

OpenCms® DAYS 2012

OpenCms on Open Clouds

OaSe: OpenCms as a Service



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OaSe*: OpenCms as a Service?

- OpenCms can be delivered through:
 - Public
 - Private
 - Community
 - and Hybrid cloud service delivery models
 - or even on traditional dedicated servers?
- Create OpenCms **Sites** On-Demand
 - OpenCms Cloud Sites (**for business users**)
 - OpenCms on Jelastic PaaS (**for developers**)
- Deploy multiple OpenCms **Instances** in 5 minutes (Demo)
 - Deploy a full featured OpenCms Instance with Apache, Tomcat and MySQL on Apache CloudStack or OpenStack (**for developers and solution providers**)
- Run OpenCms in 5 Seconds (Demo)
- Challenges to run OpenCms as a Service →

*OaSe: means in German the Oasis ☺

What is the Cloud?

- Hot Vapor or Hype or a **New Way** to provide better **on-demand services**?
- Public, Private, Community, Hybrid Clouds
- What are IaaS, PaaS, SaaS, C&CaaS, BaaS, HaaS, EaaS?
- What kind of cloud services delivery models exists?
- SaaS:
 - Software as a Service (e.g. Gmail, Google Sites 😊)
 - Security as a Service (e.g. CypherCloud)
 - Storage as Service (e.g. Amazon S3)
- PaaS:
 - Platform as a Service:
 - Google App Engine (Python, Java, GO)
 - Appscale, RedHat OpenShift, Jelastic, VMware Cloud Foundry
 - Microsoft Azure (.Net)
 - Salesforce Heroku (Ruby & Java)
- IaaS:
 - Infrastructure as a Service (Server Hosting, Physical and Virtual)

What is the Open Cloud?

- What does Open really mean?
 - Open Source?
 - Open API?
 - Speak to AWS?
 - Governance?
 - Federation (the ability to burst from private to the public cloud)?
 - To keep your data and the security in your hands?
 - YES

Definition of the Cloud Computing I

“a model for enabling convenient, **on-demand** network access to a shared pool of configurable computing resources (e.g., **networks, servers, storage, applications, and services**) that can be **rapidly** provisioned and released with minimal management effort or service provider interaction.

NIST: National Institute of Standards and Technology

Definition of the Cloud Computing II

Cloud Computing is a model for providing IT Services according to existing industrial principles, which is based on **AUTOMATION & VIRTUALIZATION**.

MATERNA GmbH

Our Definition of Cloud Computing

Cloud Computing is a **New Way** which covers SOA, ASP, Automation, Monitoring and IT Transition from the Traditional IT to the Modern IT in the next decade!

It would help our clients to save \$\$\$s and us to earn €€€s 😊

Clouds Sky GmbH

Public Cloud Providers

- Amazon (IaaS, PaaS: Hosting)
- AT&T
- Dogado Internet
- ElasticHost
- Google (GCE, GAE)
- GoGrid
- IBM SmartCloud
- Microsoft (Azure PaaS, SaaS)
- Rackspace
- Salesforce
- SoftLayer
- OpSource
- Joyent
- Terremark Worldwide

Private Cloud IaaS

- Abiquo
- CA AppLogic
- Apache CloudStack, Citrix CloudPlatform (OS*)
- Enomaly ECP
- OnApp Engine
- OpenStack (OS*)
- OpenNebula (OS*)
- openQRM (OS*)
- Eucalyptus (OS*)
- Nimbula
- Nimbus
- VMWare vCloud

*OS: Open Source

Private Cloud (Java) PaaS

- Jelastic
- VMWare Cloud Foundry (OS*)
- Stackato (based on Cloud Foundry)
- Cumulogic (CAP*)
- Appscale (OS* Google App Engine)
- RedHat OpenShift (OS*)
- WSO2 Stratos

*CAP: Cloud Application Platform: is a technology to build the PaaS layer on any IaaS Cloud. CAP can be used for development and runtime management and moving workloads btw. Clouds. Source: [Cumulogic PaaS white Paper](#).

Open Cloud Operation Centers

Name	License	API	EC2	S3	EBS	Hypervisor
Apache CloudStack (Citrix CloudPlatform)	GPLv3	CloudStack , AWS	Part.	no	no	KVM,XEN, VMWare, OVM, BareMetal, (LXC)
Eucalyptus	GPLv3	AWS	YES	YES	YES	KVM, XEN, WMware
OpenStack	Apache v2.0	OpenStack , AWS	Part.	no	no	KVM,XEN, LXC, UML
OpenNebula	Apache v2.0	OCCI,AWS	95%	no	In work	KVM, XEN, Vmware, VirtualBox, VirtualBox

Challenges to run OaSe in the Cloud

- Is OpenCms Cloud ready?
- How to scale EC2 like (Elastic Cloud Computing)
- Security (Network, Storage (DB, RFS), Application)
- Create OpenCms **Sites** On-Demand
 - OpenCms Cloud Sites (**for business users**) → Demo
 - OpenCms on Jelastic PaaS (**for developers**) → Demo
 - OpenCms in Stackato AppStore (coming soon)
- Deploy OpenCms **Instances** in 3 minutes → Demo
 - Deploy a full featured OpenCms Instance with Apache, Tomcat and MySQL on Apache CloudStack or OpenStack (**for developers and solution providers**)
- Run OpenCms in 5 Seconds (Demo)
- Build management and continuous integration (ANT / Maven / Gradle, CruiseControl / Jenkins, ANThillPro)
- Cloud Vendor Lock-In (move your OpenCms Instances between clouds)
- **Integrate** with 3rd parties, Nuxeo, LDAP (ADS), Red5 Media Server, SAP, IBM WebSphere, Microsoft Lync, etc..

