



J2EEPS: long time ago in a galaxy...

CERN Home | IT Department | IT/IS Group | Mail Services | Web Services | Win Services

CERN Web Services

CERN IS WebServices User: **Imorenol** (Password authentication [details])

Home > Services > [CreateNewSite](#)

Create new site [Open help]

Site category:

Site name: [Build name >>](#)

Description:

Site type:

- Centrally hosted (recommended)
- AFS folder
- NICE/DFS folder
- Collaboration workspace (please read Getting started with SharePoint)
- Java web application (please read the SLA)** ←

How to choose?

Owner (NICE login): [Search user >>](#)

I have read and agreed the CERN Computing Rules

technology transfer

Highlighted Technologies | CERN Technologies | Successful Transfers | 1104230 | IT Home | Contact | More Stories

1104230 - The world's largest particle physics laboratory - where the web was born!

Mission: "To make known and available to third parties, under agreed conditions, technologies and innovations achieved in fulfilling CERN's mission in fundamental research, for the benefit of Humanity."

CERN Technology Transfer promotes the inspection of scientists at all levels of daily life in many different ways. For example, nobody would ever have thought that a phenomenon based on quantum theory - quantum entanglement - would find practical applications in cryptography, computing and teleportation, and lead to the creation of companies to safeguard the sharing of information.

Discover: a goldmine of CERN technologies

EPC provides technologies to the limit:

- Highly Customized
- Electronic
- Grid

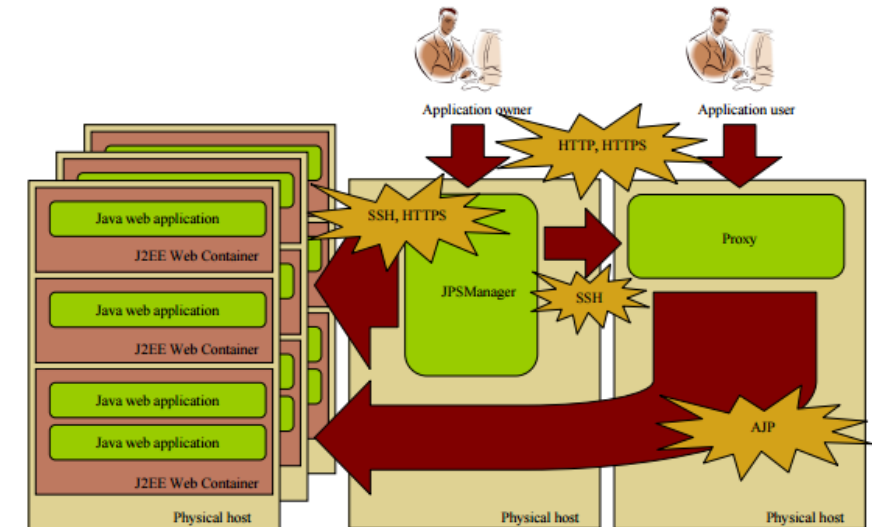
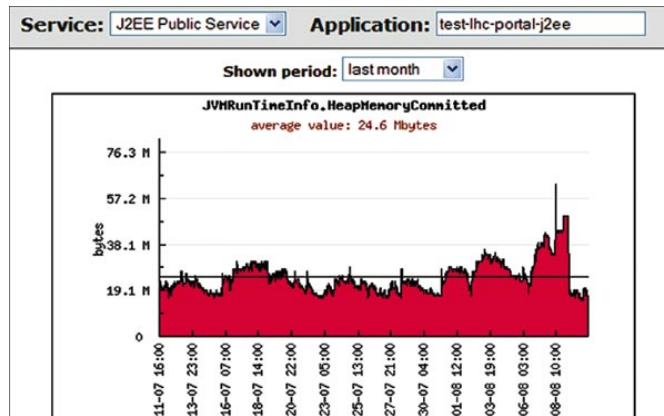
Not only for HEP...

