IN THE HIGH COURT OF DELHI AT NEW DELHI

F. No. 649-B/DA-02/IT/ DHC/No. _

6	39	7	
			-

Dated: 21.04.2022

From:

The Registrar General Delhi High Court, New Delhi.

To

(On the website of this Court)

Sub: Tender calling quotations for purchase of

1. Forty Nine (49) nos. of Cisco Switches (i) Thirty One (31) nos. of Cisco Switch 48 Port Model C9300-48T-E and (ii) Eighteen (18) nos. of Cisco Switch 24 Port Model C9300-24T-E),

AND

2. Two (02) nos. of Nexus 9300 with 48P 1/10/25GE 6p 40/100G QSP28 Fibre Switches (N9K-C93180YC-FX) and other accessories for redundancy plan for 10G LAN of this Court; with the services of a Resident Engineer for five (05) years.

Sir,

This Court intends to call quotations from the authorized Cisco vendors for purchase of the following items with services of well qualified Resident Engineer able to resolve issues independently under five (05) years on-site comprehensive warranty period:-

- 1. Forty Nine (49) nos. of Cisco Switches (Thirty One (31) nos. of Cisco Switch 48 Port Model C9300-48T-E and Eighteen (18) nos. of Cisco Switch 24 Port Model C9300-24T-E) for the use of this Court, as per Technical Specifications at Annexure 'A1 & A2' with the services of Resident Engineer for five years.
- 2. Two (02) nos. of Nexus 9300 with 48P 1/10/25GE 6p 40/100G QSP28 Fibre Switches (N9K-C93180YC-FX) and other accessories for redundancy plan for 10G LAN:

Sl. No.	Description	Model	Quantity
1.	Nexus Core Switches Modules	N9K-C93180YC-FX	2 Nos.
2.	Network Rack 42 U with all accessories		1 No.
3.	SM SFP 10G modules 26 SFP for Switch location + 4 SFP for A Block to C Block connectivity	Cisco	30 Nos.
4.	Single Mode Optical fiber (6 core OFC) including all accessories like LIU, Pigtel, fiber patch cord (3 Mtr, 5 Mtr and 10 Mtr dual core SM), HDP casing etc, FMS.	DigiCable or Dlink	3600 Mtr. Approximat length
5.	9 U small rack with all accessories		12 nos.

*Note: The participating authorized firm / vendor must submit duly filled in technical specification compliance sheet as per Annexure-'A1', 'A2' & Annexure-'B' along with the quotation to be submitted as per Annexure-'C'. Non compliance will lead to rejection of the quotation.

