Proposal Title: US R&E Ecosystem Infrastructure Planning

Presenter: John H Moore

Affiliation: Internet2

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Presenter's biography:

John Moore is currently the Associate Vice President of Research and Infrastructure Strategy for Internet2, where he leads a talented group of engineers and research facilitators responsible for developing the next generation infrastructure that supports the Internet2 community's quest for discovery and innovation.

Prior to joining Internet2, he spent nine years with MCNC, the operator of the North Carolina Research and Education Network (NCREN), where he held several technical and senior executive positions in the areas of service development, strategy, innovation and cybersecurity.

John has been involved with the Research and Education networking community since 2000, starting with his position at North Carolina State University, where he focused on network technology testing as Director of the Centaur Lab and the NC Internet2 Technology Evaluation Center (NC-ITEC).

Prior to his work at with the R&E community, John spent six years as an engineering consultant and project manager on large networking and enterprise security projects for RPM Consulting (Columbia, Maryland) as well as with his own one-man company. His clients included firms in the healthcare, finance, semiconductor and Internet service provider markets.

He started his career in 1985 with IBM. In his nine years there, he worked on developing international standards for protocol testing as part of the Network Systems Architecture group, served as a network-engineering consultant for Fortune 500 clients in the automotive and manufacturing sectors, and held several technical and planning positions in network product development groups.

John received a BS in Electrical Engineering degree from Case Western Reserve University in 1985.

Presentation Description:

The US R&E community is approaching its next infrastructure refresh investment as an opportunity to develop end-to-end solutions for supporting data-intensive science that span organizational boundaries between campuses, regional networks and the national backbone during 2018. Several collaborative community efforts have been completed or are underway that will serve as input to the development of new core and edge architectures, and will facilitate conversations about how to evolve operations, business model and workforce development plans on an ecosystem-wide basis. This presentation will provide an overview of the effort, and address the following key topics:

- Report out on lab testing of the Facebook-designed Voyager platform, with details about test results and an assessment of the utility of open hardware / open software platforms to support a more bandwidth-rich and cost-effective core network
- Details on a number of in-process pilot projects that are experimenting with innovative ways to develop and operationalize ideas about how to support data-intensive science with greater integration between campuses, regional networks and Internet2
- Report on efforts to develop a smart edge architecture by convening community experts to find common threads among a number of key research projects that have designed and deployed related technologies
- Describe the key milestones, post-TNC18, that will result in a final set of community-developed requirements, and clear architectural direction by the end of 2018