

## Telefónica Investigación y Desarrollo (TID) The Telco Use Case

The research division of Telefónica drives a use case in the area of Mash-up platforms enabling the composition of a custom web page combining several gadgets, each provided by a different information agency. This use case has pinpointed an example of a Mash-up web application that is relevant from a wide audience perspective to demonstrate the potential of a federated cloud infrastructure, as in RESERVOIR. This means the Mash-up platform back-end, which provides the resources to be accessed from gadgets created by different media providers, is able to migrate without boundaries.

### Description

Telefónica I+D (TID - www.tid.es), a 100% subsidiary of Telefónica S.A, works on research and development activities in order to identify those factors that are going to shape the future of telecommunications and the development of Telefónica's businesses. TID is in charge of providing new and innovative products and solutions, which solve customer needs, and can be commercialised by the Telefónica's operators (LATAM, Spain, O2 Europe, etc.).

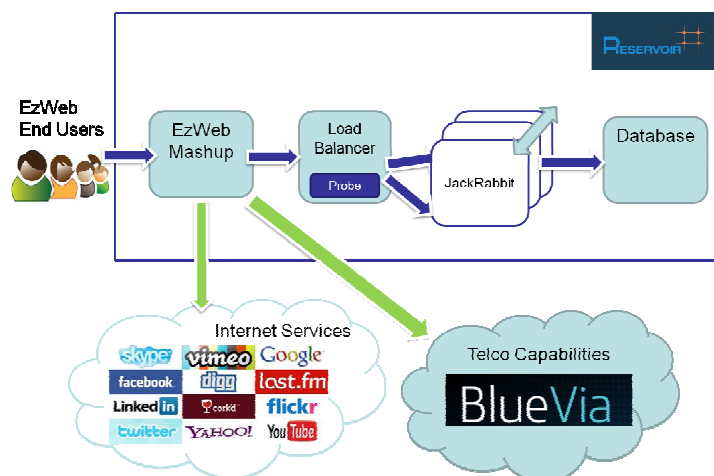
The Telco application use case focuses on building a complete computing environment in which a Telco operator, such as Telefonica, could host massively accessed Web Services, such as for a worldwide event like the Olympics, or a service like YouTube.

This use case demonstrates a "Infrastructure as a Service" (IaaS) business model where a Telco operator could host owned or third party services on a RESERVOIR Compute Cloud, integrating them using the Web 2.0 EzWeb integration platform. These third party services could be created on top of the platform services supplied by the infrastructure provider. Examples of such services would be: billing, messaging, video streaming, VoIP, etc.

### Scenario

The Telco use case is a proof of concept to define the base of the service delivery platform that Telefonica is offering. Concretely, it is going to show the access to different BlueVia capabilities integrated with customer services stored in the RESERVOIR Cloud.

The figure shows an overview of this scenario.



From the EzWeb Masu-up platform, it is possible to access to the different BlueVia capabilities (like Movilforum to send SMS, MMS), to other providers services (Flicker, Youtube, Google Maps, etc.), or to a set of services which are included inside the RESERVOIR infrastructure. Concretely, the key elements for the implementation of this scenario are:

- RESERVOIR compute cloud infrastructure that will allow the service deployment and lifecycle management by providing virtualized compute resources from a federated cloud infrastructure.
- EzWeb Mash-up platform, as part of the Bluevia initiative, is a Web 2.0 integration platform to easily develop and compose web applications.
- BlueVia Capabilities: Telecommunication services platform offered by Telefónica to enable the service development over Telefónica Open Capabilities.
- Telefonica's Customer Services: Demo-services will be deployed over the RESERVOIR compute cloud. In the use case, Jackrabbit, a content distribution service, was deployed..

The RESERVOIR Service Manager (SM) component is a key element in the use case to help reduce the cost associated to the service management (e.g. automatic scalability in a federated infrastructure will enable to have optimal performance with minimum costs). Also, this layer will help to play the role of service infrastructure broker, minimizing costs and preventing vendor lock-in. The main aim of the RESERVOIR Telco Scenario is to define and develop an Infrastructure as a Service (IaaS) demonstrator focused on showing the business opportunities for a Telco Operator like.

### Outcomes

Through this scenario, Telefónica I+D aims to support its exploitation strategy for RESERVOIR results in order to show Telefónica Group Strategy and Business Units the advantages of including Cloud Computing capabilities into the Bluevia Platform and Telefonica's Data Centers strategy. Bluevia is a corporative initiative to coordinate the group's enterprise initiatives to open to the Internet Market some Telecom capabilities for the development of services.

A set of elements has been selected to define this scenario: RESERVOIR cloud infrastructure to support the deployment of Bluevia capabilities (EzWeb and Bluevia APIs) and Telefónica's customers services (these customers play the role of Service Providers, in RESERVOIR terms).

*"Telefónica is a worldwide telecommunications operator, providing services in Europe and South America, as well as in partnerships with China Unicom. RESERVOIR has offered an important opportunity to evaluate how Cloud can best be used in the sector, how computing components can be designed into the architecture that has been developed and ultimately how Cloud can provide a global solution integrated into our world-wide services. Service provision is now in line with the company's global strategy for Cloud services.*

*RESERVOIR is a success story where the know-how of all partners has enhanced existing expertise, generating new ideas on services we can offer our customers.*

*RESERVOIR achievements have helped drive investments at corporate level. Telefónica has planned far-reaching investments globally with a budget doubling EC investment in RESERVOIR over the same number of years." Juan CACERES, Global Cloud Platform Technology Manager, Telefónica*

Further information on RESERVOIR can be found at [www.reservoir-fp7.eu](http://www.reservoir-fp7.eu)

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