

Connectivity Meeting

MINUTES

June 6, 2017

1. Network Services Update- Thomas Nieva

a) Videoconferencing Services (Dani Chandler)

- **USDA RUL LT Grant – Education**

For the Russ Grant, all installations in rural areas are complete. The USDA completed a site visit around end of May. This is now all done and verified. Moving forward with Clariti (upgrade to bridges). Clariti testing and staging on new units will begin on June 19; then working on the go-live date, setting up virtual meeting rooms, etc. Clariti platform will provide opportunity for virtual meeting rooms and Polycomm Real Presence, replacing Blue Jeans. We will keep Blue Jeans through December, and campuses can still use Blue Jeans if they choose, but they will need to do their own licensing & contracts rather than NSHE handling that. Clariti is the last piece of the Russ Grant, so once that is installed the educational portion of the Russ Grant will be complete.

- **USDA RUS LT Grant – Telemedicine**

Renown is working very slowly on this project. They are only purchasing about seven units at a time. To date, there has been no further discussion of the prisons. To Dani's knowledge, some units will be replaced at the clinics in rural locations, but the exact sites have not been identified.

b) Nevada State College Fiber Upgrade (Eric Kepschull)

Using some year-end funding we have decided to purchase a new router and replace the old one at NSC. The new NSC router will be capable of speeds up to 10Gbps. Nevada State College will have the option to move from 1 Gbps to 10 Gbps, providing future flexibility.

c) Datacenter SAN Switch Upgrade (Eric Kepschull)

After looking at current and future needs, we was decided to use year end funds to upgrade the SAN switches used to interconnect the Reno and Las Vegas datacenter SAN Fabrics. These upgrades enable us to go from dual 1 Gbps Fiber Channel over IP (FCIP) connections to dual 10 Gbps FCIP connections between the datacenters. The end result of the Fiber Channel infrastructure upgrade will be faster replication and data transfer between the datacenter SAN's.

d) UNR Cooperative Extension Pahrump (Eric Kepschull for Rick Romero)

Rick is out in the field now, putting the last pieces together. This will upgrade their connection from a T1 to an Ethernet hand-off over a fiber infrastructure connection from Valley Electric Association. The result will be increased speeds from the 1.5 Mbps. The new Ethernet circuit

will provide an upload speed of 50 Mbps and a download speed of 75 Mbps.

The implementation of People Soft 9.2 will provide a few different ports and servers, allowing more flexibility for future projects.

e) **NevadaNet 100 Gbps Network Phase-II (Kirk Fitzgerald)**

All of the older cards in our backbone routers have been replaced with the latest generation, giving the routers the ability to operate at full 100 Gbps line rate. Previously the internet routers were at half capacity, or 50 Gbps. New 100Gig cards have also been added in the backbone routers, providing improved redundancy router to router, and not just a single card for two links. There are a couple of extra 100Gig ports, allowing growth & flexibility for another 100 Gbps North/South link in the near future.

f) **ITS Phase-II US50 Project (Greg Ebner)**

The US50 project, headed up by NDOT, is under construction. This has been broken into two groups, based on their districts. District 2 is out of Carson City, and is covering east to Cold Springs. District 3 out of Elko is covering the rest of the sites, over to Ely. Construction began in May and has 150 working days to be completed by contractors. If work is kept to schedule, fiber could potentially to be lit in December. When completed, four new sites will be added; one in Fallon, one in Cold Springs (maintenance station about half-way to Austin), a new location in Austin, and a new location in Eureka. A follow on to this is that is inter-related: SWITCH & NHA are building a fiber connection from Great Basin College in Ely to the Ely Hospital, continuing to the Ely NDOT yard. At the NDOT yard, there will be a new communications shelter & tower, so when both the US 50 project and SWITCH NHA projects are completed, they will add in a fifth site to the optical backbone, the Ely NDOT yard, that will coincidentally tie in the hospital. Replacing a (don't understand) with a DWDM system that will have initially 4 110 Gbps waves; similar deployment to what was done on I-80 in terms of topology and equipment.

g) **Winnemucca I-80 Fiber Repair (Greg Ebner)**

Due to heavy rains & moisture this winter, a retaining wall at the rear of the NDOT yard began to collapse. The wall had an entrance fiber in it, going to the main distribution point in Winnemucca, which also tied it into the long-haul fiber on I-80. Over the last several months NDOT and NSHE have worked with contractors to get a new entrance facility created and move State fibers out of the old facility into the new, before the wall collapsed to ensure continuity of service. That work has been completed and the fiber has been moved. Fortunately the wall held up long enough, but is leaning six inches, and will go over eventually.

h) **Pershing County School District last mile fiber for Lovelock (Greg Ebner)**

SWITCH and NHA completed construction last month, of fiber to the hospital and cooperative extension, as well as the NDOT yard, where there is a meet-me vault, and tied those three locations back into our long-haul fiber distribution point in Lovelock. Pershing County School District wrote a grant and received funding to extend the fiber from this meet-me vault to the

school district. We matched a portion of that cost, since they didn't have the money to match. Fiber was installed mid-May. Greg has tested this; it works well, so now the school district is once again connected to the long haul fiber distribution point. There is still need for some provisioning: a new router must be installed and the hub site needs reconfiguring, but fiber is in place. Lovelock has gone from no fiber, to having every anchor institution that the state serves tied in.

