



OMi Management Pack for Microsoft Skype for Business Server

Software Version: 1.00

For Operations Manager i for Linux and Windows® operating systems

Installation Guide

Document Release Date: July 2017

Software Release Date: December 2015



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Chapter 1: Introduction

The HPE OMi Management Pack for Microsoft Skype for Business Server (OMi MP for Microsoft Skype for Business Server) works with Operations Manager i (OMi) and enables you to monitor Microsoft Lync 2010, 2013, and Skype for Business Servers 2015 available in your environment. The OMi MP for Microsoft Skype for Business Server includes the following components for monitoring performance and availability of Lync or Skype for Business Servers in your environment:

- Microsoft Skype for Business Server Management Templates
- Microsoft Skype for Business Server Aspects
- Microsoft Skype for Business Server Policy Template group
- Parameters
- Run-time Service Model (RTSM) Views
- Event Type Indicators (ETIs)
- Health Indicators (HIs)
- Configuration Item (CI) and Configuration Item Types (CITs)
- Topology Based Event Correlation (TBEC)
- Tools
- Graph Templates

For more information about the components, see the *OMi Management Pack for Microsoft Skype for Business Server Online Help* or *User Guide*.

Abbreviations Used in this Manual

Abbreviations	Expansion
OMi	Operations Manager i
RTSM	Run-time Service Model
OMi MP	OMi Management Pack
OMi MP for Microsoft Skype for Business Server	OMi Management Pack for Microsoft Skype for Business Server

Related Documentation

For more information about OMi MP for Microsoft Skype for Business Server, see the following documents:

- OMi MP for Microsoft Skype for Business Server - *Release Notes*
- OMi MP for Microsoft Skype for Business Server - *User Guide*
- OMi MP for Microsoft Skype for Business Server - *Reference 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](#)".

Chapter 2: Installing OMi MP for Microsoft Skype for Business Server

This section provides information about installing OMi MP for Microsoft Skype for Business Server on BSM 9.2x or OMi 10.x (Linux or Windows) servers.

Installation Package

The following section provides information about the installation media for OMi MP for Microsoft Skype for Business Server . The OMi MP for Microsoft Skype for Business Server English locale is available through the electronic media (e-media) at the following location .

The e-media contains the software and the product documentation. In a distributed environment, it must be installed on all OMi 10.x - Data Processing Servers (DPS) and Gateway Servers (GWS).

The following table provides information about the documentation available in the package:

Document	Location	Document
Online Help	<p>On BSM 9.2x console Help menu.</p> <p>From the BSM console, go to Help > BSM Help > Application Administration > Operations Management > OMi Management Pack for Microsoft Skype for Business Server</p> <p>On OMi 10.x console ? menu.</p> <p>From the OMi console, go to ? > General Help > Administration Guide > Management Packs > Management Pack Documentation > OMi Management Pack for Microsoft Skype for Business Server.</p>	<p>To provide information about the following:</p> <ul style="list-style-type: none"> Using Microsoft Lync Management Templates, Aspects and Policy Templates Using Indicators - HIs and ETIs

Document	Location	Document
User Guide	DOCUMENTATION\guides	
Reference Guide		To provide complete information about the metrics, policies and corresponding events and instructions.
Installation Guide	DOCUMENTATION\guides	To provide information about installing the OMi MP for Microsoft Skype for Business Server 1.00.
Interactive Installation Guide		
Release Notes	DOCUMENTATION\releasenotes	To provide information about the following: <ul style="list-style-type: none"> • Salient Features • Installation Notes

Prerequisite

The following section lists the software prerequisites for installing OMi MP for Microsoft Skype for Business Server on BSM 9.2x (Linux or Windows) or OMi 10.x (Linux or Windows) server.

Software Requirements

Before installing OMi MP for Microsoft Skype for Business Server, the following components must be installed and configured on the BSM 9.2x or OMi 10.x Servers.

Management Server

Component	Version
BSM	9.23 or later*
Operations Manager i	9.23 or later*
Monitoring Automation	9.23 or later*
(Optional) OMi MP for Infrastructure	1.10 or later*
(Optional) OMi MP for Microsoft SQL Server	1.01
(Optional) OMi MP for Microsoft Active Directory	1.00

Note: For large scale environments, it is recommended to use BSM 9.24 or later.

Note: To monitor Lync servers, SQL servers, Domain Controllers and the underlying infrastructure elements as a composite application, you must install OMi Management Pack for Microsoft SQL Server 1.01, and OMi Management Pack for Active Directory 1.00 in addition to OMi MP for Microsoft Skype for Business Server and OMi Management Pack for Infrastructure 1.10.

Managed Node

Component	Version
Operations Agent	11.12 or later*

Note: * For more information about compatible software applications, see the Support Matrix at <https://softwaresupport.hpe.com/km/KM323488>.

Installation Checklist

Make sure that the installation tasks described in the following table are completed in the specified order:

If you have already installed OMi 10.x, skip to [Task 6](#).

Management Server

Serial	Task	Reference
1	Check the installation prerequisites for BSM	See the <i>General Prerequisites</i> section in the <i>Business Service Management Installation Guide</i> .

