

ATLAS Grid Information System

store and deploy static and semi-static information about services, configuration parameters and topology of the ATLAS computing resources

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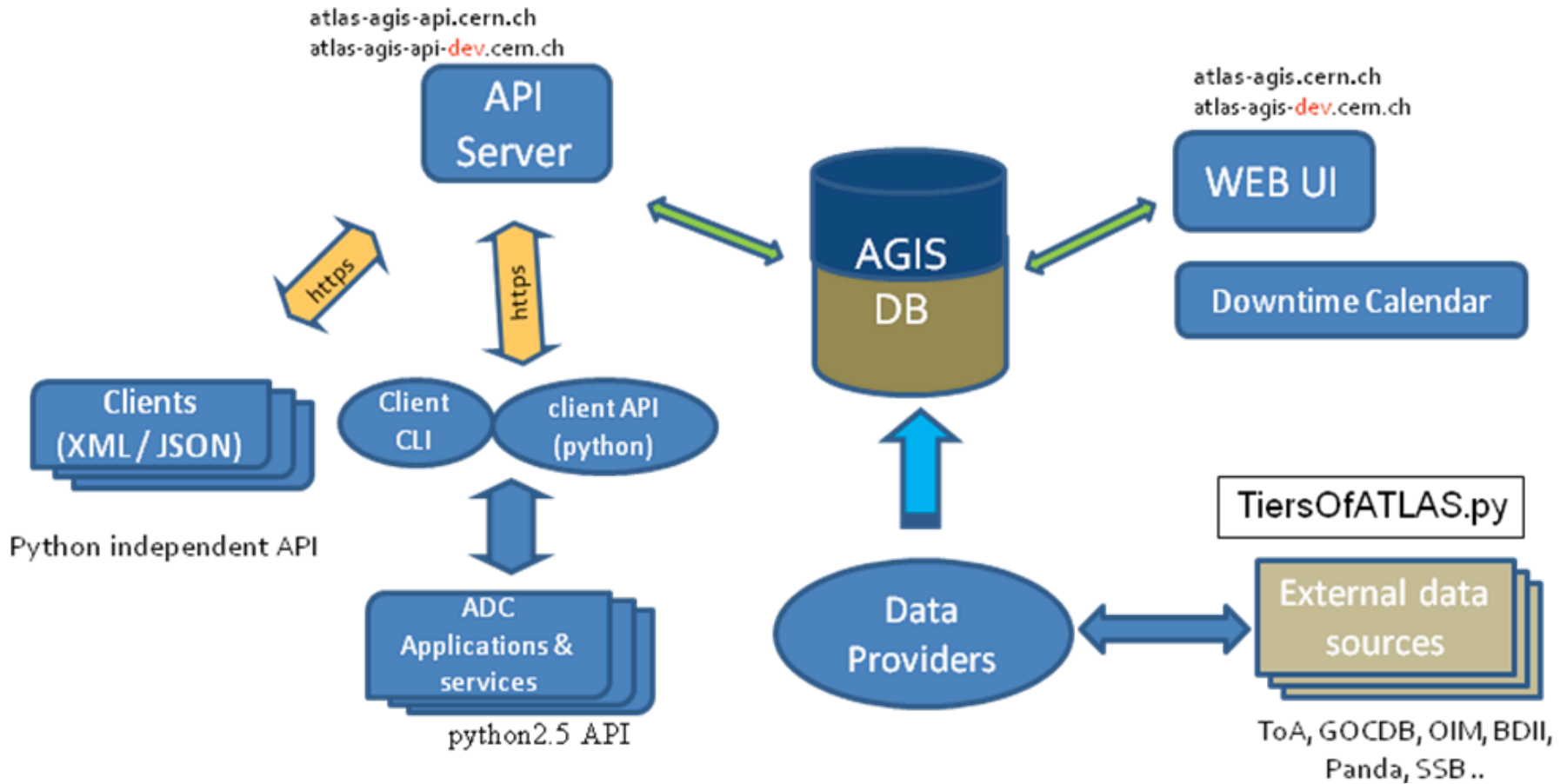
atlas-adc-agis@cern.ch

