National Film Archive of India

Ministry of Information and Broadcasting

Government of India

Corrigendum for RFP for Selection of Master System Integrator (MSI) For Implementation of NFAIs Enterprise Solution Ref. No: 302/52/2021- NFHM dated November 16, 2021

Attention is invited to the Advertisement on All India basis inviting response to the Request for Proposal for Selection of Master System Integrator (MSI) For Implementation of NFAIs Enterprise Solution. The said RFP was also uploaded on the NFAI's website (www.nfai.gov.in) and Procurement website of Government of India (https://eprocure.gov.in/cppp/)

This document covers the changes in the schedule details. The Corrigendum shall be construed as a part of the RFP and it shall be the responsibility of the Bidder to read carefully and understand the changes / additions mentioned it.

The rest of the content as mentioned in the RFP shall remain unchanged.

Sd/-

Officer on Special Duty, NFHM

CORRIGENDUM – 2

Tender Reference Number	302/52/2021- NFHM
Tender Title	Request for Proposal for Selection of Master System Integrator (MSI) For Implementation of NFAIs Enterprise Solution
Tender Publishing Date	November 16, 2021
Corrigendum Published based on	Clarifications to the RFP

1   Under Section 4, Schedule details, the following changes have been made

S. No	Information	Details
4.1.	Last date (deadline) for submission of bids	January 11, 2022 Upto 3 PM
4.2.	Opening of Technical Proposal	January 12, 2022 at 4 PM

2   Under the RFP, Schedule details, the following changes have been made

#	Chapter	Section No.	Section Name	Page No.	Content of the RFP	Revised clause of the RFP
1	Chapter 2: Scope of Work	Section 1.5	NFAI Enterprise Solution	25	1.5.1. To develop, operate and maintain the on-Cloud data center	The revised clause to be read as: "Develop, maintain and support **NES platform** hosted on cloud"

#	Chapter	Section No.	Section Name	Page No.	Content of the RFP	Revised clause of the RFP
2	Chapter 2: Scope of Work	11.Performance of Cabernets containers	16.5. Project Monitoring and Reporting	78	11. Performance of Cabernets containers	The revised clause to be read as: "Performance of **Kubernetes** & containers"
3	Chapter 4: Evaluation Process	3.Technical Evaluation Criteria	3.1.Technical Evaluation Parameters	129	Criteria 3.1.3 Cloud Service Provider experience

Experience in Cloud hosting /Cloud Services in the last 5 years as on the last date of bid submission. The value of each project shall not be less than INR 5 Crore. | The revised clause to be read as: "Cloud Service Provider experience

Experience in Cloud hosting /Cloud Services in the last 5 years as on the last date of bid submission. The value of each project shall not be less than **INR 10 Crore**." |
| 4 | Chapter 4: Evaluation Process | Sub-Table B.2: Cloud Pricing | Cloud Pricing | 143 | B.2.1 Storage – Total Quantity 500.00 #, UoM - GB/month | The revised clause to be read as: "B.2.1 Storage – Total Quantity 500.00 #, UoM - **TB/month**"

Kindly Refer Corrigendum 2: Annexure Point 1 |
| 5 | Chapter 6: Technical Specifications | 2. NFAI Media Ingestion Room (MIR) Architecture – Physical Infrastructure | 2.1.12. UPS Requirements & Features | 151 | It is recommended to have 2 UPS with 60 minutes battery back-up on each UPS for redundant purpose. The UPS system shall be provided with a capacity to accommodate the active components in the Media Ingestion Room for 60 Minutes. (number of racks may increase/ decrease as per MSI's solution) in an area of 200 sq. ft. | The revised clause to be read as: "It is recommended to have 2 UPS with **30 minutes** battery back-up on each UPS for redundant purpose. The UPS system shall be provided with a capacity to accommodate the active components in the Media Ingestion Room for **30 Minutes**. (number of racks may increase/ decrease as per MSI's solution) in an area of **300 sq. ft**." |

