

Bonding HA and MT

Bonding

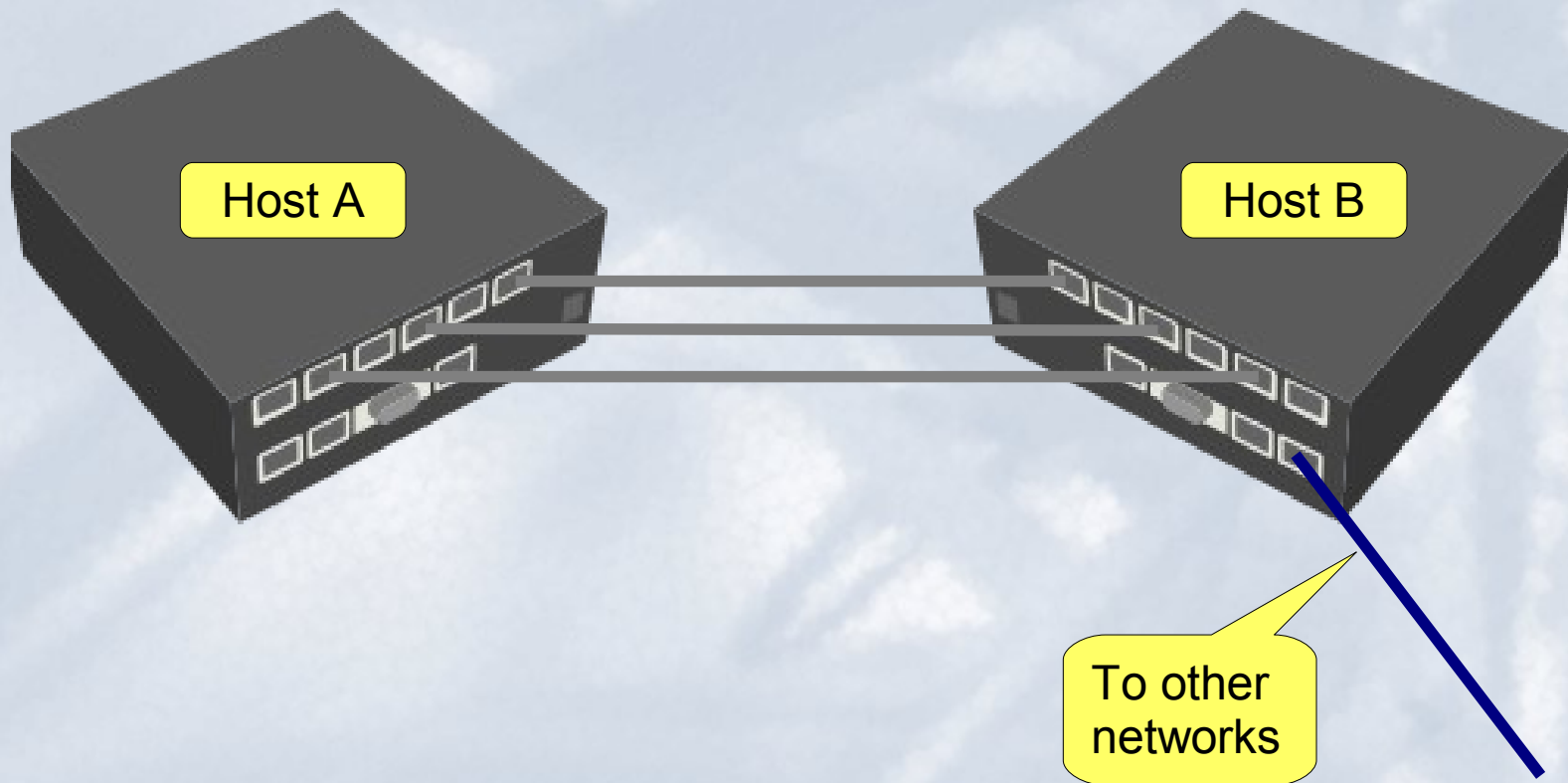
- ✓ High Availability
- ✓ Maximum Throughput

High Availability

- ✓ HA goal is to provide the maximum availability of network connectivity
- ✓ HA configurations have redundant or backup network devices or (and) links between the host and the rest of the world

