

Issuetrak Help Center

**Created on: 08/31/2022 8:19
am EDT**

Table of Contents

Getting Started	8
Deployment	8
Issuetrak Deployment Fundamentals	8
How to Install Issuetrak Using the Issuetrak Deployment Utility (IDU)	9
How to Install Issuetrak Using the Issuetrak Deployment Manager (IDM)	9
Post-Deployment Configuration	9
About Integrated Security	9
General	11
Password Policies	11
About the Features Screen	11
About Organizations	11
About Departments	11
About Tasks	11
About Locations and Regions	11
About Issue Types and Subtypes	11
About Priorities	11
About Issue Templates	11
Incoming Email Overview	11
Issue Notifications	11
Visibility Controls Best Practices	11
About Issue Forms	11
About Causes	11
The Benefits of Customer Training	11
Ways to Utilize Issuetrak Consulting	14
Getting Started in Issuetrak	17
Implementation Guidelines	17
Term Dictionary	22
Resources List	32
HTML Enhancement Options	34
About Issue Responsibilities	43
Rich Text Editor Limitations for Copying and Pasting	43
Configuration and Customization of Issue Submission	44
Staged Release Notes	48
Total / Adjusted Time Open	52
Pre-Deployment	53
Issuetrak System Requirements	53
IDU Verb Documentation	53
Working with the JSON	62
Introduction to the Issuetrak Deployment Utility (IDU)	62
Introduction to the Issuetrak Deployment Manager (IDM)	63
Issuetrak's Release Pipeline	64
User Management	64
About Users	64
About Groups	64
Linking Issues	64
Using Issuetrak	64
Best Practices	64
Best Practices - Moving a Workflow to Issuetrak	64

Making Use of the User Administrator	66
How to Use Round Robin	66
Managing Task Groups	70
How to Embed Video	70
Best Practices - Expanding Issuetrak	71
Best Practices - Working with Task and Processes	75
Custom Record Table - When to Use	85
Personalization	87
About Issue Hub	87
My Settings	87
About Bookmarks	87
About Dark Mode	88
Make Issuetrak Your Own	88
My Notifications	88
General	89
About Reports	89
Change Password	91
Submitting Issues	92
Saved Searches	92
Searching Issues	94
Self-Help Password Reset	94
Logging into Issuetrak	94
How to clear browser cache and storage	94
Issuetrak Navigation	96
About Issuetrak	98
How to reset a locked user account	100
Using Global Issues to Submit Multiple New Issues	101
Custom Productivity Reports	101
How to Use Issue Hub	106
Working with the Task Manager	108
Web Accessibility Guidelines	108
Add to Home Screen (A2HS)	109
Automation	110
How to Use Issuetrak Automation	110
How to Use Tasks Groups for Change Management Workflow	115
How to Use Tasks Groups for Employee Onboarding and Offboarding	119
Administering Issuetrak	127
Business Rules	127
About Workflows	127
About Substatus Rules	127
About Auto Assignment Rules	127
About Automation	127
Cloud-Specific	127
Outgoing Email in the Issuetrak Cloud	127
Cloud Vanity URL Overview	127
General	129
About Solutions	129
About Issue Statuses and Substatuses	129
About Global Issues	129
About the Knowledge Base	129
About the Calendar	129

About Projects	129
About Issue Auditing	129
About Embedded Images	129
About Scheduled Issues	129
About Admin Auditing	129
Issuetrak Release Notes	129
About Classes	134
About Round Robin	134
About the Custom Record Table	137
Activating Rich Text	137
Previous Release Notes	137
Custom Record Table - Usage Notes	142
Service Contracts	145
About Labor Hours	147
About the All Restrictions Screen	150
Incoming Email	152
Managing IEM Mailboxes	152
Blocked Attachments	152
Email Tokens	153
Exclude Text	153
Keywords	154
Viewing the Incoming Email Log	154
Using Google App Passwords with a Gmail IEM Account	154
Issue Handling	156
Mass Updates	156
About Issue De-Escalations	156
About Issue Attachments	158
Issue Submission Methods	158
Entered Date vs Submitted Date	159
Reports	160
About Report Writer	160
About the Dashboard	160
Setting Report Writer Defaults	162
Scheduled Reports	162
Dashboard Settings	162
Summary Reports	163
How does Issuetrak define Report Permissions?	163
Service Level Agreements	165
About Service Level Agreements	165
Managing Service Agreements	165
Managing Service Levels	165
Managing Service Terms	165
Managing Severities	165
System Settings	165
Mobile Settings	165
About the System Menu	166
About User Defined Fields	166
Outgoing Email	173
About Optional Fields	173
Hours of Operation	176
License Key	176

Interpreting Admin Auditing Logs	178
System Colors	184
System Defaults	184
About Configuration Items	184
Site Appearance	184
Custom Links	184
Best Practices - Time Zone Adjustment in the Cloud	186
Security	186
About Site IDs	188
Upgrade & Migration	189
How to Perform an Upgrade Using the Issuetrak Deployment Utility (IDU)	189
Configuring Services and Scheduled Tasks	189
How to Perform an Upgrade Using the Issuetrak Deployment Manager (IDM)	192
Test Site Creation	192
SQL Server Migration	192
Web Server Migration	194
Web and SQL Server Migration	194
User Management	194
Attachments within User Profiles	194
User Templates	194
User Permissions	194
How to Reset a Password	194
User Administrator Feature	194
Integrations and Add-Ons	196
API	196
About the Issuetrak RESTful API	196
Installing the API	199
API Operation Conventions	200
API Operations for APIMETADATA	202
API Operations for Attachments	203
API Operations for Causes	208
API - Encrypting ConnectionStrings	211
API Operations for Classes	211
API Authorization Overview	213
API Operations for Departments	213
API Operations for Issues	215
API - Swagger Overview	222
API Operations for IssueTypes	224
API Operations for IssueSubTypes	226
API Samples Overview	228
API Operations for IssueSubTypes2	234
API Operations for IssueSubTypes3	236
API - Elevating NLog	238
API Operations for IssueSubTypes4	239
API Operations for Locations	241
API Operations for MenuItems	245
API Operations for Notes	248
API Operations for Organizations	252
API Operations for Priorities	256
API Operations for Projects	258
API Operations for ServiceLevels	260

API Operations for ServiceLevelAgreements	262
API Operations for ServiceLevelSeverities	265
API Operations for ServiceLevelTerms	267
API Operations for Substatuses	270
API Operations for TimeZones	272
API Operations for Users	274
API Operations for User Types	281
API Operations for User-Defined Field Types	283
API v2	285
API v2 Overview	285
Asset Management Module	288
About the Asset Management Module	288
Managing Assets	288
Asset Reporting	288
Asset Tables	288
Managing Software	288
Asset Audits	288
Billing Module	288
About the Billing Module	288
Chat	288
Creating Issues from Chat Transcripts	288
How to Enable Chat in Issuetrak	288
How to add a Chat Agent	289
Issuetrak Chat - Enable Emailing Transcripts	290
Identity Management	291
About Active Directory (LDAP) Integration	291
Activating Identity Management Integration within Issuetrak	291
Configuring Active Directory (LDAP)	291
Migrating to AD Federation Services	291
Importing Users from Active Directory	293
Preparing to use the Active Directory LDAP Integration	296
Granting permissions to Agents	296
About Active Directory Federation Services (AD FS)	296
Rolling back to AD from AD Federation Services	296
AD - Setting up additional attributes (Optional)	298
How to Configure Active Directory Single Sign On	298
Preparing AD Federation Services for use with Issuetrak	298
About Azure AD Integration	298
Migrating to Azure AD	305
Troubleshooting the Active Directory Module	305
About Identity Management	307
About OAuth / OpenID Connect	307
Power BI	315
How to Integrate Power BI with Issuetrak	315
Salesforce	329
How to create custom links within Salesforce to display a list of issues from Issuetrak	329
Surveys	329
About the Surveys Module	329
Designing Surveys	331
Survey Reporting	331

Managing Surveys	334
Closing Surveys	334
Webforms	334
About Webforms	334
Standard Issuetrak Webform	337
Webforms Requirements	340
Webform Limitations	342
Zapier	345
Baby Steps: Creating a Simple Zapier Integration	345
Using Zapier with Issuetrak	349
Google Applications	353
About Google Application Integration	353
Trust Center	355
General	355
Security in Issuetrak	355
Business Associate Agreement Addendum	364
Data Processing Addendum	371
GDPR Compliance FAQ	379
Subprocessors Used by Issuetrak	382
CCPA FAQ	383
How To Comply with GDPR Information Requests in Issuetrak	385
Network Protocols and Ports for Issuetrak	385
Log4j Vulnerability	387
Firewall Exceptions for Use With Issuetrak's Hosted Service	388
Terms of Service	390
Issuetrak Terms of Service	390
Issuetrak Cloud-Based Application Agreement	391
Issuetrak Software License Terms and Conditions	421
Troubleshooting	435
Bucket of Retirement	435
Reports	435
Departments	435
Projects	435
Embedded Images	435
Knowledge Base	435
Global Issues	435
Issue Auditing	435
Issue Types and Subtypes	435
Locations and Regions	435
Priorities	435
Quick Picks	435
Recurring Issues	435
Tasks	435
Users	435
Groups	435
Organizations	435
Staged for Retirement	435

Issuetrak Deployment Fundamentals

Learn About Issuetrak

[Issuetrak Release Notes](#)

[Issuetrak System Requirements](#)

[Introduction to the Issuetrak Deployment Manager \(IDM\)](#)

[Introduction to the Issuetrak Deployment Utility \(IDU\)](#)

IDU-Specific Documentation

[IDU Verb Documentation](#)

[Working with the JSON](#)

Issuetrak Deployment Guides

[How to Install Issuetrak Using the Issuetrak Deployment Manager \(IDM\)](#)

[How to Install Issuetrak Using the Issuetrak Deployment Utility \(IDU\)](#)

[How to Perform an Upgrade Using the Issuetrak Deployment Manager \(IDM\)](#)

[How to Perform an Upgrade Using the Issuetrak Deployment Utility \(IDU\)](#)

[Installing the API](#)

Wrapping Up the Installation

[Post-Deployment Configuration](#)

[Getting Started in Issuetrak](#)

About Integrated Security

Issuetrak sites have traditionally been deployed using a combination of SQL credentials and various Windows accounts that had ownership over the product's web folder, IIS application pools, Windows Services and Scheduled Tasks. The release of Issuetrak 14.6 introduced support for Windows Integrated Security (referred to henceforth as **Integrated Security**), which allows for sites to be deployed and run entirely by one Windows account.

There are multiple benefits to utilizing Integrated Security for an Issuetrak site. Some of them are:

- Bolstered Security
- Improved Interoperability with clustered environments
- Conformance with best practices for environments that are heavily dependent on Windows domain authentication and integration

What's done differently when an Integrated Security site is deployed?

Lots of things!

1. The connection strings for MVC, API, and Classic sites are deployed so that they reference the Integrated Security user that you selected during deployment
2. The sites that use Integrated Security in IIS are placed in a common application pool that runs under the authority of the Integrated Security user
 - a. When deploying new Integrated sites via the IDM, the API applications will be placed in an "Issuetrak Integrated API Pool" and the MVC applications will be placed in "Issuetrak Integrated Main Pool"
3. Windows Services and Scheduled Tasks are deployed to run as the Integrated Security user
4. The web folder permissions are set to the Integrated Security user

Requirements

Make sure your environment can meet these needs beforehand.

The Integrated Security user that you designate needs to be a Domain-authenticated service account and:

1. Exist before deploying the site
2. Have "Access this computer from the network" rights for BOTH Web and SQL servers

3. Have "Log on as a service" rights on the SQL server
4. Have "Log on as a batch job" on the Web server

Additionally:

- If you have a single site using Integrated Security, then all sites on the same version as that site must also use Integrated Security if the site takes advantage of any of the default Issuetrak scheduled tasks and services. See "Caveats and Limitations" further down for more details.

Caveats and Limitations

There are some things that you should be aware of before deploying a site with Integrated Security.

1. All sites using Integrated Security on a server for the same Issuetrak version must use the same Integrated Security user.

This is because all sites on a given version are processed by that version's set of scheduled tasks and services, which are all deployed to run as one particular user. That user needs to have access rights to all of the sites running that version, which necessarily means that the account running these tasks and services must be the same Integrated Security user.

2. In addition to the point above, non-Integrated Security sites coexisting with the same version of sites that use Integrated Security will have scheduled tasks and services processing for their site that are running as the Integrated Security user.
 3. Sites running the same version but without Integrated Security CANNOT share the same application pool in IIS.
-

The Benefits of Customer Training

When you purchased Issuetrak software, you had a specific problem that needed to be resolved. Setting up your system and training your team are critical steps toward implementing Issuetrak successfully. And, if you're the system administrator, you're probably responsible for all of the above. Studies show that when customers are better trained, they get more out of the software. And the more they get out of the software, the longer they'll remain customers.

Additionally, well-trained customers are happier.

How do you learn the intricacies of how to set up your Issuetrak site? That's where our Professional Services team members come in.

"When we enter your world we become immersed in how you operate and what you actually need to do."

Mike Wright
Issuetrak Senior Consultant

What Type of Training is Best for You

You can do training sessions via remote web sessions or have one of our consultants come out to your location. Since these sessions or onsite visits are specific to your company, the team can focus on your goals.

The web sessions, known as **JumpStarts**, give you a brief walkthrough of every feature within Issuetrak. During your first session, our consultants will talk with you about your goals and the challenges your business is trying to resolve. They will make suggestions on which features to enable and pull on their decades of experience to guide you through which structural entities are best for your business. Subsequent sessions explain more about how features interact and any best practices on their configuration. These sessions work great if you're already familiar with tracking software, or have a finite goal in mind.

Onsite visits allow you to spend time with our consultants face to face and build real relationships with them. With no time constraints, information flows freely back and forth. In addition to going over comparable material from the JumpStarts, all stakeholders can get a chance to have input on any future business plans that might impact the Issuetrak implementation. Sometimes, customers find that there are additional ways that Issuetrak can help their business, beyond their initial goals. These visits are perfect for larger implementations or anyone who wants more detailed assistance and training during the configuration process.

Several customers have opted to do both. This allows you to begin to transfer information with your consultant while getting the basics handled during the JumpStart portion. Normally, you'll have your first two JumpStart sessions, followed by the onsite visit, with a follow-up web session after the consultant leaves. The JumpStart portion is basically the same, although it may be slowed down to accommodate more detailed information to be shared. Then, during the subsequent onsite visit, that time can be used for detailed consulting and assistance building out more advanced configuration pieces, such as workflow processes.

Ultimately, you decide which training works for you and your company. Issuetrak Senior Consultant Paul Harris says, "I'm here to find out how you need to use Issuetrak and give you the best recommendations to make that happen."

The Importance of Ongoing Training

There are three main reasons why you would want to consider ongoing training:

1. Issuetrak adds new features

All cloud customers, as well as on-premises customers with valid maintenance plus agreements, have access to all updates and upgrades that Issuetrak makes. With those upgrades come new features or changes in current functionality. While the new features may not impact your business directly, there may be other times where you want to take advantage of the latest and greatest options. With **hourly consulting** available, you can spend as little as an hour or as long as you need to go over the best way to implement features into your existing Issuetrak site.

2. Turnover in administrators or agents

Staff turnover is a way of life. It's possible that the original administrator of Issuetrak is no longer with the company, or perhaps the main agents that used Issuetrak have moved on to other positions. With new employees coming on board or changing positions, as part of their training, you can set up some time with Issuetrak's consultants to review any gaps in knowledge. Issuetrak offers a two-hour remote session called a **Tune-Up** that's perfect for new administrator training.

3. Change in business needs

Business needs change over time. Other departments may see the benefit you get from Issuetrak and may want to see whether it can help them as well. Even if you know exactly how to configure or adjust your Issuetrak site for your needs, other groups coming into the site may need a different feature or tweak to the structural settings that you're not familiar with. An hour with the team can tell you how easy or difficult the changes will be. Longer consulting engagements or onsite visits allow our consultants to be with you every step of the way.

Because your company is unique, your sales engineer can discuss which options will work best for your company. Or you can reach out directly to the Professional Services team.

**SPEAK WITH A PRODUCT
EXPERT**

"You can pull on our knowledge of Issuetrak and best practices to work for you."

Mike Wright
Issuetrak Senior Consultant

Ways to Utilize Issuetrak Consulting

Whether you're new to Issuetrak, or someone who's used the software for years, there's always another process that needs updating, a newly released feature you're not sure of, or a new department that wants to reap the same benefits as your team. The challenge is finding the time to plan, implement, and test everything you want to accomplish.

Fortunately for you, Issuetrak offers consulting services to help! Time can be purchased by the hour or in blocks, and the services can be performed either at your location or via remote web sessions.

There are many reasons to consider consulting services that go beyond standard training sessions. According to Forbes magazine, consulting helps you incorporate ideas beyond the scope or skills of your existing staff. That's what Issuetrak's Professional Services team is here to do!

You can leverage the team's information, knowledge, and assistance to maximize your Issuetrak implementation, making you more productive and efficient!

"When I consult with a customer, I have time to solve problems using Issuetrak. Often the result becomes a new process that helps to support their business for a long time. Solving customer problems is what makes me feel good about my job."

Mike Wright
Issuetrak Senior Consultant

Issuetrak offers consulting services designed with you and your business in mind. Here are a few options other customers have taken advantage of:

Workflow

This could be as simple as helping set up the flow of issues from one department to another, or more complicated as setting up decision-based processes that involve multiple departments across your company. The team will share best practices and suggestions based on their decades of experience by asking leading questions, potentially finding gaps in your current process. Going beyond the initial process, they will help you build it out within your Issuetrak site, explaining as they go and making sure the implementation is sound.

New or Expanding Usage

Once you start using Issuetrak, you may have other groups or departments that want to take advantage of the same benefits you've received. It's possible that they can be incorporated into the same site, or they may need a separate site. Your company may also undergo a merger, picking up new affiliates, or blending into a new parent company. The Issuetrak team can help you make the best determination on what should be modified based on the needs of everyone involved and then work with you to implement the needed changes.

As Issuetrak continues its long-standing tradition of implementing customer suggestions into features within the product, you may want assistance in implementing those new features. Or you may be ready to take advantage of features you weren't able to use during your initial implementation. Business needs change, and Issuetrak's flexibility along with guidance from the team makes sure you're able to roll with the punches and stay productive.

Site Administration and Configuration

Small businesses frequently have limited time and resources. Some customers elect to set up recurring consults with the Issuetrak team to be used in 15-minute increments when they need something changed within their site. So if you need to add or deactivate users, build out workflow processes, or even get assistance doing the site configuration, consulting services give you the opportunity to have someone experienced do the work for you!

Pre-Launch Consulting

Consulting services aren't just for customers who have been using Issuetrak for a long time. Prospects who are in the evaluation stage can take advantage of the experience and knowledge the Issuetrak team has. Whether it's helping develop your proof of concept or working from the initial needs analysis to the configuration and implementation planning, this team helps with it all.

General Consultations

No question is off-limits to the Issuetrak consulting team. You can talk to them about any usage question, have them check the accuracy of your process workflows, get them to help with API or data import preparation, or show you how to build specific reports to meet your requirements. Then there's always the famous "sanity check" where a customer asked the

team to review what's been set up just to make sure nothing got missed or left out.

Concluding Remarks

The goal of Issuetrak consulting is to make sure you get the most out of your Issuetrak implementation. Because your company is unique, your account manager can discuss which consulting options will work best for you. Or you can reach out directly to the **Professional Services** team.

**SPEAK WITH A PRODUCT
EXPERT**

"I enjoy working with customers that take advantage of our consulting services. Rather than just teaching them Issuetrak, I'm working within their business processes and helping them configure Issuetrak in the way they envision it solving their needs."

Paul Harris
Senior Product Engineer

Implementation Guidelines

This article provides a high-level, general implementation plan for Issuetrak, including installation and configuration. Every installation varies and may not directly follow this guideline.

1. Communications

Time Frame: 1 - 2 days

After purchasing Issuetrak, you'll receive a series of emails. The information varies depending on your chosen deployment option.

Issuetrak Instructions for Cloud Customers – This message contains your next steps, including what to expect and basic contact information.

Issuetrak Download Instructions for Premises Customers – This message contains links to the documentation, Issuetrak installation zip file, and your Issuetrak license key. It also contains additional information explaining the next steps and basic contact information.

Scheduling your Professional Services Training – You will receive an email with a link to schedule your JumpStart training. Simply select a date and time that works best for you! You will want to have access to your cloud site or have installed Issuetrak on your servers before scheduling. If you purchased onsite training along with or in place of your JumpStart, you should determine a tentative date for the Issuetrak trainers to be at your location.

Please save the information from these emails to a safe location for future reference.

2. Install Software

Time Frame: 1 hour - 1 day

On-Premises Customers

Customers installing Issuetrak on their servers will need to:

- Identify the hosting IIS server and SQL server. Please verify any prerequisites or system requirements.
- Access your download instructions email, which contains installation files and a license key needed during your installation process. Please save this to a secure location for future reference.
- Install the software using the installation files. The installation utility walks through

creating a User ID and password to access your newly created site.

Cloud Customers

There is no installation required for customers hosting Issuetrak on our cloud servers. A link to access your site and login credentials will be emailed to you.

Contact Support

If you are unable to connect or open the Issuetrak site, or you would like assistance performing the installation, please contact the Support Team by email at support@issuetrak.com or call 757-213-1351. The Support Team can also assist with the setup of incoming email, outgoing email, or linking the Active Directory module. They will assist in getting basic information in place and ready for configuration.

3. Gather data / Get Started

Time Frame: 1 - 3 days

Initial Site Review

Log into Issuetrak the first time, click through the menus, and take a look around. Become familiar with the layout and the way the site works. If you have any problems or concerns, contact Support immediately.

Before meeting with Professional Services, you can start going through the [Settings Lightbox](#), focusing on the System submenu. Reference the product documentation on any specific page by using the help icon in the top bar.

Prepare for Your Professional Services Training

Use the Scheduling email to reserve your spot for your JumpStart session. If you purchased onsite training, you can set up a time to discuss your goals and timeline with your Issuetrak trainer during your JumpStart session. Before meeting with Professional Services, think about the following:

- Who will your administrators be? These are the users that should attend the training to learn how to set up and configure the software. They will also decide what options and features are enabled.
- What types of Issues will you be logging? Think about what your Issue Categories need to be.
- How do you want Issuetrak to represent your users or customers in the site so that you can control their access and then report properly once issues are logged?
- Be prepared to discuss your business use case with the Issuetrak trainer. Provide them with any documentation, process maps, or specifics that you feel will help prepare for your sessions or set up your Issuetrak site.

4. Configuration with Professional Services

If you purchased onsite training in place of or with a JumpStart, then a general training itinerary is used. Before your on-site training, you will be contacted by your assigned trainer. They will confer with you to discuss your specific needs. A training outline and list of deliverables will be provided to you. If your onsite training is in conjunction with JumpStart, you can schedule the JumpStart training using a web session first. You can then use your onsite time to get into more details of the configuration, including in-depth consultation to map your business practices or train your users.

JumpStart Training – these training sessions are scheduled as needed to assist you in configuring your site and training your Administrator User or Users.

JumpStart Session One – Begins with a discussion on how you want Issuetrak to work for you. The Professional Service trainers will use this information to develop instructions for the setup and configuration of your site. This session covers:

- **Entities** – Includes Organizations, Users, and Groups. It may include optional Departments and Locations. Your Trainer will help you decide how to use each entity to organize and report on your issues. Getting this right gives you a strong foundation moving forward.
- **Issue Types** – Provides the categorization needed to organize your Issue records.
- **System Settings** – Reviews each page, making sure one-time settings are accurate and all necessary features and optional fields are enabled to make Issuetrak more powerful. Highlights System Colors, License Key, and Hours of Operation.
- **Issue Notification** – Reviews outbound system notifications and emails sent by role and event.

At the end of this session, you may be assigned homework by your Trainer to gather and enter information into areas of the site. This information will allow you to test the system as you become more familiar with Issuetrak.

Additional Sessions - Your trainer will schedule additional sessions as required to complete your site setup and training. They normally begin with questions and follow-up from the previous session. Once your Trainer responds to any concerns or questions, he or she will discuss the advanced features of Issuetrak. Once configured, these features are used to provide automation and better control of your processes. The trainer will discuss the following items if needed in your site:

- Auto-Assignments

- Workflows
 - Issue Templates
 - Scheduled Issues
 - Purchased Modules (such as Active Directory, Asset Management, Incoming Email)
 - Calendar
 - Knowledge Base
 - Reporting
-

5. Testing and Documentation

Time Frame: 1 - 2 weeks

After the setup and configuration are completed, a normal testing period usually begins. This allows for testing your configuration, email, and user permissions. As testing progresses, begin to develop the training materials needed to introduce Issuetrak to your user base.

Formal end-user training is normally conducted by your staff and focuses on your specifics of Issuetrak. If you prefer to have the Professional Services Team involved in end-user training, discuss the options with your salesperson.

It's recommended to roll out only to a small group of users after the initial training phase is completed. This allows you to implement Issuetrak in a controlled environment, sharpen procedures, and manipulate configuration data to best achieve your goals. If needed, contact the Support Team for assistance.

6. Final Release

Total Implementation Time: 11 - 26 days

After testing and training are completed, the software can be released to all users. Some customers find it useful to set up a test site to conduct training and to provide a testbed for future upgrades to your Issuetrak software. This is allowed under your license agreement with Issuetrak. If you are a Cloud customer, you will need to request this from the Support Team. They can provide additional information about test sites.

After you have rolled out your Issuetrak site to your staff, our teams remain ready to provide any assistance you require. The Support Team handles any technical issues that come up, and the Professional Services Team can assist with any usage questions you need to address.

Support Resources

If you have any questions or would like the assistance of our **product experts**, please do not hesitate to contact us with any questions.

[SPEAK WITH A PRODUCT EXPERT](#)

Term Dictionary

If you are new to Issuetrak, the terms we use may be overwhelming. In some cases, the words we use may mean different things to different people. This document will give you a repository of the major terms used within Issuetrak. We'll start with the most basic terms and work through the more advanced ones.

Term	Definition
Issue	is a generic term that describes a unit of work in Issuetrak. The label for this may be changed in your site, so it appears as Item, Work Order, Request, Ticket, Complaint, etc.
Navigation	
Bookmarks	Bookmarks is a feature allowing you to mark a page for single click access in the site. They are added using the 'Bookmark' flag next to the title of the current page. You can specify a custom title for each that can be navigated to by clicking the corresponding link in the Bookmark menu. You may rename Bookmarks by clicking the edit icon next to them. Additionally, you can re-arrange them by simply clicking and dragging within the section.
Related Links	Related links is a section that appears in certain Administrative areas within Issuetrak at the bottom of the quick menu. When present, it will always contain links to other features that are closely related to the feature you are currently viewing.
Settings Lightbox	A pop-up window that appears when you click on the Settings gear icon in the upper right corner of Issuetrak (if you have the right permissions). It provides Sys Admins (and users with lesser Administrative permissions) with the ability to quickly navigate to any configurable system setting in Issuetrak. A Settings Search box is included in the upper right, which allows you to quickly search the Settings Lightbox for the exact setting that you want to adjust. The Settings Lightbox is responsive to different screen resolutions and window sizes, and will auto-adjust to fit under most circumstances.
Left Menu	The left menu is a collapsible sidebar that is present on every page in Issuetrak. It contains logos, the "New Issue" button, and several permanent links beneath that. The Bookmarks section is found towards the bottom of the left menu, and underneath it is a toggle for collapsing and expanding this menu.
Quick Menu	The visible sidebar on the right that provides links to action and visibility options for the visible feature or issue you are viewing. The options will change as you navigate the application. At the bottom of the sidebar will be the Related Links section (if applicable to the current page) that will contain links that are related to the area of the product that you're working in. The whole menu can be collapsed or expanded using the toggle at the bottom of it.
Sidebar	A collapsible set of links to the features of the application. Issuetrak has the Left Menu and the Quick Menu (on the right).
Gear Icon	Quick Link in the upper right that opens the Settings Lightbox.
Users and Groups	

User is a record that represents an identifiable account in Issuetrak. They normally are associated with anyone who sends or receives an email, or who may be responsible to perform actions on an issue. It stores contact details, as well as permissions that determine what the user can access and do within Issuetrak. Below are fields that help define a user in Issuetrak

Record Type	
End User	has a role in the site or on the issue. They may also access issues through reports or searches. Users with the record type User can log in, and send, or receive email from Issuetrak.
Template	is a record used only to create other users. Not an active user account, these records have no access to the site and perform no role on the issue. Provides sample information and permissions to a user-type record.

User Type	
End User	is a user in Issuetrak with no agent-level permissions. May be granted access to log in, or may simply send and receive emails.
Agent	<p>is a user with any one of the following permissions:</p> <ul style="list-style-type: none"> • Can assign or be assigned primary issue ownership • Can assign or be assigned Next Action secondary ownership • Can submit issues on behalf of others • Can perform administrative actions within the site <p>The number of Agents allowed in your system is controlled by your software license key.</p>

User Roles define the relationship between the user and the issues.

Enterer	is a person logging the issue
Submitter	is a person with the problem that the issue is created on behalf of
Assignee	is an Agent user or Group that is the owner of the issue
Next Action	is an Agent User or Group assigned secondary ownership
Task Assignee	is a User or s Group assigned to a step within a process on an issue

Group is a collection of users for a purpose. Each group is assigned a type that determines who can be added to the group. Groups have four main functions within Issuetrak:

Permission inheritance	all the members of the group inherit the permissions of the group
-------------------------------	---

	Assignment	is used when you want to associate the assignment, next action, or tasks to multiple users
	Round Robin	an agent group designation that instructs Issuetrak to assign issues to members of the Group. The Assignment rotates to all members of the group in order. Users in a Round Robin group are ordered by UserID.
	Restriction	are values such as issue Types, Knowledge Base articles, Issue Templates, and Task Groups may be restricted to only the members of the group
	Email	if you need to email issues or Knowledge Base articles to multiple people, you can send it to the group
	Group Membership Type	
	Any	means there are no restrictions on what users may belong to this group. Agent-level permissions are unavailable to be selected.
	Agent	means only users designated as agents may belong to this group. This group is allowed access to agent-level permissions, and any agent added to that group inherits those permissions.
Permissions	control what each user can do within Issuetrak. Granted at the user level and/or through Group membership.	
Parameters	are settings on the user record that determine record attributes.	
	Active	this parameter may be used to report and respond to issues. Users without this checked are no longer able to be used in the site but are maintained for historical purposes.
	Can Log In	users may fully use the web site and view information. Users who are active but cannot log in can be used as submitters on issues.
	Sys Admin	this parameter can be granted only to Agents by another user with this parameter. This grants full control and an unlimited view of the site. They are the only users that can make modifications to all of the settings in the System section of the Settings Lightbox.
	Show Debug	use only when directed by Issuetrak's Support Team. It displays the information needed for troubleshooting.
	Suppress All Email	this parameter turns off all mail going to this user from Issuetrak
Authentication Type	when the Active Directory module is enabled, this controls whether the user record will be authenticated and updated directly in Issuetrak, by Active Directory, or by AD Federated Services.	

Building Blocks

Organizations are structural containers for holding users, issues, and assets. Organizations can be used to control the visibility of issues and users in Issuetrak. These containers normally represent companies you support or need to interact with Issuetrak.

Internal Organizations	an organization may be marked as "internal only". Members of an "internal only" organization can only view users of their organization and they may only view issues of their organization. User permissions may override this restriction
-------------------------------	--

Additional Organizations	creates a parent/child relationship between organizations. The additional organization's issues and users may then be seen by users in the parent organization.
---------------------------------	---

Departments are optional structural containers associated with users, issues, and assets. Can be used to control the visibility of issues and users in Issuetrak. Provides reporting capabilities, but does not appear as a value on issues. They normally represent a business department.

Internal Departments	departments can also be marked "internal only". Members of an internal-only Department can only view users and issues from their department. This restriction can be based on whether the issues are assigned to or submitted by other users in the same department. The "Restrict to..." setting in Features controls whether this restriction is by the department of the submitting user, or by the department of the "Assigned To" user.
-----------------------------	--

Responsible Departments	allows an issue to be associated with a named department. It overrides the normal view of the issue by the department and creates another reporting variable.
--------------------------------	---

Locations are optional structural elements that can be associated with a user and display as a value on the issue. Is not involved in determining issue visibility. It typically represents offices or buildings associated with your company.

Regions	is a structural element tied directly to locations. Can be used for reporting, but does not appear on the issue record.
----------------	---

Issues – Standard Features

Types the classification of an issue for reporting. Required to be associated at the submission of all issues. Types also determine which issue form will display when the type is selected. Subtypes may be enabled to allow greater granularity.

Tool Tips	a message that may be displayed to users based on the selection of a type or subtype on the issue.
------------------	--

Subtypes	are optional levels of classification going beyond issue types. There are four levels available that create a hierarchical structure with issue types.
-----------------	--

	Issue Forms	is a feature that allows an administrator to change which fields are displayed and required. It allows the administrator to change the order the fields appear to a user. Issue Forms are assigned to issue types, so selecting the type on the issue loads the appropriate issue form.
	Screen Text	customizable text positioned on the issue form.
	Section Headers	customizable headers that divide sections of your issue form.
Issue Template		is a template used for submission of issues that allows for field values, individual tasks, or task groups to be pre-populated. Access to issue templates is determined by permission as well as group and organization restrictions
Priority		is a value representing the urgency of an issue. May be selected by any user with a role on the issue and the permission to select the priority. A default priority can be set at the system level to apply to newly submitted issues when the submitter doesn't have the permission to change it.
Issues – Optional Features		
Attachments		allows files to be linked to issues, assets, users, projects, and Knowledge Base articles. Any type of file may be attached. There is no restriction on the number of files that may be attached to a particular item.
Causes		is a dropdown field to capture the reason why the issue occurred.
Classes		allows a broad categorization of issues that can be filtered on the dashboard and in reports.
Solutions		is a field filled out during issue closure that describes how the issue was resolved. Allows administrators to create a drop-down list of pre-filled values to handle repetitive resolutions.
Substatus		is a value representing stages in the issue lifecycle.
User Defined Fields		are fields within Issuetrak set up by administrators specific to their needs. There is no limit to the number of fields available to be created. Field types include text, large text, drop-down lists, yes/no, integer, number, issue association, hyperlink, and date fields.
Tasks		
Task		a single item of work that needs to be completed before the issue can be closed. Tasks can be assigned to a user or group. Each task can either be marked when complete or can have a Yes/No/NA response.
Task Group		is a defined collection of tasks that may be added to an issue or triggered in response to another Yes/No/NA task.
Process		a list of tasks that need to be completed to close the issue.
Task Manager		the engine that allows you to build individual tasks or add task groups to an issue. It is used to build all task workflows and processes in Issuetrak.
Automation		

Auto Assignment	allows you to assign an issue based on predefined conditions.						
Workflows	allows you to build rules that modify an issue or email users based on criteria on the issue record. Workflows operate by what time the issue was submitted or how long the issue has been idle.						
Last Activity	the last time the issue was edited and saved to change a value, or when a task was marked as completed, or a note added.						
Process Order	the order that the rules are applied to the issue.						
Substatus Rules	is an ability to change substatus values from one to another by an event occurring on the issue. Also used to pause the system clock on an issue.						
Additional Capabilities							
Standard Features							
Calendar	enabled users may create events and reminders. Agent users may also create Out-of-Office events to control routing of issues to another agent.						
Global Issues	issues that are linked together to work as a collective unit. Global issues can be configured to update values on the linked issues as new issues are linked. Global issues can also cascade changes made to the global issue to the linked issues.						
Email Notifications	automated email messages sent to the users involved with an issue. Email notifications are automatically generated based on events that occur within an issue. When an event occurs, emails are sent to users based on the role they hold on the issue.						
Incoming Email	a processor that converts email into new issues. The processor can also add notes to existing issues when it receives a reply to a system-generated notification.						
	<table border="1"> <tr> <td>Email Tokens</td> <td>a combination of text and tags that tell the Incoming Email processor to update specific fields within an issue.</td> </tr> <tr> <td>Blocked Attachments</td> <td>allows specific attachments to be blocked from future processing. Common examples of blocked attachments are company logos or social media icons.</td> </tr> <tr> <td>Private Notes</td> <td>The Incoming Email Module allows email replies sent from Issuetrak to be parsed and added as Notes on the sending Issue. By default, the Notes added to the Issue will be set to public. However, there is an exception: in a case where a User has the user permission "Can view and add Private Notes," and where "Private" is enabled on the Defaults page located in the System area of the Settings Lightbox (see Notes Default section). If this combination is true, then the Notes added through Issuetrak email replies will be set to private.</td> </tr> </table>	Email Tokens	a combination of text and tags that tell the Incoming Email processor to update specific fields within an issue.	Blocked Attachments	allows specific attachments to be blocked from future processing. Common examples of blocked attachments are company logos or social media icons.	Private Notes	The Incoming Email Module allows email replies sent from Issuetrak to be parsed and added as Notes on the sending Issue. By default, the Notes added to the Issue will be set to public. However, there is an exception: in a case where a User has the user permission "Can view and add Private Notes," and where "Private" is enabled on the Defaults page located in the System area of the Settings Lightbox (see Notes Default section). If this combination is true, then the Notes added through Issuetrak email replies will be set to private.
Email Tokens	a combination of text and tags that tell the Incoming Email processor to update specific fields within an issue.						
Blocked Attachments	allows specific attachments to be blocked from future processing. Common examples of blocked attachments are company logos or social media icons.						
Private Notes	The Incoming Email Module allows email replies sent from Issuetrak to be parsed and added as Notes on the sending Issue. By default, the Notes added to the Issue will be set to public. However, there is an exception: in a case where a User has the user permission "Can view and add Private Notes," and where "Private" is enabled on the Defaults page located in the System area of the Settings Lightbox (see Notes Default section). If this combination is true, then the Notes added through Issuetrak email replies will be set to private.						
Issue Hub	A tool to provide a customized view of issues and manage them. May be set as a home page.						

	Base Filter	A view of issues, showing columns and or a filtered view that serves as a basis for a customized view. See details on the Feature Documentation icon.
	User Filter	A refined view of the base filter created by the logged in user. Users cannot permanently modify a base filter. See details on the Feature Documentation icon.
	Issue Hub Settings	A tool to enable and disable new and existing views on the Issue Hub in the System area of the Settings Lightbox .
	Feature Documentation Icon	This is a button with a bold 'i' present when editing any view in the Issue Hub. Clicking on this will display a pop-up explanation of the behavior of views, columns and filters.
Issue Audits	captures detailed changes made to the issues, such as who changed a value, when they changed it, and what the original value was. May be viewed from either the issue or from the Settings Lightbox.	
Admin Audits	captures detailed information about changes made to your issuetrak system. Admin audits cover non-issue related changes in many different areas of the system. The areas covered include changes to the System area of the Settings Lightbox, including features and defaults, as well as entities such as user accounts, permissions, groups, and changes to group memberships and many other areas of the system.	
Knowledge Base	a container that allows for the creation of searchable content in article format. Each article may be associated with a category or subcategory. Articles may be public or viewable only by those with the appropriate permission. Categories or individual articles may also be restricted by group or organization membership.	
Projects	allows issues to be associated with a particular project ID. Projects may have associated hours, dollars, categories, and substatus. Dashboard reporting is available by Project and Project Category.	
Scheduled Issues	pre-filled issue template that submits issues automatically on a defined schedule.	
Service Level Agreements	used if you are required to respond to and/or resolve issues in a certain timeframe. They can be based on either who submits the issue or who the issue is assigned to.	
	Response Time	allowed time for someone other than the issue submitter to add a public note in reply to the issue.
	Resolution Time	allowed time to close the issue.
	Severity	rates the issue's impact on the organization. By using the link to service levels and associated agreements, ultimately determines the required issue response and resolution times.
	Service Level	set of terms defining applicable days and time, response, and resolution times specific to each severity.

	Agreement	applies a service level and a default severity to an issue. Agreements can be applied by organization, group, or asset.
	In Compliance	issue responded to within response time and closed within resolution time.
	Out of Compliance	issue not responded to within response time or closed after allowed resolution time.
Add On Functionality		
Identity Management	Allows Issuetrak to use external authentication methods with Microsoft and other third-party identity management services.	
	Active Directory (LDAP)	Allows for importing and updating of users from Microsoft Active Directory into Issuetrak. Controls user authentication on login.
	Active Directory Federated Services	Allows Issuetrak to perform claims-based authentication to an Active Directory domain.
	Azure AD	Allows Issuetrak to perform claims-based authentication to an Azure AD-hosted domain.
	Open Authorization (OAuth 2.0) / Open ID Connect (OIDC)	Allows Issuetrak to perform claims-based authentication to a third-party OAuth 2.0 / OIDC identity provider.
API	Application Programming Interface that allows external systems to integrate with Issuetrak. Its capabilities allow for adding, editing, and deleting issues.	
Asset Management	Allows you to enter, track, and manage assets. They may be associated with issues for reporting.	
	Asset	A record, thing, or entity with value to an organization. An asset can be linked to a User, Organization, Department, Location, or issue for combined reporting.
	TrakPC/ScanPC	Issuetrak's proprietary application used to scan and audit Windows-based computers. Used to populate and update PC Assets.
	TrakMac	Issuetrak's proprietary application used to scan and audit Macintosh OS based computers. Used to populate and update PC Assets.
Billing	Allows for the association of multiple line items to an issue to provide hourly and materials rate information.	
	Products/Services	A service charged as a set value or hourly rate, or a billed material.
	Work Order	Billing and materials line items that may be printed and verified but aren't yet invoiced to the customer.

	Invoice	A work order that has been converted into a billing statement or exported to be used with an external accounting program.
Surveys		Questionnaires that can be sent manually or automatically to measure the quality of service or gather information.
Chat		An integration that provides a support channel within your Issuetrak site. Based on your configuration, a floating button can appear, allowing visitors to initiate a chat session with chat agents.
	Chat Agents	Users that have been given access to receive and respond to incoming chat messages.
	Widgets	The interface that visitors use to initiate chat sessions with chat agents. Multiple widgets can be configured, with different options and chat agent assignments.
	Chat Widget ID	Obtained from the Settings section of the Admin Portal; required to have the chat widget appear on your Issuetrak site.
	Chat Portal	Where agents log into to see incoming chats, previous chats, and stats about availability, etc.
	Admin Portal	The page where admins can adjust various aspects of their Chat Widgets and Chat Agents.

Reporting

Basic Terms

Field	is a piece of information stored within Issuetrak. It could be data from an issue, user, asset, etc.
Record	is a collection of fields. Each record displays as one row. A record can be an issue, a user, an asset, a task, or any other item that you need to report on with your selected fields displayed.
Table	is a collection of records containing similar data, such as the Organization Table or User Table.
Dataset	is a collection of multiple fields from related tables selectable for reporting purposes. For example, to report on User information, selecting the Users dataset pulls fields from the Users, Organizations, Departments, and Locations tables.
Total Time Open	is a calculated value that represents the time elapsed from the Entered On Date/Time to the Closed Date/Time for closed issues. Open issues use the run time of the query or the report instead of the Close Date Time for the calculation.
Adjusted Time Open	adjusts the Total Time Open when certain conditions apply. First, the optional feature substatus must be enabled. Second, a substatus value must be set to pause the issue time in the Issuetrak Automation Rules. Paused Time is the total time an issue uses a paused time substatus. Total Time Open minus Paused Time results in Adjusted Time Open.

Reporting Tools

Saved Searches	an option allowing a user to save the current search criteria to be used again in the future. Output options allow for multiple formats, and sorting may be done on up to three columns. May also be used to create scheduled reports.
Summary Reports	pre-formatted reports that summarize data over a selected time.
Report Writer Query Builder	allows you to select a dataset, create a filter, determine the fields that you would like in your output. Each query may be used to build multiple reports.
Report Writer Report Builder	allows for formatting a Report Writer Query into a recognizable report. A Report Writer Report can be grouped, ordered, and totaled for presentation. Report Writer Reports can be viewed within Issuetrak or exported to Excel or CSV format.
Scheduled Reports	ability to schedule the delivery of Report Writer Reports and Saved Searches. Scheduled Reports are emailed to designated recipients. Scheduled reports are normally filtered by the recipient's permissions in Issuetrak. Scheduled reports can also be sent to non-user email addresses for unfiltered results.
Google Analytics	allows integration between an Issuetrak site and Google Analytics. This leverages a free set of digital analytics tools from Google. Google's tools can assist you in gaining a deeper understanding of the customer experience on your site.
Analytics ID	Required for Issuetrak to provide data to your Analytics account. The Analytics ID is Obtained via your Google Analytics portal.

Resources List

To help you become familiar with Issuetrak, we have provided you with a reading list of articles and resources to help you. The list below is broken down into sections so that you can focus your attention on articles that will benefit you as a User or an Agent in Issuetrak. We would suggest that you begin with the Term Dictionary to help you become familiar with terms that you will find used in the articles in this list.

Resources

[Issuetrak Help Center](#)

[Traktips](#)

[On-Demand Webinar](#)

[Issuetrak - Term Dictionary](#)

Resources - Training and Professional Services

[Benefits of Issuetrak Training](#)

[Ways to Utilize Issuetrak Consulting](#)

[Worksheet - Jumpstart Configuration](#)

User training videos

[Video Tutorial - Navigation](#)

[Video Tutorial - My Issues](#)

[Video Tutorial - Working with Issues](#)

[Video Tutorial - Submitting Issues](#)

[Video Tutorial - Searching Issues](#)

Basic Features

[About the Dashboard](#)

[Email Notifications](#)

[About Reports](#)

[About Users](#)

[About Groups](#)

[About Organizations](#)

Advanced Features

[About Automation](#)

[About the Dashboard](#)

[About Global Issues](#)

[About Tasks](#)

[Service Level Agreements](#)

[Custom Record Table- When to Use](#)

[Custom Record Table - Usage Notes](#)

[Users and Groups](#)

[Email Notifications](#)

[Email Tokens](#)

[About Report Writer](#)

Advanced Features - Process and Workflow

[About Tasks](#)

[How Issuetrak handles Workflow Management](#)

[Process - Employee Offboarding and Onboarding](#)

[Onboarding](#)

[Process - Change Management Workflow](#)

Advanced Features- Modules

[About the Billing Module](#)

[About the Surveys Module](#)

[About the Asset Management Module](#)

Best Practices

[Best Practices - Billing Module](#)
[Best Practices - Expanding Usage](#)
[Best Practices - Visibility Controls](#)
[Best Practices - Report Writer](#)

[Best Practices - Tasks and Processes](#)
[Best Practices - Time Zone Adjustment in the Cloud](#)
[Best Practices - User Permissions](#)

Videos

[Video Tutorial - Adding Users](#)
[Video Tutorial - Advanced Task Groups](#)
[Video Tutorial - Auto Assignments](#)
[Video Tutorial - Changing the Issuetrak Logo to Your Logo](#)
[Video Tutorial - Creating & Using Issue Templates](#)
[Video Tutorial - Creating Groups & Managing Members](#)
[Video Tutorial - Creating Queries](#)
[Video Tutorial - Creating Reports](#)
[Video Tutorial - Issue Forms](#)
[Video Tutorial - Workflows](#)

[Video Tutorial - Escalation Notifications](#)
[Video Tutorial - Running Reports](#)
[Video Tutorial - Scheduling Reports](#)
[Video Tutorial - Substatus Rules](#)
[Video Tutorial - Task Group Basics](#)
[Video Tutorial - Employee Onboarding](#)
[Video Tutorial - Simple Checklist](#)
[Video Tutorial - User ID Maintenance](#)
[Video Tutorial - Using the Dashboard](#)
[Video Tutorial - Working with Tasks](#)

HTML Enhancement Options

When using Issuetrak, the look and feel of the site are important as it helps provide additional information or better expresses the usage and usability of the site for your users. Whether this is the login screen having additional text or images or issue submission screens having text advising what information needs to be filled out, having the ability to customize the text using HTML code is helpful to better customize your site to your needs.

HTML can be added in multiple locations, however, some locations do have a character limit which may limit the amount of additional formatting that can be added.

HTML code allows for you to add additional functionality to your site, for example:

- *Images* that can not only be used as images, but as links to take a user to another page in your site or article in your Knowledge Base.
- *Collapsible field* sections allowing text or additional information to be hidden and once clicked, expanded to show additional details.

Locations that can have HTML code added

It is possible to add images wherever HTML code can be added to a screen.


Note: Images must be placed in a publicly accessible area in order for them to load to a user. The easiest way to do this is through a Knowledge Base article used as an Image Repository.

Screen	Location to edit
Login Screen	Click the gear icon in the upper right > click on Site Appearance beneath <i>System</i> .
Home screen for Agents	Click the gear icon in the upper right > click on Site Appearance beneath <i>System</i> .
<u>Issue Forms</u>	Click the gear icon in the upper right > click on Issue Forms beneath <i>Issues</i> > edit the screen in question > Add Screen text .
Email Notifications	Click the gear icon in the upper right > click on Custom Messages beneath <i>Email</i> > select the Event you wish to edit, such as <i>on note</i> for when a note is added to an issue.
Knowledge Base	<ul style="list-style-type: none">• For existing articles: Select Knowledge Base from the left menu > locate the article to be edited > in the right context menu select edit.• For new Articles: Select Knowledge Base from the left menu > Select Add from the right context menu.

Adding Images

If you are not adding an image directly to a note or description field in an issue, the best way to host and display images on your Issuetrak site is to upload them into a Knowledge Base article and reference the file by copying the image address and pasting it into the source code (**Tools > <>Source Code**) at the location where you would like to have the image appear.

Edit or create a new article and follow these steps:

1. Set up your article normally. Add an article title, category, and tags as you see necessary. You may want to consider making the article private if you'd like to restrict access to your image library.
2. In the article description field, press the "Insert/edit image" icon () to upload a new image.
3. Follow the prompts to upload your image. The safest way to ensure your image will appear is to choose the "Upload" option and select an image from your computer.
4. After uploading your image, it will appear in the article description field. Repeat the last few steps as many times as you need to upload all of the images you desire. You can always edit the article to add more later.
5. Save or Update your article. You should be directed to viewing your updated article with all of the images you've uploaded so far.
6. From this view, right-click on an image and select "Copy image address".;

Use this image URL address combined with simple HTML to add images throughout your Issuetrak site. Most text fields accept HTML. Experiment with what looks best and don't be afraid to try interesting combinations!

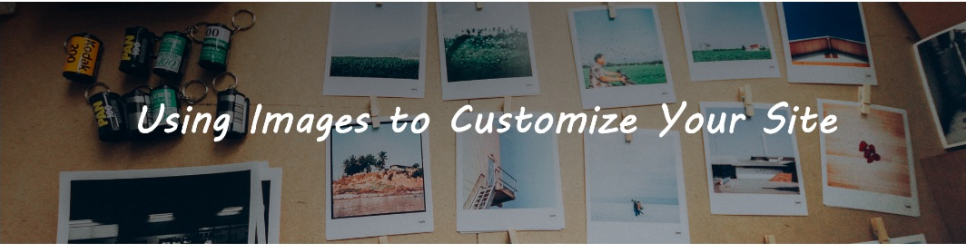
The Login Screen and the Home Screen for Agents will need to have the code directly added to the field as these fields have a character limit that may cause your image to not render correctly, or they may not render at all.

In the below code example is an example of the format needed in order to have these images added to these screens.

▶ Example Code

▶ Example Login Screen


▼ Example Knowledge Base Article



Using Images to Customize Your Site


You may have noticed the variety of images we utilize throughout the default Issuetrak configuration. If you'd like to use images to customize parts of your site, like the login screen or issue submit screens, continue reading below.


The best way to host and display images on your Issuetrak site is to upload them into a Knowledge Base article (like this one for example). Edit or create a new article and follow these steps:


1. Set up your article normally. Add an article title, category, and tags as you see necessary. You may want to consider making the article private if you'd like to restrict the access to your image library.
2. In the article description field, press the "Insert/edit image" icon () to upload a new image
3. Follow the prompts to upload your image. The safest way to ensure your image will appear is to choose the "Upload" option and select an image from your computer.
4. After uploading your image, it will appear in the article description field. Repeat the last few steps as many times as you need to upload all of the images you desire. You can always edit the article to add more later.
5. Save or Update your article. You should be directed to viewing your updated article with all of the images you've uploaded so far.
6. From this view, right click on an image and select "Copy image address".

Use this image URL address combined with simple HTML to add images throughout your Issuetrak site. Most text fields accept HTML but use caution on smaller fields, or fields with character limits. Your images may not render correctly or they may not render at all. Experiment with what looks best and don't be afraid to try interesting combinations!

Image Library

 You can swap our logo with your company's logo!

 This is your Site Title. This text is displayed across Issuetrak. You can change it under Site Appearance.

 You can add a second logo to the right side if you want!

Collapsible Sections

As seen throughout this article there have been sections of text and code that have been in a collapsed state but could be expanded to see additional details.

These collapsible sections can also be added to Issuetrak's and Knowledge Base to help organize text, provide example documentation, or highlight specific information that would otherwise make a screen harder to read.

This code must be entered through the **Tools > <> Source code** option in the Rich Text Editor in order to properly format it on the screen.

1. To add a collapsible section to an Issue Forms or Knowledge Base article we want to start by going to **Tools > <> Source code**.
2. Copy and paste the following code to the code editor screen, if there is a different background color you wish to use, you can edit the *background-color* section to the Hex code for the color desired:

▶ Text to click to open the collapsed section

3. Save the changes.
4. On the Rich Text Editor, you should now see a collapsible section that was created.
5. Edit the text to your desired text or additional HTML as you wish.
6. Save or Update your article. You should be directed to viewing your updated article with all of the images you've uploaded so far.

Below is a code example to create collapsible fields in the Issue Forms.



▶ **Example Code**

▶ **Example Code Output**

Custom links to other locations

While having a link on a page may be helpful to navigate to pages in and outside of Issuetrak, having a link look like a button or an image can help dramatically with the look and feel of your site.

To add a custom image link to Knowledge Base articles or your Issue Forms:

1. In the description field, press the "Insert/edit image" icon () to upload a new image.
2. Follow the prompts to upload your image. The safest way to ensure your image will appear is to choose the "Upload" option and select an image from your computer.
3. After uploading your image, it will appear in the article description field. Repeat the last few steps as many times as you need to upload all of the images you desire. You can always edit the article to add more later.
4. Highlight the Image you want to turn into a link and click the "Insert/edit link" icon () and follow the prompts.
5. Save or Update your article. You should be directed to viewing your updated article with all of the images you've uploaded so far, if you click on the image now it will take you to the URL input into the link.

Below is some sample code that we use on our Support site that appears in our Issue Forms. This code creates links that look like buttons that can be used to direct users to different areas in Issuetrak.

▼ **Example Code**

Welcome to Issuetrak!

Please use the links below to access information from our Help Center:

`class="trak-link-1" target="_blank">Navigation`

`class="trak-link-1" target="_blank">Issue Hub`

`class="trak-link-1" target="_blank">Submitting Issues`

`class="trak-link-1" target="_blank">Searching Issues`

`class="trak-link-1" target="_blank">About Issuetrak`

[Learn how to configure this message](#)

▼ Example Code Output

Welcome to Issuetrak!

Please use the links below to access information from our Help Center:

[Navigation](#)

[Issue Hub](#)

[Submitting Issues](#)

[Searching Issues](#)

[About](#)

[Issuetrak](#)

[Learn how to configure this message](#)

Use CSS to Override Dark Mode Colors

This section only applies to On-Premises customers, and all customizations will be cleared during site upgrades. We do not recommend customizing the CSS in Issuetrak.

You may find that certain content in your site doesn't look quite the way you want it when you're in Dark Mode, such as KB articles. If you find that something doesn't look quite right, you can use CSS to override the way it looks in your site.

While we do not recommend adjusting the CSS for your site, if you feel that you must do so, then please know that you should:

1. Make sure you know how CSS works. Teaching the basics of CSS is beyond the scope of this article, but there are many tutorials that can teach you how CSS works.
 2. Perform the following steps in a **test** site to avoid causing trouble with your production site!
-

Where is the CSS that Controls Issuetrak's Overall Look?

Issuetrak uses a set of CSS files in the root of the web folder to determine the look-and-feel of the product. The ones we are most concerned with in this article are:

1. **issuetrak.css** - This contains the CSS classes for the bulk of the product. Many of the classes in this file reference custom CSS properties (specifically colors) that are in the Dark Mode CSS file.
2. **issuetrak_dark_theme.css** - This contains the alternate color definitions (custom CSS properties) that are referenced only when Dark Mode is enabled.
3. **issuetrak_default_theme.css** - This contains the default color definitions (custom CSS properties) that are referenced when Dark Mode is disabled. We won't be adjusting these in the examples below, since this section is focused on Dark Mode.

With the knowledge of the two files above, we will build small examples to demonstrate how it works further below.

Pre-made CSS Classes

Before we dive into the nuts and bolts of the example exercises, you should know that we've already created some CSS classes to help you keep your site customizations legible while they are viewed in Dark Mode. Issuetrak has developed four CSS classes that you can apply anywhere that you can customize the HTML in your site:


```

.trak-alert-div-1 {
  width: 100%;
  padding: 15px;
  background-color: #fffce6;
  background-color: var(--trak-alert-div-1-background-color);
  border-radius: 8px;
}

.trak-alert-header-1 {
  font-size: 18px;
  font-weight: bold;
  color: #eb1b00;
  color: var(--fail-text);
}

.trak-link-1 {
  white-space: nowrap;
  background-color: #E9E9E9;
  background-color: var(--trak-link-1-background-color);
  border-radius: 14px;
  padding: 5px 15px;
  margin: 0 10px;
}

.trak-link-2 {
  white-space: nowrap;
  background-color: #f6f6f6;
  background-color: var(--trak-link-2-background-color);
  border-radius: 14px;
  padding: 5px 15px;
  margin: 0 10px;
}

```

Of particular note is *.trak-link-1*, which you can apply to site appearance customizations in place of inline styling. Text with this class applied to it should render noticeably better when viewed in Dark Mode than when the class isn't applied.

In this first example, you can see site customization code without the *trak-link-1* class applied, as well as a screenshot that shows the site customization in Dark Mode is harder on the eyes and more difficult to read:

```

View the release notes

```



And below, you can see the same site customization has been modified to instead apply the *trak-link-1* class, and the screenshot below it which displays a much improved appearance and legibility.

```

View the release notes

```

Example Exercise 1: Adding a New Custom CSS Property

This section describes how to create a new custom CSS property that will be applied to an element of your choosing when Dark Mode is enabled.

Steps:

1. Open your Issuetrak site's web folder.
2. Open the file **issuetrak_dark_theme.css** in an advanced text editor such as Notepad++. This file contains the styling that makes Dark Mode what it is.
 - a. Add a custom CSS property to this file within the **:root** element. Give it a unique name. This custom property will be applied only when Dark Mode is active. Save the changes you made. For example purposes, let's add custom property named *generic-background* with a value of *#630b0b*. Such an entry will turn any future associated element dark red, and the entry will look like:

```
--generic-background: #630b0b;
```

3. Open the file **Issuetrak.css** in an advanced text editor such as Notepad++. This file contains most of the CSS styling used in Issuetrak.
 - a. We now need to associate the custom property we defined above with a CSS class defined in this file. To further our example, we will apply the custom property to the dashboard panels. Do a CTRL-F to search for "**.dashboard-panel {**", then add the following new line within the class and save the file:

```
background-color: var(--generic-background);
```

4. Navigate to your Issuetrak site and take note of its normal Dashboard background color.
5. Now click on your username in the upper right corner and choose **Enable Dark Mode**.

Note that the Dashboard background is now dark red.

Example Exercise 2: Adding a New CSS Class

This section describes how to create a new CSS class that you can associate your custom CSS property with, then subsequently use in HTML to reduce reliance on inline styles. We will utilize the custom CSS property that we defined in the previous section.

Steps:

1. Open your Issuetrak site's web folder.
2. Open the file **Issuetrak.css** in an advanced text editor such as Notepad++.
3. Create a new class and then save the file. In this example we will call this *class red-bg*.

```
.red-bg {  
  background-color: var(--generic-background);  
}
```

4. We now have a new CSS class. But since it's brand new, nothing in Issuetrak is associated with it. You can apply this class to anything in Issuetrak that you can define in an HTML tag, such as fields on the [Site Appearance](#) screen or in Knowledge Base articles. In this example,

let's enclose the entire content of a KB article in a that specifies our new class:

In this example article, we will discuss the merits of pastries and why you should consume them.

1. They are delicious.
2. You can have them for breakfast.
3. You can have them for lunch.
4. You can have them for dinner.
5. You can obtain all of the calories that you need to exist by consuming pastries.

Most of the pastries this author has encountered were baked. However, there are fried varieties as well: Donuts and funnel cakes. These fried varieties should be seriously considered as a primary source of sustenance.

You will now have an article that looks 'normal' when Dark Mode is disabled but will be displayed with a dark red background when Dark Mode is enabled.

In this example, we enclosed the content of the entire article in our custom CSS class. But you can target individual elements in a similar

(or other HTML tag) to achieve more focused results. Additionally, multiple properties can be specified in your custom class, or you can choose to specify multiple classes in any (or other HTML tag) to stack the properties that you want. There's a large degree of design freedom to achieve the results that you want.

Rich Text Editor Limitations for Copying and Pasting

Problem

Images from certain sources, such as Microsoft products, must be copied and pasted into Issuetrak in isolation - if text is also copied with the image, only the text will paste.

Cause

There is a limitation with the Rich Text Editor we utilize in Issuetrak. We selected our editor, TinyMCE, because they are a leader in this space. Unfortunately, TinyMCE has elected to support this functionality in a higher tier than we have currently licensed, and we are unable to pass the cost of implementing this onto you, our customers.

Solution

We are going to investigate whether there are alternative Rich Text Editors we can implement in replacement of TinyMCE.

Workaround

Going forward, images can be copied and pasted into Issuetrak separately.

Configuration and Customization of Issue Submission

The Issue submission process is by far the most impactful setup process within Issuetrak. This is where all of the fields needed to collect, organize, and present information are placed to allow your workflows to process smoothly. Once configured, it is possible to re-configure the issue submission screens as the needs of your organization change.

This article will help direct you through the various processes needed to create and maintain your issues and issue submission processes.

Information Gathering

Before we enter Issuetrak and start adding or changing settings, you will need to know what information to gather in order to process your issues. It is a good idea to draw a layout so you can visually see what fields you want to place on the screen and determine what additional information you would like to gather.

- There are several required fields needed to create any issues, such as Enterer, Submitter, and your Issue Types. Do you need additional fields or need to provide additional information to users?
 - What Issue Types and associated Subtypes do you need to record?
 - Is there any additional information that can be placed into fixed fields to gather and present data, rather than having to be present in your descriptions or notes?
-

Terminology and Functionality

There are 3 main methods to submit issues in Issuetrak, more information about these methods is provided later in this article:

- Manual submission by a user logging into the site and clicking on “New Issue”.
- Sending an email to a mailbox configured to process messages into issues within the site.
- Using the [API](#) to push issues from a separate application or form into Issuetrak in order to be processed.

Regardless of the method by which they are submitted, there will be specific information from this initial submission needed in order to process the issue.

It's best to be familiar with several terms going forward:

Term	Description
Pre-Submit Form	If enabled, when a user clicks on "New Issue" a simpler submission screen appears that will ask the user for basic information and to select an Issue Type or Template, based on the setting selected.
Issue Types	Descriptive categories such as Product Support, Customer Relations, Shipping, IT, Operations, Administration, etc.
Subtypes	Detailed sub-categories of specific issue types and higher-level subtypes.
User Defined Fields	Custom fields that can be added to Issuetrak by administrators to allow additional information to be provided.
Issue Forms	Allows you to customize the information displayed on different Issues Types, as well as the required fields that apply to those Issues Types.
Issue Templates	When an issue is submitted, Templates will pre-define appropriate information and values for those issues, such as the Subject, Description, Issue Type, Subtype, Priority, Email Distribution List, Attachments, etc. They also allow you to pre-define the necessary workflows involved, such as the Assigned To, Next Action, Tasks, etc.

Overall Issue Submission Customization Flow

Step 1. Gather information

- Decide what information each issue should collect. This will help you determine what fields and features will need to be configured later.

Step 2. Plan layout

- Determine where you would like specific fields, text, logos or images to be placed.
- (Optional) Determine if you want to use the Pre-Submit screen for users.

Step 3. Setup [Issue Types and Subtypes](#)

- Issue Types are tied to Issue forms to change what content and fields are displayed.

Step 4. Build [User Defined Fields](#)

- These will largely be determined by the planning decisions you made in the earlier stages.

Step 5. Create [Issue Forms](#)

- Using HTML encoding you can add images, links, buttons, and text to your Issue screens. This is where the layout for each issue type is determined and what fields are required.

Step 6. Associate Issue Types with Issue Forms

- Each issue type is associated with a particular issue form.

Step 7. Create [Issue Templates](#)

- These will make issue submission easier and more intuitive. During the process of creating issue templates, you can pre-populate some of the fields with suggestions of information that users should include when they submit an issue.
-

Issue Submission Methods

As noted above there are 3 main methods that an issue can be submitted. Each of the submission methods has a large number of permissions and limitations on their utilization. It is recommended to read their supporting articles for details and the limits involved.

Direct login and submission

This method is used when a user (via either an Agent or an End User account) logs into the site and clicks on the **New Issue** button in the top left of the screen. From here they will be prompted to fill out the information in order to submit the issue. If the user has the permission [Can view and select from Issue Templates when submitting issues](#), then they will see a dropdown where they can select an Issue Template with pre-filled fields or tasks added to the issue, which can ease the issue submission process.

The visibility of fields and the ability to select items are both determined by the [user's profile](#) and [permissions](#), as well as the restrictions placed on the fields used in the issue form.

If the [Pre-Submit Form](#) is enabled, then a simplified issue submission screen is initially provided and prompts the user to select an Issue Type and/or an Issue Template, depending on the option selected, once selected the screen will refresh and the Issue Form or Template selected will appear.

Incoming Email

This submission method is used when a user sends an email to a mailbox configured to process issues into the site.

Our [Incoming Email Overview](#) article goes into more detail on exactly what permissions and capabilities are available with Incoming Email.

API

The [API](#) is used when an external application directly pushes data into the site for issue submission and updating. The API is used to allow an external application to interface with

Issuetrak to automate or integrate processes. The API does not just cover issue submission- a large part of our application can be integrated with an external application using the API.

The API requires a developer to create application code to facilitate the translation of data from the external source to and from Issuetrak.

Best Practices

There are several questions that should be asked during the information gathering process that will help determine what changes are needed for later steps of editing Issue Forms and Templates.

- What are the needs for the form you are creating?
 - There is a default Issue Form that is created with your site. Does this pre-built form fit your needs?
 - What needs to change?
 - What needs to be added?
 - Think about mapping your process flow. What do you envision this will look like?
 - Draw a rough sketch of how you would like the issue screen to appear.
 - Are there notes to the user?
 - Are there images?
 - Are there links or buttons?
-

**SPEAK WITH A PRODUCT
EXPERT**

Staged Release Notes



issuetrak 15.4

Introducing: A Renovated Mobile Experience

help desk | customer support | complaint management

release date 08.23.2022

Issuetrak 15.4 is here, and it's a well-rounded release containing new additions, updated features, and bug fixes.

First off, 15.4 is a massive facelift to Issuetrak's mobile view. Navigating around an Issuetrak site using Android and iOS now feels a more modern, while still supporting our full Identity Management suite for authenticating to Issuetrak. When using the mobile site, the login screen also now features an "Add to Home Screen" function, making it easier to add your Issuetrak site to your mobile device's home screen with just a tap.

We're also introducing a new area of the product that we're calling the *Restrictions* screen. This is a centralized page that allows Sys Admins to see every part of the product that has visibility/access restrictions applied to it. Sys Admins can quickly and easily jump to any restriction and make changes to it with a simple click.

There's more to 15.4 than just what we've mentioned above, so please keep reading to learn more!

What's New

Mobile View

The mobile view of Issuetrak has long remained unchanged, but today's release addresses that. Not only have we refreshed the look of the mobile view, we've also made some subtle changes and additions to functionality.

[Add to Home Screen \(A2HS\)](#)

The mobile view login screen now has added functionality that makes it possible to add your Issuetrak site to your device's home screen. *This requires a mobile browser and your site to use HTTPS in order to work.*

Identity Management

The mobile view will now work with all forms of identity management, and not just Issuetrak authentication.

Switch to Desktop / Switch to Mobile

We've also included a link on the login screen that allows you to toggle between the desktop and mobile experience of your site.

Restrictions

Have you ever...

- Wanted to find every issue type restriction in your site in just a few clicks?
- Needed to see every task and task group restriction without going through every single one of them?
- Needed to run a report of every visibility restriction configured for your site?

Well, now you can easily do all of those things and more!

We've added a new *All Restrictions* feature, which provides the ability to display and jump to every visibility restriction in your Issuetrak site from one centralized location. We've even added a new Restrictions data set to the Report Writer.

You can get to the *All Restrictions* screen by navigating to the settings lightbox, then find and click on *Restrictions* under **Tools**.

It's never been easier to view the visibility restrictions in an Issuetrak site! Click [here](#) to learn more about this new functionality.

Custom Links

The Custom Links functionality has been improved with the ability to restrict visibility of Custom Links based on group and organization membership.

Custom Links have also been included on the new *All Restrictions* screen with all of the other visibility restrictions for ease of access and monitoring.

Report Writer

We're also including enhancements and new data sets for the Report Writer:

- Clear indication of who has shared access to queries and reports
- User Type is now a filterable field in the Users-related data sets
- **NEW** Survey Responses / Issues data set
- **NEW** Configuration / Tasks data set
- **NEW** Configuration / Task Groups data set

What's Fixed

Incoming Email

If a Google IMAP mailbox failed to connect or authenticate, then all subsequent mailboxes configured in IEM would not be processed.

Outgoing Email

Resolved an issue where OEM would stop working if there was a SQL error processing a message.

Report Writer

- Issue links that were contained within scheduled reports would redirect to the user's issuetrak homepage rather than navigate directly to the issue.
- A report exported as a CSV file with "Group by" set to "Issue Next Actioned On" would appear blank.

Search Issues

Removed invalid export options for "Task Assigned to" issue searches.

Security

Resolved two XSS (Cross Site Scripting) related bugs that could have allowed arbitrary JavaScript code to be executed on an Issuetrak site.

Tasks

- Added "Time entered on Task" field to the "Issues/Tasks" and "Issues/Available Tasks" datasets in Report Writer.
- Removed VBScript code that caused extremely long page load times in issues with large task groups.

Users and Groups

When merging duplicate users, it was possible for the resulting user to have multiple copies of the same group if both original users were a member of the same group.

User Interface

A 500 error would appear when adding a new submitter on an issue and there were more than 32767 organizations.

Total / Adjusted Time Open

This article explains how Issuetrak calculates the "Total/Adjusted Time Open Mins" via the value stored in the database. It is not recommended to use this value directly from the database for reporting purposes, as we will explain.

What is TotTimeOpenMins?

TotTimeOpenMins is a fraction of the total number of minutes in a single day (1440). If the value for TotTimeOpenMins is 1, then that would mean 1440 minutes, which is 1 day.

If the value is "0.9333333333333333" then it can be multiplied by 1440 to get the total number of minutes (rounded, that would be 1344) that the issue has been open for. 1344 divided by 60 minutes yields 22.4 hours.

Formulas

```
x = Value in table
1440(x) = Time in minutes
1440(x) / 60 = Time in hours
```

When viewing an issue inside Issuetrak, the value for Total Time Open is displayed as HH:MM. This particular calculation (22.4) is therefore displayed as 22:24. The .4 part of 22.4 does not represent 40 minutes; it's 4 tenths of an hour (60 min * .4), which is 24 minutes.

One very important thing to keep in mind is that the `IssuesTimeOpen` table is updated constantly by Issuetrak. When someone accesses an issue, we calculate the `TotTimeOpen` for that issue and update the table accordingly. If a report involving the field `TotTimeOpenMins` is run using Report Writer, then the `TotTimeOpen` for all the issues is calculated and will appear on the report, and the table will be updated accordingly.

Why is it a bad idea to use this value for reporting?

If no one has accessed the issue or ran a report involving that issue, and you try to grab the field from the database, it will be out-of-date. Therefore, the `IssuesTimeOpen` table should not be relied upon for SQL queries outside of Issuetrak to determine how long an issue has been open. `IssuesTimeOpen` is mainly a special table specifically designed for Issuetrak.

If it's imperative that this information be gathered outside of Issuetrak, then it will be necessary to review the stored procedure `sp_IssuesTimeOpen_Upd` for more information. This requires an advanced understanding of SQL and the Issuetrak database schema.

IDU Verb Documentation

Introduction to IDU Verbs

In order for the IDU to perform useful work, we need to tell it what to do. This is accomplished through the use of **verbs**. Only one verb may be specified at runtime. Each verb has its own set of parameters that are either required or optional. If a verb is invoked, it **must** be placed before any verb parameters. You may choose from the list below to jump to a specific verb's documentation, or you can find more about Issuetrak Deployment Fundamentals [here](#).

[Deploy](#)

[GenerateDeploymentConfiguration](#)

[GenerateAPIKey](#)

[ApplyLicenseKey](#)

[VerifyConfiguration](#)

[DecodeLicenseKey](#)

[GetSiteDetails](#)

[VerifySQLCredentials](#)

[GetIISConfiguration](#)

[VerifyDotNetHostingBundleInstalled](#)

Deploy

The verb **Deploy** will deploy Issuetrak with the options specified.

```
.\issuetrak.deployment.utility deploy -c yoursite.json -x database
```

Verb parameters:

-i, --site

Deploys the sites specified by a space-separated list of site names. If this parameter is omitted, then all sites listed in the JSON will be deployed. **Sitename** consists of the name of the root website and the full IIS application path separated with a period, as well as the spaces and slashes replaced with periods.

-x, --context

Specifies which machine the deployment is running on. Valid options are "web", "database", "services" and "all". If this option is omitted, it will default to "all". Note that the JSON must

provide administrative SQL authentication regardless of which context is specified. This is because the IDU performs a mandatory check of the site version prior to attempting deployment. Additionally, please note that the 'web' and 'services' contexts can only be deployed on the web server at this time.

-c, --config

Specifies the path and filename of the JSON configuration file. If no name or path is specified, the IDU will look in the root of the distribution for **deployment.json**.

-d, --distro

Specifies the path to the folder containing the distribution. If this is omitted, the path specified in the JSON is used. If the JSON doesn't provide a location, then the folder the IDU is run from is assumed to be the distribution.

--agree-to-terms-of-service

Pre-emptively acknowledges the Issuetrak Terms of Service before beginning deployment. If this parameter is not specified during deployment, the IDU will prompt the administrator to agree to the Terms of Service before proceeding.

Usage Example 1

```
.\issuetrak.deployment.utility deploy -c yoursite.json -x database
```

Deploy Issuetrak using the JSON file yoursite.json, but only using the database context.

Usage Example 2

```
.\issuetrak.deployment.utility deploy -d "C:\temp\Issuetrak.xxxx" -c yoursite.json -i site1 site2
```

Deploy Issuetrak from a particular distribution folder, using the JSON **yoursite.json**, but only the sites named site1 and site2 designated within the JSON. Since no deployment context is provided, all contexts of Issuetrak will be deployed.

[back to top](#)

GenerateDeploymentConfiguration

The verb **GenerateDeploymentConfiguration** will output configuration information for the Issuetrak sites found on the web server. The output will never contain valid SQL credentials, as the IDU does not have the ability to determine these on its own.

```
.\issuetrak.deployment.utility generatedeploymentconfiguration -i Your.Issuetrak.Site --outfile "path\yoursite.json"
```

Verb parameters:

-i, --site

Generates a configuration for only the site specified as **sitename**. If omitted, all sites will be included in the generated configuration. **Sitename** consists of the name of the root website and the full IIS application path separated with a period, as well as the spaces and slashes replaced with periods.

-f, --outfile "path\yoursite.json"

Tells the IDU to write the output to the specified file instead of the console window. Useful for obtaining a starting configuration file for an environment with pre-existing Issuetrak sites.

The specified file does **not** need to exist prior to running this command.

Usage Example 1:

```
.\issuetrak.deployment.utility generatedeploymentconfiguration -i Your.Issuetrak.Site --outfile "path\yoursite.json"
```

Generate a deployment configuration for the application "Your Issuetrak Site", which has an application path of /. Note that the sitename converts to "Your.Issuetrak.Site". Writes the configuration information to the file **yoursite.json** that is within the folder called **path**.

Usage Example 2:

```
.\issuetrak.deployment.utility generatedeploymentconfiguration --outfile "path\yoursite.json"
```

Generates a deployment configuration for all sites detected on the web server. Writes the configuration information to **yoursite.json** that is within the folder called **path**.

