

This section describes the PanDA server database configuration. (See SchedconfigParameterDefinitions for additional info.) Cloudconfig and schedconfig are the most important tables, each queue should be defined there.

- Cloudconfig
 - ◆ The minimal parameters are:
 - ◇ NAME cloud name. Clouds can usually be correlated to countries, for example, "RU".
 - ◇ DESCRIPTION human readable description of the cloud. Can be anything, but should be specified since this field has no default.
 - ◇ TIER1 Tier-1 site corresponding to the queue. It is recommended to set the same value to this and schedconfig's NICKNAME and SITEID (Otherwise the SiteMapper will raise an error that this Tier-1 "doesn't exists". Even though it is possible to ignore it).
 - ◇ TIER1SE storage element of the Tier-1.
 - ◇ SERVER hostname of the server. * STATUS should be "online" to accept jobs (other possible values: "offline", "test", "brokeroff").
 - ◆ Other parameters:
 - ◇ COMMENT_ commentary to the cloud.
 - ◇ COUNTRIES list of countries corresponding to the cloud.
 - ◇ PILOTOWNERS specifies the owner of the pilot certificates. See "Pilot roles" below.
 - ◇ VALIDATION in case this field set to "True" only the jobs with VALIDATION=True can be assigned to this cloud.
 - ◆ Unused parameters (not handled in OraDBProxy and WrappedCursor in any way): AUTO_MCU, COMMENT_, DN, EMAIL, MODTIME, MODUSER, SPACE.
- Schedconfig
 - ◆ The minimal parameters are:
 - ◇ NICKNAME name of the queue, see TIER1 above.
 - ◇ SYSTEM - GRID system interacting with queue (must be set, but not used anywhere?).
 - ◇ SITE name of the site (must be set, but not used anywhere?).
 - ◇ STATUS should be "online" to accept jobs (other possible values: "offline", "test", "brokeroff").
 - ◆ Other parameters:
 - ◇ ACCESSCONTROL - allows access to specific groups of people.
 - ◇ ALLOWDIRECTACCESS (True/False) jobs with transferType=direct will be matched by brokerage to sites with ALLOWDIRECTACCESS=True, ALLOWDIRECTACCESS=True for all sites which have copyssetup true for direct access.
 - ◇ ALLOWFAX (True/False).
 - ◇ ALLOWEDNODE pattern for allowed worker node names. See "Pilot roles" below.
 - ◇ ALLOWEDGROUPS sets allowed VOMS groups for the queue. Example: /atlas/.+/Role=production.
 - ◇ AVAILABLECPU used to calculate pledged resources ratio. Related to COUNTRYGROUP.
 - ◇ AVAILABLESTORAGE used to calculate pledged resources ratio. Related to COUNTRYGROUP.
 - ◇ CACHEDSE (0/1) enable PanDA Dynamic Data Placement, ANALY sites only.
 - ◇ CLOUD name of the cloud corresponding to the queue.
 - ◇ CMTCONFIG CMT is a configuration management environment (www.cmtsite.net), this variable should be set to proper configuration for the queue,

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in most cases i686-slc5-gcc43-opt .

