

# HP Operations Smart Plug-in for Blackberry Enterprise Server Software

for the HP Operations Manager for Windows Software

Software Version: 03.00

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## Installation Guide

Document Release Date: June 2009

Software Release Date: June 2009



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# Contents

- 1 Preface ..... 9
  - Introduction .....9
  - Audience .....9
  - Prerequisites .....9
  - Related Documents.....9
  
- 2 Introduction ..... 11
  - About the BlackBerry SPI.....12
  - Operations Manager.....13
  - Architecture .....14
    - BlackBerry SPI software components .....15
    - BlackBerry SPI License.....15
  - BlackBerry SPI best practices & use cases.....17
    - Metric data collection.....17
    - Add-On Policies .....18
  
- 3 Preparation for Installation..... 19
  - HP OM for Windows Management Server Prerequisites .....20
    - Hardware Requirements .....20
    - Software Requirements .....20
  - BlackBerry Enterprise Server (BES) Prerequisites.....21
    - Hardware Requirements .....21
    - Software Requirements .....21
  - Licenses .....22
    - Evaluation license .....22
    - Permanent licenses .....22
    - Updating licenses .....22
  
- 4 Installation ..... 23
  - Before Installing .....24
    - General Requirements.....24
  - Installation on HP OM for Windows Management Server.....25
    - Software Requirements for HP OM for Windows .....25
    - Installing the Management Server Component on HP OM for Windows .....25
    - Verifying Installation on the HP OM for Windows Management Server .....27
  - Install BlackBerry SPI Licenses.....29

5	De-Installation .....	31
	Cleanup on BlackBerry Enterprise Server .....	32
	De-Installation on HP OMW Management Server .....	33
6	The HP Operations Management Module for BlackBerry Enterprise Server.....	34
	Installation of the BlackBerry Content Pack for HP OMi .....	35
	Software Requirements .....	35
	Step 1 – Install the software on the HP OMi Management Server .....	35
	Step 2 – Deploy the Universal CMDB package.....	36
	Step 3 – Import the Content Pack.....	39
	Step 4 – Configure the Topology Synchronization.....	42
	Glossary .....	45
	Index .....	46

## Figures

Figure 1	High Level Architecture.....	14
Figure 2	BlackBerry SPI Integration and Data Flow.....	15
Figure 3	SPI Data Collector in Instrumentation list.....	20
Figure 4	Installation Wizard on HP OM for Windows Server.....	26
Figure 5	License Term Agreement.....	26
Figure 6	Confirmation window.....	27
Figure 7	Add BlackBerry SPI License into OM for Windows.....	29
Figure 8	License has been added successfully.....	30
Figure 9	Open the UCMDB Package Manager.....	36
Figure 10	Locate the file HPOprMMBes.zip.....	37
Figure 11	Deploy the file HPOprMMBes.zip.....	38
Figure 12	Check the deployment results.....	38
Figure 13	Verify the Package Manager inventory.....	39
Figure 14	Open the Content Pack Manager.....	39
Figure 15	Locate the Content Pack.....	40
Figure 16	Import the Content Pack.....	41
Figure 17	Check the results of the import.....	41
Figure 18	Verify the Content Pack.....	42
Figure 19	Open the Infrastructure Setting Manager.....	43
Figure 20	Add the BlackBerry Content Pack to the synchronization list.....	43

## Tables

Table 1	Related Documentation.....	10
Table 1	BlackBerry SPI components in the HP OM for Windows GUI.....	27



# 1 Preface

## Introduction

This guide describes the architecture, installation, and functions of the HP Operations Smart Plug-in for BlackBerry Enterprise Server Software for HP Operations Manager Software (BlackBerry SPI).

The guide assumes that you have a good understanding of HP Operations Manager for Windows (HP OMW) and the BlackBerry Enterprise Server (BES).

## Audience

HP Operations Manager Operators, BlackBerry Enterprise Server Administrators

## Prerequisites

You should be familiar with the following topics:

- BlackBerry Enterprise Server (BES) concepts
- Deploying the HP OM Agent to a Windows system
- HP Operations Manager administration

## Related Documents

This section illustrates what information is available for the BlackBerry SPI and where you can find it. The following manuals are available in PDF format:

- Installation Guide
- Administration Guide
- Reference Guide (contact support)
- Software Release Notes
- Support Matrix (SUMA)

In addition to the documentation for the BlackBerry SPI, related HP Software products also provide a comprehensive set of manuals, which aim to assist you in using the products and improving your understanding of the underlying concepts. Table 1 lists the documentation provided with products that are related to the BlackBerry SPI.

**Table 1 Related Documentation**

<b>HP Software Product Name</b>	<b>Manual Title</b>
Operations Manager for UNIX / Windows	Administrators reference Concepts guide Configuring circuits for HP OM DCE agents concept and configuration guide HTTPS agents concept and configuration guide Installation guide Java GUI operator's guide (more available, please refer to the HP Software support pages)
Performance Manager	Administrator's Guide User's guide and tutorials
Performance Agent	Data Source and integration Guide Installation and Configuration User's Guide Tracking your Transactions Installation and Configuration Guide Application Response Measurement API Guide (Windows only)
HP Operations Manager i	Installation and Deployment Guide

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## 2 Introduction

This chapter includes the following topics:

- About the BlackBerry SPI on page 12
- Operations Manager on page 13
- Architecture on page 14
  - BlackBerry SPI software components on page 15
  - BlackBerry SPI License on page 15
- BlackBerry SPI best practices on page 17
  - Metric data collection on page 17
  - Add-On Policies on page 18

## About the BlackBerry SPI

The HP Operations Smart Plug-in for BlackBerry Enterprise Server Software (BlackBerry SPI) maximizes the value of BlackBerry Enterprise Servers by providing management services.

The BlackBerry SPI is a complete HP Operations Manager integration, implementing distributed monitoring of the BlackBerry Enterprise Server (BES) deployed in Microsoft Exchange environments. The BlackBerry SPI further leverages your investment in HP Operations Manager by integrating management of yet another mission-critical application into HP Operations Manager.

The BlackBerry SPI provides extensive log file monitoring, performance thresholding, and handheld device monitoring which improves the overall availability and performance of the BlackBerry Enterprise Server (BES).

The BlackBerry SPI comes with the HP Operations Management Module for BlackBerry Enterprise Server (HPOprMMBes), or the BlackBerry OMi Content Pack, for short.

# Operations Manager

The most important task of availability management is to monitor information processing systems and applications residing on the network. HP OM uses local HP OM agents to monitor elements and resources such as:

- Servers and clients
- Operating systems
- Middleware applications and databases
- User applications
- Networks

HP OM transforms the event stream coming from the BlackBerry Enterprise Servers into a meaningful message stream by sorting through the events and forwarding only relevant messages to the central HP Operations Management Server. Operators use the HP OM console to check these messages for problems and solve them by launching corrective actions and preconfigured tools using the Operations Manager agent. Examples of corrective actions and preconfigured tools are:

- Automatic actions to restart processes or gather diagnostic information
- Predefined operator-initiated actions to correct a problem
- Context sensitive, problem-specific help and instruction text
- Pre configured tools and applications

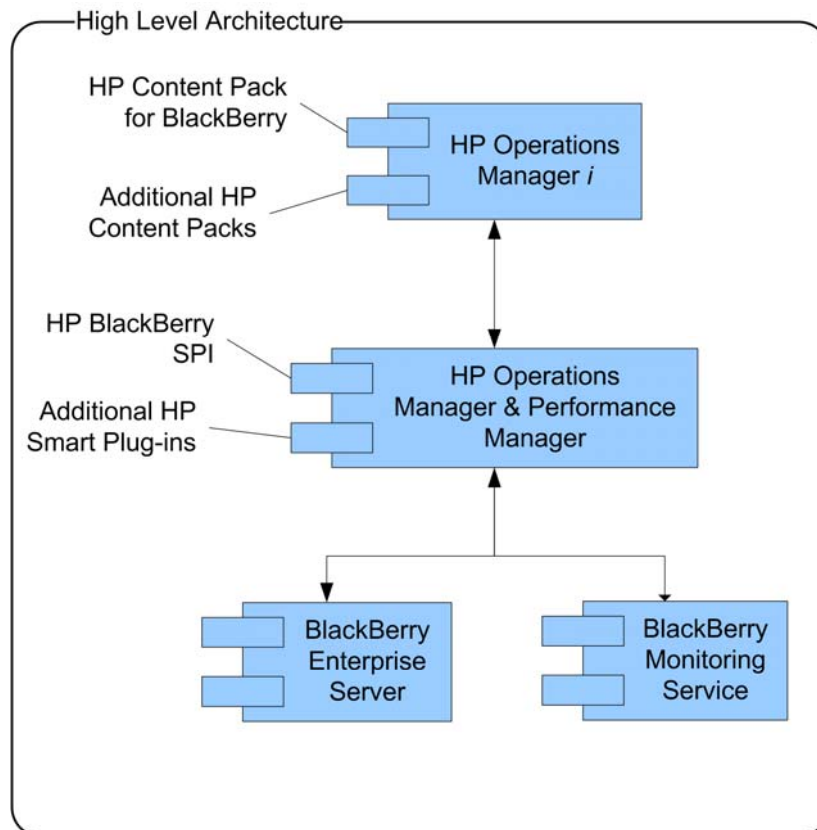
HP OM can solve problems by taking any or all of the following steps:

- **Collect information:** HP OM collects information on the status of devices, applications, and systems present in the computing environment
- **Process information:** HP OM makes important or critical status information available on the central console in a consolidated fashion through filtering and event correlation
- **Present the problem:** HP OM displays the problem in the operator desktop, highlights the problem, and shows the resolution strategy
- **Act:** HP OM performs predefined actions (automatic or operator-initiated) to solve and correct the problem. HP OM is an open system with a published set of APIs that let you create complete solutions

