WVNET Significant Accomplishments 2017

February 4, 2018

2017 was a challenging year for education and government in West Virginia. State budget issues lead to cutbacks and uncertainties, which caused some of WVNET's staff to move on to other employment opportunities. Despite the hardships WVNET persevered, on behalf of our customers, to keep all of our services available at a high level of quality.

As we look back on 2017, we have plenty of accomplishments to show for our hard work. Here are some of the noteworthy things we did last year in our mission to enhance education through technology while saving you money.

Thanks to a contract with the West Virginia Department of Education, WVNET continued to provide significantly lower cost **Internet access** for our schools and libraries.

WVNET's Data Center is home for a substantial collection of computer systems, some belonging to WVNET and some collocated for customers. We constantly monitor this space and make upgrades as needed to sustain a proper environment. In 2017 we installed a new air conditioning condenser unit and added three manual transfer switches to our power system. The switches will allow us to perform regular maintenance on our Automatic Transfer Switch (ATS) with decreased possibility of unexpected failures. The ATS switches power to our UPS/generator in the case of a utility power outage.

WVNET continued to be an active member of **Internet 2**, participating in their meetings and conference. Internet 2 is a new Internet being built with fiber and high speed all the way. It connects the research universities with resources like supercomputers, and provides numerous improvements over the existing Internet.

WVNET supports the **Quality Matters** program that helps West Virginia Institutions of Higher Education to focus on the quality of their online courses. Quality Matters is an internationally recognized process for peer reviews of online courses. To date, over 1700 WV faculty have received training on the Quality Matters rubric, 126 have gone on to become peer reviewers, and another 16 have become master reviewers. Twenty-three additional peer reviewers are now eligible to take the training to become master reviewers. In addition, five faculty received training to become face-to-face and/or online trainers. There are now 12 courses that have been through the official Quality Matters Review process. West Virginia is now poised to conduct official subscriber-managed reviews for $450 per course as another attempt at cost-savings for institutions. WVU submitted the first course for this in-state process.

WVNET attended **Higher Ed Day** at the WV State Capitol in Charleston. This was a great opportunity to get the word out about WVNET's diverse services that save educational institutions money while providing personal in-state support. Not only did we have the honor of talking directly to some WV legislators, but we also had the privilege of meeting face-to-face with many of our colleagues from institutions throughout the state.

WVNET displayed our service offerings at the 3rd **Bluefield State College Biennial Regional Technology Conference (RTC)** held in honor of its co-founder Mrs. Audrey Biggs. We met some very interesting people at this conference as they

visited us between sessions.

WVNET presented **URcast** to attendees at the WVDE Spring Network Design and TSS workshop. URcast is an application that enables content to be delivered through caching servers at local sites. This negates the need for the students to have an internet connection at home to access content, materials, and assignments. When the student returns back to the school, their work syncs automatically back to the caching server for the teacher to access. The big goal is to diminish the digital divide that exists for many students due to their lack of access to the internet or the ability to afford that access.

WVNET's Blackboard Training Instance received a makeover and it was re-envisioned as a **Portal for Education, Achievement, and Knowledge(PEAK)**. PEAK provides online, on demand, faculty and staff training for twelve hosted institutions, in-house personnel training, URcast training for public school teachers and staff, WordPress tutorials for web hosting, and more. This online training resource has achieved both travel and human resource cost savings while delivering excellent customer service and access to an ever growing knowledge base of on-demand information.

WVNET Systems Programmer Jonathan Lynch developed a **Student Performance Dashboard Building Block** for all of WVNET's **Blackboard** customers. This custom program adds a page to Blackboard that allows teachers, deans, and guidance counselors to get a top-down view of how students are doing across all of their online courses. Without this building block, faculty had to click into every individual course to get this information, an arduous task for a dean overseeing hundreds of classes.

In July 2017 WVNET worked with the WV Dept. of Education to present the **West Virginia Statewide Technology Conference** which was attended by nearly 500 educators from throughout West Virginia. 176 representatives from 79 companies also participated in the event to demonstrate the latest educational technologies. The conference offered over 100 peer-presented sessions along with formal training including Coding with Apple, Office Mix, Library Media Specialist, Certifications and 1:1 Initiatives.County Technology Integrations Specialists took a bus trip to Coopers Rock State Park where they participated in training from Apple on a variety of outdoors-based projects using iPads and other innovative technology.

WVNET's **OZ Problem/Task Tracking System** affects 1000's of people in West Virginia as it is used by numerous K-12 and Higher Education institutions and Government agencies to request and fulfill service needs. Over 100 updates were made to OZ this year, both fixing and improving the existing functionality while adding new capabilities. The most notable changes overhauled search capabilities, added new reports, extended time tracking functions and created integrations with other applications.

WVNET's OZ system makes **Chromebooks Management** easier by interfacing with Google's Chromebooks API. We developed a dashboard to perform common Chromebooks tasks. This integration saves schools a lot of time and effort when they are managing hundreds or thousands of Chromebooks for students. System Administrators can use this to quickly check in or check out a Chromebook or schedule it for repair.

More K-12 institutions adopted WVNET's **Gatekeeper** application as their solution for tracking student attendance. Gatekeeper keeps track of students coming and

going by monitoring student ids entered by swipes on a fingerprint scanner, magnetic card reader, RFID reader or a keyboard.

WVNET was a proud sponsor of the **West Virginia Community College Association Conference** (WVCCA). This year's conference was held at the NewRiver Community and Technical College, Raleigh County campus. WVNET provided a web/mobile online conference guide in cooperation with conference director Lori Midkiff. At the conference we met with contacts and friends from CTC's throughout West Virginia. It is a treat to meet people face-to-face.

