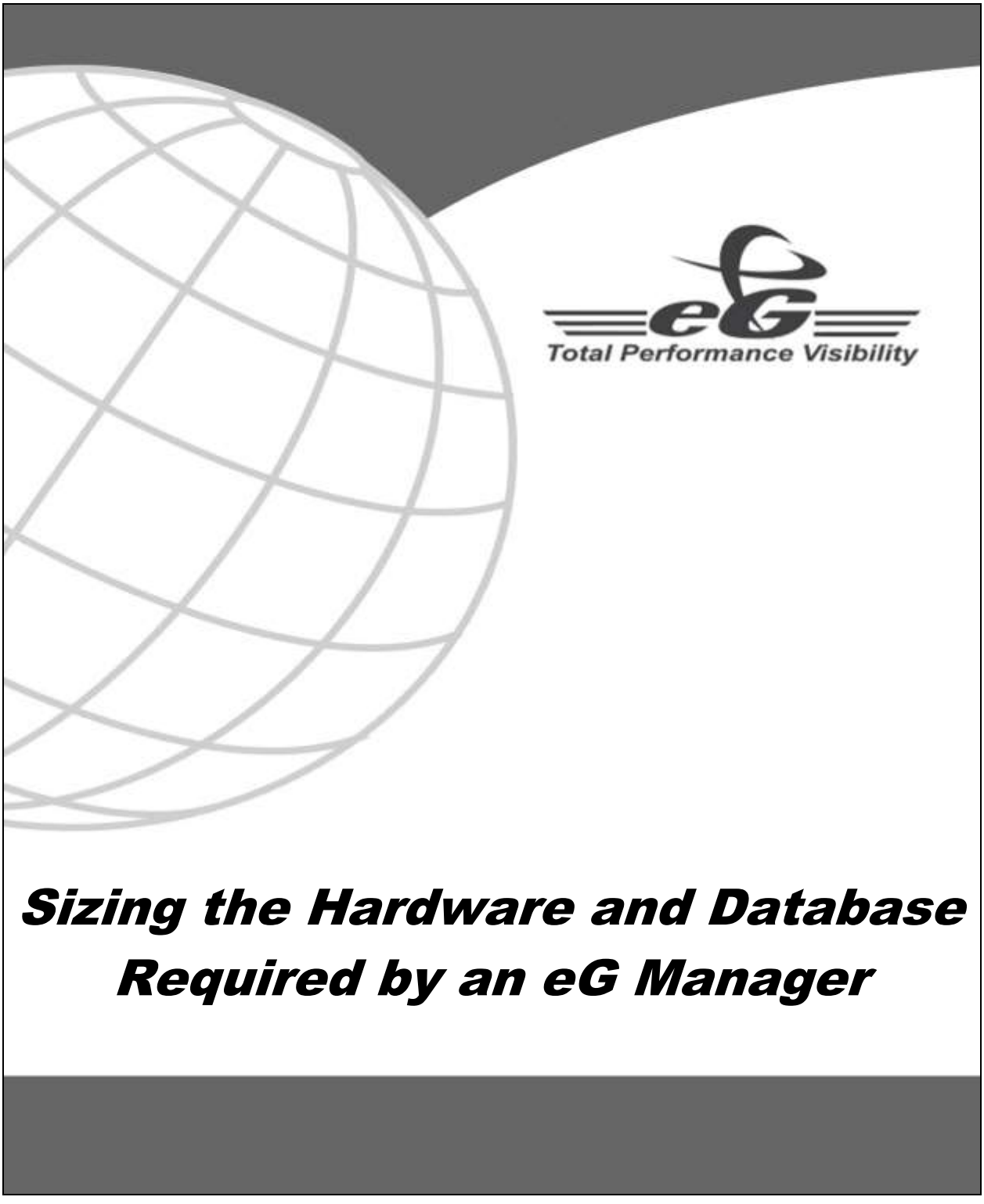

Sizing the Hardware and Database Required by an eG Manager

Sizing the Hardware and Database Required by an eG Manager

Before deploying an eG manager and agents to monitor your infrastructure, it is essential to determine the hardware required to host the eG manager and agents. The eG database also has to be configured appropriately - for data storage, as well as to ensure that sufficient client connections can be simultaneously established from the eG manager to the eG database server.

Clearly, as the number of infrastructure components that the eG manager is handling increases, the resource requirements for the eG manager and the eG database will increase. The resources to be considered when determining the configuration of the eG manager and eG database include:

- CPU availability
- RAM availability
- Disk space availability
- Simultaneous client connections that can be established by the eG manager to the eG database
- Database IOPS

To determine the sizing of the eG manager and eG database, review the number of network devices, hypervisors, physical machines, virtual machines, applications, and storage devices you are planning to monitor with eG Enterprise. Each one of these components imposes a different load on the eG manager and database. Hence, we use a term "***monitoring unit***" for sizing purposes.

