HERMES SoftLab Oracle's Siebel Business Applications SMART Plug-In for HP Operations Manager (SPI for Siebel)

This Version 3.20 is for use with HP Operations Manager for UNIX

User's Guide

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HERMES SoftLab d.d.
Litijska 51
SI-1000 Ljubljana
Slovenia, Europe
www.hermes-softlab.com

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Document Overview

Edition History

New editions are complete revisions of the manual. The printing dates for each edition are listed below.

Edition	Date
First Edition	June 2002
Second Edition	October 2002
Third Edition	February 2003
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Ninth Edition	December 2006
Tenth Edition	July 2007
Twelfth Edition	October 2008

Conventions

The following typographical conventions are used in this manual:

Font	Definition	Example
Italic	Product names, book or manual titles, man page names, and section, table, and figure titles. Emphasis. Window and dialog box names.	Refer to the *SPI for Siebel Installation and Configuration Guide* for additional information. You *must* follow these steps. In the *Node Bank* window, select a node.
Bold	Commands on menus and buttons, dialog box titles and options, menu and icon names.	In the menu, first click **Actions**, and then **Agents**.
`Computer`	File names, syntax, directory names, or text that should be entered on screen or that is displayed on the monitor.	The following file is located on the root directory of the SPI for Siebel installation CD: `siebspi-readme-unix.txt`.

Product Documentation

With SPI for Siebel, the following documentation is provided:

- *HERMES SoftLab Oracle's Siebel Business Applications SMART Plug-In for Operations Manager Installation and Configuration Guide*
  Installation and Configuration Guide is available in PDF format (*SIEBSPI-InstallGuideUNIX.pdf*).
- *HERMES SoftLab Oracle's Siebel Business Applications SMART Plug-In for Operations Manager User's Guide*
  User's guide is available in PDF format (*SIEBSPI-UserGuideUNIX.pdf*).
- *HERMES SoftLab Oracle's Siebel Business Applications SMART Plug-In for Operations Manager - Supported Siebel and HP Software Platforms*
  Supported Platforms document is available in PDF format (*SPI_for_Siebel-Supported_Platforms.pdf*).
- Release notes
  Release notes are available in TXT format (*siebspi-release-notes-unix.txt*).
- Readme
  Readme file is available in TXT format (*siebspi-readme.txt*).
- HERMES SoftLab software license terms file
  License file is available in TXT format (*hsl_software_license_support_terms_signed.txt*)

Customer Support

Use the following e-mail and Web page addresses if you need help with the licensing process or while using the product, and if you would like additional information about this or other HERMES SoftLab products.

Licensing

To obtain the license activation file you can visit HERMES SoftLab licensing portal:

http://spi.hermes-softlab.com/licensing/

or send an e-mail to the following address:

spi-licensing@hermes-softlab.com

For more information on licensing and licensing procedure refer to *SPI for Siebel Installation and Configuration Guide*.

If you encounter any problems with the licensing process, contact the HERMES SoftLab licensing department at:

spi-licensing@hermes-softlab.com

Contacting Support

IMPORTANT

Should you require additional assistance or information while using the product, contact the vendor that shipped the software.

If you have purchased the software directly from HERMES SoftLab, send e-mail to:

support-siebelspi@hermes-softlab.com

Before Contacting Support

Before you contact the support department, have the following information available so that a technical support analyst can work on your problem more efficiently:

- the support files `siebspi_supp.zip` (on Windows managed nodes) and `siebspi_supp.tar.Z` (on Unix managed nodes)

To create the support file, run the **Collect Information UN*X** or **Collect Information WIN** application on one or more nodes. To run the application, perform the following steps:

1. Go to *Application Bank/SPI for Siebel/SIEBSPI Maintenance/SIEBSPI Support/ SIEBSPI UN*X nodes* or *Application Bank/SPI for Siebel/SIEBSPI-Maintenance/ SIEBSPISupport/SIEBSPI Win nodes* application group and run the **Collect Information UNIX** or **Collect Information Win** application on the managed nodes for which you would like to collect the information. The files with the support information are created in the following directory on the node(s):
   `<OvAgentDataDir>\siebspi\supplog on Windows`

   `<OvAgentDataDir>/siebspi/supplog on Unix`

- symptoms
- sequence of events leading to the problem
- commands and options that you used
- messages you have received (a description with the time and date)

General Information

For marketing or business-related issues in reference to this or other HERMES SoftLab SPIs, send e-mail to:

spi-info@hermes-softlab.com

Product Web Sites

Visit HERMES SoftLab SMART Plug-In Web site at:

http://www.hermes-softlab.com/products/SPI/about_SPI.html

and the company Web site at:

http://www.hermes-softlab.com/

Chapters Summary

This guide describes how to use HERMES SoftLab Oracle's Siebel Business Applications SMART Plug-In for Operations Manager (SPI for Siebel) to monitor and manage Siebel application resources from the HP Software environment. It also addresses and troubleshoots some of the possible installation problems.

NOTE

This document assumes that you are familiar with the HP Operations Manager administration procedures and concepts.

The guide contains the following chapters:

Chapter 2

Getting Started

About Oracle's Siebel Business Applications

Today's organizations must manage customer interactions across multiple communications channels. The challenge is to make it easy for customers to do business with the organization any way they want-at any time, through any channel, in any language or currency-and to make customers feel that they are dealing with a single, unified organization that recognizes them at every touch point. Oracle's Siebel Customer Relationship Management solutions, designed to fit any size organization, empower companies to deliver seamless and superior customer experiences by extending CRM to everyone in their organizations and partner networks.

The Oracle's Siebel Business Applications represents the framework for the Siebel Products and Industry solutions that are built upon them.

Products:

- Business Analytics Applications
- Call Center And Service
- Customer Data Integration
- Customer Order Management
- Enterprise Marketing
- Partner Relationship Management
- Sales
- Self Service And Ebilling
- Siebel CRM On Demand

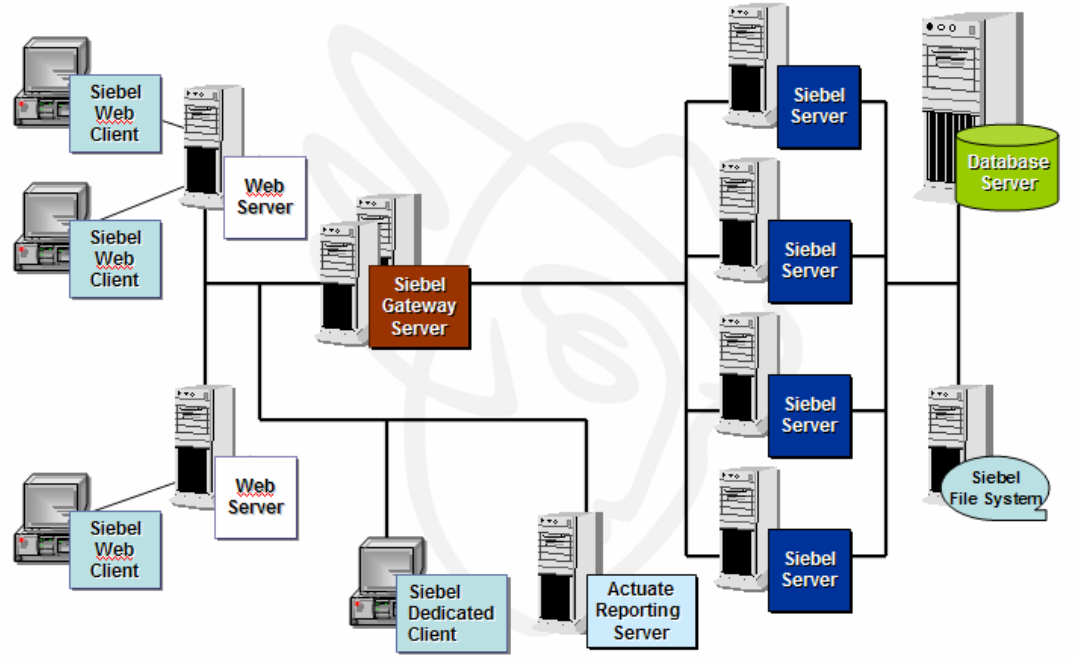
Typical Enterprise Setup of Oracle's Siebel Business Applications

Typical enterprise setup of Oracle's Siebel Business Applications consists of the following components:

- Siebel Server
- Siebel Server Components
- Gateway Name Server
- Web Server and Siebel Web Server Extension
- Siebel Database Server
- Resonate Central Dispatch (obsolete since Siebel 7.7.)

- Siebel clients:
  - Siebel High Interactivity Web Clients: Java based, using Microsoft JVM.
  - Siebel HTML Clients: Functionality the same as HI web client, however everything implemented with HTML. Slower, can be used from non-Windows platforms.
  - Siebel Dedicated Clients: Desktop or "fat" clients - inside LAN. Java based, internally implemented with a web server. Practically obsolete by now.

Picture: Typical Enterprise Setup of Siebel Environment



Siebel Server

The Siebel Server is the middle-tier platform that supports both back-end and interactive processes for all Siebel application clients. These processes are components within the Siebel Server architecture, and support functions such as:

- Operation of business logic for Siebel Thin Clients, as well as connectivity and access to the database server and file system
- Integration with legacy or third-party data
- Automatic assignment of new accounts, opportunities, service requests, and other records

- Workflow management
- Mobile client synchronization

The Siebel Server supports both multi-process and multi-threaded components, and can operate components in background, batch, and interactive modes. Many of the Siebel Server components can operate on multiple Siebel Servers simultaneously to support an increased numbers of users or larger batch workloads.

Siebel Server Components

The various programs that operate on the Siebel Server are implemented as components. A component represents only a specific type of program; a component is executed or operated as a task, or instantiation of a component, on a specific Siebel Server.

Gateway Server

The Siebel Gateway Server:

- Serves as a single entry point for accessing Siebel Servers
- Provides enhanced scalability, load balancing, and high availability across the Enterprise Server

Two primary services that coordinate the Enterprise Server and Siebel Servers operate within the Gateway are:

- Name Server
- Connection Brokering

The Gateway Server maintains the configuration information for all Siebel Servers in all the Enterprise Servers it manages.

Resonate Central Dispatch

The Resonate Central Dispatch is used for:

- Connection Brokering
- Load Balancing

Connection Brokering is an optional service of the Gateway Server that uses the Resonate Central Dispatch product to distribute client connection requests across multiple Siebel Servers. Only client connections to the Siebel Object Manager (for thin clients), request processor, and request agent components (for Interactive Assignment) will be distributed by Resonate Central Dispatch.

Siebel Web Server Extension

The Siebel Web Server Extension, operating on the Web server, connects to the Application Object Manager component operating within the Siebel Server. This connection uses Siebel's application.

Web Server (for example, IPlanet)

Web Server is used with Siebel Web Server Extension. It provides a server (Web) for providing an HTTP access for Siebel Web Clients.

Siebel Database Server (for example, Oracle)

The Siebel Database Server stores the data used by Oracle's Siebel Business Applications. Siebel dedicated clients and Siebel Server components, including those that operate in conjunction with the Siebel Thin Client, connect directly to the Database Server and make changes in real time.

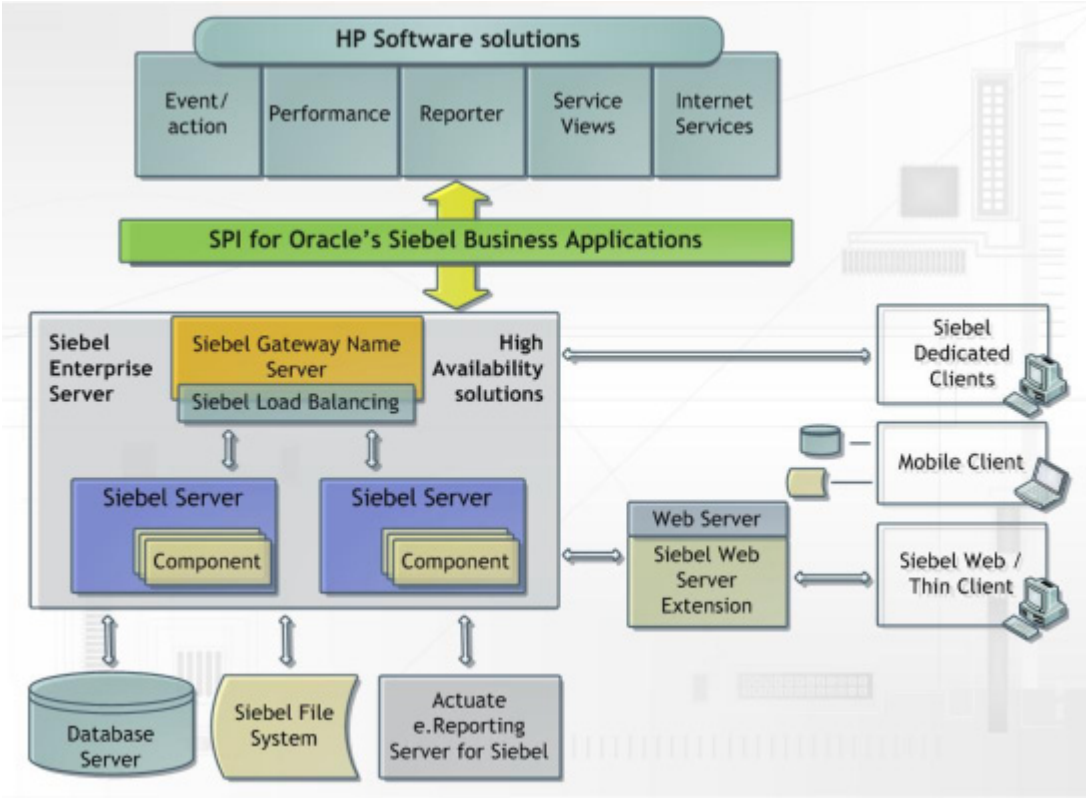
About SPI for Siebel

HERMES SoftLab Oracle's Siebel Business Applications SMART Plug-In for HP Operations Manager (SPI for Siebel) is designed specifically for use with Oracle's Siebel Business Applications in HP Software environments. Developed by HERMES SoftLab Group, it performs proactive system monitoring and service management while providing additional control over your computing environment. Additional benefits of using SPI for Siebel include the following:

- **Easy installation**. The "standard" HPOM GUI is used for all administration and configuration tasks. SPI for Siebel also uses well-known installation procedures.
- **Seamless integration into your environment**. As a pre-configured software module, SPI for Siebel "plugs into" HP Software automatically and provides an efficient and productive link between the applications that run on your server and other server applications.
- **Consistent performance**. Because SPI for Siebel runs on standard hardware, monitoring of the Siebel system has a low impact on system performance.
- **Dependable usage**. Operators are notified when errors occur. Additionally, backup is handled through the HP Software environment.
- **Built-in security features**. SPI for Siebel is compatible with the security features pre-established in the HP Software environment.
- **Comprehensive reports**. SPI for Siebel generates detailed reports on: server, database and component activity and status; remote user client synchronization history and status; event/action history; and Siebel Web Server Extensions.
- **Includes an Intelligent SMART Probe**. This feature measures customer experience when they use the software.

High-Level Architecture

Below is the high-level diagram of SPI for Siebel architecture.



Quick Introduction to SPI for Siebel

The main components of SPI for Siebel include the following:

- HP Operations Manager/Unix Templates
- HP Operations Manager/Unix Applications
- HP Operations Manager/Unix Reports
- HP Operations Manager/Unix Service Map

Templates

Templates instruct HP Operations Manager for UNIX engines how to solve system management issues, for example, “Monitor CPU Utilization”.

SPI for Siebel templates enable you to define complex rules and instructions for monitoring different systems and services. Templates are instructions for HP Operations Manager (HPOM) agents that monitor your Siebel environment. When an issue is detected, a message is sent to the HP Operations Manager (HPOM) console.

In addition, you can define automated actions to be performed upon detecting a specific issue, or include instructions for operators as part of the message. Every template can start automatic or operator initiated action when issue is detected. You can check which actions were launched when issue was detected, and check the action outcome in the message annotation.

Applications

SPI for Siebel supplies powerful applications for monitoring and managing your Siebel environment. SPI for Siebel enable you to inspect, analyze, and manage your Siebel environment, check the current status of the environment, and react to issues in your environment.

Reports

SPI for Siebel also offers report functionality, where collected performance data can be represented in web-based reports. SPI for Siebel integrates HP Reporter and HP Reporter Lite (integrated in HPOM 7.50).

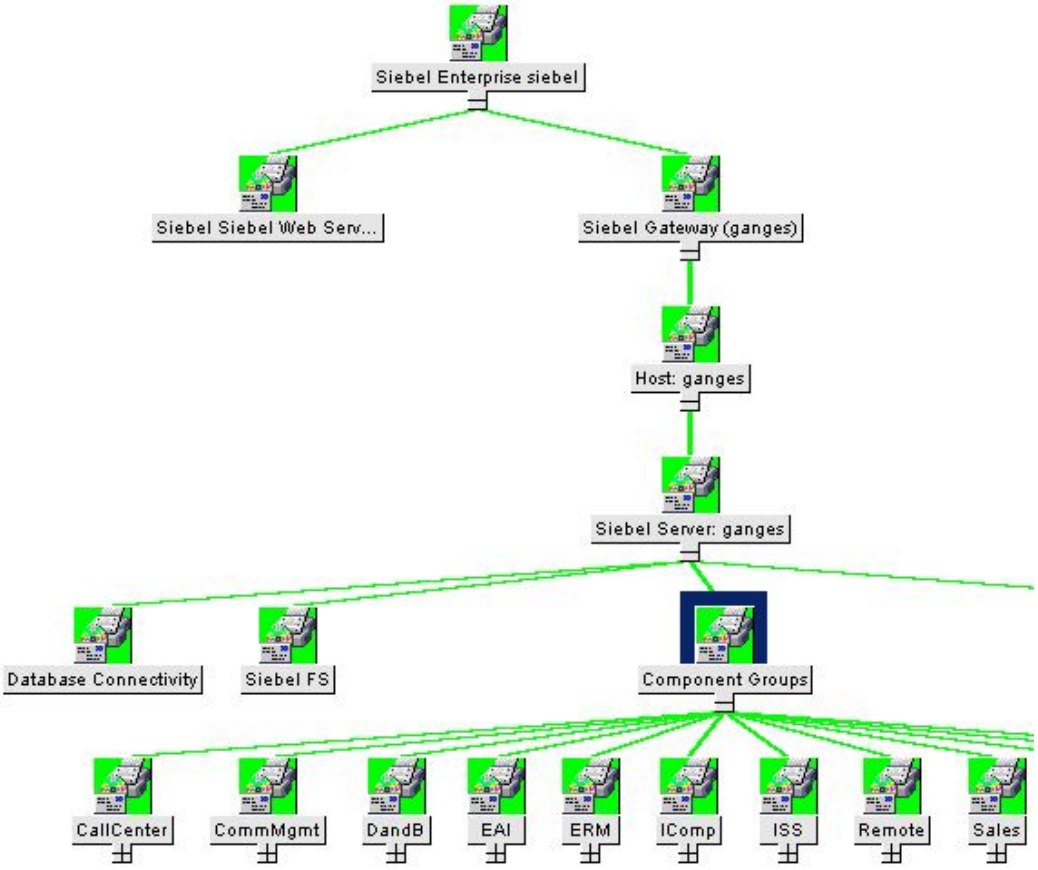
Services Navigator Map

HP Service Navigator Map View is a component of the HP Java-based operator GUI. This component enables you to manage your IT (information technology) environment while focusing on the IT services that you provide.

SPI for Siebel provides support for Service Navigator. It automatically generates a Siebel service map of the Siebel enterprise configuration, which offers complete graphical representation of your Siebel environment and its hierarchical organization. All Siebel object types (Siebel Servers, Gateway Name Servers, Components, Web Server Extensions, Actuate Reporter Server, and so on) in your environment are displayed in a tree view, which shows the components and their hierarchical dependencies.

In addition, graphical representation of your Siebel environment clearly indicates relations between Siebel environment components, how they impact one another, and which business services are affected. This enables you to effectively manage services within your information technology framework.

An example of a service map view:



Chapter 3

Setting Up the Environment

Setting Up the Siebel Environment

SPI for Siebel enables you to monitor and manage your Siebel environment from one, centralized point. For this purpose Siebel Servers are added as managed nodes on the HPOM management server.

Setting up your Siebel environment involves installing, licensing, and configuring SPI for Siebel on the HPOM management server and on the managed nodes. For more information on how to install, license and configure managed nodes refer to *SPI for Siebel Installation and Configuration Guide*.

When you successfully configured your environment, you can start using the SPI for Siebel product. For procedural information on how to:

- perform autodiscovery of Siebel components and update your configuration, refer to "Mapping the Siebel Environment" on page 21
- configure SPI for Siebel reporting functionality, refer to "SPI for Siebel Integration with HP Reporter" on page 83.

Mapping the Siebel Environment

SPI for Siebel integrates HPOM Services and supports Service View. HPOM Services is a component of the HPOM GUI. It automatically generates services MOF file of your Siebel enterprise configuration. This component enables you to manage your IT environment while focusing on the IT services that you provide.

SPI for Siebel offers complete graphical representation of your Siebel environment and its hierarchical organization. All Siebel object types (Siebel Servers, Gateway Name Servers, Components, Web Server Extensions, Actuate Reporter Server, and so on) in your environment are displayed in a tree view, which shows the components and their hierarchical dependencies.

NOTE

For additional information on the HP Operations Manager Services, refer to the HP Operations Manager manuals.

Autodiscovery

SPI for Siebel offers autodiscovery of the Oracle's Siebel Business Applications topology, comprising different Siebel object types and their dependencies. As a result, it graphically displays the business impact of Siebel lower-level components, their failures, or performance degradations.

SPI for Siebel application group contains an application that performs discovery of the Siebel enterprise configuration. Additionally, it monitors the configuration. If the discovered configuration has changed, a message is sent to the management server, which is automatically acknowledged if the automatic action has completed successfully. Autodicovery must be performed on the Siebel Server managed node. Autodiscovery on one Siebel Server in Siebel Enterprise performs discovery for the whole Siebel Enterprise. All Siebel Servers and Siebel Gateway that are part of the discovered Siebel Enterprise are added to a service tree. For more information about autodiscovery, refer to "Autodiscovery" on page 164. Additionally, refer to the `SIEBSPI_ENTERPRISE_CONFIGURATION policy` description in the section .

If you want Web Servers with the Siebel Web Server Extension (SWSE) installed also to appear in a service tree, you need to add these nodes to configuration on the Siebel Server where autodiscovery will be performed. `SPI for Siebel` application group contains an application **Add SWSE nodes to Autodisc** that will add SWSE nodes to autodiscovery of the Siebel enterprise configuration. For more information, refer to "Add SWSE nodes to Autodisc." on page 165.

To perform autodiscovery, perform the following steps:

1. Assign the template group **SPI for Siebel/SIEBSPI-Siebel eBusiness Appl/ SIEBSPI-Siebel *.*.*/SIEBSPI-Siebel *.*.* Server/SIEBSPI-Autodiscovery** to a node where the Siebel server is installed, and install the template group to the node.
2. If you want SWSE nodes to appear in a service tree, run the **Add SWSE nodes to Autodisc.** application on that node. Before performing autodiscovery, edit the application parameter `swe_nodes` and type the nodes names, for example:

   ```
   -swe_nodes "node1,node2"
   ```
3. Run the **Autodiscovery** application on that node.

In the *Message Browser* window, you can check whether the autodiscovery was successful or not.

N O T E

You should only assign autodiscovery templates to one node in the Siebel enterprise where the Siebel Server is installed.

By default, services are assigned to the `opc_op` user. If you want these services to also be assigned to another operator or user, you must perform the following steps:

1. Change the autodiscovery templates in the **SIEBSPI-Autodiscovery** group (refer to section *Changing the Autodiscovery Templates*).
2. Modify the **Autodiscovery** application in the **Application Bank** (refer to section *Modifying the Autodiscovery Application*).

Changing the Autodiscovery Templates

To change the autodiscovery templates in the SIEBSPI-Autodiscovery group, perform the following steps:

1. Log in as `opc_adm`.
2. Open the *Message Source Templates* window.
3. Double-click the **SPI for Siebel** template group.
4. Open the **SIEBSPI-Siebel eBusiness Appl and then the SIEBSPI-Siebel *.*.*** application group.
5. Open the **SIEBSPI-Siebel *.*.* Server** template group and then the **SIEBSPI-Autodiscovery** template group.
6. Click the `SIEBSPI_ENTERPRISE_CONFIGURATION` template.

---

7. Click **[Conditions]**.
8. Select the condition **Siebel enterprise configuration changed** and click **[Modify]**.
9. In the operator initiated actions field, locate the command `siebspi_autod` and change it to the following:

   ```
   siebspi_autod -op <Your operator>
   ```

10. Click **[Ok]** to confirm the changes and close all of the windows.

N O T E

You must assign and update the templates on the nodes for the changes to take effect.

Modifying the Autodiscovery Application

To modify the Autodiscovery application in the Application bank, follow the procedure below:

1. Log in as `opc_adm`.
2. Open the *Application Bank* window.
3. Double-click the **SPI for Siebel** application group.
4. Double-click the **SIEBSPI-Tools** application group.
5. Double-click the appropriate application group depending on the platform of the target node where the application will be executed, for example, **UN*X Nodes** or **Windows Nodes**.
6. Right-click the **Autodiscovery** application and select **Modify**.
7. In the **Additional Parameters** field, type:

   ```
   -op <Your operator>
   ```

8. Click **[OK]** to confirm the changes.

From this point on, whenever you run autodiscovery, the Service tree of the Siebel Enterprise will be visible for **<Your operator>**.

N O T E

To perform an autodiscovery, the template group SPI for Siebel/SIEBSPI-Siebel eBusiness Appl/SIEBSPI-Siebel *.*.*/SIEBSPI-Siebel *.*.* Server/SIEBSPI-Autodiscovery must be assigned and installed on the node where the Siebel server is installed.

Adding Additional Services in Service Map

If you want to include additional services in your Service View, you can manually add them in the existing Service View that was discovered by Autodiscovery.

To do this, edit the `siebspi_svc.xml` file that was generated by Autodiscovery. This file is located on the management server in the folder: `/opt/OV/siebspi/bin`. This file can be edited and then uploaded using the `opcservice` command-line tool. For detailed information about XML format and file upload techniques, refer to the *HP OpenView Operations Manual*.

Every service requires its own unique Service ID. Service IDs are defined in the templates. You can discover a Service ID by inspecting the appropriate template for which you want to create a new service. Service IDs in Service View should not contain any HP Operations Manager variables (for example, `<$MSG_NODE_NAME>`), such as Service IDs in templates. When putting a Service ID into the Service View, replace all variables with the actual variable values.

Example: Creating a service for monitoring the Siebel Web Server Extension

Service ID in the `SIEBSPI_WEB_SERVER_STATUS` template is:
`<$MSG_NODE_NAME>:SIEBEL_WEB_SERVER`

When creating a service in the Service View, replace the variable with the variable value. Service ID (if node name is `MYCOMPUTER`) is:
`MYCOMPUTER:SIEBEL_WEB_SERVER`

You must use this value as a Service ID in Service View.

NOTE

The same approach is applicable also for adding Actuate Reporter.

Another way of discovering the actual Service ID is by inspecting the message in the HP Operations Manager Message Browser. You can do this by double-clicking the message, where you can see the actual Service ID. You should use the same Service ID when adding a new service in the Service View.

Chapter 4

Monitoring the Availability of all Key Components of the Siebel Environment

About Monitoring the Availability

SPI for Siebel monitors availability of all key components in your Siebel Environment. These are the components that Siebel requires for correct operation. The key components are:

- Siebel Server service/daemon
- Gateway service/daemon
- Siebel Database
- Siebel shared file system
- Web services/daemons

Siebel Server Service/Daemon

To monitor availability of the Siebel Server service/daemon on a Siebel Application server, distribute `SIEBSPI_SERVER_PROCESS` and `SIEBSPI_SERVER_PROCESS_EXT` templates to the Siebel Application server.

To monitor availability of the Siebel Server and Siebel Gateway server from a Siebel server, distribute `SIEBSPI_SERVER_AVAILABILITY` and `SIEBSPI_SERVER_AVAILABILITY_EXT` templates to the Siebel Application server.

Gateway Service/Daemon

To monitor availability of the Gateway service/daemon on a Siebel Gateway server, distribute the `SIEBSPI_GATEWAY_PROCESS` template to the Gateway server.

Siebel Database

To monitor availability of the Siebel Database from a Siebel server, distribute the `SIEBSPI_DB_CONNECTIVITY` template to the Siebel Application server.

Siebel Shared File System

To monitor availability of the Siebel shared file system from a Siebel server, distribute the `SIEBSPI_SIEBEL_FS` template to the Siebel Application server.

Web Services/Daemons

To monitor availability of all Web services/daemons on a Web server that is needed for Siebel Web Server Extension to work correctly, distribute `SIEBSPI_WEB_WIN_SERVER_STATUS`, `SIEBSPI_TOMCAT_PROCESS`, `SIEBSPI_WEB_SUN60_SERVER_STATUS`, `SIEBSPI_WEB_SUN61_SERVER_STATUS`, or `SIEBSPI_WEB_IBM_HTTP_SERVER_STATUS` templates to the Siebel Web Server Extension system.

In templates that check availability of the Siebel related services and daemons, you can configure operator initiated or automatic actions to restart the unavailable service or daemon.

Chapter 5

Monitoring Siebel Log Files

About Monitoring Siebel Log Files

SPI for Siebel checks for errors in the most important Siebel log files within the following components:

- Siebel Gateway
- Siebel Server
- Siebel Web Server
- Siebel Server Components

You can extend this to monitoring any log files on system.

If a condition in the log file is met, a message is displayed in the message browser. By default, only Siebel messages with the following severity are sent:

- Fatal error
- Error

Siebel Gateway and Server Log Files

For the Siebel gateway and server log files, you can change the severity of messages in the log files that are reported, for example, warning, info, and so on. To perform this action, modify the following templates:

- `SIEBSPI_GATEWAY_LOG` and `SIEBSPI_GATEWAY_LOG_EXT (check NameSrvr.log)`
- `SIEBSPI_SERVER_LOG` and `SIEBSPI_SERVER_LOG_EXT (check SiebSrvr.log)`
- `SIEBSPI_SERVER_EVENT_LOG` and `SIEBSPI_SERVER_EVENT_LOG_EXT (check "<SiebEntName>_<Server_Name>.log)`

To modify a template, perform the following steps:

NOTE

Make sure that the Siebel gateway log file exists. In Siebel, version 6.0.1, there is no gateway log file available.

1. Log in as `opc_adm`.
2. Open the *Message Source Templates* window.
3. Double-click **SPI for Siebel**, and then the **SIEBSPI-Siebel eBusiness Appl** template group.

4. Double-click the **SIEBSPI-Siebel *.*.*** template group.
5. Select the required template:
   - For Gateway Log: The `SIEBSPI_GATEWAY_LOG` template in the **SIEBSPI-Siebel Gateway Server** template group.
   - For Server Log: In the **SIEBSPI-Siebel Server** template group select the `SIEBSPI_SERVER_LOG` template for the Siebel server log file or the `SIEBSPI_SERVER_EVENT_LOG` for the Siebel server event log file.
6. Click `[Modify]`.
7. In the *Monitor Program* or *MIB ID* text box add the `-s` severity option and specify the required severity level. For example:
   `siebspi_extmon -srvr -m SIEBSPI_SERVER_LOG -s 3`

The default severity level is 2. You can set one of the following severity levels:

```
0: No errors are reported
1: Only fatal errors are reported
2: Errors and fatal errors are reported
3: Warnings, errors and fatal errors are reported
4: Info, warnings, errors and fatal errors are reported
5: Details, info, warnings, errors and fatal errors are reported
```

Specifying Log File Location

If the Siebel gateway or server is installed on UNIX systems, you may receive a message indicating that the log file could not be found. If this occurs, add the `path` option. To do this, perform the following steps:

1. Follow the steps 1 to 7 as described in the previous procedure.
2. In the *Monitor Program* or *MIB ID* text box, add the `-p` parameter and set the path. Note that "path" is the root path where the Siebel application is installed, for example, `c:\sba80 for Windows or /opt/siebel for UNIX`.

   Example:

   `siebspi_extmon -srvr -m SIEBSPI_SERVER_LOG -p /opt/siebel`

N O T E

If a message from SIEBSPI_SERVER_EVENT_LOG is received in the message browser, an operator-initiated action, which displays a detailed log of the Siebel component that produced the error, can be executed.

Siebel Server Component Log Files

To monitor component log files, use the following templates:

- `SIEBSPI_SERVER_REQ_BROKER_LOG, Service Request Broker`
- `SIEBSPI_SC_BROKER_LOG, Siebel Connection Broker`
- `SIEBSPI_SERVER_MGR_LOG, Siebel Server Manager`

To add a template, perform the following steps:

1. Log in as `opc_adm`.
2. Open the *Message Source Templates* window.
3. Double-click **SPI for Siebel**, and then the **SIEBSPI-Siebel e-Business Appl** template group.
4. Double-click the **SIEBSPI-Siebel *.*.*** Siebel e-Business Appl/SIEBSPI-Siebel *.*.*/SIEBSPI-Siebel *.*.* Server/SIEBSPI-Siebel Log Files/SIEBSPI-System Management Logs.
5. In the **SIEBSPI-Siebel Server** template group select the `SIEBSPI_SERVER_REQ_BROKER_LOG` template for the Siebel server log file.
6. Change the log path file to <`siebspi_logn -l logfile -file SCCObjMgr_enu`>
7. Save as `SIEBSPI_SCC_OBJ_MGR_LOG`. You can create a new template group **SIEBSPI-Call Center Logs.**
8. You can change the severity option and specify the required severity level.

Monitoring Siebel Flight Data Recorder (FDR) files

The FDR files help you discover what happened before a system or a component server failure. These files have .fdr extension, they can be found in the following location:
`SIEBEL_ROOT/siebsrvr/bin`

To monitor FDR files, use the following templates: This new template group SIEBSPI-Siebel Log Files is located in SIEBSPI-Siebel Server template group (within all groups from SIEBSPI-Siebel 6.x to SIEBSPI-Siebel 8.0.x) with the following templates:

`SIEBSPI_FDR_FILES_EXT` or `SIEBSPI_FDR_FILES`

To restrict number of arriving messages, use the optional parameter „max_log_msgs“ (default value is 5).

Monitoring Siebel Crash files

SPI for Siebel can monitor Crash files on Siebel Application Servers on all Siebel platforms. Siebel Administrators can immediately respond to component failure. When some Siebel server component failure occurs on Siebel system, a "crash" file is created. For each component failure, one "crash" file is created. This file contains more detailed information about the process and thread that caused the failure and other useful information. Admin will be immediately informed that new crash file is appearing. A "crash_*.txt" file on Microsoft Windows platforms, and "core.*" or "core" file on UNIX platforms.

You can find information about the latest component failure on the system in the following location:
`SIEBEL_HOME\siebsrvr\bin`

This new SIEBSPI-Siebel Log Files template group is located under SIEBSPI-Siebel Server template group (within all groups - from SIEBSPI-Siebel 6.x to SIEBSPI-Siebel 8.0.x) with the following policies:

- `SIEBSPI_CRASH_FILES`
- `SIEBSPI_CRASH_FILES_EXT`

Customizing templates to monitor crash files

You can customize the file name, extension and path searching conditions using parameters "file", "exten" and "path" in the "Program name" field of the `SIEBSPI_CRASH_FILES` template.

To restrict number of arriving messages, use the optional parameter „max_log_msgs" (default value is 5).

Siebel Web Server Log File

SPI for Siebel monitors the log files for IIS on Windows and SUN One Web Server on Sun managed nodes. Only errors are reported in the HPOM message browser. To view the line in the Siebel Web server log file that produced the message, double-click the message in the message browser and click `[Show Original Message]`.

Resonate Log File

Central Dispatch records all of its activities in log files stored on each node in the Central Dispatch site.

