DB2SPI

SMART Plug-In for managing
IBM's DB2 Universal Database
with HP OpenView Operations

Version 03.51 / 03.61
September 2008

Release Notes

What is new with this Release?

Version 03.51 / 03.61 of the DB2SPI, available today for both HP Operations Manager products (on the UNIX and the Windows platforms) is primarily a consolidation and maintenance release.

The key improvements are:

- New "Discovery Filter" allows the definition of instances to be monitored besides the automatic discovery

- DB2 i5/OS (OS400) running on IBM System i (iSeries, AS400) hardware can now be monitored remotely (separate license required, please contact support)

- DB2 version 7.2 can be monitored again (upon request only)

- DB2 versions 8 and 9 can be monitored simultaneously on the same system

- Revised service tree presentation, now also providing auto-cleanup for unmonitored elements

- Powerful tool for the definition of tracing

- Logging and tracing have been revised and the error codes have been aligned throughout all components

- All dialogues have been revised and aligned to offer similar answering options

- Directories have been aligned with the standard locations defined by HP

- DB2 logfile monitoring status is aligned with the instance monitoring status now

- A new upgrade tool is provided for the automatic upgrade from earlier DB2SPI releases (B.03.30 / B.03.31 for OM for Windows, A.03.24 / A.03.25 for OM for UNIX)

- Extended platform support, especially for 64bit systems

- Support for DMS tablespaces with "autoresize" enabled

- User defined metrics (UDM) have been removed from the product

Platform Support

OM Management Server

We are supporting Operations Manager for UNIX versions 8.10 and 8.2x with this release, and Operations Manager for Windows version 7.5 and 8.0 on all hardware platforms supported by HP, with all patches currently available.

OM Managed Nodes

DB2SPI 03.51 / 03.61 requires either HTTPS agents or the latest DCE agents (Version 7.25 at least) to operate.

DB2 Servers

The latest versions currently available from IBM, i.e, DB2 version 9.1, and the former DB2 8.2 versions are supported.

Upon request, we also provide a backward compatible version that monitors DB2 version 7.2.

DB2 Version 8 FixPack Requirements

DB2 FixPack from V8 FP9 and later are supported.

DB2 Version 9 FixPack requirements

For V9 FixPacks FP1-5 are supported. Please note that FixPack 3 has been withdrawn by IBM and replaced by FixPack 3a. Withdrawn and unsupported FixPacks are not supported by the DB2SPI.

> **Please note that FixPack 3 will not work with the DB2SPI!**
>
> **Please ensure it has been replaced by FixPack 3a or later.**

Functionality Extensions

Discovery Filter

The new "Discovery Filter" tool does not only execute a thorough search for installed DB2 versions, but also allows the manual definition of instances and their installation paths. This is helpful if alternate paths are used for special FixPack setups or alike.

The "Discovery Filter" also provides the option to set instances as "invisible", hence disabling all further drilldown discovery on them.

Note that all databases and subordinate objects discovered newly are being monitored automatically, but freshly discovered instances are not.

Do not mix it up with the "Entity Filter" tool – this can be used to define the monitoring status of elements within visible instances only.

Service Tree Improvements

The service tree is now able to hold up to 9999 elements per instance.

We also improved the code to allow the removal of unmonitored or vanished elements.

New Trace Definition Tool

A new tool allows a very comfortable way to define the functional area or process within the DB2SPI that needs to be traced. The various scripts and programs are grouped to logical entities and can be traced individually or all together.

Platforms and Internals

Supported Platforms

The platform matrix for the management servers and managed nodes (DB2 servers) has been updated / extended and is provided as a separate document.

Support of IBM i5/OS resp. OS400 based DB2

DB2 i5/OS (OS400) running on IBM System i (iSeries, AS400) can now be managed remotely from our DB2SPI residing on a Linux, UNIX or Windows system together with an HP Operations Agent.

In this release of the DB2SPI, a local instance must be available where the remote i5 databases will be logically connected to.

Languages Used by the DB2SPI

Perl and more

All primary processing scripts are written in Perl. This makes it necessary to have Perl available on the managed nodes as a prerequisite, and we still go with the version that is installed by the OM agent. We can operate with both versions, 5.6.1 from the older agents and 5.8.8 as provided by HP recently.

Please note that the OM agent Perl 5.6.1 for AIX is not functional for all HP Agents prior to agent version 08.5x. With 08.50, HP changed to a functional Perl 5.8.8.

