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IMPLEMENTATION OF MULTISIDED WAN ARCHITECTURE
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ABSTRACT
This paper proposes a method for implementing of Multisided WAN Architecture in which different colleges were attached with ISP and then create a VLAN for a switch and transfer VLAN to other switches.

Keywords: *VLAN, WAN, ISP, DHCP*

1. INTRODUCTION

It is a system that spans large geographical locations; typically to interconnect several Local Area Networks (LANs) and it is a system that traverses a public network or marketable carrier, using one of several WAN technologies.

WAN operates on layer 1 and 2 of the OSI model. It includes Leased line, ISDN, Frame relay. Business and government entities use WANs to transmit information among workers, clients, buyers, and suppliers from a range of geographical locations. This method of telecommunication allows a business to successfully carry out its daily job in spite of its position. The Internet can be measured a WAN as well and is used by businesses, governments, organizations, and individuals for almost any purpose imaginable. WANs essentially do not just attach physically dissimilar LANs.

2. IMPLEMENTATION OF WAN ARCHITECTURE
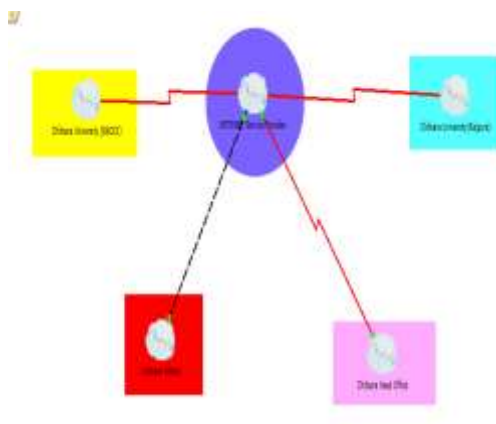
3. INTRODUCTION OF VLAN ARCHITECTURE

It is logical description of network users and resources over the predefined port of a switch.
1. We can add, remove, or update any VLAN related configuration.
2. It provides security and reliability.
3. Users that need high level security will be member of an independent VLAN.
4. It is logical grouping by function.

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5. Increase in number of broadcast domain with decrease in their size.
6. Broadcast control i.e. broadcast for any one   VLAN will only affect the same VLAN not others.

By creating virtual local area network(VLAN), broadcast domains smash up in a cleanswitched internetwork. A VLAN is a reasonable set ofnetwork users and resources associated administrativelydistinct ports on a switch. When VLANS formed, it will bethe capacity to make smaller broadcast domains withina layer 2 switched internetworks by reassigndifferent ports on the switch to dissimilar sub networks. A VLAN is treated like its own subnet; sense that frames broadcast ontothe network are only switched between the portssensibly grouped within the sameVLAN.
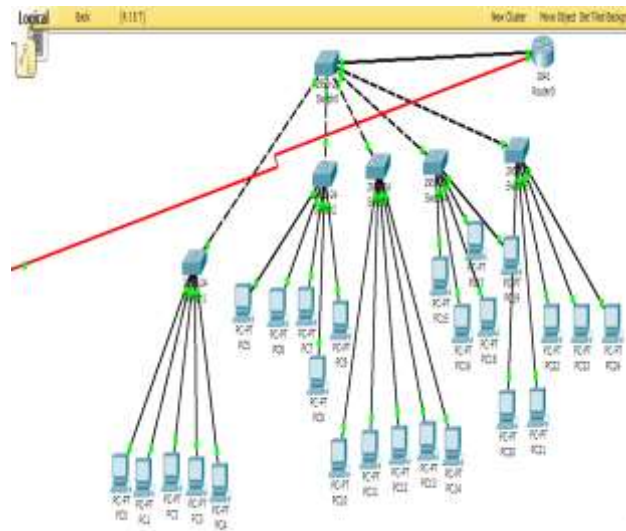
VLANs make simpler network management:
Network adds, moves, and changes are achieved with ease by just configuring a port into the suitable VLAN.
A set of users that need high level   of security can be put into its own VLAN so that users outside of the VLAN cannot converse with them.
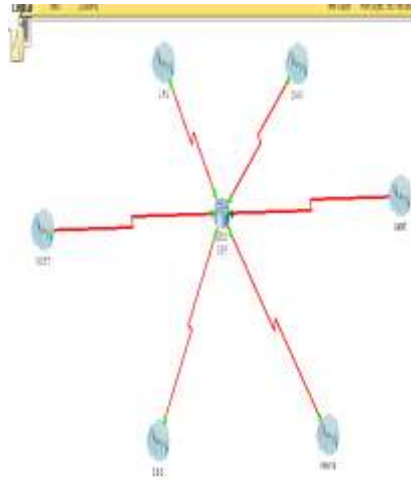VLANs seriously improve network protection.
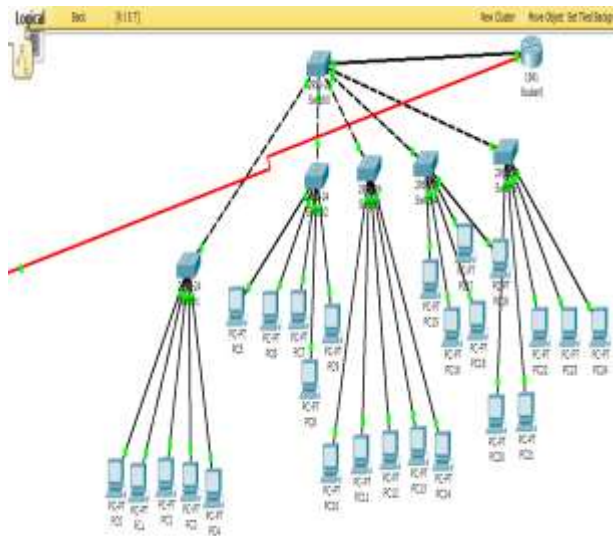
4. IMPLEMENTATION