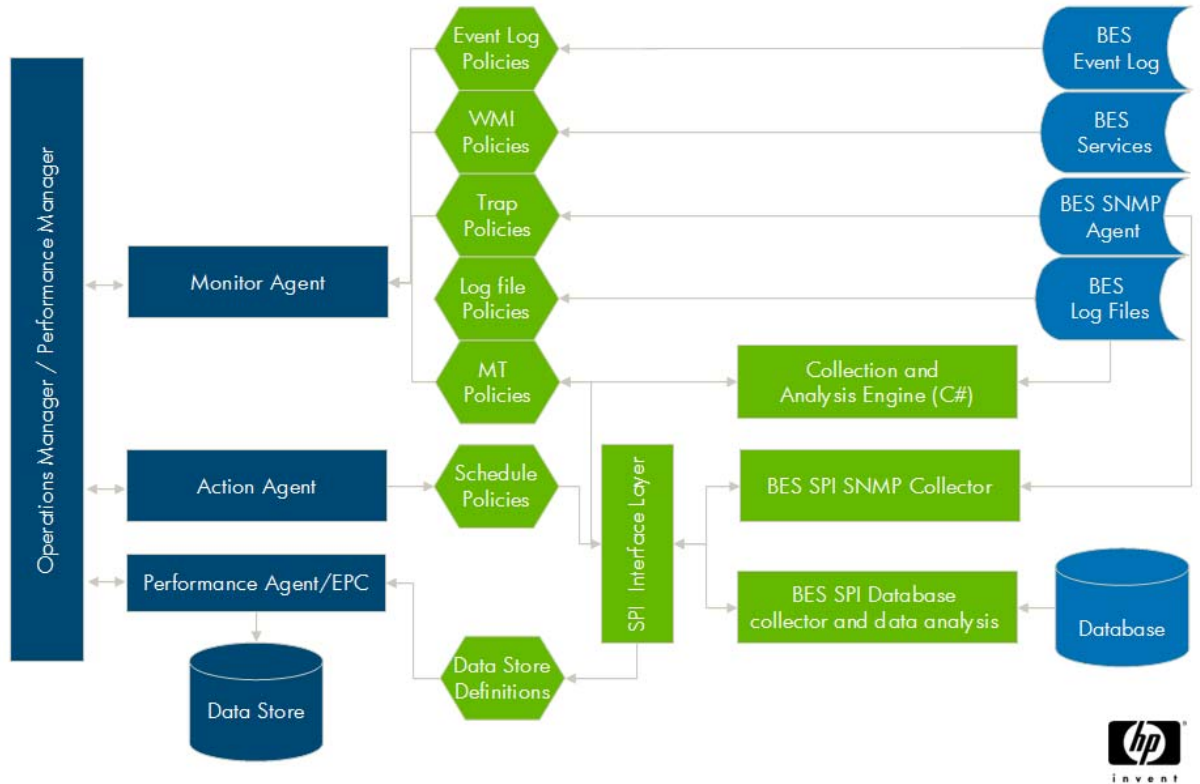
# Architecture

This section provides detailed information about the architecture of the BlackBerry SPI.

**Figure 1 High Level Architecture**



**Figure 2 BlackBerry SPI Integration and Data Flow**



**Legend**

- a dark blue elements are part of the HP Operations Manager
- b green objects depict the BlackBerry SPI components
- c mid blue elements mark BES integration points

## BlackBerry SPI software components

The BlackBerry SPI has the following software components:

- BlackBerry SPI instrumentation files
- BlackBerry SPI policies / templates
- BlackBerry SPI tools / applications

The location of the software components depends on the choice of Management Server platform and the particular BlackBerry Enterprise Server management requirements.

## BlackBerry SPI License

The BlackBerry SPI requires one software license for each managed BlackBerry server or server partition. Licenses are not required to install the BlackBerry SPI on the Management Server. With the BlackBerry SPI installed on the Management Server, you can review the BlackBerry SPI policies, policy groups, node groups, and tools.

If the BlackBerry SPI policies are deployed on a BlackBerry server without a valid evaluation or permanent license, the policies will not run properly and produce errors. All

tools will not be able to execute as well. Therefore, either a permanent or evaluation license is required for operation of the BlackBerry SPI on the BlackBerry servers. This license is added to the management server during the configuration of the BlackBerry SPI.

More details about licensing may be found in section Licenses on page 22.



# BlackBerry SPI best practices & use cases

## Metric data collection

The BlackBerry SPI Version 3.00 offers two different collection engines to collect data required for the calculation of all metrics.

- 1 SNMP Based Data Collection (recommended)
  - a All data is collected from the BES SNMP Agent, analyzed and forwarded to the HP Operations Agent and/or the Performance Agent.
  - b For this option the BlackBerry SPI must be deployed and configured on each BES.  
Metrics in the metric ID range below 2000 can be collected if the SNMP Based Data Collection is configured.
- 2 BMS Database Based Data Collection
  - a In case you have the BlackBerry Monitoring Service (BMS) installed and configured you can collect all metrics from the central BMS database.
  - b This option does not require any instrumentation or configuration deployed to the different BES in your domain.
  - c Using this collection depends fully on the data which resides in the BMS database. In case event and performance data is not written into the database, incorrect alerting can occur. Depending on the configuration of the BMS data collection subsystem data might be delayed.  
Metrics in the metric ID range above 2000 can be collected additionally if the BMS Database Based Data Collection is configured.

## Use cases for data collectors

We can differentiate between three different use cases, depending on your BES/BMS environment.

### **Use Case 1:** BES only setup (no BMS set up or configured)

In case the BMS is not configured, policies contained in the "BlackBerry Monitoring Service" Policy group cannot be used. The configuration tool of the BlackBerry SPI "Configure SPI for BES" must be run on every BES in the BlackBerry domain.

### **Use Case 2:** BES and BMS setup, combined monitoring

In case BMS is configured in your BES domain, additional metrics can be collected. Policies for the BMS based metrics (metric ID range 2000-3000) are assigned to the "BlackBerry Monitoring Service" policy group. In this case the following is required:

- On each BES the "Configure SPI for BES" tool must be run
- On the BMS server the "Configure SPI for BMS" tool is run
- Deploy the "Auto-Deploy" policy group to both
- Deploy the "BlackBerry Enterprise Server" policy group to the BES
- Deploy the "BlackBerry Monitoring Server" policy group to the BMS server

- Optional: Deploy the "BlackBerry Enterprise Server Add-on" policy group to the BES

## Note



In some case a single event might trigger two messages. Example: Metric 2115 (Percentage hung threads) and metric 115 (number of hung threads).

Please be aware that the messages do not appear at the same time but might both indicate the same issue.

### **Use Case 3:** BES and BMS setup, only remote monitoring

In this case the customer has the BMS set up and configured and decides to not deploy anything to the BES. All monitoring will be done using the BMS. The following steps need to be completed to achieve this:

- Run the "Configure SPI for BMS" tool
- Adapt the collector engine for each metric in the bespi\_metric.cfg file (please contact support to get help for this task)
- Adjust the schedule templates to only collect the desired metric sets (please contact support to get help for this task)
- Deploy BES policies and BMS policies to the BMS server

## Add-On Policies

For all policies in the "BES Log" and "BES Service Health" policy groups it is required that the BlackBerry SPI is configured locally on each node. Policies in these groups cannot be used remotely. The policies in the "BES SNMP" policy group can be configured to monitor remote systems. See HP OM documentation to configure this.

---

## 3 Preparation for Installation

This chapter includes the following topics:

- HP OM for Windows Management Server Prerequisites on page 20
- BlackBerry Enterprise Server (BES) Prerequisites on page 21
- Licenses on page 22

# HP OM for Windows Management Server Prerequisites

## Hardware Requirements

On the hard disk there must be at least 12 MB free disk space to accommodate the installation files.

## Software Requirements

Be careful to ensure that the HP OM for Windows Management Server meets the following requirement before installing the BlackBerry SPI:

Make sure that a supported version of HP OM for Windows is installed and running on both the management server and the managed node.

### Note

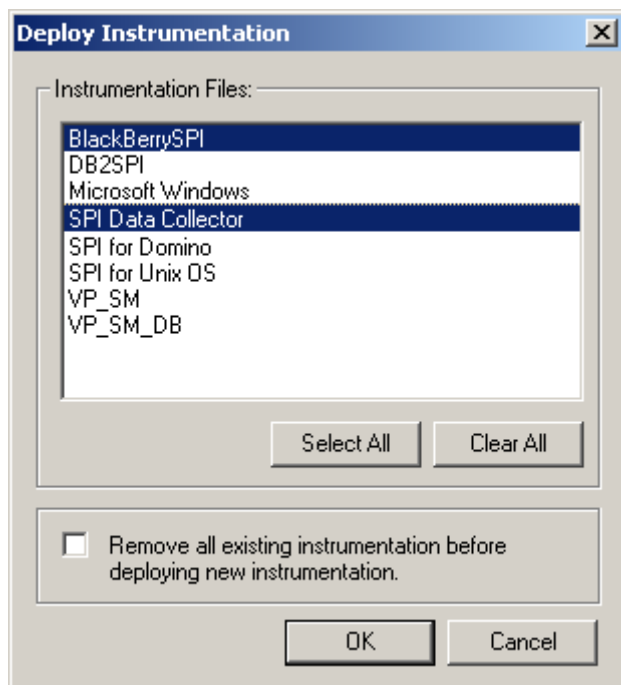
- ▶ For supported versions of HP OM for Windows for the BlackBerry SPI see the current support matrix in the Support Matrix interface - SUMA:  
<http://support.openview.hp.com/selfsolve/document/KM323488>

Further ensure that the Operations Manager server meets the following software prerequisite for the BlackBerry SPI:

- DSI2DDF (SPI data collector) for collecting data

To verify that the SPI Data Collector is installed, start the task “**Deploy Instrumentation**” on any node in HP OMW. Look for the term “**SPI Data Collector**” in the list. Press Cancel to close the window.

