

**EGI-Engage**

D6.10 Infrastructure tests and best usage practices for life science service providers

Number (if app.)

|  |  |
| --- | --- |
| **Date** | 27 April 2016 |
| **Activity** | [provide] |
| **Lead Partner** | [provide] |
| **Document Status** | DRAFT |
| **Document Link** | https://documents.egi.eu/document/XXX |

Abstract

ELIXIR Competence Center aims to bring the EGI resources, especially the EGI Federated Could, better available to the ELIXIR user community. This document sums up the experiences of those ELICIR CC members who are providing resources for EGI Federated Cloud and/or have utilized EGI resources for providing life science services.

**COPYRIGHT NOTICE**



This work by Parties of the EGI-Engage Consortium is licensed under a Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/). The EGI-Engage project is co-funded by the European Union Horizon 2020 programme under grant number 654142.

**DELIVERY SLIP**

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Name*** | ***Partner/Activity*** | ***Date*** |
| **From:** |  |  |  |
| **Moderated by:** |  |  |  |
| **Reviewed by** |  |  |  |
| **Approved by:** |  |  |  |

**DOCUMENT LOG**

|  |  |  |  |
| --- | --- | --- | --- |
| ***Issue*** | ***Date*** | ***Comment*** | ***Author/Partner*** |
| **v.1** |  |  |  |
| **...** |  |  |  |
| **...** |  |  |  |
| **v.n** |  |  |  |

**TERMINOLOGY**

A complete project glossary is provided at the following page: <http://www.egi.eu/about/glossary/>

**Contents**

[1Introduction 5](#__RefHeading__6849_1033653468)

[2Integration experiences and best practices from nodes already provoiding services for FedCloud 6](#__RefHeading__6855_1033653468)

[2.1CESNET 6](#__RefHeading__6857_1033653468)

[2.2 GRNET 6](#__RefHeading__6859_1033653468)

[3Results and suggestions based on the currently ongoing FedCould integration tests 7](#__RefHeading__6861_1033653468)

[3.1EBI 7](#__RefHeading__6863_1033653468)

[3.2JetSteram (Indiana University) 7](#__RefHeading__6865_1033653468)

[4. Services utilizing or planning to utilize EGI resources 8](#__RefHeading__6867_1033653468)

[4.1 using EGI Federated Cloud to provide access to Chipster platform 8](#__RefHeading__6869_1033653468)

[4.1.1. Chipster platform 8](#__RefHeading__6871_1033653468)

[4.1.2 Fitting Chipster to EGI Federated Cloud 8](#__RefHeading__6873_1033653468)

[4.1.3 Pros and Cons 9](#__RefHeading__6875_1033653468)

[3.2 BioShaDock 9](#__RefHeading__6877_1033653468)

**Executive summary**

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero.

# Introduction

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Curabitur sodales ligula in libero.

# Integration experiences and best practices from nodes already provoiding services for FedCloud

## CESNET

Text from CESNET here (Miroslav Ruda)

## 2.2 GRNET

Text from GRNET here (Kostas Kumantaros)

# Results and suggestions based on the currently ongoing FedCould integration tests

## EBI

(Steven Newhouse)

## JetSteram (Indiana University)

(Robert Quick)

# 4. Services utilizing or planning to utilize EGI resources

## 4.1 using EGI Federated Cloud to provide access to Chipster platform

### 4.1.1. Chipster platform

Chipster is an easy to use data analysis platform for bioinformatics. It provides an uniform graphical interface for over 350 commonly used bioinformatics tools including several R/Bioconductor based tools and standalone programs (e.g. BWA, TopHat).

Chipster is based on a client-server system where the user runs locally a Chipster-client that submits analysis tasks to a Chipster server. Even though Chipster is an open source tool, there is no public Chipster server that would be open for everybody. Due to that, a researcher needs to have an access to some of the existing Chipster servers to be able to use this platform. Alternatively, researcher can set up your his own Chipster server.

Chipster is available as a Virtual machine image and thus utilizing this VM in EGI Federated Cloud could provide an easy to use solution for a user willing to set up her own Chipster server.

### **4.1.2** Fitting Chipster to EGI Federated Cloud

In order to use the publicly available Chipster VM in EGI federated cloud, minor changes had to done to the VM image (including. XXXX and XXXX). The required modifications were applied to the VM building process and they are now permanently included to the VM building process.

The most problematic feature in setting up a Chipster server, is setting up the bioinfomatics tools, used by the Chipster server. This so called “tools directory” consists of large number of bioinformatics applications, R modules and reference data sets that together require nearly 200 GB of storage space. To make the Chipster setup in EGI Federated Cloud fast to set up to save disk space, the Chipster server process was tuned so that in stead of downloading the tools set for each VM separately we wanted to set up the tools directory that several Chipster VM:s could use the same tools directory.

A cluster specific read-only NFS mount was tested first, but finally CVMFS based remote mounting of the tools directory was used. The benefit of CVMFS is that same installation can be used in any fedCould server............

### 4.1.3 Pros and Cons

To be added

## 4.2 BioShaDock

Table 1 – Preferred colour scheme

|  |  |  |  |
| --- | --- | --- | --- |
|  | ***Name*** | ***Partner/Activity*** | ***Date*** |
| **From:** |  |  |  |
| **Moderated by:** |  |  |  |
| **Reviewed by** |  |  |  |
| **Approved by:** |  |  |  |

1. Appendix example