

# ThreatQuotient



## Zscaler Blacklist Export Connector

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# Integration Details

ThreatQuotient provides the following details for this integration:

|                             |       |
|-----------------------------|-------|
| Current Integration Version | 1.1.0 |
|-----------------------------|-------|

|                                     |           |
|-------------------------------------|-----------|
| Compatible with ThreatQ<br>Versions | >= 4.57.0 |
|-------------------------------------|-----------|

|                |     |
|----------------|-----|
| Python Version | 3.6 |
|----------------|-----|

|              |                   |
|--------------|-------------------|
| Support Tier | ThreatQ Supported |
|--------------|-------------------|

# Introduction

The Zscaler Blacklist Export integration allows a ThreatQ user to export FQDNs and URLs from a Threat Collection to Zscaler's URL blacklist.

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# Prerequisites

Review the following requirements before attempting to install the connector.

## Time Zone

You should ensure all ThreatQ devices are set to the correct time, time zone, and date (UTC is recommended), and using a clock source available to all.

To identify which time zone is closest to your present location, use the `timedatectl` command with the `list-timezones` command line option.

For example, enter the following command to list all available time zones in Europe:

```
timedatectl list-timezones | grep Europe
Europe/Amsterdam
Europe/Athens
Europe/Belgrade
Europe/Berlin
```

Enter the following command, as root, to change the time zone to UTC:

```
timedatectl set-timezone UTC
```

## Integration Dependencies

 The integration must be installed in a python 3.6 environment.

The following is a list of required dependencies for the integration. These dependencies are downloaded and installed during the installation process. If you are an Air Gapped Data Sync (AGDS) user, or run an instance that cannot connect to network services outside of your infrastructure, you will need to download and install these dependencies separately as the integration will not be able to download them during the install process.

 Items listed in bold are pinned to a specific version. In these cases, you should download the version specified to ensure proper function of the integration.

| DEPENDENCY      | VERSION | NOTES |
|-----------------|---------|-------|
| threatqsdk      | >=1.8.2 | N/A   |
| threatqcc       | >=1.4.1 | N/A   |
| python-dateutil | N/A     | N/A   |

---

# Installation

The following provides you with steps on installing a Python 3 Virtual Environment and installing the connector.

## Creating a Python 3.6 Virtual Environment

Run the following commands to create the virtual environment:

```
mkdir /opt/tqvenv/  
sudo yum install -y python36 python36-libs python36-devel python36-pip  
python3.6 -m venv /opt/tqvenv/<environment_name>  
source /opt/tqvenv/<environment_name>/bin/activate  
pip install --upgrade pip  
pip install threatqsdk threatqcc setuptools==59.6.0
```

Proceed to [Installing the Connector](#).

## Installing the Connector

**⚠ Upgrading Users** - Review the [Change Log](#) for updates to configuration parameters before updating. If there are changes to the configuration file (new/removed parameters), you must first delete the previous version's configuration file before proceeding with the install steps listed below. Failure to delete the previous configuration file will result in the connector failing.

1. Navigate to the ThreatQ Marketplace and download the .whl file for the integration.
2. Activate the virtual environment if you haven't already:

```
source /opt/tqvenv/<environment_name>/bin/activate
```

3. Transfer the whl file to the /tmp directory on your ThreatQ instance.
4. Install the connector on your ThreatQ instance:

```
pip install /tmp/tq_conn_zscaler_blacklist_export-<version>-py3-none-any.whl
```



A driver called tq-conn-zscaler-blacklist-export will be installed. After installing, a script stub will appear in /opt/tqvenv/<environment\_name>/bin/tq-conn-zscaler-blacklist-export.

5. Once the application has been installed, a directory structure must be created for all configuration, logs and files, using the `mkdir -p` command. Use the commands below to create the required directories:

```
mkdir -p /etc/tq_labs/  
mkdir -p /var/log/tq_labs/
```

6. Perform an initial run using the following command:

```
/opt/tqvenv/<environment_name>/bin/tq-conn-zscaler-blacklist-export -  
ll /var/log/tq_labs/ -c /etc/tq_labs/ -v3
```

7. Enter the following parameters when prompted:

| PARAMETER         | DESCRIPTION                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------------------|
| ThreatQ Host      | This is the host of the ThreatQ instance, either the IP Address or Hostname as resolvable by ThreatQ.              |
| ThreatQ Client ID | This is the OAuth id that can be found at Settings Gear → User Management → API details within the user's details. |

| PARAMETER        | DESCRIPTION                                                                   |
|------------------|-------------------------------------------------------------------------------|
| ThreatQ Username | This is the Email Address of the user in the ThreatQ System for integrations. |
| ThreatQ Password | The password for the above ThreatQ account.                                   |
| Status           | This is the default status for objects that are created by this Integration.  |

### Example Output

```
/opt/tqvenv/<environment_name>/bin/tq-conn-zscaler-blacklist-export -ll /  
var/log/tq_labs/ -c /etc/tq_labs/ -v3  
ThreatQ Host: <ThreatQ Host IP or Hostname>  
ThreatQ Client ID: <ClientID>  
ThreatQ Username: <EMAIL ADDRESS>  
ThreatQ Password: <PASSWORD>  
Status: Review  
Connector configured. Set information in UI
```

You will still need to [configure and then enable the connector](#).

# Configuration



ThreatQuotient does not issue API keys for third-party vendors. Contact the specific vendor to obtain API keys and other integration-related credentials.

