ThreatQuotient

A Securonix Company

Google Threat Intelligence CDF

Version 2.1.0

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ThreatQ Supported

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Support

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

Support Email: tq-support@securonix.com
Support Web: https://ts.securonix.com
Support Phone: 703.574.9893

Integrations/apps/add-ons designated as **ThreatQ Supported** are fully supported by ThreatQuotient's Customer Support team.

ThreatQuotient strives to ensure all ThreatQ Supported integrations will work with the current version of ThreatQuotient software at the time of initial publishing. This applies for both Hosted instance and Non-Hosted instance customers.

> ThreatQuotient does not provide support or maintenance for integrations, apps, or add-ons published by any party other than ThreatQuotient, including third-party developers.

Integration Details

ThreatQuotient provides the following details for this integration:

Current Integration Version	2.1.0
Compatible with ThreatQ Versions	>= 5.12.1
Support Tier	ThreatQ Supported

Introduction

Google is on a mission to make every organization secure from cyber threats and confident in its readiness. They deliver dynamic cyber defense solutions powered by industry-leading expertise, intelligence, and innovative technology.

The Google Threat Intelligence CDF integration provides the following feeds:

- **Google Threat Intelligence** - ingests compromised Adversaries objects and any related Indicators, Malware, Vulnerabilities, Attack Patterns, and Tags.
  - **Google Threat Intelligence Related Malware (Supplemental)** - returns associated collections of malware family objects.
  - **Google Threat Intelligence Related Attack Pattern (Supplemental)** - fetches related attack patterns.
  - **Google Threat Intelligence Related Vulnerabilities (Supplemental)** - fetches related CVEs.
  - **Google Threat Intelligence Related Campaigns (Supplemental)** - returns associated collections of campaign objects.
  - **Google Threat Intelligence Related IOC (Supplemental)** - fetches related indicators to threat actors.
  - **Google Threat Intelligence Related Adversaries (Supplemental)** - fetches related adversaries.
- **Google Threat Intelligence Campaigns** - ingests a list of campaigns tracked by Google Threat Intelligence.
- **Google Threat Intelligence Indicators** - ingests a list of indicators tracked by Google Threat Intelligence.
- **Google Threat Intelligence Malware** - ingests a list of malware tracked by Google Threat Intelligence.
- **Google Vulnerability Intelligence** - ingests a list of vulnerabilities tracked by Google Threat Intelligence.
- **Google Threat Intelligence Threat Lists** - ingests indicators from the selected threat lists.

The integration ingests the following system objects:

- Adversaries
- Attack Patterns
- Campaigns
- Indicators
- Malware
- Vulnerabilities

Prerequisites

The integration requires the following:

- A Google Threat Intelligence API Key.

Installation

Perform the following steps to install the integration:

> The same steps can be used to upgrade the integration to a new version.
>
> If you are upgrading to version 2.0.0 or later from a version > 2.0.0 and are utilizing the **Google Vulnerability Intelligence** (formerly **Mandiant Vulnerability Intelligence**) feed, you should ensure that your credentials and other configurations are backed up as you will need to re-enter your configuration and re-enable the feed after upgrading.

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 yaml file into the dialog box
   - Select **Click to Browse** to locate the integration yaml file on your local machine
6. Select the individual feeds to install, when prompted, and click **Install**.

   > 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.

7. The feeds will be added to the integrations page. You will still need to configure and then enable the feeds.

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:

Google Threat Intelligence Parameters

PARAMETER	DESCRIPTION
Base URL	The base URL for the Google Threat Intelligence API. > You will not have to modify this unless Google changes its API URL.
API Key	Enter your Google Threat Intelligence API Key to authenticate.
Origin Filter	Filter the results based on the origin of the intelligence. Options include: ◦ Google Threat Intelligence (Curated) (default) ◦ Partner (i.e. AlienVaultOTX) ◦ Crowdsourced (i.e. Individual Users) > ThreatQuotient highly recommends only selecting the curated origin to ensure data quality and reduce noise/ volume.

Target Industry	Specify the industry objects you want to ingest.
Custom API Filter	An optional custom filter can be applied to all API requests when retrieving collections. This filter applies only to the top-level collection request and does not affect API calls used to fetch associated data. It is appended to the default query using logical AND and is evaluated alongside the existing `collection_type`, `origin`, `last_modification_date`, and `target_industry` filters. Additional details on filter construction are available at: https://gtidocs.virustotal.com/reference/list-threats.
Supplemental Context Confidence Filter	Specify the confidence levels of the context you want to ingest. Only context with the selected confidence levels will be included in the ingestion process. Context such as Target Industry, Target Region, Motivation, etc. are reported with a confidence level. Using this filter helps ensure that only high-confidence context is ingested into ThreatQ. Options include: ◦ Confirmed ◦ Suspected ◦ Unconfirmed
Adversaries Context Selection	Select the context to bring back with each ingested Adversary. Options include: ◦ Target Industry ◦ Target Region ◦ Target Sub Region ◦ Target Country ◦ Target Country Code ◦ Source Region ◦ Source Sub Region ◦ Source Country ◦ Source Country Code ◦ Motivation ◦ Aliases (as Tags)
Fetch Related Attack Patterns	Enable this parameter to utilize additional API calls to fetch related Attack Patterns. ⚠ This feature can quickly consume the daily rate limit.
Fetch Related Malware	Enable this parameter to utilize additional API calls to fetch related Malware. ⚠ This feature can quickly consume the daily rate limit.

Malware Context Selection	Select the context to bring back with each ingested Malware. Options include: ◦ Industry *(default)* ◦ Target Operating System *(default)* ◦ Detection This parameter is only accessible if the **Fetch Related Malware** parameter is enabled.
Fetch Related Campaigns	Enable this parameter to utilize additional API calls to fetch related Campaigns. This feature can quickly consume the daily rate limit.
Campaign Context Selection	Select the context to bring back with each ingested Campaign. Options include: ◦ Motivations *(default)* ◦ Source Regions Context ◦ Target regions Context This parameter is only accessible if the **Fetch Related Campaigns** parameter is enabled.
Fetch Related CVEs	Enable this parameter to utilize additional API calls to fetch related CVEs. This feature can quickly consume the daily rate limit.
CVE Context Selection	Select the context to bring back with each ingested CVE. Options include: ◦ CVSS v2 Vector ◦ CVSS v2 Scores ◦ CVSS v3 Vector *(default)* ◦ CVSS v3 Scores *(default)* ◦ Exploitation Vectors ◦ EPSS Score *(default)*

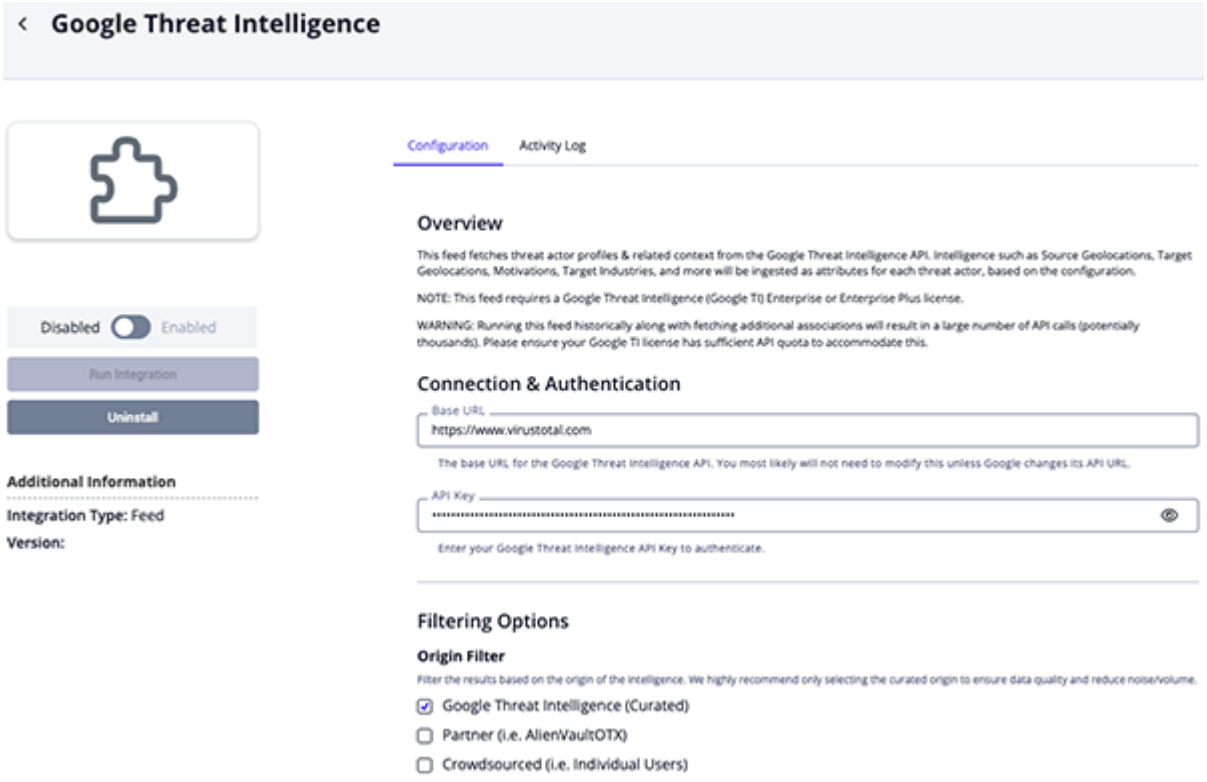
> This parameter is only accessible if the **Fetch Related CVEs** parameter is enabled.

Ingest CVEs As	Select which entity type to ingest CVEs as into ThreatQ. Options include: ◦ Vulnerabilities ◦ Indicators (CVE) This parameter is only accessible if the **Fetch Related CVEs** parameter is enabled.
Fetch Related Indicators	Enable this parameter to utilize additional API calls to fetch related Indicators. This feature can quickly consume the daily rate limit.
Ingested Indicator Types	Select the types of indicators to ingest into ThreatQ. Options include: ◦ IP Addresses *(default)* ◦ URLs *(default)* ◦ Domains *(default)* ◦ Hashes (*default*) This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Ingested Related Hash Types	Optional - Select the types of the related hashes to ingest for SHA-256. Options include: ◦ MD5 ◦ SHA-1 ◦ SHA-256 This parameter is only accessible if you have selected the `Hashes (SHA-256)` option for the **Ingested Indicator Types** parameter.

Minimum Threat Score Threshold	Enter the minimum score required to ingest a related indicator. The default value is 40.  This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Set Indicator Status to Active if Verdict is Malicious	Enable this parameter to dynamically set the status of indicators with a verdict of malicious to Active.  This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Set Indicator Status to Whitelisted if Threat Score is 0	Enable this parameter to dynamically set the status of indicators with threat scores of 0 to whitelisted.  This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Normalize Threat Scores	Enable this parameter to normalize the Threat Score from the default 0-100 range to a human-readable value. The normalization will be based on the mapping field set in **Threat Score Normalization Mapping** parameter. This is useful for developing a ThreatQ Scoring Policy that is based on these normalized values.  This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Threat Score Normalization Mapping	Enter your mapping to normalize the numeric threat score values to the scorable attribute, `Normalized Threat Score`. The raw Threat Score value will always be ingested. This mapping should contain a line-separated CSV-formatted string with the following columns: Minimum, Maximum, Normalized Value. *default: (0,39,Low 40,79,Medium 80,94,High 95,100,Critical)*  This parameter is only accessible if the **Fetch Related Indicators** and **Normalize Threat Scores** parameters are enabled.

Indicator Context Selection	Select the context to bring back with each ingested indicator. Verdict is not enabled by default as it's a binary value of malicious or benign. Instead, it is recommended to use the **Normalize Threat Score** parameter to create a more granular range to use in your ThreatQ Scoring Policy. Options include: ◦ Threat Score ◦ Confidence Score ◦ Severity ◦ Verdict ◦ Safe Browsing Verdict ◦ Category ◦ Tags ◦ Type Tags ◦ Is Pervasive ◦ Malicious Count ◦ Suspicious Count ◦ AS Organization ◦ RIR ◦ Country Code ◦ Continent Code ◦ ASN ◦ Meaningful Name ◦ Site Title ◦ Last Submission Date ◦ Mandiant Score (Deprecated) ◦ Crowdsourced IDS Signatures (Snort) This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Indicator Description Context Selection	Select the context used to populate each indicator's description based on available fields. Options include: ◦ GTI Assessment ◦ WHOIS ◦ Crowdsourced AI Summary ◦ Crowdsourced Context ◦ Associated Names ◦ Outgoing Links ◦ Crowdsourced YARA Results ◦ Sigma Analysis Results
Ingests ASNs As	Select which entity type to ingest ASNs as in ThreatQ. Options include: ◦ Attributes (*default*) ◦ Indicators (Type: ASN)
Enable SSL Certificate Verification	Enable this parameter for the feed to validate the host-provided SSL certificate.

Disable Proxies Enable this option if the feed should not honor proxies set in the ThreatQ UI.



Google Threat Intelligence Campaigns

PARAMETER	DESCRIPTION
Base URL	The base URL for the Google Threat Intelligence API. You will not have to modify this unless Google changes its API URL.
API Key	Enter your Google Threat Intelligence API Key to authenticate.
Origin Filter	Filter the results based on the origin of the intelligence. Options include: ◦ Google Threat Intelligence (Curated) (default) ◦ Partner (i.e. AlienVaultOTX) ◦ Crowdsourced (i.e. Individual Users) ThreatQuotient highly recommends only selecting the curated origin to ensure data quality and reduce noise/volume.
Target Industry	Specify the industry objects you want to ingest.
Custom API Filter	An optional custom filter can be applied to all API requests when retrieving collections. This filter applies only to the top-level collection request and does not affect API calls used to fetch associated data. It is appended to the default query using logical AND and is evaluated alongside the existing `collection_type`, `origin`, `last_modification_date`, and `target_industry` filters. Additional details on filter construction are available at: https://gtidocs.virustotal.com/reference/list-threats.
Supplemental Context Confidence Filter	Specify the confidence levels of the context you want to ingest. Only context with the selected confidence levels will be included in the ingestion process. Context such as Target Industry, Target Region, Motivation, etc. are reported with a confidence level. Using this filter helps ensure that only high-confidence context is ingested into ThreatQ. Options include:

- Confirmed
- Suspected
- Unconfirmed

Context Options	Select the context for the campaign's attributes to ingest into ThreatQ. Options include: ◦ Target Sector ◦ Target Country ◦ Target Country Code ◦ Target Region ◦ Target Sub Region ◦ Country ◦ Country Code ◦ Region ◦ Sub Region ◦ Motivation ◦ Last Seen
Fetch Related Attack Patterns	Enable this parameter to utilize additional API calls to fetch related Attack Patterns. ⚠ This feature can quickly consume the daily rate limit.
Fetch Related Adversaries	Enable this parameter to utilize additional API calls to fetch related Adversaries. ⚠ This feature can quickly consume the daily rate limit.
Adversaries Context Selection	Select the context to bring back with each ingested Adversary. Options include: ◦ Target Industry ◦ Target Region ◦ Target Sub Region ◦ Target Country ◦ Target Country Code ◦ Source Region ◦ Source Sub Region ◦ Source Country ◦ Source Country Code ◦ Motivation ◦ Aliases (as Tags) ✎ This parameter is only accessible if the **Fetch Related Adversaries** parameter is enabled.

Fetch Related Malware	Enable this parameter to utilize additional API calls to fetch related Malware. ⚠ This feature can quickly consume the daily rate limit.
Malware Context Selection	Select the context to bring back with each ingested Malware. Options include: ◦ Industry *(default)* ◦ Target Operating System *(default)* ◦ Detection ✎ This parameter is only accessible if the **Fetch Related Malware** parameter is enabled.
Fetch Related CVEs	Enable this parameter to utilize additional API calls to fetch related CVEs. ⚠ This feature can quickly consume the daily rate limit.
CVE Context Selection	Select the context to bring back with each ingested CVE. Options include: ◦ CVSS v2 Vector ◦ CVSS v2 Scores ◦ CVSS v3 Vector *(default)* ◦ CVSS v3 Scores *(default)* ◦ Exploitation Vectors ◦ EPSS Score *(default)* ✎ This parameter is only accessible if the **Fetch Related CVEs** parameter is enabled.
Ingest CVEs As	Select which entity type to ingest CVEs as into ThreatQ. Options include: ◦ Vulnerabilities ◦ Indicators (CVE) ✎ This parameter is only accessible if the **Fetch Related CVEs** parameter is enabled.

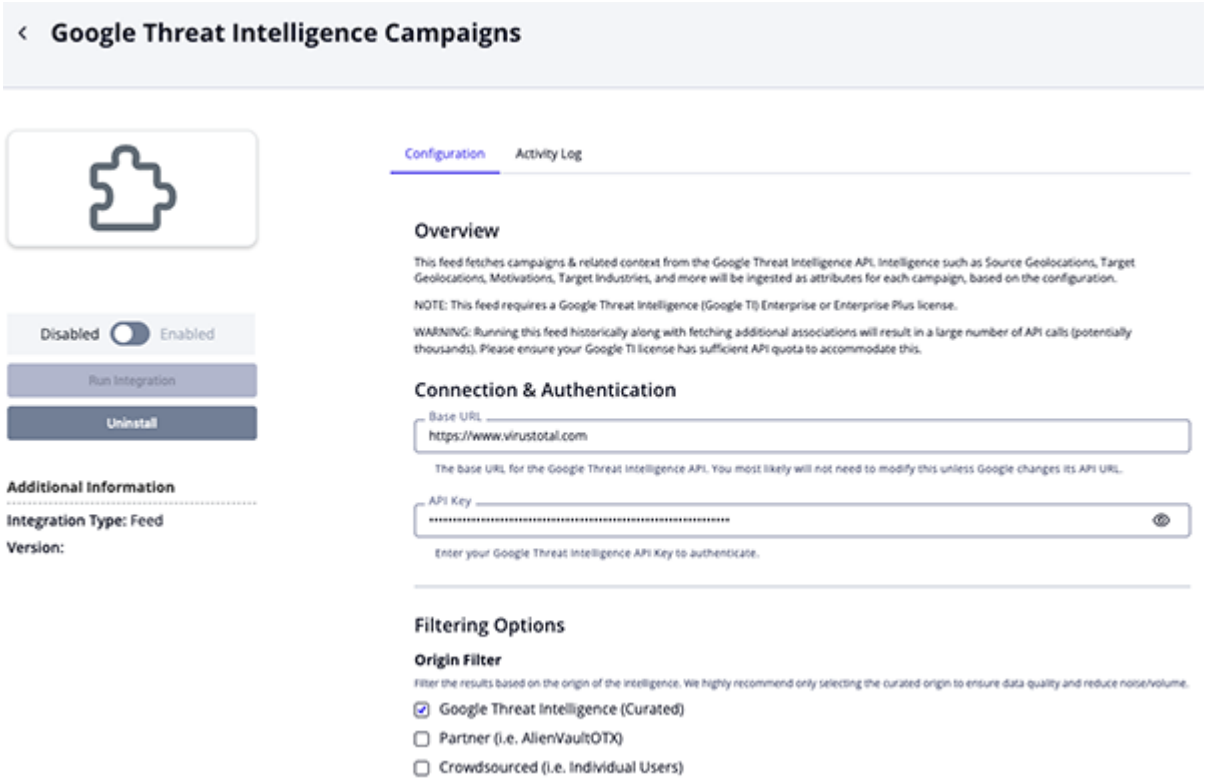
Fetch Related Indicators	Enable this parameter to utilize additional API calls to fetch related Indicators. ⚠ This feature can quickly consume the daily rate limit.
Ingested Indicator Types	Select the types of indicators to ingest into ThreatQ. Options include: ◦ IP Addresses *(default)* ◦ URLs *(default)* ◦ Domains *(default)* ◦ Hashes (*default*) This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Ingested Related Hash Types	Optional - Select the types of the related hashes to ingest for SHA-256. Options include: ◦ MD5 ◦ SHA-1 ◦ SHA-256 This parameter is only accessible if you have selected the `Hashes` option for the **Ingested Indicator Types** parameter.
Inherit Context from Indicators to Related Hashes	Enable this parameter to inherit the context from the top-level indicators to the associated hashes. This parameter is only accessible if you have selected the `Hashes (SHA-256)` option for the **Ingested Indicator Types** parameter.
Minimum Threat Score Threshold	Enter the minimum score required to ingest a related indicator. The default value is 40. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.

Set Indicator Status to Active if Verdict is Malicious	Enable this parameter to dynamically set the status of indicators with a verdict of malicious to Active. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Set Indicator Status to Whitelisted if Threat Score is 0	Enable this parameter to dynamically set the status of indicators with threat scores of 0 to whitelisted. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Normalize Threat Scores	Enable this parameter to normalize the Threat Score from the default 0-100 range to a human-readable value. The normalization will be based on the mapping field set in **Threat Score Normalization Mapping** parameter. This is useful for developing a ThreatQ Scoring Policy that is based on these normalized values. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Threat Score Normalization Mapping	Enter your mapping to normalize the numeric threat score values to the scorable attribute, `Normalized Threat Score`. The raw Threat Score value will always be ingested. This mapping should contain a line-separated CSV-formatted string with the following columns: Minimum, Maximum, Normalized Value. *default: (0,39,Low 40,79,Medium 80,94,High 95,100,Critical)* This parameter is only accessible if the **Fetch Related Indicators** and **Normalize Threat Scores** parameters are enabled.
Indicator Context Selection	Select the context to bring back with each ingested indicator. Verdict is not enabled by default as it's a binary value of malicious or benign. Instead, it is recommended to use the **Normalize Threat Score** parameter to create a more granular range to use in your ThreatQ Scoring Policy. Options include:

- Threat Score
- Confidence Score
- Severity
- Verdict
- Safe Browsing Verdict
- Category
- Tags
- Type Tags
- Is Pervasive
- Malicious Count
- Suspicious Count
- AS Organization
- RIR
- Country Code
- Continent Code
- ASN
- Meaningful Name
- Site Title
- Last Submission Date
- Mandiant Score (Deprecated)
- Crowdsourced IDS Signatures (Snort)

This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.

Indicator Description Context Selection	Select the context used to populate each indicator's description based on available fields. Options include: ◦ GTI Assessment ◦ WHOIS ◦ Crowdsourced AI Summary ◦ Crowdsourced Context ◦ Associated Names ◦ Outgoing Links ◦ Crowdsourced YARA Results ◦ Sigma Analysis Results
Ingests ASNs As	Select which entity type to ingest ASNs as in ThreatQ. Options include: ◦ Attributes (*default*) ◦ Indicators (Type: ASN)
Enable SSL Certificate Verification	Enable this parameter for the feed to validate the host-provided SSL certificate.
Disable Proxies	Enable this option if the feed should not honor proxies set in the ThreatQ UI.



Google Threat Intelligence Indicators Parameters

PARAMETER	DESCRIPTION
Base URL	The base URL for the Google Threat Intelligence API. You will not have to modify this unless Google changes its API URL.
API Key	Enter your Google Threat Intelligence API Key to authenticate.
Origin Filter	Filter the results based on the origin of the intelligence. Options include: ◦ Google Threat Intelligence (Curated) (default) ◦ Partner (i.e. AlienVaultOTX) ◦ Crowdsourced (i.e. Individual Users)

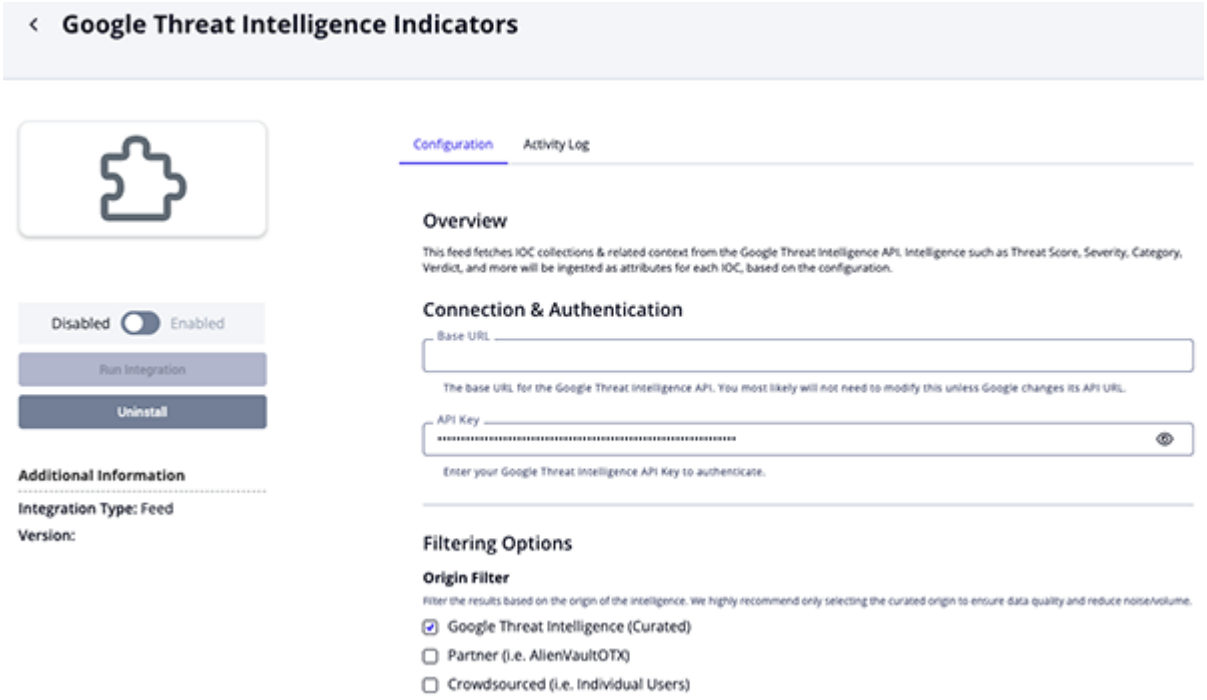
	ThreatQuotient highly recommends only selecting the curated origin to ensure data quality and reduce noise/ volume.
Target Industry	Specify the industry objects you want to ingest.
Custom API Filter	An optional custom filter can be applied to all API requests when retrieving collections. This filter applies only to the top-level collection request and does not affect API calls used to fetch associated data. It is appended to the default query using logical AND and is evaluated alongside the existing `collection_type`, `origin`, `last_modification_date`, and `target_industry` filters. Additional details on filter construction are available at: https://gtidocs.virustotal.com/reference/list-threats.
Ingested Indicator Types	Select the types of indicators to ingest into ThreatQ. Options include: ◦ IP Addresses *(default)* ◦ URLs *(default)* ◦ Domains *(default)* ◦ Hashes (*default*)
Ingested Related Hash Types	Optional - Select the types of the related hashes to ingest for SHA-256. Options include: ◦ MD5 ◦ SHA-1 ◦ SHA-256 This parameter is only accessible if you have selected the `Hashes (SHA-256)` option for the **Ingested Indicator Types** parameter.
Minimum Threat Score Threshold	Enter the minimum score required to ingest a related indicator. The default value is 40. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Set Indicator Status to Active if	Enable this parameter to dynamically set the status of indicators with a verdict of malicious to Active.