Serial	Task	Reference
2	Install BSM version 9.23 or later	See the <i>Install BSM 9.20</i> and <i>Install the latest BSM 9.2x Minor Minor Release and Patch</i> chapters in the <i>Business Service Management Installation Guide</i> .
3	Install Monitoring Automation version 9.23 or later	See the <i>Installing Monitoring Automation</i> section in the <i>Operations Manager i Monitoring Automation Installation Guide</i> .
4	Verify the Monitoring Automation installation	See the <i>Verifying the Monitoring Automation Installation</i> and <i>Using Monitoring Automation</i> chapters in the <i>Monitoring Automation for Operations Manager i Installation Guide</i> .
5	<p>Install Additional Software Update for Monitoring Automation 9.23</p> <p>Note: If you are installing OMi MP for Microsoft Skype for Business Server on BSM 9.23, you must install additional software update for Monitoring Automation 9.23.</p>	See the " Installing Additional Software Update for Monitoring Automation 9.23 " section.
6	Clean up OMi MP for Infrastructure version 1.00	If OMi MP for Infrastructure version 1.00 is already installed, see <i>Removing OMi MP for Infrastructure version 1.00</i> in the <i>OMi Management Pack for Infrastructure 1.10 Installation Guide</i> .
7	Install OMi MP for Infrastructure 1.10	See the chapter <i>Installing OMi MP for Infrastructure 1.10</i> in the <i>OMi Management Pack for Infrastructure 1.10 Installation Guide</i> .
8	(Optional). Install OMi MP for Microsoft SQL Server 1.00	See the chapter <i>Installing OMi MP for Microsoft SQL Server version 1.00 on BSM or OMi</i> in the <i>OMi Management Pack for Microsoft SQL Server 1.01 Installation Guide</i> .
9	(Optional). Install OMi MP for Microsoft SQL Server 1.01	See the chapter <i>Installing OMi MP for Microsoft SQL Server version 1.01 on BSM or OMi</i> in the <i>OMi Management Pack for Microsoft SQL Server 1.01 Installation Guide</i> .
10	(Optional). Install OMi MP for Microsoft Active Directory 1.00	See the chapter <i>Installing OMi MP for Microsoft Active Directory version 1.00 on BSM or OMi</i> in the <i>OMi Management Pack for Microsoft Active Directory 1.00 Installation Guide</i> .
11	Install OMi MP for Microsoft Skype	See the section " Installing OMi MP for Microsoft

Serial	Task	Reference
	for Business Server 1.00	Skype for Business Server BSM 9.2x or on OMi 10.x Server ".
12	Verify OMi MP for Microsoft Skype for Business Server 1.00 installation	See the section " Verifying the OMi MP for Microsoft Skype for Business Server Installation "
13	Apply the License	See the section " Applying the License ".

Managed Node

Task	Reference
Install Operations Agent 11.12 or later	See the <i>Installing the Operations Agent 11.12</i> chapter in the <i>Operations Agent and Operations Smart Plugins for Infrastructure Installation Guide</i> .
Install hotfix QCCR1A184632 on Windows managed node	If Operation Agent 12.00 is installed on a Windows managed nodes, then the Skype discovery and collection fails. For more information, see the <i>OMi MP for Microsoft Skype for Business - Release Notes</i> .

Installing Additional Software Update for Monitoring Automation 9.23

Note: You must install additional software update for Monitoring Automation 9.23 only for BSM 9.23.

Before installing OMi MP for Microsoft Skype for Business Server, you must install an additional software update for Monitoring Automation 9.23. If you are using Monitoring Automation 9.24 or a later version, you do not need to install this additional software update. The additional software update for Monitoring Automation 9.23 (HPOprMA_update.zip) is available in the e-media or MPDVD, under the folder HPOprMA_update.

For more information about installing the update software, see "[Installing Monitoring Automation 9.23 Software Update](#)".

Installing OMi MP for Microsoft Skype for Business Server BSM 9.2x or on OMi 10.x Server

You can use the e-media to install the OMi MP for Microsoft Skype for Business Server on the BSM 9.2x or OMi 10.x (Linux or Windows) server. The following section provides the installation instructions:

On Linux

Note: In a BSM 9.2x or OMi 10.x distributed environment, OMi MP for Microsoft Skype for Business Server must be installed on all BSM 9.2x or OMi 10.x servers, including DPS and GWS.

Follow these steps:

1. Log on as root user.

Note: If OMi is configured as a non-root user, then log on as an OMi non-root.

2. Set the umask by typing the command `umask 022`.
3. Copy and extract the `OMi_MP_for_MSSkype_<version>.zip` file to a *<Temp folder>* on BSM 9.2x or OMi 10.x servers.
4. Run the following command:

```
<TEMP Folder>/mpinstall.sh -i
```

5. To accept the End User License Agreement (EULA), type **Yes** or **Y** and to decline the license agreement, type **No** or **N**.

After the installation is complete, a message appears stating: OMi Management Pack Installation Finished.

