



Hybrid Cloud Management

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Microsoft SQL Server - Standalone Basic Provision 17.05

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Introduction

This section describes how to use the Microsoft SQL Server capsules as a provider for HPE Hybrid Cloud Management 2017.05 to deploy SQL Server database using templates. The SQL Server Service Designs simplify and accelerate the creation of the Database lifecycle Service Designs and implementation so that it can be consumed more easily by business users, as well as managed more quickly and consistently by database administrators. They also enable the users to provide DBaaS self-service offerings to install Database instances and to manage their lifecycle, or to manage the lifecycle of pre-installed DB instances. Yo

Audience

Capsules are designed and built with ease of deployment and consumption in mind. However, Capsule installation and configuration still require domain expertise with the underlying cloud provider or associated vendor technology. The Cloud Service Automation Content Administrator should be familiar or work with certified personnel to properly deploy the out-of-the box capsule content including service provider properties, service designs and service offerings.

Pre-deployment requirements

This topic lists the basic requirements that must be met before you import the SQL Server capsule, use the service designs, and create subscriptions in the marketplace.

- Ensure that the HPE Hybrid Cloud Management 2017.05 is configured, operational and ready for content execution.
- Ensure that you have a shared location to store the required Runtime Client Solution binaries and SQL Server binaries, for example **/var/vols/itom/hcm/shared/content/resources/dma-binaries** as a file server. The file server details need to be updated in the service design.
- Ensure that the following requirements for the target system are met:
 - SQL Server 2008, 2008 R2, or 2012 software installation files, obtained from Microsoft.
 - Permissions to create an SQL Server database:
 - System Stored Procedures (SP)
 - CREATE LOGIN

If using a non-default database owner, the `sp_changedbowner` process is available

If a non-default database owner is specified and does not exist, permission to create the appropriate login.
 - .NET 3.5 is installed.
 - Licenses for SQL Server

Requirements

Before you import any SQL Server capsule, you must ensure that you have performed the following tasks:

1. ["Install an HPE OO RAS Server" below](#)
2. ["Install Nmap" on page 9](#)

Install an HPE OO RAS Server

HPE OO RAS is a remote action server, containing a remote protocol for connecting with HPE OO Central and a worker (a software component responsible for executing flows). The HPE OO RAS enables execution in remote data centers and networks.

- If you have installed HPE OO Central on Linux and want to run any DMA Premium and DMA Express flows, you must install RAS on a Windows target and create a worker group and assign a worker to it. For instructions to create a worker group and assigning a worker to it, see ["Creating a new Worker Group and assigning a Worker to it" on the next page](#).
- If you have installed HPE OO Central on Windows, you must create a worker group and assign a worker to it. For instructions to create a worker group and assigning a worker to it, see ["Creating a new Worker Group and assigning a Worker to it" on the next page](#).

Note: Before you install RAS on a Windows target, ensure that you have installed .NET on the target. For information about compatible .NET version, see CSA System and Software Support Matrix a <https://softwaresupport.hpe.com>.

To install HPE OO RAS, see the *Operations Orchestration Installation Upgrade Configuration Guide at HPE Software Support*.

Note: If you want to verify if HPE OO RAS is already installed on the Windows target, open the **Microsoft Windows Services** (`services.msc`) and check if the **HPE Operations Orchestration RAS** service is running. If yes, HPE OO RAS is already installed. You can now create a worker group and assign a worker to it, see ["Creating a new Worker Group and assigning a Worker to it" on the next page](#).

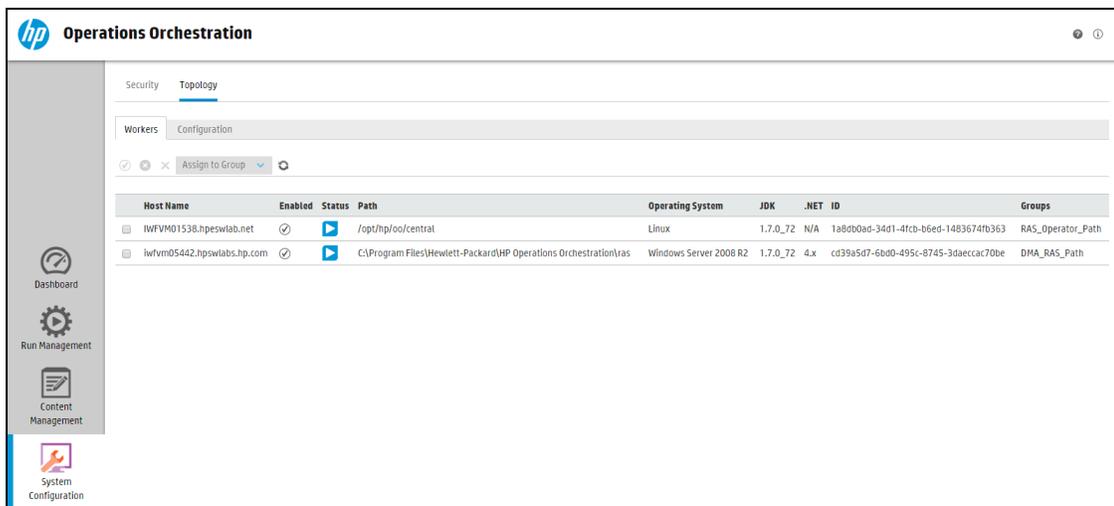
Note: The steps in this procedure are mandatory:

Creating a new Worker Group and assigning a Worker to it

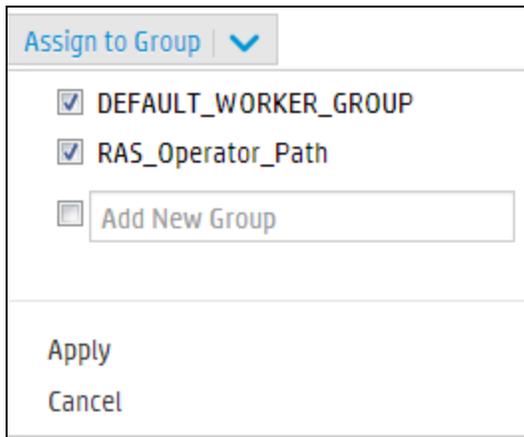
Worker group is a logical collection of Workers (software components that are responsible for executing flows). You can define a Worker Group in HPE OO Central. A Worker Group helps in preventing bottlenecks due to action execution load, as a steps in a flow can run on any of the Workers in the group.

Perform the following steps to create the new Worker Group, DMA_RAS_Path and assign a Worker to it:

1. In **System Configuration** workspace, select **Topology > Workers**.
2. Select the check box next to the worker name.



3. Click **Assign to Group**
4. Click the check box next to the empty box and enter **DMA_RAS_Path**.



5. Click **Apply**.

Note: For information about configuring HPE OO, see the HPE DMA Premium Edition User Guide at <https://softwaresupport.hpe.com/km/KM02364832>.

Install Nmap

Nmap (Network Mapper) is a security scanner used to discover hosts and services on a computer network, creating a "map" of the network.

Note: To verify if Nmap is already installed on the Windows target servers, open a command prompt and execute the `nmap --version` command. If Nmap exists, the output is similar to the following message:

```

C:\Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Program Files (x86)\Nmap>nmap --version

Nmap version 6.47 < http://nmap.org >
Platform: i686-pc-windows-windows
Compiled with: nmap-liblua-5.2.3 openssl-1.0.1i nmap-libpcap-7.6 libpcap-4.1.3 nmap-libdnet-1.12 ipv6
Compiled without:
Available nsock engines: select

C:\Program Files (x86)\Nmap>_

```

Installation of Nmap for Windows target servers. Nmap, an open source tool for network exploration and security auditing, must be installed on the source machine (OO Studio/OO Central/RAS) from <http://www.nmap.org>.

Nmap requires the free WinPcap packet capture library. A version of WinPcap installer is available in the zip file as `winpcap-nmap-<version>.exe`, where `<version>` is the WinPcap version rather than

the Nmap version. Alternatively, you can obtain and install the latest version from <http://www.winpcap.org>.

After installing Nmap, you must start HPE OO Central and HPE OO RAS services.

- To start the HPE OO Central service:

At command prompt, run the following command

```
<Install-dir>/central/bin/central start
```

where, Install-dir is the HPE OO installation directory.

- To start HPE OO RAS service:

At the command prompt, run the following command

```
<Install-dir>/central/bin/central start
```

where, Install-dir is the HPE OO installation directory.

Set up Runtime Client Solution files

The DMA Client binaries are available in the Runtime Client Solution Pack. These files must be copied into the file server or shared folder, for example, `/var/vols/itom/hcm/shared/content/resources/dma-binaries`:

- `dma_oo_client_bin_linux.zip`
- `dma_oo_client_bin_windows.zip`
- `dma_oo_client_code_linux.zip`
- `dma_oo_client_code_windows.zip`
- `dma_oo_client_bin_linux.zip.MD5`
- `dma_oo_client_bin_windows.zip.MD5`
- `dma_oo_client_code_linux.zip.MD5`
- `dma_oo_client_code_windows.zip.MD5`

Install Content Capsule

Use the Content Store area in the Cloud Service Management Console to consume and deploy the content from the CSA platform directly, instead of downloading the Content SDK available from CSA. To consume and deploy the content, you must have Content Manager or Administration rights. For more information about Content store, see HCM documentation.

Environment requirements and support matrix

The following table shows the major components required to use this implementation. The versions of components listed in this table are supported for HPE Hybrid Cloud Management Suite 2017.05.

