CISCO

Basic Connectivity Test Plan

	Start Date	End Date
Network Build (Setup)		
Testing Date		

Table of Contents

Attendees

Name	Company	Position

Introduction

For example:

The purpose of this test plan is to demonstrate that the basic connectivity and routing protocol are configured correctly. This prototype network is used to test various aspects of the proposed design.

- Test 1: Baseline Connectivity Test

    - Verify physical and IP connectivity between devices on the prototype network.

    - Collect operational baselines.

    - Demonstrate IP connectivity between devices on different VLANs.

    - Demonstrate the routing protocol, VLAN, and STP configurations operate correctly and that all servers are accessible through the network.

Equipment

Qty. Req	Model	Any additional options or software required	Substitute	IOS Software Rev.
5	2960 Layer 2 switch	none	Any 2950 or 2960 model switch	12.2 or above
5	1841 ISR routers with 2 FastEthernet ports and 2 Serial ports	none	Any multilayer switch or router with minimum 2 FastEthernet ports and two serial port.	12.2 or above
3	Personal Computer end-devices	FastEthernet NIC	At least one PC and any other IP end-device (camera, printer, etc.)	Windows, MAC or Linux operating system.
6	Personal Computer Server	FastEthernet NIC	Any PC with web server and DNS software loaded	Windows, MAC, or Linux operating system
12	Cat 5 or above straight-through patch cables.	none	none	n/a
6	Cat 5 or above cross-over patch cables	none	none	n/a
5	V.35 DTE Serial Cables	None	None	n/a
5	V.35 DCE Serial Cables	None	None	n/a

Design and Topology Diagram

Place a copy of the prototype network topology in this section. This is the network as it should be built to be able to perform the required tests. If this topology duplicates a section of the actual network, include a reference topology showing the location within the existing or planned network. Initial configurations for each device must be included in the Appendix.
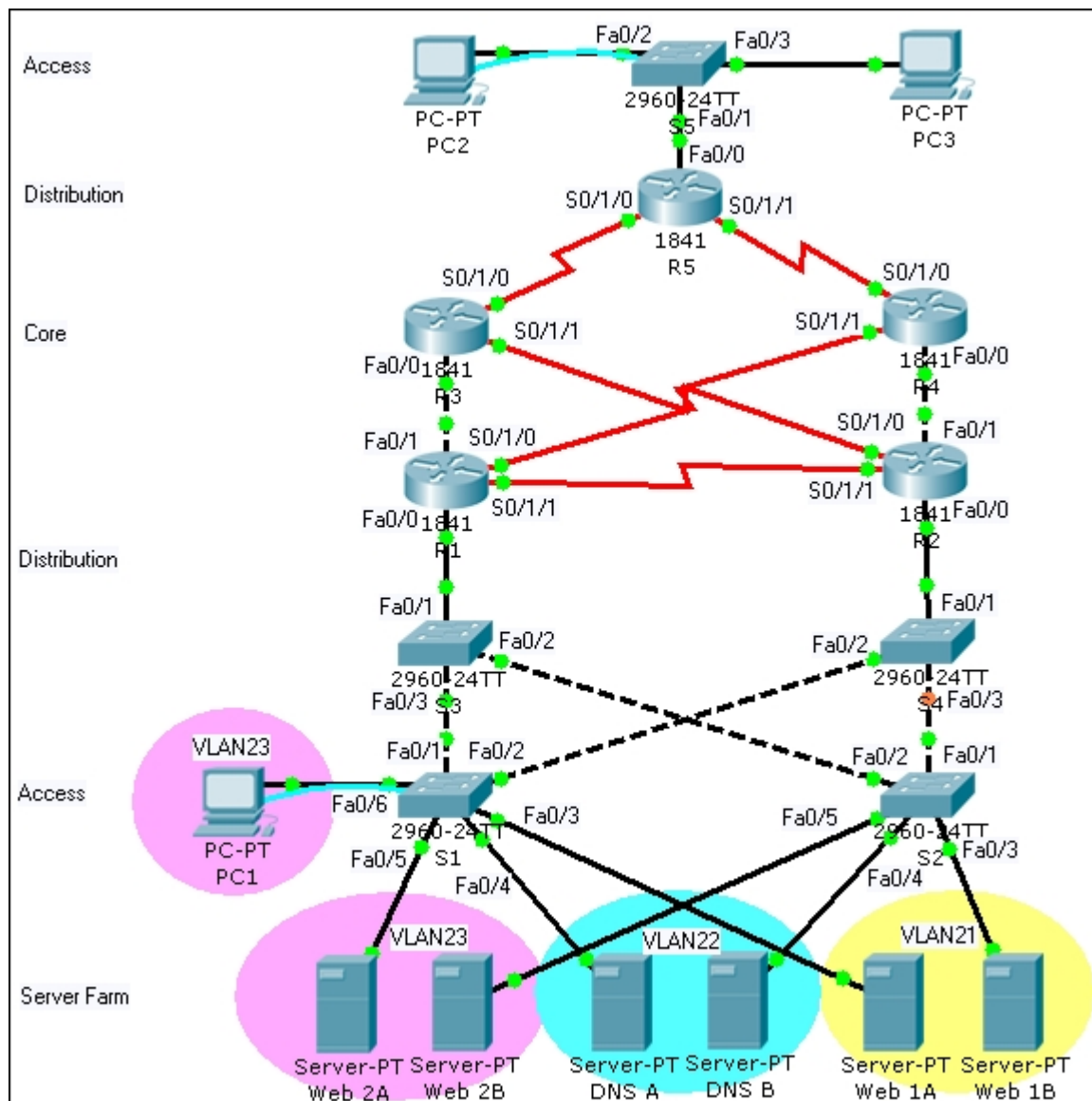
Figure 1: Topology - Prototype test topology.

