

# Virtuoso 2 Multi-User Licensing Information

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This Readme contains some new information about upgrading to Virtuoso 2's Multi-User Licensing (MUL). You should have root privileges in order to install the multi-user licensing. For best results, use this Readme with your *Multi-User Licensing* pamphlet included in your Virtuoso 1 packaging.

## New Notes:

The old-style key numbers (VX1234....) are no longer compatible with Virtuoso 2. Use the new key numbers on your Key & Serial Number Card.

If you are upgrading to Virtuoso 2's MUL, you'll need to make sure and kill the `issd` that's running now by using the kill command in Terminal.app. The old `issd` and `alived` are no longer compatible. They must NOT be running because they will conflict with the newer `issd6` and `locald6`. Remove them from startup files if they are present.

To kill the existing `issd` type in Terminal:

```
ps -wauX | grep iss
```

you'll get something like:

```
root 12345 2.2 0.6 1.60M 208K p2 S 0:00 grep iss
root 456 0.0 1.1 1.70M 368K ? S 0:11
/LocalApps/Virtuoso.app/Licensing/issd
```

So in this case, type:

```
kill 456
```

The 456 in this case is the process id that follows root.

Use a similar procedure to locate and kill any locald or `locald6` processes.

### **How a multi-user license works:**

A single user license is included with each copy of Virtuoso, which means that only one person can use each copy of Virtuoso at any given time. Multi-User Licenses can be purchased from Altsys which allow multiple users to use a licensed copy of Virtuoso simultaneously. To set up multi-user licensing, a licensing server host must be selected. This machine holds the multi-user licensed copy of Virtuoso as well as some licensing files for statistics. In addition, it runs a licensing daemon called `issd6` which handles licensing requests. Users can launch from the MUL copy of Virtuoso if it is visible over the network, or copy the Virtuoso folder to their local machine and launch from there. **Note:** If the MUL copy of Virtuoso is copied to a local machine, the `.VirtInfo` file must be checked and edited if necessary so it points to the correct License server host (see format of `.VirtInfo` below).

### **Single User:**

Simply enter the Key number from the card on first startup (same as Virtuoso 1).

**Note:** Key numbers ARE case-sensitive and must be entered exactly.

## Multi User License:

1. Use Installer.app to install Virtuoso 2 on the machine that will be your license server (*refer to page 6 of the Multi-User Licensing pamphlet*). The MUL code is tied to your license server's hostid, which is a unique number for each NeXT computer or network card that NEXTSTEP uses to identify each machine.
2. After the installer has completed its process, launch and personalize your new version of Virtuoso. Then create the following directory at the root level of the license server called `ISS_Licensing`. Its a special folder that holds the licensing information and utilities for the MUL copy of Virtuoso 2. (If you have BÙcchus products installed, that directory would have been created by their installation process.)
3. Then install the MUL.pkg from the MUL disk. It will only install in the `ISS_Licensing` directory. Installer, in turn, creates a directory called `bin` which contains all the software and utilities needed to maintain the MUL.
4. In order to automatically start up `issd6` whenever you boot the Virtuoso network licensing server machine, you should put the following into your `/etc/rc.local` file on the network licensing server machine:

```
if [ -f /ISS_Licensing/bin/issd6 ];  
  
then /ISS_Licensing/bin/issd6
```

```
(echo -n issd6) > /dev/console
```

```
fi
```

**Note:** `issd6` can no longer be run from `inetd.conf`. If your `inetd.conf` is launching `issd` or `issd6` you'll need to edit your `inetd.conf` file to comment out or delete the `issd` or `issd6` launching line. Use the `rc.local` method mentioned above instead.

5. Run `issd6` from the Terminal.app. To do this, type:

```
/ISS_Licensing/bin/issd6
```

6. Call Altsys (214.680.2060) to obtain your MUL key. Make sure and have the `hostid` of the license server ready.
7. Write down your key number. It contains upper and lower case letters and symbols (or you can just type it in as you talk with the technical support person at Altsys). At any rate, its a lifetime code (the old code was a one-time only number).
8. Virtuoso will exit and be ready for MUL.

