Monitoring Siebel Application Server

eG Innovations Product Documentation

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Total Performance Visibility

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Chapter 1: Introduction

The Siebel Enterprise Server is a logical grouping of one or more Siebel Servers that connect to one Siebel Database.

Each Siebel Server functions as an application server and is composed of server components. Each server component performs a defined function.

Server components or groups of components determine what applications and services a Siebel Server supports. Components run in one of several modes:

- **Interactive mode.** Interactive mode components start tasks automatically in response to user requests. Interactive tasks run until the user ends the session. Examples of interactive components include the Application Object Managers (AOMs) and the Synchronization Manager.
- **Background mode.** Background mode components handle background processing tasks. Typically, background tasks are called by interactive tasks. Background tasks run until they are explicitly shut down. Examples of background components include Transaction Router and Workflow Monitor Agent.
- **Batch mode.** Batch mode components handle processing of asynchronous work requests. When the task is complete, the component exits. Examples of batch components are Database Extract and Enterprise Integration Manager (EIM).

Many of the Siebel Server components can operate on multiple Siebel Servers simultaneously, allowing Siebel applications to scale across many server machines to support large numbers of users.

Other Siebel Server components provide additional functionality, including the following:

- Siebel Mobile Web Client synchronization
- Integration with legacy or third-party data
- Automatic assignment of new accounts, opportunities, service requests, and other records
- Workflow management
- Document generation

The Gateway Server is a logical server that consists of the Siebel Name Server and optionally Resonate Central Dispatch. These two components can reside on separate physical servers. The Gateway Name Server is a repository for configuration information about each Siebel Server. When Siebel Servers or components come online or go offline the Name Server data is refreshed with the connect strings. Clients will also use the Gateway Name server to connect to the Siebel Servers if

Resonate Central Dispatch (which is used to load balance and manage client connections to Siebel Enterprise) is not implemented.

Since the Siebel Application server component of the Siebel server maintains the connectivity information pertaining to every component in Siebel Enterprise, the 24 x 7 availability of the Siebel Application server is crucial to the functioning of the Siebel server, and also for ensuring that client connections to Siebel servers are not disrupted. This is where eG Enterprise helps administrators!

Chapter 2: How to Monitor Siebel Application Server using eG Enterprise?

eG Enterprise monitors the Siebel Application server in agent-based and agentless manners. Before attempting to monitor the server, a set of pre-requisites should be fulfilled. These requirements are discussed in the following section.

2.1 Pre-Requisites for monitoring the Siebel Application Server

The following pre-requisites need to be fulfilled for an eG agent to collect metrics from the Siebel Application server:

- The target Siebel Application server should be installed with JDK 1.5 and above.
- The **Management Agent** should be installed on the target Siebel Application server. By default, the Management Agent collects the required metrics from the target Siebel Application server. The eG agent communicates with the Management Agent and collects the required metrics at periodic intervals.
- By default, the Management Agent is installed using the credentials of a user possessing *Admin* privileges. The credentials of such a user will be available in the **security.properties.xml** file that is located at the following location: <SIEBEL_INSTALL_DIR>\mgmtsrvr\security. By default, the name of the user will be **SADMIN**. The user credentials can be obtained from the following lines of the **security.properties.xml** file:

```
com.siebel.management.security.login=SADMIN
com.siebel.management.security.password=U0FETUlO (this is Encrypted password)
```

- Ensure that the Management Agent communicates with the Siebel Management server using the default port number *1199*. To confirm the default port, refer to the following line of the <SIEBEL_INSTALL_DIR>\mgmtagentsrvr\pref\system\configuration.agents.xml file:

```
<entry key="defaultconnector"
value="4:service:jmx:rmi://W2K3XEN225VM12/jndi/rmi://W2K3XEN225VM12:
1199/jmx/siebel/agent" />
```

If the port number specified in the above file is different, then ensure that you specify the same port number while configuring the Siebel Application server in the **COMPONENT** page of the eG administrative interface.

2.2 Managing the Siebel Application Server

The eG Enterprise cannot automatically discover the Siebel Application server. This implies that you need to manually add the component for monitoring. To manage a Siebel Application component, do the following:

1. Log into the eG administrative interface.
2. Follow the Components -> Add/Modify menu sequence in the Infrastructure tile of the **Admin** menu.
3. In the **COMPONENT** page that appears next, select Siebel Application as the **Component type**. Then, click the **Add New Component** button. This will invoke Figure 2.1.

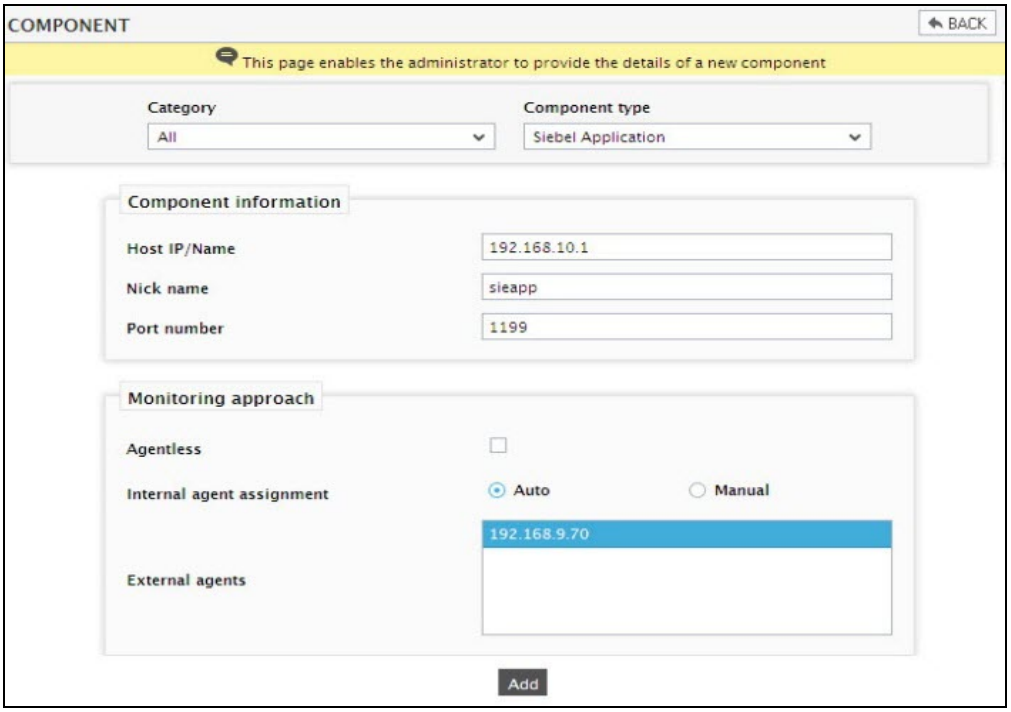

Figure 2.1: Adding a Siebel Application server

3. Specify the **Host IP** and the **Nick name** of the Siebel Application server in Figure 2.1. Then click the **Add** button to register the changes.

4. When you attempt to sign out, a list of unconfigured tests will appear as shown in Figure 2.2.

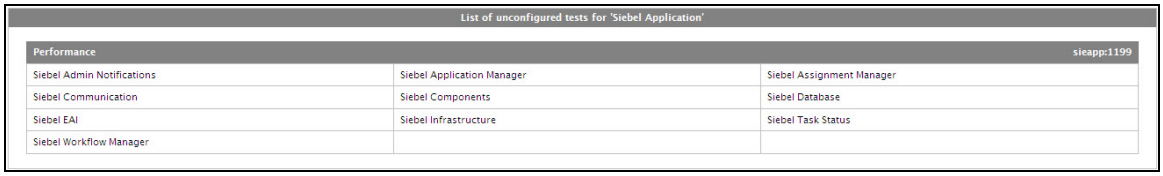

Figure 2.2: List of Unconfigured tests to be configured for the Siebel Application server

5. Click on the test names to configure. To know about the parameters to be configured and the metrics that the tests report, refer to **Monitoring the Siebel Application server** chapter.
6. Finally signout of the eG administrative interface.

