Monitoring Microsoft Remote Authentication Service (RAS)

eG Innovations Product Documentation

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Total Performance Visibility

Table of Contents

Table of Figures

Chapter 1: Introduction

Microsoft Remote Access Service (RAS) is a feature in the Windows Server family, including Windows Server 2003, Windows 2000 Server, and , NT4 Server. A Limited version of RAS is also included in Windows XP Professional. RAS allows remote dial-up clients to connect to a Local Area Network using analog phone lines or ISDN lines. A typical use would be by an ISP (Internet Service Provider) to allow users to dial in to their LAN, or by a corporate network administrator to allow their users to connect to the corporate LAN from remote sites. The remote clients connect to RAS using the TCP/IP protocol encapsulated in the Point-to-Point (PPP) protocol, which allows the remote client to access the LAN as if they were plugged directly into it.

Needless to say, even a brief non-availability of RAS can cause critical services to go out of the reach of remote clients. Continuous monitoring of the RAS server can alone ensure a higher uptime of the RAS service. To achieve this purpose, eG Enterprise provides a 100% web-based monitoring model to continuously monitor and report on the status of Microsoft RAS.

This document describes the monitoring model that eG Enterprise prescribes for Microsoft RAS, and the performance metrics the monitoring model collects.

Chapter 2: How to Monitor Microsoft Remote Authentication Service (RAS) Using eG Enterprise?

eG Enterprise is capable of monitoring the Microsoft Remote Authentication Service (RAS) in both agent-based and agentless manners. In case of the agentless approach, the remote agent used to monitor the server should be deployed on a remote Windows host in the environment. Manage the Microsoft Remote Authentication Service (RAS) using eG administrative interface to start monitoring the server. The procedure for achieving this is explained in the following section.

2.1 Managing the Microsoft RAS

The eG Enterprise cannot automatically discover the Microsoft RAS. This implies that you need to manually add the component for monitoring. Remember that the eG Enterprise automatically manages the components that are added manually. To manage a Microsoft RAS 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 *Microsoft RAS* as the **Component type**. Then, click the **Add New Component** button. This will invoke Figure 2.1.

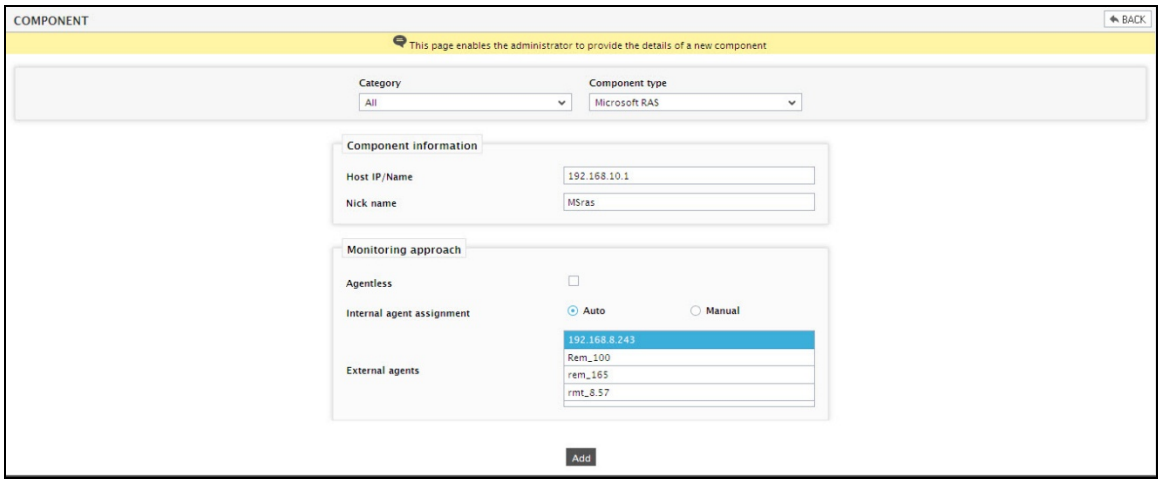

Figure 2.1: Adding a Microsoft RAS server

3. Specify the **Host IP** and the **Nick name** of the Microsoft RAS in Figure 2.1. Then, click the **Add** button to register the changes.
4. Finally sign out of the eG administrative interface.

