

ThreatQuotient



Recorded Future CDF User Guide

Version 2.8.2

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ThreatQuotient

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 **ThreatQ Supported**

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Support

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Support Email: support@threatq.com

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Integration Details

ThreatQuotient provides the following details for this integration:

Current Integration Version	2.8.2
Compatible with ThreatQ Versions	>= 4.34.0
Support Tier	ThreatQ Supported

Introduction

The Recorded Future CDF ingests threat intelligence data from the following feeds published by the *Recorded Future* vendor:

- **Recorded Future Domain Risk List** - retrieves information in the form of a CSV list where the first token is risk data and the last token containing the supporting context.
- **Recorded Future IP Risk List** - retrieves IP Addresses from the provider.
- **Recorded Future URL Risk List** - retrieves URLs from the provider.
- **Recorded Future Vulnerability Risk List** - retrieves CVEs from the provider.
- **Recorded Future Hash Risk List** - retrieves Hashes from the provider.
- **Recorded Future Analyst Note** - retrieves Reports, Indicators, and Attack Patterns from the provider.
- **Recorded Future Alerts** - retrieves Alerts from the provider.
- **Recorded Future Alerts Details (Supplemental)** - retrieves related data for each of the ingested events retrieved from the Alert endpoint.
- **Recorded Future Playbook Alerts** - retrieves a list of alerts filtered by the values provided in the configuration section.
- **Domain Abuse Playbook Alert (Supplemental)** - retrieves related data for each of the ingested events retrieved from the Alert endpoint.

The integration ingests the following system objects:

- Attack Patterns
 - Attack Pattern Attributes
- Events
 - Event Attributes
- Indicators
 - Indicator Attributes
- Malware
 - Malware Attributes
- Reports
 - Report Attributes
- Vulnerabilities
 - Vulnerability Attributes

Prerequisites

MITRE ATT&CK attack patterns must have already been ingested by a previous run of the MITRE ATT&CK feeds in order for MITRE ATT&CK attack patterns ingested by the Analyst Note feed to be created. MITRE ATT&CK attack patterns are ingested from the following feeds:

- MITRE Enterprise ATT&CK
- MITRE Mobile ATT&CK
- MITRE PRE-ATT&CK

Installation

Perform the following steps to install the integration:



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

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



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

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

You will still need to [configure and then enable](#) the feed.

Configuration



ThreatQuotient does not issue API keys for third-party vendors. Contact the specific vendor to obtain API keys and other integration-related credentials.

To configure the integration:

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



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

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



All Recorded Future feeds require the Recorded Future API Key. The tables below provide any additional parameters required for specific feeds included with this integration.

All Feeds

PARAMETER

DESCRIPTION

API Key

Your API Key to be used in HTTP headers for accessing feed data.

All Risk List Feeds

PARAMETER

DESCRIPTION

List to be Retrieved

Use the checkboxes provided to select specific Recorded Future lists to be retrieved.

Minimum Risk Score
Threshold

The numeric value representing the minimum risk score required to ingest an IOC. The default setting is 50.

Recorded Future Vulnerability Risk List - Additional Parameter

PARAMETER	DESCRIPTION
Save CVE Data As	Select whether to ingest CVEs as: Vulnerabilities, Indicators, or Both.  The default setting is to ingest Indicators objects.

Recorded Future Hash Risk List - Additional Parameter

PARAMETER	DESCRIPTION
Ingested Hash Types	Select the type of hashes to be ingested into ThreatQ. Options include ◦ MD5 ◦ SHA-1 ◦ SHA-256

Recorded Future Analyst Note - Additional Parameters

PARAMETER	DESCRIPTION
Entity	A string to search for notes by entity ID.
Author	A string to search for notes by author ID.
Title	A string to search for notes by title.
Topic	A string to search for notes by topic ID. The options for this user field are: ◦ Actor Profile ◦ Analyst On-Demand Report ◦ Cyber Threat Analysis ◦ Flash Report ◦ Geopolitics ◦ Hunting Package ◦ Indicator ◦ Informational ◦ Malware/Tool Profile ◦ SNORT Rule ◦ Source Profile ◦ Threat Lead ◦ TTP Instance ◦ Validated Intelligence Event ◦ Weekly Threat Landscape ◦ YARA Rule
Label	A string that helps searching for notes by label, by name.
Source	A string that helps sorting by the source of note. The options for this user field will be: ◦ Insikt Group ◦ ThreatQuotient - Partner Notes
Tagged Text	Select whether the text should contain tags or not. Possible values are: ◦ True ◦ False
Limit	The maximum number of records per request. This will be used in the pagination.

Record Version	Ingested Hash Types Select the type of hashes to be ingested into ThreatQ. Options include ◦ MD5
----------------	--

Recorded Future Alerts - Additional Parameters

PARAMETER	DESCRIPTION
Triggered	A string to search for events from a specific date (YYYY-MM-DD or YYYY-MM or YYYY).
Review Status	A string to search for events by status (Unassigned, Assigned, No Action and Tuning). If no specific status is selected, all event statuses are returned by the provider.
Freetext Search	A string to search for events by any value.
Save CVE Data as	Select whether to ingest CVEs as: Vulnerabilities, Indicators, or Both.  The default setting is to ingest Indicators objects.
Ingested Hash Types	Select the type of hashes to be ingested into ThreatQ. Options include ◦ MD5 ◦ SHA-1 ◦ SHA-256

Recorded Future Playbook Alerts - Additional Parameters

PARAMETER	DESCRIPTION
Filter By	The date that will be used for filtering the alerts: Creation or Update time of the Playbook Alert.
Statuses	The Status of the Playbook Alert. Options include: ◦ New ◦ In Progress ◦ Dismissed ◦ Resolved
Priority	The Priority of the Playbook Alert. Options include: ◦ High Priority ◦ Moderate Priority ◦ Priority Informational

-
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

Recorded Future Domain Risk List

The data on this feed comes in form of a CSV list. The first token is the actual risk data (domain), and the last token (EvidenceDetails) contains supporting context. This token is a JSON-formatted string of an array of dictionaries.

