

IT Security Search 11.3

User Guide



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Quest Software Inc.

Attn: LEGAL Dept

4 Polaris Way

Aliso Viejo, CA 92656

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Legend

 **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

 **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

IT Security Search User Guide

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Welcome to IT Security Search

Quest IT Security Search provides IT administrators, IT managers and security teams with a way to navigate the expanse of information about the enterprise network. It helps you achieve the following:

- Examine what is going on
- Assess the efficiency of security practices
- Track security incidents
- Track incidents related to operations
- Have up-to-date information about users, computers, file server status and more at your fingertips
- Perform recovery operations if IT Security Search is connected to Recovery Manager for Active Directory

The search engine-like interface helps you pinpoint the data you need using only a few searches and clicks.

Installing IT Security Search

To set up IT Security Search, run the **ITSearchSuite.exe** installation package. You can customize the installation path and the port that will be used for getting data.

During setup, you may also choose to participate in the Quest Software Improvement Program. For details, see [Feedback on IT Security Search](#).

Compatibility

The following versions of data-providing systems are supported in this version of IT Security Search:

- InTrust 11.3, 11.2
- Change Auditor 6.9.3, 6.9.2, 6.9.1, 6.9, 6.8, 6.7, 6.6, 6.5
- Enterprise Reporter 2.6, 2.5.1, 2.5
- Recovery Manager for Active Directory 8.8, 8.7.1, 8.7
- Active Roles 7.1, 7.0

Software Requirements

- Operating system:
 - Microsoft Windows Server 2016
 - Microsoft Windows Server 2012 R2
 - Microsoft Windows Server 2012
 - Microsoft Windows Server 2008 R2
- Additional software:
 - Microsoft .NET Framework 4.5.1 or later
 - Microsoft Windows PowerShell 3.0 or later
- Additional requirements for the Recovery Manager for Active Directory connector:
 - Enable remote commands in Windows PowerShell. For details, see <https://technet.microsoft.com/en-us/magazine/ff700227.aspx>.
 - The PowerShell script execution policy must be set to **RemoteSigned**. Run the following cmdlet:
`Set-ExecutionPolicy RemoteSigned`
- Additional requirement for the Active Roles connector: ARS Management Tools

Browser Compatibility

The IT Security Search Web interface works correctly with the following browsers:

- Microsoft Edge
- Microsoft Internet Explorer 11 and later
- Google Chrome 40.0 or later
- Mozilla Firefox 35.0 or later

The minimum supported monitor resolution is 1024x768.

Hardware Requirements

- CPU: Quad-core; recommended: Intel Xeon E5-2670 v2 (Ivy Bridge) and 8–16 logical CPU cores
- RAM: 6GB minimum; 15GB or more recommended
- Disk: 100GB (SSD recommended); disk space requirements are very dependent on the volume of Enterprise Reporter data being processed, because the index size varies proportionally; the indexes for Change Auditor and InTrust data do not consume any disk space on the IT Security Search computer, because they are located in the data stores used by these systems
- If you deploy on a virtual machine, make sure the CPU and memory requirements above are met, and do not overload the virtual machine host

To find out the disk requirements for IT Security Search installation, consider the table below. It shows how much disk space is used for indexing in a sample environment with 10000 of each type of object. Scale the values according to your own circumstances.

Object type	Size of an index entry	Number of objects	Size of the index
Users	2KB	10000	20MB
Groups	2.5KB	10000	25MB
Computers	1KB	10000	10MB
Shares	1KB	10000	10MB
Files	0.2KB	10000	2MB
Total		50000	67MB

To display events rather than objects, IT Security Search uses the built-in indexes in InTrust and Change Auditor data stores.

Where to Install

It is recommended that you install IT Security Search in the same domain as the servers of your data-providing systems: InTrust, Enterprise Reporter, Change Auditor and Recovery Manager for Active Directory. Do not install IT Security Search on any of those systems' servers.

Security Details and Configuration

By default, IT Security Search uses a self-signed SSL certificate, which will cause security warnings for IT Security Search users. You can provide a new certificate at any time. Your certificate can be either self-signed or issued by a certificate authority. Using a certificate generated by your organization and signed by a certificate authority is recommended.

Providing a CA-Signed Certificate

If your company uses a registered SSL certificate, run the **New-CertificateBinding.ps1** PowerShell script described below to make IT Security Search use the certificate.

You can obtain a CA-signed certificate using Windows native tools and then bind it, as follows:

1. Log on to the IT Security Search server using an IT Security Search administrator account.
2. Run Microsoft Management Console (**mmc.exe**) and add the **Certificates** snap-in.
3. Select **Computer Account** and click **Next**.
4. Select **Local Computer**, and then **Finish**.
5. Click **OK** in the Add or Remove Snap-ins dialog box.
6. In the console, right-click **Certificates (Local Computer) | Personal | Certificates** and select **Request New Certificate** to start the Certificate Enrollment wizard.
7. Click **Next** and **Next** again to use the Active Directory Enrollment Policy.
8. Locate the Web Server certificate template and clear its check box. If you cannot see this template, make the check box to show all templates is selected. If you can see the template but don't have permission to enroll, contact your Certificate Authority administrator to be granted the **Enroll** permission for the account of the computer where IT Security Search is installed.
9. Click the **More information is required to enroll for this certificate** link.
10. On the **Subject** tab, from the drop-down menu under **Subject name** select Common Name and enter the NETBIOS name of the IT Security Search server. Click **Add**.
11. From the drop-down menu under **Alternative name**, select **DNS** and enter the NETBIOS name of the IT Security Search server. Click **Add**.
12. Add the FQDN of the IT Security Search Server and enter **localhost** as the DNS type entry.
13. Change the drop-down menu to **IP address (v4)** and the IP address will be automatically supplied. Click **Add**.
14. Change the drop-down menu to **IP address (v6)**. If IPv6 is enabled, the IP address will also be automatically supplied. Click **Add**. If nothing is supplied, you can safely skip this step.
15. In the same section, if necessary, enter any predefined names that DNS records have been created for, such as "IT Security Search Console", so the certificate matches the name of the URL used for access to the page.

16. Go to the **General** tab and enter a **Friendly name**, for example **IT Security Search Certificate**. Optionally, add a description.
17. Go to the **Extensions** tab, expand **Extended Key Usage** and confirm that **Server Authentication** is available appears under **Selected options**.
18. Click **Apply**, then click **OK**, then click **Enroll**.
19. The new certificate should now appear in the **Certificates** folder, under **Personal**.
20. Export the certificate by right clicking it and selecting **All Tasks | Export**.
21. In the Certificate Export wizard, click **Next**.
22. On the next step, make sure the **No, do not export the private key** radio button is selected. Click **Next**.
23. Select the **DER encoded binary X.509 (.CER)** radio button and then click **Next**.
24. Click **Browse** to select where to save the certificate. For example, save it in **%ProgramFiles%\Quest\IT Security Search** and give the file a descriptive name.
25. Click **Next** and then click **Finish**. The certificate is saved at the specified location.
26. To make IT Security Search use this new certificate, run the **New-CertificateBinding.ps1** script as described below, supplying the file you saved on the previous step.
27. Restart the Quest IT Security Search service.

Providing a Self-Signed Certificate

To create a new self-signed certificate, use the **New-SslCertificate.ps1** PowerShell cmdlet located in the **Scripts** subfolder of your IT Security Search installation folder. By default, the certificate is set to be in effect from the current date until December 31, 2039.

The cmdlet has the following parameters:

Parameter	Type	Description
-FilePath	string	The path to your certificate file.
-Subject	string	The subject of the certificate.
-SubjectDnsAltNames	string	Optional: a list of alternative names for the IT Security Search server (IP addresses, NetBIOS name and so on). If this parameter is omitted, the certificate will be generated for all possible alternative names of the specified host (localhost, IPv4 address, IPv6 address, FQDN, 127.0.0.1, NetBIOS).
-Begin	datetime	Optional: the date from which the certificate is in effect; by default, from the current day.
-End	datetime	Optional: the date until which the certificate is in effect; by default, until December 31, 2039.
-KeepExisting	switch	Whether any existing file with the specified name should be kept instead of overwritten.

Example:

```
powershell -file "C:\Program Files\Quest\IT Security Search\Scripts\New-
SslCertificate.ps1" -filepath "c:\temp\ITSearch.cer"
```

After you have generated the certificate (and ideally, had it signed by a CA), perform the procedure described in [Binding Your Certificate](#).

Binding Your Certificate

To begin using your self-signed or CA-signed certificate, use the **New-CertificateBinding.ps1** cmdlet, which is located in the **Scripts** subfolder of your IT Security Search installation folder. The cmdlet has the following parameters:

Parameter	Type	Description
-FilePath	string	The path to your certificate file.
-Port	int	The port that IT Security Search uses. It is specified during setup, the default port is 443.
-Force	switch	If this switch is set, then any existing certificate will be unbound from the specified port. If the switch is not set, then the existing certificate will be kept instead of the specified one.
-FilePassword	SecureString	If your certificate is a password protected .PFX certificate, you need to provide this parameter.

Example:

```
powershell -file "C:\Program Files\Quest\IT Security Search\Scripts\New-
CertificateBinding.ps1" -filepath "c:\temp\ITSearch.cer" -port 443 -Force
```

Revoking a Certificate

To revoke a certificate that is currently in use by IT Security Search, run the **Delete-CertificateBinding.ps1** cmdlet located in the **Scripts** subfolder of your IT Security Search installation folder.

Example:

```
powershell.exe -file "C:\Program Files\Quest\IT Security Search\Scripts\Delete-
CertificateBinding.ps1" -Port 443
```

The **-Port** parameter specifies the port that the certificate is bound to.

! CAUTION: After you perform this operation, the IT Security Search service becomes unavailable until a new certificate is bound. Prepare the next certificate in advance to avoid downtime.

How IT Security Search Security Features Are Implemented

IT Security Search security is based on the Windows Data Protection API (DPAPI). For details about its security features, see the corresponding MSDN article; at the time of this writing it is located at

<https://msdn.microsoft.com/en-us/library/ms995355.aspx>.

