Extensis™

UniversalTypeServer® 6

SERVER ADMINISTRATION GUIDE

Contents

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 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™.

If you have just installed Universal Type Server and want to get going quickly, you should do these things:

Log in to the Server Administration application.

1. Open a new browser tab or window.
2. Enter the address of your Type Server, followed by the port number for the Server Administration application. By default, this port is **18081**.
   Example: `http://127.0.0.1:18081`
3. Log in using the account name **administrator** and password **password**.

Enter your license numbers.

1. Click **Licenses** in the list on the left.
2. Enter your serial number and click **Add Serial Number**.
3. If you have a Core Client license, enter that serial number and click **Add Serial Number**.

For further configuration steps, see **Installation Overview** on page 10.

After you configure your server, you should change the administrator account password. Do this in the User Management application.

1. Open a new browser window or tab.
2. Enter the address of your Type Server, followed by the port number for the User Management application. By default, this port is **8080**.
   Example: `http://127.0.0.1:8080`
3. Log in using the administrator account credentials listed above.
4. In the **Workgroups** pane, click **All Users**.
5. In the **Users** pane, select the **Administrator** user account.
6. In the **Details** pane, click the **Account** tab and enter a new password in the **Password** field, then enter it again in the **Confirm Password** field.
   Write your new password down; if you forget it, you will need to contact Extensis Technical Support for assistance in resetting the password.
7. Click **Save**.

For details about using the User Management application, see the Help system in the application.

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 applications: the Server Administration application, the User Management application, and the Universal Type Client. In addition, Enterprise installations have access to the Universal Type Core Client for users that do not have changing font needs.

For detailed instructions about configuring roles, workgroups and users, please see the User Management Guide, or the help system available within the application.

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

New in 6.1.7

- Font Connector for Esko ArtPro+
- QuarkXPress 2018 auto-activation plug-in

New in 6.1

Universal Type Server

- Update to use Java 8 and JBoss 10 to ensure the highest level of security
- Secure server transmissions now utilize TLS v1.

Universal Type Client

- Added auto-activation plug-in and Extensis Font Panel support for Adobe InDesign, Illustrator, and Photoshop CC 2015 (Summer 2016).
- Added auto-activation plug-in support for Adobe InCopy and After Effects CC 2015 (Summer 2016) and QuarkXPress 2016.

User Management

- New report: Font Usage

New in 6.0

Universal Type Server

- New report analytics engine that will help server administrators know everything about their font environment at their fingertips
- Configurable server memory management
- Support for OS X El Capitan

Universal Type Client

- Auto-activation plug-in for Adobe After Effects

User Management

- Enhanced, extensible reporting module

Recent updates

Universal Type Server

- FontLink for Adobe® InDesign® Server allows InDesign Server to connect to your Universal Type Server to include managed fonts in your automated workflow.
- **TurboSync™:** Fonts and metadata replicate to clients up to 27 times faster.
- **Failover configuration:** Enterprise users can set up a second Universal Type Server to ensure maximum up-time with minimum disruption.
- **External SQL database:** Enterprise users can add a high-performance database for user and workgroup maintenance and font usage tracking.
- Fully 64-bit native for improved performance and better system resource utilization.

Universal Type Client

- **Extensis Font Panel:** The Extensis Font Panel allows you to access all of your workgroups directly in Adobe InDesign, Illustrator, and Photoshop CS6 and later.
- **"My Fonts" Workgroup:** Users can now see the fonts in all their workgroups in one place.
- **Font Favorites:** Mark fonts as favorites and easily find them when you need them. Use them to search fonts and create smart sets.
- **Fontspiration:** The Details Panel includes the new Fontspiration tab. Fontspiration displays examples of WebINK fonts designed to inspire you to seek new and unique ways to use typography in your own projects. Click an example to view that example in your Web browser, and from there follow Fontspiration and view the thousands of typography examples gleaned from around the Web.
- **QuarkXPress 10:** Universal Type Client includes an auto-activation plug-in for QuarkXPress 10 and 10.1, and can also clean font caches for the Macintosh version.
- **QuickComp:** QuickComp is a new Preview option that displays your font choices used in a variety of document layouts. Multiple templates are available that mimic brochures, newsletters, and other common design projects.
- **Details Panel:** The Details Panel has been enlarged and moved from the bottom left to the right side of the main window. It displays more details about anything you select in the Workgroups pane, provides shortcuts for QuickFind searches using many popular search criteria, and allows you to directly edit some properties.
- **Color Previews:** You can now set the font and background colors used in the Previews pane. Test color combinations, use them in floating previews, and grab a Font Snapshot.
- Support for Adobe Creative Cloud apps and Typekit fonts.

User Management

- Full Administrator users can now access the User Management application using their standard LDAP credentials.
- **Compliance model:** Universal Type Server uses a "per-machine" licensing model, similar to licenses purchased from most type foundries.
- **Enfocement options:** Enterprise users can choose between strict enforcement, in which fonts are not allowed to be activated beyond the limits of your licenses, or notification, in which you receive an alert whenever a font is used beyond the number of available licenses.
- Map Active Directory groups directly to Type Server workgroups.

System Requirements

For the most up-to-date information about the latest release of Universal Type Server, please visit the **Product Support page** (https://www.extensis.com/support/universal-type-server-6/).

Macintosh Server

- OS X® 10.8 through 10.13
- 2.0 GHz or faster processor
- 2 GB RAM
- 2 GB available hard drive space for application files, plus additional space for fonts

Windows Server

- Windows® Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, or Windows Server 2016
- 2.0 GHz or faster multi-core processor
- 2 GB RAM
- 2 GB available hard drive space for application files, plus additional space for fonts

Enterprise Edition Database Requirements

Enterprise Edition users have the option of utilizing one of these external databases. Use of an external database is *required* with a proxy failover configuration.

- MySQL 5.5 or newer (Macintosh or Windows)
- Microsoft SQL Server 2012 or 2014 (Windows)

Macintosh Universal Type Client

- OS X® 10.8 through 10.13
- 2.0 GHz or faster processor
- 1 GB available hard drive space for application files, plus additional space for fonts
- 100 Mbit/s or faster network connection
- An Internet connection and Safari® 7 or later or the current release of Firefox® or Chrome™ to view Help

Windows Universal Type Client

- Windows® 7, Windows 8, Windows 8.1, or Windows 10
- 2.0 GHz or faster processor
- 1 GB available hard drive space for application files, plus additional space for fonts
- 100 Mbit/s or faster network connection
- An Internet connection and Internet Explorer® 10, Microsoft Edge, or the current release of Firefox or Chrome to view Help

You need to have Internet Explorer installed in order for QuickComp to work properly. It does not need to be your default browser.

Server Administration and User Management

Requirements for any computers that will be used for Server Administration or User Management. These applications can be run remotely.

- Internet Explorer 10 or later or Microsoft Edge (for administering the server from Windows), Safari 7 or later (for administering the server from a Macintosh), or the current release of Firefox or Chrome.
- An Internet connection and one of the above browsers to view Help.
- The current release of Adobe Flash® Player.

Reports

Reports can be viewed from any supported desktop browser.

- Internet Explorer 10 or later (for viewing reports from Windows 7 or later), or
- Microsoft Edge (for viewing reports from Windows 10), or
- Safari 9 or later (for viewing reports from OS X), or
- The current release of Firefox, or
- The current release of Chrome.

Installation Overview

The following is a general overview of the steps required to install and configure Universal Type Server.

1. **Verify server system requirements.**
   Make sure your server meets or exceeds the specifications found at the **Product Support page** (https://www.extensis.com/support/universal-type-server-6/).
2. **Run the installer on the target server computer.**
   You can download the latest version of the installer from the **Product Support page** (https://www.extensis.com/support/universal-type-server-6/). For detailed installation instructions, see **Installing Universal Type Server** on the next page.
   Note that you do not need to install the software on the server's boot partition.
3. **Log in to the Server Administration application.**
   The Server Administration application is browser-based; it will start automatically when the installation is complete. To start it yourself, see **Opening the Server Administration application** on page 14.
4. **Enter your Universal Type Server serial number.**
   See **Universal Type Server Serial Numbers** on the next page.
5. **Set the Bonjour Name (optional).**
   Bonjour makes it easy for users to find your Type Server. See **Setting the Bonjour Name** on page 23.
6. **Check for and resolve port conflicts.**
   Universal Type Server requires several open ports for communication; if any of these are in use by other software then you will need to change them. See **Resolving Port Conflicts** on page 19.
7. **Set any desired server configuration options.**
   This could include:
   - Defining a Backup Plan (see **Defining a Backup Plan** on page 29);
   - Configuring Log Files (see **Log Files** on page 15);
   - Any other necessary server settings.

After installing the server, open the User Management application. From here, you can configure workgroups and roles, then add users. These topics are covered in the User Management Guide and help system.

Installing Universal Type Server

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

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 **Product Support page** (https://www.extensis.com/support/universal-type-server-6/).

After the installer runs, the installation application starts your web browser and opens the Server Administration application.

> **NOTE**
>
> You can administer the server using a web browser on a remote computer. 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; see **Viewing Server Settings with the Command Line Tool** on page 59.

In the Server Administration application, log in using the default Server Administrator username and password:

Server Administrator username: **administrator**

Server Administrator password: **password**

You should change the password in the User Management application before adding any other users to the Type Server.

Universal Type Server Serial Numbers

Universal Type Server is licensed on a concurrent user model: your license allows a certain number of users to connect at the same time (concurrently).

To begin using Universal Type Server, you must first enter your product's serial numbers using the Server Administration application.

NOTE: Your serial numbers are listed in your product receipt email and are also available by logging in to your account at the **Extensis website** (https://secure.extensis.com/loginpage).

To serialize the server:

1. Log in to the Server Administration application.
2. Click **Licenses**.
3. Enter the Client serial number into the field and click **Add Serial Number**.
4. If you have a license for Type Core Clients, enter that serial number and click **Add Serial Number**.
5. If you have an Enterprise license, enter that serial number and click **Add Serial Number**.

Modules

Universal Type Server allows you to extend functionality with add-in Modules.

Typically, you will need to license your server and install the module on the Universal Type Server system before you can enter the license for the module.

See the details for your specific module for complete installation and licensing instructions.

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 the **Uninstall Universal Type Server** application icon and follow the instructions.
3. To 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.

To remove the Universal Type Server application on Windows Server 2012:

1. Choose **Start > Control Panel**.
2. Click **Programs**, then click **Programs and Features**.
3. Select **Universal Type Server**.
4. Click **Uninstall**.
5. To remove the font repository and backup files from the default installation location, delete all files from the directory `Program Files/Extensis/Universal Type Server/`.

> **NOTE**
>
> Your font repository and backup files may be in a custom location. You can delete these files if you no longer need them.

Upgrading From a Previous Version

> **IMPORTANT**
>
> - Please run a complete backup before attempting your upgrade.
>   Users of Universal Type Server 5 can upgrade directly to version 6. Users of earlier versions must upgrade to version 5 first.
>   Universal Type Server downloads are available from:
>   - Windows (`http://bin.extensis.com/UTS-5-2-1-W.zip`)
>   - Mac (`http://bin.extensis.com/UTS-5-2-1-M.zip`)
> - 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 **Converting Between Database Types** on page 41.

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.

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

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

1. Open your web browser and start the Server Administration application.
2. Under **Datastore** on the left, click **Backups**.
3. Note your current backup location, and click **Backup now**.

