



# JOINING OSG

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# INTRODUCTION TO OSG

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# INTRODUCTION TO OSG

- OSG stands for Open Science Grid
- Provides high-throughput computing across US
  - Currently more than 75 sites
  - Recent stats:
    - 282,912 jobs for 433,051 hours
    - Used 75 sites
    - Jobs by ~20 different virtual organizations
    - 92% of jobs succeeded
    - Underestimate: 4 sites didn't report anything
  - Provides opportunistic computing for VOs
- Focus on high-throughput computing rather than high performance computing

## OVERRIDING PRINCIPLE: AUTONOMY

- Sites and VOs are autonomous
  - Admins are free to make decisions about site
  - OSG provides software and recommendations about configuration
  - Admins are allowed to decide when and if to upgrade
  - Admins are responsible for site but OSG provides operational support
  - VOs run and maintain own membership lists (on VOMS server)

# JOINING OSG AS AN USER

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## STARTING OUT

- Everyone using OSG gets a personal certificate because it is required to do any activity on an OSG resource
- Will need to know or contact someone with DOEGrids certificate in order to obtain a personal certificate
- As a new user, you can contact the engage team to get assistance with obtaining a personal certificate and in getting started in OSG

## TWO TYPES OF NEW USERS

- Users coming in as a member of an existing VO
  - VOs have existing infrastructure and support centers to help
  - VO will help in getting started: applications, data sets, etc.
- Users coming in as a completely new user
  - Will typically come join through the auspices of the engage VO

## COMPLETELY NEW USERS

- Will typically become members of the engage VO
- The Engage team will provide assistance with:
  - Getting applications and workflows running on OSG
  - An existing framework to help with selecting resources
  - Contacts to software providers that can help with moving forward (getting resources on the OSG, becoming a VO)



## ISSUES THAT MAY ARISE

- Getting jobs running on the grid is difficult:
  - Grids are still being worked on so things may break
  - No logins so troubleshooting is difficult
  - Sites may go down, sites may have misconfigurations that affect you
- The grid paradigm is not for everyone
  - Jobs should be relatively independent
  - Large MPI type jobs not really suitable
  - Jobs should have fairly low overhead in relation to computation time

## GETTING FURTHER ASSISTANCE

- Contact engage team (engage-team@opensciencegrid.org)
  - John McGee
  - Mats Rynge (rynge@renci.org)
  - Other local engage contact
- osg users mailing list
  - [osg-users@opensciencegrid.org](mailto:osg-users@opensciencegrid.org)

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## YOUR ROLE AS AN ADMIN

- As a site admin, you should:
  - Keep in touch with OSG (downtime, security, etc.)
  - Respond to trouble tickets or inquiries from GOC
  - Plan your site's layout
  - Update software as needed (within limits)
  - Participate and be a good community member

## SUPPORT PROVIDED FOR ADMINS

- OSG provides:
  - Software and ancillary information (configuration tools, documentation, recommendations)
  - Assistance in keeping site running smoothly
  - Help in troubleshooting and installing software
  - Users for your site

## SITE REGISTRATION USING OIM

- Done using OIM at <https://oim.grid.iu.edu/>
- Will need to register first,
- After GOC approves registration :
  - Registrations > Resources > Add New Resource

# SITE OPERATIONS POLICY: HOW TO BE A GOOD CITIZEN

- <https://osg-docdb.opensciencegrid.org:440/cgi-bin/RetrieveFile?docid=676>,
- Must support at least one VO: MIS
  - We are doing drills, tests are coming up – not perfect but getting there
  - Update your gums template
  - Let us know if you suspend a VO
- Apply security patches announced asap
  - Let us know if you cannot
- Make sure published site info is accurate

# POLICIES

- Site Registration Database
  - OSG Information Management – site manager, site security, site operations, site incident response
  - Names, email, address, phone
  - Old stale info needs to be uptaded
  - OIM is maintained at GOC
  - We currently check once year, but will the frequency increase once OIM sends automated emails



## FURTHER ASSISTANCE

- [osg-sites@opensciencegrid.org](mailto:osg-sites@opensciencegrid.org) mailing list
- Weekly operations teleconference:
  - Operations Group Meetings are held on each Monday at 1PM EST/EDT. Phone: +1 510 665-5437 ID: 786999
- Campfire chat:
  - <http://integrationcloud.campfirenow.com/6e62e>
- Grid operations center
  - <http://www.grid.iu.edu/>
  - [goc@opensciencegrid.org](mailto:goc@opensciencegrid.org)
  - +1 317-278-9699

# JOINING AS A VO

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## OSG ORGANIZATION: VIRTUAL ORGANIZATIONS (VO)

- OSG is organized by Virtual Organizations
- A VO allows members of a collaboration or group to retain that same grouping on the OSG
- Each VO has different policies as to group membership and runs a VOMS server to track membership
- VOs are typically the owner of the various resources found on the OSG