The terms & conditions of this tender are as under:-

- 1. The firm (s) / vendor(s) authorized by OEM(s) to participate in the instant tender are requested to submit the necessary technical / financial bids along with the copy of current authorization letter of the OEM(s) and Earnest Money Deposit (EMD) equal to 5% of total proposed cost by way of Demand Draft or Bankers Cheque drawn in favour of "The Registrar General, Delhi High Court" payable at New Delhi.
- 2. Quotations received without EMD shall be summarily rejected and no request for waiver of EMD will be entertained.
- 3. Selected Firms(s) / Vendor(s) will also be required to submit valid authorization letter or copy of valid authorization letter issued by OEM duly attested under the scal of the firm while submitting Invoice/Bill mentioning warranty/support period.
- 4. The selected vendor will have to install and integrate the new hardware/software with the existing set-up of Delhi High Court.
- 5. One Scaled/closed envelope containing two scaled/closed envelopes of Technical / Financial Bid & EMD must reach to the AOJ (IT & Stationery Branch), Lawyers' Chamber Block-III, Room No. 6, Ground Floor, Delhi High Court on or before //2-05-2022 till 5:30P.M. clearly mentioning the rates inclusive of GST/Tax rate, technical specifications, warranty/support period and the delivery /installation schedule of the product being offered.
- 6. The big envelope should be addressed in the name of "The Registrar General, Delhi High Court, New Delhi" and the <u>subject</u> & <u>due date</u> for which the quotation is submitted should be clearly superscribed in capital letters on each envelope.
- 7. The validity of rates must not be less than 180 days from the last date of submission of quotations.
- 8. Quotations with less period of validity of rates shall be summarily rejected.
- 9. No quotation shall be entertained <u>after due date</u>. Envelope(s) received <u>without subject</u> being mentioned on them as referred to above shall be summarily rejected.
- 10. The quotation must be tendered strictly in the format mentioned in Annexure-'A1' & A2, Annexure 'B' and Annexure 'C' of this tender. Quotation(s) offered in any other format than prescribed shall be liable to be rejected.
- 11. The DD/Pay order towards EMD of all the tenderers, except the lowest three, shall be returned to vendors on their written request after finalization of Tender Process & EMD of successful tenderer will be returned only after supply and successful completion of the purchase order placed upon the firm fulfilling all codal formalities against receipt.
- 12. The selected vendor(s) will have to submit Performance Bank Guarantee equivalent to 8% of the Invoice amount with Delhi High Court valid for five years from the date of invoice towards security and satisfactory performance throughout the warranty period.
- 13. The DD/Pay Order of L-2 & L-3 will be returned upon written request after issuance of the Purchase order to the successful tenderer. If the offer of quotation is withdrawn by the tenderer before/after opening of tender or if any other default is found in the quotation, the amount of EMD shall be forfeited and the firm will be blacklisted from participation in future tenders of this Court
- 14. If multiple quotations are submitted by a firm / vendor, all such quotations submitted by it shall be liable to be rejected at the first instance.
- 15. After opening of the sealed quotation if any correction is found in the offered rate which renders the whole Tender process doubtful or ambiguous, the said quotation shall be summarily rejected.
- 16. The firm/vendor shall also have to furnish an undertaking (strictly as per Annexure-'D') that the firm or its Partner/Director/Proprietor has not been blacklisted/banned and its Business dealings with the Central/State Government/Public Sector Undertakings/Autonomous Bodies have not been banned/terminated on account of poor performance/conduct and also that all the terms and conditions of the instant Tender Notice are acceptable to them. The quotation received without undertaking shall be summarily rejected.
- 17. In case the firm/vendor wants any clarification regarding this Tender, Mr. Zamcem Ahmad Khan, Joint Director (IT) at Tel. No. 011-43010101 (Ext. 4852) may be contacted.

This Court reserves the right to modify/amend the quotation letter/terms & conditions at a later stage and will be binding on the participants

(Rajeev Kumar Chauhan)

Joint Registrar (IT/Sty)

for Registrar General

CC to:- Director (IT), Delhi High Court.- for uploading on the official website of the Delhi High Court.

