HP Operations Orchestration

for the Windows and Linux operating systems

Release Notes

Software version: 9.00.06/October 2011

This document provides an overview of the changes made to HP Operations Orchestration for the 9.00.06 version which is a content only release. It contains important information not included in the manuals or in online help.

There is also a file named *OO 9.00.06 Change Reports* that is available on **https://www.www2.hp.com/** that contains simple lists of the items that have been added, updated, or removed from the OO 9.00 release since the 9.00.05 release.

In This Version Documentation Updates Installing OO 9.00.06 Enhancements and Fixes Known Problems, Limitations, and Workarounds Support Legal Notices

In This Version

New Operations and Operation Updates

Base64 Utility Operations

- Two new operations have been created in the Library/Utility Operations/ folder to encode and decode a Base64 encoded strings:
 - Base64 Encoder Encodes a clear string into a Base64 encoded string.
 - Base64 Decoder Decodes a Base64 encoded string into a clear string.

FreeBSD

- The **Get OS Name** operation in the Library/Operations/Operating Systems/FreeBSD/OS and Server Operations/ folder has three new outputs that return operating system version information:
 - osVersion The version from the uname output (for example, 7.4-RELEAS..)
 - osVersionMajor The major version from the uname output (for example, 7).
 - osVersionMinor The minor version from the uname output (for example, 4..
- A new **Interface Info** flow has been created in the Library/Operations/Operating Systems/FreeBSD/Network Operations/ folder. This flow uses the **ifconfig** command to retrieve information for a network interface on a FreeBSD host.

Oracle

- In the following operations located in the Library/Operations/Databases/Oracle/ folder:
 - TNS Names SQL Command
 - TNS Names SQL Query LOB
 - TNS Names SQL Query Tabular
 - TNS Names SQL Query
 - TNS Names SQL Script

The TNSPath and TNSEntry input descriptions have been made clearer as follows:

TNSPath

The path to the folder of the TNS file tnsnames.ora. This path must be accessible by the OO RAS service. For example, if the RAS and the Oracle server are installed on the same Windows system, the TNSPath might look like "C:\app\Administrator\product\11.1.0\db_1\network\admin". If the RAS and the Oracle server are on different Windows systems, you can copy the tnsnames.ora file to the RAS system, then the TNSPath might look like "C:\Program Files\Hewlett-Packard\Operations Orchestration\RAS\Java\Default\webapp\conf" or "C:\Temp" depending on where you place the .ora file.

TNSEntry

The entry name in the tnsnames.ora file that contains the connection information. The value for this input is case insensitive. For example, the value for the **TNSEntry** input is "TestEntry" if the content in the tnsnames.ora file looks like the following:

```
TestEntry = (DESCRIPTION = (ADDRESS = (PROTOCOL = TCP)(HOST =
16.110.111.111)(PORT = 1521)) (CONNECT_DATA = (SERVER = DEDICATED) (SERVICE_NAME
= orcl) ))
```

XML Processing

- A new **xsdLocation** optional input has been added to the **Validate XML Document** operation in the Library/Utility Operations/XML Processing/ folder. If the user specifies a value for this input, the XML document is validated against the XSD schema. The value for the **xsdLocation** input can be a fully qualified URL to an HTTP-accessible XSD schema document or a complete path to a local XSD schema document.
- Two new operations have been created in the Library/Utility Operations/XML Processing/ folder to read from a file and perform stacks of queries:
 - XPath Query from File operation takes XML (in the form of a string) from an .xml file. The specified XPath query is run against the XML and returns the results in a form of a delimited list. The World Wide Web Consortium (W3C) organization provides the XPath specification (http://www.w3.org).
 - XPath Query operation takes a reference to XML (in the form of a string) and the specified XPath query is run against the XML and returns the results in a form of a delimited list. The World Wide Web Consortium (W3C) organization provides the XPath specification (http://www.w3.org).

You can specify the XPath query as a single query in a format similar to the following:

/employees/employee[@id="3"]/*[name()="name" or name()="jobDescription" or name()="salary" or name()="managerId"]/text()

This would return the results like the following:

Albert Hall, tester, \$50,1

If you want to specify more than one XPath query, populate **xpathQuery** using the XPath **concat** function. Here is an example of an **xpathQuery** value using the XPath **concat** function:

```
concat(/employees/employee[@id="2"]/name/text(),',',/employees/employee[@id="
2"]/jobDescription/text(),',',/employees/employee[@id="2"]/managerId/text(),'
,',/employees/employee[@id="2"]/salary/text())
```

The output using the concat xpathQuery input would return results like the following:

```
Mary Smith, Lead Coder, 1, $50
```

The examples above use the following XMLstring value:

```
</managerId>lbert Hall</name>
```

- A sample flow has also been created in the Library/Utility Operations/Samples/ folder that demonstrates this new functionality:
 - Sample XPath Query takes a reference to XML (in the form of a string) and the specified XPath Query is run against the XML and the result returned.

New Integrations and Integration Updates

Amazon EC2

- Added support for Cluster Placement Groups in the Amazon EC2 integration with the following three new operations in the Library/Integrations/Amazon/EC2/Placement Groups/ folder:
 - Create Placement Group operation creates a new placement group.
 - Delete Placement Group operation deletes a placement group.
 - Describe Placement Groups operation returns a list of your Amazon EC2 placement options.
- Added new sample flow **Placement Group Operations** in the Library/Integrations/Amazon/EC2/Placement Groups/Samples/ folder ,that uses the **Placement Group** operations.

Citrix XenApp

• A new Citrix XenApp intregration in the Library/Operations/Application Servers/Citrix XenApp/ and Library/Accelerator Packs/Application Servers/Citrix XenApp/ folders. These folders contain operations and flows that communicate between OO and Citrix XenApp.