Chapter 3: Monitoring the Microsoft RAS Server

Using the *Microsoft RAS* monitoring model (see Figure 3.1) presented by the eG Enterprise suite, administrators can closely observe RAS operations 24x7, be forewarned of probable issues, and quickly attend to the issues before any permanent damage occurs.

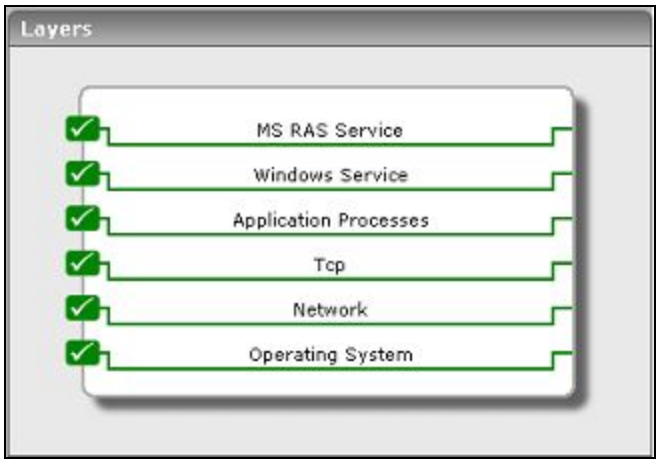

Figure 3.1: Layer model of the MS RAS server

The sections to come will deal with the tests mapped to the **MS RAS Service** layer only, as the remaining layers have already been discussed in the *Monitoring Unix and Windows Servers* document.

3.1 The MS RAS Service Layer

Using the tests depicted by Figure 3.2, the **MS RAS Service** layer enables administrators to assess the effectiveness of the dial-up communication service provided by the RAS device.

Figure 3.2: The tests associated with the MSRAS_SERVICE layer

3.1.1 Microsoft RAS Port Test

This test reports the performance statistics pertaining to every port of the Remote Access Service (RAS) device on the computer.

Target of the test : A Microsoft RAS Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for every RAS port.

Configurable parameters for the test

Parameters	Description
Test Period	How often should the test be executed.
Host	The host for which this test is to be configured.
Port	The port at which the specified host listens. The default port is *Null*.

Measurements made by the test

Measurement	Descriptiom	Measurement Unit	Interpretation
Bytes transmitted	Indicates the rate at which bytes were transmitted.	Bytes/Sec	
Bytes received	Indicates the rate at which bytes were received.	Bytes/Sec	When viewed along with the Bytes_ transmitted measure, this measure

Measurement	Descriptiom	Measurement Unit	Interpretation
			serves as a good indicator of the traffic on the network.
Frames transmitted	Indicates the number of frames transmitted per second.	Frames/Sec	
Frames received	Indicates the number of frames received per second.	Frames/Sec	
Total errors	Indicates the number of CRC, Timeout, Serial Overrun, Alignment, and Buffer Overrun errors per second.	Number	
Compression ratio for bytes sent	Indicates the compression ratio for the bytes being transmitted.	Percent	
Compression ratio for bytes received	Indicates the compression ratio for the bytes being received.	Percent	
Total connections	Indicates the number of remote access connections.	Number	
CRC errors	Indicates the current number of CRC errors for this port.	Number	CRC errors occur when the frame received contains erroneous data.
Timeout errors	Indicates the current number of timeout errors for this port.	Number	Timeout errors occur when an expected packet is not received in time.
Serial overrun errors	Indicates the current number of serial overrun errors for this port t.	Reqs/Sec	Serial Overrun errors occur when the hardware cannot handle the rate at which data is received.
Alignment errors	Indicates the current number of alignment errors for this port.	Number	Alignment errors occur when a received byte is different from the expected byte.
Buffer overrun errors	Indicates the current	Number	Buffer Overrun errors occur when the

Measurement	Descriptiom	Measurement Unit	Interpretation
	number of buffer overrun errors for this port.		software cannot handle the rate at which data is received.

