# HP Operations Orchestration

Software Version: 10.20
Windows and Linux Operating Systems

## REST Wizard User Guide

Document Release Date: November 2014
Software Release Date: November 2014

# Legal Notices

## Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

## Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

## Copyright Notice

© Copyright 2014 Hewlett-Packard Development Company, L.P.

## Trademark Notices

Adobe™ is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

This product includes an interface of the 'zlib' general purpose compression library, which is Copyright © 1995-2002 Jean-loup Gailly and Mark Adler.

# Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to: **http://h20230.www2.hp.com/selfsolve/manuals**

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to: **http://h20229.www2.hp.com/passport-registration.html**

Or click the **New users - please register** link on the HP Passport login page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

# Support

Visit the HP Software Support Online web site at: **http://www.hp.com/go/hpsoftwaresupport**

This web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To register for an HP Passport ID, go to:

**http://h20229.www2.hp.com/passport-registration.html**

To find more information about access levels, go to:

**http://h20230.www2.hp.com/new_access_levels.jsp**

**HP Software Solutions Now** accesses the HPSW Solution and Integration Portal Web site. This site enables you to explore HP Product Solutions to meet your business needs, includes a full list of Integrations between HP Products, as well as a listing of ITIL Processes. The URL for this Web site is **http://h20230.www2.hp.com/sc/solutions/index.jsp**

# Contents

Introduction ..... 5
Purpose of the REST Wizard Integration ..... 5
Audience ..... 5
Supported Versions ..... 5
Supported Languages ..... 6
Getting Started with the REST Wizard ..... 7
Installing the REST Wizard ..... 7
REST Wizard Logs ..... 7
Uninstalling the REST Wizard ..... 7
REST Wizard System Requirements ..... 7
REST Wizard Steps ..... 8
Step1. Welcome Page ..... 8
Step 2. Destination ..... 9
Step 3. API Definitions ..... 9
Step 4. Operations ..... 11
Step 5. Configuration ..... 12
Step 6. Summary ..... 15
Importing the Generated Flows into Studio ..... 16
Generated Flows ..... 16
Inputs ..... 17
Outputs ..... 17
Responses ..... 18
Descriptions ..... 18
REST Operation ..... 19
Troubleshooting ..... 21
Troubleshooting Overview ..... 21
Unable to locate resource ..... 21

# Introduction

## Purpose of the REST Wizard Integration

This integration enables administrators to create HP Operations Orchestration (HP OO) flows based on URL to Resource Listing or local API Definition files.

The REST Wizard supports the Swagger and WADL formats for RESTful web service.

Swagger is a specification and a complete framework implementation for describing, producing, consuming, and visualizing RESTful web services. Swagger is JSON-based. The main goal of Swagger is to enable client and documentation systems to update at the same pace as the server. The documentation of methods, parameters, and models are tightly integrated into the server code, allowing APIs to always stay in sync.

The Web Application Description Language (WADL) is a machine-readable XML description of HTTP-based web applications (typically REST web services). WADL models the resources provided by a service and the relationships between them. WADL is intended to simplify the reuse of web services that are based on the existing HTTP architecture of the web. It is platform- and language-independent and aims to promote reuse of applications beyond the basic use in a web browser. It was designed to provide an alternative to the WSDL.

For more information about creating HP OO flows, see the *HP OO Studio Authoring Guide*.

This document explains how this integration has been implemented, and how the integration's operations and flows communicate between HP OO and RESTful web services.

## Audience

This guide is intended for system administrators who establish and maintain the implementation of the integration between RESTful web services and HP OO. This guide assumes that you have administrative access to both systems.

## Supported Versions

| Content Pack | HP Operations Orchestration Version | REST Wizard Version |
|---|---|---|
| Base Content Pack | 10.x | 10.20 |

# Supported Languages

This release supports the following languages:

- en - English
- fr - French
- de - German
- ja - Japanese
- es - Spanish
- zh_CN - Simplified Chinese

# Getting Started with the REST Wizard

## Installing the REST Wizard

The wizard is installed if Studio is selected from the Operations Orchestration installer. The REST Wizard is located under **<OOInstallPath>\studio\tools**.

## REST Wizard Logs

The logs are located in the **<OOInstallPath>\studio\tools\logs\rest-wizard.log** file.

## Uninstalling the REST Wizard

The wizard is uninstalled when Studio is uninstalled.

## REST Wizard System Requirements

The following are the minimum software requirements for systems running REST Wizard for HP Operations Orchestration:

- The environment must have Java SE Runtime Environment 7 (also known as JRE) installed (for running the wizards).

