February 5, 2013
Connectivity Committee Meeting
MINUTES

Network Services – Ed Anderson (SCS)

Phase I – Reno Firewall/Aggregation Switch Upgrades – Tom Nieva (SCS)
The Reno Phase I has been completed. Network Services installed the new firewalls, plus the two MLX aggregation switches in Reno. Phase II will involve the virtualization of the new firewalls and aggregation switches and will result in the elimination of the existing legacy firewalls and 6500 aggregation switches. SCS staff is currently working on lab testing of the proposed design and we expect to complete work in on Phase II both in Reno and Las Vegas by June or July of this year.

CENIC External Monitoring – Ed Anderson (SCS)
A few weeks ago NevadaNet had an outage that affected DNS. Because network alarms were not communicated correctly, we were unaware of the problem for several hours. To address this problem, SCS came up with several alternatives. One of the approaches was to establish an external monitoring capability through CENIC to monitor specific IP addresses and make sure that if they are unresponsive, that NSHE gets called immediately.

SCS contacted CENIC and worked out a deal where they provide us this service at no cost. We gave them a list of IP addresses to be monitored or pinged appropriately. If these monitored devices don't respond in a certain amount of time or over a certain number of polls, the condition will be alarmed at CENIC's desk, and CENIC will initiate a manual phone call to a call-out list supplied by NSHE. CENIC will continue to go down the call list until a human to human communication is made. This external monitoring function has been in operation a couple of weeks now, but as yet we haven't had to use it.

Two other alternate monitoring approaches have been implemented as well. One utilizing Nagios, an internal automated monitoring system and a third system utilizing an automated, but external cloud based system called Ops Genie. SCS is comfortable that this "boots and suspenders" approach will prevent a situation where SCS will be unaware of a system failure due to lack of normal, internal notification/alarm delivery.

Misc. DWDM/CTC Upgrades – Greg Ebner (SCS)
SCS has completed the optical SONET upgrades in both the North and South. There were no customer related issues. The Las Vegas DWDM ring was upgraded last fall, and we're in the process of doing the same in the North. The core ring in the North has been completed with the Reno to Sacramento link being the last piece to be upgraded, and that will be done by the end of the month. There should be no real impact to the customer.

<u>Project Queue Stats</u> – Tom Nieva (SCS)
For the end of the year, we had **108 new projects**, **completed 103**, and **cancelled 18**. We **had 58 in the queue**. We have 54 in the queue as of today.

Systems Support Services – Pam Burns (SCS)

All institutions made it through the first day of classes. SCS did turn on some extra capacity for the Shared Instance and for the UNR Instance. Nobody hit max capacity, but usage was significant. We didn't receive any complaints.

We're working on completing upgrades on our VM servers and (for the iNtegrate environment) all of the process schedulers and the terminal servers. We are also working with Applications to migrate the Financial Data Warehouse from the older equipment to some new equipment we have in place. That should help that be more stable.

The Storage RFP is out on the street, and we're answering the first round of questions.

System Licensing and Contracting – Chris Gaub (SCS)

We have two RFPs in progress. The first RFP is the Enterprise Mass Storage Enhancement. The deadline for submission of questions to NSHE was last Thursday. NSHE is due to have the responses back to potential bidders by close of business this Thursday. We are anticipating the public bid opening on February 21 and finalists' presentations the week of March 18. We are hoping to have an award made by April 19, and have the solution(s) installed, running, tested by June 30.

The second RFP is for Microsoft Enrollment for Educational Solutions (EES) and Select Plus agreements. EES replaces our soon to expire Microsoft Campus Agreement. We are running a single RFP for both agreements to helpfully select a single re-seller to fulfill orders and provide sales support for both contracts, which is something we have never had. The deadline for questions was last Thursday, and we owe our answers back to our potential bidders this Thursday. The proposals are due to us on February 14, and we are anticipating an award date on March 1.

Data Center Operations – Rich Ayala (SCS)

Before the end of the year, we mentioned that UNR IT might be relocating some equipment and some activity would be going on in January. We've gotten that nailed down to this coming week. They'll be coming down to move some equipment from some existing racks to some new locations. The UNSOM (UNR medical school) equipment will also be moved to some new rack locations. This should all be finished by Saturday (2/9).

