



# A Portal System for SuperB

# Scenario



At present we use several collaboration (web) tools, like

- ▶ SuperB website
- ▶ Wiki
- ▶ SVN
- ▶ Document management system
- ▶ etc.

Each tool is a stand-alone service.

Should we try to «consolidate» applications?

# Portal System



- ▶ From the Open Directory Project, a portal system is defined as a web site containing
  - Search engine
  - Groupware and collaboration tools
  - Content (and web content) management instruments
  - ...and other tools

A portal system has also to manage applications integration

In summary a portal system can be seen as an entry point to access several resources on an intranet (or internet) within an «homogeneous» environment

# Liferay Portal System [1 / 2]



Liferay is an enterprise portal platform, available both with LGPL or commercial license.

- ▶ Written in Java : can run on several application servers (GlassFish, Jboss, Tomcat, Weblogic, etc.)
- ▶ Supports most popular DBMS (DB2, MySQL, Oracle, PostgreSQL, SQL Server, Sybase)
- ▶ Employs standard web technologies (AJAX, Hibernate, Lucene, Spring, Velocity, etc.)
- ▶ Supports Javascript, Ruby, PHP and Python as scripting languages
- ▶ Implements several widely adopted standards like JSR-168 and JSR-286 (Portlet 1.0 and 2.0), JSR-170 (Java Content repository), JSR-127 and JSF-314 (JavaServer Faces), Opensearch, etc.

# Liferay Portal System [2 / 2]

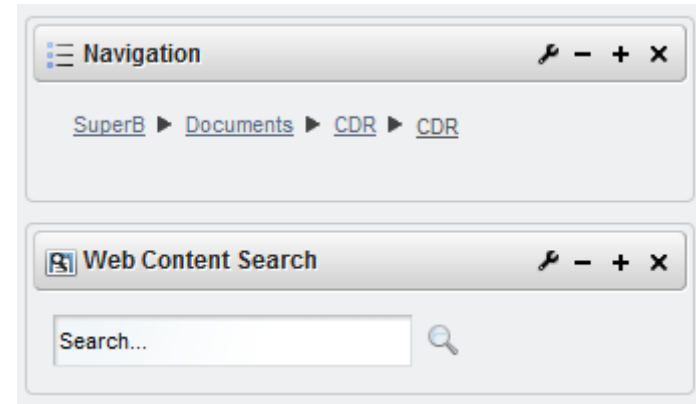


- ▶ Rich content management features («office» and web) supported natively
- ▶ Several collaboration tools available out of the box: blog, discussion forum and wiki
- ▶ Supports hierarchical partition of content/services (through organizations, locations, etc.)
- ▶ Supports user rights management through groups, roles, assignement of users to organizations or communities
- ▶ Content delivery to users can also be based on membership to community, organization, etc.

# Liferay Portlets [1 / 2]



- ▶ Portlet (standards JSR-168 and JSR-286) is the concept at the base of Liferay: it's a pluggable piece of code that can be run inside the portal environment. Portlet outputs can be aggregated into portal pages



- ▶ Liferay comes with a rich set of portlets. Among others, employing portlets provided with Liferay 6 it is possible to perform operations like content publishing, search throughout the repository, manage message boards/wiki/blog pages, perform operation on communities and so on
- ▶ This set can be extended adding new portlets: so the set of tools available to the collaboration may be enhanced, within the same portal environment