Verdict is Malicious	This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Set Indicator Status to Whitelisted if Threat Score is 0	Enable this parameter to dynamically set the status of indicators with threat scores of 0 to whitelisted. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Normalize Threat Scores	Enable this parameter to normalize the Threat Score from the default 0-100 range to a human-readable value. The normalization will be based on the mapping field set in **Threat Score Normalization Mapping** parameter. This is useful for developing a ThreatQ Scoring Policy that is based on these normalized values. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Threat Score Normalization Mapping	Enter your mapping to normalize the numeric threat score values to the scorable attribute, `Normalized Threat Score`. The raw Threat Score value will always be ingested. This mapping should contain a line-separated CSV-formatted string with the following columns: Minimum, Maximum, Normalized Value. *default: (0,39,Low 40,79,Medium 80,94,High 95,100,Critical)* This parameter is only accessible if the **Fetch Related Indicators** and **Normalize Threat Scores** parameters are enabled.
Indicator Context Selection	Select the context to bring back with each ingested indicator. Verdict is not enabled by default as it's a binary value of malicious or benign. Instead, it is recommended to use the **Normalize Threat Score** parameter to create a more granular range to use in your ThreatQ Scoring Policy. Options include: ◦ Threat Score ◦ Confidence Score ◦ Severity ◦ AS Organization ◦ RIR ◦ Country Code

- Verdict
- Safe Browsing Verdict
- Category
- Tags
- Type Tags
- Is Pervasive
- Malicious Count
- Suspicious Count
- Continent Code
- ASN
- Meaningful Name
- Site Title
- Last Submission Date
- Mandiant Score (Deprecated)
- Crowdsourced IDS Signatures (Snort)

This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.

Indicator Description Context Selection	Select the context used to populate each indicator's description based on available fields. Options include: ◦ GTI Assessment ◦ WHOIS ◦ Crowdsourced AI Summary ◦ Crowdsourced Context ◦ Associated Names ◦ Outgoing Links ◦ Crowdsourced YARA Results ◦ Sigma Analysis Results
Ingests ASNs As	Select which entity type to ingest ASNs as in ThreatQ. Options include: ◦ Attributes (*default*) ◦ Indicators (Type: ASN)
Enable SSL Certificate Verification	Enable this parameter for the feed to validate the host-provided SSL certificate.
Disable Proxies	Enable this option if the feed should not honor proxies set in the ThreatQ UI.



Google Threat Intelligence Malware Parameters

PARAMETER	DESCRIPTION
Base URL	The base URL for the Google Threat Intelligence API. You will not have to modify this unless Google changes its API URL.
API Key	Enter your Google Threat Intelligence API Key to authenticate.
Origin Filter	Filter the results based on the origin of the intelligence. Options include: ◦ Google Threat Intelligence (Curated) (default) ◦ Partner (i.e. AlienVaultOTX) ◦ Crowdsourced (i.e. Individual Users) ThreatQuotient highly recommends only selecting the curated origin to ensure data quality and reduce noise/volume.

Target Industry	Specify the industry objects you want to ingest.
Custom API Filter	An optional custom filter can be applied to all API requests when retrieving collections. This filter applies only to the top-level collection request and does not affect API calls used to fetch associated data. It is appended to the default query using logical AND and is evaluated alongside the existing `collection_type`, `origin`, `last_modification_date`, and `target_industry` filters. Additional details on filter construction are available at: https://gtidocs.virustotal.com/reference/list-threats.
Supplemental Context Confidence Filter	Specify the confidence levels of the context you want to ingest. Only context with the selected confidence levels will be included in the ingestion process. Context such as Target Industry, Target Region, Motivation, etc. are reported with a confidence level. Using this filter helps ensure that only high-confidence context is ingested into ThreatQ. Options include: ◦ Confirmed ◦ Suspected ◦ Unconfirmed
Context Options	Select the context for the campaign's attributes to ingest into ThreatQ. Options include: ◦ Target Sector ◦ Capability ◦ Target Operating Systems ◦ Role ◦ Aliases ◦ Last Active
Fetch Related Attack Patterns	Enable this parameter to utilize additional API calls to fetch related Attack Patterns. ⚠ This feature can quickly consume the daily rate limit.
Fetch Related Adversaries	Enable this parameter to utilize additional API calls to fetch related Adversaries. ⚠ This feature can quickly consume the daily rate limit.

Adversaries Context Selection	Select the context to bring back with each ingested Adversary. Options include: ◦ Target Industry ◦ Target Region ◦ Target Sub Region ◦ Target Country ◦ Target Country Code ◦ Source Region ◦ Source Sub Region ◦ Source Country ◦ Source Country Code ◦ Motivation ◦ Aliases (as Tags) This parameter is only accessible if the **Fetch Related Adversaries** parameter is enabled.
Fetch Related CVEs	Enable this parameter to utilize additional API calls to fetch related CVEs. This feature can quickly consume the daily rate limit.
CVE Context Selection	Select the context to bring back with each ingested CVE. Options include: ◦ CVSS v2 Vector ◦ CVSS v2 Scores ◦ CVSS v3 Vector *(default)* ◦ CVSS v3 Scores *(default)* ◦ Exploitation Vectors ◦ EPSS Score *(default)* This parameter is only accessible if the **Fetch Related CVEs** parameter is enabled.
Ingest CVEs As	Select which entity type to ingest CVEs as into ThreatQ. Options include: ◦ Vulnerabilities ◦ Indicators (CVE) This parameter is only accessible if the **Fetch Related CVEs** parameter is enabled.

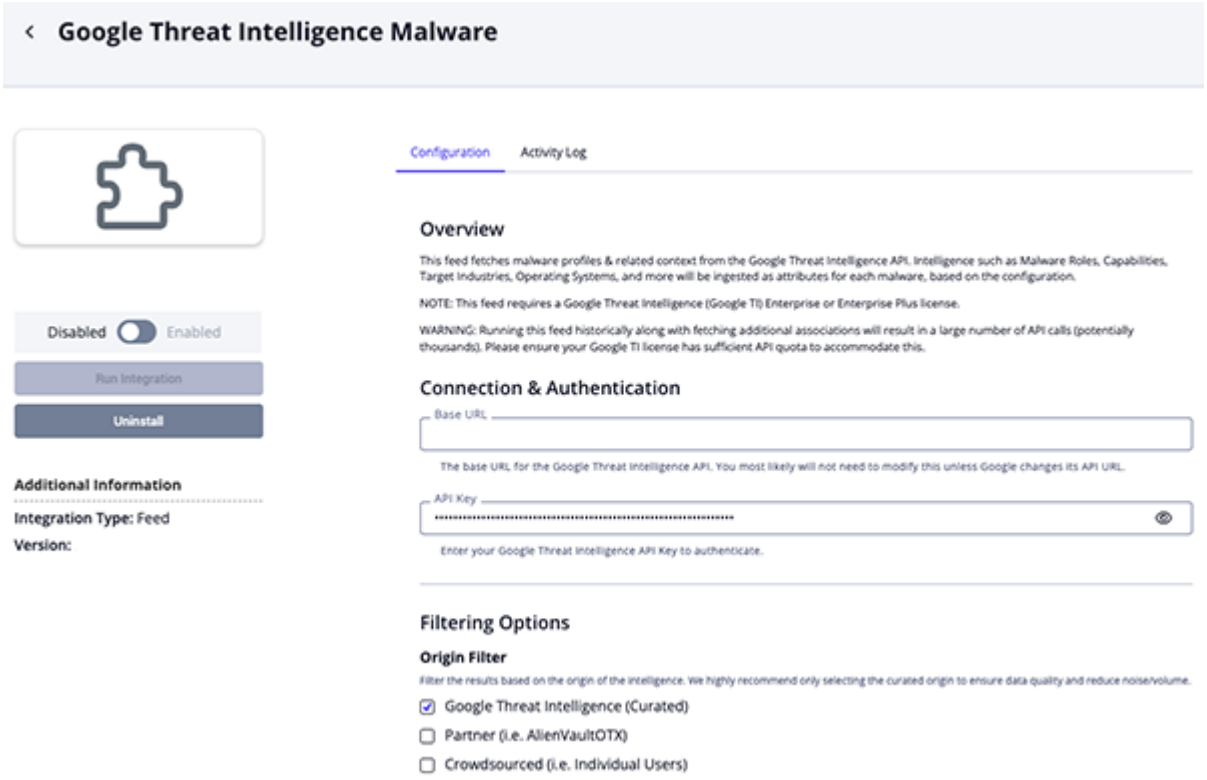
Fetch Related Indicators	Enable this parameter to utilize additional API calls to fetch related Indicators. ⚠ This feature can quickly consume the daily rate limit.
Ingested Indicator Types	Select the types of indicators to ingest into ThreatQ. Options include: ◦ IP Addresses *(default)* ◦ URLs *(default)* ◦ Domains *(default)* ◦ Hashes (*default*) This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Ingested Related Hash Types	Optional - Select the types of the related hashes to ingest for SHA-256. Options include: ◦ MD5 ◦ SHA-1 ◦ SHA-256 This parameter is only accessible if you have selected the Hashes for the **Ingested Indicator Types** parameter.
Minimum Threat Score Threshold	Enter the minimum score required to ingest a related indicator. The default value is 40. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Set Indicator Status to Active if Verdict is Malicious	Enable this parameter to dynamically set the status of indicators with a verdict of malicious to Active. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Set Indicator Status to Whitelisted if	Enable this parameter to dynamically set the status of indicators with threat scores of 0 to whitelisted.

Threat Score is 0	This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Normalize Threat Scores	Enable this parameter to normalize the Threat Score from the default 0-100 range to a human-readable value. The normalization will be based on the mapping field set in **Threat Score Normalization Mapping** parameter. This is useful for developing a ThreatQ Scoring Policy that is based on these normalized values. This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.
Threat Score Normalization Mapping	Enter your mapping to normalize the numeric threat score values to the scorable attribute, `Normalized Threat Score`. The raw Threat Score value will always be ingested. This mapping should contain a line-separated CSV-formatted string with the following columns: Minimum, Maximum, Normalized Value. *default: (0,39,Low 40,79,Medium 80,94,High 95,100,Critical)* This parameter is only accessible if the **Fetch Related Indicators** and **Normalize Threat Scores** parameters are enabled.
Indicator Context Selection	Select the context to bring back with each ingested indicator. Verdict is not enabled by default as it's a binary value of malicious or benign. Instead, it is recommended to use the **Normalize Threat Score** parameter to create a more granular range to use in your ThreatQ Scoring Policy. Options include: ◦ Threat Score ◦ Confidence Score ◦ Severity ◦ Verdict ◦ Safe Browsing Verdict ◦ Category ◦ Tags ◦ Type Tags ◦ Is Pervasive ◦ Malicious Count ◦ AS Organization ◦ RIR ◦ Country Code ◦ Continent Code ◦ ASN ◦ Meaningful Name ◦ Site Title ◦ Last Submission Date ◦ Mandiant Score (Deprecated) ◦ Crowdsourced IDS Signatures (Snort)

- Suspicious Count

> This parameter is only accessible if the **Fetch Related Indicators** parameter is enabled.

Indicator Description Context Selection	Select the context used to populate each indicator's description based on available fields. Options include: ◦ GTI Assessment ◦ WHOIS ◦ Crowdsourced AI Summary ◦ Crowdsourced Context ◦ Associated Names ◦ Outgoing Links ◦ Crowdsourced YARA Results ◦ Sigma Analysis Results
Ingests ASNs As	Select which entity type to ingest ASNs as in ThreatQ. Options include: ◦ Attributes (*default*) ◦ Indicators (Type: ASN)
Enable SSL Certificate Verification	Enable this parameter for the feed to validate the host-provided SSL certificate.
Disable Proxies	Enable this option if the feed should not honor proxies set in the ThreatQ UI.



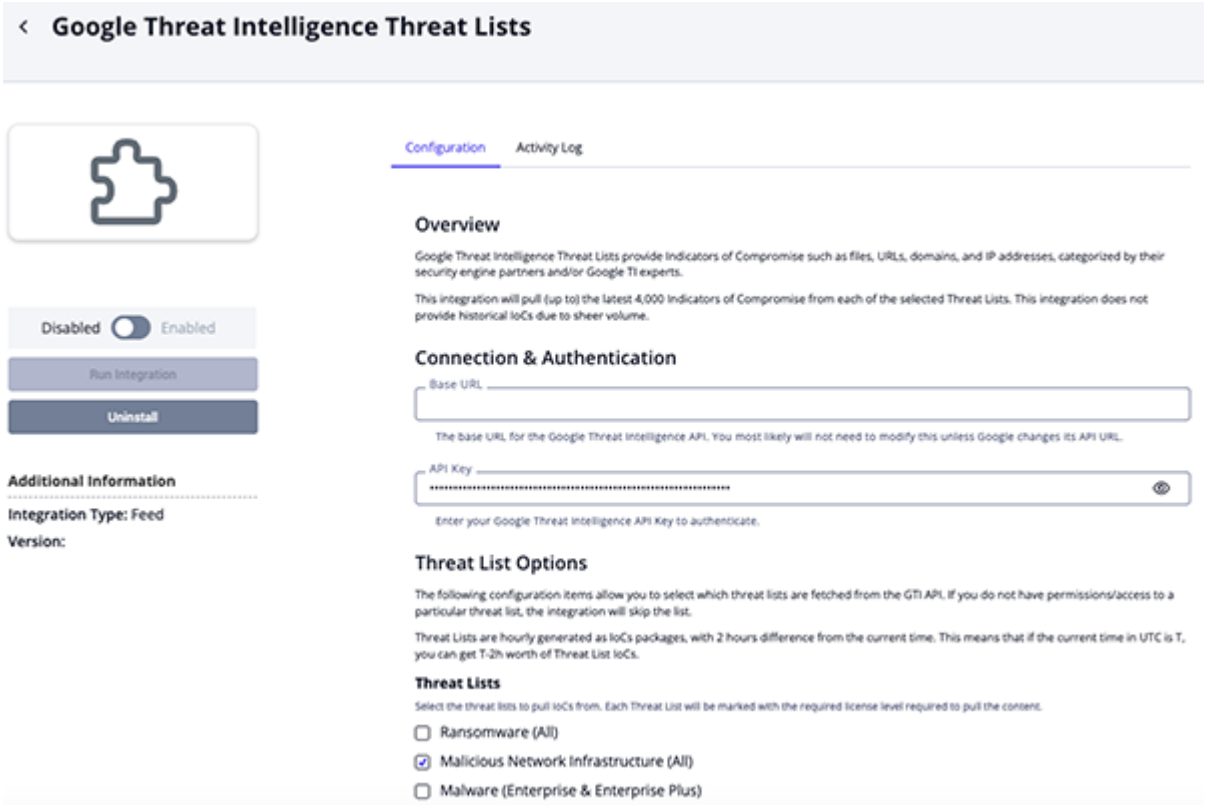
Google Threat Intelligence Threat Lists Parameters

PARAMETER	DESCRIPTION
Base URL	The base URL for the Google Threat Intelligence API. You will not have to modify this unless Google changes its API URL.
API Key	Enter your Google Threat Intelligence API Key to authenticate.
Threat Lists	Select the threat lists to pull IoCs from. Each Threat List will be marked with the required license level required to pull the content. Options include: ◦ Ransomware (All) ◦ Malicious Network Infrastructure (All) ◦ Linux (Enterprise Plus) ◦ Internet of Things (Enterprise Plus)

	◦ Malware (Enterprise & Enterprise Plus) ◦ Threat Actor (Enterprise & Enterprise Plus) ◦ Daily Top Trending (Enterprise & Enterprise Plus) ◦ Mobile (Enterprise Plus) ◦ OS X (Enterprise Plus)	◦ Cryptominers (Enterprise Plus) ◦ Phishing (Enterprise Plus) ◦ First Stage Delivery Vectors (Enterprise Plus) ◦ Vulnerability Weaponization (Enterprise Plus) ◦ Infostealers (Enterprise Plus)
Ingested Indicator Types	Select the types of indicators to ingest into ThreatQ. Options include: ◦ IP Addresses (*default*) ◦ URLs (*default*) ◦ Domains (*default*) ◦ Hashes (*default*)	
Minimum Threat Score Threshold	Enter the minimum score (0-100) required to an indicator from the API and ingest into ThreatQ. ThreatQuotient highly recommend that you set this value to at least `40`, the default value, to avoid ingesting low-confidence indicators.	
Minimum Positive Detections Threshold	Enter the minimum positive detections required to return an indicator from the API and ingest into ThreatQ. This must be a numeric value with a minimum of 0.	
Require Malware Family Association	Enable this parameter to configure the feed to only return indicators from the API that have a malware family associated with them.	
Require Campaign Association	Enable this parameter to configure the feed to only return indicators from the API that have a campaign associated with them.	
Require Report Association	Enable this parameter to configure the feed to only return indicators from the API that have a report associated with them.	

Require Threat Actor Association	Enable this parameter to configure the feed to only return indicators from the API that have a threat actor associated with them.
Ingested Severities	Select the severities of the indicators to ingest. This allows you to filter out indicators that do not meet a certain severity level criteria. This option will be used in addition to the "Minimum Threat Score Threshold" and "Minimum Positive Detections Threshold" options above. Options include ◦ None ◦ Unknown ◦ Low (*default*) ◦ Medium (*default*) ◦ High (*default*)
Ingested Hash Types	Optional - Select the types of the related hashes to ingest for indicators. Options include: ◦ MD5 ◦ SHA-1 ◦ SHA-256
Set Indicator Status to Active if Verdict is Malicious	Enable this parameter to dynamically set the status of indicators with a verdict of malicious to Active.
Set Indicator Status to Whitelisted if Threat Score is 0	Enable this parameter to dynamically set the status of indicators with threat scores of 0 to whitelisted.
Indicator Context Selection	Select the context to bring back with each ingested indicator. Verdict is not enabled by default as it's a binary value of malicious or benign. Instead, it is recommended to use the **Normalize Threat Score** parameter to create a more granular range to use in your ThreatQ Scoring Policy. Options include: ◦ Threat List ◦ Threat Type ◦ Threat Score ◦ Severity ◦ Verdict ◦ Meaningful Name ◦ Continent Code ◦ Country Code ◦ ASN ◦ AS Organization

	◦ Category ◦ Malicious Count ◦ Suspicious Count ◦ Last Submission Date	◦ Regional Internet Registry ◦ Last HTTP Response Code ◦ Site Title ◦ Tags ◦ Type Tags
Indicator Association Selection	Select the context used to populate each indicator's description based on available fields. Options include: ◦ Malware Families ◦ Threat Actors	
Normalize Threat Scores	Enable this parameter to normalize the Threat Score from the default 0-100 range to a human-readable value. The normalization will be based on the mapping field set in **Threat Score Normalization Mapping** parameter. This is useful for developing a ThreatQ Scoring Policy that is based on these normalized values.	
Threat Score Normalization Mapping	Enter your mapping to normalize the numeric threat score values to the scorable attribute, `Normalized Threat Score`. The raw Threat Score value will always be ingested. This mapping should contain a line-separated CSV-formatted string with the following columns: Minimum, Maximum, Normalized Value. *default: (0,39,Low 40,79,Medium 80,94,High 95,100,Critical)*	
Ingests ASNs As	Select which entity type to ingest ASNs as in ThreatQ. Options include: ◦ Attributes (*default*) ◦ Indicators (Type: ASN)	
Enable SSL Certificate Verification	Enable this parameter for the feed to validate the host-provided SSL certificate.	
Disable Proxies	Enable this option if the feed should not honor proxies set in the ThreatQ UI.	



Google Vulnerability Intelligence Parameters

PARAMETER	DESCRIPTION
Base URL	The base URL for the Google Threat Intelligence API. You will not have to modify this unless Google changes its API URL.
API Key	Enter your Google Threat Intelligence API Key to authenticate.
Origin Filter	Filter the results based on the origin of the intelligence. Options include: ◦ Google Threat Intelligence (Curated) (default) ◦ Partner (i.e. AlienVaultOTX) ◦ Crowdsourced (i.e. Individual Users)

> ⚠ ThreatQuotient highly recommends only selecting the curated origin to ensure data quality and reduce noise/volume.

Target Industry	Specify the industry objects you want to ingest.
Custom API Filter	An optional custom filter can be applied to all API requests when retrieving collections. This filter applies only to the top-level collection request and does not affect API calls used to fetch associated data. It is appended to the default query using logical AND and is evaluated alongside the existing `collection_type`, `origin`, `last_modification_date`, and `target_industry` filters. Additional details on filter construction are available at: https://gtidocs.virustotal.com/reference/list-threats.
Risk Rating Filter	Select the risk ratings for vulnerabilities to ingest into ThreatQ. Options include: ◦ Low ◦ Medium *(default)* ◦ High *(default)* ◦ Critical *(default)*
Exploitation State Filter	Select the exploitation states for vulnerabilities to ingest into ThreatQ. Options include: ◦ No Known *(default)* ◦ Confirmed *(default)* ◦ Reported *(default)* ◦ Suspected *(default)*
Exploitation Vector Filter	Select the exploitation vectors for vulnerabilities to ingest into ThreatQ. Options include: ◦ Administrative Interface *(default)* ◦ Bluetooth Access *(default)* ◦ Browser *(default)* ◦ Email *(default)* ◦ Exposed Web Application *(default)* ◦ File Share *(default)* ◦ Malicious File *(default)* ◦ Malicious Server *(default)* ◦ Open Port *(default)* ◦ Physical Access *(default)* ◦ Short Range Radio *(default)*

- General Network Connectivity *(default)*
- Local Access *(default)*
- Local Network Access *(default)*
- Malicious Application *(default)*
- Unspecified Local Vector *(default)*
- Unspecified Remote Vector *(default)*
- VPN Access *(default)*
- Web *(default)*
- WiFi Access *(default)*

Specific Vulnerability Filter

Select particularities to use to filter vulnerabilities. Options include:

- Must Affect Cloud
- Must Affect Operational Technology
- Must be CISA Exploited
- Must Have Exploits
- Must be observed In The Wild
- Must require User Interaction
- Must have Zero Day

Ingest CVEs As

Select which entity type to ingest CVEs as in ThreatQ. Options include:

- Indicators
- Vulnerabilities *(default)*

Vulnerability Attribute Context

Select the context for vulnerabilities to ingest into ThreatQ. Options include:

- Available Mitigation *(default)*
- CWE *(default)*
- Affected Platforms (Based on CPEs)
- Affected Products (Based on CPEs)
- Affected Vendors (Based on CPEs) *(default)*
- Exploitation Consequence *(default)*
- Exploitation State *(default)*
- Exploitation Vector *(default)*
- MVE ID
- Observed in the Wild *(default)*
- Risk Rating *(default)*
- Has Zero Day *(default)*
- Is Predicted
- Targeted Industry *(default)*

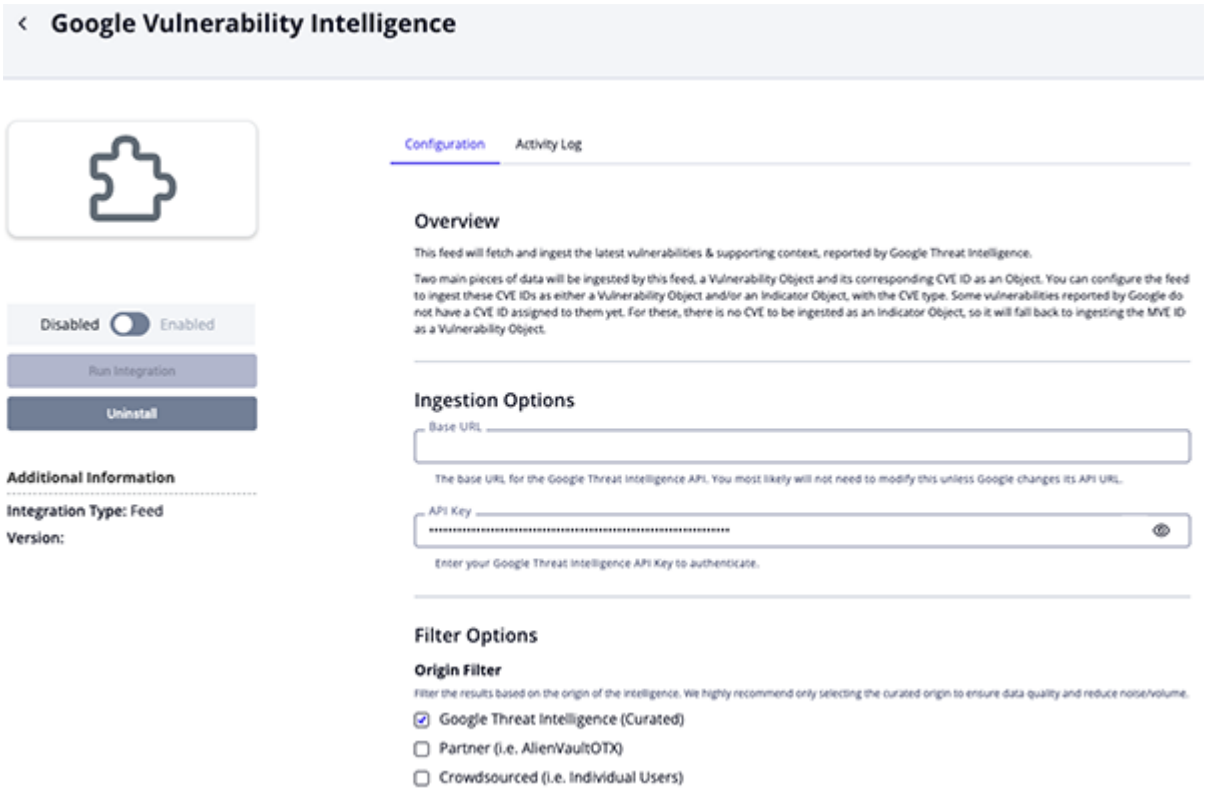
Description Context

Select the pieces of context to include in the vulnerability's description. Options include:

- Analysis *(default)*
- Description *(default)*
- Vendor Fix References *(default)*

- Executive Summary *(default)*
- Sources *(default)*
- Vulnerable CPEs
- Workarounds *(default)*
- CVSS Ratings *(default)*

CVSS Attribute Context	Select the CVSS context for vulnerabilities to ingest into ThreatQ. Options include: ◦ Base Score *(default)* ◦ Exploit Code Maturity *(default)* ◦ Temporal Score *(default)* ◦ Vector String *(default)*
Enable SSL Certificate Verification	Enable this parameter for the feed to validate the host-provided SSL certificate.
Disable Proxies	Enable this option if the feed should not honor 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

Google Threat Intelligence

The Google Threat Intelligence feed ingests ingests compromised Adversary objects and any related Indicators, Malware, Vulnerabilities, and Attack Patterns.

