



# OMi Management Pack for SAP HANA

Software Version: 2.00

Operations Manager i for Linux and Windows® operating systems

## Installation Guide

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# Chapter 1: Introduction

The OMi Management Pack for SAP HANA (OMi MP for SAP HANA) works with Operations Manager i (OMi) and enables you to monitor SAP HANA environments. The OMi MP for SAP HANA includes the following components for monitoring the health and status of SAP HANA databases.

**Note:** For more information about the components, see the *OMi MP for SAP HANA Online Help or User Guide*.

- HANA Management Templates
- HANA Aspects and Policy Templates
- Parameters
- Run-Time Service Model (RTSM) Views
- Health Indicators (HIs)
- Tools
- Performance Dashboard

## Abbreviations Used in this Manual

Abbreviations	Expansion
OMi	Operations Manager i
RTSM	Run-time Service Model
OMi MP	OMi Management Pack
OMi MP for SAP HANA	OMi Management Pack for SAP HANA

## Related Documentation

For more information about OMi MP for SAP HANA, see the following documents:

- OMi MP for SAP HANA - *Release Notes*
- OMi MP for SAP HANA - *User Guide*

## Licensing

The OMi MP licenses are available in a pack of 25 license units. Each license can be used per OS instance, irrespective of the application type. For example, the license pack can contain 5 licenses of OMi MP for Microsoft Skype for Business Server, 10 licenses of OMi MP for Oracle Database with any other combination of supported applications.

There are three types of licenses:

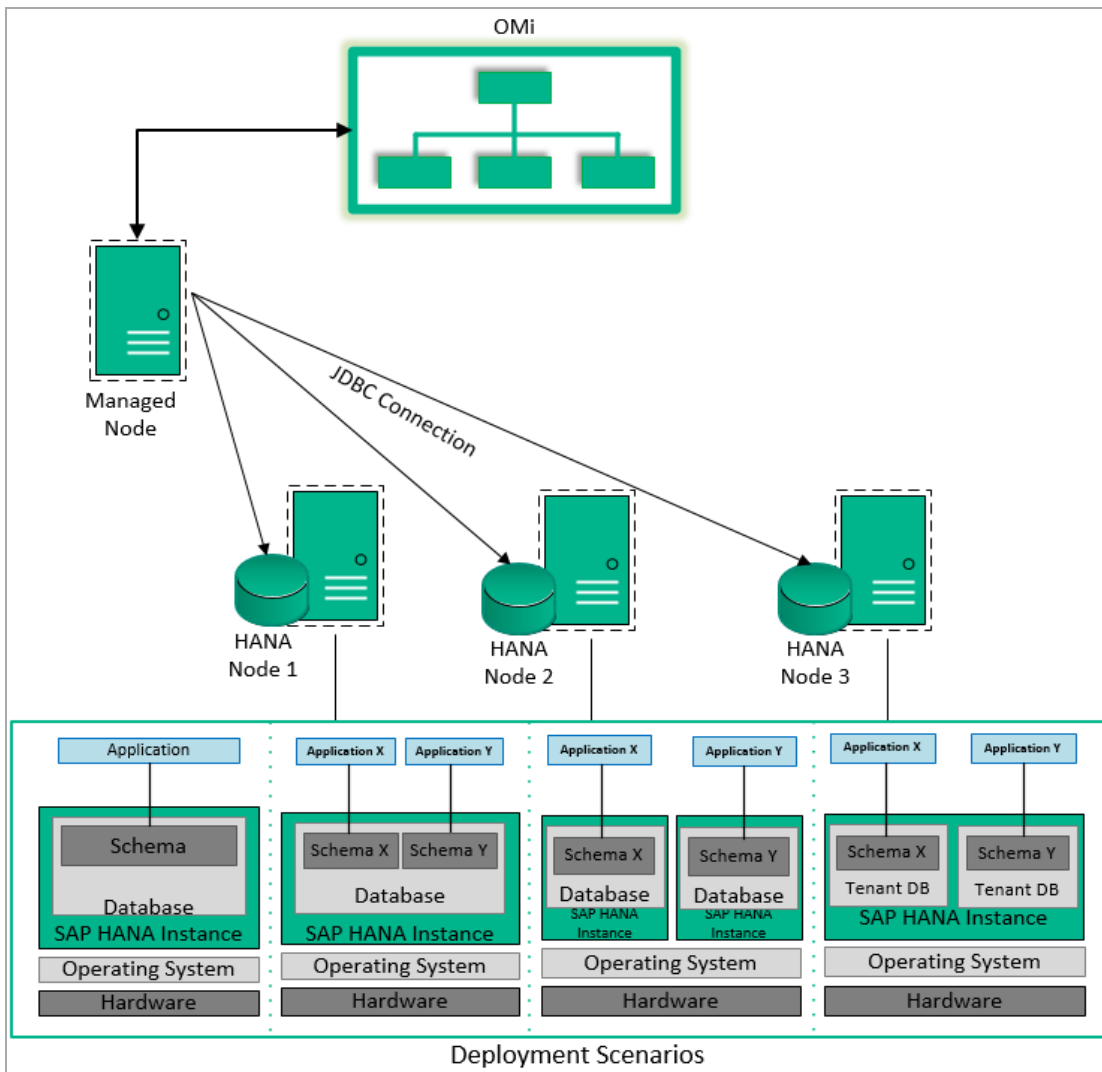
- Evaluation: A license with a fixed trial period of up to 60 days. This type of license is available only until a Time Based or Permanent license is purchased. Once purchased, the trial period immediately terminates.
- Term: A license that has a time-based expiration date.
- Perpetual: A license that does not expire.

To procure the license for the Entitlement Order Number (EON), go to <http://enterpriselicense.hpe.com> and log on using your HPE Passport credentials to redeem the license.

For information about applying the license, see "[Applying the License](#)".

