Linux on IBM z Systems Install Lab

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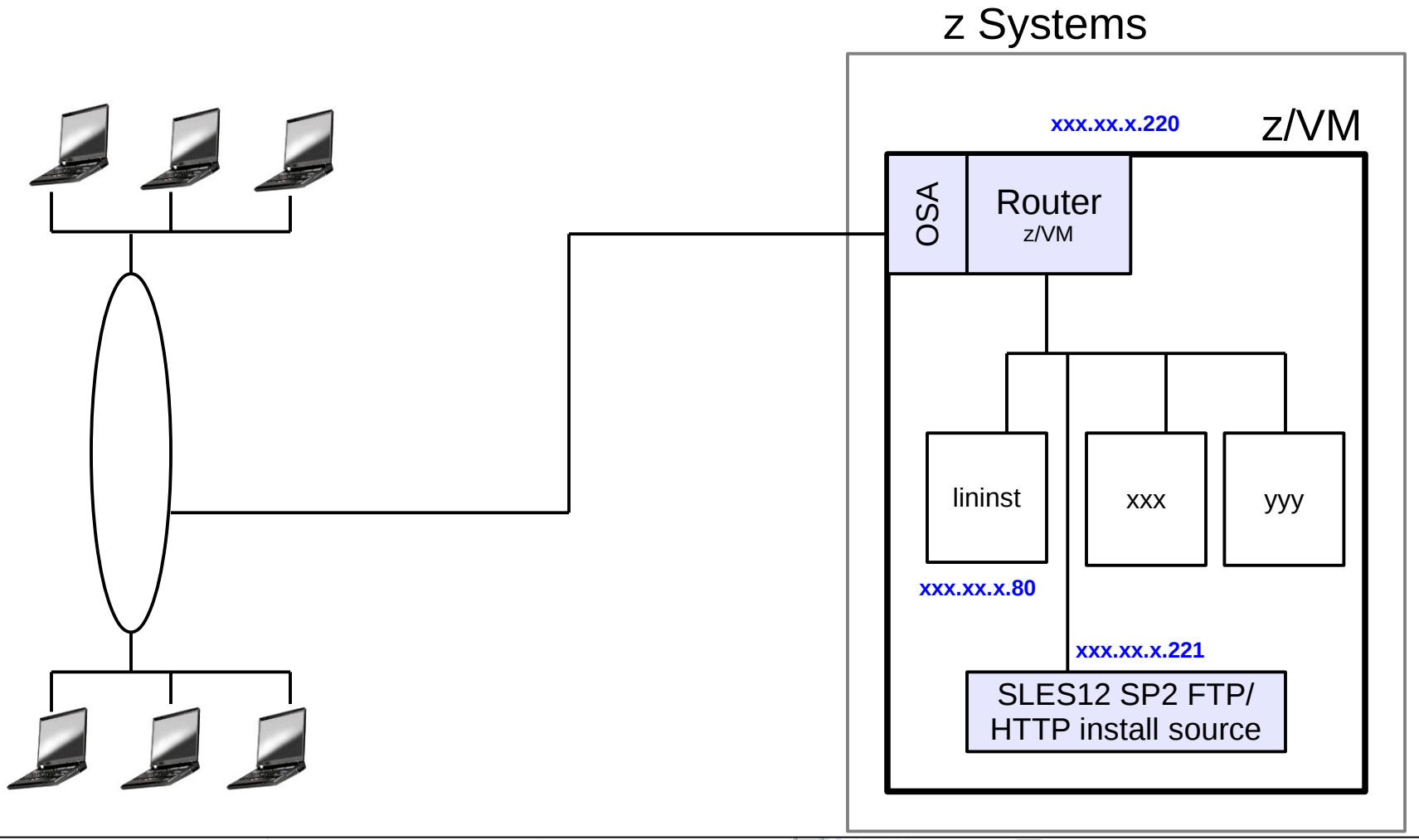
Linux on System z distributions (Kernel 2.6/3.0/4.0 based)

- SUSE Linux Enterprise Server (“SLES”)
  - Version 11 SP4 (GA 07/2015) Kernel 3.0.103, GCC 4.3.4
  - **Version 12 SP2 (GA 11/2016) Kernel 4.4.21, GCC 4.8.5**
- Red Hat Enterprise Linux AS (“RHEL”)
  - Version 5 (GA 03/2007) Kernel 2.6.18, GCC 4.1.0, Update 11 (GA 09/2014)
  - Version 6 (GA 11/2010) Kernel 2.6.32, GCC 4.4.4, Update 8 (GA 05/2016)
  - Version 7 (GA 06/2014) Kernel 3.10.0, GCC 4.8.2, Update 3 (GA 11/2016)
- Ubuntu
  - Version 16.04 (GA 04/2016) Kernel 4.3.3, Update 1 (GA 10/2016)
- Others
  - Debian, Slackware
  - Third party support may be available

