Notices

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<table>
<thead>
<tr>
<th>Country</th>
<th>Toll-free telephone number</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>1-855-577-4323</td>
</tr>
<tr>
<td>Australia</td>
<td>1-800-823-405</td>
</tr>
<tr>
<td>Belgium</td>
<td>0800-266-65</td>
</tr>
<tr>
<td>Canada</td>
<td>1-855-577-4323</td>
</tr>
<tr>
<td>China</td>
<td>400-120-9242</td>
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<td>France</td>
<td>08-05-08-05-62</td>
</tr>
<tr>
<td>Germany</td>
<td>0800-180-0882</td>
</tr>
<tr>
<td>Italy</td>
<td>800-878-295</td>
</tr>
<tr>
<td>Japan</td>
<td>0800-170-5464</td>
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<tr>
<td>Netherlands</td>
<td>0-800-022-2961</td>
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<tr>
<td>New Zealand</td>
<td>0800-003210</td>
</tr>
<tr>
<td>South Africa</td>
<td>0-800-980-818</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0800-520-0439</td>
</tr>
</tbody>
</table>

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Chapter 1: Introduction

This manual describes how to install Rocket UniVerse 12.1.1.

You can install UniVerse following the directions in the quick installation procedure as described in Installing using the quick procedure, on page 14. The quick installation procedure should only be used by users experienced with the procedure for configuring UNIX and installing UniVerse.

The complete installation procedure describes how to install UniVerse for the first time and how to complete an upgrade installation. See the following sections for more information:

UNIX installations:
- Installing UniVerse as root, on page 17
- Installing UniVerse as uvadm, on page 24

Windows installations:
- Installing UniVerse on Windows, on page 34

You do not need to authorize UniVerse during the installation process. You have 10 days after installation to authorize UniVerse.

UniVerse environment

UniVerse is a database management, development, and execution environment that is well suited for business applications. In a client/server environment, UniVerse functions as a relational database management system (RDBMS) server. It is simple enough to be used by people who are not programmers, yet powerful enough for experienced programmers to develop complex applications.

As a tool for moving existing applications into open systems or for creating new applications, UniVerse has proven to be a productive development environment and an efficient execution environment. UniVerse provides easy-to-use access to complex open system technologies such as distributed processing, modern user interfaces, and the latest advances in hardware and operating systems.

Programmers can use the UniVerse BASIC programming language and the powerful facilities for stored command sequences and menu generation to develop business applications such as payroll, accounts receivable, inventory, sales tracking, and general ledger.

Users can use UniVerse SQL to define, query, and control the data in the database without changing existing UniVerse applications.

Installation type

The following types of installation procedures are available with UniVerse:
- Initial Installation – You are installing UniVerse for the first time on your system.
- Upgrade Installation – You are installing UniVerse 12.1.1 over an earlier version of UniVerse. An upgrade installation preserves site-specific files in the UV account, such as the &DEVICE& file, and recatalogs only the cataloged routines delivered with UniVerse. User-cataloged routines are left intact in the system catalog.

Operating system requirements

U2 ports UniVerse for UNIX products to AIX, Linux, and Windows operating systems.

For operating system information, please see the U2 Product Availability Matrix at:
UniVerse requires that certain kernel parameters have adequate settings in order for UniVerse to accommodate the full number of licensed users. The following table lists some recommended kernel parameters.

<table>
<thead>
<tr>
<th>Kernel parameters</th>
<th>Recommended minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHMMAX</td>
<td>1073741824</td>
</tr>
<tr>
<td>SHMSEG</td>
<td>1024</td>
</tr>
<tr>
<td>SEMMSL</td>
<td>8</td>
</tr>
<tr>
<td>SEMMNI</td>
<td>256</td>
</tr>
</tbody>
</table>

**Note:** If requirements for your operating system are not listed in the above table, the default values after installation should be sufficient.

**Product configuration**

A UniVerse order confirmation is emailed to you when you order UniVerse. This email lists customer information, hardware information, and the products and number of users you are authorized to install. Verify that the information on the email is correct. You will need this information when authorizing UniVerse.

**Applicable platforms**

UniVerse must be installed on a local, physical file system, including those within virtual machines. Installing UniVerse on a remote or network mounted file system will cause unpredictable problems during the execution of `uv.load` (the UniVerse installation and upgrade script).

You can install UniVerse on the following UNIX and Windows platforms.

**UNIX platforms**

- AIX 7.1, 7.2
- HP-UX Itanium/Integrity Server

**Note:** Starting at UniVerse 11.3.0, for HP Itanium only, the HP library called `MallocNextGenis` is required. If this library is not found specifically in the path `/usr/lib/hpux64/libmallocng.so`, then the UniVerse install or upgrade will abort prior to making any modifications to the system. This library incorporates a better memory manager.

- CentOS 6.0, 7.0
- Oracle Linux x86 7.3, 7.4
- RHEL Linux 6.1 and above
- SuSE Linux 11 SP4, 12 SP1
Chapter 1: Introduction

Windows platforms

- Windows 10, 2012 R2, 2016

About the MallocNextGen (mallocng) library

Starting at UniVerse 11.3.0, for HP Itanium only, the HP library called MallocNextGen (mallocng) is required. If this library is not found specifically in the path `/usr/lib/hpux64/libmallocng.so`, then the UniVerse install or upgrade will abort prior to making any modifications to the system. This library incorporates a better memory manager.

Abstract

In the 11.1 release of UniVerse on HP Itanium, changes were made to how UniVerse handles memory allocation. In previous releases, a UniVerse specific malloc function (`uvmalloc()`) was used. At 11.1, the introduction of new functionality into UniVerse related to EDA, XML, and SSL required that UniVerse use the standard system `malloc()` functionality supplied with HPUX. The change to system `malloc()` was required so that UniVerse could link with external libraries associated with the new functionality previously noted.

The switch to the standard system `malloc()` on HPUX Itanium has resulted in some performance degradation in specific instances. One area which is known to be affected is a SELECT operation that makes use of both leading and trailing wildcards. To overcome this situation, HP has recommended the use of the mallocng library, which they consider to have better performance. Testing by Rocket Software has shown that it does, in fact, ease the performance problem and has no negative effect on other operations.

What is the mallocng library?

mallocng (or MallocNextGen) is a new implementation of the user space memory allocator. It is only available on Itanium-based systems. The mallocng allocator uses a more efficient method to allocate small blocks and is designed to scale well with threads.

UniVerse can be linked to the new library `libmallocng.so`. This will cause the new allocator to be invoked. No code changes in applications are necessary. Additional information can be found in the mallocng(3X) documentation on HPUX Itanium.

Installing the MallocNextGen (mallocng) library for HP Itanium

Installation requires downloading the software bundle from the HP Software Depot (access is restricted to those with an HP passport account), verifying the content with the `swlist` command, and then installing the software with the `swinstall` command.

This task has two parts:

- First you must download, verify, and install the HPUX MallocNextGen product (`libmallocng.so`).
- After installation is complete, you must then make UniVerse aware of mallocng.

1. Install the HPUX MallocNextGen product from the Software Depot website as follows:
   a. Download the depot `MallocNextGen.depot` and move it to the `/tmp` directory.
   b. Verify the file has been downloaded correctly using the `swlist` command.
The XDEMO account

Starting at UniVerse 11.3.1 and UniData 8.2.0, you can use the XDEMO account to test and use database commands. The XDEMO account is a group of test files that are installed automatically with UniVerse and UniData on Windows. For UNIX platforms, the XDEMO account is optional.

For more information about how to use XDEMO, see the Rocket UniVerse User Guide.

The minimum generally available database releases required for U2 Python support are:

- UniData: 8.2.0
- UniVerse: 11.3.1

**Note:** If moving to a UniVerse or UniData version prior to 11.3.1 or 8.2.0, respectively, the U2 Python examples will be included but cannot be used.

For UniVerse UNIX/Linux, the XDEMO account is included with the XD cpio file. For UniData UNIX/Linux, the xdemo.tar file is in $UDTBIN/tarfiles after the installation.
On Windows, the account is included by default. If you are moving XDEMO to another system, it is recommended to run `updatevoc` (UniData) or `UPDATE.ACCOUNT` (UniVerse) on the new system.
Chapter 2: Installing UniVerse on UNIX

UniVerse is installed on an existing UNIX system in directories you specify during the installation process. These directories are:

- **uv** – The UniVerse home directory
- **unishared** – The UniVerse/UniData shared directory

The examples in this manual use the default directories of `/usr/uv` and `/usr/unishared`. During the installation process, you can substitute the paths you choose for these directories.

**Warning:** Do not use symbolic links when specifying your `uvhome` and `unishared` directories. If you use symbolic links, the UniVerse license authorization routines fail.

To install UniVerse, you must log on to your system as either root or uvadm.

If you log on as root, all UniVerse home account files and directories are owned and administered by root.

If you log on as uvadm, or as a uvadm group user, all UniVerse home account files and directories are owned and administered by uvadm. If you log on as uvadm to install UniVerse, you must have write permissions on the root directory (`/`) and the directories where you install the UniVerse home directory and the UniVerse/UniData shared directory.

Preinstallation tasks for UniVerse on UNIX

Before beginning a UniVerse installation on UNIX, make sure you know the following information:

- How to log on as root or uvadm.
- The type of installation you are performing and the prerequisites for that type:
  - For an initial installation, see Preinstallation tasks for an initial installation, on page 12.
  - For an upgrade installation, see Pre-installation tasks for an upgrade installation, on page 12.
- How to download the installation media.
- The location of the UniVerse directories.
- The type of shell with which you are working.
- The operating system requirements for your platform. See Operating system requirements, on page 6.

If you are installing UniVerse on a Linux platform and are using UniVerse 10.x or earlier, you must create a symbolic link for the uncompress using the following command:

```
ln -s gunzip uncompress
```

It is recommended that the umask value be set to a minimum value of 0022. To check the current value, type `umask` at your UNIX/Linux OS prompt.

**Note:** UniVerse Telnet services will not work if SELINUX is enabled. It is recommended to disable SELINUX if you are planning to use the UniVerse Telnet services. Responses are blocked in non-secure and secure modes if SELINUX is enabled. Use `echo 0 > /selinux/enforce` to disable SELINUX temporarily to verify that UniVerse Telnet services work correctly. To re-enable SELINUX use `echo 1 > /selinux/enforce`. 
You do not need to authorize UniVerse during the installation process. You have 10 days after installation to authorize UniVerse.

Preinstallation tasks for an initial installation

Before you begin the installation process for the first time, prepare the UniVerse home directory with adequate disk space.

The preferred home directory is `/usr/uv`. You cannot specify the home directory for UniVerse with a symbolic link. If you do, the license authorization routines fail.

**Note:** Some of the files on the installation media are in a compressed format and have a `.Z` or `.gz` suffix. If you are installing over an existing release of UniVerse, more space (approximately 50%) than mentioned above is required to install the files before uncompressing them. If this causes disk space problems, remove the UniVerse files in the UniVerse home directory that will be replaced by the new release.

Pre-installation tasks for an upgrade installation

If you are already running a release of UniVerse, you must complete the following tasks before beginning the upgrade installation.

- Make sure no users are using UniVerse.
- Save any of the following files in the UV account directory that you may have modified:
  - `.profile`
  - `sample/uv.rc`
  - `sample/.profile`
  - `sample/terminfo.src`
  - Any changes to programs in BP or APP.PROGS
- Uninstall any optional UniVerse products (for example, NLS, as described in Uninstalling NLS, on page 55) that are installed on an earlier release of UniVerse.

**Note:** An installation upgrade preserves the existing `uvconfig` file. On Windows platforms, the original `uvconfig` file is copied to `uvconfig.bak` and a new `uvconfig` file overwrites the existing one. UniVerse copies the existing `VOC` file to `VOC.OLD`.