- AT and CT, a perfect fit
- Advances in ultra-high vacuum technology
- Way for medical applications

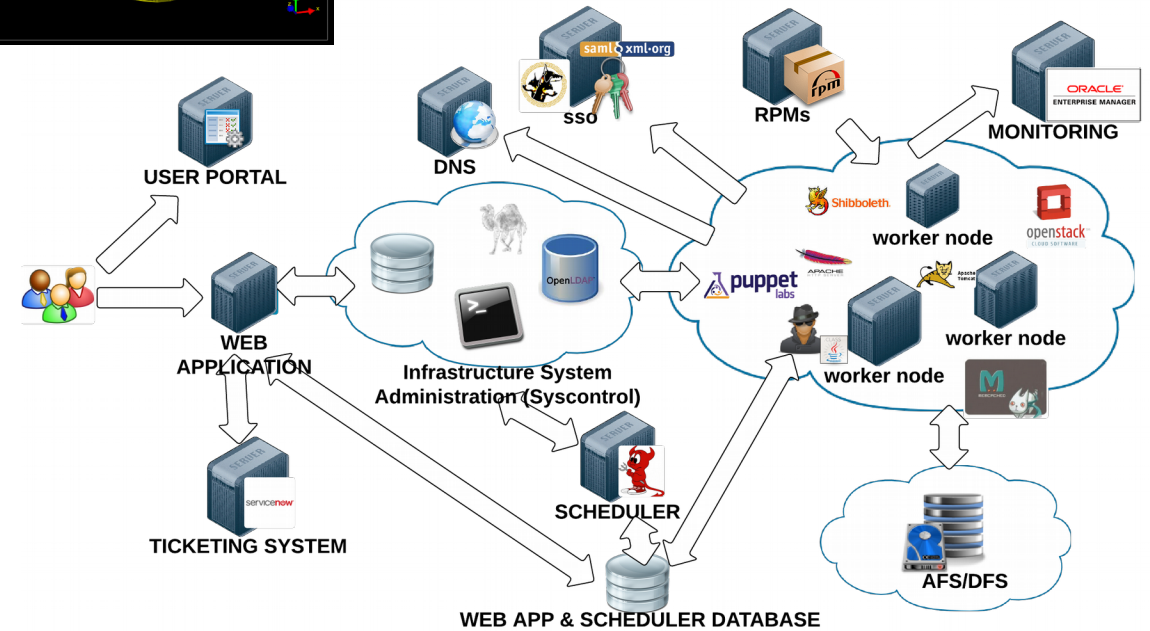
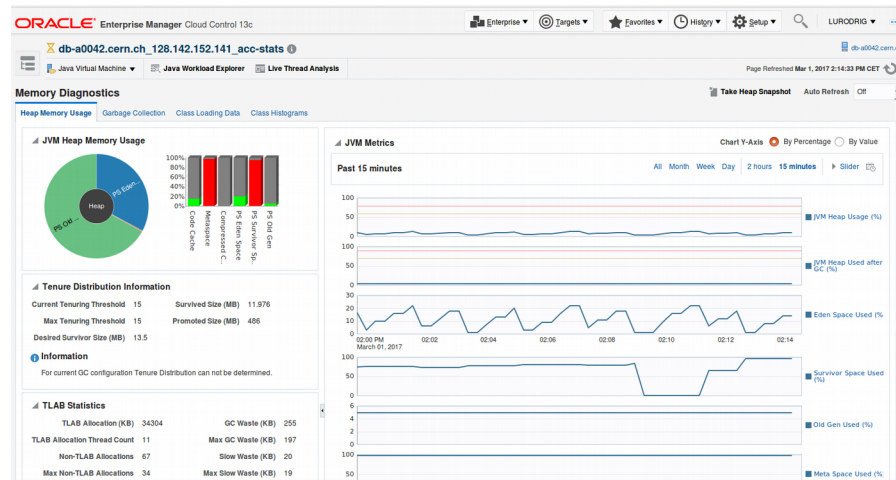
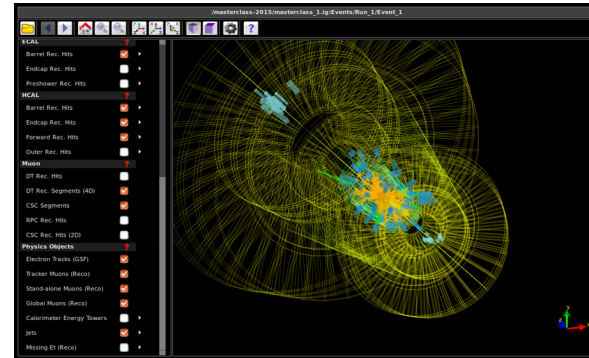
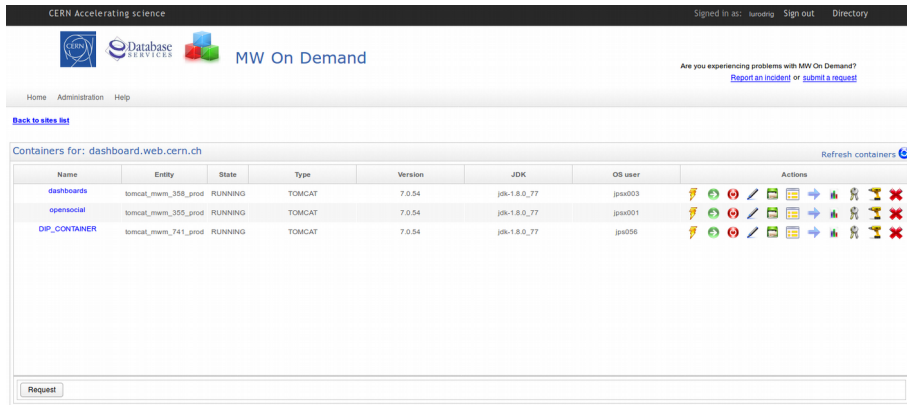
Accelerators: Accelerators are machines able to speed up particles to very high energies, using powerful electric fields, before smashing them into targets or into each other. Accelerators are of two types: linear and circular, and CERN has both. Linear machines propel the beam of particles in a straight line. The longer the machine, the higher the energy.

