

KINBERCON 2016 Technical Workshops

Wednesday, April 13, 2016 | 8:30 a.m. – 5:00 p.m.

Full-Day Workshops

Workshop #1 – perfSONAR

Overview: perfSONAR is a network measurement and monitoring toolkit that helps to identify and isolate problems as they happen. This workshop will focus on the deployment of perfSONAR platforms within the campus environment. Highlights include:

- Overview of KINBER's Pilot program, providing pre-configured perfSONAR platforms to Pennsylvania higher education campuses in order understand if pre-configured platforms lead to faster integration of into the campus infrastructure.
- perfSONAR use cases and best practices.
- SDN discussion and use cases.
- DDoS overview.
- Science DMZ and what it could mean for your campus.
- HPC & OpenStack cloud and storage examples.

Presenter(s): Ken Miller, Penn State University; John Hicks, Internet2; and Mike Carey, KINBER

*This workshop is supported in part by KINBER's Regional Coordination and Partnership in Advanced Networking award from the NSF's Division of Advanced Cyberinfrastructure "Campus Cyberinfrastructure - Infrastructure, Innovation and Engineering (CC*IIE)" program, which invests in improvements and re-engineering at the campus level to support a range of data transfers supporting computational science and computer networks and systems research.*

Workshop #2 – IPv6 Training

Overview: This customized workshop will provide attendees with the foundation for the silver IPv6 certification exam at the end of the course. IPv6 instruction topics include, but are not limited to the following: Addressing, Architecture, Capabilities, Configuration, Features, Header Translation, Integration, Migration Planning, Packet Generation, QoS, Routing, Security, Specification, Transition Mechanisms, Troubleshooting, and Tunneling. This coursework is approved and certified by the IPv6 Forum.

Presenter(s): Brandon Ross, Chief Network Architect and CEO, Network Utility Force LLC

Workshop #3 – Executive IT Cybersecurity Training

Overview: Securing the network is top priority for organizations of every size. This workshop will explore proven strategies and best practices from nationally renowned experts for securing your network from both the research and education networking community. Attendees will have a better understanding of key concepts, protocols, and policies involved in establishing and maintaining security on the network. The workshop will also look at the nature and structure of network attacks and motivation behind malicious online activity. Through exercises, demonstrations and hands-on activities attendees will be better prepared and more equipped prevent, identify, mitigate and respond to malicious attacks.

Presenter(s): William J. (Joe) Adams, Ph.D., Vice President for Research and Cyber Security, Executive Director of the Michigan Cyber Range, Merit Network and Nathan Dragun, Director of Cyber Range Development, CISSP, CEH, GXP, GREM, CPTA

Workshop #4 – Peering and Caching with BGP

Overview: Workshop participants will learn all about peering and caching in this interactive workshop. Topics to include: Caching examples from KINBER and other regional networks including CEN and OSHEAN as well as commercial caches such as Netflix. Also covered will be an introduction to Border Gateway Protocol (BGP) and hands on BGP exercises using Cisco and Juniper.

Presenter(s): Peter Southwick, Senior Solutions Architect, Integration Partners; Scott Taylor, Director Connecticut Education Network; Shawn Jacobsen, Solutions Architect, Integration Partners

Half-Day Workshops

Workshop #5 – NSF Campus Cyberinfrastructure Grants

Overview: KINBER brings you an in-depth look at National Science Foundation Campus Cyberinfrastructure solicitation, the program that enables you to build your campus infrastructure or develop tools and support for robust research projects that require an advanced network like PennREN. Topics include elements of a successful campus cyberinfrastructure proposal, resources available to help prepare your response to the solicitation, developing a campus cyberinfrastructure plan, science driver requirements, and more. Have your questions answered and discuss and explore partner and collaboration opportunities.

Presenter(s): Wendy Huntoon, President and CEO, KINBER

Workshop #6 – Performing Arts & Humanities Over Advanced R&E Networks

Overview: This workshop will lead participants through the current advanced networking technologies being most widely used in the performing arts and humanities. Through live demonstrations, applications examples and interactive discussion with world-renowned leaders in the arts and humanities, participants will have a more complete understanding of how to best support these initiatives at their own institutions. Topics to be covered include interactive collaboration technologies such as Lola, Polycom Music Mode and others; developing a robust distance learning program, digital repositories, network considerations, funding, K12 considerations and more.

Instructor(s): Ann Doyle, Community Engagement Manager, Internet2 and Jennifer Oxenford, Director Community Engagement, KINBER

Workshop #7 - Fiber Buy vs. Build: Understanding the Second E-rate Modernization Order

Overview: This workshop will focus on the changes the FCC adopted to the E-rate rules in the Second E-rate Modernization Order to allow schools and libraries more options for applying for E-rate funding for fiber builds. Presenters will also provide brief summaries of funded fiber build projects. Presenters will ask questions and help explore the lessons learned from past projects that will be relevant to E-rate applicants seeking E-rate funding for new fiber builds.

Instructor(s): Joe Freddoso, Co-Founder and Chief Operating Officer, Mighty River, LLC and former President and Chief Executive Officer, MCNC