

WVNET Accomplishments for 2019

February 4, 2020

2019 was another year of restructuring, staff retiring and some employees moving on to the next adventure in their lives. But we still came out on top with 10 new employees to joining the WVNET team. Also, WVNET will be celebrating 45 years of service in 2020. Check out our [blog](#) for some history on WVNET throughout the years.

WV Statewide

Technology Conference: After a brief hiatus, WVNET is bringing back the West Virginia Statewide Technology Conference (WVSTC). The conference will be held at the Charleston Conference Center from July 14 -16, 2020. We are working with the West Virginia Department of Education (WVDE) and the West Virginia Office of Technology (WVOT) to put together a diverse program that should appeal to K-12, Higher Education and Government users. Check out the website wvstc.com for more details.

Marketing WVNET: The new Marketing Committee developed two professional brochures for WVNET. One is an [executive summary of WVNET, our programs, our services, and our customers](#). The other, designed for [State Delegates and Senators, details our impressive list of customers by political district](#). Combined, these documents convey the importance of WVNET to the growth and vitality of West Virginia.

Banner, Blackboard, and other Academic Applications

Banner 9 Implementation: WVNET has been working with our college and university customers over the past year to ensure the adoption of the newest version of Banner. All our schools are now using Banner 9 for administrative processes and are on their way to moving toward full adoption for faculty and students. WVNET has provided each school with regular communications regarding the continual releases of Banner 9, ensuring that

these releases are applied and underlying technologies are updated to ensure optimum performance.

Pierpont Banner Separation: WVNET has worked with Pierpont Community and Technical College to perform an extensive separation of Pierpont data from the shared systems environment it was previously using. WVNET has worked with to resolve inconsistencies in the data, worked with third party vendors for integration, and provided hundreds of hours of support to the Pierpont staff. These efforts were primarily on their Banner system, but also included work on Argos and Blackboard. This was all completed at a cost that was more economical than that charged by other vendors.

DegreeWorks: Ellucian DegreeWorks is a comprehensive academic advising, transfer articulation, and degree audit solution. The

Transfer Equivalency Self-Service module offers institutions an easy-to-use administrative tool for mapping courses and processing transcripts. It also includes a self-service tool for transfer students that clearly shows them where they stand in meeting course and degree requirements. Testing of this module wrapped up in 2019, making 2020 the year many institutions go-live with this student-focused application.

Blackboard Learning System

- We conducted Blackboard Admin Chats every other Tuesday for our customers.
- We conducted 12 Blackboard training sessions at 7 institutions and managed over 170 Blackboard support tickets.
- The WV Supreme Court of Appeals was added as a customer. They are using the Blackboard-based PEAK system for professional advancement and training.

- Blackboard admin training sessions were conducted at Eastern CTC and Mountwest CTC.

Education Services

Department of Education: WVNET is proud to work with the WV Department of Education (WVDE). WVNET hosts the WVDE primary site and works with WVDE staff to ensure that all services are operational. This was crucial this past year when strike announcements were announced and user demand on the server increased to levels that rendered the website inaccessible. WVNET staff worked to allocate additional resources to the server so that the website remained available during this peak demand.

WVNET also worked with WVDE on to their Microsoft Office 365 deployment. WVNET worked with WVDE staff to upgrade the system to ensure that all 500,000+ accounts would continue to be accessible.

Finally, WVNET continues to host websites for many of the K-12 school districts. Just look for the tagline “Powered by WVNET” tagline on their home page.

WV Virtual

Learning Network: In October 2019, WVNET revived the dormant WV Virtual Learning Network (WVVLN) with a multi-day conference in Roanoke. WVVLN is a consortium of WV institutions that are doing distance learning classes. The program went stagnant a few years ago due to retirements and staff departures. It has now resumed its previous status as a respected program for distance learning enthusiasts.

Other Software Applications

OZ Problem Tracking System: In

2019, we released the latest version of WVNET's problem tracking system called OZ. OZ 5.0 include many security improvements, a complete re-write of all database code, new table management to improve how lists of tickets are displayed, a new email system that extends the capabilities to communicate with OZ, and many code improvements and optimizations.

We also created a

Progressive Web Application for OZ. This mobile application provides a user-friendly interface to the OZ system for mobile devices. While the PWA is currently limited to basic ticket processing (view, create, update, close), it is extremely useful for people who are working at multiple locations and need to stay on top of problems and tasks.

WV Instructional Resource Center: We created a new version of the West Virginia Instructional Resource Center (WVIRC) application. It is used to manage orders and inventory for students of the West Virginia School for the Deaf and the Blind. The new version is implemented using updated framework software on a new server and includes numerous optimizations that improve performance and minimize errors.

PSTACHIO: WVNET's Public

Service Training application, PSTACHIO, is used by public service providers throughout

West Virginia. In 2019, we added new features such as copying enrollments between classes, sorting certificates by department, new on-demand reports, and an easier way to export data for reporting and certificates.

Professional Learning

and Development: WVNET's Professional Learning and Development application (PLAD)

gives administrators all the tools needed to manage, plan track and approve professional development for all educators, bus drivers and staff members. In 2019,

it was updated with a completely new user interface, making it more responsive for smaller screens and less confusing for users. We also conducted a security audit of the PLAD system and corrected potential access restriction issues.

Blinks: To improve our support for Ellucian Banner products, we created a tool called Blinks. This tool reconciles important information about our numerous Banner instances. The program makes it easy to track versions and update software levels across all institutions in both production and test environments.

