Core: Key Concepts

Overview
Interdependence with other components

Overview

The following figure illustrates the GT3 core architecture. Core components are represented by a white background.

![Core Architecture Diagram]

The core component of the Globus Toolkit version 3 contains the basic infrastructure needed for building grid services. In particular, it is comprised of the following major subcomponents:

| **OGSI Spec Implementation** | An implementation of the OGSI Specification, i.e., an implementation of all OGSI specified interfaces. |

OGSI Spec Implementation

http://www-unix.globus.org/toolkit/docs/3.2/core/key/index.html
<table>
<thead>
<tr>
<th><strong>Security Infrastructure</strong></th>
<th>This subcomponent provides support for message level security, authentication and gridmap based authorization. The message level security implementation provides session (GSI-SecureConversation) as well as per-message (GSI-SecureMessage) based security. More information can be found here</th>
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<tr>
<td><strong>System level services</strong></td>
<td>System level services are OGSi-compliant grid services that are generic enough to be used by all other grid services. Currently the toolkit contains three system level services:</td>
</tr>
<tr>
<td><strong>Ping service</strong></td>
<td>Used to &quot;ping&quot; a hosting environment.</td>
</tr>
<tr>
<td><strong>Logging Management Service</strong></td>
<td>Allows you to modify log filters and to group existing log producers into more easily manageable units at run time.</td>
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<tr>
<td><strong>Management Service</strong></td>
<td>Provides an interface for monitoring the current status and load of a grid service container and to cleanly shut down a container. It also allows you to activate and deactivate service instances.</td>
</tr>
</tbody>
</table>

**Note:** The Admin Service (which formerly contained the ping and shutdown services) was deprecated in GT 3.2.

More information can be found in the [GT3 Core white paper](http://www-unix.globus.org/toolkit/docs/3.2/core/key/index.html)

**Interdependence with other components**

GT3.2 Core itself depends on and is required by a number of other components.

The components GT3.2 Core depends on are:

- A hosting environment that provides traditional web server functionality, such as a transport mechanism, e.g. HTTP.

GT3.2 ships with lightweight embedded and standalone hosting environments, but will also work with a standard Java Servlet Engine, e.g. Tomcat, and EJB application servers, e.g. JBOSS or Websphere.

- A web service engine which is responsible for implementing XML Messaging.

GT3.2 currently depends on the [Apache Axis](http://www.apache.org) project for this component.
Components that require GT3.2 Core are:

- The base service component which contains the higher level services such as the [WS GRAM](http://www-unix.globus.org/toolkit/docs/3.2/core/key/index.html) (program execution) and [Reliable File Transfer](http://www-unix.globus.org/toolkit/docs/3.2/core/key/index.html) services that ship with GT3.2.
- User-defined services. This term denotes services outside of the toolkit that are developed on top of any subset of GT3.2 components, including the base services.