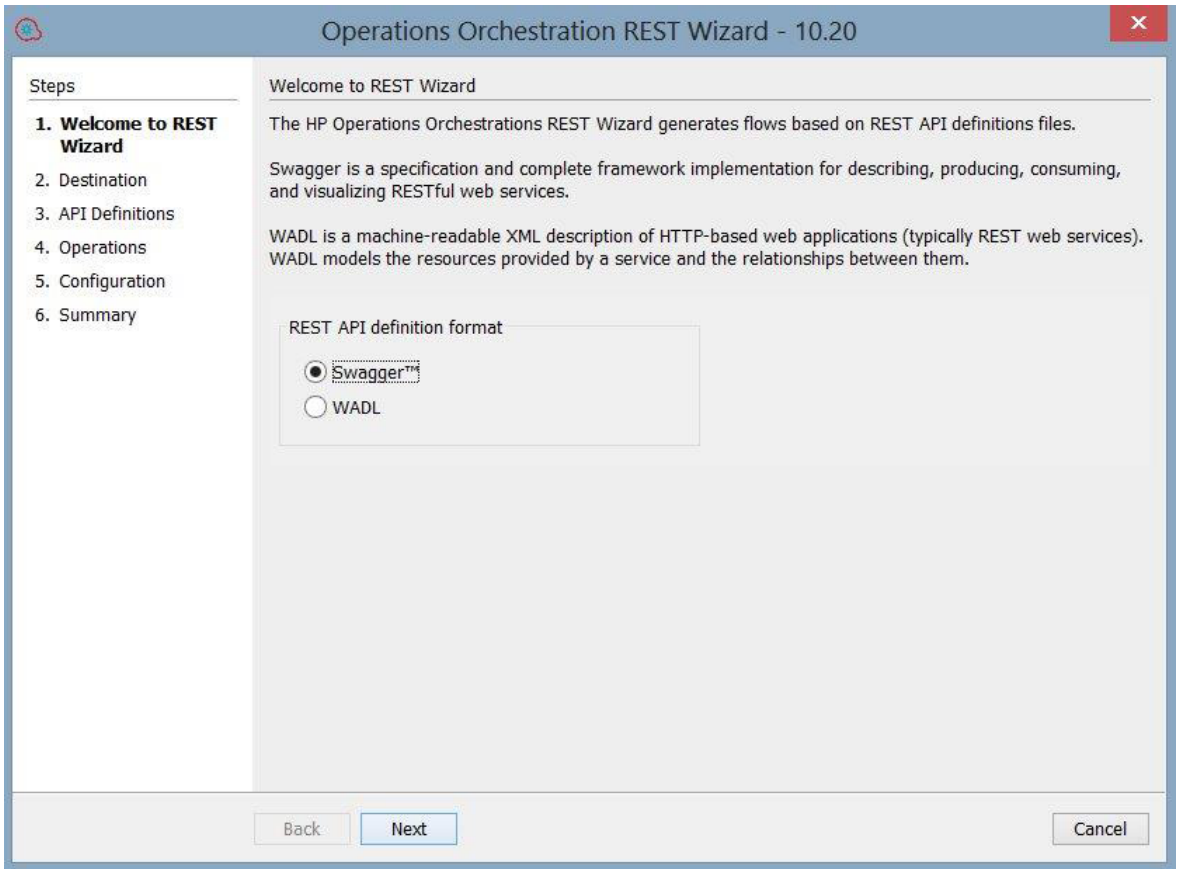
# REST Wizard Steps

To start the REST wizard, run the **rest-wizard.bat** file. This section describes the steps that you have to perform.

## Step1. Welcome Page

When you start the REST Wizard, the **Welcome** page opens.

Select **Swagger** or **WADL**.

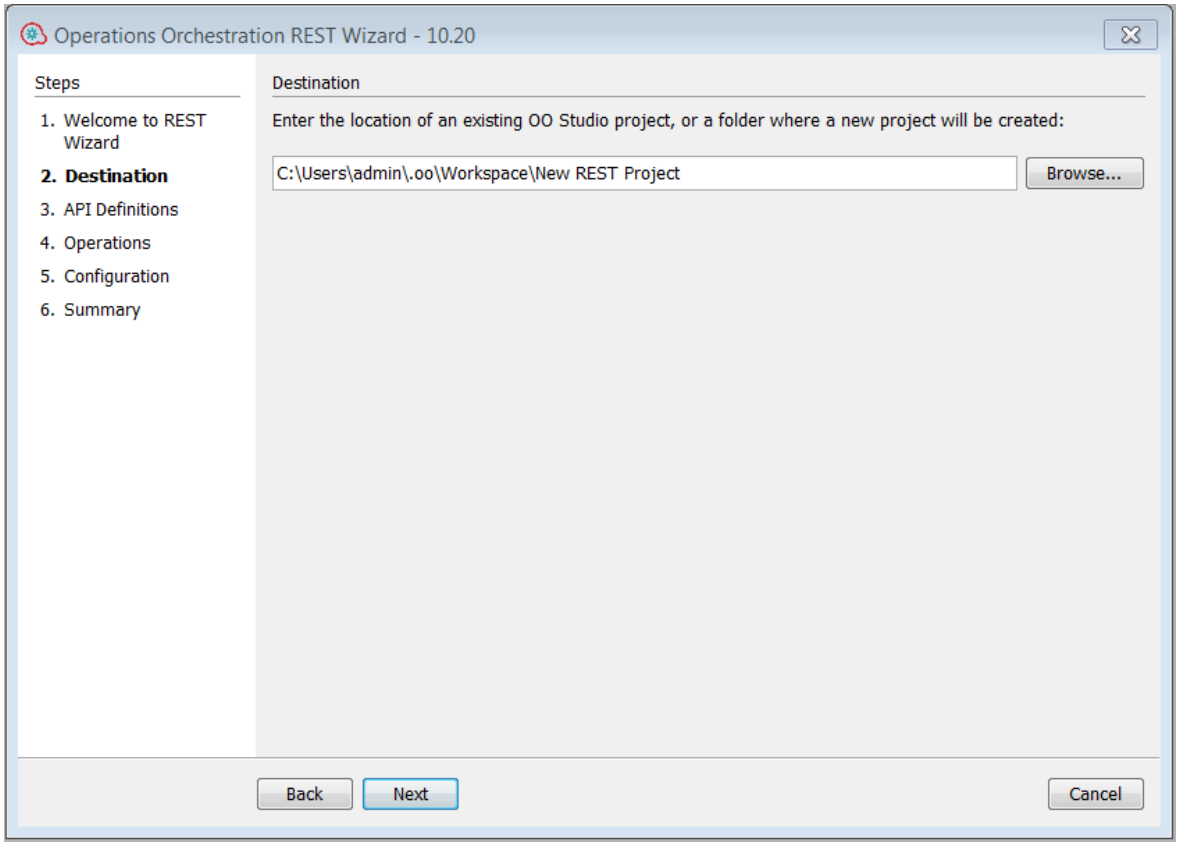



Click **Next** to open the **Destination** page.

# Step 2. Destination

In this step, you select the location of an existing Studio project or a folder where the new project will be created.

Enter or select a location of a Studio project for the flows you want to create and then click **Next**.




