

# iGoldMine Getting Started Guide

Version 8.0

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# Introduction

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## Welcome to iGoldMine

iGoldMine adds the dimension of thin-client access to your customer relationship management tools. It provides a solution for harmonizing data transactions across platforms. And, as a thin client, it requires no costly desktop installations.

The iGoldMine application uses any network connection (direct land line, a wireless connection, the Internet) to deliver the functionality of core GoldMine applications to virtually any computer in your network. Whether across the country or across the room, your analysts can log on to GoldMine or Answer Wizard and work remotely – viewing and updating records as if they were working locally.

iGoldMine manages and deploys connections and application processing using a combination of server components running on a Web server. Offering cross-platform compatibility, iGoldMine allows analysts to run GoldMine applications from computers operating Macintosh, Linux, Microsoft Windows, or any Java-enabled device or browser systems.

## **What's New in iGoldMine 8.0**

iGoldMine 8.0 includes the following product updates.

### **Client Side Password Caching**

Client side password caching allows users who are not members of the iGoldMine Server's domain to log onto iGoldMine without having to enter a user name and password every time.

### **Time Zone Redirection**

Time zone redirection allows iGoldMine sessions to run in the time zone of the client computer, regardless of the time zone that is selected on the iGoldMine server.

### **Relay Server Enhancements**

The Relay server enhancements provide addition relay server support.

### **Session Shadow Notification**

Session Shadow Notification allows iGoldMine to notify users when someone connects to their session and allows the user to accept or deny access.

### **Automatic Windows Update and Hotfix Compatibility**

The Automatic Windows and Hotfix Compatibility Updates eliminate the need for compatibility updates when Microsoft releases a new windows update or hot fix. At runtime, iGoldMine automatically detects the locations of the internal Operating system variables and functions used by iGoldMine.

### **Mac OS X Client**

The new Macintosh OS X client is a lightweight application that integrates seamlessly with OS 10.3 and 10.4 environment.

# About This Guide

This *Getting Started Guide* provides installation and setup information necessary to begin using iGoldMine.

## Audience and Expertise



This guide describes how to set up and maintain your system using the features in the Cluster Manager and the Program window.

The guide's function is to assist those responsible for installing and managing the application (typically system administrators) in developing a working understanding of the many features of iGoldMine.

The directions for installation and customization assume an in-depth knowledge of GoldMine and full security rights to GoldMine administration. In addition, the system administrator must have a basic understanding of the Microsoft Windows operating system and some working knowledge of database applications.

System administrators use the Cluster Manager to maintain iGoldMine. The end user accesses GoldMine applications from other locations using the Program Window. These end users should be familiar with the module they are granted access to through iGoldMine.

## Document Conventions

Example	Description
<b>File&gt;&gt;Print</b>	Menu bar commands (in this example, select <b>File</b> on the menu bar, then select <b>Print</b> in the drop-down menu)
The <b>Select a Data Source</b> dialog box appears.	Dialog boxes and menu items in bold
<b>OK</b> 	Button names
<b>Note</b>	Additional information
<b>CAUTION/WARNING</b>	Critical information to prevent functionality or data loss
	Reference to another topic or resource

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FrontRange Solutions can answer your technical support questions about GoldMine, GoldMine, and FrontRange product families. Visit:

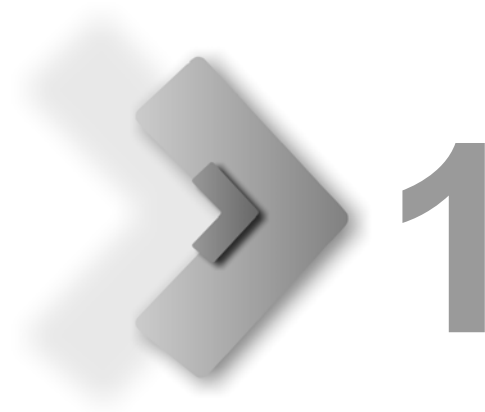
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### Contact Information

#### FrontRange Solutions Worldwide Headquarters

5675 Gibraltar Drive  
Pleasanton, CA 94568 USA  
TEL: 925.398.1800

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# Installing iGoldMine

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## Overview

To enable user access to GoldMine through iGoldMine, the GoldMine application and its components must be installed and operated from a central server.

The iGoldMine Installation Wizard is a step-by-step guide that walks you through installation of the server application. Windows and dialog boxes clearly outline important information, features, and directions.

This chapter provides instructions and tips for a successful installation of iGoldMine.

## Checklist

- ☐ Customers should review the following checklist before installing iGoldMine. This checklist outlines the basic steps for successfully installing and running iGoldMine. Exit all programs running on your system including the Microsoft Office Shortcut bar to free memory and alleviate potential conflicts between the installer and other software on your computer.
- ☐ **IMPERATIVE!** Customers upgrading from a previous version must uninstall any older versions of GoldMine Everywhere Thin Client (GMETC) prior to installing iGoldMine. The iGoldMine installation detects previous versions and displays a message to uninstall any previous version before continuing. We recommend uninstalling previous versions of GMETC using the Windows **Add/Remove Programs** from the Control Panel. After removing GMETC, we recommend you delete the folders **c:\Program Files\Everywhere**.
- ☐ **No Compatible Products Detected:** This message appears during installation if iGoldMine does not detect a compatible version of GoldMine. Click **Yes** to select another location to install iGoldMine or **No** to continue the installation.
- ☐ Ensure a successful implementation of GoldMine. The current GoldMine system and applicable modules must be fully functional and accessible from the iGoldMine server. See the *GoldMine Installation Guide*.
- ☐ **Windows Logo Verification:** Appears during installation with Windows 2003 and Windows XP. iGoldMine must install its own display driver during installation. You can revert to your original display driver after installation. If you receive a display driver error, click **Continue Anyway** to complete the installation.
- ☐ If using Answer Wizard, set up the ODBC data source using ODBC Administrator (new customers only). Use the ODBC Administrator to set up the data sources using your specific database drivers and configurations.
- ☐ If you are running both iGoldMine and iHEAT, iGoldMine must be installed in a separate directory.
- ☐ **Windows Automatic Update Enabled:** This message appears during the iGoldMine installation if the Microsoft Windows automatic

update service is enabled. You can disable the service and continue to install iGoldMine or exit the installation.

- ❑ Installation steps may vary depending on whether iGoldMine is installed using a download from NetUpdate or from an installation CD-ROM. Access NetUpdate from the Help menu in the GoldMine application from the GoldMine server.
- ❑ Installation requires Windows Server 2003 (with all critical Hotfixes) or Windows XP. For installation, administrative rights to the iGoldMine computer is required. Please read the sections titled "System Requirements" on page 1-3 and "HotFix Patches" on page 1-5.

## System Requirements

iGoldMine system administrators must have administrative rights on the server to perform the installation, and the server must have TCP/IP as a network protocol. A Web server must also be available in order to set up the server for browser deployment of iGoldMine.

Following are minimal software and hardware requirements for running iGoldMine.

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**Note:** Additional requirements are noted in the technical document, "System Requirements," available from our support site at [support.frontrange.com](http://support.frontrange.com)

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## Required Components

### iGoldMine Server

The iGoldMine Server requires one of the following Windows operating systems:

- Windows Server 2003 Standard or Enterprise Edition with Service Packs 1 and 2
- Windows Server 2003 R2 Standard or Enterprise Edition
- Windows XP Professional with Service Pack 2

Where applicable, these platforms are supported with or without the Security Rollup Package.

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**Note:** Right-to-left languages are not supported.

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iGoldMine Administrators must have administrative rights on the server to perform the installation, and the server must have TCP/IP as a network protocol.


A Web Server (for example, Microsoft Internet Information Server (IIS) or Apache HTTP Server) must be available in order to set up the server for browser deployment of iGoldMine.

The color depth of the client and server must be greater than 256 - 16 million or greater is recommended.

The Memory and CPU requirements of an iGoldMine Server are determined by the applications that are published and the number of users accessing the system. In general, an iGoldMine Server can support 12 heavy users/500 MHz CPU and 25 light users/500 MHz CPU. (Heavy is defined as a user running one or more large applications with continuous user interaction. Light is defined as a user running one application with intermittent user interaction.)

The Operating Systems (OS) are Windows Server 2003 and Windows XP.

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 Consult the technical document titled "System Requirements" for OS requirements and service pack support information available online at **[support.FrontRange.com](http://support.FrontRange.com)**.

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## iGoldMine Clients

Users can connect to an iGoldMine Server from any computer that supports an iGoldMine client. The following clients are available:

- The Microsoft ActiveX Control is available to Windows users running Internet Explorer. The ActiveX Control is automatically installed the first time a user accesses the HTML page containing the ActiveX Control.
- The Windows Client is a 32-bit Windows application that can be installed and run on most Windows computers.
- The Windows CE Client is a lightweight application that provides seamless integration with the native device's environment. Windows CE users can run iGoldMine from the Start menu, a desktop shortcut, or directly from the iGoldMine executable.



- The Pocket PC Client is a lightweight application that provides seamless integration with the native device's environment. Mobile users can run the Pocket PC Client from the Start menu or directly from the iGoldMine executable.
- The Linux Client is a lightweight native X Window Systems application that delivers excellent performance to Linux clients. Users can install the Linux Client and run iGoldMine from the Linux console.

The Mac OS X Client is a lightweight application that provides seamless integration with the native Mac OS X environment. Users can download and install iGoldMine.dmg and run iGoldMine from the Applications directory.

- The Browser Plug-in for Mac OS X is available to Mac OS X users running Apple Safari or any Java-enabled browser. Users browse to an HTML page that contains a link to the Plug-in.
- The Java Client is available to Windows and Linux users. When running from a browser, users launch iGoldMine by browsing to an HTML page containing the Java applet. The browser automatically downloads the iGoldMine Client classes and launches the applet.

## Workstation Requirements

- Any OS supporting Microsoft Internet Explorer
- Microsoft Explorer 6.0 SP 1 or higher
- The Java Client requires JRE 1.4 or JVM 1.4.2.03 or higher
- Macintosh OS X 10.3 Panther

## HotFix Patches

All HotFix patches and Service Packs have the capability of disabling the Application Publishing Service of iGoldMine. If a HotFix or Service Pack is released from Microsoft, and disables iGoldMine, a short lag time (usually 2-3 days) occurs while compatibility issues are resolved. Time is needed for FrontRange Solutions Inc. to assess the changes and adjust and test iGoldMine to ensure that it is compatible with these Microsoft changes.