# Deployment Scenario

OMi MP for SAP HANA is installed on OMi. A node must be installed with Operations Agent and should be configured as a managed node with capabilities to connect to the SAP HANA nodes using remote JDBC connectivity. The SAP HANA JDBC jar or SAP HANA client needs to be available on the managed node.



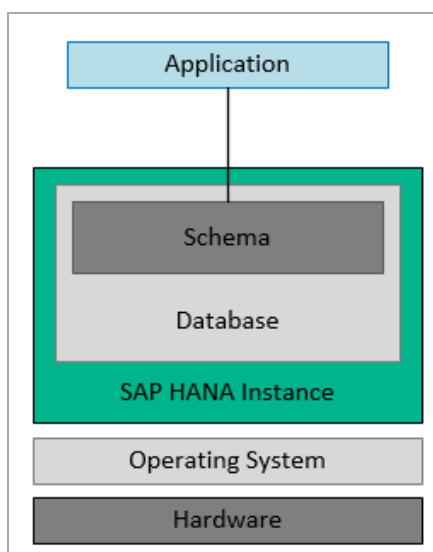
The OMi MP for SAP HANA comprises of SAP HANA aspects and management templates for monitoring the availability, health, and performance of SAP HANA databases. When you specify the values for the parameters in the aspects and deploy to the remote node, OMi MP for SAP HANA discovers information about the SAP HANA databases and services on the SAP HANA nodes.

The following are the deployment scenarios for SAP HANA nodes:

- [Standard Deployment](#)
- [Multiple Components in One Database \(MCOD\)](#)
- [Multiple Components in One System \(MCOS\)](#)
- [Multitenant Database Containers \(MDC\)](#)

## Standard Deployment Scenario

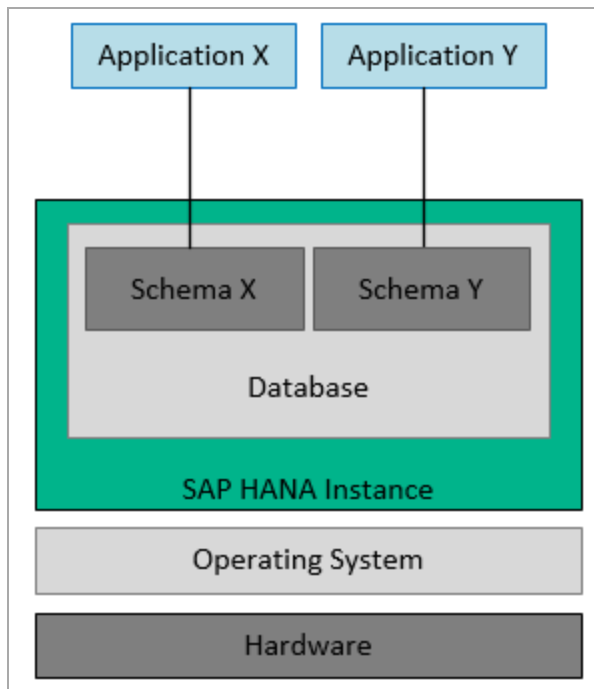
In this scenario, there is only one SAP HANA instance with one database, schema, and application.



## Multiple Components in One Database (MCOD) Deployment Scenario

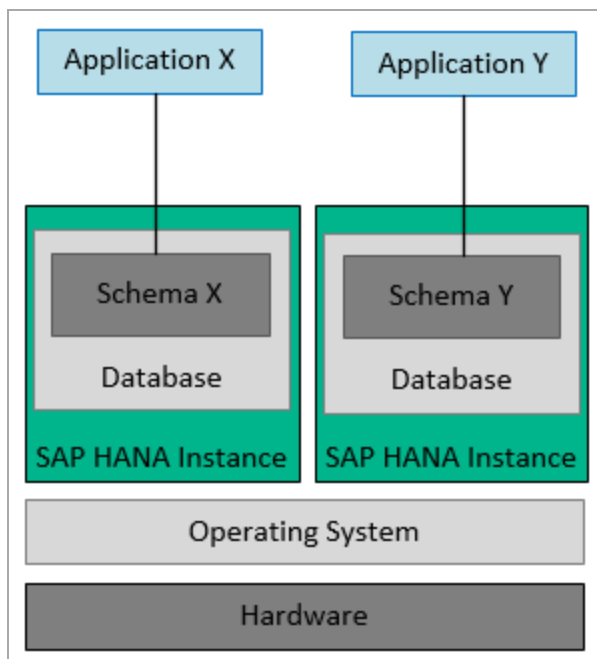
In this scenario, there is only one SAP HANA instance with one database. The database can have multiple schemas with respective application.





## Multiple Components in One System (MCOS) Deployment Scenario

In this deployment, the SAP HANA nodes can have multiple SAP HANA instances with respective database, schema and application.



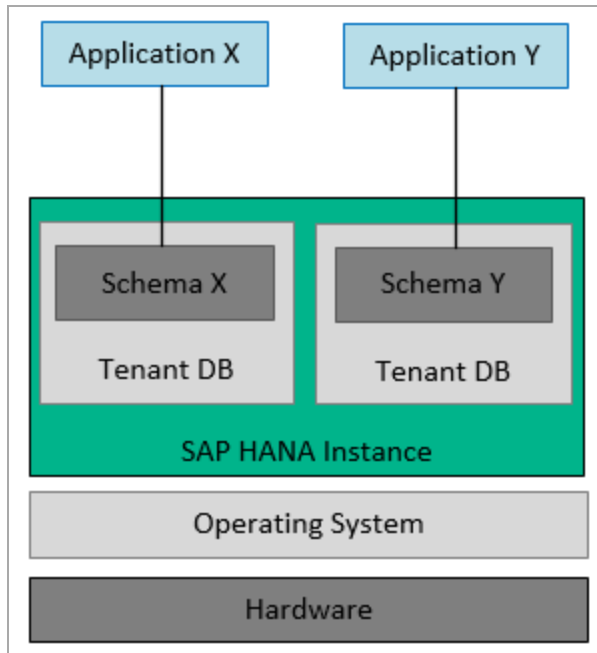
## Multitenant Database Containers (MDC)

### Deployment Scenario

In this scenario, you can run multiple tenant databases on one SAP HANA instance. This deployment has strong separation of data and users with application specific life cycle management.

