# Tanium™ Reveal User Guide

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# Reveal overview

With Reveal, you can detect sensitive unstructured data at rest on endpoints across an entire IT environment. Use Reveal to continuously monitor for artifacts that match patterns. When sensitive content that matches a pattern is discovered, you can label the files where the content exists and further analyze or take action on them to address regulatory compliance, information security, or data privacy issues.

## Rule sets

Rule sets group related rules that are collectively used for a specific purpose, such as evaluating compliance with a particular standard, and target rules to specific groups of endpoints.

Create and apply rule sets to provide the most relevant Reveal capabilities to specific groups of endpoints. For example, you can create rule sets that apply rules that discover sensitive data specific to financial information or health records.

Reveal features the following rule sets:

**PCI**

PCI standards help companies that accept, process, store, and transmit credit card information to maintain a secure environment.

**HIPAA**

HIPAA standards help protect sensitive patient health data.

**GDPR**

GDPR standards help protect personal data and ensure European Union compliance.

**CCPA**

CCPA standards help protect personal data and ensure State of California compliance.

## Rules

With rules, you can specify patterns to match in specific types of files and perform an action on either the file or the endpoint when Reveal discovers a match. For example, you could add a 'confidential' label to all of the text documents where a social security number pattern matches.

You can create multiple rules to evaluate content on the same files on each endpoint. For example, you can create a rule that detects credit card numbers, a rule that detects social security numbers, and a rule that detects email addresses, and evaluate each rule on specific types of files. The results of each rule indicate which files contain matches for which pattern. Results are categorized by each rule so that you can quickly locate pattern matches.

## Patterns

In Reveal, a pattern is an expression that matches entities that can otherwise be hidden in the context of other information.

For example, a pattern could match an entity such as a credit card number or email address. Such a pattern could be assigned to a rule to match entities in unstructured data such as a word processing document, text file, PDF document, or spreadsheet. Reveal provides patterns for several types of sensitive information, such as credit card numbers, social security numbers, and email addresses. To extend the list, contact your TAM for assistance.

# Getting started

1. Install Tanium Reveal. For more information, see Installing Reveal on page 13.
2. Create rules. For more information, see Creating rules on page 16.
3. Create rule sets. For more information, see Creating rule sets on page 18.
4. Manage rule matches. For more information, see Investigating rule matches on page 21.
5. Create validations. For more information, see Validating pattern matches on page 23.
6. Search for sensitive information across the enterprise. For more information, see Searching across the enterprise on page 25.

# Reveal requirements

Review the requirements before you install and use Reveal.

## Tanium dependencies

In addition to a license for the Reveal product module, make sure that your environment also meets the following requirements.

| Component | Requirement |
|---|---|
| Platform | 7.2.314.2831 or later |
| Tanium Client | 6.0.314.1540 or later recommended |
| Tanium Module | Tanium™ Trace 2.7.10.0001 or Tanium™ Threat Response 1.1.0 |

## Tanium Module Server

Reveal is installed and runs as a service on the Tanium Module Server. The impact on Module Server is minimal and depends on usage.

## Endpoints

Reveal supports Windows and MacOS endpoints. Up to 2 GB of free disk space is required.

## Host and network security requirements

Specific ports and processes are needed to run Reveal.

### Ports

The following ports are required for Reveal communication.

| Component | Port | Direction | Purpose |
|---|---|---|---|
| Module Server | 17444 | Inbound | Connecting to the Module Server for live connections to endpoints. |

### Security exclusions

If security software is in use in the environment to monitor and block unknown host system processes, your security administrator must create exclusions to allow the Tanium processes to run without interference.

**Table 1: Reveal security exclusions**

| Target Device | Process |
|---|---|
| Module Server | `<Tanium Module Server>\services\Reveal\node.exe` |
| Endpoint computers | `<Tanium Client>\Tools\EPI\TaniumExecWrapper.exe`<br>`<Tanium Client>\Tools\EPI\TaniumEndpointIndex.exe`<br>`<Tanium Client>\Tools\Reveal\TaniumReveal.exe`<br>`<Tanium Client>\Tools\Trace\TaniumTraceWebsocketClient.exe` |

## User role requirements

Use role-based access control (RBAC) permissions to restrict access to Reveal functions.

