



UNIVERSIDAD DE CASTILLA-LA MANCHA

**Escuela Superior de Informática**

**Ingeniería en Informática**

**Work Diary**

**Geo-Cloud**

Modelling and Implementation of the Geo-Cloud Experiment  
for the Fed4FIRE European Project

**Autor:** Rubén Pérez Pascual

**Director:** Jonathan Becedas Rodríguez

**Tutor:** Carlos González Morcillo

1 de marzo de 2014

Índice

|                            |          |
|----------------------------|----------|
| <b>1. Introducción</b>     | <b>1</b> |
| <b>2. Diary of work</b>    | <b>1</b> |
| 2.1. First week . . . . .  | 1        |
| 2.2. Second week . . . . . | 1        |
| 2.3. Third week . . . . .  | 1        |
| 2.4. Fourth week . . . . . | 2        |

## **1. Introducción**

This document contains all diary procedures that Rubén Pérez Pascual has realised. In order to make the final documentation and to remember all procedures, problems and ideas has been.

## **2. Diary of work**

### **2.1. First week**

Fist week, my partners explained me all extension of the proyect, what and how we will do it. I read a lot of documentation of the proyect Geo-Cloud. I took a look for the proyect planification and I think if there were some to change or troubles, but it has been well-done.

### **2.2. Second week**

I registered in the BonFIRE's official page[2] and the iMinds' main page[7]. The last page gave me an certificate in format pem for to get access the iMinds TestBed. In both pages, I had to push my public RSA key for getting access in its testbeds. I had read with BonFIRE's documentation. I tried to start an experiment with some storage and compute resources successfully. Also, I began with Orchestrator's designing. I made the basic architecture and drew the class diagrams. Last, I built the Orchestrator and began to made some test but are incomplete. In the first phase of Orchestrator, we have a functional Orchestrator but not definetly so we will have to re-build and add more complexity and funcionalities.

### **2.3. Third week**

First, I read a lot about Geo-Server[5] and Geo-Network[4]. We understood how that platforms work so we decided to work with Geo-Server and a Csw plugin for it. I installed Apache Tomcat and via War files, I installed Geo-Server in Tomcat. When Geo-Server was running, I started with designing of the communication between Geo-Server and Orchestrator.

This communication is easy so only the Orchestrator sends the result of the processing to Geo-Server. I tried to generate an experiment with jFed[6]. I had to install java manually because the system didn't recognise the java binary, so I downloaded it of the official page and installed it manually. In addition, I installed icedtea-plugin for firefox in order to it can open java binaries.

## **2.4. Fourth week**

I installed Nepi[1] and python v7 because with version 6, Nepi has lots of errors. I made an experiment template in order to develop the VirtualWall slice. This template will serve to us for making all experiments for all escenarries. I tried lots of times to execute an PlanetLab[3] script getting some errors. So, I had a meeting with Alina and Lucía for solve this exceptions. The meeting is in a document in wiki. Also, I tried with a VirtualWall script too but I got the same result. The next week, we have to develop the PlanetLab scrip with a test execution of the scrip and verify that works fine. In addition, we have to develop the VirtualWall scripts (I think they are so easiest) and testing them.

## Referencias

- [1] Quereilhac A., Tribino J., Guevgeozian L., and Kouvakas A. Nepi v3.0. 2013.
- [2] BonFIRE Consortium and University of Southampton. BonFIRE Documentation. <http://doc.bonfire-project.eu/R4.0.5/>, última consulta el 24 de Febrero de 2014.
- [3] PlanetLab Europe. PlanetLab Documentation. <http://doc.planet-lab.eu/html/>, última consulta el 24 de Febrero de 2014.
- [4] GeoNetwork. Geonetwork user manual. <http://geonetwork-opensource.org/manuals/2.10.3/eng/users/>, última consulta el 16 de Febrero de 2014.
- [5] GeoServer. Geoserveruser manual. <http://docs.geoserver.org/stable/en/user/>, última consulta el 16 de Febrero de 2014.
- [6] iMinds Research Institute. jfed : Java based framework to support sfa testbed federation client tools. <http://jfed.iminds.be/>, última consulta el 26 de Febrero de 2014.
- [7] iMinds Research Institute. VirtualWall Documentation. <http://www.iminds.be/en/develop-test>, última consulta el 24 de Febrero de 2014.