ThreatQuotient

VirusTotal Collections CDF Guide

Version 1.0.0

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ThreatQ Supported

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Contents

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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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Versioning

- Current integration version: `1.0.0`
- Compatible with ThreatQ versions >= `4.49.0`

Introduction

The VirusTotal Collections feed allows a user to ingest all IoCs (IP Address, Domains, URLs, and Hashes) and related attributes from one or multiple VirusTotal collections.

The integration provides the following endpoint:

- **VirusTotal Collections** - `GET https://www.virustotal.com/api/v3/collections/{collection_id}`

Based on the response of the collection, the integration will then execute four additional GET requests:

- **IP Address** - `GET https://www.virustotal.com/api/v3/collections/{collection_id}/ip_addresses`
- **Domains** - `GET https://www.virustotal.com/api/v3/collections/{collection_id}/domains`
- **URLs** - `GET https://www.virustotal.com/api/v3/collections/{collection_id}/urls`
- **Files** - `GET https://www.virustotal.com/api/v3/collections/{collection_id}/files`

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 file.
3. Navigate to the integrations management page on your ThreatQ instance.
4. Click on the **Add New Integration** button.
5. Upload the integration file using one of the following methods:
   - Drag and drop the file into the dialog box
   - Select **Click to Browse** to locate the integration 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. If prompted, select the individual feeds to install 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.

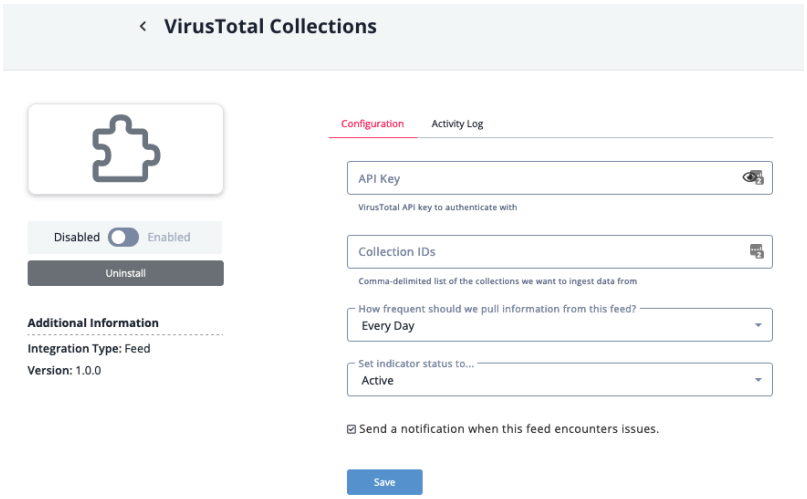
To configure the integration:

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

PARAMETER	DESCRIPTION
API Key	Your VirusTotal API Key.
Collection IDs	A comma-delimited list of the collections to ingest data from. > The number and size of the collections can affect the performance of the integration. A large number of collections or large collection sizes can extend the amount of time to ingest all data.



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

VirusTotal Collections Data

`GET https://www.virustotal.com/api/v3/collections/{collection_id}`

JSON response sample:


```
{
   "data": {
      "attributes": {
         "alt_names": [
            "Geodo",
            "Heodo"
         ],
         "autogenerated_tags": [
            "cve-2018-20250",
            "cve-2017-11882",
            "upx",
         ],
         "creation_date": 1612569600,
         "description": "While [i]Emotet[/i] historically was a banking malware organized in a botnet, nowadays
Emotet is mostly seen as infrastructure as a service for content delivery. For example, since mid 2018 it is used by
Trickbot for installs, which may also lead to ransomware attacks using Ryuk, a combination observed several times
against high-profile targets.\r\nIt is always stealing information from victims but what the criminal gang behind it
did, was to open up another business channel by selling their infrastructure delivering additional malicious
software. From malware analysts it has been classified into epochs depending on command and control, payloads, and
delivery solutions which change over time.",
         "description_html": "While <em>Emotet</em> historically was a banking malware organized in a botnet,
nowadays Emotet is mostly seen as infrastructure as a service for content delivery. For example, since mid 2018 it is
used by Trickbot for installs, which may also lead to ransomware attacks using Ryuk, a combination observed several
times against high-profile targets.\r\nIt is always stealing information from victims but what the criminal gang
behind it did, was to open up another business channel by selling their infrastructure delivering additional
malicious software. From malware analysts it has been classified into epochs depending on command and control,
payloads, and delivery solutions which change over time.",
         "domains_count": 0,
         "files_count": 3688,
         "ip_addresses_count": 0,
         "last_modification_date": 1613148085,
         "link": "https://malpedia.caad.fkie.fraunhofer.de/details/win.emotet",
         "name": "Emotet",
         "references_count": 129,
         "status": "COMPUTED",
         "tags": [
            "upx"
         ],
         "targeted_countries": ["United States"],
         "targeted_industries": ["Finance"],
         "tlp": "WHITE",
         "top_icon_md5": [
            "647ca034cb6c763363b636269047a4c0",
            "da87510c3aabe7851c7c5d0493dbb14a",
            "d2d15e1e362ef2edda7238e165376112"
         ],
```

```
        "urls_count": 0
      },
      "id": "malpedia_win_emotet",
      "links": {
        "self": "https://virustotal.com/api/v3/collections/malpedia_win_emotet"
      },
      "type": "collection"
   }
}
```


ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	EXAMPLES	NOTES
.data.id	Indicator.Attribute	VirusTotal Collection ID	malpedia_win_emotet	N/A
.data.attributes.name	Indicator.Attribute	VirusTotal Collection Name	Emotet	N/A
.data.attributes.creation_date	Indicator.Attribute	VirusTotal Collection Creation Date	2021-02-06 12:00:00-00:00	Uses timestamp to convert from datetime to standardized
.data.attributes.targeted_countries[]	Indicator.Attribute	Targeted Country	United States	One attribute for each country
.data.attributes.targeted_industries[]	Indicator.Attribute	Targeted Industry	Finance	One attribute for each industry
.data.attributes.tags[]	Indicator.Tag	N/A	upx	N/A
.data.attributes.autogenerated_tags[]	Indicator.Tag	N/A	cve-2018-20250	N/A
.data.attributes.tlp	Indicator.TLP	N/A	WHITE	N/A

These attributes and tags are then added to each IoC ingested into ThreatQ. See the GET Requests section for more details.

GET Requests

Based on the response from the collection, the integration will then execute 4 other GET requests for the IoC data:

- IP Addresses
- Domains
- URLs
- Files

IP Addresses

`GET https://www.virustotal.com/api/v3/collections/{collection_id}/ip_addresses`

JSON response sample:


```
{
   "meta": {
      "count": 300,
      "cursor": "eyJsaW1pdCI6IDIsICJvZmZzZXQiOiAyfQ=="
   },
   "data": [
      {
         "attributes": {
            "as_owner": "Strato AG",
            "asn": 6724,
            "continent": "EU",
            "country": "DE",
            "jarm": "27d40d40d29d40d1dc42d43d00041d4689ee210389f4f6b4b5b1b93f92252d",
            "last_analysis_results": {
               "ADMINUSLabs": {
                  "category": "harmless",
                  "engine_name": "ADMINUSLabs",
                  "method": "blacklist",
                  "result": "clean"
               },
               "AegisLab WebGuard": {
                  "category": "harmless",
                  "engine_name": "AegisLab WebGuard",
                  "method": "blacklist",
                  "result": "clean"
               },
               "AlienVault": {
                  "category": "harmless",
                  "engine_name": "AlienVault",
                  "method": "blacklist",
                  "result": "clean"
               },
               "Antiy-AVL": {
                  "category": "harmless",
                  "engine_name": "Antiy-AVL",
                  "method": "blacklist",
                  "result": "clean"
               },
               "AutoShun": {
                  "category": "harmless",
                  "engine_name": "AutoShun",
                  "method": "blacklist",
                  "result": "clean"
               }
            },
            "last_analysis_stats": {
               "harmless": 5,
               "malicious": 0,
               "suspicious": 0,
               "timeout": 0,
               "undetected": 0
```

```
            },
            "last_https_certificate": {
               "cert_signature": {
                  "signature":
"97ef5af5e6e898ba4ec4b04644954ed60ba16b82e6f9c56967b90b5abc9a559bc3a912af382a1073c4793d75749035597b341efec1073c17bd8b
5e03714781c6e9f11b1ce39ecc74afcb8319b9f6f1d9f6c484400bd58374fc0addf7d05f743cdba94a21ebee3d4ea074282a7662eec26171092a6
9fd60158cd72dd647146de7eb8ae2b5db6257588acc98429eb40f6b393fcbad71139ba11671370d41cbb5f6ca6a18506fccf26d05c3c555377d03
946d9e01cdefedbd55c66f34276113885a77babb64ccea9fe16bfac6f2be823bce6d698aed09c3cc02c2c39127d6418c21dbacd723d8f5fa465ce
72a8778eee58bf5603a8f42d4afc4c10b0470cef4b244",
                  "signature_algorithm": "sha256RSA"
               },
               "extensions": {
                  "1.3.6.1.4.1.11129.2.4.2": "0481f300f1007700e2694bae26e8e94009e8861bb63b83d43ee7fe7488fba48f",
                  "CA": true,
                  "authority_key_identifier": {
                     "keyid": "a84a6a63047dddbae6d139b7a64565eff3a8eca1"
                  },
                  "ca_information_access": {
                     "CA Issuers": "http://cert.int-x3.letsencrypt.org/",
                     "OCSP": "http://ocsp.int-x3.letsencrypt.org"
                  },
                  "certificate_policies": [
                     "2.23.140.1.2.1",
                     "1.3.6.1.4.1.44947.1.1.1"
                  ],
                  "extended_key_usage": [
                     "serverAuth",
                     "clientAuth"
                  ],
                  "key_usage": [
                     "ff"
                  ],
                  "subject_alternative_name": [
                     "www.ufos-hosting.de"
                  ],
                  "subject_key_identifier": "f522cd9c9a4ccdf5d1ec3f925013bf1185e0bc0c"
               },
               "issuer": {
                  "C": "US",
                  "CN": "Let's Encrypt Authority X3",
                  "O": "Let's Encrypt"
               },
               "public_key": {
                  "algorithm": "RSA",
                  "rsa": {
                     "exponent": "010001",
                     "key_size": 2048,
                     "modulus":