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.

NOTES

- During the upgrade process, all users will be disconnected and the server will be placed in Standby mode. After upgrading the server, change the Access State to Normal. Users will need to log in to the Type Server again.
- The database upgrade might take some time to finish. 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 an external database and connect to Directory Services as required.

Deploy new Universal Type Client

The new version of Universal Type Server includes a new version of Universal Type Client. If you have deployed Universal Type Client 5, you can allow your users to continue with this version. However, many new features and performance enhancements will not be available if you do not upgrade users to the latest client. This is especially true if you are going to rely on Type Server to report on font activity or enforce font license compliance: older Type Clients do not provide the information that Type Server requires for these features.

If you are still using Universal Type Client 4, you must update users to a newer version; we recommend updating to the latest version of Universal Type Client 6.

You do not need to upgrade users all at once, but we strongly recommend that you upgrade users to the latest Universal Type Client at your earliest convenience.

Server Status

Opening the Server Administration application

The Server Administration application is where the Server Administrator is able to:

- start, stop, and pause the server;
- change the server's Bonjour name;
- examine and change port settings;
- manage memory allocation;
- view connected clients;
- configure and restore backups;
- locate, move, or create a new datastore;
- manage server serial numbers.

To log in to the Server Administration application:

1. Open a supported web browser.
   Recent versions of most popular browsers with the latest Adobe Flash plug-in are supported.
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 **Web Admin port**). For example: `http://192.168.0.1:18081` or `http://localhost:18081`.
3. Enter the administration username and password. The default Server Administrator username and password are **administrator** and **password**.

NOTES

- The **Password** field is case-sensitive, but the **Username** field is not.
- It is very important to change the Server Administrator password as soon after installation as possible.
- The default location of the User Management application is the same IP address, with the port number **8080**. For example: `http://localhost:8080`

Log Files

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

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

- User login and logout
- 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

On Windows, the default location for log files is:

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

On Mac OS X, the default location for log files is:

```
Applications/Extensis/Universal Type Server/Logs
```

These are the logs that are important for server administration:

Log file name	Purpose
`extensis.admin.log`	Contains all log messages displayed in the Server Activity window of the Server Administration Status page.
`extensis.server.log`	This is the main server log. Changing the server logging level affects what is recorded in this file.
`server.log`	Contains very verbose logging of server activity.
`boot.log`	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:

Log Level	What Gets Logged
`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. Itis not recommended unless specifically requested by your support representative.

To change the server logging level:

1. Open the Server Administration application (see **Opening the Server Administration application** on page 14).
2. Click **Logging**.
3. Choose a new level from the **Logging level** drop-down menu, then 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 application (see **Opening the Server Administration application** on page 14).
2. Click **Logging**.
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 new paths:
   Windows: `C:\Universal Type Server\logs`
   Macintosh: `/Volumes/Macintosh HD/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 text editor or word processor.

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 application (see **Opening the Server Administration application** on page 14).
2. Click **Logging**.
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
UTS HTTP / Web Service	8080
UTS HTTPS / Web Service	8443
UTS CLI	9999
Web Admin HTTP	18081
Web Admin CLI	19999
Report Service	8880

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.

NOTE: The **Report Service** port is not included in the Server Administration application's **Ports** page. If you have a conflict with the default port, contact Extensis Technical Support for assistance. (See **Technical Support** on page 75).

Ports for External Communication

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

- **UTS HTTP/Web Service port:** Default port number **8080**
- **UTS HTTPS/Web Service port:** Default port number **8443**
- **Web Admin port:** Default port number **18081**

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

IMPORTANT

If you are configuring a Primary and Secondary server in a failover configuration, be sure the ports are set to the same values on both systems. See **Configuring Automatic Failover Services** on page 42 for more information.

UTS HTTP/Web Service port

This is the port where users connect to your server, as well as the port where administrators open the User Management application. 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 UTS HTTP / Web Service port number. If using a Bonjour name, a port is not required.
- Client account name and password.

User Management

To connect to the User Management application, 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/`

UTS HTTPS/Web Service port

When the secure connection option is enabled, administrators connect to the User Management application through the UTS HTTPS/Web Service Port.

The default setting for this port is `8443`.

The port for secure connections is only used to connect with the User Management application. With secure connections enabled, when administrators attempt to connect with the UTS HTTP/Web Service port, they are automatically redirected to the UTS HTTPS/Web Service port.

For example, an administrator can enter `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.

Web Admin port

This port is used to open the Server Administration application. 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`.

Example: `http://123.45.34.12:18081/`

Ports for Internal Server Communication

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

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 computer, 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
UTS CLI	9999
Report Service	8880

NOTE: The **Report Service** port is not included in the Server Administration application's **Ports** page. If you have a conflict with the default port, contact Extensis Technical Support for assistance. (See **Technical Support** on page 75).

Resolving Port Conflicts

The Universal Type Server installer checks to see if the default server administration port **18081** (Web Admin Port) is bound to any other application. If it is already taken, then another port is chosen randomly before the Server Administration application starts.

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 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.

NOTE: The **Report Service** port (default **8880**) does not have an entry on the **Ports** page. If you have a conflict and need to change this port's value, contact Extensis Technical Support (see **Technical Support** on page 75).

To update port numbers:

1. Open the Server Administration application (see **Opening the Server Administration application** on page 14).
2. Under **Settings** on the left, click **Ports**.
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 (see **Stopping, Starting, and Restarting the Server** on page 22).

Opening Ports in the Windows Firewall

To open ports for server administration and client connection:

1. Open the Windows Control Panel.
2. Double click the **Windows Firewall** icon.
3. Click the **Change Settings** option.
4. If prompted, click **Continue** to allow this action.
5. Click the **Exceptions** tab of the **Windows Firewall Settings** dialog, then click **Add Port**.
6. In the **Add A Port** dialog, enter the following information and click **OK**.
   - Name: Universal Type Server User Management
   - Port: **8080**
   - Protocol: TCP
7. Click **Add Port** again to add a second port. Enter the following information and click **OK**.
   - Name: Universal Type Server System Administration
   - Port: **18081**
   - Protocol: TCP
8. Click **OK** to accept the new settings.

Security Concerns

The Universal Type Core communicates with the Type Server using HTTP through the JBoss HTTP port (see **Ports for External Communication** on page 17).

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 (see **Ports for External Communication** on page 17).

Implementing a Secure Connection

A secure connection provides encrypted communications between Universal Type Server and the computer 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 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 User Management application. 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 `standalone.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 User Management application. 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, you can obtain a one from **Verisign** (http://www.verisign.com/ssl/), **GoDaddy** (http://www.godaddy.com/ssl/ssl-certificates.aspx), or other Certificate Authority.

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:

Windows: `C:\Program Files\Extensis\Universal Type Server\applications\jboss\standalone\configuration\uts.keystore`

Macintosh: `/Applications/Extensis/Universal Type Server/applications/jboss/standalone/configuration/uts.keystore`

Edit the standalone.xml file

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

To add the security certificate:

1. Open the `standalone.xml` file from the following location with a text editor such as Notepad or TextEdit.
   Windows: `C:\Program Files\Extensis\Universal Type Server\applications\jboss\standalone\configuration\standalone.xml`
   Macintosh: `/Applications/Extensis/Universal Type Server/applications/jboss/standalone/configuration/standalone.xml`
2. To change the name and location of your security certificate, search for the `certificate-key-file` 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.
   For example, the default entry in `standalone.xml` looks like this: `certificate-key-file="${jboss.server.base.dir}/configuration/uts.keystore"`
   If you have moved the security certificate file, enter its complete path between the quote marks.
   Windows example: `certificate-key-file="C:\Users\me\certificates\my_uts_cert.keystore"`
   Macintosh example: `certificate-key-file="/Users/me/Documents/my_uts_certificate.keystore"`
3. To enter the password of your security certificate, search for the `password` entry. Edit the value between the quote marks to match your security certificate password.
   `password="uts_ssl"`
4. Save and close the `standalone.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.
   Windows: `C:\Program Files\Extensis\Universal Type Server\applications\jboss\standalone\deployments\uts.ear\uts.war\WEB-INF\web.xml`
   Macintosh: `/Applications/Extensis/Universal Type Server/applications/jboss/standalone/deployments/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.
4. You will need to restart your Universal Type Server for the change to take affect.

Automatically Starting the Server

If you need to restart the physical server, 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 application (see **Opening the Server Administration application** on page 14).
2. Click **System**.
3. Choose **Autostart > Enabled**.
4. Click **Update server**.

If the Autostart preference is disabled, administrators are still able to connect to the Server Administration application 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 and restores, 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 your web browser and start the Server Administration application.
3. Click **System**.
4. Choose **Access state > standby**.
5. Click **Update server**.
   The server will be placed in standby mode.
6. Perform any necessary server maintenance.
7. Click **System**.
8. Choose **Access state > normal**.
9. Click **Update server**.
   The server resumes normal access and displays the Status page when complete.

Stopping, Starting, and Restarting the Server

If you need to stop, start, or restart Universal Type Server, use the Server Administration application. This ensures that all processes are properly shut down and restarted.

When you shut down the server, connected clients are automatically put in Offline mode. This means that client computers will only have access to fonts that are cached locally on their computer. Which fonts are cached depends mostly upon the font replication mode that is enabled for each user. See the User Management Guide for more information.

Before you shut down or restart your Type Server, we recommend that you notify users so they can prepare to work offline.

To stop Universal Type Server:

1. Start your web browser and connect to the Server Administration application (see **Opening the Server Administration application** on page 14).
2. Under **Settings** on the left, click **System**.
3. Choose **Running state > stopped**.
4. Click **Update server**.

When the server has stopped, the Status page will be displayed.

To start the server:

1. Start your web browser and connect to the Server Administration application.
2. Click **System** again.
3. Choose **Running state > started**.
4. Click **Update server**.

When the server has finished starting, the Status page will be displayed.

To restart the server:

Follow the steps above to stop the server, then follow the steps to start the server. Be sure the **Status** page shows the server has stopped before attempting to start it.

Starting automatically

If you need to restart the physical server hardware, you should enable the Autostart preference (see **Automatically Starting the Server** on the previous page) for the Type Server to automatically launch and serve fonts to clients. If this preference is disabled, you will need to start the Type Server manually.

Setting the Bonjour Name

Bonjour is a technology from Apple Inc. that enables users to easily locate Universal Type Server on the network. 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 application (see **Opening the Server Administration application** on page 14).
2. Click **System**.
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 (see **Stopping, Starting, and Restarting the Server** on the previous page).

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, choose **Server > Browse Local Servers**.
4. Select your new Bonjour name from the list and click **OK**.
5. Enter your username and password and click **Connect**.

Memory allocation

If you are using Universal Type Server with a large number of LDAP users or a large number of workgroups, you may find it necessary to increase the amount of memory available to the Type Server. This is especially important if your server logs have Java Heap Space errors.

To change the server memory allocation:

1. Click **System**.
2. Enter the amount of memory for the Java Virtual Machine in the **Memory Allocation** field. ***IMPORTANT:*** Select a size that is lower than the amount of physical memory in the server system. For example, if your server has 8GB of RAM, do not attempt to allocate more than 6GB to the Type Server.
3. Click **Update server**.

The Universal Type Server will restart.

Locking Server Administration

The Server Administration application 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 application from another computer.

