



# **Toon Boom Harmony 10.3 Installation Guide**

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# Chapter 1: Installing on Windows

This document explains how to install Toon Boom Harmony on Windows.

There are three stages required to install Toon Boom Harmony 10.3, these are covered in the following topics:

1. [Pre-installation on the next page](#)
2. [Toon Boom Harmony Installation on page 13](#)
3. [Configuration on page 18](#)

After completing these stages, you can verify the integrity of the installation and resolve any configuration issues.

- [Troubleshooting on page 40](#)

# Pre-installation

Before installing Toon Boom Harmony, you must perform the following task:

- [Check Your Minimum Requirements](#) below
- [Prerequisites for Harmony Installation](#) below
- [Pre-installation Configuration](#) on the facing page

## Check Your Minimum Requirements

For the most current Toon Boom Harmony hardware requirements, refer to the white paper **Harmony and Your IT Department**. This is available from:

- Toon Boom Animation Sales Representative
- Toon Boom Animation Support at: [support@toonboom.com](mailto:support@toonboom.com)

## Prerequisites for Harmony Installation

For a fast database connection, it is necessary to set up extra network settings so that the clients can perform a fast Name Resolution of the server as well as the server to the clients.

- [Get the Product Activation Code](#) below
- [Additional Network Settings](#) below
- [Windows 2008 Server](#) on the facing page

## Get the Product Activation Code

You should obtain a Product Activation code from the Toon Boom licenser so that you can finish the installation process without having to wait for the activation code to arrive.

To obtain a Harmony 10.3 activation code, please send the following information to: [licensor@toonboom.com](mailto:licensor@toonboom.com).

- Your name and the name of your company
- Email address where to send the license file

## Additional Network Settings



These steps for editing the `hosts` file are only required if there are problems or slowness when a computer is resolving names. **DO NOT** edit the `hosts` file unless there are problems resolving names on the network.

1. Setup the server and clients' IP with a static (fixed) IP address.
2. Go to C:\WINDOWS\system32\drivers\etc\ folder and open the hosts file using a plain text editor.



3. Go to the end of the file, on a new line add the static IP address and the machine name accordingly. If you are using a domain, you need to use the fully qualified domain name (**FQDN**).

For example, if the server name is **server.toonboom.com** in the domain and the IP address of the server is **192.168.1.1**, the line should be:

```
192.168.1.1 server.toonboom.com
```

4. Add the rest of the client's IP and hostname on a new line and click **Save**.
5. Once the list is complete, you can copy and paste the **hosts** file to all of the machines including the server under the **C:\WINDOWS\system32\drivers\etc\** folder.

## Windows 2008 Server

For a Windows 2008 server, you need to perform some additional steps to complete the task.

If you have a domain, you need to add a **usabatch** user on the global group where all the Harmony users are, this user should have administrator account rights.

- The user name is **usabatch**
- The password is **usabatch**

If an error due to the password policy occurs, you can change the password policies for both Domain Controller Security Policy and Domain Security Policy. You also need to do this from the Domain server if the Domain server is different from the Harmony database server.

1. From the WindowsStart menu, select **Control Panel**.
2. In Control Panel, double-click on **Administrative Tools**.
3. In **Administrative Tools**, select **Group Policy Management**.
4. In the hierarchy view of the **Group Policy Management**, go into the Domain used by Harmony, right-click on **Default Domain Policy** and click on **Edit...**
5. In the hierarchy view of the **Group Policy Management Editor** window, go in **Computer Configuration> Policies> Windows Settings> Security Settings> Account Policies> Password Policy**.
6. In the right part of the **Group Policy Management Editor** window, double-click on **Password must meet complexity requirements**.
7. Select **Define this policy setting** and the **Disabled** radio button.
8. Click **OK**.

Wait for the changes to take effect or restart the Server. It can take several minutes for the domain controller to update and use the new settings.

Once this is done you will be able to create the user **usabatch**, this user should be inside of the Harmony user group.

## Pre-installation Configuration

Configure your computer before installation by performing the following tasks:

- [Turn off Anti-Virus Software on the next page](#)
- [Turn off the Firewall on page 11](#)
- [Turn Off Use Simple File Sharing on page 12](#)




Inform your System Administrator before proceeding with these tasks.

## Turn off Anti-Virus Software



Inform your System Administrator before proceeding with this task.

### To disable your anti-virus software:

1. Click the **Start** menu and select **Settings > Control Panel**. The Control Panel opens.
  - ▶ Vista Users: Click the **Start** menu and select **Control Panel**.
2. Double-click the **Security Center** icon  in the Control Panel window. The **Windows Security Center** dialog box opens.
  - ▶ Vista users must turn off **Malware Protection**.




3. If your anti-virus software is not detected, open all anti-virus software applications on your computer and disable each one manually.

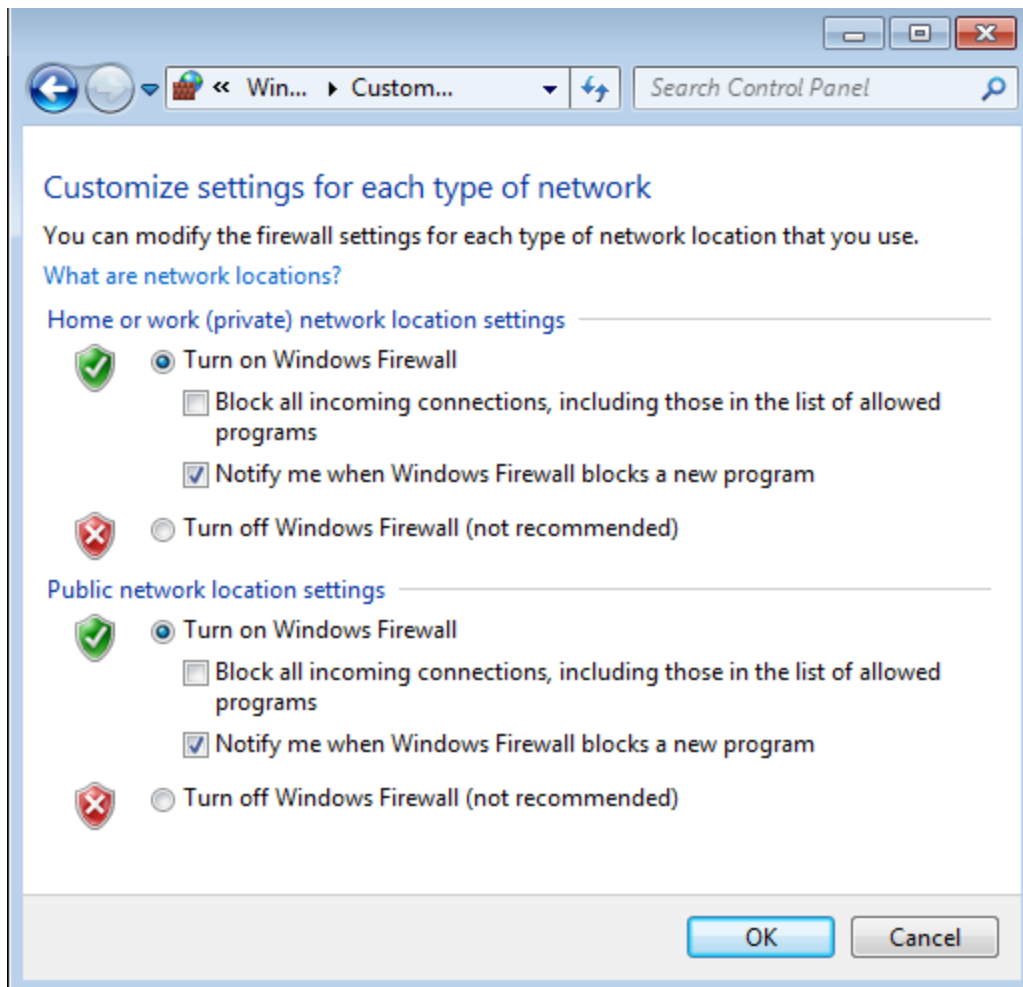
## Turn off the Firewall



Inform your System Administrator before proceeding with this task.

### To disable the Windows Firewall:

1. Open the **Windows Firewall** dialog box.
  - ▶ Click the Start menu, and select **Control Panel** to open the Control Panel. Double-click the **Windows Firewall**  icon.
  - ▶ In the Windows Firewall window, click on the **Turn Windows Firewall On or Off** **Turn Windows Firewall On or Off** link on the left side panel



2. Select the **Turn off Windows Firewall** option for both private and public network locations to turn the firewall off.
3. Click **OK** to confirm your selection.

## Turn Off Use Simple File Sharing

1. Open Windows Explorer.
2. Select **Organize > Folder and Search Options**.
3. In the View tab, if the option **Use Sharing Wizard (Recommended)** is on, deselect it.

### Related Topics

- [Toon Boom Harmony Installation on the facing page](#)

# Toon Boom Harmony Installation

Now that you have verified your minimum requirements, and configured your hardware and software, you are ready to install Toon Boom Harmony.

You will perform the following tasks:

1. [Upgrading from a Previous Installation](#) below
2. [Installing Toon Boom Harmony on page 17](#)

## Upgrading from a Previous Installation

If you are not upgrading from a previous installation of Toon Boom Harmony, go directly to [Installing Toon Boom Harmony on page 17](#).

If you are performing an upgrade, you should pick a time when Toon Boom Harmony production is slow or stopped. During the upgrade, no users can run any of the Toon Boom Harmony modules and all rendering jobs must be stopped and complete.

Before you can update a previous installation of Toon Boom Harmony, you must stop all services, including:

- The database server
- Batch processing
- The license server

### Related Topics

- [Stop Services Affecting Harmony](#) below
- [Stop the License Server](#) on the next page
- [Removing Harmony Related Environment Variables](#) on page 15
- [Backing up any Necessary Configuration Files:](#) on page 16
- [Uninstalling the Previous Version of Toon Boom Harmony or Opus](#) on page 16

## Stop Services Affecting Harmony

To stop all services affecting Toon Boom Harmony:

1. Make sure that no one is running Toon Boom Harmony.  
All Toon Boom Harmony modules must be closed on the server and on all of the clients.
2. Make sure that all batch rendering or vectorizing is complete or that the queues are empty.  
You can check the status of the **Vectorize** and **Render** queues from the Control Center module.
3. In the Control Center module, use the Queue menu to open the **Vectorize and Render Queue** for all environments. The queues should either be empty or the status of all jobs should be "Completed".

Upgrading from V7.2 or earlier:

- Click the **Start** menu, select **All Programs > Toon Boom Harmony (or Opus) > Configuration Tools > usa\_cfg**. The **USAnimation Properties** window opens.

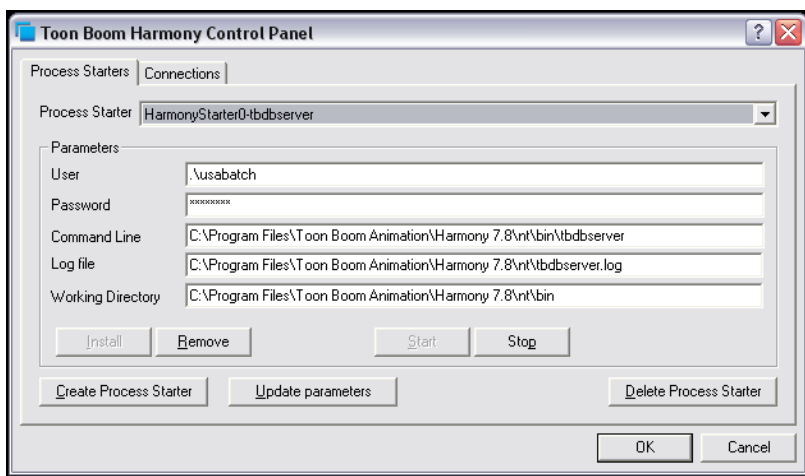
**Upgrading from a previous version of V7.3:**

- ▶ Click the **Start** menu, select **All Programs > Toon Boom Animation > Toon Boom Harmony > Tools > Harmony Control Panel**. The **HarmonyProperties** window opens.

**Upgrading from V7.8, V9.2 or a previous V10 version:**

- ▶ Click the **Start** menu, select **All Programs > Toon Boom Harmony > Tools > Control Panel**. The Harmony Control Panel window opens.
4. Select a process from the **Process Starter** drop-list and click **Stop**. Do this for every Toon Boom Harmony related process running on the machine.

During this process, you will be able to stop the **tbdbserver** on the server and **tbprocess** on workstations that are set as a batch render.



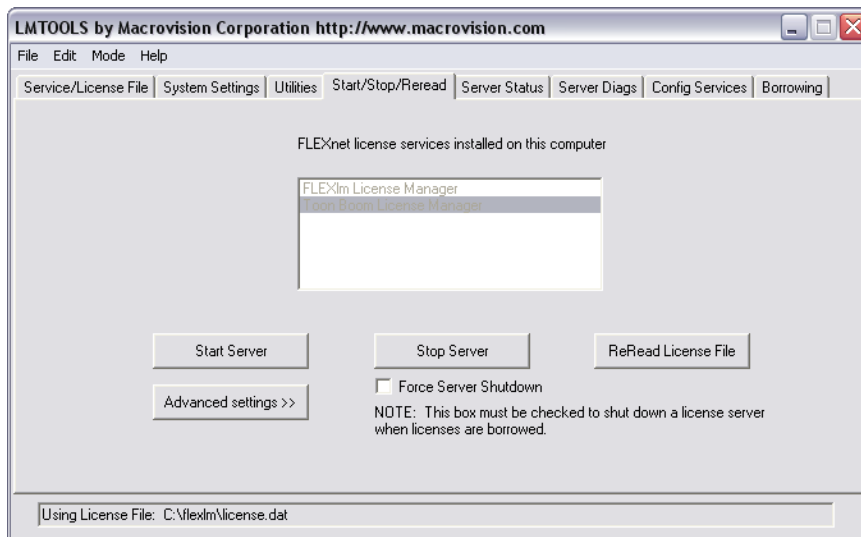
5. Turn off all of the client machines and the render farm.

**Stop the License Server**

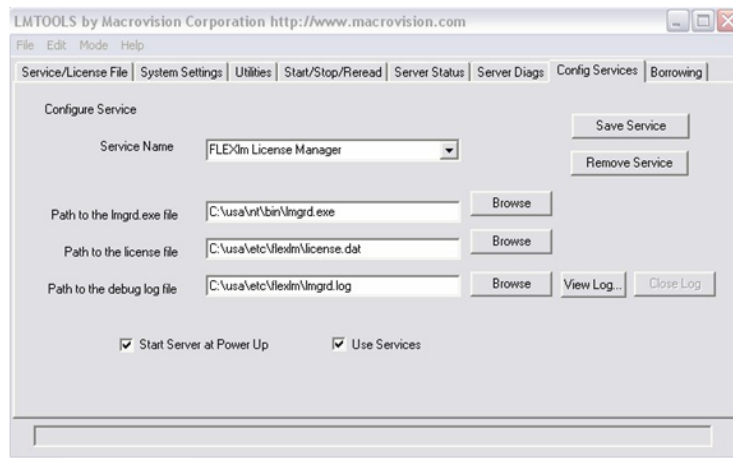
6. On the License server computer:
  - ▶ First, click the **Start** menu, and select **All Programs > Harmony > Configuration Tools > FLEXlm - lmtools**.

The **LMTTOOLS** window opens.

- If you are upgrading from version 7.3 click the **Start** menu, and select **All Programs > Toon Boom Animation > Harmony > Tools > Flexlm Tools**.
  - If you are upgrading from version 7.8 click the **Start** menu, and select **All Programs > Toon Boom Harmony 7.8 > License Tools > Flexlm Tools**.
- ▶ Next, in the **Start/Stop/Reread** tab, select the license server in the **Remote Server List**.



- ▶ Click the **Stop Server** button.
- ▶ In the **Config Services** tab, click the **Remove Service** button to remove the license service.



7. Close FLEXlm " lmtools".

## Removing Harmony Related Environment Variables

To complete the installation, you need to remove some environment variables set by the previous installation.



Please do this with caution.

1. Click the **Start** menu and select **Control Panel**.  
The **Control Panel** opens.
2. Double-click on System and select the **Advanced system settings** link in the left panel.
3. In the **Advanced** tab, click on the **Environment Variables** button.

4. In the **System Variables** panel, select **LM\_LICENSE\_FILE** if it is listed, and then click **Delete** button to delete **LM\_LICENSE\_FILE**.
5. Delete any of the following variables if they appear in the **System** or **User variables** lists: **TOONBOOM\_LICENSE\_FILE**, **USADB**, **USADIR** or **USAROOT**.

## Backing up any Necessary Configuration Files:

You also need to back up any necessary configuration files from the machine in case you want to reuse them. You can also back up the `license.dat` during this procedure.

1. Do one of the following:
  - For V7.8, go to `\Program Files (x86)\Toon Boom Animation\Harmony 7.8\etc`.
  - For V7.3, go to `\Program Files (x86)\Toon Boom Animation\Harmony\etc`.
  - For V7.2 and earlier, go to the `\usa\etc` folder.
2. Back up any necessary configuration files:
  - **Scan.conf** if this workstation is to be configured as a scanning station.
  - **VectOptions.conf** from any machine (including the server) that is doing a batch vectorization.
  - Any other **.conf** file that is required to be used later.



You can back up the whole `/usa` or `harmony` folder to ensure all configuration file are backed up.

---

3. Go to the `/usa/etc/flexlm` folder and back up the `license.dat`

## Uninstalling the Previous Version of Toon Boom Harmony or Opus

Once you finish all the steps above, you should uninstall the previous version of Harmony or Opus.

1. Click the **Start** menu and select **Control Panel**. The Control Panel opens.
2. Double-click **Program and Features** and choose Harmony or Opus from the program list. And then, click **Uninstall** from the top menu.
3. **Reboot the machine.**

Backup the database



### Backup the database

For the server upgrading process, please backup the database by exporting the whole database. This will prevent you from losing any data during the upgrading process. You can, however, back up current `/usa_db` and `/usadata` by renaming them (this procedure can only be used when installing on the same server). But this will require extra caution, if you are at all unsure contact your system administrator or Toon Boom Animation Support.

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# Installing Toon Boom Harmony

To run the installation script:

1. Download the build of Harmony that you are going to install.
2. Double-click on the Harmony **InstallShield** executable.
3. Select the language in which you want the installer to execute and click **OK**. This will only affect the installer and will not change the language of the actual software.
4. In the **InstallShield Welcome** window, click **Next** to continue with the installation. The **License Agreement** dialog box appears.
5. Read the license agreement and decide if you accept its terms.
  - If you accept the terms in the license agreement, select **I accept the terms in the license agreement** then click the **Next** button.
  - If you do not accept the terms in the license agreement, click **I do not accept the terms in the license agreement** then click the **Next** button. The installation will stop immediately and Toon Boom Harmony will not be installed on your computer.

The **Destination Folder** dialog box appears. You can click **Cancel** to interrupt the installation and then click **Yes** to stop the installation completely.



You can install Toon Boom Harmony to any location. In this installation guide, it assumes that the installation process is done to the default location.

6. Select the drive on which you want to install Toon Boom Harmony and click **Next**. The **Setup Type** dialog box appears.
7. Select the type of installation you want to do. Click on the **Complete** radio button to install all of the Harmony components.

When installing a server, it is possible to do a custom install and install only the server component. However, it is recommended to always do a full install, this will give access to all the applications from the server if need be.
8. Click the **Next** button. The **Ready to Install the Program** dialog appears.
9. Click **Install** again to begin the installation.

When this process is complete, click **Finish**.

## Related Topics

- [Configuration on the next page](#)

# Configuration

After installing Toon Boom Harmony, you need to configure database parameters depending on your machine's setup and third-party software, and reinstate your anti-virus settings.

1. [Configure Toon Boom Harmony below](#)
2. [Sharing Toon Boom Harmony Related Directories on page 22](#)
3. [Configure the License on page 26](#)
4. [Turning on the Anti-Virus Software on page 37](#)

## Configure Toon Boom Harmony

You can use the Toon Boom Harmony Installation Wizard at any time to:

- Modify the Toon Boom Harmony server or client configuration
- Configure batch processing
- Configure scanners
- Prepare a client to be the client of a Linux server
- Add Harmony's path to the **Path** environment variable

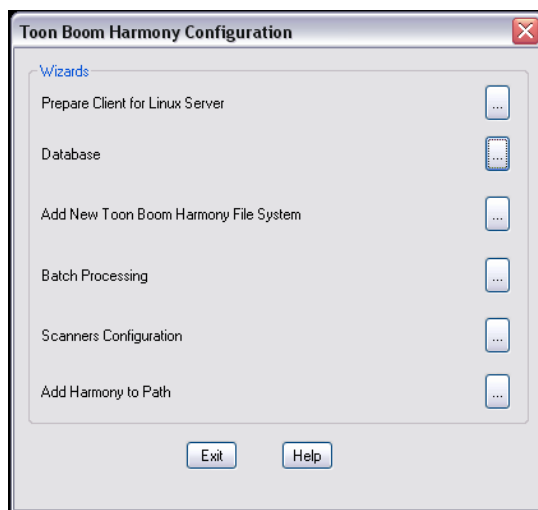
After installation, you must set up the database configuration for computers running Toon Boom Harmony.

1. [Set Up the Database Server on the facing page](#)
2. [Set Up the Database Client on page 21](#)

**To launch the Toon Boom Harmony Configuration Wizard:**

- From the **Start** menu, select **All Programs > Toon Boom Harmony 10.0 > Tools > Configuration Wizard**.

The **Toon Boom Harmony Configuration** dialog box opens.

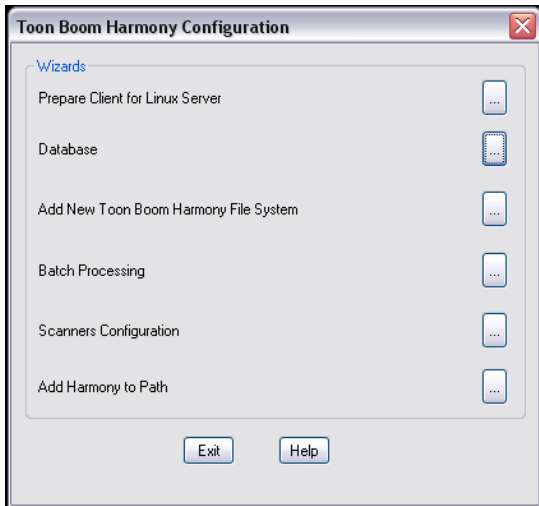


## Set Up the Database Server

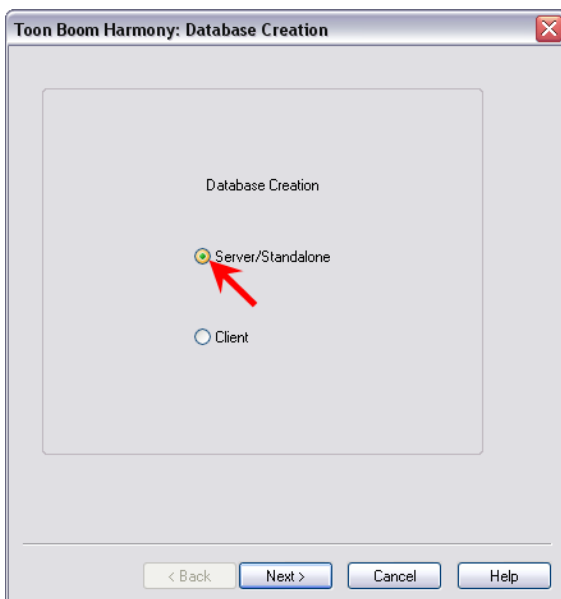
The Database Server controls all interactions with the contents of the Toon Boom Harmony database. It processes all requests to open, read or update files, keeping track of files that are locked so that others cannot edit them.

To set up the Database Server:

1. In the **Toon Boom Harmony Configuration** dialog box, click the **Database** button.



2. Select **Server/Standalone** and click **Next**.



3. Select the location of the database from the drop-list and select a username and a password for the user that will be running the database services.  
The default account is **usabatch**. If the account specified does not exist, it will be created by the wizard.



Make sure to take note of the account name and password if an account other than the default one is used. This information will be required later on for client workstations to connect to the server.

4. Click **Next**.

The configuration program creates the database, `/USA_DB`, in the location you select. The `/USA_DB` tracks the location of the scene data on the file system. You can have multiple file systems, but only one `/USA_DB`.

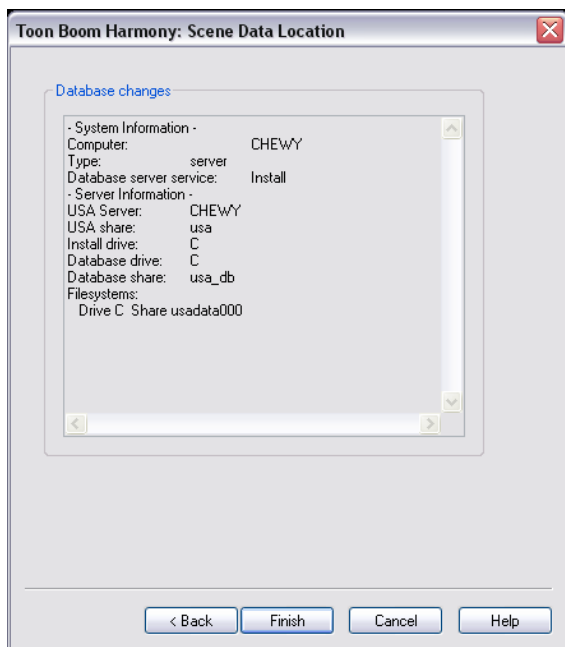


If you are upgrading from a previous version of Harmony or Opus and you have renamed `/usa_db` for back-up, you need to create new `usa_db` at the same location where the previous `/usa_db` was located.

5. In the **Scene Data Location** window, you create the storage locations for the database.

- ▶ From the File system drop-list, you select the file system you want to add. The first File system is already created for you. If you want to create additional file systems, you must click **Add**. For example, if you want to store scene data across multiple drives or computers, you can create them here.
- ▶ From the Drive drop-list, select the drive where you want to create the file system.
- ▶ In the Share field is the name of the file system that will be created. You can change this value. However, it is recommended to leave the default name, which increments from `usadata000`.
- ▶ In the Host Computer field, enter the name of the computer on which this file system will be created. By default, the current computer's name will appear here. You can create file systems on other computers if necessary.
- ▶ Specify the username and the password that will be used to connect to that file system. It is recommended to use the same username and password as the one used for the database, in the previous step.

6. Click **Next**. The **Toon Boom Harmony: Review** window opens.



7. Review the information in the window. If it is correct, click **Finish**.

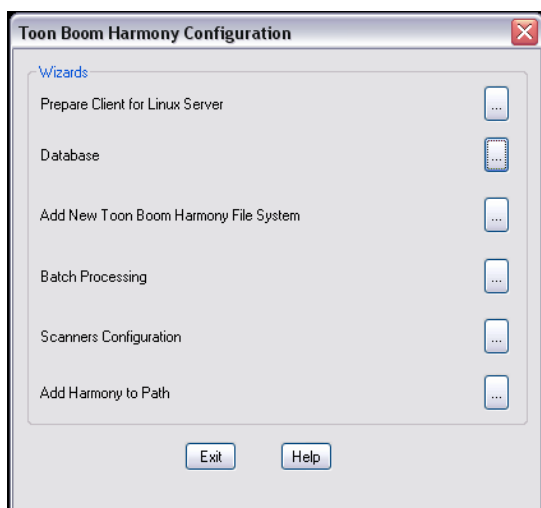
When the configuration wizard is finished, a dialog box opens which indicates the success of the process.