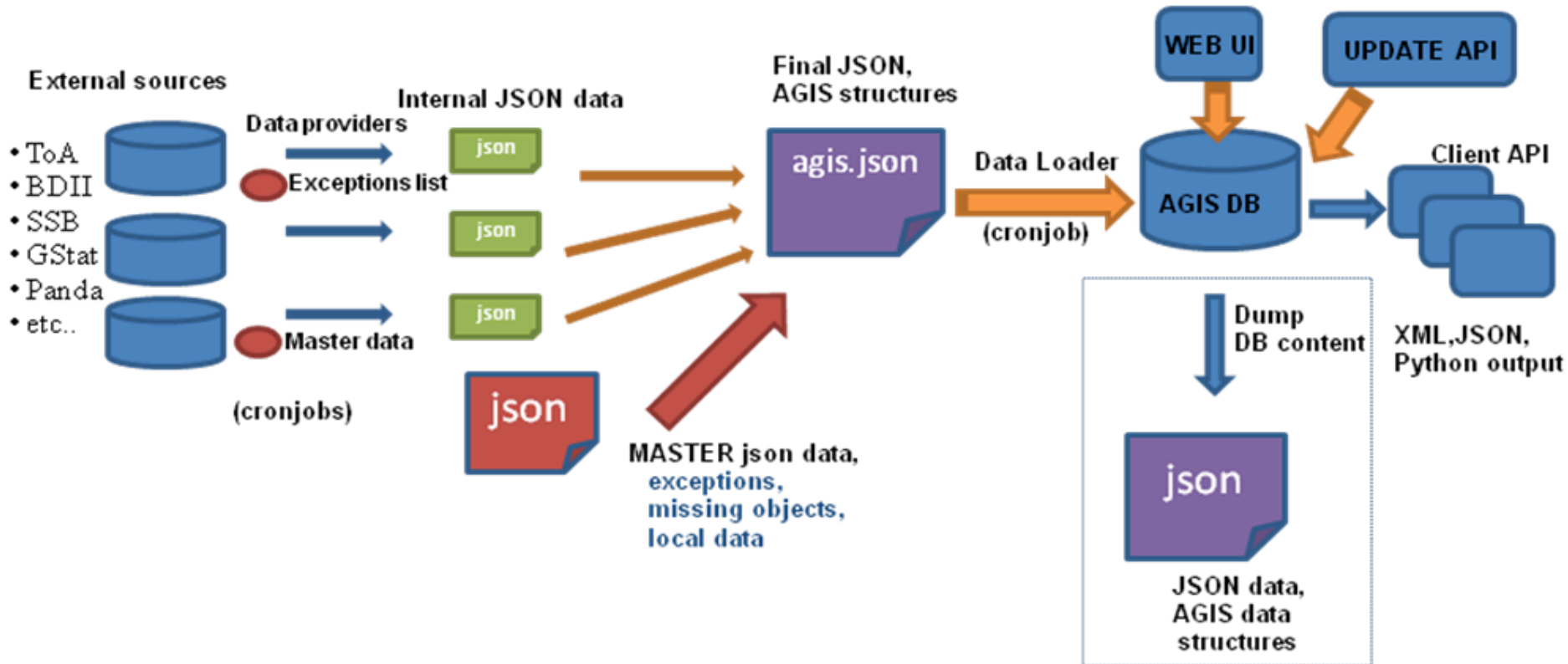
- ATLAS Computing uses a variety of Grid infrastructures:
 - different information services,
 - application interfaces,
 - communication systems and
 - policies.
- ATLAS Computing applications and services require the diversity of common information, configurations, parameters and quasi-static data originally stored in different sources, organized in the way in which are used by ATLAS

- Central configuration and topology of ATLAS Distributed Computing system and services:
 - Collect, aggregate, cache and expose static, semi-static information and configuration parameters of ATLAS computing resources and services
- Intermediate middleware between clients and external information sources
 - Remove the sources as direct dependency for clients
 - AGIS does not duplicate the source information
- Synchronization of AGIS with external sources: performed periodically by agents which store the information into the AGIS DB

- Store data objects in the way more convenient for ATLAS, introducing additional object relations required by ADC.
 - Provided by
 - E.g. services provided by a GOCDB/OIM Site
 - Used by
 - E.g. services used by specific PandaQueues or DDMEndpoints
- In addition to data collected from external sources AGIS allow the definition of own data
 - E.g. new services
- Expose data through API, webUI and REST interface
 - Topology view for Panda, DDM, Dashboards
 - Service Configuration for Pilot Factory
 - Downtime calendar (automatic exclusion)
 - WN configuration for Frontier/Squid
 - SW releases for PandaResources