**Table 2: Tanium Reveal User Role Privileges**

| Permission | Reveal Administrator | Reveal Read Only User | Reveal Service Account | Reveal User |
|---|---|---|---|---|
| **Show Reveal**<br>Access to the Reveal workbench | ✓ | ✓ | ✗ | ✓ |
| **Reveal Affected Files**<br>Enables viewing of affected files | ✓ | ✗ | ✗ | ✓ |
| **Reveal Quick Search**<br>Enables viewing of quick search results | ✓ | ✗ | ✗ | ✓ |

| Permission | Reveal Administrator | Reveal Read Only User | Reveal Service Account | Reveal User |
|---|---|---|---|---|
| **Reveal Rules Deploy**<br>Enables the deployment of rules to endpoints | ✓ | ✗ | ✗ | ✓ |
| **Reveal Rules Deploy Status**<br>Access to the Reveal workbench | ✓[1] | ✓ | ✗ | ✓[1] |
| **Reveal Rules Read**<br>Enables the viewing and listing of rules | ✓[1] | ✓ | ✗ | ✓[1] |
| **Reveal Rules Write**<br>Enables the editing of rules | ✓ | ✗ | ✗ | ✓ |
| **Reveal Rule Sets Read**<br>Enables the viewing and listing of rule sets | ✓[1] | ✓ | ✗ | ✓[1] |
| **Reveal Rule Sets Write**<br>Enables the editing of rule sets | ✓ | ✗ | ✗ | ✓ |
| **Reveal Service User**<br>Enables a user to perform work as the service account user | ✗ | ✗ | ✓ | ✗ |
| **Reveal Service User Read**<br>Allows viewing details of the service account user | ✓[1] | ✓ | ✗ | ✗ |

| Permission | Reveal Administrator | Reveal Read Only User | Reveal Service Account | Reveal User |
|---|---|---|---|---|
| **Reveal Service User Write**<br>Enables modifications to the service user account | ✓ | ✗ | ✗ | ✗ |
| **Reveal Snippets**<br>Enables viewing of snippets of affected files. | ✓ | ✗ | ✗ | ✓ |
| **Reveal Use API**<br>Perform Reveal operations using the API | ✓[1] | ✓[1] | ✓[1] | ✓[1] |
| **Reveal Validations Deploy**<br>Enables the deployment of validations to endpoints | ✓ | ✗ | ✗ | ✓ |
| **Reveal Validations Deploy Status**<br>Enables viewing of the status of validation deployments | ✓[1] | ✓ | ✗ | ✓[1] |
| **Reveal Validations Read**<br>Enables viewing and listing of validations | ✓[1] | ✓ | ✗ | ✓[1] |
| **Reveal Validations Write**<br>Enables the editing of validations | ✓ | ✗ | ✗ | ✓ |

[1] Denotes a provided permission.

For more information and descriptions of content sets and permissions, see the Tanium Core Platform User Guide: Users and user groups.

The **Trace Live Connections Write** permission is required for any user to make direct connections to endpoints to investigate rule matches.

> **Note:** Provide the **Bypass Action Approval** Advanced Role to the **Trace Analysis** Content Set so that Trace users can make Live Connections to endpoints without having to go through action approval and still require approval on all other actions.

# Installing Reveal

You can install Reveal from the **Tanium Solutions** page.

## Before you begin

- Read the Release Notes.
- Review the Reveal requirements on page 8.

> **Note:** Tanium™ Trace 2.7.10.0001 or Tanium™ Threat Response 1.1.0 is required to use Reveal. For more information see Installing Trace or Installing Threat Response.

## Import Reveal

Import Reveal from the **Tanium Solutions** page.

