

WVNET Significant Accomplishments in 2018

January 1, 2019

2018 was a year of serious change for WVNET. Our management from the top down was restructured, some of our staff retired or moved on to other opportunities, and we adjusted our work flow a bit to better support our customers. With all of these changes creating some chaos, we still managed to accomplish a lot. Here is an overview of some things we did:



WVNET Telecommunications played a major role in **moving nearly all 55 West Virginia county courthouses to new circuits**. The courthouses were paying a hefty price for internet access, and this change saved them thousands of dollars. Since the circuits had to be moved before renewal of an existing contract, the time frame to complete the work was short. Our Telecommunications team worked hard to get this done on time.



WVNET worked extensively with West Virginia's County Judges, Clerks and Supreme Court technical staff to do arraignments, host remote lawyers, interpreters and witnesses, and other court business via **video communications**. Originally

designed and implemented by Judge Dan O'Hanlon and WVNET's Allen Daugherty, the video infrastructure for this service has grown and evolved for nearly two decades. WVNET provides scheduling, connecting, troubleshooting and training for the video systems.



We replaced the aging **Akamai server** and switch in our Charleston Data Center with a new one that is significantly faster and more robust. Our Akamai servers are part of a large Content Delivery Network (more than 240,000 servers world-wide) which **cache certain popular content** in multiple geographical locations. As an example of why this is important, when a Windows Update is available there would be a lot of network congestion if every PC downloaded the update from Microsoft's servers in Silicon Valley. Instead, Akamai servers cache the update locally so that fewer computers are downloading from a more local source. The result is a significant improvement in connectivity and download speed.



WVNET deployed our first instance of **Ellucian Workflow**, a tool that automates business processes. Working with **Blue Ridge Community and Technical College**, we got both a test instance and a production instance running. We are now working on implementing Workflow for other institutions.



WVNET's Banner Support team achieved greater stability with the **Banner** database servers, optimizing the memory usage to prevent outages. There were semi-regular memory problems, and our DBAs worked on new memory settings that have resulted in far fewer service interruptions. Also, we worked with **Pierpont Community and Technical College** to implement their Banner system hosted at WVNET.



WVNET's custom **problem tracking system "OZ"** never stands still, as we constantly tweak and extend it by request from our customers. This year we made numerous changes to reports and invoice layouts, improved searching capabilities, and made improvements to our Google Chromebooks management interface.



We introduced our **Professional Learning and Development system (PLAD)** in the spring of 2018. Multiple K-12 school boards have adopted the tool for tracking their staff's professional development. Thousands of users have helped us build on the initial system which now includes a pre-registration system for class sessions, sign-in sheet generation, and many more reporting options.



A new version of our **Public Service Training application “PSTachio”** was written by one of our software developers. The emphasis in this rewrite was bringing the software into a set of standards to improve performance and maintainability. We are now working with PST coordinators to move this new version into production along with improvements to functionality and performance.



Our **Entry Log application** serves as a community monitor for WVNET staff. It helps us to know who is currently working and whether they are local or remote. New staff members can use the app to match faces with names. This year the app was completely re-written to conform to modern standards and provide a more dynamic update of staff information. We also integrated our **Emergency SMS messaging system** into the app, which is used to notify our staff of inclement weather closings and other important events. These applications were built for use at WVNET, but could work just as well for your institution. Contact us if you would like to know more!



Gatekeeper is a WVNET program that **monitors school attendance** via input from biometric devices or other sources. It is mostly used by K-12 schools to keep track of

tardy and early dismissal students. This year we made improvements to the student data input code to help keep an up-to-date record of enrolled students at each school.



HONU is an application we made for the **WV Center for Nursing** that helps nursing educators schedule time at medical institutions for student experiences. In the past year many parts of the application were written to make it more maintainable and compliant with WVNET's software development standards. Users of the application responded enthusiastically, with one saying that "This is the easiest it has ever been."