GET <https://api.recordedfuture.com/v2/domain/risklist>

Sample Response:

```
'ns513726.ip-192-99-148.net', '92', '3/32',
'{"EvidenceDetails":
  [
    {
      "CriticalityLabel": "Unusual",
      "Rule": "Historical Malware Analysis DNS Name",
      "EvidenceString": "6 sightings on 1 source: VirusTotal...",
      "Timestamp": "2015-04-04T00:00:00.000Z",
      "Criticality": 1
    },
    {
      "CriticalityLabel": "Suspicious",
      "Rule": "Blacklisted DNS Name",
      "EvidenceString": "1 sighting on 1 source: DShield: Suspicious
Domain List.",
      "Timestamp": "2018-12-26T07:12:00.936Z",
      "Criticality": 2
    },
    {
      "CriticalityLabel": "Very Malicious",
      "Rule": "C&C DNS Name",
      "EvidenceString": "1 sighting on 1 source: Abuse.ch: Zeus Domain
Blocklist (Standard).",
      "Timestamp": "2018-12-26T07:12:00.936Z",
      "Criticality": 4
    }
  ]
}'
```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
0 (first token)	Indicator.Value	FQDN	N/A	ns513726.ip-192-99-148.net	N/A
1 (second token)	Indicator.Attribute	Risk Score	N/A	66	N/A
2 (third token)	Indicator.Attribute	Risk String	N/A	2/32	N/A
3 (fourth token) [].CriticalityLabel	Indicator.Attribute	Criticality	3 (fourth token) [].Timestamp	Suspicious	N/A
3 (fourth token) [].Rule	Indicator.Attribute	Associated Rule	3 (fourth token) [].Timestamp	Blacklisted DNS Name	N/A
3 (fourth token) [].EvidenceString	Indicator.Attribute	Evidence	3 (fourth token) [].Timestamp	1 sighting on 1 source: Abuse.ch: Zeus Domain Blocklist (Standard).	N/A

Recorded Future IP Risk List

Similar to the above feed, this feed gets IP addresses as indicators.

GET <https://api.recordedfuture.com/v2/ip/risklist>

Sample Response:

```
'5.120.187.119', '65', '1/49',
{'EvidenceDetails':
  [
    {
      "CriticalityLabel": "Malicious",
      "Rule": "Recent Positive Malware Verdict",
      "EvidenceString": "1 sighting on 1 source: ReversingLabs....",
      "Timestamp": "2018-11-22T00:00:00.000Z",
      "Criticality": 3
    }
  ]
}'
```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
0 (first token)	Indicator.Value	IP Address	N/A	5.120.187.119	N/A
1 (second token)	Indicator.Attribute	Risk Score	N/A	65	N/A
2 (third token)	Indicator.Attribute	Risk String	N/A	1/49	N/A
3 (fourth token) [].CriticalityLabel	Indicator.Attribute	Criticality	3 (fourth token) [].Timestamp	Malicious	N/A
3 (fourth token)[]Rule	Indicator.Attribute	Associated Rule	3 (fourth token) [].Timestamp	Recent Positive Malware Verdict	N/A
3 (fourth token) [].EvidenceString	Indicator.Attribute	Evidence	3 (fourth token) [].Timestamp	1 sighting on 1 source: ReversingLabs.	N/A

Recorded Future URL Risk List

Similar to the above feeds, this feed gets URLs as indicators.

GET <https://api.recordedfuture.com/v2/url/risklist>

Sample Response:

```
'http://handle.booktobi.com/css/index.html', '65', '1/7',
{'EvidenceDetails':
  [
    {
      "CriticalityLabel": "Malicious",
      "Rule": "Active Phishing URL",
      "EvidenceString": "1 sighting on 1 source: PhishTank: Phishing
Reports.",
      "Timestamp": "2018-12-26T16:15:44.750Z",
      "Criticality": 3
    }
  ]
}'
```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
0 (first token)	Indicator.Value	URL	N/A	http://handle.booktobi.com/css/index.html	N/A
1 (second token)	Indicator.Attribute	Risk Score	N/A	65	N/A
2 (third token)	Indicator.Attribute	Risk String	N/A	1/7	N/A
3 (fourth token) [.CriticalityLabel]	Indicator.Attribute	Criticality	3 (fourth token) [.Timestamp]	Malicious	N/A
3 (fourth token) [.Rule]	Indicator.Attribute	Associated Rule	3 (fourth token) [.Timestamp]	Active Phishing URL	N/A
3 (fourth token) [.EvidenceString]	Indicator.Attribute	Evidence	3 (fourth token) [.Timestamp]	1 sighting on 1 source: PhishTank: Phishing Reports.	N/A

Recorded Future Vulnerability Risk List

Similar to the above feeds, this feed gets CVEs.

