Trusteer Pinpoint Detect

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Release Notes

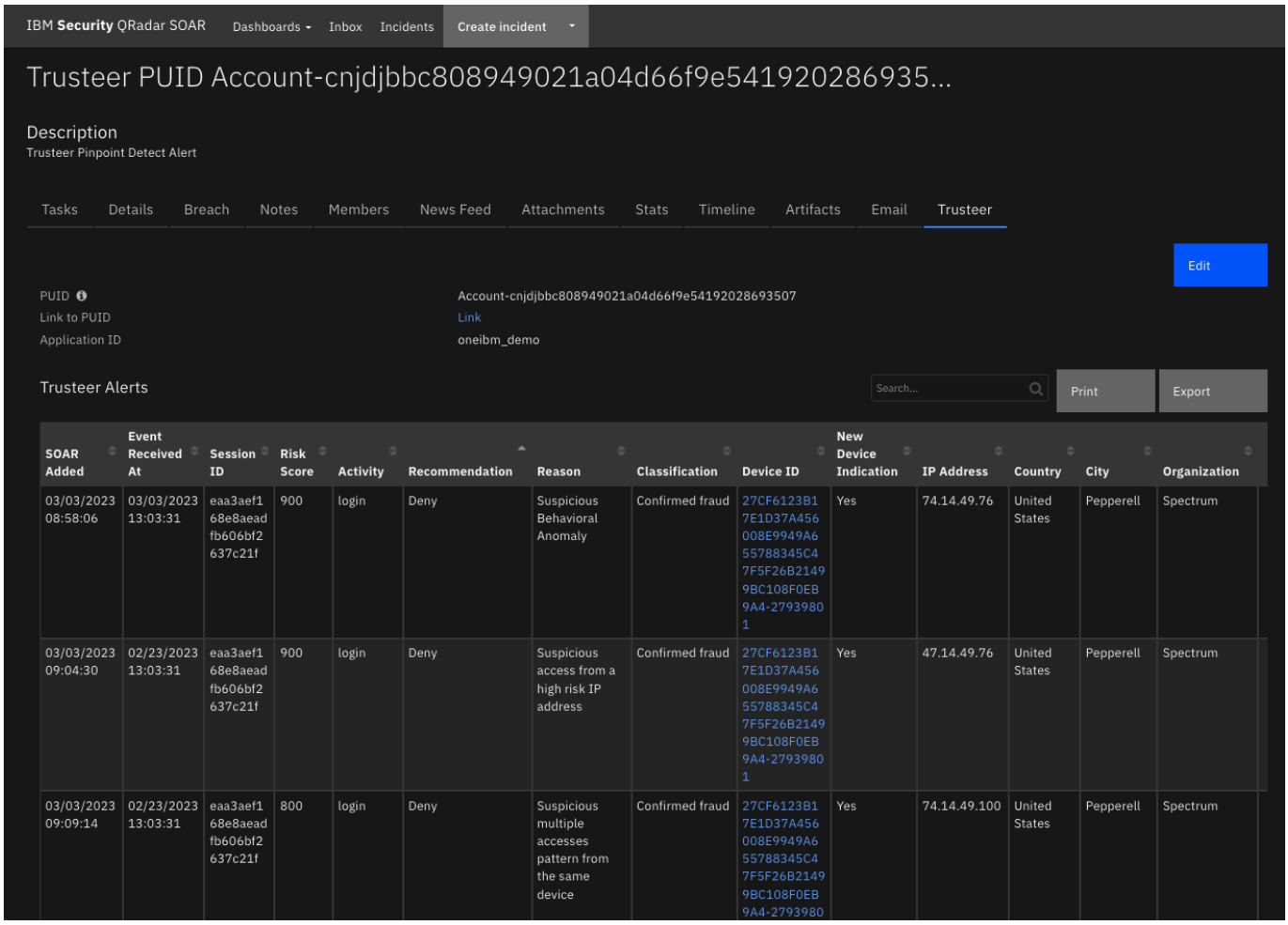
Version	Date	Notes
1.0.0	03/2023	Initial Release

Overview

IBM SOAR app for Trusteer Pinpoint Detect

IBM Security® Trusteer® Pinpoint Detect helps organizations quickly and transparently establish digital identity trust throughout a seamless customer experience without compromising on security.

IBM Security® Trusteer® Pinpoint Detect is real-time, cloud-based risk assessment software that analyzes online identities to differentiate between malicious users and true customers. Trusteer® Pinpoint Detect uses artificial intelligence and machine learning to protect digital channels against account takeover and fraudulent transactions and detect end user devices infected with high-risk malware.



Bi-directional App for Trusteer Pinpoint Detect. Parse emails from Trusteer Pinpoint Detect and create cases in SOAR and sends classification information back to Trusteer.

Key Features

- Create cases in SOAR from Trusteer Pinpoint Detect Criminal email alert feeds via email parsing script in SOAR.
- A Trusteer account (PUID - Permanent User ID) maps to a case in SOAR and subsequent new alerts on the account are added to the Trusteer Alerts data table.
- Send alert Classification feedback to Trusteer on a session from the Trusteer Alerts data table. Classification options are:
    - Pending
    - Confirmed legitimate
    - Undetermined
    - Confirmed fraud
    - Confirmed fraud (Account takeover)
    - Confirmed fraud (First-party)
    - Confirmed fraud (Mule account)
    - Confirmed fraud (Remote access tool)
    - Confirmed fraud (Social engineering)
- Add artifacts to the Trusteer case via email parsing script
- Add artifacts to the Trusteer case via Trusteer Alerts data table script.
- Navigate links back to the Trusteer account and devices from the case.

Requirements

This app supports the IBM Security QRadar SOAR Platform and the IBM Security QRadar SOAR for IBM Cloud Pak for Security.

SOAR platform

The SOAR platform supports two app deployment mechanisms, Edge Gateway (formerly App Host) and integration server.

If deploying to a SOAR platform with an Edge Gateway, the requirements are:

- SOAR platform >= `45.0.7899`.
- The app is in a container-based format (available from the AppExchange as a `zip` file).

If deploying to a SOAR platform with an integration server, the requirements are:

- SOAR platform >= `45.0.7899`.
- The app is in the older integration format (available from the AppExchange as a `zip` file which contains a `tar.gz` file).
- Integration server is running `resilient-circuits>=47.1.0`.
- If using an API key account, make sure the account provides the following minimum permissions:

Name	Permissions
Org Data	Read
Function	Read
Incidents	Read
Edit Incidents	Fields
Layouts	Read, Edit

The following SOAR platform guides provide additional information:

- *Edge Gateway Deployment Guide* or *App Host Deployment Guide*: provides installation, configuration, and troubleshooting information, including proxy server settings.
- *Integration Server Guide*: provides installation, configuration, and troubleshooting information, including proxy server settings.
- *System Administrator Guide*: provides the procedure to install, configure and deploy apps.

The above guides are available on the IBM Documentation website at ibm.biz/soar-docs. On this web page, select your SOAR platform version. On the follow-on page, you can find the *Edge Gateway Deployment Guide*, *App Host Deployment Guide*, or *Integration Server Guide* by expanding **Apps** in the Table of Contents pane. The System Administrator Guide is available by expanding **System Administrator**.

Cloud Pak for Security

If you are deploying to IBM Cloud Pak for Security, the requirements are:

- IBM Cloud Pak for Security >= `1.8`.
- Cloud Pak is configured with an Edge Gateway.
- The app is in a container-based format (available from the AppExchange as a `zip` file).

The following Cloud Pak guides provide additional information:

- *Edge Gateway Deployment Guide* or *App Host Deployment Guide*: provides installation, configuration, and troubleshooting information, including proxy server settings. From the Table of Contents, select Case Management and Orchestration & Automation > **Orchestration and Automation Apps**.
- *System Administrator Guide*: provides information to install, configure, and deploy apps. From the IBM Cloud Pak for Security IBM Documentation table of contents, select Case Management and Orchestration & Automation > **System administrator**.

These guides are available on the IBM Documentation website at ibm.biz/cp4s-docs. From this web page, select your IBM Cloud Pak for Security version. From the version-specific IBM Documentation page, select Case Management and Orchestration & Automation.

Proxy Server

The app **does** support a proxy server.

