

iLinc 10 Installed

Installation Guide

Version 1.0

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iLinc Communications | 10 - User Guide for Installed Edition
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iLinc Installed Edition

This User Guide is intended for organizations installing the iLinc application within the organization's network. It provides all the information you will need to set up the servers, install the software and enable the organization's users to manage the environment and host sessions. This document includes the following chapters:

- Chapter 1: [Planning the iLinc Environment](#)
- Chapter 2: [Installing iLinc](#)

Once the server software is installed and set up, please reference the iLinc 10 User Guides for information on how to use the iLinc software application.

1. Planning the iLinc Environment

The first step in getting iLinc up-and-running at your organization is to install the iLinc Server. The iLinc Server installation is a standard installation wizard that allows you to complete the installation quickly. This article describes the requirements for installation to a single server computer and provides detailed instructions on the installation process. For information on installing to multiple servers, see Appendix B: [Installing iLinc on Multiple Servers](#).

Before you install iLinc, you should make sure that your environment is ready. The following sections cover planning considerations.

What's in this chapter:

- Before You Install
- Recommended System Requirements
- Firewall Considerations
- Security Considerations
- Bandwidth Considerations

Before You Install

If you are upgrading an existing iLinc server environment (previous versions may include 7.x or 8.x), you will need to uninstall the existing version of ActiveState's ActivePerl application. The iLinc 10 application comes with a newer version of ActivePerl, but the installation will not update the existing ActivePerl application installed on your server. See Appendix E: [Upgrading to iLinc 10](#) for more information on upgrading an existing iLinc server environment.

If you do not have a previous installation that is being upgraded, you will not need to make any changes.

Recommended System Requirements

Server Requirements

- Microsoft Windows 2003 Server SP2
- Microsoft IIS 5.0 or 6.0 (please see the 10 Readme file on the server CD for special notes about Windows 2003 support)
- Minimum Processor and RAM as follows. Please note that Users are measured as concurrent users (not as named users).

# of Users	Processor and RAM minimums...
0-200	Single 2.8 GHz processor; 512 MB RAM



200-500	Dual 3 GHz processors; 1 GB RAM
500-1000	Dual 3 GHz Xeon Processors with 2 GB RAM

- 1 GB hard disk space
- 100 Mb Network Interface card supporting TCP/IP
- Microsoft PowerPoint version 8.0.0.5507 or newer (if using the iLinc PowerBoard).
 - For PPTX file import, you will need PowerPoint 2003 with Compatibility Pack or PowerPoint 2007.
- SQL Server 2005, iLinc embedded database (Access) or MySQL (5.0)
 - SQL Server 2005 is recommended for larger implementations (more than 200 concurrent users)
 - SQL Server 2000 is not supported due to localization in Japanese and Greek.
- Remote mail server (i.e. Exchange or some other mail system) which the iLinc server can use to send automated session invitation and reminder emails.
 - Please note that a remote mail server is an option. iLinc conferencing systems can be used without automatic e-mail invitations – manual invitations will still work.

ActiveState™ ActivePerl® is a requirement of iLinc 10 and will be installed on your iLinc server as part of the iLinc Server Installation. For more information on this software, please visit <http://www.activestate.com/>

If you are upgrading to iLinc 10 from a previous version, please be sure to review and follow the instructions in the section above, Before You Install, on an update needed for ActivePerl.

iLinc Client Requirements for Session Attendees

The iLinc Client installation installs automatically the first time a user joins a session. It can also be installed manually or with third party “push” solutions. Contact iLinc support for additional details.

You may wish to provide the following client requirements to your IT department or to individual users to make sure that their machines support these specifications. Using these specifications will provide the best possible setup for iLinc sessions.

