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# **BDII Documentation**

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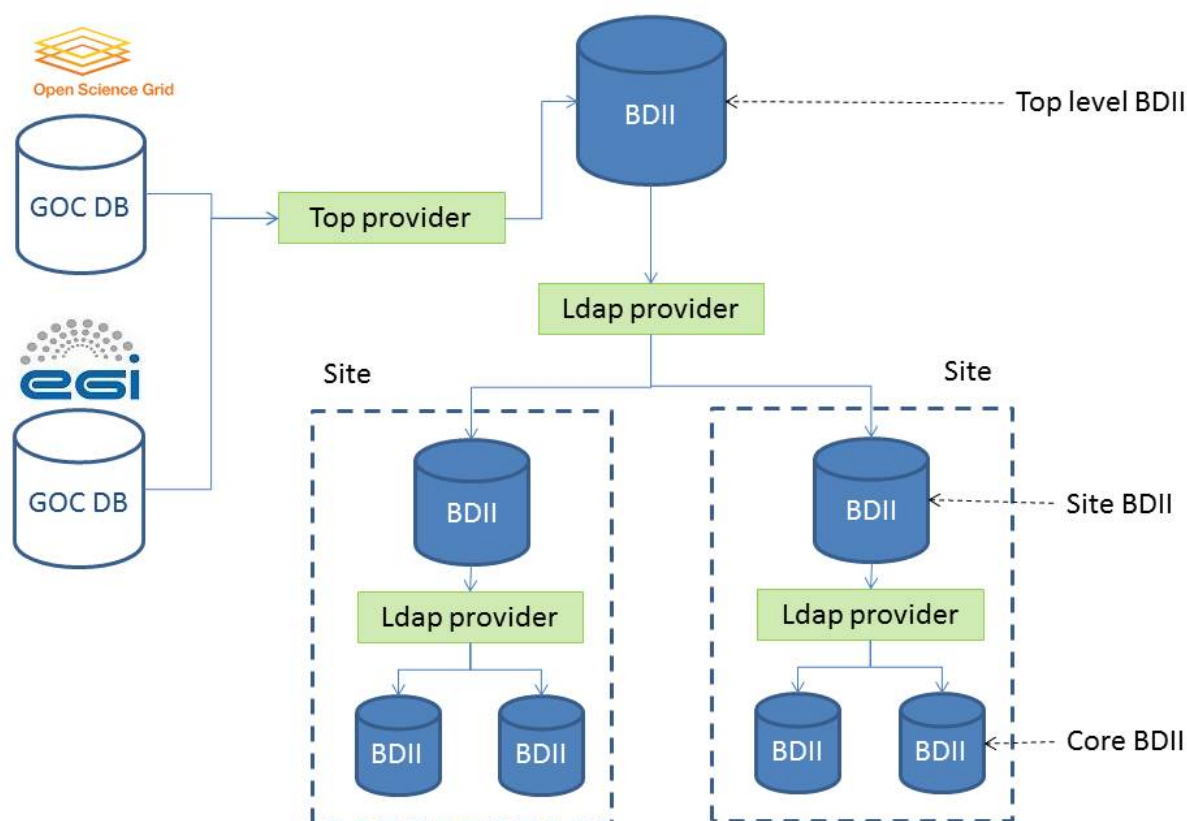


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## Grid Information System Introduction

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The grid information system is a mission-critical component in the WLCG grid infrastructure. It provides detailed information about grid services which is needed for various different tasks. The grid information system has a hierarchical structure of three levels. The fundamental building block used in this hierarchy is the Berkley Database Information Index (BDII). Although the BDII has additional complexity, it can be visualized as an LDAP database. The resource level or core BDII is usually co-located with the grid service and provides information about that service. Each grid site runs a site level BDII. This aggregates the information from all the resource level BDIIs running at that site. The top level BDII aggregates all the information from all the site level BDIIs and hence contains information about all grid services. There are multiple instances of the top level BDII in order to provide a fault tolerant, load balanced service. The information system clients query a top level BDII to find the information that they require.



The BDIIs are populated with information by running information providers. These are scripts which obtain information, format it as LDIF and print the result to standard out. These information providers can also be used to query other BDIIs which is how the hierarchy is built. The order in which these information providers are run is random.

The information in the information systems conforms to a schema called the GLUE schema. The GLUE schema started as collaboration effort between European and US grid projects to facilitate interoperability between them. The Open Grid Forum (OGF) is now responsible for the GLUE schema.

The information system is bootstrapped from the information registered in the Operations Databases of EGI and OSG grid infrastructures (GOCDB and OIM). When a site registers, it enters the URL for the site level BDII into the GOCDB/OIM. GOCDB/OIM then generates a list of LDAP URLs for all the sites in the grid and this is downloaded by the information provider running on the top level BDII. These URLs are then used to query all the site level BDII and the result is used to populate the top level BDII.

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## Indices and tables

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- `genindex`
- `modindex`
- `search`