RedHat Configuration Triple H

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Contents

1 Introduction

1.1 Things you will need

1. Intel based server

2. RedHat Enterprise

3. RedHat License

4. RedHat email with license details

5. UniVerse or UniData software and license

6. Digi Terminal Server

7. Tapes matching the tape drive

2 Register RedHat

Did a "rhn_register –nox" and used keyboard to step through the RedHat Registration.

2.1 Update all

Did a "yum update" to update all installed software.

3 RedHat Setup

3.1 Package Installation

3.1.1 compat-libstdc++

```
"yum install compat-libstdc++-33.i386"
  To install the compatability libraries for uniVerse


[root@hhhshims \~]# yum install compat-libstdc++-33.i386
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up Install Process
Setting up repositories
rhel-i386-server-5         100\% |=====| 1.4 kB     00:00
Reading repository metadata in from local files
Parsing package install arguments
Resolving Dependencies
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for compat-libstdc++-33 to pack into transaction set.
compat-libstdc++-33-3.2.3 100\% |=====| 7.4 kB     00:00
---> Package compat-libstdc++-33.i386 0:3.2.3-61 set to be updated
--> Running transaction check

Dependencies Resolved

 Package                   Arch        Version          Repository        Size

Installing:
 compat-libstdc++-33       i386        3.2.3-61         rhel-i386-server-5  232 k

Transaction Summary

Install       1 Package(s)
Update        0 Package(s)
Remove        0 Package(s)

Total download size: 232 k
Is this ok [y/N]: y
```

```
Downloading Packages:
(1/1): compat-libstdc++-3 100\% |=====| 232 kB    00:01
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing: compat-libstdc++-33          ##### [1/1]


Installed: compat-libstdc++-33.i386 0:3.2.3-61
Complete!
[root@hhhshims \~]#
```

3.1.2 Search for and install telnet-server

```
[root@hhhshims \~]# yum search telnet.server
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up repositories
rhel-i386-server-5        100\% |=====| 1.4 kB    00:00
Reading repository metadata in from local files
No Matches found
[root@hhhshims \~]# yum search telnet-server
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up repositories
rhel-i386-server-5        100\% |=====| 1.4 kB    00:00
Reading repository metadata in from local files




telnet-server.i386                1:0.17-38.el5        rhel-i386-server
Matched from:
telnet-server
Telnet is a popular protocol for logging into remote systems over the
Internet. The telnet-server package includes a telnet daemon that
supports remote logins into the host machine. The telnet daemon is
disabled by default. You may enable the telnet daemon by editing
/etc/xinetd.d/telnet.




telnet-server.i386                1:0.17-39.el5        rhel-i386-server
Matched from:
```

```
telnet-server
Telnet is a popular protocol for logging into remote systems over the
Internet. The telnet-server package includes a telnet daemon that
supports remote logins into the host machine. The telnet daemon is
disabled by default. You may enable the telnet daemon by editing
/etc/xinetd.d/telnet.

[root@hhhshims \~]# rpm -qa |grep telnet
telnet-0.17-39.el5
[root@hhhshims \~]# yum install telnet-server.i386
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up Install Process
Setting up repositories
rhel-i386-server-5          100\% |=====| 1.4 kB     00:00
Reading repository metadata in from local files
Parsing package install arguments
Resolving Dependencies
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for telnet-server to pack into transaction set.
telnet-server-0.17-39.el5 100\% |=====| 8.5 kB     00:00
---> Package telnet-server.i386 1:0.17-39.el5 set to be updated
--> Running transaction check
--> Processing Dependency: xinetd for package: telnet-server
--> Restarting Dependency Resolution with new changes.
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for xinetd to pack into transaction set.
xinetd-2.3.14-10.el5.i386 100\% |=====| 7.7 kB     00:00
---> Package xinetd.i386 2:2.3.14-10.el5 set to be updated
--> Running transaction check

Dependencies Resolved


 Package                   Arch        Version             Repository          Size

Installing:
 telnet-server             i386        1:0.17-39.el5       rhel-i386-server-5   35 k
Installing for dependencies:
 xinetd                    i386        2:2.3.14-10.el5     rhel-i386-server-5  124 k

Transaction Summary

Install        2 Package(s)
```

```
Update          0 Package(s)
Remove          0 Package(s)

Total download size: 159 k
Is this ok [y/N]: y
Downloading Packages:
(1/2): telnet-server-0.17 100\% |=====|  35 kB    00:00
(2/2): xinetd-2.3.14-10.e 100\% |=====| 124 kB    00:01
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing: xinetd                      ##### [1/2]
  Installing: telnet-server               ##### [2/2]

Installed: telnet-server.i386 1:0.17-39.el5
Dependency Installed: xinetd.i386 2:2.3.14-10.el5
Complete!
[root@hhhshims \~]#
```

3.1.3 tcp_wrappers

```
tcp\_wrappers is already installed if we want to use it.
[root@hhhshims \~]# rpm -qa |grep tcp\_wrappers
tcp\_wrappers-7.6-40.4.el5
[root@hhhshims \~]#
```

3.1.4 Install expect

Note: Expect is a package used in the assigning of user passwords inside a script.

```
[root@hhhshims bin]# yum install expect.i386
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up Install Process
Setting up repositories
rhel-i386-server-5          100\% |=====| 1.4 kB    00:00
Reading repository metadata in from local files
Parsing package install arguments
Resolving Dependencies
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for expect to pack into transaction set.
expect-5.43.0-5.1.i386.rp 100\% |=====|  15 kB    00:00
---> Package expect.i386 0:5.43.0-5.1 set to be updated
```

```
--> Running transaction check

Dependencies Resolved

 Package                   Arch        Version          Repository        Size

Installing:
 expect                    i386        5.43.0-5.1       rhel-i386-server-5  158 k

Transaction Summary

Install       1 Package(s)
Update        0 Package(s)
Remove        0 Package(s)

Total download size: 158 k
Is this ok [y/N]: y
Downloading Packages:
(1/1): expect-5.43.0-5.1. 100\% |=====| 158 kB    00:01
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing: expect                          ##### [1/1]

Installed: expect.i386 0:5.43.0-5.1
Complete!
```

3.1.5 Install gcc

```
[root@hhhshims dgnc-1.3]# yum install gcc-c++.i386
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up Install Process
Setting up repositories
rhel-i386-server-5         100\% |=====| 1.4 kB    00:00
Reading repository metadata in from local files
Parsing package install arguments
Resolving Dependencies
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for gcc-c++ to pack into transaction set.
gcc-c++-4.1.2-14.el5.i386 100\% |=====|  57 kB    00:00
---> Package gcc-c++.i386 0:4.1.2-14.el5 set to be updated
--> Running transaction check
```

```
--> Processing Dependency: gcc = 4.1.2-14.el5 for package: gcc-c++
--> Processing Dependency: libstdc++-devel = 4.1.2-14.el5 for package: gcc-c++
--> Restarting Dependency Resolution with new changes.
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for libstdc++-devel to pack into transaction set.
libstdc++-devel-4.1.2-14. 100\% |=====| 135 kB     00:00
---> Package libstdc++-devel.i386 0:4.1.2-14.el5 set to be updated
---> Downloading header for gcc to pack into transaction set.
gcc-4.1.2-14.el5.i386.rpm 100\% |=====|  64 kB     00:00
---> Package gcc.i386 0:4.1.2-14.el5 set to be updated
--> Running transaction check
--> Processing Dependency: glibc-devel >= 2.2.90-12 for package: gcc
--> Processing Dependency: libgomp = 4.1.2-14.el5 for package: gcc
--> Processing Dependency: libgomp.so.1 for package: gcc
--> Restarting Dependency Resolution with new changes.
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for glibc-devel to pack into transaction set.
glibc-devel-2.5-18.el5\_1. 100\% |=====| 109 kB     00:00
---> Package glibc-devel.i386 0:2.5-18.el5\_1.1 set to be updated
---> Downloading header for libgomp to pack into transaction set.
libgomp-4.1.2-14.el5.i386 100\% |=====|  54 kB     00:00
---> Package libgomp.i386 0:4.1.2-14.el5 set to be updated
--> Running transaction check
--> Processing Dependency: glibc-headers for package: glibc-devel
--> Processing Dependency: glibc-headers = 2.5-18.el5\_1.1
 for package: glibc-devel
--> Restarting Dependency Resolution with new changes.
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for glibc-headers to pack into transaction set.
glibc-headers-2.5-18.el5\_ 100\% |=====| 142 kB     00:00
---> Package glibc-headers.i386 0:2.5-18.el5\_1.1 set to be updated
--> Running transaction check

Dependencies Resolved

Dependencies Resolved

 Package              Arch       Version            Repository      Size

Installing:
 gcc-c++              i386       4.1.2-14.el5       rhel-i386-server-5  3.4 M
Installing for dependencies:
 gcc                  i386       4.1.2-14.el5       rhel-i386-server-5  5.2 M
 glibc-devel          i386       2.5-18.el5\_1.1   rhel-i386-server-5  2.0 M
```

