

## Lab 7.2.2 Creating a Test Plan for the Campus Network

### Objective

- Create a test plan for a prototype test.

### 640-802 CCNA Exam Objectives

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

- Interpret network diagrams.
- Determine the path between two hosts across a network.
- Select the components required to meet a network specification.
- Select the appropriate media, cables, ports, and connectors to connect switches to other network devices and hosts.
- Perform and verify initial switch configuration tasks, including remote access management.
- Verify network status and switch operation using basic utilities (including: ping, traceroute, telnet, SSH, arp, ipconfig), and **show** and **debug** commands.
- Describe enhanced switching technologies (including: VTP, RSTP, VLAN, PVSTP, 802.1q).
- Describe how VLANs create logically separate networks and the need for routing between them.
- Configure, verify, and troubleshoot VLANs.
- Configure, verify, and troubleshoot trunking on Cisco switches.
- Configure, verify, and troubleshoot inter-VLAN routing.
- Implement static and dynamic addressing services for hosts in a LAN environment.
- Select the appropriate media, cables, ports, and connectors to connect routers to other network devices and hosts.
- Access and use the router to set basic parameters, including CLI/SDM.
- Connect, configure, and verify operation status of a device interface.
- Verify device configuration and network connectivity using ping, traceroute, Telnet, SSH or other utilities.
- Perform and verify routing configuration tasks for a static or default route given specific routing 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?

---

---

---

Why do you think it is important to create a test plan before beginning a prototype test?

---

---

Why do you think it is important to perform prototype tests before implementing a proposed design?

---

---

## Background / Preparation

This lab takes you through the steps required for creating a test plan to test the FilmCompany LAN design. To prepare for this lab, you will need information from the results of earlier labs that you saved in your portfolio. The required information can be found in these labs:

- The topology diagram created in Lab 5.2.4
- The IP address spreadsheet created in Lab 6.2.5

## Task 1: Review the Supporting Documentation

### Step 1: Refer to the proposed LAN Design Topology diagram created in Lab 5.2.4

- a. Make a list of all the necessary equipment and cables required to build the LAN portion of the proposed network design.

---

---

Make a list of all the VLANs required to implement the design.

---

---

### Step 2: Review the proposed IP Address Allocation spreadsheet created in Lab 6.2.5

- a. Determine the appropriate IP addressing for the devices identified in Step 1a.
- b. Determine an appropriate IP address range for each VLAN identified in Step 1b.

## Task 2: Create the LAN Design Test Plan

The format used to create the test plans may vary. The format used for this and subsequent labs is similar to the document used by the Cisco Customer Proof-of-Concept Labs. It is divided into sections to make it easier to read and understand.

The test plan is a formal document that can be included in a proposal. It verifies that the design functions as expected. Many times, customer representatives are invited to view the prototype tests. In these cases, the customer can review the design and see for themselves that the network meets the requirements.

### Step 1: Review the contents of the test plan document

Download and review the LAN Design Test Plan. Record a description of each section and what types of information each section requires you to enter.

#### Introduction:

---

---

---

#### Equipment:

---

---

---

#### Design and Topology:

---

---

---

#### Test Description:

---

---

---

#### Test Procedures:

---

---

---

#### Test Expected Results and Success Criteria:

---

---

---

#### Test Results and Conclusions:

---

---

---

**Appendix:**

---

---

---

**Step 2: Complete the Introduction section of the test plan**

In this example test plan, much of the information has already been entered for you.

- a. Enter the purpose of the test.
- b. Think about why you want to test the LAN portion of the design.
- c. Enter what functions of the LAN design you intend to test.

Three tests are entered for you to use with this test plan.

Test 1: Basic Connectivity

Test 2: VLAN Configuration

Test 3: VLAN Routing.

**Step 3: Complete the Equipment Section of the test plan**

- a. Using the information you recorded in Task 1, Step 1a, fill in the chart in the equipment section. List all network devices and cables. Two personal computers are already listed to assist in the testing of the design.
- b. If your school lab does not include the required equipment for the design, discuss possible substitute models with your instructor.

**Step 4: Complete the Design and Topology Section of the test plan**

- a. Copy the LAN topology from the diagram created previously in Lab 5.2.4
- b. Enter the IP addressing information recorded in Task 1, Step 2a, in the IP Address Plan chart.
- c. Enter the VLAN names and IDs recorded in Task 1, Steps 1b and 2b, in the VLAN plan.
- d. Enter any additional information that you want the technician performing the test to be aware of before the test begins.

**Step 5: Complete the Test Description, Procedures, and Expected Results sections of the test plan**

- a. In the Test Description section, enter the goals for each of the three tests that you plan to perform. Test 1 is completed as an example of how to fill in the information.
- b. In the Test Procedures section, enter the steps that are necessary to perform each planned test.
- c. In the Expected Results and Success Criteria section, enter what you expect the results to be if all the steps in the Test Procedures section are followed correctly. Determine what results need to be observed for the test to be considered a success.

**Step 6: Save the LAN Design Test Plan in your portfolio**

**NOTE:** Do not complete the Test Results and Conclusions section or the Appendix section. These will be completed in a later lab.