**Note:** Ensure the following:

- The roles should be added to be both the System DB and all the tenants DB.
- In this deployment scenario, the OMi MP for SAP HANA user must be assigned the **MONITORING** roles of the standard SAP HANA database.



# Chapter 2: Installing OMi MP for SAP HANA

This section provides information about installing OMi MP for SAP HANA on OMi 10.x (Linux or Windows) servers.

If you are upgrading OMi MP for SAP HANA from earlier versions, see ["Upgrade" on page 19](#).



## Download OMi MP for SAP HANA

You can download OMi MP for SAP HANA (**OMi\_MP\_for\_SAP\_HANA\_02.00.010.zip**) from the following e-media location:

### ITOM Marketplace

The OMi MP for SAP HANA e-media (**OMi\_MP\_for\_SAP\_HANA\_02.00.010.zip**) contains the software and the product documentation. In a distributed environment, it must be installed on all OMi Data Processing Servers (DPS) and OMi Gateway Servers (GWS).

The following table provides information about the documentation available in the e-media:

Document	Location	Purpose
Online Help	<b>olh\en\10.00\con008</b>  Also available in the OMi 10.x console  menu.  From the OMi console, go to  > <b>General Help &gt; Administration Guide &gt; Management Packs &gt; OMi Management Pack for SAP HANA.</b>	To provide information about the following: <ul style="list-style-type: none"><li>• Using Management Templates</li><li>• Using Aspects and Policy Templates</li><li>• Using Indicators - HIs and ETIs</li></ul>
Installation Guide	<b>\DOCUMENTATION\en\Guides</b>	
User Guide	<b>\DOCUMENTATION\en\Guides</b>	
Release Notes	<b>\DOCUMENTATION\en\ReleaseNotes</b>	To provide information about the following: <ul style="list-style-type: none"><li>• Salient Features</li><li>• Installation Notes</li></ul>

# Installation Prerequisites

The following section lists the hardware and software prerequisites for installing OMi MP for SAP HANA OMi 10.x (Linux and Windows) Servers. It also provides information about the prerequisites required for monitoring SAP HANA.

## Software Requirements

### Components

Before installing OMi MP for SAP HANA, the following components must be installed and configured on OMi 10.x servers.

Component	Version
Operations Manager i	10.10 or higher*  <b>Note:</b> The Performance Dashboard is supported from OMi version 10.12 onwards.

\* See the Support Matrix for latest versions supported

### Operating System and Versions

Operating System	Version
RHEL	6.7 onwards
	7.x - 7.3 (Supported with OA 12.02 or later)
SUSE	SLES11SP4
	SLES12SP2
Windows Server	2008, 2008 R2
	2012, 2012 R2

## Managed Node

Component	Version
Operations Agent	12.01 or higher*
Java	1.8 or higher
Open JDK	1.8 or higher

**Note:** You must use 64 bit JRE with 64 bit Operations Agent and 32 bit JRE with 32 bit Operations Agent.

**Note:** You must ensure to place the HANA JDBC driver in the following instrumentation directory on the managed node: `%ovdatadir%\bin\instrumentation\ngdbc.jar`.

\* See the Support Matrix for latest versions supported

## Installation Checklist

Ensure that the installation tasks described in the following table are completed in the specified order.

Serial	Task	Reference
1	Install OMi MP for SAP HANA	See the section <a href="#">Installing SAP HANA on OMi</a> .
2	Applying the License	See the section <a href="#">"Applying the License"</a> .

## Managed Node

Task	Reference
Install Operations Agent	See the chapter <i>Installing Operations Agent 12.01</i> in the <i>Operations Agent and Operations Smart Plug-ins for Infrastructure Installation Guide</i> .

## User Privileges

For information on user privileges, see ["User Privilege" on page 27](#).

# Installing OMi Management Pack for SAP HANA on OMi

You can use the e-media to install the OMi Management Pack for SAP HANA on the OMi 10.x Server.

**Note:** In a OMi 10.x distributed environment, OMi MP for SAP HANA must be installed on all OMi Servers - (OMi) DPS and (OMi) GWS.

## On a Linux OMi 10.x Server

To install the OMi MP for SAP HANA on a Linux OMi 10.x Server, follow these steps:

1. Log on as a root user.  
If the OMi is configured as a non-root user then log on as a non-root.
2. Set the umask by typing the command `umask 022`.
3. Copy and extract the **OMi\_MP\_for\_SAP\_HANA\_02.00.010.zip** file to a temporary folder on OMi 10.x Server.
4. Run the following command:  

```
<PATH>/mpinstall.sh -i
```

  
where, <PATH> is the location where you have extracted the OMi MP for SAP HANA.
5. To accept the End User License Agreement (EULA), type **Yes** or **Y** and to decline the license agreement, type **No** or **N**.

**Note:** If you decline the EULA, the OMi MP for SAP HANA will not be installed.

After the installation is completed, a message appears stating that the installation of OMi Management Pack for SAP HANA is completed.

## On a Windows OMi 10.x Server

To install the OMi MP for SAP HANA on a Windows OMi 10.x Server, follow these steps:

1. Copy and extract the **OMi\_MP\_for\_SAP\_HANA\_02.00.010.zip** file to a temporary folder on OMi 10.x Server.
2. Open the command prompt, change the directory to folder that has the installer script and run the following command:  
  

```
cscript /nologo mpinstall.vbs -i
```
3. To accept the End User License Agreement (EULA), type **Yes** or **Y** and to decline the license agreement, type **No** or **N**.

