



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

# HANA Management Pack for Microsoft System Center Operations Manager

Release Notes

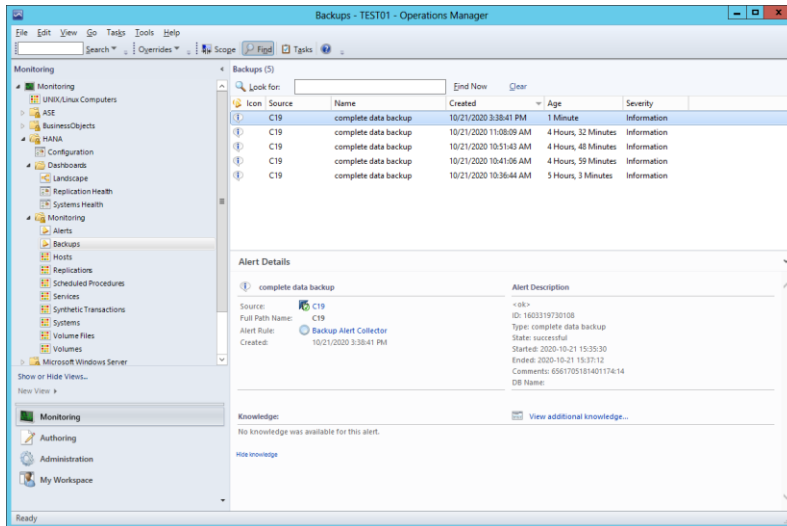
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## Version 1.3.0, November 2, 2020

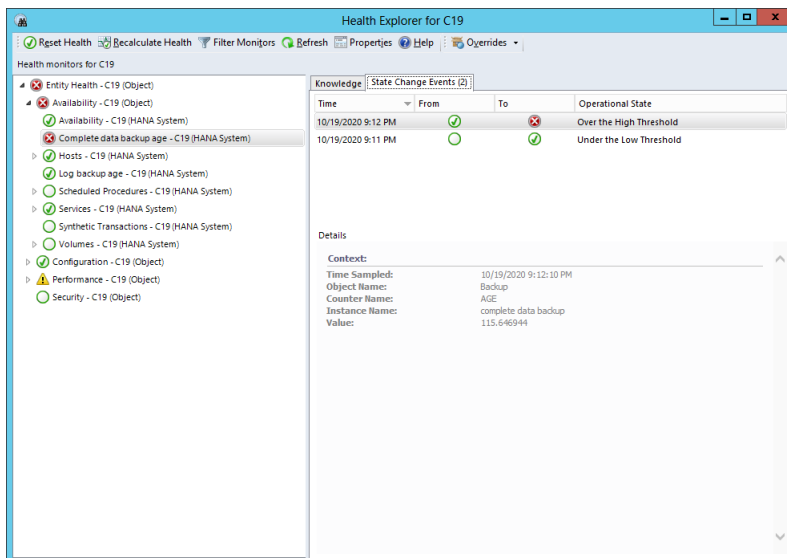
### New in this release

#### Backup Monitoring

HANA Management Pack now supports HANA Backup monitoring. This includes alerting on backup success, cancelation or failure:



As well as monitoring the age (in hours) of last successful backups (data and log)



## Changed in this release

### Monitors have been changed

The following monitors have been modified to monitor Delta instead of the actual values:

- Record Lock Total Waits
- Record Lock Total Wait Time
- Table Lock Total Wait Time

**These monitors are now disabled by default**

### Latest version of HANA ODBC driver

The Management Pack now bundles the latest version of HANA ODBC driver 2.6.54

### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000041</b>	Class Case Exception is thrown when adding a new HANA Instance in the Configuration dashboard
<b>BMPHANA000042</b>	Schedule Procedures monitoring is not functioning properly
<b>BMPHANA000043</b>	Lock monitoring reports total values since system start which is not usable
<b>BMPHANA000044</b>	Service Memory utilization reports inaccurate values. Compactors' memory is now excluded from the calculations.

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description

### Installation Instructions

Import the new version of ***ozsoft.hana.mpb***, ***ozsoft.hana.monitoring.mp*** and ***ozsoft.hana.dw.rules.mp***

- ! Due to changes in the Management Pack's Managed Module please restart "**Microsoft Monitoring Agent**" windows service on all **Watcher Nodes** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher Node)

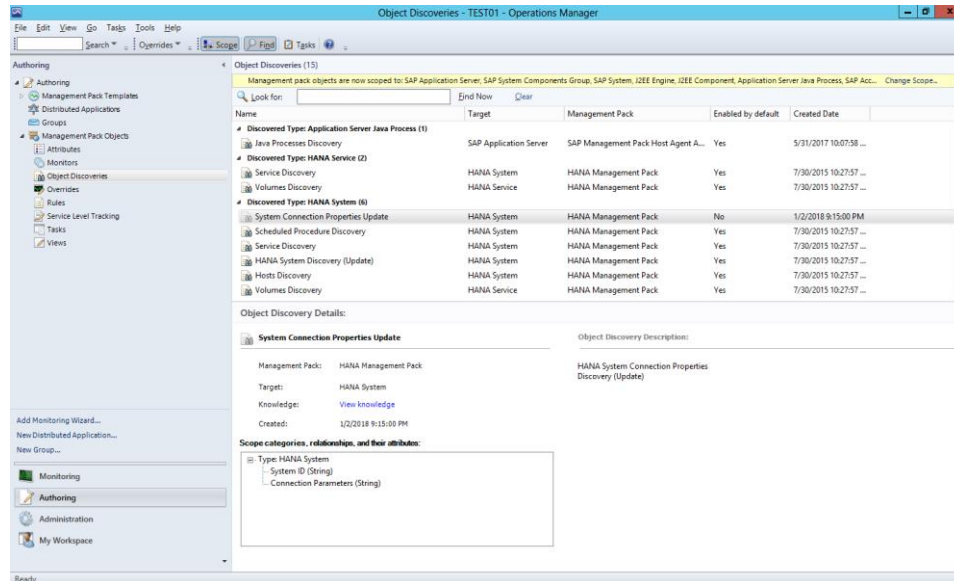
## Version 1.2.0, January 5, 2018

### New in this release

#### Connection Parameters Override

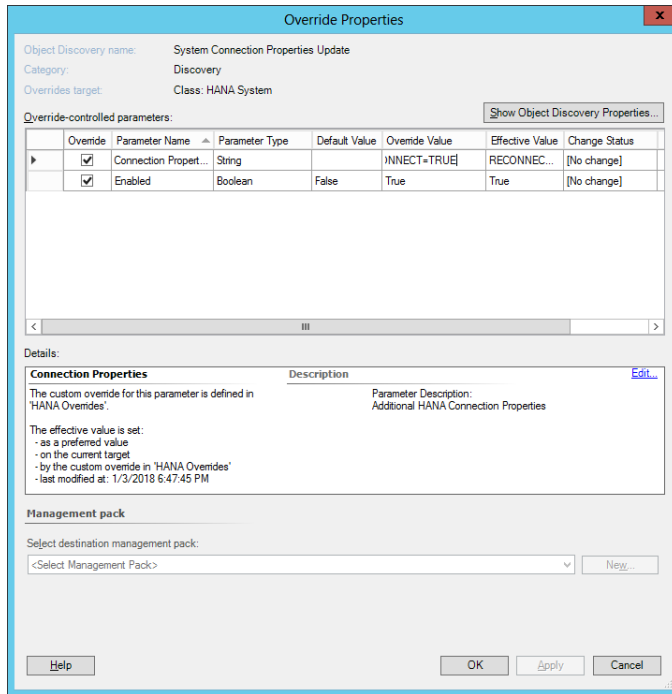
Custom HANA ODBC Connection Parameters override option has been added.

The new discovery **System Connection Properties Update** can be enabled and the desired ODBC Connection Parameters can be supplied for either all HANA System configurations or the specific ones.



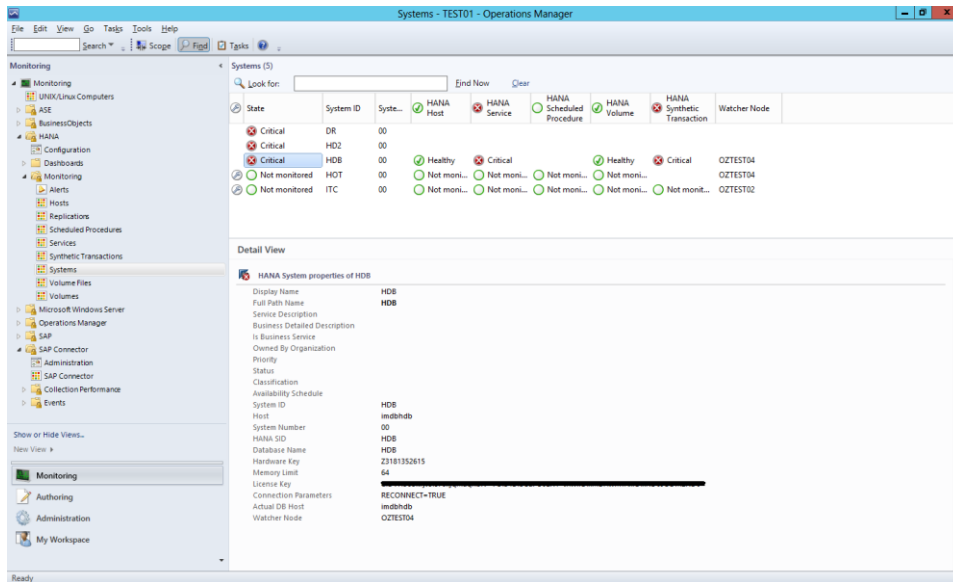
#### Discovery: System Connection Properties Update

# HANA Management Pack for Microsoft System Center Operations Manager



## Connection Properties Override

The Discovery is scheduled to run every 4 hours. When completed, the overridden Connection Parameters will show up in HANA System properties:



## System Properties

## Changed in this release

### Latest HANA ODBC Driver

HANA Management Pack now utilizes the latest SAP HANA ODBC Driver 2.2.26.1504297370

## Release Notes

### Monitors/Rules have been disabled

HANA Service **Pending Threads** monitor has been disabled by default. Please override if needed.

HANA Service **Service Threads Counter Collector** rule has been disabled by default.

### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000040</b>	The following HANA Service Monitors report inaccurate data: <ul style="list-style-type: none"><li>• <b>Heap Memory Used (%)</b></li><li>• <b>Total Memory Allocated (%)</b></li><li>• <b>Total Memory Used (%)</b></li></ul>

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description
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### Installation Instructions

Import the new version of ***ozsoft.hana.mpb*** and ***ozsoft.hana.monitoring.mp***

- ! Due to changes in the Management Pack's Managed Module, after importing ***ozsoft.hana.mpb***, please restart **Microsoft Monitoring Agent** windows service on all **Watcher Nodes** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher Node).  
The Operations Console also needs to be restarted

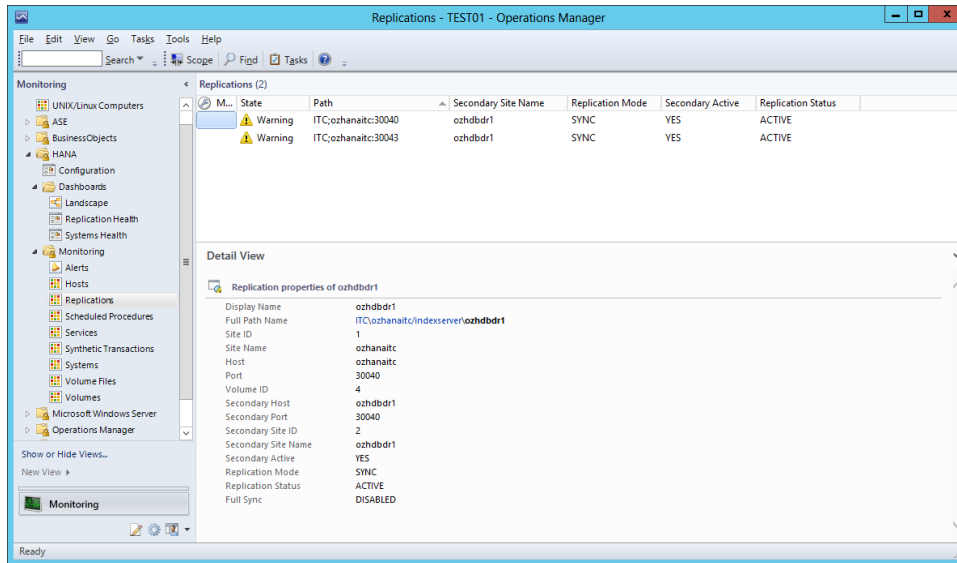
## Version 1.1.0, October 31, 2016

### New in this release

#### HANA Replication Monitoring

HANA Replication monitoring has been added.

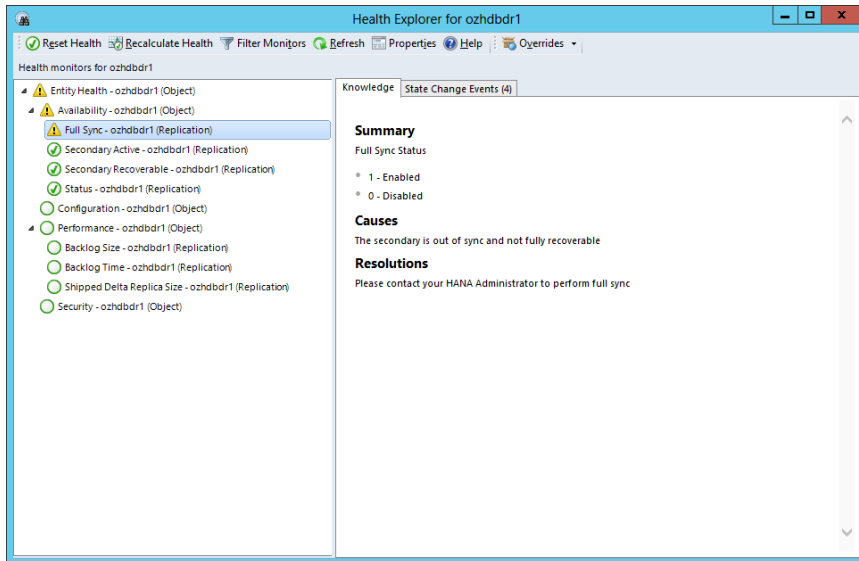
The **Replications** are auto-discovered for HANA Services.



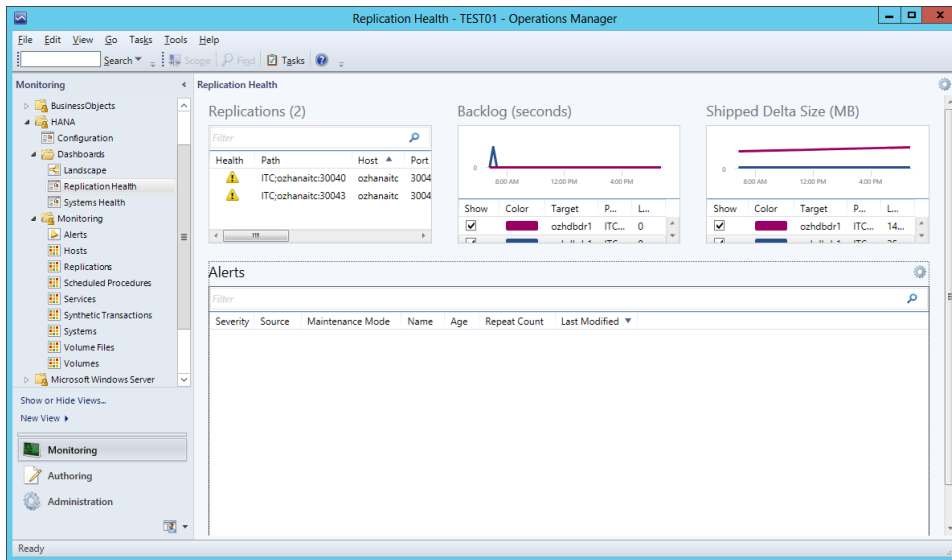
Each **Service Replication** object has the following monitors implemented:

Monitor Name	Description	Enabled
<b>Status</b>	Replication Status	Yes
<b>Full Sync</b>	Replication Full Sync Status	Yes
<b>Secondary Active</b>	Replication Secondary Active Status	Yes
<b>Secondary Recoverable</b>	Replication Secondary is Fully Recoverable	Yes
<b>Backlog Size</b>	Replication Backlog Size (MB)	No
<b>Backlog Time</b>	Replication Backlog Time (seconds)	No
<b>Shipped Delta Replica Size</b>	Replication Last Shipped Delta Replica Size (MB)	No

# HANA Management Pack for Microsoft System Center Operations Manager



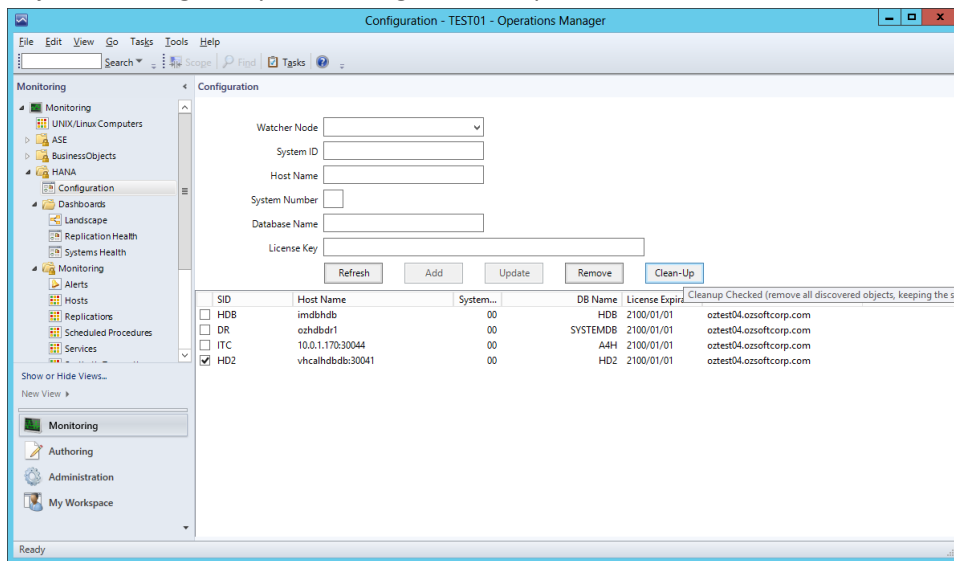
The updated **ozsoft.hana.dashboards.xml** management pack now includes a dedicated Replication Health dashboard:





## System Clean-up in Configuration Panel

The configuration panel supports HANA system clean-up. The cleanup removes all discovered SCOM objects, leaving the system configuration in-place.



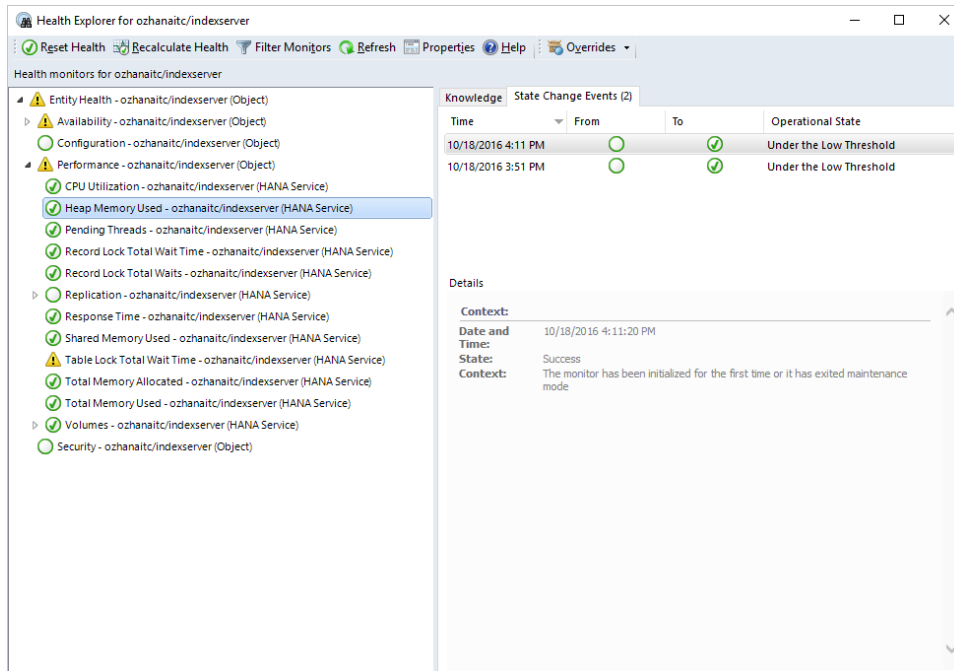
To perform Clean-up – check the checkbox for the systems that need to be cleaned-up, the Clean-Up button will be enabled. Press the button and confirm the selection.