3.1.2 Microsoft RAS Test

This test reports the performance statistics that are aggregated across all the ports of the Remote Access Service (RAS) device on the computer.

Target of the test : A Microsoft RAS Server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for every port on the RAS server being monitored.

Configurable parameters for the test

Parameters	Description
Test Period	How often should the test be executed.
Host	The host for which this test is to be configured.
Port	The port at which the specified host listens. The default port is *Null*.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Bytes transmitted	Indicates the rate at which bytes were transmitted.	Bytes/Sec	
Bytes received	Indicates the rate at which bytes were received.	Bytes/Sec	When viewed along with the Bytes_ transmitted measure, this measure serves as a good indicator of the traffic on the network.
Frames transmitted	Indicates the number of frames transmitted per second.	Frames/Sec	
Frames received	Indicates the number of frames received per	Frames/Sec	

Measurement	Description	Measurement Unit	Interpretation
	second.		
Total errors	Indicates the number of CRC, Timeout, Serial Overrun, Alignment, and Buffer Overrun errors per second.	Number	
Compression ratio for bytes sent	Indicates the compression ratio for the bytes being transmitted.	Percent	
Compression ratio for bytes received	Indicates the compression ratio for the bytes being received.	Percent	
Total connections	Indicates the number of remote access connections.	Number	
CRC errors	Indicates the current number of CRC errors for this port.	Number	CRC errors occur when the frame received contains erroneous data.
Timeout errors	Indicates the current number of timeout errors for this port.	Number	Timeout errors occur when an expected packet is not received in time.
Serial overrun errors	Indicates the current number of serial overrun errors for this port.	Reqs/Sec	Serial Overrun errors occur when the hardware cannot handle the rate at which data is received.
Alignment errors	Indicates the current number of alignment errors for this port.	Number	Alignment errors occur when a received byte is different from the expected byte.
Buffer overrun errors	Indicates the current number of buffer overrun errors for this port.	Number	Buffer Overrun errors occur when the software cannot handle the rate at which data is received.

3.1.3 Windows Telephony Test

This test measures the performance of the telephone-communication activity on a computer running Windows 2000 or a higher operating system.

Target of the test : A Microsoft RAS Server

Agent deploying the test : An internal agent

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

Configurable parameters for the test

Parameters	Description
Test Period	How often should the test be executed.
Host	The host for which the test is to be configured.
Port	The port at which the specified host listens. The default port is *Null*.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Telephone lines	Indicates the number of telephone lines currently serviced by this computer.	Number	
Telephone devices	Indicates the number of telephone devices (telephones or speaker phones) currently serviced by this computer.	Number	
Active telephone lines	Indicates the number of telephone or integrated services digital network (ISDN) lines serviced by this computer that are currently in use by applications.	Number	
Active telephone devices	Indicates the number of telephone devices (telephones or speaker phones) that are currently in use by applications.	Number	
Outgoing calls	Indicates the rate at which outgoing calls are made by	Calls/Sec	

Measurement	Description	Measurement Unit	Interpretation
	this computer.		
Incoming calls	Indicates the rate at which incoming calls are answered by this computer.	Calls/Sec	
Client applications using telephony services	Indicates the number of applications that are currently using telephony services.	Number	
Current outgoing calls	Indicates the number of outgoing calls that are currently being serviced by this computer.	Number	
Current incoming calls	Indicates the number of incoming calls that are currently being serviced by this computer.	Number	

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.

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