The `uv.load` script

Execute the UniVerse installation while you are logged on as root, uvadm, or a uvadm group user. Use the `cpio` to load a short installation script called `uv.load`, by inputting `cpio-ivcBdum uv.load < /cdrom/STARTUP`. Then execute the `uv.load` script to load the files from the installation media.

To ensure a valid installation, the `uv.load` script performs the following actions:

- Stops any active UniVerse spooler
- Removes the shared memory segments used by UniVerse, including shutting down the UniVerse instance.
The spooler must be stopped before you install UniVerse because the restoration cannot overwrite an active file. *uv.load* then loads the files from the installation media into the directories you specify. Depending on the type of installation you are performing, the script then performs the following actions:

- If you log on as root and are installing UniVerse for the first time, *uv.load* automatically executes the *uv.install* script.
- If you log on as *uvadm* and are installing UniVerse for the first time, you exit the *uv.load* script, then manually execute the *uv.install* script.
- If you log on as *uvadm*, or as a *uvadm* group user, and are upgrading an existing UniVerse system, you must use *uv_upgrade* to run *uv.load*, which then automatically executes the *uv.install* script.

UniVerse checks the files loaded from the installation media to make sure they have a checksum that matches the checksum on the installation media. If the checksums do not match, UniVerse indicates that the files were not loaded correctly from the installation media, and instructs you to reload the groups that were in error.

**Note:** If you have not been able to reload the groups that are in error, contact your maintenance vendor for assistance.

The *uv.load* script performs the following actions:

- Creates the UniVerse directory structure and grants proper permissions. The following table describes the default UniVerse directory structure.

<table>
<thead>
<tr>
<th>Path</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>/usr/uv</td>
<td>The UniVerse home directory.</td>
</tr>
<tr>
<td>/usr/uv/bin</td>
<td>Contains the executables that make up the UniVerse product.</td>
</tr>
<tr>
<td>/usr/uv/sample</td>
<td>Contains various prototype files.</td>
</tr>
<tr>
<td>/usr/uv/NEWACC</td>
<td>Contains the templates for the supported flavors of the VOC file.</td>
</tr>
<tr>
<td>/usr/uv/terminfo</td>
<td>Contains the UniVerse terminal characteristics database.</td>
</tr>
<tr>
<td>/usr/uv/catdir</td>
<td>The system catalog.</td>
</tr>
<tr>
<td>/usr/unishared</td>
<td>Contains subdirectories and files shared by UniVerse and UniData systems.</td>
</tr>
</tbody>
</table>

In addition, the installation procedure loads several UniVerse type 1 files or multiple data files, which are implemented as UNIX directories in the UniVerse home directory (for example, *BP*, *BP.O*, *APP.PROGS*, and *APP.PROGS.O*)

- Initializes the shared memory tables used by UniVerse, and modifies the UNIX initialization script to execute the *uv.rc* file, which performs UniVerse initialization.
- Installs the UniVerse spooler and executes the spooler daemon. See *Administering UniVerse* for a more information about the UniVerse spooler.
- Compiles the UniVerse terminal definitions. You should always install the new definitions unless you have modified the supplied definitions and want to preserve your changes. Installing the UniVerse terminal definitions updates only the UniVerse-specific characteristics kept in /usr/uv/terminfo. If you want to update the non-UniVerse-specific characteristics in /usr/lib/terminfo, you must manually invoke the *uvtic* command with the -a option.

**Warning:** If this is an initial installation, the UniVerse terminal definitions are always installed. You should make sure the UNIX terminal definitions exist. If the UNIX version does not exist, use the -a option with the *uvtic* command to create it.
Chapter 2: Installing UniVerse on UNIX

- Creates the SQL catalog if it does not already exist.
- Initializes the UniVerse catalog space (for initial installation only) and catalogs a number of subroutines. For more information about catalog space, see Administering UniVerse.
- Copies the sample shell initialization file, .profile, from the UniVerse sample directory to the UniVerse home directory. The .profile file contains paths for system commands, default protection for created files, and characteristics of the login terminal.

You must activate the UniVerse license or upgrade by entering the authorization code supplied by your vendor. To activate the license, you must log on as root, uvadm, or a uvadm group user, enter the UV account, then enter the authorization information in the License Activation screen.

After you authorize UniVerse, you can then add other accounts to be used in a UniVerse or UNIX environment, or perform administration of peripherals, such as spooler devices. To perform these tasks, use the Extensible Administration Tool client application or the System Administration menus. For detailed information, refer to Administering UniVerse.

**Note:** When you log on to the UV account, you are in the System Administration menu system. If you exit the menus, you can reenter them by using the LOGIN command. To exit the System Administration menus, press ESC.

### The `uv_upgrade` command

Execute the `uv_upgrade` command while you are logged in as uvadm, or as a member of the uvadm group, to upgrade UniVerse installations. The `uv_upgrade` command is used to ensure that uvadm users have the appropriate administrative privileges necessary to upgrade existing UniVerse installations.

**Note:** When running `uv_upgrade` while you are logged in as uvadm, the UniVerse installer will always report the value as root. The `uv_upgrade` process calls the uvadmsh shell that uses the SUID bit to perform additional items that need to be done as root.

The `./uv_upgrade ./uv.load` command invokes the `uv.load` script, which loads the files from the installation image. Users who are logged on as uvadm or as a member of the uvadm group must use the `uv_upgrade` command to upgrade existing UniVerse installations.

**Note:** If UniVerse 11.1 or later is installed, root, uvadm, or uvadm group users can run `uv_upgrade`. If UniVerse 10.3 or earlier is installed, only the root or uvadm user can run `uv_upgrade`.

### Installing using the quick procedure

The quick installation procedure should only be used by users experienced with the procedure for configuring UNIX and installing the database.

#### Prerequisites

Before you begin the installation, make sure you rebuild your kernel with adequate values for your environment. See Preinstallation tasks for UniVerse on UNIX, on page 11 and Administering UniVerse on Windows and UNIX Platforms for information about kernel parameter settings.

Make sure no one is using the database during the installation procedure. If this is an upgrade installation, make sure any optional products (such as NLS) are already installed on your system are uninstalled before proceeding with the following steps.
Review Applicable platforms, on page 7 and verify that your platform meets the database installation requirements.

About this task
The installation procedure requires input several times. Normally, you respond to the prompts by pressing Enter to select the default action.

Procedure
1. Log on as root, and change directories to any directory to which you have write permissions, as shown in the following example:
   
   #cd /tmp

2. Download the installation image.

3. If using FTP, create a directory on the UNIX machine (example used in the following step is /data/ftp_directory) and ftp the files from the PC to the UNIX directory in binary format.

4. Use the following \texttt{uv.load} command to install from the installation image:
   
   cpio -ivcBdum uv.load < /data/ftp_directory/STARTUP

5. Load the database by executing the \texttt{uv.load} command, as shown in the following example.
   
   # ./uv.load
   
   \texttt{uv.load} displays the current installation settings, as shown in the following example:

   UniVerse Installation Procedure
   ================
   The current installation is being done as 'root'. All
   UniVerse home account files and directories will be owned
   and administered by 'root'. UniVerse may also be
   installed, owned and administered by the non-root user
   'uvadm'. Choose one of the following below:

   1) Make 'root' the default owner and administrator of UniVerse.
   The current installation continues uninterrupted.

   2) Make 'uvadm' the default owner and administrator of UniVerse.
   The current installation will be terminated, and the user
   'uvadm' must be created. You must then login as 'uvadm'
   and restart this installation.

   3) Stop the installation.

   Your choice (Default action is 1):

6. Decide how you want the database to be owned and administered:

   - 1: Install the database and keep the root user as the owner and administrator of the database.
   - 2: Install the database and make the uvadm user the new owner and administrator of the database. If the uvadm user does not yet exist, the following message appears:

     The user 'uvadm' does not exist. Would you like to:
     1). Suspend the installation so that you can create the 'uvadm'
        user.
     2). Stop the installation.
     Your choice (Default action is 1):

     Press Enter to suspend the installation procedure, and create a new user uvadm. When you exit from doing this, you return to the installation procedure.

   The \texttt{uv.load} command loads the database release files and runs \texttt{uv.install}, which installs the database.
If you are installing the database over an earlier database release, you may see the following message:

Unable to get disk shared memory segment: Invalid argument

If this happens, shut down and restart the database, then proceed to the next step.

7. After all groups are installed, the Upgrade UniVerse License screen appears. Proceed to the next step.

If you are installing the database for the first time as uvadm, the following message appears:

This initial installation of UniVerse must now be completed by logging in as 'root' and executing the script '/usr/uv/uv.install'.

UniVerse will remain in an inoperable state until this script has been executed.

Log on as root, change directories to the database home directory, and execute the uv.install script:

```
# /uv/install
```

After the uv.install script completes successfully, the Upgrade UniVerse License screen appears.

8. Enter the license activation information as requested by the prompts. You must enter the following information:

- Serial number
- Maximum number of local users
- Expiration date, or press Enter for the default
- Package list
- Number of device licenses for which you are authorized

Press Enter. The licensing process displays a configuration code.

9. Remember the configuration code that the licensing process displays. The configuration code is of the following format:

```
CCTM5-ZZ3UZ-QFZ7Z-ZZZW6-Z3ZZ4-XBKLC-UZTI9
```

The licensing process prompts for Local Authorization Code.

10. To obtain your authorization code, go to:

US: [https://rbc.rocketsoftware.com/authprod.asp](https://rbc.rocketsoftware.com/authprod.asp)


Click Authorize Products. Follow the instructions on the website to obtain your authorization code. The serial number on the website should include a -UV extension.

11. Once you have your authorization code, go back to the Upgrade UniVerse License window and enter the authorization code in the Local Authorization Code field.

When the authorization completes successfully, the following message appears:

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

12. Shut down and restart the database:

a. Change to the database home directory:

```
# cd /usr/uv
```

b. Enter the following command to shut down the database:

```
# bin/uv -admin -stop
```
Installing UniVerse as root

You can execute the UniVerse installation by logging on as root, as uvadm, or as a uvadm group user. The following sections describe the steps you must complete to install UniVerse as root, either as an initial installation or an upgrade installation.

For steps about initial installation, see Installing UniVerse as an initial installation for root, on page 17.

For steps about an upgrade installation, see Installing UniVerse as an upgrade installation for root, on page 21.

Installing UniVerse as an initial installation for root

Complete the following steps to install the database for the first time on your system.

Prerequisites

Review the prerequisites as described in Preinstallation tasks for an initial installation, on page 12.

Before you begin the installation, make sure you rebuild your kernel with adequate values for your environment. See Preinstallation tasks for UniVerse on UNIX, on page 11 and Administering UniVerse on Windows and UNIX Platforms for information about kernel parameter settings.

Make sure no one is using the database during the installation procedure. If this is an upgrade installation, make sure any optional products (such as NLS) are already installed on your system are uninstalled before proceeding with the following steps.

Review Applicable platforms, on page 7 and verify that your platform meets the database installation requirements.

Procedure

1. Log on as root, and change directories to any directory to which you have write permissions, as shown in the following example:
   
   ```
   # cd /tmp
   ```

2. Download the installation image.

3. If using FTP, create a directory on the UNIX machine (example used in the following step is /data/ftp_directory) and ftp the files from the PC to the UNIX directory in binary format.

4. Use the following `uv.load` command to install from the installation image:

   ```
   cpio -ivcBdum uv.load < /data/ftp_directory/STARTUP
   ```

5. Load the database by executing the `uv.load` command, as shown in the following example.

   ```
   # ./uv.load
   ```

   `uv.load` displays the current installation settings, as shown in the following example:

   ```
   UniVerse Installation Procedure
   ```
The current installation is being done as 'root'. All UniVerse home account files and directories will be owned and administered by 'root'. UniVerse may also be installed, owned and administered by the non-root user 'uvadm'. Choose one of the following below:

1) Make 'root' the default owner and administrator of UniVerse. The current installation continues uninterrupted.

