

Project Objectives

SDC is looking for Storage Technology Refreshment by Refresh the current Active-Active Solution in the Main and HA sites, and the Disaster recovery site. to enhance the business continuity and disaster recovery plan.

SDC aims to achieve the following objectives:

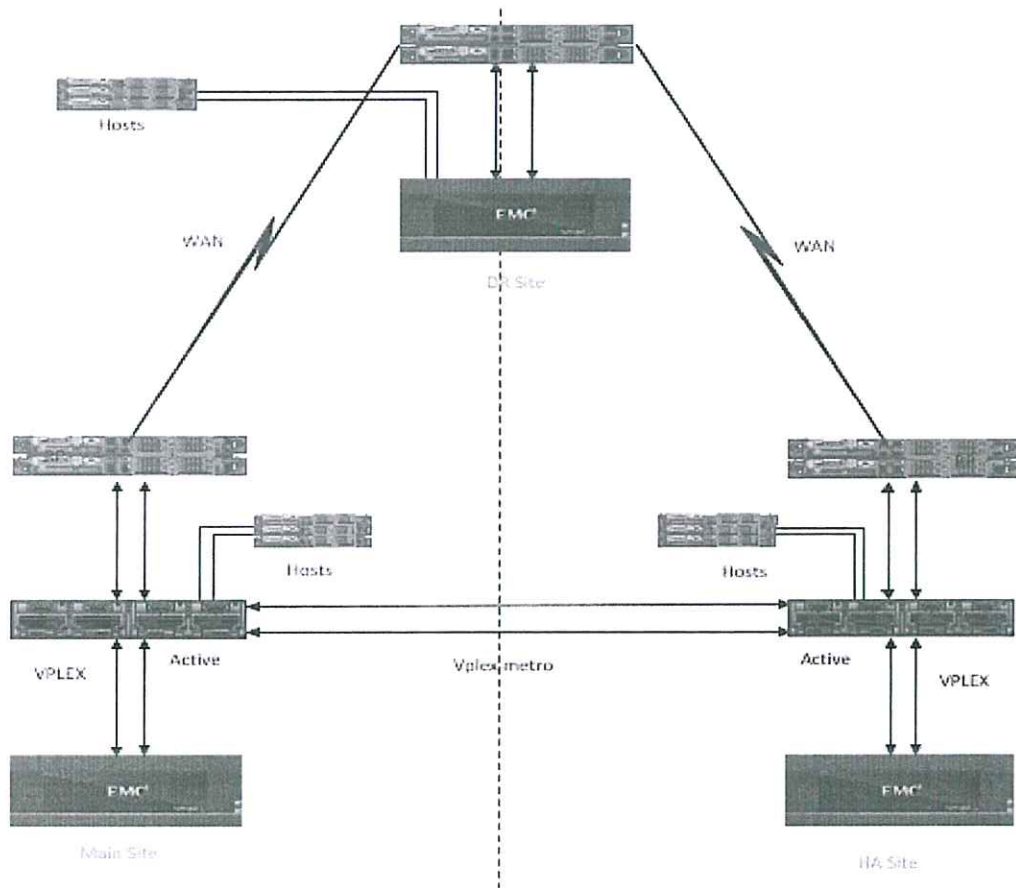
- Replace the current storage in Main, HA, and DR sites with latest Storage solutions in the market.
- Replace the existing high availability and disaster recovery solutions with the latest technologies.
- Improve the Business continuity plan.
- Improve the current Disaster recovery site.
- Build Active-Active Sites with Zero data loss and no single point of failure.

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Current SDC Infrastructure

Current environment Components & Design

Main Site	HA Site	DR Site
EMC Storage VNX 5400	EMC Storage VNX 5400	EMC Storage VNX 5400
Physical VMware servers	Physical VMware servers	Physical VMware servers
2X IBM Power 9 Machines	2X IBM Power 9 Machines	2X IBM Power 8 Machines
2X Cisco MDS C9148S SAN Switches	2X Cisco MDS C9148S SAN Switches	2X Cisco MDS C9148S SAN Switches
2X RecoverPoint Appliance	2X RecoverPoint Appliance	2X RecoverPoint Appliance
EMC Vplex	EMC Vplex	