## Set Up the Database Client

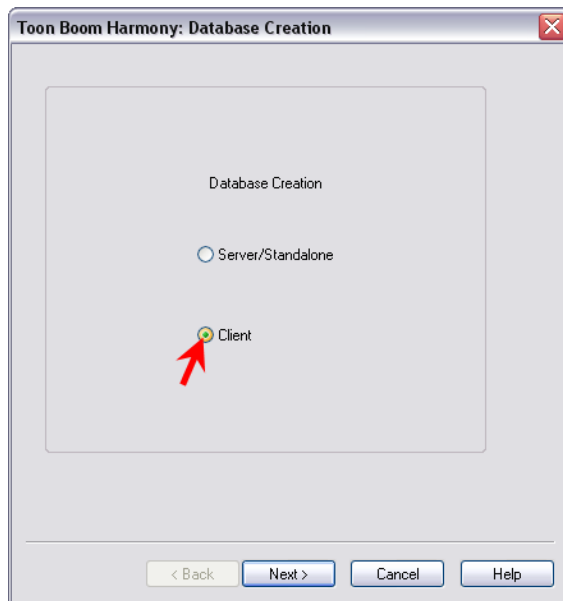
After you have configured your server, you can configure all of the client machines that will connect to the server. Use the **Toon Boom Harmony Configuration Wizard** to connect client computers to the database.

**To set up the Database Client:**

1. In the **Harmony Configuration** dialog box, click the **Database** button.



2. Select **Client** and click **Next**.



3. Enter the name of the Toon Boom Harmony server and click **Next**. The Review window opens.
4. Verify the database changes and click **Finish**.

A message will appear when the client computer is successfully connected to the database server.



It is possible to change the user account used to connect to the **USA\_DB** or the different file systems using the **Toon Boom Control Panel**, which can be started from **Start > Programs > Toon Boom Harmony 10.0 > Tools > Control Panel**.

## Sharing Toon Boom Harmony Related Directories

These steps don't have to be done in a typical installation. This is required only when the shares were not created correctly during the server configuration procedure. For example, this situation could happen when Simple file sharing was not turned off before running the **Configuration Wizard** on the server. Other cases would be when you have backed-up your USADB and usadata folders prior to installation, you may have to share them when putting them back into place.

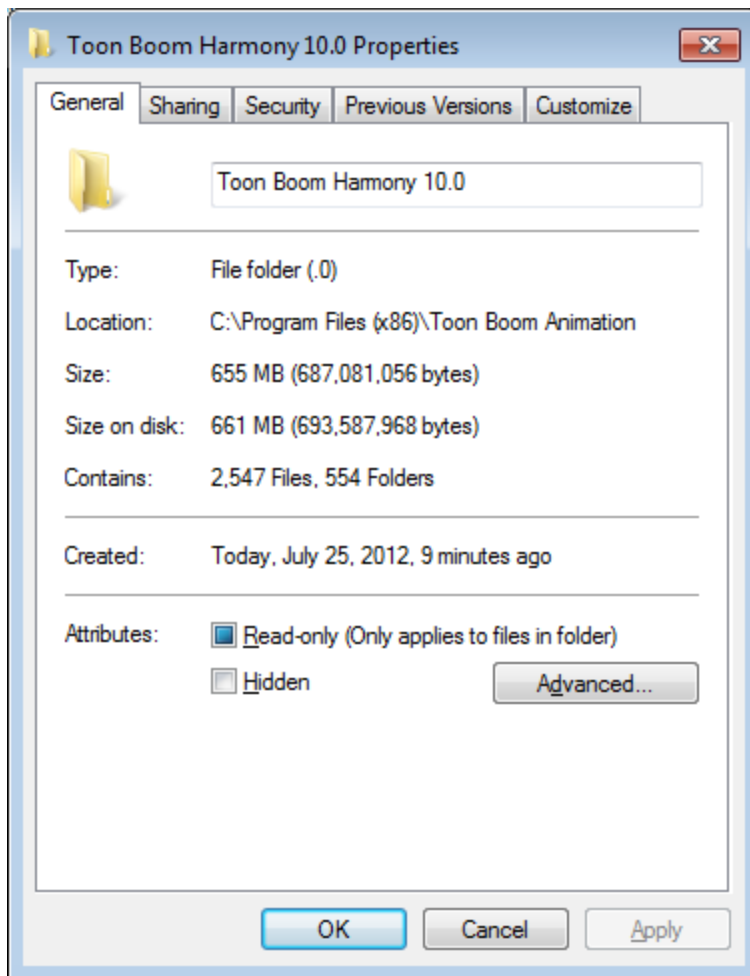


If you are upgrading from a previous version and you have changed the **/usa\_db** and **/usadata** during upgrade, please roll back to the normal name before continuing.

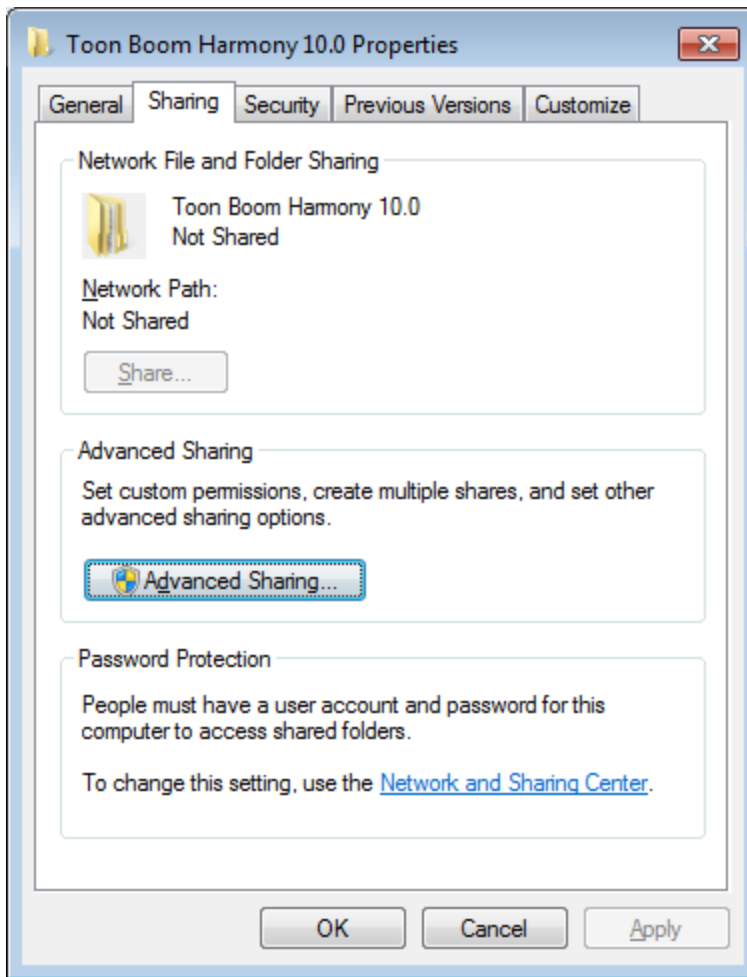
### To activate file sharing for the Toon Boom Harmony folder:

1. Open Windows Explorer.
2. Locate the Toon Boom Harmony folder **C:\Program Files (x86)\Toon Boom Animation\Harmony10.0**.

3. Right-click the folder and select **Properties** from the pop-up menu to open the **Properties** dialog box.



4. Click the **Sharing** tab.



5. Click on **Advanced Sharing...**
6. Type **usa** in the **Share Name** field.

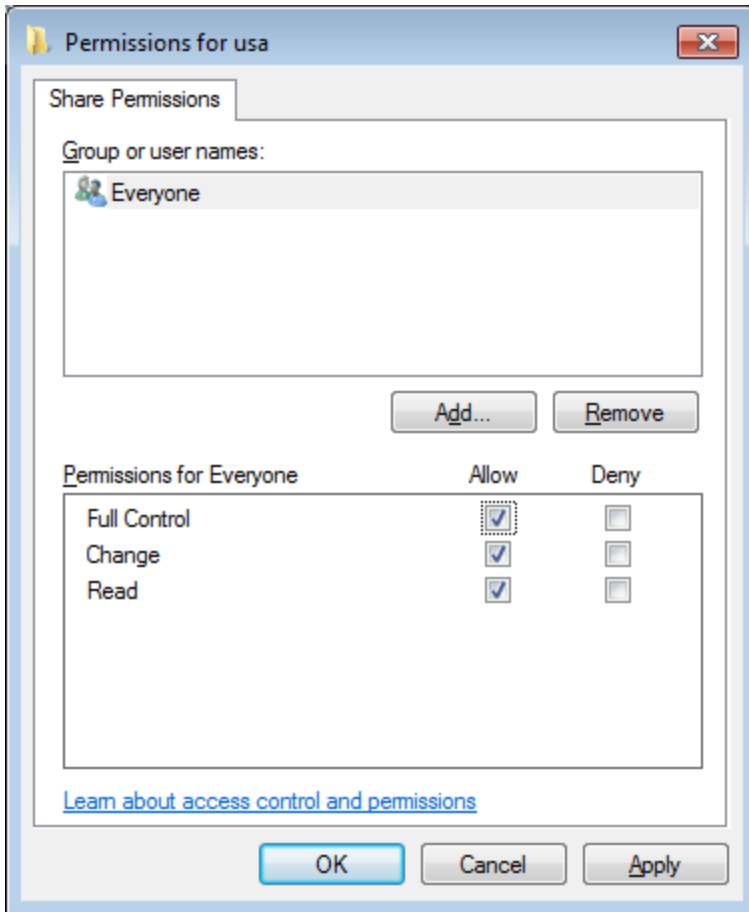


Changing the name of the share to **usa** must only be done when sharing the **Harmony** folder. The **USA\_DB** and **USADATA** folders should keep their original name.

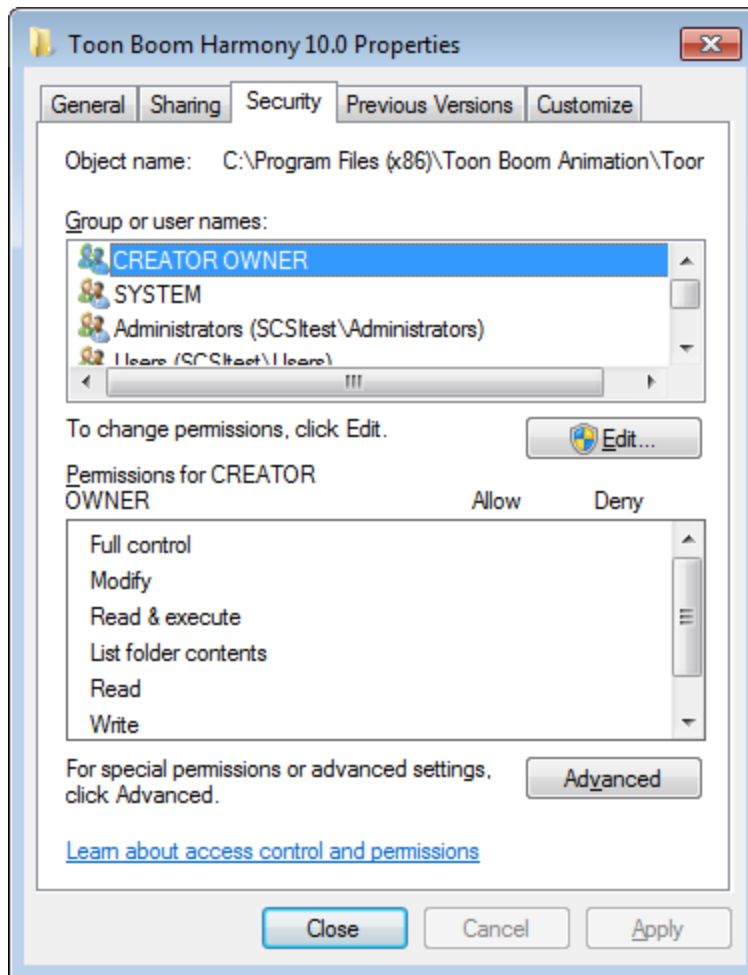
---

7. Click the **Permissions** button to display the **Permissions** dialog box.





8. Set all permissions in the **Everyone** group to **Allow** and click **OK** to save the settings and close the dialog box.
9. Back in the File Properties window, click the **Security** tab.



- ▶ Click the **Edit** button to prompt the permissions window. Set all permissions in each group or user to all.
10. Click **OK** to save the settings and close the dialog box.
  11. Repeat Step 3 to Step 10 with the `usa_db` and `usadata` folders.

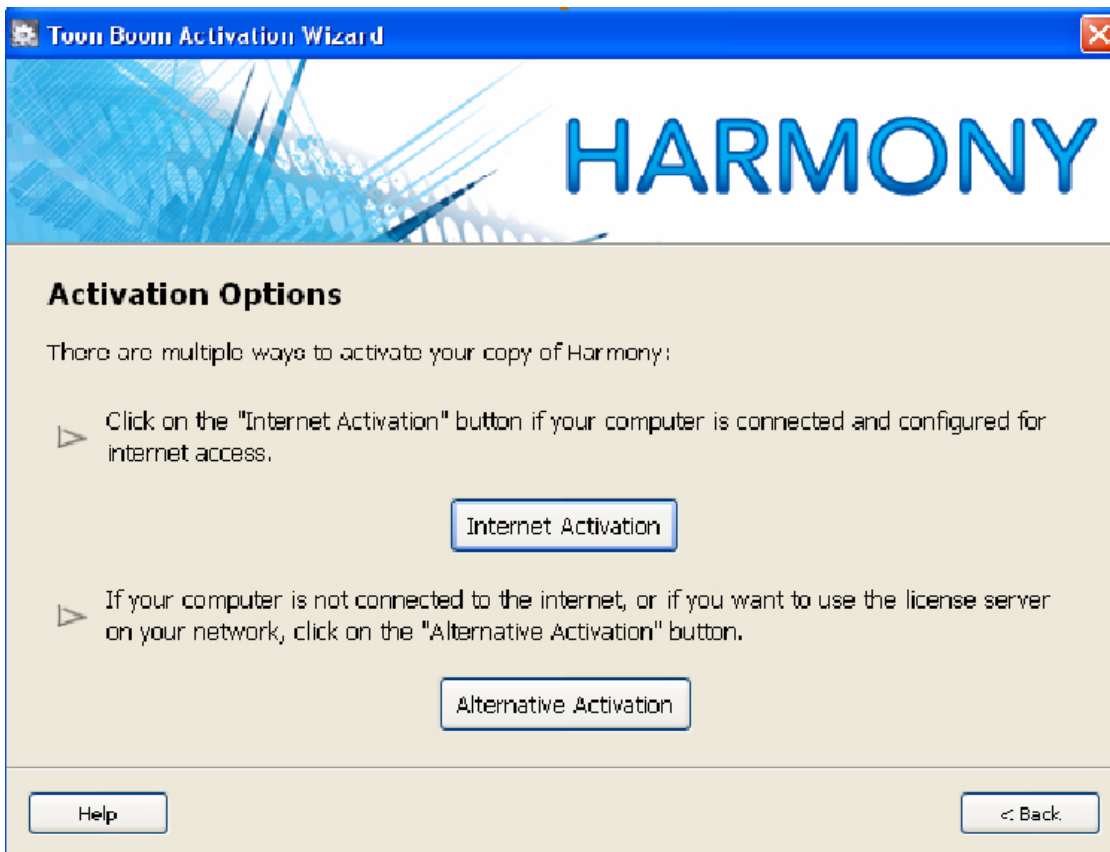
## Configure the License

### Configuring the license server

1. Launch the **License Wizard** from **Windows Start menu > All Programs > Toon Boom Harmony 10.0 > License Tools > LicenseWizard**.
2. Depending on how the **License Wizard** was started, the first page of the **License Wizard** will be one of the following:

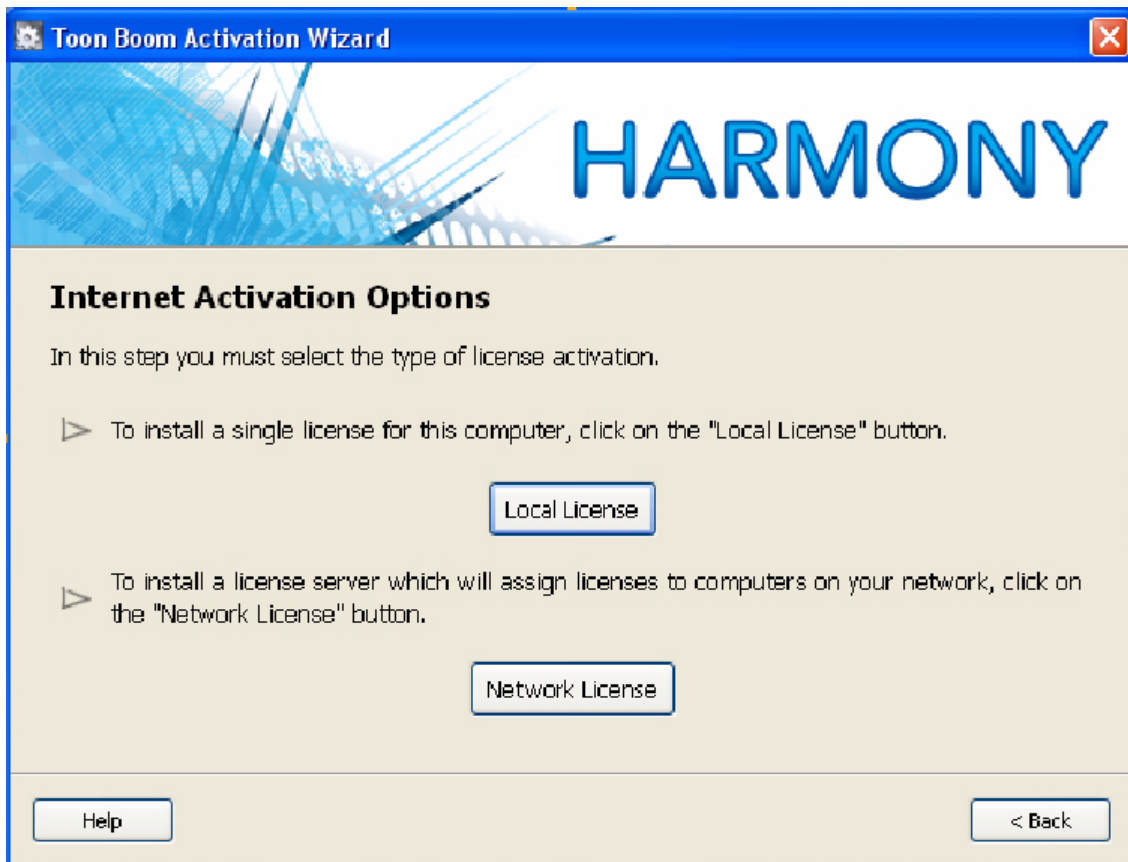


The **Activation Options** screen appears:



3. Click on **Internet Activation**

The **Internet Activation Options** screen appears:



4. Click on **Network License**.

The **Internet Activation - Network License** screen appears:

**Toon Boom Activation Wizard**

# HARMONY

## Internet Activation - Network License

If you purchased your copy of Harmony from the Toon Boom Web Store, you should have received your Product Code by email. If you purchased it elsewhere, you will find the Product Code on the registration card in the software packaging.

Product Code  -  -  -  -

Enter the number of licenses you would like to install.

License Count

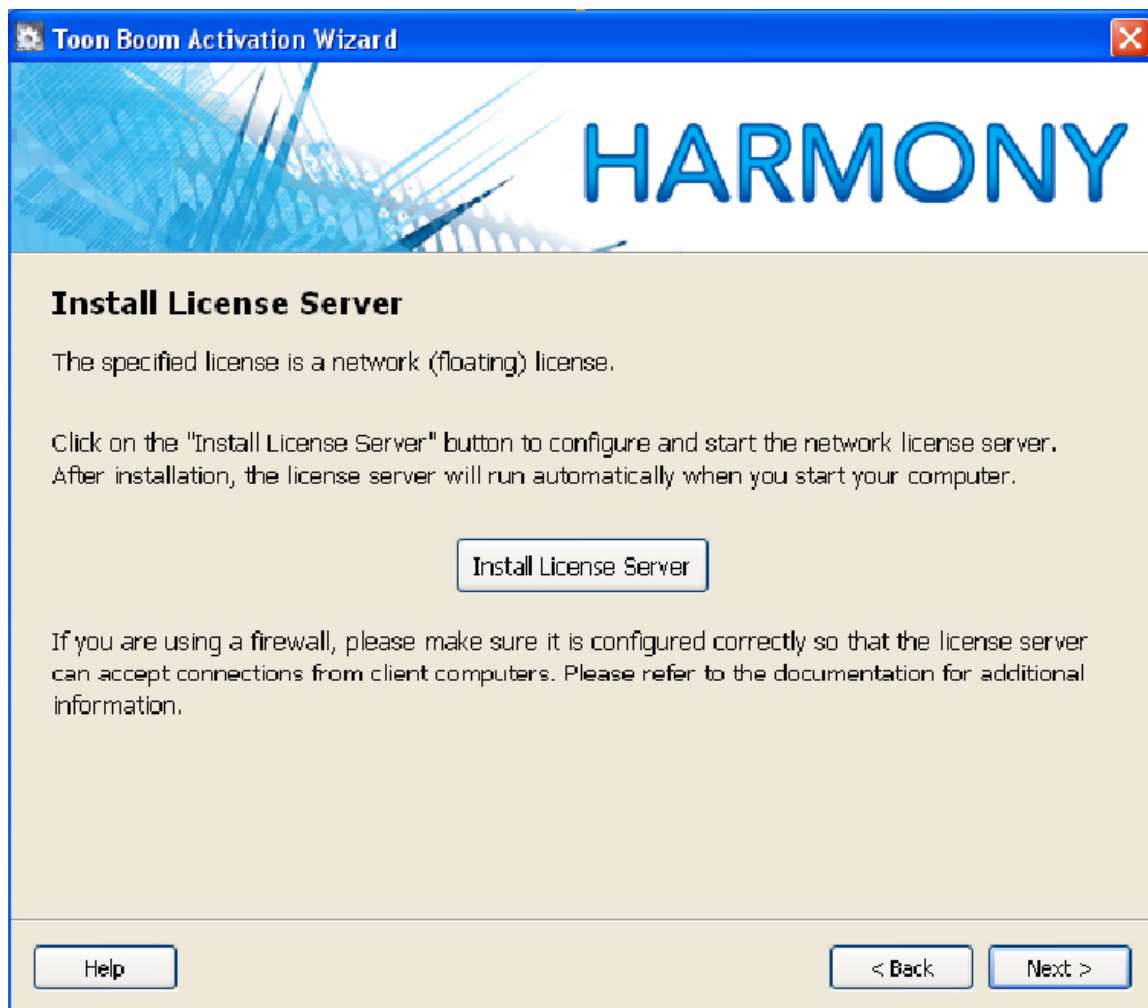
Enter your Product Code and click on the "Activate" button. This will connect you to the Toon Boom Activation Server which will verify the Product Code and activate your copy of Harmony.

5. Type or copy/paste the **Product Code** and type in the number of licenses this product code grants you.

**NOTE:** Once activated, server license cannot be returned to the activation server. Make sure you are activating the license on the correct computer with the proper license count.

6. Click on **Next**.

The **Install License Server** screen appears:



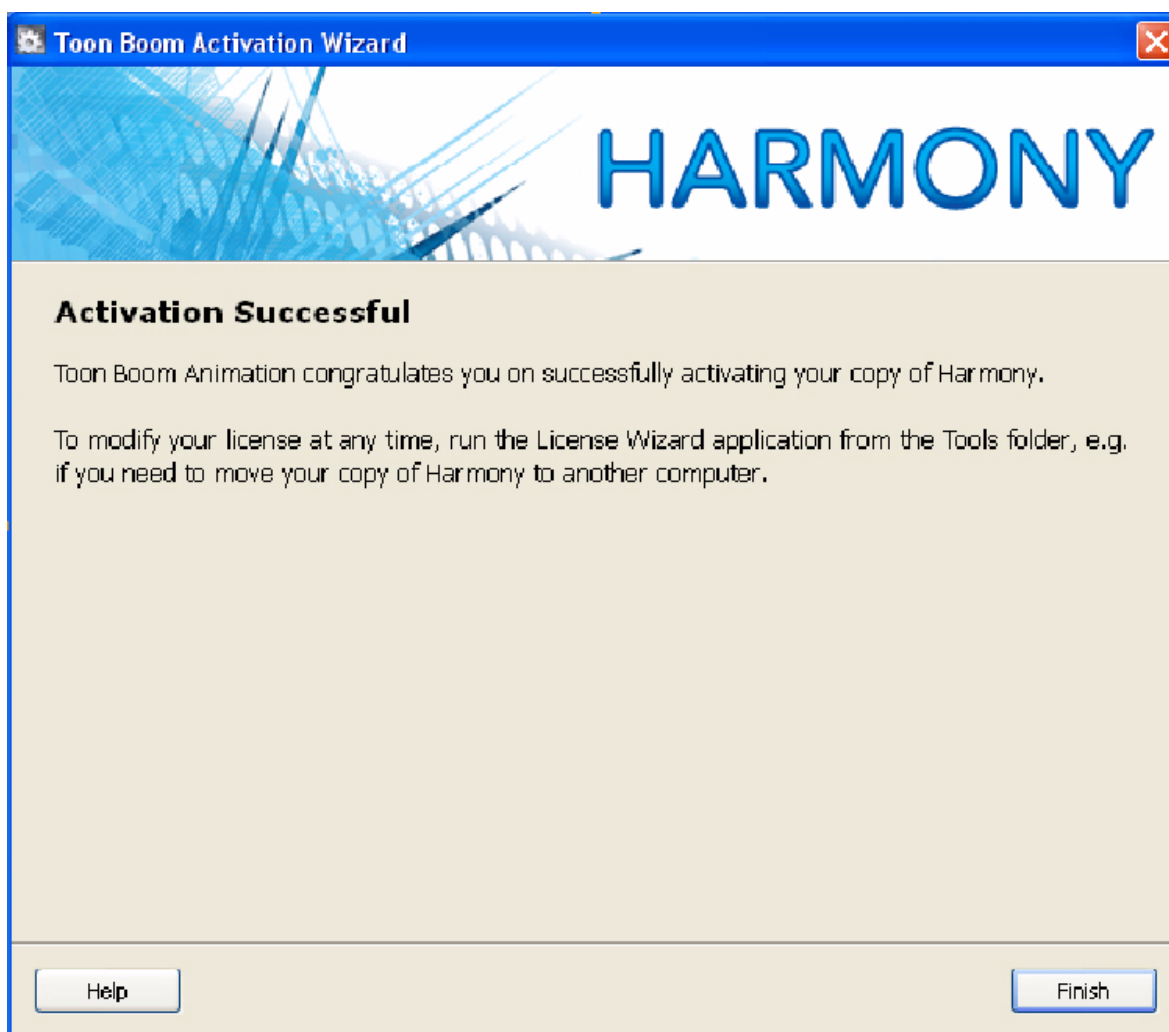
7. Click on **Install License Server**.