Chapter 3: Monitoring the Siebel Application server

eG Enterprise offers a specialized Siebel Application server monitoring model (see Figure 3.1), which runs periodic availability checks on the Gateway server to determine the availability of its Name server component and related services. This way, availability issues can be proactively detected and resolved before they affect the end-user experience.

Besides, additions to the Siebel Gateway server's log files are also closely monitored, so that potential threats to the health of the Gateway server can be promptly detected, and administrators immediately alerted.

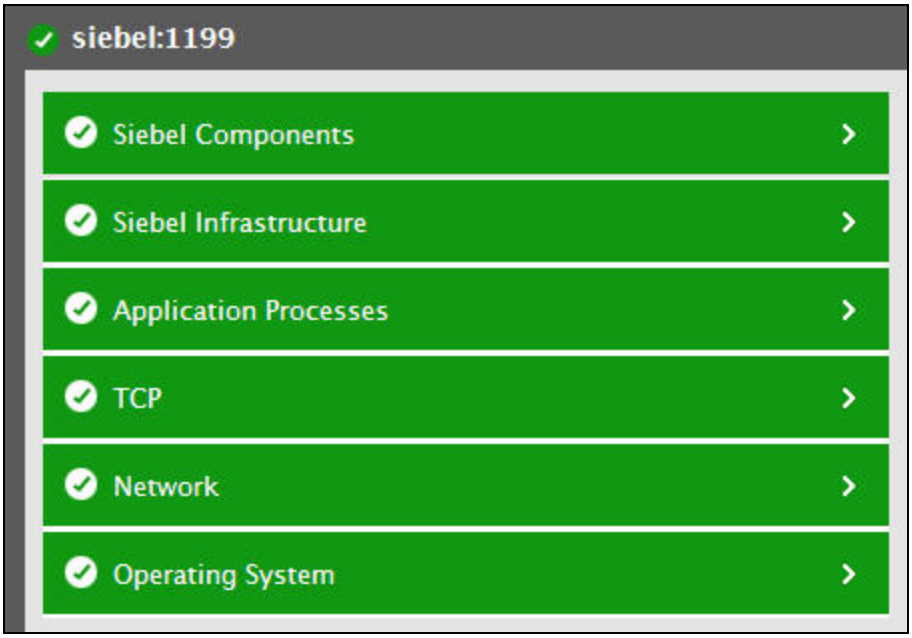

Figure 3.1: The layer model of the Siebel Application server

The **Operating System**, **Network**, **TCP** and **Application Processes** layers of a Siebel Application Server model are similar to that of a Windows Generic server model. The tests mapped to these layers have been dealt with in the *Monitoring Unix and Windows Servers* document, The section to come focuses on the **Siebel Infrastructure** layer.

3.1 The Siebel Infrastructure Layer

The tests associated with this layer monitor the availability of the Siebel database and the efficiency with which the database server handles queries executed by the Siebel server. The availability, responsiveness, and resource usage of the object managers on the Siebel server

Figure 3.2: The tests mapped to the Siebel Infrastructure layer

3.1.1 Siebel Application Manager Test

Application Object Managers (AOMs) host the Business Objects layer and Data Objects layer of the Siebel architecture. The Web clients host the Siebel application user interface layer. The AOM is used primarily to support Siebel Web client connections. To do this, the AOM handles multiple users simultaneously by making requests to the Siebel Server on their behalf.

AOMs are hosted as components in the Siebel Server and run on the application server (the machine that hosts the Siebel Server). The Siebel Server provides the infrastructure for an AOM to serve multiple Siebel Web client users. Multiple AOM components can run on a single Siebel Server installation. AOM components can be configured to run as multithreaded processes in the Siebel Server. Like other Siebel Server components, you can administer AOM components using the Siebel Server Manager.

AOMs communicate with clients using the TCP/IP protocol through a Web server that contains the Siebel Web Server Extension plug-in (SWSE). Communication between the Web server and the AOM can be compressed and encrypted. An independent session is established to serve incoming connect requests from each client. Subsequent requests from clients are directed to the same AOM tasks until the sessions are terminated. After startup, AOMs do not achieve their full run-time environments until after the first connect, therefore, leading to possible delays during the first connection.

One of the most important types of server components is the Application Object Manager (AOM). These server components always run in interactive mode. They process user requests and are application- or service-specific. For example, the Siebel Call Center component group contains the Call Center Object Manager, one for each language deployed on the Siebel Server. This AOM provides the session environment in which this application runs.

Internally, each AOM also contains a data manager and the Siebel Web Engine. When an AOM receives a user request to start an application, the AOM follows this procedure:

- The business object layer starts an application user session, processes any required business logic, and sends a data request to the data manager.
- The data manager creates an SQL query and forwards it to the Siebel Database.
- The data manager receives the data from the database and forwards it to the business object layer for additional processing.
- The business object layer forwards the result to the Siebel Web Engine, which helps create the UI for the data. The Siebel Web Engine then forwards the Web pages to the Siebel Web Server Extension on the Web server.

Whenever users start complaining of delays encountered in receiving response to requests, it is the onus of the administrators to figure out the exact cause of the delays in request processing – is the delay due to an unresponsive database/Application Object Manager or a lengthy request or due to errors encountered by the Application Object Manager? To ensure optimal request processing, such issues should be rapidly detected and remedial steps should be taken accordingly. This is where the **Siebel Application Manager** test helps! This test helps you to figure out the errors encountered by the Application Object Manager, the size of the request and reply messages and the requests received per session. In addition, this test provides insight on the response time of the database and also the rate at which the request and reply data were processed in the Application Object Manager.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.

Parameter	Description
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.

Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
	The credentials of such a user will be available in the following lines of the SIEBEL_INSTALL_DIR>\mgmtsrvr\security\security.properties.xml file:
	`com.siebel.management.security.login=SADMIN`
	`com.siebel.management.security.password=******`

Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Number of errors	Indicates the number of errors encountered by this Object Manager.	Number	Ideally, the value of this measure should be zero.
Average message requests	Indicates the number of request messages received by this Object Manager per second.	Requests/Sec	
Average message responses	Indicates the number of reply messages sent from this Object Manager per second.	Responses/Sec	
Average connect time	Indicates the average time taken to connect to this Object Manager session.	Secs	A low value is desired for this measure. A high value indicates connection bottlenecks.
Average size of request messages	Indicates the average size of the request messages received by this Object Manager.	KB	
Average size of reply	Indicates the average	KB	

Measurement	Description	Measurement Unit	Interpretation
messages	size of the reply messages sent from this Object Manager.		
Average no of requests	Indicates the number of requests received by this Object Manager per session.	Requests/Session	
Average response time	Indicates the average time taken by this Object Manager to respond to requests.	Secs	A low value is desired for this measure. A very high value indicates that the component responds slowly to requests. Response time issues can be caused by high CPU utilization or heavy load on the components.
Average end user think time	Indicates the average end user think time between requests received by this Object Manager.	Secs	
Database response time	Indicates the time taken by the database to process and respond to the requests sent through this Object Manager.	Secs	A sudden/gradual increase in the value of this measure is a cause of concern as this may indicate network connectivity issues, performance bottleneck of the server etc.
Request Data	Indicates the amount of request data processed per second in this Object Manager.	KB/Sec	
Reply Data	Indicates the rate at which the reply data of this Object Manager is processed.	KB/Sec	

3.1.2 Siebel Assignment Manager Test

Siebel Assignment Manager routes business entities and work items to the most appropriate candidates by enforcing business rules set by sales, service, and marketing organizations.