WVNET created and maintains software to help the **West Virginia Instructional Resource Center (WVIRC)**, which provides materials for the West Virginia School for the Deaf and the Blind. The application helps teachers order free educational materials while helping the WVIRC to manage orders and inventory. This year we made many updates to the user interface, reports and help system, and improved ADA compliance in the user interface so that it will work better with screen readers.



OneTAP is our on-line **electronic bid management system** which allows an institution to post RFPs and RFQs on a web-based platform and accept vendor bids electronically. We made major improvements to the user interface and functioning of the application in the past year, and it is now available as a service to our customers.



WVNET's home web site was re-designed and rebuilt from scratch during 2018, with an emphasis on simplicity, easier navigation and a more modern look. See it here: <http://wvnet.edu> .



In the past year more counties in West Virginia began hosting their K-12 Web Sites at WVNET. We provide **free web sites for K-12**. Our support includes ready-made theme templates, training from our skilled web support staff, problem solving and software updates. We back up sites and update plug-ins on a daily basis. For sites that use custom domain names or SSL certificates, we make sure they get renewed at the right time and continue to work correctly.



SSL (Secure Sockets Layer) is a protocol that provides security in connections to web applications and sites. An authorized certificate is required to establish an SSL connection, and this has traditionally been an on-going expense as the certificate had to be purchased/renewed from a certificate authority. There is now a product called **Let's Encrypt** which is free, automated and open, so there is no on-going cost. WVNET has been gradually integrating Let's Encrypt in our applications and sites.



Web site accessibility is rapidly becoming an issue for schools, as the U.S. Department of Education is requiring sites to adhere to ADA compliance standards. For this reason WVNET began offering **Web Site Accessibility Remediation** services. Combining our knowledge of best practices established by the Worldwide Web Consortium (W3C) and the latest industry tools, WVNET can assist anyone wishing to craft and/or implement an Accessibility Action Plan for their institution/business, helping to provide a path to compliance. Whether building a new website or making existing web content more accessible, we are able to provide a comprehensive audit of online material, as well as the resources to remedy any issues identified. This service is offered at extremely competitive rates and helps to minimize and/or eliminate potential legal costs as more and more high-profile institutions (both government and private) are caught up in preventable litigation resulting from non-compliance. We have already worked with several customers to identify and correct accessibility issues on their sites.



WVNET hosts and supports **Blackboard Learning Management System** for West Virginia institutions. During the past year we upgraded the software three times to provide the latest and greatest features and reliability. Many of the state's educational institutions use Ellucian Banner for student management, and WVNET created and maintains an integration between Banner and Blackboard. In 2018 we implemented this integration for more of our participating institutions. As with all of our services, we also worked with customers to train, assist, solve problems and make sure everything worked correctly.



While WVNET has hosted and supported Blackboard Learning Management System for West Virginia Higher Education institutions for many years, we are now offering **Blackboard for K-12**. This LMS service helps schools reduce paper costs and create reusable subject matter with powerful content management tools. The new service offers customizable content to fit a variety of lessons and delivery methods including blended/ flipped classroom structures. Through the Blackboard LMS, students can access course materials and complete assignments on snow days while parents can stay informed with classroom/grade notifications for students. Plus, it is hosted right here at WVNET. The K12 Blackboard LMS also features custom integration with the West Virginia Department of Education's Student Information System (WVEIS), and an attendance tracking tool. Blackboard boasts a mobile app

to engage active learners where they are, as well as an instructor app to allow teachers to access their classrooms from mobile devices and a grader app that allows teachers to grade lessons on the go. WVNET offers 24/7 Help Desk support for teachers, students, and parents as well as a variety of technical support and onsite training for faculty and staff.



More of WVNET's customers are using **Big Blue Button** to enhance their Blackboard, WVROCKS and PEAK courses. Big Blue Button is a web-conferencing system that provides high-quality, face-to-face communications along with recording capabilities, annotations, shared desktop, document sharing, interactive whiteboard, polling, chat and more. It's an incredibly useful tool that is surprisingly inexpensive compared with other web conferencing solutions.