2. iNtegrate2 Update (Pam Burns)

Mainly, the project is on track for October 2nd Go Live. Some parts of the project remain "yellow" (warning status) due to delays in financial areas. A few of the NSHE integrations are also behind schedule, but they are being finalized.

Regarding end unit testing: several of the campuses still have some integration at risk. The project management office for Workday is monitoring the status of all of those to ensure everything stays on track. The focus is on parallel payroll activities, starting next week. One of the main issues that arose in the implementation is payroll accrual – Workday is providing solution, which is expected in early July. Expected delivery to NSHE is July 17.

Cutover planning being vetted (business processes that currently run manually or in existing systems and how those will be implemented to Workday processes). A communication will come out about this at a later date.

P4 unit (prototype build) is under way. User Acceptance Training (UAT) starts June 19, and that is the last tenant prior to the build of Go Live or "Gold" tenant, in September. UAT activities start June 19 and will end no later than August 4th. UAT is an "early look" for selected staff to see how Workday processes work, and to help validate support materials. Each campus is developing scenarios, and will choose which UAT activities they run, according to their needs.

3. System Support Services (Pam Burns)

Definition of DMs for the Clariti project continues, which will be ready for implementation on June 19th. Application of security and critical system patches also continues, as well as upgrading upgrading operating systems on the Windows systems where possible, so they are under 2012/R2, as opposed to the unsupported 2003.

Previously discussed firmware patch from IBM has been cancelled; IBM has decided not to release an upgrade for the firmware to the E850 hardware that we own.

CSS 9.2 implantation of Campus Solutions for People Soft is underway. Additional hardware was ordered in March, and at the end of March, Oracle certified People Tools 855 with AIX 7.2, providing direction for which version of the OS to use, moving forward. Based on a questionnaire and discussions with each of the instances, a single stack of web application and database ELPARS, which currently have AIX 7.2 in the associated tool sets on them; however, as part of the implementation

there will be many, many security network & firewall rule changes, so as many as we are aware of will be implemented, and then turn the ELPARS over to each of the instances in the coming weeks. On receipt of the ELPARS, they should be able to get in and start implementation, but will find road blocks, and they will need to contact Systems as a start, to implement new firewall rules. The process will be very iterative, learning how to open up access to between ELPARS and processes.

To support that, an initial questionnaire was provided. Now we have gone back to see where access needs to be defined and will put that in prior to turning over the ELPARS, but also have secondary questionnaire to obtain further info.

Another obstacle in CSS 9.2 was that Oracle informed us that Elastic search is critical for implementation. It runs on INTEL hardware, for which we did not plan, so we have come up with requirements for that hardware, which has been ordered. Delivery is expected by June 30th and will work with the campuses to get those pieces installed.

OCTA: single sign-on product for Workday. Each institution has OCTA single sign-on functional for their campus to get on to Workday, which was the major thrust of the project. The secondary piece was to potentially provide provisioning; however, each institution gets to determine whether to implement. Provisioning between Workday and OCTA tenants, and provisioning between OCTA tenant and each campus or institution's on premises central store; either their LD or their ELDAT; it's up to them whether they want to implement that or not.

A meeting was held with OCTA and institution administrations on March 23rd, where key dates for implementation were reviewed in order to keep everyone on the same page about what was coming down the pike and how it would affect them. OCTA has also discussed the process to configure the provisioning between Workday and the institution's Workday tenant. Based on that, OCTA was going to work on consistent, cross-institutional guidelines; these have not yet been provided. Pam's understanding is that they will either be all sent to us, or sent individually to all OCTA administrators. Sessions will be organized to set up and define configurations with each institution. As Pam has not yet seen documentation, she does not believe these have yet been set up. Pam will contact OCTA to see what their schedule is.

4. **Client Services (Richard Ayala)**

Brian Anzalone provided updates on three areas in Client services:

Client services are responsible for administering business productivity solutions. System Administration, NSHE and EBSCOR will be migrating from G Suite to Office 365 in July. About 250 total users and shared accounts; will be piloting a group mid-July, and migrating rest of the enterprise by the end of July.

End point management: Client Services is also responsible for desktop support, so under the advisement of our security group, we have been doing a lot with end point management initiatives

over the last few months, including ramping up encryption efforts to be in compliance with NRS, ensuring there is a plan for all mobile devices to be encrypted. This is going well.

Privilege management solutions are being considered to replace what we have now (Beyond Trust's Power Broker). Automated (to a degree) tools for that are under review.