To configure the integration:

1. Navigate to your integrations management page in ThreatQ.
2. Select the **Labs** option from the *Category* dropdown (optional).
3. Click on the integration entry to open its details page.
4. Enter the following parameters under the **Configuration** tab:

| PARAMETER                           | DESCRIPTION                                                                                                                                                                                                                                                            |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| API Hostname                        | <p>The API hostname obtained from the Zscaler admin console.</p> <div>  <p>This can be found by navigating to <b>Administration &gt; Cloud Service API Key Management</b>.</p> </div> |
| Zscaler Username                    | Your Zscaler username.                                                                                                                                                                                                                                                 |
| Zscaler Password                    | The password associated with the username above.                                                                                                                                                                                                                       |
| API Key                             | <p>Your API Key provided by Zscaler.</p> <div>  <p>This can be found by navigating to <b>Administration &gt; Cloud Service API Key Management</b>.</p> </div>                       |
| Threat Library Data Collection Name | <p>Enter the name of the data collection from ThreatQ that you would like to export to Zscaler.</p> <p>The data collection selected should only include URLs and FQDNs.</p>                                                                                            |
| Category Name                       | Enter a name for the category you want to export IOCs to.                                                                                                                                                                                                              |
| Category Description                | Enter a description for the category you want to export IOCs to.                                                                                                                                                                                                       |

| PARAMETER                              | DESCRIPTION                                                                              |
|----------------------------------------|------------------------------------------------------------------------------------------|
| Automatically Activate Pending Changes | If enabled, the integration will automatically activate pending policy/category changes. |
| Verify Host SSL                        | Enable or disable server certificate validation.                                         |



Disabled
☒
Enabled

Additional Information
Integration Type: Connector

### Configuration

API Hostname
Enter the API hostname obtained from the Zscaler admin console.

Zscaler Username
Enter your Zscaler Cloud (ZIA) username to authenticate.

Zscaler Password
Enter your Zscaler Cloud (ZIA) password to authenticate.

API Key
Enter the API key provided in Zscaler (Administration -> Cloud Service API Security).

Threat Library Data Collection Name
Enter the name of the data collection from ThreatQ that you'd like to export to Zscaler.

Category Name
Enter a name for the category you want to export IOCs to.

Category Description
Enter a description for the category you want to export IOCs to.

☐ Automatically Activate Pending Changes  
If enabled, the integration will automatically activate pending policy/category changes.

☒ Verify Host SSL  
If checked, use SSL to connect.

Save

- Review any additional settings, make any changes if needed, and click on **Save**.
- Click on the toggle switch, located above the *Additional Information* section, to enable it.

# Usage

Use the following command to execute the driver:

```
/opt/tqenv/<environment_name>/bin/tq-conn-zscaler-blacklist-export -v3
-ll /var/log/tq_labs/ -c /etc/tq_labs/
```

## Command Line Arguments

This connector supports the following custom command line arguments:

| ARGUMENT                                                | DESCRIPTION                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>-h, --help</code>                                 | Review all additional options and their descriptions.                                                                                                                                                                                                                                                                           |
| <code>-ll LOGLOCATION, --loglocation LOGLOCATION</code> | Sets the logging location for the connector. The location should exist and be writable by the current. A special value of 'stdout' means to log to the console (this happens by default).                                                                                                                                       |
| <code>-c CONFIG, --config CONFIG</code>                 | This is the location of the configuration file for the connector. This location must be readable and writable by the current user. If no config file path is given, the current directory will be used. This file is also where some information from each run of the connector may be put (last run time, private oauth, etc.) |
| <code>-v {1,2,3}, --verbosity {1,2,3}</code>            | This is the logging verbosity level where 3 means everything.                                                                                                                                                                                                                                                                   |
| <code>-n, --name</code>                                 | Optional - Name of the connector (Option used in order to allow users to configure multiple Intelligence Mailbox connector instances on the same TQ box).                                                                                                                                                                       |

## CRON

Automatic CRON configuration has been removed from this script. To run this script on a recurring basis, use CRON or some other jobs scheduler. The argument in the CRON script must specify the config and log locations.

Add an entry to your Linux crontab to execute the connector at a recurring interval. Depending on how quickly you need updates, this can be run multiple times a day (no more than once an hour) or a few times a week.

In the example below, the command will execute the connector every two hours.

1. Log into your ThreatQ host via a CLI terminal session.
2. Enter the following command:

```
crontab -e
```

This will enable the editing of the crontab, using vi. Depending on how often you wish the cronjob to run, you will need to adjust the time to suit the environment.

3. Enter the commands below:

### Every 2 Hours Example

```
0 */2 * * * /opt/tqenv/<environment_name>/bin/tq-conn-zscaler-  
blacklist-export -c /etc/tq_labs/ -ll /var/log/tq_labs/ -v3
```

4. Save and exit CRON.

## Known Issues / Limitations

- Zscaler only allows up to 25,000 custom URLs to be stored in their platform, globally. The integration will make checks to ensure that the number of URLs in the category does not exceed 25,000.

---

# Change Log

- **Version 1.1.0**
  - Resolved an issue where URLs would not be removed from a URL category.
  - Added validation to ensure the custom URL quota is not exceeded.
  - Resolved an issue where sensitive user fields were not masked.
  - Added the ability to automatically activate pending policy changes via new configuration parameter: **Automatically Activate Pending Changes**.
  - Added the following new configuration parameters: **Category Name**, **Category Description**, and **Verify Host SSL**.
- **Version 1.0.0**
  - Initial release