SUBJECT: Approval to purchase a Dell Virtual Server Storage Array from Access Interactive in the amount of $133,586 using a competitively bid contract through the Oakland County G2G Marketplace.

SUBMITTING DEPARTMENT: Integrated Solutions – Technology Division

EXPENDITURE REQUIRED	**$133,586**
AMOUNT BUDGETED	**$176,320**
APPROPRIATION REQUIRED	**$0**
LINE ITEM NUMBER	**101-205.00-986.031**

BACKGROUND INFORMATION:

The City of Novi's Integrated Solutions – Technology Division leverages the benefits of a virtual server environment to provide technology solutions to individual department operations that positively impact the citizens of the City. A virtual server architecture allows the Technology Division the flexibility to expand and contract our server and storage environment as the City's operational requirements require. Access Interactives Dell Virtual Server Storage Array provides a scalable architecture that delivers enhanced storage performance and the reliability the City demands. The Dell Virtual Server Storage Array will replace the current Dell EqualLogic System, which is now at the end of its life, and provide the reliability and functionality required for the expanding storage demand and changing flexible work environment.

RECOMMENDED ACTION:

Approval to purchase a Dell Virtual Server Storage Array from Access Interactive in the amount of $133,586 using a competitively bid contract through the Oakland County G2G Marketplace.

Oakland County G2G Pricing CONTRACT NUMBER: 6559

for

VMware VDI Virtual SAN Upgrade

Version 3

Prepared by:

access*i*nteractive

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Access Interactive Company Overview

Access Interactive provides technology solutions, services and support to business, educational and government organizations since 1985. Our business focus is helping our Clients make the most of technology investments. Over the last 230 years Access has experienced significant growth to establish itself as a $35 million organization proudly retaining over 65 full-time employees. We pride ourselves on being large enough to be extremely competitive and small enough to pay personal attention to our customers. We have an unwavering commitment to providing the best solutions, service and support to our customers.

Our highly-skilled technical services group includes over 30 full-time technicians including VMware, Microsoft, Cisco and Dell certified system engineers. Our technicians are available to you for projects ranging from on-site break/fix services to full-scale WAN/LAN integration, remote access, IP telephony and more.

Access Interactive sales consultants are technically astute and have an average over 20 years of industry experience.   They are ready to apply their knowledge and technical expertise to recommending the best products and solutions and to providing efficient project management.

It is our focused mission to implement the best products, service and support in the industry to our clients.

Strategic Directive

Access Interactive's initial, primary focus in City of Novi's upcoming project is an in depth review of the organizational environment. Gathering momentum from the initial meetings; we're confident Access can offer credible short term recommendations / solutions in order to create a strong long lasting relationship. Our relationships with our clients grow based on strong commitment and Access Interactive's willingness to go the extra mile. Access Interactive prides itself on communication, documentation and thirst for industry knowledge. These traits, coupled with cross trained technical aptitude, contribute greatly to our overall success. We look forward to working with an organization that has a firm grasp on their field, and knowledge of how their ever changing IT infrastructure can elevate them to new levels of achievement.

City of Novi Organizational Needs

- Risk Planning and Mitigation
- Upgrade existing Infrastructure and Applications
- Prepare New Infrastructure for Growth or New Applications
- Faster and Granular Snapshots
- Enhance Performance
- Support for Legacy product integration
- Central and Expansive I.T. Administration Management Dashboard
- Latency resistant Design
- Simplified Infrastructure
- Optimize support and integration

Solution Synopsis

The proposed application performance solution provides a scalable, secure, cost effective foundation for City of Novi. There are several components that work together to provide a network that has excellent performance, is easy to manage, provides fault tolerance and secure data backups.

These components are:

- Dell Virtual SAN Servers for VDI
- Dell Fabric Switches
- Nvidia Licenses
- Professional Services and Knowledge Transfer

Dell PowerEdge R750XA – vSAN Ready Node Servers

Description	Quantity
2.5 Chassis	1
Trusted Platform Module 2.0 V3	1
2.5" Chassis with up to 8 SAS/SATA Drives	1
Intel Xeon Gold 5320 2.2G, 26C/52T, 11.2GT/s, 39M Cache, Turbo, HT (185W) DDR4-2933	1
Intel Xeon Gold 5320 2.2G, 26C/52T, 11.2GT/s, 39M Cache, Turbo, HT (185W) DDR4-2933	1
Additional Processor Selected	1
Heatsink for 2 CPU	1
Performance Optimized	1
3200MT/s RDIMMs	1
No RAID	1
Dell HBA355i Controller Front	1
Front PERC Mechanical Parts, rear load	1
Performance BIOS Settings	1
UEFI BIOS Boot Mode with GPT Partition	1
Very High Performance Fan	1