Assignment Manager does this by matching candidates (that is, employees, positions, and organizations) to predefined and user-configurable assignment objects. To assign the most qualified candidate to each object, Assignment Manager applies assignment rules that you define to each candidate.

This test reports the number of object rows that are assigned by the Assignment manager and the rate at which the object rows are processed by the assignment manager.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.

Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
	The credentials of such a user will be available in the following lines of the SIEBEL_ INSTALL_DIR>\mgmtsrvr\security\security.properties.xml file:
	`com.siebel.management.security.login=SADMIN`
	`com.siebel.management.security.password=******`

Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Rows assigned	Indicates the number of records i.e., object rows that are assigned by this assignment manager.	Number	
Rows assigning rate	Indicates the rate at which the object rows are processed by this assignment manager.	Rows/Sec	A high value is desired for this measure.

3.1.3 Siebel Communication Test

Siebel Communications Server provides an infrastructure to support several kinds of communication activities for Siebel application users, including session communication (such as voice calls) and inbound and outbound communication (such as email). Often administrators find it difficult to figure out the load on the communication server. To figure this out, administrators need to find out how many events were processed by the communication server and how well the events are processed. This is where the **Siebel Communication** test helps!

This test reports the number of events processed by the Siebel Communication server and the rate at which the events were processed.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the

Parameter	Description
	agentconfig.connectors.xml file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Events processed	Indicates the number of events that were processed by this Siebel Communication server.	Number	This measure is a good indicator of the load on the Siebel Communication server.
Events processing rate	Indicates the rate at which the events were processed by this Siebel Communication server.	Events/Sec	A high value is desired for this measure.

3.1.4 Siebel Database Test

This test monitors the overall health of the interactions between the Siebel Application server and its backend database.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Average sql execute time	Indicates the average time taken for SQL execute operations.	Secs	
Average sql fetch time	Indicates the average time taken for SQL fetch operations.	Secs	
Average sql parse time	Indicates the average time taken for SQL parse operations.	Secs	
Sql executes	Indicates the total number of execute operations per second.	Executes/Sec	
Sql fetches	Indicates the total number of SQL fetch operations	Fetches/Sec	A low value is indicative of low fetch-intensive Siebel queries on the Siebel

Measurement	Description	Measurement Unit	Interpretation
	per second.		database.
Sql parses	Indicates the total number of SQL parse operations per second.	Parses/Sec	A low value is indicative of low parse-intensive queries on the Siebel database.

3.1.5 Siebel EAI Test

Siebel EAI provides components for integrating Siebel Business Applications with external and internal applications, and provides inbound and outbound interfaces to and from a Siebel application.

Siebel EAI support for XML allows you to communicate with any Siebel system or external system, or with trading partners that can read and write XML (either arbitrary XML or Siebel XML, also known as the Siebel Message format). XML documents are delivered directly to and from Siebel applications, or through middleware using any of the supported transports: HTTP, IBM MQSeries, Microsoft Messaging Queue (MSMQ), File, and so on. XML communicated in this way can query Siebel Database, upsert (update or insert) data, synchronize the two systems, delete data, or execute a workflow process. By frequently analyzing the XML documents, administrators may be able to figure out the load on the Siebel EAI Adapter and figure out how well the Siebel EAI Adapter is processing the queries made. The **Siebel EAI** test helps administrators in this process.

This test reports the number of query calls and non query calls made to the Siebel EAI adapter. In addition, this test also helps you to understand the rate at which the input and output property sets are processed. This test also helps you to understand the rate at which the XML calls are generated, the rate at which the XML input buffer grows and the rate at which the XML output buffer is read.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The host for which the test is to be configured.

Parameter	Description
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Query calls	Indicates the number of query calls made to the Siebel EAI Adapter.	Number	This measure is a good indicator of the load on the Siebel EAI Adapter. A high value for this measure indicates a higher load on the Siebel EAI Adapter.
Query size	Indicates the rate at which the output property sets for all queries are processed.	KB/Sec	
Non-query calls	Indicates the number of non query calls made to the Siebel EAI Adapter.	Number	This measure is inclusive of all the Synchronize, Upsert, Insert and Update queries.
Non-query size	Indicates the rate at which the input property sets for all queries are processed.	KB/Sec	
XML calls	Indicates the rate at which the XML calls are generated in this Siebel EAI Adapter.	Calls/Sec	
XML input buffer	Indicates the rate at which the XML input buffer grows	KB/Sec	

Measurement	Description	Measurement Unit	Interpretation
	in this Siebel EAI adapter.		
XML output buffer	Indicates the rate at which the XML output buffer is read from this Siebel EAI adapter.	KB/Sec	
XML parser calls	Indicates the number of XML Parser calls invoked in this Siebel EAI Adapter.	Number	

3.1.6 Siebel Infrastructure Test

Components refer to the various tasks or programs that run on the Siebel server and perform the work requested by the user. For example, the object manager is one of the key components on a Siebel server. In order to effectively measure the end-user experience with a Siebel server, it is essential to keenly observe and analyze the fluctuations in responsiveness, and errors encountered by these components. The **Siebel Infrastructure** test enables such an analysis. In the event of any deterioration in the performance of a Siebel server, the metrics reported by this test will enable administrators to figure out whether there are any unresponsive/error-prone components on the Siebel server, which are impacting its performance.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.

Parameter	Description
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Average transfer time	Indicates the average time taken to transfer connections between components.	Secs	A low value is desired for this measure. A high value of this measure may indicate connection bottleneck.
Maxed out errors	Indicates the number of times the connection transfer failed due to the components being busy.	Number	A high value of this measure indicates that the component is overloaded and hence unable to handle excess load.
Successful connections	Indicates the number of connections that were successfully forwarded to the components.	Number	A high value is desired for this measure.
Total connections	Indicates the total number of connections to the components.	Number	
Total transfer time	Indicates the overall time spent in transferring connections to the components.	Secs	
FDR buffer wraps	Indicates the number of FDR buffer wraps per second on the components.	Wraps/sec	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 to the failure are

Measurement	Description	Measurement Unit	Interpretation
			captured and logged.
FDR buffer life	Indicates the time elapsed since the FDR buffer was last created.	Secs	
FDR aging rate	Indicates the average time taken for each FDR buffer wrap on the components.	Secs	
Task completion rate	Indicates the rate at which the tasks were completed for the server components.	Tasks/sec	
Tasks exceeding capacity	Indicates the number of tasks that were assigned to the components after the maximum task limit of the components was reached.	Number	A high value for this measure is an indication of overload on the Siebel server.
Database connection retries	Indicates the number of times the database connection was retried due to database connection loss.	Number	A low value is desired for this measure. A high value is an indication of poor database connectivity.
Deadlock rollbacks	Indicates the number of times the connection was retried due to deadlock rollbacks on the database.	Number	Deadlock rollback is a condition when forced rollback is initiated by the database manager due to a deadlock.
Exhausted retries	Indicates the number of connection retries that were exhausted.	Number	A high value indicates persistent connectivity issues that needs to be addressed immediately.

