Kidwell»

City of Crete

Replacement SCADA Hosts, SAN & Purpose Built SCADA Veeam Server

KIDQ19995

Project Scope
Replacement SCADA Hosts, SAN & Purpose Built SCADA Veeam Server

Background & Project Objective

The City of Crete (COC) has submitted a Request for Proposal to refresh their SCADA Infrastructure which is managed in conjunction with their SCADA partner, Olsson. COC has requested a Good/Better/Best submittal. Kidwell recommends the "Better" option submitted in the included Scope of Work, including two (2) Dell PowerEdge R450 servers, each with a Silver 4514 Processor and 128GB of RAM, and a Dell PowerVault ME5024 hybrid storage array. This option best matches the requirements set forth by the RFP and provides the best value in performance and capacity while not oversizing or undersizing the infrastructure. Kidwell recommends 7 years of Dell ProSupport for all Dell hardware in order to provide the best value in warranty support for the lifetime of all equipment proposed. Kidwell recommends upgrading VMware ESXI to the current stable build of vSphere version 8. Kidwell recommends upgrade/replacing the existing VM's with Windows Server 2022 Standard or exercise downgrade rights should any of the required application not support Server 2022 to a compatible, supported version of Windows Server. Kidwell recommends Veeam Data Platform to backup the virtual machines utilizing Veeam best practices for data resiliency. Kidwell recommends a Dell PowerEdge server is utilized as a purpose-build Veeam Backup and repository server and utilizing a Synology NAS as a secondary backup copy repository utilizing an integrated Linux VM on the NAS to provide Veeam's Linux Hardened Repository configuration for data immutability.

Project Engineering

Phase I – Hardware Staging and Deployment

- Kidwell will procure the selected Dell PowerEdge servers and storage array and associated licensing.
- Kidwell will apply all available software/firmware updates and begin staging the equipment for deployment.
- Kidwell will install the current version of VMware vSphere v8 to the new PowerEdge ESXI hosts and interconnect them with the PowerVault storage array.
- Kidwell will work with COC and Olsson to determine the appropriate naming and IP addresses for the infrastructure hardware and software.
- Kidwell will configure a Dell PowerEdge server as the primary Veeam Backup & Replication (VBR) Server and repository and interconnect it with the PowerVault array for direct SAN connections.
- Kidwell will deploy a new vCenter Server Appliance on the new hardware for management of the new ESXI hosts.
- Kidwell will configure the Synology NAS hardware and drives and connect and deploy a linux Virtual machine on the NAS to be configured as a Veeam Hardened Repository (VHR).

- Kidwell will configure VBR to utilize the Linux VM on the NAS as a VHR to store backup copy data.
- Kidwell will configure a minimum of two datastores on the storage array and present them to the ESXI hosts. The datastores will include an ISO/Template datastore and a virtual machine datastore.
- Kidwell will download the Windows Server ISO's and create a template with all available Windows Server updates applied to be utilized for VM deployment in Phase II.
- Kidwell will coordinate a time to deploy the new infrastructure hardware to the COC SCADA network.
- Kidwell will deploy the new hardware to the SCADA network and interconnect it with the existing switches, etc. All cabling will be labeled appropriately for easy of troubleshooting and management.
- Kidwell will configure a share from the backup NAS for Olsson to backup the SCADA configuration if required.

Phase II – VM Migration and Upgrades
- Kidwell will coordinate migrating the existing VM's from the old infrastructure hardware to the new.
- Kidwell will migrate the VM's to the new hardware and COC and Olsson will validate server functionality.
- Kidwell will work with COC and Olsson to determine the IP addresses and server names as well as virtual machine specification required for the new virtual machines.
- Kidwell will build five new virtual machines to the determined specifications utilizing the new Windows Server 2022 Standard licensing procured. If Windows Server 2022 is not compatible with any of the required applications, downgrade rights will be exercised and virtual machines using the compatible, supported versions of Windows Server will be utilized.
- Kidwell will configure two virtual machines as Domain Controllers and will coordinate and execute the migration of Active Directory and any other required services from the old VM's to the new.
- Kidwell will turn over the remaining virtual machines for application installation and configuration by Olsson.
- Kidwell will work with COC and Olsson to configure email alerting from the vCenter, infrastructure hardware and backup server including but not limited to hardware failure, VMware vSphere notifications and backup job status.
- Kidwell will work with COC and Olsson to connect the SCADA backup server to the Kidwell Veeam Service Provider Console for job reporting and management if required.

