Sun Cluster Data Service for Siebel Guide for Solaris OS

SPARC Platform Edition

Sun microsystems

Contents

Preface

Sun Cluster Data Service for Siebel Guide for Solaris OS explains how to install and configure Sun™ Cluster HA for Siebel.

This document is intended for system administrators with extensive knowledge of Sun software and hardware. Do not use this document as a planning or presales guide. Before reading this document, you should have already determined your system requirements and purchased the appropriate equipment and software.

The instructions in this book assume knowledge of the Solaris™ Operating System (Solaris OS) and expertise with the volume-manager software that is used with Sun Cluster software.

Using UNIX Commands

This document contains information about commands that are specific to installing and configuring Sun Cluster data services. The document does *not* contain comprehensive information about basic UNIX® commands and procedures, such as shutting down the system, booting the system, and configuring devices. Information about basic UNIX commands and procedures is available from the following sources:

- Online documentation for the Solaris Operating System
- Solaris Operating System man pages
- Other software documentation that you received with your system

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P–1 Typographic Conventions

Typeface	Meaning	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your .login file.
		Use ls -a to list all files.
		machine_name% you have mail.
AaBbCc123	What you type, contrasted with onscreen computer output	machine_name% **su**
		Password:
aabbcc123	Placeholder: replace with a real name or value	The command to remove a file is rm *filename*.
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*.
		A *cache* is a copy that is stored locally.
		Do *not* save the file.
		Note: Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P–2 Shell Prompts

Shell	Prompt
C shell	machine_name%
C shell for superuser	machine_name#
Bourne shell and Korn shell	$
Bourne shell and Korn shell for superuser	#

Related Documentation

Information about related Sun Cluster topics is available in the documentation that is listed in the following table. All Sun Cluster documentation is available at http://docs.sun.com.

Topic	Documentation
Data service administration	*Sun Cluster Data Services Planning and Administration Guide for Solaris OS*
	Individual data service guides
Concepts	*Sun Cluster Concepts Guide for Solaris OS*
Overview	*Sun Cluster Overview for Solaris OS*
Software installation	*Sun Cluster Software Installation Guide for Solaris OS*
System administration	*Sun Cluster System Administration Guide for Solaris OS*
Hardware administration	*Sun Cluster 3.1 - 3.2 Hardware Administration Manual for Solaris OS*
	Individual hardware administration guides
Data service development	*Sun Cluster Data Services Developer's Guide for Solaris OS*
Error messages	*Sun Cluster Error Messages Guide for Solaris OS*
Command and function reference	*Sun Cluster Reference Manual for Solaris OS*

For a complete list of Sun Cluster documentation, see the release notes for your release of Sun Cluster at `http://docs.sun.com`.

Related Third-Party Web Site References

Third-party URLs that are referenced in this document provide additional related information.

Note – Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused or alleged to be caused by or in connection with use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (`http://www.sun.com/documentation/`)
- Support (`http://www.sun.com/support/`)
- Training (`http://www.sun.com/training/`)

Getting Help

If you have problems installing or using Sun Cluster, contact your service provider and provide the following information:

- Your name and email address (if available)
- Your company name, address, and phone number
- The model number and serial number of your systems
- The release number of the Solaris Operating System (for example, Solaris 10)
- The release number of Sun Cluster (for example, Sun Cluster 3.2)

Use the following commands to gather information about each node on your system for your service provider.

Command	Function
prtconf -v	Displays the size of the system memory and reports information about peripheral devices
psrinfo -v	Displays information about processors
showrev —p	Reports which patches are installed
SPARC: prtdiag -v	Displays system diagnostic information
/usr/cluster/bin/clnode show-rev	Displays Sun Cluster release and package version information

Also have available the contents of the /var/adm/messages file.

Installing and Configuring Sun Cluster HA for Siebel

This chapter explains how to install and configure Sun Cluster HA for Siebel.

This chapter contains the following sections.

Sun Cluster HA for Siebel Overview

Sun Cluster HA for Siebel provides fault monitoring and automatic failover for the Siebel application. High availability is provided for the Siebel gateway and Siebel server. With a Siebel implementation, any physical node running the Sun Cluster agent cannot be running the Resonate agent as well. Resonate and Sun Cluster can coexist within the same Siebel enterprise, but not on the same physical server.

Note – If you are using the Solaris 10 OS, install and configure this data service to run only in the global zone. At publication of this document, this data service is not supported in non-global zones. For updated information about supported configurations of this data service, contact your Sun service representative.

For conceptual information about failover services, see the *Sun Cluster Concepts Guide for Solaris OS*.

TABLE 1 Protection of Siebel Components

SiebelComponent	Protected by
Siebel gateway	Sun Cluster HA for Siebel
	The resource type is `SUNW.sblgtwy`.
Siebelserver	Sun Cluster HA for Siebel
	The resource type is `SUNW.sblsrvr`.

Installing and Configuring Sun Cluster HA for Siebel

Table 2 lists the tasks for installing and configuring Sun Cluster HA for Siebel. Perform these tasks in the order that they are listed.

