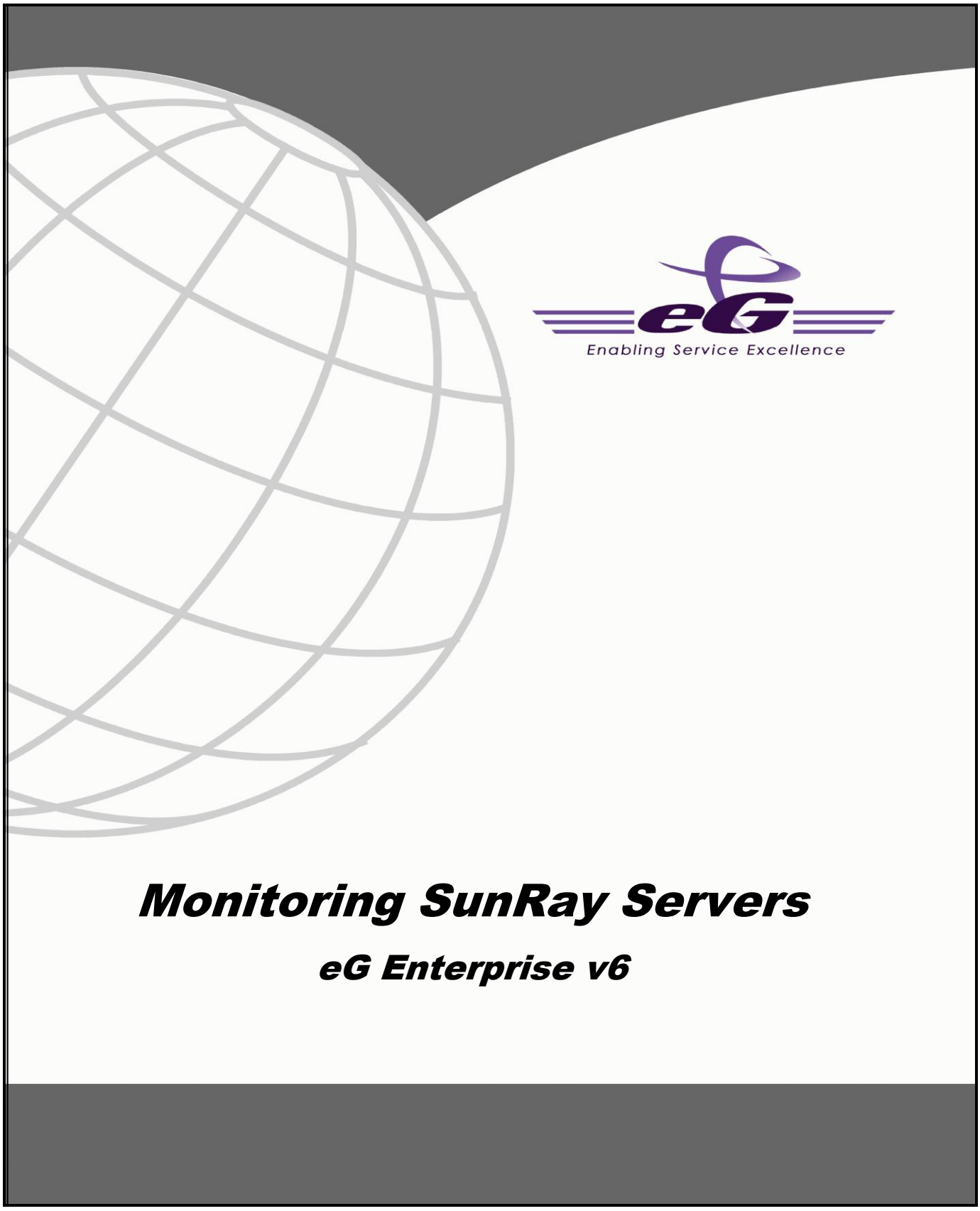

Monitoring SunRay Servers

eG Enterprise v6

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Chapter 1

Monitoring SunRay Servers

SunRay Software is a secure, cost effective solution that delivers a virtual Windows, Linux or Solaris OS desktop to SunRay clients. It enables organizations to centrally manage and control the end-user desktop experience from the server, not the client, thereby virtually eliminating desktop maintenance.

Though the SunRay technology is designed to provide immunity to the server from availability issues caused by client-induced viruses, a bad network connection can still render the server unavailable to a SunRay client; this can deny the client access to critical desktops. Similarly, if the administrator inadvertently disables a crucial device service on the SunRay server – eg., the smart card reader – it can result in unsecured, unauthenticated Windows sessions to be alive on the SunRay server; data loss/theft will then become inevitable!

By periodically monitoring the SunRay server and the network connections leading to it, such problems can be averted.

eG Enterprise provides a specialized monitoring model for the *SunRay* server, which monitors the client-server connections, the status of device services, and the user sessions on the SunRay server to detect anomalies, and promptly alert administrators to it.

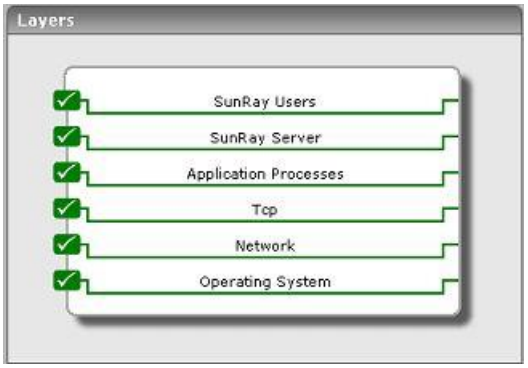

Figure 1: The layer model of a SunRay server

Using the tests mapped to each of the layers in Figure 1, administrators can figure out the following:

- Is any SunRay client unable to connect to the server? If so, which one?
- Is the network traffic to the server from any client very heavy?
- Is any device service on the server disabled currently? If so, which service?