Who Can Do What in IT Security Search

There are two roles that IT Security Search associates with users that access it: *operator* and *administrator*. Unless your user account is one of these, you do not have access to IT Security Search.

An operator can use the search features of the application; if the Recovery Manager data link is enabled, an operator can also perform recovery. To make an account an operator, include it in the IT Security Search access control list. This list is available on the IT Security Search **Settings** page, on the **Security** tab. You can supply individual users in **domain\user** format or security groups in **domain\group** format.

An administrator can use the same features as an operator and also configure the connectors to the data-providing systems, as described in [Where the Data Comes From](#), and assign operator roles. To give a user account administrator privileges, make the account a member of the **IT Security Search Administrators** local group on the computer where IT Security Search is installed. You can assign the administrator role by specifying Active Directory groups or individual users. If an account is an administrator, all objects are visible to that account, no matter what scope is set for it on the **Security** tab of the **Settings** page.

The user account that performs IT Security Search installation automatically becomes an administrator.

Setting the Scope of Responsibility for an Operator

For each operator you add, specify the scope of objects visible to the operator by supplying a list of organizational units. If you want to make everything visible to an operator, specify the asterisk wildcard * for the scope. If you want to limit an operator's scope, follow the instructions below.

! CAUTION: For InTrust events, the scope delegation settings will have an effect only if the Enterprise Reporter connector is enabled and configured. Otherwise, all operators can see all InTrust events.

To make the right decisions when specifying OUs, make sure you understand the relevance of these OUs to the results that the operator is going to get. The following table explains how the choice of OU affects the scope, depending on the type of object:

What type of object the operator looks for	The operator sees the object if...
Active Directory user, group or computer	It is in the OU (or any OU nested in it)
OU	It is the same OU or it is nested in the OU at any level

What type of object the operator looks for	The operator sees the object if...
Computer that isn't in a domain	—
Computer local user or group	The computer is in the OU (or any OU nested in it)
File or network share	The hosting computer is in the OU (or any OU nested in it)
InTrust event	<p>If the Enterprise Reporter connector is not enabled, scope settings are irrelevant and the operator can see all InTrust events.</p> <p>If the Enterprise Reporter connector is enabled:</p> <ul style="list-style-type: none"> • If the event has the Whom field, the operator sees it as long as the OU (or any OU nested in it) contains the object in Whom • Otherwise, the operator sees it as long as the OU (or any OU nested in it) contains the object in Where
Non-InTrust event	<ul style="list-style-type: none"> • If the event has the Whom field, the operator sees it as long as the OU (or any OU nested in it) contains the object in Whom • Otherwise, the operator sees it as long as the OU (or any OU nested in it) contains the object in Where

The OUs must be listed in canonical name format, one OU per line.

Where the Data Comes From

IT Security Search relies on data provided by auditing systems. At this time, the following systems are supported:

- InTrust
- Change Auditor
- Enterprise Reporter
- Recovery Manager for Active Directory
- Active Roles

You can connect to any combination of these systems. However, to make the most of IT Security Search, you should establish links with all of them that are available to you. IT Security Search is designed to correlate the data they supply, sparing you the effort of trying to match disparate bits of information to build up a picture.

For example, an event captured by InTrust can prompt you to examine the initiator user account closely; user information is provided by Enterprise Reporter. Next, you might be interested in recent changes to the user account; this information comes from Change Auditor. With all three systems interconnected, these transitions from one piece of data to another are quick and seamless.

Support for Recovery Manager for Active Directory lets you perform recovery directly from the IT Security Search interface in addition to viewing a list of available backup states. For each of them, the **Restore object to this state** link is provided. If the object was changed rather than deleted, you can select specific modified attributes to restore. If it was deleted, you can only restore it to a full state.

Specifying Data Sources

To configure the connections between IT Security Search and any of the supported systems available in your environment, go to the IT Security Search settings page. To open this page, click **Settings** in the upper right corner.

See the following topics for details about connection configuration for each of the systems:

- [InTrust](#)
- [Change Auditor](#)
- [Enterprise Reporter](#)
- [Recovery Manager for Active Directory](#)
- [Active Roles](#)

Change Auditor Database

Change Auditor produces information about changes to critical resources such as Active Directory, Exchange or files on file servers. Generally, whenever you are looking for an answer to the question “What changed in the environment?” in IT Security Search, the data is likely provided by Change Auditor.

To start configuring the Change Auditor database data link, select the **Connector enabled** option. To set up connection to the Change Auditor database, configure the standard SQL Server database access settings:

- Server name
- Database name
- Authentication type
The following options are available:
 - Windows authentication
Make sure the Active Directory account you specify is granted **Read** permissions on the database.
 - SQL Server authentication
Specifies that SQL Server-specific credentials are used.
- User name and password

To verify that your Change Auditor database access works, click the **Test Connection** link.

Finally, click **Apply**.

! CAUTION: To make Change Auditor generate the events you want to see in IT Security Search, configure monitoring of the Active Directory attributes you are interested in. For that, in the configuration of the Auditing task, in the AD Attribute Auditing page, go to Forest Attributes. Select the object class and enable monitoring for the necessary attributes.

For details about working with Change Auditor tasks, see the [Change Auditor User Guide](#).

InTrust Repository

InTrust collects audit events from a wide range of logs on a variety of platforms. Generally, whenever you are looking for an answer to the question “What happened?” in IT Security Search, the data is provided by InTrust.

To start configuring the InTrust repository data link, select the **Connector enabled** option. To set up connection to one or more InTrust repositories with audit data, configure the following:

- InTrust server name and credentials
This is an InTrust server in the InTrust organization where the repository is registered. There can be multiple servers in an InTrust organization, and any of them is accepted.
- The repository or repositories to connect to

i NOTES:

- The page shows the date of the last gathered event across all of the included repositories.
- If there was recently a problem with a repository, indicated by an error icon, hover the mouse cursor over that repository, and a tooltip will show the error message.

To verify that your repository access works, click the **Test Connection** link.

Finally, click **Apply**.

Enterprise Reporter Database

Enterprise Reporter retains information about the configuration of critical systems. Generally, whenever you are looking for an answer to the question “What settings are configured for this?” in IT Security Search, the data is provided by Enterprise Reporter.

To start configuring the Enterprise Reporter database data link, select the **Connector enabled** option. To set up connection to the Enterprise Reporter database, configure the standard SQL Server database access settings:

- Server name
- Database name
- Authentication type
The following options are available:
 - Windows authentication
 - SQL Server authentication
Specifies that SQL Server-specific credentials are used.
- User name and password
Make sure the Active Directory account you specify is granted **Read** and **Execute** permissions on the database.

To verify that your Enterprise Reporter database access works, click the **Test Connection** link.

Finally, click **Apply**.

! **CAUTION:** In the properties of the NTFS discovery you use in Enterprise Reporter, make sure the **For this discovery, collect trough option is set to The administrative share. This is required for correlation of Change Auditor data with information about files. For details about working with Enterprise Reporter discoveries, see [Creating and Managing Discoveries](#).**

Indexing

Before you can use data from the Enterprise Reporter database, you need to wait until an index is built.

To track the progress of index building, check the Enterprise Reporter connector settings page. If any errors occur during database indexing, they are displayed on the page.

You can force reindexing of objects that are loaded from the Enterprise Reporter database by clicking **Rebuild Index**.

Recovery Manager for Active Directory Server

Recovery Manager for Active Directory performs Active Directory recovery at any level: from entire domains to individual objects and attributes. IT Security Search lets you track recovery-related activity. Enabling the Recovery Manager for Active Directory data link makes it possible to list available backup states and restore objects to any of them.

To start configuring the Recovery Manager for Active Directory data link, select the **Connector enabled** option. To set up connection to Recovery Manager for Active Directory, configure the following:

1. Recovery Manager connection settings
Specify the Recovery Manager server to connect to and the credentials to use for running PowerShell cmdlets on that server. The account you supply must have local administrator privileges on the server.
2. Active Directory connection settings
Specify the Active Directory domain or a particular domain controller and the credentials to use for working with backup data. The account you supply must be powerful enough to both read the backup configuration and perform recovery by applying backup states.

For up-to-date details about the permissions required for access to Recovery Manager for Active Directory, see the [Recovery Manager for Active Directory Deployment Guide](#).

To make sure that you have specified valid account or accounts, click the **Test connection** link. This verifies that the credentials are valid and suitable for running searches. However, it does not ensure that the Active Directory access account can perform recovery operations.

Active Roles

Active Roles simplifies and streamlines creation and ongoing management of user accounts, groups and other objects in Active Directory. Generally, whenever you are looking for an answer to the question “What is known about this user or group?” in IT Security Search, the data can be provided by Active Roles.

Active Roles brings information about the following:

- Users
- Groups
- Computers
- OUs
- Active Directory change events as logged by Active Roles
- Active Roles-specific information:
 - Virtual attributes of objects
 - Dynamic groups and their membership rules

To start configuring the Active Roles data link, select the **Connector enabled** option. To set up connection to the Active Roles server, configure the following settings:

- Server name
- User name and password

To verify that your Active Roles server access works, click the **Test Connection** link.

Finally, click **Apply**.

! **CAUTION:** For the connection to the Active Roles server to work, make sure that port 15172 is opened for both inbound and outbound traffic on that server.

Management History Synchronization Specifics

Management history synchronization between IT Security Search and Active Roles does not happen directly. IT Security Search uses its own “warehouse” component as an intermediary data store. The first synchronization

can take a long time, because all available history has to be processed. After that, synchronization involves only the most recent data.

Running Searches

To begin searching, enter what you are looking for in the search box. For example, start with a user name, a network share path, a computer name or a phrase to look for in event fields.

A search involves all available item types (events, users, files, computers and so on) at once, no matter which item type is currently highlighted. By default, the number of results returned is limited to 100,000. For Recovery Manager for Active Directory items, the limit is fixed at 5,000.

Viewing Data by Object Type

IT Security Search groups the discovered data by object type:

- Computers
- Events
- Files
- Groups
- OUs
- Shares
- Users

These items can be selected at the top. The object type is also switched when you use links in the context of some object's details, such as **Activity initiated by this user** or **Who granted permissions to this file**.

