



# CSA-OO Virtual Appliance

Software Version: HCS 2016.10

## Installation Guide

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# About CSA-OO Virtual Appliance

HPE CSA (Cloud Service Automation) -OO (Operations Orchestration) Virtual Appliance provides cloud management software that makes it easy for your business to benefit from secure and compliant cloud services. It orchestrates the deployment of complex multi-tier application architectures. With HPE CSA-OO Virtual Appliance, you can automate and simplify the deployment and management of hybrid IT services according to your requirement.

## Products

Name	Version
HPE Cloud Service Automation	4.70.0001
HPE Operations Orchestration	10.60
PostgreSQL	9.4.4

## System Configuration

Server	Configuration	Default
Virtual Appliance	RAM	16GB
	vCPU	8
	Operating System	Linux
	Disk Space	150GB
	Ports	CSA-8444, OO-8443, MPP-8089, PostgreSQL-5432
	Swap	8GB

# Installing the Appliance

To install the HPE CSA-OO Virtual Appliance, perform the following steps:

- Install the VMware vSphere client.
- Browse and choose the appliance OVF file and select import option.
- Deploy the OVF file.
- Start the appliance so that it completes its first time setup and is ready to use.

# Deploy the OVF file

Start the VMware vSphere client and then deploy the OVF (Open Virtual Machine Format) template within your ESXi environment as described below:

1. Start the VMware vSphere client.
2. On the menu bar, select **File > Deploy OVF Template**.
3. Browse to the CSA-OO\_VA201610.ova file.
4. Click **Next**

The vSphere Client Deploy OVF Template installer will now take you sequentially through the following installation steps, which are visible on the left sidebar of the installer:

- OVF Template Details
  - End User License Agreement
  - Name and Location
  - Host / Cluster
  - Resource Pool
  - Storage
  - Disk Format
  - Properties
  - Ready to Complete.
5. **OVF Template Details:** This screen shows details of the template such as Product, Version, Vendor, Publisher, Download Size, Size on Disk available (based on how the application is provisioned), and the template Description.
  6. Read the **End User License Agreement**. Click **Accept**, then click **Next**.
  7. On the **Name and Location** screen, specify the **Name** and **Location** for the deployed template.
    - a. Select an **Inventory location**.
    - b. Select the text in the Name window, which defaults to CSA-OO Virtual Appliance, and re-name the appliance.
    - c. Click **Next**.

8. On the **Host/Cluster** screen, select a cluster in which you want to run the deployed template and click **Next**.
9. On the **Resource Pool** screen, select a **Resource Pool** within which you want to deploy the template and then click on Next.
10. On the **Storage** screen, select **storage location** where you want to store the virtual machine files and click **Next**.
11. On the **Disk Format** screen, there are three options: Thick Provision, Lazy Zeroed; Thick Provision, Eager Zeroed and Thin Provision. It is recommended that you select Thin Provision, then click **Next**.

**Note:** For maximum performance, you may choose a Thick Provisioning option, however this will require more system resources.

12. On the **Network Mapping** screen, select the **Network** for the deployed template, then click **Next**.
13. The **Properties** screen has several selections to complete:
  - a. Enter the **Host Name**.
  - b. Enter the **IP Address**.
  - c. Enter the **Gateway**.
  - d. Enter the **Subnet Mask**.
  - e. Enter the **DNS Servers**, with multiple server addresses separated by a comma.
  - f. Click **Next**.
14. On the **Ready to Complete** tab, review your configuration, then click **Finish** to start the deployment.

**Note:** The selection box **Power on after deployment** will be un-checked. Do not check this box as you should take a snapshot first before you power on the virtual machine.

15. A status window will appear during deployment showing progress.
16. You will get a status message, '**Deployment Completed Successfully**' once the deployment is successful.
17. Click **Close**.
18. Locate the deployed appliance; (NOTE: vSphere will display in **Home > Inventory > VMs and Templates**.)

Deployment of HPE CSA-OO Virtual Appliance is completed.



# Virtual Snapshot

Before turning the appliance on for the first time, it is important to capture a system snapshot. This creates a backup duplicate IP on the network.

1. Right click on deployed HPE CSA-OO Virtual Appliance to open the context menu.
2. Navigate to **Snapshot**, then click **Take Virtual Snapshot** when you start the appliance for the first time.
3. In the **Take Virtual Machine Snapshot** window, enter a **snapshot name**, then click **OK**. You can also enter a short description (optional).
4. Once you click **OK**, vSphere will create a snapshot.
5. In the **vSphere Task and Events** window, click **Create VM Snapshot** to check that the snapshot has been created successfully.