## Changed in this release

### New Service Monitors

New HANA Service Monitors have been added:

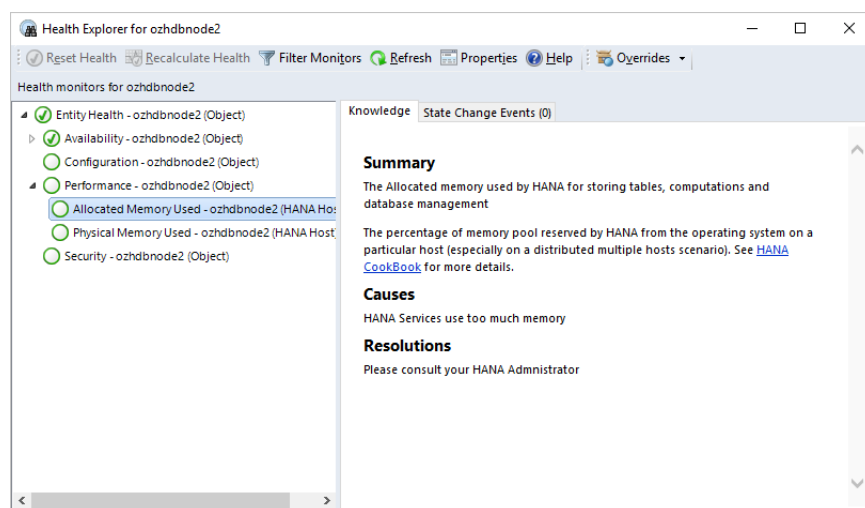
- **Heap Memory Used (%)**
- **Total Memory Allocated (%)**
- **Total Memory Used (%)**



## Monitors have been disabled

HANA Host Data source using the SQL statement that can cause the database to crash due to HANA Bug in the revisions prior to 122 (see known issues - **BMPHANA000038**).

The HANA Host Monitors: **Allocated Memory Used** and **Physical Memory Used** as well as the rule **Host Counters Collector** are now disabled by default. Please enable them only if HANA has been upgraded to revision 122 and later.



## Latest HANA ODBC Driver

HANA Management Pack now utilizes the latest SAP HANA ODBC Driver 1.0.120.42

## Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000033</b>	Error message in the Windows Event log: <i>The constructor for the managed module type "ozsoft.hana.PerformanceDSHostOS"...</i> <i>The exception text is:</i> <i>Microsoft.EnterpriseManagement.HealthService.HealthServiceException: The module host method RequestSuspend failed with error code -2130771954 for module of type Unknown ...</i>
<b>BMPHANA000034</b>	Error message in the Windows Event log: <i>Value was either too large or too small for an Int32 for column:USED_SIZE.</i>
<b>BMPHANA000035</b>	Configuration panel fails to load in the operations console
<b>BMPHANA000036</b>	The following error is displayed while trying to add a new system in the configuration panel: <i>Value cannot be null. Parameter name: monitoringConnector</i>

## Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description
<b>BMPHANA000038</b>	<p>SAP Note <b>2343165</b> - SAP HANA SPS 12 Database Revision 122 Fixed a bug which caused a crash when selecting <b>M_HOST_RESOURCE_UTILIZATION</b> with WHERE clause "HOST=" condition has non-existing hostname value.</p> <p>Callstack:</p> <ol style="list-style-type: none"><li>1. MemoryManager::SmallBlockAllocator::delayedDeallocate(...)</li><li>2. MemoryManager::MemoryPool::deallocate(...)</li><li>3. MemoryManager::PoolAllocator::deallocateImpl(...)</li><li>4. ptime::HostResourceUtilMonitor::create_objects(...).</li></ol>

## Installation Instructions

Import the new version of ***ozsoft.hana.mpb***, ***ozsoft.hana.monitoring.mp***, ***ozsoft.hana.dw.xml*** and ***ozsoft.hana.dashboards.xml***

- ! Due to changes in the Management Pack's Managed Module, after importing ***ozsoft.hana.mpb***, please restart **Microsoft Monitoring Agent** windows service on all **Watcher Nodes** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher Node).  
The Operations Console also needs to be restarted
- ! Due to the recent changes in HANA that allowed multiple instances of the same service on the same host, the Management Pack Service object unique key has changed as well. SCOM however is unable to un-discover the old services. Please perform system Clean-Up for all configured HANA system in Configuration Panel (see System Clean-up in Configuration Panel)

## Version 1.0.9, October 1, 2015

### New in this release

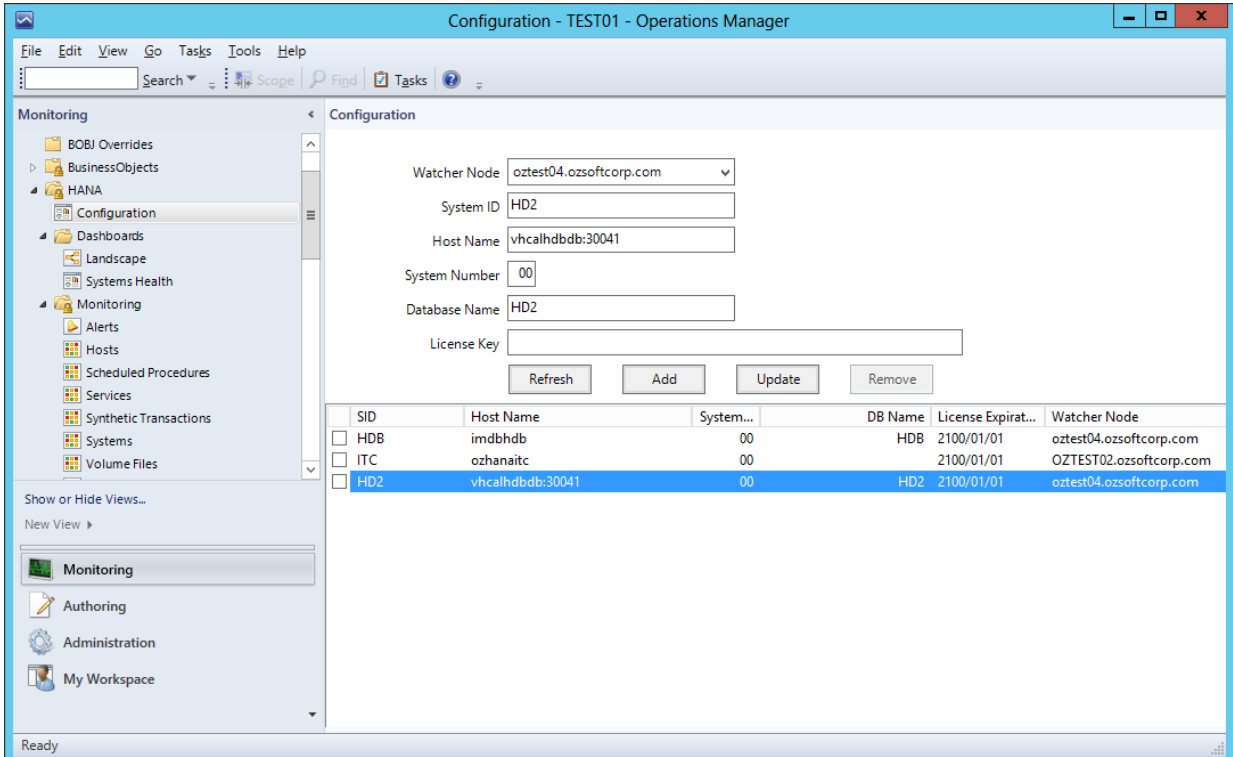
There is no new functionality in this release

### Changed in this release

#### HANA Multi-tenancy configuration

A peculiar behavior of remote SAP clients (ODBC, JDBC, and HDBSQL) in HANA multitenant environment has been discovered: When connecting to the SYSTEMDB or the first-created tenant the port used per documentation as 3<sys number>15. Also supplied is a Database Name (Tenant Name) that specifies the tenant name. However, it has been determined that the standard port will not work for any additional tenant created. It took a little detective work to find out how to connect to the additional tenants. Apparently the new tenants' *indexserver* services (appear as hdbindexserver-<DB Name>) are assigned a different SQL ports which requires the client connection to specify this particular port when connecting to the tenant.

In order to enable multiple tenant monitoring in the management pack this release adds an ability to explicitly specify the connection port number:



The screenshot shows the 'Configuration - TEST01 - Operations Manager' window. The left sidebar contains a tree view with 'Monitoring' expanded, showing 'HANA' and 'Configuration'. The main area displays the configuration form for a HANA tenant. The form includes fields for 'Watcher Node' (oztest04.ozsoftcorp.com), 'System ID' (HD2), 'Host Name' (vhcalhdbdb:30041), 'System Number' (00), and 'Database Name' (HD2). Below the form are buttons for 'Refresh', 'Add', 'Update', and 'Remove'. A table at the bottom lists the configured tenants:

SID	Host Name	System...	DB Name	License Expirat...	Watcher Node
<input type="checkbox"/> HDB	imdbhdb	00	HDB	2100/01/01	oztest04.ozsoftcorp.com
<input type="checkbox"/> ITC	ozhanaitc	00		2100/01/01	OZTEST02.ozsoftcorp.com
<input checked="" type="checkbox"/> HD2	vhcalhdbdb:30041	00	HD2	2100/01/01	oztest04.ozsoftcorp.com

The supported hostname format now includes optional port number separated by ':'. The explicit port number overrides the default port number which is calculated as 3<sys number>15.

! Each HANA tenant requires a separate "System" configuration.

! The same license key can be used for all tenants' configurations for the same HANA appliance.

