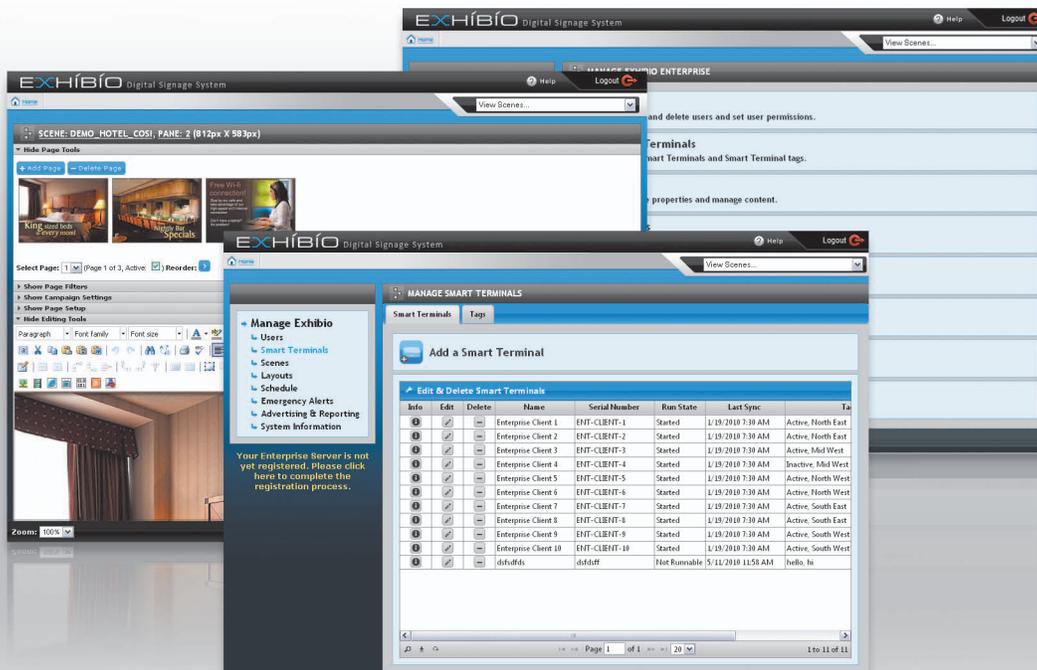


Exhibio® Enterprise Server Administrator's Guide

Software Version 1.1
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Exhibio™ Enterprise Server Administrator's Guide: Version 1.1

Dear Exhibio Digital Signage Customer,

Congratulations on the purchase of your new Exhibio Enterprise Server! We appreciate your business. For the best use and operation of the Exhibio Digital Signage Solution, please read through this Administrator's Guide and the Software User Manual before making any adjustments, and retain this document for future reference. We hope that you will enjoy working with your Exhibio Digital Signage Solution.

For assistance, please contact Exhibio at the following:

Phone: **Within the USA:** 877.EXHIBIO (394.4246)

International: 1.716.799.0410

Please listen to the prompts for Exhibio Support.

Web: <http://www.exhibio.com/support>

To purchase or inquire about accessories or other Exhibio products, please visit our website at <http://www.exhibio.com> or call the toll-free number above.

We highly recommend you register your system, either through the Enterprise Manager, via the web at <http://www.exhibio.com/registration> or by mailing in your registration card so that you may receive important information updates.

For peace of mind, and to protect your investment beyond the standard warranty, contact Exhibio for extended warranty contracts.

Write down your serial number located on the side of the system, or place the sticker from the shipping box here:

Serial Number _____

Purchase Date_____

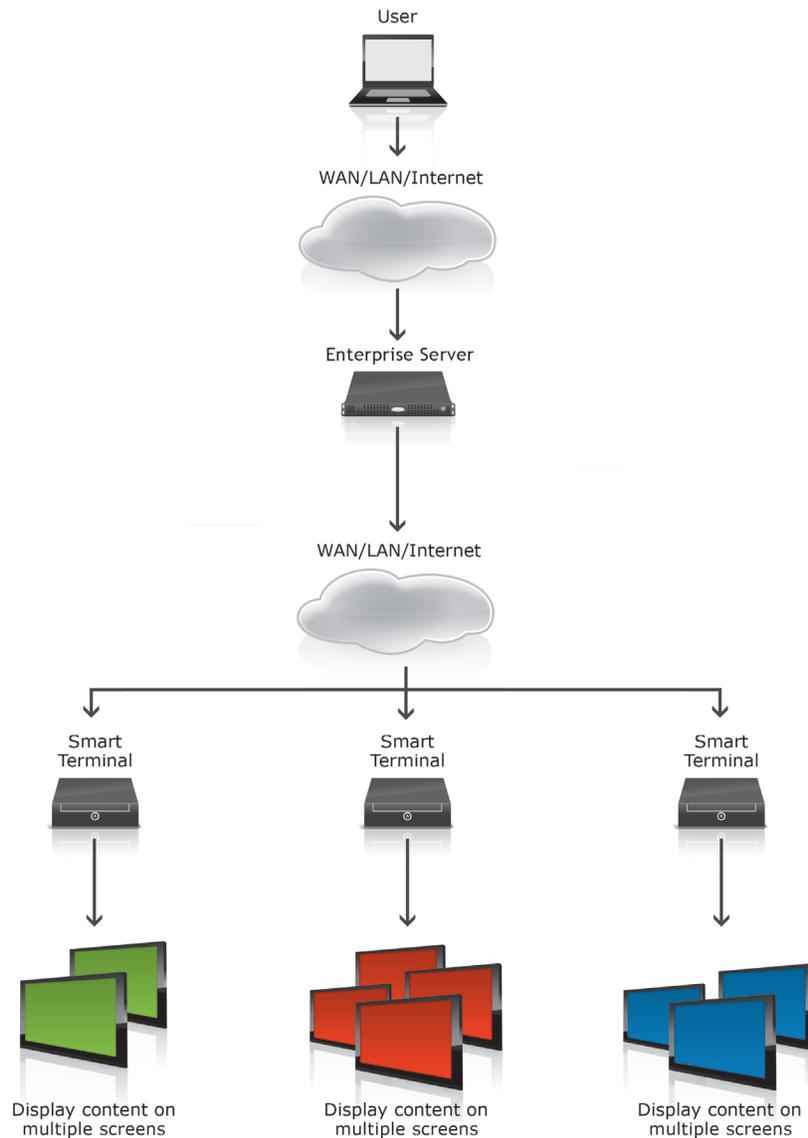
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SYSTEM OVERVIEW