The first group of these operations are contained in the Library/Operations/Application Servers/Citrix XenApp/ folder and its **Applications**, **Sessions**, and **Users** subfolders:

- The operations in the **Citrix XenApp** folder are:
 - Close Runspace Session
 - Close Runspace Pool Session
 - Get Farm Name
 - Get Servers
 - Query Server
 - Run XenApp Cmdlets
- The operations in the **Applications** subfolder are:

- Add Application to Server
- Get Applications
- Modify Application
- Query Application
- Remove Application from Server
- The operations in the **Sessions** subfolder are:
 - Get Sessions
 - Query Session
 - Stop Session by SessionId
 - Stop User Session
- The operations in the **Users** subfolder are:
 - Add User to Application
 - Query User
 - Remove User from Application

The second group of flows are contained in the Library/Accelerator Packs/Application Servers/Citrix XenApp/ folder and its **Health Check**, **Information Gathering**, and **Utility** subfolders:

- The flows in the **Health Check** subfolder are:
 - Load Analysis
- The flows in the **Information Gathering** subfolder are:
 - Get List of Applications
 - Get Servers
 - Get Sessions
 - Query Application
- The flows in the **Utility** subfolder are:
 - Add User to All Applications
 - Add User to Application
 - get All Users
 - Get Farm Name
 - Modify Application
 - Remove User from All Applications
 - Remove User from Application

HP BladeSystem Onboard Administrator

• A new HP BladeSystem Onboard Administrator (OA) integration in the Library/Integrations/Hewlett-Packard/Onboard Administrator/ / folder which contains operations and flows that integrate OA and OO.

These operations and flows are contained in the **Power**, **Rack and Enclosure**, and **User** subfolders:

- The operations in the **Power** subfolder are:
 - Get Power

- Get Power Cap
- Get Power Cap Excluded Bays
- Get Power Summary
- Get Power Supply
- Set PDU Type
- Set Power Cap
- Set Power Cap Bays to Exclude
- Set Power Limit
- Set Power Mode
- Set Power Savings
- The operations in the **Rack and Enclosure** subfolder are:
 - Get Enclosure Info
 - Get Enclosure Status
 - Get Enclosure Temp
 - Get FRU
 - Get Rack Name
 - Get Topology
 - Set Asset Tag
 - Set Enclosure Name
 - Set Enclosure UID LED
 - Set Part Number
 - Set Rack Name
 - Set Serial Number
- The operations in the **User** subfolder are:
 - Add User
 - Delete User
 - Get Password Settings
 - Get Session Timeout
 - Get User
 - Get Users
 - Modify User
 - Set Password Settings
 - Set Session Timeout
- A new *HP BladeSystem Onboard Administrator Integration Guide* describes the operations in the Library/Integrations/Hewlett-Packard/Onboard Administrator/ folder.

HP Proliant iLO

• The OO HP Proliant iLO integration now supports iLO 3.

HP SiteScope

• The OO SiteScope integration now supports HP SiteScope 11.10.

HP UCMDB

• The OO UCMDB integration now supports UCMDB 9.0.4,

HP Virtual Connect Enterprise Manager (VCEM)

• A new HP Virtual Connect Enterprise Manager (VCEM) integration in the Library/Integrations/Hewlett-Packard/Virtual Connect Enterprise Manager/ folder that contains operations that centralize network connection management and workload mobility for HP BladeSystem servers that use Virtual Connect to access local area networks (LANs), storage area networks (SANs), and converged network environments.

These flows are contained in the **Bays and Enclosures**, **Failover**, **Job**, **Maintenance**, **Profiles**, and **VC Domains and Domain Groups** subfolders:

- The operations in the Bays and Enclosures subfolder are:
 - Check Power Status of Bay
 - Find Bay
 - Find Enclosure by Name
 - Find Enclosure by Serial Number
 - Power Bay Off
 - Power Bay On
- The operations in the **Failover** subfolder are:
 - Failover by Enclosure Name and Bay Number
 - Failover by Server IP Address
 - Failover by Server Name
- The operations in the **Job** subfolder are:
 - Job State
- The operations in the **Maintenance** subfolder are:
 - Cancel Maintenance Mode
 - Complete Maintenance Mode
 - Enable Maintenance Mode
- The operations in the **Profiles** subfolder are:
 - Add FC Connection to Profile
 - Add Network Connection to Profile
 - Assign Profile by Id
 - Assign Profile by Name
 - Delete FC Connection from Profile
 - Delete Network Connection from Profile
 - Find Profile by Id

- Find Profile by Name
- List Server Profiles
- Unassign Profile by Id
- Unassign Profile by Name
- Update FC Connection in Profile
- Update Network Connection in Profile
- The operations in the VC Domains and Domain Groups subfolder are:
 - Find VC Domain Group
 - Find VC Domain
 - List VC Domain Groups
 - List VC Domains
- A new *HP VCEM Integration Guide* describes the operations in the Library/Integrations/Hewlett-Packard/Virtual Connect Enterprise Manager/ folder.

Linux KVM

- A new RedHat KVM integration in the Library/Integrations/Linux KVM/ folder contains operations in the Host, Hypervisor, Interface, Network, Samples, Storage Pool, Storage Volume, and Virtual Machine subfolders.
- The operations in the **Host** subfolder are:
 - Get Host Info
 - List Inactive VMs
 - List Running VMs
- The operation in the **Hypervisor** subfolder is:
 - Get Hypervisor Info
- The operations in the **Interface** subfolder are:
 - Activate Interface
 - Deactivate Interface
 - Define Ethernet Interface
 - Define Internet From XML
 - Get Interface Info
 - List Interfaces
 - Undefine Interface
- The operations in the **Network** subfolder are:
 - Create Network From XML
 - Create Simple Network
 - Get Network Info
 - Is Network Active
 - List Networks
 - Start Network

- Stop Network
- The flows in the **Samples** subfolder are:
 - Migrate All Active VMs From A Host
 - Shutdown and Undefine VM
- The operations in the **Storage Pool** subfolder are:
 - Create Storage Pool From XML
 - Get Storage Pool Info
 - List Storage Pools
- The operations in the **Storage Volume** subfolder are:
 - Create Storage Volume From XML
 - Delete Storage Volume
 - Get Storage Volume Info
 - List Storage Volumes
- The operations in the Virtual Machine subfolder are:
 - Attach Device From XML
 - Attach Disk Device
 - Attach Disk Image File
 - Attach Network
 - Change Active VM Max MemSize
 - Change Active VM Target MemSize
 - Change Active VM Vcpus Count
 - Configure VM Autostart
 - Configure VM Parameters for Restart
 - Create VM From XML
 - Create VM
 - Define VM From XML
 - Define VM
 - Detach Device by XML
 - Detach Disk
 - Detach Network
 - Get Network Connection Info
 - Get VM Info
 - List Disks
 - List Network Connections
 - Migrate VM
 - Reboot VM
 - Resume VM
 - Shutdown VM

- Start VM
- Suspend VM
- Undefine VM
- A new *LinuxKVM Integration Guide* describes the operations in the Library/Integrations/Linux KVM/ folder.