# Starting the Appliance

**Tip:** Before powering on HPE CSA-OO Virtual Appliance. for the first time, verify that the date and time are properly set on the VM host system. Maintain accurate time on the host system, such as Network Time Protocol (NTP), as the VM synchronizes with that time.

Right click again on the deployed HPE CSA-OO Virtual Appliance to open the **Context** menu.

1. Select **Open Console** to display the **console** window.
2. Click the green **Play** button to start the appliance. The appliance starts, configures the networking and starts its first time setup configuration.

The appliance will now run through a series of checks, self-tests and first boot scripts during initialization. This will take about 5 and 10 minutes.

First boot scripts will perform the following configurations:

- a) Network configuration
- b) CSA and OO configurations

Standard output of script execution is shown on the VM console, please wait till you see configuration completion message as shown in the following image:

```
HP Cloud Management Appliance configuration.

DNS :
Gateway:
Hostname : csaappliance.example.com
IPAddress:
Netmask:
Timezone: US/Pacific

Configuring Network...

Configuring HP Cloud Service Automation, it may take few minutes to complete. Pl
ease wait...

Configuring HP Operations Orchestration...

Configuring other services...

Completed HP Cloud Management Appliance configuration.

*****
Press any key to continue...

-
```

# Login Credentials

Account	Credentials (User name/ Password)
Server	root/Solutions@2016
Server (CSA User)	csauser/csauser
HPE CSA Portal	admin/cloud
HPE MPP Portal	consumer/cloud
HPE OO	admin/admin

**Note:** HPE recommends you to change the root user password during the first time you login to the CSA-OO Virtual Appliance.

# Post installation tasks

After the completion of 'First Time Setup', the following processes must be performed:

## Launching CSA Management Console

To launch CSA Management Console, complete the following steps:

1. Launch web browser and use URL as given below:

`https://<csaProductionAppliance.domain.com>:8444/csa`

**Note:** Replace <csaProductionAppliance.domain.com> with the current FQDN of CSA-OO Virtual Appliance. If DNS is not configured for hostname resolution, you may need to add an entry in hosts file on the server from where web browser is launched.

Example:

```
10.10.10.10 csaProductionAppliance.domain.com csaProductionAppliance
```

2. Login using CSA admin credentials.

Default: admin/cloud

## Configure CSA resource providers

Resource providers must be created in CSA.

To create a resource provider:

1. Log on to the **Cloud Service Management Console** as an administrator.
2. Click **Providers**.
3. Select a provider type from the panel on the left.
4. **Create** button is available at the bottom of the **Provider** tab
5. Fill in the Create Resource Provider fields:

- a. Enter the **Display Name**.
  - b. Enter the **User ID** and **Password** in the respective fields.
  - c. Enter the **Service Access Point**.
6. Click **Create** to complete or click **Cancel** to exit.

You can view new resource providers in the **Providers** tab.

The following table lists sample resource providers required for this implementation and the service access points. You may need to change them to reflect your environment.

Provider Type	Provider name	Service access point
VMware vCenter	vCenter	https://<vcenter-prod>:443
Amazon EC2	EC2	https://< ec2.amazonaws.com>:443
HPE Helion OpenStack	OpenStack	https://<openstack-prod>:443

## Associate Resource offerings with Providers

Complete the following steps for each resource offering listed in the table above:

1. Log on to the **Cloud Service Management Console** as an administrator.
2. Click **Providers**.
3. Select the provider.
4. Click the **Resource Offerings** tab.
5. Click **Select** from the right top of the screen.
6. Select the Resource Offering from the available list and click **Add>** to add the resource offering.
7. Select any offering from the selected list and click **<Remove** to delete it from the list.
8. Click **Save** to complete or click **Cancel** to exit.

After you have created the resource provider, to view the proxy properties, click the **Providers** tab.

## Publish service designs

To publish a service design in HPE CSA:

1. Log on to the **Cloud Service Management Console** as an administrator.
2. Click **Designs > Sequenced > Designer**.
3. Select appropriate Service Design.
4. Click **Version** tab.
5. Select the service design version.
6. Click **Publish** button is available at the bottom of the Version tab.

A confirmation message pops up to inform the user that after publishing the service design, no modifications can be made.

7. Click **Yes** to publish the design or click **No** to cancel.

## Creating the service offering

A service offering must be created in CSA before subscribers can request services based on this service design.