FrontRange Solutions recommends maintenance customers verify which patches and packs are currently supported prior to installing a HotFix or Service Pack, and apply the latest compatibility update (available on the Drivers and Downloads Section of [support.frontrange.com](http://support.frontrange.com).)

Additionally, FrontRange Solutions recommends searching its product Knowledge Base at [support.frontrange.com](http://support.frontrange.com) for the keyword "HotFix" or the topic "Critical Updates and Microsoft Hotfixes: Supported and not Supported" to review any unsupported HotFixes.

## Before You Install...

Some conditions can impede the installation of iGoldMine. You will receive the following notifications if any of these conditions exist:

- **Windows Automatic Update Enabled:** This window appears during the iGoldMine installation only if you have the Microsoft Windows automatic update service enabled. We recommend disabling the Automatic Update Service to avoid potentially downloading an incompatible patch (see "HotFix Patches" on page 1-5).

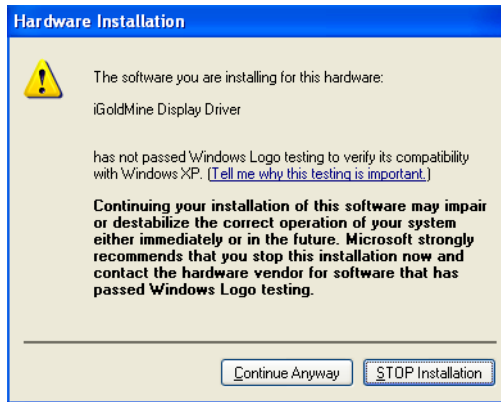
A check box allows you to disable the service and then continue installing iGoldMine or exit the installation.

- **No Compatible Products Detected:** This window appears if the iGoldMine installation does not detect a compatible version of GoldMine. We recommend you install a compatible version of GoldMine first, then run the iGoldMine installation.

Click **Yes** to select another location to install iGoldMine or **No** to continue the installation.

Click **Continue** to continue the installation or click **Exit** and successfully install a compatible version of GoldMine prior to installing iGoldMine.

- **Windows Logo Verification:** Appears during installation on Windows 2003 and Windows XP. iGoldMine must install its own display driver during installation. You can revert to your original driver after iGoldMine is successfully installed. To continue, click **Continue Anyway**.



- **Windows 2003 and Windows XP Configured as Active Directory Domain Control:** When the Windows 2003 Server or the Windows XP is configured as a Domain Controller, users do not have the right to allow log on locally. Without this right assigned, users will get a Login Failed error when logging in from the iGoldMine client. You can assign this right to users or user groups using the Domain Controller Security Policy tool. Select **Start>>All Programs>>Administrative Tools**, then restart the server.

## iGoldMine CD Browser

If you are installing from the iGoldMine installation CD, you see that it is set up to autorun when inserted into the CD-ROM drive. If installing from NetUpdate, some steps may differ slightly.

The CD Browser initiates the installation process. Several options are available from the CD Browser:

- **Install iGoldMine:** Select to begin installing the iGoldMine server components. The **iGoldMine Installation Wizard** appears.
- **View Documentation:** Select to view and/or print the *iGoldMine Getting Started Guide* or the Readme file.
- **Browse CD:** Select if you want to find specific files on the CD.
- **Exit:** Select if you want to exit the installation.

---

**IMPORTANT:** You are required to successfully install, license, and configure the latest version of GoldMine before installing iGoldMine.

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## Installation Wizard

The iGoldMine Installation Wizard is a step-by-step guide for installing the server application. Follow the directions in the important information areas, features, and directions.

To cancel the installation and exit the wizard at any time, click **Cancel**.

## Installing the iGoldMine Server

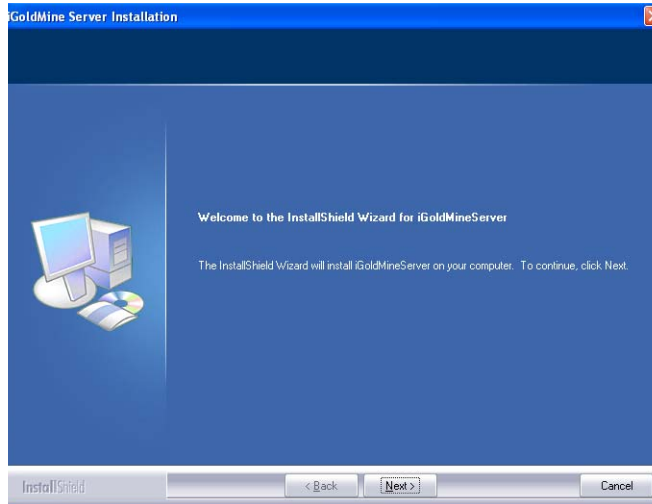
The Installation Wizard installs the iGoldMine Application Publishing Service, Display Server, Component Server, Program Window, and Cluster Manager.

1. Insert the iGoldMine Installation CD.

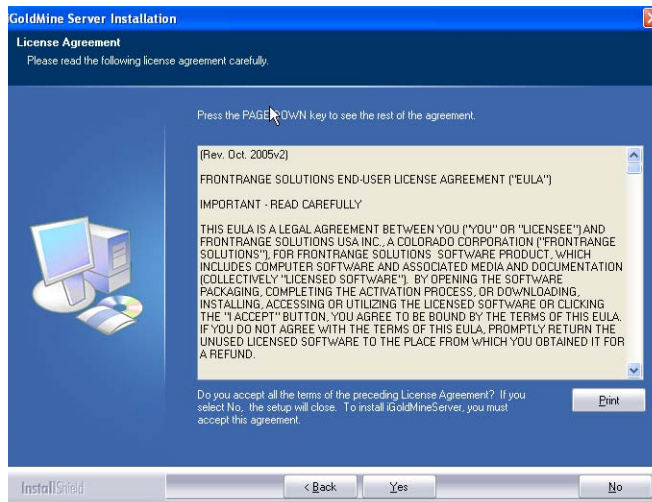
The CD Browser appears.

2. Select **Install iGoldMine**.

The **Installation Wizard Welcome** dialog box appears.

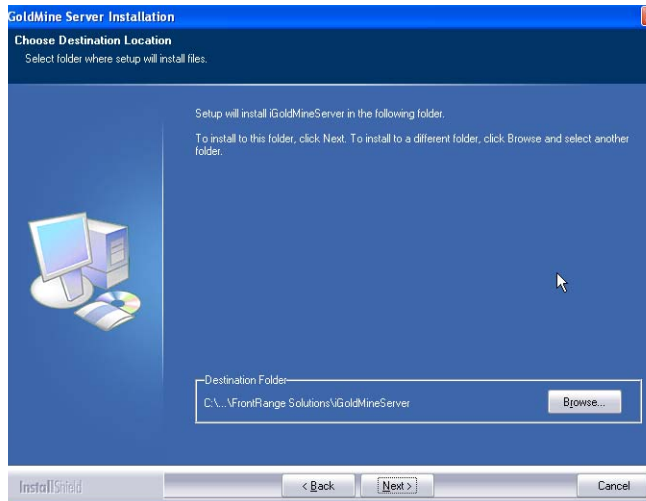


3. Review the information and click **Next**. The **FrontRange Solutions End-User License Agreement (EULA)** appears.



4. Review the licensing information carefully, and if you agree to the terms, select **Yes**.

## 1-10 Installing iGoldMine



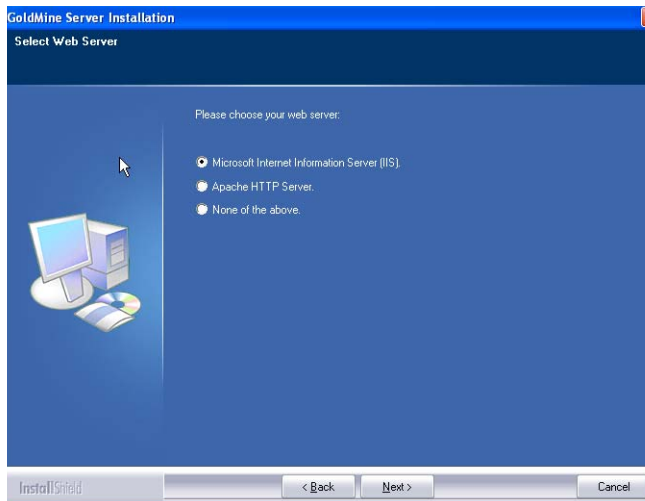
5. At the **Choose Destination Location** screen, click **Next** to choose the default locations for both the GoldMine and iGoldMine files

- Click **Change GoldMine Location** if GoldMine is not installed in the default location. The **Change Current Destination Folder** dialog box appears. Type the desired path, select a path from the drop-down list, browse to the folder using the Up One Level button, or create a new folder using the New Folder button. Click OK and then **Next**.

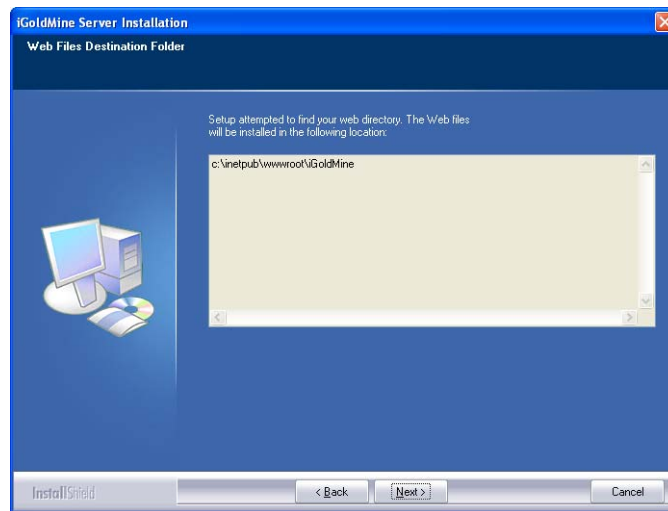
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**Note:** If GoldMine is not installed on the iGoldMine server, it is recommended that you use a mapped drive instead of UNC. Click **Change GoldMine Location** and browse to the GoldMine server location if GoldMine is not installed on the iGoldMine server.