### Format of `.VirtInfo` File

This file is automatically generated when you first license Virtuoso or complete the MUL process listed above. `.VirtInfo` is located inside the Virtuoso app wrapper:

```
#Name
#company
#serial_number
altsys 1 host_name license_directory key_number
```

The first three lines are personalization info, the last line contains licensing info:

altsys:           Altsys' developer ID. Does not change

1:                Single License Server. Does Not Change

host\_name:        Name of Virtuoso license server. This field tells your local copy of Virtuoso what host to check for licensing information. Only used for MUL.

license\_directory:            Location on Virtuoso License Server of license data files. This directory on the licensing server contains licensing statistics files in a sub-directory called `altsys`. This entry can be edited to store the files in a different location. Only used for MUL. The name of this directory is `/ISS_Licensing/altsys`.

password:         Your individual key number for single-users or multi-user licenses.

**Note:** The last line, which contains the key number may be

duplicated if you have two or more single-user key numbers that you want in the same file, such as:

```
altsys 1 host_name license_directory key_number1  
altsys 1 host_name license_directory key_number2
```

**Note:** If you use this method, and then later make this copy a MUL, you would lose the additional license strings since Virtuoso overwrites the `^VirtInfo^` file at the end of the MUL process. Therefore, be sure to make a copy of the `^VirtInfo^` file before changing from a single-user to multi-user licenses.

### MUL Utilities:

When a MUL is purchased, you can use the utilities in the "License" sub-directory to get Licensing statistics and data. These only work on a MUL Version of Virtuoso, not with the original single-user key numbers.

xwho

Will list the users currently using Virtuoso

Usage: xwho Virtuoso <server> <licensing\_dir>

example: xwho Virtuoso mycomputer /ISS\_Licensing/altsys

xstat

returns daily(-d), weekly(-w), monthly(-m), or yearly(-y) usage statistics

Usage: xstat Virtuoso <server> <dir> [-d/w/m/y] [-l]

example: xstat Virtuoso mycomputer /ISS\_Licensing/altsys -w

xactive

reports whether the specified host is running @issd6<sup>o</sup>

example: xactive mycomputer

**Note:** The following xclear and xclear\_nr are rarely needed. Please be careful when using them. System Administrators usually do not make these utilities available.

xclear

xclear (must be run as root) "unsticks" and clears all checked-out licenses. This will force all current users of Virtuoso to exit.

Usage: xclear Virtuoso <license-adm-dir>

example xclear Virtuoso /ISS\_Licensing/altsys

**Note:** You will be required to confirm this. After a few minutes, all users must quit.

xclear\_nr

**ALERT:** This is the same as xclear, except it does NOT require root! Anyone can revoke Virtuoso Licenses (forcing exit) with this utility.

Usage: xclear\_nr Virtuoso <license-adm-dir>

example xclear\_nr Virtuoso /ISS\_Licensing/altsys

**Note:** We don't recommend you leave it with regular access because it gives users the ability to force others to quit.

xhostid

Return the local hostid

usage: xhostid

**Information about Bacchus, Inc. products:**

Important - if your are running Pixel Magician™/ Image Agent™from BÙcchus, Inc., please read the following notes:

Altsys and BÙcchus use the same underlying license manager for their NEXTSTEP®applications. Virtuoso 2.0 uses a slightly newer version of this license manager. When you install Virtuoso 2.0, we have tried to ensure that the license manager files used by both Altsys and BÙcchus get updated. This should ensure that the BÙcchus applications will continue to function properly.

If you experience any problems during installation or running Virtuoso, Pixel Magician or Image Agent, please contact us immediately. If you are already running Pixel Magician v1.4d and/or Image Agent 1.2d you should not experience any problems. If you are running Pixel Magician v1.4c or earlier and/or Image Agent 1.2c or earlier, please contact BÙcchus to obtain upgrades to ensure 100% compatibility with Virtuoso 2.0.

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## Troubleshooting

What if Virtuoso reports licensing problems even if you know it should run?

1. Kill all `issd6` and `locald6` daemons on the license server and the local machine.
2. Make sure `issd6` **is not** started in `inetd.conf` (**Hint:** search for `issd` in `/etc/inetd.conf`) and make sure `/ISS_Licensing/bin/issd6` **is** started by `rc.local`.
3. Replace other applications `issd6` and `locald6` files with the ones in `/ISS_Licensing/bin`.
4. Start `/ISS_Licensing/bin/issd6` by hand.

And that should take care of it.

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