1. From the Main menu, click **Tanium Solutions**.
2. Under **Tanium Reveal**, click **Import**.

   > **Note:** Tanium Reveal is a licensed solution. If Tanium Reveal is not on the **Tanium Solutions** page, contact your Technical Account Manager.

3. In the **Content Import Preview** window, you can expand the package to review the Tanium content that is being installed. Click **Proceed with Import**.
4. After the installation process completes, refresh your browser.
5. From the Main menu, click **Reveal**. The Reveal Home page displays.

## Verify installation

To verify that Reveal is installed, go to the Tanium Solutions page and check the installed version. To check the installed version on the Reveal Home page, click Info .

## Set up Reveal

### Configure service account

The service account is used to create recurring maintenance activities for Reveal.

1. From the Reveal Home page, click **Configure Service Account**.
2. Enter a user name and password.
3. Click **Save**.

> **Note:** Configuring the service account installs Reveal tooling on the endpoints and starts the Reveal service. After deploying the tools for the first time, endpoints can take up to four hours to display status.

### Configure Reveal action group

The action group defines the set of endpoints to which you are deploying the Reveal packages. By default, the **Computer Group Targets** setting for the Reveal action group is set to **No Computers**. You can set the action group to **All Computers** or any computer groups that you have defined.

1. From the Main menu, click **Actions > Scheduled Actions**.
2. Click the **Tanium Reveal** action group, and click **Edit**.
3. Select the computer group for the group of endpoints that you want to use for Reveal. Click **Save**.
4. Enter your credentials and click **OK**.

## Upgrade the Reveal version

Upgrade Reveal to the latest version from the Solutions page.

1. From the Main menu, click **Tanium Solutions**.
2. Locate Reveal and click **Upgrade to X.X.X.XX**.
3. Click **OK**.
   The Import Solution window opens with a list of all the changes and import options.
4. Click **Proceed with Import** and enter your password.
   The installation and configuration process begins.
5. To confirm the upgrade, return to the **Tanium Solutions** page and check the **Installed: X.X.X.XX** version for Reveal.

> **Tip:** If the Reveal version does not update, refresh your browser window.

## What to do next

See Getting started on page 7 for more information about using Reveal.

# Creating rules

A rule is a combination of conditions that you define and an action to perform when the conditions are met. Rules are evaluated every hour on all files that have been hashed by Tanium™ Index. When all of the conditions of a rule are matched, an action is triggered. For example, you can label files that contain matches to social security number patterns as confidential. You can apply multiple rules to target the same files so you can discover many types of sensitive information in the same file set.

## Criteria for rule evaluation

For rules to evaluate on a file, the file must match the following criteria:

- The file must be hashed by Tanium Index using hash type MIME.
- The file must be in a format that Tanium Reveal can read. This include text files (such as text, XML, and CSV) and binary files (such as PDF and Microsoft Office).
- Binary files must be less than 32 MB. To increase this default size limit, update the `max_file_size_kb` setting in the config.json for Reveal. Note that text files do not have a size limit.
- The file must not be filtered out by the `filter_stems` or `filter_regexes` settings in the config.json for Reveal.

## Create a rule

1. From the Reveal menu, click **Rules**. Click **New Rule**.
2. Enter a name and description for the rule.
3. Select one or more rule sets to contain the rule. Click **Add Rule Set** and select the rule sets you want to associate with the rule. Click **Save**.
4. Add conditions. Conditions include file types and patterns. Click **Add Condition** and select either **File Type** or **Pattern**.
    1. For file type conditions, select the types of files that you want the rule to cover. If you do not select at least one file type, rules do not evaluate.
    2. For Patterns, select the pattern to match.
5. Select the Actions that the rule performs when the conditions have been matched, and click **Apply**. You can select to apply a label to the files that contain the match.
6. Click **Save**.

## Deploy rules

Reveal deploys rules to endpoints through a rules package. Rules packages also contain information that maps rules to rule sets and determines how endpoints in specific computer groups monitor for rules. Multiple rule sets can apply to an endpoint; and all rules in all of the applicable rule sets are evaluated.