Integrate OpenCms with:


- Media Server (Red5) → RFS Module (Demo)
- LDAP (ADS, IBM Tivoli) → LDAP Module (Demo)
- IBM WebSphere
- SAP
- Microsoft Lync / SharePoint
- **DONE** by our Partner **Metamesh**



Install OpenCms in 5 minutes

Alkacon OpenCms Setup Wizard - Import modules

Status

 Finished. Please check the output to see if the modules have been imported without errors.

```
29315:
29314: Shutdown completed, total uptime was 00:05:26.
29313: Shutting down OpenCms, version 8.5.0 in web application "opencms"
29312:
29311:
29310: The OpenCms system used for the setup will now shut down.
29309: The setup is finished!
29308:
29307:
29306: Admin@Offline>exit
29305: Admin@Offline>
29304: Indexing statistics: indexed files: 4,353, returned threads: 4,353, abandoned threads: 0, duration: 0
29303: ----- ... finished rebuilding search index "Gallery Index"
29302: ( 4353 ) Indexing file /system/workplace/views/workplace.jsp ... o.k.
29301: ( 4352 ) Indexing file /system/workplace/views/top_js.jsp ... o.k.
29300: ( 4351 ) Indexing file /system/workplace/views/top_head.jsp ... o.k.
-----
( 4350 ) Indexing file /system/workplace/views/top_head.jsp ... o.k.
-----
```

<< Back Continue >> Cancel

OpenCms CloudSites on CloudStack

CloudPlatform 2 Notifications Default View Project View admin cloud CITRIX®

Dashboard

Instances

Storage

Network

Templates

Events

Filter by All + Add Instance

Display name	Internal name	Zone name	State	Actions
OpenCmsCloudSites	i-2-24-VM	Germany	● Running	▶ ⏸ ↺ ✕ ↻
OpenCmsActive	i-2-21-VM	Germany	● Running	▶ ⏸ ↺ ✕ ↻
CentOS 5.5 ATM	i-2-20-VM	Germany	● Stopped	▶ ⏸ ↺ ✕ ↻
LoadBalancerNginx	i-2-23-VM	Germany	● Running	▶ ⏸ ↺ ✕ ↻
OpenCmsStandby	i-2-22-VM	Germany	● Running	▶ ⏸ ↺ ✕ ↻

DEMO

OpenCms BleedingEdge on OpenStack

ubuntu OpenStack Dashboard

 Logged In as: admin Settings Sign Out

Project Admin

PROJECT
admin

Manage Compute

Overview

Instances & Volumes

Images & Snapshots

Access & Security

Instances & Volumes

Success: Instance "OpenCmsBleedingEdge" updated.

Launch Instance
Terminate Instances

Instances

<input type="checkbox"/>	Instance Name	IP Address	Size	Status	Task	Power State	Actions
<input type="checkbox"/>	OpenCmsBleedingEdge	192.168.22.19 212.224.122.73	2GB RAM 1 VCPU 10.0GB Disk	Active	None	Running	Edit Instance ▾
<input type="checkbox"/>	OpenMeetings	192.168.22.16 212.224.122.71	4GB RAM 2 VCPU 10.0GB Disk	Active	None	Running	Edit Instance ▾
<input type="checkbox"/>	RHEL56	192.168.22.18	4GB RAM 2 VCPU 10.0GB Disk	Active	None	Running	Edit Instance ▾
<input type="checkbox"/>	Ubuntu11	192.168.22.1	4GB RAM 2 VCPU 10.0GB Disk	Active	None	Running	Edit Instance ▾
<input type="checkbox"/>	CentOS62	192.168.22.17	4GB RAM 2 VCPU 10.0GB Disk	Active	None	Running	Edit Instance ▾
<input type="checkbox"/>	Fedora16	192.168.22.11	4GB RAM 2 VCPU 10.0GB Disk	Active	None	Running	Edit Instance ▾
<input type="checkbox"/>	Ubuntu 12.04 LTS	192.168.22.8 212.224.122.72	4GB RAM 2 VCPU 10.0GB Disk	Active	None	Running	Edit Instance ▾

