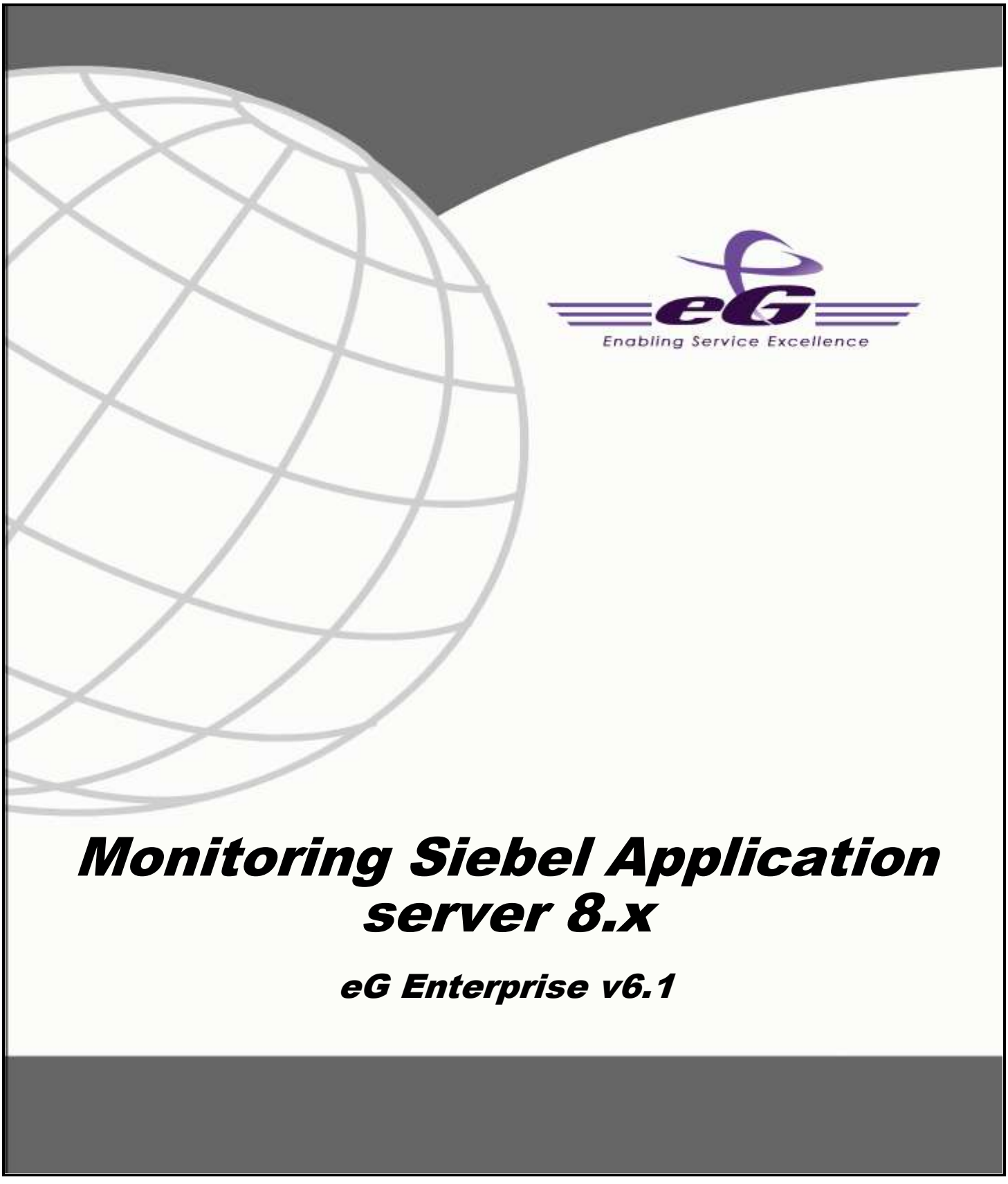

Monitoring Siebel Application server 8.x

eG Enterprise v6.1

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1 Monitoring the Siebel Application server

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.

eG Enterprise offers a specialized *Siebel Application server* monitoring model (see Figure 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.