Microsoft Windows 2000 SP4, XP SP2, 2003 R2 or Vista:

- Internet Explorer 6.0 or higher (Recommend ActiveX enabled)
- Firefox 1.5 or higher (Recommend Java installed)
- Memory: 128 MB; recommend 256
 - For Vista: 1 GB
- Available Disk Space: 15 MB
- Processor Speed: 600 MHz; 1 GHz for sharing; 1.5 GHz for editing
- Native Data transport on HTTP/port 80 – firewall and proxy server friendly
- Bandwidth: 56 Kbps
- Display: 1024 X 768, 16-bit color

Apple Macintosh:

- OS X 10.5 (Leopard): Intel, PPC G5 or G4
- OS X 10.4 (Tiger): Intel, PPC G5, G4 or G3
- OS X 10.3.9 (Panther): PPC G5, G4 or G3
- Firefox 1.5 or higher
- Safari 2.0 or higher
- Java Runtime Environment (JRE) 5.0 or higher
- Memory: 256 MB; recommend 512
- Available Disk Space: 15 MB
- Processor Speed: 800 MHz; 1 GHz for sharing; 1.5 GHz for editing
- Native Data transport on HTTP/port 80 – firewall and proxy server friendly



- Bandwidth: 56 Kbps
- Display: 1024 X 768, 16-bit color
- Note: Users joining sessions from PowerPC machines will not have an optimal experience if streaming video or internet audio (VoIP) are enabled and used within the session.

Internet Audio / Video:

- Full duplex sound card
- Headphones with microphone (see Recommended Headsets)
- Video camera
- Recommend 100 kbps if using Internet Audio and/or Video
- Voice and video on either UDP 11730, HTTP 80 or HTTPS 443

Note: If you are using iLinc's live video option, your client system requirements should be either the requirements above, or the system requirements for your USB camera or other video input device, whichever is higher.

Firewall Considerations

iLinc does not require any changes to your firewall settings. The server should typically be installed in a "DMZ" or other network location where port 80 is open to it, just as you would treat a typical web server. However, if you are using VoIP and/or iLinc live video, you may want to open one UDP port on your firewall to improve performance. iLinc will attempt to use UDP on port 11730 for audio and video, and thus opening this port outbound from the server will improve performance of these tools. If the port is available, the iLinc client will automatically use it by default. If the port is not available, the client will automatically use port 80 for VoIP and Video. These features will still work on port 80, but will use more bandwidth and may have higher latency and reduced overall quality, in some cases.

Security Considerations

iLinc supports both SSL and AES data encryption, for both the "front end" web pages as well as for all in-session data. Both SSL and AES require that you obtain and install a valid "SSL Certificate" from a trusted authority, on your iLinc server prior to installation. Information on how to do so can be found in your operating system documentation. If you require assistance with these steps you can contact iLinc Support.

Bandwidth Considerations

You must ensure that when your users connect to the iLinc Server, they have enough bandwidth to participate in the session. You can do so by determining how much bandwidth is available on your network for iLinc traffic. In addition, if your users are connecting to the Internet via a modem, you can require that they connect at an average speed, such as 56 kbps.

On average, iLinc sessions will use around 30 Kbps per concurrent user, assuming typical conferencing options are used, for normal session use. Higher utilizations can occur, particularly if either iLinc live video or high-end application sharing is used. For detailed information about potential bandwidth utilization, please contact iLinc support for details. See Appendix A: Understanding Bandwidth of the iLinc 10 User Guide for more information.

Note that it is also possible to "throttle" or limit the most bandwidth intensive iLinc session tools from exceeding certain bandwidth settings. For more information, contact iLinc support. If you must limit the amount of bandwidth available on your network for iLinc sessions, communicate the bandwidth limitation to everyone who can schedule sessions. Determine how many users you can have in sessions in a given time period, based on available bandwidth and licenses, and make everyone aware of the maximum number of users to avoid scheduling sessions when there will not be enough bandwidth or enough licenses available to ensure reliable operation for everyone.



2. Installing iLinc

The chapter discusses the steps and actions needed to properly install the iLinc software.

What's in this chapter:

- [Obtaining Your iLinc License Key](#)
- [Configuring the Server Computer for iLinc](#)
- [Installing the iLinc Server](#)
- [Enabling Your Server Licenses after Install](#)

Obtaining Your iLinc License Key

You may wish to install iLinc before you request your license keys. The installation will start with a single seat for each session type so that you can check to make sure all is working correctly. If you have not received your License Key via email at this time, you may get your key by following these steps:

1. Go to <http://www.ilinc.com/myilinc/downloads>
2. Log in with the User Name and Password for the organizational contact
3. Enter your IP Address.
4. Your License Key will display in a text box on screen. Additionally, an email containing this information will be sent to the organizational contact.
5. See [Enabling Your Server Licenses after Install](#) once iLinc 10 has been installed.