[back to top](#)

GenerateAPIKey

The verb **GenerateAPIKey** generates an API key within the console window. The output contains the correct syntax to be copied and pasted into the appropriate location within a JSON. If a site is deployed with the API key specified, then that API key will be required to authenticate to the API after deployment.


```
.issuetrak.deployment.utility generateapikey
```

Example Output:

```
{  
  "ApiKey": "3HpE9Ho4XAZFdFnRh1pFRhgVuKkPzWYQIZGYgbnEI8="  
}
```

You may also choose to save the output of this to make it easier to find the key you generated:

```
.issuetrak.deployment.utility generateapikey > apikey.txt
```

[back to top](#)

ApplyLicenseKey

The verb **ApplyLicenseKey** will parse each site entry in a given JSON. The IDU will apply the license key value specified for each site. Note that this is **not** related to the API key. License keys are validated as they are parsed. If the license key for a given site fails validation, it will not be applied to the site, and the IDU will skip to the next site entry in the JSON.

```
.issuetrak.deployment.utility applylicensekey -c twosites.json -i Your.Web.Site
```

Parameters for this verb:

-i, --site

Specifies the sites to update the license key for. Multiple sites can be specified in a space-separated list. If this parameter is omitted, the IDU will parse the JSON and apply the license key value specified for each site.

-c, --config

Mandatory. Specifies the path and filename of the JSON.

Usage Example

```
.issuetrak.deployment.utility applylicensekey -c twosites.json -i Your.Web.Site
```

Parses the file **twosites.json** and applies the license key specified for the **Your Issuetrak Site** site.

► **Example Output - Successful**

► **Example Output - Failure Scenario 1: Invalid License Key**

► **Failed Output - Failure Scenario 2: Missing/Blank License Key**

[back to top](#)

VerifyConfiguration

The verb **VerifyConfiguration** parses the specified JSON to determine whether required values are filled. This does **not** validate the values, it merely checks to see if they are present.

```
.\issuetrak.deployment.utility verifyconfiguration -c .\twosites.json
```

Parameters:

-c, --config

Specifies the full path and filename of the JSON to verify. If omitted, the IDU will look for the file **deployment.json** in the console's current folder.

-d, --distro

Specifies the path to the folder containing the distribution. If this parameter is omitted at runtime, the IDU will use the DistributionPath value in the JSON if specified. If the DistributionPath value isn't specified in the JSON, and this parameter isn't passed to the IDU, then the IDU will assume the console's current folder contains the distribution.

Usage Example

```
.\issuetrak.deployment.utility verifyconfiguration -c .\twosites.json
```

Verifies that the required values are filled in the file **twosites.json**.

► **Example Output - Successful**

► Example Output - Failure

[back to top](#)

DecodeLicenseKey

The verb **DecodeLicenseKey** will decode and output the details of one or more license keys.

```
.\issuetrak.deployment.utility decodelicensekey -k "908pTHjduTL7^%SKiHUX5!TRM#2ORgGIE  
M681iQ8ECbKp*BzznIBAo15y" "HyhC2yVaGvpfgJUz9Gbkt97YrK+HXOdezUTyomCxaOY="
```

There are two parameters:

-k, --key

License keys should be specified after this parameter, enclosed within quotes and separated by spaces. If the license key is invalid, then the IDU will note this in the console window.

The usage example above decodes both of the provided keys.

-b, --base64key

This parameter is a function intended to be used only by the IDM. It decodes base64-encoded license key strings. Although we don't provide a mechanism for encoding license keys in base64 for the IDU, you may encode a license key in base64, and use this parameter to decode them. Here is an example of how this parameter can be used:

```
.\Issuetrak.Deployment.Utility.exe decodelicensekey -b "SSBsb3ZlIHVvdGF0byBzYWxhZCBzby  
BtdWNoIQ=="
```

► Example Output - Successful

► Example Output - Failure

[back to top](#)

GetSiteDetails

The verb **GetSiteDetails** will provide very brief IIS and database information about a site specified in a JSON. This is useful for determining how long it might take to back up website files and database information, as well a count of total users versus how many are licensed.

```
.\issuetrak.deployment.utility getsitedetails -i Your.Web.Site -c twosites.json
```

Verb parameters:

-i, --site

Provides details for a specific site, specified by "sitename". If omitted, all sites listed in the JSON will be included.

-c, --config

Provides path and filename of the JSON this verb should scan. If omitted, the IDU will look for **deployment.json** in the console's current folder.

Usage Example

```
.\issuetrak.deployment.utility getsitedetails -i Your.Web.Site -c twosites.json
```

Targets the site called **Your Web Site**, which has an entry in the JSON named **twosites.json**.

► **Example Output**

[back to top](#)

VerifySQLCredentials

The verb **VerifySQLCredentials** will verify SQL that credentials are valid by attempting to authenticate to the designated SQL server. If validation fails, the output on the **Message** line will give an indication of what went wrong.

```
.\issuetrak.deployment.utility verifysqlcredentials -s servername -u sa -p yourpassword
```

Verb parameters:

-s, --server

Mandatory. Specifies the server to verify credentials against. This can be a hostname or IP.

-u, --username

Specifies the username to verify. This must exist as a SQL account on the designated server.

-p, --password

Specifies the password to verify.

Usage Example

```
.\issuetrak.deployment.utility verifysqlcredentials -s yourserver -u sa -p yourpassword
```

Attempts to authenticate to the server called **yourserver**, using username **sa** and password **yourpassword**.

► Example Output - Successful

► Example Output - Failure

[back to top](#)

GetIISConfiguration

The verb **GetIISConfiguration** pulls information from IIS about ALL (not just Issuetrak) web sites currently running on the server and dumps them to the screen as JSON.

```
.\issuetrak.deployment.utility getiisconfiguration
```

► Example Output

The output from this command can be redirected to a file to make it easier to view:

```
.\issuetrak.deployment.utility getiisconfiguration > yoursite.json
```

[back to top](#)

VerifyDotNetHostingBundleInstalled

The verb **VerifyDotNetHostingBundleInstalled** determines whether the .NET 6.0 Hosting Bundle is installed on the server, then and displays the resulting information on screen as JSON. The .NET 6.0 Hosting Bundle is required in order to install and use APIv2.

```
.\issuetrak.deployment.utility verifydotnethostingbundleinstalled
```

► Example Output

[back to top](#)

Introduction to the Issuetrak Deployment Utility (IDU)

The Issuetrak Deployment Utility (IDU) is the command line utility for deploying Issuetrak. The IDU is an interactive deployment tool designed to provide maximum power and flexibility for the system administrator that needs fine control over how Issuetrak is deployed. Working with the IDU requires proficiency with PowerShell or the Command Prompt on Windows Server. Viewing, editing, and making sense of a JSON file are all necessary to successfully complete a deployment of Issuetrak using the IDU. If a more familiar graphical installation or upgrade experience is desired, please consider using the [Issuetrak Deployment Manager \(IDM\)](#) instead.

The IDU can be used to install or upgrade single or multiple sites, apply a license key, generate an API key, and more.

In order to get useful results, we must specify a **verb** to the IDU when we use it. Only one verb may be specified at runtime. A list of possible verbs (and a brief description of each) can be called by simply executing the IDU with no options from a console window. Additional information about the usage of verbs can be found in the [IDU Verbs](#) article.

The IDU requires that a **JSON** configuration file be provided for many of its functions to be carried out. JSON is short for JavaScript Object Notation. For the purposes of our documentation, most references to JSON configuration files will be shortened to just **the JSON**, or similar. The IDU can be instructed to scan the web server for current Issuetrak instances and generate a JSON based upon the results of its scan. We also provide JSON files that can be used as a base and customized to suit your environment and needs. We'll go more in-depth into the JSON in the article [Working With the JSON](#).

The IDU can also be instructed to deploy a particular **context** of Issuetrak. That is, we can choose to deploy only the web, database, services, or all of Issuetrak. This can be useful for isolating different portions of Issuetrak to different servers for load-balancing and auto-scaling.

The example below will execute the IDU with no parameters, which will output an abbreviated 'help' explanation.

```
.issuetrak.deployment.utility
```

Now that we've given you a high-level overview of the IDU, let's take a look at what it can do. Click [here](#) to see the IDU verb documentation.

You can find more about Issuetrak Deployment Fundamentals [here](#).

Introduction to the Issuetrak Deployment Manager (IDM)

The Issuetrak Deployment Manager (IDM) is the graphical interface for deploying Issuetrak. This tool replaced the installer provided in previous releases. The IDM still provides a friendly wizard-style front-end, but it contains several enhancements over our previous installation tool.

The IDM can:

- Deploy the API during the installation of a new site or the upgrade of an existing site.
- Install or upgrade a single site, or multiple sites at one time
- Deploy only the database, web, services, or all contexts of an Issuetrak instance (at your discretion)
- Automatically back up and restore databases and web files as part of a deployment
- Generate a JSON file that can be exported for manipulation later
- Display current utilization of site resources and licensed users

We recommend the use of the IDM for most of our on-premises customers.

If a more involved level of control is desired for the deployment of Issuetrak within your environment, please consider using the [Issuetrak Deployment Utility \(IDU\)](#) instead.

You can find more about Issuetrak Deployment Fundamentals [here](#).

Best Practices - Moving a Workflow to Issuetrak

Getting a handle on your business processes requires knowledge of the process and how the process is handled in the everyday world. We have found that real-world and recorded processes can sometimes be different. Documenting both can help you understand how a process is really handled in your company.

How Can Issuetrak Help?

Let's start with the process itself. Each step in the process is going to be represented in Issuetrak by a [Task](#). A Task can be assigned to any person or group of users that have been granted permission to work with Tasks. Any user in Issuetrak can be granted permission to work with Tasks.

An issue Task is a single work step or instruction that is normally assigned to a user or a group. A [Task Group](#) is a collection of individual Tasks that can be assigned to an issue by assigning the Task Group to the issue.

Task Groups link Tasks together, to represent multiple steps in your process. Within each individual Task, you have the ability to trigger the addition of additional Task Groups, depending on the answer to a Yes/No/NA question.

What does that mean in regular language? When the steps of your process come to a decision point, you have the ability to add in additional steps, depending on what's needed. A real-life example might be an employee onboarding process. This has many steps that cross over multiple departments and teams. If the employee needs pieces of hardware, then certain steps need to be completed by the IT team, but if not, those steps aren't needed. Or perhaps an employee is part-time, so they need different paperwork done by the HR team.

Once you have your process defined and Task Groups created, how do you use them? A Task Group can be added to any issue at any time. However, a more efficient way is to build a [Issue Template](#) to launch your process. Within Issuetrak, a [Issue Template](#) is an issue submission template. You can create as many Issue Templates as needed with fields pre-filled, or prompting for information.

Additionally, Issue Templates can have tasks already included to kick off a process. That way, every time someone uses that Issue Template, the first task automatically populates. Then, as tasks are completed, any branching options triggering additional task groups cause the proper tasks to populate into the issue.

Managing Your Process

Normally, the person ultimately responsible for managing the process is assigned to the issue. Using the Issue Template, you can fill out the assignment value. Perhaps the manager of the process changes based on the submitting department or issue [subtype](#). Using [auto-assignment rules](#), you can determine who gets assigned to the issues based on your criteria.

Issuetrak Tasks, when set to have a Yes/No/NA response also give you the ability to set the substatus value, which defines where the issue is in its lifecycle. This lets you run reports or view the issue using different criteria on the [Dashboard](#). You can also use a Yes/No/NA value to trigger the cancellation of all remaining tasks and the close of the issue.

All of these options help you manage exactly where your processes are at any given time. You can set up Issuetrak to handle as many processes as needed. And if you need help, our team of **Professional Services** consultants can help you break down your steps and advise you on the best way to implement your process and workflow management within your Issuetrak site.

The goal of Issuetrak consulting is to make sure you get the most out of your Issuetrak implementation. Because your company is unique, your account manager can discuss which consulting options will work best for you. Or you can reach out directly to the Professional Services team.

**SPEAK WITH A PRODUCT
EXPERT**

How to Use Round Robin

Whether you're just learning about Round Robin for the first time, or you've just enabled it for a group in your instance of Issuetrak, you'll want to know what you can use this feature for. This article will discuss a few use scenarios for Round Robin and how it can make your work easier.

Quickly Re-Assign Any Quantity of Issues

Issuetrak has long provided the ability to make specific changes to a large quantity of issues meeting specific criteria. We call this feature **Mass Update Issues**. With the introduction of Round Robin, we can envision scenarios wherein these two features can be combined to reduce your stress and workload.

Fix Any Quantity of Incorrect Issue Assignments

You return from vacation to find out that a new team member has been assigning all of the issues they entered to the wrong team for a week. This looks like it could be a lot of work - there are over 100 issues that need to be properly re-assigned!

Steps:

1. Either [create or have a Round Robin group](#) in mind that you want to re-assign the issues to.
2. [Create a query in Report Writer](#) to look at all of the issues the new team member entered for the past week.
 - a. Select the **Issues** data set.
 - b. Select the fields:
 - i. Issue Number
 - ii. Entered On
 - iii. Entered By
 - iv. Assigned To
 - c. Set the filters:
 - i. Status = *Open*
 - ii. Entered By = *[New Team Member]*
 - iii. Entered On = *Date Range*
 - d. Save the query.
 - e. Run the query.
 - f. Validate that the results only contain the issues that you want to re-assign.
3. Click the **gear** icon in the upper right > Click on **Mass Update Issues** beneath *Tools*.
4. Set **Select Query** to the query that you created in step 2.
5. Set **Choose Field** to **Assigned To**.
6. Set **New Value** to your team's Round Robin group.
7. Click **Update**.

This will distribute the issue assignments amongst your team in far less time than if you did so manually.

Re-Distributing a Team Member's Issues

When one of your teammates needs to go on maternity leave, vacation, or any other length of time without working, you can easily re-distribute their issues amongst your colleagues.

Steps:

1. Either [create or have a Round Robin group](#) in mind that you want to re-assign the issues to.
2. [Create a query in Report Writer](#) to capture all open issues currently assigned to the team member that is going on leave.
 - a. Select the **Issues** data set.
 - b. Select the fields:
 - i. Issue Number
 - ii. Entered On
 - iii. Entered By
 - iv. Assigned To
 - c. Set the filters:
 - i. Status = *Open*
 - ii. Assigned To = *[Team Member Taking Leave]*
 - d. Save the query.
 - e. Run the query.
 - f. Validate that the results only contain the issues that you want to re-assign.
3. Click the **gear** icon in the upper right > Click on **Mass Update Issues** beneath *Tools*.
4. Set **Select Query** to the query that you created in step 2.
5. Set **Choose Field** to **Assigned To**.
6. Set **New Value** to your team's Round Robin group.
7. Click **Update**.

The employee's issues are now distributed amongst the team.

Create Different Auto Assignment Rules for Every Shift

If you have day and night teams that traditionally pull from the Unassigned queue, you can combine Round Robin with Auto Assignment rules that will continuously distribute incoming issues amongst the team members that share a common schedule. In this scenario, we will assume you have a day shift and a night shift that works Monday through Friday. Each shift belongs to a Round Robin group called Day Shift or Night Shift, respectively:

- *Day Shift: 6:00AM - 2:00PM*
- *Night Shift: 2:00PM - 10:00PM*

Day Shift Steps

1. Click the **gear** icon in the upper right > Click on **Auto Assignments** beneath Automation.
2. Along the right context menu, click **Add**.
3. Fill in the initial matching criteria for issues that you want to be auto-assigned.
4. Set the **Submitted Between** schedule for the **Day Shift** Round Robin group:
 - 6:00AM - 2:00PM
5. Set the **Submitted On** days to Monday through Friday.
6. Set the Auto-Assign To field to: **Day Shift**.
7. Click **Save**.

Night Shift Steps

1. Click the **gear** icon in the upper right > Click on **Auto Assignments** beneath Automation.
2. Along the right context menu, click **Add**.
3. Fill in the initial matching criteria for issues that you want to be auto-assigned.
4. Set the **Submitted Between** schedule for the **Night Shift** Round Robin group:
 - 2:00PM - 10:00PM
5. Set the **Submitted On** days to Monday through Friday.
6. Set the Auto-Assign To field to **Night Shift**.
7. Click **Save**.

In following the steps above, you've just configured Issuetrak to distribute issues based on the shift of the teams you manage. There is no need to activate or deactivate these rules when business hours end. The Round Robin Auto Assignments will automatically work according to the schedule you set!

Automatically Cycle Through On-Call Staff

If you have team members that remain on-call for after-hours support, then you know how important it is for them to respond to emergencies in a timely manner. These steps will show you how to use Automation in conjunction with Round Robin to help ensure that on-call staff responds to emergencies. In this scenario we will assume that your site has:

- A Round Robin group called **On-Call**.
- After-hours support between 10PM and 6AM, which the **On-Call** group covers.
- An issue type called **Emergency**.
- A default issue substatus called **New**, which is prohibited in your team's workflow for issues that are being addressed.
- Email notifications enabled for the issue assignee.

Part 1: Auto Assignment Rule Steps

1. Click the **gear** icon in the upper right > Click on **Auto Assignments** beneath *Automation*.
 2. Along the right context menu, click **Add**.
 3. Set the matching criteria to **Issue Type = Emergency**.
 4. Set the **Submitted Between** schedule for the after-hours support:
 - 10:00PM - 6:00AM
 5. Set the **Submitted On** days to Monday through Friday.
 6. Set the Auto-Assign To field to: **On-Call**.
 7. Click **Save**.
-

Part 2: Workflows Steps

1. Click the **gear** icon in the upper right > Click on **Workflows** beneath *Automation*.
2. Along the right context menu menu, click **Add**.
3. Set the Interval fields for **10 minutes** after **Last Activity**.
4. Set the matching conditions to:
 - a. **Substatus = New**
 - b. **Issue Type = Emergency**
5. Set the **Set Assigned To** field to **On-Call**.
6. Set **Add Note** to: "On-call technician hasn't responded. Assigning to the next technician in rotation."
 - a. Mark the note as **Private**.
7. Name the rule **After-Hours On-Call**.
8. Click **Save**.

After you've followed the steps above, your site will automatically re-assign a new emergency issue every 10 minutes, adding a note informing the reader why it has done so. The auto-assignment rule stops processing when normal business operations begin at 6 AM, while the workflow will continue running round-the-clock until the issue substatus or issue type is changed.

How to Embed Video

It is possible to embed videos within Knowledge Base (KB) articles and/or issues. Although the embedded video is a desirable feature, it may be best to just add the video file to a KB article or issue as an attachment. This will allow the users to save the file and run it from their own PC.

Streaming media is a resource-intensive service, so any server that will be hosting video files for multiple users may be heavily taxed on its resources, memory, CPU, and storage space.

However, if you still seek to have this functionality, it would be better to use a 3rd party media hosting service such as Photobucket or YouTube so that most of the strain is placed on the hosting provider and not on the server hosting Issuetrak. The only downside would be the amount of bandwidth used by streaming media outside the local network.

If you wish to install something similar locally, you can look into Window Media Server or other 3rd party services that can be installed on a local server. Windows Media Server is a package of Microsoft that comes disabled by default and needs to be installed/enabled to be used.

Steps

Below are instructions on how to embed the video from a 3rd party vendor.

1. Upload your video to your Media Host provider and copy the 'Embed Video' text that they will provide. You will use this text to copy into the *Note* or *Description* field of Issuetrak Knowledge Base articles and/or issues.
2. Log into Issuetrak and open the KB and/or Issue you wish to attach the video to.
 - a. If it is a KB click **Edit**.
 - b. If it is an Issue click **Add Note**.
3. Click the **Tools** menu at the top of the Rich Text Editor window, then click **<Source Code>**.
4. Paste the *Embed Video* text that you copied from your Media host provider
5. Click the **Save** button
6. Click **Update**.

You should now see the embedded video that is available to play from the Note or Knowledge Base article.

Best Practices - Expanding Issuetrak

When another group or department wants the same benefits you're getting from Issuetrak, what's the best way to make that happen? Should they use your site or get their own? Where do you start?

Where to start?

The key to successful expansion is planning. Here are some questions to ask before starting:

- Are the users in the new group different from the ones currently using the site?
 - Are the issues highly sensitive or confidential in nature?
 - Do you want to completely separate all system-wide dropdowns?
 - Is the scope and reach of this new department vastly different than your current site?
-

Separate Sites

If you answered **yes** to any of these questions, then you may want to implement a separate site. It could be that you're currently supporting external customers, but the new group only wants to handle internal issues. This means users accessing the site are completely different. As such, it might make sense to maintain different sites.

Remember that administrators see all issues and that some sites contain confidential information related to issues. In these instances, a separate site may be necessary to limit the visibility of issues. For example, Human Resources departments often install their own sites, which enables their administrators to maintain personnel security and confidentiality.

To set up a new site, identify who the administrators, agents, and end-users should be for the site, and then reach out to your sales engineer. They'll provide you with a quote and can set up consulting time with Issuetrak's Professional Services team. If the administrators are different from your existing site, a JumpStart session can guide them through the system setup.

One Site

If you answered **no** to the above questions, then there's no reason why you can't share a single site. We recommend using a test site to make sure all your needs are handled before going live. Cloud customers can request a site through Support. Support can also assist on-

premise customers by creating a backup of existing data into a test site.

Certain features become more important as you start bringing additional groups into the same Issuetrak site:

- **Class:** The Dashboard allows you to filter by Class. Using Classes helps keep things separated for those that see all issues. Management maintains open visibility across all corners of the business while being able to quickly drill down to specific areas.
 - **Groups:** Assigning issues to Groups create silos for agents to work from, allowing them to focus on completing assigned work without sifting through irrelevant issues. Groups must contain at least one agent to be assigned issues. The same agent can be in multiple groups if necessary.
 - **Departments:** If both the users and issues need to stay separate between areas, you can use the internal flag on Departments to restrict issues assigned to or submitted by the users of a specific department.
 - **Projects:** Projects group related issues to the same project or initiative. In an exclusive project, only project members are allowed access, which makes exclusive projects useful in controlling issue visibility.
-

Other Considerations

Additional departments may require different issue types and subtypes. It's possible that if you're using only subtype level one, they may need to get more granular. Subtype levels two, three, and four can also be activated if needed.

You have an unlimited number of user-defined fields available to be created. If the other group needs additional information, these fields can easily be added.

If the other department needs to see the issue fields in a different order or their user-defined fields are different than yours, the Issue Forms feature can be used to address these needs. Issue Forms are tied directly to issue type. So by adding new issue types for your new department to use, you can create issue screens with the appropriate order and user-defined fields relevant to their needs.

Dropdown fields are shared across the site. When these fields are activated, the values are seen by everyone with access to the feature. These fields include Substatus, Solutions, Priority, and Causes. Make sure the phrasing of the dropdown values makes sense to everyone. This may mean that you include prefixes to separate by the group. (E.g. IT – In Process, OPS – Under Review, FAC – Waiting for Budget).

Issue types and Issue Templates also have a "restrict to" option. This allows certain values to only be submitted by certain Groups. So if no one outside of the new department needs to

submit your new issue types or use any new Issue Templates, you can restrict those to eliminate them from the dropdowns most users see.

Steps to Move Forward

1. **Gather data.** Before making changes to your site, get an idea about what actually needs to change. Here are a few questions that will help guide you:
 - What new types of issues will you be capturing?
 - Who will these new issues come from and who will be working with them?
 - What visibility controls are needed for these new issues and new users?
 - Do you need to grant any new permissions to the users that will be submitting or working on these issues?
 - Will you need to add any new values to your existing fields like priority, substatus, solutions, or causes?
 - What new User Defined Fields will you need to create?
 - Do these new issues need new tasks or processes?
2. **Get a test site.** Our Support Team can assist you in creating a test site.
3. **Modify site structure** (organizations, departments, projects, potentially locations). Consider your needs carefully before making changes to your site's structure. *This is one area where a test site is invaluable for testing configuration changes.*
4. **Manage users/groups.** You may need to manage group memberships, adjust permissions, or create new groups.
5. **Add any issue types** and subtypes you've identified.
6. **Add any user-defined fields** that are needed.
7. **Modify issue forms.** If you added new user-defined fields or need to change the field order, you'll need to edit your existing issue forms or have new issue forms associated with new issue types.
8. **Add appropriate values** to your existing dropdowns fields like Priority, Substatus, Solution, and Class.
9. **Add new tasks/processes/Issue Templates.** Expanding Issuetrak often means adding new processes and workflows. This means setting up new tasks and task groups, then using Issue Templates to kick off those tasks as new issues are submitted.
10. **Test with users.** Try out the new functionality in your test site. It's important to test your new visibility controls along with the rest of the system, which means logging in as users from different departments, organizations, or different exclusive projects to

verify your various users have access to the issues they need without seeing the issues they shouldn't.

11. **Document changes/create training materials/train users.** New users may need some training, which requires training materials. The easiest way to create these materials is to start by documenting the changes you've made to your Issuetrak site.
12. **Roll out your site changes** in your production environment.

This is meant to be a general guideline about setting up additional departments within Issuetrak. Please contact your sales engineer or reach out to us if you have any questions. Additional consulting and training are available through Issuetrak Professional Services.

**SPEAK WITH A PRODUCT
EXPERT**

Best Practices - Working with Task and Processes

This article contains guidelines on how to analyze your processes and convert them so they can be implemented into your Issuetrak system. The actual steps to add Tasks and Task Groups to Issuetrak are not covered here. See our [About Tasks](#) article for more information about task management.

It's best to be familiar with several terms going forward:

Term	Definition
Task	An Issuetrak term defining a single item that needs to be completed. Processes and workflows normally consist of multiple tasks.
Process	A list of related tasks on an issue that needs to be completed.
Workflow	In the context of this subject, a complicated process that includes decision points that determine the next steps in the process. Not to be confused with Issuetrak's Workflows feature.
Task Group	An Issuetrak term consisting of a series of tasks that define either the entire process or a portion of the process that is triggered by a decision point. Workflows may call different Task Groups, depending on the answer at any given decision point.
Issue Template	Within Issuetrak, it is a pre-filled issue template. It allows for individual tasks or task groups to be pre-populated on specific templates for ease of use.

Now that we've looked at a couple of the terms that we'll be working with, let's move on. We'll start with simple processes.

Simple Processes

It's best to understand the process that needs to be added to Issuetrak. Some examples of processes include purchase approvals, access approvals, creation of customer records or hardware replacement requests. Your processes may be short, with only two or three items, or you may need something much longer. Either way, you will want to determine all the steps involved in each process before creating it within Issuetrak.

If the process is long or complicated it may be helpful to write it down. Documenting the process ensures that no steps are missed when it's entered into Issuetrak.

Example 1: A simple list of items that need to be done to add a new customer.

	A
1	Add new customer
2	
3	Send New Cusotmer Packet
4	Add account to CRM
5	Create Support Account
6	Ship Product
7	
8	End Process
9	

To create this process within Issuetrak, the first step is to create a single Task Group that contains these individual tasks. That is also where you can determine who is assigned each individual task within that process. Here's what the Task Group looks like once created in Issuetrak:

edit del	Sales- Add New Customer
	Send New Cusotmer Packet
	Add account to CRM
	Create Support Account
	Ship Product

When that group is added to an issue, it looks like this:

Task	Assigned To	Completed	Time
Send New Cusotmer Packet		task complete?	00:00
Add account to CRM		task complete?	00:00
Create Support Account		task complete?	00:00
Ship Product		task complete?	00:00

Example 2: Hardware replacement request.

With this process, each step needs to be done in order. A quote on the hardware must be acquired before the department manager is notified. Once the purchase is made, then the hardware can be installed. It's possible that the different steps may need to be completed by different teams or individuals.

	A
1	Hardware Purchasing Request
2	
3	Gather hardware requirements
4	Get quote on replacement hardware
5	Notify department manager
6	Purchase hardware
7	Install hardware
8	
9	End Process
10	

Here's what the process looks like as a Task Group on an issue:

Task Manager

Task	Assigned To	Completed	Time
Gather hardware requirements	IT Technician	task complete?	00:00
Get quote on replacement hardware	Purchasing Manager		00:00
Notify department manager	IT Technician		00:00
Purchase hardware	Purchasing Manager		00:00
Install hardware	Installer Team		00:00

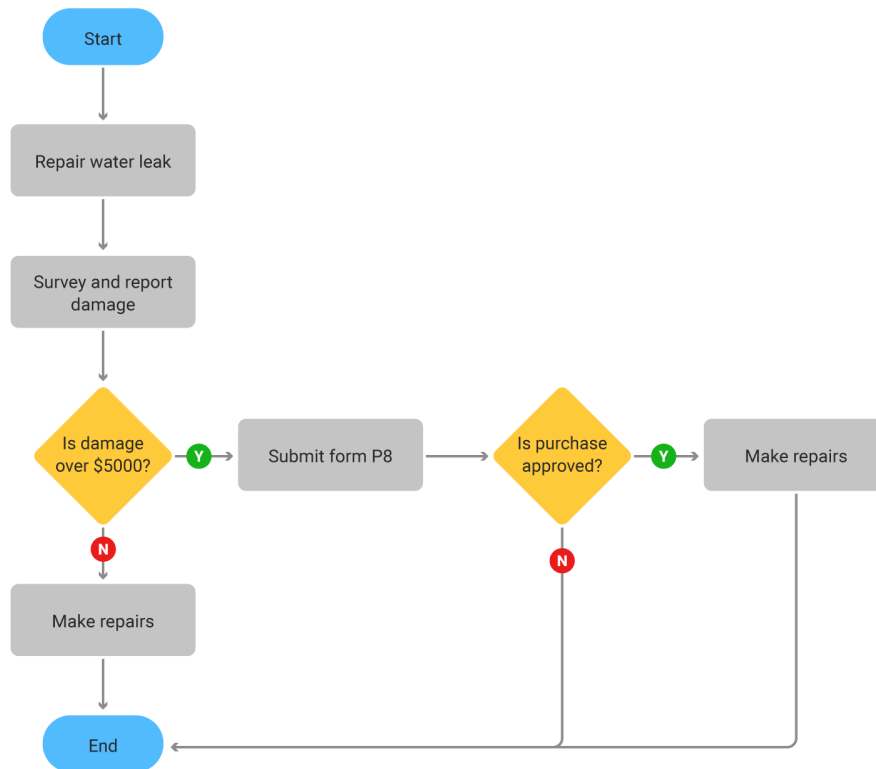
By documenting your steps ahead of time, you can better understand how the process is represented in Issuetrak. It may help to add more columns on the spreadsheet to help decide which users or groups will be assigned each task and the exact order they need to occur in.

Branching Workflows

Because workflows tend to be more complicated than a simple process, it's highly recommended to document all the steps, giving you a better visual before beginning to create the workflow within Issuetrak. Unlike a simple process, workflow contains conditional tasks that allow for different actions to occur based on the response, such as changing the direction of the existing process or inserting a new set of steps. This is handled by creating multiple Task Groups within Issuetrak that are triggered based on the response to an earlier decision point.

Example: A plumbing leak. Once the water leak is repaired, the damage needs to be surveyed and reported. If the damage exceeds \$500, there's a workflow process to be followed before damage repairs can be made. If the damage is less than \$500, then the workflow is not necessary and the damage can go ahead and be repaired.

This is the documented workflow, complete with decision-based branching:



Looking at this same process mapped in Excel allows for the identification of decision points and helps with designing the Issuetrak Task Groups.

	A	B	C
1	Operations Leak Process		
2			
3	Fix Leak		
4	Survey damage and report		
5	Is damage over \$500?		
6		Yes	
7		Submit purchasing form P8	
8		Purchasing approves?	
9		Yes	
10		Make Repairs	
11			
12		No	
13		End Process	
14		No	
15		Make Repairs	
16		End Process	
17	End Process		
18			

Identifying Decision Points

A decision point occurs anywhere a question is asked. The response to this question determines what steps happen next. These are set within Issuetrak by using Yes/No/NA task types. These tasks trigger other Task Groups to populate into the issue and continue the workflow.

In our **example**, the first two steps are simple to process items. The next task asks the question “Is the Damage over \$500?” This is the first decision point. If so, the required form must be submitted and approved before repairs can be made. If not, the repairs can be made without approval.

The second decision point only applies if the first decision point gets a “Yes” response. So if the damage is over \$500, then approval must be given before the repairs are done. The approval task is your second decision point. If the approval is not granted, the entire process stops, and nothing further occurs.

The image shows an Excel spreadsheet with the following content:

	A	B	C	E
1	Operations Leak Process			
2				
3				
4				
5				
6		Yes		
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				

Red arrows point from a red-bordered box labeled "Decision Points" to the cells containing "Is damage over \$500?" (row 5) and "Purchasing approves?" (row 8).

The tasks that continue on because of the decision points determine what Task Groups will be set up within Issuetrak.

Identifying Task Groups

There are two things that could possibly happen at our first decision point. If the answer is “Yes”, then another task and the second decision point need to be added to the process. So an Issuetrak Task Group is created containing those two items. It will be triggered by the answer of “Yes” to the Task question: “Is Damage Over \$500”. Since the “No” answer requires a different task, a second Task Group is created that includes only the “Make Repairs” task.

The second decision point also uses the “Make Repairs” Task Group. If the Task of “Purchasing Approves” is “Yes”, then it needs to call the “Make Repairs” Task Group. If the answer is “No”, then the process ends with no activity.

	A	B	C	D
1	Operations Leak Process			
2				
3		Fix Leak		
4		Survey damage and report		
5		Is damage over \$500?		
6		Yes		
7		Submit purchasing form P8		
8		Purchasing approves?		
9		Yes		
10		Make Repairs		
11				
12		No		
13		End Process		
14		No		
15		Make Repairs		
16		End Process		
17		End Process		
18				

Once the Task Groups are identified and the triggers established, the next step is to build out the workflow in Issuetrak. You will have three Task Groups with the following tasks:

Group Name	Task	Response	Call Group
Operations – Plumbing Leak			
	Fix Leak	Complete	
	Survey Damage and Report	Complete	
	Is Damage over \$500?	Yes	Operations – Plumbing Leak > \$500
		No	Operations – Make Repairs
		N/A	Operations – Plumbing Leak > \$500
Operations – Plumbing Leak > \$500			
	Submit purchasing Form P8	Complete	
	Purchasing approves?	Yes	Operations – Make Repairs
		No	Close Issue
		N/A	Operations – Make Repairs
Operations – Make Repairs			
	Make Repairs	Complete	Close Issue

Planning out the process ahead of time allows it to be easily entered into Issuetrak. Once created, starting the workflow only requires the first Task Group of “Operations – Plumbing Leak” to be added to an issue.

Best Practices

Pre-defined vs. Free-form tasks

There are two options when creating Tasks. Issuetrak comes with a pre-populated list of Tasks that can be customized. However, when creating tasks, you can either use that predefined list or create a free-form task on an ad-hoc basis.

- **Pre-defined** tasks are easier to add to Task Groups if you need to use a specific task repetitively or you want consistency in spelling or naming conventions. However, these must be entered into the Task section ahead of time before they can be used to build out processes and workflows.
- **Free-form** tasks are much more flexible, allowing you to create any task at any time. There are no spelling or grammar checks, so there could be a potential concern about data entry errors.

The values for these two values are stored in different fields within Issuetrak's backend database. We suggest only using Free-form tasks for simplicity. This allows for quick entry and avoids creating unnecessary dropdown values for items only used once.

Complete vs. YES/NO/N/A tasks

There are two types of tasks. "Complete" tasks are simply to be marked as completed once the item in question is finished. A "Yes/No/NA" task type allows for the branching workflow options. These are especially useful in approval situations or anywhere you have a decision point. Most users find it easier to phrase "Yes/No/NA" tasks in the form of a question.

Task Groups and Issue Templates

Issue Templates are pre-filled issue templates. They can be used to launch the processes and workflows. It's recommended to create all the processes and workflows in the Task Group area, then only put the initial group on the Issue Template itself. This allows you to reuse a Task Group on any issue, including another Issue Template or an existing issue, giving you greater control of your processes.

Naming Task Groups

When creating and setting triggers to call multiple Task Groups, it's easy to get confused when looking at the list of available Task Groups. It's important to consider a naming convention to help keep your Task Groups organized. You can use a common name or abbreviation for the initial group, then use the same name with dashes and additions for the workflow pieces, keeping everything together on the list. See the example below:

Initial Task group name: "HD - User Access Change"

Task group that's triggered by a yes response: "HD - User Access Change: 01 Data Owner Approval"

The next task group triggered by a no response: "HD - User Access Change: 02 Data Owner Denied"

You can see that all of these task groups are part of the same process because they all start with "HD - User Access Change".

Dependency Orders

Some processes require that tasks are completed in a specific order. The dependency order of a task allows you to control the order that the task is completed. For example,

Task	Dependency Order
Do Step 1	1
Do Step 2	2
Do Step 3	2
Do Step 4	3
Do Step 5	No Dependency

In the table above Step 1 must be completed before you can do step 2. Step 4 Cannot be completed before steps 1,2, and 3, are completed. That is because a dependency order is controlling when the task can be completed. Step 5 does not have a dependency order set so it can be done at any time.

The task that needs to be done first needs to have the lowest dependency order (usually 1). Once that task is completed the task with the next highest dependency order (usually 2) becomes available. After that task is completed, then the task with the next highest dependency order (usually 3) becomes available, and so on. You can also set many tasks to have the same dependency order so that they become available at the same time. For example, all tasks with a dependency order of 1 must be completed before you can move on to tasks with an order of 2. If a dependency order is not set, then a task is available the moment it's included on the issue.

End Task Groups at Decision Points

When putting your tasks into Task Groups, you always want to use one of your decision points as the last task. This allows the tasks to be added to the issue only when needed, providing a cleaner, more dynamic feel to the issue.

Use Issue Templates to Launch Processes/Workflows

By using Issue Templates to initiate the first part of any process or workflow, it ensures that the beginning portion of the process is uniform. Very often, that Issue Template may only have one question or a small process included, but it prevents having to try to add a process to an issue mid-stream.

Putting It All Together - an Example Process

This example does not follow best practices. All the tasks are visible, whether or not they can be completed. Notice how the list appears long, clunky and complicated. This can be especially confusing to end-users.

Task	Assigned To	Completed	Time
Is Risk assessment needed?		Yes No N/A	00:00
Risk Analysis Completed	Change User	task complete?	00:00
Assign Impact Rating	Change User	task complete?	00:00
Is Backout Plan needed?	Change User	Yes No N/A	00:00
Approved by Data Owner?	Change User	Yes No N/A	00:00
Approved by Change Board?			00:00
Schedule Change			00:00
Notify affected users			00:00
Implement Change	Change User		00:00
Was Change Successful?			00:00
Complete Post Change Review	Change User		00:00
Report to Management			00:00
Implement Backout Plan	Change User	task complete?	00:00
Was Back out Successful?	Change User		00:00
Notify Users of the Backout			00:00
Report to Management			00:00
Restart Change Process?			00:00

In the next screenshot, best practices have been applied to the same workflow. It makes the initial list short and well organized. It begins with only a single question, providing less confusion to the end-users. In this case, it only populates the tasks when necessary. After the decision points have been answered.

Task	Assigned To	Completed	Time
Is Risk assessment needed?		Yes No N/A	00:00

If you answer "Yes" to that first question, then another Task Group is called and added to the issue automatically.

Task	Assigned To	Completed	Time
YES Is Risk assessment needed?		06/30/2020 05:00PM	00:00
Risk Analysis Completed	Change User	task complete?	00:00
Assign Impact Rating	Change User	task complete?	00:00
Is Backout Plan needed?	Change User	Yes No N/A	00:00
Approved by Data Owner?			00:00

If you answer "No" a different Task Group is added. Either way, the process ends with "Data Owner Approval". Additional process items are then added by using conditional triggers when necessary.

	Task	Assigned To	Completed	Time
NO	Is Risk assessment needed?		06/30/2020 05:03PM	00:00
	Is Backout Plan needed?	Change User	Yes No N/A	00:00
	Approved by Data Owner?			00:00

This is only meant to be a general guideline and a list of some best practices when using Tasks and Task Groups within your Issuetrak system. If you have any questions or would like the assistance of our **product experts**, please do not hesitate to contact us with any questions.

**SPEAK WITH A PRODUCT
EXPERT**

Custom Record Table - When to Use

The Custom Record Table contains records with up to 50 text fields of reference information that can be used to associate just about anything to an issue, such as contact records, parts, contracts, contractors, customers, or rooms. When the Custom Record Table is used as a contact record, Issuetrak can even send email notifications to the contact. In this article, we'll take a look at when you should use the Custom Record Table.

When should you use the custom record table?

One of the key strengths of the Custom Record Table is its flexibility. For example, you control the field names, so it accommodates the information you need. If you use the table for customer contact information, those 50 fields could store first name, last name, phone number, address, and zip code, or any additional information needed about the contact.

While there are 50 fields available, you can use as many or few as you need. All of them are reportable using the Report Writer, and the first five fields can be searched on using the Search Issues option. The first five fields will be the only ones to appear on the issue record. Clicking "details" from the issue record will allow you to see the remaining data.

The Custom Record Table works really well to record contact information for people or things that don't need to interact with your Issuetrak system. It allows you to create information outside of your site's structure, without the overhead of creating a new user or new asset. Custom Record Table records also allow you to track an issue history for each record, so you can see what issues that record was selected on.

Considerations

Appearance - The first five fields of the Custom Record Table appear as a group on the issue record. This appearance draws the eye toward this section so you look at the entered data as a group.

Data Labels are controlled by the administrator, allowing the information entered into these fields to be identified by the site usage.

Create a Table Record allows users to view history of submissions on submission, and view details for the record for reference on the issue.

This feature can allow for a second reporting user or reference user to be entered into the issue for reference or for email communication. This does not allow the referenced user in the Custom Record Table access to the issue.

Data can be uploaded into the Custom Record Table by our Data Services team to provide parts list or other data that might need to be updated or referenced when submitting issues.

About Bookmarks

Bookmarks are a feature in Issuetrak that allows you to save and revisit almost any page in the product (subject to [visibility restrictions](#) and your [permissions](#)) with a single click.

Adding Bookmarks

You can add the current page in Issuetrak as a bookmark by following the steps below.

Steps:

1. Click the **bookmark** flag to the right of the page title. The flag will illuminate **gold**.
2. Enter the label that you would like to appear for this bookmark, then click **Save**.

Your bookmark will appear in the lower part of the left menu.

Managing Bookmarks

You can manage your bookmarks from the left menu. You can:

- **Delete** or **Rename** a bookmark by hovering over it and clicking the **edit** button that appears
 - **Rearrange** the display order of bookmarks by clicking and dragging
-

My Notifications

The *My Notifications* screen allows you to see what issue notifications have been sent to you from your Issuetrak site. You can get to this screen by clicking your profile name in the far upper right of Issuetrak and then clicking on **My Notifications**.

Functionality

Once you are on the *My Notifications* screen, you have a few options:

- **Sorting:** Notifications can be sorted by clicking on any column.
 - **View Notification Body:** You can view the body of any notification by clicking the **View Body** link corresponding with that notification's line item.
 - **Paging:** If there are more notification line items than can fit on one screen, you may choose to click the **Next** and **Previous** buttons to page through your notifications.
-

About Reports

Issuetrak has five reporting mechanisms:

- Dashboard
- Summary Reports
- Saved Searches
- Report Writer
- Scheduled Reports

[Dashboard](#)

The Dashboard presents users with up-to-the-minute statistics on all open issues in your system.

[Summary Reports](#)

Summary Reports are built-in system reports.

[Saved Searches](#)

Saved Searches are quick and easy retrievals of stored search criteria.

[Report Writer](#)

Report Writer allows for sophisticated report writing, including building a query and running subsequent reports.

[Scheduled Reports](#)

Scheduled Reports automatically email Saved Searches and reports built in the Report Writer at regular intervals to a list of users via email in CSV, Excel, or HTML format.

Optionally, Saved Searches and reports built in the Report Writer may also be **Shared** on a case-by-case basis, making them accessible to other users.

Required Permissions

Which report mechanisms are available to users depend on their users' permissions. Related permissions include:

- **Menu Options / Pages Allowed > Dashboard** determines which users can view the Dashboard.
- **Menu Options / Pages Allowed > Reports** determines which users can view the Reports menu.
- **Menu Options / Pages Allowed > Search Issues** determines which users can view Search Issues.

- **Can run built-in Summary reports** determines which users can see the Reports > Summary Reports sub-menu option, allowing the user to run Summary Reports.
 - **Can add, edit and run Saved Searches** determines which users can see the Reports > Saved Searches sub-menu option, allowing the user to add, share, edit, delete and run Saved Searches, as well as share, edit, delete and run Saved Searches Shared with that user. The “Share” checkbox will appear on the Search Issues screen.
 - **Can add, edit and run Report Writer queries and reports** determines which users can see the Reports > Report Writer sub-menu options, allowing the user to add, share, edit, delete and run Report Writer Queries and Reports, as well as share, edit, delete and run Queries and Reports Shared with that user.
-

Change Password

The option for a user to change their own password will only appear if the below conditions are met:

- “Self Service” option has been enabled within the [Password Policy](#) settings (this, in turn, can only be activated if Outbound Email is enabled).
- “Can change their own password” permission has been enabled on the current user's account page.

To change your password, please do the following steps:

1. Click on your **User ID** in the upper right > choose **Change password** from the drop-down.
 - Note: If you do not have Change Password available, then this is disabled for you as a result of the site's configuration.
2. Enter *Current Password*.
3. Enter *New Password* (making sure to adhere to any listed password requirements).
4. *Retype password*.
5. Click the **Change Password** button.

A confirmation message will appear when this process is complete.

Saved Searches

Saved Searches are quick and easy reports generated from criteria entered on the Search Issues screen. Once saved, a Saved Search can be run any time with the most current data or delivered at regular intervals to select users via email in CSV, Excel, or HTML format as a **Scheduled Report** from the Reports menu.

Saved Searches may also be **Shared**, making them accessible to other users. However, users that are members of Internal Only Organizations or Departments can only see Shared Searches created by other users within the same Organization or Department.

Adding a Saved Search

Steps:

1. Along the lefthand menu, click **Search Issues**.
2. Enter the search criteria you want to search Issues for.
3. When you've entered the desired search criteria, set the **Search Title** field to a descriptive name you can use to find this saved search at a later time.
4. Set the **Output** dropdown menu to the desired output format.
5. In the bottom right area of the screen, click **Save New Search**.
 - a. You will receive a warning that you are about to save your search criteria: "*Search Title will be saved as a new search. Continue?*"
 - b. Click **OK** to accept the warning.

The Saved Search will then be available in the **Reports menu > Saved Searches** or via the Search Issues screen by clicking the **Retrieve Saved Searches** link that appears at the bottom right. A shortcut to the new Saved Search will also be sent to the *Issue Hub* page in the *My Reports* tab.

Editing a Saved Search

Steps:

1. Along the lefthand menu, navigate to **Report Writer > Saved Searches**;
2. Select the Saved Search that you want to edit, then click **Edit**.
3. You will be taken to the *Search Issues* screen. Change the criteria to match your desired values.
4. When you are done making changes, click **Update Search** in the lower right area of the screen.
 - a. You will receive a warning that you are about to save your search criteria: "*Search Definition ### - Search Title... will be updated with current selections.; Continue?*"

b. Click **OK** to accept the warning.

How to clear browser cache and storage

If you are experiencing login issues you may need to reset your browser state or storage, please reference the steps below.

Steps:

Internet Explorer *(for Issuetrak versions 12.9 or older):*

1. Go to **Tools** (Gear icon in the top right-hand corner).
2. Select **Internet Options**.
3. Under the Browsing History section, click on **Settings**.
4. Click on **View Files**.
5. Locate and delete the Cookie for your Issuetrak site.

Firefox:

1. Press **F12** to pull up the console.
2. Go to the **Storage** Tab.
3. Expand **Cache Storage** on the left.
 - a. Locate the cookie for your Issuetrak site.
 - b. Right-click and select **Clear**.
4. Expand **Cookies** on the left.
 - a. Locate the cookie for your Issuetrak site.
 - b. Right-click and select **Clear**.
5. Expand **Indexed DB** on the left.
 - a. Locate the cookie for your Issuetrak site.
 - b. Right-click and select **Clear**.
6. Expand **Local Storage** on the left.
 - a. Locate the cookie for your Issuetrak site.
 - b. Right-click and select **Clear**.
7. Expand **Session Storage** on the left.
 - a. Locate the cookie for your Issuetrak site.
 - b. Right-click and select **Clear**.

Edge Legacy:

1. Press **F12** to pull up the console.
2. Go to the **Storage** Tab.
3. Expand **Cookies** on the left.
4. Click on the cookie for your Issuetrak site.
5. In the right pane - Right-Click and select **Delete all cookies**.

Chrome and Chromium Edge:

1. Press **F12** to pull up the console.
2. Go to the **Application** Tab.
3. Expand **Local Storage** on the left.

- a. Right-Click on the cookie for your Issuetrak site.
 - b. Click on **Clear**.
4. Expand **Session Storage** on the left.
 - a. Right-Click on the cookie for your Issuetrak site.
 - b. Click on **Clear**.
5. Expand **Cookies** on the left.
 - a. Right-Click on the cookie for your Issuetrak site.
 - b. Click on **Clear**.

Once the cookie(s) is cleared the user can then close the console and log in again, or refresh the page if you are using SSO login.

If you still experiencing issues, please contact the **Support Team**. You can contact Support at 888-789-8725 (US & Canada), +1 757-213-1351 (International), support@issuetrak.com or <https://support.issuetrak.com/>.

Issuetrak Navigation

In Issuetrak there are three basic navigation menus:

- Settings lightbox navigation
- Left menu
- Right context menu

Issuetrak Site Navigation

In the top bar to the far right, there is a gear icon to the left of the name for the currently logged-in user. This icon when clicked will show the settings lightbox. It is typically the first thing you see when loading a browser window displaying Issuetrak. On the left side of Issuetrak is a collapsible menu showing Main site functionality options and an editable Bookmarks section. On some screens, a changing right context menu will appear with options and related links that change depending on your current screen.

Site Navigation areas	Functionality
Settings Lightbox	Opens the site configuration options and also provides access to the Asset Management, Billing, and Surveys modules, if available. Options will show as grayed out if the currently logged-in user does not have permission to access the section, or if the section is Disabled.
Left Menu	This menu has two sections: a static menu providing links to items such as New Issue, Dashboard, and Issue Hub, and the Bookmarks section where a user can bookmark commonly accessed pages for easy access. The items in this list can be re-organized, edited, and deleted by the user. The Bookmarks section is user-specific and can be resized.
Right Context Menu	This menu changes depending on the screen that is currently navigated to and provides contextual options based on the current screen. For example, if the user is on the Issue screen, options for Edit, Add Note, and Close will be in the righthand context menu.

The upper-right side of the Title bar shows you some important information such as a search option, which allows you to search for information in an Issue's Subject, or load an Issue by its Number. Other available options are a print option to allow you to print a cleaned-up version of the page you are viewing, a circle with a question mark that opens the Issuetrak Help Center, a gear icon for accessing the Settings lightbox, and a User settings menu. The User settings menu includes options for My Settings, Change Password, and Log Out.

Remember: The selections shown, and options available, will vary according to how the site is configured and what permissions your Administrators have assigned to your User profile. Please explore your options and contact us if you have any questions!

About Issuetrak

What is Issuetrak?

Issuetrak is a software solution that allows you to track issues, tickets, and requests from start to finish. Issuetrak is backed up by a team of developers, support analysts, account managers, and software engineers ready to assist you and your team whenever you need help.

What is an Issue?

An “*issue*” is a generic term that describes a unit of work in Issuetrak. The label for this unit may be changed on your site to whatever word you prefer: item, work order, request, ticket, complaint, etc. Each issue contains a collection of information. Your administrator can configure the information gathered on each issue to meet the needs of your site. There is no limit to the number of issues that can be recorded in any given instance of Issuetrak.

Term Dictionary

Before you start, you may find it helpful to see definitions for some of the tools and features within Issuetrak. Please take a look at our [Term Dictionary](#).

What can I do to an Issue?

If you are a [SysAdmin](#), you can see and do everything possible within Issuetrak. If you are not a SysAdmin, then the story is a little more complicated. Licensing, site structure, site configuration, and the permissions granted to your account will control the features and Issues that you can access.

Getting Help

As a user, your first line of inquiry should be your local *Issuetrak Administrator*. You may also find some answers within Issuetrak’s Help Center. Use the search box at the top of this page to find help about the topics you are interested in.

If your question cannot be answered by your local administrator, then they can submit a request to the Issuetrak Support Team. Only a user approved by your local account Administrator will be able to submit an issue directly to our Support Team. To help them get in touch, we provide a "[Contact Us](#)" button within each Issuetrak site to help them submit an issue into our system.

Additional Resources

Thanks for reading! We have put together a few more resources for new Issuetrak users to take a look at:

- [Issuetrak Navigation](#)
- [Submitting Issues](#)
- [Searching Issue](#)
- [How to Use Issue Hub](#)

For Administrators and Sys Admins we also recommend taking a look at the following:

- [Resource List](#)
 - [The Benefits of Customer Training](#)
 - [Issuetrak Professional Services](#)
-

How to reset a locked user account

If a user inputs an incorrect password too many times, or has forgotten their password and has subsequently locked their user account, a password reset will be required in order to allow the user to log into Issuetrak again.

As there are multiple methods a user account password is used to log into Issuetrak, there are different methods a password can be reset.

Third-Party Identity Management-Authenticated Accounts

As third-party passwords are not stored in Issuetrak, if the user account is locked on the identity provider's side, it will prevent login to Issuetrak. Once the account has been unlocked/reset in the identity provider, the user will be able to log into Issuetrak.

Issuetrak Authenticated Accounts

If your instance of Issuetrak has its own separate password that is different than the Active Directory credentials, then there are two methods that a user's password can be reset to allow for the user to log in after the account has been locked.

- Have an **Administrator** or **User Administrator** perform a manual password reset.
- Have the user perform a [Self-Help Password Reset](#) if the option is enabled.

You can also refer to [this](#) article in order to confirm that Self-Help Password Reset is enabled and instructions on how to perform a password reset.

Custom Productivity Reports

Custom reports can be very helpful to managers that wish to obtain data about the productivity of their agents. In this article, we'll take a look at using the Report Writer to create a custom summary report. It's important to note that the methods outlined here are not the only way of displaying or getting report data. Feel free to use the steps in this tutorial to create your own custom reports with the fields and information that matter to you.

If you are not familiar with the Report Writer, you may find it helpful to take a look at the article [About Report Writer](#) for some background information. If you are familiar with the Report Writer, then please feel free to read on.

Here are a few examples of custom reports that could be valuable to track the productivity of agent users.

Report on the number of issues assigned to agents last month

The purpose of this report will be to look at the number of issues assigned to each agent last month. Note, this report will show who was most recently assigned to an issue if that issue moved through multiple assignments. This is valuable information when assessing the performance of agent users.

To build this report, we must first build a query to retrieve the filtered data and then build a report off of that query data to organize the data.

Step 1. Create a Query

1. Navigate to **Reports > Report Writer > Queries**.
2. Click **New** to create a new query.
3. Choose the dataset **Issues** from the data sets drop-down menu. *(This may be a different name if you have renamed the issue field).*
4. Drag the available fields **Issue Number** and **Assigned To** over to the *Selected Fields* column.
5. Click **Next**.
6. Choose **Assigned On** from the *Field* dropdown and set the *Condition* to **Last Month** *(or any time frame you want to report on).*
7. Click **Save Filter Expression**.
8. Choose **Assigned To** from the *Field* dropdown and set the *Condition* to **IN**.
9. Click the **magnifying glass** next to the *Field Value* and a pop-up box with the users will be presented.
10. From the *Select Assigned To* pop-up window, you can choose multiple agent users that you want to report on by holding down the Ctrl button when selecting users. You can also manually fill out the *Field Value* by separating the user display names with semicolons

Example:

Lily Braun;Piotr Bridges;Gene Guzman

11. Once the agent display names are populated in the *Field Value*, click **Save Filter Expression**.
12. Click **Next**.
13. Type a **Query Name** and click **Save & Run**.
14. You will be presented with the filtered Query data.

Step 2. Create a Report

1. Click **Reports** on the left-hand menu.
2. Click **New**.
3. Click the *Query Drop Down* and select the **Query** you created. This will bring in all fields from the query.
4. Click **Next**.
5. On the *Group By* page, drag the **Assigned To** field over to the *Selected Fields* list.
6. Click **Next**.
7. On the *Group Defaults* page, uncheck **Show Header**.
8. Click **Next**.
9. On the *Sort By* page click **Next**.
10. On the *Column Defaults* page, check **Suppress Report Details**.
11. Choose **Count** from the *Subtotal* dropdown for the *Issue Number* Column Name.
12. Click **Next**.
13. Type a **Report Name** and click **Save & Run**.

The displayed report should show a concise count of issues and the agent that they were assigned to. Managers can use this report to monitor the productivity of agent users in the Issuetrak system.

Report of number of labor hours per agent last month

The purpose of this report will be to look at the number of labor hours each agent recorded last month. This report can only display labor hours if the users adding the notes are recording Labor Hours. This is valuable information when assessing the performance of agent users.

Step 1. Create a Query

1. Navigate to **Reports > Report Writer > Queries**.
2. Click **New** to create a new query.
3. Choose the dataset **Issues/Notes** from the data sets drop-down menu. (*This may be a different name if you have renamed the issue field.*)

4. Drag the available fields **Note Created By** and **Note Labor Hours** over to the *Selected Fields* column.
 5. Click **Next**.
 6. Choose **Note Created On** from the *Field* dropdown and set the *Condition* to **Last Month** (or any time frame you want to report on).
 7. Click **Save Filter Expression**.
 8. Click **Next**.
 9. Type a **Query Name** and click **Save & Run**.
 10. You will be presented with the filtered Query data.
-

Step 2. Create a Report

1. Click **Reports** on the left-hand menu.
2. Click **New**.
3. Click the Query Drop Down and select the **Query** you created. This will bring in all fields from the query.
4. Click **Next**.
5. On the Group By page drag, the **Note Created By** field over to the *Selected Fields* list.
6. Click **Next**.
7. On the Group Defaults page, uncheck **Show Header**.
8. Click **Next**.
9. On the Sort By page click **Next**.
10. On the column defaults page, check **Suppress Report Details**.
11. For the *Note Labor Hours* Column Name, choose **Sum** from the *Subtotal* dropdown.
12. Click **Next**.
13. Type a **Report Name** and click **Save & Run**.

The displayed report should show a concise total of labor hours and the users that entered labor hours. Managers can use this report to monitor the productivity of agent users in the Issuetrak system.

Report on the number of issues closed per agent last month

The purpose of this report will be to look at the number of issues closed per agent last month. This is valuable information when assessing the performance of agent users.

Step 1. Create a Query

1. Navigate to **Reports > Report Writer > Queries**.
2. Click **New** to create a new query.
3. Choose the dataset **Issues** from the data sets drop-down menu. (This may be a different name if you have renamed the issue field.)
4. Drag the available fields **Issue Number** and **Closed By** over to the *Selected Fields* column.
5. Click **Next**.

6. Choose **Closed On** from the *Field* dropdown and set the *Condition* to **Last Month**. (or any time frame you want to report on)
7. Click **Save Filter Expression**.
8. Choose **Closed By** from the *Field* dropdown and set the *Condition* to **IN**.
9. Click the **magnifying glass** next to the *Field Value* and a pop-up box with the users will be presented.
10. From the *Select Closed By* pop-up window, you can choose multiple agent users that you want to report on by holding down the Ctrl button when selecting users. You can also manually fill out the Field Value by separating the user display names with semicolons.

Example:

```
Lily Braun;Piotr Bridges;Gene Guzman
```

11. Once the agent display names are populated in the *Field Value*, click **Save Filter Expression**.
12. Click **Next**.
13. Type a **Query Name** and click **Save & Run**.
14. You will be presented with the filtered Query data.

Step 2. Create a Report

1. Click **Reports** on the left-hand menu.
2. Click **New**.
3. Click the Query Drop Down and select the **Query** you created. This will bring in all fields from the query.
4. Click **Next**.
5. On the *Group By* page, drag the **Closed By** field over to the *Selected Fields* list.
6. Click **Next**.
7. On the *Group Defaults* page, uncheck **Show Header**.
8. Click **Next**.
9. On the *Sort By* page click **Next**.
10. On the *Column Defaults* page, check **Suppress Report Details**.
11. For the *Issue Number* Column Name, choose **Count** from the *Subtotal* dropdown.
12. For the *Note Labor Hours* Column Name, choose **Sum** from the *Subtotal* dropdown.
13. Click **Next**.
14. Type a **Report Name** and click **Save & Run**.

The displayed report should show a concise count of issues closed per agent last month. Managers can use this report to monitor the productivity of agent users in the Issuetrak system.

Reports can be configured to send out automatically by utilizing the Scheduled Reports feature in Issuetrak. For more information on Scheduled Reports, please reference the following article about [Scheduled Reports](#).

Closing Thoughts

If you would like the assistance of our **product experts** in creating a custom report that fits your company's unique needs, please do not hesitate to contact us with any questions.

[SPEAK WITH A PRODUCT
EXPERT](#)

How to Use Issue Hub

Before we can explain how the Issue Hub works, let's discuss what the Issue Hub is!

So What Is the Issue Hub?

The Issue Hub is a control panel where Issuetrak Users can see and manage their Issues at a glance. It is shipped with a set of preset views allowing you to see data through pre-selected column views. All of the views except the *Open Issues* view are filtered by your role on an Issue: *Submitter*, *Enterer*, *Assigned*, *Next Action*, *Task Assigned*, or *Task Available*. The Open Issues view allows you to view all Issues you are able to see regardless of your role on the Issue.

Each view can be filtered by a column value and/or sort order set by another column. But there's more!

As an [Administrator](#), you can add new views or remove the default views to give you a more customized view. Additionally, you can customize the information shown on the view by selecting the columns that are important to your team. This includes columns that were not available to you on the default views.

You can also create a filter that applies automatically to Issues in a view. This is known as a *Base Filter*. An example would be a view showing Issues filtered by one Issue Type. Once a User accesses the view, they can modify the view by changing the sort order or adding additional filters (*User Filters*) on top of the Base Filter.

For more information on Base and User Filters, see our [Term Dictionary](#).

Using the Issue Hub for Mass Updates

The Issue Hub also allows users with the proper permissions to make certain updates to Issues, either individually or in bulk. For example, you could select five issues and update their assignment or close them -- directly from the Issue Hub. A User's permissions and visibility filters will affect what actions they can take within the Issue Hub.

What Does Issue Hub Mean for My Team?

The Issuetrak Hub is a tool to allow you and your administrators to create customizable

views and management capabilities. Allowing you to organize data that is important to your team. Using the ability to update multiple issues with this toolset Users can be more productive.

Please also look through the [About Issue Hub](#) for more information on its specific capabilities. If you have any questions or would like to speak with our Product Expert, we are here to help!

**SPEAK WITH A PRODUCT
EXPERT**

Web Accessibility Guidelines

The Web Accessibility Initiative developed the [Web Content Accessibility Guidelines \(WCAG\)](#) to provide a single standard for web content accessibility that meets the needs of individuals with disabilities.

Accessibility is a function of [Universal Design](#), or the degree to which a product, device, service, or environment is available to as many people as possible. When applied to software, accessibility focuses on the right of people with disabilities or special needs to a system, often through use of assistive technology such as screen readers. [Screen readers](#) are software programs that allow blind or visually impaired users to read the text that is displayed on the computer screen with a speech synthesizer or braille display.

One of the ways Issuetrak helps you meet accessibility standards is by providing a series of optional accessibility settings to work with screen readers.

Accessibility in Issuetrak

These settings can be enabled by any Administrator with the [Sys Admin](#) parameter. To activate these options:

1. Click the gear icon in the upper right > click **Defaults** beneath *System*.
2. Scroll to the bottom of the page.
3. Click any or all of the options needed in the **Accessibility** section.
4. Click **Update**.

While Issuetrak does include these options, their rendering is dependent on the specifications of the web browser. If you have any questions, please contact Issuetrak Support at 757-213-1351 or by [email](#).

Add to Home Screen (A2HS)

Add to Home Screen (A2HS) is an option that appears on the mobile login screen of Issuetrak when viewed from a mobile browser.

As its name suggests, A2HS offers to add your Issuetrak site to your device's home screen for quick and easy access.

Have a look at [this](#) article for more information on mobile settings in Issuetrak.

Requirements

In order for the prompt to appear:

- Your site must be running Issuetrak 15.4 or above
 - Your site must be hosted via HTTPS
 - The mobile view must be enabled in your Issuetrak site
 - You must browse to the site via a mobile browser
 - You cannot have previously set the prompt to 'Never show again'
 - If you have done this, then it will be necessary to clear cookies/cache for the site before the prompt will appear again
-

How to Use A2HS

In order to use A2HS:

1. Browse to your Issuetrak 15.4+ site from your mobile device.
2. Along the top area of the site, look for a prompt to "Add site to Home Screen" and tap on it.
3. A pop-up will appear and ask you to confirm whether the Install the app to your home screen. Tap **Install**.

Note that no software is installed on your device - it effectively adds your Issuetrak site as an icon to your home screen.

You can now find the Issuetrak icon listed with the rest of the apps installed on your device.

How to Use Issuetrak Automation

Issuetrak has several types of automation that allow you to automatically update issues in various ways to keep their progress moving forward. In this article, we will discuss examples of how you can utilize combinations of automation that will work together to save you time and effort.

Before we get started, it's a good idea to familiarize yourself with the mechanisms at play here:

- [Hours of Operation](#)
- [About Substatuses](#)
- [About Substatus Rules](#)
- [About Workflows](#)

Understanding the Clock

Issuetrak provides two time measurements the moment an issue is submitted: "Total Time Open" and "Response Time". These are determined by your Hours of Operation and automation.

Total Time Open	Adjusted Time Open
This is the entire amount of time that an issue has been open including the times that the clock was paused.	This is the amount of time an issue has been open excluding the amount of time the issue was paused.

The *Adjusted Time Open* also provides users with the timeframe that the owner of the issue is responsible for.

► Why is this Important?

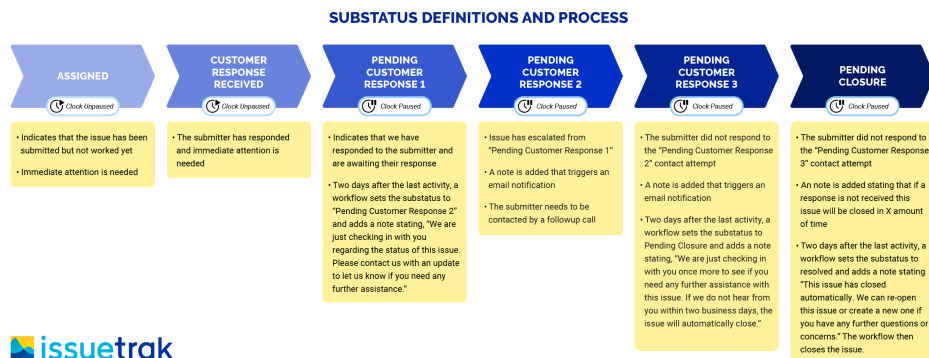
Analyze the Process

There are a few things you will want to consider before creating or adjusting automation:

- **Who should be responsible for the pending action?** The responsible user should become aware that **they** are now in charge of moving the issue forward.
- **How long do you want to wait for a response?** The workflows will fire at a time you configure. Determine how much time you are willing to let the issue sit before an automated action is made to keep the issue moving forward.
- **Name your substatus with a good naming convention.** The substatuses will inform

the users of where in the process the issue is and therefore the substatuses need to be clear and easily understandable at a glance.

- **Make a flowchart of your process (Process Document/flow).**



Create Substatuses

We developed a process in the Issuetrak Support site that we've been using to automate our correspondence with customers to keep issues moving forward. We use a combination of *Substatus Rules* and *Workflows* to:

1. Pause the clock so that time waiting on a user response is not counted against us.
2. Quickly ascertain where the responsibility for that issue currently lies.
3. Ensure that an issue doesn't stay unattended for a certain amount of time.

Our support team uses [automation](#) as a way to respond to our clients consistently, progress their issues along, and make sure that they have been fully satisfied with the resolution. This also ensures that time waiting on the submitter to respond will not count against our [Service Level Agreements](#) or affect the reporting of team metrics.

We started with creating substatuses that easily indicate the responsibility and progress of that issue. A good naming convention is important here as this field will indicate many things about an issue. Six substatuses were created to facilitate this process. Your organization may choose to use fewer or more substatuses based on your needs. Issuetrak can be customized to match your workflow and processes very easily.

Substatuses will drive this entire process since all of the automation is triggered by which substatus is on the issue. They need to be clear, descriptive, and easily understandable at a glance.

Substatus Name	Clock Status	Description
Assigned	Unpaused	<ul style="list-style-type: none"> This indicates that the issue has been submitted but not worked yet.

Customer response received	Unpaused	<ul style="list-style-type: none"> The submitter has responded and attention to this issue is needed immediately.
Pending Customer Response 1	Paused	<ul style="list-style-type: none"> This indicates that we have responded to the submitter and are awaiting their response. A note is added that triggers an email notification.
Pending Customer Response 2	Paused	<ul style="list-style-type: none"> The issue has escalated from Pending Customer Response 1. A note is added that triggers an email notification. The submitter needs to be contacted by a follow-up call.
Pending Customer Response 3	Paused	<ul style="list-style-type: none"> The submitter did not respond to the Pending Customer Response 2 contact attempt. A note is added that triggers an email notification.
Pending Closure	Paused	<ul style="list-style-type: none"> The submitter did not respond to the Pending Customer Response 3 notification. A note is added stating that if a response is not received this issue will be closed in X amount of time.

As you can see above, we have configured four of the substatures to pause the clock since we will be waiting on a response from the submitter when issues are in these substatures. Pending Customer Response 1 Pending Customer Response 2 Pending Customer Response 3 Pending Closure

Now that we have our foundation of substatures, it is time to automate them with substature rules and workflows. These rules will look at the substature in order to determine what actions to take. Our biggest goal is to be able to respond back to submitters as soon as we can. In order to accomplish this, we will create a substature rule to set the substature to Customer Response Received every time the submitter added a note to an issue. This will allow us to easily see that immediate attention is needed. Also, the Customer Response Received substature will now unpaused the clock, if it was paused, and put ownership clearly back to the assignee.

Define Substature Rules

Let's look at the substature rules we made to reduce our workload:

Issue Event = Note Added by anyone in Submitter's Organization - We use this Issue Event because we have Organizations that contain many users. We wanted to allow other users from that Organization to be able to respond to issues and have the Substatus rule fire. There are other note-added events available that may work better for your needs.

When Substatus = Any Value - This allows the substatus rule to fire any time the submitter responds to an issue which is invaluable when your goal is to respond to issues as quickly as possible.

Set substatus to = Customer Response Received - This substatus is what we use at Issuetrak Support to focus our attention on every day. This substatus means that the submitter has responded and the issue needs our immediate attention.

Now it is time to automate the process further with Workflows. The workflows are time-triggered events that fire off after a predetermined amount of time has passed. This keeps the issues moving forward by performing an action on the issues. Workflows are used to inform the responsible party that their attention is needed and that the issue has sat too long without action taken.

Workflows

Here are the Workflows we configured:

Rule Name	Interval	Condition	Actions
Pending Customer Response 1	2 Days after last activity	Substatus = Pending Customer Response 1	<ul style="list-style-type: none"> • Set Substatus to <i>Pending Customer Response 2</i> • Add Note "We are just checking in with you regarding the status of this issue. Please contact us with an update to let us know if you need any further assistance."
Pending Customer Response 3	2 Days after last activity	Substatus = Pending Customer Response 3	<ul style="list-style-type: none"> • Set Substatus to <i>Pending Closure</i> • Add Note "We are just checking in with you regarding the status of this issue. Please contact us with an update to let us know if you need any further assistance."

Pending Closure	2 Days after last activity	Substatus = Pending Closure	<ul style="list-style-type: none"> • Set Substatus to <i>Resolved</i> • Add Note "This issue has closed automatically. We can re-open this issue or create a new one if you have any further questions or concerns." • Check "Close Issue?"
------------------------	----------------------------	---------------------------------------	---

Now that the automation is configured you can use the [Issue Hub](#) or [Dashboard](#) to easily view issue substatures and monitor the progress of issues. This is valuable information to managers and agents since they can immediately see which issues need attention and which issues are waiting for a response from the submitter. Sorting by substatures is a technique used to create a worklist and prioritize your issues so that a timely response can occur.

Closing Thoughts

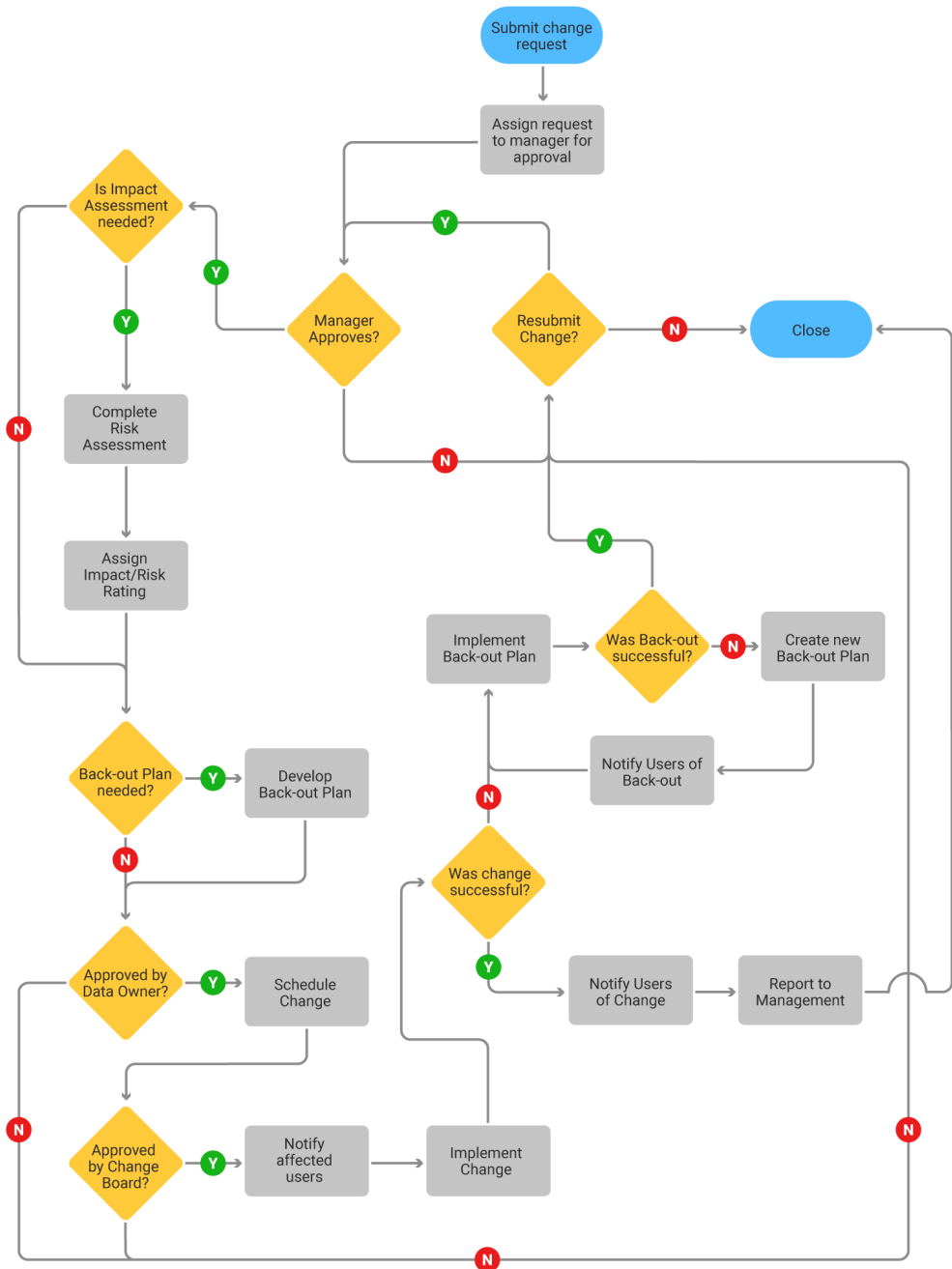
If you have any questions or would like the assistance of our **product experts**, please do not hesitate to contact us with any questions.

SPEAK WITH A PRODUCT EXPERT

How to Use Tasks Groups for Change Management Workflow

Change Management Workflow

In Issuetrak, a basic workflow must be broken down and entered as [Task Groups](#). Those Task Groups have triggers that move you to the next step in the workflow. We've created a workflow diagram that appears below and then followed it with the detailed Task Groups needed to apply it in your Issuetrak system. Not every single step is included as a task. Some are part of the standard issue process (e.g., Close issue).



Defining Task Groups

In the following process, each Task Group name is marked in bold, with the Task Group name underneath the specific name. In the second column, triggered Task Groups are also in bold and substatus changes in italics.