For older agents, a working copy (original IBM Perl 5.6.1) can be downloaded from the NiCE Customer Portal at https://portal.nice.de/Portal/login.jsp

Directory and File Name Changes

Some changes have been made with respect to the file location on the management server and the managed nodes.

Please note that not all directories are listed here, only those that have changed.

Management Server

On HP-UX and Solaris (OM for UNIX):

/var/opt/OV/share/log/db2spi formerly: /var/opt/OV/db2spi/log	log and trace files
/var/opt/OV/share/conf/db2spi formerly: /etc/opt/OV/db2spi/conf	configuration files

On Windows (OM for Windows):

`%OvInstallDir%\atop`	log and trace files for the communication layer

`%OvShareDir%\tmp\db2spi`
formerly:
`\Program Files\HP-OpenView\Installed Packages\<##>\db2spi\tmp`
	temporary storage

`%OvShareDir%\log\db2spi`
formerly:
`\Program Files\HP-OpenView\Installed Packages\<##>\db2spi\log`
	log and trace files

Managed Nodes

On all UNIX or Linux nodes:

`/var/opt/OV/tmp/db2spi`
formerly:
`/var/opt/OV/db2spi/tmp`
	temporary storage

`/var/opt/OV/log/db2spi`
formerly:
`/var/opt/OV/db2spi/log`
	log and trace files

`/var/opt/OV/conf/db2spi`
formerly:
`/etc/opt/OV/db2spi/conf`
	configuration files

On Windows nodes:

`…\data\tmp\db2spi`
formerly:
`…\db2spi\tmp`
	temporary storage

`…\data\log\db2spi`
formerly:
`…\db2spi\log`
	log and trace files

`…\data\conf\db2spi`
formerly:
`…\db2spi\conf`
	node specific configuration files

File Name Change

The DB2SPI log file has been renamed from db2spi.log to db2s_spi.log for reason of keeping a systematic naming scheme.

Other Functionality Fixes and Extensions

This version installs some improvements to the DB2SPI. It contains in detail:

- Windows event log entries are read starting from the DB2SPI configuration for all instances (ID: 2802, 2811, 2934)

- Included the event log script in tracing (ID: 2778)

- Update of Tiering Matrix to may 2008 version including fix for ADM based Solaris (ID: 2808, 2899)

- Update of French and German language packs (ID: 2907, 2930, 2976)

- Installation issues for OMW 8.0 and win x64 on OMU (ID: 2712, 2933, 2954)

- Minor fixes for administrative log file analysis (ID: 2897)

- Enhance discover handling of empty database directories and instances where all databases where dropped (ID: 2841, 2842)

- Fixe for free space determination on remote DPF partitions (ID: 2786)

- Enhancements for the services xml upload file (ID: 2806)

- Fix OVOAGT_BIN_PATH issue for DCE agents (ID: 2952)

Manual Changes

The DB2SPI User's Guide for version 03.51 / 03.61.has been updated to include the new or changed features.

The DB2SPI Reference Guide has been revised to cover the new or modified metrics we are providing with this release.

License Update

With 03.51 / 03.61, you will need to install new runtime license keys on your management server.

New licenses have been made available on the NiCE customer portal for all customers with valid support contracts as soon as the DB2SPI version 03.51 / 03.61 has been available to the public.

Installation of DB2SPI 03.51 / 03.61

The installation of DB2SPI 03.51 / 03.61 is possible on new systems or on such that had a DB2SPI installed already

If you have installed an older package and want to use 03.51 / 03.61 now, please see the "Upgrade" section below.

New Installation of the Package

Install the new package as described in the DB2SPI 03.51 / 03.61 User's Guide.

Deploy the instrumentation and policies to the managed nodes.

Upgrading earlier Versions of the DB2SPI

Prerequisites

The upgrade tool provided with the package allows the upgrade:

- from A.03.24 (OM for UNIX) to 03.61

- from B.03.31 (OM for Windows) to 03.51.

If you have an older version of the SPI installed, please upgrade those to the versions mentioned.

On all nodes where the SPI is currently acting, you should disable the automatic update of the service tree by disabling the respective OM policy, DB2SPI_discover_svctree.

This is required because the communication between the service tree components residing on the managed node and management server side have changed, and installing the new package on the management server would cause unnecessary error messages while the managed nodes are still unchanged.

Manual Preparations on the Management Server

On the management server, delete the DB2SPI configuration items from the OM configuration manually before installing the new DB2SPI package. This consists primarily of policies and policy groups, tools and tool groups. You may leave the user profiles and node groups related to DB2 monitoring.