Configuring the Server Computer for iLinc

The server computer on which you plan to install iLinc must be properly configured before you begin your iLinc Server installation. Before you begin, make sure that you install the following on the server computer:

- Windows 2003 Server: Refer to your Microsoft documentation for complete installation directions.
- PowerPoint version 8.0.0.5507 or newer from the Microsoft Office software suite.
 - *Important! Be sure to enable web page authoring at the server level. Refer to your Microsoft Office documentation for complete installation instructions.*
 - For the DCOM configuration steps to enable in-session use of PowerPoint files, see Appendix F:



DCOM Configuration for PowerPoint.

Then, log in to the server as a user with Local Administrative rights to the server and run through the following checklist:

- Ensure that TCP/IP and the network card are installed and working properly. To do so, try “pinging” addresses that you should be able to get to from the server, such as “localhost”, the default gateway, and the address of a client machine on the same network.
- Check that your Server License Key files are based on the Internal IP address of the server. If not, request new keys from <http://www.ilinc.com/myilinc/downloads/> before completing the server installation.
- Ensure that Microsoft Internet Information Server (IIS) is installed and functioning properly. To test this, access the IIS default web page from a client PC using the primary IP address you identified above. Type `http://serveripaddress`, where *serveripaddress* is the primary address for the server. If the default web page does not appear, contact iLinc Support for assistance.
- Add ASP support to the server (Control Panel > Add Remove programs > Windows Components Wizard > Application Server > IIS > World Wide Web Service > Active Server Pages).
- You may need to reboot the server at least once during the installation. If other services are running on the server, you will want to make sure you do not disrupt other users during your iLinc installation.

Installing the iLinc Server (All Servers)

Note: For PowerPoint uploads to function correctly, you may need to run the Windows DCOM Configuration. For more information, see Appendix F:



DCOM Configuration for PowerPoint.

1. Log-in to the server as an administrator.
2. Download iLinc 10 Installed to the server's hard drive or burn to CD and place CD into drive of server.
3. Launch the installer by double-clicking the icon.
4. Click **Next** on "Welcome to the iLinc 10 Installer."
5. The next screen in the installer informs you that your web server must be stopped to continue with the installation. Before you stop the web server, make sure you notify other users at your organization that may be affected. Click **Yes** to continue.
6. Check the box next to "I accept to the terms of the license agreement" and click **Next** to accept the license agreement.
7. The "User Information" screen will appear. Enter your name and company, and click **Next**.
8. The "Choose Destination Location" screen will appear. Click **Browse** to select a different location, or click **Next** to continue. Files will be copied to these locations.
9. The "Server Address and E-mail Server" screen will appear. Enter the server address information as below:
 - For "*Server Address*," enter the address of the iLinc server that you want the iLinc Client software to connect to. This address is typically the DNS name you will tell iLinc participants to join. For example, "myserver.mycompany.com" (without quotes).
 - For "*Email Server Address*," enter the IP address or DNS name of the remote e-mail server.
 - To use the local SMTP service, enter "localhost" as the IP address and a valid Administrator User ID and Password in the fields provided.
 - If you do not want to utilize automatic iLinc session invitations and reminders, you can leave the Email server field blank. Manual e-mail invitations will still be supported.
 - If E-mail Server Address is left blank, the Server Name will be used instead.
 - Click **Next**.
10. The "IIS Web Site" screen will appear. Select or enter the name of the IIS Web Site.
 - a. The drop down will auto-populate with existing sites in IIS. Typing in a name not in the dropdown will create a new site.
 - b. For "*Virtual Directory*," enter the virtual directory that iLinc will be installed to. You may leave this blank to have iLinc installed to the root of your IIS web server. For example, to have your iLinc Server accessible at <http://myserver.mycompany.com/ilinc> you would enter "ilinc" (without quotes).
 - c. Click **Next**.
11. The "IIS User Accounts" screen will appear. Enter in the users for the IUSR Account and the IWAM Account. These auto-populate and the default settings are used for most installations. Click **Next**.
12. The "Security" screen will appear. The security screen will appear as disabled if no certificate was configured for the "IIS Web Site" set in step 11. If you have a valid certificate, you can select the Security Level and AES key size. Click **Next**.
13. The "File Service Directories" screen will appear. In most cases you should accept the default settings on this screen. Contact iLinc support if you plan to change these directories. Click **Next**.
14. The "Database Type" screen will appear. Chose the database type you prefer. One of the following configuration screens will appear based on your selected database type.
 - a. *Embedded*: Enter the path to the database and the Database Name. For added security you can configure a Database Password. (Do not edit if you want to use the iLinc default location.)
 - b. *Microsoft SQL Server 2005*: Enter the database server location, database name, and a SQL login ID and password with DB owner permissions.
 - c. *MySQL*: The same configuration requirements exist as those for SQL Server 2005, but you must install the MySQL ODBC driver prior to the installation (see Appendix D:



Configuring the MySQL 5.0 Database Server).

