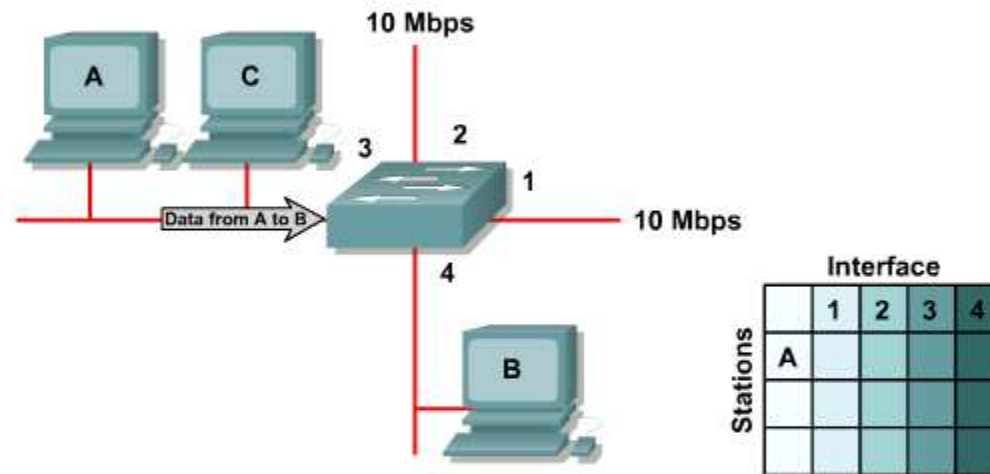


Switch Operation

FIGURES

1

2



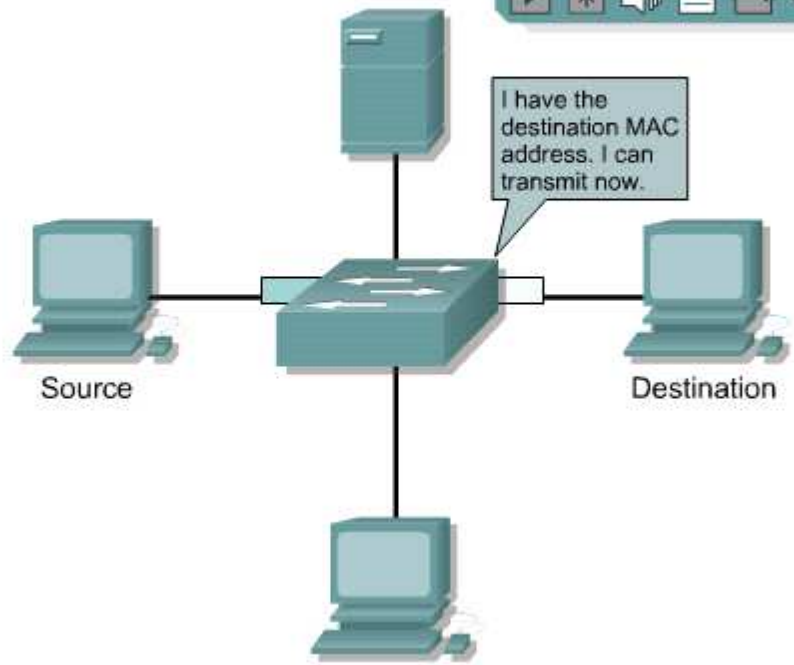
- Forward packets based on MAC address in forwarding table
- Operates at OSI Layer 2
- Learns a station's location by examining source address