Phase III – Training and Documentation
- Kidwell will document the licensing, configuration and credentials of the SCADA network hardware and software deployed by Kidwell and will provide to the COC technical point of contact as required.
- Kidwell will create an as-built diagram of the hardware deployed to be included in the documentation and provided to a COC technical point of contact as required.
- Kidwell will review the configuration of the new infrastructure with the COC technical point of contact and review any required maintenance schedule and procedures, etc.

- Kidwell will be available as part of COC's Managed Services Agreement or as a T&M hourly engagement for any consultation or troubleshooting upon the conclusion of the infrastructure upgrade and deployment as specified in this project scope.

Items not included in proposal:

- Applications and Software Licensing not noted in the above scope phases.
- Hardware not noted in the above scope phases.
- Cabling or alteration of the existing premise cabling/wiring
- Any electrical runs and/or UPS devices.

Assumptions:

- Kidwell assumes that the City of Crete has a current VMware Essentials subscription for the SCADA network and is under a current support agreement with the ability to upgrade the existing version 5.5 licensing up to version 8. In the event that a current support agreement is not available or is being shared with the city VMware licensing, Kidwell will submit and process a change order for a separate VMware vSphere Essentials license.
- Kidwell assumes that five (5) Windows Server 2022 Client Access Licenses (CAL's) will be sufficient for all users accessing Microsoft services on the SCADA network. If additional license are required, Kidwell will submit and process a change order for additional CAL's.
- Kidwell assumes that the existing network switching, environmental controls and power infrastructure will support running both the old and new hardware simultaneously.
- Kidwell assumes that additional redundant parity (such as RAID 6 volumes) or hot-spare disks in the servers and storage array will be sufficient to satisfy the "two spare disk" requirement as specified in the RFP.
- Kidwell assumes that COC has and will continue to purchase support for any third-party applications. If any applications do not have support contracted or support contracts are unavailable, Kidwell will provide best effort support to troubleshoot the applications.
- Kidwell assumes that any third-party application vendors will provide support for migration and post-migration maintenance of their applications, both cloud-based and on-premise.
- Kidwell assumes that the COC has and will continue to maintain all software and applications under support agreements including but not limited VMware, Microsoft, and any other applicable third-party applications.

Acceptance Criteria:

The project will be accepted as complete when the above items in project engineering section are met.

Important Contact Information:

Solutions Expert: Jason Muehlhausen – jmuehlhausen@kidwellinc.com – 402.817.3472
Service Desk: servicedesk@kidwellinc.com – 402.473.7787
Project Manager: Joey Beard – jbeard@kidwellinc.com – 402.473.7774
Executive Director of Technology: Shawn Phillips – sphillips@kidwellinc.com – 402.898.4257

Additional Notes:

Kidwell does not warrant the functionality of hardware moved.

Troubleshooting ISP/Telco Lines not included.

Work to be done during regular business hours (Monday-Friday 8am – 5pm) unless other arrangements have been made with Kidwell or indicated as part of the scope document.

All hardware/software will be installed in accordance with the manufacturer's specifications.

Diagnosing existing hardware/software problems not included.

Kidwell does not warrant the functionality of owner's existing hardware or software. Kidwell will work with owner and/or software/hardware provider on T&M basis per owner's request.

Changes to proposed configurations are not included.

All Microsoft software will be installed using Microsoft Best Practices. Additional modifications and configurations are outside of the scope of this project.

Kidwell will provide service to the manufacturer's warranty for 30 days. After 30 days, Kidwell will work with the manufacturer on a T&M basis per owner's request.

Kidwell will warrant the installation per the scope for 30 days from acceptance.

Modifications made by the customer to the original installation will void Kidwell's warranty.

Any custom configurations are outside the scope of this project.

