

WVNET 2020 Accomplishments

February 1, 2021

2020 was a year unlike any other before, with the COVID-19 pandemic presenting many new challenges for WVNET and our customers. WVNET management and staff expertly managed the challenges head on. The year consisted of some restructuring, staff retirements and some employees moving on to a new opportunity. But we still finished the year with six new employees joining the WVNET team, along with several employee promotions and advancements. On top of that, WVNET celebrated 45 years of service this year.

Kids Connect: With the COVID-19 pandemic forcing K-12 schools to immediately shift to remote learning, the absence of reliable, in-home broadband access was a major issue across the state. Partnering with the WV Department of Education and the WV Office of Technology, WVNET helped launch the Kids Connect Initiative, a statewide program to provide over 1,000 community hotspots for drive-up Internet access for K-12 students, including 670 K-12 schools 171 libraries, and 28 state parks. It also included hotspots at 38 colleges and universities, and provided drive-up Internet access for higher education students as well. From concept to power-up, the program took less than 60 days, thanks to the intra-departmental cooperation among these state agencies.

New Strategic Plan: A new five-year strategic plan was published, based on input from WVNET employees and customers, along with a review of the business trends and strategic technologies in education. This new plan included updates to WVNET's mission, vision, and goals, and outlined operational initiatives for the next five years. It provides a roadmap to ensure WVNET is responsive to the needs of West Virginia's higher education customers while maximizing the state's investment in new technologies.

WV Statewide Technology Conference: After a brief hiatus, WVNET resumed the West Virginia Statewide Technology Conference (WVSTC) in 2020. What had been planned as an in-person event was reformatted to a virtual conference due to COVID-19 and was held from July 14 -16, 2020. WVNET worked with the West Virginia Department of Education (WVDE) and the West Virginia Office of Technology (WVOT) to put together a diverse program for K-12, Higher Education and Government users.

Plans are well underway for the 2021 WVSTC virtual event which is scheduled for July 12-14, 2021. Additional details, including speakers, agenda, and registration, will be posted to the conference website (wvstc.com) in the coming months.

Marketing WVNET: The Marketing Committee has been working to update the professional brochure designed for State Delegates and Senators that details our vast list of customers by political district. Combined with the WVNET organizational information brochure, these documents convey the importance of WVNET to the growth and vitality of West Virginia. The Marketing Committee has also been working to increase employee engagement and recognition by establishing "Employee of the Month" and "Customer of the Month" initiatives. In 2020, the committee provided updates to the WVNET Webpage and renewed social media accounts with regular posts to Facebook, Instagram, Twitter, and LinkedIn. WVNET's social media engagement

increased by 300% in 2020!

Quality Matters (QM): WVNET assumed management of QM for the State of West Virginia and conducted six subscriber-managed course reviews in 2020. As a result of COVID-19, course offerings were adjusted to meet the needs of the state, including offering eight additional courses. WVNET added Designing Your Online Course (DYOC) to the state license, conducted the first QM Zoom face-to-face session in the state, and added an additional QM peer reviewer.

Financial Impact: WVNET continues to provide financial savings to all of its higher education customers through group purchasing agreements that provide large discounts on technology purchases. In 2020, this resulted in West Virginia colleges and universities savings over \$5.2M in software purchases alone. Add to that the expert technical talent and 24/7 support provided by WVNET and you can easily see how WVNET is a critical success for the citizens of West Virginia.

The NEW Teaching and Learning Commons

In July, WVNET launched the Teaching and Learning Commons. This prompted a change in focus for the Software Development team from an exclusively software/ application development focus to a more comprehensive focus that includes applications, websites, and content development. This change allows the Development Team to operate in a more flexible manner to better support the activities of the Teaching and Learning Commons and the broader mission of WVNET.

The 2020 Professional Development Week was held with 34 presentations to 431 attendees and 1564 registrations. Additionally, monthly training sessions provide continuous educational opportunities. A new TLC website and registration site were launched, and a documentation portal and course catalog were established. The TLC Team joined several online Learning Consortium and Professional and Occupational Development Organizations and was invited to participate in Academic Affairs Meetings to discuss the program.

Banner ACT Reporting Upgrade: WVNET has been working with our college and university customers over the past year with testing the new Banner ACT College Score Reporting upgrade provided by ACT and Encoura Data Labs. This new application bridges the gap in uploading high school transcripts, resumes, letters of recommendation, high school profile, admission essays, cover letter, and personal statements in addition to the super-scoring where the higher test scores are reported.

Banner Financial Aid: WVNET has worked with our college and university Banner customers over the past year to monitor and disseminate information regarding the CARES Act, provide updates to federal systems (COD, EdConnect, SAIG, CPS, etc), and address Banner Financial Aid concerns. WVNET aided colleagues inside and outside of West Virginia with troubleshooting problems and facilitated setup of new Banner procedures. WVNET continues to encourage the adoption of new procedures to help staff keep up with increasingly complex and evolving regulations.

