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Nonprofit • Research • Education • Consortium

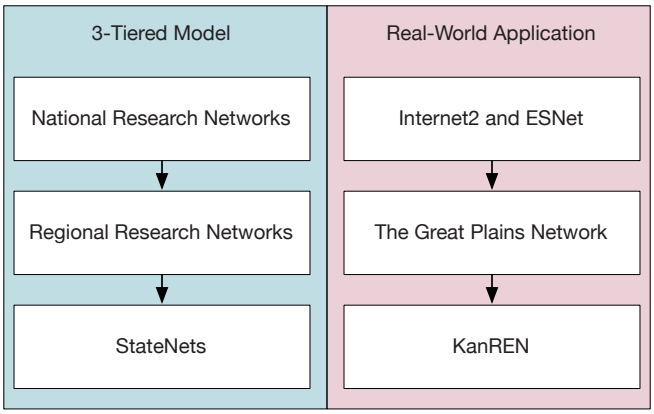
Sustainable Success Since 1992

KanREN brought The Internet to Kansas and continues to provide critical, world-class broadband services and innovation to the Kansas research and education community. As a member-driven not-for-profit organization, the Kansas Research and Education Network has and continues to focus on advanced network services for all its members.

History, Governance, and Ecosystem

Founded in 1992, the Kansas Research and Education Network (KanREN) is a registered 501(c)(3) not-for-profit organization serving Community Anchor Instutitions (CAI) and education or research focused organizations.

KanREN serves the StateNet role in the 3-tiered model for education and research entities. The 3-tiered model has been proven a cost effective, efficient, and scalable solution for meeting the unique connectivity needs of education and research.



Member-Focused Structure

KanREN operates on a self-sustaining cost recovery model. Our initial funding, provided by The National Science Foundation (NSF), was quickly transitioned to the current, long-term, stable methodology. Members pay exactly what it costs to deliver services.

KanREN is governed by our members. Working Groups provide an opportunity for member interaction and the introduction of new ideas into our ecosystem. The Board of Directors evaluates and refines working group recommendations and sets long-term organizational direction, vision, values, and mission. Most importantly, all members have opportunity to vote on major resolutions; including rate and fee structure changes. Because all decisions are fully vetted and debated among members, KanREN's services never lose their fiscal responsibility and member focus.

Private-Public Partnership

KanREN is a perfect example of a successful public-private partnership. KanREN purchases raw connectivity building blocks, converting those inputs into innovative network services. KanREN has the unique skillset to understand the needs of diverse user groups (from residence halls to security professionals to researchers) and convert those needs into required raw resources.

The world of connectivity moves quickly and requires a nimble organization. KanREN's status as a private business allows us to move quickly in conjunction with telecom industry partners. KanREN's member ecosystem allows for open discussion and keeps the organization moving forward with solid financial and technical plans for emerging technologies.

Quick Facts:

- Registered 501(c)(3) not-for-profit organization
- Self-funded – No on-going state or federal funds
- Full financial disclosure to members
- Governed by members
- Facilitate group purchases, increasing vendor discounts
- Founded in 1992, before "the Internet" as we know it existed
- Consistently leading the nation in technology and capabilities
- Lawrence, KS small business – member funds stay in Kansas

Expert Support Services

Wide Area Networking (WAN) requires a very specific skillset that does not typically coincide with enterprise LAN skillsets. Most institutions find hiring WAN experts is an extremely expensive process due to relative lack of a properly trained worker pool in the Midwest. KanREN staff are dedicated, passionate WAN experts; we know the technologies, terms, requirements, and troubleshooting methodologies associated with operating world-class, feature rich Wide Area Networks.

KanREN's members and contractors depend on our expertise 24x7x365 to reduce their FTE, equipment, and support expenses; saving KanREN's members hundreds of thousands of dollars per year. From helping members with advanced routing architectures to proactive monitoring of network components, all of KanREN's 185,000+ users enjoy the same world-class support services.

