

SAYRE AREA SCHOOL DISTRICT IT PLAN

Fiscal Year July 1 2015 to June 30 2016

“Standardize, Simplify, & Save Money”

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(Note: Some Items will change due to technology evaluations of the vendor’s products and/or resources/funding)

Some of the highlights for 2015-2016:

1. Disaster Recovery – implement more redundancy to Snyder (fiber / internet feed).
2. Server – upgrade all critical servers to Server 2012 R2 (migrate 2003 / 2008 / 2008 R2 Virtual Servers to 2012 Virtual Servers).
3. Security – have outside security firm perform a security audit on the district’s computers.
4. Desktop - replacement of the remaining old classroom student desktops with fast solid state drive laptops.
5. Desktop Management – leverage Dell KACE OR Acronis 5 to better manage deployment of software to our desktops / laptops within the district.
6. Web – implement Drupal Web Content Management server to replace current web server.
7. Network – implement additional wireless coverage and performance, removal of a few closets that lack proper ventilation and security, properly setup / rewire areas for improved management and reliability), and much more.
8. Printer – implement new MFP printers (black and white, color, copiers) and new print servers to manage them (2012 R2).
9. Snyder Elementary – laptops and desktops to cover the needs of PA Online Assessment testing online using computers

Table of Contents

Table of Contents.....	2
Purpose.....	8
DESKTOP: High School CAD Lab – [Upgrade] to New Release (Priority - Medium)	10
Rationale	10
Key Financial / Resource Benefit (CAD is now free)	10
Proposal.....	10
DESKTOP: High School Lab 129 and 131 [Reimage – Office 2013] (Priority - High).....	11
Rationale	11
Proposal.....	11
DESKTOP: High School & Snyder Teacher / Staff PCs [Reimage] (Priority - Medium).....	12
Rationale	12
Proposal.....	12
DESKTOP: Replacement of Desktops with Laptops for Classroom Student PCs [Replacement] (Priority - High).....	13
Rationale	13
Proposal.....	13
DISASTER RECOVERY: Backup Fiber Connection [Outside Vendor] (Priority - High)	14
Rationale	14
Proposal.....	14
DISASTER RECOVERY: Domain Controllers 2012 R2 [BLaST IU 17] (Priority - High).....	15
Rationale	15
Proposal.....	15
DISASTER RECOVERY: NEW APC UPS [e-Rate] (Priority - High)	16
Rationale	16
Proposed Solution	16
DISASTER RECOVERY: SAN [BLaST IU 17] (Priority - Low).....	17
Rationale	17
Proposed Solution	17
DISASTER RECOVERY: Security Camera Storage 2012 R2 [Implement & Fine Tune] (Priority - High).....	18
Rationale	18
Proposal.....	18
DISASTER RECOVERY: Replication - 2012 R2 Data Servers and DA Servers [BLaST IU 17] (Priority - Medium)	19
Rationale	19
Proposal.....	19
DISASTER RECOVERY: VLAN Snyder [BLaST IU 17] (Priority - Low)	20
Rationale	20
Proposed Solution	20
EDUCATIONAL TECHNOLOGY NEEDS ASSESSMENT: (Priority - High).....	21
2015-2016 Needs	21
2014-2015 Needs	21
2013-2014 Needs	21
2012-2013 Needs	21

2011-2012 Needs 22

2010-2011 Needs 22

2009-2010 Needs 22

2008-2009 Needs 22

2007-2008 Needs 22

2006-2007 Needs 22

EDUCATION: Technology Webinars (Priority - Medium)..... 23

 Rationale 23

 Action..... 23

EDUCATION: Staff Technology Training (Priority - Medium)..... 24

 SASD Staff..... 24

 Background 24

 Proposed Solution 24

FINANCIALS: Budget Breakdown Financials (Priority - High) 25

 Budget 25

 Background 25

INTERNS: College Internship Program [Currently Enrolled] (Priority - High) 26

 Work Projects..... 26

INVENTORY: Conduct 100% Inventory [PDE PATI] (Priority - Medium)..... 28

 Rationale 28

 Action..... 28

LAPTOP: HS Krall Laptops– [Additional Laptops] (Priority - High) 29

 Rationale 29

 Action..... 29

LAPTOP: HS Jennings Laptops– [Additional Laptops] (Priority - High) 30

 Rationale 30

 Action..... 30

LAPTOP: HS Powers Grade Laptops – [New Cart] (Priority - High) 31

 Rationale 31

 Action..... 31

LAPTOP: SE Kindergarten Grade Laptops North – [Additional Laptops] (Priority - High)..... 32

 Rationale 32

 Action..... 32

LAPTOP: SE Kindergarten Grade Laptops South – [Additional Laptops] (Priority - High)..... 33

 Rationale 33

 Action..... 33

LAPTOP: SE First Grade Laptops – [New Cart] (Priority - High) 34

 Rationale 34

 Action..... 34

LAPTOP: SE Second Grade Laptops – [New Cart] (Priority - High)..... 35

 Rationale 35

 Action..... 35

LAPTOP: SE Third Grade Laptops – [New Cart] (Priority - High)..... 36

 Rationale 36

 Action..... 36

LAPTOP: SE Fourth Grade Laptops – [New Cart] (Priority - High)..... 37

 Rationale 37

 Action..... 37

MOBILE: Apple / Android / Windows Mobile Devices Management – [Fine Tune] (Priority - Low)... 38

 Rationale 38

Proposal..... 38

NETWORK: Closet Migration HS 129 [Migration] - (Priority - High)..... 39

 Rationale 39

 Proposed Solution 39

NETWORK: Closet Migration HS 258 [Migration] - (Priority - High)..... 40

 Rationale 40

 Proposed Solution 40

NETWORK: Migration HS 252 Lab [Migration] - (Priority - High)..... 41

 Rationale 41

 Proposed Solution 41

NETWORK: Closet Migration HS Hickey [Migration] - (Priority - High) 42

 Rationale 42

 Proposed Solution 42

NETWORK: Closet Patch Panel Cleanup HS 123 [Patch Panel] - (Priority - High)..... 43

 Rationale 43

 Proposed Solution 43

NETWORK: Closet Patch Panel Cleanup HS Science [Patch Panel] - (Priority - High)..... 44

 Rationale 44

 Proposed Solution 44

NETWORK: Closet Patch Panel Cleanup HS Basement Cage [Patch Panel] - (Priority - High)..... 45

 Rationale 45

 Proposed Solution 45

NETWORK: Network Equipment Migration HS Cafeteria [Migration] - (Priority - High)..... 46

 Rationale 46

 Proposed Solution 46

NETWORK: HS Music / Keyboard Lab [Wiring & Laptops] - (Priority - High)..... 47

 Rationale 47

 Proposed Solution 47

NETWORK: Fluke Fiber and Main Copper Testing (Priority - Medium) 48

 Rationale 48

 Proposed Solution 48

NETWORK: Juniper Switch Software [Upgrade] (Priority - High) 49

 Rationale 49

 Proposed Solution 49

NETWORK: Upgrade Juniper Switch [Athens WAN] (Priority - High) 50

 Rationale 50

 Proposed Solution 50

NETWORK: Web Filtering [Fine Tune] – iBoss (Priority - Medium) 51

 Rationale 51

 Proposed Solution 51

NETWORK: Wireless [Additional Access Points] - (Priority - High)..... 52

 Rationale 52

 Proposed Solution 52

NETWORK: Wireless [BYOD] - (Priority - High)..... 53

 Rationale 53

 Proposed Solution 53

NETWORK: Wireless [High School Athletic Field] - (Priority - High)..... 54

 Rationale 54

 Proposed Solution 54

 Fine Tuning..... 54

NETWORK: Wireless [Software Upgrade] - (Priority - Medium) 55
 Rationale 55
 Proposed Solution 55
 PRINTERS: HS Replacement HP 400 MFP [Replacement] (Priority - Medium) 56
 Rationale 56
 Proposed Action 56
 PRINTERS: SE Replacement HP 400 MFP [Replacement] (Priority - Medium)..... 57
 Rationale 57
 Proposed Action 57
 PRINTERS: Replacement Color MFP [Replacement] (Priority - Medium) 59
 Rationale 59
 Proposed Action 59
 PRINTERS: SASDHPPMNEW – Manage Printer Settings (Priority - High) 60
 Rationale 60
 Proposed Action 60
 RECYCLING: Old Technology [Optiplex 740’s and Optiplex 160’s] (Priority - Medium) 61
 Annual Recycling 61
 SECURITY: Security Camera [2012 R2 & Fine Tuning] – Additonal Cameras (Priority - High)..... 62
 Rationale 62
 Proposal 62
 SECURITY: External Assessment [iSecure] (Priority - High)..... 63
 SECURITY: Antivirus ThirtySeven4 EPS 6.0 – [Upgrade] to Latest Version (Priority - High)..... 64
 Rationale 64
 Proposed Solution 64
 Security: Picture ID – [Fine Tune] Procedures (Priority - Low) 65
 Rationale 65
 Proposed Action 65
 Standard ID Usage 65
 SECURITY: Deep Freeze [Limited] (Priority – Low) 66
 Rationale 66
 Proposed Plan 66
 SERVER: Balance out work load of all VM Servers [Fine Tune / Ongoing] (Priority - Medium) 67
 Rationale 67
 SERVER: CAD 2008 R2 Servers for new version of AUTOCAD Server (Priority - Low)..... 68
 Rationale 68
 Proposal 68
 SERVER: [Cloud] Access to SASD Data Servers (Priority - Low)..... 69
 Rationale 69
 Proposed work 69
 SERVER: Desktop Management – [Upgrade] Dell Desktop Authority (Priority - High) 70
 Proposed Enhancements 70
 Upgrade Plan 70
 SERVER: DHCP 2012 R2 Server [Upgrade & Fine Tune] (Priority - High) 72
 Rationale 72
 Proposal 72
 SERVER: ACRONIS 5 Desktop Deployment Management [ACRONIS 5] (Priority - High) 73
 Rationale 73
 Proposal 73
 SERVER: MS Licensing 2012 R2 Server [Fine Tune] (Priority - High) 74
 Rationale 74

