Text between double brackets are wiki pages. See https://www.grid5000.fr/

For events and maintenance on platform See https://www.grid5000.fr/status/

[[Deploy\_environment-OAR2]] [[Advanced\_Kadeploy]]

v0.10.0 - 2016/06/10

# [[Cluster\_experiment]] [[Advanced\_OAR]] Jobs states oarstat -f -j JOB ID oarstat -u G5K LOGIN **Nodes states** oarnodes --sql "cpucore='4'" **Submission: Interactive** oarsub -I env | grep OAR cat \$OAR\_NODE\_FILE Reserve IPs oarsub -I -l slash\_22=1 g5k-subnets 20 nodes on griffon during 2h with 20G ib cards oarsub -I -l nodes=20, walltime=2 \ -p "cluster='griffon' and ib20G='YES' **Submission: Passive** oarsub ~/my-script

oarsh node.fqdn **Submission**: Reservation (passive mode)

oarsub -1 nodes=5, walltime=2 -p "ib10G='YES'" ~/prog

5 nodes during 2h with 10G ib cards

cat OAR.OAR\_JOB\_ID.std{err,out}

Connection to a running job

oarsub -r '2011-05-16 14:20:00' \

on a node in your reservation

oarsub -C OAR JOB ID

-l nodes=10, walltime=0:10:00 ~/my-script Reservation with deploy type (interactive mode) oarsub -t deploy -r '2011-05-16 14:30:00' \

-1 nodes=5, walltime=2 -p "ib10G='YES'" -n "Prog42"

Delete a reservation

oardel OAR\_JOB\_ID

## Oar Grid [[Grid\_experiment]]

#### **Discovering resources**

disco cluster name disco site1 site2

#### **Jobs Grid stats**

oargridstat oargridstat GRID\_JOB\_ID

## **Submission: Interactive**

argridsub -t allow\_classic\_ssh \ -w '0:20:00'CLUSTER1:rdef="/nodes=2",CLUSTER2:rdef="/nodes=3"

Create a node file

oargridstat -w -l GRID JOB ID | sed '/^\\$/d' > ~/nodes

## Distribute node file

OAR\_JOB\_ID=CLUSTER\_JOB\_ID oarcp -i \ /tmp/oargrid/oargrid\_ssh\_key\_LOGIN\_GRID\_JOB\_ID~/machines \

## Connect on first node

'head -n 1 machines'

DAR JOB ID=CLUSTER JOB ID oarsh -i \ /tmp/oargrid/oargrid\_ssh\_key\_LOGIN\_GRID\_JOB\_ID ' head -n 1 machines'

**Ending** 

oargriddel GRID\_JOB\_ID

## **Submission**: Reservation (passive mode)

oargridsub -t allow\_classic\_ssh CLUSTER1:rdef="/nodes=1",\ CLUSTER2:rdef="/nodes=4" -s '2011-05-16 14:20:00' -w '0:10:00' -p /prog42/helloworld

### View results

tail -f OAR.CLUSTER\_JOB\_ID.std{err,out}

## Hardware Overview [[Special:G5KHardware]]

		Nodes	Cpu Intel	AMD	Memory	Disks	GPU	Network
Grenoble				•				
adonis	(2010)	10	2x4cores	@2.27Ghz	24Gb	233GB HDD	2xTesla-C1060	IB40G QDR
edel	(2008)	72	2x4cores	@2.27Ghz	24Gb	119GB SSD		IB40G QDR
genepi	(2008)	34	2x4cores	@2.5Ghz	8Gb	153GB HDD		IB20G DDR
Lille	, ,							
chimint	(2011)	20	2x4cores	@2.4Ghz	16Gb	272GB HDD		
chinqchint	(2007)	46	2x4cores	@2.83Ghz	8Gb	232GB HDD		
chirloute	(2011)	8	2x4cores	@2.4Ghz	8Gb	279GB HDD	4xTesla-S2050	
Luxembourg								
granduc	(2011)	22	2x4cores	@2.0Ghz	16Gb	136GB HDD		1x10G
petitprince	(2013)	16	2x6cores	@2.0Ghz	31Gb	232GB HDD		2x10G
Lyon								
hercule	(2012)	4	2x6cores	@2.0Ghz	31Gb	3x1863GB HDD		1x10G
orion	(2012)	4	2x6cores	@2.3Ghz	31Gb	557GB HDD	1xTesla-M2075	1×10G
sagittaire	(2006)	79	2x1cores	@2.4Ghz	2Gb	68GB HDD		
taurus	(2012)	16	2x6cores	@2.3Ghz	32Gb	557GB HDD		1×10G
Nancy								
graoully	(2016)	16	2x8cores	@3.2Ghz	126Gb	2x558GB HDD		IB56G FDR 1x10G
graphene	(2011)	144	1x4cores	@2.53Ghz	16Gb	298GB HDD		IB20G DDR
graphique	(2015)	6	2x6cores	@3.2Ghz	63Gb	278GB HDD	2xGTX 980	1×10G
graphite	(2013)	4	2x8cores	@2.8Ghz	252Gb	2x279GB SSD		IB56G FDR 1x10G
griffon	(2009)	32	2x4cores	@2.5Ghz	16Gb	298GB HDD		
grimoire	(2016)	8	2x8cores	@3.2Ghz	126Gb	5x558GB HDD, 186GB SSD		IB56G FDR 4x10G
grisou	(2016)	51	2x8cores	@3.2Ghz	126Gb	2x558GB HDD		4×10G
talc	(2009)	134	2x4cores	@2.5Ghz	16Gb	298GB HDD		
Nantes								
econome	(2014)	22	2x8cores	@2.2Ghz	63Gb	1863GB HDD		1×10G
Reims								
stremi	(2011)	44	2x12cores	@1.7Ghz	47Gb	232GB HDD		
Rennes								
paranoia	(2014)	8	2x10cores	@2.2Ghz	126Gb	5x558GB HDD		1×10G
parapide	(2010)	25	2x4cores	@2.93Ghz	24Gb	465GB HDD		IB20G DDR
parapluie	(2010)	40	2x12cores	@1.7Ghz	47Gb	232GB HDD		IB20G DDR
parasilo	(2015)	28	2x8cores	@2.4Ghz	126Gb	5x558GB HDD, 186GB SSD		2x10G
paravance	(2015)	72	2x8cores	@2.4Ghz	126Gb	2x558GB HDD		2x10G
Sophia	-							
sol	(2007)	50	2x2cores	@2.6Ghz	4Gb	232GB HDD		
suno	(2010)	45	2x4cores	@2.26Ghz	32Gb	557GB HDD		