Cut-Through

FIGURES

- 1
- 2

Toolbar: Roll over tools

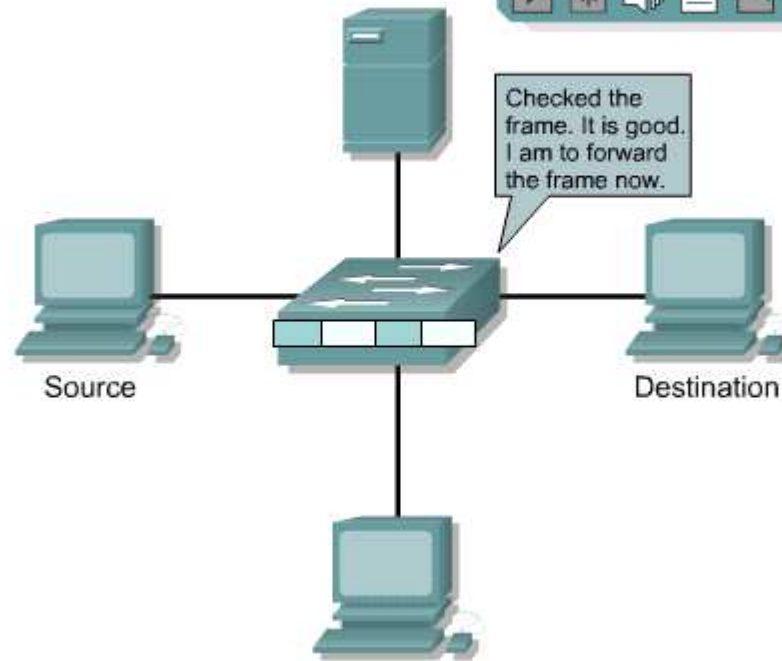


Store-and-Forward

FIGURES

- 1
- 2

Toolbar: Roll over tools



Collisions in Collision Domain

FIGURES

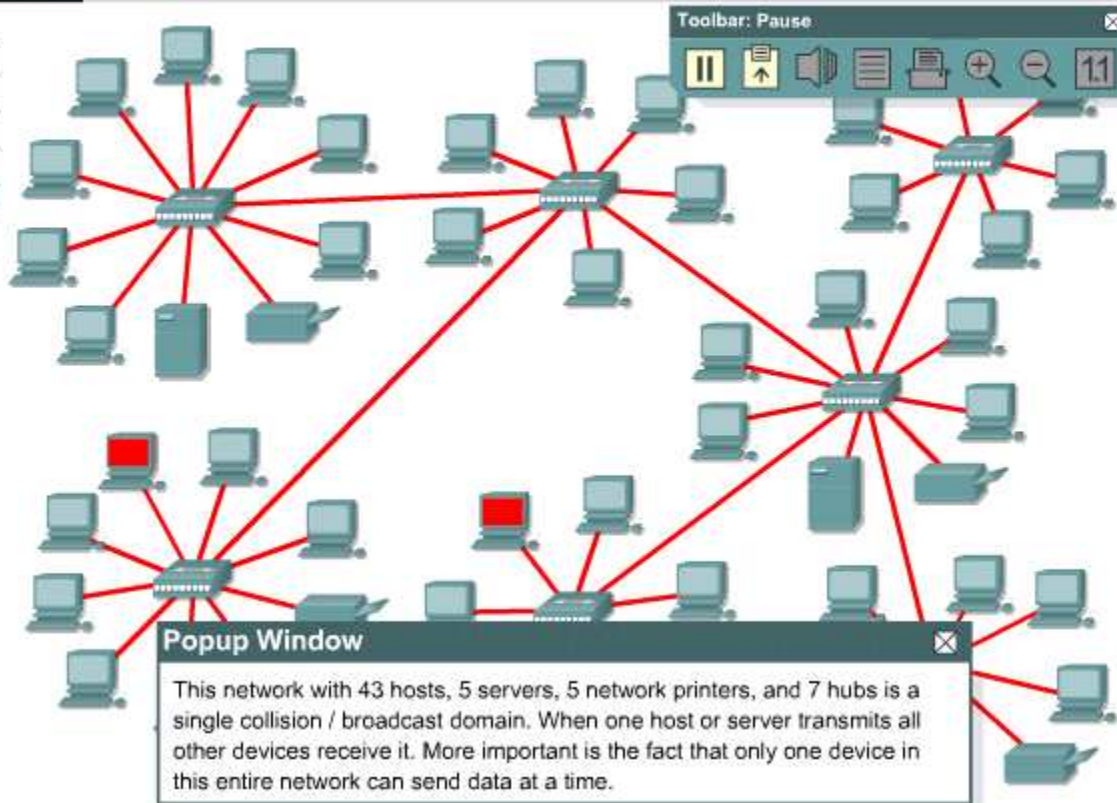
1

2

3

4

5



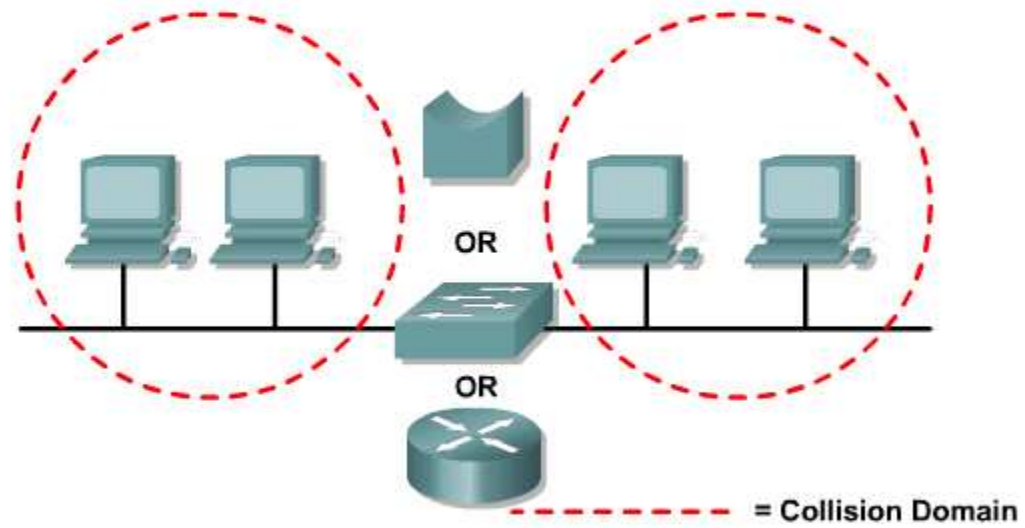
Limiting the Collision Domain

FIGURES

1

2

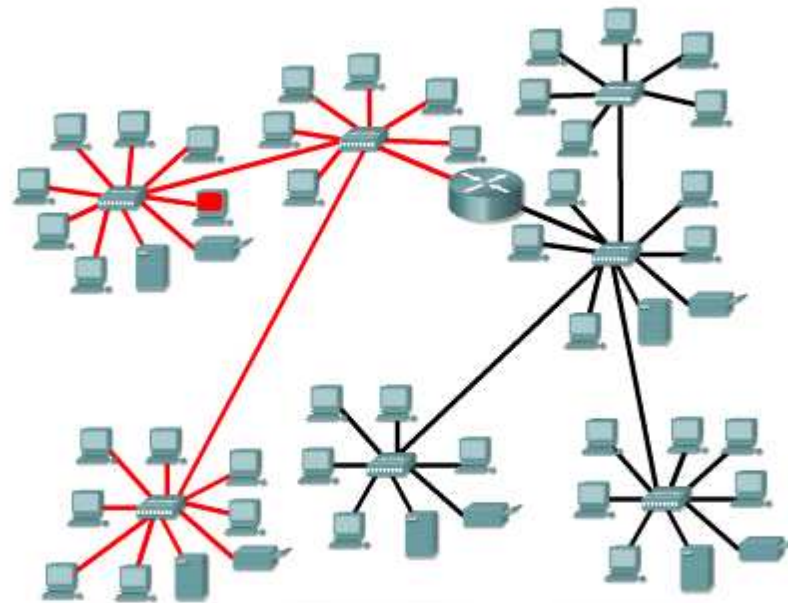
3



Broadcast Domain Segmentation

FIGURE

1

