System Monitoring and Diagnostics Guide for Siebel *e*Business Applications

Version 7.7, Rev. A

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1 What's New in This Release

What's New in System Monitoring and Diagnostics Guide for Siebel eBusiness Applications, Version 7.7, Rev. A

Table 1 lists changes described in this version of the documentation to support Release 7.7 of the software.

Table 1. What's New in System Monitoring and Diagnostics Guide for Siebel eBusiness Applications, Version 7.7, Rev. A

Topic	Description
"About Component Job States" on page 18	New section added to describe the potential states of component jobs.
"Monitoring Component Job Status" on page 33	New section describing how to monitor component job status.
Chapter 3, "Configuring Siebel Server and Component Logging"	Retitled this chapter, and refocused contents specifically to Siebel Server and component logging.
"Common Event Types for Component Diagnostics" on page 56	New section added to provide details on common event types used for server component diagnostics.
"Common Event Types for Application Object Manager Diagnostics" on page 56	New section added to provide details on common event types used for application object manager (AOM) diagnostics.
Chapter 4, "Configuring SWSE Logging and Monitoring"	New chapter consolidating previous information on Siebel Web Server Extension (SWSE) logging and monitoring with the SWSE Statistics page.
Chapter 5, "Configuring Additional System Logging"	New chapter consolidating additional system logging information.

What's New in System Monitoring and Diagnostics Guide for Siebel eBusiness Applications, Version 7.7

Table 2 lists changes described in this version of the documentation to support release Version 7.7 of the software.

System Monitoring and Diagnostics Guide for Siebel eBusiness Applications is a new title on the *Siebel Bookshelf*, and is part of the new *Siebel Deployment Documentation Suite*. This book contains new material in Chapter 6, "Querying System Log Files," and previously released material in the remaining chapters.

Table 2. What's New in System Monitoring and Diagnostics Guide for Siebel eBusiness Applications, Version 7.7

Topic	Description
Chapter 6, "Querying System Log Files"	The Log File Analyzer (LFA) utility is a new feature that searches through Siebel eBusiness application log files and isolates information or messages of interest.
Appendix A, "List of Statistics and State Values"	Enhanced documentation and a listing of new state values and statistics appear in this new appendix.

2 Monitoring Siebel Server Run-Time Operations

Monitoring Siebel Server run-time operations is a necessary, on-going aspect of administering a Siebel application. Use metrics such as log files, state values, and statistics to monitor the Siebel application performance.

This chapter includes the following topics:

About Siebel Server States

After installation, a Siebel Server is always in one of the following states when connected to the Server Manager component (alias ServerMgr):

- **Starting Up.** Indicates that the Siebel Server is in the process of starting up. When this process is complete, the state changes to Running.
- **Running.** Indicates that the Siebel Server is running and that Siebel Server components can operate. This is the normal mode of operation for the Siebel Server. When the Siebel Server Service starts, it sets the Siebel Server to the Running state by default (depending on the value of the Auto Startup Mode Siebel Server-level parameter, which defaults to TRUE).

  When the Siebel Server starts, its components are enabled and the default number of tasks is instantiated for the background mode components (the number of tasks is determined by the value of the Default Tasks parameter for each component).

- **Shutting Down.** Indicates that the Siebel Server is in the process of shutting down. When this process is complete, the state changes to Shutdown.
- **Shutdown.** Indicates that the Siebel Server is running, but component tasks are not currently running (other than the Siebel Server Manager component, which is operational whenever the Server Manager is connected) and new tasks are not allowed to start. The only processes that can run when the Siebel Server is in a Shutdown state are the Siebel Server System Service itself and the Server Manager for a Siebel Server Manager client.

  Shut down the Siebel Server using the Server Manager whenever you want to shut down the:

  - Server machine on which the Siebel Server is running. This allows a clean shutdown of each Siebel Server component.
  - Siebel Server to perform maintenance.
  - Siebel Server to perform an automatic upgrade on the Siebel Server's software using Siebel Upgrade Wizard.

  NOTE: Individual components may be shut down or disabled without having to shut down the entire Siebel Server.

If the Siebel Server is not connected to the Server Manager component (alias ServerMgr), the following states are applicable:

- **Not available.** Indicates that the Siebel Server has not been started. Indicates that the Server Manager cannot connect to the Siebel Server; you will not be able to run any tasks or perform any administrative functions on that Siebel Server.
- **Connect Failed**. Indicates that Server Manager is able to get the connect string for the ServerMgr component from the Siebel Gateway Name Server but is unable to connect to the Siebel Server.
- **Handshake Failed**. On startup, Server Manager sends a handshake request to the Siebel Server for the ServerMgr component. If that request fails then this state occurs. Also, if the ServerMgr component on that particular Siebel Server cannot start any more tasks (because it has reached Maximum Tasks (alias MaxTasks) number of tasks) for the administration clients, this state occurs. For more information on the MaxTasks parameter, see *Siebel System Administration Guide* and *Performance Tuning Guide*.
- **Login Failed**. Server Manager connects to every Siebel Server for authentication. If the authentication fails for any Siebel Server, the Login Failed state appears.
- **Disconnected**. When Server Manager connects to the Siebel Server, the Siebel Server starts a task for the ServerMgr component. If that task exits (because of a crash or other problems), the Disconnected state appears.

Siebel Server Status Fields

Each Siebel Server record has three fields in which the Siebel Server status appears (Table 3).

Table 3. Siebel Server Status Fields

GUI Column Name	Command-Line Interface Column Name	Description
Server State (Internal)	SBLSRVR_STATE	The state of the Siebel Server using ENU language code.
State	SV_DISP_STATE	The state of the Siebel Server using the appropriate language code.
State (Icon)	Not applicable	A stoplight representation of the state of the Siebel Server. Green indicates normal conditions. Red indicates a non-operational condition. Clicking the icon field reveals the state value associated with the color code.

About Siebel Server Component Group States

A component group may be in one of several states. The run state is dependent on the enable state; only component groups that have an Online enable state when the Siebel Server was started can have a run state of Online or Running:

- **Online.** Every component within the component group is enabled to run tasks.
- **Running.** Every component within the component group is enabled, and at least one component within the component group is running a task.
- **Shutdown.** Every component within the component group is shut down. Tasks cannot run for any components within the component group.
- **Part shutdown.** At least one component within the component group is shut down or shutting down.
- **Offline.** Every component within the component group is offline.
- **Part offline.** At least one component within the component group is offline or unavailable.
- **Starting up.** At least one component within the component group is starting up.

Server Component Group Status Fields

Each Siebel Server component group record has three fields in which the status appears (Table 4).

Table 4. Siebel Server Component Group Status Fields

GUI Column Name	Command-Line Interface Column Name	Description
State	CA_RUN_STATE	The state of the server component group using ENU language code.
Run State (internal)	CA_RUN_STATE	The state of the server component group using the appropriate language code.
State (Icon)	Not applicable	A stoplight representation of the state of the server component group. Green indicates normal conditions. Yellow indicates a temporary non-operation condition. Red indicates a non-operational condition. Clicking the icon field reveals the state value associated with the color code.

About Siebel Server Component States

A Siebel Server component may be in one of the following states: Starting Up, Online, Running, Offline, Shutting Down, Shutdown, or Unavailable.

The Siebel Server component state is dependent on the assignment state of the component group to which it belongs; only Siebel Server components within assigned component groups when the Siebel Server was started can be Running or Online:

- **Starting Up.** Indicates that the Siebel Server component is in the process of starting up. When this process is complete, the state changes to Online. When a new task is started for the component, the component state changes to Starting Up during the initialization phase and then to Running.
- **Online.** Indicates that tasks are currently not running for the Siebel Server component, but new tasks may be started through the Siebel Server Manager (or in response to client requests, for interactive-mode components). When the Siebel Server starts, all components for which processes are *not* started by default will be online.
- **Running.** Indicates that tasks are currently running for the Siebel Server component on the Siebel Server, and new tasks are allowed to start (up to the value of the Maximum Tasks parameter for the component). When the Siebel Server starts up, all background-mode components for which processes are started by default (components with a Default Tasks parameter set to a nonzero value) will start.

- **Offline.** Indicates that new tasks may not be started for the component, though current running tasks can continue running (for background-mode components) or run to completion (for batch-mode and interactive-mode components).

  You may want to disable an individual component to perform a system maintenance operation outside of the Siebel Server. For example, you may disable the Synchronization Manager component to do a file system reorganization on the docking subdirectory.

  To minimize the number of multithreaded processes that will be started on the Siebel Server, you may want to disable components that you do not plan to run.

  You may also want to disable components due to database licenses. If you have exceeded the maximum licensed connections for your database, then you may want to disable the Siebel Server components that you will not be using. You should only disable components for which you do not plan to run tasks across the entire enterprise. Setting the Min MT Servers parameter to 0 for multithreaded Siebel Server components renders the server component unable to run tasks.

  An offline component may be set to Online (or Started, if there are still tasks running for the offline component) or Shutdown, in which case, any running tasks will be stopped as cleanly as possible.

- **Shutting Down.** Indicates that the Siebel Server component is in the process of shutting down. When this process is complete, the state changes to Shutdown.

- **Shutdown.** Indicates that processes are not running for the component and new tasks may not be started. Each task running when the component shuts down is stopped as soon as possible. All components will be set to Shutdown when the Siebel Server shuts down, with the exception of the Siebel Server Manager component, which remains Online to perform administrative commands executed by the Siebel Server Manager. Background-mode components that are set to Shutdown but have a Default Tasks parameter set to a nonzero value may be set to Online or Started.

- **Unavailable.** Indicates that processes are not running for the component when a Siebel Server process should be running. Multithreaded Siebel Server components change to an Unavailable component state when the Min MT Servers parameter is set to a value greater than 0 and no Siebel Server processes are actually running for that component. In this case, the Siebel Server component may exit with an error and become unavailable because it failed to initialize. Siebel Server components may also go into this state if the database connection is down. In this case, you need to restart the Siebel Server component after the database connection has been reestablished.

Server Component Status Fields

Each server component record has two fields in which the status appears (Table 5).

Table 5. Server Component Status Fields

GUI Column Name	Command-Line Interface Column Name	Description
State	CP_DISP_RUN_STATE	The state of the Siebel Server component using the appropriate language code.
State (Icon)	Not applicable	A stoplight representation of the state of the Siebel Server component. Green indicates normal conditions. Yellow indicates a temporary non-operation condition. Red indicates a non-operational condition. Clicking the icon field reveals the state value associated with the color code.

About Siebel Server Task States

A Siebel Server task is an instantiation of a Siebel Server component. To run a Siebel Server task, you need to run a component job, which requests one or more Siebel Server tasks to run. For information on component jobs, see *Siebel System Administration Guide*.

A Siebel Server task may be in one of four fundamental states: Running, Paused, Stopping, or Completed.

- **Running.** Indicates that the task is executing normally. While the task is running, it will periodically update its task status, a component-generated message that indicates the task progress (or phase of operation).
  - Background mode component tasks run until stopped manually, or until the Siebel Server or the server component shuts down.
  - Batch mode component tasks run to completion when their assigned unit of work is done.
  - Interactive mode component tasks run until the client signs off from the connection (or until the task, server component, or Siebel Server is shut down).

  You may explicitly stop any currently running component task.
- **Paused.** Indicates that the task has been temporarily placed in a suspended state. A paused task does not exclusively hold any shared system resources (such as file locks or database locks), or expend any processor or I/O cycles. You may choose to pause a running task to temporarily free up the system to process other critical tasks without having to restart the entire task. You may then resume or stop the paused task.

  NOTE: Only tasks from certain component types can be paused. See *Siebel System Administration Guide* for a list of these component types.

- **Stopping.** Indicates that the task has been instructed to stop, or the server component or Siebel Server is being shut down. Occasionally, the shutdown process may take a while, in which case you may issue another Stop command, and the shutdown will be forced (this state may appear as Forcing Shutdown). After a task has been instructed to stop, it may not be resumed.
- **Completed.** Indicates that the task is no longer running. After a task is completed, it may not be restarted, though you may start a new task for the same server component. Several variations exist for the Completed state, depending on the manner in which the task finished processing:
  - *Completed* indicates that the task ran to completion and exited normally (batch mode and interactive mode tasks only).
  - *Exited with Error* indicates that the task encountered an error during its processing (such as bad input values or database errors). In this case, the Task Status field displays the error identifier for the error that has occurred.
  - *Killed* indicates that the task was not able to shut down cleanly, and you forced the task to shut down.

About Task Status Fields

Each Siebel Server record has three fields in which the Siebel Server status appears (Table 6).

Table 6. Task Status Fields

GUI Column Name	Command-Line Interface Column Name	Description
State	TK_RUNSTATE	The state of the task using the appropriate language code.
Status	TK_STATUS	Every component task sets various state values during the course of its operation. The Status column in the tasks view and the TK_STATUS column in the command-line interface displays the value for the state value Task Status (alias TaskStatus).
State (Icon)	Not applicable	A stoplight representation of the state of the task. Green indicates normal conditions. Yellow indicates temporary non-operational conditions. Red indicates a non-operational condition. Clicking the icon field reveals the state value associated with the color code.

About Siebel Server Task IDs

Siebel Server Task IDs identify Siebel Server tasks and are referenced in various views of the GUI as well as in both Siebel Server and component log files. These identification numbers can help you locate individual tasks and their applicable log files. See "About Siebel Server Log Files" on page 46 for details on event logging and log files.

Task IDs are assigned sequentially from each Siebel Server for each Siebel Server task beginning at 1. Each time the Siebel Server is restarted, Task ID numbers are increased by 1000. The maximum task ID number that can be assigned is 262144 (256*1024). After the maximum task ID number is reached, the task ID number begins again at 1.

About Component Job States

After the creation of a component job, it is always in one of the states in the following list. For further information on starting component jobs, see *Siebel System Administration Guide*. For further information on monitoring component job status, see "Monitoring Component Job Status" on page 33.

- **Creating.** Indicates the component job record is in the process of being defined.
- **Queued.** Indicates the component job record was started and is scheduled to run. The component job field Scheduled Start defines when the component job runs.
- **Active.** Indicates the scheduled component job is running.
- **On Hold.** Indicates the component job is on hold and will not run at the Scheduled Start time. Only component jobs in the queued state can be put on hold.
- **Cancelled.** Indicates the component job is cancelled. Only component jobs in the queued or on hold state can be cancelled.
- **Canceling.** Indicates the component job is in the process of being cancelled.
- **Error.** Indicates the component job ran, but encountered an error during operation.
- **Success**. Indicates the component job ran and completed successfully.
- **Completed.** Indicates that all repeating component jobs completed successfully.
- **Expired.** Indicates the component job has expired. The component job field Expiration Date defines when the component job expires.
- **Parent Request Cancelled.** Indicates the first component job of a repeating component job was cancelled. The first component job of a repeating component job is considered the parent job.
- **Parent Request On Hold.** Indicates the first component job of a repeating component job is on hold. The first component job of a repeating component job is considered the parent job.

About User Sessions

User sessions include data on any user logged into the Siebel Server as well as sessions created by the Siebel application. User sessions comprise all interactive component tasks.

User sessions run based on a Siebel Server component task. Therefore, user sessions have the properties of Siebel Server component tasks. The Session ID field of an individual user session shares the same ID number as the Task ID of the component task that runs the session. That is, information on user sessions can be viewed as either a user session or a task.

For information and procedures on monitoring user sessions, see "Monitoring User Session Status" on page 34.

For information and procedures on monitoring tasks, see "Monitoring Server Component Task Status" on page 30.

About Siebel Application Statistics

Various statistics are recorded at the task level for every Siebel Server component task. You may use these statistics to:

- Monitor the progress and performance of a task, component, or Siebel Server
- Optimize system performance

When the task completes its operation, task-level statistics (gathered dynamically during the operation of a task) roll up to the component and Siebel Server levels.

Two types of statistics exist for task-level Siebel Server statistics:

- **Subsystem statistics.** Common to every component process (such as process management, networking, database access, and file I/O) and tracked for each component task.
- **Component-specific statistics.** Only applicable to the component for which the statistics are defined.

When a task for a component completes its operation, both generic and component-specific statistics roll up to the component level. Only generic statistics roll up to the Siebel Server level.

Statistics on the component level includes data for all completed tasks on interactive and batch mode components. Statistics for component tasks that are still running are not included. Check the tasks directly to monitor statistics for running tasks on interactive and batch mode components. For information on monitoring task statistics, see "Monitoring Server Component Task Statistics" on page 32. For background mode components, the statistic rollup behavior is slightly different because the component tasks should never complete. For background components, the component statistics change whenever a statistic value is updated by the running component task.

About Siebel Application State Values

State values contain information about the current operation of a task or the component for which the task is running. Component tasks periodically update their state values to indicate information about their current processing, such as the current phase of operation. State values are defined at the component and task levels. Component-level state values refer to the state of the component as a whole. Task-level state values refer to the state of an individual process for a Siebel Server component.

Two types of state values exist for components and component tasks:

- **Subsystem state values.** Kept for every component (such as Component Start Time and Component Stop Time) and component task (such as Task Start Time and Task Stop Time) that uses that subsystem.
- **Component-specific state values.** Kept for every component and component task. Only applicable to the component for which they are defined.

Monitoring Siebel Enterprise Server Status

Monitor the status of Siebel Servers in a Siebel Enterprise Server by using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). For configuration tasks and background information on the Siebel Enterprise Server, see *Siebel System Administration Guide*.

For information on monitoring other Siebel Server run-time operations, see "About Siebel Server States" on page 11.

To monitor a Siebel Enterprise Server on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Enterprise Operations.
   - The name and description of the Siebel Enterprise Servers available are in the Enterprise Servers list.
   - The state of the Siebel Servers for the selected Siebel Enterprise Server are available in the Siebel Servers list. For details on Siebel Server states, see "About Siebel Server States" on page 11.
   - The state of the Siebel Server components for the selected Siebel Server are available in the Components list. For details on Siebel Server component states, see "About Siebel Server Component States" on page 14.

Figure 1 shows an example of a Siebel Enterprise Server with a single Siebel Server.

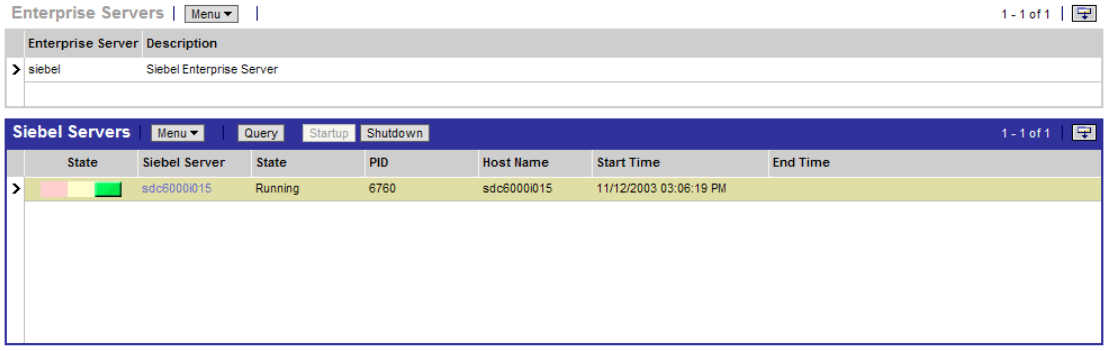


Figure 1. Example of a Siebel Enterprise Server with a Single Siebel Server

To monitor Siebel Enterprise Server on srvrmgr

- At the srvrmgr program prompt, enter:

```
list servers
```

NOTE: Make sure you do not start the Server Manager command-line interface program for a particular Siebel Server; that is, do not start the Server Manager command-line interface with the /s flag.

For details on starting, running, and configuring the Server Manager command-line interface program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Status

Monitor the status of Siebel Servers by using the Server Manager GUI or Server Manager command-line interface program (srvrmgr program). The following sections describe procedures that monitor the Siebel Server:

- "Monitoring Siebel Server State" on page 21
- "Monitoring Siebel Server Component Groups" on page 22
- "Monitoring Siebel Server Log Files" on page 23
- "Monitoring Siebel Server Statistics" on page 23
- "Monitoring Siebel Server User Sessions" on page 24
- "Monitoring Siebel Server Tasks" on page 25

For background information Siebel Servers, including running and configuring procedures, see *Siebel System Administration Guide*.

Monitoring Siebel Server State

Monitor the status of a Siebel Server by using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr).

For details on the possible states of the Siebel Server, see "About Siebel Server States" on page 11.

For information on monitoring other Siebel Server run-time operations, see "Monitoring Siebel Server Status" on page 21.

To monitor the Siebel Server state on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Servers.
3. In the Servers list, select the Siebel Server of interest.
4. Review the state of the selected Siebel Server by referencing the State or Server State fields.

Figure 2 shows an example of monitoring a Siebel Server state.