TABLE 2 Task Map: Installing and Configuring Sun Cluster HA for Siebel

Task	Instructions
Plan the Siebel installation	"Planning the Sun Cluster HA for Siebel Installation and Configuration" on page 11
Prepare the nodes and disks	"How to Prepare the Nodes" on page 14
Install and configure Siebel	"How to Install the Siebel Gateway on the Global File System" on page 16
	"How to Install the Siebel Gateway on Local Disks of Physical Hosts" on page 17
	"How to Install the Siebel Server and Siebel Database on the Global File System" on page 18
	"How to Install the Siebel Server and Siebel Database on Local Disks of Physical Hosts" on page 19
Verify Siebel installation and configuration	"How to Verify the Siebel Installation and Configuration" on page 21
Install Sun Cluster HA for Siebel packages	"Installing the Sun Cluster HA for Siebel Packages" on page 22
Register and configure Sun Cluster HA for Siebel as a failover data service	"How to Register and Configure Sun Cluster HA for Siebel as a Failover Data Service" on page 24
	"How to Register and Configure the Siebel Server" on page 26
Verify Sun Cluster HA for Siebel installation and configuration	"How to Verify the Sun Cluster HA for Siebel Installation and Configuration" on page 28

TABLE 2 Task Map: Installing and Configuring Sun Cluster HA for Siebel   *(Continued)*

Task	Instructions
Maintain Sun Cluster HA for Siebel	"Maintaining Sun Cluster HA for Siebel" on page 28
Tune the Sun Cluster HA for Siebel fault monitors	"Tuning the Sun Cluster HA for Siebel Fault Monitors" on page 29

Planning the Sun Cluster HA for Siebel Installation and Configuration

This section contains the information you need to plan your Sun Cluster HA for Siebel installation and configuration.

Configuration Restrictions

Caution – Your data service configuration might not be supported if you do not observe these restrictions.

Use the restrictions in this section to plan the installation and configuration of Sun Cluster HA for Siebel. This section provides a list of software and hardware configuration restrictions that apply to Sun Cluster HA for Siebel.

For restrictions that apply to all data services, see the release notes for your release of Sun Cluster.

- High availability is provided for the Siebel gateway and Siebel server.
- With a Siebel implementation, any physical node running the Sun Cluster agent cannot be running the Resonate agent as well. Resonate and Sun Cluster can coexist within the same Siebel enterprise, but not on the same physical server.
- If you are using Sun Cluster HA for Siebel with Sun Cluster HA for Sun Java System Web Server, you *must* configure Sun Cluster HA for Sun Java System Web Server as a failover data service. Scalable Sun Cluster HA for Sun Java System Web Server *cannot* be used with Sun Cluster HA for Siebel.

Configuration Requirements

Caution – Your data service configuration might not be supported if you do not adhere to these requirements.

Use the requirements in this section to plan the installation and configuration of Sun Cluster HA for Siebel. These requirements apply to Sun Cluster HA for Siebel only. You must meet these requirements before you proceed with your Sun Cluster HA for Siebel installation and configuration.

For requirements that apply to all data services, see "Configuration Guidelines for Sun Cluster Data Services" in *Sun Cluster Data Services Planning and Administration Guide for Solaris OS*.

- Install each Siebel gateway and each Siebel server in its own Siebel root environment (each instance has its own `siebenv.sh` file). This allows each instance to be independent of others, making failovers and problem diagnosis easier.

- If more than one Siebel server will use the Siebel Filesystem, install the Siebel Filesystem on a global file system. This will ensure that all Siebel server resources have access to the same Filesystem from any node in the cluster.

- Do not use the `Autostart` feature. When prompted to configure this parameter during the Siebel gateway or Siebel server installation, configure **Autostart=NO**.

Standard Data Service Configurations

Use the standard configuration in this section to plan the installation and configuration of Sun Cluster HA for Siebel. Sun Cluster HA for Siebel supports the standard configuration in this section. Sun Cluster HA for Siebel might support additional configurations. However, you must contact your Sun service provider for information on additional configurations.

Figure 1 illustrates a possible configuration using Sun Cluster HA for Siebel. The Siebel server and the Siebel gateway are configured as failover data services.
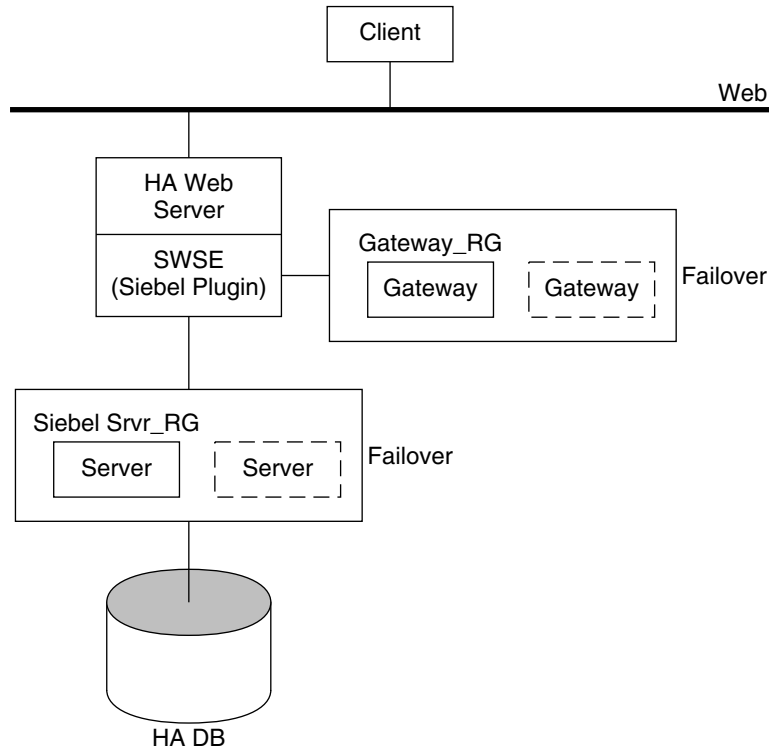
FIGURE 1 Standard Siebel Configuration

Configuration Planning Questions

Use the questions in this section to plan the installation and configuration of Sun Cluster HA for Siebel. Insert the answers to these questions into the data service worksheets in Appendix D, "Data Service Configuration Worksheets and Examples," in *Sun Cluster Data Services Planning and Administration Guide for Solaris OS*.

