



SMART Plug-in for IBM's DB2 Universal Database

Version 03.80

Installation Guide

*For use with
HP Operations Manager for Windows, UNIX or Linux*



December 2009





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Revisions

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Print History

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Conventions

In this book, HP Operations Manager (HP OM) is used as a synonym for all versions of the management product otherwise known as

- HP OpenView IT/Operations (ITO) (obsolete)
- HP OpenView VantagePoint Operations (VPO) (obsolete)
- HP OpenView Operations for HP-UX or for Solaris (OVO for HP-UX, OVO for Solaris) and OVO for Windows (obsolete)
- HP Operations Manager for UNIX (HP OM for UNIX)
- HP Operations Manager for Windows (HP OM for Windows)

In essence, they are all the same product and can host the SMART Plug-in for IBM DB2 Universal database.

Table 1 shows the typographical conventions used in this book.

Table 1: Typographical Conventions

Font Type	What the Font Type Represents	Example
Italic	Book or manual titles, and main page names	Refer to the HP Smart Plug-In for HP-UX and Solaris: Administrator's Reference and the <code>opc(1M)</code> main page for more information.
	Provides emphasis	<i>You must follow these steps.</i>
	Specifies a variable that you must supply when entering a command	At the prompt type: <code>rlogin your_name</code> where you supply your login name.
	Parameters to a function	The <code>oper_name</code> parameter returns an integer response.
Bold	New terms	The monitor agent observes...
Computer	Text and items on the computer screen	The system replies: <code>Press Enter</code>
	Command names	Use the <code>grep</code> command...
	Function names	Use the <code>opc_connect()</code> function to connect ...
	File and directory names	<code>/opt/OV/bin/OpC/</code>
	Process names	Check to see if <code>opcmona</code> is running.
	Window/dialog box names	In the <code>Add Logfile</code> window...
Computer Bold	Text which you have to enter	At the prompt, type: <code>ls -l</code>
Keycap	Keyboard keys	Press Return .
[Button]	Buttons on the user interface.	Click [Operator]. Click the [Apply] button.

Menu Items	A menu name followed by a colon (:) means that you select the menu, then the item. When the item is followed by an arrow (->), a cascading menu follows.	Select Actions: Utilities-> Reports...
------------	---	--

Documentation Road Map

This section illustrates what information is available for the NiCE DB2SPI and where you can find it. The following manuals come with the DB2SPI:

- **Installation Guide**
Explains installation and removal of the DB2SPI in HP Operations Manager environments (management server and managed nodes).
- **Administrator's Guide**
Explains the basic configuration, deployment and administrative tasks to keep the SPI up and running successfully in the management environment.
- **Operator's Guide**
Explains the tasks and applications for the HP OM operator that is responsible for DB2 server monitoring.
- **Concepts and Troubleshooting Guide**
Explains the architecture and components of the DB2SPI, the files and directories used and provides sample scenarios for efficient troubleshooting.
- **Reference Guide**
Explains the performance data collected, the rules they depend on and the collection characteristics.
- **Software Release Notes**
Gives the most recent information about the product and is updated with every patch released.

In addition to the documentation for the DB2SPI, 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.

This Document

This document covers the installation and de-installation of the DB2SPI and its related integrations on HP Operations Manager environments. This consists of the following areas:

- Installation Prerequisites
- Installing the DB2SPI
- De-installing the DB2SPI
- Appendix A: HP Performance Manager Integration (Portable Graphs)
- Appendix B: HP Reporter Templates Integration

Installation Prerequisites

This section describes the various platforms and software versions supported by the DB2SPI. Make sure that a supported version of OM is installed and running on both the management server and the managed node and, in addition, that a supported version of DB2 is installed and running on the DB2 server.

This includes the aspects:

- OM platforms and versions
- DB2 platforms and versions

Note:

To determine whether NiCE DB2SPI is supported for a HP Operations Management Server and DB2 platform and version combination, please refer to the detailed document [NiCE_DB2SPI_0380_SupportMatrix.pdf](https://portal.nice.de) from the NiCE Customer Portal <https://portal.nice.de>

HP Operations Management Server

Management Server physical Requirements

- Disk Space Requirements
The DB2SPI requires about 100 MB disk space is required on the management server to store programs and configuration data.
- Memory (RAM) Requirements
DB2SPI will require about 10MB RAM on the HP OM management server.

HP Operations Manager for UNIX and Linux

The DB2SPI 03.80 supports HP Operations Manager (HP OM) for UNIX 8.x and HP OM for UNIX 9.0 on the following platforms:

- HP-UX
- Solaris
- Linux (HP OM 9.0 only)

Please note that this list may change with the support of the respective platforms by HP and NiCE.

Internal command forwarding requires that the command line buffer of the operating system must at least be 1024 byte. Please use the `ulimit -s` command to verify your command line buffer size.

HP Operations Manager for Windows

The DB2SPI 03.80 can be installed in English HP Operations Manager for Windows 8.0 and 8.10 environments.

HP Operations Manager Configuration

Managed Node Status

The operations management server must be a managed node itself and have the agent software installed. This is required to make use of the ServiceNavigator (HP OM for UNIX) and HP Reporter integration. If this requirement is not fulfilled, functionality of the DB2SPI will be limited.

Actions and commands of the DB2SPI required on the management server are copied to the correct location during package installation.

- With HP OM for UNIX the DB2 servers must be "controlled" managed nodes in the respective management domain. If they should be set up as "monitored only" or "message allowed" some functionality, like service tree updates, will not be available due to restrictions imposed by HP Operations in these cases.
- With HP OM for Windows, the Self-Healing Service commands that are required on the management server are distributed, when instrumentation is deployed to the management server, after the DB2SPI has been installed.

Performance Data Collection Tools

In order to store metric data collected by the DB2SPI, the DSI2DDF package must be installed on the HP OM management server and the respective instrumentation must have been deployed to the managed nodes (the DB2 servers).

Self-Healing Collector

In order to make use of the HP self-healing services, the respective instrumentation must also be deployed to the managed nodes and the management server.

Perl on the Management Server

Some functionality of the DB2SPI is provided as Perl scripts on the management server (UNIX, Linux or Windows). The HP Operations Agent supplies Perl 5.6.1 (older agents) or Perl 5.8.

During installation of the product, the DB2SPI determines the version of the HP agent and links itself to the proper HP agent Perl. Note, that this link may become invalid when upgrading the HP agent at a later time (e.g. from DCE to HTTPS or to more recent versions).

