Packet Tracer - Troubleshoot Connectivity Issues

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

In this Packet Tracer activity, you will troubleshoot and resolve connectivity issues, if possible. Otherwise, the issues should be clearly documented 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.

Note: Router R1 can only be accessed using SSH with the username **Admin01** and password **cisco12345**. Router R2 is in the ISP cloud and is not accessible by you.

Instructions

Step 1: Determine connectivity issues from PC-01.

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

b. After verifying/correcting the IP addressing issues on PC-01, issue 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)?

Answer :Yes.

To web server (209.165.201.2)?

Answer :Yes

Ping to PC-02?

Answer :Yes

To PC-A?

Answer: No

To PC-B?

Answer: No

c. Use the web browser to access the web server on PC-01. Access the web server by first entering the URL http://www.cisco.pka and then by using the IP address 209.165.201.2. Record the results.

Can PC-01 access www.cisco.pka?

Answer: Yes

Using the web server IP address?

Answer: Yes

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

Answer: Ip address of PC1 was wrongly configured. To solve this issue we updated the ip address.by accessing PC1

Step 2: Determine connectivity issues from PC-02.

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 verifying/correcting the IP addressing issues on PC-02, issue 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)?

Answer: Yes

To web server (209.165.201.2)?

Answer: Yes

Ping to PC-01?

Answer: Yes

To PC-A?

Answer: No

To PC-B?

Answer: No

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

Questions:

Can PC-02 access www.cisco.pka?

Answer: Yes

Using the web server IP address?

Answer: Yes

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

Answer: An error occurred while configuring PC2's default gateway. To resolving this issue I changed the default gateway in PC2's IP configuration

Step 3: Determine connectivity issues from PC-A.

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 web server, default gateway, and other PCs. Were the pings successful? Record the results.

To web server (209.165.201.2)?

Answer: No

Ping to default gateway (172.16.2.1)?

Answer: No

Ping to PC-B?

Answer: Yes

To PC-01?

Answer: No

To PC-02?

Answer: No

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

Can PC-A access www.cisco.pka?

Answer: No

Using the web server IP address?

Answer: No

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

Answer: There is a communication issue in R1. Here configuration have to done remotely since direct access to the router is not possible. If there is an error it needs to be correct by using proper IP address, Subnet Mask and default gateway

Step 4: Determine connectivity issues from PC-B.

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 web server, default gateway, and other PCs. Were the pings successful? Record the results.

To web server (209.165.201.2)?

Answer: Yes

Ping to default gateway (172.16.2.1)?

Answer: Yes

Ping to PC-A?

Answer: Yes

To PC-01?

Answer: Yes

To PC-02?

Answer: Yes

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

Can PC-B access www.cisco.pka?

Answer: No

Using the web server IP address
Answer: Yes

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

PC-B is not able to map the domain name to IP Address

e. Could all the issues be resolved on PC-B and still make use of DNS2? If not, what would you need to do?

Answer: We cannot fix it because the DNS part is locked

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, verify that the IP configuration information is correct on all devices and that it matches what is shown in the addressing table.