2) Make 'uvadm' the default owner and administrator of UniVerse. The current installation will be terminated, and the user 'uvadm' must be created. You must then login as 'uvadm' and restart this installation.

3) Stop the installation.

Your choice (Default action is 1):

6. Decide how you want the database to be owned and administered:
   - 1: Install the database and keep the root user as the owner and administrator of the database.
   - 2: Install the database and make the uvadm user the new owner and administrator of the database. If the uvadm user does not yet exist, the following message appears:

   The user 'uvadm' does not exist. Would you like to:
   1). Suspend the installation so that you can create the 'uvadm' user.
   2). Stop the installation.
   Your choice (Default action is 1):

   Press Enter to suspend the installation procedure, and create a new user uvadm. When you exit from doing this, you return to the installation procedure.

The uv.load script displays the current installation settings, as displayed in the following example:

The current settings of the available options are:
UniVerse installer : uvadm
UniVerse administrator : uvadm uid=214 gid=200
1) UniVerse home directory: /usr/uv (currently: Not Installed.)
2) UniVerse-UniData shared directory: /usr/unishared (currently: Not Installed.)
3) Compile termInfo definitions: true
4) Install Media Path: /cdrom
5) Long File Names: OFF
6) Install XDEMO: YES
Enter a field number to change, q to abort installation, or press <Return> to begin installation of UniVerse:

Note: UniVerse file ownership: As of UniVerse 12.1.1 and later, most files are owned by the uvdb user.

7. Enter the number of the value that you want to change.
   1: The database home directory path.
   2: The shared directory path.
   3: Whether or not to compile terminfo definitions. You cannot change this value.
   4: The installation media path.
5: The default file creation characteristics. You can toggle between OFF, and ON NEWACC. The default is LONGNAMES OFF. The ON NEWACC setting enables LONGNAMES in all data accounts after the account has been updated to the current version. For detailed information about LONGNAMES, see *Administering UniVerse on Windows and UNIX Platforms*.

6: Whether or not to install the XDEMO account for examples. You cannot change this value.

8. When the display values are correct, press Enter to begin the installation process.

If an SQL catalog does not exist, the following message appears:

```
The user 'uvsql' does not exist. This user is the default owner of the SQL catalog.
Would you like to:
1). Continue with the installation, making 'root' the default owner of the SQL catalog.
2). Suspend the installation so that you can create the 'uvsql' user.
3). Stop the installation.
Your choice (Default action is 1):
```

Select one of the following options:

1: Make root the owner of the SQL catalog.

2: Suspend the installation process to create the uvsql user. When you finish creating the user, you return to the installation process.

After all groups are installed, the Upgrade UniVerse License screen appears.

9. Enter the license activation information as requested by the prompts:
   - Serial number – include the numeric portion only
   - Maximum number of local users
   - Expiration date, or press Enter for the default
   - Package list – use the following formats:
     - PACKAGE_NAME:USER_COUNT,PACKAGE_NAME:USER_COUNT
     - Connection Pooling – CONNPL:###
     - UVNET – UVNET:9999 (always use 9999)
     - EDA – EDA:1 (To enable EDA)
     - AUDIT:1 (To enable AUDIT)
     - SUBKEY:1 (To enable SUBKEY)
     - CURE:1 (To enable SystemCure)
   - Number of device licenses for which you are authorized – set to 10 in Workgroup and Enterprise editions. Set to 0 on Server edition, unless the add-on is used.

Press Enter. The licensing process displays a configuration code.

10. Remember the configuration code that the licensing process displays. The configuration code is of the following format:
    CCTM5-ZZ3UZ-QFZ7Z-ZZZW6-Z3ZZ4-XBKLC-UZTI9

    The licensing process prompts for Local Authorization Code.

11. To obtain your authorization code, go to:
    - US: [https://rbc.rocketsoftware.com/authprod.asp](https://rbc.rocketsoftware.com/authprod.asp)
    - Click Authorize Products. Follow the instructions on the website to obtain your authorization code. The serial number on the website should include a -UV extension.
12. Once you have your authorization code, go back to the Upgrade UniVerse License window and enter the authorization code in the **Local Authorization Code** field.

   When the authorization completes successfully, the following message appears:

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

13. Shut down and restart the database:
   a. Change to the database home directory:
      
      ```
      # cd /usr/uv
      ```
   b. Enter the following command to shut down the database:
      
      ```
      # bin/uv -admin -stop
      ```
   c. Enter the following command to restart the database:
      
      ```
      # bin/uv -admin -start
      ```

14. Log on to the UV account.

   The System Administration menu appears. This menu system allows you to perform tasks such as adding users or setting up your spooler. See **Administering UniVerse on Windows and UNIX Platforms** for complete instructions.

   To exit the menus, press ESC until you get to the database prompt: `>`

   To reenter the System Administration menu system, enter `LOGIN`.

15. To exit the database environment, enter `Q` at the database prompt.

   A standard shell prompt appears, as shown in the following example:

   ```
   >Q
   #
   ```

   **Note:** The database `LOGTO` command does not check the release level of the `VOC` file when used to enter a database account. The check is done only when directly invoking the database in a user account. If your application uses `LOGTO`, you must verify that all user accounts are updated to the current release level before running the application.

16. When you install the database on your system for the first time, you must add the UniRPC daemon's port to the `/etc/services` file.

   **Add the following line to the `/etc/services` file:**

   ```
   uvrpc 31438/tcp # uvrpc port
   ```

   **Note:** You can check to see if the entry already exists in the `/etc/services` file by executing the following command:

   ```
   cat /etc/services | grep 31438
   ```

   Once the port information is added to the `/etc/services` file, you can start the RPC Service from the UniVerse System Administration Menu in the database account.

   To do this, perform the following steps:

   a. Select **Package** → **RPC Administration** → **Start the rpc daemon**.
      A dialog box opens and asks for file name information.
   b. Either add a new file name or accept the default. Add the correct file name information and then press Enter.
      A window opens and asks if you want to start the daemon. Click **Yes**. The UniRPC daemon will now start automatically when the database restarts.
Installing UniVerse as an upgrade installation for root

Complete the following steps to upgrade an existing UniVerse system from the system console.

Prerequisites

Review the prerequisites as described in Pre-installation tasks for an upgrade installation, on page 12.

Before you begin the installation, make sure you rebuild your kernel with adequate values for your environment. See Preinstallation tasks for UniVerse on UNIX, on page 11 and Administering UniVerse on Windows and UNIX Platforms for information about kernel parameter settings.

Make sure no one is using the database during the installation procedure. If this is an upgrade installation, make sure any optional products (such as NLS) are already installed on your system are uninstalled before proceeding with the following steps.

Review Applicable platforms, on page 7 and verify that your platform meets the database installation requirements.

Procedure

1. Log on as root, and change directories to any directory to which you have write permissions, as shown in the following example:
   
   # cd /tmp

2. Download the installation image.

3. If using FTP, create a directory on the UNIX machine (example used in the following step is /data/ftp_directory) and ftp the files from the PC to the UNIX directory in binary format.

4. Use the following uv.load command to install from the installation image:
   
   cpio -ivcBdum uv.load < /data/ftp_directory/STARTUP

5. Load the database by executing the uv.load command, as shown in the following example.
   
   # ./uv.load

   uv.load displays the current installation settings, as shown in the following example:

   UniVerse Upgrade Procedure
   ===============
   The current upgrade is being done as 'root'. The existing installed uniVerse (at /usr/uv) is being administered by the user 'root'. Choose one of the following below:

   1) Keep 'root' as the owner and administrator of uniVerse. The current installation continues uninterrupted.

   2) Make 'uvadm' the new owner and administrator of uniVerse. The current installation continues uninterrupted.

   3) Stop the installation.

   Your choice (Default action is 1):

6. Decide how you want the database to be owned and administered:

   - 1: Install the database and keep the root user as the owner and administrator of the database.

   - 2: Install the database and make the uvadm user the new owner and administrator of the database. If the uvadm user does not yet exist, the following message appears:

   The user 'uvadm' does not exist. Would you like to:
1). Suspend the installation so that you can create the 'uvadm' user.
2). Stop the installation.
Your choice (Default action is 1):

Press Enter to suspend the installation procedure, and create a new user uvadm. When you exit from doing this, you return to the installation procedure.

The uv.load script displays the current installation settings, as displayed in the following example:

The current settings of the available options are:
UniVerse installer     : uvadm
UniVerse administrator : uvadm uid=214 gid=200
1) UniVerse home directory: /usr/uv
   (currently: Not Installed.)
2) UniVerse-UniData shared directory: /usr/unishared
   (currently: Not Installed.)
3) Compile termInfo definitions: true
4) Install Media Path: /cdrom
5) Long File Names: OFF
6) Install XDEMO: YES
Enter a field number to change, q to abort installation, or press <Return> to begin installation of UniVerse:

Note: UniVerse file ownership: As of UniVerse 12.1.1 and later, most files are owned by the uvdb user.

7. Enter the number of the value that you want to change.
1: The database home directory path.
2: The shared directory path.
3: Whether or not to compile terminfo definitions. You cannot change this value.
If you choose 3, a list similar to the following is displayed:

Compiling the uniVerse terminfo definitions will overlay the descriptions for terminals listed below:
4410          at386     pt200     viewpoint
AT386         att3b1    qt102     viewpoint60
M=            att4410   regent20  vp
Mu            av        regent25  vp60
a210          dialup    regent40  vp60:regent40
a210:adm5     dumb      regent60  vt100
a210:hz1410   fenix     s4        vt100-am
a210:hz1500   gt        sun        vwpt
a210:qt102    hft       sun-cmd   vwpt60
a210:regent25 hz1410   sun-w     wy200
a210:tti910   hx1500    tvi910    wy200-w
a210:tti910+  ibm5151   tvi910+   wy50
a210:tti920   icl6404   tvi920    wy50:hz1500
a210:tti925   network   tvi925    wy50:tti910
a210:vp       pc7300    tvi955    wy50:tti920
adm5          performer unixpc    wy50:tti925
at            pt         unknown   wy50:vp

Enter Y to compile and install terminfo.src. Enter N to change option 3 from true to false.
4: The installation media path.
5: If UniVerse is running at the start of the upgrade and LONGNAMES was previously enabled, the value for prompt 5 shows the present value. Otherwise, it is set to OFF. You cannot change this value.

**Note:** You can manually change the LONGNAMES setting later by issuing the command LONGNAMES ON NEWACC in the UV account.

6: Whether or not to install the XDEMO account for examples. You cannot change this value.

8. When the display values are correct, press Enter to begin the installation process.

If an SQL catalog does not exist, the following message appears:

```
The user 'uvsql' does not exist. This user is the default owner of the SQL catalog.
Would you like to:
1). Continue with the installation, making 'root' the default owner of the SQL catalog.
2). Suspend the installation so that you can create the 'uvsql' user.
3). Stop the installation.
Your choice (Default action is 1):
```

Select one of the following options:

1: Make root the owner of the SQL catalog.

2: Suspend the installation process to create the uvsql user. When you finish creating the user, you return to the installation process.

9. If you see the following message, shut down and restart UniVerse, then proceed to step 15.

```
Unable to get disk shared memory segment: Invalid argument
```

10. A prompt opens and asks if you want to update the `uvdr.config` and `uvodbc.config` files. If you use Data Replication or BCI (Basic Call Interface), select No; otherwise, answer Yes to overwrite these files.

After all groups are installed, the Upgrade UniVerse License screen appears.

