



server  
Administration Guide

**Universal** Type Server®





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# Welcome to Universal Type Server

Universal Type Server® is the next generation of workgroup font management software. Written for the latest operating systems, this cross-platform system combines the power, speed, and control that administrators need with the seamless font delivery and elegant interface that users expect.

Type Server® provides the centralized control, consistency, and compliance for all levels of font management - administrators as well as client users. Administrators can rest assured that the appropriate fonts are available to the client when they need them, and rogue fonts are kept out of the workflow. Meanwhile, users are certain that they are using the correct, approved fonts for their projects by using the Universal Type Client™.

## About the Server Administration Guide

This Server Administration guide provides instructions for installing and configuring the server, as well as general server management information.

Universal Type Server is administered through three primary interfaces: The Server Administration web interface, the Users and Workgroups web interface, and the Universal Type Client.

For detailed instructions about configuring roles, workgroups and users, please see the Users and Workgroups Administration Guide, or the webhelp available from the Users and Workgroups Administration interface.

All management of the physical font files such as adding fonts to the server is accomplished in the Universal Type Client. Other administrative functions such as running license reports are also performed from the Type Client. For information about these features as well as all other client operations, please see the Universal Type Client User Guide or choose **Help > Universal Type Client Help**.

## What's New in Universal Type Server 2

There are many new features in Universal Type Server.

The following are new features at the server level of Universal Type Server 2.1.

- Expanded external database support now includes MySQL.
- Universal Type Client Core can now be scripted by creating specialized Core Client scripts.
- Directory Integration now supports LDAP-bind authentication.
- Users can now be excluded from Organizational Group binding when using a directory service.
- Streamlined user creation and editing.
- Predefined Roles can now be edited, and reset to factory settings.
- Updated lists of required fonts for use with System Font Policies. Now supports Mac OS X 10.6 (Snow Leopard) and Windows 7 required fonts.
- Improved Type Client synchronization.
- Support for TrueType Collection fonts.

The following are new features that were introduced at the server level in Universal Type Server 2.0.

- **Improved administration interface** - the Users and Workgroups Administration web interface was updated to allow easier user administration.
- **Font Compliance reporting** – the reporting feature allows you to check font licensing to ensure that you remain in compliance.
- **External Database Module** – a new module allows you to store the Universal Type Server database in an external MySQL database. This module is available as an additional purchase.
- **Directory integration** – this feature allows you to bind Universal Type Server to an LDAP service, such as Active Directory on Windows, or Open Directory on Mac.
- **Machine-based licensing** for Universal Type Clients allows you to have two or more users on a single machine, and have only a single client license consumed for that machine.
- **Client licensing updates** – client license tracking by Type Server ensures that client users who have not connected to the network for more than 30 days are prompted to reconnect, then cleared if no connection is established. This releases the license for use by another client.
- **System Font Policies** – To maintain control over rogue fonts in client user system font folders, administrators can now create a system font policy to manage system fonts. This is basically a list of fonts allowed into client operating system folders that can be enforced on a user-by-user basis.
- **Batch apply user settings** – Administrators can now select multiple users to apply and update settings for all selected users at once.
- **Import users from a TXT file** – To speed setup and configuration of your server, Universal Type Server now supports the import of users through a tab-delimited text file.
- Support for **Windows Server 2008**.

# Installation Overview

Thank you for purchasing Universal Type Server! Installing and serializing Universal Type Server should take just a few minutes.

This guide covers high level administration tasks associated with the installation and management of the server. Additional configuration information is located in the Users and Workgroups Administration Guide and help system.

The following is a high level overview of the steps required to appropriately install the server.

Each step in the process is explained in detail in this guide. Please refer to these sections for complete procedures as required.

1. [Verify server system requirements](#)
2. [Run the installer on the target server machine](#)
3. [Login to the Server Administration web interface](#)
4. [Serialize the server](#)
5. [Set the Bonjour Name](#)
6. [Resolve any port conflicts](#)
7. Set any desired server configuration options, including [backup schedule](#), [log file configuration](#), [secure connection options](#), and any other necessary server settings.
8. After installing the server, configure workgroups, roles and add users. These topics are covered in the Users and Workgroups Administration Guide and help system.

## Universal Type Server System Requirements

### Macintosh Server

- Mac OS X v 10.5.7, 10.6 Mac OS X Server 10.5 or 10.6
- 1.6 GHz or faster 32-bit (x86) or 64-bit (x64) processor (PowerPC is not supported)
- 1 GB available RAM
- 250 MB of hard disk space + space for fonts
- Safari 3.0 or Firefox 3.0 or higher\*
- Adobe Flash Player 10 or higher\*

### Windows Server

- Windows XP SP3 (32-bit only), Server 2003 SP2, Server 2008 SP2 (32 or 64-bit version\*\*)
- P4 or faster processor\*\*\*
- 1 GB available RAM
- 250 MB of hard disk space + space for fonts
- Internet Explorer 7 or Firefox 3.0 or higher\*
- Adobe Flash Player 10 or higher\*
- Adobe Reader 7 to read PDF documentation\*
- Microsoft .NET 3.5 or higher

\* Required on the machine that is used to administer the server through the web interface. May be administered remotely.

\*\* 64-bit supported in 32-bit emulation mode only.

\*\*\*While Pentium 4 (Win) processors are supported, it is not recommended for installations serving in excess of 10 clients. Therefore, for customers deploying Universal Type Server Professional, a faster Intel CPU is recommended. For optimal performance, choose a processor capable of supporting Java 6. See the following sites for more information.

Java SE 6 release notes and supported configurations:

<http://java.sun.com/javase/6/webnotes/install/system-configurations.html>

Java SE 6 is available on 64-bit, Intel-based Macs only: <http://support.apple.com/kb/HT2733>

## Installing Universal Type Server

Before installation, ensure that your server meets all of the minimum system requirements.

**NOTE:** If you are installing onto a Windows 2000 server, an additional system component, [sc.exe must be installed](#) before running the Type Server installer. See the installation instructions later in this guide.

Copy the installer onto the server's hard disk, double-click to launch the installer and follow the instructions.

For any late-breaking changes to the product, see the Universal Type Server Release Notes. These notes can be accessed from the Extensis website, and are also installed with Universal Type Server on your computer. The Release Notes are installed in the following location:

- Mac OS X: /Applications/Extensis/Universal Type Server/
- Windows: Program Files/Extensis/Universal Type Server/

After the installer runs, the installation application automatically launches the default web browser and navigates to the Server Administration web interface.

**NOTE:** If you are installing on a headless server (a machine without a monitor, keyboard or mouse), you must login to administer the server using a web browser on a remote machine. Enter the server's IP Address into your browser's address field followed by a colon and the port number 18081. If this port is already in use on your server, a random port is assigned. To obtain the port number, use the command line tool to [view server settings](#).

In the Server Administration web interface, login using the default Server Administrator Super-user username and password:

- **Super-user username:** administrator
- **Super-user password:** password

The super-user password should be changed in the Users and Workgroups web interface before adding any other users to the Type Server.

## Serializing Universal Type Server

Universal Type Server is licensed on a concurrent user model. To begin using Universal Type Server, you must first enter a valid serial number using the Server Administration web interface. The Universal Type Client does not require serialization.

Serial numbers are encoded to include a valid number of client connections, and are also used to enable additional functionality, such as the storage of data in external databases.

Only one Universal Type Server serial number to register client connections can be added to a server. Additional serial numbers may be added to add functionality that is above and beyond a typical server installation.

To serialize the server:

1. [Login to the Server Administration web interface](#).
2. Click the **Licenses** link.
3. Enter a valid Universal Type Server serial number into the field and click **Add Serial Number**.  
**NOTE:** Universal Type Clients do not require a serial number, because the Type Client does not have access to served fonts without a previous connection to a Type Server.
4. Enter any additional serial numbers for external database connection services and click **Add Serial Number**.

## Uninstalling Universal Type Server

Removing Universal Type Server removes all of the Type Server application files, but leaves your font repository and any backup files on the server.

To remove the Universal Type Server application:

On Mac OS X:

1. In the Finder, navigate to Applications/Extensis/Universal Type Server/applications/
2. Double-click to run the **Uninstall Universal Type Server** application and follow the instructions.
3. To entirely remove the font repository and backup files from the default install location, move all files in the Applications/Universal Type Server/ folder to the trash using the Finder.

**NOTE:** Your font repository and backup files may be in a custom location. These files can be deleted if you are positive that you will no longer need them.

