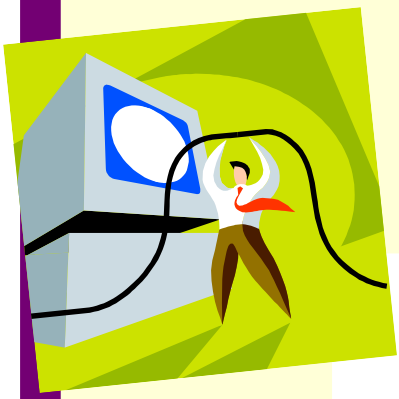


TRSD Technology Services

Volume 1, Issue 1 April 2010

SAN's A Love Story

The board recently approved the acquisition of three storage area networks (SAN's) to be deployed in each of our three attendance areas. A SAN is an architecture to attach remote computer storage devices such as disk arrays, to district servers in such a way that the devices appear as local disk. By implementing this advanced technology in conjunction with the high speed internetworking, and server virtualization, staff and students will see an increased availability of data and services.

Ongoing Projects

- SANs Deployment
- Headend Switch Upgrade
- Cabinet Upgrade
- Synrevoice
- Network Stability
- FOG
- Virtual Services
- Gear-Up Grants

Of Interest...

Schools have been continuing to upgrade the technology at their schools. We have ordered several document cameras, projectors and Promethean ActivBoards. Schools that purchased ActivBoards in the past are starting to purchase devices called ActivArenas. This allows classrooms to have more than one student at a time using the ActivBoards.

Some schools have looked to replace their older machines with new ones. Other schools are looking to get the most out of the PCs they have by upgrading the RAM in them to help increase their speeds. As the applications we use get upgraded, our workstations need to be upgraded to run them.

The biggest purchases recently have been for the Gear Up Grants. Both North Valley and Fleming recently received Gear-Up Grants for approximately $25,000 each.

North Valley High School will be getting a new lab. Fleming Middle School will be getting a lot of different equipment for use in their classrooms.

FOG

Our FOG project is moving along very successfully. FOG is an open source, meaning free to use, computer imaging system that will replace the very expensive Ghost application which we currently use. In testing, FOG has performed just as well as Ghost and in some cases has outperformed Ghost. This new imaging system will save the district from renewing its license with Ghost yearly and will also allow our technicians to be more efficient since imaging capabilities will be available at all district sites instead of only being available in our office. We anticipate that this project will be complete in the next month or two. The final step is to move FOG into its permanent location on our virtual server and complete documentation.

Network Speed and Stability

We have completed a yearlong project that involved connecting all of our schools together with fiber optics. Not only has this increased our speed and allowed technologies such as video conferencing and VOIP, but has made the network more resilient than before.

