



Advanced Intelligence Engineering

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We have prepared a quote for you

Arrowhead IT Room Improvements

Quote # JW001033 Version 9

Prepared for:

Wheaton Park District

Prepared by:

Jeremy Wills

Monday, March 11, 2019

Wheaton Park District
Andy Bendy
1777 S Blanchard St
Wheaton, IL 60189
abendy@wheatonparks.org

Dear Andy,

The following quote details the proposed improvements for the IT room at Arrowhead Golf Club. Past instability in the Arrowhead network has made evident the need for updated hardware in this environment, and to facilitate better management and maintenance of the network backbone of this facility we are recommending cleanup and removal of unneeded legacy devices that remain in the current rack.

The first recommendation is installation of a four-post rack to hold new equipment and any equipment retained from before the project. This will facilitate better cable and device management, better airflow, and a more secure environment for the network devices. Installation of the new rack will begin with removal of the existing rack and all of the unneeded hardware on it, including those items related to the old Avaya phone system. Labor to complete this is detailed on the quote.

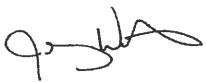
The second recommendation is installation of a server to handle Arrowhead Golf Club's major applications onsite. This would correct issues with Caterease, which has exhibited performance issues due to the fact that its servers reside at the Community Center. Having Caterease onsite at Arrowhead would allow faster performance and a better experience for its users. ***Please note that moving the application to Arrowhead might require that Wheaton Park District pay Caterease for the upgraded licensing in order for Caterease to be able to provide support during the move.*** The onsite server at Arrowhead would allow Digital Dining's server to be moved off of the workstation where it currently resides and onto a virtual machine residing on the host server. This is important because the workstation that currently hosts the Digital Dining server is 5 years old, and the warranty on this unit has expired. The GolfNow application can also be migrated to this server to provide better performance in a configuration preferred by the software vendor. The quote details the time required for migration of Caterease, GolfNow, and Digital Dining to the new server.

We also recommend moving the secondary domain controller (a virtual server) from the Community Center to the new host server at AGC, where it can help increase up time and performance in web browsing and access of network resources by keeping DNS services directly in the AGC network environment.

Lastly, a Datto backup and disaster recovery appliance will be installed onto the Arrowhead network. Similar to the one at the Community Center, a true D/R solution will allow Arrowhead to continue operations in any event where a file, application or server were to stop functioning or become compromised. By utilizing the Datto appliance, complete replication of the servers and their applications are taken several times throughout a day, allowing for an almost seamless transition of operations to the Datto appliance, should the Arrowhead servers become inoperable. In the event a local disaster were to occur, causing both the local server/s and Datto appliance to cease operating, fail-over to the Datto cloud (up to 30 days at no cost) will take place, once again, allowing for business operations to continue while the local network is restored.

Please note that Arrowhead will need to have an air conditioning unit installed into the IT room in order to regulate the temperatures, which will significantly increase with the addition of a physical server.

Please review the quote and let us know a time we can setup to discuss this quote in more detail.






Jeremy Wills
President
Advanced Intelligence Engineering

Hardware

Description		Price	Qty	Ext. Price
HPE G2 Rack Cabinet - 42U Wide for Server, PDU - Black - 3000.49 lb x Static/Stationary Weight Capacity		\$913.59	1	\$913.59
HP 110V Graphite Rack Mount Fan		\$226.85	1	\$226.85
HP Monitor/Utility Shelf - 19" 1U Wide - Graphite - 150 lb x Maximum Weight Capacity		\$92.49	2	\$184.98
HPE Standard G2 Basic 12-Outlet PDU - Basic - NEMA 5-15P - 12 x NEMA 5-20R - 120 V AC - 1900 W - 1U - Horizontal - Rack Mount		\$107.74	1	\$107.74
HPE R1500 Gen5 NA UPS - 1920 VA/1920 W - 100 V AC, 120 V AC, 125 V AC - 1U Rack-mountable		\$593.53	2	\$1,187.06
HPE Rack Hardware Kit		\$86.17	1	\$86.17
HPE 10642 G2 Top Exhaust Extension Kit		\$78.26	1	\$78.26
HP Cat. 5E UTP Cable - RJ-45 Male - RJ-45 Male - 7ft		\$3.71	100	\$371.00
HPE ProLiant DL360 G10 1U Rack Server - 1 x Intel Xeon Gold 5118 Dodeca-core (12 Core) 2.30 GHz - 32 GB Installed DDR4 SDRAM - 12Gb/s SAS, Serial ATA/600 Controller - 2 x 800 W - 2 Processor Support - Gigabit Ethernet - 16 MB Graphic Card		\$3,338.00	1	\$3,338.00
HPE SmartMemory 32GB DDR4 SDRAM Memory Module - 32 GB (1 x 32 GB) - DDR4 SDRAM - 2666 MHz DDR4-2666/PC4-21300 - 1.20 V - ECC - Registered - 288-pin - RDIMM		\$533.74	2	\$1,067.48
HPE Ethernet 1Gb 4-port 331FLR Adapter - PCI Express 2.0 x4 - 4 Port(s) - 4 - Twisted Pair		\$259.81	1	\$259.81
HPE 1.20 TB Hard Drive - SAS (12Gb/s SAS) - 2.5" Drive - Internal - 10000rpm - 1 Pack		\$328.49	6	\$1,970.94
HPE Integrated Lights-Out Advanced - Subscription License - 1 Server License - 3 Year - Standard		\$371.16	1	\$371.16