Specifying a Time Range for Events

To display events from only a specific time period, use the time range filter. For that, click the clock icon in the search box. If you choose not to specify a time range, the search will involve all available data.

Understanding the Event Timeline

The event timeline is a bar graph representation of search results, where you can quickly spot event patterns. For example, it helps you find out the peak hours for the events you are interested in or easily track activity outside business hours.

Viewing Details of Search Results

When you select an item from the result list, the right pane shows brief details about the item. To go to the full details view for this item, click **View Details**.

i | **NOTE:** Event entries do not have a details view.

The details view also suggests links to related data which you might be interested in and which you might be trying to find in the first place. Clicking such a link starts a search in an automatically supplied context. For example, when you are viewing the details of a folder in a network share, the following links are ready for you:

- Who accessed this folder
- Who granted permissions to this folder
- Files and folders in this share

Information about users, groups, computers and organizational units can come from more than one source. At this time, Enterprise Reporter and Recovery Manager for Active Directory can both provide data about them. When multiple sources have information about the same object, IT Security Search shows data from the source that submitted it first, so that the results can be displayed sooner. A warning is shown about additional data that may be available. If you want these results, click the **run a full scan** link in the warning text. This will cause IT Security Search to retrieve the data from the remaining sources and correlate it.

Navigating Session History Using Breadcrumbs

As you work with the search results, your search path is saved as a breadcrumb sequence. This helps you go back to any previous step in your session without retracing the steps.

Using Facets to Filter Results

Facets are quick view filters by property value. When you apply a facet, IT Security Search shows only matching items. You can apply multiple facets at once, progressively limiting the number of results; you can also remove any of the facets you have applied.

Facets are shown to the left of the result pane. To apply a facet, click an available value link. For example, if you are viewing the details of a deleted user account (where the value of **State** is **Deleted**) and want to focus on other deleted users, click the **Deleted** link.

Alternatively, you can use the item's properties to work with facets. The properties that support this have funnel icons next to them in the details pane. To apply a facet, click such a property.

Fine-Tuning Your Search Terms

Simple searches produce results where the term you specify is contained anywhere in the discovered data. To make your searches less broad and more relevant, you can use hints—for example, by prefixing the field names to look in. For details, see [Search Term Syntax](#).

Search Term Syntax

Use the following syntax for search terms in the search box. Searches are case-insensitive.

i NOTES:

- Asterisk wildcards in an initial position are currently not supported for events provided by InTrust and Recovery Manager for Active Directory. This limitation does not apply to data provided by Change Auditor and Enterprise Reporter.
- If you specify file system paths (such as **C:Windows**) or Active Directory distinguished names (such as **CN = BuiltIn, DC = k1test16, DC = test, DC = local**) as search terms, enclose them in quotation marks. This is necessary due to the way the search engine treats the backslash (as an escape character) and the equality sign (as an attribute indicator).

For details about the fields that you can use in your search queries, see [Event Field Reference](#).

Single-Word Terms

This is known as full-text search. The search involves all available fields and uses the Contains operator.

Meaning	Syntax	Details
Look for a single-word term in any attribute	Word without spaces Example: john	john matches John or john in any attribute, but does not match stjohn in any attribute
Look for a single-word term with the specified beginning in any attribute	Word ending in an asterisk (*) without spaces Example: john*	john* matches John or Johnson in any attribute
Find attributes where a specific single-word term is not contained in any attributes	Word without spaces with a leading hyphen Example: -john	-john may match entries that contain stjohn , but does not match entries that contain john in any attribute
Find entries where a specific single-word term with the specified beginning is not contained in any attributes	Word ending in an asterisk (*) without spaces with a leading hyphen Example: -john*	-john* may match entries that contain stjohn , but does not match entries that contain john or johnson in any attribute

Term Combinations

Meaning	Syntax	Details
Look for entries with specific single-word terms in any attributes	Words separated by spaces Example: john glen*	john glen* matches john and glen , or john and glenda , or john and glen and glenda , wherever they are found

Meaning	Syntax	Details
Look for entries that do not contain specific single-word terms in any attribute	Word without spaces Examples: <ul style="list-style-type: none"> • -john -glen • john -glen* 	<ul style="list-style-type: none"> • -john -glen matches entries that do not contain john or glen anywhere • john -glen* matches entries that contain john in any attribute and at the same time do not contain glen or glenda anywhere
Look for entries with a specific multiple-word phrase in any attribute	Phrase in quotation marks Example: "Account Logon"	"Account Logon" matches entries that contain the exact phrase Account Logon in any attribute
Look for entries that do not contain a specific multiple-word phrase in any attribute	Phrase in quotation marks Example: logon server01 - "Account Logon"	logon server01 -"Account Logon" matches entries that contain the words Logon and server01 anywhere but do not contain the exact phrase Account Logon in any attribute
Meet one of the specified terms (or sets of terms)	Terms (single words or phrases) separated by the OR operator; this operator has the following specifics: <ul style="list-style-type: none"> • It is case-sensitive: it must always be specified as OR • It denotes a choice between everything to the left of it and everything to the right of it • You can use multiple OR operators in a query; the boundary of an OR clause is the beginning of the query, the end of the query, or another OR Examples: <ul style="list-style-type: none"> • paul john OR thomas • -"logon/logoff" server01 OR stjohn 	<ul style="list-style-type: none"> • paul john OR thomas matches entries that contain either both John and Paul, or Thomas anywhere • -"logon/logoff" server01 OR stjohn matches either entries without the phrase Logon/Logoff that contain server01, or entries with stjohn (no matter whether they contain the phrase Logon/Logoff)
Explicitly mark an AND operation for visual clarity	Terms (single words or phrases) separated by the AND operator; this operator has the following specifics: <ul style="list-style-type: none"> • It is case-sensitive: it must always be specified as AND • It can be omitted wherever it occurs 	paul AND john and paul john are identical in meaning: look for entries where both paul and john occur.

Meaning	Syntax	Details
	Examples: <ul style="list-style-type: none"> • paul AND john • paul john 	
Group and nest terms for logical operations on them	Parentheses enclosing the terms you want to group Example: (homer marge) OR (peter lois)	(homer marge) OR (peter lois) matches either entries with both homer and marge , or entries with both peter and lois . It does not match entries with both peter and homer that do not contain lois or marge .

Searching in Specific Attributes

To apply your search term only to a particular attribute, prepend the name of the attribute with a colon (:) or equals sign (=) to your search term, as shown in the table below. If the attribute name is made up of multiple words, enclose it in brackets (as in **[log name]:security**). All the syntax conventions described above also apply.

The following distinction is important:

- Labels unambiguously mapped to entry attributes; for example, **Path:"Documents and Settings"** in file access entries
In this case, the search involves the specified field and uses the Contains operator.
- Labels mapped to different attributes in different contexts (known as normalized attributes); for example, **Where:primrose** would mean the **primrose** domain for users or groups, the **primrose** computer for files or shares, and so on
In this case, the search involves the associated fields as necessary and may even modify the search terms.

For details about the meanings of labels in particular contexts, see [Normalized Attributes](#) below.

i **NOTE:** When you look for permission information, you can use the Who, What and Owner attributes as follows:

- With regard to files, Who means the account that has permissions.
- Use What to specify the permission.
- Owner is not a real permission, but you can use it (as in **What:Owner**) to find the owner of a file.

Meaning	Syntax	Details
Attribute contains term	Examples: <ul style="list-style-type: none"> • user:stjohn • description:"Special privileges assigned" 	<ul style="list-style-type: none"> • user:stjohn matches entries where the User attribute contains the word stjohn • description:"Special privileges assigned" matches entries where the Description attribute contains the exact phrase Special privileges assigned

Meaning	Syntax	Details
Attribute does not contain term	Examples: <ul style="list-style-type: none"> -user:john* -description:"Special privileges assigned" -[log name]:"Directory Service" 	<ul style="list-style-type: none"> -user:john* matches entries where the User attribute does not contain the words john or johnson -description:"Special privileges assigned" matches entries where the Description attribute does not contain the exact phrase Special privileges assigned -[log name]:"Directory Service" matches entries where the Log Name attribute does not contain the exact phrase Directory Service
Attribute equals term	Examples: <ul style="list-style-type: none"> computer=server01.example.com description="An account was successfully logged on." 	<ul style="list-style-type: none"> computer=server01.example.com matches entries where the contents of the Computer attribute are exactly server01.example.com description="An account was successfully logged on." matches entries where the contents of the Description attribute are exactly An account was successfully logged on.
Attribute does not equal term	Examples: <ul style="list-style-type: none"> - computer=server01.example.com -description="An account was successfully logged on." 	<ul style="list-style-type: none"> -computer=server01.example.com matches entries where the contents of the Computer attribute are different from server01.example.com -description="An account was successfully logged on." matches entries where the contents of the Description attribute are different from An account was successfully logged on.

Filter Syntax

Select one of the operators (explained in the following table), and enter your filter terms.

Operator	Syntax	Example	Meaning
Contains	[FieldName]:<Value>	Name:Paul	The attribute contains all of the specified terms at once in any combination
Does not contain	-[FieldName]:<Value>	-Name:John	The attribute contains none of the specified terms anywhere
Equals	[FieldName]=<Value>	Name="John Paul"	The attribute contents are identical to the specified phrase; do not enclose the phrase in quotation marks for this operator
Does not equal	-	-	The attribute contents are not identical to the

Operator	Syntax	Example	Meaning
	[FieldName]=<Value>	SamAccountName=jpaul	specified phrase; do not enclose the phrase in quotation marks for this operator

The following search syntax rules described above also apply to filter terms:

- Terms are case-insensitive.
- The term can be a single word, multiple words, or a phrase in quotation marks.
- In single-word terms, a trailing asterisk is treated as a wildcard character.
- In exact phrases, an asterisk is treated as a regular character.

i **NOTE:** Asterisk wildcards in an initial position are currently not supported for events provided by InTrust and Recovery Manager for Active Directory. This limitation does not apply to data provided by Change Auditor and Enterprise Reporter.

