

HP Operations Orchestration

Software Version: 10.20

Windows and Linux Operating Systems

Shell Wizard Guide

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Introduction

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Purpose of the Shell Wizard Integration

This integration enables administrators to create HP Operations Orchestration (HP OO) flows that are integrated with Shell.

The Shell Wizard helps to create a set of predefined commands that represent a workflow or procedure. The wizard includes a recorder technology that creates steps in a flow from the commands that are used in the wizard's Shell window.

To learn how to create HP OO flows, see *Studio Guide to Authoring Operations Orchestration Flows* in the documentation set for the current HP OO release.

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

Audience

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

Supported Versions

Content Pack	HP Operations Orchestration Version	Shell Wizard Version
Base Content Pack	10.x	10.x

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 Shell Wizard Integration

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Installing the Shell Wizard

The wizard is installed if Studio is selected from the HP Operation Orchestration installer. The Shell Wizard is located under `<OOInstallPath>\studio\tools`.

Configuring Logging Settings

The configure logging settings are no longer supported in the 10.x wizard.

Uninstalling the Shell Wizard

The wizard is uninstalled when Studio is uninstalled.

Shell Wizard Requirements

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

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

Target Host

- The machine must have SSH or Telnet protocol enabled.

Shell Wizard Enhancements from 9.x

- The wizard now has the version (10.x) displayed in the title.
- The wizard now appears in the task bar and can be closed, minimized or brought to the front.

Shell Wizard Steps

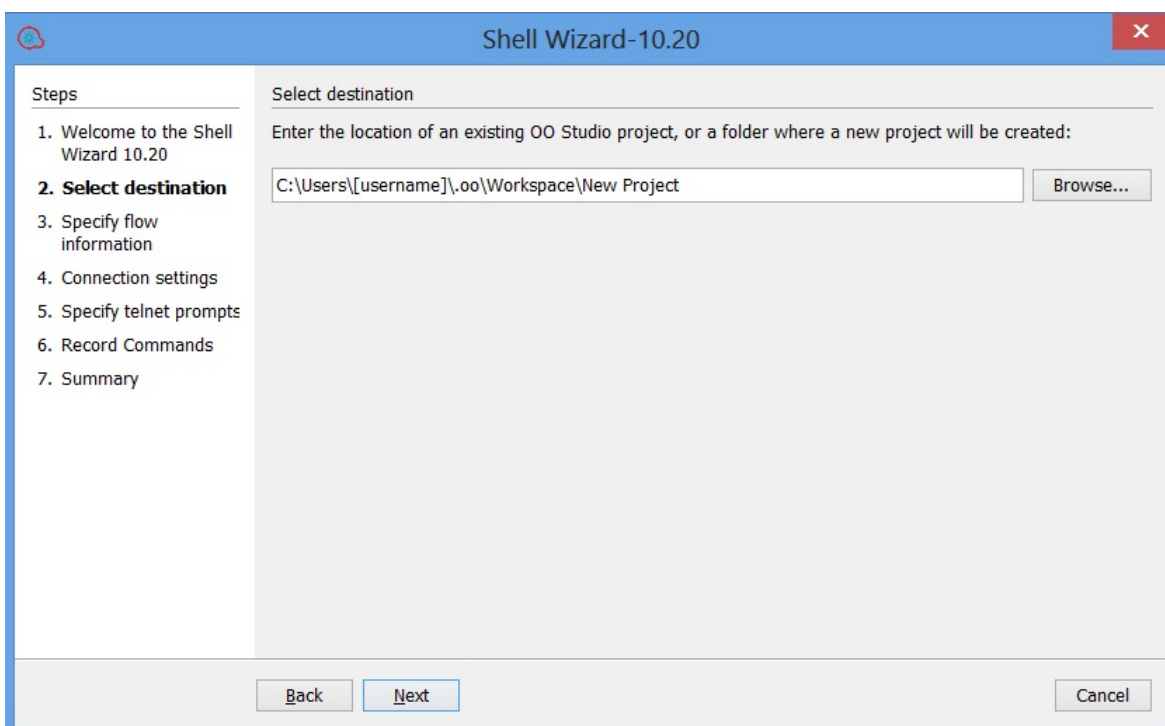
Step 1. Welcome Page

Start the Shell Wizard to open the **Welcome** page. Click **Next** to open the **Select Destination** page.