**Note:** If you decline the EULA, the OMi MP for SAP HANA will not be installed.

After the installation is completed, a message appears stating that the installation of OMi Management Pack for SAP HANA is completed.

## Applying the License

This section provides information about updating and activating the license.

**Note:** For more information about procuring the license, see the "[Licensing](#)" section.

To update your deployment with a new license and to activate the license, follow these steps:

1. Navigate to the License Management pane:

On OMi 10.x, click **Administration > Setup and Maintenance > License Management**.

The License Management provides details about the name, license type, days left to expiry of license, expiration date, capacity, and capacity details.

2. Click to open the Add License dialog box where you can search for the relevant .dat file.

**Note:** You can download .dat file from <http://enterpriselicense.hpe.com>.



# Verifying the OMi MP for SAP HANA Installation

This section provides information about verifying the installation of OMi MP for SAP HANA on OMi 10.x (Linux and Windows) servers.

You can perform any one of the following checks to verify the OMi MP for SAP HANA installation:

- Check the log files for any errors on GWS (OMi 10.x), DPS (OMi 10.x), and typical servers (OMi 10.x) at the following locations:

**For Linux:**

`/opt/HP/BSM/log/mpinstall.log`

**For Windows:**

`%TOPAZ_HOME%\log\mpinstall.log`

**Note:** The OMi logs are available on both (OMi 10.x) GWS and (OMi 10.x) DPS at the following location:

On OMi 10.x

**Linux:** `/opt/HP/BSM/log/jboss/opr-webapp.log`

**Windows:** `%TOPAZ_HOME%\log\jboss\opr-webapp.log`

- Check the following location on the OMi 10.x console:
  - On OMi 10.x, click **Administration > Setup and Maintenance > Content Packs**.

The **OMi Management Pack for SAP HANA** must appear in the Content Pack Definitions pane.

- To list the OMi MPs installed on the OMi 10.x server, run the following command on OMi 10.x GWS:

**For Linux:**

```
/opt/HP/BSM/bin/ContentManager.sh -l -username <username> -password <pwd>
```

**For Windows:**


```
%TOPAZ_HOME%\bin\ContentManager.bat -l -username <username> -password <pwd>
```

**Note:** The ContentManager.bat or ContentManager.sh command lists the Content Pack name and version.

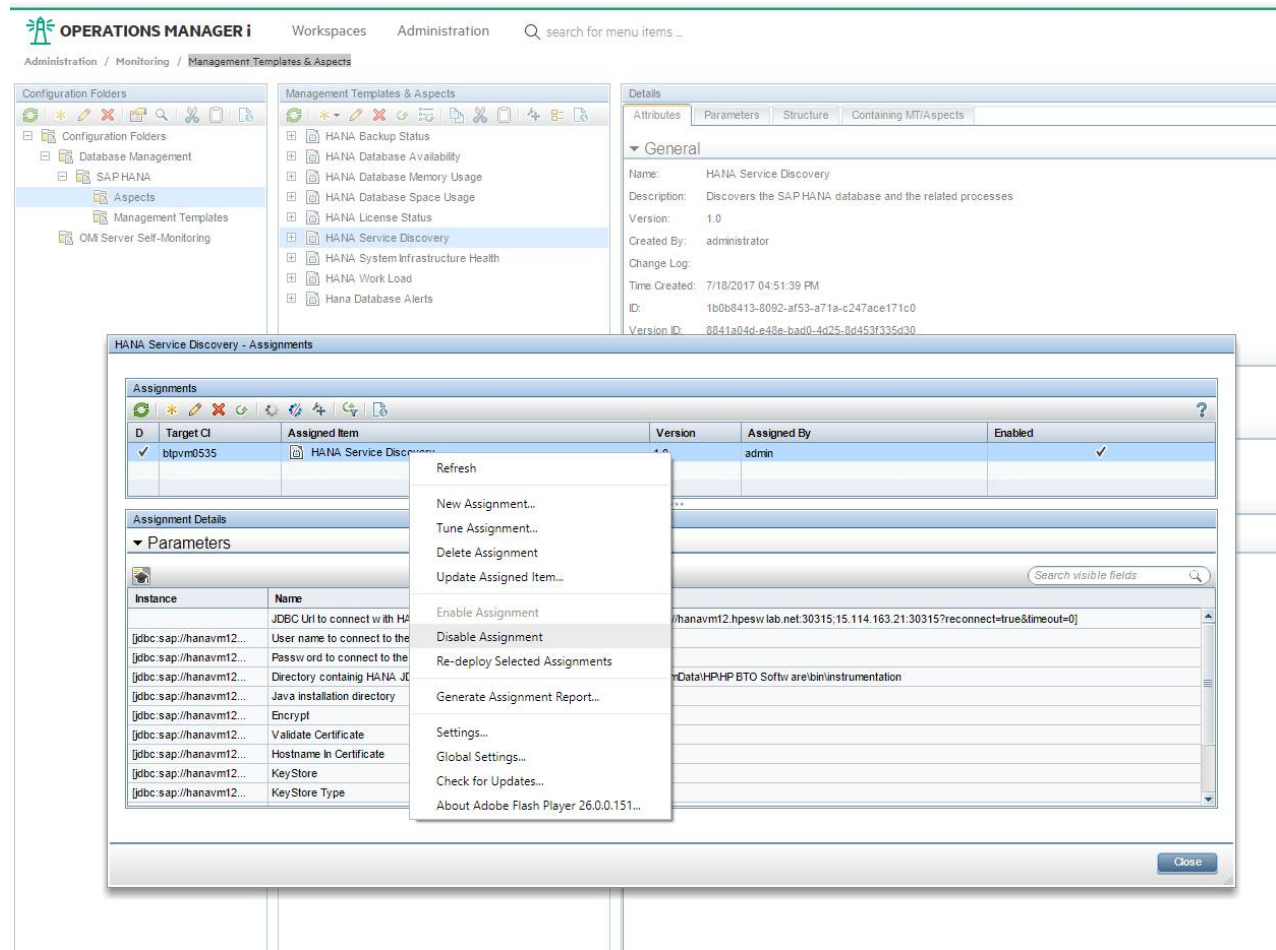
## Chapter 3: Upgrade

This section provides information on upgrading OMi MP for SAP HANA from previous version.