- d. Click **Next**.
15. The “Configuration Summary” screen will display. Click **Next**.
16. The “Select Program Folder” screen will display. Configure the Program Folder and the users that will have access. The default settings are used for most installations. Click **Next**.
17. The “**Completing the InstallAware Wizard for iLinc 10.0**” screen will display. Click **Next** and the installation using these configurations will begin.
 - a. ActiveState™ ActivePerl® will also be installed at this time.
18. To complete the iLinc server installation, you may be prompted to reboot your iLinc server. Click **Finish** to complete the installation wizard.

Enabling Your Server Licenses after Install

If you have not yet received your license keys, you will need to register your IP Address at <http://www.ilinc.com/myilinc/downloads/>. You will receive an email with an attached license key text file. Save the text file to a location that can be accessed by the iLinc Administration page. Your key includes encrypted license information that will enable or disable particular session types or features on your iLinc system, depending on what your organization licensed from iLinc.

To Enable Your Server Licenses

1. Log in to the server with the Windows server user name & password, not your iLinc credentials.
2. Open a web browser.
3. Type in the following address to access the server “iLinc Administration” page:
 - http://serveraddress/ilinc/cs/install_admin.pl,
 - *serveraddress* is the DNS address of your iLinc Server
 - *ilinc* is the virtual directory you have chosen to use (if any).
4. Locate the Licenses section.
5. Click **Browse** and locate the text file you saved from the e-mail you received.
6. **Upload** the license key file into the iLinc Administration page.
 - Note that if the page does not refresh to display the correct license amounts, you can use Control+F5 to refresh the data on the page. The license key amounts will then update to reflect the values in the license key file.
7. Scroll to the bottom of the page and click **Submit**.

Begin Using iLinc 10 Installed Edition

Now that your licenses are enabled for your Installed Edition, you may begin using iLinc! To log in to set up new users and/or schedule sessions, use the default Administrator login (provided below) to enter the Communications Center. For more information on managing your iLinc site, users, sessions, and more, refer to the iLinc 10 User Guide, available with the installer package or from the Help button on the Communications Center pages.

Default Administrator Login:

User ID: Administrator
Password: admin



Appendices

The iLinc 10 User Guide provides the following appendices:

- [Troubleshooting Your iLinc 10 Installation](#)
- [Installing iLinc on Multiple Servers](#)
- [Configuring the MS SQL Server 2005 Database Server](#)
- [Configuring the MySQL 5.0 Database Server](#)
- [Upgrading to iLinc 10](#)
- [DCOM Configuration for PowerPoint](#)

If you require additional assistance, please visit the iLinc Support center at the following link to contact the iLinc Technical Support team: <http://www.ilinc.com/support>

A. Troubleshooting Your iLinc 10 Installation

When your Server installation is complete, check the server's *Administration Center* page to make sure that your settings are correct.

To Check the Server Administration Center Page

1. Open a web browser.
2. Type in the following address to access the server "iLinc Administration" page:
`http://serveraddress/ilinc/cs/install_admin.pl`, where *serveraddress* is the DNS address of your iLinc Server and *ilinc* is the virtual directory you have chosen to use (if any).
3. Review this page for any licensing errors. If you encounter errors that you are unsure of, contact iLinc Support for assistance.
4. On the **Site** tab, change any file upload size or bandwidth restrictions. SSL settings can also be changed here.
5. On the **Servers** tab, the Server location information can be verified.
6. The **Tests** tab can be used to test email functionality as well as connectivity.
7. To verify iLinc conferencing license info, you can visit Server Classroom Licensing Info URL. This is `http://Serveraddress/ll/ll.dll/ServerInfo` (Case sensitive). Your licenses are listed by conferencing type. You can see the total for each type, the number currently in use, and the expiration date for each license type.
8. Test your server installation by logging into the Communications Center. Open a browser and visit the login page, which by default, will be at: `http://myserveraddress/myvirtualdirectory`. You can use the default Administrator login account to test logging in.

