

Cloud – Virtualization Workshop

Welcome

Network Startup Resource Center
www.nsrc.org



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**RIPE
NCC**

***Thank you Sandra
Gijzen!***



საქართველოს კომუნიკაციების ეროვნული
კომისია



GEORGIAN NATIONAL COMMUNICATIONS
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Instructors

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Who is the NSRC

- Nine University of Oregon personnel, plus students
- Twenty five contractors based in: Alicante, Auckland, Banjul, Brisbane, Colombo, Copenhagen, Dakar, Dar es Salaam, Halifax, Ibadan, Kampala, Lomé, London, Nairobi, Quito, Raleigh, Seattle, Toronto, Vancouver and Wellington
- Dozens of long-time volunteers who work for various universities, ISPs and industry from many countries
- Instructor-trainees in all regions of the world
- Core funding from NSF and Google with support from APIA, Cisco, ICANN, ISOC, O'Reilly Media, DHL & others.



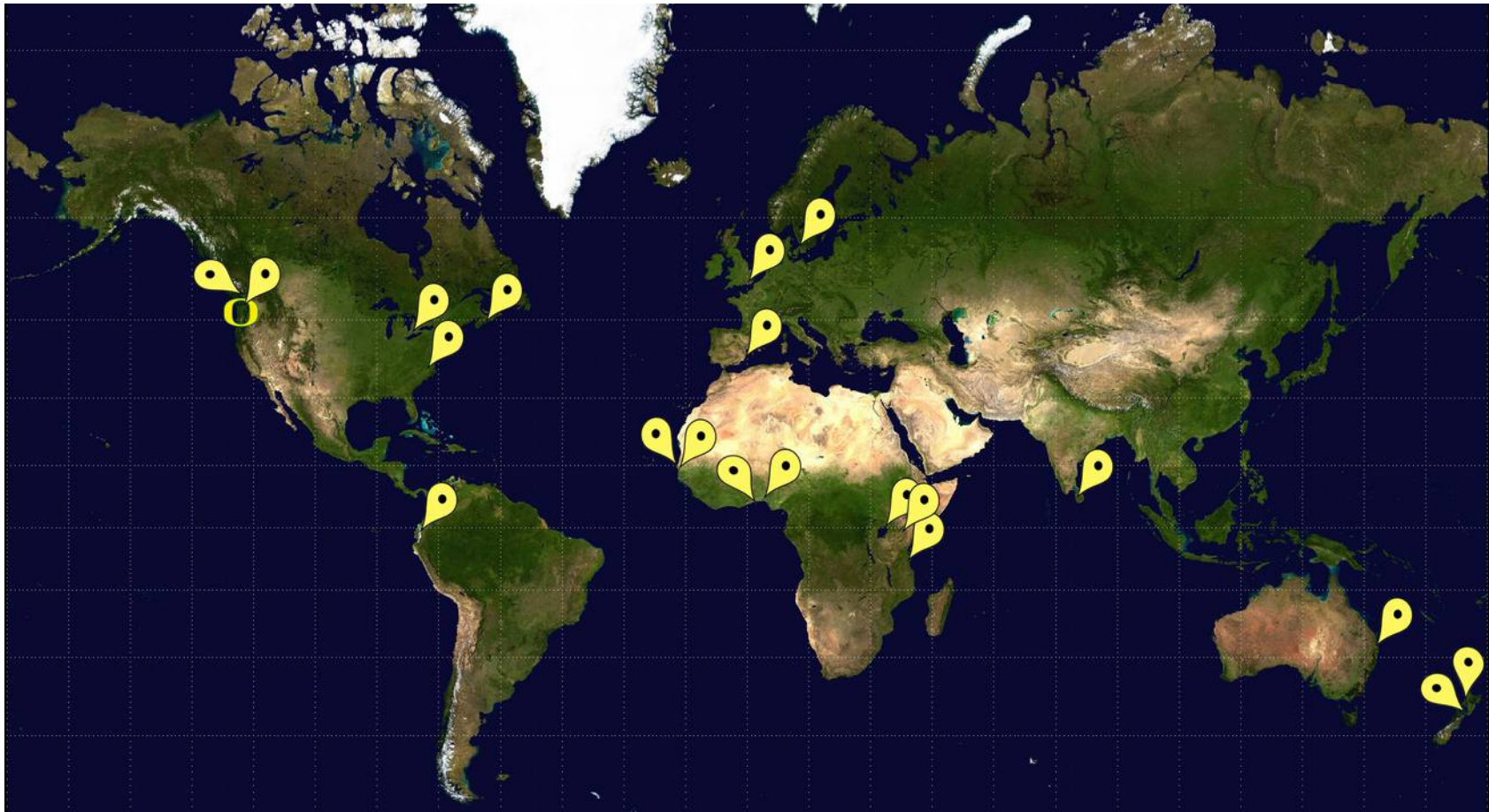
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Who is the NSRC?

