Vlan – college essay

One of the reasons for the attention placed In a broadcast environment, a broadcast is sent out by a host on a single segment would propagate to all segments, saturating the bandwidth of the entire network. Also, without forcing some method of checking at an upper layer, all devices in the broadcast domain would be able to communicate via Layer 2. This severely limits the amount of security that could be enforced on the network. Before the introduction of switches and VLANs, networks were divided into multiple broadcast domains by connectivity through a router .

Because routers do not forward broadcasts, each interface is in a different broadcast domain. Each segment is an individual IP subnet and regardless of a workstation' s function, its subnet is defined by its physical location. The shift toward LAN switching as a replacement for local/departmental routers and now even shared media devices (hubs) will only accelerate in the future. With the rapid decrease in Ethernet and Token Ring switch prices on a per-port basis, many more ambitious organizations are moving quickly toward networks featuring private port (single user/port) LAN switching architectures. Such a desktop switching architecture is ideally suited to VLAN implementation.

To understand why private port LAN switching is so well suited to VLAN implementation, it is useful to review the evolution of segmentation and broadcast containment in the network over the past several years. With the introduction of switching, organizations were able to divide the network into smaller, layer 2–defined segments, enabling increased bandwidth per segment. Routers could now focus on providing broadcast containment, and broadcast domains could now span multiple switched segments, easily

supporting 500 or more users per broadcast domain. However, the continued

deployment of switches, dividing the netw