Complete the following steps to create an offering:

1. Log on to the **Cloud Service Management Console** as an administrator.
2. Click **Offerings**.
3. Click **Create** button is available at the bottom of the offering screen.
4. Fill in the Create Offerings fields:
  - a. Enter the **Display Name** of the new offering. This is the name of the offering that will be visible to the subscribers of this service
  - b. Enter the **Offering Version** with the latest version.
  - c. Click the appropriate **Service design** from the drop down and then click **Select**.
  - d. Select an existing offering to use as a template for your new offering in the **Base Offering On field** (Optional).
  - e. Enter the **Description**(optional) in the provided field.
5. Click **Create** to complete or click **Cancel** to exit.

**Note:** After the offering is created, you can modify the pricing information, associate documents,

or modify the subscriber options.

## Publishing service offering to a Catalog

Global Shared Catalog is installed by default when CSA is installed. When you publish a service offering to this catalog, that service offering will be visible in every organization's Marketplace Portal.

Global Shared Catalog is installed by default when CSA gets installed. When you publish a service offering to this catalog, it will be visible in every organization's Marketplace Portal.

To publish the service offering to Global Shared Catalog:

1. Log on to the **Cloud Service Management Console** as an administrator.
2. Click **Catalogs**.
3. Select the appropriate Catalog
4. Click **Offerings** tab, and then click **Add Offering**.
5. Select the service offering you created from the options displayed.
6. Click **In Category** drop down, and then select the category from the list.

In the Marketplace Portal, the service offering will appear under this category.

7. Click **Publish** to complete or **Cancel** to exit.
8. A pop up appears, click on **Ok** to confirm.

The service offering published to the selected catalog is now available to the user for subscription.

**Tip:** You can also publish the service offering after creating it in the **Offering** Tile. Go to **Offering** tile, select the created offering, click **Publishing** tab, click **Publish**, select the **Catalog** and **Category**, click **Publish** to complete.

**Note:** HPE recommends that you set an approval policy for your organization to ensure proper use of expensive physical server usage. Approval policies cannot be set when services are published to the Global Shared Catalog.

## Subscribing to the service from Market Place Portal (MPP)

After the service offering is published to a catalog, you can subscribe it from the Marketplace Portal. If you have configured multiple organizations in CSA or published your service offering to a catalog other than the Global Shared Catalog, log on to the appropriate Marketplace Portal of your organization.

To subscribe to the service:

1. Log on to the **Marketplace portal** (<https://<hostname>:8089>) as a consumer.
2. Click **Sidebar Menu**, and then click **Browse Catalog**.
3. Select a service offering, and enter the values of the offering as required.

For Cloning VM service, the Existing Custom Spec value will get loaded based on the Available Template selected.

4. Click **Checkout**.
5. Enter the details such as the **subscription name** and **end date** of the subscription.
6. Click **Submit Request** to complete subscription process.

## Cancel Subscription

To cancel a subscription:

1. Log on to the **Marketplace portal** (<https://<hostname>:8089>) as a consumer.
2. On the **Sidebar Menu**, click **Subscriptions**.
3. Identify the subscription that you want to cancel.
  - a. Click the subscription to view its details.
  - b. Click **Cancel Subscription**.
  - c. Click **Yes** to confirm cancellation or click **No** to exit.

**Note:** The request is approved automatically, and shows the status as **Approved** in the **Requests** tab.



## CSA/OO appliance Workload Profile

<b>Description for a Deployment Profile</b>	<b>50 % of regular CSA Small Load</b>
Concurrent Deploy users	3
Concurrent Deployments /hr	10
Subscriptions	5000
SMC concurrent users	5 Ops Console users: 3 SMC Offerings CRUD: 1 SMC Service Design CRUD: 1
MPP Browse concurrent users	15
Deployment workload profile	Sequenced
Postgres Settings	max_connections : 200 shared_buffers: 1 GB effective_cache_size: 4 GB
Sizing Recommendation	After VA deployment, mount point "/var" has to be extended to 50 GB or even more according to the usage.

# Import OOTB content into the appliance

Complete the following steps to import CSA OOTB content:

1. Navigate to the following Content installer location

```
cd"/opt/hpe/csa/Tools/CSLContentInstaller"
```

2. Switch to csouser by running following command:

```
su csouser
```

3. Run content installer in silent mode

```
java -jar csl-content-installer.jar -silent
```

**Note:** Make sure that `silent_install.xml` file has valid entries for content capsules and user accounts for CSA and OO.

Content installer execution is shown as standard output. Once the execution is complete, log on to CSA Management console as admin user and verify if CSA OOTB content is imported.

