# caGrid 2.1 Requirements

The goal of the development effort for caGrid 2.1 is to accomplish the following:

1. Migrate select caGrid 1.4 services away from Globus to the caGrid 2.x technology stack.
2. Develop “cookbooks” to provide guidance to the caGrid community on (1) using caGrid 2.x and (2) migrating from caGrid 1.x to caGrid 2.x
3. caGrid Portal

## Service Development

The following services will be migrated from the caGrid 1.x technology stack to the caGrid 2.x technology stack:

1. Authentication Service
2. Index Service
3. Metadata Model Service (MMS)
4. Trust Service (SyncGTS)

In addition to the migration of the above services the following caGrid 2.0 services will have additional development to support some of the new caGrid 2.1 features:

1. Credential Delegation Service (CDS)
2. Dorian
3. Global Model Exchange (GME)
4. Grid Trust Service (GTS)
5. Grid Grouper

In the remainder of this section we will provide an overview of the requirements for each of the services.

### Authentication Service

1. The caGrid Authentication Service (CAGRID-AS) will be migrated from Globus 4.0.3 to the caGrid 2.x technical stack (Java 7, OSGi, ServiceMix).
2. CAGRID-AS 2.1 will be support the same SOAP Web Sevice WSDL interface as CAGRID-AS 1.4.
3. CAGRID-AS 1.4 clients will continued to work with the CAGRID-AS 2.1 service.
4. CAGRID-AS 2.1 will register caGrid service metadata with the caGrid Index Service.
5. CAGRID-AS 2.1 will be able to leverage the caGrid 2.1 Trust Service (SyncGTS)
6. CAGRID-AS 2.1 will provide an administration guide, that will document installation and administration
7. CAGRID-AS 2.1 will provide an upgrade guide that will document how to upgrade from CAGRID-AS 1.4 to CAGRID-AS 2.0

### Index Service

1. The caGrid Index Service (CAGRID-IS) will be migrated from Globus 4.0.3 to the caGrid 2.x technical stack (Java 7, OSGi, ServiceMix).
2. CAGRID-IS 2.1 will be support the same SOAP Web Sevice WSDL interface as CAGRID-IS 1.4.
3. CAGRID-IS 1.4 clients will continued to work with the CAGRID-IS 2.1 service.
4. CAGRID-IS 2.1 will register caGrid service metadata with the caGrid Index Service.
5. CAGRID-IS 2.1 will be able to leverage the caGrid 2.1 Trust Service (SyncGTS)
6. CAGRID-IS 2.1 will provide an administration guide, that will document installation and administration
7. CAGRID-IS 2.1 will provide an upgrade guide that will document how to upgrade from CAGRID-IS 1.4 to CAGRID-AS 2.0

### Metadata Model Service

1. The caGrid Index Service (CAGRID-MMS) will be migrated from Globus 4.0.3 to the caGrid 2.x technical stack (Java 7, OSGi, ServiceMix).
2. CAGRID-MMS 2.1 will be support the same SOAP Web Sevice WSDL interface as CAGRID-MMS 1.4.
3. CAGRID-MMS 1.4 clients will continued to work with the CAGRID-MMS 2.1 service.
4. CAGRID-MMS 2.1 will register caGrid service metadata with the caGrid Index Service.

### Trust Service (formerly SyncGTS)

1. The Trust Service (CAGRID-TRUST) will be migrated from Globus 4.0.3 to the caGrid 2.x technical stack (Java 7, OSGi, ServiceMix).
2. CAGRID-TRUST will be implemented as an OSGI java service that can be deployed within ServiceMix.
3. caGrid service can be configured to delegate digital certificate validation to CAGRID-TRUST
4. CAGRID-TRUST will validate digital certificates against list of certificate authorities provided to it by the Grid Trust Service (GTS).
5. CAGRID-TRUST will provide an administrative guide that document installation, configuration.

### Credential Delegation Service

1. The Credential Delegation Service (CAGRID-CDS) will backwards compatible with CAGRID-CDS 2.0
2. CAGRID-CDS updated to support delegating digital certificate validation to the caGrid Trust Service.
3. CAGRID-CDS will provide an updated administrative guide that documents installation and configuration.
4. CAGRID-CDS will provide an upgrade guide to upgrade from CAGRID-CDS 2.0 to CAGRID-CDS 2.1.

### Dorian

1. Dorian (CAGRID-DORIAN) will backwards compatible with CAGRID-DORIAN 2.0
2. CAGRID-DORIAN will be updated to support delegating digital certificate validation to the caGrid Trust Service.
3. CAGRID-DORIAN will provide an updated administrative guide that documents installation and configuration.
4. CAGRID-DORIAN will provide an upgrade guide to upgrade from CAGRID-DORIAN 2.0 to CAGRID-DORIAN 2.1.

### Global Model Exchange

1. The Global Model Exchange (CAGRID-GME) will backwards compatible with CAGRID-GME 2.0
2. CAGRID-GME will be updated to support delegating digital certificate validation to the caGrid Trust Service.
3. CAGRID-GME will provide an updated administrative guide that documents installation and configuration.
4. CAGRID-GME will provide an upgrade guide to upgrade from CAGRID-GME 2.0 to CAGRID-GME 2.1.

### Grid Trust Service

1. The Grid Trust Service (CAGRID-GTS) will backwards compatible with CAGRID-GTS 2.0
2. CAGRID-GTS will be updated to support delegating digital certificate validation to the caGrid Trust Service.
3. CAGRID-GTS will provide an updated administrative guide that documents installation and configuration.
4. CAGRID-GTS will provide an upgrade guide to upgrade from CAGRID-GTS 2.0 to CAGRID-GTS 2.1.

### Grid Grouper

1. Grid Grouper (CAGRID-GROUPER) will backwards compatible with CAGRID-GROUPER 2.0
2. CAGRID-GROUPER will be updated to support delegating digital certificate validation to the caGrid Trust Service.
3. CAGRID-GROUPER will provide an updated administrative guide that documents installation and configuration.
4. CAGRID-GROUPER will provide an upgrade guide to upgrade from CAGRID-GROUPER 2.0 to CAGRID-GROUPER 2.1.

## Cookbooks

## Portal