Hardware

Description	Price	Qty	Ext. Price
HP Standard Power Cord - 6ft 	\$7.90	2	\$15.80
Datto Siris 3 (4TB) Backup & Disaster Recovery Appliance	\$2,689.50	1	\$2,689.50
Meraki Ethernet Switch - 48 x Gigabit Ethernet Network, 4 x Gigabit Ethernet Uplink, 2 Stack - Manageable - Twisted Pair, Optical Fiber - Modular - 3 Layer Supported - 1U High - Rack-mountable, Desktop - Lifetime Limited Warranty 	\$3,838.12	1	\$3,838.12
Meraki MS120-8 1G L2 Cloud Managed 8x GigE Switch - 8 x Gigabit Ethernet Network, 2 x Gigabit Ethernet Uplink - Manageable - Twisted Pair, Optical Fiber - Modular - 2 Layer Supported - Wall Mountable, Desktop - Lifetime Limited Warranty 	\$456.28	1	\$456.28
Meraki MR42 IEEE 802.11ac 1.90 Gbit/s Wireless Access Point - 2.40 GHz, 5 GHz - MIMO Technology - 1 x Network (RJ-45) - Desktop, Wall Mountable, Ceiling Mountable	\$770.95	2	\$1,541.90
Subtotal			\$18,704.64

Software & Licensing

Description	Price	Qty	Ext. Price
Microsoft Windows Server 2019 Standard - License - 2 Core - Volume - Microsoft Open License - Single Language - PC	\$121.35	16	\$1,941.60
HPE Foundation Care - 3 Year Extended Warranty - Warranty - 24 x 7 x 4 Hour - On-site - Maintenance - Parts & Labor - Physical, Electronic Service - 2, 4 Hour, Hour - Software, Hardware	\$1,249.59	1	\$1,249.59
VMware ESXi 6.X Free	\$0.00	1	\$0.00
Meraki Enterprise with 3 Years Enterprise Support - MS210-48 Cloud Managed - Subscription License 1 Switch - 3 Year License Validation Period	\$455.98	1	\$455.98
Meraki Enterprise License And Support - MS120-8 Cloud Managed Switch - 3 Year License Validation Period	\$56.12	1	\$56.12
Meraki MR Enterprise Cloud Controller License, 3 Years - Meraki MR Series Access Point - Subscription License 1 Access Point - 3 Year License Validation Period	\$210.45	2	\$420.90
Subtotal			\$4,124.19

Phase 1 - Pre Season

Rack Assembly

Assemble rack with shelving and any new equipment planned to be installed during cut-over.

Remove Old Rack and Replace

Remove all equipment from existing 42U 2-post rack and document ports in use on patch panels. Move any equipment to remain into the new 42U cabinet, physically install, and interconnect. Remove 42U 2-post rack from floor mounts and remove/cut down anchors to be flush with the floor. Remove cable d-rings from backer board to allow patch panels to be moved from their current location. Move the new 42U cabinet into network room and mount patch panels in cabinet according to rack plan. Re-manage cable braids along the backer board using d-rings. Patch cables into switches according to notes taken during disassembly. Power up the equipment and test connectivity. Identify ports in use by Digital Dining devices and move them into the new Digital Dining VLAN. Test all equipment on-site to confirm connectivity and critical operations. Gather all equipment removed from the environment, catalog, and take for disposal at CAC per Park District guidelines.

POTS Lines

Identify and test POTS lines from the riser to the block for active lines. Deactivate POTS lines not in use, pending testing over the course of one month.

Configure Server Initial Setup

Prepare the server, install HDD, install power redundant, and configure for RAID 5. Install ESXi 6.5.

Server Installation

Rack mount the server, connect power cables, connect networking cables and power on the server.

Meraki Switch Configuration

Configure switching for the two Meraki switches, install one switch into the rack, and one to replace the unmanaged switch for the GolfNow end users.

Physical to Virtual conversion for Digital Dining and GolfNow

Convert Digital Dining and Golf now from physical to virtual on the ESXi hosts as to no disrupt operations during season.

Migrate WPDDC02

Migrate WPDDC02 from the Community Center to AGC.

Install and Configure Datto

Rack mount Datto, connect all power and networking cables. Install agent onto servers and configure backups and schedule.

Phase 1 - Pre Season Subtotal: **\$9,000.00**

Phase 2 - Post Season

Build Application Server

Build Windows 2019 Server, configure for application server. Set networking, DNS name, join to domain.

Install GolfNow

Install Golf Now onto the server, restore all data.