On Microsoft Windows:

1. Choose **Start > Control Panel**.
2. Double-click **Add/Remove Programs**.
3. In the **Add/Remove Programs** dialog box, choose **Universal Type Server** and click **Remove**.
4. To entirely remove the font repository and backup files from the default install location, in Windows Explorer delete all files from this directory: Program Files/Extensis/Universal Type Server/

**NOTE:** Your font repository and backup files may be in a custom location. These files can be deleted if you are positive that they are no longer needed.

## Upgrading from a previous version

Upgrading from a previous version of Universal Type Server is a relatively easy multiple step process.

**NOTE:** The following procedure is appropriate for users who are currently using the embedded Universal Type Server database. If you are upgrading to an external SQL database, read the external database configuration instructions for [conversion procedures](#).

## Create a backup file

Before you begin the upgrade process, it is essential that you create a backup file of your current installation.

Newer versions of Universal Type Server use an upgraded database, so if you ever want to downgrade Type Server to a previous version, this backup is required to complete the process.

To backup your current Universal Type Server to your current backup location:

1. Open the [Server Administration web interface](#).
2. In the **Datastore** area, click the **Backups** link.
3. Note your current backup location, and click **Backup now**.

Also, if you want to use an external database, this backup file is used during the upgrade process.

## Log off all users

It is best to perform the upgrade in the evening or at a time when most users are not logged in.

1. Warn all users that the Type Server will be down for maintenance.
2. From the [Server Administration web interface](#), click the **Users** link.
3. Click the top left checkbox to select all users who are currently logged-in.
4. Click **Force logout selected users**.

## Install Universal Type Server

The Universal Type Server installer automatically removes your previously installed server, while keeping all of your fonts, users and data intact.

1. Copy the new Universal Type Server installer to your server and double-click to run.
2. Follow the prompts to install the server upgrade.

**NOTE:** The database upgrade might take some time to upgrade. When complete, the server automatically starts and is ready for users to connect.

After the installation is complete, serialize the server with your serial number.

You are now ready to configure any [external database](#) and connect to directory services as required.

## Deploy new Universal Type Client

When upgrading to the new Universal Type Server, previous versions of the Universal Type Client can connect to the upgraded Universal Type Server. Even so, it is still recommended that you upgrade each user's Universal Type Client to the newest version after you upgrade the server. This allows your users to take advantage of the upgraded features and improved performance of the newer client.

## Installing sc.exe on Windows 2000 Server

An additional operating system component is required to run Universal Type Server on a Windows 2000 Server machine. This file is included by default with all supported operating systems except Windows 2000 Server.

To download and install sc.exe:

1. Download sc.exe from Microsoft:  
`ftp://ftp.microsoft.com/reskit/win2000/sc.zip`
2. Copy sc.exe into the C:\Windows\System32\ directory.

## Opening the Server Administration Web Interface

The Server Administration web interface is where the System Administrator Super-user and users with the Full Administrator setting are able to:

- Start, stop, and pause the server.
- Change the server's Bonjour name.
- Examine and change port settings.
- View connected clients.
- Configure and restore backups.
- Locate, move, or create a new datastore.
- Manage server serial numbers.

To login to the Server Administration web interface:

1. Open a [supported web browser](#).
2. In the address field, enter your server IP address followed by a colon and the port number. The default server administration port is 18081 (Also called the JBoss HTTP / Web Service port).  
For example: `http://192.168.0.1:18081` or  
`http://localhost:18081`
3. Enter the administration username and password. The default System Administrator Super-user username and password are **administrator** and **password**.

**NOTE:** The **password** field is case-sensitive, but the **username** field is not.

**NOTE:** It is very important to change the Super-user default password as soon after installation as possible.

**NOTE:** The default location of the Users and Workgroups Administration interface is the same IP address, with the port number 8080. For example: `http://localhost:8080`

## Logs

The Universal Type Server creates logs to help identify and troubleshoot potential issues with the server.

These logs include records of the following transactions as well as other information:

- User login and logoff
- The IP addresses of connected users
- The addition and deletion of workgroups
- The addition and deletion of users
- Server startup
- Server shut down
- Database backup, restoration and changes to backup settings
- Database deletion
- Changes in database location
- Changes in log file location

By default, log files are located:

Mac OS X:

`Applications/Universal Type Server/Logs`

Windows:

`Program Files\Extensis\Universal Type Server\Logs`

These are the logs that are important for server administration.

<code>extensis.admin.log</code>	Contains all log messages displayed in the Server Activity window of the Server Administration Status page.
<code>extensis.server.log</code>	This is the main server log. Changing the server logging level affects what is recorded in this file.
<code>server.log</code>	Contains very verbose logging of server activity.
<code>boot.log</code>	This log is created by JBoss upon startup. If JBoss is having problems at launch time, this file can provide useful diagnostic information.

## Changing the Logging Level

The contents of the main Universal Type Server log file, `extensis.server.log`, can be updated based on how much detail that you need.

The logging levels available are:

ERROR	Displays only error messages.
WARN	Displays only error and warning messages.
INFO	This is the default logging level and includes a wide variety of information about server activity. This level is recommended for most installations.
DEBUG	This level of logging includes very detailed information about your server and can result in very large log files. It is not recommended unless specifically requested by your support representative.

To change the server logging level:

1. [Open the Server Administration web interface.](#)
2. Click the **Logging** link.
3. From the **Logging level** drop-down menu, choose a new level and click **Update server**.

## Changing the Log Location

Administrators can change the location where the main Universal Type Server log file, `extensis.server.log`, is placed.

To change the log file location:

1. [Open the Server Administration web interface.](#)
2. Click the **Logging** link.
3. Enter a new log location into the **Logging directory** field. The default location is in the `logs` folder of the Universal Type Server application folder. The following are examples of appropriate new paths:

On a Mac server: `/Volumes/Macintosh HD/logs`

On a Windows server: `C:\Universal Type Server\logs`

**NOTE:** The new logging directory folder must already exist on the disk. Creating log files on a network location is not supported. Enter the full path, do not use relative paths, and include a drive letter on Windows.

4. Click **Update Server**.

A new `extensis.server.log` file is created in the new location. The log file in the previous location is not removed, but it is no longer updated.

All other Universal Type Server log files always remain in the default location, and the location cannot be changed. If removed, they are automatically recreated by the server.

## Changing Log Backups

The `extensis.server.log` file is backed up on a daily basis at 12:15 a.m. to your designated logging location. Log backup files are named with the log file name followed by the date of the backup, and they can be opened with any standard text editor.

Since these files can become very large, you may not want to keep a significant number of them on the server. By default, the server keeps the 10 most recent log files.

To update the number of log backups to keep:

1. [Open the Server Administration web interface.](#)
2. Click the **Logging** link.
3. Enter the number of backups to keep in the **Retained server logs** field and click **Update server**.

## Ports

The Universal Type Server requires a number of ports on your server. These ports are used for client connection, server administration as well as internal server communication.

Port	Default Value	Connection Required
JBoss HTTP / Web Service	8080	External
Jetty Web App	18081	External
JBoss Webservice	8083	Internal
Bootstrap JNP Server Bind Address	11099	Internal
JMX Pooled Port	14445	Internal
JMX RMI Object Port	14444	Internal
RMI Naming Service	11098	Internal

All ports used with Universal Type Server must not conflict with other applications on the server.

External ports must be opened in the host system's firewall and operating system. The process of opening ports varies by operating system. Please refer to the Mac OS X Server and Microsoft Windows documentation for more information.

## Ports for External Communication

The Universal Type Server requires two ports be open for server administration and client connection.

1. **JBoss HTTP/Web Service** port - default port number 8080
2. **JBoss HTTPS/Web Service** port - default port number 8443
3. **Jetty Web App** port - default port number 18081

These ports are used on a regular basis and are listed on the Server Administration Ports page.

### JBoss HTTP / Web Service port

This is the port where users connect to your server, as well as the port where administrators open the Users and Workgroups Administration web interface. The default port setting is 8080.

#### Client connections

Clients require the following information for server login:

- The server IP address, DNS name or Bonjour name.
- The JBoss HTTP / Web Service port number. If using a Bonjour name, a port is not required.
- Client account name and password.

#### Users and Workgroups Administration

To connect to the Users and Workgroups Administration web interface, enter the server IP address in the address field of any supported browser followed by a colon and the port number.

