IBM Security

IBM Resilient SOAR Platform

QRadar Functions Guide

V2.0.4

Date: April 2020

Resilient SOAR Platform
QRadar Functions Guide

Version	Publication	Notes
2.0.4	April 2020	Additional configuration notes.
2.0	March 2019	Supports the 2.0 release.
1.0	July 2018	Initial publication.

Table of Contents

Overview

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 QRadar Function.

The QRadar integration with the Resilient platform package provides the following:

- Search function to perform a QRadar Ariel query
- Search function to query an item in a QRadar reference set
- Search function to find all the reference sets that contain an item
- Add function to insert a new item in a QRadar reference set
- Delete function to remove an item from a QRadar reference set

With the above functions, this package includes example workflows that demonstrate how to call the functions, rules that start the example workflows, and custom data tables updated by the example workflows.

What’s New in V2.0

The following components were added to the function package:

- Function: “QRadar Find Reference Sets”
- Workflow: “Example of finding all QRadar reference sets for artifact”
- Rule: “Find All QRadar Reference Sets”
- Data table: “QRadar Reference Sets”

Installation

Before you install the IBM Resilient RSA NetWitness functions, make sure that your environment meets the following prerequisites:

- QRadar version 7.2.8 or later.
- Your Resilient platform version is 30 or later. If supporting the Resilient for MSSPs multi-organization feature, Resilient platform V33 or later is required.
- A Resilient integration server running Resilient Circuits V30 or later. To setup an integration server, see https://ibm.biz/res-int-server-guide.
- A dedicated Resilient account to use as the API user. This can be any account that has the permission to create incidents, and view and modify administrator and customization settings. You need to know the account username and password.

NOTE: Should you later change the dedicated Resilient account to another user, the new user must also have the permission to edit incidents, in addition to the permission to create incidents and view and modify administrator and customization settings. The edit permission is necessary so that the integration can continue to modify or synchronize the incidents escalated by the original user account.

If supporting the Resilient for MSSP feature, the Resilient account must have permission to access the configuration, global dashboard and all child organizations.

Perform the following procedure to install the IBM Resilient QRadar package.

1. Download the IBM Resilient QRadar .zip file from the IBM Security App Exchange.
2. Copy the zip file to your Integration Server and SSH into it.
3. Unzip the package:

   ```
   unzip fn_qradar_integration-x.x.x.zip
   ```
4. Change directory into the unzipped directory:

   ```
   cd fn_qradar_integration-x.x.x
   ```
5. Install the package:

   ```
   pip install fn_qradar_integration-x.x.x.tar.gz
   ```
6. Import the configurations into your file:

   ```
   resilient-circuits config -u
   ```
7. Import the fn_qradar_integration customizations into your Resilient platform:

   ```
   resilient-circuits customize -y -l fn_qradar_integration
   ```
8. Open the config file, scroll to the bottom and edit your [fn_qradar_integration] configurations:

   ```
   host=<qradar url>
   port=<8089 or the customized port>
   username=<qradar access user>
   qradarpassword=<qradar access password, key-ring protection recommended>
   verify_cert=[true|false]
   qradartoken=xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx
   ```

Use ‘false’ for self-signed certificates.

You have two choices for authentication with QRadar – username and a password, or a token. QRadar token is an authentication token created in QRadar’s Authorized Services manager.

If the username and password and the token are given, the username and password authentication takes precedence.