On Windows

Note: In a BSM 9.2x or OMi 10.x distributed environment, OMi MP for Microsoft Skype for Business Server must be installed on all BSM 9.2x or OMi 10.x servers, including DPS and GWS.

Follow these steps:

1. Copy and extract the `OMi_MP_for_MSSkype_<version>.zip` file to a *<Temp folder>* on the BSM 9.2x or OMi 10.x servers.
2. Open the command prompt, change the directory to the *<Temp folder>*, 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**.

After the installation is completed, a message appears stating: OMi Management Pack Installation Finished.

Verifying the OMi MP for Microsoft Skype for Business Server Installation

This section provides information about verifying the installation of OMi MP for Microsoft Skype for Business Server on BSM 9.2x or OMi 10.x (Linux and Windows) servers.

You can perform any one of the following checks to verify the OMi MP for Microsoft Skype for Business Server installation:

- Check the log files for any errors on GWS (BSM 9.2x or OMi 10.x), DPS (BSM 9.2x or OMi 10.x), and typical servers (BSM 9.2x or 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 (BSM 9.2x or OMi 10.x) GWS and (BSM 9.2x or OMi 10.x) DPS at the following location:

On BSM < or = 9.25

Linux: /opt/HP/BSM/log/EJBContainer/opr-configserver.log

Windows: %TOPAZ_HOME%\log\EJBContainer\opr-configserver.log

On BSM > or =9.26 and OMi 10.x

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

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

- Check the following location BSM 9.2x or on the OMi 10.x console:
 - On BSM 9.2x, click **Admin > Operations Management > Setup > Content Packs**.
The **OMi Management Pack for Microsoft Skype for Business Server 1.00** must appear in the Content Pack Definitions pane.
 - On OMi 10.x, click **Administration > Setup and Maintenance > Content Packs**.
The **OMi Management Pack for Microsoft Skype for Business Server 1.00** must appear in the Content Pack Definitions pane.
- To list the OMi MPs installed on the BSM 9.2x or OMi 10.x server, run the following command on BSM 9.2x or OMi 10.x GWS:

For Linux:

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

For Windows:

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

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

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 BSM 9.2x, click **Admin > Platform > Setup and Maintenance > License Management**.

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>.

Chapter 3: Getting Started

The following section provides information about the tasks required to monitor Lync (2010 and 2013) or Skype for Business Server 2015 using OMi MP for Microsoft Skype for Business Server.

Task 1: Adding Nodes to BSM 9.2x or OMi 10.x Console

Note: If the Microsoft Lync Server (2010 and 2013) that you want to monitor is already being monitored by Smart Plug-in (SPI) for Microsoft Enterprise Servers, then remove the SPI artifacts and data sources from the managed node hosting the Microsoft Lync Servers before proceeding.

Note: If the Node already exists in Run-time Service Model (RTSM), you can skip this step and proceed to "[Task 2: Deploying the Skype Discovery and Skype Configuration Aspects](#)" on the [next page](#).

Before you begin monitoring, you need to add the nodes by following these steps:

1. Open the Monitored Nodes pane:
On BSM 9.2x, click **Admin > Operations Management > Setup > Monitored Nodes**.
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 , and then click **Computer > <select the OS type>**. The Create New Monitored Nodes dialog box opens.
3. Specify the Primary DNS Name and verify the IP Address.
4. Specify the Operating System and Processor Architecture of the node from the drop-down list, and then click **OK**.

The newly created node is saved as a CI instance in RTSM.

Note: The node with Operations Agent must be connected to OMi Server and certificate must be granted.

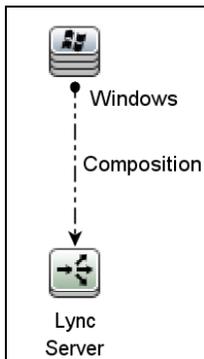
Task 2: Deploying the Skype Discovery and Skype Configuration Aspects

Note: If Microsoft Lync Server CIs are already discovered, you can skip this step and proceed to "[Task 4: Deploying the Microsoft Skype for Business Management Templates or Aspects](#)".

Deploy the Skype Discovery and Skype Configuration Aspects to a Computer CI to discover all the Lync Server CIs.

Deploying Skype Discovery Aspect

The Skype Discovery Aspect discovers the Lync Server CIs:



1. Open the Management Templates & Aspects pane:

On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

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

2. In the Configuration Folders pane:

Click **Configuration Folders > Microsoft Application Management > Microsoft Skype for Business Server > Aspects**.

