Monitoring Microsoft Print Server

eG Innovations Product Documentation

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Total Performance Visibility

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Chapter 1: Introduction

Print servers are a popular mode of sharing printing resources in IT infrastructures. The Microsoft Windows operating system allows for specific servers to be designated and managed as print servers. Some of the key reasons for why IT administrators configure and use print servers include centralized management of print drivers, access control and prioritization of print jobs, central auditing capability or charging, etc. Since print servers are common resources for all the users of an IT infrastructure, IT administrators must continuously monitor the print servers to ensure high uptime, good performance, and scalability. The eG Enterprise Suite helps administrators in this task.

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

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Chapter 2: Administering eG Manager to work with Microsoft Print server

To do the above, do the following:

1. Log into the eG administrative interface.
2. If an Microsoft Print server is already discovered, then directly proceed towards managing it using the **COMPONENTS - MANAGE/UNMANAGE** page (Infrastructure -> Components -> Manage/Unmanage). However, if it is yet to be discovered, then run discovery (Infrastructure -> Components -> Discover) to get it discovered or add the MS Print server manually using the **COMPONENTS** page (Infrastructure -> Components -> Add/Modify). Remember that components manually added are managed automatically. Discovered components, however, are managed using the **COMPONENTS - MANAGE/UNMANAGE** page. Figure 2.1 and Figure 2.2 clearly illustrate the process of managing an Microsoft Print server.

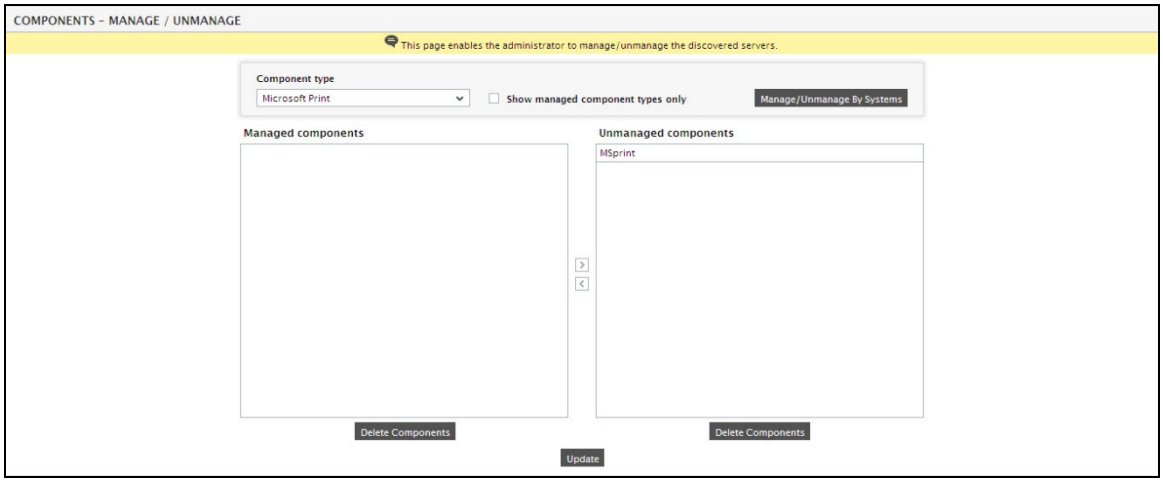

Figure 2.1: Viewing the list of unmanaged Microsoft Print servers

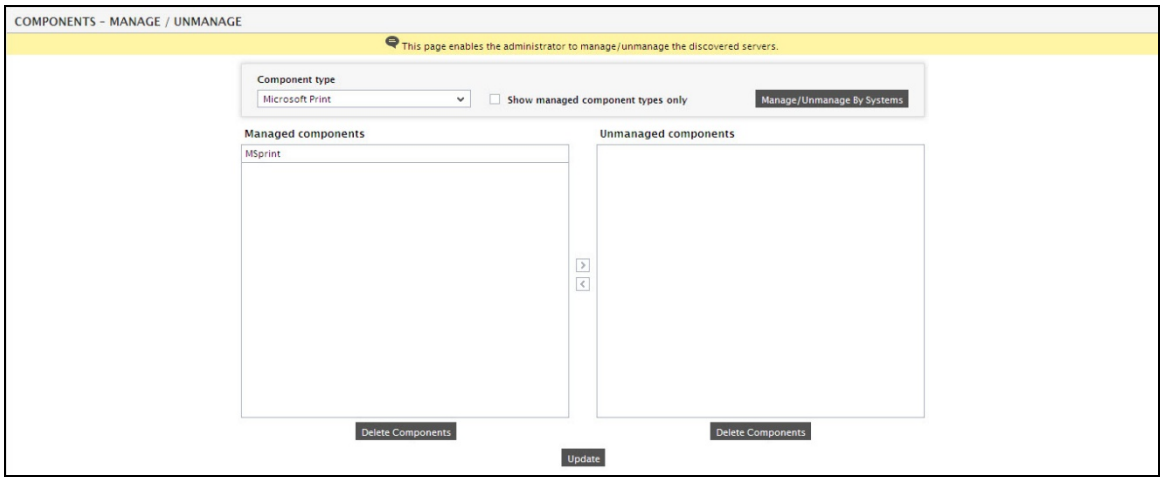

Figure 2.2: Managing an Microsoft Print server

3. Next, sign out of the eG administrative interface.

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Chapter 3: Monitoring Microsoft Print Servers

The eG Enterprise suite includes specialized monitoring capability for Microsoft Windows-based print servers. The layer model of a print server is given below (see Figure 3.1)

