

ThreatQuotient



VirusTotal Action Guide

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ThreatQuotient

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Integration Details

ThreatQuotient provides the following details for this integration:

Current Integration Version	1.1.0
Compatible with ThreatQ Versions	>= 5.6.0
ThreatQ TQO License Required	Yes
Support Tier	ThreatQ Supported
ThreatQ Marketplace	https:// marketplace.threatq.com/ details/virustotal-action

Introduction

The VirusTotal Action submits a collection of FQDN and supported objects to the VirusTotal API in individual HTTP Requests. VirusTotal returns a response for each object containing any information it has about the indicator.

The action can perform the following functions:

- **VirusTotal** - enriches supported objects with attributes and related objects describing the Indicator of Compromise.
- **VirusTotal Submit URLs** - submits URL indicators to VirusTotal to be analyzed.

The action is compatible with the following indicator types:

- FQDN
- IP Address
- MD5
- SHA-256
- SHA-1
- URL

The action returns the following enriched indicator objects:

- FQDN
- IP Address
- MD5
- SHA-256
- SHA-1
- URL



This action is intended for use with ThreatQ TDR Orchestrator (TQO). An active TQO license is required for this feature.

Prerequisites

The action requires the following:

- A VirusTotal API Key.
- An active ThreatQ TDR Orchestrator (TQO) license.
- A data collection containing at least one of the following indicator objects:
 - FQDN
 - IP Address
 - MD5
 - SHA-256
 - SHA-1
 - URL

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 action file.
3. Navigate to the integrations management page on your ThreatQ instance.
4. Click on the **Add New Integration** button.
5. Upload the action 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 action already exists on the platform and will require user confirmation before proceeding. ThreatQ will also inform you if the new version of the action contains changes to the user configuration. The new user configurations will overwrite the existing ones for the action and will require user confirmation before proceeding.

You will still need to [configure](#) the action.

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 **Actions** option from the *Category* dropdown (optional).
3. Click on the action entry to open its details page.
4. Enter the following parameters under the **Configuration** tab:



The configurations set on this page will be used as the default settings when inserting this action into a new workflow. Updating the configurations on this page will not update any instances of this action that have already been deployed to a workflow. In that scenario, you must update the action's configurations within the workflow itself.

PARAMETER	DESCRIPTION
VirusTotal API Key	Your VirusTotal API Key.
Malicious Verdict Threshold	The minimum number of AV scans reporting the IOC as malicious. Passing this threshold will result in an attribute of "Malicious: True" to be added.
AV Scan Information	The number of reports from URL scanners marking it as harmless, suspicious, malicious or undetected. Options include: ◦ Harmless Count ◦ Malicious Count (default) ◦ Suspicious Count (default) ◦ Undetected Count

PARAMETER	DESCRIPTION
FILE HASH SUBMISSION	
Supporting Context	Select the indicator type to be ingested into ThreatQ. Options include: ◦ Basic Properties (default) ◦ Names ◦ VirusTotal Link
Synonymous Hashes	Select the IOC types that will be saved in ThreatQ. Options include: ◦ MD5 ◦ SHA-1 ◦ SHA-256
Set Synonymous Hash Status to	Set the status of the ingested IOCs. Options include: ◦ Active ◦ Expired ◦ Indirect ◦ Review ◦ Whitelisted
FQDN SUBMISSION	
Supporting Context	Select which data should be used to enrich the IOC for FQDN Submission. There is currently one option: ◦ DNS NS, SOA, and MX Records *
Relationships	Select the Relationships data to be retrieved from VirusTotal. Options include: ◦ Immediate Parent ◦ Parent

PARAMETER	DESCRIPTION
	◦ Siblings ◦ Subdomains ◦ URLs *
Set Related Indicator Status to	Set the status of the related indicators. Options include: ◦ Active ◦ Expired ◦ Indirect ◦ Review ◦ Whitelisted
IP ADDRESS SUBMISSION	
Supporting Context	Select which data should be used to enrich the IOC for IP Address Submission. Options include: ◦ Basic Properties (default) ◦ Last SSL Certificate ◦ Historical SSL Certificates *
Relationships	Select the relationships data to be retrieved from VirusTotal. There is currently one option: ◦ URLs *
Set Related Indicator Status to	Set the status of the related indicators. Options include: ◦ Active ◦ Expired ◦ Indirect ◦ Review ◦ Whitelisted