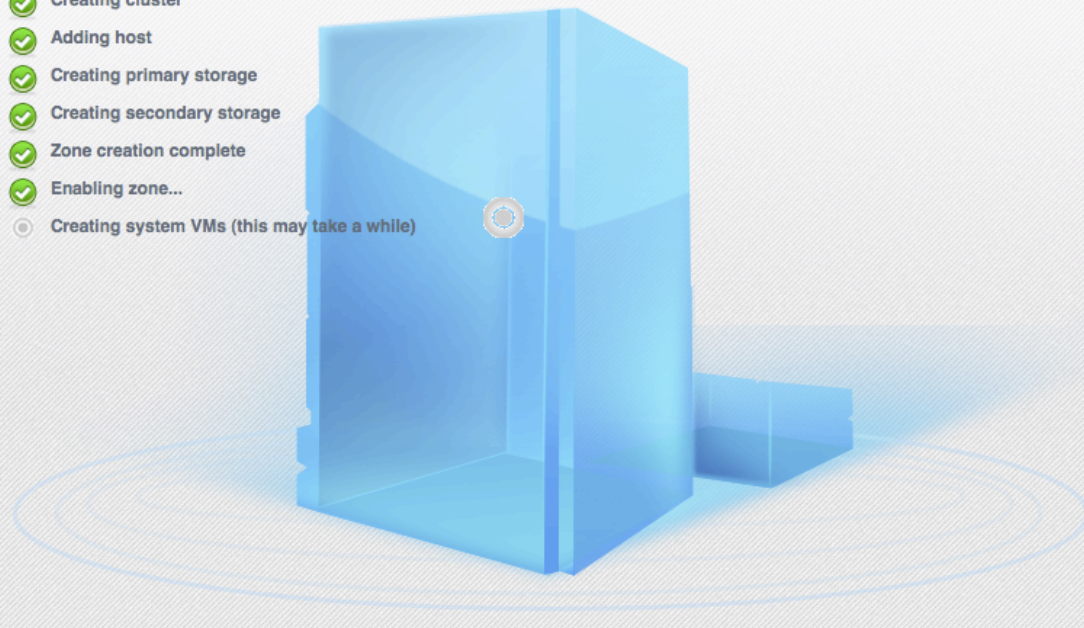
DEMO



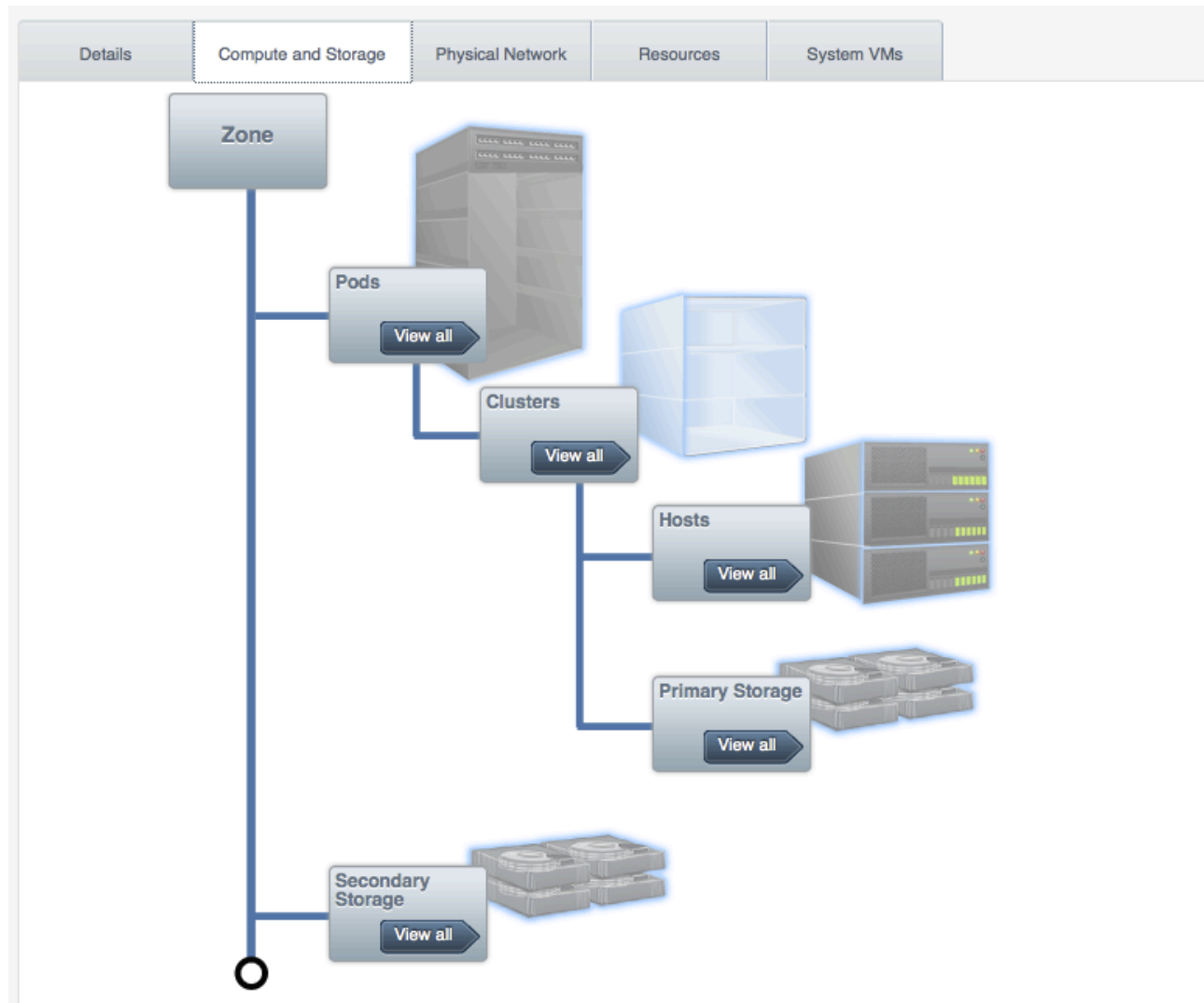
Build Your Cloud in 1 day with Apache CloudStack

Now building your cloud...