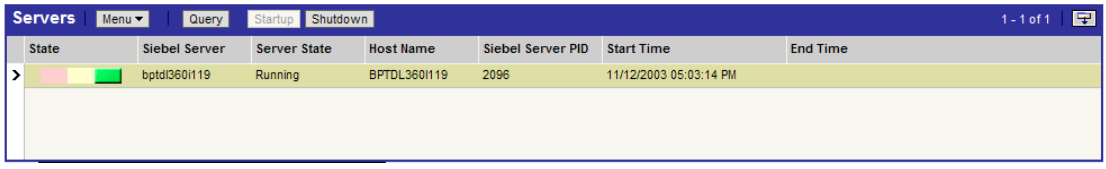


Figure 2. Example of a Siebel Server in the Servers list

To monitor the Siebel Server state on srvrmgr

■ At the srvrmgr program prompt, enter:

```
list servers
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Component Groups

Monitor the status of component groups for a Siebel Server using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr).

For details on Siebel Server component group states, see "About Siebel Server Component Group States" on page 13.

For information on monitoring other Siebel Server run-time operations, see "Monitoring Siebel Server Status" on page 21.

To monitor component groups on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Servers.
3. In the Servers list, select the Siebel Server of interest.
4. From the view tabs, Click Component Groups.
5. Review the state of the component groups for the selected Siebel Server by referencing the Run State and Enable State fields of each component group record.

Figure 3 shows an example of monitoring component groups.

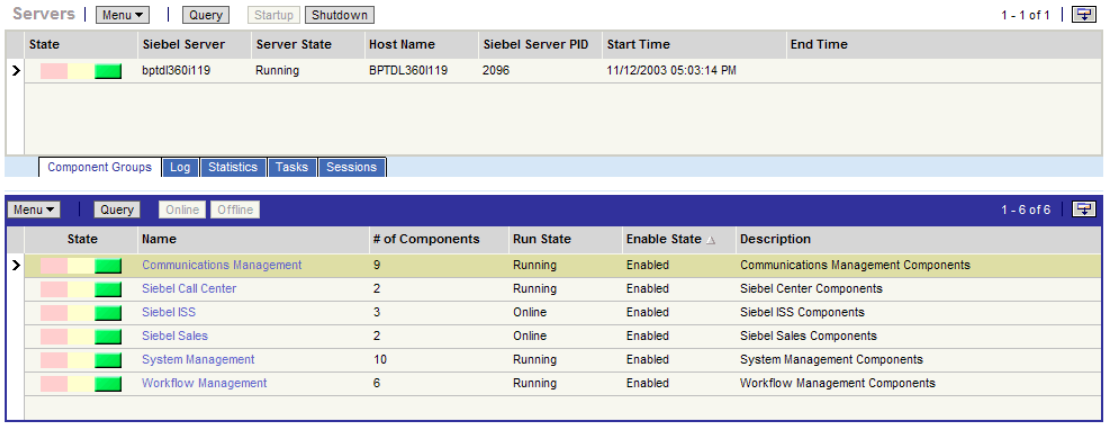


Figure 3. Example of Component Group Status for a Siebel Server

To monitor component groups on srvrmgr

- At the srvrmgr program prompt, enter

  `list component groups for server siebel_server_name`

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Log Files

Monitor the log files for a Siebel Server using the Server Manager GUI. You can also review Siebel Server log files by manually accessing the file or querying the file with the Log File Analyzer (LFA) utility.

- For background information on Siebel Server log files, see "About Siebel Server Log Files" on page 46.
- For background information on LFA, see "About the Log File Analyzer" on page 75.
- For background information on event logging, see "About Configuring Siebel Server and Component Logging" on page 43.

For information on monitoring other Siebel Server run-time operations, see "Monitoring Siebel Server Status" on page 21.

To monitor Siebel Server log files on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Servers.
3. In the Servers list, select the Siebel Server of interest.
4. From the view tabs, click Log.

   Each entry in the Log view list represents an event logged in the Siebel Server log file. For further details on each entry, click the record of interest and review information in the Info Detail view.

NOTE: The Server Manager GUI accesses Siebel Server log files from the log directory of each individual Siebel Server. Siebel Server log files use the following name convention: *EnterpriseServerName*.*SiebelServerName*.log.

Monitoring Siebel Server Statistics

Monitor Siebel Server statistics using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). For background information and a list of Siebel Server statistics, see Appendix A, "List of Statistics and State Values."

For information on monitoring other Siebel Server run-time operations, see "Monitoring Siebel Server Status" on page 21.

To monitor Siebel Server statistics on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Servers.
3. In the Servers list, select the Siebel Server of interest.
4. From the view tabs, click Statistics.

   Statistics for the selected Siebel Server appear in the Statistics list. For a list and description of Siebel Server statistics, see Appendix A, "List of Statistics and State Values."

To monitor Siebel Server statistics on srvrmgr

- At the srvrmgr program prompt for a particular Siebel Server, enter:

  ```
  list statistics for server siebel_server_name
  ```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server User Sessions

Monitor user sessions for a particular Siebel Server by using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr).

For background information on user sessions, see "About User Sessions" on page 18.

For information on monitoring other Siebel Server run-time operations, see "Monitoring Siebel Server Status" on page 21.

To monitor Siebel Server user sessions on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Servers.
3. In the Servers list, select the Siebel Server of interest.
4. From the view tabs, click Sessions.
5. Review the status of users sessions for the selected Siebel Server by referencing the State, Task Hung State, and Status fields.

For further details on monitoring individual user sessions, note the Session ID number and see "Monitoring User Session Status" on page 34.

Figure 4 shows an example of monitoring Siebel Server user sessions.

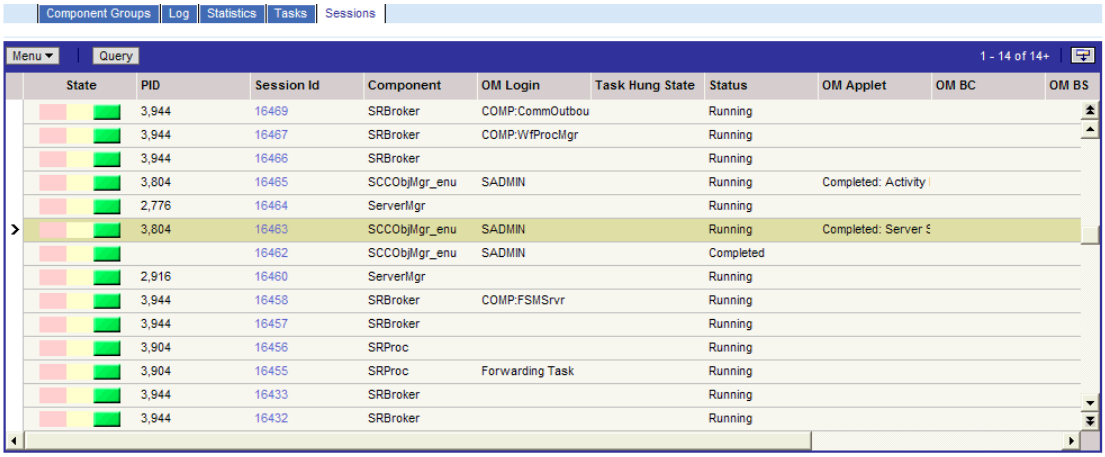


Figure 4. Example of Siebel Server User Session View

To monitor Siebel Server user sessions on srvrmgr

- At the srvrmgr program prompt, enter:

  `list sessions for server` *`siebel_server_name`*

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Tasks

Monitor Siebel Server component tasks for a particular Siebel Server by using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr).

For details on Siebel Server component task states, see "About Siebel Server Task States" on page 16.

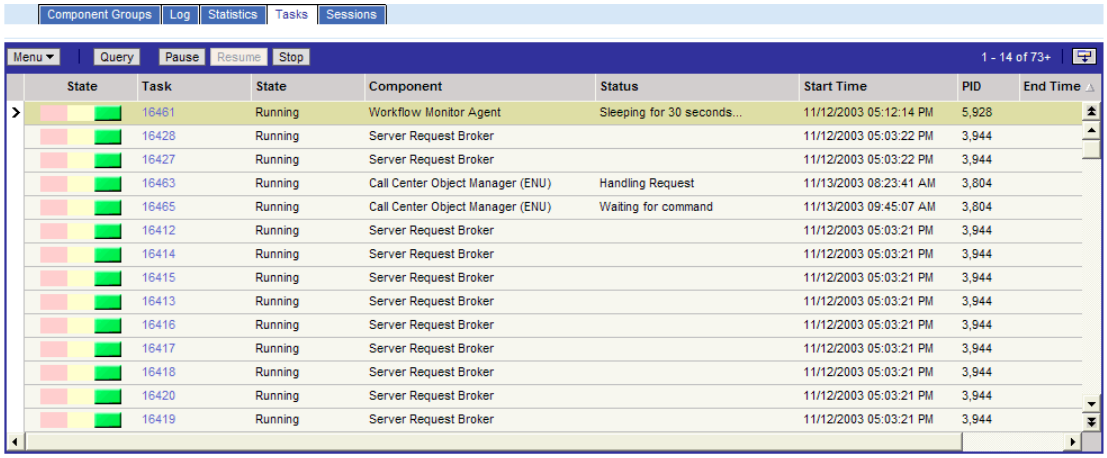
For information on monitoring other Siebel Server run-time operations, see "Monitoring Siebel Server Status" on page 21.

To monitor Siebel Server tasks on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Servers.
3. In the Servers list, select the Siebel Server of interest.
4. From the view tabs, click Tasks.
5. Review the status of tasks for the selected Siebel Server by referencing the State and Status fields.

For further details on monitoring individual tasks, note the Task ID number and see "Monitoring Server Component Task Status" on page 30.

Figure 5 shows an example of monitoring Siebel Server tasks.



State	Task	State	Component	Status	Start Time	PID	End Time
	16461	Running	Workflow Monitor Agent	Sleeping for 30 seconds...	11/12/2003 05:12:14 PM	5,928	
	16428	Running	Server Request Broker		11/12/2003 05:03:22 PM	3,944	
	16427	Running	Server Request Broker		11/12/2003 05:03:22 PM	3,944	
	16463	Running	Call Center Object Manager (ENU)	Handling Request	11/13/2003 08:23:41 AM	3,804	
	16465	Running	Call Center Object Manager (ENU)	Waiting for command	11/13/2003 09:45:07 AM	3,804	
	16412	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16414	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16415	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16413	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16416	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16417	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16418	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16420	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	
	16419	Running	Server Request Broker		11/12/2003 05:03:21 PM	3,944	

Figure 5. Example of the Siebel Server Tasks View

To monitor Siebel Server user sessions on srvrmgr

- At the srvrmgr program prompt, enter:

```
list tasks for server siebel_server_name
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Component Status

Monitor the status of Siebel Server components by using the Server Manager GUI or Server Manager command-line interface program (srvrmgr). The following sections describe procedures that monitor the Siebel Server components:

- "Monitoring Siebel Server Component State" on page 27
- "Monitoring Siebel Server Component State Values" on page 28
- "Monitoring Siebel Server Component Statistics" on page 28
- "Monitoring Siebel Server Component Tasks" on page 29

For background information on Siebel Server components, including running and configuring procedures, see *Siebel System Administration Guide*.

Monitoring Siebel Server Component State

Monitor the status of Siebel Server components using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr).

For details on Siebel Server component states, see "About Siebel Server Component States" on page 14.

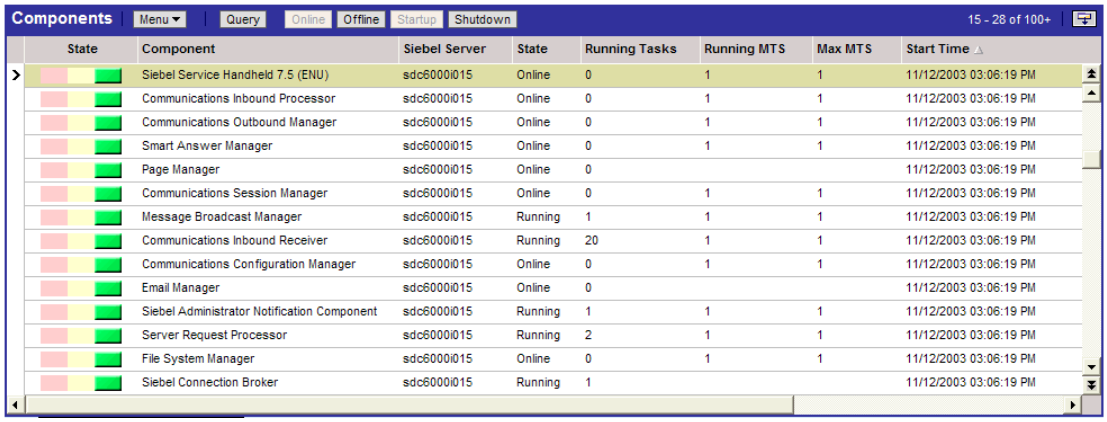
For information on monitoring other Siebel Server component run-time operations, see "Monitoring Siebel Server Component Status" on page 26.

To monitor the Siebel Server component state on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Components.
3. In the Components list, select the Siebel Server component of interest.
4. Review the state of the selected Siebel Server component by referencing the State field.

The Components view from the link bar lists Siebel Server components from all Siebel Servers operating in the Siebel Enterprise Server.

Figure 6 shows an example of monitoring Siebel Server Components.



State	Component	Siebel Server	State	Running Tasks	Running MTS	Max MTS	Start Time
	Siebel Service Handheld 7.5 (ENU)	sdc6000i015	Online	0	1	1	11/12/2003 03:06:19 PM
	Communications Inbound Processor	sdc6000i015	Online	0	1	1	11/12/2003 03:06:19 PM
	Communications Outbound Manager	sdc6000i015	Online	0	1	1	11/12/2003 03:06:19 PM
	Smart Answer Manager	sdc6000i015	Online	0	1	1	11/12/2003 03:06:19 PM
	Page Manager	sdc6000i015	Online	0			11/12/2003 03:06:19 PM
	Communications Session Manager	sdc6000i015	Online	0	1	1	11/12/2003 03:06:19 PM
	Message Broadcast Manager	sdc6000i015	Running	1	1	1	11/12/2003 03:06:19 PM
	Communications Inbound Receiver	sdc6000i015	Running	20	1	1	11/12/2003 03:06:19 PM
	Communications Configuration Manager	sdc6000i015	Online	0	1	1	11/12/2003 03:06:19 PM
	Email Manager	sdc6000i015	Online	0			11/12/2003 03:06:19 PM
	Siebel Administrator Notification Component	sdc6000i015	Running	1	1	1	11/12/2003 03:06:19 PM
	Server Request Processor	sdc6000i015	Running	2	1	1	11/12/2003 03:06:19 PM
	File System Manager	sdc6000i015	Online	0	1	1	11/12/2003 03:06:19 PM
	Siebel Connection Broker	sdc6000i015	Running	1			11/12/2003 03:06:19 PM

Figure 6. Example of Siebel Server Components List

To monitor the component state on srvrmgr

- At the srvrmgr program prompt, enter:

```
list component
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Component State Values

Monitor Siebel Server component state values using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). For background information and a list of Siebel Server state values, see Appendix A, "List of Statistics and State Values."

For information on monitoring other Siebel Server component run-time operations, see "Monitoring Siebel Server Component Status" on page 26.

To monitor component state values on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Components.
3. In the Components list, select the Siebel Server component of interest.
4. From the view tabs, click State Value.

   State values for the selected Siebel Server component appear in the State Values list. For a list and description of Siebel Server state values, see Appendix A, "List of Statistics and State Values."

To monitor component state values on srvrmgr

- At the srvrmgr program prompt, enter:

  `list state values for component` *`component_alias_name`*

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Component Statistics

Monitor Siebel Server component statistics using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). For background information and a list of Siebel Server component statistics, see Appendix A, "List of Statistics and State Values."

For information on monitoring other Siebel Server component run-time operations, see "Monitoring Siebel Server Component Status" on page 26.

To monitor component statistics on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Components.
3. In the Components list, select the Siebel Server component of interest.
4. From the view tabs, click Statistics.

   Statistics for the selected Siebel Server component appear in the Statistics list. For a list and description of Siebel Server statistics, see Appendix A, "List of Statistics and State Values."

To monitor component statistics on srvrmgr

- At the srvrmgr program prompt, enter:

  `list statistics for component` *`component_alias_name`*

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Siebel Server Component Tasks

Monitor tasks for a particular Siebel Server component by using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr).

For details on Siebel Server component task states, see "About Siebel Server Task States" on page 16.

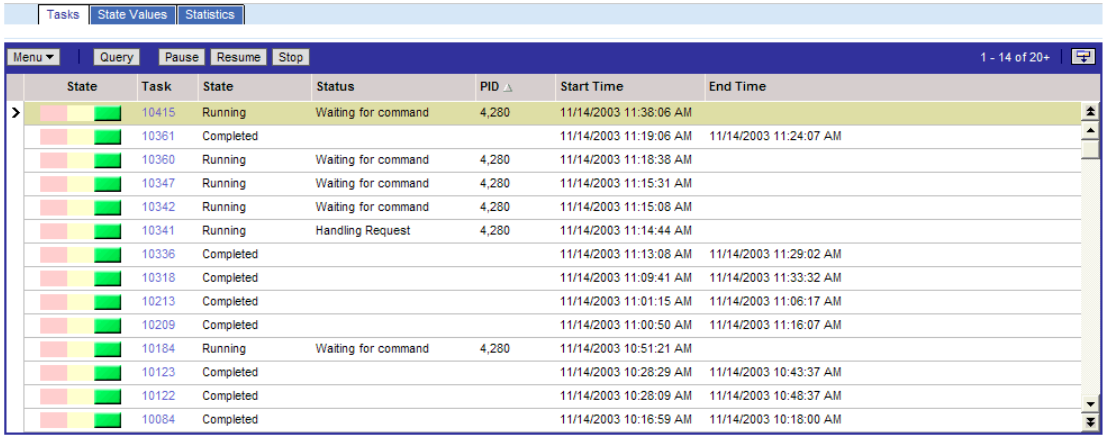
For information on monitoring other Siebel Server run-time operations, see "Monitoring Siebel Server Status" on page 21.

To monitor Siebel Server tasks on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Components.
3. In the Components list, select the Siebel Server component of interest.
4. From the view tabs, click Task.
5. Review the status of tasks for the selected Siebel Server component by referencing the State and Status fields.

For further details on monitoring individual tasks, note the Task ID number and see "Monitoring Server Component Task Status" on page 30.

Figure 7 shows an example of monitoring Siebel Server component tasks from the Components view.



State	Task	State	Status	PID	Start Time	End Time
	10415	Running	Waiting for command	4,280	11/14/2003 11:38:06 AM	
	10361	Completed			11/14/2003 11:19:06 AM	11/14/2003 11:24:07 AM
	10360	Running	Waiting for command	4,280	11/14/2003 11:18:38 AM	
	10347	Running	Waiting for command	4,280	11/14/2003 11:15:31 AM	
	10342	Running	Waiting for command	4,280	11/14/2003 11:15:08 AM	
	10341	Running	Handling Request	4,280	11/14/2003 11:14:44 AM	
	10336	Completed			11/14/2003 11:13:08 AM	11/14/2003 11:29:02 AM
	10318	Completed			11/14/2003 11:09:41 AM	11/14/2003 11:33:32 AM
	10213	Completed			11/14/2003 11:01:15 AM	11/14/2003 11:06:17 AM
	10209	Completed			11/14/2003 11:00:50 AM	11/14/2003 11:16:07 AM
	10184	Running	Waiting for command	4,280	11/14/2003 10:51:21 AM	
	10123	Completed			11/14/2003 10:28:29 AM	11/14/2003 10:43:37 AM
	10122	Completed			11/14/2003 10:28:09 AM	11/14/2003 10:48:37 AM
	10084	Completed			11/14/2003 10:16:59 AM	11/14/2003 10:18:00 AM

Figure 7. Example of Siebel Server Tasks View

To monitor component tasks on srvrmgr

- At the srvrmgr program prompt, enter:

```
list tasks for component component_alias_name
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Server Component Task Status

Monitor the status of Siebel Server component tasks by using the Server Manager GUI or Server Manager command-line interface program (srvrmgr). The following sections describe procedures that monitor Siebel Server component tasks:

- "Monitoring Server Component Task State" on page 30
- "Monitoring Server Component Task Log Files" on page 31
- "Monitoring Server Component Task State Values" on page 32
- "Monitoring Server Component Task Statistics" on page 32

A task, in the context of a Siebel application, is an instantiation of a Siebel Server component. Administrators start tasks by creating jobs. Tasks are also started by the Siebel application itself. For background information on Siebel Server component tasks, including running and configuring procedures, see *Siebel System Administration Guide*.

Monitoring Server Component Task State

Monitor the state of Siebel Server component tasks using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr).

For details on Siebel Server component task states, see "About Siebel Server Task States" on page 16.

For information on monitoring other task run-time operations, see "Monitoring Server Component Task Status" on page 30.

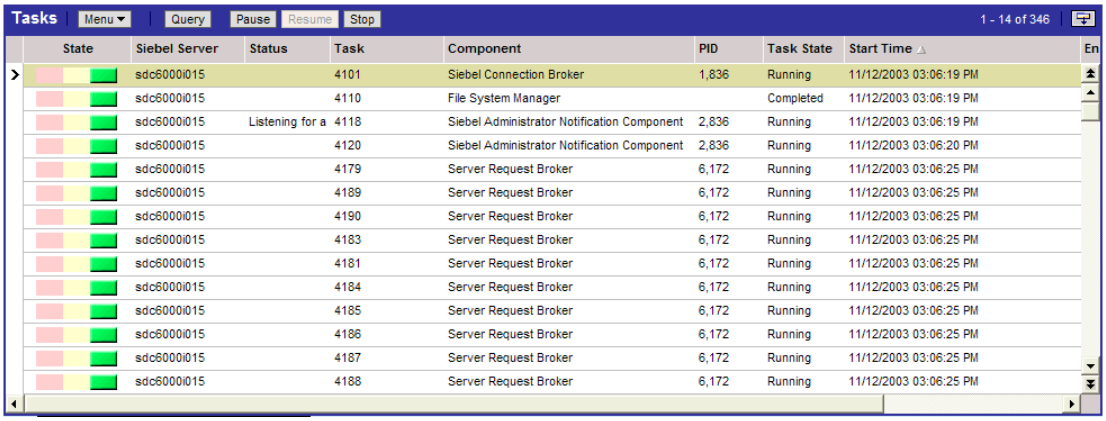
To monitor tasks on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Tasks.
3. In the Tasks list, select the task of interest.
4. Review the state of the selected task by referencing the State, Status and Task State fields.

The Tasks view from the link bar lists tasks from all Siebel Servers operating in the Siebel Enterprise Server. To isolate tasks on a particular Siebel Server, see "Monitoring Siebel Server Tasks" on page 25. To isolate tasks for a particular Siebel Server component, see "Monitoring Siebel Server Component Tasks" on page 29.

NOTE: You cannot sort tasks from different Siebel Servers across the enterprise.

Figure 8 shows an example of monitoring Siebel Server component tasks from the Tasks view.



State	Siebel Server	Status	Task	Component	PID	Task State	Start Time	En
	sdc60000i015		4101	Siebel Connection Broker	1,836	Running	11/12/2003 03:06:19 PM	
	sdc60000i015		4110	File System Manager		Completed	11/12/2003 03:06:19 PM	
	sdc60000i015	Listening for a	4118	Siebel Administrator Notification Component	2,836	Running	11/12/2003 03:06:19 PM	
	sdc60000i015		4120	Siebel Administrator Notification Component	2,836	Running	11/12/2003 03:06:20 PM	
	sdc60000i015		4179	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4189	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4190	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4183	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4181	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4184	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4185	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4186	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4187	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	
	sdc60000i015		4188	Server Request Broker	6,172	Running	11/12/2003 03:06:25 PM	

Figure 8. Example of Siebel Server Component Task List

To monitor tasks on srvrmgr

- At the srvrmgr program prompt, enter:

```
list tasks
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Server Component Task Log Files

Monitor the log files for a Siebel Server component task using the Server Manager GUI. Also review task log files by manually accessing the file or querying the file with the Log File Analyzer (LFA) utility.

- For background information on event logging, see Chapter 3, "Configuring Siebel Server and Component Logging".
- For background information on task log files, see "Configuring Siebel Server Component Logging" on page 50.
- For background information on LFA, see Chapter 6, "Querying System Log Files".

For information on monitoring other task run-time operations, see "Monitoring Server Component Task Status" on page 30.

To monitor task log files on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Tasks.
3. In the Tasks list, select the task of interest.
4. From the view tabs, click Log.

   Each entry in the Log view list represents an event logged in the task log file.

Monitoring Server Component Task State Values

Monitor Siebel Server component task state values using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). For background information and a list of task state values, see Appendix A, "List of Statistics and State Values."

For information on monitoring other task run-time operations, see "Monitoring Server Component Task Status" on page 30.

To monitor task state values on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Tasks.
3. In the Tasks list, select the task of interest.
4. From the view tabs, click State Value.

   State values for the selected task appear in the State Values list. For a list and description of task state values, see Appendix A, "List of Statistics and State Values."

To monitor task state values on srvrmgr

- At the srvrmgr program prompt, enter:

```
list state values for task task_number
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Server Component Task Statistics

Monitor Siebel Server component task statistics using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). For background information and a list of task statistics, see Appendix A, "List of Statistics and State Values."

For information on monitoring other task run-time operations, see "Monitoring Server Component Task Status" on page 30.

To monitor task statistics on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Tasks.
3. In the Tasks list, select the task of interest.
4. From the view tabs, click Statistics.

   Statistics for the selected task appear in the Statistic list. For a list and description of task statistics, see Appendix A, "List of Statistics and State Values."

To monitor task statistics on srvrmgr

- At the srvrmgr program prompt, enter:

  ```
  list statistics for task task_number
  ```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring Component Job Status

Monitor the status of Siebel Server component jobs using the Server Manager GUI.

For background information on starting Siebel Server component jobs, see *Siebel System Administration Guide*.

For information on component job states, see "About Component Job States" on page 18.

To monitor component job status

1. Navigate to the Administration - Server Management screen.
2. From the link bar, click Jobs.
3. In the Jobs list, select the component job of interest.
4. Review the status of the component job by referencing the status field.

To monitor component job status requested by your User ID

1. Navigate to the Server Jobs screen.
2. In the My Jobs list, select the component job of interest.
3. Review the status of the component job by referencing the status field.

Monitoring User Session Status

Monitor the status of user sessions by using the Server Manager GUI or Server Manager command-line interface program (srvrmgr). The following sections describe procedures that monitor user sessions:

For background information on user sessions, see "About User Sessions" on page 18.

Monitoring User Session State

Monitor the state of Siebel Server user sessions using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). The state of the user session is that of the associated Siebel Server component task that represents the user session.

For background information on user sessions, see "About User Sessions" on page 18.

For background information on Siebel Server component task states, see "About Siebel Server Task States" on page 16.

For information on monitoring other Siebel Server user session run-time operations, see "Monitoring User Session Status" on page 34.

To monitor user sessions on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Sessions.
3. In the Sessions list, select the Siebel Server user session of interest.
4. Review the state of the selected Siebel Server user session by referencing the State and Status fields.

The Sessions view from the link bar lists Siebel Server user sessions from all Siebel Servers operating in the Siebel Enterprise Server. To isolate sessions on a particular Siebel Server, see "Monitoring Siebel Server User Sessions" on page 24.

Figure 9 shows an example of monitoring Siebel Server user sessions.

