

Lane County Technical Advisory Committee

Thursday, May 19, 2016 1:00 to 3:00 pm

Room 5, Lane ESD, 1200 Hwy 99N, Eugene

**Lane County Technology Advisory Committee
MINUTES**

Present: Christina Okesson (LESD), Michael Biehler (Fern Ridge), Jason Dodge (LESD), Cory Schruth (NocTel), Roger Morris (Eugene), Jacob Shaw (Springfield), Ben Gernhardt (Creswell), David Langan (Eugene), Steve Traylor (Pleasant Hill), David Bolton (Bethel), Michael Bateman (Fern Ridge), Jesse Baber (South Lane), Jeff Michna (Springfield), Steve Shininger (Eugene), Nathan Crompton and Toby Close (Ambient), Richard Reaksecker (Crow), Arne Berglund (LESD)

Presentation – VoIP Preparedness

Cory Schruth, NocTel:

- Getting ready for VOIP. About half of districts currently deploying, most considering in the future.
- VoIP Features. Top 3 concerns of customers are More flexibility/features, Better price, Faster service
 - Web-based control panel
 - Caller ID
 - Pay per minute or Unlimited calls. Very few customers have needed an unlimited calling plan, most save money with pay-per-minute. Contracts with OETC for ease of purchase.
 - Auto attendants/Action lists
 - Mobile web site, allows users to do visual voicemail, call handling, call forwarding, etc.
 - Realtime E911 address configuration
 - Caller ID name configuration
 - Instantly purchase phone numbers
- Major concerns:
 - What if internet goes down? Review CenturyLink's Western Electric 5ESS. Switch at 10th & Oak plus fiber connections or copper from there. Internet mesh design allows routers on the net to talk to each other directly. Noctel's version of the mesh design for redundancy. Recommend districts have multiple paths to the internet.
 - New technology. Is it really? Internet has existed since 1970s.
 - Internet isn't secure (privacy): analog phone also isn't secure, devices exist that can let people listen in. VOIP is plaintext. Encrypted SSL for SIP packets works as long as call originated and ends at a VOIP phone.
- Differences between locally managed and hosted
 - Local phones connect to PBX, phone lines, maybe an internet connection. Most have to hire consultants to manage this. Contracts, etc. What is someone hijacks your system to make expensive calls? All of these pieces cost money.
 - Hosted: deployed phones connect to the service and all other pieces are managed by the provider.
 - Requirements: good internet connection (100kbps/call), supported firewall and phones, network cabling to phones, PoE switch with voice VLAN support, portable numbers (some smaller communities may not be portable). Clarify this with your current provider before you start. Regulatory issues for providers. VOIP can avoid some of those.
- Types of VOIP
 - Hosted: switch & phones only hardware; phones placed anywhere on internet, supported by redundant data centers
 - VOIP trunks: Emulates standard POTS
- Reliability

- Quality of service (QOS) is important. Where do the audio paths lie in your traffic? Layer 2 and Layer 3.
- VoIP Prerequisites
- SIP In-Depth
- Tips & Tricks for VoIP
 - Multiple NAT (2 routers) is very discouraged with VOIP
 - Connectivity Graphs are handy, either in own monitoring or at provider level. Helps to configure QOS.
 - Simultaneous Ring Groups (a hunt group) not tied to a single premise.
 - Voicemail and Fax-to-Email are provided.
 - FMA (Fax Machine Adaptor) allows faxing over VOIP. Transmits over https. Switched to cellular based monitoring for alarms, Ethernet for postage meters or credit card machines. FMA only designed for fax.
 - LDAP & Directory Services integration allows for address-book even if users don't have a physical extension.
 - Flexible Auto Attendants allow for call routing as needed or scheduled.
 - Voice VLAN allows setting QOS. Many phones now have 2 ethernet ports, 2nd one set up as data port on switch. Richard asked about phones with GB pass-throughs. Many providers have these now.
 - NT Local, with local PSTN gateways
 - Handset Provisioning gets rid of most setup. Type MAC address into database.
 - Emergency Line Identification Number (ELIN) is the ability to identify a switch port and tie it to a telephone number. Keeps from having up update location as moves are made. Gets location info from the switch port config.
- What's next
 - NT local
 - SIP video
 - Mobile client
 - Cellular integration: Verizon allows now on corporate accounts
 - SIP encryption
 - Conference bridges
 - Control panel: holiday schedules, web client/call transfer, queuing calls/call center features, customizable music on hold
- Q&A
 - Jesse asked about eNum. Don't support it yet. A DNS-to-phone number mapping. Looking into it. Can look up a phone number and it will give you're their SIP address, so you can make a SIP-to-SIP call.