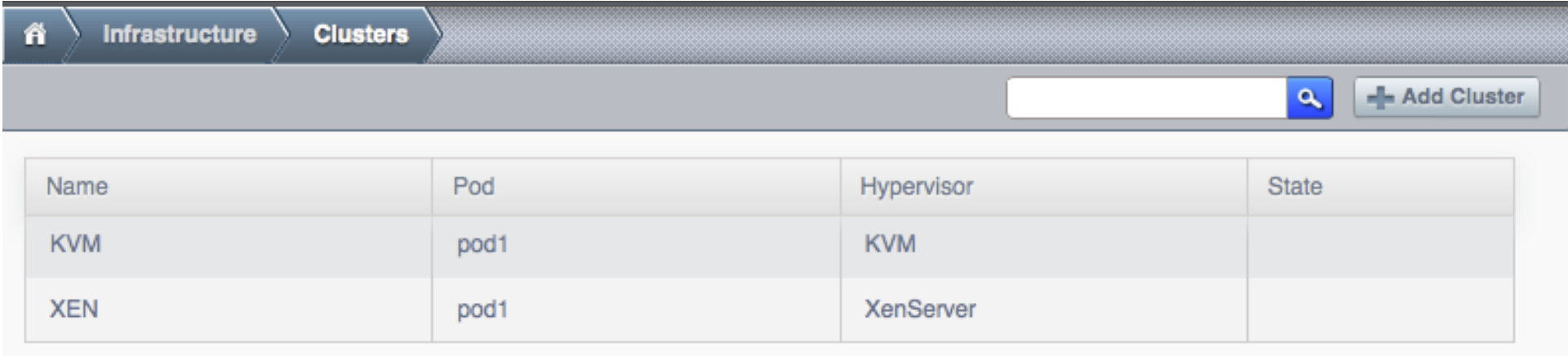
- Creating zone
- Creating physical networks
- Configuring physical networks
- Enabling Security Group provider
- Creating guest network
- Creating pod
- Configuring guest traffic
- Creating cluster
- Adding host
- Creating primary storage
- Creating secondary storage
- Zone creation complete
- Enabling zone...
- Creating system VMs (this may take a while)



Build Your Virtual Private Data Center



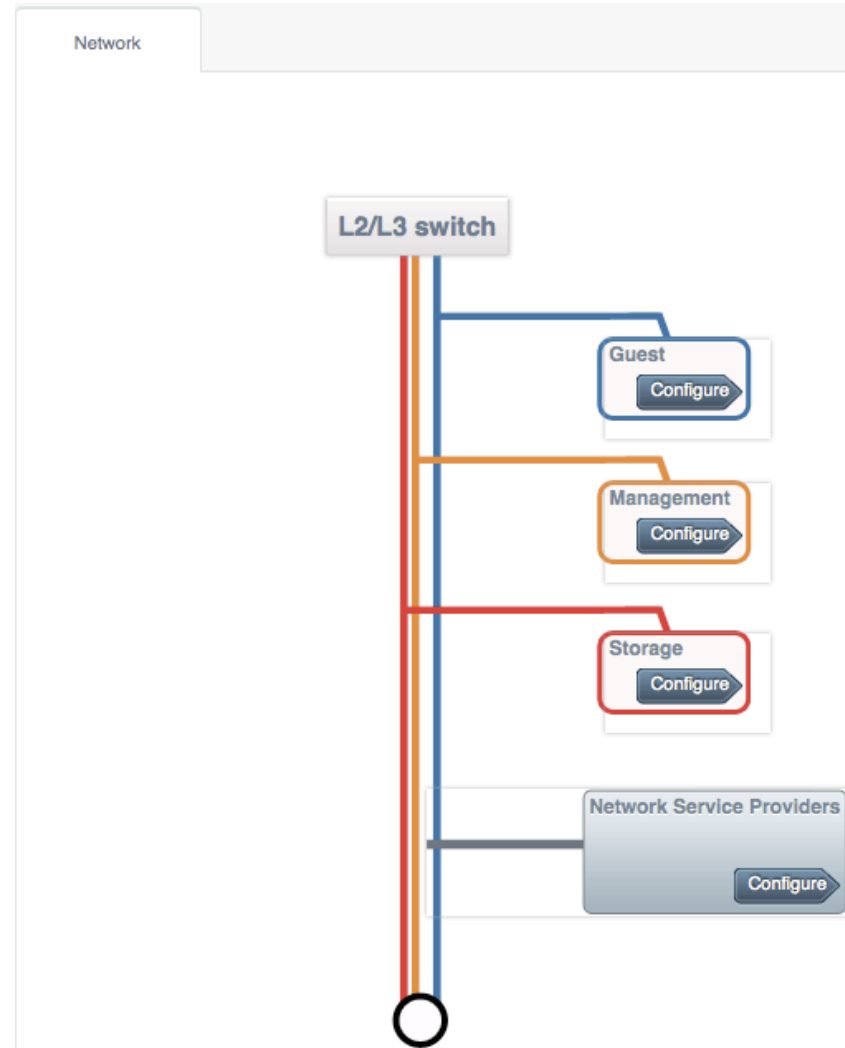
Create KVM and Xen Clusters



The screenshot shows the 'Clusters' management page in the CloudSky interface. At the top, there are navigation tabs for 'Infrastructure' and 'Clusters'. Below the tabs is a search bar and an 'Add Cluster' button. The main content is a table with four columns: Name, Pod, Hypervisor, and State. The table contains two rows of data: one for a KVM cluster and one for a XEN cluster, both associated with 'pod1'.

