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UNGOOFAARU REGIONAL HOSPITAL

Raa, Ungoofaaruu, Republic of Maldives



## TECHNICAL SPECIFICATION FOR SERVER

**Equipment: SERVER**

### OBJECTIVE

To upgrade the server infrastructure of Ungoofaaruu Regional Hospital (URH).

### SPECIFICATIONS

Category	Specification Details
<b>Chassis</b>	<ul style="list-style-type: none"> <li>◆ <b>Form Factor:</b> 2U Rack Server</li> <li>◆ <b>Drive Bays:</b> 12 x 3.5" Hot-Plug Front Drive Bays (LFF Chassis)</li> </ul>
<b>Preferred Model</b>	Dell PowerEdge R750xs or equivalent
<b>Processors</b>	<ul style="list-style-type: none"> <li>◆ <b>CPU:</b> 2 x Intel® Xeon® Silver 4310 Processor (Matches Standby Host)</li> <li>◆ <b>Cores:</b> 12 cores per processor (24 Cores total)</li> <li>◆ <b>Threads:</b> 24 threads per processor (48 Threads total)</li> <li>◆ <b>Cache:</b> 18MB</li> <li>◆ <b>Base Clock Speed:</b> 2.10 GHz</li> <li>◆ <b>Max Turbo Frequency:</b> 3.3 GHz</li> <li>◆ <b>TDP:</b> 120W</li> </ul>
<b>Memory</b>	<ul style="list-style-type: none"> <li>◆ <b>RAM:</b> 256GB DDR4 ECC RDIMM</li> <li>◆ <b>Type:</b> 3200MT/s Dual Rank (Operates natively at host-supported speed of 2666MT/s)</li> <li>◆ <b>Module Configuration:</b> 4 x 64GB modules (Population layout matched to standby host density)</li> </ul>
<b>Storage</b>	<ul style="list-style-type: none"> <li>◆ <b>Dedicated Boot Storage:</b> <ul style="list-style-type: none"> <li>- 1 x Dell BOSS-S2 PCIe Controller Module</li> <li>- 2 x 960GB M.2 SATA SSDs pre-installed</li> </ul> </li> </ul>





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	<ul style="list-style-type: none"> <li>◆ <b>High-Performance Database Storage:</b> <ul style="list-style-type: none"> <li>- 4 x 3.84TB Enterprise SAS 12Gbps Read-Intensive SSDs</li> <li>- <i>Carrier Requirement:</i> 3.5" Hot-Plug LFF Carrier (Dell Certified).</li> </ul> </li> <li>◆ <b>High-Capacity File Storage:</b> <ul style="list-style-type: none"> <li>- 6 x 8TB Enterprise SAS 12Gbps 3.5" HDDs (7.2K RPM).</li> </ul> </li> <li>◆ <b>Expansion Bays:</b> <ul style="list-style-type: none"> <li>- Remaining 2 front bays left empty and unpopulated at initial deployment for future scaling.</li> </ul> </li> </ul>
<p><b>RAID Configuration</b></p>	<ul style="list-style-type: none"> <li>◆ <b>RAID Controller:</b> Dell PERC H755 Front NV Cache</li> <li>◆ <b>Cache:</b> 8GB Non-Volatile (NV) Cache</li> <li>◆ <b>Supported RAID Levels:</b> 0, 1, 5, 6, 10, 50, 60</li> <li>◆ <b>Interface:</b> 12Gbps SAS</li> <li>◆ <b>Hardware Array Mappings:</b> <ul style="list-style-type: none"> <li>- <i>BOSS Controller:</i> RAID 1 (Mirrored for Host OS)</li> </ul> </li> <li>◆ <b>SSD Storage:</b> <ul style="list-style-type: none"> <li>- 4 × 3.84TB Enterprise SAS SSD</li> <li>- Configured in RAID 10</li> </ul> </li> <li>◆ <b>HDD Storage:</b> <ul style="list-style-type: none"> <li>- 6 × 8TB Enterprise SAS HDD</li> <li>- Configured in RAID 6</li> </ul> </li> </ul>
<p><b>Power Supply</b></p>	<ul style="list-style-type: none"> <li>◆ <b>Type:</b> Dual, Hot-Swap, Redundant Power Supplies</li> <li>◆ <b>Wattage:</b> 750W or 1100W (depending on workload and future scalability needs) (Selected for 12-bay configuration stability and future scaling)</li> <li>◆ <b>Efficiency:</b> 80 PLUS Platinum certified</li> </ul>
<p><b>Management</b></p>	<ul style="list-style-type: none"> <li>◆ <b>iDRAC:</b> Integrated Dell Remote Access Controller 9 (iDRAC9)</li> </ul>





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	<ul style="list-style-type: none"> <li>◆ <b>License:</b> iDRAC9 Enterprise (Enables full remote virtual console and media mounting)</li> </ul>
<p><b>Operating System &amp; Licensing</b></p>	<ul style="list-style-type: none"> <li>◆ <b>OS:</b> Windows Server 2022 Standard Edition (With Downgrade Rights to Windows Server 2019)</li> <li>◆ <b>Licensing Required:</b> <ul style="list-style-type: none"> <li>- 1 x Windows Server Standard 16-Core Base License</li> <li>- 1 x Windows Server Standard 8-Core Additional License Pack.</li> <li>- <i>Total Licensed Cores:</i> 24 (Fully compliant per physical server requirement)</li> </ul> </li> </ul>
<p><b>Networking</b></p>	<ul style="list-style-type: none"> <li>◆ <b>Onboard NICs:</b> Integrated 4 x 1GbE LOM Ports (LAN on Motherboard)</li> <li>◆ <b>SFP Network Card (Replication Interconnect):</b> <ul style="list-style-type: none"> <li>- <i>Add-on Card:</i> Dell Broadcom 57414 Dual-Port 10/25GbE SFP28 PCIe Network Adapter</li> <li>- <i>Ports:</i> 2 x SFP28 ports</li> <li>- <i>Speed:</i> Supports 10GbE and 25GbE data rates</li> <li>- <i>Compatibility:</i> Connects directly via Direct-Attach Copper (DAC) cables.</li> </ul> </li> </ul>
<p><b>Accessories &amp; Warranty</b></p>	<ul style="list-style-type: none"> <li>◆ <b>Mounting:</b> ReadyRails Sliding Rails with Cable Management Arm.</li> <li>◆ <b>Warranty:</b> 3-Year or 5-Year recommended.</li> </ul>





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**Current Server Upgrade Components**

Component	Qty	Technical Specification
<b>Dell BOSS-S2 Controller</b>	1	- Hardware RAID controller with 2 × 960GB M.2 SATA SSDs in RAID 1
<b>Enterprise SAS SSD</b>	4	<ul style="list-style-type: none"> <li>- 3.84TB SAS, 12Gbps, 3.5" Hot-Plug LFF Carrier (Dell Certified)</li> <li>- Supplied with Dell 3.5" LFF Hot-Plug Carrier/Tray</li> <li>- Fully compatible with Dell PowerEdge R750xs and PERC H745 Controller</li> </ul>
<b>Dell Broadcom 57414 NIC</b>	1	- Dual-Port 10/25GbE SFP28 PCIe Adapter
<b>SFP28 DAC Cable</b>	2	2-Meter Direct-Attach Copper Cable

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