Announcements & Thanks!

- Thanks to DELL for contributing to the conference dinner tonight.
  - Please go and visit them in front of the Synthesis Center upstairs!
- Thanks to AWS for contributing to the conference dinner tonight.
  - Last talk in Technology session this afternoon discusses transparent operations across OSG & AWS, ⋯ and so much more ⋯
  - Thursday morning includes user training for using AWS from OSG Connect.
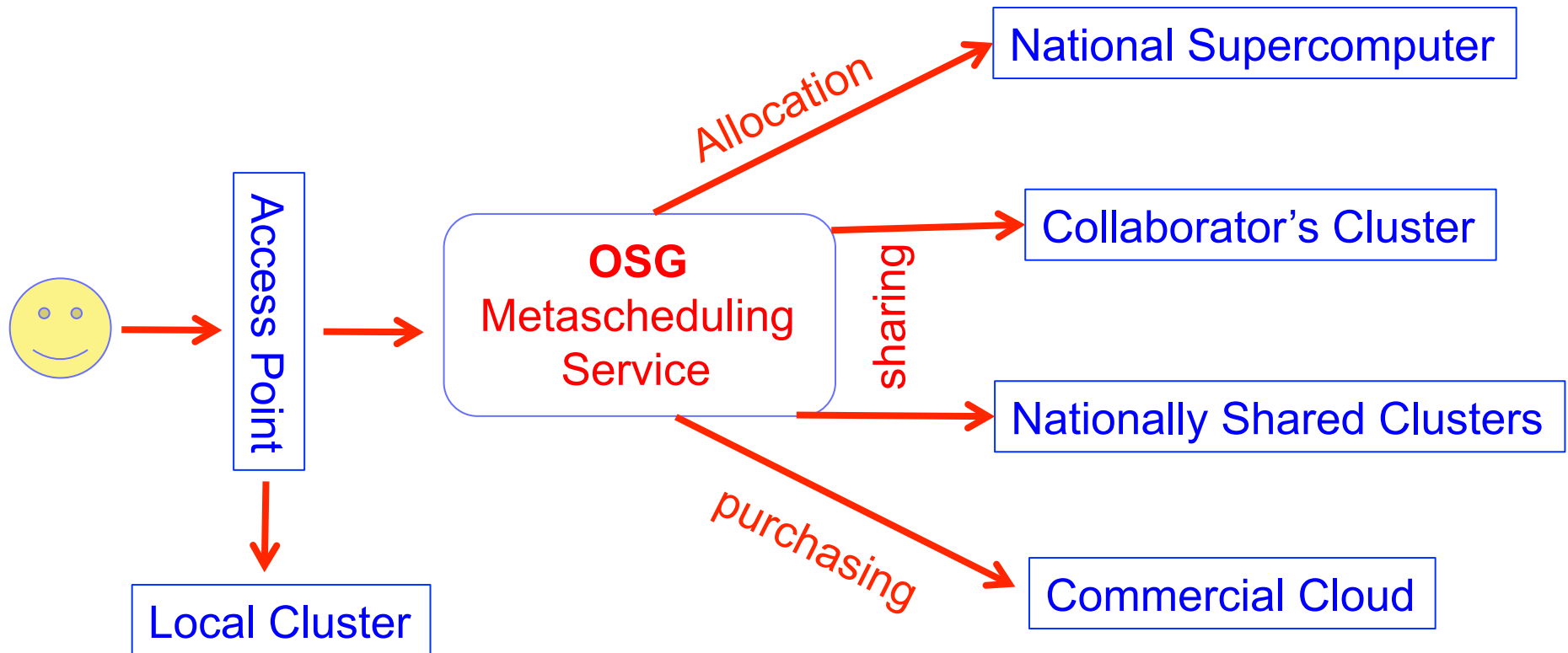
OSG for Campus Research Computing Providers

**Frank Würthwein
OSG Executive Director
Professor of Physics
UCSD/SDSC**

The Objective of this talk is to explain the options OSG offers for campus research computing groups to integrate into the larger OSG ecosystem.

The OSG Vision

National Supercomputer

Allocation

Access Point

OSG
Metascheduling
Service

sharing

Collaborator's Cluster

Nationally Shared Clusters

purchasing

Local Cluster

Commercial Cloud

OSG integrates computing across different resource types and business models to allow Campus IT to offer a maximally flexible HTC environment to your researchers.

A 3 Part Story

Sharing your resources.

Providing the fully integrated vision of OSG to your researchers.

A worked example.

Sharing your Resources

- getting jobs into your cluster => OSG-CE

- establishing a standard OSG environment for the jobs after they arrive => CVMFS

- Data caching into your cluster
    => StashCache

- We will now go through these one by one, clarifying what is expected of you, and what is optional.

Getting jobs into your cluster

- **Option 1:**
  - If you don't care about who among the OSG communities shares your cluster or want to define only some very limited high level policies that you delegate to OSG to implement and manage.
    - **all we need from you is an account accessible via ssh-key.**

- **Option 2:**
  - if you want to have full control over policies and manage & implement them yourself.
    - you need the full OSG-CE we call HTCondor-CE

Details in the next two talks !

OSG Runtime environment

- ## Purist perspective:
  - all dependencies are evil. A job should be packaged up such that it is completely self-contained.

- ## Ease of use perspective:
  - a job should find a uniform runtime environment everywhere that provides a rich set of applications uniformly configured.

