

OARtech  
August 8, 2007

#### Introductions

Denison University, Teresa Beamer  
Hocking College, Ben Dalton  
Oberlin College, Cal Frye  
Ohio Northern University, Jim Boygor (?)  
Ohio State University, Lucas Danicore, Brian Moeller, Shawn Sines, Jay Young  
OSC, Nancy Drugan Koehler, Aaron Lafferty, Dana Rogers, TJ Sander,  
Paul Schopis, MaryAnn Zbydnowski, Ann Zimmerman  
Shawnee State University, Mike Pinson  
Sinclair Community College, Daniel O'Callaghan  
Tiffin University, Matthew Allison  
University of Rio Grande, Kingsley Meyer  
Zane State University, John Jacobs, Jeff McIntire

Is the Oarnet name dead and OSC Networking the new official name? For marketing the OSC Networking is the name being used. However, the Oarnet name is on some contracts and in some legislation.

#### Client Services

Ann Zimmerman

Slides available on OARtech web site:

<http://www.osc.edu/networking/oartech/presentations.shtml>

OSC is currently investigating the possibility of hosting a static web page for sites that may have a disaster that would prevent access to the site's actual web servers. They are hoping to be able to offer this to all members at no extra fee, but will have to wait until after the testing to know. They hope to have it in place after the fall Oster meeting.

OSC Networking continues to upgrade T1 member schools. Some of the last miles include using ATT GigaMan and Time Warner's Ethernet options. There are 7 POPs that OIT and OSCnet will share. For these POPs the connection may be subsidized by OSC. There was some question as to who pays for bandwidth on shared lines (e.g. OIT and OSCnet members) in ring situations. One site asked about putting in a ring for the surrounding area and then connecting back to the network via the school's connection which is currently GigaMan and they need to move it to an OptiMan connection. Does the subsidy apply in this situation? Not as they currently understand it. OSCnet will be talking to SBC soon and will bring this up.

What about Time Warner? Time Warner Telecom is already providing some service in the state. Their cable division is not currently setup for creating aggregation services. Some campuses have had good luck with them, and some campuses have had not so good service.

The quotes for Bandwidth have been sent out. Hopefully everyone has requested their bandwidth increase.

OSC are currently promoting video conferencing and are working to use it more and more to cut down travel time and costs. They are developing a database to summarize the video conferencing that is occurring. They have an IPTV interconnect and Ruckus co-location on OSCnet (contracts must be made with Ruckus). They also have a new co-location facility across the street. Ann will see if we can visit the new facility after the meeting today.

Ann is looking for feedback on Ruckus. Ruckus is a movie and music downloading service, that students can download media for free. They pay for the service with Ads. By co-locating on Oarnet the service runs on intra-Ohio bandwidth.

The assigned region of the state for each of the OSC representatives

was reviewed.

OSCnet Update  
Paul Schopis

All Ring 4 IRUs are signed and have been approved and PO is currently being cut. This ring goes down through West Virginia and comes back into Ohio.

The I2 commodity peering service has seen about 600Mbps and so they are looking at Level 3 for a 10 GigE pipe. They are looking at multiple 10GigE services with burstable service for pieces of Ring 1, 2, and 0. The parts have been approved for these upgrades.

OSC is still bringing the partners onto the network.  
Are the partners playing well? Yes.

Merit interconnect will be done with Buckeye and Level3. They have signed the contracts and anticipate 30 days for interconnect. The Pittsburgh connection is underway. They are working to install fiber to the Youngstown racks. There is nothing new on I2 and NLR as the merger talks continue.

The State mandates that all state agencies must use OSCnet where possible. OSC is currently working on the requirements and budget. OSCnet will not compromise the academic service to accomplish it and both organizations understand this. OSC is trying to move as many sites to Ethernet as possible to get away from TDM. There are 3 designs on the table: The State gets their own Lambda (probably not); completely shared structure (probably not as it shares the routers and they have some services that OSC does not offer); Shared 10 Gbps Lambdas with separate but interconnected routers is probably the way they will go. That way they can control their traffic and still have redundant paths. Oarnet would be providing the Internet access, but OIT will maintain their network. The biggest operational change that OSCnet members will see is that there will be in the large number of circuits attaching and the change management will be more formalized (e.g. routing changes will have to go for review because there will be so many other nodes and routes involved) to prevent a change from effecting more than is intended.

Are there any other states doing this? Ohio is breaking ground on this and it is really going to increase the size and scale of the network.

There was some discussion on how the different vendors are working together (ATT, Cisco, etc...) with OSC.

The Board decided to do an external review of OSC. That review is currently in progress. The last review was done about 5 years ago.

Question from Paul to the group: In light of recent events, they are looking at revamping their services. In cases where sites have gone to a 2nd ISP for redundancy, should OSCnet cut a blanket deal with some of the redundant path vendors for the end sites? There are some campuses that have done this, and, usually on the smaller campuses, OSCnet has to help with the BGP routes to get the connections to run properly. So, it's a balancing act that they try to leverage the consortium to reduce pricing but help a customer when a second ISP connection comes into play.

"Easy Encryption": OS X and Windows 2K/Xp  
Shawn Sines

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"Encryption is a procedure that renders the contents of a message or file unintelligible to anyone not authorized to read it." (kroll) It

is a very old science that has been used for thousands of years. We also have another science of cryptanalysis which is the science of breaking codes and ciphers. Until the 70s, it was primarily done within governments. 2 events brought it to the public: public key encryption and sharing of public keys.

There are 2 types of data encryptions: code and cipher. The cipher is most commonly used today. Why do we need to bother? Laws are being put into place that exempts entities if data is encrypted and so there is a cost savings in encrypting the data. It reduces the loss of data and research data is also data that should be protected.

You need to be aware of encryption issues within a process (e.g. backups, handing end user data). There are a number of tools. OSU is participating under Bowling Green's PGP license. They will be using PGP whole disk encryption and thus will require a pass phrase for users to boot a system. This does not work for Mac boot drives currently, but it does allow use of a virtual drive.

They will centrally manage the private key encryption with a universal server. They feel the PGP management tools are horrible. They have to deal with vetting people who forget their pass phrase. They are looking at requiring 2 pieces of id with physical presence at the helpdesk to change the password. There are some limitations when dealing with multi-user machine environments and it also causes some problems with network based installs of the OS. PGP does not work well with imaging strategies and PGP discourages the use of shared storage. OSU is currently piloting PGP for ODS users and in some colleges. He recommends that schools get into the program with Bowling Green. The larger the number of licenses you purchase the cheaper they will be. There is some confusion on the licensing (per disk or per user?).

Some free encryption tools:

Macintosh OS x File Vault can protect the home user directories and desktops, and does on-the-fly encryption. It uses a login password, but does not have a secret code and can use a master phrase. Window's tool is Windows EFS which protects files and folders, is keyed to a user and can have the key backed up.

Encryption will affect the wear and tear on the drives and some forms are susceptible to corruption if there are power outages.

Shawn included some slides on how to use FileVault and EFS.

You may want to consider whether you want "all" data encrypted. You may find it better not to encrypt things like itunes, movies, etc... and file vault will not protect against hackers or viruses.

For EFS, he recommends you encrypt folders. Then put the data that needs to be encrypted into the folder. You can only encrypt NTFS and EFS will not encrypt system folders, or compressed files. There is some odd behavior depending on how you answer some of the prompts when you encrypt a single file versus encrypting the folder.

None of these technologies are seamless.

Resources:

<http://cio.osu.edu/buckeyesecure/>

<http://safecomputing.osu.edu>

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