- What is the logical hostname for the following resources: Siebel gateway and Siebel server?
- Where will the system configuration files reside?

  See "Configuration Guidelines for Sun Cluster Data Services" in *Sun Cluster Data Services Planning and Administration Guide for Solaris OS* for the advantages and disadvantages of placing the Siebel binaries on the local file system as opposed to the cluster file system.

Preparing the Nodes and Disks

This section contains the procedures you need to prepare the nodes and disks.

▼ How to Prepare the Nodes

Use this procedure to prepare for the installation and configuration of Siebel.

1 Become super user on all of the nodes.

2 Configure the `/etc/nsswitch.conf` **file so that Sun Cluster HA for Siebel starts and stops correctly if a switchover or a failover occurs.**

On each node that can master the logical host that runs Sun Cluster HA for Siebel, include the following entries in the /etc/nsswitch.conf file.

```
passwd:    files nis [TRYAGAIN=0]
publickey: files nis [TRYAGAIN=0]
project:   files nis [TRYAGAIN=0]
group:     files
```

Sun Cluster HA for Siebel uses the su - *user* command to start, stop, and probe the service.

The network information name service might become unavailable when a cluster node's public network fails. Adding the preceding entries ensures that the su(1M) command does not refer to the NIS/NIS+ name services if the network information name service is unavailable.

3 Prevent the Siebel gateway probe from timing out while trying to open a file on /home**.**

When the node running the Siebel gateway has a path beginning with /home, which depends on network resources such as NFS and NIS, and the public network fails, the Siebel gateway probe times out and causes the Siebel gateway resource to go offline. Without the public network, Siebel gateway probe hangs while trying to open a file on /home, causing the probe to time out.

To prevent the Siebel gateway probe from timing out while trying to open a file on /home, configure all nodes of the cluster that can be the Siebel gateway as follows:

a. Eliminate all NFS or NIS dependencies for any path starting with /home**.**

You may either have a locally mounted/home path or rename the /home mount point to /export/home or another name which does not start with /home.

b. Comment out the line containing +auto_master **in the** /etc/auto_master **file, and change any** /home **entries to** auto_home**.**

c. Comment out the line containing +auto_home **in the** /etc/auto_home **file.**

4 Prepare the Siebel administrator's home directory.

5   On each node, create an entry for the Siebel administrator group in the `/etc/group` **file, and add potential users to the group.**

Tip – In the following example, the Siebel administrator group is named `siebel`.

Ensure that group IDs are the same on all of the nodes that run Sun Cluster HA for Siebel.

```
siebel:*:521:siebel
```

You can create group entries in a network name service. If you do so, also add your entries to the local `/etc/inet/hosts` file to eliminate dependency on the network name service.

6   On each node, create an entry for the Siebel administrator.

Tip – In the following example, the Siebel administrator is named `siebel`.

The following command updates the `/etc/passwd` and `/etc/shadow` files with an entry for the Siebel administrator.

```
# useradd -u 121 -g siebel -s /bin/ksh -d /Siebel-home siebel
```

Ensure that the Siebel user entry is the same on all of the nodes that run Sun Cluster HA for Siebel.

7   Ensure that the Siebel administrator's default environment contains settings for accessing the Siebel database. For example, if the Siebel database is on Oracle, the following entries may be included in the `.profile` **file.**

```
export ORACLE_HOME=/global/oracle/OraHome
export PATH=$PATH:$ORACLE_HOME/bin
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:/usr/lib
export TNS_ADMIN=$ORACLE_HOME/network/admin
export ORACLE_SID=siebeldb
```

8   Create a failover resource group to hold the logical hostname and the Siebel gateway resources.

```
# clresourcegroup create [-n node] failover-rg
```

-n *node*   Specifies the node name that can master this resource group.

failover-rg   Specifies your choice of the name of the failover resource group to add. This name must begin with an ASCII character.

9   Add the logical hostname resource.

Ensure that logical hostname matches the value of the SIEBEL_GATEWAY environment variable that is set in the `siebenv.sh` file of the Siebel gateway, and also the Siebel server installations.

```
# clreslogicalhostname create -g failover-rg logical_host
```

logical_host   Specifies an optional resource name of your choice.

10   Bring the resource group online.

    # **clresourcegroup online -M** *failover-rg*

11   Repeat Step 8 through Step 10 for each logical hostname that is required.

Installing and Configuring the Siebel Application

This section contains the procedures you need to install and configure the Siebel application. To install the Siebel application, you must install the Siebel gateway, the Siebel server, and the Siebel database.

To install the Siebel application, you need the following information about your configuration.

- The gateway and server root directories (installation locations).
- The logical host names for the Siebel gateway and Siebel server (one logical hostname per Siebel server instance, if they are to failover independently).

    You must configure these addresses and they must be online.

To install the Siebel application, see the following sections.

- "Installing the Siebel Gateway" on page 16
- "Installing the Siebel Server and Siebel Database" on page 18

Installing the Siebel Gateway

You can install the Siebel gateway either on the global file system or on local disks of physical hosts. To install the Siebel gateway, see one of the following procedures.