GET <https://api.recordedfuture.com/v2/vulnerability/risklist>

Sample Response:

```
'CVE-2018-0802', '89', '11/18',
{'EvidenceDetails':
  [
    {
      "CriticalityLabel": "Low",
      "Rule": "Linked to Historical Cyber Exploit",
      "EvidenceString": "4281 sightings on 351 sources including: ...",
      "Timestamp": "2018-11-14T22:31:30.000Z",
      "Criticality": 1
    },
    {
      "CriticalityLabel": "Low",
      "Rule": "Historically Linked to Penetration Testing Tools",
      "EvidenceString": "1 sighting on 1 source: @DTechCloud....",
      "Timestamp": "2018-05-07T20:31:29.000Z", "Criticality": 1
    },
  ]
}'
```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
0 (first token)	Indicator.Value/ Vulnerability.Value	CVE/N/A	N/A	CVE-2018-0802	N/A
1 (second token)	Indicator.Attribute/ Vulnerability.Attribute	Risk Score	N/A	89	N/A
2 (third token)	Indicator.Attribute/ Vulnerability.Attribute	Risk String	N/A	11/18	N/A
3 (fourth token) [.CriticalityLabel	Indicator.Attribute/ Vulnerability.Attribute	Criticality	3 (fourth token) [.Timestamp	Low	N/A
3 (fourth token) [.Rule	Indicator.Attribute/ Vulnerability.Attribute	Associated Rule	3 (fourth token) [.TimeStamp	Linked to Historical Cyber Exploit	N/A
3 (fourth token) [.EvidenceString	Indicator.Attribute/ Vulnerability.Attribute	Evidence	3 (fourth token) [.Timestamp	1 sighting on 1 source: @DTechCloud....	N/A

Recorded Future Hash Risk List

Similar to the above feeds, this feed gets Hashes.

GET <https://api.recordedfuture.com/v2/hash/risklist>

Sample Response:

```
'ed01ebfbc9eb5bbea545af4d01bf5f1071661840480439c6e5babe8e080e41aa', 'SHA-256',
'89', '4/10',
{'EvidenceDetails':
  [
    {
      "CriticalityLabel": "Unusual",
      "Rule": "Threat Researcher",
      "EvidenceString": "21 sightings on 9 sources including: ...",
      "Timestamp": "2018-01-28T11:24:35.942Z",
      "Criticality": 1.0
    },
    {
      "CriticalityLabel": "Suspicious",
      "Rule": "Linked to Vulnerability",
      "EvidenceString": "5 sightings on 2 sources: ...",
      "Timestamp": "2017-08-08T14:10:11.410Z",
      "Criticality": 2
    },
    {
      "CriticalityLabel": "Suspicious",
      "Rule": "Linked to Malware",
      "EvidenceString": "Previous sightings on 36 sources
including: ...",
      "Timestamp": "2017-05-12T15:39:30.000Z",
      "Criticality": 2
    }
  ]
}'
```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
0 (first token)	Indicator.Value	1 (second token)	N/A	00d48afbba5ef9eadb572730b2d0cafa	N/A
2 (third token)	Indicator.Attribute	Risk Score	N/A	89	N/A
3 (fourth token)	Indicator.Attribute	Risk String	N/A	4/10	N/A
4 (fifth token) [].CriticalityLabel	Indicator.Attribute	Criticality	4 (fifth token) [].Timestamp	Suspicious	N/A
4 (fifth token) [].Rule	Indicator.Attribute	Associated Rule	4 (fifth token) [].Timestamp	Linked to Malware	N/A
4 (fifth token) [].EvidenceString	Indicator.Attribute	Evidence	4 (fifth token) [].Timestamp	Previous sightings on 36 sources including: ...	N/A

Recorded Future Analyst Note

This feed gets Reports, Indicators and Attack Patterns. The data sample and mapping are below:

GET <https://api.recordedfuture.com/v2/analystnote/search>

Sample Response:

```
{
  "data": {
    "results": [
      {
        "source": {
          "id": "VKz42X",
          "name": "Insikt Group",
          "type": "Source"
        },
        "attributes": {
          "validated_on": "2020-02-06T06:59:32.784Z",
          "published": "2020-02-06T06:59:32.784Z",
          "text": "some text",
          "topic": [
            {
              "id": "TXSFt0",
              "name": "Flash Report",
              "type": "Topic"
            }
          ],
          "title": "Mailto Ransomware Targets Enterprise Networks",
          "note_entities": [
            {
              "id": "bLfMiL",
              "name": "Mailto Ransomware",
              "type": "Malware"
            }
          ],
          "context_entities": [
            {
              "id": "J6Uzb0",
              "name": "Bleeping Computer",
              "type": "Source"
            }
          ],
          "validation_urls": [
            {
              "id": "url:url:https://www.bleepingcomputer.com/news/security/mailto-netwalker-ransomware-targets-enterprise-networks/",
              "name": "url:https://www.bleepingcomputer.com/news/security/mailto-netwalker-ransomware-targets-enterprise-networks/",
              "type": "URL"
            }
          ]
        }
      }
    ]
  }
}
```

```

    },
    {
      "id": "url:url:https://twitter.com/VK_Intel/status/
1225086186445733889?s=20",
      "name": "url:https://twitter.com/VK_Intel/status/
1225086186445733889?s=20",
      "type": "URL"
    }
  ]
},
{id": "cu1WGK"
}
]
},
"counts": {
  "returned": 10,
  "total": 19216
}
}