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```
 glibc-headers            i386        2.5-18.el5\_1.1   rhel-i386-server-5  608 k
 libgomp                  i386        4.1.2-14.el5      rhel-i386-server-5  76 k
 libstdc++-devel          i386        4.1.2-14.el5      rhel-i386-server-5  9.4 M

Transaction Summary

Install      6 Package(s)
Update       0 Package(s)
Remove       0 Package(s)

Total download size: 21 M
Is this ok [y/N]: y
Downloading Packages:
(1/6): libstdc++-devel-4. 100\% |=====| 9.4 MB     01:17
(2/6): gcc-4.1.2-14.el5.i 100\% |=====| 5.2 MB     00:44
(3/6): libgomp-4.1.2-14.e 100\% |=====|  76 kB     00:00
(4/6): gcc-c++-4.1.2-14.e 100\% |=====| 3.4 MB     00:30
(5/6): glibc-headers-2.5- 100\% |=====| 608 kB     00:04
(6/6): glibc-devel-2.5-18 100\% |=====| 2.0 MB     00:17
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing: glibc-headers                 ##### [1/6]
  Installing: glibc-devel                   ##### [2/6]
  Installing: libgomp                       ##### [3/6]
  Installing: gcc                           ##### [4/6]
  Installing: libstdc++-devel               ##### [5/6]
  Installing: gcc-c++                       ##### [6/6]

Installed: gcc-c++.i386 0:4.1.2-14.el5
Dependency Installed: gcc.i386 0:4.1.2-14.el5
 glibc-devel.i386 0:2.5-18.el5\_1.1
 glibc-headers.i386 0:2.5-18.el5\_1.1
 libgomp.i386 0:4.1.2-14.el5 libstdc++-devel.i386 0:4.1.2-14.el5
Complete!
[root@hhhshims dgnc-1.3]# pwd
/root/driverdownloads/dgnc-1.3
```

3.1.6 Install gcc

```
[root@hhhshims dgnc-1.3]# yum install gcc.i386
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
```

```
Setting up Install Process
Setting up repositories
rhel-i386-server-5         100\% |=====| 1.4 kB     00:00
Reading repository metadata in from local files
Parsing package install arguments
Nothing to do
[root@hhhshims dgnc-1.3]#
```

3.1.7 Install rpm-build

```
[root@hhhshims dgnc-1.3]# yum install rpm-build.i386
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up Install Process
Setting up repositories
rhel-i386-server-5         100\% |=====| 1.4 kB     00:00
Reading repository metadata in from local files
Parsing package install arguments
Resolving Dependencies
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for rpm-build to pack into transaction set.
rpm-build-4.4.2-47.el5.i3 100\% |=====|  18 kB     00:00
---> Package rpm-build.i386 0:4.4.2-47.el5 set to be updated
--> Running transaction check
--> Processing Dependency: elfutils for package: rpm-build
--> Restarting Dependency Resolution with new changes.
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for elfutils to pack into transaction set.
elfutils-0.125-3.el5.i386 100\% |=====|  15 kB     00:00
---> Package elfutils.i386 0:0.125-3.el5 set to be updated
--> Running transaction check
--> Processing Dependency: elfutils-libs = 0.125-3.el5 for package: elfutils
--> Processing Dependency: libdw.so.1 for package: elfutils
--> Processing Dependency: libdw.so.1(ELFUTILS\_0.122) for package: elfutils
--> Restarting Dependency Resolution with new changes.
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for elfutils-libs to pack into transaction set.
elfutils-libs-0.125-3.el5 100\% |=====|  17 kB     00:00
---> Package elfutils-libs.i386 0:0.125-3.el5 set to be updated
--> Running transaction check

Dependencies Resolved
```

```
   Package                 Arch          Version           Repository          Size

Installing:
 rpm-build               i386          4.4.2-47.el5      rhel-i386-server-5  549 k
Installing for dependencies:
 elfutils                i386          0.125-3.el5       rhel-i386-server-5  164 k
 elfutils-libs           i386          0.125-3.el5       rhel-i386-server-5  105 k

Transaction Summary

Install      3 Package(s)
Update       0 Package(s)
Remove       0 Package(s)

Total download size: 818 k
Is this ok [y/N]: y
Downloading Packages:
(1/3): elfutils-0.125-3.e 100\% |=====| 164 kB     00:01
(2/3): rpm-build-4.4.2-47 100\% |=====| 549 kB     00:04
(3/3): elfutils-libs-0.12 100\% |=====| 105 kB     00:00
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing: elfutils-libs                   ##### [1/3]
  Installing: elfutils                        ##### [2/3]
  Installing: rpm-build                       ##### [3/3]

Installed: rpm-build.i386 0:4.4.2-47.el5
Dependency Installed: elfutils.i386 0:0.125-3.el5 elfutils-libs.i386 0:0.125-3.el5
Complete!
[root@hhhshims dgnc-1.3]#
```

3.1.8 Install kernel-devel

```
[root@hhhshims driverdownloads]# yum install kernel-devel-i686
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up Install Process
Setting up repositories
rhel-i386-server-5         100\% |=====| 1.4 kB     00:00
Reading repository metadata in from local files
Parsing package install arguments
Resolving Dependencies
```

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```
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for kernel-devel to pack into transaction set.
kernel-devel-2.6.18-53.1. 100\% |=====| 746 kB     00:01
---> Package kernel-devel.i686 0:2.6.18-53.1.4.el5 set to be installed
--> Running transaction check

Dependencies Resolved


 Package                 Arch        Version            Repository         Size

Installing:
 kernel-devel            i686        2.6.18-53.1.4.el5  rhel-i386-server-5  4.7 M

Transaction Summary

Install       1 Package(s)
Update        0 Package(s)
Remove        0 Package(s)

Total download size: 4.7 M
Is this ok [y/N]: y
Downloading Packages:
(1/1): kernel-devel-2.6.1 100\% |=====| 4.7 MB     00:37
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing: kernel-devel                   ##### [1/1]

Installed: kernel-devel.i686 0:2.6.18-53.1.4.el5
Complete!
[root@hhhshims driverdownloads]#
```

3.1.9 Install ncurses-devel

```
[root@hhhshims driverdownloads]# yum install ncurses-devel.i386
Loading "installonlyn" plugin
Loading "rhnplugin" plugin
Setting up Install Process
Setting up repositories
rhel-i386-server-5        100\% |=====| 1.4 kB     00:00
Reading repository metadata in from local files
Parsing package install arguments
```

```
Resolving Dependencies
--> Populating transaction set with selected packages. Please wait.
---> Downloading header for ncurses-devel to pack into transaction set.
ncurses-devel-5.5-24.2006 100\% |=====|  98 kB    00:00
---> Package ncurses-devel.i386 0:5.5-24.20060715 set to be updated
--> Running transaction check

Dependencies Resolved


 Package                 Arch        Version          Repository         Size

Installing:
 ncurses-devel           i386        5.5-24.20060715  rhel-i386-server-5  1.6 M

Transaction Summary

Install       1 Package(s)
Update        0 Package(s)
Remove        0 Package(s)

Total download size: 1.6 M
Is this ok [y/N]: y
Downloading Packages:
(1/1): ncurses-devel-5.5- 100\% |=====| 1.6 MB    00:12
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing: ncurses-devel                 ##### [1/1]

Installed: ncurses-devel.i386 0:5.5-24.20060715
Complete!
[root@hhhshims driverdownloads]#
```