"00d1722efe2a2605072f27013b4f9371f1926464dc1c4285f38138a523dc09f0b9ae8578aa70934141bf14893921a2b754a5747a7c71ef9a2950
1f839a2fe3d052b1434a2fbd0d3149eb1bbe4eef14583791ea7cde3bee2babc5f7114a0fe1ab0c5c5f07701330056b510e020154cca0385a93955
684d4d99b74904a44e1ad93f035ebe02bd6e9721285855cbe8f6ce4aaf83ade044b6bc8bd8424ce41f21cf72a1d4ce42ae539fb202efcc791ef81
0fa49e1c791d4edf4fb83f468cc78b76b5f70333280681f034b80613438f1b0a387e3bdb0dd324e63905d96d1dc810498d5d157d12fc87d4dee9b
2abc264b5b6bd7b1e00b838735270e614e15c2c72babb99"
                  }
               },
               "serial_number": "36feb381e87e4ed9b5ee53c76bdaccfabc0",
               "signature_algorithm": "sha256RSA",
               "size": 1379,
               "subject": {
                  "CN": "www.ufos-hosting.de"
               },
```

```
            "thumbprint": "b796e1d3210edcf97290e147d1245cfc9a78132c",
            "thumbprint_sha256": "988858e7387a90af438c9d1edad64fa01e0e85666ebf88ae458b1ceb553c5760",
            "validity": {
               "not_after": "2019-10-10 14:36:27",
               "not_before": "2019-07-12 14:36:27"
            },
            "version": "V3"
         },
         "last_https_certificate_date": 1566463571,
         "last_modification_date": 1591890478,
         "network": "81.169.128.0/17",
         "regional_internet_registry": "RIPE NCC",
         "reputation": 0,
         "tags": [],
         "total_votes": {
            "harmless": 0,
            "malicious": 0
         },
         "whois": "NetRange: 31.0.0.0 - 31.255.255.255\nCIDR: 31.0.0.0/8\nNetName: 31-RIPE\nNetHandle:
NET-31-0-0-0-1\nParent: ()\nNetType: Allocated to RIPE NCC\nOriginAS: \nOrganization: RIPE Network Coordination
Centre (RIPE)\nRegDate: \nUpdated: 2009-03-25\nComment: These addresses have been further assigned to users
in\nComment: the RIPE NCC region. Contact information can be found in\nComment: the RIPE database at http://
www.ripe.net/whois\nRef: https://rdap.arin.net/registry/ip/31.0.0.0\nResourceLink: https://apps.db.ripe.net/search/
query.html\nResourceLink: whois.ripe.net\nOrgName: RIPE Network Coordination Centre\nOrgId: RIPE\nAddress: P.O. Box
10096\nCity: Amsterdam\nStateProv: \nPostalCode: 1001EB\nCountry: NL\nRegDate: \nUpdated: 2013-07-29\nRef: https://
rdap.arin.net/registry/entity/RIPE\nReferralServer: whois://whois.ripe.net\nResourceLink: https://apps.db.ripe.net/
search/query.html\nOrgTechHandle: RNO29-ARIN\nOrgTechName: RIPE NCC Operations\nOrgTechPhone: +31 20 535 4444
\nOrgTechEmail: hostmaster@ripe.net\nOrgTechRef: https://rdap.arin.net/registry/entity/RNO29-ARIN\nOrgAbuseHandle:
ABUSE3850-ARIN\nOrgAbuseName: Abuse Contact\nOrgAbusePhone: +31205354444 \nOrgAbuseEmail:
abuse@ripe.net\nOrgAbuseRef: https://rdap.arin.net/registry/entity/ABUSE3850-ARIN\ninetnum: 31.139.365.0 -
31.139.365.255\nnetname: STRATO-RZG-DED\norg: ORG-SRA1-RIPE\ndescr: Strato Rechenzentrum, Berlin\ncountry: DE\nadmin-
c: SRDS-RIPE\ntech-c: SRDS-RIPE\nremarks: ************************************************************\nremarks: *
Please send abuse complaints to abuse-server@strato.de *\nremarks: * or fax +49-30-88615-755 ONLY. *\nremarks: *
Abuse reports to other e-mail addresses will be ignored. *\nremarks:
************************************************************\nstatus: ASSIGNED PA\nmnt-by: STRATO-RZG-MNT\ncreated:
2004-02-03T18:37:52Z\nlast-modified: 2013-07-06T09:34:25Z\nsource: RIPE\norganisation: ORG-SRA1-RIPE\norg-name:
Strato AG\norg-type: LIR\naddress: Pascalstrasse 10\naddress: 10587\naddress: Berlin\naddress: GERMANY\nphone:
+4930398020\nfax-no: +493039802222\nadmin-c: CM265-RIPE\nabuse-c: SRAC-RIPE\nmnt-ref: RIPE-NCC-HM-MNT\nmnt-ref:
STRATO-RZG-MNT\nmnt-by: RIPE-NCC-HM-MNT\nmnt-by: STRATO-RZG-MNT\ncreated: 2004-04-17T11:12:39Z\nlast-modified:
2019-02-06T12:46:35Z\nsource: RIPE # Filtered\nrole: RIPE contact Dedicated Server\naddress: STRATO AG\naddress:
Pascalstr. 10\naddress: D-10587 Berlin\naddress: Germany\nphone: +49 30 39802-0\norg: ORG-SRA1-RIPE\nabuse-mailbox:
abuse-server@strato.de\nadmin-c: XX1-RIPE\ntech-c: XX1-RIPE\nnic-hdl: SRDS-RIPE\nremarks:
************************************************************\nremarks: * Please send abuse complaints to abuse-
server@strato.de *\nremarks: * or fax +49-30-88615-755 ONLY. *\nremarks: * Abuse reports to other e-mail addresses
will be ignored. *\nremarks: * *\nremarks: * For peering requests or operational issues please look *\nremarks: * at
the information in the AS6724 RIPE database object. *\nremarks:
************************************************************\nmnt-by: STRATO-RZG-MNT\ncreated:
2010-01-15T08:35:31Z\nlast-modified: 2019-02-06T12:47:52Z\nsource: RIPE # Filtered\nroute: 81.169.165.0/24\ndescr:
STRATO AG\ndescr: prefix only advertised in case of DDoS\norigin: AS6724\nmnt-by: STRATO-RZG-MNT\ncreated:
2014-02-18T16:19:05Z\nlast-modified: 2014-02-18T16:19:05Z\nsource: RIPE\n",
            "whois_date": 1565760528
         },
         "id": "31.139.365.245",
         "links": {
            "self": "https://www.virustotal.com/api/v3/ip_addresses/31.139.365.245"
         },
         "type": "ip_address"
      },
      ...
   ]
```

```
}
```

ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	EXAMPLES	NOTES
.data[].attributes.as_owner	Indicator.Attribute	As Owner	Strato AG	N/A
.data[].attributes.asn	Indicator.Attribute	ASN	6724	N/A
.data[].attributes.continent	Indicator.Attribute	Continent	EU	N/A
.data[].attributes.country	Indicator.Attribute	Country	DE	N/A
.data[].attributes.network	Indicator.Attribute	Network	81.169.128.0/17	N/A
.data[].attributes.regional_internet_registry	Indicator.Attribute	Regional Internet Registry	RIPE NCC	N/A
.data[].attributes.reputation	Indicator.Attribute	Reputation	0	N/A
.data[].attributes.whois	Indicator.Attribute	WHOIS	NetRange: 31.0.0.0 - 31.255.255.255\nCIDR: 31.0.0.0/8\ ...	N/A
.data[].attributes.tags	Indicator.Tag	N/A		N/A
.data[].id	Indicator	IP Address	31.139.365.245	N/A

Domains

`GET https://www.virustotal.com/api/v3/collections/{collection_id}/domains`

JSON response sample:


```
{
   "meta": {
      "count": 6,
      "cursor": "eyJsaW1pdCI6IDIsICJvZmZzZXQiOiAyfQ=="
   },
   "data": [
      {
         "attributes": {
            "categories": {
               "Dr.Web": "known infection source",
               "Forcepoint ThreatSeeker": "bot networks. parked domain"
            },
            "creation_date": 1106675546,
            "favicon": {
               "dhash": "71f0cc989386ba80",
               "raw_md5": "01625852ea10d9fa44p676b1g2ff1df3"
            },
            "jarm": "27d40d40d29d40d1dc42d43d00041d4689ee210389f4f6b4b5b1b93f92252d",
            "last_analysis_results": {
               "ADMINUSLabs": {
                  "category": "harmless",
                  "engine_name": "ADMINUSLabs",
                  "method": "blacklist",
                  "result": "clean"
               },
               "AegisLab WebGuard": {
                  "category": "harmless",
                  "engine_name": "AegisLab WebGuard",
                  "method": "blacklist",
                  "result": "clean"
               },
               "AlienVault": {
                  "category": "harmless",
                  "engine_name": "AlienVault",
                  "method": "blacklist",
                  "result": "clean"
               }
            },
            "last_analysis_stats": {
               "harmless": 3,
               "malicious": 0,
               "suspicious": 0,
               "timeout": 0,
               "undetected": 0
            },
            "last_dns_records": [
               {
                  "expire": 1814400,
                  "minimum": 600,
                  "refresh": 3600,
                  "retry": 300,
```

```
                "rname": "hostmaster.foo-inc.com",
                "serial": 2020061203,
                "ttl": 1799,
                "type": "SOA",
                "value": "ns1.foo.com"
            },
            {
                "ttl": 1162,
                "type": "A",
                "value": "91.117.116.8"
            },
            {
                "ttl": 299,
                "type": "AAAA",
                "value": "2430:2fb0:f0b1:ca3b::6f"
            },
            {
                "priority": 1,
                "ttl": 1545,
                "type": "MX",
                "value": "mta6.am0.foodns.net"
            },
            {
                "flag": 0,
                "tag": "issue",
                "ttl": 1799,
                "type": "CAA",
                "value": "globalsign.com"
            }
        ],
        "last_dns_records_date": 1591833767,
        "last_https_certificate": {
            "cert_signature": {
                "signature":
"9e788e906bca93be8996f3051bc5c1cbb9305a7a02bccd6f4a132555f0487f7f96f767ef66becc91d1e22704b1ec383a9d44237c3ecf28833bef
44a7105186237750301371d45049e9809f1afd4331c6f0ebc077c16d86558f43a893e8871226132a677db3d2089c6300f4e1881eaed447ee3623a
12cbe0552a0f8b73d29f195135c4f25bp700f035080afe87f2e54fd8c8fa1a505535ee3320ef04f90de13222fa476e27ed66fcbddd64e36ea77cb
fb602d1f93f7f58ce84af5435096906aa9ad60e8d86cd7c05207e5d7d47186831e14d5940648e02d407c82be1accb2343725578005020c61980fe
34136705ce8f81cf3202429cc058f405130c4dacfal3e",
                "signature_algorithm": "sha256RSA"
            },
            "extensions": {
                "1.3.6.1.4.1.11129.2.4.2": "0481f300f1007700vbea773f9df56c0e7b536487dd049e0327a919a0c84a11212",
                "CA": true,
                "authority_key_identifier": {
