



OZSoft Consulting Corporation  
<http://www.ozsoft-consulting.com>

# **SAP Host Control Management Pack for Microsoft System Center Operations Manager**

Installation and User's Guide

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## About this publication

This book provides instructions for installing, configuring and operating OZSoft SAP Host Control Management Pack for Microsoft System Center Operations Manager.

## Introduction

OZSoft SAP Host Control Management Pack for Microsoft System Center Operations Manager (SCOM) is an add-on to SAP Management Pack that enables the monitoring of SAP Landscape utilizing SAP Host Control Infrastructure.

SAP Host Control Agents implement OS-level control and monitoring of local SAP Services, such as Internet Connection Manager (ICM), J2EE Engines, Java Processes and DB Components.

The Base SAP Management Pack is required to be installed and licensed to use this Add-On Management pack.

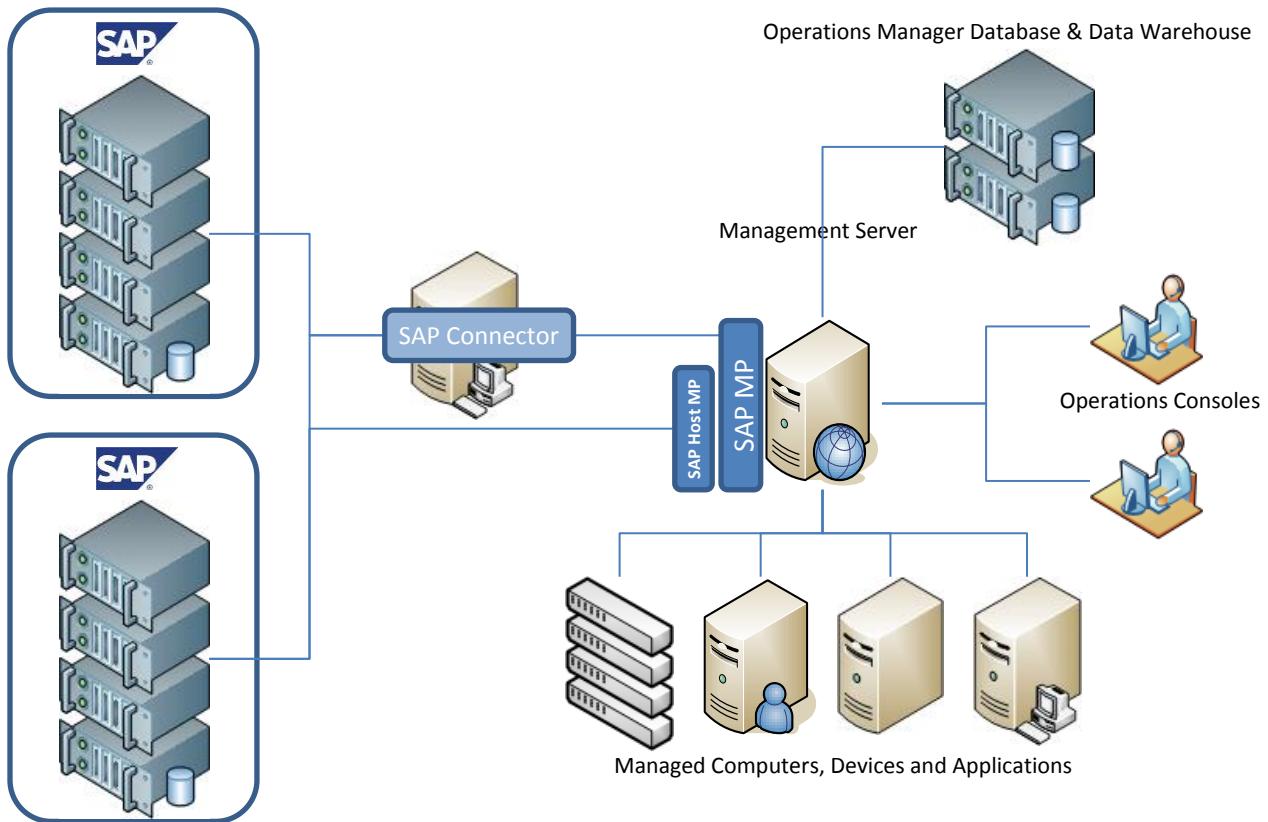
The Management Pack does not require any additional software besides SCOM and SAP Host Control Agents.