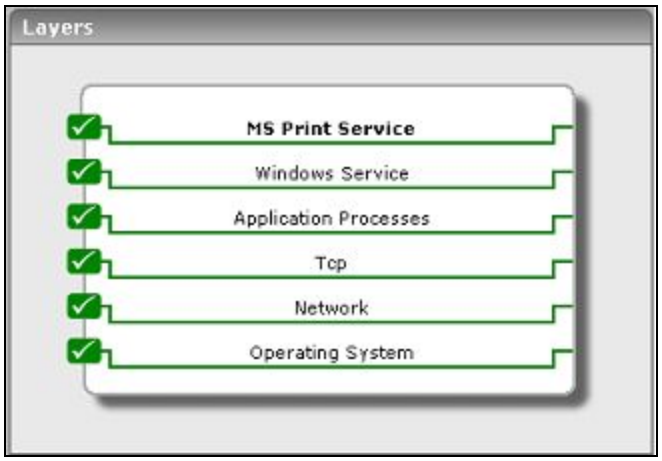

Figure 3.1: Layer model of a Microsoft Print server

The section that follows discusses the **Microsoft Print Service** layer only, as all other layers have been extensively discussed in the *Monitoring Unix and Windows Servers* document.

3.1 The MS Print Service Layer

This layer (see Figure 3.2) monitors the print queues on the print server and reports on their availability and overall health.

Figure 3.2: Tests associated with the MS Print Service layer

3.1.1 Print Server Test

This test auto-discovers the print queues of a print server and continuously tracks various key metrics relating to the availability and performance of each of the print queues.

Target of the test : A Microsoft Print server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the print queue that is being monitored

Configurable parameters for the test

Parameters	Description
Test period	This indicates how often should the test be executed.
Host	The host for which the test is to be configured.
UseWMI	If this flag is **Yes**, then the test uses WMI to extract the statistics of interest. This option is provided because on some Windows 2000 systems (especially ones with service pack 3 or lower), the use of WMI access can cause the CPU usage of the WinMgmt process to shoot up. On such systems, set this parameter value to **No**. The default is **No**.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Availability	Indicates whether or not the Print server is currently available.	Boolean	If the value of this measure is 1, it indicates that the print server is available. The value 0 on the other hand, indicates that the print server is unavailable.
Jobs services	The rate at which users' jobs are being processed over a print queue	Jobs/Sec	The value of this metric is a key indicator of a print queue's workload.
Pages printed	The number of pages printed through a print queue during the last measurement period	Number	This is another key indicator of the workload of a print queue.
Print traffic	Indicates the rate at which data is transmitted to a print queue for printing	KBytes/Sec	
Current jobs	Shows the current number of jobs in a print queue.	Number	Use this counter to identify excessive use of a print queue.
Print errors	The number of jobs to a print queue that resulted in errors during the last measurement period.	Number	This value includes the number of out of paper errors and printer not ready errors. Job errors can occur even if the connection to the printer has errors due to network problems.
Spooled jobs	The current number of spooling jobs in a print queue	Number	
Paper errors	The total number of out of paper errors that occurred in a print queue during the last	Number	

Measurement	Description	Measurement Unit	Interpretation
	measurement period		
Not ready errors	The total number of out of printer not ready errors that occurred in a print queue during the last measurement period	Number	

3.1.2 Print Job Status Test

This test reveals statistics pertaining to the operational and non-operational states of print jobs that are being queued for printing. Besides, this tests also reports the total number of jobs submitted for printing and the number of print jobs that exceed a configured size limit. This way, administrators are alerted to excessive load on the print server, and processing bottleneck in the print queue.

Target of the test : A Microsoft Print server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the Microsoft Print server that is being monitored

Configurable parameters for the test

Parameters	Description
Test period	This indicates 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 Host listens to.
Max Size	The test will report the count of those jobs that exceed a size greater than the value (in KB) specified here. The default value of this parameter is *none*.
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.

Parameters	Description
	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
OK status jobs	Indicates the number of jobs that are currently in OK status.	Number	The detailed diagnosis of this measure, if enabled, provides the details of the OK status jobs such as the owner name who initiated the print job, document name, job ID, total number of pages, size, etc.
Error status jobs	Indicates the number of jobs that are currently in the Error status.	Number	The detailed diagnosis of this measure, if enabled, provides the details of the Error status jobs such as the document name, job ID, total number of pages, size, etc.
Degraded status jobs	Indicates the number of jobs that are currently in Degraded status.	Number	
Unknown status jobs	Indicates the number of jobs that are currently in Unknown status.	Number	
Jobs which may fail in near future	Indicates the number of jobs that could fail in near future.	Number	
Starting status jobs	Indicates the number of jobs that are just started.	Number	

Measurement	Description	Measurement Unit	Interpretation
Stopping status jobs	Indicates the number of jobs that are currently in Stopping status.	Number	
Service status jobs	Indicates the number of jobs that are currently in Service status.	Number	
Stressed status jobs	Indicates the number of jobs that are currently in Stressed status.	Number	The value of this measure should be very low.
Non-recover jobs	Indicates the number of jobs that are not able to recover from the Error status.	Number	Ideally, the value of this measure should be zero. A gradual or sudden increase in this value indicates that more number of jobs are stuck in the error status preventing further documents from being printed, and thus causing processing bottleneck in the print queue.
No contact status jobs	Indicates the number of jobs that are unable to contact the print server.	Number	
Lost communication status jobs	Indicates the number of jobs that are currently lost communication with the print server.	Number	A significant increase in the value of this measure creates processing bottleneck in the queue.
Total jobs submitted	Indicates the total number of jobs that are queued for printing.	Number	This measure indicates the load on the print server.
Jobs printing above max size	Indicates the number of jobs that exceed the value specified against the Max Size parameter.	Number	

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Chapter 4: 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 **Microsoft Print** 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.