EPIKH

RESEARCH PROGRAMME

OF

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Abstract: This document describes my program research during my training period in the EPIKH project. The time schedule and the expected outcomes are also included.

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1. INTRODUCTION

1.1. PURPOSE OF THE DOCUMENT

This document presents my research topics and time schedule during the visit to the EU partners of EPIKH to get trained about the Grid technology and to be able to manage and supervise grid services

1.2. DOCUMENT ORGANIZATION

This document is organized as follows:

- •The definition of application area.

- •The schedule of my training period.

- •The Expected outcomes and goals.

1.3. APPLICATION AREA

"Grid" computing has emerged as an important new field, distinguished from conventional distributed computing by its focus on large-scale resource sharing, innovative applications, and in some cases, high-performance orientation.

The Network Division of the CERIST research center of Algeria is very active member of EumedGrid project. It has managed to install tree clusters in three different cities and during the last school, it had attract many users and sensitize them to review their way of developing their application .

As a user preparing my magister thesis, I am interested to study the different components of grid computing technology and demonstrate how to integrate the BPM (*Business process management)* in the management of resources of a grid computing.

2.   RESEARCH PROGRAMME

 My research program consists of 3 parts:

Part 1: Gridification of application:

I will focus on how to deploy an application in a grid environment for my future application.

Part 2: Administration of grid sites

To understand the mechanism of resource management in grid computing, I want to focus on

 • advanced administration of the Storage Element and the LFC catalogue.

• Using advanced aspects of Data management

• Installation of software which are needed by our scientist community

• Installing and configuring P-Grade Grid Portal

• Installing and configuring GSTAT

• Installing and configuring RTM

Part 3: **Getting trained as a tutor of grid technology**

      I will focus on administration aspects (installing, configuring and debugging) of grid services and how to aggregate the distributed Grid resources more efficiently. In addition, I will support user to deploy their applications.

3. TIME SCHEDULE AND EXPECTED OUTCOMES

3.1 Time Schedule

12/01/2011 – 12/02/2011

- Setup a basic grid test bed and focus on administration of its services

- Hand on exercises on porting applications on grid to get more experience

- Write documents and presentations of tutorials for grid users

During the project period:

- Organizing workshops about grid technology.

- Organizing training on application porting around Algeria.

- Contribution to training events during the Epikh Schools.

3.2 Expected Outcomes

- Improve and develop my knowledge of Grid technology and applications.

- Integrate the BPM technology in the grid computing resources management

- Have exchange with other teams.

- Accumulate experience with the administration and maintenance of the grid site.

- Spreading the knowledge about the "Grid Paradigm" to potential users in Algeria, including both system administrators and application developers, through Grid schools and workshops.