

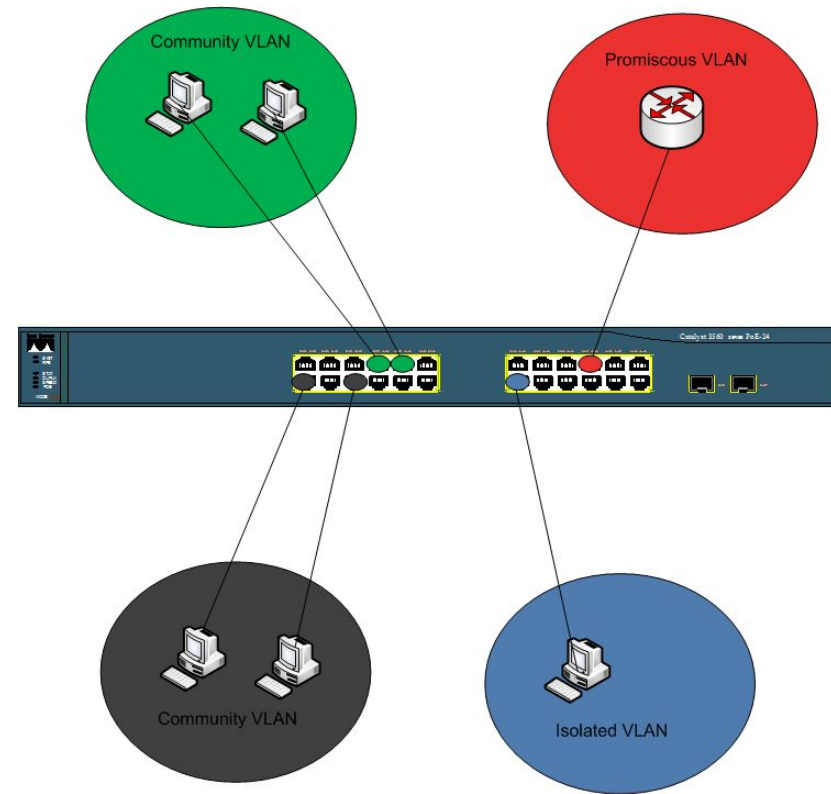


# VLAN

Virtual Local Area Network

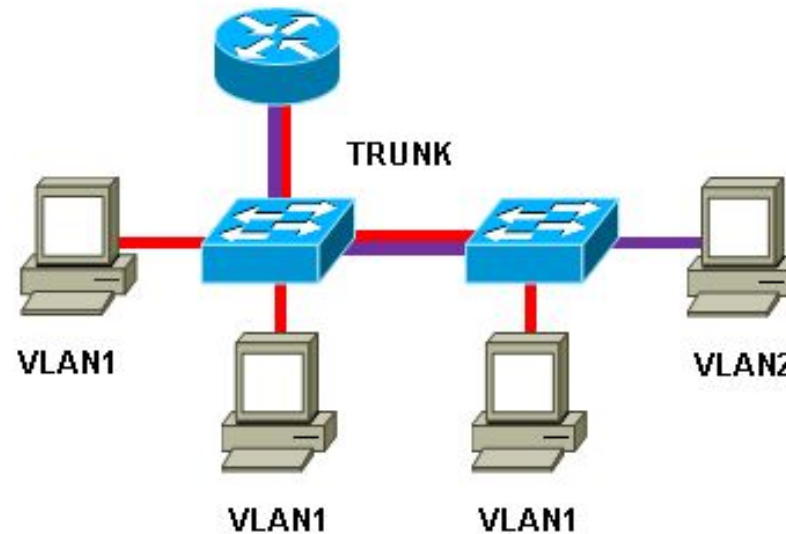
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# WHAT IS VLAN?

A virtual local area network (VLAN) is a network on which users are enabled to share a more visual sense of community through high band-width connections.



# ROUTER



# MAIN GOALS

- connectivity
- security
- management



# VLAN TECHNIQUES

## Two techniques:

- Frame Filtering --examines particular information about each frame (MAC address or layer 3 protocol type)
- Frame Tagging --places a unique identifier in the header of each frame as it is forwarded throughout the network backbone.