3.1.10 rpmbuild ????

```
I did:
941  rpmbuild --rebuild 40002369\_f.src.rpm
printed over 1000 lines and did not error
```

3.2 Miscellaneous Configuration

3.2.1 Link compress and uncompress to gzip and gunzip for UniVerse

```
[root@hhhshims \~]# cd /bin
[root@hhhshims bin]# ls -al |grep compress
[root@hhhshims bin]# ls -al |grep zip
-rwxr-xr-x  3 root root   62136 Dec 14  2006 gunzip
-rwxr-xr-x  3 root root   62136 Dec 14  2006 gzip
[root@hhhshims bin]# ln -s gzip compress
[root@hhhshims bin]# ln -s gunzip uncompress
[root@hhhshims bin]# ls -al |grep zip
lrwxrwxrwx  1 root root       4 Jan  9 14:41 compress -> gzip
-rwxr-xr-x  3 root root   62136 Dec 14  2006 gunzip
-rwxr-xr-x  3 root root   62136 Dec 14  2006 gzip
lrwxrwxrwx  1 root root       6 Jan  9 14:41 uncompress -> gunzip
```

3.3 Devices

3.3.1 Digi term servers

Looking for dgnc

```
[root@hhhshims driverdownloads]# find / -print |grep dgnc-1.3-15.i386.rpm
/usr/src/redhat/RPMS/i386/dgnc-1.3-15.i386.rpm
[root@hhhshims driverdownloads]#
 rpm -i /usr/src/redhat/RPMS/i386/dgnc-1.3-15.i386.rpm
Running Post Install script...


    ************************************************************************
    * Please run "/etc/rc.d/init.d/dgnc start" to start the dgnc driver. *
    ************************************************************************


[root@hhhshims driverdownloads]#
```

3.3.2 Digi installation uses rpmbuild

```
I did:
941  rpmbuild --rebuild 40002369\_f.src.rpm
printed over 1000 lines and did not error
```

Add the digi port settings to the /etc/rc.d/rc.local script

```
[root@hhhshims uv]# cat /etc/rc.d/rc.local
#!/bin/sh
#
# This script will be executed *after* all the other init scripts.
# You can put your own initialization stuff in here if you don't
# want to do the full Sys V style init stuff.

touch /var/lock/subsys/local

# ttyn1a is printer lp0 in UniVerse
ditty.dgnc 9600 ixon ixoff ttyn1a

# ttyn1b is printer lp2 in UniVerse
ditty.dgnc 9600 ixon ixoff ttyn1b

# ttyn1c is printer lp3 in UniVerse
ditty.dgnc 9600 ixon ixoff ttyn1c

# ttyn1d is printer lp4 in UniVerse
ditty.dgnc 9600 ixon ixoff ttyn1d

# ttyn1g is reserved for the Desqtop modem
ditty.dgnc 9600 ixon ixoff ttyn1g

# ttyn1h is reserved for the ASCII terminal on the
# warehouse counter
ditty.dgnc 9600 ixon ixoff ttyn1h
[root@hhhshims uv]#
```

Add the mgetty to the /etc/inittab

```
http://www.digi.com/support/kbase/kbaseresultdetl.jsp?id=194
See line D000

[root@hhhshims etc]# cat inittab
#
# inittab       This file describes how the INIT process should set up
#               the system in a certain run-level.
#
# Author:       Miquel van Smoorenburg, <miquels@drinkel.nl.mugnet.org>
#               Modified for RHS Linux by Marc Ewing and Donnie Barnes
#
```

```
# Default runlevel. The runlevels used by RHS are:
#    0 - halt (Do NOT set initdefault to this)
#    1 - Single user mode
#    2 - Multiuser, without NFS (The same as 3, if you do not have networking)
#    3 - Full multiuser mode
#    4 - unused
#    5 - X11
#    6 - reboot (Do NOT set initdefault to this)
#
id:5:initdefault:

# System initialization.
si::sysinit:/etc/rc.d/rc.sysinit

l0:0:wait:/etc/rc.d/rc 0
l1:1:wait:/etc/rc.d/rc 1
l2:2:wait:/etc/rc.d/rc 2
l3:3:wait:/etc/rc.d/rc 3
l4:4:wait:/etc/rc.d/rc 4
l5:5:wait:/etc/rc.d/rc 5
l6:6:wait:/etc/rc.d/rc 6

# Trap CTRL-ALT-DELETE
ca::ctrlaltdel:/sbin/shutdown -t3 -r now

# When our UPS tells us power has failed, assume we have a few minutes
# of power left.  Schedule a shutdown for 2 minutes from now.
# This does, of course, assume you have powerd installed and your
# UPS connected and working correctly.
pf::powerfail:/sbin/shutdown -f -h +2 "Power Failure; System Shutting Down"

# If power was restored before the shutdown kicked in, cancel it.
pr:12345:powerokwait:/sbin/shutdown -c "Power Restored; Shutdown Cancelled"


# Run gettys in standard runlevels
1:2345:respawn:/sbin/mingetty tty1
2:2345:respawn:/sbin/mingetty tty2
3:2345:respawn:/sbin/mingetty tty3
4:2345:respawn:/sbin/mingetty tty4
5:2345:respawn:/sbin/mingetty tty5
6:2345:respawn:/sbin/mingetty tty6
```

```
# Run agetty in standard runlevels for Wharehouse Counter
D000:2345:respawn:/sbin/agetty -L 9600 ttyn1h

# Run xdm in runlevel 5
x:5:respawn:/etc/X11/prefdm -nodaemon
```

3.3.3 Axxon serial boards

3.4 VNC setup for remote desktop

3.4.1 TightVNC setup 1/22/08

```
TightVNC setup 1/22/08
need to have xshell running and enter "vino-preferences
 \&" to see the X window for preferences.
Then to get the service started, enter "service vncserver start"
01/22/08 having a problem??
[root@hhhshims \~]# vino-preferences\&
[2] 6623
You have new mail in /var/spool/mail/rootf
[1]    Done                      vino-preferences
[root@hhhshims \~]# service vncserver status
Xvnc is stopped
[root@hhhshims \~]# service vncserver start
Starting VNC server: no displays configured          [  OK  ]
[root@hhhshims \~]# service vncserver status
Xvnc is stopped
```

I am not sure why I am getting a message no displays configured. It was working prior to a reboot.