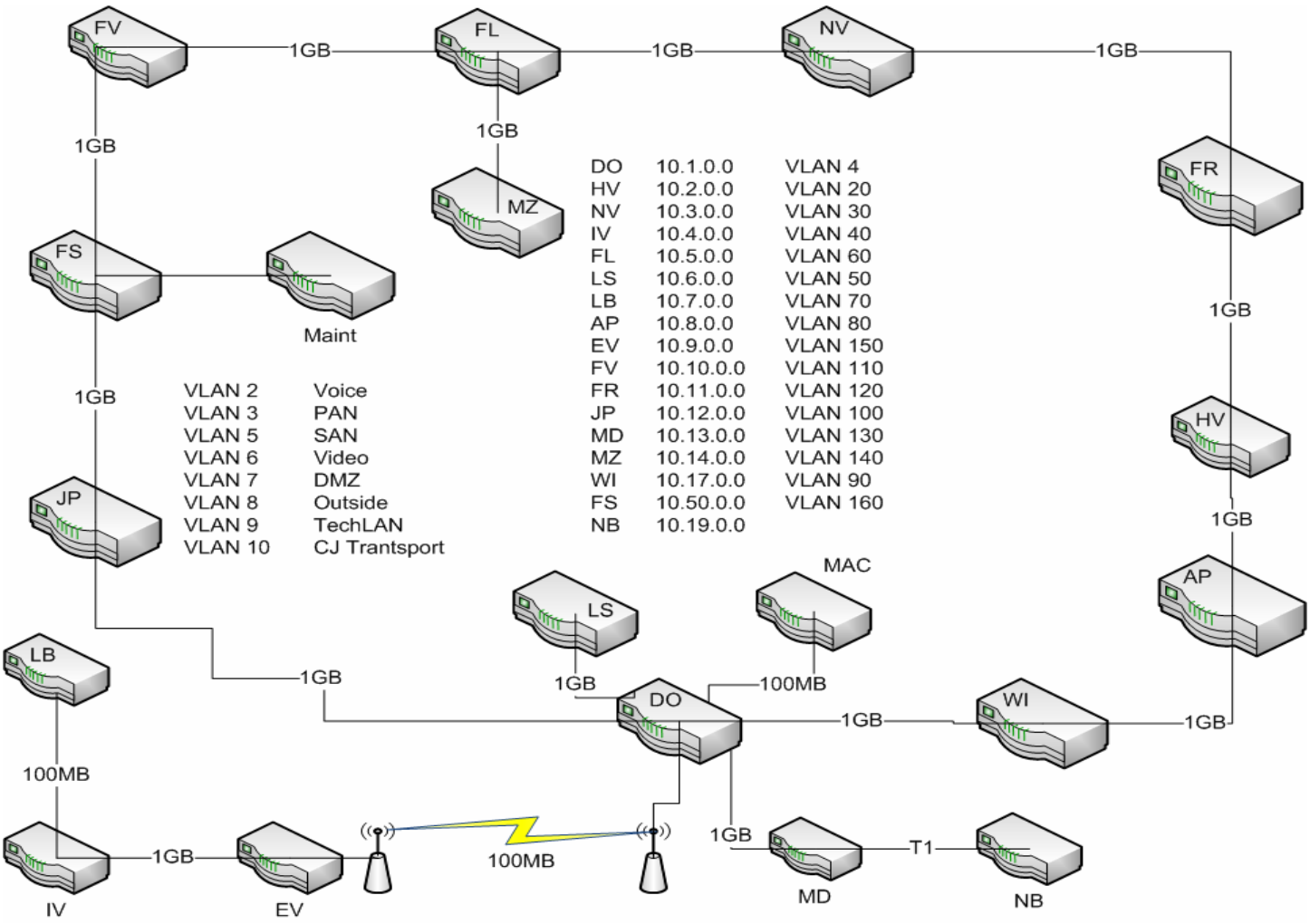
We have been able to get rid of multiple single points of failure that will allow our kids to continue learning and teachers to continue to teaching even when a line has been cut. Attached is the current WAN (Wide Area Network) drawing.

The board approved funding earlier this year to upgrade the main switch at each Three Rivers' site and to replace the network equipment that services the labs at each High School. This equipment was deployed over spring break and is working great.

With the new switches deployed, we have been able to utilize new tools that will allow us to readily see what is going on inside the network in real-time and allow us to fine tune it as necessary. One of these tools that have been deployed is an Open Source (free) program called Cacti. This will replace software that we have previously been paying for. It allows us to autonomously monitor network devices and servers and allow us to see how much bandwidth different sites are consuming.

Our main server room has undergone a big revamp this year. We have replaced old and outdated switches, gotten rid of the last remaining old server hardware, updated the racks, and cleaned up/organized the mess

TRSD Network



Work Order Data

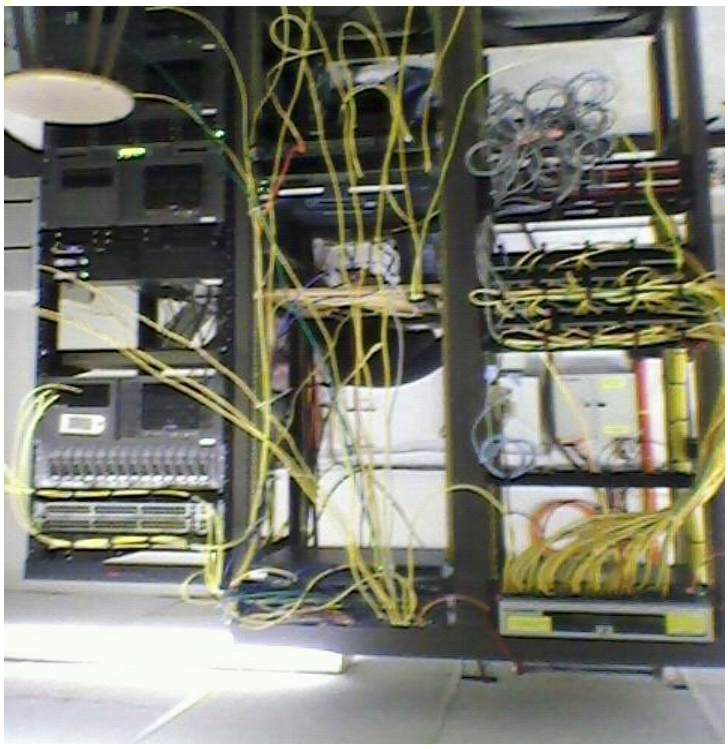
Work Order Data**	
Average Time To Close A Ticket	12.4 Days
Tickets Created This Year	2974
Tickets Closed This Year	2867
Total Open Tickets	163
Percentage of Tickets Closed in Under 1 Day	41.80%
Percentage of Tickets Closed in Under 5 Days	65.60%