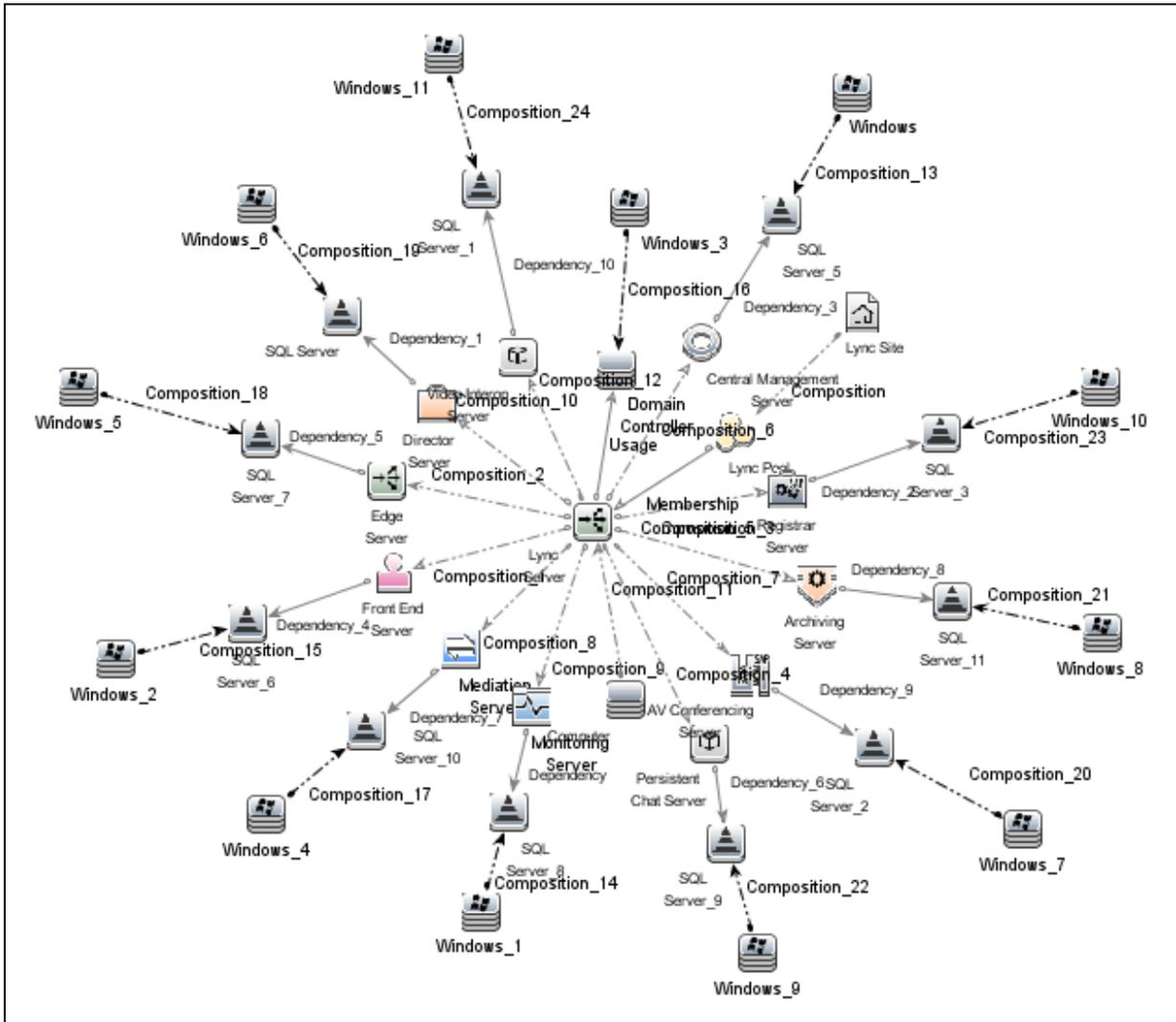
3. In the Management Template & Aspects pane, select the **Skype Discovery** Aspect, and then click  **Assign and Deploy Item**. The Assign and Deploy Wizard appears.

4. In the **Configuration Item** tab, select the **Windows** managed node CI and then click **Next**.
5. In the **Required Parameters** tab, click **Finish**.

Note: The Skype Discovery Aspect does not have mandatory parameters. You will get a notification stating the following message: There are no parameters that require editing for this Assignment.

Deploying Skype Configuration Aspect

The Skype Configuration Aspect discovers the Lync Roles and Services, Lync Pool, Lync Site, and other CIs:



Note: When you are deploying the Skype Configuration Aspect on any server other than the Edge server, ensure the following:

- Use the credentials of the **domain user** for **DISCOVERY_USERNAME** and **DISCOVERY_PASSWORD** parameters.

The **USERNAME** and **PASSWORD** parameters are optional. You can use the same credentials as the domain user or use any other credential.

1. Open the Management Templates & Aspects pane:

On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

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

2. In the Configuration Folders pane:

Click **Configuration Folders > Microsoft Application Management > Microsoft Skype for Business Server > Aspects**.

3. Select the **Skype Configuration** Aspect, and then click  **Assign and Deploy Item**. The Assign and Deploy Wizard appears.

4. In the **Configuration Item** tab, select the **Windows** CI and then click **Next**.

5. In the **Required Parameters** tab, follow these steps:

Make sure the domain user has the following privileges:

- CSViewOnlyAdministrator
 - RTCUniversalReadOnlyAdminsw
- a. Select the **DISCOVERY_USERNAME** parameter in the list, and then click . The USERNAME dialog box opens.
 - b. Specify the value in the `<domain>\<username>` format and then click **OK**.
 - c. Select the **DISCOVERY_PASSWORD** parameter in the list, and then click . The PASSWORD dialog box opens.
 - d. Click **Value** and type a value in the **Password** field.
 - e. In the **Verify Password** field and type the same password and then click **OK**.
 - f. Click **Next**.