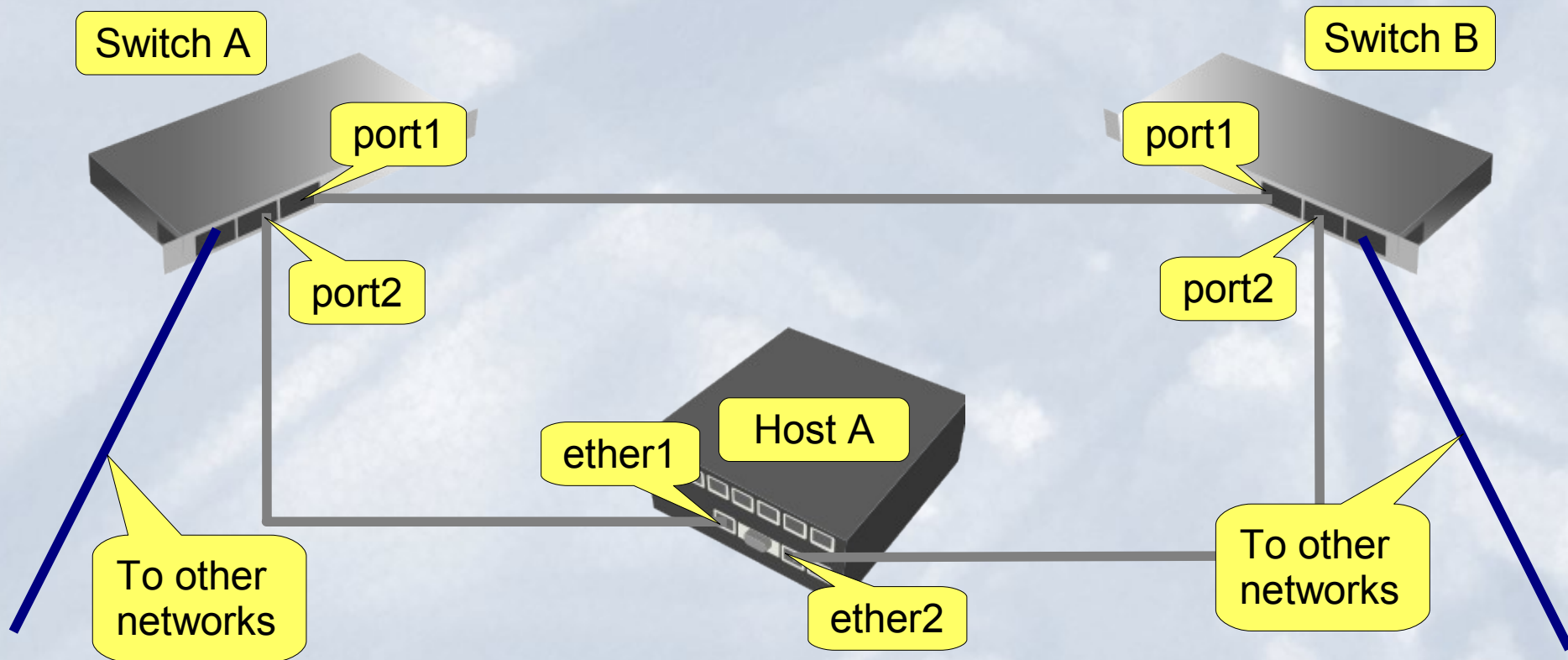
HA Single Switch Topology

- ✓ No availability penalty to optimizing for maximum bandwidth



HA Multiple Switch Topology

- ✓ A trade off between network speed and availability



Bonding and LM Modes

- ✓ **active-backup** is the preferred mode
- ✓ **broadcast** is a special purpose mode
- ✓ Depends upon capabilities of the switch
- ✓ ARP monitoring provides better level of reliability