The SIEBSPI_RCD_AGT_LOG file template catches Resonate Central Dispatch Agent log file messages with severity 3 (normal), 2 (warning), and 1 and 0 (critical).

Actuate Report Server Log Files

The Actuate Report Server log files contain information on report server errors. The report server generates the file name using the process name, a report server generated integer, and date and time. The following is an example view server diagnostic log name:

viewsrv6.exe.1824.2002FEB08_09_35_02_Pacific_Standard_Time.1.log

The SIEBSPI_RPT_SRVR_LOG file template catches report server log file messages with severity Fatal, Severe, and Warning.

Advanced Options for Monitoring Siebel Log Files and Task Issues

How to Set Rules in SPI for Siebel to Filter Error Messages

Some errors that are reported with SPI for Siebel may not be important to you. If you do not want to get messages about these errors displayed in the message browser, you can set rules so that SPI for Siebel is able to filter task errors and errors found in Siebel log files to report only errors that are important to you.

The following templates are now able to ignore the specified messages:

- SIEBSPI_SERVER_EVENT_LOG
- SIEBSPI_SERVER_LOG
- SIEBSPI_GATEWAY_LOG
- Any template that is monitoring Siebel component and sends results to SIEBSPI_CHECK_TASKS_EXT, for example SIEBSPI_SCC_OBJ_MGR_COMPONENT or SIEBSPI_REQ_PROC_COMPONENT

For SPI for Siebel to be able to ignore some messages, perform the following steps:

1. Create a text file with the rules. The file can be stored on the managed node on any location on the disk. If it is stored in the SPI for Siebel configuration directory {OVAgent InstallDir}/siebspi/conf, the short name in the -rules parameter is enough. If it is stored on any other location on the disk, the full path is required. The file may contain several rules. Every single line in the file contains one string or regular expression.

NOTE

For regular expression syntax, refer to "Regular Expression Syntax" on page 208.

2. You can use this functionality in two ways:
   - Specify in the file all messages that you do not want to receive and change the program parameters in the template by adding the following parameters:

   ```
   -rules <file name>
   ```

   All the error messages that match the rules defined in the `C:\rules.txt` file will be ignored.
   - Specify in the file all messages that you ONLY want to receive (others will be ignored) and change the program parameters in the template by adding the following parameters:

   ```
   -rules <file name> [-send_filtered]
   ```

All the error messages that match the rules defined in the C:\rules.txt file will be sent to the HPOM console.

3. Deploy any of the templates listed above that were changed.

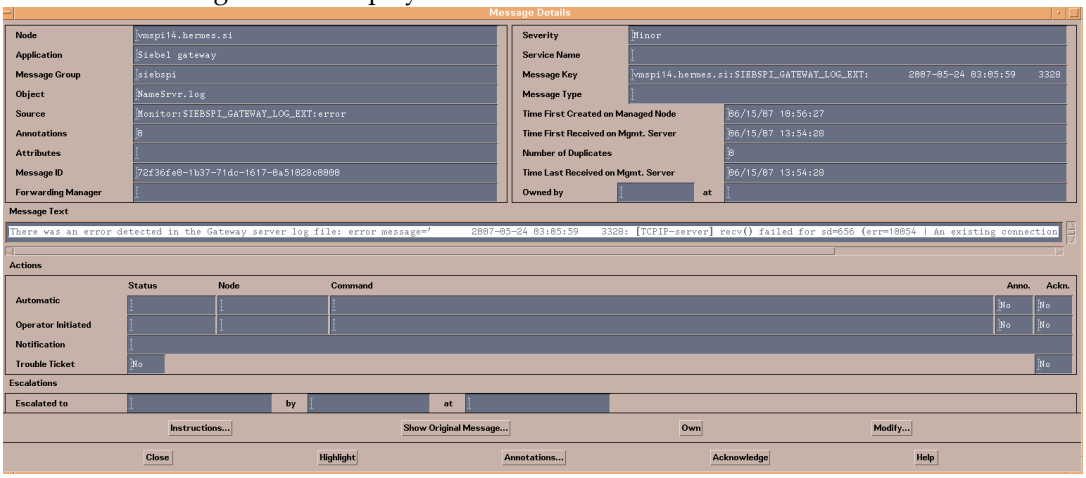
Example: How to set the rules to ignore some messages from the Siebel Gateway log file

In this example, we are getting error messages from the Siebel Gateway log file, which we want to ignore. The following entries are in the Gateway log file:

SisnTcpIp SisnSockError 1 0 2007-05-24 03:05:59 3328: [TCPIP-server] recv() failed for sd=656 (err=10054 | An existing connection was forcibly closed by the remote host (peer).)

```
SisnTcpIpSisnSockError 1 0 2007-05-24 03:06:03 4028:
[TCPIP-server] recv() failed for sd=708 (err=10054 | An existing
connection was forcibly closed by the remote host (peer).)
```

The message is then displayed in the HPOM browser.



To ignore this message, perform the following steps:

1. Create the `{OVAgent InstallDir}/siebspi/conf/rules.txt` file on managed node with the following content:

   ```
   .*An existing connection was forcibly closed by the remote host.*
   ```

2. Change the program parameters in the `SIEBSPI_GATEWAY_LOG` template:

   ```
   siebspi_extmon -m SIEBSPI_GATEWAY_LOG -gtwy -rules rules.txt
   ```

3. Deploy the modified template to the Siebel Gateway server system.

Chapter 6

Monitoring Siebel Components and Tasks

About Monitoring Siebel Components and Tasks

SPI for Siebel offers monitoring of components and tasks. Components are checked for changes in their status, for example, online and offline, while tasks are monitored for errors in their exit status and for the minimum and maximum number of running tasks.

Monitoring Siebel Components and Tasks

Monitor templates for Siebel components automatically monitor different language versions of specified Siebel component. In case you do not want or do not need to monitor components in specific language versions, change the monitor template for that specific component using the -skip_lang parameter.

To monitor the components and their tasks, assign and install templates from the **SPI for Siebel/SIEBSPI-Siebel Business Applications/SIEBSPI-Siebel *.*.*/ SIEBSPI-Siebel Server/SIEBSPI-Server Components** template group on all components that you want to monitor. In addition, the following templates from the same group must also be assigned and installed:

To monitor the tasks exit status, install the following:

- `SIEBSPI_CHECK_TASKS_EXT`

To monitor the component status, install the following:

- `SIEBSPI_COMP_STATUS_EXT`

To monitor the maximum number of running tasks on components, install the following:

- `SIEBSPI_NUM_TASKS_TOO_HIGH_EXT`

To monitor the minimum number of running tasks on components, install the following:

- `SIEBSPI_NUM_TASKS_TOO_LOW_EXT`

If you want to collect performance data for the component, you can specify this with a parameter as described below.

By default, both the change of component status and task exit status are checked. However, you can disable one of them by deleting a parameter in the *Monitor Program of MIB ID* text field of the monitor template.

The following table describes the parameters:

Parameter	What is monitored
`-status`	Status of the component
`-min_tasks N`	Minimum tasks for the component; N specifies the min threshold
`-max_tasks`	Maximum tasks for the component
`-task_exit`	Task exit status
`-perf`	Collect performance information for the component
`-skip_lang "lang1, lang2…`	Ignore the components ending with specified language extensions

If you do not want to monitor the status of the components and the exit status of tasks, you do not need to install both (`SIEBSPI_CHECK_TASKS_EXT` and `SIEBSPI_COMP_STATUS_EXT`) monitor templates. Assign and install only the required one.

When monitoring the task exit status, you can also use the following feature: In the message browser, when a message that a task has exited with error is reported, you can start an operator-initiated action to list the log file contents of the Siebel server task which produced the message as an annotation to the message.

NOTE

It is not recommended to distribute more than 10 templates for Siebel components containing -perf parameter on one managed node.

Below is an example of how to modify a monitor template to monitor only the component status changes of the Transaction Merger component:

1. Log in as `opc_adm`.
2. Open the *Message Source Templates* window.
3. Double-click **SPI for Siebel**.
4. Open the **SIEBSPI-Siebel eBusiness Appl template group, followed by SIEBSPI-Siebel *.*.*** and **SIEBSPI-Server *.*.* Components** template group.
5. Open the **SIEBSPI-Siebel Server Components** template group then the **SIEBSPI-Siebel Remote** template group.
6. Select the `SIEBSPI_TXN_MERGE_COMPONENT` template.

7. Click [Modify] to open the *Modify Threshold Monitor* window.

8. In the *Monitor Program* or *MIB ID* text box, modify the command line:
```
siebspi_extmon -srvr -m SIEBSPI_TXN_MERGE_COMPONENT - component
"Transaction Merger" -status
```

9. Click [OK] to confirm the changes.

NOTE

For the changes to take effect, you must assign and install the modified monitor template on a node where the Siebel server is installed.

Adding templatefor monitoring server statistic metrics

SPI for Siebel can monitor Siebel Server and Component statistics on Windows and Unix platforms.

This new template group SIEBSPI-Statistics metrics is located in SIEBSPI-Siebel Server template group (within all groups from SIEBSPI-Siebel 6.x to SIEBSPI-Siebel 8.0.x) with the following templates:

- SIEBSPI_SERVER_STATS
- SIEBSPI_SERVER_STATS_EXT
- SIEBSPI_COMPONENT_STATS
- SIEBSPI_COMPONENT_STATS_EXT

NOTE

SIEBSPI_COMPONENT_STATS has additional parameter 'component' for component name:
```
siebspi_extmon -mon SIEBSPI_COMPONENT_STATS -stats_list "AvgConnTime
AvgSQLExecTime TotalTasks" -component SCCObjMgr_enu
```

Additional statistics names (aliases) can be gathered from Siebel Server Manager (srvrmgr), with following command:
```
list statistics for server 'siebelservername' component 'componentname'
```

under the STAT_ALIAS column.

Example:

How to add a template for monitoring statistic metrics:

1. Log in as opc_adm.

2. Open the *Message Source Templates* window.
3. Double-click **SPI for Siebel**.
4. Open the **SIEBSPI-Siebel eBusiness Appl template group, followed by SIEBSPI-Siebel *.*.* and SIEBSPI-Server *.*.* Components** template group.
5. Open the **SIEBSPI-Siebel Server Components** template group then the **SIEBSPI-Siebel Statistics Metrics** template group.
6. Select the SIEBSPI_SERVER_STATS template.
7. Click `[Modify]` to open the *Modify Threshold Monitor* window.
8. In the *Monitor Program* or *MIB ID* text box, modify the command line:
```
siebspi_extmon -mon SIEBSPI_SERVER_STATS -stats_list "NumDBConnRtrs
NumDLRbkRtrs TotalTasks"
```
9. Click `[OK]` to confirm the changes.

NOTE

For the changes to take effect, you must assign and install the modified monitor template on a node where the Siebel server is installed.

Advanced Component Monitoring Options

Changing External Template Name that Will Collect Component Results

By default, all `SIEBSPI_*_COMPONENT` monitor templates send results to standard Siebel component external monitor templates (`SIEBSPI_CHECK_TASKS_EXT`, `SIEBSPI_COMP_STATUS_EXT`, `SIEBSPI_NUM_TASKS_TOO_HIGH_EXT`, `SIEBSPI_NUM_TASKS_TOO_LOW_EXT`) as described in the previous section. The common thresholds, defined in those external monitor templates, are applied to all of them.

In situations when you need to define component specific thresholds, instructions, or actions, you can use the following parameters:

Parameter	Description
`-extmon`	Custom external monitor template
`-[status2| min_tasks2| max_tasks2| task_exit2]`	What should be monitored and sent to the custom external monitor template

This way you define what should be monitored and to which external monitor template the results should be sent. You can combine standard parameters and the custom one in one component template as long as you define custom external templates.

The required postfixes for custom external monitor templates are:

- `component status external monitor template = *_CS_EXT`
- `task exit status external monitor template = *_TS_EXT`
- `number of tasks to low external monitor template = *_TL_EXT`
- `number of tasks to high external monitor template = *_TH_EXT`

Example:

Siebel component "Workflow Monitor Agent" should send status results to the custom monitor policy `SIEBSPI_WORK_MON_CS_EXT`. Additionally, the number of running tasks (alarm if the number of running tasks: >70%, >90%) should be monitored.

Perform the following steps:

1. Create a copy of the `SIEBSPI_COMP_STATUS_EXT` external template and save it under `SIEBSPI_WORK_MON_CS_EXT`
2. Customize Thresholds (if required, also: Actions, Instructions, and so on)
3. Customize `SIEBSPI_WORK_MON_COMPONENT` template command line to:

```
siebspi_extmon -srvr -m SIEBSPI_WORK_MON_COMPONENT -component "Workflow
Monitor Agent" -extmon SIEBSPI_WORK_MON -status2 -max_tasks
```

Using Object Name Parameter in Templates

On the UNIX HPOM management server, you can use the object name parameter to define different thresholds in Siebel component external templates (`SIEBSPI_CHECK_TASKS_EXT`, `SIEBSPI_COMP_STATUS_EXT`, `SIEBSPI_NUM_TASKS_TOO_HIGH_EXT`, `SIEBSPI_NUM_TASKS_TOO_LOW_EXT`) for specific Siebel components.

To set the Siebel component alias as an object name, perform the following:

1. Create copies of all thresholds and set the object name to component alias.
2. Modify the thresholds (message, instructions...) to get specific responses for the component that is entered as the object name.

How To Create a New Template for Monitoring Custom Component

You can create you own templates for monitoring Siebel components that are not provided out-of-the-box.

Perform the following steps:

1. Copy one of the existing templates for component monitoring.
2. Define the same name in the template command line with the `-m` parameter as the name of the template:

   ```
   -m <Monitor template name>
   ```

3. Compare the spelling of the component name (parameter `-component`) in the template command line with the output from SIEBSPI application `List components`. It is very important that they should match.

   ```
   -component "<long Siebel component name in Siebel>"
   ```

Example:

New template name: `SIEBSPI_ECOMM_WIRELESS_COMPONENT`

New template program name:

```
siebspi_extmon -srvr -m SIEBSPI_ECOMM_WIRELESS_COMPONENT -component
```

" eCommunications for Wireless Object Manager (ENU)"

-perf -status -task_exit

Analyzing Siebel Component Crashes

Sometimes a Siebel server component may crash while it is executing or while it is shutting down. The symptoms vary depending on the type of the component that has crashed. For example, if an Object Manager crashes, all users connected to that Object Manager will be disconnected.

After the crash (or task error), it is very useful for the Siebel administrator to find out who (which user) was responsible for the crash and what the user executed before the crash, so the problem can be analyzed and eliminated.

Note that different Siebel components have different log Event types. With a little modification of log Event types also other components can be traced.

To configure SPI for Siebel to be able to get information about the user and actions responsible for the Siebel component crashes, perform the following steps:

1. Enable user logging for the component:

   From the **SPI for Siebel/SIEBSPI-Tools/SIEBSPI-Windows Nodes** or **SPI for Siebel/SIEBSPI-Tools/SIEBSPI-UN*X Nodes** tools group, launch the **Set EventLog Level WIN** or the **Set EventLog Level UN*X** tool and change the tool parameters to:

   ```
   4 -event_type "ObjMgrSessionLog" -comp "SCCObjMgr_enu"
   ```

2. Enable activity logging for the component:

Launch the **Set EventLog Level WIN** or the **Set EventLog Level UN*X** tool again and change the tool parameters to:

```
4 -event_type "EventContext" -comp "SCCObjMgr_enu"
```

3. Add an automatic action to the `SIEBSPI_CHECK_TASKS_EXT` policy into the condition task exited with error that will find the user, actions he or she performed, and issues from the task log file:

   ```
   siebspi_catl -p <$OPTION(logpath)> -c <$OPTION(comp_alias)> -t
   <$OPTION(task_id)>
   -req_exp ".*EventContext|Siebel Id|newUser|Error.*"
   ```

4. Deploy the policies to the managed nodes.
5. Check the message annotation after the component crash (task error) that displays in the message browser and analyze the output.

If you want to reset component logging levels, perform the following steps:

1. Disable user logging for the component:

   Launch the **Set EventLog Level WIN** or the **Set EventLog Level UN*X** tool and change the tool parameters to:

   ```
   1 -event_type "ObjMgrSessionLog" -comp "SCCObjMgr_enu"
   ```

2. Disable activity logging for the component:

   Launch the **Set EventLog Level WIN** or the **Set EventLog Level UN*X** tool again and change the tool parameters to:

   ```
   1 -event_type "EventContext" -comp "SCCObjMgr_enu"
   ```

Chapter 7

Monitoring Siebel Database, Database Tables, and Records

About Monitoring Siebel Database, Database Tables, and Records

SPI for Siebel provides basic monitoring for database, database tables, and records in your Siebel environment.

Monitoring Database Availability, Login Time, and Transaction Time from Siebel Server System

The monitor template `SIEBSPI_DB_CONNECTIVITY` checks database server availability and connectivity from the Siebel server systems. To obtain the database login time, you can use thee `SIEBSPI_DB_LOGIN_TIME` template.

To obtain the transaction time, `SIEBSPI_DB_TRANSACTION_TIME` runs a synthetic transaction, which is a set of predefined SQL statements.

To obtain the number of open connections to the Siebel database you can use `SIEBSPI_DB_SESSION`. Administrators are notified if real-time response times exceed the predefined monitor thresholds or if the database is not available.

It is also possible to collect this performance data and generate reports that show you potential database problems and slowdowns in time. (for additional information, refer to "Viewing and Analyzing Historical Data from Collected Performance Data" on page 77). For this purpose you can use performance monitors:

- `SIEBSPI_DB_LOGIN_PERFORMANCE`
- `SIEBSPI_DB_TRANS_PERFORMANCE`
- `SIEBSPI_DB_SESSION_PERFORMANCE`

Users can write their own SQL queries that will be used with the `SIEBSPI_DB_TRANSACTION_TIME` monitor to measure the transaction time of the database. To measure the database transaction with your custom SQL queries, perform the following steps:

1. Save your SQL query into the following directory:

   ```
   {OVAgent InstallDir}/siebspi/conf
   ```

2. Open the `SIEBSPI_DB_TRANSACTION_TIME` template.
3. Change the program parameters in the template:

   ```
   siebspi_dbperf -mon SIEBSPI_DB_TRANSACTION_TIME
   -transaction -sql_name "your sql name"
   -sql_file "SQL file to be executed"
   ```

4. Change the thresholds levels in the template conditions.
5. Distribute the SIEBSPI_DB_TRANSACTION_TIME template to the Siebel server system.

To collect the transaction data obtained with your custom SQL queries, follow these instructions:

1. Open the SIEBSPI_DB_TRANSACTION_PERFORMANCE template.
2. Change the program parameters in the template:

```
siebspi_dbperf -mon SIEBSPI_DB_TRANSACTION_PERFORMANCE
-transaction -sql_name "your sql name"
-sql_file "SQL file to be executed" -p
```

3. Distribute the SIEBSPI_DB_TRANSACTION_PERFORMANCE template to the Siebel server system.

Monitoring the Size of the Siebel Database Tables

The SIEBSPI_WORKFLOW_BACKLOG and SIEBSPI_TRANS_PROCESSOR_BACKLOG templates in the template group **SIEBSPI-Mobile Clients and Backlogs** are designed to monitor the size of the Siebel database tables. It is also possible to collect this performance data with the SIEBSPI_*_BACKLOG_PERF templates and generate reports that show database backlogs trends in time.

It is also possible to monitor a specific table from the Siebel database. Refer to the instructions below about how to create a custom template to monitor any Siebel database table.

Monitoring the Transaction Processor Backlog Table

When the **System Preference Docking:Transaction Logging** is TRUE, Oracle's Siebel Business Applications will record transactions to the transaction log table (S_DOCK_TXN_LOG). The Transaction Processor (txnproc) is responsible for deleting entries from this table, once all txnprocs in the system have copied them to the Application server TXNPROC directory. Enterprise visible data will be routed to the active mobile clients. The backlog is the number of transactions in S_DOCK_TXN_LOG. However, a backlog of 1000 transactions is not usually considered a problem.

The SIEBSPI_TRANS_PROCESSOR_BACKLOG (optionally SIEBSPI_TRANS_PROCESSOR_BACKLOG_PERF) template must be distributed on the Siebel server system to monitor the size of the S_DOCK_TXN_LOG table.

For more information on transaction processor backlog, see the template instructions or refer to the *Siebel Remote and Replication Manager Administration Guide*.

Monitoring the Workflow Policies Backlog Table

When the Workflow template condition is triggered, a record is inserted in the Escalation Request table, S_ESCL_REQ. This table contains all the rows in the database that could trigger a Workflow Policy to take action. After the workflow Monitor Agent processes a request, it removes the row from this table.

If the table becomes very large, this could indicate that the number of templates being monitored is too large and a new Workflow Policies process needs to be created to share the load. If rows are being monitored and are not removed after the time interval is met, this could indicate that a template was deactivated without removing the database triggers. The triggers continue to send data which is not processed by the Workflow Policies instance.

The SIEBSPI_WORKFLOW_BACKLOG (optionally SIEBSPI_WORKFLOW_BACKLOG_PERF) template must be distributed on the Siebel server system to monitor the size of the S_ESCL_REQ table.

For more information on workflow backlog, see the template instructions or refer to the *Siebel Workflow Administration Guide*.

Monitoring any Siebel Database Table for Backlogs

To monitor the size of any Siebel database table, perform the following steps:

1. Make a copy of the SIEBSPI_WORKFLOW_BACKLOG template and rename it.
2. Change the program parameters in the template:

   ```
   siebspi_dbperf -mon "new template name"
   -backlog_name "your backlog name" -table "table that should be monitored"
   ```

3. Change the threshold levels in the template conditions.
4. Distribute the new template to the Siebel server system.

To collect data about the size of your table, perform the following steps:

1. Make a copy of the SIEBSPI_WORKFLOW_BACKLOG_PERF template and rename it.
2. Change the program parameters in the template:

   ```
   siebspi_dbperf -mon "new template name" -backlog_name "your backlog name" -table "table that should be monitored" -p
   ```

3. Distribute the new template to the Siebel server system.

Monitoring the Records Value in the Siebel Database Tables

The SIEBSPI_SYNCH_BACKLOG, SIEBSPI_SYNCH_BACKLOG_EXT, SIEBSPI_TRANS_MERGER_BACKLOG, SIEBSPI_TRANS_MERGER_BACKLOG_EXT, SIEBSPI_TRANS_ROUTER_BACKLOG and SIEBSPI_TRANS_ROUTER_BACKLOG_EXT templates in the template group SIEBSPI-Mobile Clients and Backlogs are designed to monitor the synchronization, transaction merger, and transaction router backlogs. It is also possible to collect this performance data with the SIEBSPI_*_BACKLOG_PERF templates and generate reports that show you database record value trends in time.

These backlogs are extracted from Siebel database with predefined SQL queries, stored in the {OVAgent InstallDir}/siebspi/conf directory.

It is also possible to monitor custom backlogs. Refer to the instructions below on how to create custom template to monitor the results from your SQL queries.

The difference between this templates and templates in the previous section is that templates in the previous section monitor the number of records in database tables, and templates in this section monitor the value for specific field in each record. For example, the number of hours from last user synchronization for each remote user, or the number of unsynchronized files on server for each remote user.

Monitoring the SYNCHRONIZATION BACKLOG

Synchronization Backlog indicates that there is a substantial amount of data that must be downloaded by a remote user. Remote users need to synchronize daily to keep the amount of data low. To monitor the number of files that need to be sent to a particular client, distribute the SIEBSPI_SYNCH_BACKLOG and SIEBSPI_SYNCH_BACKLOG_EXT (optionally SIEBSPI_SYNCH_BACKLOG_PERF) templates to the Siebel server system.

Monitoring the TRANSACTION MERGER BACKLOG

Transaction merger backlogs indicate that remote users have made changes on their local databases and uploaded the changes to the server, but these changes have not been committed to the server database yet. A high backlog here indicates that not all changes made by remote users are visible on the server. To monitor the number of files that need to be merged from a particular client, distribute the SIEBSPI_TRANS_MERGER_BACKLOG and SIEBSPI_TRANS_MERGER_BACKLOG_EXT (optionally SIEBSPI_TRANS_MERGER_BACKLOG_PERF) templates to the Siebel server system.

Monitoring the TRANSACTION ROUTER BACKLOG

Transactions are created when data is updated on the server database. These transactions need to be routed to remote users so that they can see the updates. A backlog of transactions indicates that not all of the data has been routed.

To monitor the number of transactions that need to be routed to a particular client, distribute the `SIEBSPI_TRANS_ROUTER_BACKLOG` and `SIEBSPI_TRANS_ROUTER_BACKLOG _EXT` (optionally `SIEBSPI_TRANS_ROUTER_BACKLOG_PERF`) templates to the Siebel server system.

Monitoring Any Record in Any Siebel Table for the Last Date of Change and if Any Numeric Values Exceed Threshold

Sometimes you would like to know which Siebel workflows are not processed for a certain number of days, which opportunities, contacts, or orders were not changed since the specific date or which opportunities are really big (for example, revenue is more than a certain amount of money). You can get all that information with SPI for Siebel. You can monitor any record in any Siebel table for the last date of change with SPI for Siebel applications and templates.

Use the **Pending Workflows WIN** or **Pending Workflows UN*X** application in the **SPI for Siebel/SIEBSPI- Performance/SIEBSPI-Windows Nodes/SIEBSPI-Mobile Clients and Backlogs** or **SPI for Siebel/SIEBSPI-Performance/SIEBSPI-UN*X Nodes/SIEBSPI-Mobile Clients and Backlogs** application group to display workflow requests that are older than the specified number of days.

Use the **Inactive opportunities WIN** or **Inactive opportunities UN*X** application in the **SPI for Siebel/SIEBSPI- Performance/SIEBSPI-Windows Nodes/SIEBSPI-Mobile Clients and Backlogs** or **SPI for Siebel/SIEBSPI-Performance/SIEBSPI-UN*X Nodes/SIEBSPI-Mobile Clients and Backlogs** application group to display opportunities that were not changed for more than the specified number of days.

You can also customize the existing applications to monitor any Siebel table for records older than the specified time or records with the value greater than the specified value.

To monitor pending workflow requests, use the `SIEBSPI_WORKFLOW_REQ` and `SIEBSPI_WORKFLOW_REQ_EXT` templates.

Example: How to create an application that will report opportunities with the revenue greater than 10.000$

1. Save the SQL query bellow into the following directory and file on the managed node:

   `{OVAgent InstallDir}/siebspi/conf/siebspi_big_oppty.sql`

   If you use the Oracle or DB2 database type:

```
SELECT     'NAME: ' || NAME || ',    ROW_ID: ' || ROW_ID AS
OPPORTUNITY, SUM_REVN_AMT
FROM         %DATABASE%.S_OPTY
ORDER BY SUM_REVN_AMT DESC
```

If you use MS SQL database type:

```
SELECT    'NAME: ' + NAME + ',   ROW_ID: ' + ROW_ID AS OPPORTUNITY,
SUM_REVN_AMT
FROM         %DATABASE%.S_OPTY
ORDER BY SUM_REVN_AMT DESC
```

2. Make a copy of the Inactive opportunities application and rename it.
3. Change the program parameters in the application:

```
siebspi_dbperf -columns 2 -col1 1 -col2 2 -sql_file
siebspi_big_oppty.sql -print -threshold  10000
```

Parameters' descriptions:

-columns Number of columns returned by your SQL query, for example, 2

-col1 Number of column that returns a string value, for example, 1

-col2 Number of column that returns a float, integer or date-timevalue, for example, 2; this value is then compared to the threshold value.

-sql_file Name of your sql file, for example, siebspi_synch.sql

-threshold Value that must be exceeded by the "col2" value to include record to the list, for example, 300

-threshold_day Include only records with the date value in "col2" older than x days, for example, 30

-threshold_date Include only records with the date value in "col2" older than this date, for example, 10-12-2006

The following two parameters are used in templates, but not in applications:

-ext_mon Template name, for example, SIEBSPI_SYNCH_BACKLOG

-pair Name of the backlog, for example, synchBL. This is used just in templates that writes data into performance agent (name ending with _PERF)

4. Launch the new application.

Similar procedure can be used to create templates that will report records that exceed threshold into HPOM message browser. You can copy and modify the `SIEBSPI_WORKFLOW_REQ` and `SIEBSPI_WORKFLOW_REQ_EXT` templates.

Chapter 8

Monitoring Siebel Users and Siebel Applications Activity

About Monitoring Siebel Users and Siebel Applications Activity

SPI for Siebel enables you to monitor the usage of different Siebel appliations and the users activity.

Monitoring Siebel Users that Are Logged into Siebel Application (Object Manager Component)

This functionality includes monitoring the number of users connected to Siebel Applications (Object Manager Components) between two monitor intervals, and the number of active users in monitoring moment. To turn this monitoring on, add a command-line parameter usercount into existing or new component monitor templates (only for Object Manager policies).

In addition to the number of users, information on when Siebel users logged in, logged out, and for how long they were connected to a Siebel Application can be collected. To turn this monitoring on, add a command-line parameter usertime into existing or new component monitors templates (only for Object Manager templates).

Example: Modifying the existing "Call Center Object Manager" component

```
siebspi_extmon -srvr -m SIEBSPI_SCC_OBJ_MGR_COMPONENT -component "Call
Center Object Manager" -perf -status -usercount -usertime
```

Example: Creating a new policy for "Call Center Object Manager" component

```
siebspi_extmon -srvr -m NEW_SCC_OBJ_MGR_COMPONENT -component "Call
Center Object Manager" -usercount -usertime
```

There are two Performance Manager graph templates available that display the number of users connected to Siebel Applications (Object Manager Components) between two monitor intervals, and the number of active users in monitoring moment. For details, reefer to "Viewing and Analyzing Historical Data from Collected Performance Data" on page 77.

You can also check who is connected to Siebel Application at the moment and what are the users doing with the `Users connected to Object Manager Component` application. This information is important, for example, if something unusual is happening to the system. It can also be useful to get information about the process PID and task number for each user session in that moment.

To output Siebel users logged into Siebel Application (Object Manager Component), you can use the **Users connected to Object Manager Component WIN** or **Users connected to Object Manager Component UN*X** application, that is located in the

SPI for Siebel/SIEBSPI-Siebel Users Activity/SIEBSPI-Windows Nodes or **SPI for Siebel/SIEBSPI-Siebel Users Activity/SIEBSPI-UN*X Nodes** application group.

The application outputs the following information:

- component name and alias
- Siebel user name
- login time
- siebntshmw process PID
- task ID
- last view accessed by user
- last applet accessed by user

Before you use the application for the first time, you need to modify the application program parameters with the name of the Object Manager Component for the application that you want to monitor. For example, for Call Center Object Manager (`SCCObjMgr_enu`):

```
-comp "SCCObjMgr_enu"
```

If you want to have more applications for different Object Manager Components, you can make a copy of the existing application and create a new one for each.

There are also web-based reports available that present collected data:

- Users connected to Siebel Applications (Object Manager Components), grouped by users
- Users connected to Siebel Applications (Object Manager Components), grouped by Siebel Applications
- Number of users connected to Siebel Applications (Object Manager Components)

For more information about these reports, refer to "SPI for Siebel Integration with HP Reporter" on page 83.

Monitoring Siebel Users' Last Login Time into Siebel Applications

Sales managers, business managers, and Siebel administrators can require information about the last time when Siebel users were connected into Siebel Applications.

To collect the information on inactive users, you can use the **Last Siebel user login time WIN** and **Last Siebel user login time UN*X** applications. They are located in the **SIEBSPI-Siebel Users Activity** application group.

For reporting purposes, you can use the template `SIEBSPI_USER_LOGIN_PERFORMANCE`, located in the **SIEBSPI-Siebel Business**

Applications/SIEBSPI-Siebel x.x.x/SIEBSPI-Siebel Server/SIEBSPI-Siebel Users Activity template group. By default, this template collects data on Siebel users last login time on a daily basis.

SPI for Siebel enables you to specify Siebel users not to include in the data collection and reports. The list of excluded users is located in the configuration file: `<OVInstallDir>/siebspi/conf/exclude_user.cfg`

By default, the following users are excluded: `GUESTCST`, `GUESTCP`, `GUESTERM`, `PROXYE`, and `UNIVERSALQUEUE`. You can also deactivate or activate users in the exclusion list by adding or removing the `//` mark at the beginning of the line.

Available web based report to present the collected data:

- Number of days since last login of Siebel user (Top 50 inactive users)

For more information about this report, refer to "SPI for Siebel Integration with HP Reporter" on page 83.

Monitoring Last Time When a Siebel User Added or Changed Account, Contact, or Opportunity

Sales managers, business managers, and Siebel administrators can require information about the last time when Siebel users add or change account, contact, or opportunity in Siebel Applications.

To get this information, you can use **Last Siebel user action time WIN** and **Last Siebel user action time UN*X** applications from the **SIEBSPI-Siebel Users Activity** tool group.

You can also use the following applications from the **SIEBSPI-Siebel Users Activity** application group:

- **Last account change WIN** or **Last account change UN*X**
- **Last contact change WIN** or **Last contact change UN*X**
- **Last opportunity change WIN** or **Last opportunity change UN*X**

For reporting purposes, you can use the `SIEBSPI_USER_ACTION_PERFORMANCE` template. It is located in the **SPI for Siebel/SIEBSPI-Siebel Business Applications/ SIEBSPI-Siebel x.x.x/SIEBSPI-Siebel Server/SIEBSPI-Siebel Users Activity** template group. By default, this template collects data about Siebel users last action time on a daily basis.

SPI for Siebel enables you to specify Siebel users not to include in the data collection and reports. For more information, refer to "Monitoring Siebel Users' Last Login Time into Siebel Applications" on page 53.

Available web based report to present the collected data:

- Number of days since last update of account, opportunity or contact (Top 50 inactive Siebel users)

For more information about this report, refer to "SPI for Siebel Integration with HP Reporter" on page 83.

Chapter 9

Monitoring Siebel Web Server Extension (SWSE)

About Monitoring Siebel Web Server Extension (SWSE)

The Siebel Web Server Extension, operating on the Web server, connects to the Application Object Manager component operating within the Siebel Server. This connection uses Siebel's application. When accessing Siebel applications using the Web client, no components are hosted on the client. The client interacts through a Web browser.

SPI for Siebel offers applications and templates that help system administrators have a better understanding of the use of the Web server. To report current SWSE data statistics, use the applications **Show SWSE System and Application Statistics WIN** and **Show SWSE System and Application Statistics UN*X** from the **SIEBSPI-Performance** application group.

It outputs the current SWSE data about:

- Average response times
  This event measures the time needed to receive a callback response from the Siebel server. This event functions with CTI and internal login callbacks. A callback is a mechanism used by the Siebel Server to initiate communication with the plug-in.
- Average close session time
  This event reflects the amount of time needed to close a session.
- Average open session time
  This event reflects the amount of time needed to open a session.
- Average request time
  This event is the amount of time needed to submit a request to the Siebel Server and to get a response back. For example, if the user (on the browser) clicked on a button then the plug-in receives the request and invokes a service on the Siebel Server.
- Number of attempts to use the application
  Number of attempts to use the specified Siebel Applications
- Average time it took to open a session to specified application

To monitor this statistic data values, install the following templates from the template group **SPI for Siebel/SIEBSPI-Siebel Business Applications/SIEBSPI-Siebel x.x.x/ SIEBSPI-Siebel Web Server Extension**:

- `SIEBSPI_SWSE_AVERAGE_APPLICATION_RESPONSE_TIME`
- `SIEBSPI_SWSE_AVERAGE_CLOSE_SESSION_TIME`
- `SIEBSPI_SWSE_AVERAGE_OPEN_SESSION_TIME`
- `SIEBSPI_SWSE_AVERAGE_REQUEST_TIME`

- SIEBSPI_SWSE_AVERAGE_RESPONSE_TIME

To collect SWSE performance statistics data, install the following templates:

- SIEBSPI_SWSE_SYSTEM_STATISTIC_PERF
- SIEBSPI_SWSE_APPLICATION_STATISTIC_PERF

Note that before you can use these templates and applications, you need to customize their command lines with the Siebel Application name that is used on your SWSE. You can get the correct application name from the url address that is used to login into your Siebel application. For example, if you use:
`http://gander/callcenter_enu/start.swe`

the name is `callcenter_enu`

To configure the `SIEBSPI_SWSE_AVERAGE_CLOSE_SESSION_TIME` template, perform the following steps:

1. Open the Modify template window.
2. Change the program name parameter from:

- `siebspi_web -application "Application name, e.g. callcenter_enu" -f SWSE_AVG_CLOSE_TIME -mon SIEBSPI_SWSE_AVERAGE_CLOSE_SESSION_TIME`

to:

- `siebspi_web -application " callcenter_enu" -f SWSE_AVG_CLOSE_TIME -mon SIEBSPI_SWSE_AVERAGE_CLOSE_SESSION_TIME`

To monitor SWSE log file for errors, install the following template from the template group **SPI for Siebel/SIEBSPI-Siebel Business Applications/SIEBSPI-Siebel x.x.x/ SIEBSPI-Siebel Web Server Extension**:

- SIEBSPI_WEB_SERVER_LOG

For more information about the log file monitoring, refer to "Monitoring Siebel Log Files" on page 29.