- "How to Install the Siebel Gateway on the Global File System" on page 16
- "How to Install the Siebel Gateway on Local Disks of Physical Hosts" on page 17

▼ How to Install the Siebel Gateway on the Global File System

Use this procedure to install the Siebel gateway on the global file system. To install the Siebel gateway on local disks of physical hosts, see "How to Install the Siebel Gateway on Local Disks of Physical Hosts" on page 17.

To install the Siebel gateway on the global file system, install the Siebel software only once from any node of the cluster.

1   Install the Siebel gateway by following the instructions in the Siebel installation documentation and the latest release notes.

Do not use the Autostart feature. When prompted, configure **Autostart=NO**.

2 Verify that the `siebenv.sh` **file is under** *gateway_root***, and is owned by the user who will launch the Siebel gateway.**

3 In the home directory of the user who will launch the Siebel gateway, create an empty file that is named `.hushlogin`**.**

The `.hushlogin` file prevents failure of a cluster node's public network from causing an attempt to start, stop, or probe the service to time out.

4 Change the `SIEBEL_GATEWAY` **to the logical hostname that is selected for the Siebel gateway in** `siebenv.sh` **and** `siebenv.csh` **files under** *gateway_root***.**

5 Stop and restart the Siebel gateway to ensure that the gateway is using the logical hostname.

▼ How to Install the Siebel Gateway on Local Disks of Physical Hosts

Use this procedure to install the Siebel gateway on local disks of physical hosts. To install the Siebel gateway on the global file system, see "How to Install the Siebel Gateway on the Global File System" on page 16.

Note – To install the Siebel gateway on local disks of physical hosts, the directory *gateway_root/*`sys` must be highly available (it must be installed on a global file system).

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1 Install the Siebel gateway on any one node of the cluster by following the instructions in the Siebel installation documentation and the latest release notes.

Do not use the `Autostart` feature. When prompted, configure **Autostart=NO**.

2 Verify that the `siebenv.sh` **file is under** *gateway_root***, and is owned by the user who will launch the Siebel gateway.**

3 In the home directory of the user who will launch the Siebel gateway, create an empty file that is named `.hushlogin`**.**

The `.hushlogin` file prevents failure of a cluster node's public network from causing an attempt to start, stop, or probe the service to time out.

4 Change the `SIEBEL_GATEWAY` **to the logical hostname that is selected for the gateway in** `siebenv.sh` **and** `siebenv.csh` **files under** *gateway_root***.**

5 Stop and restart the Siebel gateway to ensure that the gateway is using the logical hostname.

6 Move *gateway_root/*`sys` **to** `/global/siebel/sys` **and create a link to the global file system from the local file system.**

```
# mv gateway_root/sys /global/siebel/sys
# ln -s /global/siebel/sys gateway_root/sys
```

7   Replicate the installation on all remaining nodes of the cluster.

rdist -c *gateway_root hostname***:***gateway_root*

8   Verify that the ownerships and permissions of the files and directories in the Siebel gateway installation are identical on all nodes of the cluster.

9   For each node on the cluster, change the ownership of the link to the appropriate Siebel user.

chown -h *siebel***:***siebel gateway_root***/sys**

10   As Siebel user, verify that the gateway is properly installed and configured. Ensure the command below returns a version string.

$ **srvredit -q -g** *SIEBEL_GATEWAY* **-e none -z -c '$Gateway.VersionString'**

Installing the Siebel Server and Siebel Database

You can install the Siebel server either on the global file system or on local disks of physical hosts.

Note – If more than one Siebel server will use the Siebel Filesystem, you *must* install the Siebel Filesystem on a global file system.

To install the Siebel server and configure the Siebel server and Siebel database , see one of the following procedures

- "How to Install the Siebel Server and Siebel Database on the Global File System" on page 18
- "How to Install the Siebel Server and Siebel Database on Local Disks of Physical Hosts" on page 19

▼ How to Install the Siebel Server and Siebel Database on the Global File System

Use this procedure to install the Siebel server and configure the Siebel server and Siebel database on the global file system. To install the Siebel server on local disks of physical hosts, see "How to Install the Siebel Server and Siebel Database on Local Disks of Physical Hosts" on page 19.

To install the Siebel server on the global file system, install the software only once from any node of the cluster.

1   Install the Siebel server by following the instructions in the Siebel installation documentation and the latest release notes.

Do not use the Autostart feature. When prompted, configure **Autostart=No**.

When prompted to enter the gateway hostname, enter the logical hostname for the Siebel gateway.

2   Verify that the `siebenv.sh` **file is under** *server_root* **and is owned by the user who will launch the Siebel server.**

3   In the home directory of the user who will launch the Siebel server, create an empty file that is named `.hushlogin`**.**

The `.hushlogin` file prevents failure of a cluster node's public network from causing an attempt to start, stop, or probe the service to time out.

4   Ensure that a database such as HA Oracle is configured for Siebel and that the database is online.

5   Use the Siebel documentation to configure and populate the Siebel database.

When creating the ODBC data source (using `dbsrvr_config.ksh` script), ensure that the name is `siebsrvr_`*siebel_enterprise.*

6   Create a database user (for example, `dbuser/dbpassword`**) with permission to connect to the Siebel database for use by the Sun Cluster HA for Siebel Fault Monitor.**

7   Log in as the user who will launch the Siebel server and manually start the Siebel server.

8   Run `srvrmgr` **to change the configuration of Siebel server to enable Siebel server to run in a cluster.**

- **If you are using Siebel 7.7, change the** `ServerHostAddress` **parameter to the IP address of the Siebel server's logical host name resource.**

  `$ `**`srvrmgr:hasiebel> change param ServerHostAddress=`***`lhaddr`***` for server hasiebel`**

- **If you are using a version of Siebel earlier than 7.7, change the** `HOST` **parameter to the logical hostname for the Siebel server.**

  `$ `**`srvrmgr:hasiebel> change param Host=`***`lhname`***` for server hasiebel`**

Note – These changes take effect when the Siebel server is started under Sun Cluster control.