Normalized Attributes

The following table shows what attributes are involved in searches that use the Who, What and Where labels. Active Directory attributes are **bolded**. Information about events is not included, because Who, What and Where are mapped directly to the same-name fields in InTrust and Change Auditor events.

Label → Context ↓	Who	What	Where
Users	<ul style="list-style-type: none"> • SAMAccountName • DisplayName • AccountSid • DistinguishedName 	N/A	DomainName
Groups	<ul style="list-style-type: none"> • User information • User account information • ManagedByFullName • ManagedByDisplayName 	N/A	DomainName
Computers	<ul style="list-style-type: none"> • ManagedByFullName • ManagedByDisplayName 	N/A	<ul style="list-style-type: none"> • ComputerName • NetBiosName
Shares	User information	N/A	ComputerName
Files	Permission information	Permission information	ComputerName

Specifics of Recovery Manager for Active Directory Data

Recovery Manager for Active Directory provides data about users, groups, computers and organizational units, including those that have been deleted. Searching within that data should be approached in special ways.

One drawback is that full-text search does not work in Recovery Manager for Active Directory. Generally, it is recommended that you complement this data with results from Enterprise Reporter, if possible.

Searching by Distinguished Name

In all attributes that contain distinguished names, such as **distinguishedName** or **manager**, only the "equals" operator is used, meaning that the value must match exactly. For example, if the **manager** attribute of a user is "CN=David Shore,OU=Employees,DC=it,DC=example,DC=corp", then the following happens:

- These queries match the user:
`Manager:"CN=David Shore,OU=Employees,DC=it,DC=example,DC=corp"`
`Manager="CN=David Shore,OU=Employees,DC=it,DC=example,DC=corp"`
- These queries do not match the user:
`Manager:"CN=David Shore"`
`Manager="CN=David Shore"`

Searching for Deleted Objects

When Active Directory objects are deleted, they are really moved to the **Deleted Objects** container; some of their attributes are cleared and some are changed, including the name. These tips will help you compose queries that produce the expected results for deleted objects:

- The **name** attribute undergoes the following change: **<object_name>** becomes **<object_name>\0ADEL<object_GUID>**. If you are aware of this pattern, you can look for deleted objects specifically.
- The **samAccountName** attribute remains unchanged in deleted users, computers and groups.
- In computers, the **dnsHostName** attribute also remains unchanged.

Searching Without Specifying Fields

When you supply a search term without prefixing a field name, IT Security Search adds the field name for you, as follows:

Object Type	Field	Examples
User or group	aNR	"Alan Smithee" becomes aNR:"Alan Smithee" "Alan Smithee*" becomes aNR:"Alan Smithee" (wildcards are not supported by Recovery Manager for Active Directory)
Computer or OU	name	primrose.domain.local becomes name:primrose.domain.local Directors* becomes name:Directors (wildcards are not supported by Recovery Manager for Active Directory)

It is recommended that you specify the target fields explicitly and use the fields suggested in [Searching for Deleted Objects](#) above.

Specifics of Enterprise Reporter Data

Data from Enterprise Reporter contains information about permission assignments, and you can get this information by using the **Assignment** field in your search queries. This field accepts the following values: **Direct**, **Indirect** and **All**. Example: **Assignment=All**. If the **Assignment** field is omitted, its value is assumed to be **Direct**.

If you use the **Assignment** field in a query, permissions are analyzed for the objects indicated by the **Who** field.

CAUTION: In queries about permission assignments, the value of the **Who** field must be in domain/user format, where the domain name is a NetBIOS name.

Using the **PermissionsForFile** keyword also gives you permission assignment data from Enterprise Reporter. This keyword requires that you specify a nested search query enclosed in double quotes; the inner query must use single quotes. Example:

```
PermissionsForFile="Where='server1' AND Path='D:\some\important\folder\'"
```

In the inner query, the **What** keyword helps specify the kind of permission to search for. Both of the following queries will return users with the Full Control permission:

```
PermissionsForFile="Where='server1' AND Path='D:\some\important\folder\' AND what:full"
```

```
PermissionsForFile="Where='server1' AND Path='D:\some\important\folder\' AND what:'full control'"
```

The **PermissionsForFile** keyword can be used in conjunction with other keywords and doesn't have to specify the entire query. The following will return all users called **Administrator** who have access permissions:

```
Who:Administrator PermissionsForFile="Where='server1' AND Path='D:\some\important\folder\'"
```

Examples

Queries for events

Query	Meaning
Who:"John Smith"	Activity initiated by user John Smith
What:"Group Member" AND "DL.RD"	Who was added to and deleted from group DL.RD
Where:"primrose"	Access to computer primrose
Workstation:"primrose"	Access from computer primrose

Queries for files and folders

Query	Meaning
Where:"primrose.mycorp.com"	Who accessed the

Query	Meaning
AND "D:\Private\assessment.pdf"	D:\Private\assessment.pdf file
Where:"primrose.mycorp.com" AND "D:\Personal\assessment.pdf" AND What:"File Access Rights Changed"	Who granted permissions to the D:\Personal\assessment.pdf file
Who:"John Smith" What:Owner	Files and folders owned by user John Smith
Who:"John Smith"	Files and folders where user John Smith has permissions
Where:"primrose.mycorp.com" AND "C:_VIDEO"	Files and folders in the _VIDEO share

Event Field Reference

The following topics provide details about fields that you can use in search queries, organized by data-providing system:

- [Enterprise Reporter Event Fields](#)
- [InTrust Event Fields](#)
- [Change Auditor for Active Directory Event Fields](#)
- [Active Roles Event Fields](#)
- [Recovery Manager for Active Directory Fields](#)

Enterprise Reporter Event Fields

The following are lists of fields that occur in Enterprise Reporter events, organized by type of returned object. You can use these fields in your search queries.

i | **NOTE:** The **In UI** column indicates if the field is available in the IT Security Search web UI as a clickable element. Whether or not you can click it in the UI, you can use any of these fields in your search queries.

Computers

Field Name	In UI	Example Value	Details
AccountFullName	No	MAIN\HOUEVW04\$	SAMAccountDomain\SAMAccountName of the relevant computer account
AccountSid	No	S-1-5-21-636461855-2365528612-2953867313-5163	Security identifier (SID) of the computer account

Field Name	In UI	Example Value	Details
ComputerName	Yes	achtung.main.mycompany.corp	Short or NetBIOS name for the computer
Description	Yes	Serial , AOPEN_, AWRDACPI, 1002MHz, 1002MHz, 3072MB RAM	Description for the computer
DistinguishedName	No	CN=HOUITW09, OU=Houston, OU=AMER, OU=Production Computers, DC=main, DC=mycompany, DC=corp	Distinguished name for domain computer
Domain	Yes		Same as DomainName
DomainName	No	main.mycompany.corp	Fully qualified domain name
Groups	No	Pre-Windows 2000 Compatible Access;Cert Publishers	List of groups (in common name format) where the computer account is a member explicitly
HasGroups	No	True	True if this computer account is a member of any group
IsHidden	No	False	True if the server is visible to other computers in the same network; otherwise, false
Location	Yes	US/Houston	Location of domain computer
ManagedByDisplayName	No	Patricia Lum	The display name of account by which the domain computer is managed
ManagedByType	No	Users	Type of account by which the domain computer is managed; Users or Groups
Name	Yes	achtung	NetBIOS name of the computer
NetBiosName	No	IRVWEBW05	NetBIOS name for domain computer
NumLogons	No	291	Number of times the domain computer was logged into
OSName	No	Windows Server 2003	Full name of the computer's operating system
OSServicePack	No	Service Pack 1	Service pack name for the computer's operating system
OSVersion	No	5.2 (3790)	Operating system version number for the computer
OU_CanonicalName	No	main.mycompany.corp/Production Computers/US/Houston/R&D Test Computers	Canonical name for organizational unit
OU_DistinguishedName	No	OU=Cary, OU=AMER, OU=Production Computers, DC=main, DC=mycompany,	Distinguished name for organizational unit

Field Name	In UI	Example Value	Details
		DC=corp	
RelatedOU	No		Same as OU_CanonicalName
Scope	Yes	Active Directory	Active Directory or Workgroup
Source	Yes	Enterprise Reporter	Enterprise Reporter (data source)
State	Yes	Current	Current or Deleted
Where	No		Same as ComputerName, NetBiosName
Who	No		Same as ManagedByFullName, ManagedByDisplayName

Files

Field Name	In UI	Example Value	Details
Computer	Yes		Same as ComputerName
ComputerName	No	WST9240.main.mycompany.corp	Short or NetBIOS name for the computer
DomainName	Yes	MAIN	NetBIOS name for domain
Extension	Yes	.exe	Extension of the file
File	Yes	TestConsol.exe	File or folder name
FullAccountName	Yes	WST9240\Administrators	SAMAccountDomain\SAMAccountName of owner account
OU_CanonicalName	Yes	main.mycompany.corp/Production Computers/US/Houston/R&D Test Computers	Canonical name for organizational unit (for domain users only)
Owner	Yes		Same as FullAccountName, OwnerSid
Owner Domain	No		Same as SAMOwnerDomain
OwnerSid	No	S-1-5-32-544	Security identifier (SID) of the owner account
OwnerType	No	Groups	Owner account type: Users or Groups
Path	Yes	D:\Images\59491\	Full path of the folder or file; based on the collection options, the value could be in the format c:\folder or \\computer\shared\Folder
Permission	No		Same as PermissionsText
PermissionsText	No	WST9240\Remote Desktop Users: Allow List folder/read data, Create	Semicolon-delimited list of <i>permission</i>

Field Name	In UI	Example Value	Details
		files/Write data, Create folders/append data, Read extended attributes, Write extended attributes, Traverse folder/execute file, Read attributes, Write attributes, Read permissions Inherit	<i>Account: access_type</i> [Allow Deny] <i>inheritance</i> [Inherited Explicit]
RelatedOU	No		Same as OU_CanonicalName
SAMOwnerDomain	No	WST9240	SAM account name of owner account's domain
SAMOwnerName	No	Administrators	SAM account name of owner account
Size	Yes	31335914	Size in bytes of the NTFS object
Source	Yes	Enterprise Reporter	Enterprise Reporter (data source)
Type	Yes	File	File or Folder; Folder if the NTFS object is a folder; otherwise, File
What	No		Same as PermissionsText
Where	No		Same as ComputerName
Who	No		Same as PermissionsText