6. *(Optional)*. In the **All Parameters** tab on BSM 9.2x or **Parameter Summary** tab on OMi 10.x, follow these steps:
 - a. Select the **USERNAME** parameter in the list, and then click . The USERNAME dialog box opens.
 - b. Specify the value and then click **OK**.
 - c. Select the **PASSWORD** parameter in the list, and then click . The PASSWORD dialog box opens.
 - d. Click **Value** and type a value in the **Password** field.
 - e. In the **Verify Password** field and type the same password and then click **OK**.
 - f. Click **Next**.
7. *(Optional)*. If you do not want to enable the assignment immediately, follow the step:

On BSM 9.2x, clear the **Enable Assigned Objects** check box.

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

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

Deploying Skype Configuration Aspect on the Edge Server

Note: When you are deploying the Skype Configuration Aspect on an Edge server, ensure the following:

- Use the credentials of the **local administrator** of the node for **DISCOVERY_USERNAME** and **DISCOVERY_PASSWORD** parameters.
- Use the credentials of **domain user** with the following privileges for **USERNAME** and **PASSWORD** parameters:
 - CSViewOnlyAdministrator
 - RTCUniversalReadOnlyAdminsw

When you are deploying the Skype Configuration Aspect on any server other than the Edge server, ensure the following:

- Use the credentials of the **domain user** for **DISCOVERY_USERNAME** and **DISCOVERY_PASSWORD** parameters.

The **USERNAME** and **PASSWORD** parameters are optional. You can use the same credentials as the domain user or use any other credential.

1. Open the Management Templates & Aspects pane:

On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

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

2. In the Configuration Folders pane:

Click **Configuration Folders > Microsoft Application Management > Microsoft Skype for Business Server > Aspects**.

3. Select the **Skype Discovery** Aspect, and then click  **Assign and Deploy Item**. The Assign and Deploy Wizard appears.

4. In the **Configuration Item** tab, select the **Windows** managed node CI and then click **Next**.

5. In the **Required Parameters** tab, to enter the value of required parameters follow these steps:

- a. Select the **DISCOVERY_USERNAME** parameter in the list, and then click . The USERNAME dialog box opens.

- b. Specify the value in the `<username>` format and then click **OK**.

- c. Select the **DISCOVERY_PASSWORD** parameter in the list, and then click . The PASSWORD dialog box opens.

- d. Click **Value** and type a value in the **Password** field.

- e. In the **Verify Password** field and type the same password and then click **OK**.

- f. Click **Next**.

6. *(Optional)*. In the **All Parameters** tab on BSM 9.2x or **Parameter Summary** tab on OMi 10.x, follow these steps

- a. Select the **USERNAME** parameter in the list, and then click . The USERNAME dialog box opens.

- b. Specify the value in the `<domain>\<username>` format and then click **OK**.

- c. Select the **PASSWORD** parameter in the list, and then click . The PASSWORD dialog

- box opens.
- d. Click **Value** and type a value in the **Password** field.
 - e. In the **Verify Password** field and type the same password and then click **OK**.
 - f. Click **Next**.
7. *(Optional)*. If you do not want to enable the assignment immediately, follow the step:
- On BSM 9.2x, clear the **Enable Assigned Objects** check box.
- On OMi 10.x, clear the **Enable Assignment(s)** check box.
- You can then enable the assignment later using the Assignments & Tuning pane.
8. Click **Finish**.

Note: After the Skype Discovery and Skype Configuration Aspects are deployed, the following message appears: *Assignment and deployment jobs created*. To check the status of the deployment job, go to the following location:

On BSM 9.2x, **Admin > Operations Management > Monitoring > Deployment Jobs**.

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

Task 3: Verifying Discovery

After you deploy the Skype Discovery and Skype Configuration Aspects, you must verify if the CIs are populated in the View Explorer.

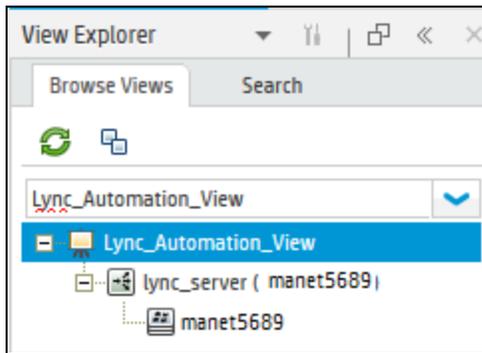
To view the CIs discovered, follow these steps:

1. Open the Event Perspective pane:

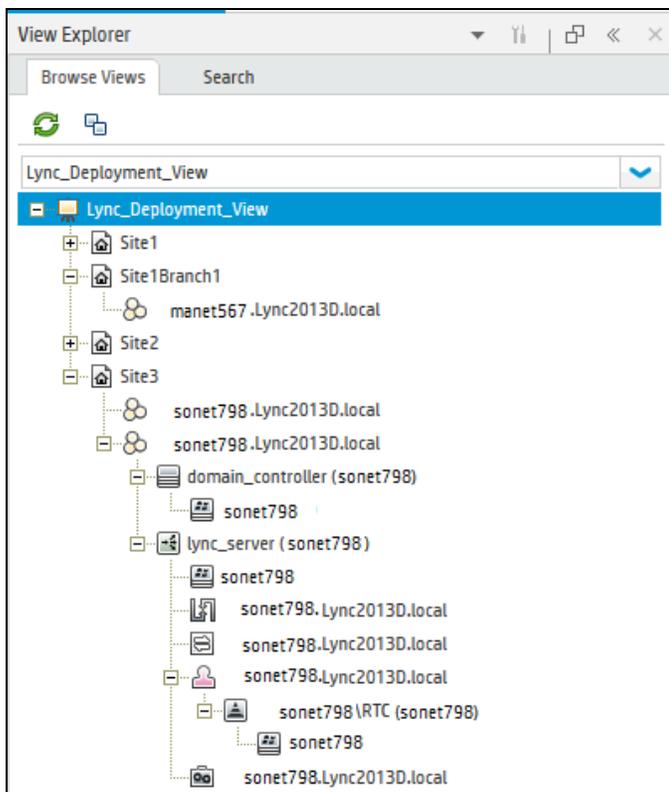
On BSM 9.2x, click **Applications > Operations Manager > Event Perspective**.

On OMi 10.x, click **Workspaces > Operations Console > Event Perspective**.
2. In the **Browse Views** tab, follow these steps:

For verifying the Skype Discovery Aspect deployment, select the **Lync_Automation_View**.



For verifying the Skype Configuration Aspect deployment, select the **Lync_Deployment_View**.



Task 4: Deploying the Microsoft Skype for Business Management Templates or Aspects

You can deploy the Management Templates to the Lync Site CIs. For more information about deploying Management Template, go to [Task 5a: Identifying and Deploying the Microsoft Skype for Business](#)

Management Template.

You can deploy Aspects to Front End Server, Edge Server, or other CIs depending on the feature required to be monitored. For more information about deploying Aspects, go to [Task 5b: Deploying the Microsoft Skype for Business Aspects](#).

The Skype Base and Skype Configuration Aspects are deployed automatically during the deployment of any Management Template. The Skype Configuration Aspect discovers the remaining CI types, creates data sources, deploys instrumentation, and defines the schedulers for data collection. The Skype Base Aspect contains the schedule task policies for all the discovered roles.

Data Collection Process

The frequency (polling interval) at which each policy 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:

Scheduler Frequency	Default value
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 parameter value in a specific policy. You can modify the default value of the parameter at following two levels:

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

For more information about how to modify the parameter values, see *Editing Parameters*.

Task 4a: Identifying and Deploying the Microsoft Skype for Business Management Templates

Before deploying the Skype Management Templates, follow these recommendations to identify the Microsoft Skype for Business Management Template suitable for your environment:

- If you want to monitor the availability and performance of Lync 2010, 2013, and Skype Business Server 2015 and also the Key Health Indicators for Lync 2013 and Skype for Business Server 2015, you can deploy the **Essential Management Template for Skype for Business Server**.
- If you want to monitor the advanced features such as performance and health of archiving, call, Conference, storage services, QoE, and so on along with key performance and availability, you can deploy the **Extensive Management Template for Skype for Business Server**.
 - If you want to monitor the complete solution for Skype for Business Server, you can deploy the **Skype Solution Management Template for Skype for Business Server**.

As part of the solution, along with Skype for Business Servers functionality, domain controllers, Microsoft SQL Servers, and the underlying infrastructure are monitored.

Note: Before deploying the **Skype Solution Management Template for Skype for Business Server**, make sure the OMi MP for Microsoft SQL Server 1.01 is installed and Management Templates and Aspects assignments are updated to the latest version. For more information about how to update the version, see the *OMi MP for Microsoft SQL Server 1.01 - Installation Guide or User Guide*.

OMi MP for Microsoft Skype for Business Server provide a wide range of Aspects to monitor various features of Skype for Business Server. You can either deploy Aspects or customize existing Management Template to monitor additional feature. For more information about the list of Aspects, see the section *Grouping of Skype Aspects* in *OMi MP for Microsoft Skype for Business Server - User Guide*.

To deploy the Skype Management Templates to the Lync Site CIs, follow these steps:

1. Open the Management Templates & Aspects pane:

On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

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

2. In the Configuration Folders pane:

Configuration Folders > Microsoft Application Management > Microsoft Skype for Business Server> Management Templates

3. In the Management Templates & Aspects pane, select the Management Template that you want to deploy, and then click  **Assign and Deploy Item**. The Assign and Deploy wizard opens.
4. In the **Configuration Item** tab, select the Lync Site CI to assign the Management Template, and then click **Next**.
5. In the **Required Parameters** tab, to enter the required parameters detail follow these steps:
 - a. Select the **DISCOVERY_USERNAME** parameter in the list, and then click . The DISCOVERY_USERNAME dialog box opens.
 - b. Specify the value in the `<domain>\<username>` format and then click **OK**.
 - c. Select the **DISCOVERY_PASSWORD** parameter in the list, and then click . The DISCOVERY_PASSWORD dialog box opens.
 - d. Click **Value** and type a value in the **Password** field.
 - e. In the **Verify Password** field and type the same password and then click **OK**.
 - f. Click **Next**.
6. *(Optional)*. In the **All Parameters** tab on BSM 9.2x or **Parameter Summary** tab on OMi 10.x, click **Next**.
7. *(Optional)*. In the **Configure Options** tab, if you do not want to enable the assignment immediately, follow the step:

On BSM 9.2x, clear the **Enable Assigned Objects** check box.