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Crete, NE 68333
United States

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(402) 475-9151
KIDQ19995
1/2/2024

Replacement SCADA Hosts, SAN & Purpose Built

Description	Qty
Option #1 - Good	
Dell PowerEdge R350	1
- (1) Intel Xeon E-2388G 3.2GHz, 16M Cache, 8C/16T Processor	
- (2) 16GB UDIMM for 32GB of RAM total	
- (4) 4TB 7.2K RPM SAS Hard Drives, 3 Drives in RAID 5 for 8TB of Usable Space with a hotspare	
- (1) BOSS-S2 controller card + with 2 M.2 480GB (RAID 1) for OS	
- (1) Windows Server 2022 Essentials	
- (7) Years ProSupport Next Business Day Onsite Service	
Dell 12Gb HD-Mini to HD-Mini SAS Cable 2M to direct attach to storage array	2
Dell PowerEdge R450	2
- (1) Intel Xeon Silver 4310 2.1G, 12C/24T Processor	
- (2) 32GB RDIMM for 64GB of RAM	
- (3) 600GB Hard Drive SAS 10k Hard Drive in RAID 1 Mirror with Spare	
- (1) Broadcom 5720 Dual Port 1Gb LOM Network Card	
- (1) Broadcom 57416 Dual Port 10GbE BASE-T Network Card	
- (7) Years ProSupport Next Business Day Onsite Service	
Dell PowerVault ME5024 Storage Array	1
- (1) 12Gb SAS Connectivity Dual Controllers	
- (4) 12Gb HD-Mini to HD-Mini SAS Cable	
- (24) 1.2TB HDD 10K SAS Hard Drives in RAID 10 (6+6) to provide dual disk redundancy	
- (7) Years ProSupport Next Business Day Onsite Service	
- Estimated 13.09 TiB of Usable Space	
- Estimated 2714 IOPS Rated at 80/20 Read/Write Ratio	
Dell HBA355e Adapter SAS Adapter for storage array connectivity	2
Synology NAS	1
Synology 800GB PCIe M.2 SSD	2
Synology Plus Series 6TB Hard Drives	6
VMware vSphere Standard	1

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Kearney, NE 68847
Tel 308.233.5111

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Description	Qty
- 32 Cores	
- 3 Years	
Veeam Backup Essentials Universal Subscription License	1
- Includes Enterprise Plus Edition features	
- 3 Years Subscription	
Microsoft Windows Server 2022 Standard 16-Core License Pack	6
Microsoft Windows Server 2022 User CAL	5
Freight	1
Kidwell IT Implementation Services	

Option #1 - Good Total: $75,575.00

Option #2 - Kidwell Recommended - Better

Dell PowerVault ME5024 Storage Array   1
- (1) 12Gb SAS Connectivity Dual Controllers
- (4) 12Gb HD-Mini to HD-Mini SAS Cable
- (4) 1.92TB SSD in RAID 5 (2+1) with Hot Spare
- (10) 1.2TB HDD 10K SAS Hard Drives in RAID 5 (8+1) with Hot Spare
- (7) Years ProSupport Mission Critical 4-Hour 7x24 Technical Support and Assistance
- Estimated 12.22 TiB of Usable Space
- Estimated 7325 IOPS Rated at 80/20 Read/Write Ratio

Dell PowerEdge R350   1
- (1) Intel Xeon E-2388G 3.2GHz, 16M Cache, 8C/16T Processor
- (2) 16GB UDIMM for 32GB of RAM total
- (4) 4TB 7.2K RPM SAS Hard Drives, 3 Drives in RAID 5 for 8TB of
  Usable Space with a hotspare
- (1) BOSS-S2 controller card + with 2 M.2 480GB (RAID 1) for OS
- (1) Windows Server 2022 Essentials
- (7) Years ProSupport Next Business Day Onsite Service

Dell PowerEdge R450   2
- (1) Intel Xeon Silver 4314 2.4G, 16C/32T Processor
- (4) 32GB RDIMM for 128GB of RAM
- (3) 480GB Read Intensive SATA SSD in RAID 1 Mirror with Spare
- (1) Broadcom 5720 Dual Port 1Gb LOM Network Card
- (1) Broadcom 57416 Dual Port 10GbE BASE-T Network Card
- (7) Years ProSupport Plus Mission Critical 4-Hour 7x24 Onsite Service with Emergency Dispatch