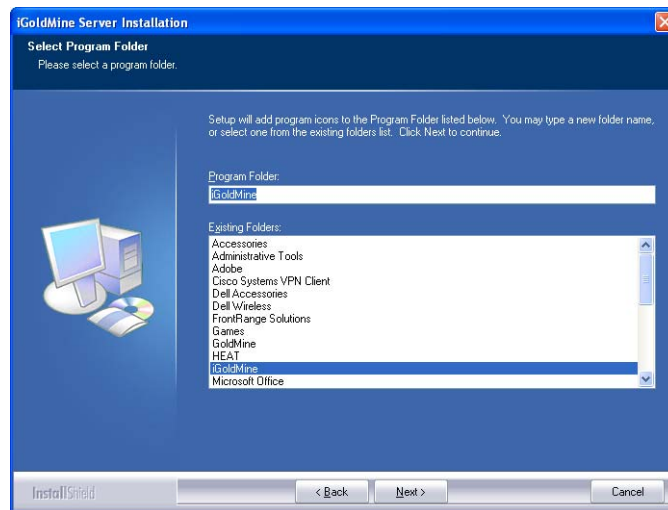
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6. At the **Select Web Server** screen, select a Web server and then click **Next**.



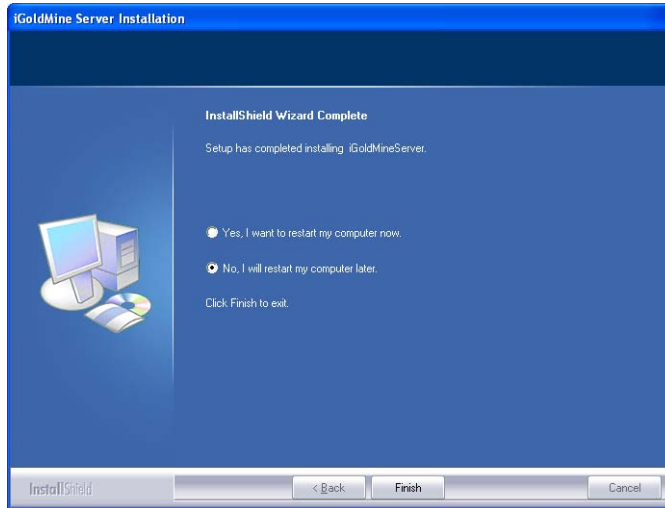
7. At the **Web Files Destination Folder** screen, iGoldMine lists where it will install the Web files. Click **Next**.



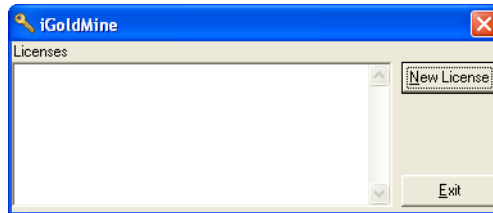


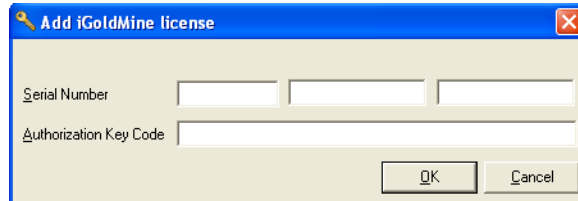
8. At the **Select Program Folder** screen, select an existing folder if necessary; otherwise to accept the location, click **Next**.

iGoldMine configures and loads onto your computer.

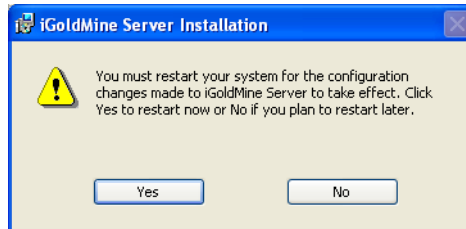


9. Type in the license number information and then click **OK**.



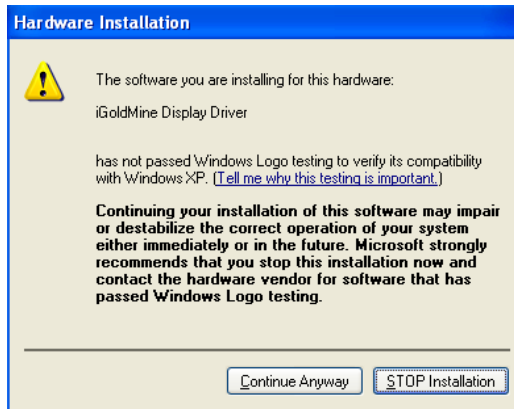


10. When the install is complete, click **Finish**. The iGoldMine License key dialog box appears.



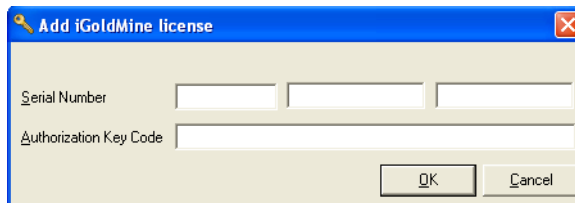
## Windows 2003 and Windows XP Users

1. If you are running Windows 2003 or Windows XP, the Hardware Installation window will appear during the course of the installation.
2. Click **Continue Anyway**.

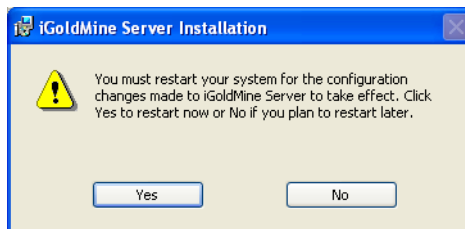


For more information, see "Before You Install..." on page 1-6.

The **Add iGoldMineSee license** window appears.



3. Enter the appropriate information in the **Serial Number** and **Authorization Key Code** text boxes and click **OK**.
4. Click **Finish**. The **Restart** dialog box appears.



5. Click **Yes** to restart the computer and have iGoldMine configuration changes take effect.

## Making iGoldMine Your Default Web Page in IIS

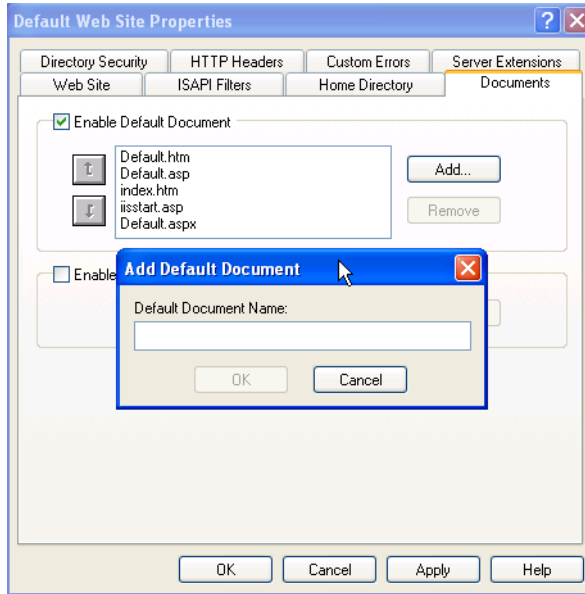
The iGoldMine setup allows you to install the iGoldMine Web files directly into a subdirectory of your Web server home directory. Although you can use various methods to accomplish this, the following steps illustrate one method of making iGoldMine your default Web site during installation.

1. At the Start menu, select **Start>>Control Panel>>Administration>>Internet Information Services Manager**.
2. In the **Tree** pane, navigate to the **Default Web Site** node. Right-click to access a shortcut menu and select **Properties**.
3. The **Default Web Site Properties** dialog box appears.
4. Click the **Home Directory** tab. In the **Local Path** text box, type or browse to the destination folder selected in step 3.

The iGoldMine HTML files are installed here.

5. Click the **Documents** tab.
6. Ensure **Enable Default Document** is selected and click **Add**.

The **Add Default Document** dialog box appears.



7. Type **logon.html** in the text box and click **OK**.

**Logon.html** now appears in the default document list.

8. Select and remove any other default documents listed in the Default Document window.
9. Click **Apply**.

The Inheritance Overrides window appears.

10. Click **OK**.

The **Properties** dialog box appears. Click **OK** again.

iGoldMine is now the default Web site for your server.

**Options:** As noted, a number of methods exist to make iGoldMine your default Web site.

- If you performed a typical installation, you can now redirect the default Web site to the **Program Files>>iGoldMine>>Web** folder and select the iGoldMine logon page as the default document using IIS.
- Copy the Web files to your iGoldMine Web Server home directory. First, locate the iGoldMine Web files directory. The default

iGoldMine Web files are located in the Web folder on the iGoldMine CD. Copy the files from this directory to your Web server home directory.

## Working with the Application Publishing Service

Use the Application Publishing Service (APS) to verify it is running and to start, stop, and customize startup preferences.

If iGoldMine is installed properly, the APS is configured so it starts automatically.

When the service is stopped, users cannot log into the server or start an application using iGoldmine.

1. Open **Control Panel** and select **Administrative Tools**.
2. Double-click **Services**.
3. Find **Application Publishing Service** in the list of services.
  - Verify the APS has **Started** and that the startup is **Automatic**.
  - To start, click **Start**.
  - To stop, click **Stop**.

## Mapped Drives

Drive mappings are now private within each iGoldMine session on Windows Server 2003. For example, if there are two sessions running on a iGoldMine server, a drive letter (for example, H) can be mapped to one network share in session 1

```
\\servername\session1)
```

and the same drive letter can be mapped to a different network share in session 2

```
\\servername\session2)
```

Administrators define drive letter mappings using logon scripts. Administrators can also allow users to define their own drive letter mappings by publishing applications that provide this functionality.

Drive mappings defined within the interactive session on the iGoldMine server are not available to remote users as they were in earlier versions of iGoldMine. If all users require access to the same network share through a drive mapping, the drive mapping will generally need to be defined in a logon script.

## Logon Scripts

Logon scripts allow administrators to configure the operating environment for iGoldMine users. Scripts may perform an arbitrary set of tasks such as defining user-specific environment variables and drive letter mappings.

Before loading the user's profile and launching the Program Window, the iGoldMine Logon Manager checks to see if a logon script has been specified. If so, the Logon Manager runs the script within the user's security context. The logon script executes each time a user is authenticated.

iGoldMine supports two types of logon scripts: **global scripts** that execute for all users that logon to the server, and **user-specific scripts** that execute for individual users.