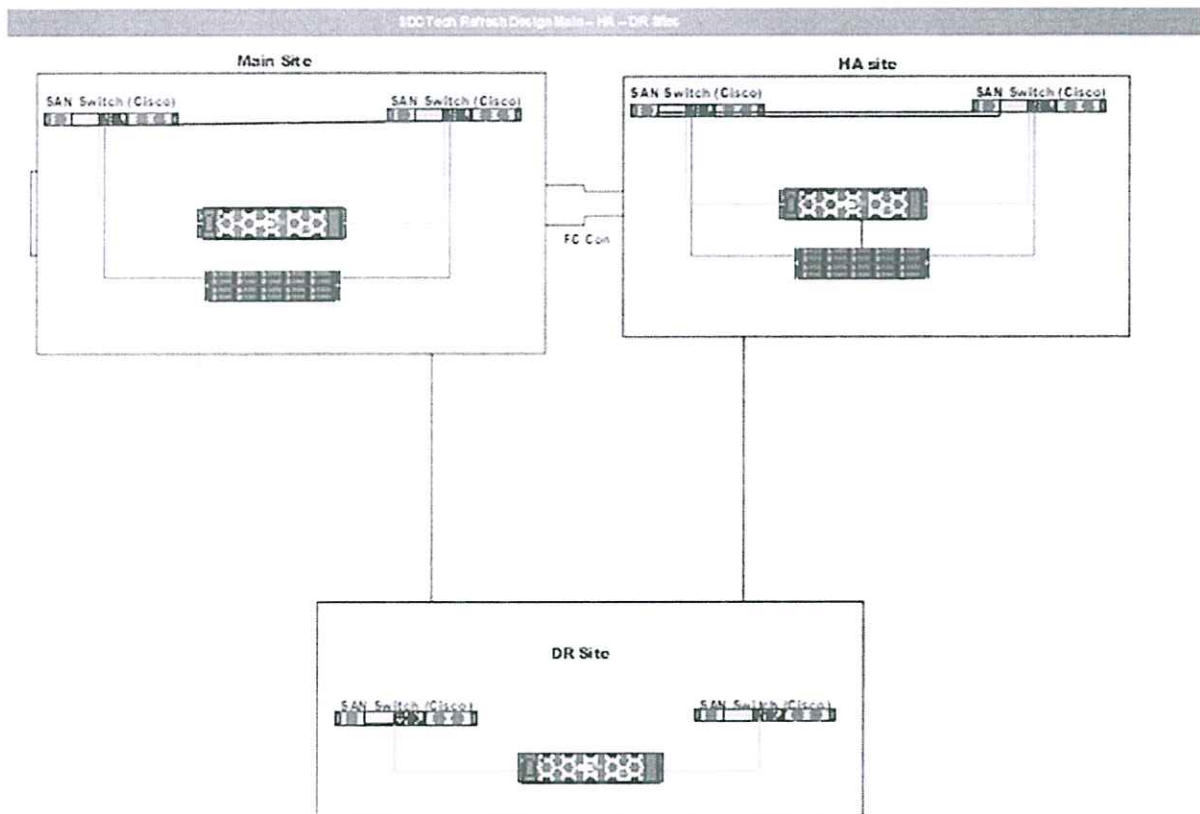


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Suggested SDC Infrastructure

Suggested Solution Component & Design

Main Site	HA Site	DR Site
Enterprise NVMe Storage	Enterprise NVMe Storage	Enterprise NVMe Storage
HA Appliances and DR Replication Solution	HA Appliances and DR Replication Solution	2 x SAN Switches
2 x SAN Switches	2 x SAN Switches	



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Project Scope of Work

- Supply and install the storage in Main, HA, and DR sites.
- Provide and install high availability appliances between Main and HA storages.
- Provide and Install a Replication solution for the existing Virtual Machines between the Main, HA, and DR Sites.
- Install and configure the new solution in all sites based on vendor best practices and recommendations.
- Provide 5 Years warranty with 24/7 support for the total solution (hardware and software), local support with certified local partner and Back-to-Back with the mother company.
- Migrate the current Virtual Machines and Databases to the new environment.
- Provide SDC with an approved design document and installation guide.
- Provide complete documentation for the implementation and migration steps.