3.5 Local Logging

3.6 Backup

4 UniVerse Installation

4.1 Directory Configuration

4.1.1 Setup UniVerse Directories

```
[root@hhhshims \~]# mkdir /media/cdrom
[root@hhhshims \~]# mkdir -p /usr/ibm/uv
```

Sometimes I make a symbolic link to /usr/ibm/uv from wherever the old install directory. Thus: ln -s /usr/ibm/uv /usr/lpp/uv on 1/10/08 I changed the ownership of /usr/ibm to uvadm

```
[root@hhhshims usr]# chown uvadm:adm ibm
[root@hhhshims usr]# ls -al|grep ibm
drwxr-xr-x   2 uvadm adm   4096 Jan 10 15:38 ibm
[root@hhhshims usr]#

Then I removed the uv directory
[root@hhhshims usr]# cd ibm
[root@hhhshims ibm]# ls uv
[root@hhhshims ibm]# rmdir uv
```

4.2 User setup

4.2.1 uvadm creation?

```
Need to make a uvadm user for the installation.
```

4.3 Use following gui commands for system configuration

```
Bob's notes:

[root@hhhshims /]# ls  /usr/sbin/system-config*
/usr/sbin/system-config-authentication  /usr/sbin/system-config-network-cmd
  /usr/sbin/system-config-packages
/usr/sbin/system-config-lvm             /usr/sbin/system-config-network-gui
  /usr/sbin/system-config-printer
```

```
/usr/sbin/system-config-network         /usr/sbin/system-config-network-tui
  /usr/sbin/system-config-services
[root@hhhshims /]# ls  /usr/bin/system-config*
/usr/bin/system-config-authentication  /usr/bin/system-config-network
          /usr/bin/system-config-selinux
/usr/bin/system-config-date            /usr/bin/system-config-network-cmd
      /usr/bin/system-config-services
/usr/bin/system-config-display         /usr/bin/system-config-packages
         /usr/bin/system-config-soundcard
/usr/bin/system-config-kdump           /usr/bin/system-config-printer
          /usr/bin/system-config-time
/usr/bin/system-config-keyboard        /usr/bin/system-config-rootpassword
      /usr/bin/system-config-users
/usr/bin/system-config-language        /usr/bin/system-config-securitylevel
/usr/bin/system-config-lvm             /usr/bin/system-config-securitylevel-tui
[root@hhhshims /]#
```

4.3.1 Create uvadm and uvsql users

```
[root@hhhshims /]# adduser -g adm -G wheel,users,root -m
 -c "uniVerse Administrator" uvadm
[root@hhhshims /]# passwd uvadm
Changing password for user uvadm.
New UNIX password:
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@hhhshims /]# adduser -g adm -G wheel,users -m
 -c "uniVerse SQL Admin" uvsql
[root@hhhshims /]# passwd uvsql
Changing password for user uvsql.
New UNIX password:
Retype new UNIX password:
passwd: all authentication tokens updated successfully.
[root@hhhshims /]#
```

4.4 Installation

4.4.1 Mounting the UniVerse cd

```
[root@hhhshims \~]# mount /dev/cdrom /media/cdrom
mount: block device /dev/cdrom is write-protected, mounting read-only
[root@hhhshims \~]#
```

4.4.2 Copy uv.load to root

```
[root@hhhshims cdrom]# cd /
[root@hhhshims /]# cpio -ivcBdum uv.load < /media/cdrom/STARTUP
uv.load
28 blocks
[root@hhhshims /]#
```

4.4.3 Did the uv.load as user uvadm.

```
Final few lines read:
Creating directory /usr/spool
mkdir: cannot create directory '/usr/spool': Permission denied
chown: cannot access '/usr/spool': No such file or directory
chgrp: cannot access '/usr/spool': No such file or directory
chmod: cannot access '/usr/spool': No such file or directory
Creating directory /usr/spool/uv
mkdir: cannot create directory '/usr/spool/uv': No such file or directory
chown: cannot access '/usr/spool/uv': No such file or directory
chgrp: cannot access '/usr/spool/uv': No such file or directory
chmod: cannot access '/usr/spool/uv': No such file or directory
Creating sample sp.config file
cp: cannot create regular file '/usr/spool/uv': No such file or directory
Creating a dummy usplog file for usd
./uv.load: line 1449: /usr/spool/uv/usplog: No such file or directory
Copying the sample .profile into uv home directory
Copying \&PARTFILES\& file
Copying UV.ACCOUNT file
Copying UV.FLAVOR file
Copying VCOMM.PORTS file
Creating resize\_lock file
Copying uvlogd.script
43467
478
43923


This initial installation of UniVerse must now be completed

by logging in as 'root' and executing the script

'/usr/ibm/uv/uv.install'.

UniVerse will remain in an inoperable state until this
```

```
script has been executed.

[uvadm@hhhshims tmp]\$
```

4.4.4 Doing uv.install the first time attempt as uvadm user

Seemed to work except for creating the /usr/spool/uv directory. Then I decided to delete this installation and redo the install as root.

```
[root@hhhshims uv]# ./uv.install
./uv.install: line 30: NEWACC: command not found


Continuing installation of uniVerse.


Adding UniVerse initialization to rc file
9210
9221
Initializing unohist file
uvconfig: No such file or directory
UVSPOOL path does not exist or have adequate permissions.
error in uvconfig at line 56: UVSPOOL /usr/spool/uv
uvregen: error during regen, process aborted
uvregen: error during regen, process aborted
uvconfig: No such file or directory
UVSPOOL path does not exist or have adequate permissions.
error in uvconfig at line 56: UVSPOOL /usr/spool/uv
uvregen: error during regen, process aborted
uvregen: error during regen, process aborted
UniVerse has not been configured! Please go to \$UVHOME and run 'uvsh' as root.
Setting the new Dynamic Library location to /usr/ibm/uv/uvdlls
...Compiling terminfo definitions.
mkdir /usr/ibm/uv/terminfo/p
mkdir /usr/ibm/uv/terminfo/t
mkdir /usr/ibm/uv/terminfo/1
mkdir /usr/ibm/uv/terminfo/a
mkdir /usr/ibm/uv/terminfo/h
mkdir /usr/ibm/uv/terminfo/q
mkdir /usr/ibm/uv/terminfo/u
mkdir /usr/ibm/uv/terminfo/s
mkdir /usr/ibm/uv/terminfo/4
mkdir /usr/ibm/uv/terminfo/3
mkdir /usr/ibm/uv/terminfo/8
mkdir /usr/ibm/uv/terminfo/f
```

```
mkdir /usr/ibm/uv/terminfo/5
mkdir /usr/ibm/uv/terminfo/7
mkdir /usr/ibm/uv/terminfo/2
mkdir /usr/ibm/uv/terminfo/n
mkdir /usr/ibm/uv/terminfo/9
mkdir /usr/ibm/uv/terminfo/6
...Generating terminfo index.
sort: open failed: +1: No such file or directory
The uniVerse/SQL Catalog does not exist.
Installing the default catalog.
16 blocks
28 blocks
16 blocks
16 blocks
16 blocks
16 blocks
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Fixing path and ownership information for uniVerse/SQL Catalog.
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Initializing the UniVerse catalog space
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Copying \&DEVICE\& file
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
70
```

```
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
chown: cannot access 'D\_UV.TRANS': No such file or directory
chgrp: cannot access 'D\_UV.TRANS': No such file or directory
Created file D\_UV.TRANS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Updated file D\_UV.TRANS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
chown: cannot access 'UV.TRANS': No such file or directory
chgrp: cannot access 'UV.TRANS': No such file or directory
Created file UV.TRANS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
```

```
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
chown: cannot access 'D\_UV\_LOGS': No such file or directory
chgrp: cannot access 'D\_UV\_LOGS': No such file or directory
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Created file D\_UV\_LOGS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
chown: cannot access 'UV\_LOGS': No such file or directory
chgrp: cannot access 'UV\_LOGS': No such file or directory
Created file UV\_LOGS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
Updated file D\_UV\_LOGS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9   2
chown: cannot access 'UV.ACCESS': No such file or directory
chgrp: cannot access 'UV.ACCESS': No such file or directory
```

```
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
chown: cannot access 'D\_UV.ACCESS': No such file or directory
chgrp: cannot access 'D\_UV.ACCESS': No such file or directory
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
Created and loaded file UV.ACCESS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
chmod: cannot access 'STAT.FILE': No such file or directory
chown: cannot access 'STAT.FILE': No such file or directory
chgrp: cannot access 'STAT.FILE': No such file or directory
Created file STAT.FILE
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
chmod: cannot access 'D\_STAT.FILE': No such file or directory
chown: cannot access 'D\_STAT.FILE': No such file or directory
chgrp: cannot access 'D\_STAT.FILE': No such file or directory
Created file D\_STAT.FILE
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
Updated file D\_STAT.FILE
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code: 9    2
```

```
Compiled STAT.FILE dictionary items
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
chown: cannot access 'D\_UV\_UDRPUB': No such file or directory
chgrp: cannot access 'D\_UV\_UDRPUB': No such file or directory
Created file D\_UV\_UDRPUB
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
chown: cannot access 'UV\_UDRPUB': No such file or directory
chgrp: cannot access 'UV\_UDRPUB': No such file or directory
Created file UV\_UDRPUB
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Updated file D\_UV\_UDRPUB
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
chown: cannot access 'D\_UV\_UDRSUB': No such file or directory
chgrp: cannot access 'D\_UV\_UDRSUB': No such file or directory
Created file D\_UV\_UDRSUB
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
chown: cannot access 'UV\_UDRSUB': No such file or directory
chgrp: cannot access 'UV\_UDRSUB': No such file or directory
Created file UV\_UDRSUB
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
```

```
Please contact the system administrator
Error code:  9   2
Updated file D\_UV\_UDRSUB
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9   2
chown: cannot access 'D\_UV\_UDRSYS': No such file or directory
chgrp: cannot access 'D\_UV\_UDRSYS': No such file or directory
Created file D\_UV\_UDRSYS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9   2
chown: cannot access 'UV\_UDRSYS': No such file or directory
chgrp: cannot access 'UV\_UDRSYS': No such file or directory
Created file UV\_UDRSYS
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9   2
Updated file D\_UV\_UDRSYS

Generating UniVerse keystore file...
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9   2

Installed /usr/ibm/unishared/unirpc version 10.1.7.
Installed /usr/ibm/unishared/ucisdk version 10.2.4.
Installed /usr/ibm/unishared/uojsdk version .
Installed /usr/ibm/unishared/jdbc version 1.2.5.
Installed /usr/ibm/unishared/icsdk version .
Updating /usr/ibm/unishared/sharedby...
Done.
Updating /usr/ibm/unishared/unirpc/unirpcservices...
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9   2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
```

```
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
cp: cannot stat 'sample/hs\_environ': No such file or directory
chmod: cannot access 'uvodbc/hs\_environ': No such file or directory
Installing uniVerse GCI package..Temporary directory /usr/spool/uv
 does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
.Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
.Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
.Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9    2
```

```
.Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9   2
.Done
Unable to open error log file
/etc/rc.d/init.d/uv.rc: line 12:  7485 Segmentation fault      \$uvhome/bin/usa -z
No daemon running
uniVerse has been brought down.
UniVerse has not been configured! Please go to \$UVHOME and run 'uvsh' as root.
Temporary directory /usr/spool/uv does not exist or have adequate permissions.
An error has occurred during uniVerse initialization
Please contact the system administrator
Error code:  9   2

UniVerse licensing is complete. Please shutdown and restart UniVerse.
Use the UniVerse system administration menu to create additional
UniVerse accounts.


****** Just a reminder! ******
During the installation process, the existing keystore file for
Master Key was not changed.

[root@hhhshims uv]#
```