## List of contents available in CSA OOTB

1. Amazon EC2 Compute in VPC
2. Amazon EC2 Compute with ELB
3. MOE Infrastructure Compute
4. OpenStack - Multi-Tenant Support v2.0
5. Provider Communication Test
6. Provision JBoss on vCenter Compute
7. Provision VLAN using Network Automation
8. SA Software Policies Deployment on vCenter Compute
9. vCenter Compute Custom Pool Selection
10. vCenter Compute Modify
11. vCenter Compute with Basic Options

12. vCenter Compute-Monitoring and Configuration Management
13. Amazon EC2 (Topology)
14. OpenStack Basic Compute, Storage and Network (Topology)
15. OpenStack Swift Container (Topology)
16. vCenter Simple Compute (Topology)
17. Deploy Server with HPE OneView Profile
18. vCenter Compute Service Instance Upgrade

**Note:** Check HPE Live Network for latest content capsules.

## HPE DMA Content Packs

Following DMA OO content packs are preloaded into the OO central.

- DMA Premium Database 10.40.000.000.jar
- DMA Premium Middleware 10.40.000.000.jar
- DMA Premium Utilities 10.40.000.000.jar

**Note:** DMA client files are available at `/opt/hpe/dma`

## HPE CSA-OO Virtual Appliance and RAS

This section describes how to install and configure OO Remote Action Server (OO RAS) on a Windows Virtual machine in order to run Microsoft .NET workflows in HPE Operations Orchestration.

HPE CSA-OO Virtual Appliance is a Linux-based appliance. For the integrated HPE Operations Orchestration (OO) to run .NET workflows, a Windows Virtual machine with an OO Remote Action Server must be configured to process the workflows.

**Note:** The OO RAS is different than a Microsoft Windows Remote Access Server.

### Prerequisites

- HPE CSA-OO Virtual Appliance should be deployed.
- A Windows virtual server should be available to host the RAS.

## Installing and Configuring RAS

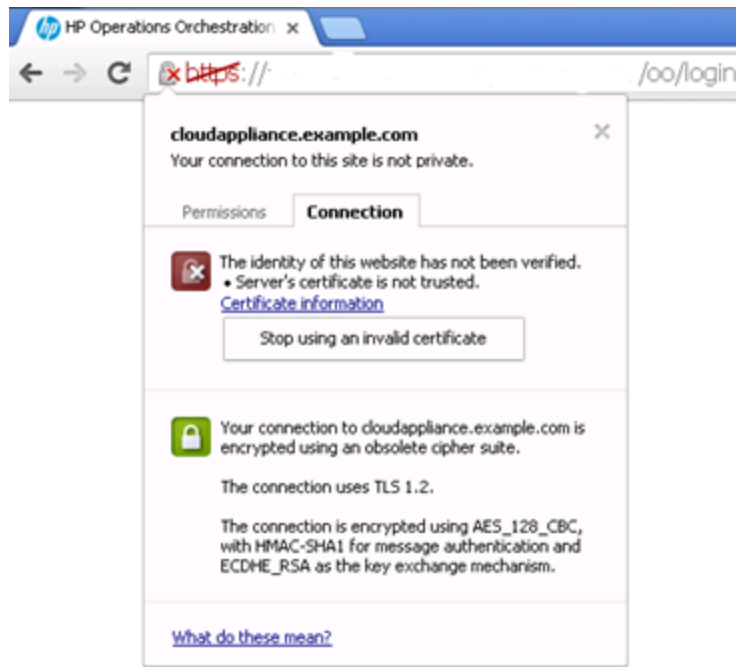
1. Log on to the Windows virtual server, where you plan to install RAS.

**Note:** This Windows virtual server should be dedicated for the Remote Action Server purpose. If the server is taken offline, OO will be unable to perform remote actions and cloud provisioning on Windows servers will fail.