Microsoft System Center Virtual Machine Manager (SCVMM)

- A new Microsoft System Center Virtual Machine Manager (SCVMM) integration in the Library/Integrations/Microsoft/System Center Virtual Machine Manager/ folder contains the Run SCVMM Commands operation that runs System Center Virtual Machine Manager (SCVMM) cmdlets using Windows PowerShell. It also contains flows that use the Run SCVMM Commands operation to run specific commands. These flows are contained in the Hardware Profile, Jobs, Templates, Virtual Disk Drive, Virtual DVD Drive, Virtual Hard Disk, Virtual Machine, Virtual Network, Virtual Network Adapter, and Virtual SCSI Adapter subfolders:
- The flows in the **Hardware Profile** subfolder are:
 - Get CPU Type
 - Get Hardware Profile
 - Get Operating System
 - New Hardware Profile
 - Remove Hardware Profile
 - Set Hardware Profile
- The flows in the **Jobs** subfolder are:
 - Get Job
 - Get Step
 - Restart Job
 - Stop Job
- The flows in the **Templates** subfolder are:
 - Get Template
 - New Template
 - Remove Template
 - Set Template
- The flows in the Virtual Disk Drive subfolder are:
 - Compress Virtual Disk Drive
 - Convert Virtual Disk Drive
 - Expand Virtual Disk Drive
 - Get Virtual Disk Drive
 - New Virtual Disk Drive
 - Remove Virtual Disk Drive
 - Set Virtual Disk Drive
- The flows in the Virtual DVD Drive subfolder are:

- Get Virtual DVD Drive
- New Virtual DVD Drive
- Remove Virtual DVD Drive
- Set Virtual DVD Drive
- The flows in the Virtual Hard Disk subfolder are:
 - Get Virtual Hard Disk
 - Move Virtual Hard Disk
 - Remove Virtual Hard Disk
 - Set Virtual Hard Disk
- The flows in the **Virtual Machine** subfolder are:
 - Disable Virtual Machine Undo Disk
 - Discard Virtual Machine State
 - Get Virtual Machine
 - Move Virtual Machine
 - New Virtual Machine
 - Refresh Virtual Machine
 - Register Virtual Machine
 - Remove Virtual Machine
 - Repair Virtual Machine
 - Resume Virtual Machine
 - Save Virtual Machine State
 - Set Virtual Machine
 - Shut Down Virtual Machine
 - Start Virtual Machine
 - Stop Virtual Machine
 - Store Virtual Machine
 - Suspend Virtual Machine
- The flows in the **Virtual Network** subfolder are:
 - Get Virtual Network
 - New Virtual Network
 - Remove Virtual Network
 - Set Virtual Network
- The flows in the Virtual Network Adapter subfolder are:
 - Get Virtual Network Adapter
 - New Virtual Network Adapter
 - Remove Virtual Network Adapter
 - Set Virtual Network Adapter
- The flows in the Virtual SCSI Adapter subfolder are:

- Get Virtual SCSI Adapter
- New Virtual SCSI Adapter
- Remove Virtual SCSI Adapter
- A new *SCVMM Integration Guide* describes the operations in the Library/Integrations/Microsoft/System Center Virtual Machine Manager/ folder.

VMware Virtual Infrastructure

- The Add NIC to VM and Configure NIC on VM operations now support the vmxnet2 and vmxnet3 NIC types.
- The **Create Virtual Machine** operation is now aware of virtual distributed port groups on Virtual Distributed Switches.
- The Add NIC to VM and Configure NIC on VM operations now support the use of distributed virtual port groups
- Deprecated the following operations in the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Configuration/ folder and replaced them with new versions that take a device number as an input to make them language-independent:
 - Configure NIC on VM modifies an existing Network Interface Card (NIC) on a virtual machine.
 - Remove Disk From VM removes a virtual disk from an existing virtual machine.
 - Remove NIC From VM removes a Network Interface Card from a virtual machine.
- The **Set VM CPU Count** and **Set VM Memory Size** operations in the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Configuration/ folder now support hot plug reconfiguration if enabled for the virtual machine.
- Added the following new operations and flows:

In the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/ folder:

- Create VM Folder creates a new inventory folder in a datacenter.
- **Delete VM Folder** deletes an existing inventory folder in a datacenter. This operation can also delete any VMs contained in the specified folder if it is not empty.
- Move Virtual Machine moves a virtual machine to a different inventory folder, resource pool, host system, cluster, or datastore.
- Register Virtual Machine Template registers an existing .vmtx file from a datastore as a virtual machine template.
- Register Virtual Machine registers a existing .vmx file from a datastore as a virtual machine.
- Rename VM Folder renames an inventory folder in a datacenter.
- Unregister Virtual Machine unregisters a virtual machine or virtual machine template from a vCenter or ESX(i) host.

In the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Configuration/ folder:

- Add Existing Disk To VM adds an existing virtual (SCSI) disk to an existing virtual machine.
- Add Floppy Drive To VM adds a floppy drive to a virtual machine.
- Add New Disk To VM adds a new virtual (SCSI) disk to an existing virtual machine.
- Add Optical Drive To VM adds an optical drive (CD/DVD) to a virtual machine.
- Edit Floppy Drive on VM edits an existing floppy drive on a virtual machine.