Exhibio™ Enterprise Digital Signage System

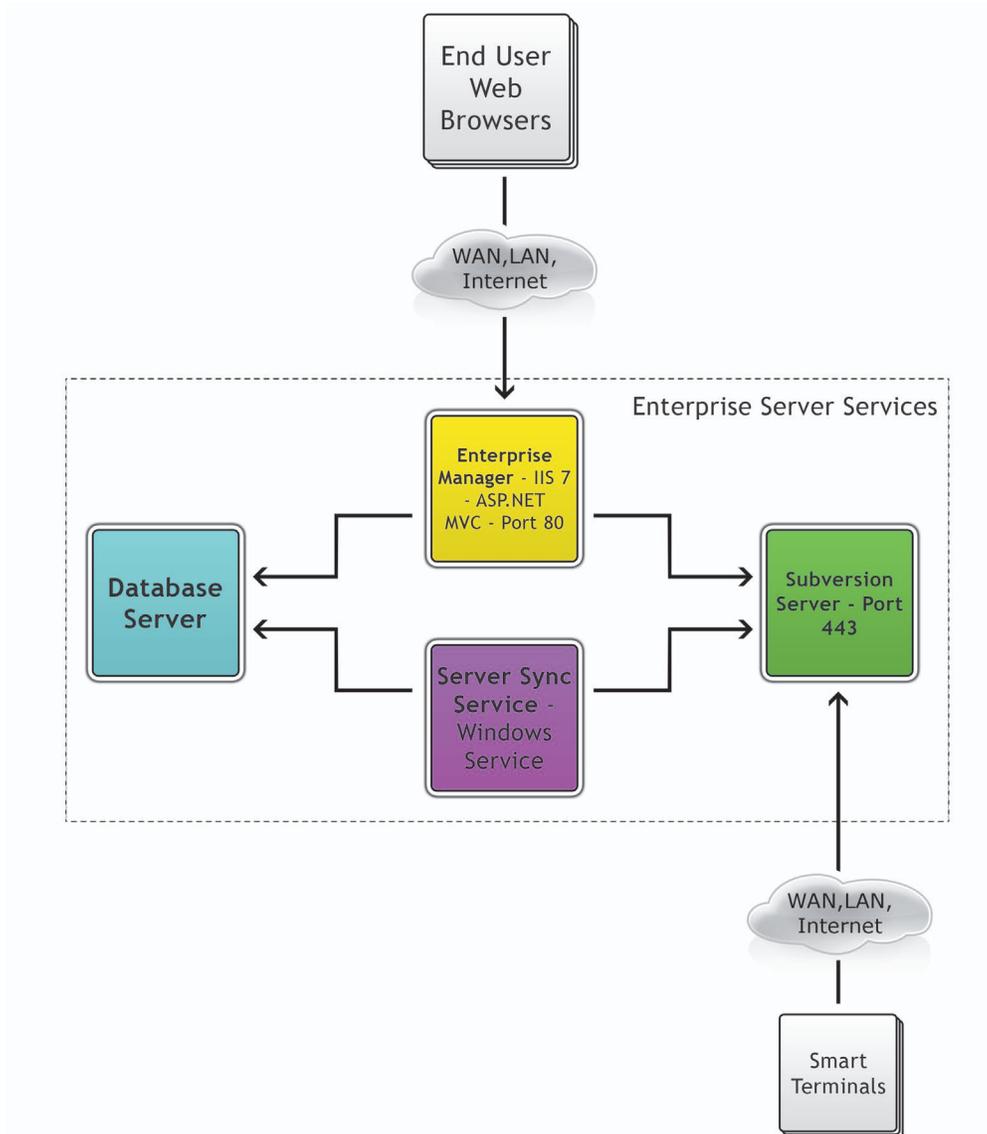
The Exhibio™ Enterprise Digital Signage System is a collection of devices and services designed for the purpose of easily and efficiently creating and displaying digital signage content in a number of geographically dispersed locations.



SYSTEM OVERVIEW

System Dependencies

The Exhibio™ Enterprise Digital Signage System employs several interdependent services outlined in the diagram below.



Definitions

Enterprise Manager - A web-based user interface for managing content and playback of data on multiple Exhibio™ Enterprise Smart Terminals. It runs on the Microsoft IIS7 web server.

Database Server - Stores all the non-binary data for the Enterprise Manager. The Enterprise Manager uses Postgresql 8.4.

Subversion Server - A Subversion (svn) server that holds data that is synchronized between the Enterprise Manager database and its associated Smart Terminals. It also holds all of the Enterprise system's binary media file data.

Server Sync Service - A Windows service that periodically synchronizes all of the data from the Database Server to the Subversion Repository.

