UNICORE’s architecture consists of three layers:

- **User tier:** A user interface for job preparation, job monitoring, output retrieval, and certificate management. A job is represented by an Abstract Job Object (AJO).

- **Server tier:** The Gateway authenticates the user and the Network Job Supervisor (NJS) translates the AJO into a target specific batch job.

- **Target tier:** The Target System Interface (TSI) interfaces between UNICORE and the local batch subsystem.

The relevant Globus components are:

- **Globus Resource Allocation Manager (GRAM)** is used for preparing RSL (Resource Specification Language) jobs from the UNICORE job parameters and for job monitoring. The job status is delegated to the TSI which maps it to a UNICORE job status.

- **Globus Access to Secondary Storage (GASS)** transfers files to and from Globus and standard output/error back to UNICORE. The GASS Server is initialised in the GRIP TSI and communicates with the GASS Client on the remote machine.

- **Globus Security Infrastructure (GSI)** provides the API to generate user proxy certificates used by Globus.

The security of UNICORE and Globus is based on public key mechanisms using X.509 certificates. UNICORE signs each part of the job with the users certificate. Globus uses proxy delegation. A proxy plugin creates a temporary proxy certificate from the UNICORE user certificate.

GRIP enabled applications to be used in an interoperability environment:

- **Biomolecular Applications**
- **Meteorological Applications**

GRIP designs and implements an interoperability layer between UNICORE and Globus. The number of potential UNICORE target systems is enlarged by providing access to many Globus systems. Moreover, the uniform and seamless UNICORE user interface brings additional value to Globus.