Call for Participation - Collaborative Service Delivery Proof of Concept (PoC)

November 17, 2017

Introduction

Internet2 invites interested community members to participate in and lead experiments that will help define the next generation infrastructure architecture for the US Research and Education community. The intent is to test an ecosystem-wide approach to service development, delivery, operation and management that will inform community architecture principles and investment decisions targeted for the next two to five years.

This invitation presupposes that the likely leads for these efforts are regional networks and university campus collaborations, who we anticipate will build partnerships for the proposal with other community members and interested vendors.

Key Components

The focus of the experiments should be on delivering an end-to-end advanced application or service to a specific set of users, but also on exercising and evaluating new ways to more closely collaborate across institutional boundaries to provide a true “ecosystem-wide” service.

The experiments should be modest in scope, with a manageable number of partners and an anticipated duration of 6 months maximum for delivery of results (see Outcomes section below). They should address some or all of the following components:

1. **Motivation** - Experiments should target service ideas that support a valid research use case, or solve an operational dilemma for advanced infrastructure in a collaborative way. An example of the latter might be an experiment about ways to better share resources/investments where multiple community members (regionals and/or Internet2) have existing capability. For the former, incorporating an experiment into an existing research collaboration would be a good example.
2. **Value proposition** - Experiments should attempt to demonstrate a clear advantage over currently available services or define a new advanced set of capabilities for the community from an end user perspective. As an example, say an existing need from a research user can be met by requesting services from multiple providers for an end-to-end service. There would be a clear advantage if there was a new technology and service approach that minimized community investment, offered faster end-to-end provisioning, and improved usability - without the end user having to coordinate among multiple service providers.
3. **Technology evolution** - Experiments should involve innovative technology solutions for providing multi-domain (i.e. multi-provider) service delivery, be focused on providing an

improved service at a lower cost, involve core and/or edge functions with associated configuration, management and orchestration as required, and test the ability of the collaboration to support the new technology. The results of the Core Technology Evaluation PoC being led by NYSERNet (and utilizing Facebook-designed Voyager platforms, provided by ADVA Optical Networking) can be a useful technology starting point, but collaborations with other vendors are encouraged.

4. **Operations and business drivers** - Experiments should examine and provide a basis for further discussion of how such a service might impact the operations and business models of the collaborators.

Outcomes

At the completion of each experiment, a short report should be developed for delivery to the community that outlines the following:

- Description of the experiment, what was learned about the technology used and an assessment of whether the technology can be generally useful to the community in the future
- User impact - how the services delivered were useful to the research users involved
- An assessment of the operational and/or business model impacts that deploying such services would entail for the community
- Recommendations for further work, if needed
- Presentation of these outcomes by the experiment teams to the larger community at appropriate Internet2 community meetings & forums

Each report will serve as input to the development of a next generation infrastructure architecture for the community. The process for defining such an architecture will be developed during the trial period.

Process

Community members with an idea for an experiment should contact us at csd-poc@internet2.edu with a expression of interest. Subsequently Internet2 will schedule conference calls with individual teams to explore the viability of the proposal and if so, develop a collaborative plan for the experiment.

Once plans are finalized, a brief project description will be developed that will include timelines, personnel who will be supporting the effort, support needed from Internet2 (for people, funding, services, etc.) and information on contributions to be provided by vendor partners. The target for finalizing the projects descriptions will be February 15, 2018. The projects should be planned for a start date in the new year (2018), and completion by September 2018.