# Liferay Portlets [2 / 2]

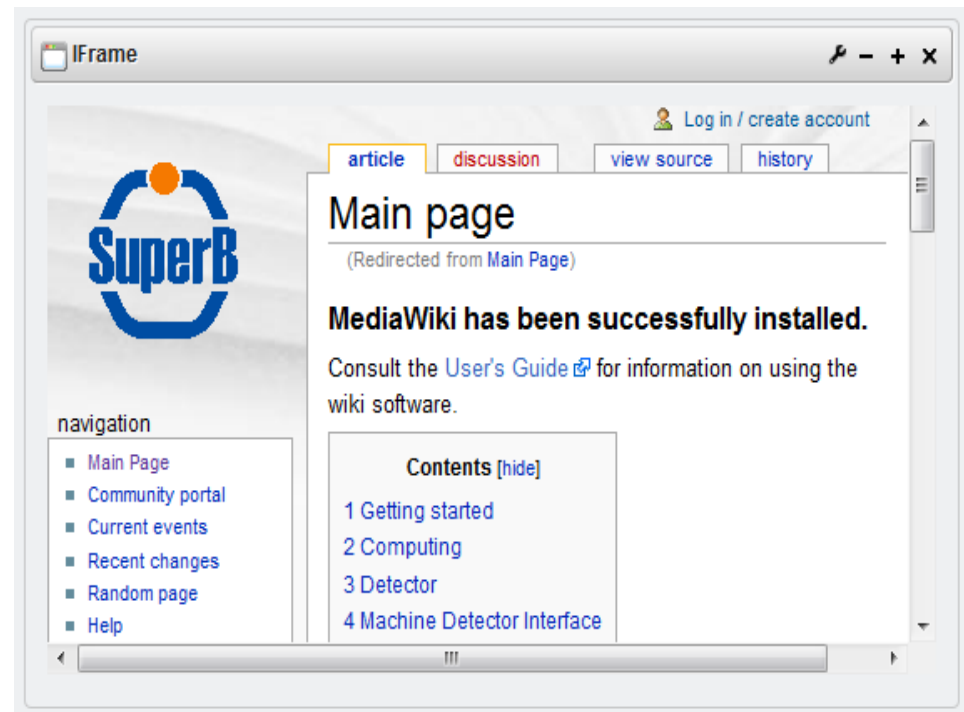


- ▶ Even if Liferay is a Java application, it is possible to develop new portlets also in other languages. Liferay supports portlet development in:
  - Java
  - PHP
  - Python
  - Ruby
- ▶ Liferay provides a SDK and an IDE to extend portal functionality (a plug-in for Eclipse is also available)
- ▶ Moreover portal features can be extended employing third-party standard portlets

# Liferay iFrames



- ▶ iFrames are tools enabling external services (applications) consolidation inside the portal
- ▶ Consolidation is gained through embedding. With an iFrame the external service is invoked and its output is aggregated in a portal page or inside a portlet
- ▶ The external service can be executed as it is: no code rewriting is needed

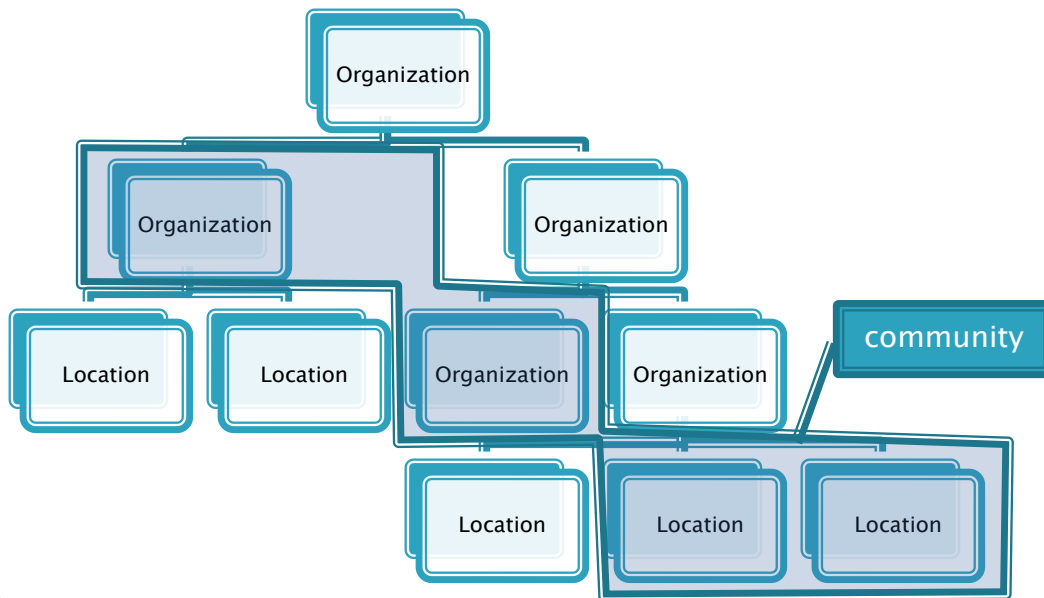




# Content partitioning [1 / 2]



- ▶ Site structure is organized hierarchically through organizations (plus Locations as leafs of the tree)
- ▶ Users and contents are assigned to organization units
- ▶ User rights (and services availability) can be assigned on the basis of belonging to an organization



- ▶ At the same time, a cross-organization division of users and content can be done through communities
- ▶ Content, services and rights can also be assigned in function of the community membership

# Content partitioning [2 / 2]



- ▶ Organizations, communities and users may have their own web space with related services
- ▶ All the web spaces can be public (accessible to guests) or private (registration managed by an admin)
- ▶ Roles on organizations and communities spaces may be delegated to organization or community members