# VLAN CONFIGURATIONS

## Statically

- Network administrators configure port-by-port
- Each port is associated with a specific VLAN
- The network administrator is responsible for keying in the mappings between the ports and VLANs

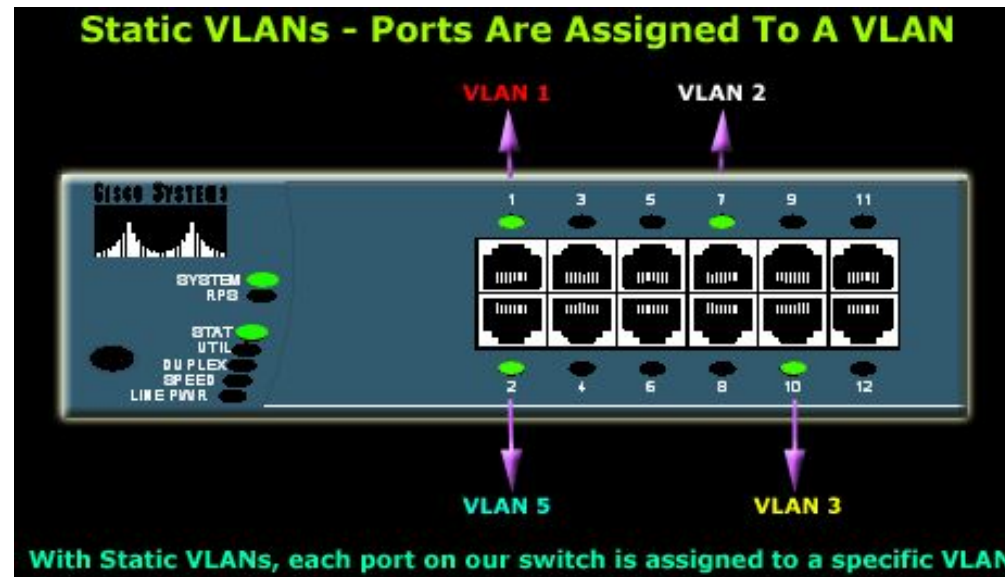
## Dynamically

- The ports are able to dynamically work out VLAN configuration
- Uses of software database of MAC address to VLAN mappings