Rules are automatically included in the next scheduled deployment when you update existing rules or create new rules. To immediately deploy updated rules, click **Deploy Rules**, enter your credentials, and click **OK** .

# Creating rule sets

Rule sets group rules together and assign them to specific groups of endpoints. You can group rules into rule sets that address specific categories of sensitive information, or that monitor specific types of files.

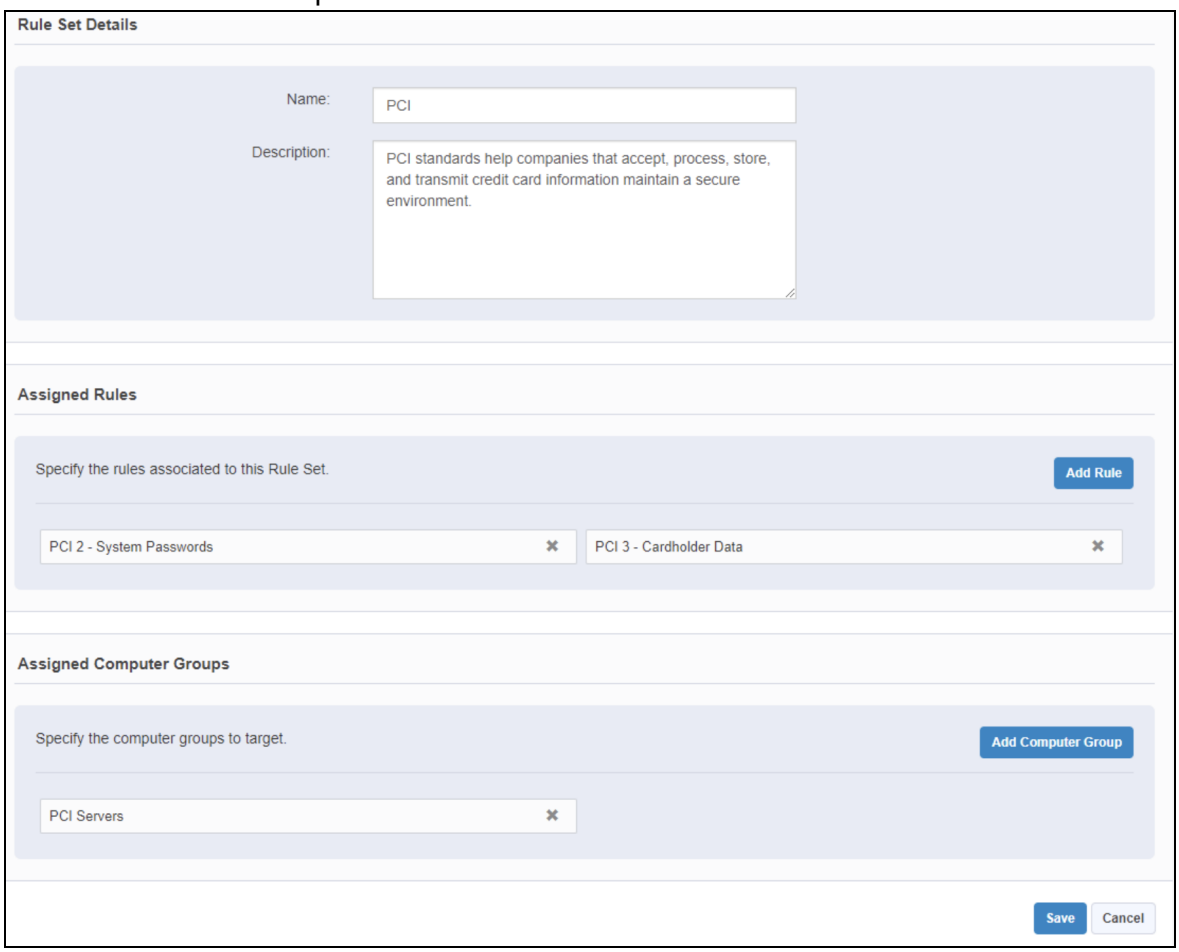
For example, you might want to apply and monitor for specific rules on one group of endpoints, but not other groups. Or, you might want to apply a subset of the available rules to a group of endpoints.

