

Service based access to Oncosimulator



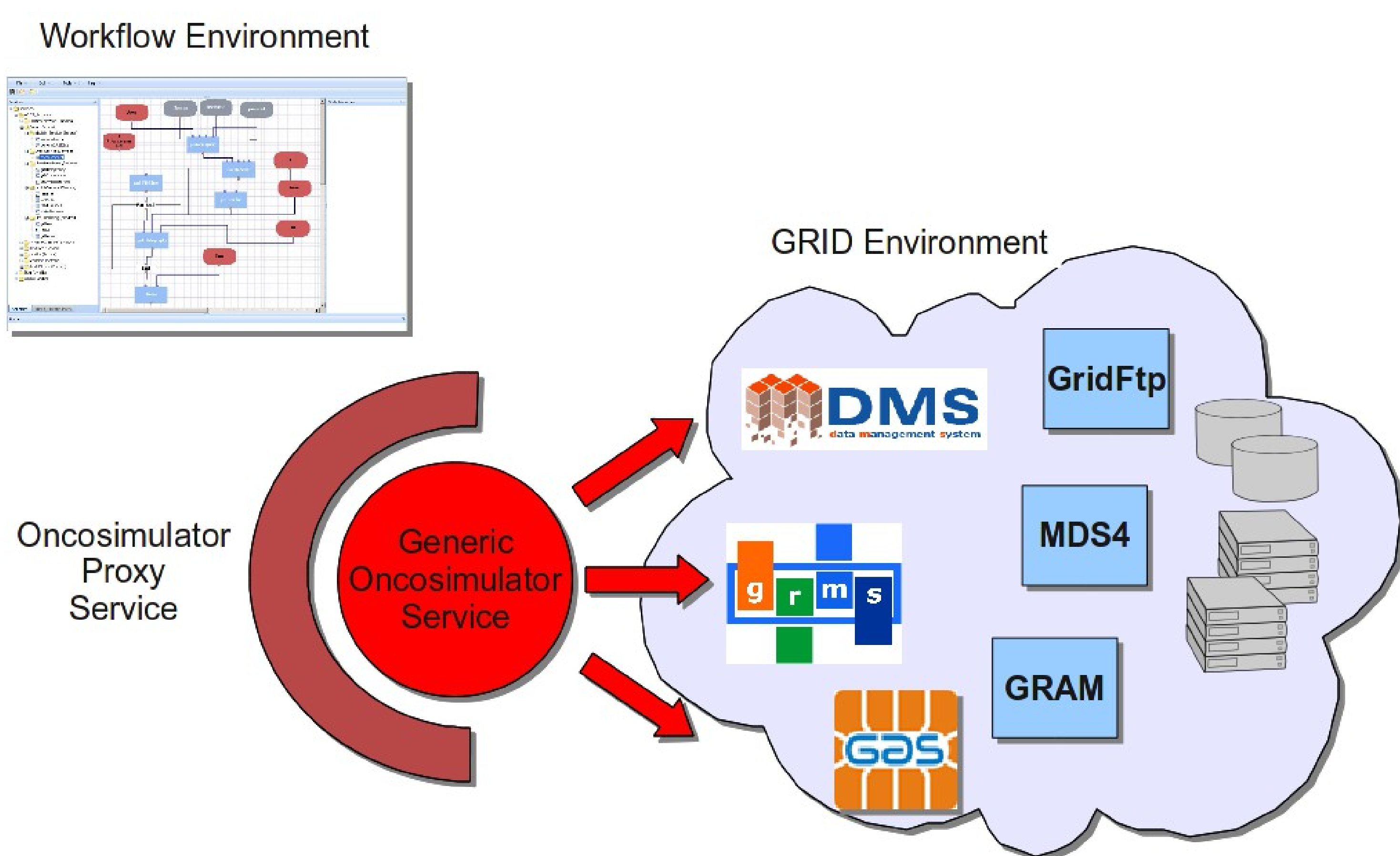
Oncosimulator Service idea

The Oncosimulator application is implemented as a standalone sequential application that can be compiled and executed on computer running under Linux/Unix or Windows operating system. The input required to run the application consists of the initial shape of the tumor and set of parameters describing patient and treatment.