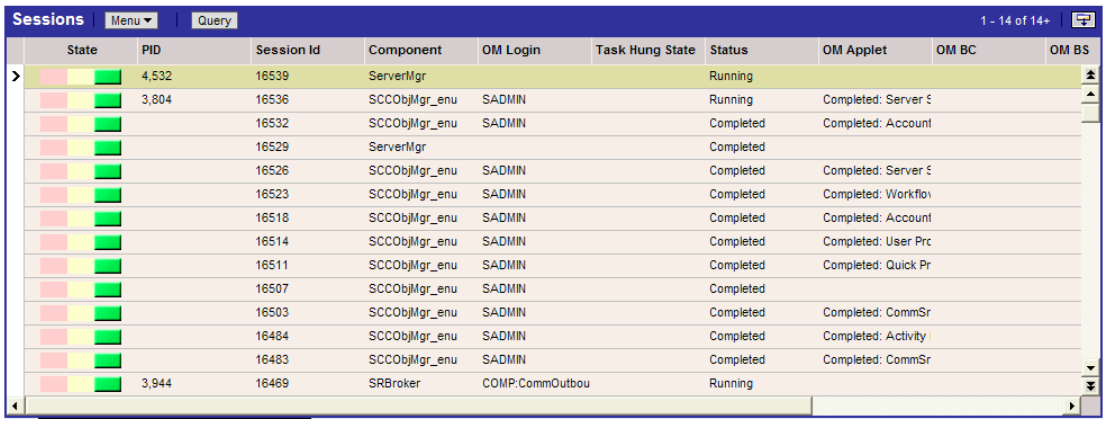


Figure 9. Example of Siebel Server Sessions List

To monitor user sessions for a Siebel Server using srvrmgr

- At the srvrmgr program prompt, enter:

  `list sessions for server` *`siebel_server_name`*

To monitor user sessions for a Siebel Server component using srvrmgr

- At the srvrmgr program prompt, enter:

  `list sessions for comp` *`component_alias_name`*

To monitor user sessions for an Application Object Manager using srvrmgr

- At the srvrmgr program prompt, enter:

  `list sessions for login` *`object_manager_login`*

To list hung user sessions using srvrmgr

- At the srvrmgr program prompt, enter:

  `list hung sessions for server` *`siebel_server_name`* `[or]comp` *`component_alias_name`* `[or]login` *`object_manager_login`*

To list active user sessions using srvrmgr

- At the srvrmgr program prompt, enter:

  `list active sessions for server` *`siebel_server_name`* `[or]comp` *`component_alias_name`* `[or]login` *`object_manager_login`*

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Monitoring User Session Log Files

Monitor the log files for Siebel Server user sessions using the Server Manager GUI. User session log files are those of the associated Siebel Server component task that represents the user session. Also review Siebel Server user session log files by accessing the associated task log file or querying the associated task log file with the Log File Analyzer utility.

- For background information on user sessions, see "About User Sessions" on page 18.
- For background information on Siebel Server component task log files, see "Configuring Siebel Server Component Logging" on page 50.
- For background information on Log File Analyzer, see Chapter 6, "Querying System Log Files".
- For background information on event logging, see Chapter 3, "Configuring Siebel Server and Component Logging".

For information on monitoring other Siebel Server user session run-time operations, see "Monitoring User Session Status" on page 34.

To monitor user session log files on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Sessions.
3. In the Sessions list, select the Siebel Server user session of interest.
4. From the view tabs, click Log.

   Each entry in the Log view list represents an event logged in the Siebel Server component task log file that represents the user session.

Monitoring User Session State Values

Monitor Siebel Server user session state values using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). User session state values are those of the associated Siebel Server component task that represents the user session. For background information on user sessions, see "About User Sessions" on page 18. For background information and a list of task state values, see Appendix A, "List of Statistics and State Values."

For information on monitoring other Siebel Server user session run-time operations, see "Monitoring User Session Status" on page 34.

To monitor user session state values on Server Manager GUI

1. Navigate to the Administration – Server Management screen.
2. From the link bar, click Sessions.
3. In the Sessions list, select the Siebel Server user session of interest.

4 From the view tabs, click State Value.

State values for the selected task that represent the user session appear in the State Values list. For a list and description of task state values, see Appendix A, "List of Statistics and State Values."

To monitor user session state values on srvrmgr

- Use the srvrmgr command to list task state values. See "To monitor task state values on srvrmgr" on page 32. Use the Session ID for the task number parameter in this command.

Monitoring User Session Statistics

Monitor Siebel Server user session statistics using the Server Manager GUI or the Server Manager command-line interface program (srvrmgr). User session statistics are those of the associated Siebel Server component task that represents the user session. For background information on user sessions, see "About User Sessions" on page 18. For background information and a list of task statistics, see Appendix A, "List of Statistics and State Values."

For information on monitoring other Siebel Server user session run-time operations, see "Monitoring User Session Status" on page 34.

To monitor user session statistics on Server Manager GUI

1 Navigate to the Administration – Server Management screen.

2 From the link bar, click Sessions.

3 In the Sessions list, select the Siebel Server user session of interest.

4 From the view tabs, click Statistics.

State values for the selected task that represent the user session appear in the State Values list. For a list and description of task state values, see Appendix A, "List of Statistics and State Values."

To monitor user session statistics on srvrmgr

- Use the srvrmgr command to list task statistics. See "To monitor task statistics on srvrmgr" on page 33. Use the Session ID for the task number parameter in this command.

Analyzing System Data with Siebel Run-Time Data

Analyze operating system data with Siebel run-time data using the following procedures.

- "Identifying Task Log Files From the Siebel Server Log File" on page 38
- "Process of Mapping Tasks with Operating System Data" on page 39
- "Mapping User Sessions to Siebel Servers or AOMs" on page 41

Identifying Task Log Files From the Siebel Server Log File

Map the Siebel Server log file to its Siebel Server components and their log files by identifying the task ID in the Siebel Server log file. Review the task log file for further information on the task performance.

NOTE: The detail of the log file depends on logging levels set for event types for each component. See Chapter 3, "Configuring Siebel Server and Component Logging" for details on event types and event logging.

For information on analyzing other Siebel application diagnostic data, see "Analyzing System Data with Siebel Run-Time Data" on page 37.

To identify task IDs from Siebel Server log files

1. Access a Siebel Server log file by using the Server Manager GUI. See "Monitoring Siebel Server Log Files" on page 23 for details on this procedure.

   Also access Siebel Server log files by:

   - Using the Log File Analyzer. See Chapter 6, "Querying System Log Files" for details on this procedure.
   - Opening the log file itself. See "About Siebel Server Log Files" on page 46 for details on locations and naming convention of Siebel Server log files.

2. Review the Text field of each log file entry for the Siebel Server component of interest.
3. The text field of each Siebel Server component log file entry also contains the task ID number started for this component.
4. Access the Siebel Server component task list. See "Monitoring Server Component Task State" on page 30 for details on this procedure.
5. Query the list with the task ID number identified in the Siebel Server log file.
6. Review the status of the Siebel Server component task by reviewing the log file, state value, and statistics for this task. See "Monitoring Server Component Task Status" on page 30 for details on these procedures.

NOTE: The task ID number identified in step 3 can also be used to find the individual task log file stored in the log folder. The name of the task log file contains the task ID for the component. For example, in `SCCObjMgr_enu_19369.log`, the task ID is 19369.

Process of Mapping Tasks with Operating System Data

Mapping tasks to operating system data allows you to view operating system CPU and memory usage for each task. Once you map a task to an operating system process ID, you can use operating system tools, such as task manager on Windows or the ps (process list) function on UNIX systems, to view other information about the process and task including CPU utilization, memory usage, and so on.

NOTE: Multithreaded components can have several tasks mapped to a single OS process ID so the operating system tools will not necessarily break the data down by task.

Map the Siebel Server component task to the operating system data by:

1. Identifying the operating system process ID (PID) for a task. See "Identifying Operating System PID for a Task" on page 39 for this procedure.
2. Reviewing the PID in the operating system. See "Identifying Operating System PID for a Task" on page 39 for this procedure.

For information on analyzing other Siebel application diagnostic data, see "Analyzing System Data with Siebel Run-Time Data" on page 37.

Identifying Operating System PID for a Task

Identifying operating system PID numbers is a task in the "Process of Mapping Tasks with Operating System Data." Identify operating system process ID numbers (PID) for tasks by one of the following methods:

- From the Server Manager GUI
- From the Siebel Server log file
- From the Task log file

NOTE: PIDs are only available in the Server Manager for running tasks.

To identify operating system PID for a task from the Server Manager GUI

1. Access the Siebel Server component task list. See "Monitoring Server Component Task State" on page 30 for details on this procedure.
2. Query the task list for a specific Siebel Server component task or task ID.
3. Note the value in the PID field for that particular task.

To identify operating system PID for a task from a Siebel Server log file

1. Access a Siebel Server log file by using the Server Manager GUI. See "Monitoring Siebel Server Log Files" on page 23 for details on this procedure.

   Also access Siebel Server log files by:

   - Using the Log File Analyzer. See Chapter 6, "Querying System Log Files" for details on this procedure.

- Opening the log file itself. See "About Siebel Server Log Files" on page 46 for details on locations and naming convention of Siebel Server log files.

2. Review the Text field of each log file entry for the Siebel Server component of interest.
3. The Text field of each Siebel Server component log file entry also contains the process ID number started for this component task.

To identify operating system PID for a task from a task log file

1. Access the Siebel Server component task log file of interest. See Chapter 3, "Configuring Siebel Server and Component Logging" for details on locations and naming convention of Siebel Server component task log files.
2. The first entry of the task log file contains the header information. The header information contains the PID number. See "About Event Attributes and Log File Format" on page 45 for a parsing of the header file and to identify the PID number.

Reviewing the PID in the Operating System

Reviewing the process ID number in the operating systems allows the identification of CPU and memory usage for individual tasks. To identify the PID number for a task, see "Identifying Operating System PID for a Task."

Reviewing the PID numbers in the operating system is a task in the "Process of Mapping Tasks with Operating System Data."

To review PID numbers under Microsoft Windows

1. Using the right mouse button, click a blank area on the taskbar.
2. Choose Task Manager.

   The Windows Task Manager dialog box appears.
3. Select the Processes tab and query for the task PID number.

   NOTE: If PID column is not visible, click View > Select Columns...

To review PID numbers under UNIX

- Enter the command:

  `ps -ef | grep <PID>`

  or:

  `ps -aux <PID>`

  where:

  `<PID>` = PID number of interest.

Mapping User Sessions to Siebel Servers or AOMs

Map user sessions from the Web server to individual Siebel Servers or application object managers (AOMs) by accessing the user session cookie in the Siebel Web Server Extension (SWSE) log file.For information on analyzing other Siebel application diagnostic data, see "Analyzing System Data with Siebel Run-Time Data" on page 37.

To map user session to a Siebel Server

1. Access the SWSE log file. See Chapter 3, "Configuring Siebel Server and Component Logging" for details on locations and naming convention of Web server SWSE files.
2. Identify the Server ID number in the user session cookie entry for the SWSE log file. See "Parsing a SWSE Log File Cookie" on page 62 for details on reviewing SWSE cookies.
3. Start the Server Manager command-line interface program (srvrmgr) at the enterprise level.

   For information on starting and running srvrmgr, see *Siebel System Administration Guide*.
4. Enter the following command:

   ```
   list servers show SBLSRVR_NAME, SV_SRVID
   ```

To map user session to an application object manager (AOM) task

1. Access the SWSE log file. See Chapter 3, "Configuring Siebel Server and Component Logging" for details on locations and naming convention of Web server SWSE files.
2. Identify the operating system ID number (PID) in the user session cookie entry for the SWSE log file. See "Parsing a SWSE Log File Cookie" on page 62 for details on reviewing SWSE cookies.
3. Access the Siebel Server component task list. See "Monitoring Server Component Task State" on page 30 for details on this procedure.
4. Query the task list for the specific PID to isolate the AOM task for that user session.
5. Review data on that AOM task. See "Monitoring Server Component Task Status" on page 30 for details on these procedures.

3 Configuring Siebel Server and Component Logging

This chapter provides descriptions and examples of configuring Siebel Server and component logging using Siebel events.

This chapter includes the following topics:

About Configuring Siebel Server and Component Logging

Configuring Siebel Server and component logging captures the internal activity and behavior of Siebel eBusiness Applications during operation. Siebel Server and component logging use the Siebel event logging system to collect data and write the information to a text log file. Additionally, the event logging system can be used with third-party system management applications to notify administrators of any significant or adverse conditions. Most Siebel eBusiness products and functional areas can be monitored and managed with the Siebel event logging system.

The information collected by event logging can range from error messages to detailed diagnostic logs. Some of the application conditions and operations that result in data written to the log file include:

- Catastrophic or error conditions
- Change of status of a Siebel Server or server component
- Start or finish of a Siebel process or workflow
- Specific point in a Siebel process or workflow
- When measurable threshold values are reached or exceeded
- When operational conditions are met

About Events and Event Logging

The elements of the event logging system are defined in the following bullets:

- **Event.** An event is created each time you execute a program code (such as running a task).
- **Event Type.** Event types are categories of events.
- **Event Subtype.** Event subtypes are code references that define the event.

- **Log Level.** The log level determines the amount of information that is written to the log file. Log levels are set for event types. Table 7 lists the log levels of event types.
- **Severity.** A severity level is associated with each event subtype. The severity level and log level share the same scale and are compared when writing events to the log file. Table 7 lists the severity of event subtypes.

Table 7. Severity and Log Levels

Log and Severity Level	Description
0	Fatal
1	Errors
2	Warnings
3	Informational
4	Details
5	Diagnostic

When an event occurs, the severity level of the event (as defined by the event subtype) is compared with the log level of the event type. If the numerical value of the event severity level is equal to or lower than the numerical value of the event type log level, then the event is written to the log file. If the numerical value of the event severity level is higher than the numerical value of the event type log level, then the event is ignored.

NOTE: Event subtypes with a lower numeric value have a higher severity. For example a value of 0 indicates the event subtype is more severe than one with a value of 5. By setting the event log level to a low number such as 1, only the most severe events are logged, but if the event log level is set to a higher number such as 5, more information is captured including less severe event subtypes.

For example, the Siebel Server components in the Enterprise Application Integration component group (alias EAI) have an event type called EAI Siebel Wizard. Several event subtypes belong to the EAI Siebel Wizard event type, including:

- EAI Siebel Wizard Invalid Business Component with a severity level of 2
- EAI Siebel Wizard Invalid MVG with a severity level of 2
- EAI Siebel Wizard MVG with a severity level of 3

While the EAI component group is running, the process encounters a multi-value group (MVG). This encounter creates an event of the EAI Siebel Wizard MVG subtype. If the MVG is invalid, a second event of the EAI Siebel Wizard Invalid MVG subtype is created. If the log level of the EAI Siebel Wizard event type is set to 1, both events are ignored. If the log level is set to 3, both events are written to the log file.

Events are logged at the Siebel Server level and the component level. See "Configuring Siebel Server Logging" on page 46 for details on Siebel Server events; see "Configuring Siebel Server Component Logging" on page 50 for information on component events.

About Event Attributes and Log File Format

Each event within the log file contains information about the associated application condition, including:

- Event Identifier
  - Type (category)
  - Subtype
- Timestamp
- Severity Level
- Details (metrics) about the event

For examples of individual events and their attribute values, see "Examples of Siebel Server Log Files" on page 48 and "Examples of Component Log Files" on page 52. For an example of a group of events collected within a log file, see "Example of Detailed Component Log File" on page 55.

Events are written to and collected in a log file in the order of their occurrence. Each log file contains a header that provides information on the individual log file. The following is an example of a log file header:

```
ï»¿2021 2004-02-12 09:07:28 0000-00-00 00:00:00 -0800 00000000 001 003f 0001 09
SiebSrvr 2049 1364 1548 d:\sea77\siebsrvr\log\siebel77.server1.log 7.7 [18027] ENU
```

Log File Header Detail	Description
ï»¿	Byte Order Marker (BOM). The BOM is a Unicode format instruction. If the log file header opens with similar characters to the left, it indicates that the text editor used to view the log file cannot interpret the Unicode instruction
2004-02-12 09:07:28	Time stamp of log file creation
-0800	Offset of the local time from the GMT in the format ±HHMM
SiebSrvr	The Siebel Server or component alias to which this log file refers.
2049	Task ID
1364	OS Process ID (PID)
1548	Thread ID
d:\sea77\siebsrvr\log\siebel77.server1.log	Log file name
7.7	Version number
[18027]	Build number
ENU	Language code

About Siebel Server Log Files

Siebel Server log files record data for each individual Siebel Server deployed as part of a Siebel Enterprise Server. The Siebel application stores Siebel Server log files in the log directory for each individual Siebel Server. The log directory location on Windows is *SIEBSRVR_ROOT*\log. The log directory on UNIX is *SIEBSRVR_ROOT*/enterprises/*EnterpriseServerName*/*SiebelServerName*/log.

Server log files use the following name convention: *EnterpriseServerName*.*SiebelServerName*.log.

Information contained in the Siebel Server log file can be used to determine where to search and investigate component log files for further information. The task ID, which makes up a part of the component log file name, is referenced in messages written to the Siebel Server log file. Locate the appropriate component task ID in the Siebel Server log file and open the task-specific component log that has the task ID in the log file name. See "Example of Component Startup Log File" on page 52 for an example of this relationship.

For further information and examples of Siebel Server log files, see "Viewing Siebel Server Log Files" on page 48 and "Examples of Siebel Server Log Files" on page 48.

About Component Log Files

Siebel Server component log files record data for each individual component and task functioning on a particular Siebel Server. These component log files are stored in the Siebel Server log directory on the Siebel Server in which the components are active. The log directory location on Windows is *SIEBSRVR_ROOT*\log. The log directory on UNIX is *SIEBSRVR_ROOT*/enterprises/*EnterpriseServerName*/*SiebelServerName*/log. Using event logging with individual components allows you to isolate portions of the Siebel eBusiness Application. Component log files use the following name convention: *ComponentAlias_TaskId*.log. For further information and examples of component log files, see "Viewing Component Log Files" on page 52 and "Examples of Component Log Files" on page 52.

Individual component task log files can also be consolidated into a single log file by setting the component parameter Use Shared Log File (alias LogUseSharedFile). See *Siebel System Administration Guide* for further information on this parameter and for information on administering Siebel Enterprise, Siebel Server, and server component parameters.

NOTE: Both Siebel Server and component log files that record less severe event log level settings can become very large in size. Additionally, using less severe event level settings results in slower application performance. Therefore, use these settings only when troubleshooting.

Configuring Siebel Server Logging

Siebel Server logging use event types that relate to Siebel Servers. For example, the Server State event type is a Siebel Server-level event that logs changes to the state of the Siebel Server. This section describes how to configure and view Siebel Server event types. See the following topics for details:

- "Setting Log Levels for Siebel Server Event Types" on page 47
- "Viewing Siebel Server Log Files" on page 48

■ "Examples of Siebel Server Log Files" on page 48

Setting Log Levels for Siebel Server Event Types

This topic describes setting log levels for Siebel Server event types using the Server Manager GUI or Server Manager command-line interface program (srvrmgr). For background information on event logging and event types, see "About Configuring Siebel Server and Component Logging" on page 43. To see the resultant Siebel Server log files, see "Viewing Siebel Server Log Files" on page 48. For examples of Siebel Server log files, see "Examples of Siebel Server Log Files" on page 48.

NOTE: The log level setting takes place immediately.

To set log levels for a Siebel Server event type on Server Manager GUI

1. From the application-level menu, choose Navigation>Site Map>Administration - Server Configuration.
2. From the link bar, click Servers.
3. In the Siebel Servers list, select the Siebel Server of interest.
4. From the view tabs, click Events.
5. In the Event Type list, select the Siebel Server Event Type of interest.
6. In the Log Level field, type in the log level you want to set for this event type.

   For a list of log levels, see Table 7 on page 44.
7. Click the menu button and then Save Record.

Figure 10 shows an example of setting the Server State event type to a log level of 4.

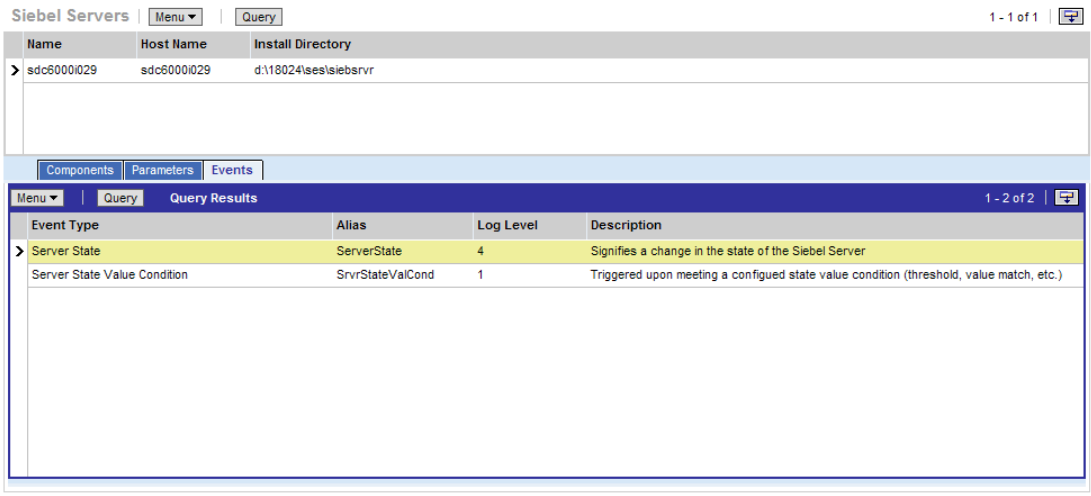


Figure 10. Setting Siebel Server Log Levels

To set log levels for a Siebel Server event type on srvrmgr

- Enter:

```
change evtloglvl event_alias_name=level for server siebel_server_name
```

To list Siebel Server event types on srvrmgr

- Enter:

```
list evtloglvl for server siebel_server_name
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Viewing Siebel Server Log Files

Siebel Server-level events are written to the Siebel Server log file. The log directory location on Windows is *SIEBSRVR_ROOT*\log. The log directory location on UNIX is *SIEBSRVR_ROOT*/enterprises/*EnterpriseServerName*/*SiebelServerName*/log. For background information on event logging and event types, see "About Configuring Siebel Server and Component Logging" on page 43. See "About Siebel Server Log Files" on page 46 for more information and file naming conventions. For examples of Siebel Server log files, see "Examples of Siebel Server Log Files" on page 48.

You can also view Siebel Server event logs from the Server Manager GUI. For information on this task, see "Monitoring Siebel Server Log Files" on page 23.

To assist in analyzing Siebel Server event log files, use the Log File Analyzer (LFA) utility to query and isolate log files of interest. For information on this feature, see Chapter 6, "Querying System Log Files."

Examples of Siebel Server Log Files

This section provides examples of Siebel Server event log files. The event log format and information are detailed and described with the examples.

Example of Siebel Server Startup Log File

The following log file samples display what is written to the server log file during a regular startup of a Siebel Server. In this example, events are created that are defined by the event subtypes LstnObjCreate, ProcessCreate, and Startup, all of which have a severity of 1. See Table 8, Table 9, and Table 10 on page 49 for a detailed description of the sample output. These events belong to the event type Server Logging (alias ServerLog). If this event type is set to a log level between 1 and 5, the following information is a sample of what is recorded in the log file.