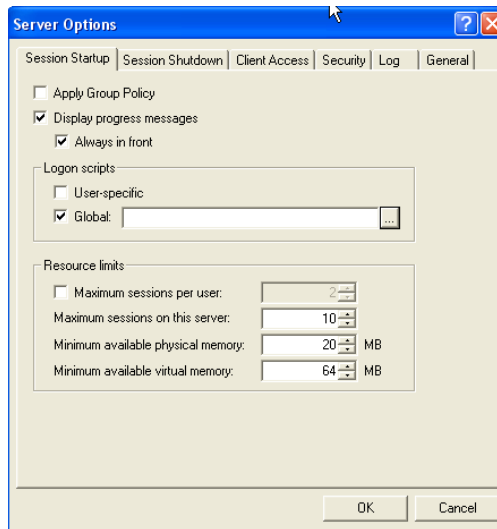
Administrators specify global logon scripts through the Cluster Manager.

### Specifying a Global Logon Script

1. Click **Start >> Programs >> iGoldMine>> iGoldMine Cluster Manager**.

The Cluster Manager opens.

2. From the Tools menu, select Server Options, then click the Session Startup tab.



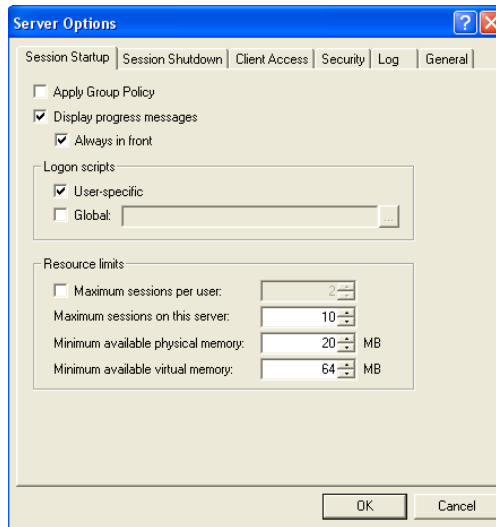
3. At the Logon scripts section, click the Global checkbox and then browse for or specify the global logon script.

## Specifying a User-specific Logon Script

User-specific logon scripts are specified using the functionality provided by the operating system. For example, the logon script for local users on a Windows 2003 or Windows XP server is specified as follows:

1. Click **Start >> Programs >> iGoldMine>> iGoldMine Cluster Manager**.  
The Cluster Manager opens.
2. From the **Tools** menu, select **Server Options**, then click the **Session Startup** tab.





3. In the Logon scripts area, click the **User-specific** checkbox and then click **OK**.
4. On your desktop, right-click **My Computer** and select **Manage**.
5. Navigate to **\System Tools\Local Users and Groups\Users**.
6. Select a user and click **Properties>>Profile**.
7. In the **Logon script** field, type the path to the user's logon script. The path may be specified with any combination of environment variables. At logon, the iGoldMine server locates an assigned logon script. It looks for the specified file following the local logon script path on the server:

C:\Winnt\System32\Rep1\Import  
 \Scripts on Windows 2003 Server

and

C:\Windows\System32\Rep1\Import\Scripts on Windows Server  
 2003.

The Rep1\Import\Scripts directory must be created on Windows Server 2003.

If a relative path is provided before the file name (for example, Admins\JohnG.bat), the server looks for the logon script in that subdirectory of the logon script path.

---

**Note:** Authenticated users must have read and execute permissions to the logon script files.

---



# Load Balancing

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## Overview

Load balancing allows administrators to simplify the management of multiple iGoldMine servers by routing user connections to different servers in the iGoldMine cluster. iGoldMine can be used with any third-party TCP/IP-based load-balancing service. Load balancing is usually done automatically and is transparent to the user.

## Load Balancing Requirements

For the servers in the cluster:

- Install the iGoldMine server on each.
- For Web deployment, run a Web server with the Web server home directory containing the iGoldMine Web files for each.
- If an application saves any user-specific settings in the registry, we recommend users operate with roaming profiles rather than local profiles. Since there is no way of predicting which server the user will actually be logged on to in a balanced server farm, working with roaming profiles is the only way to ensure user-specific settings are available to the user at all times.



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Consult the technical documents titled “System Requirements” and “Capacity Planning” available from **[support.frontrange.com](http://support.frontrange.com)** for more information.

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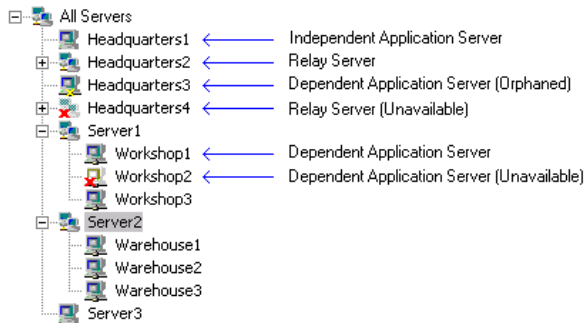
## Independent Application Servers

Independent application servers iGoldMine are iGoldMine servers that do not interact with other iGoldMine servers running on the network. Independent application servers appear in the Cluster Manager on the first level of the iGoldMine servers tree view as an independent node.

The iGoldMine setup program configures iGoldMine servers to operate as independent application servers. iGoldMine clients can connect to independent application servers directly by specifying the name or IP address of the server in the Connection dialog box or the location box of a Web browser. Clients can also connect to independent application servers through a third-party network load balancer that distributes client connections among several servers.

However, session reconnect is not supported in the latter configuration and must be disabled.

The following displays an example of iGoldMine servers:

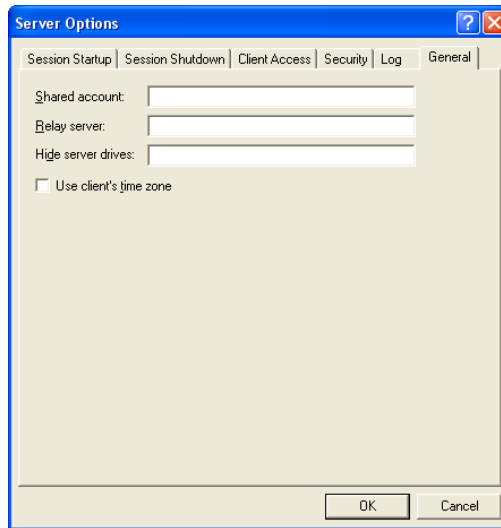


## Relay Servers

A relay server is an iGoldMine server providing centralized control over one or more iGoldMine servers. Relay servers maintain client connections and distribute iGoldMine sessions across a set of load-balanced application servers. Relay servers appear in the Cluster Manager on the first level of the list of All Servers as nodes with one or more dependent application servers.

### Configuring an iGoldMine Server to Operate as a Relay Server

1. Click **Start>>Programs>>iGoldMine>>iGoldMine Cluster Manager**.
2. At the **iGoldMine Servers** section, select the server from the list.
3. Click **Tools>>Server Options>>General tab**.



4. Type the name or IP address of the computer in the **Relay server** text box and click **OK**.
5. A message box displays indicating the change will not take effect until the Application Publishing Service is restarted. Click **OK**.
6. Stop and restart the Application Publishing Service at **Start>>Settings>>Control Panel>>Administrative Tools>>Services**.

After configuring a server to run as a relay server with one or more dependent application servers, iGoldMine load balances client connections and ensures sessions start successfully. If a session fails to start on the selected server, the relay server selects another server and tries again until it finds one that can support the session.

Dependent application servers inherit their settings from the relay server, and as a result, changes to published applications and server settings only have to be made once. When a printer driver for a client printer is installed on one of the dependent application servers in the cluster, the files for the driver are copied into a central repository that is accessible to all application servers. If the client is subsequently connected to a different dependent application server, iGoldMine automatically installs

the user's printer drivers and configures their client printers without any user intervention.

## Dependent Application Servers

A dependent application server is an iGoldMine server connected to a relay server.

iGoldMine clients cannot connect directly to dependent application servers. Instead, they connect to the associated relay server, and the relay server selects one of the connected servers to host the session.

### Configuring an iGoldMine Server to Operate as a Dependent Application Server

1. Select **Start>>Programs>>iGoldMine>>iGoldMine Cluster Manager**.
2. Select the server from the list of **All Servers**.
3. Select **Tools>>Server Options>>General tab**.
4. Type the name or IP address of the relay server in the **Relay server** text box and click **OK**.

A message box displays indicating the change will not take effect until the Application Publishing Service is restarted. Click **OK**.

5. Choose **Start>>Settings>>Control Panel>>Administrative Tools>>Services** to stop and restart the Application Publishing Service.

When the Application Publishing Service is restarted, the dependent application server will appear beneath the relay server in the Cluster Manager's list of iGoldMine servers. A dependent application server with a yellow X indicates the server was "orphaned" and its relay server has gone down.

If a server's symbol has a red X, the administrator does not have administrative rights on the server. If the server's symbol has a red X and is unavailable (gray), the server is no longer running the Application Publishing Service or it was turned off. In either case, the administrator is unable to access that server from the Cluster Manager.

Users are authenticated on dependent application servers—not on relay servers. As a result, a relay server may be located on a different Windows NT domain or Active Directory than the dependent application servers

that connect to it. If pass-through authentication is used, clients and dependent servers must be located on the same domain, but the relay server may be located on a different domain.

Dependent application servers inherit their list of published applications, server settings, and user settings from the relay server. Applications installed on the dependent application server(s) must be installed in the same directory structure as the relay server.

When an iGoldMine server is connected to a relay server, all of its server settings are synchronized with those of the relay server. When any changes are made to the relay server's settings, they are also made to all servers connected to that relay server. The only settings allowed to vary are the maximum number of sessions, the printer driver sources, and the name of the relay server. All other settings in the Server Options and Application Properties dialog boxes are unavailable (gray) and cannot be modified.

---

**Note:** Before publishing an item on a mapped drive, verify the drive is mapped to the same drive letter and location on the dependent servers as it is on the relay server.

---

## Client Printing in a Multi-Server Environment

In a multi-server environment, you can manage printer drivers from a central location by specifying a Driver server. The Driver server acts as a repository for all printer drivers that are available to iGoldMine clients. Printer drivers installed on the Driver server are replicated on each application server when a user requiring them logs on to iGoldMine.

When a user configures a printer with a driver not already available on the Driver server, that driver is replicated on the Driver server and is available to all application servers with access that use the driver server. If the Driver server and the relay server are the same computer, no additional setup is required.

If they are separate computers, the Driver server must be accessible from the application servers. In this case, the Driver server needs to have a "print\$" share that points to the printer driver directory (WINNT\system32\spool\drivers). Users need read access to this share in order to install drivers from the Driver server. Users need write access to this share in order to install drivers to the Driver server.