Required Technical Specifications

Item 1: End to End NVME SAN Storage in Main & HA Sites QTY 2

	Specification	Comply (Yes/No)	Comments
Industry Recognition	The Storage solution provided must be in a Leader in Gartner Magic Quadrant for primary storage in 2022/2023		
Storage Architecture	Proposed storage must be Enterprise Mid-Range storage or higher, entry- level storage family not acceptable		
	Should support multi-controller architecture active-active controllers		
	The solution must have All Flash NVME Architecture with Scales-Up AND Scales-Out		
	The solution must help improve storage performance to accelerate data access and speed process execution		
	Container-based microservices OS architecture that enables feature portability		
	The solution must support SCM (Storage Class Memory) Media/Drives based on NVMe as Persistence Capacity		
	The solution must support both Block and File workloads in the same array with no external (extra) HW for file workload (external Gateway)		
	Should support Online data mobility and workload balancing in the cluster		
	The Proposed Storage solution must support different Host connectivity protocols like: 16Gb/32Gb FC, 25GbE/10Gbe Optical and 1GbE/10GbE Base-T		
storage controller utilizing Intel® Xeon® processors with dual CPU per controller			
Capacity required	Minimum 40 TiB Usable capacity using high-speed NVMe. Before compression and deduplication.		
Storage Cache	System memory should be a minimum of 384 GB per storage.		
Storage Controller	The Proposed Array should be configured with at least two redundant Active/ Active controllers with redundant interconnectivity.		
	Storage should support adding disks as an upgrade and SDC should be able to upgrade one disk at a time.		

Front End & Backend Connectivity ports	Total of 4x 32Gbps FC front-end ports Ready for the FC SAN/block connection. NVMe-OF must be supported.		
	Total 4 x 10Gb SFP+ SR Ethernet for ISCSI connectivity		
	NVMe Backend ports for expansion capabilities		
	Back End connectivity must be 100GbE		
	Must support NVMe-oF/TCP and NVMe-oF/FC		
Availability	The solution must support to maximize data availability to keep business operations across the enterprise, with a goal of 99.9999% uptime		
	The solution must have all redundant HW with no single point of failure		
	The solution must support non-disruptive system software and Hardware upgrades		
	The solution must provide the maximum High Availability, Data Integrity, and Data Protection (vendor to provide more details on how to achieve this)		
Flexibility	The solution must support various of Virtualized environment and Applications like VMware, MS Hyper-V, Oracle, SAP, MS Exchange		
	The solution must support mixed workload storage consolidation with consistent scale-out performance		
	The solution must be flexible to address a wide range of application and business needs, including both structured data (such as databases) and unstructured data (such as e-mails, documents, and video)		
Efficiency	The solution must provide consolidated storage to make information more sharable, increase utilization rates, and simplify management		
	The solution must optimize the enterprise's storage, power, bandwidth, and human resources to increase revenue and ROI.		
	The solution must be complete, minimizing total cost of ownership and leveraging current investments		
	The solution must support In-Line Compression and De-duplication across volumes for maximum Capacity Efficiency		
	Storage Controllers must include Dedicated Compression hardware		
	The solution must fully support the Thin Provisioning feature, also known as Virtual Provisioning. The Thin Provisioning feature license must be included for all proposed capacity		

Operating System	Heterogeneous OS Microsoft Windows, Solaris, AIX, and Linux		
Functionality	The proposed Storage array must support different host access protocols: FC, iSCSI, FTP, SFTP, CIFS, NFS & VMware Virtual Volumes (VVols)		
	The proposed Storage Solution must support Dynamic RAID Architecture or equivalent with distributed Spare to Shorten Rebuild Times		
	Must provide the solution for Copy Data Management for MS Exchange, MS SQL, DB, Oracle DB, and filesystems		
	Proposed Storage must include Intelligent data placement, automated Data Migration, machine learning (ML) engine to optimizes resource utilization and load balancing		
Modern Applications and IT Operations Automation	The proposed Storage Solution must have deep integration with IT Operations Automation tools/Plugin that enables automated management and day to day operational tasks		
	VMware deep integration via VAAI, VASA, VSI, vRealize Orchestrator (vRO) plugin		
	Container based Modern Applications (Microservices) support via CSI (Container Storage Interface) support		
	Proposed Solution must support REST API and Ansible Module (Workbooks)		
Management	The solution must simplify management and reduce administrator tasks		
	Storage solution shall provide GUI and CLI with Management and Monitoring capabilities		
	The solution must support embedded management SW		
	Management solution should provide monitoring capabilities for Historical (trending) and Real Time Performance Metrics via Intelligent reports		
	The solution must support cloud-based Analytics portal for proactive health scores, predictive analytics, and anomaly detection		
Security	The solution must maximize information security and minimize the risks of downtime, data loss/corruption, unauthorized access, and compliance failure		
	The solution must include Data at Rest Encryption from day one		
License	All storage features must be enabled from day one for full storage capacity, no license cost will be needed in the future.		