9. Save and close the app.config file.
10. Optionally, run selftest to test the integration you configured:

    ```
    resilient-circuits selftest -l fn_qradar_integration
    ```

11. Run Resilient Circuits or restart the service on Linux or Windows.

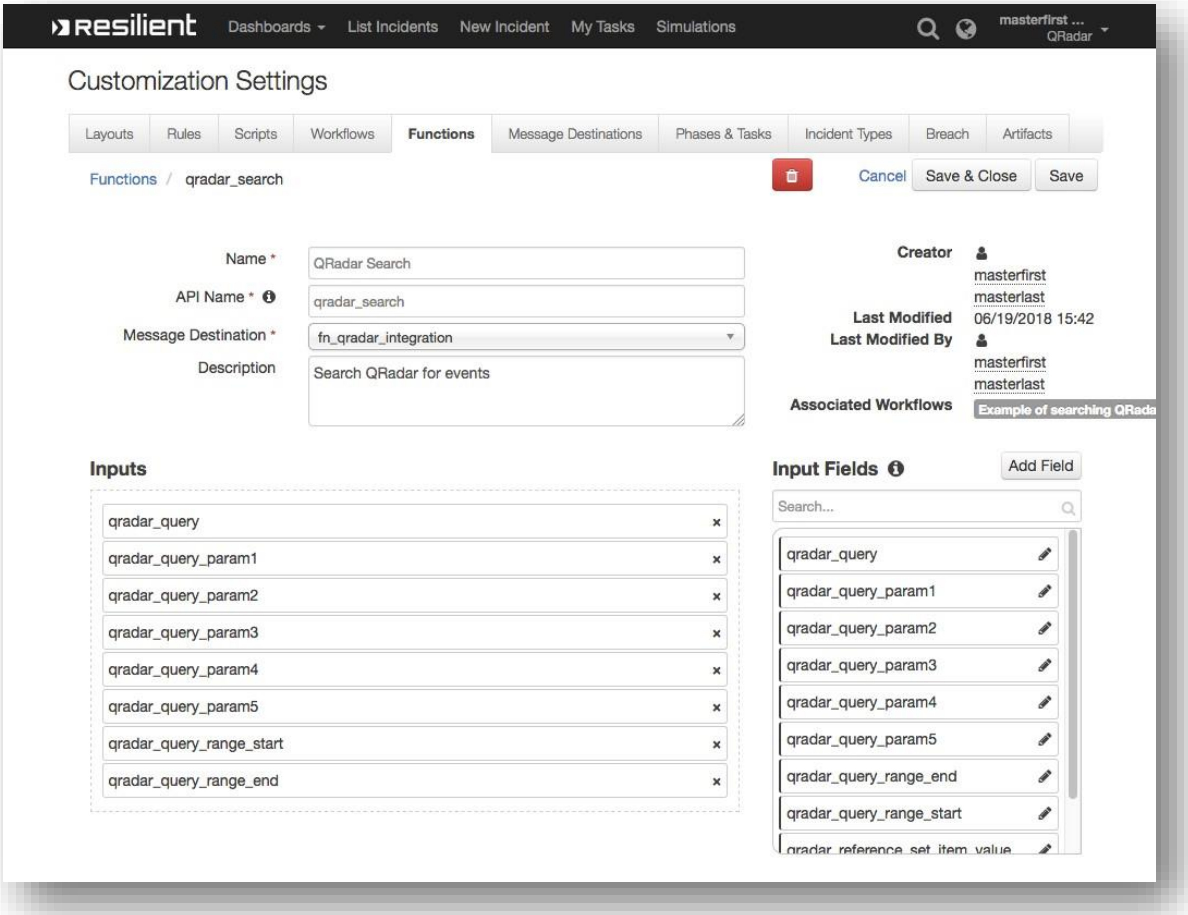
    ```
    resilient-circuits run
    ```

Function Descriptions

Once the function package deploys the functions, workflows, rules, and message destination, you can view them in the Resilient platform in their respective tabs. destination tab,

QRadar Search

This sample function performs an Ariel query to fetch data from the QRadar server.



Customization Settings

Functions / qradar_search

Name * QRadar Search

API Name * qradar_search

Message Destination * fn_qradar_integration

Description Search QRadar for events

Creator masterfirst masterlast

Last Modified 06/19/2018 15:42

Last Modified By masterfirst masterlast

Associated Workflows Example of searching QRada

Inputs

- qradar_query
- qradar_query_param1
- qradar_query_param2
- qradar_query_param3
- qradar_query_param4
- qradar_query_param5
- qradar_query_range_start
- qradar_query_range_end

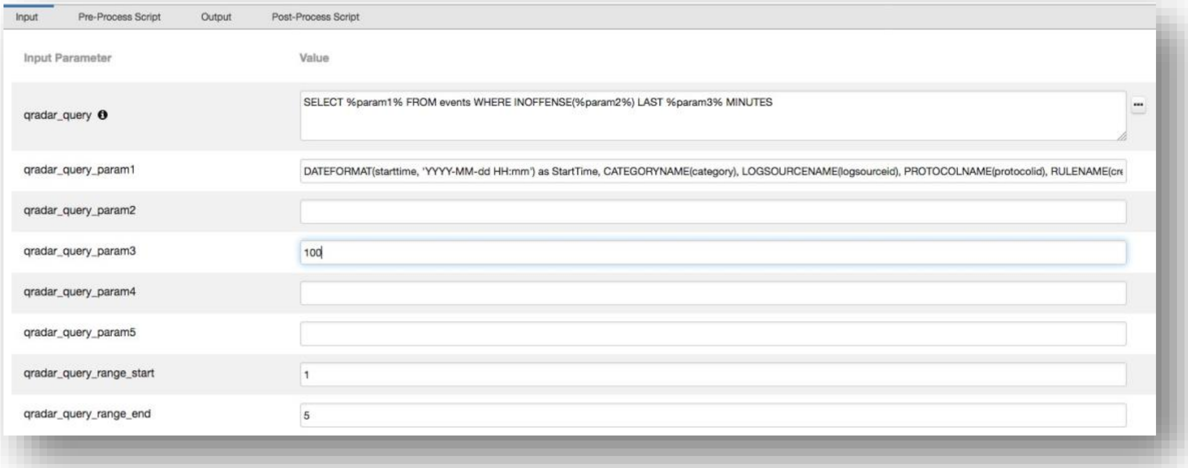
Input Fields

- qradar_query
- qradar_query_param1
- qradar_query_param2
- qradar_query_param3
- qradar_query_param4
- qradar_query_param5
- qradar_query_range_end
- qradar_query_range_start
- qradar_reference_set_item_value