OZSoft SAP Host Control Management Pack enhances SAP Management Pack, extending its reach beyond CCMS and supporting non-ABAP SAP Systems without the need for Solution Manager.

## Architecture

The SAP Host Control Management Pack takes advantage of SAP Host Agent infrastructure and covers availability and performance monitoring of non-ABAP SAP Services.

The diagram below illustrates how the Management Pack fits into SCOM Architecture.



**Figure 1. Management Pack Architecture**

SAP Host Control Management Pack is delivered as Management Pack Bundle and is imported into SCOM as a regular Management Pack.

The Management Pack utilizes SAP Host Control Web Services interface and monitors SAP Host Agents remotely.

The Host Control Management Pack is complementary to the core SAP Management Pack and can be used to monitor SAP via Host Control interface concurrently with CCMS or the stand-alone non-ABAP SAP Systems (such as Java AS).

## Installation requirements

### Microsoft System Center Operations Manager

Microsoft System Center Operations Manager 2012 SP1 or R2

### SAP Host Control Agent

Host Control Agent version 7.00, Patch 96 or later.

SAP Host(s) User Account(s) authorized to communicate with SAP Host Agents:

For Microsoft Windows we recommend using a single domain user for all Host agents.

The user account(s) must be a member of:

*On Linux: **sapinst** group*

*On Windows: **SAP\_LocalAdmin** group*

The web services provided by the SAP host agent are protected and can only be used by an authenticated caller. To authorize users to access SAP host agent services the following need to be performed for all hosts to be monitored:

1. Open the following file:  
*Under Linux: /usr/sap/hostctrl/exe/host\_profile*  
*Under Microsoft Windows: C:\Program Files\SAP\hostctrl\exe\host\_profile*
2. Add the following parameter: service/admin\_users
3. Add admin users as parameter values separated by a blank space (for example service/admin\_users =<user1><user2><user3>)  
*On Unix : service/admin\_users = <user1> <user2>*  
*On Windows : service/admin\_users = [domain]\<user1> [domain]\<user2>*  
Save.
4. Restart SAP Host Agent with "/usr/sap/hostctrl/exe/saphostexec -restart" or "C:\Program Files\SAP\hostctrl\exe\saphostexec.exe -restart"

### Watcher Nodes

SCOM 2012 (R2) Management servers and Agents can be selected as watcher nodes. However, only SAP Host Control MP Workflows can run on SCOM Agents. The core SAP MP workflows that deal with the data inserted by SAP Connector require DB connection and can't run on the Agents.

For SAP Host Control MP only the SCOM Agents, running on Windows Server 2012, are supported. SCOM Agents running on Windows Server 2008 R2 and earlier run as CRL .NET 2.0 and unable to load Host Control MP's Managed Module which requires .NET 4.0 or later.

## Installing Management Pack

### Importing Management Pack into Operations manager

In the installation folder (C:\Program Files\OZSoft Consulting Corporation\SAP Management Pack) find *scom* sub-folder. In this folder you will find *ozsoft.host.mpb*, *ozsoft.host.monitoring.mp* and *ozsoft.host.dw.mp* files.

Import these files into SCOM using Operations Console.

## Configuring Management Pack

### Define new SAP System

1. Log on to the Windows computer where the SAP Management Pack Connector is installed.
2. Launch the Management Pack Configuration.
3. Switch to **SAP** Tab to configure SAP System connections