For example: `http://123.45.34.12:8080/`

### JBoss HTTPS/Web Service port

When the secure connection option is enabled, administrators connect to the Users and Workgroups Administration web interface through the JBoss HTTPS/Web Service Port.

The default setting for this port is 8443.

The port for secure connections is only used to connect with the Users and Workgroups Administration web interface. With secure connections enabled, when administrators attempt to connect with the JBoss HTTP/Web Service port, they are automatically redirected to the JBoss HTTPS/Web Service port.

For example, an administrator may enter either:

`http://123.45.34.12:8080` and be redirected to `https://123.45.34.12:8443`

or enter `https://123.45.34.12:8443` directly.

### Jetty Web App port

This port is used to open the Server Administration web interface. Enter the server IP address followed by a colon and the port number in the address field of a supported web browser. The default port setting is 18081.

For example: `http://123.45.34.12:18081/`

## Ports for Internal Server Communication

A number of ports must be reserved for the internal communication of Universal Type Server. The server requires a number of standard Java J2EE and web service ports.

It is possible that you may have other applications running or requiring Java on your server. Type Server runs a self-contained version of Java, so it is possible to run other Java and web service applications on the same machine, provided that you resolve any port conflicts.

To avoid conflicts use the Ports page to assign new port numbers for Type Server.

The following ports are required for internal Universal Type Server communication:

Port	Default Value
JBoss Webservice	8083
Bootstrap JNP Server Bind Address	11099
JMX Pooled Port	14445
JMX RMI Object Port	14444
RMI Naming Service	11098

## Resolving Port Conflicts

The Universal Type Server installer checks to see if the default server administration port 18081 (Jetty Web App) is bound to any other application. If it is already taken, then another random port is chosen before the Server Administration web interface opens.

All other ports listed on the Server Administration's Ports page are required for proper operation of the server. Type Server checks for any port conflicts and lists them in the `extensis.admin.log`. The server uses standard JBoss and Jetty ports, so if your server has other applications that are built using this technology, you may need to change the default Type Server port numbers.

To update port numbers:

1. [Open the Server Administration web interface.](#)
2. In the **Settings** area, click the **Ports** link.
3. For each port that requires a new port number, enter a new port number or click **Find port** to locate an open port.
4. Click **Update Ports**.
5. [Restart the server.](#)

## Security Concerns

The [Universal Type Core](#) is the background application that runs on client systems and communicates with the Universal Type Server. The Type Core runs whether or not the Universal Type Client is active. All communication between the Type Core and the Type Server using HTTP through the [JBoss HTTP port](#).

All client and server login usernames are sent as clear text via HTTP. For security reasons, all associated passwords are encrypted and sent using the MD5 cryptographic hash function.

For additional security, Extensis recommends that the Type Server run behind a firewall using authentication through the required [external ports](#).

## Implementing a Secure Connection

Secure connections provide an encrypted communications between Universal Type Server and the machine that is used to administer the server.

A redirect to the secure connection port is not enabled by default. A secure connection can be enabled in using the default, self-signed certificate, or with a custom security certificate for your organization.

**NOTE:** Enabling a secure connection will cause a slight performance degradation in the Users and Workgroups Administration web interface. This setting does not affect your client users in any way.

Enabling a secure connection requires the following steps:

1. Obtain a custom security certificate.
2. Edit the `server.xml` file with your custom security certificate password.
3. Enable the automatic redirect to the secure connection by editing the `web.xml` file.

### Obtain a Security Certificate

Security certificates tell the web user that the secure connection is valid and can be trusted. Typically these certificates are issued by trusted organizations. If desired, obtain a security certificate for your organization.

Universal Type Server includes a default, self-signed security certificate. This certificate allows you to create a secure connection without obtaining your own custom certificate. Using the default certificate will cause your browser to display a number of security warnings when you open the Users and Workgroups Administration web interface. These warnings indicate the nature of the self-signed certificate, but by using it you can still create a secure connection with the Type Server. All browsers allow you to record a security exception or to trust the self-signed certificate. See your browser's documentation for details.

If you choose to obtain a custom security certificate, one can be obtained from a number of trusted online locations such as [Verisign](#) or [thawate](#).

After obtaining the certificate, rename the file to `uts.keystore` and use it to replace the default certificate in the following location on your server:

**Macintosh:** `/Applications/Extensis/Universal Type Server/applications/jboss/server/default/conf/uts.keystore`

**Windows:** `C:\Program Files\Extensis\Universal Type Server\applications\jboss\server\default\conf\uts.keystore`

## Edit the server.xml file

Editing the `server.xml` file enables the secure connection by editing the security certificate name, password and location.

To add the security certificate:

1. Open the `server.xml` file from the following location with a text editor such as Notepad or TextEdit.

**Macintosh:** `/Applications/Extensis/Universal Type Server/applications/jboss/server/default/deploy/jbossweb-tomcat55.sar/server.xml`

**Windows:** `C:\Program Files\Extensis\Universal Type Server\applications\jboss\server\default\deploy\jbossweb-tomcat55.sar\server.xml`

2. To change the name and location of your security certificate, search for the `keystoreFile` value. Edit the value between the quote marks to match your security certificate file name. If you renamed your security certificate to the default name, `uts.keystore`, and placed it in the default location, you can leave this value as is.

```
keystoreFile="{jboss.server.home.dir}/conf/uts.keystore"
```

3. To enter the password of your security certificate, search for the `keystorePass` value. Edit the value between the quote marks to match your security certificate password.

```
keystorePass="uts_ssl"
```

4. Save and close the `server.xml` file.

## Enable a Redirect to the Secure Port

Editing the `web.xml` file enables a redirect from the standard web service port (default port 8080) to the secure connection port (default port setting 8443).

To enable the redirect:

1. Open the file from the following location with a text editor such as Notepad or TextEdit.

**Macintosh:** `/Applications/Extensis/Universal Type Server/applications/jboss/server/default/deploy/uts.ear/uts.war/WEB-INF/web.xml`

**Windows:** `C:\Program Files\Extensis\Universal Type Server\applications\jboss\server\default\deploy\uts.ear\uts.war\WEB-INF\web.xml`

2. Use the search feature to locate the line that contains the "transport-guarantee" parameter. Change the following line from:

```
<transport-guarantee>NONE</transport-guarantee>
```

To:

```
<transport-guarantee>CONFIDENTIAL</transport-guarantee>
```

3. Save and close the `web.xml` file.

## Automatically Starting the Server

If you need to restart the physical server machine, the Autostart preference must be enabled for the server to automatically launch and serve fonts to clients.

The Autostart preference is enabled by default, but may be disabled if desired depending upon your server configuration.

To enable the Autostart preference:

1. [Open the Server Administration web interface.](#)
2. Click the **System** link.
3. From the **Autostart** drop-down menu, choose **Enabled**.
4. Click **Update server**.

If the Autostart preference is disabled, administrators are still able to connect to the Server Administration web interface to start the server.

## Placing the Server in Standby Mode

Placing the server in standby mode prevents any non-administrative users from performing any actions that require communication with the Universal Type Server. The server runs normally for administrative users.

When in Standby Mode, all client users are not logged off, but are placed in offline mode. While in offline mode, users are only able to activate and preview files that are in their local cache. Font files that are not available for user are displayed in red in the Universal Type Client.

When performing datastore backups, restores, and so forth, the Type Server automatically changes to standby mode before performing the required administrative task, and then changes back to normal mode when the task is complete.

To place the server in standby mode:

1. Notify users of your intention to place the server in standby mode.
2. [Open the Server Administration web interface.](#)
3. Click the **System** link.
4. From the **Access state** drop-down menu, choose **standby** and click **Update server**. The server is placed in standby mode.
5. Perform any necessary server maintenance.
6. Click the **System** link.
7. From the **Access state** drop-down menu, choose **normal** and click **Update server**. The server resumes normal access and displays the Status page when complete.

## Restarting the Server

If you need to restart Universal Type Server, use the Server Administration web interface to do so. This ensures that all processes are properly shut down and restarted.

When the server restarts, connected clients are automatically put in Offline mode. This means that client machines will only have access to fonts that are cached locally on their machine. Which fonts are cached depends mostly upon the font replication mode that is enabled for each user. See the **Settings** topic in the Users and Workgroups Administration guide for more information.