# Step 3. API Definitions

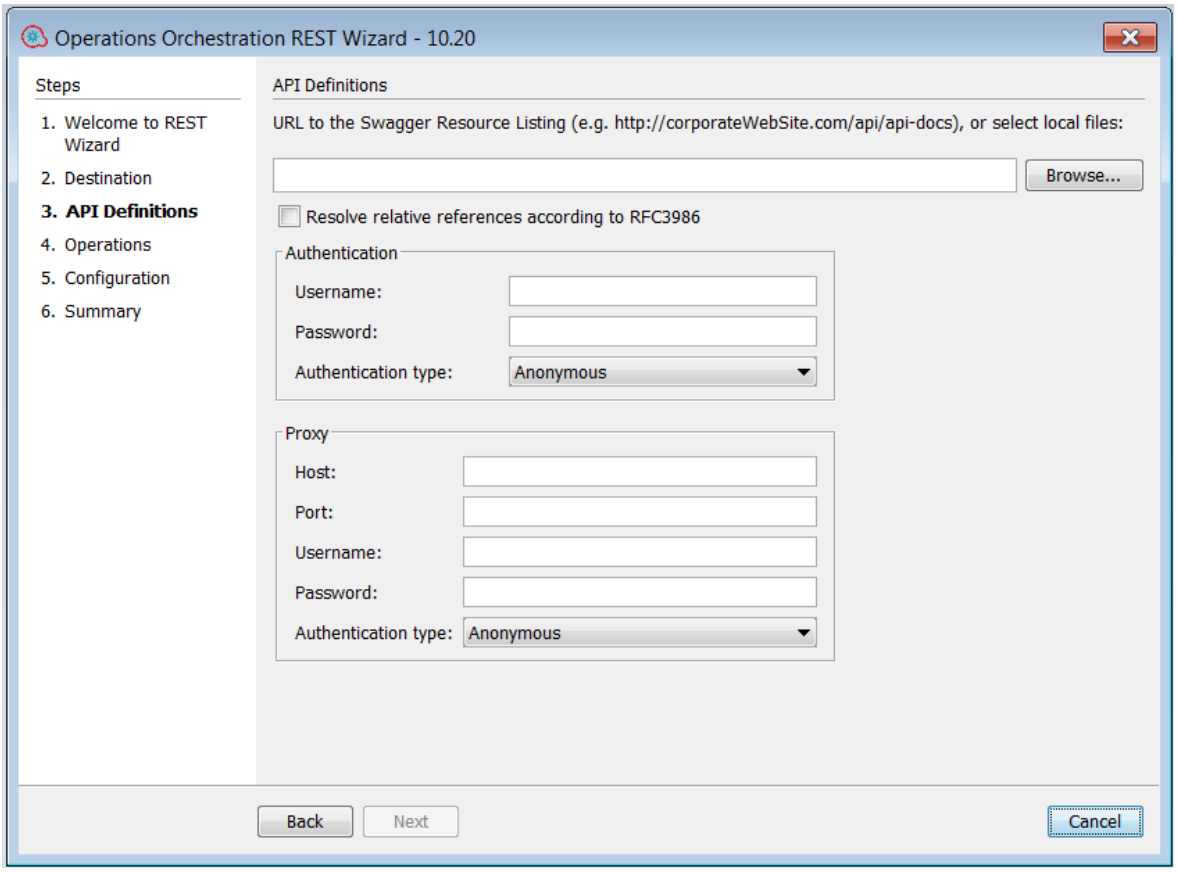
The **API Definitions** page will vary, depending on whether you selected Swagger or WADL format.

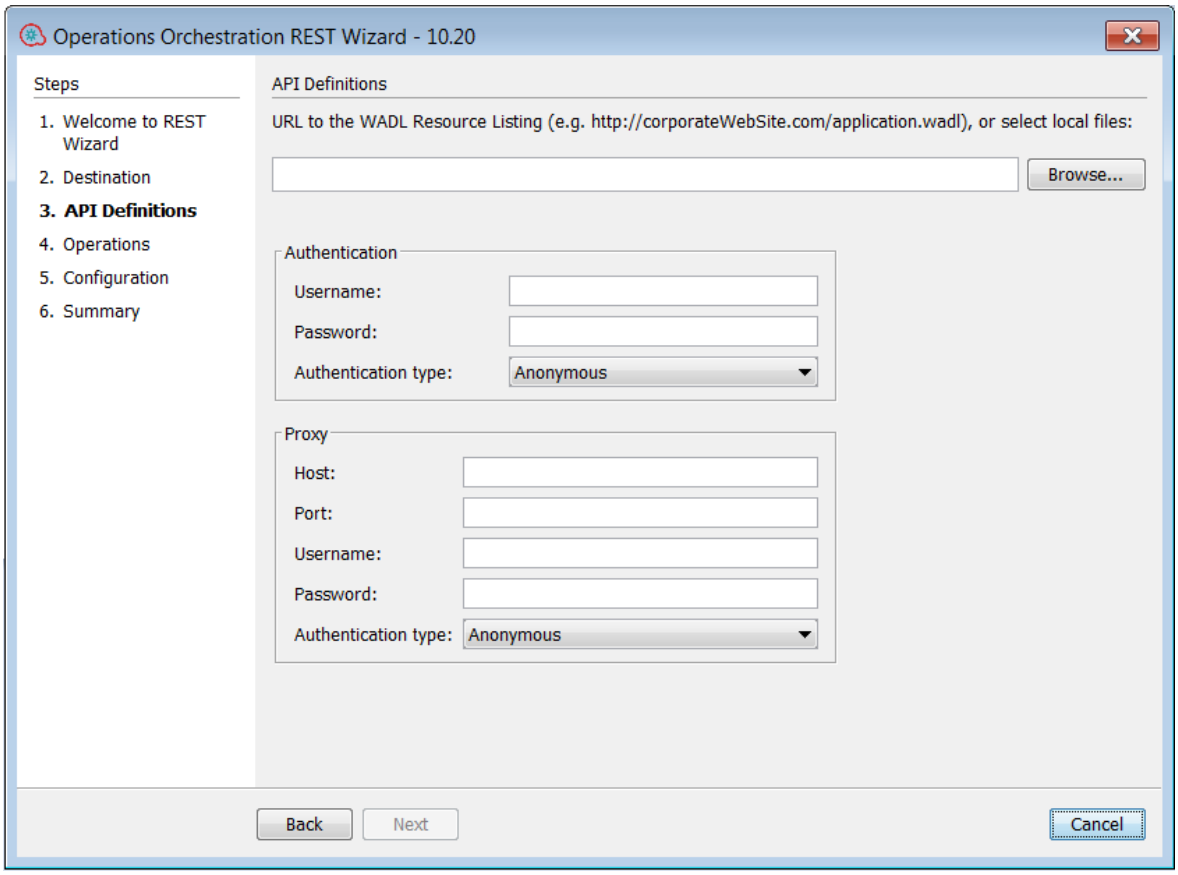
Enter the base URL to the Swagger or WADL resource listing or click **Browse** to select one or more files that contain REST API Definitions in a Swagger or WADL format. When the base URL is entered, the **Next** button is enabled.