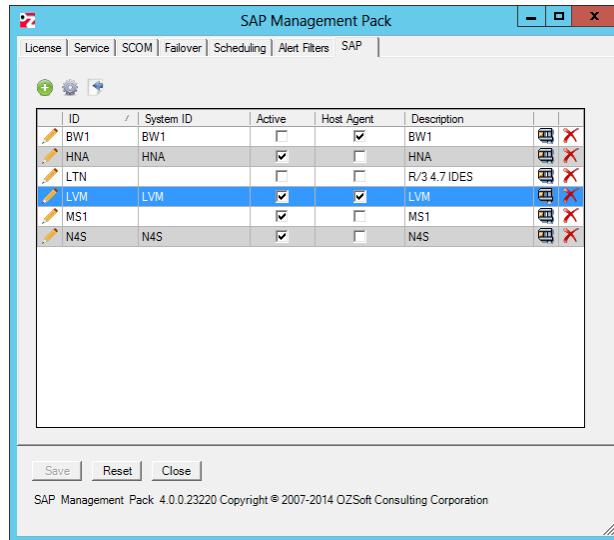


Figure 2. SAP System Configurations

4. Add a new SAP configuration - click (New) button in **SAP System** tab.

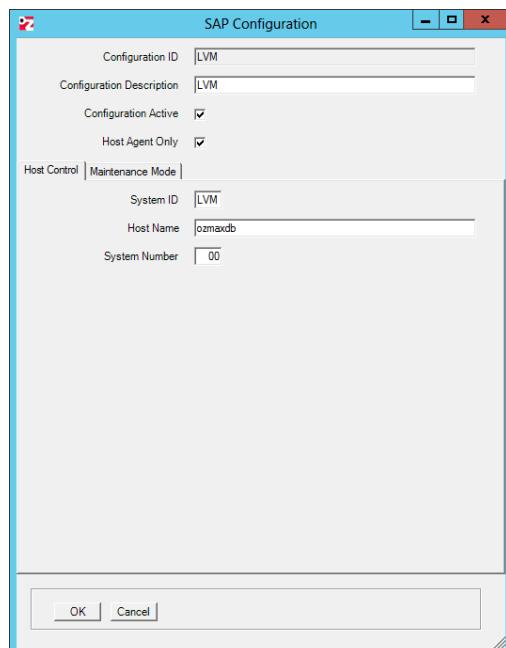
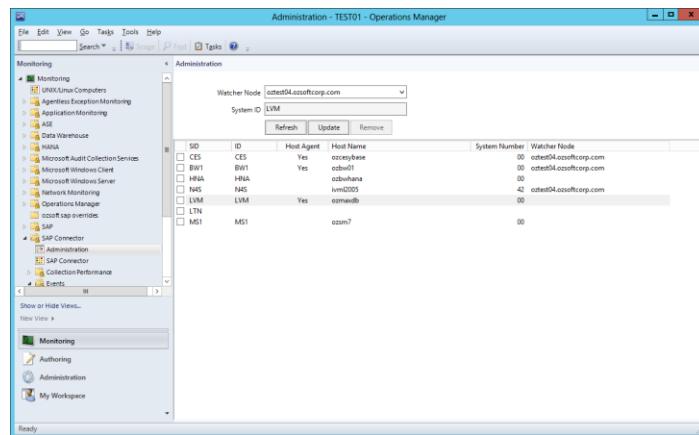


Figure 3. Defining new SAP System

5. Check **Host Agent Only** box:
6. Fill **System ID**, **Host Name** (or IP-address) and **System Number** fields. You can select the host name of any of SAP System's Application Servers - the Management Pack will discover all other Application Servers.
7. Click OK, the Save the configuration.
8. Make sure SAP Connector Service is running and wait for a few minutes (usually 5 minutes as configured in Failover synchronization) until the SAP Connector creates the entry in SCOM.
9. Launch Operations Console, using an Account with Administrator role assigned.
10. Verify that the newly configured system appears in **SAP|SAP System** view
11. Switch to Administration Panel
12. Create Run As Account
  - a. Choose **Simple Authentication** Type
  - b. Fill in user and password for the existing OS account as described in SAP Host Control Agent [Requirements](#)
  - c. Save the **Run As Account**
13. Assign **Run As Account** to **Profile**
  - a. Select Profiles and edit **SAP Host Control Monitoring Account** profile properties.
  - b. Add previously created **Run As Account** to the profile, selecting either an the relevant **SAP System** or a **Group**
  - c. Save the profile
14. Switch to Monitoring Panel
15. Assign Watcher Node:
  - a. Under SAP Connector folder click on Administration view



**Figure 4. Assigning Watcher Node**

- b. Select the SAP System from the list
- c. Select **Watcher Node** from the drop-down. This can be either a Resource Pool or a specific SCOM Management Server. The Watcher Node determines where all SAP System's Workflows will be executed. You can also use this interface to assign SAP System monitored by SAP Connector to a specific Management Server or a resource pool
- d. Click Update button
16. The configuration is now complete. The Management Pack will perform the discovery of SAP System components, which can take up to 15 minutes depending on the system configuration.