Python Environment

Python 3.6 and Python 3.9 are supported. Additional package dependencies may exist for each of these packages:

- resilient-circuits>=48.0.0

IBM Trusteer Development Version

This app has been implemented using:

Product Name	Product Version	API URL	API Version
IBM Trusteer	11.7	https://customer_name-api.trusteer.com/api/v1/ (Feedback Loop API)	v1

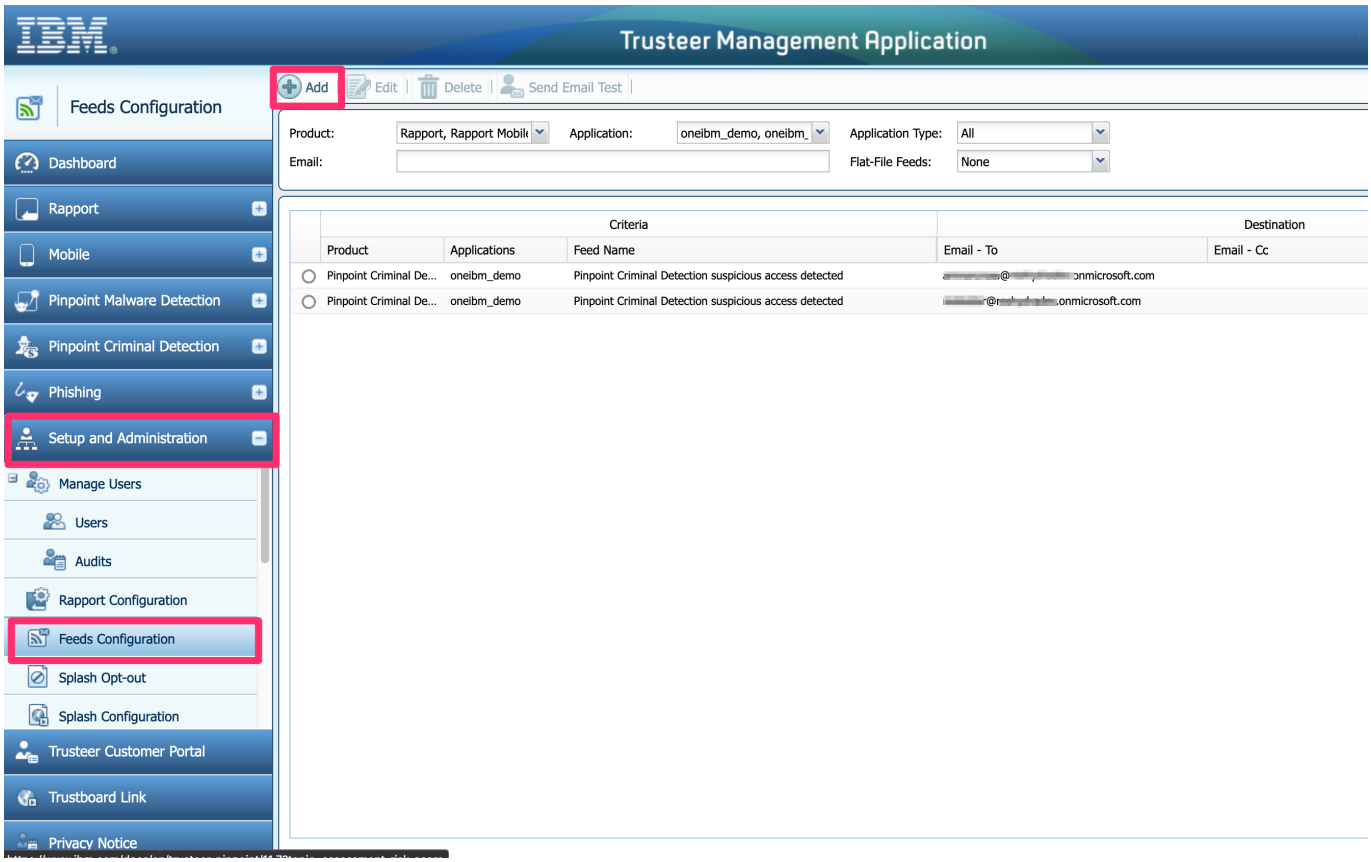
Prerequisites

- An email address configured in Trusteer Management Application (TMA/Trustboard) to which Trusteer sends **Pinpoint Detection suspicious access detected** alerts.
- The same email address configured in Trusteer is also configured in SOAR inbound email connection.
- A Trusteer API token.
- Trusteer client authorization certificate and key files to perform REST API calls.

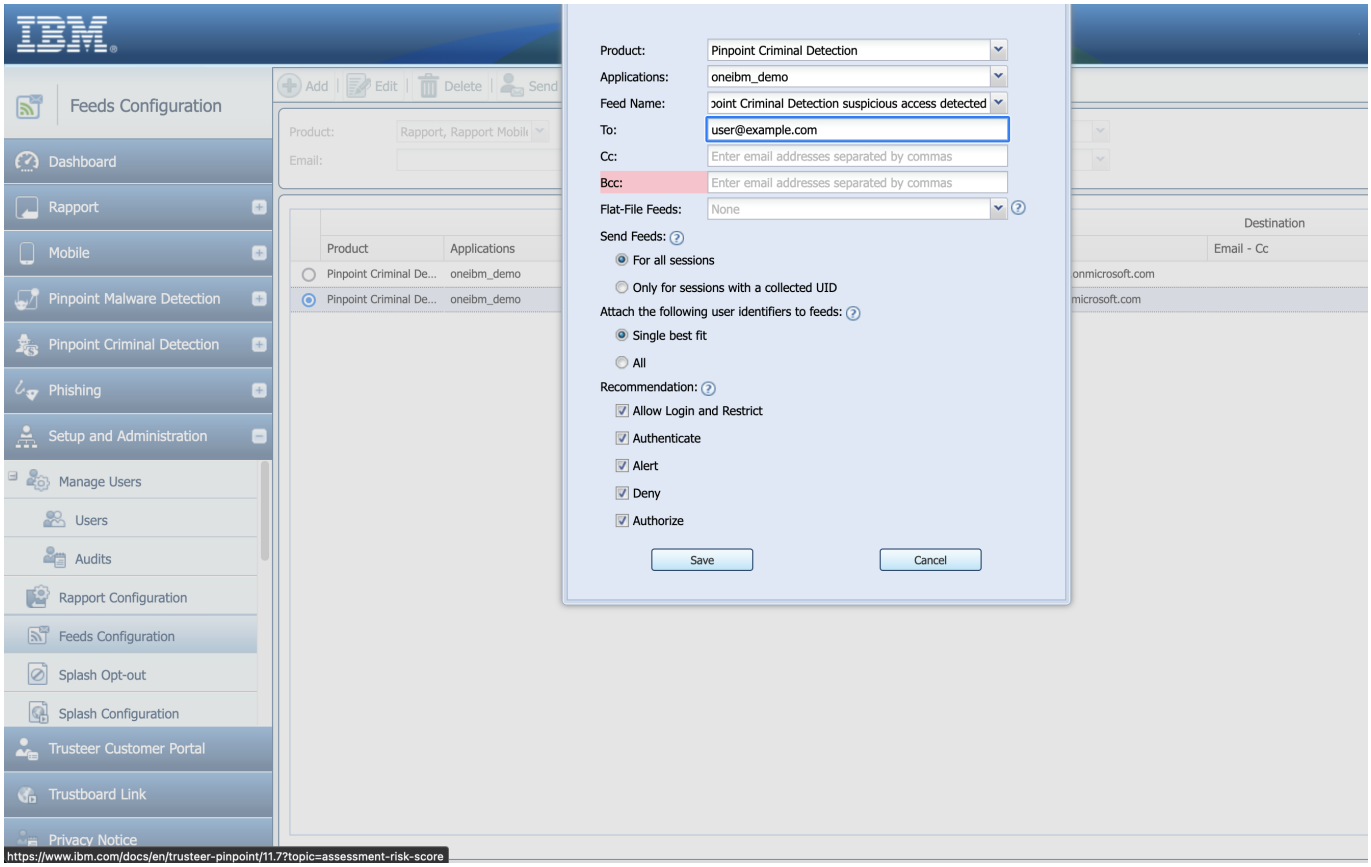
Configure Trusteer Email Feeds

Use the Trusteer Management Application (TMA/Trustboard) to configure the email address to receive Trusteer alert emails.

