

LPSD Technology Board Report

March 2021 - Sam Rigby

Cares Act Technology Update - The new iPads and keyboard cases are currently being shipped out to sites and should all be on site by the end of the month.

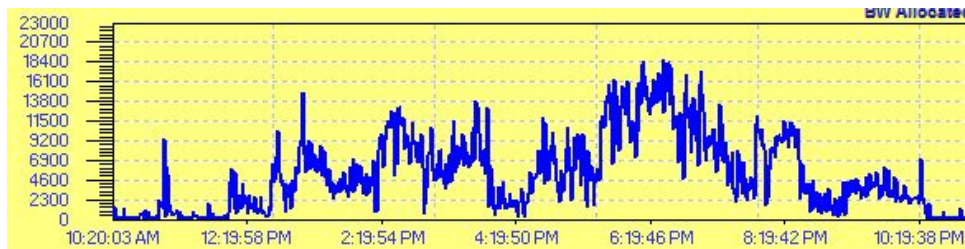
School Internet - We continue to work closely with DRS and on-site staff to identify, diagnose, troubleshoot, and resolve internet issues. There are many factors that affect performance, so rarely is there a one-size fits all solution.

- LPSD IT has run tests at all sites on multiple occasions to confirm DRS is providing the contracted 25mbps bandwidth. Anytime slow performance is reported, we run these tests. Any drop in bandwidth is reported directly to DRS for resolution.
- Reduced bandwidth or a loss of satellite signal all together are often the result of local weather conditions or satellite hardware failure.

```
[ 5] local 192.168.27.7 port 59868 connected with 104.200.25.95 port 5001
[ 9] local 192.168.27.7 port 59871 connected with 104.200.25.95 port 5001
[ ID] Interval      Transfer      Bandwidth
[ 10] 0.0-10.6 sec  5.12 MBytes  4.04 Mbits/sec
[ 6]  0.0-10.6 sec  5.12 MBytes  4.04 Mbits/sec
[ 7]  0.0-10.6 sec  5.12 MBytes  4.04 Mbits/sec
[ 8]  0.0-10.6 sec  5.12 MBytes  4.04 Mbits/sec
[ 5]  0.0-10.7 sec  5.12 MBytes  4.04 Mbits/sec
[ 9]  0.0-10.6 sec  5.12 MBytes  4.04 Mbits/sec
[SUM] 0.0-10.7 sec  30.8 MBytes  24.2 Mbits/sec
```

A sample speed test showing we are receiving contracted bandwidth

- Recent in-depth testing has revealed the primary source of poor internet performance is the result of overloaded networks, not lack of bandwidth.



We are under utilizing our bandwidth because of network hardware limitations

- Average of 50-150 devices connected to each school network.
- Current on-site hardware cannot process the volume of internet traffic requests.
- Peak internet traffic exceeds bandwidth by over 1200%.
- We are developing strategies to manage and prioritize web traffic before it hits the satellite modem. Current technology doesn't limit traffic until it reaches our internet hub.

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Recent Work Completed

- Moved our Mosaic lunch program server from vendor to self-hosted, reducing annual costs and increasing speed.
- Replaced 2 more legacy phone systems, improving quality of communication and reducing phone costs.
- Replaced 2 aging servers with newer technology, allowing us to implement additional services to reduce bandwidth load.

Future Work

- We're continuing to work with vendors to migrate our digital educational platforms to our single sign-on service. This frees up time other staff have had to spend manually rostering students in programs like IXL, NGConnect, and others. It also provides our students faster access with less passwords to remember.
- We are in the process of rebuilding the LPSD website. This will make content easier to find as well as meet ADA compliance regulations.