

Enter the world of Network Nebraska...

What is Network Nebraska?

Network Nebraska is the term used to describe the statewide multipurpose telecommunications backbone and all of its associated applications (i.e. Internet1 service, Internet2 service, etc...) Network Nebraska is operated by a collaborative partnership of the University of Nebraska System, the State of Nebraska CIO, and Nebraska Educational Telecommunications. Supporting agencies include the Public Service Commission, Department of Education, and the Nebraska Information Technology Commission (NITC).

What is the cost of Internet2 through Network Nebraska?

- For the first performance year (7-1-04 to 6-30-05), customers who purchased their Internet1 service from Network Nebraska will automatically be provided Internet2 service by the University of Nebraska at no additional charge. Since University of Nebraska and Network Nebraska network devices detect Internet2-eligible entities at both ends of the Internet Protocol connection, the devices route the data accordingly. The University of Nebraska is the only authorized provider of Internet2 in the State of Nebraska and has also agreed to pay the first year's SEGP membership and Internet2 transport fees.
- The current cost of utilization of Internet1 by partners of Network Nebraska is determined by the cost of Internet1 bandwidth purchased (# megabits per month x \$65/megabit¹) plus the cost of transport from the customer's Internet egress point to the University of Nebraska-Lincoln, with greater distances necessitating higher transport costs. UNO is also being considered as an Internet aggregation site.
EXAMPLE: Southeast Nebraska Distance Learning Consortium or **Educational Service Unit (ESU)** 4, 5, 6 decides to purchase 3 megabits of Internet1 service (3 x \$65/month = \$195/month) PLUS the cost of transport from their closest SNDLC partner (e.g. Southeast Community College) to UNL. Both Internet service costs and transport costs are Federal [e-Rate](#) eligible.

¹ Network Nebraska is doing everything it can to achieve the most favorable Internet1 pricing through aggregation. recent bids have dramatically reduced costs.

What is a Network Nebraska partner?

Partner: "those entities with the capacity to provide local technical service and network support to other participants, including the end users. This encompasses the critical function of providing the local network aggregation point for connecting to the statewide telecommunications network (Network Nebraska). All smaller entities without this technical capacity will need to aggregate or contract with a customer who does."

EXAMPLE: ESU consortia who have their own network operations center (NOC's) can qualify as partners.

What technological advantages would Internet2 have for my school?

Internet2 high-speed transmission automatically kicks in when the Sponsored Education Group Participant (SEGP Nebraska school) exchanges data with any of more than 7,000 SEGP schools or more than 1,000 Internet2 colleges and universities in any one of 32 other SEGP states. This high-speed data transmission includes web pages, e-mail, voice communication or H.323 video to any other entity or entities.

It should be made clear that Internet2 is only as good as the slowest connection. If local access is throttled or slow at either end, Internet2 will not improve that performance.

What programmatic or curriculum advantages would Internet2 have for my school?

- Currently, the Internet2 K-20 Initiative has posted over 60 collaborative, web-based projects on their project website and more are being organized every month. <http://www.internet2.edu/projects/>
- These projects range from elementary to college age, covering topics from oceanography to Lewis and Clark, and activities ranging from an "hour with a scientist" to joint orchestral performances.

Do Internet2 K-20 projects align with the State of Nebraska academic standards?

- Although the originators of most of the collaborative projects are educators and very mindful of standards and appropriate assessments, most of the curriculum alignment work is left up to the receive-site educators, since state standards differ from state to state.
- As the number of projects and their sophistication grows, it is entirely possible that projects will be constructed with suggested assessments and specific content objectives in mind.

How many Nebraska school districts have opted to participate in Network Nebraska?

- Project 42 (ESUs 10, 11, 15, 16), Lincoln Public Schools/ESU 18, and NNNC (ESUs 1, 2, 7, 8, and 17) are already connected to Network Nebraska and are also able to receive Internet2 services. This represents a total of 164 school districts and approximately 130,000 K-12 students and staff on Network Nebraska thus far. More ESUs are expected to join as Internet costs come down and their present Internet service contracts expire.
- Additionally, community colleges and state colleges such as Wayne State, Mid-Plains Community College, Metro Community College, Clarkson College, SouthEast Community College, Greighton University, Central Community College, NCTA (Nebraska College of Agriculture), and NorthEast Community College (for video) have joined Network Nebraska.

How would a consortium or school district go about becoming a Network Nebraska partner?