This step will create the license.dat file and place it in `/usr/local/flexlm/licenses/license.dat`. The license.dat created contains the following information:

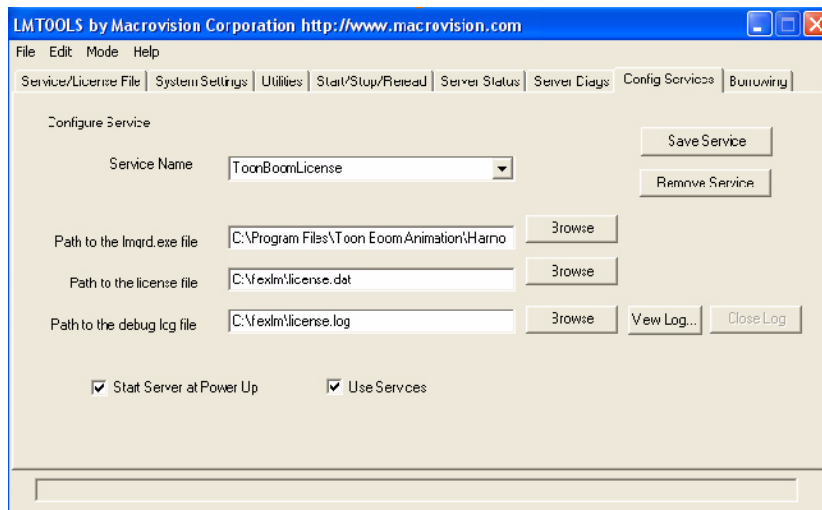
```
SERVER this_host 0 ANY
VENDOR toonboom
USE_SERVER
```

It will also configure and start the License Server service.

The **Activation Successful** screen appears:



8. Click on **Finish** to exit the wizard.
9. Once finished with the **License Wizard**, take a look at the `lmgrd.log` to make sure it was started properly.  
`C:\flexlm\lmgrd.log`
10. You can now go in **LMTOOLS** to verify that the License server has been configured properly and that it is running.  
Below are the default parameters for the license service.



11. It is good practice to verify that the license service is properly running by going in the Server Status tab and clicking **Perform Status Enquiry**.

- [Restore backed up data below](#)
- [Setting up the License on Client Workstations on the facing page](#)

## Restore backed up data

1. Stop the **tbdbserver** by opening the **Toon Boom Harmony Control Panel**. There select the **HarmonyStart0-tbdbserver** from the list and click the Stop button.  
You can verify that the **tbdbserver** was properly stopped by looking to see if the service is gone in the process tab of the task manager.
2. Open the File Explorer and rename the new empty **USA\_DB** database folder to **USA\_DB\_NEW**.
3. Rename the **USA\_DB\_BAK** (the one that was backed up earlier) to **USA\_DB** to restore the previous database.
4. Copy the **dicts** files from the new database (**USA\_DB\_NEW/dicts**) to the one you have restored (**USA\_DB/dicts**).  
**NOTE:** Dicts files can also be copied from **C:\Program Files\Toon Boom Animation (x86)\Harmony 10.0\etc\USADB\_templates\dicts**
5. Share the **USA\_DB** folder giving full control every one. Make sure that simple file sharing is turned off before doing this.  
If you cannot set permissions per use for the share, it means that the simple file sharing is turned on.
6. Rename the new empty **usadata000** folder (and any other file system folder) to **usadata000\_NEW**.
7. Share the **usadata000** folder (and any other folder you have restored) giving full control everyone.
8. Start the **tbdbserver** by opening the **Toon Boom Harmony Control Panel**. There select the **HarmonyStart0-tbdbserver** from the list and click the **Start** button. After starting the **tbdbserver**, look at the **tbdbserver.log** to make sure it was started properly.

**C:\ProgramData\Toon Boom Animation\Toon Boom Harmony**

9. Verify that you are able to open Harmony and scenes from the server.

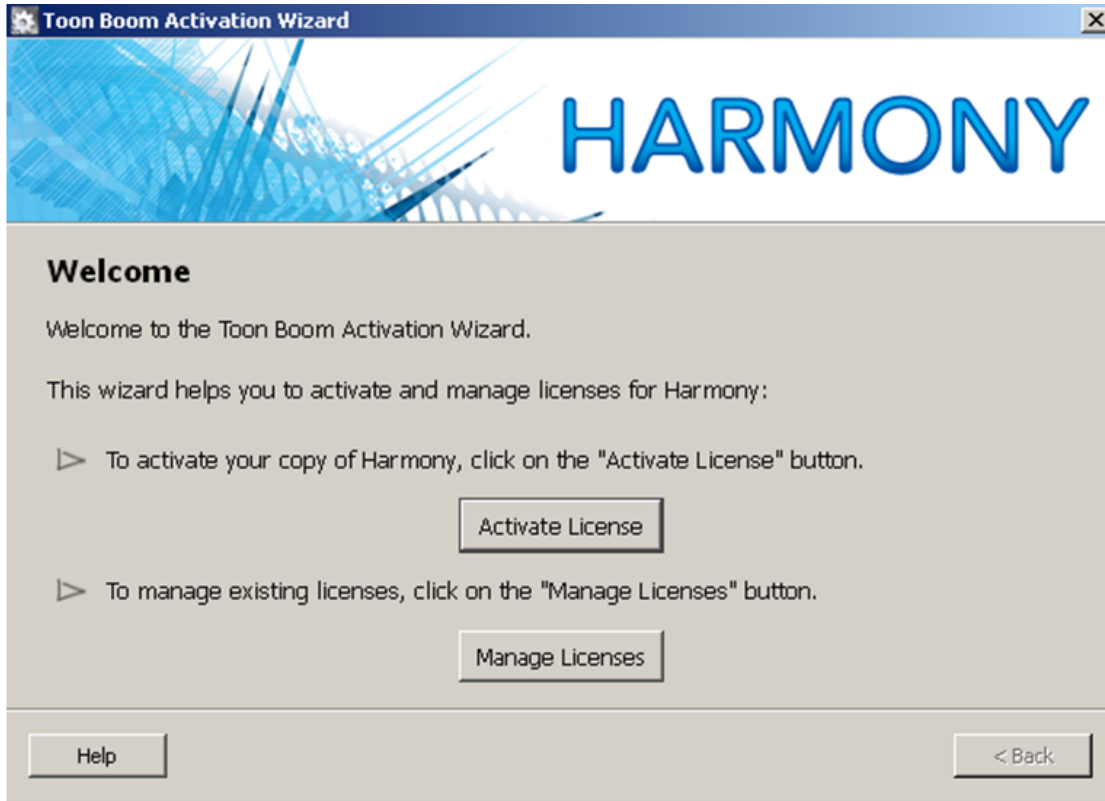


## Setting up the License on Client Workstations

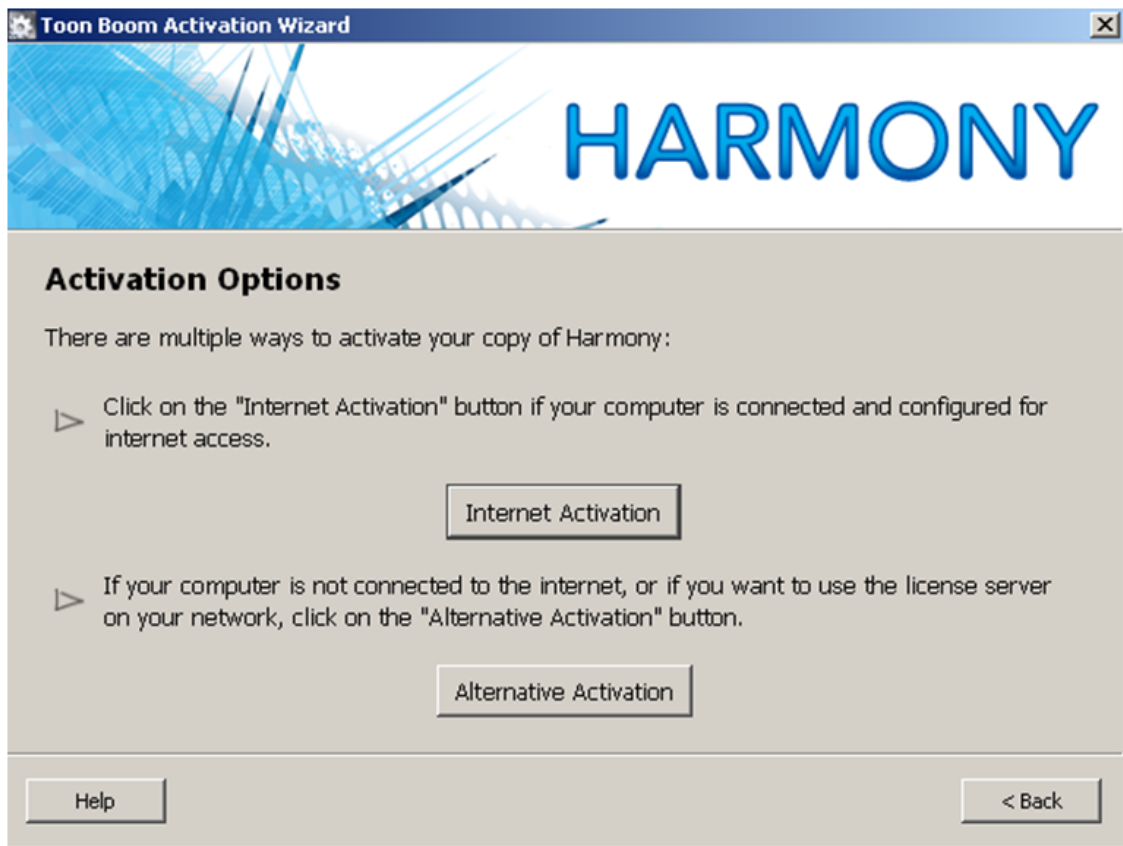
An Admin account is required to set this up. After activation you can login as client.

To set up the license on a client workstation do the following:

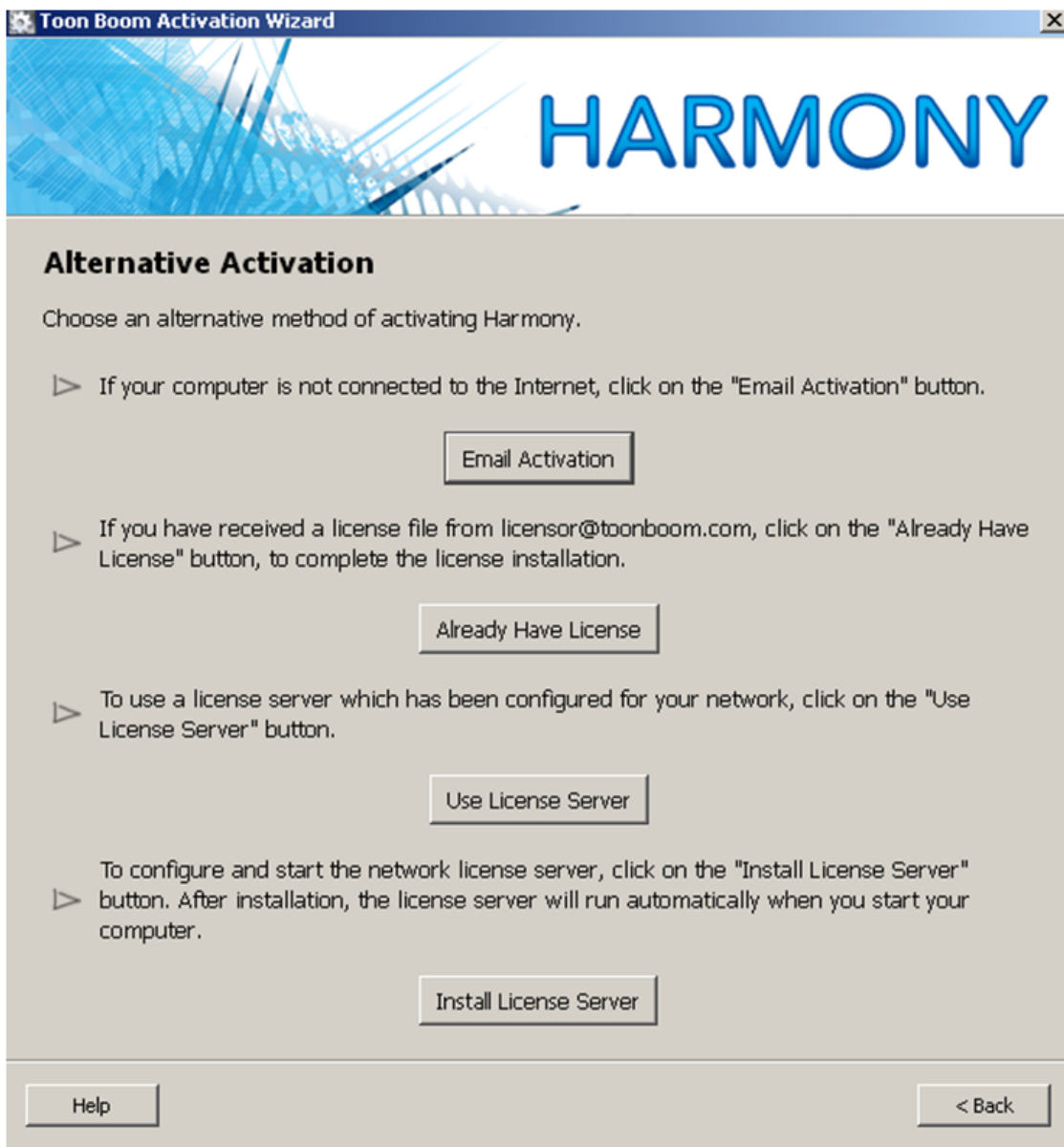
1. Open the **License Wizard** on the Client machine. The **License Wizard** appears.



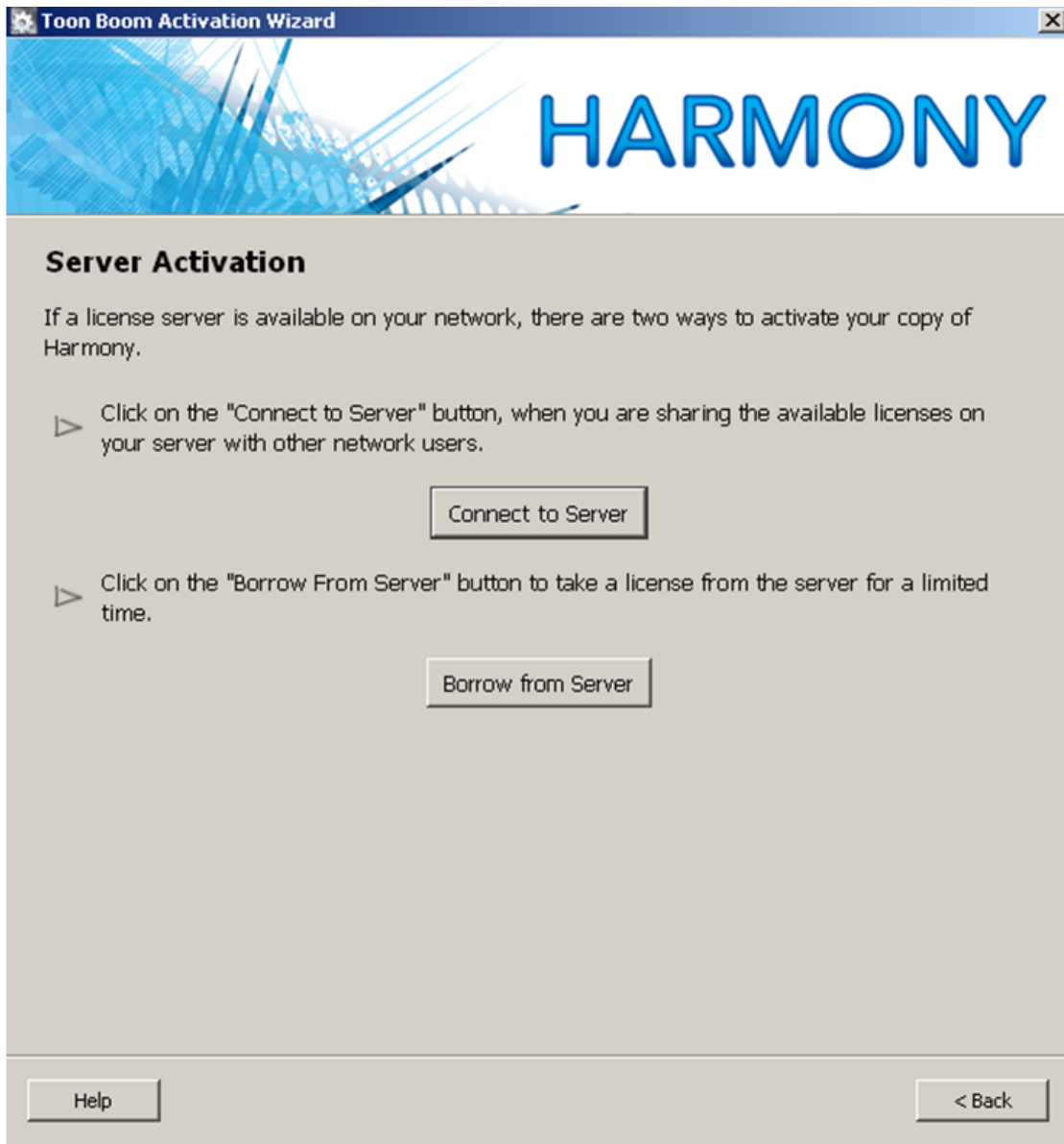
2. Click on **Activate License**. The **Activation Options** screen appears.



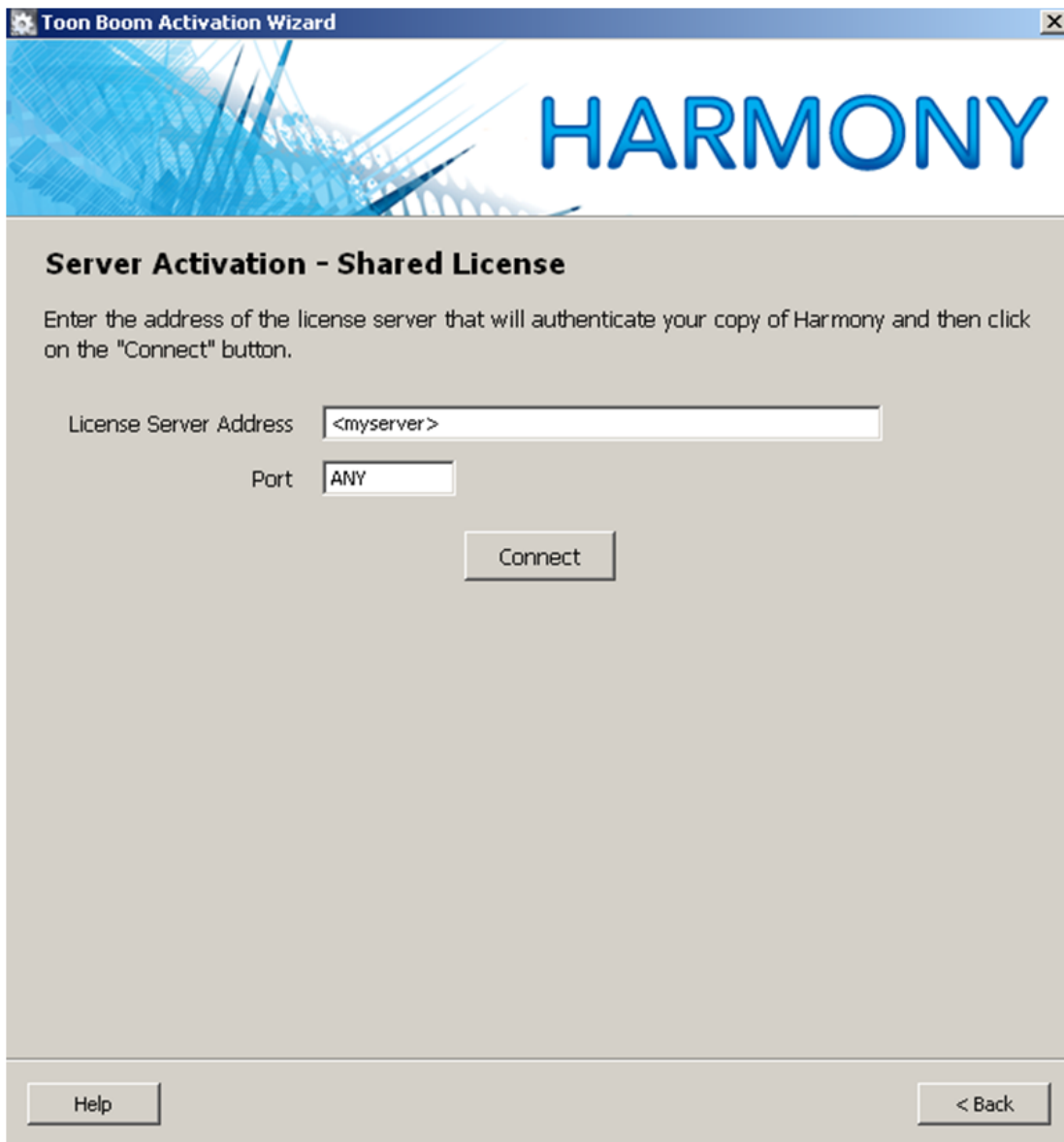
3. Click on **Alternative Activation**. The **Alternative Activation** screen appears.



4. Click on **Use License Server**. The **Server Activation** screen appears.



5. Click on **Connect to Server**. The **Server Activation - Shared License** dialog appears.



6. Enter the **hostname** or the **IP Address** in the **License Server** address field.
7. Click **Connect**. You will be prompted for a password.
8. Enter the password and click **ok**. The **Activation Successful** screen appears.
9. Click **Finish** to close the License Wizard.

## Turning on the Anti-Virus Software

Inform your System Administrator before proceeding with this task.

**To turn the anti-virus software back on:**

- ▶ Reactivate virus protection. If your anti-virus software is not detected, open any anti-virus software applications on your computer and reactivate each one manually.

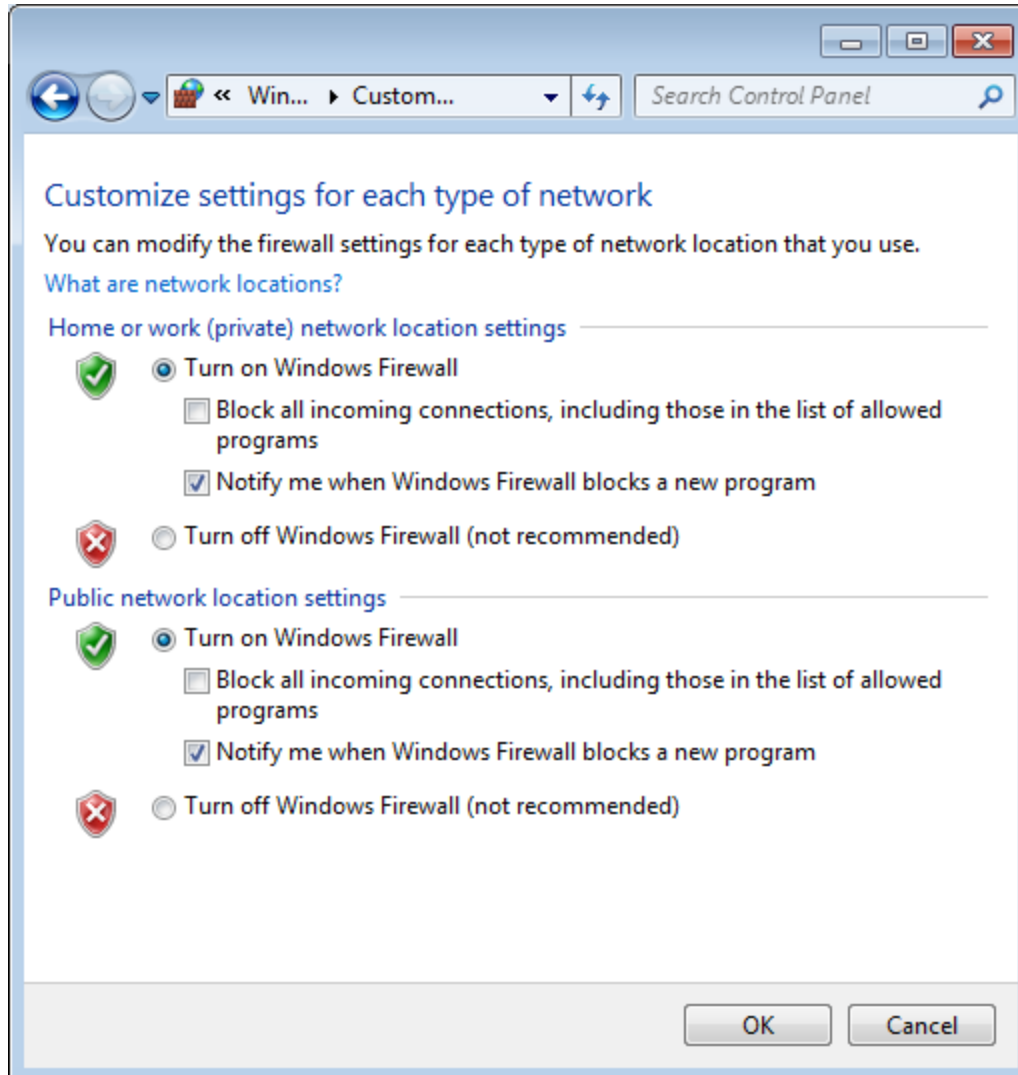
## Turning on the Firewall

The process to do this is basically the reverse of the procedure used to deactivate the firewall.

Inform your System Administrator before proceeding with this task.

### Re-enabling the firewall

1. Click the **Start** menu, and select **Control Panel** to open the Control Panel. Click on Windows Firewall.
2. Click on Turn **Windows Firewall on or off**. The **Windows Firewall Setting** dialog box appears.



3. Click on the **Turn on Windows Firewall** radio buttons to turn the firewall back on.
4. Click on **OK** to activate the option.

## Creating Inbound Rules

1. Back in the **Windows Firewall** window, click on the **Advanced Settings** link.
2. Click on **Inbound Rules** to display the list of Inbound Rules. Click on **New Rule** on the right side of the window.

3. Select the **Program** radio button and click **Next**.
4. Select the **This Program Path** radio button and click on the **Browse** button. Navigate to the Harmony installation path and select **tbdserver.exe**. Click **Next**.
5. Select the **Allow the Connection** radio button and click **Next**.
6. Select the appropriate profiles for which this rule will be applied according to your network configuration and click **Next**.
7. Finish the Rule creation process by clicking **Finish**.
8. Repeat steps 1 to 7 for **tbprocess.exe** and **toonboom.exe**.
9. Repeat steps 1 to 7 for **lmgrd.exe** if this computer will be used as a License server.

## Related Topics

- [Troubleshooting on the next page](#)

# Troubleshooting

If you have any outstanding issues running Toon Boom Harmony after installation, review the installation and configuration instructions to make sure you have followed them completely. If you continue to have problems, consult the following list to troubleshoot common installation and configuration problems.

- [Problem: License Error When Starting Any Toon Boom Harmony Module](#) below
- [Problem: Unable to Import Sample Scene \(Errors with the tdbserver\)](#) below
- [Problem: Unable to Open Sample Scene on Clients](#) on page 42
- [Problem: resolution.conf Error Message](#) on page 42

## Problem: License Error When Starting Any Toon Boom Harmony Module

If you are getting license errors when you start any Toon Boom Harmony module, check the set up and configuration of the license service.

- Make sure that the `license.dat` file is in the following directory:  
`C:\flexlm`

- Open the `license.dat` file.

The `license.dat` should contain the following information:

```
SERVER this_host 0 ANY
```

```
VENDOR toonboom
```

```
USE_SERVER
```

- Make sure that the license service is running.
- If you continue having problems with the license server, locate the file `ToonBoomLicense.log` and send it to [support@toonboom.com](mailto:support@toonboom.com). In Windows, this file is usually in `C:\flexlm`.

