OARtech meeting
4/9/2008

Introductions

Officer Elections
Cal Frye, Oberlin - Chair
Kurt Eckert, Ashland - Vice Chair
Patty Vendt, Wright State - Secretary

OSCnet Client Service Update
Ann Zimmerman
Slides are available on the OARtech web site.

Between 12/07 and 3/08, 10 schools have increased bandwidth. They
have done 60 School visits. The bandwidth from Internet 1 has
increased to 158 Mb. Ruckus has been implemented in 7 schools and the
new Co-location Facility has 8 current customers. Almost all spaces
are taken. If you are interested you need to contact OSC.

At this point there are only 7 remaining schools connected via T1 and
OSC is currently working to upgrade these sites.

They have worked with several focus meetings: OHECC, eTECH, ODCE,
OTCTC, Collaboration between OLN, OhioLink, and eTECH. They are trying
to determine who does what best so they can work together better. New
academic members include Mercy College, Lourdes College, Union
Institute, and Franciscan College.

OSC will participate in the I2 conference and are sponsoring an IT
Works preconference on Women in IT where they work with high school
students to show them what it available in the IT sector. This will
include a presentation from Super Computer Center. The emergency web
hosting project has ordered the equipment (delayed due to capital
purchase process). Hope to have a test working this year.

They continue to support research initiatives, video conferencing,
community development, vendor initiatives, and health care
initiatives. They are aware of what is happening in the community
initiatives and work with the vendors involved.

She reviewed the OSC team and the areas they cover.

A gift was presented to Mike Pinzer as he hands the chair office to Cal Frye.

OSC Networking Update
Paul Schopis
Slides are available on the OARtech web site.

Closing of ring 4 did not occur because AEP has postponed the move in
the POP at Huntington, WVA. They say the POP will be ready by 5/15.
They have had some conversation with Marshall about joining OSCnet and
I2. There is a health organization project that Marshall has
submitted that named OSCnet as the I2 connector for the project.

The have put in several Juniper M320 and Cisco 7600 (for aggregation).
  Rings 1, 2, and 3 will all be at 10Gb when all the updates are done.
  Gateways are running at 61% with peaking at approximately 5Gb.
They have already brought up bandwidth purchased from Level 3. Paul
would like to get 2 10Gb Internet 1 connectors in 2 cities to make the
routing much easier for OSCnet.   The way things are laid out today,
if a city drops, then traffic will re-route.   However, a massive
provider outage could cause some problems today.

Newnet (I2) peering connection is frequently running at 2.2 Gbps.

They are leveraging portals within the state. State implementation

phase 0 is on going in connecting the state to OSCnet routers at layer 2. Phase 1 is currently being planned and will begin to roll out this summer.

MERIT Interconnect will be up and running production in the next 2 weeks. Fiber is complete and the circuit has been turned up. They will have full access to the OmniPOP but will also be peering with MERIT.

The Pittsburgh gear has been installed and the POP move is almost complete. All the fiber move issues seem to have been resolved and should be connected in the next 2 weeks.

I2 and NLR update. Pankaj Shah is now on the governance council. Paul has been on the technical councils. If you have questions or concerns on strategic plan feel free to call and talk to Paul. The Quilt has become its own 501c3 organization and split off from I2. Paul was elected to the Executive committee and is Vice Chair.

DNS Recursion
Christine Dorsey
Slides are available on the OARtech web site.

Sites should plan for changes that will be occurring on OSC's DNS servers. Basically, they will be turning off recursion on their servers. OSCnet's DNS servers are currently open DNS recursion servers. The problems they are seeing is cache poisoning and reflector attacks. Descriptions of these can be seen on the slides. The main problem is coming from the reflector attacks because of the denial of service on bandwidth and DNS reflectors.

What they will do:
OSC is restricting the zone transfers to the OSCnet IP space. They will be creating caching only servers for the OSCnet community to use. Then they will turnoff recursion on ns1 and ns2 to outside OSCnet. Then they will turnoff recursion to any one.

The changes should have little effect, except to change the troubleshooting paradigms. You will not be able to do zone transfers or query from OSCnet server to your commercial ISP from home. There will be no effect for OSC members. OSCnet name servers will only answer for their own authoritative domains. Outside the OSCnet space, name servers will be of little use for troubleshooting.

The community caching-only servers will have a larger effect. They will be moving secondary DNS to ns3 and ns4. All clients using ns1.oar.net should be reconfigured. Caching Servers will be configured from the beginning only for OSCnet community.

The two sticking points are the turning off recursion on ns1 and ns2 to outside OSCnet and the turning off recursion on ns1 and ns2 to everyone. This is a heads up that this change will occur over the next year.

Suggestion from the floor: Create the ns3 and ns4 and let us know and we can go ahead and start making the changes needed on our end.

They are putting the servers out now because the timing fits with other equipment upgrades. They hope that by the time they turn off recursion no one will be using them legitimately.

At the same time they are also bringing up IPv6, with DNS and already have AAAAs and are designing the in-addr.arpa space. They aren't yet listening to pure IPv6.

Those using OSCnet for secondary DNS servers will not have to make DNS changes as ns1 will continue to serve as a secondary. Only those

sites using ns1 and ns2 recursively will be affected.

IPv6 Deployment Update
Chris Spears

OSCnet started back in 2006 when they applied for the ARIN address space. The reason is they expected the IPv4 space to end, and it made sense at the time. They started with planning in 2007 and have been learning and finding bugs in equipment etc... In late January 2008, IPv6 was on the air with a trickle of the requests.