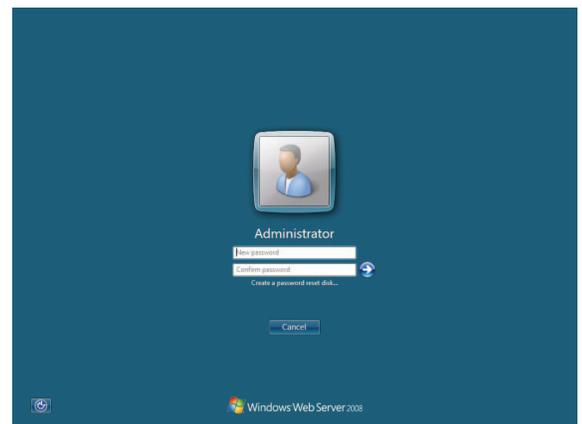
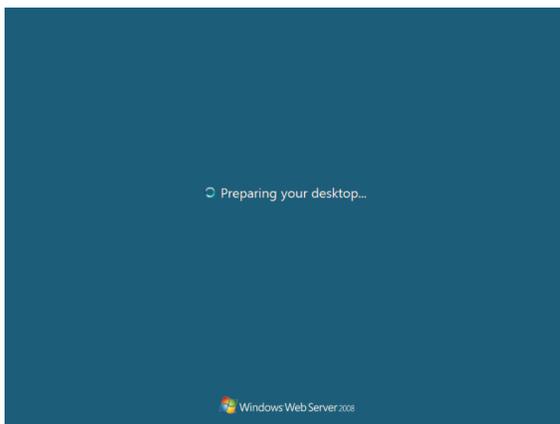
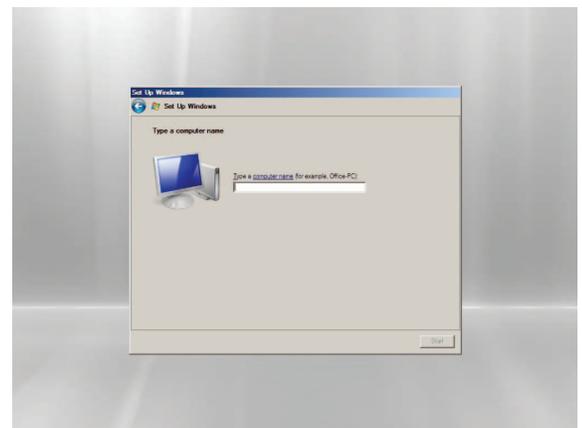
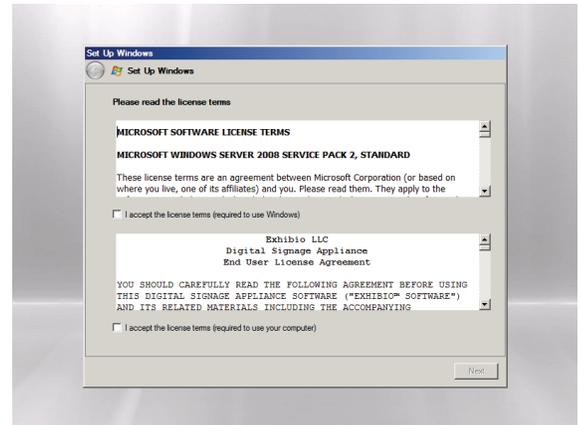
Smart Terminal - Smart Terminals (STs) are remote devices deployed alongside displays in your Enterprise signage system. STs play content that is created and scheduled in the Enterprise Manager.

ENTERPRISE SERVER SETUP

Initial Setup

Please follow these instructions when turning on your Exhibio Enterprise server for the first time:

1. Connect your server to a keyboard, mouse, and monitor.
2. Plug your server into a grounded outlet and press the power button.
3. After turning on your server, a Windows menu will appear on the monitor, asking you to confirm some basic information (country, time and currency, and keyboard layout). If you need to make changes, please do so. Then click 'Next'.
4. Find your product key on the sticker affixed to your Enterprise server and type the key into the box. Then click 'Next'.
5. Read over the Microsoft and Exhibio Software License Terms. If you accept the terms, check the 'I accept' boxes and click 'Next'.
6. Type in a name for the server. This is how your server will be seen on your internal Windows network if used.
7. Click 'Start'.
8. When prompted, press your CTRL + ALT + DELETE keys.
9. Click the Administrator icon.
10. You will see a message saying that the user's password must be changed. Click 'OK'.
11. Type in a new password to use for your server's Administrator login. Confirm it by typing it again on the second line. Please do not give out this password to anyone other than authorized systems personnel. A different login is used when managing the content of your signs. Click the arrow when done.
12. A message will appear saying 'Your password has been changed.' Click 'OK'.
13. The Enterprise server's desktop should now appear.



CONFIGURING YOUR ENTERPRISE SERVER

Enterprise Server Desktop

The Enterprise desktop has icons that link to the Enterprise Configuration Utility, the Enterprise Manager, and the Enterprise Update Utility. In addition, the Server Manager and other applications may be reached via the Start Menu.