Detectors: Particle detectors are instruments used for studying particle properties, recording their trajectories around their collision point for each collision, called an event. The goal is to reconstruct the process.

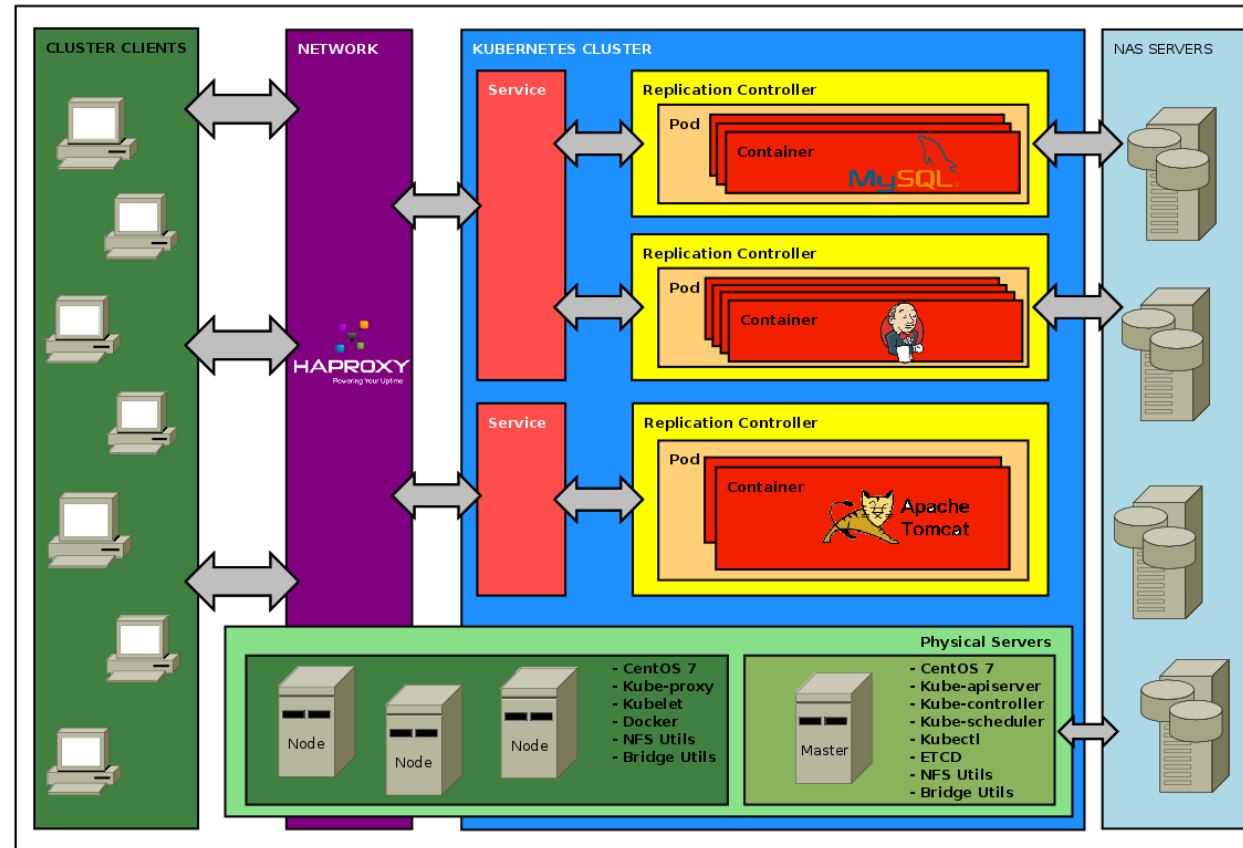
Information Technology: IT is a core technology for CERN. It is used for the processing and distribution of data using computer hardware and software. In particular, IT deals with the use of computers and computer software to convert, store, protect, process, and communicate information.