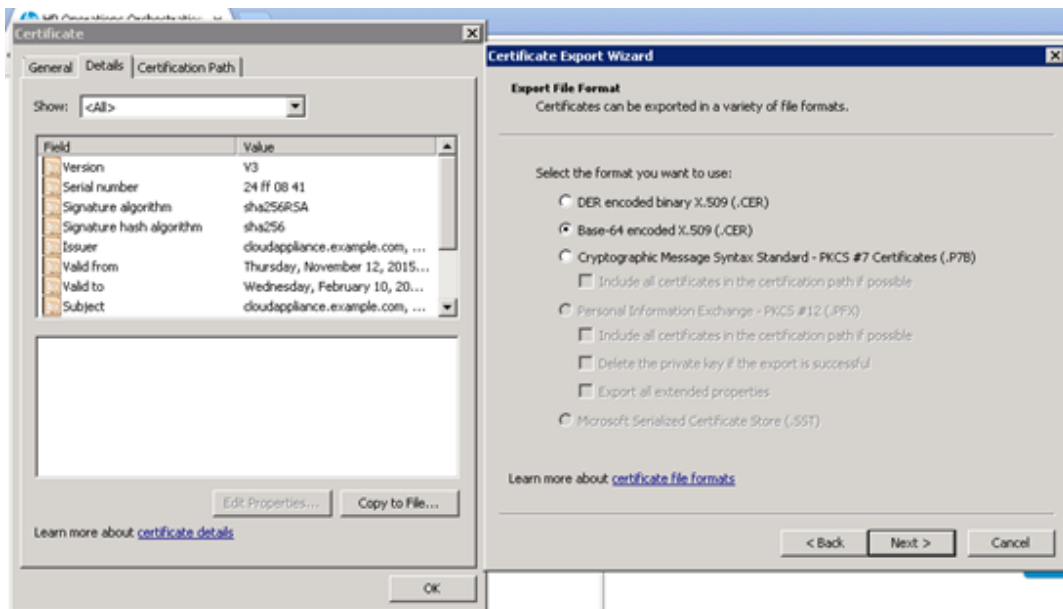
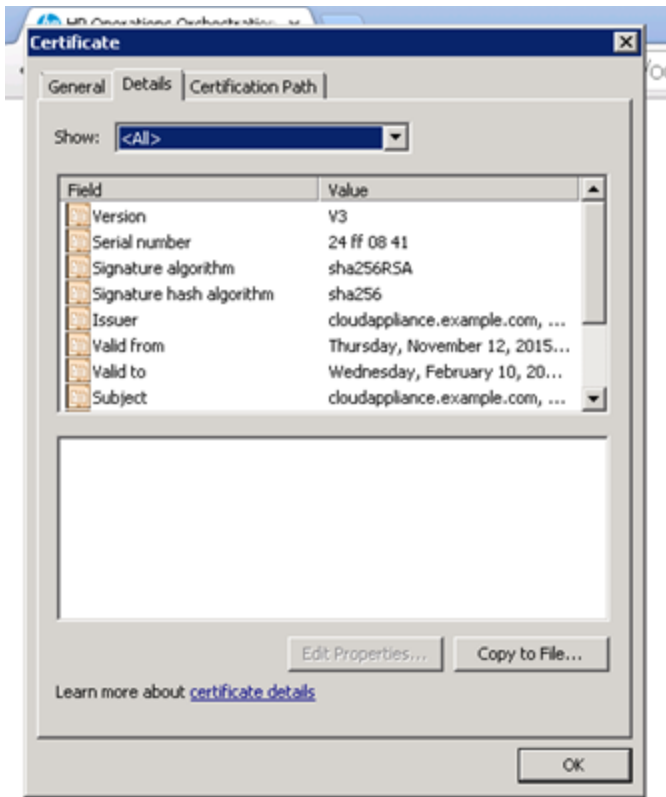
2. Download the HPE CSA-OO Virtual Appliance CA root certificate:
  - a. Open the browser and login to the OO URL (use complete FQDN OO URL).

**Note:** If DNS is not configured for host name resolution, you have to add an entry in hosts file on the server, from where web browser is launched.

- b. Open the **browser certificate** details.



- c. Open the Certificate information.
- d. Save the root certificate on the virtual server by selecting the **Copy to File** option under **Details** Tab.