CISCO C9300-48T-E

SI. No.		Description of Product	· ·	Remarks, if
NO.		Decree de la lata de lata de la lata de lata delata de lata de lata delata de lata de lata de lata delata de lata delata delata de lata delata delata de lata delata del	(Yes/No)	any
,		Proposed switch should be enterprise grade switch with		
1	General Features	x86 based CPU architecture		٠.
*	General realures	The switch should have minimum of 48 nos.		
		10/100/1000 Ethernet Ports and in addition 8 nos. of		
\vdash		10Gig SFP+ uplink ports		,
		The switch should support non-blocking switching		
		bandwidth up to 256 Gbps (without considering stacking		
		bandwidth)		
		The switch should support wire-speed 64-Byte Packet		
	•	Forwarding Rate up to 190 Mpps		•
	Doutousousous	The switch should have 16GB of Flash memory to store		
2	Performance and	image and logs	,	
.	Scalability	The switch should have 8 GB of DRAM		
		The switch should support 1000 SVI		· · · · · · · · · · · · · · · · · · ·
		The switch should support 4094 VLAN IDs		
		The switch should support Jumbo frames of 9198 bytes		
		The switch should support 32000 Unicast MAC		
	<u> </u>	addresses		
		Switch should dedicated stacking ports other than user		•
		and uplink ports		,
	· ·	Switch should have atleast 480 Gbps stacking		
		performance.		
		Switch should be provided with necessary stacking		
		module and cables from day-1	•	
		Switch should support 8 members in stack		
'/		The proposed switch family should support multi gigabit		
		ethernet switches to support higher bandwidth and it		
		should be possible to stack multigigabit switches with	,	
		proposed switches		
,	Canadista a	The Switch stack should be based on Distributed		
3	Stacking	forwarding Architecture, where in each stack member		
		forwards its own information on network.		
	. •	The Switch stack architecture should have centralized		
		control and Management plane with Active Switch and		
	·	all the information should be Synchronized with Standby	•	•
.		Switch.		
		The Switch should support Stateful Switchover (SSO)		
	•	when switching over from Active to Standby switch in a		
		Stack.		<u>. </u>
		The Switch stack architecture should allow the end user		
		to stack 24 Port Switch with 48 Port of the same model.		
	•	The Court Laboratory		
		The Switch should support stack power.	,	
	•	The switch should support IEEE 802.1D Spanning Tree		
	I	Protocol The switch should support IEEE 803.1p		
		The switch should support IEEE 802.1p		
		The switch should support IEEE 802.1Q Trunking		· ·
	•	The switch should support IEEE 802.1s Multiple	·	
		Spanning Tree (MSTP)		
4	Standards	The switch should support IEEE 802.1w Rapid Spanning		
		Tree (RSTP)	<u> </u>	:
		The switch should support IEEE 802.1x		
		The switch should support IEEE 802.1ab (LLDP)		

J		· · · · · · · · · · · · · · · · · · ·		
		The switch should support IEEE 802.3ad Link		
		Aggregation Control Protocol (LACP) across stack		
	•	members and should able to do load balance traffic		
		across links		
		The switch should support Automatic Negotiation of		
,		Trunking Protocol, to help minimize the configuration &		
		errors	,	
		The switch should support IEEE 802.1Q VLAN		
		encapsulation		
		The switch should support Spanning-tree PortFast and		
		PortFast guard for fast convergence		
		The switch should support Spanning-tree root guard to		
		prevent other edge swicthes becoming the root bridge.		
.		The switch should support Voice VLAN to simplify IP		:
		telephony installations by keeping voice traffic on a		
.5	Layer-2 Features	separate VLAN	,	
	,	The switch should support Unidirectional Link Detection		
	•	Protocol (UDLD) and Aggressive UDLD to allow for		
		unidirectional links caused by incorrect fiber-optic		
		wiring or port faults to be detected and disabled on		
ĺ	•	fiber-optic interfaces.		
	•	The switch should support IGMP v1, v2 Snooping	*	
. [
1		Switch should support IPv4 and IPv6The Switch should		
	•	be able to discover (on both IPv4 & IPv6 Network) the		
		neighboring device giving the details about the		
		platform, IP Address, Link connected through etc, thus		
.		helping in troubleshooting connectivity problems.	,	
		Switch should support min. 32000 IPv4 routes, and		·
	٠	should support Layer 2, Routed Access (RIP, OSPF - 1000		
l	•	routes), PBR, PIM Stub-Multicast (1000 routes)), PVLAN,		
		VRRP, PBR, CDP, QoS, FHS, 802.1X, MACsec-128, CoPP,		·
		SXP, IP SLA Responder, SSO from day 1		·
·		The Switch should support routing protocols such OSPF,		
		BGPv4, IS-ISv4, EIGRP, LISP, VXLAN, VRF, MPLS, L3VPN		
		for future upgrade.		
	Layer-3 Features	The Switch should support IPv6 Routing capable		1
6.	from day 1	protocols such as OSPFv3 in hardware.	•	
		The Switch should support basic IP Unicast routing		
		protocols (static, RIPv1 & RIPv2).		
ĺ	•	The Switch should support IPv6 & IPv4 Policy Based		
		Routing (PBR)	ı	
-	,	The Switch should support Inter-VLAN routing.		
		The Switch should support HSRP for IPv4 & IPv6.		,
	•	The Switch should support VRRPv3.		
·	•	The Switch should support uRPF for IPv4 and IPv6.		
		The switch should support IEEE 802.1x providing user		
.		authentication, authorization and CoA.		*
		ı		
	•	The switch should support SSHv2 and SNMPv3 to		
		provide network security by encrypting administrator	,	
		traffic during Telnet and SNMP sessions.		,
Ì		The quiteb should support TACACS, and DADUIC		
-	Network security	The switch should support TACACS+ and RADIUS	•	
7	features	authentication enable centralized control of the switch		
		and restrict unauthorized users from altering the		
		configuration.		
ŀ		The switch should support MAC address notification to		· .
.		allow administrators to be notified of users added to or		
- 1		removed from the network.	•	

