SonaSafe in a Virtual Environment

Introduction

Virtualization is being increasingly used by IT departments for server consolidation and testing purposes. Virtual servers are used to reduce operational costs and to improve system efficiency. The growth in virtual servers has created challenges for IT departments regarding high availability and data protection. It is not enough to protect physical servers but also virtual servers, as they contain business critical data and information. Virtual servers offer the flexibility, but at the same time if a single physical server containing multiple virtual servers fails, then impact of data loss is enormous.

Virtualization Benefits

Companies are adopting virtualization at a rapid speed because of the tremendous benefit it offers and some of them include:

Server Consolidation – Virtualization helps to consolidate multiple servers into one single physical server, thus offering improved operational performance.

Reduced Hardware Costs – As the number of physical servers goes down, the cost of servers and associated costs like IT infrastructure, space etc. will also decrease tremendously.

Improved Application Security – By having a separate application in each virtual machine, any vulnerability is segregated and it does not affect other applications.

Reduced Maintenance – Since virtual servers can easily be relocated and migrated, maintenance of hardware and software can be done with minimal downtime.

Enhanced Scalability – The ease with which virtual servers can be deployed will result in improved scalability of IT implementation.

File or Block Level Replication

Different kinds of replication techniques can be used to replicate data between two servers, both locally and remotely. In block level, replication is performed by

the storage controllers or by mirroring the software. In file-system level (replication of file system changes), the host software performs the replication. In both block and file level replication, it does not matter what type of applications are getting replicated. They are basically application agnostic, but some vendors do offer solutions with some kind of application specificity. But these solutions cannot provide the automation, granularity and other advantages that come with application-specific solution. Also, one needs to be concerned about the following:

- Replicated server is always in a passive mode – Cannot be accessed for reporting/monitoring purposes.
- Possibility of virus/corruption getting propagated from production server to replicated server.

Sonasoft Failover (Standby) Solution

Sonasoft offers a unique solution, which provides an integrated data protection, high availability and disaster recovery solution for Exchange and SQL servers. In Sonasoft's SonaSafe solution, the backup is integrated with replication and the users get a two-in-one solution. Typically, customers have to go to two different vendors to implement two disparate solutions to achieve the same result. Also, it will cost three to four times more to implement these solutions compared to what is offered by Sonasoft.

With SonaSafe, the replication is very application specific. In the case of Exchange, the replication is done at a mailbox level and in the case of SQL, the standby occurs at a database level. The solution provides total disaster recovery protection and enables reliable business continuity.

SonaSafe and Virtual Servers

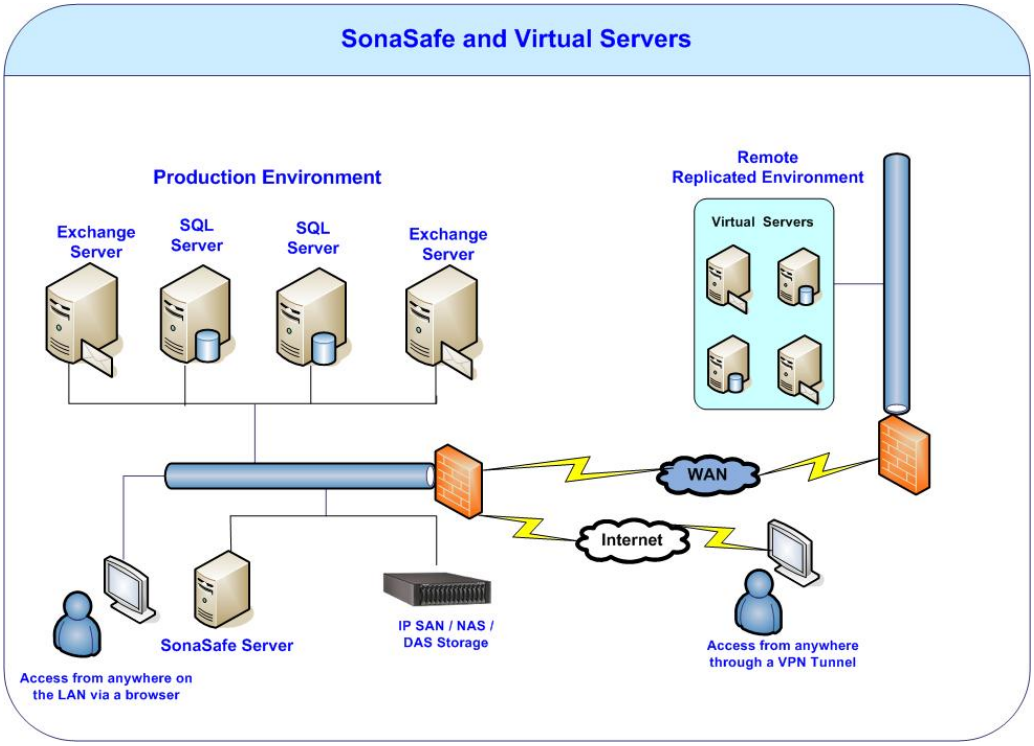
Sonasoft provides a high-availability solution, protecting data that reside on virtual servers. SonaSafe application supports many interesting disaster recovery scenarios. Customers can have multiple physical servers at the primary location

and at the offsite disaster recovery location, they can have one physical server with multiple virtual servers. Also, multiple virtual servers from the primary site can be easily backed up and replicated to the disaster recovery site.

