ThreatQuotient

OpenIOC File Export Connector Guide

Version 1.0.0

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Versioning

- Current integration version: `1.0.0`
- Compatible with ThreatQ versions >= `4.57.3`
- Python Version: `3.6`

Introduction

The OpenIOC File Exporter connector for ThreatQ enables you to export ThreatQ data collections in OpenIOC 1.0 and 1.1 formats.

> Exported files are saved to a user-specified directory on your ThreatQ instance. See the Configuration chapter for further information on setting the target directory.

The custom connector supports the following IOCs:

OpenIOC 1.0

- IP Address
- MD5
- SHA-1
- SHA-256
- Email Address
- URL
- File Path
- Registry Key

OpenIOC 1.1

- IPv4 Addresses
- MD5
- SHA-1
- SHA-256
- Email Address
- FQDN
- URL
- File Path
- Registry Key

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
```

PIP.conf

Prior to ThreatQ version 4.10, you were required to modify your system's pip.conf to use the ThreatQ integrations python repo, also known as DevPi. This functionality was made available upon an initial install of 4.10. If you have upgraded to 4.10 from a previous version, you will need to modify the pip.conf on your environment to the following (replacing username and password with your information).

```
[global]
   index-url = https://system-updates.threatq.com/pypi
   extra-index-url = https://<username>:<password>@extensions.threatq.com/threatq/integrations
                     https://<username>:<password>@extensions.threatq.com/threatq/sdk
```

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	>= 1.8.4	N/A
threatqcc	>= 1.4.1	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 setuptools==59.6.0
pip install threatqsdk threatqcc
```

Proceed to installing the connector.

Installing the Connector

The connector can be installed from the ThreatQuotient repository with YUM credentials or offline via a .whl file.

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/conn_tq_conn_openioc_export-<version>-py3-
   none-any.whl
```

A driver called `tq-conn-openioc-export` will be installed. After installing, a script stub will appear in `/opt/tqvenv/<environment_name>/bin/tq-conn-openioc-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-openioc-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.
ThreatQ Username	This is the Email Address doe the user in the ThreatQ System for integrations.
ThreatQ Password	The password for the above ThreatQ account.

Example Output

```
/opt/tqvenv/<environment_name>/bin/tq-conn-openioc-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>
Connector configured. Set information in UI
```

You will still need to configure and then enable the connector.

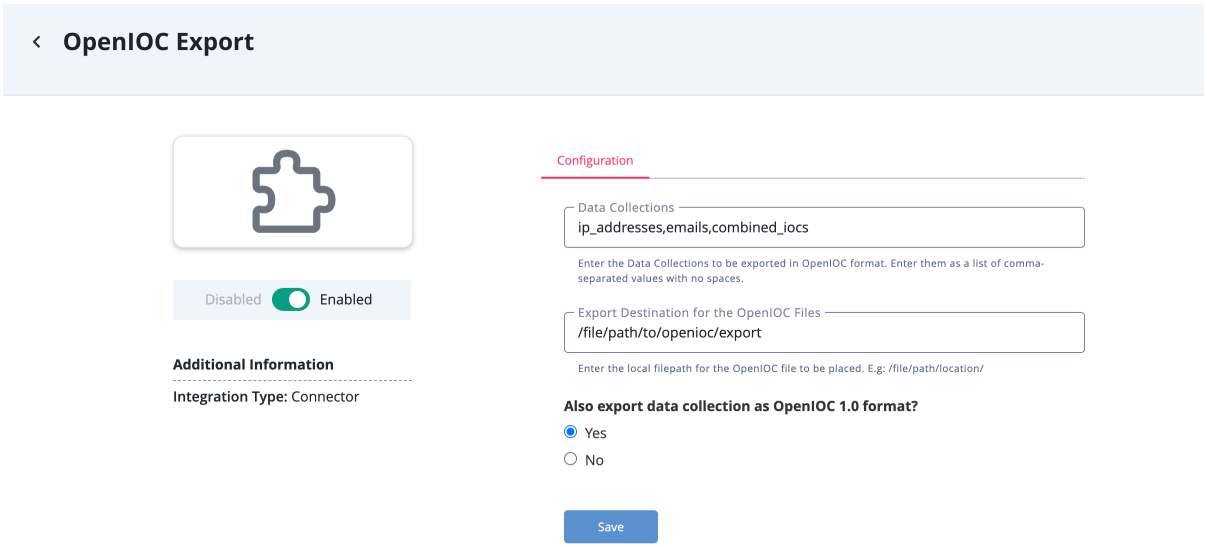
Configuration

> 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 to open its details page.
4. Enter the following parameters under the **Configuration** tab:

PARAMETER	DESCRIPTION
Data Collections	Enter a comma-separated list, with no spaces, of data collections to export. **Example**: combined_iocs,ip_addresses
Export Destination for the OpenIOC Files	The file pathway on the the TQ instance where the openIOC files will be exported.
Also export data collection as OpenIOC 1.0 format	Select whether export the collection in OpenIOC 1.0 format.



5. Review any additional settings available, 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-openioc-export -v 3
   -ll /var/log/tq_labs/ -c /etc/tq_labs/
```

Command Line Arguments

This connector supports the following custom command line arguments:

ARGUMENT	DESCRIPTION
`-h`, `--help`	Shows this help message and exits.
`-n NAME`, `--name NAME`	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.
`-ll LOGLOCATION`, `--loglocation LOGLOCATION`	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).
`-c CONFIG`, `--config CONFIG`	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.)
`-v {1,2,3}`, `--verbosity {1,2,3}`	This is the logging verbosity level where **3** means everything. The default setting is **1** (Warning).

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/tqvenv/<environment_name>/bin/tq-conn-
      openioc-export -c /etc/tq_labs/ -ll /var/log/tq_labs/ -v 3
   ```

4. Save and exit CRON.

Change Log

- **Version 1.0.0**
  - Initial Release