Į	,	The society of solid sourcest MACCO 250. Speciated		
		The switch should support MACSec-256, Encrypted		
	•	traffic analytics		
	,	The switch should support 8 egress queues per port to		*
		enable differentiated management		
		The switch should support Standard 802.1p CoS field		
8	Quality of Service	classification		
Ū	(QoS) & Control	The switch should support IPSLA feature set to verify		
		services guarantee based on business critical IP	,	
•	•	Applications.		
		The switch should support QoS based on application		
		The switch should support configuration of the Software		•
		image and switch configuration without user		
•	,	intervention		
	1	The switch should have built in RFID tag for asset	, , , , , , , , , , , , , , , , , , , ,	
		tracking and inventory management		
	•	The switch should support system health checks within		
		the switch	•	.,
	Operation and	The switch should support Command Line Interface (CLI)		
9	Management	support for configuration & troubleshooting purposes.	,	
		The switch should support Layer 2 trace route to ease	41	,
		troubleshooting by identifying the physical path that a	•	
		packet takes from source to destination.		
	٠ ,	The switch should support Telnet and ssh interface	, , , , , , , , , , , , , , , , , , ,	
	•	support for comprehensive in-band management.		,
		The switch should support SNMPv1, SNMPv2c, and		
		SNMPv3 and netflow v9	`	
	<u> </u>	The Switch should be 1RU		
	' · · · · · ·	The switch should able to support built-in redundant		
10	Dimension	power supplies from day 1	_	
		Switch should be provided with AC power supply and	<u> </u>	.,
	,	india power cords		
			L	

CISCO C9300-24T-E

	•	Description of Product	Compliance (Yes/No)	Remarks, i any
		Proposed switch should be enterprise grade switch with x86 based CPU architecture		
	General Features	The switch should have minimum of 24 nos. 10/100/1000	•	
		Ethernet Ports and in addition 8 nos. of 10Gig SFP+ uplink ports		
			,	
		The switch should support non-blocking switching bandwidth		•
		up to 208 Gbps (without considering stacking bandwidth)		ļ
		The switch should support wire-speed 64-Byte Packet		
		Forwarding Rate up to 154 Mpps The switch should have 16GB of Flash memory to store image		
	Performance and	and logs		,
	Scalability	The switch should have 8 GB of DRAM		,
		The switch should support 1000 SVI	,	
		The switch should support 4094 VLAN IDs		
		The switch should support Jumbo frames of 9198 bytes		, ,
		The switch should support 32000 Unicast MAC addresses		
		Switch should dedicated stacking ports other than user and		
		uplink ports		
	•	Switch should have atleast 480 Gbps stacking performance.		
		Switch should be provided with necessary stacking module and		
		cables from day-1		
	·	Switch should support 8 members in stack		
		The proposed switch family should support multi gigabit		
		ethernet switches to support higher bandwidth and it should	•	
	,	be possible to stack multigigabit switches with proposed		
٠	Stacking	switches The Switch stack should be based on Distributed forwarding		
	Stacking	Architecture, where in each stack member forwards its own		
		information on network.		
		The Switch stack architecture should have centralized control	x.e	
•		and Management plane with Active Switch and all the		
		information should be Synchronized with Standby Switch.		
	•	The Switch should support Stateful Switchover (SSO) when		
		switching over from Active to Standby switch in a Stack.		i
		The Switch stack architecture should allow the end user to		•
		stack 24 Port Switch with 48 Port of the same model.		
		The Switch should support stack power.		,
		The switch should support IEEE 802.1D Spanning Tree Protocol		
		The switch should support IEEE 802.1p		
		The switch should support IEEE 802.1Q Trunking		
		The switch should support IEEE 802.1s Multiple Spanning Tree	•	
	Standards	(MSTP) The switch should support IEEE 802.1w Rapid Spanning Tree		
	Stationards .	(RSTP)		
		The switch should support IEEE 802.1x	*	,
		The switch should support IEEE 802.1ab (LLDP)		
		The switch should support IEEE 802.3ad Link Aggregation		*
		Control Protocol (LACP) across stack members and should able	25	
		to do load balance traffic across links		
	Layer-2 Features	The switch should support Automatic Negotiation of Trunking	*	
	• •	Protocol, to help minimize the configuration & errors		
		The switch should support IEEE 802.1Q VLAN encapsulation		
		The switch should support Spanning-tree PortFast and PortFast		
		guard for fast convergence	•	
		The switch should support Spanning-tree root guard to prevent	7	
		other edge swicthes becoming the root bridge.		
		The switch should support Voice VLAN to simplify IP telephony	•	
	4	installations by keeping voice traffic on a separate VLAN	•	1