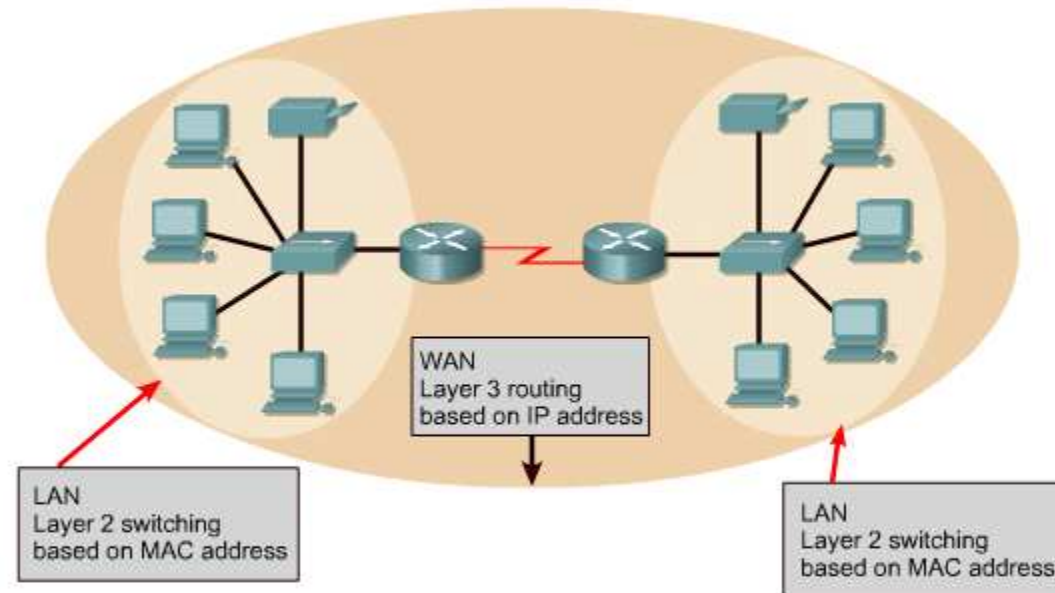


By using a router in place of a bridging device a Layer 2 broadcast is contained. Layer 3 devices are the only devices that contain broadcasts.

Layer 2 Switching and Layer 3 Routing

FIGURES

- 1
- 2
- 3
- 4



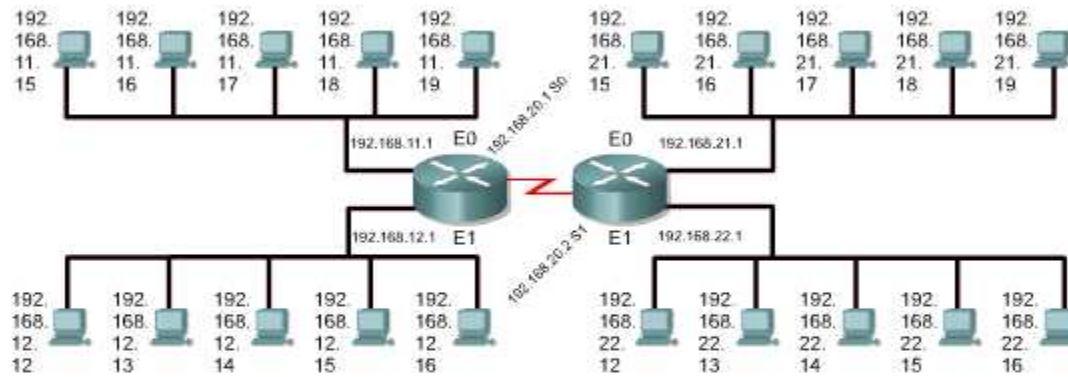
Layer 2 switching takes place within the LAN. Layer 3 routing moves traffic between broadcast domains. This requires the hierarchical addressing format that a Layer 3 addressing scheme like IP provides.

Routing Tables

FIGURE

1

Toolbar: Maximize



Routing Table			
Learned	Network Address	Hop	Interface
C	- 192.168.11.0	0	E0
C	- 192.168.12.0	0	E1
C	- 192.168.20.0	0	S0
R	- 192.168.21.0	1	S1
R	- 192.168.22.0	1	S1

Routing Table			
Learned	Network Address	Hop	Interface
C	- 192.168.21.0	0	E0
C	- 192.168.22.0	0	E1
C	- 192.168.20.0	0	S1
R	- 192.168.11.0	1	S1
R	- 192.168.12.0	1	S1