PARAMETER	DESCRIPTION
URL SUBMISSION	
Supporting Context	Select which data should be used to enrich the IOC for URL Submission. Options include: ◦ Basic Properties
Relationships	Select the relationships data to be retrieved from VirusTotal. Options include: ◦ Contacted Domains * ◦ Redirecting URLs * ◦ Referrer Files * ◦ Referrer URLs *
Set Related Indicator Status to	Set the status of the related indicators. Options include: ◦ Active ◦ Expired ◦ Indirect ◦ Review ◦ Whitelisted
Requests per minute	Set the maximum number of requests to make to DomainTools per-minute. The default value is 100.
Objects per run	Set the maximum number of objects to send to DomainTools per-run. The default value is 5,000.



* Items marked with an * require an API call.

5. Review any additional settings, make any changes if needed, and click on **Save**.

Action Functions

The action provides the following function:

FUNCTION	DESCRIPTION	OBJECT TYPE	OBJECT SUBTYPE
VirusTotal	Queries the VirusTotal API for context.	Indicator	FQDN, IP Address, MD5, SHA-256, SHA-1, URL
VirusTotal Submit URLs	Submits a URL to VirusTotal API for analysis.	Indicator	URL

VirusTotal

The VirusTotal action enriches supported objects with attributes and related objects describing the Indicator of Compromise.

GET https://www.virustotal.com/api/v3/{vt_collection_name}/{ioc_value}



`vt_collection_name` represents the plural form of the object type as it appears in VirusTotal, while `ioc_value` represents the actual value of the objects for all indicators except for URLs. The URLs are first encoded to Base64.

Sample Response:

```
{
  "data": {
    "attributes": {
      "type_description": "DOS EXE",
      "tlsh": "T178445B4972A43CF9ECA7C239C657461BEFF27C664630D35F03641A9A4F233A1622E752",
      "exiftool": {
        "MIMETYPE": "application/octet-stream",
        "FileType": "DOS EXE",
        "FileTypeExtension": "exe"
      },
      "trid": [
        {
          "file_type": "DOS Executable Generic",
          "probability": 100
        }
      ],
      "crowdsourced_yara_results": [
        {
          "description": "Detects Meterpreter Beacon - file K5om.dll",
          "source": "https://github.com/Neo23x0/signature-base",
          "author": "Florian Roth",
          "ruleset_name": "apt_apt19",
          "rule_name": "Beacon_K5om",
          "ruleset_id": "000f28467c"
        }
      ],
      "names": [
        "e2f6cdade9be842ebd160634c30f1e16.virus"
      ],
      "last_modification_date": 1654841377,
      "type_tag": "mz",
      "times_submitted": 1,
      "total_votes": {
        "harmless": 0,
        "malicious": 0
      },
      "size": 263358,
      "popular_threat_classification": {
        "suggested_threat_label": "trojan.cobaltstrike",
        "popular_threat_category": [
```

```

        {
          "count": 4,
          "value": "trojan"
        }
      ],
      "popular_threat_name": [
        {
          "count": 4,
          "value": "cobaltstrike"
        }
      ]
    },
    "last_submission_date": 1653524502,
    "last_analysis_results": {
      "ClamAV": {
        "category": "malicious",
        "engine_name": "ClamAV",
        "engine_version": "0.105.0.0",
        "result": "Win.Trojan.CobaltStrike-8091534-0",
        "method": "blacklist",
        "engine_update": "20220609"
      },
      "FireEye": {
        "category": "undetected",
        "engine_name": "FireEye",
        "engine_version": "35.24.1.0",
        "result": null,
        "method": "blacklist",
        "engine_update": "20220610"
      }
    },
    "downloadable": true,
    "sha256": "56e784268807ee237adebd98046f0090ceecdfde6d2e1326afd3670e4e3ffd23",
    "type_extension": "exe",
    "tags": [
      "mz"
    ],
    "last_analysis_date": 1654834036,
    "unique_sources": 1,
    "first_submission_date": 1653524502,
    "ssdeep": "3072:3sYckn3Xzq4IDwSK2Mbn/
gprEJwJNJsCwQTIxXouPru00TR09BQYJerCo2e:3sYwjwIGIPrEJweGTIDjh0TRqQ8I",
    "md5": "e2f6cdade9be842ebd160634c30f1e16",
    "sha1": "ccb621afe012b358ed2e13875f1581b944dd25",
    "magic": "MS-DOS executable, MZ for MS-DOS",
    "last_analysis_stats": {
      "harmless": 0,
      "type-unsupported": 11,
      "suspicious": 0,
      "confirmed-timeout": 0,
      "timeout": 0,
      "failure": 2,
      "malicious": 5,
      "undetected": 54
    },
    "meaningful_name": "e2f6cdade9be842ebd160634c30f1e16.virus",
    "reputation": 0
  },
  "type": "file",
  "id": "56e784268807ee237adebd98046f0090ceecdfde6d2e1326afd3670e4e3ffd23",
  "links": {