Name	Pod	Hypervisor	State
KVM	pod1	KVM	
XEN	pod1	XenServer	

Create the Network



Add Instance

1

Setup

2

Select a
template

3

Compute
offering

4

Data Disk
Offering

5

Network

6

Review

Select a zone

A zone typically corresponds to a single datacenter. Multiple zones help make the cloud more reliable by providing physical isolation and redundancy.

Germany

Select ISO or template

Template

OS image that can be used
to boot VMs

ISO

Disc image containing data
or bootable media for OS



Cancel

Next

Add Instance

- 1 Setup
- 2 **Select a template**
- 3 Compute offering
- 4 Data Disk Offering
- 5 Network
- 6 Review

Please select a template for your new virtual instance.

Featured

Community

My templates

- OpenCmsBleedingEdge**
OpenCmsBleedingEdge
- CloudSites**
CloudSites
- CloudSitesInitTemplate**
CloudSitesInitTemplate
- CentOS 5.5(64-bit) no GUI (KVM)**
CentOS 5.5(64-bit) no GUI (KVM)



Previous

Cancel

Next

Add Instance

1

Setup

>

2

Select a
template

>

3

Compute
offering

>

4

Data Disk
Offering

>

5

Network

>

6

Review



Large Instance

Large Instance



Medium Instance

Medium Instance



Small Instance

Small Instance



Previous

Cancel

Next

Add Instance

- 1** Setup
- 2 Select a template
- 3 Compute offering
- 4** Data Disk Offering
- 5 Network
- 6 Review

No Thanks

Medium
Medium Disk, 20 GB

Large
Large Disk, 100 GB

Custom: 1 GB
Custom Disk, 1 GB

Disk Size **1 GB**  **1024 GB** **GB**

Previous

Cancel

Next



Add Instance

- 1 Setup
- 2 Select a template
- 3 Compute offering
- 4 Data Disk Offering
- 5 Network
- 6 Review

Please select security group(s) for your new VM

OaSe



Previous

Cancel

Next

Add Instance

1 Setup > 2 Select a template > 3 Compute offering > 4 Data Disk Offering > 5 Network > 6 Review

Please review the following information and confirm that your virtual instance is correct before launch.

Name (Optional)	<input type="text" value="OpenCmsBleedingEdge"/>
Add to group (Optional)	<input type="text"/>
Zone	Edit
Hypervisor	Edit
Template	Edit
Compute offering	Edit
Data Disk Offering	Edit
Network	Edit

Previous



Cancel

 Launch VM

Long live OpenCms!

Alkacon **OpenCms 8.5 Demo Website**
Welcome to OpenCms

OpenCms

Welcome to OpenCms Release Notes **Demo [English]** Demo [Deutsch] Developer Demo

Demo [English] » Wonderful World of Flowers


Wonderful World of Flowers

- Flower Today
- Flower Dictionary
- Flower Inheritance
- Flower Extranet
- Flower Search
- Flower Subscription

Starting page

This page is based on a structured content for text blocks. Such types can be defined by yourself for editing and rendering structured contents.

Welcome OpenCms Days Participants



Subheadline here....

OpenCms 8.5 Bleeding Edge version and the Wonderful World of Flowers presents the most spectacular and amazing stories about flowers from around the world. Entertaining and with lots of useful information. Let us **take** you into the adventurous world of flowers around the globe! Right.. something more

OpenCms 8.5 Demo Content

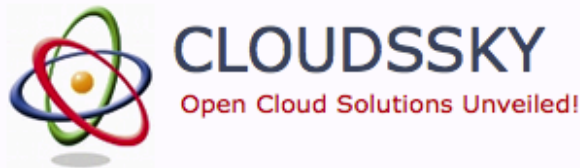
This demo content shows how the features of OpenCms 8.5 are used to create great looking websites.

Search For Content

Page Subscription

OpenCms and the Open Cloud Configurator

| Info: +49 221 55 405 385 | [Contact](#) | [OS Cloud Panel](#)



[Open](#) | [Cloud Services](#) | [Careers](#) | [Events](#) | [Vision](#)

OpenCloudConfigurator

0 1 2 3 4 5 6 7 8

Number of vCPUs	Memory(in MB)	Storage(in GB)	Monthly Price(in €)*	Server-Region	Cloud Apps
<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="10"/>	<input type="text" value="0.00"/>	Europe	- not selected -