11. Enter the license activation information as requested by the prompts:

- Serial number – include the numeric portion only
- Maximum number of local users
- Expiration date, or press Enter for the default
- Package list – use the following formats:
  - PACKAGE_NAME:USER_COUNT
  - Connection Pooling – CONNPL:###
  - UVNET – UVNET:9999 (always use 9999)
  - EDA – EDA:1 (To enable EDA)
  - AUDIT:1 (To enable AUDIT)
  - SUBKEY:1 (To enable SUBKEY)
  - CURE:1 (To enable SystemCure)
- Number of device licenses for which you are authorized – set to 10 in Workgroup and Enterprise editions. Set to 0 on Server edition, unless the add-on is used.

Press Enter. The licensing process displays a configuration code.

12. Remember the configuration code that the licensing process displays. The configuration code is of the following format:

`CCTM5-ZZ3UZ-QFZ7Z-ZZZW6-Z3ZZ4-XBKLC-UZTI9`
The licensing process prompts for Local Authorization Code.

13. To obtain your authorization code, go to:
   US: https://rbc.rocketsoftware.com/authprod.asp
   International: https://rbcint.rocketsoftware.com/authprod.asp?js=y
   Click Authorize Products. Follow the instructions on the website to obtain your authorization code. The serial number on the website should include a -UV extension.

14. Once you have your authorization code, go back to the Upgrade UniVerse License window and enter the authorization code in the Local Authorization Code field.

   When the authorization completes successfully, the following message appears:

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

15. Shut down and restart the database:
   a. Change to the database home directory:
      
      > cd /usr/uv
   b. Enter the following command to shut down the database:
      
      > bin/uv -admin -stop
   c. Enter the following command to restart the database:
      
      > bin/uv -admin -start

16. Log on to the UV account.

   The System Administration menu appears. This menu system allows you to perform tasks such as adding users or setting up your spooler. See Administering UniVerse on Windows and UNIX Platforms for complete instructions.

   To exit the menus, press ESC until you get to the database prompt:  >
   To reenter the System Administration menu system, enter LOGIN.

17. To exit the database environment, enter Q at the database prompt.

   A standard shell prompt appears, as shown in the following example:

   >Q
   #

18. Each user account VOC file must be updated to the current database release level. Do this by invoking the database in each user account.

   When you do this, the following prompt appears:

   Your VOC is out of date. Update to current release (Y/N)?

   Entering Y at the prompt updates the VOC to the current release level.

   **Note:** The database LOGTO command does not check the release level of the VOC file when used to enter a database account. The check is done only when directly invoking the database in a user account. If your application uses LOGTO, you must verify that all user accounts are updated to the current release level before running the application.

Installation is now complete. You can confirm your licensing is properly installed by typing the command CONFIG at TCL.

**Installing UniVerse as uvadm**

You can execute the UniVerse installation by logging in as root, uvadm or as a uvadm group user. The following sections describe the steps you must complete to install UniVerse as uvadm, either as an initial installation or an upgrade installation.
Installing UniVerse as an initial installation for uvadm

Complete the following steps to install the database for the first time on your system.

Prerequisites

Review the prerequisites as described in Preinstallation tasks for an initial installation, on page 12.

You must have write permissions on the root directory (/) and on the directories where you plan to install the UniVerse home directory and the UniVerse/UniData shared directory.

Before you begin the installation, make sure you rebuild your kernel with adequate values for your environment. See Preinstallation tasks for UniVerse on UNIX, on page 11 and Administering UniVerse on Windows and UNIX Platforms for information about kernel parameter settings.

Make sure no one is using the database during the installation procedure. If this is an upgrade installation, make sure any optional products (such as NLS) are already installed on your system are uninstalled before proceeding with the following steps.

Review Applicable platforms, on page 7 and verify that your platform meets the database installation requirements.

Procedure

1. Log in as uvadm, and change directories to any directory to which you have write permissions, as shown in the following example:
   $ cd /tmp

2. Download the installation image.

3. If using FTP, create a directory on the UNIX machine (example used in the following step is /data/ftp_directory) and ftp the files from the PC to the UNIX directory in binary format.

4. Use the following `uv.load` command to install from the installation image:
   ```bash
cpio -ivcBdum uv.load < /data/ftp_directory/STARTUP
   ```

5. Load the database by executing the `uv.load` command, as shown in the following example.
   ```bash
   $ ./uv.load
   uv.load displays the current installation settings, as shown in the following example:
   The current settings of the available options are:
   UniVerse installer     : uvadm
   UniVerse administrator : uvadm uid=214 gid=200
   1) UniVerse home directory:           /usr/uv
      (currently: Not Installed.)
   2) UniVerse-UniData shared directory: /usr/unishared
      (currently: Not Installed.)
   3) Compile termInfo definitions:      true
   4) Install Media Path:                /cdrom
   5) Long File Names:                   OFF
   6) Install XDEMO:                     YES
   Enter a field number to change, q to abort installation, or press <Return> to begin installation of UniVerse:
   ```
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Note: UniVerse file ownership: As of UniVerse 12.1.1 and later, most files are owned by the uvdb user.

6. Enter the number of the value that you want to change.
   1: The database home directory path.
   2: The shared directory path.
   3: Whether or not to compile terminfo definitions. You cannot change this value.
   4: The installation media path.
   5: The default file creation characteristics. You can toggle between OFF, and ON NEWACC. The default is LONGNAMES OFF. The ON NEWACC setting enables LONGNAMES in all data accounts after the account has been updated to the current version. For detailed information about LONGNAMES, see Administering UniVerse on Windows and UNIX Platforms.
   6: Whether or not to install the XDEMO account for examples. You cannot change this value.

7. When the display values are correct, press Enter to begin the installation process.
   If an SQL catalog does not exist, the following message appears:
   The user 'uvsql' does not exist. This user is the default owner of the SQL catalog.
   Would you like to:
   1). Continue with the installation, making 'uvadm' the default owner of the SQL catalog.
   2). Suspend the installation so that you can create the 'uvsql' user.
   3). Stop the installation.
   Your choice (Default action is 1):

   Select one of the following options:
   1: Make uvadm the owner of the SQL catalog.
   2: Suspend the installation process to create the uvsql user. When you finish creating the user, you return to the installation process.

   After the installation process installs the selected groups, the following message appears:
   This initial installation of UniVerse must now be completed by logging in as 'root' and executing the script '/usr/uv/uv.install'.
   UniVerse will remain in an inoperable state until this script has been executed.

8. Log in as root and execute the script:
   a. Log in as root.
      $ su
      $ password:
   b. Change directory to the UniVerse home directory.
      # cd /usr/uv
   c. Execute the uv.install script:
      # ./uv.install

   After the uv.install completes successfully, the Upgrade UniVerse License screen appears.

9. Enter the license activation information as requested by the prompts:
   ▪ Serial number – include the numeric portion only
• Maximum number of local users
• Expiration date, or press Enter for the default
• Package list – use the following formats:
  ▫ PACKAGE_NAME:USER_COUNT,PACKAGE_NAME:USER_COUNT
  ▫ Connection Pooling – CONNPPL:###
  ▫ UVNET – UVNET:9999 (always use 9999)
  ▫ EDA – EDA:1 (To enable EDA)
  ▫ AUDIT:1 (To enable AUDIT)
  ▫ SUBKEY:1 (To enable SUBKEY)
  ▫ CURE:1 (To enable SystemCure)
• Number of device licenses for which you are authorized – set to 10 in Workgroup and Enterprise editions. Set to 0 on Server edition, unless the add-on is used.

Press Enter. The licensing process displays a configuration code.

10. Remember the configuration code that the licensing process displays. The configuration code is of the following format:
   CCTM5-ZZ3UZ-QFZ7Z-ZZZW6-Z3ZZ4-XBKLC-UZTI9
   The licensing process prompts for Local Authorization Code.

11. To obtain your authorization code, go to:
   US: https://rbc.rocketsoftware.com/authprod.asp
   International: https://rbcint.rocketsoftware.com/authprod.asp?js=y
   Click Authorize Products. Follow the instructions on the website to obtain your authorization code. The serial number on the website should include a -UV extension.

12. Once you have your authorization code, go back to the Upgrade UniVerse License window and enter the authorization code in the Local Authorization Code field.

When the authorization completes successfully, the following message appears:

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

13. Shut down and restart the database:
   a. Enter the following command to shut down the database:
      $ bin/uv -admin -stop
   b. Enter the following command to restart the database:
      $ bin/uv -admin -start

14. Log on to the UV account.
   The System Administration menu appears. This menu system allows you to perform tasks such as adding users or setting up your spooler. See Administering UniVerse on Windows and UNIX Platforms for complete instructions.
   To exit the menus, press ESC until you get to the database prompt: >
   To reenter the System Administration menu system, enter LOGIN.

15. To exit the database environment, enter Q at the database prompt.
   >Q
   $

16. When you install the database on your system for the first time, you must add the UniRPC daemon’s port to the /etc/services file.
   Add the following line to the /etc/services file:
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uvrpc 31438/tcp # uvrpc port

Note: You can check to see if the entry already exists in the /etc/services file by executing the following command:

cat /etc/services |grep 31438

Once the port information is added to the /etc/services file, you can start the RPC Service from the UniVerse System Administration Menu in the database account. To do this, perform the following steps:

a. Select Package → RPC Administration → Start the rpc daemon.
   A dialog box opens and asks for file name information.

b. Either add a new file name or accept the default. Add the correct file name information and then press Enter.
   A window opens and asks if you want to start the daemon. Click Yes. The UniRPC daemon will now start automatically when the database restarts.

Installing UniVerse as an upgrade installation for uvadm

If you are currently running a release of UniVerse, you must complete the following tasks before beginning the upgrade installation.

Prerequisites

Review the prerequisites as described in Preinstallation tasks for an initial installation, on page 12.

You must have write permissions on the root directory (/) and on the directories where you plan to install the UniVerse home directory and the UniVerse/UniData shared directory.

Before you begin the installation, make sure you rebuild your kernel with adequate values for your environment. See Preinstallation tasks for UniVerse on UNIX, on page 11 and Administering UniVerse on Windows and UNIX Platforms for information about kernel parameter settings.

Make sure no one is using the database during the installation procedure. If this is an upgrade installation, make sure any optional products (such as NLS) are already installed on your system are uninstalled before proceeding with the following steps.

Review Applicable platforms, on page 7 and verify that your platform meets the database installation requirements.

Procedure

1. If the existing database system is owned by uvadm, enter the following command at the login prompt:
   $ login: uvadm
   uvadmuvadm’s password:

2. Change directories to any directory to which you have write permissions, as shown in the following example:
   $ cd /tmp

3. Download the installation image.

4. If using FTP, create a directory on the UNIX machine (example used in the following step is /data/ftp_directory) and ftp the files from the PC to the UNIX directory in binary format.

5. Use the following uv.load command to install from the installation image:
cpio -ivcBdum uv.load uv.upgrade < /data/ftp_directory/STARTUP

6. Execute the `.uv_upgrade` command to invoke the `uv.load` script, with the release media still in the device:

   $ ./uv_upgrade
   or
   ./uv_upgrade ./uv.load

A screen similar to the following appears:

UniVerse Upgrade Procedure
==============================
The current upgrade is being done as 'uvadm'. The existing installed uniVerse (at /usr/uv) is being administered by the user 'uvadm'.

Choose one of the following below:

1) Keep 'uvadm' as the owner and administrator of UniVerse. The current installation continues uninterrupted.

2) Make 'root' the new owner and administrator of UniVerse. The current installation continues uninterrupted.

3) Stop the installation.