```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data.results[].attributes.title	Report.Name	Report	"Mailto Ransomware Targets Enterprise Networks"	N/A	
.data.results[].attributes.published	Report.Published_at	N/A	"2020-02-06T06:59:32.784Z"	This date will also be used for related indicators and attack patterns.	
.data.results[].attributes.text	Report.Description	Description	"text"	N/A	
.data.results[].source.name	Report.Attribute	Recorded Future Source	"Insikt Group"	N/A	
.data.results[].attributes.topic[].name	Report.Attribute	Topic Name	"Flash Report"	N/A	
.data.results[].attributes.validated_on	Report.Attribute	Validated On	"2020-02-06T06:59:32.784Z"	N/A	
.data.results[].attributes.context_entities	N/A	N/A	N/A	*See entities mapping	
.data.results[].attributes.note_entities	N/A	N/A	N/A	*See entities mapping	

Entities Mapping

This mapping will be used to map both values from `context_entities` and `note_entities`. The data sample and mapping are below:

Sample Response:

```
{
  "context_entities": [
    {
      "id": "J6Uzb0",
      "name": "Bleeping Computer",
      "type": "Source",
      "description": "some description"
    }
  ]
}
```

```
indicator_type_map:
  IPAddress: IP Address
  URL: URL
  CyberVulnerability: CVE
```

ThreatQ will filter based by type. If the value of the `type` key is contained in the `indicator_type_map` below or is equal to Hash, an indicator will be ingested (the `published_at` date will be the same as for the report object). If the `type` key is equal to Malware, an object of type Malware type will be ingested. If the `type` key is equal to `MitreAttackIdentifier`, an object of Attack Pattern type will be ingested. Else, attributes will be created for the main report object.

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	EXAMPLES	NOTES
value	Report.Attribute	.name	"Bleeping Computer"	N/A
.text	Report.Attribute	.description	"some description"	N/A
.name	Indicator.Value	Indicator	"Bleeping Computer"	N/A
.type	Indicator.Type	.name	"Ip Address"	The value for this will be <code>indicator_type_map[.type]</code> if it exists there. If the value is Hash, the value length will be analyzed and based on it it will be either MD5, SHA-1, or SHA-256.
.description	Indicator.Attribute	Description	"some description"	N/A
See note	Indicator.Attribute	Analyst Note	"some description"	N/A
.name	Attack_pattern.Value	Attack Pattern	"T1001 - Data Obfuscation"	The value for the Attack Pattern objects is generated based on the ingested name and the values of already ingested MITRE attack patterns (by MITRE ATT&CK feeds).

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	EXAMPLES	NOTES
				If the ingested name is 'T1001', the value will be 'T1001 - Data Obfuscation'.
.description	Attack_pattern.Attribute	Entity Description	"some description"	N/A
See note	Attack_pattern.Attribute	Analyst Note	"some description"	N/A
.name	Malware.Value	Malware	"Bleeping Computer"	N/A
.description	Malware.Attribute	Entity Description	"some description"	N/A
See note	Malware.Attribute	Analyst Note	"some description"	N/A



The Analyst Note attribute inherits its value from the parent report's description.

Recorded Future Alerts

The Alerts feed retrieves Alerts from the provider.

GET <https://api.recordedfuture.com/v3/alert/>

Sample Response:

```
{
  "data": [
    {
      "review": {
        "note": null,
        "status_in_portal": "New",
        "assignee": null,
        "status": "no-action"
      },
      "owner_organisation_details": {
        "organisations": [
          {
            "organisation_id": "uhash:ER135KQ6oL",
            "organisation_name": "ThreatQ - Partner"
          }
        ],
        "enterprise_id": "uhash:DimzHe41vx",
        "enterprise_name": "ThreatQ - Partner"
      },
      "url": {
        "api": "https://api.recordedfuture.com/v3/alerts/rj540x",
        "portal": "https://app.recordedfuture.com/live/sc/notification/?id=rj540x"
      },
      "rule": {
        "name": "Cyber Espionage, Related Vulnerabilities",
        "id": "nt4XZZ",
        "url": {
          "portal": "https://app.recordedfuture.com/live/sc/ViewIdkobra_view_report_item_alert_editor?view_opts=%7B%22reportId%22%3A%22nt4XZZ%22%2C%22bTitle%22%3Atrue%2C%22title%22%3A%22Cyber+Espionage%2C+Related+V"
        }
      },
      "id": "rj540x",
      "hits": [
        {
          "entities": [
            {
              "id": "B_HE4",
              "name": "Google",
              "type": "Company"
            },
            {
              "id": "idn:reuters.com",
              "name": "reuters.com",
              "type": "InternetDomainName"
            },
            {
              "id": "Xw2PY",
              "name": "Frankfurt",
              "type": "Airport"
            },
            {
              "id": "rVnb7k",
              "name": "Rhysida",