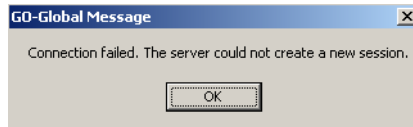
## Server Selection

When a client connects to a relay server, the relay server attempts to start a session on the dependent application server that has the lowest number of running sessions as a percentage of the maximum number of sessions allowed for the server.

If the session fails to start on the selected server, the relay server successively attempts to start the session on other available servers until it finds a server that can support the session. If there are no available servers (i.e., if the number of running sessions on all servers equals the maximum number allowed), the following message is displayed to the user:



Otherwise, if the session cannot be started on any of the available servers, the following message is displayed to the user:



---

**Note:** iGoldMine does not need to be installed on a Driver server.

---

## Relay Server Failure Recovery

On Windows Server 2003 the Application Publishing Service can be configured to automatically restart if the service fails. If a relay server fails, all sessions continue to run on the iGoldMine servers that were connected to the relay server. These servers will attempt to reconnect to the relay server every 15 seconds.

When a dependent application server reconnects to the relay server, it re-adds its sessions to the relay server and restores any state information associated with the disconnected sessions. Clients are then able to reconnect to their sessions.

Clients do not automatically attempt to reconnect to the relay server.

In order to provide higher service availability, a failover server can be configured for the iGoldMine relay server using the Microsoft Cluster Service. In this configuration, if the relay server fails for any reason, the failover server immediately takes the place of the failed server.

Application servers automatically reconnect to the failover server, and users will generally be able to log on and reconnect to their disconnected sessions within one to two minutes of the relay server failure.



# Getting to Know iGoldMine

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## Overview

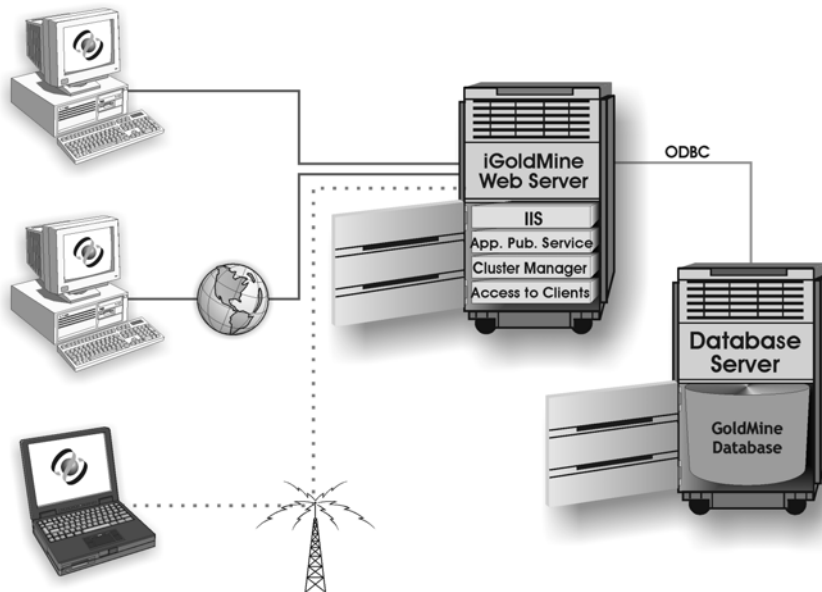
iGoldMine offers users access to GoldMine and Answer Wizard through a thin-client environment.

This chapter presents an overview of how iGoldMine works and introduces the three user interfaces.

## How iGoldMine Works

iGoldMine uses server-based computing and Web access as an intermediary to provide a thin-client link between users and the GoldMine database. iGoldMine also runs GoldMine applications residing on an application server, workstation, or computer linked to iGoldMine.

### 3-2 Getting to Know iGoldMine



In a typical scenario, a remote user calls up the iGoldMine Program Window and selects the GoldMine application or Answer Wizard. The thin client transmits the application user interface to the user's remote computer. The remote user activates function events (using the mouse and keyboard), which are returned to the server and processed. The client communicates data transactions from the function events to the database.

## Server Components

The iGoldMine server components are the Application Publishing Service (APS), Display Server, Component Server, Program Window, and the Cluster Manager.

- **Application Publishing Service** (aps.exe) is a Windows 2003 service managing iGoldMine connections, authenticating users, and launching available applications.
- **Display Server** (ds.dll) is a dynamic link library responsible for redirecting an application's user interface to the remote user computer. It intercepts Windows function events affecting the application's display and forwards them to the remote user's computer.
- **Component Server** (cs.dll) is a dynamic link library loaded into each application launched on the iGoldMine server. The Component Server downloads dynamically and runs iGoldMine components and manages all client/server communication.
- **Program Window** (pw.exe) is an application containing the user interface for launching applications through iGoldMine. The symbol for each application a user is authorized to run displays in the window. The application resides on the application server, workstation, or computer and runs from the iGoldMine server, but its user interface displays on the remote user's computer using the Display Server.
- **Cluster Manager** (cm.exe) is a 32-bit Windows application installed on the iGoldMine server. It is used by the system administrator to manage user access to applications and to add or remove applications available from the Program Window. For administering user accounts and user rights, iGoldMine employs authentication functionality supplied by Windows Server 2003 (with IIS).

## Client Options

iGoldMine offers several options for creating a user session: Java Client, Windows Client, Microsoft ActiveX Control, Linux Client, and Macintosh. These options are available from the Client selection page.

**Note:** If the client you want to use does not show on your iGoldMine Client Installation screen, click on the **[show all clients]** link.



Which option should you select?

- The Java Client provides for occasional or roaming access. Choose between the signed Java Client to take advantage of several integration features or the unsigned Java Client, which avoids creating a footprint on the desktop. Use if remote users are operating in a Macintosh environment. In addition, the associated time-out registry setting frees errant connections due to idleness or improper exit.

- The Windows Client creates a desktop program path, allows for local printing, provides better performance, and makes the browser interface virtually transparent to the user.
- You can deploy iGoldMine to a Linux workstation by either launching the Java Client or by downloading the Linux Client. It is recommended that the Java Client be the first choice in the Linux environment.
- The Mac OS X Client can be deployed to Mac in the native Mac environment.

## Java Client

To access GoldMine applications using the Java Client, users begin by opening a browser on their computers and typing the URL of an HTML page containing a Java applet (the Client selection page). The browser connects to the Web server (Microsoft IIS) running on the iGoldMine server using port 80, the standard port for HTTP protocol. The browser requests the URL for the Java Client and downloads an HTML page that displays the Program Window.

You can run the Java Client on any computing device with a version 1.4.2.03 (or above) Java Virtual Machine, including Windows 98SE/2000 Pro/XP, Macintosh, and Linux.

## Windows Client

The Windows Client option installs an applet on the remote user's computer. Because some of the processing takes place on the remote user's computer, running the Windows Client provides faster processing.

To begin, users open a browser on their computer and type the URL of the Client selection page. Users select the Windows Client link, and the browser connects to the Web server (Microsoft IIS) running on the iGoldMine server using port 491.

The **Installing the iGoldMine Windows Client** page appears. The user follows the instructions to initiate the installation wizard.

## ActiveX Client

Microsoft ActiveX Clients allows Windows XP Pro users to connect to an iGoldMine server using either Internet Explorer or any java-enabled browser. Users browse to an HTML page (the Client selection page) that

contains a link to the ActiveX client. The client is then automatically downloaded and run by the browser.

The Microsoft ActiveX Control is available for Windows clients.

### Linux Client

The Linux Client option is similar to the Windows Client, only it operates in a Linux environment. The Linux Client is a lightweight native X Window system application that delivers GoldMine functionality to Linux workstations.

As with the other two options, users open a browser on their computer and type the URL of the Client selection page. Users select the Linux Client link and the **Installing the Linux Client** page appears. The user then follows the instructions to install the desired package.

### Mac OS X Client

The Mac OS X Client is a lightweight application that provides seamless integration with the native Mac environment. See "Installing the MAC OS X Client" on page 6-18 for more information.

## Running a Session

When a remote user launches one of the clients, iGoldMine opens a TCP/IP connection to the **Application Publishing Service** running in the background. The remote user's computer and iGoldMine server negotiate the use of compression and encryption algorithms. The user is then prompted for a user name and password, and the logon operation is performed using standard Windows user authentication.

The Application Publishing Service initializes a "session" for the user and then calls the Win32k subsystem to create a new Window Station and Desktop for the user's application(s). The Window Station and Desktop are Windows objects providing a private environment for the remote user.

---

**Note:** Unlike Windows Terminal Server, which loads a separate instance of the Win32k Executive Service for each user session, all iGoldMine sessions use the same instance of this service. The System Extensions Driver makes a subset of the Win32 subsystem data session-private. This architecture allows



iGoldMine to support multiple user sessions with less memory, fewer processes, and fewer threads than is possible with Windows Terminal Server.

---

## The Program Window

Once the user's session is initialized, that user can launch an application from the iGoldMine Program Window.

The Program Window is a 32-bit Windows application containing the symbols the user selects for launching applications through iGoldMine. The Program Window runs on the server, and its user interface displays on the remote computer using the Display Server.

## The Display Server

The Display Server is a dynamic link library loaded into the application's process before it begins executing. It intercepts Windows function calls affecting the application's display and modifies the processing as needed to support iGoldMine.

For example, iGoldMine sends mouse and key events to the Display Server which places them into a session-private event queue. When the application calls one of the Windows event retrieval functions, the Display Server intercepts it and returns an input event from the queue. The application processes the event and calls other Windows functions to make changes to the display. These calls are also intercepted by the Display Server, and the modifications are reported back to iGoldMine which updates the screen. Only the modified portion of the display updates.

## The Component Server

During program execution, the Component Server manages all client/server communication between iGoldMine processes. An implementation of the Component Server is loaded into iGoldMine, the Application Publishing Service, and each application run under iGoldMine. The Component Server frames application requests, optionally compresses and encrypts the requests, and handles low-level network I/O operations.

After initializing a session, the Session Process continues running until the session is closed. Sessions are closed when:

- All applications other than the Session Process are closed.
- The connection between the client and the server is broken.
- The system administrator terminates a session from the Cluster Manager.

## Security

iGoldMine relies on the server platform to provide the security necessary to run applications safely in a multi-user environment. Applications run in the security context of the remote user's computer to ensure private sessions. Access to all computers and network resources is governed by the operating system and the rights granted to individual users' sessions.



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Consult the technical document titled "Maintaining Security with iGoldMine" for additional information.

