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

Determine connectivity issues from PC-01.

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.

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)?

Ans: Successful

To web server (209.165.201.2)?

ans: Okay

Ping to PC-02?

ans: okay

To PC-A?

ans: loss 100%

To PC-B?

ans: loss 100%

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?

ans: yes it can

Using the web server IP address?

ans: yes it can

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

ans: incorrect routing configuration leads to this problem. PC1 IP address was wrong so i fixed that. then PC A and PC B was unreachable dur to routing issue.

Determine connectivity issues from PC-02.

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.

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)?

ans: ping success.

To web server (209.165.201.2)?

ans: ping success.

Ping to PC-01?

ans: ping success.

To PC-A?

ans: loss 100%

To PC-B?

ans: loss 100%

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

Questions:

Can PC-02 access www.cisco.pka?

ans: yes it can

Using the web server IP address?

ans: yes it can

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

Ans: Default gateway was wrong so we fixed it. due to wrong routing it couldn't ping PC A and PC B

Determine connectivity issues from PC-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.

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)?

ans: unsuccessful

Ping to default gateway (172.16.2.1)?]

ans: unsuccessful

Ping to PC-B?

ans: success

To PC-01?

ans: unsuccess

To PC-02?

ans: unsuccess

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

Can PC-A access www.cisco.pka?

ans: no it can’t

Using the web server IP address?

ans: no it can’t

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

ans: as the road is block so ping web server, default gateway, pc 1 pc 2. also it can’t access the web.

To solve it we can access pc1 then access the router then fix it’s ip. doing so it will unblock the routes for PC A and PC B both at the same time.

Determine connectivity issues from PC-B.

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.

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)?

ans: successful

Ping to default gateway (172.16.2.1)?

ans: successful

Ping to PC-A?

ans: successful

To PC-01?

ans: successful

To PC-02?

ans: successful

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

Can PC-B access www.cisco.pka?

ans: Hostname unresolved

Using the web server IP address

ans: successfully loads.

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

ans: The dns has some issues so it couldn’t go the web using www.cisco.pka. solving dns configuration will do the job.

we can simply change the pc B dns to 209.165.201.3

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

ans: yes when we will fix the route then DNS2 will still be usable.

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.

ANS: ALL VERIFIED THAT THINGS ARE WORKING