WVNET continued to improve and enhance our online management system for the WV Instructional Resource Center (**WVIRC**) which provides educational resources for deaf and blind students throughout West Virginia. This year we attended the West Virginia School for the Deaf and the Blind Conference (WVSDB) where we presented training for the system and assessed needed improvements. Based on feedback, we developed and published some major updates to the application.

WVNET implemented **Blackboard Learn** 9.1 Q4 2016 CU4 (3100.0.4) to all supported institutions over the winter break. This upgrade addressed outstanding issues within the platform that our users have reported over the last semester as well as implemented some new features to the inline grading process that enables faculty to give feedbackon assignments with detailed "inline" markup as well as audio and video feedback.

The WVNET DegreeWorks team completed the upgrade of **DegreeWorks** to version 4.1.6 for 12 hosted institutions, providing many additional features and abilities to

help students on the path to graduation. We also installed a DegreeWorks add-on for **Student Transfer Articulation**, which allows students to assess their progress to graduation and progress toward a degree at another institution. This ability will help students look beyond their current academic achievement to how they can aspire to higher levels of learning. In late 2017 we facilitated the implementation and roll-out of **DegreeWorks at Eastern WV CTC**, making them our 15th hosted institution.

WVNET welcomed some **new staff members**. **Blaine Murphy** is now in the Network Operations Center, **Bradley Smoak** joined Media Services as a Web Developer, **Eric Burgy** became a member of the Telecommunications team, **Jack Forester** became a Systems Programmer and **Suma Ponnam** joined the DegreeWorks team.

WVNET assisted **Eastern WV Community and Technical College** in integrating their Active Directory with their Aerohive WiFi deployment to bring user authentication to the staff network. This allows faculty and staff to connect to wireless internet services using the same credentials they use for other campus services.

WVNET provides **Free Web Hosting for K-12 Schools** thanks to a contract with the WV Department of Education. In 2017 we added several more counties to our hosting and ramped up our training and support for this service. Our web team created some new templates for schools that greatly simplify the process of creating a new web site.

WVNET replaced our Adobe Flash-based Ookla **Speedtest Servers** with self-hosted

HTML5-based nPerf servers. Therefore, customers no longer need to have Adobe Flash installed—something not possible with Apple iOS devices, for example—and the servers are available from every major desktop and mobile platform. This migration also reduced the cost to WVNET both financially and in manpower. [Try it here!](#)

WVNET implemented new high-availability **Cisco ASA5515-X VPN Concentrators** to replace our old equipment. VPN concentrators provide encrypted, private communication tunnels between locations that greatly improve security. This upgrade allows our VPN users to employ a more modern client, authenticate with more standardized credentials, connect from multiple devices simultaneously, and utilize SSL for additional security and flexibility.

WVNET replaced an aging network statistical graphing server with a **New Network Monitor/Traffic Graphing System** using Ubuntu Linux, LibreNMS and MariaDB. The old system was hand-built more than a decade ago when software options were more limited. The new system is built on a modern Linux distro,integrated with WVNET's Active Directory, and fully manageable via a Web UI. This provides greater flexibility and scale, not to mention that the new software provides more insight than previously possible.

Expanded Service Provider Presence in the Data Center

This past year saw DQE Communications, a fiber-optic network services provider based in Pittsburgh, PA, bring their fiber down into WVNET's datacenter, providing yet one more fiber carrier to the mix. DQE Communications provides both lit and dark fiber services. This year also saw Shentel and Frontier expand their collocation presence in ourdata center. Combined with the various other providers collocated in

the WVNET data center, this continues to make **WVNET the Point of Presence (POP) in the state of WV**.

In 2017 WVNET completed the upgrade of Banner 8 to **Banner 9** for allinstitutions hosted at WVNET. Previous versions of Banner relied on plug-ins for Enterprise Resource Planning (ERP) and student information that had to be maintained separately. Banner 9 is an inclusive product that integrates all of those (ERP's) into an enterprise level product. The upgrade provides greater efficiency with regard to upgrades and patches, thus enhancing the platform's stability. Public institutions rely heavily on Banner as acomprehensive student information system that incorporates student academic records, finance, financial aid, and other valuable institutional services.

Enrollments in the **West Virginia Remote Online Collaborative Knowledge System (WVROCKS)** courses continued to grow. Over 800 students from five institutions enrolled in classes generating over $200,000 in revenue for the participating institutions. Since the pilot in Fall 2012, over 10,500 credit hours have been earned via the portal. The convenience and flexibility of WVROCKS contributes to impressive retention rates of a 93% attendance rate, a 92% completion rate, and an 84% pass rate.

WVNET's Network Operations Center saw a **50% increase in monthly calls** as they provided support to WVNET customers and remote helpdesk users. We offer helpdesk as a service for any organization that needs trained support professionals to help customers 24×7.

WVNET's Systems Team create and maintain the cloud in which all of our services run. WVNET's systems are complex, including a vast array of servers, operating systems, security systems, storage networks, backup systems, email and messaging, automation and monitors. The systems team managed an already heavy workload with reduced staff by having people expand their support areas and put in extra time and effort. Thanks to this WVNET has been able to keep running our services within the state of West Virginia to provide the best, most efficient and secure services and the most cost effective price.

WVNET's Business Office and Interface Team maintained their excellent record of meeting all of their **State and Federal deadlines for financial statements and audits** in 2017. Moreover, they continued to be a valuable resource for WVNET's consortia clients by **providing their service-level expertise and facilitating the timely completion of institutions' financial processes to help our clients meet State and Federal mandated deadlines**. WVNET negotiates and manages **consortium contracts, statewide purchases, and invoice management for pass through services**, and is able to provide substantial savings to consortia clients and the State by leveraging the resources available to acquire enterprise level services.

We're proud of our accomplishments!
How may we help you in 2018?