

**Critical Thinking Assignment 3: Labs Lessons 5 and 6**

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IT315-2: Introduction to Networks

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### Critical Thinking Assignment 3: Labs Lessons 5 and 6

This documentation is part of the Critical Thinking 3 Assignment from ITS315: Introduction to Networks at Colorado State University Global.

#### The Assignment Direction:

##### Module #3: uCertify Lab Simulations

For this assignment, you will complete multiple lab simulations. Activities include configuring IP addresses, identifying routing protocols and NAT IP addresses, testing, etc. You will take a screenshot upon completion of each lab and include the screenshots in the submitted assignment.

Access uCertify and login, go to Labs, and complete the tasks in the following lab simulations:

5.3.5 Configuring IPv4 address

5.5.11 Configuring and testing IPv6 addresses

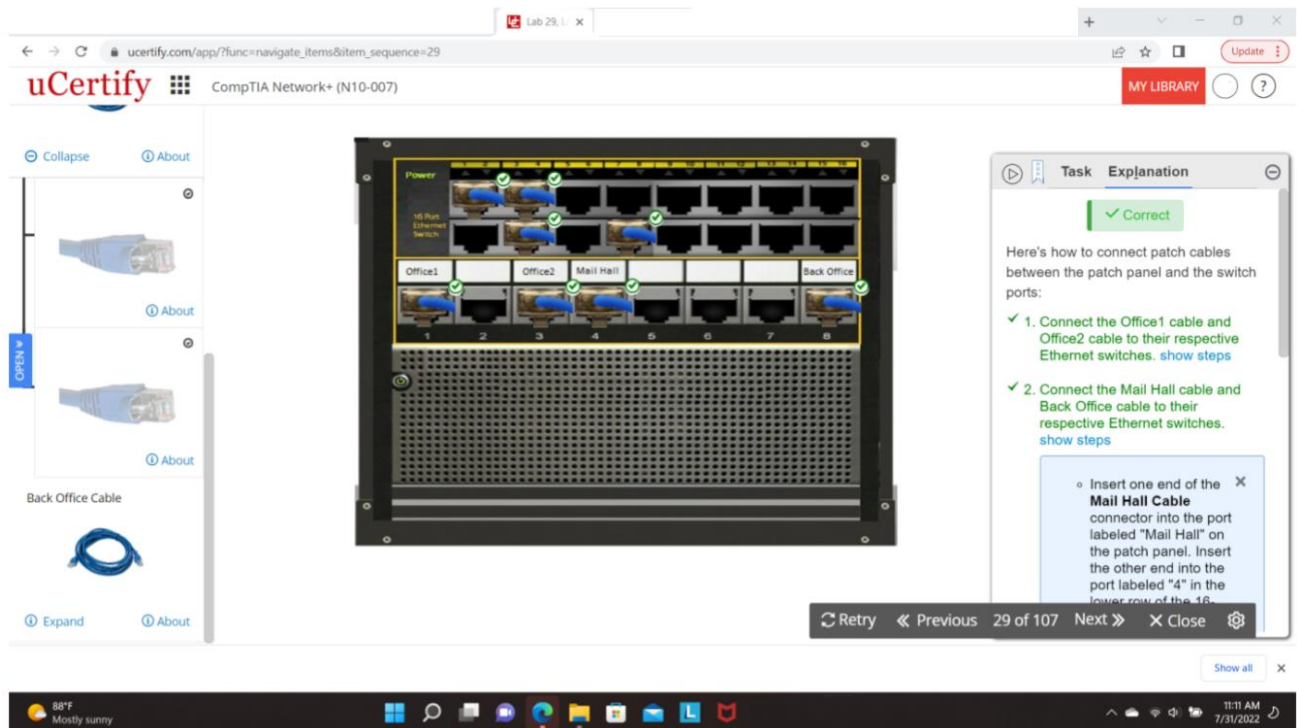
6.4.1 Identifying routing protocols

6.4.2 Describing Network Address Translation

6.5.1 Identifying NAT IP addresses

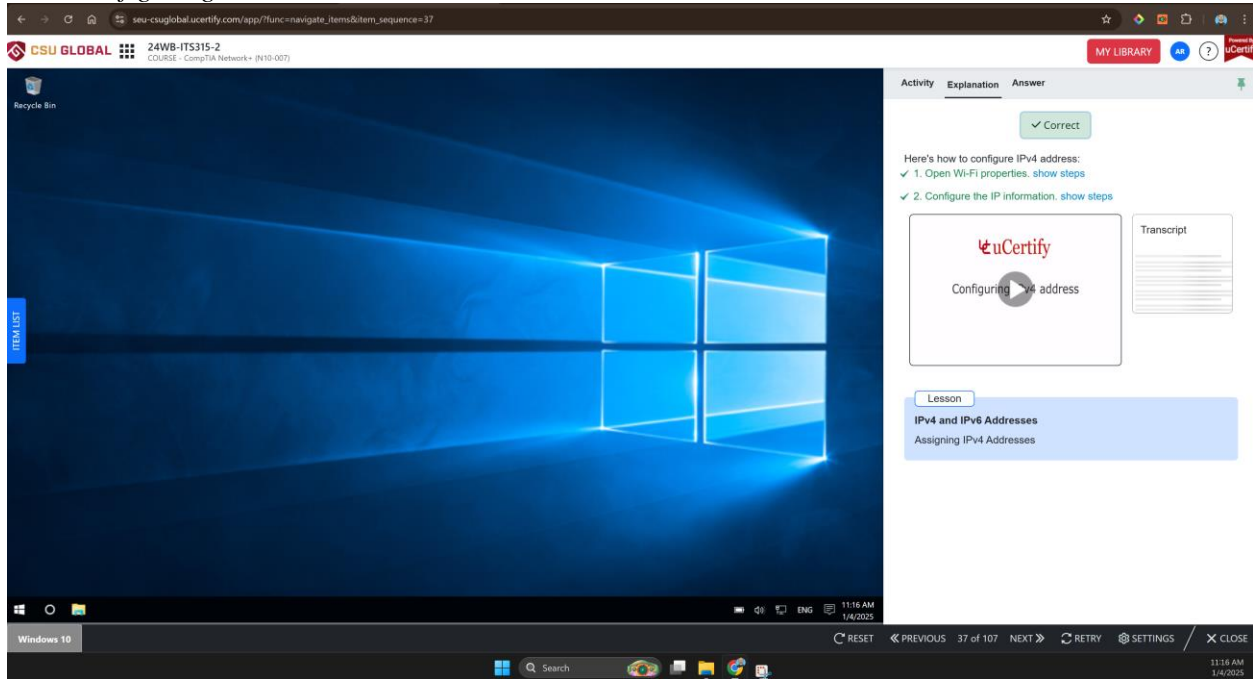
After completing the task, click Submit >> Evaluate >> Record my answer to record your answer. Take a screenshot of each of the labs and paste the screenshot into a Word document. The document should have a title page that includes your name, date, school name, section, course name, and instructor name. Submit the assignment in Canvas.

Please ensure your screenshot includes your name, date, and timestamp as shown in the image below.