Pygenwar: As part of our support for many instances of Banner, there are some tasks that can be time-consuming and complicated. For example, student self-service applications must be configured and deployed for each institution. To save a large amount of time and effort, we developed a program called Pygenwar that automatically performs these tasks. This program reduces errors caused by manual configuration while greatly optimizing the process.

Honu: Our Nursing application, called Honu, coordinates nursing student experiences in medical institutions around the state. This year we added some security improvements to the program which will provide a better user experience.

SoftChalk and

Medial Close Captioning: These are two new products we have made available to our customers. SoftChalk is a distance learning authoring tool. Medial is a video streaming system that includes closed captioning.

Data Center Systems

F5 Web Application Firewall (WAF): WVNET has upgraded its F5 load balancer service and added a Web Application Firewall (WAF) module. This has increased our web-hosted customer's protection from web attacks. F5's WAF is designed to proactively detect and mitigate bots, secure credentials and

sensitive data, and defend against application-based denial-of-service (DoS) attacks.

New IBM p-Series S922: WVNET replaced its IBM p770 server with a new IBM p-Series S922. The old system used 32 cores and had a performance rating of 288.9 rPerf, while the new system uses 20 cores yet has a performance rating of 426.4 rPerf – over 1/3 less cores, but almost a 50% boost in performance. This allowed WVNET to transition from a traditional scale-up (or vertical) infrastructure to a scale-out (or horizontal) deployment. Horizontal scaling makes it easier for WVNET to offer state-of-the-art performance at reasonable prices while providing a stable growth path as our customer's needs increase.

Oracle Database Security: WVNET continues to revise its security policies to ensure that our customer's data is protected. This year, we implemented SQLNet encryption on all database connections to ensure that data-in-motion is delivered over a secure channel.

Oracle Database Patching: WVNET continues to ensure that our databases are up to date with the latest security patches. WVNET utilizes the latest Oracle Enterprise Management (OEM) software to perform patches on multiple databases and utilize the features of OEM to enhance productivity.

Network Operations Center: The Network Operations Center (NOC) received about 11,000 calls and tickets. Half of those were for after-hours coverage of the WVOT helpdesk.

As a reminder, WVNET's NOC is staffed 24/7/365 to serve our customers.

Telecommunications Improvements

- Migrated all 55 County Tax Assessors and 174 WV Library Commission circuits off of the expiring state communications contract.
- Decommissioned outdated Netsweepers, modems, and ATM circuits.
- Upgraded the video infrastructure and device endpoints, and trained NOC specialists on how to provide more comprehensive support for video applications.

- Enhanced data security by enabling encrypted communications over the Virtual Private Network (VPN) for DegreeWorks, Argos, Amazon Web Services, Microsoft Azure Cloud, Cashnet, Ad Astra Analytics, Campus Consortium, and Adirondack Solutions.
- Made a significant investment in new core infrastructure equipment in preparation for a major upgrade of all WVNET network equipment in 2020. When complete, this will significantly improve throughput on the network, reduce network latency, and improve network reliability.

New Employees

Dr. Carl

Powell (Director

of WVNET): Dr. Powell brings knowledge and experience to lead WVNET. Dr. Powell has a master's in computer science, a Ph.D. in Educational Leadership, and thirty-five years of experience in information technology. He has served as vice president and chief information officer at universities in Colorado, Michigan and Ohio. Dr. Powell is the 10th Director of WVNET.

Anita Davis (HR Generalist):

Anita is a Certified Senior Professional in Human Resources, holds a master's degree in Industrial Relations, and fifteen years of working in Higher Education. Anita is a U.S. Navy veteran, having served as a telecommunications specialist.

Dr. Bonnie

Ordonez (Manager,

DLES): Bonnie brings with her a broad background in Higher Education and K-12. Bonnie holds a doctorate degree in Technology Education and a master's

degree in Instructional Design and Technology.

Sarah Barnes (Web Developer):

Sarah is a front-end web developer and UI/UX designer with over twenty years of experience in the field. Ironically, her first job out of college was at WVNET from 1998 to 2003.

Edward

Leonard (Database Administrator): Edward has twenty years' experience working with Oracle software as an Oracle Database Administration and as an Oracle certified professional. He is also a U.S. Navy veteran.

Mary Burkhart (Telecommunications Network Specialist II): Mary got her start as a Microsoft intern in high school and now has a degree in IT Networking & Security Management. "I enjoy working at WVNET and I look forward to contributing and growing with the company for many years to come." Mary has over ten years of networking experience.

James (Jimmie) Reed (Telecommunications Network Specialist II): After being a cook for several years, Jimmie enrolled at the West Virginia Junior College and graduated with a degree in Information Technology. "I'm very excited for what the future holds for WVNET and I look forward to working with the most brilliant and coordinated team I've ever been around!" Jimmie brings fourteen years of experience to WVNET.

Adam McKeown (Network Operator):

Adam brings his degree in Information Technology and his helpdesk experience to the NOC.

Vijay

Raol (Associate Director,

WVROCKS): Vijay is an experienced IT professional with over fifteen years of experience in higher education, both in teaching and administrative roles.

Alexander Keefover (Program Assistant

II, WVROCKS): Alex received his bachelor's degree in Mathematics, with a minor in Computer Science, from Fairmont State University and a master's degree in Digital Media and New Literacies & Learning.