`GET {base_url}/api/v3/collections?filter=collection_type:threat-actor`

Sample Response:


```
{
    "data": [
        {
            "id": "threat-actor--8211bc17-9216-5e83-b54d-d1b04add12f3",
            "type": "collection",
            "links": {
                "self": "https://www.virustotal.com/api/v3/collections/threat-
actor--8211bc17-9216-5e83-b54d-d1b04add12f3"
            },
            "attributes": {
                "merged_actors": [
                    {
                        "value": "UNC3856",
                        "first_seen": 1655826491,
                        "description": "threat-actor--6bddb7c2-
bb5c-5f1f-9f95-1ef370189c1a",
                        "confidence": "confirmed",
                        "last_seen": 1655826491
                    }
                ],
                "detection_names": [],
                "available_mitigation": [],
                "recent_activity_summary": [
                    273,
                    641
                ],
                "targeted_industries": [],
                "top_icon_md5": [
                    "a9bed4661fae1103c9f7e6cc3b718932",
                    "a681bad11b862d06eeec1352e97630ef",
                    "e757fba9022b94d32b1ba2189e4051da"
                ],
                "targeted_regions_hierarchy": [
                    {
                        "region": "Europe",
                        "sub_region": "Western Europe",
                        "country": "Austria",
```

```
            "country_iso2": "AT",
            "confidence": "confirmed",
            "first_seen": 1520867153,
            "last_seen": 1710319777,
            "description": null,
            "source": null
        }
    ],
    "targeted_informations": [],
    "capabilities": [],
    "references_count": 350,
    "first_seen_details": [
        {
            "value": "2007-01-16T00:00:00Z",
            "first_seen": null,
            "description": null,
            "confidence": "confirmed",
            "last_seen": null
        }
    ],
    "operating_systems": [],
    "technologies": [],
    "malware_roles": [],
    "ip_addresses_count": 459,
    "alt_names": [
        "Group74 (Cisco Systems)",
        "Fancy Bear (DuskRise Inc.)",
        "Frozenlake (Google)",
        "APT28 (Google)"
    ],
    "threat_scape": [],
    "workarounds": [],
    "motivations": [
        {
            "value": "Attack / Destruction",
            "first_seen": null,
            "description": null,
            "confidence": "confirmed",
            "last_seen": null
        },
        {
            "value": "Espionage",
            "first_seen": null,
            "description": null,
            "confidence": "confirmed",
            "last_seen": null
        }
    ],
    "summary_stats": {
        "first_submission_date": {
```

```
            "min": 0.0,
            "max": 1750336636.0,
            "avg": 1398991817.8962307
        },
    },
    "collection_links": [],
    "urls_count": 834,
    "risk_factors": [],
    "targeted_regions": [
        "TR",
        "CZ",
        "PT"
    ],
    "status": "COMPUTED",
    "name": "APT28",
    "alt_names_details": [
        {
            "value": "APT28 (Google)",
            "first_seen": null,
            "description": null,
            "confidence": "confirmed",
            "last_seen": null
        }
    ],
    "vulnerable_products": "",
    "vendor_fix_references": [],
    "files_count": 1988,
    "last_seen_details": [
        {
            "value": "2025-06-19T19:51:19Z",
            "first_seen": null,
            "description": null,
            "confidence": "confirmed",
            "last_seen": null
        }
    ],
    "field_sources": [],
    "is_content_translated": false,
    "intended_effects": [],
    "targeted_industries_tree": [
        {
            "industry_group": "Aerospace & Defense",
            "industry": null,
            "confidence": "confirmed",
            "first_seen": 1441948486,
            "last_seen": 1749112145,
            "description": null,
            "source": null
        }
    ],
```

```
                "subscribers_count": 45,
                "first_seen": 1168905600,
                "collection_type": "threat-actor",
                "last_modification_date": 1751251305,
                "domains_count": 995,
                "counters": {
                    "files": 1988,
                    "domains": 995,
                    "ip_addresses": 459,
                    "urls": 834,
                    "iocs": 4276,
                    "subscribers": 45,
                    "attack_techniques": 177
                },
                "tags": [],
                "affected_systems": [],
                "description": "APT28 is a highly active cyber espionage group
that has employed a variety of malware and TTPs, including spearphishing,
watering holes, credential collection, and the exploitation of mobile
platforms, toward intelligence collection intended to provide political and
military advantage. APT28 operations have primarily impacted entities across
the public and private sectors in North America and Europe, and the group,
which multiple governments have attributed to Unit 26165 within the Main
Directorate of the General Staff of the Armed Forces of the Russian Federation
(GRU), has heavily targeted Ukraine in particular following Russia's February
2022 full-scale invasion. However, we have also observed APT28's targeting of
government and military entities in other regions such as the Middle East and
Asia, and open-source reporting further corroborates our observations of the
group's activity in these regions.",
                "recent_activity_relative_change": -0.0510632142340518,
                "private": true,
                "source_region": "RU",
                "version_history": [],
                "creation_date": 1168905600,
                "mitigations": [],
                "source_regions_hierarchy": [
                    {
                        "region": "Europe",
                        "sub_region": "Eastern Europe",
                        "country": "Russian Federation",
                        "country_iso2": "RU",
                        "confidence": "confirmed",
                        "first_seen": null,
                        "last_seen": null,
                        "description": null,
                        "source": null
                    }
                ],
                "exploitation_vectors": [],
                "autogenerated_tags": [
```

```
                    "armadillo",
                    "attachment",
                    "cve-2021-40444"
                ],
                "origin": "Google Threat Intelligence",
                "last_seen": 1750362679,
                "tags_details": [],
                "aggregations": {
                    "files": {
                        "itw_urls": [
                            {
                                "value": "http://45.77.156.179/1.html",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "email_subjects": [
                            {
                                "value": "Test Meeting",
                                "count": 12,
                                "total_related": 22,
                                "prevalence": 0.5454545454545454
                            }
                        ],
                        "email_senders": [
                            {
                                "value": "commercial@vanadrink.com",
                                "count": 5,
                                "total_related": 5,
                                "prevalence": 1.0
                            }
                        ],
                        "contacted_urls": [
                            {
                                "value": "http://23.227.196.215/close/?
ags=OBy5Qj-
s0zvkV&ags=K4g4_hHH7vf&oprnd=ui&aq=8zrsUz&utm=Kth&from=unSCXQ&text=d82Ggk3&itwm
=NjLTWK3ardX5QxCNwzzSe5hOAQUhl",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "contacted_domains": [
                            {
                                "value": "api.btloader.com",
                                "count": 10,
                                "total_related": 11436,
                                "prevalence": 0.0008744316194473592
```

```
                            }
                        ],
                        "contacted_ips": [
                            {
                                "value": "91.208.207.223",
                                "count": 5,
                                "total_related": 159,
                                "prevalence": 0.031446540880503145
                            }"prevalence": 2e-05
                            }
                        ],
                        "execution_parents": [
                            {
                                "value":
"54a27464c7ad7f2e32cd123b27c0f9082590cd5ba48526bf00728e8107048f48",
                                "count": 3,
                                "total_related": 4,
                                "prevalence": 0.75
                            }
                        ],
                        "compressed_parents": [
                            {
                                "value":
"069a20cb5daaef9ff756cfd19f3ddfa4d7ecddd73d6e9f744e7156ea07d0801c",
                                "count": 4,
                                "total_related": 8,
                                "prevalence": 0.5
                            }
                        ],
                        "pcap_parents": [
                            {
                                "value":
"06b691b5d6b12c72afaa9caed3c5fc158bbab18188262f49608ff68ab5479fb2",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "dropped_files_sha256": [
                            {
                                "value":
"caa37f136c564145d0447d1d573e880fa4f1d31c430de7fc585ae6439a8a7329",
                                "count": 7,
                                "total_related": 72435,
                                "prevalence": 9.663836543107614e-05
                            }
                        ],
                        "email_parents": [
                            {
                                "value":
```

```
"a301260b4887b1f2126821825cacce19dc5b8a8006ab04f0a26f098a9555750a",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "tags": [
                            {
                                "value": "pedll",
                                "count": 59
                            }
                        ],
                        "main_icon_dhash": [
                            {
                                "value": "0000100033320000",
                                "count": 5,
                                "total_related": 7,
                                "prevalence": 0.7142857142857143
                            }
                        ],
                        "main_icon_raw_md5": [
                            {
                                "value": "a9bed4661fae1103c9f7e6cc3b718932",
                                "count": 5,
                                "total_related": 7,
                                "prevalence": 0.7142857142857143
                            }
                        ],
                        "vhash": [
                            {
                                "value": "96a88ebaa2fe6fe510c5af279ce832ce1",
                                "count": 29,
                                "total_related": 23058,
                                "prevalence": 0.0012576979790094543
                            }
                        ],
                        "imphash": [
                            {
                                "value": "1e79c6496a07d4391cba25a551392410",
                                "count": 15,
                                "total_related": 61,
                                "prevalence": 0.2459016393442623
                            }
                        ],
                        "behash": [
                            {
                                "value": "76a8f43d77060240bf707251c1cd5008",
                                "count": 6,
                                "total_related": 49242,
                                "prevalence": 0.00012184720360667723
                            }
```

```
                        ],
                        "telfhash": [
                            {
                                "value":
"t139f05945fa380b9649d2ac24dc1e05674593e379e524eb04bf95ced00c7e001f7a8daa",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "tlshhash": [
                            {
                                "value":
"T149D308B7131017BE69468B489FA86D4D3224D4B770B685C4FBAE9B28CF439EF8135D14",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "elfhash": [
                            {
                                "value": "4bf18b2cee846e961b86562f856b69d0",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "attributions": [
                            {
                                "value": "gamefish",
                                "count": 124,
                                "total_related": 337,
                                "prevalence": 0.36795252225519287
                            }
                        ],
                        "crowdsourced_ids_results": [
                            {
                                "value": {
                                    "id": "1:2047948",
                                    "message": "ET INFO Custom Endpoint Service
Domain in DNS Lookup (run .mocky .io)",
                                    "category": "bad-unknown",
                                    "source": "Proofpoint Emerging Threats
Open",
                                    "url": "https://
rules.emergingthreats.net/",
                                    "rule": "alert dns $HOME_NET any -> any any
(msg:\"ET INFO Custom Endpoint Service Domain in DNS Lookup (run .mocky .io)\";
dns.query; bsize:12; content:\"run.mocky.io\"; nocase; classtype:bad-unknown;
sid:2047948; rev:1; metadata:attack_target Client_Endpoint, created_at
```

```
2023_09_07, deployment Perimeter, performance_impact Low, confidence High,
signature_severity Informational, updated_at 2023_09_07, reviewed_at
2024_04_09; target:src_ip;)"
                                },
                                "count": 40,
                                "total_related": 87,
                                "prevalence": 0.45977011494252873
                            }
                        ],
                        "embedded_domains": [
                            {
                                "value": "run.mocky.io",
                                "count": 38,
                                "total_related": 9048,
                                "prevalence": 0.004199823165340406
                            }
                        ],
                        "embedded_ips": [
                            {
                                "value": "24.17.89.89",
                                "count": 26,
                                "total_related": 26,
                                "prevalence": 1.0
                            }
                        ],
                        "embedded_urls": [
                            {
                                "value": "https://accounts.ukr.net/login/
favicon.ico",
                                "count": 23,
                                "total_related": 97,
                                "prevalence": 0.5021367521367521
                            }
                        ],
                        "mutexes_created": [
                            {
                                "value": "\\Sessions\\1\\BaseNamedObjects\
\vgekW8b1st6yjzPA9fewB70o7KC",
                                "count": 4,
                                "total_related": 32,
                                "prevalence": 0.125
                            }
                        ],
                        "mutexes_opened": [
                            {
                                "value": "Local\
\4F75746C6F6F6B5E16934AF0EE4642B5A2BDBA4CC7666902_S-1-5-21-870151485-863566166-
2146164720-1000",
                                "count": 5,
                                "total_related": 23584,
                                "prevalence": 0.00021200814111261874
```

```
                            }
                        ],
                        "registry_keys_deleted": [
                            {
                                "value": "HKLM\\SOFTWARE\\MICROSOFT\\OFFICE\
\14.0\\WORD\\FILE MRU",
                                "count": 2,
                                "total_related": 651,
                                "prevalence": 0.0030721966205837174
                            }
                        ],
                        "registry_keys_opened": [
                            {
                                "value": "52-54-00-63-20-e5\
\WpadDecisionReason",
                                "count": 1,
                                "total_related": 165,
                                "prevalence": 0.006060606060606061
                            }
                        ],
                        "registry_keys_set": [
                            {
                                "value": "HKEY_CLASSES_ROOT\\Wow6432Node\
\CLSID\\{3543619C-D563-43f7-95EA-4DA7E1CC396A}\\InProcServer32\\(Default)",
                                "count": 1,
                                "total_related": 2,
                                "prevalence": 0.5
                            }
                        ],
                        "file_types": [
                            {
                                "value": "html",
                                "count": 187
                            }
                        ],
                        "crowdsourced_sigma_results": [
                            {
                                "value": {
                                    "id":
"8b884f70bb47a8e06faf8f548fcfef77fe3802d22c310c4cdfa01f35cb030bac",
                                    "level": "medium",
                                    "title": "WSF/JSE/JS/VBA/VBE File Execution
Via Cscript/Wscript",
                                    "author": "Michael Haag",
                                    "source_url": "https://github.com/Neo23x0/
sigma",
                                    "source": "Sigma Integrated Rule Set
(GitHub)",
                                    "description": "Detects script file
execution (.js, .jse, .vba, .vbe, .vbs, .wsf) by Wscript/Cscript"
```

```
                                },
                                "count": 18,
                                "total_related": 92144,
                                "prevalence": 0.00019534641430803959
                            }
                        ],
                        "debug_codeview_guids": [
                            {
                                "value": "d7633b5d-7f73-4804-
b5e7-78663bfec15e",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "debug_codeview_names": [
                            {
                                "value": "Z:\\PROJECTS\\Dll1\\x64\\Release\
\Dll1.pdb",
                                "count": 6,
                                "total_related": 6,
                                "prevalence": 1.0
                            }
                        ],
                        "debug_timestamps": [
                            {
                                "value": "Wed Aug 10 07:38:01 2016",
                                "count": 5,
                                "total_related": 5,
                                "prevalence": 1.0
                            }
                        ],
                        "dropped_files_path": [
                            {
                                "value": "C:\\ProgramData\\Microsoft\\Windows\
\WER\\Temp\\WER1122.tmp.WERInternalMetadata.xml",
                                "count": 2,
                                "total_related": 21825,
                                "prevalence": 9.163802978235968e-05
                            }
                        ],
                        "elfinfo_exports": [
                            {
                                "value":
"_ZStplIwSt11char_traitsIwESaIwEESbIT_T0_T1_ERKS6_S8_",
                                "count": 3,
                                "total_related": 1218,
                                "prevalence": 0.0024630541871921183
                            }
                        ],
```

```
                        "elfinfo_imports": [
                            {
                                "value":
"_ZNSbIwSt11char_traitsIwESaIwEE5beginEv",
                                "count": 3,
                                "total_related": 808,
                                "prevalence": 0.0037128712871287127
                            }
                        ],
                        "exiftool_authors": [
                            {
                                "value": "Rafael Moon",
                                "count": 3,
                                "total_related": 8,
                                "prevalence": 0.375
                            }
                        ],
                        "exiftool_create_dates": [
                            {
                                "value": "2022:09:08 03:07:43+00:00",
                                "count": 14,
                                "total_related": 51,
                                "prevalence": 0.27450980392156865
                            }
                        ],
                        "exiftool_creators": [
                            {
                                "value": "Apache Software Foundation",
                                "count": 2,
                                "total_related": 16254,
                                "prevalence": 0.00012304663467454166
                            }
                        ],
                        "exiftool_last_printed": [
                            {
                                "value": "2008:01:08 14:56:00Z",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "exiftool_producers": [
                            {
                                "value": "Qt 4.8.7",
                                "count": 2,
                                "total_related": 100000,
                                "prevalence": 2e-05
                            }
                        ],
                        "exiftool_subjects": [
```

```
                            {
                                "value": "TVqQAAMAAAAEAAAA//
8AALgAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4AAAAA4fug4AtAnNI
bgBTM0hVGhpcyBwcm9ncmFtIGNhbm5vdCBiZSBydW4gaW4gRE9TIG1vZGUuDQ0KJAAAAAAAAACseA3F
6BljlugZY5boGWOWh2/IlsEZY5aHb...",
                                "count": 3,
                                "total_related": 3,
                                "prevalence": 1.0
                            }
                        ],
                        "exiftool_titles": [
                            {
                                "value": " Good thing we disabled macros ",
                                "count": 3,
                                "total_related": 71,
                                "prevalence": 0.04225352112676056
                            }
                        ],
                        "filecondis_dhash": [
                            {
                                "value": "bebabcbe86c6c350",
                                "count": 15,
                                "total_related": 15,
                                "prevalence": 1.0
                            }
                        ],
                        "netassembly_mvid": [
                            {
                                "value": "50367b8c-fa12-4c3e-
aa3d-57620d1fa124",
                                "count": 2,
                                "total_related": 3,
                                "prevalence": 0.6666666666666666
                            }
                        ],
                        "office_application_names": [
                            {
                                "value": "Microsoft Office Word",
                                "count": 12,
                                "total_related": 100000,
                                "prevalence": 0.00012
                            }
                        ],
                        "office_authors": [
                            {
                                "value": "Nick Daemoji",
                                "count": 3,
                                "total_related": 4,
                                "prevalence": 0.75
                            }
```

```
                    ],
                    "office_creation_datetimes": [
                        {
                            "value": "2017-10-03 01:36:00",
                            "count": 3,
                            "total_related": 9,
                            "prevalence": 0.3333333333333333
                        }
                    ],
                    "office_last_saved": [
                        {
                            "value": "2012-10-31 10:10:27",
                            "count": 5,
                            "total_related": 11,
                            "prevalence": 0.45454545454545453
                        }
                    ],
                    "office_macro_names": [
                        {
                            "value": "NewMacros.bas",
                            "count": 3,
                            "total_related": 76472,
                            "prevalence": 3.9230044983784915e-05
                        }
                    ],
                    "pe_info_imports": [
                        {
                            "value": "POWRPROF.DLL",
                            "count": 1,
                            "total_related": 2911,
                            "prevalence": 0.00034352456200618345
                        }
                    ],
                    "pe_info_exports": [
                        {
                            "value": "Init1",
                            "count": 34,
                            "total_related": 396,
                            "prevalence": 0.08585858585858586
                        }
                    ],
                    "pe_info_section_md5": [
                        {
                            "value": "4031479fbcd57a5f6c8dbf647bfcd376",
                            "count": 12,
                            "total_related": 196,
                            "prevalence": 0.061224489795918366
                        }
                    ],
                    "pe_info_section_names": [
```

```
                            {
                                "value": ".rc_it",
                                "count": 2,
                                "total_related": 828,
                                "prevalence": 0.0024154589371980675
                            }
                        ],
                        "sandbox_verdicts": [
                            {
                                "value": "Clean",
                                "count": 173,
                                "sandbox_name": "Zenbox"
                            }
                        ],
                        "signature_info_comments": [
                            {
                                "value": "Check Network Identification",
                                "count": 3,
                                "total_related": 5,
                                "prevalence": 0.6
                            }
                        ],
                        "signature_info_copyrights": [
                            {
                                "value": "Â® Microsoft Corporation. All rights
reserved.",
                                "count": 83,
                                "total_related": 1117,
                                "prevalence": 0.07430617726051925
                            }
                        ],
                        "signature_info_descriptions": [
                            {
                                "value": "Network Identification Service DLL",
                                "count": 33,
                                "total_related": 53,
                                "prevalence": 0.6226415094339622
                            }
                        ],
                        "signature_info_internal_names": [
                            {
                                "value": "NetIds.dll",
                                "count": 33,
                                "total_related": 53,
                                "prevalence": 0.6226415094339622
                            }
                        ],
                        "signature_info_original_names": [
                            {
                                "value": "NetIds.dll",
```

```
                            "count": 33,
                            "total_related": 53,
                            "prevalence": 0.6226415094339622
                        }
                    ],
                    "signature_info_products": [
                        {
                            "value": "DocumentSaver",
                            "count": 5,
                            "total_related": 8,
                            "prevalence": 0.625
                        }
                    ],
                    "symhash": [
                        {
                            "value": "704b879d425b7bbe366a345454774ff2",
                            "count": 3,
                            "total_related": 5,
                            "prevalence": 0.6
                        }
                    ],
                    "trusted_verdict_filenames": [
                        {
                            "value": "amd64_windowsdeviceportal-wcos-
www_31bf3856ad364e35_10.0.17751.1_none_deb753ded4321364_favicon.ico",
                            "count": 1,
                            "total_related": 1,
                            "prevalence": 1.0
                        }
                    ],
                    "rich_pe_header_hash": [
                        {
                            "value": "cafcda8746b34ccb88ddb50252db58d0",
                            "count": 7,
                            "total_related": 25,
                            "prevalence": 0.28
                        }
                    ],
                    "popular_threat_category": [
                        {
                            "value": "trojan",
                            "count": 717
                        }
                    ],
                    "popular_threat_name": [
                        {
                            "value": "sednit",
                            "count": 247
                        }
                    ],
```

```
                        "suggested_threat_label": "trojan.sednit/sofacy",
                        "attack_techniques": [
                            {
                                "value": "T1497.003",
                                "count": 3,
                                "total_related": 94867,
                                "prevalence": 3.16232198762478e-05
                            }
                        ],
                        "malware_config_family_name": [
                            {
                                "value": "gamefish",
                                "count": 49,
                                "total_related": 77,
                                "prevalence": 0.6363636363636364
                            }
                        ],
                        "malware_config_crypto_key": [
                            {
                                "value": "0x32407b67472c3f42226b",
                                "count": 4,
                                "total_related": 10,
                                "prevalence": 0.4
                            }
                        ],
                        "malware_config_c2_url": [
                            {
                                "value": "http://swsupporttools.com/",
                                "count": 4,
                                "total_related": 6,
                                "prevalence": 0.6666666666666666
                            }
                        ],
                        "malware_config_c2_user_agent": [
                            {
                                "value": "Mozilla/5.0 (Windows NT 6.1; WOW64;
Trident/7.0; rv:11.0) like Gecko",
                                "count": 1,
                                "total_related": 100000,
                                "prevalence": 1e-05
                            }
                        ],
                        "malware_config_host_port": [
                            {
                                "value": "netcorpscanprotect.com",
                                "count": 1,
                                "total_related": 3,
                                "prevalence": 0.3333333333333333
                            }
                        ],
```

```
                        "malware_config_dropped_file": [
                            {
                                "value":
"a0d05eece2585035f553de7533258d7b63c96509aba4176c7844155435f89211",
                                "count": 3,
                                "total_related": 3,
                                "prevalence": 1.0
                            }
                        ],
                        "malware_config_dropped_file_path": [
                            {
                                "value": "258887afb9501cfd860dfc2f333adb35",
                                "count": 3,
                                "total_related": 3,
                                "prevalence": 1.0
                            }
                        ],
                        "memory_pattern_urls": [
                            {
                                "value": "https://www.msn.com/",
                                "count": 8,
                                "total_related": 27652,
                                "prevalence": 0.0002893099956603501
                            }
                        ],
                        "attack_tactics": [
                            {
                                "value": "TA0011",
                                "count": 794
                            }
                        ],
                        "parent_contacted_domains": [
                            {
                                "value": "btloader.com",
                                "count": 20,
                                "total_related": 111436,
                                "prevalence": 0.0001794752144728813
                            }
                        ]
                    },
                    "urls": {
                        "attributions": [
                            {
                                "value": "roughedge",
                                "count": 41,
                                "total_related": 47,
                                "prevalence": 0.8723404255319149
                            }
                        ],
                        "http_response_contents": [
```

```
                            {
                                "value":
"05a5f6513b2ffc4b059ce0099a0df624dc12dac43f7b98ebfe0f924af6465964",
                                "count": 37,
                                "total_related": 320,
                                "prevalence": 0.115625
                            }
                        ],
                        "contacted_domains": [
                            {
                                "value": "netmediaresources.com",
                                "count": 2,
                                "total_related": 3,
                                "prevalence": 0.6666666666666666
                            }
                        ],
                        "communicating_files": [
                            {
                                "value":
"604dbb615d6ff549f9ff3c3484a32d5e3f50853761f029f9d30c6f8eb982bf84",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "cookie_names": [
                            {
                                "value": "MBizSessionID",
                                "count": 27,
                                "total_related": 297,
                                "prevalence": 0.09090909090909091
                            }
                        ],
                        "cookie_values": [
                            {
                                "value": "00a6fcfa-
b774-401e-82ad-85af73a02f79",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "downloaded_files": [
                            {
                                "value":
"05a5f6513b2ffc4b059ce0099a0df624dc12dac43f7b98ebfe0f924af6465964",
                                "count": 73,
                                "total_related": 223,
                                "prevalence": 0.3273542600896861
                            }
```

```
                        ],
                        "domains": [
                            {
                                "value": "webhook.site",
                                "count": 115,
                                "total_related": 2863,
                                "prevalence": 0.04016765630457562
                            }
                        ],
                        "embedded_js": [
                            {
                                "value":
"6af9edac35f5a75d57f9da9e46955c4f66f35daf638cdd305acc1f0a35b292a3",
                                "count": 33,
                                "total_related": 72,
                                "prevalence": 0.4583333333333333
                            }
                        ],
                        "favicon_dhash": [
                            {
                                "value": "708c8e0a2baad0e1",
                                "count": 131,
                                "total_related": 5129,
                                "prevalence": 0.025541041138623512
                            }
                        ],
                        "favicon_raw_md5": [
                            {
                                "value": "06bde06ab3839695045d6a0a8920d0e7",
                                "count": 131,
                                "total_related": 5129,
                                "prevalence": 0.025541041138623512
                            }
                        ],
                        "html_titles": [
                            {
                                "value": "ÐŸÐ¾Ñˆ,Ð° @ ukr.net - ÑƒÐ°Ñ€Ð°Ñ—
Ð½ÑÑŒÐ°Ð° ÐµÐ»ÐµÐ°,Ñ€Ð¾Ð½Ð½Ð° Ð¿Ð¾Ñˆ,Ð°",
                                "count": 129,
                                "total_related": 155,
                                "prevalence": 0.832258064516129
                            }
                        ],
                        "ip_addresses": [
                            {
                                "value": "46.4.105.116",
                                "count": 69,
                                "total_related": 2067,
                                "prevalence": 0.033381712626995644
                            }
```

```
                        ],
                        "memory_patterns": [
                            {
                                "value":
"b8324a0250ac770ccdc92dcc8e809c8804638bf6e78e69f44dce3883dfc6e89c",
                                "count": 38,
                                "total_related": 295,
                                "prevalence": 0.1288135593220339
                            }
                        ],
                        "outgoing_links": [
                            {
                                "value": "https://mail.ukr.net/terms_uk.html",
                                "count": 39,
                                "total_related": 462,
                                "prevalence": 0.08441558441558442
                            }
                        ],
                        "path": [
                            {
                                "value": "/filedwn.php",
                                "count": 73,
                                "total_related": 139,
                                "prevalence": 0.5251798561151079
                            }
                        ],
                        "prefix_paths": [
                            {
                                "value": "/filedwn.php",
                                "count": 92,
                                "total_related": 78,
                                "prevalence": 1.1794871794871795
                            }
                        ],
                        "suffix_paths": [
                            {
                                "value": "/filedwn.php",
                                "count": 79,
                                "total_related": 71,
                                "prevalence": 1.1126760563380282
                            }
                        ],
                        "ports": [
                            {
                                "value": "5000",
                                "count": 11,
                                "total_related": 40673,
                                "prevalence": 0.00027044968406559635
                            }
                        ],
```

```
                        "query_strings": [
                            {
                                "value": "i=1",
                                "count": 15,
                                "total_related": 87578,
                                "prevalence": 0.0001712758912055539
                            }
                        ],
                        "query_param_keys": [
                            {
                                "value": "fuid",
                                "count": 2,
                                "total_related": 1659,
                                "prevalence": 0.0012055455093429777
                            }
                        ],
                        "query_param_values": [
                            {
                                "value": "6a98168f-
f14f-4014-8b28-8329b0118936",
                                "count": 5,
                                "total_related": 7,
                                "prevalence": 0.7142857142857143
                            }
                        ],
                        "query_param_key_values": [
                            {
                                "value": "id=6a98168f-
f14f-4014-8b28-8329b0118936",
                                "count": 5,
                                "total_related": 7,
                                "prevalence": 0.7142857142857143
                            }
                        ],
                        "referring_files": [
                            {
                                "value":
"4b2b188ff864453b75071c0ba80b00f87475d880c35ecdfc1cf262eb1d587580",
                                "count": 33,
                                "total_related": 66,
                                "prevalence": 0.5
                            }
                        ],
                        "tags": [
                            {
                                "value": "external-resources",
                                "count": 278
                            }
                        ],
                        "tracker_ids": [
```

```
                            {
                                "value": "UA-71917162-10",
                                "count": 14,
                                "total_related": 8366,
                                "prevalence": 0.0016734401147501792
                            }
                        ]
                    },
                    "domains": {
                        "attributions": [
                            {
                                "value": "chopstick_v2",
                                "count": 46,
                                "total_related": 57,
                                "prevalence": 0.8070175438596491
                            }
                        ],
                        "communicating_files": [
                            {
                                "value":
"85c100e140389bbbc467cc348d7c17a59c27a106b6c26b2499719aee57f2cf52",
                                "count": 5,
                                "total_related": 6,
                                "prevalence": 0.8333333333333334
                            }
                        ],
                        "downloaded_files": [
                            {
                                "value":
"b00a6010b9640e448ed277a2a62fd8905284d0d60ee2b2f51c4f20d7d115c1a1",
                                "count": 19,
                                "total_related": 9435,
                                "prevalence": 0.00201377848436672
                            }
                        ],
                        "favicon_dhash": [
                            {
                                "value": "dcc69eb0b2f2f060",
                                "count": 17,
                                "total_related": 49,
                                "prevalence": 0.3469387755102041
                            }
                        ],
                        "favicon_raw_md5": [
                            {
                                "value": "c44bbec78ebc720a8c3783f5f2f37898",
                                "count": 17,
                                "total_related": 49,
                                "prevalence": 0.3469387755102041
                            }
```

```
                        ],
                        "urls": [
                            {
                                "value": "http://
00e66943.proxy.webhookapp.com/",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "registrant_names": [
                            {
                                "value": "b94871993eab339b",
                                "count": 16,
                                "total_related": 11567,
                                "prevalence": 0.0013832454396126913
                            }
                        ]
                    },
                    "ip_addresses": {
                        "attributions": [
                            {
                                "value": "empire",
                                "count": 14,
                                "total_related": 545,
                                "prevalence": 0.025688073394495414
                            }
                        ],
                        "communicating_files": [
                            {
                                "value":
"efc1a4706a737437b387795566ef7e9d9a3d8066d661484337c333feaa1ad204",
                                "count": 2,
                                "total_related": 56,
                                "prevalence": 0.03571428571428571
                            }
                        ],
                        "downloaded_files": [
                            {
                                "value":
"a214568945ac98c7836485c5a493334fcc3d74ab32e55c3aef371599e9431e80",
                                "count": 5,
                                "total_related": 20,
                                "prevalence": 0.25
                            }
                        ],
                        "urls": [
                            {
                                "value": "file://124.168.91.178/webdav/
wody.pdf",
```

```
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ]
                    }
                }
            },
            "context_attributes": {
                "shared_with_me": false,
                "role": "viewer"
            }
        }
]
}
```