```

```
"self": "https://www.virustotal.com/api/v3/files/
56e784268807ee237adebd98046f0090ceecdfde6d2e1326afd3670e4e3ffd23"
}
}
```

ThreatQuotient provides the following default mapping for this function:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.attributes.last_analysis_stats.malicious	Indicator.Attribute, Related Indicator.Attribute	Malicious Count	.attributes.creation_date or .attributes.first_submission_date	10	If Malicious Count user option is checked. For all indicator types.
.attributes.last_analysis_stats.harmless	Indicator.Attribute, Related Indicator.Attribute	Harmless Count	.attributes.creation_date or .attributes.first_submission_date	23	If Harmless Count user option is checked. For all indicator types.
.attributes.last_analysis_stats.suspicious	Indicator.Attribute, Related Indicator.Attribute	Suspicious Count	.attributes.creation_date or .attributes.first_submission_date	8	If Suspicious Count user option is checked. For all indicator types.
.attributes.last_analysis_stats.undetected	Indicator.Attribute, Related Indicator.Attribute	Undetected Count	.attributes.creation_date or .attributes.first_submission_date	0	If Undetected Count user option is checked. For all indicator types.
.attributes.last_analysis_stats.malicious	Indicator.Attribute, Related Indicator.Attribute	Malicious	.attributes.creation_date or .attributes.first_submission_date	True	If .attributes.ma licious_count is greater then the Malicious Verdict Threshold value.
.attributes.type_description	Indicator.Attribute, Related Indicator.Attribute	File Type	.attributes.creation_date or .attributes.first_submission_date	DOS EXE	For File Hashes. If Basic Properties user option is checked
.attributes.first_submission_date	Indicator.Attribute, Related Indicator.Attribute	First Published Date	.attributes.creation_date or .attributes.first_submission_date	1581118958	For File Hashes and URLs. If Basic Properties user option is checked
.attributes.last_analysis_results.result	Indicator.Attribute, Related Indicator.Attribute	Last Analysis Result	.attributes.creation_date or .attributes.first_submission_date	0	For File Hashes. If Basic Properties user option is checked.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.attributes.meaningful_name	Indicator.Attribute, Related Indicator.Attribute	Meaningful Name	.attributes.creation_date or .attributes.first_submission_date	e2f6cdade9be842ebd160634c30f1e16.virus	For File Hashes. If Basic Properties user option is checked
.attributes.md5	Related Indicator.Value	N/A	.attributes.creation_date or .attributes.first_submission_date	e2f6cdade9be842ebd160634c30f1e16	For File Hashes. If MD5 user option is checked
.attributes.md5	Related Indicator.Attribute	VirusTotal Link	.attributes.creation_date or .attributes.first_submission_date	e2f6cdade9be842ebd160634c30f1e16	For File Hashes. If MD5 user option is checked, formatted as https://www.virustotal.com/gui/file/{.attributes.md5}
.attributes.sha1	Related Indicator.Value	N/A	.attributes.creation_date or .attributes.first_submission_date	cbbbc621afe012b358ed2e13875f1581b944dd25	For File Hashes. If SHA-1 user option is checked
.attributes.sha1	Related Indicator.Attribute	VirusTotal Link	.attributes.creation_date or .attributes.first_submission_date	cbbbc621afe012b358ed2e13875f1581b944dd25	For File Hashes. If SHA-1 user option is checked, formatted as https://www.virustotal.com/gui/file/{.attributes.sha1}
.attributes.sha256	Related Indicator.Value	N/A	.attributes.creation_date or .attributes.first_submission_date	56e784268807ee237adebd98046f0090ceecdfe6d2e1326afd3670e4e3ffd23	For File Hashes. If SHA-256 user option is checked
.attributes.sha256	Related Indicator.Attribute	VirusTotal Link	.attributes.creation_date or .attributes.first_submission_date	56e784268807ee237adebd98046f0090ceecdfe6d2e1326afd3670e4e3ffd23	For File Hashes. If SHA-256 user option is checked, formatted as https://www.virustotal.com/gui/file/{.attributes.sha256}
.attributes.names[]	Indicator.Attribute, Related Indicator.Attribute	Name	.attributes.creation_date or .attributes.first_submission_date	e2f6cdade9be842ebd160634c30f1e16.virus	For File Hashes. If Names user option is checked
.attributes.asn	Indicator.Attribute	ASN	.attributes.creation_date or .attributes.first_submission_date	39798	For IP Addresses. If Basic Properties user