To upgrade, perform the following tasks:

1. On the OMi system, disable the aspects and management templates.
  - a. Open the Assignments & Tuning pane:  
  
Click **Administration > Monitoring > Assignments & Tuning**.
  - b. In the **Browse Views** tab, select a SAP HANA view from the drop down and then select all the instances for which you want to disable the assignments.
  - c. To disable the Assignments, in the **Assigned Item** column, select the HANA aspects or management template and click  **Disable Assignment**.
2. On the OMi system, disable the assignment for HANA Service Discovery aspect.
  - a. Open the Assignments & Tuning pane:  
  
Click **Administration > Monitoring > Assignments & Tuning**.
  - b. In the Configuration Folders pane:  
  
**Configuration Folders > Database Management > SAP HANA > Aspects**
  - c. Select **HANA Service Discovery** aspect and its version.
  - d. Right-click and select the **List Assignments for Selected Item**.
  - e. Right-click the Target CI in **HANA Service Discovery – Assignments** window and select


### the Disable Assignment.



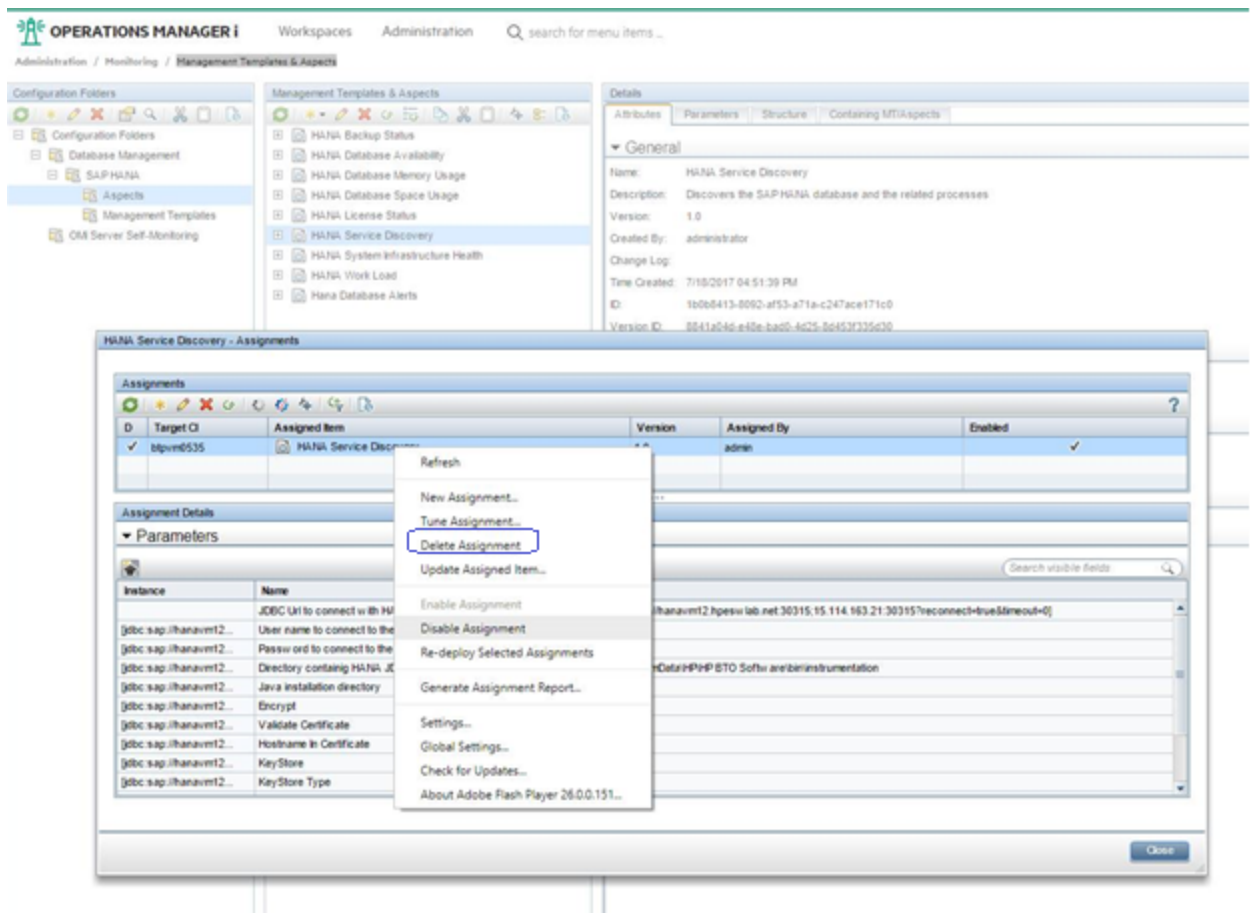
- On the OMi system, run the **Stop HANA Monitoring** tool to stop the collector on the managed node.

The Collector for HANA is stopped message is displayed.

For more information on tools, refer *OMi MP for SAP HANA User Guide*.

- On the OMi system, delete the assignment for aspects and management templates.
  - Open the Assignments & Tuning pane:  
Click **Administration > Monitoring > Assignments & Tuning**.
  - In the **Browse Views** tab, select a SAP HANA view from the drop down and then select the instance for which you want to delete the assignments.
  - To remove the Assignments, in the **Assigned Item** column, select the HANA aspects or management template and click  **Delete Assignment**.