If the base URL is protected by authentication, specify the **Username**, **Password**, and **Authentication** type. The currently supported authentication types are **Basic**, **Digest**, and **Anonymous**.

If the HTTP request to the base URL is done through a proxy, specify the proxy settings. The currently supported proxy authentication types are **Basic**, **Digest**, and **Anonymous**.

(Swagger only): If the **Resolve relative references according to the RFC3986** check box is selected, the relative paths discovered in the Swagger file found at the provided URL will be automatically resolved, and the HTTP requests will be made at the correct resource listening paths. If this check box is not selected, it is possible that for relative paths discovered, the resource listening paths will be incorrect and an exception containing the message "Invalid URL to a Swagger file" will be thrown.






# Step 4. Operations

On the **Operations** page, all the resources discovered in the previous page are displayed: the resource path, the HTTP method available for the resource and a brief description of the resource.

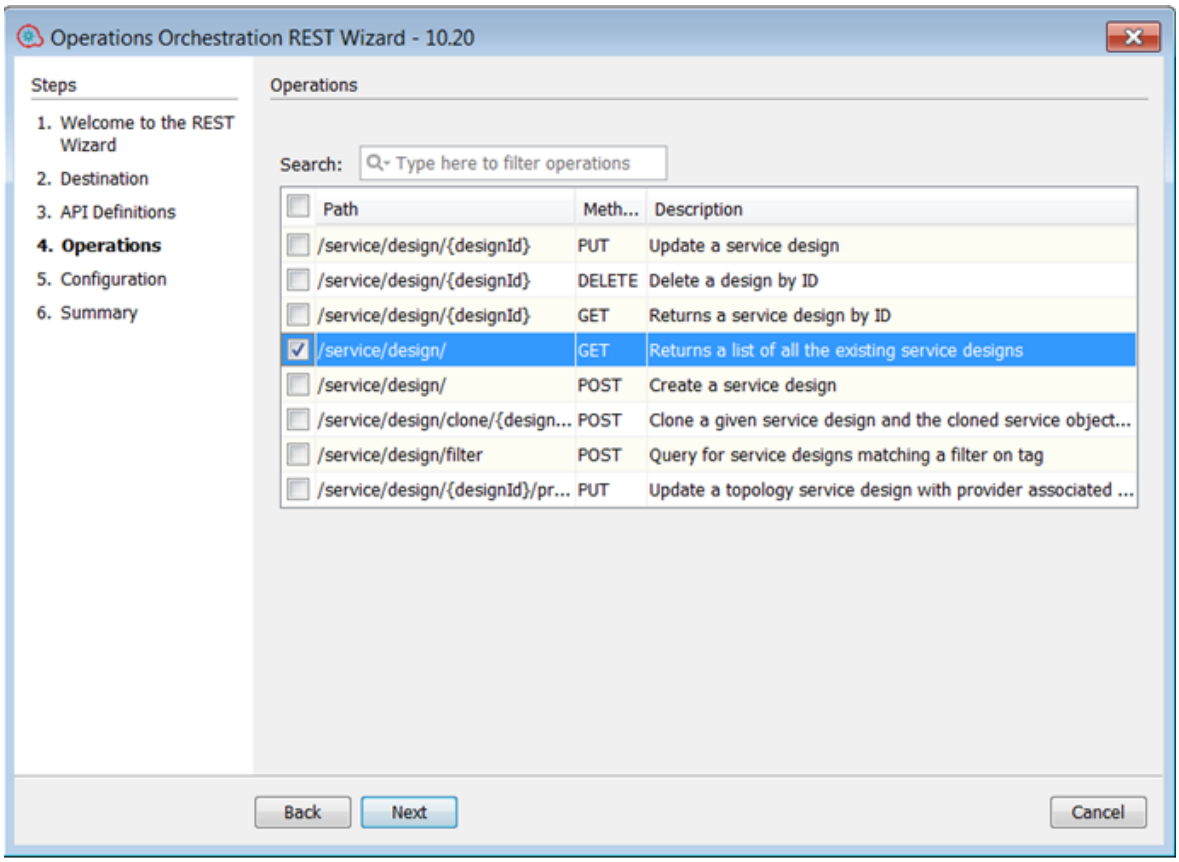
For the selected resources, the HP OO flows will be generated and will contain an operation that performs an HTTP request based on the HTTP method available for each resource.

Enter text in the top **Search** field, to filter the resources table by this text.

Select one or more resources.

> **Note:** To select multiple operations, hold down the CTRL key.

Click **Next**.




# Step 5. Configuration

All the values provided in this step will be used as inputs for the generated flows and operations.

- In the **Authentication** section, if the **Username** and **Password** are provided, a new system account will be generated under the **New REST Project\Configuration\System Accounts** folder and the user name and password inputs of generated flows will reference this system account.
- For the **Proxy user name** and **Proxy password** pair, a new system account will be generated with the **Proxy** suffix, following the same rule as for the **Username** and **Password** from the **Authentication** section.
- The currently supported authentication types are: **Basic**, **Digest**, and **Anonymous**.
  - If the selected authentication type in both the **Authentication** section and the **Proxy** section is **Anonymous**, the **authType** input from the generated flows will be initialized with an empty constant.

  - If the selected authentication type in the **Authentication** section is **Basic** and the authentication type from the **Proxy** section is **Digest**, the **authType** input from the generated flows will be initialized with a **basic,digest** constant.

- In the **Headers** text box, you can add multiple headers in the generated flows, in the following format: `headerName1=headerValue1\nheaderName2=headerValue2`. Use the new-line character to separate the headers.

