

IBM Resilient SOAR Platform

RSA NetWitness Functions Guide

V1.0.1

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Resilient SOAR Platform RSA NetWitness Functions Guide

Version	Publication	Notes
1.0.1	March 2020	Removed the dependency on fn_utilities function Utilities: String to Attachment in the example_netwitness_retrieve_log_file. Also updated the example workflow to retrieve log data handles creating the attachment within the rsa_netwitness integration.
1.0	March 2019	Initial publication.

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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.

The RSA NetWitness functions query for metadata and return pcap and log files for specific times and sessions.

Installation

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

- 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 RSA NetWitness package.

1. Download the IBM Resilient RSA NetWitness .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_rsa_netwitness-x.x.x.zip
```

4. Change directory into the unzipped directory:

```
cd fn_rsa_netwitness-x.x.x
```

5. Install the package:

```
pip install fn_rsa_netwitness-x.x.x.tar.gz
```

6. Import the configurations into your file:

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

7. Import the fn_rsa_netwitness customizations into your Resilient platform:

```
resilient-circuits customize -y -l fn_rsa_netwitness
```

8. Open the config file, scroll to the bottom and edit your [fn_rsa_netwitness] configurations:

```
nw_packet_server_url=<http://test.nw_packet_server.com:50104>
nw_packet_server_user=<nw_packet_server_username>
nw_packet_server_password=<nw_packet_server_password>
nw_packet_server_verify=[true|false]

nw_log_server_url=<http://test.nw_log_server.com:50102>
nw_log_server_user=<nw_log_server_username>
nw_log_server_password=<nw_log_server_password>
nw_log_server_verify=[true|false]
```

9. Save and close the app.config file.

10. Optionally, run selftest to test the integration you configured:

```
resilient-circuits selftest -l fn_rsa_netwitness
```

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

```
resilient-circuits run
```

Function Descriptions

Once the function package deploys the functions, you can view them in the Resilient platform Functions tab, as shown below.

The screenshot shows the Resilient platform interface. At the top is a navigation bar with the Resilient logo and tabs for Dashboards, Simulations, Incidents, and a highlighted Create button. Below this is a 'Customization Settings' section with a horizontal menu of tabs: Layouts, Rules, Scripts, Workflows, Functions (selected), Message Destinations, Phases & Tasks, Incident Types, Breach, and Artifacts. The 'Functions' tab displays a list of functions, with a search bar at the top containing 'NetWitness'. The list has two columns: 'Name' and 'Description'. Five functions are listed, all related to NetWitness. Each function name is a link, and there is a trash icon to the right of each description. At the bottom of the page is a copyright notice: '© Copyright IBM Corporation 2019'.

Name	Description
NetWitness Get Meta ID ranges	Returns the meta ID ranges given the start and end session IDs.
NetWitness Get Meta Values	Returns the meta values given the start and end meta IDs.
NetWitness Query	Queries NetWitness and returns metadata related to the query.
NetWitness Retrieve Log Data	Returns log file from NetWitness in the specified format based on the given time frame.
NetWitness Retrieve PCAP Data	Returns a PCAP file from NetWitness based on session IDs or a time frame and attaches to an incident.

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fn_rsa_netwitness: NetWitness Get Meta ID Ranges

The NetWitness Get Meta ID Ranges function returns the first and last meta ID fields when given the session IDs. You can also specify the size of the results returned by setting `nw_results_size`.

[Functions](#) / `netwitness_get_meta_id_ranges`

Name *	NetWitness Get Meta ID ranges
API Name * ⓘ	netwitness_get_meta_id_ranges
Message Destination *	RSA NetWitness Message Destination
Description	Returns the meta ID ranges given the start and end session IDs.

Inputs

nw_session_id1	×
nw_session_id2	×
nw_results_size	×

This function works well when paired with the NetWitness Query and NetWitness Get Meta Values functions. The Query function provides the session ID range, this function uses that output to get the meta ID range, and the Get Meta Values function uses its output to get all the meta values. All this is accomplished by the example workflow, (Example) NetWitness Get Meta Values, shown below.

Resilient Dashboards Simulations Incidents **Create** Resilient Sys... TestOrg

Customization Settings

Layouts Rules Scripts **Workflows** Functions Message Destinations Phases & Tasks Incident Types Breach Artifacts

Workflows / (Example) NetWitness Get Meta Values Cancel Save & Close Save

Name *	(Example) NetWitness Get Meta Values	Creator Resilient Sysadmin Last Modified 04/01/2019 13:01 Last Modified By Resilient Sysadmin Associated Rules (Example) NetWitness Get Meta Values
API Name * ⓘ	example_netwitness_get_meta_values	
Description	An example that returns the meta values based on session meta ID ranges.	
Object Type *	Incident	

