



# R Scripts



GE VERNOVA

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# Chapter 1

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## Overview

### Topics:

- [Overview of the R Script Module](#)
- [Access a Script](#)
- [R Script Workflow](#)

## Overview of the R Script Module

The R script tool in APM provides a way for you to utilize the R programming language to create scripts that can receive data from inputs, make calculations, and then return one or more outputs. These R scripts can then be used within Policy Designer to expand the functionality of policies.

R scripts can be as simple or as complex as you need them to be, depending on the data that you want the script to calculate. For instance, a simple R script may calculate and return a value based only on two inputs. A more complex R script might utilize ten inputs, and have ten different output values. This documentation does not cover the process of developing R code.

### R Scripts in Policies

R scripts can be used within Policy Designer to expand the functionality of policies. After you create and save an R script, you can use the R Script nodes in Policy Designer to pass values into the R script, and receive calculated values out of the R script.

The parameters that you define in the R script determine how the R Script node in Policy Designer will behave. Each parameter that you specify as an input appears as a field in the **Properties** window for the R Script node. You can then use standard policy options to provide values to the parameters in the R script. Each parameter that you specify as an output determines what values subsequent nodes in the policy model can use for additional calculations or actions.

**Note:** Before you can execute or validate a policy that includes an R node, you must complete the R server installation and configuration steps.

## Access a Script


### Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section, and then select **R Scripts**.

The **R Scripts** page appears.

# R Scripts

[Browse](#)[Create New](#)



| NAME                            | PATH                                       | CREATOR               | DATE                             |
|---------------------------------|--|-----------------------|----------------------------------|
| Generic Failure Frequency       | Public\Meridium\Modules\Generation Mana... | Super User, Baseline  | Monday, August 26, 2019 2:27 AM  |
| RScript - DateTime VectorPro... | Public\Meridium\Modules\Generation Mana... | Super User, Baseline  | Monday, August 26, 2019 2:26 AM  |
| CreateRScriptWithDFInputs       | Public\Meridium\Modules\Generation Mana... | Super User, Baseline  | Monday, January 07, 2019 3:02 AM |
| RScript-DF as input and output  | Public\Meridium\Modules\Generation Mana... | Super User, Baseline  | Monday, January 07, 2019 3:05 AM |
| CalculatePerformance            | Public\Meridium\Modules\Generation Mana... | Administrator, Mer... | Monday, August 28, 2017 4:12 PM  |

Rows per page 50  200 500


1 - 5 of 5 Results   

**Note:** Only R scripts created or accessed from the **R Scripts** page appear in this list. The 25 most recently accessed R scripts will appear in the list.

2. Choose one of the following:

- Select an R script from the grid.
- Browse the Catalog to select an R Script. To do so:
  - a. Select **Browse**.  
The **Select a rscript from the catalog** window appears.
  - b. Select an R script.
  - c. Select **Open**.

A new page appears, displaying the selected script.

**Tip:** If you want to modify the script, make any required changes, including updating the values in the **Parameters** pane, and then select .

## R Script Workflow

This workflow provides the basic, high-level steps for using this module. The steps and links in this workflow do not reference every possible procedure.

1. [Create a new R script](#).
2. Enter R code in the R script editor.
3. [Define each parameter in the R script](#).
4. Save the R script.
5. Create a policy containing the R Script node in order to execute the R script.

# Chapter 2

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## Manage R Scripts

### Topics:

- [Create an R Script](#)
- [Define Parameters in R Scripts](#)
- [Delete Parameters in R Scripts](#)
- [Delete an R Script](#)




## Create an R Script

### Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section, and then select **R Scripts**.  
The **R Scripts** page appears.
2. Select **Create New**.  
The **New R Script** page appears, which contains the script editor.
3. In the editor, enter your R code.

**Note:** When you use R scripts with policies, the policy execution engine sends date inputs to the R script in UTC. If your R script performs any calculations based on dates, the date output must also be in UTC and use the standard date format yyyy-MM-dd hh:mm:ss.fff.



4. [Define each parameter](#) in the R script using the **Parameters** pane.
5. Select .  
The **Save As** window appears.
6. In the **Catalog** pane, navigate to the location at which you want to save the R script.
7. Enter values in the **Name**, **Caption**, **Description**, and **Of type** boxes.
8. Select **Save**.  
The R script has been saved.

## Define Parameters in R Scripts

### About This Task



When you define a parameter, you are specifying whether each parameter in the R script is an input or output parameter, whether it is required, and what type of data it requires.

### Procedure

1. [Access the R script](#) for which you want to define parameters.
2. At the bottom of the page, select **Parameters**.  
The **Parameters** pane appears.
3. Select .  
A new row is added to the grid.
4. In the **ID** cell, enter the parameter ID exactly as it appears in the R script.
5. In the **Name** cell, enter a name for the parameter as you want it to appear to the Policy Designer user.
6. In the **Type** list, select the data type of the parameter.
7. In the **Direction** list, specify whether the parameter represents an input or an output to the R script.
8. If the parameter is an input and is required, select the **Required** check box.
9. For each parameter in the R script, repeat steps 3 through 8.
10. Select .  
The R script parameters are defined.


## Delete Parameters in R Scripts

### Procedure

1. [Access the R script](#) containing the parameter that you want to delete.
2. At the bottom of the page, select the **Parameters** tab.  
The **Parameters** pane appears.
3. On the left side of the **Parameters** pane, select the check boxes in the rows for the parameters you want to delete.
4. In the upper-left corner of the pane, select .  
The parameter is removed from the **Parameters** pane.
5. Select .  
The R script parameters are deleted.

## Delete an R Script

### Procedure

1. Access the **Catalog** page for the folder that contains the R script that you want to delete.
2. Select the check box that corresponds to the R script that you want to delete.
3. In the upper-right corner of the page, select .  
A confirmation message appears, asking if you really want to delete the R script.
4. Select **OK**.  
The R script is deleted.

# Chapter 3

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## Deployment and Upgrade

Topics:

- [Deployment](#)
- [Upgrade](#)

## **Deployment**

### **Deployment**

Refer to the deployment information here [Deploy R Scripts for the First Time](#).

## **Upgrade**

### **Upgrade**

Refer to the upgrade information here [Upgrade or Update R Scripts to V5.2.1.0.0](#).