IBM DB2 Servers

DB2 Server physical Requirements

- Disk Space for Binaries and Configuration
The DB2SPI requires less than 12 MB of disk space for binaries, scripts and configuration data on the DB2 server.
- Disk Space for Runtime Data

However, quite some space is required at runtime, particularly when performance monitoring is enabled. The amount of disk space required at run time depends to a large extent on the number of DB2 instances and databases that the DB2SPI is configured to monitor.

An indefinable amount should be expected to be consumed by temporary and log files. However, this should not exceed two MB in most configurations.

The DB2SPI also comes with an embedded self-monitoring that notifies the user if its own log file is growing too large. In this case the log file should be analyzed in order to detect any unstable situations.

The main part of disk space will therefore be used for storing performance data.

To make a rough estimation of the amount of free disk space required by the DB2SPI, assuming that performance monitoring is enabled and the Performance Agent is preserving the data it collects for graphing and reporting for one year, you can use the following formula:

- 75 MB for the HP Reporter data collection
- 5 MB x [number of databases to be managed]
- 50 MB x [number of tablespaces to be managed]

where:

number of databases	total number of databases monitored in all instances on the respective DB2 server
number of tablespaces	total number of tablespaces monitored in all instances and databases on the respective DB2 server

During configuration on a specific DB2 server, the time frame for the data storage can be reduced to one half, one fourth or one twelfth. This keeps six, three or one months of data available for performance graphing and reporting.

Note that the amount required is calculated based on the settings during the initial configuration. Adding huge databases with a large number of tablespaces, for example, will not lead to a recalculation of required disks pace and may lead to a significant shorter time frame for storage. This is not a DB2SPI limitation, but in the underlying HP PA.

Please get in touch with our product support to help retaining the data in such scenarios.

- Memory (RAM) Requirements
DB2SPI will require about 30 MB RAM on the HP OM managed nodes (DB2 servers).

DB2 Server Operating Systems

The DB2SPI supports DB2 servers running on the following operating systems:

- AIX
- HP-UX

- Solaris
- Red Hat Enterprise Linux
- SuSE Enterprise Server
- Windows Server

The versions of the DB2 server operating systems depend on the HP OM agents that are installed on these systems and can be determined from their support matrix.

Note:

The current support matrix can be obtained from the NiCE Customer Portal:
<https://portal.nice.de/>

UNIX specific Needs

Internal command forwarding requires that the command line buffer of the operating system must at least be 1024 byte. Please use the `ulimit -s` command to verify your command line buffer size.

In order for the DB2SPI to work correctly it must be possible to determine the model string using the appropriated system commands from the agent account. (use `opcdeploy / ovdeploy` to verify).

Platform	Command
HP-UX	model
AIX	uname -M
Sun Solaris	uname -i

Note that there is no such need for Linux or Windows based DB2 servers.

DB2 Versions

The DB2SPI 03.80 supports DB2 UDB version 9.1, 9.5 and 9.7.

For older versions please contact spi-support@nice.de.

The DB2SPI supports the DB2 Enterprise Server Edition. For other editions please refer to the respective support matrix.

Note:

For supported i5/OS based DB2 databases see the actual support matrix on the NiCE Customer Portal. <https://portal.nice.de/Portal/login.jsp>

This software has been verified with DB2 Version with DB2 version 9 Fix Pack 1 and later. Be careful to always use the latest Fix Pack (DB2 version 9 Fix Pack 3 has been superseded by Fix Pack 3a, for example.)

Requirements as an OM managed Node

The DB2 servers that shall be monitored with the help of the DB2SPI will in the following be called "managed nodes".

Managed Node Status and Agents installed

The managed nodes need to have an HP operations agent installed, as well as the appropriate HP operating system policies and instrumentation (also known as "HP OS-SPI" or "Infrastructure SPI") in order to be able to function properly.

Performance Data Collection Tools

In order to store metric data collected by the DB2SPI, the DSI2DDF package must be installed on the HP OM management server and the respective instrumentation must have been deployed to the managed nodes (the DB2 servers).

Self-Healing Collector

In order to make use of the HP self-healing services, the respective instrumentation must also be deployed to the managed nodes and the management server.

Perl on Managed Nodes

On the DB2 server nodes that need to be managed as well as on the management server, Perl is an essential component, because most large parts of the DB2SPI are written in Perl. The Perl versions 5.6.1 and 5.8 are supported on these nodes, as installed with the HP operations agent.

This software is delivered with all operations agents version 7.x and higher (DCE agents and HTTPS agents) and it is installed automatically when distributing the agent software to the managed nodes.

Note:

The Perl 5.6.1 delivered with HP DCE agents (version 7.x) and older HTTPS agents (up to version 8.16) for AIX managed nodes is not functional. Hence, an AIX Perl needs to be installed separately on AIX nodes, or the HTTPS must be upgraded to the latest version. You can check this on the node by entering "opcagt -version".

An agent Perl replacement must be installed, available from the NiCE customer portal. Please see the DB2SPI Release Notes for details.

Note that NO OTHER Perl installation will be used by DB2SPI and DB2SPI does NOT interfere with those installations. Only the HP agent Perl will be used and hence those other installations can be maintained independent from the DB2SPI.

Table 2: OVO 7.x & HP Operations Manager 8.x / 9.x Agent Perl paths

Operating System	Path to Perl Executable
AIX	/usr/lpp/OV/contrib/perl/bin/perl (DCE Agent) /usr/lpp/OV/nonOV/perl/a/bin/perl (HTTPS agent)
HP-UX	/opt/OV/contrib/perl/bin/perl (DCE Agent) /opt/OV/nonOV/perl/a/bin/perl (HTTPS Agent)
Solaris	/opt/OV/contrib/perl/bin/perl (DCE Agent) /opt/OV/nonOV/perl/a/bin/perl (HTTPS Agent)
Linux	/opt/OV/contrib/perl/bin/perl /opt/OV/nonOV/perl/a/bin/perl (HTTPS Agent)
Windows	/usr/OV/bin/perl (UNIX DCE Agent) Program Files/HP OpenView/nonOV/perl/a/bin/perl (UNIX HTTPS Agent) \Program Files\HP OpenView\Installed Packages\{790C06B4-844E-11D2-972B-080009EF8C2A}\bin (Windows DCE Agent) \Program Files\HP\HP BTO Software\nonOV\perl\bin (Windows HTTPS Agent)

Installing the DB2SPI

In this section, you will find information describing in detail the steps you need to perform to install the SMART Plug-in for DB2 separately. Note that when installing from the HP SPI DVD this is mostly automated, but for separate installation (e.g. after download from an FTP site) all the listed steps are required.