3.1.7 Siebel Workflow Manager Test

Siebel Workflow is an interactive environment that automates business processes such as automating escalation of events and notification of appropriate parties; routing and assigning work; processing work; and enforcing authorization and transition rules. The Workflow Manager executes real time workflow processes. Businesses are managed according to policies and procedures that

allow efficiency, quality service, adherence to contractual agreements, and profitability. Business processes that these policies enforce include:

- Allowing that response time objectives are met for customer callbacks and open service requests.
- Specifying review policies for important processes, such as contracts, quotes, or product shipments.
- Monitoring service requests or opportunities over time.

Often administrators find it difficult to identify how well the workflow manager is processing the requests and how many policy violations were detected during workflow process. The **Siebel Workflow Manager** test exactly helps administrators figure out the same!

Using this test, you could easily figure out the number of requests that were processed by the Workflow manager and the number of policy violations that were detected by the Workflow manager.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.

Parameter	Description
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Requests Processed	Indicates the number of requests that were processed by this Workflow Manager.	Number	A high value is desired for this measure.
Policy Violations	Indicates the number of policy violations that were detected by this Workflow manager.	Number	Workflow policies are a set of conditions that, when violated, triggers an associated workflow action.

3.2 The Siebel Components Layer

Using the tests associated with this layer, you can determine the following:

- Whether the object managers are overloaded with tasks
- Administrator notifications received and processed for each Siebel component
- The state of each Siebel component

Figure 3.3: The tests mapped to the Siebel Components layer

3.2.1 Siebel Admin Notifications Test

Siebel Administrator Notification (alias AdminNotify) is a batch-mode component that notifies the Siebel administrator when problems are detected on the Siebel Server or its running components. Whenever notifications are received, administrators are required to keep track on the notifications that were received and processed, how many notifciations were handled successfully and how many actually failed. The **Siebel Admin Notifications** test helps administrators identify the same!

This test reports the number of notifications received and processed for each component and also reports the numerical statistics of the invocations that were handled successfully and the invocations that failed. Using the **Siebel Admin Notifications** test, you can easily identify the ability of the Siebel server and analyze the cause of failure if too many failure notifications are identified!

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Failed notification handlers	Indicates the number of invocations of the notification handler that failed for this component.	Number	A low value is desired for this measure.
Notifications processed	Indicates the number of notifications that were processed for this component.	Number	
Notifications received	Indicates the number of notifications that were received for this component.	Number	
Successful notification handlers	Indicates the number of invocations of the notification handler that were successful for this component.	Number	A high value is desired for this measure.

3.2.2 Siebel Components Test

Components refer to the various tasks or programs that run on the Siebel server and perform the work requested by the user. For example, the object manager is one of the key components on a Siebel server. The requests to every application executing on a Siebel server are typically handled by one/more object managers. If the object manager required by an application is not running, then the Siebel server will be forced to reject all requests for that application, causing the end-user to suffer. The **Siebel Components** test monitors each of the object managers to ascertain their current state and load.

Target of the test : A Siebel Application Server

Agent deploying the test : A remote agent

Outputs of the test : One set of results for every Object Manager that is to be monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
State	Indicates the current state of this Siebel Object Manager.		The values that this measure can report and their corresponding numeric values are tabulated below: **Measure Value** / **Numeric Value** StartingUP: 0 Online: 1 Running: 2 Offline: 3 ShuttingDown: 4 ShutDown: 5 Unavailable: 6 **Note:**

Measurement	Description	Measurement Unit	Interpretation
			By default, this measure reports the above-mentioned **Measure Value**s while indicating the current state of this Siebel Object Manager. However, in the graph of this measure, the current status will be represented using the numeric equivalents only.
Max MTServers	Indicates the maximum number of MTServer per component per server.	Number	An MTServer is a multi-threaded component process. A high value for this measure is indicative of too many users logging into the Siebel server.
Active MTServers	Indicates the number of MTServers that are currently active on this Object Manager.	Number	The value of this measure should be close to the Max MTServers measure.
MTS usage factor	Indicates the percentage of MTServers that are being actively used by this Object Manager.	Percent	Ideally, the value of this measure should be between 90-100%. A far less value indicates that the object mnager is grossly under-utilizing the MTServers. This happens when the object manager does not have enough tasks to run, and is more or less idle.

3.2.3 Siebel Task Status Test

A Siebel Server task is an instantiation of a Siebel Server component. To run a Siebel Server task, you must run a component job, which requests one or more Siebel Server tasks to run.

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

This test reports the currently running and completed tasks on every object manager on a Siebel server. In addition, this test reports the tasks on which errors were detected.

Target of the test : A Siebel Application Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for each object manager on the Siebel server that is to be monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
JMX Remote Port	Specify the port at which the JMX listens for requests from the remote hosts. Ensure that you specify the same port that you have mentioned in the **agentconfig.connectors.xml** file in the <SIEBEL_INSTALL_ DIR>\siebsrvr\mgmtagent\pref\system folder used in the target application.
JNDIName	The JNDIName is a lookup name for connecting to the JMX connector. By default, this is *jmxrmi*. If you have resgistered the JMX connector in the RMI registery using a different lookup name, then you can change this default value to reflect the same.
Siebel Agent User and Siebel Agent Password	In order to monitor the Siebel Application server, a valid user possessing admin privileges is required. Specify the login credentials of such a user in the Siebel Agent User and Siebel Agent Password text boxes.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Number of running tasks	Indicates the number of tasks that are currently running on this Object Manager.	Number	The detailed diagnosis of this measure, if enabled, provides the details of tasks that are currently running. Such details include the task ID, the object manager that is running the task, the mode in which the task is running, and the date/time at which the task began running. Using this information, you can quickly identify long-running tasks, and investigate the reason behind the same.
Number of completed tasks	Indicates the number of	Number	

Measurement	Description	Measurement Unit	Interpretation
	tasks that ran to completion and exited normally on this Object Manager.		
Number of error tasks	Indicates the number of tasks on which error was detected on this Object Manager.	Number	A low value is desired for this measure. A gradual/steady increase in the value of this measure is a cause of concern which may affect the overall performance of the Siebel Application server.

Chapter 4: Monitoring the Siebel Application 7.x Server

The Siebel Application Server has one or more physical servers and is the middle tier of the enterprise architecture. These servers run the components (i.e., programs/tasks that run on the Siebel server to service user requests) that provide all business logic to the clients.

Performance degradations experienced by the Siebel Application server can therefore cause fatal errors in business logic execution, and can even bring the entire Siebel environment to a stand-still, thereby causing customer dissatisfaction and related revenue losses.

It is hence imperative to constantly 'watch over' the functioning of the Siebel server, so that probable anomalies are promptly isolated and addressed before they can adversely impact the customer experience.

The Siebel Application monitoring model (see Figure 4.1) that eG Enterprise offers exclusively for the Siebel application server, runs a wide variety of tests that execute commands on the application server to determine the overall health of the Siebel server, and its availability to service client requests.

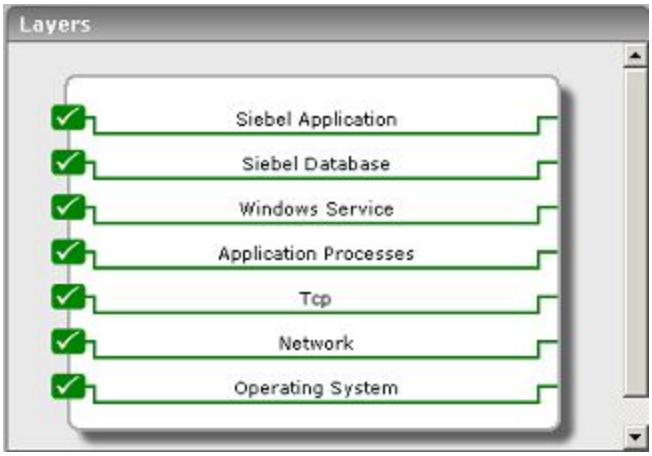

Figure 4.1: The layer model for the Siebel Application server.