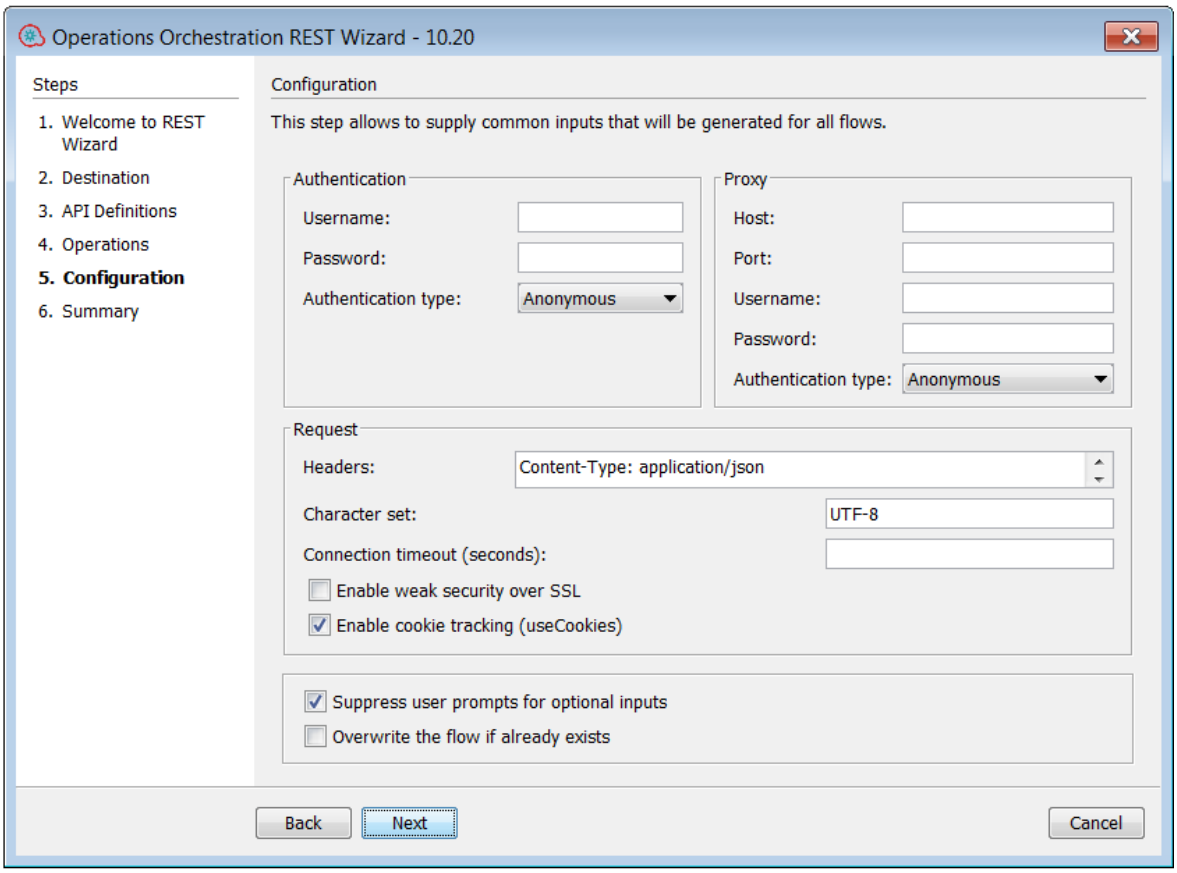
- If the **Enable weak security over SSL** or **Enable cookie tracking** check boxes are selected, the **trustAllRoots**, and **useCookies** input from the generated HTTP operation will be set to **true** and the **x509HostnameVerifier** input will be set to **allow_all**.

  Otherwise, these inputs will be set to **false** and **x509HostnameVerifier** will be set to **strict**.

- If the **Suppress user prompts for optional inputs** check box is selected, the non-required operation parameters discovered from the API Definitions document will be generated as flow inputs set to use constants with empty values. Otherwise, these flow inputs will be marked as prompts.

- Select the **Overwrite the flow if already exists** check box if the new generated flow should overwrite an existing flow from the same location specified in "Step 2. Destination" on page 9.

- Some Swagger or WADL files do not have the base URL set correctly. In this case, after the project is imported into Studio, check the **<ProjectName>/Configuration/Sytem Properties** folder, to see if the generated **System Properties SP_<ProjectName>_<ResourceName>_Url** value is initialized correctly.

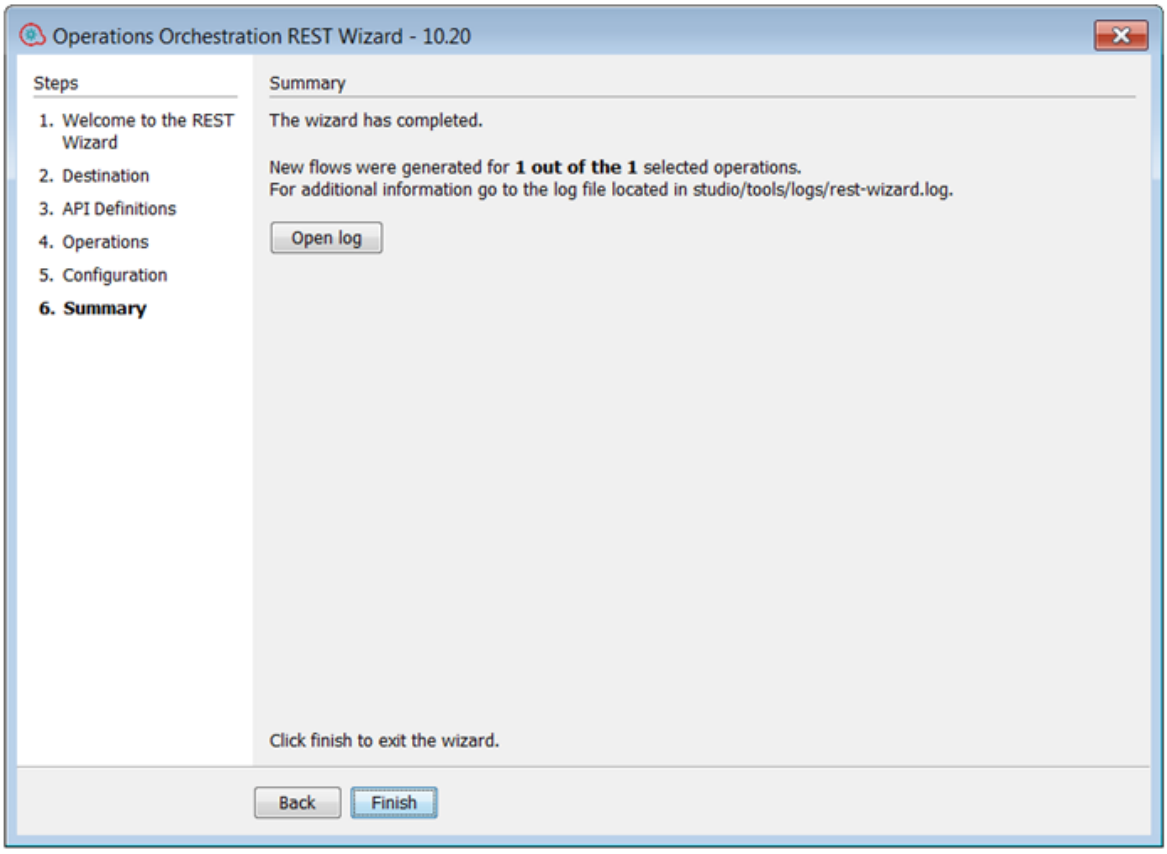



Click **Next** for the **Summary** page.