This section covers the following topics:

- Package and Component Identification
- Installing the DB2SPI Software on OM for Windows
- Installing the DB2SPI Software on OM for UNIX
- Installing the ATOP Communication Layer

The installation of DB2SPI components integrated into other products (HP Reporter and HP Performance Manager) is not explained here, but in the respective sections in the appendix.

Package and Component Identification

The DB2SPI consists of a set of individual components:

- The DB2SPI application package for HP Operations Manager.

This is the main trunk of software, consisting of tools, monitors, and help pages and so on that will be uploaded into the HP Operations Manager database. There is one component included in this package:

ATOP – the cross-platform communication layer for the DB2SPI

Other components are:

- The DB2SPI console package for HP Operations Manager console for use on any server other than the HP Operations Management Server
- OVPM Graphs – a configuration file when using HP PM for UNIX for graphing the performance data
- The DB2SPI graphing integration into HP PM for Windows, as an InstallShield package
- The DB2SPI report integration into HP Reporter as an InstallShield package

In the subsequent sections the necessary steps are described to install these packages on the respective systems.

Upgrading DB2SPI from an earlier Version

The upgrade process is described in the most recent "DB2SPI Release Notes". Please refer to that document.



Installing the DB2SPI Software on HP OM for Windows

Installation Procedure using the MSI Package

DB2SPI 03.80 must be installed on the management server via InstallShield. Please perform the following steps:

1. Install the DB2SPI by executing the file **DB2SPI-0380.msi**.
It can be found on the installation CD

InstallShield will guide you through the installation.

Verifying Installation of the DB2SPI Software

To verify that the installation of the DB2SPI completed successfully on the HP OM for Windows management server, carry out the following steps:

1. 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:

DB2SPI

2. Check that the ATOP server process is registered correctly a service. You can do this by opening the "Control Panel → Administrative Tools → Services". You should see the following entry in the list of installed services:

ATOP2 Server Service

3. Check that the elements listed in are present in the OM for Windows Console GUI:

Table 3: DB2SPI Components in HP OM for Windows

HP OM Component	HP OM Component Name	
Node Groups	DB2-UNIX	
	DB2-OS400	
	DB2-WINDOWS	
Tool Groups	DB2	
	DB2SPI Admin	
	DB2SPI for OS400	
User Roles	DB2 Operator	
	DB2SPI Admin	
Policy Groups	DB2SPI	DB2SPI Recommended
		DB2SPI Unix
		DB2SPI Windows
		DB2SPI Detail
		DB2SPI MgmtSvr
		DB2SPI OS400



For the DB2SPI and its Console package, installation/removal logging is written to <InstallDir>\install\DB2SPI\log.

The filenames are:

- DB2SPI_install.log
- DB2SPI_Console_install.log

Installing the DB2SPI Software on HP OM for UNIX or Linux

Since HP OM for UNIX and HP OM for Linux are functionally identical, we put these two platforms together in one chapter. The only difference is how the package is unpacked, all subsequent steps are identical.

Installation Procedure using the SD Package (HP OM for UNIX)

The section considers installation on "Operations Manager for UNIX". This is used as a generic expression for both management server versions (OVO/UNIX 7.x and OM for UNIX 8.x or 9.x) and both management platforms (HP-UX and Solaris) with their supported operating system versions.

DB2SPI 03.80 includes communication component (ATOP) that is installed automatically with the bundle.

For the installation on the OM for UNIX management server, carry out the following steps; we assume that the software package is already available on the system (either via DVD-ROM media or on a hard drive or network drive).

1. Login to the OM for UNIX management server as user `root`.
2. Use the `swinstall` command to install the DB2SPI software bundle. Enter:

```
swinstall -s /<directory>/<depot_name> DB2SPI
```

As an example, this might read as:

```
swinstall -s /tmp/myfiles/db2spi_0380.sd DB2SPI
```

The `swinstall` command installs the software bundle from the SD depot and performs basic configuration. The software bundle contains all the DB2SPI software, configuration files, and documentation.

Alternatively, use the `swinstall` GUI and mark and install the DB2SPI software bundle.

Installation Procedure using the RPM Package (HP OM for Linux)

The section considers installation on "Operations Manager for Linux", including the embedded communication component (ATOP) that is installed automatically with the bundle.

For the installation on the HP OM for Linux management server, carry out the following steps:

1. Login to the HP OM for Linux management server as user `root`.
2. Use the `rpm` command to install the DB2SPI software bundle. Enter:



```
rpm -U --nodeps /<directory>/<rpm_name>
```

In our example, this might read as:

```
rpm -U --nodeps /tmp/NiCE_DB2SPI_0380_oml.rpm
```

The `rpm` command installs the software bundle from the RPM depot and performs basic configuration. The software bundle contains all the DB2SPI software, configuration files, and documentation.

Verifying Installation of the DB2SPI

To verify that the installation of the DB2SPI completed successfully on the OM for UNIX or Linux management server, carry out the following steps:

1. Check the list of installed software.
 - HP OM for UNIX: On the HP-UX or Solaris command line, enter:

```
swlist | grep DB2SPI
```

In the list that is displayed, look for the following entry:

```
DB2SPI      03.80      DB2 SMART Plug-In for HP OVO / HP  
Operations Manager
```
 - HP OM for Linux: On the command line, enter:

```
rpm -qa | grep DB2SPI
```

In the list that is displayed, look for the following entry:

```
DB2SPI_03.80
```
2. Check that the ATOP server process is registered correctly as an OV service. Note, that you must have `/opt/OV/bin` in your search path to do so.
 - On HP OM for UNIX 8.x., enter:

```
ovstatus atop_server
```

The response must list ATOP Server to be "RUNNING"
 - On HP OM for UNIX 9.x., or OM for Linux 9.x, enter:

```
ovc -status atop_server
```

The response must list ATOP Server to be "Running"
3. Check that the elements listed in Table 4 are present in the OM GUI:

Table 4: DB2SPI Components in OM for UNIX or Linux

Component Type	Component Name	
Node Groups	DB2-UNIX	
	DB2-OS400	
	DB2-WINDOWS	
Message Groups	DB2	
	DB2_OS400	
	DB2SPI	
Application Groups	DB2 Tools	
	DB2SPI Admin	
	DB2SPI for OS400	
User Profiles	DB2 Operator Profile	
	DB2SPI Admin Profile	
Template Groups	DB2SPI	DB2SPI Recommended
		DB2SPI Unix
		DB2SPI Windows
		DB2SPI Detail
		DB2SPI MgmtSvr
	DB2SPI OS400	

Please note that the node groups and template groups have been changed since DB2SPI 03.5x. To reduce the upgrade effort, the old structure is still valid in OM for UNIX 8.x

- If either of these steps fails to produce the desired results, you may check the following files on the HP OM for UNIX management server for more specific information relating to installation problems:

```
/var/adm/sw/swagent.log
```

```
/var/adm/sw/swinstall.log
```

Preparing the Management Server for Service Tree Updates

Per default, remote action security on an OVOU or OM for UNIX / Linux (OMU / OML) is set to deny Automatic Actions from a DCE node on the Management Server or another node.