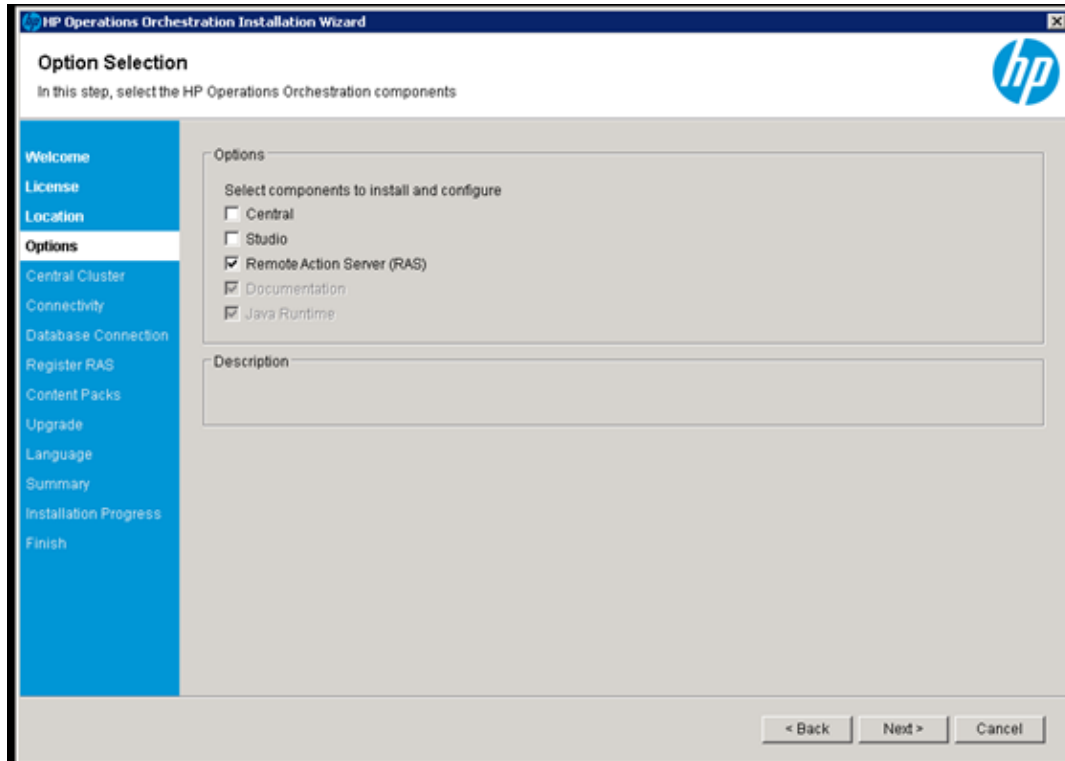


**Note:** Save the certificate using the “Base64 encoded X.509 (.CER)” option.

3. Download latest HPE OO package into the **Windows virtual server**.

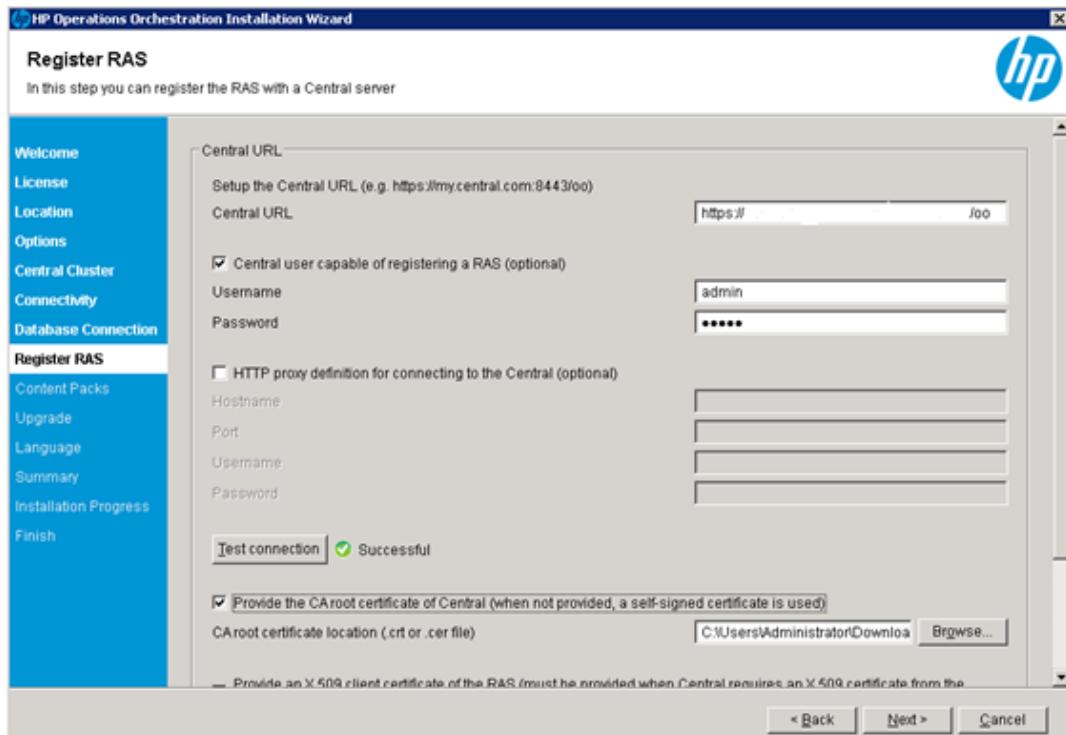
See Cloud Orchestration Suite '**At A Glance Guide**' from <http://h20230.www2.hp.com/selfsolve/manuals/>.