An internal software library is being published, for staff to have dependable locations from which to download business software. A number of things are going on besides the upgrade to Windows 10, which should be completed by December.

Everyone should be aware that Client Services administer a number of websites that system administration units provide; there is a technology accessibility item on Board agenda this week (Item 38 on BOR agenda) , reference item attached. Three or four pages of that touch upon technology specifically, and that is going in front of the board this week. Client Services looked at and purchased a license to SiteImprove, which has been installed and is crawling our sites. This will help identify accessibility priorities and remediate them. SiteImprove identifies missing tags, misspellings; helps visually impaired & deaf users.

5. Data Center and Facilities Planning (Richard Ayala)

At the last meeting, Rich discussed UPSB being installed; this was completed in May, so now there are two UPSs in Reno, which is a tremendous improvement over a couple of years ago. These are more accessible, modern and updated. Both units are 150 KVA; the old unit was 160, but now that there are two, there is a redundant unit to fail over to. Accordingly, looking at next phase of electrical challenges in Reno, to move electrical terminations from panels to an A and B configuration, so in the end, all of the IT equipment in Reno with redundant power supplies should be separated into A and B sides, and connected to one or the other of the UPSs. Given the greater redundancy and lower likelihood of losing power to equipment.

The mechanical and electrical study from 2008 is being updated. This was originally done by CH2M Hill in 2008, and CH2M just completed a draft & review. There will be more meeting to discuss the final report, within next week or so. This was an interesting report as it included computational fluid dynamics; it gives not only numbers for cooling, power and capacities, but also gives a visual of color that indicates temperature, which is useful as it indicates how the racks look. It is anticipated (pending approval) that the same thing will be done in Las Vegas in 2018.

The phone communications replacement project has been put on hold, but it is not dead. Bob has target for installation sometime in the spring of 2018.

Electrical work is needed Las Vegas. A planned power outage will be necessary; this is planned for the first or second week in December. Planning is based on current activity, but UPS 2 and electrical panel terminations are the current priority.

An ambitious electrical plan is underway. Between now and December, the plan is to relocate electrical connections from under the raised floor to above the racks. The plan is initially in Las Vegas, but the same will happen in Reno. Work has commenced with a vendor for the best design; the goal being to maximize air flow here and in particular Reno, and remove possibility of electrical connection water intrusion that we face with water piping underneath the raised floor, both in Las Vegas and in Reno. At some point in Reno, the raised floor may even be removed completely, although there are many things that need to happen prior to that.

6. Enterprise Licensing and Contracts (Chris Gaub)

The annual renewal for multi-institution agreement for Smart Thinking has been executed.

A two year contract extension has been executed for Touch Net, our charge card gateway service provider.

A new five year relationship has been entered with Instructure Canvas; those service orders are currently at the System Office for legal review.

Preparation is underway for the annual academic software license renewals with an October 1 renewal date. Since that is one day before the iNtegrate2 go-live date, the SLC will be discussing the possibility of accelerating the renewal process so that the renewals are completed on the legacy financial system before the iNtegrate2 conversion.

Preparations are underway for implementation of a multi-institution agreement for SiteImprove. To date, all institutions except DRI and TMCC have expressed an interest in this. Some NSHE sites already have SiteImprove, so the existing contracts can be grouped with the new ones, hopefully realizing some savings.

In the wings, this discussion will be revived on a multi-institution or NSHE-wide agreement with Box, for file storage.

7. System Security (Paul Mudgett)

There are some outstanding policy changes to Board policy and to the Procedures & Guidelines manual. The government Structure for Security Team has made some substantial changes, and it is undergoing additional legal scrutiny. Paul will spend time with the Vice Chancellor of Legal Affairs to go through these and hopefully get this on the Board agenda for September. While waiting for that, an audit finding was reported to the Board of Regents that discussed Cloud computing: that the NSHE-wide security teams are tasked with addressing, and need to approach from data-centric perspective, requiring a data classification standard. A draft of this has been sent out to the Information Security Officers' Council for the first round of comments. It is hoped that this will be squared away and that we will have Cloud computing policy in place, in the system, within the year.

A threat intelligence platform has been implemented at SCS; it is in the early stages of implantation. This allows the gathering of information from public sources, as well as some feeds from multi-state ISAC. What we have found so far is that it gives us a quick heads-up; potentially compromised email accounts coming in have been observed; they are seen prior to receipt of notifications from REN ISAC, so it is possible to get those out to the campuses to address as needed. These are email addresses that show up in public data bases; not necessarily public leaks. They could be old; they may not be current breaches or compromised accounts, but should be provided to campuses when received. Provision of that service has commenced, and hopefully other information and services can be provided from an information sharing perspective, to the other campuses.

8. Operational Issues/Events

None.

Meeting closed 09:46.

Next meeting 5 September 09:00-10:00