ThreatQuotient for IMAP Application

May 14, 2018

Version 1.1

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About This ThreatQuotient for IMAP Application Document

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History

Table 1: Document History Information

Version No.	Issue Date	Status	Reason for Change
0.1	16 Mar 2018	Initial Draft	Initial draft
0.2	19 Mar 2018	First Draft	ThreatQuotient internal review
1.0	20 Mar 2018	Release	Document Release
1.1	16 Apr 2018	Second draft	ThreatQuotient internal review to changes

Review

Table 2: Document Revision Information

Reviewer's Details	Version No.	Date
Dylan Cooper	0.1	18 Mar 2018
Les Adams	0.2	19 Mar 2018
Leon Brown	1.0	20 Mar 2018
Dylan Cooper	1.1	16 Apr 2018
Leon Brown	1.1	17 Apr 2018

Document Conventions

Alerts readers to take note. Notes contain suggestions or references to material not covered in the document.

Alerts readers to be careful. In this situation, you may do something that could result in equipment damage or loss of data.

Alerts the reader that they could save time by performing the action described in the paragraph.

Alerts the reader that the information could help them solve a problem. The information might not be troubleshooting or even an action.

1 Introduction

1.1 Application Function

The ThreatQuotient for IMAP Application is a uni-directional connector pulling information from an IMAP source, by scraping all unread emails of indicators then uploading those indicators into the ThreatQ instance.

1.2 Preface

This guide provides the information necessary to implement the ThreatQuotient for IMAP Application. This document is not specifically intended as a site reference guide.

It is assumed that the implementation engineer has experience installing and commissioning ThreatQuotient Apps and integrations covered within the document, as well as experience necessary to troubleshoot at a basic level.

1.3 Audience

This document is intended for use by the following parties:

1. ThreatQ and IMAP/Exchange Engineers
2. ThreatQuotient Professional Services Project Team & Engineers

1.4 Scope

This document covers the implementation of the ThreatQuotient for IMAP Application only.

Table 3: ThreatQuotient Software & App Version Information

Software/App Name	File Name	Version
ThreatQ	Version 3.6.x or greater	
ThreatQuotient for IMAP Application	3.0.0	

1.5 Assumptions

The following criteria is assumed to be in place and functional to allow the implementation of the ThreatQuotient for IMAP Application into the managed estate:

- All ThreatQuotient equipment is online and in service.
- Infrastructure/transmission at all sites and between sites is in place to support the network traffic.
- All required firewall ports have been opened.
- All equipment is powered from permanent power supplies.
- A clock source of sufficient accuracy is connected to the network and the network and devices are using it as the primary clock source.

2 Implementation Overview

This document will show how to install the ThreatQuotient for IMAP Application.

2.1 Prerequisites

Throughout this implementation document, there will be referrals to several files and directories, some of which will be symbolic, and others may change depending on specifics of the environmental setup.

The following *MUST* be installed prior to the installation of the ThreatQuotient for IMAP Application.

PySocks can be installed using the command shown below:

Figure 1: Installing PySocks Example

```
[root@localhost dist]# pip install PySocks
You are using pip version 7.1.0, however version 9.0.1 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
Collecting PySocks
  Downloading https://system-updates.threatq.com/pypi/+f/441/c4e3bf5b042f7/PySocks-
1.6.8.tar.gz (283kB)
    100% |████████████████████████████████| 286kB 6.5MB/s
Installing collected packages: PySocks
  Running setup.py install for PySocks
Successfully installed PySocks-1.6.8
[root@localhost dist]#
```

Ensure all ThreatQ devices are set to the correct time, time zone and date, and using a clock source available to all.

For Example:

Figure 2: Time Zone Change Example

```
sudo ln -sf /usr/share/zoneinfo/America/Los_Angeles /etc/localtime
```

2.2 Security and Privacy

For ThreatQuotient Professional Services engineers to configure the system, local network access is required to connect to the managed estate. Therefore, the implementation must occur at an office or data center location.

Passwords have not been provided in this document. Please contact your project team for this information, if required.

All engineers are reminded that all data belonging and pertaining to the business is strictly confidential and should not be disclosed to any unauthorized parties.

The data held within this document is classed as confidential due to its nature.

3 IMAP Application Installation

3.1 Setting up the Integration

From .whl File

To install this IMAP application from a wheel file, the wheel file (.whl) file `tqIMAP-2.0.1-py2-none-any.whl` will need to be copied via SCP into your ThreatQ instance.

