**Week 3-PART 1: Case Projects Ch.7, 8, and 9**

Matthew Freeman

California Institute of Arts and Technology

ASD-150

Quintin Miller M.S.

January 25, 2020

**Case Project 7-2: Create flexible storage**

Although not mentioned in the book, a nested RAID setup is likely the best solution for the storage issue. RAID 50, a combination of multiple volumes in RAID5 then also striped by RAID0, would offer the speed of read/write from a RAID0 setup along with the data loss tolerance offered by RAID5 parity striping. Windows Disk Manager may be used, as well as plenty of (probably superior) third party alternatives, to allocated space as Spanned Volumes.

**Case Project 8-2: A small business startup IT solution**

In order to avoid the high costs of multiple machines, and fully leverage the IT infrastructure already in place at the company, Virtualization of various operating systems or application environments may be the ideal solution. With virtualization, existing and even legacy equipment may be utilized to run more modern applications. Virtualization offers many options for networking as well, including Bridged, NAT, Host-only, or even LAN segment if they wish to entirely isolate virtual environments into their own network.

**Case Project 9-1: Peer-to-peer or server-based network?**

The preferred network structure in this example would likely be a server-based network. While team members will be working on multiple projects, only those assigned to the project should have the authority to alter that projects’ files. This would necessitate some kind of file access system like NTFS wherein specific users, associated groups, or everyone may have different restrictions or permissions on items in a directory. These permissions are likely best controlled on one server, as the question mentions the company is expanding and hiring more employees. This may seem unnecessary now with less than twenty users, but a scalable solution is almost always best.

**References**

Tomsho, G. (2017). *Guide to Operating Systems, 5th edition*. Boston MA: Cengage Learning.

(2011, January 6). *Intro to nested-RAID: RAID-01 and RAID-10.* Linux Magazine. <http://www.linux-mag.com/id/7928/>

(2011). *Windows server administration fundamentals.* Microsoft Official Academic Course. NJ: John Wiley & Sons