- **GOCDB/OIM**
 - downtime info,
 - list of sites + descriptions like email contact, certification status, country, gocdb_pk - to provide URL to original site description in GOCDB
 - site services: SE (SRM, GRIDFTP), CE (CE, cream-ce, arc-ce)
- **OIM**
 - Downtimes data, service data resolution by endpoint
 - List of sites, OIM resources translation to site model, site description: status + emailContact,
 - site services: SE (SRM+GRIDFTP), CE
- **BDII**
 - site attributes: 'infoURL', 'longitude', 'latitude'
 - CE services list and its properties (process only CE exists in AGIS): 'jobmanager', 'version', fix endpoint if need
 - local queues definition of CE and its properties: name', 'max_cputime', 'max_wallclocktime', 'status'
- **REBUS**
 - Federation names and pledges
- **ATLAS specific configuration information:**
 - As bootstrap before becoming master of the data





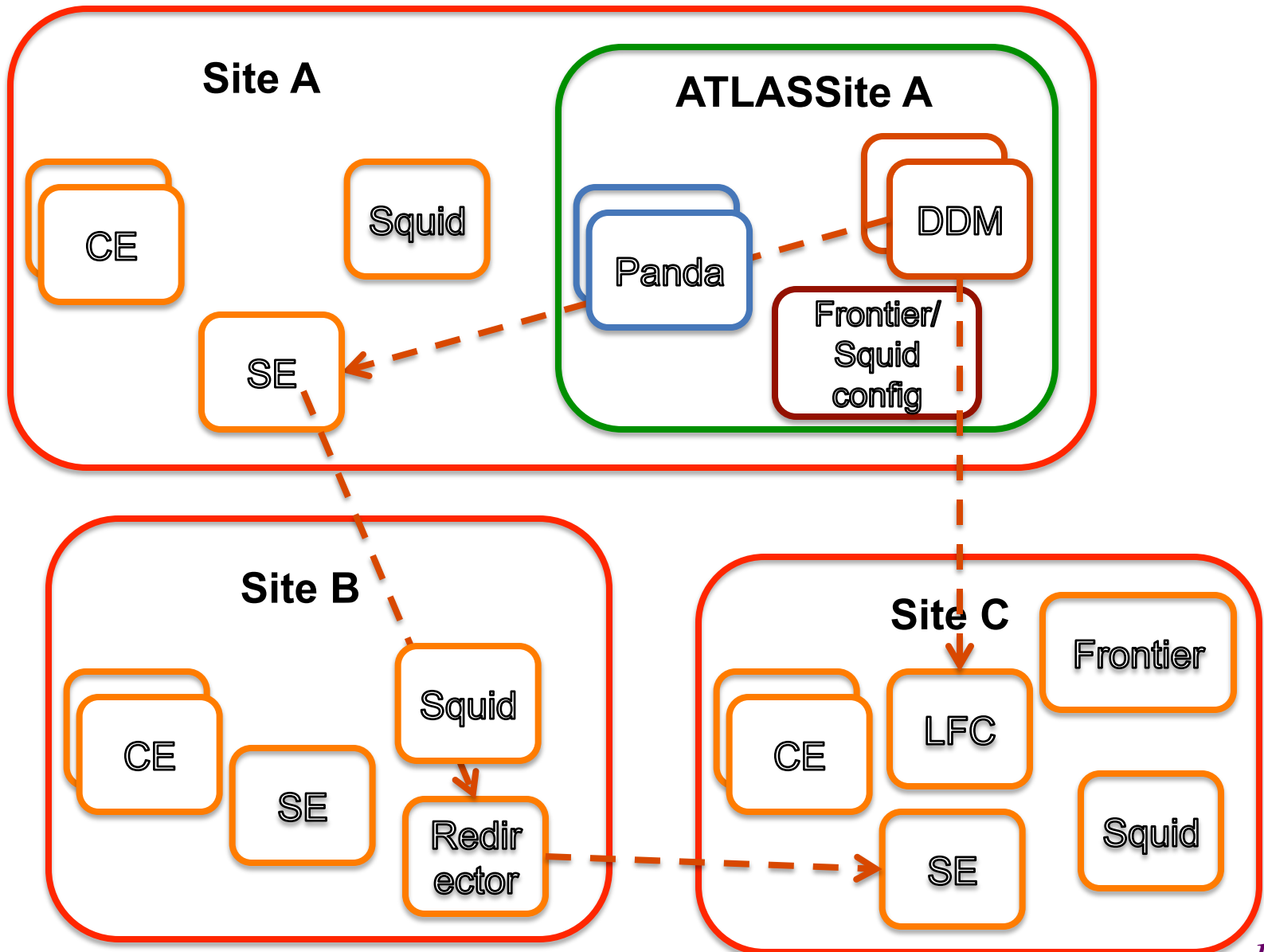
- Possible to create in AGIS services not in GOCDB/OIM
 - Squid, Frontier, Redirectors, PerfSonar (under deployment)
- Possible to define SE with Flavour XROOTD and HTTP
- ✓ If those information will be available somewhere else it will be possible to collect them