## Delete SAP System

1. Launch Operations Console, using an Account with Administrator role assigned.

2. Under SAP Connector folder click on Administration view

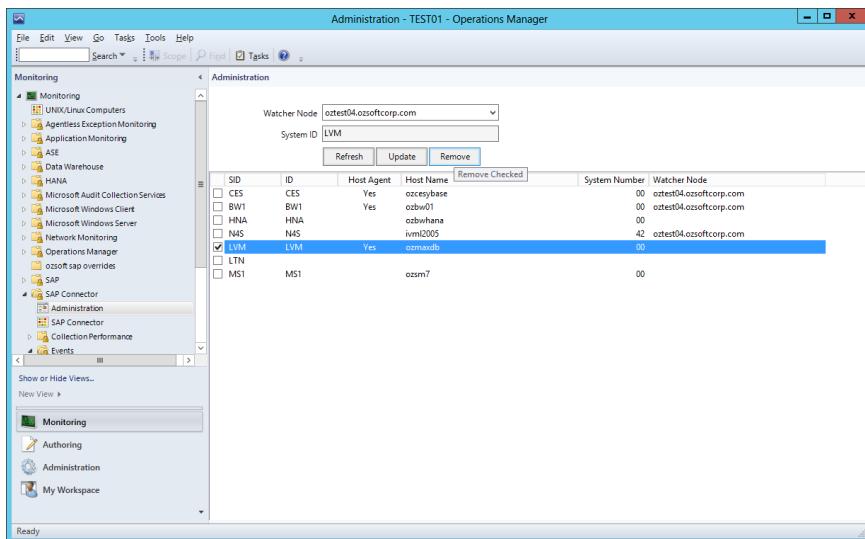


Figure 5. Assign Watcher Node

3. Check the box for the SAP System(s) to be deleted
4. Click on Delete button

## Troubleshooting

The Management Pack uses Windows Event Log is used to log the errors. Look for the events in *Applications and Services Logs\Operations Manager* as seen in the figure below:

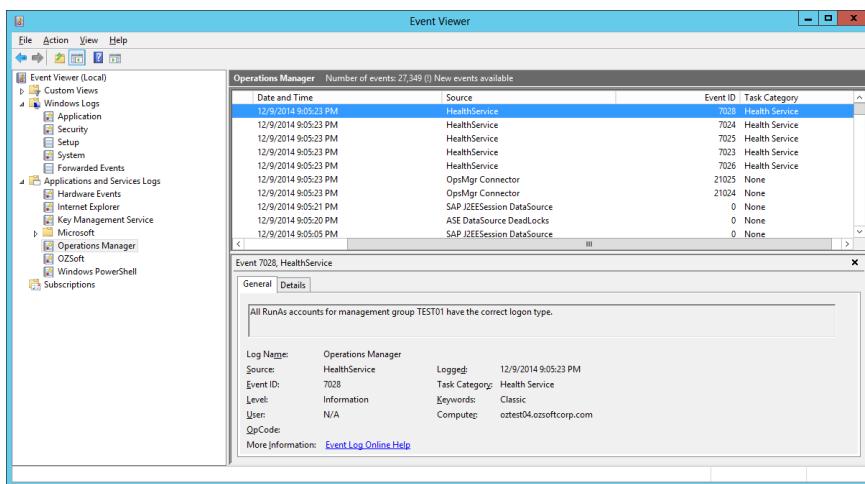


Figure 6. Management Pack Windows Event Log

The events related to SAP Host Control Management Pack typically have **Source** name starting with "SAP..."

## Using Management Pack

### Discovery

The Management Pack discoveries are performed automatically - no manual configuration or actions are required.

### SAP Systems and Components Navigation

The Host Control Management Pack re-uses SAP Management Pack folders and views. Operating this Management Pack is completely transparent and complimentary to SAP Management Pack.