Each `.data[].id` Is used to retrieve the related objects in the following Supplemental feeds.

ThreatQ provides the following default mapping for this feed based on each item within the `.data[]` list.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.attributes.name`	`Adversary.Value`	`Adversary`	`.attributes.last_modification_date`	`APT28`	N/A
`.attributes.alt_names_details[].value`	`Adversary.Tag`	`N/A`	`N/A`	`APT28 (Google)`	User-configurable.
`.attributes.description`	`Adversary.Description`	`N/A`	`N/A`	`APT28 is a highly active cyber espionage group that ...`	N/A
`.attributes.motivations[].value`	`Adversary.Attribute`	`Motivation`	`.attributes.last_modification_date`	`Attack / Destruction`	User-configurable. When the Motivation option is checked in the context.
`.attributes.targeted_industries_tree[].industry_group`	`Adversary.Attribute`	`Target Industry`	`.attributes.last_modification_date`	`Aerospace & Defense`	User-configurable. When the Industry option is checked in the context.
`.attributes.source_regions_hierarchy[].region`	`Adversary.Attribute`	`Region`	`.attributes.last_modification_date`	`Europe`	User-configurable. When the Source Context option is checked in the context.
`.attributes.source_regions_hierarchy[].sub_region`	`Adversary.Attribute`	`Sub Region`	`.attributes.last_modification_date`	`Eastern Europe`	User-configurable. When the Source Context option is checked in the context.
`.attributes.source_regions_hierarchy[].country`	`Adversary.Attribute`	`Country`	`.attributes.last_modification_date`	`Russian Federation`	User-configurable. When the Source Context option is checked in the context.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.attributes.source_regions_hierarchy[].country_iso2	Adversary.Attribute	Country Code	.attributes.last_modification_date	RU	User-configurable. When the Source Context option is checked in the context.
.attributes.targeted_regions_hierarchy[].region	Adversary.Attribute	Target Region	.attributes.last_modification_date	Europe	User-configurable. When the Target Region option is checked in the context.
.attributes.targeted_regions_hierarchy[].country	Adversary.Attribute	Target Country	.attributes.last_modification_date	Austria	User-configurable. When the Target Region option is checked in the context.
.attributes.targeted_regions_hierarchy[].country_iso2	Adversary.Attribute	Target Country Code	.attributes.last_modification_date	AT	User-configurable. When the Target Region option is checked in the context.
.attributes.targeted_regions_hierarchy[].sub_region	Adversary.Attribute	Target Sub Region	.attributes.last_modification_date	Western Europe	User-configurable. When the Target Region option is checked in the context.
.id	Related Malware	Malware	.attributes.last_modification_date	threat-actor--8211bc17-9216-5e83-b54d-d1b04add12f3	User-configurable. ID is used in supplemental requests if configured. See Google Threat Intelligence Related Malware (Supplemental)
.id	Related.Attack Pattern	Attack Pattern	.attributes.last_modification_date	threat-actor--8211bc17-9216-5e83-b54d-d1b04add12f3	User-configurable. ID is used in supplemental requests if configured. See Google Threat Intelligence Related Attack Pattern (Supplemental)
.id	Related.Campaign	Campaign	.attributes.last_modification_date	threat-actor--8211bc17-9216-5e83-b54d-d1b04add12f3	User-configurable. ID is used in supplemental requests if configured. See Google Threat Intelligence Related Campaigns (Supplemental)
.id	Related.Indicator/Vulnerability	CVE/Vulnerability	.attributes.last_modification_date	threat-actor--8211bc17-9216-5e83-b54d-d1b04add12f3	User-configurable. ID is used in supplemental requests if configured. See Google Threat Intelligence Related Vulnerabilities (Supplemental)
.id	Related.Indicator	IP Address/URL/ FQDN/MD5/SHA-1/SHA-256	.attributes.last_modification_date	threat-actor--8211bc17-9216-5e83-b54d-d1b04add12f3	User-configurable. ID is used in supplemental requests if configured. See Google Threat Intelligence Related IOC (Supplemental). A request is made for each indicator type.

Google Threat Intelligence Related Malware (Supplemental)

The Google Threat Intelligence Related Malware Supplemental feed is called once for each object `.id` returned by the main feed.

`GET {base_url}/api/v3/collections/{entity_id}/malware_families`

Sample Response:


```
{
    "data": [
        {
            "id": "malware--05b4251d-f5cf-5f90-b1b8-8d75da6d9387",
            "type": "collection",
            "links": {
                "self": "https://www.virustotal.com/api/v3/collections/
malware--05b4251d-f5cf-5f90-b1b8-8d75da6d9387"
            },
            "attributes": {
                "available_mitigation": [],
                "collection_links": [],
                "detection_names": [],
                "merged_actors": [],
                "recent_activity_summary": [
                    0,
                    2,
                    0
                ],
                "status": "COMPUTED",
                "last_seen": 1695609000,
                "ip_addresses_count": 0,
                "source_regions_hierarchy": [],
                "mitigations": [],
                "affected_systems": [],
                "recent_activity_relative_change": -0.6875,
                "counters": {
                    "files": 13,
                    "domains": 0,
                    "ip_addresses": 0,
                    "urls": 0,
                    "iocs": 13,
                    "subscribers": 0,
                    "attack_techniques": 13
                },
                "targeted_industries_tree": [],
                "capabilities": [
                    {
                        "confidence": "unconfirmed",
                        "last_seen": null,
                        "description": "Capable of allocating memory.",
                        "first_seen": null,
                        "value": "Allocates memory"
```

```
                }
            ],
            "description": "MILDMAP is an APT28 dropper for the SOURFACE
backdoor.",
            "last_modification_date": 1682107632,
            "alt_names_details": [],
            "alt_names": [],
            "private": true,
            "vendor_fix_references": [],
            "is_content_translated": false,
            "exploitation_vectors": [],
            "risk_factors": [],
            "malware_roles": [
                {
                    "confidence": "unconfirmed",
                    "last_seen": null,
                    "description": null,
                    "first_seen": null,
                    "value": "Dropper"
                }
            ],
            "top_icon_md5": [],
            "workarounds": [],
            "last_seen_details": [
                {
                    "confidence": "unconfirmed",
                    "last_seen": null,
                    "description": null,
                    "first_seen": null,
                    "value": "2023-09-25T02:30:00Z"
                }
            ],
            "summary_stats": {
                "first_submission_date": {
                    "min": 1347557862.0,
                    "max": 1596301806.0,
                    "avg": 1418747098.6153846
                },
                "last_submission_date": {
                    "min": 1373322911.0,
                    "max": 1725889743.0,
                    "avg": 1554571734.2307692
                },
                "files_detections": {
                    "min": 28.0,
                    "max": 60.0,
                    "avg": 46.61538461538461
                }
            },
            "intended_effects": [],
```

```
"name": "MILDMAP",
"vulnerable_products": "",
"files_count": 13,
"field_sources": [],
"operating_systems": [
    {
        "confidence": "unconfirmed",
        "last_seen": null,
        "description": null,
        "first_seen": null,
        "value": "Windows"
    }
],
"targeted_regions_hierarchy": [],
"creation_date": 1714525336,
"tags": [],
"first_seen_details": [],
"subscribers_count": 0,
"motivations": [],
"domains_count": 0,
"tags_details": [],
"targeted_informations": [],
"targeted_regions": [],
"threat_scape": [],
"autogenerated_tags": [
    "armadillo"
],
"version_history": [],
"origin": "Google Threat Intelligence",
"collection_type": "malware-family",
"references_count": 2,
"urls_count": 0,
"targeted_industries": [],
"technologies": [],
"aggregations": {
    "files": {
        "contacted_domains": [
            {
                "value": "www.bing.com",
                "count": 1,
                "total_related": 100000,
                "prevalence": 1e-05
            }
        ],
        "contacted_ips": [
            {
                "value": "200.106.145.122",
                "count": 2,
                "total_related": 5,
                "prevalence": 0.4
```

```
                            }
                        ],
                        "execution_parents": [
                            {
                                "value":
"1acb16dc9c194718758c017c91c439423efcdce6c06ccbb3d1696304eb555b84",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "compressed_parents": [
                            {
                                "value":
"1d986e304d2a4acc507e548b70e18f4ea51b8c8ab042ab21c68feb89d002de01",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "tags": [
                            {
                                "value": "armadillo",
                                "count": 9
                            },
                            {
                                "value": "pedll",
                                "count": 8
                            }
                        ],
                        "vhash": [
                            {
                                "value": "154056655d15751078z3f?z1",
                                "count": 5,
                                "total_related": 7,
                                "prevalence": 0.7142857142857143
                            }
                        ],
                        "imphash": [
                            {
                                "value": "9c58b46236c2f82467517fb1a07efe2d",
                                "count": 5,
                                "total_related": 10,
                                "prevalence": 0.5
                            }
                        ],
                        "behash": [
                            {
                                "value": "2f603f6672ac4e8122820c10927707b2",
                                "count": 3,
```

```
                                "total_related": 17,
                                "prevalence": 0.17647058823529413
                            }
                        ],
                        "tlshhash": [
                            {
                                "value":
"T12192AE8AF77418B3F3E71AB84C211068BB69AD71CF51EC8ED67302C518E6E5ADC20661",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "attributions": [
                            {
                                "value": "mildmap",
                                "count": 12,
                                "total_related": 12,
                                "prevalence": 1.0
                            }
                        ],
                        "crowdsourced_yara_results": [
                            {
                                "value": {
                                    "id": "000f4bfd25|IMPLANT_6_v3",
                                    "ruleset_id": "000f4bfd25",
                                    "ruleset_name": "apt_grizzlybear_uscert",
                                    "rule_name": "IMPLANT_6_v3",
                                    "source": "https://github.com/Neo23x0/
signature-base"
                                },
                                "count": 3,
                                "total_related": 23,
                                "prevalence": 0.13043478260869565
                            }
                        ],
                        "embedded_urls": [
                            {
                                "value": "http://200.106.145.122/~bars/cgi-bin/
brvc.cgi?14",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "mutexes_created": [
                            {
                                "value": "\\Sessions\\1\\BaseNamedObjects\
\Local\\ZonesCacheCounterMutex",
                                "count": 1,
```

```
                                "total_related": 100000,
                                "prevalence": 1e-05
                            }
                        ],
                        "registry_keys_opened": [
                            {
                                "value": "HKEY_CURRENT_USER_Classes\\APPID\\
{de5d803e-5d2a-4b5f-9c63-af25a465cc44}",
                                "count": 3,
                                "total_related": 87396,
                                "prevalence": 3.432651379925855e-05
                            }
                        ],
                        "registry_keys_set": [
                            {
                                "value": "HKEY_LOCAL_MACHINE\\software\
\microsoft\\windows nt\\currentversion\\svchost\\ntsvcs",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "file_types": [
                            {
                                "value": "pedll",
                                "count": 5
                            }
                        ],
                        "crowdsourced_sigma_results": [
                            {
                                "value": {
                                    "id":
"63bcc6f98c4a5594772428a329b433392d70f18a841926328607f303f3d782a5",
                                    "level": "medium",
                                    "title": "Rundll32 Spawned Via
Explorer.EXE",
                                    "author": "CD_ROM_",
                                    "source_url": "https://github.com/Neo23x0/
sigma",
                                    "source": "Sigma Integrated Rule Set
(GitHub)",
                                    "description": "Detects execution of
\"rundll32.exe\" with a parent process of Explorer.exe. This has been observed
by variants of Raspberry Robin, as first reported by Red Canary."
                                },
                                "count": 2,
                                "total_related": 100000,
                                "prevalence": 2e-05
                            }
                        ],
```

```
                        "dropped_files_path": [
                            {
                                "value": "C:\\Users\\user\\AppData\\Local\
\mscsv.tmp (copy)",
                                "count": 2,
                                "total_related": 3,
                                "prevalence": 0.6666666666666666
                            }
                        ],
                        "filecondis_dhash": [
                            {
                                "value": "787a783c58902000",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "pe_info_imports": [
                            {
                                "value": "KERNEL32.dll",
                                "count": 13,
                                "total_related": 100000,
                                "prevalence": 0.00013
                            }
                        ],
                        "pe_info_exports": [
                            {
                                "value": "Start",
                                "count": 8,
                                "total_related": 100000,
                                "prevalence": 8e-05
                            }
                        ],
                        "pe_info_section_md5": [
                            {
                                "value": "3fdf81929ae3bb2619c7f1bddf0a18c1",
                                "count": 2,
                                "total_related": 2,
                                "prevalence": 1.0
                            }
                        ],
                        "pe_info_section_names": [
                            {
                                "value": ".data",
                                "count": 13,
                                "total_related": 100000,
                                "prevalence": 0.00013
                            }
                        ],
                        "sandbox_verdicts": [
```

```
                        {
                            "value": "Malware",
                            "count": 3,
                            "sandbox_name": "Lastline"
                        }
                    ],
                    "rich_pe_header_hash": [
                        {
                            "value": "cb419b26f269240aced3c33db2613de2",
                            "count": 3,
                            "total_related": 6,
                            "prevalence": 0.5
                        }
                    ],
                    "popular_threat_category": [
                        {
                            "value": "trojan",
                            "count": 13
                        }
                    ],
                    "popular_threat_name": [
                        {
                            "value": "sednit",
                            "count": 10
                        }
                    ],
                    "suggested_threat_label": "trojan.sednit/foosace",
                    "attack_techniques": [
                        {
                            "value": "T1129",
                            "count": 5,
                            "total_related": 100000,
                            "prevalence": 5e-05
                        }
                    ],
                    "memory_pattern_urls": [
                        {
                            "value": "http://200.106.145.122/~bars/cgi-bin/
brvc.cgi?14",
                            "count": 1,
                            "total_related": 1,
                            "prevalence": 1.0
                        }
                    ],
                    "attack_tactics": [
                        {
                            "value": "TA0005",
                            "count": 14
                        }
                    ],
```

```
                        "parent_contacted_domains": [
                            {
                                "value": "bing.com",
                                "count": 1,
                                "total_related": 100000,
                                "prevalence": 1e-05
                            }
                        ]
                    }
                }
            },
            "context_attributes": {
                "shared_with_me": false,
                "role": "viewer"
            }
        }
    ]
}
```


ThreatQ provides the following default mapping for these two feeds based on each item within the `.data[]` list.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.attributes.name`	Related Malware.Value	N/A	`.attributes.last_modification_date`	'MILDMAP'	N/A
`.attributes.description`	Related Malware.Description	N/A	`N/A`	'MILDMAP is an APT28 dropper for the SOURFACE backdoor.'	N/A
`.attributes.operating_systems[].value`	Related Malware.Attribute	Target Operating System	`.attributes.last_modification_date`	'Windows'	User-configurable
`.attributes.targeted_industries_tree[].industry_group`	Related Malware.Attribute	Industry	`.attributes.last_modification_date`	N/A	User-configurable
`.attributes.detection_names[].value`	Related Malware.Attribute	Detection	`.attributes.last_modification_date`	N/A	User-configurable

Google Threat Intelligence Related Attack Pattern (Supplemental)

The Google Threat Intelligence Related Attack Pattern Supplemental feed fetches related attack patterns.

`GET {base_url}/api/v3/collections/{entity_id}/attack_techniques`

Sample Response:


```
{
  "data": [
    {
```

```
      "id": "T1003",
      "type": "attack_technique",
      "links": {
        "self": "https://www.virustotal.com/api/v3/attack_techniques/T1003"
      },
      "attributes": {
        "last_modification_date": 1744757617,
        "creation_date": 1496266219,
        "description": "Adversaries may attempt to dump credentials to obtain
account login and credential material, normally in the form of a hash or a
clear text password. Credentials can be obtained from OS caches, memory, or
structures. Credentials can then be used to perform Lateral Movement and access
restricted information.\nSeveral of the tools mentioned in associated sub-
techniques may be used by both adversaries and professional security testers.
Additional custom tools likely exist as well.",
        "name": "OS Credential Dumping",
        "info": {
          "x_mitre_attack_spec_version": "3.2.0",
          "x_mitre_contributors": [
            "Vincent Le Toux",
            "Ed Williams, Trustwave, SpiderLabs",
            "Tim (Wadhwa-)Brown",
            "Yves Yonan"
          ],
          "x_mitre_deprecated": false,
          "x_mitre_domains": [
            "enterprise-attack"
          ],
          "x_mitre_is_subtechnique": false,
          "x_mitre_modified_by_ref": "identity--c78cb6e5-0c4b-4611-8297-
d1b8b55e40b5",
          "x_mitre_platforms": [
            "Windows",
            "Linux",
            "macOS"
          ],
          "x_mitre_version": "2.2",
          "x_mitre_data_sources": [
            "Network Traffic: Network Traffic Content",
            "Process: Process Creation",
            "Network Traffic: Network Traffic Flow",
            "File: File Creation",
            "Windows Registry: Windows Registry Key Access",
            "Process: OS API Execution",
            "File: File Access",
            "Process: Process Access",
            "Command: Command Execution",
            "Active Directory: Active Directory Object Access"
          ],
          "x_mitre_detection": "Windows\nMonitor for unexpected processes
```

```
interacting with lsass.exe. Common credential dumpers such as Mimikatz access
the LSA Subsystem Service (LSASS) process by opening the process, locating the
LSA secrets key, and decrypting the sections in memory where credential details
are stored. Credential dumpers may also use methods for reflective Process
Injection to reduce potential indicators of malicious activity.\nHash dumpers
open the Security Accounts Manager (SAM) on the local file system
(%SystemRoot%/system32/config/SAM) or create a dump of the Registry SAM key to
access stored account password hashes. Some hash dumpers will open the local
file system as a device and parse to the SAM table to avoid file access
defenses. Others will make an in-memory copy of the SAM table before reading
hashes. Detection of compromised Valid Accounts in-use by adversaries may help
as well. \nOn Windows 8.1 and Windows Server 2012 R2, monitor Windows Logs for
LSASS.exe creation to verify that LSASS started as a protected process.
\nMonitor processes and command-line arguments for program execution that may
be indicative of credential dumping. Remote access tools may contain built-in
features or incorporate existing tools like Mimikatz. PowerShell scripts also
exist that contain credential dumping functionality, such as PowerSploit's
Invoke-Mimikatz module,  which may require additional logging features to be
configured in the operating system to collect necessary information for
analysis.\nMonitor domain controller logs for replication requests and other
unscheduled activity possibly associated with DCSync.    Note: Domain
controllers may not log replication requests originating from the default
domain controller account. . Also monitor for network protocols    and other
replication requests  from IPs not associated with known domain controllers.
\nLinux\nTo obtain the passwords and hashes stored in memory, processes must
open a maps file in the /proc filesystem for the process being analyzed. This
file is stored under the path /proc/<pid>/maps, where the <pid> directory is
the unique pid of the program being interrogated for such authentication data.
The AuditD monitoring tool, which ships stock in many Linux distributions, can
be used to watch for hostile processes opening this file in the proc file
system, alerting on the pid, process name, and arguments of such programs."
        },
        "stix_id": "attack-pattern--0a3ead4e-6d47-4ccb-854c-a6a4f9d96b22",
        "link": "https://attack.mitre.org/techniques/T1003/",
        "revoked": false
      }
    }
  ]
}
```


ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.data[].id - .data[].attributes.name`	Related AttackPattern .Value	N/A	`.data[] attributes.creation_date`	`T1003 - OS Credential Dumping`	If there is a MITRE Attack Pattern in ThreatQ Library, it will be related; if not, it will be ingested in the `ID - Name` format.
`.data[].attributes.description`	Related AttackPattern .Description	N/A	N/A	`Adversaries may attempt to dump credentials ...`	N/A

Google Threat Intelligence Related Campaigns (Supplemental)

The Google Threat Intelligence Related Campaigns supplemental feed returns associated collections of the campaign objects.

```
GET {base_url}/api/v3/collections/{entity_id}/campaigns
```