5. On the OMi system, delete the assignment of the HANA Service Discovery aspect.
  - a. Open the Assignments & Tuning pane:  
Click **Administration > Monitoring > Assignments & Tuning**.
  - b. In the Configuration Folders pane:  
**Configuration Folders > Database Management > SAP HANA > Aspects**
  - c. Select **HANA Service Discovery** aspect and its version.
  - d. Right-click and select the **List Assignments for Selected Item**.
  - e. Right-click the Target CI in **HANA Service Discovery – Assignments** window and select the **Delete Assignment**.



6. Install the OMi MP for SAP HANA version 2.0 on the OMi system.

For information on installing the OMi MP for SAP HANA, see ["Installing OMi Management Pack for SAP HANA on OMi"](#) on page 15.

7. On the managed node, check the version of the Operations Agent. If the version is below 12.01, ensure to upgrade the Operations Agent to version 12.01.

To upgrade, see *HPE Operations Agent documentation*.

8. On the OMi system, deploy the new HANA Discovery aspects. For more information, ["Task 2: Deploying the HANA Discovery Aspect" on page 24](#).
9. After you have discovered the topology, you must delete the earlier version of the datasource on the managed node. On the OMi, run the **Remove HANA Datasource** tool.
10. On the OMi, deploy the other required aspects and the management templates.

For more information, see ["Getting Started" on page 23](#).

If you encounter any errors during upgrade or discovery/monitoring of SAP HANA system is not working as expected, see *Troubleshooting* section in *OMi MP for SAP HANA User Guide*.

## Chapter 4: Getting Started

The following section provides step-by-step instructions for monitoring SAP HANA databases using OMi MP for SAP HANA.


### Task 1: Adding Remote Managed Node to OMi 10.x Console

**Note:** OMi MP for SAP HANA monitors SAP HANA databases through remote monitoring. The remote managed node is a node outside the HANA system that needs to be configured and added to OMi 10.x for monitoring SAP HANA databases.

Before you begin monitoring, follow these steps to add the nodes.

1. Open the Monitored Nodes pane from Administration:

On OMi 10.x, click **Administration > Setup and Maintenance > Monitored Nodes**.

2. In the Node Views pane, click **Predefined Node Filters > Monitored Nodes** and then click  .  
Select **Computer > Windows** or **Unix** from the menu. The Create New Monitored Node dialog box appears.
3. Specify the Primary DNS Name, IP address, Operating System, and Processor Architecture of the node and click **OK**.

The newly created node is saved as a Configuration Item (CI) instance in Run-time Service Model (RTSM).

**Caution:** Ensure not to install any other software on the SAP HANA system. The components of SAP HANA can only be installed by certified hardware partners, or any person holding certification. Hence, the Operations Agent should not be installed on the SAP HANA system. It is strongly recommended to use remote managed node for monitoring HANA system.

For more information, see [SAP documentation](#).

**Note:** Ensure to activate the remote managed node with Operations Agent on OMi server and grant certificate.


## Task 2: Deploying the HANA Discovery Aspect

To discover the SAP HANA databases in the environment, deploy the aspects based on the deployment scenarios to the remote managed node:

- If the managed node monitors the SAP HANA nodes based on Standard, MCOD or MCOS deployment scenario, then deploy only the HANA System DB Service Discovery aspect.
- If the managed node monitors the SAP HANA nodes based on MDC deployment scenario, then first deploy the HANA System DB Service Discovery aspect and then deploy the HANA Tenant DB Service Discovery aspect.

To deploy the aspect, follow these steps:

**Note:** Before you deploy the aspect, you must ensure to place the HANA JDBC driver in the following instrumentation directory on the managed node: `%ovdatadir%bin\instrumentation`.

1. Open the Management Templates & Aspects pane:  
On OMi 10.x, click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folders pane:  
**Configuration Folders > Database Management > SAP HANA > Aspects**
3. In the HANA Aspects folder, click the **HANA System DB Service Discovery** or **HANA Tenant DB Service Discovery** that you want to deploy, and then click . The Assign and Deploy wizard opens.
4. In the **Configuration Item** tab, click the remote managed node CI and then click **Next** to go to **Required Parameters**.
5. In the **Required Parameters** tab, you must specify the mandatory parameters.



a. **For HANA System DB Service Discovery aspect,**


Parameter Name	Description
SystemDB's JDBC URL	JDBC URL to connect with HANA system database.  For example, jdbc:sap://hanavm1.ind.com:31015;hanavm1:31015?reconnect=true&timeout=0
Username for HANA System DB	Username to connect to HANA system database.
Password for HANA System DB	Password to connect to HANA system database.


b. **For Tenant DB Service Discovery aspect,**

Parameter Name	Description
TenantDB's JDBC URL	JDBC URL to connect with HANA tenant database.  For example, jdbc:sap://hanavm1.ind.com:32017;hanavm1:32017?reconnect=true&timeout=0
Username for HANA Tenant DB	Username to connect to HANA tenant database.
Password for HANA Tenant DB	Password to connect to HANA tenant database.

6. Depending on the aspect you are deploying, perform one of the following steps in the **Parameter Summary** tab:

a. **For HANA System DB Service Discovery aspect**

- i. The **SystemDB's JDBC URL** and **Frequency for running SystemDB Discovery (Hours)** are the parameters available in this tab. Select the parameter you want to edit and click  **Edit**. The Edit parameter window appears.
- ii. In the **Instance Values** pane, double click the parameter and edit the value.

- iii. In the **Dependent Values** pane, select the parameter you want to edit and click  **Edit**. The Edit Parameter window is displayed.



**Note:** For SSL configurations, you must specify the value for the **Encrypt** parameter. You need to set the value to true to enable SSL encryption.