Language Installation

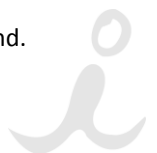
Occasionally, the language files do not successfully load during installation. English will load, but the other won't. If this happens, the `db_upgrade_101.pl` script can be run manually to reload the language files. To do so, open a Command Prompt window and run the `db_upgrade_101.pl` script with ActivePerl by entering the following command then pressing Enter (paths may need to be adjusted to match your installation):

- `C:\Perl\bin\perl.exe C:\Program Files\iLinc\Server\Bin\db_upgrade_101.pl`

Uploading Content to Communications Center

If the Security Level for your iLinc site is set to Always or Optional and you cannot upload content from the Communications Center, open a Command Prompt window on your iLinc server and enter the following command. The iLinc server must be at least temporarily connected to the Internet when entering this command:

- Enter into Command Prompt: `ppm install -force Crypt-SSLeay`



- Press **Enter**.

This command will download the latest version of the Crypt-SSLey Perl module from a Perl repository on the Internet and install it to your server. This command will also ask two questions:

1. For the "Proceed with installation" question, answer **Yes**.
2. Press **Enter**.
3. For the "Fetch sslay32.dll" question, answer **No**.
4. Press **Enter**.

Once finished you may need to open Administrator Tools, click Services, and then restart the IIS Admin Service.



B. Installing iLinc on Multiple Servers

iLinc can be installed in a single server or multiple server environment. Using a single server environment allows for the simplest implementation, while using a multiple server environment allows for increased performance per server as well as increased scalability.

How to Implement iLinc in a Multiple Server Environment

The iLinc system is comprised of four basic modules, with each one able to be installed on its own server. The four server modules are:

1. **Conferencing Server** – Contains the code required to partake in a session.
2. **Content Server** – Contains the code required to store all content and user pictures.
3. **Communications Center** – Contains the code required to access and use the Communications Center, for managing sessions, content, users and more.
4. **Database** – Contains the database that is used to store data.

This document details how to set up a multiple server implementation based on starting with a basic single server implementation. Since each module can function as part of a single server, combined with just one or two other modules on multiple servers or each on its own server, each module will be discussed separately in regards to setting it up on its own server based on the initial single server install.

All Servers are expected to be running Microsoft Windows and must be located on the same domain. Please visit <http://www.ilinc.com/technology/installed/server-requirements> for a list of the hardware requirements.

Conferencing Server

The Conferencing Server is the server that serves out session configurations.

1. Open the systems registry by running "regedit.exe"
2. Locate and double-click the registry key **HKEY_LOCAL_MACHINE\SOFTWARE\iLinc\Server\10.0\Main**, and enter the URL to the "/api/llapi.pl" page on the Communications Center Server. For example: [http://myilinc.mycompany.com/\[vdir\]/api/llapi.pl](http://myilinc.mycompany.com/[vdir]/api/llapi.pl) – Include http://
3. Locate and double-click the registry key **HKEY_LOCAL_MACHINE\SOFTWARE\iLinc\Server\10.0\ClassroomService**, and enter the network path to the content folder on the Content Server. For example: \\machinename\sharename\...\content\
4. Close regedit.

Content Server

The Content Server is what will server out all session content and any uploaded user pictures. The Content Server must be in the same domain as the Conferencing Server. A domain user account must be selected or created to use for app pool identity, share permissions and file permissions below.

1. Open the systems registry by running "regedit.exe"
2. Locate and double-click the registry key **HKEY_LOCAL_MACHINE\SOFTWARE\iLinc\Server\10.0\Main**, and enter the URL to the "/api/llapi.pl" page on the Communications Center Server. For example: [http://myilinc.mycompany.com/\[vdir\]/api/llapi.pl](http://myilinc.mycompany.com/[vdir]/api/llapi.pl) – Include http://
3. Locate and double-click the registry key **HKEY_LOCAL_MACHINE\SOFTWARE\iLinc\Server\10.0\FileService**, and enter the URL address to the "/cm/cm_content_upload_redirect.pl" page on the Communications Center Server. For example: [myilinc.mycompany.com/\[vdir\]/cm/cm_content_upload_redirect.pl](http://myilinc.mycompany.com/[vdir]/cm/cm_content_upload_redirect.pl) – Do not include http://



4. Close regedit
5. Configure a network share pointing to the location of the content folder, usually **C:\Program Files\iLinc\Server\Content**, and ensure that both the share permissions and file permissions for this folder are set, read-only, for the domain user account. The computer name and share name must match the value you entered on the Conferencing Server in the "PowerBoardBasePath" registry entry.
6. On the Conferencing Server, open IIS Manager and set the user that the IL app pool runs under, to the domain user account. The domain user account must also be in the IIS_WPG local group on the Conferencing Server.