**Determining HANA tenant Port Number**

There are two methods can be used to find out the tenant port number:

1. Using local **hdbsql**

- Use this method is you have SSH access to HANA host and have HANA account
- Start hdbsql
- Run the command below (substitute SYSTEM for the valid account if needed)

```
hdbsql=> \c -i 0 -n sid-hdb -d SYSTEMDB -u SYSTEM -p [redacted]
Connected to HDB@vhcalhdbdb:30013
hdbsql SYSTEMDB=> \di
Connection closed
hdbsql=> \c -i 0 -n sid-hdb -d HDB -u SYSTEM -p [redacted]
Connected to HDB@vhcalhdbdb:30015
hdbsql HDB=> \di
Connection closed
hdbsql=> \c -i 0 -n sid-hdb -d HD1 -u SYSTEM -p [redacted]
Connected to HDB@vhcalhdbdb:30044
hdbsql HD1=> \di
Connection closed
hdbsql=> \c -i 0 -n sid-hdb -d HD2 -u SYSTEM -p [redacted]
Connected to HDB@vhcalhdbdb:30041
hdbsql HD2=>
```

2. If you don't have the access to the HANA hdbsql login credentials, you can use this method or request the information from the HANA Admin.

- Run "sapcontrol -nr <instance#> -function GetProcessList" to find the tenant (DBNAME) and get PID for the tenant index server.
- Run "HDB info" to find the corresponding hdbindexserver matching the PID
- Find the port and add 1 to get the SQL port used for ODBC or JDBC connection

```
sid-hdb:/usr/sap/HDB/HDB00> HDB info
USER      PID  PPID %CPU  VSZ  RSS  COMMAND
hdbadm    3958 3957 0.0   13884 2784 -sh
hdbadm    4504 3958 0.0   12900 1720 \_ /bin/sh /usr/sap/HDB/HDB00/HDB info
hdbadm    4527 4504 0.0   4944  876 \_ ps fx -U hdbadm -o user,pid,ppid,pcpu,vsz,rss,args
hdbadm    3180 1 0.0   22012 1556 sapstart pf=/usr/sap/HDB/SYS/profile/HDB_HDB00_vhcalhdbdb
hdbadm    3441 3180 0.1 460828 295316 \_ /usr/sap/HDB/HDB00/vhcalhdbdb/trace/hdb.sapHDB_HDB00 -d -nw -f /usr/sap/HDB/HDB00/vhcalhdbdb/daemon.ini
hdbadm    3484 3441 26.2 5021536 2235500 \_ hdbnameserver
hdbadm    3596 3441 1.5 2811972 359740 \_ hdbpreprocessor
hdbadm    3598 3441 9.4 2889296 436212 \_ hdbcompileserver
hdbadm    3619 3441 82.5 6405876 3327140 \_ hdbindexserver -port 30003
hdbadm    3622 3441 3.0 3725220 961640 \_ hdbscriptserver -port 30004
hdbadm    3625 3441 34.1 6499452 3419668 \_ hdbindexserver -port 30040
hdbadm    3628 3441 24.1 6309880 3274828 \_ hdbindexserver -port 30043
hdbadm    4451 3441 1.7 3067400 570492 \_ hdbwebdispatcher
hdbadm    3070 1 0.0 210312 73652 /usr/sap/HDB/HDB00/exe/sapstartsrv pf=/usr/sap/HDB/SYS/profile/HDB_HDB00_vhcalhdbdb -D -u hdbadm

sid-hdb:/usr/sap/HDB/HDB00> sapcontrol -nr 00 -function GetProcessList
16.09.2015 23:08:59
GetProcessList
OK
name, description, dispstatus, textstatus, starttime, elapsedtime, pid
hdbdaemon, HDB Daemon, GREEN, Running, 2015 09 16 22:54:11, 0:14:48, 3441
hdbnameserver, HDB Nameserver, GREEN, Running, 2015 09 16 22:54:13, 0:14:46, 3484
hdbpreprocessor, HDB Preprocessor, GREEN, Running, 2015 09 16 22:59:35, 0:09:24, 3596
hdbcompileserver, HDB Compileserver, GREEN, Running, 2015 09 16 22:59:35, 0:09:24, 3598
hdbwebdispatcher, HDB WebDispatcher, GREEN, Running, 2015 09 16 23:01:41, 0:07:19, 4451
hdbindexserver, indexserver-HDB, GREEN, Running, 2015 09 16 22:59:38, 0:09:21, 3619
hdbscriptserver, scriptserver-HDB, GREEN, Running, 2015 09 16 22:59:38, 0:09:21, 3622
hdbindexserver, indexserver-HD2, GREEN, Running, 2015 09 16 22:59:38, 0:09:21, 3625
hdbindexserver, indexserver-HD1, GREEN, Running, 2015 09 16 22:59:38, 0:09:21, 3628
```

### Latest HANA ODBC Driver

HANA Management Pack now utilizes the latest SAP HANA ODBC Driver 1.0.102.2

### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000032</b>	On Multi-tenant HANA system cannot connect to a tenant other than SYSTEMDB or the first-created one.

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description
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### Installation Instructions

Import the new version of ***ozsoft.hana.mpb*** and ***ozsoft.hana.monitoring.mp***

- ! Due to changes in the Management Pack's Managed Module, after importing ***ozsoft.hana.mpb***, please restart ***Microsoft Monitoring Agent*** windows service on all ***Watcher Nodes*** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher Node)

## Version 1.0.8, July 2, 2015

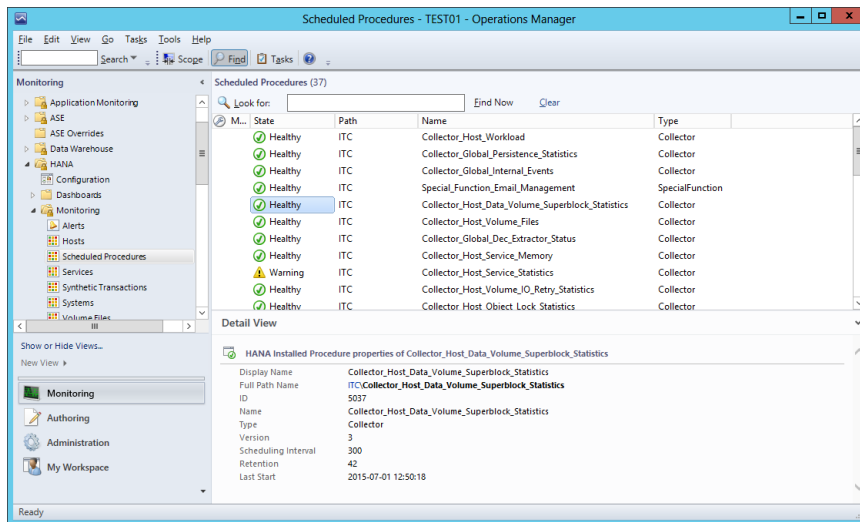
### New in this release

#### Statistics Server Scheduled Procedures Monitoring

The Statistics Server **Scheduled Procedures** (also known as **Statistics Server Actions**) are the important facility that drives periodic execution of collectors, alert generators and checks scripts. When the procedures are failing repeatedly-they are automatically disabled by the system, leading to undesirable consequences such as performance degradation, missing alerts etc.

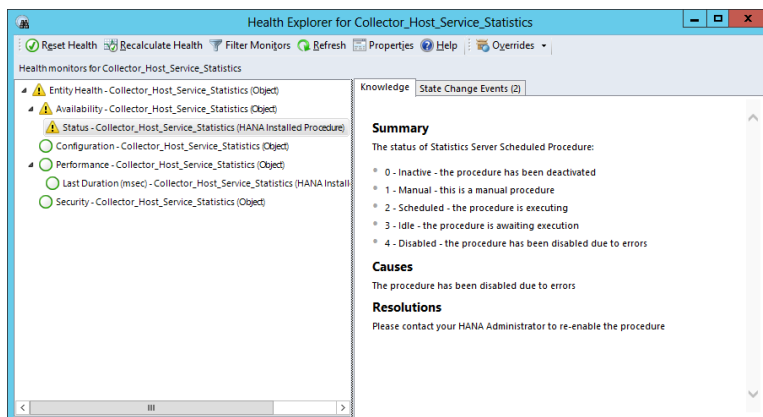
The new version of HANA Management Pack introduces **Scheduled Procedures Monitoring**.

A new view **Scheduled Procedures** has been added to HANA Monitoring folder, containing all discovered **Procedures**:



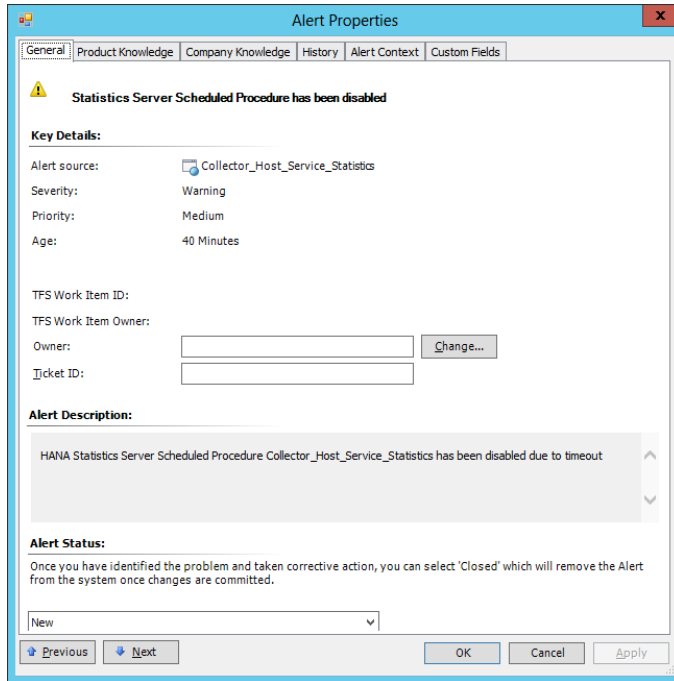
! HANA Management Pack does not discover Procedures of type 'Alert' due to a large number of such procedures which adversely impacts scom performance

For each discovered Procedure the following monitors have been implemented:





**Status** – Warning severity is triggered if the Procedure enters **Disabled** status. The alert will be generated, containing the reason for the disabling of the procedure.

