SOAR Content Package for Have I Been Pwned

Description

This content package contains a single resource file with the following rule and workflow:

1. Have I Been Pwned Hits (Rule)

- Automatic rule invoked by an artifact of type Email Recipient or Email Sender
- Associated with the Have I Been Pwned Hits Workflow

2. Have I Been Pwned Hits (Workflow)

- Queries Have I Been Pwned for Breaches and Pastes given an email address.
- Uses the Functions Have I Been Pwned Get Breaches and Have I Been Pwned Get Pastes

Package Dependences

The workflows in this package depend on the following

- SOAR Version 43
- fn_hibp Version 2.0.2

Prerequisite

This package requires the Have I Been Pwned integration to be downloaded from the app exchange and installed.

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.

Import

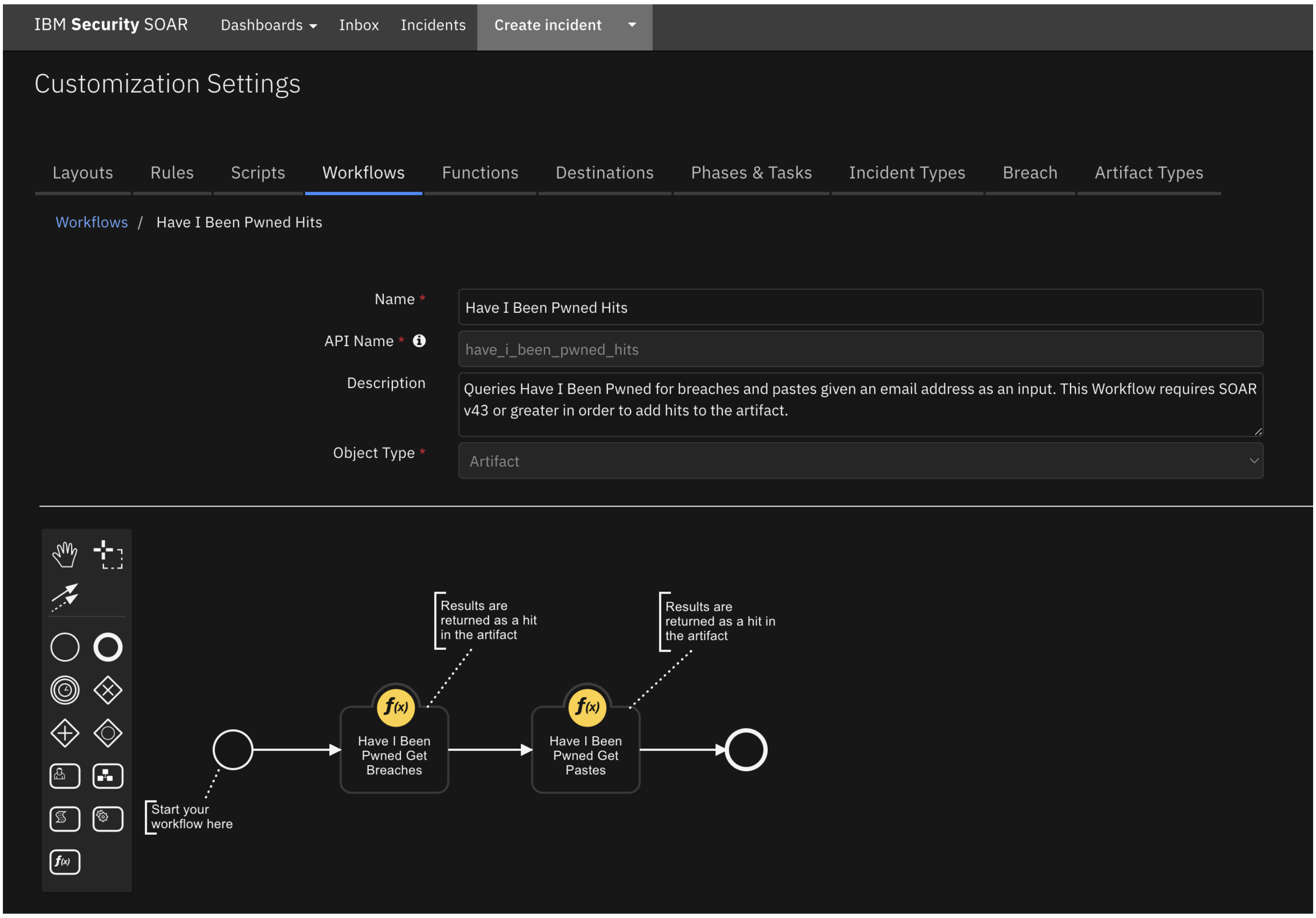
Ensure that the above packages have been installed. Download the res_hibp package and unzip it. In SOAR server, go to Administrator Settings->Organization->Migrate Settings->Import->Import Settings and select the `hibp.res` file downloaded above.

