WHAT'S NEW

NEWS ABOUT CURRENT PROJECTS AT WV NETWORK

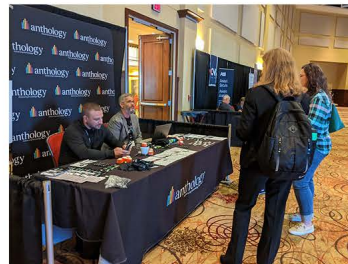**SUMMER 2022**

West Virginia NETWORK

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WVSTC 2022

The West Virginia Statewide Technology Conference (WVSTC) returned to Morgantown, July 18-20. This year's theme was **Leading the Way Through Innovation and Change**.

The three-day event hosted over 300 hundred educators, IT staff, administrators, and directors from West Virginia's K-12, higher education, government, and non-profit sectors. The Vendor Expo featured 89 exhibitors.

Sponsors for the event were:
Platinum: Promethean, Alpha Technologies/ Scale Computing, Anthology,
Gold: Google for Education, SMART, D2L,
Silver: Trafera, Learning.com, Imagine Learning, Samsung and Sonic View.

The conference featured six pre-conference sessions and over 90 concurrent sessions covering a wide range of technology topics. The keynote speakers were **Dave Burgess**, known for his *Teach Like a Pirate* presentations and **Dr. Sarah Tucker**, Chancellor of the Higher Education Policy Commission and Community & Technical System of WV.

WVNET would like to thank the conference committee and all who worked so hard to make this year's conference a success. We are looking forward to planning for 2023.

If you are interested in being a part of the planning committee, send us a note at: **wvstc.com/contact-us**.

From the Director!

Dr. Carl Powell, WVNET Director

After a five-year hiatus, the West Virginia Statewide Technology Conference returned to Morgantown for three days of presentations, exhibits, sunshine, and off-hours relaxation. Attendees were able to meet with over 70 vendors while learning to "**Teach Like a Pirate**". A few brave souls even joined us for Team Trivia night, with the winning team from WVNET becoming the losing team for wearing identical shirts! All in all, a terrific way to resume an annual tradition. We look forward to next summer and WVSTC 2023. You can find more information about the conference later in this newsletter.

In the meantime, WVNET continues to work to provide you the services you need. This summer, we are increasing the bandwidth of our broadband backbone while upgrading our hub network equipment to allow faster speeds and increased network resiliency. With our move to the Oracle cloud earlier this year, we are now concentrated on upgrading our Ellucian Banner products to improve performance and functionality. We continue to expand our use of the Cynet threat detection and response system to keep our computer systems secure. And our Network Operations Center continues to respond to customer calls 24/7.

So, enjoy the rest of your summer, take some time to relax, and get ready for the rest of 2022!

Vendor Booth at WVSTC2022

JOIN OUR TEAM!

WVNET is hiring! Click on our website to view full job details and how to apply: **wvnet.edu/about/careers/**

Telecommunication Network Specialist II with salary range of $60,000 – $70,000. This position requires an Associate's Degree in IT relevant field and 4 years of telecommunications experience.

Additionally, WVNET offers an excellent state government benefits package, including comprehensive health insurance coverage, retirement investing, and life insurance plans as well as generous amounts of vacation, sick, and holiday leave.

Highlights from WVSTC2022
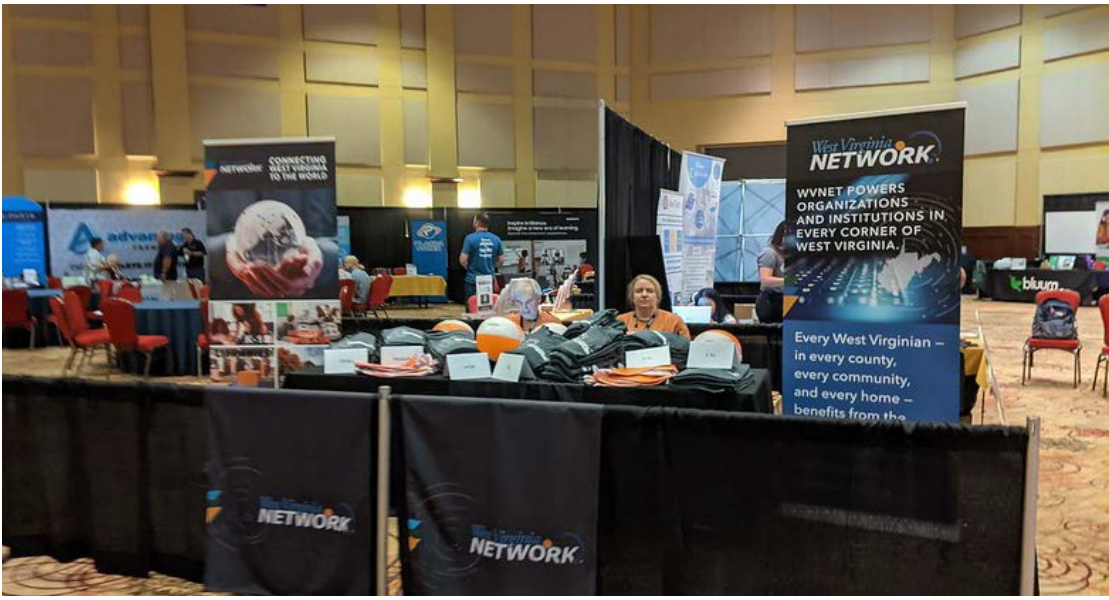
DEPARTMENT UPDATES