IPv6 will run parallel with IPv4 in the Intra-Ohio community. There are a few pieces of edge equipment that will be upgraded in the next year to be sure all equipment is capable of doing IPv6. There are a lot of configuration tasks with about 90% of them auto-generated. They will have over 140 interfaces running IPv6. The have addressed the backbone and have been turning the peering up. They still have to transition IPv4 to IS-IS and the client-edge equipment that needs to be upgraded. After the final planning it took about 2 weeks to bring everything up.

DNS is coming; Monitoring is limited on what is supported. Netflow won't be available for awhile. The problem is that in the 32 bit MIB they are running into vendor proprietary issues. When you reach the campus/LAN you need DHCP, firewall, etc... and these are not quite ready for prime time.

Allocations are available for all OSC members. You can start with a single /48. NASA Glen had IPv6 up on 2/26/08.

To get training on using it: OSCnet provides some workshops at cost-recovery only. They will do an IPv6 unicast workshop to design and set up a functioning network and connect to the global community.

IPv6 is deployed and running. The extra services are still being worked on with DNS coming soon.

ARIN Legacy Address Issues
Paul Schopis
Slides are available on the OARtech web site.

OSC is a member of ARIN as are some of the schools. Schools have not been attending the meetings as much as possible and so other community segment views are coming to the forefront.

You have legacy address space if your space that was acquired before 12/22/1997.

IPv4 space is believed to be nearly exhausted. And it is predicted there will be no more space to allocate in about 16 months. Part of the problem is the Legacy holders are not required to give ARIN good information it is not clear how much unused space is out there, for example: small schools in Ohio with Class B blocks. ARIN is hoping to motivate Legacy Address holders to enter in RSA agreement by taking a carrot approach. They originally started with a very draconian approach that many schools refused to sign. The have changed their policy as follows:
- Allows Legacy Holder to join for $100 annual payment until 2013
- Allows Legacy Holders address space to be reserved for original entity for up 12 months if there is a payment issue
- Allows reassignment to subsequent entity; but not to 3rd parties

The stick they are using:
ARIN can withhold any further allocation for entities that do not sign and could stop registry service for non-RSA entities (such as Whois). They have stated publicly they will not try to take away resources from non-compliant entities

What is it really about?
ARIN is trying to clean up the mess the current space is in. The
registered users feel they are footing the bill for the legacy users.
The side issue is that Higher Ed no longer really participates in
ARIN. Small ISPs seem to be driving this issue.

OSC is a member and was able to get IPv6 space and all their IPv4 is legacy.

One of the main problems with ARIN is their update mechanisms are archaic.

What happens after 2013? They will probably increase the maintenance
fee after 2013. We are using their services but are not paying for
them. They do say that the entity can't own the space. It may become
a non-issue because IPv6 is starting to come up.

As you move to IPv6, you will have to join to get the IPv6 space.

The legacy agreement trumps their procedures manual, so where the
procedure manual says that space has to be given up, the legacy
agreement takes over and your sites would not have to give up the space.

How does the university re-alignment affect the network? Paul doesn't
know. There are lots of rumors going around and he doesn't know what
is real. It is fair to say that no matter what happens, it won't
happen very fast. If he was to guess, then not much would change
because the network is working in its current form, and they have to
deal with herding the schools to join together.

Lunch

Email outsourcing issues: You do not have access to log files for
security issues. They would recommend that you separate the email
password from the single sign-on. The sites will maintain their list
server locally. There was some question over ownership of the data
and liability. Any subpoena for the data must go to Google. Log
information is not available to the subscribing site. Google has
backed off the use of using the data for search metrics. The Higher
Education email list would be a good list for research.
Hied-emailadmin@listserv.nd.edu.

What would be the integration with the student information system? It
should be the same. They are providing an alternate address for both
email@school.edu and email@gmail.com.

There will some data that you will not be able to give/get from the
outsourced vendors.

One site decided not to go with outsource and are going with Exchange email.

What are you doing for anti-spam? Some sites are using public domain
and other using appliances such as Ironmail. Ironmail seems to have a
good backend, but is limited on its user interface.

Future meeting topics:
TruArc will talk on PCI compliance or other regulatory topic.
Trying to get Enterasys to come in.

One site had an overall power outage and they used Leader Alert and
found it does not work in a power outage. ConnectEd is another
emergency notification system and they will accept a phone call in the
event of a power outage.

Identity management products:
What do people do about their NAC? One site is currently in band and
they are looking to move out of band. Some sites have implemented the
agent. One site uses Bradford Manager and is happy with it. They use

the non-permanent client for students.

What about emergency notification? One site is using MMM. Some are using ConnectED, 21st Century (Campus Connection), and Leader.

Is anyone using Vista? On site said it was a "pain in the ass". Most of their problems are with printer issues.   They are also trying to bring on some Apple systems to introduce the students to both platforms and is having problems getting the support they need. Some sites are running both platforms and when they look at tools or software they ask if the software runs on both platforms.

Oberlin is bringing up an NDT server at OSC for network testing. It gives statistics network connectivity and throughput.

Does OARnet use Iperf? Yes. Can customers use it? No, but if you call and request it they can make a box available. They use ActiveMon is the overseer program to prevent scheduling conflicts between tests.   See the I2 End-to-End initiative for more information on these products and OWAMP (OnWay test).

What about Bandwidth statistics? Servers have been deployed, they need to begin loading on the data. They are hoping for having something available by the end of the summer.

New pricing model is coming out that is based on the FTE. The end result is to encourage use of Intra-Ohio bandwidth. How your I2, I1, IO is split up is dependent on what the site wants. The new pricing model has been sent out to the Osteer members and will be voted on at the next meeting.

Next meeting is in June. New officers take over in August.

Meeting Adjourned at 1:30pm

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