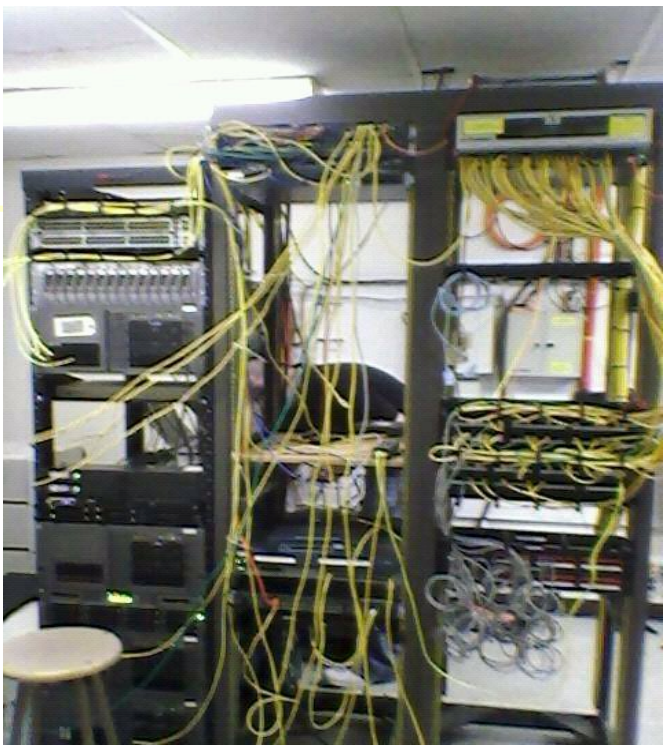
**Work order data was not fully utilized early in the year. Data noted above may not be entirely accurate. As the utilization of the Help Desk is refined, this data will become more accurate.

Services Provided To:

Place	Time Spent (Hours)	Closed Tickets	Open Tickets
Hidden Valley Area (Includes District Officer, Maintenance, Food Service)	594.76	989	59
Illinois Valley Area	690.35	987	27
North Valley Area	632.12	857	53

Server Room
Before (left) & After (right)





Work Order Data Continued

Tickets By Category:		
Category	Opened Tickets	Closed Tickets
Account Mgmt. - Access Privileges	126	109
Account Mgmt. - Creation	79	74
Account Mgmt. - Disable	1	1
Account Mgmt. - Update	152	144
Account Mgmt. - New Employee	27	26
Account Mgmt. - Password Management	187	185
Data - Conversion	1	1
Data - PDA Synchronization	1	0
Data - Reporting	3	1
Data - Restoration	2	1
Hardware - Computer/Monitor	43	42
Hardware - Equipment Transfer	19	16
Hardware - Failure	106	104
Hardware - Laptop	5	5
Hardware - Printers	13	10
Hardware - WorkStation Setup	2	2
Network Access - DNS	2	1
Network Access - Other	0	1588
Network Access - Switch	3	3
Other - Miscellaneous/Questions	20	14
Programming - HTML	1	2
Programming - Other	1605	0
Programming - PHP	3	3
Programming - Scripting	1	1
Purchasing - Consultation	3	3
Purchasing - Hardware	10	10
Purchasing - Software / License	2	2
Server - Administration	10	8
Server - Configuration	24	22
Software - Application	11	10
Software - Backup	4	4
Software - Browser	5	4
Software - Email	15	14
Software - Maintenance	9	9
Software - Networking	9	8
Software - Other	56	54
Software - Printing	21	17
Software - Virus / Spy ware	10	10
Software - Conflict	2	2
Software - Email	4	4
Software - Installation	126	118
Software - Removal	1	1
Software - Request	1	1
Software - Student Information System	31	29
Software - Virus	5	5
Software - Web Site	1	1
Training - Group	6	5
Training - Individual	76	75
Yet To Be Determined	18	17
Total* **	2862	2766
***Some tickets may count in multiple categories.		