▼ How to Install the Siebel Server and Siebel Database on Local Disks of Physical Hosts

Use this procedure to install the Siebel server and configure the Siebel server and Siebel database on local disks of physical hosts. To install the Siebel server on the global file system, see "How to Install the Siebel Server and Siebel Database on the Global File System" on page 18.

To install the Siebel server on the local disks of the physical hosts, install the software on any one node of the cluster.

1   Install the Siebel server by following the instructions in the Siebel installation documentation and the latest release notes.

Do not use the Autostart feature. When prompted, configure **Autostart=No**.

When prompted to enter the gateway hostname, enter the logical hostname for the Siebel gateway.

2   Verify that the siebenv.sh **file is under** *server_root* **and is owned by the user who will launch the Siebel server.**

3   In the home directory of the user who will launch the Siebel server, create an empty file that is named .hushlogin**.**

The .hushlogin file prevents failure of a cluster node's public network from causing an attempt to start, stop, or probe the service to time out.

4   Ensure that a database such as HA Oracle is configured for Siebel and that the database is online.

5   Use the Siebel documentation to configure and populate the Siebel database.

When creating the ODBC data source (using dbsrvr_config.ksh script), ensure that the name is siebsrvr_*siebel_enterprise*.

6   Create a database user (for example, dbuser/dbpassword**) with permission to connect to the Siebel database for use by the Sun Cluster HA for Siebel Fault Monitor.**

7   Log in as the user who will launch the Siebel server and manually start the Siebel server.

8   Run srvrmgr **to change the configuration of Siebel server to enable Siebel server to run in a cluster.**

- **If you are using Siebel 7.7, change the** ServerHostAddress **parameter to the IP address of the Siebel server's logical host name resource.**

  $ **srvrmgr:hasiebel> change param ServerHostAddress=***lhaddr* **for server hasiebel**

- **If you are using a version of Siebel earlier than 7.7, change the** HOST **parameter to the logical hostname for the Siebel server.**

  $ **srvrmgr:hasiebel> change param Host=***lhname* **for server hasiebel**

Note – These changes take effect when the Siebel server is started under Sun Cluster control.

---

9   Replicate the installation on all of the remaining nodes of the cluster.

rdist -c *server_root hostname*:*server_root*

10   Verify that the ownerships and permissions of files and directories in the Siebel gateway installation are identical on all nodes of the cluster.

Verifying the Siebel Installation and Configuration

This section contains the procedure you need to verify the Siebel installation and configuration.

▼ How to Verify the Siebel Installation and Configuration

Use this procedure to verify the Siebel gateway, Siebel server, and Siebel database installation and configuration. This procedure does not verify that your application is highly available because you have not installed your data service yet.

1   Verify that the logical hostname is online on the node on which the resource(s) will be brought online.

2   Manually start the Siebel gateway as the user who will launch the Siebel gateway.

3   Manually start the Siebel server as the user who will launch the Siebel server.

4   Use odbcsql **to verify connectivity to the Siebel database.**

    # **odbcsql /s siebsrvr_***siebel_enterprise* **/u** *dbuser* **/p** *dbpassword*

5   Run list servers **subcommand under** srvrmgr**.**

Before the Siebel server is configured to be highly available, the HOST_NAME parameter for the Siebel server shows the physical host name.

After the Siebel server is configured to be highly available, the output from this command depends on the version of Siebel that you are using.

- If you are using Siebel 7.7, the HOST_NAME parameter for the Siebel server shows the *physical* host name of the node where Siebel server is running. Therefore, running this command at different times might show different names, depending on whether the Siebel server resource has failed over or has been switched over.

- If you are using a version of Siebel **earlier than** 7.7, the HOST_NAME parameter for the Siebel server shows the *logical* host name.

6   If you are using Siebel 7.7, confirm that the serverhostaddress **parameter is set to the IP address of the Siebel server's logical host name resource.**

    $ **srvrmgr:hasiebel> list advanced param serverhostaddress**

7   Test various Siebel user sessions, such as sales and call center using a Siebel dedicated client and supported thin client (browser).

8   Manually stop the Siebel server as the user who started the Siebel server.

9   **Manually stop the Siebel gateway as the user who started the Siebel gateway.**

Installing the Sun Cluster HA for Siebel Packages

If you did not install the Sun Cluster HA for Siebel packages during your initial Sun Cluster installation, perform this procedure to install the packages. To install the packages, use the Sun Java Enterprise System Common Installer.

▼ How to Install the Sun Cluster HA for Siebel Packages

Perform this procedure on each cluster node where you are installing the Sun Cluster HA for Siebel packages.

You can run the Sun Java Enterprise System Common Installer with a command-line interface (CLI) or with a graphical user interface (GUI). The content and sequence of instructions in the CLI and the GUI are similar.

Note – Install the packages for this data service in the global zone.

Before You Begin   Ensure that you have the Sun Java™ Availability Suite DVD-ROM.

