

## **Rocket U2 Database Support with Red Hat Enterprise Linux Server (RHEL) 6.x**

Version 1.12 – 07/11/2012 – By: Brian Kupzyk (Rocket U2 Technical Support)

Official support of U2 Products on RHEL 6 started with UniVerse 11.1.4 & UniData 7.2.12. The U2 databases are still 32bit applications on the Linux platform, no 64bit versions exist. Memory related function calls were changed to support RHEL 6; therefore non-certified versions of UniVerse & UniData should not be installed on RHEL 6. File corruption could occur if running earlier versions of the U2 databases (prior to UV 11.1.4 and UDT 7.2.12) on RHEL 6.x. This document has been tested with RHEL 6.2 but no U2 database versions are currently supported on that version of the OS.

If you are using 32bit RHEL 6, no additional items will need to be installed, skip the 'Mounting OS Media' and 'RPM Installations' sections below.

If you are using a 64bit version of linux it will require some manual rpm package installations.

The libraries and directory paths noted below are from RHEL 6.0. The versions referenced with the library names will change in future RHEL versions. This document will not be updated for each version of Redhat.

### **Mounting OS Media**

The easiest way to mount OS media is 'mkdir /cdrom', then 'mount /dev/cdrom /cdrom'. If the media auto-mounts, skip the previous mount step and use the auto-mount path instead of /cdrom in this document. Go to the '/cdrom/Server/Packages' (RHEL 6.0) or '/cdrom/Packages' (RHEL 6.1) folder to run the rpm command below. When done with the rpm commands below, to unmount the cdrom run the command 'umount /cdrom'.

### **RPM Installations**

Note: These commands may copy additional packages like ...-develop packages, but that won't impact U2.

UniVerse requires these libraries: ld-linux.so.2, libstdc++.so.6, libpam.so.0 and libncurses.so.5

UniData requires these libraries: libpam.so.0, libncurses.so.5 and libgdbm.so.2

The commands needed are:

- 'rpm -iv glibc-2\*i686.rpm nss-softokn-freebl\*i686.rpm' (Both packages need to be specified here)
- 'rpm -iv ncurses-libs\*i686.rpm'
- 'rpm -iv audit-libs-2\*i686.rpm'
- 'rpm -iv cracklib\*i686.rpm'
- 'rpm -iv db4-4\*i686.rpm'
- 'rpm -iv libselinux-2\*i686.rpm'
- 'rpm -iv pam-1\*i686.rpm'
- 'rpm -iv sssd\*i686.rpm'
- 'rpm -iv libgcc\*i686.rpm'
- 'rpm -iv libstdc++-4\*i686.rpm'
- 'rpm -iv gdbm\*i686.rpm' (only needed for UniData)

The installs also require the 'ed' command. Do a 'which ed' and if it indicates no file was found, then run this command: 'rpm -iv ed-1\*.rpm'.

### **General RHEL 6 Setup Information**

Note: Depending on your company guidelines some of these may be skipped:

- The GUI interface needs a minimum of 1GB of RAM (System RAM not dedicated Video RAM)
- Under the Desktops option, select all options (not including all optional packages) or all options except KDE to get GUI interface to work. Or, select the 'Software Development Workstation' installation type.
- The firewall service is running by default, use the GUI interface to disable/configure it.
- SELinux is running by default. To disable, edit the /etc/selinux/config file. Change the first uncommented line to 'SELINUX=disabled'. Reboot.

**Note:** vsftpd wasn't able to connect by default until SELinux was disabled. There may be some way to get this to work, but it was not pursued further.

- rsh, rsh-server, telnet, telnet-server, xinetd are part of the 'Base System -> Legacy Unix Compatibility' install package option. SSH tends to be the standard connectivity now.
- The 'ftp' client is in the 'Base System -> Console Internet Tools' package option.
- Enabling root via telnet and vsftpd is the same as previous RHEL versions.

### **Binary Compatibility**

The versions noted on the product availability matrix are the versions that the U2 product was built on or certified on. The products are 'paper certified' on future patch releases of the same major OS versions; for example, 6.0, 6.1, etc. Major OS version changes may work without modification, but check with u2askus@rs.com if questions arise.

### **UniVerse Specific Notes**

- Add the line 'uvrpc 31438/tcp' to the /etc/services file. This is used for UniDK/UniAdmin type connections. UniData adds the uvrpc entry by default.
- If installing UniVerse versions that are not officially supported on RHEL 6.0 or higher, for example 11.1.1, the installation may hang after the line that says 'Compiled STAT.FILE dictionary items'. The best solution is to upgrade to a UniVerse version that is supported otherwise, start another sessions and kill any 'BUILD.INDEX HELPFILE..' process and then installation will continue. After the installation, run 'BUILD.INDEX HELPFILE ALL' in the UV account.
- If you are new to UniVerse 11.1, you may want to review the ['What You Need to Know Before You Upgrade to UniVerse 11.1'](https://u2tc.rocketsoftware.com/documentation/PDF/What%20you%20need%20to%20know%20for%20Eleven-One.pdf) document.  
(<https://u2tc.rocketsoftware.com/documentation/PDF/What%20you%20need%20to%20know%20for%20Eleven-One.pdf>)

### **Common Additional Errors**

These are some errors that are found during new installs and can be resolved with some additional configuring.

#### **libodbc.so Error**

After the U2 database installation/upgrade, when starting a database shell, if there is an error about libodbc.so, the /.udlibs## or /.uvlibs file is missing or incorrect.

The full error is similar to the following for both of the U2 databases:

*bin/uv: error while loading shared libraries: /.uvlibs/libodbc.so: cannot open shared object file: No such file or directory*

For UniVerse, run the command: '/usr/uv/bin/relink.uvlibs /usr/uv/uvdlls'  
(Replace /usr/uv with your uv home directory).

For UniData, run the command: '\$UDTBIN/relink.udlibs \$UDTHOME/lib/uddlls'

#### **XML Functions returning libxml.so errors**

The full error message is similar to:

*Can't find library /usr/uv/bin/libxml.so: libxslt.so.111*

To resolve this error and add the UniVerse or UniData XML libraries to the run-time shared cache, run these commands:

1. Add the U2 database bin directory to the Linux configuration:  
UV: echo `cat /.uvhome`/bin > /etc/ld.so.conf.d/UniVerse.conf  
UDT: echo \$UDTBIN > /etc/ld.so.conf.d/UniData.conf
2. Configure the dynamic linker run-time bindings, run the command: ldconfig

For this message on other platforms please see technote # 3705 or SFMA-8846.

### **'glibc detected' Error**

The full error message is similar to:

```
glibc detected *** uv: double free or corruption (out): 0x08935e60  
glibc detected *** uv: realloc(): invalid next size: 0x092bec48
```

Please see technote UDT-8134 for this resolution.

### **Additional Comments**

- Since UniVerse & UniData are still 32bit on linux, if using PAM/LDAP or Active Directory/Domain authentication, 32bit libraries are required. Please install the appropriate packages. Use of the 'strace' command may help in discovering which libraries are missing if you are having trouble connecting. A common error for this scenario is: *'Error reading passwd file. [000000]'*
- To query rpm packages for a particular library, use the command 'rpm -qp --filesbypkg \*.rpm |grep library\_name'.