Step 2. Selecting the Destination

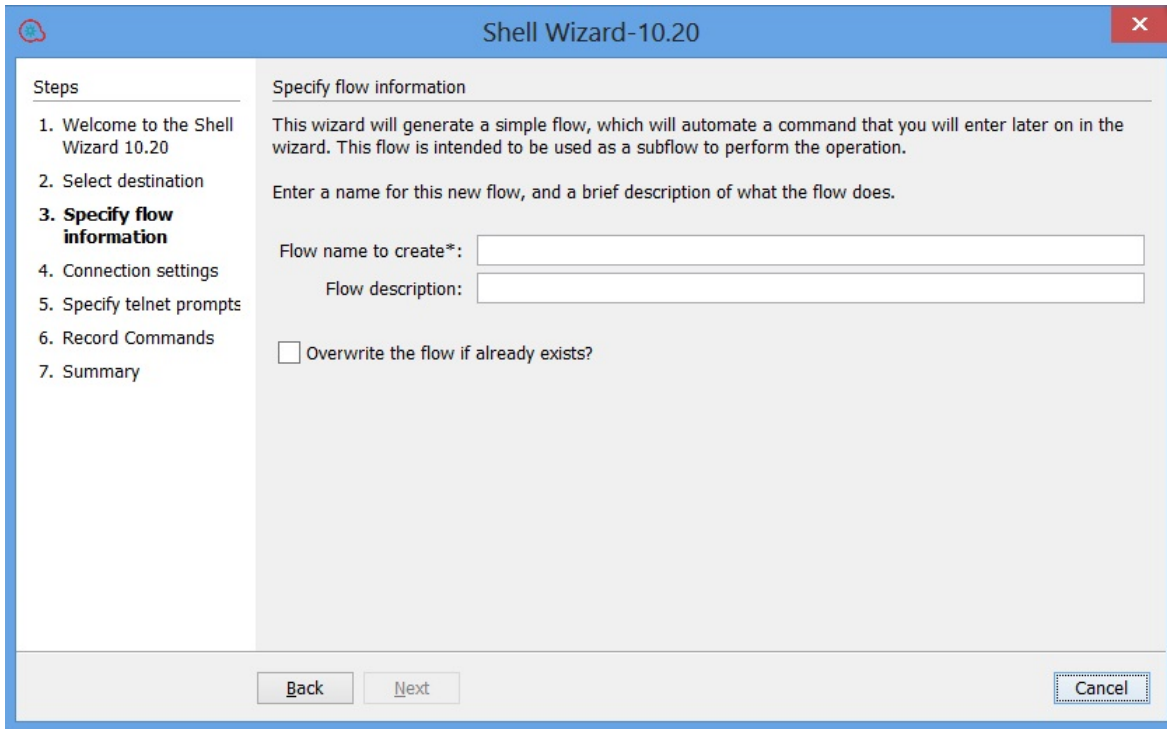
Here you need to select the location of an existing studio project, or a folder where the new project will be created.

Enter or select a location of a Studio project for the flows you want to create, and then click **Next** to open the **Specify flow information** page.