- ## OSG allows you to decide if you want to support only purists or also people who expect ease of use.
  - We offer optionally a uniform runtime environment via CVMFS
  - Requires squid server at the site, and a fuse mount and cvmfs client installation on all compute nodes in the cluster.
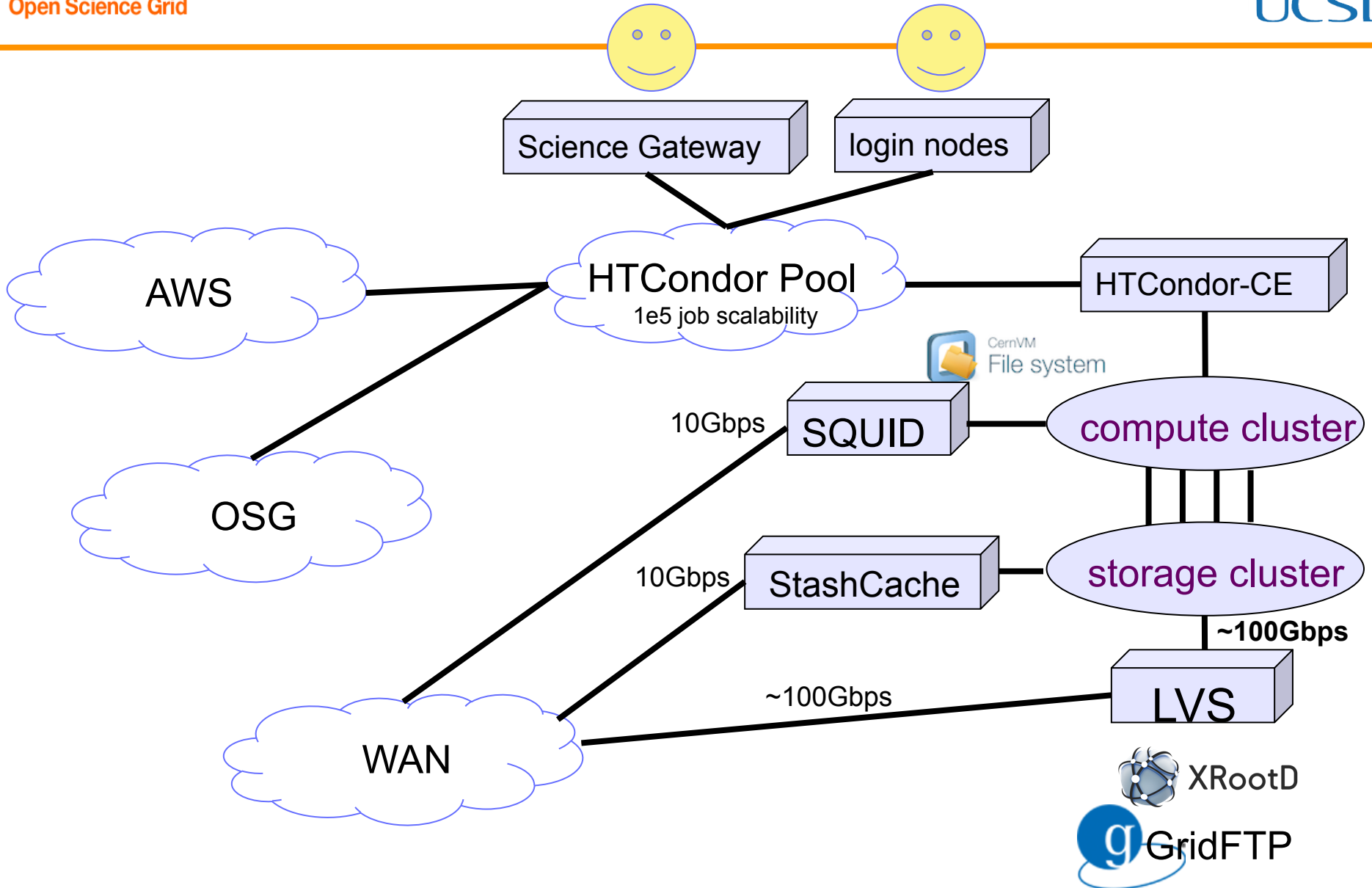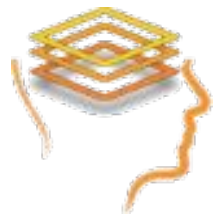
Data Caching

- We offer a caching solution that you can install at your site in order to support data intensive research on your cluster.

- See StashCache talk in Software & Technology Session on Tuesday afternoon.

- In contrast to CVMFS which is deployed almost everywhere, only very few sites have decided to offer StashCache at this point.

Providing the full OSG Vision for your researchers

- Option 1:
  - We teach you how to seamlessly integrate the OSG vision into your existing HTCondor infrastructure.

- Option 2:
  - We provide accounts for your researchers on OSG Connect and integrate your resources via previous slides into OSG.
    - your researcher enjoy OSG vision via our infrastructure.

- Option 3:
  - We define a custom solution with you for you built from our tools somewhere between the previous two options.
    - talk to me or send me email to get an appropriate appointment.
    - we set aside all of Thursday morning for you to talk with OSG experts and define a solution that works for you.

An elaborate OSG Site

opensciencegrid

osgusers

user-support@opensciencegrid.org

support.opensciencegrid.org

www.opensciencegrid.org/links