Your choice (Default action is 1):

7. Choose 1 to install the database and make uvadm the owner and administrator of the database.

`uv.load` displays the current installation settings:

The current settings of the available options are:

UniVerse installer : root
UniVerse administrator : uvadm uid=1000 gid=100

1) UniVerse home directory: /usr/uv2)
2) UniVerse-UniData shared directory: /usr/unishared
3) Compile terminfo definitions: true
4) Install Media Path /cdrom
5) Long File Names OFF
6) Install XDEMO: YES

Enter a field number to change, q to abort installation, or press <Return> to begin installation of UniVerse:

**Note:** Concerning the roles reported in the Installation and Upgrade menus:

- UniVerse Installer: Always reports as root when running `uv_upgrade`. The `uv_upgrade` process calls the `uvadmsh` shell that uses the SUID bit to perform additional items that need to be done as root.

  - UniVerse administrator: Reported as either root or uvadm.

  - UniVerse file ownership: As of UniVerse 12.1.1 and later, most files are owned by the uvdb user.

8. Enter the number of the value that you want to change.

   1: The database home directory path.

   2: The shared directory path.

   3: Whether or not to compile terminfo definitions. You cannot change this value.
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If you choose 3, a list similar to the following is displayed:

Compiling the uniVerse terminfo definitions will overlay the descriptions for terminals listed below:

4410  at386 pt200 viewpoint
AT386 att3bl qt102 viewpoint60
M= att4410 regent20 vp
Mv av regent25 vp60
a210 dialup regent40 vp60:regent40
a210:adm5 dumb regent60 vt100
a210:hz1410 fenix s4 vt100-am
a210:hz1500 gt sun vwpt
a210:qt102 hft sun-cmd vwpt60
a210:regent25 hz1410 sun-w wy200
a210:tvi910 hz1500 tv1910 wy200-w
a210:tvi910+ ibm5151 tv1910+ wy50
a210:tvi920 icl6404 tv1920 wy50:hz1500
a210:tvi925 network tv1925 wy50:tvi910
a210:vp pc7300 tv1955 wy50:tvi920
adm5 performer unixpc wy50:tvi925
at pt unknown wy50:vp

Enter Y to compile and install terminfo.src. Enter N to change option 3 from true to false.

4: The installation media path.

5: If UniVerse is running at the start of the upgrade and LONGNAMES was previously enabled, the value for prompt 5 shows the present value. Otherwise, it is set to OFF. You cannot change this value.

Note: You can manually change the LONGNAMES setting later by issuing the command LONGNAMES ON NEWACC in the UV account.

6: Whether or not to install the XDEMO account for examples. You cannot change this value.

9. When the display values are correct, press Enter to begin the installation process.

If an SQL catalog does not exist, the following message appears:

The user 'uvsql' does not exist. This user is the default owner of the SQL catalog.
Would you like to:
1). Continue with the installation, making 'uvadm' the default owner of the SQL catalog.
2). Suspend the installation so that you can create the 'uvsql' user.
3). Stop the installation.
Your choice (Default action is 1):

Select one of the following options:

1: Make uvadm the owner of the SQL catalog.

2: Suspend the installation process to create the uvsql user. When you finish creating the user, you return to the installation process.

10. If you see the following message, shut down and restart UniVerse, then proceed to step 15.

Unable to get disk shared memory segment: Invalid argument

11. A prompt opens and asks if you want to update the uvdr.config and uvodbc.config files. If you use Data Replication or BCI (Basic Call Interface), select No; otherwise, answer Yes to overwrite these files.

After all groups are installed, the Upgrade UniVerse License screen appears.
12. Enter the license activation information as requested by the prompts:
   ▪ Serial number – include the numeric portion only
   ▪ Maximum number of local users
   ▪ Expiration date, or press Enter for the default
   ▪ Package list – use the following formats:
     ▫ PACKAGE_NAME:USER_COUNT,PACKAGE_NAME:USER_COUNT
     ▫ Connection Pooling – CONNPL:###
     ▫ UVNET – UVNET:9999 (always use 9999)
     ▫ EDA – EDA:1 (To enable EDA)
     ▫ AUDIT:1 (To enable AUDIT)
     ▫ SUBKEY:1 (To enable SUBKEY)
     ▫ CURE:1 (To enable SystemCure)
   ▪ Number of device licenses for which you are authorized – set to 10 in Workgroup and
     Enterprise editions. Set to 0 on Server edition, unless the add-on is used.

Press Enter. The licensing process displays a configuration code.

13. Remember the configuration code that the licensing process displays. The configuration code is
    of the following format:
    CCTM5-ZZ3UZ-QFZ7Z-ZZZW6-Z3ZZ4-XBKLC-UZTI9
    The licensing process prompts for Local Authorization Code.

14. To obtain your authorization code, go to:
    US: https://rbc.rocketsoftware.com/authprod.asp
    International: https://rbcint.rocketsoftware.com/authprod.asp?js=y
    Click Authorize Products. Follow the instructions on the website to obtain your authorization
    code. The serial number on the website should include a -UV extension.

15. Once you have your authorization code, go back to the Upgrade UniVerse License window and
    enter the authorization code in the Local Authorization Code field.
    When the authorization completes successfully, the following message appears:

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

16. Shut down and restart the database:
    a. Change to the UniVerse home directory:
       $ cd /usr/uv
    b. Enter the following command to shut down the database:
       $ bin/uv -admin -stop
    c. Enter the following command to restart UniVerse:
       $ bin/uv -admin -start

17. Log on to the UV account.
    The System Administration menu appears. This menu system allows you to perform tasks such as
    adding users or setting up your spooler. See Administering UniVerse on Windows and UNIX
    Platforms for complete instructions.
    To exit the menus, press ESC until you get to the database prompt: >
    To reenter the System Administration menu system, enter LOGIN.

18. To exit the database environment, enter Q at the database prompt.
    >Q
Chapter 2: Installing UniVerse on UNIX

19. Each user account VOC file must be updated to the current database release level. Do this by invoking the database in each user account.

When you do this, the following prompt appears:

Your VOC is out of date. Update to current release (Y/N)?

Entering Y at the prompt updates the VOC to the current release level.

**Note:** The database LOGTO command does not check the release level of the VOC file when used to enter a database account. The check is done only when directly invoking the database in a user account. If your application uses LOGTO, you must verify that all user accounts are updated to the current release level before running the application.

Installation is now complete. You can confirm your licensing is properly installed by typing the command CONFIG at TCL.

### Additional installation information

#### The uv.load command

You can use the options of the uv.load command to change the installation process. The syntax of the uv.load command is:

```
uv.load {-buildno} {-defaults} {-longnames} {-nochecksum} {-nocpio} {-version} {-g group_name | -g group_number} {-nls | -fnls} {uvhome}
```

The following table describes each parameter of the syntax:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-buildno</td>
<td>Returns the build number of the uv.load script. This option is available at UniVerse 11.2.3 or later.</td>
</tr>
<tr>
<td>-defaults</td>
<td>Specifies that all defaults are to be used—no prompting by the script. This allows for automatic installation.</td>
</tr>
<tr>
<td>-longnames</td>
<td>Forces LONGNAMES to ON NEWACC.</td>
</tr>
<tr>
<td>-nochecksum</td>
<td>Specifies to skip the checksum step. This should be done only after consulting with U2 support. If files are really damaged, the installed UniVerse will not execute correctly, with possible damage to files.</td>
</tr>
<tr>
<td>-nocpio</td>
<td>Specifies to skip the physical read of the installation media. This option can be used to restart the installation after files have been loaded.</td>
</tr>
<tr>
<td>-version</td>
<td>Returns the version of the uv.load script. This option is available at UniVerse 11.2.3 or later.</td>
</tr>
<tr>
<td>-g group_name</td>
<td>group_number</td>
</tr>
</tbody>
</table>
### UniVerse system administration menus (UNIX only)

On UNIX systems, you can use the UniVerse System Administration menus in addition to XAdmin to administer UniVerse. While these menus are now deprecated and no longer updated, they are still functional and let you perform normal UniVerse maintenance and some UNIX system administration without having to use XAdmin (the preferred option in most cases), UNIX shell commands, or file formats.

The UniVerse System Administration menus are available only to UniVerse Administrators working in the UV account. To have access to all files used for system administration, you must log in as a UniVerse Administrator.

Once you are logged on, activate the System Administration menus from the UNIX shell by changing to the UV account directory (usually `/usr/uv`):

```
# cd /usr/uv
```

Then use the command `bin/uv`:

```
# bin/uv
```

From an account in the UniVerse environment, you can use the `LOGTO` command to log to the UV account.

The System Administration menus and data entry screens look and work the same way as Motif menus. For a complete description of these menus, see *Administering UniVerse on Windows and UNIX Platforms*.

---

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-nls</td>
<td>The -nls option installs the NLS package during installation and changes the NLSMODE parameter in the <code>uvconfig</code> file to 1. On an upgrade, this option aborts the upgrade, as NLS is normally uninstalled first.</td>
</tr>
<tr>
<td>-fnls</td>
<td>The -fnls option forces the installation of NLS even on an upgrade. When using this option on upgrades, NLSMODE is not changed.</td>
</tr>
<tr>
<td><code>uvhome</code></td>
<td>Specifies the UniVerse home directory if it is different from either the installed UniVerse or <code>/usr/uv</code>.</td>
</tr>
</tbody>
</table>
Chapter 3: Installing UniVerse on Windows

The UniVerse Release 12.1.1 for Windows platforms installation image contains a program that manages the installation. Start this installation program as an administrator, then choose the software you want to install from the UniVerse setup wizard.

This section describes how to install UniVerse release 12.1.1 on an NTFS partition on a server running Windows. The installation procedure varies according to whether you are installing, reinstalling, or upgrading.

Note: Prior to release 11.2, it was necessary to use a Local Administrator ID to install UniVerse on Windows platforms. From that release forward, this restriction no longer exists, and administrator permissions are sufficient.

Preinstallation tasks for UniVerse on Windows

Before beginning a UniVerse installation on Windows, make sure you know the following information:

▪ The type of installation you are performing and the prerequisites for that type:
  ▫ For an initial installation, see Installing UniVerse as an initial installation, on page 35.
  ▫ For an upgrade installation or reinstallation, see Installing UniVerse as an upgrade or reinstallation, on page 34.
  ▫ For a silent installation, see Installing UniVerse as a silent installation, on page 37.

▪ How to download the installation media.

▪ The operating system requirements for your platform. See Operating system requirements, on page 6.

You do not need to authorize UniVerse during the installation process. You have 10 days after installation to authorize UniVerse.

Installing UniVerse as an upgrade or reinstallation

Use the install wizard to install UniVerse 12.1.1 as an upgrade or reinstallation.

Prerequisites

Make sure no one is using the database during the installation procedure. If this is an upgrade installation, make sure any optional products (such as NLS) are already installed on your system are uninstalled before proceeding with the following steps.

1. Log on to Windows as Administrator.
2. Make sure that no users are connected to the database server by using the LISTU command to list all users who are connected.
3. Stop all database services as follows:
   a. Select Start → All Programs → Rocket U2 → UniVerse → UniVerse Control.
   b. If the database is not started, click Stop All Services.
4. Proceed with the installation as described Installing UniVerse as an initial installation, on page 35.
Installing UniVerse as an initial installation

The first time you install UniVerse, you will use the install wizard. Review the prerequisites as described in Preinstallation tasks for UniVerse on Windows, on page 34. Review Applicable platforms, on page 7, and verify that your platform meets the database installation requirements.

Procedure

1. Click the download link in the confirmation email to download the UniVerse installation image.
2. Extract the .zip file, and then double-click AutoRun.exe.
3. In the Rocket UniVerse Setup Menu dialog box, click Install Rocket UniVerse 64-bit.
4. Follow the instructions in the wizard to work through the installation process. Detailed instructions are provided below where needed.
   a. In the License Details window, shown below, some of the information that you need to enter is provided in the confirmation email.