# Step 6. Summary

This step contains information about the successfully generated flows number from the selected number of resources.

For more information about the flow generation, click **Open log** to view the log files.

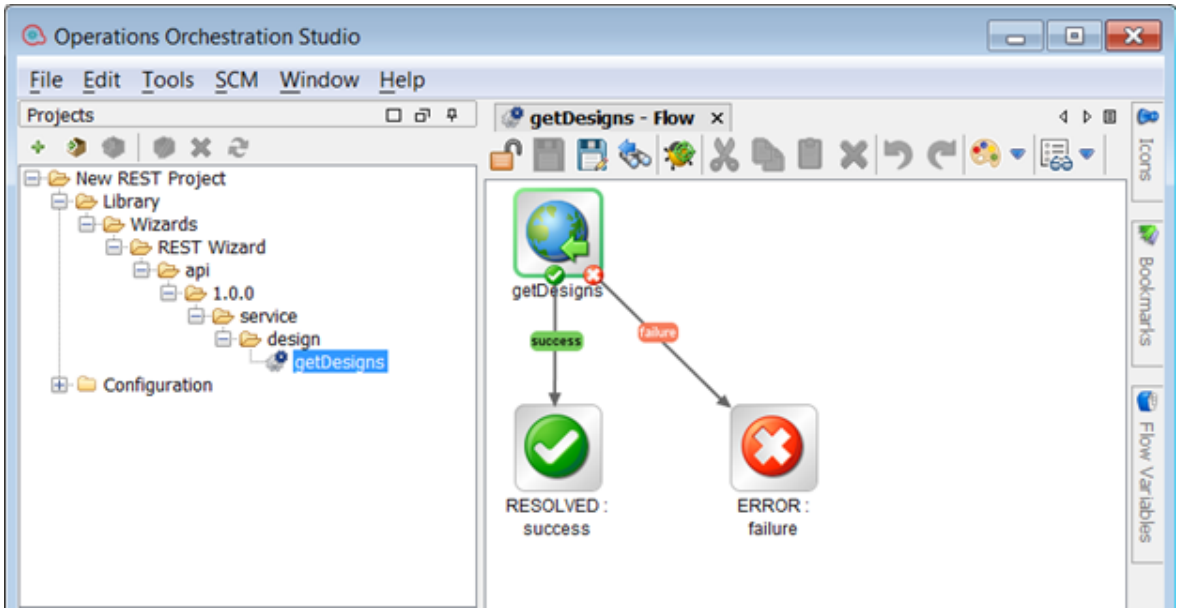


# Importing the Generated Flows into Studio

Before importing the generated flows into Studio, import the project generated by the wizard in Studio. See the “Managing Projects” section in the *HP OO Studio Authoring Guide* to see how to import a project.

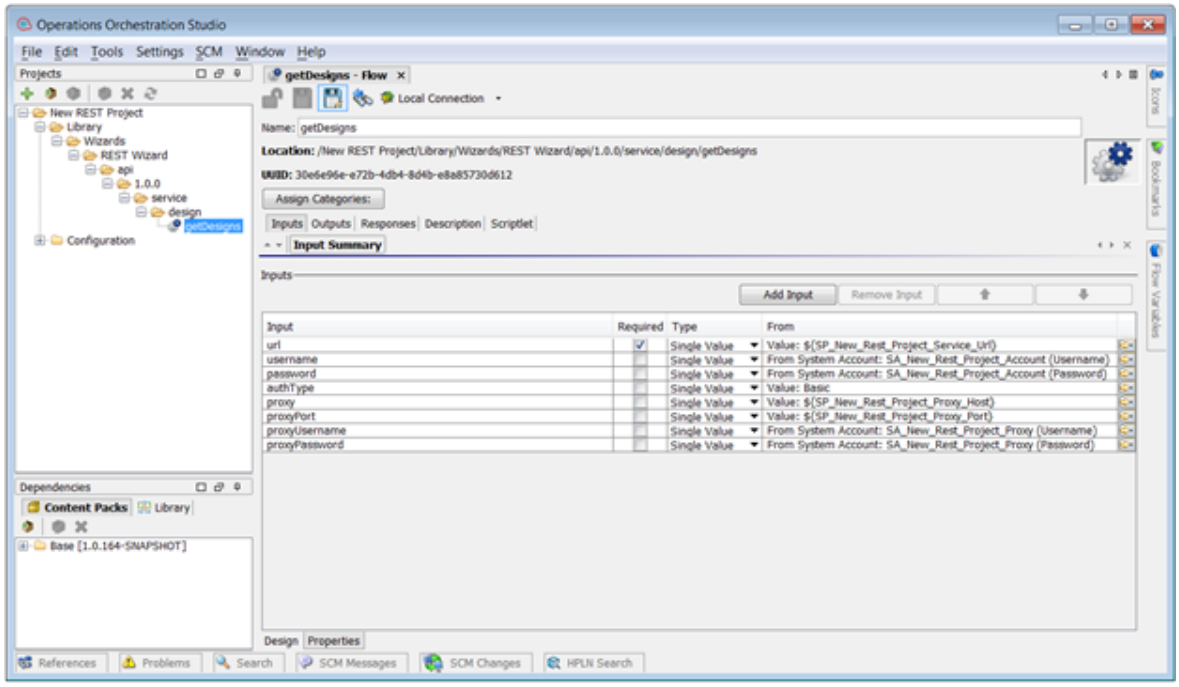
## Generated Flows

The REST Wizard generates a flow with the name specified in the Destination step of the wizard. If a project with the same name already exists, the new flow is added to it.