#	Chapter	Section No.	Section Name	Page No.	Content of the RFP	Revised clause of the RFP
6	Chapter 6 : Technical Specifications	Point no 3 Technical Specifications Physical Components	F ii. Infrastructure Components for Media Ingestion Room	157	A. Core Network Switch	Kindly Refer Corrigendum 2: Annexure Point 2
7	Chapter 6 : Technical Specifications	Point no 3 Technical Specifications Physical Components	F ii. Infrastructure Components for Media Ingestion Room	160	B. Network Access Switch	Kindly Refer Corrigendum 2: Annexure Point 3
8	Chapter 6 : Technical Specifications	Point no 3 Technical Specifications Physical Components	F ii. Infrastructure Components for Media Ingestion Room	161	C. Internet Router	Kindly Refer Corrigendum 2: Annexure Point 4
9	Chapter 6 : Technical Specifications	Point no 3 Technical Specifications Physical Components	F ii. Infrastructure Components for Media Ingestion Room	162	D. Next Generation Fire Wall	Kindly Refer Corrigendum 2: Annexure Point 5
10	Chapter 6 : Technical Specifications	Point no 3 Technical Specifications Physical Components	F ii. Infrastructure Components for Media Ingestion Room	164	F. SAN Switch	Kindly Refer Corrigendum 2: Annexure Point 6

#	Chapter	Section No.	Section Name	Page No.	Content of the RFP	Revised clause of the RFP
11	Chapter 6 : Technical Specifications	Point no 3 Technical Specifications Physical Components	F ii. Infrastructure Components for Media Ingestion Room	168	H. Ingestion Server	Kindly Refer Corrigendum 2: Annexure Point 7
12	Chapter 6 : Technical Specifications	Point no 3 Technical Specifications Physical Components	F ii. Infrastructure Components for Media Ingestion Room	-	New Clause: Minimum Technical Speciation's for Link Load Balancer	Kindly Refer Corrigendum 2: Annexure Point 8

Annexure

1 B.2: Cloud Pricing Table

Chapter 4: Evaluation Process, Point no 8. Commercial Bid Format. Sub-Table B.2: Cloud Pricing (Exclusive of all Taxes)

S. No	Items	Total Qty	UoM	Duration (in months)	Unit Rate (in INR)	Total Price (in INR)
A	B	C	D	E	F	G= C*E*F
B 2.1	Storage	500.00 #	*TB*/month	60		
B 2.2	DRM fees		monthly	60		
B 2.3	Forensic watermarking		yearly	5		
B 2.4	One time transcoding of all the content	430,000.00#	Minutes			
B 2.5	Content Delivery Network	64.37 #	TB/ month	60		
	Total in figures (excluding GST)					
	Total in figures (including GST)					
Total in words (excluding GST)						
Total in words (including GST)						

2 Revised Minimum specifications for Core Network Switch

A	Core Network Switch
S. No.	**Minimum Technical Specifications**
1	**Solution Requirement**
	The Switch should support non-blocking Layer 2 switching and Layer 3 routing
	There switch should not have any single point of failure like power supplies and fans etc. should have 1:1/N+1 inbuilt level of redundancy
2	**Hardware and Interface Requirement**
	Switch should have the 48 x 1/10G/25G fiber ports and should have **6** x 40/100G QSFP+ ports
	Switch should have 16GB DRAM and 16GB Flash/Storage
	Switch should support Configuration roll-back
	Switch should support for different logical interface types like loopback, VLAN, SVI/RVI, Port Channel, multi chassis port channel/LAG etc.
	The switch should support 100,000 IPv4 routes and 100,000 IPv6 routes entries in the routing table including 48,000 multicast routes
	The switch should support hardware-based load sharing at wire speed using LACP and multi chassis ether channel/LAG
	The switch should have 32MB buffer
	Switch should support minimum 4 Tbps of switching capacity
3	**Layer2 Features**
	Spanning Tree Protocol (IEEE 8201.D, 802.1W, 802.1S)
	Switch should support minimum 200,000 no. of MAC addresses
	Switch should support 8 nos of link or more per port channel(using LACP) and support min 16 numbers of ports per Link Aggregation Group or more
	Support for broadcast, multicast, and unknown unicast storm control to prevent degradation of switch performance from storm due to network attacks and vulnerabilities
	Switch should support Link Aggregation groups to enable one or more servers to multihome to the leaf switches