```
ServerLog LstnObjCreate 1 0 2003-05-13 11:35:10Created port 49173 for Server
Request Processor
```

Table 8. Event Subtype LstnObjCreate

Log Detail	Description
ServerLog	Event Type alias
LstnObjCreate	Event Subtype
1	Event Severity
0	SARM ID
2003-05-13 11:35:10	Date and time of log
Created port 49173 for Server Request Processor	Log message

```
ServerLog Startup 1 0 2003-05-13 11:35:10Siebel Application Server is ready and
awaiting requests
```

Table 9. Event Subtype Startup

Log Detail	Description
ServerLog	Event Type alias
Startup	Event Subtype
1	Event Severity
0	SARM ID
2003-05-13 11:35:10	Date and time of log
Siebel Application Server is ready and awaiting requests	Log message

```
ServerLog ProcessCreate 1 0 2003-05-13 11:35:10Created multithreaded server process
(OS pid = 2756) for File System Manager with task id 4114
```

Table 10. Event Subtype ProcessCreate

Log Detail	Description
ServerLog	Event Type alias
ProcessCreate	Event Subtype
1	Event Severity
0	SARM ID

Table 10. Event Subtype ProcessCreate

Log Detail	Description
2003-05-13 11:35:10	Date and time of log
Created multithreaded server process	Log message
(OS pid = 2756)	Operating System Process ID number
for File System Manager	Siebel Server Component
with task id 4114	Task ID number referencing the Siebel Server task

Configuring Siebel Server Component Logging

Component logging uses event types that relate to a specific Siebel Server component. For example, the SQL Tracing event type is a component-level event that traces SQL statements for a particular server component. This section describes how to configure and view server component event types. See the following topics for details:

- "Setting Log Levels for Component Event Types" on page 50
- "Viewing Component Log Files" on page 52
- "Examples of Component Log Files" on page 52
- "Common Event Types for Component Diagnostics" on page 56
- "Common Event Types for Application Object Manager Diagnostics" on page 56

Setting Log Levels for Component Event Types

This topic describes setting log levels for server component event types using the Server Manager GUI or Server Manager command-line interface program (srvrmgr). For background information on event logging and event types, see "About Configuring Siebel Server and Component Logging" on page 43. To see the resultant Siebel Server component log files, see "Viewing Component Log Files" on page 52. For examples of Siebel Server component log files, see "Examples of Component Log Files" on page 52.

NOTE: The log level setting takes place immediately.

To set log levels for a Siebel Server component event type on Server Manager GUI

1. From the application-level menu, choose Navigation>Site Map>Administration - Server Configuration.
2. From the link bar, click Servers.
3. In the Siebel Servers list, select the Siebel Server of interest.
4. In the Components list, select the Siebel Server component of interest.

5 Click Events in the lower view.

6 Select the Siebel Server component event type of interest.

7 In the Log Level field, type in the log level you want to set for this event type.

For a list of log levels, see Table 7 on page 44.

8 Click the menu button and then Save Record.

Figure 11 shows an example of setting the Performance Event event type to a log level of 2 for the Server Request Broker (alias SRBroker) component.

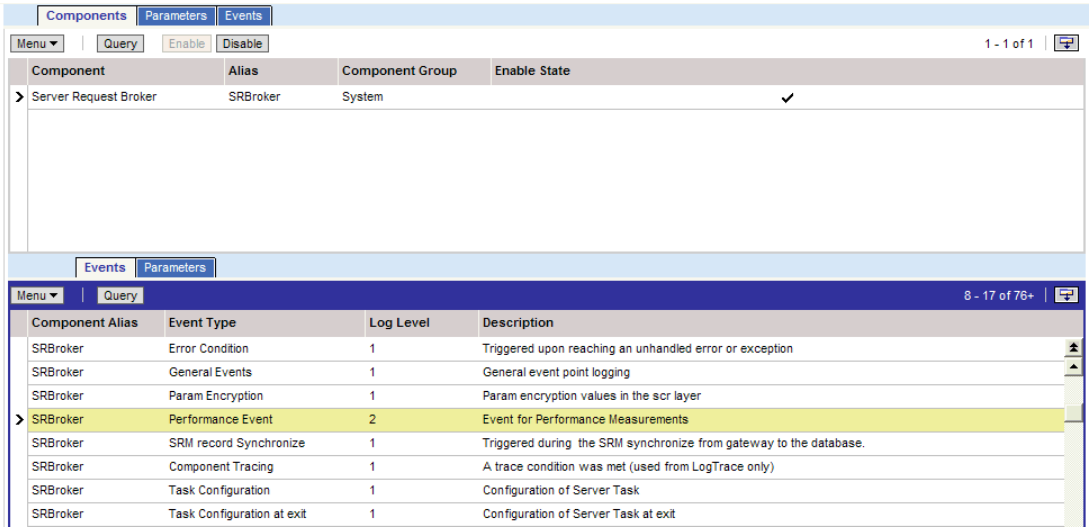


Figure 11. Setting Server Component Log Levels

To configure a component event type on srvrmgr

■ Enter:

```
change evtloglvl event_alias_name=level for component component_alias_name
```

To configure a server-specific component event type on command-line interface

■ Enter:

```
change evtloglvl event_alias_name=level for server siebel_server_name component
component_alias_name
```

To list component event types on srvrmgr

■ Enter:

```
list evtloglvl for component component_alias_name
```

For details on starting, running, and configuring the srvrmgr program, see *Siebel System Administration Guide*.

Viewing Component Log Files

Component-level events are written to log files for each task based on the component. The log directory location on Windows is *SIEBSRVR_ROOT*\log. The log directory location on UNIX is *SIEBSRVR_ROOT*/enterprises/*EnterpriseServerName*/*SiebelServerName*/log. Portions of component task log files can be viewed from the Server Manager GUI. See "Monitoring Server Component Task Log Files" on page 31 for details. Individual component task log files can also be consolidated into a single log file. See "About Component Log Files" on page 46 for more information and file naming conventions.

To assist in analyzing Siebel Server component event log files, use the Log File Analyzer (LFA) utility to query and isolate log files of interest. For information on this feature, see Chapter 6, "Querying System Log Files."

Examples of Component Log Files

This section provides excerpts and examples of component event log files. The event log format and information are detailed and described with each of the examples:

Example of Component Startup Log File

The following log file sample displays what is written to the individual Siebel Server component log files during a regular startup of components running on a Siebel Server. In the following example, an event is created for the File System Manager component that is defined by the event subtype LstnObjInherit. See Table 11 for a detailed description of this sample output. This event has a severity of 3 and events of this subtype belong to the event type ServerLog. If this event type is set to a log level between 1 and 5, the following information is recorded in the log file.

```
ServerLog LstnObjInherit 3 0 2003-05-13 11:35:10Inherited listening object for port
49172
```

Table 11. Event Subtype LstnObjInherit

Log Detail	Description
ServerLog	Event Type alias
LstnObjInherit	Event Subtype
3	Event Severity
0	SARM ID
2003-05-13 11:35:10	Date and time of log
Inherited listening object for port 49172	Log message

This sample log file extract is from the component log file named `FSMSrvr_4114.log` and is located in the log directory of the Siebel Server. The task ID, 4114, which defines this log file title, corresponds to the log message in the appropriate Siebel Server log file. See Table 10 on page 49 for this message.

Example of Server Request Broker Log File

The following examples display log file entries in a sample Server Request Broker log file. The name of this log file is `SRBroker_TaskID.log` and is found in the Siebel Server /log directory. The first sample captures an event defined by the event subtype GenericInfo, which belongs to the component event type General Events (alias GenericLog). See Table 12 for a detailed description of this sample output. This event has a severity of 3 and is recorded to the log file if the General Event log level is set between 3 and 5.

```
GenericLog GenericInfo 3 0 2003-05-13 14:07:31Set environment variable
DB2CODEPAGE=1252
```

Table 12. Event Subtype GenericInfo

Log Detail	Description
GenericLog	Event Type alias
GenericInfo	Event Subtype
3	Event Severity
0	SARM ID
2003-05-13 14:07:31	Date and time of log
Set environment variable DB2CODEPAGE=1252	Log message

The next two samples belong to the component event type SQL Parse and Execute. Events were recorded of the event subtype Statement and Prepare + Execute. See Table 13 on page 53 and Table 14 on page 54, respectively, for detailed descriptions of the sample output. Both of these event subtypes have a severity of 4 and are recorded to the log file if the SQL Parse and Execute event type is set to either 4 or 5.

```
SQLParseAndExecute Statement 4 0 2003-05-13 14:07:38 select ROW_ID, NEXT_SESSION,
MODIFICATION_NUM from dbo.S_SSA_ID
```

Table 13. Event Subtype Statement

Log Detail	Description
SQLParseAndExecute	Event Type alias
Statement	Event Subtype
4	Event Severity
0	SARM ID

Table 13. Event Subtype Statement

Log Detail	Description
2003-05-13 14:07:38	Date and time of log
select ROW_ID, NEXT_SESSION, MODIFICATION_NUM from dbo.S_SSA_ID	SQL statement

```
SQLParseAndExecute Prepare + Execute4 0 2003-05-13 14:07:38Time: 0s, Rows: 0, Avg.
Time: 0s
```

Table 14. Event Subtype Prepare + Execute

Log Detail	Description
SQLParseAndExecute	Event Type alias
Prepare + Execute	Event Subtype
4	Event Severity
0	SARM ID
2003-05-13 14:07:38	Date and time of log
Time: 0s, Rows: 0, Avg. Time: 0s	SQL Execution statistics

Example of Component Error Log File

This example displays an error entry from a sample Assignment Manager component log file. The log file is located in the *SIEBSRVR_ROOT*\log directory and is named `AsgnSrvr_TaskID.log`. The log message details an event defined by the event subtype GenericError, which belongs to the component event type General Events (alias GenericLog). See Table 15 for a detailed description of the sample output. An error event has a severity of 1 and is recorded to the log file if the General Event log level is set between 1 and 5.

```
GenericLog GenericError 1 0 2003-04-03 01:02:12[MERANT][ODBC Oracle 8
driver][Oracle 8]ORA-12541: TNS:no listener
```

Table 15. Event Subtype GenericError

Log Detail	Description
GenericLog	Event Type alias
GenericError	Event Subtype
1	Event Severity
0	SARM ID
2003-04-03 01:02:12	Date and time of log
MERANT][ODBC Oracle 8 driver][Oracle 8]ORA-12541: TNS:no listener	Error message

Example of Detailed Component Log File

The previous log file examples are sample extracts from various component log files. As a final example, the following collection of log file messages display the output recorded to a log file after a successful task run by the Document Server component. This log file information is recorded when the appropriate event type log levels are set.

```
ObjMgrSessionInfoObjMgrLogin3 02003-02-07 10:54:01Login name : SADMIN

ObjMgrSessionInfoObjMgrAuth3 0 2003-02-07 10:54:01Authentication name : SADMIN

DocServerInfoDocServerInfo0 0 2003-02-07 10:54:01Document Server was called.

DocServerInfoDocServerInfo0 0 2003-02-07 10:54:01Document Server input parameters: Service: Document
Generator, Method: OnGenerateHTML

CorrespInfoCorrespInfo0 02003-02-07 10:54:01Correspondence Service Constructor

CorrespDetailCorrespDetail2 0 2003-02-07 10:54:01Correspondence service method invoked is Start.
Correspondence Id is 1-26I5P. From Submit is .

CorrespDetailCorrespDetail2 02003-02-07 10:54:01Correspondence service method invoked is OnGenerateHTML.
Correspondence Id is 1-26I5P. From Submit is .

CorrespDebugCorrespDebug3 0 2003-02-07 10:54:04Correspondence Service: Verify Recipients...

CorrespDebugCorrespDebug3 0 2003-02-07 10:54:04Correspondence Service: Getting template from filesystem...

CorrespDebugCorrespDebug3 0 2003-02-07 10:54:04Correspondence Service: Attach Word or Word Pro...

CorrespDebugCorrespDebug3 0 2003-02-07 10:54:04Correspondence Service: Generating DataSource...

CorrespDetailCorrespDetail2 0 2003-02-07 10:54:04Number of recipients: 1

CorrespDebugCorrespDebug3 02003-02-07 10:54:06Correspondence Service: Performing MailMerge...

CorrespDebugCorrespDebug3 0 2003-02-07 10:54:08Correspondence Service: MailMerge is finished successfully.

CorrespDebugCorrespDebug3 0 2003-02-07 10:54:10Correspondence Service: Shutting down word processor...

DocServerInfoDocServerInfo0 0 2003-02-07 10:54:10Document Server finished successfully.

CorrespInfoCorrespInfo0 0 2003-02-07 10:54:11Correspondence Service Destructor
```

Common Event Types for Component Diagnostics

Set the event types in Table 16 to the indicated log levels for general server component diagnostic purposes. The increased log levels either create log files for the server component of interest or increase the amount of logging information contained in the component log files. For a description on how to set log levels for component event types, see "Setting Log Levels for Component Event Types" on page 50.

NOTE: Increased log levels require more memory and system resources. Make sure to return the event types to their previous values after completing diagnostics.

Table 16. Common Event Types for Component Diagnostics

Event Type Name	Event Type Alias	Log Level Setting
Component Tracing	Trace	4
General Events	GenericLog	4
Task Configuration	TaskConfig	4
SQL Tracing	SQL	4
SQL Error	SQLError	4
SQL Parse and Execute	SQLParseAndExecute	4

Common Event Types for Application Object Manager Diagnostics

Set the event types in Table 17 to the indicated log levels for general application object manager (AOM) diagnostic purposes. The increased log levels either create log files for the AOM of interest or increase the amount of logging information contained in the AOM component log files. Increasing the event logging provides information about the individual processes and steps that are part of the AOM task.

For a description on how to set log levels for AOM component event types, see "Setting Log Levels for Component Event Types" on page 50.

NOTE: Increased log levels require more memory and system resources. Make sure to return the event types to their previous values after completing diagnostics.

Table 17. Common Event Types for Application Object Manager Diagnostics

Event Type Name	Event Type Alias	Log Level Setting	Description
Event to track the flow of a message	MessageFlow	4	Captures messages exchanged between the Application Object Manager (AOM) and Siebel Web Server Extension (SWSE).
Object Manager Session Information	ObjMgrSessionInfo	4	Captures User Session login, logout, and timeout information.
Event Context	EventContext	4	Captures applet and method executed, view names, and screen names that the user navigates to.
		5	Captures username and IP address when the session completes.
Object Manager Data Object Log	ObjMgrDataObjLog	5	Captures data manager object tracking; that is, the creation, use, and deletion of database connections, search specifications, sort specifications, and cursors.
Object Manager Log	ObjMgrLog	5	Captures general AOM events: load license, open SRF, errors, and so on.
Object Manager Business Component Log	ObjMgrBusCompLog	4	Captures Business Component-related events: create and delete.
Object Manager Business Service Log	ObjMgrBusServiceLog	4	Captures Business Service-related events: create, delete, methods invoked, and so on.
Main Thread Events	MainThread	4	Captures task counter, task creates, and task exits (in main Multithreaded Server log).
Task Related Events	TaskEvents	4	Captures task creation, context, session timeout, and close info.

Table 17. Common Event Types for Application Object Manager Diagnostics

Event Type Name	Event Type Alias	Log Level Setting	Description
SQL Parse and Execute	SQLParseAndExecute	4	Captures the SQL insert, update, and delete statements processed by the database connector. It includes the SQL statement and bind variables. The content is similar to the ObjMgrSqlLog event; however, the select statement is not captured by the SQLParseAndExecute event.
Object Manager SQL Log	ObjMgrSqlLog	4	Captures the SQL select, insert, update, and delete statements processed by the AOM data object layer. Includes the SQL statement and bind variables. It also captures the prepare, execute, and fetch time for the SQL cursor.
		5	Captures internal and customer-defined search and sort specifications, the joins processed for queries, as well as a call stack of the operation performed. Setting this event to log level 5 incurs a significant performance impact because a callstack is generated. Only set this event to log level 5 in consultation with Siebel Technical Support.
SQL Profiling	SQLProfiling	4	Captures SQL Profiling information. Helps aid in the diagnosis of a poorly performing component.

Table 17. Common Event Types for Application Object Manager Diagnostics

Event Type Name	Event Type Alias	Log Level Setting	Description
SQL Summary	SQLSummary	4	Captures SQL prepare, fetch, and execute times. Provides detailed information regarding the execution of a SQL statement.
SQL Slow Query	SQLSlowQuery	4	Captures SQL Performance—lists ten slowest performing queries.

4 Configuring SWSE Logging and Monitoring

This chapter describes configuring the Siebel Web Server Extension (SWSE) for logging and monitoring purposes.

This chapter includes the following topics:

About SWSE Logging

The Siebel Web Server Extension (SWSE) generates one or more log files as a result of connection attempts with the Siebel Server. These log files reside in *SWEAPP_ROOT*\log directory (*SWEAPP_ROOT* is the installation directory of the Siebel Web Server Extension).

The format of the SWSE log file name is as follows:

PlatformPrefix_Timestamp_Proc_ID.log

where:

PlatformPrefix = ss

timestamp = Date of log file in YYMMDD format.

Proc_ID = The operating system process ID for the Web server that hosts the SWSE.

Depending on the logging level you choose, these files record errors, warnings, and general information. You can set log levels using environment variables on the machine hosting the Web server. For information on configuring SWSE logging, see "Configuring SWSE Logging" on page 62.

NOTE: SWSE does not use logging event levels as defined for Siebel Server and Siebel Server components.

Events such as Web server failures or invalid configuration of the Siebel Web Engine are captured in these logs. Analyzing the log files can provide clues for troubleshooting problems with the SWSE.

Configuring SWSE Logging

Use the following procedure to configure SWSE logging. The former method of configuring SWSE logging by setting a parameter in the eapps.cfg file is no longer valid.

To configure SWSE logging

1. On the machine running the Web server, set the following environment variable to the given value:
   - SIEBEL_LOG_EVENTS = 4 (or higher)

   For further information on setting environment variables, see *Siebel System Administration Guide*.
2. Optionally, set the following environment variables to add detailed information on session manager and SISNAPI tracing in the SWSE log file:
   - SIEBEL_SESSMGR_TRACE = 1
   - SIEBEL_SISNAPI_TRACE = 1

   NOTE: Configuring detailed logging uses a greater amount of disk space. Make sure sufficient disk space is available.

   For further information on these environment variables, see "About Environment Variables for System Logging" on page 69.
3. Stop and restart the Web server for these environment variables to take effect.

NOTE: Reset the original values of these variables after troubleshooting the SWSE.

Parsing a SWSE Log File Cookie

The SWSE log file encodes system data in hexadecimal format at the end of the user session cookie. An example cookie follows:

```
cookie (siebel.TCPIP.NONE.none://172.19.14.20:2320/siebel/eCommunicationsObjMgr/
!24.8c4.1779.3db56d28)
```

See Table 18 for a description of the SWSE cookie data.

Table 18. Example SWSE User Session Cookie Data Description

Cookie Data in Hexadecimal Format	Data Type	Decimal Format	Description
24	Server ID	36	ID number for Siebel Server.
8c4	OS PID	2244	Operating system ID number for of the application object manager (AOM) that handles the user session.

Table 18. Example SWSE User Session Cookie Data Description

Cookie Data in Hexadecimal Format	Data Type	Decimal Format	Description
1779	Task ID	6009	Siebel task ID for the application OM that handles the user session.
3db56d28	Date	1035300136	Operating system timestamp format of the action for that cookie.

About SWSE Monitoring

Monitor the Siebel Web Server Extension (SWSE) by configuring and reading the SWSE Statistics page. This HTML page provides current information about the operations and communications of the SWSE, which allows System Administrators to have a better understanding of the use of the Web server. Each of the sections of the Statistics page lists measurable objects, their values, mean values, and standard deviations.

CAUTION: As the SWSE Statistics page provides sensitive information about the type of requests running and potentially active sessions, it is strongly recommended that this page be protected with the Web server's, or a third party's, authentication mechanism.

Configuring the SWSE Statistics Page

The SWSE Statistics page is configured in the [SWE] section of the `eapps.cfg` file by the parameter StatsPage. By default this value is:

```
[SWE]

StatsPage = _stats.swe.
```

This parameter is a configurable item and can be changed to other file names (for example, `SiebelStats.swe`),

NOTE: Make sure the Statistics page has a `.swe` suffix.

The `eapps.cfg` file contains an additional parameter that defines content in the SWSE Statistics page: SessionMonitor.

SessionMonitor specifies if statistics are gathered on all current sessions and then reported to the application's SWSE Statistics page. If SessionMonitor is enabled (TRUE), when sessions are created they are entered into the statistical repository and appear on the application's SWSE Statistics page. This setting allows system administrators to determine who is logged onto the system at any given time, and to determine the session ID with a given user in a non-debug log level. However, performance is slightly degraded by using this feature. If SessionMonitor is disabled (FALSE), sessions are not monitored by the statistical repository and do not appear in an application's SWSE Statistics page.

This parameter is configured in the [SWE] section of the `eapps.cfg`. The default value is FALSE and appears as follows