Groups

Field Name	In UI	Example Value	Details
AccountSid	No	S-1-5-21-636461855-2365528612-2953867313-107634	Security identifier (SID) of the account
AdminDisplayName	No	Administrator	Admin display name for the domain group; name is displayed on admin screens
CanonicalName	No	main.mycompany.corp/Groups/RD/MCDL.RD.CRDHub.APAC.AU	The name of the domain group in canonical format
CommonName	No	Development Users	Common name for domain group
Description	Yes	Owner: CLIVE_HERRY	Description of the group
DisplayName	No	AA_Accounting	Display or common name for the group
DistinguishedName	No	CN=MCDL.RD.CRDHub.APAC.AU,OU=RD,OU=Groups,DC=main,DC=mycompany,DC=corp	Distinguished name for domain group or SAM account name for a local user (computer\username)
Domain	Yes		Same as DomainName
DomainName	Yes	main.mycompany.corp	Fully qualified domain name for domain accounts or computer's

Field Name	In UI	Example Value	Details
			NetBios Name for local
E-mail	Yes		Same as EmailAddress
EmailAddress	No	BC5796F842DD49CD8F4@ sales.mycompany.com	Email address for the group
Friendly Name	Yes		Same as FriendlyName
FriendlyName	No	AA_Accounting (MAIN\FB430EAC2D2E4)	Friendly name for the group
FullAccountName	No	MAIN\Office.AMER.US.Boston	domain\group; group is a SAM account name, domain is the SAM account name of a domain or NetBIOS name of a computer
FullName	No	Development Users	Full name for domain group
Groups	No	MCDL.PreSales.NAC.DatabasePerf; MCDL.Sales.DBPerformance.SR.NA	Common or SAM account names of groups (semicolon-separated) that are explicitly members
HasGroups	No	False	True if this group has members of type "group"
HasUsers	No	True	True if this group has members of type "user"
HomePage	No	http://homepage	Primary home page for domain group
Info	No	Created as part of the ChangeBase Mail migration by Charles Arrot	Informational notes on the domain group
IsSecurityEnabled	No	Security	Security or Distribution
Managed By	No		Same as ManagedByDisplayName, ManagedByFullName
ManagedByDisplayName	No	Owen Range	Display name or Common name of account by which the domain group is managed
ManagedByFullName	No	CN=Sarah Quash,OU=Employees, DC=main,DC=mycompany,DC=corp	Account (distinguished name) by which the domain group is managed
ManagedByType	No	Users	Type of account by which the domain group is managed; Users or Groups
Name	Yes		Same as DisplayName
Nested Groups	No		Same as Groups
Organizational Unit	Yes		Same as OU_CanonicalName
OU_CanonicalName	No	main.mycompany.corp/Groups/Sales	Canonical name for organizational unit
OU_DistinguishedName	No	OU=Sales,OU=Groups,DC=main, DC=mycompany,DC=corp	Distinguished name for organizational unit
RelatedOU	No		Same as OU_CanonicalName

Field Name	In UI	Example Value	Details
SAMAccountDomain	No	MAIN	SAM account name for the account's domain for domain's groups or NetBIOS name of the computer for computer's groups
SAMAccountName	No	MCDL.RD.CRDHub.APAC.AU	SAM account name for the account
Scope	Yes	Universal	One of the following: <ul style="list-style-type: none"> Builtin local Global Domain local Local Universal SQL Login Well Known Unknown
SIDHistory	No	S-1-5-21-329068152-688789844-839522115-10863	List of previous security identifiers (SID) used if the domain group was moved from other domains
Source	Yes	Enterprise Reporter	Enterprise Reporter (data source)
State	Yes	Current	Current or Deleted
Type	Yes		Same as IsSecurityEnabled
Url	No	http://group	URL addresses of websites for the domain group
Users	No	Zoe Ucchini;Peter Omelo	Common or SAM account names of users (semicolon-separated) that are explicitly members
Where	No		Same as DomainName
Who	No		Same as Users, UsersAccounts, ManagedByFullName, ManagedByDisplayName

OUs

Field Name	In UI	Example Value	Details
AppliesTo	No		Same as PermissionsText
CanonicalName	Yes	main.mycompany.corp/Builtin	Canonical name for organizational unit
ContainerType	No	Container	Type of container: Container or Organizational Unit

Field Name	In UI	Example Value	Details
Description	Yes	Default container for upgraded computer accounts	
DistinguishedName	No	Description for organizational unit	Distinguished name for organizational unit
Domain	Yes		Same as DomainName
DomainName	No	main.mycompany.corp	Fully qualified domain name
HasPermissions	No	True	True or False; True if PermissionsText is not empty
Managed By	Yes		Same as ManagedByFullName, ManagedByDisplayName
ManagedByDisplayName	No	MCDL.RD.ITSearch	Display or common name of management account
ManagedByFullName	No	CN=MCDL.RD.ITSearch, OU=RD, OU=Groups, DC=main, DC=mycompany, DC=corp	The account (distinguished name) by which the organizational unit is managed
ManagedByType	No	Groups	Management account type; Users or Groups
Name	Yes	Computers	Common short name for organizational unit
NumberOfComputers	No	4	Number of domain computers in organizational unit
NumberOfContacts	No	5	Number of contacts in organizational unit
NumberOfGroups	No	3	Number of domain groups in organizational unit
NumberOfOtherObjects	No	6	Number of other domain objects in organizational unit
NumberOfUsers	No	2	
Permission	No		Same as PermissionsText
PermissionsText	No	NT AUTHORITY\SELF: Allow Read Property, Write Property for location [Descendant computer objects] Inherited; NT AUTHORITY\SELF: Allow Read Property, Write Property for defender-tokenData [Descendant defender-tokenLicenseClass objects] Inherited	Semicolon-separated list of <i>permission/account: access_type</i> [Allow Deny] <i>inheritance</i> [Inherited Explicit]
RelatedOU	No		Same as CanonicalName
Source	Yes	Enterprise Reporter	Enterprise Reporter (data source)
State	Yes	Current	Current or Deleted
What	No		Same as PermissionsText

Field Name	In UI	Example Value	Details
Where	No		Same as DomainName
Who	No		Same as ManagedByFullName,PermissionsText

Shares

Field Name	In UI	Example Value	Details
Comment	Yes	Docs share	Comment for the share
Computer	Yes		Same as ComputerName
ComputerName	No	WST9240.main.mycompany.corp	NetBIOS name of the computer
FullOwnerName	No	WST9240\Administrators	SAMAccountDomain\SAMAccountName of owner account
Local Path	Yes		Same as SharePath
Name	Yes		Same as ShareName
Owner	Yes		Same as FullOwnerName
OwnerDomain	No	WST9240	SAM account name of owner account's domain
OwnerName	No	Administrators	SAM account name of owner account
OwnerType	No	Groups	Owner account type; Users or Groups
PermissionsText	No	WST9240\Remote Desktop Users: Allow List folder/read data, Create files/Write data, Create folders/append data, Read extended attributes, Write extended attributes, Traverse folder/execute file, Read attributes, Write attributes, Read permissions Inherit	Semicolon-delimited list of permission/ Account: access type [Allow Deny] Inheritance[Inherited Explicit]
RelatedOU	No	main.mycompany.corp/Production Computers/US/Houston/R&D Test Computers	Canonical name for organizational unit (for domain users only)
ShareName	No	C\$	Name of the share
SharePath	No	D:\Custom Utilites	Local path of share
ShareType	No	Administrative Shared Folder	Type of resource being shared
Source	Yes	Enterprise Reporter	Enterprise Reporter (data source)
What	No		Same as PermissionsText
Where	No		Same as ComputerName
Who	No		Same as PermissionsText

Users

Field Name	In UI	Example Value	Details
Account SID	Yes		Same as AccountSid
AccountIsDisabled	No	True	True if domain(computer) user account is disabled; otherwise, False
AccountIsLocked	No	False	True if domain(local) user account is locked; otherwise, False
AccountSid	No	S-1-5-21-636461855-2365528612-2953867313-71684	Security identifier (SID) of the account
Assistant	No	CN=Pamela Ear, OU=Employees, DC=main, DC=mycompany, DC=corp	The distinguished name of the domain user's administrative assistant
CannotChangePassword	Yes	False	True if the local user cannot change the password; otherwise, false
City	No	Shanghai	City of domain user account
Company	Yes	My Company Inc.	Company of the user account
Country	Yes	Canada	Country or region of the user account
Department	Yes	R&D - Development	Name of the user's department
Description	No	Build account for Archive Manager Offline Client	Description of the user
DirectReports	No	CN=Philip Arsley, OU=Employees, DC=main, DC=mycompany, DC=corp; CN=Gwen Arlic, OU=Employees, DC=main, DC=mycompany, DC=corp; CN=Greg Inger, OU=Employees, DC=main, DC=mycompany, DC=corp	List of domain users that directly report to the domain user
DisplayName	No	Caroline Abbage	Display name or SAMAccount name for the user
DistinguishedName	No	CN=Caroline Abbage,	Distinguished name for domain user or computer\user for