Component	Supported Version ¹
Hybrid Cloud Management	2017.05
File server	Linux server with administrator privileges, to be used as a repository to upload and download content or software.
Virtualization	1.9.1
Base Utility	16.12
VMWare vCenter Compute	16.07

1. HPE recommends to use the latest product versions.

Support matrix

The following table shows the platform support and database support for SQL Server capsule:

Capsule	Operating system	SQL Server
Microsoft SQL Server	Windows 2012, 2012R2, 2008, 2008R2	SQL12, SQL14

Configure Offerings in Cloud Service Automation

Resource categories that are referenced in a service design will be automatically created when the service design archive is imported.

Service Designs	Provider
Microsoft SQL Server - Standalone Basic Provision	Database and Middleware

Adding a Resource Provider

Resource providers must be created in CSA/Codar. The following table lists the resource providers required for this integration and the service access point. You should change them to reflect your environment.

Provider name	Service access point
Database and Middleware	Provide Database and Middleware identity service access endpoint: http://<ip or host>:<port>/version Example: https://mycompany.com:8445/oo

Perform the following steps for the provider:

1. Log on to the **Cloud Service Management Console** as administrator.
2. Click **Providers**.
3. Select the Provider from the panel on the left.
4. Click **Gear icon**  at the top right of the toolbar.
5. Click **Create Resource Provider**.
6. 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**.
7. Click **Create** to complete or **Cancel** to exit.

Create Credentials and System variables

After you import the flows, you must create system variables and credentials to subscribe service successfully.

Define the following credentials and system property under **Operations Orchestration > Content Management > Configuration items**, if it does not already exist.

Name	Description
OOserver	The user credentials for the OO Server, OO Orchestration is running.
Source	The File Server credentials. Linux File server from where the binaries are downloaded to the target system
SAUser	If you want to use HPE Server Automation (SA) as the file server, configure the SAUser system account.
CSA_REST_URI	If you have installed RAS service and CSA on separate systems, you must create or edit the CSA_REST_URI with the FQDN or IP address of the system where CSA is running.

Component properties of Service Designs

The following are the mandatory properties of the Microsoft SQL Server - Standalone Basic Provision service design. You must provide the values of these properties, You can also change the default values of these properties.

Microsoft SQL Server - Standalone Basic Provision

Property name	Default Value	Description
Download Source Host	no default	The host name of IP address of the file server.
Download Source Path	no default	The absolute location of the files to be downloaded in the file server.
Download Target Destination	no default	Local directory where the SQL Setup

Microsoft SQL Server - Standalone Basic Provision, continued

Property name	Default Value	Description
		files should be stored.
Download From Software Directory	no default	The zip file that contains the SQL Server setup files
Instance Name	no default	name of the newly created instance. Use "MSSQLSERVER" for the default instance, any other alphanumeric value for a named instance.
Server Target	no default	The host name or IP address of the target server.
Server Target Password	no default	The target server password.
Server Target Username	no default	The target server user name.

To change component properties:

1. Log on to the Cloud Service Management Console as an administrator.
2. Click **Designs > Sequenced > Designer**.
3. Select the service design.
4. Click the **Version** tab and select the required version of the design.
5. Click **Designer** tab.
6. Select the component.
7. Change values for the component properties as listed in the table above.
8. After making the changes, on the **Overview** tab, click **Publish**, to publish the Service Design.

Tip: Click **Help**  icon at the top right corner of the screen to know the details about editing component properties.

Creating 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 Offering** option from the **Gear icon** .
4. Fill in the Create Offering fields:
 - a. Enter the **Display Name** of the new offering. This is the offering that will be visible to the subscribers of this service.
 - b. Enter the **Version** with the latest version.
 - c. Click the appropriate **Service Design** from the drop down and then click Select.
 - d. 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 the subscriber options.

Publishing the Service Offering

To publish the Service Offering to the selected Catalog, perform the following task:

1. Log on to the **Cloud Service Management Console** as an administrator.
2. Click **Catalogs**.
3. Select the appropriate Catalog.

Tip: 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.

4. Click **Offerings** tab, and then click **Add Offering**.
5. Select the service offering you created from the options displayed.
6. Click the **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 **OK** to confirm.

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

Note: 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.

Subscribe to Service

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 from **Dashboard**, and then click **Browse Catalog**.
3. Click on the published Service offering
4. Enter the required values to subscribe for the offerings.
5. Click **Checkout**.
6. Enter the details such as the **Subscription Name** and **Start Date** of the subscription.
7. Click **Submit Request** to complete subscription process.

To monitor the status of subscription, click on the **Subscriptions** tab.

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.

Support

All CSA Customers are entitled to browse, download and deploy CSA content capsules. The level of Support provided with this Capsule is associated with the respective Capsule Content Type For more information about the different content type supported and their level of support, see

<https://hpln.hpe.com/help/content-type-support>

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Feedback on Microsoft SQL Server - Standalone Basic Provisionfor Hybrid Cloud Management 2017.05 (Hybrid Cloud Management 2017.05)

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