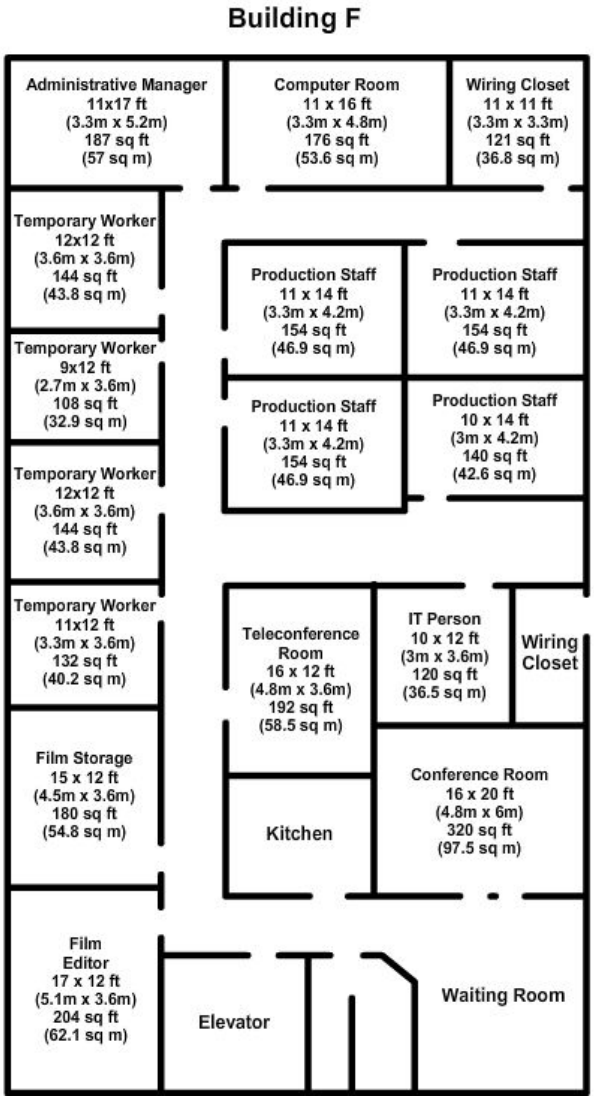
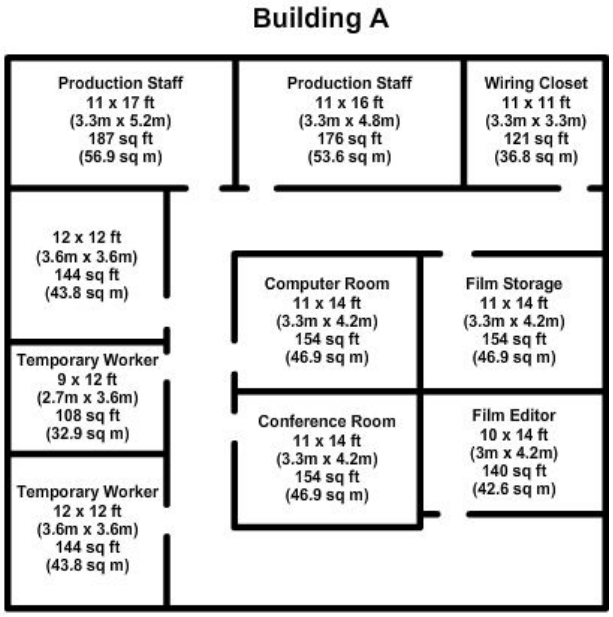
Lab 5.4.2.2 Selecting Access Points





Objective

- Evaluate an existing Access Point placement.
- Select appropriate APs for a new WLAN design.

640-802 CCNA Exam Objectives

This lab contains skills that relate to the following CCNA exam objectives:

- Select the components required to meet a network specification.

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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What are the inherent risks of using wireless in a network?

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What are several methods to limit the security risks of wireless LANs?

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Background / Preparation

A small wireless LAN is currently used occasionally by a few project managers with laptops and by guests at Building F. The FilmCompany believes that the WLAN may be used more regularly when the StadiumCompany contract work starts and mobile and contract workers will require network access. The FilmCompany plans to consolidate all their personnel and resources in one building.

Step 1: Identify WLAN requirements

a. Use word processing software to create a new document called “WLAN Diagram.”

b. Use the identified topology and associated equipment to determine WLAN design requirements.

Design requirements for the WLAN include:

- Scalability
- Availability
- Security
- Manageability

c. Brainstorm with other students to identify areas that may have been missed in the initial requirements document.

Step 2: Determine equipment features

Using the list developed from the brainstorming session create a WLAN based on technical requirements (design only).

a. Begin by creating your design using the existing equipment.

b. Using the list of equipment, identify the model of wireless router. Identify the features and range of the device. Identify whether there are upgrades that can be made to extend the range, security, and existing features.

c. Create a list of features and potential upgrades and compare them to other models of wireless router. Determine the device that can easily meet the technical requirements of the WLAN.

d. With the previous list estimate the range of coverage available with the existing wireless router. Determine if the wireless router can provide thorough coverage of the work area. Determine if standalone access points or wireless controllers are needed for the design.

e. Save your WLAN Diagram document.

Step 3: Select WLAN devices

a. Use word processing software to create an addition to the WLAN Diagram document.

b. The identified WLAN diagram will be used to determine the type of wireless device that will be included into the proposed network.

c. Ensure that the chosen wireless equipment meets the following requirements:

Design requirements for the WLAN include:

- Scalability
- Availability
- Security
- Manageability

d. Save your WLAN Diagram document.

Step 4: Design the WLAN

a. Use word processing software to create an addition to the WLAN Diagram document.

b. Design a WLAN that provides scalability. Annotate on the WLAN Diagram document how the design provides scalability.

c. Design a WLAN that provides availability. Annotate on the WLAN Diagram document how the design provides availability.

d. Design a WLAN that provides security. Annotate on the WLAN Diagram document how the design provides security.

e. Design a WLAN that provides manageability. Annotate on the WLAN Diagram document how the design provides manageability.

f. Save your WLAN Diagram document.

Step 5: Reflection / Challenge

The design strategies for the FilmCompany WLAN pose many challenges for the designer. What were a few of the more difficult challenges you encountered?

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Consider and discuss the identified strategies. Do all of the strategies designed or hardware identified accomplish the task the same way?

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Would one be less expensive or less time-consuming than the other?

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Would the current topology allow for future growth and the addition of the WLAN?