

Corrigendum

Detailed Switch Specification for Tender No. NITRR/Central Store/ CS/OT/2015/50 dated 09/04/2015 (First Corrigendum Replacing Annexure 2 of above Tender)

S.No.	Specification	Compliance YES/NO	Remarks
1	Port Density and Architecture		
a	24 * 10/100/1000T with Min 4 * SFP+ slots to accommodate 10G fiber module (single mode /multimode) with flexibility to choose.		
b	IEEE 802.1AX Link aggregation (static and LACP)		
c	IEEE 802.3ad Static and dynamic link aggregation		
d	IEEE 802.3x Flow control - full duplex operation		
e	Should support Active – Active Clustering - VSS or equivalent technology for high availability and quick resiliency from Day 1		
f	Should have min 40 Gbps of VSS or equivalent interconnection bandwidth, Interconnecting accessories as card/software/cable should be proposed from day1 to achieve the VSS or equivalent technology.		
g	The proposed VSS technology or equivalent should support high availability for both Layer 2 and Layer 3 (RIP, RIPng, OSPF, OSPF v3) Including for IP Multicasting (PIM v4,PIM v6) for data , Voice and Video applications.		
h	The VSS or equivalent technology should also support real time data mirroring on diversified location (min. 800 Meters)		
i	The switch must have dual hot-swappable power supplies from Day 1		
j	The proposed VSS or equivalent technology should support Link Aggregation between different members in an Active – Active cluster for high reliability		
k	Proposed Switch should seamlessly integrate with upcoming automated LAN Infrastructure to achieve Centralized management / provision the same using SDN or equivalent Technology for easy field replacement of any failed unit. (Replaced switches should get automatically reconfigured as zero touch replacement or equivalent.)		
l	Switches Should have provision for configuration Roll-out and Trouble Shooting with Instant Access or equivalent technology.		
m	Proposed Switches Should be provisioned for software Firmware roll-out functionality from centralized management platform / SDN technology.		
2	Performance Specifications		
a	Min 128Gbps of switching capacity		
b	Min 95 Mpps Switching throughput		
c	Min 16K MAC Address Table		
d	Switch should have inbuilt mechanism for proactively monitoring about any malfunction like power supply or internal temperature (full internal environment).		
e	Switch should work on environment friendly mode or equivalent		
3	Resiliency		
a	Should Support Rapid Ring protection / Resiliency technology providing the convergence of Sub 50ms on Ring Connectivity		
b	Loop Detection and Loop protection		
c	Should support Prioritization of Control Plane (PCC)		
d	Should support Dynamic link failover		

e	Should Support VRRP v2 and VRRP v3		
f	RSTP , MSTP and PVST+ compatibility mode		
4	VLAN		
a	Should Support VTP / GVRP		
b	VLAN creation based on protocol, Port and Subnet based		
c	IEEE 802.1Q Virtual LAN		
d	Should Support Q In Q and Voice VLAN		
e	Up to 4K configurable VLAN ' s		
5	Layer 3 Features (From Day1)		
a	Equal Cost Multi Path (ECMP) routing, PIMv4-SM, PIM-DM, PIM-SSM From Day 1		
b	RIP v2 , OSPF v2, OSPF v3, ECMP(Equal Cost Multipath) From Day 1		
c	OSPF Graceful restart From Day 1		
d	Policy-based routing		
e	Route redistribution (OSPF, RIP) From Day 1		
f	ICMP router discovery messages		
g	Classless Inter-Domain Routing (CIDR)		
h	Domain Name System (DNS) and DNS Relay		
i	RIPng for IPv6 from From Day 1		
j	PIMv6-SM and OSPF v3 Graceful restart From Day 1		
k	DHCP Client / Relay		
l	DHCP Server		
6	Security		
a	Access Control Lists (ACLs)		
b	Guest VLANs for enforcing security policies		
c	BPDU protection, IP source guard or equivalent		
d	DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI)		
e	Dynamic allocation of multiple VLAN s on one port for different user/devices		
f	Network Access and Control (NAC) features or equivalent to manage end point security		
g	Port-based learn limits (intrusion detection) or equivalent		
h	MAC address filtering and MAC address lock-down		
i	Private VLANs provide security and port isolation		
j	Secure Copy (SCP) and Strong password security and encryption		
k	MAC-based, web-based IEEE 802.1x authentication		
l	IEEE 802.1x with Web Authentication client monitoring		
m	SSH , SSLv2 ,SSLv3		
n	TACACS+ and RADIUS accounting and authentication		
o	DoS attack blocking		
p	RSTP Root Guard		
q	MD5 Message-Digest algorithm, IP authentication using keyed MD5.		
7	Quality of service		
a	IEEE 802.1p		
b	DSCP Prioritization		
c	Policy-based QoS; Traffic Classification based on MAC , Port , VLAN , and Protocol .		