- Edit VM Boot Options modifies the boot options on a virtual machine. Optional inputs that are left empty will not be modified on the VM.
- Edit VM CPUID Masks modifies the CPUID masks of a VM per register level.
- Edit VM Power Options modifies the power options on a virtual machine. Optional inputs that are left empty are not modified on the VM.
- Edit VM Settings modifies advanced settings for a virtual machine. Optional inputs that are left empty will not be modified on the VM.
- Edit VM Tools Options modifies when VM tools can execute scripts on a guest operating system.
- Get Details of Disk on VM retrieves details about an existing hard disk on a virtual machine.
- Get Details of NIC on VM retrieves details about an existing network interface card (NIC) on a virtual machine.
- Get Details of SCSI Controller on VM retrieves details about an existing SCSI controller on a virtual machine.
- **Remove Floppy Drive From VM** removes a floppy drive from a virtual machine.
- Remove Optical Drive From VM removes an optical drive (CD/DVD) from a virtual machine.

In the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Guest/ folder:

- Get Guest Info operation retrieves information about a guest operating system running on a VM using VM tools.
- VM Tools Running Status flow retrieves the running status of VM Tools running on the guest operating system of a virtual machine.
- VM Tools Version Status flow retrieves the version status of the VM Tools installed on the guest operating system of a virtual machine.

In the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Network folder:

- Add Distributed Port Group adds a Distributed Port Group to a vNetwork Distributed Virtual switch.
- Add Host to vNetwork Distributed Switch adds a host system (ESX, ESXi) to a vNetwork distributed switch.
- Add vNetwork Distributed Switch adds a vNetwork Distributed Switch to a datacenter.
- Delete Distributed Port Group deletes a Distributed Port Group from a vNetwork Distributed Virtual switch.
- Delete vNetwork Distributed Switch deletes a vNetwork Distributed Switch from a Datacenter.
- Edit Physical NIC Link edits a physical NIC's speed and duplex settings on a host system.
- Edit Virtual NIC edits a virtual NIC on a host system (ESX, ESXi).
- Remove Host from vNetwork Distributed Switch removes a host system (ESX, ESXi) from a vNetwork distributed switch.

In the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Samples/ folder:

- Get VMs Powered On Longer Than By Event flow generates a report that returns the list of VMs that are powered on for more than the specified number of hours. This flow uses the Get Latest Event operation.
- Get VMs Powered On Longer Than By Task flow generates a report that returns the list of clustered and non-clustered VMs that are powered on for more than the specified number of hours. This flow uses the Get Latest Task operation.

In the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Tasks/ folder:

— Get Task State flow retrieves the current state of a task.

In the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Utilities/ folder:

- Get Latest Event retrieves the most recent event based on event types.
- Get Latest Task retrieves the most recent task based on task types.

Documentation Updates

The first page of this release notes document contains the following identifying information:

- Version number, which indicates the software version.
- Publish date, which changes each time the document is updated.

HP Live Network provides an Operations Orchestration Community page where you can find and download supported releases of OO and associated documents.

To download OO releases and documents, visit the following site:

https://www.www2.hp.com/

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.

On the HP Live Network page, click Operations Orchestration Community.

The Operations Orchestration Community page contains links to announcements, discussions, downloads, documentation, help, and support.

Note: To view files in PDF format (*.pdf), Adobe Acrobat Reader must be installed on your system. To download Adobe Acrobat Reader, go to the following Web site: http://www.adobe.com/

Installing OO 9.00.06

IMPORTANT:

- You must install OO 9.00.06 on an existing OO platform version of 9.00.01 (or later see table below).
- You can install OO 9.00.06 on top of an existing OO 9.00.05 content installation.
- If you encounter an issue with expired certificates after an upgrade or new installation of the OO 9.00 platform release before installing the OO 9.00.06 content release, we recommend that you apply the OO 9.02 platform patch (available on the *HP Software Support Online* portal) to the OO 9.00 platform release as instructed in the OO 9.02 platform patch release notes to resolve the issue.
- If you apply OO 9.00.06 on top of an existing version of OO 9.00 and then re-install OO 9.00, you must also re-install OO 9.00.06.

Content	Platform and Patch Level	
9.00.06	9.00 + 9.00.01 patch	Required
9.00.06	9.00 + 9.00.02 patch	Supported
9.00.06	9.00 + 9.02 patch	Supported

Although you can install OO 9.00.06 manually, it is recommended that you install OO 9.00.06 using the HP Live Network Connector.

Note: If you encounter a RAS update error during the following procedure, please try again.

To install OO 9.00.06 using the HP Live Network Connector

1 Configure the Live Network Connector, and triggering a download for the OO_updates stream.

For more information see the Live Network Connector User Guide, which is located in the OO home directory in the Central tools LNC folder.

2 At the location from which you install the Live Network Connector, type the following, and then press ENTER:

live-network-connector download

3 At the same location, type the following, and then press ENTER:

live-network-connector import

4 Restart the RSJRAS service on all RASes in your OO deployment.

Installing OO 9.00.06 Manually

If you install OO 9.00.06 manually, use one of the following methods.

Note: In the following procedure, when you run OO-9_00_06-ContentInstaller.jar, you will see errors about being unable to update the RAS. The installer will retry, and the install will continue. As long as you complete the procedure, you can ignore these messages.

To install OO 9.00.06 on a Central server

- 1 Close Studio and make sure that Central and your RAS are running.
- 2 From https://www.www2.hp.com/, click Operations Orchestration Community and log in.
- 3 Navigate to and click Important Downloads.

