

Lane County Technical Advisory Committee
Thursday, March 19, 2015 1:00 to 3:00 pm
Room 5, Lane ESD, 1200 Hwy 99N, Eugene

Lane County Technology Advisory Committee MINUTES

Present: Arne Berglund (LESD), Christina Okesson (LESD), Jerry Pergamit (Pleasant Hill), Ben Gernhart (Creswell), Sam Robinson (Ambient for Blachly & Marcola), Jason Dodge (LESD), David Langan (Eugene), David Nelson (Eugene), David Bolton (Bethel), Michael Bateman (Fern Ridge), Michael Biehler (Fern Ridge), Nathan Martin (Bethel),

Topic of the Month: Server Infrastructure & Environment

Topic was suggested over a year ago via a survey. Group discussion and sharing, stories, q & a, etc.

1. Panel/Group discussion

- **Projects in progress**

- LESD SAN replacement: Server infrastructure (internal) closer to a small to medium-sized district. Basic AD setup which has recently been upgraded to 2012. Current project is replacing the main SAN where the virtual machines live. Going to a newer 10gb iSCSI with 20tb storage. Waiting to get the hardware purchased. Advantage to iSCSI solution is to have both SANs connected at the same time for data migration. In place over the next few months. Looked at VSAN, would work well for a large data center. Only have 3 machines, 300gb each, would have to expand to make it worth it. Dell offers servers with SD slots. Requirement for VSAN to have solid-state storage available. Replacing MSAs with new ones. (MSA is HPs SAN.) The MSA here in the building is fiber channel, not happy with reliability. MSA at the core is SCSI, and has been solid. Problem with fiber channel may be with the box or the switches. Moving to iSCSI for both new MSAs, both 10gb with redundant paths and controllers. Have three boxes here at the main building to connect to the MSA. Each controller has an extra port available. Two connections in each server for redundant paths. Leaning toward active/active and not active/passive.
- Bethel AD migration: Had Dell M-series entry-level SAN. Very slow. Slowly upgraded, backing up 7tb per week. 3 SAN arrays, equalogic. 27tb available. Building out a new domain, own exchange server, etc. Very involved but is going well. Finally at a

point where AD domain that was inherited is moving forward. New mail servers built, all virtualized. Mail servers currently in a distributed access group. David asked about 4J mail, which is Zimbra. Address book was in the public folders, AD was broken at the time David started at Bethel. Predecessor had worked with Feynman Group. Moving toward new server 2012 R2 domain. Run a lot of policies, over 120 different group policies. A quarter are for testing. Need to maintain a naming convention is important. AD usernames had to be cleaned up – staff is firstname.lastname, machines by location and the person's name. Desktop/laptop is identified. Machines for students identified by location. Student accounts are reversed: lastname.firstname. Add a hyphen for Hispanic names. Student accounts are deleted in August. Has a Google domain with half of administrators in it. Configured first cart of Chromebooks with CloudPrint. Lots of issues from districts with CloudPrint. Virtual environment – just now getting into HyperV. Have been VMware since 1996. Purchased another SAN array. Using Equalogics primarily to be able to snapshot and replicate. Migrated to Dell's backup product – got a great deal because in the last few days of the ending quarter. Over 50% discount for App Assure. Renewal costs are based off of the original purchase price. Backups are very fast. Purchased a second server that is a secondary target at the HS, for redundancy. Jesse asked about failover plan for SAN. Failover on the volume, just change a few pointers. Reply on backups if the whole SAN goes down. Redundant controllers, power supply, etc. Everything set up for multipath. Typically want redundant paths for iSCSI, LAN, and Management. It is taking the 10gb and splitting it 4 ways. The traffic into the backplan is not an issue. Going with Force 10 to keep the costs down, and it is close to iOS and has a port hybrid mode. Can tag and untag traffic to various (8) nics. AD policies for everything. Have stayed away from Mac OS in AD. LESD has a few macs bound to the domain. Mac users there are plus and minus to doing that. Issues from Springfield with doing this and extending the schema. Couldn't change keys after the fact. \$10 Mac Server app through the App store. Can run a Mac server in VMware now with that. Mac has a tool to join that to AD without the OS10 piece. You can't do group policy stuff however. Another product possibly from Absolute. Group policy is a powerful tool. Setting up a share and setting policies for domain-computer access only. Jesse mentioned an update that just came out, for certificate share security. Like to remove the admin account and set up sub-administrators. Helps in auditing when multiple people are in AD.