Group Name	Task	Response	Call Group
Change Request			
	Manager Approves?	Yes	Change Request: Impact Assessment
		No	Change Request: Resubmit
		N/A	Change Request: Impact Assessment
Change Request: Impact Assessment			
	Is Impact Assessment Needed?	Yes	Change Request: Impact Assessment Yes
		No	Change Request: Impact Assessment No
		N/A	Change Request: Impact Assessment Yes
Change Request: Impact Assessment Yes			
	Complete Risk Assessment	Complete	
	Impact/Risk Rating Added	Complete	
	Backout Plan Needed?	Yes	Change Request: Backout Plan Yes
		No	Change Request: Backout Plan No
		N/A	Change Request: Backout Plan Yes
Change Request: Impact Assessment No			
	Backout Plan Needed?	Yes	Change Request: Backout Plan Yes
		No	Change Request: Backout Plan No
		N/A	Change Request: Backout Plan Yes
Change Request: Backout Plan Yes			

	Develop a Backout Plan	Complete	
	Approved by Data Owner?	Yes	Change Request: Data Owner Yes
		No	Change Request: Resubmit
		N/A	Change Request: Data Owner Yes
Change Request: Backout Plan No			
	Approved by Data Owner	Yes	Change Request: Change Board Yes
		No	Change Request: Resubmit
		N/A	Change Request: Change Board Yes
Change Request: Data Owner Yes			
	Schedule Change	Complete	
	Approved by Change Board?	Yes	Change Request: Change Board Yes
		No	Change Request: Resubmit
		N/A	Change Request: Change Board Yes
Change Request: Change Board Yes			
	Notify Affected Users	Complete	
	Implement Change	Complete	
	Was Change Successful?	Yes	Change Request: Change Successful
		No	Change Request: Implement Backout
		N/A	Change Request: Change Successful
Change Request: Implement Backout			
	Implement a Backout Plan	Complete	
	Was Backout Successful?	Yes	Change Request: Resubmit
		No	Change Request: Backout Successful No
		N/A	Change Request: Resubmit
Change Request: Backout Successful			
	Was Backout Successful?	Yes	Change Request: Resubmit

		No	Change Request: Backout Successful No
		N/A	Change Request: Resubmit
Change Request: Backout Successful No			
	Create new Backout plan	Complete	
	Notify Users	Complete	
	Implement new Backout Plan	Complete	
	Was Backout Successful?	Yes	Change Request: Resubmit
		No	Change Request: Backout Successful No
		N/A	Change Request: Resubmit
Change Request: Resubmit			
	Resubmit Request?	Yes	Change Request
		No	Change Request: Close
		N/A	Change Request
Change Request: Close			
	Close	Complete	
Change Request: Change Successful			
	Notify affected users of the change	Complete	
	Coding & Integration Testing is Complete	Complete	
	Close	Complete	

This workflow chart and example of Task Groups are provided as a guide to creating processes in Issuetrak from your existing procedures and flowcharts. If you have any questions or would like the assistance of our **product experts**, please do not hesitate to contact us with any questions.

SPEAK WITH A PRODUCT EXPERT

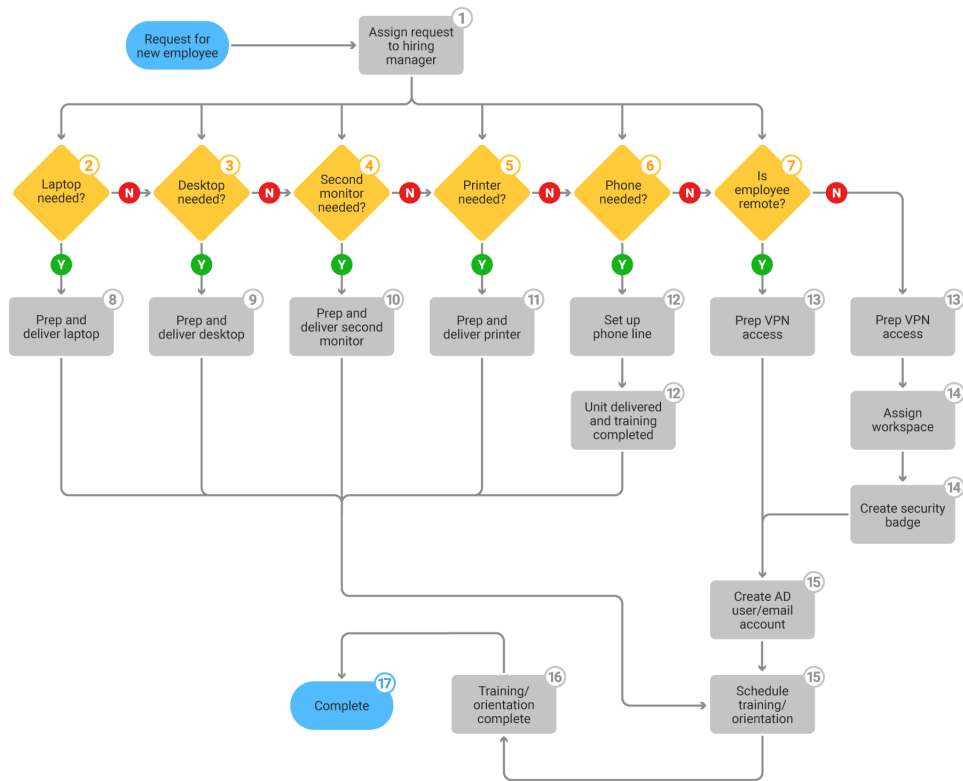
How to Use Tasks Groups for Employee Onboarding and Offboarding

Many of our customers need help with controlling their onboarding and offboarding processes. What they find is that they do not have adequate control of the process to ensure that all steps are completed; this can result in a bad experience for new employees. For employees who are leaving the company, they want to get this over with and move on. Therefore, for separations, it is important to protect the company while being respectful of the separating employee.

Below you will find basic onboarding and offboarding processes. We would like to use these processes to show you how we break down a workflow into Task Groups to assist you in building your own Task Processes using the Task Manager.

Onboarding

This example shows a simple Onboarding process. Replicating this process in our Task Manager requires us to analyze the workflow diagram or process. We look at steps to create groupings that become our **Task Groups**. We use Task Groups to build the process. In the example below, we use the workflow to show how we create individual groups. See the [Analyze](#) section below. Some Task Groups with Yes/No/NA tasks can trigger the addition of new Tasks by adding Task Groups to the Task list. This allows the process to expand as submitters respond to the Tasks. The Yes/No/NA Tasks are represented by the *diamond* shapes in the Flow Chart.



Analyze the Process

When a new employee starts, the first steps in this workflow are for the manager to respond to a series of questions that result in a list of work items for staff to perform to onboard the new employee. Once the manager responds to the questions then work can begin and does not complete until all tasks are completed.

- Each **Decision** point in this process in the rectangle labeled **Onboarding Group** represents a question the manager needs to answer. Each question adds a work task to the list of tasks to onboard this user. As you can see, the process allows from 1 to 6 responses from the manager. Therefore, you may only add a laptop or you could add a laptop and second monitor and work remotely. Recognizing this early guides you through your setup.
- Define Groups – Decision blocks start and end **Task Groups**.
 - **Onboarding 1 Assign Request to the hiring manager** – is the first group in the process and includes steps 2, 3, 4, 5, 6, and 7.
 - **Onboarding 8 Laptop** adds Task 8 from Yes response to step 2.
 - **Onboarding 9 Desktop** adds Task 9 from Yes response to step 3.
 - **Onboarding 10 Second Monitor** adds 10 from Yes response to step 4.
 - **Onboarding 11 Printer** adds Task 11 from Yes response to step 5.
 - **Onboarding 12 Phone** adds two Step 12 Tasks from Yes response to step.
 - **Onboarding 13 Remote Yes** adds both Step 13 and 15 Tasks as well as Task 16 and 17 to close the issue.
 - **Onboarding 13 Remote No** adds Step 13, 14, 15, 16, and 17 to close this issue.
- All Tasks, process numbers 8 through 15 represent tasks that are completed at any time.
- Task 16 Completes after Task 15 is completed.

- Task 17 closes the issue.

Onboarding Task Groups

Each Task Group is added to Issuetrak via the navigation by clicking the **gear** icon in the upper right > click on [Task Groups](#) beneath *Tools*> click on **Add** in the right context menu.

If you follow our best practice guidelines, then add each **Group Name** first (Onboarding). The following groups then have names associated with their purpose. In some cases, we will add *Yes* or *No* to the end of a group name to indicate the response they will spawn (Onboarding Remote Yes, Onboarding Remote No). You can also add *numbers* to the beginning of the step to indicate where in the process the step starts (Onboarding 8 Laptop). This is especially helpful when you use a workflow to reference like this one. Once you name each group, add the individual Task to the Task Groups.

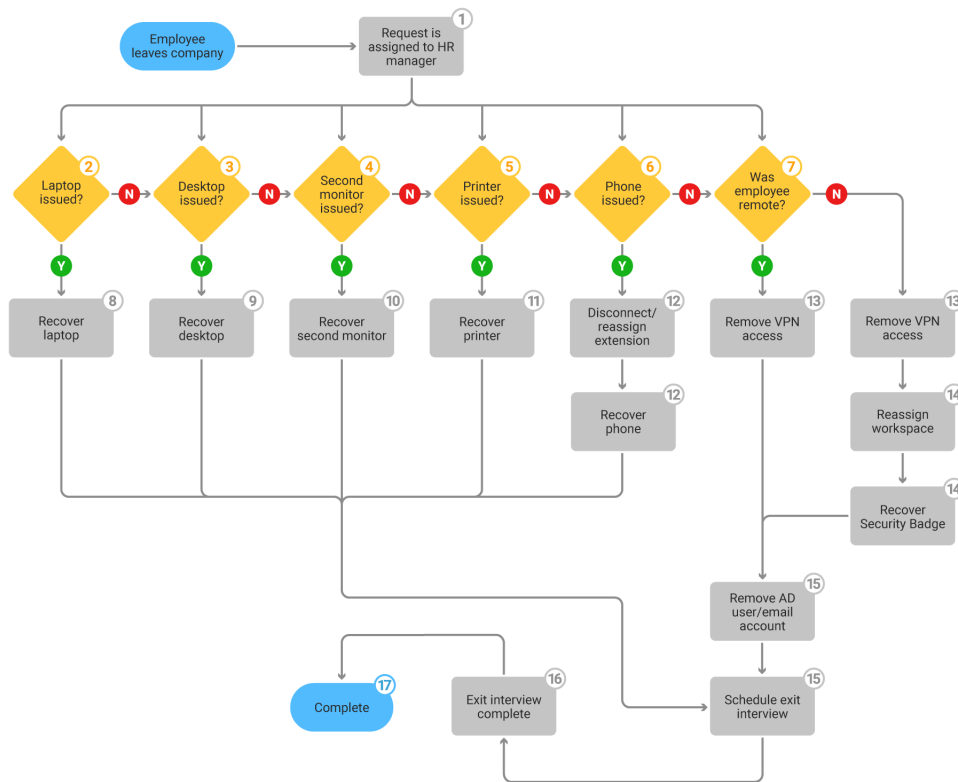
Once you are done you will have 8 Task Groups added for this process. With Task Groups, you have the ability to assign each task to an individual user or group. Additionally, you could potentially change the Substatus of the issue depending on the answer to the Yes/No/NA task. After adding all of the Task Groups to the site, you will be able to create an Issue Template to start the process. Using the Task Manager, add the **Onboarding** Group to the Issue Template. This allows the submission of the issue to assign the Task to the Submitter of the issue and to allow them to begin building the Task List upon submission of the issue.

Group Name	Task	Response	Call Group
Onboarding 1 Assign Request to the hiring manager			
	2 Laptop Needed?	Yes	Onboarding Laptop
		No	
		N/A	
	3 Desktop Needed?	Yes	Onboarding Desktop
		No	
		N/A	
	4 Second Monitor Needed?	Yes	Onboarding Second Monitor
		No	
		N/A	
	5 Printer Needed?	Yes	Onboarding Printer
		No	
		N/A	
	6 Is Phone Needed?	Yes	Onboarding Phone

	No	
	N/A	
7 Is Remote?	Yes	Onboarding Remote Yes
	No	Onboarding Remote No
	N/A	Onboarding Remote No
Onboarding 8 Laptop		
8 Prep and Deliver Laptop	Complete	
Onboarding 9 Desktop		
9 Prep and Deliver Desktop	Complete	
Onboarding 10 Second Monitor		
10 Prep and Deliver Second Monitor	Complete	
Onboarding 11 Printer		
11 Prep and Deliver Printer	Complete	
Onboarding 12 Phone		
12 Phone Line Set Up	Complete	
12 Unit Delivered and Training Completed	Complete	
Onboarding 13 Remote Yes		
13 Prepare VPN Access	Complete	
15 Create AD user/email account	Complete	
15 Schedule Training/Orientation	Complete	
16 Training /Orientation Complete	Complete	
17 Close	Complete	
Onboarding 13 Remote No		
13 Prepare VPN Access	Complete	
14 Assign Workspace	Complete	
14 Create Security Badge	Complete	
15 Create AD user/email account	Complete	
15 Schedule Training/Orientation	Complete	
16 Training /Orientation Complete	Complete	
17 Close	Complete	

Offboarding

In this example, we are using the same process, just changing the questions to provide a basic offboarding process. Pay attention to the differences, they can affect how we plan and implement the process in Issuetrak.



Analyze the Process

When an employee separation occurs we have to notify multiple departments so that certain actions occur. Some are to secure assets of the company, and some are to secure data and facility access. In this workflow, the submission of the issue becomes the notification method to multiple responsible parties. The task completion ensures that we secure all user access and assets. The first step in this workflow is for the manager to respond to a series of questions that result in a list of work items for staff to perform to off-board the employee. Once the manager responds to the questions, the work can begin and does not complete until all tasks are completed.

- Each Decision point in this process in the rectangle labeled Offboarding Group represents a question the manager needs to answer. Each question adds a work task to the list of tasks to onboard this user. As you can see, the process does allow for from 1 to 6 responses from the manager. Therefore, you may only add a laptop or you could add a laptop and second monitor and work remotely. Recognizing this early guides you through your set up
- Define Groups – Decision blocks start and end Task Groups.
 - **Offboarding 1 Request is assigned to the HR manager** is the first group in the process and includes steps 2, 3, 4, 5, 6, and 7.

- **Offboarding 8 Laptop** adds Task 8 from Yes response to step 2.
 - **Offboarding 9 Desktop** adds Task 9 from Yes response to step 3.
 - **Offboarding 10 Second Monitor** – adds 10 from Yes response to step 4.
 - **Offboarding 11 Printer** adds Task 11 from Yes response to step 5.
 - **Offboarding 12 Phone** adds two Step 12 Tasks from Yes response to step 6.
 - **Offboarding 13 Remote Yes** adds both Step 13, 15, 16, and 17 to close.
 - **Offboarding 13 Remote No** adds steps 13, 14, 15, 16, and 17 to close.
- All Tasks, process numbers 8 through 15 represent tasks that are completed at any time.
 - Task 16 Completes after Task 15 is completed.
 - Task 17 closes the issue.

Offboarding Task Groups

Group Name	Task	Response	Call Group
Offboarding 1 Request is assigned to the HR manager			
	2 Laptop Issued?	Yes	OffBoarding 8 Laptop
		No	
		N/A	
	3 Desktop Issued?	Yes	OffBoarding 9 Desktop
		No	
		N/A	
	4 Second Monitor Issued?	Yes	OffBoarding 10 Second Monitor
		No	
		N/A	
	5 Printer Issued?	Yes	OffBoarding 11 Printer
		No	
		N/A	
	6 Was Phone Issued?	Yes	OffBoarding 12 Phone
		No	
		N/A	
	7 Was Remote?	Yes	Offboarding 13 Remote Yes
		No	Offboarding 13 Remote No
		N/A	Offboarding 13 Remote No
Offboarding 8 Laptop			

	8 Recover Laptop	Complete
Offboarding 9 Desktop		
	9 Recover Desktop	Complete
Offboarding 10 Second Monitor		
	10 Recover Second Monitor	Complete
Offboarding 11 Printer		
	11 Recover Printer	Complete
Offboarding 12 Phone		
	12 Disconnect/Reassign Extension	Complete
	12 Recover Phone	Complete
Offboarding 13 Remote Yes		
	13 Remove VPN Access	Complete
	15 Remove from AD user/email account	Complete
	15 Schedule Exit Interview	Complete
	16 Exit Interview Complete	Complete
	17 Close	Complete
Offboarding 13 Remote No		
	13 Remove VPN Access	Complete
	14 Reassign Workspace	Complete
	14 Recover Security Badge	Complete
	15 Remove from AD user/email account	Complete
	15 Schedule Exit Interview	Complete
	16 Exit Interview Complete	Complete
	17 Close	Complete

These workflow charts and examples of Task Groups are provided as a guide to creating processes in Issuetrak. You will run into many variations of the process we are using here. If you need assistance in building workflows or have questions on how to implement them in Issuetrak, please do not hesitate to contact our **product experts** with any questions.

**SPEAK WITH A PRODUCT
EXPERT**



Cloud Vanity URL Overview

An Issuetrak Cloud site URL will typically have a format similar to <https://yoursite.issuetrak.com>. However, it is possible to have a URL with your company's domain instead.

For example:

If your company's name is "yoursite", you might be able to use a vanity URL of <https://support.yoursite.com> or <https://helpdesk.yoursite.com>.

SSL and Your Cloud Site

In order to provide a secure experience for you and your customers, all Issuetrak Cloud sites are secured via Secure Sockets Layer (SSL). In instances where you wish to use a vanity URL for your site, Issuetrak must also host an SSL certificate keyed to that domain. Largely speaking, there are two types of certificates that can be used to secure your site:

Specific URL - The certificate only works for one URL

For example:

<https://support.yoursite.com>

Wildcard - The certificate can be used with a number of sites which all share the same domain.

*For example a wildcard certificate for *.yoursite.com could be used for all of the following sites:*

<https://go.yoursite.com>
<https://support.yoursite.com>
<https://helpdesk.yoursite.com>

How to Obtain an SSL Certificate

Issuetrak is dedicated to helping you secure your site by any and all means necessary. With that in mind, there are a number of different solutions by which you can obtain a certificate. Which you choose will vary on your environment, business needs, and capacity.

Use an existing certificate

If you already have a certificate that is usable for the desired URL, you will need to export a copy of that certificate, along with a password, for Issuetrak to use. If this certificate expires you will be responsible for providing Issuetrak with a new one in order for the site to be secured properly.

Generate a certificate and host it yourself

In this method, you would create a Certificate Signing Request (CSR), submit that request to a certificate authority for validation (such as GoDaddy, DigiCert, etc.), and host the completed certificate that they provide on your own web servers. Issuetrak requires you to export a copy of this certificate, along with a password, in order for us to host that copy on our Cloud. This certificate expires after a set time (typically 1 or 2 years) and will need to be renewed with the vendor before that time.

Have Issuetrak create a CSR

If you are unable to do so for any reason, Issuetrak can create a Certificate Signing Request (CSR) on your behalf and provide you with the certificate request file to then have a certificate authority validate it. You would then provide a file from the certificate authority to Issuetrak so that we can complete the request and host your certificate on our servers. This certificate expires after a set time (typically 1 or 2 years) and will need to be renewed with the vendor that authorized it before that time.

OpenSSL

Issuetrak can guide you through the entire certificate process using a free open-source vendor called OpenSSL. In this instance, Issuetrak would create the CSR, submit it for validation, complete the request, and host the certificate. We would also have it set to automatically renew as it expires.

Issuetrak Release Notes



issuetrak 15.4

Introducing: A Renovated Mobile Experience

help desk | customer support | complaint management

release date 08.23.2022

Issuetrak 15.4 is here, and it's a well-rounded release containing new additions, updated features, and bug fixes.

First off, 15.4 is a massive facelift to Issuetrak's mobile view. Navigating around an Issuetrak site using Android and iOS now feels a more modern, while still supporting our full Identity Management suite for authenticating to Issuetrak. When using the mobile site, the login screen also now features an "Add to Home Screen" function, making it easier to add your Issuetrak site to your mobile device's home screen with just a tap.

We're also introducing a new area of the product that we're calling the *Restrictions* screen. This is a centralized page that allows Sys Admins to see every part of the product that has visibility/access restrictions applied to it. Sys Admins can quickly and easily jump to any restriction and make changes to it with a simple click.

There's more to 15.4 than just what we've mentioned above, so please keep reading to learn more!

What's New

Mobile View

The mobile view of Issuetrak has long remained unchanged, but today's release addresses that. Not only have we refreshed the look of the mobile view, we've also made some subtle changes and additions to functionality.

[Add to Home Screen \(A2HS\)](#)

The mobile view login screen now has added functionality that makes it possible to add your Issuetrak site to your device's home screen. *This requires a mobile browser and your site to use HTTPS in order to work.*

Identity Management

The mobile view will now work with all forms of identity management, and not just Issuetrak authentication.

Switch to Desktop / Switch to Mobile

We've also included a link on the login screen that allows you to toggle between the desktop and mobile experience of your site.

Restrictions

Have you ever...

- Wanted to find every issue type restriction in your site in just a few clicks?
- Needed to see every task and task group restriction without going through every single one of them?
- Needed to run a report of every visibility restriction configured for your site?

Well, now you can easily do all of those things and more!

We've added a new *All Restrictions* feature, which provides the ability to display and jump to every visibility restriction in your Issuetrak site from one centralized location. We've even added a new Restrictions data set to the Report Writer.

You can get to the *All Restrictions* screen by navigating to the settings lightbox, then find and click on *Restrictions* under **Tools**.

It's never been easier to view the visibility restrictions in an Issuetrak site! Click [here](#) to learn more about this new functionality.

Custom Links

The Custom Links functionality has been improved with the ability to restrict visibility of Custom Links based on group and organization membership.

Custom Links have also been included on the new *All Restrictions* screen with all of the other visibility restrictions for ease of access and monitoring.

Report Writer

We're also including enhancements and new data sets for the Report Writer:

- Clear indication of who has shared access to queries and reports
- User Type is now a filterable field in the Users-related data sets
- **NEW** Survey Responses / Issues data set
- **NEW** Configuration / Tasks data set
- **NEW** Configuration / Task Groups data set

What's Fixed

Incoming Email

If a Google IMAP mailbox failed to connect or authenticate, then all subsequent mailboxes configured in IEM would not be processed.

Outgoing Email

Resolved an issue where OEM would stop working if there was a SQL error processing a message.

Report Writer

- Issue links that were contained within scheduled reports would redirect to the user's issuetrak homepage rather than navigate directly to the issue.
- A report exported as a CSV file with "Group by" set to "Issue Next Actioned On" would appear blank.

Search Issues

Removed invalid export options for "Task Assigned to" issue searches.

Security

Resolved two XSS (Cross Site Scripting) related bugs that could have allowed arbitrary JavaScript code to be executed on an Issuetrak site.

Tasks

- Added "Time entered on Task" field to the "Issues/Tasks" and "Issues/Available Tasks" datasets in Report Writer.
- Removed VBScript code that caused extremely long page load times in issues with large task groups.

Users and Groups

When merging duplicate users, it was possible for the resulting user to have multiple copies of the same group if both original users were a member of the same group.

User Interface

A 500 error would appear when adding a new submitter on an issue and there were more than 32767 organizations.

Issuetrak 15.4.1 Patch Release

release date: 8.25.2022

Tasks

On the Submit Issue and Edit Issue screens, if a task was added to the issue as a part of a previous Yes/No/NA task completion, the "Update Substatus to" field would be blank.

About Round Robin

Round Robin is a feature that takes each issue assigned to a group and re-assigns it to one of the group's members. Round Robin is implemented as an attribute that can be turned on for groups.

How does Round Robin work?

Once Round Robin is enabled on a group, the Round Robin functionality will assign incoming issues to the group members in alphabetical order of User ID, sorted A through Z. When the end of the assignment list is reached, it will restart from the beginning.

Group members that currently have an **Out of Office** calendar status will not be assigned issues. Additionally, group members that do not have **Active** status will also not be assigned issues.

What happens if none of the users in a Round Robin group are eligible to be assigned an issue?

In this scenario, all issues routed to the group will be placed in **Unassigned** status.

How many Round Robin groups can I have?

There is no limit to the number of Round Robin groups.

Where can Round Robin be used?

Round Robin can be used anywhere an issue assignment can be made. This includes:

- On an issue
- Incoming Email
- Auto Assignments
- Scheduled Issues
- Issue Templates
- Workflows

- API issue assignment
 - Mass Updates
 - Global Issue cascading
-

Group Eligibility for Round Robin

Round Robin is enabled as an attribute to a group. In order to have the Round Robin attribute (and thereby use its features), a group must have:

1. **Active** status.
2. **Agents Only** membership type.
3. Can be assigned issues permission.

The **Round Robin Assignments** option will be visible on a group's *Edit Group* page when that group satisfies the three eligibility requirements above.

How do I enable Round Robin for a group?

Steps:

1. Click the **gear** icon in the upper right > Click on **Groups** beneath *Entities*.
 2. Click **edit** next to the desired group.
 3. Check the box next to **Round Robin Assignments**.
 - Don't see this option? Look at the **Group Eligibility for Round Robin** section above.
 4. Click **Update**.
-

You can see which groups have Round Robin enabled from the Groups List page.

Steps:

Method 1:

1. Click the **gear** icon in the upper right > Click on **Groups** beneath *Entities*.
 2. Look for the **Round Robin** column in the list of groups.
 - a. Groups with **Y** in the column have the attribute enabled.
 - b. Groups with **N** in the column have the attribute disabled.
-

Method 2:

1. Click the **gear** icon in the upper right > Click on **Groups** beneath *Entities*.
 2. Next to **Search On**, change the dropdown to **Round Robin Enabled**.
 3. Click **Search**.
-

Previous Release Notes

This article provides access to general documentation for all currently supported versions of Issuetrak.

[Issuetrak Version 15.4 - Restrictions & Renovated Mobile Experience](#) +

[Issuetrak Version 15.3 - Survey & UI Enhancements, etc.](#) +

[Issuetrak Version 15.2 - Secure Google Authentication, Off-Hours Workflows & Site ID](#) +

[Issuetrak Version 15.1 - Helpful Updates](#) +

[Issuetrak Version 15.0 - Zapier Integration](#) +

[Issuetrak Version 14.9 - API v2: OpenAPI Standard Compliance](#) +

[Issuetrak Version 14.8 - Quality of Life Improvements](#) +

[Issuetrak Version 14.7 - Security, Performance Improvements and More](#) +

[Issuetrak Version 14.6 - Integrated Security and Identity Management](#) +

[Issuetrak Version 14.5 - Feature Renaming and Custom Labels](#) +

[Issuetrak Version 14.4 - Open Authorization / OpenID Connect](#) +

[Issuetrak Version 14.3 - Quality of Life Release](#) +

[Issuetrak Version 14.2 - Organization Memberships](#) +

[Issuetrak Version 14.1 - Dark Mode, Office 365 Integration for Incoming Email & Click-to-Dial](#) +

Issuetrak Version 14 - Menu & Navigation Improvements	+
Issuetrak Version 12.10 - Issue Hub Enhancements	+
Issuetrak Version 12.9 - Issue Views and UI Updates	+
Issuetrak Version 12.8 - Azure AD	+
Issuetrak Version 12.7 - Quick Pick Enhancements	+
Issuetrak Version 12.6 - Issue Hub Phase 2	+
Issuetrak Version 12.5 - UI Updates	+
Issuetrak Version 12.4 - Issue Hub	+
Issuetrak Version 12.3 - Security Updates	+
Issuetrak Version 12.2 - AD FS Improvements, Default Dashboards, and More	+
Issuetrak Version 12.1 - Issue and User Management Improvements	+
Issuetrak Version 12.0 - AD Federation Services	+
Issuetrak Version 11.14 - Round Robin	+
Issuetrak Version 11.13 - Security Updates	+
Issuetrak Version 11.12 - UI and Security Updates	+
Issuetrak Version 11.11 - TrakPC/TrakMac	+
Issuetrak Version 11.10 - User Conference	+

Issuetrak Version 11.9 - More UI Updates	+
Issuetrak Version 11.8 - Reporting Enhancements	+
Issuetrak Version 11.7 - Additional Incoming Email Functionality	+
Issuetrak Version 11.6 - Incoming Email Enhancements	+
Issuetrak Version 11.5 - More UI Updates	+
Issuetrak Version 11.4 - UI Updates	+
Issuetrak Version 11.3 - Improved Search, Security, and Tasks	+
Issuetrak Version 11.2 - User Administrator	+
Issuetrak Version 11.1 - Admin Auditing and More	+
Issuetrak Version 11.0 - Deployment Tools	+

Upgrade Process

On-Premises

If you are an on-premises customer, you can learn more about the upgrade process [here](#).

Before installing this update, please verify that your installation environment meets the latest [system requirements](#).

If you utilize the Issuetrak RESTful API, it will be automatically upgraded when you upgrade Issuetrak.

Cloud

If you are a cloud customer, you can receive this update as needed to address reported issues and to assist with troubleshooting. Otherwise, the upgrade will be applied for you automatically to ensure the best possible Issuetrak experience.

You may also request the update for your site by contacting our Support Team at 888-789-8725 (US & Canada), +1 757-213-1351 (International), support@issuetrak.com or <https://support.issuetrak.com/>.

Additional Resources

The following resources are available to help address any questions or problems you might have as well as help you configure your Issuetrak site as effectively and efficiently as possible:

- [Technical Support](#)
- [Professional Services](#)

You can also connect with us and other Issuetrak customers through [Facebook](#), [Twitter](#), and [LinkedIn](#) or subscribe to our [Company Blog](#) for ongoing tips, tricks, and other useful information.

Technical Support

Our **Support Team** is happy to assist you with any technical questions or concerns. You can contact Support at 888-789-8725 (US & Canada), +1 757-213-1351 (International), support@issuetrak.com or <https://support.issuetrak.com/>.

More importantly, please keep in mind that every Issuetrak customer is entitled to exceptional and award-winning technical support and customer service through their *Maintenance Plus Agreement*, including:

- Unlimited email, phone, and remote technical assistance during our standard Hours of Operation
- Emergency technical assistance for system-critical issues outside our standard Hours of Operation
- Unlimited access to our Technical Support Knowledge Base (KB) 24 hours a day/7 days a week
- Unlimited access to all new releases and service packs as they become available

Our standard *Hours of Operation* are Monday through Friday, 8:00 AM to 8:00 PM (ET/GMT-5). In addition, at least one member of our Support Team is always “on call” to assist you with any system-critical issues 24/7.

To report system-critical issues that occur outside of our standard Hours of Operation, please call the Support line and speak to our 24/7 *answering service*. A member of our Support Team will return your call as soon as possible.

Professional Services

Our **Professional Services Team** offers a variety of configuration, implementation, and consulting services, including:

- JumpStarts (for new customers) and TuneUps (for existing customers)
- Administrator Training and User Training
- Data Import Assistance

Please see our [Consulting Services Overview](#) for more information, or contact our Pro Services Team at 866-477-8387 (US & Canada), +1 757-213-1330 (International), or proservices@issuetrak.com.

Custom Record Table - Usage Notes

The Custom Record Table contains records with up to 50 text fields of reference information that can be used to associate just about anything to an issue, such as contact records, parts, contracts, contractors, customers, or rooms. When the Custom Record Table is used as a contact record, Issuetrak can even send email notifications to the contact. In this article, we'll take a look at using the Custom Record Table.

Users with the permission "Can access and maintain Administration functions" or with the Sys Admin parameter can click on **gear** icon > click on **Custom Record Table** beneath *Issues* section to add, edit, or delete records.

Data Entry Only

When a user wants to add data to the visible fields of the Custom Record Table, all they need to do is enter it into the text fields. The field will hold up to 100 characters each. Any data entered into those fields is saved as a part of the issue record and can be searched using the *Search Issues* page. The information will also be available in the Report Writer queries and reports. However, only the first 5 defined fields will show on the issue record. You can define one of those 5 fields as an email address and have Issuetrak forward email based on the subscribers setting in the Custom Record Table setup.

In this usage case, table records are not created, details can not be viewed, and history records are not created to view at a later date.

Creating Table Records

In some usage cases, it becomes necessary to produce table records to associate data in the Custom Record Table with the Issue Data.

If a user has permission to use the Custom Record Table, then they can view existing records or create new records from the *Submit Issue* page. They will also be able to view details of existing records and view a history of issues submitted with the Custom Record Table record

Use this method when you would like to view pre-filled data, such as parts, or contact information.

To use this capability, a user can enter data into the field by the Magnifying Glass to start a search for matching records, or they can just click the Magnifying Glass and enter information into the search form. The first five fields can be used to search for the required record. Users with appropriate permission can use existing records or create new records from this form.

Once entered into the form, links will appear to allow you to view the history of issues

submitted using this record and allow the user to view details of the record they selected.

Record Visibility

An important point to note when using the Custom Record Table is that any user can see the Custom Record Table on the submit screen to select from an existing record or enter data into the first five visible fields. Only users with the permission "Can add, edit and delete Custom Record Table records" can create or edit Custom Record Records from the submit screen. If the user can also edit the issue, they can take the data entered into the five visible fields by someone else and create a record if necessary.

Another thing to keep in mind is that the data in the Custom Record Table is visible to all users with these permissions. There are no data restrictions to limit the view of data from one team to another.

Custom Record Table vs. User Defined Fields

As we've discussed, the Custom Record Table in Issuetrak is very flexible. You can use as many or as few of the 50 text fields as you need to contain the data that you want to store. It's important to note that User Defined fields also have some of this flexibility.

For the purposes of this comparison, we'll assume that you are using the Custom Record Table to store customer contact information, like First Name, Last Name, and Email Address. The features we've listed here are common across many usages of the Custom Record Table.

When you select Custom Record Table records.

- Each of the values is part of a record, so John Smith's email address is part of John Smith's record. This information is constant across all of the issues that his record is a part of.
- You can track history against those records, so you can easily see how many issues John Smith has submitted, and the history of those records from the issue view or submit page
- You can configure the Custom Record Table record as a contact record, so you can send email notifications to the customer listed on that record.
- The First Five fields are displayed on the issue view and Submit page. You'll have to select a record and click "details" to see the other fields.
- To add a new contact your team will need to create a new Custom Record Table record. This can be done from the submit page with the proper permissions.

- The information on the Custom Record Record is outside of your site's visibility controls. Anyone who can view the issue can also click on "details" to see the full record.
-

When you enter text into Custom Record Table fields without selecting a record.

- Each of the values in the fields is a stand-alone value, so the name entered is not related to any of the other information on the issue. This information is not constant across the other issues that list the same customer.
 - Because no record is selected, there's nothing to track history against. You'll have to do a search or report to see the other issues that have the same information entered.
 - Since no record is selected, no email is sent.
 - There's no way to use more than the first five fields unless you select a record.
 - If you can submit an issue, you can add data to the first five fields.
 - Anyone who can view the issue can see the information that's been entered.
-

When you use User Defined text fields

- Each of the values in the fields is a stand-alone value, so the name entered is not related to any of the other information on the issue. This information is not constant across the other issues that could list the same customer.
 - There's nothing to track history against. You'll have to do a search or report to see the other issues that have the same information entered.
 - User defined fields do not offer the ability to send email notifications.
 - You can create and add as many user defined fields as you want.
 - If you can submit an issue, you can add data to a non-private user defined field.
 - User Defined Fields can be configured as "Private". Only users with the proper permission can view edit or enter data into private user defined fields.
-

Service Contracts

Service Contracts allow you to record the service hours available to an Organization within a specified date range. Once defined, the system will automatically subtract any labor hours recorded in an issue from the balance of hours on the Service Contract. Multiple contracts may also be established for one Organization, allowing your team to relate the labor hours in an issue to the appropriate contract.

Multiple Contracts may be established for an Organization. If multiple Contracts are in effect simultaneously, users will be able to view and select the appropriate contract when entering their labor hours in an issue.

If you have ongoing (monthly, quarterly, or annual, etc.) types of Service Contracts for your customers, you may also use **batch add contracts** and let Issuetrak generate all the new contracts for you.

Add a Service Contract

Steps:

1. Click the **gear** icon in the upper right > click **Organizations** beneath *Entities*.
2. Click **edit** next to the appropriate organization from the Organization list displayed.
3. Click **add contract** in the *Service Contracts* section of the organization record, listed under *Additional Information*.
4. Define the **Contract Name**, **Begin** and **End Date**, and **Hours Purchased**.
5. Check the box next to **Require Hours on Notes**, if desired.
6. Click **Add Contract**.

A confirmation message will appear when this process is complete.

Add a Batch of Service Contracts

Steps:

1. Click the **gear** icon in the upper right > click **Organizations** beneath *Entities*.
2. Click **edit** next to the appropriate organization from the Organization list displayed.
3. Click **batch add contracts** in the *Service Contracts* section of the Organization record.
4. Define the **Contract Name**.
5. Enter the number of Contracts the system should **Generate**.
6. Set an interval to specify how often the contracts are created.
7. Select a date for **Starting On**.
8. Enter in a value for the **Hours Purchased** which will be included on each Contract

- generated.
9. Check the box next to **Require Hours on Notes**, if desired.
 10. Click **Generate Contracts**.

A confirmation message will appear when this process is complete.

Edit a Service Contract

Steps:

1. Click the **gear** icon in the upper right > click **Organizations** beneath *Entities*.
2. Click **edit** next to the appropriate organization from the Organization list displayed.
3. Click **edit** next to the appropriate contract in the *Service Contracts* section of the organization record.
4. Edit the appropriate field value(s).
5. Click **Update Contract**.

A confirmation message will appear when this process is complete.

Delete a Service Contract

Steps:

1. Click the **gear** icon in the upper right > click **Organizations** beneath *Entities*.
2. Click **edit** next to the appropriate organization from the Organization list displayed.
3. Click **del** next to the appropriate contract in the *Service Contracts* section of the organization record.

The *Edit Organization* screen will display upon completion.

Apply a Service Contract to Labor Hours in an Issue

Multiple Contracts may be established for an Organization. Users will be able to view and select the appropriate contract when entering their labor hours in an issue.

About Labor Hours

You can optionally enable the Labor Hours field in Issuetrak. This is a field that can be used to record, display, aggregate, and report upon the amount of time that users have spent working on an issue. Labor hours plays a role in several areas inside the product:

- **Issues** - Users track time spent working on the issue
- **Service Contracts** - Labor hours are entered against (deducted from) an organization's service contract
- **Projects** - Issues that are a part of a project can be used to determine the actual number of labor hours that the project required
- **Tasks** - Labor hours can be entered (and required) when completing a task
- **Billing Module line items** - Labor hours can form an integral part of billing rates

We will discuss the usage of the labor hours field in issues in the section below. After that, we will go over other sections of the product where labor hours play a role.

Labor Hours in Issues

The labor hours entered by a user on an issue are intended to reflect the time they spent on that particular issue and its related notes.

If it is desired for users to see and interact with labor hours on issues, then, in summary:

- The user editing the issue or completing the task requiring labor hours **must** have the permission "[Can enter Labor Hours when entering Notes/completing Tasks](#)"
- The issue form for the issue **must** include the "Labor Hours" field
- (Optional) Enable the Start/Stop functionality, which enables users to let the system keep track of their time spent on an issue

Let's go over these configuration changes and how to carry them out.

[Permissions](#)

Users **must** have the "[Can enter Labor Hours when entering Notes/completing Tasks](#)" permission in order to edit the Labor Hours field for notes on issues or when completing tasks.

User permissions are a weighty subject, so please consult the [relevant article](#) and apply this permission to the appropriate users in a method consistent with best practices.

[Issue Forms](#)

You can control the visibility of the Labor Hours field on issues by adding, removing, and

positioning on from the issue forms that you use on your issues. If this field is included on an issue form, then users will be able to see it on issues derived from that issue form.

Steps:

1. Click the **gear** icon in the upper right > click **Issue Forms** beneath *Issues*.
2. Click **edit** next to the issue form that you want to change.
3. Drag the "Labor Hours" field from the **Available Fields** column to the location you want them to appear on the **Included Fields** column.
4. Click **Update**.

A confirmation message will appear when this process is complete.

Issue types that utilize this issue form will now display the Labor Hours field.

Start/Stop Times

This is toggled from the [Optional Fields](#) screen. When enabled, this function:

- Provides "Start Clock" and "Stop Clock" buttons when viewing issues, which allows users working an issue to let the system track the time spent on the issue for them
- Expands the normally-sparse "Labor Hours" entry area under the Note field to include detailed date/time information and the ability to select which Service Contract (if applicable) to apply to the current issue

Organization | Service Contracts

In instances where you are supporting clients, [Service Contracts](#) may be established for an organization. The system will automatically subtract any labor hours recorded in an issue from the balance of hours on the service contract. Multiple contracts can be established for an organization. Users will be able to view and select the appropriate contract when entering their labor hours in an issue.

Creating and using service contracts will also allow you to run reports later to determine the amount of labor hours used on issues submitted against an organization, as well as determine other details in the relationship between the two.

You can learn more about service contracts [here](#).

Projects

You can optionally track the labor hours for the issues and tasks that are associated with a project. A given project can tally up the number of labor hours in related issues and tasks. You have some control over how this information is displayed.

Have a look at our [Projects](#) article for more information.

Tasks

You can configure Issuetrak to require a user to enter labor hours when a task is completed by enabling "Activate Popup Time Entry" on the *Optional Fields* screen. Upon completion of a task, a popup window will appear and allow labor hours to be entered, as well as the selection of a service contract to apply these against.

Please see our [Tasks](#) article for more information.

Billing Module

It is possible to use labor hours to help calculate invoices in the Billing Module. Labor hours can be recorded in (at a minimum) quarter-hour increments.

The Billing Module is a weighty subject, so we would recommend that you have a look at [this](#) article for more information about it.

Reporting

Labor hours are present in the "Issues" dataset (and other related datasets) within Report Writer, as well as many of the datasets that are combined with the Issues dataset. You can use Report Writer to determine the individual amount of labor hours entered for each issue, aggregate total of hours spent on issues connected with a project, and more. We provide an example of how to report on labor hours [here](#).

Be careful when attempting to track labor hours in Report Writer, as it is possible to get duplicate labor hour values between the billing module and issue-related labor hours. "Billing Line Item Created By" is probably the best field to use when trying to gather information from the Billing Module using the Report Writer.

About the All Restrictions Screen

The *All Restrictions* screen is a centralized location introduced in Issuetrak 15.4 from which you can view and manage visibility restrictions in your Issuetrak site.

You can navigate to the *All Restrictions* screen by clicking on the gear icon in the upper right corner of Issuetrak, then find the **Tools** header and click on *Restrictions*.

Overview and Behavior

Below is a list of every restriction on the *All Restrictions* screen.

- Custom Link
- Issue Hub View
- Issue Template
- Issue Type
- Issue Subtype Level 1
- Issue Subtype Level 2
- Issue Subtype Level 3
- Issue Subtype Level 4
- Knowledge Base Article
- Task
- Task Group

The quantity of restricted items under each restriction will be displayed next to it in each box. Each restriction's box can be collapsed by clicking on its header (but only if its box contains content).

The *All Restrictions* screen displays a collapsible box for each type of restriction in the site. Each box is divided into a table containing information specific to that restriction:

- Name of the restricted item
- Entity type that the restriction applies to
- Name of the entity that the restriction is for

Clicking on any line item within a restriction box will take you directly to that item's *Edit* screen, allowing you to make necessary changes or simply view additional details about it.

Clicking the **add/view** link in any restriction box will take you to the corresponding List screen for that item. For example, if you click on **add/view** next to Issue Type, then you will go to the *Issue Type View List* screen.

A **Search Restrictions** field is present next to the All Restrictions page header. This will allow you to find a restriction by its name, but only if its name is currently displayed on screen. To take advantage of the Search field, you must have all restrictions expanded.

Next to the search field is a toggle labeled **expand all** or **collapse all** (depending on its current state). This toggle determines whether every restriction box is expanded to display all of its contents.

Lastly, a note on how restrictions are implemented for organizations: Organization-related

restrictions are based on the primary organization membership for each user.

Blocked Attachments

Certain attachments, such as logo files or social media icons can appear repeatedly in your descriptions and notes, especially if included in the signatures of your users. You have the ability to identify the attachments you want to block from processing.

Blocking Attachments

Steps:

1. Click the **gear** icon in the upper right > click **Incoming Email** beneath *Email*.
2. Click **Blocked Attachments** on the right context menu.
3. (Optional) A list of already blocked attachments will be shown. You can click on the name to preview the file or click remove to no longer block it.
4. Click **Browse** to browse for and add a new attachment to block.

Additionally, if a file comes through that you want to block going forward, you can quickly block it right from the issue screen. When viewing the issue, you can click on **Attachments** in the right context menu, the paper clip icon by the issue number, or scroll to the attachment list on the issue. Next to each attachment will be a **block** link. Clicking that will add that particular attachment to the blocked list.

Post 15.1+ Upgrade

After upgrading from a version prior to Issuetrak 15.1, previously-blocked IEM attachments will need to be re-blocked. This is due to the underlying mechanism that is used for matching blocked attachments being changed.

You may see text on the Blocked Attachments screen indicating that some entries are no longer valid. In order to "clean up" the Blocked Attachments area, you can choose to click on **Delete all invalid entries** to get rid of all listed invalid attachments.

Exclude Text

You have the ability to specify text that is excluded from the email processing. When a block of text is input to be excluded, IEM will scan for it in the body of the message and when found, will eliminate it from the description / note of the issue. This allows you to put in confidentiality or disclaimer text so that it doesn't clutter your issue content.

Steps:

1. Click the **gear** icon in the upper right > click **Incoming Email** beneath *Email*.
 2. Click **List** beneath *Exclude Text* on the right quick menu.
 3. **Add** using the right quick menu; edit or delete items already in the list using the links provided.
 4. Type in or adjust your text content.
 5. Click **Save**.
-

Using Google App Passwords with a Gmail IEM Account

For security reasons, Google will deprecate support for using basic authentication (which relies on your Google account's username and password) with third-party applications when using their Gmail service on May 30, 2022.

It is therefore necessary to use a Google App Password to allow Issuetrak to authenticate with Google when you are using their email service with Issuetrak's IEM feature to prevent disruption of service.

Creating the Google App Password

1. Enable 2-Step Verification on your Google account by navigating to [this](#) page and signing into the Google account corresponding with the mailbox that you wish to create an app password for, then following the prompts.
 2. Once you've set up 2-Step Verification in the previous step, navigate to <https://myaccount.google.com/apppasswords> and (again) sign into the Google account corresponding with the mailbox that you wish to create an app password for.
 3. Choose **Mail** for the "select app" drop down.
 4. Choose the appropriate device for the "select device" drop down.
 5. Click on **GENERATE**.
 6. Copy and save the password shown in the next screen, as this will be the only time you will see this password.
-

Using the Google App Password for IEM Mailboxes

1. Log into the Issuetrak site to be updated.
2. Click the settings **gear** icon in the top right.
3. Click **Incoming Email** under the Email section to launch the mail settings.
 - To locate the setting faster, enter **incoming email** in the search field.
4. Depending on your specific usage, you may want to either edit an existing mailbox or create a new mailbox.
 - a. To use the Google App Password on an existing mailbox:
 - i. Click **edit** next to the mailbox to be updated.
 - ii. Under the "Email Account Information" section, paste the Google App Password into the password field.
 - iii. Click the **Test Connection** button to confirm that the settings are working as expected.
 - iv. Click the **Update Mailbox** button at the top left to save your settings.
 - b. To use the Google App Password when creating a new mailbox:
 - i. Click **Add** under the "Mailboxes" section on the right context menu.
 - ii. Configure all settings based on your mailbox settings and preferences.
 - iii. Under the "Email Account Information" section, paste the Google App Password into the password field.

- iv. Click the **Test Connection** button to confirm that the settings are working as expected.
- v. Click the **Add Mailbox** button at the top left to create the mailbox.
- vi. For further instructions on creating new mailboxes, please refer to [this](#) Help Center article.

Afterwards, you should test the functionality of IEM to ensure that emails are being turned into issues in your site.

About Issue De-Escalations

Issue De-escalations is a feature that allows [escalated issues](#) to be de-escalated. This functionality is disabled by default and must be [activated from the Features screen](#).

Every issue that has been escalated will have a link at the top of its "View Issue" screen that reads either *Currently Escalated* or *Previously Escalated* and leads to an **Escalation History** pop-up. This pop-up contains a history of escalation and de-escalation events for the issue.

The **System Overview** Dashboard panel will display a count of **Issues Escalated**. This count is based on issues *currently* escalated, and does not include issues that were previously escalated but are now de-escalated.

It is possible to use the Report Writer to determine what issues are currently escalated by choosing any data set containing "Issues" in its title and then adding the Escalated On column. Note that the **Escalated On** column will only show the most recent escalation date for each issue, and issues that are not currently escalated will not be displayed in the results.

Requirements

The following conditions are required in order for the **De-escalate** button to appear on the "View Issue" screen:

- The issue must be escalated
- The current user must be able to view the issue, but not just as a result of being on the email distribution
- The current user must be logged in
- The current user must have the "[Can Edit Issues](#)" permission
- Issue De-escalations must be [activated from the Features screen](#).



Note that it is **not** a requirement for an issue to currently be open in order to de-escalate it.

Steps

In order to de-escalate an issue:

1. Navigate to the issue that you want to de-escalate.
2. Find and click the **De-escalate** button at the top of the "View Issue" screen.

[Add Note](#) [Close](#) [De-escalate](#)

 Email Event  Currently Escalated

Event #: 130



Event Status:

3. Accept the prompt that appears.

Are you sure you want to de-escalate this Issue?

4. Note that the issue now displays a **Previously Escalated** link at the top of the "View Issue" screen.

[Add Note](#) [Close](#)

 Email Event  **Previously Escalated**

Event #: 130

Event Status:

Issue Submission Methods

Issuetrak provides the ability to determine which method was used to create an issue. The Submission Method can be found:

- Via the Report Writer in the issues Dataset
 - On the *View Issue* or *Edit Issue* screens, if the issue form includes the "Submission Method" field
 - In the database within the SubmissionMethod table
-

List of Submission Methods

Located within the **SubmissionMethod** database table are columns labeled "SubmissionMethod" and "Id". The Submission Methods are correlated with the ID numbers, and are keyed as follows:

1. Created via the UI (Normal issue submission)
 2. Copied/Cloned
 3. Created via the UI with Issue Template
 4. Created via Scheduled Issue
 5. Created via Incoming Email
 6. Created via Incoming Email with Issue Template
 7. Created via Global Issue Bulk Submit
 8. Created via API
-

Entered Date vs Submitted Date

Users with the appropriate permission can change the "Submitted Date" while submitting an issue. This article provides an explanation of the difference between the "Submitted Date" and "Entered Date."

Entered Date

This is the "actual" date/time when the issue was submitted and will reflect the current date/time of when the issue was submitted inside Issuetrak.

Submitted Date

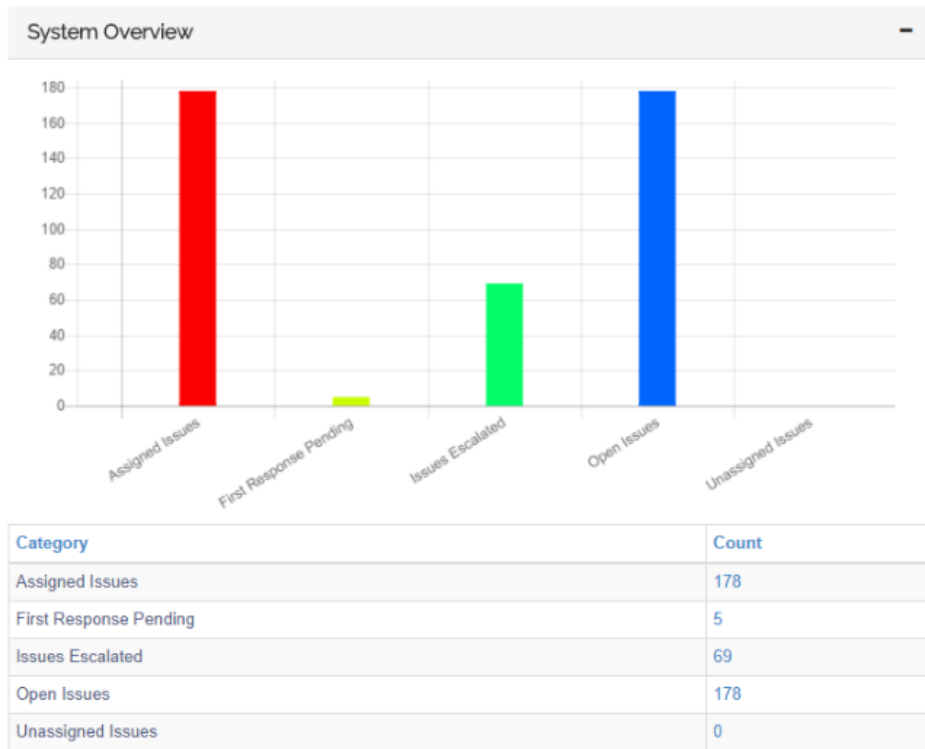
This is the date/time that was manually inputted on the issue using the "Submit Date" fields. If the "Submit Date" field on the submit screen was not altered or the user does not have the permission to change the "Submitted Date," then the "Submitted Date" will match the "Entered Date."

To retrieve this information for a particular issue, the following SQL query can be run:

```
SELECT IssueNbr, SubmittedDate, EnteredDate
FROM Issues
WHERE IssueNbr = XXX
```


About the Dashboard

The Dashboard is a user-specified display of **At-A-Glance** statistics regarding open issues. A user must have **Dashboard** permissions within their Menu Options / Pages Allowed to view the Dashboard. If **Issue Classes** are enabled, selecting a Class in the **Show Class** drop-down in the upper right corner will filter the issues displayed on the Dashboard to that particular Class.

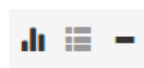


The Dashboard may be used as your Home Page. Otherwise, it is accessible from the left menu. Once the Dashboard is open there is the option for Dashboard Settings where you can set your own Dashboard preferences in the top right.

Certain Dashboard reports provide additional display options when viewed from the Dashboard itself. These options are presented as icons in the upper right-hand corner of each report, and they can be toggled to change how the reports appear to the user. For example, when an icon is dark, it has been enabled.



The above image will result in the report having both graph and chart data displayed for the user. When the icon is lighter, the option has been disabled.



The above image will result in the report only showing the data in graph form.

Please note that the video below contains navigation steps and naming conventions that apply to versions prior to Issuetrak 14. The actual use of the features depicted remains largely unchanged. You may also notice that the terminology displayed in this video differs from what you see in your instance of Issuetrak.

Dashboard Settings

This sub-menu option allows you to define your personal Dashboard preferences. Below is a walkthrough of this screen from top to bottom:

1. Select the **Dashboard Panel** you want to add to your Dashboard from the "Select a Panel" drop down.
 2. Click **Add to Left Column** or **Add to Right Column** as appropriate.
 3. Move the panel to its appropriate display order within the right or left column by manipulating the miniature buttons within the panel.
 - a. The **UP** arrow moves the panel up on the Dashboard.
 - b. The **DOWN** arrow moves the panel down on the Dashboard.
 - c. The **red X** removes the panel from the Dashboard.
 4. Repeat these steps for any additional panels you want to add.
 5. Click **Save** to save the layout, OR...
 - a. If you are a Sys Admin and you are setting up the default Dashboard layout for all users, click **Set as Default**.
 - b. If you are a Sys Admin and you are setting up the dashboard to your own preference, click **Set as My Dashboard**.
-

Default Dashboard Layout

If a Sys Admin sets a default Dashboard layout, it will affect only users that have **not** set their Dashboard preferences.

How does Issuetrak define Report Permissions?

There are currently three User/Group permissions related to Reports and Saved Searches in Issuetrak. They are listed under the "Administration" section when adding or editing a User/Group record.

Can add, edit and run Report Writer Queries and Reports

- Controls the ability to see the Reports/Report Writer and Reports/Scheduled Reports menu options.
- Allows a user to manage (ie, Modify/Delete) Report Writer queries and reports that they created as well as queries and reports that are Shared in which they have access.

Can add, edit and run shared Saved Searches

- Enables the "Share" checkbox on the Search screen. If checked, the Saved Search will be available to all users.
- Allows a user to manage (ie, Modify/Delete) Saved Searches that are Shared as well as searches they created.

Can run built-in Summary Reports

- Controls the ability to see the Reports/Summary Reports menu option.
-

Menu Access

There are two User/Group attributes related to Reports and Saved Searches in Issuetrak. They are listed under the "Menu Options Authorized" section when adding or editing a User/Group record.

Search Issues

Controls the ability to see the **Search Issues** menu option

Reports

Controls the ability to see the **Reports** menu option. The user must also have one of the following permissions in order for this menu option to display:

- Can run built-in Summary Reports
 - Can add, edit and run shared Saved Searches
 - Can add, edit and run Report Writer Queries and Reports
-

Report/Query Filtering

Reports and Saved Searches are defaulted to only be seen by the users who create them and users any of the Administration permissions (except for User Administrator) enabled.

Report Access

- In all cases having Can access and maintain Administration functions (or Sys Admin) provides access to view any Saved Search, Query, Report or Report Schedule as well as edit capability; having Allowed Read Only access to Administration information provides access to view any report or schedule but does not allow edit capability unless the user has edit permissions without the Can access and maintain Administration functions attribute.
 - Report Writer report "Shared access" means a user can access a Report that is Shared with Everyone, Shared with the User specifically, or Shared with a group the User is a member of. Note that "Everyone" means everyone in the currently logged-in user's organization.
 - Saved Search report "Shared" access means Shared with Everyone. Note that "Everyone" means everyone in the currently logged-in user's organization.
 - Saved Searches will be limited by Organization IF the user is in an Organization that is Internal. (Queries and Reports are not limited by Organization at this time).
-

Mobile Settings

Did you instead want to know how to add Issuetrak to your mobile device's home screen? You can find out about that [here](#).

When you access the system from a mobile device, you will see the *Mobile formatted* screens. Here you have the ability to customize the values that appear on those screens. Issue Templates and Tasks are not currently shown on Mobile screens.

Steps:

1. Click the **gear** icon in the upper right > click on **Mobile Settings** beneath *System*.
2. Select fields that you wish to **Show** on *Mobile Issue Form*.
3. Define the **Order** for shown fields (e.g. "3" = third place).
4. Select **Required** next to any fields that require values.
5. Under *Mobile General Settings*, select the number of **issues** returned **per page** for Issue Lists.
6. Choose the **Default view**.
7. Click **Update**.

A confirmation message will appear when this process is complete.

About User Defined Fields

User Defined Fields (or UDFs) are custom fields that can be added to Issuetrak by Administrators to allow additional information to be provided in:

- Issues
- Organization records
- User records
- Asset Types (if licensed)
- Products/Services records in the Billing Module (if licensed)

If you are an Administrator in Issuetrak, you can find the menu to edit UDFs by navigating to the **gear** icon in the upper right corner and then choosing **User Defined Fields** beneath *System* within Settings Lightbox. On the right context menu, there are three sub-menu options corresponding to where they will appear in Issuetrak: Issue, Organization, and User.

Issue UDFs

The *Issue Fields* screen allows **User Defined** values to be specified as types:

UDF Type	Description
Text	Text UDFs can contain free-form text up to a limit of 250 characters. These also have the distinction of a toggle for "Exact Match" search mode when searching issues with this UDF.
Large Text	Large Text UDFs can contain free-form text up to a limit of 7800 characters.
List	List UDFs are a form of table-driven fields that can contain entries with up to 50 characters each.
Date	Date UDFs simply allow users to set a date from a calendar.
Decimal	Decimal UDFs allow users to enter a decimal value from -2147483647.99 to 2147483646.99. A secondary limitation is that this field is limited to 250 characters.
Integer	Integer UDFs allow users to enter an integer value from -2147483648 to 2147483647.
Yes/No	Yes/No UDFs allow users to set the field to Yes or No.
Hyperlink	Hyperlink UDFs allow users to enter a hyperlink into the field, up to a limit of 250 characters.
Issue Association	Issue Association UDFs allow users to link other issues that are related to the issue they are currently working on.

Once created, any fields will be available to be included on any issue form. Fields are automatically included on the **Issuetrak Screen** but must be manually included on any other

created screens. Only users with the Can view and enter content in Private Optional Fields permission will be able to view and maintain fields with **Private** selected.

Additionally, the selections and content from these fields are copied over to new issues when:

- Cloning issues
- Using Issue Templates
- Scheduled Issues are configured to use specific values or Issue Templates
- [Submitting multiple new issues via Global Issues](#)
- IEM is configured to use Issue Templates that contain user-defined fields with values pre-selected

Issue Association

Issue Association UDFs are displayed in either single or dual columns, depending on the information relevant to the current issue.

1. The first column is entitled "Associated Issues", and it can display either **None** or a list of issues that have been added to the current issue from the **Edit Issue** screen. The issues listed here have been linked *from the current issue*.
2. The second column is entitled "Listed On", and it will only display if there is relevant data. When this column is displayed, it shows a list of issues that the current issue has been associated with. The issues listed here have *linked the current issue from the issues listed*.

Some additional information about Issue Association UDFs:

- Users require "Can Edit Issues" permission in order to add or remove issues to associate with this field.
- Issues linked in this field will open in a new browser tab.
- This field is reportable in Report Writer via the following columns in all Issue data sets:
 - [UDF Display Name] Associated With Number
 - [UDF Display Name] Associated With (All)
 - [UDF Display Name] Listed On Number
 - [UDF Display Name] Listed On (All)

Adding Issue UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
2. Click **Add New UDF** button and then select the type of field from the dropdown list.
3. Give the field a name in the **Display Name** field and check the **Private** box if necessary.
4. *(Optional)* For **Text**, **Decimal**, and **Integer fields**, define how wide you want the box to appear on the screen. Sizes range from Tiny – 75px to 5XL – 700px. If not adjusted, the default of XL – 300px will apply.
5. *(Optional)* You may set a **Tooltip** to appear when hovering over the field.
6. Click **Add UDF** button, and the popup window will disappear and your field will appear

- on the list, organized by type.
7. For any **List (Table Driven)** fields, the values to appear in the drop-down selection list need to be defined. Click on **edit** by the appropriate field and for the List Data section, click **+ add new** and enter the **Display Name** and **Display Order** for each dropdown value. Click **Add Item** to save the value.
 8. Continue to add additional values by clicking **add new**.
 9. Once all values are defined, click **Update**.
-

Editing Issue UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
 2. Find the UDF that needs to be changed and click the corresponding **edit** link next to it.
 3. Make the desired adjustments.
 4. When finished, click **Update**.
-

Deleting Issue UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
 2. Find the UDF that needs to be deleted and click the corresponding **del** link next to it.
 3. Click **OK** on the warning pop-up to confirm that you wish to delete this UDF.
-

Organization UDFs

Organization UDFs are fields that will appear on all Organization records in your Issuetrak site. These fields appear in your Organization records based on their activation by a System Administrator(s). Once activated, corresponding values for these fields can be maintained by users with Can access and maintain Administration functions from **Organizations > User Defined Fields**. The custom fields configured on the *User Defined Fields – Organization Record* screen will display on all organization records.

Activating Organization UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
2. Click on **Organization** on the right context menu.
3. Select and enter a Label for each field.
 - **Table Driven** fields are fields with the Administrator-defined selectable values. Once activated, a *User Defined Fields* menu option will appear in the *Organization*

right context menu. From this menu, the corresponding tables can be populated with appropriate values.

*Note the *Settings* option right underneath the *User Defined Fields* header. This is a shortcut you can use to quickly get back to make changes to the Organization's UDFs.

- **Text Fields** are fields with no pre-determined values. These fields will appear as **free fields** in Organization records.
- **Date Fields** will require a date value that can be entered or selected from a popup calendar in an Organization record.

3. Click **Update**.

A confirmation message will appear when this process is complete.

Editing Organization UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
2. Click on **Organization** on the right context menu.
3. Find the UDF that you wish to change, then make the desired changes.
4. Once the changes are complete, click **Update**.

Inactivating Organization UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
2. Click on **Organization** on the right context menu.
3. Find the corresponding UDF that you wish to inactivate, then uncheck its checkbox.
4. Click **Update**.

User Record UDFs

The custom fields configured on the *User Fields* screen will display on all user records. There are pre-programmed fields for user ID, password, first and last name, phone, email, pager email, mailing address, and time zone. You may define additional information needed on user records (as well as issue and organization records) following the steps outlined below. However, there is a limit to how many of these fields you can create in each format.

Activating User UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
2. Click on **User** on the right context menu.
3. Select and enter a Label for each field.
 - **Table-driven** – selected from a drop-down list. Once activated, a *User Defined* menu option will appear in the *User* menu. From this menu, the corresponding tables can be populated with appropriate values.

*Note the *Settings* option right underneath the *User Defined Fields* header. This is a shortcut you can use to quickly get back to make changes to the Organization's UDFs.

- **Text-based** – entered freely
 - **Date-based** – entered in date format or selected from the calendar search
3. Click **Update**.

A confirmation message will appear when this process is complete.

Editing User UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
2. Click on **User** on the right context menu.
3. Find and edit the UDF you want to change.
4. Click **Update** once the changes are complete.

Inactivating User UDF

Steps

1. Click the **gear** icon in the upper right > click **User Defined Fields** beneath *System*.
2. Click on **User** on the right context menu.
3. Find the UDF you want to inactivate, then uncheck its corresponding checkbox.
4. Click **Update**.

A confirmation message will appear when this process is complete.

Asset Management Module UDFs

The Asset Management module provides two possible UDF types for **Asset Types**: Text

fields and Table-driven fields. These fields can be used to store any kind of information about the asset type you add them to. It isn't necessary to activate Asset Management UDFs. Once you've created UDFs for an Asset Type, the UDFs are available for use with each asset matching that Asset Type. You may choose whether or not to populate the UDFs when you fill the information in.

Adding Asset Management UDFs

Steps

1. Click the **gear** icon in the upper right > click on **Asset Tables** beneath *Asset Management*.
 2. Click on **List** beneath *Asset Types* on the right context menu.
 3. Find the **Asset Type** that you want to add UDFs to, then click its corresponding **edit** link.
 4. For each UDF you want to add, click **Add** next to the corresponding type.
 5. Fill in the name of the UDF.
 6. Click **Save**.
-

Editing Asset Management UDFs

Steps

1. Click the **gear** icon in the upper right > click on **Asset Tables** underneath *Asset Management*.
 2. Click on **List** beneath *Asset Types* on the right context menu.
 3. Find the **Asset Type** that you want to edit UDFs for, then click its corresponding **edit** link.
 4. For each UDF you want to edit, click **edit** next to the corresponding UDF.
 5. Make the desired changes.
 6. Click **Save**.
-

Deleting Asset Management UDFs

Steps

1. Click the **gear** icon in the upper right > click on **Asset Tables** underneath *Asset Management*.
 2. Click on **List** beneath *Asset Types* on the right context menu.
 3. Find the **Asset Type** that you want to delete UDFs for, then click its corresponding **edit** link.
 4. For each UDF you want to delete, click **del** next to the corresponding UDF.
 5. Click **OK** to confirm you want to delete the UDF.
-

Billing Module Optional Fields

Customers that utilize the **Billing Module** have the option of creating user-defined Optional Fields for Products and Services. This requires Administrative privileges. Three Optional Fields can be defined for the Billing Module, and they are all **Text** fields. These cannot be changed to **Date** or **Table-driven** fields.

Activating Billing Module Optional Fields

Steps

1. Click the **gear** icon in the upper right > click **Billing** beneath *Tools*.
 2. Click **Optional Fields** beneath *Product/Services* on the right context menu.
 3. A field may be activated by entering a label into it.
 4. Click **Update**.
-

Editing Billing Module Optional Fields

Steps

1. Click the **gear** icon in the upper right > click **Billing** beneath *Tools*.
 2. Click **Optional Fields** beneath *Product/Services* on the right context menu.
 3. Edit the desired field label.
 4. Click **Update**.
-

Deactivating Billing Module Optional Fields

Deactivated fields will be removed from the **Products/Services** screen.

Steps

1. Click the **gear** icon in the upper right > click **Billing** beneath *Tools*.
 2. Click **Optional Fields** beneath *Product/Services* on the right context menu.
 3. Deactivate a field by removing its label.
 4. Click **Update**.
-

About Optional Fields

There are several **Optional Fields** that you can enable within your Issuetrak site that can help you with your process workflows.

Optional Fields	Description	
Issue and Search	Selecting these items will cause them to appear on applicable Issue and search screens.	
	<ul style="list-style-type: none"> • Next Action 	This Optional field will enable Agent User or Group to be assigned secondary ownership on the issue. For more information please also see the User Permissions article
	<ul style="list-style-type: none"> • Required By Date 	An Optional Field that can be used to record when you must have the Issue completed. It can trigger Workflows if the date has passed and if the Calendar Feature is enabled you can also use it to set Reminders.
	<ul style="list-style-type: none"> • Target Date 	An Optional Field that can be used to record when you would like the Issue to be completed. It can trigger Workflows if the date has past and if the Calendar Feature is enabled you can also use it to set Reminders.
	<ul style="list-style-type: none"> • Start / Stop Times 	An Optional capability that allows you to record the time and date when a note event starts and when it ends.
Settings Menu	Selecting a field below will activate a corresponding option on the Settings menu which will enable you to define your own list of values for the field(s).	
	<ul style="list-style-type: none"> • Causes 	This is a dropdown field to capture the reason why the issue occurred. For more information please also see the About Causes article.
	<ul style="list-style-type: none"> • Tasks 	The optional Tasks feature allows you to set up discrete actions and/or a consistent workflow required for the resolution of an issue. For more information please also see the About Tasks article.

	<ul style="list-style-type: none"> • Configuration Items 	<p>This is a three-field dropdown value list initially designed to track assets before the development of the Asset Management Module. It may be utilized as a dropdown field on the issue with two reportable connected values if needed. For more information please also see the About Configuration Items article.</p>
Table-Driven	<p>Selecting an option below will activate a corresponding table-driven field that can be used to enhance and classify the information provided in Issues.</p>	
	<ul style="list-style-type: none"> • Issue Solutions 	<p>This field is filled out during issue closure that describes how the issue was resolved. Allows administrators to create a drop-down list of pre-filled values to handle repetitive resolutions. For more information please also see the About Solutions article.</p>
	<ul style="list-style-type: none"> • Issue Substatuses 	<p>This optional field allows you to add a value representing stages in the issue lifecycle. For more information please see the About Issue Statuses and Substatuses article.</p>
	<ul style="list-style-type: none"> • Issue Subtype 	<p>These are optional levels of classification going beyond issue types. There are four levels available that create a hierarchical structure with issue types. For more information please see the About Issue Types and Subtypes article.</p>
Custom Record Table	<p>Selecting the option below will activate the Custom Record Table menu option which will enable you to define your own table / record consisting of 50 text fields.</p>	
	<ul style="list-style-type: none"> • Custom Record Table 	<p>The Custom Record Table contains records with up to 50 text fields of reference information that can be used to associate just about anything to an issue. For more information please see the About the Special Function Table article.</p>

Activating Optional Fields

Steps:

1. Click the **gear** icon in the upper right > click on **Optional Fields** beneath *System*.
2. Select all Optional Fields that you want to be available on issues and reports. Access to view and maintain these fields may be permission-dependent.
 - a. Select which fields to include on the *Issue and Search* screens:
 - b. Fields selected under the **Settings Menu** heading can be found and administered as separate items under Issuetrak's *Settings Lightbox*.
 - c. Select all optional **Table-Driven** (selectable value) fields to be available on issues and reports. Access to view and maintain these fields may be permission-dependent. Once activated, field values may be maintained from the corresponding *Issues* section of the Settings menu.
 - d. To link to a table of related values to an issue via a key field, select **Use Custom Record Table**.
 - Click [here](#) to learn more about the Custom Record Table.
3. Click **Update**.

A confirmation message will appear when this process is complete.

Deactivating Optional Fields

Steps:

1. Click the **gear** icon in the upper right > click on **Optional Fields** beneath *System*.
2. Deselect an appropriate Optional Field.
3. Click **Update**.

A confirmation message will appear when this process is complete.

License Key

This article explains the use of Issuetrak license keys, as well as the *License Key* screen within Issuetrak.

Your License Key determines how many Agents you have, which add-ons can be activated, and when access to your site will expire. You may extend expiration dates, add more Agents or evaluate/add other add-ons at any time by requesting a new key from our Technical Support Team at 757-213-1351, support@issuetrak.com, or <https://support.issuetrak.com>.

The License Key Screen

The License Key screen allows you to update your site's current license key, view your Site ID and view information about your site. If you are a cloud customer, then the license key and site ID are managed for you by Issuetrak. If you have questions about either of these, you can contact Issuetrak Support for assistance.

Managing Your License Key

Only users with Sys Admin permission can apply a License Key to your system. Cloud customers will not see this option and have their license key managed by Issuetrak.

1. Click the **gear** icon in the upper right > click on **License Key** beneath *System*.
2. Paste the new license key in the field provided.
3. Click **Update**.

A confirmation message will appear when this process is complete.

Current License Information

In addition to the current license key information, you can also view:

- Expiration date of the current license (if applicable)
- A count of the number of agent accounts in use, versus the quantity that the site is licensed for
- The current running version of Issuetrak
- Currently licensed add-ons

Permitted users can view a detailed list of every version upgrade and update applied to your site by clicking the paper icon next to the current version name.

On-Premises customers will also see a "Check for Updates" link present, which (when clicked) will display the latest released version of Issuetrak, as well as a link to obtain that version. You can also find a link to the latest release in our Support Site's *Home Screen*

Message at any time. As new releases become available, the download information will also be sent via email to the Technical Contact in your Issuetrak customer account.

If your site is hosted on our cloud environment, Issuetrak Technical Support will keep the site up-to-date and email the Technical Contact in your customer account prior to any upgrade. Those customers wishing to upgrade sooner than the established schedule should contact support to schedule the upgrade.

Interpreting Admin Auditing Logs

Admin Auditing is a feature that was introduced in Issuetrak 11.1. When this feature is enabled, a new menu item called Admin Auditing appears in the **Admin Auditing** area for administrators beneath *Tools*. Navigating to this menu item enables an administrator to review changes made to various areas controlled by Sys Admins, User Administrators, and users that have limited administrative capabilities.

Audit records are stored in the Issuetrak database. Each audit record has a **Row Key** that is used as a unique identifier. The following information is presented for each audit record:

- Date Initiated
- Area Changed
- Item Changed
- Action Performed
- Row Key (a reference to record labels in the Issuetrak database)
- Old Value (if applicable)
- New Value
- Initiating User ID

Many of the logged audit items that appear on the **Admin Audit Search** page can be interpreted fairly easily. In many cases, parameters can have only two possible values: **1** or **0**. Depending on the context of the setting, a 1 can be interpreted as **True, On, Yes, or Active**. Similarly, a 0 can be interpreted as **False, Off, No, or Inactive**. An example of such a setting is *UseAdminAuditing*, which has only two possible settings: **True** and **False**.

Another easy-to-interpret setting is *Outgoing Email*. When this feature is enabled for the first time, the Admin Audit Search page will show that no values are populated in the **Old Value** column, but the **New Value** column contains all the settings that were saved at the time the feature was enabled.

Due to the nature of how Issuetrak stores certain parameters, however, there are some items that may appear in the Admin Audits that require more explanation.

Translating Audit Items to Useful Information

User Types

There are two User Types in Issuetrak: Agents and End Users. Issuetrak stores these user types in the database as a numeric value. The numeric value is what is displayed when changes to UserID are made.

Changes to Group Membership Types will be reflected in the audit entries as a change to the UserID. For that reason, a third column is provided in the table below to correlate with changes to Group Membership Types.

UserTypeID	User Type	Group Membership Type
1	Agent	Agents Only
2	End user	Any

User Defined Field (UDF) Types

UDF types are stored in the Issuetrak database as numeric values, with each value corresponding to a UDFKeyID. The numeric value for a UDFKeyID is displayed when a change is made to a UDF Type.

UDFKeyID	UDF Type
1	Text
2	Large Text
3	List
4	Date
5	Decimal
6	Number
7	Yes/No

Users and Passwords

UserIDs are mapped to unique numeric identifiers in the **Users** table of the Issuetrak database. The unique identifier column label is called **UserNbr**. This label correlates to the **UserNbr** column in the **UserPasswords** table.

Changes to user passwords will appear in the audit records as a change to the **User Number**, but it is actually the **Row Key** that changes. When a password is changed, the **New Value** column for the audit record will display the UserNbr for the user account that was affected. It is necessary to correlate the UserNbr here to the matching UserNbr in the **Users** table to determine which account was affected.

Note that plaintext passwords will **never** appear in the Issuetrak database.

User Logins

Each time a user account is authenticated to Issuetrak via Active Directory, multiple entries concerning **User/Group/Template Permissions** will be added into the audit log.

Time Zones

Time zones are stored in the Issuetrak database using the table lookup key **TimeZoneID**,

with each record containing a numeric value. The Admin Audits only display this numeric value. A lookup table corresponding each TimeZoneID to its respective time zone can be found below.

