

Network Monitoring and Management

Welcome



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Workshop Schedule

Dates: May 13 - May 17 (08:00 – 17:00)

Break 9:30 – 10:00

Lunch 13:00 – 14:00

Break 16:30 – 17:00

Student and Facilitator Introductions

- Names
- Institution
- Role
- Objectives

Join the class Wi-Fi

SSID: "KENET"

Password: k3n3t@11b

Administrative Items

- Housekeeping/Facilities
- Phone Etiquette
- Training Platform

 <https://nsrc.vtp.kenet.or.ke/current/index.html>

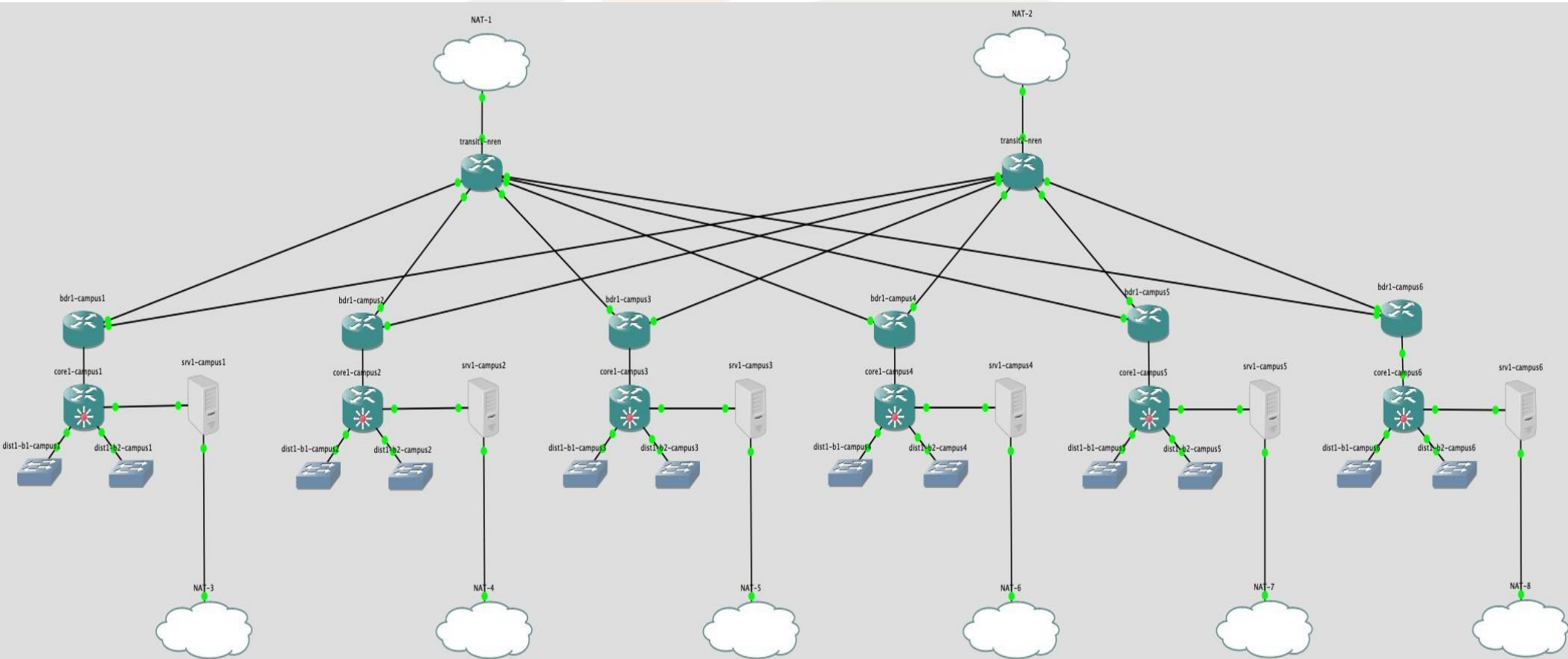
- During the course

 Please ask questions as you have them

 Please share your experiences; they are

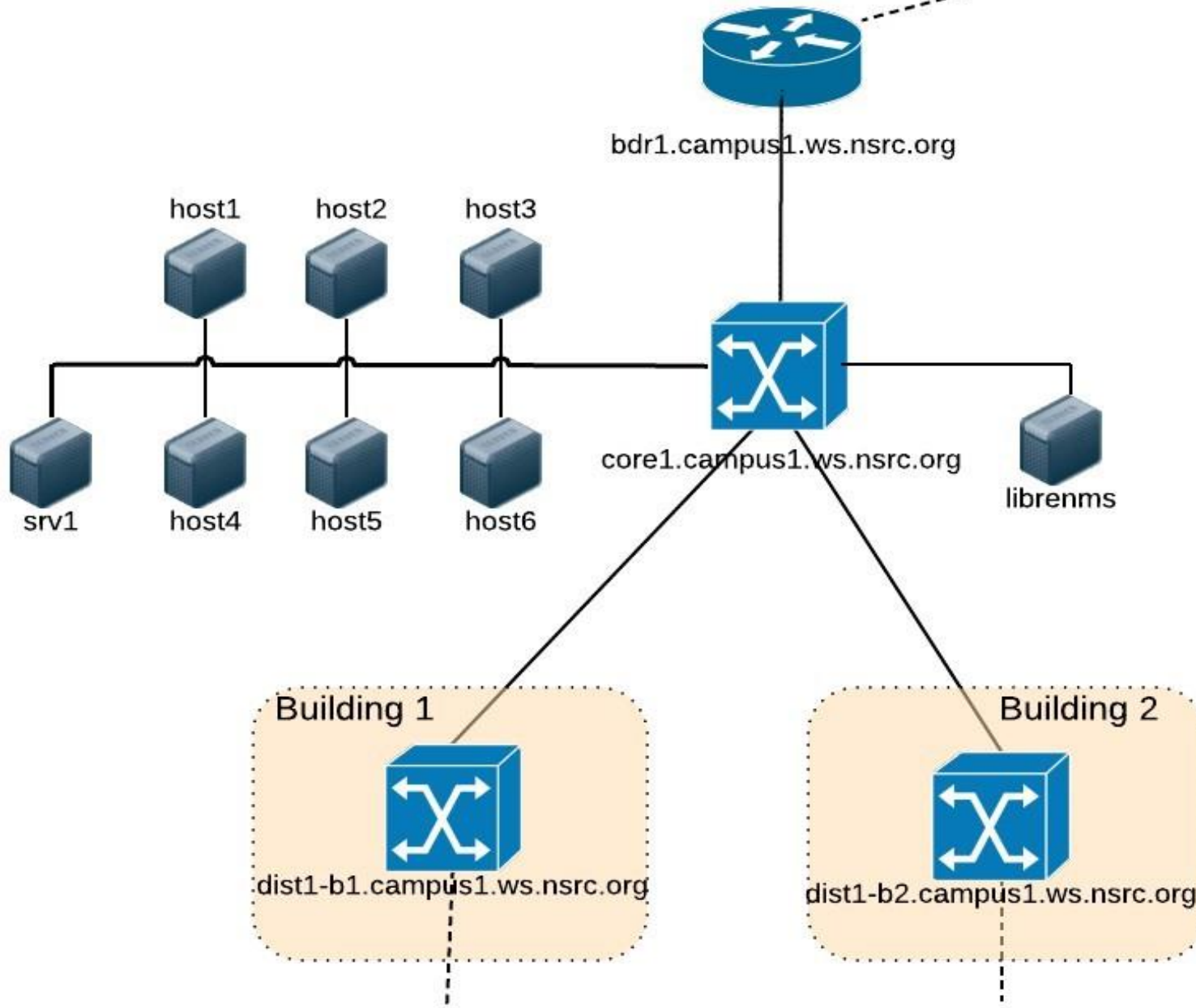
valuable

Network Diagram Overview



CAMPUS 1

To Transit Provider: transit1.nren.ws.nsrc.org



Virtual Machine Access

- There are 6 Virtual Campuses ($Y=1..6$)
- Each with one main VM and one librenms VM:
- `srv1.campusY.ws.nsrc.org`
- `librenms.campusY.ws.nsrc.org`
- Plus, six additional virtual hosts ($X=1..6$)
- `hostX.campusY.ws.nsrc.org`
- Each virtual machine (except librenms) has two users:
 - General user: *sysadm* “s y s a d m”
 - Administrative user: *root*
- Password for *sysadm* is written on the board

- Lab worksheet may say e.g.

ssh [sysadm@srv1.campusY.ws.nsrc.vtp.or.ke](ssh://sysadm@srv1.campusY.ws.nsrc.vtp.or.ke)

- If you have an ssh client, use it
- A web ssh client is provided at

www.nsrc.vtp.kenet.or.ke

Campus 6

Console ▾

SSH ▾

Web ▾

bdr1

core1

srv1

librenms

host1

host2

Windows Clients and Copy-Paste

