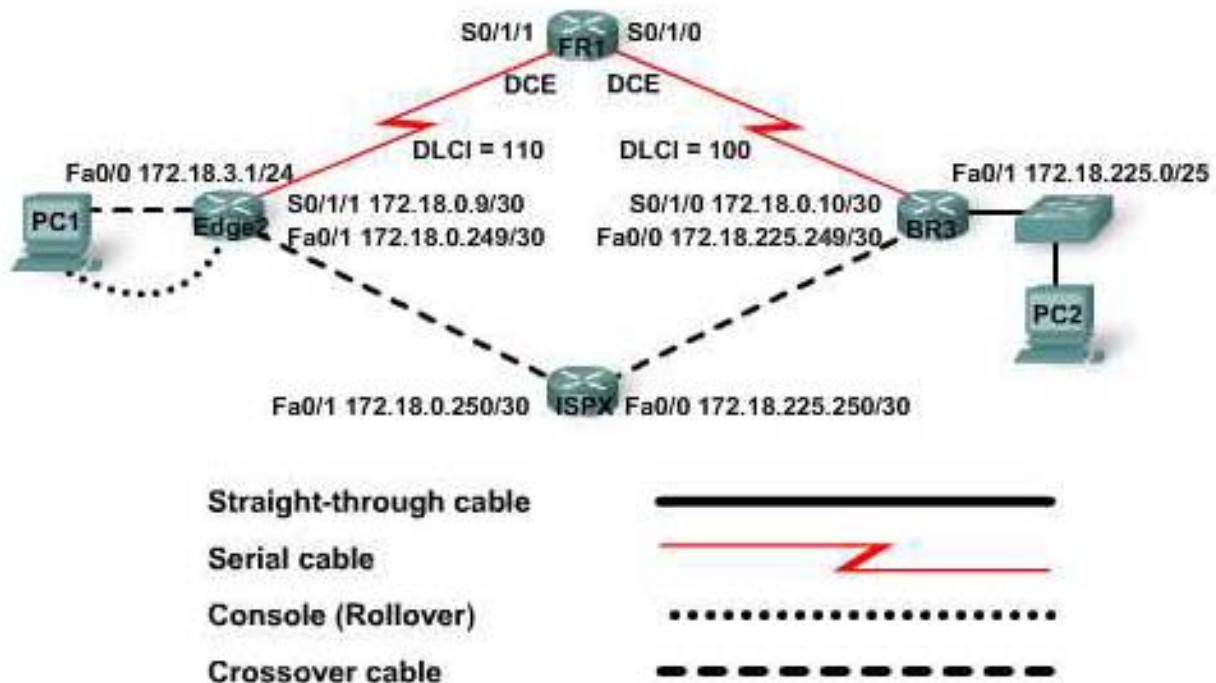


Lab 8.2.2 Creating a WAN Connectivity Test Plan



Objectives

- Create WAN connectivity test plan with multiple tests to determine:
 - Simulated Frame Relay connectivity
 - Backup Simulated VPN link functionality
- Describe the necessary information for each test to include:
 - Description of the test
 - Procedures
 - Anticipated Results and Success Criteria

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.

- 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.
- Configure, verify, and troubleshoot EIGRP.
- Troubleshoot routing issues.
- Verify router hardware and software operation using **show** and **debug** commands.
- Implement basic router security.
- Describe different methods for connecting to a WAN.
- Configure and verify a basic WAN serial connection.
- Configure and verify Frame Relay on Cisco routers.
- Troubleshoot WAN implementation issues.

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?

How does creating a test plan help you organize your thoughts and plan for the actual network prototyping?

Why do you think a pilot test, in addition to the prototype test, may be necessary to validate the WAN design?

Background / Preparation

In this lab, you will demonstrate the ability to develop a test plan to support the business goal of improving network availability. This is accomplished by configuring backup connections so that connectivity is not lost for major applications if the Frame Relay link fails. These requirements include testing a Frame Relay WAN simulation with backup links. You will determine the nature of the tests to be performed, the methods and tools to be used, and the expected results. This test plan will be used as a basis for subsequent labs 8.2.4 and 8.2.5, to test simulated Frame Relay WAN prototypes.

Task 1: Review the Supporting Documentation

Step 1: Refer to the WAN Design Test Plan document provided for this lab

Download the WAN Design Test Plan. What is the purpose of this WAN design test? Which elements of the design will be tested using this plan?

- a. Document the purpose of the test in the Introduction section of the WAN Design Test Plan.
- b. Review the tests that will be run to validate the prototype.

Test 1 Title / Purpose:

Test 2 Title / Purpose:

Step 2: Review the equipment needed to perform the tests

Review the list of all equipment needed to build the prototype and to perform the tests. Be sure to include cables, optional connectors or components, and software. If the recommended equipment is not available in your lab, discuss possible substitutes with your instructor and classmates, based on interface requirements of the topology.

- a. If substitute equipment must be used, list the devices here:

- b. Determine the amount of each type of cabling necessary to create the prototype test topology. Record the information on the Equipment chart in the WAN Design Test Plan.
- c. Document any special configuration or cabling issues that might arise if substitute equipment is used.

Task 2: Document information regarding Test 1

Test 1. Description: _____

- a. Determine the goals of Test 1. Record them on the WAN Design Test Plan in the appropriate section.

Goals of Test:

The goals of this test are to:

1. _____
2. _____
3. _____
4. _____

- b. Read through the Test 1 Procedures section in the test plan.

Are there any additional procedures that you think are necessary to document the operation of the Frame Relay link and the EIGRP routing between Edge2 and BR3? _____

If there are, add them here:

- c. Review the Expected Results and Success Criteria for Test 1.

Are there any additional results you expect as a result of doing the procedures outlined for Test1? _____

If there are, add them here:

Task 3: Document information regarding Test 2

Test 2. Description: _____

Complete the sections in the WAN Design Test Plan document for Test 2.

- a. Fill in the Test 2 Description, Procedures, and Expected Results and Success Criteria sections.
- b. Save the test plan in your portfolio. The WAN Design Test Plan is the basis for the next two labs in the course.

Task 4: Reflection / Challenge

Why is Frame Relay a good choice as a primary WAN technology?

When is it most important to have a backup link? How does a backup link compare to a redundant link?