Server Manager

When logged into your desktop, go to the Windows Start Menu and select Server Manager. The Enterprise Server Manager will open, displaying information about your Exhibio system that may be of value to your system administrator.

When 'Server Manager' is selected in the left section of your window, you will see the Server Summary, Roles Summary, and Features Summary in the right window. This is where you can set your server's IP address and other important information related to your network.

Adjusting Sync Frequency

Your Enterprise Server synchronizes changes from the Database Server to the Subversion Server at a configurable interval of time. These changes include anything you may have added or updated in the Enterprise Manager that may affect what runs on a Smart Terminal, such as changes to scheduled scenes or emergency alerts. By default, the synchronization interval is set to 30 seconds. To change this number, execute the following procedure:

1. Log into the Enterprise Server's desktop as a user with Administrator rights.
2. Double click the "Enterprise Configuration" icon on the desktop, or go to Start -> All Programs and run the "Enterprise Configuration" application.
3. Click on the "Server Sync Service" tab.
4. Adjust the number in the "Sync Frequency" box as desired.
5. Click the "Save" button.

You may wish to raise this number if you have a large number of Smart Terminals configured and find that your server is running slowly. Raising this number will cause changes to the Smart Terminals to propagate less frequently.

Changing Subversion and Database Server Passwords

Your system has usernames and passwords configured by default for the Subversion and Database servers. There are two users for Postgresql and one for Subversion. Postgresql has one Windows account that the service runs under and another synthetic account that is used as a login for the Web server application to interact with the Enterprise database. The Subversion server has only one synthetic user account that is used by the Web server and Sync server as well as the Smart Terminals. Changing either of the synthetic accounts will require changing login credentials in more than one location.

Postgresql Windows Account

To change the Postgresql Windows account, simply use the built-in Windows User Accounts control panel applet. You will need to remember this information if you ever need to configure Postgresql backups or change the Postgresql database login account.

Postgresql Database Account

To change the Postgresql database login account, follow the steps below.

CONFIGURING YOUR ENTERPRISE SERVER

1. Log into your Enterprise Server desktop as the “Administrator” user or another user in the “Administrators” Windows Group.
2. Go to Start->All Programs->Postgresql 8.4 and click on “pgAdmin III”.
3. Double click the “PostgreSQL 8.4 (localhost: 5432)” node under “Servers”.
4. Enter your Postgresql Windows account password.
5. Expand “Login Roles” in the tree-view.
6. Right click on the “exhibio” role and click on “Properties...”.
7. Enter your new password in the “Password” and “Password (again)” text boxes.
8. Click “OK”.
9. Double click the “Enterprise Configuration” icon on the desktop, or go to Start -> All Programs and run the “Enterprise Configuration” application.
10. In the “Connection String” text area under the “Database Server” tab, change the line that reads “Password=[old password],” replacing “[old password]” with your new one.
11. Click “Save”.

Subversion Account

To change the Subversion account password, follow the steps below:

1. Log into your Enterprise Server desktop as the “Administrator” user or another user in the “Administrators” Windows Group.
2. In Windows Explorer, click on Tools->Folder Options and select the “View” tab.
3. Under “Files and Folders->Hidden Files and Folders,” select “Show hidden files and folders”.
4. Click “OK”.
5. Navigate to “C:\ProgramData\SubversionRepositories\enterprise\conf”.
6. Open the “passwd” file in Notepad and change the line that reads “exhibio = [OLD PASSWORD],” replacing “[OLD PASSWORD]” with your new one.
7. Go to “File->Save” in the menu and close Notepad.
8. Double click the “Enterprise Configuration” icon on the desktop, or go to Start -> All Programs and run the “Enterprise Configuration” application.
9. Select the “Subversion Server” tab.
10. Under “Subversion Server Credentials,” enter your new password in the “Password:” and “Password (confirm):” text boxes.
11. Click “Test Connection” to ensure that the login information was entered correctly.
12. Click “Save”.