J2EEPS Evolution: MWOD



MWOD Evolution: Containers

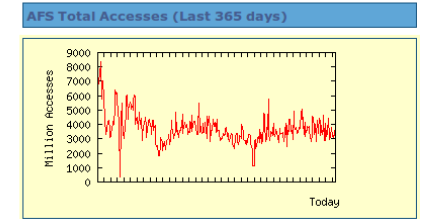


Why phaseout MWOD?

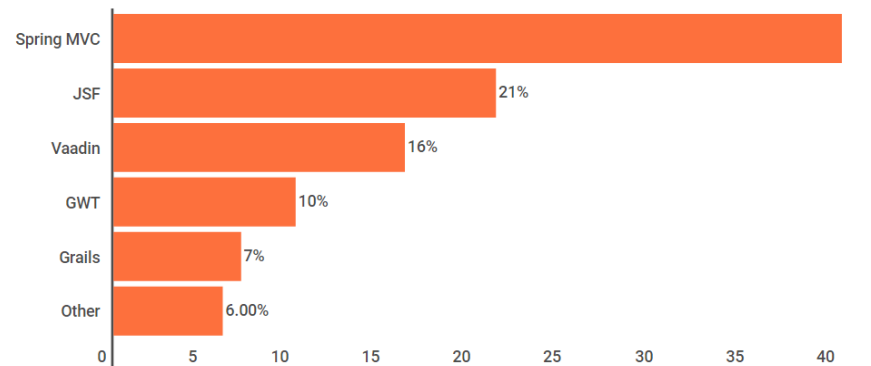
Minimize in-house development “End Of Support”