Also, delete the "DB2" service tree entirely, as this will be reconstructed at run time with the new entities that are being monitored.

> **Removal of the old service tree is important, as we have changed the structure significantly and require a "clean" start after the upgrade.**

When done, you also have to uninstall earlier versions of the DB2SPI as described in the DB2SPI User's Guide.

Package Installation and Server Upgrade

On the OM Management Server, simply install the package as if it was a new one.

Update of DB2SPI Runtime Licenses

For customers with a valid support contract new 03.50 licenses are available on the NiCE Customer Portal.

Please download them with your customer account and install them on the OM management server using the "License Add" tool, as described in the DB2SPI User's Guide.

Deployment to the Managed Nodes

Before deploying the new policies and instrumentation to a managed node you should make sure that the SPI has been disabled there.

This can either be achieved by the "DB2SPI Disable" tool from the OM GUI, or by running

```
db2s_start db2s_db2spi.pl OFF
```

from the command line.

Now the new instrumentation and policies can be deployed.

When done, the upgrade script must be started locally, twice(!):

```
db2s_start db2s_upgrade.pl -mgdnode
```

When started the first time, the script simply collects a set of data that need to be available from the former configuration.

```
db2s_start db2s_upgrade.pl -mgdnode
```

During the second run, those data are integrated / merged to the new configuration.

Please note that this may take a while we are upgrading the instance configuration file, run a new discovery etc.

If integration of DB2 performance data into OVPA/SCOPEUX is also desired or had been defined in the former configuration, you may also run the corresponding update tool for this integration:

```
db2s_start db2s_updateparm.pl
```

When done successfully, the DB2SPI simply needs to be re-enabled again:

```
db2s_start db2s_db2spi.pl ON
```

from the command line, or use the "DB2SPI Enable" tool from the GUI.

Do not forget to re-enable the service tree update policy, DB2SPI_discover_svctree.

You may also run the "Svctree Update" tool to enforce an immediate update of the service tree.

What happens during the Upgrade?

During upgrade, the following principle steps are performed:

- Directory changes

  As stated earlier we have modified some locations of the files to align them better with the current directory layout of the HP Software installed. This applies to the management server and to the managed node.

  We also make sure that the files residing at the former locations are being moved to the new locations.

- DB2 configuration changes

  With this release we have included the diagnostic and administrative log files of DB2 into the general instance configuration file of the DB2SPI. Hence we are updating the configuration file accordingly, but preserve all settings done formerly.

  We also deliver some new contents in the general configuration file db2s_spi.cfg. On the managed nodes, we transpose the values from the former one into the new format.

  Please note, that we do not make this merge on the management server, as there is no functionality related setting on this side that needs to be preserved.

- Binding to DB2 databases

  All DB2 databases defined are bound to the new access functions of the DB2SPI automatically.

- File name changes

  The DB2SPI log file is renamed from db2spi.log to db2s_spi.log.

Troubleshooting the Upgrade

General Remarks

The upgrade has been set up such that we always try to be on the safe side, thus trying to preserve as much of the old data as possible until we are sure that we do not need to get back.

However, this is not always possible, but the error detection and reporting included clearly comments this to the user when encountered.

The user is requested to get in touch with our product support whenever such a problem occurs.

We have set up a telephone hotline for immediate assistance when needed:
+49 7152 939 8222

Please note that this is in Germany (GMT+1h) and this kind of support is available only during regular business hours.

Upgrade Traces

The upgrade script is delivered with a tracing set to ON, and the trace file created is the main source for information when anything unexpected should happen during its execution.

Just like the setup trace file, we save it in a system temporary directory, which is /tmp/DB2 on all UNIX and Linux nodes, and %TEMP% of the respective user running the script on Windows managed nodes.

The trace file is named db2s_upgrade_trace.log and can be found in the DB2SPI log directory after a successful upgrade.

Known Bugs and Problems

The following problems are known to us today:

Package Installation (UNIX)

- **Integration into "seldist" file for selective distribution (ID: 2560)**

    Symptom:

    The installation is not able to add the line "DB2-WINDOWS nice_db2" if the "seldist" list has been already configured by a previous installation.

    Reason:

    Unknown

    Workaround:

    The customer has to add the line manually.