DegreeWorks: Go-live kicked off this year for Ellucian DegreeWorks, a comprehensive academic

advising, transfer articulation, and degree audit solution. “Connect, Learn and Engage” was the goal of the DegreeWorks Team for 2020 as we presented several live webinars via the WVNET Teaching and Learning Commons. Topics focused on the latest release of DegreeWorks and its new applications: Controller, Responsive Dashboard, and Web Transit. With on-site visits cancelled due to COVID-19 restrictions, the team conducted more virtual conference calls to support our user community. The users will notice several changes, including a new user interface, as well as functional enhancements. The Degree Audit Worksheet displays more responsively in a mobile environment, the exception processing experience has been improved, and this upgrade is compliant with the Americans with Disabilities Act (ADA).

DegreeWorks team has begun the process of upgrading DegreeWorks from version 4.1.6 to the 5.x release.

Blackboard Learning System: WVNET administrators for Blackboard installed Media Closed Captioning and adopted the ProctorTrack tool and SoftChalk. Additionally, WVNET provided training for Blackboard faculty users transitioning to virtual learning due to COVID-19.

Also, with recent changes made by Blackboard to sunset self-hosted software platforms, WVNET is developing a Request for Proposal to identify and select a new Learning Management System for the state. Plans are to implement a new system in the early summer of 2021 and assist customers with migrating their current Blackboard courses to the new platform before the start of Fall 2021.

Web Development

The WVNET Web Development Team is moving to better position itself to take on new projects and new partnerships by offering support and expertise for web-based projects. We worked extensively over the spring and summer to move Logan County Schools’ district website to our K-12 server and set up placeholder sites for each of its schools. More recently, projects have included launching the WV Kids Connect initiative and an accessibility audit and overhaul of the Higher Education Policy Commission’s website. The web team is also in the planning phase of working with Eastern West Virginia Community and Technical College to assist with a site redesign and moving their website to WordPress.

Most notably, in 2020 the team worked with the First2 Network to convert their site from HubZero to WordPress, customized child theme development, and implemented social network functionality. This was an eight-month project that involved a good deal of project coordination between the customer, the WVNET Development Team, and the WVNET Systems and Operations staff.

Other Software Applications

The WVNET Software Development Team underwent a significant transition this past year with the retirement of longtime Software Developer and Team Lead, Mike Karolchik. Mike’s work spanned nearly 40 years and countless projects, including creation of the WVNET problem management and support system, OZ.

OZ Problem Tracking System: In 2020, we released the latest version of WVNET's problem tracking system. We transitioned 13 customers to the OZ 5.0 and WVROCKS was added as a new customer. Additionally, custom code was replaced with reCAPTCHA for improved security and authentication rules were re-worked to help prevent unauthorized access.

PSTachio: WVNET's Public Service Training application is used by public service providers throughout West Virginia. In 2020, PSTachio was moved to a single site so users can easily switch between regions when logged in and run reports across all regions. Various other enhancements were made to this application to allow for an improved overall user experience, including the addition of a new alert system to inform WVNET when users run into errors. Additionally, new announcements have been added to the home page to keep users informed on new features and other important information.

Systems and Operations

- Deployed Banner Access Management and educated our user community on its use.
- Maintained and updated customers' Banner databases with regular patches and upgrades, ensuring enhanced security.
- Implemented reCaptcha for Banner access to prevent false applications from being submitted.
- Continued rollout of SQLNet Encryption to require encrypted communication to the database. This is in addition to the security measures already in place to protect database access.
- Implemented Ellucian Mobile and CRM Recruit / BRIM application which required multiple component upgrades and coordination with Ellucian.
- Enabled integration of Ellucian Ethos Identity Services with Microsoft Azure for a single sign-on (SSO) implementation. Worked with multiple schools to implement additional SSO solutions.
- Began implementation of Oracle Data Rest Services to migrate existing applications to a new and more secure platform.
- Upgraded datacenter computing infrastructure to increase performance.
- Migrated to a new SAN environment utilizing an all-flash array.
Upgraded computing hardware to increase resource availability to the virtual environment.
Upgraded Infoblox DNS appliances.
- Utilized third-party security scanning services to determine and mitigate risks with public facing servers.

Network Operations Center

During the COVID-19 pandemic and stay at home orders issued by Governor Justice, the Network Operations Center (NOC) continued working on-site to ensure support services remained up and running for state employees and students working remotely. The NOC took responsibility of scheduling video conferences for the court systems in February 2020. The average OZ tickets, emails and calls per week were 293. NOC staff will has earned HDI team certification. As a reminder, WVNET's NOC is staffed 24/7/365 to serve our customers.

