

# *OSG information services – A Discussion*

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*OSG Site Administrators Meeting  
Dec 12, 2007*

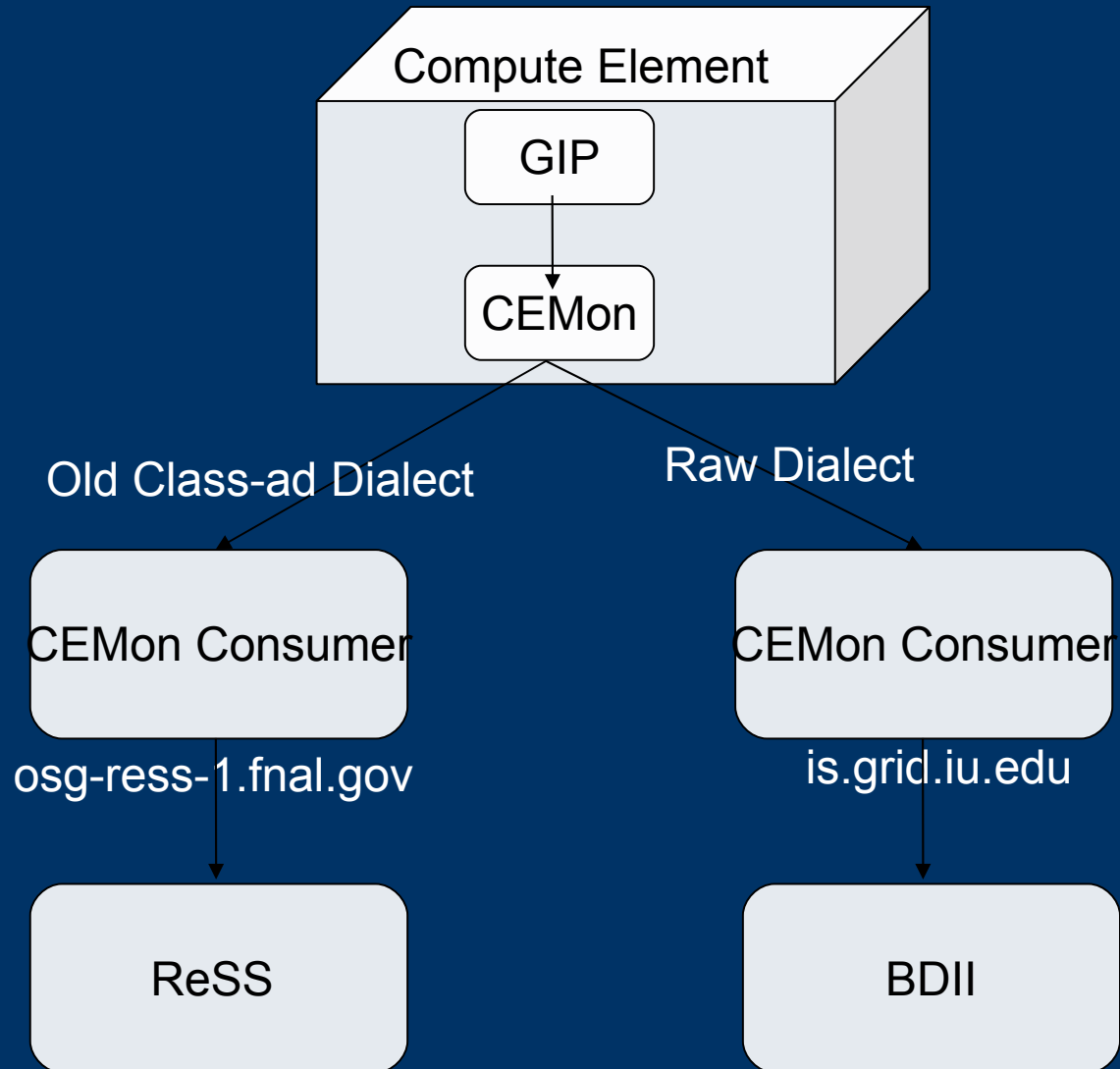
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# *Components*

- Generic Information Provider (GIP)
- CEMon
- BDII
- Resource Selection Service (ReSS)