You can view the number of rules that are assigned to each rule set, the computer groups that it targets, and whether there are any pending changes to any of the associated rules.

By default, each rule set has one rule assigned to it. The default rule cannot be edited, but you can delete it, or make a duplicate of the rule and customize it for your specific needs.

## Create a rule set

1. From the Reveal menu, click **Rule Sets**. Click **New Rule Set**.
2. Enter a name and description for the rule set.




3. Select one or more rules to associate with the rule set. Click **Add Rule** and select the rules you want to associate with the rule set. Click **Save**.
4. Add Computer Groups that you want the rule set to target. The rules that are associated with the rule set are applied to the endpoints in the computer groups you specify.
5. Click **Save**.

## Add rules to an existing rule set

1. From the Reveal menu, click **Rule Sets**.
2. Click the title of the rule set to which you want to add one or more rules.
3. Click **Add Rule** and select the rules you want to associate with the rule set. Click **Save**.

## Delete a rule set

1. From the Reveal menu, click **Rule Sets**.
2. Select the rule set that you want to delete.
3. Click **Action > Delete**. Confirm that you want to delete the rule set.

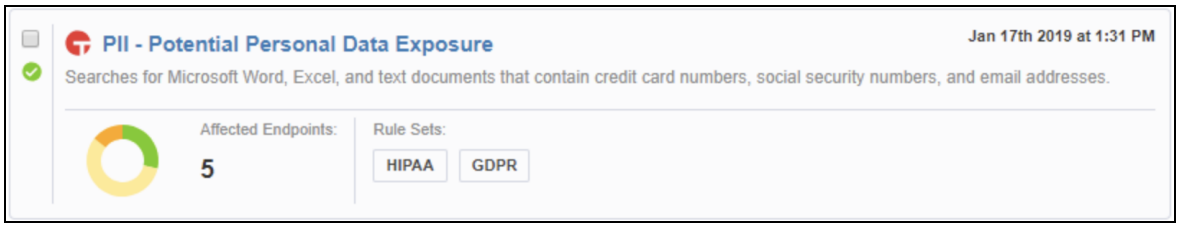
# Investigating rule matches

When Reveal finds a match to a rule, the Rules and Rule sets pages update to show a breakdown of all endpoints affected by the rule according to how many matches occur on that endpoint. You can further investigate the details of the match. Each rule displays information about the number of endpoints on which matches have been detected. You can create a Trace live connection to the endpoint and drill down to perform further analysis. You can investigate the number of matches across the endpoints over time, and filter the matches by computer group or keywords.