The sections to come will shed light on the **Siebel Application** and **Siebel Database** layers of Figure 4.1. For information on the other layers, refer to the *Monitoring Unix and Windows Servers* document.

4.1 The Siebel Database Layer

The tests associated with this layer monitor the availability of the Siebel database and the efficiency with which the database server handles queries executed by the Siebel server.

Figure 4.2: The tests associated with Siebel Database layer

4.1.1 Siebel SQLs Test

This test, executed by an internal agent, monitors the overall health of interactions between the Siebel server and its backend database.

Target of the test : A Siebel Application Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the Siebel server that is being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
InstallDirectory	Provide the full path to the install directory of the Siebel server.
GatewayServer	Provide the IP address/host name of the Gateway server.
EnterpriseServer	This refers to the name that was specified for the Enterprise server during a Siebel installation. An Enterprise server is a logical entity. It collectively represents the Siebel application servers and gateway server.

Parameter	Description
UserName	This test executes a command on the Siebel server to extract the statistics of interest; this command requires administrator privileges to execute. Therefore, enter the name of the Siebel administrator.
Password	Specify the administrator password.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
SQL execute operations	Indicates the total number of SQL execute operations.	Number	
SQL fetch operations	Indicates the total number of SQL fetch operations.	Number	A low value is indicative of low fetch-intensive Siebel queries on the Siebel database.
SQL parses	Indicates the total number of SQL parse operations.	Number	A low value is an indicative of low parse- intensive queries on the Siebel database.
Total time taken by SQL executes	Indicates the total time taken by SQL execute operations.	Secs	Ideally, the value of this measure should be low. However, if you find that execution times are unreasonably long, look at the execution plan to determine how the data was accessed. The following can also be attributed to delays in SQL execution: • I/O constraint on the disk where the table or index resides • Logical row lock contention (because of INSERT, DELETE, UPDATE and so on) • DB2 connection on page latches • CPU constrained or storage constrained machine

Measurement	Description	Measurement Unit	Interpretation
Total time taken by SQL fetches	Indicates the total time taken for SQL fetch operations.	Secs	A query is request for data. Sometimes, various queries from the application do not fetch the entire result requested which forces the SQL server to hold shared key or page locks until the entire result set is fetched, or canceled (closed). Tracking this value helps you to determine the time taken for SQL fetch operations. If the time taken to fetch all result rows is high, then it will lock the tables, thereby blocking other users.
Total time taken by SQL parses	Indicates the total time elapsed for SQL parse operations.	Secs	The parse call – hard or soft – has overhead due to processing requirements i.e. actual CPU work needed by the database engine. During the hard parse, database engine has to lock several internal sources to make sure the structure of the tables involved does not change. Operations on the library cache also require locking of internal sources. These locks are taken for very short duration of time and have little effect on the applications supporting few users. However for applications that need to scale many concurrent users, any such lock will prevent scalability. A sudden increase in the value for this measure can affect other operations and increase the transaction response time.
Avg time for SQL executes	Indicates the average time taken by SQL execute operations.	Secs	If the average elapsed time for SQL execution is high, it could be due to the following reasons: • I/O constraint on the disk where the table or index resides

Measurement	Description	Measurement Unit	Interpretation
			• Logical row lock contention (because of INSERT, DELETE, UPDATE and so on) • DB2 connection on page latches • CPU constrained or storage constrained machine
Avg time for SQL fetches	Indicates the average time for SQL fetch operations.	Secs	
Avg time for SQL parses	Indicates the average time for SQL parse operations.	Secs	
Database connection retries	Indicates the number of retries due to database connection loss.	Number	Ideally, this value should be 0.

4.1.2 Siebel Network Test

This test checks whether the database server is accessible from the Siebel server, and if so, indicates how quickly the database responds to Siebel requests.

Target of the test : A Siebel Application Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for each Siebel server being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
InstallDirectory	Provide the full path to the install directory of the Siebel server.
SibelDataSource	One of the key pre-requisites for a Siebel installation is to create an ODBC Data source

Parameter	Description
	exclusively for Siebel Enterprise. The name of this data source needs to be provided here. To know how to locate the data source name, refer to Section **4.1.2.1**.
TableOwnerName	Specify the name of the owner of any valid table on the Siebel repository. To know how to find the name of a table owner, follow the procedure detailed in Section **4.1.2.1**.
UserName	This test executes a command on the Siebel server to extract the statistics of interest; this command requires administrator privileges to execute. Therefore, enter the name of the Siebel administrator.
Password	Specify the administrator password.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.
Node	Specify the host name of the system on which the data source has been installed; typically, this will be the Siebel server's hostname.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Availability	Indicates whether/not a healthy network connection is available between the Siebel server and its database server.	Percent	Ideally, this value should be 100%. A zero value reported for this measure indicates that the database server is not accessible from the Siebel server. This could be owing to a faulty network connection, or a non-availability of the database server itself.
Response time	Indicates the time taken by the database server to respond to the Siebel requests.	Secs	An increase in response time can be due to many reasons such as sudden increase in the number of tasks waiting to be processed, lack of memory, high CPU utilization, buffer pools not properly sized etc.

4.1.2.1 Identifying the DataSourceName and TableOwnerName

To view a list of data sources to choose from, do the following:

1. On the ODBC host, follow the menu sequence Start -> Programs -> Administrative Tools -> Data Sources (ODBC).

2. In the **ODBC Data Source Administrator** dialog box that appears, click on the **System DSN** tab.
3. Figure 4.3 then appears listing the ODBC data sources currently configured. Find the Siebel data source in the list, and provide its name against the DataSourceName parameter. In the example illustrated by Figure 4.3 below, **SiebSrvr_siebel** is the name of the Siebel data source.

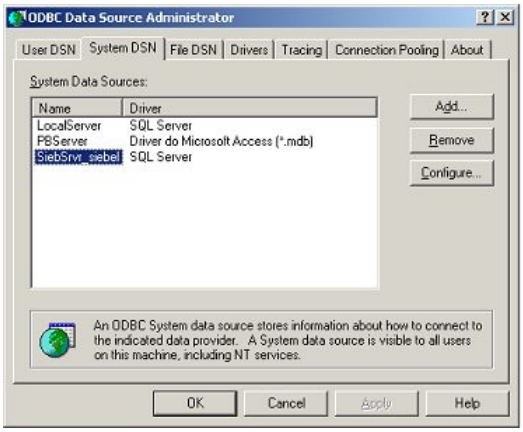

Figure 4.3: The Data source name

Siebel Enterprise can use an MS SQL server/ Oracle/ DB2 UDB server as its backend. If Siebel Enterprise uses an MS SQL server backend, then follow the steps given below to determine the owner of the Siebel database; the table owner is the same as the database owner:

1. Open the **SQL Enterprise Manager** of the MS SQL server installation using the menu sequence, Programs -> Microsoft SQL Server -> Enterprise Manager.
2. Expand the **Databases** node in the tree-structure in the left pane of the **SQL Enterprise Manager**, and select the **Siebel** database from within; right-click on the database, and select the **Properties** option (see Figure 4.4).

