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ޖެނެރަލް މެޓިންގުގެ ތާރީޚު: 2023 ޖުލައި 15	ޖެނެރަލް މެޓިންގުގެ ތާރީޚު: 38/2023/W-007
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ދަރުސާ 2- (މަޖިލީސް ސަރުކާރު)

Introduction

Elections Commission of Maldives (herein referred as ECM) invites vendors to submit proposal for Datacenter Capacity Upgrade. ECM requires implementation services to complete all components of this project including consultancy in the process of implementation, configuration, etc.

Purpose

The purpose behind issuing this RFP is to provide information for technical and commercial bids from the eligible bidders for the above purpose.

Requirement

1. SAN Storage (Technical Specifications in Annex)
2. Server Upgrade (Technical Specifications in Annex)
3. NAS Capacity Upgrade (Technical Specifications in Annex)

Scope of Work

- 1- Supply, configuration, and installation of SAN Storage and provide necessary documentation at ECM.
- 2- Supply, configuration, and installation of Server Upgrade as per the technical specifications at ECM.
- 3- Supply, configuration, and installation of NAS Capacity Upgrades as per the technical specifications at ECM.

Expectations from Bidders

- 1- Vendor is expected to examine all instructions, forms, terms, and specifications in this RFP and study the RFP document carefully. Bid shall be deemed to have been submitted after careful study and examination of this RFP with full understanding of its implications.
- 2- The bid should be precise, complete and in the prescribed format as per the requirement of this RFP.
- 3- Failure to furnish all information required by this RFP or submission of a Bid not responsive to this RFP in every aspect will be at the vendor's own risk and may result in rejection of the Bid and for which ECM shall not be held responsible.
- 4- The vendor shall bear all costs and expenses associated with the preparation and submission of its Bid and ECM shall in no case be held responsible or liable for

- these costs, regardless of the conduct or outcome of the bidding process including cancellation or abandonment or annulment of the bidding process.
- 5- No binding legal relationship will exist between any of the respondents and ECM until execution of a contractual agreement.
 - 6- Expected experience – At least 2 projects of similar nature with valid references is a must - include supporting documents (Reference letters/ Testimonials) – preference will be given to local references with similar scale deployments
 - 7- All supporting documents must be enclosed in the proposal as a proof of experience and expertise.
 - 8- Authorization letter of the product for the proposed solution.

Delivery and Installation Schedules

1. The Bidder should deliver the goods within 45 Days (Maximum) from the date of purchase order.
2. The Bidder shall install the license and integrate with existing LAN within 1 week from the date of delivery of the equipment at respective locations.
3. After completion of installation the bidder should obtain sign-off on the Installation-cum-Acceptance certificate from the ECM official. ECM will carry out acceptance of hardware as per acceptance test plan.
 - a. Installation will be treated as incomplete in one/all the following situations:
 - i. Non-delivery of any software or other components, accessories, documentation, drivers, media mentioned in the order.
 - ii. Non-delivery of supporting documentation.
 - iii. Delivery, but no installation of the components and/or software.
 - iv. System operational, but unsatisfactory to ECM.

Technical Specifications (ANNEX)

1.

SPECIFICATIONS SAN STORAGE	
Product Name	SAN Storage
Brand	Internationally Reputed brand and the OEM of the proposed brand must be in the Leaders Quadrant for the past 5 years in Gartner's Magic Quadrant for primary storage.
System architecture	<ul style="list-style-type: none"> ▪ Offered Storage array must be a Hybrid Flash Array ▪ Provides an active-active architecture to enable two core storage systems to work in active-active mode (hosts can access the same active-active volumes), tolerating single points of failure on any of the storage systems without affecting upper-layer service systems. ▪ Offered Storage array should have Actual configuration of SAN-NAS integrated storage with FC SAN, IP SAN, and NAS protocols (including NFS and CIFS). ▪ Offered Storage array should be 2 U disk and controller integrated architecture, providing ≥ 12 disk slots ▪ Proposed array should be a scale-up and scale-out architecture and controller enclosures are interconnected via PCIe or RDMA. ▪ Offered Storage Array should be configured with minimum 2 Controllers and support scale out to a minimum of 8 controllers
Cache	Cache of dual controller in the system should be 32 GB (excluding performance acceleration modules such as FlashCache, PAM, and SSD Cache), supporting power-off protection.
Disk Scalability	Offered Storage Array should support up to minimum 500 disks.
Capacity	The single storage array shall be offered with 20TiB usable capacity after RAID5 without Deduplication and Compression. 40% capacity from SSD and 60% from NL SAS
Raid	The Storage array should support Controller based RAID Levels: RAID 1, RAID 3, RAID 5, RAID, 6, RAID 10, and RAID 50
Front End Ports	The Storage Array should be provided with a minimum of 2 x 1 Gbps and 4 x 10 Gbps iSCSI interface with required transceiver and 5m DAC Cable.
Back End Connectivity	The Storage Array should be provided the back-end disk channel bandwidth with a minimum of 200 Gbit/s or higher
Reliability	Offered Storage should Support hot-swappable disks, power modules, and I/O modules.
Deduplication and Compression	Offered storage should Support block deduplication and compression to improve space utilization.
Quality of Service Control	Offered storage should enable platforms to better respond to requests for multiple services, ensuring proper resource allocation, especially sufficient resources for mission-critical services. Supporting priority based QoS control is recommended.
Snapshot	Offered storage should support Data snapshots, Where the Snapshots at a certain time can be recovered without losing snapshots created at other time points. Offered storage should provide high-density snapshots, which the system can support the second-level snapshot, achieving continuous data protection
Clone	Offered storage should provide the clone function, which creates a physical copy for the snapshot or source LUN.
Remote replication	Offered storage should support the asynchronous data replication function to replicate data from the DR site to backup site.
Mirroring	Should support Data volume mirroring function.
Thin provisioning	Should support Thin provisioning that enables on-demand storage resource allocation
Tier	Should support Automatic storage tiering
SSD Cache	Should support SSD Cache which improves the response speed to hotspot data.