To lock the Server Administration Status page:

1. Open the Server Administration application (see **Opening the Server Administration application** on page 14).
2. In the **Status** area, click the **Lock** icon.

To unlock the server, click the lock icon and log in.

Client Connections

Viewing Connected Users

Administrators can view a high level list of connected users in the **Users** page of the Server Administration application. 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. Choose:

- **User Type > All** to display both Type Client and Core Client conenctions.
- **User Type > Full** to display only Type Client connections.
- **User Type > 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 User Management application.

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 User Management application.

To force user logout:

1. Open your web browser and start the Server Administration application.
2. Click **Users**in the menu at the left.
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 **Server > Forget Connection**. 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.

Datastore

Creating a New Datastore

> **WARNING**
>
> When you create a new datastore, your current datastore will be deleted. You may wish to back up your existing datastore and move it to a safe location before you create a new one. For instructions, see **Backing Up the Datastore** on page 29.

The datastore consists of two parts: the database and the vault. The database location is fixed (whether you are using a native database or a SQL-based external database), but the vault can be moved to a new location.

The default location for the vault depends on your operating system:

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

For details about specifying a new vault location, see **Vault Location Requirements** on the next page.

To create a new datastore:

1. Log in to the Server Admin application.
2. Click **Move/New** under **Datastore** in the navigation menu on the left.
3. Enter the full path where you want to create a new vault in the field labeled **New repository location**.
   Universal Type Server will create any folders that don't already exist.
   NOTE: The database component of the datastore is always in the same location, regardless of whether you are using the built-in database or a SQL-based solution.
4. Click **New datastore**.
5. Click **OK** to confirm.
   The Type Server will go in to standby mode, then it will automatically start when the operation is complete.

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

> **IMPORTANT**
>
> If you create a new vault on a network share, that share must be accessible in read/write mode to the account that your Type Server runs under. For Universal Type Server installations on Windows, the share must be specified with a UNC path, and the Type Server must be running under a domain user account with full read/write access to the share. For Universal Type Server running on OS X, the share must be specified as a POSIX path.

Moving the Vault

The vault is the part of Universal Type Server's datastore that holds all the fonts hosted by your Universal Type Server. Because it stores a copy of each unique font, your vault can become very large.

The vault is initially created on the same volume where you installed Universal Type Server. If you think that your vault will need more space, you can move it to a new drive.

Moving the vault can take several minutes, depending on how big it is. You should move it when users don't need to access your Universal Type Server.

Vault Location Requirements

The new location for the vault must:

- Be specified by the full path to the vault folder (not a relative path such as `..\path_to_vault`);
- Always be accessible to the Universal Type Server;
- Grant read/write access to the computer account under which Type Server runs;
- Be specified by a UNC path (Windows) or a POSIX path (Mac OS X) if it is on a network volume.

You should use a folder dedicated to the vault, because Universal Type Server will create several folders inside it. We suggest naming the vault folder "vault."

Be aware that if you locate your vault in a folder that others use, anyone that has access to that folder may inadvertently corrupt the vault's contents.

WARNING

- You should only move your vault to a network location if you are using a failover configuration (see **Configuring Automatic Failover Services** on page 42).
- You should not move your vault to a local volume that is removable (such as an external USB drive).

Windows vault path examples

`C:\Users\jsmith\documents\vault\`

`D:\shared_files\font_vault\` (`D:` is a local drive)

`\\NetworkFiles\Design\vault\` (`NetworkFiles` is the server name, `Design` is a shared volume on the server, and `vault` is the vault folder)

Mac vault path examples

`/Users/jdoakes/font vault` (Universal Type Server should be running under the `jdoakes` login account)

`/Volumes/Marketing/misc/vault` (`Marketing` is a shared network volume, `misc` is a folder on the volume, and `vault` is the vault folder)

If you are running Universal Type Server on Windows:

- If you are using a network volume to store your vault, do not use a mapped drive path (such as `Z:\path_to_vault`) as the path you enter in Universal Type Server. Instead, use the complete UNC path (such as `\\remote_server\shared_volume_name\path_to_vault`).
- Universal Type Server must be running under a domain user account that has full read/write access to the network vault location.
- If your vault is located on a Mac OS X system, be sure to enable Windows (SMB) sharing for the vault.

If you are running Universal Type Server on Mac OS X:

- If you are using a network volume to store your vault, enter the POSIX path to your vault (such as `/Volumes/shared_volume_name/path_to_vault`) in Universal Type Server.
- If you mount more than one network volume with the same name as the volume that your vault is on (`shared_volume_name` in the example above), be aware that the order in which the volumes are mounted may make it impossible for Universal Type Server to find your vault. To be safe, only mount volumes with unique names. If you must mount network volumes that have identical names, be sure to always mount your vault's volume first.

To move your vault to a new location:

1. Log in to the Server Admin application.
2. Click **Move/New** under **Datastore** in the navigation menu on the left.
3. Enter the full path where you want to move the vault in the field labeled **New location for vault**. Universal Type Server will create any folders that don't already exist.
4. Click **Move vault**.
   The Type Server will go in to standby mode, then it will automatically start when the operation is complete.

Backing Up and Restoring

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, 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.

> **IMPORTANT**
>
> Backups must be created in an existing folder location on the Universal Type Server computer. Backing up the server to network locations, including NFS-mounted or UNC accessible paths, ***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 application.

Backing Up the Datastore

While you can back up Universal Type Server's data using other software, we recommend that you use the built-in backup utility. This allows you to quickly restore or replicate an entire Universal Type Server database, including all fonts and user information, on a new system if you need to.

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

To manually back up the datastore:

1. Open your web browser and start the Universal Type Server Administration application.
2. Under **Datastore** in the menu on the left, click **Schedule backups**.
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.
   Enter the full path; do not use relative paths, and be sure to include a drive letter on Windows.
   The following are examples of appropriate paths:
   Windows: `C:\Universal Type Server\backups`
   Macintosh: `/Volumes/Macintosh HD/backups`
4. Click **Update server**.
5. Under **Datastore** in the menu on the left, click **Backups**.
6. Click **Backup now**.

To configure automatic backups:

> **NOTE**
>
> For automatic backups, it is best to set backup 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.

1. Open your web browser and start the Universal Type Server Administration application.
2. Under **Datastore** in the menu on the left, click **Schedule backups**.
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.
   Enter the full path; do not use relative paths, and include a drive letter on Windows.
   The following are examples of appropriate new paths:
   Windows: `C:\Universal Type Server\backups`
   Macintosh: `/Volumes/Macintosh HD/backups`
4. Enter the number of backup files to retain in the **Retained backups** field.
   For the highest level of data security, it is a good idea to keep multiple backups.
5. Choose the time and days for backing up that will cause the least amount of user disruption.
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 your web browser and start the Server Administration application (see **Opening the Server Administration application** on page 14).
2. Under **Datastore** on the left, click **Backups**.
3. Enter the full path and filename of the backup file in the **Restore** field.
   Enter the full path; do not use relative paths, and include a drive letter on Windows.
   The following are examples of appropriate paths:
   Windows: `C:\Universal Type Server\backups\2008_02_18T10_00_00_156Z.tar`
   Macintosh: `/Volumes/Macintosh HD/backups/2008_02_18T10_00_00_156Z.tar`
4. Click **Restore datastore**.
5. Click **OK** to confirm the restore.

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 and removing fonts, is done directly in the Universal Type Client.

Universal Type Client System Requirements

For the most up-to-date information about the latest release of Universal Type Client, please visit the **Product Support page** (https://www.extensis.com/support/universal-type-server-6/).

Macintosh Universal Type Client

- OS X® 10.8 through 10.13
- 2.0 GHz or faster processor
- 1 GB available hard drive space for application files, plus additional space for fonts
- 100 Mbit/s or faster network connection
- An Internet connection and Safari® 7 or later or the current release of Firefox® or Chrome™ to view Help

Windows Universal Type Client

- Windows® 7, Windows 8, Windows 8.1, or Windows 10
- 2.0 GHz or faster processor
- 1 GB available hard drive space for application files, plus additional space for fonts
- 100 Mbit/s or faster network connection
- An Internet connection and Internet Explorer® 10, Microsoft Edge, or the current release of Firefox or Chrome to view Help

You need to have Internet Explorer installed in order for QuickComp to work properly. It does not need to be your default browser.

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

If a user chooses **Server > Go Offline**, fonts are available depending on their font replication mode setting.

- **All:** The user has access to all fonts in their workgroups.
- **On-Demand Local Cache:** The user has access to any fonts that they have previously used. Any fonts that they have ever previewed or activated reside in the cache.
- **On-Demand:** The user has 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:

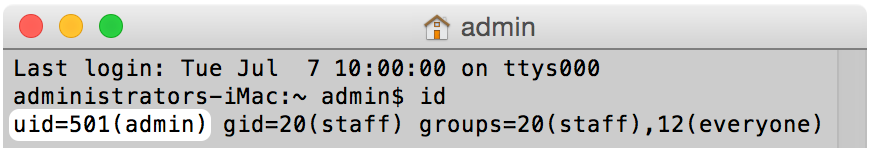
- The type cache is the storehouse for all fonts downloaded from the server. The cache's structure varies by platform. For the Mac OS X client, the **`UniversalType.typecache`** file is a bundle that contains all fonts. On Windows, font files are stored within a directory named **`cache`**.
- **`UniversalType.db`**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

> **WARNING**
>
> Deleting or moving any part of the client cache may render the application inoperable. Contact Extensis Technical Support before attempting to alter the client cache in any way.

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 OS X to each user account. The first user account on the computer is 501, followed by 502, 503, and so on. To determine the **`uid`** for the current user, open a Terminal window and enter the **`id`** command.



Windows 7, 8, 8.1, and 10: `C:\Users\<username>\AppData\Local\Extensis\UTC\cache\`

To open this directory on Windows 8, 8.1, or 10, press **WIN+X** to open the system menu, click **Search**, type the environment variable **%LOCALAPPDATA%**, then press **ENTER**.

To open this directory on Windows 7, click the **Start** menu, type **%LOCALAPPDATA%** into the **Search** field, then press **ENTER**.

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 mangers, 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 open on startup or login and then restart your computer.

On Mac OS X, it is important to disable two preferences within the Font Book application. The following preferences affect system behavior and can interfere with Universal Type Client:

- **Automatic font activation:** This option interferes with professional font mangers 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. This option is present in all versions of Font Book.
- **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. This option is only present in Font Book versions included with OS X 10.8 and earlier.

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 computer. 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 is started when the user logs in to their computer. You can stop the Type Core from the Universal Type Client preferences.

To stop the Type Core:

1. Start the Universal Type Client.
2. Choose **Universal Type Client > Preferences** (Mac) or **Edit > Preferences** (Windows).
3. Click the **FMCore** tab in the Preferences dialog.
4. Click **Stop FMCore**.
5. When asked if you are sure, click **Stop FMCore**.

When you stop the Universal Type Core, font management is disabled, and all active fonts are deactivated. Generally, the only fonts that will be available for use on the computer will be the fonts protected by the operating system.

Client License Management

Universal Type Server uses a machine-based licensing model. The number of client connections allowed is encoded into your Type Server serial number.

You can see how many users are connected, the associated IP addresses, and unique computer identification in the **Users** panel in the Server Administration application. The **Licenses** panel displays your serial numbers, as well as the number of client connections allowed.