Step 3. Specifying Flow Information

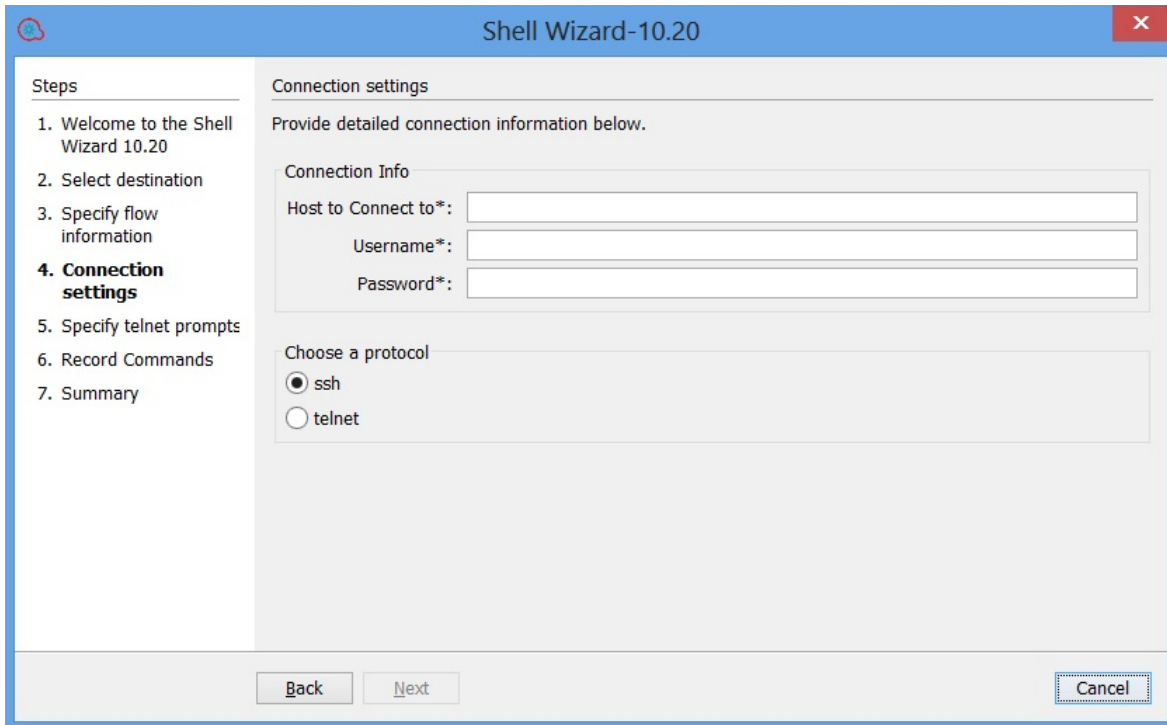
Enter the flow name and flow description. If you want to overwrite the flow, check the option with the same name available in this window.



Click **Next** to open the **Connection settings** page.

Step 4. Entering Connection Settings

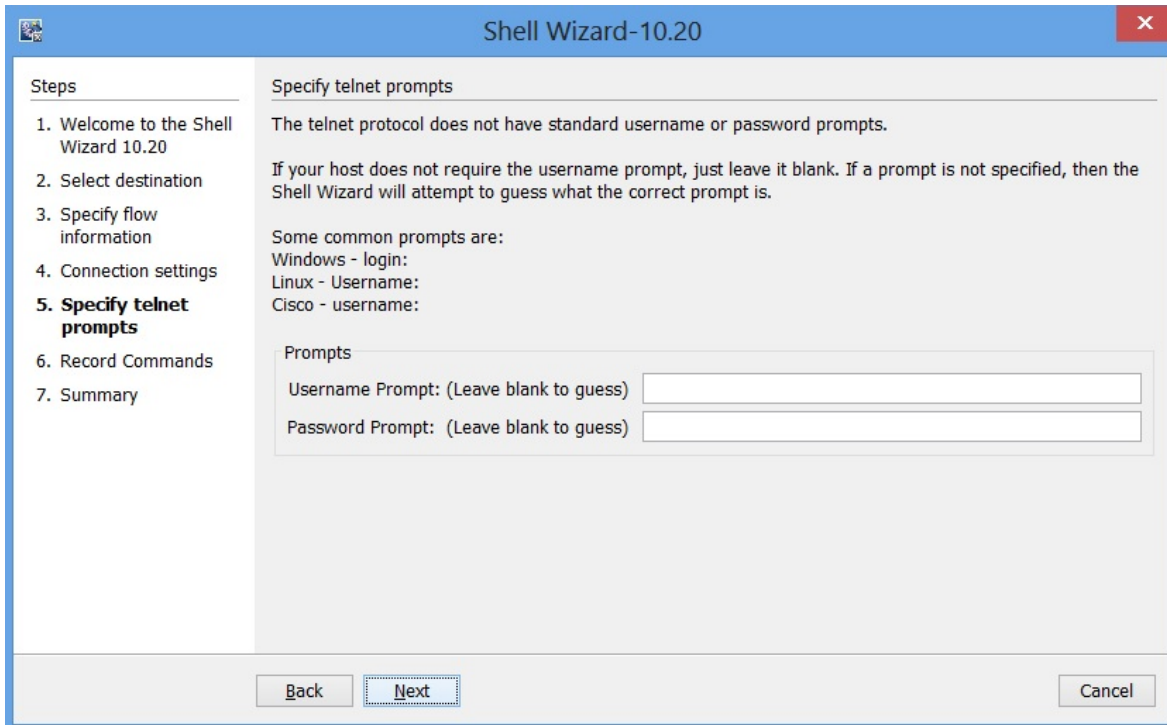
Enter the connection settings inputs.