The way to determine the number of monitoring units in your infrastructure is the following:

What you are Monitoring	Number of Monitoring Units
An application like Oracle databases, Microsoft SQL, Exchange, Active Directory, Citrix License server, IIS web, etc. (any application that needs an eG premium monitor license except application virtualization such as Citrix XenApp, MS terminal services, or server and desktop virtualization technologies). Also applies for storage devices.	1
A virtualization platform – VMware vSphere, Citrix XenServer, Solaris LDoms, Microsoft Hyper-V, AIX LPAR, etc. - irrespective of whether it is used for hosting servers or desktops. Also applies to VMware vCenter, HMC server, and connection brokers (eg., Xen DDC, VMware View, etc.)	2
Application Virtualization such as Citrix XenApp, Microsoft Terminal Services, etc.	2
Every virtual machine (VM) for which the inside view is being obtained as part of eG's virtualization monitoring capability	0.25

A file server, print server, Windows server (anything that needs an eG basic monitor license)	0.25
A network device or any externally monitored application (e.g., web servers, databases)	0.2

For installations with less than one hundred capacity units, the eG manager and database can be installed on the same system. For larger installations, it is recommended that the eG manager and database be hosted on physically different systems. Such a configuration ensures that the eG manager and database have independent resources (memory and CPU) available for their operation.

The table below provides thumb-rules that can be used to configure the eG manager and database for your infrastructure.

	CPU	Memory	Disk Storage	Database Connections	Database IOPS (Avg)
eG Manager	Minimum 2GHz Add 1GHz processing for every 100 monitoring units	Minimum 2GB for 32-bit hosts and 4 GB for 64-bit hosts Add 5MB RAM per monitoring unit	Minimum 100 MB Allow at least 1GB for proper operation	Not applicable	Not applicable
eG Database	Minimum 3GHz Add 1GHz processing for every 100 monitoring units	Minimum 2GB Add 5MB RAM per monitoring unit	5GB for 10 monitoring units with 1 month of raw measurement storage	Minimum 10 connections Additional connections required is: **No. of Monitoring Units / 6**	This changes with what is being monitored. The guidelines for computing IOPS have been detailed in the table below.

What you are Monitoring	Avg Database IOPS per monitored component
An application like Oracle databases, Microsoft SQL, Exchange, Active Directory, Citrix License server, IIS web, etc. (any application that needs an eG premium monitor license except application virtualization such as Citrix XenApp, MS terminal services, or server and desktop virtualization technologies). Also applies for storage devices.	10
A virtualization platform – VMware vSphere, Citrix XenServer, Solaris LDoms, Microsoft Hyper-V, AIX LPAR, etc. - irrespective of whether it is used for hosting servers or desktops. Also applies to VMware vCenter, HMC server, and connection brokers (eg., Xen DDC, VMware View, etc.)	20
Application Virtualization such as Citrix XenApp, Microsoft Terminal Services, etc.	20
Every virtual machine (VM) for which the inside view is being obtained as part of eG's virtualization monitoring capability	5
A file server, print server, Windows server (anything that needs an eG basic monitor	5

license)	
A network device or any externally monitored application (e.g., web servers, databases)	5

Note:

The thumb-rules discussed above apply to an eG manager that does not support double-byte characters. If you intend installing an eG manager that should support double-byte characters, then make sure that you provision double the CPU, memory, and disk storage indicated above.

Using the above table, for a system with 100 monitoring units operating at the default measurement period, where the raw data has to be stored for 3 months, the eG manager and database configurations are:

eG Manager: 3 GHz CPU, 2.5 GB RAM, 1 GB disk space

eG Database: 4 GHz CPU, 2.5 GB RAM, 150 GB disk space, 27 database connections

Note that the database size requirement may vary depending upon the specific target environment. If your environment comprises of many network devices/interfaces, or applications like Citrix, WebSphere, WebLogic, etc., for which a large number of measurements are made, the database size requirement may be much larger. For example, if your environment comprises of Citrix servers with around 100 sessions per server, the database size required will be about two times higher. It is recommended that you consult with your eG technical consultant for the sizing requirements of your production implementation.

To determine if you have configured the eG manager sufficiently, you can use the eG external agent deployed on the same system as the eG manager to monitor the eG manager and database periodically. Also, look at the eG manager's error logs periodically for any error reports. Moreover, configure the administrative user's email address so that you can be proactively alerted about any configuration problems - e.g., if the eG manager needs additional database connections.