A	Core Network Switch
4	**Layer3 Features**
	Switch should support all physical ports to use either in Layer2 or Layer 3 mode and also should support layer 3 VLAN Interface and Loopback port Interface
	Switch should support static and dynamic routing like Static, OSPF and BGP
	Switch should provide multicast traffic reachable using PIM-SM and SSM, BFD
	Should support a datacenter Fabric build on mature standards and protocols such as BGP EVPN/VXLAN to normalize datacenter and fabric operations. No proprietary solutions are to be deployed for fabric
	Should support dynamic load balancing in an EVPN-VXLAN network when a multihomed device can be reached through multiple virtual tunnel endpoints (VTEPs) that share a common Ethernet segment identifier (ESI) **Switch should have following IPv4 & IPv6 routing enabled from day one- OSPF, BGP,EVPN-VXLAN,PBR,GRE,VRF & VRRP**
	Switch should support following IPv4 & IPv6 routing with an additional license - MPLS, L2 & L3 VPN, L2 & L3 VXLAN Gateway
5	**Availability**
	Switch should provide gateway level of redundancy in IPv4 and IPv6 using HSRP/ VRRP
	Switch should support for BFD For Fast Failure Detection
6	**Quality of Service**
	Switch system should support 802.1P classification and marking of packet CoS, DSCP etc.
	Switch should support for different type of QoS features for ream time traffic differential treatment using WRED and SP Queuing
	Switch should support Flow control of Ethernet ports to control traffic rates during congestion by allowing congested nodes to pause link operation at the other end for receiving traffic as per IEEE 802.3x/PFC (802.1Qbb)
7	**Security**
	Switch should support for deploying different security for each logical and physical interface using Port Based access control lists of Layer-2 to Layer-4 in IP V4 and IP V6 and logging for fault finding and audit trail

A	Core Network Switch
	Switch should support control plane i.e., processor and memory Protection from unnecessary or DoS traffic by control plane protection policy
	Switch should support for external database for AAA using TACACS+ / Radius
	Switch should support for Role Based access control (RBAC) for restricting host level network access as per policy defined
	Switch should support to prevent edge devices in the network not administrator's controlled from becoming Spanning Tree Protocol root nodes
	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
8	Manageability
	Switch should support for embedded RMON/RMON-II for central NMS management and monitoring
	Switch should provide remote login for administration Telnet, SSHv2
	Switch should support for management and monitoring status using different type of Industry standard NMS using SNMP V2 and V3
	Switch should support for basic administrative tools like Ping and traceroute
	Switch should support XML / REST API / Openflow
	Switch should support central time server synchronization using Network Time Protocol NTP

3 Revised Minimum specifications for Network Access Switch

B	Network Access Switch
S. No.	Minimum Technical Specifications
1.	Minimum 24 x 10/100/1000 Base-T and 4 x 1/10G ports (with required transceiver modules)
2.	1 U Rack mountable and should provide stacking of minimum 8 switches with 80 Gbps of dedicated stacking/ equivalent bandwidth (All the stacking accessories should be included from day 1).
3.	The Switch should have 2GB DRAM and 2GB internal Flash
4.	128Gbps or higher Backplane capacity and minimum 95 Mpps of forwarding rate (excluding the stacking bandwidth and forwarding)
5.	Should support Non-blocking hardware architecture
6.	All interfaces should provide wire speed forwarding for both Fiber and copper modules
7.	Support for at least 2000 VLANs & 32k MAC address
8.	It should support IGMP snooping v1, v2 & v3
9.	It should have static IP routing from Day 1 and should be upgradable to support OSPF and PIM
10.	Switch should support 8 hardware queues per port
11.	Dynamic Host Configuration Protocol (DHCP) snooping
12.	Switch should support LLDP capabilities
13.	Should support IP Source Guard, DAI and IPv6 Security feature like IPv6 RA Guard and IPv6 Neighbor Discovery Inspection
14.	Should support Secure Shell (SSH) Protocol and Simple Network Management Protocol Version 3 (SNMPv3).
15.	Switch needs to have console port for administration & management
16.	Management using CLI, GUI using Web interface should be supported
17.	FTP/TFTP for upgrading the operating System
18.	Should support Energy Efficient Ethernet