4.4.5 Now trying the installation as root

```
The current settings of the available options are:

   UniVerse installer    : root
   UniVerse administrator: root  uid=0  gid=0

1) UniVerse home directory:           /usr/ibm/uv
                                      (currently: Not Installed.)
2) UniVerse-UniData shared directory: /usr/ibm/unishared
                                      (currently: Not Installed.)
3) Compile terminfo definitions:      true
4) Rewind tape name                   /media/cdrom
5) No-rewind tape name                /media/cdrom
6) Long File Names                    ON NEWACC

Enter a field number to change, q to abort installation, or
```

press <Return> to begin installation of UniVerse:

C7Q7I-ZZVCZ-RFX7Z-ZQZW6-ZUZMZ-XZ07U-UZISA
C7Q7I-ZZVCZ-RFX7Z-ZQZW6-ZUZMZ-XZ07U-UZISA

```
+----------------------- Upgrade uniVerse License ----------------------+
|              File              Action            Help                 |
+----------------------------------------------------------------------+
|                                                                      |
|    Enter Authorized serial number : 12391815                         |
|    Local User Limit               : 24                               |
|    New expiration date            : 01/01/2500                       |
|    Package list                   :                                  |
|    Device Licensing count         :                                  |
|    Configuration Code             : C7Q7I-ZZVCZ-RFX7Z-ZQZW6-ZUZMZ-XZ07U-UZISA|
|    Local Authorization Code       ?                                  |
|                                                                      |
|                                                                      |
|                                                                      |
|                                                                      |
|                                                                      |
+--------------------------- Help Region ------------------------------+
|Enter your designated authorization code. In the case of a Floating License   |
|system, this would be the Local authorization code.                   |
|                                                                      |
|                                                                      |
|                                                                      |
+----------------------------------------------------------------------+
```

Went to IBM site with the above configuration and got a warning
 that the device licensing count was less than we were entitled to???
SZMB5-7NXXQ-UTMR
SZMB5-7NXXQ-UTMR

SZMB5-7NXXQ-UTMR

UniVerse licensing is complete. Please shutdown and restart UniVerse.
Use the UniVerse system administration menu to create additional
UniVerse accounts.

****** Warning !!! ******
During the installation process, a default Master Key was installed.
The Master key is central to all data encryption operations. IBM

recommends that you change the default Master Key to a site-specific
Master Key before any data encryption activity takes place. To change
the Master Key, run the uvregen utility. For information about uvregen,
see "Administering UniVerse".

```
[root@hhhshims /]# /etc/rc.d/init.d/uv.rc stop
usa: no spool daemon
uniVerse has been brought down.
[root@hhhshims /]# /etc/rc.d/init.d/uv.rc start
UniVerse has not been authorized! You have a trial license.
uniVerse Log Daemon started
uniVerse has been brought up.
Deadlock Daemon has been started
[root@hhhshims /]#

[root@hhhshims /]# /etc/rc.d/init.d/uv.rc stop
DeadLock Daemon shutdown
uniVerse has been brought down.
[root@hhhshims /]#

[root@hhhshims /]# cd /usr/ibm/uv
[root@hhhshims uv]# /usr/ibm/uv/bin/uvregen -A "SZMB5-7NXXQ-UTMR"
uvregen: reconfiguration complete, disk segment size is 1009896
UniVerse has been authorized.
[root@hhhshims uv]#

[root@hhhshims uv]# /etc/rc.d/init.d/uv.rc start
uniVerse Log Daemon started
uniVerse has been brought up.
Deadlock Daemon has b een started
[root@hhhshims uv]#
```