Report Generator

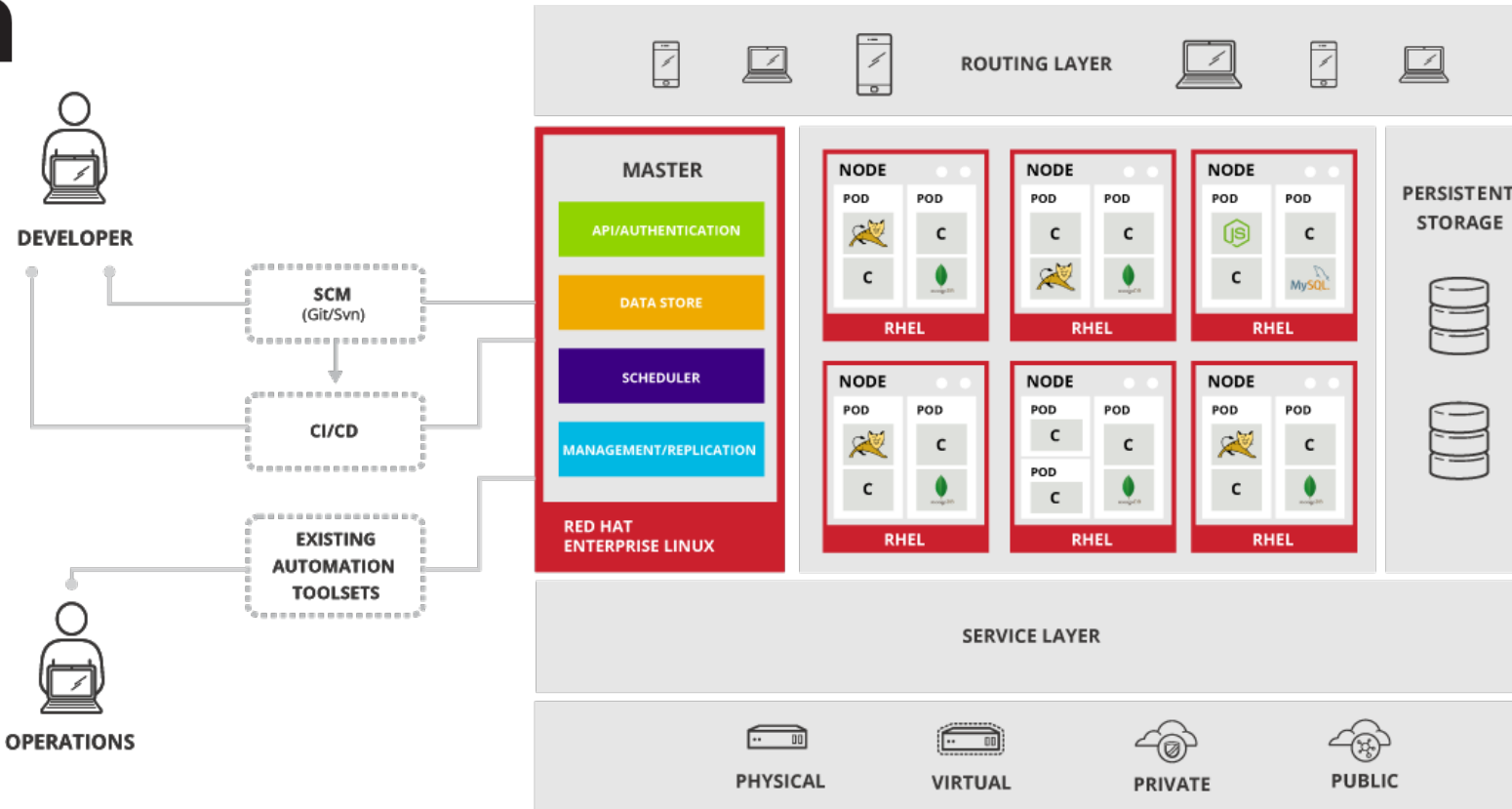
Volumes Report [by server](#) [by project](#) [global](#)
[Servers Report](#)
[Partitions Report](#)
[Pool Report](#)



Framework popularity, %



New Kids On the Block!

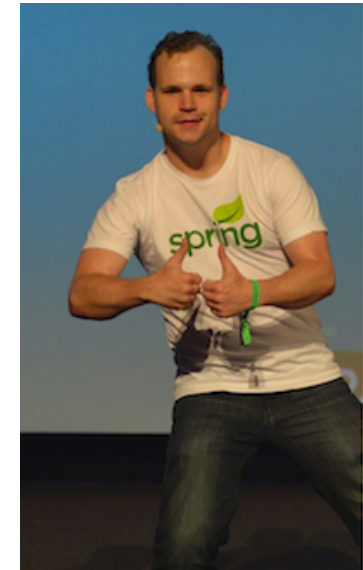


Why openshift?

