

School Board Workshop:

January 24, 2011

Subject:

Shared Services Project Update

Presenter:

Josh Swanson

SUGGESTED SCHOOL BOARD ACTION:

Report Only

DESCRIPTION:

Background and Rational:

In March of 2010 a report was brought to you outlining a proposed shared services project with the Saint Michael-Albertville Schools (STMA). The proposal included: creating a fiber connection between the two districts and to the Interstate 94 fiber corridor, sharing data center space to create high quality redundant disaster recovery sites, jointly purchasing hardware to reduce costs for both districts, and kicking off a virtualized desktop pilot to explore potential cost savings as we strive to be efficient and effective.

Fiber and Bandwidth

The joint fiber construction has been completed, but significant delays occurred due to building permits and rerouting of fiber paths. The construction was to be completed in July and the fiber connection was finally tested in December. This created delays in getting both data centers online with each other, but the two technology teams are now working on completing the connection. We expect that we will have a fully functional connection in February.

Despite construction delays, we were able to move forward with the redundant charter fiber loop and increase our bandwidth to TIES and the Internet. We are currently being served by the 100MB connection to TIES and our Internet bandwidth has been increased to 35MB. This is almost being fully utilized on a daily basis. We will be reassessing bandwidth requirements this spring. This improved connection has allowed us to flexibly increase our bandwidth when needed for special projects such as the Teach 2.0 day.

Redundant Data Center

Both districts have readied our networks and servers for inter-connectivity. A significant amount of collaborative planning and changes were needed to allow our data centers to communicate without causing network collisions. The STMA and BHM Technology teams worked together with great success and energy to ensure a successful change management process. As soon as our final connection is fully tested we will be ready to move our redundant servers to the STMA data center.

Joint Agreements and Efforts, Collaboration, and Purchasing

The STMA and BHM Business Directors and Technology Directors have met, discussed, and drafted a joint powers agreement to protect each district's interest and define the relationship the

districts have entered. The document will be reviewed by legal council and will be presented to the STMA and BHM School Boards for approval.

The BHM and STMA technology teams have met on a regular basis and have been sharing ideas and learning from each other. Both teams would describe this relationship as mutually beneficial and extremely positive. The BHM and STMA Directors along with the coordinators who manage infrastructure have developed a Service Level Agreement that collaboratively defines the services that are being jointly used by the Buffalo-Hanover-Montrose Schools and Saint Michael-Albertville Schools. It includes: Stakeholder Information, Agreement Duration, Rules of Changes and Review, Rules for Termination, Description of Services, Definitions and Priorities of Services, Service Times including Peak and Non-Peak, Types of Support Available, Quality of Assurances for services including measurement procedures and jointly set service level targets, and relationships to other IT services and providers. This was a great process for the departments to go through and there is excitement surrounding the next steps and benefits that will exist.

As we purchased hardware in the spring/summer of 2010, we were able to plan strategically with STMA and purchase a blade chassis, servers, and storage area network (SAN). This hardware by design, provides extremely high availability of services and low downtime. It is highly redundant, but has a high cost of initial purchase unless you are utilizing several server bays. On our own, we could not have justified the front loaded costs, but by purchasing with STMA we not only could justify the purchase and benefit from the design, but we were able to save over \$14,000 on servers and \$4500 on disk space. Future savings on the purchase of new servers could be more than \$30,000 as we fill the chassis and we are now able to purchase storage at \$1.40/ Gigabyte (GB) compared with \$6.00/GB on our older SAN. When we are purchasing 1-3 Terabytes (TB) (1000 to 3000 GB) at a time this becomes a substantial cost savings to the district. We were able to access these cost savings and the value this hardware provides because of the joint purchase power we now have with STMA based on the fiber network construction.

Virtualization

With delays in establishing a network connection, the desktop virtualization pilot was temporarily suspended. It is now being worked on by the support teams with the hope to yet implement a pilot this spring. We still strongly believe there is great potential for cost savings and incredible efficiencies that can be attained through this deployment. Resource area machines and lab settings will be targeted by the BHM Schools to test this deployment and STMA is planning on converting their clerical staff to collect data surrounding this deployment. Both districts will use the data we collect in the decision making process. We will look forward to seeing initial results of this pilot and reporting the findings to the board.

Implications:

1. Cost Savings Found in Joint Purchases
2. Improved Disaster Recovery
3. Increased Redundancy and High Availability of Systems
4. Future Internet Bandwidth Options
5. Collaborative Effort of STMA and BHM TIS Departments
6. Reduced Cost of Virtualized Desktop Pilot for both districts

7. Future Growth Opportunities and Revenue Possibilities

Financial Implications:

Fiber Costs:

FY 10-11 Upfront Construction Cost \$14,000 after Erate and Equity Aid
FY 10-15 \$7100 Annually

Joint Purchasing:

Realized Cost Savings in FY 2010-11
Server Replacement: \$14,000
Disk Storage \$4,500

Future Cost Savings

Server Replacement: In Excess of \$30,000
Disk Storage in Excess of \$18,000

Desktop Virtualization:

Cost Savings Over 4 years on Hardware and Support \$35,000

Revenue:

We are continuing to explore revenue and additional cost savings options which would positively impact the financials of the district while providing technology services to ensure the district operates in an efficient and effective manner.

Evaluation:

The Districts will review the Joint Powers Agreement and the Technology Teams will review the Service Level Agreement on an annual basis or per the change management process. This will allow for continuous evaluation and improvement of the documents guiding the relationship.

We will review data from the virtualization pilot and run a cost benefit analysis to calculate actual cost savings opportunities.

The redundant data center will be fully tested with a test of the disaster recovery plan.

Next Steps:

At this time, we are finalizing the union of the data centers and beginning disaster recovery planning and testing. Simultaneously, the STMA and BHM Technology Teams are preparing to roll out the virtualized desktop pilot. The data collected will be analyzed for decision making as we purchase equipment and support end users.

Internet bandwidth will be monitored and adjusted as necessary, but based on this project, it is easily scalable.

The joint services agreement will be taken to both the STMA and BHM School Boards for review and approval.

The Districts' Technology Directors will continue to look for cost savings in joint purchasing and pursue opportunities to reduce costs for both districts through partnerships or revenue opportunities.

We have launched a great partnership and collaborative effort between the two districts and we look forward to continuing to work closely with STMA for the benefit of both districts.

ATTACHMENT(S):

None