**Figure 3 SPI Data Collector in Instrumentation list**



# BlackBerry Enterprise Server (BES) Prerequisites

## Hardware Requirements

These are estimated requirements. Depending on the environment, this may vary.

Disk usage is the size of the deployed instrumentation and non-usage based configuration, which is about 700KB.

## Software Requirements

Ensure that the BES server meets the following software prerequisites for the BlackBerry SPI:

- Operating system must be supported
- A supported HP OM Agent (HTTPS) must be installed and running.
- Microsoft .NET runtime 2.0 and a Microsoft .NET runtime 2.0 Service pack 1 or higher are installed
- Optional: To use the BMS Database Based Data Collection a separate SQL user is required.

The BlackBerry SPI includes a number of metrics for which the BlackBerry Monitoring Server (BMS) database is read. During the SPI configuration (see BlackBerry SPI Administration Guide), choose to use DB Metric Collection with appropriate SQL Authentication.

- Optional: To use the **BlackBerry SPI BlackBerry Administration Tools**, the BlackBerry Administration API needs to be installed.

Also the Java Runtime Environment (JRE) must be installed and available to the HP Software Agent environment.

Please ensure that a JRE 1.5.x or later is used. We recommend Sun JRE 1.6.x

- Optional: If the SNMP Based Data Collection (BlackBerry Monitoring Service is not installed) is desired, the SNMP service is required.

This service needs to be installed and configured on all BlackBerry Enterprise Servers to monitor the activity of the BlackBerry Enterprise Servers or BlackBerry Enterprise Servers components.

### Note



Please note that to successfully use the BlackBerry SPI, it requires that at least one user is registered and configured with the Blackberry Enterprise Server.

For installation and evaluation purposes, no user is required.

# Licenses

The BlackBerry SPI requires one software license for each managed BlackBerry server or server partition. Licenses are not required to install the BlackBerry SPI on the Management Server. With the BlackBerry SPI installed on the Management Server, you can review the BlackBerry SPI policies, policy groups, node groups, and tools.

If the BlackBerry SPI policies are deployed on a BlackBerry server without a valid evaluation or permanent license, the policies will not run properly and produce errors. All tools will not be able to execute as well. Therefore, either a permanent or evaluation license is required for operation of the BlackBerry SPI on the BlackBerry servers. This license is added to the management server during the configuration of the BlackBerry SPI.

## Evaluation license

For evaluation please go to <https://webware.hp.com> and request an evaluation license. Please allow 24 hours for the license to be issued.

## Permanent licenses

If you have purchased the BlackBerry SPI, please go to <https://webware.hp.com/> to request your license. The license key will be sent you by mail. There will be one key per BES.

### Note



To update evaluation licenses to permanent licenses is a simple process. It does not require a reinstallation of the BlackBerry SPI.

## Updating licenses

In case you need to update license which is required when you change for instance the IP address for you BES, please contact support.

---

# 4 Installation

This chapter includes the following topics:

- Before Installing on page 24
- Installation on HP OM for Windows Management Server on page 25
- Install BlackBerry SPI Licenses on page 29

## Before Installing

Before installing the HP Operations Smart Plug-in for BlackBerry Enterprise Server Software for HP Operations Manager Software (BlackBerry SPI), identify the following:

- The BlackBerry Enterprise Servers intended to monitor and manage with the BlackBerry SPI.
- The HP OM for Windows Management Server
- In case you plan to use the BlackBerry Monitoring Server (BMS) to monitor your BlackBerry Domain, ensure you have information about the BMS database.

Install the BlackBerry SPI using these steps:

- Installation on HP OM for Windows Management Server
- Install BlackBerry SPI Licenses

Before starting the installation of each component, make sure that the environment meets the prerequisite conditions described in HP OM for Windows Management Server Prerequisites and BlackBerry Enterprise Server (BES) Prerequisites.

## General Requirements

The BlackBerry SPI requires the following software:

- BlackBerry Enterprise Server
- HP Operations Manager for Windows, updated to the latest patches
- HP Operations Manager agent for Windows
- Optional: BlackBerry Monitoring Server set up and configured
- Optional: BlackBerry Administration APIs installed



# Installation on HP OM for Windows Management Server

The following sections describe the process of installing the HP OM for Windows Management Server Component.

## Software Requirements for HP OM for Windows

Before you install the BlackBerry SPI Management Server Component on the HP OM for Windows Management Server, verify that the environment meets all the prerequisites listed in Chapter in HP OM for Windows Management Server Prerequisites on page 20

To run the BlackBerry SPI, you must have at least one BlackBerry Enterprise Server (BES). The HP OM for Windows Management Server must manage the BES and the BES must meet the prerequisites listed in Chapter BlackBerry Enterprise Server (BES) Prerequisites on page 21.

## Installing the Management Server Component on HP OM for Windows

Using the installation file for the HP OM for Windows Management Server on which you are installing the BlackBerry SPI Management Server Component, perform the following tasks:

**Task 1** Log on to the HP OM for Windows Management Server using an account that has local and HP OM administrative rights (a member of the HP-OVE-Admin group).

**Task 2** Download the software from or insert the according SPI-DVD, (Please see Release Notes for further details)

**Task 3** Start Windows Explorer and navigate to the appropriate directory.

**Task 4** Double-click the following file to start the installation or select the SPI during SPI DVD installation:

`BlackBerrySPI_3.00.00_omw.exe`

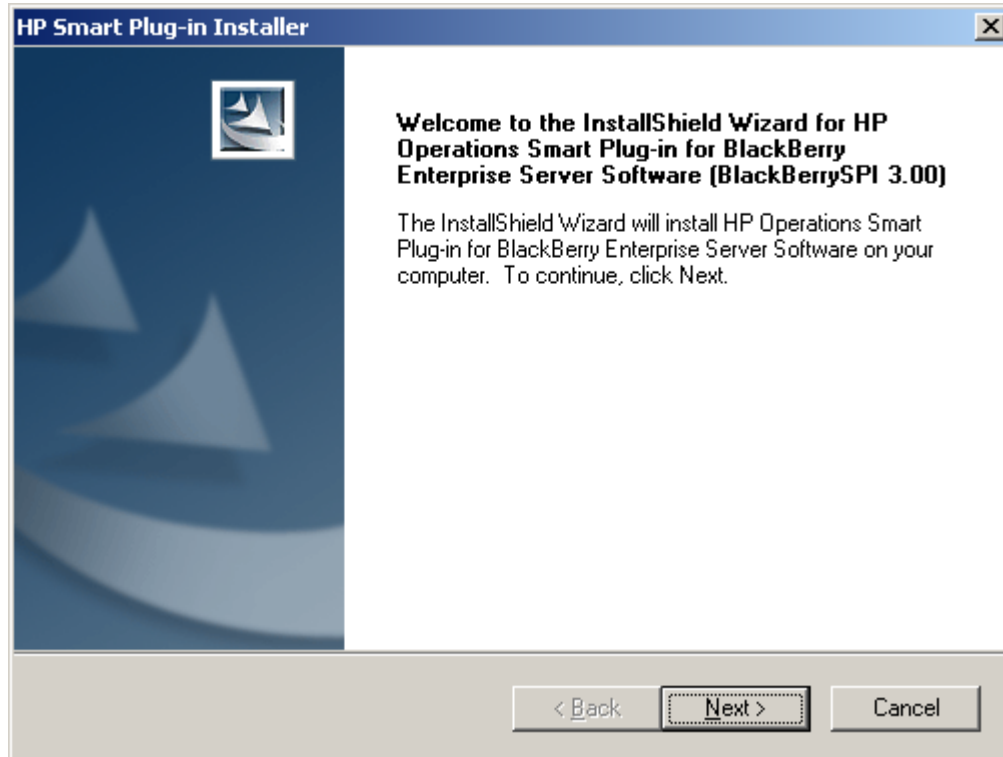
**Task 5** When you see the BlackBerry SPI Enterprise Server Installation Wizard, follow the on-screen instructions.