## Problem: Unable to Import Sample Scene (Errors with the tdbserver)

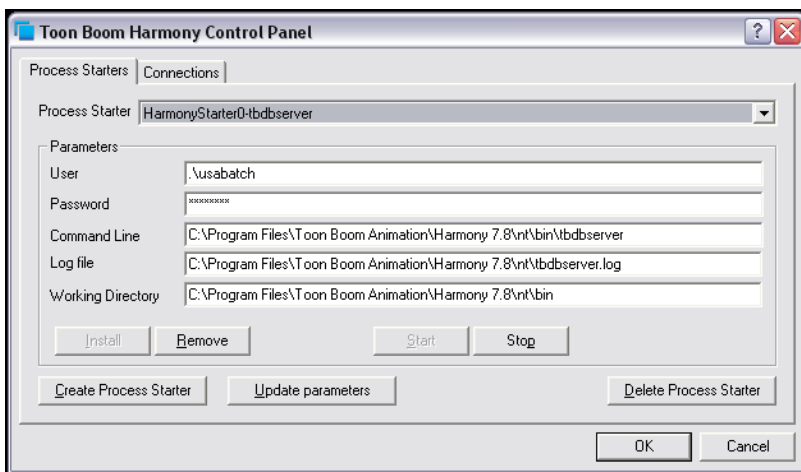
Check the `tdbserver.log` file. It is usually stored in `C:\ProgramData\Toon Boom Animation\Toon Boom Harmony`.

If there is no log file, re-start the `tdbserver`.

To restart the `tdbserver`:

1. Open the Control Panel.
2. Double-click the **Toon Boom Harmony Control Panel**  icon. The **Toon Boom Harmony Control Panel** dialog box opens.





3. From the **Process Starter** drop-down menu, select the **tbdbserver** entry.
4. Click **Start**.

If you continue to have problems with the database server, locate the `tbdbserver.log` file and send it to [support@toonboom.com](mailto:support@toonboom.com). This file is usually in `C:\ProgramData\Toon Boom Animation\Toon Boom Harmony`.

You can also run the Dbserver from the command shell in debug mode to receive additional information about the process.

#### To run the `tbdbserver` in debug mode:

1. Open `Dbserver.conf`.
2. Add the following line to the file:
 

```
debug_port 5681
```
3. Stop the `tbdbserver` service. Click the Start menu and select **All Programs > Toon Boom Harmony 10.0 > Configuration Tools > Control Panel**. When the Toon Boom Harmony Control Panel window opens, select the **tbdbserver** from the Process Starter drop-list and then click **Stop**.
4. Open a command prompt by selecting **Start > All Programs > Accessories > Command Prompt**.
5. Type the following:

```
tbdbserver -debug
```



While you are running the `tbdbserver` in debug mode, messages will be written to the shell for each operation the `tbdbserver` performs. This is additional information to what is written to the `tbdbserver.log` file.

- ▶ To output this information to a new file, type the following:

```
tbdbserver -debug > "C:\ProgramData\Toon Boom Animation\Toon Boom Harmony\tbdbserver_debug.log"
```



If you still cannot determine the nature of the problem, send this file to [support@toonboom.com](mailto:support@toonboom.com) with a detailed description of the problem.

---

## Problem: Unable to Open Sample Scene on Clients

If clients cannot open the sample scene, it is possible that they are not connected to the database server. Follow the instructions in to connect to the server.

## Problem: resolution.conf Error Message

When you open the sample scene, you might get an error message that says that the `resolution.conf` file can't be opened. This file is usually stored in the environment or job directory of your database.

There is a sample `resolution.conf` file in:

`\Program Files\Toon Boom Animation (x86)\Toon Boom Harmony 10.0\resources\samples` directory.

You can copy that into either of the following directories:

- `\USA_DB\environments\[environment_name]`
- `\USA_DB\jobs\[job_name]`
- `\USA_DB\resolution\`

# Chapter 1: Installing on Mac OS X

This document explains how to install Toon Boom Harmony 10.3 on Mac OS X.

This document assumes that you are familiar with Mac OS X networking and are capable of working in a command shell in the **Terminal** window.

Throughout this document, we will ask you to create files using a text editor. You can use TextEdit, but be sure to convert your files to plain text before saving them in TextEdit.

There are three stages required to install Toon Boom Harmony 10.3, which are covered in the following topics:

1. [Pre-installation on the next page](#)
2. [Harmony Installation on page 47](#)
3. [Configuration on page 51](#)
4. [Configuring Harmony to Share Scene Data on page 64](#)
5. [Configuring Harmony Clients on page 73](#)

After completing these stages, you can verify the integrity of the installation and resolve any configuration issues.

- [Troubleshooting on page 77](#)

# Pre-installation

Before installing Toon Boom Harmony 10.3, you must perform the following task:

- [Check Your Minimum Requirements](#) below
- [Get the Product Activation Code](#) below
- [Prerequisites for Harmony Installation](#) below

## Check Your Minimum Requirements

For the most current Toon Boom Harmony 10.3 hardware requirements, refer to the white paper **Harmony and Your IT Department**. This is available from:

- Toon Boom Animation Sales Representative
- Toon Boom Animation Support at: [support@toonboom.com](mailto:support@toonboom.com)

## Get the Product Activation Code

You should obtain a Product Activation code from the Toon Boom licensor so that you can finish the installation process without having to wait for the activation code to arrive.

To obtain a Harmony 10.3 activation code, please send the following information to: [licensor@toonboom.com](mailto:licensor@toonboom.com).

- Your name and the name of your company
- Email address where to send the license file

## Prerequisites for Harmony Installation

A DNS server must be configured on the network to be able to run Harmony. All the computers running Harmony must be registered with this server or Harmony will not be able to run properly. If a DNS server is not configured on the network or if Harmony workstations are having problems resolving the name of the server, the name of the server and each client along with their IP address should be added to the `/etc/hosts` file on each computer.

- [Editing the hosts File](#) below
- [Editing the launchd.conf File](#) on the facing page

## Editing the hosts File

To edit the host file:

1. Make sure the server and all the client workstations are configured with a static (fixed) IP address.
2. Open the Terminal (**/Application/Utilities/Terminal**).
3. From Terminal go to `/etc` folder by typing the following:

```
cd /etc
```

4. Create a backup copy of the **hosts** file. You need to be logged in using the **root** account to be able to do this. If you are not logged in as the root user, you will need to type **sudo** before launching the command.

```
sudo cp hosts hosts.bak
```

5. Edit the **/etc/hosts** file using the **vi** text editor. To do this, you need to be logged in with the root account. If not, you must type **sudo** before launching the command.

▸ For example: **sudo vi hosts**

6. Once the file is opened in the editor, press the **[i]** key to trigger the insert mode.
7. Go to the end of the file and add a new line. On this new line, type the static IP address and the machine name (hostname) of the server.

For example, if the server name is **server** and the IP address is **192.168.1.1**, type **192.168.1.1 server** on this new line. Make sure there is a space between the IP address and the hostname.

If there is a domain configured on the network, you should also type the fully qualified domain name (**FQDN**). Add the **FQDN** after the hostname separating them with a space.

For example, **192.168.1.1 server server.toonboom.com**

To complete this step, add the IP address and the hostname of each of the workstation that will be a client of the Harmony server. Each of them should be typed on a new line.

8. Once all the IP and hostnames have been typed, you will need to save the file. To do this, press **[ESC]** to exit the **insert** mode.
9. Press the **[:]** button. The **[:]** should appear on the bottom of the Terminal, if it does not then you are still in **insert** mode. Make sure you did not type the colon somewhere in the files and press the **ESC** key again to exit **insert** mode.
10. Type the letter **w**. You should now have the following typed at the bottom of the Terminal:

```
:w
```

11. Press the **return** key. The file was written.
12. To exit **vi** type: followed by the letter **q**. You should now have the following at the bottom of the Terminal:

```
:q
```

13. Press the **return** key to quit **vi**.  
The system will return you to **/etc** in the Terminal.
14. Verify the content of the **hosts** file by typing:

```
more hosts
```

15. Once this is verified, copy and paste the **hosts** file to all of the client machines.

## Editing the launchd.conf File

1. Open the Terminal (**/Application/Utilities/Terminal**).
2. From Terminal, go to **/etc** folder by typing the following:

```
cd /etc
```

3. If the **/etc/launchd.conf** file already exists, create a backup copy of it by typing:

```
cp launchd.conf launchd.conf.bak
```

4. Edit the `/etc/launchd.conf` file using the `vi` text editor. To do this, you must be logged in with the root account. If not, you must type `sudo` before launching the command.
  - For example: `sudo vi launchd.conf`
5. Once the file is opened in the editor, press the `[i]` key to trigger the insert mode.
6. At the beginning of the file, add a line with the following text:  

```
umask 0
```
7. Once finished, you will need to save the file. To do this, press `[ESC]` to exit the insert mode.
8. Press the `[:]` button. The `:` should appear on the bottom of the Terminal; if it does not, then you are still in insert mode. Make sure you did not type the colon anywhere in the file and press the `[ESC]` key again to exit insert mode.
9. Type the letter `w`. You should now see the following at the bottom of the Terminal:  

```
:w
```
10. Press the return key. The file is written.
11. To exit `vi` type `:q`. You should now see the following at the bottom of the Terminal:  

```
:q
```
12. Press the return key to quit `vi`.  
The system will return you to `/etc` in the Terminal.
13. Verify the content of the `launchd.conf` file by typing:  

```
more launchd.conf
```

## Related Topics

- [Harmony Installation on the facing page](#)

# Harmony Installation

Now that you have verified your minimum requirements, and configured your hardware and software, you are ready to install Toon Boom Harmony.

You will perform the following tasks:

1. [Upgrade from a Previous Installation](#) below
2. [Creating the usabatch User](#) on the next page
3. [Install Harmony](#) on page 50

## Upgrade from a Previous Installation

When upgrading from a previous installation of Harmony or Opus, you should pick a time when Harmony or Opus production is slow or stopped. During the upgrade, no users can run any of the Harmony or Opus modules and all rendering jobs must be complete. To update previous installations:

1. Make sure that no one is running any versions of Harmony or Opus. All Harmony or Opus modules must be closed on the server and on all of the clients.
2. Make sure that all batch rendering and vectorizing is complete or that the queues are empty. You can check the status of the **Vectorize** and **Render** queues from the Control Center module.
  - In the Control Center module, use the **Queue** menu to open the **Vectorize and Render Queue** for all environments. The Queues should either be empty or the status of all jobs should be "Completed".

You must be sure to stop the queues on all rendering machines. If the queues are running, those binaries will be locked and the installer won't be able to update them.

3. Stop all services running on the server and the clients.
  - If you are upgrading from 7.3, 7.8, 9.2 or 10.0, type in the terminal:
 

```
sudo /sbin/SystemStarter stop ToonBoomQueueServer
sudo /sbin/SystemStarter stop ToonBoomLinkServer
sudo /sbin/SystemStarter stop ToonBoomDataBaseServer
sudo /sbin/SystemStarter stop ToonBoomLicense
```
  - If you are upgrading from Harmony or Opus 7.2, type the following into the terminal:
 

```
sudo /sbin/SystemStarter stop USAnimation_queues
sudo /sbin/SystemStarter stop USAnimation_link_srv
sudo /sbin/SystemStarter stop USAnimation_dbserver
sudo /sbin/SystemStarter stop USAnimation_flexlm
```
4. Go to the applicable folder:
  - 10.0: /Applications/Toon Boom Harmony 10/tba/etc
  - 9.2: /Applications/Toon Boom Harmony 9.2/tba/etc
  - 7.8: /Applications/Toon Boom Harmony 7.8/tba/etc
  - 7.3: /Applications/Toon Boom Harmony/usa.bundle/etc
  - 7.2: /usa/etc

5. Backup any necessary configuration files.
  - ▶ **Manager.conf**
  - ▶ **server.ini**: if this server is configured to have Windows clients.
  - ▶ **Scan.conf**: if this workstation is configured to be a scanning station.
  - ▶ **VectOptions.conf**: from any machine (including the server) that is doing batch vectorization.
  - ▶ Any other configuration file that is required to be used later.
  - ▶ You can backup the whole **/Harmony** folder to ensure that no configuration file is missed.
6. Go to **/usr/local/flexlm/licenses/ (/usa/etc/flexlm/** if you are upgrading from 7.2) folder and back up the **license.dat**.
7. Then you can delete the **/Applications/Toon Boom Harmony** folder, or rename it to keep as a backup.
8. If you are upgrading from a previous version of Harmony or Opus, you must delete Startup Items from the previous installation.

From **/Library/StartupItems/**, delete any folders that begin with **USAnimation** if you are upgrading from 7.2. For example, **USAnimation\_dbserver**. Delete any folders that begin with **ToonBoom** if you are upgrading from 7.3, 7.8, 9.2 or 10.0. For example, **ToonBoomDatabaseServer**.



Depending on the server and client configuration, you may not see any folders starting with **Toonboom** or **USAnimation**.

---

If you are upgrading from Harmony or Opus, you will also need to delete extra files that are located in each users home.

1. Open the Terminal application (**/Applications/Utilities/Terminal**).
2. Go to a users' home that was configured to work with Harmony. We will use the usabatch account as an example. To do so, type:

```
cd /Users/usabatch
```

3. List all the files in usabatch's home by typing:

```
ls -lsa
```

4. Look for a folder named **.MacOSX** in the list of files and folders that appear.
5. If the folder is there, delete it with the following command:

```
sudo rm -rf .MacOSX
```

6. Repeat these steps for each user that was configured to work with a previous version of Harmony.

## Creating the usabatch User

Before you install Harmony you must create the **usabatch** user account on the server and on all the workstations that will be doing batch processing (computers that will be part of the batch rendering or vectorizing farm). A number of services, including the **tddbserver**, license server and batch processing, are



started using the **usabatch** account. In addition to the server, be sure to create the **usabatch** account on all machines that may perform batch processing.

The **usabatch** account must have administrative rights on the computer.



If you are upgrading from a previous version of Harmony or Opus, you may not need to create the **usabatch** account since you will use the same account that was created from the previous installation.

### To create the **usabatch** user account:

1. Open **System Preferences**. By default, there is a shortcut for **System Preferences** in the **Dock**.
2. In the **System** panel of the **System Preferences** dialog box:
  - 10.6 (Snow Leopard): Click **Accounts**.
  - 10.7 (Lion): Click **Users & Groups**.

The **Password** tab of the **Accounts** window opens.

3. To be able to make changes to the accounts on a Mac OS X, you must first click the lock at the bottom of the window. A dialog box will appear asking you to type your username and password. Type the username and the password of an account that has administrative privileges.
4. Click the + sign button to add a new user.
5. Give the new user the following name, account name and password:

```
usabatch
```

The **usabatch** account name and password must be in all lower-case letters.

6. Select **Administrator** from the drop-down menu next to **New Account**.
7. Create the account:
  - **10.6 (Snow Leopard)**: Click **Create Account**.
  - **10.7 (Lion)**: Click **Create User**.
8. Once the account is created, open the terminal and login as the **usabatch** user:

```
su -l usabatch
```

9. Make sure you are in **usabatch**'s home folder, then edit or create the **.profile** for **usabatch**:

```
vi .profile
```

10. Make sure the file contains the following lines:

```
#!/bin/bash  
umask 0
```

11. Once done, click on [ESC] to exit the insert mode, then type **:wq** to write the file and exit vi.

# Install Harmony

In a client-server network or in a stand-alone set up, you must install Harmony as well as the following services on the server or the stand-alone computer:

- **tbdbserver:** Controls access to the database.
- **License service:** Controls the number of licenses and features available to Harmony users.
- **Batch Processing:** Controls batch vectorizing and rendering queues.
- **Link server:** If you are installing Harmony on a Mac OS X server that will support Windows clients, you must install the Link server.

To install Harmony programs and services, you must run the installation package.

Before you start the installation, you need to make sure you are currently logged in the system with administrative rights on this local computer. You can check it from System Preferences.

1. Open **System Preferences**. By default, there is a shortcut for **System Preferences** in the **Dock**.
2. In the **System** panel of the **System Preferences** dialog box:
  - ▶ 10.6 (Snow Leopard): Click **Accounts**.
  - ▶ 10.7 (Lion): Click **Users & Groups**.

The **Password** tab of the **Accounts** window opens.

3. Select your user login account and verify if **Allow user to administer this computer** is checked. If not, please login to the system with an administrative account and do so.

## To install Harmony:

1. Double-click the Harmony dmg file.
2. Drag the Toon Boom **Harmony 10** folder from the dmg file to the **Applications** folder.

## Related Topics

- [Configuration on the facing page](#)

# Configuration

After installing Harmony, you must configure the database parameters and the third party software based on the role this computer will have.

1. [Configuring Harmony below](#)
2. [Configuring the Licensing on page 54](#)

## Configuring Harmony

Once Harmony is installed, additional steps are required to configure the database on the server and to setup the Startup Items and register the application path for the Terminal.

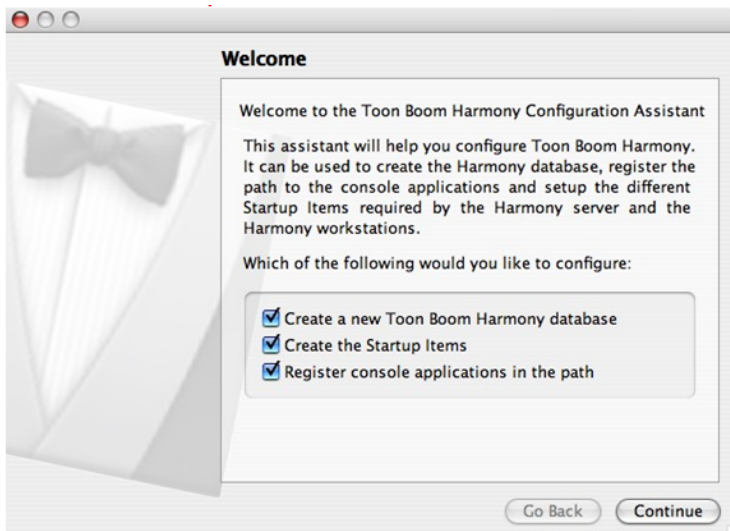
### Set Up the Database Server

The database server controls all interactions with the contents of the Toon Boom Harmony 10.3 database. It processes all requests to open, read or update files, keeping track of files that are locked so that others cannot edit them.

If you already have a database set up from a previous installation of Toon Boom Harmony 10.3 you **DO NOT** need to set up the database server, startup items, or register console application in the path. However, if you are upgrading from a previous version, you need to install the startup items and register console applications in the path. For new installations of Harmony, you must install all of them.

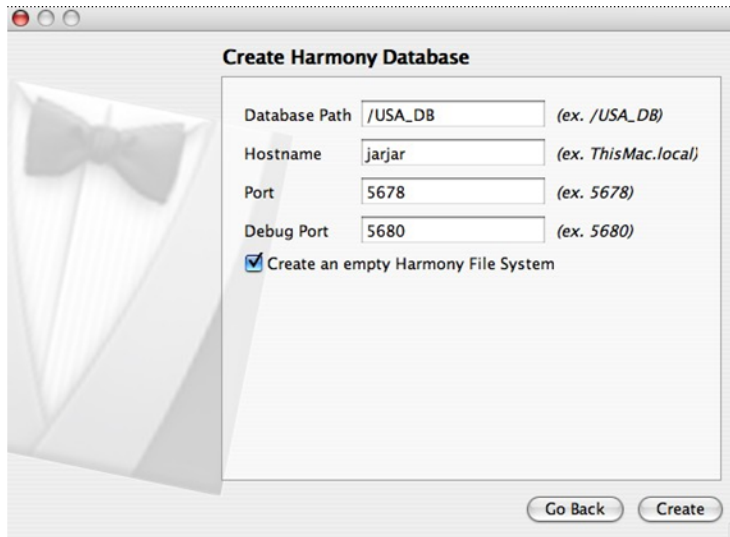
The database server is configured using the Configuration Assistant:

1. From **Finder**, go to **Applications > Toon Boom Harmony 10.3 > Tools**.
2. Double-click **Configuration Assistant**.
3. For the server, select all three options if this is the first time you are installing on this machine.
  - ▶ If you are upgrading from a previous version and a database (**/USA\_DB**) already exists on the server, unselect the **Create a new Toon Boom Harmony database** option.
  - ▶ If you are upgrading from an earlier version of Toon Boom Harmony, you will need to update the dict files in the **USA\_DB**. The dict files need to be copied from **/Applications/Toon Boom Harmony 10/tba/etc/USADB\_templates/dicts/** to **/USA\_DB/dicts/**.



4. Click **Continue**.

The **Create Harmony Database** dialog box opens. The default values shown in this dialog box should be correct and therefore accepted as is.

5. Click on the **Create** button in the **Create Harmony Database** dialog box.

You can always create the Toon Boom Harmony 10.3 file system manually later. To do so, open terminal and type following:

```
cd / [Return]
mkdir usadata000 [Return]
chmod -R 777 usadata000 [Return]
```



Note that you need to be logged in using the **root** account to be able to do this. If you are not logged in as the root user, you will need to type **sudo** before launching the command.

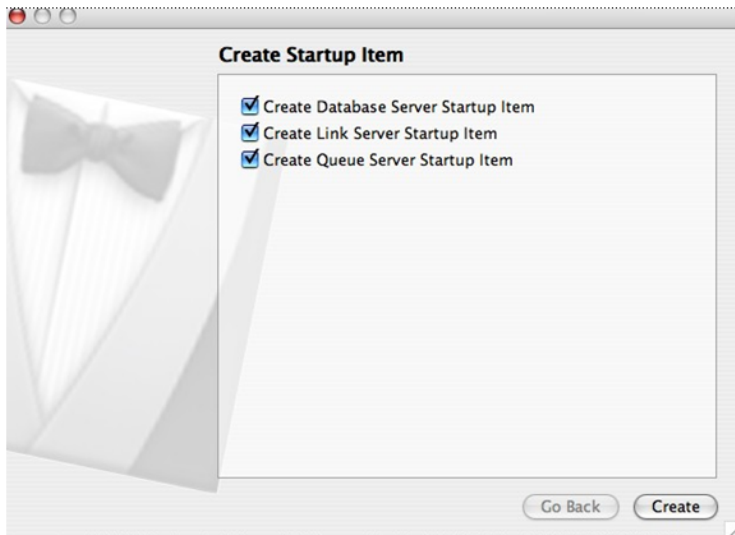
You can make as many data directories as you like. Name these directories using the following syntax, where XXX represents the number of the data directory:

```
usadataXXX
```



If you want to use a name other than **usadataXXX** for the Toon Boom Harmony 10.3 File System, you will need to edit the **Manager.conf** file and add the name or search pattern for this new file system. The **Manager.conf** file can be edited using the **Configuration Editor** that is found in the Tools folder of your Toon Boom Harmony 10.3 installation. Open the **Configuration Editor** and select the **Manager.conf** tab.

6. In the **Create Startup Item** page, select the Startup Items required.
7. Click **Create** to continue.



- ▶ **Create Database Server Startup Item:** It is mandatory to install the Database Server Startup Item on the server.
  - ▶ **Create Link Server Startup Item:** This Startup Item is required when there will be Windows clients connecting to the Mac server. This service creates symbolic links when a scene is created from a Windows client workstation.
  - ▶ **Create Queue Server Startup Item:** This is for the batch rendering. Do not install this on the server, as it will slow it down. Install this on a stand-alone machine that will be used for batch vectorizing or rendering.
8. In the **Register Path** page, choose whether you want to register the path for the current user or for all users.
    - ▶ Register Path for all users
    - ▶ Register Path for my user only



This option appends the path of Harmony's applications to the PATH environment variable in order to run the applications from the Terminal.

- **Registration Path for all users:** registers the path for all accounts on the computer. You only need to run this once.
- **Registration Path for my user only:** This option registers the path to the current account only. You need to run this for each user that will be using the Terminal and you need to run this each time you create a new user.

9. Click **Create** to go to the next page.

10. Click **Done** to close the **Configuration Assistant**.

## Configuring the Licensing

The licensing must be configured before running Toon Boom Harmony 10.3.

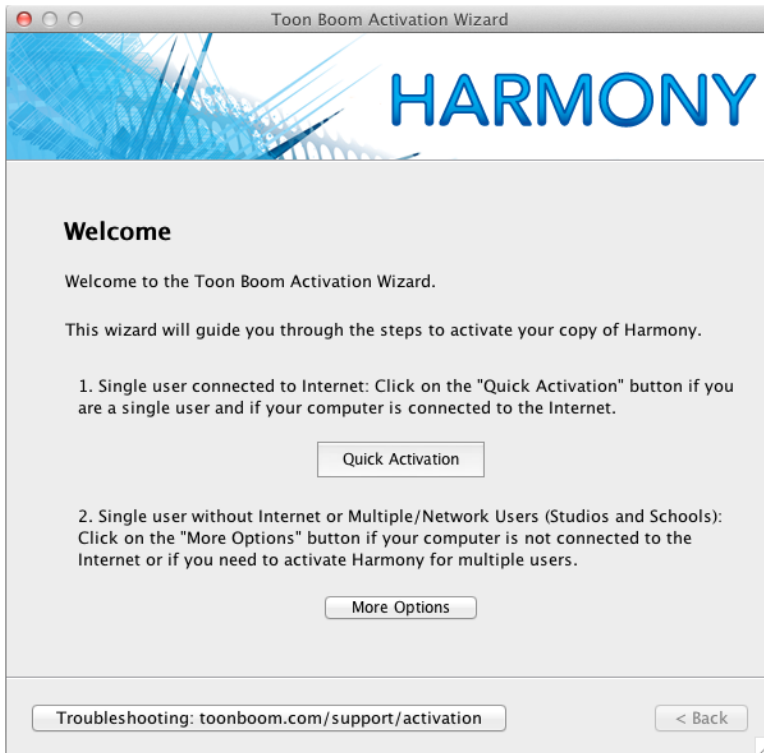
You must perform the following tasks on the server:

- [Setting Up the FlexLM License Server](#) below
- [Setting up the License on Client Workstations](#) on page 60

## Setting Up the FlexLM License Server

To configure the license server:

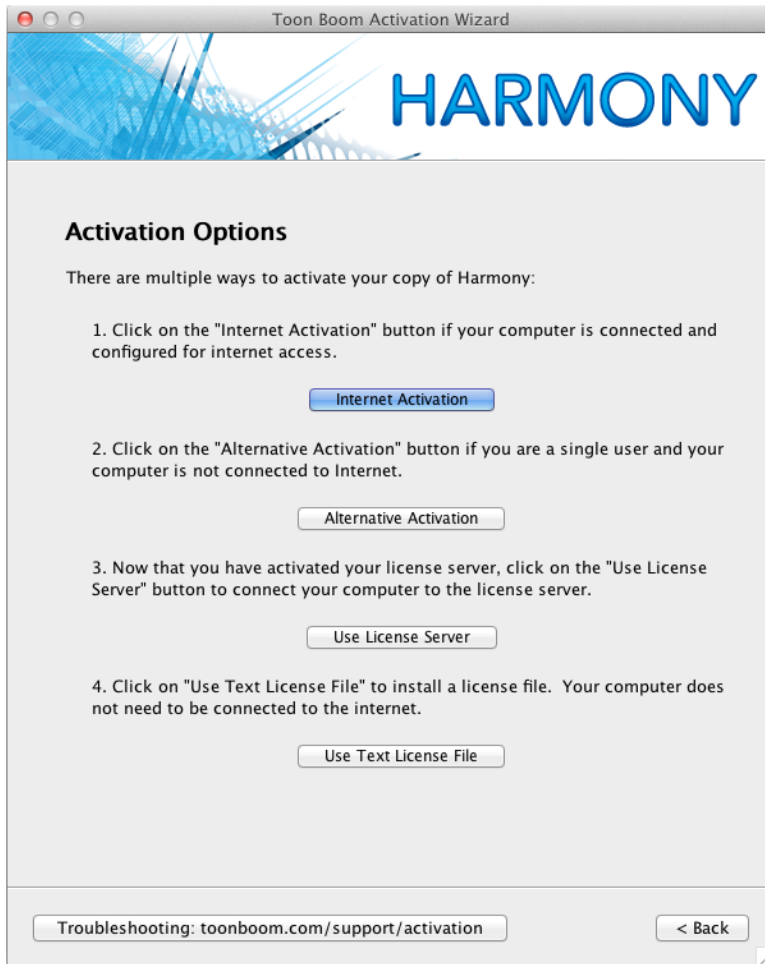
1. Launch the **License Wizard** from **Applications > Toon Boom Harmony 10.3 > Tools > LicenseWizard**.
2. Depending on how the **License Wizard** was started, the first page of the **License Wizard** will be one of the following:
  - If this screen appears: Click on **More Options**.