# STATIC VLANS

Static membership VLANs calls port-based and port-centric

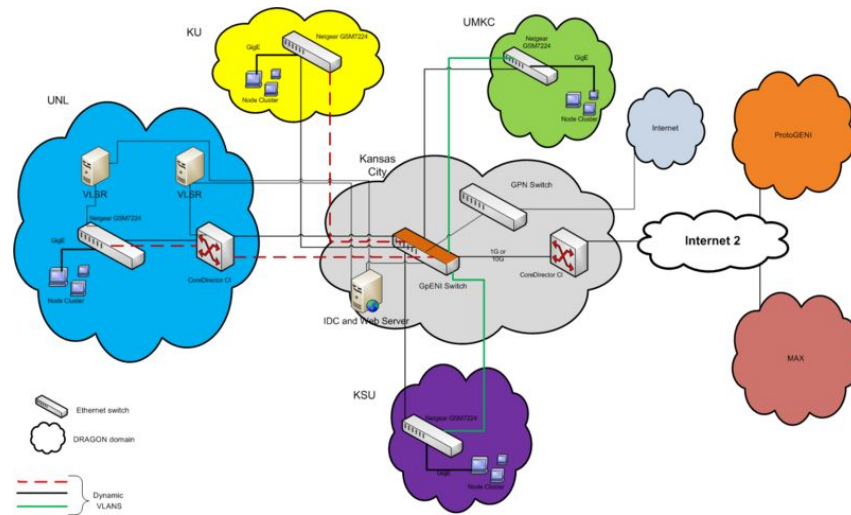




# DYNAMIC VLANS

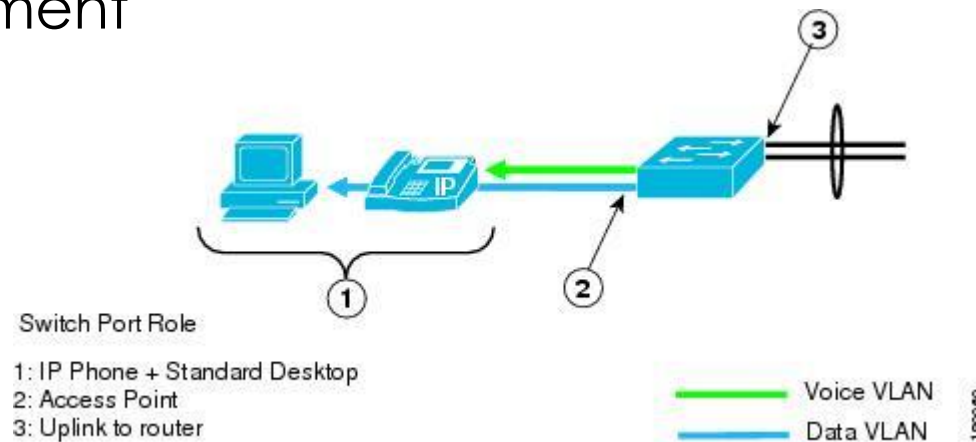
Dynamic VLANs allow for membership based on MAC address to the device connected to the switch port.

This VLANs are created through network management software

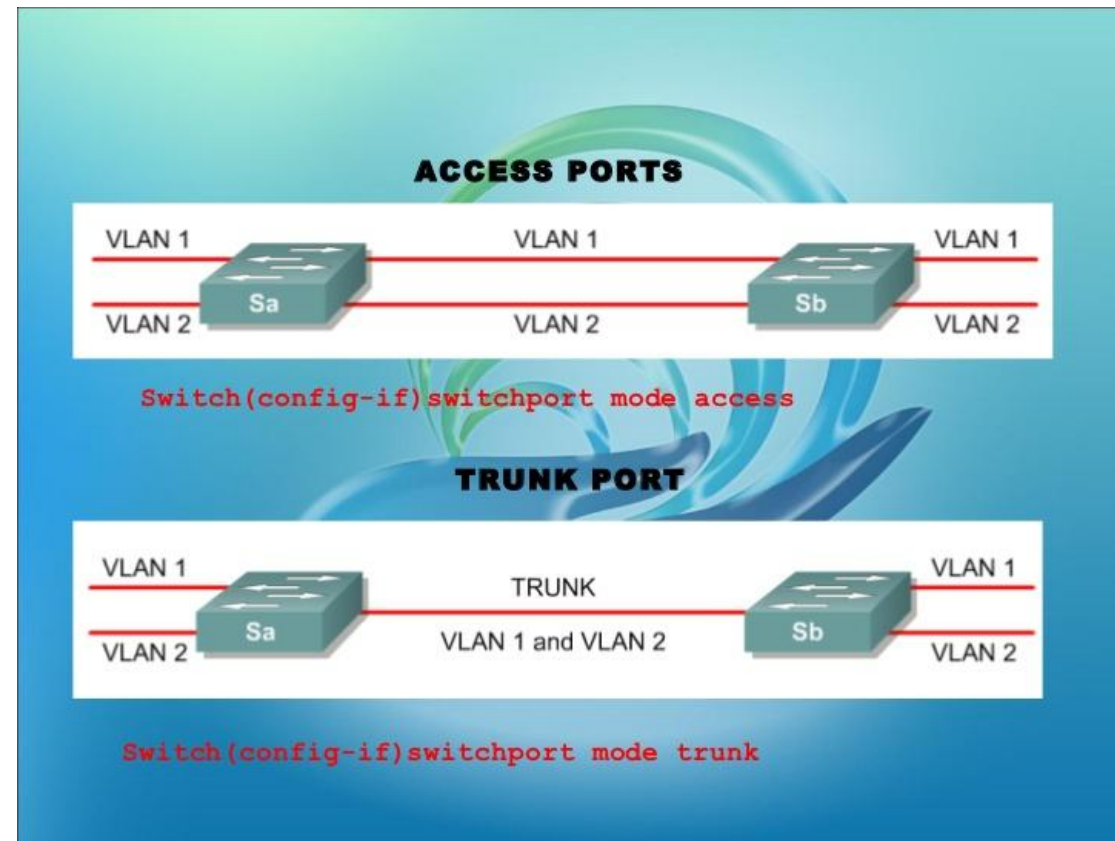


# TYPES OF TRAFFIC ON A VLAN

- Data
- Voice
- Network protocol
- Network management



# CONFIGURING PORTS



# BENEFITS OF VLAN

- Performance
- Formation of Virtual Workgroups
- Simplified Administration
- Reduced Cost
- Security



# Thank you

**VLAN**  
VERY LOCAL AREA NETWORK

