|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Device** | **Interface** | **IP Address / Prefix** | | **Default Gateway** |
| R1 | G0/0 | 10.10.1.97 | 255.255.255.224 | N/A |
| *R1* | *G0/0* | 2001:db8:1:1::1/64 | | *N/A* |
| *R1* | S0/0/1 | 10.10.1.6 | 255.255.255.252 | N/A |
| *R1* | *S0/0/1* | 2001:db8:1:2::2/64 | | *N/A* |
| *R1* | *S0/0/1* | fe80::1 | | *N/A* |
| R2 | S0/0/0 | 10.10.1.5 | 255.255.255.252 | N/A |
| *R2* | *S0/0/0* | 2001:db8:1:2::1/64 | | *N/A* |
| *R2* | S0/0/1 | 10.10.1.9 | 255.255.255.252 | N/A |
| *R2* | *S0/0/1* | 2001:db8:1:3::1/64 | | *N/A* |
| *R2* | *S0/0/1* | fe80::2 | | *N/A* |
| R3 | G0/0 | 10.10.1.17 | 255.255.255.240 | N/A |
| *R3* | *G0/0* | 2001:db8:1:4::1/64 | | *N/A* |
| *R3* | S0/0/1 | 10.10.1.10 | 255.255.255.252 | N/A |
| *R3* | *S0/0/1* | 2001:db8:1:3::2/64 | | *N/A* |
| *R3* | *S0/0/1* | fe80::3 | | *N/A* |
| PC1 | NIC | *10.10.1.100* | *255.255.255.224* | *10.10.1.97* |
| *PC1* | *NIC* | *2001:DB8:1:1::A* | | *FE80::1* |
| PC2 | NIC | *10.10.1.20* | *255.255.255.240* | *10.10.1.17* |
| *PC2* | *NIC* | *2001:DB8:1:4::A* | | *FE80::3* |

Step 1: Use ping to verify IPv4 connectivity.

a. From PC1, ping the IPv4 address for PC2.

**Question: Was the result successful?**

It was succesful



b. From PC2, ping the IPv4 address for PC1.

**Question: Was the result successful?**

It was successful



From PC1, ping the IPv6 address for PC2.

**Question: Was the result successful?**

**From PC1, ping the IPv6 address for PC2.**

**Question:**

**Was the result successful?**

**From PC2, ping the IPv6 address of PC1.**

**Question:Was the result successful?**

It was successful



From PC2, ping the IPv6 address of PC1.

**Question: Was the result successful?**

It was successful



**Part 3: Discover the Path by Tracing the Route**

**Step 1: Use tracert to discover the IPv4 path.**

**What addresses were encountered along the path? With which interfaces are the four addresses associated**

G0/0 of R1, S0/0/0 on R2, S0/0/1 on R3, NIC of PC2



**What addresses were encountered along the path? With which interfaces are the four addresses associated**

G0/0 of R3, S0/0/1 of R2, S0/0/1 of R1, NIC of PC1



**Step 2: Use tracert to discover the IPv6 path.**

**What addresses were encountered along the path? With which interfaces are the four addresses associated?**

G0/0 of R1, S0/0/0 of r2, S0/0/1 of R3, NIC of PC2



**What addresses were encountered along the path? With which interfaces are the four addresses associated?**

G0/0 of R3, S0/0/1 of R2, S0/0/1 of R1, NIC of PC1

