

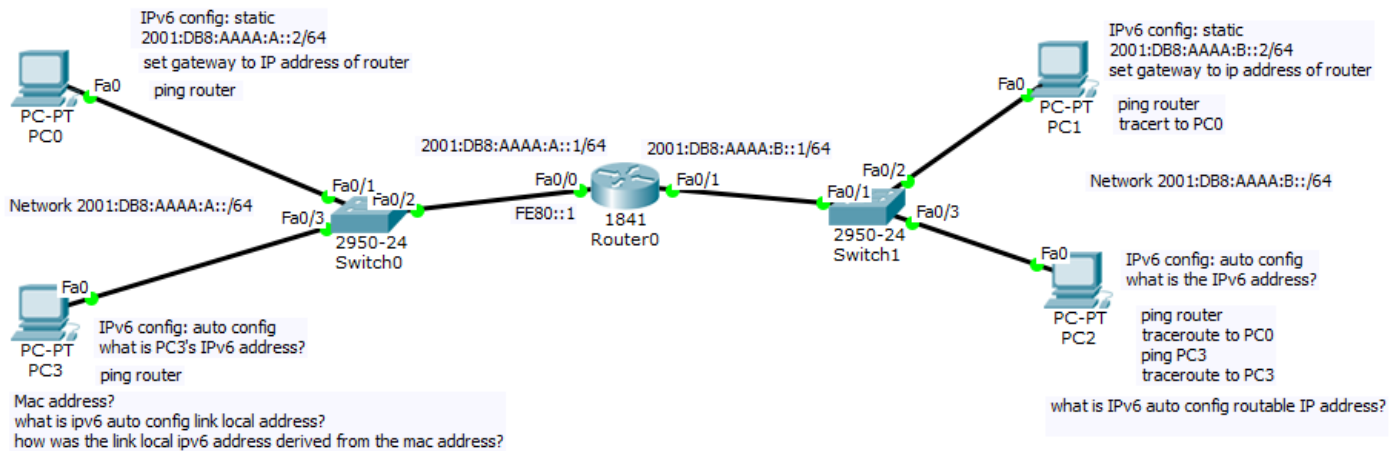
CS4471 IPv6 Lab (version 1.3)

Name _____

CIN _____

Group _____

Use Cisco Packet Tracer to create the network shown below containing one Cisco 1841 router, two Cisco 2950 switches, and 4 computers. On Router0, turn on ipv6 unicast-routing; on interface Fa0/0 configure ipv6 link-local address FE80::1 and static IPv6 address 2001:DB8:AAAA:A::1/64. On router's Fa0/1, configure static IPv6 address 2001:DB8:AAAA:B::1/64. Enable both interfaces with "no shutdown" command.



- (2 pts) On PC0, configure static IPv6 address 2001:DB8:AAAA:A::2/64. Set the IPv6 gateway to routable IPv6 address of router. Verify that you can ping the router. From PC0, submit screenshots of (i) the IPv6 address configured on PC0, (ii) IPv6 gateway configured on PC0, (iii) "ping 2001:DB8:AAAA:A::1", and (iv) "ping FE80::1".
- (1 pt) On PC1, configure static IPv6 address 2001:DB8:AAAA:B::2/64 and set the IPv6 gateway to the IPv6 address of the router. Verify that from PC1 you can ping the router and PC0. Submit screenshot of "tracert 2001:DB8:AAAA:A::2" from the command prompt window of PC1.
- (2.5 pts) On PC3, enable "auto config" in order that PC3 can automatically obtain an IPv6 address. Verify that PC3 can ping the link local address of the router.
 - Submit a screenshot of "ping FE80::1".
 - Submit a screenshot of "ipconfig /all".
 - What is the physical address of PC3's network interface?
 - What is the link local IPv6 address of PC3's network interface?
 - How was the link local IPv6 address derived from the physical address?
- (2.5 pts) On PC2, enable "auto config" in order that PC2 can automatically obtain an IPv6 address. Verify that PC2 can ping the IPv6 address of the router from the command prompt window of PC2.
 - Submit screenshots of "ping 2001:DB8:AAAA:B::1" and "ipconfig /all" on PC2.
 - Submit a screenshot of a window that displays PC2's routable IPv6 address. What is this value?
 - PC2 should be able to ping PC0. Submit a screenshot of "tracert 2001:DB8:AAAA:A::2".
 - What is PC3's auto-configured routable IPv6 address? Submit a screenshot showing this value.
 - PC2 should be able to ping PC3. Submit a screenshot of traceroute from PC2 to PC3.
- (1 pt) In simulation mode, capture/decode Neighbor Discovery Protocol packets and submit screenshots of any two of the following ND messages: Router Solicitation (ICMPv6 type 133), Router Advertisement (ICMPv6 type 134), Neighbor Solicitation (ICMPv6 type 135), Neighbor Advertisement (ICMPv6 type 136).
- (1 pt) submit printout of output of "show running-config" from the router.