Lab 6.1.1 Develop VM Server Specifications

Introduction

-

A network lab environment can be used to test upgrades/patches, evaluate new features, or as a training environment for hands-on experience.

Objectives

In this lab the student will:

- Install, configure and manage virtual networking and storage [WECM]

Equipment/Supplies Needed

- No equipment is needed for this lab.
- Supplies are a word processor like Microsoft Word

Assignment

Student will develop VM server specifications for the Unit 6 scenario.
Key activities include the following:
(1) List the specifications for a new virtualization infrastructure to support the given scenario now and for 4 years into the future.

Lab 6.1.1 requires you to develop the ESXi server specifications to support the physical to virtual migration of the data center for PK Industries as explained in the scenario in this unit. Remember that the company needs a HA solution and needs a secure infrastructure. Implementing HA requires capacity planning to accommodate for the possibility that all VMs on one ESXi server may need to be moved to another ESXi server in case of server failure. It also involves ensuring the ESXi servers have redundant hardware in case of failures. For example, having redundant power supplies would be a requirement so the server continues to operate even if one power supply fails. **You decide what other internal hardware components in the servers should be redundant and state this in your server specs.**

Read the scenario in this unit titled Scenario For All Unit 6 Labs.pdf carefully to gather the facts needed for completing this assignment. Remember also that your specifications need to allow for growth of the company and number of years the hardware needs to serve the company. Use the PDF Unit 6 Scenario Existing Hardware in this unit to see the list of existing hardware that needs to be virtualized in this lab.

Your ESXi specifications need to include the following:

1. Number of ESXi servers.
2. RAM and CPU for each ESXi server.
3. What server internal components have redundancy for HA.
4. What VM will be assigned to what ESXi server to begin with. vMotion will eventually change this, but you need to state what VMs are installed on what ESXi servers to begin with.
5. How ESXi servers will connect to the new SAN(s) i.e. - fiber optics, Fiber Channel, iSCSI, or CAT6 copper.
6. Storage capacity of SAN(s) and how many SANs will be needed.

Place all screenshots in a Word or PDF document and upload that document for grading. The following rubric will be used in lab grading.

Concerns Working Towards Proficiency	Criteria Standards for This Competency	Accomplished Evidence of Mastering Competency
	Number of ESXi servers is adequate	10 points
	RAM for each ESXi server is adequate	20 points
	CPU for each ESXi server is adequate	20 points
	Server hardware redundancy adequate for HA	10 points
	VMs assigned to an ESXi server	10 points
	ESXi to SAN connection	10 points
	SAN storage capacity is adequate	20 points