

NETWORKING 101

WEST VIRGINIA NETWORK (WVNET)

FROM THE DIRECTOR



New Year's means a new beginning. At WVNET, in addition to working hard to improve the things we do well, we are beginning to offer Managed Wireless Services* inside agencies and schools. WVNET has trained up two of our resident geniuses, Frank Seesink and Andrew Parker, to handle the latest Aerohive Wi-Fi products. WVNET can provide any level of filtering or configuration you can imagine. We can limit the websites school children can access, just like we do with their desktops, while allowing teachers and administrators access to the places they need to go. This will let K12 schools finally reach their goal of BYOD [Bring Your Own Device] as well as the 1-to-1 Initiative which has a tablet device for each child in a classroom.

When we combine that with our partnerships to bring Last Mile Wireless using whitespaces, it will help overcome the Digital Divide. This occurs when children have high speed internet access at school, but lose it when they go home. Senator Rockefeller has been a national leader in making free whitespace bandwidth available to people at no or very low cost.

WVNET participated in the very first campus rollout of whitespaces wireless bandwidth at WVU in Morgantown.

Staying ahead of the curve means never resting on your past achievements. I am proud of the technology wizards at WVNET who constantly strive to bring West Virginia schools the latest innovations to keep us ahead of everyone else in the nation. Stay tuned as we roll these out in our K12 schools!

**Special Note: Please see the WVNET Schedule of Rates http://www.wvnet.edu/documents/WVNET_Schedule_of_Rates.pdf for detailed Wi-Fi pricing. In addition to the pricing, WVNET can perform a site survey to determine if Wi-Fi access is possible and, if so, how many access points are needed for a particular location. The price for the site survey will be \$300/day plus travel expenses. The cost of the site survey will be required regardless if you choose WVNET for your Wi-Fi service. However, if you do choose WVNET, you will have the option of rolling the cost of the site survey into your month fee. For more information or if you have questions, please contact Phil Snitz at 304-293-5192 x258 or phil@mail.wvnet.edu*

WVNET/K-12 CONTRACT EXTENDED

On Friday, January 10, WVNET received some really good news. The WV Department of Education notified us that our contract to provide bandwidth and services to all K-12 schools had been extended through the end of January 2015.

WVNET has been the eRate provider to K-12 for as long as there has been an eRate program and we are delighted to have another year of this valued partnership.

Mr. Sterling Beane, the CTO at the WV Department of Education said, "We look forward to a continued relationship with the excellent staff at WVNET." Thanks for the vote of confidence, Sterling. We truly appreciate it!!



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WVNET ACCOMPLISHMENTS 2013

WVNET is a very busy place every day, with our people planning and maintaining the many services we provide. To list everything we do would be a daunting task, and we will spare you the details. However, we do have some high points we would like to share from the past year. Here are some of our major accomplishments in 2013.