- If the chosen protocol is SSH, the **Record Commands** page opens.
- If the chosen protocol is Telnet, the **Specify telnet prompts** page opens.
- If the chosen protocol is SSH, the Authenticating window opens until the connection is established.

Step 5. Specify Telnet Prompts

If the Telnet protocol was chosen, the **Specify Telnet prompts** page opens.

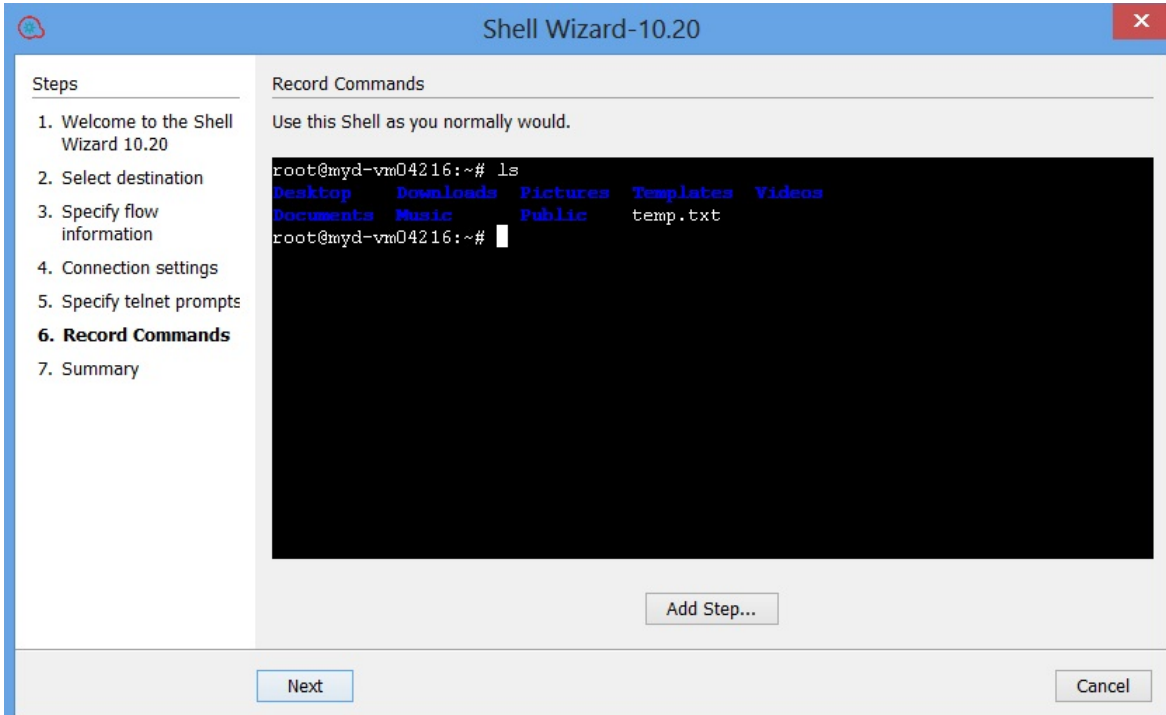


Click **Next** to open the connection. The Authenticating window opens until the connection is established.

