### INFORMATION TECHNOLOGY DEPARTMENT NDMC: PALIKA KENDRA, NEW DELHI Ph: 41501383(D), 41501353 - 60 Ext. 2701

| No.D/FFJD(IT)/2018 | Date: 06 | 03/20 | 18 |
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| M/s |       |
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Sub: Budgetary Quotation for SAN Switch in HA Mode

Sir,

Please quote your rate for Supply, Installation & proper Configuration (zoning) of Budgetary Quotation for SAN Switch in HA Mode in sealed cover duly subscribed with quotation no. and date. Your sealed quotation must reach this office by 3:00 P.M. on due date i.e. 12/03/2018 at room no 7008, 7th floor, IT Department, Palika Kendra Sansad Marg New Delhi 110001

It shall be responsibility of quotationer to ensure that their quotation reaches in time. As quotation received after the due date and time will not be considered.

#### Scope of work

IT Department, NDMC running various IT enabled citizen centric services/applications for providing best services to our citizens. These services are running 24X7 environments and related to commercial transaction

The scope of the work is supply of new SAN Switch, installation, testing and training of our officers. Bidder should ensure that equipment meets the relevant industry standards. Equipment should have been calibrated and certified by the authorized laboratories and certificate must be supplied with it, if any. All the features, required as per specification, are to be tested in the supplied equipment with necessary document and media files by supplier at the time of testing the equipment



Our environment (SAN Storage): Department having currently 03 SAN Storage of different OEM i.e Netapp, Fujitsu and HPE and all are connected through these san switch (HA Mode) and regarding servers department having 32 blades servers of HPE,IBM and Dell

# Technical future are required are mandatory of SAN Switch in HA (High availability) mode

|    | ITEM                        | SAN Switch   |  |
|----|-----------------------------|--|--|
|    | Brand Name                  |  |  |
|    | Model                       |  |  |
|    | Feature                     | Technical Specification  | A available Specification (Specify Exact Specification. Do not write Yes, No, compliance and Nor compliance) |
| 1. | Fixed 10Gig BaseT Ports     | minimum of 24 or More  |  |
| 2. | Total concurrent port count | minimum 42 or More   |  |
| 3. | Hot-swap Module Bays        | 1 in front   |  |
| 4. | Module Types                | 4x SFP+ module to be with connectivity option                                      |  |
| 5. | Cable                       | cable, SFP+ to SFP+, IOGbE, Copper<br>Twinax Direct Attach Cable, 5 Meter<br>4 Nos |  |
| 6. | Stacking # units/speed      | 12/160 Gbps  |  |
| 7. | Switching Capacity          | minimum of 630 Gbps or More  |  |
| 8. | Forwarding Capacity         | Minimum of 450 Mpps or More  |  |
| 9. | Forwarding Mode             | Store & Forward or Cut-through   |  |
| 10 | . Latency                   | should be < 3000ns (Mode specific)   |  |
| 11 | . CPU Memory                | minimum 2 GB or more   |  |



| 13. Packet Buffer                          | minimum of 9 MB or More across switch  |          |
|--|--|----------|
| 14. os                                     | IOS preferably CLI based   |          |
| 15. 10/100/1000 OOB<br>Mgmt Port           | Yes, preferably in rear  |          |
| 16. RJ45 console port with RS232 signaling | minimum 1  |          |
| 1 7. USB (Type A) port for configuration   | minimum 1  |          |
| 18. DCB                                    | Yes, DCBx, iscsl, TLV 2.2, ETS, PFC & QCN  |          |
| 1 9. Layer 3 Protocols Supported           | Static, RIP, OSPF, BGP, VRRP, PBR, ECMP, VRF-Lite                                    |          |
| 20. IPv4/IPv6 Static Route<br>Entries      | minimum of 1,024/1,024   |          |
| 21 . IPv4/IPv6 Dynamic<br>Route Entries    | minimum of 8,160/4,096   |          |
| 22. RIP Routing Interfaces supported       | minimum of 512   |          |
| 23. OSPF Routing Interfaces supported      | minimum of 8160  |          |
| 24. ECMP Next Hops per Route/Groups        | minimum of 4 Hops/1,024 Groups   |          |
| 25. VLAN Routing Interfaces                | minimum of 128   |          |
| 26. ARP Table                              | minimum of 6100  |          |
| 27. NDP Entries                            | Minimum of 400   |          |
| Feature Details                            | Technical Specification  | QUANTITY |
| 1. Fixed 10Gig BaseT Ports                 | minimum of 24 or More  |          |
| 2. Total concurrent port count             | minimum 32 or More   |          |
| 3. Hot-swap Module Bays                    | 1 in front   |          |
| 4. Module Types                            | 4 x SFP+ module to be with connectivity option                                       |          |
| 5. Cable                                   | Cable, SFP+ to SFP+, 10GbE, Copper<br>Twinax Direct Attach Cable, 5 Meter -<br>4 Nos |          |
| 6. Stacking # units/speed                  | 12/160 Gbps  |          |
| 7. Switching Capacity                      | minimum of 630 Gbps or More  |          |