Monitoring the Availability of Web Server Services and daemons Needed for SWSE to Work Correctly

SPI for Siebel offers applications and templates that help system administrators have all important web server services and daemons up and running.

To monitor availability of web services and daemons, install the following templates from the template group `SPI for Siebel/SIEBSPI-Web Servers/SIEBSPI-<Web server>` (depending on the type of web server that is used):

Tomcat:
`SIEBSPI_TOMCAT_PROCESS`

MS IIS:
`SIEBSPI_WEB_WIN_SERVER_STATUS`

Sun ONE Web Server 6.0:
`SIEBSPI_WEB_SUN60_SERVER_STATUS`

Sun ONE Web Server 6.1:
`SIEBSPI_WEB_SUN61_SERVER_STATUS`

IBM HTTP Web Server:
`SIEBSPI_WEB_IBM_HTTP_SERVER_STATUS`

For starting or stopping web services, use the following applications from the **SIEBSPI-Siebel Services** application group:

- **Start MS IIS WEB Server**
- **Stop MS IIS WEB Server**
- **Start IBM HTTP Web Server**
- **Stop IBM HTTP Web Server**
- **Start SUN ONE Web Server**
- **Stop SUN ONE Web Server**

If you use web server that is not supported with the provided templates and applications, SPI for Siebel offers easy customization that enables you to monitor any new web servers.

With the `-daemon` parameter, you can select which daemon process you want to monitor. To specify which daemon will be monitored, add this parameter to the template command line, for example:

Template: `SIEBSPI_WEB_SERVER_MYSRV_STATUS`
```
siebspi_extmon -m SIEBSPI_WEB_SERVER_MYSRV_STATUS -daemon <daemon_name>
```

In applications, used for starting or stopping the web server, you can also specify a daemon name that differs from the default. This name is used when performing the check if daemon is running before the start or stop. The -daemon parameter enables you to select which daemon process you want to check. The -script parameter enables you to change the web server start/stop script. To specify which script will be used, add this parameter to the application command line, for example:

Application: **Stop WEB Server UN*X**
```
siebspi_mgr -service stop_web -script <script_name> -daemon
<daemon_name>
```

or

Application: **Start WEB Server UN*X**
```
siebspi_mgr -service start_web -script <script_name> -daemon
<daemon_name>
```

Monitoring Availability and Response Time of Ports on the Siebel Server Machine from the SWSE Machine

SPI for Siebel offers applications and templates that can be used for checking availability and response times of ports on the Siebel Server machine from the SWSE machine.

For monitoring port availability, install the following templates from template group **SPI for Siebel/SIEBSPI-Web Servers**:

- `SIEBSPI_PORT_AVAILABILITY`
- `SIEBSPI_PORT_AVAILABILITY_EXT`

For monitoring port response time (ms), install the following templates from the **SPI for Siebel/SIEBSPI-Web Servers** template group:

- `SIEBSPI_PORT_RESPONSE_TIME`
- `SIEBSPI_PORT_RESPONSE_TIME_EXT`

For displaying current port response time (ms), the following applications can be used from the **SIEBSPI-Performance** application group:

Port performance WIN or **Port performance UN*X**

Note that before you can use this templates and applications, you need to customize their command lines with the port numbers that you want to monitor. For example, to configure the `SIEBSPI_PORT_AVAILABILITY` template, open the Modify template window and change the program name parameter from:

```
siebspi_extmon -m SIEBSPI_PORT_AVAILABILITY -target target_host -port
port1,port2,..
```

to:

```
siebspi_extmon -m SIEBSPI_PORT_AVAILABILITY -target target_host -port 80
```

Optionally you can also specify non-default time interval that template or application will wait for port to response, by adding the parameter `-timeout <Timeout in seconds>` into the template or application program name parameter.

Chapter 10

Collecting Performance and Other Metrics from Siebel Environment

About Collecting Performance and Other Metrics from the Siebel Environment

SPI for Siebel provides integration into both embedded (Embedded Performance Component of the HPOM Agent - CODA) and full-functioning (HP Performance Agent) performance management.

Integration with HP Performance Manager requires that HP Performance Agent or an Embedded Performance Component of the HPOM Agent is running on the managed node.

HP Performance Agent

HP Performance Agent (formerly OVPA or MWA) collects, summarizes, time stamps, and detects alarm conditions on current and historical resource data across a system. It also provides performance, resource, and end-to-end transaction response time measurements, and supports network and database measurement information.

Data collected outside of HP Performance Agent can be integrated using data source integration (DSI) capabilities. For example, network, database, and your data from SPI for Siebel, can be assimilated through DSI and used similarly as other data collected by HP Performance Agent. All DSI data is logged, time stamped, and can be setup for alarms. For additional information about Performance Agent, refer to the *HP Performance Agent: Data Source Integration Guide*.

All data collected or received by HP Performance Agent can be analyzed using spreadsheet programs, or HP or other third-party analysis products.

The data logged by HP Performance Agent allows you to perform the following tasks:

- Characterize environmental workloads
- Analyze resource usage for load balancing
- Perform trend analysis
- Perform service-level management based on transaction response time
- Perform capacity planning
- Respond to alarm conditions
- Solve system management problems before they arise

HP Performance Agent also gathers information on system activity and allows for customization. You can accept default configurations, or set parameters to collect data for specific conditions.

For additional information on HP Performance Agent, refer to the HP Performance Agent manuals.

Embedded Performance Component (CODA) of the HPOM Agent

Integration of SPI for Siebel performance data is also possible with the Embedded Performance Component of the HP Performance Agent of the HP Agent.

In this case, performance metrics are collected by the Embedded Performance Component, which is part of the HPOM agents. The performance component collects performance instance and counter and information from many sources, mainly operating systems. The collected values are stored in a proprietary persistent data store from which they are gathered and changed into presentation values. Programs including HP Reporter and HP Performance Manager for Windows can use these values.

NOTE

You cannot extract, export, view, or aggregate the data directly on a managed node.

The Embedded Performance Component is a powerful API and the data collection tool distributed with HP Operations Manager. The Embedded Performance Component collection is the preferred data collection mechanism and is always used when the Embedded Performance Component is installed on the managed node. For compatibility, some wrapper functions are used that provide the same interface as HP Performance Agent; however, the Embedded Performance Component is actually used.

In summary, the HP Operations Agent or Embedded Performance Agent is available with the HPOM agent. It provides the following:

- Lightweight system performance metric collection and storage via a Coda subagent
- Data can be visualized from HP Operations Manager for Windows, HP Performance Manager, and HP Reporter
- Its Black Box Communication (BBC) datacomm requires less ports through a firewall

Using SPI for Siebel with HP Performance Agent (MWA)

Data Source Integration (DSI) technology allows you to use HP Performance Agent to log data, define alarms, and access metrics from new data sources beyond the

metrics logged by the HP Performance Agent scopeux collector. Metrics can be acquired from data sources such as databases, LAN monitors, and end-user applications.

Make sure that you have selected the `MWA - HP Performance Agent` option for the performance agent when configuring the SPI for Siebel. Otherwise, use the **Configure-direct** application for selecting it. For more information, refer to "SIEBSPI-Configuration" on page 137.

For collecting performance data, you can use all templates described in "Metrics Collected with the SPI for Siebel TemplatesPolicies" on page 67.

Using SPI for Siebel with Embedded Performance Agent (CODA)

IMPORTANT

Make sure that you have read the Software Requirements section in *SPI for Siebel Installation and Configuration Guide*. You will need the "SPI Data Collector" instrumentation deployed on your managed node before proceeding.You will need the "HP OpenView Smart Plug-Ins DSI-to-DDF wrapper utilities" instrumentation deployed on your management server before proceeding.

Data Source Integration To Dynamic Data Feed (DSI2DDF) technology provides a command-line interface to the Embedded Performance Component (EPC) and passes the performance data to the EPC agent.

For this purpose, you can use the same templates in SPI for Siebel that you use for collecting performance data into HPPA, which is described in the next section *Metrics Collected with the SPI for Siebel Templates*. However, be sure that you have selected the **CODA - Embedded Performance Agent** option for the performance agent when configuring the SPI for Siebel. Via that configuration the templates collect data from the Siebel environment and store it in CODA.

Metrics Collected with the SPI for Siebel Templates

Templates Used for Collecting Performance Data

Template name	Description	Metric Group
SIEBSPI_SERVER_PERFORMANCE	Collects the performance data for the Siebel Servers	SIEBEL_ENT
SIEBSPI_GATEWAY_PERFORMANCE	Collects the performance data for the Siebel Gateways	SIEBEL_GW
SIEBSPI_SP_PERFORMANCE	Collects SMART Probe performance data	SIEBEL_SP
SIEBSPI_DB_TRANS_PERFORMANCE	Collects database transaction performance data	SIEBEL_TR
SIEBSPI_DB_SESSION_PERFORMANCE	Collects database sessions performance data	SIEBEL_BL
SIEBSPI_DB_LOGIN_PERFORMANCE	Collects database login performance data	SIEBEL_DS
SIEBSPI_*_COMPONENT with "-perf" option	Collects Siebel Components performance data	SIEBEL_COMP
SIEBSPI_*_COMPONENT with “-usercount” option	Collects data about number of Siebel users active on Siebel Components	SIEBEL_APP
SIEBSPI_*_COMPONENT with "-usertime" option	Collects data about Siebel users activity (login) on Siebel Components	SIEBEL_AMO
SIEBSPI_SYNCH_BACKLOG_PERF SIEBSPI_TRANS_MERGER_BACKLOG_PERF SIEBSPI_TRANS_PROCESSOR_BACKLOG_PERF SIEBSPI_TRANS_ROUTER_BACKLOG_PERF SIEBSPI_WORKFLOW_BACKLOG_PERF	Collects database tables backlog data	SIEBEL_BL
SIEBSPI_USER_LOGIN_PERFORMANCE	Collects data about Siebel users last login time	SIEBEL_UL
SIEBSPI_USER_ACTION_PERFORMANCE	Collects data about Siebel users last update of account, opportunity or contact	SIEBEL_UA
SIEBSPI_SWSE_SYSTEM_STATISTIC_PERF	Collects SWSE System statistics performance data	SIEBEL_SWE1
SIEBSPI_SWSE_APPLICATION_STATISTIC_PERF	Collects SWSE Application statistics performance data	SIEBEL_SWE2

Metrics Collected with SIEBSPI_SERVER_PERFORMANCE

Metric group SIEBEL_ENT

Metric Name	Metric Label	Description
ENT_NAME	Enterprise Name	Siebel Enterprise Name
AVG_CONN_TIME	Avg. Connect Time	Average connect time for Object Manager sessions
AVG_CPU_TIME	Avg. CPU Time	Total CPU time for component tasks (in seconds)
AVG_R_TIME	Avg. Response Time	Average Object Manager response time
AVG_REP_SIZE	Avg. Reply Size	Average size of reply messages (in bytes)
AVG_REQ_P_S	Avg. Req. Per S	Average number of requests per Object Manager session
AVG_REQ_SIZE	Avg. Request Size	Average size of request messages (in bytes)
AVG_SQL_EXE_T	Avg. SQL Execute Time	Average time for SQL execute operations (in seconds)
AVG_SQL_F_T	Avg. SQL Fetch Time	Average time for SQL fetch operations (in seconds)
AVG_SQL_P_T	Avg. SQL Parse Time	Average time for SQL parse operations (in seconds)
AVG_THINK_TIME	Avg. Think Time	Average end-user think time between requests
DB_LOGIN_TIME	DB Login Time	Database login time from SMART Probe
DB_SQL_EXEC_TIME	DB SQL Exec Time	Database transaction time from SMART Probe
ELAPSED_TIME	Elapsed Time	Total elapsed (running) time for component tasks (in seconds)
NUM_ACTIVE_TASKS	Num of Act. Tasks	Number of active tasks on a Siebel server
NUM_CMPLET_TASKS	Num of Completed T.	Number of completed tasks on a Siebel server
NUM_DBCON_RET	Num of DBConn Retr.	Number of re-tries due to DB connection loss

Metric Name	Metric Label	Description
NUM_DLRBK_RET	Num of DLRbk Re.	Number of re-tries due to deadlock rollbacks
NUM_EXHAS_RET	Num of Exhausted Re.	Number of times all re-tries are exhausted
NUM_EXIT_ERR_T	Num Exit Error T.	Number of completed tasks with an error on a Siebel server
NUM_OF_SERVERS	Num of Servers	Number of Siebel servers in the Siebel enterprise
NUM_OF_TASKS	Num of Tasks	Number of Siebel tasks on a Siebel server
NUM_OF_SIEBMTSH	Num of siebmtshs	Number of siebmtshs processes on a Siebel server
NUM_OF_SIEBMTSHMW	Num of siebmtshsmw	Number of siebmtshsmw processes on a Siebel server
NUM_OF_SIEBSES	Num of siebses	Number of siebses processes on a Siebel server.
NUM_OF_SLEEPS	Num of Sleeps	Total amount of sleep time for component tasks (in seconds)
NUM_REM_CLIENTS	Num of Remote Cli.	Number of remote clients on the Siebel enterprise
NUM_SQL_EXECS	Num of SQL Exec.	Total number of SQL execute operations
NUM_SQL_FETCHES	Num of SQL Fetch.	Total elapsed time for SQL fetch operations (in seconds)
NUM_SQL_PARSES	Num of SQL Parses	Total elapsed time for SQL parse operations (in seconds)
NUM_USR_NEED_SYNC	Clients Need Sync.	Number of users needing to synchronize
OBJ_MANAGER_ERR	Object Manager Err.	Number of errors encountered during Object Manager session
REPLY_MESSAGES	Reply Messages	Number of reply messages sent by the server
REQ_MESSAGES	Request Messages	Number of request messages received by the server
SIEB_FS_FREE	Sieb FS free (%)	Siebel file server disk free space (%)
SIEB_FS_SIZE	Sieb FS size (kb)	Siebel file server disk usage (kb)
SIEB_SRV_AVA	Servers Av. (%)	Percent of running servers (%)

Metric Name	Metric Label	Description
SLEEP_TIME	Sleep Time	Total amount of sleep time for component tasks (in seconds)
SQL_EXEC_TIME	SQL Execute Time	Total elapsed time for SQL execute operations (in seconds)
SQL_FETCH_TIME	SQL Fetch Time	Total elapsed time for SQL fetch operations (in seconds)
SQL_PARSE_TIME	SQL Parse Time	Total elapsed time for SQL parse operations (in seconds)
SRVR_NAME	Server Name	Siebel server name
SV_CPU_UTIL	Server CPU Util.	Siebel server CPU utilization (CPU%)
SV_MEM_USAGE	Srv. Mem Usage (kb)	Siebel server memory usage (kb)
TOT_CPU_SIEBMTSH	CPU util. siebmtshs	siebmtshs processes CPU utilization on a Siebel server (CPU%)
TOT_CPU_SIEBMTSHMW	CPU siebmtshsmw	siebmtshsmw processes CPU utilization on a Siebel server (CPU%)
TOT_CPU_SIEBSES	CPU util. of siebses	siebses processes CPU utilization on a Siebel server (CPU%)
TOT_MEM_SIEBMTSH	MEM usage siebmtshs	siebmthsh processes memory usage on a Siebel server (kb)
TOT_MEM_SIEBMTSHMW	MEM siebmtshsmw	siebmthshmw processes memory usage on a Siebel server (kb)
TOT_MEM_SIEBSES	MEM usage of siebses	siebses processes memory usage on a Siebel server (kb)
TOT_REPLY_SIZE	Total Reply Size	Total size (in bytes) of reply messages
TOT_REQ_SIZE	Total Request Size	Total size (in bytes) of request messages
TOT_RESP_TIME	Total Response Time	Total Object Manager response time (in seconds)
TOT_TASKS	Total Tasks	Total number of tasks started for server components
TOT_THINK_TIME	Total Think Time	Total end-user think time (in seconds)

Metrics Collected with SIEBSPI_GATEWAY_PERFORMANCE

Metric group SIEBEL_GW

Metric Name	Metric Label	Description
ENT_NAME	Enterprise Name	Siebel Enterprise Name
GW_NAME	Gateway Server Name	Siebel Gateway Server Name
GW_SERVER_CPU	Gateway Server CPU%	Siebel Gateway name server CPU utilization (%)
GW_SERVER_MEM	Gateway Srv. MEM (kb)	Siebel Gateway name server memory Usage (kb)

Metrics Collected with SIEBSPI_SP_PERFORMANCE

Metric group SIEBEL_SP

Metric Name	Metric Label	Description
SP_ENT_NAME	Enterprise Name	Enterprise Name
SP_CL_HOST_NAME	Host Name	Mobile client host name
SP_CL_DB_LOGIN_T	Client Login Time(ms)	Login time required by the client to connect to the database
SP_CL_DB_SQL_EXEC_T	Client Transaction Time(ms)	Transaction execute time from the client host
SP_TRANS_STRING	Transaction String	The name of Siebel's business component, business object and filed name

Metrics Collected with SIEBSPI_DB_LOGIN_PERFORMANCE

Metric group SIEBEL_DS

Metric Name	Metric Label	Description
DS_ENT_NAME	Enterprise Name	Enterprise Name
DS_HOST_NAME	Host Name	DB client host name
DS_DB_LOGIN_T	DB Login Time(ms)	Login time required by the DB client to connect to the database

Metrics Collected with SIEBSPI_DB_TRANS_PERFORMANCE

Metric group SIEBEL_TR

Metric Name	Metric Label	Description
TR_ENT_NAME	Enterprise Name	Enterprise Name
TR_HOST_NAME	Host Name	Mobile client host name
TR_DB_SQL_NAME	SQL Name	Name of SQL
TR_DB_SQL_EXEC_T	Client SQL Time(ms)	SQL execute time

Metrics Collected with SIEBSPI_*_BACKLOG_PERF

Metric group SIEBEL_BL

Metric Name	Metric Label	Description
BL_ENT_NAME	Enterprise Name	Enterprise Name
BL_HOST_NAME	Host Name	Mobile client host name
BL_DB_BACKLOG_NAME	Backlog Name	Name of backlog
BL_DB_BACKLOG_VALUE	Backlog Value	Backlog value
BL_DB_BACKLOG_STRING	Backlog String	Additional backlog string value

Metrics Collected with SIEBSPI_*_COMPONENT with the "-perf" Parameter Specified

Metric group SIEBEL_COMP

Metric Name	Metric Label	Description
CS_AVG_SQL_EXE_T	Avg. SQL Execute Time	Average time for SQL execute operations (in seconds)
CS_AVG_SQL_F_T	Avg. SQL Fetch Time	Average time for SQL fetch operations (in seconds)
CS_AVG_SQL_P_T	Avg. SQL Parse Time	Average time for SQL parse operations (in seconds)
CS_COM_NAME	Component Name	Siebel Component Name
CS_CPU_UTIL	Component CPU Util.	Siebel Component CPU utilization (CPU%)

CS_CPU_TIME	Component CPU Time	Siebel Component CPU Time
CS_ELAPSED_TIME	Elapsed Time	Total elapsed (running) time for component tasks (in seconds)
CS_ENT_NAME	Enterprise Name	Siebel Enterprise Name
CS_NUM_OF_SLEEPS	Num of Sleeps	Total amount of sleep time for component tasks (in seconds)
CS_NUM_SQL_EXECS	Num of SQL Exec.	Total number of SQL execute operations
CS_NUM_SQL_FETCHES	Num of SQL Fetch.	Total elapsed time for SQL fetch operations (in seconds)
CS_NUM_SQL_PARSES	Num of SQL Parses	Total elapsed time for SQL parse operations (in seconds)
CS_MEM_USAGE	Srv. Mem Usage	Siebel component memory usage (kb)
CS_SLEEP_TIME	Sleep Time	Total amount of sleep time for component tasks (in seconds)
CS_SQL_EXEC_TIME	SQL Execute Time	Total elapsed time for SQL execute operations (in seconds)
CS_SQL_FETCH_TIME	SQL Fetch Time	Total elapsed time for SQL fetch operations (in seconds)
CS_SQL_PARSE_TIME	SQL Parse Time	Total elapsed time for SQL parse operations (in seconds)
CS_SRVR_NAME	Server Name	Siebel server name

Metrics Collected with SIEBSPI_*_COMPONENT with the "-usercount" Parameter Specified

Metric group SIEBEL_APPCOUNT

Metric Name	Metric Label	Description
APP_ENT_NAME	Enterprise Name	Enterprise Name
APP_SRVR_NAME	Server Name	Siebel Server name
APP_APPLICATION	Siebel Appl Name	Siebel Application (Component) name
APP_ACT_USER_COUNT	Active users counter	Count of all Siebel users logged to Siebel Application in monitoring moment
APP_ALL_USER_COUNT	Users counter	Count of all Siebel users logged to Siebel Application between two monitoring intervals

Metrics Collected with SIEBSPI_*_COMPONENT with the "-usertime" Parameter Specified

Metric group SIEBEL_AMO

Metric Name	Metric Label	Description
AMO_ENT_NAME	Enterprise Name	Enterprise Name
AMO_SRVR_NAME	Server Name	Siebel Server name
AMO_APPLICATION	Siebel Appl Name	Siebel Application (Component) name
AMO_USER	Siebel User Name	Siebel user name
AMO_STARTTIME	Login time	Time when Siebel user log into Siebel Application
AMO_STOPTIME	Logout time	Time when Siebel user log out from Application

Metrics Collected with SIEBSPI_USER_LOGIN_PERFORMANCE

Metric group SIEBEL_UL

Metric Name	Metric Label	Description
UL_ENT_NAME	Enterprise Name	Enterprise Name
UL_USER	Siebel User Name	Siebel user name
UL_LAST_LOGIN	Last login time	Siebel user last login time

Metrics Collected with SIEBSPI_USER_ACTION_PERFORMANCE

Metric group SIEBEL_UA

Metric Name	Metric Label	Description
UA_ENT_NAME	Enterprise Name	Enterprise Name
UA_USER	Siebel User Name	Siebel user name
UA_LAST_ACCOUNT	Last account change	Time when Siebel user last time changed account
UA_LAST_OPPORTUNITY	Last opportunity change	Time when Siebel user last time changed opportunity
UA_LAST_CONTACT	Last contact change	Time when Siebel user last time changed contact

Metrics Collected with SIEBSPI_SWSE_SYSTEM_STATISTIC_PERF

Metric group SIEBEL_SWE1

Metric Name	Metric Label	Description
SWE1_ENT_NAME	Enterprise Name	Enterprise Name
SWE1_AR_TIME	Avg Response Time	Average response time
SWE1_AC_SESS_TIME	Avg Close Sess Time	Average close session time
SWE1_AO_SESS_TIME	Avg Open Sess Time	Average open session time
SWE1_ARQ_TIME	Avg Request Time	Average request time

Metrics Collected with SIEBSPI_SWSE_APPLICATION_STATISTIC_PERF

Metric group SIEBEL_SWE2

Metric Name	Metric Label	Description
SWE2_ENT_NAME	Enterprise Name	Enterprise Name
SWE2_APPLICATION	Siebel Appl Name	Siebel Application name
SWE2_AO_SESS_TIME	Avg Open Sess Time	Average open session time

Chapter 11

Viewing and Analyzing Historical Data from Collected Performance Data

Analyzing Historical Data from Collected Performance Data Using HP Performance Manager

HP Performance Manager provides a central point from where you can monitor and manage the performance of all networked systems in your environment. Using Performance Manager you can analyze historical data from Performance Agent systems, receive alarms generated by Performance Agent, and predict future resource usage. HP Performance Manager also allows you to perform the following functions:

- Select a data source and list the graphs associated with it
- Choose a graph to view, select how the graph will display, and change the metrics graphed
- Draw graphs
- Drill down to view detail over a period of time
- Export and import systems and graph templates
- Design graphs and save them as templates
- Receive and view alarms
- Create forecasts

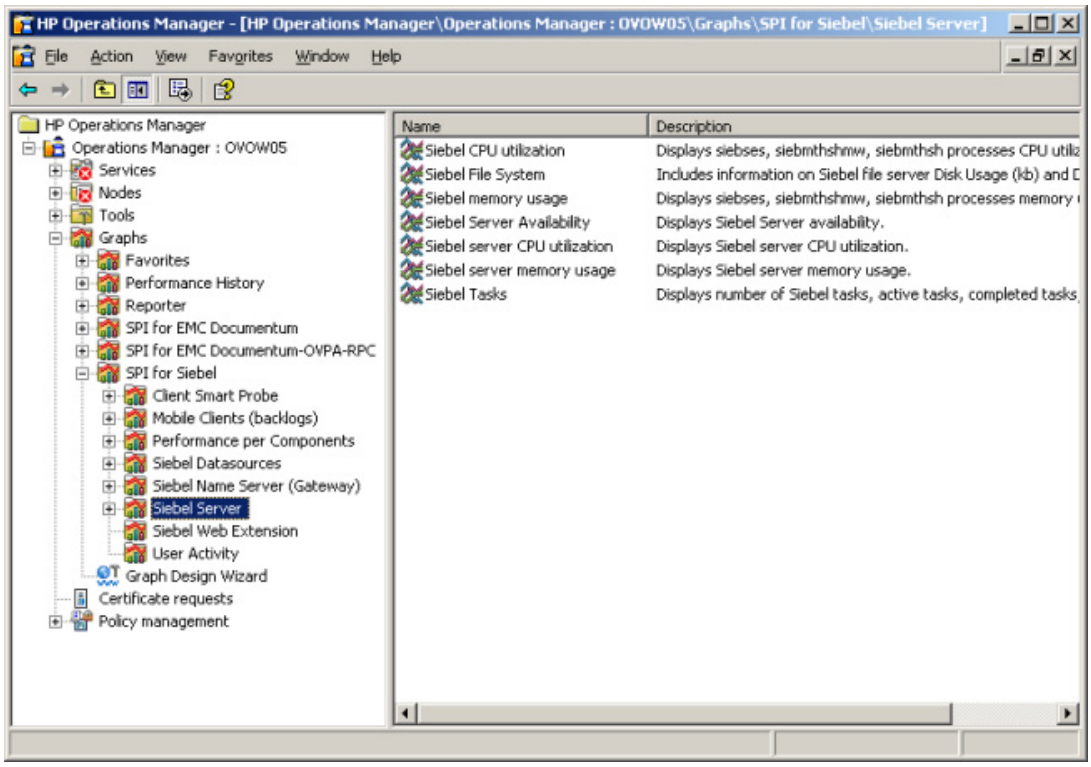
For additional information on HP Performance Manager, refer to the HP Performance Manager documentation.

HP Performance Manager User Defined Graph Templates

For easier work with Performance Manager, you can use the pre-prepared graph templates of SPI for Siebel performance data. This file is located on your UNIX management server in the following directory:
`/etc/opt/OV/share/siebspi/reports`

Copy the `VPI_GraphsUserSPI_for_Siebel.txt` file into your Performance Manager's data directory to be fully integrated with them.

Note that available graphs are listed under the family **SPI for Siebel**. The following



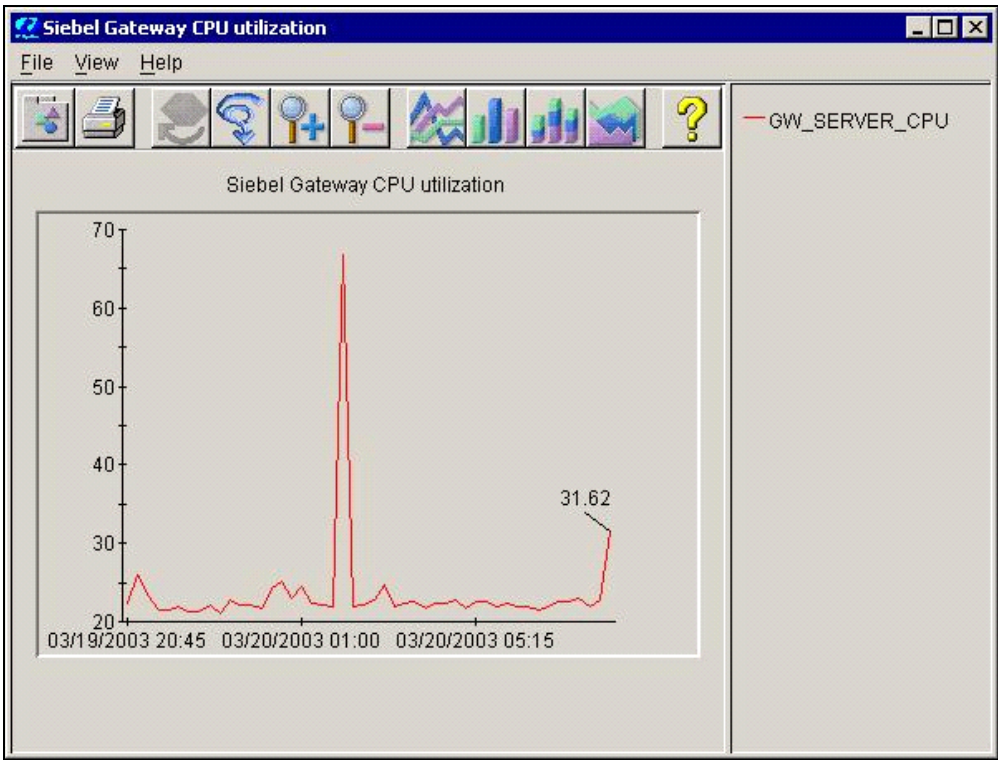
tables list and describe graphs available for use and refer to both HP Performance Agent and CODA Agent usage.

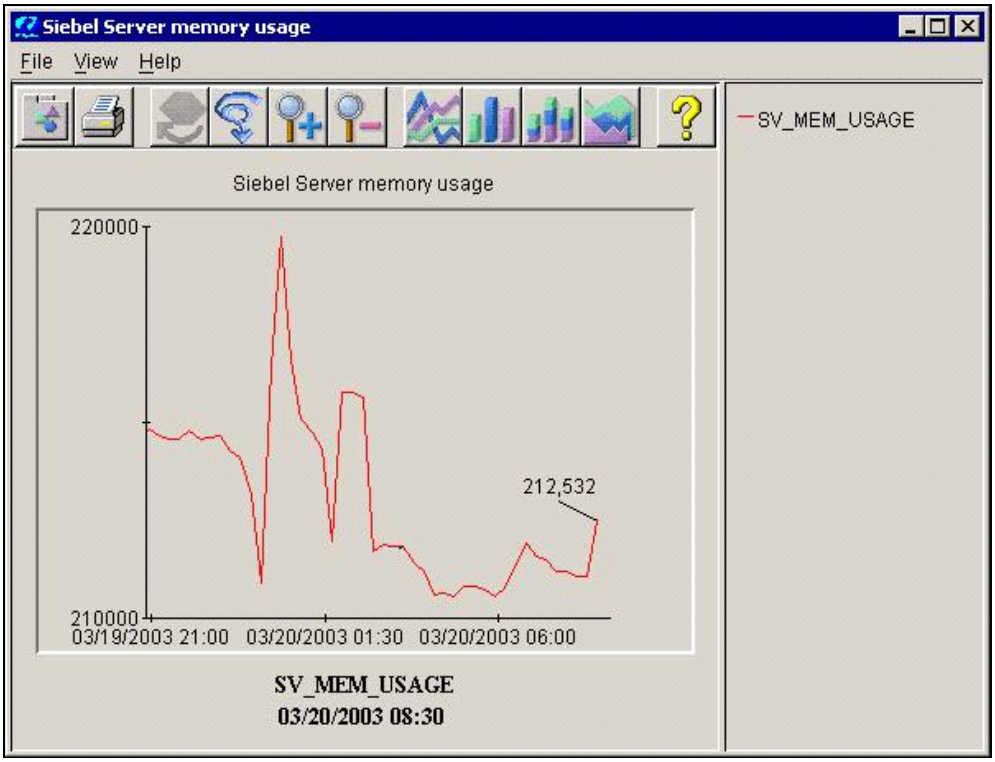
Table 1. The SPI for Siebel family

Category	Graph Name	Description
Siebel Server		
	Siebel server CPU utilization	Displays Siebel server CPU utilization.
	Siebel server memory usage	Displays Siebel server memory usage.
	Siebel CPU utilization	Displays siebses, siebmthshmw, siebmthsh processes CPU utilizations.
	Siebel memory usage	Displays siebses, siebmthshmw, siebmthsh processes memory usage.
	Siebel Tasks	Displays number of Siebel tasks, active tasks, completed tasks, and completed tasks with an error.

Category	Graph Name	Description
	Siebel Server Availability	Displays Siebel Server availability.
	Siebel File System	Includes information on Siebel file server Disk Usage (kb) and Disk Free Space (%).
Siebel Name Server (Gateway)		
	Name Server CPU utilization	Displays gateway CPU utilization.
	Name Server memory usage	Displays gateway memory usage.
Siebel Datasources		
	DS Login Time	Displays Login time required by the DB client to connect to the database.
	DS Transaction Time	Displays Transaction time.
	Workflow Policies backlog	Displays Workflow Policies Backlog.
	Transaction Processor backlog	Displays Transaction Processor backlog.
	Database Sessions	Displays number of database session.
Client Smart Probe		
	Client Smart Probe	Displays login time required by the client to connect to the server and transaction execute time from the client host.
	Login Time	Displays login time required by the client to connect to the server.
	Transaction Time	Displays transaction execute time from the client host.
Performance per Components		
	CPU time	Displays component CPU time.
	Average SQL times	Displays average SQL times per components.
	SQL times	Displays SQL times per components.
	Memory usage	Displays component memory usage.
	CPU utilization	Displays component CPU utilization.
	Total Tasks	Displays number of total tasks per components.
Mobile Clients (backlogs)		

Category	Graph Name	Description
	Clients not synchronized	Displays number of users needing to synchronize and number of remote clients on the Siebel enterprise.
	Files Transaction Router backlogs	Displays Transaction Router backlogs.
	Synchronization backlogs	Displays Synchronization backlogs.
	Transaction Router backlogs	Displays transaction Router backlogs.
User Activity		
	All active & connected users	Displays number of active and connected users for Siebel Application (Component).
	All active users	Displays number of active users for Siebel Application (Component).
	All connected users	Displays number of connected users for Siebel Application (Component).
Siebel Web Extension		
	Average Close Session Time	Displays average close session time of the Siebel Web Extension.
	Average Open Session Time	Displays average open session time of the Siebel Web Extension.
	Average Open Session Time Per Application	Displays average open time of the specific Siebel Web Extension Application.
	Average Request Time	Displays average request time of the Siebel Web Extension.
	Average Response Time	Displays average response time of the Siebel Web Extension.


Siebel Gateway CPU utilization
File View Help
GW_SERVER_CPU
Siebel Gateway CPU utilization
70
60
50
40
30
20
31.62
03/19/2003 20:45
03/20/2003 01:00
03/20/2003 05:15



HP Reporter creates Web-based reports from data derived from the targeted systems that it "discovers". Discovery of a system can occur if the system is running the HP Performance Agent software (formerly known as OVPA or MWA agents) or CODA Agent (part of the HPOM Agent).

