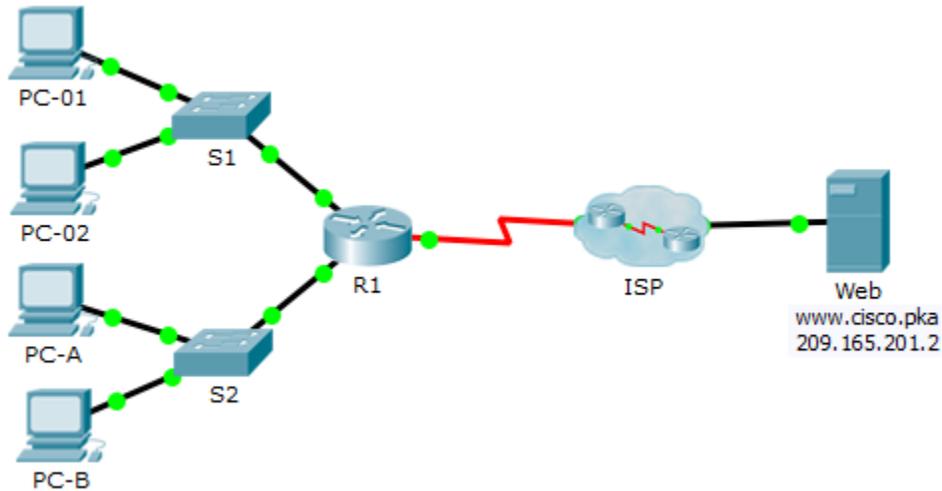# Packet Tracer - Troubleshooting Connectivity Issues

Topology

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	G0/0	172.16.1.1	255.255.255.0	N/A
	G0/1	172.16.2.1	255.255.255.0	N/A
	S0/0/0	209.165.200.226	255.255.255.252	N/A
R2	G0/0	209.165.201.1	255.255.255.224	N/A
	S0/0/0 (DCE)	209.165.200.225	255.255.255.252	N/A
PC-01	NIC	172.16.1.3	255.255.255.0	172.16.1.1
PC-02	NIC	172.16.1.4	255.255.255.0	172.16.1.1
PC-A	NIC	172.16.2.3	255.255.255.0	172.16.2.1
PC-B	NIC	172.16.2.4	255.255.255.0	172.16.2.1
Web	NIC	209.165.201.2	255.255.255.224	209.165.201.1
DNS1	NIC	209.165.201.3	255.255.255.224	209.165.201.1
DNS2	NIC	209.165.201.4	255.255.255.224	209.165.201.1

Objectives

The objective of this Packet Tracer activity is to troubleshoot and resolve connectivity issues, if possible. Otherwise, the issues should be clearly documented and so they can be escalated.

Background / Scenario

Users are reporting that they cannot access the web server, www.cisco.pka after a recent upgrade that included adding a second DNS server. You must determine the cause and attempt to resolve the issues for the users. Clearly document the issues and any solution(s). You do not have access to the devices in the cloud or the server www.cisco.pka. Escalate the problem if necessary.

Router R1 can only be accessed using SSH with the username **Admin01** and password **cisco12345**.

Step 1: Determine the connectivity issue between PC-01 and web server.

a. On PC-01, open the command prompt. Enter the command **ipconfig** to verify what IP address and default gateway has been assigned to PC-01. Correct as necessary.

b. After correcting the IP addressing issues on PC-01, issue the pings to the default gateway, web server, and other PCs. Were the pings successful? Record the results.

Ping to default gateway (172.16.1.1)   To web server (209.165.201.2)

Ping to PC-02   To PC-A   To PC-B

c. Use the web browser to access the web server on PC-01. Enter the URL www.cisco.pka and then using the IP address 209.165.201.2. Record the results.

Can PC-01 access www.cisco.pka?   using the web server IP address?

d. Document the issues and provide the solution(s). Correct the issues if possible.

Step 2: Determine the connectivity issue between PC-02 and web server.

a. On PC-02, open the command prompt. Enter the command **ipconfig** to verify the configuration for the IP address and default gateway. Correct as necessary.

b. After correcting the IP addressing issues on PC-02, issue the pings to the default gateway, web server, and other PCs. Were the pings successful? Record the results.

Ping to default gateway (172.16.1.1)   To web server (209.165.201.2)

Ping to PC-01   To PC-A   To PC-B

c. Navigate to www.cisco.pka using the web browser on PC-02. Record the results.

Can PC-01 access www.cisco.pka?   using the web server IP address

d. Document the issues and provide the solution(s). Correct the issues if possible.

Step 3: Determine the connectivity issue between PC-A and web server.

a. On PC-A, open the command prompt. Enter the command **ipconfig** to verify the configuration for the IP address and default gateway. Correct as necessary.

b. After correcting the IP addressing issues on PC-A, issue the pings to the default gateway, web server, and other PCs. Were the pings successful? Record the results.

Ping to default gateway (172.16.2.1)   To web server (209.165.201.2)

Ping to PC-B   To PC-01   To PC-02

c. Navigate to www.cisco.pka.net using the web browser on PC-A. Record the results.

Can PC-A access www.cisco.pka?   using the web server IP address

d. Document the issues and provide the solution(s). Correct the issues if possible.

Step 4: Determine the connectivity issue between PC-B and web server.

a. On PC-B, open the command prompt. Enter the command **ipconfig** to verify the configuration for the IP address and default gateway. Correct as necessary.

b. After correcting the IP addressing issues on PC-B, issue the pings to the default gateway, web server, and other PCs. Were the pings successful? Record the results.

Ping to default gateway (172.16.2.1)   To web server (209.165.201.2)

Ping to PC-A   To PC-01   To PC-02

c. Navigate to www.cisco.pka using the web browser. Record the results.

Can PC-B access www.cisco.pka?   using the web server IP address

d. Document the issues and provide the solution(s). Correct the issues if possible.

Step 5: Verify connectivity.

Verify that all the PCs can access the web server www.cisco.pka.

Your completion percentage should be 100%. If not, click **Check Results** to see which required components are not yet completed.

Suggested Scoring Rubric

Activity Section	Possible Points	Earned Points
Step 1d	**5**	
Step 2d	**5**	
Step 3d	**5**	
Step 4d	**5**	
Packet Tracer	**15**	
Total Score	**35**	