WVNET Telcomm Update

The WVNET Telecommunications Group recently migrated Southern WV Community & Technical College's (SWVCTC) core network infrastructure, including 6 Cisco routers and two switches for their five campuses as well as a router in the Capitol Complex. WVNET's Telecommunications group consulted closely with SWVCTC's leadership team and Cisco representatives to select and fully configure the new equipment.

Previously this year, our team did the same for SWVCTC's wireless infrastructure, including configuration of 5 wireless controllers for 100 wireless access points. SWVCTC provides accessible, affordable, quality education and training for students in Boone, Lincoln, Logan, McDowell, Mingo, and Wyoming counties. WVNET is honored to work with SWVSTC and our other educational partners on improving network infrastructure and connectivity across our beautiful state.

Updates from the Development Team

This summer the Development Team worked with the Higher Education Policy Commission to launch a new section of the wvhepc.edu website that highlights flexible 2- and 4-year degrees. The site provides a comprehensive list of the Board of Governors Associate in Applied Science (AAS) and Regents Bachelor of Arts (RBA) degree programs in the state as well as contact information for the coordinators at each institution. This streamlined access to information will make it easier for potential students to learn about options to complete their degrees.

Visit **wvhepc.edu/flexible-degrees** to see the site and learn about programs. Make sure to share the link with friends and family who might be thinking about finishing a degree, but don't know where to start!

To discuss web development projects with the Development Team, send an email to **wvnet-support@staff.wvnet.edu** to schedule a meeting and review your project requirements.

Systems Update

Securing Websites with SSL Certificates
By Verne Britton

Using an SSL certificate to encrypt communication to a website has become a common practice. SSL encryption ensures that any information being exchanged is kept private to the end user and the site you are visiting. Most sites typically have not utilized SSL communication due to the cost of obtaining a certificate from a reputable certificate authority such as Network Solutions or Verisign. Due to the increased demand and sites collecting more sensitive information such as credit cards, the certificate industry has become very competitive, and prices have come down to much more affordable rates.

But with Google and other search engines starting to give higher rankings to sites using HTTPS, along with browsers such as Chrome encouraging everyone to use HTTPS for secure website communications, in 2014 the Let's Encrypt project (**https://letsencrypt.org**) was launched. Let's Encrypt offers SSL certificates at no cost but there are a few catches; support is provided through documentation or the use of community support forums, the approval process to issue a Let's Encrypt certificate does not support using email verification as is very common with commercial certificates; but the biggest challenge is that a Let's Encrypt certificate is only good for 90 days, so it has to be renewed and re-installed every three months. Thankfully, many programmers around the globe have written a number of utilities and scripts to automate this renewal process using the Let's Encrypt Application Planning Interface (API).

WVNET, as part of upgrading and modernizing our webhost offerings, has taken some of those public domain utilities and scripts and created a fully automated Let's Encrypt control and deployment system to have one centralized place to request a certificate renewal, approve and authorize that renewal, and then download and deploy the new certificate to the appropriate internal WVNET server.

There are many SSL certificate applications that do not fit well into the Let's Encrypt model, both at WVNET and around the state at our many customer sites; those certificate usages still require a commercial certificate. Even these certificates have had their lifespans altered as usage has increased. A commercially provided certificate lifespan has been reduced from 8-10 years prior to 2011 to now just 398 days or just a little over 1 year because of industry changes from large companies such as Apple, Google, and Mozilla. This requires all certificates to be renewed at least once a year, which in turn requires interaction from a systems administrator to generate, renew, and install the new certificate.

No matter if you use Let's Encrypt or Commercial Certificates, WVNET is delighted to be able to offer a variety of options for SSL certificate services to our customers!