Customer Profile

- **Organization:** Washington County School District, UT
- **Environment:** 53 school campuses
- **Users:** 38,000 students, 43 IT support
- **Devices:** 66,000+

Washington County School District Transforms Network Operations with NetAlly Tools

OVERVIEW

Washington County School District in southern Utah manages the largest educational network in the region, supporting 38,000 students across 53 sites with 66,000+ connected devices. Despite operating with a lean IT team the district has achieved remarkable efficiency in network management and troubleshooting through strategic deployment of NetAlly's EtherScope® nXG and LinkSprinter® tools. This case study examines how NetAlly's comprehensive testing solutions have revolutionized the district's approach to network diagnostics, enabling faster problem resolution, reducing on-site visits, and empowering technicians at all skill levels to effectively troubleshoot complex network issues.

THE CHALLENGE: MANAGING MASSIVE SCALE WITH LIMITED RESOURCES

Washington County School District faces a perfect storm of IT challenges common to primary and secondary education. With 55,000 Chromebooks alone, plus thousands of other devices including Windows machines, Macs, and network infrastructure comprising 1,158 switches and 1,400 access points, the district operates one of the most device-dense networks in education. As Director of Technology Jeremy Cox explains, "We're a very small shop for 66,000 devices. Even compared to other Utah districts, the number of devices we support is far larger."

The district confronts several critical challenges unique to educational environments:

- **Ultra-High Device Density** – Unlike corporate environments where device usage is fairly distributed, schools experience extreme concentration. "It's possible for us to have an AP serving 60 Chromebooks simultaneously," Jeremy notes. These devices aren't just connected – they're actively streaming educational content, often the same 4K or 1080p video simultaneously as entire classes engage with identical multimedia curriculum.
- **Standardized Testing Demands** – During testing periods, the network must support hundreds of students taking exams concurrently, with each connection requiring consistent, reliable bandwidth. Any network disruption can invalidate test results and create significant administrative challenges.
- **Budget Constraints** – Operating on tight educational budgets, the district must maximize every technology investment. "We rely on open source mostly because of budget issues," Jeremy acknowledges, making the selection of commercial tools particularly strategic.

EtherScope® nXG Portable Network Expert

"The most all-in-one networking-based tool that I have ever found."

- Jeremy C.
Director of Technology

- **Geographic Distribution** – With 53 sites spread across Washington County, plus online students worldwide through military family connections, the IT team cannot afford time-consuming site visits for routine troubleshooting.

THE SOLUTION: STRATEGIC DEPLOYMENT OF NETALLY TOOLS

Washington County School District's relationship with NetAlly spans decades, beginning with the original yellow LinkSprinter® 100s originally from Fluke Networks. Today, the district operates a sophisticated toolkit including six EtherScope nXG 300 units, six EtherScope 200s, and LinkSprinter pocket network testers deployed to every field technician.

LinkSprinter: Empowering Field Technicians

The district's innovative approach places LinkSprinter units in the hands of every field technician, fundamentally changing their troubleshooting workflow. When teachers report connectivity issues – whether phone problems or computer failures – technicians immediately connect a LinkSprinter to generate an instant diagnostic report for the specific network link.

"Previously, we'd have to dispatch a network team member out to the school, which would take a lot more time," Jeremy explains. "Now we don't have to do that nearly as much unless it's a hardware failure. If it's a configuration item, that's usually easy to solve remotely."

LinkSprinter's integration with NetAlly's Link-Live collaboration, reporting and analysis platform proves particularly powerful. Field technicians plug in the device and call centrally located network specialists who can instantly view test results remotely. "Oftentimes what happens if a phone's not working is that port's configured in access mode, but it doesn't have the VLANs tagged for voice," Jeremy notes. "The LinkSprinter picks up on that quickly in Link-Live, and it's really easy to see."

EtherScope nXG: Comprehensive Diagnostics for Complex Issues

When LinkSprinter testing reveals no uplink or if more complex issues are in play, network technicians deploy EtherScope nXG units for comprehensive diagnostics. Jeremy describes it as "the most all-in-one networking-based tool that I have ever found."

The EtherScope's versatility addresses multiple network layers:

- **Wired Testing:** Complete cable qualification and switch port identification
- **Wireless Analysis:** Fast and intuitive Wi-Fi validation and troubleshooting, including spectrum analysis for interference identification and rogue AP detection
- **Performance Validation:** End-to-end throughput testing between units
- **Fiber Testing:** Optical line verification and power measurement capabilities

Particularly valuable is the EtherScope's ability to maintain wireless connectivity even when wired connections fail. "When it doesn't have an uplink, it still has its wireless connection and still sends everything to Link-Live," Jeremy emphasizes, ensuring continuous remote collaboration capabilities.

RESULTS: MEASURABLE IMPACT ON NETWORK OPERATIONS

Dramatic Reduction in Site Visits

By enabling remote diagnosis through Link-Live integration, the district has virtually eliminated routine network-related site visits. Network engineers can resolve most configuration issues remotely after field technicians provide LinkSprinter test data, saving hours of travel time across the district's 53 locations.