```

```

        "type": "Malware"
      },
      {
        "id": "J0Nl-p",
        "name": "Ransomware",
        "type": "MalwareCategory"
      },
      {
        "id": "K_4o-y",
        "name": "Anonymous Sudan",
        "type": "Organization"
      },
      {
        "id": "I_7J4G",
        "name": "Hacktivist",
        "type": "CyberThreatActorCategory"
      },
      {
        "id": "mitre:T1048",
        "name": "T1048",
        "type": "MitreAttackIdentifier"
      },
      {
        "id": "KgNdV5",
        "name": "#ddosattacks",
        "type": "Hashtag"
      },
      {
        "id": "jc5TL-",
        "name": "ProxyShell",
        "type": "CyberVulnerability",
        "description": "ProxyShell and Log4J Vulnerabilities Were the Most Exploited Flaws in
2021."
      }
    ],
    "document": {
      "source": {
        "id": "source:hPTFPY",
        "name": "RedAlert | Blog",
        "type": "Source"
      },
      "title": "2022 Activities Summary of SectorA groups (ENG)",
      "url": "https://redalert.nshc.net/2023/06/08/2022-activities-summary-of-sectora-groups-
eng/",
      "authors": []
    },
    "fragment": "In this operation, the group targeted engineering companies in the <e
id=0qjp>energy</e> and military sectors and damaged their systems by <i id=HE-xwAAZh-v>exploiting
the <e id=kvXvR5>Log4Shell</e></i> vulnerability with an initial infiltration method.",
    "id": "HE-xwAAZh-v",
    "language": "eng",
    "primary_entity": {
      "id": "kvXvR5",
      "name": "CVE-2021-44228",
      "type": "CyberVulnerability",
      "description": "Apache Log4j2 2.0-beta9 through 2.15.0 (excluding security releases
2.12.2, 2.12.3, and 2.3.1) JNDI features used in configuration, log messages, and parameters do not
protect against attacker controlled LDAP and other JNDI related endpoints. An attacker who can
control log messages or log message parameters can execute arbitrary code loaded from LDAP servers
when message lookup substitution is enabled. From log4j 2.15.0, this behavior has been disabled by
default. From version 2.16.0 (along with 2.12.2, 2.12.3, and 2.3.1), this functionality has been
completely removed. Note that this vulnerability is specific to log4j-core and does not affect
log4net, log4cxx, or other Apache Logging Services projects."
    }
  },

```

```
    "analyst_note": null
  }
],
"ai_insights": {
  "comment": "The Recorded Future AI requires more references in order to produce a summary.",
  "text": null
},
"log": {
  "note_author": null,
  "note_date": null,
  "status_date": null,
  "triggered": "2023-06-08T04:53:13.444Z",
  "status_change_by": null
},
"title": "Cyber Espionage, Related Vulnerabilities - Rise: CVE-2021-44228",
"type": "ENTITY"
}
],
"counts": {
  "returned": 10,
  "total": 2653
}
}
```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].title	Event.Title	N/A	.data[].log.note_date / .data[].log.triggered	Cyber Espionage, Related Vulnerabilities - Rise: CVE-2021-44228	If .data[].log.note_date is not present .data[].log.triggered is used as Published Date
.data[].log.triggered	Event.Happened_at	N/A	N/A	2023-06-08T04:53:13.444Z	N/A
.data[].ai_insights.text	Event.Description	N/A	N/A	N/A	N/A
.data[].ai_insights.comment	Event.Description	N/A	N/A	The Recorded Future AI requires more references in order to produce a summary.	If .data[].ai_insights.text not present.
.data[].review.assignee	Event.Attribute	Assignee	.data[].log.note_date / .data[].log.triggered	N/A	If the attribute already exists, the value will be updated.
.data[].log.note_author	Event.Attribute	Note Author	.data[].log.note_date / .data[].log.triggered	N/A	N/A
.data[].review.status_in_portal	Event.Attribute	Alert Status	.data[].log.note_date / .data[].log.triggered	no-action	If the attribute already exists, the value will be updated.
.data[].url.portal	Event.Attribute	Reference URL	.data[].log.note_date / .data[].log.triggered	https://app.recordedfuture.com/live/sc/notification/?id=rj540x	N/A
.data[].rule.url.portal	Event.Attribute	Triggered Rule URL	.data[].log.note_date / .data[].log.triggered	https://app.recordedfuture.com/live/sc/Viewldkobra_view_report_item_alert_editor?view_opts=...	N/A
.data[].rule.name	Event.Attribute	Triggered Rule Name	.data[].log.note_date / .data[].log.triggered	Cyber Espionage, Related Vulnerabilities	N/A
.data[].type	Event.Attribute	Alert Type	.data[].log.note_date / .data[].log.triggered	ENTITY	N/A
.data[].owner_organisation_details.enterprise_name	Event.Attribute	Organisation Enterprise name	.data[].log.note_date / .data[].log.triggered	ThreatQ - Partner	N/A
.data[].hits[].document.url	Related.Indicator.Value	URL	N/A	https://redalert.nshc.net/2023/06/08/2022-activities-summary-of-sectora-groups-eng/	Ingested as indicator if 'www.virustotal.com' not in .url
.data[].hits[].document.url	Related.Event.Attribute	URL	N/A	https://www.virustotal.com/84387248326473645	Ingested as attribute if 'www.virustotal.com' in .url

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].hits[].document.title, .data[].hits[].entities[].name	Related.Indicator.Description	N/A	N/A	2022 Activities Summary of SectorA groups (ENG)\n Airport:Frankfurt	Title is concatenated with all the names for which data.hits[].entities[].type is not not in the mapping tables below.
.data[].hits[].fragment	Related.Indicator.Attribute	Fragment	N/A	In this operation, the group targeted engineering companies in the <e id=0qjp>energy</e> ...	N/A
.data[].hits[].language	Related.Indicator.Attribute	Language	n/A	eng	N/A
.data[].hits[].entities[].name	Related.Indicator.Tags	N/A	N/A	ddosattacks	If data.hits[].entities[].type is Hashtag. Character # is removed.
.data[].hits[].entities[].name	Related.Indicator.Value	data.hits[].entities[].type	N/A	N/A	See Related Indicator Type Mapping table below.
.data[].hits[].entities[].name	Related.Indicator.Attribute	data.hits[].entities[].type	N/A	N/A	See Related Indicator Attributes Mapping table below.
.data[].hits[].entities[].description	Related.Indicator/Vulnerability.Description	N/A	N/A	ProxyShell and Log4j Vulnerabilities Were the Most Exploited Flaws in 2021	If data.hits[].entities[].type is in Related Indicator Type Mapping or is a Vulnerability
.data[].hits[].entities[].name	Related.Malware.Value	N/A	N/A	Rhysida	If data.hits[].entities[].type is Malware
.data[].hits[].entities[].name	Related.Malware.Attribute	Malware Category	N/A	Ransomware	If data.hits[].entities[].type is MalwareCategory
.data[].hits[].entities[].name	Related.Adversary.Value	N/A	N/A	Anonymous Sudan	If data.hits[].entities[].type is Organization or Person
.data[].hits[].entities[].type	Related.Adversary.Attribute	Type	N/A	Organization	If data.hits[].entities[].type is