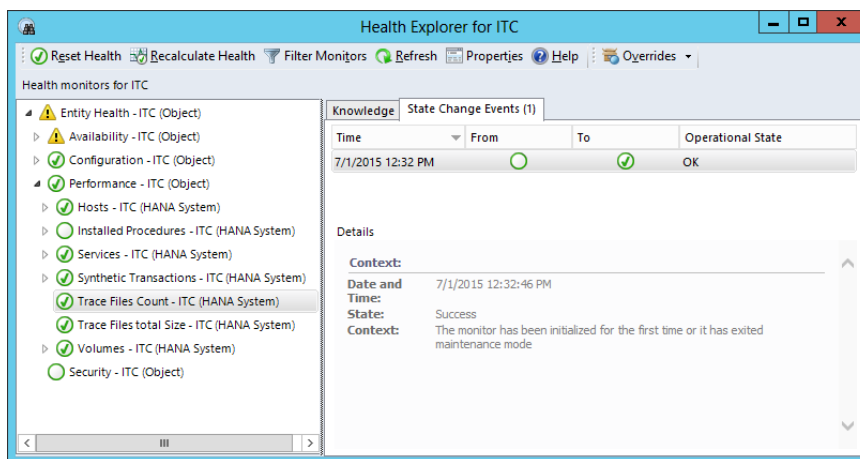


**Last Duration** – Disabled by default. Warning and Critical severities are triggered if Procedure’s last run time exceeds specified thresholds values

## Trace Files Monitoring

Runtime traces for HANA services and related Runtime dumps (RTE) are operational log tools used to troubleshoot HANA errors. Frequent number of traces, dumps and their size can indicate serious issues with the system as well as fill up the trace filesystem.

The following Trace File monitors have been implemented in this version of the HANA Management Pack:

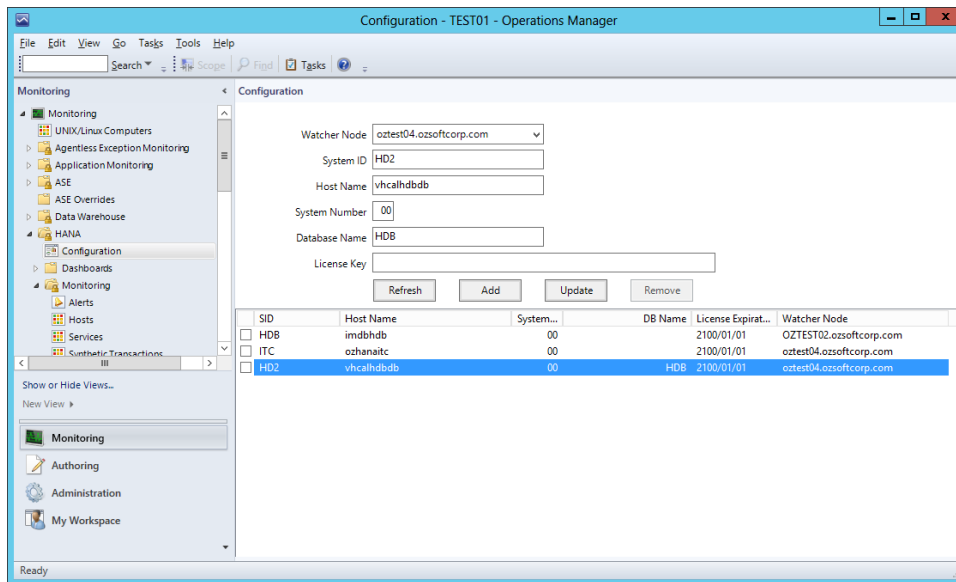


**Trace Files Count** – Warning severity is triggered if the number of Trace Files on the system (for the Tenant) exceed the specified threshold value

**Trace Files Total Size** - Warning and Critical severities are triggered if the total size of all Trace Files exceed the specified threshold values

### HANA Multi-tenancy Support

A new system connection configuration property **Database Name** has been added:



A separate system configuration needs to be added for each monitored tenant Database on the multitenant HANA system. For HANA Systems configured to run in “singledb” mode the property can be left blank.

! When upgrading from previous versions of the HANA Management Pack please select each configured system and click update button even if the **Database Name** value is desired to be blank. Without the update SCOM will not recognize the new property and will fail to load object’s workflows.

### Changed in this release

There are no changes to the existing functionality in this release

### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000030</b>	On Multi-tenant HANA system (in “multidb” mode) when monitoring tenant Database the HANA management Pack license can’t be verified due to empty SYS.M_LICENSE view

<b>BMPHANA000031</b>	HANA Management Pack can't be configured to monitor multiple tenant Databases on the same Multi-tenant HANA system
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## Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description

## Installation Instructions

Import the new versions of ***ozsoft.hana.mpb***, ***ozsoft.hana.monitoring.mp*** and ***ozsoft.hana.dw.rules.mp***

- ! Due to changes in the Management Pack's Managed Module after importing ***ozsoft.hana.mpb*** please restart "***Microsoft Monitoring Agent***" windows service on all ***Watcher Nodes*** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher Node)
- ! Due to changes in the Management Pack's Configuration Dashboard after importing ***ozsoft.hana.mpb*** please restart SCOM Operations Console. Without the restart the Configuration screen will not load.

## Version 1.0.7, June 5, 2015

### New in this release

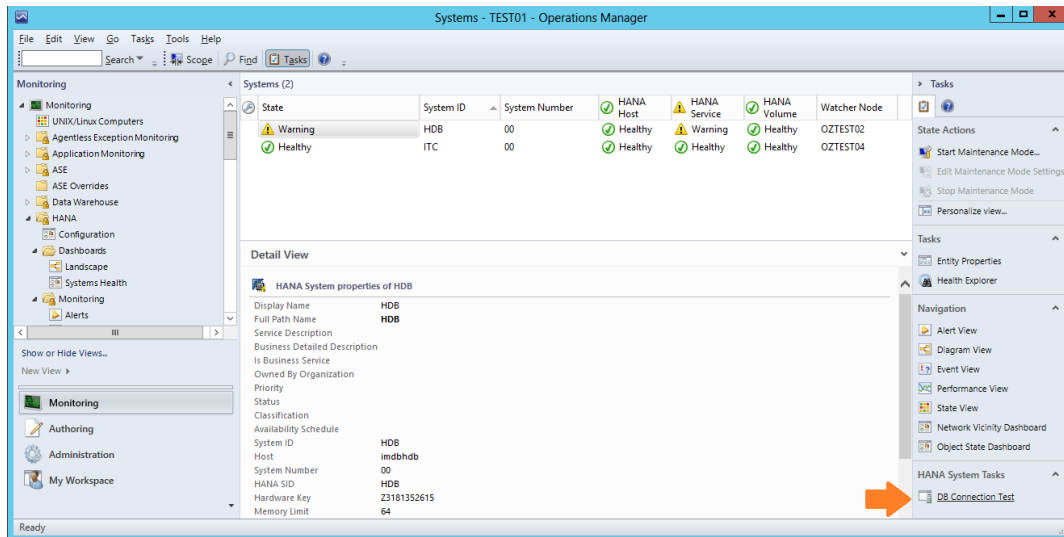
#### Managed Module version Monitoring

HANA Management Pack is based on Managed Module Assembly that is loaded by the watcher node's HealthService. When the new version of the Management Pack is imported the new version of the Managed Module Assembly is not loaded until the HealthService is restarted.

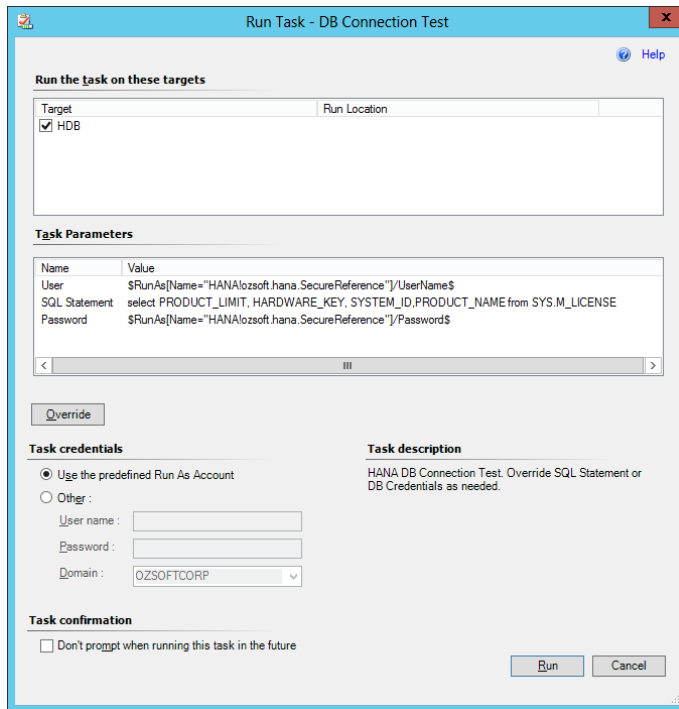
The Management Pack now has a new Monitor “**Managed Module Version**”. This Monitor checks that the latest version of the Managed Module is loaded. If the Monitor is in Critical state a restart of the Watcher Node’s Health Service (**Microsoft Monitoring Agent** service) is needed.

#### HANA Database Connection Testing Task

In order to streamline HANA Management Pack configuration the new HANA DB Connection Testing Task has been added. This task allows for interactive testing of Management Pack ODBC connection:

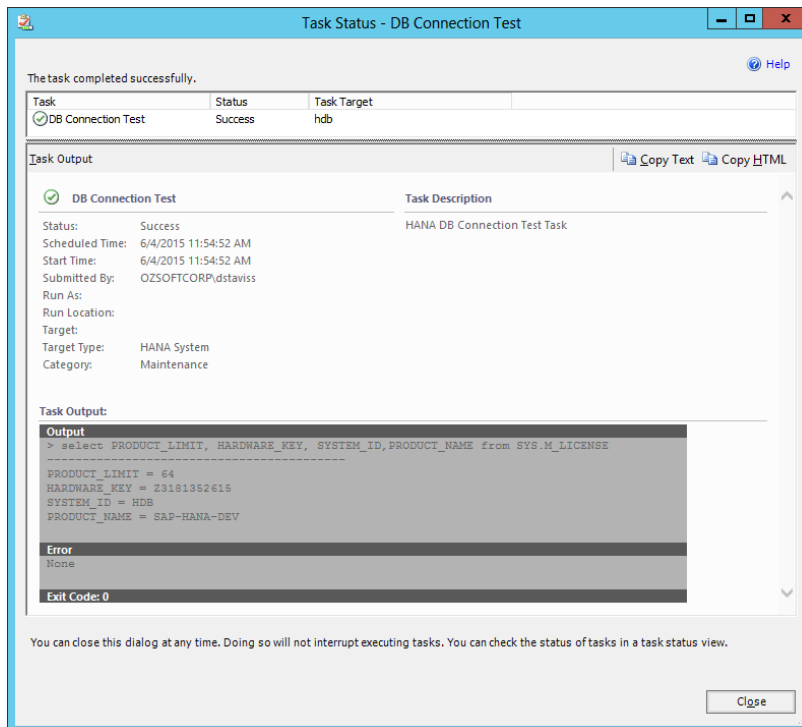


Navigate to **HANA Systems** view. Select a HANA System(s) and click on “**DB Connection Test**”.