                    "keyid": "98d1f86e10ebcf9bec6089918901ba0eb7d09fd2b"
                },
                "ca_information_access": {
                    "CA Issuers": "http://pki.goog/gsr2/GTS1O1.crt",
                    "OCSP": "http://ocsp.pki.goog/gts1o1"
                },
                "certificate_policies": [
                    "2.23.140.1.2.2",
                    "1.3.6.1.4.1.11129.2.5.3"
                ],
                "crl_distribution_points": [
                    "http://crl.pki.goog/GTS1O1.crl"
                ],
                "extended_key_usage": [
                    "serverAuth"
                ],
```

```
                "key_usage": [
                   "ff"
                ],
                "subject_alternative_name": [
                   "upload.video.foo.com",
                   "*.clients.foo.com",
                   "*.docs.foo.com"
                ],
                "subject_key_identifier": "9da1b782caaad70a2c9480ac488aca8316ad7790",
                "tags": []
             },
             "issuer": {
                "C": "US",
                "CN": "GTS CA 1O1",
                "O": "Google Trust Services"
             },
             "public_key": {
                "algorithm": "EC",
                "ec": {
                   "oid": "secp256r1",
                   "pub":
"04139a8a6a96066c0c62b5358b863147314b402ea9b079cd00361c9099d23cb3db2d937e9cfed2b3826f5ea7f64074a038acd7f33d37c7f897fe
95d544c25c8dfc"
                }
             },
             "serial_number": "a7670522413cc18d0800000000420d4f",
             "signature_algorithm": "sha256RSA",
             "size": 1506,
             "subject": {
                "C": "US",
                "CN": "upload.video.foo.com",
                "L": "Mountain View",
                "O": "Google LLC",
                "ST": "California"
             },
             "tags": [],
             "thumbprint": "ea2fe94b45d4c2929d3c2fd84292086820bd86ad",
             "thumbprint_sha256": "24c386d0829cae13b3c923bfc5c337d156c11c6ea6136b02e5c0a48634328e83",
             "validity": {
                "not_after": "2020-08-12 12:07:40",
                "not_before": "2020-05-20 12:07:40"
             },
             "version": "V3"
          },
          "last_https_certificate_date": 1591833767,
          "last_modification_date": 1591889814,
          "last_update_date": 1577183919,
          "popularity_ranks": {
             "Alexa": {
                "rank": 47288,
                "timestamp": 1591630561
             },
             "Cisco Umbrella": {
                "rank": 338,
                "timestamp": 1591803361
             },
             "Majestic": {
                "rank": 36741,
                "timestamp": 1585496163
             },
             "Statvoo": {
```

```
                "rank": 24060,
                "timestamp": 1591889764
             }
          },
          "registrar": "MarkMonitor Inc.",
          "reputation": 0,
          "tags": [
             "dga"
          ],
          "total_votes": {
             "harmless": 0,
             "malicious": 0
          },
          "whois": "Creation Date: 2005-01-25T17:52:26Z\nDNSSEC: unsigned\nDomain Name: FOOAPIS.COM\nDomain Status:
clientDeleteProhibited https://icann.org/epp#clientDeleteProhibited\nDomain Status: clientTransferProhibited https://
icann.org/epp#clientTransferProhibited\nDomain Status: clientUpdateProhibited https://icann.org/
epp#clientUpdateProhibited\nDomain Status: serverDeleteProhibited https://icann.org/
epp#serverDeleteProhibited\nDomain Status: serverTransferProhibited https://icann.org/
epp#serverTransferProhibited\nDomain Status: serverUpdateProhibited https://icann.org/
epp#serverUpdateProhibited\nName Server: NS1.FOO.COM\nName Server: NS2.FOO.COM\nName Server: NS3.FOO.COM\nName
Server: NS4.FOO.COM\nRegistrar Abuse Contact Email: abusecomplaints@markmonitor.com\nRegistrar Abuse Contact Phone:
+1.2083895740\nRegistrar IANA ID: 292\nRegistrar URL: http://www.markmonitor.com\nRegistrar WHOIS Server:
whois.markmonitor.com\nRegistrar: MarkMonitor Inc.\nRegistry Domain ID: 140496530_DOMAIN_COM-VRSN\nRegistry Expiry
Date: 2021-01-25T17:52:26Z\nUpdated Date: 2019-12-24T10:38:39Z"
       },
       "id": "foo.fooapis.com",
       "links": {
          "self": "https://www.virustotal.com/api/v3/domains/foo.fooapis.com"
       },
       "type": "domain"
    },
    ...
  ]
}
```


ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	EXAMPLES	NOTES
.data[].attributes.creation_date	Indicator.Attribute	Creation Date	2005-01-25 17:52:26-00:00	Uses timestamp to convert from datetime to standardized
.data[].attributes.jarm	Indicator.Attribute	JARM	27d40d40d29d40d1dc42d43d00041d4689ee210389f4f6b4b5b1b93f92252d	N/A
.data[].attributes.registrar	Indicator.Attribute	Registrar	MarkMonitor Inc.	N/A
.data[].attributes.reputation	Indicator.Attribute	Reputation	0	N/A
.data[].attributes.whois	Indicator.Attribute	WHOIS	Creation Date: 2005-01-25T17:52:26Z\nDNSSEC: unsigned\nDomain Name: ...	N/A
.data[].attributes.tags	Indicator.Tag	N/A	dga	N/A
.data[].id	Indicator	FQDN	foo.fooapis.com	N/A

URLs

`GET https://www.virustotal.com/api/v3/collections/{collection_id}/urls`

JSON response sample:


```
{
   "meta": {
      "count": 6,
      "cursor": "eyJsaW1pdCI6IDIsICJvZmZzZXQiOiAyfQ=="
   },
   "data": [
      {
         "attributes": {
            "categories": {
               "BitDefender": "business",
               "Forcepoint ThreatSeeker": "web hosting"
            },
            "favicon": {
               "dhash": "30d6d6dec869b6a6",
               "raw_md5": "f6c933a8a01167c2bfgb5fg65183781"
            },
            "first_submission_date": 1591711462,
            "has_content": true,
            "html_meta": {
               "description": [
                  "dezpipccner p\u0142bntno\u015bci intesnebofe holpne wla kv\u017cwego"
               ],
               "sessid": [
                  "6555835"
               ],
               "viewport": [
                  "width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"
               ]
            },
            "last_analysis_date": 1591715484,
            "last_analysis_results": {
               "ADMINUSLabs": {
                  "category": "harmless",
                  "engine_name": "ADMINUSLabs",
                  "method": "blacklist",
                  "result": "clean"
               },
               "AegisLab WebGuard": {
                  "category": "harmless",
                  "engine_name": "AegisLab WebGuard",
                  "method": "blacklist",
                  "result": "clean"
               },
               "AlienVault": {
                  "category": "harmless",
                  "engine_name": "AlienVault",
                  "method": "blacklist",
                  "result": "clean"
               },
               "Antiy-AVL": {
                  "category": "harmless",
```

```
                  "engine_name": "Antiy-AVL",
                  "method": "blacklist",
                  "result": "clean"
               },
               "Artists Against 419": {
                  "category": "harmless",
                  "engine_name": "Artists Against 419",
                  "method": "blacklist",
                  "result": "clean"
               }
            },
            "last_analysis_stats": {
               "harmless": 64,
               "malicious": 7,
               "suspicious": 0,
               "timeout": 0,
               "undetected": 9
            },
            "last_final_url": "http://pocvttpalok.net/qwlotnvsc8090067532",
            "last_http_response_code": 200,
            "last_http_response_content_length": 28195,
            "last_http_response_content_sha256": "45b81b2d4c58ada2c13q503hb56daf440ec1b9b69f3737df4cf460a080c0ab63",
            "last_http_response_cookies": {
               "PHPSESSID": "5aivcogd1tjp2b4kbfm5551mo0",
               "SameSite": "Lax,",
               "__cfduid": "d84e7486e1p2cc5a7ff3vd85d128183624591715485",
               "sessid": "494429474"
            },
            "last_http_response_headers": {
               "cache-control": "no-store, no-cache, must-revalidate, post-check=0, pre-check=0",
               "cf-cache-status": "DYNAMIC",
               "cf-ray": "5a0b78f576668hch-OhD",
               "cf-request-id": "03hb3befhc00h083h9dh9c820h0h0h01",
               "connection": "keep-alive",
               "content-type": "text/html; charset=UTF-8",
               "date": "Tue, 09 Jun 2020 15:11:25 GMT",
               "expires": "Thu, 19 Nov 1981 08:52:00 GMT",
               "pragma": "no-cache",
               "server": "cloudflare",
               "set-cookie": "__cfduid=d8ded48de1d2dc1da7df34d85d1bd1d56d1d9d7d5d85; expires=Thu, 09-Jul-20 15:11:25
GMT; path=/; domain=.fpofztfpflfk.net; HttpOnly; SameSite=Lax, PHPSESSID=5afvcfgf1tjs2bakf1mfvfqfo0; path=/,
sessid=665627777; expires=Thu, 09-Jul-2020 15:10:43 GMT; Max-Age=2592000; path=/",
               "transfer-encoding": "chunked"
            },
            "last_modification_date": 1591715488,
            "last_submission_date": 1591715484,
            "outgoing_links": [
               "https://ssl.dgtuww.pl/files/reg2lafif_gttp3w_way.pdf",
               "http://www.dtywpwy.pl/polwtwka-wwikow-wowkiws/"
            ],
            "reputation": -44,
            "redirection_chain": [
               "http://wwwcztapwlwk.net/plafgxc80333067532",
               "http://wwwcztapwlwk.net/step2"
            ],
            "tags": [
               "base64-embedded"
            ],
            "targeted_brand": {
               "Phishtank": "Bank Blablabla"
            },
```

```
            "times_submitted": 2,
            "title": "Dwtpww - Bwzpiwczww plwtnwww wntwrnewowe wa kwzdego!",
            "total_votes": {
               "harmless": 0,
               "malicious": 1
            },
            "trackers": {
               "Google Tag Manager": [
                  {
                     "id": "UA-162655555-1",
                     "timestamp": 1603372118,
                     "url": "https://www.googletagmanager.com/gtag/js?id=UA-162655555-1"
                  }
               ]
            },
            "url": "http://wwwcztapwlwk.net/plafgxc80333067532"
         },
         "id": "661q6ceqa60e4qaf1998qa8aa8q6d8daq4c51qc2qfqc5fcd6d885700c0acee3b",
         "links": {
            "self": "https://www.virustotal.com/ui/urls/
661q6ceqa60e4qaf1998qa8aa8q6d8daq4c51qc2qfqc5fcd6d885700c0acee3b"
         },
         "type": "url"
      },
      ...
   ]
}
```

ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	EXAMPLES	NOTES
.data[].attributes.reputation	Indicator.Attribute	Reputation	-44	N/A
.data[].attributes.times_submitted	Indicator.Attribute	Times Submitted	2	N/A
.data[].attributes.title	Indicator.Attribute	Title	Dwtpww - Bwzpiwczww plwtnwww wntwrnewowe wa kwzdego!	N/A
.data[].attributes.tags	Indicator.Tag	N/A	base64-embedded	N/A
.data[].attributes.url	Indicator	URL	http://wwwcztapwlwk.net/plafgxc80333067532	N/A

Files

`GET https://www.virustotal.com/api/v3/collections/{collection_id}/files`

JSON response sample:


```
{
   "meta": {
      "count": 6,
      "cursor": "eyJsaW1pdCI6IDIsICJvZmZzZXQiOiAyfQ=="
   },
   "data": [
      {
         "attributes": {
            "capabilities_tags": [
               "str_win32_internet_api",
               "cred_ff",
               "win_mutex",
               "keylogger",
               "str_win32_winsock2_library",
               "sniff_audio",
               "network_dropper",
               "ldpreload",
               "win_files_operation",
               "str_win32_wininet_library",
               "inject_thread"
            ],
            "creation_date": 1589251011,
            "crowdsourced_ids_results": [
               {
                  "alert_context": [
                     {
                        "proto": "TCP",
                        "src_ip": "152.126.25.42",
                        "src_port": 80
                     }
                  ],
                  "alert_severity": "high",
                  "rule_category": "Potential Corporate Privacy Violation",
                  "rule_id": "32481",
                  "rule_msg": "POLICY-OTHER Remote non-JavaScript file found in script tag src attribute",
                  "rule_source": "snort"
               }
            ],
            "crowdsourced_ids_stats": {
               "high": 1,
               "info": 0,
               "low": 0,
               "medium": 0
            },
            "crowdsourced_yara_results": [
               {
                  "description": "Detects a very evil attack",
                  "match_in_subfile": true,
                  "rule_name": "evil_a_b",
                  "ruleset_id": "000abc43",
                  "ruleset_name": "evilness",
```

```
            "source": "https://example.com/evil/ruleset"
         }
      ],
      "downloadable": true,
      "first_submission_date": 1592134853,
      "last_analysis_date": 1592141610,
      "last_analysis_results": {
         "ALYac": {
            "category": "malicious",
            "engine_name": "ALYac",
            "engine_update": "20200614",
            "engine_version": "1.1.1.5",
            "method": "blacklist",
            "result": "Trojan.GenericKDZ.67102"
         },
         "APEX": {
            "category": "malicious",
            "engine_name": "APEX",
            "engine_update": "20200613",
            "engine_version": "6.36",
            "method": "blacklist",
            "result": "Malicious"
         },
         "AVG": {
            "category": "malicious",
            "engine_name": "AVG",
            "engine_update": "20200614",
            "engine_version": "18.4.3895.0",
            "method": "blacklist",
            "result": "Win32:PWSX-gen [Trj]"
         },
         "Acronis": {
            "category": "undetected",
            "engine_name": "Acronis",
            "engine_update": "20200603",
            "engine_version": "1.1.1.76",
            "method": "blacklist",
            "result": null
         }
      },
      "last_analysis_stats": {
         "confirmed-timeout": 0,
         "failure": 0,
         "harmless": 0,
         "malicious": 3,
         "suspicious": 0,
