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Lab 3.5.4 Developing Network Requirements

Objectives

- Identify and record the new business and technical requirements of a new network design project.

- Develop network requirements.

Expected Results and Success Criteria

Before starting this lab, read through the tasks that you are expected to perform. What do you expect the result of performing these tasks will be?

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How is an understanding of a network requirements document useful in network administration?

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How do business goals affect the network requirements document?

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Background / Preparation

FilmCompany is an expanding small advertising company moving into interactive advertising media, including video presentations. This company has just been awarded a large video support contract by the StadiumCompany. With this new contract, FilmCompany expects to see their business grow approximately 70 percent.

To facilitate this growth, the FilmCompany has decided to significantly upgrade its data network. You have the role of network designer. Your job is to develop network design and project documents for FilmCompany that will meet the requirements of this upgrade.

As part of the new network design requirements, and based on the Project Goal statement and Project Scope documents, a Network Requirements document has to be developed.

This section of the network design document details the business goals, business constraints, technical requirements, user groups, and applications that influence the design of the new network.

Step 1: Record the company business goals and constraints that will influence the network design

As the network designer, you need to identify and prioritize the business goals of FilmCompany as defined in the Project Goals document. Develop your understanding of what these goals are from the FilmCompany case study information.

   a. List these goals in order of priority.

b. Expand and consider the details of how these goals can be achieved using the network as a platform.

c. Note any constraints that these expanded goals may impose on the network design, such as retaining the current number of IT and network support staff.

d. Use word processing software to create a Network Requirements document.

e. Clearly state the business goals and constraints in the document.

Step 2: Record the technical requirements that will influence the network design

a. Evaluate each of the business goals and determine the technical requirements to meet the goals.

List these technical requirements under the headings of:

- Scalability
- Availability and Performance
- Security
- Manageability

b. Initially, list all technologies that may be able to meet these technical requirements.

c. Include these requirements in your Network Requirements document.

Step 3: Record the user requirements that will influence the network design

a. Consider the types of users that will influence the network design. These users may be onsite, in the office, in the video editing room, offsite (at the stadium), or mobile.

Which types of users generate the heaviest amount of network traffic? Which types generate the lightest traffic?

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How might different types of users be grouped for Access Layer purposes?

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b. Include these requirements in your Network Requirements document.

Step 4: Record the application requirements that will influence the network design

a. Consider the type of applications that will influence the network design.

What applications are essentially device-based, with minimal network requirements?

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Which applications are network-intensive?

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Which applications and services are delivered onsite, in the offices, and which may need to be delivered offsite over the WAN or to mobile users?

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b. Include these requirements in your Network Requirements document.

Step 5: Develop the network requirements

a. Refine the technical requirements of the network to match user and application requirements.

What compromises may have to be made to ensure that the project remains within the business constraints?

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b. Finalize the technical requirements of the network that will meet the project goals.

c. Discuss and review your Technical Requirements document with another student to ensure it addresses all the business, user, and application requirements within the Project Scope and does not unnecessarily address out-of-scope requirements. Modify the document as necessary.

d. Save and retain your Technical Requirements document for the next stage of this network design case study.

Step 6: Reflection

Developing the technical requirements of a network that meets the project goals, while remaining within scope, requires knowledge of the available and appropriate technologies and services.

Discuss strategies that will ensure that a network design team is up-to-date with networking technologies and their applications.

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