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## User Interface Basics

Users can view records and update data in the GoldMine database. Communication with iGoldMine takes place through the following user interfaces:

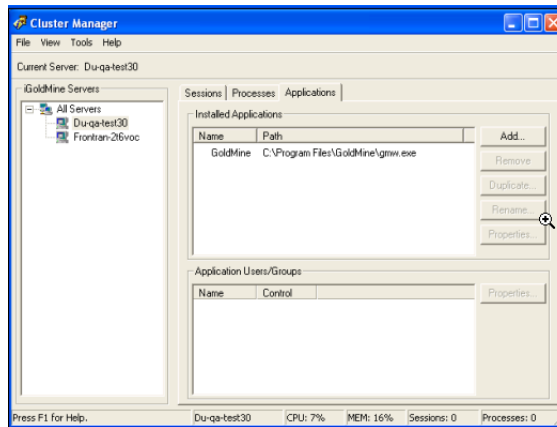
- **Cluster Manager:** Used by the system administrator.
- **Client Selection Page:** Used by a remote or other user.
- **Program Window:** Used by a remote or other user.

## Navigating the Cluster Manager

The Cluster Manager interface is a Windows application allowing the system administrator to monitor and control user access to GoldMine applications. The system administrator can add or remove GoldMine applications, terminate user sessions, and end processes taking place on the server.

To access the Cluster Manager, select

**Start>>Programs>>iGoldMine>>iGoldMine Cluster Manager.**



The Cluster Manager window is comprised of the components listed in the following table.

## Cluster Manager Window

Window Component	Function
<b>Menu Bar</b>	<p>The File, View, and Help menus contain standard items to open, close, set preferences, change items to view and how they display, and access online Help.</p> <p>The Tools menu allows you to terminate sessions and processes and configure application and server settings.</p>
<b>Current Server Bar</b>	The Current Server bar displays the name of the server you have currently accessed and corresponds with the server highlighted in the <b>Servers</b> tree view.
<b>Servers Tree View</b>	The left pane lists (in tree view) the name of each server running the Application Publishing Service.
<b>Sessions Tab</b>	The right pane displays current iGoldMine sessions. The Session name is a unique identifier assigned to each session and is listed along with the User, IP Address, Startup Time, and Applications being run.
<b>Processes Tab</b>	<p>The right pane of the Processes tab displays current iGoldMine processes (the specific application a user is running from the iGoldMine server).</p> <p>Information associated with each process is listed, including Name, User, Startup Time, and Process ID. The Process ID is assigned by the iGoldMine server's operating system and matches the process identification number displayed in the Windows Task Manager.</p>
<b>Applications Tab</b>	<p>The right pane of the Applications tab displays each GoldMine application currently available through iGoldMine and each of the remote users or user groups permitted to access the application. Users and groups are controlled by the Windows NT File System (NTFS) security settings on the server.</p> <p>Use the <b>Installed Applications</b> panel to Add, Remove, Duplicate, Rename, and view the Properties of a selected application.</p> <p>Use the <b>Application Users/Groups</b> panel to view the User Properties.</p>

Window Component	Function
<b>Status Bar</b>	The Status bar contains messages or conditions relative to the iGoldMine server—notably the percentage of the CPU being used, the percentage of memory being used, the number of sessions open, and the number of processes running (for example, if two sessions are running three applications each, a total of six processes are running).

The left pane of the Cluster Manager lists the iGoldMine servers on the network currently running the Application Publishing Service. By default, the Cluster Manager displays information for the server running on the iGoldMine server. To connect to other servers and view information about them, click the server name from the list of iGoldMine servers.

If a server's symbol has a red X, you cannot access that server. This means one of the following:

- The server is no longer running the Application Publishing Service (the server symbol's color fades).
- Access to that server was denied (you must have administrative rights on a server to access it from the Cluster Manager).
- That server was turned off.

Refreshing the Cluster Manager view removes from the list any servers that were turned off. Click the All Servers icon in the left pane to view a list of all active sessions on the network without connecting to individual servers. This is helpful for locating a particular session's server.

## Navigating the Client Selection Page

Users can log on to iGoldMine from their Web browsers. The client selection page provides direct access to the various client options.

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**Note:** The system administrator may decide to bypass the client selection page and set up the logon process so users browse directly to a specific client. iGoldMine offers several options for configuring the clients.

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After the user selects a type of client, the client pages provide links to additional forms of clients. Information about each form of client is presented on the client pages where users click the desired link to launch the next page.


## Navigating the Program Window

The Program Window is a simple interface displaying the available applications to remote users.

The Program Window comprises the Menu bar, Toolbar, Display pane, and the Status bar.

Users double-click the appropriate button and the application displays on the remote user's monitor.

Window Component	Function
Menu Bar	The File, View, and Help menus contain standard items to open, close, set preferences, change items to view and how they display, and access online Help.

Window Component	Function
<b>Toolbar</b>	<p>Use the Toolbar to quickly arrange buttons in the Display pane. Toolbar functions are also available from the Menu items.</p>  <p>The buttons, from left to right, display symbols in the format described by the button name: <b>Large Icons</b>, <b>Small Icons</b>, <b>List</b>, and <b>Details</b>. <b>Program Information</b> displays iGoldMine Version, Build, User, Host, Domain, Groups, and copyright information.</p>
<b>Display Pane</b>	<p>The Display pane contains the GoldMine application buttons available to the user. The applications appearing in the Display pane are made available by the system administrator using the Cluster Manager.</p>
<b>Status Bar</b>	<p>The Status Bar at the bottom of the window contains messages about the status of the window. For instance, when you click a button in the Display pane, the status bar contains the message <b>1 item(s)</b>.</p>







# Administering User Accounts

---

## Overview

This chapter contains basic information regarding the administration of user accounts on the iGoldMine server.

To access an iGoldMine client and then the GoldMine application, users log on to the iGoldMine server. When users start an iGoldMine client, they are prompted for their account information (user name, password) and the server name. This information is optionally encrypted and passed to the Application Publishing Service (APS) running on the iGoldMine server. The APS then performs the logon operation using standard multi-user features of Microsoft Windows.

If a user logs on to a server and a domain is not specified, the iGoldMine server first attempts to authenticate the account on the local computer, followed by the computer's domain, and lastly the trusted domains.

Users can override this default behavior and specify a domain by typing the domain name followed by a back slash (\) and their network user name in the user name text box of the Logon dialog box. For example, NORTH\johnq.

Once a user is logged on, iGoldMine relies on the server's operating system to provide the security necessary to run applications safely in a multi-user environment. Applications run in the security context of the user's computer to ensure private sessions.

Access to all computers and network resources is governed by the operating system and the rights granted to individual user's sessions.

## Setting Up User Profiles

Most Windows applications store user-specific settings and files under the user's Windows profile. By default, Windows creates a local profile for each user logging on to a system. A local profile is specific to a given computer and will not work well if running multiple iGoldMine servers. In a multi-server environment, you should set up roaming user profiles.

A roaming profile is stored centrally and valid to access from any networked computer. When a user with a roaming profile logs on to any networked computer, the desktop will appear exactly as the user left it the last time he or she logged off. For multi-server environments, working with roaming profiles is the only way to ensure user-specific settings are available to the user at all times.

## Setting File Permissions

As the administrator, you may need to restrict user access to certain files and resources. Keep in mind there are multiple users accessing the server. Particularly in a load-balanced server environment, we recommend write-protecting the system and application folders so users are unable to save files on a local iGoldMine server. Otherwise, the next time a user logs on to iGoldMine and is routed to a different server, the files and folders will be inaccessible.

You must use Microsoft Windows Explorer to set permissions for files on the server to restrict user access to applications, printers, and folders. File permissions can only be set on drives formatted with the Windows NT File System (NTFS). If you are using the File Allocation Table (FAT) file

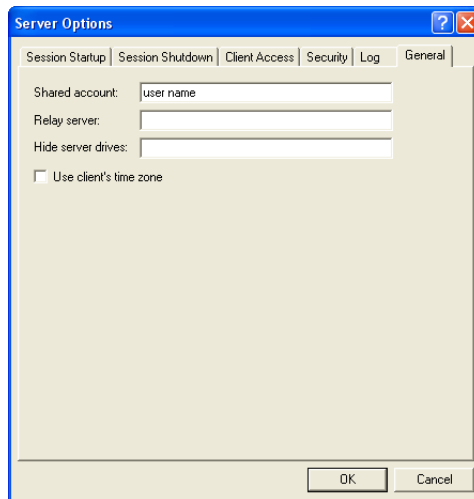
system, you will be unable to set permissions for specific files or restrict access to applications.

If you install GoldMine on the local system, users must have Modify rights on the GoldMine folder, subfolders and files, as well as the **Windows/Temp** folder.

If the user does not have Modify rights to the GoldMine folder, a “Table is Read-Only” error appears. If the user does not have Modify rights to the Windows/Temp folder, and the user has never logged into the domain controller (for example, if a Documents and Settings/User folder does not exist), a BDE error appears.

## Setting Up Shared Accounts

By specifying a shared account in the Server Options dialog box, administrators can establish an account that can be shared by multiple users. Users of a shared account are unable to disconnect or reconnect to any iGoldMine session. The shared account session will terminate immediately after disconnecting from the server, regardless of the reconnect setting in the Cluster Manager.



1. Select **Start>>Programs>>iGoldMine>>iGoldMine Cluster Manager**.

2. Select **Tools>>Server Options>>General tab**.
3. Type the user name of the shared account in the **Shared account** text box.

If an administrator designates an existing user name as a shared account while that user is disconnected from his or her session, the session will remain running on the server until the termination limit is reached. The session will then be terminated. Before specifying a shared account, verify in the Cluster Manager there are no connected or disconnected sessions using that account.

---

**Note:** iGoldMine does not support the use of domain names (for example, NORTH\johnq) for shared accounts.

---

## Setting Up a Network Printer

As the iGoldMine administrator, you can set up network printers for use by iGoldMine clients. To provide direct access to the printer, create a port on the iGoldMine server connecting directly to the server and then install the printer locally.

---

**Note:** Network printers are set up using the Windows Add Printer Wizard and not the iGoldMine Client Printer Wizard (accessed through the Program Window).

