CS312 Homework #2

January 29, 2016

Instructions

Please submit all answers as a single text file via T.E.A.C.H using the naming format `$onidusername-hw2.txt`. This homework is due at 4pm on Friday, Feb 5th.

Questions

1. Explain the function of each of the following DNS records:

    - PTR
    - MX
    - TXT
    - CNAME
    - SOA
    - AAAA

2. Describe the difference between an authoritative DNS server and a recursive DNS server.

3. `MX` records can be used on `CNAME` records

    (a) True

(b) False

4. Which DNS record is typically used to assist in classless `PTR` delegation?

5. Describe why configuring remote logging is important.

6. Name the two logging applications that are running on CentOS 7.

7. What signal does `logrotate` typically send to applications to release file handles?

8. Provide the `journalctl` command which will list all of the logs for the `kernel`.

9. Provide a single `crontab` entry that would do **all of** the following:

   - Run every Tuesday and Thursday
   - Starting at 1am, every third hour it runs once every 10 minutes. For example, it should run at 1:10, 1:20, etc and then at 4:10, 4:20, etc.

10. Which directory allows for arbitrary `crontab` formatted files used by `crond`?

    (a) `/etc/cron.d`
    (b) `/etc/crontab`
    (c) `/etc/cron.daily`
    (d) `/etc/crons`

11. Software RAID6 can be used for `/boot` with any version of `grub`.

    (a) True
    (b) False

12. Which file provides the current status of the software RAID devices?

    (a) `/dev/raid`
    (b) `/proc/mdstat`
    (c) `/proc/mdadm`

(d) `/sys/mdstat`

13. Correctly order the commands that should be used to create an LVM volume and then mount that volume.

___ `mount /dev/data/misc /mnt`

___ `vgcreate data /dev/sda1 /dev/sdb1`

___ `pvcreate /dev/sda1 /dev/sdb1`

___ `mkfs.ext4 /dev/data/misc`

___ `lvcreate -n misc -L 100G data`

14. Which RAID level provides a mirrored set of striped drives?

(a) RAID0

(b) RAID1

(c) RAID6

(d) RAID10

15. Correctly order the network boot install steps:

___ PXELINUX downloads Linux kernel/initrd image and sends any kernel arguments

___ System start up, BIOS check

___ Gets an IP address and information on where the TFTP server is

___ Grabs the initial boot image

___ Boot from network device

16. Provide the list of Anaconda **boot** options that would do the following:

(a) Set the IP statically to `192.168.5.100`

(b) Assuming the subnet is a /24 and the gateway is `192.168.5.1`, set the correct gateway and netmask.

(c) Set the DNS nameserver to `192.168.5.130` and `192.168.5.131`

(d) Enable the VNC GUI installer with the password set to `cs312`

(e) Use the Kickstart file from an NFS file share on `192.168.5.2:/kickstart/ks.cfg`

17. Which directory does systemd look for custom systemd unit files?

    (a) `/etc/systemd/system/`
    (b) `/usr/lib/systemd/system/`
    (c) `/run/systemd/system/`
    (d) `/etc/systemd/`

18. The following command is the proper way to restart the `httpd` service using systemd: `systemctl httpd restart`

    (a) True
    (b) False

19. Which systemd service type should be used for a command that is just run and then exits?

    (a) notify
    (b) simple
    (c) forking
    (d) oneshot

20. What are systemd Targets roughly equal to in the SystemV world?

    (a) Init scripts
    (b) Run levels
    (c) Units
    (d) `init`