Proposal.....	74
SERVER: Print Servers – Upgrade to 2012 R2 Server [Upgrade & Fine Tune] (Priority - High)	75
Rationale	75
Proposal.....	75
SERVER: Skyward Student Information System – [UPGRADE 2012 R2] (Priority - High)	76
Desired Outcomes.....	76
Proposed work	76
SERVER: Solid State Drives – [UPGRADE] (Priority - High)	77
Desired Outcomes.....	77
Proposed work	77
SERVER: VEEAM Archiving / Journaling the Exchange Server 2013 [2012 R2] (Priority - Medium)	78
Rationale	78
Proposed work	78
SERVER: ZENOSS Monitoring Network Systems Down [Reliability] (Priority - Medium)	79
Rationale	79
Proposed work	79
SERVICES / CONSULTING: BLaST IU17 [Disaster Recovery / Infrastructure] (Priority - High).....	80
BLaST IU17.....	80
Background.....	80
Proposed Solution.....	80
SOFTWARE: Open Source [Ninite Purchase] (Priority – Medium).....	81
Background.....	81
Proposed Solution.....	81
Ninite Programs to Install.....	81
SPECIAL PROJECTS: Snyder Student Pictures Update (Priority - Medium)	85
Rationale	85
Proposal.....	85
SPECIAL PROJECTS: Network SASD Copiers [Network & Fine Tune] (Priority - Medium).....	86
Rationale	86
Proposal.....	86
SUPPORT: Technology [Replacement] Parts / Equipment (Priority - Medium).....	87
Rationale	87
Proposed Action.....	87
TEACHER / STAFF REQUESTS: (Priority - Medium).....	88
Review the utilization of the technology – for example:.....	88
Classroom Old Desktops.....	88
Cochi Pilot Test Tablet / Interactive Solution.....	88
SE First, Second, Third, Fourth Grade Laptop Carts.....	88
HS Powers Laptop Cart	89
HS English Department Laptop Headphones	89
HS English Department Accelerated Reader, Star Program , 360.....	89
SE Kindergarten South and North Additional Laptops	89
HS Krall Additional Laptops	90
HS Jennings Additional Laptops	90
Office Upgrade to 2013 Version.....	90
SE and HS Library System Upgrade (Follett)	91
Faster Log On's.....	92
Additional Requests.....	92
WEB: Implement DRUPAL Web Content Management System (Priority - High)	93
Rationale	93

Purpose

This document will detail the IT Plans for the Sayre Area School District for the Fiscal Year 2015 – 2016. This document contains the recommended actions that are to take place with respect to technology for this fiscal year. Like any plan, some items do not get completed due to lack of resources and funding.

The overall focus of this year's IT Plan is to continue to Standardize, Simplify, and Save money. The following is the list of tentative technology initiatives for the SASD.

For the 2015-2016 year, here is a quick highlight of some of the initiatives:

- 1. Disaster Recovery – implement more robust disaster recovery solutions including new Domain Controllers, redundant fiber feed to Snyder, redundant internet feed, more replication between Snyder and High School, implement the replacement of our district's APC UPS equipment from e-Rate funding, and much more.**
- 2. Replacement of the remaining old classroom student desktops with fast solid state drive laptops.**
- 3. Desktop Management – leverage Dell KACE to better manage the desktops / laptops within the district.**
- 4. Server - Server 2012 R2 Rollout to improve performance and reliability.**
- 5. Web – implement Drupal Web Content Management server to replace current web server.**
- 6. Network – implement additional wireless coverage and performance, removal of a few closets that lack proper ventilation and security, properly setup / rewire areas for improved management and reliability), and much more.**
- 7. Printer – implement new MFP printers (black and white, color, copiers) and new print servers to manage them (2012 R2).**

“Standardize, Simplify, & Save Money”

One of the biggest challenges with technology is maintaining the technology (and keeping the cost manageable). In order to achieve this, the following procedures are used:

- 1. Standards: Standards (like Dell for desktop PCs) – enables us to standardize the images (software) so that the installation is much faster and cost effective. Additionally, by buying a standard desktop brand, ensure that the troubleshooting and maintenance is much less time consuming than utilizing a variety of brands. *This is not just done with desktops, but with all technology within Sayre Area School District. For example, PDE continues roll out new testing software to most of our PCs – thanks to our standards – we were able to use technology (Desktop Authority) to accomplish this task.***
- 2. College Internships / Work: Leveraging the help of college internships / work allows us to cost effectively implement and maintain the technology within the school district. *This not only helps the district, but gives the college students a valuable hands-on experience that aids them in acquiring jobs in their field of study. Colleges that have participated in this program are Broome Community College, Bloomsburg University, Corning Community College, Edinboro***

University of Pennsylvania, Elmira College, Houghton College, Penn College of Technology, Lock Haven University, Mansfield University, Penn State University, RIT, University of Phoenix (Axia), University of Pittsburgh, and York Technology Institute.

3. Technology Management Software: Sayre Area School District will research and leverage technology solutions that make us more efficient with the support and management of technology within the district. *As part of this year's IT Plan, some of the items are, implement Dell KACE desktop management / rollout software, update our Desktop Authority, and research and implement more Windows 7/ 8 management features, implement more backup and **disaster recovery utilizing VEEAM and other technologies**, research management technology for mobile devices, implement network management software, and much more.*
4. Good Stewardship / Purchasing: Sayre Area School District will continue to negotiate lower prices for technology (for example, utilize BLaST / State purchases - buying in bulk for lower costs). For example, this year we will be looking to continue leveraging cost savings with the Microsoft **"Shape the Future"** initiative.

DESKTOP: High School CAD Lab – [Upgrade] to New Release (Priority - Medium)

Upgrade to the latest CAD software for the HS CAD lab and for HS Lab 235.

Rationale

CAD has no cost for educational use and a new CAD licensing server and new PC build needs to be developed and tested.

Key Financial / Resource Benefit (CAD is now free)

AutoDesk now has the CAD software suites free for educational institutions which will save our district money on a yearly basis and it is always a good idea to work with the newer release.

Proposal

Download, test, and build new CAD licensing server.

Download, test, and build new CAD image for Lab 235 and HS CAD lab.

More information on product is here: <http://www.autodesk.com/education/free-software/all>

DESKTOP: High School Lab 129 and 131 [Reimage – Office 2013] (Priority - High)

To update High School Lab 129 and HS Lab 131 to Office 2013.

Rationale

Need to update these PCs so that the new Office 2013 teaching materials can be used.

Proposal

Need to build brand new image for Dell 790 and Dell 7010 PCs used in Lab 129 and Lab 131.

Need to reimage and setup Lab 129 and Lab 131 with the new image that has Office 2013 installed.

Create Windows 7 64 bit image from scratch and use this versus 32 bit.

DESKTOP: High School & Snyder Teacher / Staff PCs [Reimage] (Priority - Medium)

To update High School & Snyder teacher / staff PCs via reimaging (focus on areas that of highest need).

Rationale

Pro-actively update the software to help optimize the PCs and help prevent viruses (or other spyware etc.).

Proposal

Review each teacher / staff PC for reimaging need – focus on the areas that need the reimaging.

This will be dependent on how well the DELL KACE solution works (due to amount of time needed to reimage student laptops and student lab desktops).

DESKTOP: Replacement of Desktops with Laptops for Classroom Student PCs [Replacement] (Priority - High)

Replace all remaining classroom desktop PCs with laptops.

Rationale

Replace old desktop classroom PCs with laptops. For example, many classrooms have 2 or 4 desktop pc's and the new laptops have the following advantages:

1. Performance.
2. Wireless (can move around).
3. Easier setup due to physical room limitations.

Proposal

Complete the following:

1. Inventory current classroom desktops for Snyder and High School (consisting of Dell Optiplex 160 and Dell Optiplex 740).
2. Spec out and price replacement laptops for classrooms.
3. Recycle old desktops.
4. Image and rollout new laptops for classrooms.

DISASTER RECOVERY: Backup Fiber Connection [Outside Vendor] (Priority - High)

Our Snyder fiber connection has had 2 unexpected fiber breaks in the last 3 years. To proactively plan for potential problems, a secondary backup connection is being planned.

Rationale

To provide a backup connection to the Snyder facility in case the fiber goes down.

The connection is critical for the daily operations of Snyder.

For the district, implement a redundant internet feed separate from the WAN – for example, SASD does a lot of online PDE testing that needs internet access – this would provide redundancy.

Proposal

Research and select vendor to run secondary fiber from High School to Snyder:

1. Redundant fiber run from High School to Snyder (10 GB Connection).
2. Utilize a totally different path and access to the buildings.
3. Go with a 2nd ISP that will give us internet redundancy.
4. Implement and test the redundancy.
5. Redundancy is setup so that the WAN is the primary and the 2nd ISP is the backup – will use this connection if the performance on the primary degrades.