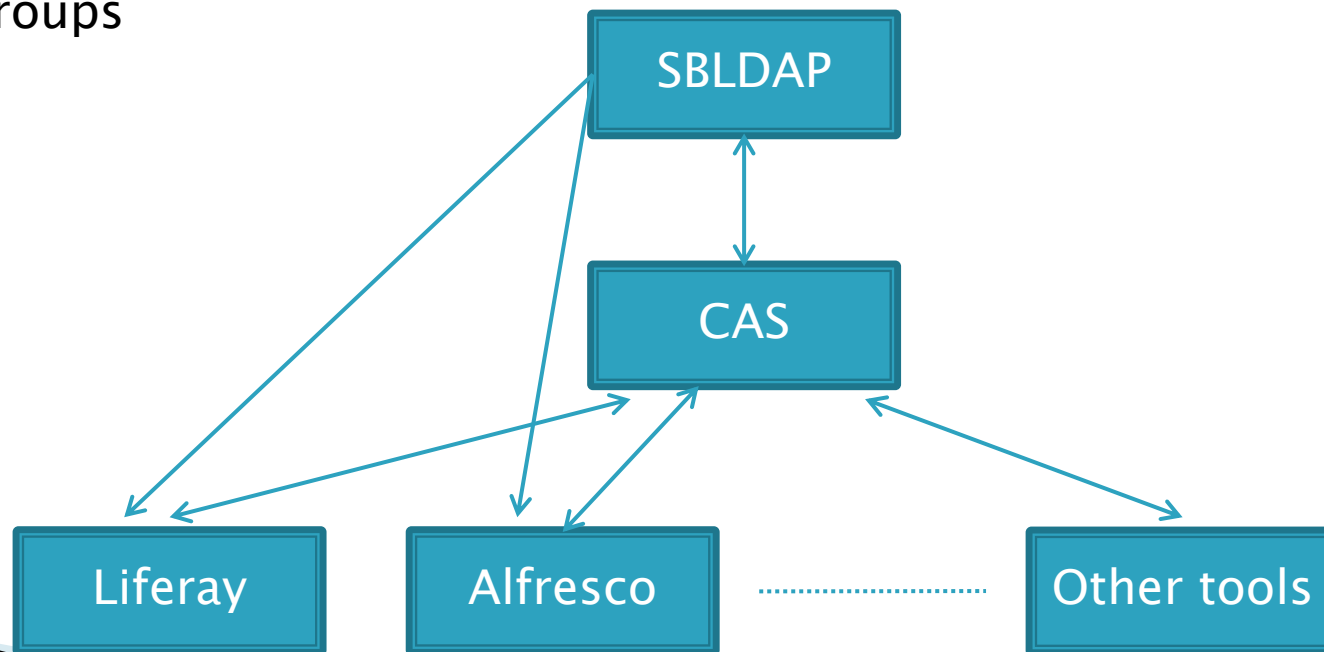


- ▶ Users may quickly access all the web spaces they are allowed to use from the Liferay Toolbar drop down menu on the left

# SSO Architecture



- ▶ To facilitate user interaction with services provided both within and outside the portal, a SSO system was setup employing a CAS (Central Authentication Service)
- ▶ Authentication is delegated to the CAS system
- ▶ Direct connection to LDAP is employed to synchronize users and groups



# Jasig CAS



- ▶ Implemented as pure java application: can run on any servlet containers ( $\geq 2.4$ )
- ▶ Out of the box it supports validations of user's credential through LDAP and Kerberos. Can be extended to other systems
- ▶ CAS clients available – directly from Jasig – for Java, PHP, .NET and Apache
- ▶ CAS support is available natively/through plugins for several applications like Alfresco, Drupal, Joomla!, Mediawiki, etc.

# SuperB Portal [1 / 2]



- ▶ A prototype system is up and running at CNAF : [lr.cnaf.infn.it](http://lr.cnaf.infn.it) (proposed alias [superb.infn.it](http://superb.infn.it))
- ▶ The setup includes Liferay portal system, Alfresco Document Manager (copy of sbdocserver) and Jasig CAS
- ▶ CAS is setup to validate users through sbldap (with binding)
- ▶ Alfresco and Liferay use CAS for authentication (SSO)
- ▶ Alfresco and Liferay use sbldap to synchronize local users and groups
- ▶ Access is already granted for all SuperB users
- ▶ SSL support enabled (at present with self-signed certificate)
- ▶ Portal configured with roles for any SuperB division (Accelerator, Detector, etc.. but also Project Board,...)
- ▶ The portal hosts a «copy» of the collaboration website (<http://web.infn.it/sbuser>) accessible to guests

# SuperB Portal [2/2]



An example page with several tools was setup. It contains:

- ▶ A group calendar
- ▶ An example of external application embedding through iFrame (SuperB Wiki)
- ▶ An example of Liferay Wiki
- ▶ A discussion forum with a category for each SuperB division
- ▶ An Alfresco DM web interface embedded with SSO
- ▶ ...and last but not least a Facebook-style chat system

To take a closer look at the SuperB Portal Prototype, just connect to the following URL:

<http://lr.cnaf.infn.it:8080/liferay-portal>