B	Network Access Switch
19.	IEEE 802.1x support, IEEE 802.1D Spanning-Tree Protocol, IEEE 802.1p class-of- service (CoS) prioritization, IEEE 802.1Q VLAN, IEEE 802.3 10BASE-T specification, IEEE 802.3u 100BASE-TX
20.	**Switch should support internal redundant power supply**
21.	Switch should be able to support management via CLI, Web interface
22.	SNMP v1, v2, v3
23.	Switch should be manageable through both IPv4 & IPv6.
24.	**Switch should be UL-UL60950-1, FCC Part 15, VCCI Class A, EN 55022 / EN 55032, EN 55024, EN 300386 / IEC 61000-4-8, CAN/CSA 22.2 No.60950-1, Reduction of Hazardous Substances (ROHS) certified**
25.	Switch Should be Common Criteria NDPP/NDcPP certified

4   Revised Minimum specifications for Internet Router

C	Internet Router
S. No	**Minimum Technical Specifications**
1.	**Architecture:**
	The appliance-based security platform shall be capable of providing firewall, IPS and VPN (IPSec) functionality.
	The Router may support Advanced Threat Protection like malware and zero-day threats through cloud subscription or should integrate with on premise APT solution
	May support Stateful failover.
	Should have routing capacity of at least 550Kpps
	Should support Up to 256K Concurrent sessions
	Should provide 200 Mbps IPSec throughput
2.	**Memory -** Should have 4Gb RAM and 8Gb Flash

C	Internet Router
3.	**Support: -** IKEv1 and v2, IPSec VPN standards, 56-bit DES, 168-bit 3DES, 256-bit AES encryption
4.	**Authentication, Authorization and Accounting (AAA) support:** RADIUS or TACACS+
5.	**May have support for: Network and application-level attacks ranging from malformed packet attacks to DoS attacks, Support RSA and Diffie-Hellman, MD-5, SHA-1, SHA-128, SHA-256**
6.	**Provides:**
	Rich dynamic NAT and PAT services
	Static NAT and PAT services
	Stateful and stateless and Zone-based firewall
	May Support Denial of service (DDoS) protection
	May Support Traffic anomaly protection
7.	**Management**
	Web based management to support for remote monitoring
	Accessible through variety of methods including: Telnet, Console Port, SSH
	Dedicated Out-of-Management interface
	Support SNMPv1, v2, v3 & Support for syslog
	Should have the ability to create customizable administrative roles/profiles (monitoring only, read-only accesses to configuration).
8.	**Software features**
	support for IPv4, RIPv2, OSPF, BGP, VLAN, DHCP, Support for IPv6 RIPng, OSPFv3.
9.	**Power Supply**
	Internal Redundant Power supply
10.	**Minimum Interfaces Required**
	8 x 1 Gig and 4 x 10 Gig Ports loaded with required optics
	Router Should be EAL4/ NDPP/NDcPP certified

5   Revised Minimum specifications for Next Generation Fire Wall

D	Next Generation Fire Wall
S. No	Minimum Technical Specifications
1.	**Architecture:**
	The appliance-based security platform shall be capable of providing firewall, IPS and VPN (IPSec) functionality simultaneously.
	The Firewall should have Application Security / AVC from Day 1.
	The Firewall should support Advanced Threat Protection like malware and zero-day threats through cloud subscription or should integrate with on premise APT solution
	Should provide Stateful failover.
2.	**Sessions**
	Should support up to 1.5 Million Concurrent sessions and at least 50,000 sessions per second
3.	**System Throughput**
	Should provide 10Gbps **Firewall Throughput**
	Should provide 2.6 Gbps IPS throughput
	Should have 1.5Gbps NextGen firewall throughput including Firewall, Application security/ AVC, IPS and URL Filtering
4.	**Support: -** IKEv1 and v2, IPSec VPN standards, 56-bit DES, 168-bit 3DES, 256-bit AES encryption
5.	**Authentication, Authorization and Accounting (AAA) support:** RADIUS or TACACS+
6.	**Support for:** Network and application-level attacks ranging from malformed packet attacks to DoS attacks, Support RSA and Diffie-Hellman, MD-5, SHA-1, SHA-128, SHA-256
7.	**Provides:**
	Rich dynamic NAT and PAT services
	Static NAT and PAT services
	Stateful and stateless and Zone-based firewall