DISASTER RECOVERY: Domain Controllers 2012 R2 [BLaST IU 17] (Priority - High)

Build new Windows 2012 R2 domain controllers (2 virtual and 1 physical).

Rationale

Windows 2012 R2 servers handle the newer hardware better and have better performance than the Windows 2008.

This will increase reliability and performance.

Decommission old 1950 Dell hardware servers.

2012 R2 replicates DHCP so that if a server goes down, DHCP is still working.

Virtualized server allows disaster recovery (redundancy at the SE building if connection / fiber to HS Data Center is down).

Proposal

Use [BLaST IU 17] IU17 to migrate to new servers as follows:

1. Built brand new Windows 2012 R2 servers for cloning
2. Servers will all be virtualized
3. 1 servers will be located in HS Data Center
4. 1 server will be located in SE Data Center (disaster recovery).
5. Decommission and recycle old physical servers used as domain controllers (7 years old and no longer on warrantee).
6. Purchase 1 physical server and install this server in HS Data Center.

DISASTER RECOVERY: NEW APC UPS [e-Rate] (Priority - High)

APC work for Data Center and Network Closets.

Rationale

Our current APC UPS units are old and need replacement (reliability issues, inconsistent power handling and other issues).

By using eRATE funding cost is minimized while reducing equipment failure. New equipment has a 2 year battery and equipment warrantee (no costs for this time period).

Proposed Solution

Using eRATE funding through IU17, replace all Data Center and Network Closet APC UPS units with the following:

APC UPS SUM3004MXL2U (for Data Center UPS)

http://www.apc.com/products/resource/include/techspec_index.cfm?base_sku=SUM3000RMXL2U&xmc=SUM3000RMXL2U&xtr=1&tab=models

APC UPS SUA1500RM2U

http://www.apc.com/products/resource/include/techspec_index.cfm?base_sku=SUA1500RM2U

DISASTER RECOVERY: SAN [BLaST IU 17] (Priority - Low)

Enhance current disaster recovery setup in Snyder with new proposal from BLaST IU 17.

Rationale

Due to no smoke detectors, or sprinkler systems, our district data center is at high risk. Essentially without our of site protection we are at extreme risk even because the systems can be effected by fire, water damage, or other issues that occur in different locals of the building.

Need to come up with a solution so that most of the technology can work in Snyder if the HS Data Center fiber line is down or other systems are down.

Proposed Solution

BLaST IU 17 is developing a multi-phase solution to improve the disaster recovery in Snyder.

Proposal will be reviewed by Tech Committee.

Proposal consists of 4 parts (details to be presented during meeting):

Part 1: Upgrade backup product from MS PDM to Veeam Backup

Part 2: Redundancy for Critical Servers (critical servers replicating to the Snyder building running 100% of the time.

Part 3: Storage for Backup Infrastructure (SAN for backup)

Part 4: Storage for Production Infrastructure (SAN)

DISASTER RECOVERY: Security Camera Storage 2012 R2 [Implement & Fine Tune] (Priority - High)

Build new Windows 2012 R2 servers that store the SASD Security Camera Storage (to help better meet disaster recovery needs so that footage is stored in both the HS and SE).

Rationale

Windows 2012 R2 servers handle the newer hardware better and have better performance than the Windows 2008.

This will increase reliability and performance.

2012 R2 has solid replication features so that a copy of the security footage will be replicated (copy in both HS and SE).

Proposal

Complete the following:

1. Built brand new Windows 2012 R2 servers for cloning.
2. Modify all security cameras to store footage to the new servers.
3. Implement replication between servers in HS and SE (test).
4. Continue to load balance and add cameras where needed.

DISASTER RECOVERY: Replication - 2012 R2 Data Servers and DA Servers [BLaST IU 17] (Priority - Medium)

Build new Windows 2012 R2 virtual servers and utilize DFS replication to have copies of key data and desktop authority servers in the HS and SE.

Rationale

Windows 2012 R2 servers handle the newer hardware better and have better performance than the Windows 2008.

This will increase reliability and performance.

Virtualized server allows disaster recovery (redundancy at the SE building if connection / fiber to HS Data Center is down). Basically, users in Snyder can log in to their PCs if the network link to the HS is down and use the key domain controllers, da servers, and data servers.

Proposal

Use BLaST IU 17 to migrate to new servers as follows:

1. Built brand new Windows 2012 R2 servers for cloning
2. Servers will all be virtualized
3. Servers will be located in HS Data Center
4. Replicated servers will be located in SE Data Center (disaster recovery).

DISASTER RECOVERY: VLAN Snyder [BLaST IU 17] (Priority - Low)

Enhance current disaster recovery setup in Snyder specific site specific VLAN so that if the network link to the HS Data Center is down, limited functionality is available at Snyder.

Rationale

Need to come up with a solution so that most of the technology can work in Snyder if the HS Data Center fiber line is down or other systems are down.

Proposed Solution

BLaST IU 17 will help us setup a few switches with the appropriate VLAN settings and SASD staff will complete the rest of the work.

Basically, all traffic will go to the main Snyder switch and this will act as their core so that people can log in using the VMs in Snyder for domain controller, data servers, and Desktop Authority servers.

EDUCATIONAL TECHNOLOGY NEEDS ASSESSMENT: (Priority - High)

2015-2016 Needs

For 2015 there are a few top needs. First is to replace the old desktops with newer laptops in the classrooms (this will provide better performance for our students and improve reliability. Next is a comprehensive security audit to ensure that SASD's technology is secure (especially with so many security breaches occurring in the world at this time). More attention is being placed on the infrastructure (for example, new domain controllers, servers, system software – is being implemented to improve performance and reliability).

A critical need is improving our disaster recovery solution for Snyder Elementary – we have had fiber breakage to Snyder. Work with vendors to develop a more complete solution with redundant network access and also limited network usage if both network connections are down. Since so much of our technology depends on the internet (ex. PDE Online Testing) – we need to ensure that the internet is up.

Snyder Elementary needs more laptops and desktops to conduct the PA Online Assessment test using computers to complete the tests online. Grades 4, 5, and 6 will complete the testing online using computers starting this year.

2014-2015 Needs

The top need is to the old student laptops that are no longer under warranty. These laptops will be able to run all types of programs including the PA Online Assessment software. A second major need is to enhance our disaster recovery setup within the district to help deal better with fiber or major system outages.

During 2014-2015, we began the study and review of disaster recovery solution for Snyder – including a redundant fiber feed. We laid a lot of the ground work to get us moving on a solution. Much more is needed to be completed.

2013-2014 Needs

The top need is to upgrade the key lab, library, and laptops that are used by students with PA Online Assessment testing.

2012-2013 Needs

The top need identified is key infrastructure upgrades including desktop PC Operating System (Windows 7), Wireless (migrate from 3COM to Aerohive), Desktop Management (upgrade to Desktop Authority 9), Virtualization (upgrade to vSphere version 5), and Disaster Recovery (upgrade VEEAM).

2011-2012 Needs

The top need identified was the roll out of a new Student Information System which is one integrated solution including family access, PIMS, grade books, alert system, food system, learning support system (all from Skyward).

2010-2011 Needs

The top needs identified was the roll out of new network wiring, upgrade of labs, upgrade of backup system software, more on disaster recovery, more server virtualization, new HS music lab.

2009-2010 Needs

The top needs identified was the roll out of additional classroom PCs, upgrade of labs, upgrade of web filtering solution.

2008-2009 Needs

The top needs identified was the roll out of additional classroom PCs, upgrade of labs, more computer projectors, and smart tablets.

2007-2008 Needs

The top need identified was roll out of computer projectors, screens, and smart tablets.

2006-2007 Needs

The top need identified was the replacement of old teacher PCs including both elementary and high school building.

EDUCATION: Technology Webinars (Priority - Medium)

Complete various webinars on the latest technology utilized at SASD.

Rationale

Training allows SASD IT staff to follow best practices with supported technologies.

For this fiscal year, this will be a high priority due to the number of new technologies being implemented.

Action

Attend various webinars on new technologies such as Nimble SAN, iBoss Web Filtering, VEEAM, ESXi, Windows 10, Server 2012 R2, and much more.

EDUCATION: Staff Technology Training (Priority - Medium)

SASD Staff

Background

The IT Plan includes a vast amount of new technologies. In order to effectively leverage these technologies in the classroom, proper training is needed. Briefly, the following are areas that the SASD staff / teachers need training in (please note that not each staff / teacher has the same needs):

1. How to log on to our new network and MS Networking Basics (including individual network storage, student storage, and group / shared storage areas).
2. How Our New Internet Filtering Works iBoss (including procedure on how to get web sites blocked).
3. How Email Filtering Works (including procedure on how each user can delete or deliver blocked emails).
4. How to use new WAN BLaST technologies
5. Skyward tips and tricks (ex. Teachers train new teachers)
6. How to use our email – MS Outlook
7. Computer policies (including proper usage, security, viruses)
8. Removable storage (including flash drives)
9. Video projectors
10. MS PowerPoint (how to leverage this in your classroom teaching)
11. Scanning
12. Saving files in the right format
13. Searching the internet effectively
14. MS Office
15. Smart Board training
16. Utilizing cameras, recorders, with PC's
17. How to publish materials to school web site

Proposed Solution

To provide for the Teacher training, a variety of mechanisms will be used not limited to:

1. Continue to deliver Technology Tips that detail how to complete common tasks with respect to SASD technology
2. Technology books
3. In house training (ex. train the trainer)
4. External training (including external companies and colleges)

FINANCIALS: Budget Breakdown Financials (Priority - High)

Budget

Background

The IT Plan is focused on excellent stewardship of tax payer's dollars. By utilizing the Technology Needs assessment, the money is focused on the district's needs. As part of the accountability of the financials, a detailed report is presented to the school board IT Committee to review. Each purchase in the IT Budget is documented in this financial report. Additionally, the IT department is committed to constantly review financial purchases and negotiating with each vendor to get the most technology for each dollar spent. *Good stewardship consists not only of getting a good price but buying technology that is reliable, meets the needs of the SASD, and is financially cost effective to support in the long run.*

INTERNS: College Internship Program [Currently Enrolled] (Priority - High)

Purpose: The College Student / Internship Program provide the following for SASD:

1. Needed help to complete the work of the annual IT Plan at a very reasonable cost. These students have studied specific disciplines such as business, information technology, engineering, etc. That can be applied to the needs of the IT Plan (expertise at a reasonable cost).
2. Provides on the job experience for college students.
3. Requirement: Student must be currently enrolled in an accredited college or university while working at SASD.
4. Results: Last summer (2013) 2 college students participated in the college student / internship program. The college student was attending Mansfield University and the second student is attending RIT. They are still working during the summer and breaks at SASD.

