**JAF Data Center**

**Technical Requirement**

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| **No** | **ITEM** | **Minimum Requirement** |
| **HCI minimum requirements** |
| 1 | Hyper-Converged Infrastructure | The proposed appliance must combine virtualization, compute, storage, management, and data protection with a single point of support from One Vendor for the hardware & software. |
| 2 | Hardware Specification | 4 nodes Appliance based (Optional 5 Nodes). |
| Each node should be an independent and separate rack mount form factor. The nodes should not share the chassis, enclosure, power supplies, network. |
|  Every Node should be installed with a minimum:* Per Node CPU: 2 x Intel Xeon Gold 6348 (2.6GHz, 28-cores).
* Per Node Memory: 1,024GB (16 \* 64), latest speed.
* Per Nodes Network: 4x 10/25 Gb/s ports using two NIC controllers and 1x1 Gbe for management.
* Per Node a Minimum of 2x480GB NVMe or M.2 Boot drive, Cache Tier: Min 2 x 800GB SAS Mixed Intensive SSD (if cache tier is used in the proposed solution), Capacity Tier: 4 x 3.84TB SATA Read Intensive SSD (if cache tear is not existing all disk should be mixed used), Minimum 10 disk bay per node, Keep Your Hard Drive.
* Per Node Dual, Hot-plug, Redundant Power Supply& Fans.
* Per Node rack with rack mounted kit.
* VMware vSphere Enterprise Plus Licenses for ALL CPU Socket.
* vCenter Standard Licenses for Cluster.
* VMware vRealize Log Insight Licenses for All CPU Socket (or equivalent).
* 3 Years mother company support (24x7) For Software and Hardware.
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| 3 | Hypervisor | VMWare vSphere. |
| 4 | Enabled features | Support quality of services. |
| 5 | Storage Virtualization | The solution must be pre-engineered, and supported by the same vendor. |
| The appliance must be all-flash. |
| The solution must be able to present its storage as iSCSI LUNs to both internal VMs and external bare-metal workloads. |
| The Storage Virtualization Support Software Must Be Able to Protect the Virtual Disks by Mirroring (RAID 1), or Erasure Coding (RAID 5 and RAID 6), or equivalent technology, RF2 and RF3 if the customer does not have erasure coding mechanism for fault tolerance. |
| Compression and Deduplication should be Enabled & Supported. |
| 6 | Management | System must have centralized management platform topology of all clusters in one global view. |
| System must have Intelligent health reporting, the user can pinpoint problem areas using metrics charting of CPU, memory, capacity, and networking resources. |
| The solution must provide One click upgrade which must include (Upgrades and fixes of both hardware & Software stacks). |
| 7 | Scalability | The solution must be able to add new appliances to join an existing cluster, Minimum to 16 nodes in a single cluster. |
| The appliance must automatically discover and non-disruptively, adds each new appliance and rebalances resources and workloads across the cluster. |
| 8 | Protection | Replication (local & remote), sync and async, and advanced disaster recovery capabilities should be supported for future use. |
| 9 | Support | The bidder should provide preventive maintenance every 3 months. |
| warranty must include free-of charge replacement of the SSDs that reach the write data limit. |
| 3 years 24x7 support (mother company) for hardware and software. |
| 10 | Industry Recognition | The provided HCI solution must be in one of the leaders Quadrant in the last three Gartner report for Hyper Converged infrastructure. |
| 11 | Company profile | The Bidder on Hyper Converged Node server and software should be Authorized Partners or equivalent with the vendor in Jordan. |
| Bidder must have an excellent experience in such environment; at least 2 Hyper-converged infrastructure references for the proposed solution in Jordan are required in the last 5 years. |
| 12 | Cables | Winning Bidder should provide all the required cables and power connectors for the solution. |
| 13 | Licenses | Bidder should provide all the required licenses for the solution. |
| **ToR Switches (Qty 2)** |
| 14 | Routing & switching | * Minimum Layer 3 Advanced.
* Fully Managed.
* Support RDMA over Converged Ethernet.
* Support Datacenter Bridging DCB.
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| 15 | Ports | * Minimum 24 ports SFP/SFP+/SFP28 1/10/25G.
* Minimum 4 ports QSFP+/QSFP28 40/100G.
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| 16 | DAC Cables | * 8 x 3m SFP28 25G DAC to connect to server nodes.
* 1 x 1m QSFP+ cross cable.
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| 17 | Uplink Transceivers | * 4 x 10 Gb SFP+ Transceivers.
* 4 x 25 Gb SFP+ Transceivers.
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| 18 | Performance | Switching Capacity: Minimum 2 Tbps Full Duplex. |
| 19 | Power & Cooling | Redundant Power & Fans. |
| 20 | Warranty & Support | Official Warranty & Support from HW Manufacturer for 3 Years, onsite including labor & Spare parts. |
| **Database Server (QTY 2)** |
| 21 | Processor | Minimum 1x [Intel® Xeon® Gold 6334 Processor](https://ark.intel.com/content/www/us/en/ark/products/215273/intel-xeon-gold-6334-processor-18m-cache-3-60-ghz.html) (3.6Ghz to 3.7Ghz, 8 Core, 18MB L3 Cache). |
| 22 | Memory | Min 256 GB, DDR4 3200 Mhz. |
| 23 | Storage | Min 2×960 GB SSD SAS. |
| 24 | Raid | RAID controllers support 0,1,5,6 With 2GB Cache. |
| 25 | Networking | * 4 X 1 GbE.
* 2 x 10 GbE SFP+.
* 2 x 10 GB SFP+ Transceiver for Dell EMC S4112f-on Switch.
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| 26 | Fiber Channel | Dual Port 16Gb Fiber Channel HBA. |
| 27 | Supported OS | Windows Server 2016& 2019. Red Hat Enterprise Server. SUSE Linux Enterprise Server. VMware vSphere. |
| 28 | Power | Dual, Hot-Plug, Power Supply Redundant (1+1), 1400W, Mixed Mode. |
| 29 | Form Factor | Two socket 1U Rack With rack mounted kit. |
| 30 | Cables | All the required cables and all power connectors should be provided. |
| 31 | Warranty & Support(Three Years) | Official Warranty & Support from HW Manufacturer for 24\*7, onsite including labor & Spare parts. |
| **DR Database Server (QTY 1)** |
| 32 | Processor | 1x [Intel® Xeon® Gold 6334 Processor](https://ark.intel.com/content/www/us/en/ark/products/215273/intel-xeon-gold-6334-processor-18m-cache-3-60-ghz.html) (3.6Ghz to 3.7Ghz, 8 Core, 18MB L3 Cache). |
| 33 | Memory | Min 256 GB, DDR4 3200 Mhz. |
| 34 | Storage | 8×960 GB SSD SAS. |
| 35 | Raid | RAID controllers support 0, 1, 5, 6 With 2GB Cache. |
| 36 | Networking | * 4 X 1 GbE.
* 2 x 10 GbE SFP+.
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| 37 | Fiber Channel | Dual Port 16Gb Fiber Channel HBA. |
| 38 | Supported OS | Windows Server 2016& 2019. Red Hat Enterprise Server. SUSE Linux Enterprise Server. VMware vSphere. |
| 39 | Power | Dual, Hot-Plug, Power Supply Redundant (1+1), 1400W, Mixed Mode. |
| 40 | Form Factor | Two socket Rack With rack mounted kit. |
| 41 | Cables | All the required cables and all power connectors should be provided. |
| 42 | Warranty & Support(Three Years) | Official Warranty & Support from HW Manufacturer for 24\*7, onsite including labor & Spare parts. |
| **Training (Abroad)**  |
| 43 | HCI virtualization software | Official training for 4 persons to cover the proposed storage virtualization software for 5 Days (Deploy, Administration, Manage and troubleshoot). |
| 44 | Oracle APEX Developer Specialist | Official Training for 2 persons to provides a training course in Oracle APEX Development for 5 Days. |