### Note



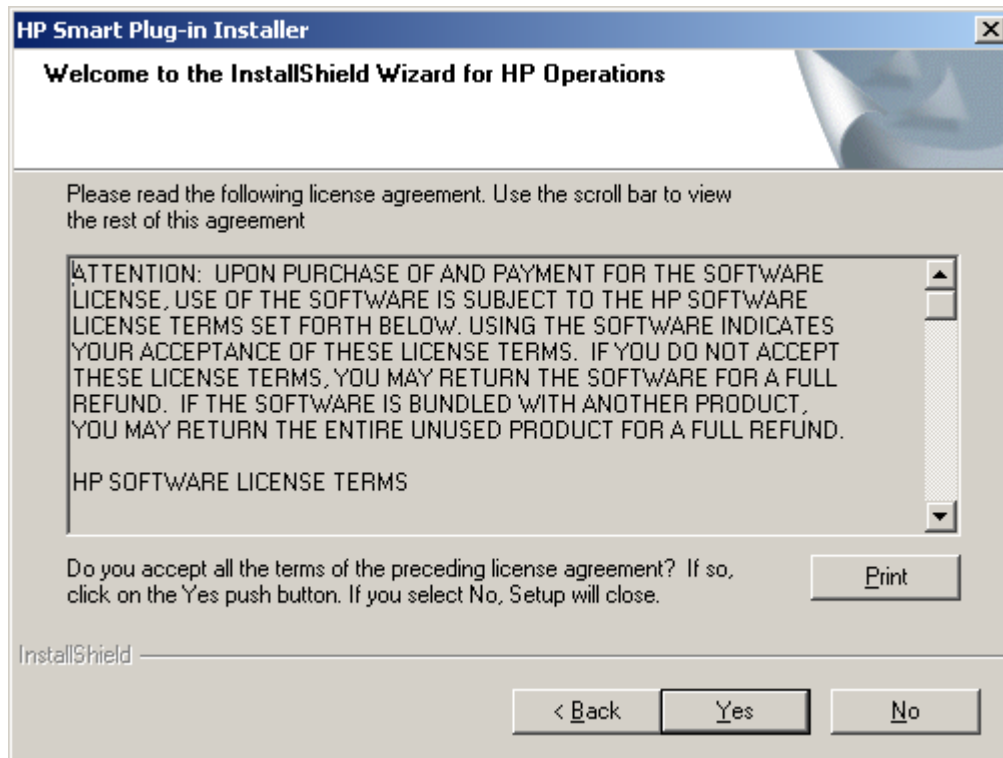
You must install from a local hard drive or CD ROM drive. The installation fails if you attempt to install from a mapped share.

**Figure 4** Installation Wizard on HP OM for Windows Server



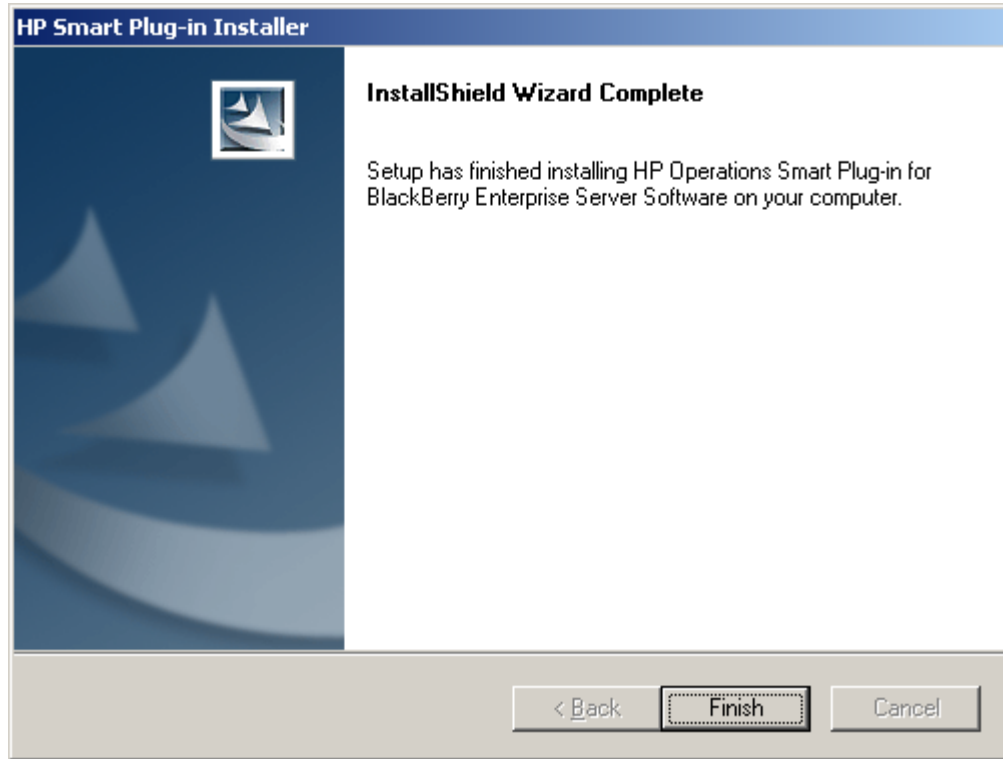
Before the installation starts, the license terms need to be acknowledged.

**Figure 5** License Term Agreement



The successful installation will be concluded with a confirmation window.

**Figure 6 Confirmation window**



## Verifying Installation on the HP OM for Windows Management Server

To verify that the installation of the BlackBerry SPI completed successfully on the HP OM for Windows Management Server, carry out the following steps:

- Open the Windows® "Control Panel" and use the "Add/Remove Programs" tab to display the list of installed software. You should find the following entries:  
 HP Operations Smart Plug-in for BlackBerry Enterprise Server Software
- Check that the elements listed in this table are present in the HP OM for Windows Console GUI:

**Table 1 BlackBerry SPI components in the HP OM for Windows GUI**

Component Type	Component Name		
Node Group	BlackBerry		
Tool Groups	SPI for BlackBerry	BlackBerry Administration	
		Performance	
		SPI Administration	
Policy Groups	SPI for BlackBerry	Auto-Deploy	
		BlackBerry Enterprise Server	BES Controller
			BES Dispatcher
			BES Messaging Agent

			BES Router
		BlackBerry Enterprise Server Add-on	BES Logs
			BES Service Health
			BES SNMP Data
		BlackBerry Monitoring Service	
		BlackBerry SPI MgmtSv	
Service: BlackBerry Domain	BlackBerry Enterprise Server	BlackBerry Components	BlackBerry Monitoring Service BlackBerry Integration Service BlackBerry Controller BlackBerry Dispatcher BlackBerry Policy Server BlackBerry Synchronization Service BlackBerry Messaging Agent BlackBerry Administration Service BlackBerry Connection Service BlackBerry Collaboration Service BlackBerry Router BlackBerry Attachment Service
User Roles	BlackBerry Operator		
	BlackBerry SPI Admin		

To verify that the Service is installed correctly, use “**Service Type Configuration Editor**”. The complete service will not show up in the Service Navigator until the BES node has been configured and the services are discovered.

To verify that the User Roles/Profiles are installed correctly use “**User Role Configuration Editor**”.

# Install BlackBerry SPI Licenses

To monitor and manage a BES with the BlackBerry SPI, a runtime license for each BES is required. These node-specific runtime licenses must be obtained from the manufacturer of the product, NiCE GmbH in Germany.

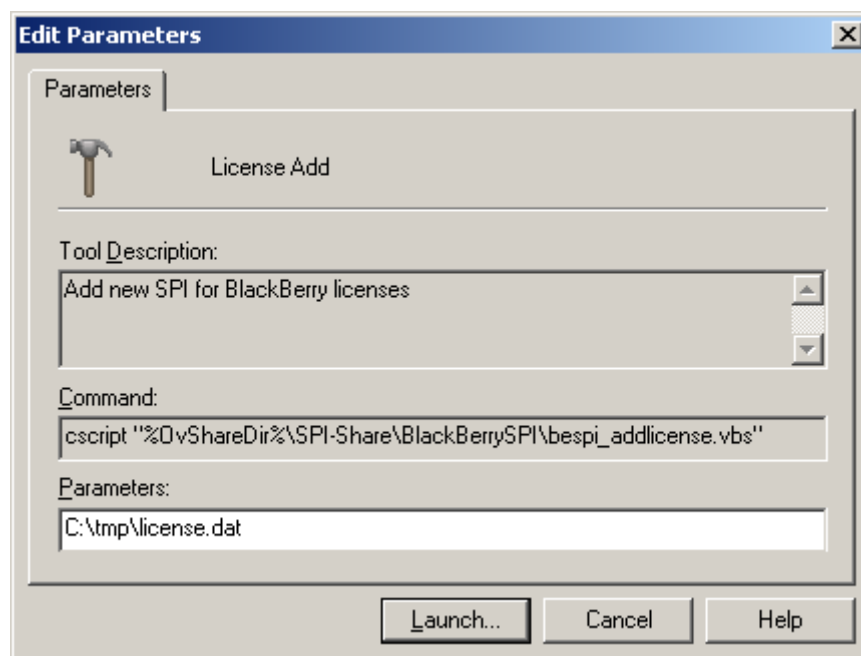
If you bought the BlackBerry SPI, please go to <https://webware.hp.com/> to obtain your runtime licenses.

For evaluation please go to <https://webware.hp.com> and request an evaluation license. Please allow 24 hours for the license to be issued.

The license installation is described next:

- Task 1** Copy the license file in any folder on the OM management server.
- Task 2** In the OM GUI, execute the tool "License Add" from the "Administration" tool group.
- Task 3** In the parameter field, you need to specify the license file with full path information where you placed it in a common folder on the management server.

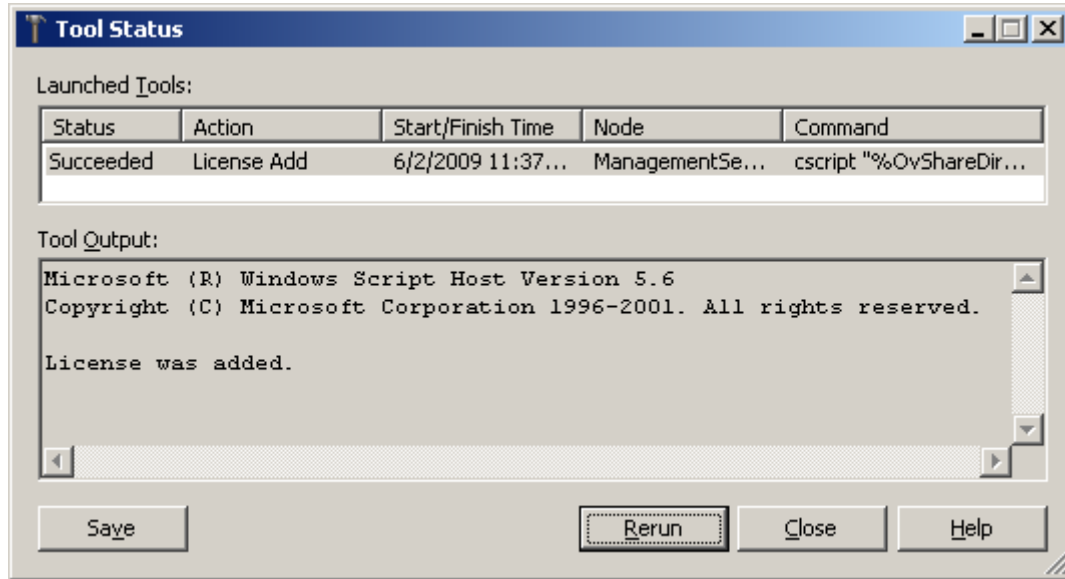
**Figure 7 Add BlackBerry SPI License into OM for Windows**



- Task 4** Then press "OK" to start the process.