Work Projects

College students will work on the following IT Plan Items (please note that college students will work on any items from the SASD IT Plan that we need help on. For more information, please see the SASD IT Plan).

1. LAPTOPS: Setup and image new laptops that will replace the old units.
2. PC IMAGES: Build PC images (for this year the focus is on new Windows 7 / 8 images – that include the standard suite of SASD programs).
3. SERVERS: Build Physical / VMWare servers (upgrading from older Server 2008 to 2008 R2 or 2012 R2).
4. PRINTERS: Setup, Test, and Install new HP MFP Printers in Snyder.
5. NETWORK CLOSETS: Add new network wire and rewire and organize network closets
6. APC: Add additional and replace APC units.
7. INVENOTRY: For all SASD technology – continue to document our inventory and implement our standard naming convention for each PC (including labeling each PC appropriately).
8. TESTING PLANS: Develop testing plans & test the PC's.
9. TECH TIPS: Create and modify Technology Tips on common activities for staff and teachers.
10. SOP (Standard Operating Procedure): Document how the technology is setup, configured, and managed.
11. RECYCLE: Recycle / properly dispose of old / broken technology equipment.
12. TROUBLESHOOTING: Research and troubleshoot problems.
13. PHYSICAL SETUP: Set up computer desks / work areas (including new classroom desks and new labs).

14. RESEARCH: Test new technologies / new versions of software
15. SECURITY CAMERA: Work on computerized security camera systems (configuration and optimization)
16. HELP: Provide help for the staff during the summer with the new technologies being rolled out.
17. SECURITY AUDIT: Conduct a security audit with various test student / staff / teacher accounts to ensure that the security is set up properly.
18. MISC: Other duties as assigned (from the IT Plan).

INVENTORY: Conduct 100% Inventory [PDE PATI] (Priority - Medium)

Complete and enter into Technology Database a 100% Inventory.

Rationale

To ensure all district technology is properly accounted for. This is required for PDE PATI survey annually.

Action

Modify and enhance Tech Inventory Database (ex. Include serial numbers in tech inventory).

Conduct district wide inventory of technology.

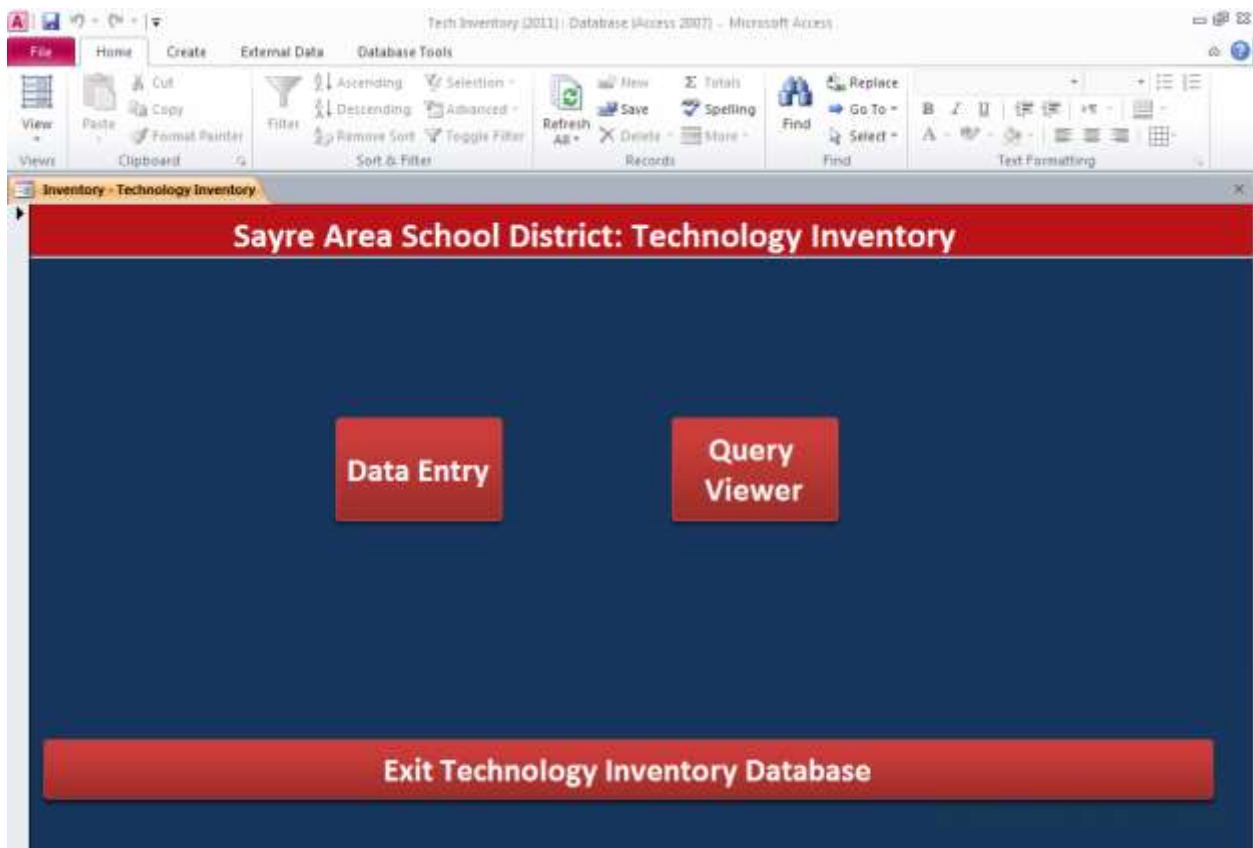


Figure 1- Tech Inventory Database

LAPTOP: HS Krall Laptops– [Additional Laptops] (Priority - High)

Setup and implement 9 additional laptops for HS Krall cart (requested by Mr. Krall).

Rationale

Teacher requested 9 additional laptops for the HS Krall Science cart so that all students can use a laptop (currently only have 15 laptops) for a total of 24 laptops.

This laptop cart can also be used for the PA Online Assessments.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart for the additional 9 laptops.

LAPTOP: HS Jennings Laptops– [Additional Laptops] (Priority - High)

Setup and implement 4 additional laptops for HS Jennings classroom.

Rationale

Teacher requested additional laptops for the classroom so that they can be used in conjunction with the Accelerated Reader and Star Reading programs.

Action

Image and setup all laptops (so that they have the latest software).

Setup additional 4 laptops for a total of 8 laptops.

LAPTOP: HS Powers Grade Laptops – [New Cart] (Priority - High)

Setup and implement new laptop cart for HS Powers Cart (recommended by HS English Dept Head).

Rationale

Teacher / principal requested for student use in the Powers classroom.

This laptop cart can also be used for the PA Online Assessments.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart.

Recycle the few student Dell Optiplex 740 desktops.

LAPTOP: SE Kindergarten Grade Laptops North – [Additional Laptops] (Priority - High)

Setup and implement 14 additional laptops for SE Kindergarten North cart (recommended by Snyder principal).

Rationale

Teacher requested 14 additional laptops for the SE Kindergarten cart so that all students can use a laptop (currently only have 10 laptops) for a total of 24 laptops.

This laptop cart can also be used for the PA Online Assessments.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart for the additional 14 laptops.

LAPTOP: SE Kindergarten Grade Laptops South – [Additional Laptops] (Priority - High)

Setup and implement 14 additional laptops for SE Kindergarten South cart (recommended by Snyder principal).

Rationale

Teacher requested 14 additional laptops for the SE Kindergarten cart so that all students can use a laptop (currently only have 10 laptops) for a total of 24 laptops.

This laptop cart can also be used for the PA Online Assessments.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart for the additional 14 laptops.

LAPTOP: SE First Grade Laptops – [New Cart] (Priority - High)

Setup and implement new laptop cart for SE First Grade POD (recommended by Snyder principal).

Rationale

Teacher / principal requested for student use in the first grade POD.

This laptop cart can also be used for the PA Online Assessments.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart.

Recycle the few student Dell Optiplex 160 desktops.

LAPTOP: SE Second Grade Laptops – [New Cart] (Priority - High)

Setup and implement new laptop cart for SE Second Grade POD (recommended by Snyder principal).

Rationale

Teacher / principal requested for student use in the Second grade POD.