D	Next Generation Fire Wall
	Denial of service (DDoS) protection
	Traffic anomaly protection
8.	**Management**
	Web based management to support for remote monitoring
	Accessible through variety of methods including: Telnet, Console Port, SSH
	Support SNMPv1, v2, v3 & Support for syslog
	Should have the ability to create customizable administrative roles/profiles (monitoring only, read-only accesses to configuration).
9.	**Software features**
	support for IPv4, RIPv2, OSPF, BGP, VLAN, DHCP, OSPFv3.
10.	**Power Supply**
	Internal Redundant Power supply
11.	**Minimum Interfaces Required**
	12 x 1G Port Accelerated ports and should have 4 free slots
	Firewall Should be EAL4/ NDPP/NDcPP certified

6   Revised Minimum specifications for SAN Switch

F	Minimum Technical Specifications for SAN Switch	
Sr. No.	Feature	Minimum Technical Specifications
1.	SAN ports and cables	Minimum Dual SAN switches shall be configured where each SAN switch shall be configured with minimum of 48 Ports scalable to 96 ports. 48 No of 16Gbps SFP ports and 48 No of 15Mtr FC cable need to be populated
2.	Scalability	Required scalability shall not be achieved by cascading the number of switches and shall be offered within the common chassis only

F	Minimum Technical Specifications for SAN Switch	
3.	Architecture	Should deliver 16Gbit/Sec Non-blocking architecture with 1:1 performance for up to 96 ports in an energy-efficient manner
4.	Port Speed	Should protect existing device investments with autosensing 4, 8, and 16 Gbit/sec capabilities.
5.	Port Types	The switch shall support different port types such as FL_Port, F_Port, E_Port, EX_Port.
6.	Form Factor	The switch should be rack mountable
7.	Switch Features	Should provide enterprise-class availability features such as redundant and hot pluggable components like power supply and FAN
		Non disruptive Microcode/ firmware Upgrades and hot code activation.
		The switch shall provide Aggregate bandwidth of 3072 Gbit/sec end to end.
		Switch shall have support for web-based management and should also support CLI.
		The switch should have USB port for firmware download, support save, and configuration upload/download.
		Offered SAN switches shall be highly efficient in power consumption. MSI shall ensure that each offered SAN switch shall consume less than **1200 Watt** of power.
		Switch shall support POST and online/offline diagnostics, including RAStrace logging, environmental monitoring, non-disruptive daemon restart, FCping and Pathinfo (FC traceroute), port mirroring (SPAN port).
		Offered SAN switch shall support services such as Quality of Service (QoS) to help optimize application performance in consolidated, virtual environments. It should be possible to define high, medium, and low priority QOS zones to expedite high-priority traffic
		The Switch should be configured with the Zoning and shall support ISL Trunking features when cascading more than 2 numbers of SAN switches into a single fabric.

F	Minimum Technical Specifications for SAN Switch	
		SAN switch shall support to restrict data flow from less critical hosts at preset bandwidths.
		It should be possible to isolate the high bandwidth data flows traffic to specific ISLs by using simple zoning
		The Switch should be configured with the Zoning and shall support ISL Trunking features when cascading more than 2 numbers of SAN switches into a single fabric.
		Offered SAN switches shall support to measure the top bandwidth-consuming traffic in real time for a specific port or a fabric which should detail the physical or virtual device.