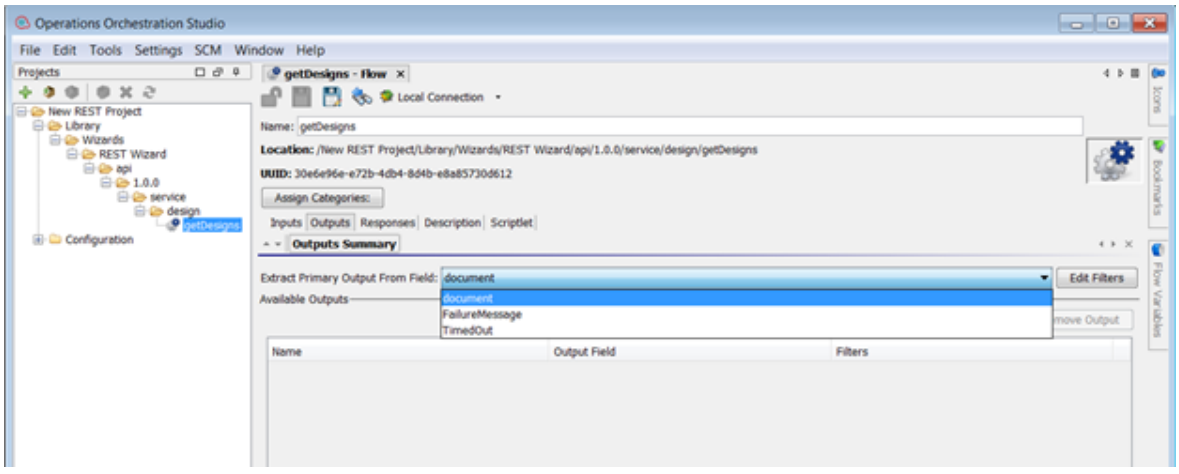
# Inputs

Each flow has the following inputs, which are common to the REST operation:



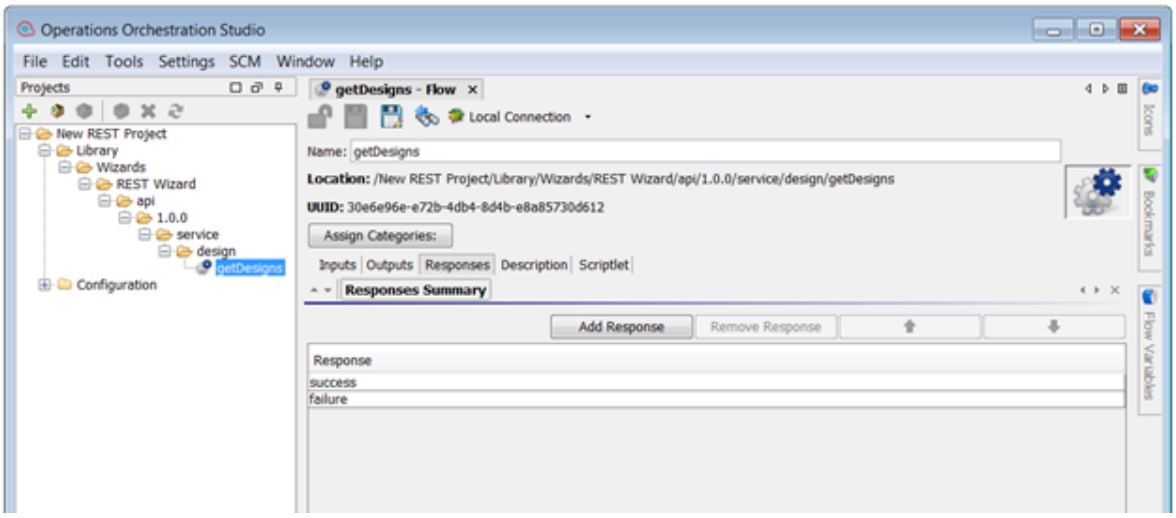

# Outputs

On the **Outputs** tab, the flow's primary result is **document**. All HP OO flows have the **FailureMessage** and **TimedOut** outputs.



# Responses

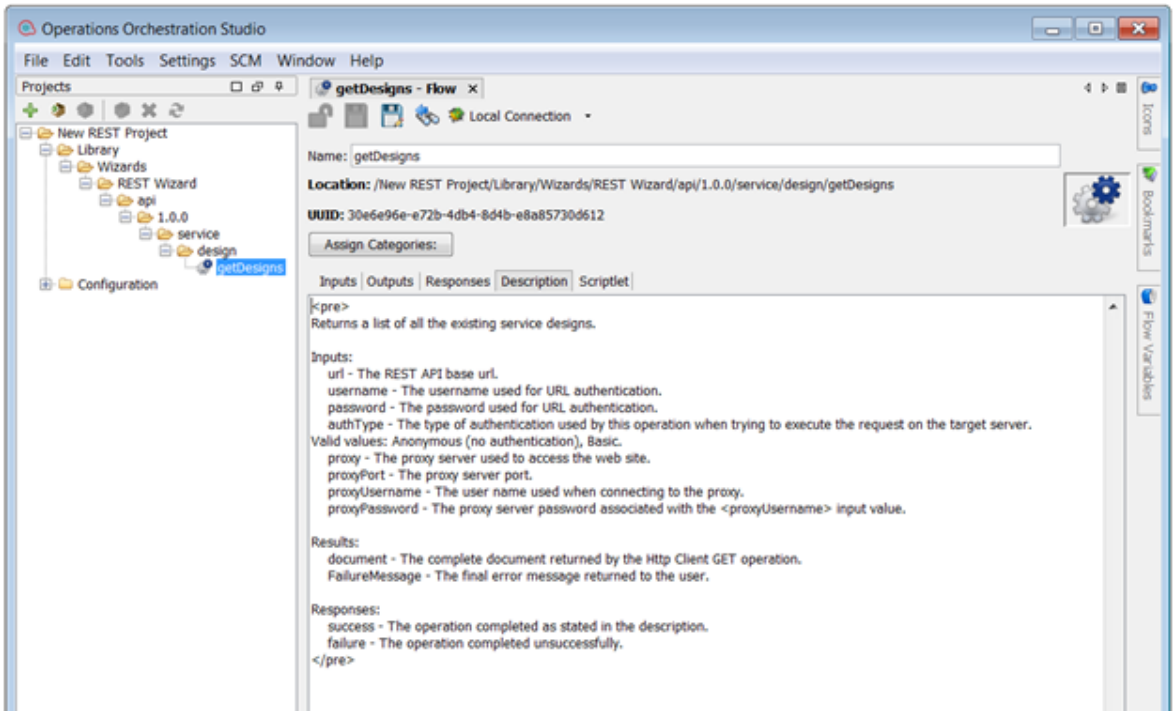
The success and failure responses of the flows are the same as the REST operations.




