Configuring Local Storage

Eli Chang

MSSA Cohort #2

Diagram Exercise 2

1/18/2020

Configuring Local Storage

The main idea is where the local storage locates in the infrastructure. The local storage will get access from other servers, such as DNS, DC, Windows Server 2016, from the server room. Since the virtual machines grow significantly in size in months, the administrator should add flexibility in the storage options. There are two disks that were already online, and my task is to add more volumes and disks for a potential increase in usage of the disks.

During the lab, three disks were created and used as RAID 1. Disk 1 was already in use. Only some are used in Disk 2, and other disks work as mirrored disks to Disk 2. By adding mirrored disks, the storage has the fault-tolerance when one or two disks are corrupted. The disks could resize by using Disk Management or PowerShell. There are two options in RAID: disk mirroring and parity information. RAID 1 is using disk mirroring, which provides full fault tolerance, but requires more storage spaces.

The arrow between Local Storage and Server Room means that any servers could communicate with the local storage. They can store data into the disks and retrieve them from the storage. It is also used as dynamic disks because it can be modified in size whenever available and does not require the system restart, unlike the basic disks. The disks are also created as ReFS because it can have more storage pooling and virtualization and share storage pools across the machines. Overall, the diagram needs more updates in the future. At the base of my knowledge, it is the best diagram so far.

Grammarly processed

These disks are shown as mirrored volume
When one disk is corrupted, the other could
act as full backups for Disk 2

Disk 1

E
F   H
        G

Disk 2

A
C   D
B

Disk 3

A
C   D
B

Disk 4

A
C   D
B

Disk 2 contains the original data;
other disks are mirrored to Disk 2
All the disks are in the local storage

Local Storage

Disk 1   Disk 2   Disk 3   Disk 4

Server Room

DNS

DC

SC

Switch

Firewall

ISP

CL1   CL2