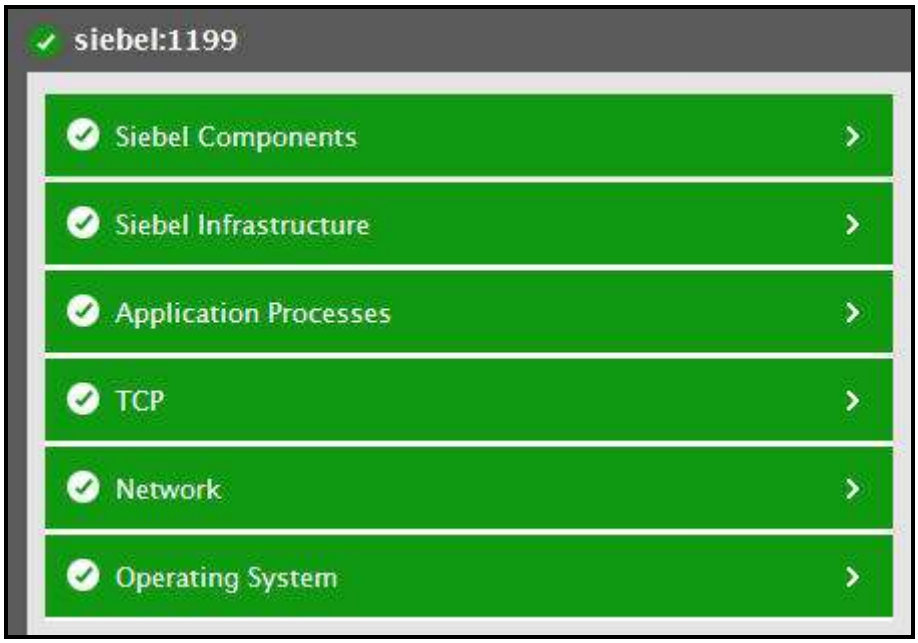

Figure 1: The layer model of the Siebel Application server

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. Since these tests have been dealt with in the *Monitoring Unix and Windows Servers* document, Section 1.1 focuses on the **Siebel Infrastructure** layer.

1.1 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/si
ebel/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.

1.2 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 2: The tests mapped to the Siebel Infrastructure layer

1.2.1 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.

Purpose	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

<table>
<tr><td>Configurable parameters for the test</td><td colspan="3">1. TEST PERIOD - How often should the test be executed
2. HOST - The host for which the test is to be configured.
3. PORT – The port number at which the specified HOST listens to. By default, this is 1199.
4. 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.
5. JNDI NAME - 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.
6. 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:
<code>com.siebel.management.security.login=SADMIN
com.siebel.management.security.password=******</code>
7. CONFIRM PASSWORD – Confirm the password by retyping it here.</td></tr>
<tr><td>Outputs of the test</td><td colspan="3">One set of results for each Siebel server being monitored</td></tr>
<tr><td rowspan="4">Measurements made by the test</td><td>Measurement</td><td>Measurement Unit</td><td>Interpretation</td></tr>
<tr><td>Number of errors:
Indicates the number of errors encountered by this Object Manager.</td><td>Number</td><td>Ideally, the value of this measure should be zero.</td></tr>
<tr><td>Average message requests:
Indicates the number of request messages received by this Object Manager per second.</td><td>Requests/Sec</td><td></td></tr>
<tr><td>Average message responses:
Indicates the number of reply messages sent from this Object Manager per second.</td><td>Responses/Sec</td><td></td></tr>
<tr><td></td><td>Average connect time:
Indicates the average time taken to connect to this Object Manager session.</td><td>Secs</td><td>A low value is desired for this measure. A high value indicates connection bottlenecks.</td></tr>
</table>

	Average size of request messages: Indicates the average size of the request messages received by this Object Manager.	KB	
	Average size of reply messages: Indicates the average size of the reply messages sent from this Object Manager.	KB	
	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	

1.2.2 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.

Purpose	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 server		
Agent deploying the test	A remote agent		
Configurable parameters for the test	1. **TEST PERIOD** - How often should the test be executed 2. **HOST -** The host for which the test is to be configured. 3. **PORT** – The port number at which the specified **HOST** listens to. By default, this is *1199*. 4. **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. 5. **JNDI NAME** - 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. 6. **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. 7. **CONFIRM PASSWORD –** Confirm the password by retyping it here.		
Outputs of the test	One set of results for each Siebel server being monitored		
Measurements made by the test	**Measurement**	**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.

1.2.3 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.

Purpose	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 server		
Agent deploying the test	A remote agent		
Configurable parameters for the test	1. **TEST PERIOD** - How often should the test be executed 2. **HOST -** The host for which the test is to be configured. 3. **PORT** – The port number at which the specified HOST listens to. By default, this is *1199*. 4. **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. 5. **JNDI NAME** - 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. 6. **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. 7. **CONFIRM PASSWORD –** Confirm the password by retyping it here.		
Outputs of the test	One set of results for each Siebel server being monitored		
Measurements made by the test	**Measurement**	**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.