---

### Adding a Port to the iGoldMine Server

1. From **Start**, select **Settings>>Printers and Faxes**.
2. Double-click **Add Printer**.  
The **Welcome to the Add Printer Wizard** dialog box appears.
3. Click **Next**.  
The **Local or Network Printer** dialog box appears.
4. Select **Local Printer** and clear the **Automatically detect...** check box, and then click **Next**.  
The **Select the Printer Port** dialog box appears.
5. Select **Create a new Port**, then click **Next**. The **Port Name** dialog box appears.
6. Add the UNC path to the printer, for example, `\\PRINT SERVER\LASERPRINTER`. Click **OK**. The **Add Printer Wizard** dialog box appears with the new port displaying in the list of available ports.
7. In the **Add Printer Wizard** dialog box, select the printer manufacturer on the left and the printer model on the right.
8. Click **Next** to continue through the wizard.





# Setting Up the Cluster Manager

---

## Overview

The Cluster Manager allows you to administer, monitor, and control user access to the iGoldMine server. It displays a list of the users logged on to an iGoldMine server, along with the applications the users are running and the time the application was started.

You must have administrative rights on each server computer in order to access the server from the Cluster Manager. Without administrative rights on a server, you will be unable to add applications, terminate user sessions, and end processes taking place on the server.

If you have administrative rights on the domain, you will be able to access each server on that domain. Otherwise, you must grant yourself administrative rights on an individual server using that computer's User Manager.

## Accessing the Cluster Manager

The Cluster Manager is installed on the iGoldMine server.

- Double-click the Cluster Manager symbol on the desktop or:
- Select **Start>>Programs>>iGoldMine>>iGoldMine >>Cluster Manager**.

The **Cluster Manager** window appears displaying the **Applications** tab.

The left pane of the Cluster Manager lists the iGoldMine servers on the network currently running the Application Publishing Service. By default, the Cluster Manager displays information for the server running on the iGoldMine server. To connect to other servers and view information about them, select the server name from the list of iGoldMine servers.

If a server's symbol has a red **X**, you cannot access that server. This means either:

- The server is no longer running the Application Publishing Service (the server icon's color fades)
- Access to that server was denied (you must have administrative rights on a server to access it from the Cluster Manager), or
- That server was turned off.

Click the **All Servers** symbol in the left pane to view a list of all active sessions on the network without connecting to individual servers. This feature is also helpful for locating a particular session's server.

---

**Note:** You must belong to the Administrators group on each iGoldMine Server in order to access that server from the Cluster Manager. Without administrative rights on a server, you will be unable to add applications and terminate processes and so on..

---



## Refreshing the Cluster Manager

You can manually update the sessions, processes, and applications information displayed in the Cluster Manager, or you can set it to update automatically. If the Cluster Manager is set to update automatically, you can still update it manually at any time.

To refresh the Cluster Manager, select **View>>Refresh**.

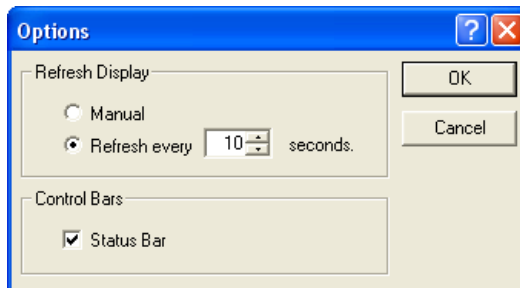
## Setting the Refresh Rate

You can set the sessions, processes, and applications tabs of the Cluster Manager to manually refresh or to automatically refresh at a specified frequency.

1. Select **View>>Options**.
2. Click **Manual**.

**To set the refresh rate to refresh automatically**

1. Click **View>>Options**.



2. Click **Refresh every x seconds** and type or select a number in the seconds box.

## About the Status Bar

The Status Bar displays at the bottom of the Cluster Manager window and provides brief descriptions of menu commands when the mouse pointer is placed over that item in the menu. The Status Bar indicates:

- The name of the iGoldMine server currently being accessed.
- The **MEM** usage and **CPU** utilization for that server as calculated by the Windows Task Manager.
- **Sessions** and **Processes** indicate the number of sessions and the number of processes running on the active iGoldMine server.

If **All Servers** is selected, the **Sessions** number reflects all the sessions running on the network, and the **Processes** number reflects all the processes on the network.

### Turning the Status Bar On or Off

1. Select **View>>Options**.
2. Select or clear the **Status Bar** check box.

## Managing Applications

Using the Cluster Manager's Application tab, the system administrator can make applications available to client users by installing application access files.

### Installing Applications



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When installing the GoldMine application to be run using iGoldMine, please consult the *iGoldMine Online Help* for instructions on proper multi-user installation.

---

You will need to install the application under an administrative account keeping in mind installation requirements will vary depending upon the application. Installation should also adhere to Microsoft's guidelines for multi-user deployment.

Install the applications on drives formatted with the Windows NT File System (NTFS). If using the FAT file system, you will be unable to set permissions for specific files or restrict access to applications.

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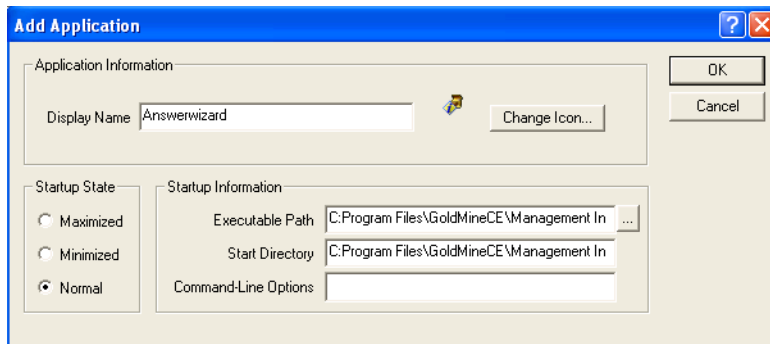
**CAUTION:** Deploying applications using iGoldMine does not entitle your enterprise to unlimited access rights. You must still abide by FrontRange Solutions' licensing agreement with regard to the number of applications that can be run concurrently.


---

## Adding Applications

Add applications to the Cluster Manager before users can to access them. Specify startup parameters that control how the application opens and what processes are initiated when the application is started.

1. Select the desired server from the list of **All Servers**.
2. Click the **Applications** tab.
3. Click **Add**. The **Add Application** dialog box appears.



4. Click the **Browse** button  to locate the application's executable file.
5. If you browsed for the application's .exe file in the preceding step, the file name will automatically be entered in the **Display Name** text box (in the **Application Information** area). This application name displays to users in the Program Window. Keep the default display name or type a new one.
6. If you browsed for the application's executable file, the path name of the directory automatically displays in the **Start Directory** text box. Keep the default, or type the full path name of the directory in which the application is to start.
7. In the **Startup State** area, select whether the application starts **Maximized**, **Minimized**, or in **Normal** mode.
8. In the **Command-Line Options** text box, you can specify launch parameters for the application. Because these parameters are specific to each application, please refer to the application's documentation for information about specific launch parameters.

9. To change the application's default symbol, click **Change Icon** and then click **OK**.

After the application is registered with the Cluster Manager, the application's name and path appear in the list of **Installed Applications**. You can sort items in any list in ascending or descending order by clicking the column's title.

If you want to set up applications using ODBC data sources, set up the ODBC drivers as system DSNs (data source names) in order for iGoldMine clients to be able to access the data sources.



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For more information about data sources, consult the Windows ODBC Data Source Administrator online Help.

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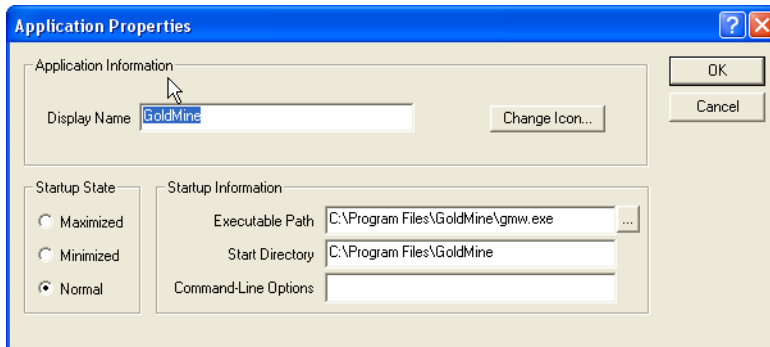
If a red exclamation point (!) appears to the left of an application in the list of Installed Applications, the EXE path could be invalid. The application may have been uninstalled or moved to a new location. Select the application and click **Properties**. Try updating the application's executable path or its Start directory.

## Editing an Application's Properties

After an application is added to the Cluster Manager, you can edit the application's properties.

1. Click the **Applications** tab.
2. Select an application from the list of **Installed Applications**.
3. Click the **Properties** button.

## 5-8 Setting Up the Cluster Manager



4. Do any of the following:

Property	Function
<b>Executable Path</b>	Type a new path name.
<b>Start Directory</b>	Type the full path name of the directory where the application is to start.
<b>Command-Line Options</b>	Type any startup parameters for the application.
<b>Display Name</b>	Type a new display name for the application.
<b>Startup State</b>	Select whether the application starts maximized, minimized, or in normal mode.
<b>Change Icon</b>	Browse for a new application icon.

## Duplicating an Application

Duplicating an application makes an exact copy of the selected registered application. This is useful if you want to make the same application available to different users or groups with variations.

For instance, you may want to register one version of an application with command-line options to bypass the Logon dialog box and another version without command-line options requiring clients to log on. When duplicating an application, you are required to select a new display name.

1. Select an application from the list of **Installed Applications**.
2. Click the **Duplicate** button.

## Renaming an Application

The display name you assign to an application will appear to the user in the Program Window. You can change an application's display name at any time.

1. Select an application from the list of **Installed Applications**.
2. Click the **Rename** button.

## Assigning Application Launch Parameters to Users or Groups

You can assign specific parameters for how an application will run for users or groups on the network or on local computers. The parameters will apply each time the user or group launches the application.

---

**Note:** Check the user's About iGoldMine textbox to verify what group or groups the user is assigned to and in what order the groups are listed in the system.

---

Application launch parameters set for an individual take precedence over parameters set for a group or for an application. When a user launches an application through iGoldMine, the Program Window first checks for launch parameters assigned to the individual user.

If no parameters are assigned, it checks the list of groups the user belongs to in the order the Program Window retrieves them from the system. Otherwise, the Program Window looks for generic launch parameters assigned to the application. File permissions for users and groups are controlled by NTFS security settings on the server.

When you select an application from the **Installed Applications** list, the **Application Users/Groups** list displays the user permissions specified for that file and/or application with NTFS. You can then edit the application's properties for specific users or groups.