Cache partitioning	Should support Cache partitioning function, ensuring sufficient resources for mission-critical services.
Global namespace	Should support global namespace.

WORM	Should support WORM function where data that has been written cannot be modified or deleted within the specific retention period but can be read multiple times, ensuring the security of mission-critical service files.
Management	Offered storage should support Non-Disruptive Upgrade. During an upgrade, the storage does not require controller restart and services need to be switched over between controllers to ensure service continuity.
Design and Implementation Scope and Warranty	<ul style="list-style-type: none"> - Respective OEM to also ensure that the final deployment is done basis the OEM specified and validated design standards and best practices -Bidder should submit BOM of proposed device including the details' part numbers and manufacturer's warranty part number. -Bidder should submit the required performance document and compliance reference document for the proposed device. -Mentioning Manufacturer's warranty must be included, minimum 3 (Three) years warranty should be provided for this unit from the date of commissioning
Training	Must provide relevant on site or online trainings by professionals for the quoted devices to ECM staffs
Professional Services	Installation & Configuration should be provided by vendor accredited engineers (provide the vendor certificate copies)
Installation, testing and commissioning	Installation, testing and commissioning with necessary accessories.

2.

SPECIFICATIONS SERVER UPGRADE	
Server Details	Dell R750xs
Type	2U rack server
CPU	Minimum Two Intel® Xeon® Silver 4314 or equivalent Minimum 2.4GHz, each CPU Minimum 16 cores, 24M Cache, each CPU
RAM	Minimum 12 x 32 GB RDIMM Dual Rank, DDR4 3200 MHz
Hard Drives	2 x 480GB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug Drives OS 6 x 960GB SSD SATA Mix Use 6Gbps 512.5in Hot plug Drives For Data
Data Protection	Should be retain the defective hard drives free of charge, if any replacement Defective hard drives will not return to the vendor for The Critical Data protection purpose. (Proof Documents should attached along with the bid)
Internal Array Controller	Should consist of a SAS 12G type or higher modular controller with 8GB Cache
Network Interface	Minimum: 6 x 1GB Integrated Ethernet ports. 2 x 10GbE SFP+ Adapter 4 x 10GbE Transceivers 2 x 5m DAC Cable
Expansion & I/O Ports	Minimum: 2x USB 3.0 ports (with Internal port) 2 x USB 2.0 ports Serial Port 5 x PCIe Gen4 slots 1 x PCIe Gen3 slots
Power Supply	Dual, Hot-Plug, Fully Redundant Power Supply (1+1), 1400W
Remote Management	Dedicated network interface for remote management Should be performance monitoring & manage Hardware, BIOS Access & Operating System through a virtual Console (up to 6 Users) providing both inbound and Out of Band remote management of the server
System Management	After the warranty period end Manufacture should support for download & upgrade the firmware without active warranty or post warranty
Bill Of Material	Complete bill of materiel with all relevant part numbers Should be provided together with the bid submission. Should be able to view the proposed product and its parts on the product vendor's support/partner web portal and should be able to raise a support request from the same web portal if an issue occurs. Should be able to obtain a verification of the proposed product and its parts from the product vendor for parts verification if such necessity arises, to verify the authenticity of the proposed product and its part
Product Authorization	Manufacturer Authorization should be provided
Professional	Installation & Configuration should be provided by vendor accredited engineers

Services	(provide the vendor certificate copies)
Warranty	3 Years Parts & 3 Years' Service

3.

SPECIFICATIONS NAS CAPACITY UPGRADE	
Server Details	Synology RS2821RP+
Hard Disk Drive	Synology 12 x 3.5" 16TB SATA
Solid State Drive	Synology 2 x 2.5" 3.84TB SSD
Warranty	Minimum 5 Years

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ނަންބަރު	ނަންބަރު
	SAN Storage
	Server Upgrade
	NAS Capacity Upgrade
	މަސައްކަތްތަކުގެ ބަޅަން 3 (ޖެ.ޕްރޮ.ޖެ. ރިޑްރިއުޝަން)
	މަސައްކަތްތަކުގެ ބަޅަން 3 (ޖެ.ޕްރޮ.ޖެ. ރިޑްރިއުޝަން)
	މަސައްކަތްތަކުގެ ބަޅަން 3 (ޖެ.ޕްރޮ.ޖެ. ރިޑްރިއުޝަން):
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Bank Guarantee

.....*Bank's name and address of issuing branch or office*¹.....

Beneficiary:*Name and address of the employer*.....

Date:

Bid Security No.:

We have been informed that *name of the bidder* (Hereinafter called "the Bidder") has submitted to you its bid dated (Hereinafter called "the Bid") for the execution of
.. *Name of contract* under Invitation for Bids No. ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we *name of Bank* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *amount in words* (*amount in figures*) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Letter of Bid; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.²

..... *Authorized signature(s) and bank's seal (where appropriate)*

Note

In case of a joint venture, the bid security must be in the name of all partners to the joint venture that submits the bid.

¹ All italicized text is for use in preparing this form and shall be deleted from the final document.