Communications Center Server

The Communications Center Server is configured almost exactly like any other installation type. During the installation steps, the only difference is ensuring that you specify a Microsoft SQL Server or a MySQL Server which is running on a dedicated server just for serving out database information.

Note: All of the configuration settings for this server are made through the Install Admin page. Configure the Conferencing Server and the Content Server and come back to this section when those are done.

1. From the Install Admin page click on the "Servers" menu at the top of the page.
2. In the "Conferencing Server" section of the page enter in the DNS name of the server being used as you Conferencing Server.
3. In the "Miscellaneous Servers" section of the page enter in the DNS name of the Content Server being used in your configuration.
4. Click the "Submit" button to save your changes

Database Server

The database server hosts the database and the iLinc portion of the setup is configured through the Communications Center Servers configuration. The iLinc installer does not need to be run on this system. See Appendix C:



Configuring the MS SQL Server 2005 Database Server or Appendix D:



Configuring the MySQL 5.0 Database Server for more information on configuring the database server.

Additional Items

If the Conferencing Server is on a separate server than the Communications Center server, it is recommended that the following registry settings are added to **HKEY_LOCAL_MACHINE\SOFTWARE\iLinc\Server\10.0\Main** for all of the systems:

1. "ServerPort"="80"
2. "SecureServerPort"="443"

After licenses have been verified, turn off the iLinc scheduler on the Conferencing and Content Servers:

1. Click Start > Programs > Administrative Tools > Services
2. Right-click iLinc Scheduler and select "Stop"



C. Configuring the MS SQL Server 2005 Database Server

Before running the iLinc server installer, you must already have SQL Server Authentication set up and named pipe remote connections enabled.

Set up SQL Server Authentication

1. Launch Microsoft SQL Server Management Studio. If it's set up for Windows Authentication, leave it that way for now. Click Connect.
2. Right-click the server instance in the left column, select Properties, select the Security page, check SQL Server and Windows Authentication mode, then click OK, then OK again.
3. Exit SQL Server Management Studio.
4. Click the Windows Start button, Administrative Tools, launch Services, and restart the SQL Server (MSSQLSERVER) service.
5. Exit Services.
6. Launch Microsoft SQL Server Management Studio again (again, probably using Windows Authentication) and click Connect.
7. Under the server instance in the left column, expand the Security folder, the Logins folder, and double-click the "sa" administrator login.
8. Under the General page, type and confirm a password for the "sa" login if you're not sure what it is.
9. Click the Status page and, under Login, check Enabled.
10. Click OK.
11. To make sure your new SQL Server Authentication login is valid, exit SQL Server Management Studio, then re-launch it, select SQL Server Authentication (instead of Windows Authentication), enter your login and password, and make sure you get in.

Note: If installing iLinc server for SQL Server 2005 using a remote MS SQL Server, the Windows administrator user names and passwords used to log in to both the machine onto which iLinc server will be installed, as well as the remote MS SQL Server, must match. If they do not, the installer will fail to create, populate or update the database. In addition, the iLinc error logs will show that the login for the SA user on the MS SQL Server failed even though it will be the Windows user names or passwords that did not match.

Enable *Named Pipe* Remote Connections

1. Click the Windows Start button, Programs, Microsoft SQL Server 2005, Configuration Tools, and launch SQL Server Surface Area Configuration.
2. Click Surface Area Configuration for Services and Connections.
3. Expand Database Engine, click Remote Connections, then *Local and remote connections*, then click either *Using both TCP/IP and named pipes* or *Using named pipes only*. Then click Apply.
4. Click OK when you see the message, "Changes to Connection Settings will not take effect until you restart the Database Engine service."
5. Expand Database Engine, click Service, click Stop, wait until the MSSQLSERVER service stops, then click Start to restart the MSSQLSERVER service.