To manually restart the server:

1. Notify users of your intention to restart the server.
2. [Open the Server Administration web interface](#).
3. Click the **System** link.
4. From the **Running State** drop-down menu, choose **Stopped** and click **Update server**. The server closes running processes; when complete, the Status page displays.
5. Click the **System** link.
6. From the **Running State** drop-down menu choose **Started** and click **Update server**. The server starts all necessary processes; the Status page displays when complete.

If you need to restart the physical server machine, the [Autostart preference](#) must be enabled for the server to automatically launch and serve fonts to clients. If this preference is disabled, the Type Server does not serve fonts, and Universal Type Clients cannot connect. That being said, even with the Type Server stopped, the Server Administration web interface is still running and available for the administrators to start the server manually.

## Setting the Bonjour Name

Bonjour is a technology from Apple Inc. that enables users to more easily locate Universal Type Servers on a network. The Bonjour technology is built into Mac OS X, and is installed by the Universal Type Client installer for clients using Microsoft Windows.

When users connect to the server, they only need to know the server's Bonjour name, their username, and their password to connect.

To set the Universal Type Server Bonjour name:

1. [Open the Server Administration web interface](#).
2. Click the **System** link.
3. Enter a Bonjour Name into the field. If you have more than one Type Server, choose as specific a name as possible.
4. Click **Update server**.
5. [Restart the server](#).

To test the new Bonjour name:

1. Launch the Universal Type Client.
2. If the client is currently connected to a server, choose **File > Server > Forget Connection**.
3. In the **Connect to Server** dialog box, choose **Browse Local Servers** from the **Server** drop-down menu.
4. Select your new Bonjour name from the list and click **OK**.
5. Enter your username and password and click **Connect**.

For more information on Apple's Bonjour technology, see the Apple Developer Connection site:

<http://developer.apple.com/opensource/internet/bonjour.html>

## Changing the Display Language

The language of the Server Administration web interface is automatically set to the language your web browser is set to use. The web interface supports administration in English, French, German, and Japanese. If your preferred language is not supported, the interface defaults to English.

You can quickly change the display language by clicking the desired language name in the lower right corner of the page.

It's important to note that this only changes the language displayed in the Server Administration page. The client's user interface, as well as the Users and Workgroups Administration interface, remain in the language currently selected for that application.

## Locking Server Administration

The Server Administration web interface automatically logs you out after a period of inactivity. Sometimes you may want to continually monitor the server status, and not automatically be logged out. For example, you might want to keep the Status page displayed on a server room monitor.

Locking the status page does not prevent other users from accessing the Server Administration web interface from another machine.

To lock the Server Administration Status page:

1. [Open the Server Administration web interface.](#)
2. In the **Status** area, click the **Lock** icon.



To unlock the server:

- Click the lock icon and login.

## Viewing Connected Users

Administrators can view a high level list of connected users in the **Users** page of the Server Administration web interface. This list provides the login User Name, Full Name, IP Address, and Login Date.

You can sort the list of users by any field by clicking the sort icon at the top of each column.

If you are using both traditional Type Client and Core Client connections in your configuration, users can be filtered by client type. From the User Type drop-down menu, choose:

- **All** to display both Type Client and Core client connections.
- **Full** to display only Type Client connections
- **CoreClient** to display only Core Client connections.

To update the number of connected users visible at a time, enter a new number in the **Users per page** field and click **Update page size**.

For more complete user management, including adding and removing users, open the Users and Workgroups web interface.

## Forcing User Disconnection

In some instances, you may need to force the logout of a currently connected user.

For example, if you are currently using all of your license seats, you may need to force the logout of one user to allow another user to connect. In another instance, you may need to force the logout of a recently terminated employee. You would of course also want to delete the user account of any terminated employee using the Users and Workgroups Administration interface.

To force user logout:

1. [Open the Server Administration web interface.](#)
2. Click the **Users** link.
3. Check the boxes for the users that you want to disconnect. To select all users on the current page, check the box at the top of the first column.
4. Click **Force Logout Selected Users**.

When you force the logout of a user, it is the same as the user selecting the **Server > Forget Connection** command. After forcing the logout of a user, the next time the client attempts to synchronize with the server the connection is terminated and all server fonts are removed from the client.

## Creating a New Datastore

The Universal Type Server datastore contains the font vault where all of your fonts are stored, user and workgroup data as well as all other server settings data. A datastore is automatically created upon installation, but you may want to create a new datastore later.

**WARNING:** Type Server can only use one datastore at a time. Creating a new datastore automatically deletes the current datastore. Therefore if you want to save a previous datastore, be sure to create a backup of your datastore and move it to a safe location before creating a new datastore.

To create a new datastore:

1. [Open the Server Administration web interface.](#)
2. In the **Datastore** area, click the **Move/New** link.
3. In the **New repository location** field, enter the full path to the location of the new datastore. The default location for the datastore is the Data folder of the Universal Type Server application folder.  
On a Mac server: /Volumes/Macintosh HD/datastore  
On a Windows server: C:\Universal Type Server\datastore  
**NOTE:** Enter the full path, do not use relative paths, and include a drive letter on Windows.
4. Click **New datastore**.
5. Click **OK** to confirm.

After creating a new datastore, you will need to go through all of the standard configuration steps, including creating workgroups, users, and so forth.

## Moving the Vault

The vault is the part of the datastore that contains all of your fonts. Since it contains one copy each unique font available across all workgroups, including server-based personal workgroups, it can become very large.

The vault must be stored in a location that is local to the Universal Type Server, but can be moved from its default location to another local disk if desired. This is typically done if the primary drive is running out of disk space, or to optimize server performance.

Because font vaults can become very large and take time to move, it is best to move the vault when client connectivity is not required.

To designate a new vault location:

1. [Open the Server Administration web interface.](#)
2. In the **Datastore** area, click the **Move/New** link.
3. Enter the full path to new location for the vault. The vault must be created in an existing folder location on the local machine.

The following are example paths:

On a Mac server: /Volumes/Macintosh HD/vault

On a Windows server: C:\Universal Type Server\data\vault

**NOTE:** Enter the full path, do not use relative paths, and include a drive letter on Windows.

Creating a vault in a network locations, including NFS-mounted and UNC accessible paths, *is not supported.*

**NOTE:** If the destination directory does not exist, it is automatically created.

4. Click **Move vault**. The server is paused, and the font vault is moved to the new location.

## Defining a Backup Plan

As you set up Universal Type Server, it is important to define an effective datastore backup plan. This ensures that, in cases of emergency, that your datastore is safe and can be restored.

The Universal Type Server datastore contains all of the fonts, as well as all user, workgroup, and server data. Backup files are rolled into a single, date-stamped .TAR file. TAR files are archive files like the ZIP files created by your operating system.

It is recommended that you back up your datastore at least once per week. Plan to store copies of the backup in an offsite location from time to time. This ensures that if anything happens to the local copies of the files, you can restore from the offsite backup.

For the highest level of data security, it is best to keep multiple backup files. Universal Type Server is able to automatically create and retain however many backup files that you need, and subsequently remove any out-of-date backups.

Backups can be performed manually, but it is much easier to define a schedule and allow Universal Type Server to automatically create files.

**NOTE:** Backups must be created in a location accessible to the server, on the local machine. Backing up to a network location is not supported.

In case of any hardware failure or other incident, a backup can be easily restored to a new server install location using the Server Administration web interface.

## Backing Up the Datastore

You can backup the server manually or configure Universal Type Server to perform automatic backups at regular intervals.

While backups can be performed using other utilities, it is recommended that you utilize the built-in backup utility. Doing so gives you the ability to quickly restore and replicate an entire Universal Type Server database, including all fonts and user information, on a new system if required.

To manually back up the datastore:

1. [Open the Server Administration web interface.](#)
2. In the **Datastore** area, click the **Schedule backups** link.
3. Enter a local backup destination into the **Backup destination** field. The default location for the datastore is the data\backups folder of the Universal Type Server application folder. The following are examples of appropriate new paths:  
On a Mac server: /Volumes/Macintosh HD/backups  
On a Windows server: C:\Universal Type Server\backups  
**NOTE:** Enter the full path, do not use relative paths, and include a drive letter on Windows.  
**NOTE:** Backups must be created in an existing folder location on the local machine. Backing up the server to network locations, including NFS-mounted and UNC accessible paths, *is not supported*.
4. Click **Update Server**.
5. In the Datastore area, click the **Backups** link.
6. Click **Backup now**.

For automatic backups, it is best to set backup days and times when most users are not connected to the server. When the server is performing a backup, users are not disconnected, but are unable to synchronize with the server until after the backup is complete.