An application output window will appear showing the progress of the license installation. You may close that window when the installation has completed.

**Figure 8 License has been added successfully**



**Task 5** All licenses contained in the downloaded file will now be added to the instrumentation for later deployment.

After the installations tasks have been successfully done, BlackBerry SPI needs to be configured. For detailed information please refer to the BlackBerry SPI Admin Guide.

---

## 5 De-Installation

The instructions in this section describe how to remove the BlackBerry SPI software quickly and cleanly from the Operations Manager management server and the managed node. This section covers the following topics:

- Cleanup on BlackBerry Enterprise Server on page 32
- De-Installation on HP OMW Management Server on page 33

# Cleanup on BlackBerry Enterprise Server

Before cleaning up the Management Server you should remove the BlackBerry SPI components from the managed nodes:

## **Task 1** Remove the BlackBerry SPI policies (HP OM for Windows)

This may be done by marking the BlackBerry policy group and selecting the function "All Tasks → Uninstall from ..." in the OMW Console. In the dialog choose the main node group and check the option "remove all versions".

## **Task 2** Run the "Delete SPI Configuration" Tool

In the "SPI for BlackBerry" -> "SPI Administration" tool group on the OM for Windows console, run the tool "Delete SPI Configuration" on all nodes which have the SPI configured. This will remove all configuration data.

## **Task 3** Run the "Delete Report Data Store" Tool

In case you have used the Performance Agent / EPC integration, you can remove the performance data stores by running the "Delete Report Data Store" tool in the "SPI for BlackBerry" -> "Performance" tool group in the OMW Console.

## **Task 4** Delete the BlackBerry SPI instrumentation Configuration

In the instrumentation directory on the BlackBerry Server remove all files called bes\*.\*

## **Task 5** Clean up registry entries on the BES server from all versions of the BlackBerry SPI.

The following keys and everything lower need to be deleted:

```
HKEY_LOCAL_MACHINE\SOFTWARE\NiCE\SPI\BESPI*
```

Be sure to keep all keys related to other NiCE products that you have installed, for example Lotus Domino SPI.



# De-Installation on HP OMW Management Server

To remove the BlackBerry SPI components from the HP OM for Windows management server:

**Task 1** On the OM for Windows management server, enter the Control Panel and select the function "Add/Remove Programs"

**Task 2** Select the components for removal:

HP Operations Smart Plug-in for Blackberry Enterprise Server Software

This will remove all installed components.

**Task 3** Clean up registry entries from all versions of the BlackBerry SPI. The following keys and everything lower need to be deleted:

HKEY\_LOCAL\_MACHINE\SOFTWARE\NiCE\HP Operations Smart Plug-in for BlackBerry Enterprise Server Software

Be sure to keep all keys related to other NiCE products that you have installed, for example Lotus Domino SPI.

The SPI related HP OM configuration elements (Policy Groups, Tools) should be removed during this process as well. Unfortunately there is no way to eliminate the BlackBerry elements from the HP OM service tree. If they still exist after all these actions, they must be deleted manually in the same manner as other configuration components.

# 6 The HP Operations Management Module for BlackBerry Enterprise Server

This chapter contains instructions on how to install the HP Operations Management Module for BlackBerry Enterprise Server on the HP OMi Management Server.

# Installation of the BlackBerry Content Pack for HP OMi

## Software Requirements

The BlackBerry Content Pack builds relationships between BlackBerry component CIs and CIs which are created by other HP OMi Content Packs:

- Exchange Content Pack (HPOprExc)
- MSSQL Server Content Pack (HPOprMss)
- Content Pack for Infrastructure Management (HPOprInf)

In addition, there are correlation rules which use these relationships to deliver more accurate messages.

This functionality requires the use and proper configuration of the Exchange and MSSQL Server Content Packs for HP Operations Manager i.

Please see the appropriate documentation for details.

## Step 1 – Install the software on the HP OMi Management Server

Using the installation file for the HP OMi Management Server on which you are installing the BlackBerry Content Pack, perform the following tasks:

**Task 1** Log on to the HP OMi Management Server using an account that has local administrative rights.

**Task 2** Download the software from or insert the according SPI-DVD, (Please see Release Notes for further details)

**Task 3** Start Windows Explorer and navigate to the appropriate directory.

**Task 4** Double-click the following file to start the installation or select the SPI during SPI DVD installation:

HPOprMMBes\_3.00.00.exe

**Task 5** When you see the BlackBerry Content Pack Installation Wizard, follow the on-screen instructions.

### Note



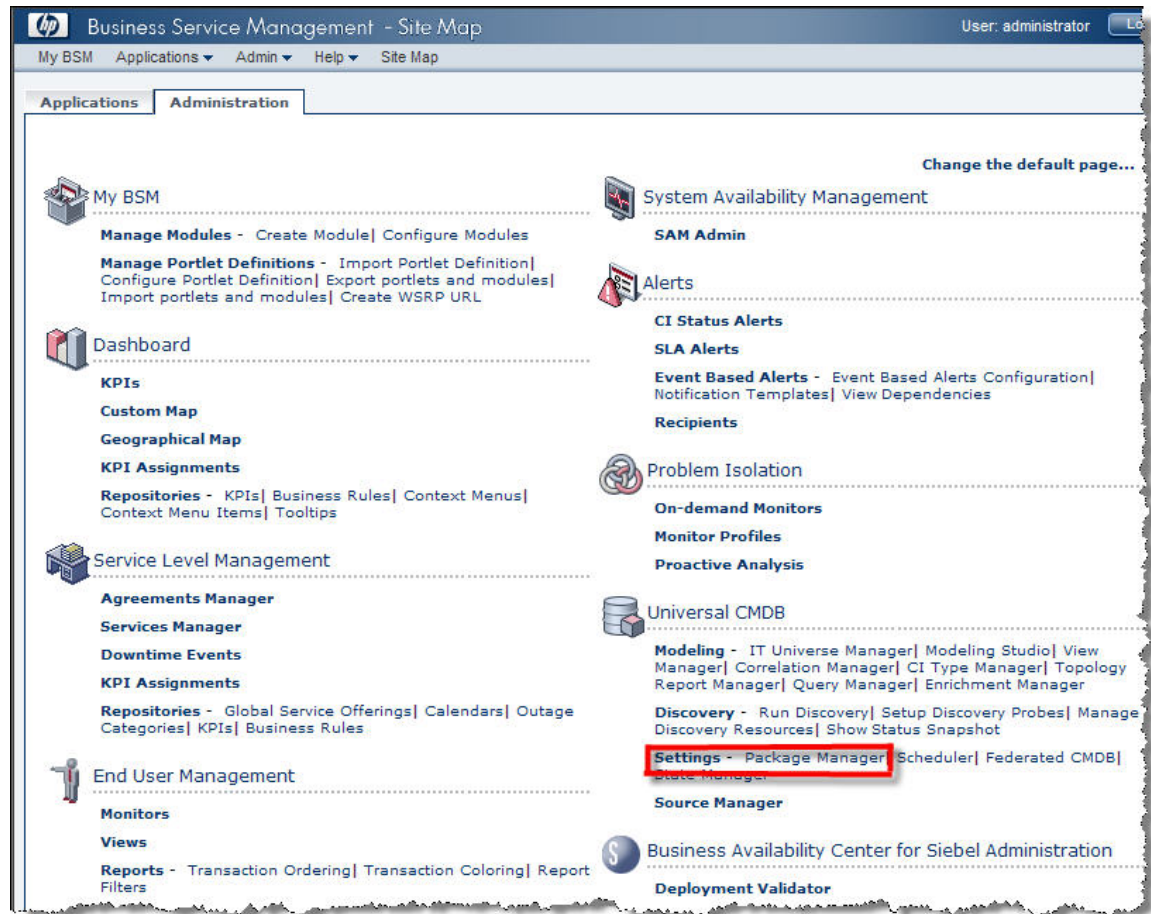
You must install from a local hard drive or CD ROM drive. The installation fails if you attempt to install from a mapped share.

## Step 2 – Deploy the Universal CMDB package

The next steps have to be performed using the HP OMi management console. Please log into HP OMi as an administrative user.