In the case of SonaSafe, both on physical and virtual servers, the appropriate agents are installed and these agents have very small footprint. Because of the limited footprint, the impact on these servers is minimal from a performance perspective. With other replication solutions, one has to install the entire application on the virtual servers and this will take a huge toll on performance.

Physical to Virtual Servers

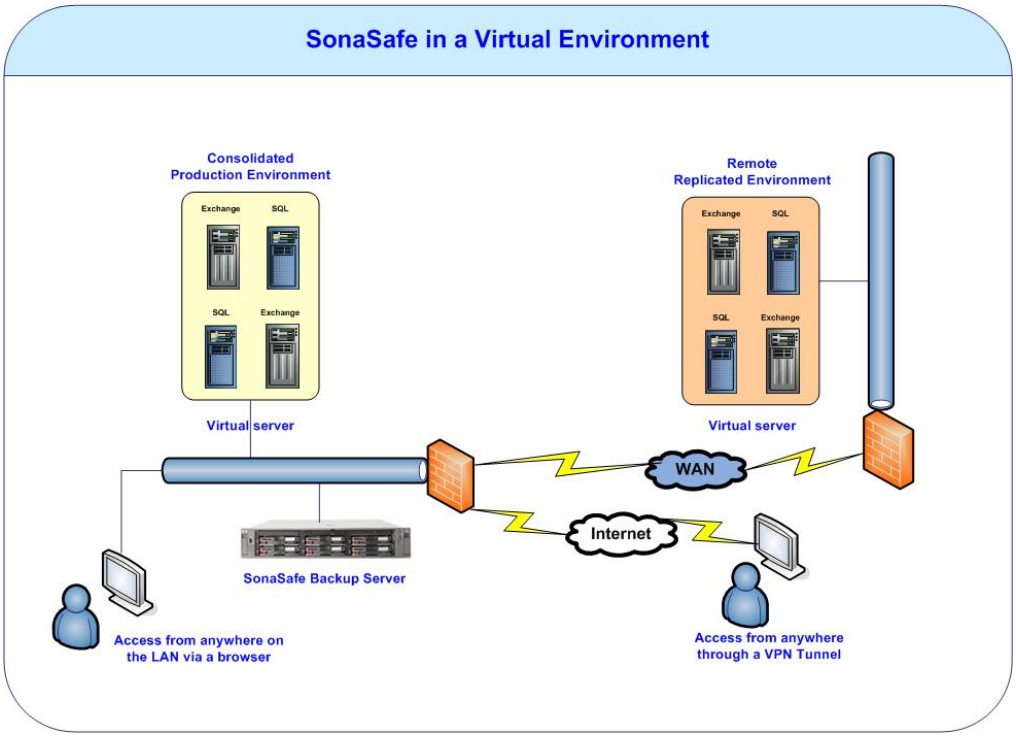
In this scenario, the production environment has physical servers and the disaster recovery site is deployed in a virtual environment. Both the physical and virtual servers are controlled by the web-based SonaSafe Application and it can be located either at the production site or at the remote site.



Virtual to Virtual Environments

In order to achieve significant cost savings, some companies not only virtualize their disaster recovery site but also use virtual servers in the production

environment. One can have one or more physical servers housing many virtual servers, both at production and remote sites. SonaSafe application with its agents will work very well in this environment also.



Failover/Failback

When a disaster strikes the primary site, then all the users will be failed over to the remote site. Once the primary is rebuilt, one can go through the failback process to the original primary servers very easily. Unlike other solutions, SonaSafe not only provides a reliable failover capability but also a robust failback functionality. Also, only a particular virtual server containing Exchange or SQL server can be failed over without affecting other physical or virtual servers.

The only way to make sure that your disaster recovery solution works is to test it periodically. Unfortunately, to do that one has to failover the entire Exchange or SQL server. Administrators will be leery about doing this for fear of crashing the production Exchange or SQL server. With SonaSafe, one can create a test

mailbox or database and use it for failover/failback testing periodically. Through this approach, customers can be fully assured that their disaster recovery solution will work when it is badly needed and have peace of mind.

Migration

Virtual servers in conjunction with SonaSafe can be used as a migration tool. If a physical server goes bad, then one can failover to the remote failover virtual server. Once the primary site is rebuilt, then the failback can be easily achieved. With SonaSafe, there is no need to have identical versions of Exchange on primary and failover servers. In fact, one can run Exchange 2003 on primary server and Exchange 2007 on failover server. This feature can be used as a migration tool. For example, you can failover to the failover server which runs Exchange 2007. Upgrade the original primary to Exchange 2007 and failback again. The whole exercise can be done very easily using a web-based interface. This scenario is applicable to SQL 2000 and SQL 2005 servers also.

Conclusion

Companies are increasingly adopting virtual servers, as virtualization offers many compelling benefits. This increase in virtualization poses tremendous disaster recovery and data protection challenge to IT Administrators. There is a greater need to implement the appropriate high availability and failover solutions to protect these servers. SonaSafe, through its integrated backup and replication approach, offers a powerful solution to protect Exchange and SQL servers in a virtualized environment.

About Sonasoft®

Sonasoft Corp. automates the disk-to-disk backup and recovery process for Microsoft Exchange, SQL and Windows Servers with its groundbreaking SonaSafe® Point-Click Recovery® solutions. SonaSafe is the only product that provides an integrated backup/recovery and replication solution for Exchange and SQL servers. Designed to simplify and eliminate human error in the backup

and recovery process, SonaSafe solutions also centralize the management of multiple servers and provide a cost-effective turnkey disaster recovery strategy for companies of all sizes. *For more information, please visit www.sonasoft.com.*