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
					Organization or Person
.data[].hits[].entities[].name	Related.Adversary.Tags	N/A	N/A	Hackivist	If data.hits[].entities[].type is CyberThreatActor Category
.data[].hits[].entities[].name	Related.Attack Patten.Value	N/A	N/A	T1048	If data.hits[].entities[].type is MitreAttackIdentifier
.data[].hits[].entities[].name	Related.Vulnerability.Value	N/A	N/A	ProxyShell	If data.hits[].entities[].type is CyberVulnerability or user config Save CVE Data as contains Vulnerabilities



In the previous table, there is a Related Indicator that is set dynamically. This is because the ThreatQ Object Type is extracted from the same path `.data.hits[].entities[].type` if the `.data.hits[].entities[].type` is one from the Related Indicator Type Mapping table listed below.

Related Indicator Type Mapping

RECORDED FUTURE INDICATOR TYPE	THREATQ INDICATOR TYPE	NOTES
InternetDomainName	FQDN	N/A
URL	URL	N/A
Hash	MD5	If the length of the hash value is 32 characters
Hash	SHA-1	If the length of the hash value is 40 characters
Hash	SHA-256	If the length of the hash value is 64 characters
pAddress	IP Address	N/A
EmailAddress	Email Address	N/A
FileName	FileName	N/A
Username	Username	N/A
CyberVulnerability	CVE	If '.data.hits[].entities[].name' contains 'CVE' and user config Save CVE Data as contains Indicators

Related Indicator Attributes Mapping

In the previous table, **Related Indicator Type Mapping**, there is a **Related Indicator Attribute** that is set dynamically. We do this because the **Attribute Key** is extracted from the same path `.data.hits[].entities[].type` if the `.data.hits[].entities[].type` is one from the table listed below.

RECORDED FUTURE ATTRIBUTE TYPE	THREATQ ATTRIBUTE KEY
AttackVector	Attack Vector
Product	Product
Company	Company
City	City
Country	Country
Facility	Facility
FileNameExtension	File Extension
FileType	File Type
GeoEntity	Geo Entity
Industry	Industry
IndustryTerm	Industry Term
Operation	Operation
OrgEntity	Organization Entity
PhoneNumber	Phone Number

RECORDED FUTURE ATTRIBUTE TYPE	THREATQ ATTRIBUTE KEY
ProvinceOrState	State
Region	Region
Technology	Technology
Topic	Topic

Recorded Future Playbook Alerts

The Recorded Future Playbook Alerts feed retrieves a list of alerts filtered by the values provided in the configuration section.

POST <https://api.recordedfuture.com/playbook-alert/search>

Sample Response:

```
{
  "status": {
    "status_code": "Ok",
    "status_message": "Playbook alert search successful"
  },
  "data": [
    {
      "playbook_alert_id": "task:2803c5f5-aa32-41ce-98c1-41a7771cd9ad",
      "created": "2022-11-08T09:44:02.447Z",
      "updated": "2022-11-08T09:44:06.584Z",
      "status": "New",
      "category": "domain_abuse",
      "priority": "Informational",
      "title": "juhaokan.ga",
      "owner_id": "uhash:ER135KQ6oL",
      "owner_name": "ThreatQ - Partner",
      "organisation_id": "uhash:DimzHe41vx",
      "organisation_name": "ThreatQ - Partner"
    }
  ]
}
```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data[].title	Event.Title	Recorded Future Alert	.data[].created	juhaokan.ga	N/A
.data[].status	Event.Attribute	Status	.data[].created	New	N/A
.data[].category	Event.Attribute	Category	.data[].created	domain_abuse	N/A
.data[].priority	Event.Attribute	Priority	.data[].created	Informational	N/A
.data[].owner_name	Event.Attribute	Owner	.data[].created	ThreatQ - Partner	N/A
.data[].organisation_name	Event.Attribute	Organisation	.data[].created	ThreatQ - Partner	N/A

Domain Abuse Playbook Alert (Supplemental)

The Domain Abuse Playbook Alert supplemental feed related data for each of the ingested events retrieved from the Alert endpoint.