Running the iLinc 10 Server Installer

When you reach the Database configuration dialog in the iLinc server installer, you are asked for a Server Name\Instance Name. That can be found in SQL Server Management Studio. If your SQL Server instance has only a server name and not an instance name, enter the server name without a trailing backslash.



D. Configuring the MySQL 5.0 Database Server

Before running the iLinc server installer, you must have the MySQL database set up.

MySQL Server Instance Configuration Wizard

Please check these settings to make sure they are set up correctly when using with iLinc:

1. Make sure both the “Install As Window Service” and “Include Bin Directory in Windows PATH” is checked. Under the “Install As Windows Service” section, keep the “Service Name” as “MySQL” and make sure the “Launch the MySQL Server Automatically” checkbox is checked.
2. Make sure the “Modify Security Settings” checkbox is checked, supply a Root Password, and make sure the “Enable root access from remote machines” checkbox is checked.

MySQL ODBC 3.51 Driver Installation

In order for iLinc to be able to populate tables in the MySQL Database it needs to have the “MySQL ODBC 3.51 Driver” installed. Locate this driver from the MySQL download page and follow the wizard for installation instructions.

1. If the iLinc Server is having trouble populating the MySQL Database, the system that will be running the iLinc Server must be configured to use the “MySQL ODBC Driver” from a “System Data Source Name.”
 - a. On the system that will run the iLinc Server, navigate to the Control Panel.
 - b. Double Click on Administrative Tools.
 - c. Double Click on Data Sources (ODBC).
 - d. The “ODBC Data Source Administrator” window will appear. Click on the “System DSN” tab.
 - e. Click on the “Add” button to add the “MySQL ODBC Driver” as a “System DSN.”
 - f. Scroll down and find the “MySQL ODBC 3.51 Driver” selection and Click on it. Click on the Finish button.
 - g. The “MySQL Connector/ODBC 3.51 – Add Data Source Name” window will appear.
 - i. For the “Data Source Name” field, give the data source a name.
 - ii. For the “Server” field, if the MySQL Server is on the same machine that will be using the MySQL ODBC Driver then the Server field does not need to be filled in. If the MySQL Server is not on the same machine that will be using the MySQL ODBC Driver, then you must supply a server address to the MySQL Server.
 - iii. For the “User” field, enter a user name that the ODBC Driver will use to connect to the MySQL Database.
 - iv. For the “Password” field, enter a the password for the user entered in the “User” field.
 - v. For the “Database” field, click the drop down and select the “mysql” database.
 - vi. Click the Ok button to finish the configuration of the “MySQL Connector/ODBC 3.51 Driver.”
 - h. Make sure that the MySQL Source Name was added to the list of “System Data Sources.” Click the OK button on the “ODBC Data Source Administrator” window.
 - i. The iLinc Server should now be able to populate the MySQL Database using the MySQL ODBC Driver.

NOTE: When setting up a DSN for the MySQL ODBC Driver in “Administrative Tools > Data Sources (ODBC)”, your MySQL database will not yet exist. Therefore, enter your Database as “ilincdb” or whatever you plan on entering for the Database Name when you run the iLinc server installer. The ODBC Driver must be set up with the same database name before running the iLinc installer so the iLinc installer can make use of it to create and populate the database. And you don’t need to click the “Test” button because the database will not exist until you run the iLinc server installer.



E. Upgrading to iLinc 10

If you have a previous version of iLinc installed in your environment, please utilize the following steps to upgrade your environment to iLinc 10.

Before Upgrading

Before running any of the following upgrade paths for upgrading an existing version of iLinc to iLinc 10, please make a backup of the iLinc Database. Once a backup is successfully created, you may continue with the following instructions for upgrading iLinc.

Uninstall Older ActivePerl

Follow these steps to uninstall the existing ActivePerl application on your existing iLinc server:

1. Go to **Control Panel->Add/Remove Programs**
2. In the "Currently installed programs" list, click **ActivePerl**, then click its **Remove** button. Follow the instructions provided.
3. Once ActivePerl has been removed, open the **C:** directory in Windows Explorer and delete the **C:\Perl** directory.
4. **Restart** the server before installing iLinc 10.