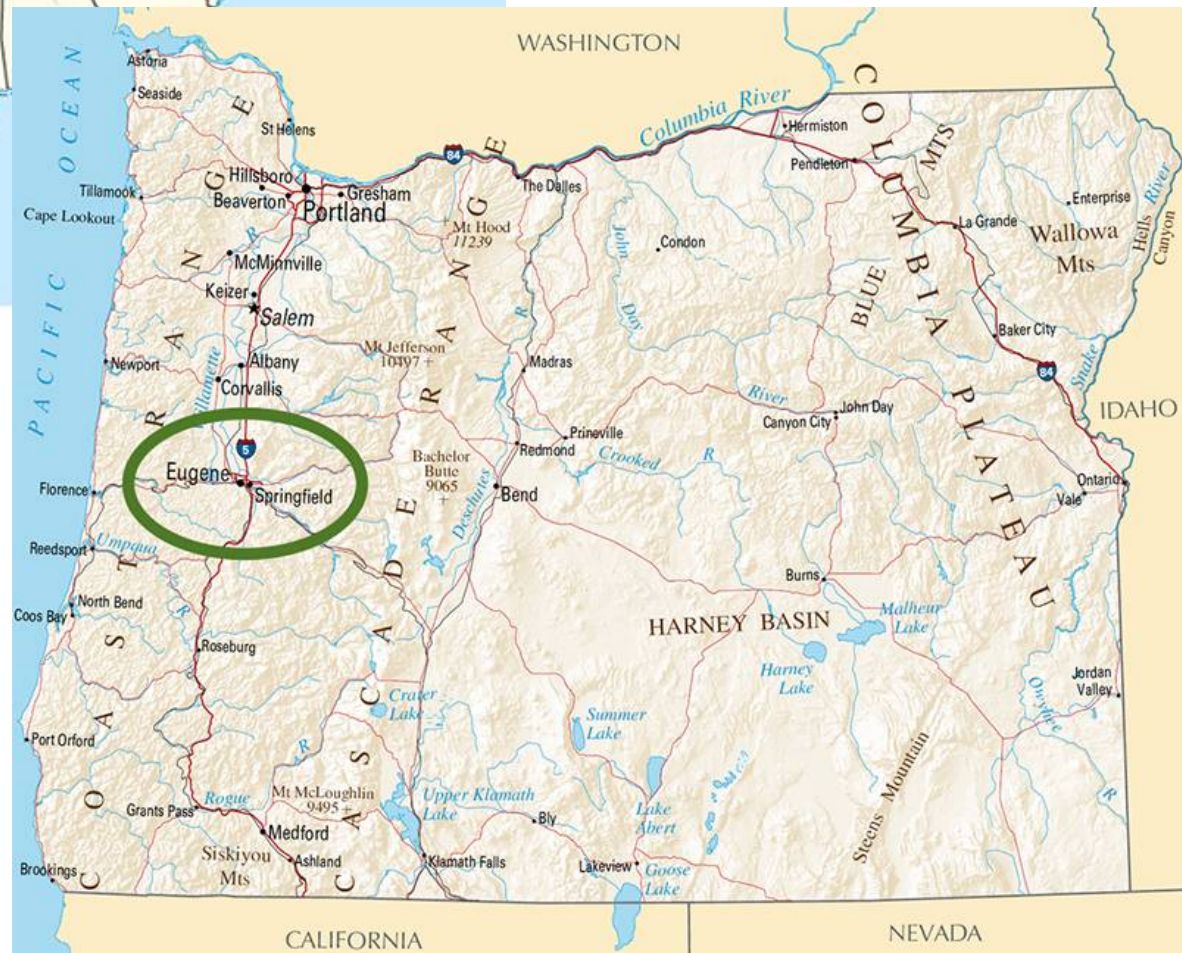
Nine University of Oregon staff and students, and...