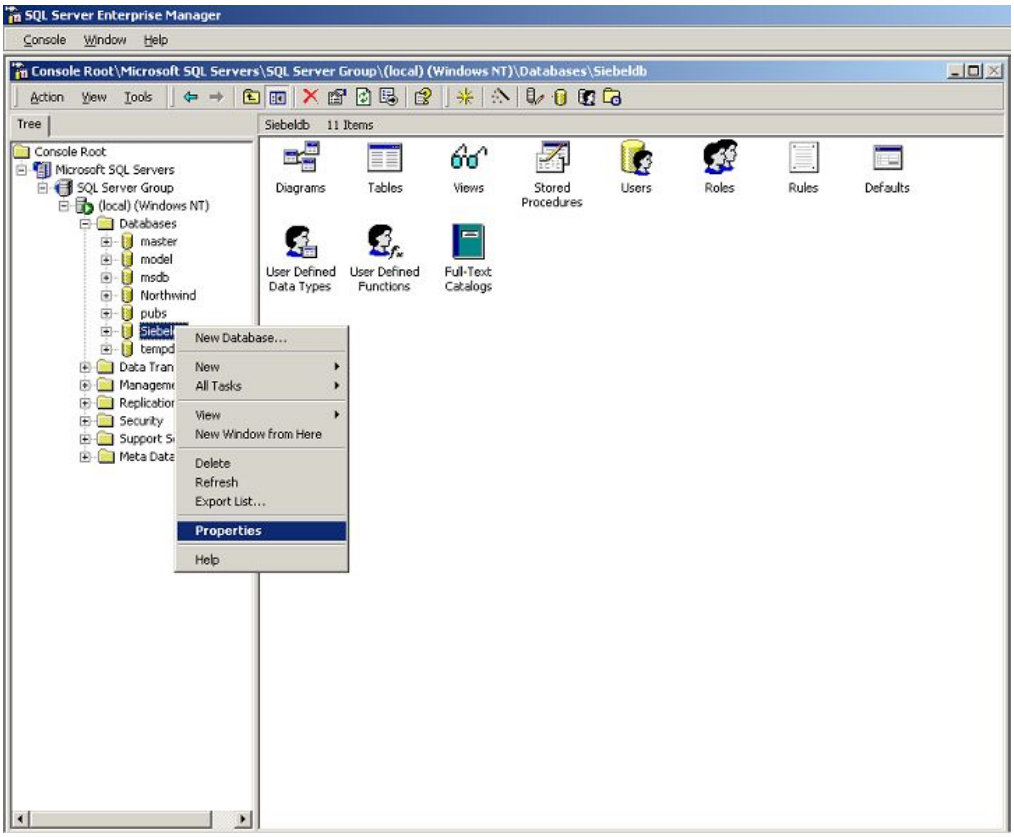

Figure 4.4: Selecting the Siebel database Properties

3. In the **Properties** dialog box that appears, you will find a name against the **Owner** field. This name should be specified as the TableOwnerName (see Figure 4.5).

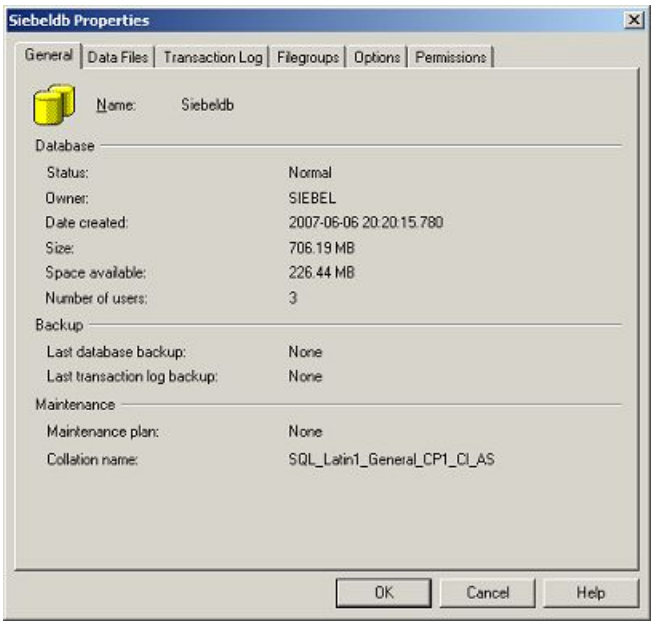

Figure 4.5: The General tab displaying the database Owner

4.2 The Siebel Application Layer

Using the tests associated with this layer, you can determine the following:

- The availability, responsiveness, and resource usage of the object managers on the Siebel server
- Whether the object managers are overloaded with tasks
- Recent errors encountered by the Siebel server
- Level of data traffic to and from the Siebel server

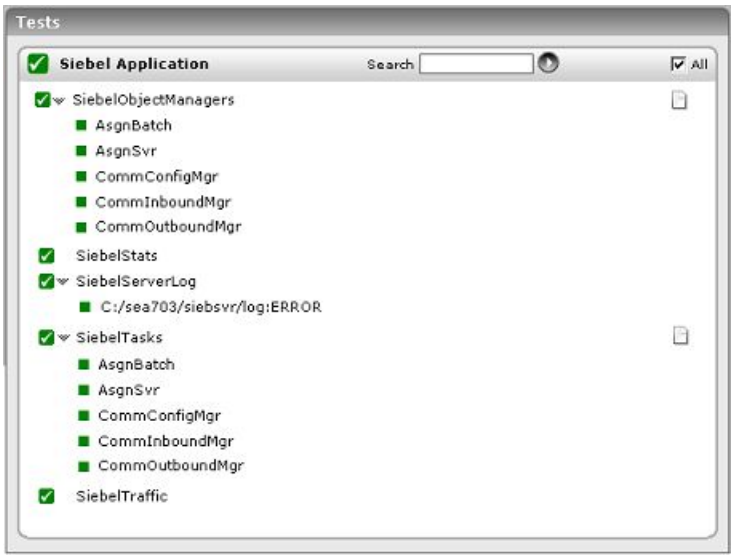

Figure 4.6: The tests associated with the Siebel Application Layer

4.2.1 Siebel Object Managers Test

The requests to every application executing on a Siebel server are typically handled by one/more object managers. If the object manager required by an application is not running, then the Siebel server will be forced to reject all requests for that application, causing the end-user to suffer. The **Siebel Object Managers** test monitors each of the object managers to ascertain their current state and load.

Target of the test : A Siebel Application Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for every object manager monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
InstallDirectory	Provide the full path to the install directory of the Siebel server.
GatewayServer	Provide the IP address/host name of the Gateway server.

Parameter	Description
EnterpriseServer	This refers to the name that was specified for the Enterprise server during a Siebel installation. An Enterprise server is a logical entity. It collectively represents the Siebel application servers and gateway server.
UserName	This test executes a command on the Siebel server to extract the statistics of interest; this command requires administrator privileges to execute. Therefore, enter the name of the Siebel administrator.
Password	Specify the administrator password.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Run state	Indicates the current state of this Siebel Object Manager.	Boolean	The value 0 for this measure indicates that the object manager is unavailable. While 1 indicates that the object manager is online (i.e., it is available, but not currently running any tasks), 2 indicates that the object manager is running (i.e., it is available and is currently running one/more tasks).
Max tasks reached	Indicates whether this object manager has reached its 'maximum tasks' limit or not.	Boolean	This measure is a true indicator of load on the object manager. As long as the value of this measure is 0, it is an indication of an optimal number of tasks currently executing on the object manager. If the value becomes 1, it implies that the 'maximum tasks' limit has been reached. When this happens, eG Enterprise triggers an alarm indicating an overload on the object manager. During such circumstances, the object manager will run out of threads to execute any more tasks, and will therefore be unable to handle subsequent requests.
Maximum	An MTServer is a multi-	Number	