Upgrading from iLinc 7.7

1. Upgrade to iLinc 8.6.3 by running the iLinc 8.6.3 installer
2. Continue on to the instructions for upgrading iLinc 8.6.3 to iLinc 10

Upgrading from iLinc 8.6

1. Uninstall Active Perl 5.8.7.815 from Control Panel -> Add/Remove Programs
2. Stop web services through command prompt with "net stop iisadmin"
3. Remove physical directory C:\Perl
4. Reboot server
5. Upgrade to iLinc 9.0.6.1850
6. Continue on to instructions for Upgrading from iLinc 9.0.6.1850

Upgrading from iLinc 9.0.6.1850

1. Back up database
2. Review database specific instructions (see Appendix C: [Configuring the MS SQL Server 2005 Database Server](#) & Appendix D: [Configuring the MySQL 5.0 Database Server](#))
3. Upgrade to iLinc 10

Note: If you are on an earlier version of iLinc 9, please upgrade first to iLinc 9.0.6.1850 and then you may follow the process to upgrade to iLinc 10.



F. DCOM Configuration for PowerPoint

Due to security restrictions imposed on the Windows 2003 Server Operating System, there are sometimes extra installation steps needed to allow iLinc to run PowerPoint during iLinc Powerboard conversions.

What You Might See if DCOM Configuration is Needed

Even if PowerPoint 2003 or 2007 is installed and fully patched, and your file is a valid .ppt file, during the uploading of a PowerPoint presentation to the iLinc server, you may receive one of the following errors:

"The uploaded file is not a valid PowerPoint presentation."

OR

"PowerPoint is not installed on the iLinc server..."

In the Server Application Log (event viewer), you may see DCOM errors associated with the times that you upload your presentations. These errors will appear similar to the following:

```
"Access denied attempting to launch a DCOM Server. The server is:
{91493441-5A91-11CF-8700-00AA0060263B}
The user is IUSR_BOURNE-SRVR1/BOURNE-SRVR1,
SID=S-1-5-21-343818398-484763869-1060284298-1024. "
```

To remedy these errors, the iLinc server administrator will need to add the IWAM and IUSR accounts to the PowerPoint DCOM permissions. If you have used different user accounts for anonymous IIS access or for the iLinc Application Pool, those accounts will need to be added.

Configuring DCOM Steps

To fix this problem, the "Distributed COM Configuration Properties" tool must be used.

1. Go to Start > Run. Enter DCOMCNFG. Hit <Enter>.
2. Browse to Component Services > My Computer > **DCOM Config**.

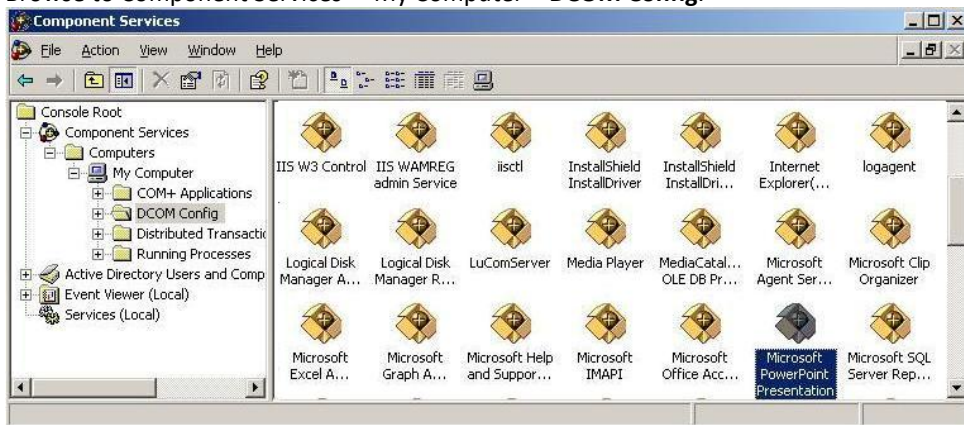


Figure 1: Component Services List

3. Scroll down to "**Microsoft PowerPoint Presentation**", right-click it and go to "Properties".
4. Click the "**Security**" tab. Select the "Use custom access permissions" and "Use custom launch permissions" options.
 - a. Click on the "Edit..." button for the Custom Access Permissions. Make sure the following accounts are in the list of users. Select all "Allow" check boxes for Local and Remote Access for each user. Click OK when complete.
 - i. **IUSR_ServerName**



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