IBM Resilient

resilient

Incident Response Platform Integrations

X-Force Collections Function V1.0.0

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Resilient Functions simplify development of integrations by wrapping each activity into an individual workflow component. These components can be easily installed, then used and combined in Resilient workflows. The Resilient platform sends data to the function component that performs an activity then returns the results to the workflow. The results can be acted upon by scripts, rules, and workflow decision points to dynamically orchestrate the security incident response activities.

This guide describes the X-Force Collections Function.

Overview

IBM X-Force Exchange is a threat intelligence sharing platform enabling research on security threats, aggregation of intelligence, and collaboration with peers.

These functions allow users to search X-Force Exchange Collections for enrichment information about a threat. Users may search all collections using an IP Address, File Hash, DNS Record or a string as a query which will return a number of collections which match the query. Users can also get a specific collection by its identifier which will return information about the requested collection to the Resilient Platform for use in other functions.

To access the X-Force Exchange head to this URL :

https://exchange.xforce.ibmcloud.com/

API Docs can be found at this URL :

https://api.xforce.ibmcloud.com/doc/

Installation

Before installing, verify that your environment meets the following prerequisites:

- Resilient platform is version 30 or later.
- You have a Resilient account to use for the integrations. This can be any account that has the permission to view and modify administrator and customization settings, and read and update incidents. You need to know the account username and password.
- You have access to the command line of the Resilient appliance, which hosts the Resilient platform; or to a separate integration server where you will deploy and run the functions code. If using a separate integration server, you must install Python version 2.7.10 or later, or version 3.6 or later, and "pip". (The Resilient appliance is preconfigured with a suitable version of Python.)

Install the Python components

The functions package contains Python components that are called by the Resilient platform to execute the functions during your workflows. These components run in the Resilient Circuits integration framework.

The package also includes Resilient customizations that will be imported into the platform later.

Complete the following steps to install the Python components:

1. Ensure that the environment is up-to-date, as follows:

   ```
   sudo pip install --upgrade pip
   sudo pip install --upgrade setuptools
   sudo pip install --upgrade resilient-circuits
   ```

2. Run the following command to install the package:

   ```
   sudo pip install --upgrade fn_xforce-1.0.0.zip
   ```

Configure the Python components

The Resilient Circuits components run as an unprivileged user, typically named integration. If you do not already have an integration user configured on your appliance, create it now.

Complete the following steps to configure and run the integration:

1. Using sudo, switch to the integration user, as follows:

   ```
   sudo su - integration
   ```

2. Use one of the following commands to create or update the resilient-circuits configuration file. Use `–c` for new environments or `–u` for existing environments.

   ```
   resilient-circuits config -c
   ```

   or

   ```
   resilient-circuits config -u
   ```

3. Edit the resilient-circuits configuration file, as follows:

   a. In the [resilient] section, ensure that you provide all the information required to connect to the Resilient platform.

   b. In the [fn_xforce] section, edit the settings as follows:

   ```
   xforce_apikey = <YOUR_API_KEY>

   xforce_password = <YOUR_API_PASSWORD>
   ```

```
xforce_https_proxy = <YOUR_PROXY_URL>

xforce_http_proxy = <YOUR_PROXY_URL>

xforce_base_url = https://api.xforce.ibmcloud.com
```

Note: The xforce_base_url is provided by default and is the official URL for the X-Force Exchange API.

Deploy customizations to the Resilient platform

The package contains function definitions that you can use in workflows, and includes example workflows and rules that show how to use these functions.

1. Use the following command to deploy these customizations to the Resilient platform:

   ```
   resilient-circuits customize
   ```

2. Respond to the prompts to deploy functions, message destinations, workflows and rules.

Run the integration framework

To test the integration package before running it in a production environment, you must run the integration manually with the following command:

```
resilient-circuits run
```

The resilient-circuits command starts, loads its components, and continues to run until interrupted. If it stops immediately with an error message, check your configuration values and retry.

Configure Resilient Circuits for restart

For normal operation, Resilient Circuits must run continuously. The recommend way to do this is to configure it to automatically run at startup. On a Red Hat appliance, this is done using a systemd unit file such as the one below. You may need to change the paths to your working directory and app.config.