*Free 30-day trial

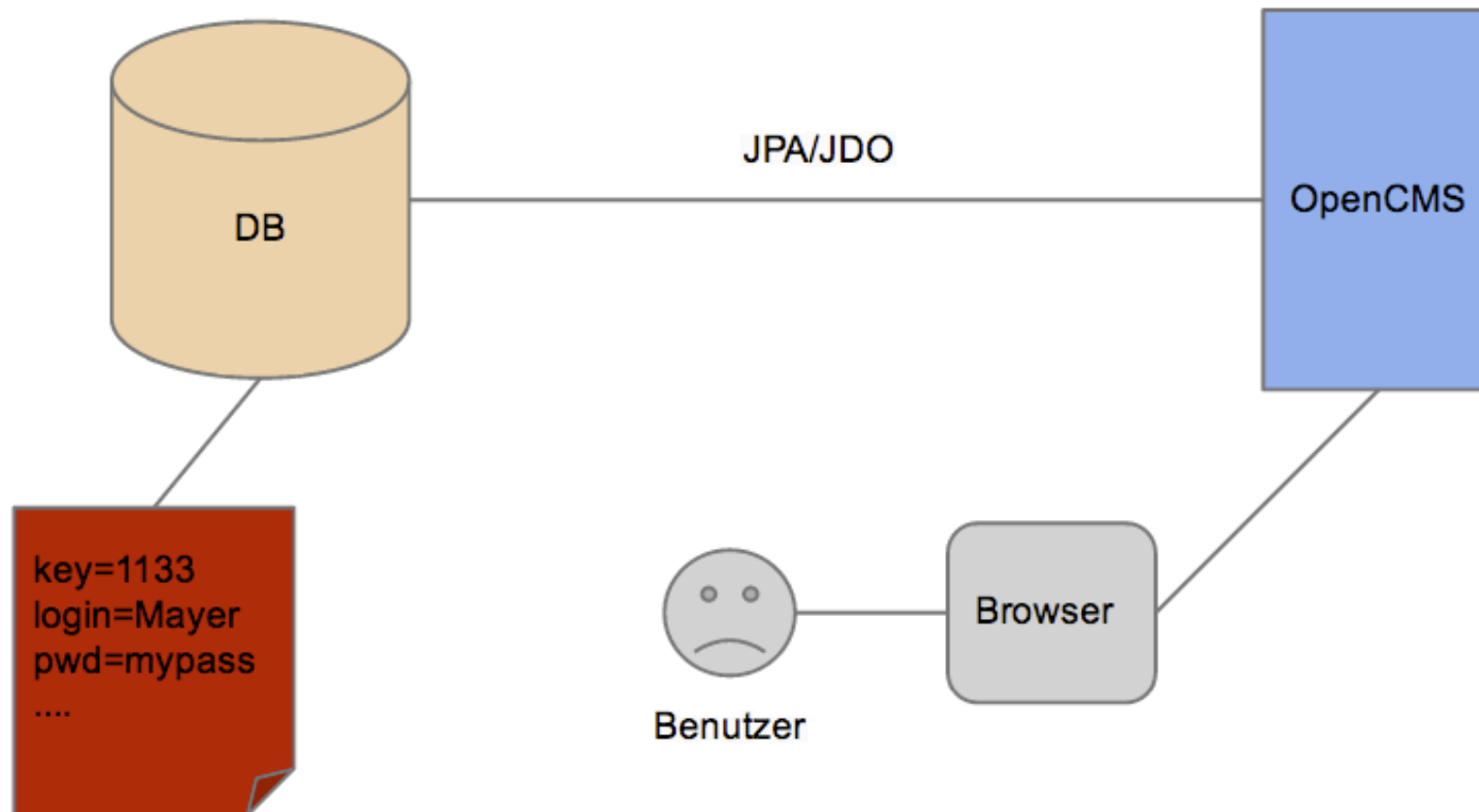
Next

DEMO

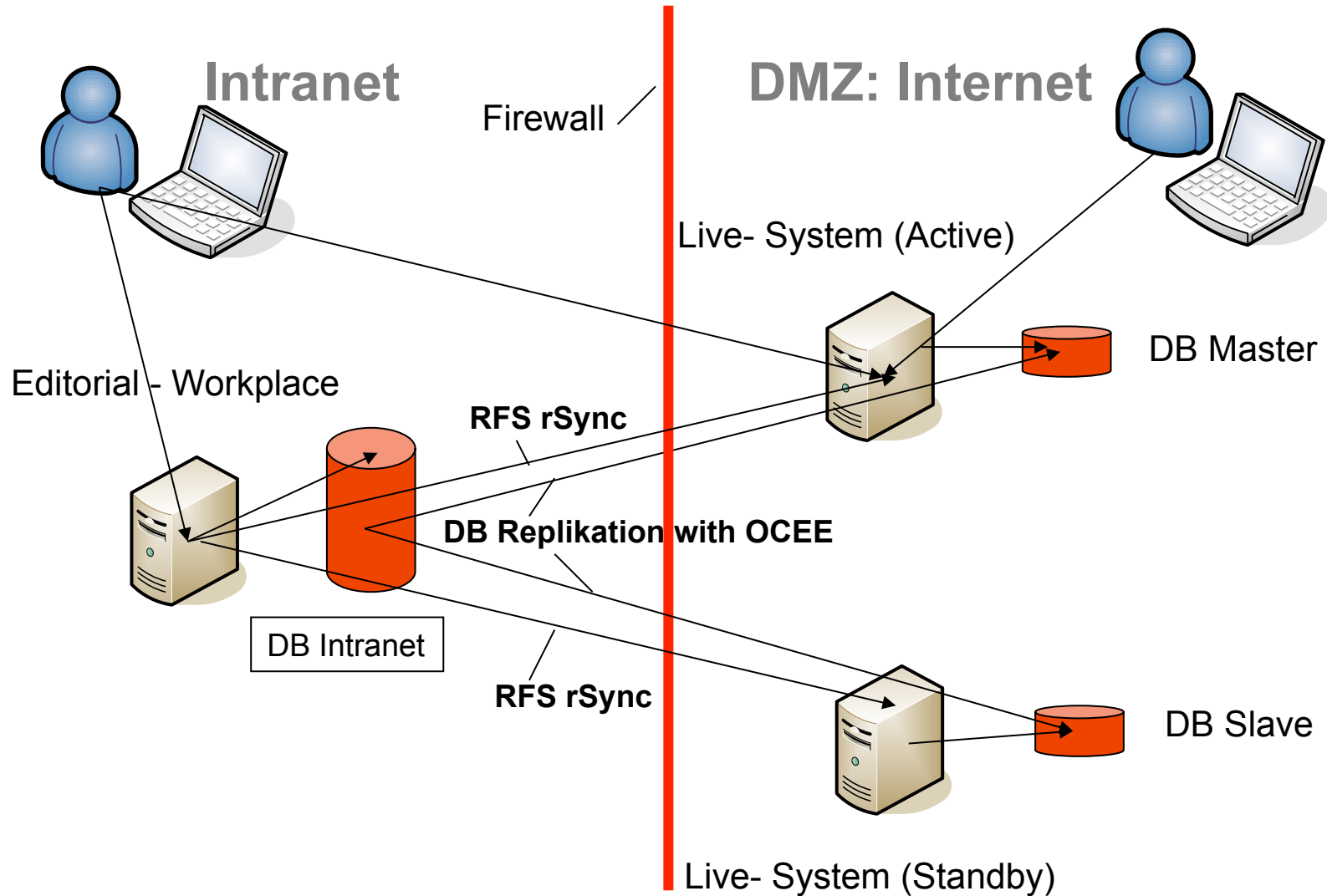
- not selected -
- Alfresco
- CumuLogic
- OpenCms**
- OpenMeetings
- ownCloud
- Zentyal SBS
- Zimbra OS