Sample Response:


```
{
  "data": [
    {
      "id": "campaign--27396631-640a-5079-954a-73a54f1c4d70",
      "type": "collection",
      "links": {
        "self": "https://www.virustotal.com/api/v3/collections/
campaign--27396631-640a-5079-954a-73a54f1c4d70"
      },
      "attributes": {
        "alt_names_details": [
          {
            "first_seen": null,
            "confidence": "confirmed",
            "last_seen": null,
            "description": null,
            "value": "CAMP.24.044"
          }
        ],
        "first_seen_details": [
          {
            "first_seen": null,
            "confidence": "unconfirmed",
            "last_seen": null,
            "description": "Mandiant Observed First Activity of Campaign",
            "value": "2024-02-08T00:00:00Z"
          }
        ],
        "tags_details": [],
        "vulnerable_products": "",
        "exploitation_vectors": [],
        "version_history": [],
        "detection_names": [],
        "campaign_type": "INDIVIDUAL",
        "first_seen": 1707350400,
        "recent_activity_summary": [
          0,
          3
        ],
        "subscribers_count": 0,
        "vendor_fix_references": [],
        "last_modification_date": 1751319613,
        "operating_systems": [],
```

```
        "risk_factors": [],
        "private": true,
        "origin": "Google Threat Intelligence",
        "targeted_industries_tree": [
          {
            "industry_group": "Government",
            "industry": null,
            "confidence": "confirmed",
            "first_seen": null,
            "last_seen": null,
            "description": null,
            "source": null
          }
        ],
        "name": "APT28 Conducts Credential Harvesting Campaign Targeting
Multiple European Entities",
        "affected_systems": [],
        "source_region": "RU",
        "available_mitigation": [],
        "capabilities": [],
        "summary_stats": {
          "first_submission_date": {
            "min": 0.0,
            "max": 1728998106.0,
            "avg": 1587694613.9230769
          },
          "last_submission_date": {
            "min": 0.0,
            "max": 1748843074.0,
            "avg": 1591272176.5384614
          },
          "files_detections": {
            "min": 0.0,
            "max": 2.0,
            "avg": 1.0
          },
          "urls_detections": {
            "min": 0.0,
            "max": 12.0,
            "avg": 4.125
          }
        },
        "last_seen": 1727913600,
        "mitigations": [],
        "references_count": 0,
        "domains_count": 1,
        "autogenerated_tags": [
          "contains-embedded-js",
          "base64-embedded"
        ],
```

```
        "description": "Starting in early February 2024, Mandiant observed
UNC4697, a subcluster of APT28 focused on credential harvesting activity. The
threat group distributed phishing emails to organizations containing links to
websites hosting fake Outlook login and password change templates. Targets of
this broad campaign included primarily Government entities in Europe and the
Middle East.",
        "last_seen_details": [
          {
            "first_seen": null,
            "confidence": "unconfirmed",
            "last_seen": null,
            "description": null,
            "value": "2024-10-03T00:00:00Z"
          }
        ],
        "files_count": 8,
        "motivations": [
          {
            "first_seen": null,
            "confidence": "confirmed",
            "last_seen": null,
            "description": null,
            "value": "Espionage"
          }
        ],
        "top_icon_md5": [
          "fc1881a5a70d2f3994eab9ea36b40305",
          "06bde06ab3839695045d6a0a8920d0e7"
        ],
        "creation_date": 1725545954,
        "collection_links": [],
        "technologies": [],
        "urls_count": 8,
        "counters": {
          "files": 8,
          "domains": 1,
          "ip_addresses": 0,
          "urls": 8,
          "iocs": 17,
          "subscribers": 0,
          "attack_techniques": 3
        },
        "malware_roles": [],
        "tags": [],
        "collection_type": "campaign",
        "is_content_translated": false,
        "targeted_informations": [],
        "targeted_regions_hierarchy": [
          {
            "region": "Europe",
```

```
            "sub_region": "Western Europe",
            "country": "France",
            "country_iso2": "FR",
            "confidence": "confirmed",
            "first_seen": null,
            "last_seen": null,
            "description": null,
            "source": null
          }
        ],
        "intended_effects": [],
        "threat_scape": [],
        "recent_activity_relative_change": 2.0,
        "ip_addresses_count": 0,
        "source_regions_hierarchy": [
          {
            "region": "Europe",
            "sub_region": "Eastern Europe",
            "country": "Russian Federation",
            "country_iso2": "RU",
            "confidence": "confirmed",
            "first_seen": null,
            "last_seen": null,
            "description": null,
            "source": null
          }
        ],
        "status": "COMPUTED",
        "field_sources": [],
        "targeted_regions": [
          "RO",
          "TR"
        ],
        "merged_actors": [],
        "targeted_industries": [],
        "workarounds": [],
        "alt_names": [
          "CAMP.24.044"
        ],
        "aggregations": {
          "files": {
            "itw_urls": [
              {
                "value": "http://run.mocky.io/v3/1070436c-7a99-47eb-a30c-
c34609165fe7",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
```

```
            "contacted_domains": [
              {
                "value": "73ce1aae8a9ba738b91040232524f51a.serveo.net",
                "count": 1,
                "total_related": 2,
                "prevalence": 0.5
              }
            ],
            "contacted_ips": [
              {
                "value": "138.68.79.95",
                "count": 1,
                "total_related": 883,
                "prevalence": 0.0011325028312570782
              }
            ],
            "dropped_files_sha256": [
              {
                "value":
"502365d41f45ede605f0c59e78bf58039f6262bd97d6b89f801ace3e9d9e04c8",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "tags": [
              {
                "value": "base64-embedded",
                "count": 3
              }
            ],
            "vhash": [
              {
                "value": "htm:223a8178b49e7ca1fbe433b41ed8c536",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "behash": [
              {
                "value": "76a8f43d77060240bf707251c1cd5008",
                "count": 2,
                "total_related": 49242,
                "prevalence": 4.0615734535559076e-05
              }
            ],
            "tlshhash": [
              {
                "value":
```

```
"T10E03BF3F57A23D0EA45B40E8F6A19D4A3F1E48138CCF96347C3C2B4CDF82AE84251A58",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "crowdsourced_ids_results": [
              {
                "value": {
                  "id": "1:2027942",
                  "message": "ET POLICY DNS Query to a Reverse Proxy Service
Observed",
                  "category": "policy-violation",
                  "source": "Proofpoint Emerging Threats Open",
                  "url": "https://rules.emergingthreats.net/",
                  "rule": "alert dns $HOME_NET any -> any any (msg:\"ET POLICY
DNS Query to a Reverse Proxy Service Observed\"; dns.query; content:
\".serveo.net\"; nocase; endswith; classtype:policy-violation; sid:2027942;
rev:3; metadata:affected_product Any, attack_target Client_Endpoint, created_at
2019_09_03, deployment Perimeter, confidence High, signature_severity Major,
updated_at 2020_09_17;)"
                },
                "count": 1,
                "total_related": 207,
                "prevalence": 0.004830917874396135
              }
            ],
            "crowdsourced_yara_results": [
              {
                "value": {
                  "id": "0122bae1e9|Base64_Encoded_URL",
                  "ruleset_id": "0122bae1e9",
                  "ruleset_name": "Base64_Encoded_URL",
                  "rule_name": "Base64_Encoded_URL",
                  "source": "https://github.com/InQuest/yara-rules-vt"
                },
                "count": 4,
                "total_related": 100000,
                "prevalence": 4e-05
              }
            ],
            "embedded_domains": [
              {
                "value": "enry48yoi2olq.x.pipedream.net",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "embedded_ips": [
              {
```

```
                "value": "178.158.223.1",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "embedded_urls": [
              {
                "value": "https://enry48yoi2olq.x.pipedream.net/",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "mutexes_created": [
              {
                "value": "\\Sessions\\1\\BaseNamedObjects\\Local\
\x64_10MU_ACB10_S-1-5-5-0-394236",
                "count": 1,
                "total_related": 726,
                "prevalence": 0.0013774104683195593
              }
            ],
            "mutexes_opened": [
              {
                "value": "Local\\10MU_ACB10_S-1-5-5-0-189300",
                "count": 1,
                "total_related": 8883,
                "prevalence": 0.00011257458065968704
              }
            ],
            "registry_keys_deleted": [
              {
                "value": "HKEY_CURRENT_USER\\Software\\Google\\Chrome\
\PreferenceMACs\\Default\\extensions.settings",
                "count": 2,
                "total_related": 100000,
                "prevalence": 2e-05
              }
            ],
            "registry_keys_opened": [
              {
                "value": "HKEY_CURRENT_USER\\SOFTWARE\\Policies\\Google\
\Chrome",
                "count": 2,
                "total_related": 100000,
                "prevalence": 2e-05
              }
            ],
            "registry_keys_set": [
```

```
            {
              "value": "HKEY_CURRENT_USER\\Software\\Microsoft\\Office\\16.0\
\Outlook\\Perf\\RoamingStreamsCache\\6154541E1BB6474FBCF1DBF1502AFDA8",
              "count": 1,
              "total_related": 1,
              "prevalence": 1.0
            }
          ],
          "file_types": [
            {
              "value": "html",
              "count": 3
            },
            {
              "value": "email",
              "count": 1
            }
          ],
          "crowdsourced_sigma_results": [
            {
              "value": {
                "id":
"cfd44c3835317e846b18021a9060f4b9b011294ec53eb3ac1fad568abeb37922",
                "level": "medium",
                "title": "Office Application Initiated Network Connection To
Non-Local IP",
                "author": "Christopher Peacock '@securepeacock', SCYTHE
'@scythe_io', Florian Roth (Nextron Systems), Tim Shelton, Nasreddine
Bencherchali (Nextron Systems)",
                "source_url": "https://github.com/Neo23x0/sigma",
                "source": "Sigma Integrated Rule Set (GitHub)",
                "description": "Detects an office application (Word, Excel,
PowerPoint)  that initiate a network connection to a non-private IP addresses.
\nThis rule aims to detect traffic similar to one seen exploited in
CVE-2021-42292.\nThis rule will require an initial baseline and tuning that is
specific to your organization.\n"
              },
              "count": 1,
              "total_related": 100000,
              "prevalence": 1e-05
            }
          ],
          "dropped_files_path": [
            {
              "value": "40861A75-839A-43E8-A7CF-A151C68F93E5",
              "count": 1,
              "total_related": 1,
              "prevalence": 1.0
            }
          ],
```

```
            "sandbox_verdicts": [
              {
                "value": "Malware",
                "count": 2,
                "sandbox_name": "Zenbox"
              }
            ],
            "popular_threat_category": [
              {
                "value": "phishing",
                "count": 1
              }
            ],
            "popular_threat_name": [
              {
                "value": "phishingx",
                "count": 1
              }
            ],
            "suggested_threat_label": "phishing.phishingx",
            "attack_techniques": [
              {
                "value": "T1056.002",
                "count": 1,
                "total_related": 7666,
                "prevalence": 0.00013044612575006522
              }
            ],
            "memory_pattern_urls": [
              {
                "value": "https://73ce1aae8a9ba738b91040232524f51a.serveo.net/
img?fuid=rada-sng",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "attack_tactics": [
              {
                "value": "TA0005",
                "count": 10
              }
            ],
            "parent_contacted_domains": [
              {
                "value": "serveo.net",
                "count": 1,
                "total_related": 2,
                "prevalence": 0.5
              }
```

```
            ]
          },
          "urls": {
            "http_response_contents": [
              {
                "value":
"21319c912fc4a6f63a92e53c3f9026e64ab6bb764de4166e402896210f0b0c3f",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "downloaded_files": [
              {
                "value":
"c955e57777ec0d73639dca6748560d00aa5eb8e12f13ebb2ed9656add3908f97",
                "count": 3,
                "total_related": 95789,
                "prevalence": 3.1318836192047103e-05
              }
            ],
            "domains": [
              {
                "value": "run.mocky.io",
                "count": 3,
                "total_related": 773,
                "prevalence": 0.0038809831824062097
              }
            ],
            "embedded_js": [
              {
                "value":
"23ff9bedb5083664a04982c42a1fe8a31879fe9f8e09c3e4c4d30818f53f7916",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "favicon_dhash": [
              {
                "value": "a6d8de2b2a84a49a",
                "count": 3,
                "total_related": 1772,
                "prevalence": 0.001693002257336343
              }
            ],
            "favicon_raw_md5": [
              {
                "value": "fc1881a5a70d2f3994eab9ea36b40305",
                "count": 3,
```

```
                "total_related": 1772,
                "prevalence": 0.001693002257336343
              }
            ],
            "html_titles": [
              {
                "value": "Outlook Web App",
                "count": 3,
                "total_related": 100000,
                "prevalence": 3e-05
              }
            ],
            "ip_addresses": [
              {
                "value": "91.208.207.221",
                "count": 2,
                "total_related": 987,
                "prevalence": 0.002026342451874367
              }
            ],
            "memory_patterns": [
              {
                "value":
"1797e4cfe9e0162014c2628d9289c14ab140d002f32f8e54312f2be9a1fb6d89",
                "count": 1,
                "total_related": 1,
                "prevalence": 1.0
              }
            ],
            "outgoing_links": [
              {
                "value": "https://enjr7ohxba0fn.x.pipedream.net",
                "count": 1,
                "total_related": 5,
                "prevalence": 0.2
              }
            ],
            "path": [
              {
                "value": "/3a417ebd-87b4-4b50-af7c-863d65fee25f",
                "count": 1,
                "total_related": 2,
                "prevalence": 0.5
              }
            ],
            "prefix_paths": [
              {
                "value": "/3a417ebd-87b4-4b50-af7c-863d65fee25f",
                "count": 1,
                "total_related": 2,
```

```
              "prevalence": 0.5
            }
          ],
          "suffix_paths": [
            {
              "value": "/3a417ebd-87b4-4b50-af7c-863d65fee25f",
              "count": 1,
              "total_related": 2,
              "prevalence": 0.5
            }
          ],
          "query_strings": [
            {
              "value": "fuid=rada-sng@ukr.net",
              "count": 1,
              "total_related": 2,
              "prevalence": 0.5
            }
          ],
          "query_param_keys": [
            {
              "value": "fuid",
              "count": 1,
              "total_related": 1659,
              "prevalence": 0.0006027727546714888
            }
          ],
          "query_param_values": [
            {
              "value": "rada-sng@ukr.net",
              "count": 1,
              "total_related": 2,
              "prevalence": 0.5
            }
          ],
          "query_param_key_values": [
            {
              "value": "fuid=rada-sng@ukr.net",
              "count": 1,
              "total_related": 2,
              "prevalence": 0.5
            }
          ],
          "referring_files": [
            {
              "value":
"1797e4cfe9e0162014c2628d9289c14ab140d002f32f8e54312f2be9a1fb6d89",
              "count": 1,
              "total_related": 1,
              "prevalence": 1.0
```

```
            }
          ],
          "tags": [
            {
              "value": "base64-embedded",
              "count": 3
            }
          ]
        },
        "domains": {
          "downloaded_files": [
            {
              "value":
"c955e57777ec0d73639dca6748560d00aa5eb8e12f13ebb2ed9656add3908f97",
              "count": 1,
              "total_related": 4245,
              "prevalence": 0.00023557126030624264
            }
          ],
          "urls": [
            {
              "value": "https://enjr7ohxba0fn.x.pipedream.net/",
              "count": 1,
              "total_related": 1,
              "prevalence": 1.0
            }
          ]
        }
      }
    },
    "context_attributes": {
      "shared_with_me": false,
      "role": "viewer"
    }
  }
 ]
}
```


ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].attributes.name	Related Campaign.Value	N/A	.data[].attributes.last_modification_date	APT28 Conducts Credential Harvesting Campaign Targeting Multiple European Entities	N/A
.data[].attributes.description	Related Campaign.Description	N/A	N/A	Starting in early February 2024, Mandiant observed UNC4697 ...	N/A

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].attributes.motivations[].value	Related Campaign.Attribute	Motivation	.data[].attributes.last_modification_date	Espionage	User-configurable. If Motivations is checked in Campaign Context.
.data[].attributes.source_regions_hierarchy[].region	Related Campaign.Attribute	Source Region	.data[].attributes.last_modification_date	Europe	User-configurable. If Source Regions Context is checked in Campaign Context.
.data[].attributes.source_regions_hierarchy[].sub_region	Related Campaign.Attribute	Source Sub Region	.data[].attributes.last_modification_date	Eastern Europe	User-configurable. If Source Regions Context is checked in Campaign Context.
.data[].attributes.source_regions_hierarchy[].country	Related Campaign.Attribute	Source Country	.data[].attributes.last_modification_date	Russian Federation	User-configurable. If Source Regions Context is checked in Campaign Context.
.data[].attributes.source_regions_hierarchy[].country_iso2	Related Campaign.Attribute	Source Country Code	.data[].attributes.last_modification_date	RU	User-configurable. If Source Regions Context is checked in Campaign Context.
.data[].attributes.targeted_regions_hierarchy.region	Related Campaign.Attribute	Target Region	.data[].attributes.last_modification_date	Europe	User-configurable. If Targeted Regions Context is checked in Campaign Context.
.data[].attributes.targeted_regions_hierarchy.country	Related Campaign.Attribute	Target Country	.data[].attributes.last_modification_date	France	User-configurable. If Targeted Regions Context is checked in Campaign Context.
.data[].attributes.targeted_regions_hierarchy.sub_region	Related Campaign.Attribute	Target Sub Region	.data[].attributes.last_modification_date	Western Europe	User-configurable. If Targeted Regions Context is checked in Campaign Context.
.data[].attributes.targeted_regions_hierarchy.country_iso2	Related Campaign.Attribute	Target Country Code	.data[].attributes.last_modification_date	FR	User-configurable. If Targeted Regions Context is checked in Campaign Context.
.data[].attributes.last_seen	Related Campaign.Attribute	Last Seen	.data[].attributes.last_modification_date	1727913600	Updatable. Timestamp value.
.data[].attributes.targeted_industries_tree[].industry_group	Related Campaign.Attribute	Target Sector	.data[].attributes.last_modification_date	Government	User-configurable.

Google Threat Intelligence Related IOC (Supplemental)

The Google Threat Intelligence Related IOC supplemental feed fetches indicators related to threat actors.

```
GET {base_url}/api/v3/collections/{entity_id}/search
```

IP Addresses

```
GET {base_url}/api/v3/collections/{entity_id}/search?query=entity:ip
```

Sample Response:


```
{
  "data": [
    {
      "id": "45.154.13.229",
      "type": "ip_address",
      "links": {
        "self": "https://www.virustotal.com/api/v3/ip_addresses/45.154.13.229"
      },
      "attributes": {
        "threat_severity": {
          "version": "I3",
          "threat_severity_level": "SEVERITY_NONE",
          "threat_severity_data": {
            "belongs_to_bad_collection": true
          },
          "last_analysis_date": "1713287964",
          "level_description": "Severity NONE because it has no detections."
        },
        "reputation": 0,
        "mandiant_ic_score": 35,
        "last_https_certificate_date": 1713287964,
        "tags": [],
        "whois": "inetnum: 45.0.0.0 - 45.255.255.255\nnetname: IANA-
NETBLOCK-45\ndescr: This network range is not fully allocated to APNIC.\ndescr:
\ndescr: If your whois search has returned this message, then you have\ndescr:
searched the APNIC whois database for an address that is\ndescr: allocated by
another Regional Internet Registry (RIR).\ndescr:\ndescr: Please search the
other RIRs at whois.arin.net or whois.ripe.net\ndescr: for more information
about that range.\ncountry: AU\nadmin-c: IANA1-AP\ntech-c: IANA1-AP\nabuse-c:
AA1452-AP\nstatus: ALLOCATED PORTABLE\nremarks: For general info on spam
complaints email spam@apnic.net.\nremarks: For general info on hacking & abuse
complaints email abuse@apnic .net.\nmnt-by: APNIC-HM\nmnt-lower: APNIC-HM\nmnt-
irt: IRT-APNIC-AP\nlast-modified: 2021-02-15T05:31:12Z\nsource: APNIC\nirt:
IRT-APNIC-AP\naddress: Brisbane, Australia\ne-mail: helpdesk@apnic.net\nabuse-
mailbox: helpdesk@apnic.net\nadmin-c: HM20-AP\ntech-c: NO4-AP\nauth: #
Filtered\nremarks: APNIC is a Regional Internet Registry.\nremarks: We do not
operate the referring network and\nremarks: are unable to investigate
complaints of network abuse.\nremarks: For information about IRT, see
```

```
www.apnic.net/irt\nremarks: helpdesk@apnic.net was validated on
2020-02-03\nmnt-by: APNIC-HM\nlast-modified: 2023-08-18T00:42:38Z\nsource:
APNIC\nrole: ABUSE APNICAP\naddress: Brisbane, Australia\ncountry: ZZ\nphone:
+000000000\ne-mail: helpdesk@apnic.net\nadmin-c: HM20-AP\ntech-c: NO4-AP\nnic-
hdl: AA1452-AP\nremarks: Generated from irt object IRT-APNIC-AP\nremarks:
helpdesk@apnic.net was validated on 2020-02-03\nabuse-mailbox:
helpdesk@apnic.net\nmnt-by: APNIC-ABUSE\nlast-modified:
2023-08-18T19:08:30Z\nsource: APNIC\nrole: Internet Assigned Numbers
Authority\naddress: see http://www.iana.org.\nadmin-c: IANA1-AP\ntech-c: IANA1-
AP\nnic-hdl: IANA1-AP\nremarks: For more information on IANA services\nremarks:
go to IANA web site at http://www.iana.org.\nmnt-by: MAINT-APNIC-AP\nlast-
modified: 2018-06-22T22:34:30Z\nsource: APNIC\n",
        "first_seen_itw_date": 1616047642,
        "last_analysis_results": {
          "Acronis": {
            "method": "blacklist",
            "engine_name": "Acronis",
            "category": "harmless",
            "result": "clean"
          }
        },
        "network": "45.154.12.0/22",
        "continent": "AS",
        "as_owner": "MOACK.Co.LTD",
        "country": "KR",
        "asn": 138195,
        "last_analysis_stats": {
          "malicious": 0,
          "suspicious": 0,
          "undetected": 32,
          "harmless": 62,
          "timeout": 0
        },
        "last_seen_itw_date": 1655397785,
        "last_modification_date": 1746637167,
        "total_votes": {
          "harmless": 0,
          "malicious": 0
        },
        "whois_date": 1713222068,
        "jarm":
"3fd3fd20d3fd3fd21c42d42d000000937221baefa0b90420c8e8e41903f1d5",
        "regional_internet_registry": "APNIC",
        "last_analysis_date": 1713287954,
        "last_https_certificate": {
          "cert_signature": {
            "signature_algorithm": "sha256RSA",
            "signature":
"df3a652aa0a5b21920b0554d2ccafcd68471e0f8bf445c57877c540c8f29e2a9c1e2e13a455b7e
07dca63330801c9ece9d9d58b44e471a35815241c425489c94bde07c597c5cc21e0aca452d75905
685e52ca591fb27e0fe45227ec5a60ccf0c2819d6eaf52d51f5e04928bc369d3c3c847cbafe3cfe
```

```
7ab36f87ea71549f85e9526fbfdb838fb54e221cac594b1c3c3d6a32573e602b210ca77989bb3fc
56f1d51868b5938d27c3d97adb2459613b7b536383161969cdd24448617cbc6b8dc82df246bd6b8
b992d144ca0dc2a55e2c08c3017d576684df46f81dcb628fa3c5363424d94b914f65efaa4c83d40
54e8774ae63a9296546c4cbd2814f87d712bb03"
          },
          "extensions": {
            "authority_key_identifier": {
              "keyid": "78df91905feedeacf6c575ebd54c5553ef244ab6"
            },
            "subject_key_identifier":
"ba370b6e8713bcc5e05fcd61f1406674764039fc",
            "subject_alternative_name": [
              "juoffer.com",
              "www.juoffer.com"
            ],
            "key_usage": [
              "digitalSignature",
              "keyEncipherment"
            ],
            "extended_key_usage": [
              "serverAuth",
              "clientAuth"
            ],
            "certificate_policies": [
              "2.23.140.1.2.1"
            ],
            "ca_information_access": {
              "OCSP": "http://ocsp.digicert.com",
              "CA Issuers": "http://cacerts.digicert.com/
EncryptionEverywhereDVTLSCA-G2.crt"
            },
            "CA": false,
            "1.3.6.1.4.1.11129.2.4.2":
"0482016c016a007700eecdd064d5db1acec55cb79db4cd13a23287467cbcecde"
          },
          "validity": {
            "not_after": "2024-08-20 23:59:59",
            "not_before": "2023-08-20 00:00:00"
          },
          "size": 1538,
          "version": "V3",
          "public_key": {
            "algorithm": "RSA",
            "rsa": {
              "modulus":
"b2f83f6781fa5ed3f32a2385110b2d89c3aff8e67fe06af33132163354ce68a7785f5c6e35f2d6
8797434acd232c716967e891c876c545d3ef6c23d9e6d478ac35471a159101b5b5735de360a8bfc
42bcc51fc0aa3bab6f695fc946dd0e62af61e14f9f5a686a3bfa8cda8f0c5162ee2d77bc4e4039f
4fc1924a0c1e9ad9141306854c13691e607a9b52cc3477f01a9de7316bd0cf1b21dfb4c6cda14bc
d788ff72c0ee99cfc860af365c03a5dd4a0234bb94320354e38370717958d28fef87b9ffb62677d
e78ca394a98af2043345b47b5bf0fc04cbc0e13a1d15af44430315cb391e565c7ecedc59842425c
```

```
c908375bd9f3d7f83ca62a8f9f7d88f292e37b1",
              "exponent": "10001",
              "key_size": 2048
            }
          },
          "thumbprint_sha256":
"595ac1d22ba540a8a92a66436094e54dbb6265f6f9a8227470c56dade415e60a",
          "thumbprint": "db988be0f18edc5db901b82854f1cfd026895623",
          "serial_number": "76b33e3cb51cc417fe6a884dbee617a",
          "issuer": {
            "C": "US",
            "O": "DigiCert Inc",
            "OU": "www.digicert.com",
            "CN": "Encryption Everywhere DV TLS CA - G2"
          },
          "subject": {
            "CN": "juoffer.com"
          }
        },
        "gti_assessment": {
          "threat_score": {
            "value": 1
          },
          "severity": {
            "value": "SEVERITY_NONE"
          },
          "contributing_factors": {
            "mandiant_association_actor": true,
            "mandiant_confidence_score": 35,
            "gti_confidence_score": 59,
            "malicious_sandbox_verdict": false,
            "mandiant_association_report": true,
            "mandiant_association_malware": true,
            "safebrowsing_verdict": "harmless"
          },
          "verdict": {
            "value": "VERDICT_UNDETECTED"
          },
          "description": "This indicator did not match our detection criteria
and there is currently no evidence of malicious activity."
        }
      }
    }
  ]
}
```