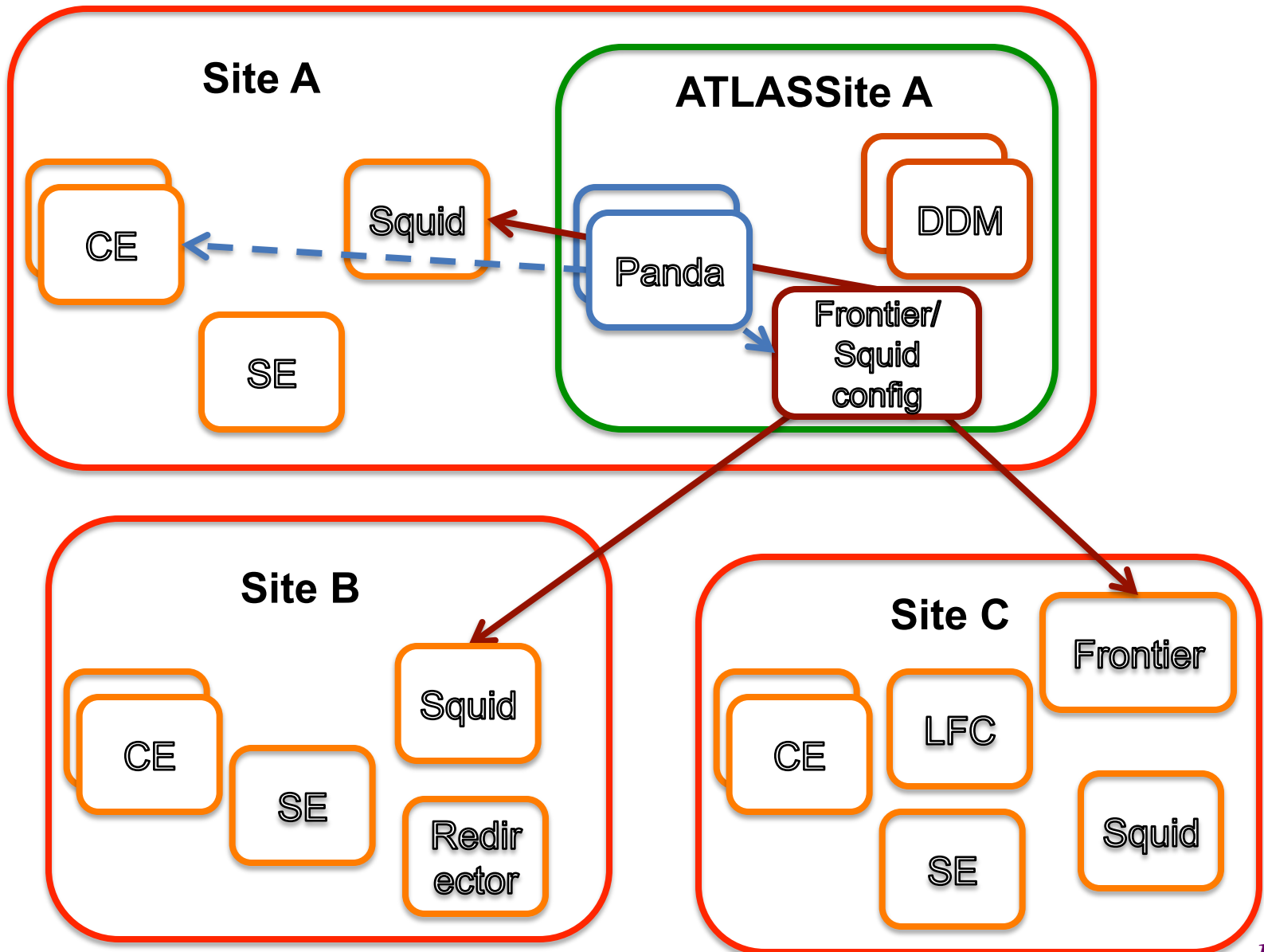

```
CE:
{
  "type": "ComputingElement",
  "ce_endpoint": "grid10.lal.in2p3.fr",
  "ce_flavour": "LCG-CE",
    other example: "OSG-CE" , "CREAM-CE"
  "ce_jobmanager": "pbs",
    other example: "condor", "Isf"
  "ce_queue_maxcputime": 0,
  "ce_queue_maxwctime": 0,
  "ce_queue_name": "atlasana",
  "ce_queue_status": "Unknown",
    e.g. production/maintenance
  "ce_version": ""
    could be "CREAM2", "GT5", "GT2"
  "rc": "US-AGLT2",
    RegionalCentre, Federation name
    (from e.g. REBUS)
  "rc_site": "AGLT2",
    RegionalCentre Site,
    i.e. GOCDB/OIM SiteName
},
```

```
SE
{
  "type": "StorageElement",
  "se": "srm://charon01.westgrid.ca:8443/srm/managerv2?SFN=",
    i.e. full url with protocol and port.
  "se_flavour": "SRM",
    could be GridFTP, XROOTD, HTTP ....
  "rc": "US-AGLT2",
  "rc_site": "AGLT2",
}
```

```
Redirector
{
  "type": "Redirector",
  "endpoint": "atlas-xrd-ru.cern.ch:1094",
  "flavour": "XROOTD",
  "parent": {
    "endpoint": "atlas-xrd-eu.cern.ch:1094",
    "name": "XROOTD_atlas-xrd-eu",
    "rc_site": "CERN-PROD",
    "state": "ACTIVE",
  },
},
```

```
Squid
{
  "type": "Squid",
  "endpoint": "http://squid.aglt2.org:3128",
  "flavour": "Frontier",
  "rc": "US-AGLT2",
  "rc_site": "AGLT2",
},
```