This laptop cart can also be used for the PA Online Assessments.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart.

Recycle the few student Dell Optiplex 160 desktops.

LAPTOP: SE Third Grade Laptops – [New Cart] (Priority - High)

Setup and implement new laptop cart for SE Third Grade POD (recommended by Snyder principal).

Rationale

Teacher / principal requested for student use in the Third grade POD.

This laptop cart can also be used for the PA Online Assessments.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart.

Recycle the few student Dell Optiplex 160 desktops.

LAPTOP: SE Fourth Grade Laptops – [New Cart] (Priority - High)

Setup and implement new laptop cart for SE Fourth Grade POD (recommended by Snyder principal).

Rationale

Teacher / principal requested for student use in the Fourth grade POD.

This laptop cart can also be used for the PA Online Assessments. (this will be the 2nd cart for Fourth Grade used not just for testing but for remediation small groups (ex. 6 students) per Pod.

Action

Image and setup all laptops (so that they have the latest software).

Setup laptop cart.

Recycle the few student Dell Optiplex 160 desktops.

MOBILE: Apple / Android / Windows Mobile Devices Management – [Fine Tune] (Priority - Low)

Continue to research and implement new Apple iPad / Android / Windows Mobile **Management** technology.

Rationale

Using technology for limited areas like learning support.

Proposal

Implementing a new technology like the Apple iPad / Android Mobiles devices will require a lot of work compared to rolling out Windows PCs (from our experience this year).

A whole new management infrastructure is being researched. Currently we have implemented CISCO's Meraki MDM – it addresses some of the needs (limited by the type of device security).

The cost will include not only the mobile devices, but also all of the software and technology needed to manage this equipment.

Went to Apple MDM training and rollout, management and security was covered. Ongoing analysis of how to leverage mobile technology (looking to promote Windows Tablet technology for future devices do to support, feature, and management advantages).

NETWORK: Closet Migration HS 129 [Migration] - (Priority - High)

Migrate and remove the network closet in HS 129.

Rationale

Migrate the closet in HS 129 – it is in a small room within a room that has inadequate cooling and the unit is not secured.

Proposed Solution

Migrate the closet in HS 129 to a main closet in HS 123.

Unit will then have proper cooling and will be secured.

NETWORK: Closet Migration HS 258 [Migration] - (Priority - High)

Migrate and remove the network closet in HS 258.

Rationale

Migrate the closet in HS 258 – it is in a classroom that has inadequate cooling and the unit is not secured.

Proposed Solution

Migrate the closet in HS 258 to a main closet in HS Data Center.

Unit will then have proper cooling and will be secured.

Convert Patch Panels to front patch panels in HS Data Center (bring Blue cabinet to HS Data Center).

NETWORK: Migration HS 252 Lab [Migration] - (Priority - High)

Migrate and rerun the network wires for HS 252 Lab to the HS Data Center.

Rationale

Migrate and rerun the network wires for HS 252 Lab to the HS Data Center due to wiring maintenance issues and that the lab is right next to the data center (HS 258 Network closet is being migrated).

Proposed Solution

Migrate the HS Lab 252 to the HS Data Center.

Installed network boxes in HS 252 next to power outlets (remove the long runs of patch cables across the lab tables).

Unit will then have proper cooling and will be secured.

Convert Patch Panels to front patch panels in HS Data Center (bring Blue cabinet to HS Data Center).

NETWORK: Closet Migration HS Hickey [Migration] - (Priority - High)

Migrate and remove the network closet in HS Hickey.

Rationale

Migrate the closet in HS Hickey –has inadequate cooling and the unit is not secured.

Proposed Solution

Migrate the closet in HS Hickey to a main closet in HS Data Center.

Unit will then have proper cooling and will be secured.

Convert Patch Panels to front patch panels in HS Data Center.

NETWORK: Closet Patch Panel Cleanup HS 123 [Patch Panel] - (Priority - High)

Clean up the patch panels in HS 123 Network Closet.

Rationale

Move all the patch panels in this closet from the back to the front of the closet (much easier to maintain and troubleshoot).

Proposed Solution

Convert Patch Panels to front patch panels and use short jumper wires to connect to the switches.

NETWORK: Closet Patch Panel Cleanup HS Science [Patch Panel] - (Priority - High)

Clean up the patch panels in HS Science Network Closet.

Rationale

Move all the patch panels in this closet from the back to the front of the closet (much easier to maintain and troubleshoot).

Proposed Solution

Convert Patch Panels to front patch panels and use short jumper wires to connect to the switches.

NETWORK: Closet Patch Panel Cleanup HS Basement Cage [Patch Panel] - (Priority - High)

Clean up the patch panels in HS Basement Cage Network Closet.

Rationale

Move all the patch panels in this closet from the back to the front of the closet (much easier to maintain and troubleshoot).

Proposed Solution

Convert Patch Panels to front patch panels and use short jumper wires to connect to the switches.

NETWORK: Network Equipment Migration HS Cafeteria [Migration] - (Priority - High)

Migrate and remove the network equipment in the HS Cafeteria.

Rationale

Migrate the network equipment in the High School Cafeteria. It is mounted on a board above a door that has inadequate cooling and the unit is not secured.

Proposed Solution

Run 6 network wires from the HS Science closet to the HS Cafeteria and install network wall boxes.

Unit will then have proper cooling and will be secured.

NETWORK: HS Music / Keyboard Lab [Wiring & Laptops] - (Priority - High)

Upgrade and properly setup the HS Keyboard / Music Lab with respect to wiring and laptops.

Rationale

Current music lab has old wire just running along the floor from the network closet to old desktop computers. The wiring is difficult to maintain and error prone. The desktop computers are slow and underpowered for the keyboard software.

Proposed Solution

Rewire High School music lab so that network and special keyboard controller network wire are permanently wired along room with network outlook boxes so that they are easy to hook up and manage.

Replace old desktops with laptops so that properly powered units are used to power the keyboard software.

Conduct lots of testing and document all usage procedures with Tech Tips.

NETWORK: Fluke Fiber and Main Copper Testing (Priority - Medium)

Continue to test our main network connections.

Rationale

To test our main network connections to the various network closets and buildings.

Proposed Solution

Using our Fluke equipment, test our main fiber and copper network connections for any performance issues.

Yearly complete the following:

1. Tested our fiber feed between High School Data Center and Snyder Elementary building (no problems found).
2. Tested our fiber closet feeds (no problems found).
3. Tested key copper feeds (no problems found).

NETWORK: Juniper Switch Software [Upgrade] (Priority - High)

Upgrade our Juniper Switch solution to the latest software versions.

Rationale

Upgrade to the latest software on our Juniper Switches to improve performance, reliability, and security.

Proposed Solution

Schedule and upgrade Juniper switches after hours to the latest version.

Completed the following on a yearly basis in the summer:

1. Upgrade all Juniper switches after hours to the latest version and rebooted all switches.
2. Test switches for errors and any problems.

NETWORK: Upgrade Juniper Switch [Athens WAN] (Priority - High)

Upgrade our 3200 Athens WAN switch to a 4200 switch.

Rationale

Upgrade our current 3200 Athens WAN switch to a 4200 so that we can have dual power supplies (so this switch can be powered by 2 APC UPS units – thus allowing us to replace batteries or APC UPS devices with downtime.

Proposed Solution

Schedule and replace switch using Jon P from BLaST to complete the work.

Completed the following on a yearly basis in the summer:

1. Replace switch during agreed upon Athen's downtime.
2. Test switches for errors and any problems.

NETWORK: Web Filtering [Fine Tune] – iBoss (Priority - Medium)

Fine Tune new web filtering solution from iBoss per product switch from BLaST IU17.

Rationale

We replaced our old web filtering solution with the iBoss solutions for FY 2014-2015. The new product has more functionality to handle our internet filtering needs – thus we need to spend time fine tuning this new product.

Proposed Solution

Schedule / allocate time to better fine tune our iBoss solution including but not limited to:

1. Implement student violation reports (auto send to appropriate SASD parties).
2. Implement staff / teacher violation reports (auto send to appropriate SASD parties).
3. Research and implement features that help with virus blocking
4. Research and fine tune safe web searching
5. Research and implement Toolbars blocking (source of a lot of viruses and spyware)
6. Research and implement better integration with our Aerohive Wireless solution

More information on the new product is located at:

http://www.ibosswebfilters.com/ibwf_overview.html

NETWORK: Wireless [Additional Access Points] - (Priority - High)

Upgrade our coverage within SASD with additional access points.

Rationale

Install additional access points in SASD for areas that need additional bandwidth.

Proposed Solution

Install new Access Points in the following areas that need more coverage / bandwidth:

1. HS Classroom 015 Krall – for coverage with his laptop cart.
2. HS Classroom 161 Kemp – for coverage with her laptop cart.
3. HS Classroom 128 Selleck – for coverage with student laptops (intermittent coverage issues currently).
4. HS Principal Office – for coverage with SASD laptops and mobile devices (intermittent coverage issues currently).
5. HS Business Office – for coverage with SASD laptops and mobile devices.
6. HS Cafeteria – for coverage with SASD laptops and mobile devices (need more bandwidth).
7. SE POD 5 – for additional bandwidth for PA Online Testing.
8. SE POD 6 – for additional bandwidth for PA Online Testing.

All of these projects require various additional network wiring run to each access point.

NETWORK: Wireless [BYOD] - (Priority - High)

Modify our wireless to give bandwidth priority to SASD devices versus BYOD devices.