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Description	Qty
Dell 12Gb HD-Mini to HD-Mini SAS Cable 2M to direct attach to storage array	2
Dell HBA355e Adapter SAS Adapter for storage array connectivity	2
Synology NAS	1
Synology 800GB PCIe M.2 SSD	2
Synology Plus Series 6TB Hard Drives	6
VMware vSphere Standard - 32 Cores - 3 Years	1
Veeam Backup Essentials Universal Subscription License - Includes Enterprise Plus Edition features - 3 Years Subscription	1
Microsoft Windows Server 2022 Standard 16-Core License Pack	6
Microsoft Windows Server 2022 User CAL	5
Freight	1
Kidwell IT Implementation Services	

Option #2 - Kidwell Recommended - Better Total: `$84,965.00`

Option #3 - Best

	Qty
Dell PowerVault ME5024 Storage Array - (1) 12Gb SAS Connectivity Dual Controllers - (4) 12Gb HD-Mini to HD-Mini SAS Cable - (10) 1.92TB SSD in RAID 5 (8+1) with Hot Spare - (7) Years ProSupport Plus Mission Critical 7x24 Technical Support and Assistance - Estimated 13.93 TiB of Usable Space - Estimated 67,500 IOPS Rated at 80/20 Read/Write Ratio	1
Dell PowerEdge R450 - (1) Intel Xeon Gold 5317 3G, 12C/24T Processor - (4) 32GB RDIMM for 128GB of RAM - (3) 480GB Mix Use SATA SSD in RAID 1 Mirror with Spare - (1) Broadcom 5720 Dual Port 1Gb LOM Network Card - (1) Broadcom 57416 Dual Port 10GbE BASE-T Network Card - (7) Years ProSupport Plus Mission Critical 4-Hour 7x24 Onsite Service with Emergency Dispatch	2

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If Kidwell's proposal is accepted, the following terms and conditions are deemed to be incorporated into the Agreement between Kidwell and the Customer identified on the previous pages:

Payments. All payments must be made in U.S. currency. Unless otherwise set forth, all payments are due upon receipt of the statement, and are delinquent 30 days after the date of the statement. Customer is responsible to pay all sales, use, excise and similar taxes, whether or not separately set forth on the statement. If any amount is not paid in full within 30 days of the date of the statement, interest will accrue on the unpaid balance at the rate of one percent (1%) per month until paid. Credit cards will not be accepted as payment of any amount.

Facilities. For services provided on the Customer's premises, Customer shall provide a safe work site for performance of the services, and shall provide such assistance as may be reasonably necessary for the efficient performance by Kidwell employees.

Disclaimer. The services will be performed in accordance with the Customer's approved work plan in a workmanlike manner determined by Kidwell to be most appropriate under the circumstances. Kidwell disclaims all warranties whether express or implied, including the warranties of merchantability and fitness for a particular purpose or use. Kidwell does not warrant that the services will meet Customer requirements or expectations; that the operation of the system will be uninterrupted, secure, virus-free, security breach intrusion-free, or error-free; or that Kidwell will detect or report intrusions or attempted intrusions; or that all system related errors will be corrected. Kidwell will transfer third party equipment warranties to the extent available and assignable. In the absence of a separate written agreement, Kidwell is not obligated to provide services, or to supply any software, parts or services, to rectify a problem, fault, or incident arising from, or to repair or replace a system which fails or develops an error due to: (i) external causes including force majeure events, (ii) hacking the network or other data security intrusion; or (iii) the effects of a virus.

Employees. Customer shall not hire, engage or employ any employee of Kidwell during the period ending twelve (12) months after the earlier of (i) the last date that Kidwell renders any services to Customer; or (ii) termination of the employee's employment with Kidwell. Kidwell shall be entitled to specific performance of this provision.

Confidentiality. Each party covenants and agrees to hold and keep the other party's confidential information in confidence and it will not disclose such confidential information to anyone without the other's prior written consent. The party receiving such confidential information will not use, or permit others to use, such confidential information for any purpose other than in accordance with this Agreement, and shall not make any unauthorized copy of any confidential information and will use its best efforts to avoid disclosure, dissemination or unauthorized use of the other's confidential information.

Remedies. The parties shall have the following remedies:

    Correction. Customer's exclusive remedy for any error in services rendered by Kidwell shall be limited to correction of the error in workmanship through its time and efforts at no additional charge to Customer. If the error results from incorrect or incomplete data or information provided to Kidwell, Customer shall be liable to Kidwell for the cost to correct the error at its customary time and material charges.