Measurement	Description	Measurement Unit	Interpretation
MTServers	threaded component process; this measure indicates the maximum number of MTServers per component per server.		
Active MTServers	Indicates the currently active MTServers on this object manager.	Number	The value of this should be close to the value of the Num_max_mts_svr measure.
Percent usage of MTServers	Indicates the percentage of maximum MTServers that are being actively used by this object manager.	Percent	Ideally, the value of this measure should be between 90-100%. A far less value indicates that the object manager is grossly under-utilizing the MTServers. This happens when the object manager does not have enough tasks to run, and is more or less idle.
Minimum MTServers	Indicates the minimum number of MTServers that should run, by default, on this object manager when the Siebel server starts.	Number	
MTServer crashes	Indicates whether/not the MTServer crashes were on this object manager.	Boolean	The value *Yes* for this measure indicates that one or more MTServers were crashed and the number of MTServers running on this object manager is lesser than the value of *Minimum MTServers* measure. Consequently, the load on the server increases and the request processing capability of the object manager reduces. While *No* indicates that the number of MTServers running on the object manager is greater than or equal to the value of the *Minimum MTServers* measure. This indicates that there are enough MTServers are available on the object server to handle the requests.

4.2.2 Siebel Stats Test

Components refer to the various tasks or programs that run on the Siebel server and perform the work requested by the user. For example, the object manager is one of the key components on a Siebel server. In order to effectively measure the end-user experience with a Siebel server, it is essential to keenly observe and analyze the fluctuations in resource usage, responsiveness, and errors encountered by these components. The **Siebel Stats** test, executed by an internal agent, enables such an analysis. In the event of any deterioration in the performance of a Siebel server, the metrics reported by this test will enable administrators to figure out whether there are any resource-intensive/error-prone components on the Siebel server, which are impacting its performance.

Target of the test : A Siebel Application Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for Siebel server that is being monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
InstallDirectory	Provide the full path to the install directory of the Siebel server.
GatewayServer	Provide the IP address/host name of the Gateway server.
EnterpriseServer	This refers to the name that was specified for the Enterprise server during a Siebel installation. An Enterprise server is a logical entity. It collectively represents the Siebel application servers and gateway server.
UserName	This test executes a command on the Siebel server to extract the statistics of interest; this command requires administrator privileges to execute. Therefore, enter the name of the Siebel administrator.
Password	Specify the administrator password.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
CPU time	Indicates the total CPU time for component tasks	Secs	Ideally, the value of this measure should be low. A very high value could indicate that users are executing one/more CPU-intensive tasks on the Siebel server. Further investigation is hence required to zero-in on the resource-hungry components.
Elapsed time	Indicates the total elapsed (running) time for component tasks.	Secs	This measure is indicative of time taken by the task to complete its operation.
Think time	Indicates the average end-user think time between requests.	Secs	
Total response time	Indicates the total amount of time taken by the components to respond to requests.	Secs	A very high value indicates slow component responsiveness. Response time issues can be caused by high resource utilization or heavy load on the components.
Total tasks	Indicates the total number of tasks completed for the server components.	Number	
Avg response time	Indicates the average time taken by the components to respond to requests.	Secs	A very high value indicates that the component responds slowly to requests. Response time issues can be caused by high CPU utilization or heavy load on the components.
Avg connection time	Indicates the average connect time for component sessions.	Secs	Ideally, a low value is desired. A high value indicates connection bottlenecks.
Errors	Indicates that the component job ran but encountered an error during operation.	Number	Ideally, this value should be 0.
Tests attempted	This indicates the number of test attempted.	Number	

Measurement	Description	Measurement Unit	Interpretation
Tests failed	This metric represents the number of tests failed.	Number	
Tests successful	This metric represents the number of test successful.	Number	

4.2.3 Siebel Server Log Test

This test provides the status of errors logged in the Siebel log files.

Target of the test : A Siebel Application server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for every log file, log file directory, or *LogFilePath:PatternName* monitored on the Siebel Gateway server.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The hostname (or IP address) of the Siebel web server.
Port	The port number on which the Siebel web server is listening.
AlertFile	Specify the path to the log file to be monitored. For eg., *C:/sea703/SWEBApp/LOG/Siebel_Web_log.txt*. Multiple log file paths can be provided as a comma-separated list. Also, instead of a specific log file path, the path to the directory containing log files can be provided - eg., *C:/sea703/SWEBApp/LOG*. This ensures that eG Enterprise monitors the most recent log files in the specified directory. Specific log file name patterns can also be specified. For example, to monitor the latest log files with names containing the strings 'siebel' and 'log', the parameter specification can be, *C:/sea703/SWEBApp/LOG/*siebel*,C:/sea703/SWEBApp/LOG/*log**. Here, '*' indicates leading/trailing characters (as the case may be). In this case, the eG agent first enumerates all the log files in the specified path that match the given pattern, and then picks only the latest log file from the result set for monitoring. You can also configure the path in the following format:*Name@logfilepath*. Here, Name represents the display name of the path being configured. Accordingly, the parameter

Parameter	Description
	specification for the 'siebel' and 'log' example discussed above can be: *siebel@C:/sea703/SWEBApp/LOG/*siebel*,log@C:/sea703/SWEBApp/LOG/*log** . In this case, the display names 'siebel' and 'log' will alone be displayed as descriptors of this test. Every time this test is executed, the eG agent verifies the following: • Whether any changes have occurred in the size and/or timestamp of the log files that were monitoring during the last measurement period; • Whether any new log files (that match the alertfile specification) have been newly added since the last measurement period; If a few lines have been added to a log file that was monitored previously, then the eG agent monitors the additions to that log file, and then proceeds to monitor newer log files (if any). If an older log file has been overwritten, then, the eG agent monitors this log file completely, and then proceeds to monitor the newer log files (if any).
SearchPattern	Enter the specific patterns of alerts to be monitored. The pattern should be in the following format: *<PatternName>:<Pattern>*, where *<PatternName>* is the pattern name that will be displayed in the monitor interface and *<Pattern>* is an expression of the form - **expr** or *expr* or **expr* or *expr**, etc. A leading '*' signifies any number of leading characters, while a trailing '*' signifies any number of trailing characters. For example, say you specify Gen_errors:Generic* in the SearchPattern text box. This indicates that "Gen_errors" is the pattern name to be displayed in the monitor interface. "Generic*" indicates that the test will monitor only those lines in the log which start with the term "Generic". A single pattern may also be of the form e1+e2, where + signifies an OR condition. That is, the *<PatternName>* is matched if either e1 is true or e2 is true. Multiple search patterns can be specified as a comma-separated list. For example: *Gen_errors:Generic*,Critical_errors:*Error**. If the AlertFile specification is of the format *Name@logfilepath*, then the descriptor for this test in the eG monitor interface will be of the format: *Name:PatternName*. On the other hand, if the Alertfile specification consists only of a comma-separated list of log file paths, then the descriptors will be of the format: *LogFilePath:PatternName*.
Lines	Specify two numbers in the format **x:y**. This means that when a line in the log file matches a particular pattern, then x lines before the matched line and y lines after the matched line will be reported in the detail diagnosis output (in addition to the matched line). The default value here is *0:0*. Multiple entries can be provided as a comma-separated list.