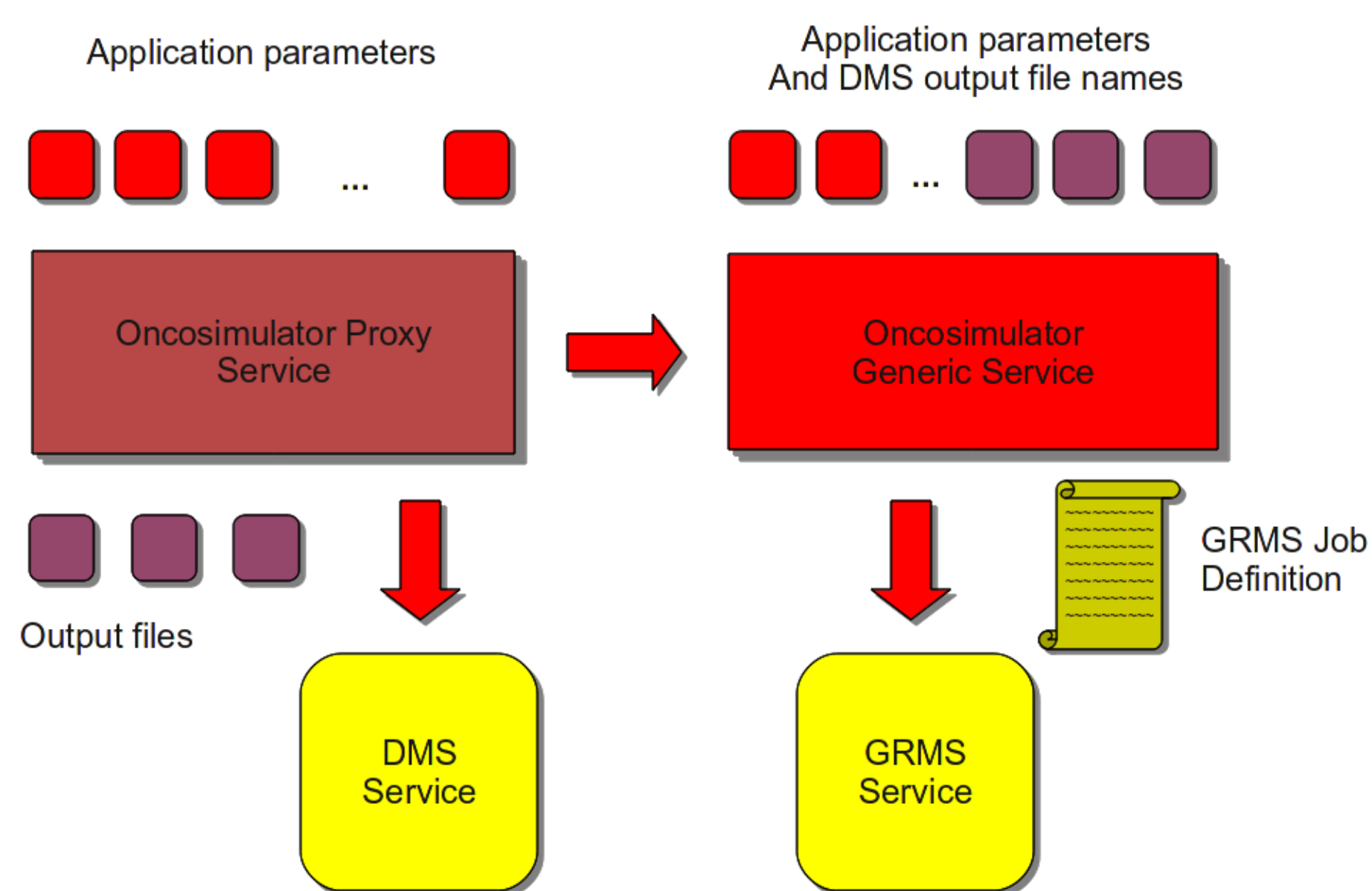
The basic and the most important scenario concerning Oncosimulator in ACGT project is a grid execution of the code.

The idea of the presented solution, is to integrate the simulation with workflow environment of ACGT.

It is achieved by implementation of the service that is wrapping the oncosimulator code and interfacing the grid environment for making the computation and managing the data transfer.



Service Implementation details



Components functionality

Generic Oncosimulator Service (GOS) - service that is wrapping calls to grid infrastructure for submitting simulation to the grid. The interface for running the simulation accepts parameters for the simulation invocation including logical identifiers of the input data stored in Data Management System of the grid (DMS).

Oncosimulator Proxy Service (OPS) - GSI enabled web services needs to be wrapped with proxy service to be compliant with workflow environment of ACGT.

Additionally OPS interface can be tailored to the needs of end users responsible for creation of workflows. Thus it has very flexible design that allows easy development and deployment different versions of service depending on user requirements.

Workflow Construction

Oncosimulator service is integrated with workflow environment of ACGT.

It can be browse in the services tree under Simulation group.

Workflow Editor allows to join the output of the service (file generated by the application) with the input of the other service for further processing of the data.