How client connections are counted

For environments where more than one user connects using the same computer, only one client license is consumed. This allows an environment that may have many users on a computer 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 computer.

Conversely, if a user logs in to Universal Type Server from two separate computers, 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 computer.

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 freed and available for another user. 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 a user to make that connection available for another user, select the user from the **Users** panel of the Server Administration application and click **Force Logout Selected Users**.

Enterprise Features

The Enterprise version of Universal Type Server provides extended capabilities for organizations with large font management and compliance needs. The additional and enhanced features available to Enterprise users are:

- External SQL database connection
- Automatic Failover Services
- Font license compliance enforcement
- Font usage and compliance reporting

Font usage and licensing is managed through the User Management application.

Upgrading to Enterprise

When you are ready to upgrade from Universal Type Server Professional to Universal Type Server Enterprise, you should back up your datastore.

Click **Licenses** and enter your Enterprise Module serial number, then click **Add Serial Number**.

External SQL Database

Rather than store the Universal Type Server database in the native embedded database, Enterprise users have the option to store all of the required data in an external SQL database. You may want to do this if:

- Your company maintains a dedicated database server for data management and centralization purposes.
- 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 scalability of your server.

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

External Database Requirements

Universal Type Server Enterprise supports the following SQL database servers:

- Microsoft SQL Server 2012 or 2014 (Windows)
- MySQL 5.5 or later (OS X or Windows)

NOTE: While it may be possible to use Universal Type Server with other versions of these databases, no others have not been tested and cannot be supported.

Hardware recommendations for an external SQL database

- For best performance, your database server should be configured on a separate server-grade computer from your Universal Type Server.
- In general, faster processor cores, faster memory, a faster disk interface, faster hard disk, and faster network connection will yield optimal performance.
- If possible, your database software and database should be installed on a separate physical disk from the database server's operating system.
- Follow these system requirements or recommendations for your particular database:
  - Microsoft SQL Server 2012: http://msdn.microsoft.com/en-us/library/ms143506(v=sql.110).aspx
  - Microsoft SQL Server 2014: http://msdn.microsoft.com/en-us/library/ms143506(v=sql.120).aspx

  MySQL does not publish specific system requirements for the database server itself. See http://dev.mysql.com/doc/workbench/en/wb-requirements-hardware.html for requirements for the highly-recommended MySQL Workbench.

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 for **Converting Between Database Types** on page 41. 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, we recommend installing your database server on a separate system from Universal Type Server. While it is possible to install the database server on the same hardware, 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 `Latin1_General_BIN2` collation for MS SQL Server. For MySQL, leave collation as `Server Default`.

For detailed assistance setting up MySQL on Mac OS X, see **Installing MySQL on Mac OS X** on page 38.

Open a port in the firewall

If you are using a firewall on the computer 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 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.

Connect Universal Type Server to the empty SQL database

1. Open the Server Administration application (see **Opening the Server Administration application** on page 14).
2. In the Datastore area, click **Database**.
3. Click the **Database Type** drop-down menu and 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 computer 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 Universal 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
`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 computer 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 **Status** in the Server Administration application. 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 **External Database Error Messages** on page 42 for solutions to common issues.

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

Installing MySQL on Mac OS X

Most of these instructions require administrator access. You should log in to the computer using an account with administrator privileges.

> **NOTE**
>
> These instructions refer to MySQL Community Server, the free community-supported version of MySQL. Your organization may prefer a commercial version of MySQL; for more information, visit http://www.mysql.com/products/.

Download and Install MySQL Server

1. Download the MySQL Community Server from http://www.mysql.com/downloads/mysql/. Choose a DMG Archive (Disk Image) for your version of Mac OS X (10.5 or 10.6) and processor architecture (x86, 32-bit or 64-bit).
2. Double-click the downloaded file to mount the disk image as a virtual disk. The DMG contains three components that must all be installed.
3. To install MySQL, double-click the MySQL installer package and follow the instructions to complete the installation.
4. When the MySQL installation is complete, double-click MySQLStartupItem.pkg to install the startup item.
5. Double-click MySQL.prefPane to install the MySQL Preference Pane.

You can find detailed installation instructions online at http://dev.mysql.com/doc/refman/5.5/en/macosx-installation-pkg.html.

Download and Install MySQL Workbench

MySQL Workbench is a powerful graphical front end for creating and administering MySQL databases.

1. Download MySQL Workbench from http://www.mysql.com/downloads/workbench/.
2. Double-click the DMG file that you downloaded. This mounts and opens a virtual disk named MySQL Workbench.
3. Drag the MySQLWorkbench icon into your Applications folder.

> **NOTES ABOUT MYSQL WORKBENCH**
>
> - The interface works something like a modern web browser: some functions will open a new tab inside the main window to display the controls needed to complete the function. To close the tab, move your mouse pointer to the tab, then click the X icon that appears there.
> - MySQL Workbench uses the term *schema* synonymously with the term *database*.

Create a Database

Create a Configuration File

Before you can create a server instance, you need to create a local MySQL configuration file. The easiest way to do this is to copy a sample file that comes with MySQL.

1. Open the Terminal application.
2. Type `cd /usr/local/mysql/support-files/` then press **RETURN**.
3. Type `sudo cp my-huge.cnf /etc/my.cnf` then press **RETURN**.
4. If you are prompted for a password, type your login password and press **RETURN**.
5. Type `exit` and press **RETURN**, then quit Terminal.

Create a Server Instance

1. Make sure MySQL is running. Open **System Preferences**, click the **MySQL** icon, and click **Start MySQL Server**.
2. Start MySQL Workbench.
3. Under **Server Administration**, click **New Server Instance**.
   This starts a step-by-step wizard that helps you create the server instance.
4. In the **Specify Host Machine** panel, choose **localhost** and click **Continue**.
5. In the remainder of the setup panels, keep the default settings and click **Continue** until you reach the final panel.
6. In the **Complete Setup** panel, click **Finish**.
   This will add an icon to the **Connections** list under **SQL Development** on the left, and add an icon to the **Servers** list under **Server Administration** on the right.
7. Double-click the new icon under **Server Administration**. This opens an **Admin** tab, where you will configure user accounts on the server.
8. Click **Users and Privileges** on the left under **Security**.
   There may already be several accounts listed here; you can ignore them but do not delete them.
9. Under **User Accounts**, click **Add Account**.
10. In the **Account Details Login** panel, enter this information:
    Login name: `typesql`
    Password: `sqltype`
    Confirm password: `sqltype`
    Limit Connectivity to Hosts Matching: `localhost`
11. Click **Administrative Roles.**
12. In the list of roles, check **DBA**, then click **Apply**.
13. Click **Add Account** and create another account with the same details and roles except use `127.0.0.1` instead of `localhost` for **Limit Connectivity**.

> **NOTE**
>
> The accounts for `localhost` and `127.0.0.1` allow access to the MySQL Server using the `typesql` login from the computer that is running MySQL Server. If you want to access this login from another computer, such as the computer running Universal Type Server, then repeat steps 9 through 12 using the same **Login name**, **Password**, and **Administrative Roles**, but use the IP address of the other computer for **Limit Connectivity**.

14. Close the **Admin** tab.

Add a Database

1. Double-click the **localhost** icon under **SQL Development** on the left.
   This will open the **SQL Editor** tab. The panel on the left lists the current schemas, or databases.
2. Right-click in the space below the last database in the list and choose **Create Schema** from the shortcut menu.
3. In the **Schema** window, enter a schema name.
4. On the **Default Collation** menu, choose `utf-8 - default collation`.
5. Click **Apply**.
   This opens the **Apply SQL Script to Database** window.
6. Click **Apply** again.
7. Make a note of the success state of your script, then click **Close** in the **Apply SQL Script** window.
8. If your script was not successful, try again, making sure there are no illegal characters in the database name.
   Otherwise, click **Close** in the **Schema** window.
9. Close the **SQL Editor** tab.

Set the user permissions

1. Double-click the icon under **Server Administration** on the right.
2. Click **Users and Privileges** on the left under **Security**.
3. Click the **Schema Privileges** tab at the top of the **Users and Privileges** panel.
4. Select the **typsql** user in the **Users** list on the left.
5. Click **Add Entry** on the right.
6. In the **Host** section of the **New Schema Privilege Definition** dialog, click **Selected host** and choose **127.0.0.1** from the pop-up menu.
7. In the **Schema** section, click **Selected schema** and select the schema you created in the section above.
8. Click **OK**.
9. Click **Select "ALL"** at the bottom left of the **Schema Privileges** panel, then click **Save Changes**.
10. Click **Add Entry** again.
11. Click **Selected host** and choose **localhost** from the pop-up menu.
12. Click **Selected schema** and select the schema you created in the previous section.
13. Click **OK**.
14. Click **Select "ALL"**, then click **Save Changes**.

> **NOTE**
>
> These steps add permissions for the `typesql` user accessing the MySQL Server from the computer that MySQL is installed on. If you added access for other computers in the **Create a Server Instance** section above, then repeat steps 10 through 14 to set permissions for each of those computers as well; choose the appropriate IP address from the **Selected host** pop-up menu.

15. Choose **File > Quit**.

Converting Between Database Types

With Universal Type Server Enterprise and an appropriate SQL database server installed, converting between two different database types is the relatively simple process of backing up and restoring.

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 out of 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. Under **Datastore** on the left, click **Backups**.
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 (see **Installing an External Database** on page 36). 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 your web browser and start the Server Administration application.
2. Under **Datastore** on the left, click **Database**.
3. Choose **Database Type > PostgreSQL**.
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 for restoring a backup (see **Restoring a Backup** on page 30). 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 application 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** below 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 application, as well as included in the `extensis.admin.log` file.

To view server status:

1. Open your web browser and start the Server Administration application.
2. Click **Status** in the menu on the left to display the server status page. The status window displays the `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.

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.

Configuring Automatic Failover Services

Enterprise users can configure a system to maximize server uptime. By setting up a simple failover system, you gain:

- Maximum server uptime
- Data consistency
- Seamless client switching when needed
- A failover license is included with the Enterprise installation

If the primary Type Server fails, client requests are automatically and seamlessly routed to the secondary Type Server. End users will not be aware of any change in the system.

