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FUTURE INTERNET TESTBEDS
EXPERIMENTATION BETWEEN
BRAZIL AND EUROPE

CNPq
Conselho Nacional de Desenvolvimento
Científico e Tecnológico

7 COOPERATION

Monitoring Infrastructure among FIBRE-BR islands

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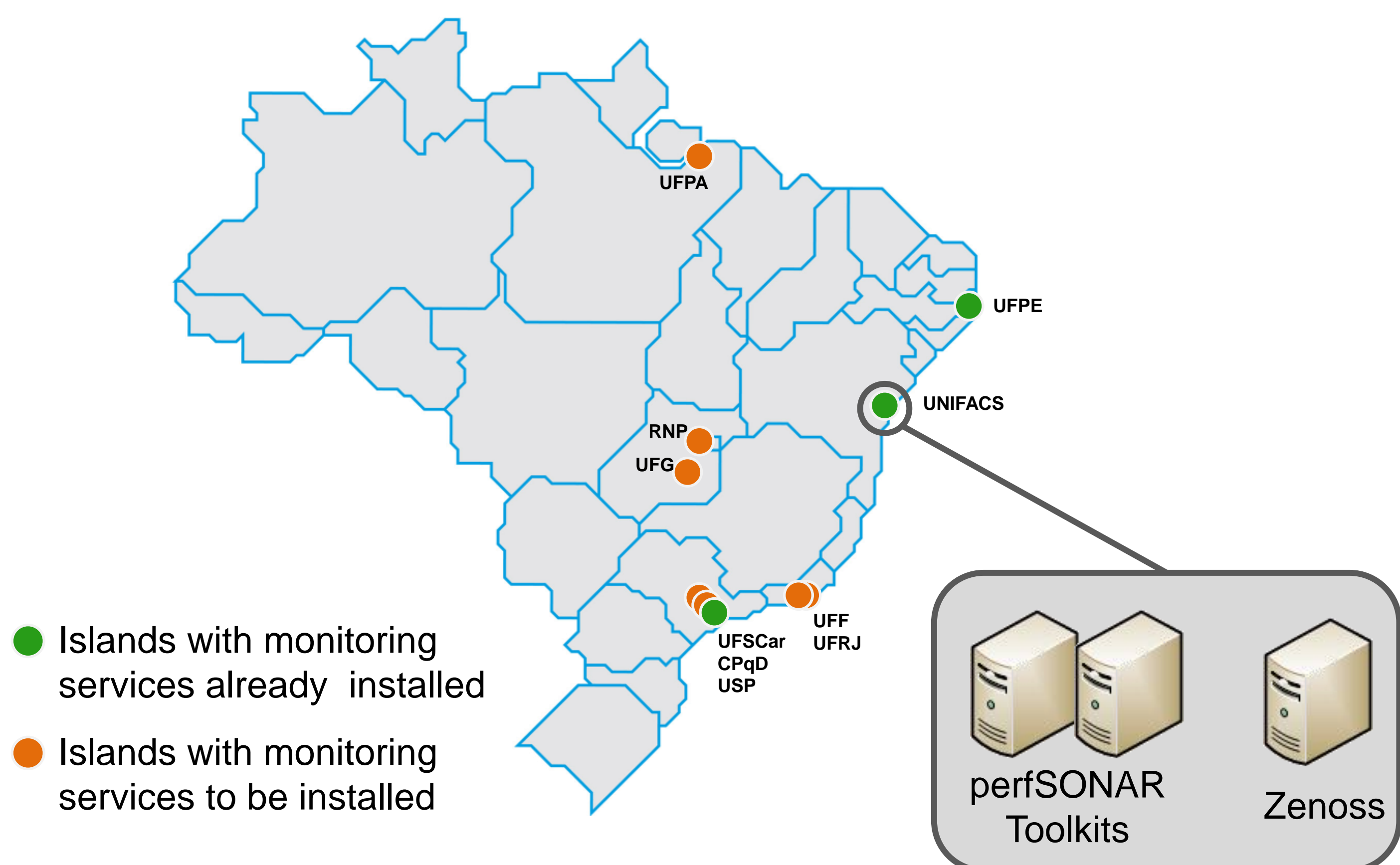
Figure 1. Monitoring infrastructure FIBRE-BR islands