4.5 Configuration of UniVerse Environment

4.5.1 UniVerse tunables default settings

```
[root@hhhshims uv]# /usr/ibm/uv/bin/smat -t
Current tunable parameter settings:
     MFILES          =    12
     T30FILE         =    200
     OPENCHK         =    1
     WIDE0           =    0x3dc00000
     UVSPOOL         =    /usr/spool/uv
```

```
        UVTEMP         =      /tmp
        SCRMIN         =      3
        SCRMAX         =      5
        SCRSIZE        =      512
        QDEPTH         =      16
        HISTSTK        =      99
        QSRUNSZ        =      2000
        QSBRNCH        =      4
        QSDEPTH        =      8
        QSMXKEY        =      32
        TXMODE         =      0
        LOGBLSZ        =      512
        LOGBLNUM       =      8
        LOGSYCNT       =      0
        LOGSYINT       =      0
        TXMEM          =      32
        OPTMEM         =      64
Press any key to continue...
        SELBUF         =      4
        ULIMIT         =      128000
        FSEMNUM        =      23
        GSEMNUM        =      97
        PSEMNUM        =      64
        FLTABSZ        =      11
        GLTABSZ        =      50
        RLTABSZ        =      50
        RLOWNER        =      50
        PAKTIME        =      300
        NETTIME        =      5
        QBREAK         =      1
        VDIVDEF        =      1
        UVSYNC         =      1
        BLKMAX         =      8192
        PICKNULL       =      0
        SYNCALOC       =      1
        MAXRLOCK       =      40
        ISOMODE        =      1
        PKRJUST        =      0
        PROCACMD       =      0
        PROCRCMD       =      0
        PROCPRMT       =      0
Press any key to continue...
        ALLOWNFS       =      0
        CSHDISPATCH    =      /bin/csh
```

```
        SHDISPATCH      =    /bin/sh
        DOSDISPATCH     =    NOT\_SUPPORTED
        LAYERSEL        =    0
        OCVDATE         =    0
        MODFPTRS        =    1
        THDR512         =    0
        UDRMODE         =    0
*       UDRBLKS         =    0
        MAXERRLOGENT    =    100
        JOINBUF         =    4095
        64BIT\_FILES    =    0
        TSTIMEOUT       =    60
        PIOPENDEFAULT   =    0
        MAXKEYSIZE      =    255
        SMISDATA        =    0
        EXACTNUMERIC    =    15
        MALLOCTRACING   =    0
        CENTURYPIVOT    =    1930
*       SPINTRIES       =    0
        SPINSLEEP       =    10000
        CONVERT\_EURO    =    0
Press any key to continue...
        SYSTEM\_EURO     =    164
        TERM\_EURO       =    164
        SQLNULL         =    128
        UVNET\_CONNECT   =    0
        ALLOWMARKS      =    0
        PICKDATE        =    0
        PICK\_MT         =    0
        UVTSORT         =    1
        PHANTOMSAMEUV   =    0
        CPLOGRLS        =    0
        BGINPUTTIMEOUT  =    0
        TXNEXTHOLD      =    1
        TIMEACCURACY    =    1
        TXWMFSYNCMODE   =    0
        FMT\_TEXTMARK    =    0
        PI\_MATCHFIELD   =    0
        UVLOGSWITCH     =    0
```

4.5.2 After changing the uvconfig parameter file need to do a uvregen

```
[root@hhhshims uv]# service uv.rc stop
DeadLock Daemon shutdown
```

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```
uniVerse has been brought down.
[root@hhhshims uv]# /usr/ibm/uv/bin/uvregen
uvregen: reconfiguration complete, disk segment size is 1495696
[root@hhhshims uv]# service uv.rc stop
usa: no spool daemon
uniVerse has been brought down.
[root@hhhshims uv]# service uv.rc start
uniVerse Log Daemon started
uniVerse has been brought up.
Deadlock Daemon has been started
UniVerse tunables default settings
```

4.5.3 UniVerse tunables after the regen settings

Note the use of the smat command to document the installation of the changes.

```
[root@hhhshims uv]# /usr/ibm/uv/bin/smat -t
Current tunable parameter settings:
*    MFILES        =    70
     T30FILE       =    200
     OPENCHK       =    1
     WIDE0         =    0x3dc00000
     UVSPOOL       =    /usr/spool/uv
     UVTEMP        =    /tmp
     SCRMIN        =    3
     SCRMAX        =    5
     SCRSIZE       =    512
     QDEPTH        =    16
     HISTSTK       =    99
     QSRUNSZ       =    2000
     QSBRNCH       =    4
     QSDEPTH       =    8
     QSMXKEY       =    32
     TXMODE        =    0
     LOGBLSZ       =    512
     LOGBLNUM      =    8
     LOGSYCNT      =    0
     LOGSYINT      =    0
     TXMEM         =    32
     OPTMEM        =    64
Press any key to continue...
     SELBUF        =    4
     ULIMIT        =    128000
     FSEMNUM       =    23
```

```
        GSEMNUM       =    97
        PSEMNUM       =    64
        FLTABSZ       =    11
*       GLTABSZ       =    75
*       RLTABSZ       =    75
*       RLOWNER       =    300
*       PAKTIME       =    30
        NETTIME       =    5
        QBREAK        =    1
        VDIVDEF       =    1
        UVSYNC        =    1
        BLKMAX        =    8192
        PICKNULL      =    0
        SYNCALOC      =    1
*       MAXRLOCK      =    74
        ISOMODE       =    1
        PKRJUST       =    0
        PROCACMD      =    0
        PROCRCMD      =    0
        PROCPRMT      =    0
Press any key to continue...
        ALLOWNFS      =    0
        CSHDISPATCH   =    /bin/csh
        SHDISPATCH    =    /bin/sh
        DOSDISPATCH   =    NOT\_SUPPORTED
        LAYERSEL      =    0
        OCVDATE       =    0
        MODFPTRS      =    1
        THDR512       =    0
        UDRMODE       =    0
*       UDRBLKS       =    0
        MAXERRLOGENT  =    100
        JOINBUF       =    4095
        64BIT\_FILES   =    0
        TSTIMEOUT     =    60
        PIOPENDEFAULT =    0
        MAXKEYSIZE    =    255
        SMISDATA      =    0
        EXACTNUMERIC  =    15
        MALLOCTRACING =    0
        CENTURYPIVOT  =    1930
*       SPINTRIES     =    0
        SPINSLEEP     =    10000
        CONVERT\_EURO   =    0
```

```
Press any key to continue...
     SYSTEM\_EURO    =    164
     TERM\_EURO     =    164
     SQLNULL        =    128
     UVNET\_CONNECT =    0
     ALLOWMARKS     =    0
     PICKDATE       =    0
     PICK\_MT       =    0
     UVTSORT        =    1
     PHANTOMSAMEUV  =    0
     CPLOGRLS       =    0
     BGINPUTTIMEOUT =    0
     TXNEXTHOLD     =    1
     TIMEACCURACY   =    1
     TXWMFSYNCMODE  =    0
     FMT\_TEXTMARK   =    0
     PI\_MATCHFIELD  =    0
     UVLOGSWITCH    =    0
[root@hhhshims uv]#
```

4.6 Spooler Configuration

4.6.1 changed sp.config again

01/21/08 changed sp.config again to use the ttyn1a-d ports insetad of prn1a-d The digi support person said the the prn1a-h ports were for transparent print through an ASCII terminal to an aux port. They have specific configuration to pace the output very slowly.

```
[root@hhhshims uv]# cat sp.config
lp0 /dev/ttyn1a BAUD 9600 XOFF STARTANY
 OFF PARITY None CRMODE ONLCR TABS ON DATABITS 8
lp2 /dev/ttyn1b BAUD 9600 XOFF STARTANY
 OFF PARITY None CRMODE ONLCR TABS ON DATABITS 8
lp3 /dev/ttyn1c BAUD 9600 XOFF STARTANY
 OFF PARITY None CRMODE ONLCR DATABITS 8
lp4 /dev/ttyn1d BAUD 9600 XOFF STARTANY
 OFF PARITY None CRMODE ONLCR DATABITS 8
LP6 /dev/null BAUD 9600 DRIVER /usr/spool/uv/hazh3.drv XOFF STARTANY
 OFF PARITY None TABS ON FFDELAY 1 LFDELAY 0 DATABITS 8
LP7 /dev/null BAUD 9600 DRIVER /usr/spool/uv/eng1.drv XOFF STARTANY
 OFF PARITY None TABS ON FFDELAY 1 LFDELAY 0 DATABITS 8
LP8 /dev/null BAUD 9600 DRIVER /usr/spool/uv/hpcolorl.drv XOFF STARTANY
 OFF PARITY None TABS ON FFDELAY 1 LFDELAY 0 DATABITS 8
LP90 /dev/null BAUD 9600 DRIVER /usr/spool/uv/belt1.drv XOFF STARTANY
```

```
OFF PARITY None TABS ON FFDELAY 1 LFDELAY 0 DATABITS 8
```

4.7 Terminal and Terminfo Configuration

4.7.1 Compiling special terminfo after go live

```
01/28/08 did the following. I am not entirely happy about the results.
So I have scheduled this evening at 5PM EST to redo the config.
UNIX Compile of terminfo

tic -v ./dbms/HHH/terminfo/vt220.ti

Got a bunch of errors when I did this.