This function takes the following parameters:

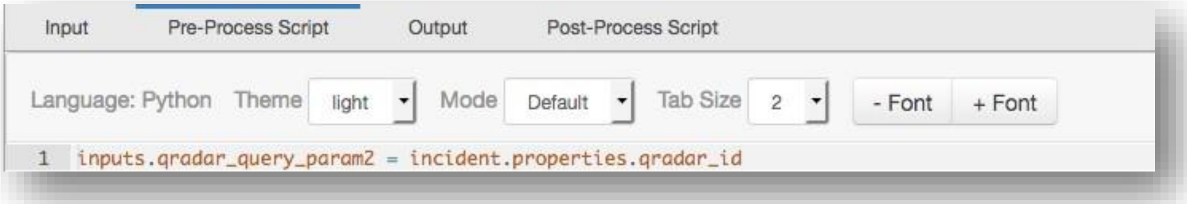
- qradar_query: Query to perform. It contains demo template queries you can select from within the calling workflow. The demo queries contain parameters that are replaced by the qradar_query_param[n] below. For example, one template query is: *SELECT %param1% FROM events WHERE INOFFENSE(%param2%) LAST %param3% MINUTES*. Users can set values for qradar_query_param1, qradar_query_param2, and qradar_query_param3 in the workflow.
- qradar_query_param[n]: Optional. Parameters used in the query.
- qradar_query_range_start: Optional. An integer specifying QRadar return start range.

- qradar_query_range_end: Optional. An integer specifying QRadar return end range. The workflow (object type = Incident), “Example of searching QRadar events using offense id”, sets the function’s input fields and runs the function. The Input tab maps the function’s input fields.



Input Parameter	Value
qradar_query	SELECT %param1% FROM events WHERE INOFFENSE(%param2%) LAST %param3% MINUTES
qradar_query_param1	DATEFORMAT(starttime, 'YYYY-MM-dd HH:mm') as StartTime, CATEGORYNAME(category), LOGSOURCENAME(logsourceid), PROTOCOLNAME(protocolid), RULENAME(cre
qradar_query_param2	
qradar_query_param3	100
qradar_query_param4	
qradar_query_param5	
qradar_query_range_start	1
qradar_query_range_end	5

In the Pre-Process Script, the input field, “qradar_query_param2” is set to the incident’s custom field, “qradar_id”.



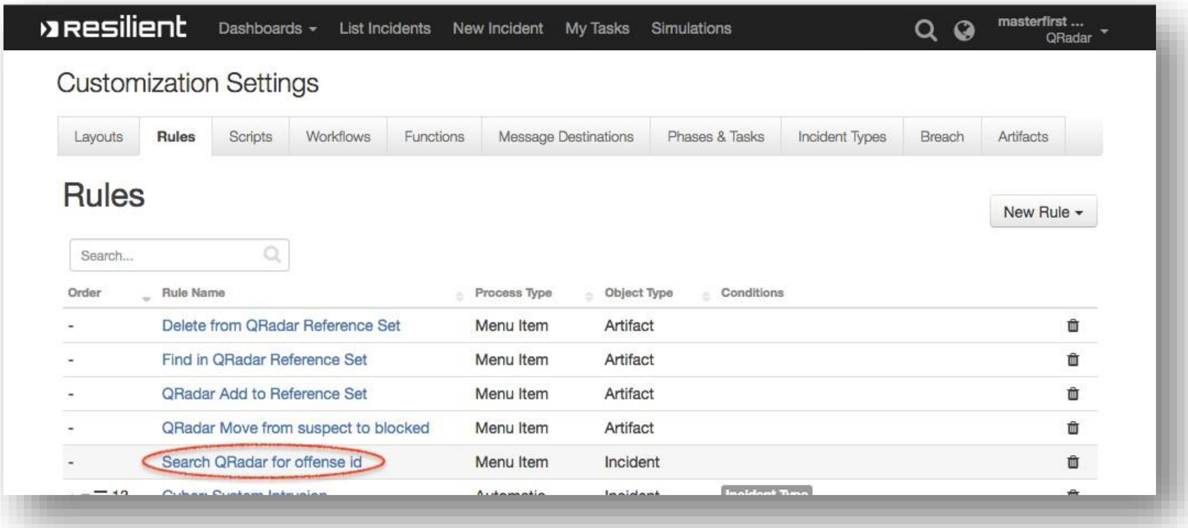
Language: Python Theme light Mode Default Tab Size 2

```
inputs.qradar_query_param2 = incident.properties.qradar_id
```

NOTES:

- You should create the custom field, qradar_id, and add it to your layout for accessibility, along with the custom data tables.
- If a reduced number of QRadar events are returned when the search is run in Resilient, allocate more time to the Resilient input parameter: qradar_query. This will allow Resilient to return the same number of QRadar events.

