fibre

FUTURE INTERNET TESTBEDS
EXPERIMENTATION BETWEEN
BRAZIL AND EUROPE

SEVENTH FRAMEWORK PROGRAMME

GOVERNO FEDERAL
BRASIL
PAÍS RICO É PAÍS SEM POBREZA

CNPq
Conselho Nacional de Desenvolvimento
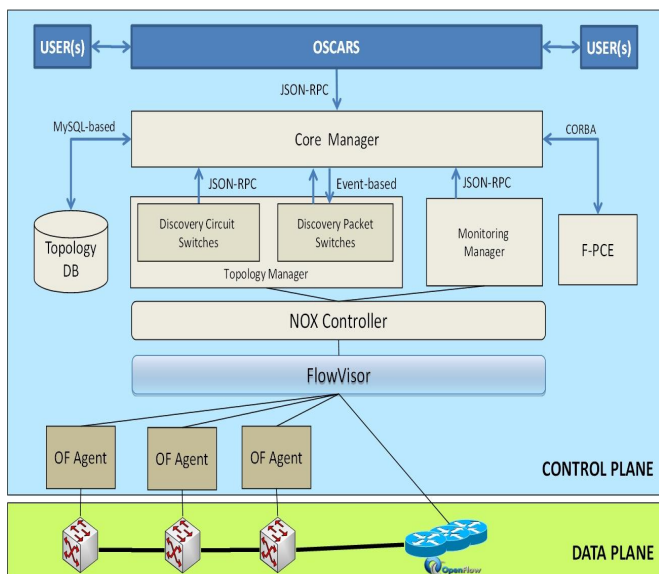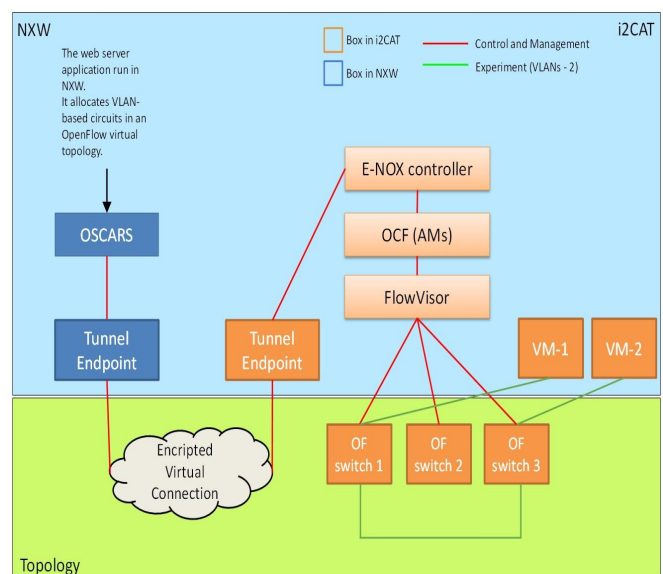Científico e Tecnológico

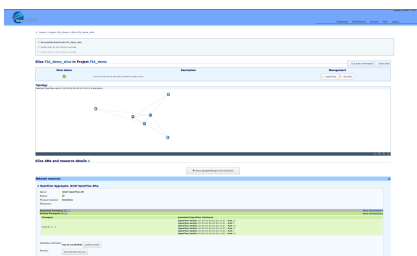# BoD services through an OpenFlow-based federated FIRE infrastructure

Architecture and Modules Interfaces

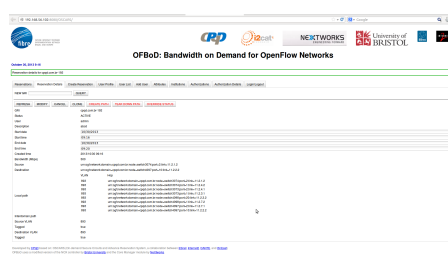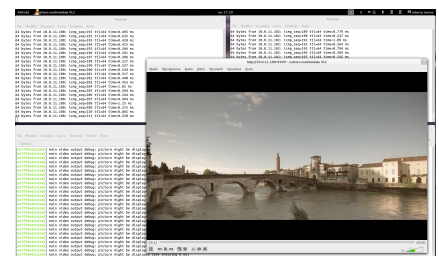## Network Topology and System Building Blocks

Storyline

An experimenter uses an enhanced version of the **OCF** (Ofelia Control Framework), especially developed for the FIBRE project, to allocate a physical "*slice*" of OpenFlow resources and virtual machines which can be provided by different FIBRE islands.

In the proposed demo, the slice is composed of IT and network resources located at i2CAT (Barcelona, **Spain**)

An **SDN controller**, based on the NOX framework and enhanced with new components, is able to abstract the physical slice details and to provide high level services, such as topology discovery, path computation and flow-entry creation to the upper layers (i.e. OSCARS).

A modified **OSCARS** platform implements BoD services and exposes a web interface for the (VLAN-based) circuit composition.

The demo shows the automatic **setup** provisioning of the physical circuit between two hosts that belong to the same slice using the OSCARS web pages.

An *audio/video streaming* (or an alternative basic utility) is used to validate the reachability between the end-points of the created connection.