Monitoring Symantec Backup Server

eG Innovations Product Documentation

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Total Performance Visibility

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Chapter 1: Introduction

Symantec Backup Exec server is a high-performance data management solution for Windows networks. With its true 32-bit client/server design, Backup Exec provides fast, reliable backup and restore capabilities for servers and workstations across the network.

In IT infrastructures providing mission-critical services to end-users, an efficient backup and restore mechanism is necessary for ensuring that critical servers that are involved in the delivery of a service do not suffer any data loss. Symantec Backup Exec servers are becoming very crucial to the normal functioning of such infrastructures. If the backup/restoration engine of the server fails, or consumes too much time to backup or restore the data of one/more key infrastructure components, these components might not be able to function properly until such time that all its data is restored to it. This in turn could have a disastrous effect on the service delivery. If such an outcome is to be prevented, the Symantec Backup Exec server needs to be closely monitored. This where eG Enterprises helps administrators.

Chapter 2: How to Monitor Symantec Backup Server Using eG Enterprise?

eG Enterprise can monitor a Symantec Backup Server in an agent-based or an agentless manner. To monitor the backup server in an agentless manner, you need to deploy an eG agent on a remote Windows host in the environment.

2.1 Managing the Symantec Backup Server

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

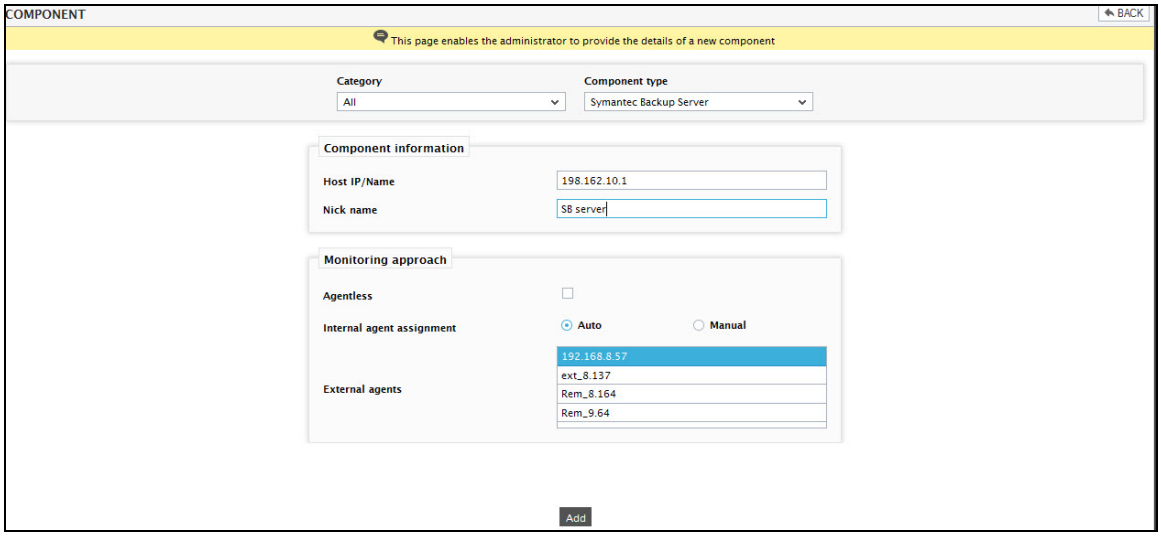

Figure 2.1: Adding the Symantec Backup server

4. Specify the **Host IP/Name** and the **Nick name** of the Symantec Backup server in Chapter 2.

Then, click the **Add** button to register the changes.

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

Chapter 3: Monitoring the Symantec Backup Server

eG Enterprise offers an exclusive Symantec Backup server monitoring model (see Figure 1.1), which keeps tabs on the backup and restore operations performed by the server, and reports deviations much before they impact the performance of the server as a whole, or the dependent service.