The example rule, “Search QRadar for offense id”, is a menu item rule for an Incident. The user can select this menu item to initiate the workflow.

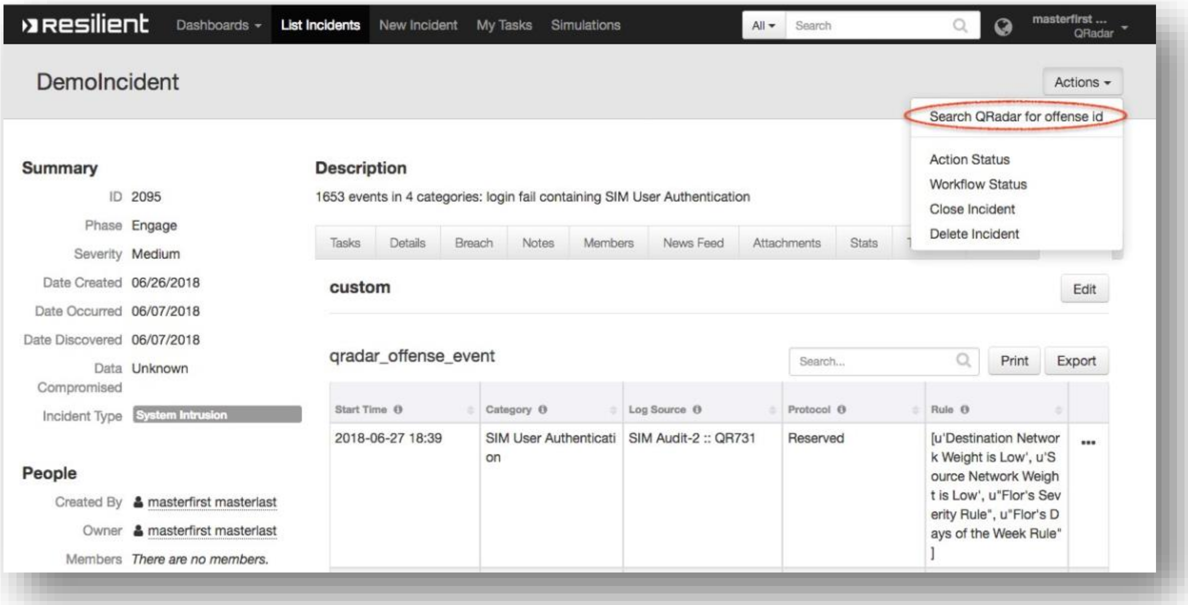


Customization Settings

Rules

Order	Rule Name	Process Type	Object Type	Conditions
-	Delete from QRadar Reference Set	Menu Item	Artifact	
-	Find in QRadar Reference Set	Menu Item	Artifact	
-	QRadar Add to Reference Set	Menu Item	Artifact	
-	QRadar Move from suspect to blocked	Menu Item	Artifact	
-	Search QRadar for offense id	Menu Item	Incident	
12	Cyber: System Intrusion	Automatic	Incident	Incident Type

This workflow can work together with the Resilient QRadar App. An incident escalated from a QRadar offense stores the offense ID. This workflow can make use of that offense ID to perform an Ariel query and update a custom data table, which is also included in the package.



DemoIncident

Summary

ID	2095
Phase	Engage
Severity	Medium
Date Created	06/26/2018
Date Occurred	06/07/2018
Date Discovered	06/07/2018
Data Compromised	Unknown
Incident Type	System Intrusion

People

Created By	masterfirst masterlast
Owner	masterfirst masterlast
Members	*There are no members.*