SAN Switch Support	Storage should support the existing SAN switches Cisco MDS & Bidder should show a proof (certificate) from Cisco.		
Implementation & Migration	Bidder is responsible for installing and configuring the new solution in all sites based on vendor best practice and recommendation.		
	The bidder is responsible the current data to the new storage system		
	Bidder is responsible to provide documentation for the implementation and migration steps		
Support	24x7 Mother Company global support for all hardware and software components		
	Five years 24x7 support (mother company) for hardware and software.		

Item 2: High Availability Active-Active Appliance requirements (Main & HA Sites) QTY 4 (2 Main – 2 HA)

	Specification	Comply (Yes/No)	Comments
Replication requirements	provides non-disruptive data mobility, and high availability across heterogeneous arrays within a Main data center and HA data Center		
	The solution must support Stretched cluster and active-active data centers		
	The solution should provide seamless data mobility to relocate workloads without application downtime non-disruptively		
	Two nodes in each site (Main & HA)		
	The solution must support Recovery Point Objective (RPO) and Recover Time Objectives (RTO) equal to zero downtime and Decision Time Objective (DTO) time needed to make the decision to failover should be zero		
	It Should Support simple configuration options and built-in management		
	The solution must provide the ability to automatically initiate an instant site failover (automatic site failover)		
	The solution must be "Cluster witness Technology" for automated and intelligent decision-making.		
	The solution should support Immediate failback without requiring primary site volume resync to complete		
	The cluster witness can be deployed as a virtual machine (VM a bare-metal or cloud-based server		
	The solution should allow for the replication of specific		

	LUNs for application-level granularity, significantly reducing TCO and improving flexibility by giving customers the choice of which workloads to replicate		
	The solution should allow for non-disruptive addition/deletion of volume groups in addition to add or removing volumes to a group without breaking the replication		
	The solution must have zero performance impact on the storage array. No additional overhead on the storage array.		
	The solution licenses must cover the array full/maximum capacity where no new cost should be incurred due to capacity expansion in the future		
	The solution must support 32Gb/s Fiber Channel		
	The solution should Support the below Native OS and 3rd Part cluster (Oracle RAC 19c, GFS2 HA add-On, Xen Server HA, Solaris Cluster 4.4, Power HA, Spectrum Scale, MS Failover)		
	The solution must support the following OS and Hypervisors (AIX (7.1, 7.2, 7.3), Red Hat Linux, SUSE SLES, Oracle Linux (7.x-8.x), Oracle Solaris Sparc 11, Windows (2016-2019, 2022), VMware 7.x, Citrix hypervisor, HP-UX 11i v3)		
	The solution should have Mother company HW and SW 5 Years 24x 7 production support		

Item 3: End to End NVME SAN Storage in DR Site QTY 1

	Specification	Comply (Yes/No)	Comments
Industry recognition	The Storage solution provided must be in a Leader in Gartner Magic Quadrant for primary storage in 2022/2023		
Storage Architecture	Proposed storage must be Enterprise Mid-Range storage or higher, entry-level storage family not acceptable		
	Should support multi-controller architecture active-active controllers		
	The solution must have All Flash NVME Architecture with Scales-Up AND Scales-Out		
	The solution must help improve storage performance to accelerate data access and speed process execution		
	Container-based microservices OS architecture that enables feature portability		