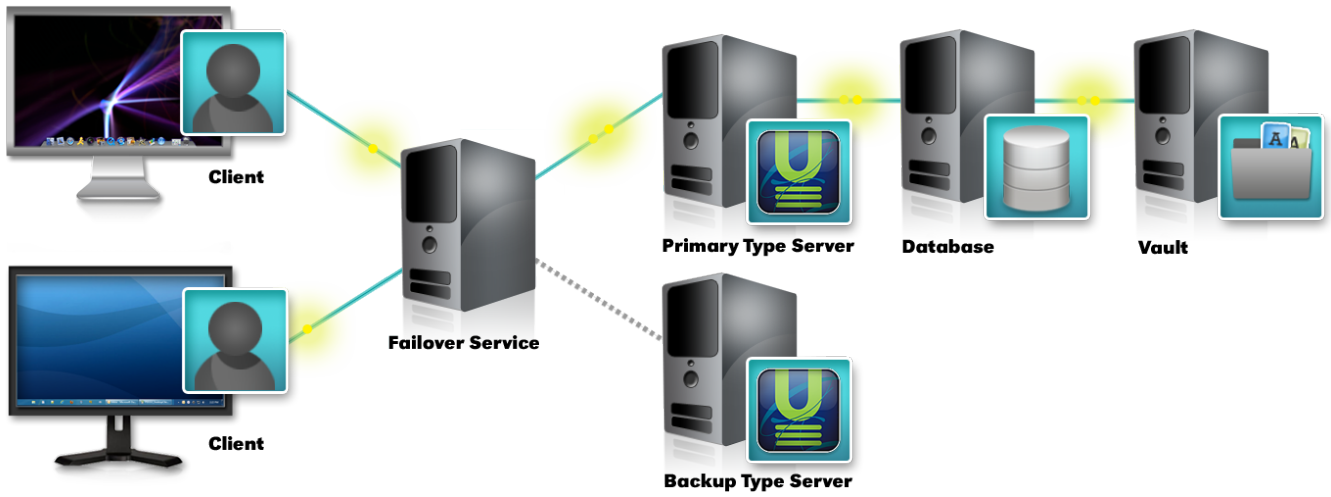
Recommended Configuration

A proxy failover configuration that is simple to set up and maintain includes the following systems:

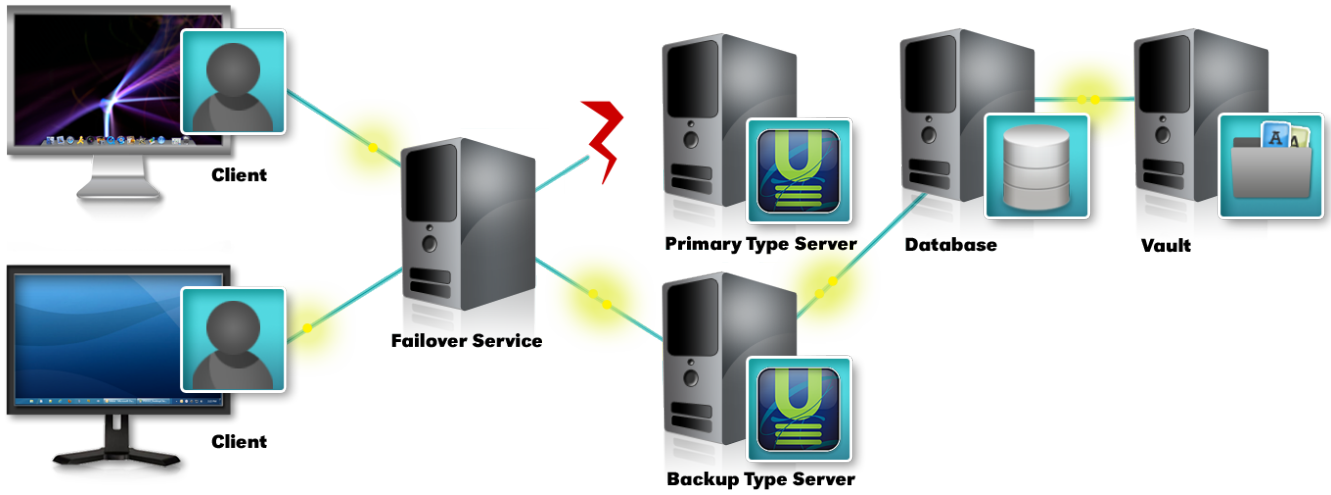
- A primary Universal Type Server
- A secondary (or backup) Universal Type Server
- A proxy server
- A database server
- A file server for housing the Universal Type Server font vault

Note that each of these servers should have its own backup mechanism.

The first diagram shows the components and the relationship between them.



The second diagram shows how the backup Type Server takes over if the primary Type Server fails.



Setup

NOTE: All servers in this configuration need to be on the same subnet.

In the following instructions, when we refer to the **applications** folder, it is the folder named "applications" located inside the Universal Type Server folder. By default, this folder would be:

Windows: `C:\Program Files\Extensis\Universal Type Server\applications\`

Macintosh: `/Applications/Extensis/Universal Type Server/applications/`

The instructions for configuring your servers are different depending on whether you are setting up your system for the first time, upgrading an existing system that uses a native database, or upgrading a system that uses an external SQL database.

Downloads

You will need to download these files to configure your servers.

Windows

- Apache Tomcat™ version 6.0.35 (do not download a newer version)
  for 64-bit Windows: http://archive.apache.org/dist/tomcat/tomcat-6/v6.0.35/bin/apache-tomcat-6.0.35-windows-x64.zip
  for 32-bit Windows: http://archive.apache.org/dist/tomcat/tomcat-6/v6.0.35/bin/apache-tomcat-6.0.35-windows-x86.zip
- Java JDK 1.5 or newer (1.7 recommended)
  http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html
  1. Scroll down the page to the section labeled **Java SE Development Kit 7u80**.
  2. Click **Accept License Agreement**.
  3. Click the download link for **Windows x64** (for 64-bit Windows) or **Windows x86** (for 32-bit Windows).
- Notepad++ (recommended but not required; this is a free text editor with syntax highlighting)
  http://notepad-plus-plus.org/

Macintosh

- Apache Tomcat version 6.0.35 (do not download a newer version)
  http://archive.apache.org/dist/tomcat/tomcat-6/v6.0.35/bin/apache-tomcat-6.0.35.zip
- Java JDK 1.5 or newer (1.7 recommended)
  http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html
  1. Scroll down the page to the section labeled **Java SE Development Kit 7u80**.
  2. Click **Accept License Agreement**.
  3. Click the download link for **Mac OS X x64**.
- BBEdit (highly recommended; this is a high-powered text editor with syntax highlighting and command-line integration that includes a very capable "free" mode)
  http://www.barebones.com/products/bbedit/
  Install BBEdit, launch it, and choose **Install command line tools** from the **BBEdit** menu.
  The instructions that follow assume you will be using BBEdit; adjust them accordingly if you are using a different editor (such as **vi**).

Other important tidbits

Other information you will need to know for configuring your servers:

- You will need the IP address for both the Primary Type Server and the Secondary Type Server.
- If you are configuring your system for single-sign on using Kerberos, the Primary and Secondary Type Servers need to be configured with their own service accounts on the domain server, their own Service Principal Names (SPNs), and their own keytabs.

Setting up for the first time

Primary Type Server

> **IMPORTANT**
>
> If you use Universal Type Server's built-in backup scheduler to back up your datastore, you only need to schedule backups on the Primary Type Server. The Type Server will be in Standby mode while the scheduled backup is running, and will return to normal access when the backup completes.

1. Install the Primary Universal Type Server. See **Installation Overview** on page 10.
2. Set up the Primary Type Server with the external database and external font vault. See **External SQL Database** on page 35 and **Moving the Vault** on page 27.
3. Stop the Primary Type Server. See **Stopping, Starting, and Restarting the Server** on page 22.
4. Run the failover setup script on the Primary Type Server.
   Windows:
   a. Open a command prompt window.
      Windows Server 2012: Press **WIN+X** and choose **Command Prompt**.
      Windows Server 2008: Click **Start**, choose **Run**, type **cmd** and press **ENTER**).
   b. Change to the **applications** directory inside the Universal Type Server directory.
      Type **cd "C:\Program Files\Extensis\Universal Type Server\applications"** and press **ENTER**.
   c. To run the script, type **win-failover-setup primary** and press **ENTER**.

   Macintosh:
   a. Open the Terminal application (inside the Utilities folder in the Applications folder on your server's hard disk).
   b. Change to the **applications** directory inside the Universal Type Server directory.
      Type **cd "/Applications/Extensis/Universal Type Server/applications"** and press **RETURN**.
   c. To run the script, type **sudo ./mac-failover-setup.sh primary** and press **RETURN**, then type your administrator password.
5. Start the Primary Type Server.

Configuring the Proxy Server

The following installations and other procedures are performed on the system that will become the Proxy Server.

1. Install the Java JDK.
   To confirm that the installation is functioning, open Command Prompt (Windows) or Terminal (OS X) and type **java -version**. This should display the version number of the JDK that you just installed.
2. Create a system variable named **JAVA_HOME** set to the installation path of the Java JDK, then add this variable to the system **PATH** variable.

Windows:

a. Open the Control Panel, click System, then click Advanced System Settings on the left.
b. In the System Properties window, click Environment Variables.
c. Create a new System Variable and give it the name **JAVA_HOME**, set its value to the path to the JDK installation folder (for example, **C:\Program Files\Java\jdk1.7.0_80**), then click **OK**.
   Make sure to enter the path to the JDK files, not the JRE. Also make sure to add the trailing backslash (\) character.
d. Edit the System Variable **PATH**, and add the following to the end of the existing value:
   ;%JAVA_HOME%bin;
   IMPORTANT: Be sure to add to the end of the variable value; do not replace it!
e. Click **OK** in the Environment Variables window, click **OK** in System Properties, then close the Control Panel.
f. Confirm that the environment is set correctly. Open a command prompt window, type **path**, and press **ENTER**. The last element of the **PATH** variable should be the full path to the JDK **bin** folder (for example, **C:\Program Files\Java\jdk1.7.0_80\bin**).

Macintosh:

These instructions assume you are using BBEdit's command-line tools for editing. Adjust them accordingly if you are using a different editor.

a. Open Terminal.
b. Type **bbedit .profile** and press **RETURN**.
   The **.profile** file in your user directory is a shell script that is run when you log in to your Mac; we will use this to set environment variables.
c. Scroll to the end of the **.profile** file. (This file may very well be empty.)
d. Type **export JAVA_HOME=/Library/Java/JavaVirtualMachines/jdk1.7.0_80.jdk** and press **RETURN**.
   Be sure to use the correct path for your version of the Java JDK.
e. Type **export PATH=$JAVA_HOME/bin:${PATH}** and press **RETURN**.
   Remember that variable and path names are case sensitive!
f. Save the file and exit BBEdit.
g. Confirm that the environment variables are set correctly. Log out from your Mac, then log back in. Open Terminal and type **env**.
   You should see that the **PATH** variable now starts with the full path to the JDK **bin** folder, and the **JAVA_HOME** variable is set as expected.

3. Install Apache Tomcat.
   Make a note of where you install Tomcat; you'll need to know its location in later steps.
4. Copy the file **esp-proxy.war**, located in the **applications** folder, into the Tomcat **webapps** folder.
5. In the Tomcat **webapps** folder, rename the **ROOT** folder to **ROOT_original**, then rename the file **esp-proxy.war** to **ROOT.war**.