Field Name	In UI	Example Value	Details
		OU=Employees, DC=main, DC=mycompany, DC=corp	local users
Division	No	Reporting division	Division for domain user
Domain	Yes	main.mycompany.corp	Fully qualified domain name for domain's users or NetBIOS name of the computer for computer's users
E-mail	Yes		Same as EmailAddress
EmailAddress	No	Patricia.Lum@support.mycompany.com	Email address for the user
EmployeeID	No	69267	Employee ID for domain user
FaxNumber	No	0123456789	Facsimile number for domain user
FirstName	No	Paul	Given name (first name) of domain user
FullAccountName	No	MAIN\jcdenton	domain\user; user is a SAM account name, domain is the SAM account name of a domain or NetBIOS name of a computer
Groups	No	WST8766VM1\Administrators; Office.US.Houston	List of groups. CommonName or Computer\groupName (explicit membership)
HasDirectReports	No	True	True or False; True if DirectReports is not empty
HasGroups	No	True	True if this user is member of any group
HasPhoto	No	True	True if this user has a photo
HomeDirSize	No	0	Size of the home directory for the domain user
HomePhoneNumber	No	+7-123-4567890	Phone number for the domain user
HomePostalAddress	No	Main street	Mailing address for the domain user
Info	No	Account used for Patchlink & Symantec scanning of domain systems	Informational notes on the domain user
Initials	No	M	Initials for the domain user
IpPhone	No	+44 1234 567890 x12345	IP telephone number or address for the domain user
LastName	No	Epper	Last name of domain user
LogonHours	No	FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF	Hex-coded hours that the domain/local user is allowed to log on to the domain
LogonName	No	SVC-Scanner@main.mycompany.corp	Logon name for the domain user
ManagedBy	No	CN=Christina Hilli,	The account (distinguished name) by which the domain

Field Name	In UI	Example Value	Details
		OU=Employees, DC=main, DC=mycompany, DC=corp	user is managed
Manager	Yes		Same as ManagedBy, ManagedByDisplayName
MiddleName	No	N	Middle name for the domain user
Mobile	Yes	+7-123-4567890	Mobile number for the user
Name	Yes		Same as DisplayName
NumLogons	No	3910	Number of times the domain/local user has successfully logged on
Office	Yes	Castlegar	Office location for the user
Organizational Unit	Yes		Same as OU_CanonicalName
OtherIpPhone	No	Conference 84030	List of alternate TCP/IP addresses for the phone for the domain user (Telephony)
OtherMailbox	No	other_mailbox@hotmail.com	Additional email addresses for the domain user
OtherMobile	No	+55 11 12345 6789	List of alternate mobile phone numbers for the domain user
OtherTelephone	No	+1 123 456 7890	List of alternate telephone numbers for the domain user
OU_CanonicalName	No	main.mycompany.corp/IS/SVC-Accounts/MailboxEnabled	Canonical name for organizational unit (for domain users only)
OU_DistinguishedName	No	OU=Enabled SVC-Accounts, OU=SVC-Accounts, OU=IS, DC=main, DC=mycompany, DC=corp	Distinguished name for organizational unit (for domain users only)
PasswordIsExpired	No	True	True if domain user's password is expired; otherwise, false
PasswordNeverExpires	No	True	True if the domain/local user's password never expires; otherwise, false
PersonalTitle	No	Mr.	Personal title for the domain user
PostalCode	No	411016	Postal or zip code for the domain user
RelatedOU	No		Same as OU_CanonicalName
SAM Account Domain	Yes		Same as SAMAccountDomain

Field Name	In UI	Example Value	Details
SAMAccountName	Yes		Same as SAMAccountName
SAMAccountDomain	No	MAIN	SAM account name for the account's domain for domain's users or NetBIOS name of the computer for computer's users
SAMAccountName	No	jcdenton	SAM account name for the account
Scope	Yes	Active Directory	Active Directory or Computer
Source	Yes	Enterprise Reporter	Enterprise Reporter (data source)
State	Yes	Current	Current or Deleted
StateOrProvince	No	AZ	State or province for the domain user
StreetAddress	No	1042 Bluesky Blvd., Bldg. 1 Flagstaff AZ	Street address for the domain user
TelephoneNumber	No	+1 123 456 7890 x45678	Telephone number for the domain user
Title	Yes	Software Developer 3	Title for the user
UserPrivilegeLevel	No	Normal	Flag for user privilege level: Normal or Unknown
UserWorkstations	No	ALVMISW02,ALVSANW01,ALVPATW01,ALVPATW02	NetBIOS or DNS names of the computers running Windows?NT Workstation or Windows?2000 Professional to which the domain user can log on
Where	No		Same as DomainName
Who	No		Same as SAMAccountName, DisplayName, AccountSid, DistinguishedName

InTrust Event Fields

The following are lists of fields that occur in InTrust events, organized by type of returned object. You can use these fields in your search queries.

i | **NOTE:** The **In UI** column indicates if the field is available in the IT Security Search web UI as a clickable element. Whether or not you can click it in the UI, you can use any of these fields in your search queries.

Field Name	In UI	Example Value	Details
Category	No	Sensitive Privilege Use	Event category
Computer	No	Y1202.seldom.mycompany	Computer where the event occurred
ComputerType	No	69635	Mask for computer type
DataSourceType	No	{A9E5C7A2-5C01-41B7-9D36-E562DFDDEFA9}	GUID of InTrust data source type

Field Name	In UI	Example Value	Details
Description	No	An operation was attempted on a privileged object.	Event description
Environment	No	9E442BEE-EAC2-4D79-9013-053FB225CFD0	Environment GUID
EventID	No	4674	Event ID
Type	No	16	Event Type ID numeric
SourceComputer	No	Y1202	Name of gathering computer
SourceDomain	No	SELDOM	Name of gathering computer's domain
Log	No	Security	Log name
PlatformID	No	500	Platform ID (500 means Windows)
Source	No	Security	Event source
UserDomain	No	WST9983	Domain of the user that initiated this event
UserName	No	Administrator	Name of the user that initiated this event
VersionMajor	No	6	OS version major
VersionMinor	No	2	OS version minor
InsertionString*	Yes	NT AUTHORITY	InsertionString1, InsertionString2 etc.
Workstation	No	WST9983	Computer where the operation was initiated
Where_From	No	WST9983	Same as Workstation
WhoDomain	No	SALES	Same as UserDomain
Who	No	Administrator	Same as UserName
Object_DN	No	CN=HealthMailbox, CN=Users, DC=seldom, DC=mycompany	DN of the object that was changed/deleted/created
Object_ID	Yes	DE442BEE-EAC2-4D79-9013-053FB225CFD0	ID of the object that was changed/deleted/created
WhomId	No	CN=Admin, CN=Users, DC=seldom, DC=spb, DC=qsft	Object_DN of the object that was changed/deleted/created, if available; otherwise Object_ID of the object
Whom_ObjectClass	No	user	Class of the object that was changed/deleted /created

Field Name	In UI	Example Value	Details
ComputerName	No	COMP1	Same as Computer
What	No	NTLMAuthentication	Event literal
Log name	No	Security	Same as Log
SourceName	No	Security	Same as Source
RelatedOU	No	sales.mycompany.corp/Production Computers	By Enterprise Reporter: OU associated with the computer
Whom_ ObjectClass	No	user	By Enterprise Reporter: Object class of Whom

Change Auditor for Active Directory Event Fields

The following are lists of fields that occur in Change Auditor for Active Directory events, organized by type of returned object. You can use these fields in your search queries. All of these fields are available in the IT Security Search web UI as clickable elements. You can also type any of these fields in your search queries.

Field Name	Example Value	Details
AAD_ActivityStatusReason	User successfully reset password	Reason for activity status
AAD_OnPremisesTarget	RHSOFTWARE\AD_Admin	Azure AD on premises target name
AAD_OnPremisesUserName	RHSOFTWARE\AD_Admin	Azure AD on premises user name
AAD_TargetDisplayName	AD_Admin@RHSoftware.Net	Azure AD Target object display name
AAD_TenantDefaultDomain	QAMyProduct.onmicrosoft.com	Azure AD tenant default domain name
AAD_TenantDisplayName	QA QAMyProduct.onmicrosoft.com My Product	Azure AD tenant display name
ActionName	Modify Attribute	Name of action
Activity Details	User successfully reset password	Same as AAD_ActivityStatusReason
After	E:\NewName.txt	Same as ValueNew
Azure - Activity Name	Set Company Information	Same as O365_Operation
Before	E:\OldName.txt	Same as ValueOld
Description	User AD Admin in the directory had their password reset	Event's description
DomainName	PROD	Domain where operation was performed
FacilityName	Local User Monitoring	Name of Facility
Log	ChangeAuditor	Name of event log

Field Name	Example Value	Details
Log name	ChangeAuditor	Same as Log
O365_Operation	Set Company Information	Office 365 operation
O365_SiteUrl	https://qa.sharepoint.com/sites/Certification/	URL of Office 365 site
Office 365 Site URL	https://qa.sharepoint.com/sites/Certification/	Same as O365_SiteUrl
On premises target	RHSOFTWARE\AD_Admin	Same as AAD_OnPremisesTarget
On premises user name	RHSOFTWARE\AD_Admin	Same as AAD_OnPremisesUserName
RelatedOU	RHSoftware.Net/AzureAD Accounts	Same as RelatedOUWhom
RelatedOUWhere	OU=Domain Controllers,DC=RHSoftware,DC=Net	Ou where operation was performed
RelatedOUWhom	RHSoftware.Net/AzureAD Accounts	OU of target object
Result	None	Operation result
SiteName	EMEA-SPB	Site where operation was performed
Target display name	AD_Admin@RHSoftware.Net	Same as AAD_TargetDisplayName
Tenant	QAMyProduct.onmicrosoft.com	Same as AAD_TenantDisplayName
Tenant initial domain	QAMyProduct.onmicrosoft.com	Same as AAD_TenantDefaultDomain
UserName	SPB9983\Administrator	Event initiator
ValueNew	E:\NewName.txt	new value of changed attribute
ValueOld	E:\OldName.txt	old value of changed attribute
What	Local user logged on	Event class name
When	2016-11-12T06:00:00.0460000Z	When the operation was performed
Where	wst9983	Where the operation was performed
Where_From	wst9943.sales.mycompany.com	Same as Workstation
Who	Administrator	Display name or name of initiator
Whold	S-1-5-21-1763487455-1171009733-2095814533-500	SID of initiator
Whom	WST9983\TestUser	Target object of operation
Whom_ObjectClass	Users	Target object's class
Workstation	wst9983.sales.mycompany.com	Workstation from that operation was initiated

Active Roles Event Fields

The following are lists of fields that occur in Active Roles events, organized by type of returned object. You can use these fields in your search queries. All of these fields are available in the IT Security Search web UI as

clickable elements. You can also type any of these fields in your search queries.