Dual, Hot-Plug,Power Supply Redundant (1+1), 1400W, Mixed Mode	1
Riser Config 0, 6x16 + 2x8 slots	1
R750XA Motherboard DAO with Broadcom 5720 Dual Port 1Gb On-Board LOM	1
iDRAC9 Datacenter 15G	1
OpenManage Enterprise Advanced Plus	1
Intel Ethernet X710 Quad Port 10GbE SFP+, OCP NIC 3.0	1
PowerEdge 2U Standard Bezel	1
Dell EMC Luggage Tag R750XA	1
Assembly BOSS Blank	1
BOSS controller card + with 2 M.2 Sticks 480GB (RAID 1),LP	1
No Quick Sync	1
iDRAC,Legacy Password	1
iDRAC Group Manager, Enabled	1
VMware ESXi NFI (License Not Included)	1
No Media Required	1
Strain Relief Bar, 2U	1
ReadyRails Static Rails for 2/4-post Racks	1
No Systems Documentation, No OpenManage DVD Kit	1
PowerEdge R750XA Shipping	1
PowerEdge R750XA Shipping Material	1
PowerEdge R750XA No CCC or CE Marking	1
Dell/EMC label (BIS) for 2.5" Chassis	1
PowerEdge R750XA Server	1
GPU Factory Installed cable kit for DW GPU W/CPU CONN (4 GPUs)	1
Basic Next Business Day 36 Months	1
ProSupport and Next Business Day Onsite Service Initial, 36 Month(s)	1
ProSupport and Next Business Day Onsite Service Extension, 24 Month(s)	1
On-Site Installation Declined	1
32GB RDIMM, 3200MT/s, Dual Rank 16Gb BASE x8	8
960GB SSD SATA Mix Use 6Gbps 512 2.5in Hot-plug AG Drive, 3 DWPD,	2
1.92TB SSD SATA Read Intensive 6Gbps 512e 2.5in Hot-plug S4510 Drive, 1 DWPD,	6
Jumper Cord - C13/C14, 4M, 250V, 12A (North America, Guam, North Marianas, Philippines, Samoa)	2

Intel X710 Dual Port 10GbE SFP+ Adapter, PCIe Low Profile	1
NVIDIA(R) Tesla(TM) T4 16GB Passive, Single Slot, Full Height GPU	2

Dell PowerEdge R750XA with 5-Year Support   Qty. 3 @ $ 25,366.00 each **$ 76,098.00**

Dell Networking S4128F

The S4100-ON 10GbE switches comprise Dell EMC's latest disaggregated hardware and software data center networking solutions, providing state-of-the-art 100GbE uplinks, fibre channel connectivity and a broad range of functionality to meet the growing demands of today's data center environment. These innovative, next-generation top-of-rack open networking switches offer optimum flexibility and cost-effectiveness for the enterprise, mid-market and Tier2 cloud service provider with demanding compute and storage traffic environments.

The compact S4100-ON models provide industry-leading density with up to 48 ports of 10GbE or up to 48 ports of 10GBaseT ports, 2 ports of 40GbE and 4 ports of 100GbE in a 1RU form factor. The S4148U-ON model can support up to 28 8/16G fibre channel ports, or 16 ports of 32G* fibre channel ports. The S4112-ON is a halfrack width model that supports up to 12 ports of 10GbE or 12 ports 10GBaseT, and 3 ports of 100GbE.

The S4100-ON series are high-performance, multi-function, 1/10/25/40/50/100 GbE and 8/16/32G FC Top-of-Rack (ToR) switches purpose-built for applications in high-performance data center, cloud and computing environments.

• 1.76Tbps (full-duplex) non-blocking, cut-through switching fabric delivers line-rate performance under full load on S4148F-ON, S4148FE-ON, S4148T-ON and S4148U-ON.

 • 960Gbps (full-duplex) non-blocking, cut-through switching fabric delivers line-rate performance under full load on S4128F-ON and S4128T-ON.

 • 840Gbps (full-duplex) non-blocking, cut-through switching fabric delivers line-rate performance under full load on S4112F-ON and S4112T-ON.