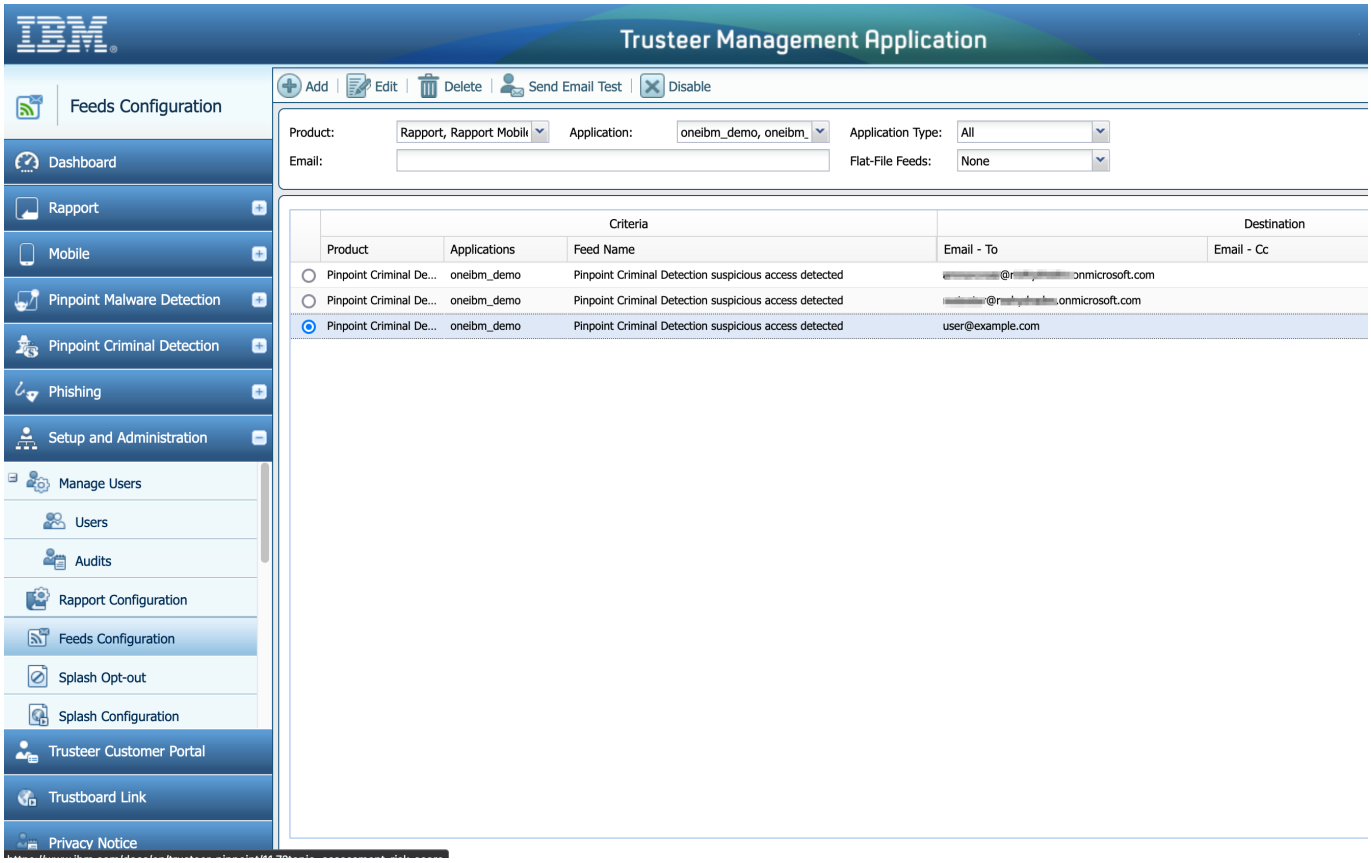
- Select **Setup and Administration** on the left menu and click on **Feeds Configuration**.
- Click on the **+ Add** button at the top of the page:



- Fill out the pop-up form.
- The **Product** selection must be **Pinpoint Detection** and the **Feed Name** selection must be **Pinpoint Criminal Detection suspicious access detected** as this is the only feed supported by the SOAR app. Hit Save.

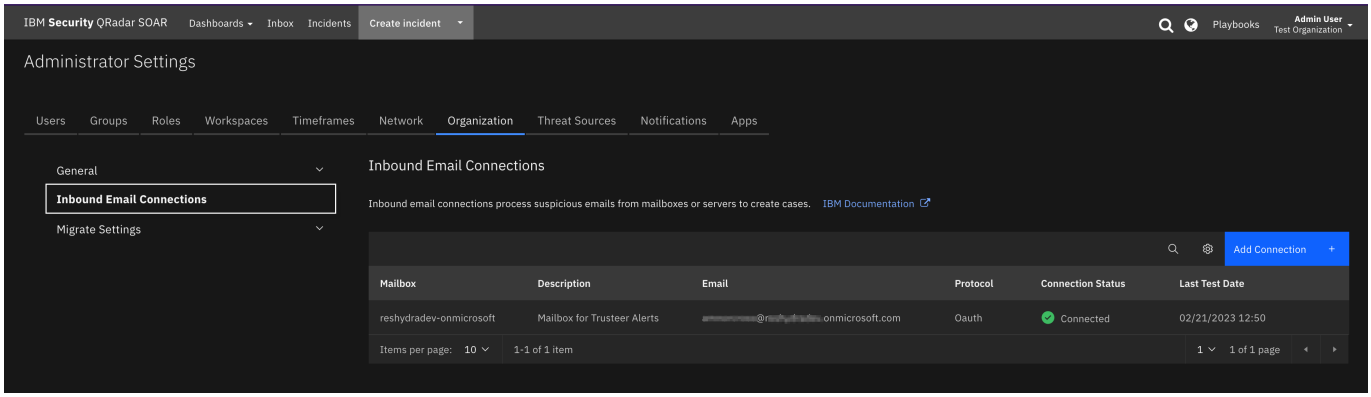


The email address to send Trusteer alerts appears in the list.



Configure SOAR Inbound Email Connection

Create and configure a SOAR inbound email connection with the same email address configured in Trusteer:



The Case/incident Owner

New cases/incidents need an owner, either an individual identified by their email address or a group name. Prior to running the app, the provided script **Trusteer PPD: Create Case from Email v1.0.0**, should be changed to reflect the new incident owner in your IBM SOAR platform. For example, to change the owner to l1@businessname.com, locate line 9 of the script:

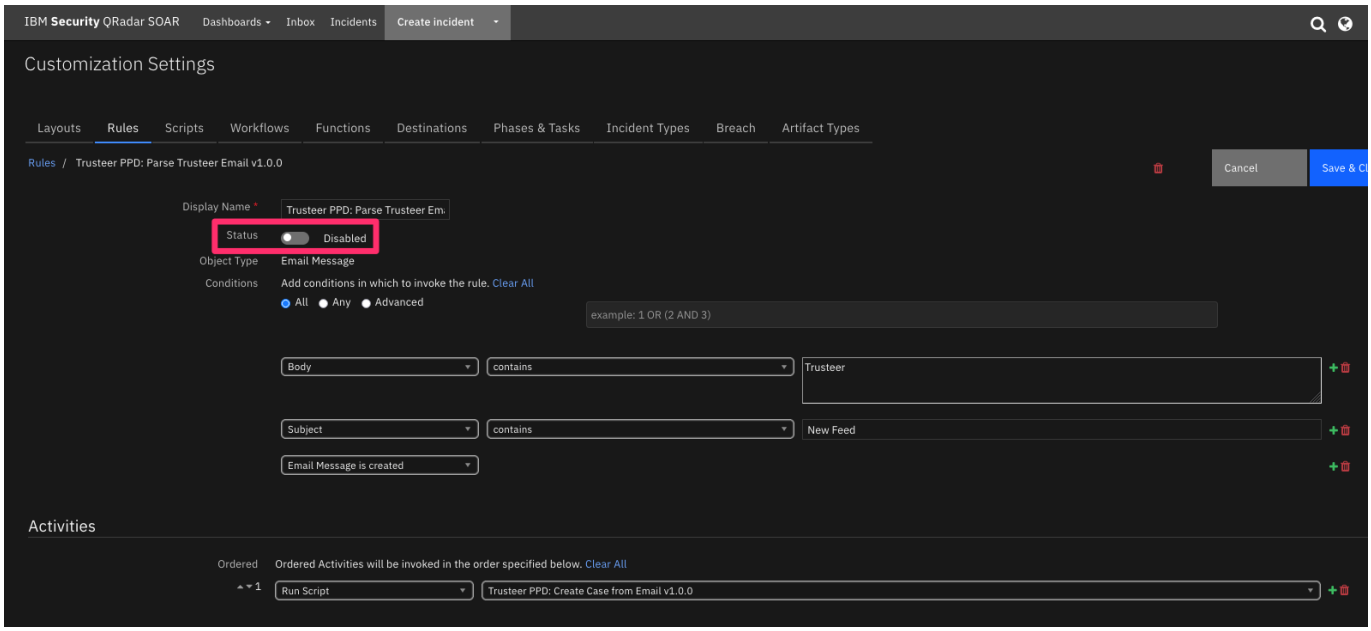
```
# The new incident owner - the email address of a user or the name of a group
and cannot be blank.
# Change this value to reflect who will be the owner of the incident before
running the script.
new_case_owner = "Trusteer Pinpoint Detect case owner"
```

Edit the line:

```
# The new incident owner - the email address of a user or the name of a group
and cannot be blank.
# Change this value to reflect who will be the owner of the incident before
running the script.
newIncidentOwner = "l1@businessname.com"
```

Enable the Rule: Trusteer PPD: Parse Trusteer Email v1.0.0

Once the new case owner is defined in the **Trusteer PPD: Create Case from Email v1.0.0** script, enable the included rule: **Trusteer PPD: Parse Trusteer Email v1.0.0**



Permissions

- Trusteer account
- Trusteer API Token

Installation

Install

- To install or uninstall an App or Integration on the *SOAR platform*, see the documentation at ibm.biz/soar-docs.
- To install or uninstall an App on *IBM Cloud Pak for Security*, see the documentation at ibm.biz/cp4s-docs and follow the instructions above to navigate to Orchestration and Automation.

