Digital Classroom Plan (DCP) Review & Recommendations

After reviewing the network diagrams for all of your schools and locations and after our onsite meetings and subsequent phone conversations, I noted the following:

- *There are many older switches at your locations that do not support PoE/PoE+ today.*
- *There are many older switches at your locations that do not support 10Gb uplinks today.*
- *Some of the deployed switches are considered Small-Medium Business (SMB) switches and may not support enterprise features/functionality needed for such applications as Voice and Video.*

Based on the information you provided pertaining to the DCP, you will need the ability to provide PoE/PoE+ for the additional 2,000 to 5,000 devices you anticipate supporting. The added network load for supporting these devices and the anticipated growth over the next 1 to 5 years, may require an upgrade to the available bandwidth coming from each switch supporting the Wireless Access Points (APs). With the current infrastructure, this does not appear to be possible. Thus, my recommendations are as follows:

- *Upgrade the older switches, both 24 and 48 port configurations, with newer switches that support PoE/PoE+.*
- *Upgrade the older switches to a platform that is capable of supporting 10Gb uplinks by just adding optics. This will allow you to support any future fiber/cable plant upgrades without having to purchase a module or having to "fork lift" upgrade your equipment and is good investment protection.*
- *Make sure all of the switches are capable of supporting resilient stacking in order to avoid service interruption when a switch fails and to add capacity if needed.*
- *Add redundant links, in the form of a Link Aggregation Group (LAG) in locations where applicable to provide resiliency and aggregate, load-sharing bandwidth.*
- *Upgrade all SMB switches to an enterprise level solution to provide for a common management infrastructure and feature parity with other enterprise switches in the network.*

It is also noted that these recommendations do not constitute an agreement to purchase and that all projects are dependent upon future funding. This is merely and outline of my observations of your current infrastructure and my personal recommendations of changes needed to support the DCP as it was explained to me.

Please let me know if you have any questions.

Thanx!
-alan

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