After Reporter has run through its discovery, it gathers data based on pre-defined and user-specified lists of metrics. This data is then used to generate reports. From the data it collects, Reporter automatically generates many different reports, providing critical information about the systems in your computing environment.

Deploying Templates and Collecting Performance Data

To produce reports, templates must be deployed. After the templates are successfully deployed, the CODA or MWA agent begins to collect performance data. For all Siebel systems where MWA or CODA agents are collecting data, HP Reporter can be used to generate reports.

How HP Reporter Creates Reports

HP Reporter follows the steps below when producing reports:

1. “Perform System Discovery” on page 84
2. “Gather Performance Data” on page 84
3. “Generate Reports” on page 85

Perform System Discovery

HP Reporter creates Web-based reports from data derived from the targeted systems that it "discovers". During a system discovery, Reporter looks for systems that are specified in the Discovery Area, and which have a CODA or HP Performance Agent agent installed on them. It then adds those systems to the Discovered Systems group.

Note that the following group is created automatically for SPI for Siebel purposes:
`Siebel`

NOTE

Node group SPI for Siebel should be created if you will use HPOM Reporter Lite.

If you want to create this group manually, follow these steps:

1. In the left pane, right-click [Discovered Systems].
2. Select **Add Group**.
3. In the **Add Group** dialog box, type the new group name **Siebel**.
4. Click `[Add]`.

Gather Performance Data

After Reporter has run through its discovery, it gathers performance data from each discovered system and places it in a local database. Additionally, Reporter collects data only for those metrics that it knows about. These metrics are specified under **Metrics Lists**.

Metric lists control what information is gathered from a system into the Reporter's database. A metric list groups metrics from a single metric class supplied by the performance agent for UNIX or Windows. The metric list can also select the degree of summarization (points every 5 minutes, hour, day, and so on) and how much data to gather and retain in the database. The shorter the interval, the more records collected. The default summarization level is one hour. Metric lists are tightly connected to Data Source and Objects within that Data Source on each system.

The following metric lists are created for SPI for Siebel reports:

- `SIEBEL_APP`

- SIEBEL_AMO
- SIEBSPI_BL
- SIEBSPI_COMP
- SIEBSPI_DS
- SIEBSPI_ENT
- SIEBEL_GW
- SIEBSPI_SP
- SIEBSPI_TR
- SIEBEL_UL
- SIEBEL_UA

More information about metrics that are contained in this metric list is explained in the chapter "Collecting Performance and Other Metrics from Siebel Environment" on page 63.

Generate Reports

Reporter generates HTML reports based on the data available in the local Reporter database.

The following report family is created for SPI for Siebel purposes:

- Siebel

Reports are divided into the following categories:

Siebel Enterprise

- Gateway CPU utilization
  Shows the average CPU consumption of the Siebel gateway server processes during the reporting interval
- Gateway memory utilization
  Shows the amount of physical memory in use for Siebel gateway server processes during the reporting interval
- Siebel servers & file system usage
  Shows the number and percent of running servers during the interval and the size of the Siebel file system
- Siebel Clients
  Shows the number of remote clients and the number of clients that must perform synchronization

Siebel Servers

- Siebel Server CPU utilization

Shows the average CPU utilization of all Siebel server processes and the average CPU utilization of the siebmtsh and siebses processes separately

- Siebel Server Memory Usage
  Shows the average memory usage of all Siebel server processes and the average memory usage of the siebmtsh and siebses processes separately
- Siebel Server Tasks
  Shows the average number of tasks started for server components, average number of active tasks, completed tasks, and tasks completed with an error
- Siebel Server Messages
  Shows the average size and average number of reply (request) messages sent (received) by the servers during the interval
- Siebel Object Manager Sessions
  Shows the average connect and response time for Object Manager sessions, average number of requests per Object Manager session, and the average number of errors during the Object Manager session.
- Siebel Server SQL Operations
  Shows the average time and average number of SQL execute, fetch, and parse operations for Siebel servers during the interval.

Siebel Components

- Siebel Component CPU utilization
  Shows the average CPU utilization for the Siebel components during the reporting interval
- Siebel Component Memory Usage
  Shows the average memory usage for the Siebel components during the reporting interval
- Siebel Component SQL Operations
  Shows the average time and average number of SQL execute, fetch, and parse operations for the Siebel components during the interval
- Siebel Component Tasks
  Shows the number of total tasks for the Siebel components during the reporting interval

Siebel Clients

- Siebel Clients Response
  Shows the average response time for Siebel clients during the reporting interval
- Synchronization Backlogs

Shows the number of files that need to be sent to the particular client

- Transaction Merger Backlogs
  Shows the number of files that need to be merged from the particular client
- Transaction Router Backlogs
  Shows the number of transactions that need to be routed to the particular client

Siebel Datasources

- Siebel DB Login Time
  Shows the average DB login time for Siebel servers during the reporting interval
- Siebel DB Transaction Time
  Shows the average DB transaction time during the reporting interval
- Siebel DB Table Size Growth
  Shows the average number of records in the Siebel database tables during the reporting interval

Operations Database

- Siebel Active Message Severity
  Shows the Siebel messages severity, which were sent to HP OpenView and had not been acknowledged
- Siebel History Message Severity
  Shows the Siebel messages severity, which were sent to HP OpenView and had been acknowledged
- Top Siebel Messages
  Shows the top Siebel messages, which were sent to HP OpenView and had not been acknowledged yet
- Top Siebel History Messages
  Shows the top Siebel history messages, which were sent to HP OpenView and had been acknowledged

Siebel Users Activity

- Users connected to Siebel Applications (Object Manager Components) grouped by users
  Shows Siebel user activity in Siebel Applications. The first part of the report focuses on determining top/bottom 30 users by the time spent using Siebel Applications. The second part of the report shows in detail for each user when they logged in, logged out and for how long they were connected to a Siebel Application. Grouping is performed by Siebel Enterprises and Siebel Servers.

- Users connected to Siebel Applications (Object Manager Components) grouped by Siebel Applications
  Shows Siebel users activity in Siebel Applications. The first part of the report focuses on summary connection time for Siebel Applications and summary number of Siebel users' connections to Siebel Application. The second part of the report shows in detail for each Siebel Application when users logged in, logged out, and for how long they were connected to the Siebel Application. Grouping is performed by Siebel Enterprise and Siebel Servers.
- Number of users connected to Siebel Applications (Object Manager Components)
  Shows the number of users connected to Siebel Applications (Object Manager Components) between two monitor intervals, and the number users active in monitoring moment. First part of the report focuses on determining the top/ bottom 30 Siebel Applications and Siebel Servers by the number of the Siebel user's connections. The second part of the report shows in detail how the number of connected users between the two intervals varied in time.
- Number of days since last update of account, opportunity or contact (Top 50 inactive Siebel users)
  Shows the date and time a Siebel user last added or changed an account, contact or opportunity, and the number of days since the last action, for the top 50 inactive Siebel users. Graph shows the top 20 inactive users.
- Number of days since last login of Siebel user (Top 50 inactive users)
  Shows how many days ago a Siebel user last logged in, and the last login time, for the top 50 inactive Siebel users. Graph shows the top 20 users.

Chapter 12

Using SPI for Siebel for Analyzing Siebel Application Response Measurement (SARM) Data

About Siebel ARM

Siebel ARM is a framework for capturing critical performance data in Oracle's Siebel Business Applications. Siebel ARM captures response times at key monitoring points within the Siebel Server infrastructure. These Siebel ARM monitoring points are classified in the following distinct areas within the Siebel infrastructure:

- **Web Server Time**. The time a request has spent on the Web server.
- **Infra-Network Time**. The time between a request from the Web server and the Siebel Server (including the network time).
- **Siebel Server Time**. The time Siebel Server and Database Server need to process the request (time between Server Thread (SMI) and any database-layer calls).
- **Database Time**. The time spent for any Siebel Database-layer calls.
- **Tool-Specific Time**. The time spent in tool-specific areas of the infrastructure.

The Siebel ARM feature monitors system performance in the infrastructure and tool-specific pre defined areas, which appear in Siebel ARM output.

How Can SPI for Siebel Help You Analyze Siebel Transactions

SPI for Siebel provides diagnostic applications that help administrators to correlate Oracle's Siebel Business Applications end-user performance and availability problems to their root causes within the Siebel infrastructure. These applications help you to find problematic areas in Siebel user transactions, where the most time, CPU or memory is spent. SPI also provides tolls that can be used from HPOM console for setting SARM parameters on the node, and to start or stop collecting SARM information on the node.

If you want to use SARM and SPI to analyze problematic transaction, perform the following steps:

1. If you do not want to have default values, set SARM parameters on all managed nodes that will be used by transaction (Siebel Web Server Extension, Siebel Servers) using SPI for Siebel applications.
2. Start the collection of SARM data on all involved managed nodes, using SPI for Siebel applications.
3. Execute problematic transaction (manually or using any of the automated applications for login into Siebel and performing transactions).

4. Stop the collection of SARM data on all involved managed nodes, using SPI for Siebel applications.
5. Copy SARM log files from all involved managed nodes to one location on the machine where analyzing will be performed.
6. Analyze transaction and find problematic areas and bottlenecks, using SPI for Siebel applications.

For detailed instructions on how to perform these steps, refer to the following sections. Steps are described using a real-life example. A company is having performance problem using Siebel applications for sales automation. When users try to go to Contacts View, and then to Contacts List Screen, and perform there a query by last name, it takes about 3 minutes before the results are displayed. We will try to find out where the problematic areas are.

Setting SARM Parameters Using SPI for Siebel Applications

SPI for Siebel provides applications that can be used to set all SARM parameters on managed nodes from a central point (HPOM). You can set parameters on both, Web Server and Siebel Server. The following applications are provided in application group **SPI for Siebel/SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/SIEBSPI-SARM Parameters**:

```
Change SARM Buffer Size WIN
Change SARM Buffer Size UN*X
Change SARM File Size WIN
Change SARM File Size UN*X
Change SARM Max Files Number WIN
Change SARM Max Files Number UN*X
Change SARM Period WIN
Change SARM Period UN*X
```

Before you use these applications, you should configure (modify) applications parameters. For the complete list and descriptions of the applications parameters, refer to "SIEBSPI-Resonate" on page 149.

SARM Parameters Descriptions

In SARM, the following parameters and environment variables are defined:

Parameter Display Name	Parameter Alias	Environment Variable Name
SARM Granularity Level*	SARMLevel	SIEBEL_SARMLevel
SARM Buffer Size	SARMBufferSize	SIEBEL_ SARMBufferSize
SARM Period	SARMPeriod	SIEBEL_ SARMPeriod

Parameter Display Name	Parameter Alias	Environment Variable Name
SARM Max Number of Files	SARMMaxFiles	SIEBEL_ SARMMaxFiles
SARM Data File Size	SARMFileSIze	SIEBEL_ SARMFileSIze

*This parameter is used later for enabling/disabling SARM

SARM Buffer Size

The Siebel ARM framework uses a buffered data generation mechanism. Siebel ARM collects data and stores it in memory. After the in-memory data size reaches a threshold defined by SARM Buffer Size Siebel ARM outputs the stored data to file on a physical disk. The SARM Buffer Size parameter or environment variable is specified in bytes. The default value is 5,000,000 bytes (approximately 5 MB). The valid settings range from 100,000 bytes to 50,000,000 bytes.

Siebel ARM also outputs stored data to a file based on elapsed time, which is defined by the parameter or environment variable SARM Period. The setting of this parameter may determine the size of the data saved to the file rather than the threshold value defined by SARM Buffer Size.

For example, if SARMBufferSize is 5 MB and there are five instances (processes) of the component, then the total memory used is 25 MB.

SARM Period

Siebel ARM collects data and stores it in memory. The time period specified by the SARM Period parameter or environment variable determines when Siebel ARM outputs the stored data to a file on a physical disk regardless of the value set for `SARM Buffer Size`. The parameter is specified in minutes, and has a default value of 3 minutes. The valid settings for this parameter range from 1 minute to 60 minutes.

Only use `SARM Period` to output Siebel Server performance data based on elapsed time. Siebel ARM outputs Web server performance data based only on the `SARM Buffer Size` value.

SARM Max Number of Files

Specifies the maximum number of Siebel ARM files created per component instance. The default value is four, and there is no Siebel-specified upper limit to the number of files Siebel ARM creates. (The parameter or environment variable `SARM Data File Size` configures how large a file becomes before a new file is stored on the physical disk.)

The number of active Siebel ARM files per component process is 1 plus the value of `SARM Max Number of Files`. That is, Siebel ARM removes the oldest file for that

process only after the SARM Max Number of Files-plus-1 file reaches `SARM Data File Size`.

See the description for SARM Data Size for an example on how to calculate memory usage using these parameters or environment variables.

SARM Data File Size

Specifies how large a file becomes before Siebel ARM stores data in a new file on the physical disk. The parameter is specified in bytes. The default value is 15000000 bytes (15 MB), and there is no Siebel-specified upper limit to file size.

Until the specified size is reached, Siebel ARM continues to append file segments to the current file. When the file limit is reached, Siebel ARM creates a new file. (The parameter or environment variable SARM Max Number of Files configures the number of files maintained by Siebel ARM.)

When Siebel ARM reaches the file number specified by `SARM Max Number of Files` (that is, there are SARM Max Number of Files of size SARM Data File Size), Siebel ARM removes the first (that is, the oldest) file when the next file reaches the SARM Data File Size limit. Therefore, the maximum amount of disk space used is approximately SARM Max Number of Files + 1 times SARM Data File Size bytes. This amount of memory is per-process (per component instance).

For example, if SARM Data File Size is 15 MB, SARM Max Number of Files is 4, and there are 5 instances (processes) of the component, then the maximum amount of disk space consumed is approximately 375 MB-that is, 15MB per file, times 5 files per process, times 5 processes (instances of component).

Starting the Collection of SARM Data Using SPI for Siebel Applications

SPI for Siebel provides applications that can be used to start collecting SARM data on managed nodes from a central point (HPOM). To start collecting SARM data on both, Web Server and Siebel Server, use SPI applications for changing SARM Granularity Level. The following applications are provided in the application group **SPI for Siebel/SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/ SIEBSPI-SARM Parameters**:

```
Start SARM data col.level 1 WIN
Start SARM data col.level 1 UN*X
Start SARM data col.level 2 WIN
Start SARM data col.level 2 UN*X
```

Before you use these applications, you can configure (modify) applications parameters. For the complete list and descriptions of the applications parameters, refer to "SIEBSPI-SARM" on page 156.

SARM Granularity Level

Specifies the amount of response measurement detail logged to Siebel ARM files and effectively enables or disables the Siebel ARM feature. This parameter or environment variable has the following settings:

- **1 (ARM)**. This setting captures general application performance and is based on the application response measurement (ARM) standard. At this level, Siebel ARM collects information such as process and component boundaries, third-party software calls, database measurements, workflow execution, and script performance. Use this level for general performance monitoring.
- **2 (Detail)**. This setting captures the information at level 1 as well as detailed information such as steps of workflow execution, construction of large objects, reading of large files, and crossing significant architectural areas. Use this level for problem diagnostics.

Executing Problematic Siebel User Transactions

After SARM data collection is enabled, you should execute problematic transaction. You can do this manually in Siebel GUI or use any of the automated applications for login into Siebel and performing transactions.

We recommend performing transactions without any other user activity on the nodes when SARM data collection is enabled. That way the SARM log files will be smaller and analyzing will be easier and quicker.

Stopping the Collection of SARM Data Using SPI for Siebel Applications

SPI for Siebel provides applications that can be used to stop collecting SARM data on managed nodes from a central point (HPOM). To stop collecting SARM data on both, Web Server and Siebel Server, use the SPI applications for changing SARM Granularity Level to 0. This setting is the default value and disables Siebel ARM. The following applications are provided in the application group **SPI for Siebel/ SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/SIEBSPI-SARM Parameters**:

```
Stop SARM data collection WIN
Stop SARM data collection UN*X
```

Before you use these applications, you can configure (modify) applications parameters. For the complete list and meaning of the applications parameters, refer to "SIEBSPI-SARM" on page 156.

Copying SARM Log Files to Location for Analyzing

To get a complete picture of the complete transaction, it is important that you use SARM files from Siebel Web Server Extension and from Siebel Server(s) together when analysis is performed. Usually, those SARM files are located on several computers. In such cases, copy all files to a single computer to a directory, where analysis will be performed. Alternatively, share (NFS, SAM, and so on) remote directories where SARM files are located.

We recommend you to perform analysis on a computer that is not part of the Siebel environment, because analyzing big amount of SARM files takes a lot of time and machine resources.

Analyzing Transactions Using SPI for Siebel Applications

This is the most important step and reason that all previous steps were performed. SPI for Siebel provides two ways for analyzing SARM data:

- **Call graph workflow analysis**
  The Call Graph displays how the specific areas and methods were called within the session. It also displays the specific metric values, for example, `duration`, `cpu_time`, `cpu_perc`, `pooled_memory_usage` and `pooled_memory_calls`
- **Performance aggregation analysis**
  This analysis displays problematic areas in Siebel. The application analyzes Siebel areas (for example, SWE) for the specific metric (for example, "total response time") maximum values. When the area is found, it analyzes the child areas to see which child area took the most time. After that, the application calculates in which child area the calls take the most time. When the call (method) is discovered, the application displays a performance summary for that call.

Applications for Running Call Graph Workflow Analysis

SPI for Siebel provides applications that you can use to execute Call Graph Workflow Analysis. This analysis is divided into 2 steps:

1. Create comma-separated files (CSV) from SARM binary log files. To do this, use the SPI for Siebel application that is using Siebel application for creating CSV files. The files are used for later analysis.

   For this purpose, the following applications are provided in the **SPI for Siebel/ SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/SIEBSPI-CallGraph Wkf Anly. [UN*X | WIN] application group**:

   `Run CallGraph-CSV Wkf Anly. UN*X`

```
Run CallGraph-CSV Wkf Anly. WIN
```

The CSV files are placed in the …/siebspi/tmp directory.

For more information about this SARM CSV files, refer to "Siebel ARM (SARM) Reference Information" on page 202.

2. Execute analysis that shows Call graph workflow.

Use the application List Sess. Using CSV Data from the **SPI for Siebel/SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/SIEBSPI-CallGraph Wkf Anly. [UN*X | WIN]** application group to display all available sessions in current SARM files. This information can be later used for running Call Graph Workflow analysis (using parameter `-session {session id}`) to filter output on one session.

```
List Sess. Using CSV Data UN*X
List Sess. Using CSV Data WIN
```

The following applications are provided for displaying workflow data tree in the **SPI for Siebel/SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/SIEBSPI-CallGraph Wkf Anly/ Show Wkf From CSV SARM Data** application group:

```
Show Wkf Data Using All Metrics UN*X
Show Wkf Data Using All Metrics WIN
Wkf-M. 'metric name' UN*X
Wkf-M. 'metric name' WIN
Workflow-Metric 'metric name' UN*X
Workflow-Metric 'metric name' WIN
```

It is important that you use SARM files from Siebel Web Extension and from Siebel Server(s). Usually those SARM files are located on several computers. To use SARM files from different locations, specify the directories (local or remote) using -include_sarm_dirs parameter.

Example:

```
siebspi_sarm -list_sessions
         -include_sarm_dirs /net/node/sarm,/this/too
```

Example output:

```
Session: 30969
Session: 30970
Session: 30971
Session: 30972
```

This example will use SARM files on a local computer in original Siebel log directories and the SARM files in the following directories: `/net/node/sarm and /this/too`. For example, `/net/node/sarm` is a NFS mounted directory and `/this/too` is a local temporary directory.

If you do not want to use the SARM files in original Siebel log directories on the computer where you execute the application, specify the

`-exclude_original_sarm_dirs` parameter.

Example:

```
siebspi_sarm -list_sessions
          -include_sarm_dirs /net/node/sarm,/this/too
          -exclude_original_sarm_dirs
```

In this case, only the SARM files in directories `/net/node/sarm and /this/too` will be used.

The same parameters can also be used for other applications, for example, **Run CallGraph-CSV Wkf Anly**.

The Call Graph displays how the specific areas and methods were called within the session. It also displays the specific metric values, for example, SystemMemoryUsage (on areas).

Analysis can be done for the specified metric and/or session.

Example command line:

```
siebspi_sarm   -call_graph
               -session 30928
               -metric Duration
```

Example output:

```
    sadmin
      |
      Session: !1.c5c.78d0 - Task ID: 30928
            |
            +- Area_SWSE.Receive request [Duration(MiliSecs): 150.515]
               |
               +- Area_SWSE.Send message to app server [Duration(MiliSecs): 8.725]
                  |
               +- Area_INFRA.Request Receipt (sessID SeqID) [Duration(MiliSecs): 112.588]
                  |  |
                  |  +- Area_OBJMGR.Service Invoke Method.Web Engine Interface
    [Duration(MiliSecs): 111.368]
                  |     |
                  |     +- Area_SWE.Invoke Applet Method.Account Entry Applet
    [Duration(MiliSecs): 110.576]
                  |        |
                |       +- Area_OBJMGR.BusComp Write Record.Account [Duration(MiliSecs):
    105.292]
                  |        |  |
                  |        |  +- Area_OBJMGR.BusComp Write Record.Activity Plan
    [Duration(MiliSecs): 0.013]
                  |        |  |
                  |        |  +- Area_OBJMGR.BusComp Write Record.Activity Plan
    [Duration(MiliSecs): 0.005]
                  |        |  |
                  |        |  +- Area_OBJMGR.BusComp Query Execution.Activity Plan
    [Duration(MiliSecs): 4.004]
                  |        |  |  |
                  |        |  |  +- Area_OBJMGR.BusComp Write Record.Activity Plan
```

```
[Duration(MiliSecs): 0.006]
                |         |  |  |
           |      | |  +- Area_DBC.Prepare SQL statement [Duration(MiliSecs): 0.328]
              |         |  |  |
           |      | |  +- Area_DBC.Execute SQL statement [Duration(MiliSecs): 2.535]
              |         |  |
              |         |  +- Area_OBJMGR.BusComp Write Record.Activity Plan
[Duration(MiliSecs): 0.006]
              |         |  |
             |        |  +- Area_DBC.Get Record from DB [Duration(MiliSecs): 0.006]
              |         |  |
            |        |  +- Area_DBC.Write Record to DB [Duration(MiliSecs): 72.376]
             |        |
           |       +- Area_OBJMGR.Service Invoke Method.Task Assistant UI Service
[Duration(MiliSecs): 0.044]
             |
          +- Area_INFRA.Request Receipt (sessID SeqID) [Duration(MiliSecs): 21.650]
               |
              +- Area_OBJMGR.Service Invoke Method.Web Engine Interface
[Duration(MiliSecs): 19.900]
                |
                +- Area_OBJMGR.Service Invoke Method.Task Assistant UI Service
[Duration(MiliSecs): 0.046]
                |
                +- Area_OBJMGR.Service Invoke Method.Communications Client
[Duration(MiliSecs): 0.074]
                  |
                  +- Area_CSS.Communiations Client Invoke Method.ShellUIExit
[Duration(MiliSecs): 0.029]
```

HPOM Applications for Discovering and Analyzing Problematic Siebel Areas

SPI for Siebel provides applications that can be used to discover problematic areas in Siebel transactions. This analysis is divided into 2 steps:

1. To perform the Performance Aggregation Analysis, first run the application **Run Perf. Agg. Analysis**. A result of running a performance aggregation analysis of a Siebel ARM file is an extensible markup language (XML) output file. This file contains timing data for the instrumented areas.

   For these purpose the following applications are provided in the **SPI for Siebel/SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/SIEBSPI-SARM Performance Agg. Analysis** application group:

   - **Run Perf. Agg. Analysis UN*X**
   - **Run Performance Agg. Analysis WIN**

   This will generate the `siebspi_sarm_paa.xml` file that will be placed in the .../`siebspi/tmp` directory. This file is then used for displaying problematic areas.

   For more information about SARM Performance Aggregation Analysis refer to "Siebel ARM (SARM) Reference Information" on page 202.

2. Execute analysis that discovers problematic areas in Siebel transaction.

   To actually display the problematic areas, you must run the application for a

specific metric in the **SPI for Siebel/SIEBSPI-SARM/[SIEBSPI-UN*X Nodes | SIEBSPI-Windows Nodes]/SIEBSPI-SARM Perf.Agg.Anal./SIEBSPI-Show Problematic Areas** application group:

- **Average Exclusive Memory UN*X**
- **Average Exclusive Memory WIN**
- **Average Execution Time UN*X**
- **Average Execution Time WIN**
- **Average Inclusive Memory UN*X**
- **Average Inclusive Memory WIN**
- **Average Recursive Time UN*X**
- **Average Recursive Time WIN**
- **Average Response Time UN*X**
- **Average Response Time WIN**
- **Maximum Execution Time UN*X**
- **Maximum Execution Time WIN**
- **Maximum Recursive Time UN*X**
- **Maximum Recursive Time WIN**
- **Percent of Resp. Exec. Time UN*X**
- **Percent of Resp. Exec. Time WIN**
- **Percent of Resp.Recur. Time UN*X**
- **Percent of Resp.Recur. Time WIN**
- **Show Probl. Area for Cust.Metr. UN*X**
- **Show Probl. Area for Cust.Metr. WIN**
- **Total Exclusive Memory UN*X**
- **Total Exclusive Memory WIN**
- **Total Execution Time UN*X**
- **Total Execution Time WIN**
- **Total Inclusive Memory UN*X**
- **Total Inclusive Memory WIN**
- **Total Recursive Time UN*X**
- **Total Recursive Time WIN**
- **Total Response Time UN*X**
- **Total Response Time WIN**

Applications analyze Siebel areas (for example, SWE) for specific metric maximum values (for example, Average Exclusive Memory). When the area is found, it also analyses the child areas to see which child area took the most time.

After that, the application calculates in which child area the calls take the most time. When the call (method) is discovered, the application displays a performance summary for that call. The application also displays performance summary for a call that had the shortest execution time.

Example:

```
siebspi_sarm   -show_problematic_area
               -metric InclusiveMemory
               -submetric Average
               -detailed
```

Example output:

```
============================================================
Analyzing areas for Average InclusiveMemory
============================================================

Areas Average InclusiveMemory (ordered):

Workflow                                WORKFLOW   94464.00  bytes
Web Server Plugin                       SWSE       80677.00  bytes
Request Broker                          SRB        4216.00  bytes
Database Connector                      DBC        218.00  bytes

Area where the maximum Average InclusiveMemory was measured: Workflow(WORKFLOW)


MaxAllocated InclusiveMemory for WORKFLOW was measured here:

Workflow(WORKFLOW).Invoke workflow method(WORKFLOW_ENGNE_INVOKE).BusSvcMgrInit

This call performance data:

SarmID                      7841
Memory                      167586  bytes
ResponseTime                1003.068
PercentCPU                  4.67
SarmID                      7841
TypeLevel                   Sarm(1)
RootID                      7841
ParentSarmID                0
ParentTimeID                0
ParentProcID                0
AreaCodeSymbol              WORKFLOW
AreaDescription             Workflow
SubAreaCodeSymbol           WORKFLOW_ENGNE_INVOKE
SubAreaDescription          Invoke workflow method
Count                       1
Duration                    1003.068  ms
PooledMemoryUsage           197454  bytes
PooledMemoryCalls           7532
SystemMemoryUsage           167586  bytes
SystemMemoryCalls           2152
AppInt1                     0
AppInt2                     0
AppString1                  BusSvcMgrInit
AppString2


Workflow(WORKFLOW) child areas Average Memory:
```

```
Database Connector                      DBC        2.00  bytes

Child area where the maximum Average Memory was measured: Database Connector(DBC)


Workflow(WORKFLOW) child areas Average Memory/Invocations :

Database Connector                      DBC        0.00  bytes

Child area where the maximum Average Memory/Invocations was measured: Database
Connector(DBC)
```

After the first stage, if you do not want the analysis to go automatically to the area with the maximum value (in example above this is WORKFLOW), you must use the `-force_area {SARM area}` parameter.

Example:

```
siebspi_sarm   -show_problematic_area
               -metric InclusiveMemory
               -submetric Average
               -detailed
               -do_not_refresh
               -force_area SWSE
```

It is important that you use SARM files from Siebel Web Extension and from Siebel Server(s). Usually those SARM files are located on several computers. In such case, copy all files to one single computer in a temporary directory. Alternatively, share (NFS, SAMBA…) remote directories where SARM files are located. To use SARM files from different locations, specify the directories (local or remote) using the `-include_sarm_dirs` parameter.

Example:

```
siebspi_sarm   -show_problematic_area
               -metric InclusiveMemory
               -submetric Average
               -detailed
               -include_sarm_dirs /net/node/sarm,/this/too
```

This example will use SARM files on a local computer in original Siebel log directories and the SARM files in the following directories: `/net/node/sarm and /this/too`. For example, `/net/node/sarm` is a NFS mounted directory and `/this/too` is a local temporary directory.

If you do not want to use the SARM files in original Siebel log directories on the computer where you execute the application, specify the `-exclude_original_sarm_dirs` parameter.

Example:

```
siebspi_sarm   -show_problematic_area
               -metric InclusiveMemory
               -submetric Average
```

```
-detailed
-exclude_original_sarm_dirs
-include_sarm_dirs /net/node/sarm,/this/too
```

In this case, only the SARM files in directories `/net/node/sarm and /this/too` will be used.

Example output:

```
============================================================
Analyzing areas for Average InclusiveMemory
============================================================

Areas Average InclusiveMemory (ordered):

Workflow                                WORKFLOW   94464.00  bytes
Web Server Plugin                       SWSE       80677.00  bytes
Request Broker                          SRB        4216.00  bytes
Database Connector                      DBC        218.00  bytes

Area where the maximum Average InclusiveMemory was measured: Workflow(WORKFLOW)


Further analysis was forced with this area: SWSE



MaxAllocated InclusiveMemory for SWSE was measured here:

Web Server Plugin(SWSE).Receive request(SWSE_REQUEST)

This call performance data:

SarmID                          610212
Memory                          269962  bytes
ResponseTime                    120001.270
PercentCPU                      0.00
SarmID                          610212
TypeLevel                       Sarm(1)
RootID                          610212
ParentSarmID                    0
ParentTimeID                    0
ParentProcID                    0
AreaCodeSymbol                  SWSE
AreaDescription                 Web Server Plugin
SubAreaCodeSymbol               SWSE_REQUEST
SubAreaDescription              Receive request
Count                           1
Duration                        120001.270  ms
PooledMemoryUsage               273226  bytes
PooledMemoryCalls               1242
SystemMemoryUsage               269962  bytes
SystemMemoryCalls               276
AppInt1                         0
AppInt2                         0
AppString1
AppString2
```

```
MaxDeallocated InclusiveMemory for SWSE was measured here:

Web Server Plugin(SWSE).Receive request(SWSE_REQUEST).!1.9fc.527d

This call performance data:

SarmID                      90636
Memory                      -3056999  bytes
ResponseTime                237.767
PercentCPU                  0.07
SarmID                      90636
TypeLevel                   Sarm(1)
RootID                      90636
ParentSarmID                0
ParentTimeID                0
ParentProcID                0
AreaCodeSymbol              SWSE
AreaDescription             Web Server Plugin
SubAreaCodeSymbol           SWSE_REQUEST
SubAreaDescription          Receive request
Count                       1
Duration                    237.767  ms
PooledMemoryUsage           -3052231  bytes
PooledMemoryCalls           1443
SystemMemoryUsage           -3056999  bytes
SystemMemoryCalls           366
AppInt1                     -1
AppInt2                     0
AppString1
AppString2                  !1.9fc.527d


Web Server Plugin(SWSE) child areas Average Memory:

Web Server Plugin                       SWSE       0.00  bytes

Child area where the maximum Average Memory was measured: Web Server Plugin(SWSE)


Web Server Plugin(SWSE) child areas Average Memory/Invocations :

Web Server Plugin                       SWSE       0.00  bytes

Child area where the maximum Average Memory/Invocations was measured: Web Server
Plugin(SWSE)
```

Similarly, you can use the following parameters to force the analysis for other stages:

```
-force_child_area {SARM child area from which
                   further analysis starts on
                   the second level}

-force_child_area_per_invocations {SARM child area
                from which further analysis starts
                for metric / invocations  on the
                second level}
```

Chapter 13

Monitoring Siebel End User Experience and Response Times

About SMART Probe

SMART Probe is a program that runs on Siebel clients and shows the clients Siebel server availability and connectivity. It monitors the login time and transaction time with two monitors that are started every n-seconds. To obtain the transaction time, SMART Probe runs a synthetic transaction, which is a set of pre-defined client actions, for example, query for Account Names in Accounts. Administrators are notified if real-time response times exceed the predefined monitor thresholds or if the Siebel server/Siebel database is not available. SMART Probe works on any computer where a Siebel Mobile/Dedicated web client is installed.

The SMART Probe template for monitoring transaction time, `SIEBSPI_SP_TRANSACTION_TIME`, or the template for collecting performance data, `SIEBSPI_SP_PERFORMANCE` (Siebel client login and transaction time), in the template group **SPI for Siebel/SIEBSPI-Siebel Business Applications/SIEBSPI-Siebel *.*.*/ SIEBSPI-Smart Probe** can be modified to execute a different transaction.

For example, assume that you want to query the Last Names of your Contacts. You can modify the `SIEBSPI_SP_TRANSACTION_TIME` template to monitor the transaction time of the user query by performing the following steps:

1. Log in as opc_adm.
2. Open the Message Source Templates window.
3. Double-click SPI for Siebel and then the SIEBSPI-Siebel eBusiness Appl template group.
4. Double-click SIEBSPI-Siebel *.*.* and open the SIEBSPI-Smart Probe template group.
5. Click the SIEBSPI_SP_TRANSACTION_TIME template and then click [Modify…].
6. In the Monitor Program or MIB ID text field, add the -busobj, -buscomp and -compfield parameters. For example:

   ```
   siebspi_sp -t -busobj "Contact" -buscomp "Contact" -compfield "Last Name"
   ```

Additionally, the `SIEBSPI_SP_PERFORMANCE` policy can be modified in the same manner.

NOTE

For the changes to take effect deploy the new policies on a node where the Siebel Mobile/Dedicated web client is installed.

OVIS Smart Probe for Siebel

Installation Instructions

For information on how to install and configure OVIS Smart Probe for Siebel, refer to *OVIS SMARTProbe for Siebel Installation and Configuration Guide*.

You can find the self-extracting installation file for HP Internet Services and OVIS Smart Probe for Siebel documentation:

- `OVISProbeforSiebel_03_20.exe`
- `OVIS_SmartProbe_for_Siebel_03_20.pdf`

in the following directory on the HPOM management server:

- On 8.10:

  `C:\Documents and Settings\All Users\Application Data\HP\HP BTO Software\shared\SPI-Share\siebspi\ovis_probe`

- On 8.00:

  `C:\Program Files\HP\HP BTO Software\Data\shared\SPI-Share\siebspi\ovis_probe`

- On 7.50:

  `C:\Program Files\HP OpenView\Data\shared\SPI-Share\siebspi\ovis_probe`

OVIS SMARTProbe for Siebel target is a Web Server that is used by Siebel Web Clients to access Oracle's Siebel Business Applications. OVIS SMARTProbe for Siebel supports all Web Servers that are supported by:

- Oracle's Siebel Business Applications 7.7, 7.8 or 8.x.

Chapter 14

The SPI for Siebel Service

The SPI for Siebel Service

The SPI for Siebel service is an interface between Siebel's srvrmgr application and the SPI for Siebel executables that request information from it. Therefore, the SPI for Siebel service is installed only on managed nodes where the Siebel server is installed. The main benefit of the service is that you do not need to start the srvrmgr command-line application each time you require some data from the Siebel enterprise.

