



## SCinet 2005 High Performance Bandwidth Challenge

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Our scientists and their supercomputers are engines for innovation, new insights and the advancement of knowledge; and the vast rivers of data traveling to them across the continents, via our high performance networks, are a fundamental source of power driving these engines. Our high performance networks allow international collaborations to advance human knowledge and to provide insights into how the universe operates.

Continuing the tradition started at SC2000, SCinet is sponsoring the Sixth Annual High Performance Bandwidth Challenge, which highlights and rewards the best and brightest in new techniques for creating and utilizing these vast rivers of data that can be carried across advanced networks.

For SC|05, to be held in Seattle, Washington during November 15-17, 2005, applicants are challenged to significantly stress the SCinet network infrastructure -- which grows by leaps and bounds every year -- while delivering innovative application value across the myriad research networks that connect to SCinet. For 2005, SCinet anticipates delivery of an unprecedented forty to fifty 10 Gigabit-per-second wide area network interconnects to the Washington State Convention and Trade Center. To support Bandwidth Challenge contestants, SCinet facilitates access to the wide area networks and provides technical support to applicants.

The deadline for submitting a full entry to the Bandwidth Challenge is September 1, 2005. However, in order to be included in the final SC|05 program, an abstract must be submitted by July 29, 2005. Please make all submissions through the following website: <http://www.sc-submissions.org/>. And if you are going to be submitting an entry in August or later, please e-mail an "intent to participate in the Bandwidth Challenge" to [bwc@sc05.supercomputing.org](mailto:bwc@sc05.supercomputing.org) by July 29, 2005, so that we can include your entry in the planning process.

The judging criteria for 2005 have been expanded to include:

1. Support of science mission:
  - a. How important is the application to the scientific community it supports?
  - b. What is the potential impact of this application?
  - c. How will this application enable or enhance the science?
2. Sustained data throughput.  
(note: simulated network traffic such as iPerf is not acceptable.)
3. Use of innovative and fair TCP and non-TCP implementations.
4. Physical distance between involved sites and the associated latency.
5. Use of emerging or underutilized technologies such as IPv6 and IP multicast.

The throughput amount will be verified using high performance monitoring gear provided by Spirent Communications. Qwest Communications will be generously providing bandwidth to the show floor and Force10 Networks is providing the high-density 10GigE switch at the nexus of the Bandwidth Challenge for SC|05.

For more information, please send email to [bwc@sc05.supercomputing.org](mailto:bwc@sc05.supercomputing.org).