Universe compile of same:
uvtic -v ./dbms/HHH/terminfo/vt220.ti

[root@hhhshims /]# find . -print|grep vt220.ti
./home/s7rfw/terminfo/vt220.ti.save
./dbms/HHH/terminfo/vt220.ti
./dbms/UDS/terminfo/vt220.ti
[root@hhhshims /]# head /dbms/HHH/terminfo/vt220.ti


vt220|dec vt220 8 bit terminal,
        eo, km, msgr, cols#80, it#8, lines#24, bel=\^G,
        cr=\r, clear=\E[H\E[2J, el=\E[K, ed=\E[J,
        cup=\E[\%i\%p1\%d;\%p2\%dH, cud1=\E[B, civis=\E[?25l, cub1=\E[D,
        cnorm=\E[?25h, cuf1=\E[C, cuu1=\E[A, cvvis=\E[?25h, dl1=\E[M,
#
#norm modified from 'norm=\E[0m\E[1m'
#
        norm=\E[0m\E[22m, blink=\E[5m, bold=\E[1m, smcup=\E[?7l\E[?1l\E(B,
[root@hhhshims /]# head /dbms/UDS/terminfo/vt220.ti
vtuds|Digital Equipment Co VT220,
        msgr,   eo,     km,     it#8,   lines#24,       cols#80,
        bel=\^G,            ed=\233J,        el=\233K,
        cr=\^M,             ind=\^J,
        il1=\233L,      dl1=\233M,
        batt1=f1, batt2=f1md, font0=\E(B, font1=\E(0,
        box1=\154\161\153\170\152\155\167\165\166\164\156,
        box2=\154\161\153\170\152\155\167\165\166\164\156,
```

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```
        clear=\233H\233J, cup=\233\%i\%p1\%d;\%p2\%dH,
        cud=\233\%p1\%dB, cud1=\233B,
[root@hhhshims /]#
```

4.7.2 Here are the differences between the two files

```
[root@hhhshims /]# diff /dbms/HHH/terminfo/vt220.ti /dbms/UDS/terminfo/vt220.ti
0a1,23
> vtuds|Digital Equipment Co VT220,
>       msgr,   eo,     km,     it#8,   lines#24,       cols#80,
>       bel=\^G,            ed=\233J,       el=\233K,
>       cr=\^M,            ind=\^J,
>       il1=\233L,      dl1=\233M,
>       batt1=f1, batt2=f1md, font0=\E(B, font1=\E(0,
>       box1=\154\161\153\170\152\155\167\165\166\164\156,
>       box2=\154\161\153\170\152\155\167\165\166\164\156,
>       clear=\233H\233J, cup=\233\%i\%p1\%d;\%p2\%dH,
>       cud=\233\%p1\%dB, cud1=\233B,
>       kf1=\^B1,    kf2=\^B2,    kf3=\^B3,    kf4=\^B4,    kf6=\^B5,
>       kf7=\^B7,    kf8=\^B8,    kf9=\^B9,    kf10=\^B0,   kf11=\^B;,
   kf12=\^B<,
>       kbs=\^H,            kdch1=\2333\~,    kcud1=\233B,
>       kdo=\23329\~,    kich1=\2332\~,    kcub1=\233D,    km,
>       knl=\^J,            knp=\2336\~,    ktab=\^I,
>       kpp=\2335\~,    khlp=\23328\~,    kcuf1=\233C,    kcuu1=\233A,
>       cub=\233\%p1\%dD, cub1=\^H,            blink=\2335m,
>       smcup=\233?7l\233?1l\E(B,         rmcup=\233?7h,
>       bold=\2331m,    sgr0=\2330m,    rev=\2337m,
>       cuf=\233\%p1\%dC, rmso=\2330m,    smso=\2337m,    cuf1=\233C,
>       sgr=\E[\%?\%p1\%t;7\%;\%?\%p2\%t;4\%;\%?\%p3\%t;
7\%;\%?\%p4\%t;5\%;\%?\%p6\%t;1\%;m,
>       rmul=\2330m,    cuu=\233\%p1\%dA, cuu1=\233A,    smul=\2334m,
>       smacs=\E(0, rmacs=\E(B,
2,52c25,27
< vt220|dec vt220 8 bit terminal,
<       eo, km, msgr, cols#80, it#8, lines#24, bel=\^G,
<       cr=\r, clear=\E[H\E[2J, el=\E[K, ed=\E[J,
<       cup=\E[\%i\%p1\%d;\%p2\%dH, cud1=\E[B, civis=\E[?25l, cub1=\E[D,
<       cnorm=\E[?25h, cuf1=\E[C, cuu1=\E[A, cvvis=\E[?25h, dl1=\E[M,
< #
< #norm modified from 'norm=\E[0m\E[1m'
< #
<       norm=\E[0m\E[22m, blink=\E[5m, bold=\E[1m, smcup=\E[?7l\E[?1l\E(B,
```

```
<        rev=\E[7m,
<        smso=\E[7m, smul=\E[4m, ech=\E[\%p1\%dX, sgr0=\E[0m\E(B,
<        rmcup=\E[?7h, rmso=\E[0m, rmul=\E[0m, il1=\E[L, kbs=\b, bs=\b,
<        kcud1=\E[B,
<        kich1=\E[2\~, kcub1=\E[D, knp=\E[6\~, kpp=\E[5\~, kcuf1=\E[C,
<        kcuu1=\E[A, cud=\E[\%p1\%dB, cub=\E[\%p1\%dD, cuf=\E[\%p1\%dC,
<        cuu=\E[\%p1\%dA, mc4=\E[4i, mc5=\E[5i, ind=\n,
<        rmp=lqkxjmwuvtn, acsc=lqkxjmwuvtn, pln=f1, kcbt=f1md,
<        kent=\E(B, kext=\E(0, kopt=\E[29\~, kref=\E[28\~, krfr=\r,
<        kCAN=\t, kexit=10;13, kebs=8, dim=\E[6m,
<
< #
< # function keys
< #
<        kf1=\EOP, kf2=\EOQ, kf3=\EOR,
<        kf4=\EOS, kf5=\EOT, kf6=\E[17\~, kf7=\E[18\~, kf8=\E[19\~, kf9=\E[20\~,
<        kf10=\E[21\~, kf12=\E[23\~, kf13=\E[24\~, kf14=\E[25\~, kf15=\E[26\~,
<        kf18=\E[31\~, kf19=\E[32\~, kf20=\E[33\~, kf21=\E[34\~,
<
<
< #
< # @ minus assignments
< #
<        at1=\E[H\E[J, at2=\E[H, at3=\E[J,
<        at4=\E[K, at5=\E[5m, at6=\E[0m, at8=\E[0m, at9=\b, at10=\E[A,
<        at11=\E[1m, at12=\E[0m, at13=\E[7m, at14=\E[0m, at15=\E[4m, at16=\E[0m,
<        at17=\E[1m, at18=\E[0m, at19=\E[9m, at20=\E[0m,
<
< #
< # line draw characters
< #
<        ldul=l, ldur=k, ldbl=m, ldbr=j, ldvl=x, ldvr=x, ldht=\356,
<        ldhb=q, ldtd=w, ldtu=v, ldtr=t, ldtl=u, ldtc=n, ldvc=x,
<        ldhc=q, rmacs=\E(B, smacs=\E(0,
<        dldulc=l, dldurc=k, dldblc=m, dldbrc=j, dldh=q, dldv=x, dldtu=w,
<        dldtd=v, dldtl=t, dldtr=u, dldtcr=n, ldltdh=t, ldltdv=t, ldrtdh=u,
<        ldrtdv=u, ldbtdh=v, ldbtdv=v, ldutdh=w, ldutdv=w, ldulcdh=l,
<        ldulcdv=l, ldurcdh=k, ldurcdv=k, ldblcdh=m, ldblcdv=j,
<        ldbrcdh=j, ldbrcdv=j, ldcrdh=n, ldcrdv=n,
<
< invision|inv
<        bs=\177, kbs=\177, kebs=\177, use=vt220
---
> #!uv  macs, ldul=\154, ldur=\153, ldbl=\155, ldbr=\152, ldvl=\170,
```

```
> #!uv  ldvr=\170, ldht=\161, ldhb=\161, ldtd=\167, ldtu=\166, ldtr=\164,
> #!uv  ldtl=\165, ldtc=\156, ldvc=\170, ldhc=\161, bs=\b, lf=\n,
[root@hhhshims /]#
```