The SPI for Siebel service is located in:

- on Windows nodes in
  `{HPOM Agent install dir}\siebspi\bin\siebspi_svc.exe`
- on AIX nodes in `/usr/lpp/OV/siebspi/bin/siebspi_svc`
- on other UNIX nodes in `/opt/OV/siebspi/bin/siebspi_svc`

You can use several applications and commands to manage the SPI for Siebel service. From the HPOM management server, you can use the following applications from the **SPI for Siebel/SIEBSPI-Maintenance/SIEBSPI-SPI for Siebel Service** application group:

- `Start SPI for Siebel Service`
- `Stop SPI for Siebel Service`
- `Restart SPI for Siebel Service`
- `SPI for Siebel Status`

The described applications use the following commands, which can also be started manually:

- `siebspi_mgr -service start_spisvc`
  Starts the SPI for Siebel Service
- `siebspi_mgr -service stop_spisvc`
  Stops the SPI for Siebel Service
- `siebspi_mgr -service restart_spisvc`
  Restarts the SPI for Siebel Service
- `siebspi_mgr -service spisvc_status`
  Displays the status of the SPI for Siebel Service

You can also use the following commands on Windows Nodes:

- `siebspi_svc -install`
  Installs the SPI for Siebel Service
- `siebspi_svc -remove`

Removes the SPI for Siebel Service

and on UNIX Nodes:

- `siebspi_svc -start`
  Starts the SPI for Siebel Service
- `siebspi_svc -stop`
  Stops the SPI for Siebel Service
- `siebspi_svc -status`
  Displays the status of the SPI for Siebel Service

N O T E

On UNIX nodes, "SPI for Siebel Service" is not started automatically after the system starts. Therefore, start this service manually using the applications described above.
Make sure that the "SPI for Siebel Service" on UNIX nodes is started with the appropriate {siebel user name} if other than root. For starting and stopping the services, use the full path (for example, to start on the AIX nodes: `/usr/lpp/OV/siebspi/bin/siebspi_svc -start`)

Monitoring the SPI for Siebel Service

The SPI for Siebel Service is monitored if you distribute the **SIEBSPI-Internal** template group.

If the SPI for Siebel Service is stopped, you will receive a critical error message in your message browser. The message instructions will tell you to start the service using the commands described in the previous section.

SPI for Siebel Service Error Messages

Descriptions of SPI for Siebel Service error messages:

SPISVC-001: Check if the Siebel gateway service is running. Also make sure that the configuration parameters are correct.

You should check if the Siebel gateway service is running. If it is, check if the SPI for Siebel configuration file (`spi.cfg`) parameters on the node are correct.

Check the `SIEBEL_ENTERPRISE`, `SIEBEL_GATEWAY` and `ADMIN_USERNAME` parameters. Also make sure that you entered the right administrator password for Siebel Enterprise.

SPISVC-002: Internal SPI for Siebel service/daemon error.

Could not execute the command.

An internal error has occurred. Check the SPI for Siebel error log file on the managed node.

SPISVC-003: Cannot connect to the SPI for Siebel service/daemon (`siebspi_svc`). Check if the service/daemon is running.

Refer to "Troubleshooting" on page 201 for additional information.

SPISVC-004: SPI for Siebel Service is stopping.

If you receive this message, an attempt was made to make a request on the service while it was stopping.

SPISVC-005: SPI for Siebel Service is busy. Maximum number of connections reached.

This message indicates that the maximum number of requests is being handled and therefore the request for executing a command was rejected. If you consistently receive this message, you should reduce the number of templates on the managed node.

SPISVC-006: Timeout occurred. The request could not be processed in the specified time.

You will receive this message in the SPI for Siebel error log file if a request that has been made could not be processed in a specified timeframe. If you receive this message often, most likely the machine is very slow (check the resources usage) or there is a problem with the Siebel Gateway service.

SPISVC-007: No 'srvrmgr' available on host. Executing 'srvrmgr' commands is not allowed.

You will receive this message if a request has been made to execute a 'srvrmgr' command and there is no 'srvrmgr' application available on the machine. If you receive this message on a machine where only the Siebel Application Server is installed, this is probably a SPI for Siebel configuration error. If you receive these messages on a machine with only Siebel gateway installed, you probably installed templates for the Siebel Server on the Siebel Gateway node.

Chapter 15

Customizing SPI for Siebel

Message Correlation and State-based Browser

Message correlation helps to prevent your message browser from becoming cluttered with messages that describe the same problem. SPI for Siebel generates messages with pre-configured "Message Keys" and "Acknowledging Messages with Message Keys" properties. These make implementation of the concept for threshold as easy as possible.

NOTE

This feature is implemented in the most important templates.

About State-based Browsers

When you acknowledge messages automatically, a maximum of one message per managed object exists in the browser. This message reflects the current status of the object. Thus, the message browser has become a state-based browser. SPI for Siebel has many *Message Key* and *Acknowledge messages* with message key properties within templates. For additional information, refer to one of the templates in the list below. (Note that this list is just a representative sample of all available message keys.)

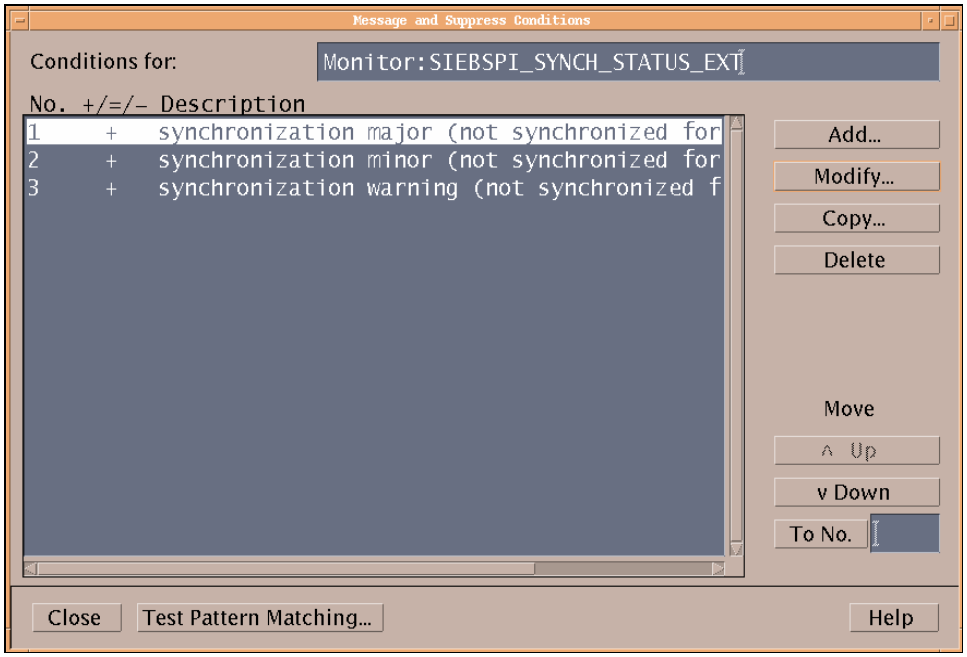
- `SIEBSPI_SERVER_AVAILABILITY_EXT`
- `SIEBSPI_SERVER_PROCESS_EXT`
- `SIEBSPI_SIEBEL_FS`
- `SIEBSPI_NUM_TASKS_TOO_HIGH_EXT`
- `SIEBSPI_COMP_STATUS_EXT`
- `SIEBSPI_CHECK_TASKS_EXT`
- `SIEBSPI_GATEWAY_PROCESS`
-

Changing Email for Synchronization Status Reporting

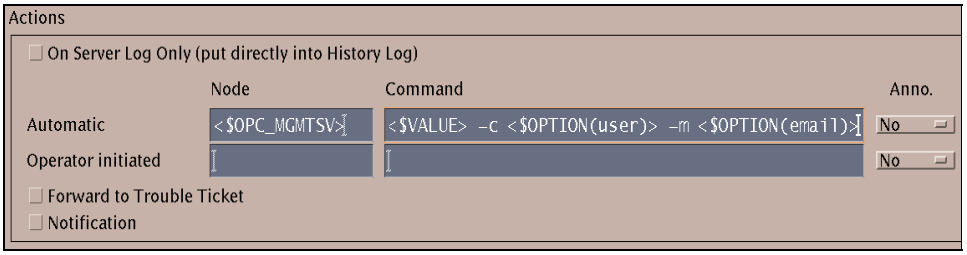
By default, email with information that a remote user has not synchronized for the specified amount of time is sent only to that user. If you want that mail to be also sent to a fixed email address (for example, a Siebel administrator) or only to a fixed email address, modify the `SIEBSPI_SYNCH_STATUS_EXT` template, located in the **SPI for Siebel/SIEBSPI-Siebel eBusiness Appl/ SIEBSPI-Siebel *.*.*/SIEBSPI-Siebel *.*.* Server/SIEBSPI-Mobile Clients, Backlogs** template group.

Changing Email

Email must be changed in all three conditions of the `SIEBSPI_SYNCH_STATUS_EXT` template. (Refer to the figure below.)



Note that every threshold level contains an automatic command that is used for sending email to the recipient. The email address of a recipient is specified with the `-m` parameter.



The default value is:
`-m <$OPTION(email)>`

This indicates that email is sent only to the user who was not synchronized for the specified amount of time.

Examples

Example 1:
`-m "<$OPTION(email)>,name1@dom1.com,name2@dom2.com"`

This will send an email message to the user who was not synchronized for the specified amount of time, and also to the following email addresses:
`name1@dom1.com`
`name2@dom2.com`

Example 2:
`-m name@domain.com`

This will send an email message only to the `name@domain.com` email address.

Sending Email for Synchronization Status from the Managed Node

By default, emails are sent from the management server, which requires that the management server has sendmail configured. Additionally, you can configure SPI for Siebel to send emails from the managed nodes where the Siebel Servers are installed. Follow the procedure below:

1. Log in as opc_adm.
2. Open the Message Source Templates window.
3. Double-click **SPI for Siebel**, followed by **SIEBSPI-Siebel eBusiness Appl** and **SIEBSPI-Siebel *.*.***.

4. Open the **SIEBSPI-Siebel *.*.* Server**, and then the **SIEBSPI-Mobile Clients**, **Backlogs** template group.
5. Select the `SIEBSPI_SYNCH_STATUS_EXT` monitor template.
6. Select `[Conditions]`. You should see a window with three conditions listed. Change each of these conditions. Click `[Modify]` to continue with the changes.
7. In the new window that opens, in the **Automatic** field within the **Actions** box, delete the `<$OPC_MGMTSV>` string in the **Node** field. Additionally, change the data listed in the **Command** field as follows:

   ```
   siebspi_smail -t <$VALUE> -c <$OPTION(user)> -m <$OPTION(email)> -
   node
   ```

8. To confirm the changes, click `[OK]`.

NOTE

Assign and install the monitor template on a node where the Siebel server is installed for the changes to take effect.

Managing Multiple Siebel Enterprise Environments Concurrently

By default, the SPI for Siebel configuration file `spi.cfg` is prepared and maintained on the management server. This file is distributed with the software components and the configuration update to the managed nodes where the SPI for Siebel configuration is updated.

To manage multiple Siebel enterprise environments at the same time, you need to prevent those automatic SPI for Siebel configuration updates from occurring. For this purpose you can use the configuration entry `MANUAL_CONFIGURATION` in the SPI for Siebel configuration file. To prevent automatic updates of the SPI for Siebel configuration, set this flag to `Y (Yes)`. Note that the default value is `N (No)`.

Example:

```
MANUAL_CONFIGURATION=Y
```

Renaming SPI for Siebel Templates

SPI for Siebel supports changing the name of any template that comes with SPI for Siebel. However, renaming a template can have side effects, so this should be done very carefully following the instructions and rules described in this chapter.

Renaming Templates That Are Using siebspi_extmon Program for Monitoring Siebel Environment

You can rename any of the SPI for Siebel templates. When renaming a template, add a new parameter to the template `program name` parameter, called `-func {functionality}` or `-f {functionality}`. The value of the `-f` parameter must be the original template name without the prefix `SIEBSPI_`.

Example:

Original template: `SIEBSPI_SERVER_AVAILABILITY`

Original template program name:
`siebspi_extmon -srvr -m SIEBSPI_SERVER_AVAILABILITY`

New template name: `MY_SIEBSPI_SERVER_AVAILABILITY`

New template program name:
```
siebspi_extmon -srvr -m MY_SIEBSPI_SERVER_AVAILABILITY \
-f SERVER_AVAILABILITY
```

Some SPI for Siebel templates send monitor messages to other SPI for Siebel templates, which are collecting data and reacting to issues. These pairs of templates usually have similar names with added postfix `_EXT`.

For example, the template `SIEBSPI_SERVER_AVAILABILITY` checks the Siebel Servers availability. The results are sent to the template `SIEBSPI_SERVER_AVAILABILITY_EXT`. In case you rename an external monitor template, it is important to follow the next rules.

The easiest way to rename an external monitor is adding the `_EXT` postfix to the name specified with the `-m` parameter.

Example:

Template A: `MY_SIEBSPI_SERVER_AVAILABILITY`

External template B: `MY_SIEBSPI_SERVER_AVAILABILITY_EXT`

Template A command:

siebspi_extmon -srvr -m `MY_SIEBSPI_SERVER_AVAILABILITY`

The external monitor can also have a different name than its paired template. In this case, you must use the `-extmon` parameter.

Example:

Template A: `MY_SIEBSPI_SERVER_AVAILABILITY`

External template B: `NEW_SIEBSPI_SERVER_AVAILABILITY_EXT`

Template A command:

```
siebspi_extmon -srvr -m MY_SIEBSPI_SERVER_AVAILABILITY \
-extmon NEW_SIEBSPI_SERVER_AVAILABILITY_EXT
```

Renaming Templates That Monitor the Siebel Server Components

Templates that monitor Siebel Components do not require the `-f` parameter for functionality description. Functionality is recognized automatically from the `-component` parameter, which is always present in the command line.

The old mandatory mask for the component the template name (`SIEBSPI_*_COMPONENT`) is obsolete. The template name can be any chosen name but must be specified with the `-m` parameter in the command line:

New template name: `NEW_SIEBSPI_SCC_OBJ_MGR_COMPONENT`

New template program name:

```
siebspi_extmon -srvr -m NEW_SIEBSPI_SCC_OBJ_MGR_COMPONENT -component
"Call Center Object Manager" -perf -status -max_tasks -task_exit
```

By default, all `SIEBSPI_*_COMPONENT` monitor templates send results to standard Siebel component external monitor template (`SIEBSPI_CHECK_TASKS_EXT`, `SIEBSPI_COMP_STATUS_EXT`, `SIEBSPI_NUM_TASKS_TOO_HIGH_EXT`, `SIEBSPI_NUM_TASKS_TOO_LOW_EXT`). Therefore common thresholds, defined in those external monitor templates, are applied to all of them.

In situations when you renamed component external monitor templates or you need to define component specific thresholds, instructions, or actions, you can use the following parameters:

Parameter	Description
-extmon	Custom external monitor template.
-[status2| min_tasks2| max_tasks2| task_exit2]	What should be monitored and sent to custom external monitor template.

This way you define what should be monitored and to which external monitor template the results should be sent. You can combine standard parameters and the

custom one in one component template as long as you define custom external templates.

The required postfixes for custom external monitor templates are:

- component status external monitor template = `*_CS_EXT`
- task exit status external monitor template = `*_TS_EXT`
- number of tasks too low external monitor template = `*_TL_EXT`
- number of tasks too high external monitor template = `*_TH_EXT`

Example:

Siebel component "Workflow Monitor Agent" should send status results to custom monitor template `SIEBSPI_WORK_MON_CS_EXT`. Additionally, the number of running tasks should be monitored (alarm if the number of running tasks: >70%, >90%).

Perform the following steps:

- Create a copy of the `SIEBSPI_COMP_STATUS_EXT` external monitor template and save it as `SIEBSPI_WORK_MON_CS_EXT`
- Customize Thresholds (if needed, also: Actions, Instructions…)
- Customize the `SIEBSPI_WORK_MON_COMPONENT` template command line to:

```
siebspi_extmon -srvr -m SIEBSPI_WORK_MON_COMPONENT -component
"Workflow Monitor Agent" -extmon SIEBSPI_WORK_MON -status2 -
max_tasks
```

Renaming Templates That Are Using siebspi_sp Program for Monitoring Siebel Environment

A new parameter `-m` is introduced in `siebspi_sp` program. If the template is renamed, this parameter is set to the new monitor template name. Functionality is recognized automatically from other parameters, and the `-f` parameter is not required.

Example:

Original template: `SIEBSPI_SP_LOGIN_TIME`

Original template program name:
`siebspi_sp -l`

New template name: `MY_SIEBSPI_SP_LOGIN_TIME`

New template program name:
`siebspi_sp -l -m MY_SIEBSPI_SP_LOGIN_TIME`

Renaming Templates That Are Using siebspi_ressvc Program for Monitoring Siebel Environment

This program is used only by log file template SIEBSPI_RCD_AGT_LOG in automatic actions for conditions number 2 in 3. All messages this template finds in a log file are sent to the external monitor SIEBSPI_RES_SVC_EXT. In case you rename this external monitor, you should use the additional -extmon parameter in this two automatic actions commands.

Example:

Original external template name: SIEBSPI_RES_SVC_EXT

Original SIEBSPI_RCD_AGT_LOG template automatic action command:
siebspi_ressvc -s 1 -m "<subfacility>: <message>" -c <facility>

New external template name: MY_SIEBSPI_RES_SVC_EXT

New SIEBSPI_RCD_AGT_LOG template automatic action command:
siebspi_ressvc -s 1 -m "<subfacility>: <message>" -c <facility> -extmon MY_SIEBSPI_RES_SVC_EXT

Renaming Templates That Are Used in Autodiscovery Process

You can perform auto discovery using the "Autodiscovery" template, or the template SIEBSPI_ENTERPRISE_CONFIGURATION. Both send new and changed Siebel service tree configuration to external monitor template SIEBSPI_CONF_UPD_EXT.

In case you rename the external monitor template SIEBSPI_CONF_UPD_EXT, two actions are required:

- The autodiscovery application command line should be updated with the -extmon parameter to specify the new external monitor name
- Program command-line in the SIEBSPI_ENTERPRISE_CONFIGURATION template should be updated with the -extmon parameter to specify the new external monitor name

Example:

Original external template name:SIEBSPI_CONF_UPD_EXT

Original SIEBSPI_ENTERPRISE_CONFIGURATION template program name:
siebspi_extmon -srvr -m SIEBSPI_ENTERPRISE_CONFIGURATION

Original Autodiscovery application command line:
siebspi_autod

New external template name: MY_SIEBSPI_CONF_UPD_EXT

New SIEBSPI_ENTERPRISE_CONFIGURATION template program name:
siebspi_extmon -srvr -m SIEBSPI_ENTERPRISE_CONFIGURATION -extmon MY_SIEBSPI_CONF_UPD_EXT

New Autodiscovery application command line:
siebspi_autod -extmon MY_SIEBSPI_CONF_UPD_EXT

Renaming SPI for Siebel Internal Monitor Template

SPI for Siebel is using one internal monitor template for intercepting some common problems that can occur in the SPI programs. Default name for this template is SIEBSPI_INT_MESSAGE_EXT and can be found in the SIEBSPI-Internal template group.

Renaming this template is a special case. In case you change the name for this template, the new name must be written in the SPI for Siebel configuration file on the managed node:
<AgentInstallDir>/siebspi/conf/spi.cfg

You must add a new parameter called "INT_MESSAGE_EXT" to this file:
INT_MESSAGE_EXT = <NEW_NAME>

Example:
INT_MESSAGE_EXT = INT_MESSAGE_EXT

Checking Mechanism for Template Consistency

Some SPI for Siebel templates send monitor messages to other SPI for Siebel templates, which are collecting data and reacting to issues. These pairs of templates usually have similar names with added postfix _EXT.

For example, the template SIEBSPI_SERVER_AVAILABILITY checks the Siebel Servers availability. The results are sent to the template SIEBSPI_SERVER_AVAILABILITY_EXT.

It is important that you distribute both templates to the system. If you distributed the first template to the system, you should also distribute the second template.

SPI for Siebel is able to check if all external templates that are used by templates distributed on the managed node are also distributed to the node (consistency checking). By default, consistency checking is disabled (MONITOR_CHECK = N). This is only necessary when a new template is distributed to the managed node.

You can enable consistency checking to ensure everything is distributed to the managed node. Consistency checking is enabled by setting MONITOR_CHECK = Y in SPI for Siebel configuration file on the managed node:

<AgentInstallDir>/siebspi/conf/spi.cfg

To disable consistency checking, set MONITOR_CHECK = N in the SPI for Siebel configuration file on the managed node.

When consistency checking is enabled and any of the used external templates are missing, a message is sent to the SPI for Siebel internal template (by default SIEBSPI_INT_MESSAGE_EXT). The message contains the following attributes:

- message group: siebspi_int
- application: SPI for Siebel
- object: template problem

message text: SIEBSPI-018: Template "XY" that is used by another template is not deployed on the system.

Chapter 16

Quick Reference

SPI for Siebel Applications and Tool Groups

When you install SPI for Siebel, a new top level application group is added in the HPOM administrator GUI.

The *SPI for Siebel* application group contains all applications, used for managing your Siebel environment. It contains the following application groups:

- `SIEBSPI-Actuate`
- `SIEBSPI-Maintenance`
- `SIEBSPI-Performance`
- `SIEBSPI-Resonate`

- `SIEBSPI-SARM`
- `SIEBSPI-Siebel Users Activity`

Running Applications in Application Groups

SPI for Siebel contains many applications, for example, applications for configuring SPI for Siebel, starting Siebel servers, tasks, and so on. Because of some differences in operating systems, based on UNIX and Windows, applications are always separated in two groups:

- **Windows Nodes**
- **UN*X Nodes**

Application labels and usage methods in these two groups are the same. However, in some cases the UN*X Nodes group contains additional applications that are not in the Windows Nodes group.

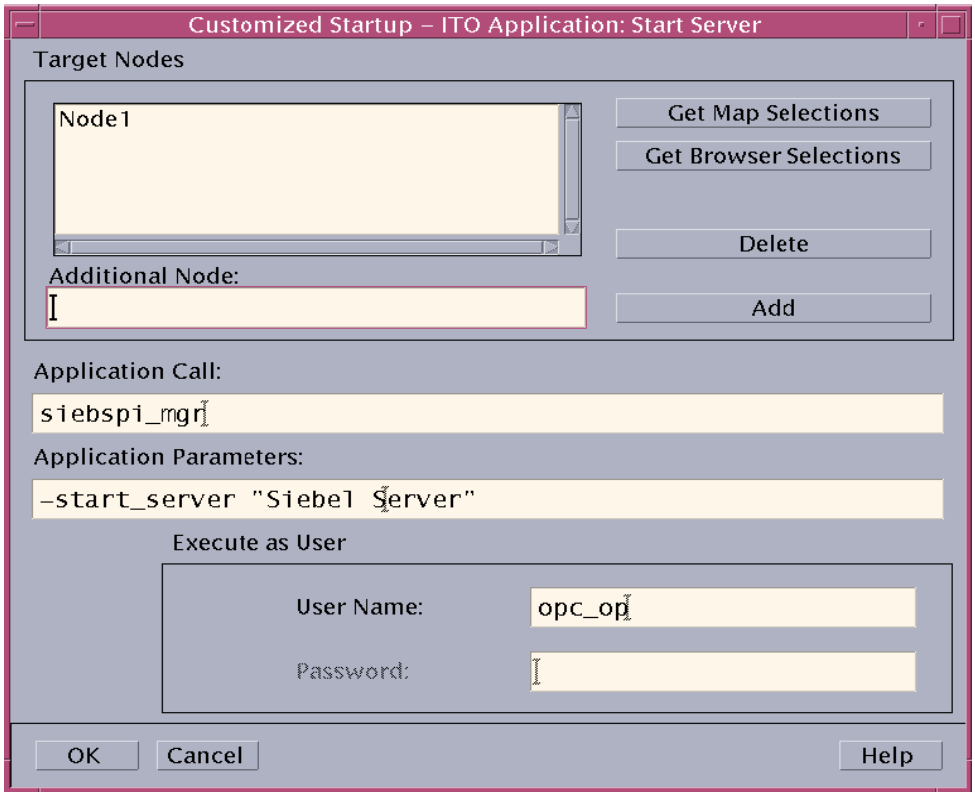
Most applications must be run as a “Customized Startup”, where you must add or change additional parameters. For example, if you want to start the Siebel server named `myserver`, use the Start Server application with an additional parameter: `-start_server "myserver"`

Example: From the `SIEBSPI-Tools` group, run the **Start Server** application.

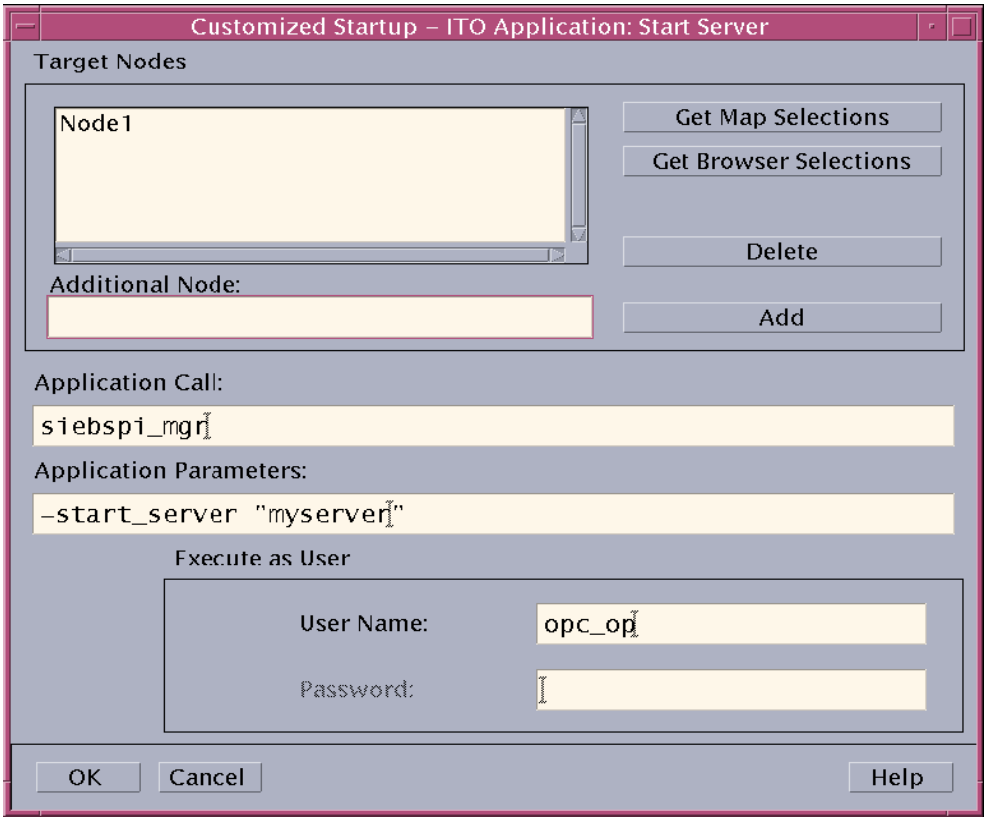
To run the **Start Server** application, perform the following steps:

1. Click the node where you want to run the application, for example, **Node1**.
2. Right-click the **Start Server** application.

3. From the menu that opens, select **Customized Startup**. The following dialog box opens:



4. In the Application Parameters: field, change the “Siebel Server” value to “myserver”:



5. Click [OK] and wait for the application to execute.

NOTE

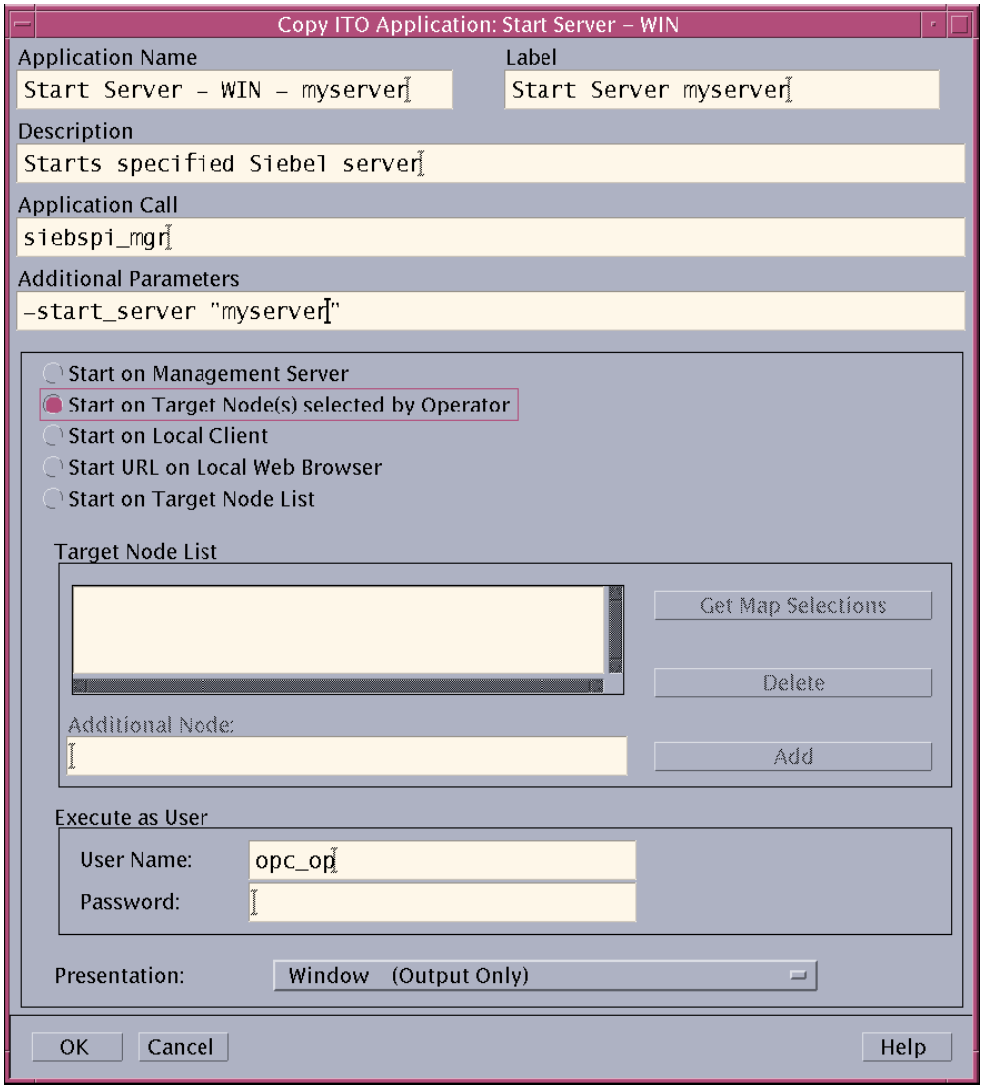
You can customize tools to change parameters to fixed values. This can be done to enlarge your application group with new applications, for example, "Start Server myserver1", "Start Server myserver2", and so on.

Example:

NOTE

You must be logged in as the opc_adm user administrator to perform the following actions.

1. Right-click the **Start Server** application.
2. In the menu that opens, select **Copy**. The following dialog box opens:



3. Change the following fields as appropriate: *Application Name*, *Label*, and *Additional Parameters*.

4. When all changes have been made, click [OK].

SIEBSPI-Maintenance

Top level application group `SIEBSPI-Maintenance` contains the following application groups:

- `SIEBSPI-Configuration`
- `SIEBSPI-Deinstallation`
- `SIEBSPI-Documentation`
- `SIEBSPI-Installation`
- `SIEBSPI-Licensing`
- `SIEBSPI-SPI for Siebel Service`
- `SIEBSPI-Support`

SIEBSPI-Configuration

The application group `SIEBSPI-Configuration` contains the following application and application groups:
`Change configuration file`

SIEBSPI-UN*X Nodes

- `Configure-direct`
- `Configure-interactive`

SIEBSPI-Windows Nodes

- `Configure-direct`

Change configuration file

Changes the configuration file `spi.cfg` for SPI for Siebel that was generated with the `siebspi_configure` command line application after the installation. The application opens a new xterm window and asks you for every input. If you want to run the application in non-interactive mode, you can use the parameters described below.

Command: `/opt/OV/siebspi/bin/siebspi_configure`

Execute on: Management Server

Required Parameters	Description
-configure_direct	Starts the tool in non-interactive mode using the additional parameters (described below) that are provided to configure the SPI for Oracle's Siebel Business Applications product.
-perf_agent "NONE|MWA|CODA"	Specifies the performance agent type. If performance agent is not specified, the "NONE" value should be used.

Optional Parameters	Description
-g "Gateway"	Specifies the Gateway server address.
-u "username"	Server administrator username.
-p "password"	Server administrator password.
-e "Enterprise Server"	Enterprise server name.
-resonate "Y|N"	If set to Y, resonate starts load balancing work. If set to N, this functionality is not enabled.
-dbtype "DB2|ORACLE|MSSQL"	Selects a database.
-cluster "Y|N"	If set to Y, Siebel Server is in cluster on this node. If set to N, this functionality is not enabled.
-smtp_port "SMTP port"	Mail server port.
-smtp_server "SMTP server"	Mail server.
-sieb_locale "locale"	Siebel locale.
-sieb_lang "Siebel Language"	Siebel language.
-spi_locale "locale"	SPI for Siebel locale.

Configure-direct

Configures SPI for Siebel. All parameters are optional, but at least one of them must be specified. Only specified parameters are changed in the configuration file.

Command:
```
siebspi_mgr -configure_direct
            -g "Gateway"
            -u "Username" -p "Password"
            -e "Enterprise Server"
            -resonate "Y or N"
            -dbtype "DB2|ORACLE|MSSQL"
            -sieb_lang "Siebel Language"
            -sieb_locale "locale"
```

```
-spi_locale "locale"
-host "new_host_name"
-smtp_server "SMTP mail server"
-smtp_port "Mail server port"
-perf_agent "NONE|MWA|CODA"
```

Required Parameters	Description
-perf_agent "NONE|MWA|CODA"	Specifies the performance agent type. If performance agent is not specified, the "NONE" value should be used. The parameter is required.

Optional Parameters	Description
-g "Gateway"	Specifies the Gateway server address.
-e "Enterprise Server"	Enterprise server name.
-u "username"	Server administrator username.
-p "password"	Server administrator password.
-resonate "Y|N"	If set to Y, resonate starts load balancing work. If set to N, this functionality is not enabled.
-sieb_lang "Siebel Language"	Siebel language.
-sieb_locale "locale"	Siebel locale.
-spi_locale "locale"	SPI for Siebel locale.
-host "new_host_name"	Siebel host name.
-dbtype "DB2|ORACLE|MSSQL"	Selects a database.
-cluster "Y|N"	If set to Y, Siebel Server is in cluster on this node. If set to N, this functionality is not enabled.
-smtp_port "Mail server port for example, 25"	Mail server port.
-smtp_server "SMTP server"	Mail server.
[-swe {home_dir}]	Siebel Web Extension home directory.
[-actuate {home_dir}]	Actuate home directory.
[-web_server {home_dir}]	Web server home directory.

Configure-interactive (on Unix platforms only)

Configures SPI for Siebel. Application opens telnet connection. Thus, the proper username and password must be specified, for example, root. The application asks you for every input.