Package Installation / Removal related Issues (Windows)

- **Installation of the DB2SPI package on Windows Longhorn management server**

    Symptom:

    If the DB2SPI package is installed under a user account other than "Administrator" (but as a member of the local or domain admin group), a User Account Control popup window appears stating that the program "atop_sc.exe" coming from an unidentified publisher requests attention.

    Reason:

    Windows Longhorn User Account Control mechanism.

    Workaround:

    Allow the application "atop_sc.exe" to be executed.

    The installation should then terminate successfully, but the "ATOP" service is not started.

    Open the services control window (via "Administrative Tools"), locate the entry with the name "ATOP2 Server" and start the service manually.

- **Removal of the DB2SPI package from Windows Longhorn management server**

    Symptom:

    If the DB2SPI package is removed under a user account other than "Administrator" (but as a member of the local or domain admin group), a User Account Control popup window appears stating that the program "atop_sc.exe" coming from an unidentified publisher requests attention.

    Reason:

    Windows Longhorn User Account Control mechanism.

Workaround:

Allow the application "atop_sc.exe" to be executed.

The removal process should then terminate successfully, but the "ATOP" service is not stopped nor removed from the system.

Open the services control window (via "Administrative Tools"), locate the entry with the name "ATOP2 Server" and stop the service manually.

Configuration related Issues

- **$AGENT_USER unknown on Windows DCE nodes (ID: none)**

   Symptom:

   Running any application or schedule template fails on Windows managed nodes with older DCE agent.

   Reason:

   There is a problem in the OM DCE agent dealing with the $AGENT_USER.

   Workaround:

   You may upgrade your managed node to use the OM HTTPS agent supplied with OM/Unix 8.0.

- **Instruction text window opened only after long delay (ID: 661)**

   Symptom:

   Requesting "Instructions …" from the OM/Unix message browser takes quite long sometimes.

   Reason:

   With a highly loaded OM management server the processing of the instructions repository (an XML file on the management server) takes pretty long.

   Workaround:

   Be patient. We are looking for performance improvements with the next release by splitting up this information in various files.

- **"Config Delete" hangs in non-root environments (ID: 1999)**

   Symptom:

   When running "Config Delete" in non-root environments, the script hangs when trying to delete the metric configuration.

   Reason:

   Permissions for DSI2DDF and metric directories require that this action is performed by the "root" user – like in the ""Config Setup" case.

   Workaround:

   Abort the script and delete the directories used and the data source definitions manually. However, there is no risk leaving these defined on the node and you may leave them all in place. Only if a re-configuration is desired, such a

cleanup would be important to do. Pleases be aware that a manual restart of the OVP Agent is required in any case.

- **When instance is stopped, discovery sends critical and error messages (ID: 3014)**

Symptom:

When an instance is stopped a (93-02) message reports it. After this some critical and error messages follow, for example (91-97) or (92-58).

Reason:

When DB2SPI monitors a stopped instance, this is recognized by the db2s_discover tool and reported with a (93-02) message. But still other processes send critical and error messages, because they cannot interact with the instance while it is stopped.

Workaround:

After a stopped instance is reported, any messages concerning this instance may be safely ignored and acknowledged, even critical or error messages.

Upgrade related Issues

- **OVPA Registration file not updated on AIX (ID: 2765)**

Symptom:

No DB2 metric data are being logged to OVPA data stores; in case of a OVPA restart, no "rep_server" processes will be created for the DB2SPI data stores (AIX only).

Reason:

Due to our new-and-improved directory structure on AIX/HTTPS nodes the SPI's stores may become unused by the performance agent. We do move the files from /var/lpp/OV/db2spi/metrics to /var/opt/OV/db2spi/metrics but we do not update the perflbd.rc file.

Workaround:

You may delete the data stores aand recreate them using the "Datastore Delete" / "Datastore Create" pair of DB2SPI tools. Note, that there may be warnings given when deleting the old data stores, as we already have moved the files away during upgrade.

Documentation Errors

- **File name omissions in the User's Guide (ID: 2696)**

Explanation:

Some files introduced recently did not find their way into the User's Guide.

Correction:

In the DB2SPI configuration directory (location depends on the platform) the following files are missing:

db2s_tracedef.cfg

db2s_ilist.cfg

db2s_os400.cfg

- **Wrong directory in the User's Guide (ID: none)**

  Explanation:

  The ATOP location is different than documented.

  Correction:

  The ATOP location on Windows platforms should read as "\Program Files\HP OpenView\bin\DB2SPI" instead of "\Program Files\Hewlett-Packard\NiCE\ATOP".