

End-to-End Service Provisioning Series

Individual e-science applications can generate network flows measured in Gbps, enduring hours, days or even weeks, often between a well-defined set of nodes, with tight constraints on quality of service. At times, traditional end-user applications need to reach out from closed local networks, bypassing blocking elements. The needs of these applications are best met by ‘traffic engineered’ point-to-point circuits, rather than ‘best effort’ routed networks. For this reason, the provisioning of end-to-end (E2E) lightpaths is becoming very important in the service portfolios of national research and education networks (NRENs).

NRENs’ networks and the GÉANT network are ready to deliver some provisioning services, but technical and other factors often cause ‘bottlenecks’ at metropolitan-, campus- and local-level infrastructures. In order to set up real end-to-end connections from one application to another, cooperation is necessary between NRENs, metropolitan, campus and local networks. Moreover, to raise awareness of end-to-end services in the research and education networking community, communication and cooperation between network service developers and application designers is essential.

Past E2E Provisioning Workshops

The first in the series of E2E Provisioning Workshops took place in 2008, and focused on establishing lightpaths. Participants discussed the technical feasibility of end-to-

end connection services, especially the last mile challenges. The second E2E Provisioning workshop in 2009 focused on the provisioning of E2E services for all network domains from campuses to the core.

During the third E2E workshop, participants concluded that the E2E community should be maintained to tackle the fundamental challenge of the last mile. They agreed to organise Birds of a Feather (BoF) meetings in parallel with major events in order to intensively consult with various communities in 2011, instead of continuing the current workshop model of broad informational gatherings. The BoFs should bring together application designers/developers and network administrators/operators, i.e. the ‘user’ and the ‘service provider’ to discuss and verify the E2E service architecture.

Future E2E Birds of a Feather Meetings

To this end, TERENA’s future E2E events will take the form of BoFs in parallel with major community events, such as the GLIF Tech WG Meeting, the Internet2 Joint Tech meeting, TERENA Networking Conference and the NORDUnet Conference 2011.

The BoFs will focus on “E2E Service Architecture Verification” and will address the tools and architectures as well as the roles and responsibilities undertaken by various players in the entire end-to-end (i.e. application-to-application) workflow.

The results of these consultations will determine how TERENA should support the E2E community in the future.

WHAT IS TERENA?

TERENA is the association in which Europe’s research networking organisations, research institutes, equipment vendors and telecommunications operators can meet, exchange information and experience, and collaborate on a range of activities.

“E2E Service Architecture Verification” at TNC2011, May 17

Join us from 18:00 - 20:00 for a Birds of a Feather meeting and contribute to the future of end-to-end (application-to-application) services for universities and research labs in Europe.

For further information, or to join our mailing list, please visit:
www.terena.org/e2e

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