Step 6. Recording Commands

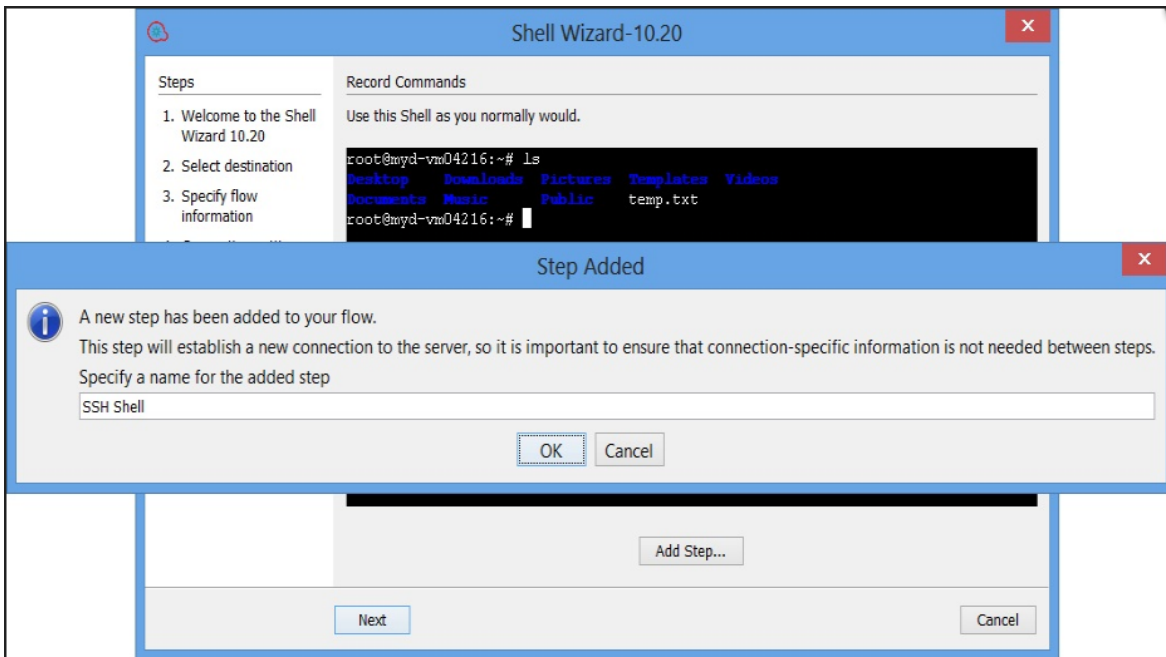
If the SSH protocol was chosen, the **Record Commands** page opens.

The commands written in this screen are recorded and executed as a step in the generated flow.



Click **Next** to go to the **Finish** page.

If the **Add Step** button is clicked, the Step Added window is displayed for a new connection to the server as a new step of the flow.