- ▶ If this screen appears: Click on **Activate License**.



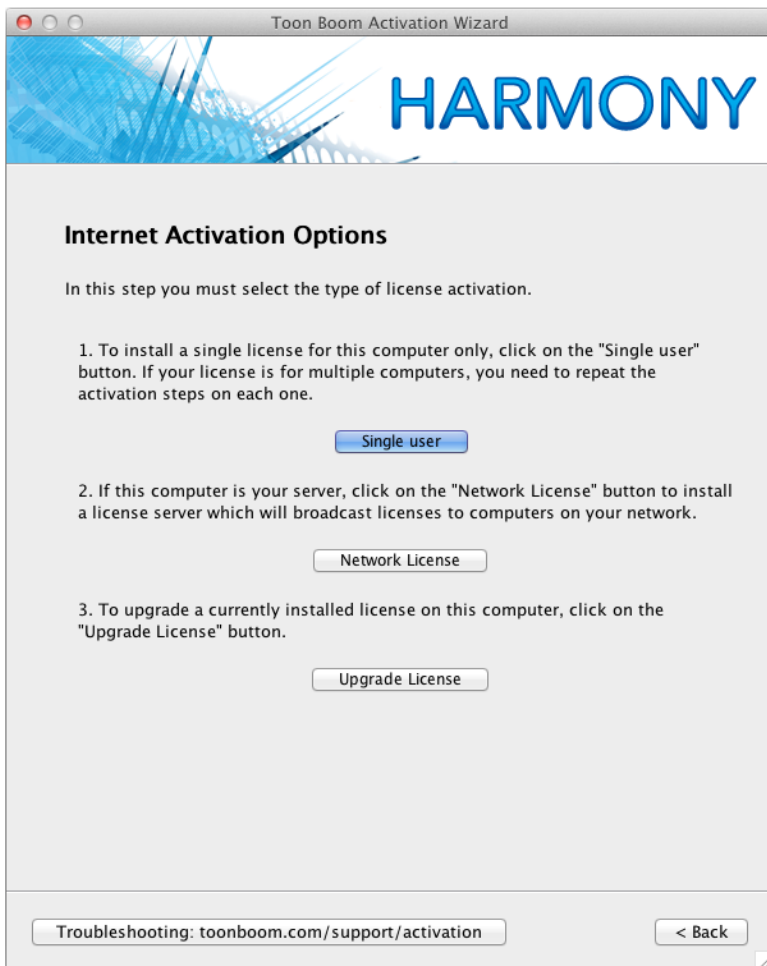
The **Activation Options** screen appears:



**3. Click on Internet Activation**

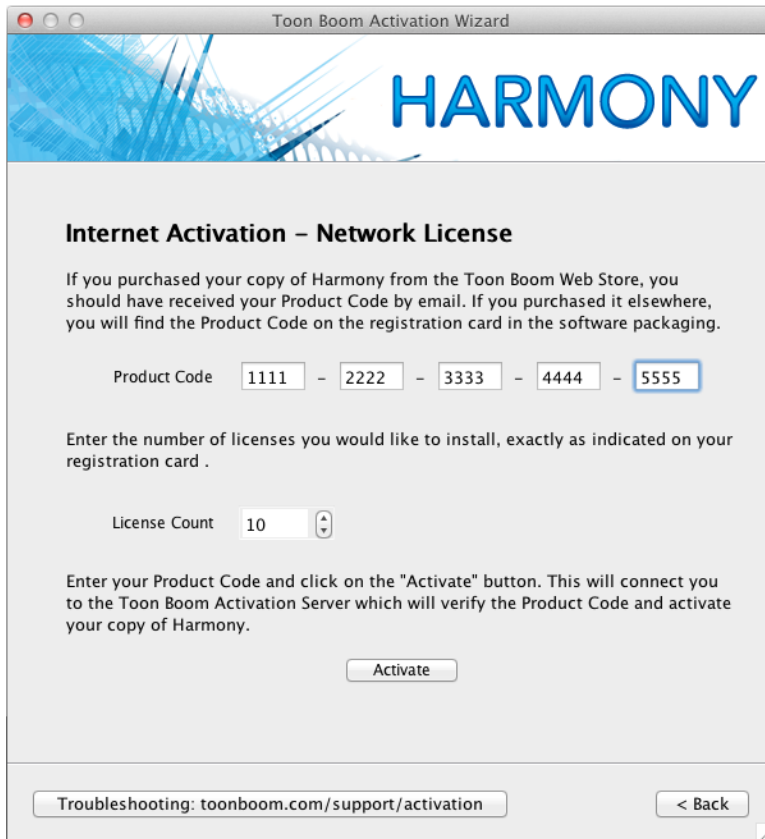
The **Internet Activation Options** screen appears:





4. Click on **Network License**.

The **Internet Activation - Network License** screen appears:



5. Type or copy/paste the **Product Code** and type in the number of licenses (License Count) this product code grants you.



Once activated and returned to the activation server, a server license cannot be activated again. Make sure you are activating the license on the correct computer with the proper license count.

6. Click on **Activate**.

The **Install License Server** screen appears:



7. Click on **Install License Server**.

This step will create the `license.dat` file and place it in `/usr/local/flexlm/licenses/license.dat`. It will also configure and start the **License Server** service.

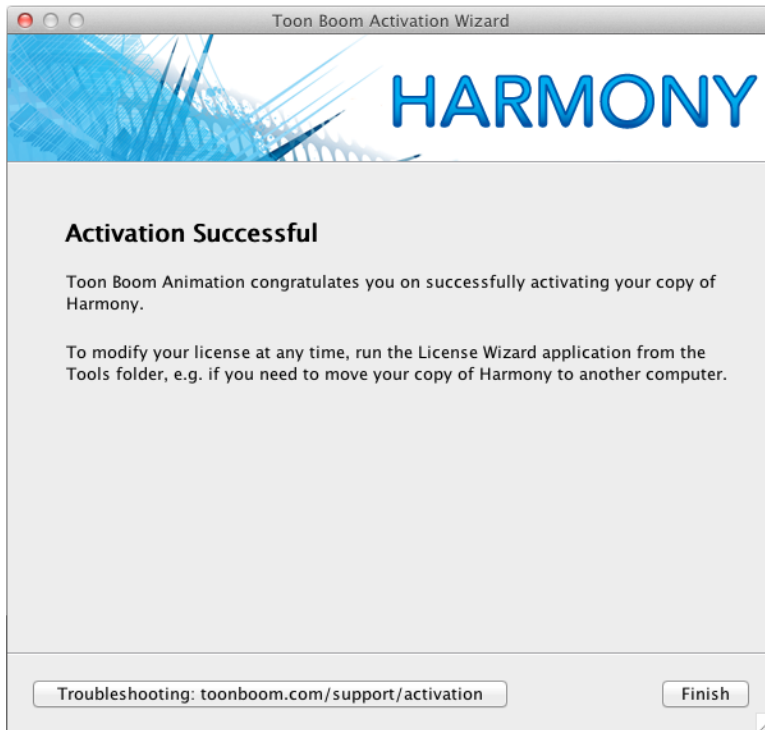
The `license.dat` created contains the following information:

```
SERVER this_host 0 ANY
```

```
VENDOR toonboom
```

```
USE_SERVER
```

The **Activation Successful** screen appears:



8. Click on **Finish** to exit the wizard.
9. Verify that the FlexLM license is working properly by using the `lmutil lmstat -a` command.

```
lmutil lmstat -a
```

You can also look at the `ToonBoomLicense.log` that is located at:

```
/Library/Logs/ToonBoomLicense.log
```

10. If the FlexLM service needs to be restarted, use the following command:

```
sudo /sbin/SystemStarter restart ToonBoomLicense
```

## Setting up the License on Client Workstations

An Admin account is required to set this up. After activation you can login as client.

To set up the license on a client workstation do the following:

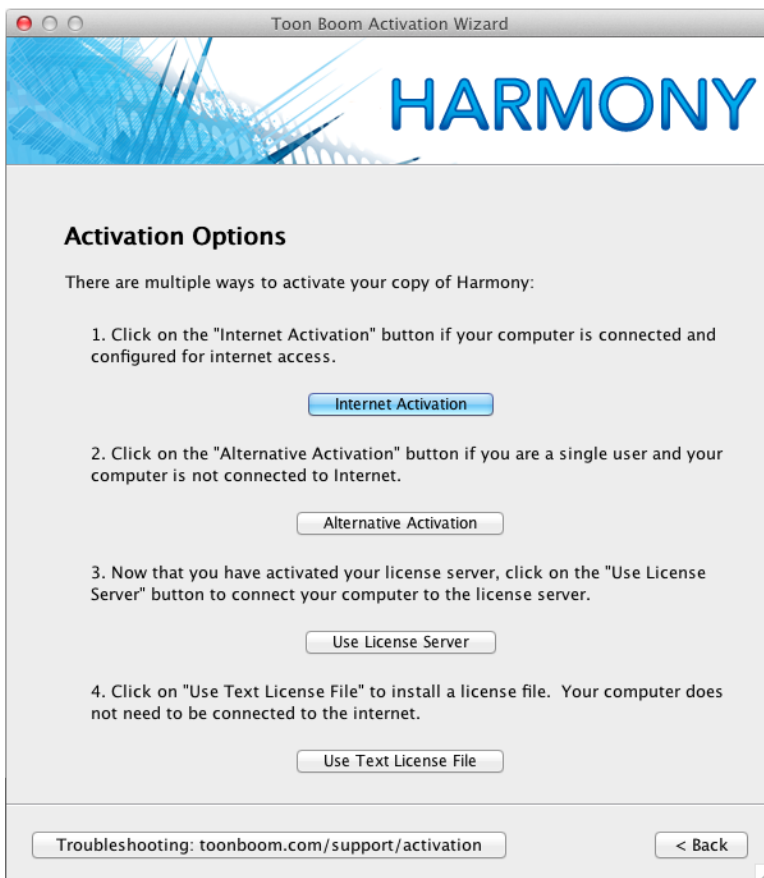
1. Open the **License Wizard** on the Client machine.

The **Toon Boom Activation Wizard** appears.



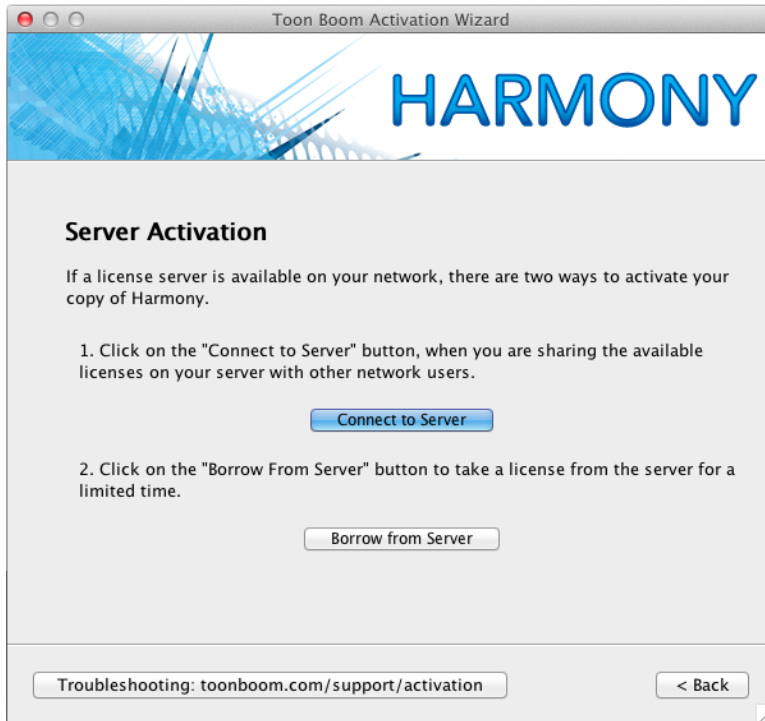
2. Click on **Activate License**.

The **Activation Options** screen appears.



3. Click on **Use License Server**.

The **Server Activation** screen appears.



4. Click on **Connect to Server**.

The **Server Activation - Shared License** dialog appears.



5. Enter the **hostname** or the **IP Address** in the **License Server address** field.
6. Click **Connect**. You will be prompted for a password.
7. Enter the password and click **OK**.

8. The **Activation Successful** screen appears.
9. Click **Finish** to close the **License Wizard**.

## Related Topics

- [Configuring Harmony to Share Scene Data on the next page](#)

# Configuring Harmony to Share Scene Data

Before you can share scene data between a Mac OS X database and Mac OS X, Linux, and Windows clients, you must configure the Mac OS X database server appropriately.

This section covers the following topics:

- [Sharing Harmony Directories for Mac OS X and Linux Clients](#) below
- [Set Up the Server for Windows Clients](#) on page 66

## Sharing Harmony Directories for Mac OS X and Linux Clients

To share scene data between the Mac OS X server and Mac OS X and Linux clients, you must export (using NFS) the database and data directories from the server.

Toon Boom Harmony 10.3 uses NFS (Network File System) to share files between Mac OS X and Linux computers. You must use NFS to export directories from the server so that clients can mount them and share the contents.

## Sharing the Database for Mac OS X and Linux Clients

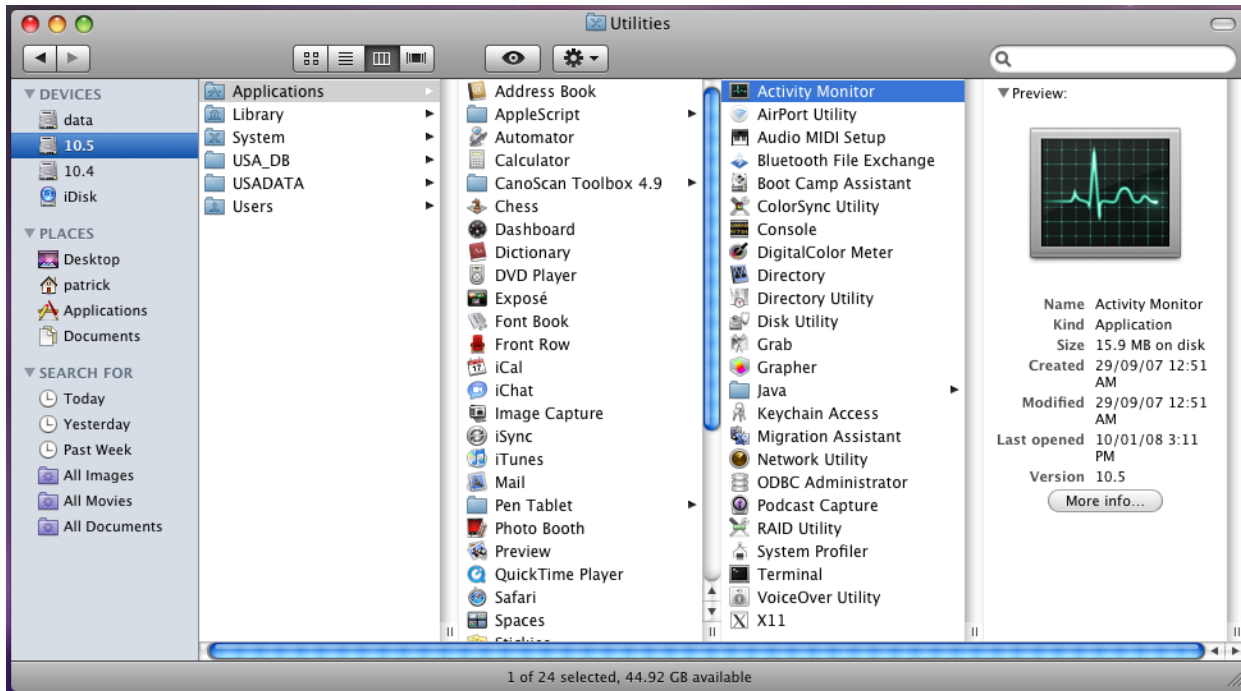
If your Mac OS X server will have Mac OS X or Linux clients, you will need to export the USA\_DB and USADATA folders using **NFS** (network file server). The clients will then need to be configured to mount those exported folders from the server.

## Setting up NFS Exports on Mac OS X 10.7 and Mac OS X 10.6

The following procedure demonstrates how to export the /USADATA and the /USA\_DB directories, on a Mac OS X workstation, as NFS Shared points.

1. From **Finder** go to **Application > Utilities** and double-click **Terminal**.





2. Create and edit the **export** file in the **/etc** directory, by typing the following:

```
sudo vi /etc/exports
```

3. Click on "i" to enter the "insert" mode and type the following lines:

```
/USA_DB -maproot=nobody
```

```
/USADATA -maproot=nobody
```

4. Once done, click on [ESC] to exit the insert mode, then type **:wq** to write the file and exit **vi**.
5. Check that the file is correct by running:

```
sudo nfsd checkexports
```



If there is no return response, then all is correct.

6. Type the following command to start **nfsd**.

```
sudo nfsd enable
```

7. If **nfsd** was already started, you will need to type the following command to notify the **nfsd daemon** that the **/etc/exports** file has changed:

```
sudo kill -1 `cat /var/run/mountd.pid`
```



The ``` character is located on the top left side of the Mac OS X keyboard on the same key as the tilde `~` character.

---

8. Once that is done, you can use the following command to see if the folders are exported correctly:

```
/usr/bin/showmount -e
```

The following should appear after running the command.

```
/USA_DB Everyone
```

```
/USADATA Everyone
```

Once the exports file is created, clients systems will be able to mount the `/USA_DB` and `/USADATA` located on the Mac OS X server system.

## Set Up the Server for Windows Clients

If Windows clients are going to access the Toon Boom Harmony 10.3 database on a Mac OS X server, you must set up the **Link Server**, **Samba** and the `server.ini` file. These allow the server and clients to communicate and share data.

**To set up the server for Windows clients, you must:**

1. [Configure and Start the Link Server](#) below.
2. [Configure Samba on Mac OS X 10.6 and 10.7](#) on the facing page.
3. [Configure the server.ini File](#) on page 72.
4. [Reboot](#) on page 72

## Configure and Start the Link Server

If you are running Toon Boom Harmony 10.3 in a mixed environment where the server is on Mac OS X and some of the clients are running Windows, you must start the Link Server. The Link Server makes it possible for Windows machines to communicate with the database.

**To configure the link server on the server in a mixed network environment:**

1. If you did not already install Link Server during the server installation, you must do it now. From the Finder, go to **Applications > Toon Boom Harmony 10.3 > Tools**.
2. Double-click the **Configuration Assistant**.
3. Select **Create the Startup Items** and uncheck the other options.
4. Click on the **Continue** button.
5. In **Create Startup Item**, select **Create Link Server Startup Item**.
6. Click **Create**.
7. Type a user name and password of a user with administration rights.
8. Click **OK** to confirm.

9. To start the Link Server, either restart the server or type the following in the Terminal. (Note: if you are not a root, you need to use `sudo` command):

```
sudo /sbin/SystemStarter start ToonBoomLinkServer
```

A message will appear in the Terminal indicating that the script has been successful.

10. A log file will be generated in `/Library/Logs/ToonBoomLinkServer.log`. Check this file to make sure there are no errors written to this file.

## Configure Samba on Mac OS X 10.6 and 10.7

Do the following:

- [Configure the Samba Service below](#)
- [Configure the Samba Shared Files on page 69](#)
- [Configure the smb.conf File on page 70](#)



**Mac OS X 10.7 (Lion)** no longer uses the open source Samba software to share folders for Windows workstations. It has been replaced by Apple's own Windows file sharing software. This software does not include some of the options required to support Windows Harmony clients.



We are seeking a solution to this problem. In the meantime, if you need to have Windows clients in your environment, Mac OS X 10.6 or a Linux server can be used.

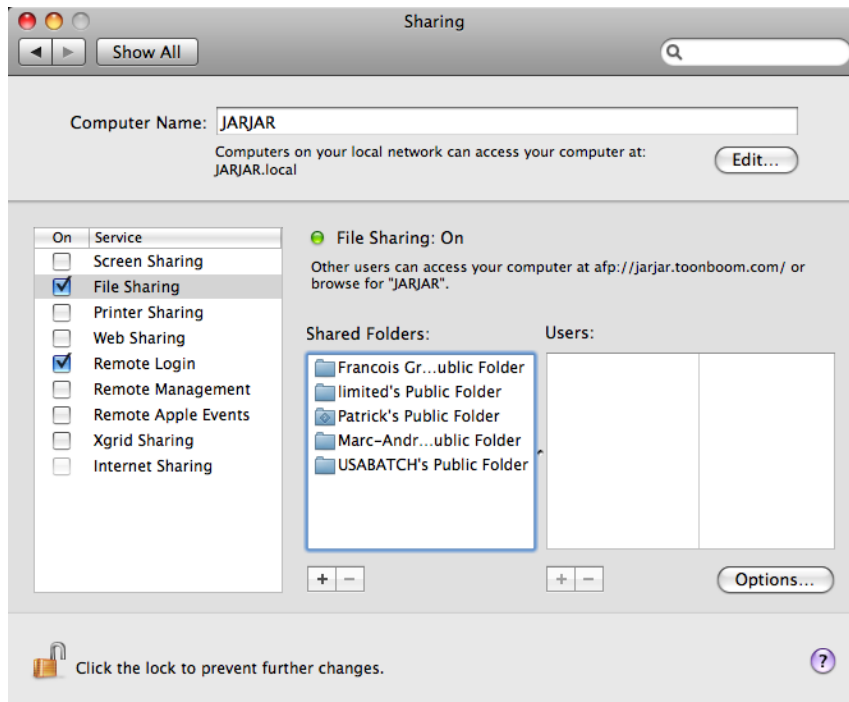
---

## Configure the Samba Service

By default, Samba is not set up to run automatically on Mac OS X.

**To start the Samba service:**

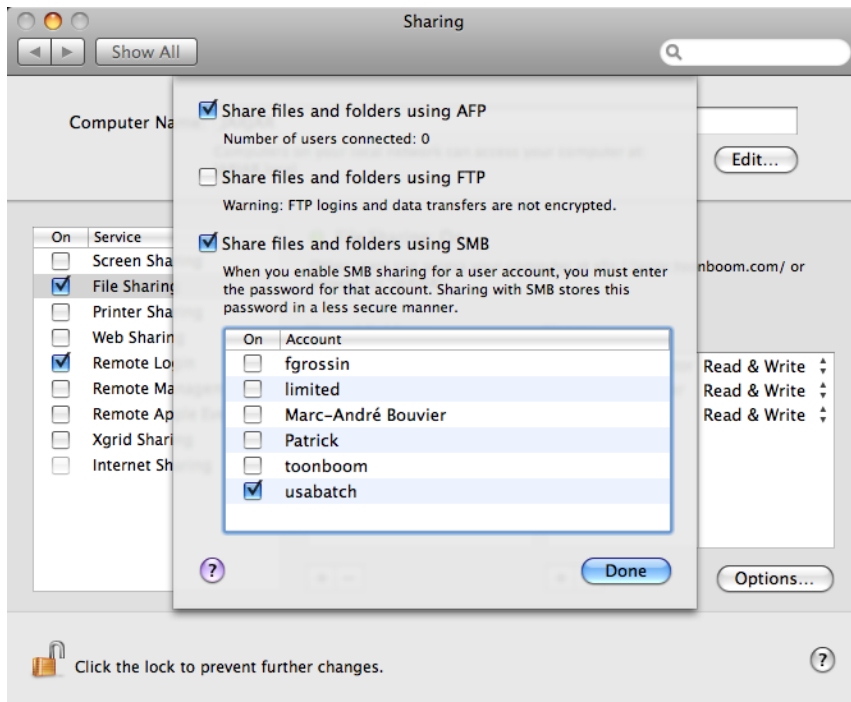
1. Open **System Preferences**.
2. In the **Internet & Wireless** section, click on **Sharing**.
3. In the **Services** section, click in the **File Sharing** checkbox.



4. Under the **Shared Folders** section, click on the plus + sign.
5. Browse and select the `/USA_DB` folder.



6. Repeat Step 4 and Step 5 for the `/USADATA` folder.
7. Make sure to give the `usabatch` account Read and Write permissions to the `USA_DB` and `USADATA` folders.
8. Click on the **Options** button.
9. Enable the **Share files and folders using SMB** checkbox.



10. Click the **usabatch** account checkbox in the account list and then click **Done**.
11. Close **System Preferences**.

## Configure the Samba Shared Files

Next, modify the `usa_db` and the `usadata` shares in the `/var/db/samba/smb.shares` and add a `usasection` to the file.

1. Open the Terminal.
2. In the Finder go to **Application > Utilities** and double-click **Terminal**.
3. Go to the `samba shares` directory:

```
cd /var/db/samba/
```

4. Open the `smb.shares` file in the `vi` text editor.

```
sudo vi smb.shares
```

5. Type "i" to enter the insert mode.
6. Add or modify options in the file.

This is an example of entries in the `smb.shares` shared file. You can add missing options at the end of the list.

```
[USA_DB]
comment = Harmony database folder
path = /USA_DB
available = yes
guest ok = no
directory mask = 777
```

```
create mask = 777
browseable=yes
read only=no
[USADATA]
comment = Harmony USADATA filesystem
path = /USADATA
available = yes
guest ok = no
directory mask = 777
create mask = 777
browseable=yes
read only=no
```

7. Create a `usa` share by making a copy of the `[USA_DB]` section and pasting it underneath.
8. Rename `[USA_DB]` for `[USA]`.
9. Modify the following lines under `[USA]`:

```
path = /Applications/Toon Boom Harmony 10.3/tba
comment = Harmony binaries and configuration files
```

10. Verify that the `[USA]` section looks like the following:

```
[usa]
comment = Harmony binaries and configuration files
path = /Applications/Toon Boom Harmony 10/tba
available = yes
guest ok = no
directory mask = 777
create mask = 777
browseable = yes
read only = no
```

11. Type `[ESC]` and type `:wq` to save the changes and quit the vi editor.

## Configure the `smb.conf` File

You must also either add or modify the following entries to the `[global]` section of `/etc/smb.conf` file.

12. Create a backup copy of your current `/etc/smb.conf` file:

```
cd /etc
sudo cp smb.conf smb.conf.bak
```

13. Open the `smb.conf` file in the `vi` editor.

```
sudo vi /etc/smb.conf
```

14. Type "i" to enter the insert mode.

15. Add or modify options in the file:

```
[global]

map to guest = Never

dos charset = 437
unix charset = UTF-8-MAC
display charset = UTF-8-MAC

blocking locks = false
oplocks = false

mangled names = no
```



When set to no, the mangled name parameter will prevent older smb clients (DOS, Win9X and Windows NT clients) to access files and folders that do not use a 8.3 file name.