Field Name	Example Value	Details
AR_ClientComputerName	ITSEARCHTEST3	Host with Active Roles client software
AR_ClientVersion_Build	2	Version build number of Active Roles client software
AR_ClientVersion_Major	7	Version major number of Active Roles client software
AR_ClientVersion_Minor	1	Version minor number of Active Roles client software
AR_ClientVersion_Revision	3406	Revision of Active Roles client software
AR_Server	arsit	Active Roles Server host
Attribute_*	New description1	New value of attribute
ChangedAttributes	description,streetAddress	List of attributes
Completed	2017-05-04T07:18:57.9741631Z	Timestamp of operation when that was completed
Control_OperationReason	Reason for modification	Reason of operation
Description	Modified attributes: groupType: -2147483646 objectClass: group sAMAccountName: ArsTestTemporalGroupSam_CB79 objectSid: AQUAAAAAAAAUVAAAA+mvC8IvUdNjWHCAbGGkBA==	Description of event
ID	1-107540	ID of operation
Initiated	2017-05-04T07:18:57.9116595Z	Timestamp of operation when that was initiated
Initiator_DN	CN=Zakhar Shkonda, OU=zs, OU=TestUsers, DC=it, DC=sales, DC=mycompany	DN of initiator
Initiator_Guid	b58c2906-ad0b-4682- bab3-0ae56503eeb5	GUID of initiator
Initiator_Host	ARSIT.it.sales.mycompany	Host of Initiator
Initiator_IsDSAdmin	True	True if initiator is DS administrator
Initiator_NTAccountName	IT\zs	NT Account name of initiator
Initiator_ObjectClass	user	Class of initiator
Initiator_Sid	S-1-5-21-4039273466-	SID of initiator

Field Name	Example Value	Details
	3631535243-455089366-91270	
Initiator_Site	Default-First-Site-Name	Site of initiator
Log	Active Roles	Log name
Logon_Site	Default-First-Site-Name	Same as Initiator_Site
Operation_GUID	9b3c5524-065d-418a-9511-3043ab1a5bd7	GUID of operation
Operation_Type	Delete	Type of operation
Operation_TypeID	1	Type ID of operation
Reason	Reason for modification	Same as Control_OperationReason
RelatedOU	it.sales.mycompany/AutotestOU/ARS/FIT2711055222_0E7C	Same as TargetObject_OUCanonical
Result	Completed	Same as Status
Status	Completed	Operation status
StatusID	1	Operation status ID
TargetObject_DN	CN=ArsCHUser1_0E7C, OU=FIT2711055222_0E7C, OU=ARS, OU=AutotestOU, DC=it, DC=sales, DC=mycompany	DN of target object
TargetObject_Guid	b6a8b5d0-e003-4421-a7a4-e6fc11f3075a	GUID of target object
TargetObject_NTAccountName	IT\ArsCHUser1_0E7C	NT Account name of target object
TargetObject_ObjectClass	user	Class of target object
TargetObject_OUCanonical	it.mycompany.com/AutotestOU/ARS/FIT2711055222_0E7C	Canonical name of object's OU
TargetObject_Sid	S-1-5-21-4039273466-3631535243-455089366-91270	SID of target object
TargetObject_SimpleName	ArsCHUser1_0E7C	Name of target object
What	Delete	Same as Operation_Type
When	2017-05-10T08:38:58.000000Z	Same as Completed
Where	dc2.it.sales.mycompany	Host where this operation was performed
Who	IT\zs	Same as Initiator_NTAccountName

Field Name	Example Value	Details
Who_DN	CN=Caroline Abbage, OU=mgmt, OU=TestUsers, DC=it, DC=sales, DC=mycompany	Same as Initiator_DN
Who_Guid	b58c2906-ad0b-4682- bab3-0ae56503eeb5	Same as Initiator_Guid
Who_IsDSAdmin	True	Initiator_IsDSAdmin
Who_ObjectClass	user	Same as Initiator_ObjectClass
Who_Sid	S-1-5-21-4039273466- 3631535243-455089366-1131	Same as Initiator_Sid
Whold	S-1-5-21-4039273466- 3631535243-455089366-1131	Same as Initiator_Sid
Whom	ArsTestDynamicGroup_CB79	Same as TargetObject_SimpleName
Whom_DN	CN=ArsTestTemporalGroup_CB79, OU=FIT1010370592_CB79, OU=ARS, OU=AutotestOU, DC=it, DC=sales, DC=mycompany	Same as TargetObject_DN
Whom_Guid	eff86e4b-7800-44ce- af3c-ecf198ccadd5	Same as TargetObject_Guid
Whom_NTAccountName	IT\ArsCHUser1_0E7C	Same as TargetObject_NTAccountName
Whom_ObjectClass	Groups	Same as TargetObject_ObjectClass
Whom_Sid	S-1-5-21-4039273466- 3631535243-455089366-92446	Same as TargetObject_Sid
WhomId	CN=ArsTestDynamicGroup_CB79, CN=ArsTestContainer2_C829, OU=FIT1012125742_C829, OU=ARS, OU=AutotestOU, DC=it, DC=sales, DC=mycompany	Same as TargetObject_DN
WhomSimple	ArsTestDynamicGroup_CB79	Same as TargetObject_SimpleName
Workstation	ARSIT.it.sales.mycompany	Same as Initiator_Host

Recovery Manager for Active Directory Fields

The following are lists of fields that occur in Recovery Manager for Active Directory events, organized by type of returned object. You can use these fields in your search queries.

i | **NOTE:** The **In UI** column indicates if the field is available in the IT Security Search web UI as a clickable element. Whether or not you can click it in the UI, you can use any of these fields in your search queries.

Computers

Field Name	In UI	Example Value	Details
AccountSid	Yes	S-1-5-21-4039273466-3631535243-455089366-89812	Computer account SID
Description	Yes	Storage Server	Description of computer
DistinguishedName	No	CD=DC1, CN=Domain Controllers, DC=it, DC=sales, DC=mycompany	Computer account distinguished name; search by full value only
DNSHostName	Yes	DC1.it.sales.mycompany	DNS host name
Location	Yes	Houston	Location of computer
ManagedBy	No	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	Same as ManagedByFullName
ManagedByFullName	No	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	Distinguished name of manager of the computer account; search by full value only
Name	Yes	DC1	Same as NetBiosName
NetBiosName	Yes	DC1	NetBIOS name of computer
NumLogons	Yes	12656	Logon count
ObjectCategory	Yes	computer	Object class = computer
ObjectGUID	No	ddd94ab4-5de6-4696-a93c-433cf9827c28	Object GUID of computer account
OSName	Yes	Windows Server 2008 R2 Enterprise	OS name

Field Name	In UI	Example Value	Details
OSServicePack	Yes	Service Pack 1	OS service pack
OSVersion	Yes	6.1 (7601)	OS version
Where	Yes	DC1	Same as NetBiosName
Who	Yes	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	Same as ManagedByFullName

Groups

Field Name	In UI	Example Value	Details
CN	Yes	Users	Common name of group
Description	Yes	Houston internal group for notification	Description of group
DisplayName	Yes	Users	Display name of group
DistinguishedName	No	CN=MCDL.RD.Notification, OU=RD, OU=Groups, DC=it, DC=sales, DC=mycompany	Distinguished name of group; . search by full value only
Email	Yes	MCDL.RD.Notification@it.sales.mycompany	Email address of group
GroupType	No	-2147483640	Integer value of bitmask that contains information about group type and scope; search by full value only (more details at https://msdn.microsoft.com/en-us/library/ms675935.aspx)
HomePage	Yes	http://homepage	Home page of group
Info	Yes	Some info	Additional information about group
ManagedBy	No	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	Same as ManagedByFullName
ManagedByFullName	Yes	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales,	Distinguished name of manager of the group; search by full value only

Field Name	In UI	Example Value	Details
		DC=mycompany	
Name	Yes	Users	Name of group
ObjectCategory	Yes	group	Object class = group
ObjectGUID	No	80b090a2-968f-42e6- bc76-6e2505f43759	GUID of group object
SAMAccountName	Yes	Users	SAMAccount name of group
Url	Yes	http://groupname	URL of group
Who	Yes	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	Same as ManagedByFullName

OUs

Field Name	In UI	Example Value	Details
Description	Yes	Default container for Defender objects	Description of OU
DistinguishedName	No	OU=BestEmployees, DC=it, DC=sales, DC=mycompany	Distinguished name of group; search by full value only
ManagedBy	No	CN=Clive Herry, OU=mgmt, OU=TestUsers, DC=it, DC=sales, DC=mycompany	Same as ManagedByFullName
ManagedByFullName	Yes	CN=Clive Herry, OU=mgmt, OU=TestUsers, DC=it, DC=sales, DC=mycompany	Distinguished name of manager of the OU; search by full value only
Name	Yes	Users	Name of OU

Field Name	In UI	Example Value	Details
ObjectCategory	Yes	organizationalUnit	Object class = organizationalUnit or container
ObjectGUID	No	675205fb-4d29-44b6-9284-69e867689f38	GUID of OU
USNChanged	No	9296605	USN-Changed attribute of OU; search by full value only

Users

Field Name	In UI	Example Value	Details
AccountSid	No	S-1-5-21-4039273466-3631535243-455089366-26350	User SID; search by full value only
Company	Yes	MyCompany	Company name
Country	Yes	United States	Country name
Department	Yes	Sales	Department name
DisplayName	No	Caroline Abbage	User display name
DistinguishedName	No	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	User distinguished name; search by full value only
EmailAddress	Yes	Caroline.Abbage@sales.mycompany.com	Email address
HomePhoneNumber	Yes	+1 410 531 0638	Home telephone number
ManagedBy	No	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	Same as ManagedByFullName
ManagedByFullName	No	CN=Caroline Abbage, OU=Employees, DC=it, DC=sales, DC=mycompany	Distinguished name of manager of user; search by full value only
Mobile	Yes	+ 911 9 769 8889	Mobile phone number
Name	Yes	Caroline Abbage	User name

Field Name	In UI	Example Value	Details
ObjectCategory	Yes	user	Object class = user
ObjectGUID	No	861205fb-4d29-44b6-9284-69e867689f38	User object GUID; search by full value only
Office	Yes	Ludlow st. 80, suite 200	Physical delivery office name
SAMAccountName	Yes	jcidenton	SAMAccountName of user
StreetAddress	Yes	Ludlow st. 80	Street address
TelephoneNumber	Yes	+ 123 4 567 8900	Telephone number
Title	Yes	Mgr, Sales	User job title
USNChanged	No	9296605	USN-Changed attribute of user; search by full value only
Who	No	Administrator	Search in the following attributes: SAMAccountName, DisplayName, AccountSid, DistinguishedName

Saving Searches and Running Saved Searches

You can save any search for later reuse. Any IT Security Search operator or administrator can save searches and run saved searches, but only administrators can make them public for shared use.