1. Install the .whl file, using the following command:

Figure 3: Installing .whl File (Inc Example Output)

```
$> sudo pip install /file/path/to/app/tqIMAP-2.0.1-py2-none-any.whl
You are using pip version 7.1.0, however version 9.0.1 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
Processing ./tqIMAP-2.0.1-py2-none-any.whl
Requirement already satisfied (use --upgrade to upgrade): threatqsdk>=1.6.2 in
/usr/lib/python2.7/site-packages (from tqIMAP==2.0.1)
Requirement already satisfied (use --upgrade to upgrade): threatqcc>=1.1.2 in
/usr/lib/python2.7/site-packages (from tqIMAP==2.0.1)
Collecting python-dateutil>=2.6.1 (from tqIMAP==2.0.1)
  Downloading https://system-
updates.threatq.com/pypi/+f/5a8/6a548fe776cc0/python_dateutil-2.7.0-py2.py3-none-
any.whl (207kB)
    100% |████████████████████████████████| 208kB 1.2MB/s
Requirement already satisfied (use --upgrade to upgrade): PySocks>=1.6.7 in
/usr/lib/python2.7/site-packages (from tqIMAP==2.0.1)
Installing collected packages: python-dateutil, tqIMAP
      Successfully uninstalled python-dateutil-2.6.0
Successfully installed python-dateutil-2.7.0 tqIMAP-2.0.1
```

From the ThreatQuotient Repository

To install this TQIS app from the ThreatQuotient repository with YUM credentials.

1. Install the IMAP application by using the following commands.

Figure 4: Installing From The ThreatQuotient Repository (Example Output)

```
sudo pip install -i
https://<USERNAME>:<PASSWORD>@extensions.threatq.com/threatq/integrations tqIMAP
You are using pip version 7.1.0, however version 10.0.0 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
Collecting tqIMAP
  Downloading https://extensions.threatq.com/threatq/integrations-
dev/+f/391/67366f9ebbdd2/tqIMAP-3.0.0-py2-none-any.whl
    100% |████████████████████████████████| 212kB 257kB/s
  Running setup.py install for PySocks
Successfully installed PySocks-1.6.8 jinja2-2.8 python-dateutil-2.7.2 threatqcc-
1.3.0 threatqsdk-1.7.0 tqIMAP-3.0.0
```

Once the application has been installed, a directory structure must be created for all configuration, logs and files, using the `mkdir` command. See example below:

Figure 5: Creating Integration directories Example

```
$>cd /opt/
$>mkdir integrations
$>cd integrations
$>mkdir config
$>mkdir logs
$>mkdir files
```

A driver called `tqIMAP` or `tqimap` is installed.

2. Issue the following commands to initialize the integration.

Figure 6: Running the Integration

```
$>tq-imap -c /file/path/to/config/ -ll /file/path/to/logs/ -f /file/path/to files/
-v 3  --files files
ThreatQ Host: 192.168.1.176
Client ID: 9b22884a1876e5ca19f2c95292650ee3
E-Mail Address: <EMAIL ADDRESS>
Password: <PASSWORD>
Status: Active
Connector configured.  Set information in UI. 2018-03-16 18:05:46 - Intelligence
Mailbox CRITICAL: Connector has been created, please use UI for final configuration
```

The driver will run once, where it connects to the TQ instance and installs the UI component of the connector.

3.2 Configuring the Connector

To edit the configuration, go to the **Incoming Feeds** page within ThreatQ, click the **ThreatQ Labs** tab, then expand the Feed Settings for the **Intelligence Mailbox** section.

1. The following information will need to be entered as described below.

   - **IMAP Server**: This is the IMAP server associated with the email provider.
   - **IMAP Username**: The username/email address to be accessed.
   - **IMAP Password**: The password associated with the username/email address.
   - **Proxy Address**: This is the socks proxy address needed to be used to connect to the IMAP server.