Hashes

```
GET {base_url}/api/v3/collections/{entity_id}/search?query=entity:url
```

Sample Response:

```
{
    "data": [
        {
            "id":
"c8fd3259549a33b42da38c3f53301f73a66df1a007dbbd2d18ad94b95b4ca37a",
            "type": "file",
            "links": {
                "self": "https://www.virustotal.com/api/v3/files/
c8fd3259549a33b42da38c3f53301f73a66df1a007dbbd2d18ad94b95b4ca37a"
            },
            "attributes": {
                "names": [],
                "last_submission_date": 1446069053,
                "unique_sources": 0,
                "last_analysis_stats": {
                    "malicious": 0,
                    "suspicious": 0,
                    "undetected": 0,
                    "harmless": 0,
                    "timeout": 0,
                    "confirmed-timeout": 0,
                    "failure": 0,
                    "type-unsupported": 0
                },
                "md5": "2c397d151a6137a2a9be6455d143d165",
                "first_seen_itw_date": 1445641333,
                "mandiant_ic_score": 50,
                "available_tools": [],
                "sha1": "2cc2ad776a7a4149ddded992c05b6c458accb0c6",
                "type_description": "unknown",
                "last_seen_itw_date": 1446069053,
                "tags": [],
                "type_tags": [],
                "total_votes": {
                    "harmless": null,
                    "malicious": null
                },
                "last_modification_date": 1741350537,
                "last_analysis_results": {},
                "downloadable": false,
                "sha256":
"c8fd3259549a33b42da38c3f53301f73a66df1a007dbbd2d18ad94b95b4ca37a",
                "first_submission_date": 1445641333,
                "gti_assessment": {
                    "contributing_factors": {
                        "mandiant_confidence_score": 50,
                        "mandiant_association_actor": true
                    },
                    "threat_score": {
                        "value": 1
                    },
```

```
                    "severity": {
                        "value": "SEVERITY_NONE"
                    },
                    "verdict": {
                        "value": "VERDICT_UNKNOWN"
                    },
                    "description": "This indicator did not match our detection
criteria and there is currently no evidence of malicious activity."
                }
            }
        }
    ]
}
```

FQDNs

```
GET {base_url}/api/v3/collections/{entity_id}/search?query=entity:domain
```

Sample Response:

```
{
  "data": [
    {
      "id": "update.centosupdates.com",
      "type": "domain",
      "links": {
        "self": "https://www.virustotal.com/api/v3/domains/
update.centosupdates.com"
      },
      "attributes": {
        "last_analysis_date": 1768880897,
        "last_modification_date": 1768881776,
        "tld": "com",
        "last_dns_records": [
          {
            "type": "A",
            "ttl": 10800,
            "value": "210.71.232.9"
          }
        ],
        "last_update_date": 1765584000,
        "tags": [],
        "whois": "Administrative city: REDACTED FOR PRIVACY\nAdministrative
country: Taiwan, Province Of China\nAdministrative email:
50a11fe4587b136es@gmail.com,\nAdministrative state: Taiwan\nBilling city:
REDACTED FOR PRIVACY\nBilling country: Taiwan, Province Of China\nBilling
email: d52ad5e18ac11e26s@net-chinese.com.tw\nCreate date: 2024-12-05
00:00:00\nDomain name: centosupdates.com\nDomain registrar id: 1336.0\nDomain
registrar url: whois.net-chinese.com.tw\nExpiry date: 2026-12-05
00:00:00\nQuery time: 2025-12-14 04:50:33\nRegistrant address:
```

```
1f8f4166599d23ee\nRegistrant city: 1f8f4166599d23ee\nRegistrant company:
1f8f4166599d23ee\nRegistrant country: Taiwan, Province Of China\nRegistrant
email: 50a11fe4587b136es@gmail.com,\nRegistrant name:
1f8f4166599d23ee\nRegistrant state: 12a25dd97c2aa81d\nRegistrant zip:
1f8f4166599d23ee\nTechnical city: REDACTED FOR PRIVACY\nTechnical country:
Taiwan, Province Of China\nTechnical email: d52ad5e18ac11e26s@net-
chinese.com.tw\nUpdate date: 2025-12-13 00:00:00",
        "first_seen_itw_date": 1640789950,
        "favicon": {
          "raw_md5": "3fa1bd1b382e00cabf7d0048f411af2a",
          "dhash": "41a6597969699641"
        },
        "jarm":
"29d29d00029d29d21c29d29d29d29d4d38a7b5ffb0e5536d09513d9de81205",
        "last_https_certificate_date": 1727165567,
        "creation_date": 1733356800,
        "reputation": 0,
        "last_analysis_results": {
          "Acronis": {
            "method": "blacklist",
            "engine_name": "Acronis",
            "category": "harmless",
            "result": "clean"
          },
          "ZeroFox": {
            "method": "blacklist",
            "engine_name": "ZeroFox",
            "category": "undetected",
            "result": "unrated"
          }
        },
        "last_seen_itw_date": 1694684844,
        "categories": {},
        "popularity_ranks": {},
        "total_votes": {
          "harmless": 0,
          "malicious": 0
        },
        "threat_severity": {
          "version": "D3",
          "threat_severity_level": "SEVERITY_NONE",
          "threat_severity_data": {
            "num_detections": 13,
            "has_bad_communicating_files_high": true,
            "has_bad_communicating_files_medium": true,
            "belongs_to_bad_collection": true,
            "belongs_to_threat_actor": true
          },
          "last_analysis_date": "1765204575",
          "level_description": "Severity NONE because it has less than 2
detections."
```

```
        },
        "last_dns_records_date": 1768880935,
        "last_analysis_stats": {
          "malicious": 13,
          "suspicious": 1,
          "undetected": 27,
          "harmless": 52,
          "timeout": 0
        },
        "last_https_certificate": {
          "cert_signature": {
            "signature_algorithm": "sha256RSA",
            "signature":
"59462d40461e843083f948198463089877da104178d8b8324d2518ef23775c703b04abc6edada8
9d917f94ab1c734d8658d40408de3eabae73ec89df3a4f8364954ff69c134606b40250ccc8e4aed
4cad94f29d6c6423d1689989d36c750e5a07e344dcf2fb4b147ebee0df9bf9a70594f4db9e26961
a0fd5cf07135e391abfe7a344526bc61510054e0317deee97bd18acb7ecd558c169ed6dc23e032b
b9b0b8d53a819f2fb28747e8ebb21af1959aae41cc1f5ff00c034a1c21f8c71024e097963196185
4a6ff5a0664f46223b7ebf065cd6f86c737a9ce3388f1444b49761a0cca666ea017d2b00b348456
fecf924d41b9d64fd77c673d3c7d33cc178aee8"
          },
          "extensions": {
            "key_usage": [
              "digitalSignature",
              "keyEncipherment"
            ],
            "CA": false,
            "ca_information_access": {
              "CA Issuers": "http://secure.globalsign.com/cacert/
gsgccr3dvtlsca2020.crt",
              "OCSP": "http://ocsp.globalsign.com/gsgccr3dvtlsca2020"
            },
            "certificate_policies": [
              "1.3.6.1.4.1.4146.1.10",
              "2.23.140.1.2.1"
            ],
            "crl_distribution_points": [
              "http://crl.globalsign.com/gsgccr3dvtlsca2020.crl"
            ],
            "subject_alternative_name": [
              "*.value-domain.com",
              "value-domain.com"
            ],
            "extended_key_usage": [
              "serverAuth",
              "clientAuth"
            ],
            "authority_key_identifier": {
              "keyid": "0d98c0737fabbdbdd9474b49ad0a4a0cac3ec77c"
            },
```

```
            "subject_key_identifier":
"f64a642d24e28968a6bb468a547fbc09908450d8",
            "1.3.6.1.4.1.11129.2.4.2":
"0482016b0169007600e6d2316340778cc1104106d771b9cec1d240f6968486fb"
          },
          "validity": {
            "not_after": "2025-06-22 09:36:51",
            "not_before": "2024-05-21 09:36:52"
          },
          "size": 1634,
          "version": "V3",
          "public_key": {
            "algorithm": "RSA",
            "rsa": {
              "modulus":
"d3cd29371c6c3cf811692053afe0a5a6d0915f3fdc245de58db79fc596d8e66f4a95a6db55df36
9da915b7e575d2782f391b485de574f5456849ce808097e5b1516ea84db34f7db003269d55ac4a0
a25d5a3abed85c7f8b92cbce863e93d741112b7a51895039d6efc9e6c18cb149bcbbcd8fe494825
1d6830e266bb5929494f4b38a0c183c966f7dd80587d04340fd664745e714ac776af74a8808aed4
25cf0548a36ede19fe4f2b143329814970fa37f52dffcf2bbb534043ffe68d0ef56126489efa880
457afb1305b1d24959250478686e7b7ce9754b7dbd5efc19f1a0392a656ef617d24081fc20dcbc8
c38f024c63b54c4a9b61281c68b91a300703a39",
              "exponent": "10001",
              "key_size": 2048
            }
          },
          "thumbprint_sha256":
"0ef793be2789c1f720db3d14af3409a275b2a07bc9f71940d483c35fd1c64dc8",
          "thumbprint": "ef063301053de37e2cab57b8da7d8f51073ceebe",
          "serial_number": "43dd1a276886f0260ac72bfc",
          "issuer": {
            "C": "BE",
            "O": "GlobalSign nv-sa",
            "CN": "GlobalSign GCC R3 DV TLS CA 2020"
          },
          "subject": {
            "CN": "*.value-domain.com"
          }
        },
        "gti_assessment": {
          "threat_score": {
            "value": 60
          },
          "severity": {
            "value": "SEVERITY_MEDIUM"
          },
          "verdict": {
            "value": "VERDICT_MALICIOUS"
          },
          "contributing_factors": {
```

```
            "malicious_sandbox_verdict": false,
            "mandiant_association_malware": true,
            "mandiant_confidence_score": 50,
            "gti_confidence_score": 90,
            "normalised_categories": [
              "phishing"
            ],
            "mandiant_association_actor": true,
            "safebrowsing_verdict": "harmless",
            "associated_actor": true
          },
          "description": "This indicator is malicious (medium severity). GTI's
ML scoring model identified this indicator as malicious, it is associated with
a tracked Mandiant threat actor, it is associated with a tracked Mandiant
malware family, it is contained within a collection provided by the Google
Threat Intelligence team, or a trusted partner or security researcher and it
was detected as a Mandiant malware family that downloads and potentially
executes a payload."
        }
      }
    }
  ]
}
```


URLs

```
GET {base_url}/api/v3/collections/{entity_id}/search?query=entity:url
```

Sample Response:


```
{
  "data": [
    {
      "id": "2d2c5810e379ac61b4b40453e40d78f0e93b1748d868520ad016888ce102b96c",
      "type": "url",
      "links": {
        "self": "https://www.virustotal.com/api/v3/urls/
2d2c5810e379ac61b4b40453e40d78f0e93b1748d868520ad016888ce102b96c"
      },
      "attributes": {
        "last_submission_date": 1749988084,
        "last_http_response_code": 200,
        "last_analysis_date": 1749988084,
        "total_votes": {
          "harmless": 0,
          "malicious": 0
        },
        "favicon": {
          "raw_md5": "c44bbec78ebc720a8c3783f5f2f37898",
          "dhash": "dcc69eb0b2f2f060"
```

```
        },
        "reputation": 0,
        "threat_severity": {
          "version": "U3",
          "threat_severity_level": "SEVERITY_NONE",
          "threat_severity_data": {
            "num_detections": 5,
            "has_bad_downloaded_files_high": true,
            "has_bad_downloaded_files_medium": true,
            "belongs_to_bad_collection": true,
            "belongs_to_threat_actor": true
          },
          "last_analysis_date": "1749991873",
          "level_description": "Severity NONE because it has less than 2
detections."
        },
        "tld": "com",
        "last_http_response_cookies": {},
        "title": "DriveHQ Error Page",
        "first_seen_itw_date": 1710134463,
        "times_submitted": 18,
        "last_analysis_stats": {
          "malicious": 5,
          "suspicious": 1,
          "undetected": 27,
          "harmless": 64,
          "timeout": 0
        },
        "last_final_url": "https://www.drivehq.com/errorpage.aspx?
fromURL=https://info-mod.firstcloudit.com/&errcode=8&errmsg=Permission+Denied!
+The+file+owner+is+not+allowed+to+publish+files+of+this+type.&gotoURL=/",
        "tags": [
          "password-input",
          "external-resources"
        ],
        "has_content": false,
        "categories": {
          "alphaMountain.ai": "Information Technology, Malicious
(alphaMountain.ai)",
          "BitDefender": "computersandsoftware",
          "Sophos": "information technology",
          "Forcepoint ThreatSeeker": "malicious web sites"
        },
        "last_http_response_content_length": 85993,
        "first_submission_date": 1702405015,
        "mandiant_ic_score": 100,
        "redirection_chain": [
          "https://info-mod.firstcloudit.com/"
        ],
        "url": "https://info-mod.firstcloudit.com/",
```

```
        "last_seen_itw_date": 1712670553,
        "outgoing_links": [
          "https://www.linkedin.com/company/drivehq",
          "https://x.com/TheDriveHQ",
          "https://www.cameraftp.com/CameraFTP/pricing.aspx"
        ],
        "threat_names": [
          "Mal/HTMLGen-A"
        ],
        "last_modification_date": 1750006722,
        "last_http_response_content_sha256":
"463ec407ab626fd608299649f5e3aa868b02968eb7bfd63cb5734d4e5736d44c",
        "last_analysis_results": {
          "Artists Against 419": {
            "method": "blacklist",
            "engine_name": "Artists Against 419",
            "category": "harmless",
            "result": "clean"
          }
        },
        "html_meta": {
          "viewport": [
            "width=device-width, initial-scale=1.0"
          ],
          "author": [
            "DriveHQ"
          ]
        },
        "last_http_response_headers": {
          "Cache-Control": "private",
          "Content-Type": "text/html; charset=utf-8",
          "Vary": "User-Agent,User-Agent",
          "Server": "Microsoft-IIS/10.0",
          "X-Frame-Options": "DENY",
          "X-AspNet-Version": "4.0.30319",
          "Set-Cookie": "refID=0; expires=Wed, 15-Oct-2025 12:46:04 GMT;
path=/; secure; HttpOnly, srcID=0; expires=Wed, 15-Oct-2025 12:46:04 GMT;
path=/; secure; HttpOnly, randID=1012650855447390745; expires=Wed, 15-Oct-2025
12:46:04 GMT; path=/; secure; HttpOnly, ServerUTCDateOffset=-25200000;
expires=Mon, 16-Jun-2025 08:46:04 GMT; path=/; secure",
          "X-Powered-By": "ASP.NET",
          "Date": "Sun, 15 Jun 2025 12:46:03 GMT",
          "Content-Length": "85993"
        },
        "gti_assessment": {
          "verdict": {
            "value": "VERDICT_MALICIOUS"
          },
          "threat_score": {
            "value": 100
```

```
          },
          "severity": {
            "value": "SEVERITY_HIGH"
          },
          "contributing_factors": {
            "safebrowsing_verdict": "harmless",
            "associated_actor": true,
            "mandiant_confidence_score": 100,
            "gti_confidence_score": 99,
            "mandiant_association_actor": true,
            "mandiant_analyst_malicious": true
          },
          "description": "This indicator is malicious (high severity) with high
impact. It was determined as malicious by a Mandiant analyst, Mandiant's
scoring pipeline identified this indicator as malicious, GTI's ML scoring model
identified this indicator as malicious, it is associated with a tracked
Mandiant threat actor and it is contained within a collection provided by the
Google Threat Intelligence team, or a trusted partner or security researcher.
Analysts should prioritize investigation."
        }
      },
      "context_attributes": {
        "url": "https://info-mod.firstcloudit.com/"
      }
    }
  ]
}
```


ThreatQ provides the following default mapping for this feed:

> The following fields are added to the description if they are enabled:
> `.data[].attributes.gti_assessment.description,.attributes.whois, .attributes.outgoing_links, .attributes.crowdsourced_ai_results[], .crowdsourced_context, attributes.names, .attributes.crowdsourced_yara_results, .attributes.sigma_analysis_results`.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.data[].id/ data[].attributes.sha256 / data[].attributes.url`	`Indicator .Value`	`Mapped: .type`	`.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date`	`45.154.13.229 /https:// info-mod.firstcloudit.com/`	See Indicator Type Mapping Table. For `url` type, the value is mapped to `url` key. For type `file`, the value is mapped to `.sha256` and for the rest of them, it is mapped to the `.id` key.
`.data[].attributes.tags, data[].attributes.type_tags`	`Indicator .Tags`	`N/A`	`N/A`	`N/A`	User-configurable. Updatable

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].context_attributes[].sources[type=threat_profile].label	Indicator.Attribute	Threat Profile	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	N/A	User-configurable. Updatable
.data[].attributes.gti_assessment.contributing_factors.mandiant_confidence_score	Indicator.Attribute	Mandiant Score	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	100	User-configurable. Updatable
.data[].attributes.gti_assessment.contributing_factors.normalised_categories[]	Indicator.Attribute	Category	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	N/A	User-configurable
.data[].attributes.gti_assessment.contributing_factors.gti_confidence_score	Indicator.Attribute	Confidence Score	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	99	User-configurable. Updatable
.data[].attributes.gti_assessment.severity.value	Indicator.Attribute	Severity	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	High	User-configurable. Updatable. Title-cased . Severity_ was removed
.data[].attributes.gti_assessment.threat_score.value	Indicator.Attribute	Threat Score	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	100	User-configurable. Updatable
.data[].attributes.gti_assessment.threat_score.value	Indicator.Attribute	Normalised Threat Score	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	High	Normalized based on user-field mapping. User-Configurable. Updatable
.data[].attributes.gti_assessment.verdict.value	Indicator.Attribute	Verdict	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	VERDICT_MALICIOUS	User-configurable, Updatable
.data[].attributes.gti_assessment.contributing_factors.safebrowsing_verdict	Indicator.Attribute	Safe Browsing Verdict	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	Harmless	User-configurable, Updatable
.data[].attributes.gti_assessment.contributing_factors.pervasive_indicator	Indicator.Attribute	Is Pervasive	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	True	User-configurable, Updatable. Converted to String

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].attributes.last_analysis_stats.malicious	Indicator.Attribute	Malicious Count	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	N/A	User-configurable, Updatable.
.data[].attributes.last_analysis_stats.suspicious	Indicator.Attribute	Suspicious Count	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	N/A	User-configurable, Updatable.
.data[].attributes.as_owner	Indicator.Attribute	As Organization	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	MOACK.Co.LTD	User-configurable.
.data[].attributes.asn	Indicator.Attribute	ASN	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	MOACK.Co.LTD	User-configurable, Ingested according to Ingest ASNs As.
.data[].attributes.asn	Related Indicator.Value	ASN	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	MOACK.Co.LTD	User-configurable, Ingested according to Ingest ASNs As.
.data[].attributes.regional_internet_registry	Indicator.Attribute	RIR	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	APNIC	User-configurable.
.data[].attributes.last_http_response_code	Indicator.Attribute	Last HTTP Response Code	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	200	User-configurable.
.data[].attributes.title	Indicator.Attribute	Site Title	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	N/A	User-configurable.
.data[].attributes.last_submission_date	Indicator.Attribute	Last Submission Date	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	2015-10-29T03:20:53	User-configurable.
.data[].attributes.md5	Related Indicator.Value	MD5	.data[].attributes.first_submission_date/.data[].attributes.first_seen_itw_date	2c397d151a6137a2a9be6455d143d165	User-configurable.
.data[].attributes.sha1	Related Indicator.Value	SHA-1	.data[].attributes.first_submission_date/.data[].attribut	2cc2ad776a7a4149ddded992c0	User-configurable.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
			es.first_seen_itw_date	5b6c458accb0c6	
.data[].attributes.crowdsourced_ids_results[].rule_msg	Signature.Name	Snort	N/A	N/A	User-configurable.
.data[].attributes.crowdsourced_ids_results[].rule_raw	Signature.Value	Snort	N/A	N/A	User-configurable.
.data[].attributes.crowdsourced_ids_results[].alert_severity	Signature.Attribute	Severity	N/A	N/A	User-configurable.
.data[].attributes.crowdsourced_ids_results[].rule_category	Signature.Attribute	Category	N/A	N/A	User-configurable.
.data[].attributes.crowdsourced_ids_results[].rule_source	Signature.Attribute	Source	N/A	N/A	User-configurable.
.data[].attributes.meaningful_name	Indicator.Attribute	Meaningful Name	.data[].attributes.last_modification_date	Malicious	User-configurable.
.data[].attributes.continent	Indicator.Attribute	Continent Code	N/A	AS	User-configurable.
.data[].attributes.country	Indicator.Attribute	Country Code	N/A	RU	User-configurable.

For `.data[].attributes.first_submission_date` is not received for IP Addresses and Domains. In this case, the "Published Date" falls on `.data[].attributes.first_seen_itw_date`.

Indicator Type Mapping

The following table displays indicator type mapping from Google to ThreatQ.

GOOGLE TYPE	THREATQ INDICATOR TYPE
ip_address	IP Address
url	URL

GOOGLE TYPE	THREATQ INDICATOR TYPE
domain	FQDN
sha1	SHA-1
md5	MD5
file	SHA-256

Google Threat Intelligence Related Vulnerabilities (Supplemental)

The Google Threat Intelligence Related Vulnerabilities supplemental feed fetches related CVEs.