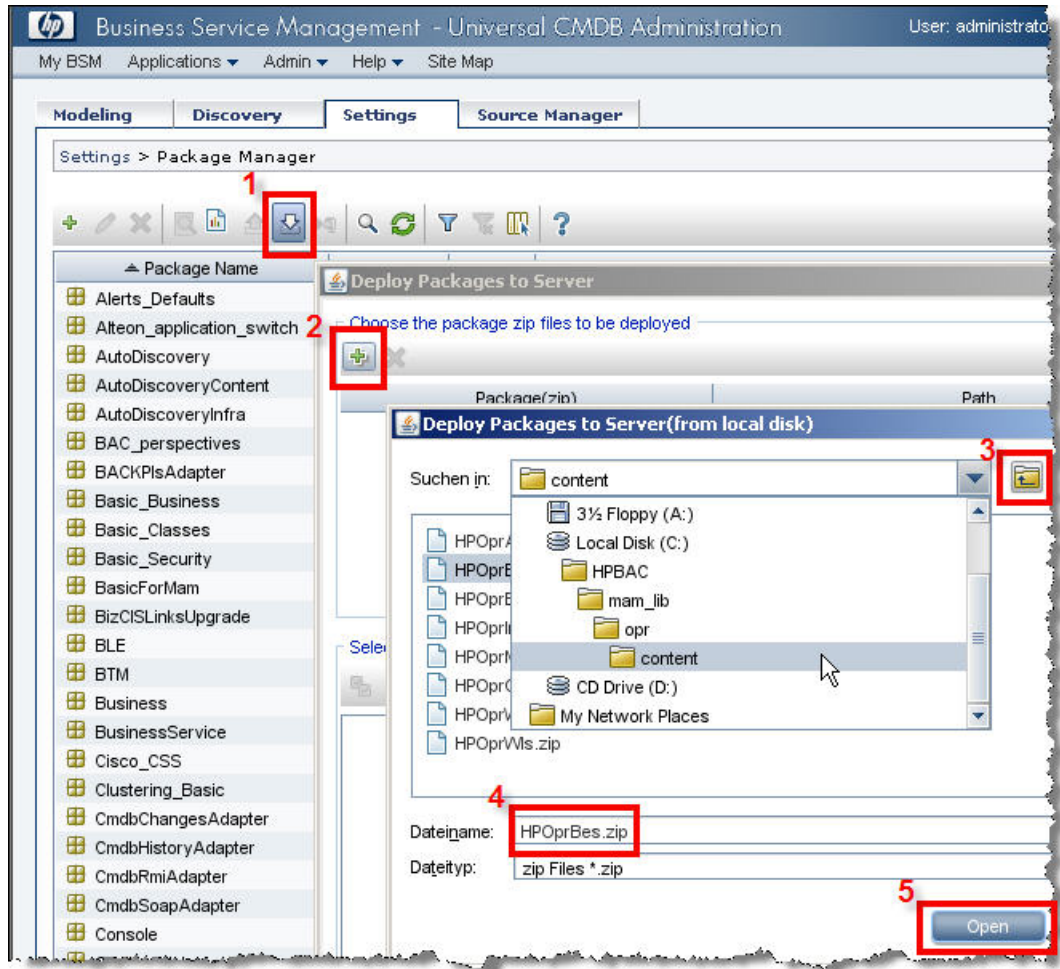
**Task 1** Open the Package Manager in the Universal CMDB section.

**Figure 9** Open the UCMDB Package Manager



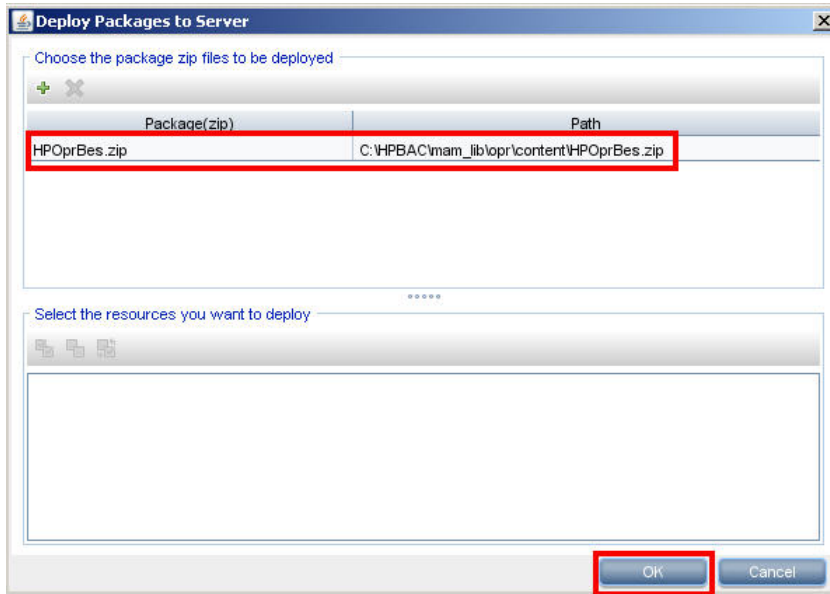
**Task 2** Locate the HP Operations Management Module for BlackBerry Enterprise Server (HPOprMMBes).

**Figure 10** Locate the file HPOprMMBes.zip

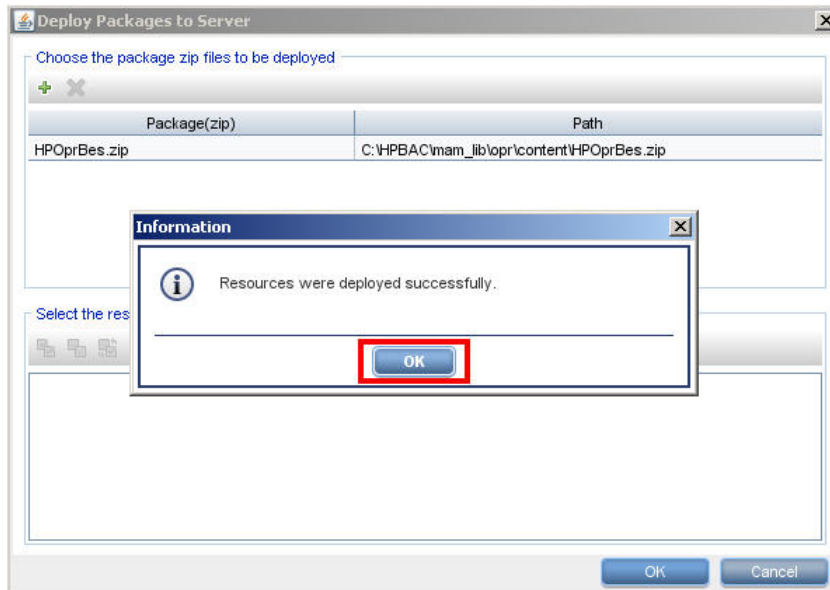


**Task 3** Deploy the HP Operations Management Module for BlackBerry Enterprise Server.

**Figure 11** Deploy the file HPOprMMBes.zip

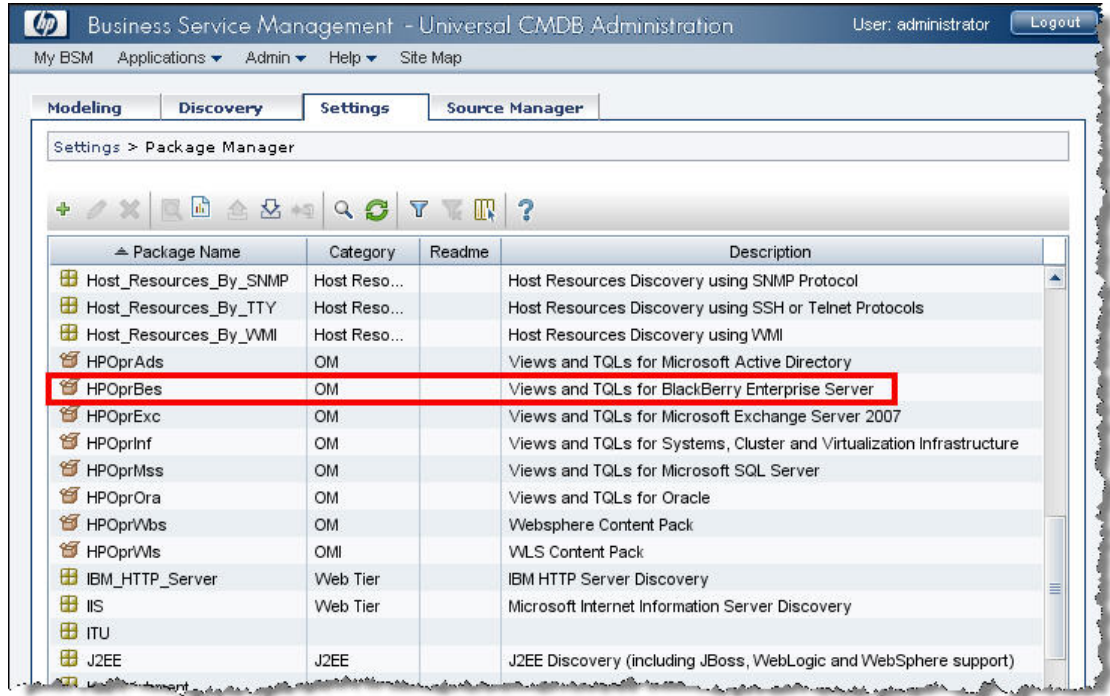


**Figure 12** Check the deployment results



**Task 4** Verify that the HPOprMMBes content pack has been loaded and is shown in the inventory.

**Figure 13 Verify the Package Manager inventory**

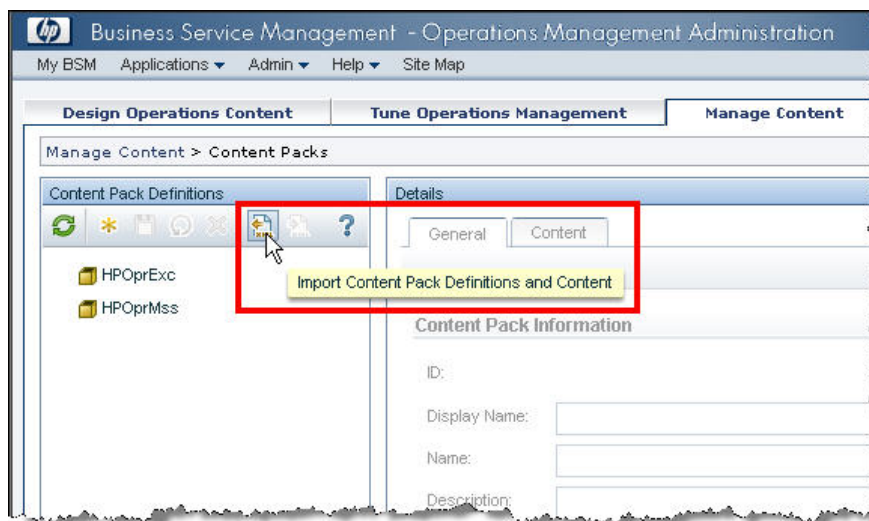


### Step 3 – Import the Content Pack

The next step is to import the actual definition of the Content Pack. This step is similar for all HP Operations Management Modules (Content Packs) and is described in detail in the HP Operations Manager i "Installation and Deployment Guide", chapter "Managing Content Packs".