6. Start the Proxy.
   Windows:
   a. Open a command prompt window.
   b. Change to the **bin** directory of your Tomcat installation. Type (for example) **cd "C:\Program Files\apache-tomcat-6.0.35\bin"** and press **ENTER**.
   c. Type **startup** and press **ENTER**.
   Macintosh:
   a. Open Terminal.
   b. Change to the **bin** directory in your Tomcat installation. Type (for example) **cd "/Applications/apache-tomcat-6.0.35/bin"** and press **RETURN**.
   c. Type **sudo ./startup** and press **RETURN**, then type your administrator password.
7. Edit **data.xml** to include the IP addresses of your Primary and Secondary Type Servers.
   From the Tomcat installation directory, **data.xml** is in **/webapps/ROOT/WEB-INF/config/**.
   a. Open **data.xml** in a text editor.
   b. Find the lines that start with **<server domainName=**. Substitute the IP address for your Primary Type Server for the text **UTSserver1**, and the IP address for your Secondary Type Server for the text **UTSserver2**. The lines should look something like this:
      ```
      <server domainName="192.168.0.101:8080" />
      <server domainName="192.168.0.102:8080" />
      ```
      If you have changed the port used for the HTTP/Web Service from the default value of 8080, then use that value in the lines above.
   c. Find the line that starts with **<esp-proxy**. If you have changed the port used for the HTTP/Web Service from the default value of 8080, then enter that value for the **servicePort** parameter. If you have changed the port used for the HTTPS/Web Service from the default value of 8443, then enter that value for the **securePort** parameter.
   d. Save your changes and close **data.xml**.
8. You will need to manually replace the server start/stop script included with the Tomcat distribution.
   Windows:
   a. Make a backup copy of the file **catalina.bat**, located in Tomcat's **bin** directory.
   b. Locate the file **catalina.bat** at **/webapps/ROOT/WEB-INF/config/** in the Tomcat installation directory.
   c. Copy this file to Tomcat's **bin** directory, replacing the existing file.
   Macintosh:
   a. Make a backup copy of the file **catalina.sh**, located in Tomcat's **bin** directory.
   b. Locate the file **catalina.sh** at **/webapps/ROOT/WEB-INF/config/** in the Tomcat installation directory.
   c. Copy this file to Tomcat's **bin** directory, replacing the existing file.
   d. Make the **catalina.sh** script executable. In a Terminal window, enter **chmod 755** followed by the path to the file. Example:
      ```
      chmod 755 /Applications/apache-tomcat-6.0.35/bin/catalina.sh
      ```

9. Because the default Tomcat installation does not include an open port for secure traffic, you will need to replace the existing **server.xml** file with one included with Universal Type Server.
    a. Make a backup copy of the Tomcat default **server.xml** file located in Tomcat's **conf** directory.
    b. Locate the **server.xml** file at **/webapps/ROOT/WEB-INF/config/** in the Tomcat installation directory.
    c. Copy this file to Tomcat's **conf** directory, replacing the existing file.
    d. If you have changed the HTTP/Web Service port from the default value of 8080, then you will need to edit the **server.xml** file and change all occurrences of the text **port="8080"** to include the updated port value.
    If you have changed the HTTPS/Web Service port from the default value of 8443, then you will need to change all occurrences of the text **port="8443"** and **redirectPort="8443"** to use the updated port value.
10. Shut down the Proxy.
    Windows: Open a command prompt, switch to Tomcat's **bin** directory, type **shutdown**, and press **ENTER**.
    Macintosh: Open Terminal, switch to Tomcat's **bin** directory, type **sudo ./shutdown** and press **RETURN**, then type your administrator password.
11. Start the Proxy again.

Configuring Tomcat as a Windows service

If your Proxy is running on a Windows server, you can configure Tomcat as a service so that it starts automatically.

1. Open a command prompt with Administrator privileges.
2. Change to Tomcat's **bin** directory.
   Example: **cd "C:\Program Files\apache-tomcat-6.0.35\bin"**.
3. Type **setup.bat install** and press **ENTER**.

This installs Tomcat as a service; you will need to configure the service to start when you want it to. Run **services.msc**, right-click on the Tomcat service, select **Properties**, set the **Startup Type**, click **OK**, then close the Services window. You may also need to restart your server.

Secondary Type Server

1. Install the Secondary Type Server.
2. Stop the Secondary Type Server.
3. Run the failover setup script on the Secondary Type Server. Follow the instructions above, but change the script parameter `primary` to `backup` in the final step (type `sudo ./mac-failover-setup.sh backup` or `win-failover-setup backup`).

> **NOTE**
>
> If you have multiple Universal Type Servers that you are configuring with failover service, you will need to specify a unique multicast address for each pair of Primary and Backup Type Servers. For further instructions, run the failover setup scripts with no parameters (i.e., `sudo ./mac-failover-setup.sh` or `win-failover-setup`.

4. Start the Server Admin application on the Secondary Type Server.
5. Enter the same serial numbers that you used for the Primary Type Server.
6. Connect to the existing external database.
   The button should be labeled **Join Datastore** instead of **New Datastore**.
7. Start the Secondary Type Server.
8. Connect to the existing external vault.

Confirm configuration

NOTE: This step helps you confirm that your servers are running correctly and is completely optional.

View the most recent log file to confirm that both Primary and Secondary Type Servers are running.

Log files are in the `logs` folder inside the Tomcat installation directory. The most recent Tomcat log file is named `catalina.out`.

Look near the end of the file for entries that resemble the following:

```
INFO: PRIMARY Universal Type Server : 192.168.0.101:8080 is up.
   . . .
INFO: BACKUP Universal Type Server : 192.168.0.102:8080 is up.
```

Upgrading an existing native database

Your existing Universal Type Server will become your Primary Type Server.

1. Move your vault to an external location where it can be shared by your Primary and Secondary Type Servers. See **Moving the Vault** on page 27 for instructions.
2. Back up your existing datastore. See **Backing Up the Datastore** on page 29.
3. Configure your external database. See **External SQL Database** on page 35.
4. Restore your datastore backup. See **Restoring a Backup** on page 30.
   This copies your previous native database to the new SQL database.
5. Continue from step 3 under **Setting up for the first time** on page 45.

Upgrading an existing SQL database

Your existing Universal Type Server will become your Primary Type Server. These instructions assume your SQL database resides on a separate server from your Universal Type Server.

1. Move your vault to an external location where it can be shared by your Primary and Secondary Type Servers. See **Moving the Vault** on page 27 for instructions.
2. Back up your existing datastore. See **Backing Up the Datastore** on page 29.
   This is a precautionary measure.
3. Continue from step 3 under **Setting up for the first time** on page 45.

Modules

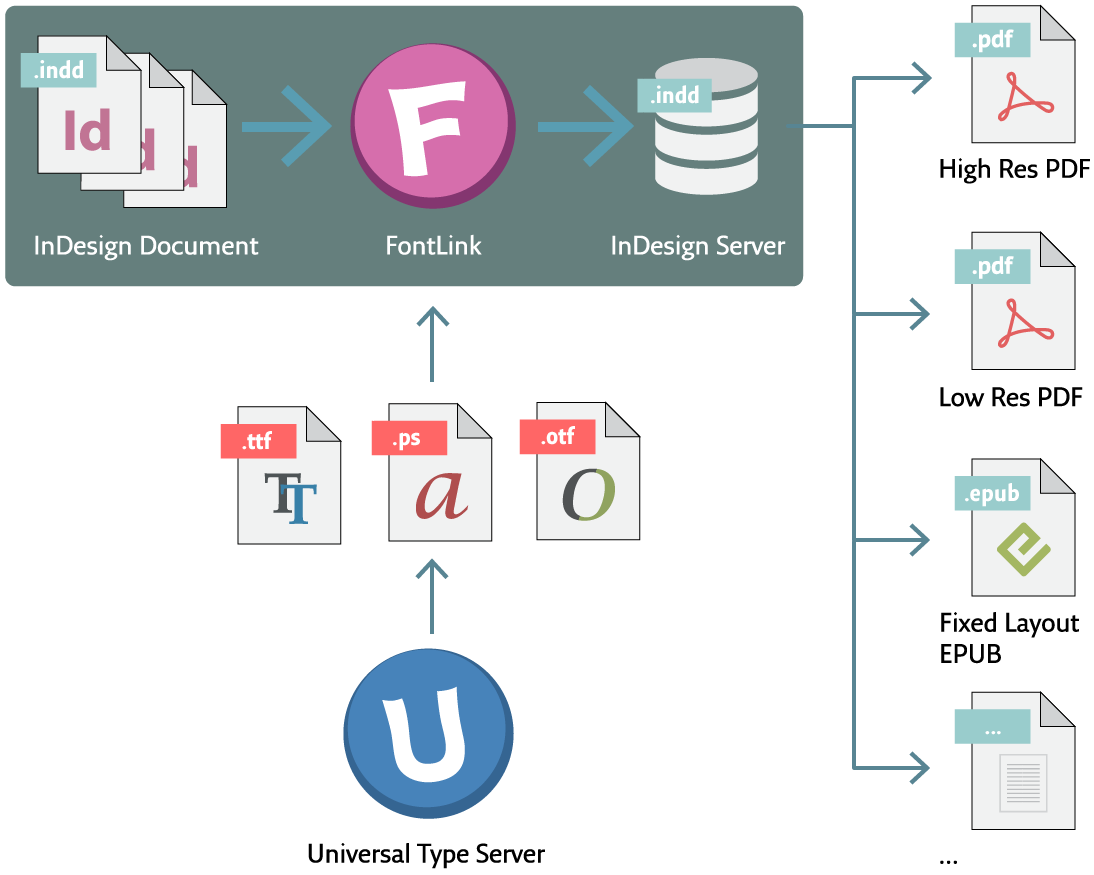
Universal Type Server now supports add-in modules that provide functionality for specific tasks, such as providing fonts in an automated workflow using Adobe® InDesign® Server.

To add a module's functionality, you need to install the module on the same system with your Universal Type Server, then enter a license for the module in the Server Admin application.

Specific modules may have other requirements; see the individual topics for each module.

To purchase a module, contact your Extensis sales representative.

FontLink



Automates font preflighting

FontLink is a module for Universal Type Server that dynamically delivers fonts for documents in automated publishing workflows using Adobe® InDesign Server®.

Having the correct fonts during the production process is critical for any InDesign Server workflow. Missing or incorrect fonts can quickly derail any automated processes and pull people away from other critical tasks.

FontLink solves the font management problem by easily plugging-in to any automated, multi-channel publishing workflow, no matter how complex.

Speeds up document processing

FontLink examines and gathers fonts for InDesign documents at any point before they are handed off to InDesign Server, removing manual document processing tasks for output.

Ensures the correct fonts with Font Sense

FontLink leverages the same powerful Font Sense technology as Universal Type Server.

During the creative process, Universal Type Server's font auto-activation plug-ins automatically embed Font Sense metadata to identify and record all of fonts in use in InDesign documents.

FontLink reads Font Sense metadata from the InDesign document and collects the required fonts from Universal Type Server for output.

Easy Content Management System integration

FontLink is easily integrated with most popular professional content management software solutions and fits any point prior to InDesign Server processing.

Jobs are processed using straightforward input, output and error folders, ensuring the most straightforward integration.

Delivers real-time alerts

Publishing administrators stay informed with instantaneous email alerts of font-related errors. Daily reports of completed and failed jobs ensure efficient server monitoring and record keeping.

Contact us for pricing details and to discuss your automated publishing workflow.

FontLink and font compliance

FontLink provides copies of your document fonts to InDesign Server on demand for processing. To remain compliant, it is important that you license your fonts for server or production use as required by their foundries. Most Foundries offer different licensing options for the various output options (i.e. PDF output, ePub, etc.). Please consult foundry (EULA) End User License Agreements for more information about storing your fonts on a Server and other required licensing details.

FontLink System Requirements

FontLink Module

FontLink Module is installed on the system running Universal Type Server.

- Universal Type Server Enterprise Edition version 5.1.0 or later
- OS® X or OS X Server, v10.8 through 10.12
  — OR —
  Windows® Server 2008 R2, Windows Server 2012, or Windows Server 2012 R2
- 1.3 GB hard drive space

FontLink Connector

FontLink Connector is installed on the system running InDesign Server.

