IBM Resilient

# Incident Response Platform Integrations

## Exchange 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 Exchange Function.

## Overview

This Resilient Function package provides seven functions that work with Exchange:

1) Exchange Create Meeting – Creates a meeting in Exchange and send out invites
2) Exchange Delete Emails – Deletes queried emails from a user's mailbox
3) Exchange Find Emails – Queries emails from a user's mailbox
4) Exchange Get Mailbox Info – Gets mailbox info for a sender
5) Exchange Move and Delete Folder – Moves the contents of one folder to another folder and deletes the original
6) Exchange Move Emails – Moves queried emails from one folder to another folder
7) Exchange Send Email – Sends email to a list of recipients

The package also includes corresponding menu item rules and workflows that create Notes and Artifacts from the function results.

# Installation

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

- Resilient platform is version 31 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_exchange-<version>.<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_exchange] section, edit the settings as follows:

```
verify_cert=[True|False]
server=example.com
username=domain\username
email=admin@example.com
password=password
default_folder_path=Some folder path after root i.e. Top of Information
Store/Inbox
default_timeozne=Some Microsoft timezone i.e. America/New_York
```

## Deploy customizations to the Resilient platform

*<Describe what the package contains.>*

*<EXAMPLE: 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:

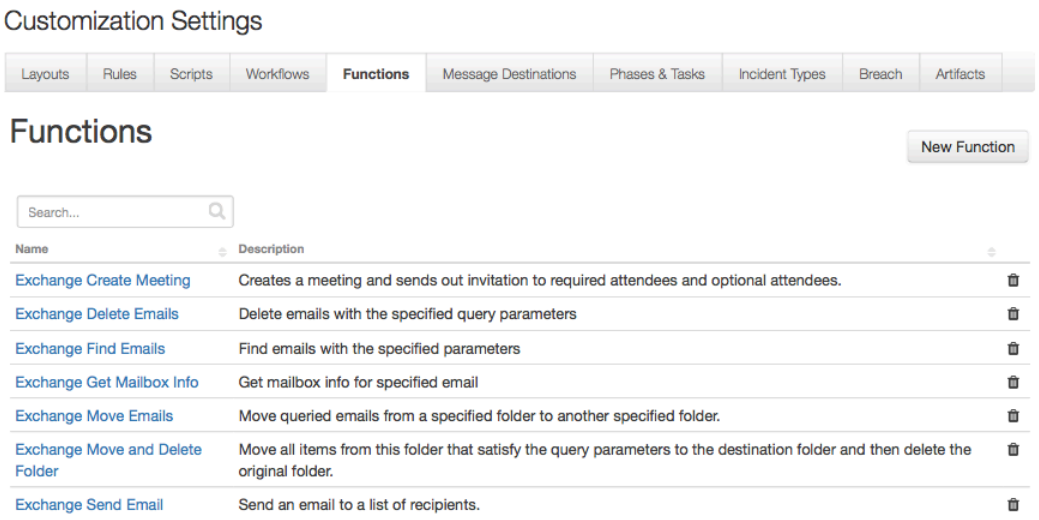
```
sudo systemctl resilient_circuits [start|stop|restart|status]
```

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.




## Functions and Components

The package includes example workflows and rules that show how you can use the functions, as shown in the following table. Resilient users can view the rules in the Rules tab and the workflows in the Workflows tab, and modify them as needed. The object type for the workflows is Artifact.

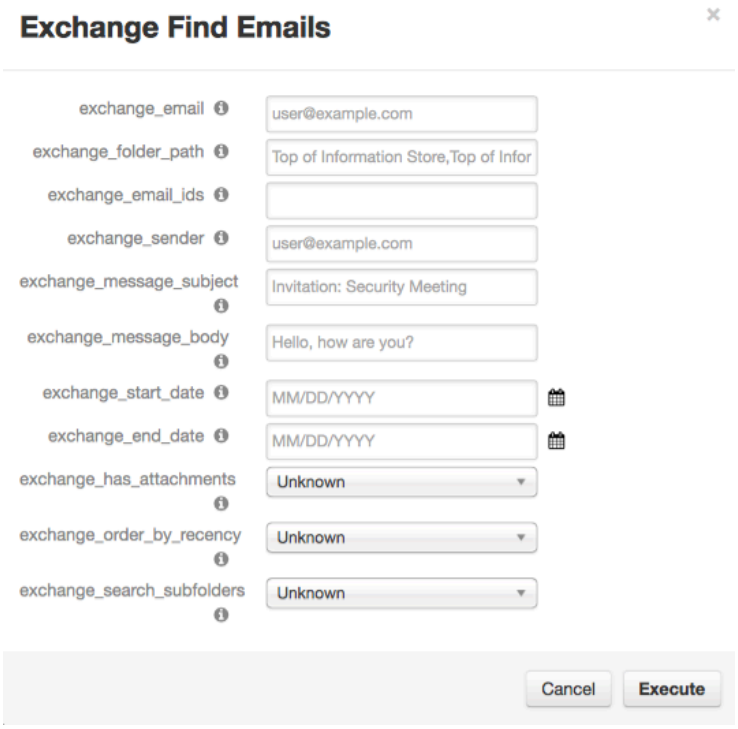
| Function | Rule | Workflow |
|---|---|---|
| exchange_create_meeting | Exchange Create Meeting | Example of Exchange Create Meeting |
| exchange_delete_emails | Exchange Delete Emails | Example of Exchange Delete Emails |
| exchange_find_emails | Exchange Find Emails | Example of Exchange Find Emails |
| exchange_get_mailbox_info | Exchange Get Mailbox Info | Example of Exchange Get Mailbox Info |
| exchange_move_emails | Exchange Move Emails | Example of Exchange Move Emails |
| exchange_move_and_delete_folder | Exchange Move and Delete Folder | Example of Exchange Move and Delete Folder |
| exchange_send_email | Exchange Send Email | Example of Exchange Send Email |

## Inputs

Each function has a set of inputs, which you can view by clicking the function name in the Functions tab of the Resilient platform.

The Resilient functions use input parameters starting with `exchange_`, examples include `exchange_email`, `exchange_subject` and `exchange_body`

The function inputs can also be set by the user when clicking a menu item. For example:




For more information on specific function inputs, check the tooltips.

# The Resilient functions use input parameters starting with Resilient Platform Configuration

The configuration file must specify credentials that have access to mailboxes that are being queried otherwise the functions can only query the account that is specified.

# 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.

## *Documentation Guidelines*

*<Do NOT include this section in your guide.>*

*Here are some writing guidelines:*

- *Never use "Resilient," instead use "Resilient platform."*
- *Use "deploy to the Resilient platform" to describe the resilient-circuits customize command.*
- *Do not initial cap function, workflow, etc. unless you are referring to a specific item (proper name), such as Utilities Function.*
- *Try to avoid passive voice and future tense.*
- *For the guide's file name, use this format: Resilient Integration <name> Function*
- *In the Word file, open properties and make these changes:*
  - *Author = IBM Resilient*
  - *Title = Resilient IRP Integrations <name> Function Guide*

*If you don't know how to open properties:*

1. *Click **File > Info**.*
2. *On the right side of the Info page, click the **Properties** drop-down and select **Show Document Panel**. This shows the Document Properties with the Author and Title fields.*