Add a description about this design here that is essential to provide a better understanding of the testing or to emphasize any aspect of the test network to the reader.

For each test to be performed state the goals of the test, the data to record during the test, and the estimated time to perform the test.

Test 1. Description: Baseline Connectivity Test

Goals of Test:

The goal of the baseline is to verify that the topology is up and running with the proper protocols and features.

Data to Record:

Configurations

Routing Tables
VLAN information
Spanning Tree information
CPU & Memory
Ping Test Output

Estimated Time:

120 minutes

Test 1. Procedures:

Itemize the procedures to follow to perform the test.

1. Connect and configure the prototype network according to the Installation Checklist.

2. From PC1 and PC2 ping all of the other devices in the topology. Record any anomalies.

3. Telnet to all of the devices and examine the "`show running-config`" output. Copy and paste the results into a document for later use.
4. Use the "`tracert`" command between PC1 and PC2 and between PC2 and servers Web 1A and Web 2B to verify that the traffic is taking the correct routes through the network.
5. Test IP connectivity between host devices on the same VLAN.
6. Test IP connectivity between host devices in different VLANs

7. Verify EIGRP configuration using **"show ip route", **"show ip protocols", "show ip eigrp topology", and "show ip eigrp interfaces" on all routers.

8. Verify VLAN and STP configuration using **"show vlan"** and "show spanning-tree" on all switches.

Test 1. Expected Results and Success Criteria:

1. All networking devices are connected and accessible through Telnet.

2. Hosts can ping all hosts on every VLAN.

3. EIGRP routes are advertised correctly and are installed into the routing tables on all of the routers.

4. STP is selecting the correct root bridge and blocking the expected port.

5. Web pages stored on all web servers are available to all PCs.

6.

Test 1. Results and Conclusions

Record the results of the tests and the conclusions that can be drawn from the results.

Appendix

Record the starting configurations, any modifications, log file or command output, and any other relevant documentation.