WVNET redesigned its **Address Cleansing** application and began offering it to our hosted institutions at no charge. Address Cleansing is a process which checks addresses against data files of authentic deliverable locations (provided by the US Postal Service) and revises or cleanses them as needed. Approximately twenty-five percent of scanned addresses are either misspelled or have an incorrect zip code, city or state. Using this service greatly improves an institution's success in contacting students, prevents unauthorized changing of student-provided data, and enables eligibility for postal discounts.



WVNET extended its **Microsoft contract** for an additional year. This contract provides 19 public and private higher education institutions with all of the Microsoft products they need at the lowest possible cost through the Microsoft Campus Agreement Program.



Our Distance Learning team worked with the West Virginia Supreme Court of Appeals to deploy staff development and HR tools on our **Portal for Education and Knowledge (PEAK)**. We offer PEAK as a shared Learning Management System (LMS) for organizations who want to provide online training without the expense of paying for an entire LMS instance. If you have a small set of courses you want to offer to your employees, this service is worth looking into!



Some of our customers who get a lot of email rely on our **Virus and Spam Filtering**

service to remove unwanted email. Email continues to be a major source of computer compromises, delivered through attached files or via embedded links that may be clicked. WVNET uses **Defender MX** and other spam filtering tools to eliminate malicious emails and flag others that have suspicious characteristics. In the past year we updated this software numerous times to provide the best service and stay up-to-date with our ability to correctly identify and eliminate problem email.



Enrollments in the **West Virginia Remote Online Collaborative Knowledge System (WVROCKS)** courses continue to break records. WVROCKS provides online courses for Regents Bachelor of Arts Degree Students, Board of Governor's Degree Students, and a number of other special initiatives. Courses are offered in a compressed eight-week format and range from 1-3 credit hours for 100-400 level courses. During the 2018 calendar year, WVROCKS enrollments increased to 2317. Students from seven participating institutions of higher education enrolled in classes generating over \$600,000 in revenue for those institutions. In addition, retention statistics continue to exceed national averages in that 97% of those who enrolled, attended their classes; 96% of those students who attended, completed their courses; and 87% of the students who completed their courses earned passing grades. Spring 2019 enrollments have already surpassed Spring 2018, and two new institutions have joined the consortia of participating institutions. WVROCKS began in the Fall of 2012 with just 50 enrollments and three participating institutions. WVROCKS growth in a few short years demonstrates the sustainability of their business model and the need to extend curriculum offerings at the institutional level through a statewide portal. West Virginia Network's (WVNET's) support, both technical and administrative, is essential to the portal's success. For more information, contact Dr. Roxann Humbert (<mailto:Roxann.Humbert@wvrocks.wvnet.edu>) or Dr. Mary Stewart (<mailto:Mary.Stewart@wvrocks.wvnet.edu>).

DegreeWorks

In early 2018, WVNET's **DegreeWorks** Team, in partnership with Ellucian, launched a series of **virtual training sessions** focusing on the "scribing" course catalog process. To ensure repeated outcomes were achieved in maintaining course catalog data within DegreeWorks, instructors incorporated institution-specific curriculum and data, recommended best practices, and other scribe industry standards. In Mid-Summer 2018, WVNET hosted our first **DegreeWorks Reporting Workshop**. During this 3-day workshop, attendees from six institutions were provided with an overview of the DegreeWorks Curriculum Planning Assistant (CPA) tables/views and report creation strategies. Behind the scenes, the DegreeWorks team made changes to ensure better data management. For example, they denoted the 2nd Tuesday of the Month for an **expanded maintenance window** for all our hosted DegreeWorks Test environments.



WVNET worked with numerous customers to create and manage **Listserv** group email lists, **Domain Name System (DNS)** configurations that map friendly internet URLs to IP Addresses, **Domain Name configurations** that allow users to have a custom URL for their web and email presence, and **Secure Socket Layer (SSL)** certificates that provide a secure internet connection. All of these services are provided at no charge to our customers, which is an example of **Value Added Benefits** you get when partnering with WVNET.



WVNET's Systems Team creates and maintains 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 keeps our services running within the State of West Virginia to provide the best, most efficient and secure services and the most cost-effective price.