Description

1653 events in 4 categories: login fail containing SIM User Authentication

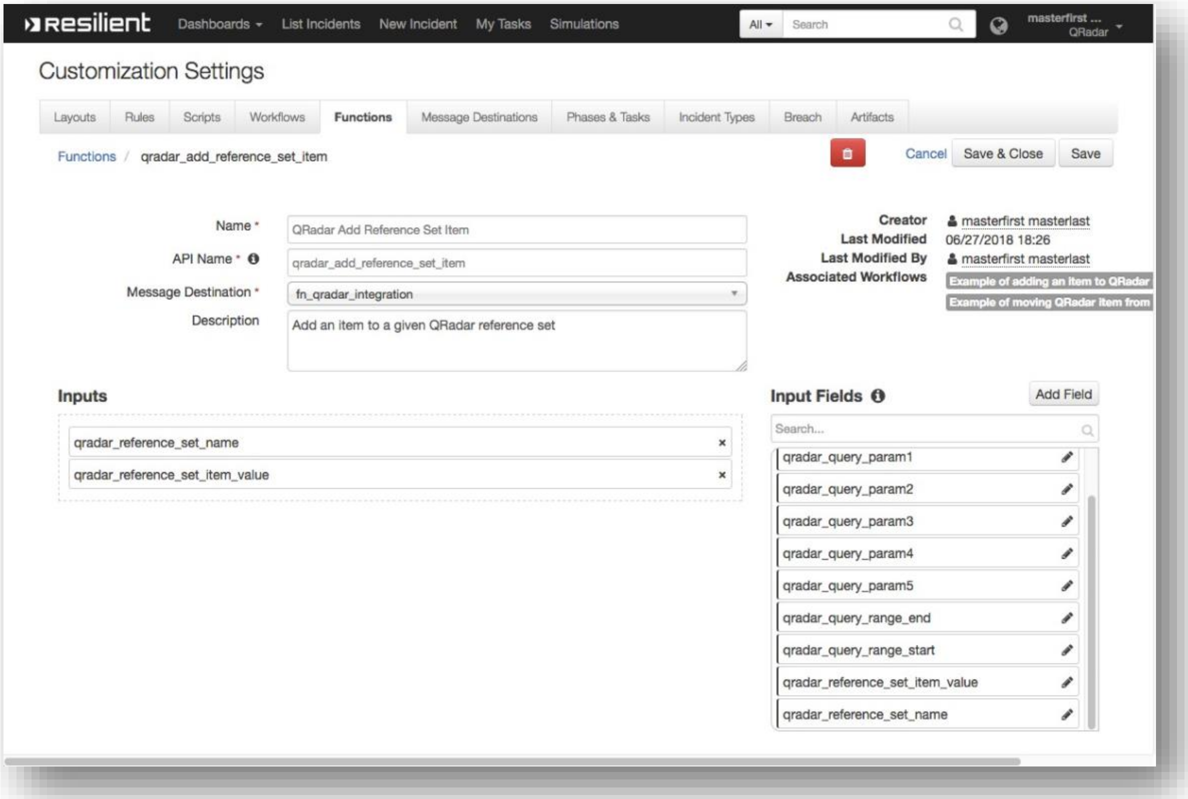
custom

qradar_offense_event

Start Time	Category	Log Source	Protocol	Rule
2018-06-27 18:39	SIM User Authentication	SIM Audit-2 :: QR731	Reserved	[u'Destination Network Weight is Low', u'Source Network Weight is Low', u"Flor's Severity Rule", u"Flor's Days of the Week Rule"]

QRadar Add Reference Set Item

This function adds a new item to an existing QRadar reference set. It uses two input parameters: qradar_reference_set_name is the name of an existing reference set in QRadar, and qradar_reference_set_item_value is the value to be added. The input is populated by the workflow, “Example of adding an item to QRadar reference set”.



Customization Settings

Functions / qradar_add_reference_set_item

Name * QRadar Add Reference Set Item

API Name * qradar_add_reference_set_item

Message Destination * fn_qradar_integration

Description Add an item to a given QRadar reference set

Creator masterfirst masterlast

Last Modified 06/27/2018 18:26

Last Modified By masterfirst masterlast

Associated Workflows Example of adding an item to QRadar
Example of moving QRadar item from

