PacNOG 16
Linux Systems Administration
Network Monitoring and Management
Welcome

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UNIVERSITY OF OREGON

NSRC Network Startup Resource Center

Workshop Schedule

Session I	09:00 – 10:30
Break	10:30 – 11:00
Session II	11:00 – 13:00
Lunch	13:00 – 14:00
Session III	14:00 – 15:30
Break	15:30 – 16:00
Session IV	16:00 – 17:30+

Class can finish at 6PM if requested.

Workshop Instructors

Instructor	Country	Biography
Jon Brewer	New Zealand	http://nsrc.org/trainers/bios/JonBrewer.html
Mike Jager	New Zealand	

Workshop Agenda

Monday

Session 1.3.1	Welcome, Introductions, Workshop Details
Session 1.3.2	Layers 1/2/3 Refresher
Session 1.3.3	TCP/IP Network Essentials
Session 1.4.1	Introduction to Linux
Session 1.4.2	Security Essentials SSH

Tuesday

Session 2.1.1	Ubuntu Linux, Basic Commands
Session 2.1.2	Ubuntu Package Management
Session 2.2.1	Linux Commands and the CLI
Session 2.2.2	Text Editors (Vi, Nano, Emacs)
Session 2.3.1	Linux Permissions
Session 2.3.2	Scripting Basics
Session 2.4.1	Apache
Session 2.4.2	DNS Essentials

Wednesday

Session 3.1.1	Intro Network Monitoring & Mgmt
Session 3.1.2	SNMP
Session 3.1.3	SNMP Labs
Session 3.2.1	SNMP Labs
Session 3.2.1	Observium
Session 3.3.1	Nagios
Session 3.3.2	Nagios Labs
Session 3.4.1	Smokeping
Session 3.4.2	Smokeping Labs

Thursday

Session 4.1.1	Log Management rsyslog, Tenshi, Logstash
Session 4.1.3	rsyslog Lab
Session 4.2.1	Netflow & Nfsen
Session 4.2.2	Netflow & Nfsen Lab
Session 4.3.1	Cacti
Session 4.3.2	Cacti Lab
Session 4.4.1	Version control RANCID, SVNWeb
Session 4.4.2	Netdot
Session 4.4.3	Netdot Lab

Friday

Session 5.1.1	Ticketing Systems (RT)
Session 5.1.2	Ticketing Systems (Nagios / Cacti w/RT)
Session 5.2.1	Summary, Q&A
Session 5.2.2	Certificate Presentation, Closing