7 Revised Minimum specifications for Ingestion Server

H	Ingestion Server Minimum Technical Specifications	
Sr. No.	**Component**	**Minimum Technical Specifications**
1.	Ingestion Server	Minimum 2CPU Configuration, 1X Trusted Platform Module 2.0
2.	Processor	2 X Intel Xeon Silver 4208 Processor (2nd Gen) or Higher
3.	Processor Speed, Cache	11M Cache
4.	Chipset	Intel Chipset
5.	Memory	8 X 32GB RDIMM 2666MT/s Dual Rank BOSS controller card + with 2 M.2 Sticks 480GB.
6.	Hard Disk Drives	2 X 480GB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive,3.5in HYB CARR
7.	RAID Controller	Raid Controller 6G SAS/SATA HDD support. It should support RAID levels 0, 1,5,6,10.
8.	Ports	4 x USB 2.0, 1 VGA, and 1 Dedicated 1G Service LAN for Management (IPMI 2.0 Compliant).
9.	Drive bays	System should be configured with minimum 8 drive bays for installing Hard Drives. It should support SAS, SATA, and SSD

H	Ingestion Server Minimum Technical Specifications	
		Drives
10.	Graphics Controller	Integrated Graphic controller.
11.	Ethernet Ports	2 numbers of 1G Ethernet Port supporting PXE-Boot and iSCSI boot support and SAS port for connecting Tape Library.
12.	Expansion Slots	6 x PCI-Express 3.0 slots
13.	Optical Drive.	DVD-RW
14.	Fans	Fans should be redundant and hot plug.
15.	Redundant Power Supply	Hot swappable redundant (1+1) power supply or better.
16.	Operating System Support	Microsoft® Windows Server® 2012 R2 or above Windows 2008 R2, VMware vSphere 6.0, VMWare vSphere5.5, Suse Linux Ent Server11, RHEL7, RHEL 6, RHEL 5
19.	Management Software	Management software should have below features as standard or if any license is required for below features should be provided. • System management tools should be from the same OEM. • Should support Unattended, Local and Remote installation. • Event Management, Threshold management, Asset Management, Performance Management. • Prefailures and analysis, Automatic System Recovery, and restart. • Monitoring and control power consumption • Raid Management, Storage management. • Update Management(Bios and Firmware), Online Diagnostics, • Single sign on and Role based access control should be provided. •Power Consumption Monitoring,Power Consumption Control should be provided. Drivers and Firmware should be available for free till the complete life of the server.
20.	Compliance	ROHS, WEEE, CSAc/us, FCC Class A, CE, CB

8 New Minimum specifications for Link Load Balancer

J	Link Load Balancer
S. No	Minimum Technical Specifications
1.	Should be high-performance purpose-built hardware with multicore CPU support.
2.	The appliance should have minimum 4x10G SFP+ data interfaces from day one and should have option to convert it to 1G copper interfaces by changing Transceivers. Should have One 1G Copper dedicated management interface
3.	The appliance should support Minimum 64GB RAM, 2TB HDD
4.	The appliance should have minimum 10Gbps of system throughput from day one.
5.	To meet high performance requirements, load balancer must support virtual grouping or stacking of the appliances and must appear as single system.
6.	Support for multiple internet links in Active-Active load balancing and active-standby failover mode.
7.	Appliance must have link load balancer license & server load balancer license comes by default along with base license including ipv6
8.	Extensible policies (ePolicies) TCL scripts to implement business logic on network without changes in application code.
9.	Should support Outbound load balancing algorithms like round robin, Weighted round robin, shortest response, hash ip, target proximity and dynamic detect.
10.	Should support inbound load balancing algorithms like round robin, Weighted round robin, target proximity & dynamic detect.
11.	Should support Static NAT, Port based NAT and advanced NAT for transparent use of multiple WAN / Internet links.
12.	IPV6 support with IPv6 to IP4 and IPv4 to IPv6 translation and full IPv6 support.
13.	IPV6 support with DNS 6 to DNS 4 & DNS 4 to DNS 6 translation
14.	Domain name support for outbound link selection for FQDN based load balancing.
15.	Dynamic detects (DD) based health check for intelligent traffic routing and failover
16.	In case of link failure, device should detect it in less than 30 seconds and divert the traffic to other available links.
17.	Shall provide individual link health check based on physical port, ICMP Protocols, user defined l4 ports and destination path health checks.