1. The unit file must be named `resilient_circuits.service` To create the file, enter the following command:

   ```
   sudo vi /etc/systemd/system/resilient_circuits.service
   ```

2. Add the following contents to the file and change as necessary:

   ```
   [Unit]
   Description=Resilient-Circuits Service
   After=resilient.service
   Requires=resilient.service
   ```

   ```
   [Service]
   Type=simple
   User=integration
   WorkingDirectory=/home/integration
   ExecStart=/usr/local/bin/resilient-circuits run
   Restart=always
   TimeoutSec=10
   Environment=APP_CONFIG_FILE=/home/integration/.resilient/app.config
   ```

```
Environment=APP_LOCK_FILE=/home/integration/.resilient/resilient_circuits.
lock

[Install]
WantedBy=multi-user.target
```

3. Ensure that the service unit file is correctly permissioned, as follows:

```
sudo chmod 664 /etc/systemd/system/resilient_circuits.service
```

4. Use the systemctl command to manually start, stop, restart and return status on the service:

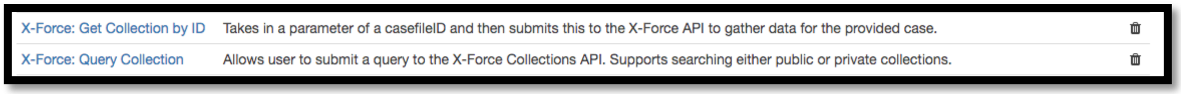
```
sudo systemctl resilient_circuits [start|stop|restart|status]
```

You can view log files for systemd and the resilient-circuits service using the journalctl command, as follows:

```
sudo journalctl -u resilient_circuits --since "2 hours ago"
```

Function Descriptions

Once the function package deploys the function(s), you can view them in the Resilient platform Functions tab, as shown below. The package also includes example workflows and rules that show how the functions can be used. You can copy and modify these workflows and rules for your own needs.



X-Force: Get Collection by ID Takes in a parameter of a casefileID and then submits this to the X-Force API to gather data for the provided case.

X-Force: Query Collection Allows user to submit a query to the X-Force Collections API. Supports searching either public or private collections.

X-Force: Get Collection by ID:

This function takes in a parameter of a collectionID to be searched. The function then creates a connection to the X-Force REST API and attempts to gather collection information using the provided ID. The return result is saved as a note in this example workflow.

Name	Type	Example	Mandatory
`xforce_collection_id`	String identifier for a collection	“a1a447c6c22b6554258cbf0e2bba1a0d”	Y

X-Force: Query Collection(s):

This function allows a user to submit a query in the form of a String, IP Address, Hash, DNS entry which is then used to search either the public or private collection in X-Force Exchange. The function creates a connection to the X-Force REST API and submits the query also specifying whether public or private results are desired. The result of this is a number of matching collections which each have a collectionID.

Name	Type	Example	Mandatory
xforce_query	String query which may be an IP,DNS,File hash or just a string	"Mirai"	Y
xforce_collection_type	String specifying whether to search in public or private collections	"public"	N

X-Force: Return Top 3 from Collection(s)

This workflow combines the first two defined functions to create a workflow which will allow a user to submit a query in the form of a String, IP Address, Hash, DNS entry which is then used to search either the public or private collection in X-Force Exchange. Results, which come in the form of an array of strings, will be then passed downstream to the next part of the workflow. The top 3 results received from the output of the query will be submitted to X-Force to gather enrichment information about each one to display in the Resilient Platform as a Note.

The parameters for this function are the same as X-Force Query Collection. Any results are then used as inputs to up to 3 instances of the X-Force Get Collection by ID function.

Name	Type	Example	Mandatory
xforce_query	String query which may be an IP,DNS,File hash or just a string	"Mirai"	Y
xforce_collection_type	String specifying whether to search in public or private collections	"public"	N

Troubleshooting

There are several ways to verify the successful operation of a function.

- Resilient Action Status

  When viewing an incident, use the Actions menu to view Action Status. By default, pending and errors are displayed. Modify the filter for actions to also show Completed actions. Clicking on an action displays additional information on the progress made or what error occurred.

- Resilient Scripting Log

  A separate log file is available to review scripting errors. This is useful when issues occur in the pre-processing or post-processing scripts. The default location for this log file is: `/var/log/resilient-scripting/resilient-scripting.log`.

- Resilient Logs

  By default, Resilient logs are retained at `/usr/share/co3/logs`. The `client.log` may contain additional information regarding the execution of functions.

- Resilient-Circuits

  The log is controlled in the `.resilient/app.config` file under the section `[resilient]` and the property `logdir`. The default file name is `app.log`. Each function will create progress information. Failures will show up as errors and may contain python trace statements.

Support

For additional support, contact support@resilientsystems.com.

Including relevant information from the log files will help us resolve your issue.