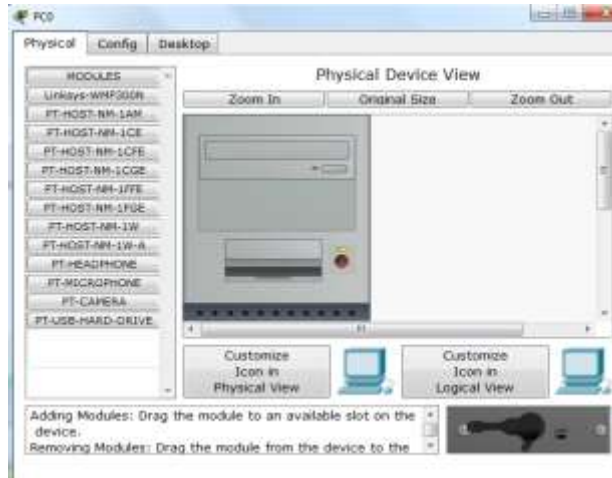Make a cluster which helps to make a area of particular location.

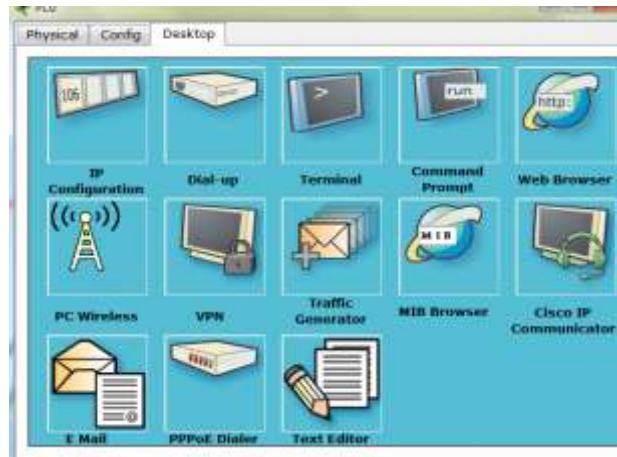Different colleges were attached with ISP i.e internet service provider.

Create a VLAN for a switch and transfer VLAN to other switches with the help of VLAN Trucking Protocol and assigned ip with the help of DHCP
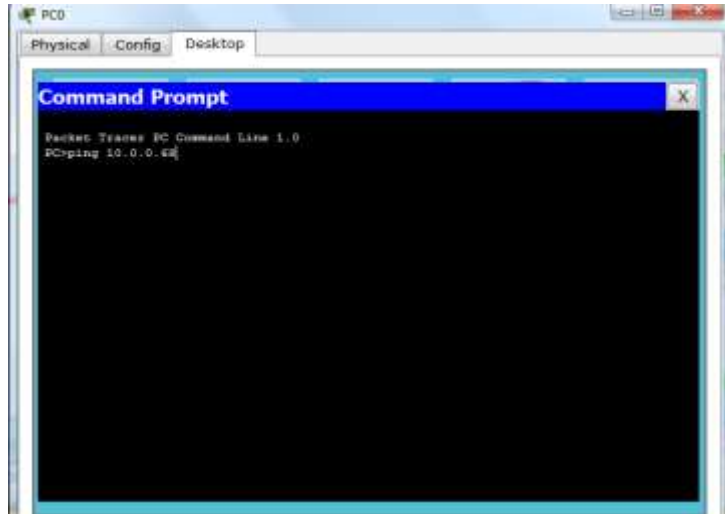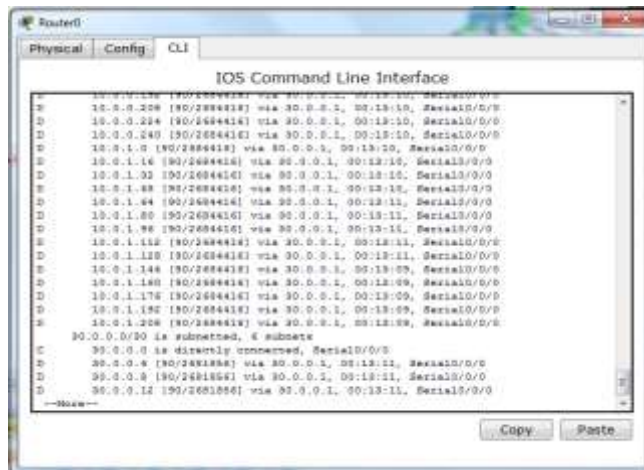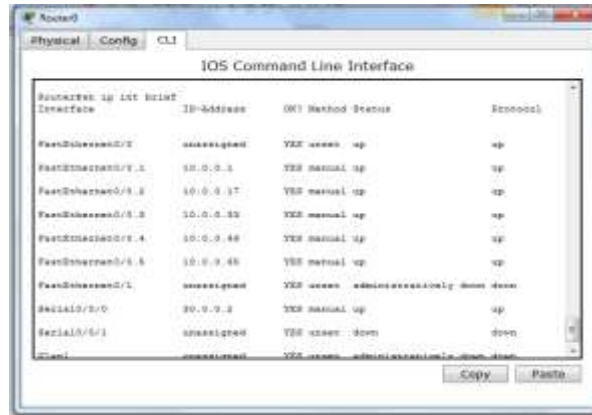
Click on PC