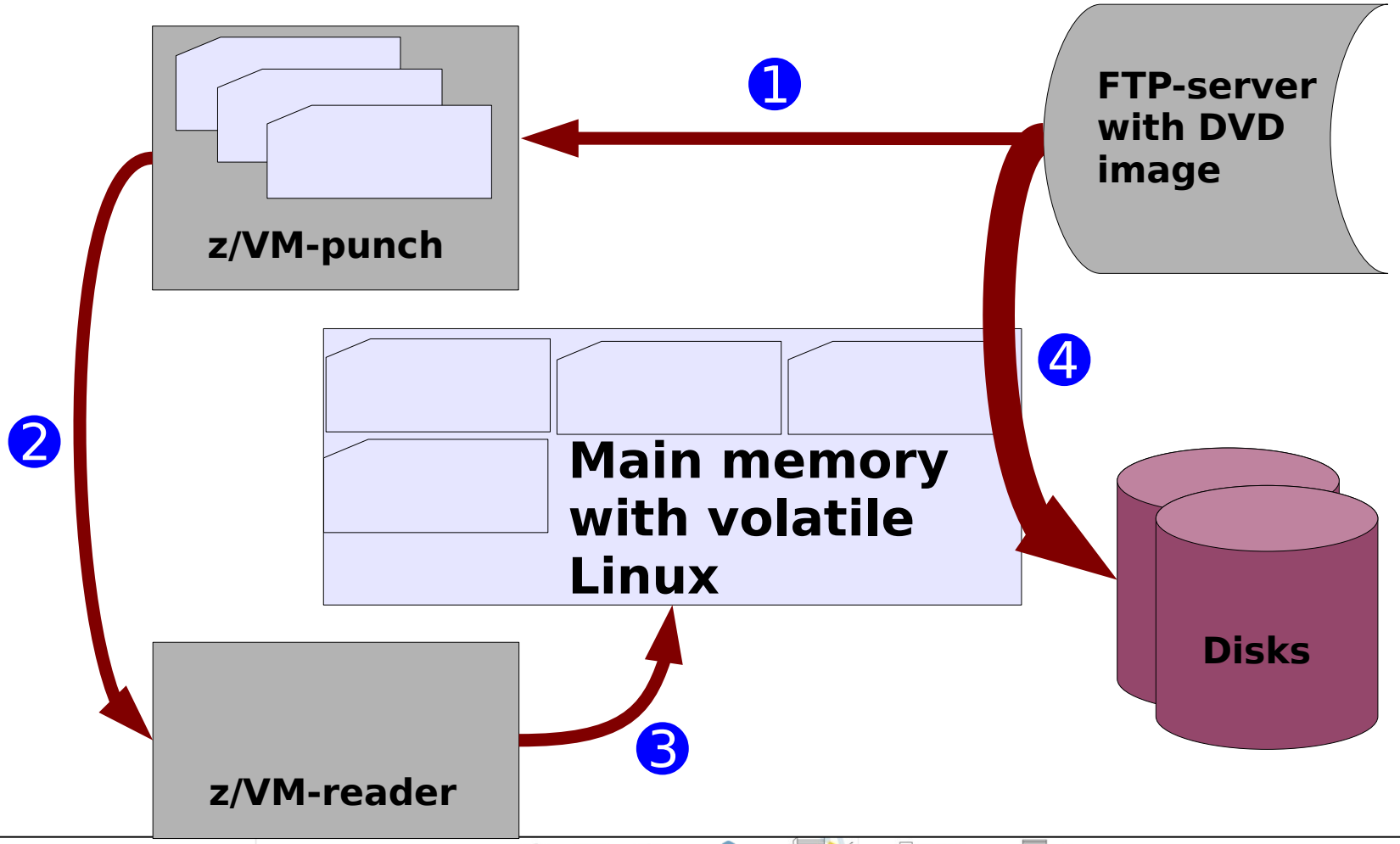
Lab Installation Environment



Preparation and starting installation

- Prepare initial IPL from z/VM reader
  - Setup an FTP/NFS/HTTP server later needed as installation source (done for you)
    - E.g. Linux server on hardware of your choice, MS Windows causes problems
    - In this lab we use the server with IP xxx.xx.x.221
  - Store kernel image, parmfile, and ramdisk locally in the z/VM guest
    - Use z/VM ftp with 'locsite fix 80' command to get the files stored in card compatible format
  - Prepare the sles12.exec.a
- IPL from reader using command 'sles12'
  - Boots a volatile Linux image in memory
- Connect the Linux image in memory to the environment
  - Prepare a network connection (OSA in this lab)
  - Prepare the install interface

Preparation and starting installation



Installation

- Connect via browser or VNC client to the graphical YAST interface
- Configure installation (installation source ...)
  - Prepare disks (write file systems, mount points)
  - Specify package selection, language, time zone
  - Create users and set passwords
- Installation of packages
  - Including boot loader
- IPL the new Linux system from disk (permanent)
- Installation completed!

References

- Trouble Shooting and Support for Linux on z Systems: http://publib.boulder.ibm.com/infocenter/lnxinfo/v3r0m0/topic/com.ibm.trouble.doc/trouble/lnxsv_ts_linuxonz.htm
- Linux on z Systems project at IBM DeveloperWorks: http://www.ibm.com/developerworks/linux/linux390/
- Linux on z Systems: Tuning Hints & Tips http://www.ibm.com/developerworks/linux/linux390/perf
- Optimize disk configuration for performance: http://www.ibm.com/developerworks/linux/linux390/perf/tuning_rec_dasd_optimizedisk.html
- Linux-VM Performance Website: http://www.vm.ibm.com/perf/tips/linuxper.html
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Questions?

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KVM for IBM z Systems

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