To configure automatic backups:

1. [Open the Server Administration web interface.](#)
2. In the **Datastore** area, click the **Schedule backups** link.
3. Enter a local backup destination into the **Backup destination** field. The default location for the datastore is the data\backups folder of the Universal Type Server application folder. The following are examples of appropriate new paths.  
On a Mac server: /Volumes/Macintosh HD/backups  
On a Windows server: C:\Universal Type Server\backups  
**NOTE:** Enter the full path, do not use relative paths, and include a drive letter on Windows.  
**NOTE:** Backups must be created in an existing folder location on the local machine. Backing up the server to a network locations, including NFS-mounted and UNC accessible paths, *is not supported*.
4. Enter the number of backup files to retain in the **Retained backups** field. For the highest level of data security, it is best to keep multiple backup files.
5. Choose a backup time and days when it will cause the least amount of user disruption. Users are unable to synchronize with the server until the backup is complete.
6. Click **Update server**.

After setting automatic backups, be sure to make a note of the times when you should also be moving backup files off the server to a secure, offsite location.

## Restoring a Backup

In the case of hardware failure or other issues, a backup datastore can be restored. The backup contains all fonts, users, workgroups, and all other settings to restore your datastore to the backed-up state.

**WARNING:** Restoring a backup overwrites your current datastore. All connected users are automatically logged out, and will need to reconnect.

To restore a backup:

1. [Open the Server Administration web interface.](#)
2. In the **Datastore** area, click the **Backups** link.
3. Enter the full path and filename of the backup file in the **Restore** field. The following are examples of appropriate paths:  
On a Mac server: /Volumes/Macintosh HD/backups/2008\_02\_18T10\_00\_00\_156Z.tar  
On a Windows server: C:\Universal Type  
Server\backups\2008\_02\_18T10\_00\_00\_156Z.tar  
**NOTE:** Enter the full path, do not use relative paths, and include a drive letter on Windows.
4. Click **Restore datastore**.
5. Click **OK** to confirm.

## Client Administration

Most Universal Type Client information can be found in the Universal Type Client User Guide as well as the Type Client help system.

It's important to note that all font administration, including adding fonts, removing fonts and so forth is done directly in the Universal Type Client.

## Universal Type Client System Requirements

### Macintosh Client

- Mac OS X v10.4.11, 10.5.7, 10.6 or higher
- 1.6 GHz or faster 32-bit (x86/PPC) or 64-bit (x64) processor
- 150 MB of hard disk space + space for fonts
- 256 MB of available RAM
- Safari 2.0 or Firefox 2.0 or higher

### Windows Client

- Windows XP Professional SP3 (32-bit version only), Vista SP1 (32 or 64-bit versions\*) or Windows 7 (32 or 64 bit versions\*)
- P4 or faster processor
- 256 MB of available RAM
- 150 MB of hard disk space + space for fonts
- Internet Explorer 7 or Firefox 2.0 or higher
- Adobe Reader 7 or higher to view PDF documentation
- Microsoft .NET 3.5 or higher

\* 64-bit supported in 32-bit emulation mode only.

## The Universal Type Client Cache

Each client system stores fonts and other client data locally in a cache folder. This includes all necessary server fonts as well as items in client-based personal workgroups.

When a user chooses the **Server > Forget Connection** command, any font files cached in the Type Client cache are no longer available for use on that system.

If a user chooses to **Go Offline**, fonts are available based upon that user's font replication mode setting. Users with the **All** font replication setting have access to all fonts in workgroups to which they belong. Users with the **On Demand Local Cache** setting have access to any fonts to which they have previously used. This means any fonts that they have ever previewed or activated reside in the cache. Users with the **On-Demand** setting only have access to the fonts that are active on their system before going offline.

The Type Client cache consists of two components, the database and the type cache:

- The type cache is the storehouse for all fonts downloaded from the server. The cache's structure varies by platform. For the Mac OS X client, the `UniversalType.typecache` file is a bundle that contains all fonts. On Windows, font files are stored within a directory named `cache`.
- `UniversalType.db` contains all of the database information, such as font and workgroup details, client permissions, and so forth. It is stored within the `UniversalType.typecache` bundle.

**WARNING:** Do not delete or move any part of the client cache unless instructed to do so by Extensis Technical Support.

The Type Client cache files are stored in the following locations:

### Mac OS X

`/Library/Extensis/UTC/<uid>/UniversalType.typecache/`

The UserID (`uid`) is a unique number assigned by the operating system to each user account. The first user account on the machine is 501 followed by 502, 503, and so on. To locate the current UserID, open a Terminal window and enter the `id` command.



```
Terminal — bash — 56x8
Last login: Thu Nov 29 13:33:58 on console
Welcome to Darwin!
jk-macbookpro:~ jkidwell$ id
uid=501(jkidwell) gid=501(jkidwell) groups=501(jkidwell)
, 81(appserveradmin), 79(appserveruser), 80(admin)
jk-macbookpro:~ jkidwell$
```

### Windows Vista

`<disk>:\Users\<username>\AppData\Local\Extensis\UTC\cache\`

To navigate to this directory on the client machine, type the environment variable `%LOCALAPPDATA%` into the Start Menu's **Start Search** field.

**NOTE:** If your Windows Vista system was upgraded from XP, the cache may still be located in the standard XP location. Using the environment variable will always display the appropriate location.

## Windows XP

```
<disk>:\Documents and Settings\<>username>\Local Settings\Application  
Data\Extensis\UTC\cache\
```

To navigate to this directory on the client machine, choose **Start > Run** and then enter the environment variable `%APPDATA%\..\Local Settings\Application Data\`

## Disabling Other Font Managers

To ensure the proper operation of Universal Type Client, it is important to disable or uninstall any other font managers.

Just closing or quitting other font managers might not be sufficient. Many font managers, including the Universal Type Client, run an application in the background that manages font activation and deactivation. These background applications must be disabled before running the Type Client. To do so, check for an application preference that tells the other application to launch on startup or login and then restart your machine.

On Mac OS X 10.5, it is important to disable two Font Book preferences. The following preferences act like system preferences and can interfere with Universal Type Client:

- **Automatic font activation** - This option interferes with professional font managers and does not allow for automatic font activation across all applications. The Universal Type Client still allows you to use plug-in based automatic activation for each supported application.
- **Alert me if system fonts change** - When enabled, this option will automatically place “protected” fonts back into your system font folders even if you remove them. It also can prevent a professional font manager from effectively managing or overriding your system fonts.

**WARNING:** Do not launch Font Book while using Universal Type Client. Remove it from the Dock if necessary.

## The Universal Type Core

The Universal Type Core is a background application that runs on the client machine. This application handles all communication with the Type Server and makes it possible for the user to close the Universal Type Client and still keep fonts active and automatically activate fonts. The Type Core handles all plug-in based auto-activation requests and automatically implements any updated permissions, workgroup changes, and all other changes upon synchronization with the server.

The Universal Type Core can be launched upon user system login, or upon Type Client launch based on client preferences. You can start and stop the Type Core from the preferences, as well as control the core launch at startup. These preferences are set in a System Preferences panel (Mac) or a Control Panel applet (Win).

To stop or start the Type Core (Mac OS X):

1. From the Applications folder, double-click **System Preferences**.
2. Click the **Universal Type Core** icon to open the Type Core preferences.
3. Change the Type Core status to **Stopped** and close the Type Core preferences panel.

To stop or start the Type Core (Windows):

1. Choose **Start > Control Panel**.
2. Double-click **Universal Type Core** icon to open the Type Core preferences.
3. Change the Type Core status to **Stopped** and click **OK**.

**NOTE:** The process name for the Universal Type Core in the Mac OS X Activity Monitor is "FMCORE" and in Windows Task Manager is "FMCORE.exe".

## Client license management

Universal Type Server uses a concurrent user licensing model. The number of client connections allowed is encoded into your Type Server serial number.

View how many users are connected, the associated IP addresses, and unique machine identification from the **Users** link in the [Server Administration web interface](#). The **Licenses** link displays your serial numbers, as well as the number of client connections allowed.

## Concurrent connections on a single machine

For environments where more than one user connects using the same machine, only one client license is consumed. This allows environment who may have many users on a machine during the course of the day, such as educational institutions, to allow each user to connect, and even if each user does not choose the **Forget Connection** command at the end of their session, the computer itself only consumes one client license for the machine.

Conversely, if a user logs in to Universal Type Server from two separate machines, two client licenses are required. For example, in an environment where every user has both a Mac and a PC, a client license is required for each machine.