License details are described in the following table:

<table>
<thead>
<tr>
<th>License detail</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial #</td>
<td>The UniVerse serial number, which is provided in the Install Serial Number column in the email.</td>
</tr>
<tr>
<td>User Limit</td>
<td>The number of UniVerse users for which you are licensed. This number is provided in the Transaction Details beside UV in the email.</td>
</tr>
</tbody>
</table>
Chapter 3: Installing UniVerse on Windows

<table>
<thead>
<tr>
<th>License detail</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UVNET User Limit</td>
<td>The number of UVNET users for which you are licensed. This number is provided in the Transaction Details beside UVNET in the email.</td>
</tr>
<tr>
<td>Connection Pooling</td>
<td>The number of connection pooling licenses. This number is provided in the Transaction Details beside CONNPLEP in the email.</td>
</tr>
<tr>
<td>Device License</td>
<td>The number of device licenses for which you are authorized.</td>
</tr>
<tr>
<td>EDA, AUDIT, SUBKEY, PYTHON, Replication, RFS</td>
<td>Select the check boxes for the features that you plan to run.</td>
</tr>
<tr>
<td>Expiration Date</td>
<td>Update the expiration date of the license if necessary.</td>
</tr>
</tbody>
</table>

b. Click **Next**, and continue following the instructions in the wizard.

After the program files have been installed, you see the UniVerse Licensing dialog box. Before you can complete the UniVerse installation, you must obtain an authorization code.

c. In the UniVerse Licensing dialog box, select **Authorize UniVerse Now**, and click **Next**. You see the UniVerse License dialog box, which contains a **Configuration Code** field containing the configuration code, and a blank **Authorization Code** field.

d. Copy the configuration code.

e. Access the Rocket Authorization web page, listed below:

f. Sign in, and follow the instructions on the website to obtain the authorization code.

g. Copy the authorization code, and paste it into the **Authorization Code** field in the UniVerse License dialog box.

h. Click **Next** and then **Finish** to complete the UniVerse installation.

5. Start all database services as follows:

a. From the Start menu, select **Rocket U2** → **UniVerse Control**. The UniVerse Control Panel opens.

   ![UniVerse Control Panel](image.png)

b. If the database is not started, click **Start All Services**.
6. Start a database session on the server by using one of the following methods:
   ▪ From the Windows Start menu, select **Rocket U2 → UniVerse Shell**.
   ▪ Start a Telnet session from a client.

7. Review your file security.
   The database installation directory inherits its security permissions from the parent directory and from the attributes of the installer. Adjust the permissions to meet your needs. Database administrators need full access to the UV account directory. Other users require full access to the `catdir` directory and its contents, and read-only access to all other files in the UV account directory. All users must have full access to the database temporary directory.

8. Use Notepad to edit the `uvconfig` file in the UV account directory to specify a value for the `UVTEMP` configurable parameter. This value defines the directory where the database writes temporary files. (Windows platforms do not have a fixed location for temporary files.)
   If you do not specify a value for `UVTEMP`, the database first checks for temporary files in the directory specified in the TEMP environment variable, and then it searches the local directory.

9. Define the default database printer as follows:
   a. In the Devices and Printers control panel, click **Add a printer**.
   b. Select a suitable printer as the database default, and name it `UVDEFAULT`. The printer must be available to all database users on the system. It need not be a physical printer; it can be a file or a print queue.

10. Choose the maximum number of minidump files to store in the event of a UniVerse process failure.
    This feature is turned on by default, but can be turned on or off in the registry setting or in XAdmin.

---

**Installing UniVerse as a silent installation**

A silent installation runs without prompting you for input. To run a silent installation, you must set up a response file to answer the prompts automatically, then run through a normal installation to save the responses in a *Setup.iss* file in the `C:\Windows` directory. The *Setup.iss* response file
Chapter 3: Installing UniVerse on Windows

stores information about the data entered and options selected by the user at runtime so that the next time you run the installation, you can run it silently and avoid the prompts.

Review the prerequisites as described in Preinstallation tasks for UniVerse on Windows, on page 34. Review Applicable platforms, on page 7, and verify that your platform meets the database installation requirements.

Procedure

1. Download the installation image. As an administrator, open a command prompt and cd to the installation image's UNIVERSE/I386 directory.

2. Run setup.exe /r. The /r (or -r) switch records the responses. Proceed through the dialogs and complete the installation. This process created a Setup.iss file in the C:\Windows directory, as well as a setup.log file. You can change these default file names and location using the following steps:
   a. If you want to use a different name than the default Setup.iss name, use the /f1 or -f1 switch. For example:
      ```shell
      setup.exe /r /f1"c:\temp\UVSetup.iss"
      ```
      This option creates a UVSetup.iss file in the c:\temp directory. Note that there is no space between the /f1 switch and the file name.
   b. If you want to specify a log file name other than the default setup.log file, use the /f2 switch. For example:
      ```shell
      setup.exe /r /f2"c:\temp\uvsetup.log"
      ```
      This option creates a uvsetup.log file in the c:\temp directory. Again, there is no space between the /f2 switch and the file name.

   **Note:** The installer will start a separate process and exit before the installer is complete. To prevent this, use the /sms switch to pause the installer until it is complete. This option is useful for scripting purposes.

3. When the installation is complete, navigate to the C:\Windows directory. Copy the Setup.iss file and paste it into the installation's directory.

   The following example shows a basic Setup.iss response file.

   ```ini
   [InstallShield Silent]
   Version=v7.00
   File=Response File
   [File Transfer]
   OverwrittenReadOnly=NoToAll
   [{E7EA0E92-3AFF-11D4-8961-00500462FF70}-DlgOrder]
   Dlg0={E7EA0E92-3AFF-11D4-8961-00500462FF70}-AskYesNo-0
   Count=13
   Dlg1={E7EA0E92-3AFF-11D4-8961-00500462FF70}-SdWelcome-0
   Dlg2={E7EA0E92-3AFF-11D4-8961-00500462FF70}-SdLicense2-0
   Dlg3={E7EA0E92-3AFF-11D4-8961-00500462FF70}-LICENSE_DIALOG-0
   Dlg4={E7EA0E92-3AFF-11D4-8961-00500462FF70}-ASK_DEST_PATH_DIALOG-0
   Dlg5={E7EA0E92-3AFF-11D4-8961-00500462FF70}-GENERAL_CHECK_DIALOG-1
   Dlg6={E7EA0E92-3AFF-11D4-8961-00500462FF70}-GENERAL_CHECK_DIALOG-2
   Dlg7={E7EA0E92-3AFF-11D4-8961-00500462FF70}-GENERAL_CHECK_DIALOG-3
   Dlg8={E7EA0E92-3AFF-11D4-8961-00500462FF70}-GENERAL_CHECK_DIALOG-4
   Dlg9={E7EA0E92-3AFF-11D4-8961-00500462FF70}-SdSelectFolder-0
   Dlg10={E7EA0E92-3AFF-11D4-8961-00500462FF70}-SdStartCopy-0
   Dlg11={E7EA0E92-3AFF-11D4-8961-00500462FF70}-GENERAL_CHECK_DIALOG-5
   Dlg12={E7EA0E92-3AFF-11D4-8961-00500462FF70}-SdFinish-0
   [{E7EA0E92-3AFF-11D4-8961-00500462FF70}-AskYesNo-0]
   Result=1
   ```
Installing UniVerse as a silent installation

Result=1

SerialNo=123456789
UserLimit=10
UVNETUserLimit=10
ConnectionPooling=10
DeviceLicense=10
ExpirationDate=01/01/2500
EDA=1
AUDIT=1
SUBKEY=1
PYTHON=1
MVCURE=1
Result=1

UniVerseDir=C:\U2\UV
UniSharedDir=C:\U2\unishared
PythonDir=C:\U2\UV\python
Result=1

Check_Box_1=0
Check_Box_2=0
Check_Box_3=0
Check_Box_4=0
Result=1

Check_Box_1=0
Check_Box_2=0
Check_Box_3=0
Check_Box_4=0
Result=1

Check_Box_1=0
Check_Box_2=0
Check_Box_3=0
Check_Box_4=0
Result=1

Check_Box_1=1
Check_Box_2=1
Check_Box_3=1
Check_Box_4=0
Result=1

szFolder=Rocket U2\UniVerse
Result=1

Result=1

Name=UniVerse
Version=11.3
Company=Rocket Software
Lang=0009
Result=1
Chapter 3: Installing UniVerse on Windows

4. **Optional:** Verify that the silent installation works by uninstalling the database, then running `setup.exe /s` from the command prompt. The /s (or -s) switch runs the installer with the silent option.

5. The next time you install the database, run `setup.exe /s` to install it silently. If you changed the file name or location using the /f1 switch, run `setup.exe /s /f1"path"`.

**Results**

When you use a silent installation, the database creates a `silent-install.log` file. Open and check this file to monitor the progress of the silent installation. The message "UniVerse silent installation finished" is written to the log when the silent installation is finished. If any errors occur during the silent installation, the message "UniVerse silent installation aborted" is written to the log.

**Starting a UniVerse session over telnet**

Complete the following steps to start a UniVerse session over telnet.

**Procedure**

1. From the server, make sure the UniVerse Telnet services is running on the server.
2. From the client, run the telnet application, for example, UV/Term.
3. From the client, enter the appropriate telnet command, such as open or connect, and specify your UniVerse server’s network name as it appears in the hosts or lmhosts file. The following example illustrates connecting to the server univ.
   ```
   open univ
   ```
4. Once connected, enter a valid user ID and password for your server.
5. If you are prompted, enter the location of the UniVerse account that you want to access, as shown in the following example:
   ```
   D:\U2\UV
   ```

**Updating license information**

Use the XAdmin License tool to authorize UniVerse.

**Prerequisites**

If you are using UVNet, you must authorize both the UniVerse database and UVNet.

**Procedure**

1. To access the License tool in XAdmin, open XAdmin and then double-click the server you want to use.
   The server starts. The Admin Tasks view opens and displays the database type that you are using.
2. From the Admin Tasks view, double-click License. The License tab opens, as shown in the following example:

3. Click the Update tab, and in the Serial Number field, enter the UniVerse serial number.
4. In the UniVerse User Limit field, enter the number of users for which you are licensed.
5. In the UVNET User Limit field, enter the number of UVNet users for which you are licensed. If you are not licensed for any UVNet users, enter 0.
6. In the Connection Pooling field, enter the number of connection pooling licenses. If you are not licensed for any connection pools, enter 0.
7. In the Device License field, enter the number of device licenses for which you are authorized.
8. Select the check boxes for any of the applicable features you are running:
   - EDA
   - AUDIT
   - SUBKEY
   - PYTHON
   - SystemCure for UniVerse
   - Replication (UniVerse replication)
   - RFS (UniVerse Recoverable File System)
9. In the Expiration Date field, update the expiration date of the license if necessary.
10. If you have not yet authorized UniVerse, click the Authorize tab, and enter the code in the Authorization Code field. See Obtaining an authorization code, on page 41.

**Note:** In previous versions of UniVerse, if you move the installation to different hardware and start UniVerse, you might encounter an invalid .uvconfig error and UniVerse fails to start. At 11.2.5 and 11.3.x, the 10-day temporary license period prevents this message. When moved to different hardware, UniVerse will become unauthorized and enter the 10-day temporary license period. You need to reauthorize then restart UniVerse within 10 days to avoid the expiration of the temporary license. When starting UniVerse sessions, reminder messages display indicating the status of the temporary license.