         "timeout": 0,
         "type-unsupported": 0,
         "undetected": 2
      },
      "last_modification_date": 1592141790,
      "last_submission_date": 1592141610,
      "md5": "5a430646b4d3c04f0b43b444ad48443f",
      "meaningful_name": "o4oz44Z4E444.exe",
      "names": [
         "myfile.exe",
         "o4oz44Z4E444.exe"
      ],
      "reputation": 0,
      "sandbox_verdicts": {
         "VirusTotal Jujubox": {
```

```
                "category": "malicious",
                "confidence": 70,
                "malware_classification": [
                   "MALWARE",
                   "TROJAN"
                ],
                "malware_names": [
                   "XMRigMiner"
                ],
                "sandbox_name": "VirusTotal Jujubox"
             },
          },
          "sha1": "54fdf53af86f90bf446f0a5fe26f6e4fd5f4c9fd",
          "sha256": "3f6fa13af90cf967f0b5f5d07f413f9d1f39d2fa366f09ff760fcd3fd8bf6fbf",
          "sigma_analysis_stats": {
             "critical": 0,
             "high": 0,
             "low": 2,
             "medium": 0
          },
          "sigma_analysis_summary": {
             "Sigma Integrated Rule Set (GitHub)": {
                "critical": 0,
                "high": 0,
                "low": 2,
                "medium": 0
             }
          },
          "size": 374272,
          "tags": [
             "peexe",
             "runtime-modules",
             "assembly",
             "direct-cpu-clock-access",
             "detect-debug-environment"
          ],
          "times_submitted": 3,
          "total_votes": {
             "harmless": 0,
             "malicious": 0
          },
          "type_description": "Win32 EXE",
          "type_tag": "exe",
          "type_tag": "peexe",
          "unique_sources": 3,
          "vhash": "2350f6f515f29f93f147f0f0"
       },
       "id": "3f6fa13af90cf967f0b5f5d07f413f9d1f39d2fa366f09ff760fcd3fd8bf6fbf",
       "links": {
          "self": "https://www.virustotal.com/ui/files/
3f6fa13af90cf967f0b5f5d07f413f9d1f39d2fa366f09ff760fcd3fd8bf6fbf"
       },
       "type": "file"
    },
    ...
 ]
}
```

ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	EXAMPLES	NOTES
.data[].attributes.creation_date	Indicator.Attribute	Creation Date	2020-05-12 2:36:51-00:00	Uses timestamp to convert from datetime to standardized
.data[].attributes.downloadable	Indicator.Attribute	Downloadable	True	Only available for Premium API users
.data[].attributes.meaningful_name	Indicator.Attribute	Meaningful Name	o4oz44Z4E444.exe	N/A
.data[].attributes.size	Indicator.Attribute	Size	374272	File size in bytes
.data[].attributes.times_submitted	Indicator.Attribute	Times Submitted	3	N/A
.data[].attributes.type_description	Indicator.Attribute	Type Description	Win32 EXE	N/A
.data[].attributes.reputation	Indicator.Attribute	Reputation	0	N/A
.data[].attributes.type_extension	Indicator.Attribute	Type Extension	exe	N/A
.data[].attributes.unique_sources	Indicator.Attribute	Unique Sources	3	N/A
.data[].attributes.capabilities_tags	Indicator.Tag	N/A	str_win32_internet_api	Only available for Premium API users.
.data[].attributes.type_tag	Indicator.Tag	N/A	peexe	N/A
.data[].attributes.tags	Indicator.Tag	N/A	runtime-modules	N/A
.data[].attributes.md5	Indicator	MD5	5a430646b4d3c04f0b43b444ad48443f	N/A
.data[].attributes.sha1	Indicator	SHA-1	54fdf53af86f90bf446f0a5fe26f6e4fd5f4c9fd	N/A
.data[].attributes.sha256	Indicator	SHA-256	3f6fa13af90cf967f0b5f5d07f413f9d1f39d2fa366f09ff760fcd3fd8bf6fbf	N/A

Average Feed Run

METRIC	RESULT
Run Time	15 minutes
Indicators	1,788
Indicator Attributes	19,719

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.

Change Log

- **Version 1.0.0**
  - Initial release