Prospective **partners**² are encouraged to contact Rick Golden, the Director of Networking for the University of Nebraska System, rgolden@nebraska.edu or 402-472-7626 to discuss specific Internet pricing and transport. A contractual agreement would be signed between the State of Nebraska CIO (on behalf of Network Nebraska) and the eligible **partner** (on behalf of their member schools).

² As defined earlier, a partner is described as an entity who has their own technical support or network operations center.

Who would we talk to if we wanted to know more about the educational opportunities available through Internet2 or SEGP?

The NITC Education Council recommended a team of five individuals to begin representing Nebraska at Internet2 K-20 Initiative meetings. This team's responsibilities are to begin the discussions at a national level and to organize and promote Internet2 awareness and opportunities at the local level.

These individuals are John Stritt, Tri-Valley Distance Learning Consortium; Eddie Elfers, Wayne State College; Nebraska Department of Education; Pam Holley-Wilcox, UNL; and Terry Dugas, NET. Tom Rolfes, Office of the CIO/NITC can also assist in answering questions, trolfes@cio.state.ne.us, 402-471-7969.

What is a Sponsored Educational Group Participant (SEGP)?

A SEGP is an [aggregate](#) of educational and education-related organizations (museums, libraries, etc.) inter-connected by one or more networks within a state that is approved for participation in the [Abilene Backbone Network](#).

What is the benefit of becoming a member of SEGP?

SEGP status allows members of the aggregation to send and receive traffic over the Abilene network.

What difference will the connection to the Abilene Backbone Network provide to the average school?

The connection to the backbone network does not alone guarantee any improvement in network performance over existing Internet connections. In addition to the backbone, local and regional networks at both ends of the network connection being used must be high-performance for users to experience improved performance.

What is the relationship of SEGPs to Internet2?

SEGPs have no relationship to, and are not members of, Internet2.

Who can sponsor a Sponsored Educational Group Participant?

Internet2 Regular (University) members can sponsor networked aggregations of educational organizations as Sponsored Educational Group Participants in Abilene. The sponsor must be in the same state as the networked aggregate. Requests for exceptions to the same-state requirement should be referred to the Internet2 Director of Member Activities.

Can more than one Regular (University) Member of Internet2 in the same state sponsor a Sponsored Educational Group Participant?

Yes. These types of collaborations are encouraged.

Are there any requirements of the Sponsored Educational Group Participant?

Potential Sponsored Educational Group Participants are expected to be engaged in activities that make use of advanced network services and be able to document a commitment to deploying advanced networking capabilities.

What is the process for adding a Sponsored Educational Group Participant to Abilene?

An Internet2 Regular member that is also an Abilene Primary Participant, or a group of Internet2 Regular members and Primary Participants, can submit an application to sponsor a networked aggregate of educational organizations, such as a state K-20 network. The sponsor(s) submits an application to Internet2 that describes the network's applications, projects, and other activities involving Internet2, and documents its commitment towards implementing advanced networking capabilities.

The Regular Member also submits a letter agreeing to the conditions of sponsorship. The application is reviewed by Internet2 senior staff. Upon acceptance of the application, the sponsor is notified and the necessary network routing is enabled to allow the Sponsored Participant to use Abilene.

What are the costs associated with Sponsored Educational Group Participation and who pays them?

Internet2 will charge the Connector for the Sponsored Educational Group Participant an annual fee of \$30,000 per connector per state, plus a variable fee of \$2,000 times the current number of Congressional representatives for that state. Sponsored Educational Group Participants may pay fees to the Connector and/or to the sponsoring Internet2 member, where these fees apply to the specific conditions of connection.

No fees are assessed directly of the Sponsored Educational Group Participant itself by Internet2. This fee structure will be assessed on an annual basis. Any questions about how this fee applies in specific situations should be referred to the Internet2 Director of Backbone Network Infrastructure. [For Nebraska, this amounts to \$36,000 per year]

What organizations cannot be covered by Sponsored Educational Group Participation?

Institutions classified as Carnegie Doctoral/Research-Extensive that are part off these networked aggregates must become Internet2 members and Abilene Primary Participants in order to connect to Abilene. Internet2 Regular members that are part of these networked aggregates are expected to remain Internet2 members and Abilene Primary Participants.

For more information about Network Nebraska Information Desk at 1-800-NET-NEBR or email to: info@networknebraska.net.