1.2.4 Siebel Database Test

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

Purpose	Monitors the overall health of the interactions between the Siebel server and its backend database.		
Target of the test	A Siebel server		
Agent deploying the test	A remote agent		
Configurable parameters for the test	1. **TEST PERIOD** - How often should the test be executed 2. **HOST -** The host for which the test is to be configured. 3. **PORT** – The port number at which the specified **HOST** listens to. By default, this is *1199*. 4. **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. 5. **JNDI NAME** - 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. 6. **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. 7. **CONFIRM PASSWORD –** Confirm the password by retyping it here.		
Outputs of the test	One set of results for each Siebel server being monitored		
Measurements made by the test	**Measurement**	**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 per second.	Fetches/Sec	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 per second.	Parses/Sec	A low value is indicative of low parse-intensive queries on the Siebel database.

1.2.5 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.

Purpose	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 server
Agent deploying the	A remote agent

<table>
<tr><td>test</td><td colspan="3"></td></tr>
<tr><td>Configurable parameters for the test</td><td colspan="3">1. TEST PERIOD - How often should the test be executed
2. HOST - The host for which the test is to be configured.
3. PORT – The port number at which the specified HOST listens to. By default, this is 1199.
4. 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.
5. JNDI NAME - 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.
6. 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.
7. CONFIRM PASSWORD – Confirm the password by retyping it here.</td></tr>
<tr><td>Outputs of the test</td><td colspan="3">One set of results for each Siebel server being monitored</td></tr>
<tr><td rowspan="5">Measurements made by the test</td><td>Measurement</td><td>Measurement Unit</td><td>Interpretation</td></tr>
<tr><td>Query calls:
Indicates the number of query calls made to the Siebel EAI Adapter.</td><td>Number</td><td>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.</td></tr>
<tr><td>Query size:
Indicates the rate at which the output property sets for all queries are processed.</td><td>KB/Sec</td><td></td></tr>
<tr><td>Non-query calls:
Indicates the number of non query calls made to the Siebel EAI Adapter.</td><td>Number</td><td>This measure is inclusive of all the Synchronize, Upsert, Insert and Update queries.</td></tr>
<tr><td>Non-query size:
Indicates the rate at which the input property sets for all queries are processed.</td><td>KB/Sec</td><td></td></tr>
<tr><td>XML calls:
Indicates the rate at which the XML calls are generated in this Siebel EAI Adapter.</td><td>Calls/Sec</td><td></td></tr>
</table>

	XML input buffer: Indicates the rate at which the XML input buffer grows in this Siebel EAI adapter.	KB/Sec	
	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	

1.2.6 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.

Purpose	Monitors the fluctuations in responsiveness, and errors encountered by the components of the Siebel Application server
Target of the test	A Siebel server
Agent deploying the test	A remote agent
Configurable parameters for the test	1. **TEST PERIOD** - How often should the test be executed 2. **HOST -** The host for which the test is to be configured. 3. **PORT** – The port number at which the specified HOST listens to. By default, this is *1199*. 4. **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. 5. **JNDI NAME** - 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. 6. **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. 7. **CONFIRM PASSWORD –** Confirm the password by retyping it here.

Outputs of the test	One set of results for each Siebel server being monitored		
Measurements made by the test	**Measurement**	**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 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.

1.2.7 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.

Purpose	Reports 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 server		
Agent deploying the test	A remote agent		
Configurable parameters for the test	1. **TEST PERIOD** - How often should the test be executed 2. **HOST -** The host for which the test is to be configured. 3. **PORT** – The port number at which the specified HOST listens to. By default, this is *1199*. 4. **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. 5. **JNDI NAME** - 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. 6. **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. 7. **CONFIRM PASSWORD –** Confirm the password by retyping it here.		
Outputs of the test	One set of results for each Siebel server being monitored		
Measurements made by the test	**Measurement**	**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.

1.3 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: The tests mapped to the Siebel Components layer

1.3.1 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!