- Adobe InDesign Server CS6 or later
- OS® X or OS X Server, v10.8 through 10.12
  — OR —
  Windows® Server 2008 R2, Windows Server 2012, or Windows Server 2012 R2
- FontLink Connector requires 1.3 GB hard drive space *per instance* of Adobe InDesign Server

Supported documents

FontLink processes InDesign documents (INDD) and templates (INDT) from InDesign CS6 and later. In order to work with FontLink, documents must be saved using the Extensis auto-activation plugin from Universal Type Client version 4.0.2 or later (or Suitcase Fusion 6 v17.0.0 or later). Ensure that the **Enable Font Sense Support** option is turned on for each user in the InDesign auto-activation preferences.

You can easily upgrade documents that don't meet these requirements by opening them in a supported version of InDesign with the auto-activation plug-in, then re-saving them.

For font compliance purposes, InDesign files processed by FontLink must include fonts hosted on your Universal Type Server. Files containing fonts not recognized by Universal Type Server will raise an error during processing.

Setting up FontLink

A FontLink installation consists of several components:

- Universal Type Server
- FontLink Module
- Adobe InDesign Server
- FontLink Connector

If your organization has an email server, FontLink can send a daily digest of completed jobs, or alert administrators to files that can't be processed.

Order of installation

Before you can install and configure the FontLink-specific components of Universal Type Server, you need to have a working installation of Adobe InDesign Server CS6 or later, and a working installation of Universal Type Server Enterprise Edition version 5.1 or later.

Once you have your servers running, do the following:

1. Install FontLink Connector on your InDesign Server system.
2. Create the following folders on your InDesign Server system: a folder for jobs to be processed by FontLink (called the *Input folder*), a folder for jobs that have been processed successfully (called the *Output folder*), and a folder where jobs that can't be processed are sent (called the *Errors folder*). ***NOTE:*** These folders can be created on network volumes. Due to platform-specific differences results may vary between operating systems.
3. By default, InDesign Server uses port 12345 to identify its first running instance. You can change this if necessary. If you are running multiple instances of InDesign Server, you must configure each with its own unique port number. See the InDesign Server documentation for port-specific setup instructions.
4. Install the FontLink Module on the Universal Type Server system.
5. Enter the license for the FontLink Module in the Server Admin application. See **Universal Type Server Serial Numbers** on page 11.
6. Enter the details for your email server in the Server Admin application. See **Configuring FontLink notifications** on page 55.
7. Connect each instance of InDesign Server in the Server Admin application. See **Connecting to InDesign Server** on the next page.

Connecting to InDesign Server

In order for the FontLink Module of Universal Type Server to communicate with a running copy of InDesign Server and its corresponding FontLink Connector, you need to provide information to Universal Type Server.

To identify your InDesign Server to FontLink, click **Modules** in the menu on the left, then click **Add a Server Instance**.

- **Instance Name:** This identifies a specific running instance of InDesign Server in logs, email digests, and error emails. Use a friendly and descriptive name, such as **3rd floor Production**.
- **IP Address (with port):** This is the IP address of the system that hosts the InDesign Server and FontLink Connector. Include the specific port for the instance of InDesign Server. By default, InDesign Server runs on port 12345; see your InDesign Server documentation to change this.
  Example: `123.45.67.89:12345`
- **Input Folder:** Enter the full path to the folder on the InDesign Server system where FontLink will watch for jobs to process. This folder can be local on the InDesign Server or on a network volume accessible to the InDesign Server.
  Examples:
  - `D:\data\fontlink-input\` (Windows local folder)
  - `Z:\production\fontlink-in\` (Windows remote folder; drive Z: is mapped to a network share or folder)
  - `/Users/Shared/FontLink input/` (Macintosh local folder)
  - `/Volumes/Production/FontLink in/` (Macintosh remote folder; the volume Production must be mounted on the InDesign server system)
- **Output Folder:** Enter the full path to the folder where FontLink will place processed files.
- **Error Folder:** Enter the full path to the folder where FontLink will move jobs that can't be processed.
- **Daily Digest Notifications:** Enter a comma-separated list of email addresses where you would like to send a daily digest listing jobs successfully processed by this InDesign Server instance. The daily digest is sent once a day for jobs processed during the previous 24 hours.This feature requires that you enter your network's email server details in the FontLink Module panel.
- **Error Notifications:** Enter a comma-separated list of email addresses where you would like to send messages about jobs that could not be processed. These messages are sent immediately.

Enter the above information and click **Save**.

Adding more connections

You can connect FontLink Module to more than one instance of InDesign Server. In this way, you can leverage the additional processing power of your InDesign Server system.

To add another connection, follow the steps above. Be sure to enter a unique **Instance Name** and port value for each instance of InDesign Server.

Your initial license for FontLink allows up to three connections to InDesign Server. Contact your Extensis Sales representative for information about additional connections.

Removing a connection

If you need to make a change to one of your InDesign Server connections, you need to remove the connection and then re-create it. Before you do so, make sure you have copied down any required information.

To remove a connection:

1. Click **Modules** in the list on the left.
2. Select the InDesign Server instance connection that you want to remove.
3. Click **Details** and copy down any information that you will need to re-create the instance, then click **Back** .
4. Select the Server Instance and click **Delete**. In the confirmation dialog, click **OK**.

Follow the steps above to re-create the Server Instance.

Configuring FontLink notifications

FontLink can send email notification when a job cannot be processed, and can also send a daily digest listing successfully completed jobs. In order to have FontLink send notifications, you need to enter information about your organization's email server.

Supported email servers

Any SMTP email server can be used to send FontLink notifications. The email server needs to be on the same network as the FontLink module, and needs to support incoming messages without authentication.

Adding your email server

To add your email server's details so that FontLink can send job notifications:

1. Click **Modules** in the menu on the left.
2. Under **Email Services Setup**, click **Setup**.
3. Enter the domain-specific name of your email server (such as **`smtp.example.com`**).
4. Enter the port used to accept incoming email message requests.
5. Click **Save**.

Removing your email server

To remove your email server, click **Modules**, then click **Remove** under **Email Service**.

Restarting FontLink services

NOTE: Universal Type Server must be running before you can restart the FontLink Module service.

Windows

To restart the FontLink Module service on a Windows server running Universal Type Server

1. Open the Services browser (**Control Panel > Administrative Tools > Services**, or type `servces.msc` in the **Run** dialog).
2. Select **FontLink Module Service for IDS** in the list of services and click **Restart Service** on the toolbar.

To restart the FontLink Connector service on a Windows server running InDesign Server

1. Open the Services browser.
2. Select **FontLink Connector Service for IDS** in the list of services and click **Restart Service** on the toolbar.

Macintosh

To restart the FontLink Module service on a Macintosh server running Universal Type Server:

1. Open a Terminal window.
2. Type `sudo launchctl unload /Library/LaunchDaemons/com.extensis.ids.fontlink.module.jboss.plist` and press **RETURN**. Enter your computer's administrator password when prompted.
   This stops the FontLink Module service.
3. Type `sudo launchctl load /Library/LaunchDaemons/com.extensis.ids.fontlink.module.jboss.plist` and press **RETURN**.
   This starts the FontLink Module service again.

To restart the FontLink Connector service on a Macintosh running InDesign Server:

1. Open a Terminal window.
2. Type `sudo launchctl unload /Library/LaunchDaemons/com.extensis.ids.fontlink.connector.jboss.plist` and press **RETURN**.
   This stops the FontLink Connector service.
3. Type `sudo launchctl load /Library/LaunchDaemons/com.extensis.ids.fontlink.connector.jboss.plist` and press **RETURN**.
   This starts the FontLink Connector service again.

FontLink technical details

Ports

FontLink Module requires port **8485** and FontLink Connector requires port **8486** to be open so the two servers can communicate with each other. When Module and Connector are installed on the same server both ports must be open.

These port numbers cannot be changed, so if you have other software using either of these ports you should change the ports used by the conflicting software.

Log files

Each FontLink component records information about its startup condition and all transactions in log files.

FontLink Module log files

FontLink Module maintains two log files:

`boot.log`: records environment information and status when the FontLink Module starts up

`Server.log`: identifies JBoss and MySQL system errors and lists all jobs processed

FontLink Module log files are located on the Universal Type Server system:

Windows: `C:\Program Files\Extensis\FontLinkModule\jboss\standalone\log\`

Macintosh: `/Applications/Extensis/FontLinkModule/jboss/standalone/log/`

FontLink Connector log files

FontLink Connector maintains four log files:

`boot.log`: records environment information and status when the FontLink Connector starts up

`Server.log`: identifies FontLink Connector system errors related to JBoss or MySQL

`fontActivationFailure.log`: lists jobs that FontLink could not process

`fontActivationSuccess.log`: lists jobs that FontLink processed successfully

FontLink Connector log files are located on the InDesign Server system:

Windows: `C:\Program Files\Extensis\FontLinkConnector\jboss\standalone\log\`

Macintosh: `/Applications/Extensis/FontLinkConnector/jboss/standalone/log/`

Uninstalling FontLink Connector

Note: If you uninstall FontLink Connector, any workflows that rely on its Input Folder location may need to be modified.

To uninstall FontLink Connector on Windows:

1. Choose **Start > Control Panel**.
2. Click **Programs and Features**.
3. Select **Extensis FontLink Connector**.
4. Click **Uninstall**.

To uninstall FontLink Connector on OS X:

1. Open the folder **Applications > Extensis > FontLinkConnector**.
2. Double-click the **FontLink Connector Uninstaller**.
3. Follow the instructions on screen to uninstall the FontLink Connector.

Uninstalling FontLink Module

To uninstall FontLink Module on Windows:

1. Choose **Start > Control Panel**.
2. Click **Programs and Features**.
3. Select **Extensis FontLink Module**.
4. Click **Uninstall**.

To uninstall FontLink Module on OS X:

1. Open the folder **Applications > Extensis > FontLinkModule**.
2. Double-click the **FontLink Connector Uninstaller**.
3. Follow the instructions on screen to uninstall the FontLink Module.

Font Connector for Esko ArtPro+

Fonts play an integral role in print and packaging design. Ensuring accuracy and consistency is critical for producing a high-quality product.

Font Connector for Esko ArtPro+ allows your users to:

- Immediately access the fonts they need
- Make on-the-fly, live text edits in PDFs
- Fix critical, last-minute text changes during the prepress stage
- Increase workflow efficiency
- Save time and money by reducing font inconsistencies and errors

Font Connector for Esko ArtPro+ is an add-on module for Universal Type Server.

Contact Extensis sales to purchase a license (https://www.extensis.com/contact-us-form).

ArtPro+ and PDFs

ArtPro+ allows you to edit normalized PDFs with embedded fonts.

Typically a PDF will only contain a subset of the font in use, so attempting to edit text with an embedded font results in the font being replaced by a system font.

With FontConnector for ArtPro+ and Universal Type Client, you can edit the PDF and ensure that the original font is retained, with all the appropriate characters embedded. ***NOTE:*** The original font must be installed on your Universal Type Server.