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
					option is checked
.attributes.as_owner	Indicator.Attribute	AS Owner	.attributes.creation_date or .attributes.first_submission_date	MivoCloud SRL	For IP Addresses. If Basic Properties user option is checked
.attributes.last_https_certificate	Indicator.Attribute	Last SSL certificate	.attributes.creation_date or .attributes.first_submission_date	1581118958	For IP Addresses. If Last SSL certificate user option is checked

IOC Type Mapping

ThreatQ provides the following ThreatQ IOC Type to VirusTotal Collection Name mapping.

THREATQ IOC TYPE	VIRUSTOTAL COLLECTION NAME
FQDN	domains
IP Address	ip_addresses
SHA-256	files
SHA-1	files
MD5	files
URL	urls

Supplemental Calls

VirusTotal objects contain relationships with other objects in the dataset that can be retrieved the supplemental call endpoint.

```
GET https://www.virustotal.com/api/v3/{vt_collection_name}/  
{{ioc_value}}/{{relationship}}
```

Sample Response:

```
{  
  "meta": {  
    "count": 1  
  },  
  "data": [  
    {  
      "attributes": {  
        "last_dns_records": [  
          {  
            "type": "CNAME",  
            "value": "rigpriv.com",  
            "ttl": 599  
          },  
          {  
            "type": "NS",  
            "value": "jm2.dns.com",  
            "ttl": 21600  
          }  
        ],  
        "jarm": "28d28d28d00028d1ec28d28d28d28de9ab649921aa9add8c37a8978aa3ea88",  
        "whois": "Creation Date: 2022-06-29T16:00:00Z\nCreation Date:  
2022-06-30T02:32:32Z\nDNSSEC: unsigned\nDomain Name: RIGPRIV.COM\nDomain Status: ok  
https://icann.org/epp#ok\nName Server: JM1.DNS.COM\nName Server: JM2.DNS.COM\nRegistrant  
City: 7145b6c7c70448a6\nRegistrant Country: CN\nRegistrant Email:  
5c0a26a8248bb13fs@\nRegistrant State/Province: 4f3a9c87b8ed6c6a\nRegistrar Abuse Contact  
Email: domainabuse@35.cn\nRegistrar Abuse Contact Phone: +86.4001353511\nRegistrar Abuse  
Contact Phone: +86.4006003535\nRegistrar IANA ID: 1316\nRegistrar Registration Expiration  
Date: 2023-06-30T04:00:00Z\nRegistrar URL: http://www.35.com\nRegistrar WHOIS Server:  
whois.35.com\nRegistrar: Xiamen 35.Com Technology Co., Ltd\nRegistrar: Xiamen 35.Com  
Technology Co., Ltd\nRegistry Domain ID: 2707568686_DOMAIN_COM-VRSN\nRegistry Expiry  
Date: 2023-06-30T02:32:32Z\nRegistry Registrant ID: Not Available From Registry\nUpdated  
Date: 2022-06-30T02:43:05Z\nUpdated Date: 2022-08-21T16:00:00Z",  
        "last_https_certificate_date": 1660080390,  
        "tags": [],  
        "popularity_ranks": {},  
        "last_dns_records_date": 1660080390,  
        "last_analysis_stats": {  
          "harmless": 86,  
          "malicious": 0,  
          "suspicious": 0,  
          "undetected": 8,  
          "timeout": 0  
        }  
      },  
      "creation_date": 1656556352,  
      "reputation": 0,  
    }  
  ]  
}