Rationale

Bandwidth for SASD devices needs to have a bandwidth priority versus BYOD devices.

Proposed Solution

Research the various options to create this solution:

Divide wireless into SASD and BYOD.

Throttle BYOD.

Prioritize higher SASD wireless.

NETWORK: Wireless [High School Athletic Field] - (Priority - High)

Implement & Fine tune our Aerohive wireless solution cover the High School Athletic field.

Rationale

Implement wireless solution on our High School Athletic field. This will provide wireless access to the entire football field and can be used with an Aerohive Wireless Access Points to live stream events such as the high school graduation utilizing our LifeSize BLaST IU17 streaming solution.

Proposed Solution

Complete the following:

1. Research and order needed Aerohive equipment (external equipment).
2. Contracted BLaST IU 17 to mount equipment on outside of High School Press Box.
3. Optimize all configurations on the server and access points.
4. Test with video conferencing equipment.

Fine Tuning

Complete the following:

1. Research and test the coverage.
2. Fine tune the coverage.
3. Work on off hour's security.
4. Document how to use live streaming on football field.

NETWORK: Wireless [Software Upgrade] - (Priority - Medium)

Upgrade our Aerohive wireless solution to the latest software versions.

Rationale

Upgrade to the latest software on our Aerohive Wireless Access Points and VM server that manages it.

Proposed Solution

Schedule and upgrade Aerohive.

Complete the following yearly:

1. Upgrade the Aerohive VM server to the latest release.
2. Upgrade all Aerohive Wireless Access Points.
3. Optimize all configurations on the server and access points.

PRINTERS: HS Replacement HP 400 MFP [Replacement] (Priority - Medium)

Perform maintenance / replacement / reallocation of SASD printers.

Rationale

High School Megan Jarvis Learning Support will her old printer replaced with new HP 400 MFP printer. Current printers are old and need replacement. New printers are much faster and cost effective to use. New printers allow for network scanning and copying which is great for Learning Support.

Proposed Action

Recycle old printer. Install new printer in Megan Jarvis room.



Figure 2 - Sample HP 400 Printer Management Screen

PRINTERS: SE Replacement HP 400 MFP [Replacement] (Priority - Medium)

Perform maintenance / replacement / reallocation of SASD printers.

Rationale

Snyder Elementary will have its old Dell 3335 MFP printers replaced with new HP 400 MFP printers. Current printers are old and need replacement. New printers are much faster and cost effective to use. New printers allow for network scanning.

Proposed Action

- 6th Grade POD
- 4th Grade POD
- 3rd Grade POD
- 2nd Grade POD
- 1st Grade POD
- Kindergarten South
- Ready 4
- Library
- Reading



Figure 3 - Sample HP 400 Printer Management Screen

PRINTERS: Replacement Color MFP [Replacement] (Priority - Medium)

Replace various color printers with new HP OfficeJetPro printers.

Rationale

The HP OfficeJetPro printers have new print technology that prints color for half the cost and prints the output faster.

Proposed Action

Implement new printers for the following areas:

SE Principal Office
HS Principal Office
SE Art Room
HS Art Room
SE Lab
HS Business Office
HS Tech Office



Figure 4 - HP Officejet Pro Sample Management Screen

PRINTERS: SASDHPPMNEW – Manage Printer Settings (Priority - High)

Create a HP Jet Admin Server (SASDHPPMNEW) to manage printer settings.

Rationale

To manage the print settings so that optimal settings can be put in place to reduce toner / supplies.

To be able to quickly monitor and update software for HP printers at SASD.

Proposed Action

Create Server

Determine optimal print settings per printer

Implement optimal print settings for select HP Printers (ex. HP 400 MFP) – in this example set print quality to draft and print density to 1 and economode off.

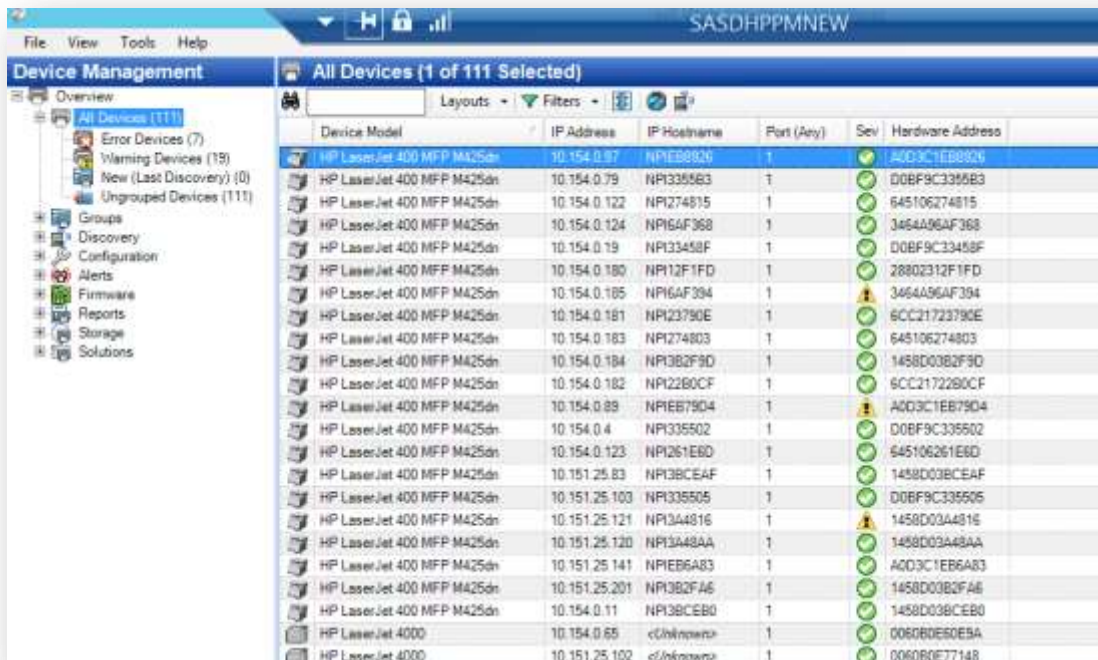


Figure 5 - Sample HP Web Jet Admin Server Management

RECYCLING: Old Technology [Optiplex 740's and Optiplex 160's] (Priority - Medium)

Annual Recycling

Continue to recycle old equipment that is no longer utilized – for this year, Dell Optiplex 740's and Dell Optiplex 160's plus other broken / old equipment.

- This will continue on an annual basis to keep the work manageable.
- This year we will recycle via Upcycle Recycling.
- Serial / product identification will be maintained for recycled SASD IT recycled technology.
- We will conduct 2 phases of recycling – one in the spring and one in the summer.

SECURITY: Security Camera [2012 R2 & Fine Tuning] – Additional Cameras (Priority - High)

Rationale

We need the following additional cameras to more securely monitor our facilities:

1. Additional cameras at the High School.
2. Additional cameras at the Snyder Elementary School.
3. Need to replace any cameras that are no longer working properly.
4. Migrate cameras to 2012 R2 Server to improve performance and reliability.

Proposal

1. For some camera installations, may need to contract with BLaST IU17 to add additional cameras.
2. Review and balance out the storage of the cameras.
3. Upgrade the Mobotix software to the latest release.
4. Upgrade the camera storage servers to 2012 R2 Server and use replication to store a copy in the HS Data Center and another copy in the SE Data Center
5. Fine tune the cameras for better capturing and storage

SECURITY: External Assessment [iSecure] (Priority - High)

For fiscal year complete an internal and external security audit.

Here is what we plan to implement in 2015-2016:

1. Conduct a 3rd party security assessment using the firm iSecure (<http://www.isecurenet.net/>)
2. From their security assessment, address the key findings.



SECURITY: Antivirus ThirtySeven4 EPS 6.0 – [Upgrade] to Latest Version (Priority - High)

Upgrade to the latest version (EPS version 6.0).

Rationale

Need to upgrade our ThirtySeven4 program for the following reasons:

1. Easier to manage and deploy
2. Systems perform faster
3. Better protection.

Proposed Solution

1. Implement new ThirtySeven4 solution to all PCs and Servers.
2. Include ThirtySeven4 software on newly imaged PCs.

More information here: http://www.thirtyseven4.com/eps_new_features_6.html

New Console (Main) Dashboard

The enhanced Dashboard contains new site wide statistical listings such as: Status view, Security View and Compliance View. These new listings will help Administrators easily and visually retrieve the information (i.e. Hardware/Software changes, Top Attacks, Top Blocked Sites, Top Offending Users, etc.) they need to get an accurate and overall picture of the Network Health.

Security: Picture ID – [Fine Tune] Procedures (Priority - Low)

Rationale

Continue to take student pictures for fiscal year and add them into the Student Information System (Skyward). This will allow verification of students with their pictures.

Possibly research and expand utilization (elementary) and research using Student Picture ID cards with the cafeteria system and the library system.

Proposed Action

Create standard procedure for when to take new pictures for HS Students.

Create standard procedure for how to handle (charge students) for missing picture IDs.

Create standard procedure for the handling of staff IDs.

Create new standard for student and staff ID cards (layout and design) via Skyward / Crystal Reports.



Figure 6 - Sample Picture ID

Standard ID Usage

Use Skyward ID (Other ID) for Skyward, Library, and Cafeteria.

Fine tune the utilization (upgraded ID printers to new hardware).

SECURITY: Deep Freeze [Limited] (Priority – Low)

Continue to research and implement Deep Freeze on select critical PCs.