Usage

Once the resource file is successfully imported, the workflows included in the file are ready for use.

Example of Have I Been Pwned Workflow with Hits

This workflow invokes two functions from the fn_hibp integration packages.



Customization Settings

Workflows / Have I Been Pwned Hits

Name * Have I Been Pwned Hits

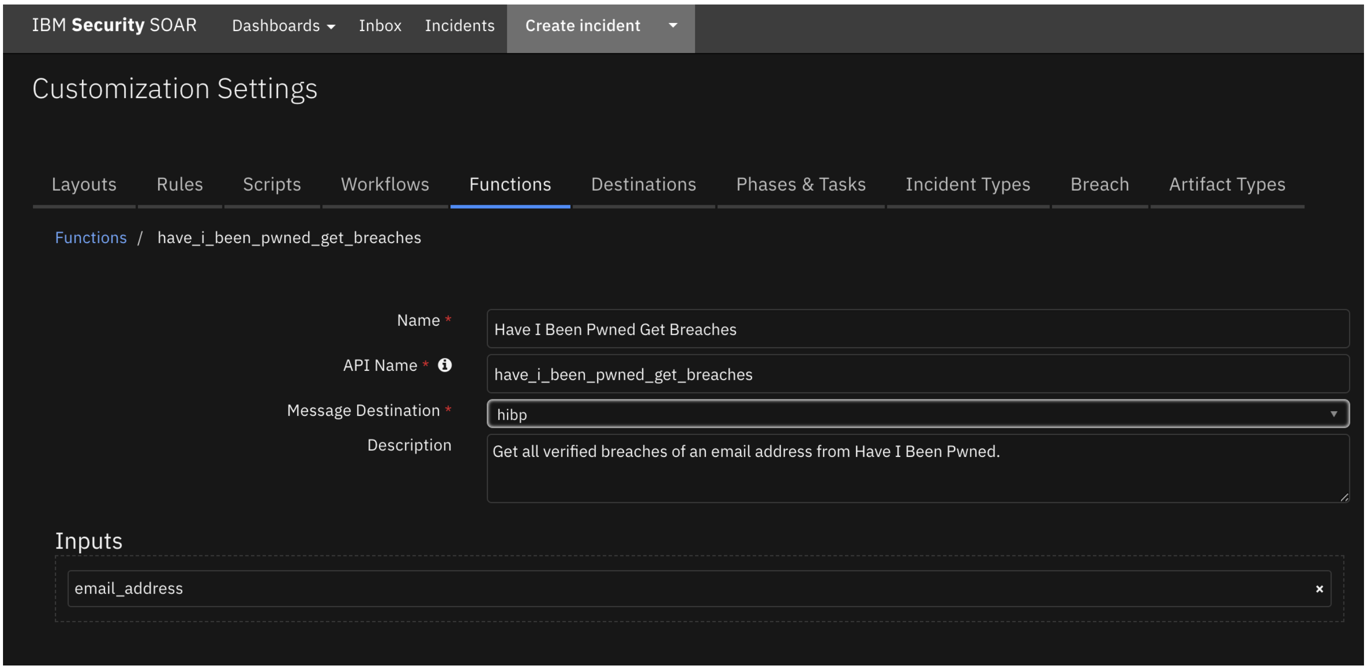
API Name * have_i_been_pwned_hits

Description Queries Have I Been Pwned for breaches and pastes given an email address as an input. This Workflow requires SOAR v43 or greater in order to add hits to the artifact.