		The switch should support Unidirectional Link Detection		,
		Protocol (UDLD) and Aggressive UDLD to allow for		
	•	unidirectional links caused by incorrect fiber-optic wiring or		
	,		,	
		port faults to be detected and disabled on fiber-optic		
	•	interfaces.		
		The switch should support IGMP v1, v2 Snooping		
	·	Switch should support IPv4 and IPv6The Switch should be able	•	
	,	to discover (on both IPv4 & IPv6 Network) the neighboring		
	•	device giving the details about the platform, IP Address, Link		
		connected through etc, thus helping in troubleshooting		
		connectivity problems.		
		Switch should support min. 32000 IPv4 routes, and should	ļ.,	
		support Layer 2, Routed Access (RIP, OSPF - 1000 routes), PBR,	,	
	·. '	3 A ₄ 6 3 5		
		PIM Stub Multicast (1000 routes)), PVLAN, VRRP, PBR, CDP,	:	
		QoS, FHS, 802.1X, MACsec-128, CoPP, SXP, IP SLA Responder,	4	
		SSO from day 1		ļ
	,	The Switch should support routing protocols such OSPF, BGPv4,		
		IS-ISv4, EIGRP, LISP, VXLAN, VRF, MPLS, L3VPN for future		
		upgrades.		
	Layer-3 Features from	The Switch should support IPv6 Routing capable protocols such		
5	•	as OSPFv3 in hardware.	,	
	day 1	The Switch should support basic IP Unicast routing protocols	,	
		(static, RIPv1 & RIPv2).		,
		The Switch should support IPv6 & IPv4 Policy Based Routing		
	,	(PBR)		
		The Switch should support Inter-VLAN routing.		
	•	The Switch should support HSRP for IPv4 & IPv6.	-	
		The Switch should support VRRPv3.		
			· · · · · · · · · · · · · · · · · · ·	
		The Switch should support uRPF for IPv4 and IPv6.		
	•	The switch should support IEEE 802.1x providing user		
	•	authentication, authorization and CoA.		
		The switch should support SSHv2 and SNMPv3 to provide		
	,	network security by encrypting administrator traffic during	· .	
		Telnet and SNMP sessions.		
		The switch should support TACACS+ and RADIUS authentication		
7	Network security	enable centralized control of the switch and restrict		
	· features		,	,
	•	unauthorized users from altering the configuration.	, , , , , , , , , , , , , , , , , , , ,	
	•	The switch should support MAC address notification to allow	ŧ	' .
	•	administrators to be notified of users added to or removed	,	
	,	from the network.		
		The switch should support MACSec-256, Encrypted traffic	•	
		analytics		
		The switch should support 8 egress queues per port to enable		
		differentiated management		
	,	The switch should support Standard 802.1p CoS field		
	Quality of Service	classification		
3	(QoS) & Control			-
	• • • • • • • • • • • • • • • • • • • •	The switch should support IPSLA feature set to verify services		
	•	guarantee based on business critical IP Applications.		
		The switch should support QoS based on application		
	,	The switch should support configuration of the Software image		
		and switch configuration without user intervention		
			·	
		The switch should have built in RFID tag for asset tracking and		
		inventory management		
		The switch should support system health checks within the		
	·	switch		
	Operation and	The switch should support Command Line Interface (CLI)		
)	Management	support for configuration & troubleshooting purposes.	,	
		The switch should support Layer 2 trace route to ease		
	_	troubleshooting by identifying the physical path that a packet		
		takes from source to destination.		
	•			
		The switch should support Telnet and ssh interface support for		
		The switch should support Telnet and ssh interface support for comprehensive in-band management.		
		The switch should support Telnet and ssh interface support for comprehensive in-band management. The switch should support SNMPv1, SNMPv2c, and SNMPv3		
		The switch should support Telnet and ssh interface support for comprehensive in-band management. The switch should support SNMPv1, SNMPv2c, and SNMPv3 and netflow v9		
		The switch should support Telnet and ssh interface support for comprehensive in-band management. The switch should support SNMPv1, SNMPv2c, and SNMPv3		÷
		The switch should support Telnet and ssh interface support for comprehensive in-band management. The switch should support SNMPv1, SNMPv2c, and SNMPv3 and netflow v9		
0	Dimension	The switch should support Telnet and ssh interface support for comprehensive in-band management. The switch should support SNMPv1, SNMPv2c, and SNMPv3 and netflow v9 The Switch should be 1RU		
D	Dimension	The switch should support Telnet and ssh interface support for comprehensive in-band management. The switch should support SNMPv1, SNMPv2c, and SNMPv3 and netflow v9 The Switch should be 1RU The switch should able to support built-in redundant power		