J	Link Load Balancer
18.	Should provide mechanism to bind multiple health checks, support for Application specific VIP health check and next gateway health checks.
19.	Should support persistency features including RTS (return to sender) and ip flow persistence.
20.	Should support various deployment modes for seamless integration including reverse proxy (IPv6 to IPv4, IPv4 to IPv6) and IPv6 to IPv6 transparent and reverse proxy mode.
21.	Should define ACL rules to restrict the connections per second (CPS) and concurrent connections (CC) utilizable for the clients on a specified subnet/IP or network
22.	Should support QOS for traffic prioritization, CBQ , borrow and unborrow bandwidth from queues.
23.	Should provide QOS filters based on port and protocols including TCP, UDP and ICMP Protocols.
24.	Should support rate shaping for setting user defined rate limits on critical application.
25.	The appliance should support site selection feature to provide global load balancing features for disaster recovery and site redundancy.
26.	Global load balancing should support advance functions Authoritative name sever, DNS proxy/DNS NAT, full DNS server with DNSEC, DNS DDOS, application load balancing from day one
27.	Capable of handling complete Full DNS bind records including A,MX, AAAA, CNAME, PTR, SOA etc.
28.	GSLB solution should be able to evaluate round trip time (RTT), Persistence loss ratio (PLR) and hop count for dynamic proximity calculations.
29.	The appliance should support global server load balancing algorithms including - Weighted round robin, Weighted Least Connections, Administrative Priority, Geography, Proximity, Global Connection Overflow (GCO),Global Least Connection (GLC),IP Overflow (IPO)
30.	should support dynamic proximity and static proximity rules to direct the traffic to closest datacenter
31.	Shall provide individual link health check based on physical port, ICMP Protocols, user defined l4 ports and destination path health checks.
32.	GSLB SDNS should provide full IPv6 functionality with support for AAAA DNS resolution, proximity rule support for IPv6 , dynamic proximity (to detect IPv6 local DNS's) and SDNS health check for IPv6 service IP's

J	Link Load Balancer
33.	Should provide comprehensive and reliable support for high availability and N+1 clustering based on Per VIP based Active-active & active standby unit redundancy mode.
34.	The solution should provide comprehensive and reliable support for high availability with Active- active & active standby unit redundancy mode using standard VRRP (RFC-2338) for HA interconnection over network.
35.	Stateful session failover with N+1 clustering support when deployed in HA mode
36.	Support for multiple communication links for Realtime configuration synchronizations including HA group, gateway health check, decision rules, SSF sessions etc. and heartbeat information
37.	should support floating MAC address to avoid MAC table updates on the upstream routers/switches and to speed up the failover
38.	should support for secondary communication link for backup purpose
39.	should support floating IP address and group for stateful failover support. Appliance must have support 256 floating ip address for a floating group
40.	should support built in failover decision/health check conditions including, CPU overheated, system memory, process health check, unit failover, group failover and reboot
41.	should also have option to define customized rules for gateway health check - the administrator should be able to define a rule to inspect the status of the link between the unit and a gateway
42.	Should provide comprehensive and reliable support for high availability with Active-active & active standby unit redundancy mode. Should support both device level and VA level High availability
43.	Configuration synchronization at boot time and during run time to keep consistence configuration on both units.
44.	The appliance should have extensive reporting and logging with inbuilt tcp dump like tool and log collection functionality
45.	The appliance should have SSH CLI, Direct Console, SNMP, Single Console per Cluster with inbuilt reporting.
46.	Should support XML-RPC for integration with 3rd party management and monitoring of the devices.
47.	The appliance should provide detailed logs and graphs for real time- and time-based statistics

J	Link Load Balancer
48.	USB based fast failover support for automated configuration synchronization and improved failover time as compare to traditional cluster
49.	Appliance must support multiple configuration files with 2 bootable partitions for better availability and easy upgrade / fallback.
50.	The system should support led warning and system log alert for failure of any of the power and CPU issues