

# QPNKPG'OGFK'CPF'GPVGTVCPOGPV

The entertainment contents may consist of different forms (e.g., movie on demand or online games ) with different hosting capacity demands and lifecycle properties. One of the primary goals of this use case is the ability to dynamically manage the resources based on workload demand and current system configuration. Another observation with media entertainment is the change of the content during its lifecycle and changes in the roles of the actors involved.

User involvement and responsiveness with the entertainment content drives this use case into two categories:

The consumption of the media content, movie on demand, with very limited user interaction

Frequent user interaction with the content, as we can see in online games.

A number of new commercial consumer experiences will emerge from the economic factors of content subscription, usage-based pricing, content availability, and differentiation among competitors .

Most of online media entertainment (games and video on demand) are designed based on a stovepipesolution for each media entertainment and each solution is managed separately. This will become a cumbersome solution because of the lack of reusability and overprovisioning of the resources. The grid architecture should provide mechanisms for on-demand provisioning, new business models (pricing models), and resource-sharing models.

## **Actors**

A customer who consumes the entertainment content

A service provider who hosts the entertainment content

A publisher who offers the entertainment content

A developer who consumes the entertainment content

## **Scenarios**

A consumer, for example a game player, accesses the game portal and authenticates with the game server and starts the game.

There are several providers that are working in concert to provide the required service for the

consumer. For example, the network service provider offers the required bandwidth, the hosting provider provides the server and storage, and the application service provider offers common services like game engine, accounting and billing applications, and help.

The content provider or media studio provides the content for the customer experience.

Each of the above activities is an interaction between actors.

### Functional Requirements on OGSA

After a thorough and careful examination of the static and dynamic behavior present in this use case, the following functional requirements of the grid architecture can be identified:

Discovery of resources

Instantiating new service

Service-level management to meet user expectations

Enabling metering and accounting to quantify resource usage into pricing units

Monitoring resource usage and availability

Managing service policies

Providing service grouping and aggregation to provide better indexing and information

Managing end-to-end security

Servicing lifecycle and change management

Failure management

Provisioning management

Workload management

Load balancing to provide a scalable system

We can see that the requirements enlisted in each of the use cases are complex. Providing a solution to these complex requirements is a challenging task. We will see in the coming chapter how the OGSA architecture is trying to provide some basic solutions to the above requirements.