Saving Searches

To save a search, click the drop-down icon at the left edge of the search box and click **Save Current Search**. Proceed to configure your search in the popup that appears:

- Give the search a meaningful name.
- Add tags so that users can easily find the search by category.
- Select which parameters you want to make customizable, if necessary.
All field names that occur in your search string are listed. Select the check boxes next to the ones that you want to make customizable. Whenever this saved search is used in the future, it will prompt for the values of all of the fields you select.

i NOTE: The field selection controls in the popup are really only a graphical way to include special syntax in your search string. The syntax for a customizable attribute is a string (usually, the field name) enclosed in double curly braces, in the place of a value substring.

For example, **Domain:{{Domain}}** will make IT Security Search prompt you for the value of the Domain field, labeled "Domain"; **Domain:{{Active Directory Domain}}** will also prompt you for the value of Domain, but the label will be "Active Directory Domain".

You can manually construct search strings that include this syntax, without using the field selector. This helps you provide descriptive labels for parameters.

- Specify the time period that the search must cover.
For that, select one of the options at the right edge of the search box. These times are relative to the moment the saved search is run.

When you have configured these options, click **Save**.

Running a Saved Search

To run an existing saved search, click the drop-down icon at the left edge of the search box; the available saved searches are listed at the bottom of the popup that appears. You can filter the list by clicking tag buttons in the **Saved Search Categories** drop-down.

Making a Saved Search Public or Private

You can publish a search to make it available to all operators only if you are an IT Security Search administrator.

In the saved search list, the items have a lock icon showing their state. A private search has a closed lock icon; click the icon to make it public. A public search has an open lock icon; click the icon to make it private.

Deleting a Saved Search

To delete a saved search, highlight it in the saved search list and click the cross icon.

Use Scenarios

The following examples explain how IT Security Search tools can be applied in practice to real-life situations.

Finding and Examining a User

To find events where a particular user is somehow involved (as the doer or as a subject), run a search for any of the variety of names that identify the user in the environment. You can supply the first name, last name, full name, logon name and so on.

The results of your search put the most relevant matching users at the top of the list. If there are too many matches, refine the results using facets.

From a different perspective, if you need to find a user whose name you are not sure about but whose manager's name you remember, try searching for the manager's name, then opening the details of the manager's user account and finding the user you are looking for among the manager's direct reports.

Understanding Who Did What

A typical use case is tracking the activity that involved a particular object, such as a file, folder, group or user account. You begin by finding this object; this provides a starting point and a context for your session. The next step is to use the links in the object's details view. This is the easiest way to create a context and filter out irrelevant data.

Another option is to start with events directly, especially if you expect to find specific events within a specific period of time. To specify the period, use the date range filter. The graphical timeline in the result grid can help you quickly locate peaks of activity that need closer examination.

Exploring a User's Scope of Access

IT Security Search provides quick access to information about files and folders owned by a user and all permissions assigned to the user; for that, use the **Files and folders owned by this user**, **Files and folders where this user has direct permissions** and **Files and folders where this user has permissions (both direct and indirect)** links in the details view for the user you are interested in.

Conversely, if you start with a particular file or folder, its details contain a table of permissions, which can prompt your further steps.

Tracking Permission Management

You can easily follow permission assignment activity using the **Who changed permissions on this file** and **Who changed permissions on this folder** links in the details view of a file or folder, respectively.

Exploring Change History of Active Directory Objects

Object change history is available only if the Recovery Manager for Active Directory connector is enabled. For information about changes to an object, go to the **History** tab on the object's details page. Only the three most recent states are shown on this tab, with changes that occurred after each of them.

You can restore the object to any of these states by clicking its **Restore object to this state** link. If the object was changed rather than deleted, you have the option to restore specific modified attributes. If it was deleted, you can only restore it to a full state.

Case Studies

See also the following topics for examples of investigations that IT Security Search can help carry out:

- [Case Study: Investigating Tampering](#)
- [Case Study: Making the Most of Multiple Connectors](#)
- [Case Study: Active Roles Dynamic Group Membership Tracking](#)

Case Study: Investigating Tampering

Suppose a critical file (such as a project roadmap or payroll file) is showing signs of tampering. You want to use IT Security Search to look into this.

What you will need

To make the investigation as efficient as possible, make sure that data from the following sources is available:

- For security events, including user session events: InTrust
- For file change information: Change Auditor
- For user information: Enterprise Reporter

Where to start

You are about to examine the circumstances of file modifications, so it makes sense to start by finding the affected file. This will provide clues about where to go next and also mark a point (as a breadcrumb) that you can always fall back to, even if your next steps take you too far.

How to proceed

When you have found the file, open its full details and use the **Who accessed this file** link provided in that view. In the list of events that are found, find a "File changed" event and use the **What** facet to filter out other types of events. Try to spot any unlikely users in the list of file change events.

Suppose you find an event by a user who is not meant to have access to the file. Note the time of the event, and then open the details of the event and click the user name. In the the user details view that opens, click the **Files and folder where this user has permissions** link. If the file in question is not listed, that means the permissions have been rolled back by now—likely a piece of incriminating data.

You can also view the entire history of permission management for the file. Use the breadcrumbs to go back to the file details view, and click the **Who granted permissions to this file** link.

Use the breadcrumbs to go back to the user details view, and click the **Activity initiated by this user** link. Use the time range filter to restrict the results to a period around the time of the suspicious file modification. The results may reveal noteworthy details about the situation. Consider examining InTrust-specific user session events for the following clues:

- Logon session time and duration
- Whether the session was interactive or Terminal Services-based

In addition, check if there were any attempts to clear security logs.

Case Study: Making the Most of Multiple Connectors

Suppose a user complains about being unable to log in through VPN. Use IT Security Search to investigate and resolve the situation.

What you will need

For best results, enable the following connectors:

- For security events: InTrust and Change Auditor
- For Active Directory object modification and recovery: Recovery Manager for Active Directory
- For user information: Enterprise Reporter

Where to start

You should start by searching for the **David Shore** user account, which is having problems. To get results quickly, use the **Whom:"David Shore"** query. This will take you directly to the events that affected the account.

How to proceed

Suppose the search results include group membership change events from InTrust and Change Auditor indicating that the user was removed from one or more groups. Examine these events and find the one about the group used for providing VPN access. Note that the timestamp of the event is later than the last Active Directory backup. Also note the other event details such as who did this.

In the breadcrumbs line, click the user name to open the user details, and go to the **History** tab. In the change history view, locate the state before the VPN-related group membership change, and click the corresponding **Restore object to this state** link.

VPN access for **David Shore** is restored now, and you know who interfered with his group membership.

Case Study: Active Roles Dynamic Group Membership Tracking

Suppose a new user is not getting the expected permissions to open a network share. You want to use IT Security Search to look into this.

What you will need

To make the investigation as efficient as possible, make sure that data from the following sources is available:

- For network share and user information: Enterprise Reporter
- For dynamic group membership information: Active Roles

Where to start

You are about to examine share access, so it makes sense to start by looking at share permissions.

How to proceed

Search for the share path. Click the share you need in the list of results and open its details. In the permissions table, you find the **Marketing** group, which is used for controlling access to the share. Apparently the user is supposed to be a member of this group, but is not.

Do a search for the **Marketing** group; click the group in the results and go to the details view for the it. It turns out to be an Active Roles dynamic group. Click the **Membership Rules** tab in the details table to see how the group is populated. In the Rule Details column, you find the following rule: "[User] department Is (exactly) Marketing".

The user's department information is probably wrong, making the user unfit for membership in the **Marketing** dynamic group. See if this guess is correct: search for the user name, locate the user in the results and open the user's details.

You find that the value of the Department attribute has a typo: "Markering" instead of "Marketing", and you notify security administrator about this issue.

When you get a response from the administrator saying that the problem has been resolved, you do another search for the **Marketing** group to confirm that the user is now a member.

Feedback on IT Security Search

IT Security Search provides the following facilities for getting customer feedback:

- An option to participate in the software improvement program. If you choose to participate, it will help Quest enhance customers' IT Security Search experience.
- A utility that gathers information for support engineers.

i | **NOTE:** Participation in the software improvement program is available in version 11.0.5 and later.

Software Improvement Program

This initiative involves Quest automatically receiving anonymous usage statistics from the Quest software you install. No personal identifying data (such as account names) is included in this feedback. The purpose is to determine which features are most popular and find out how their use can be streamlined.

The following information is transmitted:

- Hardware configuration
- Which product features are used
- External IP addresses

Participation in the program is voluntary. The first time you are prompted to make the choice is during IT Security Search installation. Depending on the country you select, you may be asked whether you want to opt in; for some countries, participation will be enabled automatically.

After you have set up IT Security Search, you can change your choice at any time by opening the About box in the IT Security Search UI, selecting the **Customer Feedback** tab and inverting the state of the **I am willing to participate in the customer feedback program** option.

Support Information Utility

If you need to contact Support, you should provide various technical details for a speedy response. IT Security Search includes a utility that automatically gathers all the information that support engineers may need and stores it in a single ZIP file.

To create such a file, open the About box in the IT Security Search UI, select the **Contact** tab and click **Gather Support Information**.

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