TimeZoneID	Time Zone	Dropdown Display Name
1	Afghanistan Standard Time	(GMT+04:30) Kabul
2	Alaskan Standard Time	(GMT-09:00) Alaska
3	Arab Standard Time	(GMT+03:00) Kuwait, Riyadh
4	Arabian Standard Time	(GMT+04:00) Abu Dhabi, Muscat
5	Arabic Standard Time	(GMT+03:00) Baghdad
6	Atlantic Standard Time	(GMT-04:00) Atlantic Time (Canada)
7	AUS Central Standard Time	(GMT+09:30) Darwin
8	AUS Eastern Standard Time	(GMT+10:00) Canberra, Melbourne, Sydney
9	Azores Standard Time	(GMT-01:00) Azores
10	Canada Central Standard Time	(GMT-06:00) Saskatchewan
11	Cape Verde Standard Time	(GMT-01:00) Cape Verde Is.
12	Caucasus Standard Time	(GMT+04:00) Yerevan
13	Cen. Australia Standard Time	(GMT+09:30) Adelaide
14	Central America Standard Time	(GMT-06:00) Central America
15	Central Asia Standard Time	(GMT+06:00) Astana, Dhaka
16	Central Europe Standard Time	(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague
17	Central European Standard Time	(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb
18	Central Pacific Standard Time	(GMT+11:00) Magadan, Solomon Is., New Caledonia
19	Central Standard Time	(GMT-06:00) Central Time (US & Canada)
20	China Standard Time	(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
21	Dateline Standard Time	(GMT-12:00) International Date Line West
22	E. Africa Standard Time	(GMT+03:00) Nairobi

TimeZoneID	Time Zone	Dropdown Display Name
23	E. Australia Standard Time	(GMT+10:00) Brisbane
24	E. Europe Standard Time	(GMT+02:00) Minsk
25	E. South America Standard Time	(GMT-03:00) Brasilia
26	Eastern Standard Time	(GMT-05:00) Eastern Time (US & Canada)
27	Egypt Standard Time	(GMT+02:00) Cairo
28	Ekaterinburg Standard Time	(GMT+05:00) Ekaterinburg
29	Fiji Standard Time	(GMT+12:00) Fiji, Kamchatka, Marshall Is.
30	FLE Standard Time	(GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius
31	GMT Standard Time	(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
32	Greenland Standard Time	(GMT-03:00) Greenland
33	Greenwich Standard Time	(GMT) Casablanca, Monrovia, Reykjavik
34	GTB Standard Time	(GMT+02:00) Athens, Bucharest, Istanbul
35	Hawaiian Standard Time	(GMT-10:00) Hawaii
36	India Standard Time	(GMT+05:30) Chennai, Kolkata, Mumbai, New Delhi
37	Iran Standard Time	(GMT+03:30) Tehran
38	Israel Standard Time	(GMT+02:00) Jerusalem
39	Korea Standard Time	(GMT+09:00) Seoul
40	Mexico Standard Time	(GMT-06:00) Guadalajara, Mexico City, Monterrey – Old
41	Mexico Standard Time 2	(GMT-07:00) Chihuahua, La Paz, Mazatlan – Old
42	Mid-Atlantic Standard Time	(GMT-02:00) Mid-Atlantic
43	Mountain Standard Time	(GMT-07:00) Mountain Time (US & Canada)
44	Myanmar Standard Time	(GMT+06:30) Yangon (Rangoon)
45	N. Central Asia Standard Time	(GMT+06:00) Almaty, Novosibirsk

TimeZoneID	Time Zone	Dropdown Display Name
46	Nepal Standard Time	(GMT+05:45) Kathmandu
47	New Zealand Standard Time	(GMT+12:00) Auckland, Wellington
48	Newfoundland Standard Time	(GMT-03:30) Newfoundland
49	North Asia East Standard Time	(GMT+08:00) Irkutsk, Ulaan Bataar
50	North Asia Standard Time	(GMT+07:00) Krasnoyarsk
51	Pacific SA Standard Time	(GMT-04:00) Santiago
52	Pacific Standard Time	(GMT-08:00) Pacific Time (US & Canada)
53	Romance Standard Time	(GMT+01:00) Brussels, Copenhagen, Madrid, Paris
54	Russian Standard Time	(GMT+03:00) Moscow, St. Petersburg, Volgograd
55	SA Eastern Standard Time	(GMT-03:00) Buenos Aires, Georgetown
56	SA Pacific Standard Time	(GMT-05:00) Bogota, Lima, Quito, Rio Branco
57	SA Western Standard Time	(GMT-04:00) Georgetown, La Paz, Manaus, San Juan
58	Samoa Standard Time	(GMT-11:00) Midway Island, Samoa
59	SE Asia Standard Time	(GMT+07:00) Bangkok, Hanoi, Jakarta
60	Singapore Standard Time	(GMT+08:00) Kuala Lumpur, Singapore
61	South Africa Standard Time	(GMT+02:00) Harare, Pretoria
62	Sri Lanka Standard Time	(GMT+05:30) Sri Jayawardenepura
63	Taipei Standard Time	(GMT+08:00) Taipei
64	Tasmania Standard Time	(GMT+10:00) Hobart
65	Tokyo Standard Time	(GMT+09:00) Osaka, Sapporo, Tokyo
66	Tonga Standard Time	(GMT+13:00) Nuku'alofa
67	US Eastern Standard Time	(GMT-05:00) Indiana (East)

TimeZoneID	Time Zone	Dropdown Display Name
68	US Mountain Standard Time	(GMT-07:00) Arizona
69	Vladivostok Standard Time	(GMT+10:00) Vladivostok
70	W. Australia Standard Time	(GMT+08:00) Perth
71	W. Central Africa Standard Time	(GMT+01:00) West Central Africa
72	W. Europe Standard Time	(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
73	West Asia Standard Time	(GMT+05:00) Islamabad, Karachi, Tashkent
74	West Pacific Standard Time	(GMT+10:00) Guam, Port Moresby
75	Yakutsk Standard Time	(GMT+09:00) Yakutsk
76	Azerbaijan Standard Time	(GMT+04:00) Baku
77	Central Brazilian Standard Time	(GMT-04:00) Manaus
78	Central Standard Time (Mexico)	(GMT-06:00) Guadalajara, Mexico City, Monterrey – New
79	Georgian Standard Time	(GMT+03:00) Tbilisi
80	Jordan Standard Time	(GMT+02:00) Amman
81	Middle East Standard Time	(GMT+02:00) Beirut
82	Montevideo Standard Time	(GMT-03:00) Montevideo
83	Mountain Standard Time (Mexico)	(GMT-07:00) Chihuahua, La Paz, Mazatlan – New
84	Namibia Standard Time	(GMT+02:00) Windhoek
85	Pacific Standard Time (Mexico)	(GMT-08:00) Tijuana, Baja California
86	Venezuela Standard Time	(GMT-04:30) Caracas
87	UTC	(UTC) Coordinated Universal Time

Custom Links

You can create custom links that appear on the left menu. There is no limit to the number of links created, and they may be direct links to any URL you wish.

Adding Custom Links

Steps:

1. Click the **gear** icon in the upper right > click **Custom Links** beneath *System*.
2. From the right context menu, click **Add**.
3. Enter a **Link Label**.
4. Enter the label's **Link URL**.
5. To override the alphabetical ordering of your custom menu options, give this menu option a **Display Order** among your other custom links.
6. Click **Update**.

A confirmation message will appear when this process is complete.

Editing Custom Links

Steps:

1. Click the **gear** icon in the upper right > click **Custom Links** beneath *System*.
2. Click **edit** next to the link you wish to modify.
3. Make all the necessary changes.
4. Click **Update**.

A confirmation message will appear when this process is complete.

Deleting Custom Links

Steps:

1. Click the **gear** icon in the upper right > click **Custom Links** beneath *System*.
2. Click **del** next to the link you wish to delete.
3. Click **OK** on the popup prompt message box.
4. Click **Update**.

Security

The following series of options in the Security section allow you to either enhance or reduce the security of your Issuetrak site. It is important to note that some of these enhancements may reduce the functionality of the browser, causing potential inconveniences to your users. Additionally, two of these options will result in reduced security and should only be enabled with care.

Want to find out about security as it relates to the deployment of Issuetrak? Read the [Security in Issuetrak](#) article instead.

Defining Site Security

Steps:

To change your system's security options:

1. Click the **gear** icon in the upper right > click on **Security** beneath *System*.
 2. Make the desired selections and then click the **Update** button.
-

The following options increase site security:

- **Tell browsers not to cache page data** was an option in previous versions that was removed in Issuetrak 15.1 and above. *See the next bulleted item down for more information about this option for 15.1+.* This disabled the caching functions on data entry pages within Issuetrak. This measure is designed to prevent hackers from potentially gaining access to sensitive information through a specific workstation or other common access points. However, this results in potential inconveniences for your user base, primarily in that the **Back** button of the browser may not return the user to the previously viewed page and could also empty the data entry fields on the page they are on.
- **Page Data Caching** - If you had the option above enabled prior to upgrading to Issuetrak 15.1, then no further action is needed on your part to keep this functionality. But if you did not have this option enabled prior to upgrading to 15.1, you will need to enable a new URL rewrite rule in IIS. The rewrite rule is called "Set Cache-Control Response Header" and it can be found in the Outbound Rules.
- **Protect this site from Cross-Site Request Forgery (CSRF) attacks** adds additional security layers to your site that help prevent hackers from potentially gaining access to sensitive information and/or executing malicious functions through **Cross-Site Request Forgery** attacks. This option comes with a number of potential inconveniences to your users, including additional steps needing to be taken to perform certain behaviors.
 - Users will not be able to access any shortcut or direct link to a specific page within your Issuetrak site (such as an Issue record, Project record, KB Article, Report, etc.) that is not specifically embedded with a system-generated Synchronizer Token Pattern.

- Users will not be able to access any shortcut or direct link to a specific page within your Issuetrak website that has been copied and pasted directly from a browser's address bar into any other location inside or outside of Issuetrak (such as into another Issue record, Project record, KB Article, personal email message, desktop shortcut, etc.).
- Users will be required to generate a **Safe** URL using the (**Create Safe URL**) function found in the top bar of your Issuetrak interface each time they need to paste a link to a specific page within Issuetrak into any other location inside or outside of Issuetrak.
- Significantly lengthens the general URL displayed in a browser's address bar for every individual page within your Issuetrak site.
- Significantly increases the number of characters involved in a **Safe** link to specific pages within your Issuetrak site which may potentially exceed the amount of available space or maximum character limit allowed in certain locations inside or outside of Issuetrak.

For more details on this type of attack, please see the [OWASP's Cross Site Request Forgery \(CSRF\) page](#).

The following options reduce site security:

- **Use cookies to remember User IDs on the login page** will use a cookie to store the User ID information on the local machine, a convenience feature that prevents your users from having to type their User ID every time they visit your Issuetrak site.
-

About Site IDs

A Site ID is a unique identifier that distinguishes a running instance of Issuetrak from all others. Additionally, it is used to distinguish production sites from test sites: Production sites and test sites require different site IDs.

You will be prompted to enter a numeric Site ID when you [deploy](#) a new instance of Issuetrak or [upgrade](#) an existing instance from a version (less than 15.2) that didn't require it. If you do not know your Site ID, then please reach out to Issuetrak [Support](#) so that we can provide it to you.

If you have already upgraded to Issuetrak 15.2 or above, then you can find your Site ID in your site by navigating to the [License Key](#) screen or clicking on the question mark towards the top-right area of the screen and then choosing **About Issuetrak**.

Configuring Services and Scheduled Tasks

Issuetrak uses a combination of Windows **services** and **scheduled tasks** to continuously provide features and functionality:

Feature Name	Service or Task?
Automatic Asset Updates	Scheduled Task
Issue Escalations	Scheduled Task
Scheduled Issues	Scheduled Task
Scheduled AD Imports	Scheduled Task
Scheduled Reports	Scheduled Task
SLA Notifications	Scheduled Task
Incoming Email	Scheduled Task
Outgoing Email	Service

This article applies to the *current version of Issuetrak*. If you have an older version, please see [this article](#) for a comparison of previous versions or [contact Issuetrak Support](#) for more information.

Each service and task is version-specific. That is, it will only target and process Issuetrak instances matching its own version.

Additionally, it is possible to choose which tasks or services need to run against your site. In order to make these changes, it is necessary to review and modify the underlying configuration.

In **On-Premises** deployments, these tasks are deployed:

Incoming Email Scheduled Task	<ul style="list-style-type: none">• To begin at 12:12 AM• With an offset between 0-120 seconds• With a frequency of every 2 minutes
Scheduled Reports Task	<ul style="list-style-type: none">• To begin at 12:03 AM• With a frequency of every hour
Scheduled Issues Task	<ul style="list-style-type: none">• To begin at 12:06 AM• With a frequency of every hour

EmailConfiguration.xml

Configuration information concerning these services and tasks is located on the Web server in a single file named **EmailConfiguration.xml** located here:

C:\Program Files (x86)\Issuetrak\Common\Configuration\Services

An entry for each site determines whether scheduled tasks and services should target the site when they begin their work, what communication information should be used, and other information necessary to process the site. Services and tasks can be disabled by changing their respective value to **False**. For example, if you don't make use of SLAs in one site, you

can simply set the relevant setting "SLANotificationsActive" to **False** to disable the SLA scheduled task for that site.

For reference, here is an example of a site's entry within the file:

► **Example Code**

An explanation of each entry follows below:

Entry Name	Setting Explanation
Name	Name of the Issuetrak site
Version	Version of the Issuetrak site
IncomingActive	Deprecated. Possible values: True or False. If 'True', tells the matching Incoming Email Service to process the site.
OutgoingActive	Possible values: True or False. If 'True', tells the matching-version Outgoing Email Service to process the site.
WebRootPath	Path to the Issuetrak site's web folder.
SiteProcessingMaxDegreeOfParallelism	Default value is '2'. Should not be changed.
CountOfOutgoingMessagesToProcessPerIterationForSite	Default value is '0', and is interpreted as 'infinite'. Tells the matching Outgoing Email Service to limit the number of outgoing emails sent specified each time this site is processed.
ConfigurationFilePath	Default value is 'C:\Program Files (x86)\Issuetrak\Common\Configuration\Services\Issuetrak.Services.Global.xml' This provides the path to the Issuetrak.Services.Global.xml file that contains connection string information for the various Issuetrak services that connect to the Issuetrak sites.
ConnectionStringName	This is a hex string that is auto-generated when a site is deployed. It is a unique identifier for each site, and it is used to differentiate between sites in the Issuetrak.Services.Global.xml file.
AdImportActive	Possible values: True or False. Tells the AD Scheduled Import task whether to process this site.
ScheduledReportsActive	Possible values: True or False. Tells the Scheduled Reports task whether to process this site.
RecurringIssuesActive	Possible values: True or False. Tells the Recurring Issues task whether to process this site.
AssetAuditActive	Possible values: True or False. Tells the Asset Audit task whether to process this site.
IssueEscalationActive	Possible values: True or False. Tells the Issue Escalation task whether to process this site.
SLANotificationsActive	Possible values: True or False. Tells the SLA Notification task whether to process this site.

Issuetrak.Services.Global.xml

Issuetrak.Services.Global.xml contains the "other half" of the configuration information referenced in **EmailConfiguration.xml**. **Issuetrak.Services.Global.xml** is located on the Web server at the following location:

C:\Program Files (x86)\Issuetrak\Common\Configuration\Services

The configuration information in this file is divided into three discrete sections:

- **Secure Storage Keys:** A table cross-referencing the unique identifier for each site with the Secure Storage Key that is used to authenticate the services and tasks.
- **Site Versions:** A table cross-referencing the unique identifier for each site with the version of the site and its services.
- **Connection Strings:** An encrypted block of text that cross-references the unique identifier for each site with its own connection string information. Each entry, when decrypted, consists of:
 - Site Unique Identifier
 - SQL server hostname
 - Database name
 - The site-specific SQL username that communicates with the MVC application. This is usually a variation on "IssuetrakMvcUser".
 - The password for the site's MVC SQL user account.

If you require any assistance with modifying the settings outlined above, please contact Issuetrak Support at 757-213-1351 or support@issuetrak.com.

SQL Server Migration

This migration scenario is for Issuetrak 11.0 and above only. It assumes that you're migrating an Issuetrak database from one SQL server to another. This is normally done when an old SQL server is about to be decommissioned and its databases are being migrated to a newer platform. Additionally, if you are attempting to migrate a version of Issuetrak older than 11.0, please reach out to Issuetrak Support for assistance.

Preparation

1. Confirm that the site is working properly in its current environment (IEM, OEM, AD integration, and SSO, as applicable).
 2. Be sure that the new SQL server meets all of the [system requirements](#).
 3. Download the latest version of Issuetrak from [here](#) to your current Web server.
 4. From the Web server, use the IDM to [generate a JSON](#) of the existing Issuetrak instance. This will provide a snapshot of the instance's current deployment configuration.
 5. Stop the website in IIS.
 6. Perform a backup of your Issuetrak database.
 7. Take the database offline to prevent any site operations (Task, Services, Issue submissions, and editing).
 8. Restart the website in IIS.
-

Deployment

1. Restore the backup of your database to the new SQL server.

The subsequent steps are performed on the Web server.

2. Open the JSON in a text editor. (*Notepad++ is recommended for this, as Windows Notepad tends to malform the displayed file contents*).
 - Update the Database section of the JSON to reflect the values that apply to the new SQL server.
3. Use the IDM to deploy the JSON that you just saved by performing the following steps:
 - a. Open Issuetrak Deployment Manager.
 - b. Click **Add Sites for Deployment**.
 - c. Choose the **From a Configuration File** option.
 - d. Select the JSON that was edited in step 2.
 - e. Click the box beside the site > click **Deploy**. *Don't make changes to any of the selected deployment contexts, as it is necessary to re-deploy all contexts.*
4. Confirm that the site comes up as normal.
5. Confirm that you can sign into the site.
6. Confirm that the features of your site are working properly (IEM, OEM, AD integration,

and SSO, as applicable).

Issuetrak Support will be happy to troubleshoot or assist you. You can contact Support at 888-789-8725 (US & Canada), +1 757-213-1351 (International), support@issuetrak.com or <https://support.issuetrak.com/>.

User Administrator Feature

There are scenarios where it is advantageous to have a user with limited administrative capabilities in Issuetrak, without needing to take up an agent license to do so. Beginning with Issuetrak 11.2, it is possible to give permission to an end-user account for the limited administration of other users within their organization. When a user is provided with this permission, we then refer to them as a *User Administrator* or *User Admin*. The *User Administrator* is capable of limited provisioning of new and existing users in Issuetrak.

In summary, a User Administrator:

- Does not take up an Agent license
- Has the ability to create non-AD user accounts within their own organization memberships, add them to groups, and set their password
- Is limited to viewing and editing End User accounts that have primary membership in common with the User Admin's own organization memberships
- Does not have the ability to edit or set user permissions directly, but can grant group membership

Necessary Permissions

The only necessary permission to make an account into a User Admin is Can access and maintain users in this user's Organizations.

However, there are two permissions that the account **cannot have** if they are a User Admin:

- Allowed Read Only access to Administration information
- Can access and maintain Administration functions

If either of the above permissions is selected for a user that already has Can access and maintain users in this user's Organizations permission, then Issuetrak will warn that the permissions are mutually exclusive.

Abilities

User Admins **can** perform the following actions on users within their own organization:

- Edit user data within their own organization memberships
- Manage membership for group types of *Any* within their own organization
- Clone user accounts
- Set and change passwords for end-users in their organization
- Create new End User accounts
- View user permissions
- View user type
- Create user administrators via group membership

Limitations

User admins **cannot**:

- Search AD
- Clone AD-authenticated users
- Change whether users are authenticated via AD
- Clone, grant, or edit user permissions
- Delete users
- Change user types
- Edit a Sys Admin or users with Can access and maintain Administration functions permission
- Add a user to a group outside their organization
- View users outside of their own organization

Additional Limitations

- All users created by a User Admin will have the No AD Authentication checkbox (pre-11.13 releases) or **Issuetrak Authentication** (11.13 and later) dropdown set on their account.
- User Admins will only be able to add users to groups that already belong to the same organizations that the User Admin is a part of.
- Although User Admins will have access to the **Settings Lightbox** it will have access to **Users** beneath *Entities*.
- After clicking on the **Users** item from the Settings Lightbox, the items **List All**, **Add**, and **Search** will appear in the right context menu.
- When viewed by a User Admin, the *User Summary* page will be filtered to display only those users that have membership in their Organization.
- The Subscriptions link is not shown on the *User View* screen.
- The ability to *Email to User List* and *Email Survey Invitations User List* options will not be present on the *User Search* screen.

Legacy Upgrade Considerations

Customers running Issuetrak 9.9.6 or older and using the **Organization Administrator** feature can [run a SQL script](#) to export a list of their existing OrgAdmin users prior to upgrading. This list of users is temporarily stored in a table in the Issuetrak database that is left untouched by the intermediate 10.x - 11.1 upgrades. The 11.2+ deployment tools have an import process that checks for this table, grants the listed users the **User Administrator** permission, and subsequently deletes the table.

About the Issuetrak RESTful API

This article provides information on the Issuetrak RESTful API, including important points to keep in mind and instructions on where to locate the documentation and installation files.

Introduction

Why might you want to use our API?

You might have a scenario specific to your organization wherein you need to pull certain data from Issuetrak and display it in another application, website, or report. Or maybe you want to do the opposite of that: Pull data from an application, website or report, and integrate it into Issuetrak.

Maybe you want to get a realtime count of how many issues have been submitted today without signing into Issuetrak. Or perhaps you want to submit issues from a custom interface your development team has put together.

You can accomplish all of these things via our API.

Before Getting Started

- **Programmers with RESTful API experience** – The goal of any API is that you can utilize your own resources to create something unique that interacts with another product. Imagination and creativity is your only limit; therefore, you need to be sure you have the proper personnel to accomplish what you want to do with the API.
 - **Latest and Greatest** – In order to gain access to the latest API, On-Premises installations will need to be on the latest version of Issuetrak and Cloud installations will need to contact our Support Team. For On-Premises installations, the latest version of the API is included in the Issuetrak distribution attached to the following [Issuetrak Support KB article](#).
 - **System Requirements** – The System Requirements for the API are located in the following [Help Center article](#).
-

Functionality

The Issuetrak API gives your programmers access to the issue-related tables within your Issuetrak database through a .NET Web Service. Using the API, they'll be able to insert, update, and retrieve issue data. There is a lot of flexibility to a RESTful API, which means you and your programmers may develop a number of uses for it.

Documentation

The following Help Center articles will provide you with everything you need to know to understand the ins and outs of the API:

[API System Requirements](#)
[Installing the API \(Issuetrak 11.0+\)](#)
[API - Elevating NLog](#)
[API Authorization Overview](#)
[API Operation Conventions](#)
[API Operations for APIMETADATA](#)
[API Operations for Attachments](#)
[API Operations for Causes](#)
[API Operations for Classes](#)
[API Operations for Departments](#)
[API Operations for Issues](#)
[API Operations for IssueSubTypes](#)
[API Operations for IssueSubTypes2](#)
[API Operations for IssueSubTypes3](#)
[API Operations for IssueSubTypes4](#)
[API Operations for IssueTypes](#)
[API Operations for Locations](#)
[API Operations for MenuItems](#)
[API Operations for Notes](#)
[API Operations for Organizations](#)
[API Operations for Priorities](#)
[API Operations for Projects](#)
[API Operations for ServiceLevelAgreements](#)
[API Operations for ServiceLevelSeverities](#)
[API Operations for ServiceLevels](#)
[API Operations for ServiceLevelTerms](#)
[API Operations for Substatuses](#)
[API Operations for TimeZones](#)
[API Operations for User-Defined Field Types](#)
[API Operations for Users](#)
[API Operations for User Types](#)
[API Samples Overview](#)
[API – Encrypting ConnectionStrings](#)
[API – Swagger Overview](#)
[API – Troubleshooting Swagger](#)

Examples

Also included in the Distribution are some examples we've developed, which you can use for

testing the API. For more information on the examples, including access for our Cloud customers, please visit the following [article](#).

Installing the API

If you're actually interested in learning about Issuetrak's second-generation API v2, then you should read [this](#) article instead.

Issuetrak provides the means to deploy the API via either the Issuetrak Deployment Utility (IDU) or the Issuetrak Deployment Manager (IDM).

If you wish to install the API while [upgrading](#) or [installing](#) a new instance of Issuetrak with the IDM, you should select the API when prompted, and continue with the deployment as normal.

If you are installing or upgrading a site with the IDU and wish to include the API, then you will need to add the [API object to your site's JSON](#).

Deploying the API will require a few minutes of downtime for all involved Issuetrak sites. During deployment, the following events will happen for each targeted Issuetrak instance.

- An API user will be created on the SQL server if it doesn't exist, and it will be associated with your Issuetrak instance.
- An account called "APIUser" will be added within your Issuetrak site. It will only be visible when querying the SQL server for this account. This account **must** remain active, and should not be modified.
- A new application called **api** will be created at the root of your Issuetrak site in IIS.

For any API call to be made to the site, your API Key will be required as a part of the [API Authorization](#), there are 2 methods to retrieve the API Key.

- If a new Issuetrak site is being deployed the API Key will be provided during the API portion of the installation.
- If the API is being installed during an upgrade, the API Key can be found from the Database using the following SQL query after the installation is complete:
 - `SELECT Parametervalue FROM Parameters WHERE Parameter = 'ApiKey'`

If you want to learn more in general about deploying Issuetrak before performing an API deployment, you can find more about Issuetrak Deployment Fundamentals [here](#).

API Operation Conventions

Data Transfer Objects

The Issuetrak API uses the concept of Data Transfer Objects (DTOs) to represent the serialized input to API operation endpoints for API methods that use the POST and PUT HTTP verbs and to represent the serialized output from API operations where a response object is expected.

Date Serialization

For serializing dates, the Issuetrak API uses the [ISO 8601 standard](#).

Example:

```
The date February 27, 2014, at 11:30:10 AM, is represented in the ISO 8601 standard as: 2014-02-27T11:30:10.0000000.
```

Data Serialization

The Issuetrak API supports two serialization formats: JSON and XML. The documentation assumes the use of JSON; however, the Issuetrak API Swagger UI demonstrates the alternate serialization response schema for XML if an XML implementation is desired.

ExtensionData and MetaData Objects

For API operation responses that generate DTOs or collections of DTOs, there are two additional properties that will be present within each of the DTO instances, "ExtensionData" and "Metadata".

The **ExtensionData** property represents a collection of key / value pairs and is intended to provide a container for conveying data that is external to an established data contract. One of the primary uses of this property would be to convey data from a future version of a DTO contract (e.g., a future version of a response DTO from a version X implementation of the Issuetrak API) to a previous DTO version.

The **Metadata** property represents a collection of key / value pairs and is intended to provide a container for conveying data that is pertinent to the individual API operation. For API

operations that produce response DTO instances, the Metadata collection will include at least two properties: "APIVersion" and "QueryDate". The "*APIVersion*" property will provide a text representation of the version of the API used to generate the response, e.g., "v1". The "*QueryDate*" property will provide an ISO 8601 serialized date representing the date-time that the API operation was run.

API Operations for APIMETADATA

Summary

Operation Name: Retrieve API Metadata

Relative API Request Path: ~/api/v1/metadata/current

HTTP Verb: GET

Description: Retrieves the current API metadata

Retrieve API Metadata

Description: This API method provides metadata regarding the current API version.

The response code on success will be 200 (OK), and the response body will include the current server UTC date and the current API version.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Data: 400

Response DTO Property Notes:

- The UTCDate property represents the UTC datetime for the server

Sample Request URL: ~/api/v1/metadata/current

► Sample Response:

API Operations for Attachments

Summary

Operation Name: [Retrieve an Attachment by Attachment ID](#)

Relative API Request Path:

~/api/v1/attachments/{attachmentID}/{includeAttachmentContent}

HTTP Verb: GET

Description: Retrieve a single Attachment from by its AttachmentID with the option of specifying whether or not to retrieve the attachment file content.

Operation Name: [Retrieve a Collection of Attachments by Issue Number](#)

Relative API Request Path:

~/api/v1/attachments/issue/{issueNumber}/{includeAttachmentContent}

HTTP Verb: GET

Description: Retrieve a collection of Attachments for an associated issueNumber with the option of specifying whether or not to retrieve the attachment file content.

Operation Name: [Retrieve a Collection of Attachments by IssueNumber with the Contents of the Attachments Compressed as a ZIP Archive](#)

Relative API Request Path:

~/api/v1/attachments/compressed/issueNumber/{issueNumber}

HTTP Verb: GET

Description: Retrieve a collection of Attachments for an associated issueNumber with the contents of the attachment compresses as a ZIP Archive.

Operation Name: [Create Attachment for Issue](#)

Relative API Request Path: ~/api/v1/attachments

HTTP Verb: POST

Description: Create a new Attachment for an Issue.

Retrieve an Attachment by Attachment ID

Description: This API method retrieves an Attachment from the Issuetrak data store for a specified Attachment ID. The "attachmentID" parameter must correspond to an existing Attachment. If there is no such Attachment ID, an error message will be returned with an HTTP response status code of 400.

The "includeAttachmentContent" parameter is an optional parameter that defaults to true. If false, (e.g., /attachments/1/false), the **ReadAttachmentDTO** FileContent property will be null representing the skipped operation of retrieving the attachment file content.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadAttachmentDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Attachment ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Attachment: 404
- Invalid Attachment ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response DTO Property Notes:

- The **FileSizeInBytes** property value should equal the number of bytes present in the **FileContent** byte array after decoding from base-64.
- The **FileContent** property will contain the base-64 encoded contents of the Attachment file.
- The **ExtensionData** property will contain an echo of the “includeAttachmentContent” parameter setting for the request.
- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/attachments/139978/true

► Sample Response:

Retrieve a Collection of Attachments by Issue Number

Description: This API method retrieves a collection of Attachment from the Issuetrak data store for the specified Issue Number. The “issueNumber” parameter must correspond to an existing Issue. If there is no such IssueNumber, an error message will be returned with an HTTP response status code of 400.

The “includeAttachmentContent” parameter is an optional parameter that defaults to true. If false, (e.g., /attachments/1/false), the **ReadAttachmentDTO** FileContent property will be null representing the skipped operation of retrieving the attachment file content.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadAttachmentDTO** instances.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Issue Number: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Issue: 404
- Non-existent Attachment: 404
- Invalid Issue Number 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response DTO Property Notes:

- The **IsPageIndexZeroBased** property value is always true. This property is included for use in future API versions.
- The **PageIndex** property value is always 0. This property is included for use in future API versions.
- The **CountForPage** property value is always the same as **TotalCount**. This property is included for use in future API versions.
- The **PageSize** property value is always the maximum value for a signed, 32-bit integer. This property is included for use in future API versions.
- The **TotalCount** property value is the number of records returned in the collection.
- The **Collection** property is an array containing the **ReadAttachmentDTO** objects returned.
- The **ExtensionData** property will contain an echo of the “includeAttachmentContent” parameter setting for the request.

Sample Request URL: ~/api/v1/attachments/issueNumber/122/true

► **Sample Response:**

Retrieve a Collection of Attachments by IssueNumber with the Contents of the Attachments Compressed as a ZIP Archive

Description: This API method retrieves a collection of Attachment from the Issuetrak data store for the specified Issue Number. The “issueNumber” parameter must correspond to an existing Issue. If there is no such IssueNumber, an error message will be returned with an HTTP response status code of 400.

The content of the retrieved attachments are compressed as a ZIP archive.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized “QueryResults” instance with a Collection property containing a set of

ReadAttachmentDTO instances. For each of the **ReadAttachmentDTO** instances, the `FileContent` property will be null and the `ExtensionData` property will contain a key/value pair with the key name, "CompressedEntryName". The value of the "CompressedEntryName" key will represent the name of the ZIP archive entry corresponding to the byte content for the **ReadAttachmentDTO** instance's compressed content.

A successful response will include a second root object, "CompressedAttachmentsContent", representing the Base-64 encoded representation of the ZIP archive of the attachments for the queried Issue.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Issue Number: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Issue: 404
- Non-existent Attachment: 404
- Invalid Issue Number 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response DTO Property Notes:

- The **IsPageIndexZeroBased** property value is always true. This property is included for use in future API versions.
- The **PageIndex** property value is always 0. This property is included for use in future API versions.
- The **CountForPage** property value is always the same as **TotalCount**. This property is included for use in future API versions.
- The **PageSize** property value is always the maximum value for a signed, 32-bit integer. This property is included for use in future API versions.
- The **TotalCount** property value is the number of records returned in the collection.
- The **Collection** property is an array containing the **ReadAttachmentDTO** objects returned.
- The **ExtensionData** properties for the **ReadAttachmentDTO** instances included within the `QueryResults` Collection will contain a key/value pair with the key name, "CompressedEntryName", representing the ZIP archive entry name for the attachment. The "CompressedEntryName" is a randomly-generated value for every request to allow attachments with the same base name to be compressed.

Sample Request URL: `~/api/v1/attachments/compressed/issueNumber/105557`

► Sample Response:

Create Attachment for Issue

Description: This method creates a new Attachment associated with a specific Issue (identified by IssueNumber) within the Issuetrak data store. The **CreateAttachmentDTO** object conveys the properties and file content of the new Attachment. Because Attachments are associated with Issues, the IssueNumber property of the DTO must correspond to an existing Issue. If there is no such IssueNumber, an error message will be returned with a 400 HTTP status code.

A successful response will include an HTTP status code of 201 (Created), and the response body will represent the 32-bit integer value representing the ID of the newly-created Attachment.*

► Response DTO Schema:

Request HTTP Verb: POST

Response Status Codes:

- Success: 201 (Created)
- Invalid Data: 400
- Non-existent Issue: 400

Response DTO Property Notes:

- The **FileName** property value must comply with the [character limitations imposed on standard Windows file names](#).
- The **CreatedBy** property value must reference an existing, active User within the Issuetrak application.
- The **FileSizeInBytes** property value must match the number of bytes present in FileContent after decoding from base-64.
- The **FileContent** property value must contain the base-64-encoded contents of the Attachment file.

Sample Request URL: ~/api/v1/attachments/

► Sample Request:

Sample Response HTTP Status Code: 201

Sample Response Body: 140367 (represents the newly-created Attachment ID)

API Operations for Causes

Summary

Operation Name: [Retrieve a Cause by Cause ID](#)

Relative API Request Path: ~/api/v1/causes/{causeID}

HTTP Verb: GET

Description: Retrieve a single Cause by Cause ID.

Operation Name: [Retrieve all Causes](#)

Relative API Request Path: ~/api/v1/causes

HTTP Verb: GET

Description: Retrieve a collection of currently defined Causes.

Retrieve a Cause by Cause ID

Description: This API method retrieves a Cause from the Issuetrak data store for a specified Cause ID. The "causeID" parameter must correspond to an existing Cause. If there is no such Cause ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a Cause using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the CauseName returned via the API method represents the CauseName **as stored** within the Issuetrak database. Thus, when retrieving a Cause created through the Issuetrak web interface where HTML encoding of the CauseName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadCauseDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Cause ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Cause: 404
- Invalid Cause ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **ExtensionData** property is not used in version 1 of the API.
- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/causes/11

► **Sample Response:**

Retrieve all Causes

Description: This API method retrieves a collection of all currently-defined Causes from the Issuetrak data store.

When retrieving a Cause using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the CauseName returned via the API method represents the CauseName **as stored** within the Issuetrak database. Thus, when retrieving a Cause created through the Issuetrak web interface where HTML encoding of the CauseName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadCauseDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Cause: 404

Response Properties:

- The **IsPageIndexZeroBased** property value is always true. This property is included for use in future API versions.
- The **PageIndex** property value is always 0. This property is included for use in future API versions.
- The **CountForPage** property value is always the same as **TotalCount**. This property is included for use in future API versions.
- The **PageSize** property value is always the maximum value for a signed, 32-bit integer. This property is included for use in future API versions.
- The **TotalCount** property value is the number of records returned in the collection.

- The **Collection** property is an array containing the **ReadCauseDTO** objects returned.

Sample Request URL: ~/api/v1/causes/

▶ **Sample Response:**

API Operations for Classes

Summary

Operation Name: [Retrieve a Class by Class ID](#)

Relative API Request Path: ~/api/v1/classes/{classID}

HTTP Verb: GET

Description: Retrieve a single Class by Class ID.

Operation Name: [Retrieve all Classes](#)

Relative API Request Path: ~/api/v1/classes

HTTP Verb: GET

Description: Retrieve a collection of currently defined Classes.

Retrieve a Class by Class ID

Description: This API method retrieves a Class from the Issuetrak data store for a specified Class ID. The "classID" parameter must correspond to an existing Class. If there is no such Class ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a Class using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the Class Name returned via the API method represents the Class Name **as stored** within the Issuetrak database. Thus, when retrieving a Class created through the Issuetrak web interface where HTML encoding of the ClassName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadClassDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Class ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Class: 404
- Invalid Class ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/classes/1

▶ **Sample Response:**

Retrieve all Classes

Description: This API method retrieves a collection of all currently-defined Classes from the Issuetrak data store.

When retrieving a Class using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the ClassName returned via the API method represents the ClassName **as stored** within the Issuetrak database. Thus, when retrieving a Class created through the Issuetrak web interface where HTML encoding of the ClassName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadClassDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Class: 404

▶ **Response Properties:**

Sample Request URL: ~/api/v1/classes/

▶ **Sample Response:**

API Operations for Departments

Summary

Operation Name: [Retrieve a Department by Department ID](#)

Relative API Request Path: ~/api/v1/departments/{departmentID}

HTTP Verb: GET

Description: Retrieve a single Department by Department ID.

Operation Name: [Retrieve all Departments](#)

Relative API Request Path: ~/api/v1/departments

HTTP Verb: GET

Description: Retrieve a collection of currently defined Departments.

Retrieve a Department by Department ID

Description: This API method retrieves a Department from the Issuetrak data store for a specified Department ID. The “departmentID” parameter must correspond to an existing Department. If there is no such Department ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an Department using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the DepartmentName returned via the API method represents the DepartmentName **as stored** within the Issuetrak database. Thus, when retrieving a Department created through the Issuetrak web interface where HTML encoding of the DepartmentName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadDepartmentDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Department ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Department: 404
- Invalid Department ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response Properties:

Sample Request URL: ~/api/v1/departments/11

▶ **Sample Response:**

Retrieve all Departments

Description: This API method retrieves a collection of all currently-defined Departments from the Issuetrak data store.

When retrieving an Department using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the DepartmentName returned via the API method represents the DepartmentName **as stored** within the Issuetrak database. Thus, when retrieving a Department created through the Issuetrak web interface where HTML encoding of the DepartmentName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadDepartmentDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Department: 404

▶ **Response Properties:**

Sample Request URL: ~/api/v1/departments/

▶ **Sample Response:**

API Operations for Issues

Summary

Operation Name: [Retrieve an Issue by Issue Number](#)

Relative API Request Path: ~/api/v1/issues/{includeNotes}/{issueNumber}

HTTP Verb: GET

Description: Retrieve a single Issue from by Issue Number.

Operation Name: [Retrieve a Collection of Issues for a List of Issue Numbers](#)

Relative API Request Path: ~/api /v1/issues/{includeNotes}/list

HTTP Verb: GET

Description: Retrieve a collection of issues for a delimited list of issue numbers.

Operation Name: [Create an Issue](#)

Relative API Request Path: ~/api/v1/issues

HTTP Verb: POST

Description: Create a new Issue.

Operation Name: [Update an Issue](#)

Relative API Request Path: ~/api/v1/issues

HTTP Verb: PUT

Description: Update an existing Issue.

Operation Name: [Search Issues](#)

Relative API Request Path: ~/api/v1/issues/search

HTTP Verb: POST

Description: Search issues for specified search filters, ordering instructions, and paging boundaries.

Retrieve an Issue by Issue Number

Description: This API method retrieves an Issue from the Issuetrak data store for a specified Issue Number value. The "IssueNumber" parameter must correspond to an existing Issue. If there is no such Issue Number, an error message will be returned with an HTTP response status code of 400.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadIssueDTO** instance.

The **ReadIssueDTO** response instance will contain a collection of **ReadNoteDTO** instances if the {includeNotes} parameter was specified as true; otherwise, the "Notes" array will be null.

The **ReadIssueDTO** response instance will contain a collection of **ReadIssueUserDefinedFieldDTO** representing the user-defined fields defined for the Issue if

any user-defined fields are defined.

When retrieving an Issue using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the Subject, Description, and NoteText returned via the API method represents the text as stored within the Issuetrak database. Thus, when retrieving an Issue created through the Issuetrak web interface where HTML encoding of the Subject, Description, and NoteText are performed, the API consumer may desire to perform additional client-side decoding.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Issue Number: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Issue: 404
- Invalid Issue Number: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Notes** property represents the collection of ReadNoteDTO instances for the Issue.
- The **UserDefinedFields** property represents the collection of ReadIssueUserDefinedFieldDTO instances for the Issue.
- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/issues/101502/false

► Sample Response:

Retrieve a Collection of Issues for a List of Issue Numbers

Description: This method retrieves a collection of Issues from the Issuetrak data store for a list of specified Issue Numbers. The list is passed to the method via a custom query string parameter of comma-delimited Issue Number values.

The Issue Number values must correspond to existing Issues. If there is no such IssueNumber, an error message will be returned with an HTTP response status code of 400.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of ReadIssueDTO instances.

Each **ReadIssueDTO** response instance will contain a collection of **ReadNoteDTO** instances if the {includeNotes} parameter was specified as true; otherwise, the "Notes" array will be null.

Each **ReadIssueDTO** response instance will contain a collection of **ReadIssueUserDefinedFieldDTO** representing the user-defined fields defined for the Issue if any user-defined fields are defined.

When retrieving an Issue using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the Subject, Description, and NoteText returned via the API method represents the text **as stored** within the Issuetrak database. Thus, when retrieving an Issue created through the Issuetrak web interface where HTML encoding of the Subject, Description, and NoteText **are** performed, the API consumer may desire to perform additional client-side decoding.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Issue: 400
- Invalid Issue Number List: 422 (Unprocessable Entity, e.g., negative or non-numeric values are supplied)

► Response Properties:

Sample Request URL: ~/api/v1/issues/true/list/?issueNumbers=104413,104414

► Sample Response:

Create an Issue

Description: This API method creates a new Issue within the Issuetrak data store. The **CreateIssueDTO** object conveys the properties of the new Issue along with any Note instances or User-defined Field instances to be associated with the new Issue. If invalid data are supplied, an error message will be returned with a 400 HTTP status code.

Depending on the activation of Issuetrak application features, the only acceptable value for a property associated with an application feature that is not activated is null. For example, for the “Use Issue Classes” feature, if the feature is disabled, the “ClassID” property for the **CreateIssueDTO** instance must be set to null.

For example, if a non-null value is provided for the “ClassID” property and the “Use Issue Classes” feature is not activated, an error of the following form will be returned:

The specified value for the 'ClassID' property is invalid because the 'Issue Classes' feature is not activated.

► **CreateIssueDTO** properties that depend on specific Issuetrak feature activation:

Please note that the value of the **ProjectID** property (if specified) must represent the Int32 ID value for an existing project. The existing projects may be retrieved using the “Get All Projects” method of the Projects API controller. Within the Issuetrak UI, the “ProjectID” property refers to the user-assigned project text identifier, not the Int32 value.

The response code on success will be 201 (Created), and the response body will represent the 32-bit integer value representing the ID of the newly-created Issue.

► **Response DTO Schema:**

Request HTTP Verb: POST

Response Status Codes:

- Success: 201
- Invalid Data: 400

Request Properties:

- The **ShouldSuppressEmailForCreateOperation** property value determines whether or not e-mail notifications will be sent by Issuetrak during the creation of this Issue. If 'false', e-mail notifications will be sent normally. If 'true', e-mail notifications will not be sent.
- The **CreatedBy** property value must reference an existing, active User within the Issuetrak application.

Sample Request URL: ~/api/v1/issues/

► **Sample Request:**

Sample Response HTTP Status Code: 201

Update an Issue

Description: This API method updates an existing Issue within the Issuetrak data store. The **UpdateIssueDTO** object conveys the properties of the Issue along with any User-defined Field instances to be associated with the new Issue. If invalid data are supplied, an error message will be returned with a 400 HTTP status code.

Depending on the activation of Issuetrak application features, the only acceptable value for a property associated with an application feature that is not activated is null. For example, for the "Use Issue Classes" feature, if the feature is disabled, the "ClassID" property for the **UpdateIssueDTO** instance must be set to null.

For example, if a non-null value is provided for the "ClassID" property and the "Use Issue Classes" feature is not activated, an error of the following form will be returned:

The specified value for the 'ClassID' property is invalid because the 'Issue Classes' feature is not activated.

► **UpdateIssueDTO** properties that depend on specific Issuetrak feature activation:

Please note that the value of the **ProjectID** property (if specified) must represent the Int32 ID value for an existing project. The existing projects may be retrieved using the "Get All Projects" method of the Projects API controller. Within the Issuetrak UI, the "ProjectID" property refers to the user-assigned project text identifier, not the Int32 value.

The response code on success will be 200 (OK), and the response body will represent the 32-bit integer value representing the Issue Number of the updated Issue.

► **Response DTO Schema:**

Request HTTP Verb: POST

Response Status Codes:

- Success: 200
- Invalid Data: 400

Request Properties:

- The **ShouldSuppressEmailForUpdateOperation** property value determines whether or

not e-mail notifications will be sent by Issuetrak during the update of this Issue. If 'false', e-mail notifications will be sent normally. If 'true', e-mail notifications will not be sent.

Sample Request URL: ~/api/v1/issues/

► **Sample Request:**

Sample Response HTTP Status Code: 200

Sample Response Body: 79048 (represents the Issue Number for the Issue updated)

Search Issues

Description: This method retrieves a collection of Issues from the Issuetrak data store for specified query set definitions. The query set definitions can contain one or more query expressions arranged into query sets with each query set related to the other query sets via an "AND" or "OR" logical operator.

► **ReadIssueDTO** properties that may be used as the "FieldName" property value within the "QuerySetExpressions" of the searchIssueDTO JSON representation:

To search on User Defined Fields, specify the FieldName property of the query expression using the format "UDI.ID" where ID is the primary key of the UDFields table record for the User Defined Field you want to search on. For example, if you want to search Issues on a User Defined Field with a primary key in the UDFields table of 5 you would use FieldName = "UDI.5".

Additionally, to change the output result set ordering, one or more query order definitions may be specified with each query order definition consisting of a property name over which to apply the sorting and the sorting direction: ASC or DESC.

Paging of the results is specified by including a zero-based page index and the desired page size.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of ReadIssueDTO instances.

Each **ReadIssueDTO** response instance will contain a collection of **ReadNoteDTO** instances if the {CanIncludeNotes} property was specified as true; otherwise, the "Notes" array will be null.

Each **ReadIssueDTO** response instance will contain a collection of **ReadIssueUserDefinedFieldDTO** representing the user-defined fields defined for the Issue if any user-defined fields are defined.

When retrieving an Issue using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the Subject, Description, and NoteText returned via the API method represents the text as stored within the Issuetrak database. Thus, when retrieving an Issue created through the Issuetrak web interface where HTML encoding of the Subject, Description, and NoteText are performed, the API consumer may desire to perform additional client-side decoding.

► **Response DTO Schema:**

Request HTTP Verb: POST

Response Status Codes:

- Success: 200
- Serialization Issue: 400

Response Properties: None

Sample Request URL: ~/api/v1/issues/search

► **Sample Request – Search on Issue Number:**

► **Sample Request – Search on User Defined Field:**

Sample Response HTTP Status Code: 200

► **Sample Response Body:**

API - Swagger Overview

Swagger is a RESTful API Documentation Specification that describes and documents Application Programming Interfaces (API). From the swagger.io site documentation:

The Swagger specification defines a set of files required to describe such an API. These files can then be used by the Swagger-UI project to display the API and Swagger-Codegen to generate clients in various languages. Additional utilities can also take advantage of the resulting files, such as testing tools.

The Issuetrak API employs technology to produce a “Swagger” API portal dashboard that is accessible from a specific URL relative to the API installation path, which is discussed in the sections below.

This Swagger dashboard displays baseline API documentation for each of the Issuetrak API operation endpoints including:

- API Operation Endpoint URLs
- API Operation Implementation Notes
- API Operation Request Schema
- API Operation Response Schema
- API Operation Response Codes

In addition, the Swagger dashboard provides the ability to issue test API requests using a request schema builder tool and to observe the API response for such test requests.

Swagger Access Controls

You should know that access to your site's Swagger page is determined by settings in the API site's web.config file. You can find this in: `{IssuetrakWebFolderPath}\API`

The two settings in the API web.config that control access to the Swagger page are discussed below. The Issuetrak [IDM](#) sets the values for these settings during the initial site/API deployment, but you can change them using a text editor later.

APIAuthorizationBypassReferrers

The value expressed in this setting should match the URL of the API website. The URL must end with `/api/swagger/ui/index`

```
http://www.mysite.com/api/swagger/ui/index
```

APIAuthorizationBypassIPAddresses

The value expressed in this setting should include the IP addresses of any computers that should be allowed to connect to the Swagger UI for the Issuetrak API. If more than one IP address is included in the list, then each value should be separated with a comma only (without spaces).

```
1.2.3.4,5.6.7.8
```

How to Access the Swagger Dashboard

Steps:

1. Determine the base URL that maps to the full virtual path for the Issuetrak API installation to access.

An example of the base API URL for an installation is: **<https://localhost/api/>**

2. Append “/swagger” to the base URL obtained in the previous step. Open this augmented URL with a web browser.

An example of the the augmented API URL to access the Swagger dashboard is:

<https://localhost/api/swagger/>

API Operations for IssueTypes

Summary

Operation Name: [Retrieve an IssueType by IssueType ID](#)

Relative API Request Path: ~/api/v1/issuetypes/{issueTypeID}

HTTP Verb: GET

Description: Retrieve a single IssueType by IssueType ID.

Operation Name: [Retrieve all IssueTypes](#)

Relative API Request Path: ~/api/v1/issuetypes

HTTP Verb: GET

Description: Retrieve a collection of currently defined IssueTypes.

Retrieve an IssueType by IssueType ID

Description: This API method retrieves an IssueType from the Issuetrak data store for a specified IssueType ID. The "issueTypeID" parameter must correspond to an existing IssueType. If there is no such IssueType ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an IssueType using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueTypeName returned via the API method represents the IssueTypeName **as stored** within the Issuetrak database. Thus, when retrieving an IssueType created through the Issuetrak web interface where HTML encoding of the IssueTypeName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadIssueTypeDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid IssueType ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent IssueType: 404
- Invalid IssueType ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response Properties:

Sample Request URL: ~/api/v1/issuetypes/11

▶ **Sample Response:**

Retrieve all IssueTypes

Description: This API method retrieves a collection of all currently-defined IssueTypes from the Issuetrak data store.

When retrieving an IssueType using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueTypeName returned via the API method represents the IssueTypeName **as stored** within the Issuetrak database. Thus, when retrieving an IssueType created through the Issuetrak web interface where HTML encoding of the IssueTypeName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadIssueTypeDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent IssueType: 404

▶ **Response Properties:**

Sample Request URL: ~/api/v1/issuetypes

▶ **Sample Response:**

API Operations for IssueSubTypes

Summary

Operation Name: [Retrieve an IssueSubType by IssueSubType ID](#)

Relative API Request Path: ~/api/v1/issuesubtypes/{issueSubTypeID}

HTTP Verb: GET

Description: Retrieve a single IssueSubType by IssueSubType ID.

Operation Name: [Retrieve all IssueSubTypes](#)

Relative API Request Path: ~/api/v1/issuesubtypes

HTTP Verb: GET

Description: Retrieve a collection of currently defined IssueSubTypes.

Retrieve an IssueSubType by IssueSubType ID

Description: This API method retrieves an IssueSubType from the Issuetrak data store for a specified IssueSubType ID. The "issueSubTypeID" parameter must correspond to an existing IssueSubType. If there is no such IssueSubType ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an IssueSubType using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubTypeName returned via the API method represents the IssueSubTypeName **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType created through the Issuetrak web interface where HTML encoding of the IssueSubTypeName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadIssueSubTypeDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid IssueSubType ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent IssueSubType: 404
- Invalid IssueSubType ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/issuesubtypes/11

▶ Sample Response:

Retrieve all IssueSubTypes

Description: This API method retrieves a collection of all currently-defined IssueSubTypes from the Issuetrak data store.

When retrieving an IssueSubType using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubTypeName returned via the API method represents the IssueSubTypeName **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType created through the Issuetrak web interface where HTML encoding of the IssueSubTypeName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadIssueSubTypeDTO** instance.

▶ Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent IssueSubType: 404

▶ Response Properties:

Sample Request URL: ~/api/v1/issuesubtypes/

▶ Sample Response:

API Samples Overview

The Issuetrak API is a RESTful API that uses the HTTP protocol as the primary transport infrastructure both to invoke an API operation and to transmit the response from an API operation back to the API consumer. As such, the API is platform-agnostic.

Any API consumer platform that can transmit the appropriately defined payload via a valid HTTP application protocol request using the API HMAC authorization scheme (see the [API Authorization Overview](#) article for details about the authorization scheme) can communicate with the API.

Issuetrak has created sample applications to demonstrate how to communicate with the API using Microsoft .NET, PHP, Python, and NodeJS. You can get the samples from the zip file attached [here](#). Please reference the samples from the aforementioned zip file using your favorite text editor, with the exception of Python, which we provide as code examples within this article.

.NET Sample

The .NET API sample relies upon an Issuetrak.API.Client library distributed with the sample as a .NET assembly. This Issuetrak.API.Client includes a set of wrapper methods to encapsulate the details of the process of calling the Issuetrak API for a particular operation.

For example, to retrieve a Note for a specific Note ID value, the Issuetrak.API.Client library exposes the following method signature:

```
Task<GetNoteForNoteIDResponse> GetNoteForNoteIDAsync(GetNoteForNoteIDRequest request)
```

This signature indicates that the wrapper method is an asynchronous method that will return a Task with a task result of type `GetNoteForNoteIDResponse`. The `GetNoteForNoteIDResponse` class provides a wrapper to encapsulate the details of an API response with properties such as "ResponseStatusCode" to retrieve the HTTP status code of the HTTP response and "ResponseText" to provide the raw string response of the HTTP response.

To call the `GetNoteForNoteIDAsync` API method, the Issuetrak.API.Client library may be invoked as in the following C# example:

```
using (IssuetrakAPIClient client = new IssuetrakAPIClient(API_KEY))
{
    GetNoteForNoteIDRequest request =
        new GetNoteForNoteIDRequest(BASE_API_URL, API_VERSION, noteID);
    GetNoteForNoteIDResponse response = await client.GetNoteForNoteIDAsync(request);
}
```

In the sample, the "API_KEY" constant is the API key text value that is used for the API

authorization scheme. The "BASE_API_URL" constant is the root URL to the Issuetrak API instance, and the API_VERSION constant is the integer identifier for the desired API version, e.g., 1.

The "noteID" parameter is a variable that is used to identify the desired Note ID value to retrieve.

PHP Sample

The PHP sample project demonstrates how to interact with the Issuetrak API via standard PHP functions to include code samples to:

1. Create a New Note
2. Retrieve a Note by Note ID
3. Retrieve Issues by Issue Number List

The PHP sample also demonstrates how to employ standard PHP functions to generate the authorization headers for API authorization.

To execute the PHP sample, copy the text for the "index.php" file to an appropriately configured PHP web server and update the "\$base_url" and "\$api_key" PHP variables with the appropriate values for the Issuetrak API deployment.

Python Samples

The Python sample projects demonstrate how to interact with the Issuetrak API via Python to:

1. Retrieve an Issue
2. Update an Issue
3. Submit an Issue

► Python 2.6:

▼ Python 3.7:

```
from uuid import uuid4
from urllib.parse import urlparse
from hashlib import sha512
from datetime import datetime
import hmac
import json
```

```

import json
import base64
import http.client

SITE_URL = "http://subdomain.myissuetraksite.com/nestedsite1/nestedsite2/api/v1"
API_KEY = "dUd4ZzQ3dDNvM1rYzFoY1IHymh3anRjQkjhB1dBWWdWTHdOd25kZm9GQQ="

class ApiAuthorization:
    __apiKey = ""
    __siteUrl = ""

    def __init__(self, apiKey, siteUrl):
        self.__apiKey = apiKey
        self.__siteUrl = siteUrl

    def __generateMessageToHash(self, httpVerb, requestId, requestTimeStamp, absoluteUrlPath, requestQuery = "", requestBody = ""):
        return "\n".join([httpVerb, requestId, requestTimeStamp, absoluteUrlPath, requestQuery, requestBody])

    def __computeHash(self, apiKey, messageToBeHashed):
        hashText = None
        hashKeyBytes = bytes(apiKey, 'UTF-8')
        messageToBeHashedBytes = bytes(messageToBeHashed, 'UTF-8')

        hmacHash = hmac.new(hashKeyBytes, messageToBeHashedBytes, sha512).digest()
        hashText = base64.b64encode(hmacHash).decode('UTF-8')

        return hashText

    @staticmethod
    def __getUtcDate():
        return datetime.utcnow().strftime("%Y-%m-%dT%H:%M:%S.%f0Z")

    def __getConnection(self, protocol, url):
        return http.client.HTTPConnection(url, 80) if (protocol == "http") else http.client.HTTPSConnection(url, 443)

    def __generateHeaders(self, requestId, requestTimestamp, hashedMessage):
        return {
            "X-IssueTrak-API-Request-ID": requestId,
            "X-IssueTrak-API-Timestamp": requestTimestamp,
            "X-IssueTrak-API-Authorization": hashedMessage,
            "content-type": "application/json"
        }

    def __performApiCall(self, httpVerb, endpointUrl, requestQuery = "", requestBody = ""):
        fullUrl = f"{self.__siteUrl}{endpointUrl}"
        urlParts = urlparse(fullUrl)
        baseUrl = urlParts.netloc.lower()
        absolutePath = urlparse(fullUrl).path.lower()
        requestId = str(uuid4()).lower()
        requestTimestamp = self.__getUtcDate()
        messageToHash = self.__generateMessageToHash(httpVerb, requestId, requestTimestamp, absolutePath, requestQuery, requestBody)
        hashedMessage = self.__computeHash(self.__apiKey, messageToHash)

        connection = self.__getConnection(urlParts.scheme, baseUrl)
        headers = self.__generateHeaders(requestId, requestTimestamp, hashedMessage)

        connection.request(httpVerb, fullUrl, requestBody, headers)
        return connection.getresponse()

    def performGet(self, endpointUrl):
        return self.__performApiCall("GET", endpointUrl)

```

```

def performPost(self, endpointUrl, requestQuery = "", requestBody = ""):
    return self.__performApiCall("POST", endpointUrl, requestQuery, requestBody)

def performPut(self, endpointUrl, requestQuery = "", requestBody = ""):
    return self.__performApiCall("PUT", endpointUrl, requestQuery, requestBody)

#####
# Initialize Api Authorization Class
#####
apiAuthorization = ApiAuthorization(API_KEY, SITE_URL)

#####
# GET
# Retrieves issue #1 from issuetrak
#####
print("-----Issue Retrieve-----")
response = apiAuthorization.performGet("/issues/false/1")
getResponseData = response.read().decode()
print(getResponseData)

#####
# PUT
# Updates issue #1 in issuetrak
#####
updateData = json.loads(getResponseData)

# Remove fields not on the issue update DTO
del updateData["Metadata"]
del updateData["ExtensionData"]
del updateData["Notes"]
del updateData["SubmittedDate"]
del updateData["SLAComplianceStatus"]
del updateData["Slaid"]
for userDefinedField in updateData["UserDefinedFields"]:
    del userDefinedField["ExtensionData"]
    del userDefinedField["Metadata"]
    del userDefinedField["DisplayName"]

# Remove fields that are disabled or inactive
del updateData["CauseID"]
del updateData["DepartmentID"]
del updateData["IssueSubType4ID"]

# Make changes to existing fields with updated data
updateData["Subject"] = "Altering my subject"

# Perform request
print("\n\n-----Issue Update-----")
response = apiAuthorization.performPut("/issues", "", json.dumps(updateData))
print(response.read().decode())

#Update a UDF value, if its ID matches the provided field ID, without wiping other UDFs
for userDefinedField in updateData["UserDefinedFields"]:
    if userDefinedField["UserDefinedFieldID"] == 4:
        userDefinedField["Value"] = "new value"

#Set a value for a specific UDF ID on a specific issue number
add_memo = {"IssueNumber":"12257 "UserDefinedFieldID":4, "Value":"1234"}
if re.search('Document Number', getResponseData) == None:
    updateData["UserDefinedFields"].append(add_memo)

#####
# POST
# Insert issue into Issuetrak
#####

```



```

# Set disabled/inactive fields to None
requestBody = {
    "ShouldSuppressEmailForCreateOperation": True,
    "Notes": [
        {
            "CreatedDate": f"{datetime.now()}",
            "CreatedBy": "admin",
            "NoteText": "This is a note",
            "IsPrivate": False,
            "IsRichText": True
        }
    ],
    "UserDefinedFields": [
        {
            "UserDefinedFieldID": 1,
            "Value": "This is text that will go into one of my user defined fields"
        },
        {
            "UserDefinedFieldID": 1008,
            "Value": f"{datetime.now().strftime('%Y-%m-%dT%H:%M:%S')}"
        }
    ],
    "SubmittedDate": f"{datetime.now()}",
    "EnteredBy": "admin",
    "SeverityID": None,
    "Subject": "This is a test subject submitted via the Issuetrak API in Python",
    "Description": "This is the description of the test issue",
    "IsDescriptionRichText": True,
    "IssueTypeID": 1,
    "IssueSubTypeID": 0,
    "IssueSubType2ID": 0,
    "IssueSubType3ID": 0,
    "IssueSubType4ID": None,
    "PriorityID": 1,
    "AssetNumber": 0,
    "LocationID": "",
    "SubmittedBy": "admin",
    "AssignedTo": None,
    "TargetDate": None,
    "RequiredByDate": None,
    "NextActionTo": None,
    "SubStatusID": 0,
    "ProjectID": 0,
    "OrganizationID": 1,
    "ShouldNeverSendEmailForIssue": False,
    "ClassID": 1,
    "DepartmentID": None,
    "SpecialFunction1": "string",
    "SpecialFunction2": "string",
    "SpecialFunction3": "string",
    "SpecialFunction4": "string",
    "SpecialFunction5": "string"
}

print("\n\n-----Insert Issue-----")
response = apiAuthorization.performPost("/issues", "", json.dumps(requestBody))
print(response.read().decode())

```

NodeJS Samples

The NodeJS sample project demonstrates how to insert a note into an issue by calling the notes API end point.

API Operations for IssueSubTypes2

Summary

Operation Name: [Retrieve an IssueSubType2 by IssueSubType2 ID](#)

Relative API Request Path: ~/api/v1/issuesubtypes2/{issueSubType2ID}

HTTP Verb: GET

Description: Retrieve a single IssueSubType2 by IssueSubType2 ID.

Operation Name: [Retrieve all IssueSubTypes2](#)

Relative API Request Path: ~/api/v1/issuesubtypes2

HTTP Verb: GET

Description: Retrieve a collection of currently defined IssueSubTypes2.

Retrieve an IssueSubType2 by IssueSubType2 ID

Description: This API method retrieves an IssueSubType2 from the Issuetrak data store for a specified IssueSubType2 ID. The "issueSubType2ID" parameter must correspond to an existing IssueSubType2. If there is no such IssueSubType2 ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an IssueSubType2 using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubType2Name returned via the API method represents the IssueSubType2Name **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType2 created through the Issuetrak web interface where HTML encoding of the IssueSubType2Name is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadIssueSubType2DTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid IssueSubType2 ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent IssueSubType2: 404
- Invalid IssueSubType2 ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/issuesubtypes2/11

▶ Sample Response:

Retrieve all IssueSubTypes2

Description: This API method retrieves a collection of all currently-defined IssueSubTypes2 from the Issuetrak data store.

When retrieving an IssueSubType2 using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubType2Name returned via the API method represents the IssueSubType2Name **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType2 created through the Issuetrak web interface where HTML encoding of the IssueSubType2Name is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadIssueSubType2DTO** instance.

▶ Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent IssueSubType2: 404

▶ Response Properties:

Sample Request URL: ~/api/v1/issuesubtypes2/

▶ Sample Response:

API Operations for IssueSubTypes3

Summary

Operation Name: [Retrieve an IssueSubType3 by IssueSubType3 ID](#)

Relative API Request Path: ~/api/v1/issuesubtypes3/{issueSubType3ID}

HTTP Verb: GET

Description: Retrieve a single IssueSubType3 by IssueSubType3 ID.

Operation Name: [Retrieve all IssueSubTypes3](#)

Relative API Request Path: ~/api/v1/issuesubtypes3

HTTP Verb: GET

Description: Retrieve a collection of currently defined IssueSubTypes3.

Retrieve an IssueSubType3 by IssueSubType3 ID

Description: This API method retrieves an IssueSubType3 from the Issuetrak data store for a specified IssueSubType3 ID. The "issueSubType3ID" parameter must correspond to an existing IssueSubType3. If there is no such IssueSubType3 ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an IssueSubType3 using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubType3Name returned via the API method represents the IssueSubType3Name **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType3 created through the Issuetrak web interface where HTML encoding of the IssueSubType3Name is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadIssueSubType3DTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid IssueSubType3 ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent IssueSubType3: 404
- Invalid IssueSubType3 ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/issuesubtypes3/11

▶ Sample Response:

Retrieve all IssueSubTypes3

Description: This API method retrieves a collection of all currently-defined IssueSubTypes3 from the Issuetrak data store.

When retrieving an IssueSubType3 using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubType3Name returned via the API method represents the IssueSubType3Name **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType3 created through the Issuetrak web interface where HTML encoding of the IssueSubType3Name is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadIssueSubType3DTO** instance.

▶ Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent IssueSubType3: 404

▶ Response Properties:

Sample Request URL: ~/api/v1/issuesubtypes3/

▶ Sample Response:

API - Elevating NLog

The following steps can be used to help provide more feedback when encountering API problems such as "Authorization Failure" on API procedures or within the Swagger UI. Your site must be on a minimum version of Issuetrak 11.4.1 in order for these steps to be effective.

Steps:

1. On your site's Web server navigate to your site's web folder, then navigate to its **\API\App_Data** folder.
 2. Right-click the **Logs** folder, choose **Properties**, then click the **Security** tab.
 3. Verify that the **IIS_IUSRS** account (or the account that Issuetrak's API App Pool is running as) has **Modify** permission to this folder. Add this permission to the account if it is not present.
 4. Edit the **NLog.config** file.
 5. Do a CTRL-F and search for the string: **enabled="false"**
 6. Change the string so that it reads: **enabled="true"**
 7. Save and close the file.
 8. Open IIS and then restart the **Issuetrak API Pool**.
 9. Attempt an API operation, then check the **API\App_Data\Logs** folder for a newly-generated log file.
-

API Operations for IssueSubTypes4

Summary

Operation Name: [Retrieve an IssueSubType4 by IssueSubType4 ID](#)

Relative API Request Path: ~/api/v1/issuesubtypes4/{issueSubType4ID}

HTTP Verb: GET

Description: Retrieve a single IssueSubType4 by IssueSubType4 ID.

Operation Name: [Retrieve all IssueSubTypes4](#)

Relative API Request Path: ~/api/v1/issuesubtypes4

HTTP Verb: GET

Description: Retrieve a collection of currently defined IssueSubTypes4.

Retrieve an IssueSubType4 by IssueSubType4 ID

Description: This API method retrieves an IssueSubType4 from the Issuetrak data store for a specified IssueSubType4 ID. The "issueSubType4ID" parameter must correspond to an existing IssueSubType4. If there is no such IssueSubType4 ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an IssueSubType4 using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubType4Name returned via the API method represents the IssueSubType4Name **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType4 created through the Issuetrak web interface where HTML encoding of the IssueSubType4Name is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadIssueSubType4DTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid IssueSubType4 ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent IssueSubType4: 404
- Invalid IssueSubType4 ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/issuesubtypes4/11

▶ Sample Response:

Retrieve all IssueSubTypes4

Description: This API method retrieves a collection of all currently-defined IssueSubTypes4 from the Issuetrak data store.

When retrieving an IssueSubType4 using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the IssueSubType4Name returned via the API method represents the IssueSubType4Name **as stored** within the Issuetrak database. Thus, when retrieving an IssueSubType4 created through the Issuetrak web interface where HTML encoding of the IssueSubType4Name is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadIssueSubType4DTO** instance.

▶ Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent IssueSubType4: 404

▶ Response Properties:

Sample Request URL: ~/api /v1/issuesubtypes4/

▶ Sample Response:

API Operations for Locations

Summary

Operation Name: [Retrieve a Location by Location ID](#)

Relative API Request Path: ~/api/v1/locations/{locationID}

HTTP Verb: GET

Description: Retrieve a single Location by Location ID.

Operation Name: [Retrieve all Locations](#)

Relative API Request Path: ~/api/v1/locations

HTTP Verb: GET

Description: Retrieve a collection of currently defined Locations.

Operation Name: [Create a Location](#) (Issuetrak 10.3+)

Relative API Request Path: ~/api/v1/locations

HTTP Verb: Post

Description: Create a new location with a specific LocationID.

Operation Name: [Update a Location](#) (Issuetrak 10.3+)

Relative API Request Path: ~/api/v1/locations

HTTP Verb: Put

Description: Update an existing location by specified LocationID.

Retrieve a Location by Location ID

Description: This API method retrieves a Location from the Issuetrak data store for a specified Location ID. The "locationID" parameter must correspond to an existing Location. If there is no such Location ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an Location using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the LocationName returned via the API method represents the LocationName **as stored** within the Issuetrak database. Thus, when retrieving a Location created through the Issuetrak web interface where HTML encoding of the LocationName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadLocationDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Location ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Location: 404
- Invalid Location ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► **Response Properties:**

Sample Request URL: ~/api/v1/locations/11

► **Sample Response:**

Retrieve all Locations

Description: This API method retrieves a collection of all currently-defined Locations from the Issuetrak data store.

When retrieving an Location using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the LocationName returned via the API method represents the LocationName **as stored** within the Issuetrak database. Thus, when retrieving a Location created through the Issuetrak web interface where HTML encoding of the LocationName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadLocationDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Location: 404

► **Response Properties:**

Sample Request URL: ~/api/v1/locations

► **Sample Response:**

Create a Location

Description: This API method creates a new Location associated with a specific LocationID within the Issuetrak data store. The CreateLocationDTO object conveys the properties of the new Location. Because LocationID values must be unique, the specified LocationID value must not currently exist. If the LocationID currently exists, an error message will be returned with a 400 HTTP status code.

The response code on success will be 201 (Created), and the response body will represent the text value representing the ID of the newly-created Location.

When creating a Location using the API, no special character encoding (e.g., HTML decoding < as < or > as >) is performed.

All string properties have a maximum length of 50 unless specified otherwise.

► **Response DTO Schema:**

Request HTTP Verb: POST

Response Status Codes:

- Success: 201
- Invalid Data: 400 (Bad Request, e.g., a negative integer is supplied)
- Invalid Location DTO: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► **Response Properties:**

Sample Request URL: ~/api/v1/locations

Update a Location

Description: This API method updates an existing Location associated with a specific LocationID within the Issuetrak data store. The UpdateLocationDTO object conveys the

properties of the Location. If invalid data are supplied, an error message will be returned with a 400 HTTP status code.

The response code on success will be 200 (OK), and the response body will represent the text value representing the ID of the Location.

When updating a Location using the API, no special character encoding (e.g., HTML decoding < as < or > as >) is performed.

All string properties have a maximum length of 50 unless specified otherwise.

► **Response DTO Schema:**

Request HTTP Verb: PUT

Response Status Codes:

- Success: 201
- Invalid Data: 400 (Bad Request, e.g., a negative integer is supplied)
- Invalid Location DTO: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► **Response Properties:**

Sample Request URL: ~/api/v1/locations

API Operations for MenuItems

Note: Menu Items are called "Custom Links" within the product UI.

Summary

Operation Name: [Retrieve a MenuItem by MenuItem ID](#)

Relative API Request Path: ~/api/v1/menuitems/{menuItemID}

HTTP Verb: GET

Description: Retrieve a single MenuItem by MenuItem ID.

Operation Name: [Retrieve all MenuItems](#)

Relative API Request Path: ~/api/v1/menuitems

HTTP Verb: GET

Description: Retrieve a collection of currently defined MenuItems.

Retrieve a MenuItem by MenuItem ID

Description: This API method retrieves a MenuItem from the Issuetrak data store for a specified MenuItem ID. The "MenuItemID" parameter must correspond to an existing MenuItem. If there is no such MenuItem ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a MenuItem using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the MenuItem Name returned via the API method represents the MenuItem Name as stored within the Issuetrak database. Thus, when retrieving a MenuItem created through the Issuetrak web interface where HTML encoding of the MenuItemName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadMenuItemDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid MenuItem ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Cause: 404

- Invalid MenuItem ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/menuitems/1

▶ Sample Response:

Retrieve all MenuItems

Description: This API method retrieves a collection of all currently-defined MenuItems from the Issuetrak data store.

When retrieving a MenuItem using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the MenuItemName returned via the API method represents the MenuItemName as stored within the Issuetrak database. Thus, when retrieving a Cause created through the Issuetrak web interface where HTML encoding of the MenuItemName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadMenuItemDTO** instance.

▶ Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent MenuItem: 404

▶ Response Properties:

Sample Request URL: ~/api/v1/menuitems/

▶ Sample Response:

API Operations for Notes

Summary

Operation Name: [Retrieve a Note by Note ID](#)

Relative API Request Path: ~/api/v1/notes/{noteID}

HTTP Verb: GET

Description: Retrieve a single Note from the database by Note ID.

Operation Name: [Retrieve a Collection of Notes by Issue Number](#)

Relative API Request Path: ~/api/v1/notes/issue/{issueNumber}

HTTP Verb: GET

Description: Retrieve a collection of Notes from the database by their associated issueNumber.

Operation Name: [Create a Note for an Issue](#)

Relative API Request Path: ~/api/v1/notes

HTTP Verb: POST

Description: Create a new Note for an Issue.

Retrieve a Note by Note ID

Description: This API method retrieves a Note from the Issuetrak data store for a specified Note ID value. The "noteID" parameter must correspond to an existing Note. If there is no such Note ID, an error message will be returned with an HTTP response status code of 400.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized ReadNoteDTO instance.

When retrieving a Note using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the NoteText returned via the API method represents the NoteText as stored within the Issuetrak database. Thus, when retrieving a Note created through the Issuetrak web interface where HTML encoding of the NoteText is performed, the API consumer may desire to perform additional client-side decoding.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200

- Invalid Note ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Note: 404
- Invalid Note ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response Properties:

- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/notes/102

▶ Sample Response:

Retrieve a Collection of Notes by Issue Number

Description: Description: This API method retrieves a collection of Attachment from the Issuetrak data store for the specified Issue Number. The "issueNumber" parameter must correspond to an existing Issue. If there is no such IssueNumber, an error message will be returned with an HTTP response status code of 400.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of ReadNoteDTO instance.

When retrieving a Note using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the NoteText returned via the API method represents the NoteText as stored within the Issuetrak database. Thus, when retrieving a Note created through the Issuetrak web interface where HTML encoding of the NoteText is performed, the API consumer may desire to perform additional client-side decoding.

▶ Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Issue Number: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Issue: 400
- Invalid Issue Number: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

▶ Response Properties:

Sample Request URL: ~/api/v1/notes/issue/6

▶ **Sample Response:**

Create a Note for an Issue

Description: This API method creates a new Note associated with a specific Issue (identified by IssueNumber) within the Issuetrak data store. The CreateNoteDTO object conveys the properties of the new Note. Because Notes are associated with Issues, the IssueNumber property of the DTO must correspond to an existing Issue. If there is no such IssueNumber, an error message will be returned with a 400 HTTP status code.

The response code on success will be 201 (Created), and the response body will represent the 32-bit integer value representing the ID of the newly-created Note.

When creating a Note using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. This deviates from the process when creating a Note through the Issuetrak web interface where HTML encoding of the NoteText is performed.

▶ **Response DTO Schema:**

Request HTTP Verb: POST

Response Status Codes:

- Success: 201 (Created)
- Invalid Data: 400
- Non-existent Issue: 400

▶ **Response Properties:**

Sample Request URL: ~/api/v1/notes/

▶ **Sample Request:**

Sample Response HTTP Status Code: 201

Sample Response Body: 123101 (represents the newly-created Note ID)

API Operations for Organizations

Summary

Operation Name: [Retrieve an Organization by Organization ID](#)

Relative API Request Path: ~/api/v1/organizations/{organizationID}

HTTP Verb: GET

Description: Retrieve a single Organization by Organization ID.

Operation Name: [Retrieve all Organizations](#)

Relative API Request Path: ~/api/v1/organizations

HTTP Verb: GET

Description: Retrieve a collection of currently defined Organizations.