If you intend to run the Sun Java Enterprise System Common Installer with a GUI, ensure that your DISPLAY environment variable is set.

1   **On the cluster node where you are installing the data service packages, become superuser.**

2   **Load the Sun Java Availability Suite DVD-ROM into the DVD-ROM drive.**

If the Volume Management daemon vold(1M) is running and configured to manage DVD-ROM devices, the daemon automatically mounts the DVD-ROM on the /cdrom directory.

3   **Change to the Sun Java Enterprise System Common Installer directory of the DVD-ROM.**

- **If you are installing the data service packages on the SPARC® platform, type the following command:**

  # **cd /cdrom/cdrom0/Solaris_sparc**

- **If you are installing the data service packages on the x86 platform, type the following command:**

  # **cd /cdrom/cdrom0/Solaris_x86**

4   Start the Sun Java Enterprise System Common Installer.

`# ./installer`

5   When you are prompted, accept the license agreement.

If any Sun Java Enterprise System components are installed, you are prompted to select whether to upgrade the components or install new software.

6   From the list of Sun Cluster agents under Availability Services, select the data service for Siebel.

7   If you require support for languages other than English, select the option to install multilingual packages.

English language support is always installed.

8   When prompted whether to configure the data service now or later, choose Configure Later.

Choose Configure Later to perform the configuration after the installation.

9   Follow the instructions on the screen to install the data service packages on the node.

The Sun Java Enterprise System Common Installer displays the status of the installation. When the installation is complete, the wizard displays an installation summary and the installation logs.

10   (GUI only) If you do not want to register the product and receive product updates, deselect the Product Registration option.

The Product Registration option is not available with the CLI. If you are running the Sun Java Enterprise System Common Installer with the CLI, omit this step

11   Exit the Sun Java Enterprise System Common Installer.

12   Unload the Sun Java Availability Suite DVD-ROM from the DVD-ROM drive.

a.   To ensure that the DVD-ROM is not being used, change to a directory that does *not* reside on the DVD-ROM.

b.   Eject the DVD-ROM.

`# eject cdrom`

Next Steps   See "Registering and Configuring Sun Cluster HA for Siebel" on page 24 to register Sun Cluster HA for Siebel and to configure the cluster for the data service.

Registering and Configuring Sun Cluster HA for Siebel

This section contains the procedures you need to configure Sun Cluster HA for Siebel.

Setting Sun Cluster HA for Siebel Extension Properties

The sections that follow contain instructions for registering and configuring resources. These instructions explain how to set *only* extension properties that Sun Cluster HA for Siebel requires you to set. For information about all Sun Cluster HA for Siebel extension properties, see Appendix A. You can update some extension properties dynamically. You can update other properties, however, only when you create or disable a resource. The Tunable entry indicates when you can update a property.

To set an extension property of a resource, include the following option in the clresource(1CL) command that creates or modifies the resource:

-p *property***=***value*

-p *property*   Identifies the extension property that you are setting

value   Specifies the value to which you are setting the extension property

You can also use the procedures in Chapter 2, "Administering Data Service Resources," in *Sun Cluster Data Services Planning and Administration Guide for Solaris OS* to configure resources after the resources are created.

▼ How to Register and Configure Sun Cluster HA for Siebel as a Failover Data Service

Use this procedure to configure Sun Cluster HA for Siebel as a failover data service. This procedure assumes that the data service packages are already installed. If the Sun Cluster HA for Siebel packages are not already installed, see "Installing the Sun Cluster HA for Siebel Packages" on page 22 to install the packages. Otherwise, use this procedure to configure the Sun Cluster HA for Siebel.

1   **On one of the nodes in the cluster that hosts the application server become superuser or assume a role that provides** solaris.cluster.modify **and** solaris.cluster.admin **RBAC authorizations.**

2   **Register the resource type for the Siebel gateway.**

```
# clresourcetype register SUNW.sblgtwy
```

3   **Create a failover resource group to hold the logical hostname and the Siebel gateway resources.**

Note – If you have already created a resource group, added the logical hostname resource, and brought the resource group online when you completed the "How to Prepare the Nodes" on page 14 procedure, you may skip to Step 6.

```
# clresourcegroup create [-n node] gateway-rg
```

-n *node*   Specifies the node name that can master this resource group.

gateway-rg   Specifies your choice of the name of the failover resource group to add. This name must begin with an ASCII character.

4   **Add the logical hostname resource.**

Ensure that logical hostname matches the value of the SIEBEL_GATEWAY environment variable that is set in the siebenv.sh file of the Siebel gateway, and also the Siebel server installations.

```
# clreslogicalhostname create -g gateway-rg logical_host
```

logical_host   Specifies an optional resource name of your choice.

5   **Bring the resource group online.**

```
# clresourcegroup online -M gateway-rg
```

6   **Verify that** siebenv.sh **file exists under** *gateway_root***.**

The owner of this file launches the Siebel gateway server when the Siebel gateway resource is brought online.

7   **Create the Siebel gateway resource.**

```
# clresource create -g gateway-rg \
-t SUNW.sblgtwy  \
-p Confdir_list=gateway_root sblgtwy-rs
```

-t SUNW.sblgtwy   Specifies the name of the resource type for the resource.

-p *Confdir_list*   Specifies the path name to the Siebel server root directory.

sblgtwy-rs   Specifies your choice of the name of the resource to add.

The resource is created in the enabled state.