d	ASIC based remarking capabilities		
e	Tail drop for queue congestion control		
f	Strict priority/ weighted round robin		
g	support Voice VLAN, LLDP-MED		
8	IPv6 Features		
A	Path MTU discovery for IPv6		
b	IPv6 Router Discovery		
c	IPv6 Router Advertisement		
d	IPv6 Router Advertisement Guard		
e	Transmission of IPv6 packets over Ethernet networks		
f	Default address selection for IPv6		
g	DNS extensions to support IPv6		
h	Unique local IPv6 unicast addresses		
i	Internet Control Message Protocol (ICMPv6)		
j	Neighbour discovery for IPv6		
k	IPv6 Stateless Address Auto-Configuration (SLAAC)		
l	IPv6 Router Advertisement (RA) flags option		
m	IPv6 Router Advertisement (RA) guard		
n	IPv4 and IPv6 Dual stack		
o	DHCP Client / Relay for IPv6		
p	DHCP server for IPv6		
9	Multicast Support		
a	IGMP query solicitation and IGMP snooping v1 , v2 and v3		
b	IGMP Queries and IGMP Snooping Queries		
c	MLD snooping (v1 and v2) and MLD Queries		
d	IGMP/MLD multicast forwarding (IGMP/MLD proxy) , IGMP Snooping Fast - leave , IGMP Filtering , IGMP snooping report suppression , IGMP source address check , IGMP static entries		
e	PIM neighbour filtering and PIM - SSM		
f	PIM for IPv6 , MLD Filtering , MLD Snooping fast leave , MLD snooping static mrouter ports , MLD snooping report suppression		
10	Management Features		
a	SNMPv1, v2c and v3, Industry-standard CLI with help menu and GUI		
b	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)		
c	Should Support sFlow or equivalent and CLI script option		
d	User-based Security Model (USM) for SNMPv3		
e	Should have Console management port		
f	TFTP , NTP And Syslog		
g	A USB or equivalent memory card socket , allowing software release files, configuration and other files to be stored for backup and distribution to other switches		
h	DDM – Optical digital diagnostic monitoring as per SFF – 8472 or equivalent standards		
i	Event-based triggers allow user-defined scripts to be executed upon selected system events based on Time , Date , day and Event		

j	The switch shall have pro active intelligence to create an ICMP polling for service reach ability based on IP address and configure pro active action upon loss or re establishment of the service reach ability		
11	Approvals		
a	Restrictions on Hazardous Substances (RoHS) Compliance , IEEE 802.3az Energy Efficient Ethernet (EEE) is mandatory and UL, cUL, TUV or equivalent certified.		
12	Warranty		
a	The bidder should propose minimum 5 years replacement warranty certificate /document. The certificate /document should be from the respective OEM on OEM letter head duly stamped and signed.		
13	Document		
a	The document claiming the availability of a certain feature should be enclosed with the proposed solution mentioning the page/reference /section no. to evaluate by the technical team. All the documents should also be available with data sheets/user manual/installation guide on the OEMs official website. Any feature other than the ones mentioned in these documents should be provided on OEM letter head duly stamped and signed.		