Step 7. Finish

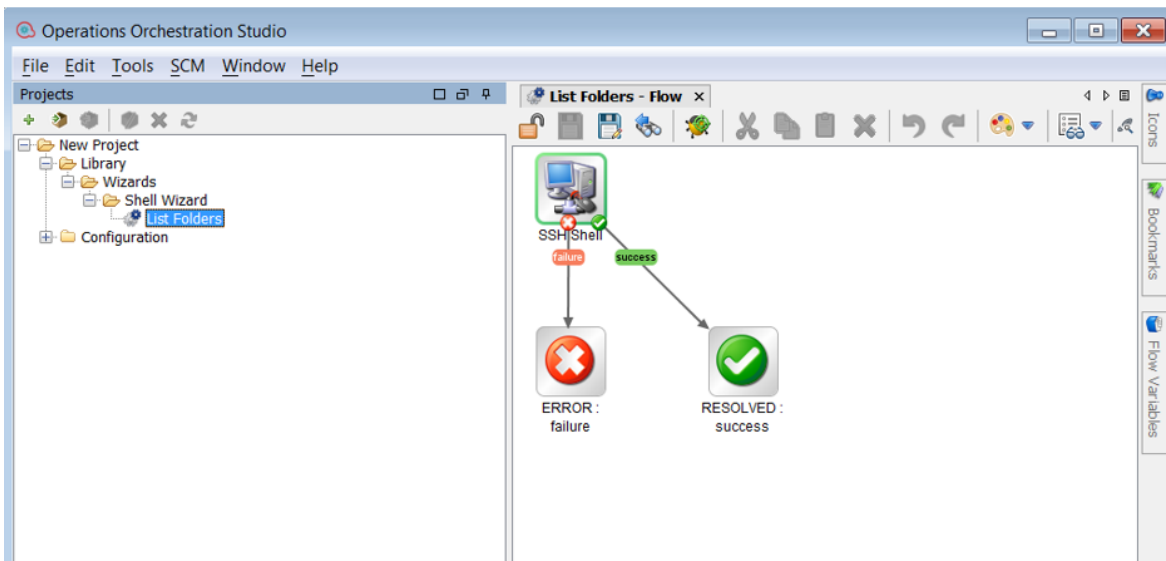
Click **Finish** to exit the wizard.

Importing the Generated Flows into Studio

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

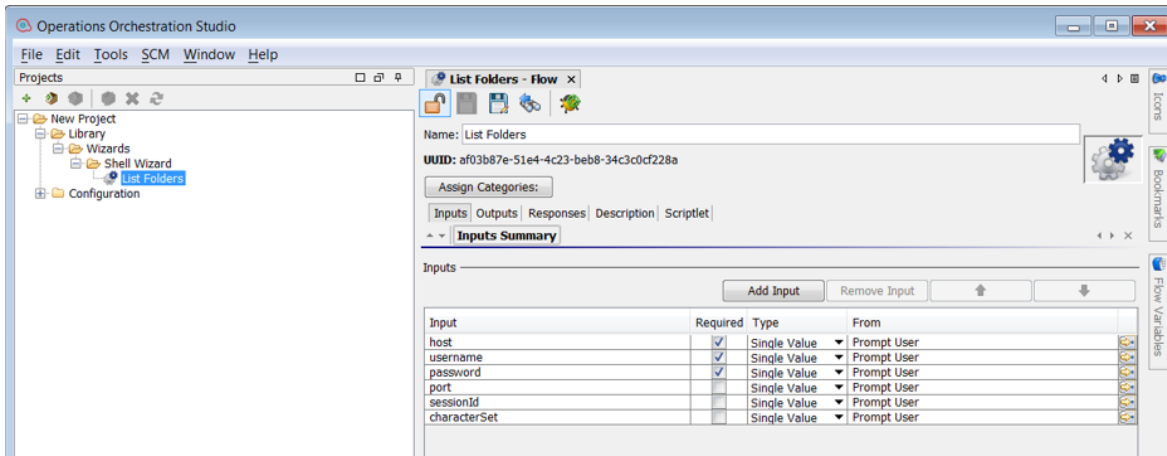
Generated Flows

The Shell Wizard generates a flow with the name specified in the **Specify step information** step of the wizard. If a project with the same name already exists, the new flow will be added to.