## Automatic disconnection

Users who may spend long amounts of time working offline away from the server must connect to the server at least once every 30 days or be automatically disconnected from the server. Once disconnected, the client license is now available. The disconnected user is no longer able to access fonts through the Universal Type Client, and must reconnect to Type Server to regain access.

## Client license overage

When the number of licensed clients is reached, any additional users who attempt to connect are not able to do so. To forcibly disconnect users to make a license available, select a user from the **Users** link of the Server Administration web interface.

## External Database Module

Rather than store the Universal Type Server database in the native, embedded database, you have the option to store all of the required data in an external SQL database server. The External Database Module is an add-on to the standard Universal Type Server installation.

You may want to store your data in an external database if:

- For data management and centralization purposes, your company maintains dedicated database server.
- You need to take advantage of the additional administration and performance tuning options in third-party SQL databases that are not available in the embedded Type Server database.
- You require a distribution of hardware resources to improve the performance and ability to scale of your server.

After configuring the connection to an external database, most administrative functions, and all client-level interaction with Universal Type Server functions the same as the native, embedded Type Server database.

## External Database Requirements

The Universal Type Server External Database Module is supported for the following SQL database servers.

- Microsoft SQL Server 2005 SP3 or Server 2008, Workgroup, Standard or Enterprise editions on Windows.
- MySQL 5.1 or 5.4 on Mac OS X only.

**NOTE:** While it may be possible to configure a connection to different versions of some SQL databases, the use of other versions not listed is not supported.

Hardware requirements for an external SQL database

- Universal Type Server allocates 1GB of RAM upon launch, and may use slightly more under heavy load. Type Server will not necessarily benefit from larger amounts of RAM.
- Faster processor speed, RAM speed and the throughput of other hardware elements will more positively affect the speed of Universal Type Server.

For more information about the hardware requirements of Microsoft SQL Server, see the following websites:

- [Microsoft SQL Server 2005 System Requirements](#)
- [Microsoft SQL Server 2008 System Requirements](#)

For more information about the hardware requirements of MySQL, see the following website:

- [MySQL Reference Manual](#)

## Installing an External Database

### Install Universal Type Server

Before configuring the external database connection, install the Universal Type Server application, and then proceed with the instructions below.

If you have previously installed and configured Universal Type Server, and prefer to upgrade your data, follow the instructions to [convert between database types](#). There is no need to re-install Universal Type Server.

### Install the database server and create a database

Install and configure your external database server. To get the benefits of an external database, consider installing your database server on a separate system from Universal Type Server. It is possible to install the database server on the same hardware, but the most benefit will be achieved from separate hardware.

1. Install the database server following the manufacturer's instructions.
2. Using the database administration interface or command line tools, provided by your database server, create a username and password for Universal Type Server to the new SQL database. In Microsoft SQL Server, the username is called a "Login." Choose **SQL Server Authentication** when creating your new login.
3. Create a new empty SQL database for the Universal Type Server datastore. The user that you created in the previous step must be set as the database owner.

**IMPORTANT:** When creating the database, be sure to specify `SQL_Latin1_General_CP1_CS_AS` collation. The native database of Universal Type Server is case-sensitive. To preserve the ability to convert between databases, the database must also use case-sensitive collation.

### Open a port in the firewall

If you are using a firewall on the machine that hosts the SQL server, you must open a port so that Universal Type Server can connect to the SQL database.

The default SQL port for Microsoft SQL Server 2005 is port 1433.

The default SQL port for MySQL is port 3306.

This port can be changed in your database server to meet any specialized requirements.

### Serialize the External Database Module

Serializing the External Database Module enables the ability to add and manage an external database. Prior to entering your serial number, the external database management links are not available in the Server Administration web interface.

1. Open the [Server Administration web interface](#).
2. Click the **Licenses** link.
3. Enter your External Database Module serial number into the text box and click **Add Serial Number**.

**NOTE:** An External Database Module serial number enables the ability to connect to only one type of external database. If you are switching from one type of database server to another, you must enter a new serial number.

## Connect Universal Type Server to the empty SQL database

1. Open the [Server Administration web interface](#).
2. In the Datastore area, click the **Database** link.
3. From the **Database Type** drop-down menu, select your database server type.
4. Enter the following fields so that Universal Type Server can connect to the new database server.

Field	Description
Server Address	Either the DNS name or IP Address of the machine hosting the database server.
Port	The port used to access the external database server. The default Microsoft SQL Server port is 1433, and for MySQL the default is 3306.
Database Name	The SQL database name.
Username	The username that you created for Type Server to use. When using Microsoft SQL Server, this is the "Login" name.
Password	The password for the username above.

5. The **Additional Parameters** field is used to modify the behavior of the connections between Universal Type Server and the SQL database server. The use of this field is relatively rare. If required, enter any parameters provided by your SQL Database Administrator. The following table illustrates a number of parameters that may be helpful. For more information about additional parameters, see <http://jtds.sourceforge.net/faq.html#urlFormat>

Parameter	Usage	Description
domain	domain="<domain name>"	Specifies the Windows domain to authenticate in. If present, the Universal Type Server will use Windows (NTLM) authentication instead of the usual SQL Server authentication (i.e. the user and password provided are the domain user and password).
namedPipe	namedPipe=[true, false]	When set to true, named pipe communication is used to connect to the database instead of TCP/IP sockets. This can result in performance gains when the SQL Server is running on the same machine as the Universal Type Server.
instance	instance="<instance name>"	Allows the Universal Type Server to connect to a named instance of SQL Server.

6. Click **New datastore** to create the new datastore.

## Verify database creation

After creating the new datastore, click the **Status** link in the Server Administration web interface. Check in the Status window to verify that Universal Type Server has stopped and restarted. This is your indication that the datastore has been created and the server is running. See the list of [external database error messages](#) for solutions to common issues.

You can now administer the Universal Type Server the same as you would with an embedded database.

## Converting Between Database Types

With the External Database Module enabled, and an appropriate SQL database server installed, converting between two different database types is relatively simple process of backing up and restoring. For example, you may need to switch between an external database and the native, embedded Universal Type Server database.

You may need to convert between one database type and another if you need to:

- Upgrade from the embedded database to an external SQL database.
- Troubleshoot an issue and want to maintain continuity of connection for your users.
- Perform necessary maintenance on the external SQL server.
- Port your database from one database server type to another.

In general, to convert from one database to another, backup the source database, change the database type in Universal Type Server, then restore the backup.

### Warn users

Before beginning the process, warn users that they will be logged-off Universal Type Server automatically during the backup process.

To ensure that all current data is captured and not modified between the backup and restore processes, users should not log back in until after the upgrade process is complete.

### Backup the current database

Before you begin the conversion process, it is essential that you create a backup file of your current installation. This backup file will be used to transfer your data between the source and target database servers.

To backup your current Universal Type Server to your current backup location:

1. In the **Datastore** area, click the **Backups** link.
2. Note your current backup location, and click **Backup now**.

### Switch to the new database server

The process to switch from one database server to another varies depending upon the new database server you are choosing, as well as the source database type.

If you are moving from the native, embedded Universal Type Server database to a new external SQL database server, or are moving from one type of external database to another:

1. Follow the instructions to [Install an External Database](#). This includes creating a new empty database, new database user, and connecting the to Universal Type Server.
2. Proceed to the next step to restore your backup file.

If you are moving an external database server to an embedded Universal Type Server database:

1. [Open the Server Administration web interface](#).
2. In the **Datastore** area, click the **Database** link.
3. From the **Database Type** drop-down menu, choose **Embedded**.
4. Click **New Datastore**.
5. Proceed to the next step to restore your backup file.

## Restore the backup

Restoring a previous backup automatically populates your new database, and performs any necessary upgrades to the data so that it is compatible with the current version of Universal Type Server.

- Follow the instructions to [Restore your Backup](#). This populates your new database with your previous data.

Your database is now converted to the new database type and ready to be used.

## Verify database creation and connection

After you're done restoring the backup, check the status page of the Universal Type Server, Server Administration web interface to confirm that the server has stopped and restarted. This is your indication that the datastore has been created and the server is running. See the list of [external database error messages](#) for solutions to common issues.

## External Database Error Messages

If you are having problems during the creation or connection to an external SQL database, Universal Type Server logs pertinent info to help you diagnose potential problems. This information is displayed in the **Status** page of the [Server Administration web interface](#), as well as included in the `extensis.admin.log` file.