Recurring Items

- E-Rate — *Quick recap of any news this month*
 - Consortium letters have been received for all districts we provide ISP to.
 - Another form will be needed from districts for CIPA certification, July time-frame
 - Deadlines extended for 471s to May 26 for districts, and July for consortia. Consortia rely on districts having completed their 471s in order to apply discount rates for their members.
- Professional Development chat — *What have you done, seen or found recently?*
 - Group Policy Class in April
 - What did you attendees take away from this?
 - David Langan enjoyed it and got positive feedback
 - LESD brought 3 things - GPO backups, Default Domain Policy no longer default, too many OUs with broken inheritance
 - TechJunction IT Conference coming to Eugene again, it will be at the Hilton, June 2nd. A few districts were there last year and shared at LCTAC it was valuable.

- Lane ESD staff recently attended a Project Management workshop, INTERFACE, COSN & ACPE
- Steve mentioned world record for drones in the air at ACPE, short by two.
- Service Incidents — *A review of LESD service interruptions since last meeting*
 - Review SSL, OAKS and web filter
 - Challenging and ongoing. Mention of working with Connie Lobato to monitor issues. Some hard limits on web filter boxes for secure connections. Does not appear exclusive to our web filter. Working with the vendor currently. Richard mentioned most problems on Macs. Fern Ridge a few issues every day. Arne mentioned moving to new webfilter, first question was when that will be? How do districts simulate environment to test a new product? Are districts close to end of testing window? South Lane majority is finished, just stragglers. Jesse mentioned issues didn't occur until live testing occurs. No problems in practice sessions. Do practice tests hit the OAKS servers? Yes, but not via ssl. Ben mentioned that when they were testing, it was only a handful out of the larger group that would hang. Not always a whitescreen. Jesse said random calls about a single computer that wouldn't load. Nathan asked if when testing occurs – most districts in the morning. Jason: If you want to statically assign a lab we can put that into the bypass, reach out to us to request. Can we share information on OAKS servers? We were directed to not share this info.
 - Planning on upgrading the firewall soon.
 - Replacing everything in the core. 10gb move at the core. Upgrading firewall in the summer. Can include some district representatives in the decision-making process if you would like. Looking at possibly including web filtering into the firewall product. Redundancy expected.
 - Hunter outage for Oakridge and Fern Ridge
 - Extended outage, started around 2:00pm and continued through 10:30am the next day. Have been ensured by Hunter they now have redundancy on all links. Jason: we have the ability in Solarwinds to have out-of-band notifications. We can send you a text message or email if you would like, when we have outages. Michael Bateman and Jesse are interested, and will email.

Quick Bytes

- Presentation by PNW for wireless in Aug in K-12 best practices. Jason will send an email to ask for topics to address.
- LESD beginning research in migrating email services to Google via Apps for Education. More on this in the future. Planning to figure out process before Arne leaves at the end of July. Pilot on a test domain.

Added

- Pleasant Hill asking about free or low-cost inventory/barcode systems. Pleasant Hill has over 1200/1300 devices. Is anyone using anything? Jesse said Aaron is writing a new system for South Lane in HTML5. Will be open-sourced, and will share when complete. Collects data from multiple sources. LESD hosts 5 (including our own) servers running OCS and GLPI. Not extensively used by districts, and has a major limitation in that no clients are available for mobile devices. Did have a help-desk ticketing aspect. Is anyone using Casper, JAMF, for managing mobile IOS? Is Casper the best? 4J believes it is for their district.
- David Langan: Windows 10 upgrades – are people going with that? LESD isn't, we don't buy licensing on OS. MS School Agreement saved Bethel a lot of money in licensing.

Next planned LCTAC meeting, June 23, 2016: topics is TBA