Connecting to any Open Cloud, every where, with OCC

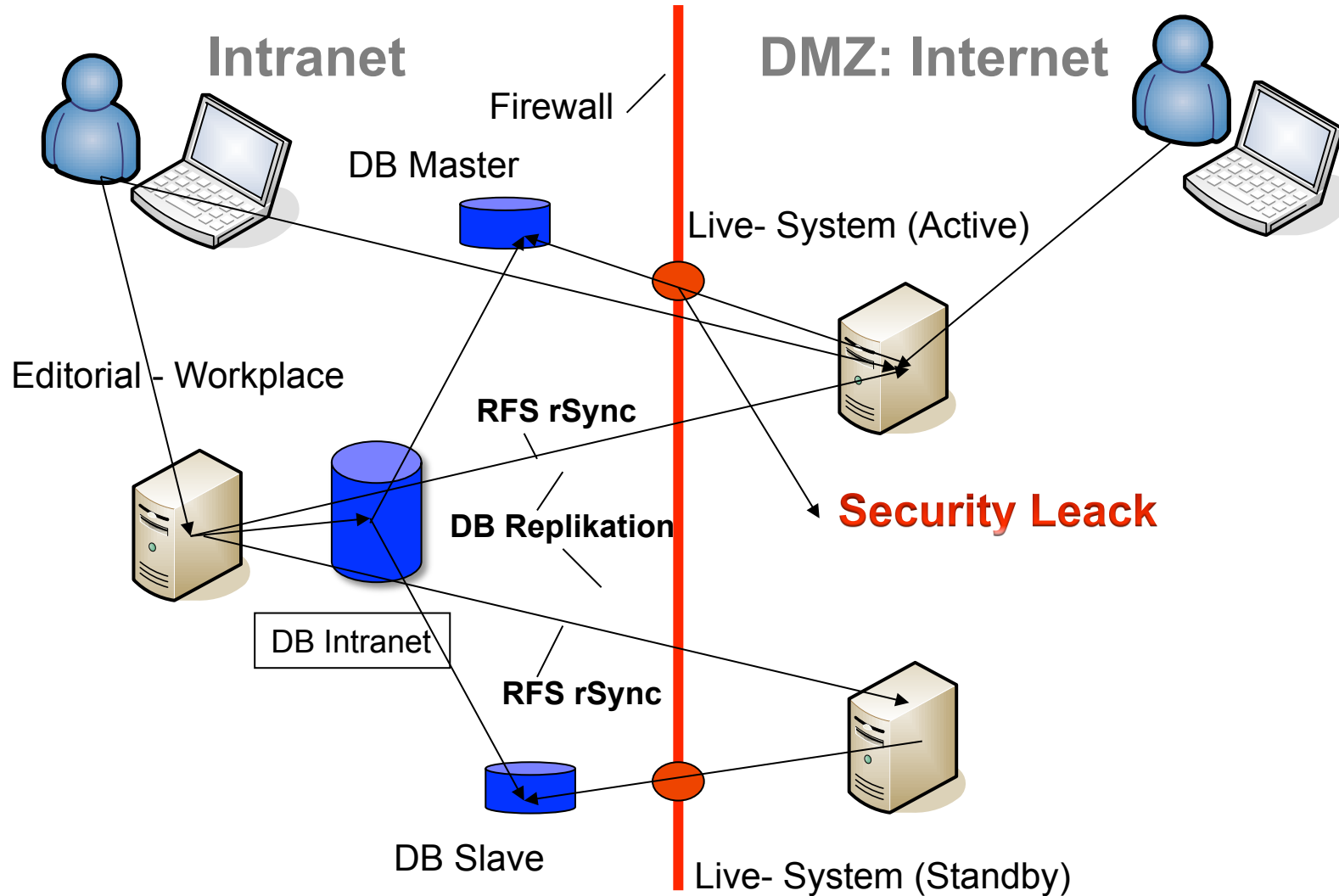
OpenCms Security (in the Cloud)