Object Type * Artifact

Function - Have I Been Pwned Get Breaches

Get all verified breaches of an email address from Have I Been Pwned.



Customization Settings

Functions / have_i_been_pwned_get_breaches

Name * Have I Been Pwned Get Breaches

API Name * have_i_been_pwned_get_breaches

Message Destination * hibp

Description Get all verified breaches of an email address from Have I Been Pwned.

Inputs

email_address

▶ Inputs:

Name	Type	Required	Example	Tooltip

Name	Type	Required	Example	Tooltip
`email_address`	`text`	No	`test@example.com`	-

▶ Outputs:

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

```
results = {
  "content": {
    "Breaches": [
      {
        "AddedDate": "2015-10-26T23:35:45Z",
        "BreachDate": "2015-03-01",
        "DataClasses": [
          "Email addresses",
          "IP addresses",
          "Names",
          "Passwords"
        ],
        "Description": "In approximately March 2015, the free web hosting
provider \u003ca href=\"http://www.troyhunt.com/2015/10/breaches-traders-
plain-text-passwords.html\" target=\"_blank\"
rel=\"noopener\"\u003e000webhost suffered a major data
breach\u003c/a\u003e that exposed almost 15 million customer records. The
data was sold and traded before 000webhost was alerted in October. The
breach included names, email addresses and plain text passwords.",
        "Domain": "000webhost.com",
        "IsFabricated": false,
        "IsMalware": false,
        "IsRetired": false,
        "IsSensitive": false,
        "IsSpamList": false,
        "IsVerified": true,
        "LogoPath":
"https://haveibeenpwned.com/Content/Images/PwnedLogos/000webhost.png",
        "ModifiedDate": "2017-12-10T21:44:27Z",
        "Name": "000webhost",
        "PwnCount": 14936670,
        "Title": "000webhost"
      },
      {
        "AddedDate": "2018-02-26T10:06:02Z",
        "BreachDate": "2018-02-19",
        "DataClasses": [
          "Email addresses",
          "Passwords"
        ],
        "Description": "In February 2018, \u003ca
href=\"https://www.troyhunt.com/ive-just-added-2844-new-data-breaches-
with-80m-records-to-have-i-been-pwned/\" target=\"_blank\"
```

```
rel=\"noopener\"\u003ea massive collection of almost 3,000 alleged data
breaches was found online\u003c/a\u003e. Whilst some of the data had
previously been seen in Have I Been Pwned, 2,844 of the files consisting
of more than 80 million unique email addresses had not previously been
seen. Each file contained both an email address and plain text password
and were consequently loaded as a single \u0026quot;unverified\u0026quot;
data breach.",
        "Domain": "",
        "IsFabricated": false,
        "IsMalware": false,
        "IsRetired": false,
        "IsSensitive": false,
        "IsSpamList": false,
        "IsVerified": false,
        "LogoPath":
"https://haveibeenpwned.com/Content/Images/PwnedLogos/List.png",
        "ModifiedDate": "2018-02-26T10:06:02Z",
        "Name": "2844Breaches",
        "PwnCount": 80115532,
        "Title": "2,844 Separate Data Breaches"
      },
      {
        "AddedDate": "2019-03-21T18:50:00Z",
        "BreachDate": "2018-07-01",
        "DataClasses": [
          "Email addresses",
          "Genders",
          "Geographic locations",
          "IP addresses",
          "Names",
          "Passwords"
        ],
        "Description": "In July 2018, the health and fitness service
\u003ca href=\"https://8fit.zendesk.com/hc/en-us/articles/360017746394-
Notice\" target=\"_blank\" rel=\"noopener\"\u003e8fit suffered a data
breach\u003c/a\u003e. The data subsequently appeared for sale on a dark
web marketplace in February 2019 and included over 15M unique email
addresses alongside names, genders, IP addresses and passwords stored as
bcrypt hashes. The data was provided to HIBP by \u003ca
href=\"https://dehashed.com/\" target=\"_blank\"
rel=\"noopener\"\u003ededehashed.com\u003c/a\u003e.",
        "Domain": "8fit.com",
        "IsFabricated": false,
        "IsMalware": false,
        "IsRetired": false,
        "IsSensitive": false,
        "IsSpamList": false,
        "IsVerified": true,
        "LogoPath":
"https://haveibeenpwned.com/Content/Images/PwnedLogos/8fit.png",
        "ModifiedDate": "2019-03-21T18:50:00Z",
        "Name": "8fit",
        "PwnCount": 15025407,
        "Title": "8fit"
      },
      {
        "AddedDate": "2018-02-16T07:09:30Z",
        "BreachDate": "2017-06-27",
        "DataClasses": [
          "Email addresses",
          "Passwords"
        ],
        "Description": "In June 2017, the online playlists service known as \u003ca href=\"https://blog.8tracks.com/2017/06/27/password-security-alert/\" target=\"_blank\" rel=\"noopener\"\u003e8Tracks suffered a data breach\u003c/a\u003e which impacted 18 million accounts. In their disclosure, 8Tracks advised that \u0026quot;the vector for the attack was an employee\u2019s GitHub account, which was not secured using two-factor authentication\u0026quot;. Salted SHA-1 password hashes for users who \u003cem\u003edidn\u0027t\u003c/em\u003e sign up with either Google or Facebook authentication were also included. The data was provided to HIBP by whitehat security researcher and data analyst Adam Davies and contained almost 8 million unique email addresses. The complete set of 18M records was later provided by JimScott.Sec@protonmail.com and updated in HIBP accordingly.",
        "Domain": "8tracks.com",
        "IsFabricated": false,
        "IsMalware": false,
        "IsRetired": false,
        "IsSensitive": false,
        "IsSpamList": false,
        "IsVerified": true,
        "LogoPath": "https://haveibeenpwned.com/Content/Images/PwnedLogos/8tracks.png",
        "ModifiedDate": "2019-08-25T08:52:21Z",
        "Name": "8tracks",
        "PwnCount": 17979961,
        "Title": "8tracks"
      }
  },
  "inputs": {
    "email_address": "test@email.com"
  },
  "metrics": {
    "execution_time_ms": 302,
    "host": "My Host",
    "package": "unknown",
    "package_version": "unknown",
    "timestamp": "2022-04-27 16:43:44",
    "version": "1.0"
  },
  "raw": "",
  "reason": null,
  "success": true,
  "version": "1.0"
}
```