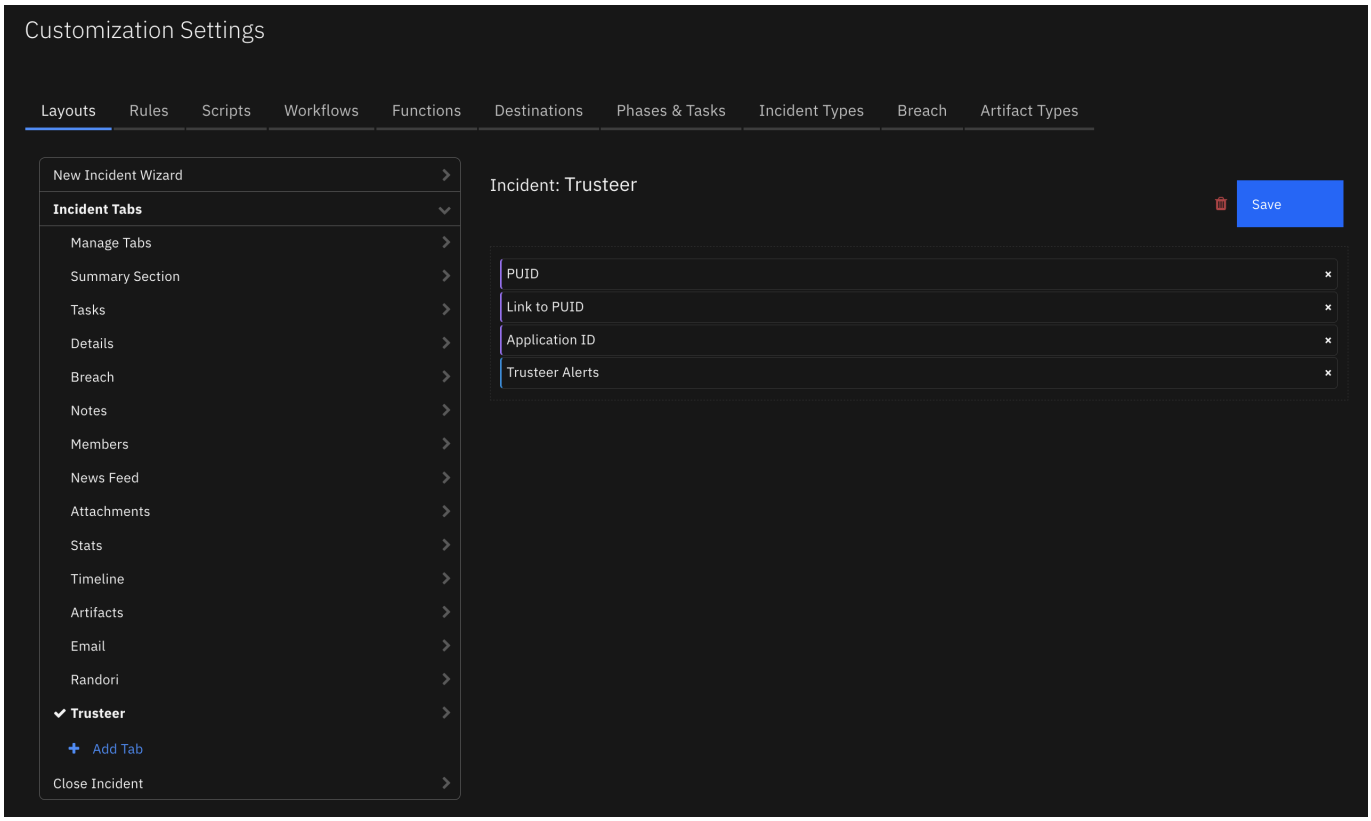
App Configuration

The following table provides the settings you need to configure the app. These settings are made in the app.config file. See the documentation discussed in the Requirements section for the procedure.

Config	Required	Example	Description
api_token	Yes	`xxx`	*Trusteer token used to make REST API call.*
api_version	Yes	`v1`	*Trusteer REST API version.*
client_auth_cert	Yes	`<path_to_cert.pem>`	*Path to client authorization certificate file used to make REST API call.*
client_auth_key	Yes	`<path_to_key.pem>`	*Path to client authorization key file used to make REST API call.*
customer_name	Yes	``	*Trusteer customer name. Used to form URL for links back to Trusteer and to call feedback REST API endpoint.*

Custom Layouts

The following Trusteer Tab custom layout is included in the app:



Function - Trusteer PPD: Get URL Links to Trusteer

Return the URL links to the Trusteer PUID and/or the device, depending on the input parameters.

▶ Inputs:

Name	Type	Required	Example	Tooltip
`trusteer_ppd_device_id`	`text`	No	`-`	-
`trusteer_ppd_puid`	`text`	No	`-`	-

▶ Outputs:

> **NOTE:** This example might be in JSON format, but `results` is a Python Dictionary on the SOAR platform.


```
results = {
  "content": {
    "link_url_device_id": null,
    "link_url_puid": "https://customer-name.trusteer.com/search-results?
puid=PUID-808949021a04d66f9e54192028693507"
  },
  "inputs": {
    "trusteer_ppd_puid": "PUID-808949021a04d66f9e54192028693507"
  },
  "metrics": {
    "execution_time_ms": 1,
    "host": "laptop.local",
    "package": "fn-trusteer-ppd",
    "package_version": "1.0.0",
    "timestamp": "2023-02-27 14:24:00",
    "version": "1.0"
  },
  "raw": null,
  "reason": null,
  "success": true,
  "version": 2.0
}
```


▶ Example Pre-Process Script:

```
inputs.trusteer_ppd_device_id =
row.trusteer_ppd_dt_device_id_and_link.content
```

▶ Example Post-Process Scrip to Create Link to Device:

```
result = playbook.functions.results.trusteer_ppd_result
if not result.success:
  incident.addNote("Trusteer PPD: Function to get URL links was not
successful.")
else:
  content = result.get("content", {})

  link_url_device_id = content.get("link_url_device_id", {})
  if link_url_device_id:
    ref_html = u"""<a href='{0}'>{1}</a>""".format(link_url_device_id,
result.inputs.trusteer_ppd_device_id)
    row.trusteer_ppd_dt_device_id_and_link = helper.createRichText(ref_html)
  else:
    incident.addNote("Trusteer PPD: Function to get URL links has no
content.")
```

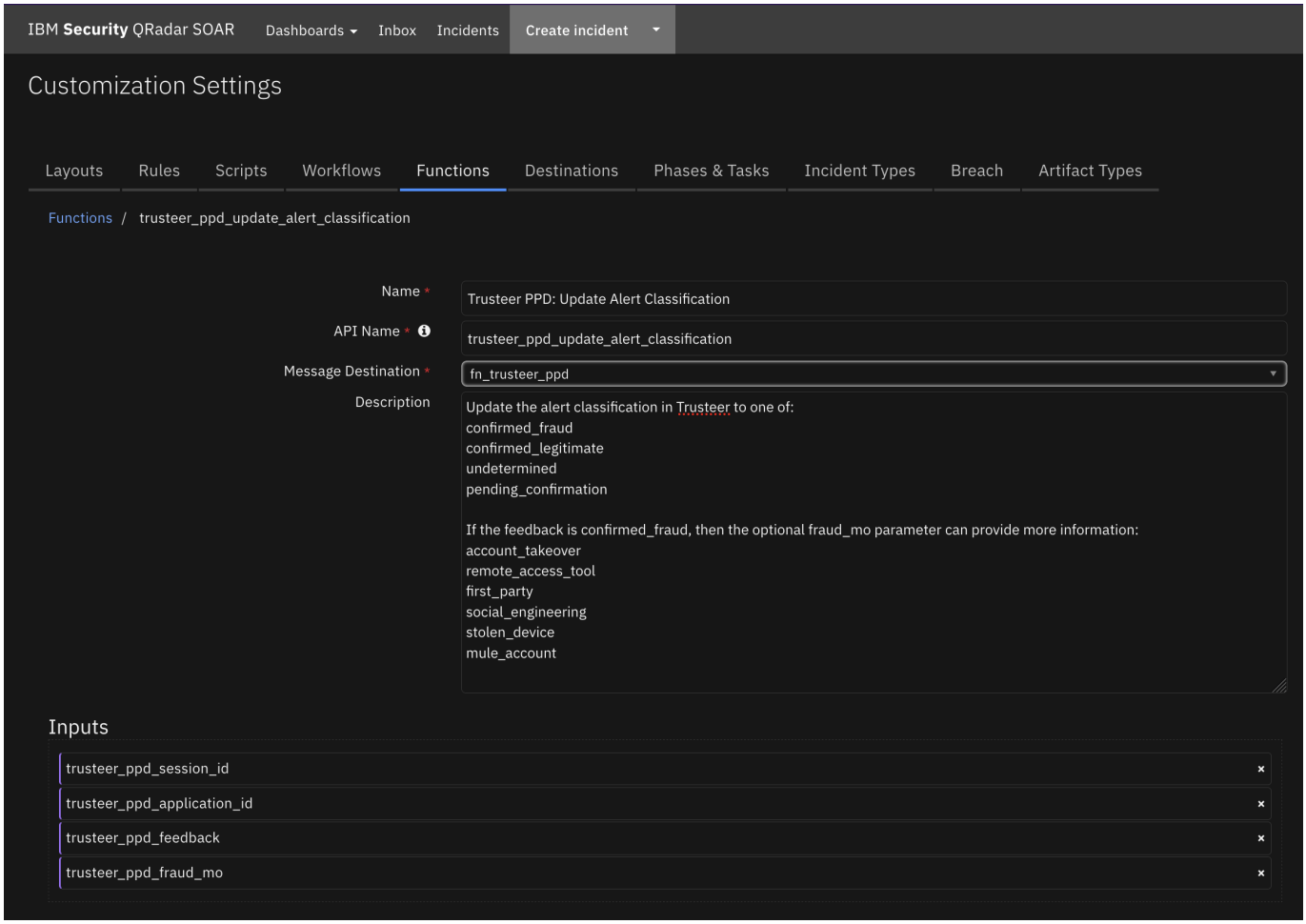
Function - Trusteer PPD: Update Alert Classification