`GET {base_url}api/v3/collections/{{run_params.entity_id}}/vulnerabilities`

Sample Response:


```
{
    "data": [
        {
            "id": "vulnerability--cve-2004-0210",
            "type": "collection",
            "links": {
                "self": "https://www.virustotal.com/api/v3/collections/
vulnerability--cve-2004-0210"
            },
            "attributes": {
                "risk_factors": [
                    "Local Access Required"
                ],
                "cve_id": "CVE-2004-0210",
                "files_count": 1,
                "creation_date": 1646663312,
                "alt_names": [],
                "targeted_regions": [],
                "alt_names_details": [],
                "priority": "P1",
                "source_regions_hierarchy": [],
                "field_sources": [
                    {
                        "source": {
                            "sources": [],
                            "field_type": "Ranked",
                            "source_name": "Cybersecurity and Infrastructure
Security Agency (CISA)",
                            "source_url": ""
```

```
                        },
                        "field": "cvss.cvssv3_x"
                    }
                ],
                "cisa_known_exploited": {
                    "ransomware_use": "Unknown",
                    "due_date": 1648080000,
                    "added_date": 1646265600
                },
                "status": "COMPUTED",
                "collection_type": "vulnerability",
                "workarounds": [],
                "technologies": [],
                "recent_activity_summary": [
                    0,
                    0
                ],
                "first_seen_details": [],
                "date_of_disclosure": 1089676800,
                "capabilities": [],
                "origin": "Google Threat Intelligence",
                "cvss": {
                    "cvssv3_x": {
                        "vector": "CVSS:3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:H/I:H/
A:H",
                        "base_score": 7.8,
                        "temporal_score": 7.8
                    },
                    "cvssv2_0": {
                        "vector": "AV:L/AC:L/Au:N/C:C/I:C/A:C/E:F/RL:OF/RC:C",
                        "base_score": 7.2,
                        "temporal_score": 6.0
                    }
                },
                "available_mitigation": [
                    "Patch"
                ],
                "affected_systems": [],
                "top_icon_md5": [],
                "tags": [
                    "has_exploits",
                    "observed_in_the_wild"
                ],
                "sources": [
                    {
                        "url": "https://exchange.xforce.ibmcloud.com/
vulnerabilities/16590",
                        "title": "Microsoft Windows POSIX buffer overflow
allows local attacker to gain privileges",
                        "cvss": {
```

```
                            "cvssv3_x": null,
                            "cvssv2_0": null,
                            "cvssv3_x_translated": null,
                            "cvssv4_x": null
                        },
                        "md5": null,
                        "unique_id": null,
                        "published_date": 1089748800,
                        "name": "IBM Corp.",
                        "source_description": null
                    }
                ],
                "targeted_industries_tree": [],
                "urls_count": 0,
                "last_seen_details": [],
                "references_count": 0,
                "malware_roles": [],
                "subscribers_count": 0,
                "tags_details": [
                    {
                        "first_seen": null,
                        "description": null,
                        "last_seen": null,
                        "value": "observed_in_the_wild",
                        "confidence": "possible"
                    }
                ],
                "private": true,
                "epss": {
                    "percentile": 0.9259,
                    "score": 0.10564
                },
                "executive_summary": "\n\n* A Buffer Overflow vulnerability
exists that, when exploited, allows a local, privileged attacker to bypass
certain security mechanisms.\n* This vulnerability has been confirmed to be
exploited in the wild. Unverified exploit code is available.\n* Google Threat
Intelligence Group (GTIG) considers this a Medium-risk vulnerability due to the
potential for bypassing certain security mechanisms, offset by local access
requirements.\n* Mitigation options include a patch.\n",
                "motivations": [],
                "version_history": [
                    {
                        "date": 1743734117,
                        "version_notes": [
                            "exploitation_vectors: Added ['Unspecified Local
Vector'] to existing exploitation_vectors. "
                        ]
                    }
                ],
                "vulnerable_products": "",
```

```
                "last_modification_date": 1743734117,
                "cpes": [
                    {
                        "end_rel": null,
                        "end_cpe": null,
                        "start_rel": "=",
                        "start_cpe": {
                            "version": "",
                            "product": "Windows 2000",
                            "uri":
"cpe:2.3:o:microsoft:windows_2000:-:sp3:*:*:advanced_server:*:*:*",
                            "vendor": "Microsoft"
                        }
                    }
                ],
                "summary_stats": {
                    "first_submission_date": {
                        "min": 1639345444.0,
                        "max": 1639345444.0,
                        "avg": 1639345444.0
                    },
                    "last_submission_date": {
                        "min": 1639390624.0,
                        "max": 1639390624.0,
                        "avg": 1639390624.0
                    },
                    "files_detections": {
                        "min": 0.0,
                        "max": 0.0,
                        "avg": 0.0
                    }
                },
                "exploitation_vectors": [
                    "Local Access",
                    "Unspecified Local Vector"
                ],
                "analysis": "\n\nAn attacker could exploit this vulnerability
to gain elevated privileges. An attacker would need to specially craft a
malicious application and run it on the vulnerable system. A failed attempt at
exploitation could potentially cause a crash of the application, resulting in a
denial-of-service condition.\n\nThis vulnerability has been exploited by the
Tsar Team since at least 2007 in a variety of campaigns. For more information,
please refer to the report, \"[Overview of Tsar Team Espionage Activity]
(https://advantage.mandiant.com/reports/16-00014614).\"\n\nIn January 2014, a
campaign ofÂ targeted spam messages began with the intent of installing
Gameover Zeus on victim systems. For more information, please refer to the
report, \"[Gameover Zeus Resumes Operations with Altered Malware and Increased
Use of Fluxxy and KOL Fast-Flux Infrastructure Hosting](https://
advantage.mandiant.com/reports/Intel-1167778).\"\n\nCISA added this
vulnerability to its Known Exploited Vulnerabilities Catalog on March 3, 2022,
```

```
with a required remediation date of March 24, 2022.\n\n  \nMandiant Threat
Intelligence considers this a Medium-risk vulnerability due to the potential
for escalation of privileges, offset by the local access required.\n\n",
                "ip_addresses_count": 0,
                "risk_rating": "MEDIUM",
                "days_to_report": 6446,
                "exploitation_consequence": "Security Bypass",
                "intended_effects": [],
                "mati_genids_dict": {
                    "cve_id": "vulnerability--e35ba016-5a4d-55e1-a812-
ee56477a6df6",
                    "report_id": "report--
c81eb59b-89fe-5c73-8659-5cd10d51e2b3",
                    "mve_id": "vulnerability--23e4110d-ee84-5250-8ce3-
ef5e84cad030"
                },
                "name": "CVE-2004-0210",
                "exploitation_state": "Confirmed",
                "predicted_risk_rating": "",
                "targeted_industries": [],
                "exploitation": {
                    "first_exploitation": 1474761600,
                    "tech_details_release_date": null,
                    "exploit_release_date": 1089936000
                },
                "domains_count": 0,
                "counters": {
                    "files": 1,
                    "domains": 0,
                    "ip_addresses": 0,
                    "urls": 0,
                    "iocs": 1,
                    "subscribers": 0,
                    "attack_techniques": 0
                },
                "autogenerated_tags": [],
                "targeted_informations": [],
                "merged_actors": [],
                "detection_names": [],
                "operating_systems": [],
                "mitigations": [],
                "threat_scape": [],
                "exploit_availability": "Unverified",
                "cwe": {
                    "title": "Buffer Overflow",
                    "id": "CWE-120"
                },
                "mve_id": "MVE-2004-88",
                "vendor_fix_references": [
                    {
                        "url": "http://www.kb.cert.org/vuls/id/647436",
```

```
                        "title": "Microsoft Windows contains a buffer overflow
in the POSIX subsystem",
                        "cvss": null,
                        "md5": null,
                        "unique_id": "VU#647436",
                        "published_date": 1089835200,
                        "name": "CERT/CC",
                        "source_description": null
                    }
                ],
                "collection_links": [],
                "targeted_regions_hierarchy": [],
                "description": "\n\nThe National Vulnerability Database (NVD)
has provided the following description:\n\n*The POSIX component of Microsoft
Windows NT and Windows 2000 allows local users to execute arbitrary code via
certain parameters, possibly by modifying message length values and causing a
buffer overflow.*\n\n",
                "is_content_translated": false,
                "aggregations": {
                    "files": {
                        "tags": [
                            {
                                "value": "javascript",
                                "count": 1
                            }
                        ],
                        "vhash": [
                            {
                                "value": "3101773ac42964b4fd3c05b2c4d8e433",
                                "count": 1,
                                "total_related": 36356,
                                "prevalence": 2.750577621300473e-05
                            }
                        ],
                        "tlshhash": [
                            {
                                "value":
"T12632B6D94839693321BB861947072A5DFA5D401B53A8E719FC8C874C9FB21A0C6E8F98",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ],
                        "embedded_domains": [
                            {
                                "value": "www.securityfocus.com",
                                "count": 1,
                                "total_related": 44620,
                                "prevalence": 2.2411474675033616e-05
                            }
```

```
                        ],
                        "embedded_urls": [
                            {
                                "value": "https://www.securityfocus.com/bid/
10710/info",
                                "count": 1,
                                "total_related": 1,
                                "prevalence": 1.0
                            }
                        ]
                    }
                }
            },
            "context_attributes": {
                "shared_with_me": false,
                "role": "viewer"
            }
        }
        ]
}
```


ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].attributes.name	Related Vulnerability/ Indicator.Value	CVE	.data[].attributes.creation_date	CVE-2004-0210	User-configurable. Based on Ingest CVE as selected option
.data[].attributes.description	Related Vulnerability/ Indicator.Description	N/A	N/A	The National Vulnerability Database (NVD) has provided.....	N/A
.data[].attributes.cvss.cvssv2_0.vector	Related Vulnerability/ Indicator.Attribute	CVSS v2 Vector	.data[].attributes.creation_date	AV:L/AC:L/Au:N/C:C/I:C/A:C/E:F/RL:OF/RC:C	User-configurable
.data[].attributes.cvss.cvssv2_0.base_score	Related Vulnerability/ Indicator.Attribute	CVSS v2 Base Score	.data[].attributes.creation_date	7.2	User-configurable
.data[].attributes.cvss.cvssv2_0.temporal_score	Related Vulnerability/ Indicator.Attribute	CVSS v2 Temporal Score	.data[].attributes.creation_date	6.0	User-configurable
.data[].attributes.cvss.cvssv3_x.vector	Related Vulnerability/ Indicator.Attribute	CVSS v3 Vector	.data[].attributes.creation_date	CVSS:3.1/AV:L/AC:L/PR:L/UI:N/S:U/C:H/I:H/A:H	User-configurable
.data[].attributes.cvss.cvssv3_x.base_score	Related Vulnerability/ Indicator.Attribute	CVSS v3 Base Score	.data[].attributes.creation_date	7.8	User-configurable

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].attributes.cvss.cvss_v3_x.temporal_score	Related Vulnerability/ Indicator.Attribute	CVSS v3 Temporal Score	.data[].attributes.creation_date	7.8	User-configurable
.data[].attributes.cvss.exploitation_vectors[]	Related Vulnerability/ Indicator.Attribute	Exploitation Vector	.data[].attributes.creation_date	Local Access	User-configurable
.data[].attributes.epss.score	Related Vulnerability/ Indicator.Attribute	EPSS Score	.data[].attributes.creation_date	0.10564	User-configurable

Google Threat Intelligence Related Adversaries (Supplemental)

The Google Threat Intelligence Related Adversaries supplemental feed fetches related adversaries.

`GET {base_url}/api/v3/collections/{entity_id}/threat_actors`

> Sample Response is the same as the sample response for: `Google Threat Intelligence`

ThreatQ provides the following default mapping for this feed based on each item within the *`.data[]`* list.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.attributes.name	Related Adversary.Value	Adversary	.attributes.last_modification_date	APT28	N/A
.attributes.alt_names_details[].value	Related Adversary.Tag	N/A	N/A	APT28 (Google)	User-Configurable
.attributes.description	Related Adversary.Description	N/A	N/A	APT28 is a highly active cyber espionage group that ...	N/A
.attributes.motivations[].value	Related Adversary.Attribute	Motivation	.attributes.last_modification_date	Attack / Destruction	User-Configurable. When the Motivation option is checked in the context
.attributes.targeted_industries_tree[].industry_group	Related Adversary.Attribute	Target Industry	.attributes.last_modification_date	Aerospace & Defense	User-Configurable. When the Industry option is checked in the context
.attributes.source_regions_hierarchy[].region	Related Adversary.Attribute	Region	.attributes.last_modification_date	Europe	User-Configurable. When the Source Context option is checked in the context

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.attributes.source_regions_hierarchy[].sub_region	Related Adversary.Attribute	Sub Region	.attributes.last_modification_date	Eastern Europe	User-Configurable. When the Source Context option is checked in the context
.attributes.source_regions_hierarchy[].country	Related Adversary.Attribute	Country	.attributes.last_modification_date	Russian Federation	User-Configurable. When the Source Context option is checked in the context
.attributes.source_regions_hierarchy[].country_iso2	Related Adversary.Attribute	Country Code	.attributes.last_modification_date	RU	User-Configurable. When the Source Context option is checked in the context
.attributes.targeted_regions_hierarchy[].region	Related Adversary.Attribute	Target Region	.attributes.last_modification_date	RO	User-Configurable. When the Target Region option is checked in the context
.attributes.targeted_regions_hierarchy[].sub_region	Related Adversary.Attribute	Target Sub Region	.attributes.last_modification_date	Eastern Europe	User-Configurable. When the Target Region option is checked in the context
.attributes.targeted_regions_hierarchy[].country	Related Adversary.Attribute	Target Country	.attributes.last_modification_date	Russian Federation	User-Configurable. When the Target Region option is checked in the context
.attributes.targeted_regions_hierarchy[].country_iso2	Related Adversary.Attribute	Target Country Code	.attributes.last_modification_date	RU	User-Configurable. When the Target Region option is checked in the context

Google Threat Intelligence Campaigns

The Google Threat Intelligence Campaigns feed ingests campaigns tracked by Google. This feed also ingests any related indicators, malware, threat actors, vulnerabilities, and attack patterns relevant to the campaign.

`GET {base_url}/api/v3/collections?filter=collection_type:campaign`

> Sample Response is the same as the one for `Google Threat Intelligence Related Campaigns Supplemental feed.`

ThreatQ provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.data[].attributes.name`	Campaign.Value	N/A	`.data[].attributes.last_modification_date`	APT28 Conducts Credential Harvesting Campaign Targeting Multiple European Entities	N/A
`.data[].attributes.description`	Campaign.Description	N/A	`.data[].attributes.last_modification_date`	Starting in early February 2024, Mandiant observed UNC4697 ...	N/A
`.data[].attributes.motivations[].value`	Campaign.Attribute	Motivation	`.data[].attributes.last_modification_date`	Espionage	User-configurable
`.data[].attributes.targeted_industries_tree[].industry_group`	Campaign.Attribute	Target Sector	`.data[].attributes.last_modification_date`	Government	User-configurable
`.data[].attributes.source_regions_hierarchy[].region`	Campaign.Attribute	Region	`.data[].attributes.last_modification_date`	Europe	User-configurable
`.data[].attributes.source_regions_hierarchy[].sub_region`	Campaign.Attribute	Sub Region	`.data[].attributes.last_modification_date`	Eastern Europe	User-configurable
`.data[].attributes.source_regions_hierarchy[].country`	Campaign.Attribute	Country	`.data[].attributes.last_modification_date`	Russian Federation	User-configurable
`.data[].attributes.source_regions_hierarchy[].country_iso2`	Campaign.Attribute	Country Code	`.data[].attributes.last_modification_date`	RU	User-configurable
`.data[].attributes.targeted_regions_hierarchy[].sub_region`	Campaign.Attribute	Target Sub Region	`.data[].attributes.last_modification_date`	Eastern Europe	User-configurable
`.data[].attributes.targeted_re`	Campaign.Attribute	Target Country	`.data[].attributes.last_modification_date`	Russian Federation	User-configurable

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
gions_hierarchy[].country					
.data[].attributes.targeted_regions_hierarchy[].country_iso2	Campaign.Attribute	Target Country Code	.data[].attributes.last_modification_date	RU	User-configurable
.data[].attributes.targeted_regions_hierarchy[].region	Campaign.Attribute	Target Region	.data[].attributes.last_modification_date	RO	User-configurable
.data[].attributes.campaign_type	Campaign.Attribute	Campaign Type	.data[].attributes.last_modification_date	INDIVIDUAL	User-configurable
.data[].attributes.last_seen	Campaign.Attribute	Last Seen	.data[].attributes.last_modification_date	1727913600	Updatable. Timestamp value.
.data[].id	Related Adversary	Adversary	N/A	N/A	User-configurable. See Google Threat Intelligence Related Adversaries (Supplemental)
.data[].id	Related Malware	Malware	N/A	N/A	User-configurable. See Google Threat Intelligence Related Malware (Supplemental)
.data[].id	Related Vulnerability/ Related Indicator	Vulnerability/CVE	N/A	N/A	User-configurable. See Google Threat Intelligence Related Vulnerabilities (Supplemental)
.data[].id	Related Attack Pattern	Attack Pattern	N/A	N/A	User-configurable. See Google Threat Intelligence Related Attack Pattern (Supplemental)
.data[].id	Related Indicator	Indicator	N/A	N/A	User-configurable. See Google Threat Intelligence Related IOC (Supplemental)

For each campaign ID in the collection, the supplemental feeds collect all related objects. Sample data & mapping for them can be found in each Supplemental feed mapping section, as specified in the above mapping table notes.

Google Threat Intelligence Indicators

The Google Threat Intelligence Indicators feed ingests a list of Indicators tracked by Google TI filtered by time.

```
GET {base_url}/api/v3/collections?filter=collection_type:collection
```

Sample Response [truncated]:


```
{
    "data": [
        {
            "id":
"fee4323cebb88f025586fd9f3e7d0de183fd536fad2312d4ccccdb21f2f7185f",
            "type": "collection",
            "links": {
                "self": "https://www.virustotal.com/api/v3/collections/
fee4323cebb88f025586fd9f3e7d0de183fd536fad2312d4ccccdb21f2f7185f"
            },
            "attributes": {

            },
            "context_attributes": {
                "shared_with_me": false,
                "role": "viewer"
            }
        }
  ],
    "meta": {
        "count": 6898,
        "cursor": "eJwVjN1uwiAYQF-JlpHMyxnAn-
Wjih_QclerUws43FxszR5-3eXJOTm_vo7vh5jv7ppbJ2XGMs87En-213iBIj9cOLijibd9GXc6rM3OR
do6GKs6hi0JpaVZHsXAd7jeWJLvmAqrDLsZtH5vDcGUv1vDlro-
qGPqHs4VGmQYbX3eaMI-0RVVK7NAnFcQwohGfykzW2KdlRWSTj-pxEzodN7YYvL_PZl8yus9F-
xjOZRAh1fArgA80QobBteJk6GeA1HP8KL4lvkkhmrRUN-
fBoWrBzyhVM6GClcUeMeg11Fx2aseRsXDs-ltArcq_cJfmh4Y4Bv1pz84PGUl"
    },
    "links": {
        "self": "https://www.virustotal.com/api/v3/collections?
filter=collection_type:collection%20last_modification_date:2025-01-01%2B",
        "next": "https://www.virustotal.com/api/v3/collections?
filter=collection_type%3Acollection+last_modification_date%3A2025-01-01%2B&curs
or=eJwVjN1uwiAYQF-JlpHMyxnAn-
Wjih_QclerUws43FxszR5-3eXJOTm_vo7vh5jv7ppbJ2XGMs87En-213iBIj9cOLijibd9GXc6rM3OR
do6GKs6hi0JpaVZHsXAd7jeWJLvmAqrDLsZtH5vDcGUv1vDlro-
qGPqHs4VGmQYbX3eaMI-0RVVK7NAnFcQwohGfykzW2KdlRWSTj-pxEzodN7YYvL_PZl8yus9F-
xjOZRAh1fArgA80QobBteJk6GeA1HP8KL4lvkkhmrRUN-
fBoWrBzyhVM6GClcUeMeg11Fx2aseRsXDs-ltArcq_cJfmh4Y4Bv1pz84PGUl"
    }
  }
```

For each `data[].id` of the IOC Collection, related indicators are retrieved. See the Google Threat Intelligence Related IOC (Supplemental) mapping is the same.

Google Threat Intelligence Malware

The Google Threat Intelligence Malware feed ingests malware tracked by Google TI. This feed also ingests any related indicators, threat actors, vulnerabilities, and attack patterns relevant to the malware.

`GET {base_url}/api/v3/collections?filter=collection_type:malware-family`

> Sample Response is the same as the sample response for: `Google Threat Intelligence Related Malware Supplemental feed.`

ThreatQ provides the following default mapping for this data:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.data[].attributes.name`	Malware Value	Malware	`.data[].attributes.last_modification_date`	`LOCKBIT`	N/A
`.data[].attributes.description`	Malware Description	N/A	`.data[].attributes.last_modification_date`	`LOCKBIT is a ransomware written in C...`	N/A
`.data[].attributes.alt_names[]`	Attribute	`Alias`	`.last_upddata[].attributes.last_modification_dateated`	N/A	User-configurable.
`.data[].attributes.capabilities[].value`	Attribute	`Capability`	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.data[].attributes.targeted_industries_tree[].industry_group`	Attribute	`Target Sector`	`.last_updata[].attributes.last_modification_datedated`	N/A	User-configurable.
`.data[].attributes.last_seen`	Attribute	`Last Active`	`.data[].attributes.last_modification_date`	N/A	User-configurable.Updatable
`.data[].attributes.operating_systems[].value`	Attribute	`Target Operating System`	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.data[].attributes.malware_roles[].value`	Attribute	`Role`	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.data[].id`	Related Adversary	Adversary	N/A	N/A	User-configurable. See `Google Threat Intelligence Related Adversaries (Supplemental)` above
`.data[].id`	Related Campaign	Campaign	N/A	N/A	User-configurable. See `Google Threat Intelligence Related Campaigns (Supplemental)` above

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.data[].id`	Related Vulnerability/ Related Indicator	Vulnerability/CVE	N/A	N/A	User-configurable. See `Google Threat Intelligence Related Vulnerabilities (Supplemental)` above
`.data[].id`	Related Attack Pattern	Attack Pattern	N/A	N/A	User-configurable. See `Google Threat Intelligence Related Attack Pattern (Supplemental)` above
`.data[].id`	Related Indicator	Indicator	N/A	N/A	User-configurable. See `Google Threat Intelligence Related IOC (Supplemental)` above

Google Vulnerability Intelligence

The Google Vulnerability Intelligence feed will fetch and ingest the latest vulnerabilities & supporting context, reported by Google TI.

Two main pieces of data will be ingested by this feed: a Vulnerability Object and its corresponding CVE ID as an Object. You can configure the feed to ingest these CVE IDs as either a Vulnerability Object and/or an Indicator Object, with the CVE type.

```
GET {base_url}/api/v3/collections?filter=collection_type:vulnerability
```

Sample Response:


```
{
  "data": [
    {
      "id": "vulnerability--cve-2025-31324",
      "type": "collection",
      "links": {
        "self": "https://www.virustotal.com/api/v3/collections/vulnerability--
cve-2025-31324"
      },
      "attributes": {
        "description": "SAP NetWeaver Visual Composer Metadata Uploader is not
protected with a proper authorization, allowing unauthenticated agent to upload
potentially malicious executable binaries that could severely harm the host
system. This could significantly affect the confidentiality, integrity, and
availability of the targeted system.",
        "collection_type": "vulnerability",
        "recent_activity_summary": [
          0,
          0
        ],
        "targeted_informations": [],
        "epss": {
          "score": 0.66207,
          "percentile": 0.98406
        },
        "top_icon_md5": [],
        "targeted_regions_hierarchy": [],
        "creation_date": 1745520314,
        "references_count": 0,
        "sources": [
          {
            "md5": "71ff8f7bd1271b29afb6ff0f61b36a0b",
            "published_date": 1745513427,
            "name": "Cybersecurity and Infrastructure Security Agency (CISA)",
            "source_description": null,
            "url": "https://github.com/cisagov/vulnrichment/blob/develop/
2025/31xxx/CVE-2025-31324.json",
            "cvss": {
```

```
            "cvssv4_x": null,
            "cvssv2_0": null,
            "cvssv3_x_translated": null,
            "cvssv3_x": {
              "base_score": 10.0,
              "temporal_score": null,
              "vector": "CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H"
            }
          },
          "title": null,
          "unique_id": null
        }
      ],
      "subscribers_count": 7,
      "tags": [
        "affects_ot",
        "observed_in_the_wild",
        "was_zero_day",
        "has_exploits",
        "media_attention"
      ],
      "threat_scape": [],
      "summary_stats": {},
      "tags_details": [
        {
          "description": null,
          "first_seen": null,
          "confidence": "possible",
          "last_seen": null,
          "value": "affects_ot"
        },
        {
          "description": null,
          "first_seen": null,
          "confidence": "possible",
          "last_seen": null,
          "value": "has_exploits"
        }
      ],
      "analysis": "An attacker would need to send an HTTP(S) request to the
'/developmentserver/metadatauploader' endpoint with the 'CLIENT' parameter set
to any value and the 'CONTENTTYPE' parameter set to 'MODEL'. The JSP file
contents must be sent in the request body with the 'name' and 'filename' form-
data fields set appropriately. The JSP file is executed with a GET request to
the '/irj/filename' endpoint, where 'filename' is the name of the file uploaded
in the previous step. This JSP file will be executed with Operating System user
privileges.\n\nOn April 22, 2025, ReliaQuest published a blog post detailing
exploitation of this vulnerability in the wild. Exploitation of this
vulnerability was conducted to deploy web-shells on several vulnerable systems.
For more information, please refer to their blog \"[ReliaQuest Uncovers New
```

```
Critical Vulnerability in SAP NetWeaver.](https://reliaquest.com/blog/threat-
spotlight-reliaquest-uncovers-vulnerability-behind-sap-netweaver-compromise/)
\"\n\nOn April 25, 2025, Onapsis released a blog post detailing observed
exploitation of this vulnerability in the wild. For more information and IOCs,
please refer to their blog post \"[Active Exploitation of SAP Zero-Day
Vulnerability (CVE-2025-31324, SAP Security Note 3594142).](https://
onapsis.com/blog/active-exploitation-of-sap-vulnerability-
cve-2025-31324/)\"\n\nOn April 28, 2025, Rapid7 reported they observed
exploitation of this vulnerability as early as March 27, 2025, against multiple
customer environments, primarily affecting manufacturing companies. For more
information, please refer to their blog post \"[Active exploitation of SAP
NetWeaver Visual Composer CVE-2025-31324.](https://www.rapid7.com/blog/post/
2025/04/28/etr-active-exploitation-of-sap-netweaver-visual-composer-
cve-2025-31324/)\"\n\nOn April 30, 2025, WithSecure published a report
detailing exploitation of this vulnerability to deploy the XMRig coin miner.
The earliest exploitation activity they are aware of occurred on March 18,
2025. For more information, please refer to their report \"[SAP NetWeaver
CVE-2025-31324 Exploitation.](https://labs.withsecure.com/publications/
netweaver-cve-2025-31324)\"\n\nOn May 13, 2025, EclecticIQ published a [report]
(https://blog.eclecticiq.com/china-nexus-nation-state-actors-exploit-sap-
netweaver-cve-2025-31324-to-target-critical-infrastructures) detailing China-
nexus nation-state APTs launching campaigns against critical infrastructure
networks via this vulnerability.\n\nOn May 14, 2025, ReliaQuest published an
[update](https://reliaquest.com/blog/threat-spotlight-reliaquest-uncovers-
vulnerability-behind-sap-netweaver-compromise/) stating that multiple threat
groups have attempted exploitation of this vulnerability.\n\nGoogle Threat
Intelligence Group (GTIG) has observed exploitation of this vulnerability in
the wild as early as mid-March 2025.",
        "cisa_known_exploited": {
          "ransomware_use": "Unknown",
          "added_date": 1745884800,
          "due_date": 1747699200
        },
        "source_regions_hierarchy": [],
        "mati_genids_dict": {
          "report_id": null,
          "cve_id": "vulnerability--1d7f26d7-c182-55ae-9ab4-c81951c63480",
          "mve_id": "vulnerability--e2ccf457-8ba4-5c45-a63c-63bedaf70f21"
        },
        "targeted_industries": [],
        "field_sources": [
          {
            "field": "cvss.cvssv4_x.vector",
            "source": {
              "source_name": "Google Threat Intelligence Group (GTIG)",
              "field_type": "Ranked",
              "sources": [],
              "source_url": ""
            }
          },
          {
```

```
            "field": "cvss.cvssv3_x_translated",
            "source": {
              "source_name": "Google Threat Intelligence Group (GTIG)",
              "field_type": "Ranked",
              "sources": [],
              "source_url": ""
            }
          }
        ],
        "risk_factors": [],
        "detection_names": [],
        "predicted_risk_rating": "",
        "technologies": [],
        "exploitation": {
          "exploit_release_date": 1745280000,
          "tech_details_release_date": 1745539200,
          "first_exploitation": 1737331200
        },
        "cve_id": "CVE-2025-31324",
        "priority": "P0",
        "collection_links": [],
        "alt_names_details": [],
        "capabilities": [],
        "risk_rating": "CRITICAL",
        "cvss": {
          "cvssv3_x": {
            "base_score": 10.0,
            "temporal_score": 9.3,
            "vector": "CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H/E:F/RL:O/
RC:C"
          }
        },
        "vendor_fix_references": [
          {
            "md5": null,
            "published_date": 1745452800,
            "name": "SAP SE",
            "source_description": null,
            "url": "https://support.sap.com/en/my-support/knowledge-base/
security-notes-news/april-2025.html",
            "cvss": null,
            "title": "SAP Security Patch Day - April 2025",
            "unique_id": null
          }
        ],
        "targeted_regions": [],
        "affected_systems": [],
        "merged_actors": [],
        "mitigations": [],
        "private": true,
```

```
        "ip_addresses_count": 0,
        "domains_count": 0,
        "intended_effects": [],
        "days_to_patch": -14,
        "last_modification_date": 1750839775,
        "workarounds": [
          "<p>Restrict access to /uddi/ URLs to internal network traffic,
especially if upgrading isnâ€™t feasible.</p>"
        ],
        "exploit_availability": "Publicly Available",
        "origin": "Google Threat Intelligence",
        "last_seen_details": [],
        "exploitation_state": "Confirmed",
        "date_of_disclosure": 1745280000,
        "malware_roles": [],
        "executive_summary": "* An Improper Authorization vulnerability exists
that, when exploited, allows a remote attacker to execute arbitrary code.\n*
This vulnerability has been confirmed to be exploited in the wild. Proof-of-
concept and weaponized code is publicly available.\n* Google Threat
Intelligence Group (GTIG) considers this a Critical-risk vulnerability due to
the potential for arbitrary code execution.\n* Mitigation options include a
patch and a workaround.",
        "motivations": [],
        "status": "COMPUTED",
        "files_count": 12,
        "operating_systems": [],
        "targeted_industries_tree": [
          {
            "industry_group": "Manufacturing",
            "industry": null,
            "confidence": "possible",
            "first_seen": null,
            "last_seen": null,
            "description": null,
            "source": null
          }
        ],
        "autogenerated_tags": [],
        "cwe": {
          "id": "CWE-285",
          "title": "Improper Authorization"
        },
        "exploitation_consequence": "Code Execution",
        "alt_names": [],
        "days_to_report": 2,
        "is_content_translated": false,
        "exploitation_vectors": [
          "Exposed Web Application"
        ],
        "mve_id": "MVE-2025-10681",
```

```
        "counters": {
          "files": 12,
          "domains": 0,
          "ip_addresses": 0,
          "urls": 0,
          "iocs": 12,
          "subscribers": 7,
          "attack_techniques": 0
        },
        "version_history": [
          {
            "date": 1750445522,
            "version_notes": [
              "epss.score: 0.80997 -> 0.66207"
            ]
          }
        ],
        "urls_count": 0,
        "first_seen_details": [],
        "cpes": [
          {
            "start_rel": "=",
            "end_cpe": null,
            "start_cpe": {
              "version": "7.50",
              "product": "Netweaver",
              "vendor": "SAP",
              "uri": "cpe:2.3:a:sap:netweaver:7.50:*:*:*:*:*:*:*"
            },
            "end_rel": null
          },
          {
            "start_rel": null,
            "end_cpe": {
              "version": "7.50 for Visual Composer Development Server",
              "product": "Netweaver",
              "vendor": "SAP",
              "uri":
"cpe:2.3:a:sap:netweaver:7.50:*:*:*:*:visual_composer_development_server:*:*"
            },
            "start_cpe": null,
            "end_rel": "<="
          }
        ],
        "name": "CVE-2025-31324",
        "available_mitigation": [
          "Intrusion Prevention Signatures",
          "Patch"
        ],
        "aggregations": {}
```

```
      },
      "context_attributes": {
        "shared_with_me": false,
        "role": "viewer"
      }
    }
  ],
  "meta": {
    "count": 97,
    "cursor": "eJwVjMFugzAQRH8J262UHhOBoVRrBKwx5pYAReBV5KipTK1-
fOlhDqM3b36Hnj4m8k9z91cjpUfuL2NC3_WdVmA-GDeZWdPjxqltXKlbQ-
Jq4KfqydWJ453w8n9vNrk2sfuynOXHUT8XF9fmzwTlVAF5hIJUk7mAspGzfss0qvKWZq-
fxc5B7CfAkQEuL7AtAYr9NKQLq_AcqjQLKh0F4DuDCOJIorBcFY7Cbu7olh08DpvjA-
poeedsJFLouIru8Osw5FkCRge7_AFwNVDi"
  },
  "links": {
    "self": "https://www.virustotal.com/api/v3/collections?
filter=collection_type:vulnerability%20creation_date:2025-01-01%2B%20(exploitat
ion_state:Confirmed%20or%20exploitation_state:Suspected%20or%20exploitation_sta
te:Reported)
%20(risk_rating:Critical%20or%20risk_rating:High%20or%20risk_rating:Low)",
    "next": "https://www.virustotal.com/api/v3/collections?
filter=collection_type%3Avulnerability+creation_date%3A2025-01-01%2B+
%28exploitation_state%3AConfirmed+or+exploitation_state%3ASuspected+or+exploita
tion_state%3AReported%29+
%28risk_rating%3ACritical+or+risk_rating%3AHigh+or+risk_rating%3ALow%29&cursor=
eJwVjMFugzAQRH8J262UHhOBoVRrBKwx5pYAReBV5KipTK1-
fOlhDqM3b36Hnj4m8k9z91cjpUfuL2NC3_WdVmA-GDeZWdPjxqltXKlbQ-
Jq4KfqydWJ453w8n9vNrk2sfuynOXHUT8XF9fmzwTlVAF5hIJUk7mAspGzfss0qvKWZq-
fxc5B7CfAkQEuL7AtAYr9NKQLq_AcqjQLKh0F4DuDCOJIorBcFY7Cbu7olh08DpvjA-
poeedsJFLouIru8Osw5FkCRge7_AFwNVDi"
  }
}
```