#### SAP Systems

The Management Pack discovers the actual Management Server the SAP System objects' workflows are executed:

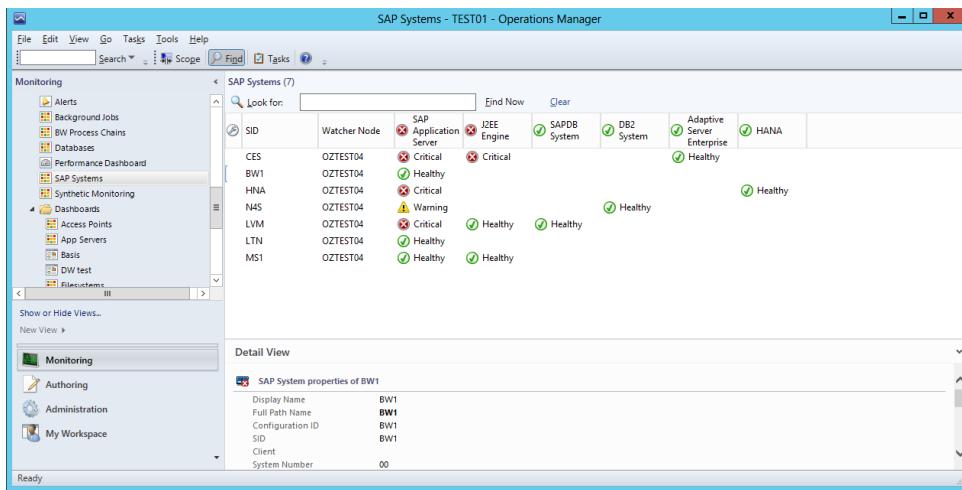
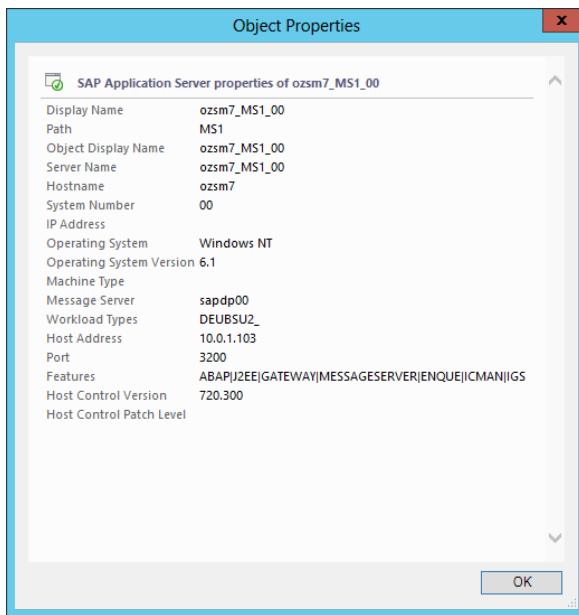


Figure 7. SAP Systems

## Application Servers

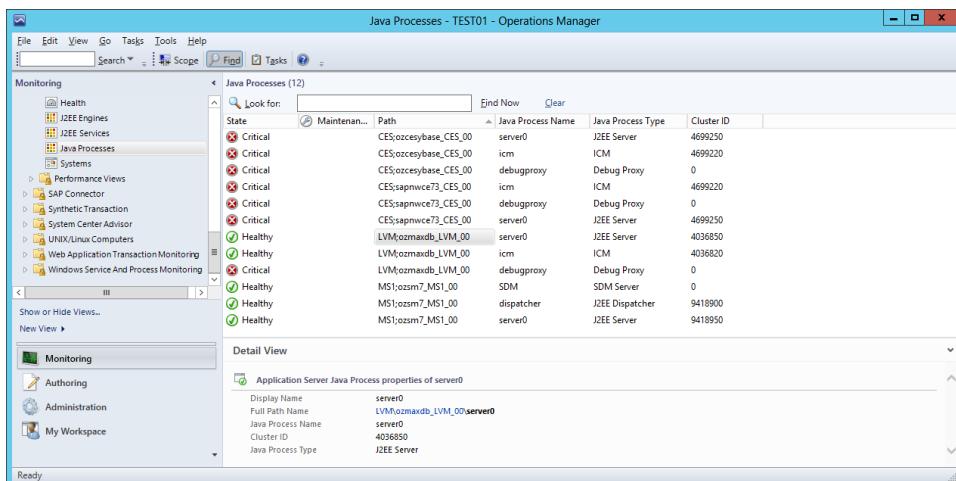
The Management Pack discovers all configured Application Servers