System Requirements

- Esko ArtPro+ version 18.0 or later (see https://wiki.esko.com/pages/viewpage.action?pageId=211029673)
- Universal Type Server version 6.1.7 or later (Professional or Enterprise)
- Universal Type Client version 6.1.7 or later (installed on the same system with ArtPro+)

Configuring Font Connector for ArtPro+

- Font Connector for ArtPro+ allows Universal Type Client to automatically activate fonts used in ArtPro+ documents.
- Enter the license for the Font Connector for ArtPro+ Module in the Server Admin application. See **Universal Type Server Serial Numbers** on page 11.
- Install Universal Type Client on the same system with ArtPro+, and connect to your Universal Type Server.
- In ArtPro+, open **Preferences** and click **Extensis**.
  - Choose **Enable Font Connector** to allow ArtPro+ to communicate with Universal Type Client.
  - Choose **Activate entire font family** to have Universal Type Client activate all members of the font family (i.e. Regular, Bold, Italic, and Bold Italic). With this option off, Type Client will only activate the precise face used in your document (for example, Helvetica Bold).
  - Choose **Deactivate fonts on application close** to have Universal Type Client deactivate any fonts activated by ArtPro+ for your document when you quit ArtPro+.

Command Line Administration Tool

Universal Type Server contains a command line tool that exposes a number of the functions of the Server Administration application 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 application, 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 a Command Prompt window.
   Click **Start > Run**, type **cmd**, and press Enter.
2. At the command prompt enter:
   ```
   cd C:\Program Files\Extensis\Universal Type Server\applications\
   ```
3. Enter the following command to list server settings:
   ```
   esp-admin -username administrator -password password -getserversettings
   ```

> **NOTE**
>
> If you have changed the default administrator password, enter it after `-password` in the command.

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

1. Start the Terminal application located in the Utilities folder inside the Applications folder.
2. At the prompt, enter:
   ```
   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
   ```

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 application.

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.stayinquiescentmode=false
```

NOTE: Paths in the properties file must be specified differently than they are in Windows. Use the form `<drive_letter>://<folder>/<folder>/<file>`; for example, `C://backups/` or `C://Program Files/Extensis/Universal Type Server/data/vault`.

Properties files are used with the following commands:

`backupdatastore` (see **backupdatastore** on the next page.)

`createdatastore` (see **createdatastore** on page 63.)

`moverepository` (see **moverepository** on page 67.)

`restoredatastore` (see **restoredatastore** on page 67.)

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 value `administrator`, the Server Administrator username; and
- `ESP_ADMIN_PW`, which by default is set to the value `password`, the default Server Administrator 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.

Commands

backupdatastore

`-backupdatastore [-properties` *properties.txt*`] [-force]`

Backs up the datastore.

`-properties`: use properties specified in the file **`properties.txt`**.

`-force`: automatically accept all interactive confirmation prompts.

The properties file is a plain text file that can contain any or all of the following optional settings:

`esp.backup.location=`*full_backup_path*

The complete path to the backup directory. If not specified, the default backup directory is used.

NOTE: Paths in the properties file must be specified differently than they are in Windows. Use the form `<drive_letter>://<folder>/<folder>/<file>`; for example, `C://backups/` or `C://Program Files/Extensis/Universal Type Server/data/vault`.

`esp.backup.filename=`*filename.zip*

Name of the backup file. The backup is stored as a .ZIP compressed archive; you must include the .ZIP extension in the filename. If you don't specify a filename, the backup will be named using the pattern `year_mo_dy_hr_mn.zip`.

`esp.option.backup.stayinquiescentmode=`*boolean*

Specifies whether the server will be left in "quiescent" or standby mode after the backup is complete. Valid values are `true` or `false`; the default is `false`.

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 yyyy_mm_dd_hh_mm.zip	No
`esp.option.backup.stayinquiescentmode`	Specifies that the server be left in quiescent (standby) mode after backup. Valid values are `true` or `false`. Default value is `false`.	No

NOTE: Paths in the properties file must be specified differently than they are in Windows. Use the form `<drive_letter>://<folder>/<folder>/<file>`; for example, `C://backups/` or `C://Program Files/Extensis/Universal Type Server/data/vault`.

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 parameters.

```
-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 parameters.

```
-checkdatastoreoperationstatus
```

Windows usage example:

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

Macintosh usage example:

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

createdatastore

`-createdatastore -properties` *properties.txt* `[-force]`

Creates a new database with the properties specified in `properties.txt`.

`esp.repository.directory=`*folder_name*

Required. This is the name of the folder that contains the datastore.

`esp.repository.type=esp.repository.type.vault`

Required. Currently, `esp.repository.type.vault` is the only supported repository type.

`esp.database.driver=esp.database.driver.PostgreSQL`

Required. Currently, `esp.database.driver.PostgreSQL` is the only supported database driver.

`esp.database.username=`*user*

Optional. The database user's name.

`esp.database.password=`*password*

Optional. *user*'s password to access the database.

`esp.database.hostport=`*host:port*

Optional. Host and port used to connect to the database, in the form `host:port`. `host` can be any valid host identifier: the word `localhost`, an IP address, or a server name; `port` is the JBoss Web App port.

`esp.database.datapath=`*full_path_to_database*

Optional. If not specified, the default location is used.

`esp.option.backup.stayinquiescentmode=`*boolean*

Optional.

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 (see **Properties Files** on page 60). 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 `esp.repository.type.vault`.	Yes
`esp.database.driver`	Logical name of database type to use. Currently the only supported value is `esp.database.driver.PostgreSQL`.	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 `host:port`, for example: `localhost:3487`.	No
`esp.database.datapath`	Path to the database.	No
`esp.option.backup.stayinquiescentmode`	Specifies that the server be left in quiescent (standby) mode after creating the datastore. Valid values are `true` or `false`. Default value is `false`.	No

NOTE: Paths in the properties file must be specified differently than they are in Windows. Use the form `<drive_letter>://<folder>/<folder>/<file>`; for example, `C://backups/` or `C://Program Files/Extensis/Universal Type Server/data/vault`.

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 (see **getlogins** on the next page). 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 parameters.

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 **forecelogouts** or **forcelogoutswithfile** commands (see **forcelogouts** on the previous page and **forcelogoutswithfile** above).

```
-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: `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 User Management 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.txt` file (see **Properties Files** on page 60).

`-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 `esp.repository.type.vault`.	Yes
`esp.option.backup.stayinquiescentmode`	Specifies that the server be left in quiescent (standby) mode after moving the datastore. Valid values are `true` or `false`. Default value is `false`.	No

NOTE: Paths in the properties file must be specified differently than they are in Windows. Use the form `<drive_letter>://<folder>/<folder>/<file>`; for example, `C://backups/` or `C://Program Files/Extensis/Universal Type Server/data/vault`.

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 within 30 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

> **WARNING**
>
> `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.txt` file (see **Properties Files** on page 60). 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
`esp.backup.location`	Directory of the backup file. If not specified, the default server backup directory is assumed.	No
`esp.backup.filename`	Name of the backup file.	Yes
`esp.repository.directory`	The top level of the datastore.By default this is `Applications/Extensis/Universal Type Server/data/vault` on Macintosh or `C:\Program Files\Extensis\Universal Type Server\data\vault` on Windows.	Yes
`esp.repository.type`	The only supported value is `esp.repository.type.vault`.	Yes
`esp.database.driver`	Logical name of database type to use. Currently the only supported value is `esp.database.driver.PostgreSQL`.	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 `host:port`, for example: `localhost:3487`.	No
`esp.database.datapath`	Path to the database.	No
`esp.option.backup.stayinquiescentmode`	Specifies that the server be left in quiescent (standby) mode after restoring the datastore. Valid values are `true` or `false`. Default value is `false`.	No

NOTE: Paths in the properties file must be specified differently than they are in Windows. Use the form `<drive_letter>://<folder>/<folder>/<file>`; for example, `C://backups/` or `C://Program Files/Extensis/Universal Type Server/data/vault`.

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 computer starts. This command takes a single parameter with one of two values: `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 be a complete path and the user must have write access to the target location.

`-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 values:

- `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
```

setmaxbackuplogs

This command sets the maximum number of log files that are backed up.

`-setmaxbackuplogs` *count*

count must be a whole number greater than zero. The default is 10.

Windows usage example:

```
esp-admin -username ssmith -password stevespass -setmaxbackuplogs 15
```

Macintosh usage example:

```
sudo ./esp-admin.sh -username ssmith -password stevespass -setmaxbackuplogs
  7
```

setport

This command is used to set the ports to which clients connect, the User Management port (`esp.port.http`) as well as the Server Administration 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 the User Management application port (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 application port (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
```

setserversettings

Use this command to set a number of server settings using a `properties.txt` file (see **Properties Files** on page 60). All undefined values in the properties file are ignored.

`-setserversettings -properties` *properties.txt*

The following is a list of server properties available to be set using this command:

Property	Description
`esp.container.autostart`	This is the autostart setting of the server: `enabled` or `disabled`.
`esp.core.bonjour.name`	The Bonjour name of the server. Any alphanumeric value is acceptable.
`esp.core.repository.location`	The complete full path to the server vault.
`esp.core.service.backup.directory`	Directory where backup files are to be written. This path must 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. Four case-sensitive values are acceptable: `error`, `warn`, `info`, or `debug`.
`esp.core.service.logging.location`	Complete path to the folder where logs are to be written. This folder must allow changes.
`esp.core.service.state`	The current state of the server can be set to one of three case-sensitive values: `started`, `stopped`, or `standby`.
`esp.port.admin-web-app`	The Server Administration port, also called the Jetty Web App port. Any positive integer between 1 and 65536 inclusive.
`esp.port.bootstrap-jnp`	The Bootstrap JNP Server Bind Address port. Any positive integer between 1 and 65536 inclusive.
`esp.port.http`	The User Management port. This port is also used for client connection and also called the JBoss HTTP / Web Service port. Any positive integer between 1 and 65536 inclusive.
`esp.port.jmx-pooled`	The JMX Pooled Port. Any positive integer between 1 and 65536 inclusive.
`esp.port.jmx-rmi`	The JMX RMI Object Port. Any positive integer between 1 and 65536 inclusive.
`esp.port.rmi-naming`	The RMI Naming Service port. Any positive integer between 1 and 65536 inclusive.
`esp.port.webservice`	The JBoss Webservice port. Any positive integer between 1 and 65536 inclusive.

Windows usage example:

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

Macintosh usage example:

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

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 values:

- `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 takes no parameters. 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
```

Contacting Extensis

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Support Request: https://help.extensis.com/hc/en-us/requests/new

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Email: NA_sales@extensis.com (North America)
Web: https://www.extensis.com/contact-us-form/ (all regions)
We also work with distributors around the world; **find one near you**.

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Technical Support

Technical support for current products is available through the **Extensis website** (https://www.extensis.com/support/).

Extensis also maintains a searchable **Knowledge Base** of in-depth articles on various technical topics.

Creating a tech support case

If you are experiencing a problem with a current product, you can submit a tech support case using this **Support Request**.

Provide as much of the following information as you can:

- Product name and version number;
- Serial number, if you have it available;
- Computer operating system version;
- Other details about your computer system, including RAM, hard drive size and free space, and processor type and speed;
- A description of the problem, including any error message that might be displayed;
- Your contact information.

Support Policy

Extensis provides full support for the current version of all shipping products. In addition, Extensis provides limited support for older products up to one year after the product version is no longer offered for sale. For complete details see the **Support Policy**.

For details on currently supported products, see:

- **Portfolio Support Guide** (https://www.extensis.com/support/portfolio-support-guide/)
- **Universal Type Server Support Guide** (https://www.extensis.com/support/universal-type-server-support-guide/)
- **Universal Type Client Support Guide** (https://www.extensis.com/support/universal-type-client-support-guide/)
- **Suitcase Fusion Support Guide** (https://www.extensis.com/support/suitcase-fusion-support-guide/)

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