Telecommunications

- Provided Softphones to NOC and other key staff to be able to answer calls and work remotely during the COVID-19 pandemic.
- Built a support line for the Kids Connect initiative for our NOC to help support students and families learning remotely.
- Upgraded Blackboard Learning Management system to be compatible with shift in user work and learning environments.
- Utilized WVNET's F5 load balancer to find a solution to the depreciation of TLS version by several browser developers for both our Blackboard and Banner customers.
- Increased utilization of our F5 load balancer to provide an additional security layer for many of our hosted websites.
- Implemented new security training and phishing simulations to ensure WVNET staff use safe computing practices.
- Provided VPN solutions for people transitioning to work-from-home during the COVID-19 pandemic.
- Provided additional co-location services in our data center to a variety of new telecom vendors.
- Increased bandwidth to the Internet from both POPs and between the POPs to provide additional bandwidth during the COVID-19 pandemic.
- Worked with WVNET carriers to increase redundancy to the Internet and Internet2 to handle additional network traffic due to the COVID-19 pandemic.
- Enabled the Federal court districts in West Virginia to expand telepresence video sessions due to travel restrictions brought on by the COVID-19 pandemic.
- Continued to mitigate malicious traffic on the network on a daily basis.
- Continued to work in concert with West Virginia Office of Technology to provide greater services to the citizens of West Virginia.
- Continued to enhance Distributed Denial of Service (DDoS) mitigation services with a fully automated solution coming in Q1 2021.
- Reduced down time by providing replacements for failed BTOP-funded routers out of WVNET stock at multiple locations free of charge.

New Employees in 2020

Stephen Doll (System Administrator): Before joining WVNET, Stephen worked at WVU for 12 years in various roles. Prior to WVU, he managed Windows servers and networks for an IT servicing company. Stephen is certified in the IT Infrastructure Library (ITIL), CompTIA A+, Certified Novell Administrator (CNA), and received a degree in Computer Systems Applications from ECPI College of Technology.

Benjamin Frame (Network Operator): Along with his technical expertise, Ben is an entrepreneur who has co-founded two small businesses in Morgantown: Concierge Digital (providing consulting services) and DubVMade (promoting local music artists and events in West Virginia). Ben received an Associate's degree in Information Technology from West Virginia Junior College.

Tiffany Goff (Executive Administrative Assistant): Tiffany has over eight years of experience as an executive administrative assistant and providing paralegal support experience in the healthcare field at Mon Health Center. She received a Bachelor's degree in Business Administration and HR Management from Fairmont State University.

Gustavo Keener (Banner Systems Administrator): Originally from North Carolina, Gustavo started his IT career by laying Ethernet wiring for a small business in Utah. He has worked on several roles ever since and in the last few years has worked as a full- stack software developer at Mylan and as a Database Administrator for a local non- profit. Gustavo received a Bachelor's degree in Computer Science from Utah Valley University, and an Associate's degree in General Science Studies from Brevard College. Gustavo is also fluent in Spanish (conversational and practical).

Annaliza Marks (Programmer Analyst for Banner Finance): Annaliza has over 25 years of experience in Information Technology and has worn many hats in the IT field, such as: Database Administrator, Web Page Administrator, Software Specialist, Programmer, Graphic Artist, Report Writer, and Blackboard Administrator. She has also taught Information Technology and Robotics to high school students. Annaliza received a Bachelor's degree in Computer Information Systems and an Associate's degree in Technical Studies – Cisco Networking, both from Glenville State College. Additionally, she is certified as a Wimba Product Specialist, as well as Comptia A+ and Network+.

Kathy Stucklen (Network Operator): Kathy is an experienced Tier 1 Helpdesk customer support representative and administrative specialist, with several years in a fast-paced pharmaceutical environment. Kathy received an Associate's degree in Computer Information Systems and an Associate's degree in Criminal Justice, both from Kaplan University.

Employee Promotions and Advancements in 2020

Sarah Barnes to Supervisor of Development Team (previously Web Developer): In her new role as Supervisor of Development Team, Sarah will lead the Software Development and Web Development teams on current projects and plan for future projects in consultation with the Teaching & Learning Commons (TLC).

Jason Chastain to Telecommunications Supervisor (previously Telecom Specialist): Jason has taken on additional responsibilities of supervising the operations of the Morgantown telecommunications staff and for all WVNET telecommunication and networking systems, under the direction of the Manager of Telecommunications.

James (J.R.) Farley to Database Administrator Team Lead (previously Senior DBA): His team says, "J.R. is a great presenter and helps us understand complex systems by breaking them down into digestible chunks. He is the glue that holds the Banner DBA team together. His insight has helped us solve complex issues in a timely manner more times than one can count."

Alexander Keefover to Instructional Designer, WVROCKS (previously Program Assistant II): Throughout the state of West Virginia, Alex leads WVROCKS instructors in designing and building

online courses in accordance with current learning theories, design models, and compliance with intellectual property, privacy, and accessibility laws. Additionally, he assists with administering Blackboard LMS and integrating new, external tools using LTI.

Phil Snitz to Manager of Business Operations (previously Business Manager II): Phil has taken on additional responsibilities of procurement and purchasing agent tasks while continuing to manage payroll and overseeing the accounts payable and accounts receivable functions.

In Memoriam

In March 2020, we lost a long-time employee and a well-loved colleague, Randy Long. His sudden passing was an emotional blow to his friends and colleagues at WVNET. In his honor, we have named one of the WVNET conference rooms after Randy so that he is always with us.

Similarly, another conference room was renamed after long-term WVNET employee, Allen Daugherty, who passed away in 2018.