MARIA, the Mid-Atlantic Research Infrastructure Alliance, Inc., is increasing campus connections to the Internet2 Network to 100 gigabits per second (100G) to meet rapidly advancing needs of high-performance, data intensive research and collaboration. MARIA, a not-for-profit corporation, brings together Virginia’s major universities—Virginia Tech, the College of William and Mary, George Mason University, James Madison University, Old Dominion University, University of Virginia, and Virginia Commonwealth University—to facilitate access to shared technology infrastructure for research.

MARIA and the Mid-Atlantic Broadband Communities Corporation (MBC) are scheduled to complete the upgrade by July 1. The upgraded network will deliver an initial capacity of 4 terabits per second (4Tbps), including 500 gigabits per second dedicated for MARIA research. Virginia Tech and Old Dominion University will be the first MARIA members to implement 100G channels over the research allocation. George Mason University and the University of Virginia will connect at 100G over their own fiber optic networks, and Old Dominion University’s connection through MBC will serve the College of William and Mary, Jefferson Lab, ODU’s Virginia Modeling Analysis and Simulation Center and other participants in the Hampton Roads region. Radford University and the Virginia Tech Carilion Research Institute will benefit from Virginia Tech’s 100G link. The MBC network will reach Virginia Commonwealth University and James Madison University in a phased approach.

New load balancing service available

Ensure maximum availability, greater performance and increased reliability of your networked application with Network Infrastructure and Services’ (NI&S') improved, high-capacity load-balancing services.

The Application Load Balancing (ALB) service operated by NI&S evenly distributes the network traffic for a particular service (for example, the main university website: www.vt.edu) across multiple physical and virtual servers, which operate as a single server for ALB subscribers. Housed in the controlled environment of the university Data Center in Andrews Information Systems Building (AISB), the service has backup electrical power and is monitored 24/7/365. The result is a highly available and scalable application delivery system.

The legacy load balancing service is tentatively scheduled to be decommissioned in August 2015, so now is the time to plan your move. The ALB offers redundant hardware and network connections, faster processing and 10Gb of bandwidth, and is IPv4 and IPv6 compatible.

To order the Application Load Balancing service, or for specification and pricing information, contact NI&S' Customer Support Services at cssnis@vt.edu or call 540-231-6460.

Information security to be upgraded

A new program to upgrade the security levels for university data will implement two-factor authentication. The program follows on the work of the CyberSecurity Task Force and multifactor authentication working group. The goal is to make two-factor authentication the norm for typical logins to services, data, and administration of electronic resources. Two-factor authentication adds a level of security to the process that permits access. Passwords alone can be compromised through phishing, hacking, or even guessing. Two-factor authentication—adding the factor of “something you HAVE” to the password of “something you know—makes all of those methods of compromise much more difficult. CAS, the central authentication service that provides the login gateway to many different applications from My VT to most Banner applications, is the first candidate, with other systems to follow.

Contact Mary Dunker for more information or to get involved with the program.

VT Google Groups replacing LISTSERV

Virginia Tech’s Listserv service is being replaced with VT Google Groups. After May 15, 2015, no more general Listservs will be created. By Fall term, class lists will also be created through Google groups.

Please replace your general list with your own VT Google Group for announcement, discussion, question and answer, and general purpose mass mailing needs. For more information on the features of Google Groups, see Using VT Google Groups.
Electrical and computer engineering capstone course

Sixteen teams of upper-level engineering students are completing a new capstone design course in electrical and computer engineering that paired teams with industry sponsors including Lockheed Martin, General Electric, BAE Systems, Northrop Grumman, Johns Hopkins, and also included one project from Information Technology.

Students go through a full business acquisition/deliverables cycle—responding to a request for a proposal, developing the statement of work and technical specifications, negotiating deliverables, designing and developing the technology, conducting initial simulations, and proceeding to a final turnover of the project. The course emphasizes business process and professional development—including building leadership/team skills, listening skills, and identifying strengths and weaknesses.

Unique among the projects was designing a mobile single sign-on software interface, proposed by Identity Management Services. While most applications store passwords, creating security risks and poor user experiences, a single sign-on interface allows multiple services or applications to securely identify users over an open network, and allows users to sign in using just one password. Team members Zack Bubb, Christopher Dorick, Nathan McCloskey, and Cameron Spiller (pictured above) worked to develop a solution using open authorization to provide secure sign-on, keeping all authorization requests under the control of a token agent.

Karen Herrington (IMS), project sponsor, praised the work of the four-member team. “They worked hard and met all the goals we set for them, and came up with a solution that is workable and elegant. I really saw an evolution in their communication style and project management abilities over the duration of the project.” Herrington mentioned that the students chose the project specifically because they wanted to work on a software challenge instead of a hardware challenge. Having had less experience in software development, two of the team members expressed an interest in taking additional mobile software design courses in the future.

The single sign-on software interface project won the Best Paper Award, as voted by participants of the poster session and presentation.

Karen Herrington with Gino Manzo, lead instructor, and Luke Lester, department head.

Photos by Angela Correa
Welcome new salaried employees

Tim Chittenden, IT Project Manager, Enterprise Systems
Jonathan Fink, Instructional Designer, Technology-enhanced Learning and Online Strategies
Michael Flora, Windows Applications and System Administration, Enterprise Systems
Wally Lewis, IT Project Manager, Enterprise Systems
Mark Williams, Network Engineer, Network Infrastructure and Services

Focus on HR

Did you see the email from Jamie Boggs detailing the many activities for May and June coming up?

Topics include

• May 1 to 22: Open enrollment for health benefits and flexible spending accounts
• May 2: Healthy Kids Day 2015
• May 12: Cancer and Genetic Testing: What You Need to Know
• May 27: Hokie Wellness Elder Care Symposium
• June 10: Men’s Preventive Health: What You Need to Know
• June 17 Carilion Clinic Diabetes Prevention and Management

And more on-going events.

Juanita Petrone

Juanita Petrone, retired from Information Technology, passed away at her home on March 30 at the age of 89. Juanita served as the service manager for the Computing Center in the 1970s, having begun her career at Tech in the ’60s. She worked with customers who brought in varieties of computing problems, mainframe-based issues primarily. She retired in 1992 as a computer systems analyst.

Golf was one of her passions, a passion for which she was well-regarded and well-known!

Find some of the senior staff in Information Technology who remember her well!

The complete obituary is available from NRV News at http://nrvnews.com/obituaries/petrone-juanita-w/.