		CISCO (N9K-C93180YC-FX)		-
SI.		Description of Product	Compliance	
No.	, , , , , , , , , , , , , , , , , , ,	The Switch should support non-blocking Layer 2 switching and Layer 3	(Yes/No)	any
		Switch should support the complete STACK of IPv4 and IPv6 services.		
1	Solution	The proposed switches should be part of Gartner Leader Quadrant for		
	Requirement	DC Networking for last 2 years		·
		The Switch used have the capability to function in line rate for all ports		
		Switch should have the following interfaces:		
		Minimum 48 ports support 1/10/25Gbps SFP+ ports for host		
	Hardware and	connectivity and 6*100G ports for Fabric/Spine connectivity.		
2	Interface	Switch should have console port for local management & management		
_	Requirement	interface for Out of band management		, , , , , , , , , , , , , , , , , , , ,
	•	1 RU fixed form factor		`
	. ,	Switch should be rack mountable and support side rails if required		
		Switch should be provided with power redundancy		
	·	Modular OS with dedicated process for each routing protocol		
		Switch should re-converge all dynamic routing protocol at the time of		
		routing update changes i.e. Graceful restart for fast re-convergence of		
		routing protocols (OSPF, IS-IS, BGP) Switch should support minimum 1000 VRF instances with route leaking		
		The switch should support 650K IPy4 LPM routes		
				, , ,
3	Performance	The Switch should support intelligent buffer management with a minimum buffer of 40MB.		
	Requirement	The switch should have MAC Address table size of 512K	,	
		The switch should support 128K multicast routes		, , , , , , , , , , , , , , , , , , , ,
		Switch should support 4000 VLANs		
	•	Switch should support 64 nos of ECMP paths		
		Switch should support minimum 3.6 Tbps of switching capacity (or as		
		per specifications of the switch if quantity of switches are more, but		
		should be non blocking capacity)		
•	Network	Switch should support Network Virtualisation using Virtual Over Lay		
4	Virtualization	Network using VXLAN		
	Features	Switch should support VXLAN and EVPN symmetric IRB for supporting		
		Spine - Leaf architecture to optimise the east - west traffic flow inside		
		Spanning Tree Protocol (IEEE 802.1D, 802.1W, 802.1S)		
		Switch should support VLAN Trunking (802.1q)		
		Switch should support minimum 90k no. of MAC addresses		
		Switch should support VLAN tagging (IEEE 802.1q)		,
		Switch should support IEEE Link Aggregation and Ethernet Bonding		
,		functionality (IEEE 802.3ad) to group multiple ports for redundancy Switch should support Link Layer Discovery Protocol as per IEEE		<u> </u>
		802.1AB for finding media level failures		1
5	Layer2 Features	Switch should support layer 2 extension over VXLAN across all		
		DataCenter to enable VM mobility & availability		
		The Switch should support DC Briding i.e. IEEE 802.1Qbb Priority Flow		
		Control (PFC), Data Center Bridging Exchange (DCBX), IEEE 802.1Qaz Enhanced Transmission Selection (ETS), Explicit Congestion Notification		
		Maximum number of port channels should be 300		, , , , , , , , , , , , , , , , , , , ,
		Maximum no of ports in the port channel should be 32		
		The switch should support BGP EVPN Route Type 2, Type 4 and Route		
		Type 5 for the overlay control plane		
		Switch should support static and dynamic routing		
		Switch should support segment routing and VRF route leaking		
•		Switch should support Segment Routing and Layer3 VPN over Segment		
		Switch should support multi instance routing using VRF/ VRF Edge/		
c	Laure Tacture	Virtual Router routing and should support VRF Route leaking		
6	Layer3 Features	Switch should provide multicast traffic reachable using:		
		a. PIM-SM		
	·	b. PIM-SSM		
		Support Multicast Source Discovery Protocol (MSDP)		
		IGMP v1, v2 and v3	i	
	<u> </u>	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	