16. Type `[ESC]`[escape] to quit the **insert mode**.
17. Type `:wq` to save the changes and quit the `vi` editor.
18. Once the file is saved, run the `testparm` command to check that you have not made any basic syntactic errors.

```
testparm
```

19. Notify the **smbd service** of the changes by typing the following:

```
sudo kill -1 `cat /var/run/smbd.pid`
```



The ``` character is located on the top left side of the Mac OS X keyboard on the same key as the tilde `~` character. Or simply reboot the computer.

## Configure the server.ini File

Before you install Toon Boom Harmony 10.3 on Windows clients, you must create the `server.ini` file on the server. The `server.ini` file provides information necessary in Windows for the **Configuration Wizard** to set up a Windows client.



When creating the `server.ini` file, be attentive to spelling, character spacing and case.

---

### To create the `server.ini` on the Mac server:

1. In Finder, go to **Application > Toon Boom Harmony 10 > Tools** and double-click the **Configuration Editor**.
2. When the **Configuration Editor** opens, click on the `server.ini` tab.
3. Copy and paste this example and modify it accordingly:

This is an example of the `server.ini` file. In this example, the server name is `harmonyserver` and there is one `usadata` directory named, `USADATA`.

```
[WizardConfig]
ServerName=harmonyserver
InstallationDrive=C
UsaShare=usa
UsadbDrive=C
UsadbShare=USA_DB
FileSystem0=C USADATA harmonyserver
```



The references to `DriveC` shown in this example are necessary for Windows clients and will be ignored by Mac OS X.

---

4. Save the file using the **Save** command under **the File menu** and quit the **Configuration Editor**.

## Reboot

At this point, you should reboot the server so that all of the services which you have just configured will start up.

### Related Topics

- [Configuring Harmony Clients on the facing page](#)



# Configuring Harmony Clients

The following procedure demonstrates how to mount the /USADATA and the /USA\_DB server directories, on a Mac OS X X 10.6 or 10.7 workstation, as NSF Shared points.

To mount NFS Export on Mac OS X 10.6 and 10.7 Clients do the following:

- [Renaming your existing /USA\\_DB and /USADATA directories below](#)
- [Configuring the Mounts using the Disk Utility below](#)

## Renaming your existing /USA\_DB and /USADATA directories



This only applies if you already have a /USA\_DB and a /USADATA local directory.

Before starting, you must rename these directories if you want to keep their contents.

To rename /USA\_DB and /USADATA local directories:

1. Open the Terminal.
1. From the Finder go to **Application > Utilities** and double-click **Terminal**.
2. Rename the local USA\_DB and USADATA directories, by typing the following:

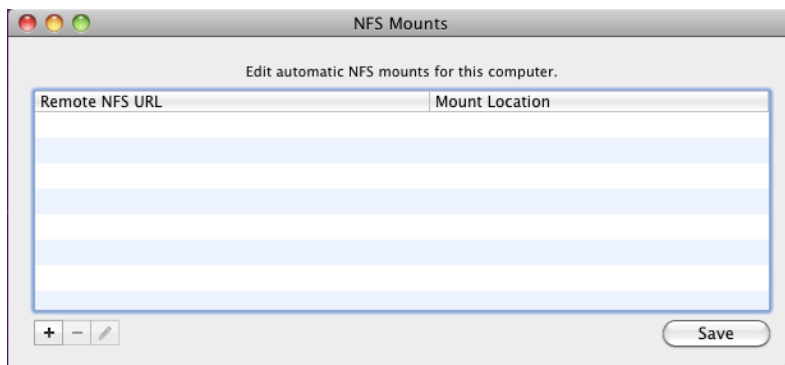
```
sudo mv /USA_DB /USA_DB.BAK
```

```
sudo mv /USADATA /USADATA.BAK
```

## Configuring the Mounts using the Disk Utility

1. In the Finder go to **Application > Utilities** and double-click on **Disk Utility**.
2. In **Disk Utility**, click on **File > NFS Mounts**.

The **NFS Mounts** window opens.



3. Press the **[+]** button in the toolbar below the panel.

4. In the **Remote NFS URL** field type the following:

```
nfs://[server name]/USA_DB
```



Replace [server name] by the name of the server. For example, if the server name was `jarjar`, you would type: `nfs://jarjar/USA_DB`.

5. In the **Mount Location** field type the following:

```
/Volumes/USA_DB
```

6. If the workstation is going to be connecting to a Linux server, you must edit the **Advanced Mount Parameters**. In the **Advanced Mount Parameters** field, type:

```
resvport
```

Enter the URL and mount location below for the remote mount to configure.

Remote NFS URL:   
 Example: nfs://nfsserver.apple.com/sales

Mount location:   
 Example: /Volumes/sales

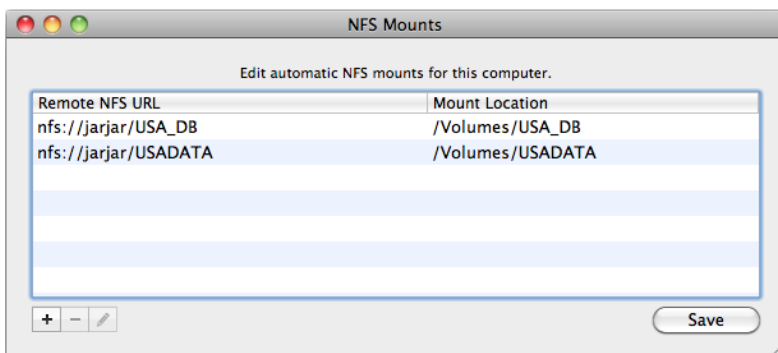
▼ Advanced Mount Parameters

Mount as read-only  
 Ignore "set user ID" privileges

7. Click on the **Verify** button.
8. Click on the **OK** button on the message that confirms that NFS server is functional.
9. Repeat [Press the \[+\] button in the toolbar below the panel.](#) through [Click on the OK button on the message that confirms that NFS server is functional.](#), but enter the following for the Remote NFS URL and Mount Location:

```
nfs://[server hostname]/USADATA
```

```
/Volumes/USADATA
```



10. Press the **Save** button and enter your user password to confirm the changes. Note that on Mac OS X 10.7 there is no save button. Changes are automatically saved and applied when the NFS Mounts window is closed.
11. Quit the **Disk Utility**.
12. Open a new **Terminal** window.
13. Verify that the /USA\_DB and /USADATA shared points have been mounted properly:

```
ls /Volumes/USA_DB
```

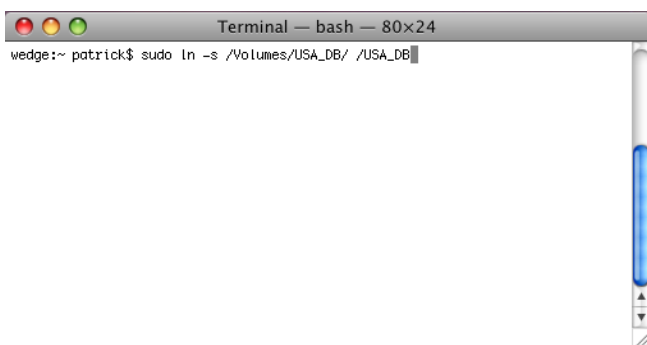
and

```
ls /Volumes/USADATA
```

14. Create symbolic links to the **USA\_DB** and **USADATA** directories at the root level /

```
sudo ln -s /Volumes/USA_DB /USA_DB
```

```
sudo ln -s /Volumes/USADATA /USADATA
```



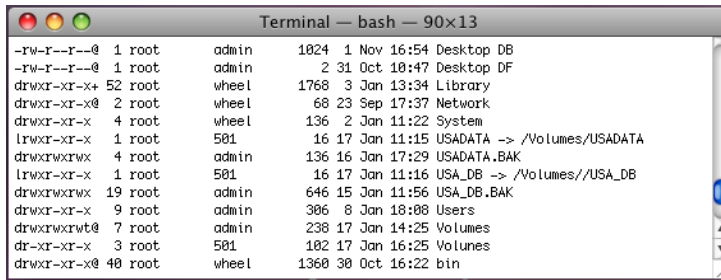
15. Verify that the symbolic links are pointing to the right directories:

```
ls -l /
```

The symbolic links for the **/USA\_DB** and **/USADATA** should look like the following:

```
USADATA -> /Volumes/USADATA
```

```
USA_DB -> /Volumes/USA_DB
```



A screenshot of a macOS Terminal window titled "Terminal — bash — 90x13". The window displays the output of the `df -k` command, showing disk usage for various volumes. The output is as follows:

```
-rw-r--r--@ 1 root    admin    1024  1 Nov 16:54 Desktop DB
-rw-r--r--@ 1 root    admin      2 31 Oct 10:47 Desktop DF
drwxr-xr-x+ 52 root    wheel   1768  3 Jan 13:34 Library
drwxr-xr-x@  2 root    wheel     68 23 Sep 17:37 Network
drwxr-xr-x  4 root    wheel    136  2 Jan 11:22 System
lrwxr-xr-x  1 root    501     16 17 Jan 11:15 USADATA -> /Volumes/USADATA
drwxrwxrwx  4 root    admin   136 16 Jan 17:29 USADATA.BAK
lrwxr-xr-x  1 root    501     16 17 Jan 11:16 USA_DB -> /Volumes//USA_DB
drwxrwxrwx 19 root    admin   646 15 Jan 11:56 USA_DB.BAK
drwxr-xr-x  9 root    admin   306  8 Jan 18:08 Users
drwxrwxrwt@ 7 root    admin   238 17 Jan 14:25 Volumes
dr-xr-xr-x  3 root    501    102 17 Jan 16:25 Volumes
drwxr-xr-x@ 40 root    wheel  1360 30 Oct 16:22 bin
```

## Related Topics

- [Troubleshooting on the facing page](#)

# Troubleshooting

If you have any problems running Harmony after the installation, review the installation and configuration instructions to make sure you have followed them completely. If you continue to have problems, consult the following list to troubleshoot common installation and configuration problems.

## Problem: Unable to Open Sample Scene on Clients

- On the Toon Boom Harmony 10.3 server, verify:
  - The database and data directories were exported using NFS.
  - Link Server, Samba and server.ini configurations for Windows clients.
- On Mac OS X Toon Boom Harmony 10.3 clients, check that the database and data directories were mounted using NFS.

## Problem: License Error When Starting any Harmony Module

If you are getting license errors when you start a Toon Boom Harmony 10.3 module, check the set up and configuration of the license service.

- On the license server, make sure that the license.dat file is in the following directory:  
`/usr/local/flexlm/licenses`
- The license.dat should contain the following information:

```
SERVER this_host 0 ANY
VENDOR toonboom
USE_SERVER.
```

- Open the **Activity** monitor and make sure that the lmgrd and toonboom processes are running. If both of them are missing, you can start the license by typing the following in the Terminal:

```
sudo /sbin/SystemStarter start ToonBoomLicense
```

The following line should appear followed by messages from lmgrd:

```
Starting Toon Boom License Daemon...
```

- If you get an error message when you try to start the license service, it is possible that you did not install the license Startup Item. Use the **LicenseWizard** to install license server Startup Item. Refer to, .
- If you continue having problems with the license server, locate the file `ToonBoomLicense.log` and send it to [support@toonboom.com](mailto:support@toonboom.com). The file is located in: `/Library/Logs` and can be accessed from the Console application.

## Problem: Unable to Import Sample Scene (Errors with the Dbserver)

- Check the `ToonBoomDatabaseServer.log` file. The file is located in `/Library/Logs` and can be accessed from the Console application.
- If there is no log file, restart the Dbserver. Type the following in a Terminal window:

```
sudo /sbin/SystemStarter start ToonBoomDatabaseServer
```

If there is a log file, the last few lines in the log file will give you some indication as to the problem with the Dbserver.

- If you get an error in the log about the machine name, check the `/USA_DB/Dbserver.conf` file and make sure the hostname matches the machine name of the Toon Boom Harmony 10.3 server.
- If you get errors about the port number, another service might be using port 5680. You can change the port number in `Dbserver.conf` to any unused number above 5000.
- Restart the Dbserver. Type the following in a shell:

```
sudo /sbin/SystemStarter start ToonBoomDatabaseServer
```

# Chapter 1: Installing on Linux

This document explains how to install Toon Boom Harmony 10.3 on Linux Fedora.

This document assumes that you are familiar with Linux and are capable of working in a command shell.

Throughout this document, we will ask you to create files using a text editor. The console text editor **vi** is commonly used and is part of the Fedora package. Another text editor you can use is **nano**. To launch them just type their name on the command line.

**NEdit** is a graphical, user-friendly text editor, which may not be installed by default. You can download it from <http://www.nedit.org/>. Other graphical text editors, such as **kedit** and **gedit** can also be used.

There are three stages required to install Harmony, which are covered in the following topics:

1. [Pre-installation on the next page](#)
2. [Installing a New System on page 98](#)
3. [Configuration on page 101](#)

After completing these stages, you can verify the integrity of the installation and resolve any configuration issues.

- [Troubleshooting on page 115](#)

## Topics Covered

- [Pre-installation on the next page](#)
- [Upgrading From a Previous Version of Toon Boom Harmony on page 84](#)
- [Installing a New System on page 98](#)
- [Troubleshooting on page 115](#)

# Pre-installation

Before installing Harmony, you must perform the following task:

- [Check Your Minimum Requirements](#) below
- [Get the Product Activation Code](#) below
- [Check Your Pre-installation Configuration](#) below

## Check Your Minimum Requirements

For the most current Harmony hardware requirements, refer to the white paper **Harmony and Your IT Department**. This is available from:

- Toon Boom Animation Sales Representative
- Toon Boom Animation Support at: [support@toonboom.com](mailto:support@toonboom.com)

## Get the Product Activation Code

You should obtain a Product Activation code from the Toon Boom licensor so that you can finish the installation process without having to wait for the activation code to arrive.

To obtain a Harmony 10.3 activation code, please send the following information to: [licensor@toonboom.com](mailto:licensor@toonboom.com).

- Your name and the name of your company
- Email address where to send the license file

## Check Your Pre-installation Configuration

Configure your computer before installation by performing the following tasks:

1. [Fedora Installation](#) below
2. [Disabling SELinux](#) on the facing page
3. [Update NVIDIA Drivers](#) on the facing page
4. [Resolve Keyboard Shortcut Conflicts and Tweak KDE](#) on page 82

## Fedora Installation

Following are some considerations for Fedora Linux installation. Explaining how to install Fedora Linux is beyond the scope of this document. For detailed information on how to install Fedora Linux, see the Fedora documentation.

### Installing Fedora Linux:

- Download the Fedora Linux documentation from:  
<http://docs.fedoraproject.org/>
- Before installing Linux, make sure the distribution you will be installing is 64-bit. Harmony 10 will not work if the OS is not 64-bit.



- When installing Fedora Linux, perform a **Custom** installation and select to install **Everything** to ensure that you get all packages necessary to run Harmony.
- When asked, select **Firewall as disabled**. Your file server should be behind a firewall, but should not be configured as one.
- When asked, select SELinux as **disabled**.
- Harmony has been tested and certified for use on the KDE windows manager.
- Harmony works best with a minimum screen resolution of:  
1280 pixels x 1024 pixels x 24-bit.  
If Fedora cannot detect your monitor, configure the monitor as a generic CRT or an LCD with this resolution and a 60 Hz refresh rate. Alternatively, consult your monitor manufacturer's documentation.
- If you're new to Linux, we recommend that you create a boot disk to facilitate recovery.

## Disabling SELinux

1. Verify if SELinux is enabled by reading the content of the SELinux config file:

```
more /etc/selinux/config
```

2. Look for the line that starts with SELINUX= and ensure that the value is set to disabled:

```
# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#   enforcing - SELinux security policy is enforced.
#   permissive - SELinux prints warnings instead of enforcing.
#   disabled - No SELinux policy is loaded.
SELINUX=disabled
# SELINUXTYPE= can take one of these two values:
#   targeted - Targeted processes are protected,
#   mls - Multi Level Security protection.
SELINUXTYPE=targeted
```

3. If the value is set to something other than disabled, you must open the file using a text editor to change the value to disabled. Once the file is modified and saved, reboot the computer.

## Update NVIDIA Drivers

You must install the recommended drivers for your NVIDIA video card. If you don't, Harmony will not function.

In general, you should use the latest drivers. New drivers tend to resolve past driver issues. If you already have NVIDIA drivers installed, you can find out the version of the installation, by typing:

```
cat /var/log/Xorg.0.log | grep "X Driver"
```

**To install the NVIDIA driver:**

1. Download the Linux driver from the NVIDIA website:

<http://www.nvidia.com/object/unix.html>

2. Switch to text mode when installing video card drivers. Type the following in a shell while logged in as the root user:

```
/sbin/init 3
```

3. To install the NVIDIA kernel driver, type the following in a shell while logged in as the root user:

```
sh /[path_to_driver_file]/NVIDIA-Linux-x86_64-[driver_name].run
```

4. Once the NVIDIA driver installation is successful, revert to graphical mode by starting X. In a shell, type:

```
/sbin/init 5
```

OR

```
startx
```



Some recent Linux distributions include an open source driver for NVIDIA graphic cards called "Nouveau". This driver must be disabled in order to install the NVIDIA drivers. Please refer to the NVIDIA documentation for more information on how to do this.

---

## Resolve Keyboard Shortcut Conflicts and Tweak KDE

Some KDE default keyboard shortcuts conflict with the shortcuts in Harmony and can prevent normal user operation.

To change the keyboard shortcuts and tweak KDE, follow these steps:

1. In the KDE menu, select **Computer > System Settings**. (In earlier versions of KDE, you may need to open the KDE Control Center).
2. In the **System Settings** window, select **Windows Behavior** in the Desktop section (in earlier versions of KDE, open the **Look & Feel > Window Behavior** menu instead).
3. Click the **Window Actions** tab.
4. In the **Inner window, titlebar and frame** section, do one of the following:
  - ▶ Change your keyboard layout to choose Meta key from the Modifier Key option. The Meta key is the Windows Start button on a 104-key keyboard. You must have this type of keyboard to use this option. Go to **Desktop > Window Behavior** (in earlier versions, open the Look & Feel > Window Behavior menu). Click the **Actions** tab. In the **Inner window, titlebar and frame** section, select **Meta** as the **Modifier Key**.
  - If the Meta key is not available in the Modifier Key list, you will need to change your Keyboard Layout. This is set in **Control Center > Regional and Accessibility > Keyboard Layout** (in earlier versions, open the **Control Center > Peripherals > Keyboard** menu). Select the **Enable keyboard layouts** option and then select a **Keyboard Model** that includes 104 keys.
  - ▶ Set all of the **Modifier Key +** options to **Nothing**.
5. There are a few KDE preferences that you should update to optimize Harmony.
  - ▶ In the KDE menu, select **Computer > System Settings > Window Behavior**. Click the **Moving** tab to disable these two options. Harmony reacts better and faster when these are disabled:

- Display content in moving windows
- Display content in resizing windows
- In the KDE menu, select **Computer > System Settings > Appearance** and select the **Colors** menu. Under the Options tab, disable the following option:
  - Apply colours to non-KDE4 applications

NOTE: This option may cause Toon Boom Harmony to display incorrect colours in some of the interface controls.

After you have completed all Fedora Linux configurations, you are ready to install Toon Boom Harmony.

# Harmony Installation

Now that you have verified your minimum requirements, and configured your hardware and software, you are ready to install Toon Boom Harmony.

You will perform the following tasks:

- [Configuration on page 101](#)
- [Configuring Harmony to Share Scene Data on page 108](#)

## Upgrading From a Previous Version of Toon Boom Harmony

This procedure assumes that the USAnimation, Opus or Toon Boom Harmony binaries (program files) are installed on the Toon Boom Harmony server and are mounted by all of the Linux clients. When you update the installation on the server; all clients will load the new binaries from the central mount point

When upgrading previous installations of USAnimation, Opus or Toon Boom Harmony, you should pick a time when Toon Boom Harmony production is slow or stopped. During the upgrade, no users can run any of the USAnimation, Opus or Toon Boom Harmony modules and all rendering jobs must be complete.

- [Restore the files that were previously backed-up on page 86](#)
- [Edit usabatch's .cshrc on page 86](#)
- [Edit other users .cshrc on page 87](#)
- [Edit the /etc/skel/.cshrc on page 88](#)
- [Configuring the License Server on page 88](#)
- [Restart the Harmony Services on page 93](#)
- [Updating the nfs export on page 94](#)
- [Updating the smb.conf on page 94](#)
- [Verify the parameters required in the smb.conf on page 95](#)

**To update previous installations:**

1. Make sure that no one is running any versions of USAnimation, Opus or Toon Boom Harmony. All USAnimation, Opus or Toon Boom Harmony modules must be closed on the server and on all of the clients.
2. Make sure that all batch rendering and vectorizing is complete or that the queues are empty. You can check the status of Vectorize and Render queues from the Control Center module.
  - In the Control Center module, use the Queue menu **Environment > Vectorize Queue** or **Render Queues** to open the **Vectorize and Rendering Queue** for all environments. The queues should either be empty or the status of all jobs should be **Completed**.
3. Stop all services running on the server and the clients. Depending on the services you have running, type the following commands, in the order presented, in a shell while logged in as the root user:

```
/etc/init.d/USAnimation_queues stop
/etc/init.d/USAnimation_link_srv stop
/etc/init.d/USAnimation_dbserver stop
```

```
/etc/init.d/USAnimation_flexlm stop
```

You must be sure to stop the queues on all rendering machines. If the queues are running, those binaries will be locked and the installer won't be able to update them.

Note: It is not required to delete the startup scripts from `/etc/init.d/` as the Harmony install script will update them automatically.

You must be sure to stop the queues on all rendering machines. If the queues are running, those binaries will be locked and the installer won't be able to update them.

#### 4. Backing up configuration files:

Back up Harmony's configuration files by copying them to a location where you will be able to recover them later on. Go to the folder where the previous version of Harmony is installed and backup configuration files that are in the etc folder:

- ▶ **7.5 and earlier:** `/usa/etc`
- ▶ **7.8:** `/usr/local/ToonBoomAnimation/harmony_7.8/etc`
- ▶ **9.2:** `/usr/local/ToonBoomAnimation/harmony_9.2/etc`
- ▶ **10.0:** `/usr/local/ToonBoomAnimation/harmony_10.0/etc`

Back up the following configuration files:

**Manager.conf**

**Scan.conf** (If a scanner was configured to run with the Harmony Scan module on this computer)

**server.ini** (If the server is configure to receive connections from Windows clients)

**VectOptions.conf** (If vectorization preset had been added to it)

If any plug-ins have been added to the Harmony installation, backup these files as well. The plug-ins are located in:

- ▶ **7.5 and earlier:** `/usa/lrx86/plugins`
- ▶ **7.8:** `/usr/local/ToonBoomAnimation/harmony_7.8/lrx86/plugins`
- ▶ **9.2:** `/usr/local/ToonBoomAnimation/harmony_9.2/lrx86/plugins`
- ▶ **10.0:** `/usr/local/ToonBoomAnimation/harmony_10.0/lrx86_64/plugins`

You can back up the entire Harmony folder by renaming it to make sure all config files are kept.

Delete or backup the Harmony Installation by renaming the folder where it is installed. Default install location for 7.5 and earlier is `/usa`.

#### 5. Cleaning the KDE menu.

Shortcut to launch the previous application should be removed from the KDE menu. There are two ways of doing this:

Using the KDE Menu Editor that can be started from the KDE menu. The location will vary depending on the version of Linux installed.

By deleting them from the command line. Change to `/usr/share/applnk/`

```
$ cd /usr/share/applnk/
```

Delete the old shortcuts:

- Versions 7.8,9.2 and 10.0:

```
$ rm ToonBoom-Harmony_*
```

- Earlier versions:

```
$ rm USAnimation-*
```

The shortcuts will be removed from the KDE menu the next time you log in.

6. Uncompress the distribution file.

```
tar xvfz [path_to_distribution_file]/[filename].tar.gz
```

7. Change to the directory that was extracted from the `tar.gz` file.
8. While logged in as the root user, run the install script specifying the options required for your server.

```
$ ./install -b -d -l -p -u - kde
```

- ▶ `-b`: mandatory. This will install the binaries required to run Harmony.
- ▶ `-d`: configures the `tbdserver` for auto startup. Required when installing a server.
- ▶ `-l`: configures the `Link_srv` for auto-startup. Required if the server has window clients.
- ▶ `-p`: Configures the `tbprocess` for auto-startup. Required if the server will be performing batch processing.
- ▶ `-u`: Updates the dict files in the `USA_DB/dicts`. This is mandatory when upgrading a server from a version previous to Harmony 10. This option will only work if `-d` is also selected.
- ▶ `-kde`: installs Harmony menu shortcuts in the KDE menu.

## Restore the files that were previously backed-up

- ▶ Copy the `server.ini`, `Manager.conf` and any other files you must backup to the new installation. From the backup location to `/usr/local/ToonBoomAnimation/harmony_10.0/etc/`.

## Edit usabatch's `.cshrc`

Before being able to start the Harmony services, you will need to make modification to the `.cshrc` that is in usabatch's home.

1. If you are not logged in as usabatch, do so by typing the following:

```
$ su - usabatch
```

2. Once logged in, open the `.cshrc` file in usabatch's home using your favourite text editor. I use vi:

```
$ vi .cshrc
```

The file used for Harmony 9.2 contains the following:

```
if ( -f /usr/local/ToonBoomAnimation/harmony_9.2/etc/usa_cshrc ) then
source /usr/local/ToonBoomAnimation/harmony_9.2/etc/usa_cshrc
endif
```

```
umask 0
```

The file used for Harmony 7.8 contains the following:

```
if ( -f /usr/local/ToonBoomAnimation/harmony_7.8/etc/usa_cshrc ) then
source /usr/local/ToonBoomAnimation/harmony_7.8/etc/usa_cshrc
endif
```

```
umask 0
```

The file used for Harmony 7.3 contains the following:

```
if ( -f /usa/etc/usa_cshrc ) then
source /usa/etc/usa_cshrc
endif
```

```
umask 0
```

3. Change `/usa/etc/usa_cshrc` to `/usr/local/ToonBoomAnimation/harmony_10.0/etc/usa_cshrc`, so that it looks like this:

```
if ( -f /usr/local/ToonBoomAnimation/harmony_10.0/etc/usa_cshrc ) then
source /usr/local/ToonBoomAnimation/harmony_10.0/etc/usa_cshrc
endif
```

```
umask 0
```

4. Save and quit.

## Edit other users .cshrc

The `.cshrc` of the all other users of Harmony should be edited to remove the lines that are used to source the `usa_cshrc` file. It is not required to source this file anymore as the path to the application is now added to the `PATH` variable via the files in `/etc/profile.d`.

For version 9.2:

```
if ( -f /usr/local/ToonBoomAnimation/harmony_9.2/etc/usa_cshrc ) then
source /usr/local/ToonBoomAnimation/harmony_9.2/etc/usa_cshrc
endif
```

```
umask 0
```

For version 7.8:

```
if ( -f /usr/local/ToonBoomAnimation/harmony_7.8/etc/usa_cshrc ) then
source /usr/local/ToonBoomAnimation/harmony_7.8/etc/usa_cshrc
endif
```

```
umask 0
```

For version 7.3:

```
if ( -f /usa/etc/usa_cshrc ) then
source /usa/etc/usa_cshrc
endif

umask 0
```

## Edit the /etc/skel/.cshrc

- ▶ Open the files `/etc/skel/.cshrc` with your favourite text editor and remove the lines that source the `usa_cshrc` file from it as well.