Purpose	Reports the number of notifications received and processed for this component and also reports the numerical statistics of the invocations that were handled successfully and the invocations that failed.
Target of the test	A Siebel server
Agent deploying the test	A remote agent

<table>
<tr><td>Configurable parameters for the test</td><td colspan="3">1. TEST PERIOD - How often should the test be executed
2. HOST - The host for which the test is to be configured.
3. PORT – The port number at which the specified HOST listens to. By default, this is 1199.
4. 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.
5. JNDI NAME - 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.
6. 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.
7. CONFIRM PASSWORD – Confirm the password by retyping it here.</td></tr>
<tr><td>Outputs of the test</td><td colspan="3">One set of results for each Siebel server being monitored</td></tr>
<tr><td rowspan="4">Measurements made by the test</td><td>Measurement</td><td>Measurement Unit</td><td>Interpretation</td></tr>
<tr><td>Failed notification handlers:
Indicates the number of invocations of the notification handler that failed for this component.</td><td>Number</td><td>A low value is desired for this measure.</td></tr>
<tr><td>Notifications processed:
Indicates the number of notifications that were processed for this component.</td><td>Number</td><td></td></tr>
<tr><td>Notifications received:
Indicates the number of notifications that were received for this component.</td><td>Number</td><td></td></tr>
<tr><td></td><td>Successful notification handlers:
Indicates the number of invocations of the notification handler that were successful for this component.</td><td>Number</td><td>A high value is desired for this measure.</td></tr>
</table>

1.3.2 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.

Purpose	Monitors each of the object managers to ascertain their current state and Load.		
Target of the test	A Siebel server		
Agent deploying the test	An internal agent		
Configurable parameters for the test	1. **TEST PERIOD** - How often should the test be executed 2. **HOST -** The host for which the test is to be configured. 3. **PORT** – The port number at which the specified HOST listens to. By default, this is *1199*. 4. **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. 5. **JNDI NAME** - 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. 6. **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. 7. **CONFIRM PASSWORD –** Confirm the password by retyping it here.		
Outputs of the test	One set of results for every Object Manager that is to be monitored		
Measurements made by the	**Measurement**	**Measurement Unit**	**Interpretation**

<table>
<tr>
<td rowspan="4">test</td>
<td>State:
Indicates the current state of this Siebel Object Manager.</td>
<td></td>
<td>The values that this measure can report and their corresponding numeric values are tabulated below:

<table>
<tr><th>Measure Value</th><th>Numeric Value</th></tr>
<tr><td>StartingUP</td><td>0</td></tr>
<tr><td>Online</td><td>1</td></tr>
<tr><td>Running</td><td>2</td></tr>
<tr><td>Offline</td><td>3</td></tr>
<tr><td>ShuttingDown</td><td>4</td></tr>
<tr><td>ShutDown</td><td>5</td></tr>
<tr><td>Unavailable</td><td>6</td></tr>
</table>

Note:
By default, this measure reports the above-mentioned Measure Values 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.</td>
</tr>
<tr>
<td>Max MTServers:
Indicates the maximum number of MTServer per component per server.</td>
<td>Number</td>
<td>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.</td>
</tr>
<tr>
<td>Active MTServers:
Indicates the number of MTServers that are currently active on this Object Manager.</td>
<td>Number</td>
<td>The value of this measure should be close to the Max MTServers measure.</td>
</tr>
<tr>
<td>MTS usage factor:
Indicates the percentage of MTServers that are being actively used by this Object Manager.</td>
<td>Percent</td>
<td>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.</td>
</tr>
</table>

1.3.3 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.

Purpose	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 server		
Agent deploying the test	An internal agent		
Configurable parameters for the test	1. **TEST PERIOD** - How often should the test be executed 2. **HOST -** The host for which the test is to be configured. 3. **PORT** – The port number at which the specified HOST listens to. By default, this is *1199*. 4. **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. 5. **JNDI NAME** - 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. 6. **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. 7. **CONFIRM PASSWORD –** Confirm the password by retyping it here.		
Outputs of the test	One set of results for each object manager on the Siebel server that is to be monitored		
Measurements made by the test	**Measurement**	**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 tasks that ran to completion and exited normally on this Object Manager.	Number	
	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.

2

Conclusion

This document has described in detail the monitoring paradigm used and the measurement capabilities of the eG Enterprise suite of products with respect to the **Siebel Application Server**. For details of how to administer and use the eG Enterprise suite of products, refer to the user manuals.

We will be adding new measurement capabilities into the future versions of the eG Enterprise suite. If you can identify new capabilities that you would like us to incorporate in the eG Enterprise suite of products, please contact support@eginnovations.com. We look forward to your support and cooperation. Any feedback regarding this manual or any other aspects of the eG Enterprise suite can be forwarded to feedback@eginnovations.com.