Command: `siebspi_mgr -configure`

Execute on: Managed Node

SIEBSPI-Deinstallation

The application group, `SIEBSPI-Deinstallation`, contains the following application groups:

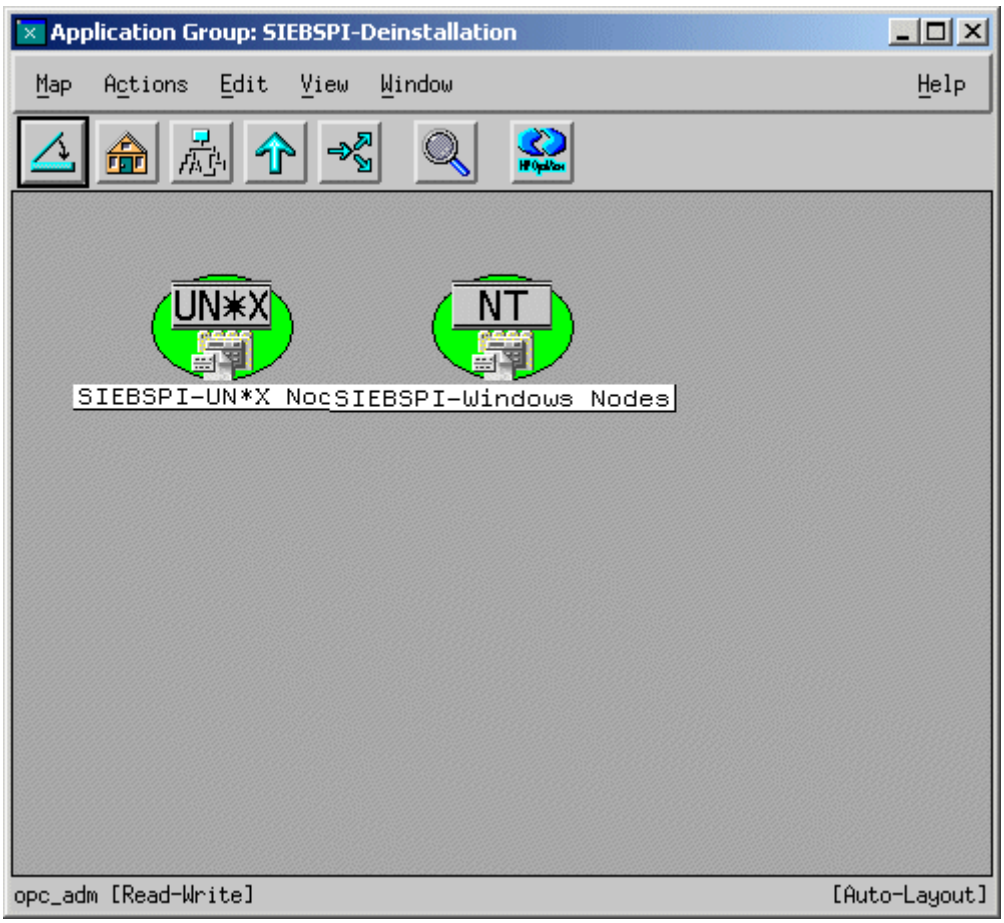
SIEBSPI-Windows Nodes

- Remove from Windows Node

SIEBSPI-UN*X Nodes

- Remove SPI for Siebel - WIN

Figure 5. SIEBSPI-Deinstallation application group



Remove from UN*X Node

Removes SPI for Siebel from the UNIX node.

Command: `siebspi_mgr -deinstall`

Remove from Windows Node

Removes SPI for Siebel from the Windows node.

Command: `siebspi_mgr -deinstall`

SIEBSPI-Licensing

The application group `SIEBSPI-Licensing` contains two application groups:

SIEBSPI-UN*X Nodes

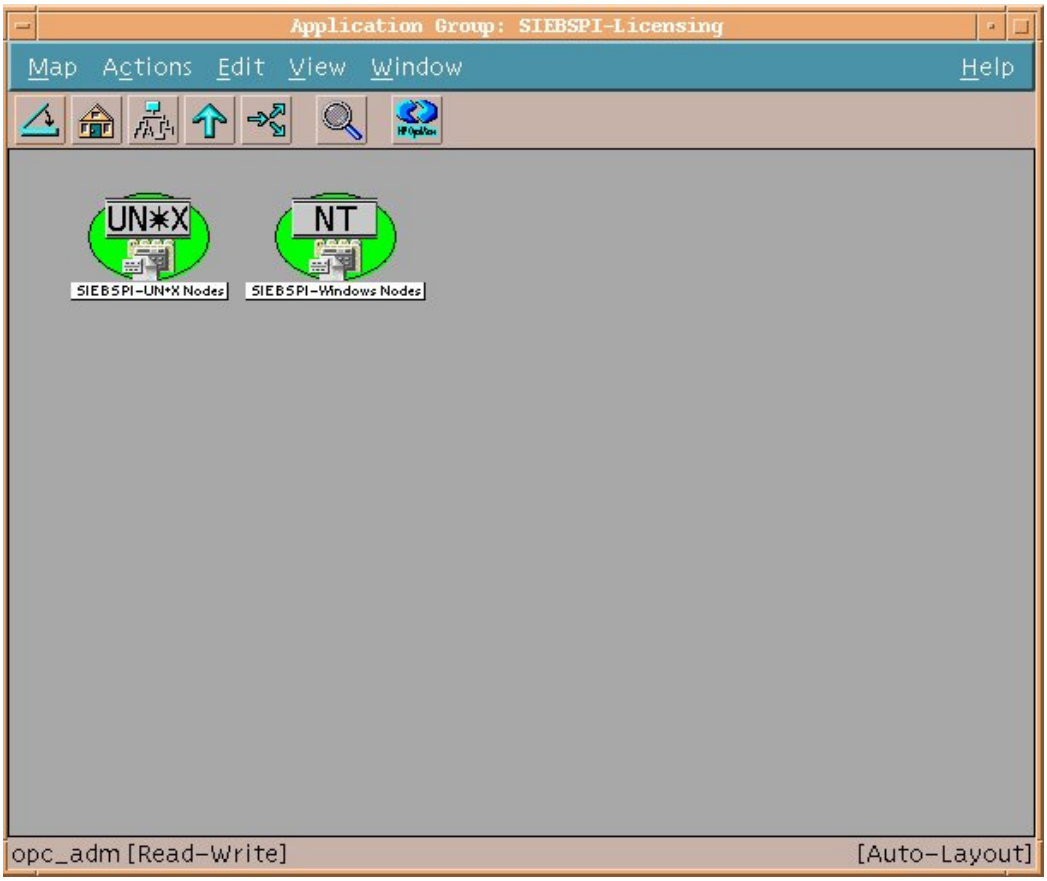
- `1. Clear License Request File`
- `2. Generate License Requests`
- `3. Merge License Activation Codes`
- `List License Activation Codes`

SIEBSPI-Windows Nodes

- `1. Clear License Request File`
- `2. Generate License Requests`
- `3. Merge License Activation Codes`

- List License Activation Codes

Figure 6. SIEBSPI-Licensing application group



1. Clear License Request File

This application clears the license request file `siebspi_license_requests.dat` on the management server:

- `/opt/OV/siebspi/`

It executes on the management server only and does not need to be executed on any of the managed nodes. It is usually the first step when requesting SIEBSPI licenses, hence number 1 in front of the application name.

Command: `/opt/OV/siebspi/bin/siebspi_licmgr -clear`

2. Generate License Requests

This application generates the SIEBSPI license request information for the managed node. The application is usually executed on several nodes at once to quicken license request generation. Note that license request information for all nodes is collected on the management server in a single license request file:

`/opt/OV/siebspi/siebspi_license_requests.dat`

It is usually the second application executed when requesting SIEBSPI licenses, hence number 2 in front of the tool name.

NOTE

For this application to work correctly, a node on which the application is executed needs to have all templates distributed from the `SIEBSPI Licensing` template group.

Command: `siebspi_licmgr -generate`

Required Parameters	Description
`-company_name "Company Name"`	Specifies the company name for which SPI for Siebel will be licensed.

3. Merge License Activation Codes

This application merges newly obtained SIEBSPI license activation codes to existing license activations. Once this occurs, license activation codes are ready to be distributed to the Siebel managed nodes. It is usually the third application executed when requesting SIEBSPI licenses, hence number 3 in front of the application name.

Command: `siebspi_licmgr -merge`

List License Activation Codes

This application lists and counts SIEBSPI license activation codes on the management server.

Command: `siebspi_licmgr -list`

For additional information on SPI for Siebel licensing, refer to the *SPI for Siebel Installation and Configuration Guide*.

SIEBSPI-Support

The application group `SIEBSPI-Support` contains two application groups:

SIEBSPI-UN*X Nodes

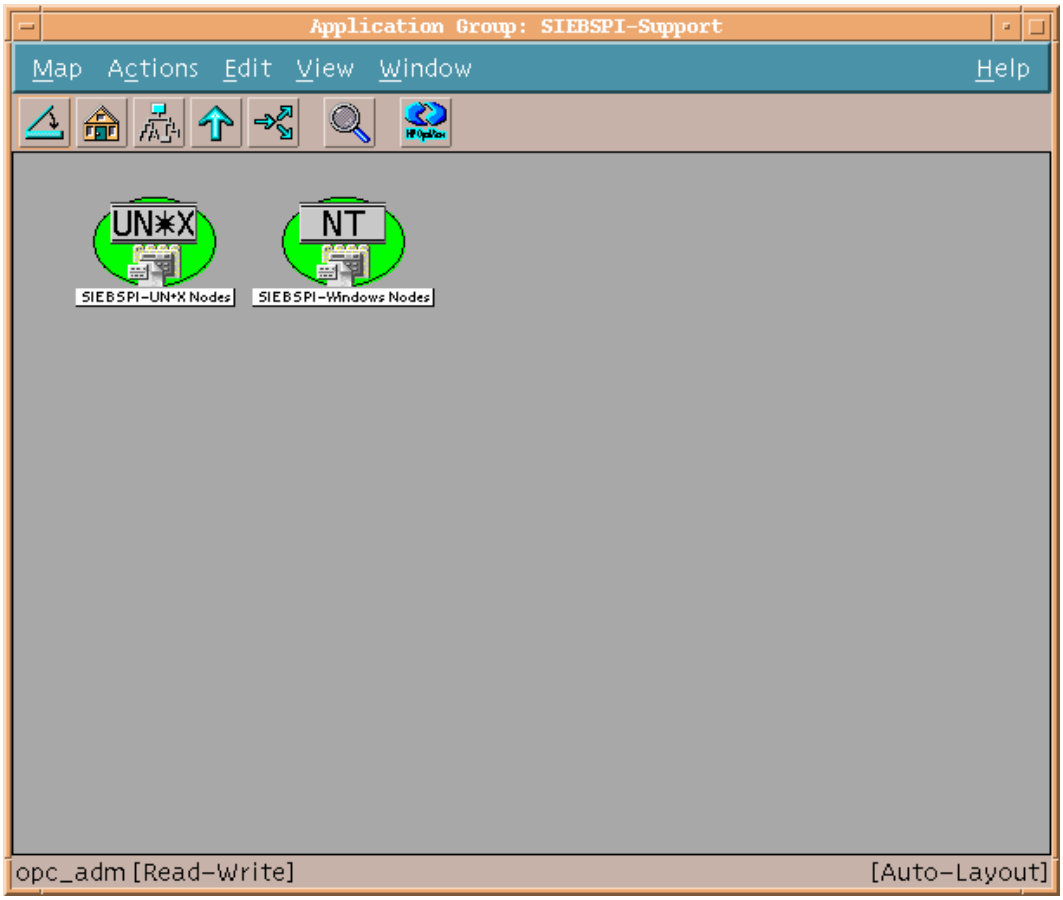
- `Display information UN*X`

- `Collect information UN*X`

SIEBSPI-Windows Nodes

- `Display information WIN`
- `Collect information Win`

Figure 7. SIEBSPI-Support application group



Collect information

Collects and saves information about the installed SIEBSPI files, the HP agent, and the operating system.

Command: `siebspi_support -collect`

Display information

Displays information about the installed SIEBSPI files, the HP agent, and the operating system.

Command: `siebspi_supp -status`

SIEBSPI-Installation

The application group SIEBSPI-Installation, contains the following application groups:

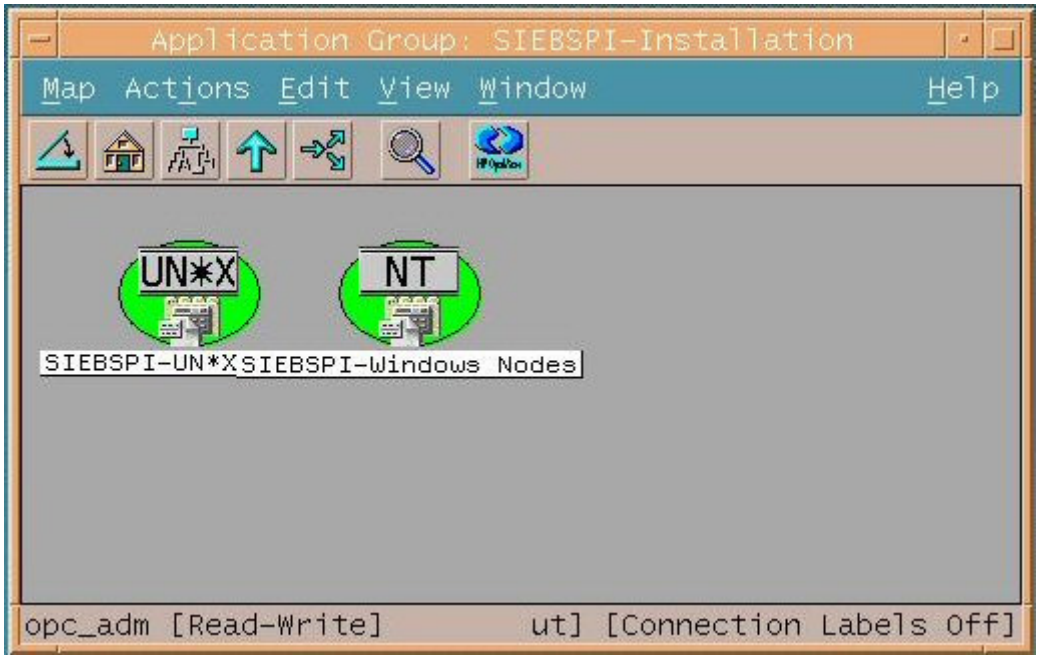
SIEBSPI-UN*X Nodes

- `Install on UN*X Node`

SIEBSPI-Windows Nodes

- `Install on Windows Node`

Figure 8. SIEBSPI-Installation application group



Install on UN*X/Windows Node

Forces installation of SPI for Siebel on the UNIX/Windows node.

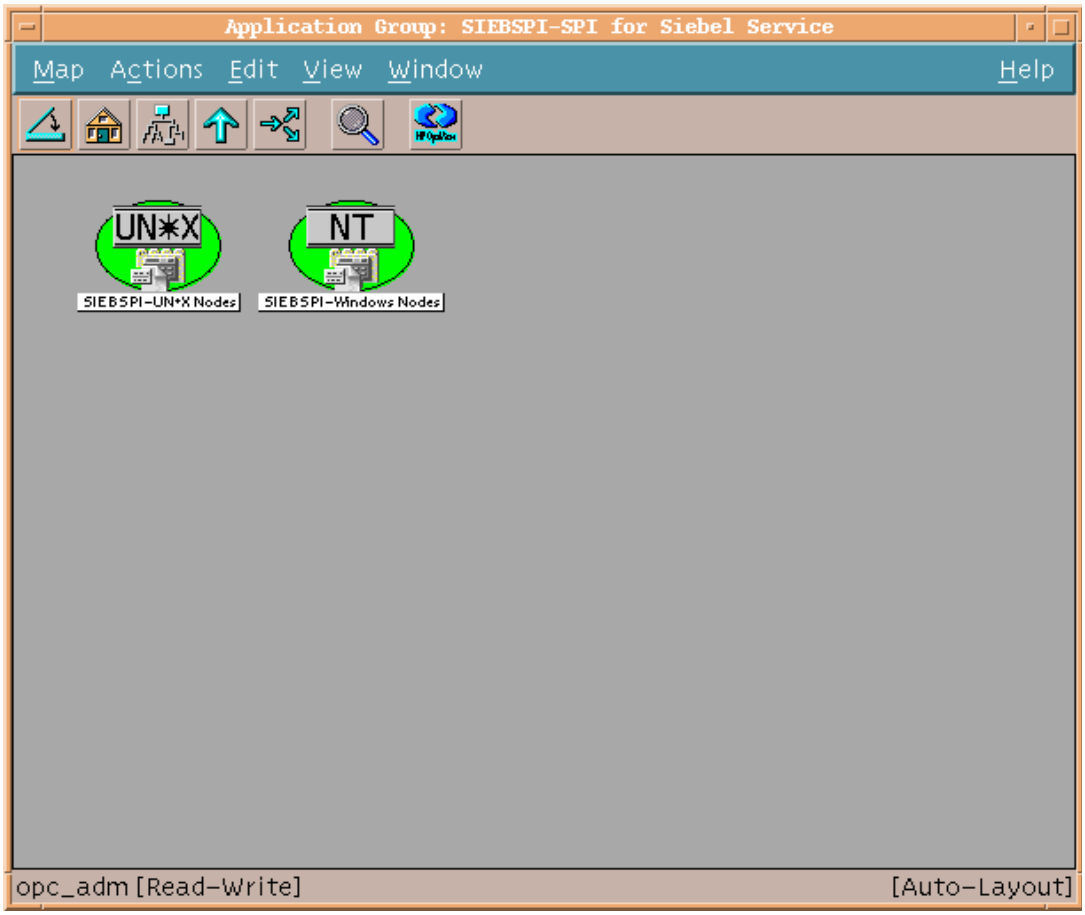
Command: `siebspi_mgr -install`

SIEBSPI-SPI for Siebel Service

The application group SIEBSPI-SPI for Siebel Service contains the following application groups:

- `SIEBSPI-UN*X Nodes`
- `SIEBSPI-Windows Nodes`

Figure 9. SIEBSPI-SPI for Siebel Service application group



Start SPI for Siebel Service

Starts the SPI for Siebel service.

Command: `siebspi_mgr -service start_spisvc`

Restart SPI for Siebel Service

Restarts the SPI for Siebel service.

Command: `siebspi_mgr -service restart_spisvc`

Stop SPI for Siebel Service

Stops the SPI for Siebel service.

Command: `siebspi_mgr -service stop_spisvc`

SPI for Siebel Service Status

Displays the status of the SPI for Siebel service.

Command: `siebspi_mgr -service spisvc_status`

SIEBSPI-Resonate

The application group SIEBSPI-Resonate contains two application groups:

SIEBSPI-UN*X Nodes

```
RCD Add Node
RCD Start
RCD Set Weight
RCD Disable Server
RCD Enable Server
RCD Load Rules
RCD Make Master
RCD manager
RCD Remove Node
RCD Save
RCD Save Rules
RCD Status
RCD Stop
RCD Show Rules
SIEBSPI-Resonate Reporter
```

- Data Collector Install
- Data Collector Start
- Data Collector Status
- Data Collector Stop
- Data Collector Uninstall
- Reporter Viewer
- Reporter Agent Install
- Reporter Agent Start

- Reporter Agent Status
- Reporter Agent Stop
- Reporter Agent Uninstall

SIEBSPI-Resonate Services

- Start Resonate Service
- Stop Resonate Service
- Resonate Service Status

SIEBSPI-Windows Nodes

RCD Add Node
RCD Start
RCD Set Weight
RCD Disable Server
RCD Enable Server
RCD Load Rules
RCD Make Master
RCD Remove Node
RCD Save
RCD Save Rules
RCD Status
RCD Stop
RCD Show Rules

SIEBSPI-Resonate Reporter

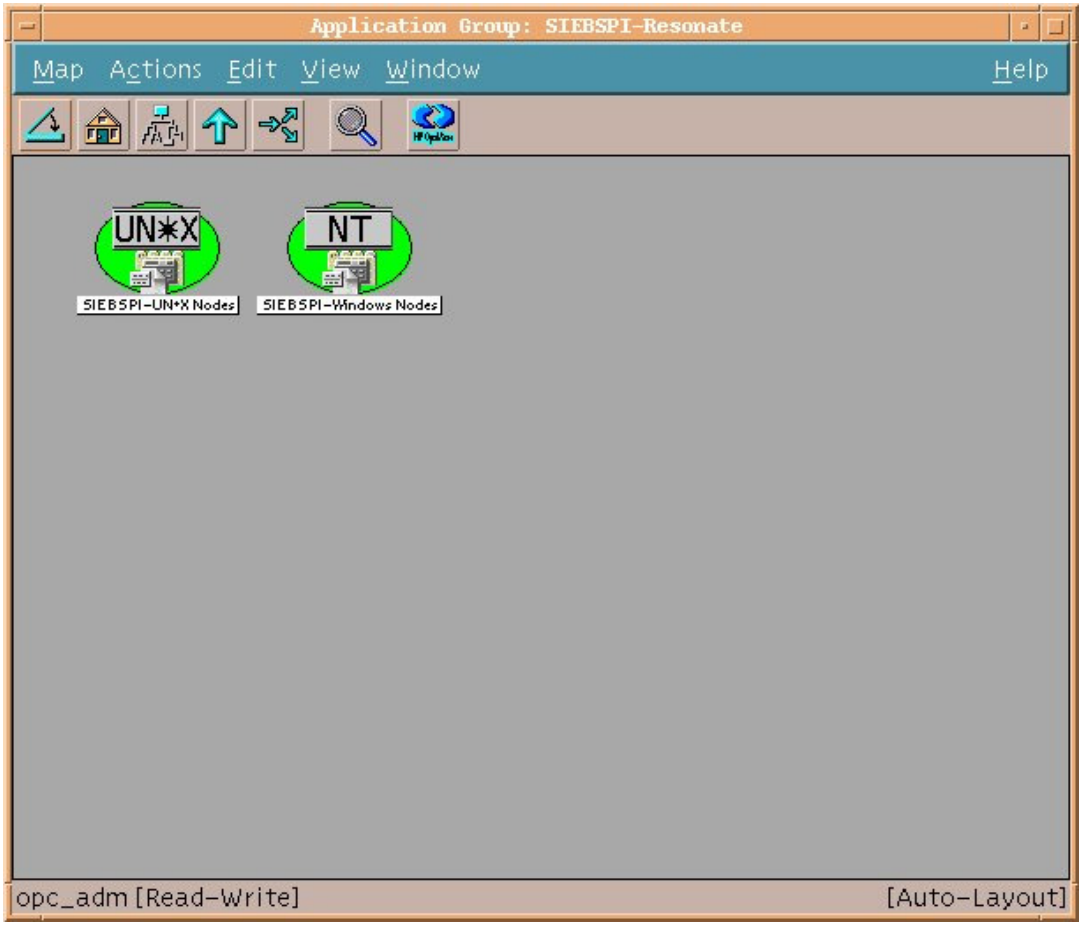
- Data Collector Install
- Data Collector Start
- Data Collector Status
- Data Collector Stop
- Data Collector Uninstall
- Reporter Agent Install
- Reporter Agent Start
- Reporter Agent Status
- Reporter Agent Stop
- Reporter Agent Uninstall

SIEBSPI-Resonate Services

- Start Resonate Service
- Stop Resonate Service

- Resonate Service Status

Figure 10. SIEBSPI-Resonate application group



RCD Add Node

Adds a node to the Resonate Central Dispatch site.

Command:
```
siebspi_resonate -cda
<host>
<password>
add_node
<node>
```

RCD Start

Starts the Resonate Central Dispatch site using the configuration on <host> or (optional) using the configuration in <filename>.

Command:
```
siebspi_resonate -cda
<host>
<password>
start
[<filename>]
```

RCD Set Weight

Sets weight of Resonate Central Dispatch server node (1 <= n <= 100).

Command:
```
siebspi_resonate -cda
<host>
<password>
set_weight
<node>
<n>
```

RCD Disable Server

Disables a Resonate Central Dispatch server node.

Command:
```
siebspi_resonate -cda
<host>
<password>
disable_server
<server>
```

RCD Enable Server

Enables a Resonate Central Dispatch server node.

Command:
```
siebspi_resonate -cda
<host>
<password>
enable_server
<server>
```

RCD Load Rules

Loads scheduling rules from <filename>.

Command:
```
siebspi_resonate -cda
<host>
<password>
load_rules
<filename>
```

RCD Make Master

Makes the node the master of the Resonate Central Dispatch site.

Command:
```
siebspi_resonate -cda
<host>
<password>
make_master
<node>
```

RCD manager

Starts Resonate Central Dispatch manager.

Command: `siebspi_resonate -manager`

RCD Remove Node

Removes the node from the Resonate Central Dispatch site.

Command:
```
siebspi_resonate -cda
<host>
<password>
remove_node
<node>
```

RCD Save

Stores the current Resonate Central Dispatch site configuration in `<filename>`.

Command:
```
siebspi_resonate -cda
<host>
<password>
save
<filename>
```

RCD Status

Shows server status (enabled or disabled) of all nodes. If "all" is specified, shows server statuses (enabled/disabled, up/down, failback enabled/disabled, server weight, affiliated server or not) for all nodes.

Command:
```
siebspi_resonate -cda
<host>
<password>
status
[all]
```

RCD Stop

Stops the Resonate Central Dispatch site.

Command:
```
siebspi_resonate -cda
```

```
<host>
<password>
stop
```

RCD Show Rules

Shows scheduling rules from <filename>.

Command line (Win Mgd. node): `cmd /x /c "type" <filename>`

Command line (Un*x Mgd node): `cat <filename>`

SIEBSP-Resonate Reporter

Data Collector Install

Installs Reporter data collector.

Command: `siebspi_resonate -rep_data_collector install`

Data Collector Start

Starts Reporter data collector.

Command: `siebspi_resonate -rep_data_collector start`

Data Collector Status

Shows Reporter data collector status.

Command:`siebspi_resonate -rep_data_collector status`

Data Collector Stop

Starts Reporter data collector.

Command: `siebspi_resonate -rep_data_collector stop`

Data Collector Uninstall

Uninstalls Reporter data collector.

Command: `siebspi_resonate -rep_data_collector uninstall`

Reporter Viewer

Starts Reporter Viewer.

Command: `siebspi_resonate -rep_viewer`

Reporter Agent Install

Installs Reporter agent.

Command: `siebspi_resonate -rep_agent install`

Reporter Agent Start

Starts Reporter agent.

Command: `siebspi_resonate -rep_agent start`

Reporter Agent Status

Shows Reporter agent status.

Command: `siebspi_resonate -rep_agent status`

Reporter Agent Stop

Stops Reporter agent.

Command: `siebspi_resonate -rep_agent stop`

Reporter Agent Uninstall

Uninstalls Reporter agent.

Command: `siebspi_resonate -rep_agent uninstall`

SIEBSPI-Resonate Service

Resonate Service Status

Displays the status of all Resonate CD services.

Command: `siebspi_mgr -service resonate_status`

Start Resonate Service

Starts the specific Resonate CD service. The service name should be one of the following: `cdagent`, `controller`, `reporter`, `reporter-agent`, `sentinel`.

Command: `siebspi_mgr -service start_resonate -s <Resonate CD service name>`

Stop Resonate Service

Stops the specific Resonate CD service. The service name should be one of the following: `cdagent`, `controller`, `reporter`, `reporter-agent`, `sentinel`.

Command:
```
siebspi_mgr -service stop_resonate
-s <Resonate CD service name>
```

SIEBSPI-SARM

The application group SIEBSPI-SARM contains two application groups:

```
SIEBSPI-UN*X Nodes
SIEBSPI-CallGraph Wkf Anly.
Show Wkf From CSV SARM Data
          Workflow-Metric '%CPU' UN*X
          Workflow-Metric 'Count' UN*X
          Workflow-Metric 'CPUTime' UN*X
          Workflow-Metric 'Duration' UN*X
          Wkf-M. 'PooledMemoryCalls' UN*X
          Wkf-M. 'PooledMemoryUsage' UN*X
          Wkf-M. 'SystemMemoryCalls' UN*X
                 Wkf-M. 'SystemMemoryUsage' UN*X
                 Show Wkf Data Using All Metrics UN*X
List Sess. Using CSV Data UN*X
Run CallGraph-CSV Wkf Anly. UN*X
SIEBSPI-SARM Parameters
        Change SARM Buffer Size UN*X
        Change SARM File Size UN*X
        Change SARM Max Files Numb. UN*X
        Change SARM Period UN*X
Start SARM data col.level 1 UN*X
Start SARM data col.level 2 UN*X
Stop SARM data collection UN*X
SIEBSPI-SARM Perf.Agg.Anal.
        SIEBSPI-Show Problematic Areas
               Average Exclusive Memory UN*X
               Average Execution Time UN*X
               Average Inclusive Memory UN*X
               Average Recursive Time UN*X
               Average Response Time UN*X
               Maximum Execution Time UN*X
               Maximum Recursive Time UN*X
               Percent of Resp. Exec. Time UN*X
               Percent of Resp.Recur. Time UN*X
               Show Probl. Area for Cust.Metr. UN*X
               Total Exclusive Memory UN*X
```

```
              Total Execution Time UN*X
              Total Inclusive Memory UN*X
              Total Recursive Time UN*X
              Total Response Time UN*X
       Performance Agg. Analysis Help UN*X
       Run Perf. Agg. Analysis UN*X
SIEBSPI-Windows Nodes
SIEBSPI-CallGraph Wkf Anly.
       Show Wkf From CSV SARM Data
         Workflow-Metric '%CPU' WIN
         Workflow-Metric 'Count' WIN
         Workflow-Metric 'CPUTime' WIN
         Workflow-Metric 'Duration' WIN
         Wkf-M. 'PooledMemoryCalls' WIN
         Wkf-M. 'PooledMemoryUsage' WIN
         Wkf-M. 'SystemMemoryCalls' WIN
                Wkf-M. 'SystemMemoryUsage' WIN
                Show Wkf Data Using All Metrics WIN
List Sess. Using CSV Data WIN
Run CallGraph-CSV Wkf Anly. WIN
SIEBSPI-SARM Parameters
       Change SARM Buffer Size WIN
       Change SARM File Size WIN
       Change SARM Max Files Numb. WIN
       Change SARM Period WIN
Start SARM data col.level 1 WIN
Start SARM data col.level 2 WIN
Stop SARM data collection WIN
SIEBSPI-SARM Perf.Agg.Anal.
       SIEBSPI-Show Problematic Areas
              Average Exclusive Memory WIN
              Average Execution Time WIN
              Average Inclusive Memory WIN
              Average Recursive Time WIN
              Average Response Time WIN
              Maximum Execution Time WIN
              Maximum Recursive Time WIN
              Percent of Resp. Exec. Time WIN
              Percent of Resp.Recur. Time WIN
              Show Probl. Area for Cust.Metr. WIN
              Total Exclusive Memory WIN
              Total Execution Time WIN
              Total Inclusive Memory WIN
              Total Recursive Time WIN
              Total Response Time WIN
       Performance Agg. Analysis Help WIN
```

Run Perf. Agg. Analysis WIN

The application group SIEBSPI-SARM Call Graph Workflow Analysis contains the following applications and application groups:

- Show Wkf From CSV SARM Data
- List Sess. Using CSV Data UN*X
- Run CallGraph-CSV Wkf Anly. UN*X

List Sess. Using CSV Data

The application displays all available sessions in current SARM files. This information can be later used for running Call Graph Workflow analysis (using the parameter -session {session id}).

Command: siebspi_sarm -list_sessions -do_not_refresh

Additional Parameters	Description
-include_sarm_dirs {dir1,dir2,dir3,...}	Specifies the list of directories where SARM files exists. All those directories will be used/
-exclude_original_sarm_dirs	Original SARM directories will not be used. This is useful when you want to use some already existing SARM files
-target_dir {target tmp dir; Default:.../siebspi/tmp}	Specifies where the CSV files will be placed. Default is .../siebspi/tmp
-refresh_when_older {minutes : default: 30}	Specifies how old the CSV files can be. If CSV files are older then specified parameter in minutes the they will be regenerated. If parameter is not specified, default value is 30 minutes.
-do_not_refresh	The CSV files will not be generated, regardless on files age.
-refresh	The CSV files will be generated, regardless on files age.

Run CallGraph-CSV Wkf Anly.

The application transfers SARM files to CSV files that are used for displaying call graph workflow tree. The CSV files are placed in the .../siebspi/tmp directory.

Command: `siebspi_sarm -call_graph -refresh`

Additional Parameters	Description
`-include_sarm_dirs {dir1,dir2,dir3,...}`	Specifies the list of directories where SARM files exists. All those directories will be used/
`-exclude_original_sarm_dirs`	Original SARM directories will not be used. This is useful when you want to use some already existing SARM files
`-target_dir {target tmp dir; Defauly:.../siebspi/tmp}`	Specifies where the CSV files will be placed. Default is `.../siebspi/tmp`
`-refresh_when_older {minutes : default: 30}`	Specifies how old the CSV files can be. If CSV files are older then specified parameter in minutes the they will be regenerated. If parameter is not specified, default value is 30 minutes.
`-do_not_refresh`	The CSV files will not be generated, regardless on files age.
`-refresh`	The CSV files will be generated, regardless on files age.

The application group `Show Wkf From CSV SARM Data`, contains the following applications:

- `Workflow-Metric '%CPU'`
- `Workflow-Metric 'Count'`
- `Workflow-Metric 'CPUTime'`
- `Workflow-Metric 'Duration'`
- `Wkf-M. 'PooledMemoryCalls'`
- `Wkf-M. 'PooledMemoryUsage'`
- `Wkf-M. 'SystemMemoryCalls'`
- `Wkf-M. 'SystemMemoryUsage'`
- `Show Wkf Data Using All Metrics`
- `Workflow-Metric '%CPU'`
- `Workflow-Metric 'Count'`
- `Workflow-Metric 'CPUTime'`
- `Workflow-Metric 'Duration'`
- `Wkf-M. 'PooledMemoryCalls'`
- `Wkf-M. 'PooledMemoryUsage'`
- `Wkf-M. 'SystemMemoryCalls'`
- `Wkf-M. 'SystemMemoryUsage'`
- `Show Wkf Data Using All Metrics`

The application displays the workflow tree for the specific metric. The Call Graph displays how the specific areas and methods were called within the session. It also displays the specific metric values, for example `SystemMemoryUsage` (on areas). Analysis can be done for specified metric and/or session.

Command: `siebspi_sarm -call_graph -metric "%CPU"`

Additional Parameters	Description
`-metric {SARM Raw metric - one of: Cunt, Duration, CPUTime, %CPU, PooledMemoryUsage, PooledMemoryCalls, SystemMemoryUsage, SystemMemoryCalls, all_metrics}`	Specifies which metric with values will be shown. If the parameter is `all_metrics` then all metrics will be shown.
`-session {session - task id}`	Optional parameter specifies for which session - task id the analysis will be done. If equals to * it will be done for all sessions.
`-include_sarm_dirs {dir1,dir2,dir3,...}`	Specifies the list of directories where SARM files exists. All those directories will be used.
`-exclude_original_sarm_dirs`	Original SARM directories will not be used. This is useful when you want to use some already existing SARM files
`-target_dir {target tmp dir; Default:.../siebspi/tmp}`	Specifies where the CSV files will be placed. Default is `.../siebspi/tmp`
`-refresh_when_older {minutes : default: 30}`	Specifies how old the CSV files can be. If the CSV files are older then specified parameter in minutes the they will be regenerated. If parameter is not specified, default value is 30 minutes.
`-do_not_refresh`	The CSV files will not be generated, regardless on files age.
`-refresh`	The CSV files will be generated, regardless on files age.

Examples:

```
siebspi_sarm  -call_graph
              -metric "Duration"

siebspi_sarm  -call_graph
              -metric "all_metrics"
```

```
                -session 22345

siebspi_sarm    -call_graph
                -metric "Duration"
                -refresh
                -target_dir "/my_tmp"
```

The application group `SIEBSPI-SARM Parameters`, contains the following applications:

- `Change SARM Buffer Size`
- `Change SARM File Size`
- `Change SARM Max Files Numb.`
- `Change SARM Period`
- `Start SARM data col.level 1`
- `Start SARM data col.level 2`
- `Stop SARM data collection`

Change SARM Buffer Size
Change SARM File Size
Change SARM Max Files Numb.
Change SARM Period
Start SARM data col.level 1
Start SARM data col.level 2
Stop SARM data collection

The application sets the specific SARM parameter using `srvrmgr`. Also the environment variable is set (for SWSE).

Command: `siebspi_sarm -parameter {parameter name}`

Additional Parameters	Description

`-parameter {one of:`
 	
`SARMLevel`
`SARMBufferSize`
`SARMPeriod`
`SARMMaxFiles`
`SARMFileSize}`
	Specifies which SARM parameter will be changed.

`-value {value}`	Specifies value for SARM the parameter that will be changed.
`- parameter_area {server | component | swe | all}`	Specifies in which Siebel area the SARM parameter will be changed. When specifying "all" all areas will change the SARM parameter.