- <http://atlas-agis.cern.ch/agis/>
- Twiki:
 - <https://twiki.cern.ch/twiki/bin/viewauth/Atlas/AtlasGridInformationSystem>
 - Latest AGIS schema
 - <https://twiki.cern.ch/twiki/pub/Atlas/AtlasGridInformationSystem/2012.11.30.agis.Main.jpg>
 - Documentation
 - <http://atlas-agis.cern.ch/docs/latest/>
- AGIS “most used” programmatic views:
 - <http://atlas-agis-api.cern.ch/request/ddmendpoint/query/list/?json>
 - <http://atlas-agis-api.cern.ch/request/pandaqueue/query/list/?json&preset=schedconf.all>
 - <http://atlas-agis.cern.ch/ToACache/TiersOfATLASCACHE.py>
 - <http://atlas-agis-api.cern.ch/request/site/query/list/?json>
 - http://atlas-agis-api.cern.ch/request/site/query/list_rcsites/?json

- ✓ AGIS is currently used by ATLAS Computing as main information system and topology source
 - ✓ Integrated with DDM, Dashboard, container of SW releases
 - ✓ Flexible system:
 - ✓ easy to include the new use cases needed by the experiment
 - ✓ Reliable
 - ✓ If information are wrong experts can directly change them into AGIS
- ! Panda configuration now migrating from local configs to AGIS
 - ✓ AGIS webUI ready and tested since midDecember, planning now the migration
- ✓ If “Provided by” information on resources will be available in a central WLCG Information System, it will be possible to use it as source for the object relationship that will be anyway needed by ATLAS (i.e. “Used by” relations)

ES

Backup



ES

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● ...



ES

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