Update the alert classification in Trusteer to one of:

- confirmed_fraud
- confirmed_legitimate
- undetermined
- pending_confirmation

If the feedback is confirmed_fraud, then the optional fraud_mo parameter can provide more information:

- account_takeover
- remote_access_tool
- first_party
- social_engineering
- stolen_device
- mule_account



▶ Inputs:

Name	Type	Required	Example	Tooltip
trusteer_ppd_application_id	text	Yes	–	-
trusteer_ppd_feedback	select	Yes	–	-

Name	Type	Required	Example	Tooltip
trusteer_ppd_fraud_mo	select	No	–	If you set feedback to confirmed_fraud and confirm that the session was fraudulent, you can also set the specific type of fraud that occurred. If you are not sure of the type of fraud, do not set the fraud_mo field.
trusteer_ppd_session_id	text	Yes	–	-

▶ Outputs:

> **NOTE:** This example might be in JSON format, but `results` is a Python Dictionary on the SOAR platform.


```
results = {
  "content": {
    "data": {
      "api_request_id": "82825B58-70CA-4B04-9BD2-E65E112AA417"
    },
    "message": "OK",
    "status": "success"
  },
  "inputs": {
    "trusteer_ppd_application_id": "demo_app",
    "trusteer_ppd_feedback": "pending_confirmation",
    "trusteer_ppd_fraud_mo": null,
    "trusteer_ppd_session_id": "eaa3aef168e8aeadfb606bf2637c21f"
  },
  "metrics": {
    "execution_time_ms": 3517,
    "host": "laptop.local",
    "package": "fn-trusteer-ppd",
    "package_version": "1.0.0",
    "timestamp": "2023-02-28 16:57:36",
    "version": "1.0"
  },
  "raw": null,
  "reason": null,
  "success": true,
  "version": 2.0
}
```


▶ Example Pre-Process Script:

```
classification_map = {
  "Pending": {"feedback": "pending_confirmation", "fraud_mo": None},
  "Confirmed legitimate": {"feedback": "confirmed_legitimate", "fraud_mo":
```

```
None},
  "Undetermined": {"feedback": "undetermined", "fraud_mo": None},
  "Confirmed fraud": {"feedback": "confirmed_fraud", "fraud_mo": None},
  "Confirmed fraud (Account takeover)": {"feedback": "pending_confirmation",
"fraud_mo": "account_takeover"},
  "Confirmed fraud (First-party)": {"feedback": "confirmed_fraud",
"fraud_mo": "first_party"},
  "Confirmed fraud (Mule account)": {"feedback": "confirmed_fraud",
"fraud_mo": "mule_account"},
  "Confirmed fraud (Remote access tool)":{"feedback": "confirmed_fraud",
"fraud_mo": "remote_access_tool"},
  "Confirmed fraud (Social engineering)":{"feedback": "confirmed_fraud",
"fraud_mo": "social_engineering"},
  "Confirmed fraud (Stolen device)": {"feedback": "confirmed_fraud",
"fraud_mo": "stolen_device"}
}
mapped_classification =
classification_map.get(playbook.inputs.trusteer_ppd_classification)
inputs.trusteer_ppd_feedback = mapped_classification.get("feedback")
inputs.trusteer_ppd_fraud_mo = mapped_classification.get("fraud_mo")

inputs.trusteer_ppd_application_id =
incident.properties.trusteer_ppd_application_id
inputs.trusteer_ppd_session_id = row.trusteer_ppd_dt_session_id
```

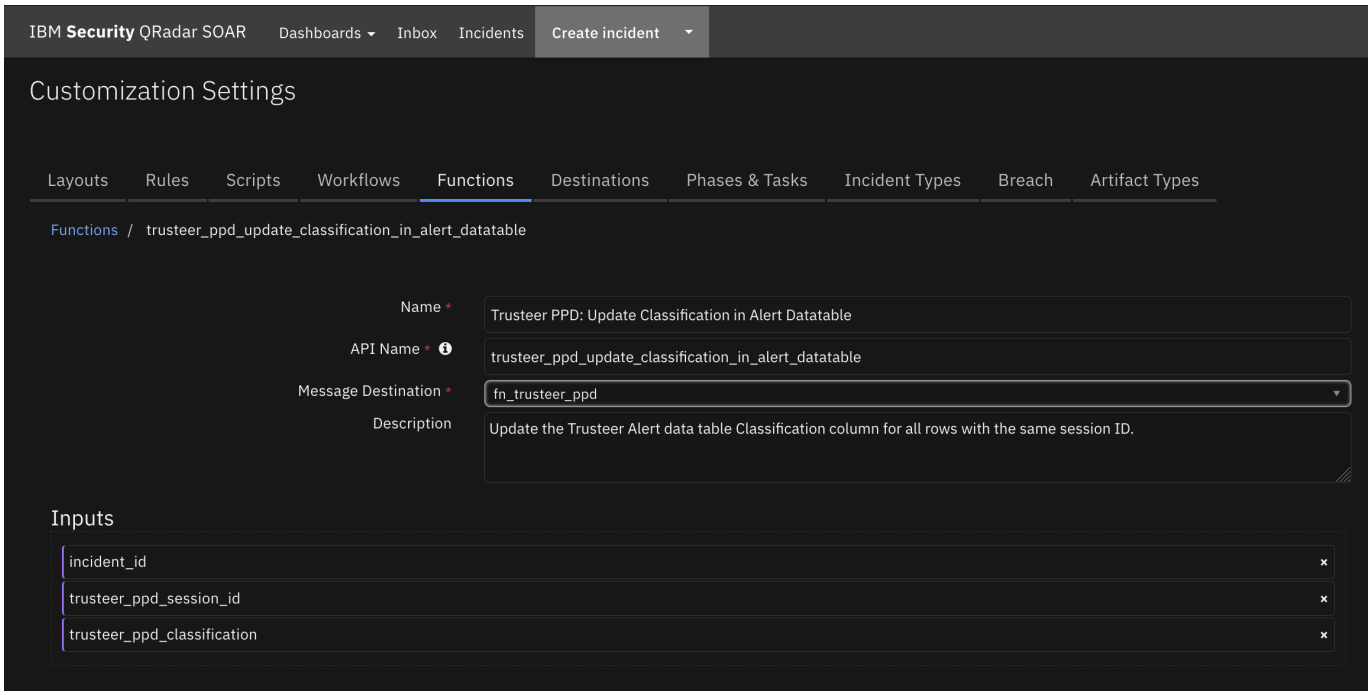
▶ Example Post-Process Script:

```
results = playbook.functions.results.alert_classification

if results.success:
  incident.addNote("Trusteer PPD: Updated Alert Classification to <b>{0}
</b>".format(playbook.inputs.trusteer_ppd_classification))
else:
  incident.addNote("Trusteer PPD: ERROR: Unable to Update Alert
Classification to <b>{0}</b> in
Trusteer".format(playbook.inputs.trusteer_ppd_classification))
```

Function - Trusteer PPD: Update Classification in Alert Datatable

Update the Trusteer Alert data table Classification column for all rows with the same session ID.



▶ Inputs:

Name	Type	Required	Example	Tooltip
incident_id	number	Yes	–	-
trusteer_ppd_classification	text	Yes	–	-
trusteer_ppd_session_id	text	Yes	–	-

▶ Outputs:

> **NOTE:** This example might be in JSON format, but `results` is a Python Dictionary on the SOAR platform.


```
results = {
  "content": {
    "num_rows_updated": 5
  },
  "inputs": {
    "incident_id": 3326,
    "trusteer_ppd_classification": "Confirmed fraud (Stolen device)",
    "trusteer_ppd_session_id": "xxx3aef168e8aeadfb606bf2637cxxx"
  },
  "metrics": {
    "execution_time_ms": 5647,
    "host": "laptop.local",
    "package": "fn-trusteer-ppd",
    "package_version": "1.0.0",
    "timestamp": "2023-03-01 10:23:36",
    "version": "1.0"
  },
  "raw": null,
  "reason": null,
  "success": true,
```

```
  "version": 2.0
}
```

▶ Example Pre-Process Script:

```
inputs.incident_id = incident.id
inputs.trusteer_ppd_session_id = row.trusteer_ppd_dt_session_id
inputs.trusteer_ppd_classification =
playbook.inputs.trusteer_ppd_classification
```

▶ Example Post-Process Script:

```
results = playbook.functions.results.alert_datatable_update

if not results.success:
  incident.addNote("Trusteer PPD: ERROR: Unable to update Trusteer Alerts
data table to classification <b>{}
</b>".format(playbook.inputs.trusteer_ppd_classification))
else:
  incident.addNote("Trusteer PPD: Updated Trusteer PPD Alerts data table
sessions: <b>{0}</b> to classification:<b>{1}</b>
".format(row.trusteer_ppd_dt_session_id,
playbook.inputs.trusteer_ppd_classification))
```

Script - Trusteer PPD: Create Artifacts

This script will create artifacts from the items in a row of the Trusteer Alerts data table.