    Performance. If Customer defaults in payment or otherwise, Kidwell at its sole and exclusive option, shall have the right to suspend performance of the services until such default is cured, and such suspension shall be without liability or obligation to Customer or any third party, and without prejudice to the rights and remedies of Kidwell pursuant to this Agreement.

    Limitation of Liability. Neither party shall be liable for incidental, consequential, indirect, special, punitive or exemplary damages of the other arising out of or in connection with this Agreement, including, but not limited to, loss of profits, revenue, data or use, incurred or suffered by the other party or any third party even if advised of the possibility of such damages. In no event shall Kidwell's liability for damages, losses or expenses as a result of negligence or otherwise exceed the amount of fees paid by Customer to Kidwell in the six (6) month period immediately preceding the act or omission causing such damage or loss. The amount of Kidwell's fee for services is a consideration in the limitation of its liability hereunder.

Independent Contractor. Kidwell and Customer have the relationship of independent contractors and neither is the agent, partner, joint venturer, or employee of or with the other and no fiduciary relationship between the parties exists. Neither party shall have the right to bind or obligate the other in any manner, nor shall it represent that it has any such right to do so.

Security: Customer acknowledges that Kidwell has no responsibility for the security of Customer's systems. Customer shall maintain security measures, procedures and practices to protect its computer systems, networks and data from unauthorized control, tampering, or any other unauthorized access. In the event of a security intrusion, Customer may select an independent security assessor to conduct a review of its security procedures, policies, and systems.

Governing Law. This Agreement shall be governed by and construed in accordance with substantive laws of the State of Nebraska.

Force Majeure. The performance by either party of any of the undertakings set forth in this Agreement shall not be deemed untimely to the extent any late performance or nonperformance is due to acts of God, acts of war, civil disturbance, natural disaster, fire, accident, neglect, misuse, vandalism, water, lightning, power failure, power surge or power spike, acts of government or court orders, or any other act or event beyond the control of the affected party.

Entire Agreement. This Agreement sets forth the entire agreement between the parties concerning the subject hereof, and supersedes all prior and contemporaneous written or oral negotiations and agreements between them concerning the subject matter hereof. No statement by any Kidwell employee or agent, whether oral or in writing, will create any warranty or obligation not set forth herein or otherwise modify this Agreement in any way whatsoever.

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Description	Qty
Dell PowerEdge R350 - (1) Intel Xeon E-2388G 3.2GHz, 16M Cache, 8C/16T Processor - (2) 16GB UDIMM for 32GB of RAM total - (4) 4TB 7.2K RPM SAS Hard Drives, 3 Drives in RAID 5 for 8TB of Usable Space with a hotspare - (1) BOSS-S2 controller card + with 2 M.2 480GB (RAID 1) for OS - (1) Windows Server 2022 Essentials - (7) Years ProSupport Next Business Day Onsite Service	1
Dell 12Gb HD-Mini to HD-Mini SAS Cable 2M to direct attach to storage array	2
Dell HBA355e Adapter SAS Adapter for storage array connectivity	2
6' Blue CAT6 Network Patch Cables	13
Synology NAS	1
Synology 800GB PCIe M.2 SSD	2
Synology Plus Series 6TB Hard Drives	6
VMware vSphere Standard - 32 Cores - 3 Years	1
Veeam Backup Essentials Universal Subscription License - Includes Enterprise Plus Edition features - 3 Years Subscription	1
Microsoft Windows Server 2022 Standard 16-Core License Pack	6
Microsoft Windows Server 2022 User CAL	5
Freight	1
Kidwell IT Implementation Services	

Option #3 - Best Total: **$95,460.00**

Please indicate option selection by circling the option total. Any applicable sales tax and shipping will be added upon invoice. Deposit of 50% of proposal price will be invoiced upon signing.

If Base options are listed, Base must be selected to accept any option listed

By signing, CUSTOMER ACKNOWLEDGES that they have reviewed and understand all attached terms and conditions of this agreement.

Authorized Kidwell Signature: _Shawn Phillips_   **Date:** _1/8/2024_

Customer Signature: _____   **Date:** _____

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