| 8. Forwarding Capacity                     | Minimum of 450 Mpps or More                       |
|--|---|
| 9. Forwarding Mode                         | Store & Forward or Cut-through                    |
| 10. Latency                                | should be < 3000ns (Mode specific)                |
| 11 . CPU Memory                            | minimum 2 GB or more                              |
| 12. Flash Memory                           | minimum of 256 MB or More                         |
| 13. Packet Buffer                          | minimum of 9 MB or More across switch             |
| 14. os                                     | IOS preferably CLI based                          |
| 15. 10/100/1000 OOB Mgmt<br>Port           | Yes, preferably in rear                           |
| 16. RJ45 console port with RS232 signaling | minimum 1   |
| 17. USB (Type A) port for configuration    | minimum 1   |
| 18. DCB                                    | Yes, DCBx, iscsl, TLV 2.2, ETS, PFC & QCN         |
| 19. Layer 3 Protocols Supported            | static, RIP, OSPF, BGP, VRRP, PBR, ECMP, VRF-Lite |
| 20. IPv4/IPv6 Static Route<br>Entries      | minimum of 1,024/1,024                            |
| 21. IPv4/IPv6 Dynamic<br>Route Entries     | minimum of 8,160/4,096                            |
| 22. RIP Routing Interfaces supported       | minimum of 512                                    |
| 23. OSPF Routing Interfaces supported      | minimum of 8160                                   |
| 24. ECMP Next Hops per<br>Route/Groups     | minimum of 4 Hops/1,024 Groups                    |
| 25. VI-AN Routing Interfaces               | minimum of 128                                    |
| 26. ARP Table                              | minimum of 6100                                   |
| 27. NDP Entries                            | Minimum of 400                                    |
| 28. ACLs                                   | minimum of100                                     |
| 29. ACLs                                   | MAC ,Time-controlled ACLs,IP Based                |
| 30. Max ACL Rules (System wide)            | Minimum of 3072                                   |
| 31. Max Rules per ACL                      | Minimum of 1023                                   |
| 32. Max ACL Rules per IPv4                 | Minimum of 2,047 ingress/ 1,023 egress            |



| 32. Max ACL Rules per IPv4              | Minimum of 2,047 ingress/ 1,023 egress  |  |
|---|---|--|
| Interface                               |   |  |
| 33, Max ACL Rules per IPv6<br>Interface | Minimum of 1,021 ingress/512 egress   |  |
| 34. MAC Address Storage                 | Minimum of 131072   |  |
| 35. VLANs                               | Minimum of 4094   |  |
| 36. Subnet Based VLANs                  | Minimum of128   |  |
| 37. Protocol based VLANs                | Minimum of128   |  |
| 38. LAGS (Ports per group)              | Static 128/Dynamic 144 (8)  |  |
| 39. MLAG                                | Yes   |  |
| 40. Jumbo Frame                         | Yes, MTU 9,216 MB   |  |
| 41. QoS Priority Queues                 | minimum of 7 nos  |  |
| 12. Remote Port Mirroring               | minimum 4 session per node  |  |
| 43. Port Mirroring                      | 4 port TX or 2 ports TX & RX  |  |
| 14. Features                            | USB Rapid Deployment,Bare Metal<br>Provisioning ,SDN Ready,Dual<br>Firmware Images,Tool-less racking<br>w/Ready Rails,Fresh Air Compliant |  |
| 15. power supplies                      | Dual 80+ certified hotswap  • Power Down on Unused Ports  |  |
| 16. Max Watts                           | 240   |  |
| 17. Compliant                           | PCI   |  |
| 18. Compatibility                       | The Give Switch Should be compatible with Blade servers of HPE,IBM and Dell Appropriate cables should be given for Connectivity.          |  |
| 19. Warranty                            | 3 Years Onsite warranty with 04 hours CTR   |  |

## TERMS AND CONDITIONS OF CONTRACT

### 1. Rates:

Rates shall be written in figure as well as in words (English).

