

CCNA 640-802 Bible - Connect, Configure and Verify Operation Status of Device Interface

1. Refer to the exhibit. What is the reason that the interface status is "administratively down, line protocol down"?

```
Router# show interface
Serial 0/0/0 is administratively down, line protocol down
```

A: There is no encapsulation type configured. B: There is a mismatch in encapsulation types. C: The interface is not receiving any keepalives. D: The interface has been configured with the shutdown command. E: The interface needs to be configured as a DTE device. F: The wrong type of cable is connected to the interface. **Correct Answers: D** Explanation: Based on the information provided in the exhibit, we know that Serial0/0/0 administratively down, line protocol down, usually there are three states : 1. serial0/0 up, line protocol is up; The interface is up and the link protocol is up. 2. serial0/0 down, line protocol is down; The interface is down and there is something wrong with the physical layer . 3. serial0/0 up, line protocol is down; The interface is up , but the encapsulation format is not matched correctly. 2. The show interfaces serial 0/0 command resulted in the output shown in the graphic. What are possible causes for this interface status? (Choose three.)

```
Router# show interfaces serial 0/0
Serial0/0 is up, line protocol is down
Hardware is HD64570
Internet address is 192.168.100.1/24
MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set
Keepalive set (10 sec)
```

A: The interface is shut down. B: No keepalive messages are received. C: The clockrate is not set. D: No loopback address is set. E: No cable is attached to the interface. F: There is a mismatch in the encapsulation type. **Correct Answers: B, C, F** Explanation: Based on the information provided in the exhibit, we know that Serial0/0 is up, line protocol is down, usually there are three states : 1. serial0/0 up, line protocol is up; -> The interface is up and the link protocol is up. 2. serial0/0 down, line protocol is down; -> The interface is down and there is something wrong with the physical layer . 3. serial0/0 up, line protocol is down; -> The interface is up , but the encapsulation format is not matched correctly. 3. Refer to the exhibit. What could be possible causes for the "Serial0/0 is down" interface status? (Choose two.)

```
Router1# show interfaces serial 0/0
Serial0/0 is down, line protocol is down
Hardware is MK5025
Serial Internet address is 10.1.1.2/24
MTU 1500 bytes, BW 1544 Kbits, DLY 20000 usec, rely 255/255, load 9/255
Encapsulation PPP, loopback not set, keepalive set (10 sec)
<some output omitted>
```

A: A Layer 1 problem exists. B: The bandwidth is set too low. C: A protocol mismatch exists. D: An incorrect cable is being used. E: There is an incorrect IP address on the Serial 0/0 interface. **Correct Answers: A, D** 4. Refer to the exhibit. What could be possible causes for the "Serial0/0 is down" interface status? (Choose two.)

```
Router1# show interfaces serial 0/0
Serial0/0 is down, line protocol is down
Hardware is MK5025
Serial Internet address is 10.1.1.2/24
MTU 1500 bytes, BW 1544 Kbits, DLY 20000 usec, rely 255/255, load 9/255
Encapsulation PPP, loopback not set, keepalive set (10 sec)
<some output omitted>
```

A: A Layer 1 problem exists. B: The bandwidth is set too low. C: A protocol mismatch exists. D: An incorrect cable is being used. E: There is an incorrect IP address on the Serial 0/0 interface. **Correct Answers: A, D** 5. Refer to the exhibit. What is the meaning of the output MTU 1500 bytes?

```
Router# show interfaces ethernet 0
Ethernet0 is up, line protocol is up
  Hardware is QUICC Ethernet, address is 00c0.ab73.dead (bia 0010.7bcc.7321)
  MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
<output omitted>
Router#
```

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A: The maximum number of bytes that can traverse this interface per second is 1500. B: The minimum segment size that can traverse this interface is 1500 bytes. C: The maximum segment size that can traverse this interface is 1500 bytes. D: The minimum packet size that can traverse this interface is 1500 bytes. E: The maximum packet size that can traverse this interface is 1500 bytes. F: The maximum frame size that can traverse this interface is 1500 bytes. **Correct Answers: E** Explanation: MTU is short for Maximum Transmission Unit, which refers to the largest data packet transmitted on the network. The unit of MTU is byte. The MTU of most network devices is 1500 byte. If the MTU of the router is larger than that of the gateway, large packets will be split in order to transmit, this causes the production of many data packet fragments, increasing the packet loss rate and lowering the network speed. If the MTU of one device matches that of another, the packet loss rate will be reduced.