Object: incident

▶ Script Text:

```
artifact_value = row.trusteer_ppd_dt_user_ip_address
if artifact_value:
  incident.addArtifact("IP Address", artifact_value, "Created by Trusteer
PPD.")

device_link = row.trusteer_ppd_dt_device_id_and_link.content
if device_link:
  # Parse the device ID out of the HTML text link
  parsed_device_id = device_link.split('">')
  if parsed_device_id[1]:
    device_id = parsed_device_id[1].split('</a>')
    if device_id[0]:
      incident.addArtifact("trusteer_ppd_device_id", device_id[0], "Created
by Trusteer PPD.")
```

Script - Trusteer PPD: Create Case from Email v1.0.0

Parse an email from Trusteer Pinpoint Detect and create a case if there is not an Active case with the PUID already in SOAR. Otherwise, add a new row to Trusteer Alerts data table in the case with the associated PUID and populate with information from the current email.

Object: __emailmessage

▶ Script Text:

```
# (c) Copyright IBM Corp. 2010, 2023. All Rights Reserved.
import re
import time
import calendar
from datetime import datetime

# The new incident owner - the email address of a user or the name of a group
and cannot be blank.
# Change this value to reflect who will be the owner of the incident before
running the script.
new_case_owner = "admin@example.com"

# Change to True if you have Outbound Email 2.0+ installed and wish to
capture the inbound email as a conversation
SAVE_CONVERSATION = False

# pattern used to find and extract the email message-id
MESSAGE_PATTERN = re.compile(r"([^<>]+)")
# check for any combination of upper/lowercase http/https/news/telnet/file.
Characters repeated for readability
DEFANG_PATTERN = re.compile(r"
(https|http|ftps|ftp|mailto|news|file|mailto):", re.IGNORECASE)
# possible message-id names
MESSAGE_ID_LIST =  ["message-id", "x-original-message-id", "x-microsoft-
original-message-id", "x-google-original-message-id"]
# Supported Feed type from Trusteer
TRUSTEER_PPD_FEED_ITEM_TYPE_SUPPORTED = "Pinpoint Criminal Detection
suspicious access detected"

# Trusteer PPD email key names
ACTIVITY = "Activity"
APPLICATION_ID = "Application ID"
EVENT_RECEIVED_AT = "Event received at"
FEED_ITEM_TYPE = "Feed item type"
CITY_NAME = "City name"
COUNTRY_NAME = "Country name"
DETECTED_AT = "Detected at"
GLOBAL_DEVICE_ID = "Global Device ID"
IS_TARGETED = "Is Targeted"
MALWARE = "Malware"
NEW_DEVICE_INDICATION = "New Device Indication"
ORGANIZATION = "Organization"
PERMANENT_USER_ID = "Permanent User ID"
REASON = "Reason"
```

```
    REASON_ID = "Reason ID"
    RECOMMENDATION = "Recommendation"
    RESOLUTION_ID = "Resolution ID"
    RISK_SCORE = "Risk Score"
    SESSION_ID = "Session ID"
    TRUSTEER_ENDPOINT_PROTECTION_DEVICE_ID = "Trusteer Endpoint Protection Device
    ID"
    USER_IP_ADDRESS = "User IP Address"
    USER_AGENT_STRING = "User Agent String"

    COUNTRY_NAMES = {
        "N/A": "-",
        "AFG": "Afghanistan",
        "ALA": "Åland Islands",
        "ALB": "Albania",
        "DZA": "Algeria",
        "ASM": "American Samoa",
        "AND": "Andorra",
        "AGO": "Angola",
        "AIA": "Anguilla",
        "ATA": "Antarctica",
        "ATG": "Antigua and Barbuda",
        "ARG": "Argentina",
        "ARM": "Armenia",
        "ABW": "Aruba",
        "AUS": "Australia",
        "AUT": "Austria",
        "AZE": "Azerbaijan",
        "BHS": "Bahamas",
        "BHR": "Bahrain",
        "BGD": "Bangladesh",
        "BRB": "Barbados",
        "BLR": "Belarus",
        "BEL": "Belgium",
        "BLZ": "Belize",
        "BEN": "Benin",
        "BMU": "Bermuda",
        "BTN": "Bhutan",
        "BOL": "Plurinational State of Bolivia",
        "BES": "Sint Eustatius and Saba Bonaire",
        "BIH": "Bosnia and Herzegovina",
        "BWA": "Botswana",
        "BVT": "Bouvet Island",
        "BRA": "Brazil",
        "IOT": "British Indian Ocean Territory",
        "VGB": "British Virgin Islands",
        "BRN": "Brunei Darussalam",
        "BGR": "Bulgaria",
        "BFA": "Burkina Faso",
        "BDI": "Burundi",
        "KHM": "Cambodia",
        "CMR": "Cameroon",
        "CAN": "Canada",
        "CPV": "Cape Verde",
        "CYM": "Cayman Islands",
```

```
    "CAF": "Central African Republic",
    "TCD": "Chad",
    "CHL": "Chile",
    "CHN": "China",
    "CXR": "Christmas Island",
    "CCK": "Cocos (Keeling) Islands",
    "COL": "Colombia",
    "COM": "Comoros",
    "COK": "Cook Islands",
    "CRI": "Costa Rica",
    "HRV": "Croatia",
    "CUB": "Cuba",
    "CUW": "Curaçao",
    "CYP": "Cyprus",
    "CZE": "Czech Republic",
    "COD": "The Democratic Republic of the Congo",
    "DNK": "Denmark",
    "DJI": "Djibouti",
    "DMA": "Dominica",
    "DOM": "Dominican Republic",
    "TLS": "Timor-Leste",
    "ECU": "Ecuador",
    "EGY": "Egypt",
    "SLV": "El Salvador",
    "GNQ": "Equatorial Guinea",
    "ERI": "Eritrea",
    "EST": "Estonia",
    "ETH": "Ethiopia",
    "FLK": "Falkland Islands (Malvinas)",
    "FRO": "Faroe Islands",
    "FJI": "Fiji",
    "FIN": "Finland",
    "FRA": "France",
    "GUF": "French Guiana",
    "PYF": "French Polynesia",
    "ATF": "French Southern Territories",
    "GAB": "Gabon",
    "GMB": "Gambia",
    "GEO": "Georgia (Country)",
    "DEU": "Germany",
    "GHA": "Ghana",
    "GIB": "Gibraltar",
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    "GRD": "Grenada",
    "GLP": "Guadeloupe",
    "GUM": "United States",
    "GTM": "Guatemala",
    "GGY": "Guernsey",
    "GIN": "Guinea",
    "GNB": "Guinea-Bissau",
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    "HTI": "Haiti",
    "HMD": "Heard Island and McDonald Islands",
    "HND": "Honduras",
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    "HKG": "Hong Kong S.A.R. of the PRC",
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    "LTU": "Lithuania",
    "LUX": "Luxembourg",
    "MAC": "Macao S.A.R. of the PRC",
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    "MDG": "Madagascar",
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    "MLT": "Malta",
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    "MNG": "Mongolia",
    "MNE": "Montenegro",
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    "MMR": "Myanmar",
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    "NPL": "Nepal",
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    "SHN": "Ascension and Tristan Da Cunha Saint Helena",
    "KNA": "Saint Kitts and Nevis",
    "LCA": "Saint Lucia",
    "MAF": "Saint Martin (French Part)",
    "SPM": "Saint Pierre and Miquelon",
    "VCT": "Saint Vincent and the Grenadines",
    "WSM": "Samoa",
    "SMR": "San Marino",
    "STP": "Sao Tome and Principe",
    "SAU": "Saudi Arabia",
    "SEN": "Senegal",
    "SRB": "Serbia",
    "SCG": "Serbia and Montenegro",
    "SYC": "Seychelles",
    "SLE": "Sierra Leone",
    "SGP": "Singapore",
    "SXM": "Sint Maarten (Dutch Part)",
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```

```
    "SGS": "South Georgia and the South Sandwich Islands",
    "KOR": "Republic of Korea",
    "SSD": "South Sudan",
    "ESP": "Spain",
    "LKA": "Sri Lanka",
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    "SUR": "Suriname",
    "SJM": "Svalbard and Jan Mayen",
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    "CHE": "Switzerland",
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    "USA": "United States",
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    "URY": "Uruguay",
    "UZB": "Uzbekistan",
    "VUT": "Vanuatu",
    "VAT": "Holy See (Vatican City State)",
    "VEN": "Bolivarian Republic of Venezuela",
    "VNM": "Viet Nam",
    "WLF": "Wallis and Futuna",
    "ESH": "Western Sahara",
    "YEM": "Yemen",
    "ZMB": "Zambia",
    "ZWE": "Zimbabwe"
}
class EmailProcessor(object):
    """ A class that facilitates processing the body contents of an email
message.
    Once the EmailProcessor class has been instantiated, the other methods
can be used to add artifacts to the
    incident.
    """