- Are there too many active sessions on the server?
- Are there any unknown sessions on the server?
- Have any sessions on the server been idle for too long a time?

The sections to come will shed light on which tests report the aforesaid metrics.

1.1 The SunRay Server Layer

The test mapped to this layer monitors the current status of the device services on the SunRay server.

Figure 2: The test mapped to the SunRay server

1.1.1 UtDeviceServices Test

SunRay device services include USB devices connected through USB ports, internal serial ports, and internal smart card readers on the SunRay DTU. After installation of SunRay Server Software, all device services are enabled by default. Administrators can use this test to check whether each of these device services is enabled or not.

Purpose	Checks whether SunRay device services are enabled or not		
Target of the test	The SunRay 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 – Refers to the port at which SunRay server listens for requests. By default, this is 7010.		
Outputs of the test	One set of results for each device service on the SunRay server monitored		
Measurements made by the	**Measurement**	**Measurement Unit**	**Interpretation**

test	**Service status:** Indicates whether this service is enabled or disabled.	Percent	If the value of this measure is 100, it indicates that this service is enabled. Whereas, the value 0 indicates that this service is disabled. When internal serial service is disabled, users cannot access embedded serial ports on the SunRay DTU. The SunRay 170 has two embedded serial ports. When internal smart card reader service is disabled, users cannot access the internal smart card reader through the PC/SC or SCF interfaces for reading or writing; however, this does not affect session access or hotdesking with unauthenticated smart cards. When USB service is disabled, users cannot access any devices connected to USB ports. This does not, however, affect HID devices such as the keyboard, mouse, or barcode reader.

1.2 The SunRay Users Layer

This layer monitors the health of the network connections to the SunRay server, and also monitors the nature of the sessions on the server.

Figure 3: The tests mapped to the SunRay Users layer

1.2.1 SunRayClientDetails Test

This test monitors the connectivity between each SunRay client and the SunRay server, so that the quality of each network link is checked and connection bottlenecks revealed.

Purpose	Monitors the connectivity between each SunRay client and the SunRay server, so that the quality of each network link is checked and connection bottlenecks revealed
Target of the test	A SunRay 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 – Refers to the port at which SunRay server listens for requests. By default, this is 7010. 4. targetport - In the **TARGETPORT** text box, specify the port at which the SunRay server is listening for requests from clients. 5. timeout – Specify the duration for which this test will wait for a response from the server. The default is 120 seconds.		
Outputs of the test	One set of results for each client connected to the SunRay server		
Measurements made by the test	**Measurement**	**Measurement Unit**	**Interpretation**
	Packets: Indicates the number of data packets received by the server from this client during the last measurement period.	Packets	
	Dropped packets: Indicates the number of packets sent by this client that were dropped in transit during the last measurement period.	Packets	Ideally, this value should be low. A high value for this measure is indicative of poor network performance.
	Packet traffic: Indicates the rate at which the server received data packets from this client.	Packets/Sec	
	Bandwidth used: Indicates the bandwidth used by the SunRay server while receiving data packets from this client.	Kbytes/Sec	
	Data transferred: Indicates the data sent by this client to the server during the last measurement period.	MBytes	
	Latency: Indicates the average delay between transmission of a packet to the server from this client.	Msecs	Ideally, this value should be very low. A high value, or a consistent increase in the value, indicates the existence of a bottleneck in the network connection leading to the server from this client.

	Delta latency: Indicates the difference in latency since the previous measurement period.	Msecs	Ideally, this value should be 0, or should at least be a very low value. A high value, or a steady increase in the value, indicates that the quality of the network connection between this client and the server is deteriorating.
	Connect time: Indicates the duration for which this user session remained idle on the server during the last measurement period.	Secs	A low value is desired for this measure. A high value could indicate a network problem.
	Idle time: Indicates the duration for which this user session remained idle on the server during the last measurement period.	Secs	Idle sessions are unnecessary resource drainers. You might want to set a low timeout value on the server to ensure that user sessions do not remain idle for too long a time.
	Percent idle time: Indicates the percentage of time for which this user session was idle.	Percent	

1.2.2 SunRaySessions Test

This test monitors the sessions to the SunRay server, and helps determine number and type of sessions on the server.

Purpose	Monitors the sessions to the SunRay server, and helps determine number and type of sessions on the server
Target of the test	A SunRay server
Agent deploying the test	An internal 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 – Refers to the port at which SunRay server listens for requests. By default, this is 7010.
4. 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 enabled/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.</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>Active sessions:
Indicates the number of sessions that are currently active on the server.</td><td>Number</td><td>This is a good indicator of the current workload on the server. The detailed diagnosis of this measure provides the details of the active sessions.</td></tr>
<tr><td>Detached sessions:
Indicates the total number of detached sessions on the server in the last measurement period.</td><td>Number</td><td></td></tr>
<tr><td>Login sessions:
Indicates the number of login sessions on the server during the last measurement period.</td><td>Number</td><td>a.</td></tr>
<tr><td></td><td>Unknown sessions:
Indicates the number of unknown sessions on the server during the last measurement period.</td><td>Number</td><td>b.</td></tr>
</table>

Chapter 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 **SunRay 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.