ThreatQ provides the following default mapping for this feed based on each item within the *.data[]* list.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].attributes.name	Vulnerability.Value	Vulnerability	.data[].attributes.last_modification_date	CVE-2025-31324	N/A
.data[].attributes.executive_summary, .data[].attributes.analysis, .data[].attributes.description, .data[].attributes.workarounds[], .data[].attributes.source	Vulnerability.Description	N/A	.data[].attributes.last_modification_date	N/A	User-Configurable. All fields are optional. Fields are concatenated into HTML when enabled.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
s[], .data[].attributes.vendor_fix_references[], .data[].attributes.cpes[], .data[].attributes.cvss					
.data[].attributes.cve_id	Related Vulnerability/ Related Indicator	Vulnerability/ CVE	.data[].attributes.last_modification_date	CVE-2025-31324	N/A
.data[].attributes.risk_rating	Vulnerability.Attribute	Risk Rating	.data[].attributes.last_modification_date	CRITICAL	User-configurable.
.data[].attributes.available_mitigation	Vulnerability.Attribute	Available Mitigation	.data[].attributes.last_modification_date	Intrusion Prevention Signatures	User-configurable.
.data[].attributes.cwe.title	Vulnerability.Attribute	CWE	.data[].attributes.last_modification_date	Improper Authorization	User-configurable.
.data[].attributes.exploitation_consequence	Vulnerability.Attribute	Exploitation Consequence	.data[].attributes.last_modification_date	Code Execution	User-configurable.
.data[].attributes.exploitation_state	Vulnerability.Attribute	Exploitation State	.data[].attributes.last_modification_date	Confirmed	User-configurable. Updatable.
.data[].attributes.exploitation_vectors	Vulnerability.Attribute	Exploitation Vector	.data[].attributes.last_modification_date	Exposed Web Application	User-configurable.
.data[].attributes.targeted_industries_tree[].industry_group	Vulnerability.Attribute	Targeted Industry	.data[].attributes.last_modification_date	Manufacturing	User-configurable.
.data[].attributes.mve_id	Vulnerability.Attribute	MVE ID	.data[].attributes.last_modification_date	MVE-2025-10681	User-configurable.
.data[].attributes.tags_details	Vulnerability.Attribute	Observed in the Wild	.data[].attributes.last_modification_date	false	User-configurable. Updatable. True if observed_in_the_wild exists in data[].attributes.tags_details[].value
.data[].attributes.tags_details	Vulnerability.Attribute	Has Zero Day	.data[].attributes.last_modification_date	false	User-configurable. Updatable. True if was_zero_day exists in data[].attributes

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
					`.tags_details[].value`
`.data[].attributes.tags_details`	Vulnerability.Attribute	Is Predicted	`.data[].attributes.last_modification_date`	`false`	User-configurable. Updatable. True if `is_predicted` exists in `data[].attributes.tags_details[].value`
`.data[].attributes.cpes[].start_cpe.vendor` / `.data[].attributes.cpes[].end_cpe.vendor`	Vulnerability.Attribute	Affected Vendor	`.data[].attributes.last_modification_date`	`SAP`	User-configurable.
`.data[].attributes.cpes[].start_cpe.product` / `.data[].attributes.cpes[].end_cpe.product`	Vulnerability.Attribute	Affected Product	`.data[].attributes.last_modification_date`	`Netweaver`	User-configurable.
`.data[].attributes.cpes[].start_cpe.uri` / `.data[].attributes.cpes[].end_cpe.uri`	Vulnerability.Attribute	Affected Platform	`.data[].attributes.last_modification_date`	`visual_composer_development_server`	User-configurable. The 11th value extracted from the `.data[].attributes.cpes[].start_cpe.uri` or `data[].attributes.cpes[].end_cpe.uri` after splitting by `:`
`.data[].attributes.cvss[{cve_version}].base_score/ .data[].attributes.cvss[cvssv4_x].score`	Vulnerability.Attribute	CVSS Base Score	`.data[].attributes.last_modification_date`	`10`	User-configurable. Updatable. Only for CVE vulnerability/ indicator. For `cvssv4_x` the path is: `.data[].attributes.cvss[cvssv4_x].score`
`.data[].attributes.cvss[{cve_version}].temporal_score`	Vulnerability.Attribute	CVSS Temporal Score	`.data[].attributes.last_modification_date`	`9.3`	User-configurable. Updatable. Only for CVE vulnerability/ indicator.
`.data[].attributes.cvss[{cve_version}].vector`	Vulnerability.Attribute	CVSS Vector String	`.data[].attributes.last_modification_date`	`CVSS:3.1/AV:N/AC:L/PR:N/UI:N/S:C/C:H/I:H/A:H/E:F/RL:O/RC:C`	User-configurable. Only for CVE vulnerability/ indicator.
`.data[].attributes.cvss[cvssv4_x].threat.exploit_maturity`	Vulnerability.Attribute	CVSS Exploit Code Maturity	`.data[].attributes.last_modification_date`	N/A	User-configurable. Updatable. Only for `cvssv4_x` CVSS version. Only for CVE vulnerability/ indicator.

For CVSS attributes, if `data[].attributes.cvss` has more versions, the biggest one will be selected.

Google Threat Intelligence Threat Lists

The Google Threat Intelligence Threat Lists feed will fetch up to 4,000 indicators or compromise for each of the selected Threat Lists.

`GET {base_url}/api/v3/collections?filter=collection_type:threat_lists`

Sample Response:


```
{
  "iocs": [
    {
      "data": {
        "type": "ip_address",
        "id": "1.221.254.82",
        "attributes": {
          "gti_assessment": {
            "verdict": {
              "value": "VERDICT_MALICIOUS"
            },
            "threat_score": {
              "value": 80
            },
            "severity": {
              "value": "SEVERITY_HIGH"
            }
          },
          "asn": 3786,
          "as_owner": "lg dacom corporation",
          "continent": "as",
          "country": "kr",
          "last_analysis_stats": {
            "malicious": 13,
            "undetected": 30,
            "harmless": 49
          },
          "last_modification_date": 1769068959,
          "network": "1.220.0.0/15",
          "positives": 13,
          "regional_internet_registry": "apnic"
        },
        "relationships": {
          "malware_families": {
            "data": [
              {
                "id": "malware--f1151a22-9d9c-589d-90ad-1157ea90033e",
                "type": "collection",
                "attributes": {
                  "name": "emotet",
                  "collection_type": "malware-family"
                }
              },
              {
                "id": "threatfox_win_emotet",
                "type": "collection",
                "attributes": {
                  "name": "emotet",
                  "collection_type": "malware-family"
                }
              }
            ]
          },
```

```
        "reports": {
          "data": [
            {
              "id": "report--20-00018831",
              "type": "collection",
              "attributes": {
                "name": "silentnight observed distributing emotet as a secondary payload",
                "collection_type": "report"
              }
            }
          ]
        }
      },
      "context_attributes": {
        "threat_list_id": "ransomware"
      }
    }
  }
 ]
}
```

ThreatQ provides the following default mapping for this feed based on each item within the *.data[]* list.

> The following fields are added to the indicator description: `.relationships.campaigns.data[]`, `.relationships.reports.data[]`, `attributes.names` and `.attributes.outgoing_links`.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.relationships.threat_actors.data[].attributes.name`	Related Adversary	Adversary	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.relationships.malware_families.data[].attributes.name`	Related Malware	Adversary	`.data[].attributes.last_modification_date`	emotet	User-configurable.
`.context_attributes.threat_list_id`	Indicator.Attribute	Threat List	`.data[].attributes.last_modification_date`	Ransomware	User-configurable.
`.context_attributes.threat_list_id`	Indicator.Attribute	Threat Type	`.data[].attributes.last_modification_date`	Ransomware	User-configurable. See table `Threat Type Mapping`
`.attributes.last_submission_date`	Indicator.Attribute	Last Submission Date	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.attributes.title`	Indicator.Attribute	Site Title	`.data[].attributes.last_modification_date`	Login Page	User-configurable.
`.attributes.last_http_response_code`	Indicator.Attribute	Last HTTP Response Code	`.data[].attributes.last_modification_date`	200	User-configurable.Updatable

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
`.attributes.regional_internet_registry`	Indicator.Attribute	RIR	`.data[].attributes.last_modification_date`	APNIC	User-configurable.
`.attributes.as_owner`	Indicator.Attribute	AS Organization	`.data[].attributes.last_modification_date`	MOACK.Co.LTD	User-configurable.
`.attributes.asn`	Indicator.Attribute	ASN	`.data[].attributes.last_modification_date`	MOACK.Co.LTD	User-configurable.
`.attributes.continent`	Indicator.Attribute	Continent Code	N/A	AS	User-configurable.
`.attributes.country`	Indicator.Attribute	Country Code	N/A	RU	User-configurable.
`.attributes.categories[]`	Indicator.Attribute	Category	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.attributes.meaningful_name`	Indicator.Attribute	Meaningful Name	`.data[].attributes.last_modification_date`	Malicious	User-configurable.
`.attributes.last_analysis_stats.suspicious`	Indicator.Attribute	Suspicious Count	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.attributes.last_analysis_stats.malicious`	Indicator.Attribute	Malicious Count	`.data[].attributes.last_modification_date`	N/A	User-configurable.
`.gti_assessment.threat_score.value`	Indicator.Attribute	Threat Score	`.data[].attributes.last_modification_date`	100	User-configurable.
`.gti_assessment.verdict.value`	Indicator.Attribute	Verdict	`.data[].attributes.last_modification_date`	VERDICT_MALICIOUS	User-configurable.
`.gti_assessment.severity.value`	Indicator.Attribute	Severity	`.data[].attributes.last_modification_date`	Severity_None	User-configurable.
`.gti_assessment.threat_score.value`	Indicator.Attribute	Threat Score	`.data[].attributes.last_modification_date`	100	User-configurable.
`.attributes.tags[]` + `.attributes.type_tags[]`	Indicator.Attribute	Tag	`.data[].attributes.last_modification_date`	100	User-configurable. Updatable. True if `is_predicted` exists in `data[].attributes.tags_details[].value`
`.id/.attributes.{sha256,sha1,md5} / .attributes.url`	Indicator.Value	Mapped: `.type`	`.data[].attributes.last_modification_date`	1.221.254.82	User-configurable.

Threat List Threat Type Mapping

The following table illustrates how Google Threat Intelligence Threat Types are mapped as ThreatQ Attributes.

GOOGLE THREAT LIST	THREATQ ATTRIBUTE
infostealer	Infostealer
ransomware	Ransomware
cryptominer	Cryptominer
phishing	Phishing
vulnerability-weaponization	Exploit
malicious-network-infrastructure	Malware Infrastructure
mobile	Mobile
iot	IoT

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.

Google Threat Intelligence

METRIC	RESULT
Run Time	27 minutes
Adversaries	532
Adversary Attributes	7,056
Attack Patterns	263
Malware	4
Malware Attributes	201
Vulnerabilities	298
Vulnerability Attributes	1,132

Google Threat Intelligence Campaigns

METRIC	RESULT
Run Time	2 minutes

METRIC	RESULT
Adversaries	98
Adversary Attributes	104
Attack Patterns	289
Campaigns	121
Campaign Attributes	1,551
Indicators	481
Indicator Attributes	481
Malware	342
Vulnerabilities	41

Google Threat Intelligence Indicators

METRIC	RESULT
Run Time	48 minutes
Adversaries	41
Indicators	159,178
Indicator Attributes	142,805

Google Threat Intelligence Malware

METRIC	RESULT
Run Time	4 minutes
Adversaries	60
Attack Patterns	105
Indicators	3,985
Indicator Attributes	10,619
Malware	41
Malware Attributes	1,336
Vulnerabilities	2

Google Vulnerability Intelligence

METRIC	RESULT
Run Time	1 minute
Indicators	207
Indicator Attributes	4,731
Vulnerabilities	363
Vulnerability Attributes	6,194

Google Threat Intelligence Threat Lists

METRIC	RESULT
Run Time	6 minutes
Indicators	20
Indicator Attributes	92

Known Issues / Limitations

- Each feed has optional parameters for retrieving related objects. These parameters were made optional to avoid encountering the daily rate limit. It highly recommended that you use these optional parameters with caution to avoid hitting the daily rate limit.

Change Log

- **Version 2.1.0**
  - Added a new feed: **Google Threat Intelligence Threat Lists**.
  - Added support for parsing out IDS (Snort) rules linked to indicators.
  - Performed improvements to pagination to better select a delta from the API for each feed run.
  - Updated integration processes to reduce the number of API calls made during each feed run.
  - Made improvements to description formatting.
  - Resolved a bug that would cause IOC date filtering to not function as expected.
  - Resolved a bug that caused all related IOCs to be re-ingested into ThreatQ on each feed run. Only new/updated indicators related to a given collection will be ingested on each feed run based on the feed run timeframe and minimum threat score threshold.
  - `Industry` attribute for Adversaries & Malware has been renamed to `Target Industry` to better align with the standard data model.
  - `Targeted Industry` attribute has been renamed to Target Industry to better align with the standard data model.
  - Added an Overview section to each feed's configuration to describe what the feed does and what sort of information will be ingested.
  - Added the following new configuration parameters to all feeds:
    - **Origin Filter** - filter the results based on the origin of the intelligence.
    - **Custom API Filter** - an optional custom filter to append to all API requests when fetching collections from the API.
  - Added the following new configuration parameters for all feeds excluding Vulnerability Intelligence:
    - **Indicator Description Context Selection** - select the context used to populate each indicator's description.
    - **Ingest ASNs As** - select which entity type to ingest ASNs as in ThreatQ.
  - Added the following new configuration parameter for the Threat Intelligence, Campaigns, and Malware feeds:
    - **Supplemental Context Confidence Filter** -
  - Added the new options for the **Ingest Related Hash Types**, **Adversaries Context Selection**, and **Indicator Context Selection** parameters for all feeds excluding Vulnerability Intelligence.
  - Removed legacy configuration parameter: **Inherit Context from Indicators to Related Hashes**.
- **Version 2.0.0**
  - Rebranded the integration from Mandiant Threat Intelligence CDF to **Google Threat Intelligence CDF**.
  - Migrated the integration feeds from Mandiant to Google Threat Intelligence.
  - Added new parameters to retrieve related objects with a customizable context.
  - Added configuration parameter to filter by industries.

- Resolved an issue where CVE IDs would not be ingested into ThreatQ when the `Indicators (Type: CVE)` option was selected in the `Ingest CVEs As` field for the **Google Vulnerability Intelligence** (formerly Mandiant Vulnerability Intelligence) feed.

  > A note has also been added to this feed to clarify how CVE IDs will be ingested into the platform. You will need to re-enter your configuration and re-enable the feed after upgrading to this version. **Ensure your credentials and other configurations are backed up before upgrading.**

- Added the ability to ingest the Last Activity Date for Campaigns as an attribute.
- Performed the following updates and fixes for Google Score & Threat Score mapping:
  - Google Score is no longer used for threshold filtering, in favor of the new "Threat Score" field.
  - Google's new Confidence and Severity fields are now ingested as attributes alongside the threat score.
  - Google's new Verdict field is now ingested as an attribute for indicators.
  - Google's new Category field is now ingested as an attribute for indicators.
- Added the ability to dynamically set the status of indicators based on the threat score or verdict.
  - Automatically set status to Active if the verdict is malicious.
  - Automatically set status to Whitelisted if the threat score is 0.
- Added the ability to normalize the Threat Score for indicators into a value range of your choosing.
- Added the ability to select which pieces of context get brought into ThreatQ with each indicator.

- **Version 1.5.0**
  - Added the following new feeds:
    - Mandiant Threat Intelligence Campaigns
    - Mandiant Threat Intelligence Malware
  - The **Mandiant Threat Intelligence** (actors) feed no longer will fetch attack patterns related to *related malware* as this fetch will be handled by the dedicated **Mandiant Threat Intelligence Malware** feed.
  - Added a new configuration parameter, **Ingest CVEs As**, to the Mandiant Vulnerability Intelligence feed.
  - Performed the following updates regarding Mandiant Score Mapping:
    - Mandiant Score now normalizes to an attribute called `Disposition`. It was previously called `Mandiant Confidence.` Users should adjust their scoring policy to account for this change.
    - Score thresholds are now inclusive (previously exclusive).
    - Added the ability to map to a Disposition of `Suspicious.`
    - Modified the default score thresholds based on Mandiant's recommendations:
      - 0-39: Unknown
      - 40-59: Indeterminate
      - 60-79: Suspicious
      - 80-100: Malicious

        - Indicators are no longer marked as `Benign` if their score does not reach the Indeterminate threshold. Instead, they will be marked as `Unknown`, per Mandiant's recommendations
    - Added TLP mapping Support.
    - Added the ability to have associated hashes (to indicators) inherit attributes from the top-level indicator
    - Added `Category` attribute for indicators based on the reporting sources.
    - Added the ability to ingest MISP flags into the description of each indicator (Indicators feed only).
    - Removed the redundant `Audience Name` attribute from the `Mandiant Threat Intelligence` feed and renamed the `Audience License` attribute to `Audience.`
    - Resolved a pagination issue where the supplemental feed may error out when relationships exceed 10k.
    - Renamed the `Operating System` attribute for Malware to `Target Operation System`
    - The default selection for how CVEs will be ingested is now set to `Vulnerabilities.`
    - The default MScore threshold is now 40 to prevent ingestion of unrated indicators.
    - Added the ability to enable/disable SSL Verification.
    - Added the ability to enable/disable Proxies.
    - Added two new known issues / limitation entries:
        - Users upgrading from an integration version <1.5.0 will have to reconfigure and reenable their feeds upon upgrade to 1.5.0 or later.
        - Disabling the **Only Ingest Recently Updated Entities** configuration parameter for the Mandiant Threat Intelligence Malware feed will result in extremely long run times and may trigger a 500 internal server error from Mandiant.
    - Updated the minimum ThreatQ version to 5.12.1.
- **Version 1.4.0**
    - Updated the minimum ThreatQ version to 5.6.0.
    - The **Mandiant Threat Intelligence Vulnerabilities** feed has been renamed to the **Mandiant Vulnerability Intelligence** feed.
        - The feed can now parse and return more context and details regarding vulnerabilities.
        - Added the following parameters:
            - **Range Type Filter** - select the rating types for vulnerabilities to ingest.
            - **Risk Rating Filter** - select the risk ratings for vulnerabilities to ingest.
            - **Exploitation State Filter** - select the exploitation states for vulnerabilities to ingest.
            - **Exploitation Vector Filter** - select the exploitation vectors for vulnerabilities to ingest.
            - **Vulnerability Must Have a Zero Day** - filter out vulnerabilities that do not have zero days exploits.
            - **Vulnerability Must be Observed in the Wild** - filter out vulnerabilities that have not been observed in the wild.
            - **Vulnerability Must be CISA Known Exploited** - filter out vulnerabilities that are not CISA known exploited.
            - **Vulnerability Must Have Exploits** - filter out vulnerabilities that have no associated exploits.

        - **Vulnerability Attribute Context** - select the context for vulnerabilities to ingest.
        - **Description Context** - select the pieces of context to include in the vulnerability's description.
        - **CVSS Attribute Context** - select the CVSS context for vulnerabilities to ingest.
      - Removed the **Save CVE Data As** parameter from the feed.
    - Added the following parameters to the Intelligence and Indicator Intelligence feeds:
      - **Inherit Attributes from Indicators to Associated Hashes** - adds the ability to inherit attribution from top-level indicators to the associated hashes.
      - **Add MISP Flags to Indicator Descriptions** - adds the ability to ingest the MISP flags into the description of each indicator.
    - Added the **Parsing Entities** parameter field to the Mandiant Threat Intelligence feed.
    - Resolved an issue where the Confidence mapping was not an inclusive threshold.
- **Version 1.3.4**
    - Added a new configuration parameter, **Parsed Entries**, that allows you to select the IOC types to automatically parse from the content.
    - Added ingestion rules for certain attributes.
    - Updated the **Save CVE Data** default setting. The Vulnerabilities option will now be selected by default.
- **Version 1.3.3**
    - Added new configuration option: **Base URL**, that allows you set the Mandiant Base URL for the feeds.
    - New Known Issue / Limitation chapter entry added to the user guide regarding data ranges.
- **Version 1.3.2**
    - Resolved an issue where feed requests would fail with a 400 Bad Request message when the epoch value was empty.
- **Version 1.3.1**
    - Added the following new configuration options for the **Mandiant Threat Intelligence** and **Mandiant Threat Intelligence Indicators** feeds:
      - Mandiant Score Confidence Indeterminate Threshold
      - Mandiant Score Confidence Malicious Threshold
    - Added additional attribute, **Mandiant Classification**, that is derived from the Mandiant Score.
- **Version 1.3.0**
    - Added two new feeds: **Mandiant Threat Intelligence Indicators** and **Mandiant Threat Intelligence Vulnerabilities**.
- **Version 1.2.1**
    - Updated integration authentication method to use **API ID** and **Secret Key** opposed to Username and Password.
- **Version 1.2.0**
    - Added the ability to:
      - Include uncategorized groups as tags.
      - Filter data by recently updated entities.
      - Fetch related attack patterns to the threat actors.
      - Fetch related indicators to the threat actors.
      - Fetch related attack patterns to the related malware.

  - Fixed an issue where the feed attempted to ingest related malware as Indicators
- **Version 1.1.1**
  - Fixed an issue where the integration would attempt to ingest related malware as indicators.
  - Added the following configuration parameters:
    - **Only Ingest Recently Updated Threat Actors -** Adds ability to filter data by recently updated entities.
    - **Add Uncategorized Groups as Tags -** Adds ability to include uncategorized groups as tags.
    - **Fetch Attack Patterns Related to Threat Actors -** Adds ability to fetch related attack patterns to the threat actors.
    - **Fetch Indicators Related to Threat Actors -** Adds ability to fetch related indicators to the threat actors.
    - **Fetch Indicators Related to Malware -** Adds ability to fetch related attack patterns to the related malware.
- **Version 1.1.0**
  - Added X-App-Name as a header.
  - Performed internal refactoring.
- **Version 1.0.0**
  - Initial release