Inputs

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

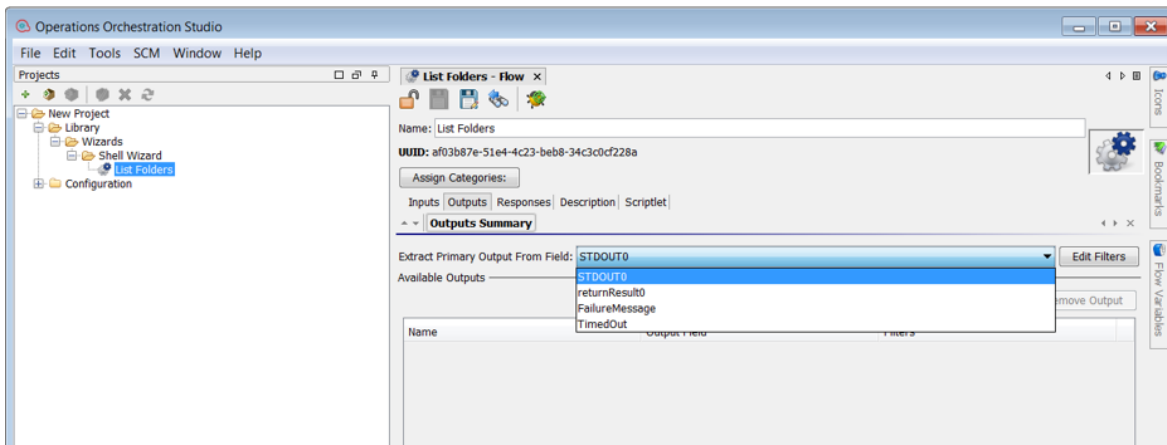


Outputs

On the **Outputs** tab, the flow primary result is **stdout** in addition to the **returnResult** result.

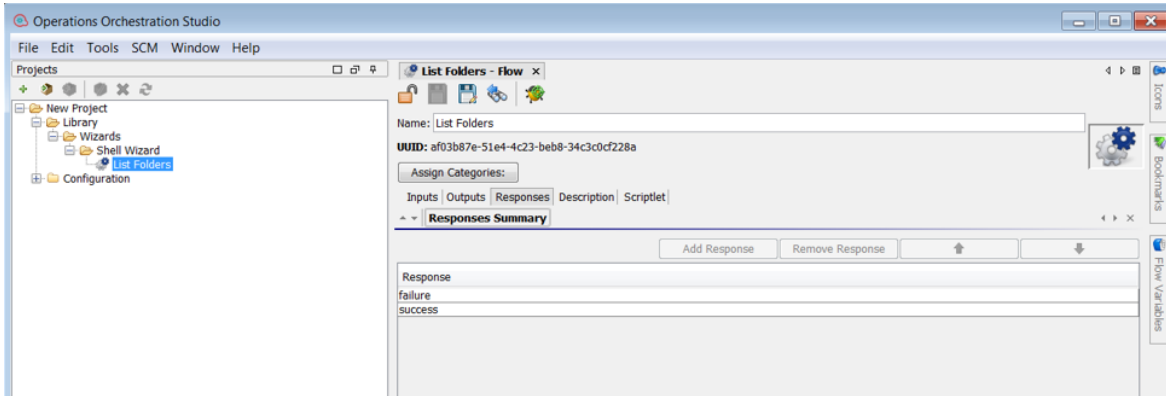
All HP OO flows have the **FailureMessage** and **TimedOut** outputs.

All generated flows have the **returnResult** output (which is the generic operation's result), and **stdout** result.