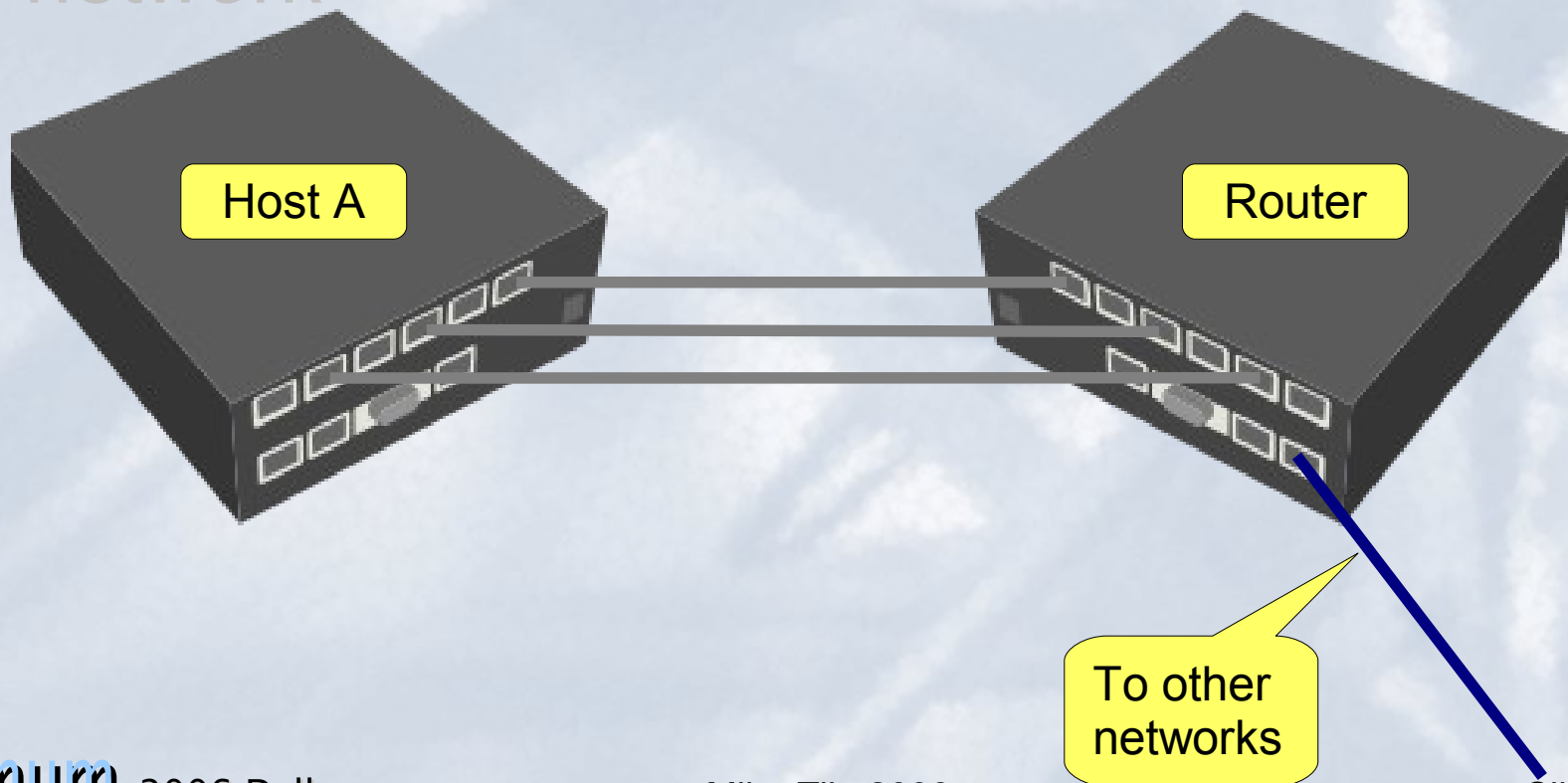
Maximum Throughput

It means nothing more than

THROUGHPUT

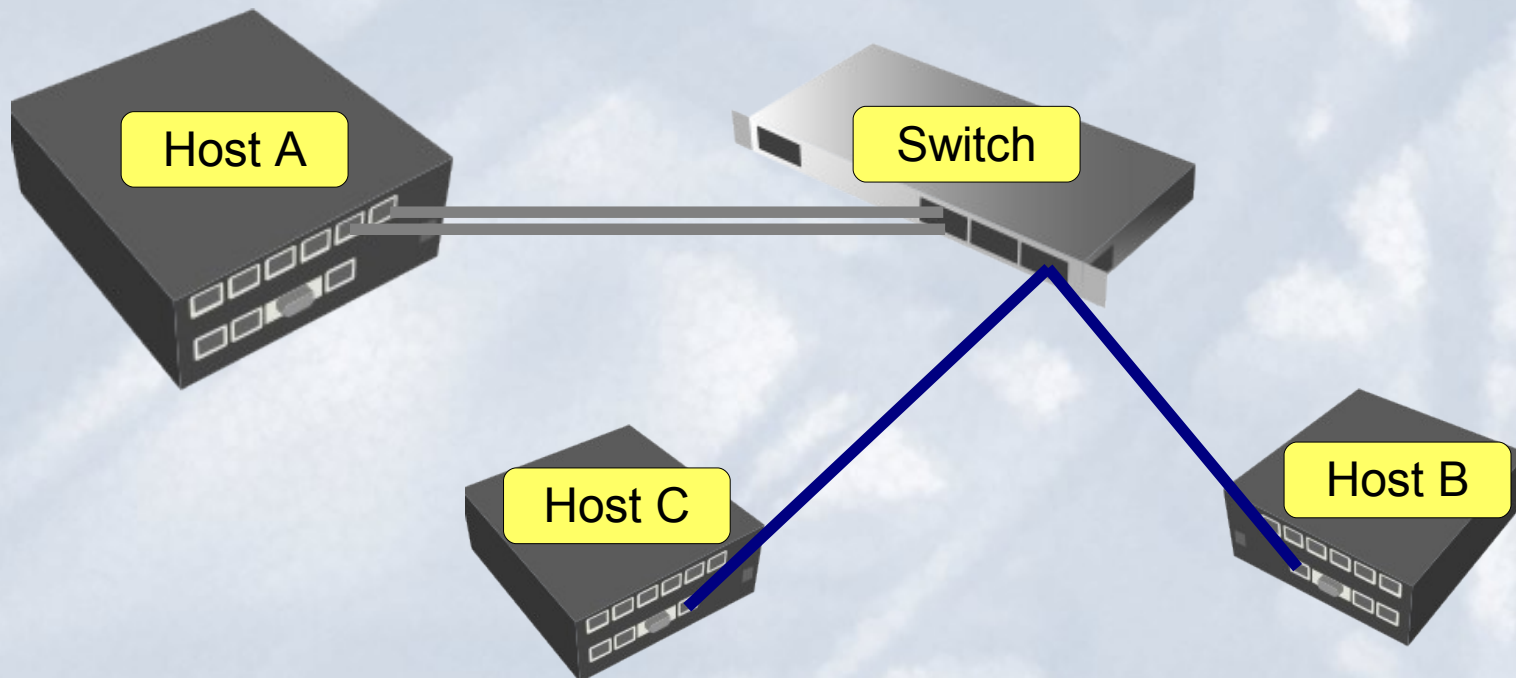
MT Single Switch Topology: Gatewayed

- ✓ Traffic to and from the bonded device will be to the same MAC level peer on the network



MT Single Switch Topology: Local

- ✓ Each destination (Host B, Host C) will be addressed directly by their individual MAC addresses



Bonding Modes: balance-rr

- ✓ The only mode that permit a single TCP/IP connection to stripe traffic across multiple interfaces
- ✓ Packets may arrive out of order
- ✓ This mode requires the switch to have the appropriate ports configured for "etherchannel" or "trunking"

Bonding Modes: balance-xor

- ✓ Packets destined for specific peers will always be sent over the same interface
- ✓ Works best in a "local" network configuration
- ✓ Switch ports need to be configured for "etherchannel" or "trunking."

Bonding Modes: 802.3ad

- ✓ Standard
- ✓ Almost no switch configuration
- ✓ Distributes traffic by peer
- ✓ Same speed and duplex
- ✓ ARP monitor is not available in this mode

Bonding Modes: balance-tlb

- ✓ Balances outgoing traffic by peer
- ✓ All incoming traffic arrives over a single interface
- ✓ ARP monitor is not available

Bonding Modes: **balance-alb**

- ✓ Almost the same as **balance-tlb**
- ✓ balances incoming traffic from local network peers
- ✓ device driver must support changing the hardware address while the device is open

Promiscuous Mode

- ✓ balance-rr, balance-xor, broadcast and 802.3ad all slaves

- ✓ active-backup, balance-tlb and balance-alb active slave