- 4 Navigate to and copy the 9.00.06 version of **OO-9_00_06-ContentInstaller.jar** to the OO home directory in the \jre1.6\bin\ folder.
- 5 Restart the RSJRAS service.
- 6 Click the Start menu, and then click Run.
- 7 In the Run dialog box, type **cmd** and then click OK.
- 8 In the command window, change to the OO home directory in the \jre1.6\bin\ folder, and then type:

```
java -jar 00-9_00_06-ContentInstaller.jar -centralPassword <your Central
password>
```

9 Restart the RSJRAS service on all RASes in your OO deployment.

Notes:

• If you are using a Central username other than the default admin, use the **-centralUsername** parameter in the command shown in step 7 of the previous procedure as follows:

java -jar 00-9_00_06-ContentInstaller.jar -centralUsername <non-default Central username> -centralPassword <your Central password>

For example:

```
java -jar 00-9_00_06-ContentInstaller.jar -centralUsername sysadmin
```

-centralPassword iconclude

• If you are installing OO 9.00.06 on a non-default port instead of the default port https://localhost:8443, use the **-centralURL** parameter in the command shown in step 7 of the previous procedure as follows:

java -jar 00-9_00_06-ContentInstaller.jar -centralURL <non-default Central URL>

-centralPassword <your Central password>

For example:

java -jar 00-9_00_06-ContentInstaller.jar -centralURL https://central_server1:8080 -centralPassword iconclude

• To install OO 9.00.06 even if there are conflicts between versions of operations, use the **-forceInstall** parameter in the command shown in step 7 of the previous procedure as follows:

java -jar 00-9_00_06-ContentInstaller.jar -forceInstall -centralPassword

<your Central password>

For example:

java -jar 00-9_00_06-ContentInstaller.jar -forceInstall -centralPassword iconclude

To install OO 9.00.06 on a remote Central server

- 1 Make sure that Central and your RAS are running.
- 2 From https://www.www2.hp.com/, click Operations Orchestration Community and log in.
- 3 Navigate to and click Important Downloads.
- 4 Navigate to and copy the 9.00.06 version of OO-9_00_06-ContentInstaller.jar to a temporary directory.
- 5 Click the **Start** menu, and then click **Run**.
- 6 In the **Run** dialog box, type **cmd** and then click **OK**.
- 7 In the command window, change to the <temporary directory>, and then type:

java -jar 00-9_00_06-ContentInstaller.jar -centralURL <remote Central URL> -centralPassword <your Central password>

8 Restart the RSJRAS service on all RASes in your OO deployment.

Enhancements and Fixes

The following items (identified by reference number) are fixed in the current software release.

QCCR1D102231: Note on Description tab of Microsoft SQL operations and flows is not correct

PROBLEM: The **Description** tab of the following operations and flows contains a note about the network protocol for SQL Server that is incorrect:

- In the Library/Operations/Databases/Microsoft SQL/ folder:
 - SQL Script
 - SQL Query
 - SQL Command
 - Get Active Connections
- In the Library/Operations/Databases/Microsoft SQL/Samples/ folder:
 - Active Connections
- In the Library/Accelerator Packs/Database/Microsoft SQL Server/Diagnostics/ folder:
 - SQL Server Diagnostic
- In the Library/Accelerator Packs/Database/Microsoft SQL Server/Health Check/ folder:
 - Allocation Information for DB
 - Integrity Check for DB
 - Integrity Check for Table
 - SQL Manager Statistics
- In the Library/Accelerator Packs/Database/Microsoft SQL Server/Information Gathering/ folder:
 - Connectivity Test
 - Database Size
 - List of Databases
 - No of Active Connections
 - No of Processors
 - Table Size
- In the Library/Accelerator Packs/Database/Microsoft SQL Server/Utility/ folder:
 - Database Read System Tables Test
 - Database Write Diagnostic
 - MS SQL Server Connectivity
 - SQL Server Soft Reset

It states: "For windows authentication, the SQL Server protocol Named Pipes must be enabled and protocol TCP/IP disabled and also the windows users should be in the form DOMAIN\username."

FIX:	A note has been added to the Description tabs of the Library/Accelerator Packs/Database/Microsoft SQL Server/ and Library/Operations/Databases/Microsoft SQL/ folders:
	1. Make sure that the network protocol for the database instance is correctly configured in SQL Server Configuration Manager. Refer to the Microsoft SQL Server document for more information regarding how to configure protocols for SQL Server and the client system.
	2. For Windows authentication, the Windows username should be in the format domain\username and should be set to "Allow log on locally" in Local Security Settings on the SQL Server host system.
	3. If Named Pipes protocol is enabled and TCP/IP protocol is disabled in SQL Server Configuration Manager, for the operations and flows that have "instance" and "port" inputs, specify a value for the "instance" input but not for the "port" input. This allows you to access the named instance.
	4. For the operations and flows that have "instance" and "port" inputs, if you specify values for both of these inputs the "port" input value will have precedence."

QCCR1D119258: When a non-local administrator install OO 9.00.06 on a Windows 2003 or later system, the message "Central is not installed." is displayed

PROBLEM: The message "Central is not installed." is incorrect because Central is installed.

CAUSE:	
FIX:	The message has been changed to "Central appears to not be installed. If Central is installed please ensure this installer is executed as an administrator" when executed on a Windows 2003 or later system. The message was changed to appear on any system instead of just Windows 2008 and later if a permission error occurs. If the folder cannot be found, it is assumed that Central is not installed.
QCCR1D1208	12: Java WMI Query operation fails with SocketTimeoutException for long running queries
PROBLEM:	The Java version of the WMI Query operation (in the Library/Operations/WMI/Java/ folder) fails when a query takes a long time to execute (after about 20 minutes) with a SocketTimeoutException.
CAUSE:	
FIX:	The XML construction method has been optimized and the operation executes successfully.

QCCR1D121035: Exchange operations do not load properly if PowerShell 1.0 is installed

- PROBLEM: The operations in the Library/Operations/Exchange/ folder and all flows that reference those operations are not properly loaded if PowerShell 1.0 is installed on the RAS server. Some of the operations appear in red because they have missing results, and the outputs of the operations are not correct.
- CAUSE: This happens because when an Exchange operation attempts to load the Exchange IActions, it looks for the PowerShell 2.0 dll's in the GAC (General Assembly Cache) because the IActions use PowerShell 2.0. The dll's in the GAC however, correspond to PowerShell 1.0 thus creating a version conflict. This is how .dll loading is managed and you cannot change this behavior. If there are no. dll's in the GAC, the operation searches for them in the specified path.
- FIX: All Exchange operations work if the RAS system has Powershell 2.0 installed on it. Only the operations shown below that use Powershell 2.0, do not work on a RAS system with Powershell 1.0 installed.