# Descriptions

The description of each generated flow contains the following items:

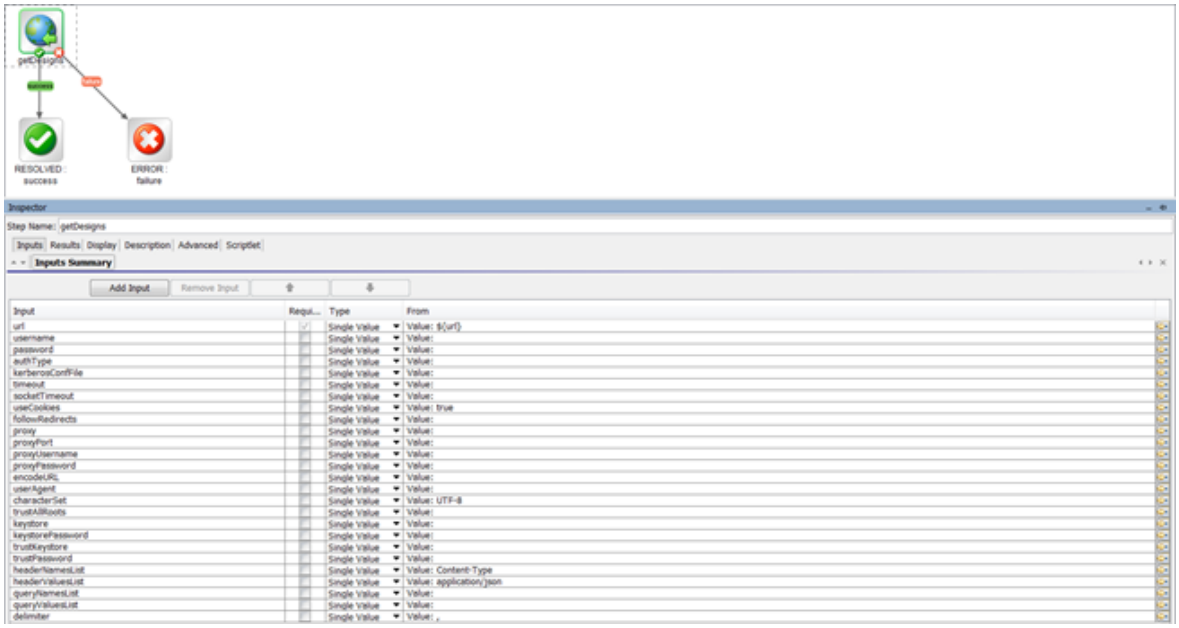
- The description of the flow
- The description of the flow inputs
- The description of the results
- The description of the responses



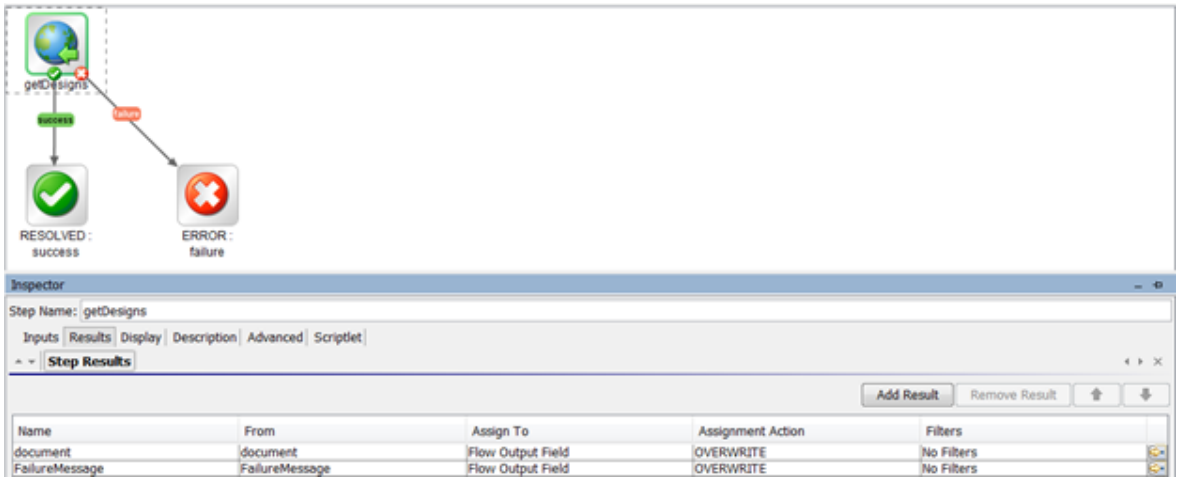

# REST Operation

This operation is used to execute a HTTP request on a target host, either local or remote.

### Operation Inputs




### Operation Results


getDesigns
success
failure
RESOLVED :
success
ERROR :
failure
Inspector
Step Name: getDesigns
Inputs
Results
Display
Description
Advanced
Scriptlet
Step Results
Add Result
Remove Result
Name
From
Assign To
Assignment Action
Filters
document
document
Flow Output Field
OVERWRITE
No Filters
FailureMessage
FailureMessage
Flow Output Field
OVERWRITE
No Filters

# Troubleshooting

## Troubleshooting Overview

This section provides troubleshooting procedures and tools that you can use to solve problems you may encounter while using this integration.

## Unable to locate resource

Possible reasons are:

- Invalid URL to Swagger/WADL Resource Listing or API Definition local files.
- The connection to a Swagger/WADL Resource Listing URL must be done through a proxy.
- The URL to the resource is invalid based on the provided JSON/XML document.

Java™
COMPATIBLE