Covers standard war deployment

“Make jar no war”: Josh Long

“Make war no jar”: Antonio Goncalves

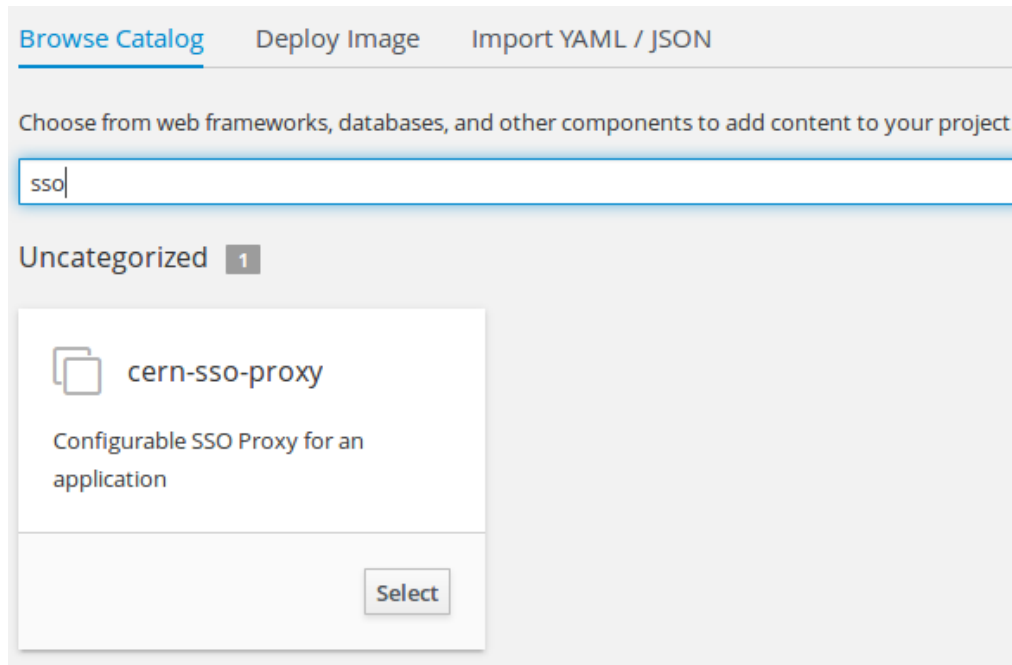


Why openshift?

Security

Application isolation

SSO



NO NEED FOR SECURITY MANAGER!!!



Shibboleth®

Why openshift?

User Interface

The screenshot displays the OpenShift console interface for a project named 'lurodrig'. The left sidebar contains navigation options: Overview, Applications, Builds, Resources, Storage, and Monitoring. The main content area shows two service cards:

- CERN SSO PROXY**: Deployment Config `cern-ss0-proxy` (15 days ago). Containers: HTTPD (Image: `openshift/cern-ss0-proxy`) and SHIBD (Image: `openshift/cern-ss0-proxy`). Pod count: 1. URL: <https://lurodrig.web.cern.ch>. Button: **Group Service**.
- PRODUCTS CORE**: Deployment Config `products-core` (12 days ago). Container: PRODUCTS-CORE (Image: `lurodrig/products-core`). Ports: 8080/TCP. Pod count: 1. Button: **Group Service**.

Why openshift?

AFS phaseout


lurodrig » Add to Project

[Browse Catalog](#) [Deploy Image](#) [Import YAML / JSON](#)

Choose from web frameworks, databases, and other components to add content to your project.


VOLUME|

Uncategorized 2

 **cvmfs-volume**

Create PersistentVolumeClaim to have access to a CVMFS repository from inside your application.

Select

 **persistent-volume**

Create PersistentVolumeClaim to have access to a standard volume from inside your application.

Select



Why openshift?

Consolidation



Why openshift?

