Hyper-V clustering offered ETEAN high availability and redundancy to their 20+ VMs plus improved DR times.

Overview

Country: Greece
Industry: Finance

Customer Profile
ETEAN SA is a valuable element in the integration of Micro, Small and Medium size enterprises (MSMEs) financing cycle, through the collateralization of the fraction of business risk not accepted by the banking system, thus amplifying the scope of viable entrepreneurial initiatives undertaken by MSMEs.

Business Situation
The company needed a high availability solution that would ensure maximum up time of their system services.

Solution
Using their existing hardware Office Line SA managed to put in place a system that offers high availability and redundancy for their 20+ VM hosts plus reduced DR times.

Benefits
- High availability of critical services
- Much improved DR procedures
- Improved storage availability to boost application reliability
- Improved manageability to reduce IT

Situation

The IT team at ETEAN experienced 2 major outages in its data center during the last year due to server hardware failures that left the company offline for more than a day and its staff not being able to carry their everyday work.
That prompted ETEAN to find a solution that would offer high redundancy and availability to any future hardware outages that would arise.

ETEAN maintains an exceptionally lean IT department of 4 people with the company employing more than 100 full-time employees supporting the daily needs of the organization. The company is always looking for ways to improve the efficiency of its IT function while controlling costs, so virtualization was a natural choice. Their 20+ VMs are running on 3 standalone servers allowing the staff work flawlessly but in two cases of hardware failures their work got interrupted for many hours and that was a major concern for company.

Solution

Office Line SA, who overseas and complements the IT support staff of ETEAN, had the perfect solution to the problem, Hyper-V clustering. They used their existing infrastructure (3 Dell Servers running VMs like a DC, an Exchange, Linux VMs, a Proxy server, File Services etc. plus an external storage Dell MD 3240) by switching their setup to a high availability clustered environment that would ensure maximum uptime and much reduced DR times in case of recovery.
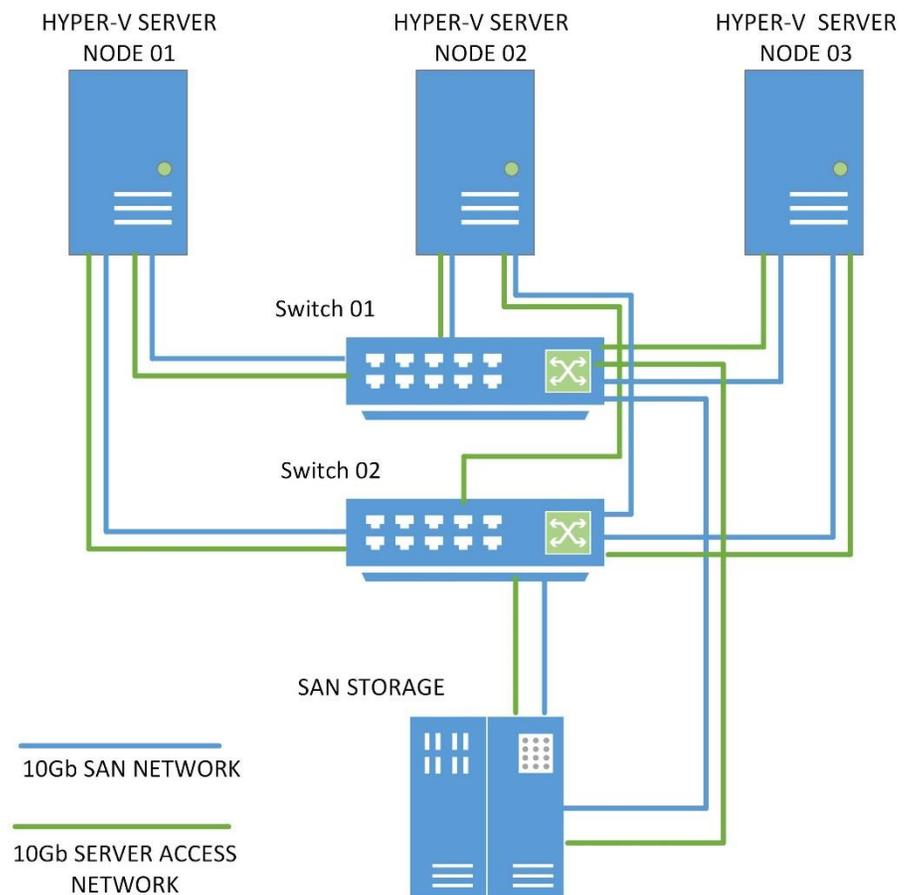The steps and guidelines Office Line took for setting up Hyper-V and Failover Clustering were:

- Connect the physical computer to the network and storage
- Install Hyper-V Server and Failover Clustering on the physical computer
- Create a virtual network
- Validate the cluster configuration
- Create the cluster
- Create a virtual machine and reconfigure the automatic start action
- Make the virtual machine highly available
- Install the guest operating system on the virtual machine
- Test a planned failover

- Test an unplanned failover
- Modify the settings of a virtual machine
- Remove a virtual machine from a cluster

Following the above guidelines, Hyper-V Clustering was applied first by moving the VMs running on the 3rd Server to the 1st. Eventually the 3rd Server was formatted, installed Hyper-V Server (2012 R2) along with the Failover Cluster role (Management tool) and configured the Multipath I/O feature that connects the server with iSCSI to 4 x 10Gbit slots on 2 different switches (2xSAN, 2xServer Access) to the external storage (4x10Gbit iSCSI slots) for the greatest redundancy.

As soon as work was complete, then Live Storage migration took place from the 2nd server to the 3rd (to the external storage) without a single interruption to the users. The 2nd server was also formatted using Hyper-V Server (2012 R2) and was added to the cluster by again installing the Failover Cluster role with 4 iSCSI connections to the switches. Lastly Office Line live storage migrated the VMs of the 1st server to the external storage and was also configured with HYPER-V server and added to the cluster the same way as the previous 2. When this part of the migration was completed Office Line setup a cluster of 2 WatchGuard UTMs for added security from external threats.

HYPER-V SERVER NODE 01   HYPER-V SERVER NODE 02   HYPER-V SERVER NODE 03

Switch 01

Switch 02

SAN STORAGE

10Gb SAN NETWORK

10Gb SERVER ACCESS NETWORK

Benefits

High Availability
The server nodes (physical machines) work together to provide redundancy and failover to the virtual machines with little to no downtime on the VMs. They were also used to maximize server hardware by allocating VMs to the node with the lowest current workload.

Centralized VM Management
A centralized and ergonomic console to manage all VMs from a single place

Other
- Full synchronous real-time replication of a virtual machine with failover
- Load balancing of virtual machines between 2 Hyper-V servers with crossed replication
- Better hardware utilization

Contact Us

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