Parameter	Description
	If you give *1:1* as the value for LINES, then this value will be applied to all the patterns specified in the SearchPattern field. If you give *0:0*, *1:1* as the value for Lines and if the corresponding value in the SearchPattern filed is like Gen_errors:Generic*,Critical_ errors:*Error*, then: *0:0* will be applied to the Gen_errors:Generic*pattern *1:1* will be applied to the Critical_errors:*Error*pattern
ExcludePattern	Provide a comma-separated list of patterns to be excluded from monitoring in the ExcludePattern text box. For example **critical*,*exception**. By default, this parameter is set to '*none*'
UniqueMatch	By default, the UniqueMatch parameter is set to **False**, indicating that, by default, the test checks every line in the log file for the existence of each of the configured SearchPatterns. By setting this parameter to **True**, you can instruct the test to ignore a line and move to the next as soon as a match for one of the configured patterns is found in that line. For example, assume that *Pattern1:*Generic*,Pattern2:*Error** is the SearchPattern that has been configured. If UniqueMatch is set to **False**, then the test will read every line in the log file completely to check for the existence of messages embedding the strings 'Generic' and 'Error'. If both the patterns are detected in the same line, then the number of matches will be incremented by 2. On the other hand, if UniqueMatch is set to **True**, then the test will read a line only until a match for one of the configured patterns is found and not both. This means that even if the strings 'Generic' and 'Error' follow one another in the same line, the test will consider only the first match and not the next. The match count in this case will therefore be incremented by only 1.
RotatingFile	This flag governs the display of descriptors for this test in the eG monitoring console. If this flag is set to true and the AlertFile text box contains the full path to a specific (log/text) file, then, the descriptors of this test will be displayed in the following format: *Directory_containing_monitored_file:<SearchPattern>*. For instance, if the AlertFile parameter is set to *c:\eGurkha\logs\syslog.txt*, and RotatingFile is set to **True**, then, your descriptor will be of the following format: *c:\eGurkha\logs:<SearchPattern>*. On the other hand, if the RotatingFile flag had been set to **False**, then the descriptors will be of the following format: *<FileName>:<SearchPattern>* - i.e., *syslog.txt:<SearchPattern>* in the case of the example above. If this flag is set to **True** and the AlertFile parameter is set to the directory containing log files, then, the descriptors of this test will be displayed in the format: *Configured_ directory_path:<SearchPattern>*. For instance, if the AlertFile parameter is set to *c:\eGurkha\logs*, and RotatingFile is set to **True**, then, your descriptor will be: *c:\eGurkha\logs:<SearchPattern>*. On the other hand, if the RotatingFile parameter had been set to **False**, then the descriptors will be of the following format: *Configured_*

Parameter	Description
	directory:<SearchPattern> - i.e., *logs:<SearchPattern>* in the case of the example above. If this flag is set to **True** and the AlertFile parameter is set to a specific file pattern, then, the descriptors of this test will be of the following format: *<FilePattern>:<SearchPattern>*. For instance, if the AlertFile parameter is set to *c:\eGurkha\logs*sys**, and RotatingFile is set to **True**, then, your descriptor will be: **sys*:<SearchPattern>*. In this case, the descriptor format will not change even if the RotatingFile flag status is changed.
Detailed Diagnosis	To make diagnosis more efficient and accurate, the eG Enterprise suite embeds an optional detailed diagnostic capability. With this capability, the eG agents can be configured to run detailed, more elaborate tests as and when specific problems are detected. To enable the detailed diagnosis capability of this test for a particular server, choose the **On** option. To disable the capability, click on the **Off** option. The option to selectively enable/disable the detailed diagnosis capability will be available only if the following conditions are fulfilled: • The eG manager license should allow the detailed diagnosis capability • Both the normal and abnormal frequencies configured for the detailed diagnosis measures should not be 0.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Recent errors	Indicates the total number of recent errors logged in the Siebel log files.	Number	The value of this measure is a clear indicator of the number of “new” alerts that have come into the log file of the monitored server.

4.2.4 Siebel Tasks Test

This test reports the current and completed tasks on every object manager on a Siebel server.

Target of the test : A Siebel Application Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for each object manager on the Siebel server monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
InstallDirectory	Provide the full path to the install directory of the Siebel server.
GatewayServer	Provide the IP address/host name of the Gateway server.
EnterpriseServer	This refers to the name that was specified for the Enterprise server during a Siebel installation. An Enterprise server is a logical entity. It collectively represents the Siebel application servers and gateway server.
UserName	This test executes a command on the Siebel server to extract the statistics of interest; this command requires administrator privileges to execute. Therefore, enter the name of the Siebel administrator.
Password	Specify the administrator password.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.
Detailed Diagnosis	To make diagnosis more efficient and accurate, the eG Enterprise suite embeds an optional detailed diagnostic capability. With this capability, the eG agents can be configured to run detailed, more elaborate tests as and when specific problems are detected. To enable the detailed diagnosis capability of this test for a particular server, choose the **On** option. To disable the capability, click on the **Off** option. The option to selectively enable/disable the detailed diagnosis capability will be available only if the following conditions are fulfilled: • The eG manager license should allow the detailed diagnosis capability • Both the normal and abnormal frequencies configured for the detailed diagnosis measures should not be 0.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Running tasks	Indicates the number of tasks currently running on this Object Manager.	Number	The detailed diagnosis of this measure, if enabled, provides the details of tasks current running. Such

Measurement	Description	Measurement Unit	Interpretation
			details include the task ID, the object manager that is running the task, the mode in which the task is running, and the data\time at which the task began running. Using this information, you can quickly identify long-running tasks, and investigate the reason behind the same.
Completed tasks	Indicates the number of tasks that ran to completion and exited normally on this Object Manager.	Number	

4.2.5 Siebel Traffic Test

This test monitors the status of incoming and outgoing traffic to the Siebel application server.

Target of the test : A Siebel Application Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for each Siebel server monitored.

Configurable parameters for the test

Parameter	Description
Test period	How often should the test be executed.
Host	The host for which the test is to be configured.
Port	The port number at which the specified host listens to. By default, this is *1199*.
InstallDirectory	Provide the full path to the install directory of the Siebel server.
GatewayServer	Provide the IP address/host name of the Gateway server.
EnterpriseServer	This refers to the name that was specified for the Enterprise server during a Siebel installation. An Enterprise server is a logical entity. It collectively represents the Siebel application servers and gateway server.

Parameter	Description
UserName	This test executes a command on the Siebel server to extract the statistics of interest; this command requires administrator privileges to execute. Therefore, enter the name of the Siebel administrator.
Password	Specify the administrator password.
Confirm Password	Confirm the Siebel Agent Password by retyping it here.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Request size	Indicates the size of incoming requests to the Siebel server.	Bytes	This measures helps you to quantify the load on the Siebel server.
Reply size	Indicates the size of responses sent by the Siebel server.	Bytes	

About eG Innovations

eG Innovations provides intelligent performance management solutions that automate and dramatically accelerate the discovery, diagnosis, and resolution of IT performance issues in on-premises, cloud and hybrid environments. Where traditional monitoring tools often fail to provide insight into the performance drivers of business services and user experience, eG Innovations provides total performance visibility across every layer and every tier of the IT infrastructure that supports the business service chain. From desktops to applications, from servers to network and storage, from virtualization to cloud, eG Innovations helps companies proactively discover, instantly diagnose, and rapidly resolve even the most challenging performance and user experience issues.

eG Innovations is dedicated to helping businesses across the globe transform IT service delivery into a competitive advantage and a center for productivity, growth and profit. Many of the world's largest businesses use eG Enterprise to enhance IT service performance, increase operational efficiency, ensure IT effectiveness and deliver on the ROI promise of transformational IT investments across physical, virtual and cloud environments.

To learn more visit www.eginnovations.com.

Contact Us

For support queries, email support@eginnovations.com.

To contact eG Innovations sales team, email sales@eginnovations.com.