We're also looking at the Las Vegas building. I think I mentioned before the end of last year, that we were slowly but surely making some planning progress. We had a survey done late January for how many heat pumps we're going to be installing. We've had an engineer take a look at some redesigns in some locations for maintenance on equipment that was hard to get to. We've had some of these ills since the building was built, so we hope to take care of those things and make it a better plan all the way around.

We're also looking at replacing at least the oldest cooling unit down in the computer room and looking at possibly putting in an additional one. We're looking at some better ways to being more efficient and effective down there and to also maintain our redundancy for cooling.

Client Services – Brian Anzalone (SCS)

This is an interesting time in service and support for system administration. We have back to back board meetings coming up in February at UNLV and DRI, and more importantly, the legislature session is beginning. Our shift goes a lot more toward response orientation. There's not a lot of appetite for change, training, or production at this time. We spend a lot of our time doing preparation and planning work for things coming up after that period. For us, that's going to include upgrading our KACE appliances, continuing to look at some processes for outage response, customizations in testing, documentation, inventory efforts and things like that. A lot of remote work, a lot of after-hours work, so we're just making sure we're prepared for that.

System Security – Paul Mudgett (SCS)

We have what we typically see at the beginning of each school year – an uptick in viruses, copyright infringements, and those types of notifications. Those continue to come in and be sent out to the appropriate campuses or agencies – whoever's responsible for it.

New Technologies

None offered.

Operational Issues/Events

WNC Hard Lid Project Status – Susan Schoeffler (WNC)
Here at WNC, about three years ago, we had a network audit, and one of the major problems the grant found was a physical problem in our server room. The ceiling tiles both inside and outside of that room made physical access pretty easy. Somebody could just climb up and over the wall into the room. The audit recommended a "hard lid" on

the room to rectify the problem. It has taken us about three years to gather the money for that. We started that project and got the funding for it last summer. We couldn't shut down any of the equipment in that room because our phones are there, SCS has connectivity equipment in that room, and we have all of our servers in that room. We had to look at a way to protect that equipment that would allow us to continue using the equipment and access it during all of the construction.

We found a couple of vendors. We brought one in that was mostly for heat and dust exhaust, and then we brought in another one that dealt with temperature control and related. They covered all the equipment with plastic sheathing and then exhausted the heat out of a window in the room. They had temperature gauges, filtering machines, and put in 15 zippers that allowed access to a particular server. That was a very clean production during that part and it worked out very well. The temperature did not vary by more than about two degrees the whole time.

We tore down the old ceiling which revealed a mess with the cabling – no conduits, no cabling trays, etc. We had to stop and pull up all of the cabling because it was in the way of the construction. We decided we would address that problem at a later date. They took out a wall that was next to SCS's equipment and took out the old door. That brought in a side room into the server room that had our generator panels, our new fire system, and some electrical panels and made the room quite a bit bigger. A new door was installed and a hard lid ceiling. There is a barricade now that prevents someone from accessing the room through the drop ceiling in the hall. We also replaced the archaic fire system. We took out the lighting and put in 11 new lights. The ceiling is a little lower than it was before. They painted. There is new metal bracing and walkways above the ceiling so you can access cabling and systems that are up there. We have a new locking system and card access system for the door.

It stayed very clean in there during construction, even outside of the protection. I was very impressed with the vendors that we had come in and do that. All in all, it took about four weeks. We had planned for three weeks. SCS helped us with some of this with sending a person down to check on it occasionally and also with the funding for the protection aspect of it, which we really appreciate.

It's all back on line. I don't think anybody had any problems. We used the zippers twice. Right now, it is complete. There are issues we found that need to be addressed next. We are pulling money together to get someone to put in cable trays so that all the cabling is arranged properly, and traced and labeled. The floor in the room also has to be cleaned up. Part of it is carpeted, part is bare concrete, and part is linoleum. We need to install one basic server-type flooring. All in all, it went very well and we're very pleased with it.

Power Outage in Getchell Building – Jeff Wolff (UNR)
Sunday, I got a call from one of the Facilities people. Their energy monitoring system went down in Getchell. When I got down there, I discovered a circuit that powered a UPS that powered a video network switch. (SCS has about four of them on the UNR

campus using our dark fiber.) That switch was offline for several hours and was put back online when the power was restored.

Other

None offered.