Once you have done this, you will need to log into each Smart Terminal that connects to your server and follow the steps below:

1. Connect to the Smart Terminal desktop locally using a keyboard and mouse, or remotely using VNC.
2. Hit <esc> to stop the sign.
3. Click on the “Setup” icon on the desktop.
4. Enter your Smart Terminal’s administrator password and click on the “Login” button.
5. Select the “Smart Terminal Registration” tab.
6. Under “Sync Service Credentials, enter your new password in the “Password” text box.
7. Click “OK”.

UPDATING YOUR ENTERPRISE SERVER

Operating System Updates

Your Exhibio™ Enterprise Server runs on the Windows™ Web Server 2008 operating system. Accordingly, you may use any of the tools provided by Microsoft for keeping the underlying operating system updated with the latest security updates. Among these tools are Windows Update, and WSUS. You may choose the method for applying Windows Updates that is appropriate for your organization.

Exhibio™ Enterprise Software Updates

Exhibio™ may provide updates to the Enterprise Server software from time to time. These updates are for the Exhibio™ Enterprise applications and services running on your server and are different than the Windows Updates described above. The Enterprise Update application is provided to allow you to check for and apply Enterprise Software Updates.

Follow the steps below to use the Enterprise Update application.

1. Log into your Enterprise Server desktop as the “Administrator” user or another user in the “Administrators” Windows Group.
2. Either double-click the “Enterprise Update” icon on the desktop, or go to Start->All Programs and click on “Enterprise Update”.
3. Click the “Find Updates” button.
4. If no updates were found click “Finished”. Otherwise, select any updates you wish to install and then press the “Install Selected” button.
5. Your updates will be downloaded and launched. Follow any prompts in the installer.
6. Click the “Finished” button.

Once you update your Enterprise Server software, you may also need to update each of your Smart Terminals (via their desktops or a VNC connection) or they may not be able to get scheduled updates. Any Smart Terminals requiring software updates will be noted in the “Smart Terminals” section of the Enterprise Manager

BACKING UP YOUR ENTERPRISE SERVER

Considerations

Backing up your Enterprise Server is not a “one size fits all” task. You’ll need to examine how data is stored in the Enterprise Server and assess how its backup strategy will fit into the backup strategy your organization already has. Some questions you should ask yourself first, are “where do I want to store the data for my Enterprise Server backup,” “how often should I back up,” and “how much of my data should I back up at a time.”

The first thing you’ll need to know is where the data for your Enterprise Server is stored and whether or not it can be simply copied file by file over a period of time or requires an atomic “snapshot” of all the data at once. Assuming that you can obtain a new fully-working installation of your server, all the data you need to bring a system back to its former state after a crash is stored in two locations, a Subversion repository, and a PostgreSQL database. Backing up the PostgreSQL database will require special procedures beyond a simple file copy. The Subversion repository, however, can simply be copied file by file.

A basic strategy that will work well and save space is to take a full backup of your system once and then copy over the Postgresql and Subversion data regularly. This way in the event of a catastrophic failure you can simply restore the original full backup and then restore the latest Postgresql/Subversion snapshot. The only caveat is that the Postgresql backup must be taken prior to the Subversion Repository copy.

Alternatively, you may do a Postgresql backup and full system backup each time. This will make the restoration process simpler, but it will also take up considerably more space on your backup media.

Backing up Postgresql

Detailed information on how to backup Postgresql can be found at the following URL: <http://www.postgresql.org/docs/8.4/static/backup.html>. It is recommended that you read through that documentation first. However, your backup could be as simple as setting up a scheduled task running as the postgresql user with the following command:

```
C:\Program Files (x86)\PostgreSQL\8.4\bin\pg_dumpall.exe > [PATH TO BACKUP FILE]
```

“[PATH TO BACKUP FILE]” is the location where you want your Postgresql backup to be saved.

Backing up Subversion

To back up your Subversion repository just copy over the following directory from your server.

```
C:\ProgramData\SubversionRepositories\enterprise
```

Note: This file copy must occur after you have backed up Postgresql. Otherwise, your data may be out-of-sync when you restore.



Exhibio[®] Dynamic Digital Signage

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