Based on your set up, you need to specify the values for other parameters related to SSL.

**Note:** The **High Availability Setup** parameter is applicable for High Availability scenario only. The default value is **False**. For High Availability scenario, set the value to **True**.

- iv. Enter the value and click **OK**.
- v. Click **OK** again and then click **Next**.

b. **For HANA Tenant DB Service Discovery aspect**

- i. The **TenantDB's JDBC URL** and **Frequency for running TenantDB Discovery (Hours)** are the parameters available in this tab. Select the parameter you want to edit and click  **Edit**. The Edit parameter window appears.
- ii. In the **Instance Values** pane, double click the parameter and edit the value.
- iii. In the **Dependent Values** pane, select the parameter you want to edit and click  **Edit**. The Edit Parameter window is displayed.

**Note:** The **High Availability Setup** parameter is applicable for High Availability scenario only. The default value is **False**. For High Availability scenario, set the value to **True**.

- iv. Enter the value and click **OK**.
- v. Click **OK** again and then click **Next**.

7. (Optional) In **Parameter Summary** tab on OMi 10.x, click **Next** to go to the **Configure Options** tab.

If you do not want to enable the assignment immediately, clear the or Enable Assignment(s) check box.

You can enable the assignment later using the Assignments & Tuning pane.

8. Click **Finish**.

**Note:** After the **HANA System DB Service Discovery** or **HANA Tenant DB Service Discovery** aspect is deployed, a message stating the Assignment and deployment jobs created appears. To check the status of the deployment job, go to the following location:

On OMi 10.x, click **Administration > Monitoring > Deployment Jobs**.

## Task 3: Verifying Discovery

After you deploy the **HANA System DB Service Discovery** or **HANA Tenant DB Service Discovery** aspect, you must verify if the CIs are populated in the Browse Views.

To view the CIs populated in the Browse Views pane, follow these steps:

1. Open the Event Perspective pane:  
On OMi 10.x, click **Workspaces > Operations Console > Event Perspective**.
2. In the Browse Views pane, select the **HANA\_Topology** or **Hana\_Deployment** view.

The CIs are populated in the Browse Views pane.

## Task 4: Deploying the HANA Management Templates or HANA Aspects

This section provides information about user privilege required for monitoring, data collection, deploying management templates and aspects. For more information about deploying HANA Management Template, go to [Task 4a: Deploying HANA Management Templates](#) and for more information about deploying HANA Aspects, go to [Task 4b: Deploying HANA Aspects](#).

## User Privilege

OMi MP for SAP HANA user must be assigned the MONITORING role of the standard SAP HANA database, that contains the read-only privileges for all the system and monitoring views.

**Note:** In case of MDC deployment scenario, ensure the following:

- The roles should be added to be both the System DB and all the tenants DB.
- In this deployment scenario, the OMi MP for SAP HANA user must be assigned the **MONITORING** roles of the standard SAP HANA database.

## Data Collection

Frequency (polling interval) at which each Aspect must be monitored is predefined with a default value in a specific frequency parameter. Frequency parameter is an expert parameter that is defined for each of the metrics regardless of whether they are for generating events or not.

Following are the four predefined frequency parameters:

Parameter	Frequency
Very High	5 mins
High	15 mins
Medium	1 hour
Low	24 hours

After Management Templates and Aspects are deployed, collector is triggered based on the predefined frequency parameter in a specific Aspect. You can modify the default value of the parameter at the following levels:

- During deployment of the Management Template or Aspects using the Management Templates & Aspects pane.
- After deployment using the Assignments & Tuning pane.

## Task 4a: Deploying HANA Management Templates

You must deploy the HANA System DB Discovery aspect even if the CIs are already populated by any other source such as SiteScope, DDM and so on. Also deploy the HANA Tenant DB Discovery aspect if tenants are available.

For more information, see [Task 2: Deploying the HANA Discovery Aspect](#).


You can deploy the HANA Management Templates by following these steps:

1. Open the Management Templates & Aspects pane:

On OMi 10.x, click **Administration > Monitoring > Management Templates & Aspects**.


2. In the Configuration Folders pane:


**Configuration Folders > Database Management > SAP HANA > Management Templates**

3. In the **HANA Management Templates** folder, select the **Management Template** that you want to deploy, and then click . The Assign and Deploy wizard opens.
4. In the **Configuration Item** tab, select the discovered HANA system to which you want to assign the Management Template, and then click **Next** to go to the **Required Parameters** tab.

**Note:** You do not need to specify the values for the required parameters as these have been already specified while deploying the HANA Service Discovery Aspect.

5. Click **Next** to go to **Parameter Summary** tab on OMi 10.x.

**Note:** In **Parameter Summary** tab on OMi 10.x, you can override the default values of any parameter. You can specify a value for each parameter at the Management Template level. By default, parameters defined as expert parameters are not shown. To view expert parameters, click  **Show Expert Parameters**.

6. (Optional). In **Parameter Summary** tab on OMi 10.x, select the **SAP HANA Database SID** parameter, and click  **Edit**. The Edit Instance Parameter: SAP HANA database SID window appears.

7. (Optional). In the Dependent Values pane, you can edit the values by following these steps:

- a. Select a parameter and click  **Edit**.

For example, you can select **Frequency for Service Status**. The Edit Parameter: Frequency for Service Status window appears.

- b. Click **Value**, specify the value.
- c. Click **OK**.

8. In **Parameter Summary** tab on OMi 10.x, click **Next** to go to **Configure Options** tab.

9. (Optional). If you do not want to enable the assignment immediately, clear the or Enable Assignment(s) check box.

On OMi 10.x, clear the **Enable Assignment(s)** check box.

You can enable the assignment later using the Assignments & Tuning pane.


10. Click **Finish**.

## Task 4b: Deploying HANA Aspects

You must deploy the HANA System DB Discovery aspect even if the CIs are already populated by any other source such as SiteScope, DDM and so on. Also deploy the HANA Tenant DB Discovery aspect if tenants are available.