    # The body of the email - the plaintext and html versions of the same
email, if present
    email_contents = []
```

```
    email_contents_json = {}

    def __init__(self):
        """The EmailProcessor constructor.
        As initialization it retrieves the email body as both text and HTML.
        """
        if (emailmessage.body.content is not None):
            self.email_contents = emailmessage.body.content
        if (len(self.email_contents) == 0):
            log.error("Email message has no contents!")
        else:
            self.email_contents_json = self.build_dict(self.email_contents)

    def add_info_to_case(self):
        # Make sure the feed type is correct.
        if self.email_contents_json.get(FEED_ITEM_TYPE) !=
TRUSTEER_PPD_FEED_ITEM_TYPE_SUPPORTED:
            log.error("Only Feed item type: %s is supported!",
TRUSTEER_PPD_FEED_ITEM_TYPE_SUPPORTED)

        # Fill in case fields with info from the Trusteer Pinpoint Detect
email
        newReporterInfo = emailmessage.sender.address
        if hasattr(emailmessage.sender, "name") and emailmessage.sender.name
is not None:
            newReporterInfo = u"{0} <{1}>".format(
                emailmessage.sender.name, emailmessage.sender.address)
            log.info(u"Adding reporter field \"
{0}\"".format(newReporterInfo))
            incident.reporter = newReporterInfo

        # Fill in incident data
        incident.description = "Trusteer Pinpoint Detect Alert"
        incident.discovered_date =
self.soar_datetimeformat(self.email_contents_json.get(EVENT_RECEIVED_AT))
        incident.start_date =
self.soar_datetimeformat(self.email_contents_json.get(EVENT_RECEIVED_AT))
        incident.plan_status = "A"
        incident.severity_code =
self.soar_severity(self.email_contents_json.get(RISK_SCORE))
        incident.properties.trusteer_ppd_puid =
self.email_contents_json.get(PERMANENT_USER_ID)
        incident.properties.trusteer_ppd_application_id =
self.email_contents_json.get(APPLICATION_ID)

    def update_alert_data_table(self):
        # Add a new row to the Trusteer Alert data table
        alert_row = incident.addRow('trusteer_ppd_dt_trusteer_alerts')
        alert_row.trusteer_ppd_dt_date_added =
int(datetime.now().timestamp()*1000)
        alert_row.trusteer_ppd_dt_session_id =
self.email_contents_json.get(SESSION_ID)
        alert_row.trusteer_ppd_dt_activity =
self.email_contents_json.get(ACTIVITY)
        alert_row.trusteer_ppd_dt_event_received_at =
```

```
self.soar_datetimeformat(self.email_contents_json.get(EVENT_RECEIVED_AT))
        alert_row.trusteer_ppd_dt_user_ip_address =
self.email_contents_json.get(USER_IP_ADDRESS)
        alert_row.trusteer_ppd_dt_device_id_and_link = {'format':'html',
'content': self.email_contents_json.get(GLOBAL_DEVICE_ID)}
        alert_row.trusteer_ppd_dt_new_device_indication =
bool(self.email_contents_json.get(NEW_DEVICE_INDICATION))
        alert_row.trusteer_ppd_dt_organization =
self.email_contents_json.get(ORGANIZATION)
        alert_row.trusteer_ppd_dt_reason =
self.email_contents_json.get(REASON)
        alert_row.trusteer_ppd_dt_recommendation =
self.email_contents_json.get(RECOMMENDATION)
        if self.email_contents_json.get(COUNTRY_NAME) != 'N/A':
            alert_row.trusteer_ppd_dt_country =
COUNTRY_NAMES.get(self.email_contents_json.get(COUNTRY_NAME), "-")
        alert_row.trusteer_ppd_dt_city =
self.email_contents_json.get(CITY_NAME)
        if self.email_contents_json.get(RISK_SCORE) != 'N/A':
            alert_row.trusteer_ppd_dt_risk_score =
int(self.email_contents_json.get(RISK_SCORE))

    def add_artifacts(self):
        # Add any Trusteer information (not in the data table) as artifacts
here.
        artifact_description = "Trusteer PPD created artifact."
        if self.email_contents_json.get(USER_AGENT_STRING) and
(self.email_contents_json.get(USER_AGENT_STRING) != 'N/A'):
            artifact_value = self.email_contents_json.get(USER_AGENT_STRING)
            incident.addArtifact("User Agent", artifact_value,
artifact_description)
        if self.email_contents_json.get(MALWARE) and
(self.email_contents_json.get(MALWARE) != 'N/A'):
            artifact_value = self.email_contents_json.get(MALWARE)
            incident.addArtifact("Malware Family/Variant", artifact_value,
artifact_description)
        if self.email_contents_json.get(DETECTED_AT) and
(self.email_contents_json.get(DETECTED_AT) != 'N/A'):
            artifact_value = self.email_contents_json.get(DETECTED_AT)
            incident.addArtifact("URL", artifact_value, artifact_description)

    def add_incident_note(self):
        # Add a note containing the email contents
        incident.addNote("Email from Trusteer Pinpoint Detect:<br>
{0}".format(self.email_contents))

    def get_trusteer_ppd_puid(self):
        trusteer_ppd_puid = self.email_contents_json.get(PERMANENT_USER_ID,
None)
        if trusteer_ppd_puid is None:
            log.error("Email message has no  Pinpoint Detect Permanent User
ID!")
        return trusteer_ppd_puid

    @staticmethod
```

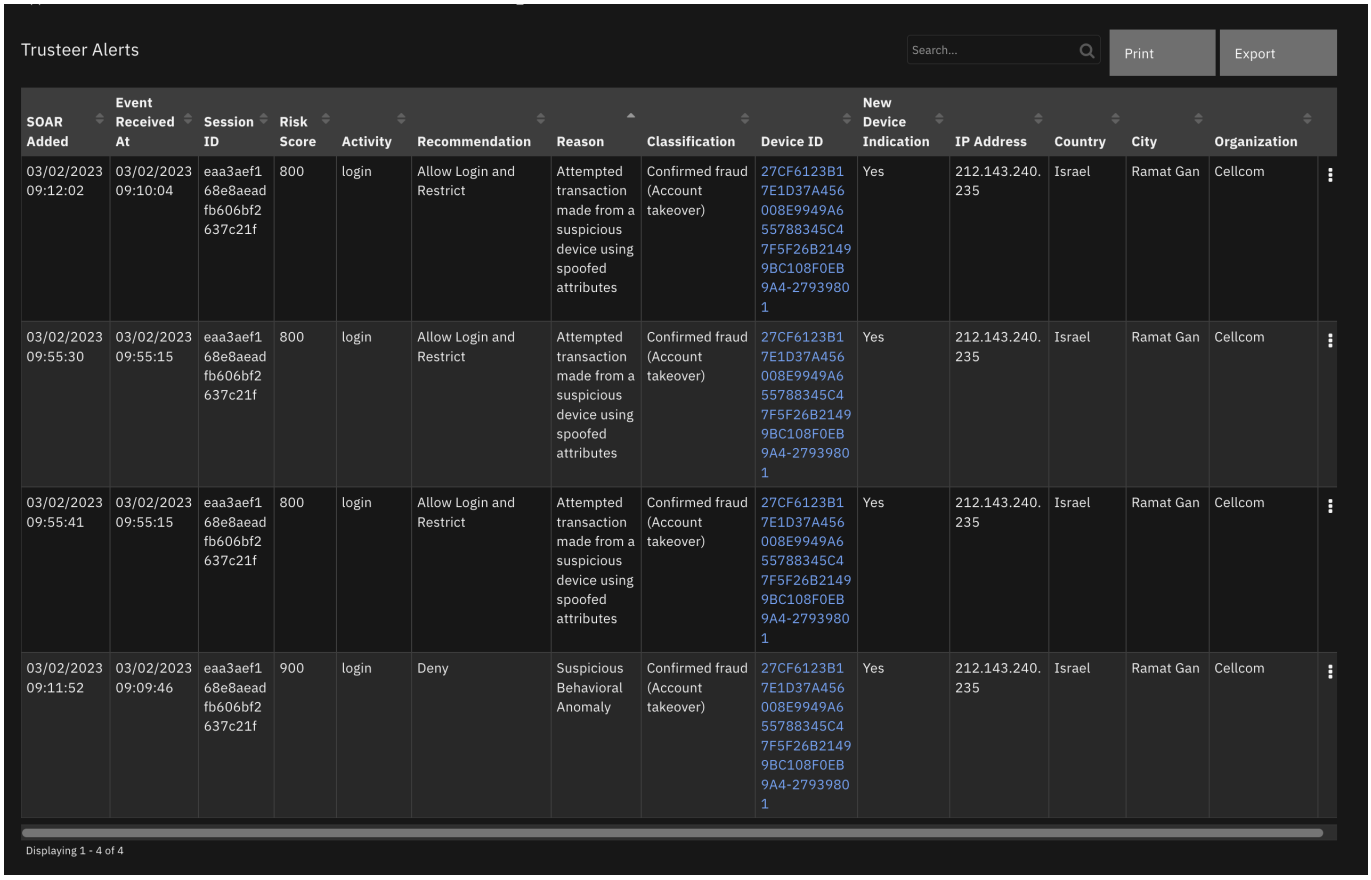
```
    def build_dict(content):
        """
        Builds a dictionary from either the key, value pairs in the email
        One key, value pair per line, so split on end of line character.
        :param content: email plain text content
        :return: Dictionary
        """
        temp_dict = {}
        if content is not None:
            lines = content.split("\n")
            for line in lines:
                keyval = line.strip().split(": ", 1)
                if len(keyval) == 2:
                    temp_dict[keyval[0].strip()] = keyval[1].strip()
        return temp_dict

    def processAttachments(self):
        """ A method to process the email attachments, if present. Each non-
inline email attachment is added as an
        attachment to the incident, and its name is added as an artifact.
Inline attachments are assumed to be unimportant.
        No return value.
        """
        for attachment in emailmessage.attachments:
            if not attachment.inline:
                incident.addEmailAttachment(attachment.id)
                incident.addArtifact(
                    "Email Attachment Name", attachment.suggested_filename,
"")