In the Library/Operations/Exchange/Mailbox/ folder:

- Enable Mailbox
- Move Mailbox
- Add Mailbox Permission

In the Library/Operations/Exchange/Exchange 2010/ folder:

• Run Exchange 2010 Cmdlets

In the Library/Operations/Exchange/Database Availability Group/ folder:

- Get Database Availability Group
- Move Active Mailbox Database
- Stop Database Availability Group

QCCR1D121123: SiteScope 11.01 operations go to success with invalid usernames and passwords

PROBLEM: Starting with SiteScope version 10.11, the SiteScope API contains a new set of methods that include user and password authentication. This means that operations run on a machine with SiteScope 11.01 can go to success with incorrect usernames and passwords.

CAUSE:

FIX:	The old methods are deprecated but are still available. In order to use the new version of the API, the accessControlled flag should be set to true . If it is set to false , the operations will use the previous API version and the credentials will be ignored. You can set the accessControlled flag using one of the following methods:
	• Open the <sitescope installation="">\groups\master.config file and edit the line that defines access control to say _accessControlled=true.</sitescope>
	 Access SiteScope from a browser, open the Preferences \ Infrastructure Preferences \Custom Settings tab, and then set the accessControlled property to true.
QCCR1D12799 Execution opera	25: Angle bracket (>) cannot be used in a command line parameter in the Remote Command tion

PROBLEM:	The angle bracket (>) character cannot be escaped to be used as a command line parameter in the Remote Command Execution operation (in the Library/Operations/Operating Systems/Windows Management/ folder).
CAUSE:	
FIX:	Special characters ("<", ">", "(", ")") can now be escaped using a "^" with the Remote Command Execution operation. The only exception to this rule is when the ">" character is used to redirect output.

QCCR1D130316: New Excel document fails with no message when the Excel file name has no extension

PROBLEM: The **New Excel** operation in the Library/Operations/File System/Windows Only/Excel/ folder fails with no error message when you specify a value for the **excelFileName** input does not contain a period.

CAUSE:

FIX: The **New Excel** operation now displays a correct error message when the value of the **excelFileName** input does not contain a period.

QCCR1D130346: Get Excel Data operation does not show empty cells in the output

PROBLEM:	The Get Excel Data operation in the Library/Operations/File System/Windows Only/Excel/
	folder fails has the following issues:

- The Get Excel Data operation does not show empty cells in its output.
- The operation does not show empty rows in the output.
- If you leave the **rowIndexStart**, **rowIndexStop**, **columnIndexStart**, or **columnIndexStop** inputs empty, the output should show all the data in the worksheet. Instead, the output shows only empty rows.
- If the values for the **rowIndexStart**, **rowIndexStop**, **columnIndexStart**, or **columnIndexStop** inputs have logical errors (for instance, the start index is greater than the stop index or the input is a negative number), the operation should show the error message in the **returnResult** and **returnCode** = -1. Instead, the operation fails with an **AxisFault** exception.
- The code has some logic errors to get the start and end row index to read. For example, when the values for the **rowIndexStart** and **rowIndexStop** inputs are larger than the last row index of the worksheet, the **returnResult** should not show any output. Instead, the **returnResult** shows the data rows with index other than you specified.
- If the value for the **excelFileName** input does not contain a period(.), the **returnResult** does not give an error message.

CAUSE:

FIX: Added the following for the **Get Excel Data** operation:

- Added the input **trimEmptyCells**. This operation defaults to **false** (the output shows all empty cells). If you set it to **true**, all the empty cells are trimmed in the output.
- Added the input **trimEmptyRows**. This operation defaults to **false** (the output shows all empty rows). If you set it to **true**, all the empty rows are trimmed in the output.
- Edited the code to output. If the **rowIndexStop** input is empty or null, the operation sets it to the last row index of the worksheet. If the **columnIndexStop** input is empty or null, the operation sets it to last column index of each row.
- Changed the code to catch all the thrown exceptions.
- Edited the code to get the start and end row indexes needed to read from the worksheet.
- Edited the **isValidExcelFormat** (String format) method in **AbstractExcellDocument** to throw the exception .

QCCR1D135036: Create Group and Delete Group operations do not have the same format for the escaping of special characters

PROBLEM: The **Delete Group** operation does not support deleting AD groups whose names contain special characters. The **Create Group** operation allows creating a group that contains special characters, but the **Delete Group** operation fails in you do this and does not allow the group's deletion.

FIX:	Code changes were made that allow the Delete Group and Create Group operations to manage escaping special characters in the same way. Escaping a special character in both operations is now done by preceding it with a single backslash (\) when the escapeChars input value is set to false . The special characters that need to be escaped are: #,+><;=\"
QCCR1D13507	1: Export Snapshot operation goes to success but does not create the snapshot
PROBLEM:	The Export Snapshot operation in the Library/Integrations/Microsoft/Hyper- V/Snapshots/ folder starts the job of exporting the snapshot on a VM on a Hyper-V server, but the job doesn't finish it.
CAUSE:	The Export Snapshot operation can launch an export job on a Hyper-V server, but for a snapshot other than the machine's first created snapshot it does not export the snapshot.
FIX:	The implementation of the operation has been changed. The job launched by the current implementation always failed with a file system limitation error, whenever a snapshot other than the youngest was exported. This was also the behavior when running the operation locally, on the Hyper-V server, both when the RSJRAS service was ran with a local system account and when it was ran with a given account (such as the Administrator buit-in account of the Hyper-V sever).
	The workaround was to copy a vbscript file on the server, use WMI to launch a process that runs the script and performs the export, and delete the script after the export is completed. This approach works for any of a given virtual machine's snapshots. The description of the operation was also updated, to eliminate the note referring to merging the previous snapshots.
QCCR1D13523	0: Deprecated version of PowerShell Script command fails
PROBLEM:	The deprecated version of the PowerShell Script operation in the Library/Operations/PowerShell/Deprecated/ folder fails.
CAUSE:	This occurs because the updated version of the PowerShell Script operation requires a host input and, because of changes in the underlying code, the deprecated version expects this input as well.
FIX:	The deprecated PowerShell Script operation has been modified so that if you do not specify a host input value, it defaults to localhost .

