Communications Infrastructure Committee

Meeting Minutes

Monday, November 16, 2009 2:00 – 3:00 PM

ACNS Conference Room – 610 University Services

1. Attending the meeting: Mark Ritschard, Jim Cox, Neal Lujan, Jon Schroth, Mike Maxwell, Robin McGee, and Adam Warren, Greg Redder, Kyle Haefner, Scott Baily
2. The topic of discussion was operational models to consider. The language from the charge was reviewed: "The committee shall explore and analyze at least three operational models: centralized operations, hybrid centralized/decentralized operations, and decentralized operations for each technology, networking and telephony. For each model, the committee shall evaluate the total costs and benefits of each approach. Note that the committee is charged with a comprehensive, balanced analysis, and should not strive for any advocacy position until a comprehensive analysis is completed. The committee should address strengths and weaknesses of each model. Prior to its reporting, the committee shall have its analyses assessed for risk by Internal Auditing, the Facilities Alarm Shop, CSUPD, and CSU Risk Management."
3. Since Redder and Haefner were available for this discussion, the focus was geared toward the telephony side as they had recent experience deploying VoIP service that was germane to the discussion. Greg Redder raised the following points/concerns:
    a. Successful VoIP deployment will depend upon 3 things
        i. Consistency (of hardware, topology, naming and deploying VLANs, switch and phone configuration, labeling, documentation, etc)
        ii. Monitoring (of the entire network, switches providing VoIP services, and the phone sets)
        iii. Troubleshooting (the success of which is dependent upon items i. and ii. above)
    b. Telecom needs to maintain an accurate database of where phone sets exist
    c. Deploying a test instance of VoIP in WCNR was problematic as ACNS could not configure quality of service (QoS) and VLAN trunking through a firewall with which ACNS was unfamiliar.
    d. Deploying VoIP at IDRC was problematic due to older switches at the endpoints, which were unable to support QoS and power over Ethernet (PoE)
4. Jon Schroth suggested a parallel infrastructure, dedicating switches to VoIP that would be managed by ACNS/Telecom. In Jon's case, this probably involves about 10% of their total ports
5. Mike Maxwell expressed interest in maintaining the legacy category 3 network, allowing continued use of existing analog phones (cordless sets, etc). Kyle said that preliminary

investigations suggested analog telephone adapters (ATAs) add expense commensurate with VoIP phones, although there are certainly cases where they will be required. Baily suggested that the committee consider scenarios for existing buildings with category 3 infrastructure installed, as well as new buildings/remodel projects where category 3 cabling will not be installed.

6. E911 concerns
    a. Soft phones are still problematic with respect to E911, as they can be run from anywhere (wireless, off-campus, etc)
    b. Not all data jacks will be voice enabled. It will take time to develop a means of identifying voice jacks, procedures for moving VoIP phones, etc. Maintaining the Intrado database (providing emergency response personnel accurate calling party location information) is currently a manual process
7. Kyle opined that a decentralized support model for networking is not conducive to deploying reliable, high quality IP telephony. Maxwell suggested that departmental IT personnel could be part of moves, adds, and changes. With very clear processes and procedures, this may be possible.
8. Back to Schroth's recommendation for a dual infrastructure model
    a. Using a phone's built-in data switch to allow voice and data applications to use a common data jack would not be possible in this scenario (by definition)
    b. Would other secured applications, such as environmental controls, alarms, video surveillance, keyless access systems, etc. be moved to this separate infrastructure as well? Possibly. Redder commented that on numerous occasions the NOC has had to respond to off-hours outages due to LAN managers making configuration changes that prevented these devices from being available
    c. Ritschard preferred the dual infrastructure model, stating that colleagues in other companies suggested this is the best way to provision critical applications (when budgets allow it). Mark said that Engineering provisions/deprovisions VLANs all the time in support of their faculty and researchers
    d. Redder suggested that in this budget climate, duplicating infrastructure is not in the best interest of the University
    e. Engineering, if they provided VoIP to all faculty/staff, would need about 10% of their total data jacks to be VoIP enabled (consistent with CoB)
    f. Cox said that in CNS, it varies from 10-50%, depending upon the college/department
9. Ritschard mentioned that existing ACNS/Telecom staff cannot possibly respond to the needs of the colleges for network support. Baily requested that for the next meeting, everyone come back with estimates of how many FTE (suspected to be fractional) are required for network support.

10. If there was a separate infrastructure for VoIP, once it was built out, what would be the staffing requirements? Baily thought it would be essentially the same as supporting the legacy plain old telephone service (POTS) system in place today.
11. The meeting adjourned at 3:05