GOTO COMMAND PROMT

Ping one network to another network to check the connectivity.
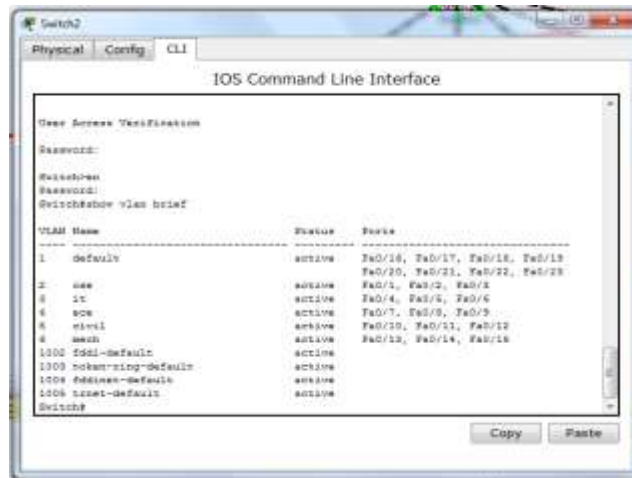

Networking occurs on 10.0.0.0- 10.0.1.208

Following are the interfaces that are used for switch port up and router port up.
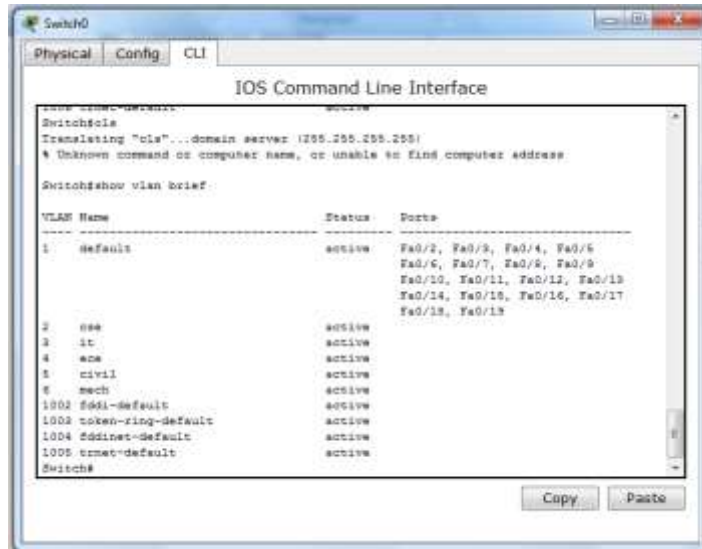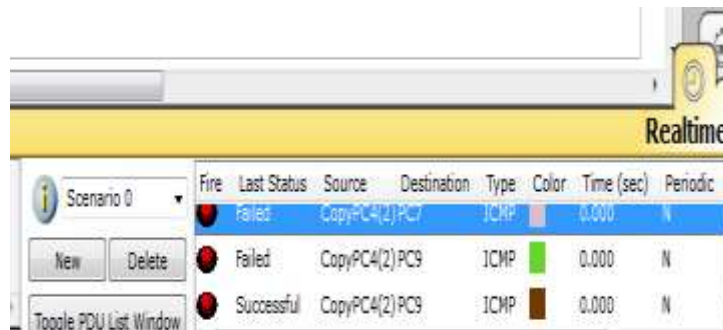
Following are the VLAN create for different departments.

Show VTP status which shows about the introduction of client.

Same for server.

Results:

REFERENCES

1. *http://www.networkworld.com/article/2248736/lan-wan/chapter-1--introduction-to-wan-architectures.html*
2. *https://www.cisco.com/c/dam/en/us/solutions/collateral/enterprise-networks/intelligent-wan/wan-architecture-and-design.pdf*
3. *http://www.industrial-ip.org/en/industrial-ip/convergence/how-to-design-a-vlan-based-network-architecture*