

ThreatQuotient



Cisco Umbrella Enforcement Connector User Guide

Version 1.1.1

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ThreatQuotient

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Contents

Warning and Disclaimer	3
Support	4
Integration Details.....	5
Introduction	6
Prerequisites	7
Time Zone	7
Integration Dependencies	8
Installation.....	9
Creating a Python 3.6 Virtual Environment	9
Installing the Connector.....	10
Configuration	12
Usage.....	13
Command Line Arguments.....	13
CRON	14
Example Results	15
Execution Log.....	15
Single Report.....	17
Change Log	18

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Integration Details

ThreatQuotient provides the following details for this integration:

Current Integration Version	1.1.1
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Compatible with ThreatQ Versions	>= 4.30.0
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Python Version	3.6
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Support Tier	ThreatQ Supported
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Introduction

The Cisco Umbrella Enforcement Connector for ThreatQ integration allows a user to export prioritized threat intelligence from ThreatQ, to be blocked in Cisco Umbrella Enforcement.

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
urllib3	1.24.3	Pinned
threatqsdk	>=1.8.7	N/A
threatqcc	>=1.4.2	N/A
requests	>=2.21.0	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 requests
```

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_umbrella_enforcement-<version>-py3-none-any.whl
```



A driver called tq-conn-umbrella-enforcement will be installed. After installing, a script stub will appear in /opt/tqvenv/<environment_name>/bin/tq-conn-umbrella-enforcement.

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-umbrella-enforcement -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-umbrella-enforcement -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
Cisco Umbrella API Host	The URL to access Cisco Umbrella's API. The default is <code>s-platform.api.opendns.com</code> .
API Token (Customer Key)	Enter your Cisco Umbrella API Token for authentication.
Data Collection Names	Enter a comma-separated list of Threat Library collection names to export.

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

Usage

Use the following command to execute the driver:

```
/opt/tqvenv/<environment_name>/bin/tq-conn-umbrella-enforcement -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>	Shows this help message and exits.
<code>-n, --name</code>	This sets the name for this connector. In some cases, it is useful to have multiple connectors of the same type executing against a single TQ instance. For example, the Syslog Exporter can be run against multiple target and multiple exports, each with their own name and configuration
<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. The default setting is 1 (Warning).
<code>-ep, -external-proxy</code>	This allows you to use the proxy that is specified in the ThreatQ UI.

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-umbrella-  
enforcement -c /etc/tq_labs/ -ll /var/log/tq_labs/ -v3
```

4. Save and exit CRON.

Example Results

The following section provides examples of the execution log and single reports.

Execution Log

```
2020-04-10 13:39:42 - threatqcc.custom_connector DEBUG: Using Current working
directory for config path
2020-04-10 13:39:42 - tq_conn_umbrella_enforcement DEBUG: Private Connection
Established
2020-04-10 13:39:42 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Cisco Umbrella Enforcement Integration is starting...
2020-04-10 13:39:49 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: ThreatQ Domain List contains [2187] domains
2020-04-10 13:39:49 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Downloading saved search [Umbrella] from ThreatQ
2020-04-10 13:39:50 - threat_library DEBUG: Executing [indicators] Query:
{"fields": ["value", "type", "score"], "filters": {"+and": [{"+or":
[{"type_name": "IP Address"}, {"type_name": "IPv6 Address"}, {"type_name":
"FQDN"}, {"type_name": "URL"}]}]}, "criteria": []}
2020-04-10 13:39:50 - threat_library DEBUG: Threat Library search found 6459
total results
2020-04-10 13:39:50 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [8] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:39:56 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [5] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:40:02 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [22] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:40:08 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [43] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:40:14 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [16] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:40:20 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [79] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:40:27 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [58] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:40:28 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
DEBUG: Rate limit exceeded. Waiting 60 seconds...
2020-04-10 13:41:34 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [44] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:41:40 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [50] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:41:46 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [17] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:41:52 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [10] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:41:58 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [14] IOCs to Cisco Umbrella Enforcement
```

```
2020-04-10 13:42:04 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Uploading batch of [7] IOCs to Cisco Umbrella Enforcement
2020-04-10 13:42:09 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
DEBUG: Checking for expired IOCs...
2020-04-10 13:42:09 - tq_conn_umbrella_enforcement.cisco_umbrella_enforcement
INFO: Successfully exported [373] IOCs to Cisco Umbrella Enforcement!
2020-04-10 13:42:09 - tq_conn_umbrella_enforcement INFO: [::] Completed
execution of the Cisco Umbrella Enforcement Connector in 147 seconds.
```

Single Report



ThreatQ Destination List

Q

03al.freedomdynamicdns.org	✕
0tqhajaoa2v.capanha01v4h6m7j801.cf	✕
101.edufav.com	✕
123123dnf.com	✕
155.ip-51-161-9.net	✕
1789republic.com	✕
1800propainter.com	✕
180130030.tbmyoweb.com	✕
19ce033f.ngrok.io	✕

[CLOSE](#)

Change Log

- **Version 1.1.1**
 - Added improvements to the rate limit avoidance mechanism.
 - Updated integration dependencies.
- **Version 1.1.0**
 - Initial release