## Configuring the License Server

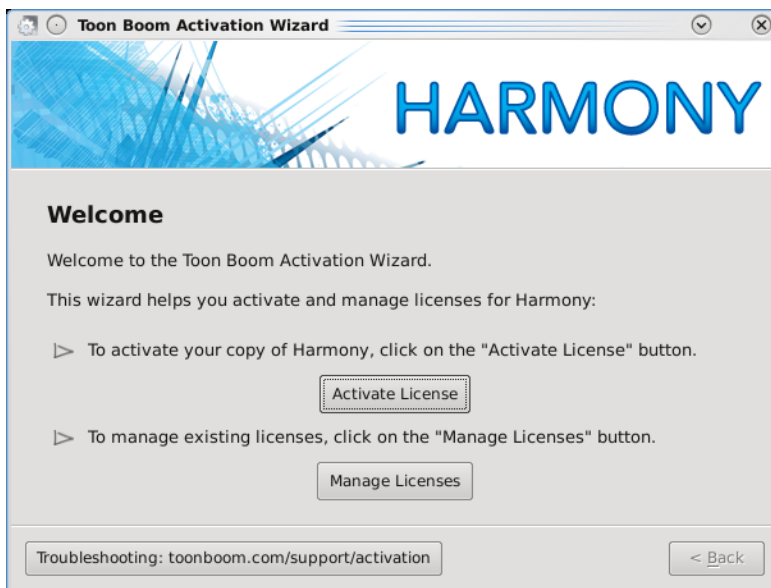
1. To launch the **License Wizard** go to: `/usr/local/ToonBoomAnimation/harmony_10.0/lrx86_64/bin/` in the terminal.

```
cd /usr/local/ToonBoomAnimation/harmony_10.0/lrx86_64/bin/
```

Logged as root user, type:

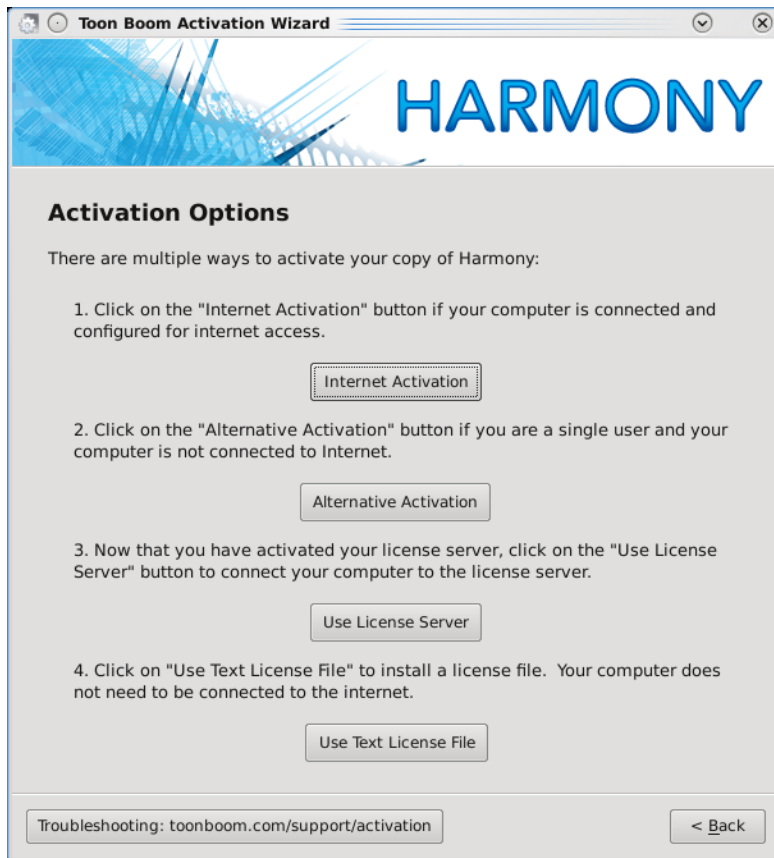
```
./LicenseWizard.
```

2. Click on **Activate License**.



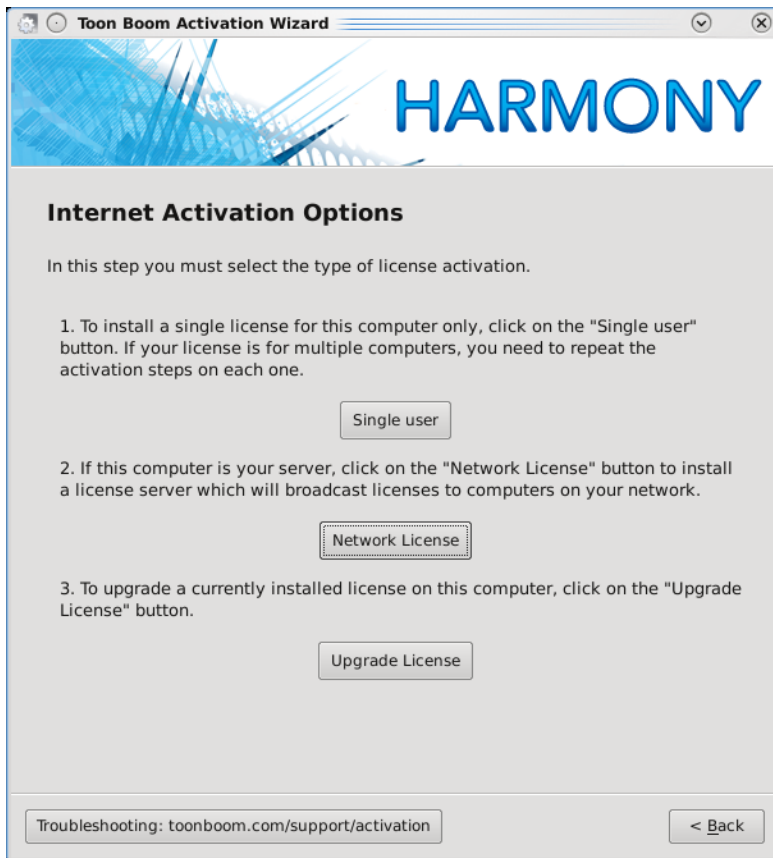
The **Activation Options** screen appears:





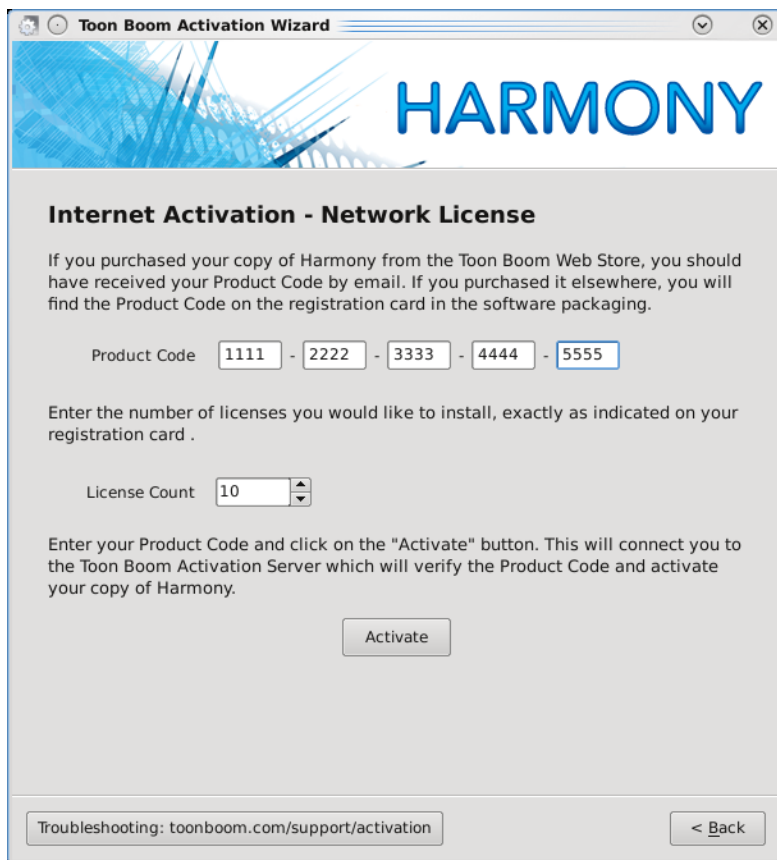
**3. Click on Internet Activation.**

The **Internet Activation Options** screen appears:



4. Click on **Network License**.

The **Internet Activation - Network License** screen appears:



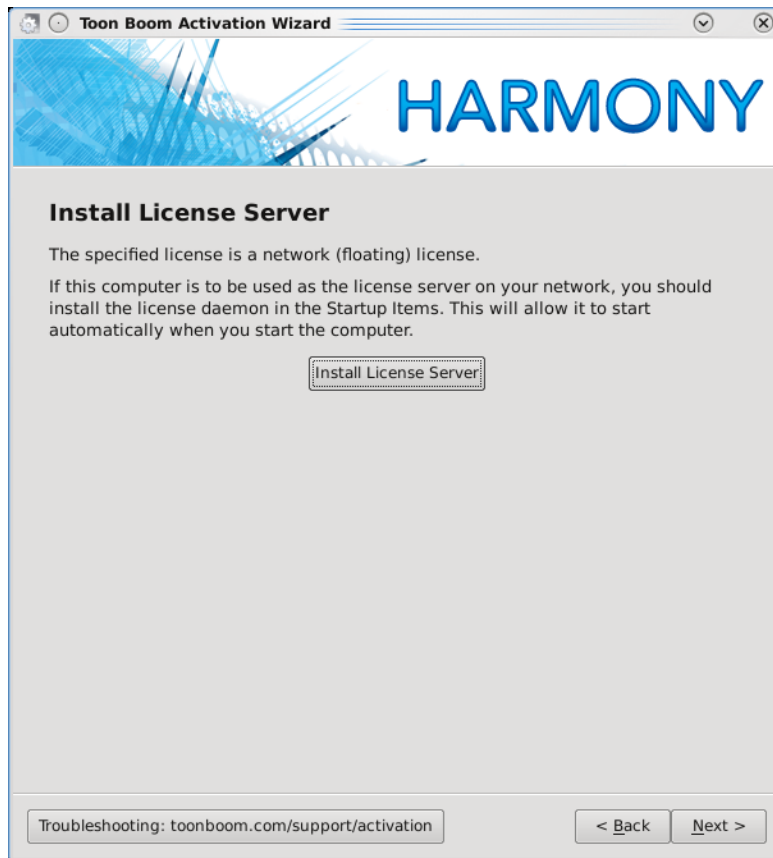
5. Type or copy/paste the **Product Code** and type in the number of licenses this product code grants you.



Once activated, server licenses can only be returned to the activation server once. A previously returned licensed cannot be re-activated. Make sure you are activating the license on the correct computer.

6. Click on **Next**.

The **Install License Server** screen appears:



7. Click on **Install License Server**.

This step will create the `license.dat` file and place it in `/usr/local/flexlm/licenses/license.dat`

The `license.dat` created contains the following information:

```
SERVER this_host 0 ANY
VENDOR toonboom
USE_SERVER
```



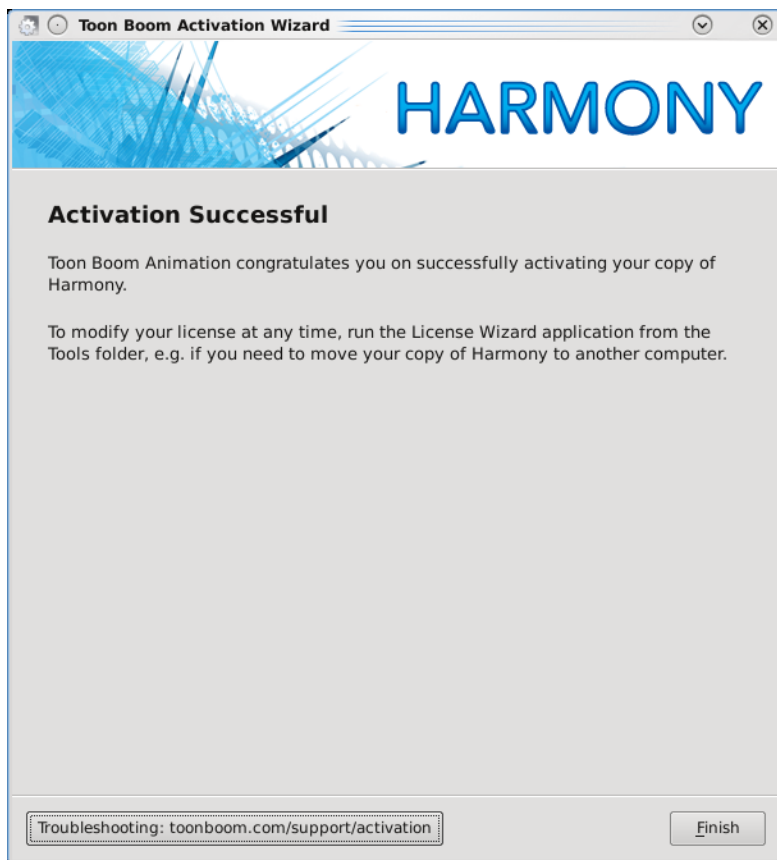
Both these steps can be done manually if need be. To configure the License Server service to start automatically at boot, use the following command:

```
$ /sbin/chkconfig USAnimation_flexlm on
```

To start the license server manually, type the following as the root user:

```
$ /etc/init.d/USAnimation_flexlm restart
```

The **Activation Successful** screen appears:



8. Click on **Finish** to exit the wizard.
9. Verify that the FlexLM license is working properly by using the `lmutil lmstat -a` command.

```
$ lmutil lmstat -a
```

You can also look at the log:

```
$ less /tmp/lmgrd.log
```

If the FlexLM service needs to be restarted, use the following command:

```
$ /etc/init.d/USAnimation_flexlm restart
```

## Restart the Harmony Services

10. Once the license is properly configured, and started, start the Harmony services that are required on your server. They should be started in the following order:

```
$ /etc/init.d/USAnimation_dbserver restart
```

```
$ /etc/init.d/USAnimation_link_srv restart
```

```
$ /etc/init.d/USAnimation_queues restart
```

11. Once the services are started, check the logs to make sure that they have been started properly. Check all the logs to see if the services are running properly. Logs are located in `/tmp`.

```
/tmp/lmgrd.log
```

```
/tmp/tbdbserver.log
```

```
/tmp/tbprocess.log
```

```
/tmp/Link_srv.log
```

12. Start Harmony and open a scene to see if the server works properly.

## Updating the nfs export

If the Linux server has Linux or Mac OS X clients, the nfs exports need to be updated with the path of the new Harmony binaries.

```
$ vi /etc/exports
```

1. Change the path of /usa to /usr/local/ToonBoomAnimation/harmony\_10.0

```
/USA_DB *(rw, sync)
```

```
/usadata000 *(rw, sync)
```

```
/usr/local/ToonBoomAnimation/harmony_10.0 *(rw, sync)
```

2. For this change to take effect, you will need to run the following command:

```
$ /usr/sbin/exportfs -r
```

3. You should then test the exports using the showmount command:

```
[root@chewy etc]$ /usr/sbin/showmount -e
```

```
Export list for chewy.toonboom.com:
```

```
/USA_DB *
```

```
/usadata000 *
```

```
/usr/local/ToonBoomAnimation/harmony_10.0 *
```

## Updating the smb.conf

1. When upgrading a Linux server, a small modification must be made to the usa share path to point to the new install. "vi /etc/samba/smb.conf" and change the path under the [usa] share to the path of the new Harmony install.

```
[usa]
```

```
comment = Harmony binaries & stuff
```

```
browseable = yes
```

```
read only = no
```

```
guest ok = no
```

```
create mask = 0777
```

```
directory mask = 0777
```

```
path = /usr/local/ToonBoomAnimation/harmony_10.0
```

2. Once the file is saved, run the `testparm` command to check that you have not made any basic syntactic errors.

```
[root@chewy samba]$ testparm
Load smb config files from /etc/samba/smb.conf
Processing section "[homes]"
Processing section "[printers]"
Processing section "[USA_DB]"
Processing section "[usa]"
Processing section "[usadata000]"
Processing section "[tmp]"
Loaded services file OK.
Server role: ROLE_STANDALONE
```

3. Press **Enter** to see a dump of your service definitions.



If the `smb.conf` was configured according to the 7.3 documentation, the `testparm` command might return the following error:

```
Level II oplocks can only be set if oplocks are also set.
```

To get rid of this error, you need to add the `level2 oplocks = No` parameter in the global section of the `smb.conf`.

See the next section for all the parameters that are required in the `smb.conf`.

4. Then, restart smb:

```
$/etc/init.d/smb restart
```

## Verify the parameters required in the `smb.conf`

1. Verify the configuration of the `smb.conf`.

It is always safe to verify the configuration of the `smb.conf`.

```
$ vi /etc/samba/smb.conf
```

Parameters needed in the [global] section.

```
encrypt passwords = no
```

```
blocking locks = no
```

```
oplocks = no
```

```
level2 oplocks = no
```

```
follow symlinks = yes
```

```
unix extensions = no
```

```
wide links = yes
```

Default parameters for the shares.

```
[USA_DB]
```

```
comment = Harmony Database
```

```
browseable = yes
```

```
read only = no
```

```
guest ok = no
```

```
create mask = 0777
```

```
directory mask = 0777
```

```
path = /USA_DB
```

```
[usa]
```

```
comment = Harmony binaries & stuff
```

```
browseable = yes
```

```
read only = no
```

```
guest ok = no
```

```
create mask = 0777
```

```
directory mask = 0777
```

```
path = /usr/local/ToonBoomAnimation/harmony_10.0
```

```
[usadata000]
```

```
comment = Harmony data 000
```

```
browseable = yes
```

```
read only = no
```

```
guest ok = no
```

```
create mask = 0777
```

```
directory mask = 0777
```

```
path = /usadata000
```

2. Remember to always perform a `testparm` after making changes to the `smb.conf`.

```
$ testparm
```

3. Restart the `smb` service.

```
$ /sbin/service smb restart
```

4. Reboot the server.

If possible, reboot the server to verify that all the services are properly started.

5. Once the server is booted, check all the logs to see if the services are running properly. Logs are located in `/tmp`.

```
/tmp/lmgrd.log
```



`/tmp/tbdbserver.log`

`/tmp/tbprocess.log`

`/tmp/Link_srv.log`

# Installing a New System

## Create the `usabatch` User

After you have installed Fedora Linux, you must create the `usabatch` user account. A number of Toon Boom Harmony services run in the `usabatch` account.

You must also set the `usabatch` user to use the `tcsh` shell and you must create a `.cshrc` file to launch the Toon Boom Harmony environment whenever the user logs on.

You must create user accounts for all Toon Boom Harmony family users. All user accounts you create on Fedora Linux that will also run Harmony must be set up the same way as the `usabatch` account, except for the user name and password.

### To create user accounts:

1. In a shell, login as the "root" user.
2. Using a text editor, create the file `/etc/skel/.cshrc`. This file should contain the following line:

```
umask 0
```

*Note that this character is a zero.*

3. Create the user `usabatch`. In a shell, type:

```
useradd -m -s /bin/tcsh -r usabatch
```

4. Enter the password for user `usabatch`. In a shell, type:

```
passwd usabatch
```

Then, type `usabatch` as a password.

To create additional users repeat steps 3 and 4. Just replace `usabatch` with the user name and password of the new user.



Setting `umask` to zero (0) ensures that Toon Boom Harmony users are able to read and write all files in the database, which is essential for people to share their work.

---

5. If you are not logged in as `usabatch`, do so by typing the following:

```
su - usabatch
```

6. Once logged in, open the `.cshrc` file in `usabatch`'s home. Using a text editor, add the following lines:

```
if ( -f /usr/local/ToonBoomAnimation/harmony_10.0/etc/usa_cshrc ) then
source /usr/local/ToonBoomAnimation/harmony_10.0/etc/usa_cshrc
endif
```

The `.cshrc` file should now contain the following:

```
if ( -f /usr/local/ToonBoomAnimation/harmony_10.0/etc/usa_cshrc ) then
```

```
source /usr/local/ToonBoomAnimation/harmony_10.0/etc/usa_cshrc
endif
```

```
umask 0
```

7. Save and quit.
8. Log out of `usabatch` to return to the root user.

## Install Harmony

In a client-server network or in a stand-alone set up, you must install Harmony binaries as well as the following services:

- **Dbserver:** Controls access to the Harmony database.
- **License service:** Controls the number of licenses and features available to Harmony users.
- **Batch Processing:** If you are setting up the machine for batch processing this controls batch vectorizing and rendering queues.
- **Link Server:** If you are installing Harmony on a Linux server that will support Windows clients.

To install Harmony binaries and services, you must run the installation script.

With the product activation code from the licenser, you are ready to install Harmony.

### To run the installation script:

1. Decompress the distribution file.

```
tar xvfz [path_to_distribution_file]/[filename].tar.gz
```

2. Change to the directory that was extracted from the tar.gz file.
3. Run the install script as the root user, specifying the options required for your server. There are a number of options that control the installation process. For a typical Harmony server or a stand-alone machine, you would run the installation script with the following parameters:

```
./install -b -d -kde
```

With these options, the binaries are installed, and the database server is installed and set up to start automatically. These options also add Harmony entries to the KDE application menu.

If your Linuxserver will be serving Windows clients, you must add the `-l` option.

If you are setting up the clients for the batch render, you will add the `-p` parameter. It is not recommended to configure batch processing on the server, as it will slow it down.

### Here is a description of all the installation options:

Option	Default Value	Details
<code>- binaries</code>	Inactive	Installs binaries and configuration files required to run Harmony applications.
<code>-b</code>		You must include this option when doing a fresh install or when you upgrade Harmony.

Option	Default Value	Details
		You must use this option when installing Harmony on the server.
- <b>dbserver</b>  -d	Inactive	Installs the <b>tbdbserver</b> as a daemon. This is the Harmony database server daemon. It processes data requests from clients on the network.  This option also creates a fresh database when there is no <b>/USA_DB</b> directory.  You must use this option when installing Harmony on the server and on the stand-alone machine.
- <b>help</b>  -h	Inactive	Displays script usage information.
- <b>kde</b>	Inactive	Adds Harmony entries to the KDE application menu.
- <b>linkserver</b>  -l	Inactive	Installs the <b>link_server</b> daemon.  This daemon is required for Linux (or SGI) servers to create symbolic links for Windows clients.  If you have Windows clients, you must install this daemon on the server.
- <b>process</b>  -p	Inactive	Installs the <b>process</b> daemon.  The <b>process</b> daemon manages batch processing (vectorizing and rendering) for Harmony. Usually several computers participate in the batch processing pipeline.  This parameter is required if this computer is going to batch process any files for Harmony.
- <b>quiet</b>  -q	Inactive	Does not output any information during installation.
- <b>target</b> <DIRECTORY>  -t <DIRECTORY>	<b>/usr/local/ToonBoomAnimation/harmony_10.0</b>	Directory where the installer will install the <b>harmony_10.0</b> tree.
-	Inactive	Updates the <b>dict</b> files in the database. Needs

Option	Default Value	Details
<code>updatedict</code> <code>-u</code>		to be specified when upgrading from a previous version.

## Related Topics

- [Configuration](#) below

# Configuration

After installing Harmony, configure database parameters depending on your machine's setup, and configure third-party software.

1. [Set Up Licensing](#) below
2. [Configure Harmony on page 106](#)

## Set Up Licensing

Now that you have installed Harmony, you must set up the licensing so that it can run on the server and client machines.