Inputs

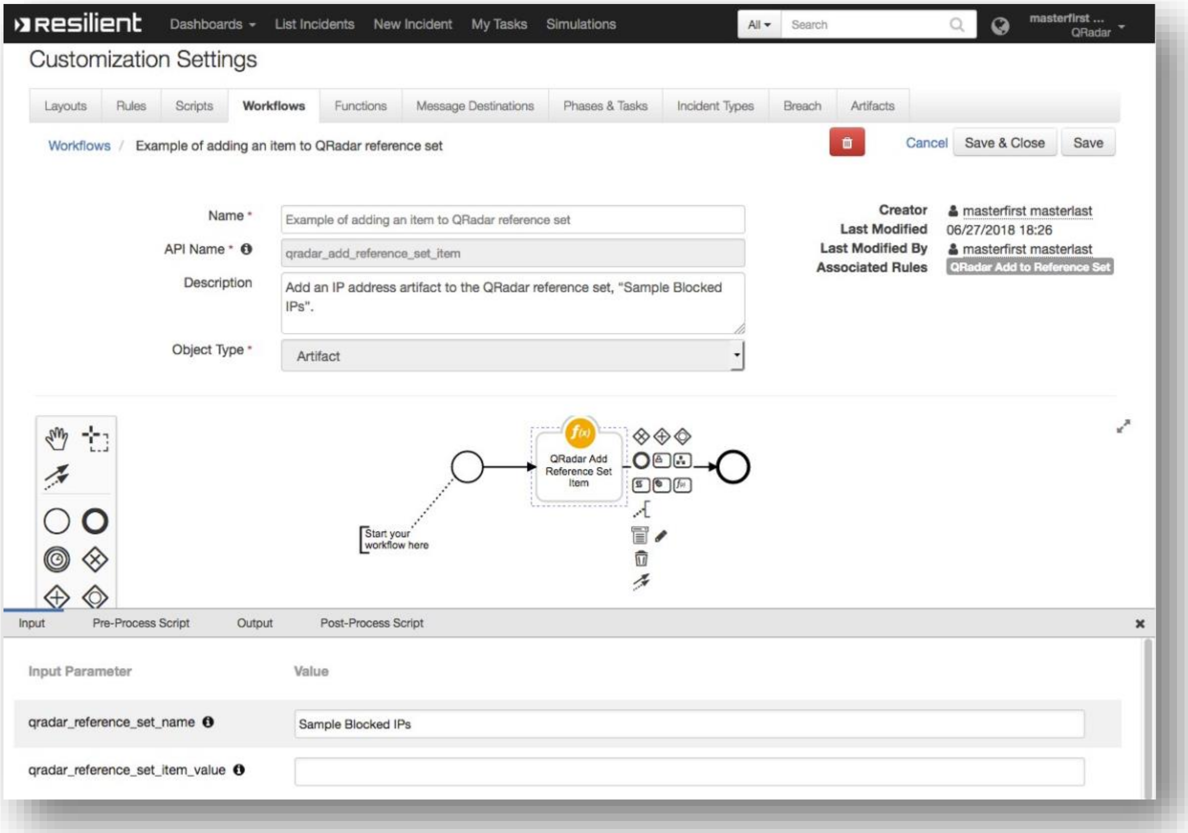
- qradar_reference_set_name ×
- qradar_reference_set_item_value ×

Input Fields

- qradar_query_param1
- qradar_query_param2
- qradar_query_param3
- qradar_query_param4
- qradar_query_param5
- qradar_query_range_end
- qradar_query_range_start
- qradar_reference_set_item_value
- qradar_reference_set_name

The workflow, “Example of adding an item to QRadar reference set”, sets the function’s input fields: “qradar_reference_set_name” is mapped to “Sample Blocked IPs”, and qradar_reference_set_item_value is mapped to the artifact value, and then runs the function.

The workflow is initiated by the rule, “QRadar Add to Reference Set”.



Customization Settings

Workflows / Example of adding an item to QRadar reference set

Name * Example of adding an item to QRadar reference set

API Name * qradar_add_reference_set_item

Description Add an IP address artifact to the QRadar reference set, “Sample Blocked IPs”.