QCCR1D135257: Get Pool Info operation fails with a valid pool

PROBLEM:	The F5 Get Pool Info (in the Library/Integrations/F5/ folder) operation fails when a load balancer contains partitions, but works correctly when the load balancer does not contain partitions.
CAUSE:	The operation does not support partitions for load balancers that contain partitions.
FIX:	This has been fixed in OO 9.00.06. A new Partition input has been added to the operation that allows you to specify which partition on a partitioned load balancer to search.
QCCR1D135660:	Remote Shell, RAS Telnet Shell, and SSH Shell operations can fail with a thread concurrency

PROBLEM:	The Remote Shell, RAS Telnet Shell, and SSH Shell operations fail with a java.util.ConcurrentModificationException if they attempt to modify an iterator that was read by another thread. The iterator being modified builds the "visualizedResult" for any shell operation (SSH, Telnet, Remote).
CAUSE:	
FIX:	Moved the iterator parsing inside a synchronized block to prevent another thread modifying the iterator. Added a synchronize block around the frames iterator.

QCCR1D136382: Edit Floppy Drive on VM and Edit Optical Drive on VM operations hostDevice input accepts invalid input

PROBLEM:	In the Edit Floppy Drive on VM and Edit Optical Drive on VM operations in the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Configuartion/ folder, the hostDevice input accepts invalid values.
	When you specify a value for the hostDevice input, the VMware API and the integration do not verify whether the host device actually exists. This can result in an invalid virtual machine configuration.
CAUSE:	The VMware API and the integration do not verify whether the host device actually exists. This can result in an invalid virtual machine configuration.

QCCR1D136383: Edit Floppy Drive on VM and Edit Optical Drive on VM operations diskPath input accepts invalid values

PROBLEM:	The Edit Floppy Drive on VM and Edit Optical Drive on VM operations in the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Configuration/ folder, go to success with invalid values for the diskPath input
CAUSE:	The operations do not check to see if the specified image file exists on a datstore.
FIX:	The operations now verify if the specified datastore image file exists on the datastore. If the image file cannot be found, the operation fails with the following error: Image file does not exist on datastore

QCCR1D137141: Remote Command operation fails with cryptic error message when the protocol is Telnet and the connection limit has already been reached

PROBLEM:	The Remote Command operation in the /Library/Operations/Remote Command Execution/ folder fails with the following error:
	returnResult=String index out of range
CAUSE:	This happens when trying to connect over Telnet protocol, and the target server has reached the max number of allowed Telnet connections. A string index out of range exception was thrown because the output was shorter than the prompt. The only scenario where this may occur is when the server immediately returns an error.
FIX:	The operation should fail under these circumstances. The error message has been improved to clarify the cause of the failure.

Known Problems, Limitations, and Workarounds

QCCR1D85010: F5 integration does not support non-alphanumeric passwords

PROBLEM: This problem happens because the password is placed in an HTML GET string and non-alphanumeric characters break the GET string, so cannot be used in the password.

QCCR1D106288: Get Mail Message operation does not display Japanese values in subject and body results

PROBLEM: The **Get Mail Message** operation in the Library/Operations/Email/ folder does not display Japanese characters in the messages specified in the **subject** and **body** inputs.

QCCR1D117519: Divider operation goes to success when a division by zero occurs

PROBLEM: The **Divider** operation in the Library/ Utility Operations/Math and Comparison/Simple Evaluators/ folder goes to success when a division by zero occurs, and the result is infinity. The operation has been modified to check whether the divisor is zero. If the divisor is zero, the operation fails.

QCCR1D117520: Divider operation fails with a confusing message when you divide 0.0 by 0.0

PROBLEM: When you use the **Divider** operation in the Library/ Utility Operations/Math and Comparison/Simple Evaluators/ folder to divide 0.0 by 0.0, the operation fails with the message "BigInteger divide by 0".

QCCR1D117862: Invoke Method 2 operation has difficulties with special characters

PROBLEM: When you use WSWizard to create a flow using the Service Manager webinterface, the **Invoke Method 2** operation in the Library/Operations/Wizards/Web Service/ folder cannot retrieve special characters correctly if they have not been encoded in UTF-8. QCCR1D119709: Could not resolve the connect identifier from the TNS Names SQL Query operation based on the syntax within tnsnames.ora

```
PROBLEM: The TNS Names SQL Query operation runs a SQL query against an Oracle database, using the information in the tnsnames.ora file. The error occurs because the tnsnames.ora file requires that there to be two spaces in front of the DESCRIPTION line in the tnsnames entry. Here is an example of a TNS entry that triggers the error:
```

```
#HP Network Automation Oracle Database
NAS_PRD =
(DESCRIPTION =
   (ADDRESS_LIST =
        (ADDRESS = (PROTOCOL = TCP)(HOST = oradb7p.us.bank-
dns.com)(PORT = 1521))
   )
   (CONNECT_DATA = (SID = NAS_PRD)
   )
)
```

Here is the corrected TNS entry with two spaces in front of the DESCRIPTION line:

```
#HP Network Automation Oracle Database
NAS_PRD =
   (DESCRIPTION =
    (ADDRESS_LIST =
        (ADDRESS = (PROTOCOL = TCP)(HOST = oradb7p.us.bank-
dns.com)(PORT = 1521))
   )
   (CONNECT_DATA = (SID = NAS_PRD)
   )
)
```

The workaround is to edit the tnsnames.ora file and add two spaces in front of the DESCRIPTION line of the TNS entry being used.

QCCR1D121393: Add proxy support to RSflowinvoke

PROBLEM: If Central is behind a proxy and the proxy is configured in Internet Options, then RSFlowInvoke wants to use those settings but JRSFlowInvoke cannot access those settings.