**Figure 8. AppServer Properties**

## Java Processes

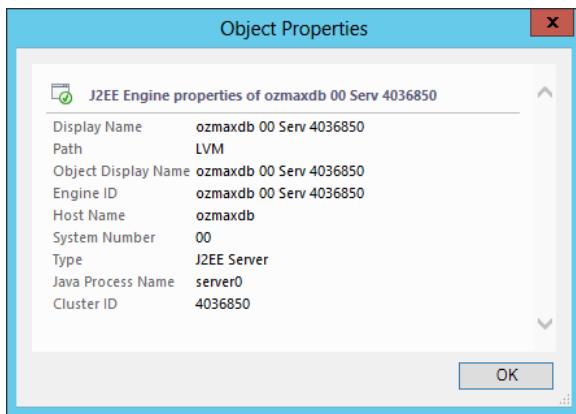
The Management Pack discovers all defined Java Processes such as J2EE Engine (server<n>), ICM, Dispatcher and SDM.



**Figure 9. Java Processes**

## J2EE Engines

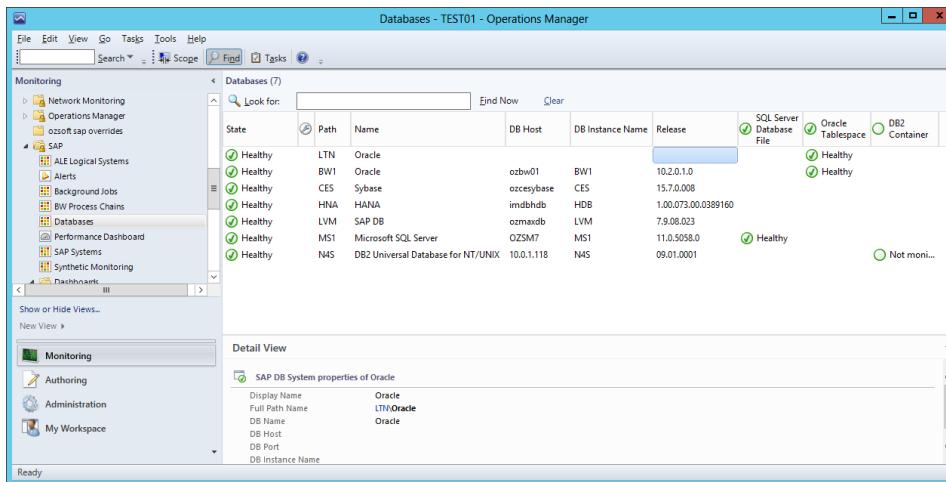
The Management Pack discovers J2EE Engines and their relationship to the java Processes:



**Figure 10. J2EE Engine Properties**

## Databases

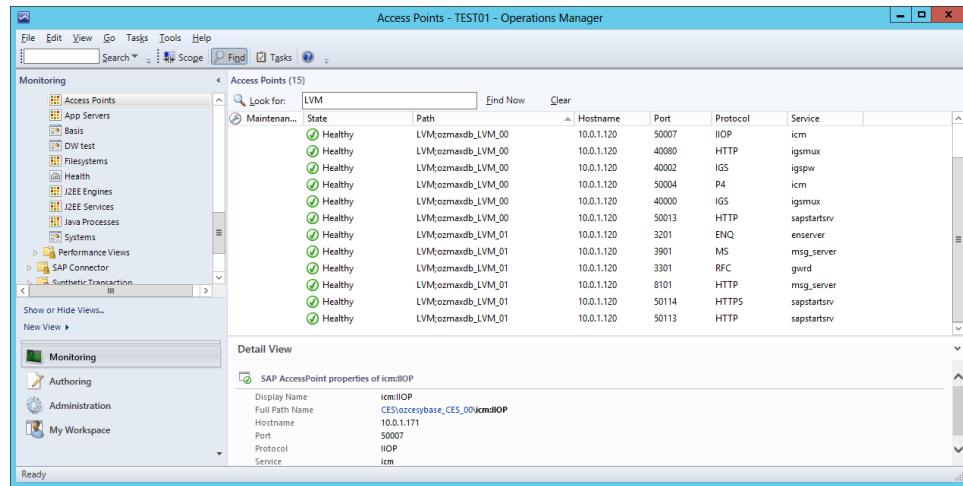
The Management Pack discovers SAP databases such as Oracle, SQL Server, DB2, HANA, Sybase ASE and SAP DB (MaxDB):