Configure GolfNow End Users

Configure end user machines for new GolfNow server location and configuration.

Configure Digital Dining

Install Digital Dining onto Application server, configure all settings and restore backup data.

Configure POS Machines

Configure POS machines to use the new Digital Dining server on the ESXI host.

Retire P2V Conversions

Retire GolfNow and Digital Dining machines, remove from the domain and remove from the ESXI host.

Phase 2 - Post Season Subtotal: **\$3,240.00**

Optional Meraki Firewall Hardware and Licensing

Meraki MX84 Cloud Managed Security Appliance - 10 Port - 1000Base-T Gigabit Ethernet - AES (128-bit) - USB - 10 x RJ-45 - 2 x SFP - 2 x SFP - Manageable - 1U - Rack-mountable

Meraki MX84 Advanced Security License and Support, 3 Years - Meraki MX84 Cloud Managed Security Appliance - License - 3 Year License Validation Period

*Optional Meraki Firewall Hardware and Licensing Optional Subtotal: **\$3,961.64**

Copy of Optional Meraki Firewall Labor

Firewall Configuration & Installation

Install the firewall into the rack. Configure the firewall, including site-to-site VPN. Firewall put in non production mode while traffic tests are conducted.

*Copy of Optional Meraki Firewall Labor Optional Subtotal: **\$810.00**

Monthly Services Changes

This project changes your network infrastructure, and will result in changes to your ongoing IT services billing, under the existing Managed Services Provider Agreement. Your monthly IT services following the project are outlined below

Description	Recurring	Qty	Ext. Recurring
AIE Managed IT Services			
Managed Server(s)	\$125.00	2	\$250.00
Managed Workstation(s)	\$35.00	-1	(\$35.00)
Cisco Network Device(s)	\$50.00	-1	(\$50.00)
Meraki Network Device(s)	\$25.00	4	\$100.00
Datto Backup & Disaster Recovery Services	\$493.90	1	\$493.90
	Recurring Subtotal		\$758.90

Discount

Discount

The discount offsets the Arrowhead Golf Club for the additional two Meraki wireless access points to be deployed. Please note the licensing has approximately 2 years remaining of the 3 year licensing timeline. AGC staff will be responsible for running the cabling. An additional \$1,000 manager's discount is also included in the discount line.

Discount Subtotal: **(\$2,962.80)**

Payment Terms

In order to initiate the work, AIE requires a signed copy of the agreement along with 100% down payment on all hardware and licensing and 50% down payment on all labor. The balance of the labor, along with any additional surcharges or tax, will be billed Net20 upon completion of the work.

Arrowhead IT Room Improvements



Prepared by:
Advanced Intelligence Engineering

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Prepared for:
Wheaton Park District

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Quote Information:

Quote #: JW001033

Version: 9
Delivery Date: 03/11/2019
Expiration Date: 03/29/2019

Assumptions

- Client staff will be available in a timely manner for questions and testing of changes.
- Client will provide all necessary software discs, serial numbers, and passwords for any software needing to be reinstalled.
- The work will be completed Monday-Friday / 7:30am-5:30pm, unless otherwise designated by AIE, unless otherwise agreed upon in writing.
- Client will provide assistance in removal of concrete anchors currently in place for existing 2-post rack.
- Client to provide a window of downtime for this project where the AGC network will be completely down.
- Digital Dining support will assist with the migration of the application and data to the new server.
- GolfNow support will assist with the migration of the application and data to the new server.
- Client is responsible for providing valid licenses for GolfNow.
- Application migrations will be performed during a downtime window off-season, between 7am and 11am, prior to restaurant opening and during regular business hours, to reduce after-hours costs.
- Client is responsible for adding an A/C unit into the IT room in order to properly regulate the temperatures. This will be required in order to avoid overheating the IT infrastructure.
- Caterease will not be migrated during this project and will remain at the Community Center until an upgrade or new product is determined, in which that will be quoted as its own project.

Should any of these assumptions prove to be incorrect, additional labor will be billed at WPD's contracted rates for during-hours and after-hours project support.

Quote Summary

Description	Amount
Hardware	\$18,704.64
Software & Licensing	\$4,124.19
Phase 1 - Pre Season	\$9,000.00
Phase 2 - Post Season	\$3,240.00
Discount	(\$2,962.80)
Total:	\$32,106.03

Recurring Expenses Summary

Description	Amount
Monthly Services Changes	\$758.90
Recurring Total:	\$758.90


*Optional Expenses


Description	One-Time
Optional Meraki Firewall Hardware and Licensing	\$3,961.64
Copy of Optional Meraki Firewall Labor	\$810.00
Optional Subtotal:	\$4,771.64

Taxes, shipping, handling and other fees may apply. We reserve the right to cancel orders arising from pricing or other errors.

Advanced Intelligence Engineering

Wheaton Park District

Signature: 
Name: Jeremy Wills
Title: President
Date: _____

Signature: 
Name: Andy Bendy Michael Bernard
Title: Director of Spec. Facilities Exe Dir
Date: 4-17-19