```
graph LR; Start(( )) --> NW_Query[NetWitness Query]; NW_Query --> NW_Get_Meta_ID_Ranges[NetWitness Get Meta ID ranges]; NW_Get_Meta_ID_Ranges --> NW_Get_Meta_Values[NetWitness Get Meta Values]; NW_Get_Meta_Values --> End(( ))
```

fn_rsa_netwitness: NetWitness Get Meta Values

The NetWitness Get Meta Values function returns the meta values between the first and last meta ID fields. You can also specify the size of the results returned by setting `nw_results_size`.

[Functions](#) / `netwitness_get_meta_values`

Name *	<input type="text" value="NetWitness Get Meta Values"/>
API Name * ⓘ	<input type="text" value="netwitness_get_meta_values"/>
Message Destination *	<input type="text" value="RSA NetWitness Message Destination"/>
Description	<input type="text" value="Returns the meta values given the start and end meta IDs."/>

Inputs

<input type="text" value="nw_meta_id1"/>	x
<input type="text" value="nw_meta_id2"/>	x
<input type="text" value="nw_results_size"/>	x

This is included in the workflow, (Example) NetWitness Get Meta Values. See the NetWitness Get Meta ID Ranges for more information.

fn_rsa_netwitness: NetWitness Query

The NetWitness Query function takes a string query as an input and returns the query response as json. Setting the size of the results to be returned can also be set using `nw_results_size`. This function is used in the workflows (Example) NetWitness Get Meta Values and (Example) NetWitness Retrieve PCAP File.

[Functions](#) / `netwitness_query`

Name *	<input type="text" value="NetWitness Query"/>
API Name * ⓘ	<input type="text" value="netwitness_query"/>
Message Destination *	<input type="text" value="RSA NetWitness Message Destination"/>
Description	<input type="text" value="Queries NetWitness and returns metadata related to the query."/>

Inputs

<input type="text" value="nw_query"/>	x
<input type="text" value="nw_results_size"/>	x

fn_rsa_netwitness: NetWitness Retrieve Log Data

The NetWitness Retrieve Log Data function takes the incident id, and a start and end time and returns the log data in the specified format, which can be plain text, csv, xml, or json.

[Functions](#) / [netwitness_retrieve_log_data](#)

Name *	NetWitness Retrieve Log Data
API Name * ⓘ	netwitness_retrieve_log_data
Message Destination *	RSA NetWitness Message Destination ▼
Description	Returns log file from NetWitness in the specified format based on the given time frame.

Inputs

nw_start_time	✕
nw_end_time	✕
incident_id	✕
nw_data_format	✕

fn_rsa_netwitness: NetWitness Retrieve PCAP Data

The NetWitness Retrieve PCAP Data function returns a PCAP data file of the specific network data based on a given timeframe or comma separated list of session IDs.

[Functions](#) / [netwitness_retrieve_pcap_data](#)

Name *	NetWitness Retrieve PCAP Data
API Name * ⓘ	netwitness_retrieve_pcap_data
Message Destination *	RSA NetWitness Message Destination ▼
Description	Returns a PCAP file from NetWitness based on session IDs or a time frame and attaches to an incident.

Inputs

nw_event_session_ids	✕
incident_id	✕
nw_start_time	✕
nw_end_time	✕

This function automatically adds the PCAP data as an attachment to the incident. An example of this function being used in a workflow is shown below.

Workflows

/ (Example) NetWitness Retrieve PCAP File

Cancel

Save & Close

Save

Name *

(Example) NetWitness Retrieve PCAP File

API Name *

example_netwitness_retrieve_pcap_file

Description

An example that returns a PCAP file of packet data within the given session ID range and attaches it to the incident.

Object Type *

Incident

Creator

Resilient Sysadmin

Last Modified

04/01/2019 13:03

Last Modified By

Resilient Sysadmin

Associated Rules

(Example) NetWitness Retrieve PCAP File

Start your workflow here

Hand icon

Selection icon

Move icon

Copy icon

Paste icon

Undo icon

Redo icon

Zoom in icon

Zoom out icon

Fit icon

Fullscreen icon

Start node

NetWitness Query

NetWitness Retrieve PCAP Data

End node

Resilient Platform Configuration

The NetWitness integration workflow, (Example) NetWitness Retrieve Log File, uses the Utilities: String to Attachment function. This function must be present for the data to be imported into the Resilient platform correctly.

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.