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

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

Task 4b: Deploying the Microsoft Skype for Business Server Aspects

To deploy Microsoft Skype for Business Server Aspects to the FrontEnd Server, Edge Server, or other CIs, follow these steps:

1. Open the Management Templates & Aspects pane:

On BSM 9.2x, click **Admin > Operations Management > Monitoring > Management Templates & Aspects**.

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

2. In the Configuration Folders pane:

Configuration Folders > Microsoft Application Management > Microsoft Skype for Business Server > Aspects

3. In the Management Templates & Aspects pane, select any Aspect that you want to deploy, and then click  **Assign and Deploy Item**.

Alternately, you can right-click any Aspect that you want to deploy, and then click **Assign and Deploy Item** to open the Assign and Deploy Wizard.

4. In the **Configuration Item** tab, select the appropriate CI to deploy the Aspect and then click **Next**.

Note: If you want to deploy Aspects to Node CIs, select the **Also show CIs of type Node** check box.

5. In the **Required Parameters** tab, click **Next**.
6. In the **All Parameters** tab on BSM 9.2x or **Parameter Summary** tab on OMi 10.x, you can edit to override the default parameter values and click **Next**.
7. (*Optional*). In the **Configure Options** tab, if you do not want to enable the assignment immediately, follow the step:

On BSM 9.2x, clear the **Enable Assigned Objects** check box.

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

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

8. Click **Finish**.

Checking Topology Synchronization Settings

Note: In OMi, to monitor nodes or CIs that are monitored by HPOM, you have to perform topology synchronization between OMi and HPOM. The **HPOPrLys** topology sync package is required only when you configure topology synchronization settings between OMi and HPOM.

If you are using Smart Plug-in for Microsoft Enterprise Servers with Operations Manager, perform following steps to forward topology data from the OM Server to OMi Server.

For more information about the Topology Synchronization, see the *OMi Administration Guide*.

To check the Topology Synchronization settings, follow these steps:

1. Open the Infrastructure Settings pane from Administration:
 - On BSM 9.2x, click **Admin > Platform > Setup and Maintenance > Infrastructure Settings**.
 - On OMi 10.x, click **Administration > Setup and Maintenance > Infrastructure Settings**.
2. In the Infrastructure Settings pane, select **Applications > Operations Management**.
3. To verify the availability of toposync package to be synchronized, go to **Operations Management – HPOM Topology Synchronization Settings** and check if **HPOprLys** is available.
4. If the package is not available, add the toposync package by following these steps:
 - a. In the **Packages for Topology Sync**, click .
 - b. In **Value**, add **HPOprLys** and click **Save**.

Appendix A: Installing Monitoring Automation 9.23 Software Update

This section provides detailed information about installing the software update in a distributed BSM environment.

If you do not have a distributed BSM environment, you can skip to the section "[Installing Additional Software Update in a Typical BSM Environment](#)".

Installing Additional Software Update in a Distributed BSM Environment

In a distributed BSM environment, the BSM DPS and BSM GWS are available on different systems. The additional software update needs to be installed on both the BSM DPS and BSM GWS.

Installing Additional Software Update on BSM DPS

To install the additional software update on BSM DPS running in a distributed BSM environment, follow these steps:

1. Run the following commands to check the version of the current `opr-config-content-server.war` file:

On Linux:

```
cd /opt/HP/BSM/opr/webapps  
  
/opt/HP/BSM/opr/support/what.sh ./opr-config-content-server.war
```

On Windows:

Go to the drive where BSM is installed:

```
cd /d %TOPAZ_HOME%\opr\webapps
```

```
cscript %TOPAZ_HOME%\opr\support\what.vbs opr-config-content-server.war
```

Note: If the version number is lower than 09.23.174, then proceed to the next step. If the version number is 09.23.174 or higher, then the current BSM installation already contains the required software update and you do not need to perform the remaining steps in this section.

2. Run the following command to stop the BSM services running on BSM DPS:

On Linux:

```
/opt/HP/BSM/scripts/run_hpbsm stop
```

On Windows:

```
%TOPAZ_HOME%\bin\SupervisorStop.bat
```

3. Take a backup of the existing `opr-config-content-server.war` file, which exists in the following folder:

On Linux:

```
/opt/HPBSM/opr/webapps
```

On Windows:

```
%TOPAZ_HOME%\opr\webapps
```

The `opr-config-content-server.war` file must be backed up to a different folder.