To view server status:

1. Open the [Server Administration Web Interface](#).
2. Click the **Status** link to display the server status page. The status window displays `extensis.admin.log` file indicating the most recent server activity.
3. Check for any error messages.

Some of the possible errors are listed in the chart below. Be sure to note any specific error messages. These are essential for proper issue diagnosis by Extensis Technical Support and Service Engineers.

Error message	Potential issue
Error creating new datastore: Unable to connect to database server: Network error IOException: Connection refused: connect	Unable to connect to the specified SQL Server
Error creating new datastore: Unable to connect to database server: Login failed for user 'username'	SQL database login authentication failure. This may happen in the case of wrong password, incorrect username, nonexistent username, or improper user permissions.
Error creating new datastore: Unable to connect to database server: Cannot open database "databasename" requested by the login. The login failed.	The SQL database does not exist, or was not properly created.

## Command Line Administration Tool

Universal Type Server contains a command line tool that exposes a number of the functions of the Server Administration web interface in command line format.

In some cases, this tool allows for more granular control of certain operations and allows these operations to be scripted.

The tool script name is `esp-admin` and is available in both batch (`.bat`) and shell script (`.sh`) formats for use on Windows and Macintosh operating systems, respectively.

The tool resides inside of the Universal Type Server's "applications" subfolder. For example:

- Windows: `C:\Program Files\Extensis\Universal Type Server\applications\`
- Mac OS X: `Applications/Extensis/Universal Type Server/applications/`

**NOTE:** When running the `esp-admin.bat` using the Windows command prompt, any non-ASCII characters are displayed as question marks. This can cause issues when displaying items that allow Unicode characters, such as the Bonjour server name.

## Viewing Server Settings with the Command Line Tool

If you are unable to use the web application to initially open the Server Administration web interface, you can use the command line tool to view pertinent server settings. This can happen if you are installing onto a headless server, and there is a port conflict with the default Server Administration port.

To view server settings with the command line tool on Windows:

1. Open the Command Prompt from **Start > All Programs > Accessories > Command Prompt**.
2. At the command prompt enter:  
`cd:\Program Files\Extensis\Universal Type Server\applications\`
3. Enter the following command to list server settings:  
`esp-admin -username administrator -password password -getserversettings`
4. The server lists a number of important server settings, including repository location, backup location, and the ports currently in use. The port listed after `esp.port.admin-web-app=` is the port currently in use for the Server Administration web interface.

To view the server settings with the command line tool in Mac OS X:

1. Launch the Terminal utility from **Applications > Utilities > Terminal**.
2. At the prompt, enter the following:  
`cd "/Applications/Extensis/Universal Type Server/applications/"`
3. Enter the following command to list server settings:  
`sudo ./esp-admin.sh -username administrator -password password -getserversettings`

## Properties Files

Many commands require the inclusion of data in a "properties" file to function properly. These files are basically lists of options and the selected values for those options.

Properties files must be saved as standard ASCII text files, and cannot include any high ASCII characters.

The following is an example of the contents of a properties file

```
esp.backup.location=C:\backups\  
esp.backup.filename=mybackup.tar  
esp.option.backup.serverstate=standby  
esp.option.backup.stayingquiescentmode=false  
esp.option.backup.override=false
```

Properties files are used with the following commands:

- [backupdatastore](#)
- [createdatastore](#)
- [moverepository](#)
- [restoredatastore](#)

## Specifying a Username and Password

Almost every command line operation requires the addition of a username and password that has administrative privileges.

The username and password can be specified in the command line each time a command is executed, or it can be specified as an environment variable.

The two environment variables that can be set are:

- `ESP_ADMIN_USER` which by default is set to the variable `administrator`, the System Administrator Super-user.
- `ESP_ADMIN_PW` which by default is set the variable to `password`, which is the default Super-user password.

The following is an example of specifying the username and password in the Windows command line when adding a serial number:

```
esp-admin ESP_ADMIN_USER ESP_ADMIN_PW -addserialnumber XXXX-1234-ABCD-EFGH-IJKL-MNOP
```

For assistance setting environment variables, see the documentation for your operating system.

## backupdatastore

Use this command to backup the datastore. This command can be used alone, or with a properties file that contains multiple parameters. In addition, the option to dismiss all interactive confirmation prompts is controlled with the `force` option.

```
-backupdatastore -properties properties.txt -force
```

The following properties can be specified in the properties file.

Property	Description	Required
esp.backup.location	The full, complete directory path to where the backup file will be placed. If not specified, the default backup directory is used.	No
esp.backup.filename	Name of the backup file. If not specified, the server will use the default backup file naming convention of <code>yyyy_mm_dd_hh_mm.zip</code>	No
esp.option.backup.serverstate	The only supported value is <code>standby</code> .	No
esp.option.backup.stayinquiescentmode	Specifies that the server be left in quiescent ( <code>standby</code> ) mode after backup. Valid values are <code>true</code> or <code>false</code> . Default value is <code>false</code> .	No
esp.option.backup.overwrite	By default, this command will not overwrite any existing datastore. Setting this property to <code>true</code> , will cause the repository to be overwritten. Default value is <code>false</code> .	No

Windows usage example:

```
esp-admin -username ssmith -password stevespass -backupdatastore -properties properties.txt -force
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -backupdatastore -properties properties.txt -force
```

## canceldatastoreoperation

This command cancels any current datastore operation, and does not have any variables.

```
-canceldatastoreoperation
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -canceldatastoreoperation
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -canceldatastoreoperation
```

## checkdatastoreoperationstatus

This command checks the status of any current datastore operations, and does not have any variables.

```
-checkdatastoreoperationstatus
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -checkdatastoreoperationstatus
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -  
checkdatastoreoperationstatus
```

## createdatastore

This command creates a new datastore using a properties file. Before using this command, be sure to have a backup of your current datastore.

This command relies upon the creation of a [properties file](#). In addition, the option to dismiss all interactive confirmation prompts is controlled with the `force` option.

```
-createdatastore -properties properties.txt -force
```

The following properties can be specified in the properties file.

Property	Description	Required
esp.repository.directory	The top level of the datastore.	Yes
esp.repository.type	The only supported value is <code>vault</code> .	Yes
esp.database.driver	Logical name of database type to use. Currently the only supported value is <code>Embedded</code> .	Yes
esp.database.username	The database user name.	No
esp.database.password	The database password.	No
esp.database.hostport	Host and port used to connect to the database. Formatted <code>host:port</code> , for example: <code>localhost:3487</code> .	No
esp.database.datapath	Path to the database.	No
esp.option.backup.serverstate	The only supported value is <code>standby</code> .	No
esp.option.backup.stayinquiescentmode	Specifies that the server be left in quiescent ( <code>standby</code> ) mode after creating the datastore. Valid values are <code>true</code> or <code>false</code> . Default value is <code>false</code> .	No
esp.option.backup.overwrite	By default, this command will not overwrite any existing datastore. Setting this property to <code>true</code> , will cause the repository to be overwritten. Default value is <code>false</code> .	No

Windows usage example:

```
esp-admin -username ssmith -password stevespass -createdatastore -properties
properties.txt -force
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -createdatastore -
properties properties.txt -force
```

## directorySynchronize

With directory integration, Universal Type Server is bound to a directory service. This command synchronizes Universal Type Server with the directory service.

```
-directorySynchronize
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -directorySynchronize
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -directorySynchronize
```

## forcelogouts

This command forces the logout of a specific user as identified by session ID (or GUID).

To identify a user's session ID, use the [getlogins](#) command. This command returns a list containing the username, long username, IP address of login client, the login time, as well as the necessary session ID which is also known as the user GUID.

```
-forcelogouts sessionID
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -forcelogouts 28203500-FA5D-
8A0A-27BC-E7996E17EDC1
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -forcelogouts
28203500-FA5D-8A0A-27BC-E7996E17EDC1
```

## forcelogoutswithfile

This command forces the logout of a list of users contained within a userlogout text file. The text file must contain one user session ID (or GUID) per line.

To identify a user's session ID, use the [getlogins](#) command. This command returns a list containing the username, long username, IP address of login client, the login time, as well as the necessary session ID which is also known as the user GUID.

```
-forcelogoutswithfile -file userlogout.txt
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -forcelogoutswithfile -file
userlogout.txt
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -forcelogoutswithfile
-file userlogout.txt
```

## getlogins

This command lists all users currently logged in to the Type Server and does not have any variables.