```
[SWE]
SessionMonitor = FALSE
```

Accessing the SWSE Statistics Page

The Siebel Web Server Extension (SWSE) Statistics page is generated by the SWSE plug-in. To access the SWSE Statistics page, enter the following URL in a Web browser:

`http://host/application/_stats.swe.`

In addition to defining the name of the SWSE Statistics page accessory handle, you can configure if currently active sessions appear on the page as well. For information about monitoring currently active sessions, see information on the SessionMonitor parameter in "Configuring the SWSE Statistics Page" on page 63.

When accessing the SWSE Statistics page URL, additional parameters can be appended to the URL, which modify the display and content of the page.

Statistical Page Verbosity Option. This option allows the user to dictate the amount of information to appear in SWSE Statistics page. There are three settings as shown in Table 19:

Table 19. Statistical Page Verbosity Settings

Verbose Parameter Setting	Description
`Verbose=low`	Default value if not present. Displays only system and application-level statistics.
`Verbose=medium`	Displays the low setting information, plus the lock statistics.
`Verbose=high`	Displays the medium setting information, plus all currently active operations to the Siebel Server.

Statistical Page Reset Option. This option allows the user to dictate if the statistics are reset after viewing. There are two settings as shown in Table 20:

Table 20. Statistical Page Reset Settings

Verbose Parameter Setting	Description
`Reset=True`	Resets all noncounter and current operational statistics.
`Reset=False`	Default value if not present. Does not reset current operational statistics.

An example of the SWSE Statistics page request with parameters:

- `http://host/application/_stats.swe?Verbose=High&Reset=True`

  This request displays the System Stats, Applications, Current Sessions, Locks, and Current Operations Processing statistical categories and then resets all noncounter and current operational statistics.

- `http://host/application/_stats.swe?Reset=True`

  This request displays the System Stats and Applications statistical categories and then resets all noncounter and current operations statistics.

Reading the SWSE Statistics Page

The individual events and objects measured on the SWSE Statistics page are described in the following list. See "Example of SWSE Statistics Page" on page 66 for examples of these metrics.

Open Session Time. This event reflects the total amount of time it took to open a session. In the general stats section, the count is the number of times a session was opened and the mean reflects the average time it took to open a session.

Response Time (waiting for service event). This event measures the time it takes 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.

Close Session Time. This event reflects the amount of time it takes to close a session. Closing the session might involve signaling to the session manager to close the session. The session manager might or might not close the TCP/IP connection.

Request Time (waiting for service method to process). This event is the amount of time it takes 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. The value for Request Time is the total amount of time for invoking that service.

Applications. This section displays information about the various applications, for example, session life span and number of attempts to use the application.

Current Sessions. This section contains information about the current active sessions open. The parameter SessionMonitor must be set to True for this to take effect (see "Configuring the SWSE Statistics Page" on page 63 for further information on SessionMonitor). If verbose mode is used, then this section also displays the anonymous sessions (see "Accessing the SWSE Statistics Page" on page 64 for further information on verbose mode).

Example of SWSE Statistics Page

A sample SWSE Statistics page is reproduced in: Table 21, Table 22 on page 66, Table 23 on page 67, Table 24 on page 67, and Table 25 on page 68. The information contained in these tables encompasses one SWSE Statistics page.

Table 21. System Statistics Sample (All time in seconds)

Event	Value	General Stats (count, mean, standard deviation)	Frequency (mean, standard deviation)
Open Session Time	191.6682	12 15.9723 34.4210	61.9689 128.9318
Response Time (waiting for service event)	0.0000	0 0.0000 0.0000	0.0000 0.0000
Close Session Time	0.0000	0 0.0000 0.0000	0.0000 0.0000
Request Time (waiting for service method to process)	349.9513	23 15.2153 70.4652	3374.4503 16020.5422

Table 22. Application Statistics Sample (All time in seconds)

Application Name	Totals	General Stats (count, mean, standard deviation)	Frequency (mean, standard deviation)
/echannel/	13.0000	13 1.0000 0.0000	5970.1458 21303.1122
/echannel/Session Lifespan	0.0000	0 0.0000 0.0000	0.0000 0.0000

Table 23. Current Sessions Sample (All time in seconds)

Event	Total Time	General Stats (count, mean, standard deviation)	Frequency (mean, standard deviation)
siebel://test:2320/siebel/ objmgr/test/ !1.64c.14.3bb0e99fuser0	3.9228	4 0.9807 0.8953	85.9297 168.6426
siebel://test:2320/siebel/ objmgr/test/ !9.34b.1fe.3bbf349fuser1	338.4631	9 37.6070 112.8092	59.4458 116.0594
siebel://test:2320/siebel/ objmgr/test/ !1.56.1ef.4c0a0e99fuser2	3.3424	3 1.1141 0.8227	25665.0354 44450.4096

Table 24. Locks Sample (All time in seconds)

Application Name	Total	General Stats (count, mean, standard deviation)	Frequency (mean, standard deviation)
/*application*/InitLock	0.0000	1 0.0000 0.0000	0.0002 0.0000
/*application*/anonSessionLock	0.0003	25 0.0000 0.0000	3104.4834 15393.1114
SWEWebPublishMutex	0.0000	2 0.0000 0.0000	0.8005 1.1318

Table 25. Current Operations Processing Sample

Operation	Duration
NewAnonSession_00000022_499	0.9581
Open Session Time_00000023_499	0.9580

5 Configuring Additional System Logging

This chapter describes other system logging configurations and information that can be used to uncover errors or improper application behavior in addition to Siebel Server and component event logging.

This chapter includes the following topics:

About Environment Variables for System Logging

The following system environment variables can be set to assist with logging other aspects of the Siebel application deployment. For information on configuring these environment variables on both Microsoft Windows and UNIX, see the *Siebel System Administration Guide* or review the documentation specific to your operating system for details on changing these variables.

- **SIEBEL_LOG_EVENTS.** The SIEBEL_LOG_EVENTS environment variable sets the event logging level, which determines the extent of information captured in the log file. See Table 7 on page 44 for level settings and descriptions of information captured. More information is captured when the environment variable is set to a higher numeric value, and less information is captured when the variable is set to a lower numeric value. The numeric value is inversely proportional to the severity of the information—0 is more severe than 5 for instance. More disk space is consumed and performance is hindered when the value is set to a value of 5 than a value of 0.
- **SIEBEL_LOG_ARCHIVES**. The SIEBEL_LOG_ARCHIVES environment variable determines the number of log files archived. Set this value to a positive integer; this value indicates the number of files that will be saved. For example, if the value is 3 then only the 3 most recent log files are retained, any additional log files are deleted. When a new log is created, `program.log`, the previous versions are archived as `program_1.log`, `program_2.log`, and so on. The numbers in the file name increase as the file gets older. The oldest log file that numbers past the integer setting is deleted. The default value of this variable is ten.
- **SIEBEL_LOG_DIR.** The SIEBEL_LOG_DIR environment variable determines the log file location. Set this variable to change the location from the default directory. Make sure this directory already exists, access permission to write a file in that location is available, and sufficient space is free to support the log file.

- **SIEBEL_CRASH_HANDLER.** The SIEBEL_CRASH_HANDLER environment variable enables the creation of crash files. See "About Other Siebel Server Log Files" on page 72 for information on crash files. The default setting is 1, which enables the creation of crash files. Setting this variable to 0 disables this function. Only set this variable in consultation with Siebel Technical Support.
- **SIEBEL_ASSERT_MODE.** The SIEBEL_ASSERT_MODE environment variable enables the creation of assert files. See "About Other Siebel Server Log Files" on page 72 for information on assert files. The default setting is 0, which disables the creation of assert files. Only set this variable in consultation with Siebel Technical Support.
- **SIEBEL_SESSMGR_TRACE.** The SIEBEL_SESSMGR_TRACE environment variable enables tracing for session manager, which is part of the Siebel Web Server Extension (SWSE). By default, this variable is set to 0, which logs fatal and error events to the SWSE log file. For information on SWSE log files, see "About SWSE Logging" on page 61. To enable detailed logging of session manager, set this variable to 1. For further information on configuring logging for SWSE, see "Configuring SWSE Logging" on page 62.
- **SIEBEL_SISNAPI_TRACE.** The SIEBEL_SISNAPI_TRACE environment variable enables tracing for SISNAPI, which is a Siebel-proprietary communication protocol between the Web server and the Siebel Servers. By default, this variable is set to 0, which logs fatal and error events to the SWSE log file. For information on SWSE log files, see "About SWSE Logging" on page 61. To enable detailed logging of SISNAPI, set this variable to 1. For further information on configuring logging for SWSE, see "Configuring SWSE Logging" on page 62.
- **SIEBEL_STDERROUT.** The SIEBEL_STDERROUT environment variable enables logging of the standard error files. For further information on standard error files, see "Configuring Standard Error Files" on page 71. By default, this variable is set to 0, which disables standard error file logging. To enable logging of standard error files, set this variable to 1.

Configuring Siebel Gateway Name Server Log Files

The Siebel Gateway Name Server log file, `NameSrvr.log`, is located in the LOG folder of the Siebel Gateway Name Server root directory. This file captures operational information when the Siebel Gateway Name Server System Service is started manually or when Siebel Gateway Name Server errors occur. For further details on the Siebel Gateway Name Server, see *Siebel System Administration Guide*.

To configure Siebel Gateway Name Server logging

1. On the machine running the Siebel Gateway Name Server, set the following environment variable to the given value:

- SIEBEL_LOG_EVENTS = 3 (or higher)

  For further information on this variable, see "About Environment Variables for System Logging" on page 69.

  NOTE: If this value is set to 2 or lower, a Siebel Gateway Name Server log file is not created.

  For further information on setting environment variables, see *Siebel System Administration Guide*.

2. Stop and restart the machine running the Siebel Gateway Name Server for the environment variable to take effect.

NOTE: If the Siebel Gateway Name Server does not create log files, the log details may still reside in the operating system buffer. Shut down the name server to flush the logging information to the log file.

Configuring Standard Error Files

Standard error files contain process messages that are directed to standard error and standard out. These messages come from Siebel Server or third-party components and contain important information to help diagnose Siebel Server functionality issues. For example, the information contained in a Siebel Server process message can help identify instances where `siebmtshmw`, the process shell in which the application object manager (AOM) component runs, is unable to start up due to problems like incorrect LIBPATH setting or a corrupt registry. For further information on Siebel Server processes, see *Siebel System Administration Guide*.

When configured, process messages are saved to file in the directory labeled *SIEBSRVR_ROOT*/log/StdErrOut. The format of the standard error files is as follows:

`stderrout_$`*`Process_ID`*`_$`*`Time_stamp`*`.log`

where:

`Process_ID` = The operating system process ID number (PID).

`Time_stamp` = The log file creation time in YYYY-MM-DD HH:MM:SS format.

Standard error file logging is not enabled by default.

To configure standard error file logging

1. On the machine running the Siebel Server, set the following environment variable to the given value:

   - SIEBEL_STDERROUT = 1

   For further information on this variable, see "About Environment Variables for System Logging" on page 69.

   For further information on setting environment variables, see *Siebel System Administration Guide*.

2 Stop and restart the machine running the Siebel Server for the environment variable to take effect.

About Other Siebel Server Log Files

Siebel eBusiness Applications generate other text log files in the binary (bin) subdirectory of the Siebel Server root directory. These files record conditional responses when certain portions of code are executed during the operation of the application. They appear in the following form listed in Table 26:

Table 26. Other Siebel Server Log Files

Log File Name	Description
siebel_assert*.txt	Indicates a fatal condition that may have led to a crash or data corruption.
siebel_crash*.txt	Indicates a process has crashed. These files are produced only on Windows and HP-UX platforms.
siebel_prefer*.txt	Indicate a less critical error condition that arises but did not lead to a crash or data corruption.

If these files are generated during the normal running of processes when no errors occur, they can be ignored (or deleted as they can become very large). However, if these files are generated when errors occur (especially crashes), these files can be forwarded to Siebel Technical Support for investigation.

About Flight Data Recorder (FDR) Log Files

Siebel flight data recorder files (extension `.fdr`) are records of system and server component behavior at run time. In the event of a system or server component failure, the settings and events leading up to the failure are captured and logged. The Siebel flight data recorder log file can then be forwarded to Siebel Technical Support and used to troubleshoot and analyze the specific settings and events that occurred prior to the failure. The Siebel flight data recorder log files are stored in the Binary subdirectory of the Siebel Server root directory. They appear in the following form:

- `SOI_P_`*`ProcessID`*`.fdr`

  where:

  `ProcessID` is the identification number of the process that crashed or was killed.

The Siebel flight data recorder feature is enabled by default.

NOTE: FDR files are stored in binary format and cannot be read with a text editor.

Setting the environment variable SIEBEL_CRASH_HANDLER to 0 disables the creation of FDR files, in addition to several other logging functions. Only set this variable to 0 in consultation with Siebel Technical Support.

6 Querying System Log Files

Querying log files produced by a Siebel application is a useful diagnostic task to resolve problems that occur during any stage of operation. The Log File Analyzer (LFA) is a command-line utility that assists with this analysis.

This chapter includes the following topics:

About the Log File Analyzer

The Siebel Log File Analyzer (LFA) is a command-line utility designed to search through Siebel log files and isolate information of interest. Use the LFA to analyze and review the content of log files and to compile analysis information from these files.

Run the LFA to query log files across Siebel Servers and Siebel Web Server Extensions (SWSE) while filtering on one or more of the following items:

- User name
- Literal values
- Session IDs
- Component
- Log levels
- Events or subevents
- Time and date of log files

The LFA creates analysis output, which can be reviewed from the command-line or saved to text files.

For details on the process to run the LFA, see "Process for Analyzing Log Files with LFA" on page 77.

LFA Language Considerations

The LFA uses information in the events of the main Siebel Server log file to determine what components are available. The events in this log file are translated for different languages. To understand the format of the events for different languages, the LFA reads information in the language files located in the locale subdirectory of the Siebel Server root directory (for example, `/siebsrvr/locale`),

If the language files are changed, the LFA may not be able to recognize certain key events in the main Siebel Server log file, which lead to run-time errors.

Strategy for Analyzing Log Files

The strategy for analyzing log files depends on the type of issues encountered. Identify whether the issue of interest is related to a particular user or the application system in general. Run the Log File Analyzer (LFA) using the strategy applicable to the identified issue.

- For a strategy to use the LFA to examine user issues, see "Analyzing User Issues".
- For a strategy to use the LFA to examine system issues, see "Analyzing System Issues".

For information and details on the process of using the LFA, see "Process for Analyzing Log Files with LFA".

Analyzing User Issues

For user issues that are not immediately resolvable, log files provide additional information logged by the application regarding a user's time spent accessing and using the application.

The LFA gives the administrator the capability of querying across numerous log files for log events that were pertinent to the user's session. For example, in a situation where a user named Casey Smith reports an issue with her application at approximately 13:00, use the LFA to query events pertinent to Casey that occurred between 12:30 and 14:00. To refine the results, include the condition that the log level must be greater than or equal to one, which represents an error condition.

The LFA output includes information as to which file each log event came from. The administrator can, after finding an error or other log event of interest, check back in the original log file and look for events nearby that might give additional context useful for troubleshooting the issue.

NOTE: To query log files for users, make sure the environment variable SIEBEL_LOG_EVENTS is set to 4. For further information on environment variables, see "Common Event Types for Component Diagnostics" on page 56.

Analyzing System Issues

For general system issues not involving user issues (for example, a problem with a workflow), the LFA assists the administrator in isolating and resolving issues relating to general system usage.

For example, if the workflow processor is known to have failed within a particular time frame, use the LFA to search for log events that occurred during that time frame, and then look at the log files in which the events are contained for more specific detail.

As a preventative measure, the LFA is also useful to periodically check log files for any errors even if no system issue is apparent at that time.

Process for Analyzing Log Files with LFA

To analyze log files with the Log File Analyzer (LFA), perform the following tasks:

1. Configure the LFA to access the appropriate Siebel Server and Siebel Web Server Extension (SWSE) log files, if necessary. See "Configuring the Log File Analyzer" on page 77 for further information on this task.
2. Launch the LFA. See "Launching the Log File Analyzer" on page 80 for further information on this task.
3. Query the log files using LFA. See "Creating and Saving LFA Queries" on page 83 for information on this task. For general information on running the LFA, see "About Running Log File Analyzer Commands" on page 82.

For strategies on analyzing log files using the LFA, see "Strategy for Analyzing Log Files" on page 76.

Configuring the Log File Analyzer

Configure the Log File Analyzer (LFA) by accessing and editing the LFA configuration file, which has the default name `logreader.cfg`. The LFA uses the LFA configuration file when launched to reference Siebel Server locations, Siebel Web Server Extension (SWSE) plug-in locations, and other run-time details.

This task is the first step in "Process for Analyzing Log Files with LFA" on page 77. Once the LFA is configured, this step is optional unless further changes are necessary.

The default location for the LFA configuration file is the binary subdirectory of the Siebel Server root directory (for example, `/siebsrvr/bin`).

The LFA configuration file contains sections that configure which log files are analyzed by the utility and what content is reviewed. Edit the appropriate sections in the configuration file with a text editor. See Table 27 for LFA configuration file parameters and their descriptions. See "Example of a Log File Analyzer Configuration File" on page 79 for an example of a typical configuration file.

Table 27. Log File Analyzer Configuration File Sections and Parameters

Section	Parameter	Description
[elements]	*Siebel Server Name*	Under the [elements] section, list Siebel Servers searchable by the LFA. Use the following format: *Siebel Server Name* = server, where *Siebel Server Name* is the unique name of the Siebel Server. For example, SiebServer1=server.
	Siebel Web Server Extension plug-in Name	Under the [elements] section, list SWSE plug-ins searchable by the LFA. Use the following format: *SWSE plug-in Name* = plug-in, where *SWSE plug-in Name* is the unique name of the SWSE plug-in. For example, SiebSWSE1=plugin.
[*Siebel Server Name*]	Path	Each Siebel Server parameter listed in the [elements] section has a respective section of its own with its name in square brackets. The path parameter of each Siebel Server section denotes the location of the associated log files for that Siebel Server.
[*Siebel Server Name.Siebel Server Component Name*]	shortname	List Siebel Server component display names in square brackets to allow the LFA to search for component references in log files. Add the Siebel Server component alias as the value for the shortname parameter. For example, create a section named [server01.Server Request Broker] with a value of SCBroker for the shortname parameter. For a listing of Siebel Server components and their aliases, see *Siebel System Administration Guide*.
[*Siebel Web Server plug-in Name*]	Path	Each SWSE plug-in parameter listed in the [elements] section has a respective section of its own with its name in square brackets. The path parameter of each SWSE plug-in section denotes the location of the associated log files for that SWSE plug-in.
[Render][1]	event	Displays information on log events if enabled. Set to 1 to enable; set to 0 to disable.

Table 27. Log File Analyzer Configuration File Sections and Parameters

Section	Parameter	Description
	subevent	Displays information on log sub events if enabled. Set to 1 to enable; set to 0 to disable.
	loglevel	Displays information on log level of event subtypes. Set to 1 to enable; set to 0 to disable.
	time	Displays log timing information in enabled.Set to 1 to enable; set to 0 to disable.
	file	Displays log file path information if enbabled.Set to 1 to enable; set to 0 to disable.

1. The parameter information in the [render] section is also controlled by using commands during the running of the LFA. See "About Running Log File Analyzer Commands" on page 82 for further information.

NOTE: Do not modify the sections entitled [schemes], [user], and [session].

Example of a Log File Analyzer Configuration File

The following example Log File Analyzer (LFA) configuration file is intended for a Siebel application with two Siebel Servers, named SiebSrv1 and SiebSrv2, and three Web servers with three Siebel Web Server Extensions (SWSE), named SWSE1, SWSE2, and SWSE3. The LFA configuration file also contains alias information on two Siebel Server components, Server Request Broker and Call Center Object Manager. Using this configuration file, the LFA searches all Siebel Server and SWSE log files, has the ability to search on the two Siebel Server components listed, and displays all information except log level and the log file path.

See "Configuring the Log File Analyzer" on page 77 for descriptions of the individual sections and parameters.

```
[elements]

SiebSrv1=server

SiebSrv2=server

SWSE1=plugin

SWSE2=plugin

SWSE3=plugin

[SiebSrv1]

Path = //SiebSrv1/siebsrvr/log

[SiebSrv2]

Path = //SiebSrv2/siebsrvr/log

[SiebSrv1.Server Request Broker]
```

```
shortName=SCBroker

[SiebSrv2.Call Center Object Manager (ENU)]

shortName=SCCObjMgr

[SWSE1]

Path = //SWSE1/eappweb/log

[SWSE2]

Path = //SWSE2/eappweb/log

[SWSE3]

Path = //SWSE3/eappweb/log

[Render]

event=1

subevent=1

loglevel=0

time=1

file = 0
```

Launching the Log File Analyzer

Launching the Log File Analyzer (LFA) is the second step in the "Process for Analyzing Log Files with LFA" on page 77. For background information on the LFA, see "About the Log File Analyzer" on page 75.

The LFA utility resides in the binary subdirectory of Siebel Server root directory under Microsoft Windows as the executable `logreader.exe` or as binaries under UNIX.

The procedure for launching the LFA under Microsoft Windows is available in "Launching the Log File Analyzer Under Microsoft Windows" on page 81.

The procedure for launching the LFA under UNIX is available in "Launching the Log File Analyzer Under UNIX" on page 82.

Launching the Log File Analyzer Under Microsoft Windows

Use the following command to launch the Log File Analyzer (LFA) command-line utility under Microsoft Windows.

To launch the Log File Analyzer under Microsoft Windows

1. Navigate to the binary subdirectory within the Siebel Server root directory (for example, `/siebesrvr/bin`).
2. Make sure the LFA configuration file (`logreader.cfg`) is present in the same directory as the utility. If this file is located in another directory, or has another name, use the `/f` parameter described in Table 28. For further information on the configuration file, see "Configuring the Log File Analyzer" on page 77.
3. At the Windows command prompt, enter `logreader.exe` using, as necessary, parameters listed in Table 28.

   The log reader command prompt appears after a successful launch as follows:

   ```
   logreader>
   ```

4. Run the LFA by using the commands described in "About Running Log File Analyzer Commands" on page 82.

NOTE: Make sure the DLL files `MSVCR70D.dll` and `MSVCP70D.dll` are present in the LFA directory.

Table 28 describes the parameters available for use during the launching of the LFA.

Table 28. Log File Analyzer Parameters

Parameter	Description	Example
`/h`	Lists the parameters available for use with the LFA utility.	`logreader /h`

`/f`	Locates the LFA configuration file if not present in LFA utility directory or if the configuration file is named differently than logreader.cfg. Include the path or new configuration file name after the /f parameter. If the configuration file name includes a space, enclose the argument with quotation marks.	`logreader /f abc.cfg`
		or
		`log reader /f g:\abc\abc.cfg`

`/i`	Specifies an input file that contains LFA commands. At launch, the LFA provides output from the commands listed in the input file. Include the file name and path, if necessary, after the `/i` parameter.	`logreader /i g:\abc\abc.txt`

NOTE: Use the parameters `/f` and `/i` independently or together.

Launching the Log File Analyzer Under UNIX

Use the following command to launch the Log File Analyzer (LFA) command-line utility under UNIX.

To launch the Log File Analyzer under UNIX

1. Make sure the LD_LIBRARY_PATH (Solaris), SHLIB_PATH (HP-UX), or LIBPATH (AIX) environment variable contains the full pathname for your database client library directory. For more information on these variables, see *Siebel Installation Guide for UNIX: Servers, Mobile Web Clients, Tools*.
2. Make sure the LFA configuration file (`logreader.cfg`) is present in the same directory as the utility. If this file is located in another directory, or has another name, use the `/f` parameter described in Table 28. For further information on the configuration file, see "Configuring the Log File Analyzer" on page 77.
3. Enter `logreader` using, as necessary, other parameters listed in Table 28.

   The log reader command prompt appears after a successful launch as follows:

   ```
   logreader>
   ```

4. Run the LFA by using the commands described in "About Running Log File Analyzer Commands" on page 82.

About Running Log File Analyzer Commands

Running the Log File Analyzer (LFA) allows you to search and filter information contained in Siebel application log files. For overall strategy on running the LFA, see "Strategy for Analyzing Log Files" on page 76.

Make sure when running the LFA that you enter commands and parameters correctly. The following information is common to all LFA commands:

- The LFA is case sensitive.
- Enclose any parameters that contain spaces with quotation marks.

The following sections list instructions for running the LFA:

- "Creating and Saving LFA Queries" on page 83. Creating and executing a query is the fundamental task associated with the LFA.
- "Filtering LFA Queries" on page 89. Filtering queries assists the user to isolate diagnostic information of interest.

NOTE: Move log files to a nonproduction environment before querying them with the LFA. As the LFA parses through potentially large and numerous log files, using the LFA in a production environment may reduce overall system performance.

Creating and Saving LFA Queries

Creating and executing a query is the fundamental task associated with the Log File Analyzer (LFA). Creating saved queries is a task in the "Process for Analyzing Log Files with LFA" on page 77.

Run queries using the LFA query command to search log files based on users, literal values, sessions, severity, events, subevents, log times, or combinations of these items.

See the following sections for descriptions on running these commands.

The LFA saves the results of each query to memory or saves it to a text file. See "Displaying Saved Query Output" on page 91 for details on displaying saved queries. For details on saving output to a text file, see "Saving Log File Analyzer Output to Text Files" on page 90.

To stop a query before it finishes, see "Interrupting Log File Analyzer Queries" on page 91.

Querying Log Files for Users

Use the following procedure to search log files for events associated with individual users. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

NOTE: To query log files for users, make sure the environment variable SIEBEL_LOG_EVENTS is set to 4. For further information on environment variables, see "Common Event Types for Component Diagnostics" on page 56.

To query for events associated with a particular user

- Enter:

  `query` *`query_name`* `where user =` *`user_name`*

  where:

  `query_name` = Query command output stored in memory under this name.

  `user_name` = User of interest in log files.

An example of this query command is as follows:

```
query asqry where user = asmith
```

This command queries log files for events associated with user `asmith` and saves the output to memory under the name `asqry`.

Querying Log Files for Literal Values

Use the following procedure to search log files for specific literal values. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

To query for a literal value

- Enter:

  `query` *`query_name`* `where literal =` *`literal_value`*

  where:

  `query_name` = Query command output stored in memory under this name.

  `literal_value` = Literal value of interest in log files.

An example of this query command is as follows:

```
query litqry where literal = Parameter
```

This command queries log files for events associated with literal `Parameter` and saves the output to memory under the name `litqry`.

Querying Log Files for Error Messages

Use the following procedure to search log files for error messages. This command is an application of querying for literal values. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

To query for an error message

- Enter:

  `query` *`query_name`* `where literal =` *`error_message_number`*

  where:

  `query_name` = Query command output stored in memory under this name.

  `error_message_number`= Error message number of interest in log files.

An example of this query command is as follows:

```
query errorqry where literal = SBL-ASG-00001
```

This command queries log files for events associated with error message number `SBL-ASG-00001` and saves the output to memory under the name `errorqry`.

Querying Log Files for Sessions

Use the following procedure to search log files for specific sessions. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

To query for events associated with a particular session

- Enter:

  `query` *`query_name`* `where session =` *`session_ID`*

  where:

  `query_name` = Query command output stored in memory under this name.

  `session_ID` = Session ID of interest in log files.

An example of this query command is as follows:

```
query sesqry where session = !1.15bc.c425.3f302b17
```

This command queries log files for events associated with session ID `!1.15bc.c425.3f302b17` and saves the output to memory under the name `sesqry`.

Querying Log Files of a Particular Severity

Use the following procedure to search log files for events of a specific severity. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

Events are categorized from 0 to 5, 0 being the most severe or critical. For further information on event severity and event logging, see *Siebel System Administration Guide*.

This command includes events of the indicated severity as well as events of a greater severity. For example, if you query for a severity of 2, events of severity 0 and 1 are also included in the output.

To query for events associated with a particular severity

- Enter:

  `query` *`query_name`* `where loglevel =` *`severity_value`*

  where:

  `query_name` = Query command output stored in memory under this name.

  `severity_value` = Severity value of interest (integer value from 0 to 5).

An example of this query command is as follows:

```
query svtqry where loglevel = 1
```

This command queries log files for events associated with a severity of 0 and 1 and saves the output to memory under the name `svtqry`.

Querying Log Files for a Particular Log Event

Use the following procedure to search log files for a specific log event. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

For a partial listing of log events and for further information on event logging, see *Siebel System Administration Guide*.

To query for events associated with a particular log event

■ Enter:

```
query query_name where event = event_name
```

where:

query_name = Query command output stored in memory under this name.

event_name = Log event name of interest.

An example of this query command is as follows:

```
query evtqry where event = SessMgr
```

This command queries log files for log events named `SessMgr` and saves the output to memory under the name *evtqry*.

Querying Log Files with a Particular Log Subevent

Use the following procedure to search log files for a specific log subevent. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

For a partial listing of log subevents and for further information on event logging, see *Siebel System Administration Guide*.

To query log entries associated with a particular log subevent

■ Enter:

```
query query_name where subevent = subevent_name
```

where:

query_name = Query command output stored in memory under this name.

subevent_name = Log subevent name of interest.

An example of this query command is as follows:

```
query subevtqry where subevent = SisnNetGeneric
```

This command queries log files for log subevents named `SisnNetGeneric` and saves the output to memory under the name `subevtqry`.

Querying Log Files After a Particular Time

Use the following procedure to search log files created after a specific time. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

To query events logged after a certain time

- Enter:

  `query` *`query_name`* `where time from "YYYY-MM-DD HH:MM:SS"`

  where:

  `query_name` = Query command output stored in memory under this name.

  `"YYYY-MM-DD HH:MM:SS"` = Date and time of interest.

  NOTE: The exact time portion of the date and time parameter, `HH:MM:SS`, can be omitted. In this case, the date's base time defaults to `00:00:00`.

An example of this query command is as follows:

```
query timeqry where time from "2003-10-01 16:30:00"
```

This command queries log files created after October 1, 2003 at 4:30 PM, and saves the output to memory under the name `timeqry`.

This command is useful in combination with other parameters to filter results. See "Querying Log Files Using Multiple Conditions" on page 88 for further information.

Querying Log Files Within a Time Interval

Use the following procedure to search log files created within a specific time interval. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

To query events logged within a certain time interval

- Enter:

  `query` *`query_name`* `where time from "YYYY-MM-DD HH:MM:SS" to "YYYY-MM-DD HH:MM:SS"`

  where:

  `query_name` = Query command output stored in memory under this name.

  `"YYYY-MM-DD HH:MM:SS"` = Date and time of interest.

  NOTE: The exact time portion of the date and time parameter, `HH:MM:SS`, can be omitted. In this case, the date's from-time defaults to `00:00:00` and the to-time defaults to `23:59:59`.

An example of this query command is as follows:

```
query timeintqry where time from "2003-10-01 16:30:00" to "2003-10-05"
```

This command queries log files created between October 1, 2003 at 4:30 PM and October 5, 2003 at 11:59 PM, and saves the output to memory under the name `timeintqry`.

This command is useful in combination with other parameters to filter results. See "Querying Log Files Using Multiple Conditions" on page 88 for further information.

Querying Log Files for Components

Use the following procedure to search log files for a specific Siebel Server component. See "Creating and Saving LFA Queries" on page 83 for other options of the Log File Analyzer (LFA) query command.

Make sure the LFA configuration file contains information on the Siebel Server component of interest. For further information, see "Configuring the Log File Analyzer" on page 77.

For further information on Siebel Server components, see *Siebel System Administration Guide*.

To query log entries for a particular Siebel Server component

- Enter:

  `query` *`query_name`* `where component =` *`component__name`*

  where:

  `query_name` = Query command output stored in memory under this name.

  `component__name` = Siebel Server component name of interest.

  NOTE: The *`component__name`* parameter takes either the long form or alias form of the Siebel Server component name. For a list of component names and aliases, see *Siebel System Administration Guide*.

An example of this query command is as follows:

```
query compqry where component = SCCObjMgr
```

This command queries log files for the Call Center Object Manager (alias SCCObjMgr) and saves the output to memory under the name `compqry`.

Querying Log Files Using Multiple Conditions

See the following examples of combination query commands using multiple conditions. See "Creating and Saving LFA Queries" on page 83 for a list of individual query command conditions and their use.

The logical AND and OR operators are also applicable to the Log File Analyzer (LFA) query command. To add clarity to multiple condition commands, group condition sets in parentheses.

- `query litasqry where (literal = Parameter) or (user = asmith)`

  This command queries log files for the literal `Parameter` or the user `asmith`. It saves the output to memory under the name `litasqry`.

- `query aqry where literal = Parameter and literal = SBL-GEN`

  This command queries log files for the literal `Parameter` and the literal `SBL-GEN`. It saves the output to memory under the name `aqry`.

- `query asauggqry where user = asmith time from 2003-08-05`

  This command queries log files for the user `asmith` after August 05, 2003. It saves the output to memory under the name `asauggqry`.

- `query asauggqry where user = asmith time from “2003-08-05 15:20:00” to “2003-08-05 15:30:00”`

  This command queries log files for the user `asmith` during the ten minute time period between 3:20 PM and 3:30 PM on August 05, 2003. It saves the output to memory under the name `asauggqry`.

Filtering LFA Queries

Use the `show` command to further refine the output of saved queries. See “Creating and Saving LFA Queries” on page 83 for information on querying log files and creating saved queries.

For information on displaying a saved query or multiple saved queries, see “Displaying Saved Query Output” on page 91.

To filter saved query information

- Enter:

  `show` *`query_name where_clause`*

  where:

  `query_name` = Query command output stored in memory under this name.

  `where_clause` = Where clause used to filter display results using key words.

For a list of key words available for use with the Log File Analyzer (LFA), see “Listing Query Command Key Words” on page 92. The syntax of where clauses used with the `show` command are similar to those used with the `query` commands. Review “Creating and Saving LFA Queries” on page 83 for further information.

Use multiple where clause conditions and the logical operators AND and OR to further filter an individual or multiple saved queries. See “Examples of Filtered Saved Queries” on page 90 for examples of these types of commands.

To save filtered output from the `show` command, save the results to a text file. See “Saving Log File Analyzer Output to Text Files” on page 90 for description of this task. Filtered output from the `show` command cannot be saved in memory.

Examples of Filtered Saved Queries

The following examples display the type of filtering available on saved queries using the show command.

- `show aquery where user = asmith`

  This command filters the saved query aquery for information specific to user asmith.

- `show aquery where user = asmith and literal = Parameter time from “2003-08-05 15:20:20” to “2003-08-05 15:30:00” > out.dat`

  This command filters the saved query aquery for information on user asmith and the literal value parameter between the time of 3:20 and 3:30 PM on August 05, 2003. The command also stores the results of the filtered query to a text file named out.dat.

- `show aquery, bquery where user = asmith and literal = Parameter time from “2003-08-05 15:20:20” to “2003-08-05 15:30:00” > out.dat`

  This command filters the saved queries aquery and bquery based on the same conditions in the previous bullet.

Saving Log File Analyzer Output to Text Files

Use the following procedure to save the results of a Log File Analyzer (LFA) command to a text file. For information on running the LFA, see “About Running Log File Analyzer Commands” on page 82. Any LFA command that creates output can have the output channeled to a file.

To save Log File Analyzer output to text files

- Enter:

  log_file_analyzer_command > file_name.txt

  where:

  log_file_analyzer_command = LFA command.

  file_name.txt = Name of the output text file.

  Make sure to:

  - Include the > character when saving output to a text file.
  - Specify a path name with the text file name if saving to another directory other than the Log File Analyzer (LFA) directory.

Example:

```
query litqry where literal = Parameter > output1.txt
```

This command saves the output from the litqry saved query to the text file named output1.txt. The LFA stores this output text file in the save directory as the Log File Analyzer directory.

Displaying Saved Query Output

Use the following procedures to display results of one or more saved query commands to the screen. For a listing of saved queries, see "Listing Log File Analyzer Queries and Run-time Details" on page 95.

For more information on the query command, see "Creating and Saving LFA Queries" on page 83.

The Log File Analyzer (LFA) also saves query command output to text files. See "Saving Log File Analyzer Output to Text Files" on page 90 for further information on this task.

To show saved query output to the screen

- Enter:

  show *query_name*

  where:

  query_name = Query command output stored in memory under this name.

Example:

```
show evtqry
```

This example displays the output from a previous query command named `evtqry`.

NOTE: The LFA only displays queries saved to memory during a given session.

To show multiple saved query output to the screen

- Enter:

  show *query_name_1, query_name_2, ... , query_name_N*where:

  query_name_N = Query command output stored in memory under this name.

Example:

```
show evtqry1, evtqry2
```

This example displays the output from two previous query commands named `evtqry1` and `evtqry2`.

Interrupting Log File Analyzer Queries

Use the following procedure to interrupt a query command. For more information on the query command, see "Creating and Saving LFA Queries" on page 83.

To interrupt a query command in operation

- Hit CTRL-C during the operation of the command.

Listing Query Command Key Words

Use the following procedure to list the key words available for use with the query command where clause. See "Creating and Saving LFA Queries" on page 83 for detailed descriptions of use for each key word.

To list the query command key words

- Enter:

  `keys`

  The key words are output to the screen.

Listing Log Event Fields Display Status

Use the following procedure to list the display status for log event fields. The value 1 indicates the log event field is set to display. The value 0 indicates the log event field is set to hide.

To list log event fields display status

- Enter:

  `fields`

To change the display status at run-time, see the task "Showing Log Event Fields in LFA Results" on page 93 or "Hiding Log Event Fields in LFA Results" on page 94 for further information.

Set the default display status of the event log fields by modifying the Log File Analyzer (LFA) configuration file. See "Configuring the Log File Analyzer" on page 77 for more information on the LFA configuration file.

Showing Log Event Fields in LFA Results

Use the following procedures to show log file fields in the output from the Log File Analyzer (LFA) during an individual LFA session. You can also set this information in the LFA configuration file, which is applicable to all LFA sessions. For further information, see "Configuring the Log File Analyzer" on page 77.

To list the current event log field display status, see "Listing Log Event Fields Display Status" on page 92.

To show log file fields in the LFA output

- Enter:

  `showfield` *`log_field_name`*

  where:

  `log_field_name` = Name of the log field name for display. See Table 29 for a list of the available display fields.

Set multiple log file fields to show on a single `showfield` command by separating each log file field with a space or comma.

Table 29. Configurable Log File Fields

Log File Field	Description
`event`	Name of the event.
`subevent`	Name of the subevent.
`loglevel`	Severity of the log file event.
`file`	File and path name of the log file.
`time`	Date and time of the log file.

Hiding Log Event Fields in LFA Results

Use the following procedures to hide log file fields in the output from the Log File Analyzer (LFA) during an individual LFA session. You can also set this information in the LFA configuration file, which is applicable to all LFA sessions. See "Configuring the Log File Analyzer" on page 77 for further information.

To list the current event log field display status, see "Listing Log Event Fields Display Status" on page 92.

To hide log file fields in the LFA output

■ Enter:

`hidefield` *`log_field_name`*

where:

`log_field_name` = Name of the log field name for display. See Table 29 on page 93 for a list of the available display fields.

Set multiple log file fields to hide on a single `showfield` command by separating each log file field with a space or comma.

Deleting Log File Analyzer Saved Query Results

Use the following procedure to delete saved queries. See "Creating and Saving LFA Queries" on page 83 for further information on querying log files.

NOTE: Deleting saved queries does not delete queries saved as text files.

To delete Log File Analyzer query results

■ Enter:

`delete` *`query_name`*

where:

`query_name` = Query command output stored in memory under this name.

Delete multiple saved queries by separating each query name with a space or comma when using the `delete` command.

Listing Log File Analyzer Queries and Run-time Details

Use the `list` command in the following procedure to list saved queries and run-time details to the screen. For information on running the Log File Analyzer (LFA), see "About Running Log File Analyzer Commands" on page 82. For information on creating saved queries, see "Creating and Saving LFA Queries" on page 83.

For information on each list item, see "Listing Log File Information Using Log File Analyzer" on page 96 for details.

To list Log File Analyzer queries and run-time details

- Enter:

  `list` *`list_item`*

  where:

  `list_item` = The list item of interest. See Table 30 for items availab le for listing.

Table 30. Log File Analyzer Items Available for Listing

Item	Description
`all`	Lists all LFA items available for listing. **NOTE:** The LFA does not list users or sessions until you perform at least one user query.
`queries`	Lists LFA queries saved in the current session.
`servers`	Lists servers searched by LFA.
`sessions`	Lists sessions found in the log files searched by LFA.
`plugins`	Lists plug-ins searched by LFA.
`components`	Lists components with information in log files searched by LFA.
`processes`	Lists processes with information in log files searched by LFA.
`users`	Lists users with information in the log files searched by LFA.

NOTE: If the LFA is not searching the appropriate server or plug-in, see "Configuring the Log File Analyzer," for details on configuring the LFA to search the server and plug-in of interest.

Listing Log File Information Using Log File Analyzer

Use the `info` command in the following procedure to list detailed information on the values of the run-time details. For a list of items available for use with the info command, see "Listing Log File Analyzer Queries and Run-time Details" on page 95.

For information on running the Log File Analyzer (LFA), see "About Running Log File Analyzer Commands" on page 82. For information on creating saved queries, see "Creating and Saving LFA Queries" on page 83.

To list information on values for Log File Analyzer run-time details

- Enter:

  `info` *`info_item`*

  where:

  `info_item` = The value of a list item of interest. See Table 30 on page 95 for items availab le for listing (with the exception of list item `all` and `queries`).

List information on multiple list values by separating values with a comma or space for the *`info_item`* parameter.

For example, using the `list` command for users revealed an entry named `asmith`. Use the following command to list information on `asmith`:

```
info asmith
```

Exiting Log File Analyzer

Use the following command to exit the log file analyzer. Exiting the log file analyzer deletes saved queries for that session unless query output is saved to text files. See "Saving Log File Analyzer Output to Text Files" on page 90 for information on this task.

To exit the Log File Analyzer

- Enter:

  ```
  exit
  ```

About Log File Analyzer Error Messages

Table 31 lists the error codes, the message text, an explanation, and a resolution, if possible, of each error that the Log File Analyzer (LFA) may generate during processing.

Table 31. Log File Analyzer Error Messages

Error Code	Error Text	Explanation	Resolution
SBL-LFA-00100	Section [%s] in configuration file is empty.	The section indicated in the error message is blank. LFA requires content for this section.	See the "Configuring the Log File Analyzer" on page 77 for the correct specification of the configuration file.
SBL-LFA-00101	Rule "%s" appears in the configuration file but is not registered.	A rule has been added to the LFA configuration file but not registered with the utility. Therefore, the rule is not recognized.	At this time, it is not possible to create customized rules for the LFA. Remove this rule from the configuration file.
SBL-LFA-00102	Cannot find section [%s] in the configuration file.	Though it is a required section, the section of the LFA configuration file indicated in the error message text is missing.	See the "Configuring the Log File Analyzer" on page 77 for the correct specification of the configuration file.
SBL-LFA-00103	There is a format problem in section [%s] of the configuration file.	There is a formatting error in the LFA configuration file section indicated in the error message text.	See the "Configuring the Log File Analyzer" on page 77 for the correct specification of the configuration file.
SBL-LFA-00104	Value "%s" in the section is invalid or missing.	There is a missing value in the LFA configuration file section indicated in the error message text.	See the "Configuring the Log File Analyzer" on page 77 for the correct specification of the configuration file.
SBL-LFA-00105	Time filters are invalid or have contradictory values.	The time filter you are trying to use in your query is invalid. It is possible that the *To* time is before the *From* time.	See "Querying Log Files Within a Time Interval" on page 87 for information on using time filters correctly.
SBL-LFA-00106	Value or Name for "%s" is a negative number.	This value is not expected to be negative.	Provide a positive value.
SBL-LFA-00107	Cannot open file: "%s".	The LFA cannot write output to the given file.	Check your permissions to the file and directory. Make sure the file is not read only.

Table 31. Log File Analyzer Error Messages

Error Code	Error Text	Explanation	Resolution
SBL-LFA-00108	File "%s" is already in use.	This file may be locked by another running application.	Shut down applications that might be accessing the file and try again.
SBL-LFA-00109	Cannot create pipe for command \"%s\".	Pipe is not supported.	This functionality is not supported.
SBL-LFA-00110	OUT OF MEMORY !!!!!!	The computer on which you are using the LFA has run out of memory.	Shut down some of your applications and try again.
SBL-LFA-00112	Query's "where" clause is invalid.	The where clause in the query is not correctly specified.	See "Creating and Saving LFA Queries" on page 83 for information on correct application of the "where" clause.
SBL-LFA-00113	Query with name "%s" does not exist.	You have tried to reference a query that does not exist.	Type `list queries` to see existing queries. If your query does not exist, you must create it before trying to reference it. See "Creating and Saving LFA Queries" on page 83 for information on creating queries.
SBL-LFA-00114	Filter for "%s" does not exist.	The specified parameter cannot be used as a filter.	D.o not use this item as a query parameter.
SBL-LFA-00115	Category "%s" does not exist.	You tried to use the specified word, but only key words are expected	Fix the command and try again. See "Listing Query Command Key Words" on page 92 for information on key words.
SBL-LFA-00116	Object "%s" does not exist.	The object (that is, Siebel Server, plug-in, query, user, component, or session) that you are trying to reference is unavailable.	Make sure the object is available for reference. See "Listing Log File Analyzer Queries and Run-time Details" on page 95 for information on listing existing objects.
SBL-LFA-00117	Object "%s" already exists. Please use another name	An object by that name already exists.	Use another name for your object.
SBL-LFA-00118	Query "%s" finished abnormally.	The query finished abnormally, possibly due to corrupt log files or user intervention.	Re-run the query. If that does not work and the query is complex, try simplifying it.

Table 31. Log File Analyzer Error Messages

Error Code	Error Text	Explanation	Resolution
SBL-LFA-00119	"%s" should not be used for naming.	The name you have specified cannot be used.	Use another combination of characters.
SBL-LFA-00120	Cannot interpret: "%s"	The name you have specified cannot be used in this place.	The LFA identified an error in your command syntax. See "About Running Log File Analyzer Commands" on page 82 for information on valid LFA commands.
SBL-LFA-00121	Token has a wrong value: "%s"	The specified value is invalid.	See "About Running Log File Analyzer Commands" on page 82 for information on valid LFA commands.
SBL-LFA-00122	Unknown issue.	There is an error in the command that you have entered.	See "About Running Log File Analyzer Commands" on page 82 for information on valid LFA commands.
SBL-LFA-00123	There is no file "%s".	The input file that you specified when starting the LFA does not exist.	Make sure the file exists and the filename and path is correct.
SBL-LFA-00124	Wrong format of the string: "%s".	The specified string is formatted incorrectly.	See "About Running Log File Analyzer Commands" on page 82 for information on valid LFA commands.
SBL-LFA-00125	Error parsing configuration file "%s".	The Log File Analyzer configuration file specified in the message text is missing.	Restart the LFA with another configuration file, or make sure the specified configuration file is available.
SBL-LFA-00126	Too many unrelated files are found following main server log file pattern: "%s".	The log files in the server log directory are inconsistent. More than one unrelated file fits the main server log file pattern that is used by the LFA to initialize the server model.	Remove all unrelated files and try again.
SBL-LFA-00127	Invalid usage of the command.	You have used the command incorrectly.	See "About Running Log File Analyzer Commands" on page 82 for information and links to the correct usage of LFA commands.

Table 31. Log File Analyzer Error Messages

Error Code	Error Text	Explanation	Resolution
SBL-LFA-00128	Component with name "%s" could not be found.	The Log File Analyzer cannot translate the component name you entered into a component short name.	If this is a valid component, specify its short name in the LFA configuration file. See "Configuring the Log File Analyzer" on page 77 for more information.
SBL-LFA-00130	Language "%s" could not be initialized. Please see Log File Analyzer documentation for more information.	The language files in the locale directory on the Siebel Server may be missing or corrupt.	Review information on LFA log file language considerations. See "About the Log File Analyzer" on page 75 for further information.
SBL-LFA-00131	String with code "%s" could not be loaded. Please see Log File Analyzer documentation for more information.	The language files in the locale directory on the Siebel Server may be missing or corrupt.	Review information on LFA log file language considerations. See "About the Log File Analyzer" on page 75 for further information.
SBL-LFA-00132	Formatting string "%s" is not supported. Parameters for this string could not be extracted.	There is an error in the string that makes it impossible for the Log File Analyzer to parse it properly.	Contact Siebel Technical Support if you cannot resolve the underlying issue that caused this error.

7 Capturing Siebel Environment Data

Capturing Siebel environment information is useful for diagnostic and troubleshooting purposes. Use the command-line utility Siebel Diagnostic Data Collector (SDDC) to collect data such as environment setup, configuration settings, and logging information.

This chapter includes the following topics:

About Siebel Diagnostic Data Collector

The Siebel Diagnostic Data Collector (SDDC) is a command-line utility that resides in the binary subdirectory of the Siebel Server, Siebel Gateway Name Server, and Siebel Web Server Extension (SWSE) root directory as the executable `siebsnap.exe` under Microsoft Windows or as binaries under UNIX. When run, the Siebel Diagnostic Data Collector (SDDC) utility collects information individually for Siebel Servers, the Siebel Gateway Name Server, and the Siebel Web Server Extension.The utility stores the collected data in output files. These files are available for immediate review, or can be sent to Siebel Technical Support if required. For information on running the SDDC, see:

- Running the SDDC, see "Capturing Siebel Environment Data Under Microsoft Windows" on page 102.

SDDC creates output files after each execution. These files document environment information for each specific entity. For details on the location and type of collected information for the Microsoft Windows SDDC utility, see "Reviewing Siebel Environment Data" on page 106. For details on the location and type of collected information for the UNIX SDDC utility, see the following section for further information.

- Reviewing SDDC output, see "Reviewing Siebel Environment Data" on page 106.

Capturing Siebel Environment Data Under Microsoft Windows

The Siebel Diagnostic Data Collector (SDDC) utility is manually run to capture environment setup, configuration settings, and logging information for system infrastructure. Run SDDC separately for the Siebel Servers, the Siebel Gateway Name Server, and the Siebel Web Server Extension (SWSE) to collect information specific to that entity.

For background information on SDDC, see "About Siebel Diagnostic Data Collector" on page 101.

See the following topic for information on running SDDC under Microsoft Windows:

- "Running Siebel Diagnostic Data Collector Under Microsoft Windows" on page 102

To review information captured by SDDC, see "Reviewing Siebel Environment Data" on page 106.

Running Siebel Diagnostic Data Collector Under Microsoft Windows

Use the following commands for running Siebel Diagnostic Data Collector (SDDC) under Microsoft Windows. For background information on running the SDDC utility under Microsoft Windows, see "Capturing Siebel Environment Data Under Microsoft Windows" on page 102.

To collect Siebel Server information

1. Navigate to the binary subdirectory within the Siebel Server root directory.
2. Run `siebsnap.exe` using the `/s` flag and, as necessary, parameters listed in Table 32 on page 103 as shown in the following example:

   ```
   siebsnap.exe /s
   ```

3. Review the collected information in the `siebsnap` output directory, which is created by the SDDC utility under the *SIEBSRVR_ROOT* directory.

To collect Siebel Gateway Name Server information

1. Navigate to the binary subdirectory within the Siebel Gateway Name Server root directory.
2. Run `siebsnap.exe` using the `/g` flag and, as necessary, parameters listed in Table 32 on page 103 as shown in the following example:

   ```
   siebsnap.exe /g
   ```

3. Review the collected information in the `siebsnap` output directory, which is created by the SDDC utility under the `gtwysrvr` directory.

To collect Web server and SWSE information

1. Navigate to the binary subdirectory within the Siebel *SWSE_ROOT* directory.

2 Run `siebsnap.exe` using the `/w` flag and, as necessary, parameters listed in Table 32 on page 103 as shown in the following example:

```
siebsnap.exe /w
```

3 Review the collected information in the `siebsnap` output directory, which is created by the SDDC utility under the *SWSE_ROOT* output directory.

Table 32 below provides a description of the parameters available for use with SDDC.

Table 32. SDDC Parameters under Microsoft Windows

Parameter	Description	Required?
`/g`	Append this parameter to the `siebsnap.exe` command to collect information on the Siebel Gateway Name Server.	Y
`/s`	Append this parameter to the `siebsnap.exe` command to collect information on the Siebel Server.	Y
`/w`	Append this parameter to the `siebsnap.exe` command to collect information on the Web server and SWSE.	Y
`/c` *`siebsnap.cfg`*	Include this parameter to reference a particular configuration file. Use this parameter if Siebel Technical Support provides a configuration file. See "Configuring SDDC Content Under Microsoft Windows" on page 111 for further details.	N
`/h`	Use this parameter with the `siebsnap.exe` command to list information on SDDC and its parameters.	N

NOTE: Use only one of the parameters `/g`, `/s`, and `/w` during a single SDDC execution.

Examples of Microsoft Windows Siebel Diagnostic Data Collector Commands

Some examples of Microsoft Windows Siebel Diagnostic Data Collector (SDDC) commands follow.

- `siebsnap.exe /c siebsnapw32.cfg -g`

  This command retrieves Siebel Gateway Name Server information using a configuration file named `siebsnapw32.cfg`.

- `siebsnap.exe /s`

  This command retrieves Siebel Server information.

- `siebsnap.exe -c siebsnapw32.cfg /w`

  This command retrieves Web server and SWSE information using a configuration file named `siebsnapw32.cfg`.

Capturing Siebel Environment Data Under UNIX

The Siebel Diagnostic Data Collector (SDDC) utility is manually run by the user to capture environment setup, configuration settings, and logging information for system infrastructure. Run SDDC separately for Siebel Servers, the Siebel Gateway Name Server, and the Siebel Web Server Extension (SWSE) to collect information specific to that entity.

For background information on SDDC, see "About Siebel Diagnostic Data Collector" on page 101.

See the following topic for information on running SDDC under UNIX:

- "Process of Running Siebel Diagnostic Data Collector Under UNIX" on page 104

To review information captured by SDDC, see "Reviewing Siebel Environment Data" on page 106.

Process of Running Siebel Diagnostic Data Collector Under UNIX

To run Siebel Diagnostic Data Collector (SDDC) under UNIX, perform the following tasks:

1. Prepare the UNIX environment to use SDDC. See "Preparing the UNIX Environment to Use SDDC" on page 104 for information on this task.
2. Run the Siebel Diagnostic Data Collector. See "Running Siebel Diagnostic Data Collector Under UNIX" on page 105 for information on this task.

For background information on capturing environment data with SDDC, see "Capturing Siebel Environment Data Under UNIX" on page 104.

Preparing the UNIX Environment to Use SDDC

Perform the following procedure to prepare the UNIX environment to use the Siebel Diagnostic Data Collector (SDDC). This task is a part of the "Process of Running Siebel Diagnostic Data Collector Under UNIX" on page 104.

To prepare environment to use SDDC

1. Run a database-specific script to set database environment variables.
2. Run the `siebenv.sh` or `siebenv.csh` scripts to set Siebel environment variables. For more information on these scripts, see *Siebel Installation Guide for UNIX: Servers, Mobile Web Clients, Tools*.
3. Change the permissions to execute SDDC.

Running Siebel Diagnostic Data Collector Under UNIX

Use the following commands for running Siebel Diagnostic Data Collector (SDDC) under UNIX. This task is a part of the "Process of Running Siebel Diagnostic Data Collector Under UNIX" on page 104.

To collect Siebel Server information

1. Enter the `siebsnap` command using the `-s` flag and, as necessary, parameters listed in Table 33 on page 105 as shown in the following example:

   `siebsnap -s siebel_server_name`

2. Review the collected information in the `siebsrvr_machine-name_server-name` output directory.

To collect Siebel Gateway Name Server information

1. Enter the `siebsnap` command using the `-g` flag and, as necessary, parameters listed in Table 33 on page 105 as shown in the following example:

   `siebsnap -g siebel_gateway_name`

2. Review the collected information in the *machine-name*_gateway output directory.

To collect Web server and SWSE information

1. Enter the `siebsnap` command using the `-w` flag and, as necessary, parameters listed in Table 33 on page 105 as shown in the following example:

   `siebsnap -w webserver_root`

2. Review the collected information in the *machine-name_webserver-name* output directory.

NOTE: Alternatively, use `this_server` in place of the Siebel Gateway Name Server name, Siebel Server name, or the Web server name when using SDDC under UNIX.

Table 33. SDDC Parameters Under UNIX

Parameter	Description
`-g siebel_gateway_name`	Append the parameter `-g` with the name of the Siebel Gateway Name Server to collect information on the Siebel Gateway Name Server. Alternatively, use `-g this_server`.
`-s siebel_server_name`	Append the parameter `-s` with the name of the Siebel Server to collect information on a Siebel Server. Alternatively, use `-s this_server`.
`-w webserver_root`	Append the parameter `-w` with the path of the Web server root to collect information on the SWSE and Web server. Alternatively, use `-w this_server`.

Table 33. SDDC Parameters Under UNIX

Parameter	Description
`-c siebsnap.ini`	Include this parameter to reference a particular configuration INI file. See "Configuring SDDC Content Under UNIX" on page 115 for further details.
`-help`	Use this parameter with the `siebsnap` command to list information on SDDC and its parameters.

Examples of UNIX Siebel Diagnostic Data Collector Commands

Some samples of UNIX Siebel Diagnostic Data Collector (SDDC) commands follow.

- `siebsnap -s this_server -u sadmin -p sadmin`

  This command retrieves Siebel Server information using a username and password.

- `siebsnap -g gtway1`

  This command retrieves Siebel Gateway Name Server information with a Siebel Gateway Name Server name of `gtway1`.

- `siebsnap -w this_server`

  This command retrieves Web server and SWSE information.

Reviewing Siebel Environment Data

The Siebel Diagnostic Data Collector (SDDC) utility creates output files and directories, as necessary, after each execution of the utility. Manually access these files to review the Siebel environment data or send the output files to Siebel Technical Support for review.

The output files document the environmental setup information, application configurations, and log files if specified. For further information on running SDDC:

- Under Microsoft Windows, see "Capturing Siebel Environment Data Under Microsoft Windows" on page 102.
- Under UNIX, see "Capturing Siebel Environment Data Under UNIX" on page 104.

The SDDC Microsoft Windows utility creates output in the format of a root directory with additional subdirectories and files. For details on SDDC Microsoft Windows output file information and locations, see "SDDC Output Under Microsoft Windows" on page 108.

The SDDC UNIX utility creates output in the format of compressed files. For details on SDDC UNIX output file information and locations, see "SDDC Output Under UNIX" on page 109.

SDDC uses the following naming convention for the creation of root directory and file names:

ss_{GS|SS|WS}*yyyy-mm-dd_hh_mm_ss*

Where:

ss = siebsnap

GS|SS|WS = Siebel Gateway Name Server, Siebel Server, or Web server

yyyy-mm-dd = Year, month, and day

hh_mm_ss = Hour, minute, and second based on a 24-hour clock.

For example, the directory or file name ss_SS2003-04-08_17_10_30 represents information collected for a Siebel Server on April 8th at approximately 5:00 PM, and the directory or file name ss_GS2003-04-07_14_18_58 represents information collected for the Siebel Gateway Name Server on April 7th at approximately 2:00 PM.

Common SDDC Output Files and Folders

The output from a Siebel Diagnostic Data Collector (SDDC) execution for a Siebel Server, the Siebel Gateway Name Server, and Siebel Web Server Extension (SWSE) contains common folders and files. Table 34 provides further descriptions of the information collected in these files and folders.

Table 34. Common Files and Folders

Files and Subfolders	Description
ReadMe file	Provides a snapshot of the files copied and directories created during the SDDC execution.
Siebsnap log file	Provides a detailed log of information collected during the SDDC execution. This file is only available for SDDC under Microsoft Windows.
Configuration file	Copies the configuration file used if one is specified during the SDDC execution.This file is only available for SDDC under Microsoft Windows.
siebel_info directory	Directory for Siebel environment information. This folder contains further subfolders, which contain log files and details on the Siebel environment.
system_info directory	Directory for system information. This folder contains text files containing information on hardware, network statistics, operating system, and registry keys.
db_info directory	Directory for database version information. This folder contains text files containing details on the database version.
WebserverLogs directory	Directory for Web server log information. This folder contains log files for the Web server.

SDDC Output Under Microsoft Windows

Siebel Diagnostic Data Collector (SDDC) output under Microsoft Windows consists of files stored within a directory structure created by the utility. The default directory for the SDDC output under Microsoft Windows—if a configuration file is not specified—is the `siebsnap` directory under the Siebel Server root. To configure a different SDDC output location, update the parameter `OutputDirectory` in the SDDC configuration file. See "Configuring SDDC Content Under Microsoft Windows" on page 111 for further details on configuring this and other parameters in the SDDC configuration file.

SDDC creates additional folders within the `siebsnap` directory (or the configured output directory) based on whether SDDC collects data for a Siebel Server, the Siebel Gateway Name Server, or the Web server and SWSE. See "Reviewing Siebel Environment Data" on page 106 for details on the time-sensitive directory naming convention for these root folders.

For locations of the output contents produced for these entities, see:

- "Siebel Server SDDC Output Under Microsoft Windows" on page 108
- "Siebel Gateway Name Server SDDC Output Under Microsoft Windows" on page 109
- "Web Server SDDC Output Under Microsoft Windows" on page 109

See "Common SDDC Output Files and Folders" on page 107 for descriptions of the files and directory content of the SDDC output, some of which are common between each entity.

Siebel Server SDDC Output Under Microsoft Windows

With a Siebel Server Siebel Diagnostic Data Collector (SDDC) execution, the utility creates the root Siebel Server output folder, in the format `ss_SSyyyy-mm-dd_hh_mm_ss`, within the `siebsnap` directory (or configured output directory). Within this folder, the utility creates a folder of the format, `siebesrvr_`*`server_name`*, where *`server_name`* represents the name of the Siebel Server profiled by the utility. The directory structure and contents appear as follows:

```
ss_SSyyyy-mm-dd_hh_mm_ss\

   siebesrvr_enterprise-name_server-name\

      Readme file

      Siebsnap log file

      Configuration file

      system_info\

      siebel_info\

      db_info\
```

Siebel Gateway Name Server SDDC Output Under Microsoft Windows

With a Siebel Gateway Name Server Siebel Diagnostic Data Collector (SDDC) execution, the utility creates the root Siebel Gateway Name Server output folder in the format ss_GSyyyy-mm-dd_hh_mm_ss within the siebsnap directory (or configured output directory). Within this folder, the utility creates a folder named gateway, which collects information on the Siebel Gateway Name Server. The directory structure and contents appear as follows:

```
ss_GSyyyy-mm-dd_hh_mm_ss\

    gateway\

        Readme file

        Siebsnap log file

        Configuration file

        system_info\

        siebel_info\
```

Web Server SDDC Output Under Microsoft Windows

With a Web server Siebel Diagnostic Data Collector (SDDC) execution, the utility creates the root Web server output folder in the format ss_WSyyyy-mm-dd_hh_mm_ss within the siebsnap directory (or configured output directory). Within this folder, the utility creates a folder named webserver, which collects information on the Web server and SWSE. The directory structure and contents appear as follows:

```
ss_WSyyyy-mm-dd_hh_mm_ss\

    webserver\

        Readme file

        Siebsnap log file

        Configuration file

        system_info\

        siebel_info\

        WebserverLogs\
```

SDDC Output Under UNIX

Siebel Diagnostic Data Collector (SDDC) output under UNIX consists of files compressed within a directory structure created by the utility. The default directory for the compressed files is the directory from which SDDC is run. To configure a different SDDC output location, use the parameter -o during the SDDC execution. See "Process of Running Siebel Diagnostic Data Collector Under UNIX" on page 104 for further details on running the SDDC utility under UNIX.

The compressed output files have the extension .tar.z appended to the file name created by SDDC using the SDDC output naming convention. See "Reviewing Siebel Environment Data" on page 106 for a descriptions of this naming convention. The extensions .logarchive.tar.z, asserts.tar.z, and logarchive_asserts.tar.z also apply based on the log parameters specified during execution.

See "Siebel Server SDDC Collector Output Under UNIX" on page 110, "Siebel Server SDDC Collector Output Under UNIX" on page 110, and "Web Server SDDC Output Under UNIX" on page 110 for descriptions of the output for each entity.

See "Common SDDC Output Files and Folders" on page 107 for descriptions of the files and directory content of the SDDC output, some of which are common between each entity.

Siebel Server SDDC Collector Output Under UNIX

With a Siebel Server Siebel Diagnostic Data Collector (SDDC) execution, the utility creates the compressed file in the format ss_SS_yyyy-mm-dd_hh_mm_ss.tar.z in the default output directory (or configured output directory). The information collected by the SDDC utility varies based on the parameter settings in the siebsnap.ini file. See "Configuring SDDC Content Under Microsoft Windows" on page 111 for information on configuring the siebsnap.ini file.

By default the Siebel SErver SDDC execution collects system_info, database_info, and Siebel_info. See "Common SDDC Output Files and Folders" on page 107 for descriptions of the files and directory content.

Siebel Gateway Name Server SDDC Output Under UNIX

With a Siebel Gateway Name Server Siebel Diagnostic Data Collector (SDDC) execution, the utility creates the compressed file in the format ss_GS_yyyy-mm-dd_hh_mm_ss.tar.z in the default output directory (or configured output directory). The information collected by the SDDC utility varies based on the parameter settings in the siebsnap.ini file. See "Configuring SDDC Content Under Microsoft Windows" on page 111 for information on configuring the siebsnap.ini file.

By default a Siebel Gateway Name Server SDDC execution collects system_info and Siebel_info. See "Common SDDC Output Files and Folders" on page 107 for descriptions of the files and directory content.

Web Server SDDC Output Under UNIX

With a Siebel Web server Siebel Diagnostic Data Collector (SDDC) execution, the utility creates the compressed file in the format ss_WS_yyyy-mm-dd_hh_mm_ss.tar.z in the default output directory (or configured output directory). The information collected by the SDDC utility varies based on the parameter settings in the siebsnap.ini file. See "Configuring SDDC Content Under Microsoft Windows" on page 111 for information on configuring the siebsnap.ini file.

By default, a Web server SDDC execution collects system_info, Siebel_info, and Webserver_info. See "Common SDDC Output Files and Folders" on page 107 for descriptions of the files and directory content.

Configuring SDDC Content Under Microsoft Windows

The Microsoft Windows Siebel Diagnostic Data Collector (SDDC) can be configured to modify or enhance the amount of information collected during a SDDC execution. A Microsoft Windows SDDC configuration file is required by SDDC to modify any configurations to the output. The configuration file is referenced during the SDDC execution. By default, a configuration file is not included with the SDDC utility. It is recommended that you contact Siebel Technical Support before using configuration files. Siebel Technical Support provides configuration files based on the specific information required.

For information on SDDC configurations under UNIX, see "Configuring SDDC Content Under UNIX" on page 115.

The SDDC configuration file is divided into sections that can be used to configure the type of information and log files collected by the utility. Edit the configuration file with a text editor. See Table 35 for SDDC configuration file parameters.

Table 35. SDDC Configuration File and Parameters

Section	Parameter	Specifies
[Main]	OutputDirectory	Specifies the directory location for the creation of the SDDC directory and output files.
	CollectLog	Specifies whether log files are collected.
	CollectLogArchive	Specifies whether log archive files are collected.
	CollectCrash	Specifies whether crash files are collected.
	CollectStderrFiles	Specifies whether standard error files are collected.
	CollectDump	Specifies whether dump files are collected.
	CollectAssert	Specifies whether assert and prefer files are collected.
	SiebelBinDir	Specifies the directory location of the *SIEBSRVR_ROOT* binary folder.
[Registry]	Key01	Specifies a registry key for collection.
	Key02	Specifies a registry key for collection.
	Key03	Specifies a registry key for collection.
[CrashFiles]	StartDate	Specifies the start date for a range of crash files to collect.
	EndDate	Specifies the end date for a range of crash files to collect.
	MatchingFiles	Specifies the crash file extensions to collect. You can specify the collection of Siebel Flight Data Recorder (FDR) files in this section by identifying the extension FDR (for example, *.fdr).

Table 35. SDDC Configuration File and Parameters

Section	Parameter	Specifies
[StderrFiles]	StartDate	Specifies the start date for a range of standard error files to collect.
	EndDate	Specifies the end date for a range of standard error files to collect.
	MatchingFiles	Specifies the standard error file extensions to collect.
[ProcessDump]	StartDate	Specifies the start date for a range of dump files to collect.
	EndDate	Specifies the end date for a range of dump files to collect.
	MatchingFiles	Specifies the dump file extensions to collect.
[AssertFiles]	StartDate	Specifies the start date for a range of assert files to collect.
	EndDate	Specifies the end date for a range of assert files to collect.
	MatchingFiles	Specifies the assert file extensions to collect.
[LogFiles]	StartDate	Specifies the start date for a range of log files to collect.
	EndDate	Specifies the end date for a range of log files to collect.
	MatchingFiles	Specifies the log file extensions to collect. You can specify the collection of Siebel Application Response Measurement (Siebel ARM) files in this section by identifying the file extension SARM (for example, *.sarm).
[LogArchive]	NumArchives	Specifies that SDDC collects log archive files from the NumArchives directory.
	MatchingArchiveDir	Specifies the archive directories for collection.
[SiebelServer]	LogDir	Specifies the Siebel Server log directory in the case of not being able to connect to the Siebel Gateway Name Server.
	LogArchiveDir	Specifies the Siebel Server log archive directory in the case of not being able to connect to the Siebel Gateway Name Server.
[GatewayServer]	LogDir	Specifies the Siebel Gateway Name Server in the case the directory name is different than the default.
[WebServer]	SiebelRoot	Specifies the Siebel Server root directory in the case the directory name is different than the default.

About SDDC Parameter Configuration

The parameters StartDate, EndDate, and MatchingFiles, which appear in several Siebel Diagnostic Data Collector (SDDC) configuration file sections, have common configuration details. See Table 36 for these details.

Table 36. Common Parameter Configuration Details

Common Parameters	Configuration Details
StartDate, EndDate	Set these parameters to specify collection of data between the two dates. If StartDate and EndDate are set, do not set the parameter MaxNumFiles. Configure the dates in the following format: dd-Month_Acronym-yyyy where: dd = Integer of the date ranging from 01 to 31. Month_Acronym = A three-letter month acronym as follows: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec. yyyy = Integer of the year. Another valid configuration selection for the StartDate and EndDate parameters is NONE. If NONE is entered for StartDate and a valid date is entered for EndDate, files prior to the end date are collected. If NONE is entered for EndDate and a valid date is entered forStartDate, files from the start date to the current date are collected.
MatchingFiles	Set this parameter to collect multiple file formats using a comma-delimited list. Wildcard characters are also applicable. For example, to collect files containing siebmtsh in the filename with the extension .dmp and files of the type siebmtshmw5409.dmp, enter: MatchingFiles=siebmtsh*.dmp,siebmtshmw5409.dmp

Example of Microsoft Windows SDDC Configuration File

The following listing is an example of a Microsoft Windows Siebel Diagnostic Data Collector (SDDC) configuration file. See "Configuring SDDC Content Under Microsoft Windows" on page 111 for parameter descriptions and configuration details.

```
[Main]

OutputDirectory=D:\s\752-15051\SWEApp\siebsnap

CollectLog=TRUE

CollectLogArchive=TRUE

CollectCrash=TRUE
```

```
CollectStderrFiles=TRUE

CollectDump=TRUE

CollectAssert=TRUE

SiebelBinDir = D:\s\752-15051\SWEApp\bin


[Registry]

Key01 = HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Tag

Key02 = HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Internet Explorer\Version

Key02 =
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\MaxHashTableSize

Key03 =
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\MaxFreeTcbs

Key04 =
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\MaxUserPort


[CrashFiles]

StartDate=05-Jan-2002

EndDate=10-Feb-2004

MatchingFiles = crash*.txt


[StderrFiles]

StartDate=05-Jan-2003

EndDate=10-Jun-2004

MatchingFiles = stderrout_*.txt


[ProcessDump]

StartDate=05-Jan-2002

EndDate=10-Dec-2004

MatchingFiles = *.dmp


[AssertFiles]
```

```
StartDate=05-Dec-2002

EndDate=10-Dec-2003

MatchingFiles=siebel_prefer*,siebel_assert*


[LogFiles]

StartDate=05-Dec-2002

EndDate=10-Dec-2003

MatchingFiles=*.log


[LogArchiveFiles]

StartDate=05-Dec-2002

EndDate=24-Feb-2003

MatchingFiles=*.log


[SiebelServer]

LogDir=M:\siebel\log

LogArchiveDir=M:\siebel\logarchive


[GatewayServer]

LogDir=M:\siebel\log


[WebServer]

SiebelRoot=M:\siebel
```

Configuring SDDC Content Under UNIX

The UNIX Siebel Diagnostic Data Collector (SDDC) can be configured to enhance the amount of information collected during a SDDC execution. Modify the SDDC INI file to record any configurations to the SDDC UNIX output.

The SDDC INI file, `siebsnap.ini`, resides in the binary (bin) subdirectory of the Siebel Server root directory. To modify this file, open with a UNIX text editor.

For information on SDDC configurations under Microsoft Windows, see "Configuring SDDC Content Under Microsoft Windows" on page 111.

To configure SDDC to collect enhanced diagnostic information

1. With a text editor, open the `siebsnap.ini` file located in the binary (bin) subdirectory of the Siebel Server root directory.
2. Set specific parameters in the `siebsnap.ini` file based on how much information you require.

   See Table 37 for details and descriptions of SDDC INI file parameters.
3. Save the `siebsnap.ini` file.

Table 37. UNIX Configuration Parameters for Siebsnap.ini file

INI File Parameter	Description	Default
`OutputDirectory`	Set this parameter to send the SDDC output to a different file location than the default.	The directory from which SDDC runs.
`CollectLog`	Set this parameter to TRUE to collect log file information. For further information on log files, see Chapter 3, "Configuring Siebel Server and Component Logging."	=TRUE
`CollectLogArchive`	Set this parameter to TRUE to collect log archive information.	=TRUE
`CollectCrash`	Set this parameter to TRUE to collect crash file information.	=TRUE
`CollectDump`	Set this parameter to TRUE to collect dump file information.	=TRUE
`CollectAssert`	Set this parameter to TRUE to collect assert file information. For further information on assert files, see "About Other Siebel Server Log Files" on page 72.	=TRUE
`CollectFDR`	Set this parameter to TRUE to collect Flight Data Recorder (FDR) file information. For further information on these log files, see "About Flight Data Recorder (FDR) Log Files" on page 72.	=TRUE
`CollectSARM`	Set this parameter to TRUE to collect Siebel Application Response Measurement (Siebel ARM) information. For further information on these Siebel ARM files, see *Performance Tuning Guide*.	=FALSE
`CollectQuickFix`	Set this parameter to TRUE to collect the following quick fix files if present: `upgrade.txt`, `obsolete.txt`, `incompatible.txt`, and `log.txt`.	=TRUE

Table 37. UNIX Configuration Parameters for Siebsnap.ini file

INI File Parameter	Description	Default
FileRetention	Set this parameter to the number of .tar.z files you want to retain. It is useful to retain snapshots of the system in regular intervals and compare them. Once SDDC reaches the value set by the FileRetention parameter, it overwrites the oldest file.	=2
StartDate, EndDate	Set these parameters to allow the SDDC utility to collect files between a range of dates. Configure the date values in the following format: dd-Month_Acronym-yy where: dd = Integer of the date ranging from 01 to 31. Month_Acronym = A three-letter month acronym as follows: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec. yy = Integer of the last two digits of the year. If no value is set for EndDate, then all files to the current date are collected.	EndDate =*Current Date*
StartTime, EndTime	Set these parameters in conjunction with the StartDate and EndDate parameters to further refine the range of files collected by the SDDC utility. Configure the time values in the 24 hour clock format. If no values are set, the default start time is 00:00 and the default endtime is 23:59.	StartTime =00:00, EndTime =23:59

Example of UNIX SDDC Configuration INI File

The following listing is an example of the contents of a UNIX Siebel Diagnostic Data Collector (SDDC) configuration INI file. See "Configuring SDDC Content Under UNIX" on page 115 for parameter descriptions and configuration details.