**Obtaining an authorization code**

After updating all of the license information, you must obtain an authorization code. You must authorize UniVerse within 10 days of installation.
1. From the Admin Tasks view, double-click **Licenses**, and then click **Authorize**.
2. Copy the configuration code shown in the **Configuration Code** field.
3. Go to the Rocket Authorization page, listed below, and follow the instructions on the website to obtain and copy the authorization code.
4. Paste the authorization code into the **Authorization Code** field.
Chapter 4: Upgrading UniVerse and Data Replication

The Data Replication protocol requires that if you are upgrading from one version of UniVerse to another version of UniVerse where the replication protocol level, sub-protocol level, or replication log file versions have changed, the following steps must be completed:

1. Ensure the subscribing server has received and applied all the updates from the publisher server before commencing the upgrade.
2. Perform a controlled shut down of UniVerse on both the publisher and subscriber. (Do not use `uv -stop -force`).
3. Upgrade the publishing server first and choose not to start UniVerse after the upgrade.
4. Clear the contents of the directory as specified by the configurable REP_LOG_PATH in `uvconfig`.
5. You can now start UniVerse on the publishing server.
6. Repeat Steps 3 to 5 for the subscribing server.
Chapter 5: UniVerse accounts

This section describes how to add new UniVerse accounts and how to maintain existing accounts. It covers the following topics:

- How to create a UniVerse account, and how to carry out additional procedures that make the account function properly in either the operating system or the UniVerse environment
- How to delete a UniVerse account
- How to customize a UniVerse account

When you first install UniVerse, the UV account is created. One of your first tasks after starting up the system is to add new UniVerse accounts.

About UniVerse accounts

You always enter UniVerse through a UniVerse account. A UniVerse account includes a directory containing the files required to run UniVerse in that directory. An established UniVerse account can also contain database files and program files.

The VOC file in each UniVerse account defines the account environment, including all the files and commands that are available to users who are logged on to the account.

For example, a UniVerse account might be defined for a department rather than for an individual. Each user of the SALES account might be given his or her own login name at the operating system level but be assigned the same home directory and share the same UniVerse account.

UniVerse file permissions are managed by the UNIX or Windows file permissions. For information about setting file permissions, refer to the documentation that comes with your operating system.

Creating accounts with XAdmin

An account is a container for a collection of related files for a business purpose or activity.

Prerequisites

To create an account, you must have a server definition set up.

About this task

A U2 account is a virtual container used to organize a collection of related files and data for a specific business purpose or activity. For example, a business organization might create a U2 account to track sales data.

More technically, a U2 account is a UNIX or Windows directory in hashed format that contains a vocabulary (VOC) file and other U2 system files that provide the environment in which to run U2 tools and applications. An account can be configured to meet the needs of one user, a job function, a department, or an entire company.

A U2 account is associated with a specific U2 server definition. The U2 Resource window displays a list of all UniVerse accounts currently defined in the UV.ACCOUNT file.
Creating accounts with XAdmin

**Note:** You can also create UniVerse accounts by entering `uv` at an operating system prompt. If an account is created this way, the `UV.ACCOUNT` file is not updated and the account cannot be administered using the **Accounts** option.

When you add a new account, UniVerse does the following:

- Assigns an account compatibility flavor
- Updates the UV.ACCOUNT file
- Edits the LOGIN entry in the UniVerse account

**Procedure**

1. Open XAdmin from the **Start** → **Rocket U2** menu.
2. Double-click the name of the server in the U2 Resource view to connect to it.
3. From the U2 Resource view, right-click **Accounts** and select **New** → **Account**.
   The Create a New U2 Account dialog box displays, as shown in the following example:

   ![Create New U2 Account dialog box](image)

   4. In the **Account Name** field, enter a unique name for the account.
   5. In the **Account Path** field, enter the full path for the account, or click **Browse** to select a location.
      The **Create the account path if it does not exist** check box is selected by default to create the directory you define if it is not created already.
   6. Click **Finish**.
   7. Select one of the following flavors from the **Account Flavor** list.
      - **IDEAL**: Choose this flavor if you are a new user. It contains the best features of all the flavors.
      - **INFORMATION**: Choose this flavor for compatibility with Prime INFORMATION.
      - **PIOPEN**: Choose this flavor for compatibility with PI/Open.
Chapter 5: UniVerse accounts

- **PICK**: Choose this flavor for compatibility with Pick or Advanced Pick.
- **REALITY**: Choose this flavor for compatibility with Microdata REALITY.
- **IN2**: Choose this flavor for compatibility with IN2.

8. Select the **Use Default LOGIN** check box if you want to use the default LOGIN entry for the new account.

9. Click **OK**.

The account is created in the chosen directory, with the ownership and security of the parent directory. The `UV.ACCOUNT` file and the U2 Resource view are updated.

**Note:** You can choose a directory path of an existing UniVerse account. In this case, the new account is added to the `UV.ACCOUNT` file, but no changes are made to the existing account files in the directory.

---

### Viewing or modifying account details

To view or modify the details of an account, use the **Accounts** tab from XAdmin

**Prerequisites**

You must have an account created before you can view the details. For more information, see *Creating accounts with XAdmin, on page 44.*

**Procedure**

1. From the Admin Tasks view in XAdmin, double-click **Accounts**.
2. From the **Accounts** tab, select the account that you want to view or update, and click **Detail**.
3. Modify the account settings that you want, except for the account flavor setting and account path. Click **OK** to save your changes.

### Deleting an account

Delete an account you no longer want for the U2 server.

**Prerequisites**

To delete an account, you must have an account created, as described in *Creating accounts with XAdmin, on page 44.*

**Procedure**

1. Right-click the account you want to delete from the U2 Resource view, then click **Delete**.
2. From the Confirm Account Delete dialog box, select how the account should be deleted by clicking the appropriate option.
   - For UniVerse:
     - **Retain Directory**: UniVerse removes the account from the `UV.ACCOUNT` file.
     - **Delete Directory**: UniVerse removes the account from the `UV.ACCOUNT` file and deletes the directory, along with all of its contents. If other accounts in the `UV.ACCOUNT` file use the files in this directory, you will also be prompted whether you want to delete these accounts.
Click **OK**.

3. Click **Yes** to remove the account as specified.

# Customizing UniVerse accounts

You can customize UniVerse accounts. For example, you can prevent certain users from creating or modifying accounts from their own UniVerse accounts.

You can also set up alternative account flavors and their associated VOC files. To customize your system in this way, you must modify the `NEWACC` file and the `UV.FLAVOR` file.

Using XAdmin, you can specify the account flavor to use, which in turn affects the VOC file and the user’s access to UniVerse. There are six standard flavors: IDEAL, INFORMATION, PICK, REALITY, PIOPEN, and IN2. These are listed when you create accounts using the Accounts view in XAdmin.

On Windows platforms, you can specify the account directory or UniVerse account to which each user initially logs on from a telnet session. Use the Network Services option of XAdmin to do this. For more information about the Network Services option, see *Administering UniVerse on Windows and UNIX Platforms*.

## UniVerse account control files

XAdmin uses the account control files to check the validity of responses to some of the data entry screens. These files are updated only when you create or modify an account using XAdmin, so it is important to create accounts using XAdmin.

Although these files are used primarily by XAdmin, you can use the `LIST` and `SORT` commands to create reports. You can update them with ReVise or the UniVerse Editor.

The following sections describe the account control files:

- **The UV.ACCOUNT file**
  The `UV.ACCOUNT` file is in the UV account directory. It contains a list of UniVerse accounts and their paths.

- **The UV.FLAVOR file**
  The `UV.FLAVOR` file is in the UV account. The `UV.FLAVOR` file dictionary contains X-descriptors that define each flavor.

- **The UV.LOGINS file (Windows only)**
  The `UV.LOGINS` file is in the UV account only on Windows platforms. It contains a list of users and the UniVerse accounts they log on to when they first connect to UniVerse through a telnet session.

## The UV.ACCOUNT file

The `UV.ACCOUNT` file is in the UV account directory. It contains a list of UniVerse accounts and their paths.

UniVerse automatically updates this file when you create or delete an account using XAdmin. Each UniVerse account has a record in the `UV.ACCOUNT` file. The record ID is the account name. Each record also contains the following fields, but only the PATH field is updated by UniVerse.

<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>@ID</td>
<td>Account name</td>
</tr>
<tr>
<td>PASSWORD</td>
<td>Account’s password</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Field name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAX</td>
<td></td>
</tr>
<tr>
<td>MIN</td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td></td>
</tr>
<tr>
<td>UID</td>
<td>User ID number</td>
</tr>
<tr>
<td>GID</td>
<td>Group ID number</td>
</tr>
<tr>
<td>NAME</td>
<td>Account owner’s name</td>
</tr>
<tr>
<td>OFFICE</td>
<td></td>
</tr>
<tr>
<td>EXT</td>
<td></td>
</tr>
<tr>
<td>PHONE</td>
<td></td>
</tr>
<tr>
<td>PATH</td>
<td>Account directory’s path</td>
</tr>
<tr>
<td>SHELL</td>
<td>UNIX shell</td>
</tr>
<tr>
<td>PERMISSIONS</td>
<td></td>
</tr>
</tbody>
</table>

Parent topic: UniVerse account control files

The UV.FLAVOR file

The UV.FLAVOR file is in the UV account. The UV.FLAVOR file dictionary contains X-descriptors that define each flavor.

The UV.FLAVOR data file contains records that specify restrictions on creating or updating accounts. This file lets you choose the account flavor for an individual or for a group of users.

Each record in UV.FLAVOR can have one of the three types of record ID:

<table>
<thead>
<tr>
<th>Record ID</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>USER.name</td>
<td>name is the login name of a user.</td>
<td>USER.alice</td>
</tr>
<tr>
<td>GROUP.name</td>
<td>name is the name of a user group.</td>
<td>GROUP.users</td>
</tr>
<tr>
<td>OTHER</td>
<td>A specially defined account.</td>
<td>OTHER</td>
</tr>
</tbody>
</table>

Each record has two fields. The second field specifies one of the six different flavors: IDEAL (UniVerse), INFORMATION, PICK, REALITY, PIOPEN, or IN2. The first field specifies one of the following codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>UniVerse prompts you to choose an account flavor when creating or updating an account.</td>
</tr>
<tr>
<td>F</td>
<td>UniVerse automatically assigns the account flavor designated in field 2.</td>
</tr>
<tr>
<td>N</td>
<td>The user cannot create or update an account.</td>
</tr>
</tbody>
</table>

The following example is of a sample UV.FLAVOR file:

```
UV.FLAVOR........ Access Code.. Flavor....... GROUP.users F PICK OTHER C GROUP.demo F NEWACC
```

To prevent users from creating or modifying an account, create an entry for them in the UV.FLAVOR file and set the access code to N.
To use a custom flavor, create an entry in the **UV.FLAVOR** file for users who will use the flavor, and set the access code to F. Enter the custom flavor name in field 2 of the **UV.FLAVOR** file.

**Parent topic:** UniVerse account control files

### The UV.LOGINS file (Windows only)

The **UV.LOGINS** file is in the UV account only on Windows platforms. It contains a list of users and the UniVerse accounts they log on to when they first connect to UniVerse through a telnet session.

Use the Network Services option of XAdmin to maintain this file. For information about the Network Services file, see *Administering UniVerse on Windows and UNIX Platforms*.

**Note:**

If you create **UV.LOGINS** entries with an uppercase domain name and a lowercase user name, UniVerse will find those entries regardless of the case the user uses when logging on to the system.

If UniVerse is not able to find the entered *domain name or username* in the **UV.LOGINS** file, a second attempt will be made after the *domain name* is upcased and the *username* is downcased. Therefore, if **UV.LOGINS** records are created with an uppercase domain name and a lower case user name, UniVerse will be able to locate the **UV.LOGINS** record regardless of the case input by the user.

**Parent topic:** UniVerse account control files

### Essential UniVerse files

For users to work in the UniVerse environment, their current working directories must contain a number of UniVerse files, including the **VOC** file and its associated file dictionary. In addition, each UniVerse account is set up in a specified flavor of compatibility, such as IDEAL (UniVerse), PICK, or INFORMATION.