 • VXLAN gateway functionality support for bridging and routing the non-virtualized and the virtualized overlay networks with line rate performance

 • Converged Network support with DCB

 • IO panel to PSU airflow or PSU to IO panel airflow

 • Redundant, hot-swappable power supplies and fans (S4112-ON has redundant, fixed power supplies and fans)

 • Support for 10GBASE-LRM optics over OM1/OM2 fiber on S4148FE-ON product (not supported on other products in S4100 product family)

 • IEEE 1588v2 supported (hardware only) on 48 port models

Description	Quantity
Dell EMC Switch S4128F-ON, 1U, 28 x 10GbE SFP+, 2 x QSFP28, PSU to IO, 2 PSU, OS10	1
VLT Tech Sheet Document	1
OS10 Enterprise S4128F-ON	1
Dell EMC Networking S4100-ON Americas User Guide	1
Dell Hardware Limited Warranty 1 Year	1
ProSupport:Next Business Day Onsite Service After Problem Diagnosis, 1 Year	1
ProSupport:Next Business Day Onsite Service After Problem Diagnosis, 4 Years Extended	1

ProSupport:7x24 HW/SW Technical Support and Assistance, 5 Years	1
Dell Limited Hardware Warranty Extended Year(s)	1
Thank you choosing Dell ProSupport. For tech support, visit //www.dell.com/support or call 1-800- 945-3355	1
Info 3rd Party Software Warranty provided by Vendor	1
On-Site Installation Declined	1
5 Years ProSupport OS10 Enterprise Software Support-Maintenance	1
Power Cord, 125V, 15A, 10 Feet, NEMA 5-15/C13	2
Power Cord, 125V, 15A, 10 Feet, NEMA 5-15/C13	2
Dell Networking, Cable, QSFP+ to QSFP+, 40GbE Passive Copper Direct Attach Cable, 0.5 m	1

Dell S4128F Switches – 5 Year Support   Qty. 2 @ $ 11,194.00 each **$ 22,388.00**

Miscellaneous
4xSFP+ Transceivers, 2x45ft MM patch cables, 35ft corrugated conduit   **$ 360.00**

NVIDIA RTX Virtual Workstation (vWS) software combined with our world-leading GPUs are a dynamic force for visual computing, delivering the most powerful virtual workstations from the data center or cloud to any device. Millions of creative and technical professionals can access the most demanding applications from anywhere, with awe-inspiring performance that rivals physical workstations, all while meeting the need for greater security.

With NVIDIA® RTX™ Virtual Workstation (vWS)* powering your virtual desktop environment, you enable the industry-leading capabilities of GPU-acceleration on every device in your organization.

> Enable secure, work-from-anywhere work styles.
> Deliver a full RTX experience from the data center or cloud.
> Run complex, real-time simulations.
> Speed rendering time of photorealistic images.
> Leverage AI-enhanced applications for more fluid, visual interactivity throughout the design process.
> Gain peace of mind with certified application compatibility.
> Enable business agility and stand up a new, powerful virtual workstation in as little as ten minutes.

Nvidia Licensing

NVIDIA: GRID vPC Perpetual License, 1 CCU

Qty. 40 @ $ 100.00 each **$ 4,000.00**

NVIDIA: GRID vPC Production SUMS 5 Years 1CCU

Qty. 40 @ $ 125.00 each **$ 5,000.00**

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Design points for discussion

- City of Novi provides Battery Backup that can accommodate this solution
- We assume Rack Space is available. Racks quoted upon request.
- Patch cords provided by customer
- Utilizing existing VMware Horizon licenses

PROFESSIONAL SERVICES:

Scope assumes someone from City of Novi assists with the project. Hours subject to change depending on exact project scope. The following is an estimate based on similar projects.

- Project plan and scheduling
- Equipment prep/software firmware updates
- Physical deployment of equipment
- Equipment integration/Virtual SAN integration
- Fabric switch integration
- Virtual SAN and volume provisioning
- VMware Horizons configuration
- System documentation and visio's
- Performance tuning
- Knowledge transfer and optimization
- Project management

TOTAL: 156 hours

Senior LAN Technician @ $165.00 per hour **$ 25,740.00**

PROJECT COSTS:

EQUIPMENT: $ 107,846.00
MI SALES TAX: $ EXEMPT
SUBTOTAL: $ 107,846.00
SERVICES: $ 25,740.00
SHIPPING: $ NA

TOTAL: $ 133,586.00

Quote Valid for 20-Days. Prices Subject to Change with Notice Depending on Current Market conditions.
Terms: 50% Upon Acceptance, 30% Upon Delivery, 20% Remaining Net 30. 25% Restocking Fee plus shipping fee for Returned Merchandise.
Shipping charges not included. No returns on software or software licenses/renewals. Credit card payment add, 4%.

Authorized Signature: _____**Date:**_____

Printed Name: _____**Purchase Order No:** _____