POST https://api.recordedfuture.com/playbook-alert/domain_abuse

Sample Response:

```
{
  "status": {
    "status_code": "Ok",
    "status_message": "Domain Abuse lookup successful"
  },
  "data": {
    "panel_status": {
      "entity_name": "lonsdale.social",
      "entity_criticality": "Low",
      "risk_score": 5,
      "context_list": [
        {
          "context": "Phishing Host"
        },
        {
          "context": "Active Mail Server"
        }
      ],
      "targets": [
        "idn:lonsdale.fr",
        "idn:lonsdale.us",
        "idn:lonsdale.porn",
        "idn:lonsdale.club"
      ],
      "status": "New",
      "priority": "High",
      "created": "2022-11-09T08:20:15.778Z",
      "case_rule_id": "report:nvAj-X",
      "case_rule_label": "Domain Abuse",
      "owner_id": "uhash:ER135KQ6oL",
      "owner_name": "ThreatQ - Partner",
      "organisation_id": "uhash:DimzHe41vx",
      "organisation_name": "ThreatQ - Partner"
    },
    "panel_action": [],
    "panel_evidence_summary": {
      "explanation": "Alert was created as a result of a triggered typosquat detection",
      "resolved_record_list": [
        {
          "entity": "idn:ns1025.ui-dns.org",

```

```

        "risk_score": 5,
        "criticality": "Low",
        "record_type": "NS",
        "context_list": []
    },
    {
        "entity": "ip:217.160.0.153",
        "risk_score": 27,
        "criticality": "Medium",
        "record_type": "A",
        "context_list": [
            {
                "context": "Phishing Host"
            }
        ]
    },
    {
        "entity": "idn:mx00.ionos.co.uk",
        "risk_score": 0,
        "criticality": "0",
        "record_type": "MX",
        "context_list": [
            {
                "context": "Active Mail Server"
            }
        ]
    },
    {
        "entity": "idn:mx01.ionos.co.uk",
        "risk_score": 0,
        "criticality": "0",
        "record_type": "MX",
        "context_list": [
            {
                "context": "Active Mail Server"
            }
        ]
    }
],
"screenshots": [
    {
        "description": "An image associated with the Playbook
Alert",
        "image_id": "img:349f92e2-fa93-4282-be15-e7a330130686",
        "created": "2022-11-09T08:20:51.685Z"
    }
]
},
"panel_evidence_dns": {
    "ip_list": [

```

```

        {
          "entity": "ip:217.160.0.153",
          "risk_score": 27,
          "criticality": "Medium",
          "record_type": "A",
          "context_list": [
            {
              "context": "Phishing Host"
            }
          ]
        }
      ],
      "mx_list": [
        {
          "entity": "idn:mx00.ionos.co.uk",
          "risk_score": 0,
          "criticality": "0",
          "record_type": "MX",
          "context_list": [
            {
              "context": "Active Mail Server"
            }
          ]
        }
      ],
      "ns_list": [
        {
          "entity": "idn:ns1115.ui-dns.de",
          "risk_score": 0,
          "criticality": "0",
          "record_type": "NS",
          "context_list": []
        },
        {
          "entity": "idn:ns1090.ui-dns.biz",
          "risk_score": 5,
          "criticality": "Low",
          "record_type": "NS",
          "context_list": []
        }
      ]
    },
    "panel_evidence_whois": {
      "body": [
        {
          "provider": "whois",
          "entity": "idn:lonsdale.social",
          "attribute": "attr:whois",
          "value": {
            "privateRegistration": false,

```

```

        "status": "clientTransferProhibited addPeriod",
        "nameServers": [
            "idn:ns1066.ui-dns.com",
            "idn:ns1025.ui-dns.org",
            "idn:ns1115.ui-dns.de",
            "idn:ns1090.ui-dns.biz"
        ],
        "registrarName": "IONOS SE",
        "createdDate": "2022-11-08T19:44:16.000Z"
    },
    "added": "2022-11-09T08:21:13.682Z"
},
{
    "provider": "whois",
    "entity": "idn:btbo2.top",
    "attribute": "attr:whoisContacts",
    "value": {
        "organization": "REDACTED FOR PRIVACY",
        "city": "REDACTED FOR PRIVACY",
        "name": "REDACTED FOR PRIVACY",
        "state": "REDACTED FOR PRIVACY",
        "street1": "REDACTED FOR PRIVACY",
        "country": "REDACTED FOR PRIVACY",
        "postalCode": "REDACTED FOR PRIVACY",
        "telephone": "REDACTED FOR PRIVACY",
        "type": "technicalContact"
    },
    "added": "2022-11-08T10:28:20.712Z"
}
]
},
"panel_log": [
    {
        "id": "uuid:26b4be48-e1e0-4773-97d7-b8c8260fe53b",
        "created": "2022-11-09T08:27:31.377Z",
        "modified": "2022-11-09T08:27:31.377Z",
        "action_priority": "Informational"
    }
]
}
}

```

ThreatQuotient provides the following default mapping for this feed:

FEED DATA PATH	THREATQ ENTITY	THREATQ OBJECT TYPE OR ATTRIBUTE KEY	PUBLISHED DATE	EXAMPLES	NOTES
.data.panel_status.entity_name	Related.Indicator	FQDN	.data.panel_status.created	jlonsdale.social	N/A
.data.panel_status.risk_score	Related.Indicator.Attribute	Risk Score	.data.panel_status.created	5	N/A
.data.panel_status.entity_criticality	Related.Indicator.Attribute	Criticality	.data.panel_status.created	Low	N/A
.data.panel_evidence_dns.ip_list[].entity	Related.Indicator	IP Address	N/A	ip:217.160.0.153	N/A
.data.panel_evidence_dns.ip_list[].risk_score	Related.Indicator.Attribute	Risk Score	N/A	27	N/A
.data.panel_evidence_dns.ip_list[].criticality	Related.Indicator.Attribute	Criticality	N/A	Medium	N/A
.data.panel_evidence_dns.mx_list[].entity	Related.Indicator	FQDN	N/A	idn:mx00.ionos.co.uk	N/A
.data.panel_evidence_dns.mx_list[].risk_score	Related.Indicator.Attribute	Risk Score	N/A	0	N/A
.data.panel_evidence_dns.mx_list[].criticality	Related.Indicator.Attribute	Criticality	N/A	0	N/A
.data.panel_evidence_dns.ns_list[].entity	Related.Indicator	FQDN	N/A	idn:ns1025.ui-dns.org	N/A
.data.panel_evidence_dns.ns_list[].risk_score	Related.Indicator.Attribute	Risk Score	N/A	5	N/A
.data.panel_evidence_dns.ns_list[].criticality	Related.Indicator.Attribute	Criticality	N/A	Low	N/A

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.