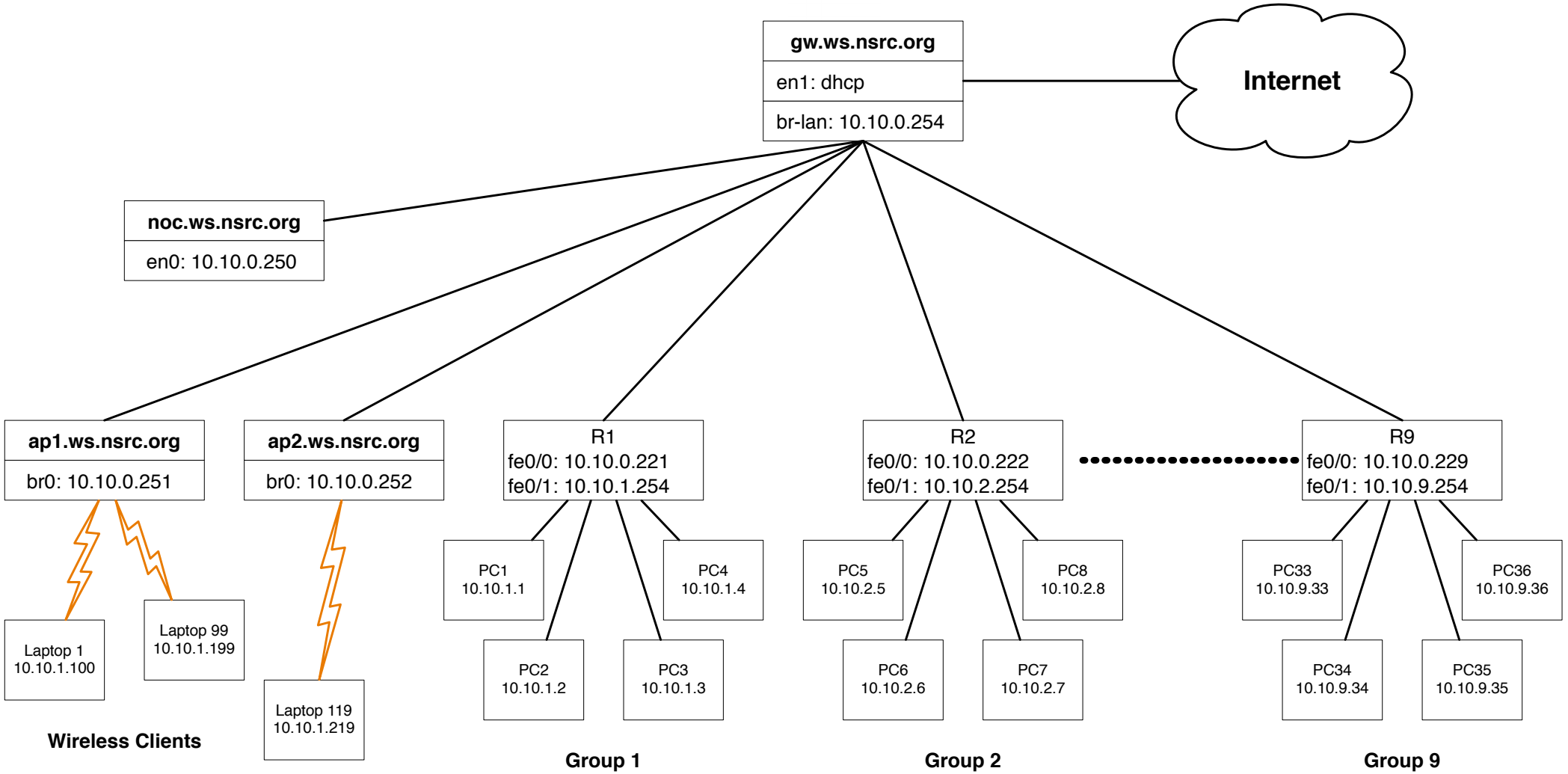
Administrative Items

- Agenda
  - http://noc.ws.nsrc.org/
- During the course
  - Please ask questions as you have them.
  - Your experiences are valuable. Please share them.
  - The schedule is somewhat flexible.
- Course Materials
  - http://noc.ws.nsrc.org/
  - Will be available permanently here:
  - http://nsrc.org/workshops/20NN/workshopname

Virtual Machine Access

- There are 36 Virtual Machines: pc1-pc36
- Each has two users:
  - General User: sysadm ← “s y s a d m”
  - Administrative User: root
- Password for sysadm is written on the board.

Network Diagram



Virtual Machine Groups

GROUP1
rtr1→ 10.10.1.254
pc1→ 10.10.1.1
pc2→ 10.10.1.2
pc3→ 10.10.1.3
pc4→ 10.10.1.4

GROUP2
rtr1→ 10.10.2.254
pc5→ 10.10.2.5
pc6→ 10.10.2.6
pc7→ 10.10.2.7
pc8→ 10.10.1.8

GROUP3
rtr1→ 10.10.3.254
pc9→ 10.10.3.9
pc10→ 10.10.3.10
pc11→ 10.10.3.11
pc12→ 10.10.3.12

GROUP4
rtr4→ 10.10.4.254
pc13→ 10.10.4.13
pc14→ 10.10.4.14
pc15→ 10.10.4.15
pc16→ 10.10.4.16

GROUP5
rtr5→ 10.10.5.254
pc17→ 10.10.5.17
pc18→ 10.10.5.18
pc19→ 10.10.5.19
pc20→ 10.10.5.20

GROUP6
rtr6→ 10.10.6.254
pc21→ 10.10.6.21
pc22→ 10.10.6.22
pc23→ 10.10.6.23
pc24→ 10.10.6.24

GROUP7
rtr7→ 10.10.7.254
pc25→ 10.10.7.25
pc26→ 10.10.7.26
pc27→ 10.10.7.27
pc28→ 10.10.7.28

GROUP8
rtr8→ 10.10.8.254
pc29→ 10.10.8.29
pc30→ 10.10.8.30
pc31→ 10.10.8.31
pc32→ 10.10.8.32

GROUP9
rtr9→ 10.10.9.254
pc33→ 10.10.9.33
pc34→ 10.10.9.34
pc35→ 10.10.9.35
pc36→ 10.10.9.36

Select Your Groups Now

- 9 total (virtual) routers
- 4 (virtual) Linux server images per router
  - 36 total virtual machine images

You will work in groups of 4 on some exercises

Please choose your location now

You will use your virtual machine all week

Questions

Please Ask Questions At Any Time!