

2. Plano de Controle da FIBRENet - Endereçamento de rede das ilhas


Introduction

This guide will explain how is done the control plane network configuration for the FIBRE's servers. For further information about how the network was designed, check the [Architecture](#) section.

Network


For the FIBRENet's Control Plane was chosen the following network for the FIBRE's Islands:

10.X.Y.Z/16	
X	Stands for the Institution ID.
Y	It's usually the default value is '0' for the third octect, but resources for experimentation like: Virtual Machines, Icarus Nodes and the OMF Portal will set another value.
Z	Stands for the host ID.

 As for netmask, it's obligatory to use 16 bits.

Institution ID

So as to segregate each Island's network, the Institutions receive an ID that correspond as the **second octect** used in the FIBREnet's control plane.

 Due to federation reasons, the ID of the brazilian institutions begin at 128.

Institution	ID
NOC	128
UFRJ	129
UFPA	130
UNIFACS	131
UFPE	132
USP	133
UFF	134
UFSCar	135
RNP	136
UFG	137
CPqD	138
UFRGS	139
AMPATH	140
UFES	141
UFMG	142
UFU	143
UFBA	144

PUCRS	145
New Institutions	N + 1

Examples of ID usage:

Institution	Server (dom0)
RNP	10.136.0.30/16
USP	10.133.0.30/16
UFG	10.137.0.30/16

Host ID and Configuration

Quicklook for configuration

Servers and equipments

Server	Endereço
ToR Switch	10.X.0.1/16
dom0	10.X.0.30/16
OpenFlow Equipment #1	10.X.0.10/16
OpenFlow Equipment #2	10.X.0.11/16
OpenFlow Equipment #3	10.X.0.12/16
OpenFlow Equipment #4	10.X.0.13/16
perfSONAR01 (interface: eth0)	10.X.0.60/16
perfSONAR02 (interface: eth0)	10.X.0.61/16

Services' Virtual Machines

Server	Endereço
VM LDAP	10.X.0.50/16
VM VPN	10.X.0.70/16
VM DNS and Monitoring System	10.X.0.80/16
OCF Portal	10.X.0.100/16
Flowvisor	10.X.0.101/16
OMF Portal	10.X.11.200/16