For more information, see [Task 2: Deploying the HANA Discovery Aspect](#)


You can deploy HANA Aspects to the remote managed nodes by following these steps:


1. Open the Management Templates & Aspects pane:  
On OMi 10.x, click **Administration > Monitoring > Management Templates & Aspects**.
2. In the Configuration Folders pane:  
**Configuration Folders > Database Management > SAP HANA > Aspects**
3. In the Management Templates & Aspects pane, click the HANA Aspect that you want to deploy, and then click . The Assign and Deploy wizard opens.
4. In the **Configuration Item** tab, click the remote managed node CI to which you want to assign the Aspect, and then click **Next** to go to **Required Parameters**.

**Note:** To view remote managed node, select the **Also Show CIs of Type Node** check box.

5. In the **Required Parameters** tab, update the SAP HANA database SID.
6. Click **Next** to go to **Parameter Summary** tab on OMi 10.x.

**Note:** In **Parameter Summary** tab on OMi 10.x, you can override the default values of any parameter. You can specify a value for each parameter at the Aspect level. By default, parameters defined as expert parameters are not shown. To view expert parameters, click  **Show Expert Parameters**.

7. In **Parameter Summary** tab on OMi 10.x, select the **SAP HANA Database SID** parameter, and click  **Edit**. The Edit Instance Parameter: SAP HANA database SID window appears.

8. *(Optional)*. In the Dependent Values pane, you can edit the values by following these steps:
  - a. Select a parameter and click  **Edit**. For example, you can select **Frequency for Service Status**.

The Edit Parameter: Frequency for Service Status window appears.

- b. Click **Value**, specify the value and click **OK**.
  - c. Click **OK**.
9. Click **Next** to go to **Configure Options** tab.
10. *(Optional)*. If you do not want to enable the assignment immediately:

On OMi 10.x, clear the **Enable Assignment(s)** check box.

You can enable the assignment later using the Assignments & Tuning pane.
11. Click **Finish**.

## Monitoring SAP HANA Environment

After you deploy Management Template and Aspects, you can analyze the status and health of HANA CIs from the following perspectives:

### Event Perspective

The Event Perspective provides information of events from an event perspective. In the Event Perspective, you can view the event information of the SAP HANA CI that are monitored by OMi MP for SAP HANA.

To view the Event Perspective of SAP HANA CIs, follow these steps:

1. Open the Operations Management pane:

On OMi 10.x, click **Workspaces > Operations Console > Event Perspective**.

The View Explorer pane appears.
2. In the **Browse Views** tab, select **HANA\_Deployment** that contains the SAP HANA CIs for which you want to view the events. Alternatively, you can use **Search** tab to find a SAP HANA CI.
3. Click the SAP HANA CI for which you want to view the Event Perspective. The list of events for the selected SAP HANA CI appears on the Event Browser pane.

When you click an event from the Event Browser, the Event Details pane opens where you can view the following details:

- **General** - Displays the detailed information about the selected event such as Severity, Lifecycle State, Priority, Related CI and so on.
- **Additional Info** - Displays more detailed information about the attributes of the selected event.
- **Source Info** - Displays an overview of the information available about the source of the selected event.
- **Actions** - Displays the list of actions available for a selected event. There are two types of possible actions: User Actions and Automatic Action.
- **Annotations** - Displays a list of the annotations attached to the selected event.
- **Custom Attributes** - Displays a list of the attributes that either an administrator or the responsible user manually configured and added to the selected event.
- **Related Events** - Displays an overview of all the events that are related to the event selected in the Event Browser.
- **History** - Displays the history of the selected event.
- **Resolver Hints** - Displays the information used to identify the node and CI associated with an event.
- **Instructions** - Displays instruction information designed to help operators handle the associated event.
- **Forwarding** - Displays the transfer of ownership details if any, for the events.

### Health Perspective

The Health Perspective provides a high-level view of the overall health information of the related CIs in the context of events. In the Health Perspective, you can view the health information of the SAP HANA CIs that are monitored by OMi MP for SAP HANA.

To view the Health Perspective of SAP HANA CIs, follow these steps:

1. Open the Operations Management pane:

On OMi 10.x, click **Workspaces > Operations Console > Health Perspective**.

The View Explorer pane appears.

2. In the **Browse Views** tab, select **HANA\_Deployment** that contains the SAP HANA CIs for which you want to view the health related events. Alternatively, you can use **Search** tab to find a SAP HANA CI.
3. Click the SAP HANA CI for which you want to view the Health Perspective. The list of health related events for the selected SAP HANA CI appears on the Event Browser pane.



When you click an event from the Event Browser pane, the following panes appear:

- **Health Top View** - Displays the health top view of the selected event.
- **Health Indicators** - Displays the Key Performance Indicators (KPIs) and HIs related to the CI that you select from the Health Top View pane.
- **Actions** - Displays the list of actions available for a selected event.

### Performance Perspective


Performance Perspective enables you to populate graphs from existing graph templates. You can also plot customized graphs by selecting the required metrics for a specific CI.

To view the Performance Perspective of SAP HANA CIs using graphs, follow these steps:

1. Open the Operations Management pane:

On OMi 10.x, click **Workspaces > Operations Console > Performance Perspective**.

The View Explorer pane appears.

2. In the **Browse Views** tab, select **HANA\_Deployment**. The list of CIs appear. Select a specific CI of the type **hana\_instance**. The performance pane appears, which lists the default graphs available for the **HANA\_Deployment** view.
3. To create graphs, click the graph you want to plot from the **Graphs** tab, and then click  **Draw Graphs**. The selected graph is plotted on the right pane.

**Note:** For more information about Event Perspective, Health Perspective, and Performance Perspective, see the *Operations Manager i Concepts Guide*.

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