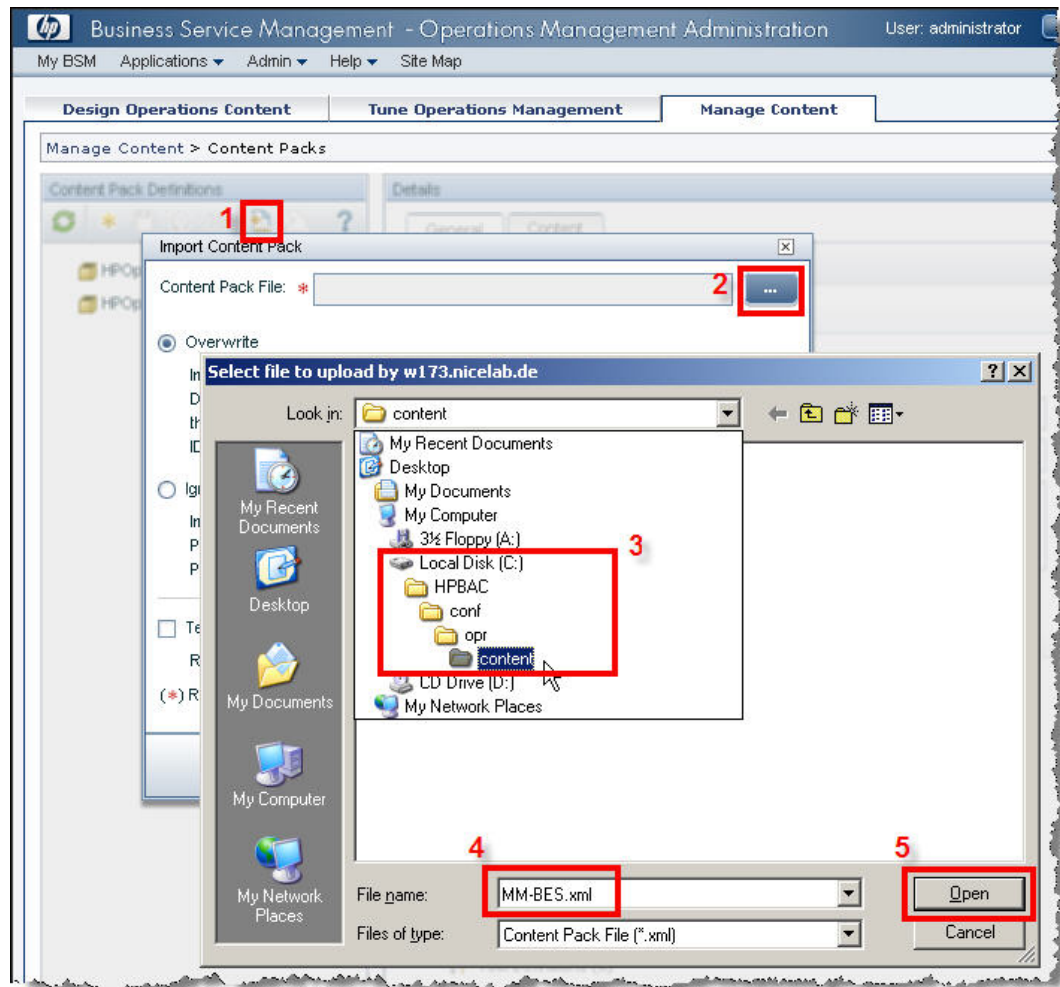
**Task 1** Open the Content Pack Manager in the Operations Management section.