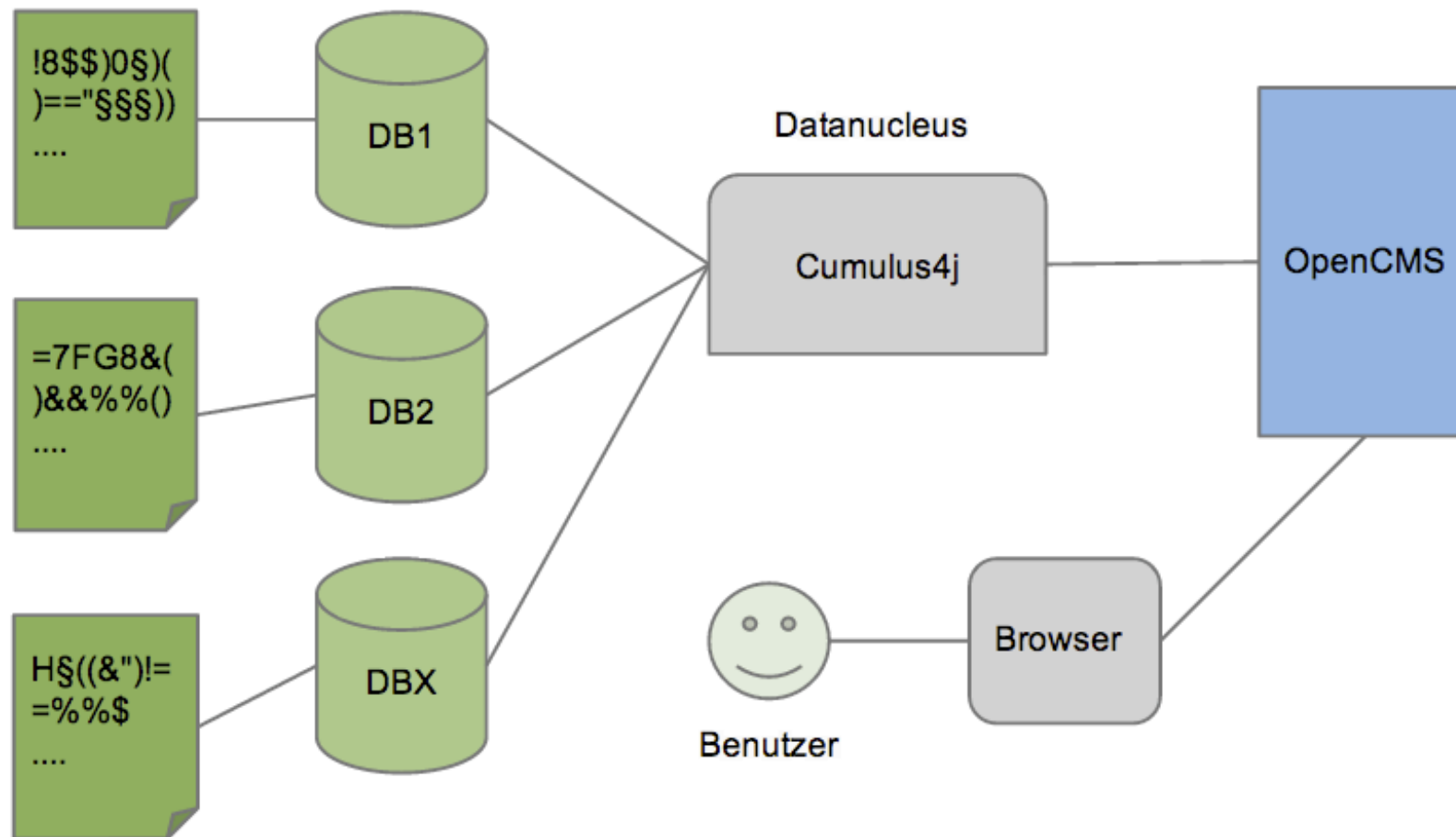
OpenCms Security



OpenCms Security



Solution: OpenCms and Cumulus4j



Master thesis by Sergey Bagautdinov, Clouds Sky GmbH

What we offer (I)

KnowHow as a Cloud-Enabler:

- We Build Clouds: Design, Architecture, Processes
- Open Source Tool-Chain for the Cloud
- We Build Clouds with our Partners:
 - Canonical
 - Citrix
 - **Metamesh**
 - Rackspace
 - First-Colo
 - **Dogado Internet GmbH**
- Cloud Computing Migration Framework
- Cloud Computing Security and Privacy Recommendations
- Automation (Puppet, Chef, **RunDeck**)
- Monitoring, Event and Performance Management
- Virtualization for Private, Community and Hybrid Cloud Environments
- Metering, Billing, Reporting, Self Service Portal and Provisioning

What we offer (II)

KnowHow as a Cloud-Enabler:

- Help our clients to choose the right solution
 - Define what they want first, then match the right solution
 - Short term goals
 - Long range Vision
 - Provide Open Cloud Labs, let them Try before they Buy
 - Include target users in the selection process
- Build the first Java based **Open Cloud Management Platform (OpenCmp)**

To whom are we going to provide our Services

- Large Enterprises
- SMBs
- Gouvernement and Public Sectors
- Developers
- To the Open World 😊



OpenCms®  DAYS ²⁰₁₂

Thanks!