

BILL OF QUANTITY (BOQ) & TECHNICAL SPECIFICATION REQUIREMENT

Item	Server and Storage for Active Directory and Exchange server implementation
Justification	Continuation of the Microsoft Licensing project for Design and implementation of Active Directory and Exchange server
Justification for opting a specific model	
<ul style="list-style-type: none"> ➤ Maintain common server standard since existing data center hosts Dell servers which have proven to be reliable ➤ Current technical staff are experienced in handling Dell servers ➤ Technical recommendation provided by contractor fits the requirement ➤ Local service center for the brand backed with international support ➤ Since contractor is required to certify the design from Microsoft, following the recommendation by contractor will avoid future complications in project delivery 	

Specification

Item	Server Chassis	Qty	
1	PowerEdge FX2 Chassis for 4 Server Nodes (Chassis Level Redundancy for both Exchange and AD Cluster)	2	
	PowerEdge FX2S Chassis Configuration with Flexible IO (up to 8 PCIe Slots)		
	PowerEdge FN2210S Redundant I/O Aggregator, Int 8 Ports to Ext 4 Ports (2x 10GbE SFP+, 2		
	CMC Enterprise for FX2		
	PowerEdge FX2 Power Supply, Redundant, 2 x 2000W, (1+1), C19/C20 Power Cord Required		
	Power Cord, C20 to C19, PDU Style, 16A, 250V, 2ft (0.6m)		
	8x DVD-ROM, USB, External		
	Blade Node		
2	PowerEdge FC630 Blade Server (2 Node for Exchange Cluster and 2 Nodes for AD Cluster)	4	
	2 x Intel Xeon ES-2690 v4 2.6GHz,35M Cache,9.60GT/s QPI,Turbo,HT,14C/28T (135W) Max Mem 2400MHz		
	256GB (16 x 16GB) RDIMM, 2400MT/s, Dual Rank, x4 Data Width		
	PERC H730 RAID Controller		
	2 x 200GB SSD fo Host VM Cache		
	Dual Port 10Gbps Mezz Card with NPAR Capability		
	Dual 8GB SD card Module for Vmware installation		
	Dual Port 8Gbps FC PCI-E Card Low Profile		
	iDRAC8, Enterprise with OpenManage Essentials,Server ConfigMgmt		
	All Flash Storage for Exchange and AD		
3	UNITY 350F ALL FLASH SAN Storage	1	
	D31DEMCK25KITAF	UNITY 25 DRIVE DPE AF FLD INSTALL KIT	1
	D31BD24AF25AF	UNITY 350F 2U DPE 25X2.5 DRIVE FLD RCK	1
	D3F-2SFXL2-1920	UNITY AFA 1.92TB SSD 25X2.5	16
	D3SFP16FAF	UNITY 4X16GB SFP FC CONNECTION	1
	D3SL16FAF	UNITY 2X4 PORT 16G FC IO	1



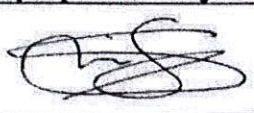
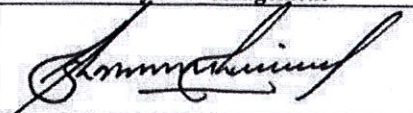
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National Centre for Information Technology

	M-PSM-HWE-005	PROSUPPORT W/MISSION CRITICAL-HARDWARE	1
	VCS-SIA-12-PR	SEI STORAGE CLOUD STD IA CAP UNITY PROMO	6
	458-001-848	UNITY 300F/350F BASE SOFTWARE=IC	
	M-PSM-SWE-005	PROSUPPORT W/MISSION CRITICAL-SOFTWARE	1
	SYSTEM	RECOVERPOINT	
	458-001-374	RP BASIC FOR UNITY 300/300F/350F =IC	1
	M-PSM-SWE-004	PROSUPPORT W/MISSION CRITICAL-SOFTWARE	1
	458-001-440	RECOVERPOINT FOR VM STARTER PACKS	1
	456-107-803	RP4VM ESSENTIAL SW FOR UNITY=IB	1
	M-PSM-SW-D3-001	PROSUPPORT W/MISSION CRITICAL-SOFTWARE	1
	SYSTEM	APPSYNC	
	458-001-734	APPSYNC BASIC FOR UNITY 300F/350F =IC	1
	456-111-473	APPSYNC BASIC FOR UNITY 300F/350F LIC =IC	1
	M-PSMSWE-005	PROSUPPORT W/MISSION CRITICAL-SOFTWARE	1
	SYSTEM	APPSYNC	
	458-001-589	APPSYNC ADV FOR UNITY 300F/350F =IC	1
	456-111-276	APPSYNC ADV FOR UNITY 300F/350F LIC=IC	1
	M-PSM-SWE-005	PROSUPPORT W/MISSION CRITICAL-SOFTWARE	1
Raw Capacity 23.28 TB			
Unit Count 2 U			
IOPS 43700			
Block Size 8K			
Usable Capacity 18.31 TB			
Total Drive Count 16			
Workload 80% Read – 20% Write			
Effective Capacity 24.35 TB			
Vmware License for Exchange and AD Hosts			
4	VCS6-STD-C	VMware vCenter Server 6 Standard for vSphere 6 (Per Instance)	1
	VCS6-STD-P-SSS-C	Production Support/Subscription VMware vCenter Server 6 Standard for vSphere 6 (Per Instance) for 1 year	1
	VS6-EPL-C	VMware vSphere 6 Enterprise Plus for 1 processor	8
	VS6-EPL-P-SSS-C	Production Support/Subscription VMware vSphere 6 Enterprise Plus for 1 processor for 1 year	8

Approvals and Authorizations

Approved By Supervisor / Project Manager	Authorized By the Management
	
Hussain Shifau IT Executive, E-Government Development Microsoft Licensing Project Manager	Mohamed Ashmalee Minister of State for Finance and Treasury Head of NCIT



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