

Wheaton Park District

Subject: AIE Quote # JW001386 to replace failed VM host server

March 6, 2019

Approved
3/6/19

Executive Summary

The Park's server infrastructure is comprised of 3 physical host servers which are running about 19 virtual servers. The servers are configured with hardware and software redundancy features which allow the environment to withstand certain failures. Below is a brief inventory of those servers.

Host name	Purchase Date	Warranty Expiration
WPD-VH01	12/31/2010	2/13/2014
WPD-VH02	12/31/2010	2/13/2014
WPD-VH03	1/24/2013	3/2/2017

The typical lifespan of a server is about 4-6 years before it should be considered for replacement. Two of the servers are 8+ years old, and one is 6+ years old. AIE and Vision96 have requested a budget amount of \$16,169.00 for the replacement of one server in 2019.

Server "WPD-VH02" (colored red above) has recently failed beyond repair according to AIE (detected on 2/26/19). I recommend the immediate purchase of a replacement to restore redundancy and help prevent disruptions to Park computer systems and operations.

AIE has provided quote # JW001386 in the amount of \$16,299.72 for hardware and labor. Although this is slightly above the budgeted amount, the costs are fair and justified.

In 2020, we will be budgeting for a second, new host server as part of a proactive replacement and consolidation effort. Once the second new server is installed, we plan on removing the 3rd host to reduce unnecessary hardware and lower the Park's monthly support costs with AIE.

Please see accompanying quote from AIE, sign and return upon your approval.

Regards,

Jonathan Butkus

vCIO – Wheaton Park District



Advanced Intelligence Engineering

www.AIE195.com

We have prepared a quote for you

Server Replacement

Quote # JW001386 Version 1

Prepared for:

Wheaton Park District

Prepared by:

Jeremy Wills

Friday, March 01, 2019

Wheaton Park District
Mike Benard
1777 S Blanchard St
Wheaton, IL 60189
mbenard@wheatonparks.org

Dear Mike,

We've prepared quote to replace the physical host server that failed overnight Monday (HOST2). We've provided two options here, one for replacing the one server which failed, which recommend doing immediately, and another option for replacing the full infrastructure with an additional server and a SAN. **Please note that the hardware on this quote has rebates that expire at the end of the day on March 31, and we will need to reprice should we order after that date.**

Replacing HOST2 with a new sever is imperative. The other two host servers at Community Center are currently capable of hosting the existing server load, but they are not under vendor support and are showing signs of age. Should one of these servers fail, the other server does not have the resources to support WPD's server load. We could potentially bring up some of the needed servers on the Datto, but we would not have space to run the entire park district's operations. Therefore, AIE recommends moving forward with the one server replacement as an emergency measure.

We have also provided a proposal for replacing the SAN and purchasing another host server. (AIE recommends WPD's final network architecture be two servers and a SAN, as opposed to the three servers and SAN now. Both servers proposed have been spec'd to be able to support the entire WPD architecture should the other server fail.)

This second phase is optional at this time, but doing the replacement now provides some benefits. The VMWare technology allows for immediate failover to another host server in the event of one host failing, and this technology works most dependably when the server infrastructure shares matching processors. On Tuesday morning, after the failure of HOST2, AIE needed to reconfigure some of the allocations and assignments in the VMWare infrastructure due to the mismatched processors. This resulted in some applications and services being down for an hour or two while we worked to remediate. With identical servers in operation, this remediation time would be unnecessary, and the servers would automatically fail over.






Under separate cover, we have attached the list of specs for the exiting servers, for Vision96's reference.

Please let me know if you have any questions or would like to move forward with this project.



Jeremy Wills
President
Advanced Intelligence Engineering

Hardware: Server Replacement

Description	Price	Qty	Ext. Price
HP Host Server	\$12,339.72	1	\$12,339.72
HPE ProLiant DL360 G10 1U Rack Server - 1 x Intel Xeon Gold 6130 Hexadeca-core (16 Core) 2.10 GHz - 64 GB Installed DDR4 SDRAM - 12Gb/s SAS, Serial ATA/600 Controller - 2 x 800 W - 2 Processor Support - Gigabit Ethernet - 16 MB Graphic Card 		1	
HPE Intel Xeon 6130 Hexadeca-core (16 Core) 2.10 GHz Processor Upgrade - Socket 3647 - 16 MB - 22 MB Cache - 64-bit Processing - 3.70 GHz Overclocking Speed - 14 nm - 125 W - 188.6&deg;F (87&deg;C)		1	
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 		6	
HPE 600 GB Hard Drive - SAS (12Gb/s SAS) - 2.5" Drive - Internal - 10000rpm - 1 Pack 		2	
HPE Ethernet 1Gb 4-port 331FLR Adapter - PCI Express 2.0 x4 - 4 Port(s) - 4 - Twisted Pair 		1	
HPE Integrated Lights-Out Advanced - Subscription License - 1 Server License - 3 Year - Standard 		1	
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	
Subtotal			\$12,339.72

Labor: Server Replacement

Configure Server

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 and networking cables.

