"शीलं परं भूषणम्"

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STUDENT'S ROLL NO.:

3330

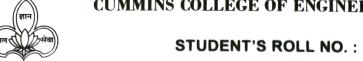


	Assignment
	Aim-Simulation of WAN using static routing (minimum 3 networks), using lisco packet tracer tool.
	Theory:
	Routing is one of the most essential procedures in data communication. It ensures that data travels
	from one network to another with ontimal speed and minimum delay and that its integrity is
	Broadly routing is performed in 2 ways
1.	Broadly routing is nextormed in 2 ways Dynamic - continuously updates the routing Routing table with paths and their cost/ metric while making optimal routing
	metric while making optimal routing
	decisions based on changing the network operating environments.
2.	Static routing - performs routing decisions with
	table, which can be changed
	manually only by administrators Static routes are pormally implemented in situation
	where the choices in the route selection are
	limited or there is a single default roule
	upu have few devices for router configuration

Significance/Need of Routing— Routing is the path process of selecting a path along which data can be transferred from source to destination. It is performed by a router. A router is a networking device that forwards the packets based on information available in the nacket header and forwarding table. It helps to examine the destination IP address of a packet, determine the next hop address and forward it. Routers use the routing table to determine the next hop to which the packet should be delivered.
Optimality Principle — It states that if nonter I is on the optimal path from nonter I to nonter K, then the optimal path from I to K also fulls along the same noute. Call the noute from I to I as I and the rest of the noute as I? I could be concatenated with I to improve the noute from I to K contradicting the statement That I is optimal only if a route better Than I?
Difference between static and dynamic routing. Static Routing Dynamic Routing In static routing In dynamic routing routes houtes are user over updated according to defined. Japology.

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Static Routing Static routing does not use complex routing algorithms.	Dynamic Routing Dynamic routing uses complex routing
Static routing provides high or more security. Static routing is manual	
In static routing, additional resources are not required.	active provides in
In static routing, failure of link disrupto the renouting.	e In dynamic routing, failure of link does not interrupt the revolting.
Static Routing may not follow any specific protocol.	Dynamic Routing follows protocols like BGP, RIP, etc.
steps to configure state. 1. Connect end devices - routers & connect rou	to switches, switches to leas to each other using
copper crossover calo	rle.

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2	Assign IP addresses to all the end devices and also to the 2 routers. gigabit ethernet 0/0 - connect to the switch gigabit ethernet 0/1 -> to connect with the other
	also to the 2 routers.
	gigabit ethernot D/D = to anget to the suitely
	air abit other not of a to another the other
	gigation concerned by 1 -> to connect with the civiler
	router.
3.	Then add static nouting.
	Router 0 : Network > 172 €.16.0.0
	Subnet mask → 255,255,0,0
	Next Hop -> 192,168,0,2
	Router 1 : Network > 10,0,0,0
	Subnet Mask > 255,0,0,0
	No. 1 Han > 192 168 0 1
,	Nent Hop -> 192,168,0,1
4.	Assign default gateway of end devices with It address of the nearest nouter and check for the connectivity.
1.	If address of the nearest nauter and check
	Contractivate
	John Chile Commediations.
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