# Information Services Overview



# *Generic Information Provider*

- GIP provides information about resources
  - GIP aggregates static and dynamic resource information for use with LDAP-based information systems
  - Information published is based on Glue Schema
    - Version 1.3 in OSG 0.8.0
  - Validation
    - <http://gip-validate.grid.iu.edu/>
  - Local verification
    - Run `$VDT_LOCATION/lcg/libexec/osg-info-wrapper`
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## *Major updates in 0.8.0*

- GIP uses Glue Schema 1.3
  - Deprecated osg-info-dynamic-dcache. Needs replacement.
  - Old configuration is maintained if `OLD_VDT_LOCATION` is set
  - Added squid service plugin
  - Admins can add site defined constraints to customize configure condor status commands
  - Admins can specify if they don't want to count VMs in "Owner" State in Condor Batch system
  - Status of GUMS server is also configured to be published through GIP
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# *CEMonitor*

- Responsible for providing information coming from the Computing Element
  - Support of the ReSS (Resource Selection Service)
  - Collects the CE resource information by using Generic Information Provider (GIP).
  - Central Information Gatherer (CEMonconsumer) runs on `osg-ress-1.fnal.gov` (prod)
    - This information is in classad format
    - Information is also used by match making service
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## *CEMon (cont)*

- Another CEMonconsumer runs at is.grid.iu.edu
    - This consumer receives its information in LDIF format using the RAW dialect
    - BDII server is also co-located
    - BDII server also publishes this information.
  - Validate
    - `condor_status -pool osg-ress-1.fnal.gov -l -constraint "GlueCEInfoHostName ==\"<YOUR HOST_NAME>\""`
  - Log files
    - `catalina $VDT_LOCATION/tomcat/v4/logs/catalina.out`
    - `cemonitor $VDT_LOCATION/tomcat/v4/logs/glite-ce-monitor.log`
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# *Resource Selection Service (ReSS)*

- ReSS provides a matchmaking service
  - Sites advertise their characteristics to a central ReSS information collector in the form of old-format classads
  - Classads are formed at sites by the CEMon which collects it from GIP
  - The ReSS central collector of site information is based on the condor collector server.
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# ReSS

- Information is expressed via attributes according to the Glue Schema v1.2 or v1.3.
    - The matchmaking uses a critical set of attributes from Glue schema, that have been identified by OSG.
  - Validation
    - Uses the ability of condor to evaluate logical expressions carried by the classad itself.
    - Verifies if the attributes defined as critical are defined and have reasonable values.
    - Condor command
      - `condor_status -pool osg-ress-1.fnal.gov -format '%d\n' isClassadValid -constraints 'GlueSiteName == "YOUR_SITE_NAME"' | uniq`
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# *Berkeley Database Information Index (BDII)*

- BDII consists of multiple standard LDAP databases that are populated by an update process.
  - Port forwarding is used to enable one database to serve data while the other is refreshing.
  - Made up of following services
    - bdi-update, bdi-fwd, slapd, bdi
  - BDII service is run at the GOC
  - Collects information from GIP through CEMon
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# *Validating BDII*

- Interop-BDII publishes LDAP information to EGEE
  - Check information at
    - <http://is.grid.iu.edu/cgi-bin/status.cgi>
  - LDAP commands
    - `ldapsearch -x -LLL -p 2170 -h is.grid.iu.edu -b mds-vo-name=YOUR_SITE_NAME_HERE,mds-vo-name=local,o=grid`
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# Discussions

- Some requirements already received (thanks Gabriele)
    - Improve GIP probes so that it is possible to distinguish between spurious information resulting from error conditions (e.g. condor\_status time out) and good information. [GIP]
    - Improve GIP information for Storage [GIP]
    - Modify the BDII aggregator so that custom attributes from sites do NOT break interoperability. [BDII]
      - Myself and Tim are working on this.
      - We have designed and developed a filter.
      - Need to be attached to BDII aggregator.
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## *Discussion (cont)*

- Standardize a mechanism for site administrators to add custom attributes in their GIP deployment [GIP/ReSS/OSG]
  - Develop standard OSG attributes for advertising WS-GRAM interfaces [GIP]
    - Work just started.
    - Initial thought is to go publish WS-GRAM as additional CEs
  - Modify the BDII aggregator so that stale information can be set to expire [BDII]
  - Provide standard OSG attributes for advertising MPI capabilities of sites?? [GIP]
  - Improvements to configure-osg-gip? [GIP]
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# *Your Comments*

- Suggestions for improvement of Information Services?
- Any Requirements for your application?