r ——		Switch system should support 802.1P classification and marking of		
		a. CoS (Class of Service)		
	,	b. DSCP (Differentiated Services Code Point)	,	
	Quality of	Switch should support for different type of QoS features for real time traffic differential treatment using		
7	Service	a. Weighted Random Early Detection		
		b. Strict Priority Queuing		
		Switch should support Rate Limiting - Policing and/or Shaping		
	· ·	Switch should support to trust the QoS marking/priority settings of the		
		end points as per the defined policy		
•		Switch should support control plane Protection from unnecessary or		
		DoS traffic by control plane protection policy	,	
		Switch should support for external database for AAA using:		
		a. TACACS+		
		b. RADIUS :		
		Switch should support to restrict end hosts in the network. Secures the		
		access to an access or trunk port based on MAC address. It limits the		
		number of learned MAC addresses to deny MAC address flooding Switch platform should support MAC Sec (802.1AE) encryption in	 	
		VXLAN and other tunnel encapsulation/decapsulation should be		
	٠	performed in single pass in Hardware	:	, , , , , , , , , , , , , , , , , , ,
	·	Switch should support for Role Based access control (RBAC) for	,	
	n 11	restricting host level network access as per policy defined	,	
8	Security	Switch should support DHCP Snooping		
		Switch should support Dynamic ARP Inspection to ensure host integrity		
	·	by preventing malicious users from exploiting the insecure nature of		, ,
		Switch should support IP Source Guard to prevents a malicious hosts from spoofing or taking over another host's IP address by creating a	*	
		binding table between the client's IP and MAC address, port, and VLAN		,
		Switch should support unicast and/or multicast blocking on a switch	,	
		port to suppress the flooding of frames destined for an unknown		;
	,	unicast or multicast MAC address out of that port		
		Support for broadcast, multicast and unknown unicast storm control to prevent degradation of switch performance from storm due to network		
		attacks and vulnerabilities		
		The Switch should support LLDP.		,
,		Switch should support Spanning tree BPDU protection		
		Switch should support for sending logs to multiple centralised syslog		, , ,
	•	server for monitoring and audit trail		
		Switch should provide remote login for administration using:		
	'	a. Telnet		
		b. SSHv2		· · · · · · · · · · · · · · · · · · ·
,		Switch should support for capturing packets for identifying application	•	
	,	performance using local and remote port mirroring for packet captures Switch must have Switched Port Analyzer (SPAN) with minimum 4		
		active session and ERSPAN on physical, Port channel, VLAN interfaces		
		Switch should support for management and monitoring status using		·
	·	different type of Industry standard NMS using:		
9	Manageability	a. SNMP v1 and v2, SNMP v3 with Encryption		
		Switch should provide different privilege for login in to the system for		
		monitoring and management Should have Open APIs to manage the switch through remote-	,	
	* *	procedure calls (JavaScript Object Notation [JSON] or XML) over HTTPS		
	,	after secure authentication for management and automation purpose.		,
		The Switch Should support monitor events and take corrective action		
		like a script when the monitored events occurs.		, .
.		Should support hardware telemetry from ASIC-		
	,	Flow path trace (ingress to egress switch)		:
		Per Flow Hop by Hop packet drop with reason of drop		,
<u>.</u>		Per Flow latency (per switch and end to end)	·	
		Switch should have provisioning for connecting to 1:1/N+1 power		
10	AVAILABILITY	supply for usage and redundancy	, , , , , , , , , , , , , , , , , , , ,	•
.		Switch should provide gateway level of redundancy Ip V.4 and IP V.6	, , , , , , , , , , , , , , , , , , ,	
Ļ		Switch should support for BFD For Fast Failure Detection		

