

WNoDeS training

Tuesday, 18 September 2012 16:00 (1 hour)

Description of the work

The training session will be focused on two cases: the former deals with the installation and configuration of WNoDeS for batch jobs and the latter with the installation and configuration of WNoDeS for grid jobs. The pre-requisites and the technicalities for both cases will be illustrated and widely explained. The WNoDeS mixed mode feature and its configuration will also be described during the training.

Torque/Maui will be the reference batch system and Scientific Linux (either SL6 or SL5) the operating system for the tutorial.

The installation and configuration will then be validated by submitting both batch and grid jobs. At the end of the training session participants will be able to install, configure and run WNoDeS either on their grid site or on a standalone farm.

Link for further information

<http://web.infn.it/wnodes/>

Wider impact of this work

Large computing centers supporting a range of applications by communities need to leverage appropriate configurations or tools for the management of the computing resources in order to increase efficiency without decreasing the security level. Communities also need to have access to resources by a number of different interfaces, authentication methods and exploiting the existing local and distributed infrastructures. WNoDeS provides administrators and end users with several benefits for resource provisioning. Administrators can use the same set of services to manage the resources that are allocated dynamically to satisfy user requests. Resource centers can provide their users with a cloud infrastructure that is built upon non-invasive changes in their production computing infrastructure. End users can exploit grid and cloud interfaces based on their applications and requirements, potentially enjoying an increased number of available resources through easy and intuitive user interfaces.

Printable Summary

WNoDeS is a software framework to integrate grid and cloud provisioning through virtualization. Based on the needs of the INFN CNAF computing center (10,000 computing cores, 9 PB of disk space, 10 PB of tape space and about 80,000 jobs per day), WNoDeS has proved to be scalable and reliable; developed in a joint effort between INFN and the Italian Grid Infrastructure (IGI), in December 2011 has been accepted in the EMI software stack and has recently been released within the EMI-2 release. WNoDeS features a seamless integration with the EMI middleware that allows to transparently run Grid Jobs both on real and virtual Worker Nodes, instantiating virtual machines from an existing VM repository.

The proposed tutorial is intended for site administrators and aims at providing an understanding of how to dynamically extend the resources at a site by installing, configuring and testing the WNoDeS service.

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Session Classification: New middleware products

Track Classification: Resource Infrastructure services (Peter Solagna: track leader)