



2016 ACCOMPLISHMENTS

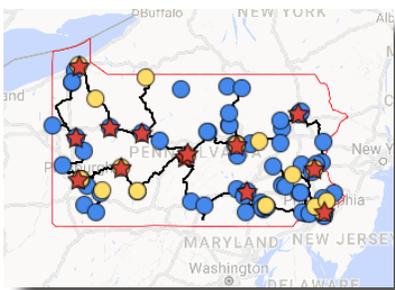
Continuing Growth.

In 2016 29 new sites connected to PennREN, KINBER's statewide high-performance Pennsylvania Research and Education Network.

KINBER has 124 total connections, which includes multiple connections for some organizations.

Of the total connections, at least 32 entities upgraded their service, ranging from increasing their speed from 1 Gbps to 10 Gbps, to adding Internet2 connectivity and increasing bandwidth.

The number of 10 Gbps sites



doubled from 13 sites in 2015 to 26 sites in 2016.

Approximately 60 percent of PennREN's connections are on-net while 40 percent connect to the network via partnerships with last mile providers.

Advancing Research. KINBER has led efforts to strengthen research in Pennsylvania and was awarded funds to administer several National Science Foundation (NSF) grants, starting with its 2015 \$150,000 Regional Coordination and Partnership in Advanced Networking award as part of the NSF Campus Cyberinfrastructure program.



In October 2016, in collaboration with the Quilt, KINBER led the Campus Cyberinfrastructure (CC*) PI and Cybersecurity Innovation for Cyberinfrastructure (CICI) PI Workshop in Philadelphia.

In addition, KINBER is a regional partner on two new NSF grants awarded in 2016: the NSF CICI Regional: SAC-PA: Towards Security Assured Cyberinfrastructure in Pennsylvania project led by the University of Pittsburgh and the NSF CIF21 DIBBs: EI: Virtual Data Collaboratory: A Regional Cyberinfrastructure for Collaborative Data Intensive Science project led by Rutgers University and The Pennsylvania State University.

KINBER is a participant in the NorthEast Big Data Hub Big Data Literacy Education Spoke and Inquiry Group and also became an XSEDE (Extreme Science and Engineering Discovery Environment) Campus Champion in 2016.

KINBER is working with three Pennsylvania NSF 2015 Campus Cyberinfrastructure – Data, Networking, and Innovation (CC*DNI) awardees, Bucks County Community College, Franklin & Marshall College, and Harrisburg Area Community College, who received grants totaling more than \$900,000 to seed campus innovation. The two community colleges were the first community colleges nationwide to receive campus cyberinfrastructure awards from the NSF.

Planning Next Steps. KINBER's Board of Directors approved a new strategic plan during the final month of 2016. The initiative builds upon the organization's accomplishments and sets a path for the future.

Convening KINBERCON 2016. Now recognized as the Pennsylvania event for network-based information and collaboration, KINBERCON 2016 drew nearly 300 leaders and technologists to Philadelphia in April. The fifth annual conference offered breakout sessions and a full day of technical training workshops, which were new for 2016, as well as dynamic keynote addresses. Florence Hudson, Internet2's senior vice president & chief innovation officer, engaged attendees with her discussion of the endless possibilities and realistic challenges of the Internet of Things and State Senator John Yudichak, who represents the 14th Senatorial District in Carbon and Luzerne counties, captured the momentum and energy of the event with his closing words:



“KINBER is the anchor of a technological revolution that can unleash the talented minds of a generation of Pennsylvanians who will push the boundaries of science, business and government... We must seize this moment in PA and rally around the tremendous foundation already established by the KINBER organization and continue your great work to connect PA to the future... a brighter, more prosperous future where high-speed broadband connections are at the fingertips of every Pennsylvanian.”

Enriching the Community. The Community Services program continued to expand its offerings, providing 34 virtual trainings and programs in

2016 serving over 500 people. New communities of practice were launched in 2016, including the new Cybersecurity Working Group. Recognizing the need to encourage and foster more diverse participation in the fields of information technology and networking technology in the commonwealth, the KINBER Diversity Scholarship was created

to encourage participation at KINBERCON among women, minorities and communities who previously had been unable to attend. Each scholarship includes admission to KINBER's annual conference as well as registration for one technical workshop of the awardee's choice. Four scholarships were awarded during the inaugural year. Other diversity efforts occurred, including KINBER's continued partnering with University Corporation for Atmospheric Research (UCAR) and the Department of Energy's Energy Sciences Network (ESnet) on the WINS "Women in IT Networking at SC" initiative, which selected seven awardees for 2016 from 33 applicants from 13 states.



Offering Services and Forging Partnerships. Partnerships and services are a hallmark of 2016, with KINBER establishing a peering connection to enhance network capabilities with ESnet as well as peering with neighboring network WVNET in West Virginia and NJEDge.Net in New Jersey. After a successful pilot, KINBER began offering BlueJeans cloud video collaboration services to 16 institutions. KINBER also started offering authoritative IPv4 and IPv6 DNS services and third-party technology services through SungardAS and TierPoint. KINBER became a member of the Schools, Health, and Libraries Broadband Coalition (SHLB). 2016 saw a strengthening of the existing partnership between KINBER and the National Park Service with the inaugural Flight 93 Distance Learning program marking the 15th anniversary of September 11th, 2001 streamed live from the Flight 93 National Memorial in Shanksville, PA to thousands of classrooms and viewers worldwide.