Routed Backbone Network Comparison

Same Subnet

Switch 1
1. Read Destination MAC
2. Check the Forwarding Table
3. Forward to the Respective Port

Different Subnet

Switch 1
1. Read Destination MAC
2. Check the Forwarding Table
3. Forward to the Router

Router
4. Read Destination IP
5. Check Routing Table
6. Apply ARP Command to get MAC
7. Check the Best Path
8. Change the Destination MAC
9. Forward to the Switch 2

Switch 2
10. Read Destination MAC
11. Check the Forwarding Table
12. Forward to the Respective Port

VLAN Backbone Network Comparison

Same VLAN

Switch 1
1. Read Destination MAC
2. Check the Forwarding Table
3. Forward to the Respective Port

Different VLAN

Switch 1
1. Read Destination MAC
2. Check the Forwarding Table
3. Tag the Frame with VLAN ID
4. Forward it Through VLAN Trunk

Router
Just Passing Through

Switch 2
5. Un-tag the VLAN ID
6. Read Destination MAC
7. Check the Forwarding Table
8. Forward to the Respective Port