Recorded Future Domain Risk List

METRIC	RESULT
Run Time	1 minute
Indicators	393
Indicator Attributes	3,226

Recorded Future IP Risk List

METRIC	RESULT
Run Time	1 minute
Indicators	95
Indicator Attributes	1,979

Recorded Future URL Risk List

METRIC	RESULT
Run Time	23 minutes

METRIC	RESULT
Indicators	10,653
Indicator Attributes	92,877

Recorded Future Vulnerability Risk

METRIC	RESULT
Run Time	1 minute
Indicators	3
Indicator Attributes	158
Vulnerabilities	5
Vulnerability Attributes	158

Recorded Future Hash Risk List

METRIC	RESULT
Run Time	1 minute
Indicators	534
Indicator Attributes	4,707

Recorded Future Analyst Note

METRIC	RESULT
Run Time	2 minutes
Attack Patterns	1
Attack Pattern Attributes	2
Indicators	113
Indicator Attributes	732
Malware	24
Malware Attributes	131
Reports	19
Reports Attributes	335

Recorded Future Alerts

METRIC	RESULT
Run Time	1 minute
Events	13
Events Attributes	65
Indicators	48

METRIC	RESULT
Indicator Attributes	151
Malware	6
Malware Attributes	6
Adversary	2
Adversary Attributes	2

Recorded Future Playbook Alerts

METRIC	RESULT
Run Time	1 minute
Events	23
Events Attributes	115
Indicators	14
Indicator Attributes	24

Known Issues / Limitations

- The 5 main Recorded Future feeds take progressively longer to complete as more and more lists are specified for the **Recorded Future List** configuration parameter. ThreatQ recommends pulling a targeted subset of lists for each feed instead of all of the available lists.
- If Recorded Future deletes a list, the feed will return an empty response for it.

Change Log

- **Version 2.8.2**
 - Improved the **Recorded Future Alerts** feed to ingest more information regarding alerts.
 - Added new configuration field for the feed: **Save CVE Data As**.
 - Guide Update - updated Recorded Future Alerts sample response, default mapping table, Related Indicator Type mapping, and added a new Related Indicator Attributes mapping entry.
- **Version 2.8.1**
 - Updated the Recorded Future Alerts endpoint to API version 3.
 - Removed support from the following problematic lists:
 - Positive Malware Verdict
 - Historical Ransomware Distribution URL
 - Recent Ransomware Distribution URL
- **Version 2.8.0**
 - The integration now synchronizes Risk lists.
- **Version 2.7.0**
 - Added a new feed: Recorded Future Playbook Alerts.
 - Added the ability to filter by minimum risk score for the Risk List feeds (Recorded Future Domain Risk List, Recorded Future IP Risk List, Recorded Future URL Risk List, Recorded Future Vulnerability Risk List and Recorded Future Hash Risk List).
 - Added the ability to select the hash types that are ingested by the Recorded Future Hash Risk List, Recorded Future Analyst Note, and Recorded Future Alerts feeds.
 - Added the ability to ingest SHA-1 indicators.
- **Version 2.6.2**
 - Synchronized the Risk lists for the Risk List feeds to match option updates that Recorded Future performed.
 - Added time constrained data ingestion for all feeds so manual runs can be performed. Previously, the manual run option was only supported by the Analyst Note feed.
- **Version 2.6.1**
 - Fixed a parsing error that would occur when no evidence details are provided.
- **Version 2.6.0**
 - Removed lists from Recorded Future Domain Risk List feed:
 - Ransomware Distribution URL
 - Ransomware Payment DNS Name
 - Removed lists from Recorded Future Vulnerability Risk feed:
 - Observed Exploit/Tool Development in the Wild
 - Historically Observed Exploit/Tool Development in the Wild
- **Version 2.5.0**
 - Refactored Recorded Future Feeds (aside from Analyst Note).
 - Fixed a bug that caused an Error applying FilterMapping error from the URL Risk List and other similar feeds.
 - Removed lists that are no longer support that would cause the feed to throw a 404 error. Lists removed include:

-
- Recorded Future Domain Risk List:
 - C&C URL
 - Recorded Future URL Risk List:
 - C&C
 - Compromised URL
 - Historically Detected Malicious Browser Exploits
 - Recently Detected Malicious Browser Exploits
 - Recently Detected Suspicious Content
 - Historically Detected Suspicious Content
 - Recorded Future Vulnerability Risk List:
 - Recently Observed Exploit/Tool Development in the Wild
 - **Version 2.4.1**
 - Fixed a parsing error with Analyst Note.
 - **Version 2.4.0**
 - Added Alert details
 - **Version 2.3.0**
 - Added support for MITRE Attack Pattern Sub-Techniques
 - Added 'Save CVE Data As' user configuration parameter for Recorded Future Vulnerability Risk List
 - **Version 2.2.0**
 - Added support to multiple selection for list
 - Fixed issue with MITRE map
 - **Version 2.1.0**
 - Added support for configuration list in the request
 - **Version 2.0.1**
 - Fixed issue with attributes
 - **Version 2.0.0**
 - Added Analyst Note Integration
 - **Version 1.0.0**
 - Initial release