Additional Parameters	Description
-s {server}	Specifies on which Siebel server the SARM parameter will be changed for all components.
-c {component}	Specifies on which Siebel server the SARM parameter will be changed for a specific component. Used only when parameter area is component. Also the -s parameter must be used to specify the Siebel server.

Example::

```
siebspi_sarm   -parameter "SARMLevel"
               -value "2"
               -parameter_area "server"
               -server "MySiebelServer"
               -component "SCCObjMgr_enu"
```

The application group SIEBSPI-SARM Perf.Agg.Anal. contains applications and application groups as follows:

- SIEBSPI-Show Problematic Areas
- Performance Agg. Analysis Help
- Run Perf. Agg. Analysis

Performance Agg. Analysis Help

The application displays help. In help is a table with possible metric - submetric combinations.

Command: siebspi_sarm -help

Run Perf. Agg. Analysis

The application performs Performance Aggregation Analysis and generates the siebspi_sarm_paa.xml file that is placed in the .../siebspi/tmp directory. This file is then used for displaying problematic areas.

```
Command:       siebspi_sarm -run_paa
               -include_sarm_dirs ""
```

Additional Parameters	Description
-paa_aggregate_argument {area | details Default: area}	Specifies the level of analysis.
-include_sarm_dirs {dir1,dir2,dir3,...}	Specifies the list of directories where SARM files exists. All those directories will be used

Additional Parameters	Description
`-exclude_original_sarm_dirs`	Original SARM directories will not be used. This is useful when you want to use some already existing SARM files
`-xml_file {target and/or source xml file}`	Specifies the XML file name

Example:

```
siebspi_sarm  -run_paa
              -exclude_original_sarm_dirs
              -include_sarm_dirs "net/mycomputer/sarmfiles"
```

The application group `SIEBSPI-Show Problematic Areas`, contains the following applications:

- `Average Exclusive Memory`
- `Average Execution Time`
- `Average Inclusive Memory`
- `Average Recursive Time`
- `Average Response Time`
- `Maximum Execution Time`
- `Maximum Recursive Time`
- `Percent of Resp. Exec. Time`
- `Percent of Resp.Recur. Time`
- `Show Probl. Area for Cust.Metr.`
- `Total Exclusive Memory`
- `Total Execution Time`
- `Total Inclusive Memory`
- `Total Recursive Time`
- `Total Response Time`
- `Average Exclusive Memory`
- Average Execution Time
- Average Inclusive Memory
- Average Recursive Time
- Average Response Time
- Maximum Execution Time
- Maximum Recursive Time
- Percent of Resp. Exec. Time

- Percent of Resp.Recur. Time
- Show Probl. Area for Cust.Metr.
- Total Exclusive Memory
- Total Execution Time
- Total Inclusive Memory
- Total Recursive Time
- Total Response Time

The application analyses Siebel areas (for example, SWE) for the specific metric, for example `Average Exclusive Memory` maximum values. When the area is found, it analyses also the child areas to see which child area took the most time.

After that the application calculates in which child area the calls take the most time. When the call (method) is discovered. The application displays a performance summary for that call. The application also displays performance summary for a call that had a shortest execution time.

```
Command: siebspi_sarm       -show_problematic_area
                            -metric {metric}
                            -submetric {submetric}
                            -do_not_refresh
                            -detailed
```

Additional Parameters	Description
`-metric` {SARM metric, for example, ResponseTime}	Specifies for which metric analysis is done (see table below)
`-submetric` {SARM submetric, for example, Total}	Exactly specifies metric, for example, "Total" (see table below)
`-force_area` {SARM area from which further analysis starts on the first level}	The analysis on first level is continued with this SARM area regardless on the results.
`-force_child_area` {SARM child area from which further analysis starts on the second level}	The analysis on second level is continued with this SARM child area regardless on the results.
`-force_child_area_per_invocations` {SARM child area from which further analysis starts for metric / invocations on the second level}	The analysis on second level is continued with this SARM child area (for metric / invocations) regardless on the results.
`-include_sarm_dirs` {dir1,dir2,dir3,...}	Specifies the list of directories where SARM files exists. All those directories will be used/
`-exclude_original_sarm_dirs`	Original SARM directories will not be used. This is useful when you want to use some already existing SARM files

Additional Parameters	Description
`-xml_file` {target and/or source xml file}	Specifies the XML file name
`-refresh_when_older` {minutes : default: 30}	Specifies how old the XML file can be. If the XML file is older then specified parameter in minutes then it will be regenerated. If the parameter is not specified, the default value is 30 minutes.
`-do_not_refresh`	The XML file will not be generated, regardless on file's age.
`-refresh`	The XML files will be generated, regardless on file's age.
`-detailed`	Analysis will display additional data about specific SARM point where available.

Possible METRIC and SUBMETRIC combinations:

```
        METRIC              SUBMETRIC
=====================================
       Invocations   |     Recursive
                     |     NonRecursive

       ResponseTime  |     Total
                     |     Average
                     |     StandardDeviation

       ExecutionTime |     Total
                     |     Average
                     |     Calls
                     |     Maximum
                     |     Minimum
                     |     PercentOfResponse

       RecursiveTime |     Total
                     |     Average
                     |     Calls
                     |     Maximum
                     |     Minimum
                     |     PercentOfResponse

       InclusiveMemory     Total
                     |     Average
                     |     StandardDeviation
```

```
       ExclusiveMemory|     Total
                      |     Average
                      |     StandardDeviation
  ======================================
```

Examples:

```
siebspi_sarm   -show_problematic_area
               -metric "ResponseTime"
               -submetric "Average"
               -refresh

siebspi_sarm   -show_problematic_area
               -metric "InclusiveMemory"
               -submetric "MaxAllocated"
               -refresh
               -detailed
```

SIEBSPI-Siebel Users Activity

The application group `SIEBSPI-Siebel Users Activity` contains two application groups:

`SIEBSPI-UN*X Nodes`

- `Last account change UN*X`
- `Last contact change UN*X`
- `Last opportunity change UN*X`
- `Last Siebel user action time UN*X`
- `Last Siebel user login time UN*X`
- `Users connected to Object Manager Component UN*X`

`SIEBSPI-Windows Nodes`

- `Last account change WIN`
- `Last contact change WIN`
- `Last opportunity change WIN`
- `Last Siebel user action time WIN`
- `Last Siebel user login time WIN`
- `Users connected to Object Manager Component WIN`

Last account change

Lists the last time when Siebel users added or changed an account.

Command: `siebspi_dbperf -last_account -print`

Last contact change

Lists the last time when Siebel users added or changed a contact.

Command: `siebspi_dbperf -last_contact -print`

Last opportunity change

Lists the last time when Siebel users added or changed an opportunity.

Command: `siebspi_dbperf -last_opty -print`

Last Siebel user action time

Lists the last time when Siebel users add or change an account, contact, or opportunity in Siebel Applications.

Command: `siebspi_dbperf -print -last_action`

Users connected to Object Manager Component

Lists Siebel users that are connected to Object Manager Component.

Command: `siebspi_mgr -list users -comp "object_manager_component"`

Last Siebel user login time

Lists the last time when Siebel users were connected into Siebel Applications.

Command: `siebspi_dbperf -print -last_login`

SIEBSPI-Tools

The top level application group `SIEBSPI-Tools` contains the following application groups:

```
SIEBSPI-UN*X Nodes
        Disable Component Group
        Enable Component Group
        List Servers
        List Components
        List EventLog Levels
        List Tasks
        Start Server
        Stop Server
        Offline Component Group
        Online Component Group
        Start Task
        Stop Task
        Pause Task
        Resume Task
```

```
        Pause Component (Siebel 8.0 or higher)
        Resume Component (Siebel 8.0 or higher)
        Shutdown Component
        Startup Component
        Start "srvrmgr" command
        Autodiscovery
        Add SWSE nodes to Autodisc.
        Set EventLog Level
        Start EVT tool
               Start EVT tool with custom parameters
        SIEBSPI-Siebel Services
               Name Server Status
               Siebel Server Status
               Start Name Server
               Stop Name Server
               Restart Name Server
               Start Siebel Server
               Stop Siebel Server
               Restart Siebel Server

SIEBSPI-Windows Nodes
        Disable Component Group
        Enable Component Group
        List Servers
        List Components
        List EventLog Levels
        List Tasks
        Start Server
        Stop Server
        Offline Component Group
        Online Component Group
        Start Task
        Stop Task
        Pause Task
        Resume Task
        Pause Component (Siebel 8.0 or higher)
        Resume Component (Siebel 8.0 or higher)
        Shutdown Component
        Startup Component
        Start "srvrmgr" command
        Autodiscovery
        Add SWSE nodes to Autodisc.
        Set EventLog Level
        SIEBSPI-Siebel Services
               Name Server Status
               Siebel Server Status
```

```
Start Name Server
Stop Name Server
Restart Name Server
Start Siebel Server
Stop Siebel Server
Restart Siebel Server
Start Web Server
"Stop Web Server
```

List Servers

Lists Siebel servers.

Command: `siebspi_mgr -list servers`

List Components

Lists components on the specified Siebel server. If the server parameter (-s) is not specified, components are listed on all available servers.

Command: `siebspi_mgr -list components -s "Siebel Server"`

Optional Parameter	Description
`-s "Siebel Server"`	Specifies Siebel server name, on which components are listed.

List EventLog Levels

Lists event log levels for the specified component.

Command:
```
siebspi_mgr -list log_levels
            -comp "Component Alias"
            -s "Siebel Server"
```

Optional Parameters	Description
`-comp "Component Alias"`	Specifies Siebel Component Alias
`-s "Siebel Server"`	Specifies Siebel server name, on which components are listed.

List Tasks

Lists tasks on the specified Siebel server. If the server parameter (`-s`) is not specified, tasks are listed on all available servers.

Command: `siebspi_mgr -list tasks -s "Siebel Server"`

Optional Parameter	Description
`-s "Siebel Server"`	Specifies Siebel server name, on which tasks are listed.

Start Server

Starts specified Siebel server.

Command: `siebspi_mgr -start_server "Siebel Server"`

Required Parameter	Description
`-start_server "Siebel Server"`	Specifies Siebel server name that will be started.

Stop Server

Stops the specified Siebel server.

Command: `siebspi_mgr -stop_server "Siebel Server"`

Required Parameter	Description
`-stop_server "Siebel Server"`	Specifies Siebel server name that will be stopped.

Online Component Group

Puts a component group online.

Command: `siebspi_mgr -online_compgrp "Component Group"`

Required Parameter	Description
`- online_compgrp "Component Group"`	Puts a component group online.

Optional Parameter	Description
`-server "Siebel Server name"`	If this parameter is specified, a component group is put online only for that Siebel server.

Offline Component Group

Puts a component group offline.

Command: `siebspi_mgr -offline_compgrp "Component Group"`

Required Parameter	Description
`- offline_compgrp "Component Group"`	Puts a component group offline.

Optional Parameter	Description
`-server "Siebel Server name"`	If this parameter is specified, a component group is put offline only for that Siebel server.

Enable Component Group

Enables the component group.

Command: `siebspi_mgr -enable_compgrp "Component Group"`

Required Parameter	Description
`- enable_compgrp "Component Group"`	Enables the component group.

Optional Parameter	Description
`-server "Siebel Server name"`	If this parameter is specified, a component group is enabled only for that Siebel server.

Disable Component Group

Disables the component group.

Command: `siebspi_mgr -enable_compgrp "Component Group"`

Required Parameter	Description
`- disable_compgrp "Component Group"`	Disables the component group.

Optional Parameter	Description
`-server "Siebel Server name"`	If this parameter is specified, a component group is disabled only for that Siebel server.

Startup Component

Starts up the component.

Command: `siebspi_mgr -startup_comp "Component"`

Required Parameter	Description
`-startup_comp "Component"`	Starts up the specified component.

Optional Parameter	Description
`-server "Siebel Server name"`	If this parameter is specified, a component group is started only for that Siebel server.

Shutdown Component

Shuts down the component.

Command: `siebspi_mgr -shutdown_comp "Component"`

Required Parameter	Description
`- shutdown_compgrp "Component"`	Shuts down the component group.

Optional Parameter	Description
`-server "Siebel Server name"`	If this parameter is specified, a component group is stopped only for that Siebel server.

Pause Component (Siebel 8.0 or higher)

Pauses the specified component.

Command: `siebspi_mgr -pause_comp "Component ID" -s "Siebel Server"`

Required Parameters	Description
`-pause_comp "Component ID"`	Specifies ID of component that you want to place on pause. Use "List Components" tool to find the task ID.
`-s "Siebel Server"`	Specifies Siebel server on which component will be stopped.

Resume Component (Siebel 8.0 or higher)

Resumes the specified component.

Command: `siebspi_mgr -resume__comp "Component ID" -s "Siebel Server"`

Required Parameters	Description
`-resumee_comp "Component ID"`	Specifies ID of (paused) component that you want to resume. Use "List Components" tool to find the task ID.
`-s "Siebel Server"`	Specifies Siebel server on which component will be resumed.

Start Task

On a Siebel server, starts a task for the component.

Command:
```
siebspi_mgr -start_task "Component Alias"
            -s "Siebel Server"
            -r "Run Mode"
            -param "param_alias_name1=value1,
            param_alias_name2=value2,…"
```

Required Parameters	Description
`-start_task "Component Alias"`	Specifies the component alias, for which the task will be started
`-s "Siebel Server"`	Specifies Siebel server on which component will be started.
`-r "Run Mode"`	Run mode for a task. Must be one of: • batch • interactive • background

Optional Parameter	Description
`-param "param_alias_name1=value1, param_alias_name2=value2,…"`	Specifies parameters for a task. You must use the abbreviation (alias) for the parameter name.

Stop Task

Stops the specified task.

Command: `siebspi_mgr-stop_task "Task ID"`

```
-s "Siebel Server"
```

Required Parameters	Description
`-stop_task "Task ID"`	Specifies ID of task that you want to stop. Use "List Tasks" application to find the task ID.
`-s "Siebel Server"`	Specifies Siebel server on which component will be stopped.

Pause Task

Pauses the specified task.

Command: `siebspi_mgr -pause_task "Task ID" -s "Siebel Server"`

Required Parameters	Description
`-pause_task "Task ID"`	Specifies ID of task that you want to place on pause. Use "List Tasks" application to find the task ID.
`-s "Siebel Server"`	Specifies Siebel server on which component will be paused.

Resume Task

Resumes the specified task.

Command: `siebspi_mgr -resume_task "Task ID" -s "Siebel Server"`

Required Parameters	Description
`-resume_task "Task ID"`	Specifies ID of (paused) task that you want to resume. Use "List Tasks" application to find the task ID.
`-s "Siebel Server"`	Specifies Siebel server on which component will be resumed.

Start "srvrmgr" command

Starts the Siebel Server Manager command.

Command: `siebspi_mgr -start_command "srvrmgr Command"`

Required Parameter	Description
`-start_command "srvrmgr Command"`	Specifies the Siebel Server Manager command. See your Siebel documentation (*System Administration/Server Administration/Using the Server Manager Command-Line Interface*).

Autodiscovery

Starts the Siebel Enterprise configuration and topology discovery. Autodiscovery should only be executed on nodes where the Siebel Server Manager is installed. Typically, these are the nodes where the Siebel server is installed.

Command: `siebspi_autod`

Optional Parameter	Description
`-op "Your operator"`	If the parameter is specified, the services in the Service Navigator will be visible not only to the opc_op user, but also to "Your operator".

Add SWSE nodes to Autodisc.

Adds SWSE nodes to autodiscovery of the Siebel enterprise configuration.

Command: `siebspi_mgr -configure_direct -swe_nodes "change_me1,change_me2"`

Required Parameter	Description
`-swe_nodes "change_me1,change_me2"`	Specifies the list of the SWSE managed nodes that will appear in service tree after autodicovery.

Set EventLog Level

Sets log level for a Siebel Component.

Command:
```
siebspi_mgr  -set_evtloglvl "log level"
             -comp "Siebel Component Alias"
             -event_type "event type"
```

Required Parameters	Description
`-set_evtloglvl "log level"`	Specifies desired log level for a Siebel Component.

Required Parameters	Description
-comp "Component Alias"	Specifies a Siebel Component.
-event_type "event type"	Specifies the event type for which you are setting the log level. If you specify "*", the log level will be set for all event types

SIEBSPI-Siebel Services

The application group SIEBSPI-Siebel Services contains subgroups SIEBSPI-UN*X Nodes and SIEBSPI-Windows Nodes containing the following applications:

- Name Server Status
- Siebel Server Status
- Start Name Server
- Stop Name Server
- Restart Name Server
- Start Siebel Server
- Stop Siebel Server
- Restart Siebel Server
- Start MS IIS WEB Server
- Stop MS IIS WEB Server
- Start IBM HTTP Web Server
- Stop IBM HTTP Web Server
- Start SUN ONE Web Server
- Stop SUN ONE Web Server

Name Server Status

Displays the status of the Siebel Gateway Name Server service.

Command: siebspi_mgr -service ns_status

Siebel Server Status

Displays the status of the Siebel Server service(s).

Command: siebspi_mgr -service server_status

Start Name Server

Starts the Siebel Gateway Name Server service.

Command: siebspi_mgr -service start_ns

Stop Name Server

Stops the Siebel Gateway Name Server service.

Command: `siebspi_mgr -service stop_ns`

Restart Name Server

Restarts the Siebel Gateway Name Server service.

Command: `siebspi_mgr -service restart_ns`

Start Siebel Server

Starts the Siebel Server service for the specified Siebel Server.

Command:
```
siebspi_mgr  -service start_server
             -s "Siebel Server"
```

Additional Parameter	Description
`-s "Siebel Server"`	Specifies the Siebel Server that will be started.

Stop Siebel Server

Stops the Siebel Server service for the specified Siebel Server.

Command:
```
siebspi_mgr  -service stop_server
              -s "Siebel Server"
```

Additional Parameter	Description
`-s "Siebel Server"`	Specifies the Siebel Server that will be stopped.

Restart Siebel Server

Restarts the Siebel Server service for the specified Siebel Server.

Command:
```
siebspi_mgr  -service restart_server
             -s "Siebel Server"
```

Additional Parameter	Description
`-s "Siebel Server"`	Specifies the Siebel Server that will be restarted.

Start MS IIS WEB Server

Starts the IIS web service on Windows managed node.

Command: `siebspi_mgr -service start_web`

Stop MS IIS WEB Server

Stops the IIS web service on the Windows managed node.

Command: `siebspi_mgr -service stop_web`

Start IBM HTTP Web Server

Stars the IBM HTTP Web Server service on AIX managed nodes.

Command: `siebspi_mgr -service start_web -script "/usr/IBMIHS/bin/startapa" -daemon httpd`

Stop IBM HTTP Web Server

Stops the IBM HTTP Web Server service on AIX managed nodes.

Command: `siebspi_mgr -service stop_web -script "/usr/IBMIHS/bin/stopapa" -daemon httpd`

Start SUN ONE Web Server

Starts the SUN One Web Server service on SUN managed nodes.

Command: `siebspi_mgr -service start_web -script "/opt/SUNWwbsvr/https-server-name/start" -daemon webservd`

Stop SUN ONE Web Server

Stops the SUN One Web Server service on SUN managed nodes.

Command: `siebspi_mgr -service stop_web -script "/opt/SUNWwbsvr/https-server-name/stop" -daemon webservd`

Start EVT application with optional parameters

Monitors servers with SPI for Siebel, configuration, installation requirements, product versions, and supported platforms. This application helps monitoring problems before and after the installation procedure.

Command: `siebspi_mgr –evt –evtparams “parameters_list”`

Optional Parameters	Descriptions
`-h`	Prints help messages with a list of flags used with this application.
`-g`	Displays the name of the Siebel Gateway Name Server. If not provided, EVT application displays the name of the Siebel Gateway Name Server from the Siebel Server configuration file; for example, enu\siebel.cfg.

Optional Parameters	Descriptions
-s	Sets the name of the Siebel Server. If this option is not provided, the name of the server from the directory tree is displayed.
-e	Displays the name of the Enterprise Server. If this option is not provided, the name of the Enterprise Server from the Siebel Server configuration file is displayed; for example, enu\siebel.cfg.
-u	Sets the user name of the Server Manager. The default username is sadmin.
-p	Displays the password of the Server Manager. The default value is sadmin. Note: If the Siebel Gateway Name Server is not running or if any of the srvrmgr parameters are incorrect, this application is not able to check Siebel Server or Database Client parameters. In this case, EVT displays an error in the detail output (use –d SHOWERRORS).
-r	Displays the path location of the Siebel Root directory. The default value is the current directory. Note: it is not allowed to add a “\” at the end of the option.
-o	Generates computer output in the following formats: text (default option), textfile, HTML, and HTMLFILE.

Optional Parameters	Descriptions
-d	Enables debug mode with reports in the following verbose levels: • DEFAULT Displays pass, fail, and not executed problems. • EXPLAIN Displays a description of the problems, and possible workarounds. • SHOWERRORS Displays a description of the problems, possible workarounds with more details. For example, if a file is not found. • SHOWCOMMENTS Displays a description of the problem, possible workarounds with detailed additional information. • EVTLOG Displays execution log file with valuable information for the technical support.
-l	Displays the location of the reports.
-w	Displays the Web server installation location.
-t	Selects different servers to monitor: • Siebel Server [SIEBSRVR] • Gateway Name Server [GTWYNS] • Siebel Database Server [DBSERVER] • Siebel Web Server Extension [SWSE] • Siebel CORBAOM [CORBAOM] For example, if –t SWSE is defined, then EVT application starts only Web server-related checks and those checks that can be run on any type of server, such as JRE.
-f	Displays the location of the “evt.ini” file.
-q	Starts this application in query mode.

SIEBSPI-Actuate

The top level application group `SIEBSPI-Actuate` contains the following application groups:

SIEBSPI-Windows Nodes

- `Actuate Service Status`

- Start Actuate Service
- Start Tomcat Service
- Stop Actuate Service
- Stop Tomcat Service
- Tomcat Service Status

SIEBSPI-UN*X nodes

- Actuate Service Status
- Start Actuate Service
- Stop Actuate Service

Actuate Service Status

Displays the status of the Actuate service.

Command: `siebspi_mgr -service actuate_status`

Start Actuate Service

Starts the Actuate service.

Command: `siebspi_mgr -service start_actuate`

Stop Actuate Service

Stops the Actuate service.

Command: `siebspi_mgr -service stop_actuate`

Tomcat Service Status

Displays the status of the Tomcat service.

Command: `siebspi_mgr -service tomcat_status`

Start Tomcat Service

Starts the Tomcat service.

Command: `siebspi_mgr -service start_tomcat`

Stop Tomcat Service

Stops the Tomcat service.

Command: `siebspi_mgr -service stop_tomcat`

SIEBSPI-Performance

The top level application group `SIEBSPI-Performance` contains the following application groups:

SIEBSPI-UN*X Nodes

- `SIEBSPI-Mob. Clnts, Bcklgs UN*X`
  - `Transaction Merger Backlog UN*X`
  - `Transaction Router Backlog UN*X`
  - `Transaction Processor Backlog UN*X`
  - `Synchronization Backlog UN*X`
  - `Synchronization Status UN*X`
  - `Workflow Backlog UN*X`
  - `Inactive Opportunities UN*X`
  - `Pending Workflows UN*X`
- `DB login time UN*X`
- `DB Session UN*X`
- `DB transaction time UN*X`
- `Siebel Server performance data UN*X`
- `Siebel Gateway performance data UN*X`
- `Siebel component performance data UN*X`
- `Port performance UN*X`

SIEBSPI-Windows Nodes

- `SIEBSPI-Mob. Clnts, Bcklgs WIN`
  - `Transaction Merger Backlog WIN`
  - `Transaction Router Backlog WIN`
  - `Transaction Processor Backlog WIN`
  - `Synchronization Backlog WIN`
  - `Synchronization Status WIN`
  - `Workflow Backlog WIN`
  - `Inactive Opportunities WIN`
  - `Pending Workflows WIN`
- `DB login time WIN`
- `DB Session WIN`
- `DB transaction time WIN`
- `Siebel Server performance data WIN`
- `Siebel Gateway performance data WIN`
- `Siebel component performance data WIN`
- `Port performance WIN`
- `Smart Probe performance data WIN`

- Smart Probe performance data WIN

Transaction Merger Backlog UN*X

Outputs current values of monitor SIEBSPI_TRANS_MERGER_BACKLOG. Applicable for UNIX nodes.

Command: `siebspi_dbperf -ext_mon SIEBSPI_TRANS_MERGER_BACKLOG -pair tranMergerBL -threshold 2 -columns 2 -col1 1 -col2 2 -sql_file siebspi_merger.sql -print`

Transaction Router Backlog UN*X

Outputs current values of monitor SIEBSPI_TRANS_ROUTER_BACKLOG. Applicable for UNIX nodes.

Command: `siebspi_dbperf -ext_mon SIEBSPI_TRANS_ROUTER_BACKLOG_PERF -pair tranRouterBL -threshold 2 -columns 5 -col1 1 -col2 4 -sql_file siebspi_router.sql -print`

Transaction Processor Backlog UN*X

Outputs current values of monitor SIEBSPI_TRANS_PROCESSOR_BACKLOG. Applicable for UNIX nodes.

Command: `siebspi_dbperf -mon SIEBSPI_TRANS_PROCESSOR_BACKLOG_PERF -backlog_name tranBL -table S_DOCK_TXN_LOG -print`

Synchronization Backlog UN*X

Outputs current values of monitor SIEBSPI_SYNCH_BACKLOG. Applicable for UNIX nodes.

Command: `siebspi_dbperf -ext_mon SIEBSPI_SYNCH_BACKLOG_PERF -pair synchBL -threshold 0 -columns 4 -col1 1 -col2 4 -sql_file siebspi_synch.sql -print`

Synchronization Status UN*X

Outputs synchronization status of mobile clients. Applicable for UNIX nodes.

Command: `siebspi_perftool -status`

Workflow Backlog UN*X

Outputs current values of monitor SIEBSPI_WORKFLOW_BACKLOG. Applicable for UNIX nodes.

Command: `siebspi_dbperf -mon SIEBSPI_WORKFLOW_BACKLOG_PERF -backlog_name workflowBL -table S_ESCL_REQ -print`

Inactive opportunities UN*X

Displays opportunities that were not changed more than x days.

Command: `siebspi_dbperf -columns 2 -col1 1 -col2 2 -sql_file siebspi_oppty.sql -print -threshold_day 30`

Pending Workflows UN*X

Displays workflow requests older than x days.

Command: `siebspi_dbperf -columns 2 -col1 1 -col2 2 -sql_file siebspi_workflow.sql -print -threshold_day 1`

DB login time UN*X

Outputs current DB login time. Applicable for UNIX nodes.

Command: `siebspi_dbperf -login -print`

DB Session UN*X

Outputs current DB sessions. The parameter for the sql file is optional. Applicable for UNIX nodes.

Only Oracle and MS SQL database types are supported. DB2 is not supported.

NOTE: Make sure that you can access and run the sql files.

Command: `siebspi_dbperf -db_session  -print [-sql_file siebspi_dbsession.sql]`

DB transaction time UN*X

Outputs current database transaction time.

Command: `siebspi_dbperf -transaction -print`

Siebel Server performance data UN*X

Outputs current Siebel Server performance metrics.

Applicable for UNIX nodes.

Command: `siebspi_perftool -server`

Siebel Gateway performance data UN*X

Outputs current Siebel Gateway Server performance metrics. Applicable for UNIX nodes.

Command: `siebspi_perftool -gateway`

Siebel component performance data UN*X

Display current Siebel component's performance metrics for the defined component. The parameter for the server name is optional. Applicable for UNIX nodes.

Command: `siebspi_perftool -com_name "Component name or Alias" [-comp_srvr "Siebel Server Name"]`

Port performance UN*X

Outputs current port response time performance metrics. Applicable for UNIX nodes.

Command: `siebspi_perftool -target "Target node" - port "Port list" [-timeout "Timeout in seconds"]`

Show SWSE System and Application Statistics UN*X

Outputs current SWSE performance data. Applicable for UNIX nodes.

Command: `siebspi_web -f PRINT -application "Application name e.g. callcenter_enu"`

Transaction Merger Backlog WIN

Outputs current values of monitor `SIEBSPI_TRANS_MERGER_BACKLOG`. Applicable for Windows nodes.

Command: `siebspi_dbperf -ext_mon SIEBSPI_TRANS_MERGER_BACKLOG -pair tranMergerBL -threshold 2 -columns 2 -col1 1 -col2 2 -sql_file siebspi_merger.sql -print`

Transaction Router Backlog WIN

Outputs current values of monitor `SIEBSPI_TRANS_ROUTER_BACKLOG`. Applicable for Windows nodes.

Command: `siebspi_dbperf -ext_mon SIEBSPI_TRANS_ROUTER_BACKLOG_PERF -pair tranRouterBL -threshold 2 -columns 5 -col1 1 -col2 4 -sql_file siebspi_router.sql -print`

Transaction Processor Backlog WIN

Outputs current values of monitor `SIEBSPI_TRANS_PROCESSOR_BACKLOG`. Applicable for Windows nodes.

Command: `siebspi_dbperf -mon SIEBSPI_TRANS_PROCESSOR_BACKLOG_PERF -backlog_name tranBL -table S_DOCK_TXN_LOG -print`

Synchronization Backlog WIN

Outputs current values of monitor SIEBSPI_SYNCH_BACKLOG. Applicable for Windows nodes.

Command: `siebspi_dbperf -ext_mon SIEBSPI_SYNCH_BACKLOG_PERF -pair synchBL -threshold 0 -columns 4 -col1 1 -col2 4 -sql_file siebspi_synch.sql -print`

Synchronization Status WIN

Outputs synchronization status of mobile clients. Applicable for Windows nodes..

Command: `siebspi_perftool -status`

Workflow Backlog WIN

Outputs current values of monitor SIEBSPI_WORKFLOW_BACKLOG. Applicable for Windows nodes.

Command: `siebspi_dbperf -mon SIEBSPI_WORKFLOW_BACKLOG_PERF -backlog_name workflowBL`

`-table S_ESCL_REQ -print`

Inactive opportunities WIN

Displays opportunities that were not changed more than x days.

Command: `siebspi_dbperf -columns 2 -col1 1 -col2 2 -sql_file siebspi_oppty.sql -print`

`-threshold_day 30`

Pending Workflows WIN

Displays workflow requests older than x days.

Command: `siebspi_dbperf -columns 2 -col1 1 -col2 2 -sql_file siebspi_workflow.sql -print`

`-threshold_day 1`

DB login time WIN

Outputs current database login time. Applicable for Windows nodes.

Command: `siebspi_dbperf -login -print`

DB Session WIN

Outputs current DB sessions. The parameter for the sql file is optional. Applicable for Windows nodes. Only Oracle and MS SQL database types are supported. DB2 is not supported.

NOTE: Make sure that you can access and run the sql files.

Command: `siebspi_dbperf -db_session  -print [-sql_file siebspi_dbsession.sql]`

DB transaction time WIN

Outputs current database transaction time. Applicable for Windows nodes.

Command: `siebspi_dbperf -transaction -print`

Siebel Server performance data WIN

Outputs current Siebel Server performance metrics. Applicable for Windows nodes.

Command: `siebspi_perftool -server`

Siebel Gateway performance data WIN

Outputs current Siebel gateway Server performance metrics. Applicable for Windows nodes.

Command: `siebspi_perftool -gateway`

Siebel component performance data WIN

Outputs current Siebel component's performance metrics for the defined component. The parameter for the server name is optional. Applicable for Windows nodes.

Command: `siebspi_perftool -com_name "Component name or Alias" [-comp_srvr "Siebel Server Name"]`

Port performance WIN

Outputs current port response time performance metrics. Applicable for Windows nodes.

Command: `siebspi_perftool -target "Target node" - port "Port list" [-timeout "Timeout in seconds"]`

Smart Probe performance data WIN

Outputs current Smart Probe performance data. Applicable for Windows nodes.

Command: `siebspi_sp -print`

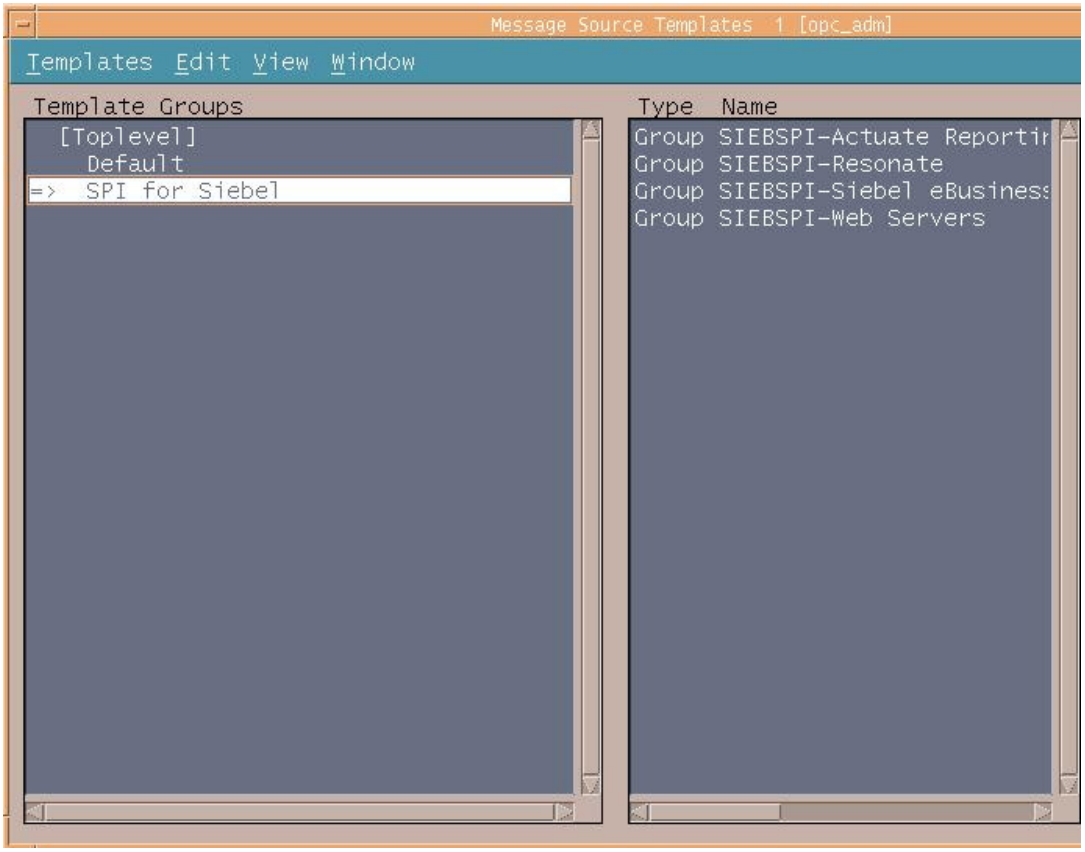
Show SWSE System and Application Statistics WIN

Outputs current SWSE performance data. Applicable for Windows nodes.

Command: `siebspi_web -f PRINT -application "Application name e.g. callcenter_enu"`

SPI for Siebel Templates and Template Groups

When you install SPI for Siebel, a new top level template group is added in the HPOM administrator GUI. The *SPI for Siebel* template group contains all templates, used for managing your Oracle's Siebel Business Applications Environment.



Main Template Groups

The main template groups are:

SIEBSPI-Siebel Business Applications

This template group contains groups for particular Siebel versions (for example, SIEBSPI-Siebel 8.0.x) where you can find the following template groups:

SIEBSPI-Internal

This template group contains policies that intercept internal siebspi messages.

SIEBSPI-Siebel Server

This template group should only be installed on a node where the Siebel server is installed.

SIEBSPI-Siebel Gateway Server

This template group should only be installed on a node where the Siebel Gateway server is installed.

SIEBSPI-Siebel Remote Client

This template group should only be installed on a node where a Siebel remote (mobile) client is installed.

SIEBSPI-Smart Probe

This template group should only be installed on the nodes where the Siebel server or dedicated clients are installed.

