Cloud service
Virtual Computing Lab (VCL)

Emir Imamagić
Srce
Overview

- Project Cloud Servers
- Virtual Computing Lab
- Architecture
- Resources
- Limits
- Support
Project Cloud Servers

- Project proposal “Establishing cloud services for science and high education in Croatia” approved by Ministry of science, education and sports on July 8th 2011.
- Cloud services advantages
  - increased flexibility
  - improved resource utilization
  - consolidated resources
  - decreased maintenance costs
  - integration with AAI federation
Virtual Computing Lab

- Provide science and academic community with virtual machines based on prepared custom images
  - accessible to employees
- Focus on laboratories and workshops
  - prepare virtual machines images
  - create reservation for a given number of virtual machines
  - virtual machines are removed at the end of reservation
- Enable image creation & reservation
  - advanced reservation – assuring resource availability
Virtual Computing Lab

- Based on open source system Virtual Computing Lab
  - [https://cwiki.apache.org/VCL/](https://cwiki.apache.org/VCL/)
- Image management
  - easy update and image creation
  - revisions
- Supported infrastructure
  - VMware, VirtualBox, bare metal (xCAT), KVM (2.3)
- Advanced authorization
  - user, resource and image groups, privilege tree
- Integration with external authentication systems
- Our customizations
  - VM power management, SAML AuthN integration, ...
VCL Architecture

Central virtualization

Internet

web - marun

db - zatocnica

vcl

MySQL

Internet

Virtual Computing Lab (VCL)
Supported operating systems
- MS Windows (XP and 7)
- Linux (Centos 5 and 6)

Virtual machine
- 1 vCPU (Intel Xeon E7-4830 ~2 GHz)
- 2 GB vRAM
- 20 GB disk space
- 1 public IPv4 address

Unlimited custom images
- up to 2 revisions per image
Limits

- **200** concurrent virtual machines
- Maximum virtual machine lifetime – **8 hours**
- Maximum concurrent reservation per user – **1**
- Reservations up to **1 year** in advance
- Maximum **30 subimages** per image
Support

- Official web site
  - http://www.srce.hr/vcl

- Helpdesk
  - http://www.srce.hr/helpdesk/

- User documentation

- Rulebook

- Video instructions
http://www.srce.hr/vcl/

helpdesk@srce.hr

Dobriša Dobrenić (project leader), Luko Gjenero, Emir Imamagić, Ivor Milošević, Hrvoje Popovski, Ivan Rako, Dubravko Sever, Damir Danijel Žagar

Nataša Dobrenić, Kruno Golubić, Jasmina Plavac