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Cisco 1 Lab 2

Step-by-step: IPv6 config & tests in Packet Tracer

1. ***Open the lab***

- *Launch Packet Tracer.*
- *Double-click **vlab6-2.pkt** to open it.*

2. ***Open PC0's IPv6 settings***

- *Click **PC0 → Desktop → IP Configuration**.*

3. ***Set the global IPv6 address***

- *In **IPv6 Address**, type: 2001:db8::1*
- *In **Prefix Length**, type: 64*
- *Press **Enter**.*

4. ***Set link-local & gateway (link-local)***

- *In **Link Local Address**, type: fe80::1*
- *In **IPv6 Gateway**, type: fe80::ff*
- *Close the **IP Configuration** window for PC0.*

  💡 *Notes:*

  - *IPv6 hosts always have a **link-local** (starts with fe80:) for same-LAN comms.*
  - *To reach beyond the LAN, they also need a **global unicast** (like 2001:db8::1/64) **and** a **default gateway**—often a link-local of the router (fe80::ff here).*
  - *Hex is case-insensitive: FE80::1 = fe80::1.*

5. ***Ping the router's link-local from PC0***

- *Open **Command Prompt** on PC0.*

- *Type: ping fe80::ff → **Enter***
  ✅ *You should see successful replies.*

6. ***Ping PC1's global address from PC0***

- *Type: ping 2001:db9::1 → **Enter***
  ✅ *You should again see successful replies.*

  🔒 *Reminder: You **cannot** ping PC1's **link-local** from PC0 across a router; link-locals work **only on the same subnet**.*

7. ***Close Packet Tracer** when done.*

If pings fail (quick checks)

- ***Step 3 re-check:** PC0 has 2001:db8::1/64 (not /63, not /128).*

- ***Step 4 re-check:** PC0 **Link Local** is fe80::1 and **Gateway** is fe80::ff.*

- ***PC1 present & on its subnet:** PC1 should have a global in 2001:db9::/64 (e.g., 2001:db9::1/64) and the same router's link-local (fe80::ff) set as its gateway.*

- ***Router interfaces up:** The router interfaces toward PC0 and PC1 should each have an IPv6 address and be **up/up**.*

- ***Typo check:** Watch for db8 vs db9, and double colons :: placement*