- ◆ WVNET unveiled its new website — WVNET.edu2.0. (January 2013)
- ◆ WVNET extended Blackboard hosting to additional institutions, growing our support to 13 different Higher Education institutions plus DHHR and the Kanawha County Schools. WVNET helpdesk staff obtained seven Blackboard GUI Administration certifications to better support our Blackboard customers. (February 2013)
- ◆ DegreeWorks has been implemented for 14 schools. DegreeWorks is a web-based tool that helps students monitor their academic progress toward degree completion. (February 2013)
- ◆ The WVNET Helpdesk was recognized by HDI as being certified in exceptional operations service and support. HDI is a leading professional association and certification body for the technical service and support industry.
- ◆ WVNET implemented Snapshot Manager for Oracle (SMO), a tool that greatly improves the efficiency of database backups. With SMO we are able to make a snapshot (copy) of a database in seconds, and make a backup of it in minutes without the need to shut down the related service.
- ◆ The West Virginia Remote Online Collaborative Knowledge System (WVROCKS), hosted at WVNET, increased enrollments, courses and instructors. Student retention in the system remains above the national average.
- ◆ The WVNET Applications group implemented Argos, an analytics tool which helps schools create reports from Banner data. (February 2013)
- ◆ WVNET deployed a locally-written tool that provides real-time integration between Banner and Blackboard. The tool automatically updates Blackboard with web registration changes from Banner, making it possible for a student to register for a class and immediately be able to get course materials on Blackboard rather than waiting for manual processing. (March 2013)
- ◆ The Association for the Study of Higher Education (ASHE) entered a second year of hosting with WVNET. ASHE moved their organization's web resources, where they do conference planning, membership registration and generally run their worldwide organization to be hosted by WVNET in 2012. ASHE operations have functioned without interruption since moving their services to WVNET insuring that the organization can focus on serving their membership. (April 2013)
- ◆ WVNET began offering its customers a wireless access (Wi-Fi) solution — Aerohive and their array of products. Not only does WVNET offer these Wi-Fi products, we manage them for customers as well. WVNET's team has been trained and certified by the best at Aerohive and has built a model that will work for the customer that needs one wireless access point for a small office or the customer that needs 1,500 access points for a university and everywhere in between. (May 2013)
- ◆ WVNET created and presented a Massive Open Online Course (MOOC) about Software Defined Networking (SDN). Entitled SDNOPS, this was the first MOOC ever to teach about SDN. Students from around the world enrolled in the MOOC and achieved participation and completion statistics above the U.S. national average. The MOOC was recognized by top5onlinecolleges.org as one of the 99 Best Resources on Open Courseware and MOOCs, coming in 11th in the company of Harvard, Stanford, Ed-X, Coursera and other outstanding on-line course sites. (June 2013)
- ◆ WVNET was chosen by AIR.U to partner with WVU in the first rollout of their Whitespaces Super Wi-Fi solution. The goal is to bring wireless last-mile solutions to rural areas in states like West Virginia. The network deployment is managed by AIR.U co-founder Declaration Networks Group LLC and represents a collaboration between AIR.U and WVU Board of Governors, WVNET, which provides the fiber optic Internet backhaul for the network and Adaptrum, Inc., a California start-up providing white space equipment designed to operate on vacant TV channels. (July 2013)
- ◆ WVNET released version 4 of its diverse tracking tool called "OZ", which organizes and coordinates work and problem solving. OZ manages tickets that represent pieces of work, directing the tickets to appropriate support people while sharing information with others as appropriate. The new version includes integration of parts, inventory and invoices along with many usability enhancements. (July 2013)
- ◆ WVNET worked with the WV Department of Education to present the 9th annual West Virginia Statewide Technology Conference (WVSTC) at the Waterfront Event Center in Morgantown, WV. Primarily aimed at K-12 educators, the conference offered 150 high-quality sessions to nearly 500 attendees. Nearly 60 exhibitors demonstrated the latest tools in educational technology. (July/August 2013)
- ◆ WVNET put in place a contract for the Ellucian On-Demand Subscription Library (formerly Digital Campus Academy). This affordable web-based training system is designed specifically for administrative end-users (and those people providing functional support) of Ellucian products. *This courseware is available through WVNET for an annual subscription fee of \$500 per named user.* (September 2013)
- ◆ The West Virginia Higher Education Technology Conference (WVHETC) 2013 was held October 28-29, 2013, at the Waterfront Place Hotel and Morgantown Event Center in Morgantown. This important higher education technology conference featured thought-inspiring keynote speakers, 60+ concurrent sessions, tantalizing and plentiful regional cuisine, the latest technological advances demonstrated by exhibitors, and networking with educators from all of West Virginia. Over two hundred people participated. (October 2013)
- ◆ WVNET joined the National Association of Student Financial Aid Administrators (NASFAA). (October 2013)
- ◆ WVNET's disaster recovery site went live. WVNET now has duplicate computer systems and data in both northern and southern West Virginia, both attached to WVNET's 10GB fiber ring. Using VMWARE Site Recovery Manager (SRM) software and a process called replication, if a problem is experienced on one site SRM can automate a failover or migration to the redundant system.

WVNET Accomplishments Continued :)

- ◆ In collaboration with ePlus, Cisco and NetApp, WVNET deployed the first Cisco GENI Rack in the United States. The GENI Rack combines Cisco Unified Computing System (UCS) and networking equipment, NetApp storage array (SAN) and GENI software from RENCIS's ExoGENI project. The resulting platform provides unprecedented access to next-generation networking and computer resources for WVNET constituents as well as research scholars across the country. With this deployment WVNET has displayed thought leadership and is well positioned to attract economic development and secure funding opportunities. (December 2013)
- ◆ WVNET became an approved Google Glass Developer and was granted early access to this amazing new device. We plan to develop educational applications for Glass to benefit both students and teachers. (December 2013)
- ◆ WVNET rebuilt and completed P20—a major analytics and reporting project combining information from West Virginia WorkForce, Higher Education and Department of Education. This system will provide longitudinal data on students of West Virginia.
- ◆ WVNET deployed IR as a service, providing a data warehouse and reporting systems for Higher Education analytics which is scalable to every Higher Education Institution in the state.
- ◆ WVNET installed \$3.5 million worth of BTOP routers and switches in Morgantown, Charleston, Huntington, Columbus and Pittsburgh as upgrades to our core network. We also assisted the WV Office of Information Technology by installing a BTOP router at every courthouse in West Virginia.
- ◆ WVNET established a peering relationship with Frontier Communications. We are working to implement peering with other internet providers in West Virginia to keep West Virginia internet traffic between providers inside the state, avoiding routes to other states around the country.
- ◆ WVNET became the second host for the ERP OASIS Project.
- ◆ WVNET's Andy Parker earned a Cisco Certified Network Professional (CCNP) certification. Frank Seesink earned a Cisco Certified Network Associate (CCNA) certification. These accomplishments emphasize some of the expertise held by WVNET's technical staff.