# VOS ON OSG

Some of the VOs currently running on OSG

ALICE	X	Latchezar Betev, Federico Carminati, Ron Soltz	-	
ATLAS/USATLAS		Torre Wenaus, Rob Gardner, Michael Ernst	+	
CDF	X	Donatella Lucchesi, Rick Snider, Dennis Box	?	
CMS/USCMS		Frank Wuerthwein, Ian Fisk, Burt Holzman	+	
CIGI	X	Shaowen Wang, Anand Padmanabhan		
CompBioGrid	X	Ion Moraru, Jeff Dutton, Jim Schaff		
DES	X	Nikolai Kouroupatkine		
DOSAR	X	Dick Greenwood, Horst Severini	?	
Dzero	X	Adam Lyon, Qizhong Li, Joel Snow	?	
Engage	X	John McGee, Sebastien Goasguen, Mats Rynge		
Fermilab	X	Keith Chadwick, Steve Timm	+	
Geant4	X	John Apostolakis, Patricia Mendez		
GLOW	X	Sridhara Dasu, Dan Bradley	?	
GPN	X	David Swanson, Greg Monaco	?	
GRASE	X	Russ Miller, Steve Gallo		
GROW	X	Jeffrey E DeReus		
GUGrid	X	Stephen Moore, David Cafaro	?	
I2U2	X	Tom Jordan		
IceCube	X	Albrecht Karle, Steve Barnett	-	
ILC	X	Lynn Garren		
JDEM	X	Stuart Fuess, Dan Yocum		
LIGO		Kent Blackburn, Britta Daudert	+	
Mariachi	X	Helio Takai, John Hover		
nanoHUB	X	Gerhard Klimeck, Steve Clark		
NWICG	X	Kevin Colby	?	
NYSGrid	X	Tom Furlani, Steve Gallo	?	
OSG-VO	X	Ruth Pordes, Chander Sehgal, Chris Green		
GridEx		Alan DeSmet		
MIS + OPS		Rob Quick, GOC		
OSG-EDU	X	Mike Wilde, Alina Bejan		
SBGrid	X	Piotr Sliz, Ian Stokes-Rees	-	
STAR	X	Tim Hallman, Jerome Lauret, Levente Hajdu	-	

## Virtual Organizations in OSG Consortium

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Abhishek Singh Rana

Active, doing Science
Resource Provider or Campus Grid, primarily OSG specific
Inactive, likely to slow down operations
Inactive, likely to be ramping up
X = At-large Consortium Stakeholder Forum

Composite of a Science domain, Resources, Service Infrastructure	Community Grid, small-scale	-
	Community Grid, large-scale	+

## VO REQUIREMENTS

- Need to have a VO Support Center to provide support for VO members
- Need to provide a VOMS server to allow resources to get information on VO membership
- You must communicate your minimal group/role-to-privilege requirements to the Grid Operations Center (GOC) in order for the appropriate privileges to be honored
- Need to register VO with GOC using OIM

# WHAT OSG EXPECTS FROM A SUPPORT CENTER

- Register your Support Center with OSG.
- Join the [osg-operations@opensciencegrid.org](mailto:osg-operations@opensciencegrid.org) mailing list. (Instructions)
- Send a representative to the weekly operations telephone conference call . Ops Meeting Notes and Agendas
- Add information or links to VO specific information page? to document your support-related policies and practices for your users
- Create an account on the Footprints OSG ticket system. (Optional)
- Respond to problem reports or problems identified by the Grid Operations Center and assigned to you for resolution.
- Track your problems in the Footprints ticket system.

## VOMS SERVER

- Need a voms server to host and manage VO membership list
- GOC may be able to host VOMS server initially
- Fairly low resources needed
  - Can use a VM
- Will need one or more VO admins to approve VO membership requests and personal certificate requests

## VO INPUT

- Through VO representatives, VOs can participate following areas:
  - Provide feedback on software available in the default OSG software stacks
  - Participate in validation of new software releases
  - Provide feedback and requests for incorporation of new features and capabilities that resources should provide (mpi support/advertisement, opportunistic storage, etc.)



## FURTHER ASSISTANCE

- Weekly forum:
  - Thursdays 1:30 PM Central, Phone: 510-665-5437, ID: 1111
- Email list:
  - [osg-vo-forum@opensciencegrid.org](mailto:osg-vo-forum@opensciencegrid.org)
- VO Representatives
  - Abhishek Rana ([rana@fnal.gov](mailto:rana@fnal.gov))
  - Britta Daudert ([bdaudert@ligo.caltech.edu](mailto:bdaudert@ligo.caltech.edu))
  - Chris Green ([greenc@fnal.gov](mailto:greenc@fnal.gov))



## Q&A TIME

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