- Ctrl-C has a special meaning in Linux!
- Try these instead:
- **Shift-Ctrl-C** (Copy) and **Shift-Ctrl-V** (Paste)
- **Ctrl-Insert** (Copy) and **Shift-Insert** (Paste)
- **Right-click** and select "Copy" or "Paste" from menu

Virtual Router Access

- Each virtual campus has these routers/switches:
- bdr1.campusY.ws.nsrc.org
- core1.campusY.ws.nsrc.org
- dist1-b1.campusY.ws.nsrc.org
- dist1-b2.campusY.ws.nsrc.org
- Username: nmmlab “n m m l a b”
- Login password and enable password for *nmmlab* is written on the board

- Network devices have a virtual serial console
 - It is shared: if multiple users are connected, they see each other typing!
- bdr1 and core1 are also directly reachable via ssh
- Both options available at www.nsrc.vtp.or.ke

Campus 6

Console ▾

SSH ▾

Web ▾

bdr1

core1

dist1-b1

dist1-b2

srv1

librenms

Campus 6

Console ▾

SSH ▾

Web ▾

bdr1

core1

srv1

librenms

host1

host2

host3

We will assign Hosts & Groups Now

- 6 border routers (bdr1.campus \mathbf{Y})
- 6 core layer 3 switches (core1.campus \mathbf{Y})
- 12 building switches (2 buildings per campus)
 - No edge switches
- 42 virtual servers
 - 1 server per user (host \mathbf{X} .campus \mathbf{Y})
 - 1 shared server per group (srv1.campus \mathbf{Y})
- *You will work in groups of 4-6 on some exercises*
- *Please choose your location for the week now*
- *You will use your group's virtual machines all week*



Acknowledgments & Partners



THANK YOU

www.kenet.or.ke

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