"STOP THE PRESSES! For the 6th time in the last 2 years, WVNET is again lowering its prices for Internet access. This time the price has gone down to \$19.95. We constantly strive to find ways to drive down our costs so we can pass the savings on to all our customers. We're sure this is most welcome in this time of budget cuts."

EMPLOYEE SPOTLIGHT—MARCIE LAYMAN :)



Meet team member Marcie Layman, Administrative Applications Software Specialist. Marcie lives in Morgantown, West Virginia (Monongalia County) and has worked for WVNET and the State of West Virginia for 31+ years. Marcie previously worked as a Network Operator and Information Technology Consultant-Sr. Marcie coordinates certification training and conferences with managers and employees pertaining to WVNET goals. She is responsible for setting up in-house training sessions for employees and participants from member institutions, working closely with training vendors on course pricing and bids.

Marcie enjoys traveling with Mike, her significant other, on their motorcycle, taking care of Spyke (dog), and working with animal and human charities.

EMPLOYEE SPOTLIGHT—GERALD HEADLEY :)

Meet team member Gerald Headley, System Administrator. Gerald lives in Morgantown, West Virginia (Monongalia County) and has worked at WVNET for 3 months. Gerald has a BSME from WVU. In his day-to-day work, he provides Blackboard LMS support and has the goal of improving his Linux administration skills. Gerald enjoys motorcycling, bicycling and photography.



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WVNET REMEMBERS WES HOLLAND



Our longtime friend and colleague, **Wes Holland**, passed away on January 7, 2014. Wes had been battling cancer for an extended period. As Manager of the Tools for Schools program, in the Office of Instructional Technology, Wes dedicated his career to ensuring that the students of West Virginia had state-of-the art technology designed to engage their learning process and prepare them for their world post-graduation. He was well-respected throughout the educational technology community. Wes was always a positive voice for education and an advocate for students. He will be deeply missed.

Whitley Saffron—Proud Recipient of \$500.00

Tip...Whitley Saffron, daughter of WVNET staff member Karen Saffron, recently became the surprise recipient of a \$500.00 tip. Whitley currently lives in Austin, Texas, where she is putting herself through school with hopes of being accepted in the physical therapy assistant program. To help pay her rent and school, Whitley works at 24 Diner as the head waitress on her shifts. She is always willing to pick up extra shifts when others need time off. From what we understand, Whitley is always either working, in class or studying, lessons she learned while out in the world of ballet.



Whitley was presented with a \$500.00 tip by one of her customers. It was his brother's Last Wish to present a waiter or waitress with an "awesome tip." Check out Whitley's reaction and an explanation of the "gift" here: <http://www.youtube.com/watch?v=5NNXytT2xc8>

CHRISTMAS MEMORIES 2013

Special Christmas memories were the theme for December 2013 as staff members and their friends and families took care of each other and those less fortunate. The annual **Christian Help Toy Drive** was another huge success due in part to WVNET's participation. Angels on **angel trees** were given wings in the way of clothing, candy, bath products and lotions and potions in an effort to make their Christmas a little bit cheerier.



WVNET Network Operator Mike McDonald tells the story about his grandfather who lives in Westover (close to Morgantown, WV) behind McCulla Funeral Home who does the big **Christmas lights display with Santa and gives out candy canes and toys to each kid that comes to visit him.** This year ended up being a record year for him as he gave out gifts to 1,770 kids. And, that number does not include any of the adults that came with the kids or the people that just come to walk through his yard to see his lights. Mike's grandfather has been doing this for about 24 years and each year his numbers are crazy. He just turned 70 in October. It takes him 3 months to put the lights up and about 2 to take them down. All we can conclude is that this is one very, very special grandfather. All in all, each of these things (and more) made this year's Christmas extra special!



WVNET staff members complete defensive driving course.

In December 2013, each of WVNET's staff members completed the nationally recognized *National Safety Council's Defensive Driving Course*. Upon successful completion of the course, participants had the opportunity to print out a certificate of completion from the website for their own personal records and potentially a nice little motor vehicle insurance discount. Staff members were reminded of the need to reduce speed especially in the wintertime, to steer in the direction you want to go in the event of a spin, foot off of gas and other timely tips like remembering to check fluid levels (anti-freeze, windshield wiper fluid, oil) tire pressure, etc.. The investment in time participants spent completing the course was deemed worthwhile.