8   **Verify that the Siebel resource group and the Siebel gateway resource are online by using** cluster status -t resourcegroup,resource **and** ps –ef**.**

▼ How to Register and Configure the Siebel Server

1 **Add the resource type for the Siebel server.**

```
# clresourcetype register SUNW.sblsrvr
```

2 **Create the failover resource group to hold the logical hostname and the Siebel server resources.**

Note – If you have already created a resource group, added the logical hostname resource, and brought the resource group online when you completed the "How to Prepare the Nodes" on page 14 procedure, you may skip to Step 5.

```
# clresourcegroup create [-n node] siebel-rg
```

-n *node*   Specifies the node name that can master this resource group.

siebel-rg   Specifies your choice of the name of the failover resource group to add. This name must begin with an ASCII character.

3 **Add the logical hostname resource.**

This logical hostname should match the value of the HOST_NAME parameter for the Siebel server.

```
# clreslogicalhostname create -g siebel-rg logical_host
```

logical_host   Specifies an optional resource name of your choice.

4 **Bring the resource group online.**

The following command brings the resource group online on the preferred node.

```
# clresourcegroup online -M siebel-rg
```

5 **Verify that the** siebenv.sh **file is located under** *server_root*.

6 **Create a file called** scsblconfig **under** *server_root*, **owned by the owner of** siebenv.sh.

If the Siebel server is installed locally, create the file scsblconfig under *server_root* on all nodes.

For security reasons, make this file readable only by the owner.

```
# cd server_root
# touch scsblconfig
# chown siebel:siebel scsblconfig
# chmod 400 scsblconfig
```

7 **Select a database user (for example,** dbuser/dbuserpassword**) with permission to connect to the database for use by the Sun Cluster HA for Siebel Fault Monitor.**

8 **Select another Siebel user (for example,** sadmin/sadminpassword**) with permission to run the** compgrps **command in** srvrmgr.

9   **Add the following entries into the** `sbsblconfig` **file.**

```
export DBUSR=dbuser
export DBPWD=dbuserpassword
export SADMUSR=sadmin
export SADMPWD=sadminpassword
```

10   **Create the Siebel server resource.**

```
# clresource create -g siebel-rg \
-t SUNW.sblsrvr \
-p Confdir_list=server_root \
--p siebel_enterprise=siebel enterprise name \
-p siebel_server=siebel_server_name  sblsrvr-rs
```

-t SUNW.sblsrvr	Specifies the name of the resource type for the resource.
-p *Confdir_list*	Specifies the path name to the Siebel server root directory.
-p *siebel_enterprise*	Specifies the name of the Siebel enterprise.
-p *siebel_server*	Specifies the name of the Siebel server.
sblsrvr-rs	Specifies your choice of the name of the resource to add.

The resource is created in the enabled state.

> **Caution –** If you enter incorrect values for `siebel_enterprise` or `siebel_server`, you may not see any errors during validation. However, resource startup will fail. If `siebel_enterprise` is incorrect, `validate` method will not be able to verify database connectivity, which will result in a warning only.

11   **Verify that the resource group and the Siebel server resource are online, by using** `cluster status -t resourcegroup`, `resource` **and** `ps –ef` **commands.**

Verifying the Sun Cluster HA for Siebel Installation and Configuration

This section contains the procedure you need to verify that you installed and configured your data service correctly.

▼ How to Verify the Sun Cluster HA for Siebel Installation and Configuration

Use this procedure to verify that you installed and configured Sun Cluster HA for Siebel correctly.

1 **Bring the Siebel database, Siebel gateway, and Siebel server resources online on the cluster.**

2 **Log in to the node on which the Siebel server is online.**

3 **Confirm that the fault monitor functionality is working correctly.**

4 **Start** srvrmgr **and run the subcommand** list compgrps**.**

5 **Verify that the required Siebel components are enabled.**

6 **Connect to Siebel using a supported thin-client (browser) and run a session.**

7 **As user root, switch the Siebel server resource group to another node.**

   # **clresourcegroup switch -n** *node2 siebel-rg*

8 **Repeat Step 4, Step 5, and Step 6 for each potential node on which the Siebel server resource can run.**

9 **As root user, switch the Siebel gateway resource group to another node.**

   # **clresourcegroup switch -n** *node2 gateway-rg*

Maintaining Sun Cluster HA for Siebel

This section contains guidelines for maintaining Sun Cluster HA for Siebel.

- To maintain a Siebel resource, you must disable the Siebel resource(s) or bring the Siebel resource group(s) to an unmanaged state using one of the following commands.
  - clresource disable *resource*
  - clresourcegroup unmanage *resource_group*
- To start a Siebel resource, disable the resource, but keep the logical hostname online, before starting the Siebel resource manually.

> ⚠ **Caution –** If the Siebel server is started manually without disabling the resource or bringing the resource group to an unmanaged state, the Siebel resource start method might "reset" the service on the node where the resource is attempting to be started under Sun Cluster control. This may lead to unexpected results.

Tuning the Sun Cluster HA for Siebel Fault Monitors

Fault monitoring for the Sun Cluster HA for Siebel data service is provided by the following fault monitors:

- The Siebel server fault monitor
- The Siebel gateway fault monitor

Each fault monitor is contained in a resource whose resource type is shown in the following table.

TABLE 3 Resource Types for Sun Cluster HA for Siebel Fault Monitors

Fault Monitor	Resource Type
Siebel server	`SUNW.sblsrvr`
Siebel gateway	`SUNW.sblgtwy`

System properties and extension properties of these resources control the behavior of the fault monitors. The default values of these properties determine the preset behavior of the fault monitors. The preset behavior should be suitable for most Sun Cluster installations. Therefore, you should tune the Sun Cluster HA for Siebel fault monitors *only* if you need to modify this preset behavior.

