



Contribution ID: 26

Type: **not specified**

perfsnarUI and eduGAIN federated login

Friday, March 18, 2016 9:20 AM (20 minutes)

Networks are vital to research disciplines. Collaboration and data mobility rely heavily on network infrastructure and almost always cross administrative domains. Ensuring that things are operating well, on an end-to-end basis, is critical. Monitoring within a single domain is a common and accepted practice ; cross-domain performance monitoring is difficult to do with traditional tools.

perfsnar is a widely-deployed test and measurement infrastructure that is used by science networks and facilities around the world to monitor and ensure network performance. It provides easy, transparent end-to-end monitoring, giving access to network measurement data from multiple network domains. It can operate at local level or around the globe and is scalable to provide at-a-glance information about multiple network paths simultaneously. With around 1,500 measurement points across the globe, it is easy for NRENs and research teams to accurately measure network performance and ensure it meets their research needs.

The perfsnarUI (psUI) web application enables users to visualize measurement results from perfsnar services. It can provide insight into historical measurements stored in a perfsnar Measurement Archive (MA), or request an on-demand measurement to be performed by a perfsnar Measurement Point (MP). The psUI gives the network operators the possibility to troubleshoot performance problems on their network but also through and up to other connected networks.

This multi-domain view on end-to-end performance is equally interesting to campus operators verifying their local and upstream connectivity, as well as to researchers needing to transfer large amount of data and that are dependant on reliable connectivity. To make the perfsnar measurements available to all interested, it was logical to authenticate users through federated login. And, as a truly multi-domain tool, the ideal federated configuration is through eduGAIN.

eduGAIN interconnects research and education identity federations around the world. It enables the trustworthy exchange of information between service providers and research and education institutions or other identity providers. This means simpler access to a wider range of online content, services and other resources that benefit collaboration in the research and education community.

To avoid overloading networks with perfsnar measurements, consumption of network resources can be controlled at each MP by local administrators through the definition of appropriate policies. On top of that, the psUI administrator can grant different authorisation levels to each federated user. With this two levels of control, federated access to performance measurements stays within defined bounds.

During this presentation, we will demo the psUI with eduGAIN federated login and show you the performance verification features it provides to a wide user audience while still assuring the network operators that their network is not overloaded.

The development of perfsnar is the result of the combined work of GÉANT, Internet2, ESnet and Indiana University. eduGAIN support, development and promotion in Europe is provided through the GÉANT Project. The MAGIC and TANDEM projects are helping to promote eduGAIN uptake in other world regions.

Summary

This presentation will demonstrate how an eduGAIN federated perfsnar UI provides network operators and researchers the possibility to troubleshoot performance problems, end-to-end, through an easy accessible

and usable user interface. All this while maintaining the confidence that network resources are under control.

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Session Classification: PLENARY SESSION IV –Paper Presentations

Track Classification: Network Design and Operation