Override **Task Parameters** as needed. By default, the HANA System's *Run As* account User and Password are used. Run the Task.

! Make sure you do not change the **Task Credentials** – *Run As* account for HANA is not compatible with Windows Accounts.



The Task is executed on the Watcher Node assigned to the specific HANA System.

### Changed in this release

#### Cookdown for Alert Rules

The so-called **Cookdown** has been implemented for all Alert Datasources. This enables the **Cookdown** for the custom Alert-generating Rules as well.

#### ODBC Driver 1.0.9.0 is bundled

The bundled ODBC drive has been updated to version 1.0.9.0.

#### HANA Alert suppression criteria and custom fields have changed

Due to change in the HANA Alert data structure some of the SCOM Alert fields have changed as well as the suppression criteria in **HANA System Alerts Generator (suppressed)** rule's Write Action.

#### Custom Fields Mapping

SCOM Alert Field	HANA Alert Field
Custom2	ALERT_ID
Custom3	ALERT_TIMESTAMP
Custom5	INDEX
Custom7	ALERT_RATING
Custom9	PROCESS_STATE
Custom10	PROCESS_AGENT

#### Suppression Criteria:

HANA Alert Field
INDEX
ALERT_ID

### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000028</b>	SCOM Alerts are not generated for HANA Alerts when connected to HANA SPS 8, Revision 83.03 and above
<b>BMPHANA000029</b>	Intermittent HANA Connection errors when connected to HANA SPS8, Revision 82 and above: See SAP Note <b>2052914</b> - ODBC driver issue after upgrade to Revision >= 82

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description
-----------------	-------------

## Installation Instructions

Import the new versions of ***ozsoft.hana.mpb*** and ***ozsoft.hana.monitoring.mp***

- ! Due to changes in the Management Pack's Managed Module please restart "***Microsoft Monitoring Agent***" windows service on all ***Watcher Nodes*** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher Node)

## Version 1.0.6, April 3, 2014

### New in this release

#### Support for Agent running on Windows Server 2008

The Management Pack now fully supports SCOM Agents under Windows Server 2008.

#### Configurable HANA Alert Severity mapping

When the Management Pack generates SCOM Alerts based on HANA Alerts the HANA Alert Rating attribute is mapped to SCOM Alert Severity. Alert Rating can have values ranging from 1 to 5 - the higher value indicates the higher severity:

HANA Alert Rating	SCOM Alert Severity
1	Info
2	
3	Warning
4	
5	Error



## HANA Management Pack for Microsoft System Center Operations Manager

It is now possible to override the value for **HANA Alert Rating** above which the generated SCOM Alerts will have Critical severity:

In Operations Console Authoring Panel navigate to **Management Pack Objects/Rules** and override rule **HANA System Alerts Generator** or **HANA System Alerts Generator (suppressed)** - depending which of them is currently enabled. Set **Critical Alert Rating** parameter to a desired value.

Override Properties

Rule name: HANA System Alerts Generator  
Category: Event Collection  
Overrides target: Class: HANA System

Override-controlled parameters: [Show Rule Properties...](#)

	Override	Parameter Name	Parameter Type	Default Value	Override Value	Effective Value	Change Status
	<input type="checkbox"/>	Alert Name Filter	String				[No change]
▶	<input type="checkbox"/>	Critical Alert Rating	Integer	5	5	5	[No change]
	<input type="checkbox"/>	Debug Level	Integer	0	0	0	[No change]
	<input type="checkbox"/>	Enabled	Boolean	True	True	True	[No change]
	<input type="checkbox"/>	Interval	Integer	60	60	60	[No change]
	<input type="checkbox"/>	Max Retries	Integer	10	10	10	[No change]
	<input type="checkbox"/>	Minimum Alert Rating	Integer	4	4	4	[No change]
	<input type="checkbox"/>	Priority	Integer	1	1	1	[No change]

Details:

Critical Alert Rating	Description	Edit...
The parameter is not set by a custom override or by a management pack. The effective value of this parameter is the default value of this parameter.	Parameter Description: HANA Alert Rating to be interpreted as Critical (1-Info, 2-Low, 3-Medium, 4-High, 5-Error)	

Management pack

Select destination management pack:  
<Select Management Pack> [New...](#)

[Help](#) [OK](#) [Apply](#) [Cancel](#)

For example: setting **Critical Alert Rating** to 4 will cause Management Pack to generate Critical SCOM Alerts for HANA Alerts with Rating 4 and above.

### Synthetic Performance Monitoring

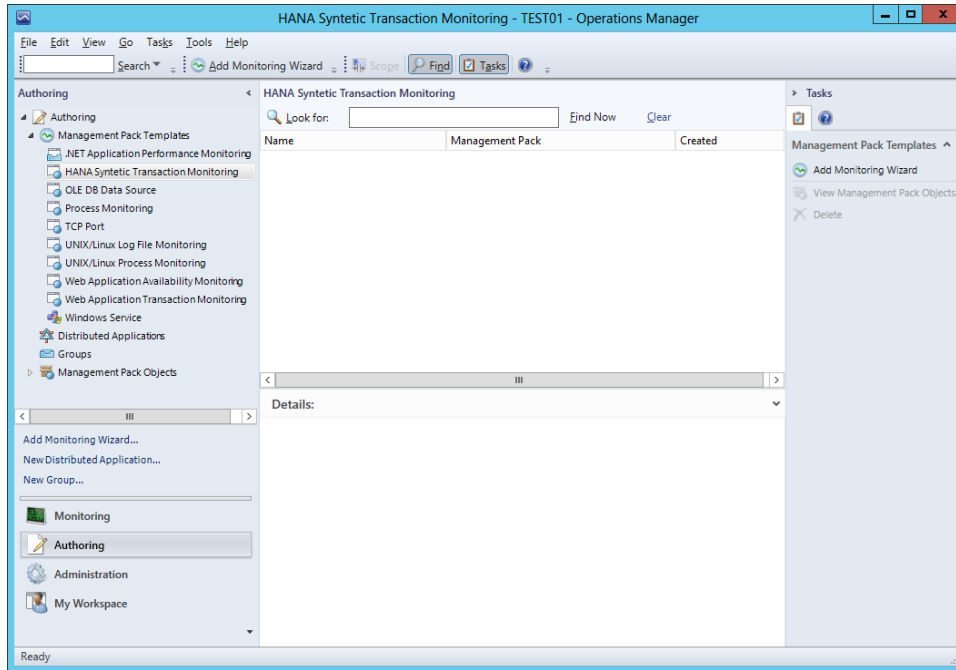
In this release of the Management Pack OZSoft is Introducing HANA Synthetic monitoring. The supplied Monitoring Template allows the creation of a Synthetic SQL statement which to be executed periodically on a specific HANA system.

### Installation Instructions

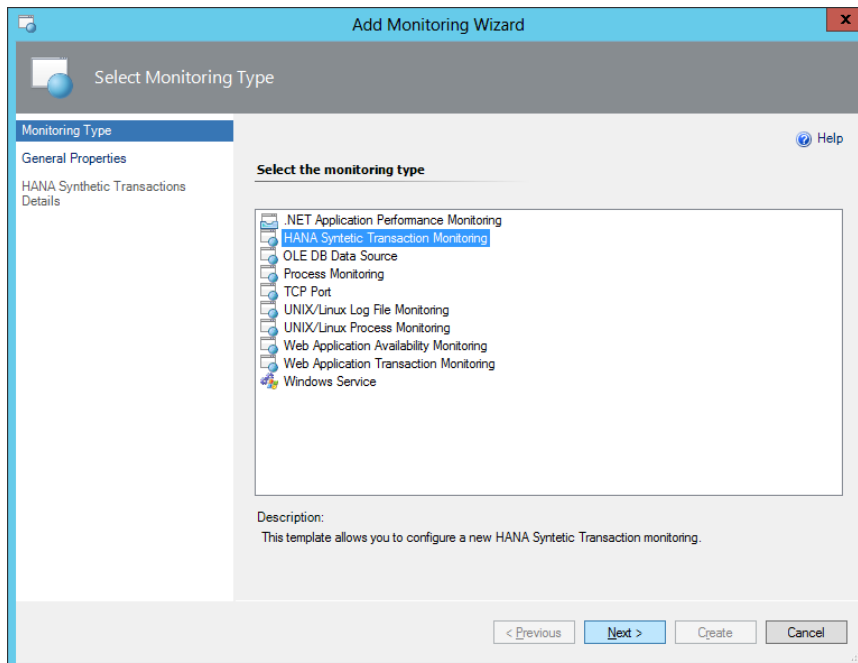
Import the Management Pack file **ozsoft.hana.synthetic.mp**.