**Figure 11. Databases**

## Access Points

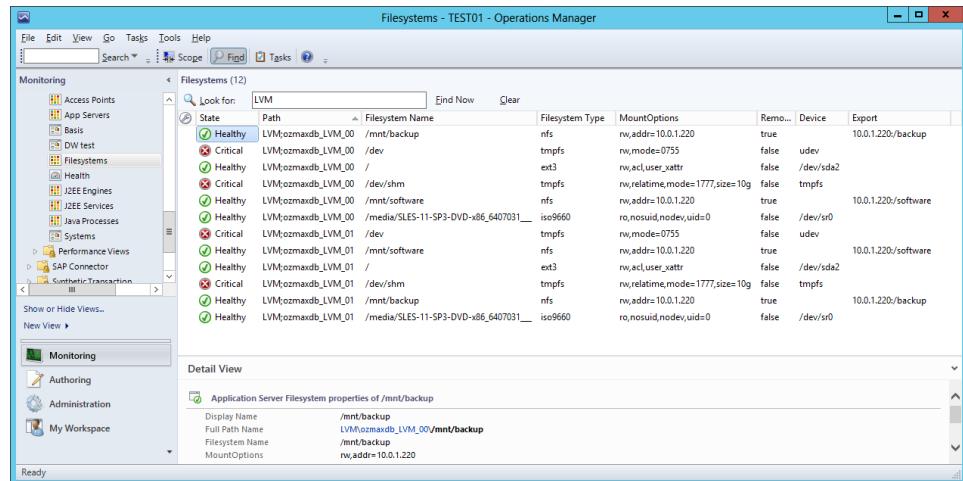
For each Application Server the Management Pack discovers all configured Access Points:



**Figure 12. Access Points**

## File Systems

The Management Pack discovers App Servers' File system:



**Figure 13. File Systems**

## Monitoring

The Management Pack includes a number of Performance and Availability monitors. Please use *Health Explorer* for specific objects to view the associated monitors' Knowledge Articles for more details. Please see objects' *Performance View* for the full list of collected *Performance Counters*. Custom monitors can be easily added per request.

Target Object	Monitor Name	Description	Enabled
App Server	CPU Load Average	App Server CPU 5 Minutes Load Average Monitor	
App Server	CPU User	App Server CPU Application Programs Utilization %	
App Server	ICM Queue Size	App Server ICM Queue Size	•
File System	Filesystem Used	File system Used space % Monitor	•
Access Point	Availability	SAP Access Point Availability	•
Java Process	Restart Count	SAP J2EE Process Restart Count Delta Monitor	•
Java Process	State	SAP J2EE Process State Monitor	•

<b>Java Process</b>	Error Count	SAP J2EE Process Error Count Monitor	•
<b>Java Process</b>	Heap Status	SAP J2EE Process VM Heap Status Monitor	•
<b>Java Process</b>	Cache Size	SAP J2EE Cache Size Monitor	•
<b>J2EE Engine</b>	Corrupted Sessions	SAP Corrupted J2EE Session Monitor	•
<b>J2EE Application</b>	Status	SAP J2EE Application Status Monitor	•
<b>J2EE Service</b>	Status	SAP J2EE Service Status Monitor	•
<b>DB</b>	CPU 5 Minute Load-Average	DB CPU 5 Minute Load-Average Monitor	
<b>DB</b>	Status	DB Availability Monitor(status Running)	•
<b>DB</b>	CPU User	DB CPU Application Programs Utilization %	

Table 1. Management Pack Monitors

## Contact Information

You can contact OZSoft Consulting at the following e-mails addresses:

Technical support: [support@ozsoft-consulting.com](mailto:support@ozsoft-consulting.com)

Sales and Marketing: [sales@ozsoft-consulting.com](mailto:sales@ozsoft-consulting.com)

You can also visit our web site at <http://www.ozsoft-consulting.com> for more information about OZSoft Consulting Corporation, the SAP Performance Management Specialist