	Should support Online data mobility and workload balancing in the cluster		
	The Proposed Storage solution must support different Host connectivity protocols like: 16Gb/32Gb FC, 25GbE/10Gbe Optical and 1GbE/10GbE Base-T		
	The storage controller utilizes Intel® Xeon® Scalable processors with dual CPU per storage		
Capacity required	Minimum 40 TiB Usable capacity using high-speed NVMe. before compression and deduplication		
Storage Cache	System memory should be minimum 192 GB per storage		
Storage Controller	The Proposed Array should be configured with at least two redundant Active/ Active controllers with redundant interconnectivity		
	Storage should support adding disks as upgrade and SDC should be able to upgrade one disk at a time		
Front End & Backend Connectivity ports	Total of 4x 32Gbps FC front-end ports Ready for the FC SAN/block connection. NVMe-OF must be supported.		
	NVMe Backend ports for expansion capabilities		
	Total 4 x 10Gb SFP+ SR Ethernet for ISCSI connectivity		
	Back End connectivity 25GbE or 100GbE ports		
	Must support NVMe-oF/TCP and NVMe-oF/FC		
Availability	The solution must support to maximize data availability to keep business operational across the enterprise, with a goal of 99.9999% uptime		
	The solution must have all redundant HW with no single point of failure		
	The solution must support non-disruptive system software and Hardware upgrades		
	The solution must provide the maximum High Availability, Data Integrity, and Data Protection (vendor to provide more details on how to achieve this)		
Flexibility	The solution must support various of		

	Virtualized environment and Applications like VMware, MS Hyper-V, Oracle, SAP, MS Exchange		
	The solution must support mixed workload storage consolidation with consistent scale-out performance		
	The solution must be flexible to address a wide range of application and business needs, including both structured data (such as databases) and unstructured data (such as e-mails, documents, and video)		
Efficiency	The solution must provide consolidated storage to make information more sharable, increase utilization rates, and simplify management		
	The solution must optimize storage, power, bandwidth, and human resources across the enterprise to increase revenue and ROI		
	The solution must be complete, minimizing total cost of ownership and leveraging current investments		
	The solution must support In-Line Compression and De-duplication across volumes for maximum Capacity Efficiency		
	Storage Controllers must include Dedicated Compression hardware		
	The solution must fully support the Thin Provisioning feature, also known as Virtual Provisioning. The Thin Provisioning feature license must be included for all proposed capacity		
Operating System	Heterogeneous OS Microsoft Windows, Solaris, AIX, and Linux		
Functionality	Proposed Storage array must support different host access protocols: FC, iSCSI, FTP, SFTP, CIFS, NFS & VMware Virtual Volumes (VVols)		
	Proposed Storage Solution must support Dynamic RAID Architecture or equivalent with distributed Spare to Shorten Rebuild Times		
	Must provide solution for Copy Data Management for MS Exchange, MS SQL, DB, Oracle DB, and filesystems		
	Proposed Storage must include Intelligent data placement, automated Data Migration,		

	machine learning (ML) engine to optimizes resource utilization and load balancing		
Modern Applications and IT Operations Automation	Proposed Storage Solution must have deep integration with IT Operations Automation tools/Plugin that enables automated management and day to day operational tasks		
	VMware deep integration via VAAI, VASA, VSI, vRealize Orchestrator (vRO) plugin		
	Container based Modern Applications (Microservices) support via CSI (Container Storage Interface) support		
	Proposed Solution must support REST API and Ansible Module (Workbooks)		
Management	The solution must simplify management and reduce administrator tasks		
	Storage solution shall provide GUI and CLI with Management and Monitoring capabilities		
	The solution must support embedded management SW		
	Management solution should provide monitoring capabilities for Historical (trending) and Real Time Performance Metrics via Intelligent reports		
	The solution must support cloud-based Analytics portal for proactive health scores, predictive analytics, and anomaly detection		
Security	The solution must maximize information security and minimize the risks of downtime, data loss/corruption, unauthorized access, and compliance failure		
	The solution must include Data at Rest Encryption from day one		
License	All storage features must be enabled from day one, no license cost will be needed in the future.		
SAN Switch Support	Storage should support the existing SAN switches Cisco MDS & Bidder should show a proof from Cisco.		
Implementation & Migration	Bidder is responsible to install and configure the new solution in all sites based on vendor best practice and recommendation		
	Bidder is responsible to migrate the current		

	data to the new storage system		
	Bidder is responsible to provide documentation for the implementation and migration steps		
Support	24x7 Mother Company global support for all hardware and software components		
	5 years 24x7 support (mother company) for hardware and software		