**الشروط الخاصة :**

1. **العطاء غير قابل للتجزئة .**
2. **تلتزم الشركة بتركيب وتشغيل وتنزيل أنظمة التشغيل على جميع الأجهزة المذكورة أعلاه وحسب متطلبات القوات المسلحة الأردنية-الجيش العربي .**
3. **تلتزم الشركة المحال عليها بتقديم نظام فعال ومتكامل (A turnkey solution) وأن تقدم الشركة جميع المواد اللازمة لتشغل النظام وإن لم تذكر في دعوة العطاء.**
4. **يجب الإلتزام بكافة محتويات المواصفات والشروط .**
5. **أن لا تكون المواد المورده مصنعه قبل عام 2022 .**
6. **يتم تسليم جميع المواد أعلاه في المواقع التي تحددها مديرية الأمن السيبراني وتكنولوجيا المعلومات .**
7. **تلتزم الشركة بوضع ليبل على كل جهاز يبين (إسم الشركة المحال عليها العطاء، رقم قرار الإحالة، تاريخ التوريد، تاريخ إنتهاء الكفالة).**
8. **يجب أن يحتوي العرض على (Compliance Sheet) مع الإشارة للمواصفة المطلوبة و تحديدها على (Data Sheet).**
9. **الكفالة المجانية لمدة ثلاث سنوات تشمل جميع البنود الواردة وحسب ما هو مذكور في دعوة العطاء.**
10. **تلتزم الشركة المحال عليها ماده/مواد بتسليم مديرية الأمن السيبراني وتكنولوجيا المعلومات نسخه الكترونية من الأرقام التسلسليه (SN ) لجميع المواد المحاله عليها .**
11. **في حال إستبدال القرص الصلب (HDD) خلال فترة الكفالة المجانية، يتم استبداله بدون بديل وتحتفظ القوات المسلحة الاردنية - الجيش العربي بالقرص التالف ودون أي تكلفة إضافية .**
12. **أن لا تزيد مدة التسليم عن 16 اسبوع**
13. **أن تكون الشركه المتقدمه حاصله على شهاده Partnership من الشركة الأم ويتم تقديمها مع أوراق العطاء وأن يكون لديها مركز صيانه معتمد .**
14. **الدورات يجب أن تُعقد من خلال مركز ومدرب معتمديَن شامله كافة التكاليف من إقامه وتذاكر وتنقل ورسوم الدوره والتأشيرات وكل ما يلزم .**