```

```

"registrar": "Xiamen 35.Com Technology Co., Ltd",
"last_analysis_results": {
  "CMC Threat Intelligence": {
    "category": "harmless",
    "result": "clean",
    "method": "blacklist",
    "engine_name": "CMC Threat Intelligence"
  }
},
"last_update_date": 1661097600,
"last_modification_date": 1660080390,
"last_https_certificate": {
  "size": 1159,
  "public_key": {
    "ec": {
      "oid": "secp256r1",
      "pub":
"0481596f6c64661ffb6a79fce6cba763d9ee961778b6e21f93eca791db1bb8fa401bbda5b35fc3874e0577444
8520d600e5f041b35257c4d7b428390afac0d514e"
    },
    "algorithm": "EC"
  },
  "thumbprint_sha256":
"2a676d52b302af217fd08e64dca3a5635bd8eea0d19ad91a50c518da2e26acc4",
  "tags": [],
  "cert_signature": {
    "signature":
"6902093866e2a299575f2c04f852aaf3c2789cf53687873d4e6f599ea9140101e9be50dd8774f01b30115ca72
1561416a4d03d316b146844a3b819ec235346bb2ddc7cf3a17592a142c6b303080b18cd801d28bf7738ffb3e51
3059d8c0664783bc7edaf3711c1e6062eb20abedada8c0c8f5b2a1be20519b3056422f3c92b02c4190f649189e
a4ed07d2f9e3e87839bb180afe9a81e36f28a826400eee290775b2035bb37b681424d8224e5c8955d5ce21ecf0
475a7670f772fe16e5133176fd6dc0cc538c3d459faa72f7ffec06c4c1f9f2578cb168f82c56e10a0ffa77365d
b3378f6f55fbb1144465011a0cadb2d72658fc59b54958b0f34a89de56d640c",
    "signature_algorithm": "sha256RSA"
  },
  "validity": {
    "not_after": "2022-10-20 12:54:43",
    "not_before": "2022-07-22 12:54:44"
  },
  "version": "v3",
  "extensions": {
    "certificate_policies": [
      "2.23.140.1.2.1",
      "1.3.6.1.4.1.44947.1.1.1"
    ],
    "extended_key_usage": [
      "serverAuth",
      "clientAuth"
    ],
    "authority_key_identifier": {
      "keyid": "142eb317b75856cbae500940e61faf9d8b14c2c6"
    },
    "subject_alternative_name": [
      "m.rigpriv.com",
      "rigpriv.com",
      "wap.rigpriv.com",
      "www.rigpriv.com"
    ],
    "tags": [],
    "subject_key_identifier":
"48a87063dd6dc4462b432889e1615c2ce20f118d",

```

```

        "key_usage": [
            "ff"
        ],
        "1.3.6.1.4.1.11129.2.4.2":
"0481f100ef007500dfa55eab68824f1f6cadeeb85f4e3e5aeacda212a46a5e8e",
        "CA": true,
        "ca_information_access": {
            "CA Issuers": "http://r3.i.lencr.org/",
            "OCSP": "http://r3.o.lencr.org"
        }
    },
    "signature_algorithm": "sha256RSA",
    "serial_number": "044be080e3027b8cbf43952e34f00ce03492",
    "thumbprint": "de1cabd8d7c8b5e3b9ef2d8899b2f148390fa3d2",
    "issuer": {
        "C": "US",
        "CN": "R3",
        "O": "Let's Encrypt"
    },
    "subject": {
        "CN": "m.rigpriv.com"
    }
},
"categories": {},
"total_votes": {
    "harmless": 0,
    "malicious": 0
}
},
"type": "domain",
"id": "wap.rigpriv.com",
"links": {
    "self": "https://www.virustotal.com/api/v3/domains/wap.rigpriv.com"
}
},
"links": {
    "self": "https://www.virustotal.com/api/v3/domains/rigpriv.com/subdomains?
limit=10"
}
}