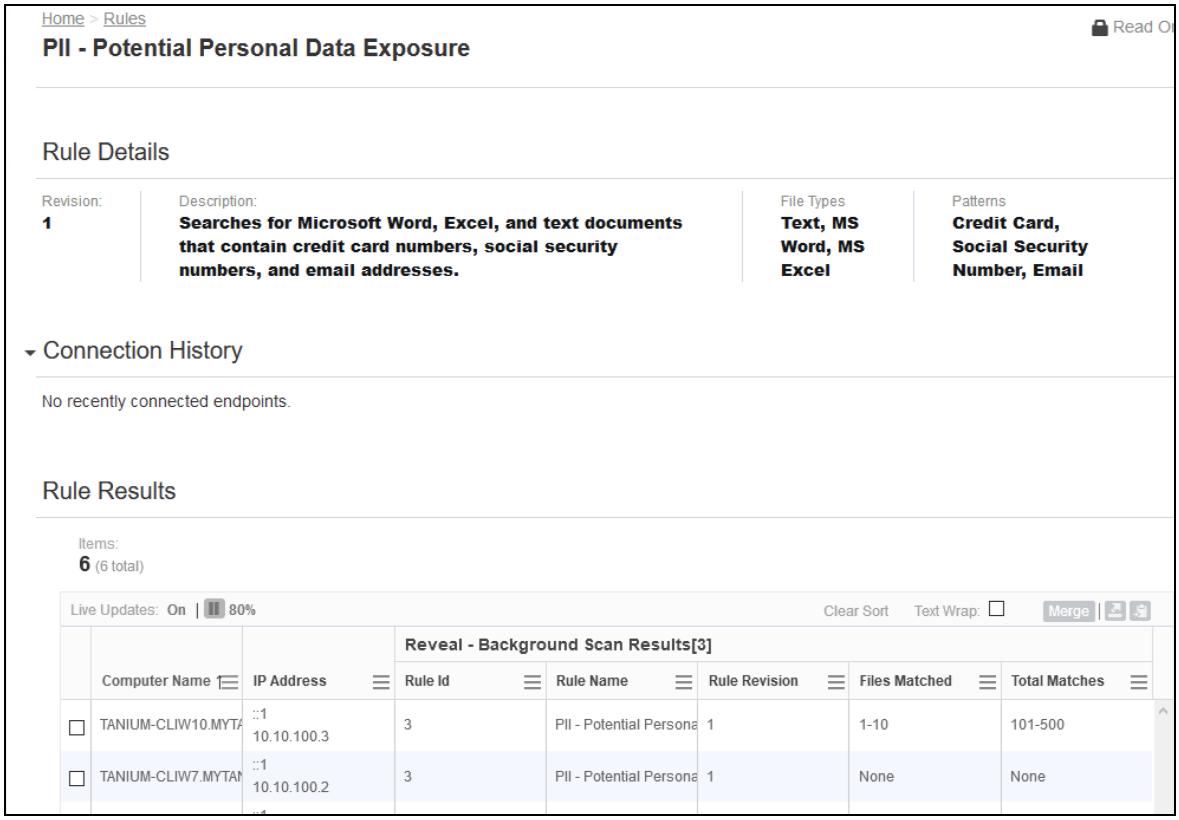
From the Rules page, you can investigate the affected endpoints, and files where matches are detected when a rule match occurs.

### Investigate by endpoint

1. From the Reveal menu, click **Rules**.
2. Click a rule that has matches that you want to investigate.



3. Reveal displays the endpoints where matches have occurred.




4. Select an endpoint and click **Create Connection**. A live connection is opened to the endpoint. When the endpoint connection displays as **Active**, click the endpoint name to view files that contain matches.
5. For files where matches have occurred, the file name, Rule ID, Number of hits, date modified, size, and path are displayed.
6. Click an affected file to view snippets that show pattern matches in context.

## Take action on files where rule matches occur

When a rule applies a label to files that contain a rule match, you can use Tanium questions to take action on affected files.

1. From the Main menu, click Interact.
2. Ask the question **Get Reveal - Label Results from all machines**. The results grid displays the labels that have been applied to files, and the number of files that are labeled.
3. Select the rows for the labels that require the action, and then click **Deploy Action**. Interact displays the Deploy Action workflow page.

For more information, see Tanium Interact User Guide: Questions.

# Validating pattern matches

Create validations to improve the accuracy of rule performance and to reduce the number of false positive results on the data that rules target. Validate rules to ensure that pattern matches are accurate and consistent in the targeted data. By validating rules, you can focus any analysis of data on results that have been confirmed or rejected as relevant pattern matches.

Validations apply to pattern matches in the context of a rule where the text appears exactly as it does in the validation. New validations display in a pending state, and are only visible to the user who created them. Pending validations automatically apply to snippet results, but do not affect rule hit counts until they are published.

## Create a validation

1. From the Reveal menu, click **Rules**.
2. Under **Rule Results**, select an endpoint that has one or more files that match patterns. Click **Create Connection**.
3. Select a file that contains one or more pattern matches.
4. View the snippets that show where a pattern match has been detected. Click **Add Validation** to confirm or reject the pattern match.
5. Highlight relevant text within the snippet. Validations are tracked relative to the beginning of the match.
6. Select **Confirm** or **Reject**. Rejected snippets are filtered from future results. Click **Apply**.
7. Provide a name and description for the validation. Reveal displays a preview of the text you have validated and reports the number of pattern matches that the validation affects in the current file, the rule that the validation affects, and whether matching patterns should be confirmed or rejected.
8. Click **Save**.