## Defining Synthetic Transactions

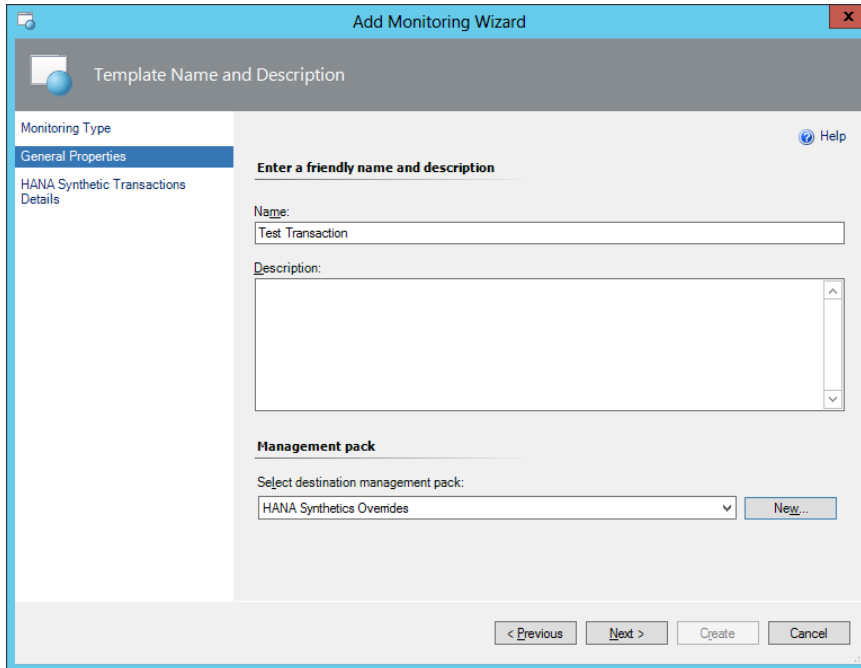
Switch to **Authoring** Perspective and navigate to **Management Pack Templates**:



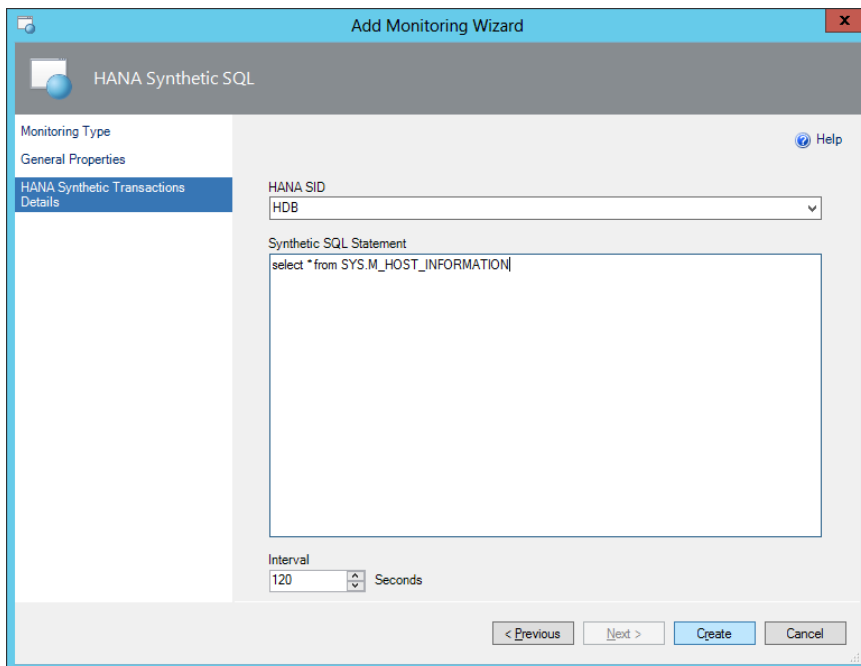
Click on **Add Monitoring Template** task



Select **HANA Synthetic Transaction Monitoring** template and click **Next**



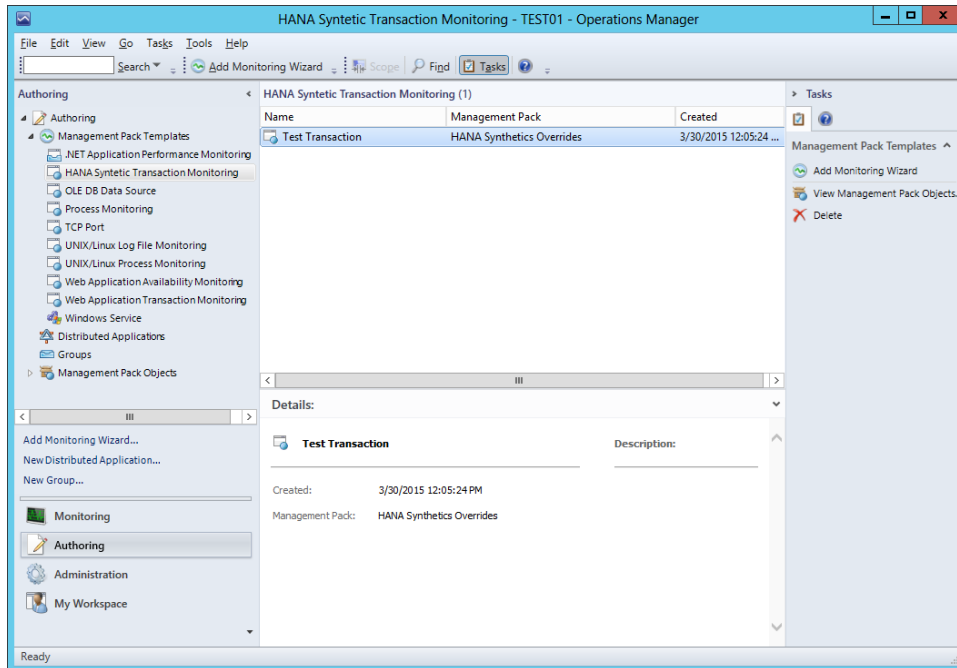
Fill in the fields, use an existing or create a new overrides management pack (we recommend creating a dedicated MP for synthetic transactions). The **Name** is used as the **Transaction ID** and has to be unique.



Select a target HANA System, fill-in the SQL statement and choose the repeat interval. Click **Create**.

! The Synthetic SQL statement is executed under HANA DB Account as assigned in **HANA DB Monitoring Account** Run As profile.

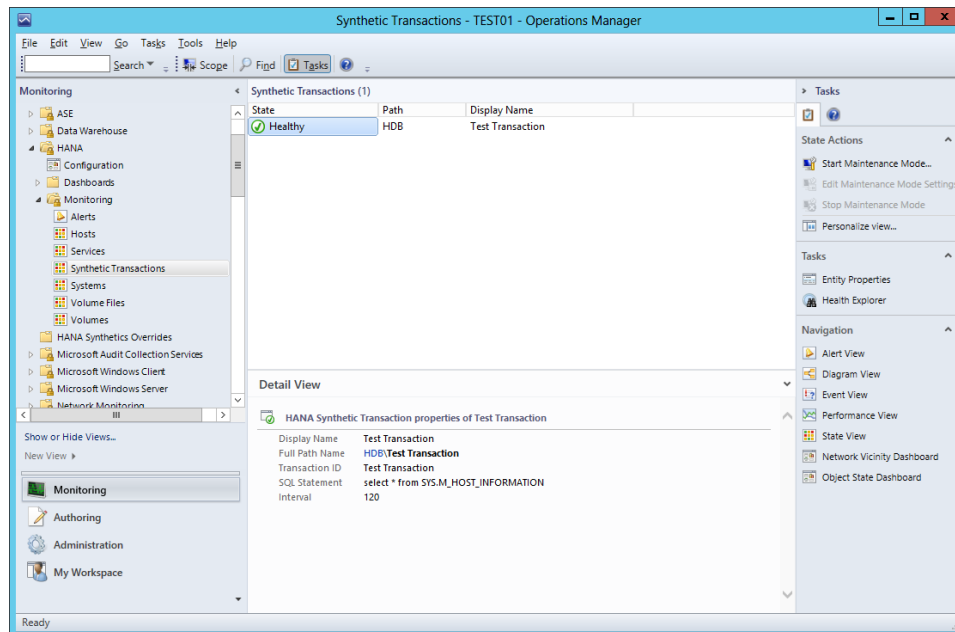
## HANA Management Pack for Microsoft System Center Operations Manager



The newly created template will appear in the view.

- ! At this time the transaction definitions are not modifiable via the UI – re-create a template if the changes are required. Alternatively, export the custom management pack chosen during the template creation to XML file, modify the values and reimport the management pack file.

The newly created Template will trigger the Discovery. It may take several minutes for a **Synthetic Transaction** object to be created. The Transaction objects are listed in the new **Synthetic Transactions** view under HANA folder:



### Monitoring Synthetic Transactions

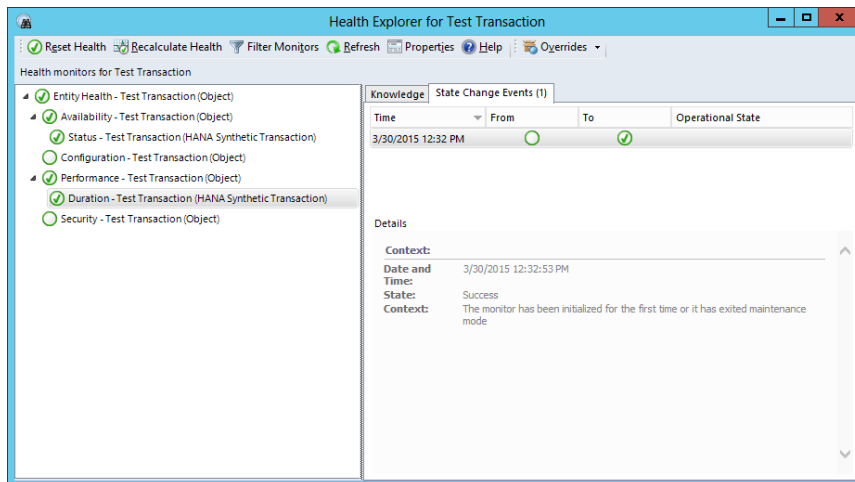
There are two performance counters collected for every Synthetic Transaction execution:

- **Status** – SQL Statement Return Code:

0	SUCCESS
1	SUCCESS_WITH_INFO
2	STILL_EXECUTING
99	NEED_DATA
100	NO_DATA
101	PARAM_DATA_AVAILABLE
198	INVALID_HANDLE
199	ERROR

- **Duration** – SQL Statement execution time (milliseconds).

Two monitors are supplied for the above performance counters:



For the **Duration** Monitor the default Thresholds are defined as Warning for > 500ms, and Error for > 2000ms. Please override as required.

### Changed in this release

#### Cookdown for Performance Monitors and Rules

The so-called **Cook-down** has been implemented for all Performance Monitors and related Rules. This significantly lowers the performance overhead of HANA monitoring for both SCOM and monitored HANA systems.

#### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000026</b>	SAP Host MP doesn't load on SCOM Agent on Windows 2008 R2 and earlier Windows OS due to the MP minimum-supported.NET version 4.0 requirement

<b>BMPHANA000027</b>	The following error message generated intermittently in the Watcher Node's Windows Event log: Can't convert value " to Integer: Input string was not in a correct format. for column: <Column Name>
----------------------	---

## Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description

## Installation Instructions

Import the new versions of **ozsoft.hana.mpb** and **ozsoft.hana.monitoring.mp**

- ! Due to the changes in the Management Pack's Managed Module please restart "**Microsoft Monitoring Agent**" windows service on all **Watcher Nodes** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as a Watcher Node)
- ! Due to the inclusion of the **Synthetic Transaction** Monitoring Template Assembly in **ozsoft.hana.mpb** please restart **Operations Console**.

## Version 1.0.5, December 29, 2014

This is a service release fixing several issues and introducing several enhancements

### New in this release

There are no new features in this release

### Changed in this release

#### Improved Configuration Dashboard

The **Configuration** dashboard has been improved – it is now automatically stretches to take all available space in the Operations Console panel

#### Monitoring Management Pack Rules renamed

In *ozsoft.hana.monitoring.mp* the following rules have been renamed:

Old Name	New Name
HANA System Alerts Collector	HANA System Alerts Generator
HANA System De-duplicated Alerts Collector	HANA System Alerts Generator (suppressed)

#### Reduced Windows Event Log messages

The amount of HANA MP-related messages in the Windows Event log is reduced; only critical errors are logged.

### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000024</b>	After Watcher Node's <b>Microsoft Monitoring Agent</b> service or Management Server restart some HANA Alerts are retrieved again resulting in the increment of <b>Repeat Count</b> field
<b>BMPHANA000025</b>	<b>HANA Service</b> Objects are discovered with empty <b>Host</b> properties

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description
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### Installation Instructions

Import the new versions of *ozsoft.hana.mpb* and *ozsoft.hana.monitoring.mp*

- ! Due to changes in the Management Pack's Managed Module please restart "**Microsoft Monitoring Agent**" windows service on all **Watcher Nodes** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher)

## Version 1.0.4, October 17, 2014

### New in this release

#### “Singleton” HANA Services

In a multi-node HANA configuration **xsengine** and **staticsserver** HANA Services failover to a stand-by node if the primary node goes down. There is only one instance of each service across all nodes.

The Management Pack now treats these services as “Singleton”: it determines dynamically which node the services are actually running on and preforms availability monitoring accordingly. The Host Name object property is update by the Discovery to reflect the effective service nodes.

### Changed in this release

#### HANA Alert Collection Rule

The “**HANA System Alerts Collector**” and “**HANA System De-duplicated Alerts Collector**” rules now have a different override-able parameter - **Minimum Alert Rating**:

Override Properties

Rule name: HANA System Alerts Collector  
Category: Event Collection  
Overrides target: Class: HANA System

Override-controlled parameters:

	Override	Parameter Name	Parameter Type	Default Value	Override Value	Effective Value	Change Status	Enforced
	<input type="checkbox"/>	Alert Name Filter	String				[No change]	<input type="checkbox"/>
	<input type="checkbox"/>	Enabled	Boolean	True	True	True	[No change]	<input type="checkbox"/>
	<input type="checkbox"/>	Interval	Integer	60	60	60	[No change]	<input type="checkbox"/>
	<input checked="" type="checkbox"/>	Minimum Alert Rating	Integer	4	4	4	[Added]	<input type="checkbox"/>
	<input type="checkbox"/>	Priority	Integer	1	1	1	[No change]	<input type="checkbox"/>
	<input type="checkbox"/>	Severity	Integer	\$Data/EventLevel\$			[No change]	<input type="checkbox"/>

Details:

**Minimum Alert Rating** Description [Edit...](#)

The new custom override will be created in the [Not available] Click apply to view the new effective value for this parameter.

Parameter Description:  
Minimum HANA Alert Rating (1-Info, 2-Low, 3-Medium, 4-High, 5-Error)

Management pack

Select destination management pack:  
<Select Management Pack> [New...](#)

Help OK Apply Cancel

The parameter corresponds to HANA Alert Rating property and allows for control of the lowest Rating for which the SCOM Alerts are generated.

HANA Alert Rating has the following meaning:

1. Information
2. Low Severity
3. Medium Severity
4. High Severity
5. Error



The default value for **Minimum Alert Rating** is 4 (High Severity Alerts)

HANA Alert Collection rule now only collects the alerts newer than 2 hours. If the collection falls behind due to Health Service issues or HANA Alert Storm, the alerts older than 2 hours will be dropped.

### Corrected Problems

The issues listed below were reported in earlier releases of HANA Management Pack and have been corrected in this release.

Tracking Number	Description

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description

### Installation Instructions

Due to the changes in Classes structure the previous version of the management pack has to be removed before the new one can be imported.

Please follow the following instructions:

1. If you created HANA Overrides – export the working Management Pack first and delete it from SCOM.
2. Remove **“OZSoft HANA Dashboards Add-On Management Pack”** Management Pack. If you have made the modification – export the Management Pack first.
3. Remove **“OZSoft HANA Management Pack DW Add-On”**.
4. Remove **“OZSoft HANA Management Pack Monitoring Add-On”**
5. In order to preserve Run As accounts configuration you will need to export **“Microsoft.SystemCenter.SecureReferenceOverride “** Management Pack
6. Remove **“Microsoft.SystemCenter.SecureReferenceOverride “** Management Pack as it contains reference to **“OZSoft HANA Management Pack”**
7. Remove **“OZSoft HANA Management Pack”**
8. Extract files from the installation archive.
9. Import all required Management Packs as well as previously exported **“Microsoft.SystemCenter.SecureReferenceOverride”, “Overrides” Management Pack and Dashboards Management Pack.**
10. Restart "Health Service" windows service on all "Watcher Nodes" selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher)
11. Navigate to HANA/Configuration panel and add HANA system entries and licenses.

## Version 1.0.3, September 17, 2014

### New in this release

There are no new features in this release

### Changed in this release

#### *MP Configuration Monitoring verifies access to SYS catalog*

In this version the MP Configuration Monitor after successfully connecting to HANA system attempts to query SYS catalog. If the configured HANA user has not permission to access the SYS tables the Monitor will report an error.

#### *HANA Service Availability in HA environment*

Now a Service is deemed unavailable only if the same service is unavailable on all HANA System Nodes. If the Service is running at least on one of the nodes the Service on all other nodes, although down, will be reported as available. In a case of a failover/standby there will be no false-positive alerts.

### Corrected Problems

The issues listed below were reported in earlier releases of SAP Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BMPHANA000019</b>	Management Pack License Key is removed when updating System Configuration while leaving the License Key field empty
<b>BMPHANA000020</b>	HANA Host Availability Alert Name is incorrect
<b>BMPHANA000021</b>	HANA Service Availability Alert Description incorrect
<b>BMPHANA000022</b>	Management Pack License is reported as invalid when the configured HANA user lacks permissions to access SYS catalog

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description

### Installation Instructions

Import the new version of **ozsoft.hana.mpb** and **ozsoft.hana.monitoring.mp**

- ! Due to changes in the MP Managed Module please restart "Health Service" windows service on all "Watcher Nodes" selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher)

## Version 1.0.2, August 14, 2014

### New in this release

#### *HANA System Actual System ID, Hardware Key and Licensed Memory Limits discovery*

HANA System object now has three more properties that are periodically updated by the discovery:

- **Actual HANA SID** property contains the actual System ID
- **Hardware Key** property contains the Hardware Key for the installation.
- **Memory Limit** property reflects the effective HANA License memory limit

The properties are used by OZSoft to generate MP License Key

### Changed in this release

There are no changes in this release

### Corrected Problems

The issues listed below were reported in earlier releases of SAP Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BPMHANA000016</b>	An error message in Windows Event Log: "License key is missing" is generated if the Management Pack license key has not been installed
<b>BPMHANA000017</b>	A truncation of the last character in the discovery data occurs in rare cases
<b>BPMHANA000018</b>	Management Pack License does not become effective

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description

### Installation Instructions

Import the new version of ozsoft.hana.mpb

- ! Due to changes in the MP Managed Module please restart "Health Service" windows service on all "Watcher Nodes" selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher)

## Version 1.0.1, July 14, 2014

### New in this release

#### *HANA Host Availability Monitor*

Monitors SAP Host Control Agent connectivity on each discovered HANA Host

#### *HANA System Effective Watcher Node and HANA Connection Host discovery*

HANA System object now has 2 more properties that are periodically updated by the discovery:

- **Effective Watcher Node** property reflects the current Watcher Node hosting the object (in case of Resource Pool assignment)
- **Actual DB Host** property reflects the effective HANA DB Connection Host (in case of failover to the backup nodes)

### Changed in this release

The SAP Host Control Agent connectivity verification has been moved from HANA System Availability Monitor to the new HANA Host Availability Monitor

### Corrected Problems

The issues listed below were reported in earlier releases of SAP Management Pack and have been corrected in this release.

Tracking Number	Description
<b>BPMHANA000012</b>	Volume Cache Discovery generates error message in Windows Event Log
<b>BPMHANA000013</b>	Volume's Failed Writes & Reads Monitors utilize "Delta" Condition Detection with Absolute=true, which can generate false status changes after the values have been reset in HANA
<b>BPMHANA000014</b>	Expired management Pack license generates multiple error messages in Windows Event Log: ozsoft.hana.LicensingException: Missing License Key
<b>BPMHANA000015</b>	HANA Service DataSource generates the following error message in Windows Event Log: Object reference not set to an instance of an object

### Open issues and resolutions

This section describes issues that remain open in this release.

Tracking Number	Description
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### Installation Instructions

Import the new version of ozsoft.hana.mpb

- ! Due to changes in the MP Managed Module please restart "**Microsoft Monitoring Agent**" windows service on all **Watcher Nodes** selected in HANA Configurations (or all Management Servers in the Resource Pool if the resource pool is chosen as the Watcher)

## **Version 1.0.0, June 16, 2014**

### **New in this release**

New Release

### **Changed in this release**

N/A

### **Installation Instructions**

Import the Management Pack Bundle *ozsoft.hana.mpb*