FIBRE-BR I&M Architecture

The FIBRE project adopted an Instrumentation and Monitoring (I&M) architecture that has as its final goal to integrate monitoring facilities among multiple CMFs (OCF, OMF, and ProtoGENI). One adopted premise is to leverage on some currently adopted monitoring tools, such as the perfSONAR Toolkit and Zenoss.

Both tools provide different monitoring information that will certainly help experimenters in knowing the status of the islands infrastructure, their internal operational resources and functional conditions, as well as connectivity performance results. The islands operations teams will also benefit from these information by proactively adjusting parameters or reactively solving issues.

CONNECTIVITY MONITORING

The perfSONAR Toolkit servers periodically measure latency (Fig. 2) and available bandwidth (Fig. 3) among the Unifacs, UFPE, and USP islands.

A unified view of the entire FIBRE-BR testbed performance is available through the Measurement Dashboard (Fig. 4).
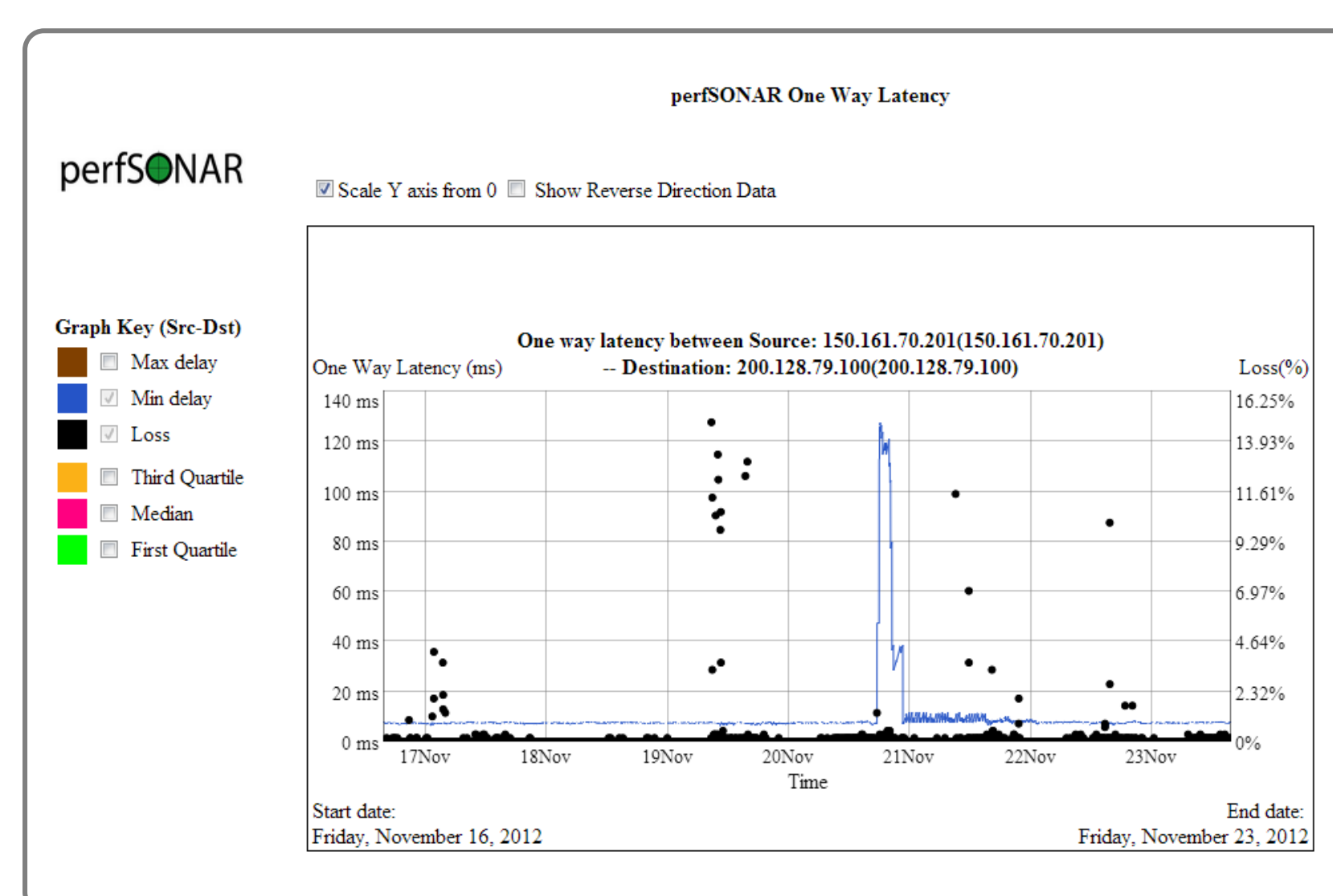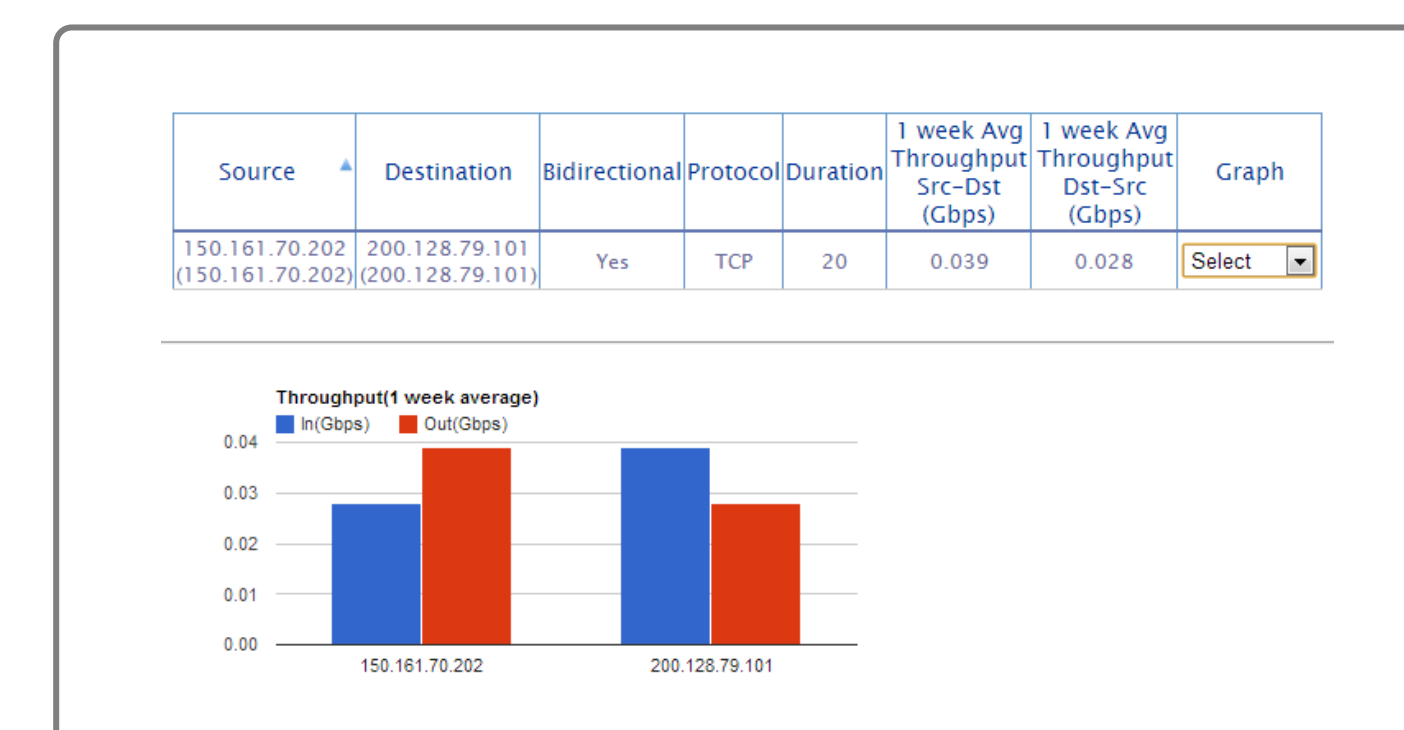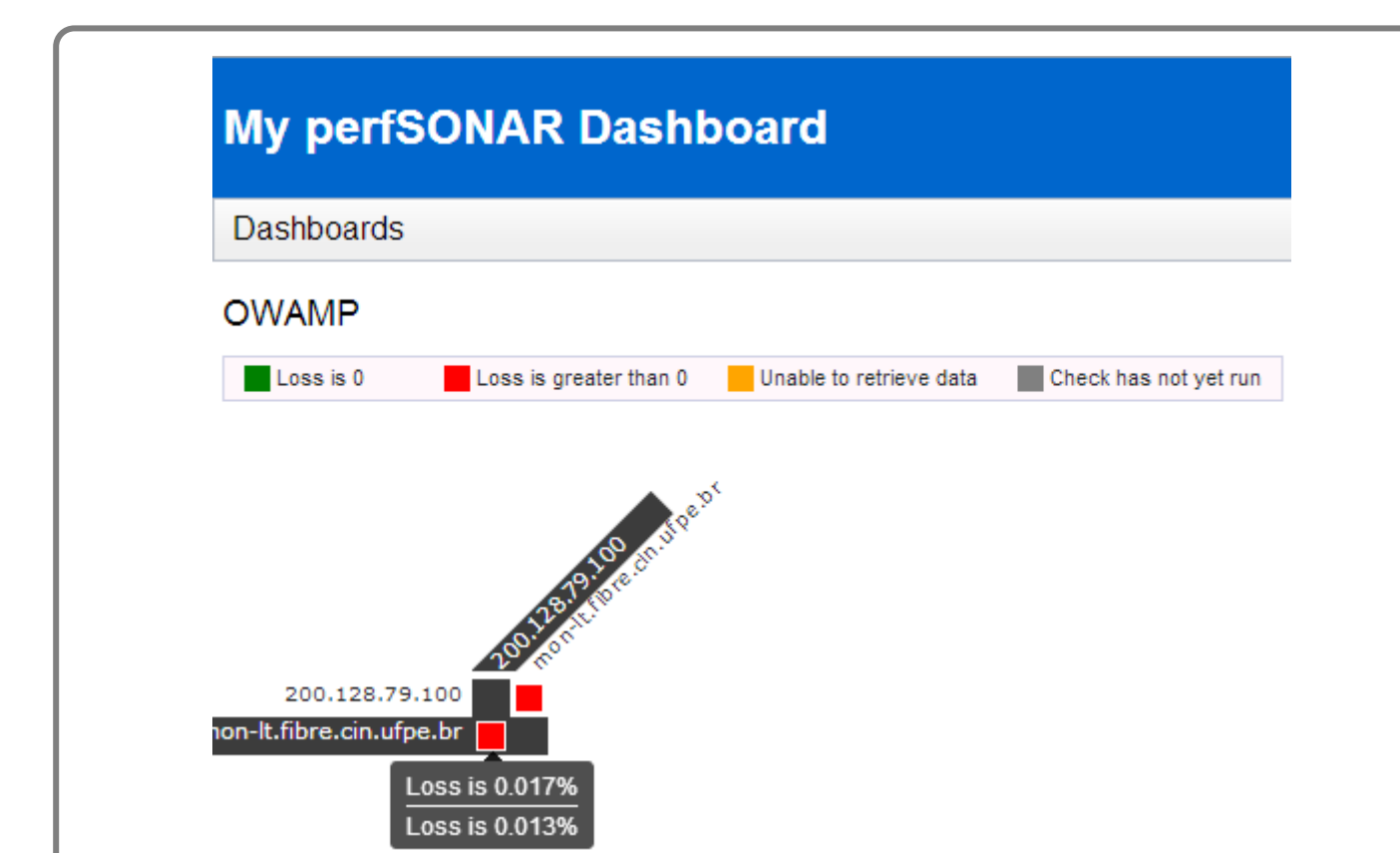