Don't like to share admin accounts. Set up directory structure with delegation – delegate the OU. Remove the abilities you don't want delegate groups to have. Delegate to a group that you can move people in and out of. David Langan asked what level student users have to walk the directory structure and look – they have no access at all. How do you lock that down? In delegation. Start with a separate OU outside of your build. Keep the OU as pristine as possible. Jesse mentioned Washington University has good documentation on how to do this. Michael Bateman asked about creating a student domain. If you are virtualized that would be easy to do, with dual controllers. Jesse asked if 2012 can do dual writing? Don't know the answer. Arne mentioned seeing something similar in 2012, but doesn't recall specifically. Nice feature in 2012 – if you install typical GUI interface and want to only run a partial GUI, there is a split between core and the GUI, called Limited GUI. Really nice feature and easy to do. Looks like core but more interactive. Michael Bateman mentioned Portland SD rolling out core and Google CloudPrint wouldn't work, upgraded all controllers to full GUI. Arne running directory sync on 2008 server, was a pain with 2012. LESD changed from all tech staff having domain admin rights, for daily usage. Jesse asked how many AD accounts David Bolton has. Has a staff test, student test, and his own. Jesse has one more account that has domain admin. Never log into a student machine with a domain admin account. Don't use preferences much. Jesse turned off iTunes auto update through preferences. Naming conventions for policies – David uses verbs that identify what it does (test-xxx, etc). Jesse asked about policies for Chromebooks (i.e., disable-incognito). Default domain policy should be kept clean and simple. Logging and auditing, password policy, etc. Limit the desktop extensively (can't right-click on desktop, hide the C: drive, etc.). Jesse asked about disabling user policy section, David doesn't worry about that. Do folder redirection for student accounts. Serious breakage with offline folder redirection. Best strategy for multi-user systems? David looking at enabling workfolders, new feature in 2012 that gives ability to access file server from any device. Students use my docs folder that is redirected and desktop is locked down. Teachers have told them to use the same machines. David asked how many using mac keys with an answer file to set OS keys? KMS is the way to go. Boots up after image, and registers/activates in a couple of minutes. Very convenient. Expires after 60 days. Jesse asked about OETC – Mac Office 2008 couldn't find the key and called them – let them know that it didn't need a key, because it was a TechNet evaluation

version. New versions now require a key. Anyone using OneNote? Sam uses it. Nathan turned David onto it and it is very useful. Handwriting recognition works really well. Possible Nathan and Sam show it at a future meeting. Sam asked about AD cleanup – David had a lot of cleanup when he started at Bethel. Hacked the shema and has vbs scripts, one is “mothball user” which can be assigned to a user. Moves it into the “mothball” OU, for initial cleanup. If account isn’t re-enabled after a few months, it is deleted.

- Is LESD moving to Exchange Server? Not in the plan with all of the districts.
- Office365? A few districts like it. Sam doesn’t like the powershell but likes it otherwise.
- Google sync/password sync? It is a pain if passwords change. LESD running it for LESD staff and JC staff. Can’t do a password sync – using a default password. GADS is buggy and is over-complex. Ben mentioned that manual student accounts get disabled. Stopped authenticating and can’t get it to work again. Sam had same problem. Jesse discovered that staff members signed up with their old @slane email address, and they didn’t show up in the console. The answer is to create the account, and teachers have to recreate and re-share. Jesse currently provisions the Google account BEFORE the email accounts, manually, to prevent users from signing up themselves.
- NPAR thing is not a Dell thing, it is a protocol supported on many kinds of nics. Network Partitioning.
- VMware 5.1 and 5.5 have Mac options for 10.6 and 10.7, still have to have the install CD.

Next planned LCTAC meeting, April 23, 2015