Operation Name: [Create an Organization](#)

Relative API Request Path: ~/api/v1/organizations

HTTP Verb: POST

Description: Creates a new Organization associated with a specific OrganizationID

Operation Name: [Update an Organization](#)

Relative API Request Path: ~/api/v1/organizations

HTTP Verb: PUT

Description: Updates an existing Organization associated with a specific OrganizationID

Retrieve an Organization by Organization ID

This API method retrieves an Organization from the Issuetrak data store for a specified Organization ID. The *organizationID* parameter must correspond to an existing Organization. If there is no such Organization ID, an error message will be returned with an HTTP response status code of 404.

When retrieving an Organization using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *OrganizationName* returned via the API method represents the *OrganizationName* **as stored** within the Issuetrak database. Thus, when retrieving an Organization created through the Issuetrak web interface where HTML encoding of the *OrganizationName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadOrganizationDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Organization ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Organization: 404
- Invalid Organization ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/organizations/11

► **Sample Response:**

Retrieve all Organizations

This API method retrieves a collection of all currently-defined Organizations from the Issuetrak data store.

When retrieving an Organization using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *OrganizationName* returned via the API method represents the *OrganizationName* **as stored** within the Issuetrak database. Thus, when retrieving an Organization created through the Issuetrak web interface where HTML encoding of the *OrganizationName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadOrganizationDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Organization: 404

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/organizations/

► **Sample Response:**

Create an Organization

This API method creates a new Organization associated with a specific *OrganizationID* within the Issuetrak data store. The **CreateOrganizationModel** object conveys the properties of the new Organization.

The response code on success will be 201 (Created), and the response body will represent the text value representing the ID of the newly-created Organization.

When creating a Organization using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed.

All string properties have a maximum length of 50 unless specified otherwise.

► **Response DTO Schema:**

Request HTTP Verb: POST

Response Status Codes:

- Success: 201
- Invalid Data: 400 (Bad Request, e.g., a negative integer is supplied)
- Invalid Organization DTO: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/organizations

Update an Organization

This API method updates an existing Organization associated with a specific *OrganizationID* within the Issuetrak data store. The **UpdateOrganizationModel** object conveys the properties of the Organization. If invalid data are supplied, an error message will be returned

with a 400 HTTP status code.

The response code on success will be 200 (OK), and the response body will represent the text value representing the ID of the Organization.

When updating a Organization using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed.

All string properties have a max length of 50 unless specified otherwise

► Response DTO Schema:

Request HTTP Verb: PUT

Response Status Codes:

- Success: 200
- Invalid Data: 400 (Bad Request, e.g., a negative integer is supplied)
- Invalid Organization DTO: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response DTO Property Notes:

Sample Request URL: ~/api/v1/organizations

API Operations for Priorities

Summary

Operation Name: [Retrieve a Priority by Priority ID](#)

Relative API Request Path: ~/api/v1/priorities/{priorityID}

HTTP Verb: GET

Description: Retrieve a single Priority by Priority ID.

Operation Name: [Retrieve all Priorities](#)

Relative API Request Path: ~/api/v1/priorities

HTTP Verb: GET

Description: Retrieve a collection of currently defined Priorities.

Retrieve a Priority by Priority ID

This API method retrieves a Priority from the Issuetrak data store for a specified Priority ID. The *PriorityID* parameter must correspond to an existing Priority. If there is no such Priority ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a Priority using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *PriorityName* returned via the API method represents the *PriorityName* **as stored** within the Issuetrak database. Thus, when retrieving a Priority created through the Issuetrak web interface where HTML encoding of the *PriorityName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadPriorityDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Priority ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Priority: 404
- Invalid Priority ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response DTO Property Notes:

Sample Request URL: ~/api/v1/priorities/1

▶ **Sample Response:**

Retrieve all Priorities

This API method retrieves a collection of all currently-defined Priority entities from the Issuetrak data store.

When retrieving a Priority using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *PriorityName* returned via the API method represents the *PriorityName* **as stored** within the Issuetrak database. Thus, when retrieving a Priority created through the Issuetrak web interface where HTML encoding of the *PriorityName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadPriorityDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Priority: 404

▶ **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/priorities/

▶ **Sample Response**

API Operations for Projects

Summary

Operation Name: [Retrieve a Project by Project ID](#)

Relative API Request Path: ~/api/v1/projects/{projectID}

HTTP Verb: GET

Description: Retrieve a single Project by Project ID.

Operation Name: [Retrieve all Projects](#)

Relative API Request Path: ~/api/v1/projects

HTTP Verb: GET

Description: Retrieve a collection of currently defined Projects.

Retrieve a Project by Project ID

Description: This API method retrieves a Project from the Issuetrak data store for a specified Project ID. The *ProjectID* parameter must correspond to an existing Project. If there is no such Project ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a Project using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *Title* returned via the API method represents the *Title as stored* within the Issuetrak database. Thus, when retrieving a Project created through the Issuetrak web interface where HTML encoding of the *Title* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadProjectDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Project ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Project: 404
- Invalid Project ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response DTO Property Notes:

Sample Request URL: ~/api/v1/projects/1

▶ **Sample Response:**

Retrieve all Projects

This API method retrieves a collection of all currently-defined Project entities from the Issuetrak data store.

When retrieving a Project using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *Title* returned via the API method represents the *Title as stored* within the Issuetrak database. Thus, when retrieving a Project created through the Issuetrak web interface where HTML encoding of the *Title* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadProjectDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Project: 404

▶ **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/projects/1

▶ **Sample Response:**

API Operations for ServiceLevels

Summary

Operation Name: [Retrieve a ServiceLevel by ServiceLevel ID](#)

Relative API Request Path: ~/api/v1/servicelevels/{serviceLevelID}

HTTP Verb: GET

Description: Retrieve a single ServiceLevel by ServiceLevel ID.

Operation Name: [Retrieve all ServiceLevels](#)

Relative API Request Path: ~/api/v1/servicelevels

HTTP Verb: GET

Description: Retrieve a collection of currently defined ServiceLevels.

Retrieve a ServiceLevel by ServiceLevel ID

This API method retrieves a ServiceLevel from the Issuetrak data store for a specified ServiceLevel ID. The *serviceLevelID* parameter must correspond to an existing ServiceLevel. If there is no such ServiceLevel ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a ServiceLevel using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *ServiceLevelName* returned via the API method represents the *ServiceLevelName* **as stored** within the Issuetrak database. Thus, when retrieving a ServiceLevel created through the Issuetrak web interface where HTML encoding of the *ServiceLevelName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadServiceLevelDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid ServiceLevel ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Cause: 404
- Invalid ServiceLevel ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► **Response DTO Notes:**

Sample Request URL: ~/api/v1/servicelevels/1

► **Sample Response:**

Retrieve all ServiceLevels

This API method retrieves a collection of all currently-defined ServiceLevels from the Issuetrak data store.

When retrieving a ServiceLevel using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *ServiceLevelName* returned via the API method represents the *ServiceLevelName* **as stored** within the Issuetrak database. Thus, when retrieving a Cause created through the Issuetrak web interface where HTML encoding of the *ServiceLevelName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadServiceLevelDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent ServiceLevel: 404

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/servicelevels/

► **Sample Response:**

API Operations for ServiceLevelAgreements

Summary

Operation Name: [Retrieve a ServiceLevelAgreement by ServiceLevelAgreement ID](#)

Relative API Request Path: ~/api/v1/servicelevelagreements/{serviceLevelAgreementID}

HTTP Verb: GET

Description: Retrieve a single ServiceLevelAgreement by ServiceLevelAgreement ID.

Operation Name: [Retrieve all ServiceLevelAgreements](#)

Relative API Request Path: ~/api/v1/servicelevelagreements

HTTP Verb: GET

Description: Retrieve a collection of currently defined ServiceLevelAgreements.

Retrieve a ServiceLevelAgreement by ServiceLevelAgreement ID

Description: This API method retrieves a ServiceLevelAgreement from the Issuetrak data store for a specified ServiceLevelAgreement ID. The "serviceLevelAgreementID" parameter must correspond to an existing ServiceLevelAgreement. If there is no such ServiceLevelAgreement ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a ServiceLevelAgreement using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the ServiceLevelAgreement Name returned via the API method represents the ServiceLevelAgreement Name **as stored** within the Issuetrak database. Thus, when retrieving a ServiceLevelAgreement created through the Issuetrak web interface where HTML encoding of the ServiceLevelAgreementName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadServiceLevelAgreementDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid ServiceLevelAgreement ID: 400 (Bad Request, e.g., a negative integer is supplied)

- Non-existent Cause: 404
- Invalid ServiceLevelAgreement ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response DTO Property Notes:

- The **ExtensionData** property is not used in version 1 of the API.
- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.

Sample Request URL: ~/api/v1/servicelevelagreements/1

▶ Sample Response:

Retrieve all ServiceLevelAgreements

Description: This API method retrieves a collection of all currently-defined ServiceLevelAgreement from the Issuetrak data store.

When retrieving a ServiceLevelAgreement using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the ServiceLevelAgreementName returned via the API method represents the ServiceLevelAgreementName **as stored** within the Issuetrak database. Thus, when retrieving a Cause created through the Issuetrak web interface where HTML encoding of the ServiceLevelAgreementName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadServiceLevelAgreementDTO** instance.

▶ DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent ServiceLevelAgreement: 404

Response DTO Property Notes:

- The **IsPageIndexZeroBased** property value is always true. This property is included for

use in future API versions.

- The **PageIndex** property value is always 0. This property is included for use in future API versions.
- The **CountForPage** property value is always the same as **TotalCount**. This property is included for use in future API versions.
- The **PageSize** property value is always the maximum value for a signed, 32-bit integer. This property is included for use in future API versions.
- The **TotalCount** property value is the number of records returned in the collection.
- The **Collection** property is an array containing the ReadServiceLevelAgreementDTO objects returned.
- The **ExtensionData** property is not implemented in v1 of the API.

Sample Request URL: ~/api/v1/servicelevelagreements/

► **Sample Response:**

API Operations for ServiceLevelSeverities

Summary

Operation Name: [Retrieve a ServiceLevelSeverity by ServiceLevelSeverity ID](#)

Relative API Request Path: ~/api/v1/servicelevelseverities/{severityID}

HTTP Verb: GET

Description: Retrieve a single ServiceLevelSeverity by ServiceLevelSeverity ID.

Operation Name: [Retrieve all ServiceLevelSeverities](#)

Relative API Request Path: ~/api/v1/servicelevelseverities

HTTP Verb: GET

Description: Retrieve a collection of currently defined ServiceLevelSeverities.

Retrieve a ServiceLevelSeverity by ServiceLevelSeverity ID

This API method retrieves a ServiceLevelSeverity from the Issuetrak data store for a specified ServiceLevelSeverity ID. The *severityID* parameter must correspond to an existing ServiceLevelSeverity. If there is no such ServiceLevelSeverity ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a ServiceLevelSeverity using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *ServiceLevelSeverityName* returned via the API method represents the *ServiceLevelSeverityName* **as stored** within the Issuetrak database. Thus, when retrieving a ServiceLevelSeverity created through the Issuetrak web interface where HTML encoding of the *ServiceLevelSeverityName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadServiceLevelSeverityDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid ServiceLevelSeverity ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent ServiceLevelSeverity: 404
- Invalid ServiceLevelSeverity ID: 422 (Unprocessable Entity, e.g., a non-numeric value is

supplied)

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/servicelevelseverities/1

► **Sample Response:**

Retrieve all ServiceLevelSeverities

This API method retrieves a collection of all currently-defined ServiceLevelSeverities from the Issuetrak data store.

When retrieving a ServiceLevelSeverity using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *ServiceLevelSeverityName* returned via the API method represents the *ServiceLevelSeverityName* **as stored** within the Issuetrak database. Thus, when retrieving a *Cause* created through the Issuetrak web interface where HTML encoding of the *ServiceLevelSeverityName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadServiceLevelSeverityDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent ServiceLevelSeverities: 404

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/servicelevelseverities/

► **Sample Response:**

API Operations for ServiceLevelTerms

Summary

Operation Name: [Retrieve a ServiceLevelTerm by ServiceLevelTerm ID](#)

Relative API Request Path: ~/api/v1/servicelevelterms/{serviceLevelTermID}

HTTP Verb: GET

Description: Retrieve a single ServiceLevelTerm by ServiceLevelTerm ID.

Operation Name: [Retrieve all ServiceLevelTerms](#)

Relative API Request Path: ~/api/v1/servicelevelterms

HTTP Verb: GET

Description: Retrieve a collection of currently defined ServiceLevelTerms.

Retrieve a ServiceLevelTerm by ServiceLevelTerm ID

Description: This API method retrieves a ServiceLevelTerm from the Issuetrak data store for a specified ServiceLevelTerm ID. The "serviceLevelTermID" parameter must correspond to an existing ServiceLevelTerm. If there is no such ServiceLevelTerm ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a ServiceLevelTerm using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the ServiceLevelTerm Name returned via the API method represents the ServiceLevelTerm Name **as stored** within the Issuetrak database. Thus, when retrieving a ServiceLevelTerm created through the Issuetrak web interface where HTML encoding of the ServiceLevelTermName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadServiceLevelTermDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid ServiceLevelTerm ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Cause: 404
- Invalid ServiceLevelTerm ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

Response DTO Property Notes:

- The **ExtensionData** property is not used in version 1 of the API.
- The **Metadata** property provides a key/value collection of additional data about the API operation and/or the response body.
- The **CoverageStartDay** property is an Int32 value in the range 1 to 7 with 1 representing Monday, 2 representing Tuesday, ..., 7 representing Sunday.
- The **CoverageEndDay** property is an Int32 value in the range 1 to 7 with 1 representing Monday, 2 representing Tuesday, ..., 7 representing Sunday.

Sample Request URL: ~/api/v1/servicelevelterms/1

▶ Sample Response:

Retrieve all ServiceLevelTerms

Description: This API method retrieves a collection of all currently-defined ServiceLevelTerms from the Issuetrak data store.

When retrieving a ServiceLevelTerm using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the ServiceLevelTermName returned via the API method represents the ServiceLevelTermName **as stored** within the Issuetrak database. Thus, when retrieving a Cause created through the Issuetrak web interface where HTML encoding of the ServiceLevelTermName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadServiceLevelTermDTO** instance.

▶ Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent ServiceLevelTerm: 404

Response DTO Property Notes:

- The **IsPageIndexZeroBased** property value is always true. This property is included for use in future API versions.
- The **PageIndex** property value is always 0. This property is included for use in future

API versions.

- The **CountForPage** property value is always the same as **TotalCount**. This property is included for use in future API versions.
- The **PageSize** property value is always the maximum value for a signed, 32-bit integer. This property is included for use in future API versions.
- The **TotalCount** property value is the number of records returned in the collection.
- The **Collection** property is an array containing the **ReadServiceLevelTermDTO** objects returned.
- The **ExtensionData** property is not implemented in v1 of the API.
- The **CoverageStartDay** property is an Int32 value in the range 1 to 7 with 1 representing Monday, 2 representing Tuesday, ..., 7 representing Sunday.
- The **CoverageEndDay** property is an Int32 value in the range 1 to 7 with 1 representing Monday, 2 representing Tuesday, ..., 7 representing Sunday.

Sample Request URL: ~/api/v1/servicelevelterms/

► **Sample Response:**

API Operations for Substatuses

Summary

Operation Name: [Retrieve a Substatus by Substatus ID](#)

Relative API Request Path: ~/api/v1/substatuses/{substatusID}

HTTP Verb: GET

Description: Retrieve a single Substatus by Substatus ID.

Operation Name: [Retrieve all Substatuses](#)

Relative API Request Path: ~/api/v1/substatuses

HTTP Verb: GET

Description: Retrieve a collection of currently defined Substatuses.

Retrieve a Substatus by Substatus ID

This API method retrieves a Substatus from the Issuetrak data store for a specified Substatus ID. The *substatusID* parameter must correspond to an existing Substatus. If there is no such Substatus ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a Substatus using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *SubStatusName* returned via the API method represents the *SubStatusName* **as stored** within the Issuetrak database. Thus, when retrieving a Substatus created through the Issuetrak web interface where HTML encoding of the *SubStatusName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadSubstatusDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid Substatus ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Substatus: 404
- Invalid Substatus ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response DTO Property Notes:

Sample Request URL: ~/api/v1/substatuses/13

▶ **Sample Response:**

Retrieve all Substatuses

This API method retrieves a collection of all currently-defined Substatus entries from the Issuetrak data store.

When retrieving a Substatus using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *SubstatusName* returned via the API method represents the *SubstatusName* **as stored** within the Issuetrak database. Thus, when retrieving a Substatus created through the Issuetrak web interface where HTML encoding of the *SubstatusName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadSubstatusDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent Substatus: 404

▶ **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/substatuses/

▶ **Sample Response:**

API Operations for TimeZones

Summary

Operation Name: [Retrieve a TimeZone by TimeZone ID](#)

Relative API Request Path: ~/api/v1/timezones/{timeZoneID}

HTTP Verb: GET

Description: Retrieve a single TimeZone by TimeZone ID.

Operation Name: [Retrieve all TimeZones](#)

Relative API Request Path: ~/api/v1/timezones

HTTP Verb: GET

Description: Retrieve a collection of currently defined TimeZones.

Retrieve a TimeZone by TimeZone ID

This API method retrieves a TimeZone from the Issuetrak data store for a specified TimeZone ID. The *TimeZoneID* parameter must correspond to an existing TimeZone. If there is no such TimeZone ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a TimeZone using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *TimeZoneName* returned via the API method represents the *TimeZoneName* **as stored** within the Issuetrak database. Thus, when retrieving a TimeZone created through the Issuetrak web interface where HTML encoding of the *TimeZoneName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadTimeZoneDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid TimeZone ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent Cause: 404
- Invalid TimeZone ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response DTO Property Notes:

Sample Request URL: ~/api/v1/timezones/1

▶ **Sample Response:**

Retrieve all TimeZones

This API method retrieves a collection of all currently-defined TimeZones from the Issuetrak data store.

When retrieving a TimeZone using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *TimeZoneName* returned via the API method represents the *TimeZoneName* **as stored** within the Issuetrak database. Thus, when retrieving a *Cause* created through the Issuetrak web interface where HTML encoding of the *TimeZoneName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadTimeZoneDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent TimeZone: 404

▶ **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/timezones/

▶ **Sample Response:**

API Operations for Users

Summary

Operation Name: [Retrieve a User by User ID](#)

Relative API Request Path: ~/api/v1/users/{userID}/{includeUserPhoto}

HTTP Verb: GET

Description: Retrieve a single User by User ID.

Operation Name: [Retrieve all Users](#)

Relative API Request Path: ~/api/v1/users/{includeUserPhotos}

HTTP Verb: GET

Description: Retrieve a collection of currently defined Users.

Operation Name: [Create a User](#)

Relative API Request Path: ~/api/v1/users

HTTP Verb: POST

Description: Create a User

Operation Name: [Update a User](#)

Relative API Request Path: ~/api/v1/users

HTTP Verb: PUT

Description: Update a User

Operation Name: [Update a User Password](#)

Relative API Request Path: ~/api/v1/users/password

HTTP Verb: PUT

Description: Update a User Password

Operation Name: [Inactivate a User](#)

Relative API Request Path: ~/api/v1/users/inactivate

HTTP Verb: PUT

Description: Inactivate a User

Retrieve a User by User ID

This API method retrieves a User from the Issuetrak data store for a specified User ID. The *userID* parameter must correspond to an existing User. If there is no such User ID, an error message will be returned with an HTTP response status code of 404.

The *IncludeUserPhoto* is a true or false parameter is a Boolean indicating whether or the binary content for any existing user photo image file should be retrieved and included in the response. If the *IncludeUserPhoto* parameter is true and if a user photo image file exists for the specified user, a base-64 encoded byte array representing the photo image file will be included in the *UserPhotoBytes* property of the response. If the *IncludeUserPhoto* parameter

is false or if the user photo image file is not defined, the *UserPhotoBytes* property will be null.

When retrieving an User using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *UserName* returned via the API method represents the *UserName* **as stored** within the Issuetrak database. Thus, when retrieving a User created through the Issuetrak web interface where HTML encoding of the *UserName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadUserDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid User ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent User: 404

► Response DTO Property Notes:

Sample Request URL: ~/api/v1/users/11/false

► Sample Response:

Retrieve All Users

This API method retrieves a collection of all currently-defined Users from the Issuetrak data store.

No *UserPhotoBytes* content is retrieved during this API method. All of the ReadUserDTO instances will have the *UserPhotoBytes* content property set to null.

When retrieving an User using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *UserName* returned via the API method represents the *UserName* **as stored** within the Issuetrak database. Thus, when retrieving a User created through the Issuetrak web interface where HTML encoding of the *UserName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadUserDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent User: 404

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/users/

► **Sample Response:**

Create a User

This API method creates a new User associated with a specific UserID within the Issuetrak data store. The CreateUserDTO object conveys the properties of the new User. Because UserID values must be unique, the specified UserID value must not currently exist. If the UserID currently exists, an error message will be returned with a 400 HTTP status code.

The response code on success will be 201 (Created), and the response body will represent the text value representing the ID of the newly-created User.

When creating a User using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed.

► **Response DTO Schema:**

Request HTTP Verb: POST

Response Status Codes:

- Success: 201

- Invalid User Properties: 400 (Bad Request, e.g., a negative integer is supplied)
- Invalid User DTO: 422 (Unprocessable Entity, e.g., an invalid value is supplied)

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/users/

► **Sample Request:**

Sample Response HTTP Status Code: 201

Sample Response Body: TestUser1 (represents the newly-created User ID)

Update a User

This API method updates an existing User associated with a specific *UserNumber* within the Issuetrak data store. The **UpdateUserDTO** object conveys the properties of the existing User. Because UserID values must be unique, the specified UserID value must not currently exist for a user with a different *UserNumber*. If the UserID currently exists, an error message will be returned with a 400 HTTP status code.

Setting a user's organization via the API will result in the requested organization becoming the primary organization for the user. If the user previously had multiple organization memberships, then these will be retained and the user will continue to have membership in their previous primary organization (but without it being their primary organization).

The User Password property cannot be updated with this API method. Please use the [dedicated API controller method](#) for password updates.

The response code on success will be 200 (OK), and the response body will represent the text value representing the ID of the edited User.

When creating a User using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed.

► **Response DTO Schema:**

Request HTTP Verb: PUT

Response Status Codes:

- Success: 200
- Invalid User Properties: 400 (Bad Request, e.g., a negative integer is supplied)
- Invalid User DTO: 422 (Unprocessable Entity, e.g., an invalid value is supplied)

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/users/

► **Sample Request:**

Sample Response HTTP Status Code: 200

Sample Response Body: TestUser1 (represents the edited User ID)

Update a User Password

This API method updates the password for an existing User associated with a specific UserID within the Issuetrak data store. The **UpdateUserPasswordDTO** object conveys the new password. Because UserID values must be unique, the specified UserID value must currently exist. If the UserID currently exists, an error message will be returned with a 400 HTTP status code.

The response code on success will be 200 (OK), and the response body will represent the text value representing the ID of the edited User.

When creating a User using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed.

► **Response DTO Schema:**

Request HTTP Verb: PUT

Response Status Codes:

- Success: 200
- Invalid User Properties: 400 (Bad Request, e.g., a negative integer is supplied)
- Invalid User DTO: 422 (Unprocessable Entity, e.g., an invalid value is supplied)

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/users/password/

▶ **Sample Request:**

Sample Response HTTP Status Code: 200

Sample Response Body: TestUser1 (represents the edited User ID)

Inactivate a User

This API method updates an existing User associated with a specific UserID within the Issuetrak data store. The **InactivateUserDTO** object conveys the UserID of the existing User to inactivate. Because UserID values must be unique, the specified UserID value must exist. If the UserID does not currently exist, an error message will be returned with a 400 HTTP status code.

The response code on success will be 200 (OK), and the response body will represent the text value representing the ID of the inactivated User.

When inactivating a User using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed.

▶ **Response DTO Schema:**

Request HTTP Verb: PUT

Response Status Codes:

- Success: 200
- Invalid User Properties: 400 (Bad Request, e.g., a non-existent UserID is specified)
- Invalid User DTO: 422 (Unprocessable Entity, e.g., an invalid value is supplied)

▶ **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/users/inactivate

▶ **Sample Request:**

Sample Response HTTP Status Code: 200

Sample Response Body: InactiveUser (represents the inactivated User ID)

API Operations for User Types

Summary

Operation Name: [Retrieve a User Type by UserID](#)

Relative API Request Path: ~/api/v1/usertypes/{userid}

HTTP Verb: GET

Description: Retrieve a single User Type by User Type ID.

Operation Name: [Retrieve all User Types](#)

Relative API Request Path: ~/api/v1/usertypes

HTTP Verb: GET

Description: Retrieve a collection of currently defined User Types.

Retrieve a User Type by UserID

This API method retrieves a User Type from the Issuetrak data store for a specified User Type ID. The *userId* parameter must correspond to an existing User Type. If there is no such User Type ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a User Type using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *UserName* returned via the API method represents the *UserName* **as stored** within the Issuetrak database. Thus, when retrieving a User Type created through the Issuetrak web interface where HTML encoding of the *UserName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadUserTypeDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Invalid User Type ID: 400 (Bad Request, e.g., a negative integer is supplied)
- Non-existent User Type: 404
- Invalid User Type ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)

► Response DTO Property Notes:

Sample Request URL: ~/api/v1/usertypes/1

▶ **Sample Response:**

Retrieve all User Types

This API method retrieves a collection of all currently-defined User Types from the Issuetrak data store.

When retrieving an User Type using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the *UserTypeName* returned via the API method represents the *UserTypeName* **as stored** within the Issuetrak database. Thus, when retrieving a User Type created through the Issuetrak web interface where HTML encoding of the *UserTypeName* is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadUserTypeDTO** instance.

▶ **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent UserType: 404

▶ **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/usertypes/

▶ **Sample Response:**

API Operations for User-Defined Field Types

Summary

Operation Name: [Retrieve a UserDefinedFieldType by ID](#)

Relative API Request Path: ~/api/v1/userdefinedfieldtypes/{userDefinedFieldTypeID}

HTTP Verb: GET

Description: Retrieve a single UserDefinedFieldType by UserDefinedFieldType ID.

Operation Name: [Retrieve all UserDefinedFieldTypes](#)

Relative API Request Path: ~/api/v1/userdefinedfieldtypes

HTTP Verb: GET

Description: Retrieve a collection of currently defined UserDefinedFieldTypes.

Retrieve a UserDefinedFieldType by ID

Description: This API method retrieves a UserDefinedFieldType from the Issuetrak data store for a specified UserDefinedFieldType ID. The "UserDefinedFieldTypeID" parameter must correspond to an existing UserDefinedFieldType. If there is no such UserDefinedFieldType ID, an error message will be returned with an HTTP response status code of 404.

When retrieving a UserDefinedFieldType using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the **DisplayName** returned via the API method represents the **DisplayName as stored** within the Issuetrak database. Thus, when retrieving a UserDefinedFieldType created through the Issuetrak web interface where HTML encoding of the **DisplayName** is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized **ReadUserDefinedFieldTypeDTO** instance.

► Response DTO Schema:

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
 - Invalid UserDefinedFieldType ID: 400 (Bad Request, e.g., a negative integer is supplied)
 - Non-existent UserDefinedFieldType: 404
 - Invalid UserDefinedFieldType ID: 422 (Unprocessable Entity, e.g., a non-numeric value is supplied)
-

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/userdefinedfieldtypes/4

► **Sample Response:**

Retrieve all UserDefinedFieldTypes

This API method retrieves a collection of all currently-defined UserDefinedFieldType entities from the Issuetrak data store.

When retrieving a UserDefinedFieldType using the API, no special character decoding (e.g., HTML decoding < as < or > as >) is performed. Therefore, please note that the DisplayName returned via the API method represents the DisplayName **as stored** within the Issuetrak database. Thus, when retrieving a UserDefinedFieldType created through the Issuetrak web interface where HTML encoding of the DisplayName is performed, the API consumer may desire to perform additional client-side decoding.

A successful response will include an HTTP status code of 200 (OK) and a response body containing a serialized collection of **ReadUserDefinedFieldTypeDTO** instance.

► **Response DTO Schema:**

Request HTTP Verb: GET

Response Status Codes:

- Success: 200
- Non-existent UserDefinedFieldType: 404

► **Response DTO Property Notes:**

Sample Request URL: ~/api/v1/userdefinedfieldtypes/

► **Sample Response:**

API v2 Overview

When we released Issuetrak 14.9, we introduced a new API called **API v2**. This new API was designed to meet the OpenAPI standard, which makes developing integrations to work with Issuetrak easier than ever.

The purpose of this article is to assist you with getting started using API v2 specifically from the server side of things, which includes deployment, logging, rate limiting, and troubleshooting. For information about *development-level interactions* with API v2, please see <https://api.issuetrak.com>.

System Requirements

API v2 has the following requirements in addition to the usual requirements for Issuetrak itself:

- Microsoft .NET 6.0 Hosting Bundle - which can be obtained [here](#)
 - API v2 needs to be in its own IIS Application Pool, which must be set to "No Managed Code"
-

Deployment

API v2 can be deployed independently of the previous API, and uses its own application pool in IIS. The introduction of API v2 comes with slightly increased deployment complexity for customers that intend to install or upgrade their Issuetrak instance via the IDU.

Please see the following articles for assistance with deploying via the IDU:

- [How to Install Issuetrak Using the Issuetrak Deployment Utility \(IDU\)](#)
- [How to Perform an Upgrade Using the Issuetrak Deployment Utility \(IDU\)](#)

Additionally, some minor changes have been made to the IDM so that customers can install API v2, but these changes do not diverge significantly from installing the previous iteration of the API.

Please see the following articles for assistance with deploying via the IDM:

- [How to Install Issuetrak Using the Issuetrak Deployment Manager \(IDM\)](#)
 - [How to Perform an Upgrade Using the Issuetrak Deployment Manager \(IDM\)](#)
-

Rate Limiting

API v2 uses rate limiting to protect the server against malicious or buggy clients. When

requests exceed the configured rate limit, API v2 will return a "429 - Too Many Requests" response to the application attempting to access it.

Below is a table of the default rate limits:

Time Period	Default Rate Limit
1 second	20 requests
1 second POST/PUT/DELETE	5 requests
1 minute	100 requests
10 minutes	100 requests
1 hour	1000 requests
12 hours	1000 requests

Rate limits can be changed by editing the configuration file on the web server:

- `{IssuetrakWebFolderPath}\api\v2\appsettings.json`

We expect that minor changes to the existing limits is all that will be needed in most environments. Please see [this](#) page if you want to see detailed information on how the rate limiting can be configured.

Logging

Error logging is enabled by default, and all logs are accessible on the web server, and the level of logging can be adjusted by editing the appropriate configuration file. If you run into errors with your code when interacting with API v2, you will find that Trace IDs have been included in the API responses. You can search the server logs for the corresponding Trace ID to get detailed information about what went wrong.

- Error logging is enabled by default, and logs are stored in the `{IssuetrakWebFolderPath}\api\v2\logs` folder.
- Logging can be configured in the `nlog.config` file located in the `{IssuetrakWebFolderPath}\api\v2` folder.
 - Changing the `enabled="false"` attribute on the line to `enabled="true"` will enable detailed logging.
- The API v2 app pool will need to be recycled for changes to take effect after you make changes to the `nlog.config` file.

Startup Logging

If you encounter a problem where the API v2 application will not start, you can turn on additional logging.

This is accomplished by editing the `{IssuetrakWebFolderPath}\api\v2\web.config` file, then changing the attribute `stdoutLogEnabled` on the element from "false" to "true". Enabling this logging will force the app pool to restart.

The logs are located in the `{IssuetrakWebFolderPath}\api\v2\logs\stdout` folder.

Troubleshooting

If you encounter trouble with API v2 not responding to requests at all, then you should take the following steps:

1. Open the `{IssuetrakWebFolderPath}\api\v2\web.config` file
 - Ensure that the "aspNetCore" tag has its argument set to `.\Issuetrak.ApiV2.Site.Dll`
 - Ensure that the environment variable "ASPNETCORE_ENVIRONMENT" is set to `release`
2. Verify `{IssuetrakWebFolderPath}\api\v2\appsettings.json` contains valid json
3. Verify `{IssuetrakWebFolderPath}\api\v2\appsettings.release.json` is valid json and looks like

```
{
  "ConnectionStrings": {
    "Issuetrak-Database": "..."
  },
  "SecureStorageKeys": {
    "KeyForEncrypter-1": "..."
  },
  "SessionSigningKey": "..."
}
```

4. Enable the `stdoutLogs` in the `{IssuetrakWebFolderPath}\api\v2\web.config` and attempt a request. Review the log file for potential causes.

If you are still encountering difficulty, please contact [Issuetrak Support](#) for further assistance.

How to Enable Chat in Issuetrak

Part 1: Get the Widget ID

To enable Chat you first need to obtain the **Widget ID** directly from the *Chat Admin Portal*.

Steps:

1. Launch the [Chat Admin Portal](#).
2. Log in to the **Admin Portal** with your credentials.
3. Click on **Settings**.
4. Click on **Get the Code**.
5. Scroll to the *(Advanced) Widget ID* section at the bottom of the page and click **Ok**.
6. The Widget ID should appear for you to copy – you can do so by clicking the copy button provided.

Once obtained, the ID can be pasted into the Issuetrak site **Features** page to enable the Chat Widget integration.

Part 2: Use the Widget ID to Enable Chat

Steps:

1. In Issuetrak, click the **gear** icon in the upper right > click **Features** beneath *System*.
2. Scroll down to the *Chat* section.
3. Check **Use Chat**. This will enable the *Chat Widget ID* text field.
4. Paste the copied Widget ID into the **Chat Widget ID** text field.
5. Click **Update** on this page to save the changes.

A confirmation message will appear when this process is complete.

How to add a Chat Agent

Chat Agents are the individuals you have set up to handle Chat conversations within your *Chat Widget*. This article will provide a walkthrough of adding new Chat Agents.

Steps

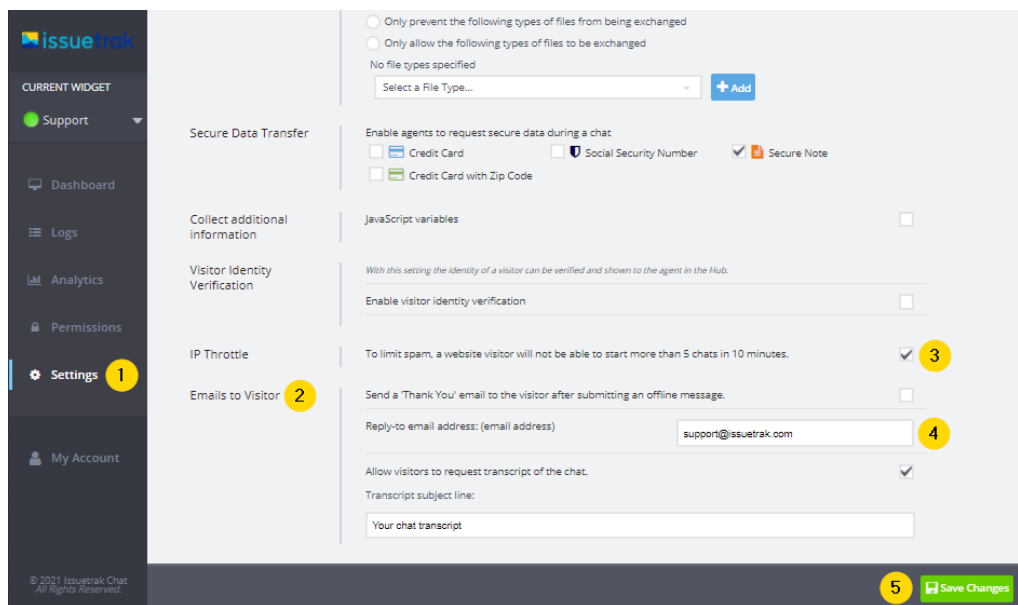
1. Launch the [Chat Admin Portal](#).
 2. Click on **Settings**.
 3. Click on **Agent Settings**.
 4. Click on **Chat Agents**.
 5. Click the **Add chat agent** button at the bottom of the screen.
 6. Populate the *Chat Agent* form with all of the necessary information.
 7. Click **Save**.
-

Issuetrak Chat - Enable Emailing Transcripts

It is possible to have Issuetrak Chat send visitors a transcript of their chat with the Agent. In order to enable the ability to request a chat transcript:

Steps

1. From the Admin dashboard, click on **Settings > Options**.
2. Scroll down to the **Emails to Visitor** section
3. Enable the "**Allow visitors to request transcript of the chat**" option.
4. *(Optional)* Change the subject of the email the visitor will receive with their transcript.
5. Click the **Save Changes** button.



Once this is enabled, the visitor will be able to request a transcript during their chat.

Migrating to AD Federation Services

This article provides steps for migrating a site with AD/LDAP-authenticated users to AD Federation Services. If you don't have AD configured but would like to configure AD FS, please see [this article](#).

At a high level, the following things happen as a result of a migration:

1. The old domain value is validated against the new domain value to ensure that they match.
 2. AD/LDAP is deactivated.
 3. ADFS/Azure is set as the **Authentication Type** for all previously AD/LDAP-authenticated users.
 4. The following fields are populated for each user account:
 - a. Authentication Type: ADFS/Azure
 - b. Active Directory User SID
 - c. Domain
 5. The mappings from Active Directory are transferred to AD Federation Services.
 - a. Any "Map Additional Attributes" are also mapped to the "User Property Mapping".
-

Part 1: Perform an Active Directory User Import

This step ensures that AD-authenticated users in Issuetrak have the appropriate properties set for SID, Domain, and Authentication Type. Failure to perform this step could result in duplicate user creation when users sign into Issuetrak.

Steps:

1. Click the gear icon in the upper right > Click on **Active Directory** beneath *Identity Management* > Click on **Import Users** from the righthand menu.
 2. Select the **Domain** from the dropdown for which this particular import should be performed from the list.
 3. Click the radio button to select either **AD Group** or **AD OU**. Click the button related to your selection. Only AD Groups or OUs with verified Organization and Permissions mappings and valid users will appear.
 4. Select the appropriate value in the window that appears.
 5. Click the **Preview Import** button.
 6. Verify the import is being returned properly in the *Preview import* window that appears.
 7. Close the *Preview Import* window.
 8. Click the **Process Import** button to process this import.
 9. Repeat the import process for as many OU/Groups as necessary to account for your AD environment and ensure all of your users will be able to authenticate.
-

Part 2: Preparing the AD FS Server

Please see [this article](#) for steps to configure your AD FS server to work with Issuetrak.

Part 3: Complete the Migration

With the information gathered from [preparing AD FS](#), we can migrate to AD Federation Services in Issuetrak.

Steps:

1. Navigate to your Issuetrak site and log in with a Sys Admin account.
 2. Click the gear icon in the upper right > Click on **AD Federation Services** beneath *Identity Management*.
 3. Choose **Migrate to AD FS** from the Right Context Menu.
 4. Check the box next to "Perform an Active Directory user import".
 5. Check the box next to "Setup AD Federation Services Server (Guide)".
 6. Populate the following data:
 - a. **Provider Name:** A friendly name for the AD FS server.
 - b. **Domain:** The Domain of the AD FS server. *Ensure this matches the domain currently in your Issuetrak instance's AD settings.*
 - c. **Provider URL:** The URL to the AD FS server.
 - d. **Client ID:** The Client Identifier from setting up AD FS.
 - e. **Client Secret:** The shared secret from setting up AD FS.
 - f. **Button Label:** The name of the button to display on the *Issuetrak Login* page.
 7. *Double-check the values you've entered and confirm that you are ready to migrate to AD FS.* Click **Migrate Server Settings** to save the settings. This will move all AD settings and user mappings to AD FS.
 8. Click **Perform Migration** to finalize the process.
 9. You will be redirected to the *Edit AD Federation Services Provider* page.
 - a. *Optional.* Click the **Test Connection** button to verify all the settings. This button launches a new browser tab to your AD FS provider's authentication page. It is necessary to sign in with an Active Directory account to view the Test Connection results.
 10. *Optional.* Customize the appearance of this identity provider's button on the login screen by using the fields on the right-hand side.
-

Importing Users from Active Directory

Once your configuration mapping is complete, you're ready to import your users into Issuetrak. You can do an initial manual import, and then schedule imports to occur automatically. This task can only be performed by an Issuetrak user with the "Can access and maintain Administration functions" permission or the "Sys Admin" parameter.

The AD module assigns organizations differently depending on whether it is creating new users or merely updating them.

- New users created by manual AD import, scheduled AD import, or upon login will have their organization set only by the organization they are mapped to within "Mapping Organizations". This becomes their primary organization, and no membership is granted based on the organization membership of user templates designated in the "Determining User Permissions" section.
- Users updated via manual import, scheduled import, or upon login will have their organization set thusly:
 - If the existing user has only a primary organization membership and it doesn't match the organization they are mapped to, then their primary organization membership is changed to their mapped organization.
 - If the existing user has membership in more than just their primary organization, and their current primary organization differs from the organization they are mapped to, then their primary organization will change to match the organization they're mapped to and they will retain membership in their formerly primary organization.

Performing a Manual Import

Steps:

1. Click the **gear** icon in the upper right > click **Active Directory** beneath *Identity Management* > click **Import Users** under the *Active Directory* section in the right context menu.
2. Select the **Domain** from the dropdown for which this particular import should be performed from the list. Only the domains which have been defined in the Issuetrak interface will appear.
3. Click the radio button to select either **AD Group** or **AD OU**. Click the button related to your selection. Only AD Groups or OUs with verified Organization and Permissions mappings and valid users will appear.
4. Select the appropriate value in the window that appears.
5. Click the **Preview Import** button.
6. Verify the import is being returned properly in the *Preview import* window that appears.
7. Close the *Preview Import* window.

8. Click the **Process Import** button to process this import. (If you only want to process this initial import and not define a schedule, this is the last step you need to complete within this task.) A *Preview import* window will appear with a summary of the import.

Repeat for each group/OU on each domain that needs to be imported. You can also use these parameters to create a scheduled import record.

Defining Scheduled Imports

Steps:

1. Define the appropriate interval and time in the **Define Schedule** section of this screen. We strongly recommend scheduled imports are performed daily outside of business/peak productivity hours.
2. Verify **Active** is selected, or the import will be scheduled but not run.
3. Click **Save and Schedule** button to save and schedule this import.

A confirmation message will appear when this process is complete. The *AD Scheduled Imports* page will be updated with a list of all scheduled imports.

You may return to the *AD Scheduled Imports* screen at any time by clicking the **gear** icon in the upper right > click **Active Directory** beneath *Identity Management* > click **Scheduled Imports** under the *Active Directory* section in the right context menu.

From this screen, scheduled imports may be edited and deleted. However, we recommend using the **edit** and deselecting the **Active** parameter rather than using **delete**.

Additional items for scheduled imports

If a scheduled import was defined, you will need to create a Windows Scheduled Task on the Web server hosting Issuetrak for the import to execute at the proper interval.

Additionally, the Application URL must be accurate for the imports to process correctly. To verify this, click the **gear** icon in the upper right > click **Defaults** beneath *System* > make sure the **Application URL** field accurately reflects your site URL.

Preventing Specific Accounts from being Imported

You might know of some accounts that you definitely don't want to be imported from Active Directory.

To prevent specific user accounts from being imported into Issuetrak from Active Directory, enter one of the phrases below into the user's Description field in Active Directory:

- Built-In Account
- Inactive for Issuetrak

If you've found that an unwanted user account has already been imported, you will need to manually inactivate or remove the user in Issuetrak.

Rolling back to AD from AD Federation Services

This article provides steps for a scenario where it is necessary to roll back to using AD/LDAP instead of AD Federation Services (AD FS).

The product prevents any domain from being authenticated by both AD and AD FS simultaneously. In the course of following the steps below, there is a period wherein Issuetrak will not authenticate via AD or AD FS. For this reason, we recommend that you have a Sys Admin account that uses Issuetrak authentication, to avoid a situation in which you cannot access your own site.

At a high level, this process will do the following in Issuetrak:

1. Disable AD FS authentication for a domain of your choosing.
2. Enable AD/LDAP authentication on the domain you disabled AD FS for.
3. Perform a user import to update all of the user accounts to use AD/LDAP as their authentication method.

Steps:

1. Sign into Issuetrak as a Sys Admin.
2. Click the **gear** icon in the upper right > click on **AD Federation Services** beneath *Identity Management*.
3. Click **edit** next to the domain that you want to switch to AD.
4. Uncheck **Active**.
5. Click **Save**.
6. Along the right context menu, click **List Providers** beneath *Active Directory*.
7. Click **edit** next to the domain that you want to activate AD for.
8. Click **Test Connection** and ensure that Issuetrak will successfully communicate with the selected domain controller.
9. Upon a successful connection test, check **Active**.
10. Click **Update**.
11. Along the right context menu, click **Import Users**.
12. Complete these steps for each OU/Group that needs to be updated in Issuetrak:
 - a. Select the **Domain** that you've switched to AD from the dropdown.
 - b. Toggle either **AD Group** or **AD OU**.
 - c. Click the **Select [Group | OU]** button and choose which block of users to import.
 - d. Click **Preview Import**.
 - e. If you are satisfied with the preview, click **Process Import**. If you aren't satisfied with the preview, then refine your selection in the steps above.
13. Check several user accounts to confirm that their **Authentication Type** is set to "Active Directory".
14. Confirm that you can sign into Issuetrak via AD.
15. Confirm that other users can sign into Issuetrak via AD.

You have successfully rolled your domain back from AD FS to AD/LDAP authentication.



About Azure AD Integration

Issuetrak offers integration with Azure AD via the Identity Management area of the product. The advantages of utilizing Azure AD with Issuetrak are very similar to those from using AD Federation Services:

- Issuetrak never has the user's credentials.
- There is no need to use an Active Directory service account.
- The nature of Azure AD prevents applications from pulling information outside of the scope of an authenticated user.

Azure AD integration is licensed under the Active Directory add-on. If you would like to purchase support for AD, please get in touch with your Account Manager.

Note that using Azure AD with Issuetrak requires:

- ***That your site is configured to use SSL***
 - ***That your site's SSL certificate is not self-signed, and can be verified with its issuer***
 - ***That your site and Azure can communicate over standard web ports 80 and 443***
 - ***A "Hybrid" environment backed by Active Directory/LDAP (if it is desired for Asset Management assets to be properly matched to Azure AD users, as applicable)***
-

Preparing Your Azure AD Instance for use with Issuetrak

You will need to pre-register Issuetrak with your Azure AD instance before the two can communicate.

Steps:

1. Open your **Azure Management** interface.
2. Navigate to **App Registrations**.
3. Click **New registration**.
 - a. Enter a name for the new app registration.
 - b. You'll be prompted to select the **Account Type**. We suggest using "Accounts in this organizational directory only (*OrganizationName* only - Single tenant)".
 - If you're using a multi-tenant app, then a **Microsoft Partner Center ID** will need to be added under the branding option after the initial registration.
 - c. Leave the redirect URI set to **Web**, and enter the URL to your Issuetrak site with the following modifiers:
 - `https://IssuetrakSite/core/login/adfs`
 - d. Click **Register**.
4. Take note of the following information, as it will be needed to configure Issuetrak later:
 - a. Application (client) ID
 - b. Directory (tenant) ID

5. Now find and click **Authentication** in the lefthand menu, then add the following **Redirect URIs**, taking care to populate your Issuetrak site's external-facing address where **IssuetrakSite** appears:
 - <https://IssuetrakSite/core/adfs/verifyPassword>
 - <https://IssuetrakSite/core/adfs/testconnection>
6. Click **Save**.
7. Find and click **Certificates & secrets** in the lefthand menu, then click **New client secret**.
 - a. Enter a description for this secret. It is suggested that you make it clear that this is used for your Issuetrak site.
 - b. Click **Add**.
 - c. *Take note of the secret value that appears below! You will need this later and it won't be shown again!*
 - It is recommended that you replace your client secrets regularly.
8. Find and click **Token configuration** in the lefthand menu.
9. Add the **Optional Claims**:
 - a. Click **Add optional claim**.
 - b. Select the **ID** token type.
 - c. Check the boxes to add the following claims:
 - email (required)
 - family_name (required)
 - given_name (required)
 - onprem_sid (If migrating from an existing LDAP domain OR it is desired to match Asset Management assets to users from Azure AD)
 - d. Click **Add**.
 - e. Check the box in the pop-up that appears with this prompt: "*Turn on the Microsoft Graph email, profile permission (required for claims to appear in token).*"
 - f. Click **Add**.
10. Add the Group Claims:
 - a. Click **Add Groups Claim**.
 - b. Check the box next to **All Groups (includes distribution lists but not groups assigned to the application)**. This will select three checkboxes, which is exactly what we want:
 - i. Security Groups
 - ii. Directory Roles
 - iii. All Groups
 - c. Click **Add**.

Now we're ready to configure Issuetrak.

Activating Identity Management in Issuetrak

You will need to activate Identity Management integration in Issuetrak before you can use it.

Steps:

1. Sign into Issuetrak with a Sys Admin account.
 2. Click the **gear** icon in the upper right > click on **Features** beneath *System*.
 3. Scroll down to **Identity Management**.
 4. Check the box next to **Enable authenticating users with third party identity providers**.
 5. Check the box next to **Update existing users on login**.
 6. Click **Update**.
-

Deactivating Identity Management in Issuetrak

You may want to deactivate Identity Management integration under certain circumstances, which will preclude the use of all forms of AD authentication with your instance of Issuetrak.

Steps:

1. Sign into Issuetrak with a Sys Admin account.
 2. Click the **gear** icon in the upper right > click on **Features** beneath *System*.
 3. Scroll down to **Identity Management**.
 4. Uncheck the box next to **Enable authenticating users with third party identity providers**.
 5. Click **Update**.
-

Configuring Issuetrak to use Azure AD

Steps:

1. Sign into Issuetrak with a Sys Admin account.
 2. Click the **gear** icon in the upper right > click on **Azure AD** beneath *Identity Management*.
 3. From the right context menu, click **Add Provider**.
 4. Fill in the required information:
 - a. **Provider Name** - What this provider will be called in Issuetrak.
 - b. **Domain** - The domain this provider provides services for.
 - c. **Azure Cloud Type** - Determines the connection method between Issuetrak and your Azure instance.
 - d. **TenantId** - You should have this from the section above.
 - e. **Client ID** - You should have this from the section above.
 - f. **Client Secret** - You should have this from the section above.
 5. Set the **Button** configuration along the right.
 6. Click **Save**.
-

Creating User Mappings for Azure AD

The final step to configuring Azure AD is to create mappings for user accounts. Without a minimum of Organization and Template mappings, users will be unable to sign in using the

identity provider you configured.

Issuetrak uses identity claims to map users to the correct organizations, user templates, locations, departments, and any user account UDFs that are configured. This is more constrained than using traditional mappings from AD or AD Federation Services.

Mapping User Templates

Steps:

1. Sign into Issuetrak with a Sys Admin account.
2. Click the **gear** icon in the upper right > click on **Azure AD** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Template Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two User Template mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both templates' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin of this mapping.
7. Enter the **Matching Value** that applies to the claim.
8. Select which User Template this claim should be mapped to upon a successful match.
9. Click **Save**.

Mapping Organizations

Steps:

1. Sign into Issuetrak with a Sys Admin account.
2. Click the **gear** icon in the upper right > click on **Azure AD** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Organization Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two Organization mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both Organizations' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin

- of this mapping.
7. Enter the **Matching Value** that applies to the claim.
 8. Select which Organization this claim should be mapped to upon a successful match.
 9. Click **Save**.

Mapping Locations

Steps:

1. Sign into Issuetrak with a Sys Admin account.
2. Click the **gear** icon in the upper right > click on **Azure AD** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Location Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two Location mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both Locations' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin of this mapping.
7. Enter the **Matching Value** that applies to the claim.
8. Select which Location this claim should be mapped to upon a successful match.
9. Click **Save**.

Mapping Departments

Steps:

1. Sign into Issuetrak with a Sys Admin account.
2. Click the **gear** icon in the upper right > click on **Azure AD** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Department Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two Department mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both Departments' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin of this mapping.
7. Enter the **Matching Value** that applies to the claim.

8. Select which Department this claim should be mapped to upon a successful match.
9. Click **Save**.

User Property Mappings

There are several claims automatically mapped by default for Street Address, City, State, etc. These can be edited or deleted if necessary.

Additionally, three claims are mandatory and automatically mapped to fields for each user. They are mapped as follows:

- SamAccountName -> User Id
- GivenName -> First Name
- LastName -> Last Name

Any other Claim can be mapped to any UDF or unused field in a user account.

Mapping User Properties

Steps:

1. Sign into Issuetrak with a Sys Admin account.
2. Click the **gear** icon in the upper right > click on **Azure AD** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define User Property Mapping**.
5. Enter a **Claim** name.
6. Select the field in the dropdown to map the **Claim** to.
7. Click **Save**.

Testing User Mappings

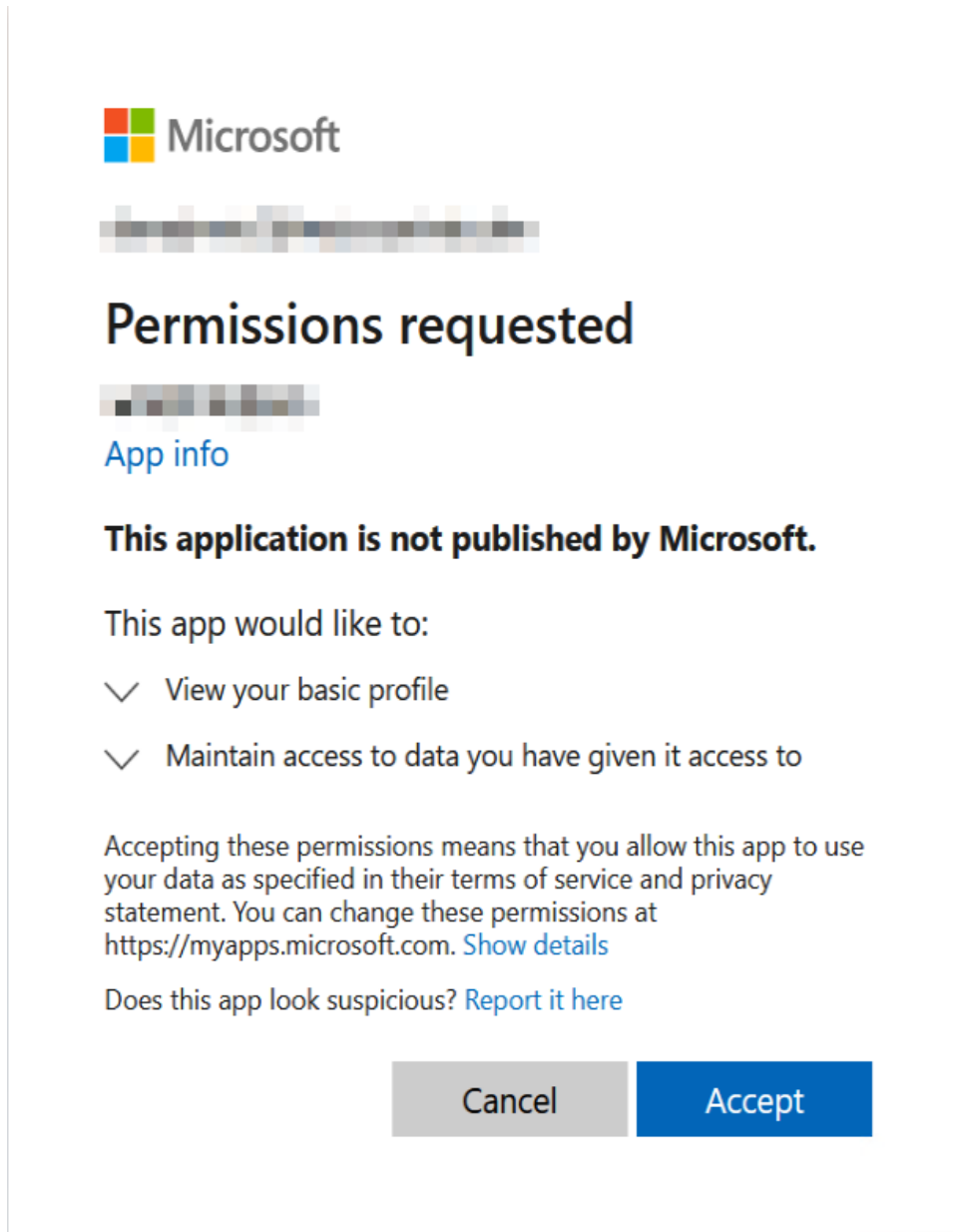
The **Test User Mappings** button provides the capability to authenticate a user account and immediately display the mappings that are applied to that account. It is recommended for customers to test user account mappings by creating a 'dummy' AD account that has the same mappings as the target user(s), then authenticate that user via the **Test User Mappings** prompt to check the mappings.

Even if you're just testing the mappings, if it's the first time Issuetrak is attempting to authenticate via Azure, then it will display a prompt that may seem unexpected. See the section below for more information on this.

First Time Signing into Issuetrak via Azure AD

The first time you attempt to sign into Issuetrak with your Azure AD credentials, you will be greeted with a prompt in your browser to provide permissions to Issuetrak to use Azure AD for authentication. You must accept this in order for Azure AD integration with Issuetrak to work.

The prompt will look something like this:



Troubleshooting the Active Directory Module

This article details troubleshooting tips for Active Directory accounts not being able to log into Issuetrak.

Steps

If users can pull up the Issuetrak login page, but cannot get past the screen with their credentials, we would need to verify a few settings:

Verify Active Directory Connection

1. Log into Issuetrak.
2. Click the **gear** icon in the upper right > click on **Active Directory** beneath *Identity Management*.
3. Click **Edit** next to your AD Server settings.
4. Click **Test Connection**.

If this fails, then you would need to verify that all information; Server, UserDN, and Password.

Verify User Mappings

1. Log into Issuetrak.
2. Click the **gear** icon in the upper right > click on **Active Directory** beneath *Identity Management*.
3. Click **Edit** next to your AD Server settings.
4. Scroll to **Search Test**.
5. Type in the **UserID** and click **Search**.

This will give you a pop-up with information such as whether it has found the account and if it has any mappings. Active Directory user accounts **must** have user attributes and an organization set in order to import properly into Issuetrak!

Manually Import Account

1. Log into Issuetrak.
2. Click the **gear** icon in the upper right > click on **Active Directory** beneath *Identity Management*.
3. Click **Import Users** from the right context menu.
4. Click the **radio button** next to AD Group or OU.
 - If you have multiple servers, be certain to select the correct server from the dropdown list.
5. Select the AD Group or OU that you will be importing.
6. Click **Preview Import**.
 - If there is a problem with the import, such as mappings or inactive accounts, this

preview should display them.

7. Click **Process Import**.
-

Verify AD User Account Permissions

If everything appeared correctly in the previous steps, then you'll need to verify the login permissions for the user in Active Directory.

1. Open **Active Directory Users and Computers**.
 2. Find the user account.
 3. Right-click the account and click **Properties**.
 4. Go to the **Account** tab.
 5. Click **Log On To**.
 6. Can the user log on to **All Computers**? If the user is restricted to a few workstations, you will have to add the WebServer and Domain Controller for Active Directory Integration to function.
-

About OAuth / OpenID Connect

[Open Authorization \(OAuth\)](#) and [OpenID Connect \(OIDC\)](#) are both widely-used standards for identity management and authentication. Issuetrak provides the ability to authenticate via these standards, which we will refer to as **OAuth 2.0 / OIDC**. What this means is that you can use third-party authentication providers that support OAuth 2.0 / OIDC to sign into Issuetrak via (for example) a "Sign in with Google" button on your instance's login page.

Issuetrak provides configuration presets for three major providers:

1. [Google](#)
2. [OKTA](#)
3. [One Login](#)

A fourth option labeled "Custom" is also available, which allows you to add any standards-compliant provider that is not listed.

This article explains how to enable Identity Management, as well as configure Google, OKTA, and One Login to authenticate with Issuetrak.

Initial account creation and configuration of these third-party services is beyond the scope of this article.

Activate Identity Management

Before you can use any of the third-party authentication options, you must activate the Identity Management Module.

1. Click the **gear** icon in the upper right > click **Features** beneath *System*.
2. Select **Enable authenticating users with third party identity providers** in the *Identity Management* section.
3. *(Optional)* Select **Allow single sign on functionality**.
4. *(Optional)* Select **Update existing users on login**. This will check for and update the user each time they log into Issuetrak.
5. Click **Update** to save the new settings.

Google

This section provides steps for making Google's identity management services work with your instance of Issuetrak.

Google Configuration

1. Navigate to [Google's Cloud Platform interface](#).
2. From the lefthand menu, select **IAM & Admin**, then click **Create a Project**.
 - a. You'll be prompted to set a **Project Name**. We would suggest naming this

- something distinctive and descriptive, such as "Issuetrak Auth".
 - b. You can also set which organization you want this project to work with. Select the organization that you want to be able to authenticate with Issuetrak.
 - c. Click **Create**.
 - 3. From the lefthand menu, select **APIs & Services**, then click **OAuth consent screen**.
 - a. Read the information provided onscreen and decide whether Internal or External is best for your organization. If you're unsure, we would suggest selecting **Internal**. Click **Create** after you make your selection.
 - b. Fill in the **App Name** and **User support email** fields. App name should be something descriptive such as "Issuetrak Testing Instance".
 - c. *Optional*. Fill in the fields listed under **App Domain**.
 - d. Under **Authorized Domains**, enter the domain of the organization that you want to authenticate with Issuetrak.
 - e. Enter a valid address for Google to send notifications to about the status of this registration.
 - f. Click **Add or Remove Scopes**. Check the first 3 scopes on the list:
 - i. `.../auth/userinfo.email`
 - ii. `.../auth/userinfo.profile`
 - iii. `openid`
 - g. Click **Update** at the bottom of the browser.
 - h. Click **Save and Continue** at the bottom of the browser.
 - 4. From the lefthand menu, select **APIs & Services**, then click **Credentials**.
 - 5. Click **Create Credentials > OAuth client ID**.
 - a. Select "Web Application" from the **Application Type** dropdown.
 - b. Enter a name for this client ID.
 - c. Under **Authorized Redirect URIs**, click "Add URI" and then add the following URIs separately, where *IssuetrakSite* is your Issuetrak instance's publicly accessible address:
 - i. `https://IssuetrakSite/core/adfs/verifyPassword`
 - ii. `https://IssuetrakSite/core/adfs/testconnection`
 - iii. `https://IssuetrakSite/core/login/adfs`
 - d. Click **Create**.
 - 6. Take note of the **Client ID** and **Client Secret** provided in the "OAuth Client Created" pop-up. You will need both of them in the next section.

Now we're ready to configure Issuetrak.

Issuetrak Configuration

1. Click the **gear** icon in the upper right > click **OAuth 2.0 / OIDC** beneath *Identity Management*.
2. Click **Add Provider** beneath "OAuth 2.0 / OIDC" on the righthand menu.
3. Select "Google" from the **Provider Template** dropdown. This will populate the **Discovery URL** and **Scopes** fields.
4. Enter the **Provider Name**. For example purposes, we will enter "Google".
5. Enter the **Domain** that you want to be able to authenticate via Google with Issuetrak.
6. Copy and paste the **Client ID** and **Client Secret** that Google provided in the previous steps above.
7. Set the **Button Label**.
8. *Optional*. Set custom colors for each aspect of the button.

9. Click **Save**.
10. Click **Test Connection**. You will be prompted to sign in or select a Google account to authenticate this Issuetrak instance to your project. If this succeeds, then you will see "Successfully Authenticated" at the top of the screen, along with a list of claims and values provided by Google about the account you authenticated with.

You're almost ready to continue from here! You will need to set some [user mappings](#) before you can attempt to sign in via this authentication provider.

OKTA

This section provides steps for making OKTA's identity management services work with your instance of Issuetrak.

OKTA Configuration

1. Navigate the [OKTA's configuration interface](#).
2. Along the lefthand menu, click **Applications** > **Applications**.
3. Choose **Create App Integration**.
4. Select **OIDC - OpenID Connect**, then **Web Application**. Click **Next**.
5. Set the "App Integration Name". We recommend that you make this descriptive, such as "Issuetrak Testing Instance".
6. For **Sign-In Redirect URIs**, add the following URIs separately, where *IssuetrakSite* is your Issuetrak instance's publicly accessible address:
 - a. <https://IssuetrakSite/core/adfs/verifyPassword>
 - b. <https://IssuetrakSite/core/adfs/testconnection>
 - c. <https://IssuetrakSite/core/login/adfs>
7. In Assignments, read the available options and determine the best option that will suit your organization's needs.
8. Click **Save**.
9. Take note of the **Client ID** and **Client Secret** provided on the next screen. You will need both of them in the next section.

Now we're ready to configure Issuetrak.

Issuetrak Configuration

1. Click the **gear** icon in the upper right > click **OAuth 2.0 / OIDC** beneath *Identity Management*.
2. Click **Add Provider** beneath "OAuth 2.0 / OIDC" on the righthand menu.
3. Select "OKTA" from the **Provider Template** dropdown. This will populate the **Discovery URL** and **Scopes** fields.
4. Copy and paste the **Client ID** and **Client Secret** that OKTA provided in the previous steps above.
5. Set the **Button Label**.
6. Click **Save**.
7. Click **Test Connection**. You will be prompted to sign in or select an account to authenticate this Issuetrak instance to your provider. If this succeeds, then you will see

"Successfully Authenticated" at the top of the screen, along with a list of claims and values provided by Google about the account you authenticated with.

You're almost ready to continue from here! You will need to set some [user mappings](#) before you can attempt to sign in via this authentication provider.

OneLogin

This section provides steps for making OneLogin's identity management services work with your instance of Issuetrak.

OneLogin Configuration

1. Navigate to OneLogin's administration portal (this varies according to the domain you have with them).
2. From the top menu, choose **Applications > Applications**.
3. In the upper right corner, click **Add App**.
 - a. In the **Search** field, type "oidc" and then select "OpenIdConnect (OIDC)" from the search results.
 - b. Set the display name to "Issuetrak Auth" (or any friendly name for this that you wish).
 - c. Click **Save**.
4. From the lefthand menu, choose **Configuration**.
5. Make the following entries in the **Redirect URI's** field where *IssuetrakSite* is your Issuetrak instance's publicly accessible address:
 - a. `https://IssuetrakSite/core/adfs/verifyPassword`
 - b. `https://IssuetrakSite/core/adfs/testconnection`
 - c. `https://IssuetrakSite/core/login/adfs`
6. Click **Save**.
7. From the lefthand menu, click **SSO**.
8. Take note of the **Client ID**, **Client Secret** and **Issuer URL** here. You will need them for the next section.
9. Scroll down to **Token Endpoint** and set the "Authentication Method" dropdown to "POST".
10. Click **Save**.

Now we're ready to configure Issuetrak.

Issuetrak Configuration

1. Click the **gear** icon in the upper right > click **OAuth 2.0 / OIDC** beneath *Identity Management*.
2. Click **Add Provider** beneath "OAuth 2.0 / OIDC" on the righthand menu.
3. Select "OneLogin" from the **Provider Template** dropdown. This will populate the **Discovery URL** and **Scopes** fields.
4. You will need to update the **Discovery URL** to match the Issuer URL provided by OneLogin in the previous steps.
5. Copy and paste the **Client ID** and **Client Secret** that OneLogin provided in the previous

steps above.

6. Set the **Button Label**.
7. Click **Save**.
8. Click **Test Connection**. You will be prompted to sign in or select an account to authenticate this Issuetrak instance to your provider. If this succeeds, then you will see "Successfully Authenticated" at the top of the screen, along with a list of claims and values provided by Google about the account you authenticated with.

You're almost ready to continue from here! You will need to set some [user mappings](#) before you can attempt to sign in via this authentication provider.

Creating User Mappings

The final step to configuring OAuth 2.0 / OIDC is to create mappings for user accounts. Without a minimum of Organization and Template mappings, users will be unable to sign in using the identity provider you configured.

Issuetrak uses identity claims to map users to the correct organizations, user templates, locations, departments, and any user account UDFs that are configured. This is more constrained than using traditional mappings from AD or AD Federation Services.

Mapping User Templates

Steps:

1. Sign into Issuetrak with a [Sys Admin](#) account.
2. Click the **gear** icon in the upper right > click on OAuth 2.0 / OIDC beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Template Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two User Template mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both templates' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin of this mapping.
7. Enter the **Matching Value** that applies to the claim.
8. Select which User Template this claim should be mapped to upon a successful match.
9. Click **Save**.

Mapping Organizations

Steps:

1. Sign into Issuetrak with a [Sys Admin](#) account.
2. Click the **gear** icon in the upper right > click on **OAuth 2.0 / OIDC** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Organization Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two Organization mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both Organizations' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin of this mapping.
7. Enter the **Matching Value** that applies to the claim.
8. Select which Organization this claim should be mapped to upon a successful match.
9. Click **Save**.

Mapping Locations

Steps:

1. Sign into Issuetrak with a [Sys Admin](#) account.
2. Click the **gear** icon in the upper right > click on **OAuth 2.0 / OIDC** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Location Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two Location mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both Locations' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin of this mapping.
7. Enter the **Matching Value** that applies to the claim.
8. Select which Location this claim should be mapped to upon a successful match.
9. Click **Save**.

Mapping Departments

Steps:

1. Sign into Issuetrak with a [Sys Admin](#) account.
2. Click the **gear** icon in the upper right > click on **OAuth 2.0 / OIDC** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define Department Mapping**.
5. Set the **Priority**. Priority determines whether this mapping takes precedence over other mappings of the same type that match. *A lower number indicates a higher priority.*

For example, if two Department mappings named **Alpha** (Priority 1) and **Bravo** (priority 2) are matched to the same user account, the mapping with the higher priority (*lower number*) takes precedence. Thus, a user account that matches both Departments' criteria will be mapped to **Alpha**.

6. Enter the name of the **Claim** that will be scanned by Issuetrak to determine the origin of this mapping.
7. Enter the **Matching Value** that applies to the claim.
8. Select which **Department** this claim should be mapped to upon a successful match.
9. Click **Save**.

User Property Mappings

Four claims are mandatory and automatically mapped to fields for each user. They are mapped as follows:

- preferred_username -> User Id
- given_name -> First Name
- family_name -> Last Name
- email -> Email

Any other available Claim can be mapped to any UDF or unused field in a user account.

Mapping User Properties

Steps:

1. Sign into Issuetrak with a [Sys Admin](#) account.
2. Click the **gear** icon in the upper right > click on **OAuth 2.0 / OIDC** beneath *Identity Management*.
3. Click **edit** next to the domain that you wish to set mappings for.
4. Find **Define User Property Mapping**.
5. Enter a **Claim** name.
6. Select the field in the dropdown to map the **Claim** to.
7. Click **Save**.

Testing User Mappings

The **Test User Mappings** button provides the capability to authenticate a user account and immediately display the mappings that are applied to that account. It is recommended for customers to test user account mappings by creating a 'dummy' account that has the same mappings as the target user(s), then authenticate that user via the **Test User Mappings** prompt to check the mappings.

How to Integrate Power BI with Issuetrak

It is possible to use the Scheduled Reports feature to send a Scheduled Report in CSV format to an email account that is monitored by Microsoft OneDrive. Power BI can then be connected with OneDrive to pull your reports and then process them in any way you see fit. This article will provide the foundation for your organization to use Power BI with your Issuetrak reports.

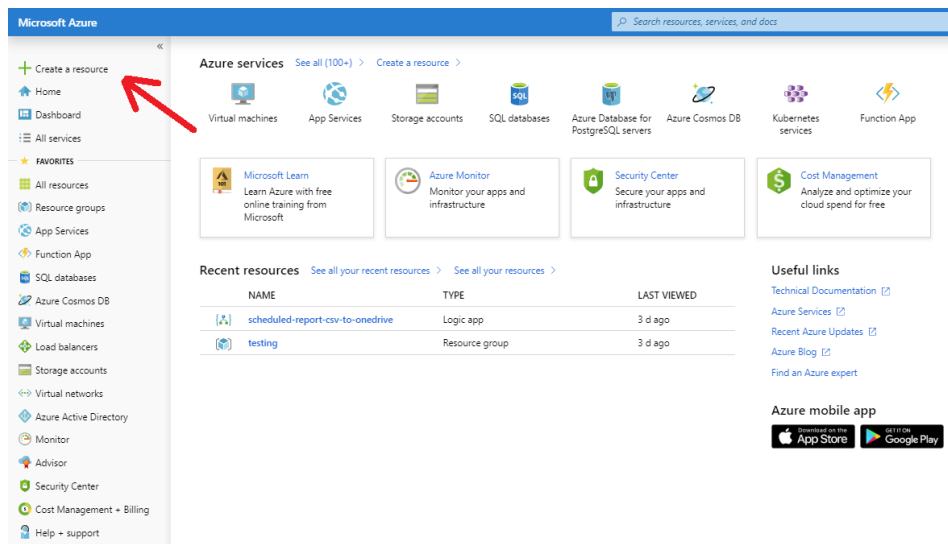
Prerequisites

- Microsoft OneDrive Account
- Microsoft Azure Account
- Email provider and credentials that can be connected to Azure

Create a New Logic App

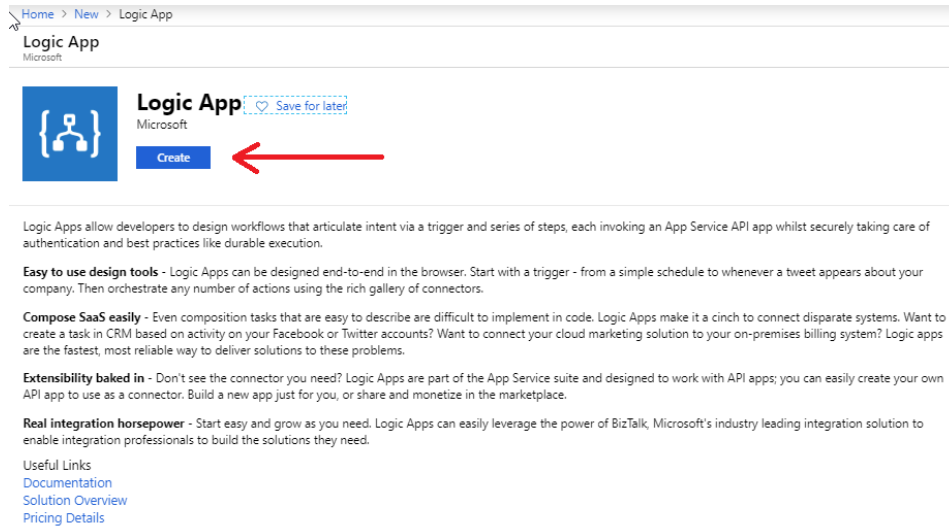
Sign in to the Azure Portal, then perform the following:

1. Expand the lefthand menu by clicking the >> chevron icon.
2. Click **Create a Resource**.



3. Type "Logic App" into the *Search the Marketplace* search box, then select "Logic App" from the resulting dropdown of search results.
4. In the **Logic App** pane, click the **Create** button.
*If you are presented with a pane that indicates that you should "Create a free account" then your account may not have permission to access **Logic Apps**. It will be necessary*

to contact the account administrator for your organization.



5. Enter a name for your Logic App. The name can only contain letters, numbers, or the following characters:
 - a. - **[hyphen]**
 - b. (**[left parenthesis]**
 - c.) **[right parenthesis]**
 - d. , **[comma]**
 - e. . **[period]**
 - f. _ **[underscore]**
6. Enter a new **Resource Group** or select an existing one.
7. Select a **Location**.
8. Click the **Create** button.

Home > New > Logic App > Logic App

Logic App

Create


* Name
sched-rep-csv-to-1drive ✓

* Subscription
Microsoft Partner Network ▾

* Resource group ⓘ
 Create new Use existing
testing ▾

* Location
East US ▾

Log Analytics ⓘ
 On Off

 You can add triggers and actions to your Logic App after creation.

[Create](#) [Automation options](#)

Configure the Logic App

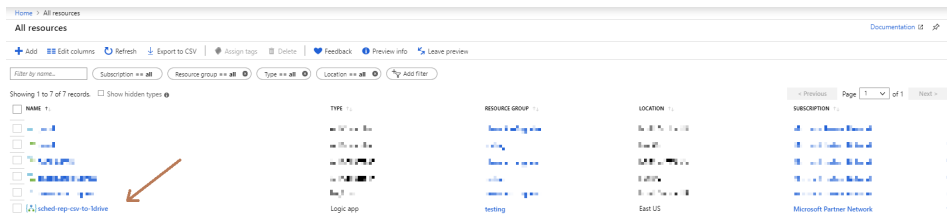
We will now configure the Logic App that you just created.

For the purposes of this article, we will provide the steps for configuring this service to utilize a Gmail account. You will need to choose the settings that work for your own email provider.