This is needed for DB2SPI Service Tree discovery. Remote Actions from DCE nodes must be allowed on the Management Server so the service tree can be built up correctly. This can be achieved by placing and editing the file `/etc/opt/OV/share/conf/OpC/mgmt_sv/remactconf.xml` on the OMU / OML Management Server.

The following may be added to that file, if this situation is applicable in your environment:

```
<rule>
  <doc>Target node MgmtSrv OK if sender DB2SPI</doc>
  <if>
    <target>
      <mgmtsrv/>
    </target>
    <source>
      <nodegroup>DB2-UNIX</nodegroup>
      <nodegroup>DB2-OS400</nodegroup>
      <nodegroup>DB2-WINDOWS</nodegroup>
    </source>
    <certified>>false</certified>
  </if>
  <allow/>
</rule>
```

On OM for Windows 8.0, a Remote Action Security Server Policy must be created or a rule must be added to one to allow actions from a DCE node on the Management Server if settings are effective which deny this.

Important automatic Changes on the Management Server

During the installation of the DB2SPI, some automatic configuration takes place on the management server.

Perl Link

A link is created in the /opt/OV/db2spi/bin directory that points to the OM agent Perl, which depends on the type of agent used on the management server. Please be aware that changing the agent type (DCE to HTTPS or vice versa) at a later time will invalidate this link. It must be reconfigured manually in order to use any management server based DB2SPI functionality.

Selective Distribution Support

If selective distribution is enabled on the management server, i.e., the file /etc/opt/OV/share/conf/OpC/mgmt_sv/selldist exists, the DB2SPI is integrated in this configuration file.

If so, some lines for the DB2SPI selective distribution are added that can be used during normal instrumentation deployment later on.

ATOP Server Installation

On the OM for UNIX / Linux management server a new OV service, atop_server, is established for the multi-platform communication as described below.

Installing the ATOP Communication Layer

The DB2SPI uses a communication layer of its own for the execution of input / output applications on the managed nodes. This layer is the Application Tunnel for Operations (ATOP). It provides input / output functionality across all platforms the DB2SPI may be installed on.

It consists of two parts:

- The ATOP server is installed on the HP Operations Management server and the management consoles automatically with the DB2SPI or DB2SPI Console package. Only in the case of OM for UNIX or Linux management consoles using the Java GUI a separate installation is necessary.
- The ATOP client is installed on the managed node when deploying the DB2SPI scripts (instrumentation).

In order to work correct, the configuration has to be consistent between all three types – management server, managed nodes, management consoles.

This is achieved automatically for the ATOP client on the managed nodes when distributing the DB2SPI to them, and the management consoles also get a default configuration with the installation of the ATOP service.

If there is a firewall between any of the types (management server, managed nodes, management consoles), the communication ports used by ATOP need to be open. This might be done by opening the ATOP default ports on the firewall, or the ATOP port may be configured to use ports which are open already. In the second case, the server and client ports have to be consistent between all three types of servers (management server, managed nodes, management consoles).

For more detailed information about ATOP, refer to the “Administrator and Concepts Guide”.

ATOP Server Setup

Terminal Server Usage

Although ATOP does not support Terminal Services in general, it may be used under the right circumstances.

A separate whitepaper describes how to open a remote session on the OM for Windows server that will pass on all windows opened on the OM for Windows server including ATOP windows. The main issue is that remote sessions will pass on most windows but not ATOP windows. To get ATOP windows it is necessary to open a **console session** using the “/console” parameter with the call of the Remote Desktop client on the Connecting Windows client.

Please refer to that document, which can be found on the NiCE customer portal server.

ATOP on the OM for Windows Management Server

ATOP server is automatically set up as a Windows® service on the management server when DB2SPI is being installed. This means, that the DB2SPI tools can be executed from the OM for Windows console on the management server.

ATOP on the OM for Windows Console

ATOP server is automatically set up as a Windows® service on the management console when the DB2SPI_console package is being installed. This means, that the DB2SPI tools can be executed from the OM for Windows console on the management console.

ATOP on the OM for UNIX Management Server

For Motif GUI users of OM for UNIX, there is no special action necessary, as they connect to the OM for UNIX management server to obtain their X-windows. There ATOP is set up as an OpenView service automatically when ATOP is being installed with the DB2SPI software.

Thus, no extra configuration steps must be taken if you are using the Motif GUI.

ATOP on the OM for UNIX Java GUI Display Station

The DB2SPI supports full application interaction in the HP OM for UNIX or Linux Java GUI environment with the embedded ATOP technology. However, since it is not a component of the HP OM for UNIX or Linux Java GUI itself, some service and programs need to be installed on the Java GUI station similar to the Java GUI itself.

Note:

The Java GUI is a requirement on the HP OM for UNIX or HP OM for Linux management station where ATOP is to be installed.

After successful installation of the DB2SPI on the management server, a web-based installation procedure just like the Java GUI is provided, and in order to show the strong relation, the installation procedure is found close to the Java GUI.

Upgrading ATOP on the Java GUI from an earlier Version

The upgrade is simply a re-installation after the older version has been removed.