4. Extract the `HP0prMA_update.zip` to a temporary folder and copy `opr-config-content-server.war` to the following folder:

On Linux:

```
/opt/HPBSM/opr/webapps
```

On Windows:

```
%TOPAZ_HOME%\opr\webapps
```

5. Run the following command to deploy the new WAR file from the extracted ZIP file:

On Linux:

```
/opt/HP/BSM/opr/bin/oprcfg-configuration.sh -setup omi -noGW
```

On Windows:

```
cscript %TOPAZ_HOME%\opr\bin\oprcfg-configuration.vbs -setup omi -noGW
```

6. Run the following command to start the BSM services:

On Linux:

```
/opt/HP/BSM/scripts/run_hpbsm start
```

On Windows:

```
%TOPAZ_HOME%\bin\SupervisorStart.bat
```

Installing Additional Software Update on BSM GWS

To install the additional software update on BSM GWS running in a distributed BSM environment, follow these steps:

1. Run the following commands to check the version of the current `opr-config-server.war` file:

On Linux:

```
cd /opt/HP/BSM/opr/webapps  
/opt/HP/BSM/opr/support/what.sh ./opr-config-server.war
```

On Windows:

Go to the drive where BSM is installed:

```
cd /d %TOPAZ_HOME%\opr\webapps  
cscript %TOPAZ_HOME%\opr\support\what.vbs opr-config-server.war
```

Note: If the version number is lower than 09.23.174, then proceed to the next step. If the version number is 09.23.174 or higher, then the current BSM installation already contains the required software update and you do not need to perform the remaining steps in this section.

2. Run the following command to stop the BSM services running on BSM GWS:

On Linux:

```
/opt/HP/BSM/scripts/run_hpbsm stop
```

On Windows:

```
%TOPAZ_HOME%\bin\SupervisorStop.bat
```

3. Take a backup of the existing `opr-config-server.war` file which exists in the following folder:

On Linux:

```
/opt/HPBSM/opr/webapps
```

On Windows:

```
%TOPAZ_HOME%\opr\webapps
```

The `opr-config-server.war` file must be backed up to a different folder.

4. Extract the `HPoprMA_update.zip` to a temporary folder and copy `opr-config-server.war` to the following folder:

On Linux:

```
/opt/HPBSM/opr/webapps
```

On Windows:

```
%TOPAZ_HOME%\opr\webapps
```

5. Run the following command to deploy the new WAR file from the extracted ZIP file:

On Linux:

```
/opt/HP/BSM/opr/bin/oprcfg-configuration.sh -setup omi
```

On Windows:

```
cscript %TOPAZ_HOME%\opr\bin\oprcfg-configuration.vbs -setup omi
```

6. Run the following command to start the BSM services:

On Linux:

```
/opt/HP/BSM/scripts/run_hpbsm start
```

On Windows:

```
%TOPAZ_HOME%\bin\SupervisorStart.bat
```

Installing Additional Software Update in a Typical BSM Environment

In a typical BSM environment, the BSM DPS and BSM GWS are available in the same system. To install the additional software update in a typical BSM environment, perform the following steps:

1. Run the following commands to check the version of the current `opr-config-server.war`:

On Linux:

```
cd /opt/HP/BSM/opr/webapps  
  
/opt/HP/BSM/opr/support/what.sh ./opr-config-server.war
```

On Windows:

Go to the drive where BSM is installed:

```
cd /d %TOPAZ_HOME%\opr\webapps  
  
cscript %TOPAZ_HOME%\opr\support\what.vbs opr-config-server.war
```

Note: If the version number is lower than 09.23.174, then proceed to the next step. If the version number is 09.23.174 or higher, then the current BSM installation already contains the required software update and you do not need to perform the remaining steps in this section.

2. Run the following command to stop the BSM services running on BSM Server:

On Linux:

```
/opt/HP/BSM/scripts/run_hpbsm stop
```

On Windows:

```
%TOPAZ_HOME%\bin\SupervisorStop.bat
```

3. Take a backup of the existing `opr-config-server.war` file which exists in the following folder:

On Linux:

```
/opt/HPBSM/opr/webapps
```

On Windows:

```
%TOPAZ_HOME%\opr\webapps
```

The `opr-config-server.war` file must be backed up to a different folder.

4. Extract the `HP0prMA_update.zip` to a temporary folder and copy `opr-config-server.war` to the following folder:

On Linux:

```
/opt/HPBSM/opr/webapps
```

On Windows:

```
%TOPAZ_HOME%\opr\webapps
```

5. Run the following command to deploy the new WAR file from the extracted ZIP file:

On Linux:

```
/opt/HP/BSM/opr/bin/oprcfg-configuration.sh -setup omi
```

On Windows:

```
cscript %TOPAZ_HOME%\opr\bin\oprcfg-configuration.vbs -setup omi
```

6. Run the following command to start the BSM services:

On Linux:

```
/opt/HP/BSM/scripts/run_hpbsm start
```

On Windows:

```
%TOPAZ_HOME%\bin\SupervisorStart.bat
```

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