Responses

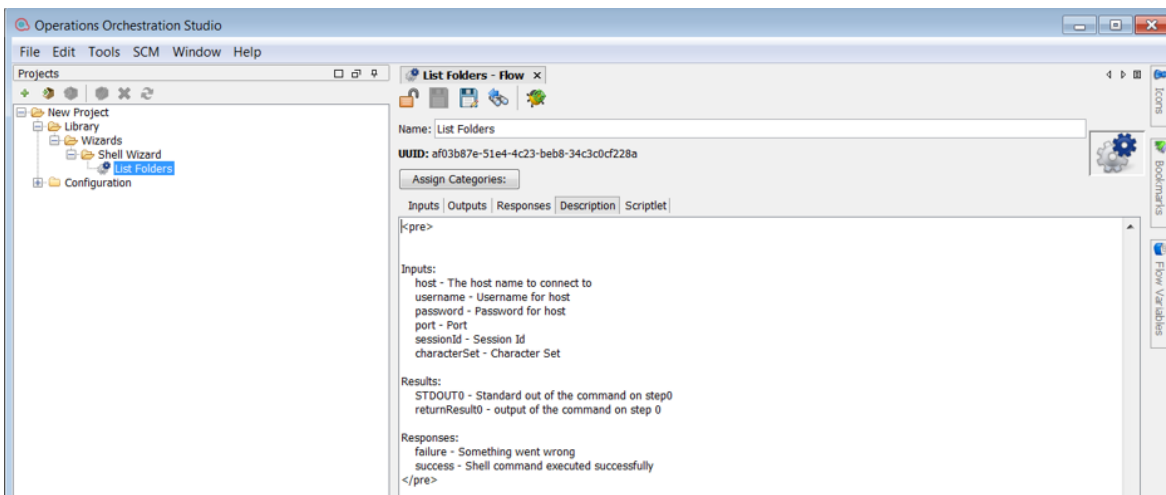
The success and failure responses of the flows are the same as in the Shell operations.



Descriptions

The description of each generated flow contains the following items:

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



Shell Operation

The operation is used to execute a Shell script on a target host, either local or remote.

Operation Inputs

The diagram shows an 'SSH Shell' operation node with two outgoing paths: 'failure' (marked with a red 'X') and 'success' (marked with a green checkmark). Below the diagram is the 'Inspector' window for the 'SSH Shell' step, showing the 'Inputs Summary' tab. The inputs are listed in a table below.

Input	Required	Type	From
host	<input checked="" type="checkbox"/>	Single Value	Value:
port	<input checked="" type="checkbox"/>	Single Value	Value:
command	<input checked="" type="checkbox"/>	Single Value	Value: expectEndsWith #send ls
username	<input checked="" type="checkbox"/>	Single Value	Value:
password	<input checked="" type="checkbox"/>	Single Value	Value:
newlineCharacters	<input type="checkbox"/>	Single Value	Value:
characterDelay	<input type="checkbox"/>	Single Value	Value:
characterSet	<input type="checkbox"/>	Single Value	Value:
privateKeyFile	<input type="checkbox"/>	Single Value	Value:
timeout	<input type="checkbox"/>	Single Value	Value:
sessionId	<input type="checkbox"/>	Single Value	Value:

Operation Results

The diagram is identical to the one above, showing the 'SSH Shell' operation with 'failure' and 'success' paths. Below it is the 'Inspector' window for the 'SSH Shell' step, showing the 'Step Results' tab. The results are listed in a table below.

Name	From	Assign To	Assignment Action	Filters
STDOUT0	STDOUT	Flow Output Field	OVERWRITE	No Filters
returnResult0	returnResult	Flow Output Field	OVERWRITE	No Filters

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Troubleshooting Overview

This section provides troubleshooting procedures and tools that you can use to solve problems you may encounter while using this integration. It also includes a list of the error messages you may receive while using the integration and offers descriptions and possible fixes for the errors.

Could not connect to the host

The possible reasons are:

- The user credentials are not correct.
- Telnet protocol is not enabled on the machine.
- The user does not have permission to execute Shell scripts on the target host. Make sure the user has admin rights for executing the file.
- Authentication problems (most common). See "Running a PowerShell Script on a Remote Host".

Error Messages

This section lists the error messages you may receive while using this integration. Each error message includes possible causes and fixes for the error.

```
java.net.ConnectException: Connection refused: connect
```

This error occurs when SSH or Telnet protocol are not supported on the machine.

