

LSST progress on the Grid front

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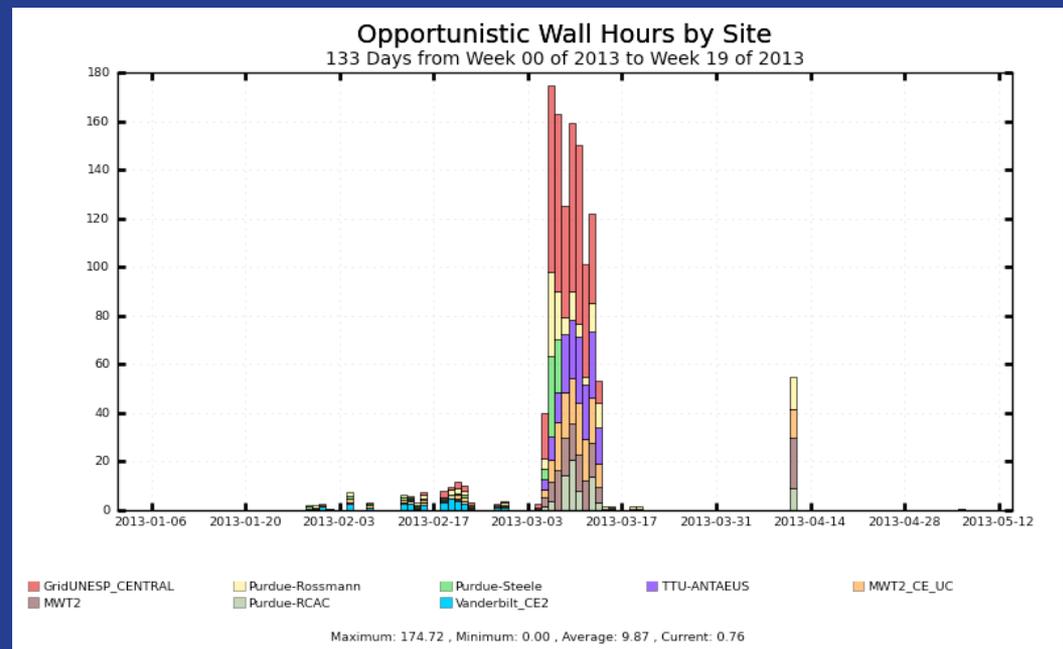
LSST@FNAL meeting – May 14, 2013

Overview

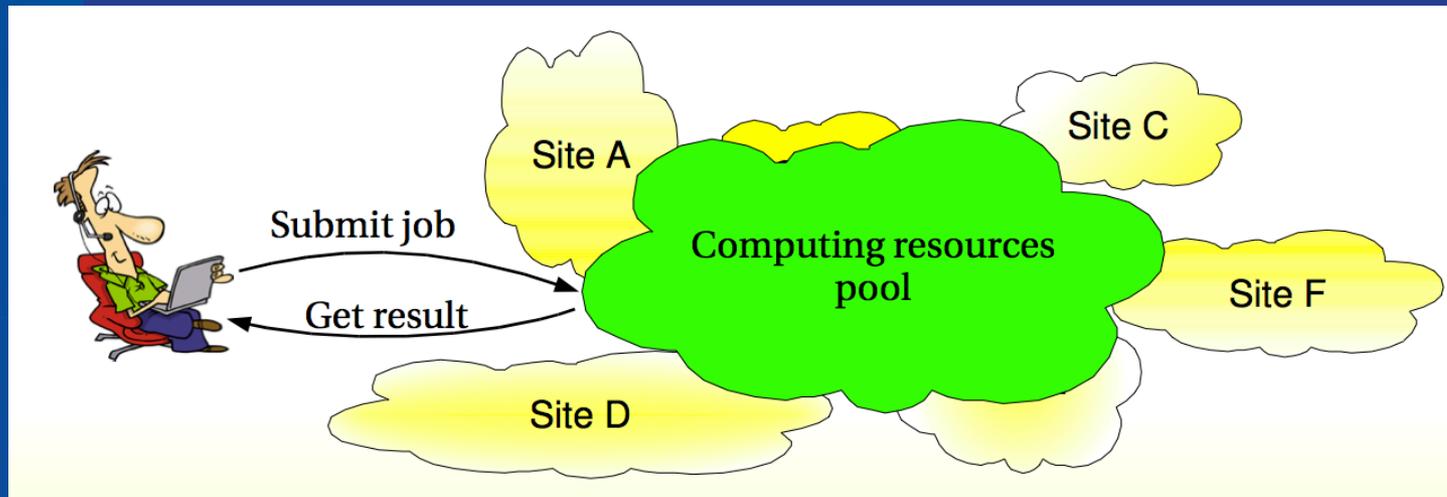
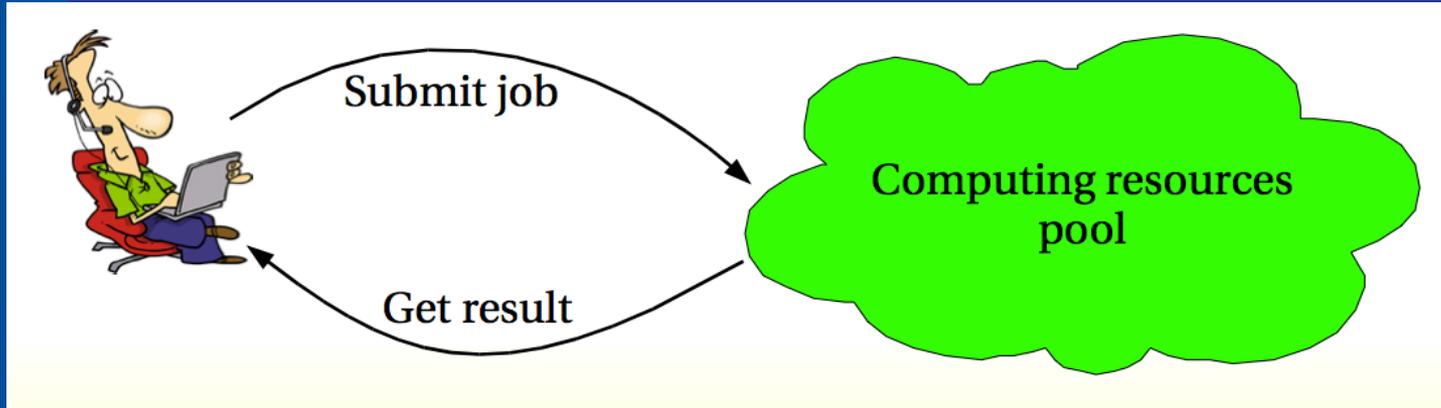
- OSG Submission Infrastructure for LSST
- Registration Authority and VO administration
- Interoperability with the European Grid Infrastructure

