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## **Obama Inauguration Generates Record Traffic for OARnet**

COLUMBUS, Ohio, Feb. 4 -- Ohio computer users helped make President Barack Obama's inauguration the most watched streaming video event in the Internet's history, pushing network traffic over the state's fiber-optic backbone to more than 8.1 gigabits -- or 8.1 billion bits of digital information -- per second.

"The inauguration created the largest demand for bandwidth ever on the Broadband Ohio Network," said Paul Schopis, director of networking for the Ohio Academic Resources Network (OARnet). "The popularity of new President, the sharp increase of video on the Internet and the time of day, being held at lunchtime, all helped drive the enormity of the online event."

At its highest, a record 7 million surfers were watching streaming video of the event, according to Web traffic metrics firm Akamai. CNN alone reported that more than 21 million viewers accessed streaming video from its site throughout inauguration afternoon. Demand in recent years for streaming video of other popular events such as March Madness and the 2008 Summer Olympics have challenged network engineers to supply adequate bandwidth for capacity-guzzling video.

Fortunately for many of Ohio's viewers, OARnet engineers recently completed an upgrade of most of their high-speed network backbone to provide bandwidth of 10 gigabits per second. The enhancement involved the installation of faster transponder cards (generate the optical signals) and routers (guide the information), which can operate at four times the speed of the network's earlier hardware.

Further improving traffic flow out of and into the state, OARnet recently doubled the capacity of the network's link to the commodity Internet by configuring a 10 gigabit-per-second standalone connection. This is further augmented by a 5 gigabit-per-second connection the network maintains through Internet2, America's leading national research and education network.

"These types of improvements not only provide capacity for our client institutions, but also constitute our role as a research and education network," explained Pankaj Shah, executive director of OARnet, the technology infrastructure arm of the University System of Ohio. "We continually push our network and network services to the leading edge to serve as a role model and test bed for commodity networks."

The statewide network also features routers with the ability to accept and replicate a streaming video feed for a multitude of viewers -- a highly efficient protocol called multicasting -- that could have reduced the enormous network loads on inauguration day if content providers and enough other networks implemented the technology, according to Schopis. Multicasting greatly reduces the

number of individual video streams news organizations would have to provide for such popular events.

Another recent network enhancement involved the implementation of "dual stack" routers, which sort network traffic according to the latest addressing standards (Internet Protocol, version 6 or IPv6), as well as the earlier standard (IPv4), which is running low on network addresses available to additional computers and servers.

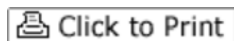
OARnet was established by the Ohio Board of Regents in 1987 to provide researchers with access to the computational resources of the Ohio Supercomputer Center. Today, OARnet provides Ohio's colleges and universities and their research partners with an integrated technology infrastructure that includes unrivaled intrastate network connectivity and shared services. OARnet specializes in providing custom solutions, whether providing virtualization resources, spanning the globe by videoconference or providing unrivaled 24/7 network support. For more information, visit [www.oar.net](http://www.oar.net).

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*Source: Ohio Academic Resources Network*

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