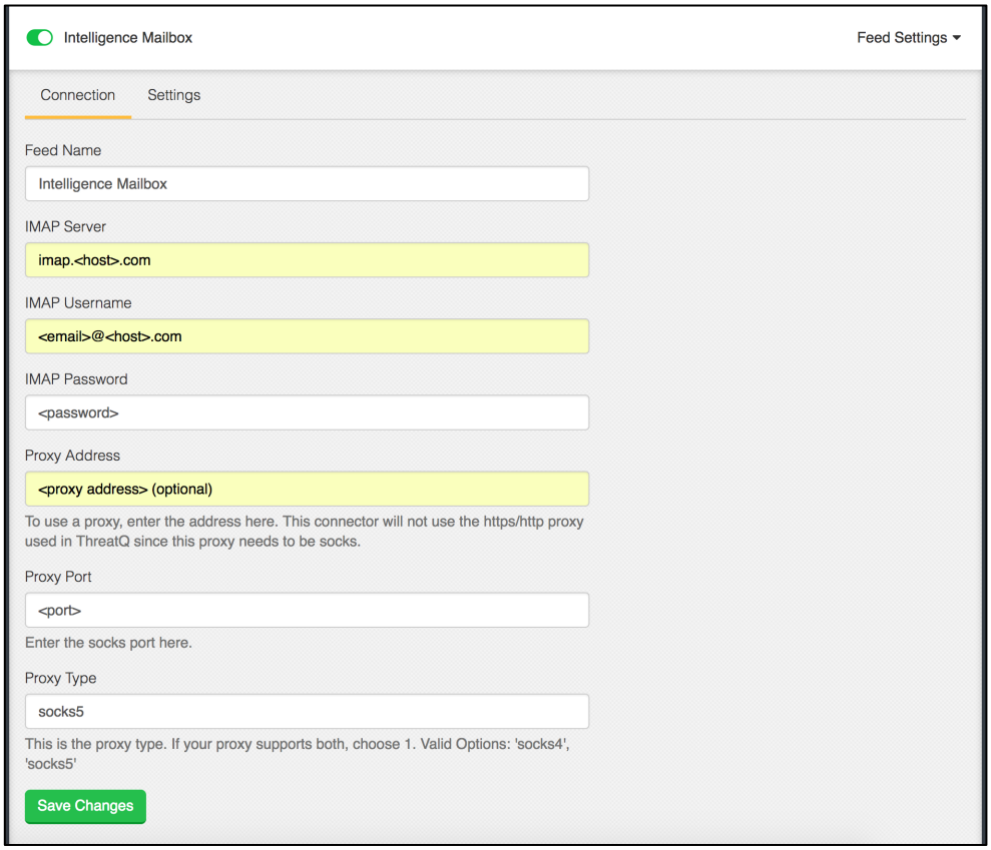
   The proxy cannot be a HTTP/HTTPS proxy. This field is optional. If a socks proxy is not used, this field can be left blank.

   - **Proxy Port**: The port associated with the proxy address field.

   This will only be used if you are using a proxy.

   - **Proxy Type**: This is the type of proxy to use. Since there are two sock proxy versions, the options are '*socks4*' and '*socks5*'.

Figure 7: ThreatQ UI Configuration



3.3 CRON

To run this script on a recurring basis use CRON or some other system schedule. The argument in the CRON script ***must*** specify the config and log locations.

This can be run multiple times a day and should not be run more often than once/hr.

3.3.1 Setting Up the CRONJOB

1. Login via a CLI terminal session to your ThreatQ host.
2. Input the commands below.

Figure 8: Command Line Crontab 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. Input the commands below – this example shows every **4 Hours.**

Figure 9: Command Line Crontab tqIMAP Command

```
0 */4 * * * $> tqIMAP -c /path/to/config/directory/ -ll /path/to/log/directory/ -f
/path/to/files/directory --files files/
```

To run this script on a recurring basis, use CRON or some other on system schedule. CRON is shown here.

 The argument in the CRON script ***must*** specify the config and log locations.

 This can be run multiple times a day and should **not** be run more often than once/hr.

For further reference, see the [ThreatQ Help Center.]

Appendix A: Supplementary Information

IMAP Application Notes

- Running the ThreatQuotient for IMAP Application connector will look for all unread emails. Once the connector is run, it will read the unread emails, marking them show and be marked as read.
- This ThreatQuotient for IMAP Application will read the entire email including the attachments. If an attachment is present, it will upload the attachment to ThreatQ as a File. It will also attempt to parse the file and the email body looking for any indicators. If indicators are found, they will be related to the email's attachment.

Uninstalling the Connector

```
sudo pip uninstall tqIMAP
```

Driver Command Line Options

The tqIMAP driver has several command line arguments that will help you and your customers execute this. They are listed below. You can see these by executing `/usr/bin/tqIMAP --help.`

```
usage: tqIMAP Connector [-h] [-ll LOGLOCATION][-c CONFIG] [-v VERBOSITY]

tqIMAP
```

optional arguments:

```
  -h, --help
```

Shows the help message and exit

```
  -ll LOGLOCATION, --loglocation LOGLOCATION
```

This sets the logging location for this connector. The location should exist and be writable by the current user. A special value of 'stdout' means to log to the console (the default).

```
  -c CONFIG, --config CONFIG
```

This is the location of the configuration file for the connector. This location must have read and write permissions for the current user. If no config file is given, the current directory will be used. This file is also where some information from each run of the connector may be put (e.g. last run time, private OAuth, etc).

```
  -v {1,2,3}, --verbosity {1,2,3}
```

This is the logging verbosity level. The default is 1 (Warning).

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