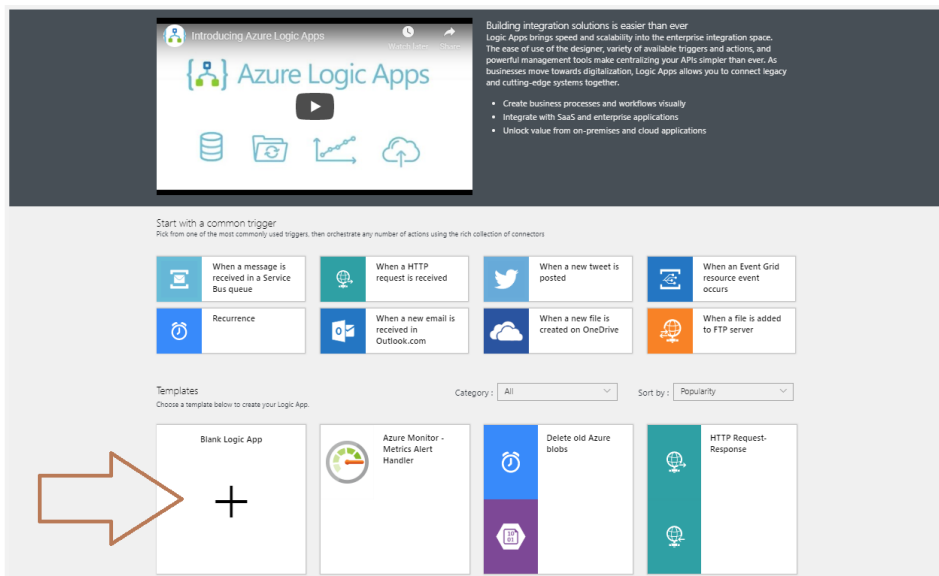
Within the Azure Portal:

1. Expand the lefthand menu by clicking the >> chevron icon.

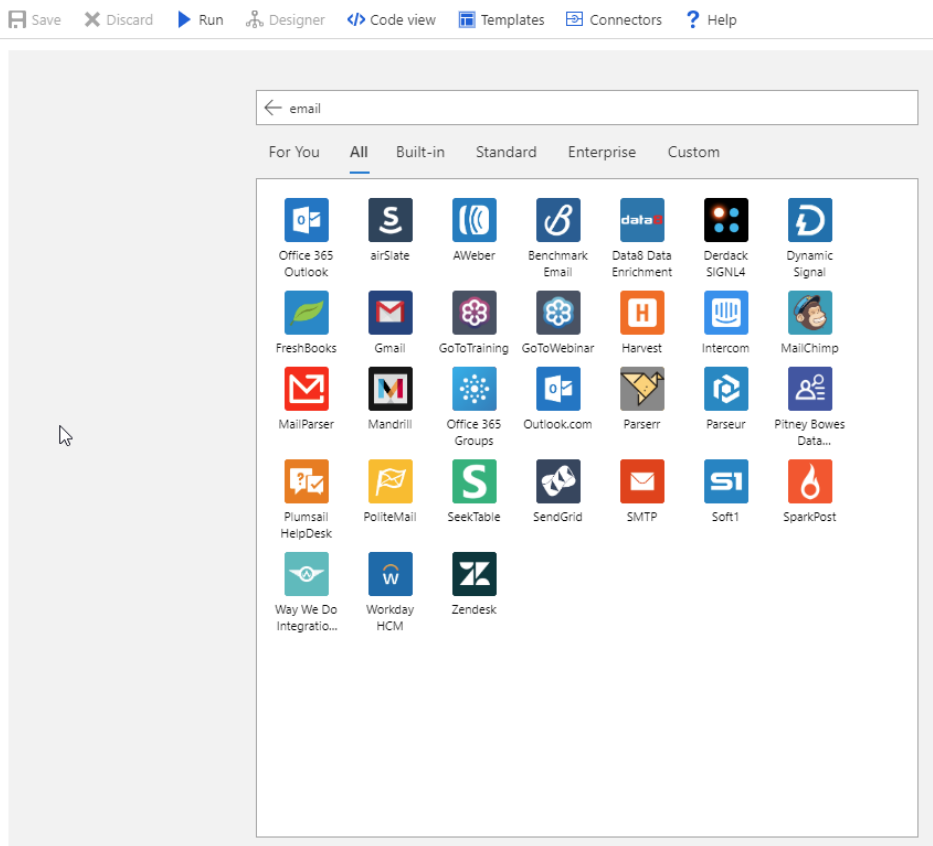
2. Click on **All Resources** along the left-hand menu.
3. Search for and click on the name of the Logic App that you created in the previous section. It's possible that the Logic App you created won't show up immediately, so it may be necessary to refresh the page periodically until it appears.



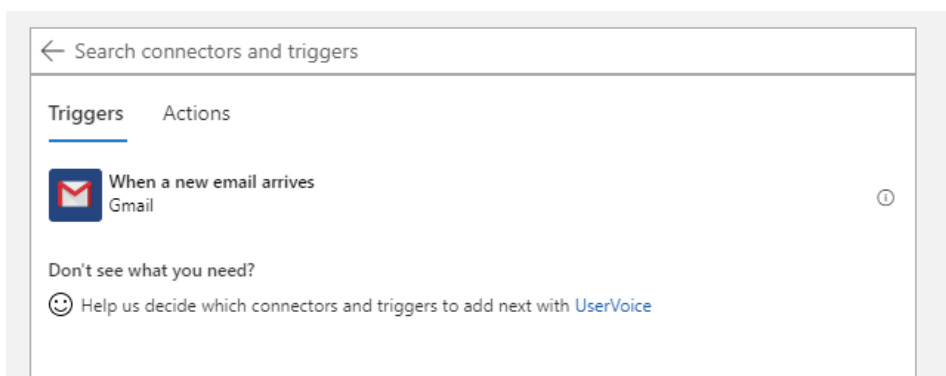
4. If you aren't taken directly to the Logic App Designer, then look for **Development Tools** in the new menu that appears and choose **Logic App Designer** beneath that.
5. Within the Logic App Designer pane, click the **Blank Logic App** button under the **Templates** menu.



6. In the **Search Connectors and Triggers** search bar, enter "email". The search results will show the first two rows of results. Choose the down arrow beneath the first two rows to expand all of the search results.



7. Choose the **Gmail** icon *or the email provider that applies to your organization*.
8. Choose the trigger that indicates "When a new email arrives".



If you've already created a **Logic App Trigger** connection to your email account, then you can skip to **step 9**. If you haven't previously created a **Logic App** connection to your email service, then you will be asked to sign in. With Gmail, you'll need to:

- a. Click the **Sign In** button to open a popup window that will allow you to sign into your Gmail account.
- b. After successfully signing in, choose **Allow** to allow the Logic App to access your Gmail account. This will create an Azure Resource of the type called "API Connection" that can be maintained from the "All Resources" option on the main Azure Portal menu.

9. On the "When a New Email Arrives" pane, select **Yes** for the options "Has Attachments"

and "Include Attachments".

When a new email arrives

Label
INBOX

Importance
All

Starred
All

Has Attachments
Yes

Include Attachments
Yes

How often do you want to check for items?

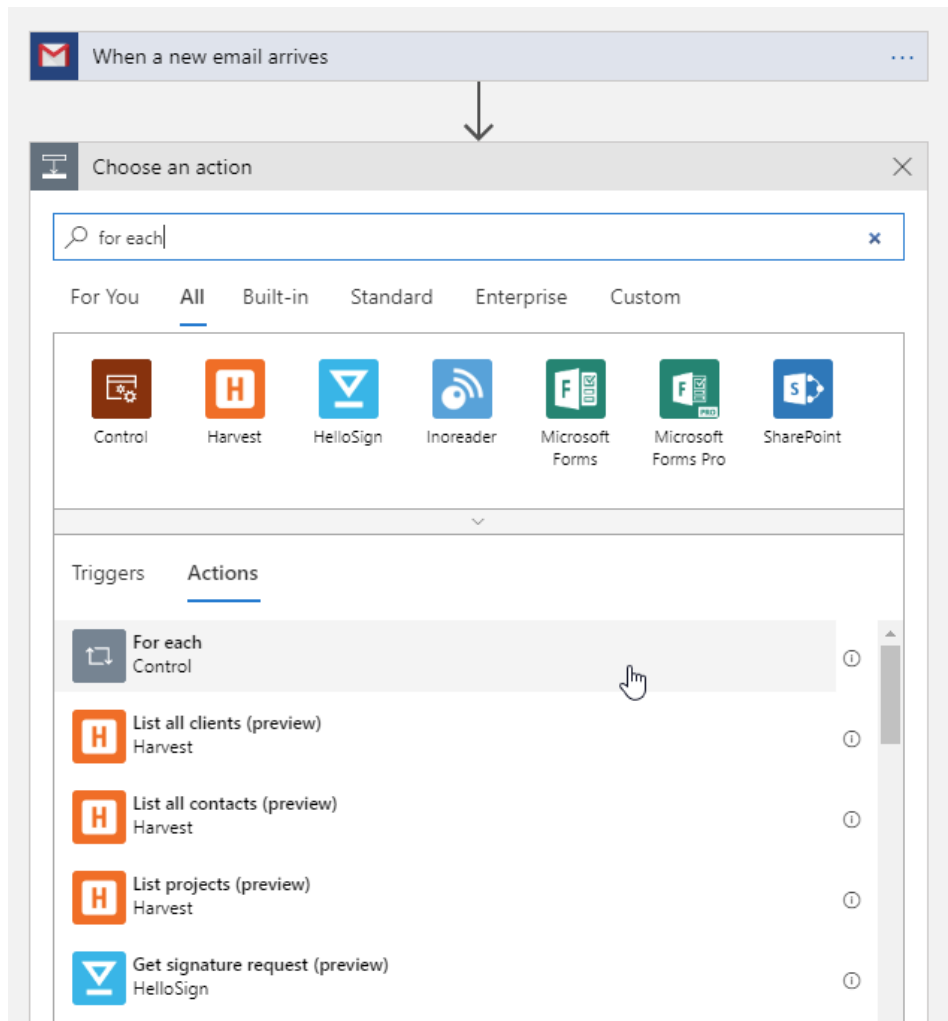
* Interval: 3 * Frequency: Minute

Add new parameter

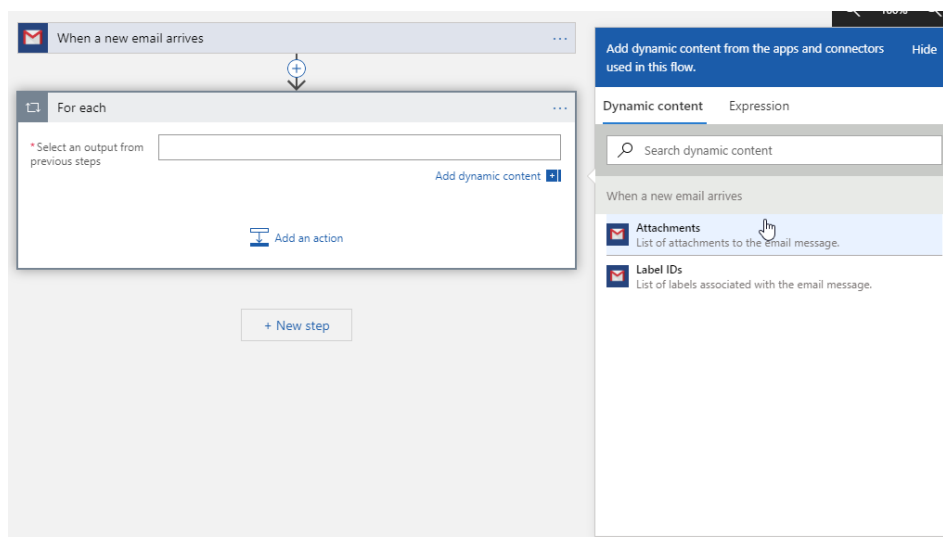
Connected to . [Change connection.](#)

+ New step

10. Enter a value for the prompt "How frequently do you want to check for items?" The default value is **every 3 minutes**. You may add additional "Parameters" if desired, such as limiting to a specific "From" email address.
11. Click the **+ New Step** button.
12. Enter "For Each" in the search bar for this new step, then select "For each" under the "Actions" list.

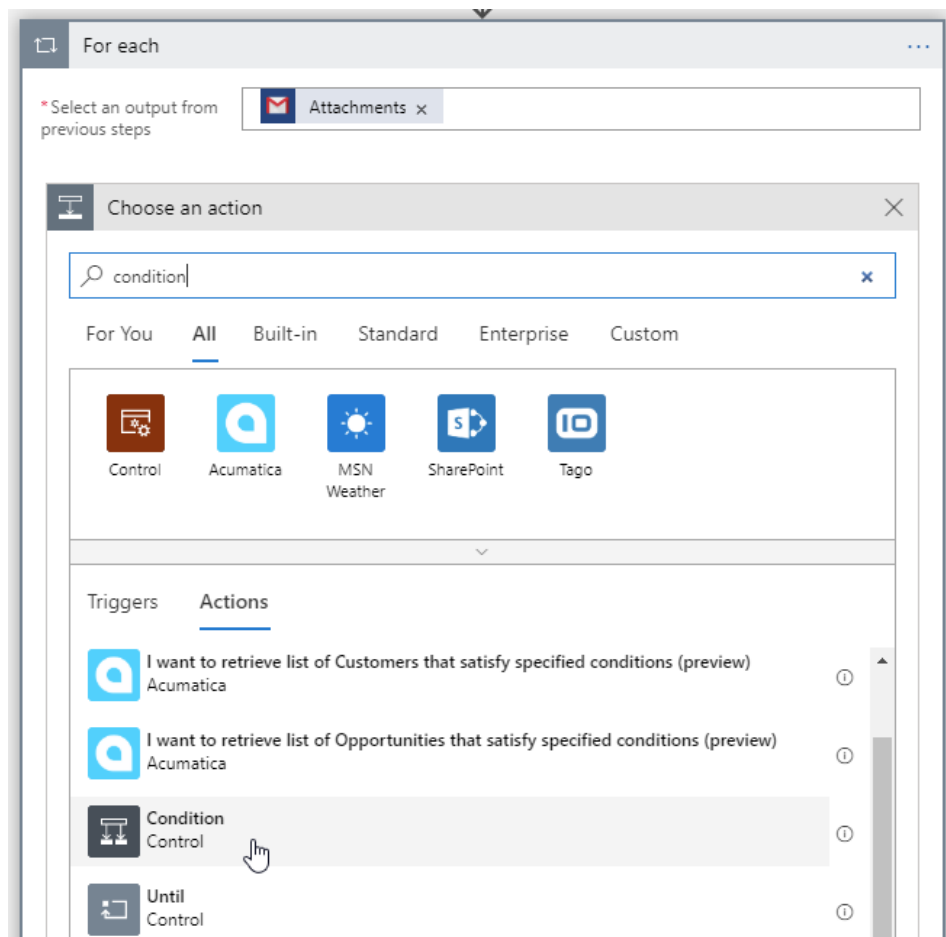


13. Click within the "Select an Output" box and select **Attachments** from the panel that opens next to the box.



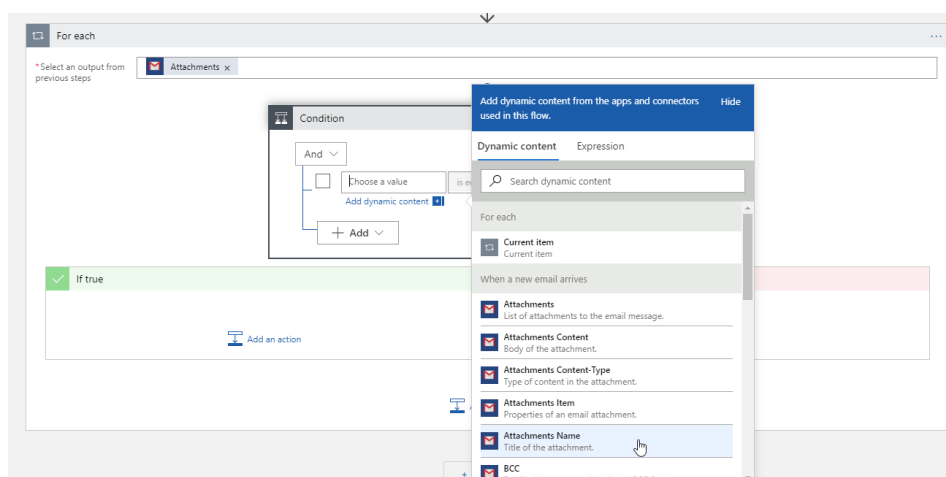
14. Click the **Add an Action** button at the bottom of the "For Each" panel.

15. Enter "condition" in the search bar for this new action.

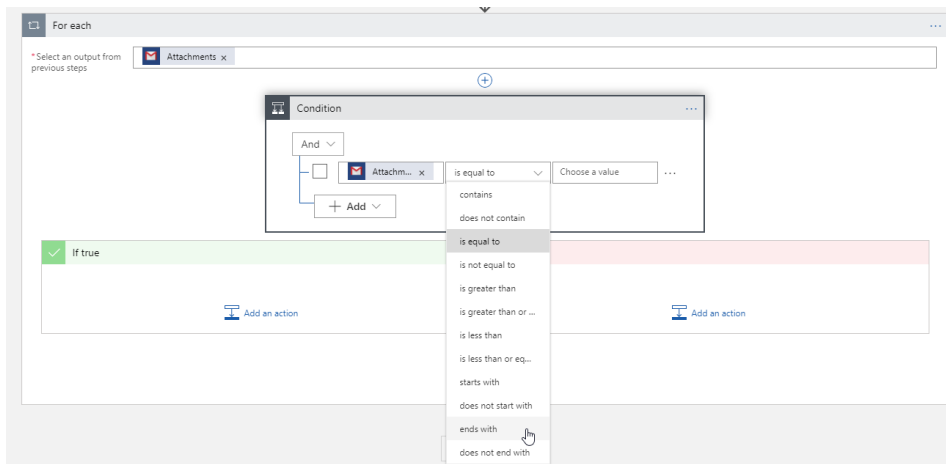


16. Select **Condition Control** in the **Actions** list below.

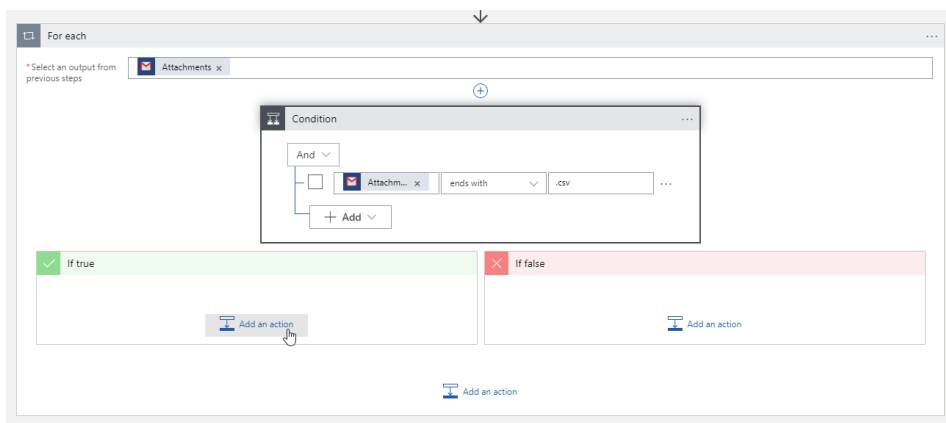
17. Click in the first "Choose a value" box and select **Attachments Name** from the panel that opens next to the box.



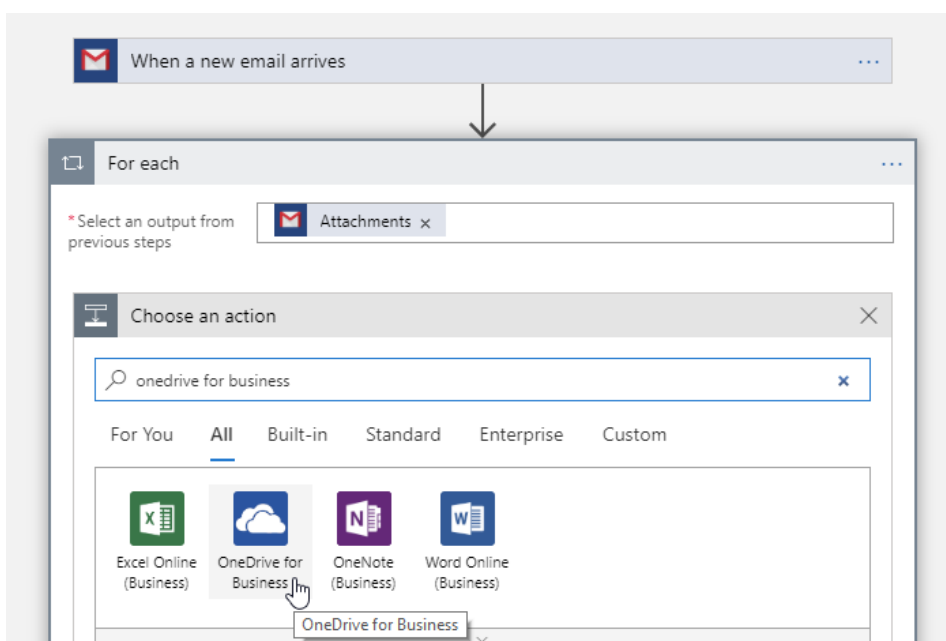
18. Click on the **Is equal to** dropdown and select "ends with".



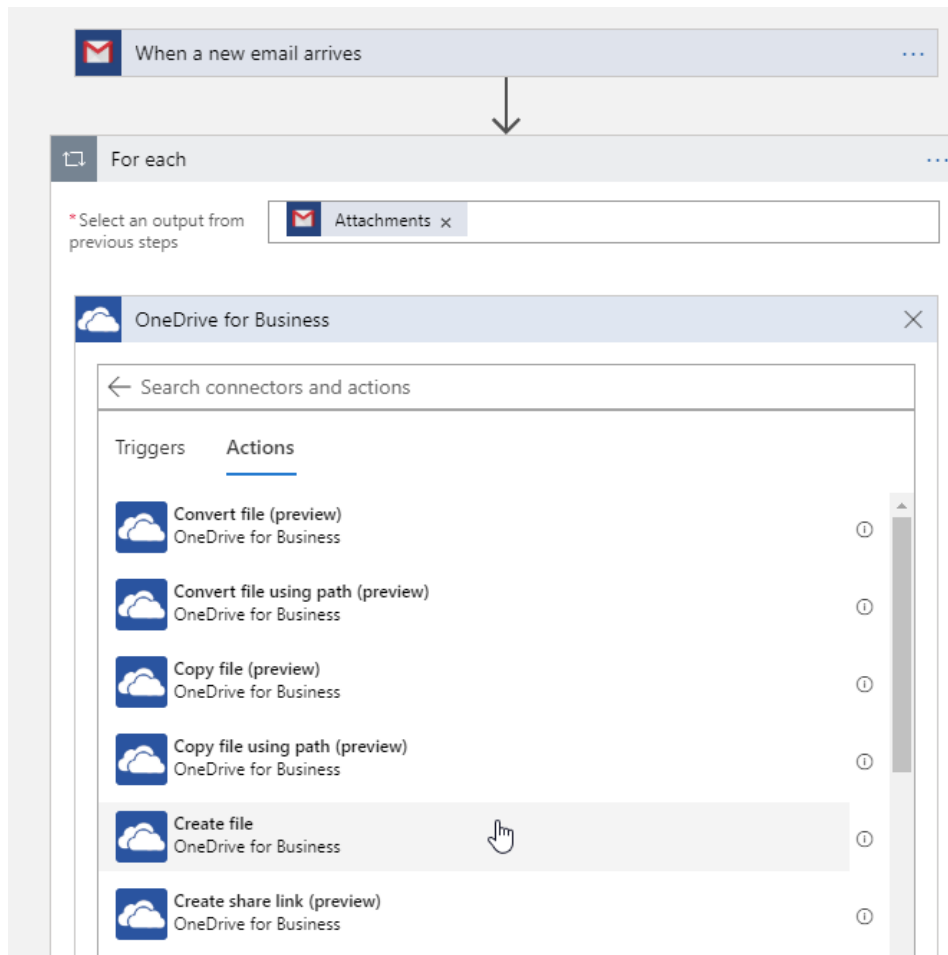
19. Click in the second "Choose a value" box and enter **.csv**.
20. Click the **Add an Action** button at the bottom of the "If true" panel.



21. Search for "OneDrive for Business", then select it from the search results.



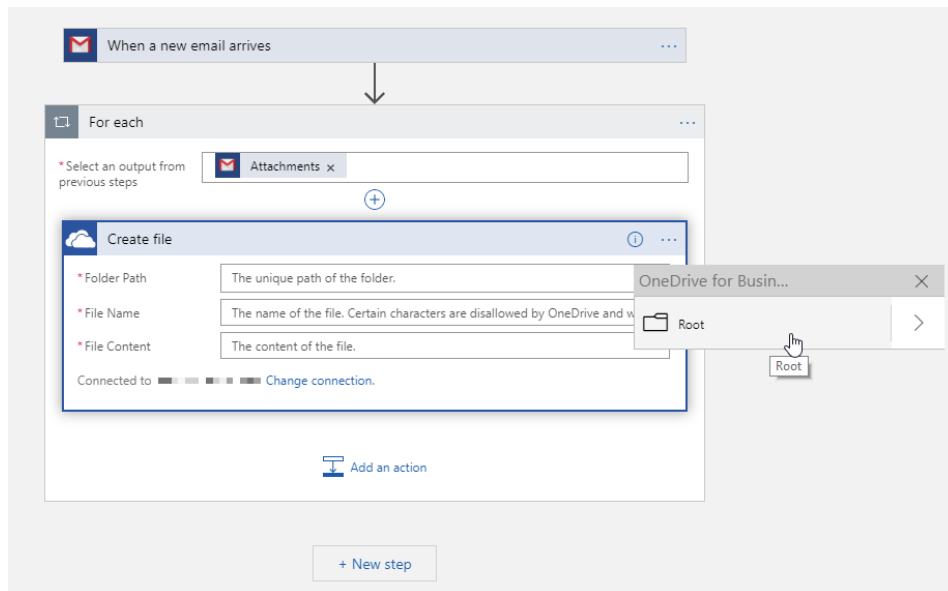
22. Select **Create File** from the list of actions.



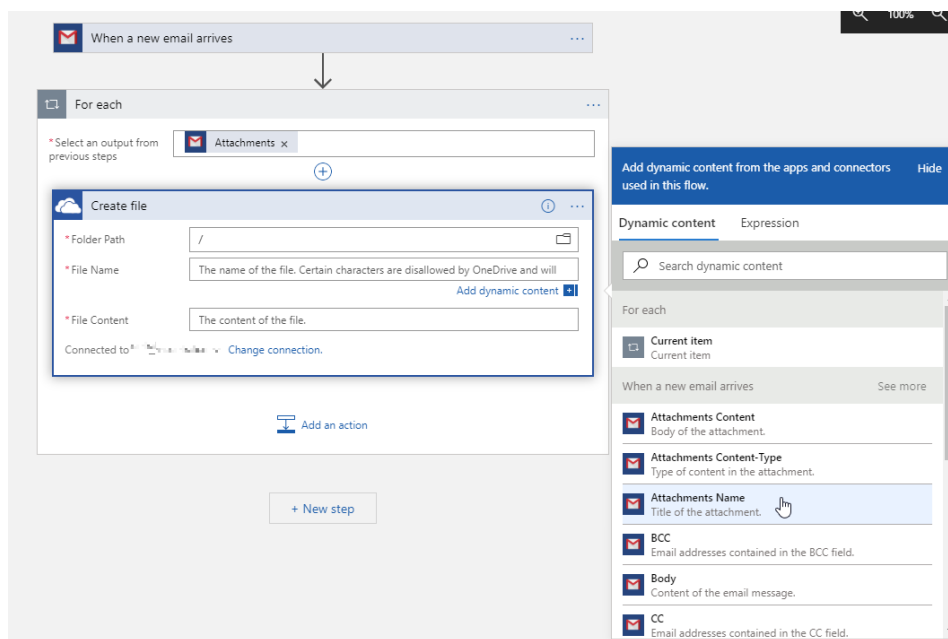
If you have previously created a Logic App connection to OneDrive, it will be selected by default and you can click the "Change Connection" link at the bottom of the "Create File" pane to change it.

If you haven't previously created a Logic App connection to OneDrive, you will be asked to sign in:

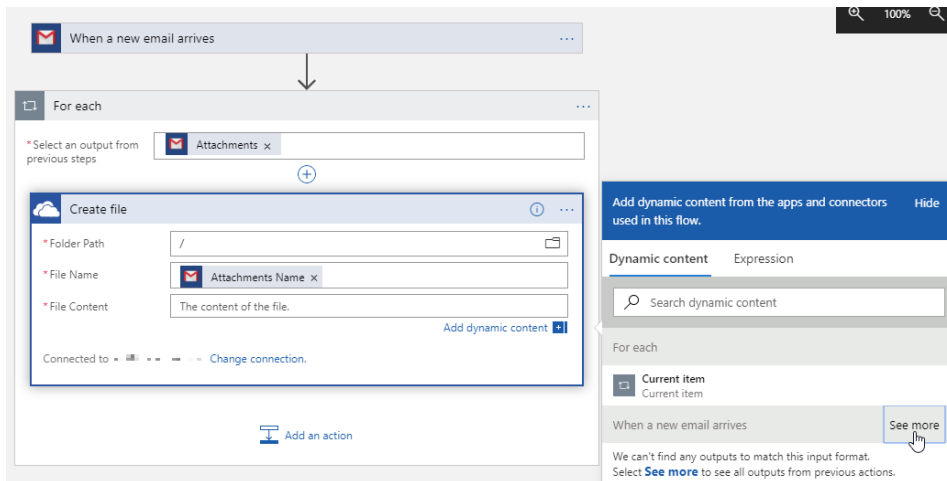
- a. Click the **Sign In** button to open a popup window that will allow you to sign into your OneDrive for Business account. *If you receive an error indicating your Microsoft account doesn't exist, and you're certain you entered the correct account name, then it's possible that you selected **OneDrive** instead of **OneDrive for Business**.*
 - b. This will create an Azure Resource of type "API Connection" that can be maintained under the **All resources** option on the main Azure Portal menu.
23. In the "Create File" pane, click the folder icon to the right of the "Folder Path" box to select a folder in OneDrive to save the email attachment to.



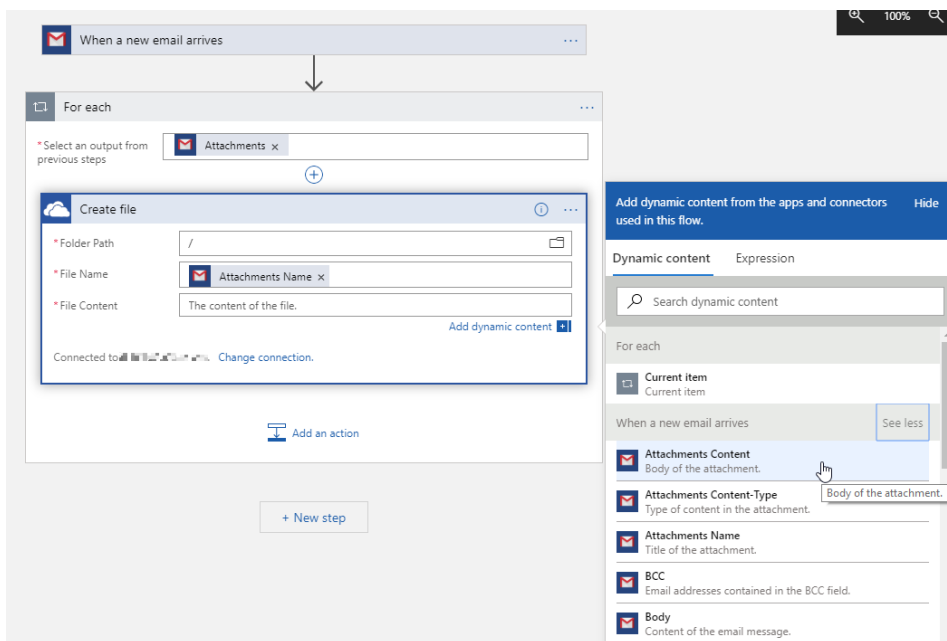
24. Click in the "File Name" box and select **Attachments Name** from the "Add Dynamic Content" pane that opens.



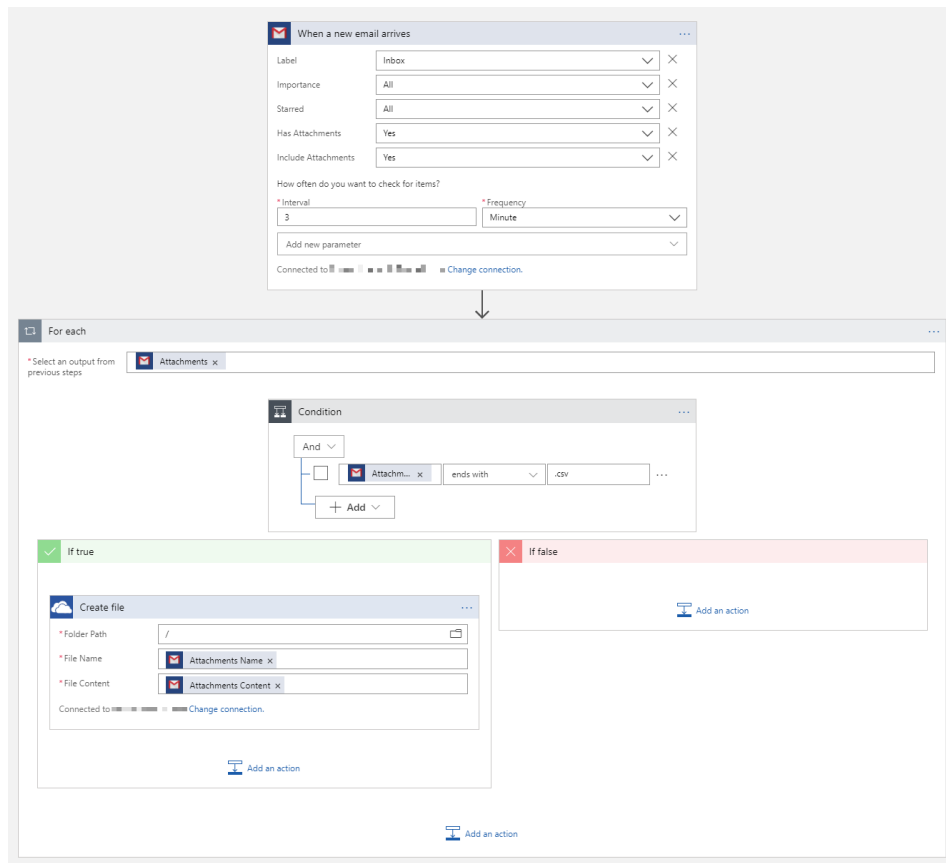
25. Click in the "File Content" box, then click the "See More" button in the "Add Dynamic Content..." pane that opens.



26. Select **Attachments Content**.



27. Your Logic App should look a bit like the screencap below



28. Click the **Save** icon in the upper left of the **Logic Apps Designer** to save your Logic App.

Testing the Logic App

In order to test the functionality of the Logic App you created in the previous steps:

1. Send an email containing a CSV attachment to the email account you configured your Logic App to use.
2. Watch the OneDrive account that you attached to the Logic App for the CSV file to appear. It should appear within the time interval that you configured the Logic App to check for new content.

If you have successfully tested your configuration using the steps above, then:

- Issuetrak's Scheduled Reports can now be delivered to an email account regularly monitored by Microsoft OneDrive
- All CSV attachments that arrive via the configured email account are copied to OneDrive
- Your OneDrive account is ready to be linked with Power BI

Integration with Power BI

Now that you've established the foundation necessary to pull your Scheduled Reports into OneDrive, you just need to sign into PowerBI and link it to your OneDrive as a data source. Microsoft provides the necessary documentation for you to import your OneDrive-based reports into Power BI as datasets that can then be manipulated as you see fit, and you can find those steps in the links below:

- [Connect to files stored in OneDrive for your Power BI app workspace](#)
 - [Get data from Comma Separated Value \(.CSV\) files](#)
-

About the Surveys Module

Web Surveys is an add-on to Issuetrak that allows you to construct Web surveys, deploy them, and then analyze the results.

Activating Surveys

Activating the Surveys add-on is easy:

1. Sign into Issuetrak with a Sys Admin account.
2. Click the gear icon in the top right corner of Issuetrak.
3. In the Settings lightbox that appears, click **Surveys** under the *Tools* menu.
4. On the page that appears, check the box next to **Activate Web Surveys Module**.
5. Click **Update**.

The next time you go to the Settings lightbox and click on **Surveys**, you will be taken to the Surveys area of the product.



The surveys add-on is integrated with Issuetrak in a variety of ways. When creating a survey, the Administrator decides whether users can respond anonymously, or if a login will be required.

Once a survey has been created, a link to the survey can either be provided automatically based on issue closure, sent manually, or included as a link on a web page.

Surveys do not need to only be a process to monitor Issuetrak issues, surveys can also be used as a method to send questionnaires or messages for specific purposes while at the same time being able to collect the responses and report upon them from within Issuetrak, without them being associated with anything else in the Issuetrak product.

The overall creation and usage of surveys follow several distinct phases each of which is described in the following table and their associated articles.

Phase	Description
Planning & Design	The look and feel of surveys are created using over 20 optional field types, such as multiple-choice, open-ended responses, and matrices.
Deployment	Determine how a survey is to be provided to a user, is it on issue closure, a web link, or a pop-up?

Reporting	Create filters or reports to help organize the responses received, either through the Surveys module or Report Writer.
Closing	Once a survey is complete it can be closed, deleted, or reset.

Only system administrators and users with the “Can access and maintain Surveys Module functions” user attribute will be able to view and access the Surveys menu option from the Home Menu.

**SPEAK WITH A PRODUCT
EXPERT**

Survey Reporting

Once a survey has a completed response, there may be a need to filter the responses by different criteria or the need to export data to be organized into a different format, such as charts or graphs, to allow for reporting.

There are 2 methods to report on data from surveys from within the Surveys module.

- Use [Survey Filters](#) to create live reports inside of the Surveys module to review surveys.
- Use [Export Survey Data](#) to export a comma-delimited file (CSV) file with the selected data.

A report can also be built using our [Report Writer](#), and once saved, can be run as desired or set up as a [Scheduled Report](#).

Survey Filter

Report filters provide the ability to limit the set of responses in the reports based on custom filter criteria.

For example, if a survey contains a question asking users if they have a driver's license, a report filter could be created to only display the responses where the user answered "Yes" to this question.

You can use one of two types of report filters: *Issuetrak type filters* or *managed filters*. Issuetrak suggests you use only one of the above filter types at a time.

- **Issuetrak filters** allow you to filter on characteristics of the issue that is related to the survey response submitted, such as *priority*, *issue type*, or *department*.
- There are two types of **managed filters**: Date and Question.
 - [Date filters](#) limit the responses to only the dates within the specified range. Question filters limit the responses based on answers to questions in the survey.
 - [Question filters](#) vary depending on the type of question selected. Answers can be set to be equal to a response, contain a response, or, in the case of number and date questions, be greater than or less than a certain value.

One or more managed filters may be applied to a survey. All of the filters are combined using **AND** logic, meaning that all filters must evaluate to "True" in order for a response to be included in the results.

If a report has filters, the filters are applied to the overview report, the individual report, the text report, and the data export functionality.

When working with a report with many questions, you may want to run multiple reports with various combinations of filters. Rather than deleting filters, you can set any filter to active or inactive on the page that displays the main list of report filters.

Export Survey Data

The *Export Data* page enables a user to export the responses to a survey. The data is exported as a comma-delimited file (CSV), which can be opened with Excel.

There are three formats for exporting the data format.

Format	Description	Notes
User Responses	Exports one row of data, per entire response, with each of the questions displayed as a column.	<ul style="list-style-type: none"> The minimum user data displayed for each row is the username.
Individual Responses	Exports each individual response on its own row.	<ul style="list-style-type: none"> If a user selected more than one response for a multi-select question, each individual response appears on its own row. The minimum data displayed for each response is the text of the question, the text of the response, and the ID of the response.
SPSS Format	Exports each response as a row, with one column per possible answer to each question.	

In addition, the *Export Data* page contains a series of optional fields, each preceded by a checkbox. Any field that is selected before exporting the data is included as a column of data in the CSV file.

The additional data fields that can be exported include both response and user data.

The optional <u>response</u> fields are:	The optional <u>user</u> fields are:
<input type="checkbox"/> Username	<input type="checkbox"/> First Name
<input type="checkbox"/> IP address	<input type="checkbox"/> Last Name
<input type="checkbox"/> Date started	<input type="checkbox"/> Email Address
<input type="checkbox"/> Time started	<input type="checkbox"/> Company

● Date completed	
● Time completed	

About Webforms

Webforms are one of many methods of submitting issues with Issuetrak. This method is based on a form being created in a customer-facing application (normally a web site) that interacts with Issuetrak through an [Application Programming Interface \(API\)](#) or by creating an email that is sent to a designated mailbox. There, our [Incoming Email](#) feature interprets the information in the email and creates an issue. Below are some important Best Practices for you to consider when using Webforms.

Knowing how your webform creates issues

Your Issuetrak site and your webform are separate entities. As a best practice, it's important for you to know how these entities are connected. In other words, it's important for you to know how your webform creates issues in your Issuetrak site.

How an Email-Enabled Webform Works

Email-Enabled webforms create and send an email message when the user fills out the webform. Your Issuetrak site then uses the [Incoming Email](#) feature (IEM) to create issues based on those email messages. In this scenario, there's no direct connection between the webform and your Issuetrak site. All your webform does is create emails and send them to a mailbox. All your Issuetrak site does is check that mailbox and create issues.

How an API-Enabled Webform Works

An API-Enabled webform works a little differently. When a user fills out an API-Enabled webform the form connects to your Issuetrak site's [API](#) to create issues in your Issuetrak site. With an API-Enabled Webform, there is a direct connection between your webform and your Issuetrak site. Because of this connection, issues are created instantly on your Issuetrak site. An API-Enabled webform can be coded to display the issue number that's created in your Issuetrak site.

Which type of Webform do I have?

Your webform is Email-Enabled if:

- The **Submission Method** field shows "Incoming Email" or "Incoming Email with Issue Template" for issues created from your webform.
 - Issues created by your webform all say "Submitted by direct email" in the description.
 - You created your webform using a service like *Formidable*, *Jotform*, or *Cognito* forms.
-

Your webform is API-Enabled if:

- The **Submission Method** field shows “API” for issues created by your webform.
 - You purchased your webform from Issuetrak.
 - Your webform is hosted in the Issuetrak domain (`issuetrak.com`).
 - Issues are created instantly on your Issuetrak site.
 - Your webform displays the actual issue number for the issue that’s created.
-

Best practices

For both Email-Enabled and API-Enabled webforms:

Information that’s added, changed, or deleted in your Issuetrak site will not be automatically updated on your webform. Your webform will need to be modified separately.

For Email-Enabled Webforms:

There are several fields that if modified can potentially disrupt your webform and prevent it from creating issues. This applies especially if the data from these fields is used within your webform or your Incoming Email settings.

These fields include but are not limited to:

- Issue types/subtypes
 - Issue Templates
 - User-Defined Fields
 - Issue Forms
 - Incoming Email Tokens
 - Incoming Email mailbox information such as a password or default Issue type
-

For API-Enabled Webforms:

There are several fields that, if modified, can potentially disrupt your web form and prevent it from creating issues. This applies especially if the data from these fields is used within your webform.

The fields include but are not limited to:

- Issue types/subtypes
 - User-Defined Fields
 - Issue Forms
 - Locations
 - Any other fields that receive data from your API-Enabled Webform
-

Asking Issuetrak for modifications

Issuetrak's **Professional Services Team** can make changes to webforms that they have provided. Modifications will not be covered by the original Scope of Work and will need to be covered under the second Scope of Work with additional charges incurred. Contact your **Account Manager** for specific information related to your form. If your team created the web form and needs assistance, then our Support, Data Services, and Professional Services teams can work with them to provide information and guidance.

Support for technical issues

If something goes wrong with your webform or your Issuetrak site, contact the **Support team** directly at 757-213-1351 or by email at support@issuetrak.com. They will work with you to troubleshoot and resolve any issues.

Standard Issuetrak Webform

Our standard Issuetrak webform is a simple, 8 field webform that always maps to the same 8 fields in Issuetrak. This basic webform option is perfect for organizations looking for a webform with straightforward capabilities, or for a budget-friendly option. We can get these forms to you quickly with just a few details from your team, rather than the much longer process of developing a more customized form.

With the standard webform, we allow organizations to customize a **small number of specific aspects** detailed below. If you need your webform to do more than this standard functionality, please reach out to us regarding a more customized webform for your company's needs.

Benefits of a Standard Webform

- Quick deployment
- Low cost
- Fewer details required
- Straightforward; fewer fields, less clutter
- Easy to implement

Required Fields in a Webform

[Here is an example of a standard Issuetrak webform.](#) The standard form is a copy of this site in form and function. **This includes creating users.** We are able to add a logo in place of the Issuetrak logo and change labels and form colors for no additional cost. It's also important to note that because of the stripped-down nature of the webform, all 8 of the below fields **will be required.**

Field Number	Field on Form	Field in Issuetrak
1	First Name	Submitter's First Name
2	Last Name	Submitter's Last Name
3	Email Address	Submitter's User ID and Email Address
4	Phone Number	Submitter's Phone Number
5	Type of Problem (Issue Types)	Issue Type (Customer would need to provide a list)
6	Location	Issue Location
7	Subject	Issue Subject

Field Number	Field on Form	Field in Issuetrak
8	Description	Issue Description

Default Fields for the Customer to Identify

- Issue Organization
 - User Organization
 - Priority
 - Substatus
 - Issue Assignee (or Unassigned)
-

Other Items the Customer Would Need to Provide

- List of issue types customer wants to see displayed on the webform
 - Whether or not they want to use location on the webform, and which locations to include
 - List of locations if they are using location
 - Any custom webform field names
 - Any custom background or font color information
 - Custom logo
 - The customer name portion of the URL for the form (premise customers only)
-

Allowable Customizations

These are the customizations we can provide with a standard webform:

- Color, including page background, card background, and text color
 - Webform field labels
 - Disable/enable the locations field
 - Logo
 - Any of the 8 standard default fields listed above
-

What is NOT Included in the Standard Webform?

The following fields, features, and customizations are not included in our standard webform offering. However, they are included in the more detailed custom forms our team can develop for your business.

- User Defined Fields
 - Field mappings and field types beyond the standard 8 listed above
 - Changing the field order
 - All hardcoded logic, including assignments, substatus, subject, and descriptions
 - Marking any fields “not required” (all 8 fields are required on the standard webform)
-

Webforms Requirements

Issuetrak Webforms Requirements

release date: 5.30.2019

Issuetrak's Webforms integration requires several conditions to be present, but there are differences between the deployments for On-Premises and Cloud customers. Below we will list the requirements for each customer group.

On-Premises

If you are an On-Premises customer, you may need to make changes to your server environment in order to support integration with Issuetrak Webforms. You must:

- Understand and accept the [limitations](#) of Issuetrak Webforms
- Have a public-facing **production** Issuetrak site...
 - *Running the latest Issuetrak release
 - *With the API installed
 - Secured with TLS
- For a limited period, have a public-facing **test** Issuetrak site (which can be shut down after Webforms have been finalized)...
 - *Running the latest Issuetrak release
 - *With the API installed
 - Secured with TLS
- *Provide the API key for the production and test Issuetrak sites
- Allow Issuetrak to capture various site configuration data via the execution of a SQL script in order to build the Webform content
- For a limited period, provide Issuetrak with a user account that will allow configuration changes to work with Webforms
- Add our (Issuetrak's) company IP ranges to the Swagger bypass (Ranges to be provided)
- Provide the application URLs for the Production and Test sites

** Indicates that Issuetrak Support can assist with this.*

Cloud

If you are an Issuetrak Cloud customer, then Issuetrak will need your permission to make adjustments to your site to support Webforms. You must:

- Understand and accept the [limitations](#) of Issuetrak Webforms
- Allow Issuetrak to create and use a test clone of your site for a limited period
- Allow Issuetrak to deploy the API on both the production and test Issuetrak sites

- For a limited period, provide Issuetrak with a user account that will allow configuration changes to work with Webforms
 - Provide Bypass IPs to access the Swagger UI
-

Webform Limitations

Issuetrak Webforms are an excellent tool for submitting issues. They eliminate the need to have a user account for every submitter, simplify the issue submission process, and require no training on the part of the end-user. As with all tools, its utility comes with limitations. This is not a complete list, but it is a compilation of the more prominent limitations.

Field Configuration

The label for each field on the Webform is set when the form is configured. Each field is used to populate an issue in the Issuetrak site. If the label for the field is changed in either location, then the label will **not** be changed in the other location.

Additionally:

- There are many table-driven fields in Issuetrak that Webforms can be configured to utilize:
 - Table-driven User-Defined Fields (UDFs)
 - Multiple Organizations
 - Issue Types and Subtypes
 - Priority
 - Location
 - Department
 - Substatus
 - Severity
 - Next Action
 - Assigned To
- If values for any of the above fields are removed, and a Webform is configured to use the removed value, then this will cause problems with submitting issues via Webforms.

*For example, if a Webform is configured to submit issues with a **Substatus** of "Pending" and then the "Pending" substatus is subsequently removed from Issuetrak, then this will cause problems with submitting issues via Webforms.*

Issue Submission

When it comes to submitting issues, Webforms cannot...

- Update existing issues
- Add notes to existing issues
- Submit an issue with notes (this does not include the subject or description fields)
- Create more than one issue at a time

Attachments

Issuetrak Webforms are not capable of attaching a file to an issue.

User Creation

- Users are created in a default organization that is pre-set when the Webform is configured per your requirements during the Webforms build process.
 - Users have a default Time Zone that is determined when the Webform is configured. The user's Time Zone can be changed in the application later.
 - Users created by the Webforms will not have any permissions by any means (including via template or group). However:
 - Permissions can be added to these user accounts after creation.
 - Users will not be able to log into the site unless they are manually given permission to do so.
 - Users will receive email notifications if they are created with an email address.;
-

Tasks

Webforms cannot create tasks. Tasks will need to be created after the issue has been submitted.

Billing Module

If you utilize the Billing Module, please understand that a Webform cannot add Billing line items to an issue. These should be added manually after an issue has been created.

Hosting

- Webforms are available to On-Premises customers.
- By default, the embedding of Webforms in another site is not permitted. However, upon request Issuetrak can permit Webforms to be embedded in iframes.
- Only Issuetrak can host the Webforms for your site.

Baby Steps: Creating a Simple Zapier Integration

This article will describe how you can create some simple [zaps](#) using Issuetrak and [Zapier](#).

Zapier is pretty easy to use, and we've tried to match that quality where API v2 is concerned so that you can get started without having any programming knowledge. However, there are some things you should know and some pre-work that you should take care of before we proceed. Just so that it's fresh in your mind, go ahead and do the following:

- Review [API v2 Overview](#)
- Review [Using Zapier with Issuetrak](#)
- [Create](#) a Zapier account
- **Optional but recommended:** Stand up an Issuetrak Test instance so that you can experiment in a non-production site. Issuetrak Support can [help](#) you with this, or you can [read](#) about how to deploy one on your own.
- [Generate](#) an API v2 token and keep its value safe but accessible for later

Once you've taken care of the pre-work above, you should be ready to proceed.

SMS Notifications

This first scenario allows you to receive SMS notifications every time a new Organization is created in Issuetrak. These steps might look pretty complex, but it's easy to get through them in just a couple of minutes once you have the information that you need.

1. Sign into Zapier.
2. Along the lefthand side, choose **Create Zap**.
3. You'll be prompted to choose an App and Event. Enter "Issuetrak" into the search field, and then select **Issuetrak** when it appears.
4. In the "Event" field, choose **New Organization**.
5. Click **Continue**.
6. You'll be prompted to choose an account or create a new one. Click **Connect a new account**.
 - a. Enter the API v2 token that you generated earlier.
 - b. Enter the application URL for your Issuetrak site.
 - c. In the "Connection Label" field, give this site a friendly name so you can easily identify it later.
 - d. Click **Yes, Continue**.
 - e. You will now be prompted with "Test your trigger". Click **Test trigger**. If Zapier has communicated successfully with your site, then some information about an organization in your site should be displayed. Click **Continue**.
7. You will now be prompted to choose an Action/App event to execute. Find and select **SMS by Zapier**.
8. Set the Event field to "Send SMS".
9. Click **Continue**.
10. You should now see "Connect your SMS by Zapier account" displayed. Go ahead and

- click on "Connect a new account".
- a. Fill in the information about the number you want Zapier to send SMS messages to, then click "Send PIN".
 - b. Fill the PIN you received, then click **Yes, Continue**.
11. You should see a list of different numbers available from which you can choose to receive the SMS messages from. Choose a number and then click "Next".
 12. You should now be prompted with "Set up action". We're going to map fields from Issuetrak to the SMS message function. In the Message field, type any message you would like to receive via SMS from Zapier, but leave an opening in your message for information from your Issuetrak site to be presented. For example, you can set the message to "New Organization has been created in Issuetrak:". Click just after the text at the end of the message, and you will be prompted to select what information from new organizations should be populated into the SMS when they are created. By default you will see only 4 fields that you can include, as well as "Show All Options", which will display every available Organization field. In this example, simply select "Name" and then click **Continue**.
 13. Click **Test & continue**.
 14. You should now receive an example SMS on your phone corresponding with the message template you just configured in Zapier. Once received, click **Continue**.
 15. Click **Publish Zap**, then click **Publish & Turn On**.

You will now receive a text message every time a new organization is created in your Issuetrak site. You can choose to go back and edit the SMS template to include as much information about the new organization as you would like.

Slack Announcements

This zap will announce the creation of every new user on a Slack server and channel that you have authority over.

1. Sign into Zapier.
2. Along the lefthand side, choose **Create Zap**.
3. You'll be prompted to choose an App and Event. Enter "Issuetrak" into the search field, and then select **Issuetrak** when it appears.
4. In the "Event" field, choose **New User**.
5. Click **Continue**.
6. You'll be prompted to choose an account or create a new one. Click **Connect a new account** (or choose an existing Issuetrak site if you've previously configured this, then skip to step 7).
 - a. Enter the API v2 token that you generated earlier.
 - b. Enter the application URL for your Issuetrak site.
 - c. In the "Connection Label" field, give this site a friendly name so you can easily identify it later.
 - d. Click **Yes, Continue**.
 - e. You will now be prompted with "Test your trigger". Click **Test trigger**. If Zapier has communicated successfully with your site, then some information about an organization in your site should be displayed. Click **Continue**.
7. You will now be prompted to choose an Action/App event to execute. Find and select **Slack**.

8. Set the Event field to "Send Channel Message".
9. When prompted, sign into the Slack server that you have authority and permission to integrate Issuetrak with, then click **Continue**.
10. Select the channel to receive new user announcements.
11. In the "Message Text" field, we will create a template for the announcements to follow. For this example:
 - a. Enter the following text:

We've got a new user in Issuetrak!

UserID:

Email:

Created By:

- b. Click the area immediately to the right of **UserID**, then **Show all options**. Select **User id** from the list of available fields.
 - c. Click the area immediately to the right of **Email**, and then choose **Email** from the list of available fields.
 - d. Click the area immediately to the right of **Created By**, then **Show all options**. Select **Created by user iid**.
 - e. Set any additional options you want for this announcement, then click **Continue**.
12. Click **Test & continue**.
13. You should see a Slack announcement corresponding with the template you just created. Once received, click **Continue**.
14. Click **Publish Zap**, then click **Publish & Turn On**.

You will now receive announcements in the configured Slack channel about new user creations.

Email Creation of New Users

This zap will go in the other direction than the previous two: Instead of using Issuetrak to trigger an event, we will use another app to trigger something happening in Issuetrak. We're going to make a zap that will create new users based on information contained in an incoming email. This zap's configuration is a little more complex (but no more difficult) than the previous two.

1. Sign into Zapier.
2. Along the lefthand side, choose **Create Zap**.
3. You'll be prompted to choose an App and Event. Enter "email" into the search field, and then select **Email by Zapier** when it appears.
4. In the "Event" field, choose **New Inbound Email**.
5. Click **Continue**.
6. You will be prompted with a field that will determine the email address that will receive email messages to create users. Enter a short but descriptive word or phrase into the field (such as "newituser"), and take note of the value in the field as a whole (for example, newituser.8ggr8a@zapiermail.com).
7. Click **Continue**.
8. Send an email to the email address determined in step 6, then click **Test trigger**.
9. If Zapier successfully received an email at that recipient address, you can now click

Continue.

10. You will now be prompted to choose an Action/App event to execute. Find and select **Issuetrak**.
 11. Set the event to **Create User**.
 12. Click **Continue**.
 13. You'll be prompted to choose an account or create a new one. Click **Connect a new account** (or choose an existing Issuetrak site if you've previously configured this, then skip to step 14).
 - a. Enter the API v2 token that you generated earlier.
 - b. Enter the application URL for your Issuetrak site.
 - c. In the "Connection Label" field, give this site a friendly name so you can easily identify it later.
 - d. Click **Yes, Continue**.
 - e. You will now be prompted with "Test your trigger". Click **Test trigger**. If Zapier has communicated successfully with your site, then some information about a user account in your site should be displayed. Click **Continue**.
 14. We will now configure the manner in which user accounts will be created in Issuetrak when this zap is triggered. For this example, we will take three values from the incoming email and populate them into different fields for the new user account, then select additional (non-email) values based on our preferences.
 - a. For "First Name", find and select **From Name**.
 - b. For "Last Name", find and select **Subject**.
 - c. For "Display Name", find and select **From Name** and **Subject** (so that both values are side-by-side with a space between them).
 - d. Set the "Time Zone" field according to preference.
 - e. Set the "Primary Organization" according to preference.
 - f. Set the "Redirect After Issue Submit" according to preference.
 - g. Set the "Home Page" according to preference.
 - h. Set any other non-required fields according to preference.
 - i. Click **Continue**.
 15. Click **Test & Continue**.
 16. You should see a new user get created in your Issuetrak site.
 17. Click **Publish Zap** and then try sending emails from different accounts to the Zapier service account for this zap, then monitor for new user creation.
-

Using Zapier with Issuetrak

This article describes what is needed to get your instance of Issuetrak working with Zapier.

Ensure that you are on the Correct Version of Issuetrak

If your Issuetrak instance is hosted in the cloud by Issuetrak, then you do not need to worry about your Issuetrak version. If you host your own instance, then you will need to make sure that you are on the most recent version of Issuetrak.

The minimum required version is 14.9, but it is highly recommended that you be on the most recent version of Issuetrak. As we develop more endpoints for API v2, we will be adding more Zapier actions and triggers. The version of API v2 your site has will be tied to the version of Issuetrak you are on and if we add a Zapier action in the future, you may not be able to make use of it if you are not on the most recent version. To find the most recent version of Issuetrak, please refer to [this](#) article in our Help Center.

To check what version of Issuetrak you are on, log into your Issuetrak site and click on the dropdown in the top right corner. It should have your display name as the text. You will see your current version at the bottom of the dropdown. Note that this is only valid for relatively recent versions of Issuetrak.

If you are on an older version of Issuetrak then you will not be able to make use of Issuetrak through the Zapier platform. If you do not see the dropdown in the top right of your Issuetrak site, then you are on a version below 14 and will need to upgrade in order to make use of Zapier.

Ensure that you have API v2 Installed and Enabled

In order for Zapier to function, you must ensure that API v2 is both installed and enabled. If your site is hosted in the cloud by Issuetrak, then you do not need to worry about installing API v2. If you host your own instance of Issuetrak and you need help installing API v2, please refer to [this](#) article in our Help Center.

Once you have API v2 installed, you need to ensure that it is enabled. In order to do this:

1. Log into your Issuetrak site as a system administrator.
 2. Click on the **gear** in the top right corner.
 3. Click on **Features** beneath *System*.
 4. Ensure that the **Enable API v2** checkbox is checked. If it is not, then you will need to check the box and then click **Update**.
-

Create an API Token

In order to authenticate against Issuetrak using Zapier, you will need an API token. Specifically, you will need a token that represents an agent account with one of the permissions below:

- Sys Admin
- Can access and maintain Administration functions

To create an API token, perform the following.

1. Log into your Issuetrak site as either a system administrator or a user with both "Can access and maintain Administration functions" and "Can authenticate with the API v2" permissions.
2. Click on the **gear** icon in the top right corner.
3. Within the Settings lightbox, click on **API v2**.
4. Click **Tokens** on the right context menu.
5. Click on the **Add New** button.
6. Complete the "Create New Token" form and then click **Create Token**.
 - When creating your token, it is recommended that you give a name to the token that is reflective of how the token will be used. If you plan to use the same token for all of your Zaps, then you should give it a name like "Zapier". If you intend to use different tokens for different Zaps, then the name should reflect those use cases.
 - The "Expiration Date" field is optional but strongly encouraged. The expiration date provides a way to enforce "key rotation" policies. If you provide an expiration date, then the generated token will stop working after the date specified. If you do not provide an expiration date, then that token will work until it is manually revoked.
 - If you are signed in as a system administrator, you will also see the "User" field. If you do see the User field, then you have two options:
 - You can leave it blank, which means that actions performed by Zapier will be performed as the user you are currently signed in as.
 - Alternatively, you can select another system administrator or a user with both of the aforementioned permissions, which will result in Zapier performing actions as the user you've selected.
7. Copy the **New Token** value. *This is the only time you will see the value for this token.*

Filling Out the Authentication Screen on Zapier

The *Authentication* screen will contain three fields as shown below:

Allow Zapier to access your Issuetrak Account?

Api Token (required)
Your Issuetrak API token. The token must be for a system administrator.

.....

Base URL (required)
The application URL of your Issuetrak site.

https://example.issuetrak.com/

Connection Label (required)
What would you like to label this connection?

My Integration

Yes, Continue Cancel

1. The **API Token** field should be the value presented after creating the token in Issuetrak using the steps above.
2. The **Base URL** should be the same value as the Application URL from your Issuetrak site. You can retrieve this by performing the following steps:
 - a. Click on the **gear** icon in the top right corner.
 - b. Click on **Defaults** under *System*.
 - c. Copy the value in the "Application URL" field.
3. The **Connection Label** can be anything you want, but it is recommended that you enter the text that matches the "Token Name" of the token that you generated. This will allow you to identify the Zapier connection you need to update if you choose to revoke the token or if it expires.

Update Actions in Zapier

When updating things in Issuetrak via Zapier, there is an implicit merge process that happens behind the scenes.

For example, let's say that we add a step to a zap to update a user. When defining this action, the only required field is the IID of the user to update, even though there are many required fields on users. This works because we do not overwrite fields that were not defined in the Zapier step. If we were to set up an update user action step in Zapier with only the IID and the email address, then *every user targeted by that action* would have their email address updated, but all other fields would remain intact.

Adding and Updating Group Permissions Through Zapier

Handling permissions through Zapier is made to be much more stable, but may result in confusing behavior. The main thing you should know is that we automatically handle conflicting permissions and pre-requisite permissions.

If you were to make an API call to Issuetrak in order to create a Group, and you tried to give it the permissions "Can be assigned Issues", but you did not grant "Can view Assigned To information in Issues and email notifications", then this would return a validation error. Through Zapier, we handle this conflict by automatically granting permission to view assignment information.

Another thing that is handled by our Zapier integrations is conflicting permissions. Let's say we wanted to create a group, but we gave it both "Allowed Read Only access to Administration information" and "Can access and maintain Administration functions". Through the API this would cause a 400 validation error, but in Zapier we do some extra error prevention by removing one of the conflicting permissions with a bias towards the higher of the two. For instance, if we created a group with the permission "Can access and maintain Asset Management Module functions" and "Allowed Read Only access to Asset Management information", we would grant "Can access and maintain Asset Management Module functions" because that permission provides a greater level of access.

About Google Application Integration

Issuetrak is capable of processing incoming and outgoing email via Google's secure API authentication method. It is necessary to perform several steps in your Google account to enable this functionality and gather the required information. This article will show you how to perform those steps, as well as where to enter the resulting information in Issuetrak.

Google Cloud Platform Steps

1. [Sign](#) into Google's Cloud Platform using the Google account you want Issuetrak to process incoming and/or outgoing email from.
 2. Search for and select the **Gmail API**.
 3. **Enable** the Gmail API.
 4. Search for and select **Create a Project**.
 5. Set a name for the new project. It's a good idea to make this descriptive, so that you (or another administrator) can determine what this project is being used for. In this example, we'll call it "Issuetrak IEM Test".
 6. Click on the hamburger icon in the top left area, then navigate to **APIs & Services > OAuth consent screen**.
 7. Select **External**, then click on **CREATE**.
 8. Fill in the required fields. You may set the name of the application to the same name as the project for the sake of consistency.
 9. Click on **SAVE AND CONTINUE**.
 10. You'll be prompted to add scopes. This isn't necessary. Click on **SAVE AND CONTINUE**.
 11. Add your Gmail address as a test user where prompted, then click on **SAVE AND CONTINUE**.
 12. Click **Credentials** on the lefthand menu.
 13. Click **+ CREATE CREDENTIALS** at the top of the site, then choose "OAuth client ID".
 14. Choose "Web Application" from the dropdown.
 15. Enter a name for the web application. In this example, we will call it "Issuetrak 001".
 16. Under "Authorized Redirect URIs", click **ADD URI** and add the following URL (adjusted with your own site URL): `https://your_site_url/core/OAuthProvider/RedirectUrl`
 17. Click **CREATE**.
 18. You will be provided with your Client ID and Client Secret. *You will need this information to configure Issuetrak in the next section.* You can choose to copy/paste these values into your own credential management framework, or download the JSON to a safe location for reference later.
-

Adding Google API Credentials to Issuetrak

We must now configure Issuetrak so that it knows how to communicate with your Gmail account. This section assumes that you have the information we obtained in the steps above.

1. Sign into Issuetrak with a [Sys Admin](#) account.
2. Navigate to the settings lightbox via the gear icon in the upper right, then click on

Google Applications under "Integrations".

3. Click on **Add New**, then enter a Name that you'd like to associate with the Gmail account, as well as the required Client ID and Client Secret gathered in the previous section.
4. Click **Save**.
5. Click **Verify Connection**.
6. You'll be prompted to sign into the Google account you're attempting to access the API with. Go ahead and do so.
7. Accept the prompt allowing your Issuetrak site to access your Google account.

Once this is complete, you can move onto configuring IEM and/or Outgoing Email.

Configuring Incoming Email to Use Google OAuth

Please see our [article](#) on configuring IEM mailboxes for the relevant steps.

Configuring Outgoing Email to use Google OAuth

Please see our [article](#) on configuring outgoing email for the relevant steps.

Security in Issuetrak

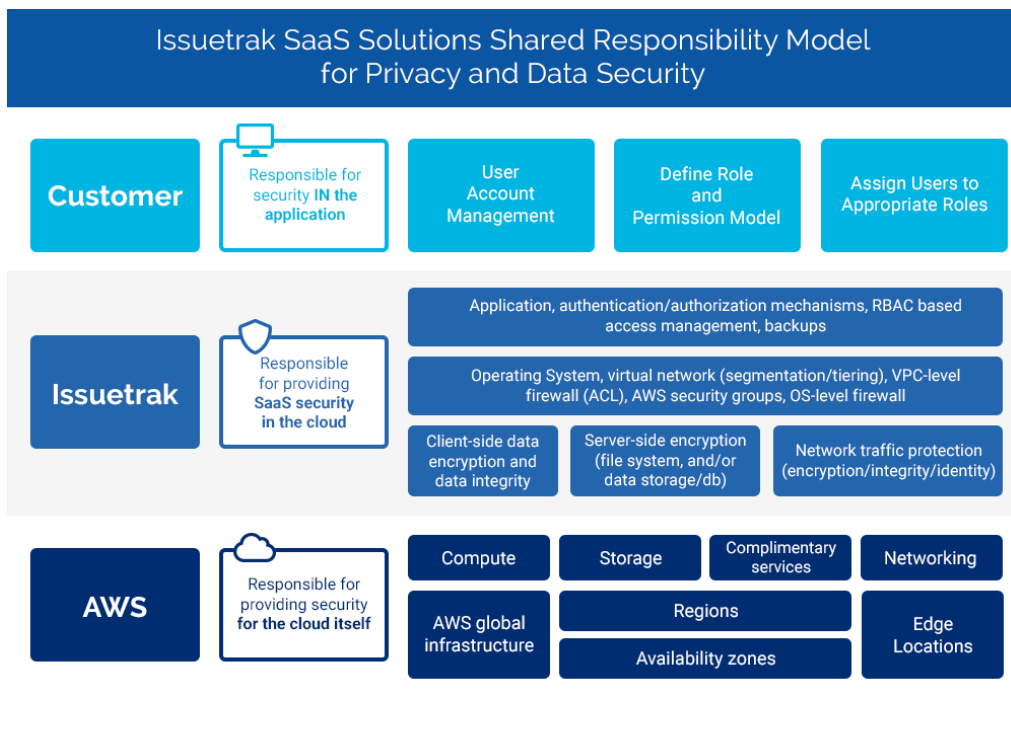
In any given application, there are multiple levels, methods, and implementations of security. Issuetrak is no different. From web traffic to connection strings to user credentials, there are different security mechanisms at work in different areas of the product. This article exists to specify many of Issuetrak's security implementations. Additionally, this page serves to provide more information than what is provided on our [website](#).

Did you actually want to read about the Security page in Issuetrak? Click [here](#) to read about that instead.

Issuetrak Cloud

Before we get into the security measures within the product and within the Issuetrak Cloud, it's a good idea to see the division of security responsibilities.

Below is a chart that shows what **you** are responsible for as the customer and administrator of your site, what **Issuetrak** is responsible for as the custodian of your data, and what **Amazon Web Services (AWS)** is responsible for as the infrastructure provider.



Connection Strings

Connection strings are used by a web server to specify the basic connection and

authentication information to use when connecting to another server. Issuetrak is divided into four entities that handle different aspects of the product and intercommunicate. Each of these entities use different connection strings.

- Classic ASP: Optional DPAPI encryption is supported. You can learn how to use DPAPI encryption in [this article](#).
 - The file is called **Connection-Strings.asp** and is located in the **Connect** folder within Issuetrak's web directory.
 - MVC (Core) Application: Encrypted by default.
 - The file is called **web.config** and is located in the **Core** folder within Issuetrak's web directory.
 - Services: Encrypted by default.
 - The file is called **Issuetrak.Services.Global.xml** and is located in **C:\Program Files (x86)\Issuetrak\Common\Configuration\Services**
 - API Application (Optional): Encrypted by default.
 - The file is called **web.config** and is located in the **API** folder within Issuetrak's web directory.
-

Web Traffic

This section explains how Issuetrak configures sites to behave within Internet Information Services (IIS).

HTTP Module

We've added HttpModuleLoader via Issuetrak.Middleware.HttpModule.dll into the product. This provides the framework for various security remediations.

Request Filtering

These settings can be found in the Request Filtering section of each Issuetrak site in IIS. Some of these will only be displayed by clicking **Edit Feature Settings** along the right-hand side.

- Request strings containing less-than (<) or greater-than (>) signs are denied by default. Such request strings could allow malicious content to be injected into a page.
- GET and POST request verbs are allowed on the Core, Classic, and API sites, while the PUT verb is allowed only on API sites.
- Verbs not explicitly listed as allowed are disallowed.
- The API site, if deployed, is configured to allow [double escaping](#).
- Maximum allowed request content length for the Core site is capped at 52,428,800 bytes.
- Maximum allowed request content length for the API site is 50,000,000 bytes.
- Maximum URL length in bytes is set to **2048** for all Issuetrak sites.

- Maximum query string in bytes is set to **1024** for all Issuetrak sites.

Additionally, here is a list of HTTP request headers that are filtered, along with their maximum request lengths:

- [Content-type](#): 100 bytes
- [Translate](#): 0 bytes
- [If \(all headers starting with If\)](#): 0 bytes
- [Lock-Token](#): 0 bytes
- [Transfer-Encoding](#): 0 bytes

URL Rewrite Rules

The Issuetrak deployment tools leverage the IIS **URL Rewrite** module to set inbound rewrite rules and outbound HTTP response headers. These rules can be disabled as needed. The information below explains what rules are deployed, what they are for, and when they might be deployed in a disabled state. Inbound rules modify the way the server processes incoming requests. Outbound rules modify the information the server would normally send in its outbound traffic. In the case of Issuetrak, the Outbound rules are being used to deploy certain HTTP response headers.

► **URL Rewrite Rule Details:**

HTTP Response Headers

HTTP Response headers are simple name-value pairs containing content processing instructions that are communicated between a web server and browser. In this context, we are referring to response headers sent from IIS to the web browser for the purpose of improving security from the default IIS configuration.

Server response headers are scrubbed of text containing "Issuetrak".

Issuetrak creates a [Permissions-Policy](#) header to deny all browser features not needed by the site. This includes:

- Accelerometer
- Ambient light sensor
- Autoplay
- Camera
- Encrypted media
- Fullscreen
- Geolocation
- Gyroscope
- Magnetometer
- Microphone
- Midi
- Payment
- Picture-in-picture
- USB
- VR

Additional response headers are also implemented:

- A [Referrer-Policy](#) origin header is deployed with the value of `same-origin`.
 - When navigating from an Issuetrak site to another site, information about the referring page is often included when communicating with the web server for the second site. This header controls how much information is provided to the second site.
- An [X-Content-Type-Options](#) header is deployed with the value of `nosniff`.
 - This header forces the browser to interpret and render **only** the information types specified in the site's **Content-Type** header.
- An [X-Permitted-Cross-Domain-Policies](#) header is deployed with the value `none`.
 - This header prevents client software such as Adobe Flash and Acrobat from loading your site content from another domain.
- An [X-XSS-Protection](#) header is deployed with the value `1; mode=block`.
 - Modern web browsers contain optional cross-site scripting protection. This header tells the browser to enable cross-site scripting protection when navigating an Issuetrak site.
- An [Expect-CT](#) header is deployed, with the default IDU/IDM JSON configuration options set to:
 - `ShouldEnforceExpectCt: false`
 - `ExpectCtReportUri: ""`
 - `ExpectCtMaxAge: 0`
- The [Content-Security-Policy](#) header is deployed with the value `object-src` set to **none**.

Sub-Resource Integrity

Issuetrak implements Sub-Resource Integrity, which allows browsers to validate the resources they load from a site against a known value to ensure their authenticity.

Path-Relative Stylesheet Import (PRSSI)

Every stylesheet reference in the product uses absolute URLs instead of relative URLs to prevent a Path-relative stylesheet import (PRSSI) vulnerability.

Secure Cookie Prefix

Sites that communicate over SSL add the `__Secure-` prefix to cookies sent to the browser. This instructs the browser to treat the cookies in a more secure manner. See [this page](#) for information on cookie prefixes.

Same-Site Cookies

We implement Same-Site Cookies, which will provide some protection against Cross-Site Request Forgery (CSRF) attacks and Cross-Site Script Inclusion (XSSI).

Inter-Server Communication

Incoming Email

The Incoming Email feature is capable of using secured SSL/TLS or insecure communication with POP, IMAP, and Exchange servers. Issuetrak communicates with the incoming email server using the exact communication settings specified in [Incoming Email](#). Security here is determined by the settings that were entered by the Administrator when Incoming Email was configured. **Issuetrak recommends using TLS when possible.**

Outgoing Email

The Outgoing Email feature is capable of using secured SSL/TLS or insecure communication via SMTP. Issuetrak communicates with the outgoing email server using the exact communication settings specified in [Email Settings](#). Security here is determined by the settings that were entered by the Administrator when Outgoing Email was configured. **Issuetrak recommends using TLS when possible.**

Active Directory / LDAP

Active Directory integration is capable of using secured SSL/TLS or insecure communication with Microsoft AD servers. **Issuetrak recommends using TLS when possible.**

Web-to-SQL Communication

The Web server communicates with the SQL server using the strongest encryption that both servers have enabled. Issuetrak requires that the Microsoft OLE DB Driver 18 for SQL Server is installed on the Web server, OR that MS OLE DB Driver 19 for SQL Server is installed, so long as your environment is already configured to use it.. The Microsoft OLE DB Driver 18 for SQL Server supports TLS 1.2 communication but does not force it. **Details for configuring the Web and SQL servers to force encrypted communication can be found from Microsoft [here](#).**

Safeguarding User Credentials

User Passwords

Application user account passwords are secured with the NIST-recommended PBKDF-2 function, with an iteration count that exceeds current recommended standards, and that continues to increase automatically as time progresses. For each new password stored, a new, cryptographically random 64-byte salt is generated and supplied to the function along with the plaintext password. The hash used in the function is SHA-512.

Password hashes are retained only as long as the site administrator has configured them, and plaintext passwords are never sent to the database.

Password Resets

As a security safeguard, Issuetrak requires an Administrator to validate their own password prior to performing a password reset for another user account.

