Proposed 2xN Policy Advice

Western Regional Network (WRN) is committed to preserving, sustaining, and advancing a national, three-tier networking model, consisting of national R&E backbones, regional networks/connectors, and campus or participant networks.   Because of this commitment, Western Regional Network (WRN) agreed to comment on the implications of Internet2's new 2xN pricing model on community partners at its recent meeting with Internet2 principals in Atlanta.

WRN members believe that regional and university connections deliver locally responsive services to our communities. Regional Optical Networks (RON) and university networks provide the foundation for a sustainable national network. By adopting Internet 2's 2xN pricing model, WRN recognized the critical importance to Internet2 of preserving its existing revenue stream from WRN members.   Therefore, WRN elected to honor Internet2's revenue neutral connectivity request.

However, Internet2's new 2xN port subscription service does introduce other challenges for Internet2, our WRN members and for all of Internet2's connectors.   In fact, after further review of Internet2's model, we think that this new offering has the potential to negatively affect revenues and detract from the sustainability of all levels of the community's network collaborations (i.e., Internet2, regional optical networks, and university collaborations).

We advise Internet2 and other national network providers to implement policies that establish reasonable limitations on non-connector participation. RONs/connectors exist with Internet2 in a symbiotic relationship. We rely on backbones for services, and Internet2 relies on RONs/connectors for revenue and critical middle layer aggregation.

The 2xN model, while affordably expanding capacity, creates the opportunity to disrupt RON and I2 business models through competitive marketing of low cost secondary ports across the nation. The impact of this has significant potential to drastically reduce Internet2 and/or connectors' revenue. Internet2 resolved its revenue exposure with a "revenue neutral" stance, but did not address the potential disruptions to existing RONs/connectors' revenue, and addressing this issue is critical to the sustainability of tiered networking.

In this regard, we offer the following suggestions:

- Existing Participant connection options shall be:
    - Participant continues I2 participation through their current RON/connector,
    - Participant subscribes as a new Connector, or

- Participant subscribes to another RON/connector's network with owned/leased physical infrastructure of that RON/connector's network

- A network connecting multiple Internet2 participants shall be either a direct connector via a separate Internet2 Connector Agreement or via a connection to another RON/connector's network with owned/leased physical infrastructure of that RON/connector's network;

- The term "participant" used here refers to any organization that subscribes to or uses Internet2 services through a connector (see http://www.internet2.edu/network/participants/).

The BTOP program provides substantial new funds that will be invested in building national, middle, and last mile network connections. With this new opportunity to re-build our national network, we anticipate new challenges. Deployment will require expertise, engineering, and cohesion from the RONs/connectors in order to meet an aggressive schedule in a sensible, technically, and operationally sound manner. All of these factors provide motivation to pursue and resolve the geographical issues Internet2 has struggled with in the past, that now need to be codified in a new policy.

We understand that the avenue for resolution of these issues is the Internet2 Advisory Council AOAC. We would like the opportunity to share our insight into these matters with the Council and embark on a community-wide discussion. We look forward to scheduling a meeting with the AOAC and Connectors/Networks Meetings.