### Configuring the license server

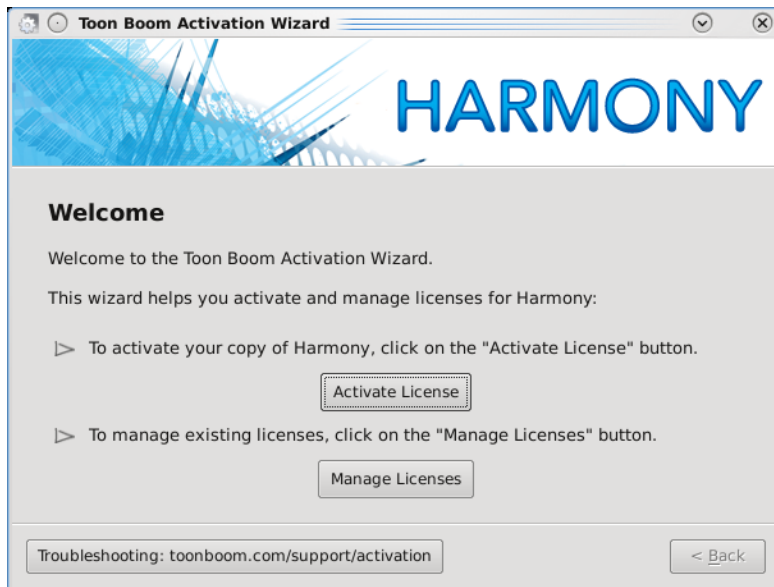
1. As the root user, start the License Wizard by typing the following:

```
cd /usr/local/ToonBoomAnimation/harmony_10.0/lnx86_64/bin
```

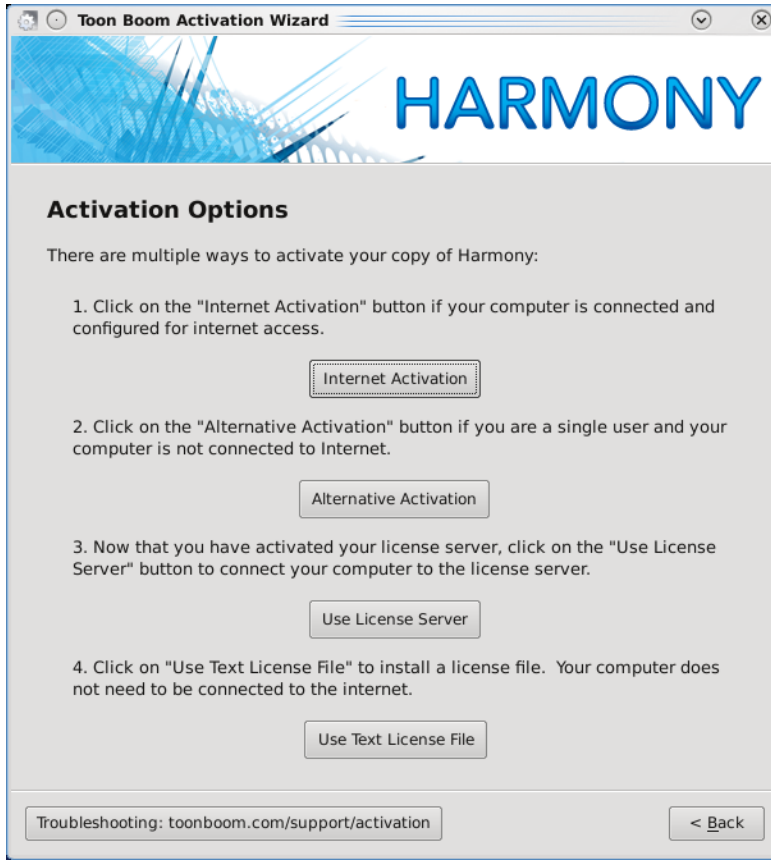
Logged as root user, type:

```
./LicenseWizard.
```

2. Click on **Activate License**.

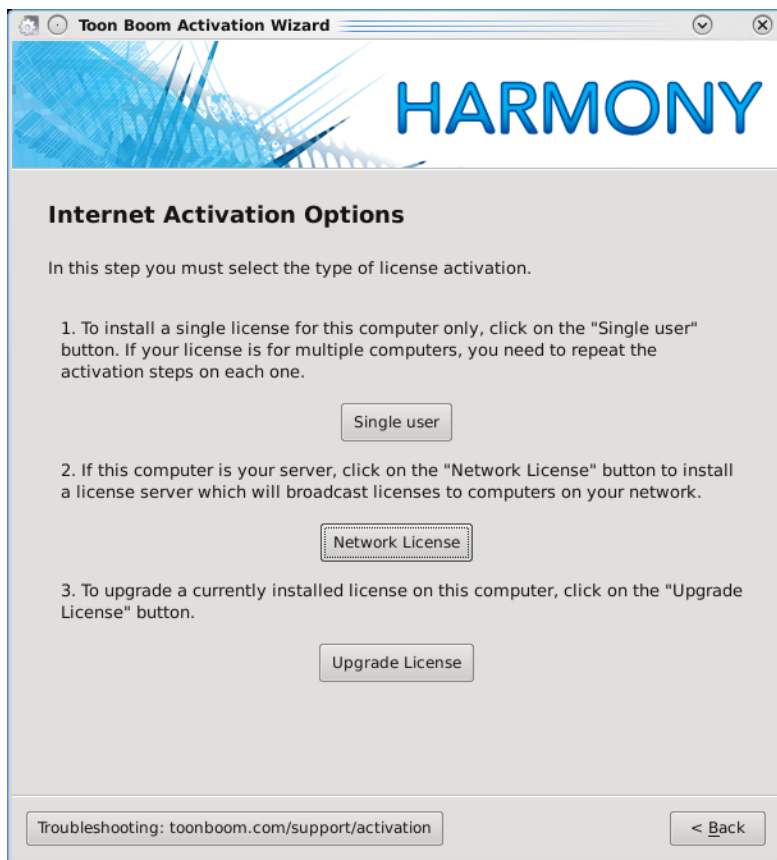


The **Activation Options** screen appears:



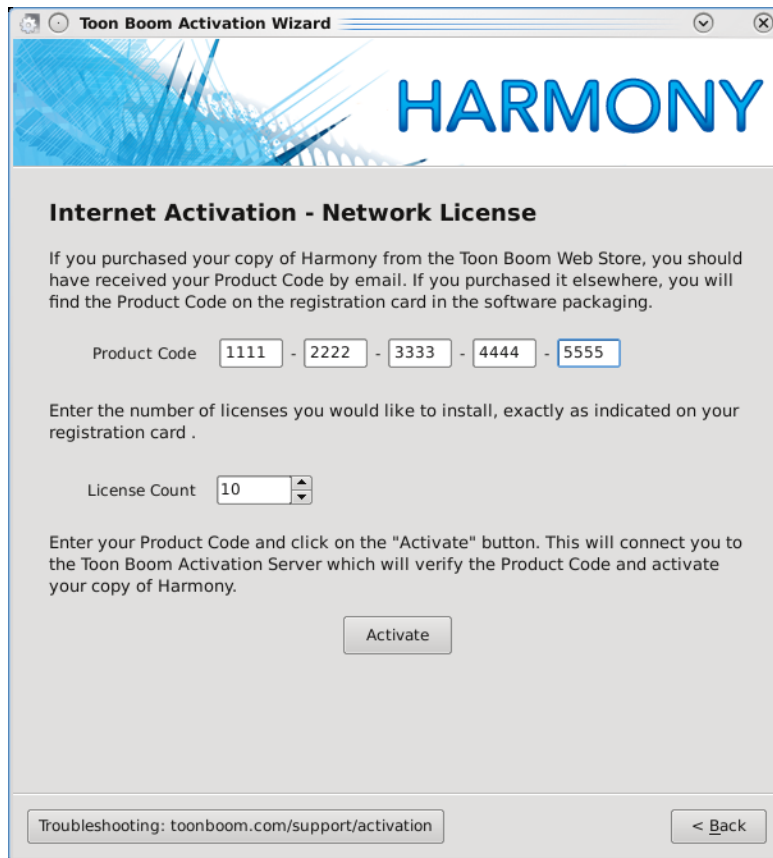
3. Click on **Internet Activation**.

The **Internet Activation Options** screen appears:



4. Click on **Network License**.

The **Internet Activation - Network License** screen appears:



5. Type or copy/paste the **Product Code** and type in the number of licenses this product code grants you.

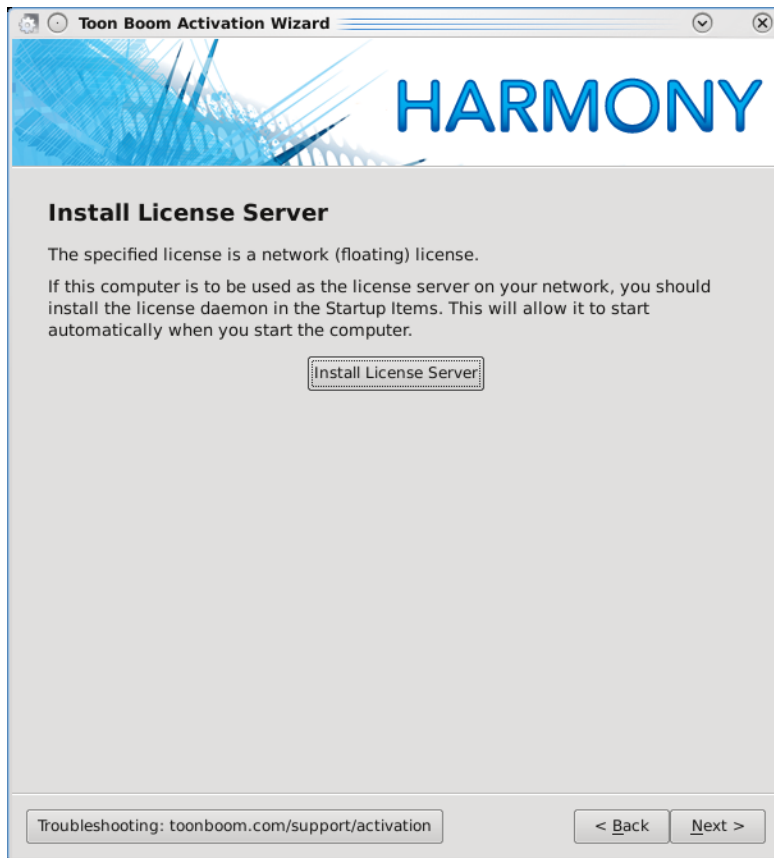


Once activated, server licenses can only be returned to the activation server once. A previously returned licensed can not be re-activated. Make sure you are activating the license on the correct computer.

6. Click on **Next**.

The **Install License Server** screen appears:





#### 7. Click on **Install License Server**.

This step will create the `license.dat` file and place it in `/usr/local/flexlm/licenses/license.dat`. The `license.dat` created contains the following information:

```
SERVER this_host 0 ANY
VENDOR toonboom
USE_SERVER
```

This step will also start the License Server service and will configure it to start automatically.



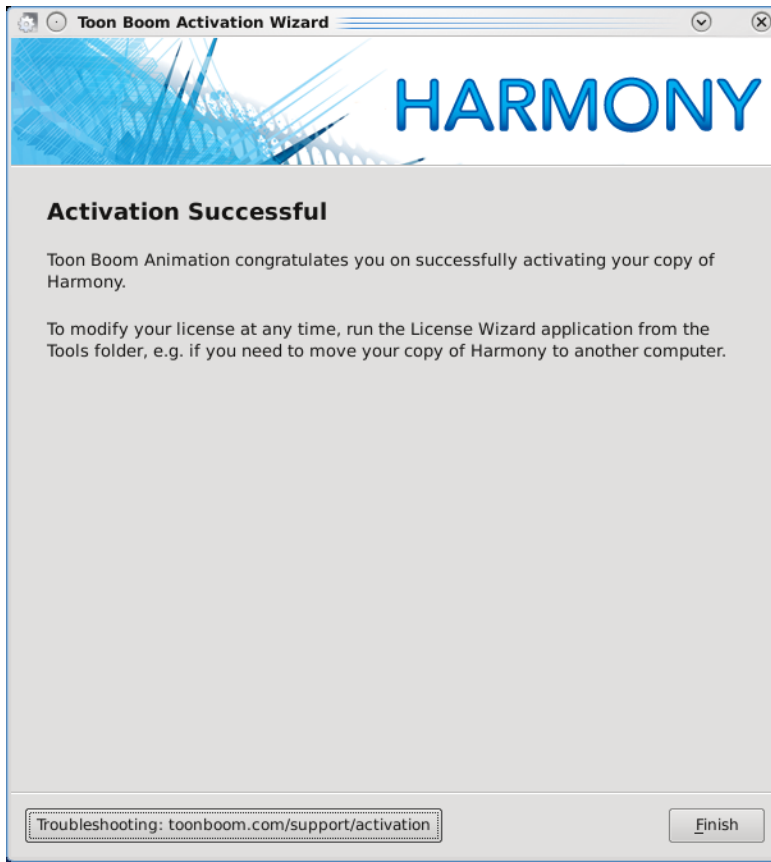
Both these steps can be done manually if need be. To configure the License Server service to start automatically at boot, use the following command:

```
$ /sbin/chkconfig USAnimation_flexlm on
```

To start the license server manually, type the following as the root user:

```
$ /etc/init.d/USAnimation_flexlm restart
```

The **Activation Successful** screen appears:



8. Click on **Finish** to exit the wizard.
9. Verify that the **FlexLM license** is working properly by using the `lmutil lmstat -a` command.

```
$ lmutil lmstat -a
```

You can also look at the log:

```
$ less /tmp/lmgrd.log
```

10. If the FlexLM service needs to be restarted, use the following command:

```
$ /etc/init.d/USAnimation_flexlm restart
```

## Configure Harmony

After installation, you must set up the database configuration for computers running Harmony.

1. [Set Up the Database Server](#) below
2. [Create the Toon Boom Harmony File System](#) on the facing page

## Set Up the Database Server

The Dbserver controls all interactions with the contents of the Toon Boom Harmony database. It processes all requests to open, read or update files, keeping track of files that are locked so that others can not edit them.

When installing Harmony on the server for the first time, the Harmony database folder is created automatically. Verify that the folder was created correctly. Look for the **USA\_DB** folder in the root folder (**/USA\_DB**).

If you do not see the folder there, you will need to create it using the `create_usa_db` script. Type the following command in a shell while logged in as root:

```
/usr/local/ToonBoomAnimation/harmony_10.0/lnx86_64/bin/create_usa_db
/USA_DB
```

Next you need to create and edit the `Dbserver.conf` file to set up the Dbserver. Then you have to run a script that will start the Dbserver.

### To set up the Dbserver:

1. Using a text editor, create the file `Dbserver.conf` in `/USA_DB/`.
2. Type the following in the `Dbserver.conf` file:

Assuming the machine name of the Dbserver is "harmonyserver", the lines in `Dbserver.conf` would look like this:

```
hostname harmonyserver

port 5678

debug_port 5680
```

**Note:** You can find the example of `Dbserver.conf` in `/usr/local/ToonBoomAnimation/harmony_10.0/resources/samples`. You can copy and paste it from there and change it accordingly.

3. Save and close the `Dbserver.conf` file.
4. Change the permissions on the `Dbserver.conf` file to 644.
  - In a shell, type the following:

```
chmod 644 Dbserver.conf
```

5. You must now start the Dbserver service. In a shell, type the following command:

```
/sbin/service USAnimation_dbserver start
```

A message will appear in the shell indicating that the script has been successful.

6. A log file will be generated in `/tmp/tbdbserver.log`. Check this file to make sure there are no errors written to the log.

## Create the Toon Boom Harmony File System

After you set up and start the license and Dbserver, you are ready to create the file system for the Toon Boom Harmony database.

### To create the Toon Boom Harmony file system:

1. In a shell, change directories to the root. Type:

```
cd /
```

2. Make a directory named `/usadata000`. Type:

```
mkdir usadata000
```

Once you have finished creating `usadata000`, change the permission of:

```
/usr/local/ToonBoomAnimation/harmony_10.0 /USA_DB and /usadata000 to  
777.
```

```
chmod -R 777 /usr/local/ToonBoomAnimation/harmony_10.0 /USA_DB  
/usadata000
```

Now you are ready to test your installation on the server/stand-alone machine.

## Related Topics

- [Configuring Harmony to Share Scene Data below](#)

# Configuring Harmony to Share Scene Data

This section shows how to share the Harmony data for different network configuration.

## Related Topics

- [Export Harmony Directories for Mac OS X and Linux Clients below](#)
- [Configure the Link Server on the facing page](#)
- [Configure Samba on page 110](#)

## Export Harmony Directories for Mac OS X and Linux Clients

Before you can install Harmony on Linux clients, you must export the Toon Boom Harmony directories from the server. The NFS and NFS locking services must be running so that all machines can access the data directories you export.

**To start NFS services and export data directories from the server:**

1. To share files with other Linux machines, you must start the NFS service. Type the following in a shell:

```
/etc/init.d/nfs restart  
  
/sbin/chkconfig nfs on
```

- Note that if you are using Fedora 16, this would be:

```
systemctl start nfs-server.service  
  
/sbin/chkconfig nfs-server on
```

2. The NFS lock manager must run on all Linux stations on your network. Without this service, they will not be able to access the database without receiving numerous "read lock" error messages. Type the following in a shell:

```
/etc/init.d/nfslock restart  
  
/sbin/chkconfig nfslock on
```

- Note that if you are using Fedora 16, this would be:

```
systemctl start nfs-lock.service  
  
/sbin/chkconfig nfs-lock on
```

Now you are ready to export the Toon Boom Harmony directory.

3. Use a text editor to edit the `/etc/exports` file. Add the names of `/USA_DB`, `/usadata000` and `/usr/local/ToonBoomAnimation/harmony_10.0` directories to the file, like this: #

```
/USA_DB *(rw, sync)
/usadata000 *(rw, sync)
/usr/local/ToonBoomAnimation/harmony_10.0 *(rw, sync)
```

4. Run the export command to finalize the exports. In a shell, type:

```
/usr/sbin/exportfs -r
```

5. To check what is being exported from the server, type the following in a shell:

```
/usr/sbin/showmount --exports
```

A report appears listing all of the shares that are being exported from the server.

## Configure the Link Server

If you are running Harmony in a mixed environment where the server is on Fedora Linux and some of the clients are running Windows, you must start the Link Server.

The Link Server makes it possible for Windows machines to communicate with the database.

**To configure the Link Server on the server in a mixed network environment:**

1. Use a text editor to create the `Link_srv.conf` file in the `/USA_DB` directory. This file must contain the following two lines:

```
hostname harmonyserver
port 5679
```

Replace `harmonyserver` with the name of the database server. You can find the name of a computer by using the `uname -n` command.

**Note:** you can find the example of `Link_srv.conf` under `/usr/local/ToonBoomAnimation/harmony_10.0/resources/samples/`. You can copy and paste it from there and change it accordingly.

2. Change the permissions on the `Dbserver.conf` file to `644`. In a shell, type the following:

```
chmod 644 Link_srv.conf
```

3. Start the Link Server. Type the following in a shell:

```
/etc/init.d/USAnimation_link_srv start
```

A message will appear in the shell indicating that the script has been successful.

4. A log file will be generated in `/tmp/Link_srv.log`. Check this file to make sure there are no errors written to this file.

## Configure Samba

Finally, you must modify the `/etc/samba/smb.conf` file. To do this, add entries for each database directory you want to share with Windows clients in the `/etc/samba/smb.conf` file. Then, you must add options to the [Global] section of the file.

- [Configure the Samba Service to Start at Boot Time](#) on the facing page
- [Configure the server.ini File](#) on the facing page
- [Reboot](#) on page 112
- [Set Up Linux Clients](#) on page 112
- [Install Start Application Menu Entries and Batch Processing on Clients](#) on page 114

Following is an example of entries in the `smb.conf` file. You can add these to the end of the `smb.conf` file.

```
[USA_DB]
comment = Toon Boom Harmony Database
browseable = yes
read only = no
guest ok = no
create mask = 0777
directory mask = 0777
path = /USA_DB

[usa]
comment = Toon Boom Harmony binaries & stuff
browseable = yes
read only = no
guest ok = no
create mask = 0777
directory mask = 0777
path = /usr/local/ToonBoomAnimation/harmony_10.0

[usadata000]
comment = Toon Boom Harmony data 000
browseable = yes
read only = no
guest ok = no
create mask = 0777
directory mask = 0777
path = /usadata000
```

```
[usadata001]
comment = Toon Boom Harmony data 001
browseable = yes
read only = no
guest ok = no
create mask = 0777
directory mask = 0777
path = /usadata001/
```

You must also either add or modify the following entries to the [Global] section of `smb.conf`:

```
[global]
encrypt passwords = no

blocking locks = no
oplocks = no
level2 oplocks = no

follow symlinks = yes
unix extensions = no
wide links = yes
```

Once you have done all the changes and saved the `smb.conf` file, run the `testparm` command to validate the `smb.conf` configuration file for internal correctness.

```
testparm
```

## Configure the Samba Service to Start at Boot Time

By default, Samba is not set up to run automatically.

To start the Samba service:

1. To configure the Samba to run as a service at boot, type the following in a shell:

```
/sbin/chkconfig smb on
```

2. To start the Samba service immediately, type the following in a shell:

```
/sbin/service smb start
```

## Configure the server.ini File

Before you install Harmony on Windows clients, you must create the `/usr/local/ToonBoomAnimation/harmony_10.0/etc/server.ini` file on the database server. The

`server.ini` file provides information necessary for the Windows configuration wizard to set up a Windows client.

When creating the `server.ini` file, be attentive to spelling and character spacing and case.

The following is an example of the `/usr/local/ToonBoomAnimation/harmony_10.0/etc/server.ini` file. In this example, the database server name is `harmonyserver` and there are two `usadata` directories, `usadata000` and `usadata001`.

```
[WizardConfig]

ServerName=harmonyserver

InstallationDrive=C

UsaShare=usa

UsadbDrive=C

UsadbShare=USA_DB

FileSystem0=C usadata000 harmonyserver

FileSystem1=C usadata001 harmonyserver
```

Do not worry about the references to "Drive C". These references are necessary for Windows clients and will be ignored by Linux.



You can find the example of `server.ini` under `/usr/local/ToonBoomAnimation/harmony_10.0/resources/samples`. You can copy and paste it from there and change it accordingly.

Any sharing folder name should be case sensitive.

## Reboot

At this point, you should reboot the Toon Boom Harmony server to verify that all the Harmony services are properly configured to start automatically.

## Set Up Linux Clients

To run Toon Boom Harmony on Linux clients, you must mount the binaries and data directories stored on the server. To access the directories exported from the server, the network file server (NFS) and NFS locking services must be running.

**To start NFS services and mount Toon Boom Harmony directories on clients:**

1. To access the mounted directories, you must start the NFS service. Type the following in a shell:

```
/etc/init.d/nfs restart
```

```
/sbin/chkconfig nfs on
```

- ▶ Note that if you are using Fedora 16, this would be:



```
systemctl start nfs-server.service
/sbin/chkconfig nfs-server on
```

- The NFS lock manager must run on all Linux stations on your network. Without this service, they will not be able to access the database without receiving numerous "read lock" error messages. Type the following in a shell:

```
/etc/init.d/nfslock restart
/sbin/chkconfig nfslock on
```

- Note that if you are using Fedora 16, this would be:

```
systemctl start nfs-lock.service
/sbin/chkconfig nfs-lock on
```

Now you are ready to mount the directories from the server.

- On each client computer, create directories for:

```
/usr/local/ToonBoomAnimation/harmony_10.0
/USA_DB
/usadata000.
```

The directory names must match the names on the Toon Boom Harmony server.

```
mkdir /usr/local/ToonBoomAnimation/harmony_10.0
mkdir /USA_DB
mkdir /usadata000
```

- To mount the directories on the client machine edit the `/etc/fstab` file.

In the following example, the `server` is the machine name of the database server.

```
server:/USA_DB /USA_DB nfs rw,soft,intr,bg 0 0
server:/usadata000 /usadata000 nfs rw,soft,intr,bg 0 0
server:/usr/local/ToonBoomAnimation/harmony_10.0
/usr/local/ToonBoomAnimation/harmony_9.2 nfs rw,soft,intr,bg 0 0
```

This will cause the Toon Boom Harmony directories to mount with the default version of NFS on your system.

If you encounter errors, you should try using NFS version 2. In this case, you should modify the `fstab` file to match the following:

```
server:/USA_DB /USA_DB nfs rw,soft,intr,bg,vers=2 0 0
server:/usadata000 /usadata000 nfs rw,soft,intr,bg,vers=2 0 0
server:/usr/local/ToonBoomAnimation/harmony_10.0
/usr/local/ToonBoomAnimation/harmony_10.0 nfs rw,soft,intr,bg,vers=2 0
0
```

- At a command line, type the mount all command.

```
mount -av
```

To verify that all of the shares are mounted, type the following in a shell:

**mount**

A report appears listing all of the shares mounted on the client.

6. To test that the mount has worked, you can open one of the mounted directories and list the contents. You can also open the sample scene in Harmony Stage.

- To list the contents of the mounted directories, type the following in a shell:

```
cd /usr/local/ToonBoomAnimation/harmony_10.0
ls
```

A list appears of the directories in `/harmony_10.0`. They are:

```
etc help lang lnx86_64 Plugins resources
```

- To open the sample scene in the Harmony Stage type the following in a shell:

```
Stage
```

- Select the **Connect to Database** radio button and login using the `usabatch` user name.
- **Open** the sample scene.



If you have any problems opening the sample scene on a Linux client, see [Troubleshooting on the facing page](#).

---

## Install Start Application Menu Entries and Batch Processing on Clients

To make it easier for users to start Toon Boom Harmony, you should install the application menu entries for KDE. You should also include the `-p` installation option to start batch processing services on rendering machines.

**To install menu entries and batch processing:**

1. Go to the directory that contains the Linux installation files.
2. Run the `install` script with the `-p` and `-kde` options.

```
./install -p -kde
```

### Related Topics

- [Troubleshooting on the facing page](#)

# Troubleshooting

If you have any problems running Harmony after installation, review the installation and configuration instructions to make sure you have followed them completely. If you continue to have problems, consult the following list to troubleshoot common installation and configuration problems.

- [Problem: License Error When Starting Any Harmony Module](#) below
- [Problem: Unable to Import Sample Scene \(Errors with the Dbserver\)](#) on the next page
- [Problem: Exported Directories Not Mounting on Clients](#) on the next page
- [Problem: Harmony Stage Will Not Open or Crashes on Startup](#) on page 117
- [Problem: Unable to Display Images in Harmony Stage](#) on page 117
- [Problem: Unable to Open Sample Scene on Linux Clients](#) on page 117

## Problem: License Error When Starting Any Harmony Module

If you are getting license errors when you start a Toon Boom Harmony module, check the set up and configuration of the license service.

- Make sure that the `license.dat` file is in the following directory:  
`/usr/local/flexlm/licenses` if you are using a license server.
- Open the `license.dat` file.

The `license.dat` should contain the following information:

```
SERVER this_host 0 ANY
VENDOR toonboom
USE_SERVER
```

Note that on a client workstation, the hostname of the server should be listed on the first line instead of `this_host`.

- Make sure that the license service is running on the license server. To see if the service is running on the server. In a shell type:

```
/sbin/service USAnimation_flexlm status
```

- If it is not running, start the service with the following command:

```
/sbin/service USAnimation_flexlm start
```

- You will have to re-start the Dbserver if the license server was not properly installed or activated. Type the following in a shell:

```
/sbin/service USAnimation_dbserver restart
```

- If you continue having problems with the license server, locate the file `lmgrd.log` and send it to [support@toonboom.com](mailto:support@toonboom.com). This file is usually in `/tmp`.

## Problem: Unable to Import Sample Scene (Errors with the Dbserver)

- Check the `Dbserver.log` file. It is usually stored in `/tmp`.
- If there is no log file, re-start the Dbserver. Type the following in a shell:

```
/sbin/service USAnimation_dbserver restart
```

If there is a log file, the last few lines in the log file will give you some indication as to the problem with the Dbserver.

- If you get an error in the log about the machine name, check the `/USA_DB/Dbserver.conf` file and make sure the hostname matches the machine name of the Harmony server.
- If you get errors about the port number, check that the port name in the `Dbserver.conf` file is not used by another service. Type `netstat -a` in a shell to see a list of port numbers used by the machine. If another service is using the port `5678`, you can change the port number in `Dbserver.conf` to any unused number above 5000.
- Re-start the Dbserver. Type the following in a shell:

```
/sbin/service USAnimation_dbserver restart
```

## Problem: Exported Directories Not Mounting on Clients

On most Fedora Linux distributions, the `yplibind` service is started after `nfs` by default. This causes directory mounting to fail when your system boots up. This will prevent Linux clients from mounting Toon Boom Harmony directories from the server.

You must make sure the `yplibind` service is started before `nfs`.

**To configure the start sequence of `yplibind` and `nfs`:**

1. Turn the service off and remove it from the startup configuration. Type the following in a shell:

```
/sbin/service yplibind stop
```

```
/sbin/chkconfig yplibind off
```

2. Edit the `yplibind` startup script located in `/etc/init.d/yplibind`. Find the line reading:

```
chkconfig: 27 73
```

Change it for:

```
chkconfig: 24 73
```

3. Restart the service. Type the following in a shell:

```
/sbin/service yplibind start
```

```
/sbin/chkconfig yplibind on
```

## Problem: Harmony Stage Will Not Open or Crashes on Startup

Periodically, the Harmony Stage refuses to open, printing an NVIDIA error message in the shell. This may not happen all of the time. Users may report this error after running the application several times successfully.

The NVIDIA error message directs users to instructions in the Read Me file:

```
/usr/share/doc/NVIDIA_GLX-1.0/README.txt
```

Problems with the security module of the PAM system can cause these periodic problems. Follow the instructions in the NVIDIA Read Me to resolve this error.

If you continue to experience problems, verify that the `xorg.conf` file (in `/etc/X11/`) contains the correct driver information (the driver should be `nvidia`, not `nv`).

If this does not resolve the problem, reinstall your NVIDIA driver.

## Problem: Unable to Display Images in Harmony Stage

Your monitor's screen settings must be set to 24-bit per pixel.

Verify your current settings.

- If you are using Fedora, verify the file `/etc/X11/xorg.conf`.

## Problem: Unable to Open Sample Scene on Linux Clients

- On the Harmony server, check that all of the Harmony directories were exported. The `/USA_DB`, `/usr/local/ToonBoomAnimation/harmony_10.0`, and `/usadata` directories must appear in the `/etc/exports` file. Make sure that the entries in this file match the name of the directories you created on the server.

In a shell, type the following to make sure the directories have been exported:

```
/usr/sbin/exportfs -r
```

For more information, .

- On the Linux client, check that you created the data directories and mounted the server directories into those directories. Check the `/etc/fstab` file to see that the data directories are listed and spelled the same way as the directories on the client and on the server.

List the contents of the mounted directories to see that there are some contents.

```
cd /usr/local/ToonBoomAnimation/harmony_10.0
```

```
ls
```

A list appears of the directories in `/usa`. They are:

```
etc help lang lnx86_64Plugins resources
```

- If you do not see anything in the exported directories, type the following in a shell to make sure the server directories have been mounted:

```
mount -a
```

If you are able to list the contents of the exported directories and open the sample scene after manually mounting all shares, check the start up sequence of ypbind and nfs to make sure that nfs is started first. For more information, [Problem: Exported Directories Not Mounting on Clients](#) on page 116.