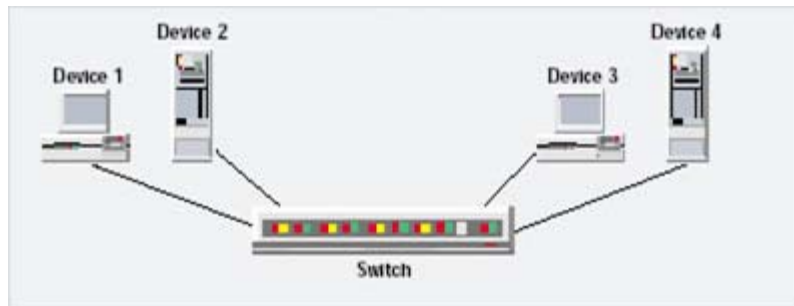


Broadcast Domain



Broadcast on a network means one node transmits packets to all other nodes in the same domain simultaneously. Multicast is a special form of broadcast, in which a selected group of users, who requested to listen to the broadcast, will receive the broadcasts. Broadcast transmission is supported on most LANs (e.g. Ethernet). Broadcast can also happen in a virtual LAN (VLAN). IPv6 has unicast, multicast and anycast. Broadcast has disappeared as a term, but is considered one form of multicast.



A broadcast domain is a restricted area in which information can be transmitted for all devices in the domain to receive. More specifically, Ethernet LANs are broadcast domains. Any devices attached to the LAN can transmit frames to any other device because the medium is a shared transmission system. Frames are normally addressed to a specific destination device on the network. While all devices detect the frame transmission on the network, only the device to which the frame is addressed actually receives it. A special broadcast address consisting of all 1s is used to send frames to all devices on the network.

- A *repeater* is a device that joins two LANs to extend the distance of the LAN. All network traffic is sent across the repeater unaltered.
- A *bridge* is a device that joins two LANs into a single broadcast domain, but isolates them so that problems on one LAN do not propagate to the other LAN. In addition, bridges maintain separate collision domains, so that computers on each segment only contend with other computers on the same segment for access.
- If multiple LANs are connected with *routers*, the router forms the boundary of the broadcast domain. Broadcast traffic and collision signals do not cross

routers, although most routers can be configured to forward specific broadcast traffic.

Virtual LAN (VLAN) technology can create "virtual" broadcast domains. A network built with switching devices can treat each workstation as an independent entity and groups of these workstations can be joined into a virtual broadcast domain, no matter where they are attached to the physical network.

A broadcast domain is the region that a broadcast on a network is heard.

Just because one has a switched network doesn't mean to say that it won't do broadcasts. For example, ARP is a broadcast and DHCP is a broadcast.

If "arp -p" is done, that's a broadcast. What happens with a broadcast is that, every workstation hears the broadcast and they respond to the request.

However, what happens in the scenario above: Imagine if every broadcast that was put onto the Internet or on to the network was heard by every single machine on the Internet- clearly one would end up with a quite congested network.

So, a broadcast domain is the area that broadcasts are received, and broadcasts are restricted by routers.

In other words, if the router receives a broadcast, it is dropped. This is called as the broadcast domain, where the domain is the extent to which broadcasts are heard on the Internet or on the network.

In other words, the router to the Internet will not up-broadcast or will not relay that broadcast message and that is called a broadcast domain.

Broadcasting is a useful feature in e-mail systems. It is also supported by some fax systems.

In networking, a distinction is made between broadcasting and multicasting . Broadcasting sends a message to everyone on the network whereas multicasting sends a message to a select list of recipients.

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