    @staticmethod
    def soar_severity(risk_score):
        if risk_score and risk_score != 'N/A':
            risk_score = int(risk_score)
            if risk_score <= 200:
                return 'Low'
            elif risk_score >= 201 and risk_score <= 499:
                return 'Medium'
            else:
                return 'High'
        else:
            return None

    @staticmethod
    def soar_datetimeformat(value, date_format="%Y-%m-%d %H:%M:%S UTC",
split_at=None):
        if not value:
            return value

        if split_at:
            utc_time = time.strptime(value[:value.rfind(split_at)],
date_format)
        else:
            utc_time = time.strptime(value, date_format)
        return calendar.timegm(utc_time) * 1000
```

```
    @staticmethod
    def get_message_id(headers):
        msg_id = None
        #represent the header keys as lower case for matching
        header_keys = {k.lower(): k for k in headers.keys()}

        # looks for the headers in order of importance
        for msg_hdr in MESSAGE_ID_LIST:
            if msg_hdr in header_keys:
                msg_id = headers[header_keys[msg_hdr]][0]
                break

        # remove brackets <>
        match = MESSAGE_PATTERN.findall(msg_id.strip()) if msg_id else None
        if match:
            return match[0]

    @staticmethod
    def save_message_id(headers):
        # extract the message ID and retain
        msg_id = processor.get_message_id(headers)
        if msg_id and hasattr(incident.properties, 'email_message_id'):
            incident.properties.email_message_id = msg_id

    @staticmethod
    def add_email_conversation(headers, msg_body, msg_attachments):
        # attempt to add to incident datatable, if present

        def handle_list(value):
            # convert a list to comma separate list, if neccessary
            if value and isinstance(value, list):
                return ", ".join(value)

            return value

        try:
            row = incident.addRow('email_conversations')
            row['date_sent'] = int(time.time()*1000)
            row['source'] = "inbound"
            row['inbound_id'] = emailmessage.id
            row['recipients'] = helper.createRichText("To: {}<br>Cc: {}
<br>Bcc: {}".format(handle_list(headers.get("To")),
handle_list(headers.get("CC", '')), handle_list(headers.get("BCC", ''))))
            row['from'] = handle_list(headers.get("From"))
            row['subject'] = handle_list(headers.get("Subject"))
            row['body'] = DEFANG_PATTERN.sub(r"x_\1_x:", msg_body)
            row['attachments'] = ", ".join(msg_attachments)
            row['message_id'] = processor.get_message_id(headers)
            row['in_reply_to'] = handle_list(headers.get("References"))
            row['importance'] = handle_list((headers.get("Importance") or
{"1": "high", "2": "normal", "3": "low"}.get(headers.get("X-Priority"),
"normal")))
        except Exception as err:
            log.warn(str(err))
```

```
###
# Mainline starts here
###

# Create the email processor object, loading it with the email message body
content.
processor = EmailProcessor()

# Check to see if a similar incident already exists
# We will search for an incident which has the same name as we would give a
new incident
trusteer_ppd_puid = processor.get_trusteer_ppd_puid()
query_builder.equals(fields.incident.plan_status, "A")
query_builder.equals(fields.incident.trusteer_ppd_puid, trusteer_ppd_puid)
query = query_builder.build()
cases = helper.findIncidents(query)

if len(cases) == 0:
  # Create a suitable title for an incident based on the email
    new_case_title = "Trusteer PUID {0} via mailbox
{1}".format(trusteer_ppd_puid, emailmessage.inbound_mailbox)

    # A similar case does not already exist. Create a new case and associate
the email with it.
    log.info(u"Creating new case {0}".format(new_case_title))

    # Create an incident with a title based on the email subject, owned
identified by variable newIncidentOwner
    emailmessage.createAssociatedIncident(new_case_title, new_case_owner)

    # Add PUID as aa User Account artifact
    incident.addArtifact("User Account", trusteer_ppd_puid, "Permanent User
ID from Trusteer")

    # Update custom fields of the new case
    processor.add_info_to_case()

    # add message-id for easy tracking
    processor.save_message_id(emailmessage.headers)
else:
    # A similar case already exists. Associate the email with this
preexisting case.
    log.info(u"Associating with existing case {0}".format(cases[0].id))
    emailmessage.associateWithIncident(cases[0])

# Update the alert data table
processor.update_alert_data_table()

# Add any artifacts from the email
processor.add_artifacts()

# Add incident note with contents of the email
processor.add_incident_note()
```

```
# Add email message attachments to incident
processor.processAttachments()

if SAVE_CONVERSATION:
    processor.add_email_conversation(emailmessage.headers,
        emailmessage.getBodyHtmlRaw() if emailmessage.getBodyHtmlRaw() else
emailmessage.body.content,
        [attachment.suggested_filename for attachment in
emailmessage.attachments])
```

Data Table - Trusteer Alerts



API Name:

trusteer_ppd_dt_trusteer_alerts

Columns:

Column Name	API Access Name	Type	Tooltip
Activity	`trusteer_ppd_dt_activity`	`text`	-
City	`trusteer_ppd_dt_city`	`text`	-
Classification	`trusteer_ppd_dt_classification`	`text`	-
Country	`trusteer_ppd_dt_country`	`text`	-

Column Name	API Access Name	Type	Tooltip
SOAR Added	trusteer_ppd_dt_date_added	datetimepicker	-
Device ID	trusteer_ppd_dt_device_id_and_link	textarea	-
Event Received At	trusteer_ppd_dt_event_received_at	datetimepicker	-
IP Address	trusteer_ppd_dt_user_ip_address	text	-
New Device Indication	trusteer_ppd_dt_new_device_indication	boolean	-
Organization	trusteer_ppd_dt_organization	text	-
Reason	trusteer_ppd_dt_reason	text	-
Recommendation	trusteer_ppd_dt_recommendation	text	-
Risk Score	trusteer_ppd_dt_risk_score	number	-
Session ID	trusteer_ppd_dt_session_id	text	-

Custom Fields

Label	API Access Name	Type	Prefix	Placeholder	Tooltip
Application ID	trusteer_ppd_application_id	text	properties	-	-
Link to PUID	trusteer_ppd_link_to_puid	textarea	properties	-	-
PUID	trusteer_ppd_puid	text	properties	-	Permanent User ID

Custom Artifact Types

Display Name	API Access Name	Description
Trusteer Device ID	trusteer_ppd_device_id	Device ID from Trusteer Pinpoint Detect Alert

Rules

Rule Name	Object	Script Triggered
Trusteer PPD: Parse Trusteer Email v1.0.0	__emailmessage	Trusteer PPD: Create Case from Email

Playbooks

Playbook Name	Description	Object	Status

Playbook Name	Description	Object	Status
Trusteer PPD: Create Artifacts	Manual playbook that runs off a row of the Trusteer Alerts data table. Create artifacts from the columns of the Trusteer Alerts data table.	trusteer_ppd_dt_trusteer_alerts	enabled
Trusteer PPD: Update Classification in Trusteer	Send classification feedback to Trusteer on the session alert. Update the Classification column in the Trusteer Alerts data table for each alert with the same session ID as the playbook row from which the playbook is executed.	trusteer_ppd_dt_trusteer_alerts	enabled
Trusteer PPD: Update Device URL Link	Automatic playbook that is executed when an alert is added to the Trusteer Alerts data table and update the Device ID cell with a link back to the device in Trusteer.	trusteer_ppd_dt_trusteer_alerts	enabled
Trusteer PPD: Update PUID URL Link	Automatic playbook that is executed when a Trusteer case is created. Update the PUID link custom field with a URL link to the customer account in Trusteer.	incident	enabled

Troubleshooting & Support

Refer to the documentation listed in the Requirements section for troubleshooting information.

For Support

This is an IBM supported app. Please search ibm.com/mysupport for assistance.