

**EGI-Engage**

Infrastructure tests and best usage practices
for life science service providers

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Abstract

ELIXIR Competence Centre (CC) 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.

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**TERMINOLOGY**

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

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**Executive summary**

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# Introduction – ELIXIR Compute Platform, role of service providers

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# Integration status and plans

## CSC

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## EMBL-EBI

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## CESNET

Aaaaaaa

## CNRS

Aaaaaaa

## GRNET

Aaaaaaa

## SURFsara

Aaaaaaa

## JetStream

Aaaaaaa

# Integration guidelines for service providers

## Generic concepts and generic guidelines EGI

Aaaaaaa

## OpenStack-specific guidelines (with experiences, recommendations, tips?) EBI

Aaaaaaa

## OpenNebula-specific guidelines (with experiences, recommendations, tips?) CESNET

Aaaaaaa

## Synnefo-specific guidelines (with experiences, recommendations, tips?) GRNET

## JetStream-specific guidelines (with experiences, recommendations, tips?) Indiana University

# Some 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

1. Appendix example