LSST Submission Infrastructure

- As of Feb 2013, Purdue is running an OSG submission host for both simulation and data management activities for the LSST VO.
- Currently, we have experience only with simulation (John Peterson's activities)
- Purdue uses GlideinWMS to access resources

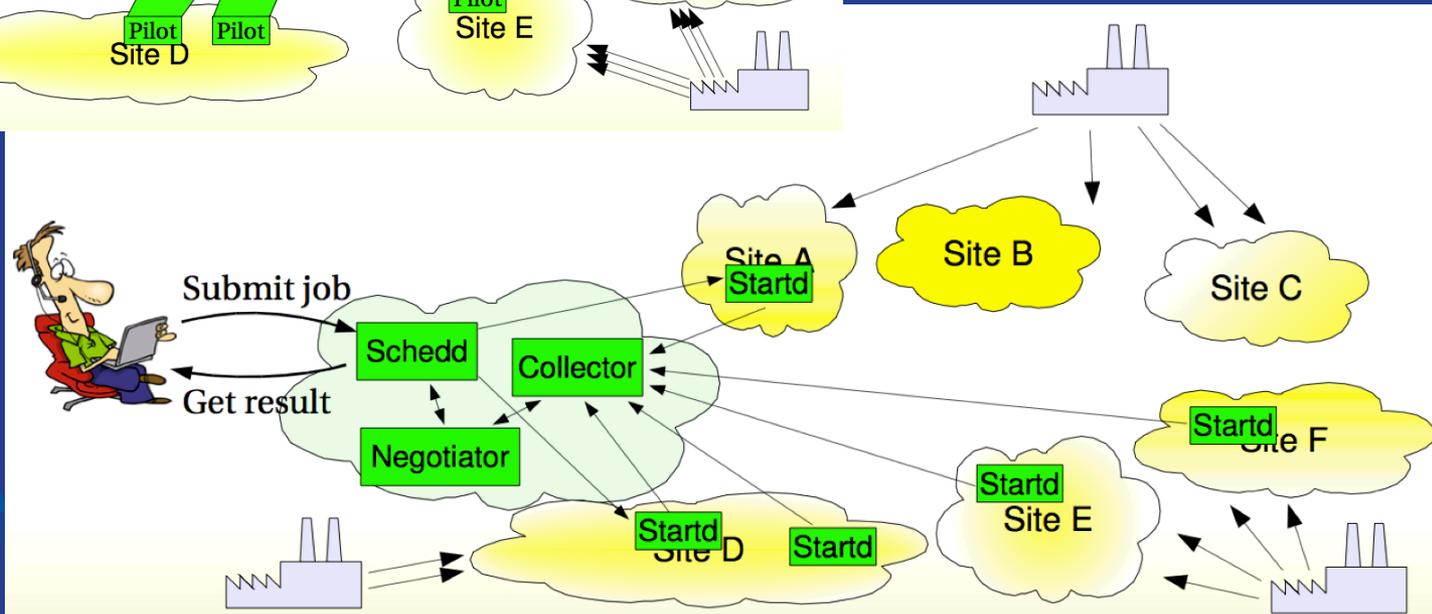
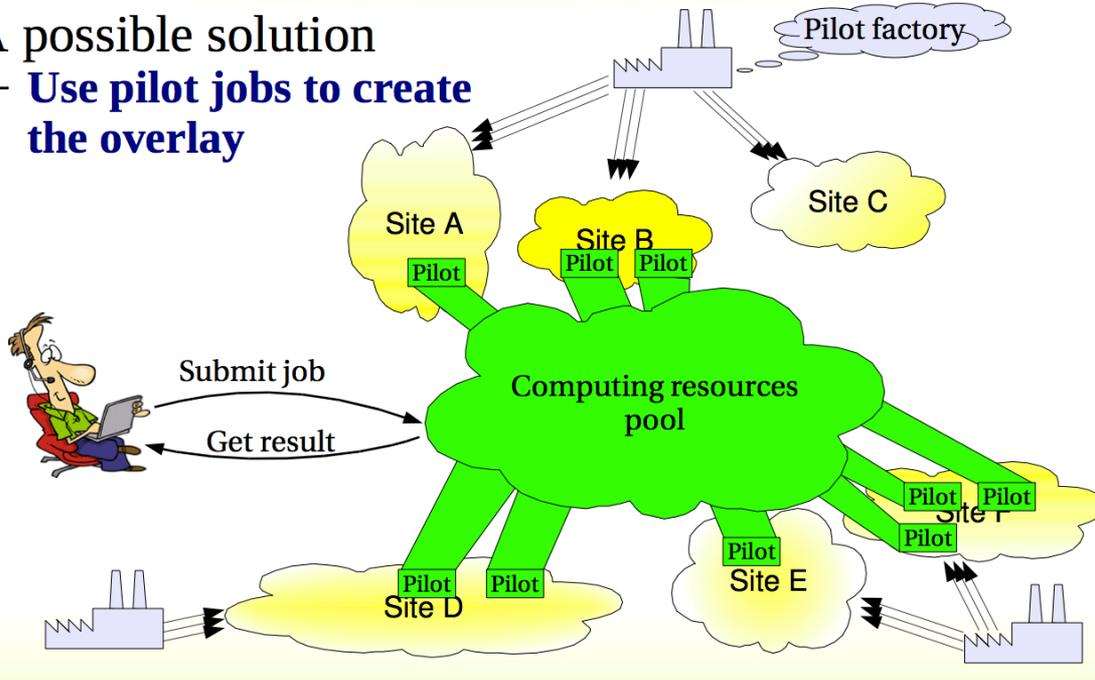


Access to resources – The scientist perspective



Access to resources – the GlideinWMS implementation

- A possible solution
 - Use pilot jobs to create the overlay



User Registration – Now in the hands of the LSST VO

- Two roles: (1) Registration Authority (RA) and (2) VO admin
 1. A Certificate Authority (CA) grants user certificates. It trusts a RA to ascertain the identity the users. There is (almost) a RA per VO.
 2. Grid sites grant access to resources to a user in virtue of her membership to a VO. When a user register with a VO, the VO admin needs to ascertain her rights to join the VO.
- Both roles need to be closely associated with the VO.
- As of May 2013, LSST staff (Iain Goodenow) is responsible for these roles as an RA member of the DigiCert CA and an LSST VO admin.

Access resources at more than one Grid

- OSG is one of the National Grid Infrastructures (NGI) of the world
- For most NGI, a VO is the entity that represents a community to a Grid (sites, consortium, etc.)
- In order for the sites to give resource access to a community, the VO must be registered with the NGI
- As of May 2013, the LSST VO is a VO registered with the European Grid Infrastructure (EGI)
- EU Sites can now “let LSST in”

What does LSST need next ?

- More Grid usage...
 - LSST has now access to Grid resources through a submission infrastructure, LSST-based identity management, and inter-NGI VO recognition
 - Thousands of CPU slots are available daily to LSST
- More application diversity on the Grid...
 - We have experience with simulation
 - We need to port a more data-intensive applications to build up workflows and experience
 - We are well placed to build the LSST Grid operations on the DES experience