

# RH342 Study Sheet

*This is a short list of information to assist in review prior to the exam. This is not a comprehensive list of objectives or commands.*

## System Boot

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Regain root control

- `rd.break` within Grub
- boot system
- `mount -o remount,rw /sysroot`
- `chroot /sysroot`
- `passwd`
- `load_policy -i && restorecon -Rv /etc`

Reinstall Grub Config (BIOS)

- ``grub2-mkconfig -o /boot/grub2/grub.cfg`

## Performance Co-Pilot

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List metrics w/ terse descriptions `pminfo -t`

Query metric `pmval <metric>`

Query for time interval `pmval -T 5m <metric>`

Query archive interval values `pmval -t 5m <metric> -a <file>`

## Remote Logging

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Config `/etc/rsyslog.conf`

## Package Management

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Query file for package `rpm -qf <file>`

List content of package `rpm -qp <package>`

List package dependencies `rpm -qR` or `yum deplist <package>`

Package that will provide `yum provides */<file>`

Exclude a package `exclude=<package>` in `/etc/yum.conf`

Version locking `yum install -y yum-plugin-versionlock` && `yum versionlock <package>`

## RPM Database

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Verify RPM database `/usr/lib/rpm/rpmdb_verify /var/lib/rpm/Packages`

Create a new RPM database from existing

```
/usr/lib/rpm/rpmdb_dump <existing> | /usr/lib/rpm/rpmdb_load <new>
```

Rebuild the database `rpm --rebuilddb`

## Kernel Modules

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List loaded modules `lsmod`

List module options `modinfo -p <module>`

Load a module `modprobe <module> <parameters>`

Remove a module `modprobe -r <module>`

Loaded module parameters `cat /sys/module/<module>/parameters/<parameters>`

## File System Issues

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Recover an XFS filesystem `xfs_repair /dev/<filesystem>`

Recover an ext4 filesystem `fsck.ext4 /dev/<filesystem>`

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List LVM archived metadata `vgcfgrestore -l <volume group>`

Undo an LVM change `vgcfgrestore -f <file from metadata> <volume group>`

Deactive a logical volume `lvchange -an /dev/<volume group>/<logical volume>`

Active a logical volume `lvchange -ay /dev/<volume group>/<logical volume>`

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View LUKS key slots `cryptsetup luksDump /dev/<LOCKED DEVICE>`

Restore a LUKS header

```
cryptsetup luksHeaderRestore /dev/<DEVICE> --header-backup-file <file>
```

Manually open a IUKS volume `cryptsetup luksOpen /dev/<device> <luks name>`

**LUKS name in `/etc/crypttab` must match `/dev/mapper` name in `/etc/fstab`**

## iSCSI

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```
/etc/iscsi/initiatorname.iscsi value ust match ACL in targetcli
```

Security settings must match `targetcli` | `/etc/iscsi/iscsid.conf`

Discovery targets `iscsiadm -m discovery -t sendtargets -p <host>`

List targets `iscsiadm -m node`

Delete discoveries `iscsiadm -m node -o delete`

Login to target `iscsiadm -m node -T <target> -l`

## Networking

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### DNS

Verify `/etc/resolv.conf` for valid DNS host

Verify `/etc/nsswitch.conf` for `dns` entry in `hosts`

Verify `/etc/hosts` for collisions

### Connectivity Testing

Connect to on `telnet <host> <post>`

Listen on `nc -l <port>`

## Firewalld

List running config `firewall-cmd --list-all`

Add `firewall-cmd --permanent --add-port=<tcp port>/tcp && firewall-cmd --reload`

## Pack Captures

Read a packet capture `tcpdump -r <file>`

Read a packet capture and display ASCII values `tcpdump -Ar <file>`

Create a packet capture `tcpdump -i <interface> -w <file>`

## Application Troubleshooting

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List libraries used by application `ldd $(which <application>)`

Test for memory leaks `valgrind <application>`

Debug `strace <application>`

## SELinux

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Use sealert on audit log `sealert -a /var/log/audit/audit.log`

List booleans `getsebool -a`

Set a permanent boolean `setsebool -P <boolean> <0|1>`

Restore context of file/dir `restorecon -Rv <file/dir>`

## Authentication

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View LDAP/Kerb settings `cat /etc/sysconfig/authconfig`

Modify LDAP/Kerb settings `authconfig-tui`

Obtain a Kerberos ticket `kinit`

List Kerberos cache `klist`

PAM - check package verification

## SystemTap

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Run a script `stap <script>`

Compile a script into a module

- `stap -p 4 -m <module name> <script>`
- create a systemtap directory under `/lib/modules/$(uname -r)/`
- move module to new directory
- run module with `staprun <module>`

Grant user access to run stap modules `usermod -aG stapusr <user>`