

Dover School District

Network Infrastructure Upgrade

Existing

- 125 unmanaged wireless access points
- 64 CISCO Switches (1 gig uplink, 10/100 to desktop)
- Comcast 50/10 cable internet connection (DMS)
- Comcast 16/3 cable internet connection (others)

Connectivity

- 16/3 speed provided at no cost to schools
- Inconsistent service level (SL)
- Speeds can go higher, but service level (SL) may go to ½ level specified
- 50/10 is charged \$100.00 per month (DMS/DHS)

Connectivity Option

- Note: Connectivity is eRate eligible
- DMS, DHS, WPS, HSS, GES
- Cable service (DMS, DHS, WPS, HSS, GES) – inconsistent SL
 - 100/20 – 160 per month

Wireless

- Note: Wireless equipment is eRate eligible
- Install Virtual Wireless LAN Access points
 - Allows Wireless infrastructure to be managed as system vs individual unmanaged Access points
 - Increase in security, throughput, control of bandwidth
 - Centralized management of wireless network

Current Wireless

- Proxim AP4000 20Mbps Throughput
- DHS
 - 37 APs
- DMS
 - 39 APs
- WPS
 - 18 APs
- HSS
 - 13 APs
- GES
 - 17 Aps
- Total: 125

Future Wireless

- Based on Predictive Heat Analysis
- DHS
 - 84 APs
- DMS
 - 51 APs
- WPS
 - 40 APs
- HSS
 - 29 APs
- GES
 - 31 Aps
- Total: 254

Cost Estimates

- 254 300Mbps Access Points
- \$104K

Network Switches – Majority 1 GB Desktop

- HSS, GES
 - 6 Switches
 - 20K ea
- WPS
 - 8 Switches
 - 12K
- DMS
 - 18 Switches
 - 46K
- DHS
 - 24 Switches
 - Sophos, Firewall
 - 77K
- TOTAL: \$180K

Conclusion

- Internet Service Levels need to be upgraded
- Current Wireless configuration is unmanageable and outdated
- Network Infrastructure will need to be updated over the next few years. BY 2017 all existing switches will reach End of Life.