...twenty five contractors from Eugene to Denmark to Senegal and New Zealand and everywhere in-between...





700 Kilometers



- Eugene-Springfield, Oregon
300,000 people
- University of Oregon
25,000 students

Home base



NSRC On the Ground in 2013-2014

Bangladesh	Indonesia	New Zealand	Tunisia
Bhutan	Ireland	Nicaragua	Turkey
Canada	Italy	Philippines	UAE
Costa Rica	Kazakhstan	Rwanda	USA
Denmark	Kenya	Samoa	Uganda
Djibouti	Korea	Senegal	Vanuatu
Ecuador	Laos	Singapore	Vietnam
England	Lebanon	Solomon Islands	Zambia
Fiji	Madagascar	South Africa	Zimbabwe
Germany	Malawi	Tanzania	
Ghana	Malaysia	Thailand	
Guam	Mongolia	Togo	
Haiti	Morocco	Tonga	
India	Myanmar	Trinidad & Tobago	



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Schedule – Thursday - Monday

Session 1 09:00 – 10:30

Break 10:30 – 11:00

Session 2 11:00 – 12:30

Lunch 12:30 – 13:40

Session 3 13:30 – 15:45

Break 15:45 – 16:15

Session 4 16:15 – 18:00

Agenda

Day 1	Topic
Session 1	Welcome, Introduction
Session 2	Virtualization overview
Session 3	Basic Linux sysadmin
Session 4	KVM and libvirt
Day 2	
Session 1	KVM and libvirt
Session 2	KVM / libvirt Security
Session 3	lvm and scripted install
Session 4	
Day 3	
Session 1	Migration and shared storage
Session 2	Ganeti
Session 3	Instance creation - ISO
	Live migration
Session 4	Monitoring Guests / Hosts

Day 4	
Session 1	Ganeti settings
Session 2	Virtualization and Performance
Session 3	Instance creation - automated
Session 4	Ganeti advanced features
Day 5	
Session 1	Networks and VLANs
Session 2	Failure handling
	Ganeti Web Manager
Session 3	Technical Round Table
	Closing / Final Q&A
	Evaluation
Session 4	Certificates and closing

Overview and objectives

<http://www.ws.nsrc.org/wiki/Agenda>

This track will provide an overview of virtualization technology with a series of hands-on practical exercises, so that participants will be able to:

- Build desktop virtualization with VirtualBox
- Build server virtualization with KVM and libvirt
- Use file and block shared storage and live VM migration
- Build redundant VM clusters with Ganeti

Administrative items

Course agenda

- <http://www.ws.nsrc.org/wiki/Agenda>

During the workshop

- Please ask questions as you go, don't wait
- Your feedback and experiences are valuable, please share them!
- We can adjust the schedule

Course Materials

- Available in electronic format <http://www.ws.nsrc.org/>
- Permanently archived at <https://nsrc.org/workshops/2015/ripe-nsrc-virt/>

Accessing the wireless network

Network Access:

- **SSID:** NSRC24 or NSRC5
- WPA key given in class

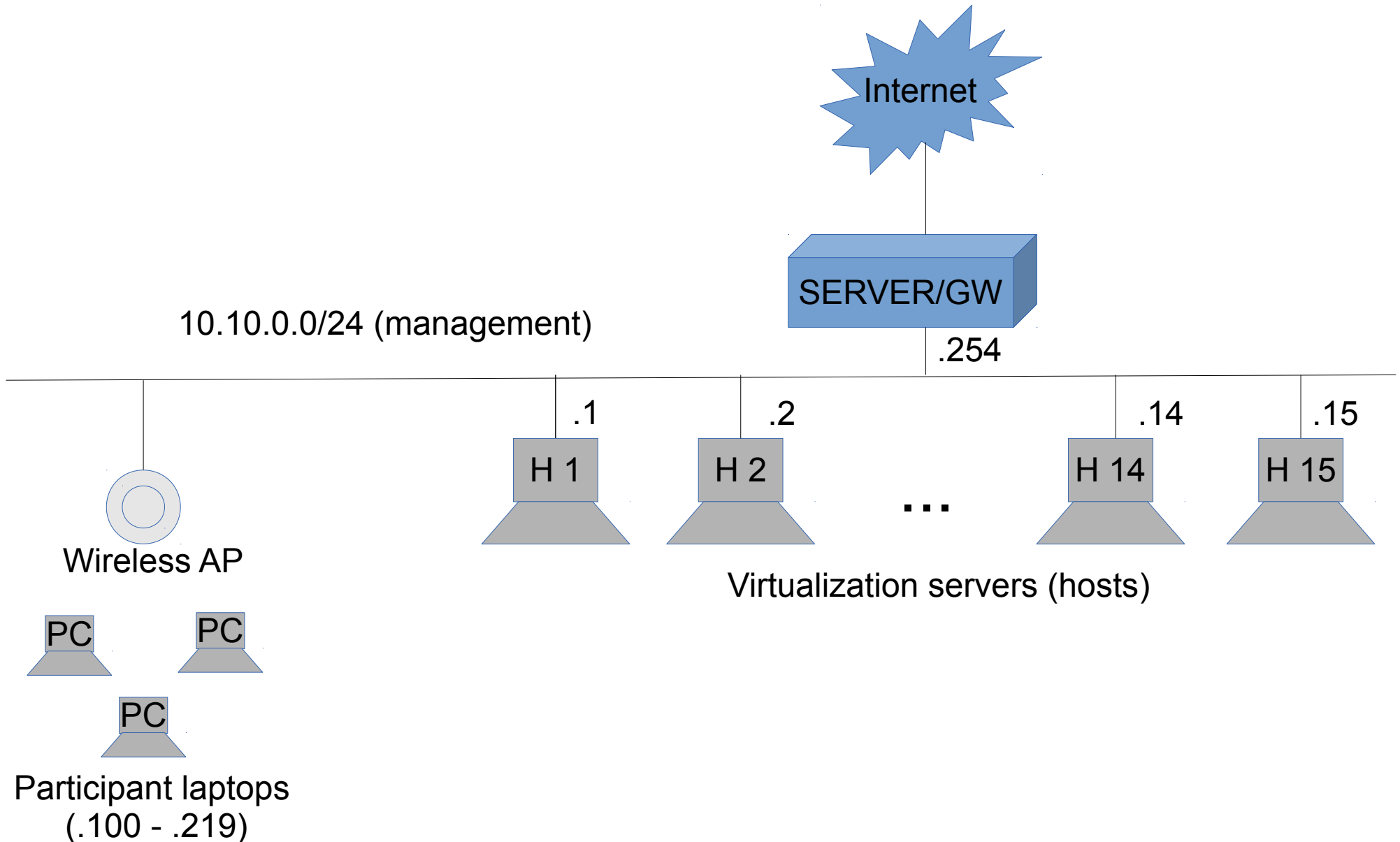
User accounts

We will be working with two user accounts:

- general user: ***nsrc***
- administrative “superuser” ***root***

You will be told which passwords to use during class.

Workshop topology



Teams and Groups

- Work in teams of 2 people per virtualization host
- One person at a time on the keyboard
 - everyone will have hands-on labs by accessing the virtualization hosts and virtual machines using SS
- We will join the Teams in Groups of 3 or 4 machines (more on this later)

Who's Here – We think...

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Questions

If you have any questions, now is the time!