4. Launch the installer and complete the following steps:
  - a. On **Options** tab, check **Remote Action Server (RAS)**.



- b. In **Register RAS**, the CentralURL should be the HPE CSA-OO Virtual Appliance OO URL (use complete FQDN OO URL).
  - Make sure to check **Central capable of register a RAS** (optional) and enter OO Central credentials (admin/admin).
  - Check **Provide the CA root certificate of Central** and browse to the path, where the certificate was exported in step 2.
  - Click **Test connection** to check the configuration.
  - Click **Next** to continue.

**Note:** The **Next** button is enabled only if the above configuration process is successful.



The RAS installer is now set to communicate with HPE OO Central. As a confirmation, you will see a screen with all installation items checked as completed.

## Configuring OO with .NET

1. On the Windows OO RAS Server, install .NET Framework 4.5.

**Note:** Click ([dotNetFx45\\_Full\\_x86\\_x64.exe](#)) to Download .Net Framework

2. Open OO Central. On the **System Configuration** screen, **Topology** tab, move the Windows RAS to its own worker group called **RAS\_Windows**.


**Note:** Create this group if not available.

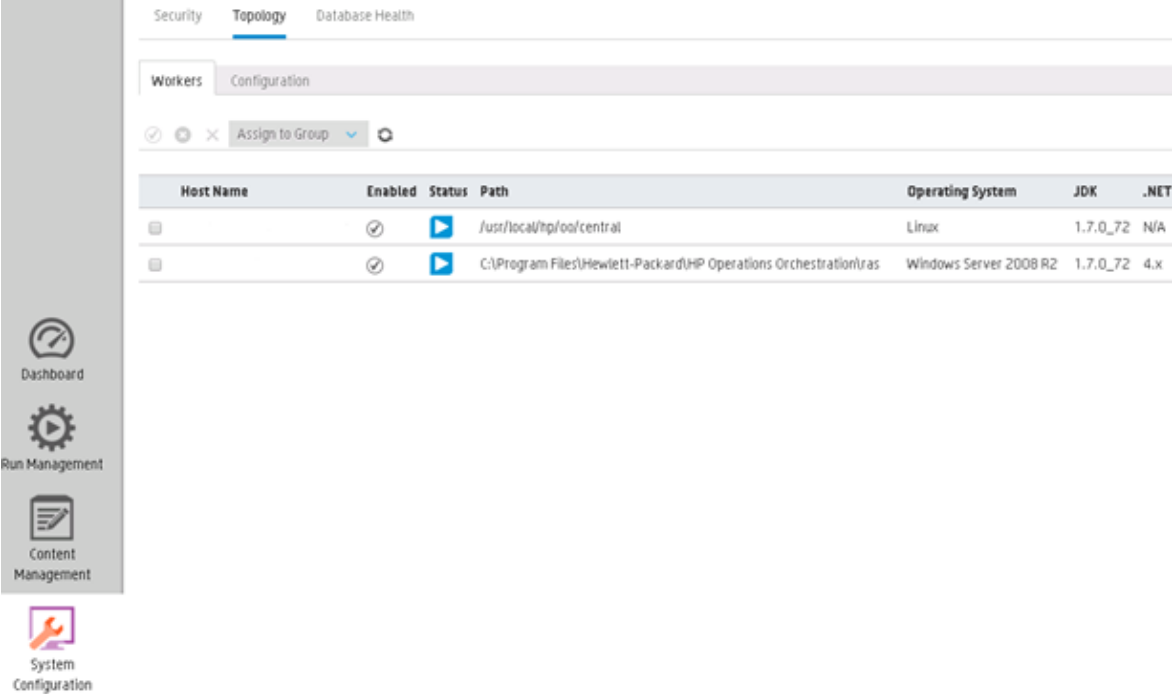


## Enable the new registered worker

When you log in to HPE OO Central and access the System Configuration panel, you should see two registered workers in the Topology section.

The default Linux worker and the Windows RAS worker you created and registered in the previous steps will be displayed under the **Topology** tab.