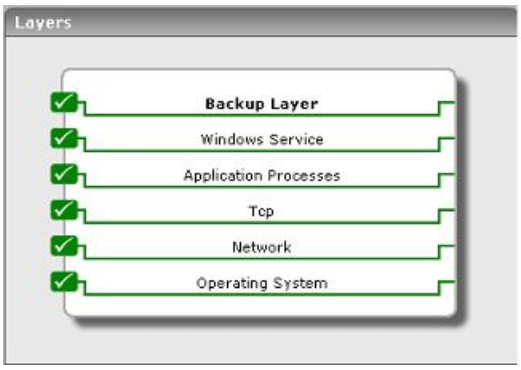

Figure 3.1: The layer model of the Symantec Backup server

The bottom 5 layers of the layer model have already been discussed elaborately in the *Monitoring Unix and Windows Servers* document. The section to follow will discuss the **Backup Layer** alone in detail.

3.1 The Backup Layer

This tests mapped to this layer measure the level of efficiency with which the Symantec Backup server performs backups.

Figure 3.2: Tests running on the Backup Layer

3.1.1 BE Jobs Test

This test reports key statistics pertaining to the backup exec engine of the Symantec Backup server. The measures made by this test are as follows:

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Active job count	Indicates the number of jobs currently active that are either running or pending.	Number	A high value indicates how active the backup server is, currently. A low value is indicative of lack of activity in the backup server.
Job count	Indicates the total number of jobs running in the Backup server.	Number	
Failed jobs	This refers to the number of backup jobs that failed since the last time the test was executed.	Number	A high value of this measure indicates that the backup server is unable to verify or open the object for backup. Check the media for errors.
Aborted jobs	Indicates the number of aborted jobs.	Number	
Avg. job run time	Indicates the average time taken by all jobs in the	Mins	

Measurement	Description	Measurement Unit	Interpretation
	backup server.		
Successful jobs count	This refers to the number of backup jobs that were completed successfully since the last time the test was executed.	Number	A high value of this measure indicates the good health of the backup server. A low value indicates that the backup jobs could be aborting or are being skipped due to errors in opening the objects or in the media.
Avg device wait time	Indicates the average time spent waiting for a storage device by all the jobs since the Backup Exec Engine service was last started.	Mins	A low value is desired for this measure. A high value for this measure indicates that the load on the backup server is high and the backup server is taking to long to process the jobs.
Avg mount time	Indicates the average time spent waiting for a media (i.e., output device) to be mounted on the storage device (for backup) by all the jobs since the Backup Exec Engine service was last started.	Mins	
Avg server active time	Indicates the percentage of time for which the Backup Exec Engine service was active since it was last restarted i.e., the percentage of time for which one or more jobs were running.	Percent	A high value is desired for this measure.
Avg server run time	Indicates the average time for which the Backup Exec Engine service was up since it was last restarted.	Mins	

3.1.2 Backup Job Test

This test reports the general statistics pertaining to the Backup Exec server running on the Windows network.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Backup job count	Indicates the number of backup jobs in-progress during the current test execution cycle.	Number	A very high value indicates heavy load on the backup server.
Backup job run time	Indicates the time taken by all backup jobs.	Mins	
Backup device wait time	Indicates the total time backup jobs have spent waiting for a storage device.	Mins	
Backup mount time	Indicates the total time all backup jobs have spent waiting for media to be mounted in a storage device.	Mins	

Measurement	Description	Measurement Unit	Interpretation
Total bytes	This indicates the size (in megabytes) of the data that was backed up since the last measurement period.	MB	This measure also indicates how active the backup server is, currently. A sudden low trend indicates that there could be an error in reading the data from the media.