Installation via Web-Browser

On the Java GUI station, start a web browser and access the page:

For OVO/UNIX 7.x environments:

Error! Hyperlink reference not valid./

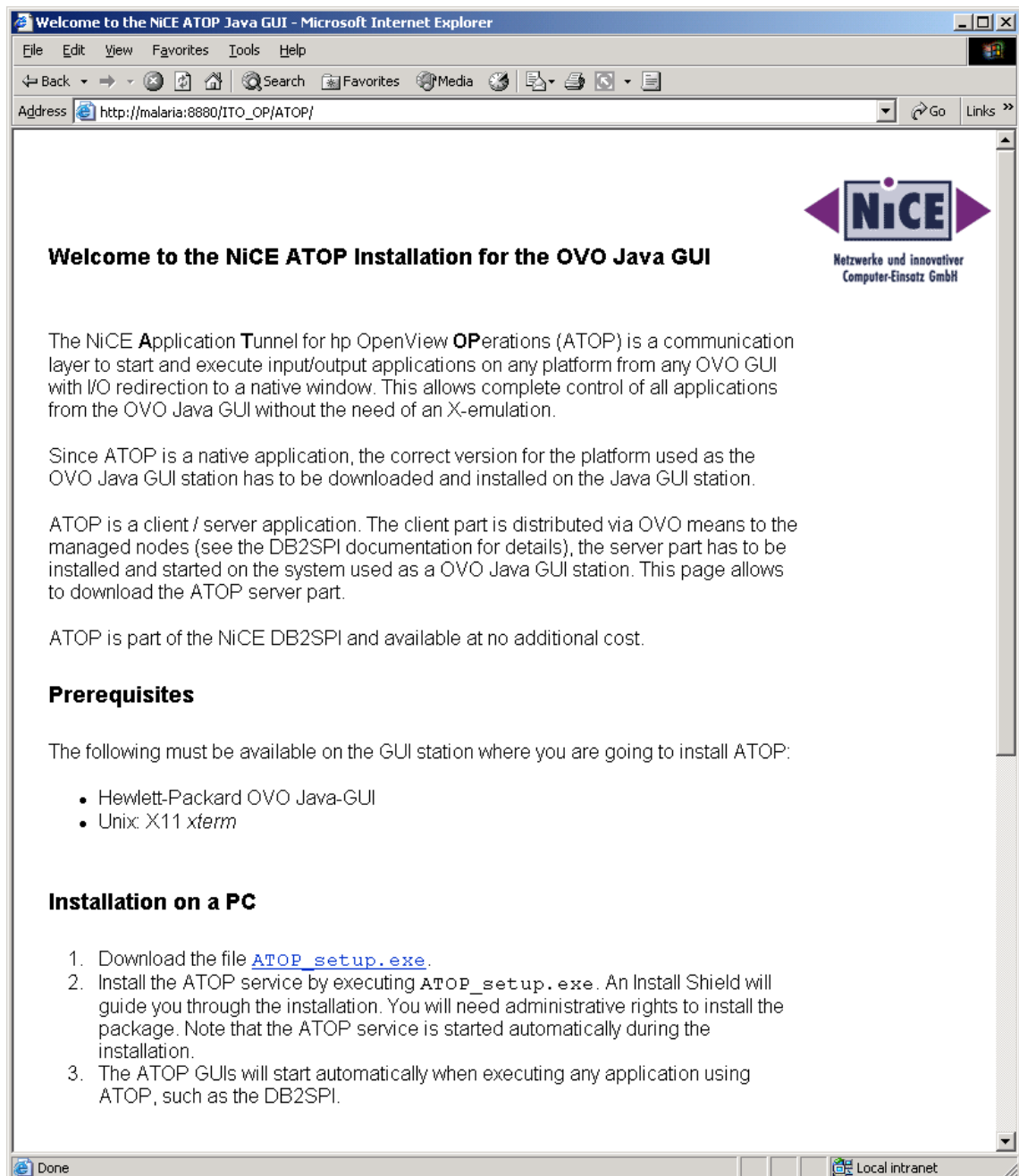
For OM for UNIX 8.x / 9.x or OM for Linux 9.x environments:

Error! Hyperlink reference not valid./

Don't miss the slash "/" at the end of the line.

The following screen will appear:

Figure 1: Web page for ATOP installation on Java GUI display station



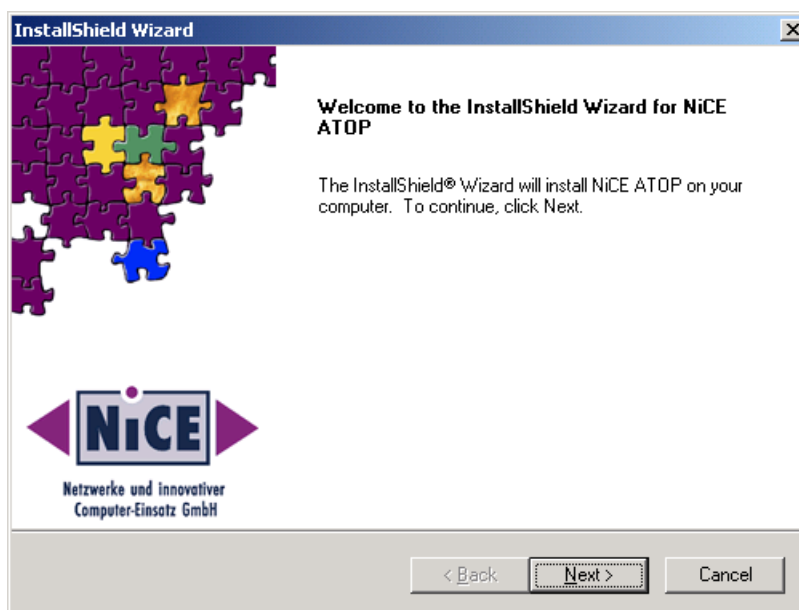
In this screen, select the platform of the Java GUI Display station and download the appropriate ATOP package. Follow the installation instructions as given of the web page.

Executing ATOP Setup on Java GUI Stations on Windows

By starting **ATOP_Setup.exe** from the web screen in OVO/UNIX environments or by directly starting it from the installation CD, an InstallShield guided ATOP server component installation is performed.

The installation process itself is done via InstallShield and you simply follow the instructions given during the setup. You have to accept the license agreement to continue when asked for. However, ATOP usage is covered by the license of the DB2SPI itself.

Figure 2: InstallShield window to set up ATOP on your PC



We are installing the ATOP Java GUI in the same branch as the OM for UNIX Java GUI to indicate the strong relation between them. You cannot operate ATOP without the OM for UNIX Java GUI.