Figure 2
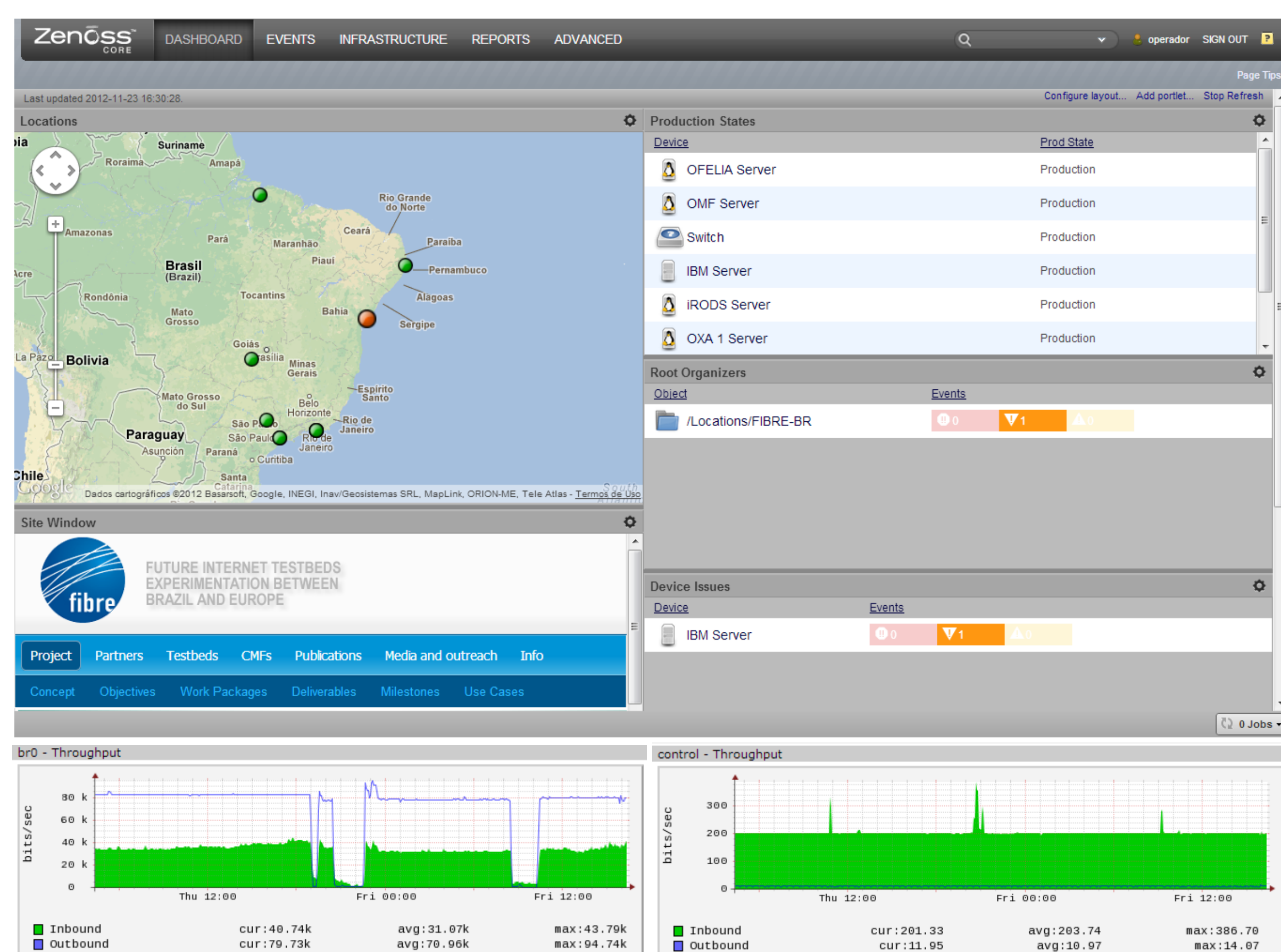

Figure 3

Figure 4

INFRASTRUCTURE MONITORING
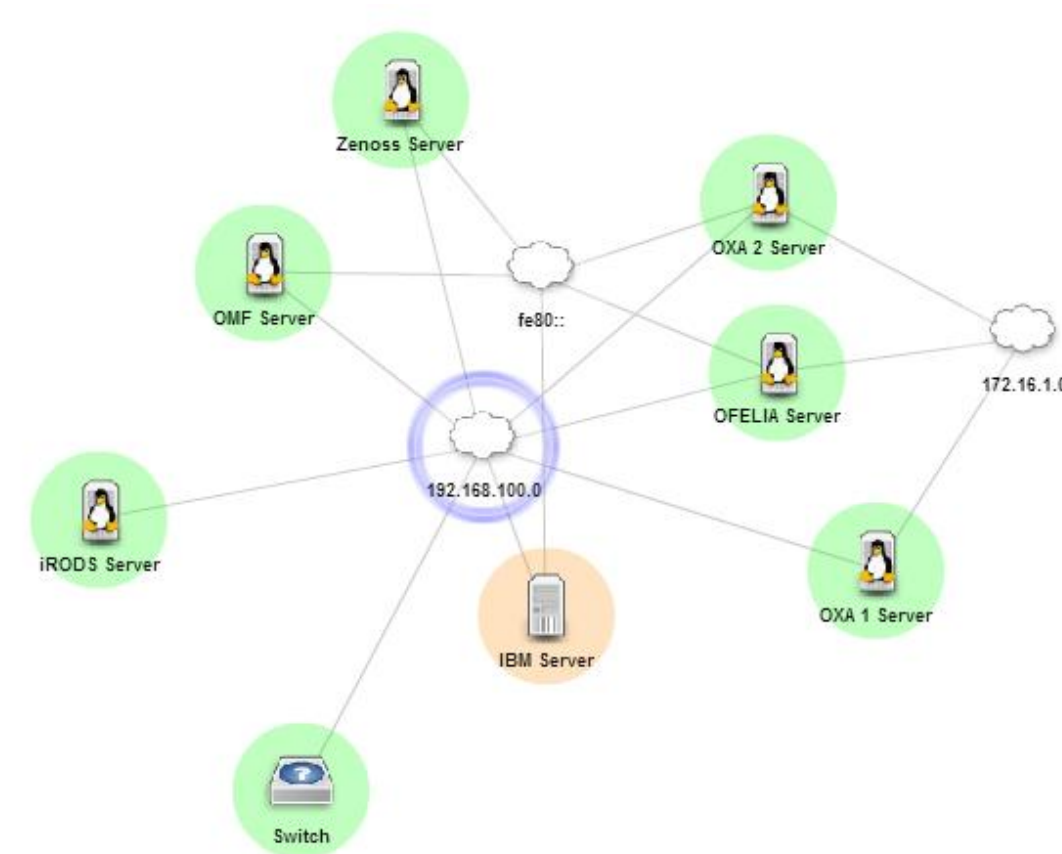

Zenoss will provide useful monitoring information about the operational infrastructure for each island in the FIBRE-BR testbed.

Experimenters and managers will have the ability to manage physical servers, network devices and virtual machines used in experiments (Fig. 5).

With a collection of extensions, Zenoss allows to customize the monitoring experience.

Figure 5