Richer functionality (e.g. oc client)
Big community
Fits in the CI model



GitLab

```
lurodrig@lurodrig-laptop:~/tmp$ oc describe dc cern-ss0-proxy
Name:          cern-ss0-proxy
Namespace:    lurodrig
Created:       2 weeks ago
Labels:       app=cern-ss0-proxy, template=cern-ss0-proxy
Annotations:  <none>
Latest Version: 1
Selector:     name=cern-ss0-proxy
Replicas:     1
Triggers:     Config, Image(cern-ss0-proxy@stable, auto=true), Image(cern-ss0-proxy@stable, auto=true)
Strategy:     Rolling
Template:
  Labels:      name=cern-ss0-proxy
  Containers:
    httpd:
      Image:          172.30.78.46:5000/openshift/cern-ss0-proxy@sha256:c1790650d2467bde04843c0bbc723f3b5670dc2d4f4fc96805544a5cea177a1
      Port:          80
      Volume Mounts:
        /etc/httpd/conf.d/configurable from apache (rw)
        /tmp/configmap from shib (rw)
        /var/run/shibboleth from shared (rw)
      Environment Variables:
        NAMESPACE:      (v1:metadata.namespace)
        SERVICE_NAME:    products-core
        HOSTNAME_FQDN:
shibd:
  Image:          172.30.78.46:5000/openshift/cern-ss0-proxy@sha256:c1790650d2467bde04843c0bbc723f3b5670dc2d4f4fc96805544a5cea177a1
  Port:          8080
  Command:
    /shib.sh
  Volume Mounts:
    /tmp/configmap from shib (rw)
    /var/run/shibboleth from shared (rw)
  Environment Variables:
    NAMESPACE:      (v1:metadata.namespace)
    HOSTNAME_FQDN:
Volumes:
  shared:
    Type:          EmptyDir (a temporary directory that shares a pod's lifetime)
  Medium:
  apache:
    Type:          ConfigMap (a volume populated by a ConfigMap)
    Name:          cern-ss0-proxy
  shib:
    Type:          ConfigMap (a volume populated by a ConfigMap)
    Name:          cern-ss0-shib
```



Why openshift?

Meets MWOD applications requirements



Caveats



Caveats

App server: apache tomcat → wildfly



JSR-000315 Java Servlet 3.0 Final Release

Caveats

JDK: HotSpot → OpenJDK

OpenJDK



Caveats

Front end: apache httpd + mod_jk → HAProxy

String	<code>getRealPath(String path)</code> Deprecated. As of Version 2.1 of the Java Servlet API, use <code>ServletContext.getRealPath(java.lang.String)</code> instead.
String	<code>getRemoteAddr()</code> Returns the Internet Protocol (IP) address of the client or last proxy that sent the request.
String	<code>getRemoteHost()</code> Returns the fully qualified name of the client or the last proxy that sent the request.
int	<code>getRemotePort()</code> Returns the Internet Protocol (IP) source port of the client or last proxy that sent the request.
RequestDispatcher	<code>getRequestDispatcher(String path)</code> Returns a <code>RequestDispatcher</code> object that acts as a wrapper for the resource located at the given path.

Support & Maintenance

Platform: Red Hat

Application Server (Wildfly): Red Hat

IT integrations: IT-CDA

Custom images: user community



WildFly



Accelerator Database	ACRON	Administration Database	AFS	AFS Web Hosting	Alerter	Backup and Restore	Batch	BOINC
Campus Network	CASTOR	CDS	Centralized Elasticsearch	Ceph	CERN Search	CERNBox	Certificate Authority	CIXP
Conference Rooms	Configuration Management	CVMS	Database on Demand	Database Replication	Databases Applications	Datacenter Network	DFS	Drupal
E-Mail	Eduroam	Electronics Design Software	EOS	Experiment Database	E-Fax	File Transfer	FILER	Fixed Line Phone
General Purpose Database	GIT	GRID Compute Element	GRID Development	GRID Information	Grid Infrastructure Monitoring	HADOOP	IIS Web Hosting	India Event Application Support
Java Web Hosting	JIRA	Linux Operating System	Load Balancing	LXPLUS	Lync	Mathematics Software	Mechanical Design Software	Messaging
Monitoring	Multimedia	MyProxy	Network Database and Registration	Network for Projects and Experiments	Printing and Copying	Public Information Display	Server Provisioning	Sharepoint
Open Sign On and Access Management	SVN	Technical Network	Twiki	VOMS	WiFi	Windows Desktop	Windows Terminal Servers	WLCG Network