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11	MISCELLANEOU S POINTS	Console cable and power cable (As per Indian standards) as per customer requirement to be provided. All Cables shall be factory-terminated. All Functionalities of Switch shall be IPv6 compliant and it should work on IPv6 Platform without any additional hardware/ software. All the components should be from same OEM.	
12	Device	The solution must be supplied with a Central management solution and associated licenses for managing, monitoring and provisioning the	
	Management	Solution must provide a single GUI tool for centralized management system with role based access control.	

Price Bid

S. No.	Description of Product	Unit Price (without taxes)	Tax Rate (%)	Total Price (incl. of tax)	Validity of Rates (required 180 days)	Remarks, if
1.	Forty Nine (49) Cisco Switches					laung ng pagai digi dané hitip ata Musim dipanan banan ,
	(i) Thirty One (31) nos. of Cisco Switch 48 Port Model C9300-48T-E,		·			
	(ii) Eighteen (18) nos. of Cisco Switch 24 Port Model C9300-24T-E					
2.	Two (02) nos. of Nexus 9300 with 48P 1/10/25GE 6p 40/100G QSP28 Fibre Switches (N9K-C93180YC-FX) and other accessories for redundancy plan for 10G LAN:	•	,	v		
	(i) Nexus Core Switches Modules (Model: N9K-C93180YC-FX) – Qty.: 02 Nos.					
	(ii) Network Rack 42 U with all accessories – Qty.: 01 No.				,	-
	(iii) SM SFP 10G modules 26 SFP for Switch location + 4 SFP for A Block to C Block connectivity (Model: CISCO) – Qty.: 30 Nos.					
	(iv) Single Mode Optical fiber (6 core OFC) including all accessories like LIU, Pigtel, fiber patch cord (3 Mtr, 5 Mtr and 10					
	Mtr dual core SM), HDP casing etc, FMS. (Model: DigiCable or Dlink) – Qty.: 3600 Mtr. Approximate length	D.				
	(v) 9 U small rack with all accessories –Qty.: 12 nos.		. •			
Res	oth with the Services of a sident Engineer for Five (05)					
·	TOTAL					

Total price (incl. of taxes) in words Rs.

UNDERTAKING

if we undertake that the firm	(name of the min)
or its Partner/Director/Proprietor	has not been
blacklisted / banned and its Business dealings with the Central / State	Government / Public
Sector Undertaking / Autonomous Bodies have not been banned / termina	ited on account of poor
performance / conduct.	•
I/We undertake that all the terms and conditions of the insta	int Tender Notice are
acceptable to me/us.	
	•
	nature of the authorised
Signatory of the firm	/company/organisation
	Official Stamp/Seal
Date:-	
Place:-	