You can now define proxy settings on the command line with the RSFlowInvoke tool. If you do not specify the proxy settings, the proxy from Internet Options is used.

To use a proxy to communicate with Central's SSL port, you must add Central's SSL port (default: 8443) to a list of SSL ports that your proxy is configured to allow (see the *OO Software Developer Kit User Guide* for instructions).

- -proxyHost <proxy host>
- -proxyPort <proxy port>
- -proxyUsername <proxy username>
- -proxyPassword <proxy password>

QCCR1D122879: Java based WMI Query operation does not work as expected on JA systems

 PROBLEM:
 When running the Java based WMI Query operation in the Library/Operations/WMI/Java/ folder against a JA system it goes to success but the result is not well returned.

 When running the WMI Query in the Library/Operations/WMI/.NET/ folder, the result is good.

QCCR1D122990: Remote Command Execution fails on Windows English operating system when characterSet is set to UTF-8/UTF-16

PROBLEM: Currently, you can only use one type of to encode the batch files executed by cmd.exe and read the redirected file output. Some programs encode their output as Unicode (UTF-16) but cmd.exe cannot execute batch files that are Unicode (UTF-16) encoded.

QCCR1D123027: Get Mail Message operation fails if the mail subject is blank

PROBLEM: The **Get Mail Message** operation in the Library/Operations/Email/ folder fails if the e-mail subject is blank,

QCCR1D129737: HTTP PUT incorrect handling of user credentials

PROBLEM: User credentials are handled incorrectly when you specify a domain user name in the form <domain>\<user> for connecting to VMWare vCenter or ESX using Basic Authentication. The domain part is split from the whole username, and only the user name part is passed for authentication.

QCCR1D130204: FS Copy Inter Machines operation fails with timeout issue when attempting to copy large files

PROBLEM:The FS Copy Inter Machines operation in the Library/Operations/File
System/Windows Only/ folder does not copy large files and fails with a timeout
issue. The file remains locked by the system on the source machine.The username and password inputs are marked as required, but if the source
path or destination path is on the same host as the RSJRAS, no credentials should
be needed for that host. Also, the operation can copy both files and folders but the
operation description only mentions folders, and the prompt messages for the inputs
only mention files.

QCCR1D131213: NNM function "UpdateManagementMode" goes to success with a nonexistent ID

PROBLEM: In NNM Versions 9.0 and 9.1, the "UpdateManagementMode" function indicates a successful result when given a nonexistent ID. When given an invalid ID, the "UpdateManagementMode" function should provide a return code that indicates failure.

QCCR1D131214: UpdateAssignedTo operation fails with exception fault "Cannot interrogate model"

PROBLEM: The **UpdateAssignedTo** operation in the Library/ Integrations/Hewlett-Packard/Network Node Manager/9.0/Incidents/ folder should change the **assignTo** input value to the specified value. The operation should return success with the **assignTo** input value to the specified input value.

QCCR1D131273: Update Priority operation goes to success on NNM 9.1 for a nonexistent ID

PROBLEM:When using the Update Priority operation in the Library/Integrations/Hewlett-
Packard/Network Node Manager/8.1x/ Incidents/ folder against NNM 9.1 with an
invalid ID, the operation goes to success.

QCCR1D131558: NNMi 9.0 Update Lifecycle State operation succeeds with invalid lifecycle choice

PROBLEM: The **Update Lifecycle State** operation in the Library/ Integrations/Hewlett-Packard/Network Node Manager/9.0/Incidents/ folder succeeds when you specify an invalid lifecycle choice. The operation should fail.

QCCR1D131560: NNMi 9.0 UpdateLifecycleState operation succeeds with nonexistent ID

PROBLEM: The **UpdateLifecycleState** operation in the Library/Integrations/Hewlett-Packard/Network Node Manager/9.0/Incidents/ folder succeeds when you specify a nonexistent ID on NNMi 9.0. The operation should fail.

QCCR1D136292: Create VM and Define VM operations fail when all four vmOsBootDevices input values are selected

PROBLEM: This issue is caused by a RedHat Linux KVM bug. To avoid the issue, do not choose more than three devices for the **vmOsBootDevices** input.

QCCR1D138276: 'includePaths' description in RepositorySync Plugin

PROBLEM: The RepositorySync plugin description in the /Integrations/Hewlett-Packard/Operations Orchestration/Repository/ folder for **includePaths** (Paths to include) should be clearer and refers to a logical offset from the repository root [rather than a system storage path on the O/S.] e.g. to include all flows under "My Ops Flow" the input should be '/Library/My Ops Flows'. The same description should be for excludePaths [Paths to exclude]

QCCR1D138282: Set System Account does not work as expected

PROBLEM:If you create a new system account and check it in, but the values for the username
and password for the system account are empty, the values are not available.This means that if you try to run an OO flow to create System Account values in
real-time, it won't work.The Same behavior is found for "Set System Property" too.

QCCR1D138283: Restart Computer and Shutdown Computer flows fail when run on a remote Windows 2008 machine

PROBLEM:	The Restart Computer and Shutdown Computer operations in the
	Library/Accelerator Packs/Operating System/Windows/PowerShell/Utility/ folder
	fails when run on a remote Windows 2008 machine.

QCCR1D138299: Base64 Decoder operation returns success when the data input contains invalid non-ASCII characters

PROBLEM: The **Base64 Decoder** operation in the Library/Utility Operations/ folder, returns success if the value of the **data** input contains an invalid non-ASCII string and the value of the **characterSet** input is ASCII or shift-JIS. The operation should fail.

QCCR1D138365: Get Details of SCSI Controller on VM operation has incorrect action template

PROBLEM: If you are authoring a flow using the **Get Details of SCSI Controller on VM** operation in the Library/Integrations/VMware/VMware Virtual Infrastructure and vSphere/Configuration/ folder and are attempting to assign results to flow variables, the list of results include results for the **Get Details of Disk on VM** operation instead of the results listed in the **Get Details of SCSI Controller on VM** operation description.

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