SIEBSPI-Siebel Web Server Extension

This template group should only be installed on a node where the Siebel Web server extension is installed.

SIEBSPI-Actuate e.Reporting Server

This template group should only be installed on a node where the Actuate Reporting Server is installed.

SIEBSPI-Resonate Central Dispatch

This template group should be installed on all nodes in the Siebel enterprise where Resonate Central Dispatch is installed. Typically, these are the nodes where the Siebel server and gateway are installed.

SIEBSPI-Web Servers

This template group should only be installed on a node where the Siebel Web server is installed.

Refer to the Technical Sales Reference Guide for HSL SMART Plug-Ins manual available also on installation CD for more information about all available policies and template groups.

Descriptions of Major SPI for Siebel Templates

SIEBSPI_SERVER_AVAILABILITY

Checks the status of the gateway (naming server) and of the Siebel servers. A message is sent if the gateway is unreachable or if the Siebel servers are not available.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_GATEWAY_PROCESS

Checks the `siebsvc` gateway service/daemon (on the gateway server node). If the process fails, a message is sent to the SPI for Siebel operator.

Automatic initiated action: The service/daemon will be restarted once and the message will be acknowledged if the service/daemon is successfully restarted.

Operator initiated action: No.

SIEBSPI_SERVER_PROCESS

Checks the `siebsvc` server service/daemon (on each Siebel server). If the process fails, a message is sent to the SPI for Siebel operator.

Automatic initiated action: The service/daemon will be restarted once and the message will be acknowledged if the service/daemon is successfully restarted.

Operator initiated action: No.

SIEBSPI_SIEBEL_FS

Monitors the Siebel file system size and availability. If the Siebel file system size is too large or, if it is not available, a message is generated.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_*_COMPONENT

This is a set of monitor templates, all of which have the same functionality. Each of these monitors specific tasks for this component. The component's task status is monitored, and a message is sent if the component task has an error state. Additionally, these templates are used to monitor the status of components, for example, online, offline, and so on. For monitoring the status of the components and the exit status of tasks, the monitor templates `SIEBSPI_CHECK_TASKS_EXT` and `SIEBSPI_COMP_STATUS_EXT` should also be assigned and installed. For monitoring the min and max component tasks, the monitor templates `SIEBSPI_NUM_TASKS_TOO_HIGH_EXT` and `SIEBSPI_NUM_TASKS_TOO_LOW_EXT` should also be assigned and installed.

The command line parameters for `siebspi_ext_mon` specify the areas of component monitoring that will be monitored (the area is monitored only if parameter is specified). Parameters and areas are as follows:

Parameter	What is monitored
-status	Status of component
-min_tasks N	Min tasks for component; N specifies the min threshold
-max_tasks	Max tasks for component
-task_exit	Task exit status
-perf	Collect performance per component
-skip_lang "lang1, lang2…"	Ignores components ending with specified Language extensions

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_CHECK_TASKS_EXT

This is executed from the `SIEBSPI_*_COMPONENT` templates if the `"-task_exit"` parameter is included in the `siebspi_extmon` command line.

This monitor template is used when checking the task exit status. When an error exit status is found, this monitor is set to display a message in the message browser.

Automatic initiated action: No.

Operator initiated actions: Lists an annotation to the message, the log file that was produced by the task, which exited with an error.

SIEBSPI_COMP_STATUS_EXT

This is executed from the `SIEBSPI_*_COMPONENT` templates if the `"-ststus"` parameter is included in the `siebspi_extmon` command line.

It checks the component's state (unavailable, shutdown, offline, online, running). When the component's status changes, the appropriate message is sent.

Automatic initiated action: Not available.

Operator initiated actions: Not available.

SIEBSPI_SYNCH_STATUS

Checks the synchronization status of remote clients and sends a message to the HPOM operator if they did not synchronize for a certain time period.

Automatic initiated action: An email is sent to the remote client, which notifies the user that they should synchronize.

Operator initiated actions: No.

SIEBSPI_DOCKING_DIR

Monitors the size of the docking directory on the servers and sends a message to the SPI for Siebel operator if the docking directory size is too large.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_DOCKING_INBOX_DIR

Checks the size of the inbox directories of remote users either on the server or on the client, and sends a message to the SPI for Siebel operator if the size of the directory is too large.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_DOCKING_OUTBOX_DIR

Checks the size of the outbox directories of remote users either on the server or on the client, and sends a message to the SPI for Siebel operator if the size of the directory is too large.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_NUM_TASKS_TOO_HIGH_EXT

This is executed from the `SIEBSPI_*_COMPONENT` templates if the `"-max_tasks"` parameter is included in the `siebspi_extmon` command line.

It watches the number of running tasks of each component and sends a message to the SPI for Siebel operator if the number is too close to the maximum number of tasks allowed.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_NUM_TASKS_TOO_LOW_EXT

This is executed from the `SIEBSPI_*_COMPONENT` templates if the `"-min_tasks N"` parameter is included in the `siebspi_extmon` command line, where `N` is a min threshold (if the parameter does not exist, or `N` is equal to `0`, there will be no checking for the min running tasks - by default, the parameter is included only for components with Background running mode. It watches the number of running tasks of each component and sends a message to the SPI for Siebel operator if the number is lower than the threshold N.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SERVER_LOG

Checks the Siebel server log files for errors.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SERVER_EVENT_LOG

Checks the Siebel server event log file for errors. If an error is detected in the log file, a message is sent to the SPI for Siebel operator. Additionally, an advanced user can apply a filter on the tasks that they want to observe. Only errors that match the filter will be sent.

Automatic initiated action: No.

Operator initiated actions: An operator can view a detailed log of the component that produced this error.

SIEBSPI_GATEWAY_LOG

Checks the Siebel gateway log file for errors. Make sure that the gateway log file exists. In Siebel version 6.0.1, there is no gateway log file available. If an error is detected in the log file, a message is sent to the SPI for Siebel operator.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_WEB_SERVER_LOG

Checks the Siebel Web server log file for errors. If an error is detected in the log file, a message is sent to the SPI for Siebel operator.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SERVER_LOG_DIR

Checks the size of the `/log` dir and produces a message if the directory size is too large.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_GATEWAY_LOG_DIR

Checks the size of the `/log` dir and produces a message if the directory size is too large.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SERVER_LOGARCHIVE_DIR

Checks the size of the `/archivelog` dir and produces a message if the directory size is too large.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_ENTERPRISE_CONFIGURATION

Checks the Siebel configuration and compares it to the configuration that is stored when the automatic discovery tool is started. If the configuration differs from the stored one, a message is sent to the SPI for Siebel operator.

Automatic initiated action: No.

Operator initiated actions: Run automatic discovery of the Siebel enterprise configuration.

SIEBSPI_WEB_SERVER_STATUS

Checks the Siebel Web server status and sends a message if the Web server is down.

Automatic initiated action: Restart the Web server.

Operator initiated actions: No.

SIEBSPI_SERVER_PERFORMANCE
SIEBSPI_GATEWAY_PERFORMANCE

Collects and logs Siebel enterprise performance data.

Operator initiated actions: No.

SIEBSPI_CONF_UPD_EXT

This monitor is a part of autodiscovery. When it is triggered, it executes an automatic action on the server that updates the Service View with new information about the Siebel enterprise configuration.

Automatic initiated action: Update the Service View with the new Siebel enterprise configuration.

Operator initiated actions: No.

SIEBSPI_SP_LOGIN_TIME

Checks the Siebel client (for example, CallCenter client) login time. If the client cannot connect or if the login time exceeds the predefined monitor threshold, a message is sent.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SP_TRANSACTION_TIME

Checks the Siebel client (for example, CallCenter client) time needed for a simple transaction (for example, query for a name in Accounts). If the client cannot perform the transaction or if the transaction time exceeds the predefined monitor threshold, a message is sent.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SP_PERFORMANCE

Collects database login and transaction time of a client.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_DB_LOGIN_TIME

Checks the database server login time. If the database server is down or if the login time exceeds the predefined monitor threshold, a message is sent.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_DB_SESSION

Checks the open database connections. If the number of database connections exceeds the predefined monitor threshold, a message is sent.

There is an optional `-sql_file` parameter. By default, SPI for Siebel collects session information on Oracle with the following SQL:

```
select * from sys.v_$session where username = 'SADMIN'
```

and on MS SQL, with the stored `sp_who` procedure.

Make sure that you can access and run the SQL files. Otherwise set the permissions, for example, on Oracle with the following SQL statement:

```
GRANT SELECT ON "SYS"."V_$SESSION" TO "SADMIN".
```

If you want to use your own way of collecting data about the number of sessions, create a new SQL file and use it with the `-sql_file` parameter.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_DB_SESSION_PERFORMANCE

Collects database session performance data.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_DB_TRANSACTION_TIME

Checks the database server transaction time. If the database server is down or if the transaction time exceeds the predefined monitor threshold, a message is sent.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_DB_LOGIN_PERFORMANCE
SIEBSPI_DB_TRANS_PERFORMANCE

Collects database login and SQL execution time.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_TRANS_PROCESSOR_BACKLOG

Checks the number of rows in the `S_DOCK_TXN_LOG` database table. If the number of rows in the table exceeds the predefined monitor threshold, a message is sent. For more information about transaction processor backlog, refer to "Monitoring the Size of the Siebel Database Tables" on page 45.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_WORKFLOW_BACKLOG

Checks the number of rows in the `S_ESCL_REQ` database table. If the number of rows in the table exceeds the predefined monitor threshold, a message is sent. For more information about workflow backlog, refer to "Monitoring the Size of the Siebel Database Tables" on page 45.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SYNCH_BACKLOG

Checks the number of files that need to be sent to the particular client. If the number of files exceeds the predefined monitor threshold, a message is sent. For more information about synchronization backlog, refer to "Monitoring the Size of the Siebel Database Tables" on page 45.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_TRANS_MERGER_BACKLOG

Checks the number of files that need to be merged to the particular client. If the number of files exceeds the predefined monitor threshold, a message is sent. For more information about transaction merger backlog, refer to "Monitoring the Size of the Siebel Database Tables" on page 45.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_TRANS_ROUTER_BACKLOG

Checks the number of transactions that need to be routed to the particular client. If the number of transactions exceeds the predefined monitor threshold, a message is sent. For more information about transactio router backlog, refer to "Monitoring the Size of the Siebel Database Tables" on page 45.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_INT_MESSAGE

Intercepts siebspi internal messages.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_CHECK_ERROR_LOG, SIEBSPI_CHECK_TRACE_LOG

Checks if the siebspi log/trace file is too long and trims it. The user can modify this monitor and set the maximum size of the log/trace file and the size of the log/trace file after trimming.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_GATEWAY_PROCESS_MEM

Monitors gateway process memory utilization and reports a message if the threshold is reached.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_GATEWAY_PROCESS_CPU

Monitors gateway process CPU utilization and reports a message if the threshold is reached.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SIEBEL_CPU_MEM_EXT

Holds memory and CPU utilization threshold values for all server processes (siebsvc - server, siebsess, siebmtsh, and siebmtshmw). It is used with these templates:

- `SIEBSPI_SERVER_PROCESS_CPU_MEM`
- `SIEBSPI_SESSION_PROCESS_CPU_MEM`
- `SIEBSPI_SIEBMTSH_PROCESS_CPU_MEM`
- `SIEBSPI_SIEBMTSHMW_PROCESS_CPU_MEM`

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_SERVER_PROCESS_CPU_MEM, SIEBSPI_SESSION_PROCESS_CPU_MEM, SIEBSPI_SIEBMTSH_PROCESS_CPU_MEM, SIEBSPI_SIEBMTSHMW_PROCESS_CPU_MEM,

Used for monitoring CPU and memory utilization for siebsvc - server, siebsess, siebmtsh, and siebmtshmw processes.

By default, both memory and CPU utilizations are monitored (both `-mem` and `-cpu` are present in the `siebspi_extmon` command line). By removing one of these parameters, monitoring can be disabled for the metric that the parameter represents.

For all of these templates, it is also necessary to deploy the `SIEBSPI_SIEBEL_CPU_MEM_EXT` policy.

SIEBSPI_RCD_AGT_LOG

Checks the Resonate Central Dispatch log file for errors. If an error is detected in the log file, a message is sent to the SPI for Siebel operator.

Automatic initiated action: No.

Operator initiated actions: No.

SIEBSPI_RESONATE_CDAGENT_PROCESS, SIEBSPI_RESONATE_CONTROLLER_PROCESS, SIEBSPI_RESONATE_REPORTER_PROCESS, SIEBSPI_RESONATE_REPORTER_AGENT_PROCESS, SIEBSPI_RESONATE_SENTINEL_PROCESS

Checks the Resonate Central Dispatch services (cdagent, controller, reporter, reporter-agent, sentinel) status and sends a message if the service is down.

Automatic initiated action: Start the service.

Operator initiated actions: No.

SIEBSPI_RES_SVC_EXT

Template used to connect the messages from the Resonate CD with Service Graph.

NOTE

Some template names that contain an EXT at the end of their name are not described here. This is because their purpose is to be used with the monitor template for which they are named and whose description is already listed in this section. For example, the template, `SIEBSPI_DOCKING_DIR_EXT` is used with the monitor template, `SIEBSPI_DOCKING_DIR`.

Siebel ARM (SARM) Reference Information

About Siebel ARM to CSV Conversion Data (used for Call Graph)

CSV format is a comma-separated file without any interpretation or aggregation. The CSV file contains data organized under column headers. Use third-party software applications to view this output, for example, a spreadsheet.

	B	C	D	E	F	G	H	I	J	K	L
1	ThreadID	IsRoot	Type(level)	RootID	ParentSarmID	ParentTimeID	ParentProcID	AreaCodeSymbol	AreaDesc	SubAreaCodeSymbol	SubAreaDesc
2	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
3	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
4	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
5	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
6	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
7	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
8	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
9	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
10	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
11	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
12	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
13	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
14	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
15	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
16	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
17	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
18	5300	N	Detail(2)	1	1	1074205585	1848	Area_SARM	SARM Framework	Sub_SARM_IO	Flush SARM Buffer To Di
19	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se
20	5300	N	Sarm(1)	1	1	1074205585	1848	Area_SWSE	Web Server Plugin	Sub_SWSE_SENDMSG	Send message to app se

Tag	Description
SarmNode	Data contained within this tag represents an instance of a Siebel ARM node, which is an instrumented area of the Siebel ARM architecture. Each Siebel ARM node can have zero to many nodes as its descendants.
SarmID	A unique number representing the Siebel ARM node.
`TypeLevel`	The granularity level at which Siebel ARM records the Siebel ARM node information.
`RootID`	The SarmID of the root Siebel ARM node.
`ParentSARMID`	The parent SarmNode from which the request traveled.
`ParentTimeID`	A unique ID number that generates from the starting time of the corresponding parent Siebel ARM node.
`ParentProcID`	The parent process ID, that is, the OS (operating system) process ID for the Siebel component.

Tag	Description
AreaCodeSymbol	Symbol of the instrumentation area within the Siebel architecture.
AreaDescription	Name of the instrumentation area within the Siebel architecture.
SubAreaCodeSymbol	Symbol of the subarea within an area of the Siebel architecture.
SubAreaDescription	Name of the subarea within an area of the Siebel architecture.
Count	Number of times Siebel ARM accesses this Siebel ARM Node.
Duration	Total time to execute the instrumented area.
PooledMemoryUsage	Amount of memory consumed from or released to the Siebel High Performance memory allocator.
PooledMemoryCalls	The number of calls made to the High performance memory allocator.
SystemMemoryUsage	Amount of memory consumed from or released to the operating system.
SystemMemoryCalls	The number of calls made to the operating system.
AppInt1 and AppInt2	Context integer value captured at the point of instrumentation. The value depends on the instrumented area.
AppString1 and AppString2	Context string value captured at the point of instrumentation. The value depends on the instrumented area. For example, the name of the method invoked or workflow process initialized.
+<ChildNode>	Expand this tag to reveal performance details on descendent nodes of the given node. The descendent nodes are defined the same as the parent node, that is, the tag definitions are the same as above.

About Performance Aggregation Analysis and Data

Performance aggregation analysis is a compilation of the data contained in a Siebel ARM binary file. Siebel ARM files group performance data based on the instrumented areas.

A result of running a performance aggregation analysis of a Siebel ARM file is an extensible markup language (XML) output file. This file contains timing data for the instrumented areas.

The amount of information contained in the performance aggregation analysis XML output is dependent on the argument used for the `-a` flag when performing the analysis (either AREA or DETAILS) and the setting for the SARM Granularity Level parameter.

The performance aggregation XML output file contains the following tag schema when the `-a` flag argument is set to **DETAILS**. If the `-a` flag argument is set to **AREA** when running the analysis, the tag schema is the same minus the **<NumberOfSubAreas>** and **<SubArea>** information.

```
<Area>
   <Name>
   <Symbol>
   <NumberOfSubAreas>
   <Invocations>
      <Recursive>
      <NonRecursive>
   <ResponseTime>
      <Total>
      <Average>
      <StandardDeviation>
      +<Maximum>
      +<Minimum>
   <ExecutionTime>
      <Total>
      <Calls>
      <Average>
      <Maximum>
      <Minimum>
      <PercentOfResponse>
   <RecursiveTime>
      <Total>
      <Calls>
      <Average>
      <Maximum>
      <Minimum>
      <PercentOfResponse>
   <InclusiveMemory>
      <Total>
      <Average>
      <StandardDeviation>
      +<MaxAllocated>
      +<MaxDeallocated>
   <ExclusiveMemory>
```

```
   <Total>
   <Average>
   <StandardDeviation>
   +<MaxAllocated>
   +<MaxDeallocated>
<SubArea>
   <Name>
   <Symbol>
   <NumberOfInstances>
   +<Invocations>
   +<ResponseTime>
   +<ExecutionTime
   +<Memory>
   +<Instance>
   +<Parents>
   +<Children>
<Parents>
   <NumberOfParents>
   <ParentArea>
      <Name>
      <Symbol>
      +<InvocationsFromParents>
      +<ResponseTime>
      +<Memory>
<Children>
   <NumberOfChildren>
   <ChildArea>
      <Name>
      <Symbol>
      +<InvocationsOfChild>
      +<ResponseTime>
      +<Memory>
```

Regular Expression Syntax

A regular expression is a pattern of text that consists of ordinary characters (for example, letters a through z) and special characters, known as metacharacters. The pattern describes one or more strings to match when searching a body of text. The regular expression serves as a template for matching a character pattern to the string being searched.

Here are some examples of regular expression you might encounter:

Regular expression	Matches
\bError\b	Find "Error" but ignore strings like "SocketError"
"\d{2}-\d{5}	"Validate an ID number consisting of 2 digits, a hyphen, and another 5 digits.
"<(.*)>.*<\/\1>	"Match an HTML tag.

The following table contains the complete list of metacharacters and their behavior in the context of regular expressions:

Character	**Description**
\	Marks the next character as either a special character, a literal, a backreference, or an octal escape. For example, 'n' matches the character "n". '\n' matches a newline character. The sequence '\\' matches "\" and "\(" matches "(".
^	Matches the position at the beginning of the input string.
$	Matches the position at the end of the input string.
*	Matches the preceding subexpression zero or more times. For example, zo* matches "z" and "zoo". * is equivalent to {0,}.

Character	Description
+	Matches the preceding subexpression one or more times. For example, 'zo+' matches "zo" and "zoo", but not "z". + is equivalent to {1,}.
?	Matches the preceding subexpression zero or one time. For example, "do(es)?" matches the "do" in "do" or "does". ? is equivalent to {0,1}
{n}	n is a nonnegative integer. Matches exactly n times. For example, 'o{2}' does not match the 'o' in "Bob," but matches the two o's in "food".
{n,}	n is a nonnegative integer. Matches at least n times. For example, 'o{2,}' does not match the "o" in "Bob" and matches all the o's in "foooood". 'o{1,}' is equivalent to 'o+'. 'o{0,}' is equivalent to 'o*'.
{n,m}	m and n are nonnegative integers, where n <= m. Matches at least n and at most m times. For example, "o{1,3}" matches the first three o's in "fooooood". 'o{0,1}' is equivalent to 'o?'. Note that you cannot put a space between the comma and the numbers.
?	When this character immediately follows any of the other quantifiers (*, +, ?, {n}, {n,}, {n,m}), the matching pattern is non-greedy. A non-greedy pattern matches as little of the searched string as possible, whereas the default greedy pattern matches as much of the searched string as possible. For example, in the string "oooo", 'o+?' matches a single "o", while 'o+' matches all 'o's.

Character	Description
.	Matches any single character except "\n". To match any character including the '\n', use a pattern such as '[.\n]'.
(pattern)	Matches pattern and captures the match. To match parentheses characters ( ), use '\(' or '\)'.
(?:pattern)	Matches pattern but does not capture the match, that is, it is a non-capturing match that is not stored for possible later use. This is useful for combining parts of a pattern with the "or" character (|). For example, 'industr(?:y|ies) is a more economical expression than 'industry|industries'.
(?=pattern)	Positive lookahead matches the search string at any point where a string matching pattern begins. This is a non-capturing match, that is, the match is not captured for possible later use. For example 'Windows (?=95|98|NT|2000)' matches "Windows" in "Windows 2000" but not "Windows" in "Windows 3.1". Lookaheads do not consume characters, that is, after a match occurs, the search for the next match begins immediately following the last match, not after the characters that comprised the lookahead.

Character	Description
(?!pattern)	Negative lookahead matches the search string at any point where a string not matching pattern begins. This is a non-capturing match, that is, the match is not captured for possible later use. For example 'Windows (?!95 | 98 | NT | 2000)' matches "Windows" in "Windows 3.1" but does not match "Windows" in "Windows 2000". Lookaheads do not consume characters, that is, after a match occurs, the search for the next match begins immediately following the last match, not after the characters that comprised the lookahead.
x | y	Matches either x or y. For example, 'z | food' matches "z" or "food". '(z | f)ood' matches "zood" or "food".
[xyz]	A character set. Matches any one of the enclosed characters. For example, '[abc]' matches the 'a' in "plain".
[^xyz]	A negative character set. Matches any character not enclosed. For example, '[^abc]' matches the 'p' in "plain".
[a-z]	A range of characters. Matches any character in the specified range. For example, '[a-z]' matches any lowercase alphabetic character in the range 'a' through 'z'.
[^a-z]	A negative range characters. Matches any character not in the specified range. For example, '[^a-z]' matches any character not in the range 'a' through 'z'.
\b	Matches a word boundary, that is, the position between a word and a space. For example, 'er\b' matches the 'er' in "never" but not the 'er' in "verb".

Character	Description
\B	Matches a nonword boundary. 'er\B' matches the 'er' in "verb" but not the 'er' in "never".
\cx	Matches the control character indicated by x. For example, \cM matches a Control-M or carriage return character. The value of x must be in the range of A-Z or a-z. If not, c is assumed to be a literal 'c' character.
\d	Matches a digit character. Equivalent to [0-9].
\D	Matches a nondigit character. Equivalent to [^0-9].
\f	Matches a form-feed character. Equivalent to \x0c and \cL.
\n	Matches a newline character. Equivalent to \x0a and \cJ.
\r	Matches a carriage return character. Equivalent to \x0d and \cM.
\s	Matches any whitespace character including space, tab, form-feed, etc. Equivalent to [\f\n\r\t\v].
\S	Matches any non-whitespace character. Equivalent to [^ \f\n\r\t\v].
\t	Matches a tab character. Equivalent to \x09 and \cI.
\v	Matches a vertical tab character. Equivalent to \x0b and \cK.
\w	Matches any word character including underscore. Equivalent to '[A-Za-z0-9_]'.
\W	Matches any nonword character. Equivalent to '[^A-Za- z0-9_]'.

Character	Description
\xn	Matches n, where n is a hexadecimal escape value. Hexadecimal escape values must be exactly two digits long. For example, '\x41' matches "A". '\x041' is equivalent to '\x04' & "1". Allows ASCII codes to be used in regular expressions.
\num	Matches num, where num is a positive integer. A reference back to captured matches. For example, '(.)\1' matches two consecutive identical characters.
\n	Identifies either an octal escape value or a backreference. If \n is preceded by at least n captured subexpressions, n is a backreference. Otherwise, n is an octal escape value if n is an octal digit (0-7).
\nm	Identifies either an octal escape value or a backreference. If \nm is preceded by at least nm captured subexpressions, nm is a backreference. If \nm is preceded by at least n captures, n is a backreference followed by literal m. If neither of the preceding conditions exist, \nm matches octal escape value nm when n and m are octal digits (0-7).
\nml	Matches octal escape value nml when n is an octal digit (0-3) and m and l are octal digits (0-7).
\un	Matches n, where n is a Unicode character expressed as four hexadecimal digits. For example, \u00A9 matches the copyright symbol (©).

The SPI for Siebel Support Tool

This tool is installed on the managed node and is implemented to help the support of SPI for Siebel. It collects statistics and log files from the system for easy submission to the Support Department. To use the tool, login to the management node and run it from the command-line.

Tool locations:

- Unix: <OVInstallDir>/siebspi/support/siebspi_supp
- Windows: <OVInstallDir>\siebspi\support\siebspi_supp.exe

Collected log files locations:

- Unix: <OVDataDir>/siebspi/supplog/siebspi_supplog.tar.Z
- Windows: <OVDataDir>\siebspi\supplog\siebspi_supplog.zip

Usage:

```
siebspi_supp    -status|-collect
```

`status`	Collects and displays statistical data about the installed SPI for Siebel files, the HP agent and the operating system including detailed information on the following: - The version of the SPI - HP Agent status - Operating system statistics - Distributed templates - Running processes - Installed software
`collect`	Collects and saves log files, statistical data about the installed SPI for Siebel files, the HP agent and the operating system in the `<OvAgetDir>\siebspi\supplog`

directory on the node for easy submission
to the Support Department

Collected detailed information includes the following:
- The version of the SPI
- HP Agent status
- Operating system statistics
- Distributed templates
- Running processes
- Installed software

Chapter 17

Troubleshooting

Errors and Problems

This section provides information relating to the logging and tracking of errors. It also describes the possible errors that can occur during SPI for Siebel usage, and how to resolve any problems if encountered.

Error Logging and Tracing

By default, error logging is on at all times. Additionally, errors are logged to the error log files at the following location:

On UNIX systems:

`<OVDataDir>/siebspi/log/error`

On Windows systems:

`<OVDataDir>\siebspi\log\error`

Each SPI for Siebel binary/executable on the managed node in the cmds, actions and monitor directories can be executed with the `-trace` option. All errors and additional "trace" information will be printed to the console and logged at the following location:

On Unix systems:

`<OVDataDir>/siebspi/log/trace`

On Windows systems:

<OVDataDir>\siebspi\log\trace

Miscellaneous Troubleshooting

Deleting the Files Needed for SIEBSPI on the Management Server

SPI for Siebel has known problems with the de-installation of the product when the managed Siebel server and the HPOM management server are installed on the same computer. If this situation exists, do not perform the procedure "Uninstalling SPI for Siebel from the Managed Nodes" on the HPOM management server. Additionally, do not run the application **Remove from Node** on the HPOM management server as a de-installation from the management server node also deletes the files that are needed for SIEBSPI on the management server. In case this occurs, perform the "Re-installing the SPI for Siebel" procedure.

Correcting Corruption of the spi.cfg File

When using the **Change Configuration** tool, immediately after entering new configuration values, if you use editing keys, for example, **[Backspace]**, **[Delete]**, and arrow keys, the configuration file, `spi.cfg` may become corrupted with the addition of special characters. Refer to the example below for a listing of how the file could appear:

```
SIEBEL_ENTERPRISE"sieb621_[D_[D_[D_[D_[D_[C_[C621"
SIEBEL_GATEWAY"yabg_[d_[d_[c_[c_[d_[d_[d_[c_[c_[c_[d_
[d_xxx_[d_[dngtzee"
SIEBEL_DATABASE_NAME"_[D_[D_[C_[D_[D_[D_[D_[C_[C_[C_[Csieb_[D_[D_[D_
[D sieb621"
```

A workaround to this problem is to use the `siebspi_configure` executable tool from the console.

SPISVC-003: Cannot connect to SPI for Siebel service/daemon (siebspi_svc). Check if the service/daemon is running.

If you receive this message in your message browser, you should check if the SPI for Siebel service/daemon is running. If it is not, you should start it by executing the **Start SPI for Siebel Service** application in the **SPI for Siebel/SIEBSPI-Maintenance/SIEBSPI-SPI for Siebel Service** application group.

If the SPI for Siebel service/daemon is running and you still receive these messages, check the SPI for Siebel error log file on the managed node where the messages came from. Look for entries in the log file such as: "Could not connect to pipe". If the error code number (errno) is 231 (`ERROR_PIPE_BUSY`) on Windows nodes or ECONNREFUSED (146 on Solaris, 79 on AIX or 239 on HP-UX) on UNIX nodes, this indicates that temporarily resources could not be allocated. This means that no new connections to the SPI for Siebel service/daemon could be established.

You should check if you receive the same messages if you install only a few templates from the **SPI for Siebel/SIEBSPI-Siebel *.*.* Server** template group and the utilization of the Siebel server is low. If you still receive these kind of messages or, if the error code number in the SPI if Siebel error log file is other than described, you should try restarting the SPI for Siebel service/daemon either with the **Restart SPI for Siebel Service** application or manually by starting the `siebspi_mgr -service restart_spisvc` command.

If you still encounter problems with the SPI for Siebel service/daemon, contact the Support Department.

Some Applications Do Not Work on UN*X Nodes

Some SPI for Siebel applications may not work correctly on UN*X nodes if the user name used to install Oracle's Siebel Business Applications is other than root. Therefore, the following applications must be modified by replacing the user name in the Target tab of the applications with the {siebel user name}:

- All of the applications in the **SPI for Siebel/SIEBSPI-Tools/SIEBSPI-UN*X Nodes** application group that are started with the `root` user
- **SPI for Siebel/SIEBSPI-Maintenance/SIEBSPI-SPI for Siebel Service/SIEBSPI-UN*X Nodes/Start SPI for Siebel Service**
- **SPI for Siebel/SIEBSPI-Maintenance/SIEBSPI-SPI for Siebel Service/SIEBSPI-UN*X Nodes/Restart SPI for Siebel Service**

In addition, the SPI for Siebel Service must be started with the same {siebel user name}. For more information, see also "SPI for Siebel Service on UN*X Nodes" on page 204.

SPI for Siebel Service on UN*X Nodes

If the username used to install Oracle's Siebel Business Applications is other than root, make sure that the SPI for Siebel Service is started with the `{siebel user name}` to work properly.

After installation, the SPI for Siebel Service is started automatically with the root user so you must first stop it with the **SPI for Siebel/SIEBSPI-Maintenance/SIEBSPI-SPI for Siebel Service/SIEBSPI-UN*X Nodes/Stop SPI for Siebel Service** application. After the SPI for Siebel Service has stopped, modify the **SPI for Siebel/SIEBSPI-Maintenance/SIEBSPI-SPI for Siebel Service/SIEBSPI-UN*X Nodes/Start SPI for Siebel Service** application, change the user name from `root` to `{siebel user name}`, and run the application to start the SPI for Siebel Service with the user name that you provided.

For details about the other applications that should be changed, refer to "Some Applications Do Not Work on UN*X Nodes" on page 204.

Timeouts

This section provides information relating to the timeout settings.

Predefined Timeouts

Some SPI for Siebel executables contain different predefined timeouts that define timeframes (in seconds) in which they expect certain results to be returned from other executables or triggered actions to be completed. Those timeout parameters are exported in four configuration files on every managed node:

`<OVInstallDir>/siebspi/conf/siebspi_svc.cfg`

`<OVInstallDir>/siebspi/conf/siebspi_extmon.cfg`

`<OVInstallDir>/siebspi/conf/siebspi_mgr.cfg`

`<OVInstallDir>/siebspi/conf/siebspi_dbperf.cfg`

Configuration settings are read from these files only if the parameter is set to `Manual_configuration=Y`. Otherwise executables will use their predefined timeouts.

NOTE

Settings in these timeout configuration files should not be changed without prior approval from SPI for Siebel Support.

Appendix A

File Locations

File Tree on the Management Server

The /var/opt/OV/share/tmp/OpC_appl/SIEBSPI directory is created when installing the bundle from the SIEBSPI depot on the HP Operations Manager management server. It contains multiple subdirectories that contain the siebspi configuration files for HP Operations Manager.

Platform dependent files (those for deployment on the management node) are copied to the HP Operations Manager Instrumentation folder. The Instrumentation directory is usually located in the following location:

/var/opt/OV/share/databases/OpC/mgd_node/customer

/opt/OV/siebspi/bin

siebspi_configure
siebspi_smail
siebspi_svcupd
siebspi_licmgr
icudt26l.dll
icuin26.dll
icuio26.dll
icuuc26.dll

\siebspi\conf

spi.cfg

\siebspi\locale

intmc_en.res

\siebspi\msg

- email.msg

SPI for Siebel - Reports

The self-extracting file for HP Reporter:

/etc/opt/OV/share/siebspi/reports

- SPIforSiebel-Reports_03.21.exe

OVIS Smart Probe for Siebel

The self-extracting file for HP Internet Services:

/etc/opt/OV/share/siebspi/ovis

- OVISProbeforSiebel_03_20.exe
- OVIS_SmartProbe_for_Siebel_03_20.pdf

Documentation

/opt/OV/siebspi/doc

SIEBSPI-InstallGuideUNIX.pdf

SIEBSPI-UserGuideUNIX.pdf

siebspi-release-notes-unix.txt

siebspi-readme.txt

hsl_software_license_support_terms_signed.txt

Description of Directory Structures on the Managed Node

The files associated with the HTTPS agent are in the following directory structures:

<OVInstallDir>

HP-UX, Solaris: /opt/OV

AIX: /usr/lpp/OV

Windows: <ProgramFilesDir>\HP OpenView

<OVDataDir>

HP-UX, Solaris, Linux, AIX: /var/opt/OV

Windows: <ProgramFiles>\HP OpenView\data

The files associated with the DCE and NCS agents are in the following directory structures:

<OVInstallDir>

HP-UX, Solaris: /opt/OV

AIX: /usr/lpp/OV

Windows: c:\usr\OV

<OVDataDir>

HP-UX, Solaris, Linux, AIX: /var/opt/OV

Windows: c:\usr\OV

File Tree on the Managed Node

After the installation of SPI for Siebel on the managed node, the following directories are created on the managed node file system:

<OVInstallDir>/siebspi

<OVInstallDir>/siebspi/bin

<OVInstallDir>/siebspi/cluster

<OVInstallDir>/siebspi/conf

<OVInstallDir>/siebspi/lib (on Unix nodes)

<OVInstallDir>/siebspi/locale

<OVInstallDir>/siebspi/locale/6.0.x

<OVInstallDir>/siebspi/locale/7.0.4

<OVInstallDir>/siebspi/locale/7.5.2

<OVInstallDir>/siebspi/locale/7.7

<OVInstallDir>/siebspi/locale/7.8

<OVInstallDir>/siebspi/msg

<OVInstallDir>/siebspi/support

<OVDataDir>/siebspi

<OVDataDir>/siebspi/tmp

<OVDataDir>/siebspi/log

<OVDataDir>/siebspi/siebspi_perf

SPI for Siebel files are also copied to the HPOM instrumentation directories on the managed node:

On HP-UX:

DCE and NCS agents

/var/opt/OV/bin/OpC/actions

/var/opt/OV/bin/OpC/cmds

/var/opt/OV/bin/OpC/monitor

HTTPS agents

/var/opt/OV/OpC/bin/instrumentation

On IBM AIX systems:

DCE agents

/var/lpp/OV/bin/instrumentation

HTTPS agents

/var/opt/OV/OpC/bin/instrumentation

On Windows 2000/2003 systems:

DCE agents

C:\Program Files\HP OpenView\Installed Packages\{790c06b4-844e-11d2-972b-080009ef8c2a}\bin\instrumentation

HTTPS agents

/var/opt/OV/bin/instrumentation/

On Sun Solaris systems:

DCE agents

/var/opt/OV/bin/instrumentation

HTTPS agents

/var/opt/OV/bin/instrumentation