```

ThreatQuotient provides the following default mapping for this function:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
attributes.url	Related Indicator.Value	N/A	N/A	www.rigpriv.com/ upload	For URLs relationships
.attributes.md5	Related Indicator.Value	N/A	N/A	e2f6cdade9be842 ebd160634c30f1e 16	For Referrer File relationship
.attributes.sha1	Related Indicator.Value	N/A	N/A	ccbbc621afe012b3 58ed2e13875f1581 b944dd25	For Referrer File relationship
.attributes.sha256	Related Indicator.Value	N/A	N/A	56e784268807ee23 7adebd98046f0090 ceecdfde6d2e1326a fd3670e4e3ffd23	For Referrer File relationship

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.context_attributes.first_seen_date	Indicator.Attribute	Historical SSL certificate	N/A	1591571057	For Historical SSL certificate relationship
.id	Related Indicator.Value	View the Relationships table above	N/A	www.rigpriv.com	For all other relationships
N/A	Related Indicator.Attribute	VirusTotal Link	N/A	https://www.virustotal.com/gui/ip-address/194.180.191.124	Formatted based on the type of the indicator and it's value. For URL indicators the url is encoded using base64 format
N/A	Related Indicator.Attribute	Relationship	N/A	True	Represents the relationship with the data collection indicator as it appears in the ThreatQ Configuration column from the Relationship table above.

Relationships Type Mapping Table

ThreatQ provides the following relationships mapping:

VIRUS TOTAL COLLECTION NAME	VIRUS TOTAL RELATIONSHIP	THREATQ CONFIGURATION	ACCESSIBILITY
domains	ns_records	DNS NS	VT Premium users only
domains	soa_records	SOA	VT Premium users only
domains	mx_records	MX Records	VT Premium users only
domains	urls	Immediate Parent	Everyone
domains	parent	Parent	Everyone
domains	siblings	Siblings	Everyone
domains	immediate_parent	Immediate Parent	Everyone
domains	subdomains	Subdomains	Everyone
domains	urls	URLs	VT Premium users only
ip_addresses	historical_ssl_certificates	Historical SSL certificates	Everyone

VIRUS TOTAL COLLECTION NAME	VIRUS TOTAL RELATIONSHIP	THREATQ CONFIGURATION	ACCESSIBILITY
ip_addresses	urls	URLs	VT Premium users only
urls	last_serving_ip_address	Last Serving IP address	Everyone
urls	contacted_domains	Contacted Domains	VT Premium users only
urls	redirecting_urls	Redirecting URLs	VT Premium users only
urls	referrer_files	Referrer Files	VT Premium users only
urls	referrer_urls	Referrer URLs	VT Premium users only

VirusTotal Submit URLs

This action enriches IPs using the VirusTotal API

POST https://www.virustotal.com/api/v3/urls/{{ioc_value}}/analyse

Sample Response:

```
{
  "data": {
    "type": "analysis",
    "id": "u-d0e196a0c25d35dd0a84593cbae0f38333aa58529936444ea26453eab28dfc86-1677067101"
  }
}
```

ThreatQ provides the following default mapping for this function:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
run_meta.started_at	Indicator.Attribute	Last TQO Submission Date	N/A	2023-02-22 12:15:00-00:00	Only gets ingested if the user selects the Add Last Submission Date as Attribute option.

Enriched Data



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

VirusTotal

METRIC	RESULT
Run Time	1 minute
Indicators	61
Indicator Attributes	352

VirusTotal Submit URLs

METRIC	RESULT
Run Time	1 minute
Indicators	57
Indicator Attributes	57

Use Case Example

1. A Threat Analyst identifies a collection of supported objects they would like to enrich.
2. The Threat Analyst adds the VirusTotal Action to a Workflow
3. The Threat Analyst configures the action with the desired parameters, and enables the Workflow
4. The Workflow executes all Actions in the graph, including VirusTotal
5. The action returns the documented Attributes from the provider, and the Workflow ingests this data into the ThreatQ platform.

Known Issues / Limitations

- The VirusTotal API is limited to 50 lookups per day.

Change Log

- **Version 1.1.0**
 - Added support for resubmitting URLs to VirusTotal to be analyzed via VirusTotal Submit URL function.
- **Version 1.0.5**
 - Resolved an issue ingesting historical SSL attributes.
- **Version 1.0.4**
 - Initial release to ThreatQ Marketplace.