This command returns a list containing the username, long username, IP address of login client, the login time, and the session ID which is also known as the user GUID. The user session ID can be used to force the logout of specific users using the [forcelogouts](#) or [forcelogoutswithfile](#) commands.

```
-getlogins
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -getlogins
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -getlogins
```

## getserversettings

This command displays a list of the current server settings.

```
-getserversettings
```

The following is a list of server properties displayed by this command:

Property	Description
esp.container.autostart	This is the autostart setting of the server. Either enabled or disabled.
esp.core.bonjour.name	The current Bonjour name of the server.
esp.core.repository.location	The location of the server vault.
esp.core.service.backup.directory	Directory where backup files are to be written. This path should allow changes.
esp.core.service.backup.schedule	Backup schedule expression. Expression must adhere to the formats supported by Quartz.
esp.core.service.logging.level	The logging level of the server - error, warn, info, or debug.
esp.core.service.logging.location	Directory where logs are to be written. This path should allow changes.
esp.core.service.state	The current state of the server - started, stopped, or standby.
esp.port.admin-web-app	The Server Administration port, also called the Jetty Web App port.
esp.port.bootstrap-jnp	The Bootstrap JNP Server Bind Address port.
esp.port.http	The Users and Workgroups Administration port. This port is also used for client connection and also called the JBoss HTTP / Web Service port.
esp.port.jmx-pooled	The JMX Pooled Port.
esp.port.jmx-rmi	The JMX RMI Object Port.
esp.port.rmi-naming	The RMI Naming Service port.
esp.port.webservice	The JBoss Webservice port.

Windows usage example:

```
esp-admin -username ssmith -password stevespass -getserversettings
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -getserversettings
```

## moverepository

This command moves the font vault (also called the repository) to a new location. This command relies upon the creation of a [properties file](#).

```
-moverepository -properties properties.txt
```

The following properties can be specified in the properties file.

Property	Description	Required
esp.repository.directory	The top level of the datastore.	Yes
esp.repository.type	The only supported value is <code>vault</code> .	Yes
esp.option.backup.serverstate	The only supported value is <code>standby</code> .	No
esp.option.backup.stayinquiescentmode	Specifies that the server be left in quiescent (standby) mode after moving the datastore. Valid values are <code>true</code> or <code>false</code> . Default value is <code>false</code> .	No
esp.option.backup.overwrite	By default, this command will not overwrite any existing datastore in the target location. Setting this property to <code>true</code> , will cause the repository to be overwritten. Default value is <code>false</code> .	No

Windows usage example:

```
esp-admin -username ssmith -password stevespass -moverepository -properties properties.txt
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -moverepository -properties properties.txt
```

## reapseats

This command synchronously removes any unused client seats that have not synchronized with the server in more that 15 days.

```
-reapseats
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -reapseats
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -reapseats
```

## restoredatastore

**NOTE:** `restoredatastore` is destructive; it will replace your current datastore with the contents of the specified backup. Be sure this is what you want to do before you execute `restoredatastore`.

Use this command to restore a backup copy of the datastore. This command relies upon the creation of a [properties file](#). In addition, the option to dismiss all interactive confirmation prompts is controlled with the `force` option.

```
-restoredatastore -properties properties.txt -force
```

The following properties can be specified in the properties file.

Property	Description	Required
<code>esp.backup.location</code>	Directory of the backup file. If not specified, the default server backup directory is assumed.	No
<code>esp.backup.filename</code>	Name of the backup file.	Yes
<code>esp.repository.directory</code>	The top level of the datastore.	Yes
<code>esp.repository.type</code>	The only supported value is <code>vault</code> .	Yes
<code>esp.database.driver</code>	Logical name of database type to use. Currently the only supported value is <code>Embedded</code> .	Yes
<code>esp.database.username</code>	The database user name.	No
<code>esp.database.password</code>	The database password.	No
<code>esp.database.hostport</code>	Host and port used to connect to the database. Formatted <code>host:port</code> , for example: <code>localhost:3487</code> .	No
<code>esp.database.datapath</code>	Path to the database.	No
<code>esp.option.backup.serverstate</code>	The only supported value is <code>standby</code> .	No
<code>esp.option.backup.stayinquiescentmode</code>	Specifies that the server be left in quiescent (standby) mode after restoring the datastore. Valid values are <code>true</code> or <code>false</code> . Default value is <code>false</code> .	No
<code>esp.option.backup.overwrite</code>	By default, this command will not overwrite any existing datastore. Setting this property to <code>true</code> , will cause the repository to be overwritten. Default value is <code>false</code> .	No

Windows usage example:

```
esp-admin -username ssmith -password stevespass -restoredatastore -properties properties.txt -force
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -restoredatastore -properties properties.txt -force
```

## setautostart

This command sets the whether the Type Server launches automatically when the machine starts. This command can have two variables, either `enabled` or `disabled`.

```
-setautostart value
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setautostart enabled
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setautostart enabled
```

## setbackupdirectory

This command sets the location where backups are stored. The path must a full path and the target location must be writable.

```
-setbackupdirectory fullpath
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setbackupdirectory  
c:\this\is\my\backup\
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setbackupdirectory  
"/Applications/Extensis/Universal Type Server/mybackups/"
```

## setlogdirectory

This command sets the location where log files are stored. The path must a full path and the target location must be writable.

```
-setlogdirectory fullpath
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setlogdirectory  
c:\this\is\my\backup\
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith - password stevespass -setlogdirectory  
"/Applications/Extensis/Universal Type Server/mybackups/"
```

## setlogginglevel

This command sets the logging level of the server and can be set to one of four case-sensitive variables:

- error
- warn
- info
- debug

```
-setlogginglevel value
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setlogginglevel info
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setlogginglevel info
```

## setport

This command is used to set the ports to which clients connect, the Users and Workgroups Administration port (esp.port.http) as well as the Server Administration web interface port (esp.port.admin-web-app).

The values must be between 1 and 65536 and not conflict with any other ports currently in use.

```
-setport portname=value
```

To change the client connection and as well as the Users and Workgroups Administration web interface port, also named the JBoss HTTP / Web Service port, use the following command:

```
esp-admin -username administrator -password password -setport  
esp.port.http=PORT_NUM
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setport esp.port.http=8080
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setport  
esp.port.http=8080
```

To change the Server Administration web interface port, also called the Jetty Web App port, use the following command:

```
esp-admin -username administrator -password password -setport esp.port.admin-  
web-app=PORT_NUM
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setport esp.port.admin-web-  
app=18081
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setport  
esp.port.admin-web-app=18081
```

## setservername

This command sets the name used by Bonjour to advertise to clients.

```
-setservername name
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setservername mysnazzyserver
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setservername  
mysnazzyserver
```

## setstate

Use this command to change the running state of the server. The server can be started, stopped or put into standby mode with the following case-sensitive variables:

- started
- stopped
- standby

```
-setstate value
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setstate stopped
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setstate stopped
```

## tailadminlog

This command displays the most recent activity in the `extensis.admin.log` file and has no variables. This log file is located in the Universal Type Server "logs" subdirectory.

```
-tailadminlog
```

Windows usage example:

```
esp-admin -username ssmith -password stevespass -tailadminlog
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -tailadminlog
```

## About Extensis

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#### Corporate Sales

Web: <http://www.extensis.com/corporatesales/>  
Phone: (800) 796-9798, ask for Corporate Sales

#### Documentation Feedback

Web: <http://www.extensis.com/helpfeedback/>

## Technical Support

Technical Support is available directly through the Extensis website or by telephone.

When contacting technical support, include the following information:

- Your serial number(s)
- Your computer configuration, including operating system, memory, hard drive configuration, etc.
- Your question or a description of the difficulty you're experiencing - what specifically occurs and when
- Your phone number if you want to have our representatives call you.

Take note of any error numbers or messages that display and any other information you think may be relevant.

For answers to frequently asked questions and troubleshooting tips, you can also visit the Extensis website: <http://www.extensis.com/typeserver/>

## Priority Support

If you have an Annual Service Agreement, you are entitled to priority support. Please call the telephone number listed on your agreement to receive support 24 hours a day.

## Online Support

To obtain support online, please fill out the online support form at

<http://www.extensis.com/support/>

Our tech support representatives will respond by phone or e-mail, usually within 24 hours on weekdays.

## Telephone Support

In North America, please call (503) 274-7030

In Europe, please call +44 (0) 1604-654-270

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