3.1.3 Diff Jobs Test

This test measures how well the Symantec Backup server performs differential backups.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Diff job count	Indicates the total number of differential backup jobs.	Number	
Avg diff job dbcctime	Indicates the average time taken running DBCCs by all differential backup jobs which run DBCCs.	Mins	
Avg diff job pre scantime	Indicates the average time taken running the pre scan	Mins	

Measurement	Description	Measurement Unit	Interpretation
	by all differential backup jobs with pre scan.		
Avg diff job runtime	Indicates the average time taken by all differential backup jobs.	Mins	
Avg diff job verifytime	Indicates the average verify time taken running all the differential backup jobs.	Mins	

3.1.4 Incr Jobs Test

This test measures how well the Symantec Backup server performs incremental backups.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Incr job count	Indicates the total number of incremental backup jobs.	Number	
Avg incr job dbcctime	Indicates the average time	Mins	

Measurement	Description	Measurement Unit	Interpretation
	taken running DBCCs by all incremental backup jobs which run DBCCs.		
Avg incr job pre scantime	Indicates the average time taken running the pre scan by all incremental backup jobs with pre scan.	Mins	
Avg incr job runtime	Indicates the average time taken by all incremental backup jobs.	Mins	
Avg incr job verifytime	Indicates the average verify time taken running all the incremental backup jobs.	Mins	

3.1.5 Normal Jobs Test

This test measures how well the Symantec Backup server performs normal backups.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Normal job count	Indicates the total number of normal backup jobs.	Number	
Average normal job dbcctime	Indicates the average time taken running DBCCs by all normal backup jobs which run DBCCs.	Mins	
Average Normal job scantime	Indicates the average time taken running the pre scan by all normal backup jobs with pre scan.	Mins	
Average Normal job runtime	Indicates the average time taken by all normal backup jobs.	Mins	
Average normal job verifytime	Indicates the average verify time taken running all the normal backup jobs.	Mins	

3.1.6 Backup Objects Test

This test reports statistics pertaining to backup objects.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Corrupt object count	Indicates the number of objects that were found to be corrupt or are corrupt on the media due to some error reading the data during backup.	Number	
Error skipped object count	Indicates the number of objects that have been skipped because there was an error opening the object during backup.	Number	
Failed verify object count	Indicates the number of objects failed to verify during verify operations.	Number	
Inuse skipped object count	Indicates the number of objects that have been skipped because they were in use during backup.	Number	
Infected object count	Indicates the number of objects that were skipped during backup because they were found to be infected.	Number	
Total objects	Indicates the total number of objects that have been backed up.	Number	
Total containers	Indicates the total number of container objects that have been backed up.	Number	
Total container bytes	Indicates the total number of Megabytes from container objects that have been backed up.	MB	
Total directories	Indicates the total number of directories that have	Number	

Measurement	Description	Measurement Unit	Interpretation
	been backed up.		
Total directory bytes	Indicates the total number of megabytes from directories that have been backed up.	MB	
Total files	Indicates the total number of files that have been backed up.	Number	
Total file bytes	Indicates the total number megabytes from files that have been backed up.	MB	
Total noncontainers	Indicates the total number of non container objects that have been backed up.	Number	
Total noncontainer bytes	Indicates the total number of Megabytes from non container objects that have been backed up.	MB	

3.1.7 Exchange Backup Test

This test reports statistics pertaining to the backup jobs that were executed on the Xchange database.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Xchg databases count	Indicates the total number of Exchange databases that have been backed up.	Number	
Xchg database bytes	Indicates the total number of megabytes from Exchange databases that have been backed up.	MB	
Xchg mail folders count	Indicates the total number of Exchange mail folders that have been backed up.	Number	
Xchg mail folderbytes	Indicates the total number of megabytes from Exchange mail folders that have been backed up.	MB	
Xchg mail message count	Indicates the total number of Exchange mail messages that have been backed up.	Number	
Xchg mail message bytes	Indicates the total number of megabytes from Exchange mail messages that have been backed.	MB	
Xchg mailboxes count	Indicates the total number of Exchange mailboxes that have been backed up.	Number	
Xchg mailbox bytes	Indicates the total number of megabytes from Exchange mailboxes that have been backed up.	MB	