4.7.3 HHH terminfo

Here is the one in HHH terminfo. This is the one in use on 1/28/08 10 AM did not compile clean.

```
[root@hhhshims /]# cat /dbms/HHH/terminfo/vt220.ti

vt220|dec vt220 8 bit terminal,
        eo, km, msgr, cols#80, it#8, lines#24, bel=\^G,
        cr=\r, clear=\E[H\E[2J, el=\E[K, ed=\E[J,
        cup=\E[\%i\%p1\%d;\%p2\%dH, cud1=\E[B, civis=\E[?25l, cub1=\E[D,
        cnorm=\E[?25h, cuf1=\E[C, cuu1=\E[A, cvvis=\E[?25h, dl1=\E[M,
#
#norm modified from 'norm=\E[0m\E[1m'
#
        norm=\E[0m\E[22m, blink=\E[5m, bold=\E[1m, smcup=\E[?7l\E[?1l\E(B,
        rev=\E[7m,
        smso=\E[7m, smul=\E[4m, ech=\E[\%p1\%dX, sgr0=\E[0m\E(B,
        rmcup=\E[?7h, rmso=\E[0m, rmul=\E[0m, il1=\E[L, kbs=\b, bs=\b,
        kcud1=\E[B,
        kich1=\E[2\~, kcub1=\E[D, knp=\E[6\~, kpp=\E[5\~, kcuf1=\E[C,
        kcuu1=\E[A, cud=\E[\%p1\%dB, cub=\E[\%p1\%dD, cuf=\E[\%p1\%dC,
        cuu=\E[\%p1\%dA, mc4=\E[4i, mc5=\E[5i, ind=\n,
        rmp=lqkxjmwuvtn, acsc=lqkxjmwuvtn, pln=f1, kcbt=f1md,
        kent=\E(B, kext=\E(0, kopt=\E[29\~, kref=\E[28\~, krfr=\r,
        kCAN=\t, kexit=10;13, kebs=8, dim=\E[6m,


#
# function keys
#
        kf1=\EOP, kf2=\EOQ, kf3=\EOR,
        kf4=\EOS, kf5=\EOT, kf6=\E[17\~, kf7=\E[18\~, kf8=\E[19\~, kf9=\E[20\~,
        kf10=\E[21\~, kf12=\E[23\~, kf13=\E[24\~, kf14=\E[25\~, kf15=\E[26\~,
        kf18=\E[31\~, kf19=\E[32\~, kf20=\E[33\~, kf21=\E[34\~,


#
# @ minus assignments
#
        at1=\E[H\E[J, at2=\E[H, at3=\E[J,
        at4=\E[K, at5=\E[5m, at6=\E[0m, at8=\E[0m, at9=\b, at10=\E[A,
```

```
        at11=\E[1m, at12=\E[0m, at13=\E[7m, at14=\E[0m, at15=\E[4m, at16=\E[0m,
        at17=\E[1m, at18=\E[0m, at19=\E[9m, at20=\E[0m,


#
# line draw characters
#
        ldul=l, ldur=k, ldbl=m, ldbr=j, ldvl=x, ldvr=x, ldht=\356,
        ldhb=q, ldtd=w, ldtu=v, ldtr=t, ldtl=u, ldtc=n, ldvc=x,
        ldhc=q, rmacs=\E(B, smacs=\E(0,
        dldulc=l, dldurc=k, dldblc=m, dldbrc=j, dldh=q, dldv=x, dldtu=w,
        dldtd=v, dldtl=t, dldtr=u, dldtcr=n, ldltdh=t, ldltdv=t, ldrtdh=u,
        ldrtdv=u, ldbtdh=v, ldbtdv=v, ldutdh=w, ldutdv=w, ldulcdh=l,
        ldulcdv=l, ldurcdh=k, ldurcdv=k, ldblcdh=m, ldblcdv=j,
        ldbrcdh=j, ldbrcdv=j, ldcrdh=n, ldcrdv=n,

invision|inv
        bs=\177, kbs=\177, kebs=\177, use=vt220
[root@hhhshims /]#
```

4.7.4 UDS/terminfo

Here is the one in UDS/terminfo.

```
[root@hhhshims /]# cat /dbms/UDS/terminfo/vt220.ti
vtuds|Digital Equipment Co VT220,
        msgr,   eo,     km,     it#8,   lines#24,       cols#80,
        bel=\^G,            ed=\233J,       el=\233K,
        cr=\^M,             ind=\^J,
        il1=\233L,      dl1=\233M,
        batt1=f1, batt2=f1md, font0=\E(B, font1=\E(0,
        box1=\154\161\153\170\152\155\167\165\166\164\156,
        box2=\154\161\153\170\152\155\167\165\166\164\156,
        clear=\233H\233J, cup=\233\%i\%p1\%d;\%p2\%dH,
        cud=\233\%p1\%dB, cud1=\233B,
        kf1=\^B1,   kf2=\^B2,   kf3=\^B3,   kf4=\^B4,   kf6=\^B5,
        kf7=\^B7,   kf8=\^B8,   kf9=\^B9,   kf10=\^B0,  kf11=\^B;,
    kf12=\^B<,
        kbs=\^H,            kdch1=\2333\~,  kcud1=\233B,
        kdo=\23329\~,   kich1=\2332\~,  kcub1=\233D,    km,
        knl=\^J,            knp=\2336\~,    ktab=\^I,
        kpp=\2335\~,    khlp=\23328\~,  kcuf1=\233C,    kcuu1=\233A,
        cub=\233\%p1\%dD, cub1=\^H,           blink=\2335m,
        smcup=\233?7l\233?1l\E(B,         rmcup=\233?7h,
```

```
        bold=\2331m,      sgr0=\2330m,      rev=\2337m,
        cuf=\233\%p1\%dC, rmso=\2330m,      smso=\2337m,      cuf1=\233C,
        sgr=\E[\%?\%p1\%t;7\%;\%?\%p2\%t;4\%;\%?\%p3\%t;7\%;
\%?\%p4\%t;5\%;\%?\%p6\%t;1\%;m,
        rmul=\2330m,      cuu=\233\%p1\%dA, cuu1=\233A,      smul=\2334m,
        smacs=\E(0, rmacs=\E(B,

#!uv    macs, ldul=\154, ldur=\153, ldbl=\155, ldbr=\152, ldvl=\170,
#!uv    ldvr=\170, ldht=\161, ldhb=\161, ldtd=\167, ldtu=\166, ldtr=\164,
#!uv    ldtl=\165, ldtc=\156, ldvc=\170, ldhc=\161, bs=\b, lf=\n,
[root@hhhshims /]#
```

4.7.5 Terminfo compiles

```
Rerun commands at 3:31 PM MST
[root@hhhshims /]# tic -v ./dbms/HHH/terminfo/vt220.ti
```

NOTE: There were 50+ lines of errors similar to the following. Deleted for sake of clarity.

```
"./dbms/HHH/terminfo/vt220.ti", line 10, col 25,
 terminal 'vt220': unknown capability 'norm'
... KEY\_BACKSPACE is the same as KEY\_LEFT
[root@hhhshims /]#
```

4.7.6 Rerun uvtic commands at 3:30MST

```
Rerun uvtic commands at 3:30MST
[root@hhhshims /]# uvtic -v ./dbms/HHH/terminfo/vt220.ti
create '/usr/ibm/uv/terminfo/v/vt220'
create '/usr/ibm/uv/terminfo/i/invision'
[root@hhhshims /]#
```

5 Migration

5.1 rlogin configuration

5.2 terminfo

5.3 Client Accounts

5.4 Cataloged programs