If Password Self Service is enabled, and a user has appropriate permissions, they can choose '**Forgot / Reset your password?**' from the login screen, and the user is emailed a dynamically-generated link that expires after a configurable time period. When clicked, the link will take the user to a page in the product that allows the user to set their password. The email is valid for a period that is [globally configurable](#) from 1 to 168 hours.

Profile Change Notifications

This feature will send an email notification to the affected user (if it has a valid email address) when changes are made to their user account. To enable this feature, go to the **Settings** lightbox > select **Outgoing Email** beneath *Email* and check the box for **Enable Notifications** under the *Profile Change Notifications* section.

Auditing

Issue Auditing

If enabled, Issue Auditing allows users to view a change log of the history of subsequently-entered issues by clicking [Issue Change Log](#) in the right context menu while in an issue.

Admin Auditing

If enabled, Admin Auditing makes it possible to view changes made to [many settings](#) of Issuetrak within the Settings Lightbox.

Admin audits can be viewed by those with Administrative privileges by going to the gear icon in the upper right corner of Issuetrak and then choosing **Admin Auditing** beneath *Tools*. The

resulting **Admin Audit Search** page can be used to find specific types of audits, subject to whatever search criteria is entered.

Asset Auditing

If properly licensed and enabled, Asset Auditing makes it possible for users to download and execute the ScanPC/TrakPC application on their machine. ScanPC will [scan and POST audits](#) about the PC to the Issuetrak site.

Logging

Logging Facilities

When Issuetrak generates log files on the Web server, it uses an application called **NLog**. NLog is responsible for monitoring various Issuetrak-specific processes on the Web server for events and writing those events to logs. NLog does not run continuously on a Web server, and is instead called by each process that relies on it for logging. Details on the various logging locations will follow below.

Deployment Tools

Every time a site is upgraded or deployed, the Issuetrak Deployment Tools will write an extensive log concerning the deployment to the Issuetrak distribution folder, located within **Logs**.

Be aware that the logs may contain sensitive information concerning your site and environment. As a best practice, Issuetrak recommends that the logs be removed once you have successfully deployed or upgraded your site.

Active Directory

If logging is [explicitly enabled](#), logs stored for Active Directory can be found within: **{IssuetrakWebFolder}\Core\App_Data\Logs**

AD Federation Services

AD FS exposes logging to the UI when clicking the **Test Connection** button on the *AD FS Identity Provider* page.

API

The API stores its logs in the Issuetrak site's web folder via the following path:

{IssuetrakWebFolder}\api\App_Data\Logs

API v2

API v2 stores its logs in the Issuetrak site's web folder via the following path:

{IssuetrakWebFolder}\api\v2\Logs

Outgoing Email

There are two logs maintained for Outgoing Email: The Product log and the Service log.

The **Product log** is kept for informational purposes and logs the content of every email sent from Issuetrak. You can navigate to it by finding and clicking on the gear icon in the top right, choosing **Outgoing Email** beneath *Email* > then selecting **View Log** within the right context menu.

The **Service log** is generated by the Outgoing Email Service and contains information related to the processing and sending of the emails to the SMTP server, which is useful for troubleshooting purposes. You can find the Service log within the file structure of the Web server in: **C:\Program Files (x86)\Issuetrak\Logs**.

Incoming Email

There are two logs maintained for Incoming Email: The Product log and the Service log.

The **Product log** is kept for informational purposes and logs the content of every email processed by Issuetrak. You can navigate to it by clicking on the **Settings** lightbox(gear icon) in the top right > choosing **Incoming Email** beneath *Email*, then clicking **View Log** in the right context menu.

The **Service log** is generated by the Incoming Email Scheduled Task and contains information related to the Web server's communication with the Incoming Email server(s), as well as receiving and processing the emails into issues. Each log file will be up to 20MB. Once a file reaches 20MB, a new log file is created. Up to 10 log files will be kept. The Service log is stored in each Issuetrak site's Web folder within:

{IssuetrakWebFolder}\Services\IEM\Logs

Scheduled Active Directory Imports

If Active Directory is enabled, and a scheduled task is utilized for automated import of AD users, there are two log files stored on the Web server located as follows:

- **{IssuetrakWebFolder}\IssueTrak_Logs\AD_Import.log** (containing the results of an AD import)
 - **C:\Program Files (x86)\Issuetrak\Logs\{SiteName}\AD_Import.log** (containing task-specific event logging)
-

Scheduled Reports

If Scheduled Reports are used, a log of the Scheduled Report activity and any problems the scheduled task may have run into will appear in a log stored in three different locations:

- Within the Issuetrak user interface, for users that have permission to access Reports: Click on **Reports** in the left menu > **Scheduled Report Logs** in the right context menu. This log displays the particulars of what report was run, who it was sent to, and when it was sent.
 - The Web server's **{IssuetrakWebFolder}\Reports\RptSch_Process.log** (containing the results of the scheduled reports)
 - The Web server's **C:\Program Files (x86)\Issuetrak\Logs\{SiteName}\RptSch_Process.log** (containing task-specific event logging)
-

Conclusion

While this isn't necessarily an exhaustive list, the information provided here is what we consider to be the most important and noteworthy security features and implementations that we have in the product. Issuetrak conducts periodic application vulnerability scanning and auditing to improve the product. Some [security features](#) are optional and are left to the discretion of the management for each instance of Issuetrak.

If you are a security researcher and have discovered a security vulnerability, we appreciate your help in disclosing it to us in a responsible manner. We ask that you keep your findings confidential and do not share or publicize any unresolved vulnerabilities with/to third parties.

If you submit a vulnerability report, the Issuetrak security team and associated development teams will use reasonable efforts to:

- Respond in a timely manner, acknowledging receipt of your vulnerability report
- Investigate the reported issue and provide feedback
- Seek your guidance in identifying or replicating the reported issue
- Let you know when the vulnerability you've identified has been fixed

Please contact us at security@issuetrak.com with any relevant information so we can investigate security issues immediately.

Business Associate Agreement Addendum

[Download](#)

This Business Associate Agreement (“BAA”) applies only to the extent that (1) Client is a “covered entity” as that term is defined in the HIPAA Rules; (2) Issuetrak is a “business associate” as that term is defined in the HIPAA Rules; (3) Client is entering PHI into the Service; and (4) Issuetrak is creating, receiving, transmitting or maintaining ePHI on behalf of Client. If all of the foregoing conditions are met, Client and Issuetrak enter into this Business Associate Agreement pursuant to the Health Insurance Portability and Accountability Act of 1996, as amended (“HIPAA”), to address the HIPAA requirements with respect to “business associates,” as defined under the privacy, security, breach notification and enforcement rules at 45 C.F.R. Part 160 and Part 164 (“HIPAA Rules”). A reference in this BAA to a section in the HIPAA Rules means the section as in effect or as amended. This BAA is effective as of the date that Covered Entity indicates its acceptance of this BAA (the “Effective Date”).

1. Definitions.

(a) This BAA is intended to ensure that Business Associate will establish and implement appropriate safeguards for the Protected Health Information (“PHI”) (as defined under the HIPAA Rules) that Business Associate may receive, create, maintain, use or disclose in connection with the functions, activities and services that Business Associate performs for Covered Entity. The functions, activities and services that Business Associate performs for Covered Entity are defined in Cloud Based Application Agreement (the “Underlying Agreement”).

(b) Pursuant to changes required under the Health Information Technology for Economic and Clinical Health Act of 2009 (the “HITECH Act”) and under the American Recovery and Reinvestment Act of 2009 (“ARRA”), this BAA also reflects federal breach notification requirements imposed on Business Associate when “Unsecured PHI” (as defined under the HIPAA Rules) is acquired by an unauthorized party and the expanded privacy and security provisions imposed on business associates.

(c) Unless the context clearly indicates otherwise, the following terms in this BAA shall have the same meaning as those terms in the HIPAA Rules: Breach, Data Aggregation, Designated Record Set, disclosure, Electronic Media, Electronic Protected Health Information (ePHI), Health Care Operations, individual, Minimum Necessary, Notice of Privacy Practices, Required By Law, Secretary, Security Incident, Subcontractor, Unsecured PHI and use.

(d) A reference in this BAA to the Privacy Rule means the Privacy Rule, in conformity with the regulations at 45 C.F.R. Parts 160-164 (the “Privacy Rule”) as interpreted under applicable regulations and guidance of general application published by the HHS, including all amendments thereto for which compliance is required, as amended by the HITECH Act, ARRA and the HIPAA Rules.

2. General Obligations of Business Associate.

(a) Business Associate agrees not to use or disclose PHI, other than as permitted or required by this BAA or as Required By Law, or if such use or disclosure does not otherwise cause a Breach of Unsecured PHI.

(b) Business Associate agrees to use appropriate safeguards, and comply with Subpart C of 45 C.F.R. Part 164 with respect to ePHI, to prevent use or disclosure of PHI other than as provided for by the BAA.

(c) Business Associate agrees to mitigate, to the extent reasonably practicable, any harmful effect that is known to Business Associate as a result of a use or disclosure of PHI by Business Associate in violation of this BAA's requirements or that would otherwise cause a Breach of Unsecured PHI.

(d) Business Associate agrees to report to Covered Entity any Breach of Unsecured PHI not provided for by the BAA of which it becomes aware within ten (10) business days of "discovery" within the meaning of the HITECH Act. Such notice shall include the identification of each individual whose Unsecured PHI has been, or is reasonably believed by Business Associate to have been, accessed, acquired, or disclosed in connection with such Breach. In addition, Business Associate shall provide any additional information reasonably requested by Covered Entity for purposes of investigating the Breach and any other available information that Covered Entity is required to include to the individual under 45 C.F.R. 164.404(c) at the time of notification or promptly thereafter as information becomes delayed. Business Associate's notification of a Breach of Unsecured PHI under this Section shall comply in all respects with each applicable provision of section 13400 of Subtitle D (Privacy) of ARRA, the HIPAA Rules and related guidance issued by the Secretary or the delegate of the Secretary from time to time.

(e) Business Associate agrees, in accordance with 45 C.F.R. 164.502(e)(1)(ii) and 164.308(b)(2), if applicable, to require that any Subcontractors that create, receive, maintain or transmit PHI on behalf of the Business Associate agree to the same restrictions, conditions and requirements that apply to the Business Associate with respect to such information.

(f) To the extent Business Associate maintains a Designated Record Set, Business Associate agrees to make available PHI in a Designated Record Set to the Covered Entity to enable the Covered Entity to fulfill its obligations under the Privacy Rule, including 45 C.F.R. 164.524.

(g) Business Associate agrees to comply with an individual's written request to restrict the disclosure of their personal PHI in a manner consistent with 45 C.F.R. 164.522, except where such use, disclosure or request is required or permitted under applicable law.

(h) Business Associate agrees that when requesting, using or disclosing PHI in accordance with 45 C.F.R. 502(b)(1) that such request, use or disclosure shall be to the minimum extent necessary to accomplish the intended purpose of such request, use or disclosure, as interpreted under related guidance issued by the Secretary from time to time.

(i) To the extent Business Associate maintains a Designated Record Set, Business Associate agrees to make PHI available to the Covered Entity so that the Covered Entity can make any amendments to PHI in the Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 C.F.R. 164.526.

(j) Business Associate agrees to maintain and make available the information required to provide an accounting of disclosures to the Covered Entity as necessary to satisfy Covered Entity's obligations under 45 C.F.R. 164.528.

(k) Business Associate agrees to make its internal practices, books and records, including policies and procedures regarding PHI, relating to the use and disclosure of PHI and Breach of any Unsecured PHI received from Covered Entity, or created or received by the Business Associate on behalf of Covered Entity, available to the Secretary for the purpose of the Secretary determining the Covered Entity's compliance with the Privacy Rule.

(l) To the extent that Business Associate is to carry out one or more of Covered Entity's obligation(s) under Subpart E of 45 C.F.R. Part 164, Business Associate agrees to comply with the requirements of Subpart E that apply to the Covered Entity in the performance of such obligation(s).

(m) Business Associate agrees to account for the following disclosures:

(i) Business Associate agrees to maintain and document disclosures of PHI in a manner as would be required for Covered Entity to respond to a request by an individual for an accounting of PHI disclosures.

(ii) Business Associate agrees to provide to Covered Entity upon written request, information collected in accordance with this Section 2(m), to permit Covered Entity to respond to a request by an individual for an accounting of PHI disclosures.

(iii) Business Associate agrees to account for any disclosure of PHI used or maintained as an Electronic Health Record (as defined in Section 5) ("EHR") in a manner consistent with 45 C.F.R. 164.528 and related guidance issued by the Secretary from time to time; provided that an individual shall have the right to receive an accounting of disclosures of EHR by the Business Associate made on behalf of the Covered Entity only during the three years prior to the date on which the accounting is requested in writing from Covered Entity.

(iv) In the case of an EHR that the Business Associate acquired on behalf of the Covered Entity as of January 1, 2009, Section 2(m)(iii) above shall apply to disclosures with respect to PHI made by the Business Associate from such EHR

on or after January 1, 2014. In the case of an EHR that the Business Associate acquires on behalf of the Covered Entity after January 1, 2009, Section 2(m)(iii) above shall apply to disclosures with respect to PHI made by the Business Associate from such EHR on or after the later of January 1, 2011 or the date that it acquires the EHR.

(n) Business Associate may not use or disclose PHI in a manner that would violate Subpart E of 45 C.F.R. Part 164 if done by the covered entity

3. Permitted Uses and Disclosures by Business Associate.

(a) Business Associate agrees to use or disclose PHI only in a manner that is consistent with this BAA, the Privacy Rule or Security Rule (as defined in Section 5) and only in connection with providing services to Covered Entity; provided that the use or disclosure would not violate the Privacy Rule, including 45 C.F.R. 164.504(e), if the use or disclosure would be done by Covered Entity.

(b) Business Associate may use and disclose PHI as permitted in the Underlying Agreement or as Required By Law.

(c) Business Associate may use and disclose PHI for the proper management and administration of Business Associate to carry out the legal responsibilities of Business Associate, provided that such uses or disclosures are permitted under state and federal confidentiality laws.

4. Obligations of Covered Entity.

(a) Covered Entity shall:

(i) Provide Business Associate with the Notice of Privacy Practices that Covered Entity produces in accordance with the Privacy Rule, and any changes or limitations to such notice under 45 C.F.R. 164.520, to the extent that such changes or limitations may affect Business Associate's use or disclosure of PHI.

(ii) Notify Business Associate in writing of any restriction to the use or disclosure of PHI that Covered Entity has agreed to or is required to abide by under 45 C.F.R. 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of PHI under this BAA.

(iii) Notify Business Associate in writing of any changes in or revocation of permission by an individual to use or disclose PHI, if such change or revocation may affect Business Associate's permitted or required uses and disclosures of PHI under this BAA.

(b) Covered Entity shall not request Business Associate to use or disclose PHI in any

manner that would not be permissible under the Privacy and Security Rule if done by Covered Entity, except as provided under Section 3 of this BAA.

5. Compliance with Security Rule.

(a) Business Associate shall comply with the HIPAA Security Rule, which shall mean the Standards for Security of Electronic Protected Health Information at 45 C.F.R. Part 160 and Subparts A and C of Part 164, as amended by ARRA and the HITECH Act. The term "Electronic Health Record" or "EHR" as used in this BAA shall mean an electronic record of health-related information on an individual that is created, gathered, managed and consulted by authorized health care clinicians and staff.

(b) In accordance with the Security Rule, Business Associate agrees to:

(i) Implement administrative, physical and technical safeguards to reasonably and appropriately protect the confidentiality, integrity and availability of the ePHI that it creates, receives, maintains or transmits on behalf of Covered Entity as required by the Security Rule; and

(ii) Report to the Covered Entity any Security Incident of which it becomes aware. Covered Entity acknowledges and agrees that this Section 5(b)(ii) constitutes notice by Business Associate to Covered Entity of the ongoing existence and occurrence or attempts of unsuccessful Security Incidents for which no additional notice to Covered Entity shall be required. Unsuccessful Security incidents means, without limitation, pings and other attacks on firewall, port scans, unsuccessful log-on attempts, denial of service attacks and any combination of the above, so long as no such incident results in unauthorized access, use or disclosure of PHI.

6. Term and Termination.

(a) This BAA shall become effective on the Effective Date and shall continue in effect until all obligations of the parties have been met, including return or destruction of all PHI in Business Associate's possession (or in the possession of Business Associate's agents and/or contractors) as necessary, unless sooner terminated as provided herein. It is expressly agreed that the terms and conditions of this BAA designed to safeguard PHI shall survive expiration or other termination of the Underlying Agreement(s) and shall continue in effect until Business Associate has performed all obligations under this BAA.

(b) Upon either party's knowledge of material breach by the other party, the non-breaching party shall provide an opportunity for the breaching party to cure the breach or end the violation. If the breaching party does not cure the breach or end the violation within a reasonable period of time from the notification of the breach, or if a material term of the BAA has been breached and a cure is not possible, the non-breaching party may terminate this BAA, upon written notice to the other party. If

termination is not feasible, the non-breaching party may report the breach to the Secretary.

(c) Upon termination of this BAA for any reason, the parties agree that Business Associate shall return to Covered Entity or, if agreed to by Covered Entity, destroy all PHI received from Covered Entity, or created, maintained, or received by Business Associate on behalf of Covered Entity, that the Business Associate still maintains in any form. In the event Business Associate determines that returning or destroying PHI is infeasible, Business Associate shall provide Covered Entity with notification of the conditions that make return or destruction infeasible. Business Associate shall extend the protections of this BAA to such PHI and limit further uses and disclosures of such PHI to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such PHI. Business Associate shall only be required to return or destroy PHI when it is feasible to do so.

7. Miscellaneous.

(a) The parties agree to take such reasonable action as is necessary to amend this BAA to comply with the requirements of the Privacy Rule, the Security Rule, HIPAA, ARRA, the HITECH Act, the HIPAA Rules and any other applicable law.

(b) The respective rights and obligations of Business Associate under Section 6 and Section 7 of this BAA shall survive the termination of this BAA.

(c) This BAA shall be interpreted such that any ambiguity shall be resolved in favor of a meaning that permits Covered Entity to comply with the HIPAA Rules. Any provision of this BAA that differs from those mandated by the HIPAA Rules, but is nonetheless permitted by the HIPAA Rules, shall be adhered to as stated in this BAA.

(d) This BAA may only be modified in a writing signed by both parties.

(e) This BAA constitutes the entire agreement between the parties related to the subject matter of this BAA. This BAA supersedes all prior negotiations, discussions, representations or proposals, whether oral or written. This BAA may not be modified unless done so in writing and signed by a duly authorized representative of both parties. If any provision of this BAA, or part thereof, is found to be invalid, the remaining provisions shall remain in effect.

(f) This BAA will be binding on the successors and assigns of the Covered Entity and the Business Associate. However, this BAA may not be assigned, in whole or in part, without the written consent of the other party. Any attempted assignment in violation of this provision shall be null and void.

(g) For avoidance of doubt, and not to the exclusion of another other provision, Section 13(f) shall apply to this BAA.

(h) Notices shall be given as specified in the Underlying Agreement.

(i) Except to the extent preempted by federal law, this BAA shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

Data Processing Addendum

[Download](#)

This Data Processing Addendum (“Addendum”) forms part of the Cloud-Based Application Agreement (“Agreement”) between Issuetrak, Inc. (“Issuetrak”) and the Company referred to as “You” therein (“Client”) and applies only to the extent that (1) Client is subject to the Data Protection Laws, including the General Data Protection Regulation (“GDPR”) and the California Consumer Privacy Act of 2018 (“CCPA”); (2) Client is a Controller of Personal Data Processed by Issuetrak as that term is defined in the Data Protection Laws; and (3) Issuetrak is a Processor of such Personal Data as that term is defined in the Data Protections Laws. If all of the foregoing conditions are met, Client and Issuetrak agree as follows:

1. Definitions. The following definitions apply to this Addendum. Any capitalized terms not defined in this Addendum have the meaning ascribed to them in the Agreement.

(a) “Commercially Reasonable Efforts” means in respect of the party in question, taking such steps and performing them in such a way as that party would undertake to achieve a particular desired result for its own benefit, assuming such party was acting in a determined, prudent and reasonable manner and in the best interests of the other party.

(b) “Confidential Information” means any information that is received from or on behalf of a disclosing party and/or is obtained by a party or its personnel in connection with or arising out of this Agreement, including for the purposes of providing or receiving the Services that, if disclosed in tangible form, is marked confidential or if disclosed otherwise is confirmed in writing as being confidential or, whether disclosed in tangible form or otherwise, is manifestly confidential. Confidential Information includes this Agreement and the relationship between the parties but does not include Personal Data.

(c) “Data Protection Laws” means all data protection and privacy laws that apply to the Processing of Personal Data under this Addendum, including:

(i) all statutes, statutory instruments, regulations, by-laws, ordinances or subordinate legislation from time to time made or issued to which a party is subject;

(ii) the common law and the law of equity as applicable to the Parties;

(iii) any binding court order or judgment;

(iv) any applicable guidance, policy or standard which, in each case, is enforceable by law; and

(v) any applicable direction, policy, rule or order that is legally binding and that is issued by a Supervisory Authority insofar as the same relates to the Processing, protection or security of Personal Data.

(d) “Data Subject” means the natural living person to whom Personal Data relates.

(e) "Standard Contractual Clauses" means the standard data protection clauses for the transfer of personal data to processors established in third countries which do not ensure an adequate level of data protection, as described in Article 46 of the GDPR and approved by European Commission decision 2010/87/EC, dated 5 February 2010.

(f) "Good Industry Practice" means the exercise of at least the skill, care, prudence and efficiency which would reasonably be expected for a similarly situated provider of services that are the same as, or substantially similar to, the Services under the Agreement.

(g) "Personal Data" means any information, including information in electronic form, that is included in Your Data and is processed by Issuetrak to provide the Service, and that relates to a living person who can be identified: (a) from those data, or (b) from those data and the use of additional information, taking into account all means reasonably likely to be used by anyone to identify the person directly or indirectly and includes, without limitation, first and last names, ID numbers, including government-issued identifiers, personal dates such as birthdates, email addresses, location data, internet protocol address or other online identifiers and information concerning race, ethnicity or mental or physical health. For clarity, "Personal Data" includes "Personal Information," as that term is defined by the CCPA, and personal data that is publicly available. The term "Personal Data" excludes personal data that has been anonymized so that it is no longer possible to identify a Data Subject from the information, taking into account all means likely reasonably to be used by Issuetrak or anyone else to identify them.

(h) "Personal Data Breach" means a breach of security leading to destruction, loss, alteration, unauthorized disclosure of, or access to, Personal Data transmitted, stored or otherwise processed by Issuetrak or its Subprocessors, which is adverse to this Addendum or Data Protection Laws, or otherwise unlawful.

(i) "Personnel" shall include the relevant Party's partners, members, employees, officers and agents, self-employed contractors and those of its sub-contractors.

(j) "Processing" means any operation or set of operations performed on data, whether or not by automated means, such as accessing, collection, downloading, recording, organization, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction (and "Process" and "Processed" shall be construed accordingly).

(k) "Subprocessor" means anyone engaged by Issuetrak to perform Processing that Issuetrak performs on behalf of Client.

(l) "Supervisory Authority" means any person or body having regulatory, supervisory, administrative, governmental or competent authority from time to time over all or any part of the Issuetrak or Client, including the European Data Protection Board. For avoidance of doubt, this includes any successors to any person or body that would be considered to be a "Supervisory Authority" at the date of this Addendum.

2. Data Protection.

(a) With respect to the Parties' rights and obligations under this Addendum, the Parties agree that Issuetrak is a Processor and Client is a Controller (each as defined in Data Protection Laws) of Personal Data.

(b) The Parties agree that Issuetrak is a "Service Provider," as that term is defined in the CCPA, with respect to any Personal Data subject to the CCPA. Issuetrak is prohibited from: (i) selling Personal Data; (ii) retaining, using, or disclosing Personal Data for any purpose other than providing the Service, or as otherwise permitted by the CCPA; and (iii) retaining, using, or disclosing Personal Data outside of the direct business relationship between the person and the business. Issuetrak hereby certifies that it understands the restrictions in this Section 2(b) and will comply with them.

(c) The subject matter and duration of the Processing of Personal Data are described in the Agreement and this Addendum. The nature and purpose of the Processing of Personal Data is providing the Service.

(d) The types of personal data and the categories of data subjects are set forth in Schedule 1 to this Addendum.

3. Responsibilities of Client.

(a) Client shall process Personal Data in compliance with Data Protection Laws and good data processing practice.

(b) Client's documented instructions of Processing of Personal Data are primarily given in the Agreement and this Addendum. Client shall have the right to give Issuetrak new documented instructions or amend the documented instructions given by Client to Issuetrak. Issuetrak is entitled to charge for reasonable and substantiated additional costs for complying with new or amended documented instructions from Client.

4. Responsibilities of Issuetrak. Issuetrak shall and shall procure that its personnel shall, at all times:

(a) process Personal Data in compliance with Data Protection Laws and good data processing practice;

(b) process Personal Data in accordance with this Addendum or on documented instructions from Client, unless prescribed otherwise by a provision of Data Protection Laws applicable to Issuetrak. In such case, Issuetrak shall inform Client of such requirement before beginning the Processing of Personal Data in accordance with the instructions, unless informing of such requirement is prohibited in Data Protection Laws;

(c) inform Client without undue delay if Issuetrak considers that instructions of Client are in breach of Data Protection Laws;

(d) ensure that Issuetrak' personnel who are authorized to process Personal Data agree to maintain the confidentiality of such Personal Data in a manner consistent with the provisions of this Addendum;

(e) implement and maintain technical and organizational measures to ensure an appropriate level of security to protect Personal Data against unauthorized access and loss, destruction, damage, alteration or disclosure, or against other unlawful Processing;

(f) follow the conditions concerning the use of Subprocessors as prescribed in Section 7(a) below;

(g) taking into account the information available to Issuetrak, provide reasonable assistance to Client in responding to requests for exercising the rights of Data Subjects where Client does not have the required information. Issuetrak is entitled to charge Client, and Client must pay to Issuetrak upon demand, for additional costs and expenses that were reasonably incurred as a result of complying with this Section 4(g). Issuetrak will promptly notify Client if it receives a request from a Data Subject to access, correct or delete that Data Subject's Personal Data or other right under Data Protection Laws or if a Data Subject objects to the Processing thereof and Issuetrak shall not respond to a Data Subject request without Client's prior written consent;

(h) taking into account the information available to Issuetrak, provide reasonable assistance to Client in ensuring compliance with its obligations set out in Data Protection Laws relating to data security, Personal Data Breaches, data protection impact assessments, and prior consulting obligations. Issuetrak is entitled to charge Client, and Client must pay to Issuetrak upon demand, for additional costs and expenses that were reasonably incurred as a result of complying with this Section 4(h);

(i) at the choice of Client, delete or return Personal Data to Client on termination of the Services and delete all existing copies unless Issuetrak is required to store such Personal Data by any law or regulation to which Issuetrak is subject; and

(j) make available to Client all information necessary to demonstrate compliance with Issuetrak' obligations set out in this Addendum and in Data Protection Laws. Client is obliged to keep all such information confidential at all times.

5. Personal Data Breach Notification.

(a) Issuetrak shall notify Client of all Personal Data Breaches without undue delay, but no later than one (1) business day after Issuetrak has become aware of the Personal Data Breach. Issuetrak shall make reasonable efforts to identify the cause of such Personal Data Breach and take those steps deemed necessary and reasonable in order to remediate the cause of such Personal Data Breach. The Personal Data Breach notification shall contain the following:

(i) a description of the nature of the Personal Data Breach, including the categories and approximate number of Data Subjects concerned and the categories and approximate number of data records concerned;

(ii) the name and contact details of the relevant contact person at Issuetrak handling the Personal Data Breach;

(iii) a description of the likely consequences and/or actual, realized consequences of the

Personal Data Breach; and

(iv) a description of the measures Issuetrak has taken to address the Personal Data Breach and to mitigate its adverse effects.

(b) To the extent Issuetrak is unable to provide all of the information set forth above upon initial notice to Client, Issuetrak may supplement such notice with information as it becomes available and/or known to Issuetrak.

(c) Issuetrak shall document Personal Data Breaches and, subject to attorney-client privilege, disclose the documentation to Client upon Client's written request.

(d) After Issuetrak has become aware of the Personal Data Breach, Issuetrak shall ensure security of Personal Data and take appropriate measures to ensure protection of Personal Data in cooperation with Client.

6. Transfers of Personal Data.

(a) Issuetrak may process Personal Data anywhere in the world where Issuetrak or its Sub-processors maintain data Processing operations. Issuetrak shall at all times provide an adequate level of protection for the Personal Data Processed, in accordance with the requirements of Data Protection Laws.

(b) To the extent Issuetrak's performance or Client's use of the Services requires the transfer of Personal Data from within the European Union or Switzerland to the United States or any other country that has not been designated by the European Commission or Swiss Federal Data Protection Authority (as applicable) as providing an adequate level of protection for Personal Data, the Standard Contractual Clauses are incorporated by reference in this Addendum and will apply to the transfer, unless the parties jointly agree that another valid mechanism under Data Protection Laws may be used with respect to the export Personal Data. For purposes of the Standard Contractual Clauses:

(i) Client is the "data exporter" and Issuetrak is the "data importer;"

(ii) Issuetrak's obligations under the Standard Contractual Clauses will be governed by the laws of the member state(s) in which Client is established;

(iii) The details of Appendix 1 of the Standard Contractual Clauses are set forth in Schedule 1 to this Addendum, which will be completed and executed by the parties;

(iv) The details of Appendix 2 of the Standard Contractual Clauses are set forth at <https://www.issuetrak.com/security/>; and

(v) In the event of any conflict between this Addendum and the Standard Contractual Clauses, the Standard Contractual Clauses will prevail.

7. Subprocessors.

(a) Issuetrak is entitled to engage and use Subprocessors in Processing Personal Data. Issuetrak may continue to use those Subprocessors already engaged by Issuetrak as of the date of this Addendum, and subject to Issuetrak meeting its obligations in Section 7(d) below Client hereby approves of such Subprocessors.

(b) Issuetrak is entitled to reduce the number of Subprocessors without separate notice to Client.

(c) Issuetrak shall notify Clients at least thirty (30) days prior to new Subprocessor commencing to Process Personal Data under this Addendum. Client may deny the use of the new Subprocessor only if Client has good faith, reasonable doubts about the ability of the Subprocessor to comply with Data Protection Laws. If Client does not deny the use of the new Subprocessor in writing within fourteen (14) days from the date of written notice from Issuetrak, Issuetrak may use the new Subprocessor in Processing Personal Data. If Client reasonably objects to a change in Subprocessor and Issuetrak cannot change the Service or recommend a commercially reasonable change to Client's configuration or use of the Service to avoid Processing of Personal Data by such Subprocessor, Client may terminate the Agreement. In such case, Issuetrak will refund Client any prepaid fees covering the remainder of the term of the Agreement.

(d) Issuetrak shall take appropriate measures to ensure that the Subprocessors comply with the obligations specified in this Addendum, including security and confidentiality requirements, and Issuetrak shall enter into a written agreement with each Subprocessor containing data protection obligations substantially similar to, and no less protective than those contained in this Addendum. Issuetrak is responsible for the performance of its Subprocessors.

8. Amendment. Except as set forth herein, this Addendum may only be amended by mutual written agreement of the Parties.

Schedule 1 to Data Processing Addendum

This Schedule forms part of the EU Model Clauses and must be completed and signed by the parties. The Member States may complete or specify, according to their national procedures, any additional necessary information to be contained in this Schedule.

Data exporter

The data exporter is (please specify briefly your activities relevant to the transfer):

The data exporter is the entity identified as "Client" in the Data Processing Addendum executed between the data exporter and the data importer, a user of the cloud-based application provided by the data importer.

Data importer

The data importer is (please specify briefly activities relevant to the transfer):

The data importer is Issuetrak, Inc., the provider of a cloud-based application utilized by the data exporter to report on and monitor the resolution of issues related to the data exporter's business.

Data subjects

The personal data transferred concern the following categories of data subjects (please specify):

The data exporter may, at its sole discretion, submit Personal Data to the Service, which may include, but is not limited to, the following categories of Data Subjects: employees, customers, prospective customers, service providers, business partners, vendors, advisors (all of whom are natural persons) of the data exporter and any natural person(s) authorized by the data exporter to use the Services.

Categories of data

The personal data transferred concern the following categories of data (please specify):

The data exporter may, at its sole discretion, submit Personal Data to the Service which may include, but is not limited to, the following categories of data: first and last name, email address, telephone number, address (business or personal), date of birth, communications (telephone recordings, voicemail), customer service information, and title.

Special categories of data (if appropriate)

The personal data transferred concern the following special categories of data (please specify):

Processing operations

The personal data transferred will be subject to the following basic processing activities (please specify):

The data importer will host and process Personal Data in the course of providing its cloud-based application for use by the data exporter, including as necessary to provide service and support.

DATA EXPORTER	DATA IMPORTER
Signature:	Signature:

Name:	Name:
Title:	Title:
Date:	Date:

GDPR Compliance FAQ

What is the GDPR?

The General Data Protection Regulation (GDPR) is a law that was passed by the European Union to go into effect on May 25, 2018. This law is intended to protect the rights of EU citizens (defined as **natural persons**) to control what is done with Personally Identifiable Information (PII) that is used or stored by organizations. The GDPR defines the responsibilities of organizations' data handling for individuals, as well as steep penalties for non-compliance. While this law was passed and is enforceable in the EU, it will also be enforceable in the United States via international trade agreements and laws.

Issuetrak has reviewed its data collection and maintenance procedures as it relates to the GDPR. This article provides a breakdown of how the GDPR applies to us, the measures we have taken, and the measures we will take in the pursuit of compliance with the GDPR.

What has Issuetrak done to prepare for the GDPR going into effect?

- Updated [Cloud Hosting Service Agreement](#)
- Updated [Business Associate Agreement](#)
- Updated website [Privacy Policy](#)
- [Data Processing Addendum](#)
- Published [Subprocessors Used by Issuetrak](#)
- Upcoming Product Changes
- Added Cookie Opt-in on our website
- Ongoing Commitment to data security
- Additional privacy-related measures: [CCPA FAQ](#)

How can I contact Issuetrak with concerns about privacy or security?

You can email privacy@issuetrak.com with questions or concerns about Issuetrak's handling of personal information.

Why does the GDPR apply to Issuetrak?

The GDPR applies to Issuetrak because we have business relationships in the EU. By extension, we handle limited information concerning the EU citizens we correspond with as a matter of course for our business relationships.

How does the GDPR define an organization like Issuetrak?

The GDPR defines the responsibilities of organizations based on their role in collection and usage of information. The roles are defined as:

- Data Controller – Who owns the data and determines what is done with it.
- Data Processor – Who hosts or stores the data and determines the mechanisms allowing access to it.
 - Subprocessor – An organization engaged in processing a subset of information processed by the Data Processor.

As a cloud hosting provider, Issuetrak is classified as a **Data Processor**.

As an organization that collects information on potential sales leads, marketing data, and customers, Issuetrak is classified as a **Data Controller**.

Does Issuetrak have a Data Protection Officer (DPO)?

No. This is because Issuetrak is not considered a public authority, nor does it conduct large-scale monitoring of individuals or processing of large amounts of personal data, and thus does not meet the required criteria for needing a Data Protection Officer.

I'm a Cloud customer. What will you do if you receive an information request concerning information that's stored in my site?

Issuetrak will not respond to requests concerning the personal information we store except as legally required and outlined in our [Privacy Policy](#) or in our [Data Processing Addendum](#).

I'm a Cloud customer and I have received a data subject request related to GDPR. What should I do?

If you need assistance complying with this request, don't hesitate to contact Issuetrak's Cloud Services team via support@issuetrak.com.

What will Issuetrak do if it receives a legal request for data?

We may be compelled to comply with a court order or other legal requirement to disclose personal information. Additionally, if we discover that our services have been misused for the purpose of committing unlawful or legally objectionable acts, we may contact the appropriate legal authorities to share the appropriate information with them to the extent necessary to assist them with an investigation.

What will you do in the event of a breach concerning my Cloud data?

We will notify you within one business day of discovering the breach. We'll let you know what information was breached, the impact of the breach, preventive measures to ensure it doesn't happen again, and who to contact at Issuetrak for more information.

Privacy Policy

We have updated our [Privacy Policy](#) to clearly declare the nature of the information we collect, the manner in which it is collected, and what purpose we have for storing and processing it.

Subprocessors Used by Issuetrak

Issuetrak utilizes a variety of services and organizations for the purpose of delivering and enhancing customer experiences, marketing, and issue tracking. These services and organizations are defined as **Subprocessors** under the EU's General Data Protection Regulation (GDPR).

The list provided below may change as Issuetrak continues to develop and improve our services and offerings. Issuetrak will update this list and provide notice to our customers prior to engaging any new subprocessor, as per our [Data Processing Addendum](#).

List of Subprocessors

Infrastructure Data Subprocessors

Issuetrak's cloud hosting and services are based on the following data subprocessors:

Name	Service	Location
Amazon Web Services (AWS)	Cloud hosting platform	United States

Specialized Data Subprocessors

Name	Service	Location
Invoiced.com	Customer Invoice Portal	United States
Hubspot	CRM and Marketing Communications	United States
Google Analytics	Anonymous tracking of site traffic	United States
SnapEngage	Chat Integration Service	United States
Capterra	Advertising Platform	United States
Google AdWords	Advertising Platform	United States
SendGrid	Cloud Outgoing Email Service	United States
Quickbooks	Financials	United States
GovSpend	Advertising Platform	United States
Citrix ShareFile	Secure data transfer service	United States
Secureframe	SOC 2 Type II Compliance Platform	United States

CCPA FAQ

What is the CCPA?

The California Consumer Privacy Act of 2018 (CCPA) is a new law that was enacted by the State of California in 2018 to provide California consumers with new rights related to their personal information. The CCPA took effect on January 1, 2020, and imposes various obligations on businesses that fall within its scope. These obligations include providing detailed notices to consumers regarding the collection, use, and disclosure of their personal information; providing consumers an opportunity to opt-out of the sale of their personal information; and giving consumers various rights in relation to their information, including the right of access and deletion.

What has Issuetrak done to prepare for the CCPA goes into effect?

- Updated [Cloud Hosting Service Agreement](#)
 - Updated [Business Associate Agreement](#)
 - Updated website [Privacy Policy](#)
 - [Data Processing Addendum](#)
 - Published [Subprocessors Used by Issuetrak](#)
 - Upcoming Product Changes
 - Added Cookie Opt-in on our website
 - Ongoing Commitment to data security
 - Additional privacy-related measures: [GDPR Compliance FAQ](#)
-

Why does the CCPA apply to Issuetrak?

Some of Issuetrak's clients may be considered "Businesses" under the CCPA and will be required to comply with these requirements, including with respect to personal information that is included in the data that they submit to our cloud-based applications. Issuetrak acts as a "Service Provider" under the CCPA with respect to this information, and processes it only at our clients' direction.

I'm a Cloud customer. What are you doing to comply with the CCPA?

Issuetrak's Cloud-Based Application Agreement already includes a Data Processing Addendum that limits Issuetrak's use and disclosure of this information to the purpose of providing our-cloud-based services or as otherwise instructed by our clients, and our clients

can rely on those contractual commitments as part of their own CCPA compliance programs. And to further support our clients' CCPA compliance efforts, we are updating that Data Processing Addendum to expressly address the CCPA and Issuetrak's status as a "Service Provider."

I'm a Cloud customer. What will you do if you receive an information request concerning information that's stored on my site?

Issuetrak will not respond to requests concerning the personal information we store except as legally required and outlined in our [Privacy Policy](#) or in our [Data Processing Addendum](#).

I'm a Cloud customer and I have received a data subject request related to CCPA. What should I do?

If you need assistance complying with this request, don't hesitate to contact Issuetrak's Cloud Services team via support@issuetrak.com.

How can I contact Issuetrak with concerns about privacy or security?

You can email privacy@issuetrak.com with questions or concerns about Issuetrak's handling of personal information.

Privacy Policy

We have updated our [Privacy Policy](#) to clearly declare the nature of the information we collect, the manner in which it is collected, and what purpose we have for storing and processing it.

Network Protocols and Ports for Issuetrak

Brief List of Necessary Ports

This section contains just a brief list of the bare minimum services necessary for Issuetrak to work:

- HTTP (80) or HTTPS (443) ports from the web server, depending on how IIS bindings are configured
- SQL Server Listening port (1433) on the SQL server
- SQL Browsing Service port (1434), if a named instance is used on the SQL server

Web Server

The table below outlines the ports that are required to be open for Issuetrak to function properly. Note that HTTP and HTTPS are not mutually exclusive. Any services listed here can be enabled on ports not listed in the table, depending on how the system administrator has configured them.

Port	Protocol/Service	Description
80	HTTP	Standard non-SSL web application. Either this or an HTTPS binding is required for users to access Issuetrak.
443	HTTPS	Web application with SSL. Either this or an HTTP binding is required for users to access Issuetrak.

Database Server

Port	Protocol/Service	Description
1433	SQL Server	Microsoft SQL Server listening port
1434	SQL Server	SQL Browsing Service. Necessary if named instances are used.

Protocols Issuetrak is Compatible With

Port	Protocol/Service	Description
25	SMTP	Used for email notifications, survey invitations (if purchased).
587	STARTTLS	Encrypted SMTP, used for email notifications, survey invitations (if purchased).
110	POP3	POP3, for use with Issuetrak's Incoming Email Service
995	POP3 SSL	POP using SSL encryption, for use with Issuetrak's Incoming Email Service
143	IMAP	IMAP, for use with Issuetrak's Incoming Email Service

993	IMAP SSL	IMAP using SSL encryption, for use with Issuetrak's Incoming Email Service
389	LDAP	Lightweight Directory Access Protocol, for use with Active Directory integration with Issuetrak (if purchased)
636	LDAPS	LDAP over SSL, for use with Active Directory integration with Issuetrak (if purchased). Requires an appropriate certificate to be installed on the domain controller that Issuetrak will connect to.
3269	Global Catalog SSL	Used for encrypted communication with the Global Catalog.
443	Exchange	Necessary to connect to an Exchange server's Web Service, when used with Issuetrak's Incoming Email Service.

Log4J Vulnerability

Issuetrak has become aware of a high-profile exploit being used in a widely-used logging application known as Log4J and Log4Shell. We have reviewed our software dependencies, Cloud infrastructure, and internally-used applications and determined that we do not use Log4J / Log4Shell.

Issuetrak's software products, customer data and infrastructure are not vulnerable to Log4J / Log4Shell exploits because we do not utilize the underlying vulnerable software.

Firewall Exceptions for Use With Issuetrak's Hosted Service

Depending on your use of Issuetrak and your company's security systems, you may need to allow connection exceptions to and from Issuetrak's public infrastructure to ensure connectivity. Below you'll find a list of public IP addresses for our services and the types of connections that may need firewall exceptions added for them.

Public IPs

IP Address
34.194.81.162
34.234.102.100
34.196.252.122
52.205.150.121
34.235.226.59
34.237.70.230
34.195.70.77
3.219.130.79
34.236.69.183
18.211.107.84
34.225.118.245
34.239.70.105
35.153.219.253
3.225.114.27
18.233.242.1
18.210.61.25

IP Addresses, Comma-Separated

For your convenience, you can triple-click the content in the field below to select and copy the values from the table above in a comma-separated format.

```
34.194.81.162,34.234.102.100,34.196.252.122,52.205.150.121,34.235.226.59,34.237.70.230,34.195.70.77,3.219.130.79,34.236.69.183,18.211.107.84,34.225.118.245,34.239.70.105,35.153.219.253,3.225.114.27,18.233.242.1,18.210.61.25
```

Connections

IP addresses are only half of the equation for firewall rules. You'll also need to know what ports to open. Besides the basic web ports (80 and 443), you will also need to know what services your site is configured to communicate with in order to determine the other ports that must be opened to the IP addresses in the table above.

You can find details of our network protocols and services [HERE](#).

For the ability to browse and access Issuetrak's Cloud services, you'll need to allow standard web browsing to the above IP Address using TCP ports 80 and 443, which will allow the usage of HTTP and HTTPS protocols.

- HTTP (TCP 80)
 - HTTPS (TCP 443)
-

Issuetrak has the ability to create and update issues directly from email. To enable this functionality, you'll need to allow the above IP addresses access to the following ports on your mail environment, in order for Issuetrak to access your configured mailbox and process email.

- POP3 (TCP 110)
 - POP3 SSL (TCP 995)
 - IMAP (TCP 143)
 - IMAP SSL (TCP 993)
 - Exchange (TCP 443)
-

Issuetrak's Cloud service has services to handle outgoing email but if you wish to process that communication through your existing mail environment, you'll need to allow the above IP Addresses access to the following ports on your mail environment.

- SMTP (TCP 25)
 - Secure SMTP (TCP 587)
-

To connect Issuetrak to your Active Directory environment you'll need to allow the above IP Addresses access to the following ports on your Active Directory server.

- LDAP (TCP 389)
 - LDAPS (TCP 636)
 - GC SSL (TCP 3269)
 - ADFS (TCP 443)
-

Issuetrak Terms of Service

Issuetrak Terms of Service

last modified: 12.18.2020

[Issuetrak Cloud Hosting Service Agreement](#)

[Issuetrak Software License Terms and Conditions \(Premise\)](#)

Issuetrak Cloud-Based Application Agreement

[Download](#)

BY SIGNING ISSUETRAK'S QUOTE, INDICATING YOUR ACCEPTANCE OF THE QUOTE BY EMAIL, OR USING THE SERVICE AFTER RECEIVING THE QUOTE, ISSUETRAK AND YOU AGREE TO THE FOLLOWING:

CAREFULLY READ THE TERMS OF THIS AGREEMENT AND THE TERMS OF YOUR QUOTE. DO NOT ACCESS OR USE THE SERVICE UNTIL YOU HAVE READ AND AGREED TO THE TERMS. THIS AGREEMENT IS LEGALLY BINDING. ACCESSING OR USING THE SERVICE CONSTITUTES YOUR AGREEMENT TO BE BOUND BY THE TERMS OF THIS AGREEMENT. BY CLICKING "ACCEPT" OR OTHERWISE ACCESSING OR USING THE SERVICES, YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT, INCLUDING ALL APPLICABLE ATTACHMENTS. IF YOU DO NOT AGREE, DO NOT CLICK "ACCEPT" AND DO NOT ACCESS OR USE THE SERVICE OR OTHER MATERIALS.

1. Background. Issuetrak, Inc. ("Issuetrak") provides a cloud-based service identified in the quote that allows you to report on and monitor the resolution of issues related to your business (the "Service"). This Agreement governs access to and use of the Service.
2. Quote. The terms of the quote you accepted for the Service (the "Quote") are incorporated into this Agreement by this reference.
3. Definitions. Capitalized terms used in this Agreement have the meanings indicated in this Agreement or in the attachments, schedules or exhibits to this Agreement.
4. Rights Granted. Subject to and conditioned upon your payment of the Fees and compliance with all terms of this Agreement, Issuetrak grants to you a non-exclusive, non-assignable and terminable (a) right for you and your employees, consultants, contractors, agents and customers who are authorized by you to access and use the Service (each, a "User") to access and use the Service in accordance with the terms and conditions herein, and (b) license to use Issuetrak's user manuals, handbooks, and guides relating to the Service provided by Issuetrak to you either electronically or in hard copy form (the "Documentation") during the Term solely for your internal business purposes in connection with your use of the Services.
5. Rights Not Granted. Issuetrak retains all rights not expressly granted to you in this Agreement. Except as expressly set forth in this Agreement, nothing in this Agreement grants, by implication, waiver, estoppel or otherwise, to you or any third party any intellectual property rights or other right, title or interest in or to the Service, Documentation, or intellectual property provided to you or any User in connection with the foregoing (collectively, "Issuetrak IP").
6. Use Restrictions. You shall not (and shall not authorize or permit others) to: (a) use the Service to send any unsolicited or unauthorized advertising, promotional materials, junk mail, spam, chain letters, pyramid schemes, or other form of duplicative

messages, whether commercial or otherwise; (b) use the Service to transmit unlawful, harassing, libelous, abusive, threatening, vulgar, or otherwise legally objectionable material; (c) copy, modify, or create derivative works of the Services or Documentation, in whole or in part; (d) rent, lease, lend, sell, license, sublicense, assign, distribute, publish, transfer, or otherwise make available the Services or Documentation; (e) reverse engineer, disassemble, decompile, decode, adapt, or otherwise attempt to derive or gain access to any software component of the Services, in whole or in part; (f) remove any proprietary notices from the Services or Documentation; (g) use the Services or Documentation in any manner or for any purpose that infringes, misappropriates, or otherwise violates any contract, proprietary rights, intellectual property or other rights of any person, or that violates applicable law; or (h) interfere with another's authorized use of the Service.

7. Your Representations and Obligations.

- a. System Requirements. Issuetrak's website (www.issuetrak.com/system-requirements/) describes the minimum system requirements for accessing and using the Service. You are responsible for obtaining and maintaining the internet connection and computer hardware and software you need to access and use the Service.
- b. Point of Contact. You must designate to Issuetrak and retain (or replace) a point of contact who has the authority to make decisions related to the access and use of the Service on your behalf.
- c. Your Responsibility for Your Users, Agents, Point of Contact, and Customers. You are solely responsible and liable for access to and uses of the Service and Documentation resulting from access provided by you, directly or indirectly, whether such access or use is permitted by or in violation of this Agreement. Without limiting the foregoing, you are responsible and liable for all acts and omissions of Users, Agents, consultants, and customers. A breach of this Agreement by anyone of those individuals will be a breach by you of this Agreement. You also are responsible and liable for any unauthorized party who accesses and uses the Service or Documentation using the credentials, usernames, or passwords of any of such individuals. For purposes of this Agreement, an "Agent" is a User of the Service that holds advanced permissions (can assign an issue, be assigned an issue, submit on behalf of other Users, access and/or maintain administration functions, assign next actions, be assigned next actions, and/or be designated as a system administrator within the Service). A fee is charged for each Agent.
- d. Collection of Usage Data. You consent to Issuetrak monitoring your use of the Service and collecting and compiling data and information relating to your use of the Service, including but not limited to User types, number and types of issues submitted, and number and size of attachments (collectively, the "Usage Data"). Usage Data will belong to us and is our Confidential Information. We have the right to use such Usage Data for the statistical and analytical purposes, for use to improve the Service, for such other purposes as we determine.
- e. Compliance with Laws. You are solely responsible and liable for access to and

use of the Service in compliance with all applicable local, state, national and foreign laws and regulations, including without limitation the Gramm-Leach-Bliley Act, the Sarbanes-Oxley Act, the Health Insurance Portability and Accountability Act, and any applicable U.S. Export Administration Regulations.

8. Issuetrak Representations and Obligations.

- a. Availability. Subject to the terms and conditions of this Agreement, Issuetrak will use commercially reasonable efforts to make the Service available as described in Attachment A.
- b. Data Access. Issuetrak may access and use any information, data and other content, in any form or medium, that is submitted, posted or otherwise transmitted by or on your behalf or an Agent or User through the Service ("Your Data"), to the extent necessary to provide the Service, including, without limitation, in response to your service and support requests.
- c. Data Storage Allocation Limits. The Service includes an allocation of up to 20 gigabytes (20 GB) of data storage. If you exceed this level of data storage, Issuetrak reserves the right to charge an additional fee to you.

9. Fees.

- a. Fees. You shall pay Issuetrak the fees as set forth in the Quote and in each invoice (collectively, the "Fees") without offset or deduction. All Fees and other amounts payable by you under this Agreement are exclusive of taxes and similar assessments. You are solely responsible for all sales, use and excise taxes, and other similar taxes, duties and charges of any kind imposed by any federal, state, local, or foreign government or regulatory authority on any amounts payable hereunder, other than taxes imposed on Issuetrak's income.
- b. Payment. You shall make all payments hereunder in U.S. dollars on or before the date due to Issuetrak at 6160 Kempsville Circle, Suite 101B, Norfolk, VA 23502 or at such other address as Issuetrak may designate in writing. All Fees and other amounts will be due by the date(s) specified on the relevant invoice(s). Without limiting our other rights or remedies, you shall pay to Issuetrak a late-payment charge at a rate of one and one-half percent (1.5%) per month or the highest rate allowed by applicable law, whichever is less, for any amounts not paid when due. Your failure to make a payment when due is a material breach of this Agreement. In addition to any other remedies it may have, Issuetrak may suspend or terminate your access to and use of the Service until such amounts are paid in full.
- c. Price Increases. Issuetrak reserves the right to increase any Fee on the anniversary of the Effective Date. Issuetrak will give you at least thirty (30) days' prior notice of a Fee increase. In addition, if you increase the number of authorized Agents, Issuetrak will invoice you for, and you shall pay, the increase in Fees associated with that change.

10. Title; Confidentiality; Security.

- a. Title. Issuetrak retains all right, title, interest, including all intellectual property rights, in and to the Issuetrak IP, all applications thereof, and all documentation.
- b. Confidentiality. From time to time during the term of the Agreement, Issuetrak and you may each disclose or make available to the other information about its business affairs, products, confidential intellectual property, trade secrets, third-party confidential information, and other sensitive or proprietary information, whether orally or in written, electronic or other form or media, whether or not marked, designated or otherwise identified as "confidential" (collectively, "Confidential Information"). In no way limiting the foregoing, for purposes of Issuetrak, "Confidential Information" also includes the Issuetrak IP. Confidential Information does not include information that, at the time of disclosure is: (i) in the public domain other than by the receiving party's noncompliance with this Agreement; (ii) known to the receiving party at the time of disclosure; (iii) rightfully obtained by the receiving party on a non-confidential basis from a third party; or (iv) independently developed by the receiving party without reference to or use of the disclosing party's Confidential Information. The receiving party shall not disclose the disclosing party's Confidential Information to any person or entity, except to the receiving party's employees, agents or consultants who have a need to know the Confidential Information for the receiving party to exercise its rights or perform its obligations under this Agreement. The receiving party shall hold the disclosing party's Confidential Information in confidence, using at least the same degree of care it uses to protect the confidentiality of its own Confidential Information. Notwithstanding the foregoing, each party may disclose the Confidential Information of the other party to the limited extent required (1) in order to comply with the order of a court of other governmental body, or as otherwise necessary to comply with applicable law, provided that the receiving party making the disclosure pursuant thereto shall first have given written notice to the disclosing party and made a reasonable a reasonable effort to obtain a protective order; or (2) to establish a party's rights under this Agreement, including to make required court filings. On the expiration or termination of this Agreement, the receiving party shall promptly return to the disclosing party all copies, whether in written, electronic or other form or media, of the disclosing party's Confidential Information, or destroy all such copies and certify in writing to the disclosing party that such Confidential Information has been destroyed.
- c. Equitable Relief. Each party acknowledges and agrees that any use or disclosure of the other's Confidential Information, other than as contemplated under this Agreement, may result in irreparable injury and damage to the other party. Accordingly, each party agrees that, in the event it uses or discloses the other's Confidential Information other than as permitted by this Agreement, the other party, in addition to other remedies it may have, will be entitled to seek equitable relief, without any obligation to post bond or security.
- d. Duration of Confidentiality Obligation. The confidentiality obligations of each party set forth in this Section 10 will survive expiration or termination of this Agreement.

- e. Security. Issuetrak's website (www.issuetrak.com/security/) describes the security Issuetrak provides for the Service. ISSUETRAK IS NOT RESPONSIBLE FOR THE SECURITY OF FACILITIES, EQUIPMENT, DATA, OR SOFTWARE NOT UNDER ITS DIRECT CONTROL.

11. Service Operation.

- a. Backup. Issuetrak's website (www.issuetrak.com/security/) describes the backup Issuetrak provides for the Service.
- b. Restoration. Database backups are available for thirty (30) days after creation. In the event of a hardware failure of the server on which the Service is hosted, Issuetrak will restore the most recent available backup of the Service and customer data to a comparable server in a comparable facility at no additional charge to you.
- c. Test Site. You may request Issuetrak to create one (1) test site in the form of a clean installation or as a copy of your existing production site. This allows you to test alternative or new configurations without impacting your production site. Issuetrak may provide a test site with certain features disabled by default. Although you may have the ability to enable them, certain features will not work, and you should not use them, in the test site. Those features include, but are not limited to, Outgoing Email, Incoming Email, Escalation Rules, SLAs, Recurring Issues, and Scheduled Reports. Certain other features, including but not limited to, Issue Attachments and KB Attachments, will not be accessible from the test site. Copied sites will have all audit history truncated unless directly requested for explicit testing. Issuetrak may remove the test site if it is not used for a period of greater than one (1) year. You should not use the test site as an active site and you should not rely on the test site as a backup. Test sites are provided as is and do not have SLA's or warranties.
- d. Audit History and Log Retention. Issuetrak may review excess usage patterns and, at Issuetrak's sole discretion, truncate, archive or delete asset audit history, or other excessive logging that exceeds one (1) year. You may request an exception for compliance reporting requirements.
- e. Hosted Incoming Email Mailbox. Issuetrak will provide, upon request, a hosted mailbox(es) with its strategic mail partner(s) to provide incoming email processing within Issuetrak for an additional fee. Hosted mailboxes provided by Issuetrak are made available to you subject to this Agreement.
 - i. Filtering. Issuetrak's strategic mail partner provides certain services designed to filter unwanted incoming email, such as spam, phishing scams, and email infected with viruses. You acknowledge that the technological limitations of the filtering service will likely result in the capture of some legitimate email, and the failure to capture some unwanted or malicious email. The filtering service is provided "AS IS" with no warranties. You release Issuetrak and its employees, agents, suppliers, and affiliates from any liability or damages arising from the failure of

filtering services to capture unwanted email or from the capture of legitimate mail, or any data loss thereof.

- ii. Retention. You must configure your hosted mailboxes with "Delete Messages After Processing" enabled. In addition, hosted mailboxes provided by Issuetrak will be configured to automatically delete any messages older than thirty (30) days. Issuetrak will not recover deleted email or provide any recovery services. Mailboxes will only maintain mail in between processing intervals.
- iii. Mail Processing. Issuetrak will provide automatic incoming email processing with ten (10) minute intervals.
- iv. Security. Issuetrak will maintain commercially reasonable administrative, physical and technical safeguards to protect the security, confidentiality and integrity of mail data, including, but not limited to, encryption of data in transmission (TLS). The Service will support the following mail protocols POP3, POP3 (SSL), IMAP and IMAP (SSL).

12. Term and Termination.

- a. Your Early Termination Rights. If you are not satisfied with the Service, you may, within fifteen (15) days after the Effective Date, notify Issuetrak in writing of your dissatisfaction and your election to terminate the Agreement pursuant to this Section 12(a). Upon issuance of such notice to Issuetrak, you will immediately cease all access to and use of the Service and Documentation and comply with the provisions of Section 10 with respect to the return of Confidential Information. Issuetrak will terminate your access and use of the Service upon receipt of your notice. Issuetrak will then return to you license and module fees paid by you for the Service, except any professional and/or data services charges, within a reasonable time after rescission.
- b. Term. The term of this Agreement (the "Term") begins on the date you accept your Quote (the "Effective Date") and continues for the initial term set forth in your Quote, or until terminated as provided in this Agreement. Unless either party delivers written notice to the other party at least thirty (30) days prior to the expiration of the then current Term, this Agreement will automatically renew at the end of such Term for additional one (1) term periods, provided that you are not in breach of the Agreement.
- c. Termination by Issuetrak. Issuetrak may terminate this Agreement, effective upon written notice to you, if you (i) fail to pay any amount when due hereunder and such failure continues for a period of fifteen (15) days after written notice thereof; or (ii) breaches any of its obligations under Section 6 or Section 10(b).
- d. Termination by Either Party. Either party may terminate this Agreement, (i) effective upon written notice to the other party, if the other party materially breaches this Agreement and fails to cure the breach to the non-breaching party's reasonable satisfaction within fifteen (15) days after the breaching party

receives written notice describing the breach; or (B) immediately, if the other party becomes insolvent or admits in writing its inability to pay its debts as they mature, or makes an assignment for the benefit of creditors; if a petition under any foreign, state, or United States bankruptcy act, receivership statute, or the like, as they now exist, or as they may be amended, is filed by the other party or if such a petition is filed by any third party; or an application for a receiver is made by anyone and such petition or application is not resolved favorably within ninety (90) days.

- e. Effect of Expiration or Termination. Upon expiration or termination of this Agreement, you shall immediately discontinue use of the Issuetrak IP, including, but not limited to the Service, and without limiting your obligations under Section 10, you shall delete, destroy, or return all copies of the Issuetrak IP and certify in writing to Issuetrak that the Issuetrak IP has been deleted or destroyed. No expiration or termination of this Agreement will affect your obligation to pay all Fees and other amounts that may have become due before such expiration or termination, or entitle you to any refund.
- f. Return of Customer Data. Issuetrak will maintain Your Data on its archive for a period of no more than ninety (90) days after expiration or termination of this Agreement. Within this retention time period, and upon receipt of a written request, Issuetrak will return to you, at no charge and in a format to be mutually agreed upon, all of Your Data contained within the Service.

13. Limited Warranty; Disclaimer; Indemnification; Limitation of Liability.

- a. Limited Warranty. Issuetrak warrants that the Services will conform in all material respects to the service levels set forth on Attachment A when accessed and used in accordance with the Documentation. Issuetrak does not make any representations or guarantees regarding uptime or availability of the Service unless specifically identified in Attachment A. The remedies set forth in Attachment A are your sole remedies and Issuetrak's sole liability under the limited warranty set forth in this Section 13(a).
- b. Disclaimer. EXCEPT FOR THE LIMITED WARRANTY SET FORTH IN SECTION 13(a) ABOVE, THE SERVICES ARE PROVIDED "AS IS" AND ISSUETRAK DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT, AND ALL WARRANTIES ARISING FROM COURSE OF DEALING, USAGE OR TRADE PRACTICE. EXCEPT FOR THE LIMITED WARRANT SET FORTH IN SECTION 13(a) ABOVE, ISSUETRAK MAKES NO WARRANTY OF ANY KIND THAT THE SERVICES, OR ANY PRODUCTS OR RESULTS OF THE USE THEREOF, WILL MEET YOUR OR ANY OTHER PERSON'S REQUIREMENTS, BE COMPATIBLE OR WORK WITH ANY SOFTWARE, SYSTEM OR OTHER SERVICES, OR BE SECURE, ACCURATE, COMPLETE, FREE OF HARMFUL CODE, OR ERROR FREE. FURTHER, ISSUETRAK MAKES NO WARRANTY THAT THE SERVICE, OR YOUR USE THEREOF, WILL ENSURE THAT YOU ARE OR WILL BE IN COMPLIANCE WITH ANY APPLICABLE LAW OR REGULATION.

- c. Indemnification by Issuetrak. Subject to the limitations of liability in Section 13(f), below, Issuetrak will indemnify and hold you harmless from and against losses, damages, liabilities and costs (including reasonable attorney's fees) ("Losses") that you incur resulting from any third-party suit or proceeding ("Third Party Claims") that allege that your use of the Service in accordance with this Agreement, infringes a third party's U.S. intellectual property right that is a matter of public record as of the Effective Date. Issuetrak's obligations under this Section 13(c) are conditioned upon you providing Issuetrak with (i) prompt written notice of the infringement claim, (ii) your full cooperation in the defense of the claim, and (iii) sole authority to control the defense and settlement of the claim. If such a claim is made or appears possible, you agree to permit Issuetrak, at Issuetrak's sole discretion, to (A) modify or replace the Service, or component or part thereof, to make it non-infringing, or (B) obtain the right for you to continue to use the Service, or component or part thereof. If Issuetrak reasonably determines that neither alternative (A) nor (B) is reasonably available, Issuetrak may terminate this Agreement, in its entirety or with respect to the affected component or part, effective immediately on written notice to you. This Section 13(c) will not apply to the extent any alleged infringement arises from (1) use of the Service in combination with data, software, hardware, equipment or technology not provided by Issuetrak; (2) modifications to the Service not made by Issuetrak; or (3) Your Data.
- d. Indemnification by You. You will indemnify, hold harmless, and at Issuetrak's option, defend Issuetrak from and against any Losses resulting from any Third Party Claims that (a) allege that any use of Your Data or information in connection with this Agreement, infringes or misappropriates such third party's U.S. intellectual property right or (b) are based on your or any User's (i) negligence or willful misconduct; (ii) use of the Service in a manner not authorized by this Agreement; (iii) use of the Service in combination with data, software, hardware, equipment or technology not provided by Issuetrak; or (iv) modifications to the Service not made by Issuetrak, provided that you may not settle any Third Party Claim against Issuetrak unless Issuetrak consents to such settlement, and further provided that Issuetrak will have the right, at its option, to defend itself against such Third Party Claim or to participate in the defense thereof by counsel of its own choice.
- e. Sole Remedy. SECTIONS 13(c) AND 13(d) SET FORTH YOUR SOLE REMEDIES AND ISSUETRAK'S SOLE LIABILITY AND OBLIGATION FOR ANY ACTUAL, THREATENED, OR ALLEGED CLAIMS THAT THE SERVICE INFRINGES, MISAPPROPRIATES, OR OTHERWISE VIOLATES ANY INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY.
- f. Limitations of Liability. IN NO EVENT WILL ISSUETRAK BE LIABLE UNDER OR IN CONNECTION WITH THIS AGREEMENT UNDER ANY LEGAL OR EQUITABLE THEORY, INCLUDING BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, AND OTHERWISE, FOR ANY: (a) CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL, ENHANCED, OR PUNITIVE DAMAGES; (b) INCREASED COSTS, DIMINUTION IN VALUE OR LOST BUSINESS, PRODUCTION, REVENUES, OR PROFITS; (c) LOSS OF GOODWILL OR REPUTATION; (d) USE, INABILITY TO USE, LOSS, INTERRUPTION,

DELAY OR RECOVERY OF ANY DATA, OR BREACH OF DATA OR SYSTEM SECURITY; OR (e) COST OF REPLACEMENT GOODS OR SERVICES, IN EACH CASE REGARDLESS OF WHETHER ISSUETRAK WAS ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES OR SUCH LOSSES OR DAMAGES WERE OTHERWISE FORESEEABLE. IN NO EVENT WILL ISSUETRAK'S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT UNDER ANY LEGAL OR EQUITABLE THEORY, INCLUDING BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, AND OTHERWISE EXCEED THE AMOUNT OF FEES PAID BY YOU TO ISSUETRAK DURING THE TWELVE (12) MONTHS PRECEDING THE EVENT GIVING RISE TO THE CLAIM.

14. General Provisions.

- a. Governing Law; Venue. This Agreement is governed by and interpreted in accordance with the laws of the Commonwealth of Virginia, without regard to its conflict of laws principles. You agree that any action to interpret or enforce this Agreement shall be instituted and maintained in a court having appropriate jurisdiction and located in Norfolk, Virginia.
- b. Entire Agreement; Headings. The term "Agreement" includes this Cloud Based Application Agreement, the Quote, any and all applicable Attachments, schedules and exhibits. This Agreement sets forth the parties' entire agreement and understanding related to the subject matter hereof and merges all prior discussions between them. This Agreement's captions and headings are intended solely for convenience and are not intended to explain, modify or restrict any of the terms or provisions of this Agreement.
- c. Modifications to Agreement. Issuetrak may, in its sole discretion, modify this Agreement upon each renewal of this Agreement. Issuetrak will provide you with notice of any such changes at least 45 days in advance of the effective date of the applicable renewal date. You can find the most recent version of these terms and conditions on the website <https://issuetrak.com/terms-of-service>.
- d. Notice. Notices must be in writing and deemed effective (i) upon delivery if given in person or by electronic mail or facsimile transmission, or (ii) the next business day after being sent if sent by internationally recognized overnight courier, in any case addressed to Issuetrak, as indicated on its website, and to you, as indicated on your invoice, unless you give Issuetrak notice of a different address.
- e. Force Majeure. The non-performance of either party (except payment of Fees and another other amounts due hereunder) will be excused to the extent performance is rendered impossible by terrorism, war, strike, fire, flood, governmental acts or orders or restrictions, failure of suppliers, denial of service attacks, or any other reason where failure to perform is beyond the control and not caused by the negligence or willful misconduct of the non-performing party.
- f. Binding Effect; Assignment; Non-Agency; No Third-Party Beneficiaries. This Agreement is binding upon the parties hereto, their successors, assigns, heirs

and personal representatives. You may not assign your rights or duties under this Agreement to any other person(s) or entity(ies) without Issuetrak's prior written consent, except in the context of reorganization, merger, consolidation, acquisition or other restructuring involving all or substantially all of the voting securities and/or assets of your business. Issuetrak is permitted to assign this Agreement without your consent. Nothing in this Agreement will be construed to make the parties partners, joint venturers, representatives or agents of one another, nor will either party so represent to any third person or entity. Nothing in this Agreement is intended to, or will, create any third-party beneficiaries, whether intended or incidental and neither party will make any representations to the contrary.

- g. Partial Invalidity; Waiver. If any provision of this Agreement is held to be invalid by an arbitrator or a court of competent jurisdiction, then the remaining provisions will remain in full force and effect, unless the Agreement would thereby fail of its essential purpose. A party's failure in a given instance to enforce any of its rights or any of the other party's obligations hereunder will not be construed or act as a waiver of enforcement of such right or obligation in any other instance.
- h. Legal Expenses. The substantially prevailing party in any arbitration or legal action brought by one party against the other under this Agreement will be entitled, in addition to any other rights and remedies it may have, to reimbursement for its reasonable costs and expenses, including court costs and reasonable fees and expenses of attorneys and other professionals.
- i. Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which will be deemed an original and all of which together will constitute but one (1) instrument. A facsimile or digital signature will have the same legal effect as an original signature. A digital or PDF copy of this Agreement will have the same effect as an original.
- j. Attachments. This Agreement is supplemented by and subject to the terms and conditions of the following attachment(s), if applicable, which will govern in case of any conflict with the rest of the Agreement: (i) Attachment A: Service Level Terms and Conditions, (ii) Attachment B: Data Processing Addendum, (iii) Attachment C: Business Associate Addendum, and (iv) Attachment D: Chat Messaging Service Agreement. Attachments B, C and D are only applicable under certain circumstances.
- k. Survival. Rights and obligations created by this Agreement which are continuing in nature, including without limitation those rights and obligations described in Sections 6, 7(c), 7(d), 9, 10(a)-(d), 12(e), 12(f), 13(c)-(f), and 14 of the Agreement, will survive termination of this Agreement and remain in full force and effect.

ATTACHMENT A: SERVICE-LEVEL TERMS AND CONDITIONS

1. Service Availability.

- a. Standard Hours for Service Availability. Subject to the terms and conditions of

the Agreement, Issuetrak will use commercially reasonable efforts to make the Service available at least 99% of the time as measured over the course of each calendar month, excluding unavailability as a result of any of the exceptions set forth below (the "Availability Requirement"). For purposes of calculating the Availability Requirement, the following are "Exceptions" to the Availability Requirement, and neither the Service will be considered unavailable nor any service level failure will be deemed to occur in connection with any failure to meet the Availability Requirement or impaired ability of you or any User to access or use the Service that is due, in whole or in part, to any: (i) act or omission by you or any User, or access to or use of the Service by you or any User, or using you or any User's access credentials, that does not strictly comply with this Agreement; (ii) your or a User's Internet connectivity; (iii) force majeure event; (iv) failure, interruption, outage, or other problem with any software, hardware, system, network, facility, or other matter not supplied by Issuetrak pursuant to this Agreement; (v) Scheduled Downtime; (vi) Planned Service Outage; or (vii) disabling, suspension, or termination of the Service pursuant to the terms of the Agreement.

- b. Scheduled Downtime. Issuetrak may use the time periods commencing at 10:00 p.m. Eastern Time on Tuesday, Friday and Saturday and ending at 6:00 a.m. Eastern Time on the following day for hardware maintenance, repair, or replacement or maintenance, updates, upgrades, implementation of patches or fixes, or installation of new releases of the Service ("Scheduled Downtime").
 - c. Planned Service Outages. In the event that a major renovation or upgrade is required, a period of additional scheduled downtime ("Planned Service Outage") may be scheduled outside of Scheduled Downtime hours. Issuetrak will use commercially reasonable efforts to give you at least forty-eight (48) hours' notice of any Planned Service Outage.
 - d. Rights of Issuetrak. Issuetrak may temporarily suspend access to and use of the Service: (i) during Scheduled Downtime and Planned Service Outages; (ii) during any unavailability caused by circumstances beyond Issuetrak's reasonable control, including a force majeure event; or (iii) if Issuetrak suspects or detects any malicious data or misuse of the Service by you or your Users.
2. Releases. Issuetrak may apply new releases to the Service. The three levels of Releases, Major, Minor, and Patch Releases are identified by a release version number consisting of a sequence of three numbers separated by a dot ("."). The first number in the sequence identifies a Major Release where dramatic or substantial changes to the product are included. The second number identifies a Minor Release when a few new features are included but are not substantial enough to be considered a Major Release. The third number in the sequence is a Patch Release which includes fixes to issues, but no new features.
3. Service Level Fee Adjustments. In the event of a material failure of the Services to meet the Availability Requirement ("Service Level Failure"), Issuetrak will, upon request, issue you a credit in the amount of one day of the Monthly Fee for the Service due for the period in which the Service Level Failure occurred ("Service Credit"); provided that (a) Issuetrak has no obligation to issue a Service Credit unless (i) you report the Service

Level Failure to Issuetrak immediately on becoming aware of it, and (ii) you request the Service Credit in writing within fifteen (15) days of the Service Level Failure; and (b) in no event will a Service Credit for any month exceed 100% percent of the total fees that would be payable for such month if no Service Level Failure had occurred. You acknowledge and agree that this Service Credit will be your only remedy, and Issuetrak's sole obligation and liability, for a Service Level Failure.

4. Support Requests. During the Term, Issuetrak will accept support requests related to the Service by telephone, electronic mail, or the Issuetrak Support site twenty-four (24) hours per day, seven (7) days a week. However, subject to the provisions set forth below, Issuetrak will provide technical support staff only during the hours of 8:00 a.m. and 8:00 p.m. Eastern Time, Monday through Friday, excluding U.S. Federal and/or company holidays. Issuetrak may employ a third-party answering service, as needed, when technical support staff is not available. Outside normal business hours, during the Term, Issuetrak will use reasonable efforts to provide technical support for any problem related to the Service that renders unusable the Service by you (an "Emergency"). Issuetrak will provide such after-hours Emergency support only by telephone and only to the extent that Issuetrak has technicians available. Issuetrak support staff will determine the severity of the Emergency in conjunction with you. Under Emergency conditions, Issuetrak may opt to follow the quickest path to resolution to restore services as quickly as reasonably possible, including, but not limited to, rolling back executed changes that inflicted the Emergency. Issuetrak may monitor and track all support-related requests and monitor and record all support-related telephone calls and electronic mail to, among other things, ensure accurate issue logs and to facilitate the creation of a "lessons-learned" database.

ATTACHMENT B: DATA PROCESSING ADDENDUM

This Data Processing Addendum ("Addendum") forms part of the Cloud-Based Application Agreement ("Agreement") between Issuetrak, Inc. ("Issuetrak") and the Company referred to as "You" therein ("Client") and applies only to the extent that (1) Client is subject to the Data Protection Laws, including the General Data Protection Regulation ("GDPR") and the California Consumer Privacy Act of 2018 ("CCPA"); (2) Client is a Controller of Personal Data Processed by Issuetrak as that term is defined in the Data Protection Laws; and (3) Issuetrak is a Processor of such Personal Data as that term is defined in the Data Protections Laws. If all of the foregoing conditions are met, Client and Issuetrak agree as follows:

1. Definitions. The following definitions apply to this Addendum. Any capitalized terms not defined in this Addendum have the meaning ascribed to them in the Agreement.

(a) "Commercially Reasonable Efforts" means in respect of the party in question, taking such steps and performing them in such a way as that party would undertake to achieve a particular desired result for its own benefit, assuming such party was acting in a determined, prudent and reasonable manner and in the best interests of the other party.

(b) "Confidential Information" means any information that is received from or on behalf of a disclosing party and/or is obtained by a party or its personnel in connection with or arising out of this Agreement, including for the purposes of providing or receiving the Services that, if disclosed in tangible form, is marked confidential or if disclosed otherwise is confirmed in writing as being confidential or, whether disclosed in tangible form or

otherwise, is manifestly confidential. Confidential Information includes this Agreement and the relationship between the parties but does not include Personal Data.

(c) "Data Protection Laws" means all data protection and privacy laws that apply to the Processing of Personal Data under this Addendum, including:

(i) all statutes, statutory instruments, regulations, by-laws, ordinances or subordinate legislation from time to time made or issued to which a party is subject;

(ii) the common law and the law of equity as applicable to the Parties;

(iii) any binding court order or judgment;

(iv) any applicable guidance, policy or standard which, in each case, is enforceable by law; and

(v) any applicable direction, policy, rule or order that is legally binding and that is issued by a Supervisory Authority insofar as the same relates to the Processing, protection or security of Personal Data.