Building Infrastructure

KanREN leverages relationships with service providers to build fiber optic infrastructure for our members. Typically building fiber optic infrastructure is an expensive, time consuming process. KanREN helps reduce infrastructure build costs for its members by centrally managing buildout projects and amortizing costs over time. This gives KanREN members the ability to acquire the services needed today, but spread the initial expenses over time while enjoying KanREN's extremely low overhead.

Technology Pioneers

KanREN has consistently lead the nation in advanced technology deployments; with a focus on stable, scalable, production-ready services and features.

Many of KanREN's "old" network services are still not available from commodity service providers.

- 1993 – Bleeding-edge T1 deployment
- 1994 – Frame-Relay forerunner
- 1997 – ATM First-adopters
- 1998 – First entity nationwide connected to Internet2
- 2001 – Full suite of Multicast features deployed
- 2001 – Advanced Quality of Service deployment
- 2003 – Adoption of Metro Ethernet WAN circuits
- 2004 – Production IPv6 Deployment
- 2005 – RIR Classification for IPv6 numbers
- 2007 – Metro Ethernet becomes default WAN circuit
- 2007 – Optical, ring backbone deployment
- 2008 – Full MPLS feature deployment
- 2009 – Internet2 DCN testbed deployment
- 2010 – Advanced BGP features deployed
- 2010 – Multi-Layer Quality of Service deployment
- 2010 – Internet2 ION feature deployment
- 2010 – Announcement of CAI connectivity capabilities

Major KanREN Stakeholders

What Our Members Say

"Since the beginning of our interactions with KanREN, our relationship with them has been great. From input and insights on architecture and routing, to troubleshooting and operations, we have received outstanding support from the KanREN organization. Their knowledgeable and experienced staff along with the resources, services, and information they are able to provide has been a great complement to our Network Team here at JCCC."

Don Campbell
Manager, Network Communications
Johnson County Community College

"Fort Scott Community College has been a KanREN member since 1996. KanREN provides us advanced services we could not obtain from our local Internet providers like direct connectivity to Internet 2 and native, global IPv6 connectivity. They let us choose the level of service and support that makes sense for our institution. KanREN gives us the buying power of a statewide consortium, and the leverage with our local service providers to get bandwidth levels, prices, and services that we could not convince them to provide on our own. My organization uses KanREN because there's no other bandwidth provider in the state who understands the needs of our nonprofit institution better."

Casey Russell
Director, Information Technology
Fort Scott Community College

"The new KanREN backbone has enabled KUMC to more efficiently obtain high speed connectivity to our sites throughout Kansas. No longer do we need to purchase expensive T1's back to Kansas City, but we can simply connect our sites to the redundant KanREN backbone and securely transfer voice, video and data. KUMC researchers are also benefitting from the high availability design and the vastly increased bandwidth to both I1 and I2."

Matthew Fuoco
Director, Telecommunications and Networking
The University of Kansas Medical Center

"We at K-State University (and GpENI) would like to thank KanREN for their support of network research. In particular, we appreciate your efforts in facilitating L2 connectivity to I2. This connection allows us to interface with the network community and conduct much needed networking research. For example, we are currently involved in an experiment with Stanford, Georgia Tech, BBN, and Rutgers, which will be one of the highlights of the meta-scale deployment of GENI (a global scale research facility) in Washington, DC. This and other opportunities would not be possible without your assistance, and for this reason, we thank you."

Don Gruenbacher
Department Head, Electrical and Computer Engineering
Kansas State University

What National Networks Say

"The KanREN community's aggressive efforts in deploying IPv6 should be seen as a role model for our entire community."

Dale Finkelson
Senior Program and Service Manager, Network Services
Internet2

"Through KanREN's leadership we are able to reaffirm our community's belief in the importance of the end-to-end principal, one of the key bases of the Internet. We applaud their efforts and hope their work helps motivate others to act as well."

Michael Lambert
GigaPoP Coordinator
Pittsburgh Supercomputing Center