Rationale

Clean Slate and /or Deep Freeze allows PCs to reboot and restore to their original state. This will help with student PCs that might be compromised.

Proposed Plan

Research and implement this solution in the various High School areas after imaging select PCs.

Implement in problem areas consisting of the teacher lab PCs.

SERVER: Balance out work load of all VM Servers [Fine Tune / Ongoing] (Priority - Medium)

Balance out all of our virtual servers so that the work load improves the VM server performance (example “the log in process faster”).

Rationale

We went from 20 physical servers to 10 physical servers and need to balance out the virtual servers to get the best possible performance and reliability.

Complete the following on a yearly basis:

1. Moved all VM data servers to unique physical servers.
2. Moved all VM security camera storage servers to unique physical servers.
3. Moved remaining servers to physical servers based on work load.
4. Continue to monitor and balance out servers.
5. Continue to adjust network (each physical server has 4 network cards).
6. Continue to adjust RAM and resources and move servers

SERVER: CAD 2008 R2 Servers for new version of AUTOCAD Server (Priority - Low)

Build new Windows 2008 R2 servers runs the licensing for our new version of AUTOCAD.

Rationale

Need to implement new virtual licensing server for CAD 2017 desktop licensing.

Proposal

Complete the following:

1. Built brand new Windows 2008 R2 servers for cloning.
2. Using the new R2 server clone, build a new version of the AUTOCASD server for the CAD program licensing for CAD 2017.
3. Test performance for both online and offline licensing.

SERVER: [Cloud] Access to SASD Data Servers (Priority - Low)

To enable cloud based access to our SASD Data Servers so that mobile devices.

Rationale

1. Allow mobile devices through a web browser to access our SASD Windows Server data files (ex. iPad, Android, Windows Phone, etc.).
2. Keeps storage in one spot for staff, teachers, and students.
3. Easier to manage and audit while extending our data storage to any device that has web access.

Proposed work

Completed the following:

1. Create server that allows access (ex. Novell Filr)
2. Setup desired access using existing active directory security.
3. Setup web page on our web site for the main access.
4. Test.
5. Document –SOP (Standard Operating Procedure)
6. Document – Tech Tip.

SERVER: Desktop Management – [Upgrade] Dell Desktop Authority (Priority - High)

Dell's Desktop Authority has been in use at SASD for many years. The following features are being utilized:

1. Power Saving – using Desktop Authorities (DA) inactivity features the district has continued to save money @ \$10,000 in electric during this fiscal year.
2. Security – locking computers – all student and staff PCs now lock when they have inactivity (each group has different settings)
3. Shortcuts – all computer shortcuts are managed by DA
4. Printers – all computers have the appropriate printers downloaded to the appropriate PC and the appropriate default printer set
5. Drive Mappings – all computers have the appropriate drive mappings set and managed by DA
6. Software installation (ex. Used to install the latest version of the PDE Exams).
7. Secured Remote Control – use secured DA remote control
8. Reporting – automating usage and security reports to quickly monitor SASD network activity
9. Reporting – auditing computer hardware (i.e. memory configurations)

More information can be found at their website at: <http://software.dell.com/products/desktop-authority-management-suite/>

Proposed Enhancements

Continue to enable and implement more DA features including but not limited to:

1. Upgrade DA from version 9.1.1 to version 9.2 newer release (please note that this company is now part of Dell).
2. 9.2 is needed to allow us to upgrade our Active Directory to 2012 R2.
3. Implement new features.
4. Implement more reporting and utilization features.
5. Training – attend various DA training sessions to learn the Best Practices of managing with DA.

Upgrade Plan

1. Create a brand new 2012 R2 Server (SASDDA)
2. From the existing DA 9.1.1 server (SASDDAR2), install SQL Management Studio & Backup the SQL SASD Configuration Files
3. Install SQL 2012 R2 Express on SASDDA
4. Import SQL backup into SASDDA SQL
5. Install Desktop Authority 9.2 on SASDDA
6. Configure SASDDA to not save files to SASDDA
7. Configure SASDDAR2 to not rollout DA Client only via slogic.bat
8. Configure SASDDAR2 to not rollout DA Client only via newslogic.bat

9. Change IT user accounts to use newslogic.bat
10. Test with IT user accounts and fix any problems
11. Go live – modify SASDDAR2 to now use Group Policy to rollout new DA client
12. Fix any problems

SERVER: DHCP 2012 R2 Server [Upgrade & Fine Tune] (Priority - High)

Upgrade & Fine tune 2012 R2 DHCP servers.

Rationale

To fine tune the newer management features of DHCP that come with 2012 R2.

To decommission the old 3 physical domain controllers that runs the old DHCP.

The newer DHCP allows for better management, faster performance on the server end, and support for one DHCP scope. The old system had the DHCP IP addresses broken into 3 different scopes on 3 different servers. Now one server gives out all DHCP IP address (these addresses are needed to access our network for Desktop PCs, SASD Laptops, and non SASD devices such as smart phones). There will be a 2nd DHCP server that is a replica that will take care of DHCP requests if the first server fails.

Proposal

Complete the following:

1. Decommission the old DHCP servers.
2. Fine tune the scopes for DHCP (lease times etc.).
3. Test the redundancy (SE DHCP server).
4. Test and document.

SERVER: ACRONIS 5 Desktop Deployment Management [ACRONIS 5] (Priority - High)

Build new Windows 2012 R2 SCCM server to manage zero touch deployment for new computer images utilizing ACRONIS 5.

Rationale

ACRONIS will allow zero touch deployment of new computer images – thus saving much time on upgrading computers to new software images.

Proposal

Complete the following:

1. Built brand new Windows 2012 R2 servers with ACRONIS 5 for the HS VLAN.
2. Built brand new Windows 2012 R2 servers with ACRONIS 5 for the SE VLAN.
3. Using the new ACRONIS 5 servers - test, document and implement the new imaging solution.
4. Develop SOP (Standard Operating Procedure) for building and rolling out images utilizing ACRONIS 5.

SERVER: MS Licensing 2012 R2 Server [Fine Tune] (Priority - High)

New Windows 2012 R2 servers run the MS Licensing – need to decommission old 2008 licensing server.

Rationale

To fine tune the newer management features of MS Licensing that come with 2012 R2.

To decommission the old 2008 licensing server.

Proposal

Complete the following:

1. Decommission old 2008 licensing server.
2. Utilize KMS licensing for SASD location PCs (network licensing).
3. Utilize MAK licensing for SASD PCs that are in and out of the SASD campus (individual license keys).
4. Test and document.

SERVER: Print Servers – Upgrade to 2012 R2 Server [Upgrade & Fine Tune] (Priority - High)

Implement new MS 2012 R2 Print Servers.

Rationale

MS 2012 R2 Print Servers support both 32 Bit and 64 bit operating systems (we are migrating to 64 bit windows).

MS 2012 R2 Print Servers have more advanced management features than the old 2008 print servers (ex. Can reboot server without having users having to log out and back in).

Consolidate from 7 print servers to just 2 print servers due to better performance.

Proposal

Complete the following:

1. Decommission old 2008 printer servers (7).
2. Migrate all printers to 2012 R2 print servers (2).
3. Test and document.

SERVER: Skyward Student Information System – [UPGRADE 2012 R2] (Priority - High)

For this fiscal year we need to continue to leverage more of the Skyward system to help our district become more efficient with the management of our student information.

Desired Outcomes

1. Improve productivity (ex. Less time spent on PIMS mandated requirements)
2. Improve communication to student / parent (ex. Home access to information)
3. Improve the efficiency of managing student information.

Proposed work

Completed the following:

1. Migrate Server to Server 2012 R2 with support from Skyward (for better reliability and performance).
2. Performed all Skyward major updates.
3. Continue to perform minor updates.
4. Optimized server with help of technical support.

SERVER: Solid State Drives – [UPGRADE] (Priority - High)

Implement new solid state drives for a few high utilization servers.

Desired Outcomes

Improve performance for high utilization servers such as:

1. Domain Controllers.
2. Desktop Authority.
3. Data Servers.
4. Log on processing servers.

Proposed work

Completed the following:

1. Research hardware with Solid State Drives for Dell Server
2. Select and order Servers
3. Setup Servers with VMWare for virtual servers
4. Setup one Physical Domain Controller
5. Migrate VMs to new VM Physical servers

SERVER: VEEAM Archiving / Journaling the Exchange Server 2013 [2012 R2] (Priority - Medium)

Continue to maintain / implement VEEAM Archiving / Journaling for our new MS Exchange Server 2013.

Rationale

Need to archive MS Exchange 2013 Server Emails using VEEAM utilizing a 2012 R2 Server.

Proposed work

1. Archive old email to SASD archive server – 2012 R2 Server.
2. Set up email rules to auto create archives
3. Use VEEAM to backup SASD archive server

SERVER: ZENOSS Monitoring Network Systems Down [Reliability] (Priority - Medium)

Implement a ZENOSS Monitoring server so that Technology gets emailed if any of the critical network devices is down.

Rationale

To implement a monitoring system of critical SASD Technology and get notified via email if any of these systems are down.

Proposed work

1. Create Linux Server
2. Install ZENOSS
3. Configure ZENOSS for critical network devices such as switches, servers, etc.

SERVICES / CONSULTING: BLaST IU17 [Disaster Recovery / Infrastructure] (Priority - High)

BLaST IU17

Background

Sayre Area School District has many major projects for Fiscal Year 2015-2016 Part of any successful plan, is to include not only the correct technology, but the necessary people skills and resources to make the plan successful.