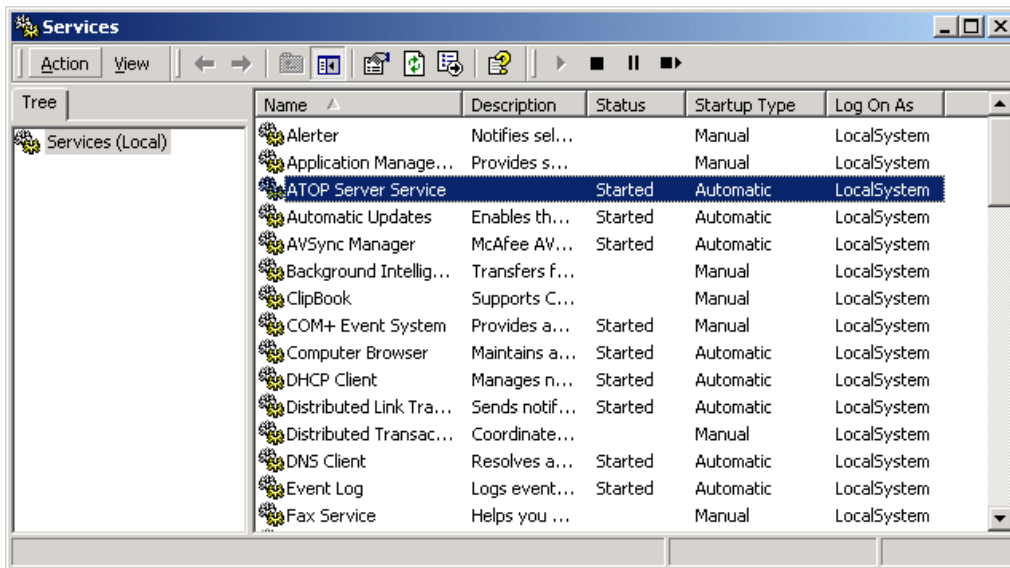
Upon completion of the installation, a final screen showing the success of the installation is displayed.

Verification of Installation on Windows

In Microsoft Windows environments, an ATOP service is added to the system, which is started automatically with the system startup. It acts as the communication access point for applications requesting input/output on the Java GUI station.

From the Start menu, access "Settings → Control Panel → Administrative Tools → Services". You should find an entry named "ATOP Server Service" as shown in the following picture:

Figure 3: ATOP server service on Windows



De-installing the DB2SPI

The instructions in this section describe how to remove the DB2SPI software quickly and cleanly from the Operations Manager management server and the managed node. This section covers the following topics:

- Clean-up the Managed Nodes
- Clean-up on the Management Server
- Removing the DB2SPI Package
- Removing DB2SPI Components from the Operations Manager

Clean-up the Managed Nodes

Before cleaning up the central instance you should have removed the DB2SPI components from the managed nodes.

Delete the DB2SPI Configuration on the DB2 Server

Execute the "Config Delete" tool (see DB2SPI Administrator Guide) on all managed nodes to clean up DB2SPI related files and directories.

De-Assignment of Policies from the DB2 Servers

This may be done by de-assigning the nodes from the DB2SPI node groups and re-distributing the policies after that to those nodes. Remember to do this for the Management Server Node as well, if the DB2SPI_ownlog0 policy was deployed to it.

An upfront note for Re-installation Scenarios


If you intend to re-install the DB2SPI (same version or an update), you may simply execute the "Config Delete" application as described above without de-assigning the policies. In this case, all DB2SPI policies get disabled automatically without being deleted from the managed node.

After (re-)configuration of the DB2SPI and (re-)deployment of the (possibly refreshed) policies and instrumentation the tool "DB2SPI Enable" may be started to put them back into action.

In such scenarios, skip the rest of this section.

Policy Removal in Operations Manager for Windows

To remove the policies from the managed nodes, following these steps:

1.  the management console, right-click the DB2SPI policy group to be removed (e.g. "DB2SPI").
2. Select the function "All Tasks → Uninstall from ..." and choose the node group or node desired (e.g. "DB2")

This removes all policies from the nodes that belong to those node groups.

Also remove the DB2SPI_ownlog0 policy from the Management Server node.

3. Remove the managed nodes from the DB2 node groups

Another possible way to remove the policies from the managed nodes is as follows:

- 1) Open the Node Configuration Editor on the management server
- 2) Drag all nodes from the DB2 node groups to the root node group "Nodes"
- 3) Close the Node Configuration Editor
- 4) Mark each node and select the function "All Tasks → Redeploy policies and Instrumentation"

Policy Removal in Operations Manager for UNIX or Linux

To get rid of the DB2SPI policies from the managed nodes, you have to enter the OM administration GUI and perform the following steps:

1. Delete all nodes from the DB2 node groups
2. Re-deploy policies and instrumentation (aka. actions, commands, monitors) to those nodes

Clean-up on the Management Server

Removing the DB2SPI Package from the Operations Manager Server

To remove the DB2SPI and ATOP components from the OM for Windows management server and complete the general clean-up process:

1. On the OM for Windows management server, enter the Control Panel and select the function "Add/Remove Programs"
2. Select the components for removal:
 - DB2SPI

This will remove all installed binaries.


Unfortunately there is no way to eliminate the DB2 elements from the service tree, if they still exist after all these actions, so this must be done manually, as well as other configuration components.

Removing DB2SPI Components from the Operations Manager Configuration Database

Removal in the Operations Manager for Windows

Unfortunately there is no way to remove all configuration elements of the DB2SPI from the OM for Windows database automatically.


You have to remove the DB2SPI integration with the Operations Manager GUI manually. You will have to remove the following DB2SPI components from the Operations Manager GUI:

- DB2 managed nodes and DB2SPI node groups (Node Configuration Editor)
-  DB2SPI tools and tool groups (Tool Configuration Editor)
- DB2SPI policies, policy groups and policies grouped by types
- DB2SPI user profiles (User Roles Configuration Editor)
- DB2 service tree elements (Service Configuration Editor and Service Type Configuration Editor)

Removal in the Operations Manager for UNIX or Linux

Unfortunately there is no way to remove all configuration elements of the DB2SPI from the HP OM for UNIX or Linux database automatically when executing the `swremove` (OM for UNIX) or `rpm` (OM for Linux) command.

You have to remove the DB2SPI integration in the HP OM administration GUI manually. You will have to remove the following DB2SPI components from the HP OM GUI:

- DB2 managed nodes and DB2SPI node groups
- DB2SPI message groups
-  DB2SPI applications and application groups
- DB2SPI message-source templates and template groups
- DB2SPI user profiles

Package Removal

Removing from HP OM for Windows Management Server

As this is a Windows system, you may use the "Add/Remove Programs" function from the Windows Control Panel to delete the DB2SPI package from the system.

Removing from HP OM for UNIX or Linux Management Server

To remove the DB2SPI and ATOP components from the HP OM for UNIX or HP OM for Linux management server and complete the general clean-up process:

Note:

We also remove all directories and files, which belong to the DB2SPI. These are:

```
/etc/opt/OV/db2spi  
/opt/OV/doc/C/db2spi  
/opt/OV/db2spi
```

Please make sure not to have any individualized configuration files etc. left there that are to be used afterwards or elsewhere or by other applications.