▶ Example Pre-Process Script:

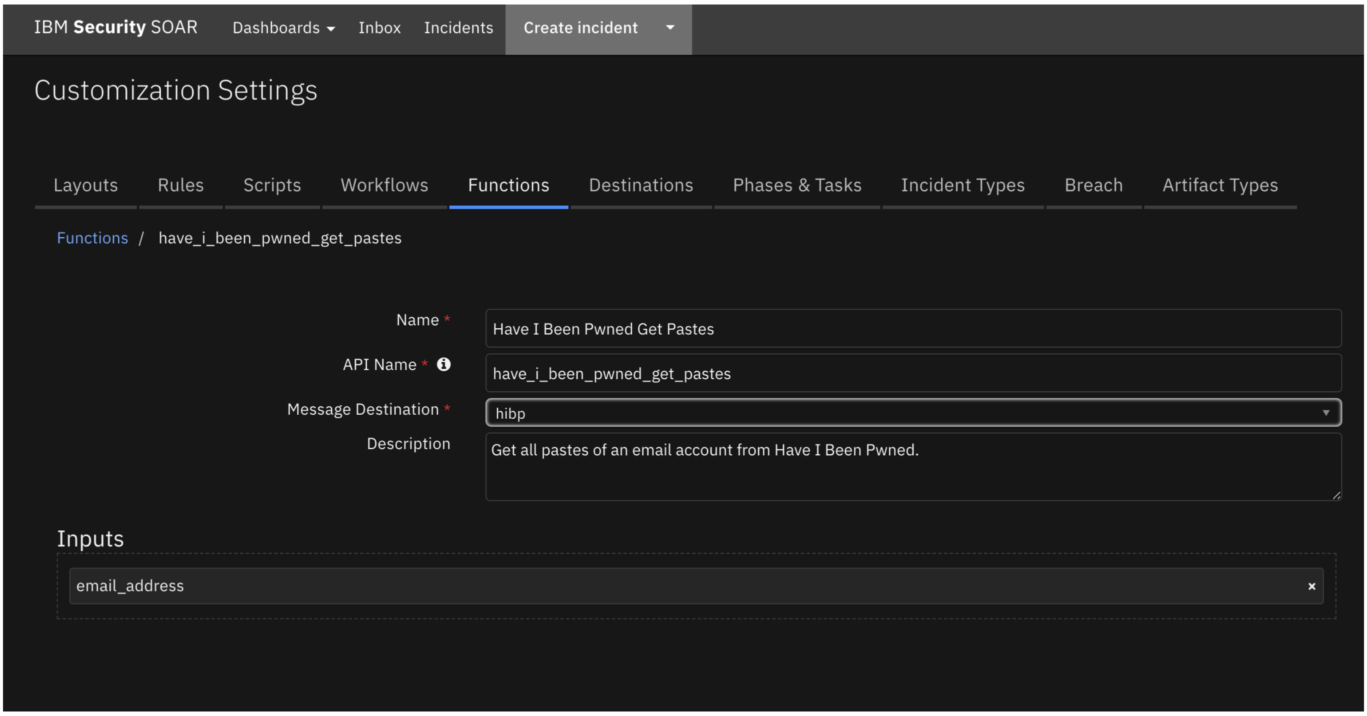
```
inputs.email_address = artifact.value
```