Proposed Solution

Contract BLaST IU17 on a yearlong contract where most of the hours will be used during the spring & summer by contracting for an annual contract (48 days) the district will save on per day costs and will have available the necessary resources to help make this IT Plan successful.

BLaST IU17 will help us with the following projects:

1. DISASTER RECOVERY: 2012 R2 Data Servers and DA Servers Replication
2. DISASTER RECOVERY: 2012 R2 Virtual Domain Controllers
3. DISASTER RECOVERY: 2012 R2 DHCP Servers (implement one consolidated scope)
4. DISASTER RECOVERY: Backup Network Connection [BLaST IU 17 / Outside Vendor / Empire]
5. DISASTER RECOVERY: Infrastructure DR / SAN 4 Parts
6. DISASTER RECOVERY: VLAN Snyder [BLaST IU 17]

SOFTWARE: Open Source [Ninite Purchase] (Priority – Medium)

Background

SASD continues to leverage Open Source software for improving the utilization of the technology within the district. Open Source software is free to use with no licensing fees.

Proposed Solution

Install the Open Source software on all SASD PC's the following software (many of these programs are already on the PCs but we will **upgrade** the software to the latest release – this will be available on new PCs or PCs that need the new software – only these PCs will be re-imaged).

Purchase the professional version of Ninite so that we can quickly update Open Source software without reimaging.

Ninite Programs to Install

Go to www.ninite.com and install the following:

Web Browser

None – just Internet Explorer



Messaging

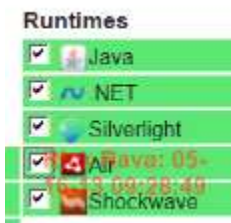
None



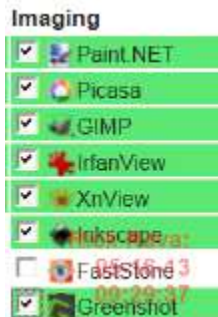
Media



Runtimes



Imaging



Make sure to uninstall FastStone if installed.

Documents



Security

None

Security

- Essentials
- Avast
- AVG
- Malwarebytes
- Ad-Aware
- Spybot 2
- Avira
- Super

File Sharing

None

File Sharing

- Torrent
- eMule

Other

None

Other

- Evernote
- Google Earth
- Steam
- KeePass 2
- Everything
- NVDA

Utilities

Utilities

- TeamViewer
- ImgBurn
- Auslogics
- RealVNC
- TeraCopy
- CDBurnerXP
- TrueCrypt
- Revo
- Launchy
- WinDirStat
- Glary Rava
- InfraRecorder
- Classic Start

Compression

Compression

- 7-Zip
- PeaZip 3
- WinRAR

Developer Tools



Online Storage

None



Complete the following:

1. Upgrade the open source software on all PCs that were reimaged.
2. Research Ninenite professional product that automatically upgrades multiple PCs to the latest version.

SPECIAL PROJECTS: Snyder Student Pictures Update (Priority - Medium)

Update Snyder student pictures.

Rationale

To have more recent photos of Snyder students in our Skyward student information system.

Proposal

Complete the following:

1. Smith photography takes new pictures of Snyder students.
2. Import new pictures into Skyward

SPECIAL PROJECTS: Network SASD Copiers [Network & Fine Tune] (Priority - Medium)

Network SASD Copiers so that SASD computers can directly print to the copier.

Rationale

1. To allow SASD staff to print via our network to these copiers (to use their advanced printing features).
2. To allow SASD staff to scan documents to network storage.
3. To allow Eastern (copy vendor) to monitor our copier usage and auto order supplies.

Proposal

Complete the following:

1. Fine tune the utilization of the various SE and HS copiers.
2. Implement scanning where needed.

SUPPORT: Technology [Replacement] Parts / Equipment (Priority - Medium)

Continue to stock technology replacement parts / equipment.

Rationale

Due to the large amount of technology being utilized in the SASD, we need to ensure that appropriate technology replacement parts / equipment are readily available.

Proposed Action

1. Purchase spare parts including keys for the keyboard, spare batteries, and other components not covered under warrantee.
2. Have at least 1 spare teacher PC for all 2 campuses (SE and HS) already imaged and ready to go.
3. Have at least 1 spare student PC (for each type of machine for each lab)
4. Have at least 1 spare POE switch
5. Have at least 1 spare switch.
6. Review and build of inventory of other spare parts including mice, monitors, etc. for equipment that is no longer under warrantee.
7. Have at least 1 spare Lenovo laptop cart (none of our Lenovo carts have a service agreement – too old).
8. Decommission broken computers and save parts to fix old units not on warrantee.
9. Replace Lenovo carts with new Dell carts and save old Lenovo's for replacements (units are not on warrantee).
10. Order and stock high use technology items so that when items fail, they can be quickly replaced.

TEACHER / STAFF REQUESTS: (Priority - Medium)

Snyder Principal and High School Principal will gather and review with the Director of Technology the submitted teacher requests. All requests are limited by the amount of funding and resources in the technology department.

Review the utilization of the technology – for example:

1. Read Naturally
2. Accelerated Reader
3. Study Island
4. Discovery Streaming
5. CAD
6. Minitab
7. Maple

Classroom Old Desktops

Requested Laptops:

1. Replace old classroom desktops (not laptop carts) with laptops for the classroom student computers.

Cochi Pilot Test Tablet / Interactive Solution

Kara Cochi has requested a tablet / interactive solution for her classroom.

SE First, Second, Third, Fourth Grade Laptop Carts

Requested New Laptops:

1. If funding is available, purchase cart (if cart is purchased, desktops will be removed and not replaced).
2. 24 laptops for full coverage of students (for each POD noted).
3. Current setup has very old a slow desktops that do not run adequately the software that they need to use.
4. Current setup does not have enough computers to run PA Online Testing.

HS Powers Laptop Cart

Requested New Laptop Cart:

1. Use to integrate Accelerated Reader and Star program in classroom.
2. If funding is available, purchase cart (if cart is purchased, desktops will be removed and not replaced).
3. 24 laptops for full coverage of students.
4. Current setup has very old a slow desktops that do not run adequately the software that they need to use.
5. Current setup does not have enough computers to run PA Online Testing.

HS English Department Laptop Headphones

Requested New Headphones:

1. Use to integrate Accelerated Reader and Star program in classroom.
2. Purchase 100 Headphones.

HS English Department Accelerated Reader, Star Program , 360

Requested continue to use Accelerated Reader, Star Program and 360 Program

1. Continue to integrate the Accelerated Reader and Star program in English Department Classrooms.
2. Work with new Reading teacher to use in classroom.
3. First year benchmarks – worked to get students interested in reading.
4. Reading has greatly increased in Powers, Jenkins, and in the Library.
5. 360 Program is aligned with PA State tests.
6. Department chair Amanda Jenkins will email HS Principal on plans and current / desired results.
7. HS Librarian will continue to administer these software programs.

SE Kindergarten South and North Additional Laptops

Additional Laptops:

1. Purchase additional laptops so that each cart has 24 laptops for full coverage of students (for each POD noted).
2. Current setup does not have enough computers to run PA Online Testing.

HS Krall Additional Laptops

Additional Laptops:

1. Purchase additional laptops so that each cart has 24 laptops for full coverage of students.
2. Current setup does not have enough computers to run PA Online Testing.

HS Jennings Additional Laptops

Additional Laptops:

1. Purchase 4 additional laptops so that classroom will now have 8 laptops.
2. Can utilize additional laptops with Accelerated Reader and Star Reading Program.

Office Upgrade to 2013 Version

Upgrade the Office to version 2013 for HS 129 and HS 131.

1. Upgrade Office to version 2013 for HS 129 and HS 131.
2. Time permitting – upgrade all student PCs to 2013 version.
3. Time permitting upgrade all teacher PC's to 2013 version.
4. Time permitting upgrade all staff PC's to 2013 version.

SE and HS Library System Upgrade (Follett)

Upgrade the SE and HS Library System to the latest version from Follett

Complete the following:

1. Upgrade SASDFOLLETT server.
2. Test and document.

Faster Log On's

Continue to look at ways to improve performance.

The following items took place during the summer:

1. Replace old Dell Desktops with Laptops (with solid state drives for faster performance).
2. Upgrade SASD wireless (updated all of our Aerohive access points and our server to the latest version)
3. Upgrade Desktop Authority (desktop management software) to the latest version.
4. Upgrade our Domain Controllers, Data Servers, key DA servers to Server 2012 R2 virtual servers to improve performance.
5. Reconfigure MS Group policies (streamline).
6. Implement a few new Dell servers with Solid State technology to improve performance (ex. Domain Controllers).

Additional Requests

There are additional requests from teachers and staff that are not in this document but are stored in our IT Plan folder for 2015. These requests will be reviewed and prioritized with the above requests based on the funding and resources needed. Please note that the people resources to implement technology is limited which affects the prioritization of the projects.

WEB: Implement DRUPAL Web Content Management System (Priority - High)

Implement new web site using DRUPAL Web Content Management System.

Rationale

To implement a Drupal Web Content Management System so that less HTML coding is needed and various staff can update our web site. Easy to implement better graphics and navigation. More ability for customization and management. Can create mobile friendly site.

Proposed Action

1. Build Linux Server.
2. Build LAMP on the Linux Server.
3. Install Drupal.
4. Migrate our current web site to Drupal.
5. Optimize our Drupal site for mobile.
6. Implement a calendar.
7. Review Towanda and other schools for ideas.