Accelerated Problem Resolution

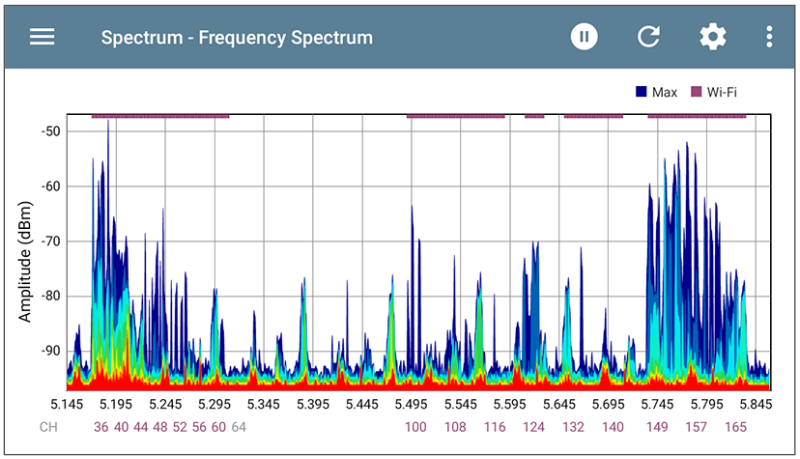
The tiered approach – LinkSprinter for initial diagnosis, EtherScope for complex issues – creates an efficient escalation path. Common problems like VLAN misconfigurations that previously required network engineer site visits are now resolved in minutes through remote collaboration.

Empowered Support Staff

Part-time help desk staff and junior technicians can now provide meaningful network diagnostics without deep networking expertise. The visual interfaces and automated testing eliminate guesswork, allowing support staff to gather actionable data for senior engineers.

"I've used the EtherScope to identify interference points multiple times," Jeremy notes, addressing the critical challenge of maintaining reliable wireless connectivity in high-density educational environments.

- Jeremy C.
Director of Technology



Spectrum analysis using the EtherScope nXG and NXT-2000 Spectrum Analyzer.

Cost-Effective Scaling

Despite budget constraints that led the district to explore cheaper alternatives, Washington County ultimately expanded their NetAlly investment. After trying out a competitor's product at half the cost, Jeremy reflects, "Although it did have similar features, it wasn't nearly as robust, didn't do everything [the EtherScope] did. I wish I hadn't done it in the first place... it ended up being money we wasted."

Enhanced Wireless Troubleshooting

With the proliferation of 1:1 device programs and wireless-dependent instruction, EtherScope's spectrum analysis capabilities prove invaluable. "I've used the EtherScope to identify interference points multiple times," Jeremy notes, addressing the critical challenge of maintaining reliable wireless connectivity in high-density educational environments.

"If you want to have a tool that can do everything that you're going to need to do in a very small package, that's the one to buy. I haven't found another option out there, and I've looked."

- Jeremy C.
Director of Technology

Looking Forward: Preparing for Wi-Fi 7 and Beyond

As Washington County School District prepares to deploy Wi-Fi 7 access points, NetAlly continues evolving their tools to meet emerging needs. The latest firmware updates include Wi-Fi 7 visibility features, with multi-link operation (MLO) support coming in version 2.9 (December 2025). The new NXT-2000 spectrum card extends analysis capabilities to Wi-Fi 6E's 6 GHz band, ensuring the district's diagnostic capabilities keep pace with infrastructure upgrades.

KEY TAKEAWAYS FOR K-12 IT LEADERS

Washington County School District's success demonstrates several best practices for educational technology teams:

1. **Distribute Diagnostic Capabilities:** Placing appropriate tools at each support tier multiplies team effectiveness
2. **Prioritize Remote Collaboration:** Cloud-based result sharing eliminates unnecessary travel while accelerating resolution
3. **Invest in Comprehensive Solutions:** Single-purpose tools may seem economical but create inefficiencies
4. **Standardize on Unified Platforms:** Common interfaces across tools reduce training requirements and improve adoption

CONCLUSION

Washington County School District's experience validates the strategic value of comprehensive network diagnostic tools in educational environments. By deploying NetAlly's integrated testing ecosystem, the district has transformed their IT team into a highly efficient operation supporting 66,000 devices across 53 sites. The combination of LinkSprinter's accessibility and EtherScope's comprehensive capabilities creates a scalable support model that addresses education's unique challenges: extreme device density, budget constraints, and geographic distribution.

For IT leaders in education facing similar challenges, Washington County's approach offers a proven blueprint. As Jeremy advises peers considering NetAlly tools: "If you want to have a tool that can do everything that you're going to need to do in a very small package, that's the one to buy. I haven't found another option out there, and I've looked."

The district's journey from those original yellow LinkSprinter 100s to today's sophisticated diagnostic ecosystem illustrates not just technological evolution, but a fundamental transformation in how educational institutions can leverage smart tools to overcome resource constraints while delivering reliable connectivity essential for modern digital learning.

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