

KanREN SERVICES MEMORANDUM

Detail: Barton utilizes KanREN (Kansas Research and Educational Network) for our Internet connection. KanREN is on the state contract as a provider. Barton has been with KanREN since 1993 and our service and benefits from being a part of this network have been exceptional. Through the partnership, Barton is provided with technical expertise in routing and networking, along with technical assistance on the ITV network. Barton's current connection is at 15MG and KanREN connects Barton to Internet 2 and Kan-ed.

Recommendation: As discussed at its July 9 study session, it is recommended that the Board authorize the President to approve Option B and to execute the KanREN Services Memorandum as presented.



Services Memorandum

This Services Memorandum is part of the attached Memorandum of Agreement between KanREN and Barton County Community College, and describes services to be provided to the Consortium Member by KanREN, along with the costs associated with those services, to be paid to KanREN by the Consortium Member, according to the terms of the attached agreement. Acceptance of the attached Memorandum of Agreement includes acceptance of the costs and fees for the services described below. Costs and fees will be billed quarterly unless otherwise noted.

Costs and fees:

KanREN Services	Option A	Option B	Option C	Option D
Membership Fee See pages 4 - 7	\$7,500 / yr.	\$7,500 / yr.		
Support Package See pages 4 - 7	\$2,000 / yr.			
Local Loop Charge	\$2,967 / mo.	\$2,967 / mo.		
Backbone/Internet Connectivity	\$791.25 / mo.	\$791.25 / mo.		
Plesk Web Mail				
Barracuda Spam Filter				
Quarterly Cost	\$13,649.75	\$13,149.75		
Annual Cost	\$54,599.00	\$52,599.00		
Select A Single Option (X)				

Additional Services:

If you wish to add any services not currently selected above, please contact KanREN. Once these services are added, a corrected Service Memorandum will be reissued for your approval and signature.

Contact Information:

To facilitate accurate communication for the services KanREN provides to members, we define several contacts for each member site. Please complete or update the listed contacts attached before returning the signed services memorandum. One person may fill more than one role, and not all members will have a complete set of contacts. Only Administrative, Billing, and Technical contacts are required. In the event a contact is not used or the listed contact is unavailable, we will always attempt to contact the most similar contact on the list until we have communicated with one of the site contacts.

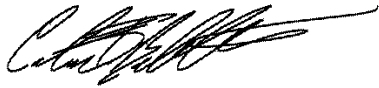
Special notes or considerations:

If this services memorandum is signed for a fiscal year beginning July 1, before the preceding April membership meeting (where rates and budget for the coming fiscal year are determined), rates, and fees may change. In the event of a change, a superseding services memorandum will be issued. The member may chose not to accept the superseding services memorandum, in which case the original services memorandum is also void.

Signatures

For KanREN

For Member



Signature

Signature

Cortney Buffington

Name (print)

Name (print)

Executive Director

Title

Title

Barton County Community College Organization Contact Information

Required:

Administrative* (CIO, Department Head, etc. -- Final authority for IT issues)

Name	Title
Phone Number	E-mail Address

Billing* (A financial contact for rectifying billing issues)

Name	Title
Phone Number	E-mail Address

Technical* (Primary 8x5x5 technical/network contact)

Name	Title
Phone Number	E-mail Address

Optional:

Emergency (24x7 on-call phone, pager, operations center, etc.)

Name	Title
Phone Number	E-mail Address

Library (Head librarian or designee)

Name	Title
Phone Number	E-mail Address

Security

Name	Title
Phone Number	E-mail Address

Service and Support Definitions

Service and support are clearly defined in this section. Where the differentiator for fees used to be associated with the “size” of the member institution, the committee is proposing several service level metrics be used instead. The following sub-sections describe those service-level metrics.

Support Hours

Support hours are broken into two categories. Primary hours are intended to be hours where, for the most part, KanREN and members have staff actively working. Secondary hours are those after-hours times when an on-call staff member will have to respond to every call. The level of on-call activity drastically increases the cost of staff. It is not reasonable to expect 3-6 people to share a 24/7/365 call rotation if the response expectation and call volume are overly restrictive. These hours were generated based on hours of operation that Kan-ed is paying for, and results from our survey of KanREN membership. The one standout discovery was that KanREN membership expectations for responsiveness was considerably more relaxed than the staff had been under the impression of it being. We believe this is due to our only feedback being communication with members during emergency events.

Primary hours:

Class A - 7:00 a.m. - 9:00 p.m. M-F

Class B-C - 7:00 a.m. - 7:00 p.m. M-F

Secondary hours:

Class A-B - All other times

Class C - No secondary support

Additional Support Charges

While member and non-member “consulting” rates have been on the books for years, without any clear demarcation concerning where or when support starts/stops, KanREN has not had good luck with assessing per-hour billing of these fees. In addition, we felt that, given the varying levels of assistance that KanREN is often called on for, and that many requests involve work outside of regular hours, it was appropriate to have different rates for different situations:

Connectivity/Performance Troubleshooting

\$100/hr during primary support hours

\$200/hr during secondary support hours

Engineering/Design

\$200/hr primary support hours only

Membership Classes

Members in class A1 and A2 are pre-defined based on the type of connectivity arrangements they have. Class B and C may be selected based on support hours and response time needs.

