

GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES 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 be 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 onto 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







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Click on PC



GOTO COMMAND PROMT

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Physical	Config	Desktop	_		
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PCW	Areless	VPN	Traffic Generator	MIB Browser	Cisco IP Communicator
E					
EN	lail	PPPor Dialer	Text Editor		





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Ping one network to another network to check the connectivity.

PCO	
Physical Config Desktop	
Command Promut	x
Packet Traces PC Command Line 1.0 PC>ping 10.0.0.48	

Networking occurs on 10.0.0.0- 10.0.1.208

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2	10.0.1 100 100/20000101 wie 30.0.0.1. 00:12:00. Serial0/0/0	
D	10.0.1.176 [90/2604416] wis 30.0.0.1. 00:18:09. deris10/D/D	
10	10.0.1.192 [90/2034418] wis 30.0.0.1, 00-13:09, Serial0/0/0	
15	10:0:1.200 (00/2000010) via 20.0.0.1, 00:10:00, Bechald/0/0	
	10:0.0.0/10 is subnetted, & subnets	
C .	30.0.0.0 is directly concerned, SecielD/0/0	
2	30.0.0.6 [NO/3481858] wis 30.0.0.1, DE:13:11, Sexial0/0/0	
D	90.4.0.0 [90/2601856] via 80.0.0.5, 00:10:11, Serial0/0/0	
3	30.0.0.13 190/26818581 via 80.0.0.1, 00:13-11, Saria10/0/0	
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Following are the interfaces that are used for switch port up and router port up.

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	105 Com	mand Line	Interface	
Routerteb ig ist bri Isteifebe	at ID-6665ass	001 Nethod	Oversia.	Annonal
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Elani	one second	12.0	interior execution for the	tern diam

Following are the VLAN create for different departments.

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Sea.	dul-was		
-	(and)		
Reise	this brist white works		
VLAN	tiane	PLATON	Ports
1	default	aut2ve	2a0/18, Fa0/17, Fa0/18, Fa0/19
			Fe0/20, Fe0/22, Ye0/22, Fe0/28
2		0.012.3.110	Fa0/1, Fa3/2, Fa0/2
	11	estive	Ja0/4, Fa3/6, Fa0/6
4	808	6/C%1/V#	Fa0/7, Fe5/0, Fa0/9
÷	million a literature	8/253/108	Fa0/30, Fa0/33, Fa0/12
Labe	and the second s	AUTION.	Padrid, Padrie, Padrie
1000	1911-0818111	active	
1000	Addings - defaults	act 2.0**	
1006	treet-default	ACT 1 04	
1.1.1			

Show VTP status which shows about the introduction of client.

IC	S Command Line Interface	
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Switch#		
5v1.5th#		
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Serie to child		
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Switch#		
Switch#show vtp status		
VTS Version	1.3	
Curriguration Bautainn	1.9	
Maximum VLANs supported local	119 : 266	
Number of existing VLANe	: 10	
VT2 Operating Hode	- CLARNS	
VIP Domain Hans	- Estate	
vis stuning mode	Disabled	
VIF V4 HDDe	: Dissoled	
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Some agree and a state and a state a s	ny divide at series we de les	1.10

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Same for server.

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Switchs Transle & Unknow Switchs	strug "cls"domain server ting "cls"domain server en command or computer ham show vian brief	1255.255.255 e, cr unable	.255) an find computer address
VLAS HA		Status	Porte
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3 15		active	
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5 = = 1	ril	act178	
1000 44	ch	8C5178	
1002	RA-BEERALS	805178	
1004 64	tingtolafante	ACC. 100	
1005 tr	net-default	active	
100 C 100 C			5

Results:

Physical Config	CLI			
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Serial0/2/0	80.0,0.17	VHF manual	inge	up
Sec1a30/2/1	40.0.9.21	YES menual	140	top:
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1	Tooole PDU List Window		•	Successful	CopyPC4(2)	PC9	ICMP		0.000	N	





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