## API [[API\_Main\_Pratical]] [[API]]

## **API Sid**

https://api.grid5000.fr/sid/ui/index.html

#### Grid'5000 Nodes API

https://api.grid5000.fr/stable/ui/nodes.html

#### **Tutorials**

http://grid5000.github.io/tutorials/

## KaVLAN [[Kavlan]]

### **Submission**

|walltime=2 -I

oarsub -t deploy -l {"type='kavlan'"}/vlan=1+nodes=2\

## **Deploy**

kadeploy3 -f \$OAR NODEFILE -e env -k --vlan 'kavlan -V'

Find out in which vlan is a node kavlan -g -m node.fqdn.fr

## List nodes (kaylan fqdn of a reservation)

kavlan -l -j jobid

#### Resources

kavlan-local not routed (1..3)

kavlan routed localy (4..9)

kavlan-global routed (one per site)

\* With electrical consumption. See https://helpdesk.grid5000.fr/supervision/lyon/wattmetre/

Locate a suitable image

kaenv3 -1 kaenv3 -1 -u LOGIN

kaenv3 -p wheezy-x64-min -u deploy

#### Use deploy type for your job

oarsub -I -t deploy -l nodes=2 cat \$OAR NODEFILE

#### Deploy an environment

kadeploy3 -e wheezy-x64-base -m node.site.grid5000.fr -k kadeploy3 -e wheezy-x64-base -f \$OAR\_NODEFILE -k ssh\_key.pub

### Save your deployed environment with tgz-g5k (available on gforge, or installed on environments)

tgz-g5k login@frontend:image.tgz (from node) ssh root@node tgz-g5k > image.tgz (from frontend)

#### Connection to the deployed environment

ssh root@node.site.grid5000.fr # password "grid5000"

with console (useful if network doesn't work)

kaconsole3 -m node.site.grid5000.fr

#### Deploy and save your environment Generate a desciption file

kaenv3 -p wheezy-x64-base -u deploy > image.env

(edit file image.env to update with your values) Deploy

kadeploy3 -f \$OAR\_NODEFILE -a image.env

Save your image kaenv3 -a image.env

## Multi-sites deployment

kadeploy3 -e wheezy-x64-base -f ~/gridnodes --multi-server -k

## Easy use with public share

kadeploy3 -f \$OAR\_NODEFILE\

-f http://public.nancy.grid5000.fr/~login/image.env -k

#### Links

# **DrawGantt** (Nodes states in a temporal diagram)

• https://intranet.grid5000.fr/oar/site/drawgantt.cgi

Monika (Nodes states with properties)

• https://intranet.grid5000.fr/oar/site/monika.cgi

# Ganglia (Nodes metrics)

https://helpdesk.grid5000.fr/ganglia/

## Grid'5000 API

https://api.grid5000.fr/

## **UMS** (Account, quotas extensions)

https://api.grid5000.fr/ui/account

## Grid'5000 Software

• [Grid5000:Software] on wiki.

# **DrawGanttGlobal**

• https://www.grid5000.fr/gridstatus/oargridgantt.cgi

#### MonikaGlobal

• https://www.grid5000.fr/gridstatus/oargridmonika.cgi

**Public share** access from outside g5k (with http auth)

• https://api.grid5000.fr/sid/grid5000/sites/site/public/login/

#### Public share access from inside g5k

https://public.site.grid5000.fr/~login/

# **Public share** (populate your own public share)

drop files in your /public/ folder (see README in there)

## Restfully, g5k-campaign

- http://github.com/crohr/restfully/
- http://g5k-campaign.gforge.inria.fr/

## Grid'5000 software

• https://www.grid5000.fr/mediawiki/index.php/Grid5000:Software