```
OutputDirectory=

CollectLog=TRUE

CollectLogArchive=TRUE

CollectCrash=TRUE

CollectDump=TRUE

CollectAssert=TRUE
```

```
CollectFDR=TRUE

CollectSARM=FALSE

CollectQuickFix=TRUE

FileRetention=2


StartDate=01-Jan-03

StartTime=00:00


EndDate=20-Jan-03

EndTime=12:59
```

A List of Statistics and State Values

This appendix contains information and listings of Siebel application statistics and state values. See the following topics for further information on statistics and state values:

- "About Siebel Application Statistics" on page 19
- "About Siebel Application State Values" on page 19

List of Siebel Server Infrastructure Statistics

Table 38 lists the statistics defined for the Siebel Server infrastructure. For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

Table 38. List of Siebel Server Infrastructure Statistics

Statistic Name	Alias	Description
Avg. Transfer Time	SCBAvgTransferTime	Average time for transferring connection to component
Component Maxed Out Error	SCBCompMaxeOut	Number of times connection transfer failed because component is busy
Component Unavailable Error	SCBCompOffline	Failed to transfer connection due to Component Unavailable
Successful Connections	SCBFwdConn	Connection successfully forwarded
Total Connections	SCBTotalConn	Total number of connection attempts
Total Transfer Time	SCBTotalTransferTime	Total time spent transferring connections to component
FDR Buffer Wraps	FDRWraps	Number of buffer wraps
FDR Buffer Life in seconds	FDRBufferLife	Seconds since buffer was created
FDR Avg time between aging	FDRAgingRate	Avg Seconds per buffer wrap
CPU Time	CPUTime	Total CPU time for component tasks (in seconds)
Elapsed Time	ElapsedTime	Total elapsed (running) time for component tasks (in seconds)
Maximum Peak Memory Usage	MaxPeakMemory	Peak Mem used by task. Rolls up differently from MinPeakMemory

Table 38. List of Siebel Server Infrastructure Statistics

Statistic Name	Alias	Description
Minimum Peak Memory Usage	MinPeakMemory	Peak Mem used by task. Rolls up differently than MaxPeakMemory
Sleep Time	SleepTime	Total amount of sleep time for component tasks (in seconds)
Number of Sleeps	Sleeps	Total number of sleeps for component tasks
Total Tasks	TotalTasks	Total number of tasks completed for server components
Tasks Exceeding Configured Capacity	TskXcdCfgCpt	Number of tasks stated that exceeded configured capacity
Num of DBConn Retries	NumDBConnRtrs	Number of Retries due to DB Connection Loss
Num of DLRbk Retries	NumDLRbkRtrs	Number of Retries due to Deadlock Rollbacks
Num of Exhausted Retries	NumExhstRtrs	Number of Times All Retries are Exhausted

List of Application Object Manager Statistics

Table 39 describes the statistics specific to the Application Object Manager (AOM). For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

In Table 39, *Application Object Manager session* refers to a session between a client and an AOM. A session begins when the client connects to the AOM, and ends when the connection is terminated. A session starts a task on the AOM. If the AOM's Multithreaded parameter is set to TRUE, tasks are implemented as threads.

NOTE: Disregard the following statistics, which are not AOM-specific but appear in the component statistics view: Avg SQL Execute Time, Number of SQL Executes, Number of SQL Fetches, and Number of SQL Parses.

Table 39. List of AOM Statistics

Statistics Name	Alias	Description
Average Connect Time	AvgConnTime	Average connect time for Object Manager sessions
Average Reply Size	AvgRepSize	Average size of reply messages (in bytes)
Average Request Size	AvgReqSize	Average size of request messages (in bytes)

Table 39. List of AOM Statistics

Statistics Name	Alias	Description
Average Requests Per Session	AvgReqs	Average number of requests per Object Manager session
Average Response Time	AvgRespTime	Average Object Manager response time
Average Think Time	AvgThinkTime	Average end-user think time between requests
Total Database Response Time	DBRespTime	Total Database Response/Processing Time (milliseconds)
Object Manager Errors	Errors	Number of errors encountered during Object Manager session
Reply Messages	RepMsgs	Number of reply messages sent by the server
Total Reply Size	RepSize	Total size (in bytes) of reply messages
Request Messages	ReqMsgs	Number of request message received by the server
Total Request Size	ReqSize	Total size (in bytes) of request messages
Total Response Time	RespTime	Total Object Manager response time (in seconds)
Total Think Time	ThinkTime	Total end-user think time (in seconds)

List of Database Infrastructure Statistics

Table 40 describes the statistics specific to the database infrastructure. For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

Table 40. List of Database Infrastructure Statistics

Statistic Name	Alias	Description
Avg SQL Execute Time	AvgSQLExecTime	Average time for SQL execute operations (in seconds)
Avg SQL Fetch Time	AvgSQLFetchTime	Average time for SQL fetch operations (in seconds)
Avg SQL Parse Time	AvgSQLParseTime	Average time for SQL parse operations (in seconds)
SQL Execute Time	SQLExecTime	Total elapsed time for SQL execute operations (in seconds)
Number of SQL Executes	SQLExecs	Total number of SQL execute operations

Table 40. List of Database Infrastructure Statistics

Statistic Name	Alias	Description
SQL Fetch Time	SQLFetchTime	Total elapsed time for SQL fetch operations (in seconds)
Number of SQL Fetches	SQLFetches	Total number of SQL fetch operations
SQL Parse Time	SQLParseTime	Total elapsed time for SQL parse operations (in seconds)
Number of SQL Parses	SQLParses	Total number of SQL parse operations

List of Siebel eAI Statistics

Table 41 describes the statistics specific to Siebel eAI. For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

Table 41. List of Siebel eAI Statistics

Statistic Name	Alias	Description
Siebel Adapter Total Query Calls	SiebAdptTotQueryCalls	Total Number of Query calls made to Siebel Adapter
Siebel Adapter Total Query Size	SiebAdptTotQuerySize	Total cumulative size of output property sets (in KB) for all queries
Siebel Adapter Total Sync/Upsert Calls	SiebAdptTotSyncCalls	Total Number of non-query (synchronize, upsert, update or insert) calls made to Siebel Adapter
Siebel Adapter Total Sync Size	SiebAdptTotSyncSize	Total cumulative size of input property sets (in KB) for all non-query calls (synchronize, upsert, update or insert)
EAI Receiver Total Messages Processed	EAIRcvrMsgsProcessed	Total number of messages processed by the EAI Receiver
Total XML Generator Calls	XMLGenTotCalls	Total number of XML Generator Calls
Total XML Converter Size of Input Buffer	XMLParseTotSize	Total Cumulative Size of Input Buffer (in KB)
Total XML Converter Size of Output Buffer	XMLGenTotSize	Total Cumulative Size of Output Buffer (in KB)
Total XML Parser Calls	XMLParseTotCalls	Total number of XML Parser Calls

List of Siebel Remote Statistics

Table 42 describes the statistics specific to Siebel Remote. For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

Table 42. List of Siebel Remote Statistics

Statistic Name	Alias	Statistics Description
Avg node extracted time	AvgTime	Average time per node extracted (in seconds)
Total nodes extracted	TotNodes	Total number of nodes extracted
Total time processing nodes	TotTime	Total time consumed to extract the lastest node (in seconds)
Avg node processing time	AvgTime	Average time per node processed (in milliseconds)
Total nodes processed	TotNodes	Total number of nodes processed
Total time processing nodes	TotTime	Total time consumed to process the current node in the current iteration (in milliseconds)
Monitor Period (in Seconds)	MonitorPeriod	Advanced: Time duration for which all monitor data are collected and calculated (in seconds)
Monitor Period (in seconds)	MonitorPeriod	Advanced: Time duration for which all monitor data are collected and calculated (in seconds)
Current Operation Processing Rate	OperProcessRate	Advanced: Current operations processed per second
Current Position-Rule Operation Processing Rate	PostnOperProcessRate	Advanced: Current Position-Rule operations processed per second
Current Related Visibility-Event Operation Processing Rate	RelVisOperProcessRate	Advanced: Current Related Visibility-Event operations processed per second.
Current Visibility-Event Operation Processing Rate	VisOperProcessRate	Advanced: Current Visibility-Event operations processed per second
Total Operations Processed	TotOper	Advanced: Total operations processed in the monitor period
Total Vis-Event Operations Processed	TotVisOper	Advanced: Total Vis-Event operations processed in the monitor period

Table 42. List of Siebel Remote Statistics

Statistic Name	Alias	Statistics Description
Total RelVisEvent Operations Processed	TotRelVisOper	Advanced: Total related Vis-Event operations processed in the monitor period
Total Postn Related Operations Processed	TotPostnOper	Advanced: Total position rule related operations processed in the monitor period
Average Time for Processing a Node	AvgTimePerNode	Average time for processing one node (in milliseconds)
Total nodes processed	TotNodes	Total number of nodes processed
Total time processing nodes	TotTime	Total time consumed to process the current node in the current iteration (in milliseconds)
Average Number of Rows Downloaded	AvgDownloadRows	Advanced: Average number of downloaded records routed in the monitor period
Total Number of Removed Records	TotRecRemove	Advanced: Total number of removed records routed during the last monitor period.
Average Number of Removed Records	AvgRemoveRows	Advanced: Average number of removed records routed in the monitor period
Total Time for Loading Visdata	TotVisdataLoadTime	Advanced: Total time for loading Visdata in the monitor period (in millisecond).
Average Time for Loading Visdata	AvgVisdataLoadTime	Advanced: Average time for loading Visdata in the monitor period
Total Time for Visdata Load SQL	TotVisdataLoadSqlTime	Advanced: Total time for SQL execution for loading Visdata in the monitor period
Average Time for Visdata Load SQL	AvgVisdataLoadSqlTime	Advanced: Average time for SQL execution for loading Visdata in the monitor period
Total Visibility Check SQL Statements Executed	TotalVisCheckSQLExe	Advanced: Total number of Visibility Check SQLs executed for loading Visibility Data database during the last monitor period
Average Time for Waiting Visdata	AvgVisdataWaitTime	Advanced: Average time for waiting Visdata in the monitor period
Total Time for Waiting Visdata	TotVisdataWaitTime	Advanced: Total time for waiting Visdata in the monitor period (in millisecond).
Average Number of VisCheck Load SQL	AvgVisCheckLoadSql	Advanced: Average number of VisCheck SQLs executed for loading Visdata in the monitor period
Total Records Fetched by Visibility Check	TotRecFetchVisCheck	Advanced: Total number of records fetched by Visibility Checks for loading Visibility Data database during the last monitor period

Table 42. List of Siebel Remote Statistics

Statistic Name	Alias	Statistics Description
Average Number of VisCheck Load Rows	AvgVisCheckLoadRow	Advanced: Average number of VisCheck SQL records fetched for loading Visdata in the monitor period
Total Number of Visdata Loading	TotVisdataLoads	Advanced: Total numbers of Visdata loading in the monitor period
Total Number of VisData VisChecks	TotvisdataHit	Advanced: Total number of VisChecks that used VisData in the monitor period
Total Number of Visdata Access	TotVisdataAcc	Advanced: Total numbers of Visdata access in the monitor period
Number of Visibility Data Garbage Collection	NumVisDataGC	Advanced: Total numbers of garbage-collection performed on the Visibility Data database during the last monitor period.
Total Number of Visdata FSGC	TotVisdataFSGC	Advanced: Total Number of Visdata Full Scan Garbage Collection in the monitor period
Total Number of Visdata RKGC	TotVisdataRKGC	Advanced: Total Number of Visdata Random Kill Garbage Collection in the monitor period
Hit Ratio of Visibility Data Cache	HitRatioVisData	Advanced: Hit ratio of the Visibility Data cache during the last monitor period
Reconcile-Operations Routed per Period	ReconcileOperRoute	Advanced: Total number of reconcile-operations routed in the last monitor period
Download-Operations Routed per Period	DownloadOperRoute	Advanced: Total number of Download-operations routed during the last monitor period
Remove-Operations Routed per Period	RemoveOperRoute	Advanced: Total number of Remove-operations routed during the last monitor period
Number of Nodes Routed per Second	NumNodeRoute	Advanced: Number of nodes routed per second during the last monitor period.
Total Number of Opers Processed	TotOpers	Advanced: Total number of operations routed in the monitor period
Monitor Period (in Seconds)	MonitorPeriod	Advanced: Time duration for which all monitor data are collected and calculated (in seconds)
Total Number of Nodes Processed	TotNumNode	Advanced: Total number of nodes routed in the monitor period
Operations Routed per Second	OperRoute	Advanced: Number of operations routed per second during the last monitor period

Table 42. List of Siebel Remote Statistics

Statistic Name	Alias	Statistics Description
Total Time for TS I/O	TotTSTime	Advanced: Total time for Tall/Skinny file I/O in the monitor period
Total Number of TS I/O	TotTSAccess	Advanced: Total number of Tall/Skinny file I/O in the monitor period
Average I/O Time for Tall-Skinny File	AvgIOTSFile	Advanced: Average I/O time for Tall-Skinny file during the monitor period (in millisecond).
Total Time for VisData I/O	TotVisdataTime	Advanced: Total time for visdata I/O in the monitor period (in millisecond).
Total Number of VisData I/O	TotVisdataAccess	Advanced: Total number of Visdata I/O in the monitor period
Average I/O Time for Visibility Data File	AvgIOVisDataFile	Advanced: Average I/O time for Visibility Data file during the monitor period (in millisecond).
Total Time for DX File I/O	TotDXFileTime	Advanced: Total time for DX File I/O in the monitor period
Total Number of DX File I/O	TotDXFileAccess	Advanced: Total number of DX File I/O in the monitor period
Average I/O Time for DX File	AvgIODXFile	Advanced: Average I/O time for DX file during the last monitor period (in millisecond).
Total Number of SQLs	TotNumSQLs	Advanced: Total number of SQLs executed in the monitor period
Average Number of SQLs	AvgNumSqls	Advanced: Average number of SQLs executed per operation routed in the monitor period
Total Time for Visibility Check	TotTimeVisCheck	Advanced: Total time spent for Visibility Check during the last monitor period (in millisecond).
Average Time for Vis-Check	AvgVisCheckTime	Advanced: Average time for Vis-Check per operation routed in the monitor period
Total Time for Reconcile	TotReconcileTime	Advanced: Total time needed for reconcile in the monitor period
Average Time for Reconcile	AvgReconcileTime	Advanced: Average time needed for reconcile in the monitor period
Total Time for Performing Related Visibility Check	TotTimeRelVisCheck	Advanced: Total time spent for performing Related Visibility-Check during the last monitor period (in millisecond).

Table 42. List of Siebel Remote Statistics

Statistic Name	Alias	Statistics Description
Average Time for Related Vis-Check	AvgRelVisCheckTime	Advanced: Average time needed for Related Vis-Check in the monitor period
Total Time for Download	TotTimeDownload	Advanced: Total time spent on downloading records the last monitor period (in millisecond).
Average Time for Download	AvgDownloadTime	Advanced: Average time for downloading records in the monitor period
Total Time for Reconcile VisCheck	TotRecVisCheckTime	Advanced: Total time needed for reconcile VisCheck in the monitor period
Average Time for Recocile Vis-Check	AvgRecVisCheckTime	Advanced: Average time needed for reconcile vis-check in the monitor period
Total Number of Records Downloaded	TotRecDownload	Advanced: Total number of downloaded records routed during the last monitor period.

List of Communication Server Statistics

Table 43 describes the statistics specific to Communication Server. For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

Table 43. List of Communication Server Statistics

Statistic Name	Alias	Description
Events Processed	EventsProcessed	Total number of events processed
Events Processed Rate	EventsProcessedRate	Rate of Processing the events

List of Assignment Manager Statistics

Table 44 describes the statistics specific to Assignment Manager. For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

Table 44. List of Assignment Manager Statistics

Statistic Name	Alias	Description
Number of object rows assigned	Number of rows assigned	This statistic represents the cumulative number of records assigned by this component since the server was started.

List of Workflow Manager Statistics

Table 45 describes the statistics specific to Workflow Manager. For background information on Siebel application statistics, see "About Siebel Application Statistics" on page 19.

Table 45. List of Workflow Manager Statistics

Statistic Name	Alias	Description
Number Requests	NumRequests	Total Number of requests processed
Policy Violations	Violations	Total Number of policy violations

List of Siebel Server Infrastructure State Values

Table 46 describes the state values specific to the Siebel Server infrastructure. For background information on Siebel application state values, see "About Siebel Application State Values" on page 19.

Table 46. List of Siebel Server Infrastructure State Values

State Value Name	Alias	Level	Description
Number of notification messages processed	NumNotifyMsgsProcessed	Component	Number of notification messages processed
Number of notification messages received	NumNotifyMsg	Component	Number of notification messages received over the pipe
Number of successful notification handler invocations	NumSuccessHndlrNotifications	Component	Number of successful notification handler invocations
Number of failed notification handler invocations	NumFailedHndlrNotifications	Component	Number of failed notification handler invocations
Component Disable Time	CompDisableTime	Component	Timestamp of when the component was disabled
Component Enable Time	CompEnableTime	Component	Timestamp of when the component was most recently enabled
Component Start Time	CompStartTime	Component	Timestamp of when the component was started
Component Status	CompStatus	Component	Current status of the server component
Component Stop Time	CompStopTime	Component	Timestamp of when the component was shutdown

Table 46. List of Siebel Server Infrastructure State Values

State Value Name	Alias	Level	Description
Component Tasks	CompTasks	Component	Current running tasks for the server component
Task Idle	TaskIdle	Task	TRUE, if task is idle
Task Label	TaskLabel	Task	Identifying label for this task
Task Memory Used	TaskMemory	Task	Current amount of memory used by task
Task Pause Time	TaskPauseTime	Task	Timestamp of when the task was paused
Task Start Time	TaskStartTime	Task	Timestamp of when the task was started
Task Ping Time	TaskPingTime	Task	Timestamp of when the task was last known to be active
Task Resume Time	TaskResumeTime	Task	Timestamp of when the task was most recently resumed
Task Schedule Time	TaskSchedTime	Task	Timestamp of when the task was scheduled
Task Status	TaskStatus	Task	Current status of the task
Task Stop Time	TaskStopTime	Task	Timestamp of when the task was shutdown
User Name	User	Task	Database user name for the task
Disk Full State	DiskFullState	Component	This state value will get updated when we reach the disk full state during logging
SCB Batch Execution Time	SCBBatchTime	Component	Num of seconds to execute a batch CDAction commands
SCB Deregistration time	SCBDeregTime	Component	Time of last deregistration
Max. Transfer Time	SCBMaxTransferTime	Task	Maximum time for transferring connection to component
Min. Transfer Time	SCBMinTransferTime	Task	Minimum time for transferring connection to component
Server Non-Essential Tasks	NonEssientialTasks	Server	Total Non-Essential running tasks for the server
Server Disable Time	ServerDisableTime	Server	Timestamp of when the Siebel Server was disabled
Server Enable Time	ServerEnableTime	Server	Timestamp of when the Siebel Server was most recently enabled
Server Start Time	ServerStartTime	Server	Timestamp of when the Siebel Server was started
Server Status	ServerStatus	Server	Current status of the Siebel Server

Table 46. List of Siebel Server Infrastructure State Values

State Value Name	Alias	Level	Description
Server Stop Time	ServerStopTime	Server	Timestamp of when the Siebel Server was shutdown
Server Cipher Strength	SrvrCipherStrength	Server	Server Encryption key length in bits
Server Tasks	SrvrTasks	Server	Total running tasks for the server
Communication Cipher Strength	ComCipherStrength	Component	Communication Encryption key length in bits

List of Application Object Manager State Values

Table 47 describes the state values specific to the Application Object Manager (AOM). For background information on Siebel application state values, see "About Siebel Application State Values" on page 19.

Table 47. List of Application Object Manager State Values

State Value Name	Alias	Level	Description
Maximum Reply Size	MaxRepSize	Component	Maximum reply message size
Maximum Request Size	MaxReqSize	Component	Maximum request message size
Maximum Response Time	MaxRespTime	Component	Maximum response time for any Object Manager operation
Applet Name	ObjMgrApplet	Task	Current Applet Name
Business Component	ObjMgrBusComp	Task	Current Business Component
Business Service	ObjMgrBusSvc	Task	Current Business Service
View Name	ObjMgrView	Task	Current View Name
Scripting State	ScriptingState	Task	Current VB/eScript Scripting State
Database Login Id	DbLogin	Task	Database Login ID for the current user

List of Siebel eAI State Values

Table 48 describes the state values specific to Siebel eAI at the task level. For background information on Siebel application state values, see "About Siebel Application State Values" on page 19.

Table 48. List of Siebel eAI State Values

State Value Name	Alias	Description
Number of IDOC messages failed to dispatch	NumIdocMsgsDispatchFail	Total number of IDOC messages failed to dispatch
Number of IDOC messages successfully dispatched	NumIdocMsgsDispatchSucc	Total number of IDOC messages successfully dispatched
Number of IDOC messages received	NumIdocMsgsReceived	Total number of IDOC messages received
Number of IDOC messages sent	NumIdocMsgsSent	Total number of IDOC messages sent
Number of IDOCs failed to dispatch	NumIdocsDispatchFail	Total number of IDOCs failed to dispatch
Number of IDOCs successfully dispatched	NumIdocsDispatchSucc	Total number of IDOCs successfully dispatched
Number of IDOCs ignored	NumIdocsIgnored	Total number of IDOCs ignored
Number of IDOCs read	NumIdocsRead	Total number of IDOCs read
Number of IDOCs received	NumIdocsReceived	Total number of IDOCs received
Number of IDOCs sent	NumIdocsSent	Total number of IDOCs sent

List of Siebel Remote State Values

Table 49 describes the state values specific to Siebel Remote at the task level. For background information on Siebel application state values, see "About Siebel Application State Values" on page 19.

Table 49. List of Siebel Remote State Values

State Value Name	Alias	Description
Current node	CurrNode	Current node being extracted
Current node start time	CurrNodeStart	Start time when current node is extracted
Max time	MaxTime	Maximum time consumed to extract a node (in seconds)
Min time	MinTime	Minimum time consumed to extract a node (in seconds)
Current file num	CurrFileNum	Current file number to be merged
Current node	CurrNode	Current node being merged
First file num	FirstFileNum	First file number to be merged
Last file num	LastFileNum	Last file number to be merged
Max time	Max Time	Maximum process time for a node (in milliseconds)
Min time	MinTime	Minimum process time for a node (in milliseconds)
Node iteration	NodeIter	The iteration number in which the current node is processed
Node start time	NodeStartime	Start time when current node is processed
Time for Txn to be Merged	TimeTxnMerge	Advanced: Elapsed time for a transaction to be merged in the last monitored period (in seconds)
Monitor Period (in Seconds)	MonitorPeriod	The period of time in which the statistic values are calculated
Low Scan Mark	LowScanMark	The lowest transaction ID to start to process
Time for Txn to be Processed	TimeTxnProcess	Advanced: Elapsed time for a transaction to be processed in the last monitored period (in seconds)
Current node	CurrNode	Advanced: Current node (mobile client or regional node) being routed
Current .dx read file	CurrRFile	Current .dx file being read
Current .dx write file	CurrWFile	Current .dx file being written
Current Transaction Id	CurrTxnId	Advanced: Current Transaction ID being routed
Current Node List	CurrNodeList	Advanced: Current list of nodes being routed

Table 49. List of Siebel Remote State Values

State Value Name	Alias	Description
Last Update of Node List	LastUpdNodeList	Advanced: Timestamp of the last update of the node list being used
Time for Transaction to be Routed	TimeTxnRoute	Advanced: Elapsed time for a transaction to be routed in the last monitor period (in seconds)

List of Communications Server State Values

Table 50 describes the state values specific to Communications Server at the component level. For background information on Siebel application state values, see "About Siebel Application State Values" on page 19.

Table 50. List of Communications Server State Values

State Value Name	Alias	Description
Feedback Counter	FeedbackCount	Number of feedback accumulated
Categorization Engine Initialized	Initializaed	Include KB loaded
Last Update Time	LastUpdateTime	Last Time KB was updated
Number of Response Groups Loaded	NumResponseGroupsLoaded	Number of response groups currently loaded
Number of Comm Profiles Loaded	NumComm Profiles Loaded	Number of communication profiles currently loaded as part of the currently loaded response groups
Response Groups Loaded	ResponseGroupsLoaded	Response groups currently loaded
Number of busy work queue threads	NumBusyWorkerThreads	Number of busy work queue threads
Send Counter	SendCount	Number of messages sent

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