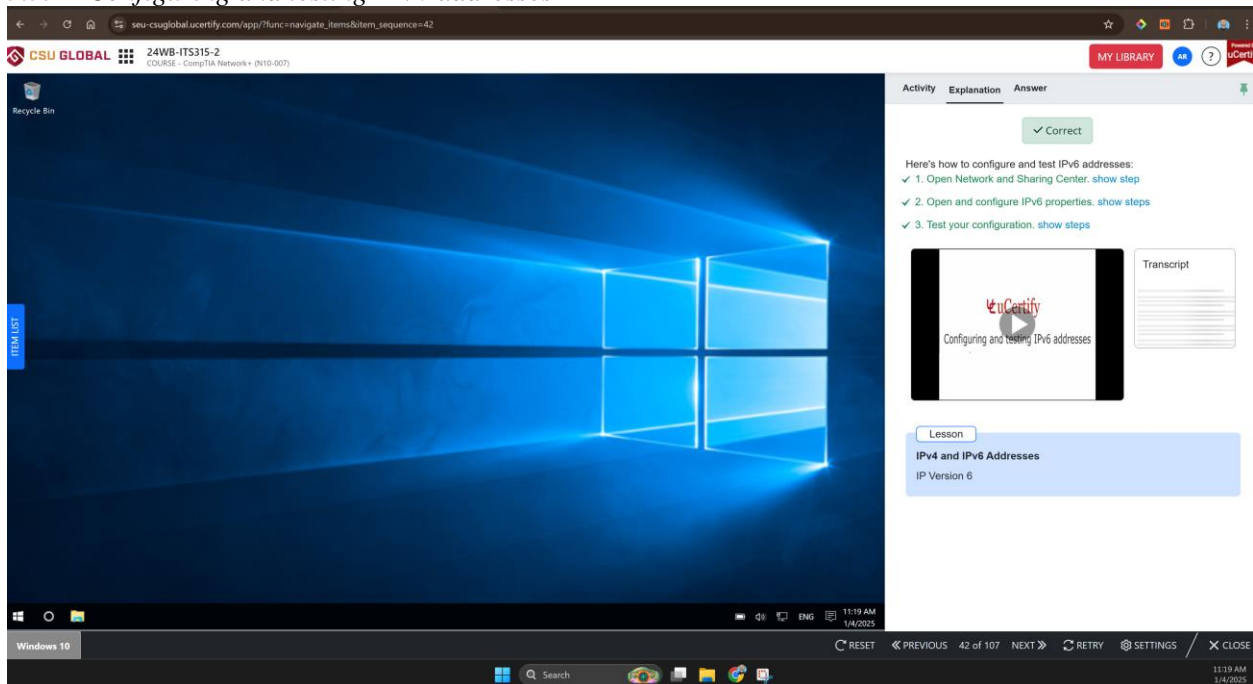


## Screenshots

**Figure 1**  
5.3.5 Configuring IPv4 address



**Figure 2**  
5.5.11 Configuring and testing IPv6 addresses



**Figure 3**  
6.4.1 Identifying routing protocols

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Correct Answer Compare Your Answer

Protocol	Description
1. OSPF	A. A Cisco proprietary protocol that uses diffusing update algorithm
2. RIP	B. A link-state routing protocol that uses a metric of cost based on the link speed between two routers
3. BGP	C. A link-state routing protocol that uses a dimensionless metric associated with an interface
4. IS-IS	D. A distance-vector routing protocol that uses a metric of hop count
5. EIGRP	E. A routing protocol of the global Internet for exchanging information between gateway host

Activity Explanation

✓ Correct

Types of routing protocols are described below:

- ✓ **RIP**: A distance-vector routing protocol that uses a metric of hop count
- ✓ **OSPF**: A link-state routing protocol that uses a metric of cost based on the link speed between two routers
- ✓ **IS-IS**: A link-state routing protocol that uses a dimensionless metric associated with an interface
- ✓ **EIGRP**: A Cisco proprietary protocol that uses diffusing update algorithm (DUAL)
- ✓ **BGP**: A routing protocol of the global Internet for exchanging information between gateway hosts

Lesson

Routing IP Packets

Routing Protocol Examples

RESET PREVIOUS 45 of 107 NEXT RETRY SETTINGS CLOSE

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**Figure 4**  
6.4.2 Describing Network Address Translation

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Correct Answer Your Answer

Network Address Translation (NAT) allows  IP addresses to be translated into  IP addresses. Address translation can also be done for specific  associated with an . When this is done, it's often referred to as .

Activity Explanation

✓ Correct

Network Address Translation (NAT) allows **private** IP addresses (as defined in RFC 1918) to be translated into **Internet-routable** IP addresses. Address translation can also be done for specific **ports** associated with an **IP address**. When this is done, it's often referred to as **port forwarding**.

Lesson

Routing IP Packets

Routing Protocol Examples

RESET PREVIOUS 46 of 107 NEXT RETRY SETTINGS CLOSE

11:21 AM 1/4/2025

**Figure 5**  
6.5.1 Identifying NAT IP addresses

Correct Answer Compare Your Answer

**IP Address**

1. Outside local
2. Inside local
3. Inside global
4. Outside global

**Definition**

- A. A public IP address referencing an outside device
- B. A public IP address referencing an inside device
- C. A private IP address referencing an outside device
- D. A private IP address referencing an inside device

Activity Explanation

✓ Correct

The NAT IP addresses are described below:

- ✓ • Inside local: A private IP address referencing an inside device
- ✓ • Inside global: A public IP address referencing an inside device
- ✓ • Outside local: A private IP address referencing an outside device
- ✓ • Outside global: A public IP address referencing an outside device

Lesson

Routing IP Packets

Address Translation

RESET PREVIOUS 47 of 107 NEXT RETRY SETTINGS CLOSE

11:23 AM 1/4/2025

Figures 1 through 5 show that all the lab questions were answered correctly.