Optional Steps

Task 1: Troubleshooting connectivity between the private instance and the public instance

In this optional task, you use the Internet Control Message Protocol (ICMP) to validate a private instance's network reachability from the public instance.

Note: This task is **optional** and is provided in case you have lab time remaining. You can complete this task or skip to the end of the lab.

.34. Return to the AWS Management Console browser tab.
.35. In the left navigation pane, choose **Instances**.
.36. Select **Private Instance**.
.37. On the **Details** tab, copy the value of **Private IPv4 addresses** to your clipboard.

Note: To copy the private IPv4 address, hover over it and choose the copy icon.

.38. Unselect **Private Instance**.
.39. Select **Public Instance**.
.40. Choose Connect.

The **Connect to instance** page is displayed.

.41. Choose the **Session Manager** tab.
.42. Choose Connect.

A new browser tab or window opens with a connection to the **Public Instance**.

First, use a *curl* command to retrieve a header file and confirm is the web app hosted on the private instance is reachable from the public instance.

.43. **Command:** Copy the following command to your notepad. Replace **PRIVATE_IP** with the value of the **Private IPv4 address** for the **Private Instance**:

```
curl PRIVATE_IP
```

Expected output:

```
<html><body><h1>It works!</h1></body></html>
```

44. **Command:** Copy the following command to your notepad. Replace **PRIVATE_IP** with the value of the **Private IPv4 address** for the **Private Instance**:

```
ping PRIVATE_IP
```

45. **Command:** Copy and paste the updated command in your terminal and press **Enter**.

This is a sample command only. Do not use the following command.

```
ping 10.0.2.131
```

46. After a few seconds, stop the ICMP ping request by pressing CTRL+C.

The ping request to the private instance fails. Your challenge is to use the console and figure out the correct *inbound rule* required in the **Private SG** to be able to successfully ping the private instance.

If you have trouble completing the optional task, refer to the Optional Task Solution section at the end of the lab.

Task 2: Retrieving instance metadata

In this optional task, you run instance metadata commands on AWS CLI using a tool such as cURL. Instance metadata is available from your running Amazon EC2 instance. This can be helpful when you write scripts to run from your Amazon EC2 instance.

Note: This task is **optional** and is provided in case you have lab time remaining. You can complete this task or skip to the end of the lab .

.47. Return to the browser tab with the AWS Management Console open.
.48. In the left navigation pane, choose **Instances**.
.49. Select **Public Instance**.
.50. Choose Connect.

The **Connect to instance** page is displayed.

.51. Choose the **Session Manager** tab.
.52. Choose Connect.

A new browser tab or window opens with a connection to the **Public Instance**.

.53. **Command:** To view all categories of instance metadata from within a running instance, run the following command:

```
TOKEN=`curl -X PUT "http://169.254.169.254/latest/api/token" -H "X-aws-ec2-metadata-token-ttl-seconds: 21600"` \
&& curl -H "X-aws-ec2-metadata-token: $TOKEN" -v http://169.254.169.254/latest/meta-data/
```

.54. **Command:** Run the following command to retrieve the public-hostname (one of the top-level metadata items that were obtained in the preceding command):

```
curl -H "X-aws-ec2-metadata-token: $TOKEN" -v http://169.254.169.254/latest/meta-data/public-hostname
```

Note: The IP address 169.254.169.254 is a link-local address and is valid only from the instance.

You have successfully learned how to retrieve instance metadata from your running Amazon EC2 instance.

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