- For HP OM for UNIX:
On the management server, use the `swremove` command to remove the DB2SPI software. Enter:

```
swremove DB2SPI
```

- For HP OM for Linux:

On the management server, use the `rpm` command to remove the DB2SPI software. Enter:

```
rpm -e --nodeps <package name>
```

For example:

```
rpm -e --nodeps NiCE_DB2SPI_0380_om1
```

Clean-up the Service Tree

At this point in time, also the DB2 service tree is deleted and all user assignments to it are skipped. Users of the Java GUI will get a notification that a configuration change has occurred and will need to reload it.

Appendix A: HP Performance Manager Integration (Portable Graphs)

This section explains how to make use of the HP Performance Manager (HP PM) integration supplied with the DB2SPI. In order to view the DB2SPI Portable Graphs, the metrics need to be collected with the help of either HP PA or CODA. This must be switched on with the DB2SPI tools “Snapshot Enable” on the DB2 side and “PerfRep Enable” on the Operations Manager side.

Prerequisites

The DB2SPI Portable Graphs are supported for HP Performance Manager 5.0, 6.0 and 8.0 on Windows and HP-UX.

HP PM may be installed on any system in the local network on any kind of system (UNIX or Windows), which has access to the collected performance data on the DB2 servers.

Installation of the HP PM Predefined Graphs Package

The HP PM Portable Graphs Package resides on the OM for Windows server at `%OvInstallDir%\install\db2spi\DB2SPI_addon`

Either copy the file `VPI_GraphsDB2SPI.txt` to the HP PM directory or simply install the msi package `DB2SPI_OVPM_3.50.msi`.

HP PM System running on UNIX

For HP PM systems running on UNIX, you need to transfer the HP PM integration file `VPI_GraphsDB2SPI.txt` and save it to `"/var/opt/OV/conf/perf/"` on your HP PM system.

Once the HP PA/ CODA started collecting, the metrics can be displayed with the HP Performance Manager.

HP PM System running on Windows

For HP PM systems running on Windows, the HP PM Portable Graphs must be installed with the package `DB2SPI_OVPM_03.50.msi`. IT may be downloaded from the Operations Manager web server mentioned above. After executing this file, InstallShield will guide you through the installation process.

To verify that the DB2SPI Portable HP PM Graphs have been successfully installed, open the directory `"<install_dir>\newconfig\OVPM"` and look for the configuration file called `"VPI_GraphsDB2SPI.txt"`.

Appendix B: HP Reporter Templates Integration

Installing DB2SPI Reports for HP Reporter

The DB2SPI software contains predefined HP Reporter templates to prepare reports about some performance data collected via HP PA / CODA.

Note:

This applies only to the integration into the HP Reporter. The embedded reporting component of OM for Windows is not able to connect to the PA data store filled by the DB2SPI and therefore cannot be used for DB2SPI reporting-

Prerequisites

The installation of DB2SPI Reports expects the following installations and settings have been done on the HP Reporter hosting system before starting the setup:

- HP Reporter Version 3.6 or later is installed

When integrating with HP OM for UNIX or Linux, the following also applies:

- Oracle client and Oracle driver are installed for communication with the HP OM for UNIX or Linux database (used partly in DB2SPI reports when looking for DB2 related messages in the Operations Manager database)
- An ODBC interface (ov_net) is established to the HP OM for UNIX or Linux management server
- The "OV /Operations 7&8 Reports" are loaded (check within HP Reporter in the "File → Configure → Report Packages" window)

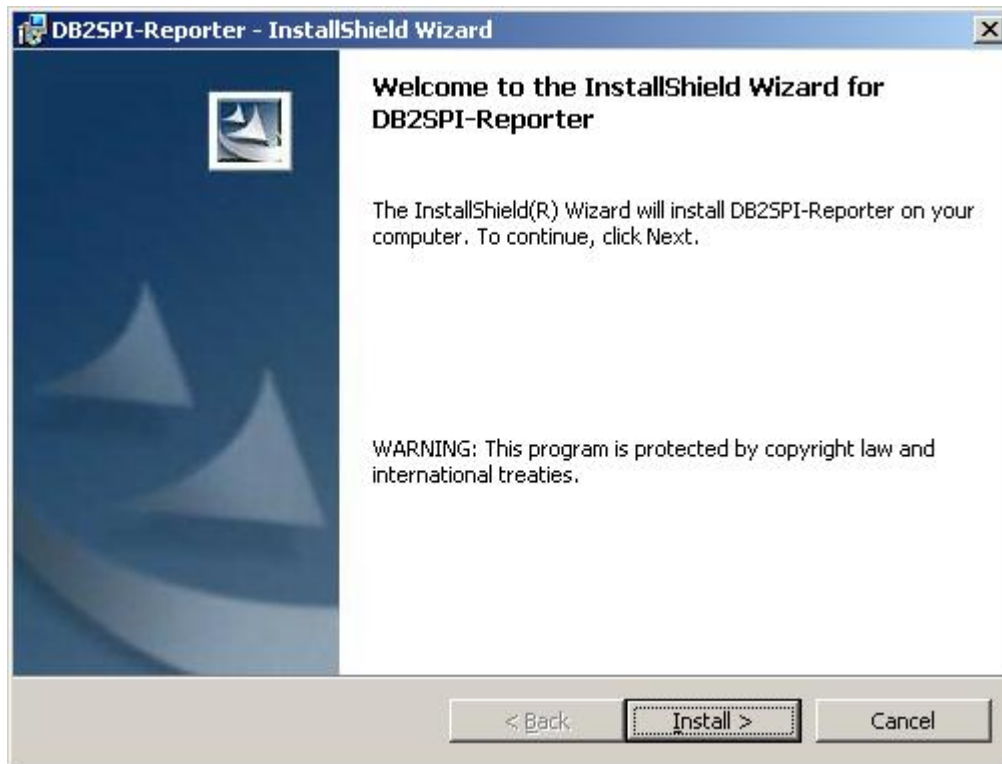
Reports Installation

The installation is simply execution of an InstallShield package on the system hosting the HP Reporter. The package is contained separately on the DB2SPI CD-ROM.

The individual steps are as follows:

1. On the Windows system with the HP Reporter installed insert the DB2SPI CD-ROM.
2. From the CD-ROM, install it using InstallShield with the package DB2SPI-Reporter.msi.

When starting the installation, a window pops up:

Figure 4: DB2SPI Service reports installation start

Click "Install" to continue. The package automatically plugs into the HP Reporter.