(d) "Data Subject" means the natural living person to whom Personal Data relates.

(e) "Standard Contractual Clauses" means the standard data protection clauses for the transfer of personal data to processors established in third countries which do not ensure an adequate level of data protection, as described in Article 46 of the GDPR and approved by European Commission decision 2010/87/EC, dated 5 February 2010.

(f) "Good Industry Practice" means the exercise of at least the skill, care, prudence and efficiency which would reasonably be expected for a similarly situated provider of services that are the same as, or substantially similar to, the Services under the Agreement.

(g) "Personal Data" means any information, including information in electronic form, that is included in Your Data and is processed by Issuetrak to provide the Service, and that relates to a living person who can be identified: (a) from those data, or (b) from those data and the use of additional information, taking into account all means reasonably likely to be used by anyone to identify the person directly or indirectly and includes, without limitation, first and last names, ID numbers, including government-issued identifiers, personal dates such as birthdates, email addresses, location data, internet protocol address or other online identifiers and information concerning race, ethnicity or mental or physical health.

For clarity, "Personal Data" includes "Personal Information," as that term is defined by the CCPA, and personal data that is publicly available. The term "Personal Data" excludes personal data that has been anonymized so that it is no longer possible to identify a Data Subject from the information, taking into account all means likely reasonably to be used by Issuetrak or anyone else to identify them.

(h) "Personal Data Breach" means a breach of security leading to destruction, loss, alteration, unauthorized disclosure of, or access to, Personal Data transmitted, stored or otherwise processed by Issuetrak or its Subprocessors, which is adverse to this

Addendum or Data Protection Laws, or otherwise unlawful.

(i) "Personnel" shall include the relevant Party's partners, members, employees, officers and agents, self-employed contractors and those of its sub-contractors.

(j) "Processing" means any operation or set of operations performed on data, whether or not by automated means, such as accessing, collection, downloading, recording, organization, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction (and "Process" and "Processed" shall be construed accordingly).

(k) "Subprocessor" means anyone engaged by Issuetrak to perform Processing that Issuetrak performs on behalf of Client.

(l) "Supervisory Authority" means any person or body having regulatory, supervisory, administrative, governmental or competent authority from time to time over all or any part of the Issuetrak or Client, including the European Data Protection Board. For avoidance of doubt, this includes any successors to any person or body that would be considered to be a "Supervisory Authority" at the date of this Addendum.

2. Data Protection.

(a) With respect to the Parties' rights and obligations under this Addendum, the Parties agree that Issuetrak is a Processor and Client is a Controller (each as defined in Data Protection Laws) of Personal Data.

(b) The Parties agree that Issuetrak is a "Service Provider," as that term is defined in the CCPA, with respect to any Personal Data subject to the CCPA. Issuetrak is prohibited from: (i) selling Personal Data; (ii) retaining, using, or disclosing Personal Data for any purpose other than providing the Service, or as otherwise permitted by the CCPA; and (iii) retaining, using, or disclosing Personal Data outside of the direct business relationship between the person and the business. Issuetrak hereby certifies that it understands the restrictions in this Section 2(b) and will comply with them.

(c) The subject matter and duration of the Processing of Personal Data are described in the Agreement and this Addendum. The nature and purpose of the Processing of Personal Data is providing the Service.

(d) The types of personal data and the categories of data subjects are set forth in Schedule 1 to this Addendum.

3. Responsibilities of Client.

(a) Client shall process Personal Data in compliance with Data Protection Laws and good data processing practice.

(b) Client's documented instructions of Processing of Personal Data are primarily given in

the Agreement and this Addendum. Client shall have the right to give Issuetrak new documented instructions or amend the documented instructions given by Client to Issuetrak. Issuetrak is entitled to charge for reasonable and substantiated additional costs for complying with new or amended documented instructions from Client.

4. Responsibilities of Issuetrak. Issuetrak shall and shall procure that its personnel shall, at all times:

(a) process Personal Data in compliance with Data Protection Laws and good data processing practice;

(b) process Personal Data in accordance with this Addendum or on documented instructions from Client, unless prescribed otherwise by a provision of Data Protection Laws applicable to Issuetrak. In such case, Issuetrak shall inform Client of such requirement before beginning the Processing of Personal Data in accordance with the instructions, unless informing of such requirement is prohibited in Data Protection Laws;

(c) inform Client without undue delay if Issuetrak considers that instructions of Client are in breach of Data Protection Laws;

(d) ensure that Issuetrak' personnel who are authorized to process Personal Data agree to maintain the confidentiality of such Personal Data in a manner consistent with the provisions of this Addendum;

(e) implement and maintain technical and organizational measures to ensure an appropriate level of security to protect Personal Data against unauthorized access and loss, destruction, damage, alteration or disclosure, or against other unlawful Processing;

(f) follow the conditions concerning the use of Subprocessors as prescribed in Section 7(a) below;

(g) taking into account the information available to Issuetrak, provide reasonable assistance to Client in responding to requests for exercising the rights of Data Subjects where Client does not have the required information. Issuetrak is entitled to charge Client, and Client must pay to Issuetrak upon demand, for additional costs and expenses that were reasonably incurred as a result of complying with this Section 4(g). Issuetrak will promptly notify Client if it receives a request from a Data Subject to access, correct or delete that Data Subject's Personal Data or other right under Data Protection Laws or if a Data Subject objects to the Processing thereof and Issuetrak shall not respond to a Data Subject request without Client's prior written consent;

(h) taking into account the information available to Issuetrak, provide reasonable assistance to Client in ensuring compliance with its obligations set out in Data Protection Laws relating to data security, Personal Data Breaches, data protection impact assessments, and prior consulting obligations. Issuetrak is entitled to charge Client, and Client must pay to Issuetrak upon demand, for additional costs and expenses that were reasonably incurred as a result of complying with this Section 4(h);

(i) at the choice of Client, delete or return Personal Data to Client on termination of the

Services and delete all existing copies unless Issuetrak is required to store such Personal Data by any law or regulation to which Issuetrak is subject; and

(j) make available to Client all information necessary to demonstrate compliance with Issuetrak' obligations set out in this Addendum and in Data Protection Laws. Client is obliged to keep all such information confidential at all times.

5. Personal Data Breach Notification.

(a) Issuetrak shall notify Client of all Personal Data Breaches without undue delay, but no later than one (1) business day after Issuetrak has become aware of the Personal Data Breach. Issuetrak shall make reasonable efforts to identify the cause of such Personal Data Breach and take those steps deemed necessary and reasonable in order to remediate the cause of such Personal Data Breach. The Personal Data Breach notification shall contain the following:

(i) a description of the nature of the Personal Data Breach, including the categories and approximate number of Data Subjects concerned and the categories and approximate number of data records concerned;

(ii) the name and contact details of the relevant contact person at Issuetrak handling the Personal Data Breach;

(iii) a description of the likely consequences and/or actual, realized consequences of the Personal Data Breach; and

(iv) a description of the measures Issuetrak has taken to address the Personal Data Breach and to mitigate its adverse effects.

(b) To the extent Issuetrak is unable to provide all of the information set forth above upon initial notice to Client, Issuetrak may supplement such notice with information as it becomes available and/or known to Issuetrak.

(c) Issuetrak shall document Personal Data Breaches and, subject to attorney-client privilege, disclose the documentation to Client upon Client's written request.

(d) After Issuetrak has become aware of the Personal Data Breach, Issuetrak shall ensure security of Personal Data and take appropriate measures to ensure protection of Personal Data in cooperation with Client.

6. Transfers of Personal Data.

(a) Issuetrak may process Personal Data anywhere in the world where Issuetrak or its Sub-processors maintain data Processing operations. Issuetrak shall at all times provide an adequate level of protection for the Personal Data Processed, in accordance with the requirements of Data Protection Laws.

(b) To the extent Issuetrak's performance or Client's use of the Services requires the

transfer of Personal Data from within the European Union or Switzerland to the United States or any other country that has not been designated by the European Commission or Swiss Federal Data Protection Authority (as applicable) as providing an adequate level of protection for Personal Data, the Standard Contractual Clauses are incorporated by reference in this Addendum and will apply to the transfer, unless the parties jointly agree that another valid mechanism under Data Protection Laws may be used with respect to the export Personal Data. For purposes of the Standard Contractual Clauses:

- (i) Client is the “data exporter” and Issuetrak is the “data importer;”
- (ii) Issuetrak’s obligations under the Standard Contractual Clauses will be governed by the laws of the member state(s) in which Client is established;
- (iii) The details of Appendix 1 of the Standard Contractual Clauses are set forth in Schedule 1 to this Addendum, which will be completed and executed by the parties;
- (iv) The details of Appendix 2 of the Standard Contractual Clauses are set forth at <https://www.issuetrak.com/security/>; and
- (v) In the event of any conflict between this Addendum and the Standard Contractual Clauses, the Standard Contractual Clauses will prevail.

7. Subprocessors.

- (a) Issuetrak is entitled to engage and use Subprocessors in Processing Personal Data. Issuetrak may continue to use those Subprocessors already engaged by Issuetrak as of the date of this Addendum, and subject to Issuetrak meeting its obligations in Section 7(d) below Client hereby approves of such Subprocessors.
- (b) Issuetrak is entitled to reduce the number of Subprocessors without separate notice to Client.
- (c) Issuetrak shall notify Clients at least thirty (30) days prior to new Subprocessor commencing to Process Personal Data under this Addendum. Client may deny the use of the new Subprocessor only if Client has good faith, reasonable doubts about the ability of the Subprocessor to comply with Data Protection Laws. If Client does not deny the use of the new Subprocessor in writing within fourteen (14) days from the date of written notice from Issuetrak, Issuetrak may use the new Subprocessor in Processing Personal Data. If Client reasonably objects to a change in Subprocessor and Issuetrak cannot change the Service or recommend a commercially reasonable change to Client’s configuration or use of the Service to avoid Processing of Personal Data by such Subprocessor, Client may terminate the Agreement. In such case, Issuetrak will refund Client any prepaid fees covering the remainder of the term of the Agreement.
- (d) Issuetrak shall take appropriate measures to ensure that the Subprocessors comply with the obligations specified in this Addendum, including security and confidentiality requirements, and Issuetrak shall enter into a written agreement with each Subprocessor containing data protection obligations substantially similar to, and no less protective than those contained in this Addendum. Issuetrak is responsible for the performance of its

Subprocessors.

8. Amendment. Except as set forth herein, this Addendum may only be amended by mutual written agreement of the Parties.

Schedule 1 to Data Processing Addendum

This Schedule forms part of the EU Model Clauses and must be completed and signed by the parties. The Member States may complete or specify, according to their national procedures, any additional necessary information to be contained in this Schedule.

Data exporter

The data exporter is (please specify briefly your activities relevant to the transfer):

The data exporter is the entity identified as "Client" in the Data Processing Addendum executed between the data exporter and the data importer, a user of the cloud-based application provided by the data importer.

Data importer

The data importer is (please specify briefly activities relevant to the transfer):

The data importer is Issuetrak, Inc., the provider of a cloud-based application utilized by the data exporter to report on and monitor the resolution of issues related to the data exporter's business.

Data subjects

The personal data transferred concern the following categories of data subjects (please specify):

The data exporter may, at its sole discretion, submit Personal Data to the Service, which may include, but is not limited to, the following categories of Data Subjects: employees, customers, prospective customers, service providers, business partners, vendors, advisors (all of whom are natural persons) of the data exporter and any natural person(s) authorized by the data exporter to use the Services.

Categories of data

The personal data transferred concern the following categories of data (please specify):

The data exporter may, at its sole discretion, submit Personal Data to the Service which may include, but is not limited to, the following categories of data: first and last name, email address, telephone number, address (business or personal), date of birth, communications (telephone recordings, voicemail), customer service information, and title.

Special categories of data (if appropriate)

The personal data transferred concern the following special categories of data (please specify):

Processing operations

The personal data transferred will be subject to the following basic processing activities (please specify):

The data importer will host and process Personal Data in the course of providing its cloud-based application for use by the data exporter, including as necessary to provide service and support.

DATA EXPORTER	DATA IMPORTER
Signature:	Signature:
Name:	Name:
Title:	Title:
Date:	Date:

ATTACHMENT C: BUSINESS ASSOCIATE AGREEMENT ADDENDUM

This Business Associate Agreement (“BAA”) applies only to the extent that (1) Client is a “covered entity” as that term is defined in the HIPAA Rules; (2) Issuetrak is a “business associate” as that term is defined in the HIPAA Rules; (3) Client is entering PHI into the Service; and (4) Issuetrak is creating, receiving, transmitting or maintaining ePHI on behalf of Client. If all of the foregoing conditions are met, Client and Issuetrak enter into this Business Associate Agreement pursuant to the Health Insurance Portability and Accountability Act of 1996, as amended (“HIPAA”), to address the HIPAA requirements with respect to “business associates,” as defined under the privacy, security, breach notification and enforcement rules at 45 C.F.R. Part 160 and Part 164 (“HIPAA Rules”). A reference in this BAA to a section in the HIPAA Rules means the section as in effect or as amended. This BAA is effective as of the date that Covered Entity indicates its acceptance of this BAA (the “Effective Date”).

1. Definitions.

(a) This BAA is intended to ensure that Business Associate will establish and implement appropriate safeguards for the Protected Health Information (“PHI”) (as defined under the HIPAA Rules) that Business Associate may receive, create, maintain, use or disclose in

connection with the functions, activities and services that Business Associate performs for Covered Entity. The functions, activities and services that Business Associate performs for Covered Entity are defined in Cloud Based Application Agreement (the "Underlying Agreement").

(b) Pursuant to changes required under the Health Information Technology for Economic and Clinical Health Act of 2009 (the "HITECH Act") and under the American Recovery and Reinvestment Act of 2009 ("ARRA"), this BAA also reflects federal breach notification requirements imposed on Business Associate when "Unsecured PHI" (as defined under the HIPAA Rules) is acquired by an unauthorized party and the expanded privacy and security provisions imposed on business associates.

(c) Unless the context clearly indicates otherwise, the following terms in this BAA shall have the same meaning as those terms in the HIPAA Rules: Breach, Data Aggregation, Designated Record Set, disclosure, Electronic Media, Electronic Protected Health Information (ePHI), Health Care Operations, individual, Minimum Necessary, Notice of Privacy Practices, Required By Law, Secretary, Security Incident, Subcontractor, Unsecured PHI and use.

(d) A reference in this BAA to the Privacy Rule means the Privacy Rule, in conformity with the regulations at 45 C.F.R. Parts 160-164 (the "Privacy Rule") as interpreted under applicable regulations and guidance of general application published by the HHS, including all amendments thereto for which compliance is required, as amended by the HITECH Act, ARRA and the HIPAA Rules.

2. General Obligations of Business Associate.

(a) Business Associate agrees not to use or disclose PHI, other than as permitted or required by this BAA or as Required By Law, or if such use or disclosure does not otherwise cause a Breach of Unsecured PHI.

(b) Business Associate agrees to use appropriate safeguards, and comply with Subpart C of 45 C.F.R. Part 164 with respect to ePHI, to prevent use or disclosure of PHI other than as provided for by the BAA.

(c) Business Associate agrees to mitigate, to the extent reasonably practicable, any harmful effect that is known to Business Associate as a result of a use or disclosure of PHI by Business Associate in violation of this BAA's requirements or that would otherwise cause a Breach of Unsecured PHI.

(d) Business Associate agrees to report to Covered Entity any Breach of Unsecured PHI not provided for by the BAA of which it becomes aware within ten (10) business days of "discovery" within the meaning of the HITECH Act. Such notice shall include the identification of each individual whose Unsecured PHI has been, or is reasonably believed by Business Associate to have been, accessed, acquired, or disclosed in connection with such Breach. In addition, Business Associate shall provide any additional information reasonably requested by Covered Entity for purposes of investigating the Breach and any other available information that Covered Entity is required to include to the individual under 45 C.F.R. 164.404(c) at the time of notification or promptly thereafter as information

becomes delayed. Business Associate's notification of a Breach of Unsecured PHI under this Section shall comply in all respects with each applicable provision of section 13400 of Subtitle D (Privacy) of ARRA, the HIPAA Rules and related guidance issued by the Secretary or the delegate of the Secretary from time to time.

(e) Business Associate agrees, in accordance with 45 C.F.R. 164.502(e)(1)(ii) and 164.308(b)(2), if applicable, to require that any Subcontractors that create, receive, maintain or transmit PHI on behalf of the Business Associate agree to the same restrictions, conditions and requirements that apply to the Business Associate with respect to such information.

(f) To the extent Business Associate maintains a Designated Record Set, Business Associate agrees to make available PHI in a Designated Record Set to the Covered Entity to enable the Covered Entity to fulfill its obligations under the Privacy Rule, including 45 C.F.R. 164.524.

(g) Business Associate agrees to comply with an individual's written request to restrict the disclosure of their personal PHI in a manner consistent with 45 C.F.R. 164.522, except where such use, disclosure or request is required or permitted under applicable law.

(h) Business Associate agrees that when requesting, using or disclosing PHI in accordance with 45 C.F.R. 502(b)(1) that such request, use or disclosure shall be to the minimum extent necessary to accomplish the intended purpose of such request, use or disclosure, as interpreted under related guidance issued by the Secretary from time to time.

(i) To the extent Business Associate maintains a Designated Record Set, Business Associate agrees to make PHI available to the Covered Entity so that the Covered Entity can make any amendments to PHI in the Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 C.F.R. 164.526.

(j) Business Associate agrees to maintain and make available the information required to provide an accounting of disclosures to the Covered Entity as necessary to satisfy Covered Entity's obligations under 45 C.F.R. 164.528.

(k) Business Associate agrees to make its internal practices, books and records, including policies and procedures regarding PHI, relating to the use and disclosure of PHI and Breach of any Unsecured PHI received from Covered Entity, or created or received by the Business Associate on behalf of Covered Entity, available to the Secretary for the purpose of the Secretary determining the Covered Entity's compliance with the Privacy Rule.

(l) To the extent that Business Associate is to carry out one or more of Covered Entity's obligation(s) under Subpart E of 45 C.F.R. Part 164, Business Associate agrees to comply with the requirements of Subpart E that apply to the Covered Entity in the performance of such obligation(s).

(m) Business Associate agrees to account for the following disclosures:

(i) Business Associate agrees to maintain and document disclosures of PHI in a manner

as would be required for Covered Entity to respond to a request by an individual for an accounting of PHI disclosures.

(ii) Business Associate agrees to provide to Covered Entity upon written request, information collected in accordance with this Section 2(m), to permit Covered Entity to respond to a request by an individual for an accounting of PHI disclosures.

(iii) Business Associate agrees to account for any disclosure of PHI used or maintained as an Electronic Health Record (as defined in Section 5) ("EHR") in a manner consistent with 45 C.F.R. 164.528 and related guidance issued by the Secretary from time to time; provided that an individual shall have the right to receive an accounting of disclosures of EHR by the Business Associate made on behalf of the Covered Entity only during the three years prior to the date on which the accounting is requested in writing from Covered Entity.

(iv) In the case of an EHR that the Business Associate acquired on behalf of the Covered Entity as of January 1, 2009, Section 2(m)(iii) above shall apply to disclosures with respect to PHI made by the Business Associate from such EHR on or after January 1, 2014. In the case of an EHR that the Business Associate acquires on behalf of the Covered Entity after January 1, 2009, Section 2(m)(iii) above shall apply to disclosures with respect to PHI made by the Business Associate from such EHR on or after the later of January 1, 2011 or the date that it acquires the EHR.

(n) Business Associate may not use or disclose PHI in a manner that would violate Subpart E of 45 C.F.R. Part 164 if done by the covered entity

3. Permitted Uses and Disclosures by Business Associate.

(a) Business Associate agrees to use or disclose PHI only in a manner that is consistent with this BAA, the Privacy Rule or Security Rule (as defined in Section 5) and only in connection with providing services to Covered Entity; provided that the use or disclosure would not violate the Privacy Rule, including 45 C.F.R. 164.504(e), if the use or disclosure would be done by Covered Entity.

(b) Business Associate may use and disclose PHI as permitted in the Underlying Agreement or as Required By Law.

(c) Business Associate may use and disclose PHI for the proper management and administration of Business Associate to carry out the legal responsibilities of Business Associate, provided that such uses or disclosures are permitted under state and federal confidentiality laws.

4. Obligations of Covered Entity.

(a) Covered Entity shall:

(i) Provide Business Associate with the Notice of Privacy Practices that Covered Entity produces in accordance with the Privacy Rule, and any changes or limitations to such

notice under 45 C.F.R. 164.520, to the extent that such changes or limitations may affect Business Associate's use or disclosure of PHI.

(ii) Notify Business Associate in writing of any restriction to the use or disclosure of PHI that Covered Entity has agreed to or is required to abide by under 45 C.F.R. 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of PHI under this BAA.

(iii) Notify Business Associate in writing of any changes in or revocation of permission by an individual to use or disclose PHI, if such change or revocation may affect Business Associate's permitted or required uses and disclosures of PHI under this BAA.

(b) Covered Entity shall not request Business Associate to use or disclose PHI in any manner that would not be permissible under the Privacy and Security Rule if done by Covered Entity, except as provided under Section 3 of this BAA.

5. Compliance with Security Rule.

(a) Business Associate shall comply with the HIPAA Security Rule, which shall mean the Standards for Security of Electronic Protected Health Information at 45 C.F.R. Part 160 and Subparts A and C of Part 164, as amended by ARRA and the HITECH Act. The term "Electronic Health Record" or "EHR" as used in this BAA shall mean an electronic record of health-related information on an individual that is created, gathered, managed and consulted by authorized health care clinicians and staff.

(b) In accordance with the Security Rule, Business Associate agrees to:

(i) Implement administrative, physical and technical safeguards to reasonably and appropriately protect the confidentiality, integrity and availability of the ePHI that it creates, receives, maintains or transmits on behalf of Covered Entity as required by the Security Rule; and

(ii) Report to the Covered Entity any Security Incident of which it becomes aware. Covered Entity acknowledges and agrees that this Section 5(b)(ii) constitutes notice by Business Associate to Covered Entity of the ongoing existence and occurrence or attempts of unsuccessful Security Incidents for which no additional notice to Covered Entity shall be required. Unsuccessful Security incidents means, without limitation, pings and other attacks on firewall, port scans, unsuccessful log-on attempts, denial of service attacks and any combination of the above, so long as no such incident results in unauthorized access, use or disclosure of PHI.

6. Term and Termination.

(a) This BAA shall become effective on the Effective Date and shall continue in effect until all obligations of the parties have been met, including return or destruction of all PHI in Business Associate's possession (or in the possession of Business Associate's agents and/or contractors) as necessary, unless sooner terminated as provided herein. It is expressly agreed that the terms and conditions of this BAA designed to safeguard PHI shall survive expiration or other termination of the Underlying Agreement(s) and shall

continue in effect until Business Associate has performed all obligations under this BAA.

(b) Upon either party's knowledge of material breach by the other party, the non-breaching party shall provide an opportunity for the breaching party to cure the breach or end the violation. If the breaching party does not cure the breach or end the violation within a reasonable period of time from the notification of the breach, or if a material term of the BAA has been breached and a cure is not possible, the non-breaching party may terminate this BAA, upon written notice to the other party. If termination is not feasible, the non-breaching party may report the breach to the Secretary.

(c) Upon termination of this BAA for any reason, the parties agree that Business Associate shall return to Covered Entity or, if agreed to by Covered Entity, destroy all PHI received from Covered Entity, or created, maintained, or received by Business Associate on behalf of Covered Entity, that the Business Associate still maintains in any form. In the event Business Associate determines that returning or destroying PHI is infeasible, Business Associate shall provide Covered Entity with notification of the conditions that make return or destruction infeasible. Business Associate shall extend the protections of this BAA to such PHI and limit further uses and disclosures of such PHI to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such PHI. Business Associate shall only be required to return or destroy PHI when it is feasible to do so.

7. Miscellaneous.

(a) The parties agree to take such reasonable action as is necessary to amend this BAA to comply with the requirements of the Privacy Rule, the Security Rule, HIPAA, ARRA, the HITECH Act, the HIPAA Rules and any other applicable law.

(b) The respective rights and obligations of Business Associate under Section 6 and Section 7 of this BAA shall survive the termination of this BAA.

(c) This BAA shall be interpreted such that any ambiguity shall be resolved in favor of a meaning that permits Covered Entity to comply with the HIPAA Rules. Any provision of this BAA that differs from those mandated by the HIPAA Rules, but is nonetheless permitted by the HIPAA Rules, shall be adhered to as stated in this BAA.

(d) This BAA may only be modified in a writing signed by both parties.

(e) This BAA constitutes the entire agreement between the parties related to the subject matter of this BAA. This BAA supersedes all prior negotiations, discussions, representations or proposals, whether oral or written. This BAA may not be modified unless done so in writing and signed by a duly authorized representative of both parties. If any provision of this BAA, or part thereof, is found to be invalid, the remaining provisions shall remain in effect.

(f) This BAA will be binding on the successors and assigns of the Covered Entity and the Business Associate. However, this BAA may not be assigned, in whole or in part, without the written consent of the other party. Any attempted assignment in violation of this provision shall be null and void.

(g) For avoidance of doubt, and not to the exclusion of another other provision, Section 13(f) shall apply to this BAA.

(h) Notices shall be given as specified in the Underlying Agreement.

(i) Except to the extent preempted by federal law, this BAA shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

ATTACHMENT D: CHAT MESSAGING SERVICE AGREEMENT

NOTE: This Section is only applicable to users of Issuetrak’s optional chat messaging service.

Issuetrak licenses the chat messaging service (“Chat Service”) from a third-party vendor (“Chat Provider”). The Chat Service allows Users to share messages with other Users through the Chat Provider’s website. If Customer uses the Chat Service, it agrees to the terms set forth in this Attachment.

1.

Chat Service customers shall not to record, upload, post, transmit, cause the display, playback or performance of, or otherwise make available any content that:

- is harmful, threatening, abusive, harassing, tortious, vulgar, hateful, obscene, pornographic excessively violent or racially, ethnically or otherwise offensive or discriminatory;
- is illegal, tortious, defamatory, libelous or invasive of another’s privacy or publicity rights;
- infringes any patent, trademark, trade secret, copyright or other proprietary or intellectual property rights of any party or includes copyrighted materials for which you do not possess appropriate rights;
- you do not have a right to make available under law or contractual or fiduciary relationships;
-

includes private information of any third-party

o

is advertising, solicitation or promotional material;

o

contains software viruses or any other computer code, files or programs designed to destroy, interrupt or otherwise limit the functionality of any computer software, computer hardware or other equipment.

2.

All messages, information, videos or other content, whether publicly posted, displayed or performed on, or privately transmitted, are the sole responsibility of the person who sends or publishes such items. Accordingly, Customer is responsible for all items that its Users record, upload, post, cause a display, playback or performance of, email, transmit or otherwise make available via the website. Issuetrak may, but has no obligation to, monitor or screen the content posted and/or displayed or performed in the Chat Service and to remove any content in its sole discretion. Nevertheless, CUSTOMER REMAINS SOLELY RESPONSIBLE FOR THE CONTENT ITS USERS RECORD, UPLOAD, POST, CAUSE TO BE DISPLAYED, PLAYED BACK OR PERFORMED IN ANY AREAS OF THE CHAT SERVICE AND THAT ITS USERS TRANSMIT IN ANY OF THEIR COMMUNICATIONS THAT USE THE CHAT SERVICE.

3.

Customer may not do any of the following to the Chat Service:

o

use the Chat Service in any manner that could damage, disable, overburden, disrupt or impair the Chat Service or any Chat Service server, or the network(s) connected to any Chat Service server, or interfere with any other party's use and enjoyment of the Chat Service;

o

disobey any applicable policies or regulations of networks connected to the Chat Service;

o

use any robot, spider, site search/retrieval application, or other device to retrieve, index or interface with any portion of the Chat Service;

o

modify, adapt, translate, reverse engineer or frame the Chat Service or reformat it in any way or create user accounts using any automated means or under false pretenses.

4.

No Responsibility for Third-Party Content. Customer understands that the Chat Service acts only as a technical interface between users and that Issuetrak and its Chat Provider do not verify the qualifications of users, nor do they evaluate or control in any ongoing manner exchanges between users. Any opinions or statements expressed by a user are those of the user alone, and are not to be attributed to Issuetrak or its Chat Provider who cannot and do not assume responsibility for the accuracy, completeness, safety, reliability, timeliness, innocuousness, legality or applicability of anything said, written, posted, displayed or otherwise made available by any user. Customer understands that its users may be exposed to content that they find offensive, and that Customer and its users use the Chat Service at their own risk.

5.

Interstate and International Use. Users in the European Union consent to the collection and processing of personal information, as described in this Agreement, in the United States. All users understand the potential cross-border nature of communications made using the Chat Service, and acknowledge that using the Chat Service may result in interstate and international transmission of data.

6.

Content License. Customer retains the copyright and any other rights it already holds in content which it submits, posts or displays on or through, the Chat Service. By submitting, posting or displaying the content Customer gives Issuetrak or its Chat Provider a perpetual, irrevocable, worldwide, royalty-free, and non-exclusive license to reproduce, adapt, modify, translate, publish, transmit and distribute any content which Customer submits, posts or displays on or through, the Chat Service. This license is for the sole purpose of enabling Issuetrak or its Chat Provider to maintain, operate and provide the Chat Service. Neither Issuetrak nor its Chat Provider shall make such content available to other companies, organizations or individuals without Customer's permission.

7.

Copyright Policy. In addition to any other use restrictions set forth in this Agreement, Customer may not engage in or facilitate the posting, modification, distribution, reproduction of any copyrighted material, trademarks, or other proprietary information belonging to others without obtaining the prior written consent of the owner of such proprietary rights. It is the policy of Issuetrak or its Chat Provider to

terminate all privileges of any user who infringes the copyright rights of others.

8.

Third-Party Web Sites, Services and Content. The Chat Service may contain links to third-party sites that are not under the control of Issuetrak or its Chat Provider.

Neither Issuetrak nor its Chat Provider are responsible for, nor does it guarantee the accuracy or integrity of these links.

Disclaimer of Warranties and Limitation of Liability. Each of Issuetrak and its Chat Provider disclaims any and all responsibility or liability for the content, legality, reliability, or operability or availability of information or material displayed in or from the Chat Service. Each of Issuetrak and its Chat Provider disclaims any responsibility for the deletion, failure to store, mis-delivery, or untimely delivery of any content, information or other material and disclaims any responsibility for any harm resulting from downloading or accessing any information or material on the Internet through the Chat Service.

THE CHAT SERVICE IS PROVIDED "AS IS" AND "AS AVAILABLE" WITH NO WARRANTIES WHATSOEVER. ALL EXPRESS, IMPLIED, AND STATUTORY WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF PROPRIETARY RIGHTS, ARE EXPRESSLY DISCLAIMED TO THE FULLEST EXTENT PERMITTED BY LAW. IN ADDITION, EXCEPT AS EXPRESSLY PROVIDED OTHERWISE, ISSUETRAK AND ITS CHAT PROVIDER DISCLAIM ANY WARRANTIES OF NON-INFRINGEMENT, TITLE, OR QUIET ENJOYMENT. TO THE FULLEST EXTENT PERMITTED BY LAW, ISSUETRAK AND ITS CHAT PROVIDER DO NOT REPRESENT OR WARRANT TO CUSTOMER THAT: CUSTOMER'S USE OF THE CHAT SERVICE WILL BE UNINTERRUPTED, TIMELY, SECURE OR ERROR-FREE, CUSTOMER'S USE OF THE CHAT SERVICE WILL MEET CUSTOMER'S REQUIREMENTS, AND, ANY INFORMATION OR CONTENT OBTAINED BY CUSTOMER AS A RESULT OF CUSTOMER'S USE OF THE CHAT SERVICES WILL BE LEGAL, ACCURATE, RELIABLE OR OF A QUALITY THAT MEETS CUSTOMER'S EXPECTATIONS, TO THE FULLEST EXTENT PERMITTED BY LAW, AND DISCLAIM ANY WARRANTIES FOR OTHER SERVICES OR GOODS RECEIVED THROUGH OR ADVERTISED ON THE CHAT SERVICE OR RECEIVED THROUGH ANY LINKS PROVIDED IN THE CHAT SERVICE, AS WELL AS FOR ANY INFORMATION OR ADVICE RECEIVED THROUGH THE CHAT SERVICE OR THROUGH ANY LINKS PROVIDED IN THE CHAT SERVICE. ISSUETRAK AND ITS CHAT PROVIDER DISCLAIM ANY RESPONSIBILITY FOR THE DELETION, FAILURE TO STORE, MISDELIVERY, OR UNTIMELY DELIVERY OF ANY INFORMATION OR MATERIAL AND DISCLAIM ANY RESPONSIBILITY OR LIABILITY FOR ANY HARM RESULTING FROM DOWNLOADING OR ACCESSING ANY INFORMATION OR MATERIAL THROUGH THE CHAT SERVICE, INCLUDING, WITHOUT LIMITATION, FOR HARM CAUSED BY VIRUSES OR SIMILAR CONTAMINATION OR DESTRUCTIVE FEATURES. CUSTOMER UNDERSTANDS AND AGREES THAT ANY MATERIAL DOWNLOADED OR OTHERWISE ACCESSED OR OBTAINED THROUGH THE USE OF THE CHAT SERVICE IS DONE AT ITS OWN DISCRETION AND RISK AND THAT CUSTOMER WILL BE SOLELY RESPONSIBLE FOR ANY DAMAGES TO ITS COMPUTER SYSTEM, MOBILE TELEPHONE, OTHER DEVICE OR DATA THAT RESULTS IN THE DOWNLOAD OF SUCH MATERIAL. NO ADVICE OR INFORMATION, WHETHER WRITTEN OR ORAL, OBTAINED BY CUSTOMER FROM ISSUETRAK AND ITS CHAT PROVIDER, THEIR EMPLOYEES OR REPRESENTATIVES SHALL CREATE ANY WARRANTY NOT EXPRESSLY STATED IN THESE TERMS. CUSTOMER EXPRESSLY UNDERSTANDS AND AGREES THAT UNDER NO CIRCUMSTANCES SHALL

ISSUETRAK AND ITS CHAT PROVIDER BE LIABLE TO ANY USER OF THAT USER'S USE OR MISUSE OF THE CHAT SERVICE OR RELIANCE ON THE CHAT SERVICE. SUCH LIMITATION OF LIABILITY SHALL APPLY TO PREVENT RECOVERY OF DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY, AND PUNITIVE DAMAGES (EVEN IF ISSUETRAK AND ITS CHAT PROVIDER HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES). SUCH LIMITATION OF LIABILITY SHALL APPLY WHETHER THE DAMAGES ARISE FROM USE OR MISUSE OF AND RELIANCE ON THE CHAT SERVICE, FROM INABILITY TO USE THE CHAT SERVICE, OR FROM THE INTERRUPTION, SUSPENSION, OR TERMINATION OF THE CHAT SERVICE AND THE DELETION OF CONTENT (INCLUDING SUCH DAMAGES INCURRED BY THIRD PARTIES). SUCH LIMITATION SHALL ALSO APPLY WITH RESPECT TO DAMAGES INCURRED BY REASON OF OTHER SERVICES OR GOODS RECEIVED THROUGH OR ADVERTISED ON THE CHAT SERVICE OR RECEIVED THROUGH ANY LINKS PROVIDED IN THE CHAT SERVICE, AS WELL AS BY REASON OF ANY INFORMATION OR ADVICE RECEIVED THROUGH OR ADVERTISED ON THE CHAT SERVICE OR RECEIVED THROUGH ANY LINKS PROVIDED IN THE CHAT SERVICE. SUCH LIMITATION SHALL APPLY, WITHOUT LIMITATION, TO THE COSTS OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, LOST PROFITS, OR LOST DATA. SUCH LIMITATION SHALL APPLY WITH RESPECT TO THE PERFORMANCE OR NON-PERFORMANCE OF THE CHAT SERVICE OR ANY INFORMATION OR MERCHANDISE THAT APPEARS ON, OR IS LINKED OR RELATED IN ANY WAY TO THE CHAT SERVICE OR TO ISSUETRAK OR ITS CHAT PROVIDER. SUCH LIMITATION SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY. SUCH LIMITATION SHALL APPLY TO THE FULLEST EXTENT PERMITTED BY LAW.

SUCH LIMITATION OF LIABILITY SHALL ALSO APPLY TO ANY DAMAGE CAUSED BY LOSS OF ACCESS TO, DELETION OF, FAILURE TO STORE, FAILURE TO BACK UP, OR ALTERATION OF USER CONTENT. CUSTOMER AGREES THAT ISSUETRAK AND ITS CHAT PROVIDER'S ENTIRE LIABILITY, IF ANY, FOR ANY AND ALL CLAIMS ARISING FROM THE USE OF THE CHAT SERVICE SHALL NOT EXCEED THE AMOUNT OF THE MOST RECENT ONE MONTH SERVICE FEE PAYMENT OR TEN (\$10) US DOLLARS, WHICHEVER IS LOWER. UNDER NO CIRCUMSTANCES SHALL ISSUETRAK OR ITS CHAT PROVIDER BE HELD LIABLE FOR ANY DELAY OR FAILURE IN PERFORMANCE RESULTING DIRECTLY OR INDIRECTLY FROM ACTS OF NATURE, FORCES, OR CAUSES BEYOND ITS REASONABLE CONTROL, INCLUDING, WITHOUT LIMITATION, INTERNET FAILURES, COMPUTER EQUIPMENT FAILURES, TELECOMMUNICATION EQUIPMENT FAILURES, OTHER EQUIPMENT FAILURES, ELECTRICAL POWER FAILURES, STRIKES, LABOR DISPUTES, RIOTS, INSURRECTIONS, CIVIL DISTURBANCES, SHORTAGES OF LABOR OR MATERIALS, FIRES, FLOODS, STORMS, EXPLOSIONS, ACTS OF GOD, WAR, GOVERNMENTAL ACTIONS, ORDERS OF DOMESTIC OR FOREIGN COURTS OR TRIBUNALS, NON-PERFORMANCE OF THIRD PARTIES, OR LOSS OF OR FLUCTUATIONS IN HEAT, LIGHT, OR AIR CONDITIONING.

SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF CERTAIN WARRANTIES OR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. ACCORDINGLY, SOME OF THE ABOVE LIMITATIONS OF THIS SECTION MAY NOT APPLY TO CUSTOMER.

9. Indemnity. Customer agrees to indemnify, defend, and hold Issuetrak and its Chat Provider, their respective officers, agents, co-branders, partners, and employees harmless from any claim or demand made by any third party due to or arising out of Customer's use of the Chat Service, Customer's connection to the Chat Service,

Customer's violation of the Terms of Service or Privacy Policy, or Customer's violation of any rights of other users of the Chat Service. Any such indemnification shall include the payment of reasonable attorney's fees incurred in the defense of such claim.

10. Termination or Modification; Consequences of Violation of Terms of Service. Issuetrak or its Chat Provider may terminate Customer's privilege to use the Chat Service at any time for any reason. In addition, Issuetrak and its Chat Provider have the right but no obligation to:

- o

- remove any material that in its sole opinion may violate, or that is alleged to violate, any applicable law or these Terms of Service;

- o

- terminate a Chat Service discussion or any other portion of the Chat Service, and/or remove a user or users from a discussion or otherwise terminate any use of the Chat Service if Issuetrak or its Chat Provider determine or have a good faith concern that such use is unlawful and/or prohibited by these Terms of Service;

- o

- inform law enforcement of any illegal activity or material that is suspected or discovered on, through, or otherwise relating to the Chat Service and provide law enforcement officials with all requested information about the user account from which the illegal activity or material originated.

11. European Union ("EU") customers have the ability to store Chat Service content on EU servers. If Customer is in the EU and wishes to store its content on EU servers, contact Issuetrak for additional information.

Issuetrak Software License Terms and Conditions

[Download](#)

These Software License Terms and Conditions (the “**Terms and Conditions**”) govern the licensing of Software (as defined below) by Issuetrak, Inc. (“**Company**”) to the client identified in a quote (the “**Quote**”) executed by Company and the client (“**Licensee**”) and referencing these Terms and Conditions (each of Company and Licensee, a “**party**” and collectively, the “**parties**”). Any different or additional terms or conditions of any related quote, purchase order, confirmation, or similar form, which conflict with these Terms and Conditions, shall have no force or effect. These Terms and Conditions together with an Quote are collectively, the “**Agreement**”).

1. Grant of License and Restrictions.

- a. License. Subject to the terms hereof and the payment of all fees due hereunder, Company grants Licensee a non-sublicensable, nonexclusive, license to install and use the Company’s software described in the Quote (the “**Software**”) only on one server solely for Licensee’s internal business purposes. Licensee will maintain the copyright notice and any other notices that appear on the Software on any copies and any media.
- b. Users. The number of persons concurrently using the Software shall not exceed the number of authorized users specified in the Quote. At all times during the Term of this Agreement, Licensee will designate and retain (or replace) one or more system administrator(s) to be responsible for performing administrative tasks associated with Licensee’s Issuetrak Software application(s).
- c. Restrictions. Licensee will not (and will not allow any third party to) reverse engineer or attempt to discover any source code or underlying ideas or algorithms of the Software. Licensee will not (and will not allow any third party to): (i) provide, lease, lend, disclose, resell, rent, use for timesharing or service bureau purposes, or otherwise use or allow others (except Company) to use for the benefit of any third party, the Software (except as expressly and specifically authorized by Company) or exceeding more than one (1) production instance and one (1) QA/development/Test instance per installation; (ii) possess or use the Software, or allow the transfer, transmission, export, or re-export of the Software or portion thereof in violation of any export control laws or regulations administered by the U.S. Commerce Department, U.S. Treasury Department's Office of Foreign Assets Control, or any other government agency; (iii) disclose to third party any benchmarking or comparative study involving the Software; or (iv) modify the Software. All the limitations and restrictions on the Software in this Agreement also apply to any documentation related to the Software provided by Company (the “**Documentation**”).
- d. Services. To the extent described in the Quote, Company shall provide the Software implementation, installation, and training services (the “**Installation and Training Services**”). Company and Licensee may agree in writing upon

descriptions of professional services to be performed (“**Professional Services**”) and deliverables (“**Deliverables**”) as defined in a statement of work referencing this Agreement and executed by Company and Licensee (“**SOW**”). The terms of this Agreement shall be deemed incorporated into and shall govern each SOW. Unless otherwise set forth in an SOW, Company will own all right, title, and interest in and to any Deliverables provided pursuant to an SOW, which Deliverables shall be deemed Software and licensed to Licensee in a manner consistent with the Software licensed under this Agreement. In the event of any conflict between this Agreement and an SOW, this Agreement will control unless otherwise expressly overridden in writing in an SOW.

- e. Company Responsibilities. Licensee shall be responsible for employing technician qualified to operate and utilize the Software. Company reserves the right to charge Company’s then-current time and materials rate to assist any user seeking assistance regarding basic background information or other matters not directly relating to the operation of the Software. Licensee acknowledges and agrees that: (a) the Software is designed and tested with the system requirements described at <https://helpcenter.issuetrak.com/home/2332-issuetrak-system-requirements> (the “**System Requirements**”) and (b) Licensee is responsible for ensuring that it maintains the (i) the Approved Configurations and (ii) a proper environment and proper utilities for the computer system on which the Software will operate. Company may update, augment or change System Requirements at any time in conjunction with product development, removal of end of life platforms or as deemed necessary for proper operations of Issuetrak Software.
- f. Chat Service. Licensee agrees that if the “Chat Messaging Service” is purchased by Licensee (as indicated in the Quote), Licensee’s use thereof is subject to the terms and conditions attached hereto as Exhibit A. In the event of any conflict between these Terms and Conditions and Exhibit A, Exhibit A shall govern with respect to the Chat Messaging Service and these Terms and Conditions shall govern in all other cases.

- 2. Support and Maintenance. Company will provide annual maintenance and support services for the Software (“**Maintenance and Support Services**” and, together with the Installation and Training Services and Professional Services, the “**Services**”) as and to the extent identified in the Quote and described in Exhibit B attached hereto (the “**Maintenance and Support Terms**”). Maintenance and Support Services shall be provided on an annual basis subject to Licensee’s payment of the applicable maintenance and support fees set forth in the Quote (“**Maintenance Fees**”). The first year of Maintenance and Support Services commences on the date set forth in the Quote (the “**Effective Date**”) and continues for a period of one (1) year. On each anniversary of the Effective Date, the Maintenance and Support Services shall automatically renew for a successive one (1)-year term unless a party provides to the other party written notice of its intent to terminate Maintenance and Support Services to the other party at least thirty (30) days. If Licensee fails to pay Maintenance Fees when due, Company will have the right to terminate all Maintenance and Support Services unless Licensee cures such failure within thirty (30) days of the date Company provides notice of such payment failure. Such termination rights will not limit any of Company’s other rights or remedies with respect to such payment failure. Company will have the right to modify the Maintenance and Support Terms, effective

upon thirty (30) days' notice. If such changes would reasonably be expected to materially adversely affect Licensee, Licensee will have the right to terminate Maintenance and Support Services by providing Company with notice within thirty (30) days of receipt of Company's notice describing such changes and Licensee will received a pro-rated refund of pre-paid Maintenance Fees.

3. Fees and Payment. For the license of Software and provision of Services, Licensee will pay Company the fees set forth in the Quote and SOW (if any). Such fees shall be due and payable as set forth in the Quote or applicable SOW. All payments shall be made by wire transfer to an account designated by Company or by check drawn on a U.S. depository institution. Any payments not made when due shall accrue interest from the date due until the date paid at twelve percent (12%) per annum or, if less, the maximum per annum rate permitted by law. Company may change fees at any time upon not less than sixty (60) days prior written notice to Licensee.
4. Term; Termination; Breach.

- a. Term.

- i. Perpetual License. If the Quote indicates that the license granted hereunder is perpetual, then the term of this Agreement shall commence on the Effective Date and shall continue until this Agreement is terminated pursuant to this Section 4 or Section 8(a).
- ii. If the Quote indicates that the license granted hereunder is for a fixed term, then term of this Agreement shall commence on the Effective Date and end on the one (1)-year anniversary of the Effective Date (the "**Initial Term**"). Thereafter, this Agreement shall automatically renew for successive one (1)-year terms (each, a "**Renewal Term**") unless either party provides written notice of its intent to terminate to the other party at least thirty (30) days prior to the end of the then-current Initial Term or Renewal Term. The Initial Term and all Renewal Terms shall be referred to as the "**Term.**"

- b. Termination for Breach. Should either party commit a material breach of its obligations hereunder, the other party may, at its option, terminate this Agreement upon thirty (30) days' written notice of termination, which notice shall identify and describe the basis for such termination. If, prior to expiration of such period, the breaching party cures such breach, termination shall not take place.
- c. Termination Upon Insolvency. Either party may, at its option and without notice, terminate this Agreement, effective immediately, should the other party: (1) admit in writing its inability to pay its debts generally as they become due; (2) make a general assignment for the benefit of creditors; (3) institute proceedings to be adjudicated a voluntary bankrupt, or consent to the filing of a petition of bankruptcy against it; (4) be adjudicated by a court of competent jurisdiction as being bankrupt or insolvent; (5) seek reorganization under any bankruptcy act, or consent to the filing of a petition seeking such reorganization; or (6) have a decree entered against it by a court of competent jurisdiction appointing a receiver, liquidator, trustee, or assignee in bankruptcy or in insolvency covering all or substantially all of such party's property or providing for the liquidation of such party's property or business affairs.

d. Effect of Termination. Upon termination or expiration of this Agreement, amounts owed to Company hereunder before such termination or expiration will be immediately due and payable, all license rights granted hereunder will immediately terminate, and Licensee will immediately discontinue all use of the Software, erase all copies of the Software from computers on which it installed Software, and destroy all copies of the Software in Licensee's possession or control and certify in writing to Company that it has fully complied with these requirements. Sections 4, 5, 6, 7, 8, 10, and 11 shall survive termination or expiration of this Agreement.

5. Confidentiality and Restrictive Covenant.

a. Confidentiality. Each party agrees, except (i) as required as part of the performance of this Agreement or (ii) as permitted pursuant to any other agreement between the parties: (a) not to disclose any Confidential Information (as defined below) belonging to the other party to any person (other than on a need to know basis to such directors, employees, or other persons engaged in activities required for the performance of the obligations set out in this Agreement who have entered legally binding written obligations at least as protective as those set out in this Section 5); (b) not to use any Confidential Information belonging to the other party for any purpose other than in accordance with this Agreement; (c) to take all reasonable steps necessary to prevent the unauthorized disclosure and/or use of any Confidential Information belonging to the other party; and (d) to notify the other party promptly in writing in the event that a party becomes aware of an unauthorized disclosure of Confidential Information of the other party.

For the purposes of this Agreement, "**Confidential Information**" means any information received by one party (the "**receiving party**") from the other party (the "**disclosing party**") and which the receiving party has been informed or has a reasonable basis to believe is confidential to the disclosing party, unless such information: (1) was known to the receiving party prior to receipt from the disclosing party; (2) was lawfully available to the public prior to receipt from the disclosing party; (3) becomes lawfully available to the public after receipt from the disclosing party, through no act or omission on the part of the receiving party; (4) corresponds in substance to any information received in good faith by the receiving party from any third party without restriction as to confidentiality; or (5) is independently developed by an employee or agent of the receiving party who has not received or had access to such information.

6. Proprietary Rights. Except as expressly set forth herein, Company alone (and its licensors, where applicable) do and will retain all intellectual property rights relating to the Software. If, in the course of performing under this Agreement, Licensee provides Company with any written comments, suggestions, or feedback regarding the Software, which do not include any Licensee Confidential Information ("**Feedback**"), Licensee hereby grants Company a non-exclusive, perpetual and irrevocable, worldwide, royalty-free license to use and disclose the Feedback in any manner Company chooses and, directly or indirectly through third parties, to display, perform, copy, have copied, make, have made, use, sell, offer to sell, and otherwise dispose of Company's products and services (including any improvements or modifications

thereof) embodying the Feedback in any manner and via any media the Company chooses, but without reference to Licensee as the source of the Feedback. This Agreement is not a sale and does not convey to Licensee any rights of ownership in or related to the Software or any intellectual property rights.

7. Indemnification.

- a. Company Indemnification. Company will defend at its own expense any third party action against Licensee to the extent based on a claim that the Software infringes any copyrights or misappropriates any trade secrets recognized as such under the Uniform Trade Secret Act, and Company will pay those costs and damages finally awarded against Licensee in any such action that are specifically attributable to such claim or those costs and damages agreed to in a monetary settlement of such action, provided that Licensee: (a) notifies Company promptly in writing of such action, (b) gives Company sole control of the defense thereof and any related settlement negotiations, and (c) cooperates with Company and, at Company's request and expense, assists in such defense. If the Software becomes, or in Company's opinion is likely to become, the subject of an infringement claim, Company may, at its option, either: (1) procure for Licensee the right to continue using the Software, (2) replace or modify the Software so that it becomes non-infringing while maintaining all material features and functionality, or (3) accept return of the Software and give Licensee a refund of the license fees paid by Licensee, less a reasonable allowance for the period of time Licensee has used the Software, in which event, Licensee's right to use the Software will immediately terminate. Company will have no obligation under this Section 7(a) or otherwise with respect to any infringement claim based on: (A) use of the Software not in accordance with this Agreement, (B) use of the Software in combination with other products, equipment, software, or data not supplied by Company if such infringement would not have occurred but for such combination, (C) use of any release of the Software other than the most current release made available to Licensee, or (D) modification of the Software by any person other than Company. THIS SECTION 7(a) STATES COMPANY'S ENTIRE LIABILITY AND LICENSEE'S SOLE AND EXCLUSIVE REMEDY FOR INFRINGEMENT ACTION.
- b. Licensee Indemnification. Licensee shall indemnify, defend and hold harmless Company and its directors, officers, employees and agents from and against any and all liabilities, damages, costs expenses and losses, resulting or arising from or in connection with Licensee's use of the Software (excluding those Losses for which Company is responsible under Section 7(a)).

8. Warranty; Disclaimer; Limitation of Liability.

- a. For ninety (90) days following the Effective Date (the "**Software Warranty Period**"), Company warrants that the Software, when used as permitted under this Agreement and in accordance with the Documentation, will operate without any reproducible material non-conformities with the Documentation. Company will, as its sole obligation and Licensee's exclusive remedy for any breach of this warranty reported to Company during the Software Warranty Period, use commercially reasonable efforts to correct any such nonconformities reported to Company by Licensee in writing during the Software Warranty Period, or, if the

nonconformity is not so corrected within thirty (30) days, Company will refund to Licensee all license fees paid for licensing the Software and this Agreement will terminate. The warranty set forth in this Section 8(a) shall not apply to any nonconformity in the Software caused by (i) use of the Software not in accordance with this Agreement, (ii) use of the Software in combination with other products, equipment, software, or data not supplied by Company or (iii) modification of the Software by any person other than Company.

- b. Company warrants that the Services will be performed in a professional and workmanlike manner. If Licensee notifies Company of a breach of the foregoing warranty within thirty (30) days following the performance of any Service (the “**Services Warranty Period**”), then Company will, at its own expense and as its sole obligation and Licensee’s exclusive remedy for any breach of this warranty reported to Company during the Services Warranty Period, use commercially reasonable efforts to reperform the Service in a conforming manner, or if Company determines that it is unable to reperform the Service in a conforming manner, then Company will refund to Licensee the fees paid for the nonconforming Service.
- c. Disclaimer. EXCEPT AS SET FORTH IN SECTIONS 8(a) AND 8(b), COMPANY DISCLAIMS ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THE SOFTWARE AND ALL SERVICES PROVIDED HEREUNDER AND THERE ARE HEREBY EXCLUDED ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. FURTHER, COMPANY DOES NOT WARRANT RESULTS OF USE OR THAT THE SOFTWARE IS BUG FREE.
- d. Limitation of Liability. NEITHER COMPANY OR LICENSEE WILL HAVE ANY LIABILITY TO THE OTHER FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE USE OR PERFORMANCE OF THE SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION APPLIES REGARDLESS OF WHETHER SUCH CLAIM IS BASED ON TORT, CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY. IN NO EVENT WILL COMPANY BE LIABLE FOR ANY CLAIMS IN AN AGGREGATE AMOUNT EXCEEDING THE LICENSE FEE PAID BY LICENSEE TO COMPANY UNDER THIS AGREEMENT. THE LIMITATIONS AND EXCLUSIONS IN THIS SECTION 8(D) SHALL NOT APPLY TO BREACHES OF SECTION 5 OR LIMIT A PARTY’S INDEMNIFICATION OBLIGATIONS UNDER SECTION 7.

9. Identification. During the Term of this Agreement, Company shall be permitted to use Licensee’s name on its website and in marketing materials to indicate that Licensee is a customer of Company.

10. Miscellaneous.

- a. Force Majeure. Neither party shall be liable or deemed in default for any delay or failure in performance hereunder (other than for payment of monies owed) resulting from any cause beyond its reasonable control.
- b. Governing Law. This Agreement shall be deemed accepted in and governed by the laws of the Commonwealth of Virginia, without regard to conflicts of laws

principles. The parties agree to the exclusive jurisdiction for any disputes arising hereunder shall be in the state and federal courts located in Norfolk, Virginia.

- c. Assignment. Licensee may not assign this Agreement without the prior written consent of Company, which it may withhold in its sole discretion. No assignment shall relieve Licensee of its obligations under this Agreement. Any prohibited assignment is void. Any merger, consolidation or change of ownership of a controlling voting interest in a party shall be considered to affect an assignment for purposes of this paragraph.
- d. Invalidity. If any parts or part of this Agreement are held to be invalid, the remaining parts of the Agreement will continue to be valid and enforceable.
- e. Waiver. The failure to enforce any right or provision herein shall not constitute a waiver of that right or provision. Any waiver of a breach of a provision shall not constitute a waiver of any subsequent breach of that provision.
- f. Entire Agreement. This Agreement (including all Exhibits) contains the complete understanding of the parties with respect to the subject matter hereof and supersede any prior written or oral agreements regarding such subject matter. In making this Agreement, neither party relies on any promise, action or statement made by the other party, other than those contained in this Agreement and its exhibits. In the event of a conflict between the provisions of the exhibits to this Agreement and the provisions of this Agreement itself, the conflicting provision of the Agreement shall control over the language in the exhibit, unless otherwise agreed by the parties.
- g. Amendment. No amendment, waiver, alteration or modification of any of the provisions of this Agreement will be binding unless it is in writing and signed by a duly authorized representative of each party.
- h. Notices. All notices under this Agreement shall be in writing. All notices shall be given (i) by delivery in person (ii) by a nationally recognized next day courier service, (iii) by first class, registered or certified mail, postage prepaid, return receipt requested or (iv) by electronic mail to the address of the party specified in the Quote, provided that there is confirmation of receipt. All notices shall be effective upon receipt by the party to which notice is given. Each party may change its address for receipt of notice by giving notice of such change to the other party.
- i. Counterparts. This Agreement may be executed in multiple counterparts, and all such counterparts shall constitute one and the same agreement.

EXHIBIT A: CHAT TERMS

NOTE: This Section is only applicable to users of Company's optional chat messaging service.

If Licensee is utilizing optional third-party chat service that allows the sharing of messages

with other users through the Chat Provider's website ("Website"), you agree to the terms detailed in this Attachment.

1. Chat Service customers agree not to record, upload, post, transmit; cause the display, playback or performance of; or otherwise make available any content that:
 - is harmful, threatening, abusive, harassing, tortious, vulgar, hateful, obscene, pornographic, excessively violent, or racially, ethnically or otherwise offensive or discriminatory;
 - is illegal, tortious, defamatory, libelous, or invasive of another's privacy or publicity rights;
 - infringes any patent, trademark, trade secret, copyright, or other proprietary or intellectual property rights of any party or include copyrighted materials for which you do not possess appropriate rights;
 - you do not have a right to make available under law or contractual or fiduciary relationships;
 - includes private information of any third party;
 - is advertising, solicitations, or promotional material;
 - contains software viruses or any other computer code, files, or programs designed to destroy, interrupt, or otherwise limit the functionality of any computer software, computer hardware, or other equipment.

2. All messages, information, videos or other content, whether publicly posted, displayed, or performed on, or privately transmitted, are the sole responsibility of the person who sends or publishes such items. Accordingly, you are responsible for all items that you record, upload, post, cause a display, playback, or performance of, email, transmit, or otherwise make available via the website. Company reserves the right to, but has no obligation to, monitor or screen the content posted and/or displayed or performed in the Website and to remove any content at its sole discretion. Nevertheless, YOU REMAIN SOLELY RESPONSIBLE FOR THE CONTENT YOU RECORD, UPLOAD, POST, CAUSE TO BE DISPLAYED, PLAYED BACK, OR PERFORMED IN ANY AREAS OF THE WEBSITE AND THAT YOU TRANSMIT IN ANY OF YOUR COMMUNICATIONS THAT USE THE WEBSITE AND THE SERVICE PROVIDED THEREBY.

3. You may not do any of the following to the Website:
 - use the Website in any manner that could damage, disable, overburden, disrupt, or impair the Website or any Website server, or the network(s) connected to any Website server, or interfere with any other party's use and enjoyment of the Website;
 - disobey any applicable policies or regulations of networks connected to the Website;
 - use any robot, spider, site search/retrieval application, or other device to retrieve, index, or interface with any portion of the Website;
 - modify, adapt, translate, reverse engineer, or frame the Website, or reformat it in any way or create user accounts using any automated means or under false pretenses.

4. No Responsibility for Third-Party Content. You understand that the chat service acts only as a technical interface between users and Company and its Chat licensor does not verify the qualifications of users, nor do they evaluate or control in any ongoing

manner exchanges between users. Any opinions or statements expressed by a user are of those of the user alone, and are not to be attributed to Company or its Chat licensor who cannot and do not assume responsibility for the accuracy, completeness, safety, reliability, timeliness, innocuousness, legality, or applicability of anything said, written, posted, displayed, or otherwise made available by any user. You understand that you may be exposed to content that you find offensive, and that you use the Service at your own risk.

5. Interstate and International Use. Users in the European Union consent to the collection and processing of personal information, as described in this Agreement, in the United States. All users understand the potential cross-border nature of communications made using the Website, and acknowledge that using the Website may result in interstate and international transmission of data.
6. Content License. You retain copyright and any other rights you already hold in content which you submit, post, or display on or through the Service. By submitting, posting, or displaying the content you give Company or its Chat licensor a perpetual, irrevocable, worldwide, royalty-free, and non-exclusive license to reproduce, adapt, modify, translate, publish, transmit and distribute any content which you submit, post, or display on or through the Services. This license is for the sole purpose of enabling Company or its Chat licensor to maintain, operate, and provide the Service. This license includes no rights for Company or its Chat licensor to make such content available to other companies, organizations, or individuals without your permission.
7. Copyright Policy. In addition to any other use restrictions set forth in this Agreement, you may not engage in or facilitate the posting, modification, distribution, reproduction of any copyrighted material, trademarks, or other proprietary information belonging to others without obtaining the prior written consent of the owner of such proprietary rights. It is the policy of Company or its Chat licensor to terminate all privileges of any user who repeatedly infringes the copyright rights of others.
8. Third-Party Web Sites, Services, and Content. The Website may contain links to third-party sites that are not under the control of Company or its Chat licensor who are not responsible for and do not guarantee the accuracy or integrity of these links.
9. Disclaimer of Warranties and Limitation of Liability. Company and its Chat licensor disclaims any and all responsibility or liability for the content, legality, reliability, operability, or availability of information or material displayed in or from the Website. Company and its Chat licensor disclaims any responsibility for the deletion, failure to store, mis-delivery, or untimely delivery of any content, information or other material, and disclaim any responsibility for any harm resulting from downloading or accessing any information or material on the Internet through the Website.

THE SERVICE IS PROVIDED "AS IS" AND "AS AVAILABLE" WITH NO WARRANTIES WHATSOEVER. ALL EXPRESS, IMPLIED, AND STATUTORY WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF PROPRIETARY RIGHTS, ARE EXPRESSLY DISCLAIMED TO THE FULLEST EXTENT PERMITTED BY LAW. IN ADDITION, EXCEPT AS EXPRESSLY PROVIDED OTHERWISE, COMPANY AND ITS CHAT LICENSOR DISCLAIM ANY WARRANTIES OF NON-INFRINGEMENT, TITLE, OR QUIET ENJOYMENT. TO

THE FULLEST EXTENT PERMITTED BY LAW, COMPANY. AND ITS CHAT LICENSOR DO NOT REPRESENT OR WARRANT TO YOU THAT: YOUR USE OF THE SERVICE WILL BE UNINTERRUPTED, TIMELY, SECURE OR ERROR-FREE, YOUR USE OF THE SERVICE WILL MEET YOUR REQUIREMENTS, AND, ANY INFORMATION OR CONTENT OBTAINED BY YOU AS A RESULT OF YOUR USE OF THE SERVICES WILL BE LEGAL, ACCURATE, RELIABLE OR OF A QUALITY THAT MEETS YOUR EXPECTATIONS. TO THE FULLEST EXTENT PERMITTED BY LAW, AND DISCLAIM ANY WARRANTIES FOR OTHER SERVICES OR GOODS RECEIVED THROUGH OR ADVERTISED ON THE SERVICE OR RECEIVED THROUGH ANY LINKS PROVIDED IN SERVICE, AS WELL AS FOR ANY INFORMATION OR ADVICE RECEIVED THROUGH THE SERVICE OR THROUGH ANY LINKS PROVIDED IN THE SERVICE. COMPANY. AND ITS CHAT LICENSOR DISCLAIM ANY RESPONSIBILITY FOR THE DELETION, FAILURE TO STORE, MISDELIVERY, OR UNTIMELY DELIVERY OF ANY INFORMATION OR MATERIAL AND DISCLAIM ANY RESPONSIBILITY OR LIABILITY FOR ANY HARM RESULTING FROM DOWNLOADING OR ACCESSING ANY INFORMATION OR MATERIAL THROUGH THE SERVICE, INCLUDING, WITHOUT LIMITATION, FOR HARM CAUSED BY VIRUSES OR SIMILAR CONTAMINATION OR DESTRUCTIVE FEATURES. YOU UNDERSTAND AND AGREE THAT ANY MATERIAL DOWNLOADED OR OTHERWISE ACCESSED OR OBTAINED THROUGH THE USE OF THE SERVICE IS DONE AT YOUR OWN DISCRETION AND RISK AND THAT YOU WILL BE SOLELY RESPONSIBLE FOR ANY DAMAGES TO YOUR COMPUTER SYSTEM, MOBILE TELEPHONE, OTHER DEVICE OR DATA THAT RESULTS IN THE DOWNLOAD OF SUCH MATERIAL. NO ADVICE OR INFORMATION, WHETHER WRITTEN OR ORAL, OBTAINED BY YOU FROM COMPANY AND ITS CHAT LICENSOR, THEIR EMPLOYEES OR REPRESENTATIVES SHALL CREATE ANY WARRANTY NOT EXPRESSLY STATED IN THE TERMS. YOU EXPRESSLY UNDERSTAND AND AGREE THAT UNDER NO CIRCUMSTANCES SHALL COMPANY AND ITS CHAT LICENSOR BE LIABLE TO ANY USER OF THAT USER'S USE OR MISUSE OF THE SERVICE OR RELIANCE ON THE SERVICE. SUCH LIMITATION OF LIABILITY SHALL APPLY TO PREVENT RECOVERY OF DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, EXEMPLARY, AND PUNITIVE DAMAGES (EVEN IF COMPANY AND ITS CHAT LICENSOR HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES). SUCH LIMITATION OF LIABILITY SHALL APPLY WHETHER THE DAMAGES ARISE FROM USE OR MISUSE OF AND RELIANCE ON THE SERVICE, FROM INABILITY TO USE THE SERVICE, OR FROM THE INTERRUPTION, SUSPENSION, OR TERMINATION OF THE SERVICES AND THE DELETION OF CONTENT (INCLUDING SUCH DAMAGES INCURRED BY THIRD PARTIES). SUCH LIMITATION SHALL ALSO APPLY WITH RESPECT TO DAMAGES INCURRED BY REASON OF OTHER SERVICES OR GOODS RECEIVED THROUGH OR ADVERTISED ON THE SERVICE OR RECEIVED THROUGH ANY LINKS PROVIDED IN THE SERVICE, AS WELL AS BY REASON OF ANY INFORMATION OR ADVICE RECEIVED THROUGH OR ADVERTISED ON THE SERVICE OR RECEIVED THROUGH ANY LINKS PROVIDED IN THE SERVICE. SUCH LIMITATION SHALL APPLY, WITHOUT LIMITATION, TO THE COSTS OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, LOST PROFITS, OR LOST DATA. SUCH LIMITATION SHALL APPLY WITH RESPECT TO THE PERFORMANCE OR NON-PERFORMANCE OF THE SERVICE OR ANY INFORMATION OR MERCHANDISE THAT APPEARS ON, OR IS LINKED OR RELATED IN ANY WAY TO THE SERVICE OR TO COMPANY OR ITS CHAT LICENSOR. SUCH LIMITATION SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY. SUCH LIMITATION SHALL APPLY TO THE FULLEST EXTENT PERMITTED BY LAW.

SUCH LIMITATION OF LIABILITY SHALL ALSO APPLY TO ANY DAMAGE CAUSED BY LOSS OF ACCESS TO, DELETION OF, FAILURE TO STORE, FAILURE TO BACK UP, OR ALTERATION OF USER CONTENT. YOU AGREE THAT COMPANY AND ITS CHAT LICENSOR'S ENTIRE LIABILITY, IF ANY, FOR ANY AND ALL CLAIMS ARISING FROM THE USE OF THE SERVICE

SHALL NOT EXCEED THE AMOUNT OF THE MOST RECENT ONE MONTH SERVICE FEE PAYMENT OR TEN (\$10) US DOLLARS, WHICHEVER IS LOWER. UNDER NO CIRCUMSTANCES SHALL COMPANY OR ITS CHAT MESSAGING LICENSOR BE HELD LIABLE FOR ANY DELAY OR FAILURE IN PERFORMANCE RESULTING DIRECTLY OR INDIRECTLY FROM ACTS OF NATURE, FORCES, OR CAUSES BEYOND ITS REASONABLE CONTROL, INCLUDING, WITHOUT LIMITATION, INTERNET FAILURES, COMPUTER EQUIPMENT FAILURES, TELECOMMUNICATION EQUIPMENT FAILURES, OTHER EQUIPMENT FAILURES, ELECTRICAL POWER FAILURES, STRIKES, LABOR DISPUTES, RIOTS, INSURRECTIONS, CIVIL DISTURBANCES, SHORTAGES OF LABOR OR MATERIALS, FIRES, FLOODS, STORMS, EXPLOSIONS, ACTS OF GOD, WAR, GOVERNMENTAL ACTIONS, ORDERS OF DOMESTIC OR FOREIGN COURTS OR TRIBUNALS, NON-PERFORMANCE OF THIRD PARTIES, OR LOSS OF OR FLUCTUATIONS IN HEAT, LIGHT, OR AIR CONDITIONING. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF CERTAIN WARRANTIES OR THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. ACCORDINGLY, SOME OF THE ABOVE LIMITATIONS OF THIS SECTION MAY NOT APPLY TO YOU.

10. Indemnity. You agree to indemnify, defend, and hold Company and its Chat Licensor, their officers, agents, co-branders, partners, and employees harmless from any claim or demand made by any third party due to or arising out of your use of the Website, your connection to the Website, your violation of the Terms of Service or Privacy Policy, or your violation of any rights of other users of the Website. Any such indemnification shall include the payment of reasonable attorney's fees incurred in the defense of such claim.

11. Termination or Modification; Consequences of Violation of Terms of Service. Company, and its Chat Licensor reserve the right to terminate your privilege to use the Website at any time for any reason. In addition, Company and its Chat Licensor shall have the right but no obligation to:

- remove any material that in its sole opinion may violate, or that is alleged to violate, any applicable law or these Terms of Service;
- terminate a Website discussion or any other portion of the Website, and/or remove a user or users from a discussion or otherwise terminate any use of the Website if Company, or its Chat Licensor determine or had a good faith concern that such use is unlawful and/or prohibited by these Terms of Service;
- inform law enforcement of any illegal activity or material that is suspected or discovered on, through, or otherwise relating to the Website and provide law enforcement officials with all requested information about the user account from which the illegal activity or material originated.

12. European Union ("EU") customers have the ability to store Chat Service content on EU servers. If you are a customer in the EU and you wish to store your content on EU servers, contact Company for additional information.

EXHIBIT B: MAINTENANCE AND SUPPORT TERMS

MAINTENANCE PLUS: UPGRADES, PRODUCT SUPPORT, TRAINING

During the first year of the Term Company will provide "Maintenance Plus" (as described in Attachment A) to Licensee for the Maintenance Plus Fee set forth in the Quote. Thereafter, during the Term Company will provide Maintenance Plus to Licensee upon Licensee's (a) prior written request and (b) advance payment of the Maintenance Plus Fee set forth in the Quote. The terms and conditions governing Company's provision of Maintenance Plus hereunder are set forth in Attachment A hereto as well as in the body of this Agreement. Licensee acknowledges and agrees that the provision of Maintenance Plus as described in Attachment A will be effective during the first year of the Term but not thereafter unless Licensee purchases Maintenance Plus as provided herein and then only for the period(s) covered by any such purchase(s) (the "Additional Maintenance Plus Period"). If any terms or conditions of Attachment A conflict with any terms or conditions of the body of this Agreement, the terms and conditions of the body of the Agreement, not Attachment A, will govern.

ATTACHMENT A: Maintenance Plus

1. Technical Support. During the first year of the Term and the Additional Maintenance Plus Period (if any), Company will accept requests related to Issuetrak Software via telephone, electronic mail, or the Issuetrak Support site twenty-four (24) hours per day, seven (7) days a week. Company will provide technical support staff during the hours of 8:00 a.m. to 8:00 p.m. Eastern Time, Monday through Friday, excluding U.S. Federal and/or company holidays. Company may employ a Third-Party answering service, as needed, to facilitate a time in which technical support staff is not available. Outside normal business hours, during the Term, Company will use reasonable efforts to provide technical support for any problem related to the Issuetrak Software or ISSUETRAK, INC. Company's equipment that renders unusable the Company Software available to Licensee ("EMERGENCY"). Such after-hours EMERGENCY support shall be provided only by telephone and only to the extent that Company has technicians available during such times. Severity of the EMERGENCY will be determined by the Company support staff in conjunction with the Licensee. Under EMERGENCY conditions, Company may opt to follow the quickest path to resolution in order to restore services as quickly as possible, including, but not limited to, rolling back executed changes that inflicted the EMERGENCY. Licensee acknowledges and agrees that to ensure accurate issue logs and to facilitate the creation of a "lessons-learned" database that can help speed recovery from future incidents requiring Company's support, Company may monitor and track all support-related requests and monitor and record all support-related telephone calls and electronic mail.

Issuetrak Maintenance Plus coverage does not include customization, Issuetrak Software that has been modified or altered, software not covered by this Agreement, on-site support, support of hardware and related equipment, supplies, or training except as expressly provided for in this Agreement.

2. Reporting and Resolution Procedures. Company will address and attempt to correct any Problem and any Emergency Problem within a reasonable time after Licensee reports the Problem or Emergency Problem to Company, as follows:
 - a. Problem Reporting: Upon discovering a Problem, Licensee will report the Problem to Company by opening an issue in Company's support website or, if that option is unavailable, by placing a telephone call to Company's support desk

or sending electronic mail to Company (regardless of which of the foregoing reporting methods is used, each such report a "Service Request").

- b. Emergency Problem Reporting: Upon discovering an Emergency Problem, Licensee will report the Emergency Problem to Company by placing a telephone call to Company's support desk (an "Emergency Service Request").
 - c. Normal Support: During normal support hours, Company will provide telephone and/or electronic mail support in the form of consultations, assistance, and advice concerning use of Issuetrak Software and correction of the Problem or Emergency Problem (collectively, "Service Desk Support") within four (4) hours after receiving a Service Request or Emergency Service Request, as the case may be.
 - d. After-Hours Support: After normal support hours, Company will provide Service Desk Support for Emergency Issues within (4) hours if it receives the Service Request through a telephone call to Company's support desk.
 - e. Resolution: If a Problem or Emergency Problem is not corrected within forty eight (48) hours after Company receives a Service Request or Emergency Service Request, Company may conduct tests and analyses at Company's facility designed to reproduce, isolate and correct the Problem or Emergency Problem using data and information provided to Company by Licensee.
3. Software Releases. During the first year of the Term and during and the Additional Maintenance Plus Period (if any), Licensee will receive at no additional charge all Updates to the relevant Issuetrak Software in the form of Major, Minor, and Patch Releases (as defined below), provided that Company reserve the right to charge for any rewrites or other complete overhauls of Issuetrak Software that go beyond the scope of a standard Release. Licensee's use of a Release with or in place of the relevant Issuetrak Software application will be governed by and subject to the terms and conditions of this Agreement. Licensee agrees promptly to install each Release supplied by Company and to destroy or return to Company any portion of the relevant Issuetrak Software application(s) replaced or modified by a Release.

Major, Minor, and Patch Release versions are identified by a release version number consisting of a sequence of three numbers separated by a dot ("."). The first number in the sequence identifies a Major Release where dramatic or substantial changes to the product are included. The second number identifies a Minor Release when a few new features are included but are not substantial enough to be considered a Major Release. The third number in the sequence is a Patch Release which includes fixes to issues, but no new features.

4. Licensee Contacts. Licensee will designate one person as its primary point of contact and another person as its secondary point of contact for Company hereunder. Those two persons will be the only persons with whom Company is obligated to communicate with respect to Maintenance Plus hereunder, and Company may, at its sole option, communicate with such persons by telephone, electronic mail (including without limitation electronic mail sent through Company's website[s]), or facsimile.
5. Access to Software and System(s). Solely to enable Company to perform its

obligations under this Agreement, Licensee will (a) give Company reasonable access to (i) the Issuetrak Software licensed hereunder, (ii) the system(s) in connection with which that Issuetrak Software is used, (iii) all Documentation and (iv) all other relevant documents in Licensee's possession or control, and (b) provide to Company any and all such technical consultation and/or other assistance that Company may reasonably request.

6. Customized, Altered, or Modified Software. Company, at its sole option, will use reasonable efforts to support Licensee with respect to any customization, alteration, or modification of relevant Issuetrak Software that is performed by or on behalf of Licensee, but Licensee acknowledges and agrees that Company (a) has no obligation to do so and (b) cannot and does not guarantee any results with respect to any such support that Company chooses, in its sole discretion, to provide with respect to such customized Issuetrak Software. Company reserves the right to charge Licensee, at Company's then-current hourly rates, for any support that Company provides with respect to customized Issuetrak Software and to require that Licensee pay in advance (or, at Company's sole option, reimburse Company for) any costs, fees, or expenses, including without limitation travel expenses, that Company reasonably incurs in connection with providing such support.
-