The system administrator does not set up the **VOC** file and its associated file dictionary. They are created when the user logs on to the new UniVerse account for the first time.

If the directory has not been set up as a UniVerse account, the system notifies the user that the account has not yet been set up. The user must answer the system prompts to create or update the **VOC** file.

The following sections describe the essential UniVerse files:

- **The VOC file**
  The **VOC** file is created according to the restrictions specified in the **UV.FLAVOR** file. The master files used as templates for creating **VOC** files are in the file **NEWACC**.

- **The UV.LOGIN and LOGIN entries**
  If the UniVerse command processor is specified as the account’s command interpreter, UniVerse executes the **UV.LOGIN** entry in the **VOC** file of the UV account when the user logs on to the account.

- **The UOLOGIN subroutine**
  The UOLOGIN subroutine can be used for security purposes to control access to UniVerse accounts on the server.
The VOC file

The VOC file is created according to the restrictions specified in the UV.FLAVOR file. The master files used as templates for creating VOC files are in the file NEWACC.

If your VOC is being updated rather than created, replaced records are moved to the file &TEMP& to prevent them from being destroyed. The names of any records that are moved to &TEMP& are listed on your screen.

Note: The VOC file defines the UniVerse account. The contents of the VOC file limits access to commands and files in a UniVerse account. Users cannot access any files or commands not defined in the VOC file of the account in which they are working.

Parent topic: Essential UniVerse files

The UV.LOGIN and LOGIN entries

If the UniVerse command processor is specified as the account’s command interpreter, UniVerse executes the UV.LOGIN entry in the VOC file of the UV account when the user logs on to the account.

The UV.LOGIN entry can be a paragraph, a proc, a UniVerse BASIC program, or a menu. It is typically a paragraph containing commands that establish system-wide defaults. After executing UV.LOGIN, UniVerse executes the LOGIN entry in the VOC file of the user’s account.

On UNIX platforms, the default LOGIN entry in the sample directory is a paragraph that looks like the following:

```
LOGIN
001 PA
002 PTERM ERASE ON KILL ON WERASE ON RPRNT ON FLUSH ON LNEXT ON SUSP ON_ 
003 INTR ON QUIT ON STOP ON START ON EOF ON BRK OFF_
004 ECHO ON ECHO CTRL ON TABS ON CRMODE ON TYPE FAST LFDELAY 0 FFDELAY 2
005 UMASK 077
```

This LOGIN entry uses PTERM to set terminal characteristics, and it uses the UniVerse UMASK command to set the default file permission mask. These commands have the same function as the UNIX commands stty and umask.

Many of the functions performed by the LOGIN entry are identical to those performed in the UNIX .profile file. For example, the stty command in .profile determines which keys perform erase, kill, interrupt and quit operation on your terminal:

```
stty erase '"H' kill '"U' intr '"?' quit '"_' -tabs ff0 cr0 nl0
```

On Windows platforms, the default LOGIN entry in the sample directory is a paragraph that looks like following:

```
LOGIN
001 PA
002 PTERM ERASE ON KILL ON WERASE ON RPRNT ON INTR ON_
003 ECHO ON ECHO CTRL
004 CLR
```

Parent topic: Essential UniVerse files
The UOLOGIN subroutine

The UOLOGIN subroutine can be used for security purposes to control access to UniVerse accounts on the server.

UniObjects, UniObjects for .NET, UniObjects for Java, and InterCall can check for the existence of a UOLOGIN BASIC subroutine on the server. The subroutine has all the capabilities available in UniVerse BASIC so the program can be tailored to meet the needs of the specific environment.

Once the UOLOGIN subroutine is cataloged globally, it will be executed when a client connection is initiated and the connection will fail if the requirements specified in the subroutine are not met. A return value of 0 indicates the requirements have not been met, and a return value of 80011 will be sent to the client.

The UOLOGIN subroutine on the server should contain two arguments, as follows:

```
SUBROUTINE UOLOGIN(RTNVAL, APPNAME)
```

**Arguments**

The following table describes the UOLOGIN subroutine arguments:

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTNVAL</td>
<td>If RTNVAL is a nonzero value, the connection is allowed. If RTNVAL is 0, the connection is not allowed and an error message is returned.</td>
</tr>
<tr>
<td>APPNAME</td>
<td>The name of the client application trying to establish the connection.</td>
</tr>
</tbody>
</table>

Parent topic: Essential UniVerse files

Controlling access to UniVerse (Windows only)

The UV.LOGINS file is used on Windows platforms to define how users connect to UniVerse via telnet sessions. Use the Network Services option of XAdmin to specify how users should connect to UniVerse.

For more information about the Network Services option, see Administering UniVerse on Windows and UNIX Platforms.

Controlling access to UniVerse (UNIX only)

You can make UniVerse your default working environment by entering `/usr/uv/bin/uv` as your default shell in the `/etc/passwd` file. When you log in and out, you log directly in to and out of UniVerse.

If, on the other hand, the `/etc/passwd` file specifies a UNIX shell (for example, `/bin/sh`), you log in to a UNIX shell. You can then invoke the UniVerse environment with the `uv` command. Even if the `/etc/passwd` file specifies a UNIX shell, your `.profile` or `.login` file can log you directly in to the UniVerse environment. To do that, add the following line to your `.profile`:

```
exec uv
```

The `exec` command replaces the current shell with the shell you specify, in this case `uv`. On exiting UniVerse, you also exit the system.
Chapter 5: UniVerse accounts

<table>
<thead>
<tr>
<th>Login shell specified in /etc/passwd</th>
<th>Initialization files</th>
<th>You log in…</th>
<th>You log out…</th>
</tr>
</thead>
<tbody>
<tr>
<td>/usr/uv/bin/uv</td>
<td>LOGIN</td>
<td>Directly to UniVerse.</td>
<td>To a UNIX login shell.</td>
</tr>
<tr>
<td>/bin/sh</td>
<td>.profile</td>
<td>To a UNIX Bourne shell.</td>
<td>To a UNIX login shell.</td>
</tr>
<tr>
<td>/bin/sh</td>
<td>.profile containing exec uv</td>
<td>To UniVerse. The UNIX login is transparent to the user.</td>
<td>To a UNIX login shell.</td>
</tr>
<tr>
<td>/bin/csh</td>
<td>.cshrc</td>
<td>To a UNIX C shell.</td>
<td>To a UNIX login shell.</td>
</tr>
<tr>
<td>/bin/csh</td>
<td>.cshrc .login containing uv command</td>
<td>To UniVerse. The UNIX login is transparent to the user.</td>
<td>To a UNIX C shell.</td>
</tr>
</tbody>
</table>

**Note:** If you interrupt the execution of the .profile or .login file (for example, by pressing the Break key) before the uv command is executed, you are left in a UNIX shell.

### Customizing a UniVerse account

A valid UniVerse account always includes a VOC file and its associated file dictionary. The VOC file defines all the commands and keywords that can be used, and all the files that can be accessed from that account. UniVerse uses master files in the UV account directory to create the VOC files in all new accounts.

### Choosing a UniVerse flavor

Any UniVerse account can be one of several standard flavors: IDEAL (UniVerse), IN2, INFORMATION, PICK, PIOPEN, or REALITY.

- The PIOPEN flavor is used for compatibility with PI/open.
- The INFORMATION flavor is used to maintain an environment compatible with Prime INFORMATION products.
- The IN2, PICK, and REALITY flavors are used for compatibility with the different versions of the Pick system. These flavors can be chosen by users who are more comfortable with a Pick system and want UniVerse to behave in the same way.
- The IDEAL flavor contains the best of both the Pick and Prime worlds.

New users are encouraged to choose the IDEAL UniVerse flavor.

### NEWACC files

The NEWACC file in the UV account contains the different VOC file templates for each flavor of UniVerse. These templates are stored as multiple data files of the NEWACC file. Each data file is a fully configured VOC template whose name corresponds to the flavor.

To list the contents of the data file containing the template for IDEAL flavor VOC files, enter either of the following commands from the UV account:

```
>LIST NEWACC
>LIST NEWACC,NEWACC
```

To list the contents of the NEWACC template for INFORMATION flavor VOC files, enter:
Customizing NEWACC files

You can modify the standard NEWACC files to ensure that the VOC files of new accounts contain only the records you want.

For example, you can remove records for commands that you do not want users to access, or you can add records for files that are needed for an application.

You can also create up to 27 additional customized NEWACC files (see UniVerse System Description for information about adding data files to a UniVerse file). Each NEWACC file is a template for a new flavor of UniVerse. For each new flavor, you must add an X-descriptor to the dictionary of the UV.FLAVOR file. The record ID of the X-descriptor is the name of the new NEWACC file, and field 2 contains the description of the new flavor. This description appears in the list of UniVerse flavors when you create new accounts. The following steps describe the easiest way to create a customized flavor.

1. Change to the UV account directory and invoke UniVerse.
2. Make a copy of one of the standard NEWACC files. Do this by creating a new data file in NEWACC and copying the contents of the standard NEWACC file to the new data file:

   ```
   >CREATE.FILE DATA NEWACC,MY.FLAVOR 3 23 4
   Creating file "NEWACC/MY.FLAVOR" as Type 3, Modulo 23, Separation 4.
   >COPY FROM NEWACC,INFORMATION TO NEWACC,MY.FLAVOR ALL
   355 records copied.
   ```

3. Use the UniVerse Editor or ReVise to add, delete, or change standard VOC entries in your new flavor.
4. Use the UniVerse Editor to add an X-descriptor to the DICT of UV.FLAVOR:

   ```
   >ED DICT UV.FLAVOR
   Record name = MY.FLAVOR
   New record.
   ----: I
   0001=X
   0002=My own custom UniVerse flavor
   0003=
   Bottom at line 2
   ----: FI
   ```
"MY.FLAVOR" filed in File "DICT UV.FLAVOR"
Chapter 6: Installing NLS

Complete the following steps to install the NLS package.

This task applies to UNIX and Linux platforms only. On Windows platforms, install NLS from the UniVerse installation program at the same time you install UniVerse. When installation is complete, use the NLS Administration menus to configure NLS to suit your system.

**Note:** Starting at 11.3.1 for UNIX and Linux platforms, you can install NLS using the `uv.load` script with the -nls or -fnls options. For more information about these options, see The `uv.load` command, on page 32.

1. As a UniVerse administrator, log on to the UniVerse account directory and invoke UniVerse.
2. From the **UniVerse System Administration** menu, select **Package**.
3. From the **Package** menu, enter I to select the **Install package** menu.
4. At the "Name of package to install?" prompt, enter NLS.
5. At the "Device to load package" prompt, select **CDROM**, to see a list of devices, enter *.
6. At the “Are you sure you want to install this package” prompt, press Enter to accept the default **Yes**.
7. At the “Installation of package NLS Complete” prompt, press Enter.
8. Press Esc to return to the UniVerse prompt.
10. Go to the UniVerse home directory (**cat** /uvhome) at the UNIX/Linux level.
11. Without users logged in, run **bin/uvregen**.
12. Shut down and restart UniVerse.

Uninstalling NLS

Complete the following steps to uninstall the NLS package.

This task applies to UNIX and Linux platforms only.

1. As a UniVerse administrator, log on to the UniVerse account directory and invoke UniVerse.
2. From the **UniVerse System Administration** menu, select **Package**.
3. From the **Package** menu, enter D to select the **De-install package** menu.
4. At the "Name of package to de-install?" prompt, enter **NLS**.
5. At the “Are you sure you want to de-install this package” prompt, press Enter to accept the default **Yes**.
6. Press Esc to return to the UniVerse prompt.
7. Log out of UniVerse.
8. Go to the UniVerse home directory (**cat** /uvhome) at the UNIX/Linux level.
9. Without users logged in, run **bin/uvregen**.
10. Shut down and restart UniVerse.