A1: Direct Connect - Multiple \$64,000. Directly connected to a backbone node with multiple connections, or directly connected to multiple backbone nodes. Members in this class terminate directly into core KanREN backbone infrastructure with either multiple redundant connections, or connections to multiple nodes. Members in this class receive the greatest level of service and redundancy that KanREN can offer. These members will not have physical or logical rate limits placed on their connections. These members pay KanREN's costs to provide them Internet service, but mutually agree upon an allocation method to distribute those costs between themselves. Members in this class may additionally receive multiple logical or physical interfaces for VPN (L2 or L3) provisioning at no extra charge beyond additional hardware necessary to facilitate such connections. Class A1 members are provided with all advanced networking access and connectivity that KanREN implements (IPv6, multicast, etc.). Many advanced services are uniquely and/or exclusively available to class A members because of their direct connection to backbone nodes. Full support for all of these services (VPN, Iv6, Multicast, etc.) including integration into the campus environment is assumed as long as the A2 member selects the "comprehensive" or "global research" support packages.

A2: Direct Connect \$45,000. Directly connected to a backbone node. Members in this class terminate directly into core KanREN backbone infrastructure with a single connection. Members in this class receive the greatest level of service and redundancy that KanREN can offer with a single connection. These members will not have physical or logical rate limits placed on their connection and will be billed for Internet service based on usage, as agreed to by all Class A members. Members in this class may additionally receive multiple logical or physical interfaces for VPN (L2 or L3) provisioning at no extra charge beyond additional hardware necessary to facilitate such connections. Class A2 members are provided with all advanced networking access and connectivity that KanREN implements (IPv6, multicast, etc.). Many advanced services are uniquely and/or exclusively available to class A members because of their direct connection to backbone nodes. Full support for all of these services (VPN, Iv6, Multicast, etc.) including integration into the campus environment is assumed as long as the A2 member selects the "comprehensive" or "global research" support packages.

B: Extended Coverage \$7,500. Members in the extended coverage class will be supported 24/7 by KanREN, and connected through one of KanREN's aggregation routers. This membership class is intended for members with critical services operating around the clock, network users in residence, etc. Extended coverage membership also entitles the member to request multiple connections to the KanREN network for the primary or remote sites (actual cost recovery for services and hardware required to be assessed on an individual case basis). Members may option the depth of support

required for their organization, and may pay for additional support on a per-incident basis. Class B members are provided with advanced networking access and connectivity as available through KanREN's network aggregation nodes (IPv6, multicast, etc.).

C: Basic Connectivity \$2,500. KanREN's most basic membership class only provides support during primary support hours. Connections are through one of KanREN's aggregation routers. This class is primarily intended for members without 24/7 support needs. Class C members may option for greater depth of support and/or pay for additional support on a per-incident basis, but are not eligible for multiple connections or any customized multi-site connections. Basis connection members may have access to advanced networking access and connectivity as KanREN's time and ability permits (IPv6, multicast, etc.)

Service Descriptions

Each member may select an optional service plan. All membership includes the "Basic" support package. It is anticipated that some class B and C members will choose "Comprehensive", and class A1 and A2 members will be a mixture of "Comprehensive" and "Global Research".

Global Research \$14,000: Developed to address the demands of large entities with diverse needs, KanREN's Global Research Support Package partners KanREN's leadership and knowledge in state, regional, and national networking. The Global Research Support Package represents KanREN's dedication to helping organizations achieve advanced WAN networking goals. The Global Research package includes advanced support and involvement in networking development at the regional and national levels (GPN, I2, etc.) as well as engineering and architectural development and operational support for WAN technologies and deployments involving KanREN and the research member. Includes all support from the "comprehensive" category. This is the premiere level of support intended for KanREN's largest members actively involved in advanced networking development.

- No pre-defined limit to hours of support
- Advanced routing design support and guidance
- Detailed troubleshooting of reach-ability issues
- Access to advanced troubleshooting and traffic analysis information
- Access to web-based trouble ticket system
- Institutional size public IPv6 Address assignments
- Access to staff with current knowledge of regional and national emerging technologies

Comprehensive \$4,000: KanREN's comprehensive support package is a great fit for organizations who need the extra peace of mind that comes with the state's best WAN engineering and support staff available to answer questions and provide guidance. Comprehensive support ensures KanREN support for end-to end connectivity/performance issues from the member site edge through KanREN upstream

connections. Comprehensive support also includes engineering level support and support for advanced networking topics. Comprehensive support is targeted at members who are Autonomous Systems, but is useful for others as well. Also includes all support from the “assured service” category.

Comprehensive support includes the following highlights:

- No pre-defined limit to hours of support
- Routing design support and guidance
- Engineering level assistance/support for advanced networking applications
- Access to web-based trouble ticket system
- Management of site router hardware (if applicable)
- Large, public IPv4 address allocations (if applicable)
- Large, public IPv6 address allocations
- Fault checking from member border to deep within The Internet
- Access to KanREN training events at free or reduced cost
- Access to KanREN conferences at free or reduced cost

Assured Service \$2,000: KanREN's assured service support level provides strong support for organizations who need to know that the best networking team in the state is available to answer questions and help with problems. Assured service ensures KanREN support for end-to-end connectivity/performance issues from the member site edge through KanREN upstream connections. Also includes all support from the “basic” category. Comprehensive support includes the following highlights:

- Up to 20 hours of support (during coverage hours) before hourly charges apply
- KanREN misconfigurations/errors/problems do not count against included support hours
- Non-critical support provided as resources are available
- Basic routing design support and guidance
- Access to web-based trouble ticket system
- Management of site router hardware
- Large, public IPv4 address allocations
- Large, public IPv6 address allocations
- Fault checking from member border to deep within The Internet
- Access to KanREN training events at free or reduced cost
- Access to KanREN conferences at free or reduced cost

Basic \$0: KanREN's Basic Support Package delivers high-quality, affordable support services to organizations wishing for only the most basic help with problems. Included support is limited to the KanREN network only. Members with basic support (as with any support plan) may purchase additional support at KanREN's published hourly rates.

Basic support includes the following:

- Management of site router hardware
- Verification of site drop port
- Availability of excellent additional support at competitive hourly rates