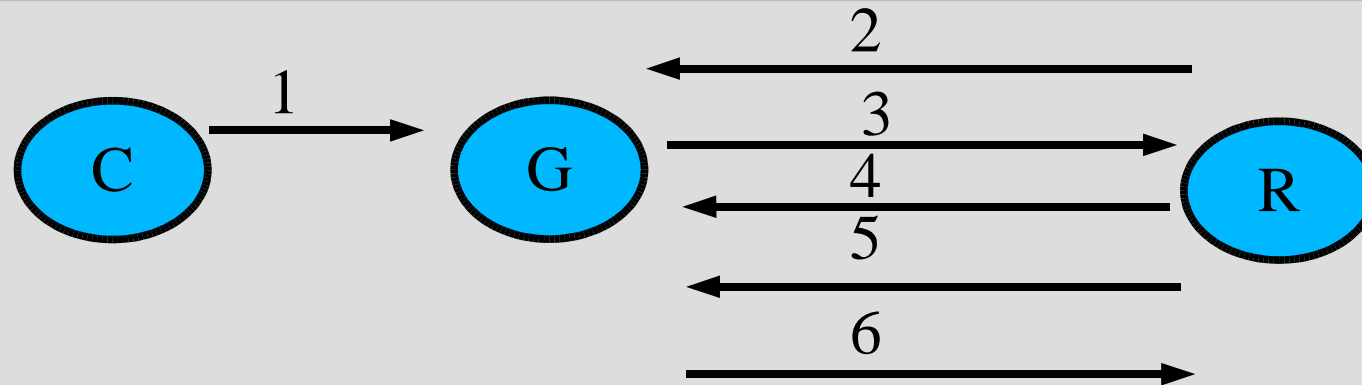


MiG Overview



1. User communicates with the MiG server with https and certificates
2. Res. (HTTP) request `newjob?cert=$cert&cputime=$cputime`
- 3 Server sends job to Resource with SCP
- 4 Res. requests inputfiles using HTTPS and sessionid
- 5 Res. sends outputfiles using HTTPS and sessionid
- 6 Server calls `rm -rf jobdir` using SSH.

MiG Client

1. Browser + x509 certificate in P12 format:

- Setup:
 - Convert Nordugrid cert to P12 format:
 - `openssl pkcs12 -export -in ~/.globus/usercert.pem -inkey ~/.globus/userkey.pem -out ~/migcert.p12`
 - ... type passwords (Export Password is for the new certificate)
 - Import new certificate in browser
- In browser go to: <https://mig-1.imada.sdu.dk>
- Server certificate is issued for old hostname but just ignore the warnings
- Please note that this method is somewhat limited compared to MiGscripts

2. MiGscripts + 'curl' + x.509 cert. (pem format, i.e. Nordugrid format)

- Download and extract `http://mig-1.imada.sdu.dk/MiGscripts.tar.gz`
- Edit `MiGuser.conf` to match certificate path
- Use scripts as specified on next slide

MiG user scripts

MiGallstatus.sh	status for all jobs
MiGcat.sh file	cat a file on the MiG server
MiGput.sh localfile remotefile	
MiGget.sh remotefile localfile	
MiGlist.sh	list all personal files at MiG server
MiGremove.sh file	delete a file on the MiG server
MiGstatus.sh jobid	status (single job)
MiGsubmit mrsfile	submit job (actually just MiGput.sh mrsfile)
MiGuser.conf	configuration file used by all MiGscripts

MiG user scripts example

Download job specification (mRSL file):

<http://mig-1.imada.sdu.dk/example4.mRSL>

This example creates and uploads 'inputfile' which is used for outputfile

Run the job:

·echo “test job” > inputfile

·MiGput.sh inputfile inputfile

·MiGsubmit.sh example4.mRSL

- returns a **job_id** that is used for further treatment of the job
- the job creates a file (outputfile)

·MiGstatus.sh job_id

- to get the status of the job

·MiGcat.sh outputfile

- to show the job output when job is done
- Further examples at **<https://mig-1.imada.sdu.dk/>**

mRSL keywords (part 1)

"EXECUTE"

one or more commands to execute
files that should be send from the central
MiG server to the resource before
executing the commands

"INPUTFILES"

"OUTPUTFILES"

the files that should be sent from the
resource to the central MiG server when
the job is done

"EXECUTABLES"

same as inputfiles, but will be chmod +x by
the resource

"CPUTIME"

#minutes will it take to execute the job

"MEMORY": ""

MB of memory needed by job

"DISK":

GB of disk space needed by job

"RUNTIMEENVIRONMENT"

specify the needed runtimeenvironments,
eg. povray-3.6

mRSL keywords (part 2)

"JOBNAME":	friendly name of the job (not being used ATM)
"NOTIFY": ""	email address to notify when the job is done. It is also possible to use jabber: jabberid@jabberserver.com to get a jabber notification
"ARCHITECTURE":	needed architecure (i386)
"ENVIRONMENT": ""	env=envvalue will set the environment env to envvalue before the job is executed
"CPUCOUNT":	number of CPU's needed
"MAXPRICE": ""	price function of 'exec_delay': must evaluate to an integer or float for all values of exec_delay. Examples: "0" (only exec if it is for free) "200-exec_delay" (only exec within 200 seconds)