**Figure 14 Open the Content Pack Manager**



Task 2 Locate the Content Pack definition file

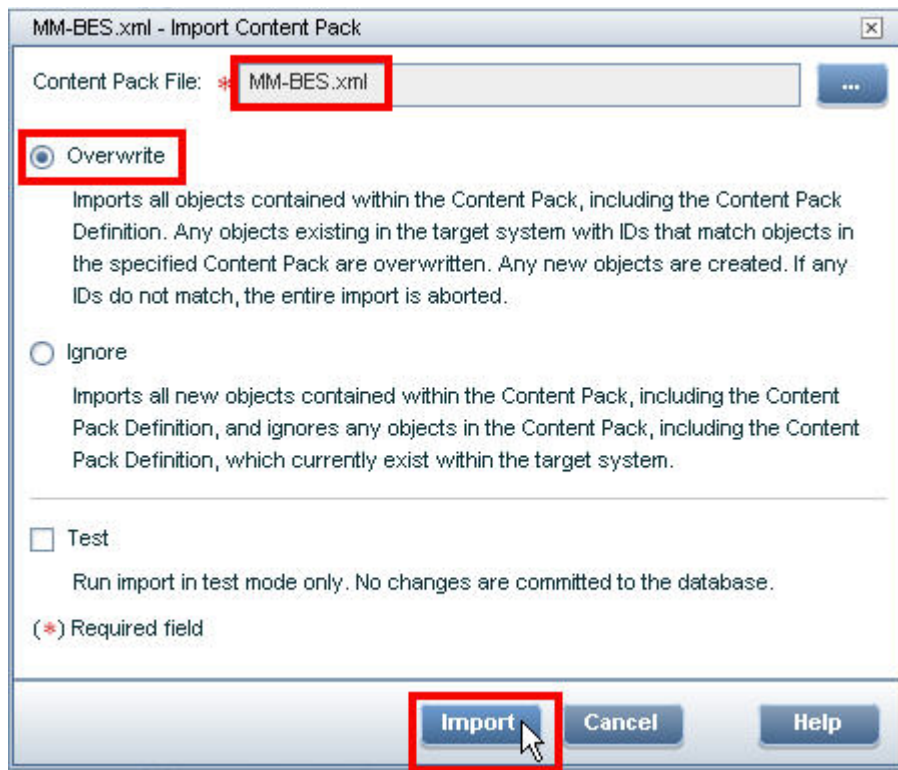
Figure 15 Locate the Content Pack





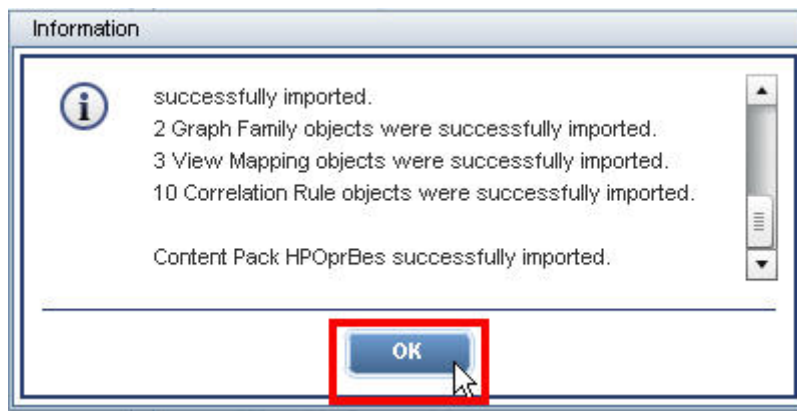
### Task 3 Import the Content Pack

**Figure 16 Import the Content Pack**



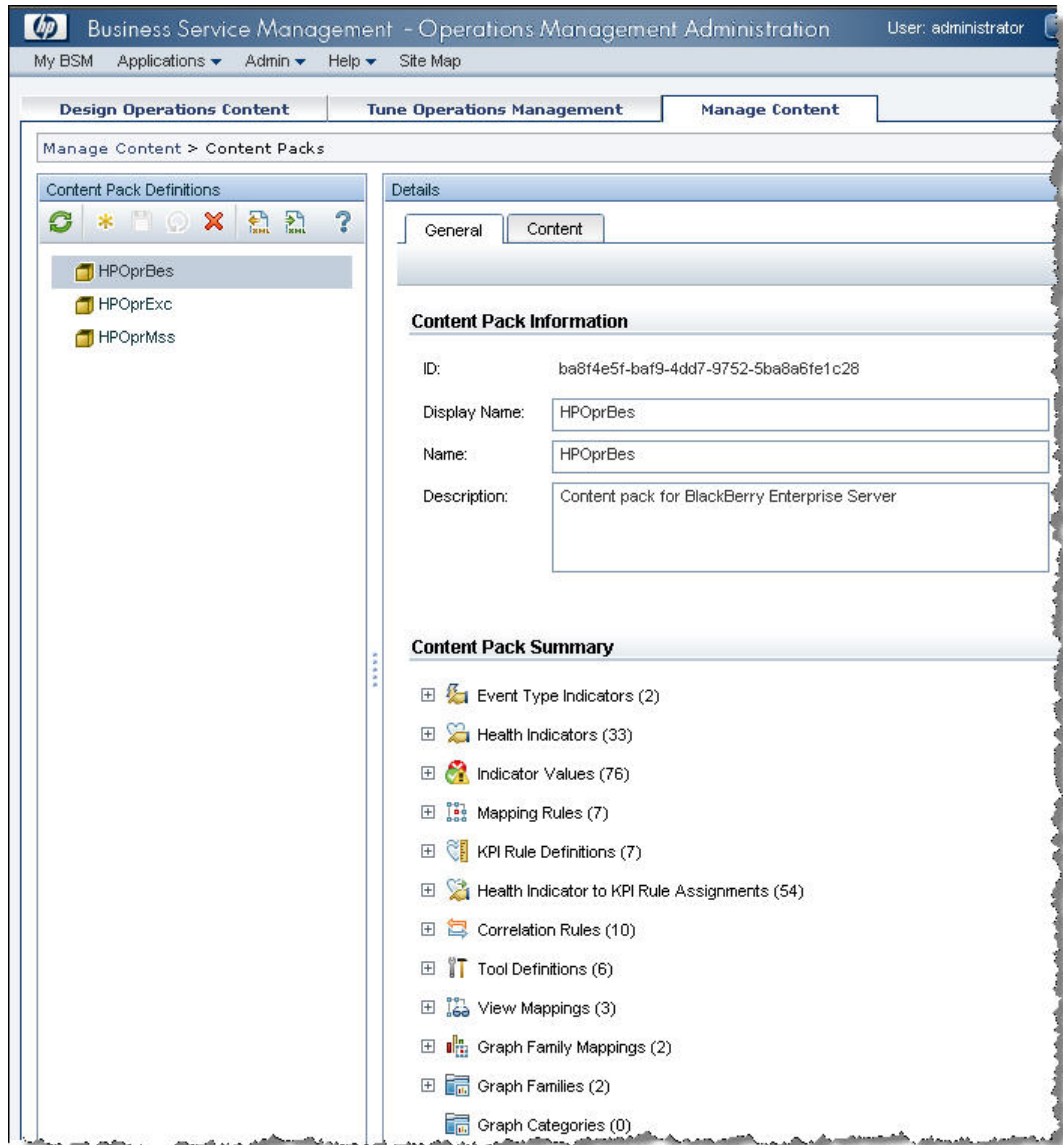
### Task 4 Check the results of the import

**Figure 17 Check the results of the import**



## Task 5 Verify the Content Pack

**Figure 18 Verify the Content Pack**



### Step 4 – Configure the Topology Synchronization

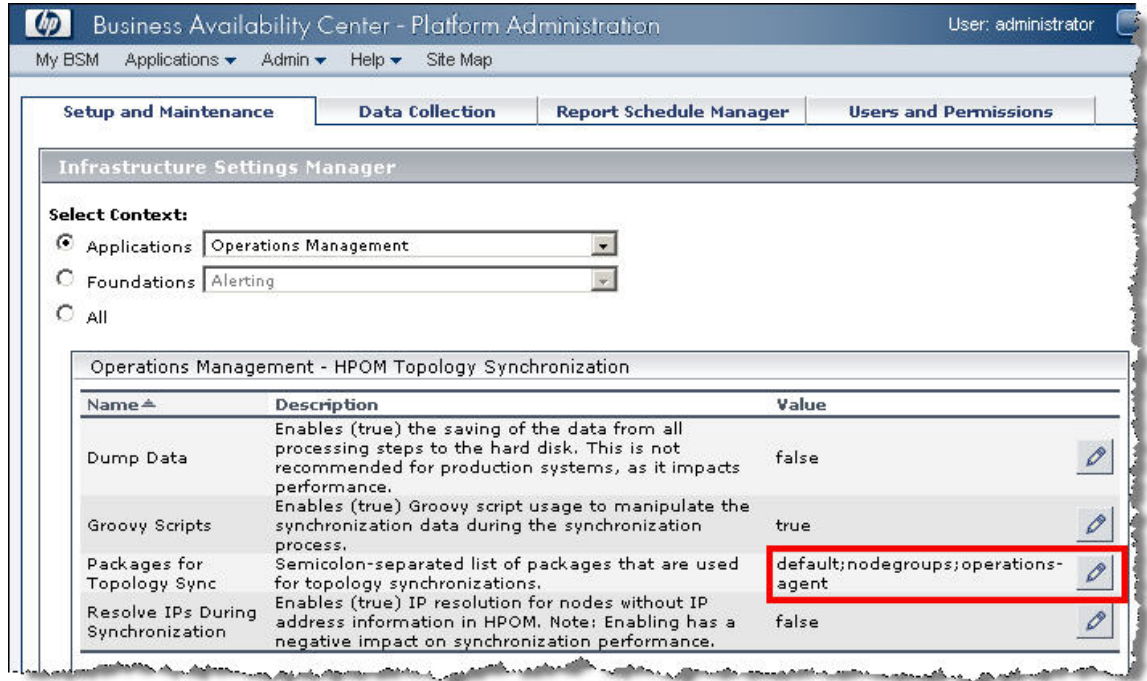
The HP OMi Topology Synchronization tool reads configuration item (CI) data from HPOM and writes it into the UCMDB.

This process has to be configured for the Content Pack related CIs and is described in detail in the HP Operations Manager i "Install and Deployment Guide", chapter "Topology Synchronization Tool".

Here are the tasks which have to be performed in order to activate the Topology Synchronization for the Content Pack for BlackBerry Enterprise Server.

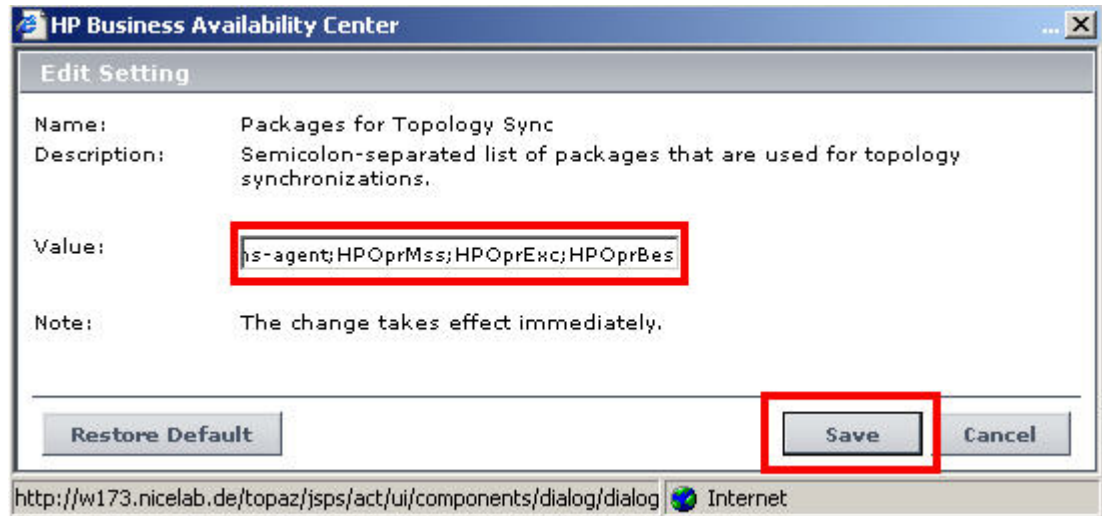
**Task 1** Open the Infrastructure Settings Manager, select the context "Operations Management" and locate the section "HPOM Topology Synchronization".

**Figure 19 Open the Infrastructure Setting Manager**



**Task 2** Add the topology synchronization directors for the BlackBerry Content Pack

**Figure 20 Add the BlackBerry Content Pack to the synchronization list**



# Troubleshooting the BlackBerry Content Pack

## CI Resolution and CI Relationships

If messages forwarded from the OM server and appearing as OMi events are not linked to the correct BlackBerry CI in OMi, or if expected "use" relationships are missing in the BlackBerry CI topology, please read on.

The BlackBerry SPI service discovery adds the names of MSSQL Server and Microsoft Exchange Server hosts as attributes to the BlackBerry CIs. This information is then used to establish the relationships in the BlackBerry universe.

These names are the result of a name resolution on the managed nodes, where the object reference to a MSSQL Server or Exchange Server has been discovered.

It's essential that these names are the same as those discovered by the appropriate Smart Plug-In, i.e. the Database SPI for SQL Server or the Exchange SPI.

In addition, the BlackBerry SPI adds CI resolution hints to its messages using the resolved name of the generating host.

Thus, the name resolution must deliver identical results on the OM server and the OMi server, or else the CI resolution will not succeed and the OMi events are not linked to the expected BlackBerry CI.

In short, the name resolution method has to be configured in a consistent way on both the OM and the OMi server and all OM managed hosts.

# Glossary

[API](#)

Application Programming Interface

[BES](#)

BlackBerry Enterprise Server

[HP](#)

Hewlett-Packard Development Company

[SPI](#)

Smart Plug-in

[HP OM for UNIX](#)

HP Operations Manager for UNIX

[HP OM for Windows](#)

HP Operations Manager for Windows

# Index

## A

access levels, 5

## C

copyright notices, 2

customer support, 5

## D

documentation updates, 3

## L

legal notices, 2

- copyright, 2

- restricted rights, 2

- trademark, 2

- warranty, 2

## P

Performance Tools, 10

prerequisites, 9

## R

related documents, 9

Reporting

- Performance Agent, 10

restricted rights legend, 2

## S

support, 5

## T

technical support, 5

Tools

- Performance Tools, 10

trademark notices, 2

## U

updates to doc, 3

## W

warranty, 2