3.1.8 SQL Backup Test

This test reports statistics pertaining to the SQL server database backups.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
SQL server databases count	Indicates the total number of SQL Server databases that have been backed up.	Number	
SQL server database size	Indicates the total number of megabytes from SQL Server databases that have been backed up.	MB	
SQL server file groups count	Indicates the total number of SQL Server file groups that have been backed up.	Number	
SQL server filegroup size	Indicates the total number of megabytes from SQL Server file groups that have been backed up.	MB	
SQL server tables count	Indicates the total number of SQL Server tables that have been backed up.	Number	
SQL server table size	Indicates the total number of megabytes from SQL Server tables that have been backed up.	MB	
SQL server file group	Indicates the total number	Number	

Measurement	Description	Measurement Unit	Interpretation
containers count	of file group containers of the SQL server that have been backed up since the Backup Exec Engine service was last restarted.		
SQL server file group container size	Indicates the amount of data of the file group containers that have been backed up since the Backup Exec Engince service was last restarted.	MB	
Data backed up per sql server filegroup container	Indicates the average data that is backed up per SQL server file group container.	MB	The value of this measure is calculated using the formulae: SQL server file group container size / SQL server file group containers count
SQL server table containers count	Indicates the total number of SQL server table containers that have been backed up since the Backup Exec Engince service was last restarted.	Number	
SQL server table container size	Indicates the amount of data of the table containers that have been backed up since the Backup Exec Engine service was last restarted.	MB	
Data backed up per sql server table container	Indicates the average of data that is backed up per SQL server table container.	MB	The value of this measure is calculated using the formulae: SQL server table container size/ SQL server table containers count
Total utility partitions count	Indicates the total number of utility partitions of the SQL server that have been backed up since the Backup Exec Engine service was last restarted.	Number	

Measurement	Description	Measurement Unit	Interpretation
Total utility partition size	Indicates the amount of data of the utility partitions that have been backed up since the Backup Exec Engine service was last restarted.	MB	
Data backed up per utility partition	Indicates the average data that is backed up per utility partition.	Percent	The value of this measure is calculated using the formulae: Total utility partition size/ Total utility partitions count

3.1.9 Backup Jobs Test

This test reports the general statistics pertaining to the Backup Exec server running on the Windows network. This test is disabled by default, and has been retained only to ensure backware compatability with previous versions of eG Enterprise. This test is disabled by default. To enable the test, go to the **ENABLE / DISABLE TESTS** page using the menu sequence : Agents -> Tests -> Enable/Disable, pick the *Symantec Backup Server* as the **Component type**, set *Performance* as the **Test type**, choose the test from the **DISABLED TESTS** list, and click on the **<** button to move the test to the **ENABLED TESTS** list. Finally, click the **Update** button.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Active job count	Indicates the number of jobs currently active that are either running or pending.	Number	A high value indicates how active the backup server is, currently. A low value is indicative of lack of activity in the backup server.
Failed jobs	This refers to the number of backup jobs that failed since the last time the test was executed.	Number	A high value of this measure indicates that the backup server is unable to verify or open the object for backup. Check the media for errors.
Successful jobs	This refers to the number of backup jobs that were completed successfully since the last time the test was executed.	Number	A high value of this measure indicates the good health of the backup server. A low value indicates that the backup jobs could be aborting or are being skipped due to errors in opening the objects or in the media.

3.1.10 VMware Backup Test

This test auto discovers the virtual machines that are to be backed up and reports the number of virtual machines that are backed up and the amount of data from the virtual machines that have been backed up and the percentage of data that have been backed up.

Target of the test : A Symantec Backup server

Agent deploying the test : An internal agent

Outputs of the test : One set of results for the 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 Symantec Backup server listens to. By default, this is NULL.

Measurements made by the test

Measurement	Description	Measurement Unit	Interpretation
Total VMware virtual machine size	Indicates the amount of data from the VMware virtual machines that have been backed up since the Backup Exec Engine service was last restarted.	MB	
Total VMware virtual machines	Indicates the total number of VMware virtual machines that have been backed up since the Backup Exec Engine was last restarted.	Number	
Data backed up per virtual machine	Indicates the percentage of data that is backed up per virtual machine.	Percent	A high value is desired for this measure.

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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