## Deploy validations

Deploy validations to move all pending validations to published validations. Deploying validations creates new **Reveal-Validations** packages, and recreates the **Reveal - Deploy Validations** saved actions. Pending validations for other users remain pending.

Published validations apply to all hits of the corresponding rule. Rejected hits are ignored.

1. From the Reveal menu, click **Rule Validations**.
2. Click **My Pending** to view pending rule validations.
3. Click **Deploy Validations**.

## Audit published validations

Audit validations to view snippets where pattern matches affected by a validation apply.

1. From the Reveal menu, click **Rule Validations**.
2. Click a published validation to view endpoints that contain pattern matches to which the validation has been applied.
3. Click an endpoint to view files affected by the validation.
4. Click a file to view snippets that match the validation.

# Searching across the enterprise

Use Reveal to search for specific items of sensitive information across an entire enterprise. You can search for sensitive information that matches a search string in real-time and not wait for an alert from a rule match. Quick search targets all of the endpoints in the Reveal action group.  Use a literal search string and parameters that you want the search to target. Reveal returns a list of results that match the search criteria you provide.

Reveal converts search strings to lowercase, removes punctuation, and removes common stop words, such as articles. Reveal then searches for the exact sequence of tokens across the environment. For example, if a search query is `process is started`, this is tokenized as `["process","started"]`. These tokens match `the malicious process has started`, but not `started the process` because the tokens are not in the same order as the query.

## Perform a quick search

1. From the Reveal menu, click **Quick Search**.
2. In the search field, provide a literal search string. For example, 123-45-6789 to find an exact match.
3. Optionally, expand the **Search Parameters** caret.
4. Click **Add Condition**. Select **File Type**.
5. Select one or more file types that you want the search to target.
6. Click **Search**.

## Investigate quick search results

Quick search results appear as Reveal discovers matches to the search criteria. For each match, you can view the computer names on which matches occur. Select one or more computer names that contain matches and click **Live Connection** to create a live connection to the computer and investigate the files where matches occur.

> **Note:** Both the quick search query and the searchable data are encrypted with a one way hash. Hashing occurs before the query is distributed to endpoints, and unencrypted queries and results are not persisted. The query is retained in the browser during the search workflow only. When results snippets are requested, the file is read on demand on the endpoint, and results are returned directly to Reveal.

Reveal does not write any unencrypted file content to disk, and no unencrypted query or result is ever sent as Tanium content.

# Troubleshooting Reveal

To collect and send information to Tanium for troubleshooting, collect logs and other relevant information.

## Collect logs

The information is saved as a ZIP file that you can download with your browser.

1. From the Reveal Home page, click Help ❓, then the **Troubleshooting** tab.
2. Click **Create Package**. When the status shows that the package is complete, click **Download Package**.
3. A `reveal-troubleshooting.zip` file downloads to the local download directory.
4. Attach the ZIP file to your Tanium Support case form or send it to your TAM.

Tanium Reveal maintains logging information in the `Reveal.log` file in the `\Program Files\Tanium\Tanium Module Server\services\Reveal` directory.

## Uninstall Reveal

You might need to remove Reveal from the Tanium Module Server for troubleshooting purposes.

1. From the Tanium Console, click **Solutions**.
   The Solutions page opens.
2. Locate Reveal, and then click **Uninstall**.
   The Uninstall window opens, showing the list of contents to be removed.
3. Click **Proceed with Uninstall**.
4. Enter your password to start the uninstall process.
   A progress bar is displayed as the installation package is removed.
5. Click **Close**.
6. To confirm, return to the **Solutions** page and check that the **Import** button is available.

   **Tip:** If the Reveal module has not updated in the console, refresh your browser.