Manual Step for Cluster Installation

If the DB2SPI Reporter Integration is installed on a clustered OM for Windows management server, the following manual copy must be made:

Copy all files

From: ...\\HP OpenView\\Data\\Reports\\db2spi

To: ...\\HP OpenView\\Data\\shared\\reports\\db2spi

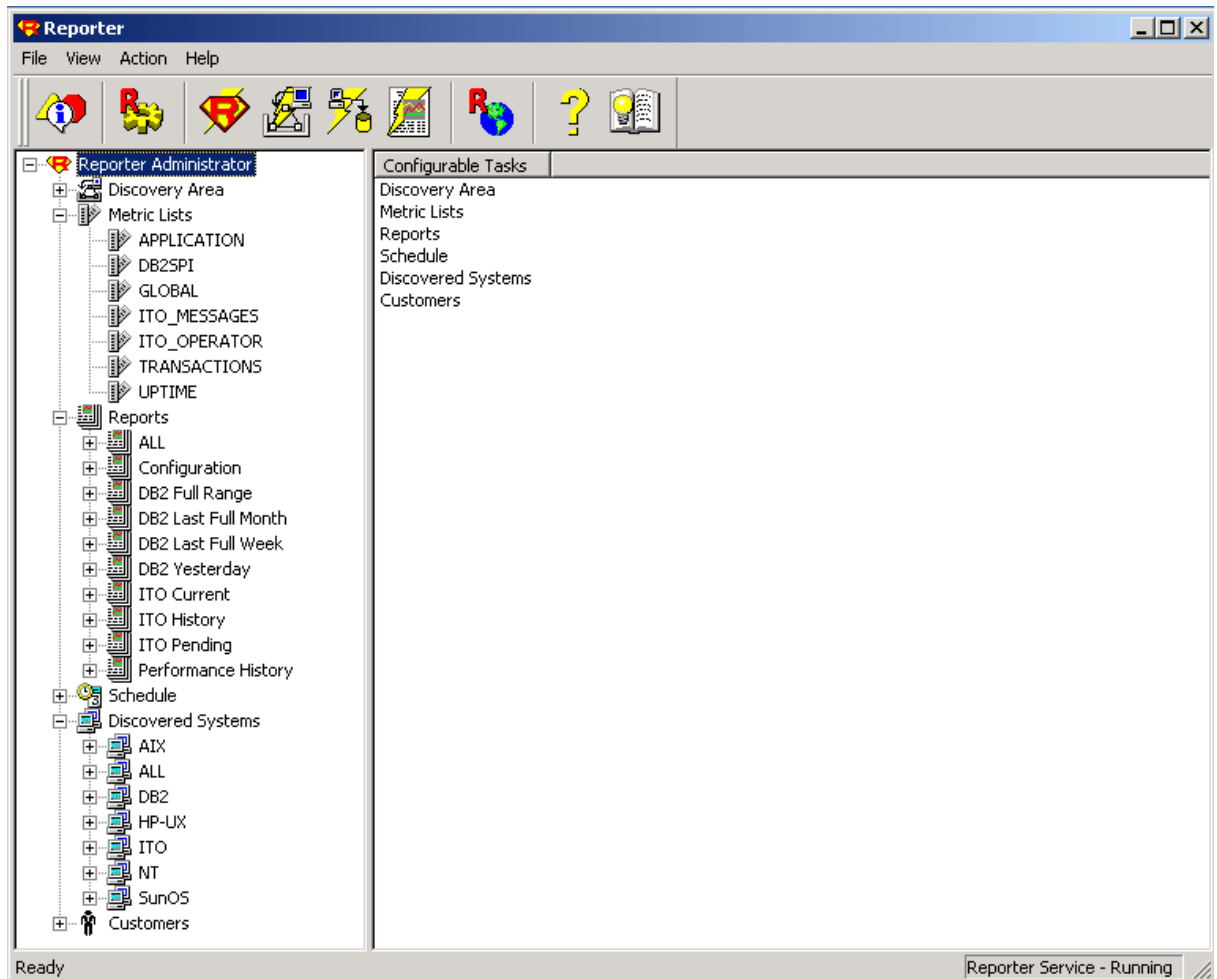
Verification of correct Installation

After installation has finished, start HP Reporter and look for the following elements:

- New element "DB2" in the branch "Metric Lists", which contains a lot of individual metrics
- New elements in the "Reports" branch:
 - DB2 Full Range
 - DB2 Full Month
 - DB2 Full Week
 - DB2 Yesterday

In the HP Reporter GUI, this appears as follows:

Figure 5: HP Reporter GUI with DB2SPI reports installed



No special steps need to be taken to enable or activate the DB2SPI reports. They are prepared just like other reports.

Appendix C: Atop Configuration Distribution Tool

Purpose of tool

The script was designed for two cases:

Distribution of the source atop configuration file on the management server to the node directories on the management server. (So they still need to be deployed)

Change atop configuration file. Editing happens via program parameters. In case there was an issue during execution, the user has to call the program a second time.


How to start the script

The script can be executed in the command line/in a shell using the start script from the SPI Management Server installation directory to provide the interactive mode.

```
/opt/OV/db2spi/bin/db2s_start db2s_atopcfg.pl
```

```
%OvInstallDir%\bin\db2spi\db2s_start.bat db2s_atopcfg.pl
```

Parameter list:

- -ll followed by a number to change the loglevel (number between 0 and 6 expected)
- -sp followed by a number to change the serverport (number greater-than-or-equal to 0 expected)
- -cp followed by a number to change the clientport (number greater-than-or-equal to 0 expected)
-  will simply distribute the atop.cfg quietly

Starting the script with the parameters “-ll”, “-sp” and/or “-cp” the atop configuration file will be changed and then distributed to the node directories.

Starting the tool without parameters will distribute the configuration.

Known issues

Starting the script is **unsupported on Windows 2008**.

If the script is started in a **command line** on Windows 2008 as a normal user, the source file cannot be edited. This is the result of the rights-management on Windows 2008 systems.

The problem is that the script wants to open “%OvInstallDir%\bin\DB2SPI” but Windows redirects this opening request and the script really opens “C:\Users\\AppData\Local\VirtualStore\%OvInstallDir%\bin\DB2SPI”. Instead of telling the user that he does not have enough rights to read(!) and write the file. In addition it is not possible to get the file-path from a file-handle in perl. So it is not possible for the script to determine which file was opened really.



(When distributing the atop configuration file in
C:\Users\<<Username>\AppData\Local\VirtualStore\“%OvInstallDir%\bin\DB2SPI is being
distributed.)