



Contribution ID: 83

Type: **Demonstration**

RadiotherapyGrid: Demonstration of the power of Grid in the e-IMRT computational services for cancer radiation therapy treatment planning

Project(s) or EGEE activity presenting the demo or poster (project or activity names only)

BEinGRID

Special requirements other than the set up mentioned in the CfA text.

For live demo, it is better to have two screens. We need also high speed connection to Internet for two computers with all ports open.

Abstract

Radiation therapy is one of the main tools for treatment cancer diseases, alone or together with other techniques. RadiotherapyGrid demonstration shows the usage of new remote computational-based tools to help medical physicists to plan the treatments: a verification tool based on Monte Carlo method and an optimization tool to end a suitable treatment plan for the doctor's prescriptions. Both tools use computational Grid resources to speed-up the calculations and to improve the security and trustworthiness of the platform. In this demonstration, the integration of four modules is shown: GridWay, which has been enhanced with a new plugin which negotiates resources using BEinGRID SLA Negotiation component; a Policy Enforcement Point (Vordel's XML Gateway) which acts as a XML security gateway to check and validate service requests; and a Policy Decision Point (Axiomatics Policy Server) as an authorization server based on XACML standard.

Primary authors: Dr GOMEZ, Andres (CESGA); Mr RODRÍGUEZ-SILVA, Daniel (Universidad de Vigo); Dr MOURIÑO, J. Carlos (CESGA)

Co-authors: Ms GAGO, Araceli (Universidad de Santiago de Compostela); PORTAS FERRADÁS, Breixo Carmelo (Fundación IDCHUS); Mr VÁZQUEZ, Constantino (Universidad Complutense de Madrid); Mr GONZÁLEZ CASTAÑO, Diego (Universidad de Santiago de Compostela); Dr HUEDO, Eduardo (Universidad Complutense de Madrid); Mr GÓMEZ RODRÍGUEZ, Faustino (Universidad de Santiago de Compostela); Dr LLORENTE MARTÍN, Ignacio (Universidad Complutense de Madrid); Dr GONZÁLEZ CASTAÑO, Javier (Universidad de Vigo); MOSQUERA SUEIRO, Javier (Complejo Hospitalario de la Universidad de Santiago); Ms GONZÁLEZ BUGEIRO, Marta (CESGA); Mr POMBAR CAMEÁN, Miguel (Complejo Hospitalario de la Universidad de Santiago); LOBATO BUSTO, Ramón (Complejo Hospitalario de la Universidad de Santiago)

Presenter: Dr GOMEZ, Andres (CESGA)