▶ Example Post-Process Script:

```
if results.success:
  if results.content:
    hit = []
    resp_data = results.content
    resp_dict = resp_data["Breaches"]
    hit = [
      {
        "name": "Number of Breached Sites",
        "type": "number",
        "value": "{}".format(len(resp_dict))
      }
    ]
    artifact.addHit("HIBP Function hits added", hit)
else:
  incident.addNote("Have I Been Pwned has failed:
{}".format(results.reason))
```

Function - Have I Been Pwned Get Pastes

Get all pastes of an email account from Have I Been Pwned.



Name * Have I Been Pwned Get Pastes

API Name * have_i_been_pwned_get_pastes

Message Destination * hibp

Description Get all pastes of an email account from Have I Been Pwned.

Inputs

email_address

▶ Inputs:

Name	Type	Required	Example	Tooltip
`email_address`	`text`	No	`test@example.com`	-

▶ Outputs:

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

```
results = {
  "content": {
    "Pastes": [
      {
        "Date": null,
        "EmailCount": 9893,
        "Id": "http://siph0n.in/exploits.php?id=3670",
        "Source": "AdHocUrl",
        "Title": "siph0n.in"
      },
      {
        "Date": null,
        "EmailCount": 12002,
        "Id": "http://siph0n.in/exploits.php?id=3892",
        "Source": "AdHocUrl",
        "Title": "siph0n.in"
      },
      {
        "Date": null,
        "EmailCount": 99791,
        "Id": "http://siph0n.in/exploits.php?id=4680",
        "Source": "AdHocUrl",
        "Title": "remotestaff.com.au"
      },
      {
        "Date": null,
        "EmailCount": 104720,
        "Id": "https://a.pomf.cat/dioeav.txt",
        "Source": "AdHocUrl",
        "Title": "a.pomf.cat"
      }
    ]
  },
  "inputs": {
    "email_address": "test@email.com"
  },
  "metrics": {
    "execution_time_ms": 669,
    "host": "My Host",
    "package": "unknown",
    "package_version": "unknown",
    "timestamp": "2022-04-27 16:43:48",
    "version": "1.0"
  },
  "raw": "",
  "reason": null,
  "success": true,
  "version": "1.0"
}
```

▶ Example Pre-Process Script:

```
inputs.email_address = artifact.value
```

▶ Example Post-Process Script:

```
if results.success:
  if results.content:
    hit = []
    resp_data = results.content
    resp_dict = resp_data["Pastes"]

    hit = [
      {
        "name": "Pastes",
        "type": "number",
        "value": len(resp_dict),
      }
    ]
    artifact.addHit("HIBP Function hits added", hit)
else:
  incident.addNote(u"Have I Been Pwned has failed: {}".format(results.reason))
```

Uninstall

Manually delete the followings:

1. Rules

- "Have I Been Pwned Hits"

2. Workflows

- Have I Been Pwned Hits