Intergrate into vCenter

Integrate into vCenter, configure VMs list and migrate machines over, update vmware tools on all VM's to match host. Correct vCenter settings, pull server into cluster and configure vMotion.




VM CPU/RAM Rebalance

Rebalance ESXI VM's adjusting cores and RAM to match that of the new host.

Labor: Server Replacement Subtotal: **\$3,960.00**

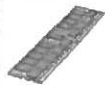



Optional Hardware: Additional Server & SAN

* Optional

Description	Price	Qty	Ext. Price
HP SAN	\$14,932.44	1	\$14,932.44
HPE MSA 2050 SAN Dual Controller SFF Storage - 24 x HDD Supported - 24 x SSD Supported - 2 x Serial Attached SCSI (SAS) Controller - 24 x Total Bays - 24 x 2.5" Bay - 2U - Rack-mountable 		1	
HPE 1.20 TB Hard Drive - SAS (12Gb/s SAS) - 2.5" Drive - Internal - 10000rpm 		12	
HPE MSA 1Gb RJ-45 iSCSI SFP+ 4-Pack Transceiver - For Data Networking 1 RJ-45 1000Base-T iSCSI LAN - Twisted PairGigabit Ethernet - 1000Base-T		1	
HPE Foundation Care - 3 Year - Warranty - 24 x 7 x 4 Hour - On-site - Technical - Labor - Physical, Electronic Service		1	
HP Host Server	\$12,339.72	1	\$12,339.72
HPE ProLiant DL360 G10 1U Rack Server - 1 x Intel Xeon Gold 6130 Hexadeca-core (16 Core) 2.10 GHz - 64 GB Installed DDR4 SDRAM - 12Gb/s SAS, Serial ATA/600 Controller - 2 x 800 W - 2 Processor Support - Gigabit Ethernet - 16 MB Graphic Card 		1	
HPE Intel Xeon 6130 Hexadeca-core (16 Core) 2.10 GHz Processor Upgrade - Socket 3647 - 16 MB - 22 MB Cache - 64-bit Processing - 3.70 GHz Overclocking Speed - 14 nm - 125 W - 188.6°F (87°C)		1	

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HPE 600 GB Hard Drive - SAS (12Gb/s SAS) - 2.5" Drive - Internal - 10000rpm - 1 Pack 		2	
HPE Ethernet 1Gb 4-port 331FLR Adapter - PCI Express 2.0 x4 - 4 Port(s) - 4 - Twisted Pair 		1	
HPE Integrated Lights-Out Advanced - Subscription License - 1 Server License - 3 Year - Standard 		1	
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	
* Optional Subtotal			\$27,272.16

Optional Labor: Additional Server & SAN

Configure Server

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 and networking cables.

Intergrate into vCenter

Integrate into vCenter, configure VM's list and migrate machines over.

Rack Mount SAN

Rack mount the SAN.

Configure SAN

Configure SAN, setup volumes and SAS connections. Connect to vCenter and create datastore.

Migrate VMS

Migrate virtual machines from current SAN to new SAN.

*Optional Labor: Additional Server & SAN Optional Subtotal: **\$5,580.00**

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.

Server Replacement



Prepared by:

Advanced Intelligence Engineering

Jeremy Wills
(630) 936-4045 x102
Fax (815) 346-5342
jwills@aie195.com

Prepared for:

Wheaton Park District

1777 S Blanchard St
Wheaton, IL 60189
Mike Benard
(630) 510-4945
mbenard@wheatonparks.org

Quote Information:

Quote #: JW001386

Version: 1
Delivery Date: 03/01/2019
Expiration Date: 03/31/2019

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.
- This will not correct the Windows license compliance issue.
- Additional maintenance windows after hours will be required to complete this project. Downtime has been billed at after hours rates, but AIE will need to arrange more maintenance windows outside of the normal Monday 11pm-2am timeframe.

Should any of these assumptions prove to be incorrect, additional labor will be billed at WPD's contracted rates of \$120/hr, or \$180/hr for after hours work.

Quote Summary

Description	Amount
Hardware: Server Replacement	\$12,339.72
Labor: Server Replacement	\$3,960.00
Total:	\$16,299.72

*Optional Expenses

Description	One-Time
Optional Hardware: Additional Server & SAN	\$27,272.16
Optional Labor: Additional Server & SAN	\$5,580.00
Optional Subtotal:	\$32,852.16

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: Mike Benard

Title: Executive Director

Date: 3/6/19