1. Select the Windows RAS worker and then click the enable  button



The screenshot shows the HPE OO Central System Configuration panel. The 'Topology' tab is selected, and the 'Workers' section is active. A table lists two registered workers:

Host Name	Enabled	Status	Path	Operating System	JDK	.NET
	<input checked="" type="checkbox"/>		/usr/local/hp/ool/central	Linux	1.7.0_72	N/A
	<input checked="" type="checkbox"/>		C:\Program Files\Hewlett-Packard\HP Operations Orchestration\ras	Windows Server 2008 R2	1.7.0_72	4.x

The left sidebar contains navigation icons for Dashboard, Run Management, Content Management, and System Configuration.

## Additional Information

For more information on Worker Groups using different OO RAS servers to run remote actions for specific requirements such as isolated networks or remote data centers, see <https://hpln.hp.com/content/worker-groups-oo-10> for Worker Groups in OO10 from the HPE Live Network.

Some workflows require special setup on the target machine where they are executed. Review the specific workflow requirements on each workflow description before running the flow.

## Appendix A-Databases and User Accounts

Product	Database name	Username/password
HPE CSA	csadb	csa/csa
IDM DB name	idmdb	idm/idm
CSA reports DB name	csa_reports_db	csa_reports_user/ csa_reports_user
OO DB name	oodb	oouser/oouser

**Note:** The PostgreSQL is configured only on localhost within the appliance. To communicate with Postgres server from outside the appliance, you may need to edit the PostgreSQL configuration manually.

## Appendix B - Linux and open-vmtool Licenses

This product includes code licensed under the GNU General Public License, the GNU Lesser General Public License, and/or certain other open source licenses. A complete machine-readable copy of the source code corresponding to such code is available upon request. This offer is valid to anyone in receipt of this information and shall expire three years following the date of the final distribution of this product version by Hewlett-Packard Company.

To obtain such source code, send a check or money order in the amount of US \$10.00 to:

Hewlett-Packard Company

Attn: General Counsel

3000 Hanover Street

Palo Alto, CA 94304

USA

Please specify the product and version for which you are requesting source code.

You may also request a copy of this source code free of charge at <http://www.hp.com/software/opensource>.

## Appendix C-Upgrade CSA 4.6+patch to CSA 4.7+patch

### Backup CSA-OO Virtual Appliance

Please take snapshot of CSA-OO Virtual Appliance before performing the below steps to upgrade.

### Download CSA and OO Installers

1. Download the latest CSA Installer and Installation Guide and CSA Patch Readme from <http://h20230.www2.hp.com/selfsolve/manuals/>.
2. Download the latest Operation Orchestration Installation Guide from <http://h20230.www2.hp.com/selfsolve/manuals/>.
3. Copy CSA and OO Installer bin files into the CSA-OO Virtual Appliance.

See <https://h20575.www2.hpe.com/evalportal/try.do?productNumber=TC095JAE&revision=1.0> for latest CSA Installer bin

**Note:** Please use /tmp as target location or any other folder with 755 permissions.

#### Setting up OO

1. Roll Back HPE Solutions 1.8.2 from OO(operation Orchestration 10.60)
2. Delete the following CPs which are dependent on HPE Solutions 1.8.2 in OO:
  - o CSA-SiteScope
  - o Utility Orchestration
  - o VMWare vCenter Compute
  - o SiteScope
  - o Cloud Orchestration

- OpenStack Content
- OpenStack Common Utility
- Delete HPE Solutions 1.8.2
- Restart the CSA and central services

## Setting up Environment for Upgrade

1. Log in as root user (default password: Cl0ud@pp1iance).
2. Set proper ownership to CSA and OO install locations using below commands:

```
chown -R csauser /usr/local/hp/csa
```

```
chown -R csauser /usr/local/hp/oo
```

3. Switch to csauser using the below credentials:

```
username: su csauser
```

```
password: csauser
```

4. Stop CSA and MPP services by running the following commands:

```
service csa stop
```

```
service mpp stop
```

5. Stop OO central service by running following commands:

```
/usr/local/hp/oo/central/bin/central stop
```

## Upgrading CSA

Make sure the logged in user is csauser before performing following steps:

1. Follow the instructions in CSA Installation Guide on how to launch the installer and install CSA.  
You may skip upgrading OO as it is a part of CSA installation.
2. Follow the instructions in CSA Patch Readme to install patch.

## Check Versions

Launch CSA Management Console and OO central and verify the version numbers for the products.  
See "[Products](#) " on [page 5](#)for the latest version.

## Send documentation feedback

If you have comments about this document, you can [contact the documentation team](#) by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

**Feedback on Installation Guide (CSA-OO Virtual Appliance HCS 2016.10)**

Just add your feedback to the email and click send.

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