Object Type * Artifact

Creator masterfirst masterlast

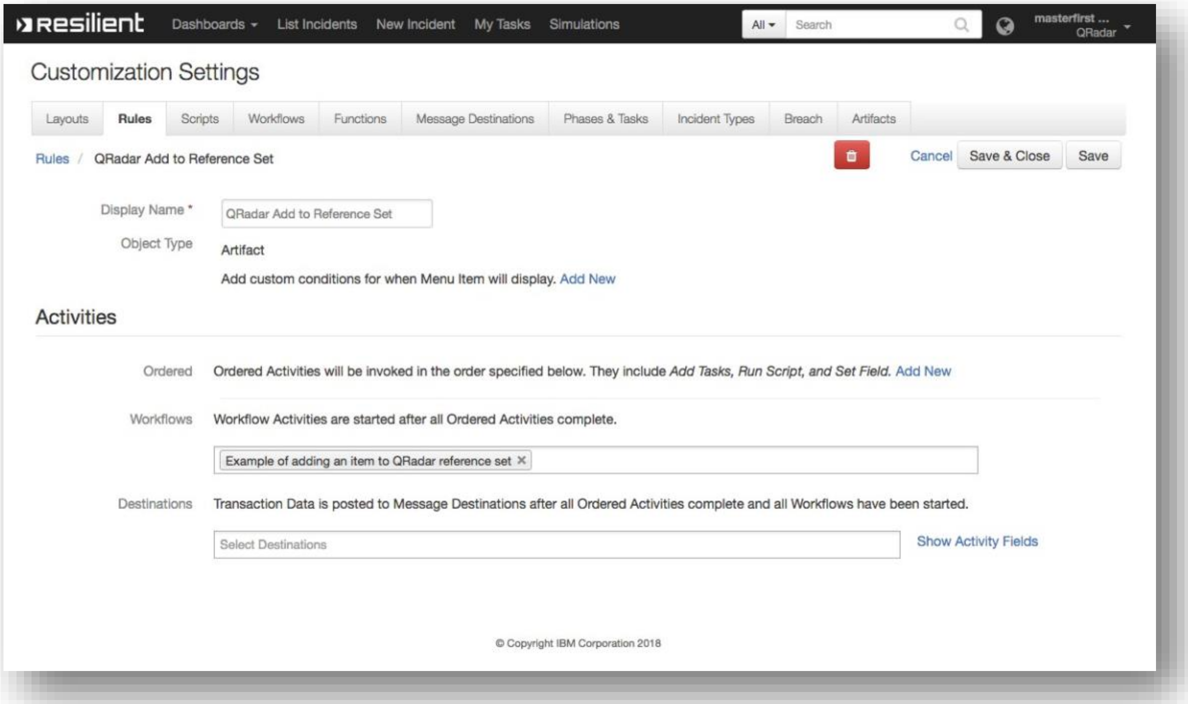
Last Modified 06/27/2018 18:26

Last Modified By masterfirst masterlast

Associated Rules QRadar Add to Reference Set

Input Parameter	Value
qradar_reference_set_name	Sample Blocked IPs
qradar_reference_set_item_value	

The example rule, “QRadar Add to Reference Set”, is a menu item rule for an artifact.



Customization Settings

Rules / QRadar Add to Reference Set

Display Name * QRadar Add to Reference Set

Object Type Artifact

Add custom conditions for when Menu Item will display. Add New

Activities

Ordered: Ordered Activities will be invoked in the order specified below. They include *Add Tasks, Run Script, and Set Field.* Add New

Workflows: Workflow Activities are started after all Ordered Activities complete.

Example of adding an item to QRadar reference set ×

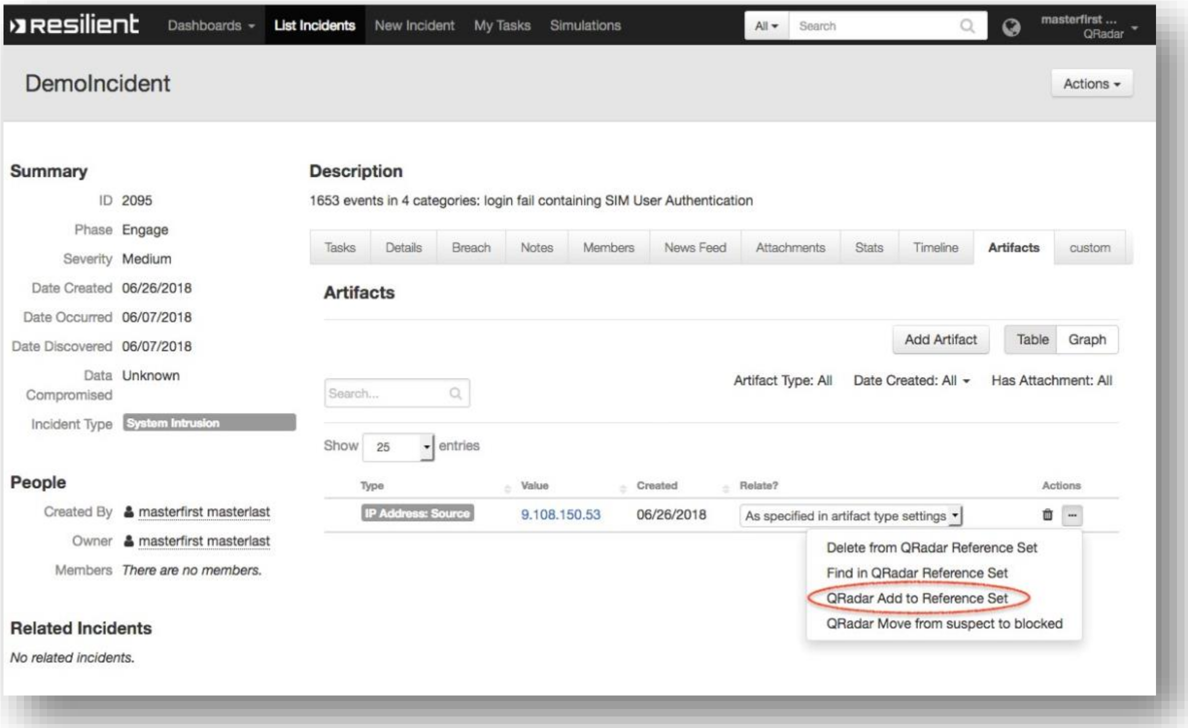
Destinations: Transaction Data is posted to Message Destinations after all Ordered Activities complete and all Workflows have been started.

Select Destinations

Show Activity Fields

© Copyright IBM Corporation 2018

The user can select this action in the menu to initiate the workflow.



DemoIncident

Summary

ID	2095
Phase	Engage
Severity	Medium
Date Created	06/26/2018
Date Occurred	06/07/2018
Date Discovered	06/07/2018
Data Compromised	Unknown
Incident Type	System Intrusion

People

Created By	masterfirst masterlast
Owner	masterfirst masterlast
Members	*There are no members.*

Related Incidents

No related incidents.