- ◇ COMMENT_ commentary to the queue.
- ◇ COPYSETUP commands to be run before inbound/outbound copies; may be a script, or a set of commands like
/somepath/setup.sh^srm://lcg-se0.ifh.de/^dcap://lcg-dc0.ifh.de:22125/^False^True .
- ◇ CORECOUNT number of cores per machine (for Athena MP).
- ◇ COUNTRYGROUP must be set to calculate pledged resource ratio.
- ◇ DDM - a comma-separated list of DDM endpoints used for input data. For a T1 the order should match the setoken order, because this is used to translate the output file space token into the final ddm destination. It is ok for the ddm list to be longer than setokens, e.g. to have an extra input location. For a T2 this is typically just local PRODDISK. The first value in the list has some special meanings. 1) The free space in this endpoint ends up in schedconfig.space(updated via curl). 2) If the site is a T1, then it also ends up in the cloud table space, which is used for task assignment, 3) Bamboo may choose to subscribe EVNT input between clouds, to aid brokerage - the destination space token is this one.
- ◇ DQ2URL DQ2 access URL. DQ2 is a tool for defining and managing datasets.
- ◇ GATEKEEPER physical hostname of the headnode for the queue.
- ◇ GLEXEC gLExec is a gatekeeper program, for more info see <https://twiki.cern.ch/twiki/bin/view/EGEE/GLExec>. This parameter defines, whether gLExec is set or no.
- ◇ LASTMOD timestamp of the last modification.
- ◇ LFCHOST LFC File Catalog host for the queue.
- ◇ LFCREGISTER LFC registration is done by the pilot ('None') or by the panda server ('server'). All the queues in the panda siteid MUST have the same value.
- ◇ LOCALQUEUE local queue name to use in the queue's batch system. If unset, this is not specified.
- ◇ MAXINPUTSIZE maximum copy-to-scratch input data total (in MB).
- ◇ MAXMEMORY maximum memory available per job (in MB), used in PanDA Brokerage.
- ◇ MAXTIME maximum wall time (s) for the jobs in queue. Zero means no restriction.
- ◇ MAXWDIR maximum available workdir space per job. The initial value has been set as MAXINPUTSIZE + 2GB.
- ◇ MINMEMORY Minimum memory (MB) requirement for the jobs to be assigned to the queue. To be set only for the "hi-mem" queues, and zero for standard ("lo-mem") queues. Used in PanDA Brokerage.
- ◇ MINTIME wall time (s) requirement for the jobs to be submitted to the queue. To be set only for the "long" queues, and zero for standard ("short") queues. Used in PanDA Brokerage.
- ◇ MULTICLOUD - The queue contributes to the tasks with the destination clouds specified here.
- ◇ NAME unused, set to 'default'.
- ◇ PLEDGEDCPU used to calculate pledged resources ratio. Related to COUNTRYGROUP.
- ◇ PLEDGEDSTORAGE used to calculate pledged resources ratio. Related to COUNTRYGROUP.
- ◇ RELEASES list of releases available, separated by pipes.
- ◇ RETRY (True/False) enable/disable job recovery.
- ◇ SE Storage Element space token and full endpoint of default output destination. The path is extracted from the matching token in seproddpath If output files do not have spacetoken set, then the token in this entry is used. This applies to direct storage from T1 jobs, but not to subscriptions from T2.
- ◇ SEPRODDPATH space token and full endpoint of default output destination.

- ◇ SETOKENS list of destination space tokens. Must match length of SEPRODPATH
- ◇ SITEID this field must not be NULL for some database searches to function.
However, it is possible to work even with NULL. Also, see TIER1 above.
- ◇ SPACE available disk space on the site.
- ◇ TRANSFERRINGLIMIT maximum number of transferring jobs to allow at a site.
- ◇ VALIDATEDRELEASES (True/False) reprocessing jobs are brokered only to the queues with this value set to 'True'.
- ◆ Unused parameters (not handled in OraDBProxy and WrappedCursor in any way):
ALLOWHTTP, ALLOWJEM, APPDIR, AUTO_MCU, CELIST, CMD, COPYPREFIX, COPYPREFIXIN, COPYSETUPIN, COPYTOOL, COPYTOOLIN, DATADIR, DEPTHBOOST, DN, EMAIL, ENVIRON, ENVSETUP, ENVSETUPIN, ERRINFO, FAXDOOR, FAXREDIRECTOR, GLOBUSADD, GOCNAME, GSTAT, HTTPREDIRECTOR, IDLEPILOTSUPPRESSION, JDL, JDLADD, JDLTXT, JOBMANAGER, LFCPATH, LFCPRODPATH, MULTICLOUD_APPEND, NODES, NQUEUE, OBJECTSTORE, PCACHE, PILOTLIMIT, PROXY, PYTHON_PATH, QUEUEHOURS, RECOVERDIR, REGION, SEIN, SEINOPT, SEOPT, SEPATH, SPECIAL_PAR, STAGEINRETRY, STAGEOUTRETRY, STATUSOVERRIDE, SYSCONFIG, TAGS, TIER, TIMEFLOOR, TMPDIR, TSPACE, VERSION, WNTMPDIR.
- Pilot roles
 - ◆ By default pilot roles should be handled automatically via FQAN parameter. However, in case of problems with FQAN (resulting in "invalid role" in JobDispatcher log and job states stuck on "sent"/"activated") it is possible to specify some additional fields to handle them properly. There are two possible approaches:
 1. Specify the pilot owner. PILOTOWNERS in cloudconfig should include the owner of the pilot certificate.
 2. Specify allowed nodes. ALLOWEDNODE in schedconfig should contain a pattern of the allowed node names for example, "." (all nodes are allowed). Also, SITEID in schedconfig should be equal to the NICKNAME value.

to be continued

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