Item 4: Virtual Machines Replication Software (DR Site)

	Specification	Comply (Yes/No)	Comments
Solution Requirements	The solution should provide any point-in-time recovery where SDC can overcome all logical corruptions and roll back to any point in time		
	The solution should drastically reduce WAN bandwidth consumption and utilize available bandwidth optimally (WAN optimization). (3rd party accepted)		
	The solution should include continuous data protection for workloads (Local and Remote).		
	The solution should be able to provide application-consistent point-in-time PIT copies for workloads with RPO = 0. The solution should be able to provide application-consistent point-in-time copies for workloads with RPO = 0.		
	The solution should be able to replicate Virtual machines in groups for the full application stacks, to make sure all are being replicated with the right timestamps		
	The solution should be able to orchestrate the VM restoration at the HA site, to have an automated Disaster recovery process, where the solution can control the sequence of VMs being activated within the same replication group (3rd party accepted)		
	License should be perpetual		
	The solution should have the ability to Retain IP addresses during failover		
	The solution should cover an unlimited number of virtual machines replication per solution or 300 VMs		
	The solution should have Mother company SW Five Years 24x 7 production support		

Item 5 (Optional): Cisco SAN Switches QTY 6

	Specification	Comply (Yes/No)	Comments
Brand	Cisco SAN Switches as upgrade for the existing Cisco SAN switches		
Architecture	Support at least 32 FC ports 32Gb/s		
Installed SFPs	24 FC ports active 32 Gb/s with SFPs (Short Wave) (licensed and SFPs installed)		
Type	Rack mountable in standard Rack		
others	Web or GUI-based Management software supporting local and remote administration. MDS SAN Switch should support and certified with the proposed storage. The Proposed SAN switches should support connectivity, interoperability, and integration with existing MDS SAN switch (where they can be one fabric)		
Support	Mother company 5 Years production support		

Item 6: Certified training

Certified training for the proposed enterprise storage for two engineers at certified training center.



Project General Terms and Conditions

Bidder qualifications

- Bidder must have at least two certified Professional engineers in provided storage with three years minimum experience in the same field and provide a summary of CVs for the technical team in Jordan.
- The Bidder must be a minimum gold Partner or equivalent with the vendor in Jordan.
- Bidder Company must be officially registered and present office in Jordan; evidence must be provided.
- Bidder must have an excellent experience in such an environment, at least five similar enterprise storage infrastructure references for the proposed solution in Jordan.
- The Bidder must be five years old in Jordan or submit a financial guarantee of 25% of the project's total value for at least five years.
- Bidder is responsible for installing and configuring the new solution in all sites based on vendor best practices and recommendations.
- Bidder is responsible for migrating the current data to the new storage system.
- Bidder is responsible for providing documentation for the implementation and migration steps.

Solution Warranty

- 24x7 Mother Company global support for all hardware and software components
- Five years of support (mother company) for hardware and software
- Five years support Local support.

Solution Training

- Bidder should offer certified training for the proposed enterprise storage for two engineers at certified training center.



Notes to be taken into consideration:

- The RFP document is confidential and is not to be reproduced, transmitted, or made available by the Recipient to any other party.
- The RFP document is provided to the Recipient based on the undertaking of confidentiality given by the Recipient to SDC.
- SDC may update or revise the RFP document or any part of it. The Recipient acknowledges that any such revised or amended document is received subject to the same terms and conditions as this original and subject to the same confidentiality undertaking. The Recipient will not disclose or discuss the contents of the RFP document with any officer, employee, consultant, director, agent, or other person associated or affiliated in any way with SDC or any of its customers, suppliers, or agents without the prior written consent of SDC.
- The Bidder must undertake that they shall trust any Information received by them under the Contract/Service Level Agreement, and the strictest of confidence shall be maintained in respect of such Information.
- Mounting and labelling, SFPs, Fiber and power patch cords cables is the Bidder's responsibility.
- The Information provided by the bidders in response to this RFP Document will become the property of SDC and will not be returned. SDC reserves the right to amend, rescind or reissue this RFP Document, and all amendments will be advised to the bidders, and such amendments will be binding on them.
- DUE DILIGENCE: The Bidder 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 a full understanding of its implications. The Bid should be precise, complete, and in the prescribed format as per the requirement of this RFP. Failure to furnish all Information required by this RFP or submission of a Bid not responsive to this RFP in each respect will be at the Bidder's own risk and may result in the rejection of the Bid and for which SDC shall not be held responsible.
- All Solution components should be covered under the contract period of five years.
- The bidder must submit a vendor declaration mentioning the proposed product make, model, part no, and quantity.
- The successful Bidder should ensure that the equipment proposed in this RFP should not be declared as End of Life (EOL) or End of Support (EOS) by the Vendor within the next **seven** years from the installation date. In the event of the supplied equipment being declared End of support/End of Life during the contract period, the Bidder must replace the equipment with compatible equipment having equivalent or higher configurations without any additional cost to SDC.
- The Bidder should provide 24x7 technical support onsite if required or through phone and Web for Support, Product Upgrades, Updates, Patches, and access to technical Library and Product Documentation during the entire contract period with no additional cost to SDC. It will be the responsibility of the successful Bidder to ensure this.



Financial Offer

- The offer should be itemized according.
- According to the Final Score, the proposal would be ranked by combining Technical and Financial scores: Weightage for the bids is as follows: Technical Bid 70% + Financial Bid 30% = Total Weightage 100%.
- The RFP would be first evaluated based on the technical offer (70%) and then on the financial offer (30%).
- All prices should be specified in Jordanian dinar after any discount. All prices should contain additional taxes (including withholding tax if existing). The below table consists of the compliance details for the requested requirements.
- Vendors/Bidders should note that SDC has the right to apply penalties for delays or failure to complete work in the agreed time frame.

NOTE: queries are to be received only online at itsdc@sdc.com.jo

Appendix A: Financial evaluation (30%)

FINANCIAL EVALUATION (Filled only in the financial offer, NOT in the Technical proposal)			
The project's five-year total cost includes all Hardware, licenses, warranty, local support, maintenance, and Back-2-Back 24x7, etc.	20		
Any Extra items needed during project implementation and not included in BOM (Bill of Materials) (if needed).	5		
Recurrent local (Bidder) support as cost value after five years of warranty.	5		

Appendix B: Vendor, Bidder & design evaluation (70%)

Requirements	Compliance (Yes/No/Partially)	Mark	Notes/Ref/Evidence
High Level Design and Solution Description	15		
Replication Methodology	10		
Specify a detailed list of references for used devices and configurations for similar projects same size or above, preferably in the financial sector in Jordan and Outside Jordan and be accepted by SDC.	10		
Specify the number of specialized and certified engineers with relevant technical certification.	15		
Specify the bidder partnership level. Bidder must submit an up-to-date valid official letter/certificate from the mother company as part of the Bidder's qualification documents to prove the partnership level for the Bidder.	5		
Ability to execute the project with authorization letter from the Vendor to guarantee the Bidder's capability of deploying this project.	15		

Technical Offer

- ✓ The Vendor shall supply the documentation of all software/hardware specifications, manuals, operation, administration, maintenance, testing procedures, engineering design and specifications, storage, network implementation, sign-off acceptance test results, and as-built documents.
- ✓ A clear list of references of similar projects installed by the Bidder in Jordan and outside Jordan of the same brand with a detailed list of installed equipment.
- ✓ Delivery and installation timings must be stated in a separate offer section.
- ✓ SDC might request oral presentations from the Bidders to clarify ONLY unclear points or/and any portion of the Bidder's responses in the proposal. If oral presentations are required, they will be scheduled after proposal submission.
- ✓ The solution must be verified by an official letter from mother company.

- ✓ Site survey can be scheduled before the proposal submission with SDC technical team in corporation.
- ✓ Cross-checks by Vendor should be performed in corporation with the Bidder.
- ✓ **Seven** years of a Lifetime commitment is a must.
- ✓ Bidder cannot subcontract any part of the project without SDC's prior written agreement.
- ✓ SDC has the right to amend the project plan and the content of phases, if necessary, before or during the project.

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