Migration Roadmap

February 2017

KB articles

March 2017

User community meeting

No new MWOD sites

April 2017

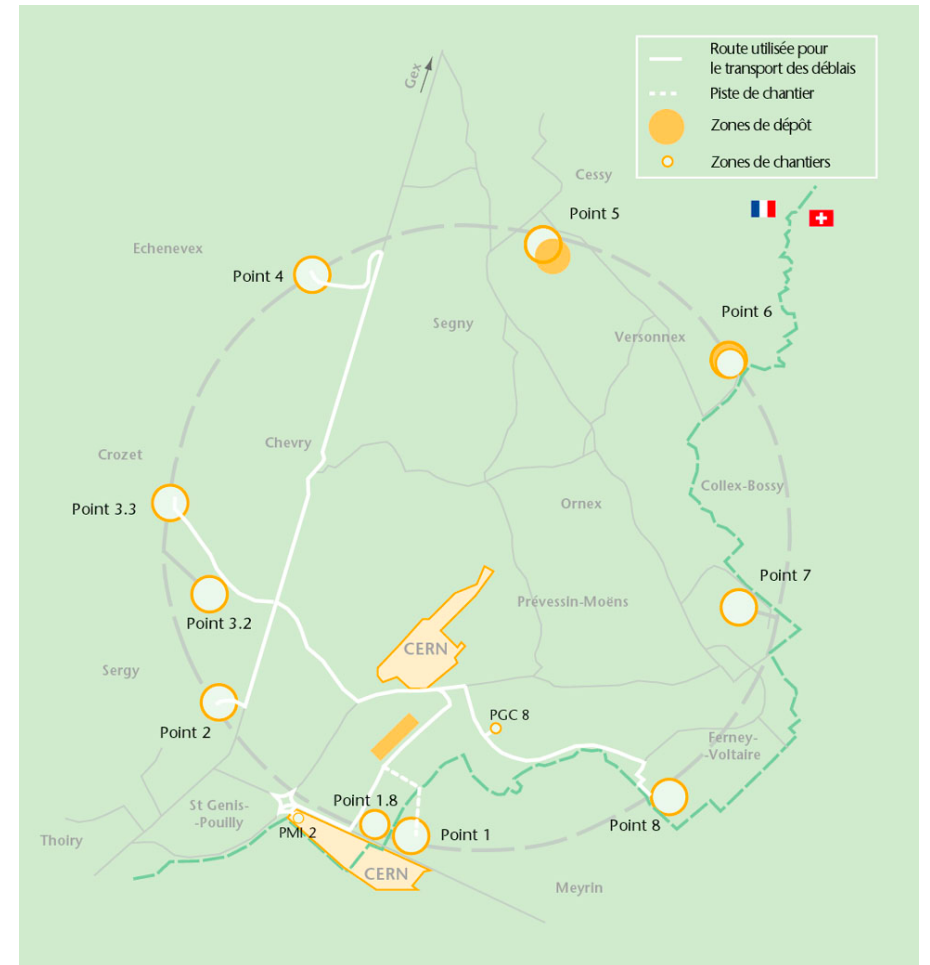
TEST instance stopped

Sites content archived

October 2017

PROD instance stopped

Sites content archived



Resources

CERN Web Services:

<https://webservices.web.cern.ch/webservices/>

Getting started with openshift:

<https://cern.service-now.com/service-portal/article.do?n=KB0004358>

Migration OTG:

<https://cern.service-now.com/service-portal/view-outage.do?n=OTG0035296>

How to migrate:

<https://cern.service-now.com/service-portal/article.do?n=KB0004488>



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[@lurodrig](https://mattermost.web.cern.ch)

<https://mattermost.web.cern.ch/it-dep/channels/developerscern>

Tip of the week