Description

1653 events in 4 categories: login fail containing SIM User Authentication

Artifacts

Artifact Type: All   Date Created: All   Has Attachment: All

Show 25 entries

Type	Value	Created	Relate?	Actions
IP Address: Source	9.108.150.53	06/26/2018	As specified in artifact type settings	

QRadar Delete Reference Set Item

This function deletes an item from an existing QRadar reference set. It has two input fields: “qradar_reference_set_name” and “qradar_reference_set_item_value”.

The function is called by the workflow, “Example of deleting QRadar reference set item”.

The workflow, “Example of deleting QRadar reference set item”, sets the function’s input fields: “qradar_reference_set_name” is mapped to “Sample Suspect IPs”, and “qradar_reference_set_item_value” is mapped to the artifact value, and then runs the function. The workflow is initiated by the rule, “Delete from QRadar Reference Set”.

The rule, “Delete from QRadar Reference Set” is a menu item rule for artifacts. The user can select this menu item to initiate the workflow.

QRadar Find Reference Set Item

This function looks for an item in an existing QRadar reference set. It has two input fields: “qradar_reference_set_name” and “qradar_reference_set_item_value”. The function is called by the workflow, “Example of finding an item from a QRadar reference set”.

The workflow, “Example of finding an item from a QRadar reference set”, sets the function’s input fields: “qradar_reference_set_name” is mapped to “Sample Blocked IPs”, and “qradar_reference_set_item_value” is mapped to the artifact value. After running the function, the workflow adds a note to the corresponding incident.

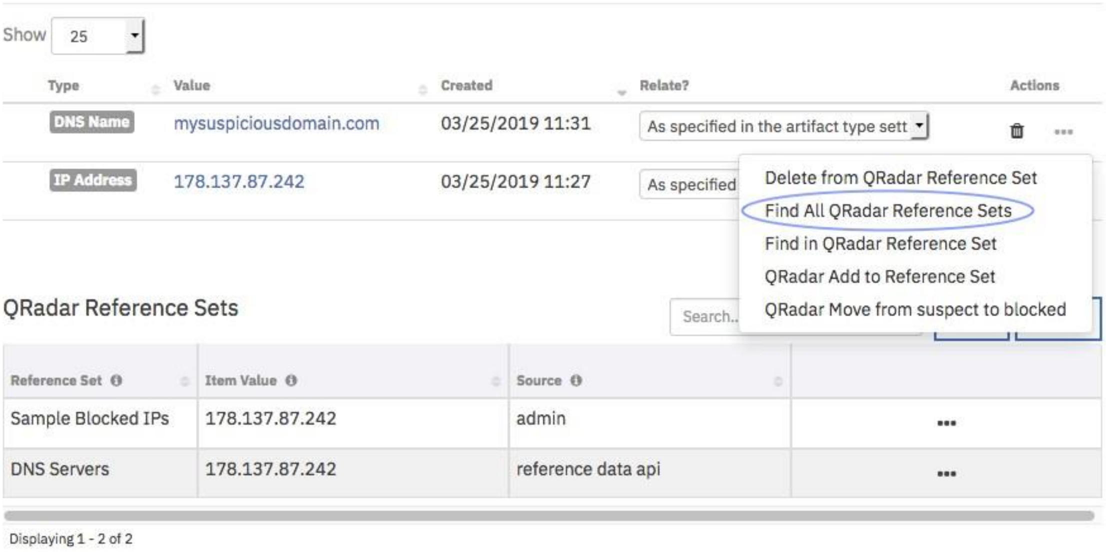
The rule, “Find in QRadar Reference Set,” is a menu item rule for artifacts. The user can select this action from the menu to initiate the workflow.

QRadar Find Reference Sets

This function looks for all QRadar reference sets that contain a given item. It has one input field, “qradar_reference_set_item_value.” The function is called by the workflow, “Example of finding all QRadar reference sets for artifact.”

The workflow, “Example of finding all QRadar reference sets for artifact”, sets the input field, “qradar_reference_set_item_value” to the artifact value. After running the function, the workflow populates the “QRadar Reference Sets” data table with the returned reference sets.

The rule, “Find All QRadar Reference Sets,” is a menu item rule for the artifact. The user can click this menu item for a selected artifact, and the example workflow commences.



Show 25

Type	Value	Created	Relate?	Actions
DNS Name	mysuspiciousdomain.com	03/25/2019 11:31	As specified in the artifact type sett	
IP Address	178.137.87.242	03/25/2019 11:27	As specified	

Delete from QRadar Reference Set
Find All QRadar Reference Sets
Find in QRadar Reference Set
QRadar Add to Reference Set
QRadar Move from suspect to blocked
Search...

QRadar Reference Sets

Reference Set	Item Value	Source	
Sample Blocked IPs	178.137.87.242	admin	•••
DNS Servers	178.137.87.242	reference data api	•••

Displaying 1 - 2 of 2

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 support, visit https://ibm.com/mysupport.

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