

Educause 2004 Network Management Constituent Group Meeting

We would like to thank the more than 60 people who turned out for the constituent meeting in Denver, it made for a fantastic meeting. We had lively discussions on a wide variety of subjects, including staffing, network security issues, change management, client security, residential network outsourcing, NOC/Network management tools, VoIP, and SPAM management. It was great to be able to get input from so many people. However, several of you expressed disappointment that due to the large size of the group we weren't able to have the kind of in-depth peer to peer discussions around the discussion items that we have been able to have in the past. So we are going to try and do a couple of things to help. First, included with this posting are the notes from the flip charts we used during the meeting. Second, over the next several weeks, we will take each of the discussion areas that we presented at the conference and post them out to the list for further discussion. Finally, for next years conference, we are going to request table space at lunch for birds of a feather sessions that will allow for smaller more focused discussions.

Notes

When we started the discussions about staffing in particular it was necessary to try and quantify the staffing relative to the size of the school. In the meeting we decided that the breakdown should be as follows:

- School Sizes
 - Small = Less than 5000 students
 - Medium = 5000 to 14999 students
 - Large = 15,000 or more students

During the discussion it quickly became evident that there is no single model for how the staffing is organized. In particular whether Networking and Telecom are combined or not, and also, where security staff fit into the picture as well. So we took an initial look at the breakdown of what percentage of the schools had combined Telecom and Networking staffs.

- Staffing
 - 65% of the schools present had a combined Telecom/Network Group
 - 35% had separate Telecom and Networking Groups

Regardless of whether the overall management of the two areas was combined, this is the breakdown of the numbers of people that are dedicated to each area. How the combined staffs were broken down was left up to the individual respondent to determine.

- Telecom Staff
 - Small Schools 1,3,2,5,6,1
 - Medium Schools 3,2,4,2,6,3,7,8,4
 - Large Schools 7,10

- Centrex 3,4
- Networking Staff
 - Small Schools 2,3,1,4,3,1,1,1,3,2
 - Medium Schools 3,4,2,2,5,3,7,6,14
 - Large Schools 4,8,6,6,8,10,7,14
- Dedicated Security
 - Small Schools None across the board
 - Medium Schools 1,2,1,1,1,2,4
 - Large Schools 3,0,2,1,1,4,1

One of the major issues of interest this past year has been Network Security and how various schools are handling the issues. Topics at the conference included Incident Response, Client Security, Perimeter Defense, Network device security, and Personnel Background Checks.

- Security Issues
 - Incident Response
 - Cert Teams in Place
 - Small Schools 1
 - Medium Schools 7
 - Large Schools 4
 - After Hours Response
 - Network Operations Center 8%
 - Network Staff 50%
 - Server Staff 30%
 - Outsourced Monitoring 5%
 - Unknown 7%
 - Client Security
 - Acceptable Use Policy Sign-off
 - One time 60%
 - Per semester 30%
 - Every time they login 10%
 - Client Compliance Scanning
 - Overall 20%
 - Perfigo 3%
 - Bradford Campus Mgmt 1%
 - Impulse 0% new player in the meeting
 - Scanning Only 16%
 - Nesus
 - Languard
 - ISS
 - Client Registration
 - NetReg 5%
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 - Perimeter Defense

- Firewall 60%
 - Effective rules allowed 30%
 - Intrusion Detection/Prevention 25%
 - Network Device Security
 - AAA on Network Devices 15%
 - Background Checks for Networking and Security Personnel
 - Criminal 20%
 - Financial 5%
 - Network Monitoring for Security
 - Bandwidth/Anomaly Monitoring 60%
 - Syslog Monitoring 50%
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Related to both Network and Client Security is the issue of outsourcing the network support for housing users. Doing this is becoming more and more attractive to Universities that are increasingly concerned about legal liabilities and the amount of staff resources it is taking to track down and detect copyright and security problems in their housing areas.

- Resnet Outsourcing
 - Currently 1%
 - Rethinking 1%
 - Looking at it 4%
- RAA Copyright Notices
 - Received notices 70%
 - Received Subpoena 3%

Change management is becoming more and more of an issue for everyone involved in networking these days, as auditors are beginning to understand the criticality of the network to most campus environments. But as the statistics below show, it is still not widely deployed in most campus environments today. Another interesting angle for change management with the growing criticality of the issue of getting maintenance windows.

- Change Management for Network Changes
 - Proactive Change Control 10%
 - Change Audits 3%
 - Change/Maintenance Windows
 - Daily Outage Window 3%
 - Weekly Outage window 30%
 - Monthly 2%
 - No Window/Adhoc Only 60%
 - What kind of change notifications are necessary for maintenance?
 - 48 Hours 10%
 - One week 50%
 - No Policy 40%

- Change Process
 - E-mail 95%
 - Remedy 5%
- Change/Outage reporting
 - List Serve 30%
 - Chat Room 3%
 - None 67%

Network Management and networking tools are always a hot topic for the constituent group. We are all constantly looking for better and cheaper ways to manage our networks.

- Network Management Models
 - FCAPS Model of Management 3%
- NOC/Management Tools
 - Sniffing Tools
 - Ethereal 30%
 - TCPDUMP 15%
 - EtherPeek 20%
 - Sniffer 20%
 - Intrusion Detection Tools
 - Snort 40%
 - Arbor 1%
 - Scanning Tools
 - NMAP 10%
 - Device Availability Monitoring
 - WhatsUp 30%
 - Somix 1%
 - Open View 10%
 - Nagios 10%
 - Solarwinds Orion 6%
 - Aprism 1%
 - Lancelot 1%
 - Smarts 1%
 - Device Management Tools
 - CiscoWorks 7%
 - Happy with it 1%
 - Usage Monitoring and Graphing Tools
 - MRTG 40%
 - Cricket 5%
 - InfoVista 1%
 - Concord Network Health 1%
 - Arbor 1%
 - Other/General Purpose
 - Solaarwinds Network Management Tools 6%
 - NTOP 3%

Spam and e-mail filtering has become a hot topic on almost all campuses with the recent onslaught of mail that now engulfs most campus e-mail systems. There is a wide array of solutions being used by most campuses, and at the same time, most campuses are also looking at other solutions that are more effective than the ones that are currently using.

- Spam filters currently in use.
 - Barracuda
 - BriteMail
 - CanIt
 - Spam Assassin
 - Sophos

Many campuses are looking into replacing or supplementing existing phone systems with Voice over IP Systems. This new technology potentially represents a considerable reduction in the total cost of ownership as well as offering new services that aren't available in conventional phone systems.

- Voice of IP
 - Production Deployment 4%
 - Trial or Test Deployments 20%
 - University of Hawaii
 - Nortel off hybrid PBX
 - Cisco
 - Feeds trunk lines through Nortel
 - Manufacturers
 - Cisco 12%
 - Avaya 5%
 - Nortel 7%
 - Alcatel 1%
 - Large Installations
 - California State
 - 10,000 State Wide
 - Cisco
 - Running without QOS
 - University of Guelph Canada
 - 3 Year Project Started in 2001
 - Campus-wide Fiber and Copper Infrastructure Upgrade
 - New Switching Gear and Closet
 - 3638 Students in Residence Halls
 - 3600 Faculty and Staff
 - Cisco