Tuning the Sun Cluster HA for Siebel fault monitors involves the following tasks:

- Setting the interval between fault monitor probes
- Setting the timeout for fault monitor probes
- Defining the criteria for persistent faults
- Specifying the failover behavior of a resource

For more information, see "Tuning Fault Monitors for Sun Cluster Data Services" in *Sun Cluster Data Services Planning and Administration Guide for Solaris OS*. Information about theSun Cluster HA for Siebel fault monitors that you need to perform these tasks is provided in the subsections that follow.

Tune the Sun Cluster HA for Siebel fault monitors when you register and configure Sun Cluster HA for Siebel. For more information, see "Registering and Configuring Sun Cluster HA for Siebel" on page 24.

Operation of the Siebel Server Fault Monitor

During a probe, the Siebel server fault monitor tests for the correct operation of the following components:

- The Siebel database

  If the Siebel database fails, the status of the Siebel server is marked as DEGRADED. When the Siebel database restarts again, the Siebel server resource probe tries to verify that the Siebel server is functioning. If this test fails, the Siebel server is restarted or failed over to another node.

The Siebel database might not be available when the Siebel server resource is started. In this situation, the fault monitor also starts the Siebel server when the Siebel database becomes available.

- The Siebel gateway

  If the Siebel gateway fails, the status of the Siebel server is marked as DEGRADED. When the Siebel gateway restarts again, the Siebel server resource probe tries to verify that the Siebel server is functioning. If this test fails, the Siebel server is restarted or failed over to another node.

  The Siebel gateway might not be available when the Siebel server resource is started. In this situation, the fault monitor also starts the Siebel server when the Siebel gateway becomes available.

- The Siebel server and all its enabled components

  If the Siebel server fails, it is restarted or failed over. If any Siebel component fails, a partial failure is reported. The fault monitor counts this partial failure as 10% of a complete failure.

Note – The fault monitor of the Siebel server can detect component failures *only* in English language installations of Siebel.

Operation of the Siebel Gateway Fault Monitor

The Siebel gateway fault monitor monitors the Siebel gateway process. If the Siebel gateway process dies, the fault monitor restarts it, or fails it over to another node.

A

Sun Cluster HA for Siebel Extension Properties

Extension properties for Sun Cluster HA for Siebel resource types are described in the following sections.

For details about system-defined properties, see the r_properties(5) man page and the rg_properties(5) man page.

SUNW.sblsrvr **Extension Properties**

The SUNW.sblsrvr resource type represents the Siebel server in a Sun Cluster configuration. The extension properties of this resource type are as follows:

Confdir_list
   This property is the path name to the Siebel server root directory.

   Data Type: String array

   Default: None

   Tunable: At creation

Monitor_retry_count
   This property controls the restarts of the fault monitor. It indicates the number of times the fault monitor is restarted by the process monitor facility and corresponds to the -n option passed to the pmfd(1M) command. The number of restarts is counted in a specified time window (see the property Monitor_retry_interval). Note that this property refers to the restarts of the fault monitor itself, not the Siebel server. Siebel server restarts are controlled by the system-defined properties Thorough_Probe_Interval, Retry_Interval, and Retry_Count, as specified in their descriptions. See r_properties(5).

   Data Type: Integer

Default: 4

Tunable: Any time

Monitor_retry_interval
Indicates the time in minutes, over which the failures of the fault monitor are counted, and corresponds to the -t option passed to the pmfadm command. If the number of times the fault monitor fails exceeds the value of Monitor_retry_count, the fault monitor is not restarted by the process monitor facility.

Data Type: Integer

Default: 2

Tunable: Any time

Probe_timeout
This property is the timeout value (in seconds) used by the fault monitor to probe a Siebel server instance.

Data Type: Integer

Default: 300

Tunable: Any time

Siebel_enterprise
This property is set to the name of the Siebel enterprise.

Data Type: String array

Default: None

Tunable: At creation

Siebel_server
This property is set to the name of the Siebel server.

Data Type: String array

Default: None

Tunable: At creation

SUNW.sblgtwy **Extension Properties**

The SUNW.sblgtwy resource type represents the Siebel gateway in a Sun Cluster configuration. The extension properties of this resource type are as follows:

Confdir_list

This property is the path name to the Siebel gateway root directory.

Data Type: String array

Default: None

Tunable: At creation

Monitor_retry_count

This property controls the restarts of the fault monitor. It indicates the number of times the fault monitor is restarted by the process monitor facility and corresponds to the -n option passed to the pmfd(1M) command. The number of restarts is counted in a specified time window (see the property Monitor_retry_interval). Note that this property refers to the restarts of the fault monitor itself, not the Siebel gateway. Siebel gateway restarts are controlled by the system-defined properties Thorough_Probe_Interval and Retry_Interval, as specified in their descriptions. See r_properties(5).

Data Type: Integer

Default: 4

Tunable: Any time

Monitor_retry_interval

Indicates the time (in minutes) over which the failures of the fault monitor are counted, and corresponds to the -t option passed to the pmfadm command. If the number of times the fault monitor fails exceeds the value of Monitor_retry_count within this period, the fault monitor is not restarted by the process monitor facility.

Data Type: Integer

Default: 2

Tunable: Any time

Probe_timeout

Indicates the timeout value (in seconds) used by the fault monitor to probe a Siebel gateway instance.

Data Type: Integer

Default: 120

Tunable: Any time

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