File permissions can only be set on drives formatted with NTFS. If you are using the FAT file system, you are unable to set permissions for specific files or restrict access to applications.



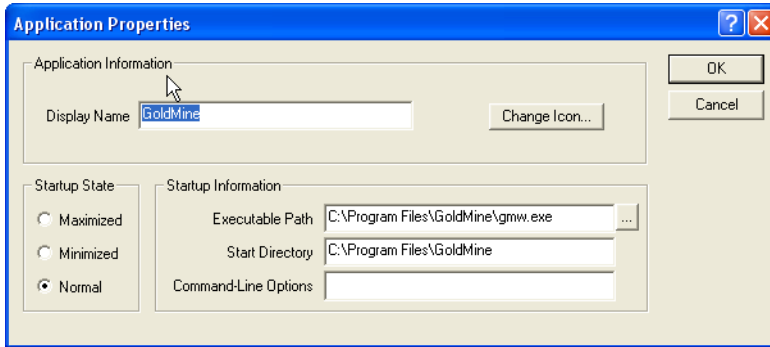
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For more information on setting file permissions, see "Setting Up Profiles" or consult online Help.

---

1. Click the **Applications** tab.
2. Select an application from the list of **Installed Applications**.
3. Select a user or group from the **Application Users/Groups** list.
4. Click the **Properties** button.





5. Complete one or all of the following fields:

Property	Function
<b>Executable Directory</b>	Type the full path name of the directory where the application is to start.
<b>Startup State</b>	Select whether the application starts maximized, minimized, or in normal mode.
<b>Command-Line Options</b>	Type the command-line arguments to use when launching the application.

Using the command-line argument **-s** when registering the Program Window will override the client's user preferences.

If the command-line argument **-s** is used, the application reverts to the settings provided by the manufacturer. The **-s** argument is useful in the event a user preference locks up the Program Window. It allows the application to run in a "safe mode."

## Removing Applications

When removing an iGoldMine-deployed application from the Cluster Manager, it is not removed from the server; it only prevents iGoldMine users from accessing the application.

1. Click the **Applications** tab.
2. Select an application from the list of **Installed Applications**.
3. Click the **Remove** button.

---

**IMPORTANT:** To avoid loss of data, it is recommended that all user sessions be completed prior to removing an application. If you remove an installed application from the Cluster Manager while a user is running the application, the user's session is not interrupted. When the user exits that application, however, the application is no longer available, and the symbol does not appear in the Program Window.

---

# Managing Sessions and Processes

Administrators can use the Cluster Manager to manage various aspects of the sessions and processes including termination and encryption of sessions.




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Consult online Help for more information on management features.

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## Shadowing a Session

Session shadowing allows multiple users to view and control a single session and its applications. This allows technical support and system administrators to provide remote assistance to customers and users. Session shadowing may also be used for live collaboration.

Users cannot reject a session shadowing connection. Only administrators can connect to running iGoldMine sessions, and they are always allowed to do so.

1. Click the **Sessions** tab.
2. Select an application(s) from the list of **Installed Applications**.
3. Select **Tools>>Sessions>>Connect**.

Selecting the **Connect** option opens the iGoldMine client session in a new frame window. The Sessions tab of the Cluster Manager displays the number of clients connected to a session. A **2** or higher in the Connected Clients column indicates the session is being shadowed. Disconnected sessions have **0** connected clients. To disconnect from a session and end session shadowing, close the frame window where the session displays.

## Session Reconnect

Session reconnect allows sessions to be maintained on an iGoldMine server without a client connection. If the client's connection to the server is lost intentionally or unintentionally, the user's session and applications remain running on the iGoldMine server for the length of the "session time-out" specified with the Cluster Manager.

Session reconnect lets users return to their iGoldMine session in the exact state they left it. Through the Program Window users can select to

disconnect, rather than exit from iGoldMine, and can return to their session as they left it – without having to shut down their open applications and processes.

If the network connection is lost or if users unintentionally disconnect from iGoldMine, their session state is preserved for the length of time specified in the Cluster Manager. After a user is authenticated through normal logon procedures, iGoldMine determines if the user has an active session. If so, that session is resumed and appears exactly as it did prior to disconnection. If not, a new session is started.

Users are also able to disconnect from one client and reconnect to the session from another client. When attempting to reconnect to a disconnected session, users are required to specify their logon credentials. After the server validates them, the server reconnects them to the disconnected session.

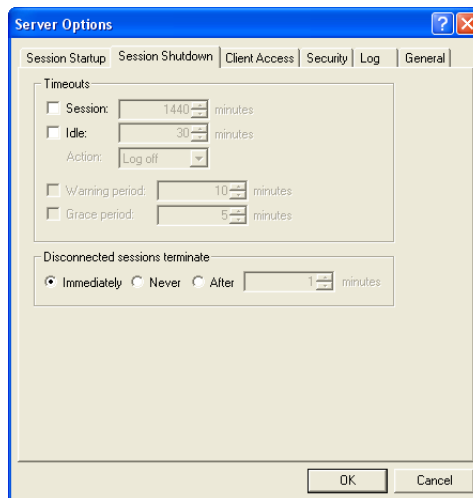
If the session is hosted on a server that is part of a cluster, the user is routed to his or her session without any indication the session is on a clustered server. If pass-through authentication is available, users are automatically re-authenticated and reconnected to their session. If pass-through authentication is not available, users are reconnected to their session after typing their user name and password in the Logon dialog box.

## Setting the Session Termination Option

Administrators control how long client sessions and applications remain running on the iGoldMine server through the Cluster Manager's Server Options dialog box.

1. Open the Cluster Manager and click **Tools>> Server Options>Session Shutdown tab**.

The **Server Options** dialog box appears.



2. Select one of the following session termination options and then click **OK**:

- **Immediately** (*default*) Client sessions will terminate as soon as the client disconnects.
- **Never**. Client sessions will terminate only when a user manually closes all applications running within a session or when an administrator manually terminates a session using the Cluster Manager.
- **After x minutes**. Specifies the number of minutes a session will remain running after a client has disconnected from the session. Type the number of minutes a session should remain running after

the client disconnects. The Cluster Manager displays the number of clients connected to a session. Disconnected sessions have **0** connected clients.

## Disconnecting a Session

If sessions are set to never terminate or to terminate after a specified number of minutes, the Program Window's File menu includes a Disconnect option. If sessions are set to terminate immediately, the Disconnect option does not appear in the Program Window's File menu.

1. Open the Program Window and select **File>> Disconnect**.

- With session termination set to **Never**, the following message is presented to the user upon disconnecting:

**Your session and its application will continue to run on the server until you reconnect.**

- When sessions are set to terminate after a specified number of minutes (20 minutes, for example) a message such as the following is presented to the user upon disconnecting from iGoldMine:

**Your session and its application will continue to run on the server for 20 minute(s).**

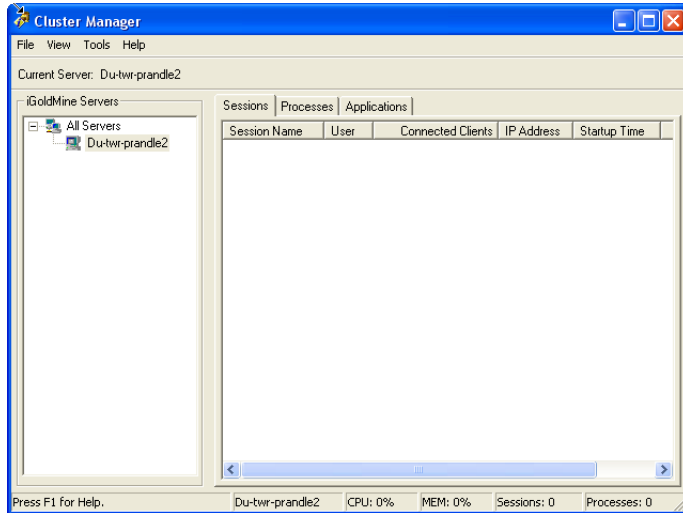
- If a user attempts to disconnect from a session and already has a disconnected session, the following message appears:

**You already have a session (sessional) that is disconnected. If you disconnect the current session, that previous session will be terminated. Do you want to continue?**

If the user clicks **Yes**, the disconnected session is terminated. If **No**, the user is returned to the running session.

## Terminating a Session

When terminating a user's session, all iGoldMine-deployed applications the user is running are terminated, and the user is logged off the iGoldMine server.



1. Click the **Sessions** tab.
2. From the **Sessions Name** column, select the session(s) to terminate.
3. Select **Tools>>Sessions>>Terminate Del.**

---

**Note:** Terminating a session or ending a process without giving users a chance to close their application can result in the loss of data.

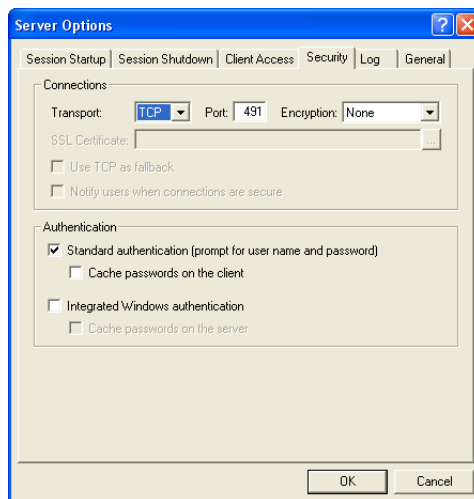
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## Encrypting Sessions

For security purposes, iGoldMine administrators can optionally encrypt all data transmitted between the client and the server. This includes the client's user name and password, which are supplied during logon, and any application data submitted by the client or returned by the server.

iGoldMine uses a Data Encryption Standard (DES) encryption algorithm with a 40-bit key. The DES key is exchanged using RSA Public-Key Cryptography Standards. The RSA keys are 512 bits. iGoldMine sessions are encrypted from the Cluster Manager.

1. Select a server from the list of **All Servers**.
2. Select **Tools>>Server Options** and then click the **Security** tab.



3. Select the **Encryption** check box.

After you enable encryption, all succeeding iGoldMine sessions will be encrypted. Sessions that are active when the feature is enabled will remain unencrypted, and the next time the user logs on to the iGoldMine server his or her session will be encrypted.



## Maximum Number of Sessions

GoldMine allows administrators to prevent users from starting new sessions when certain resource limits are exceeded on a iGoldMine Server.

iGoldMine estimates the setting for the maximum number of sessions that should be allocated per server based on the server's hardware of the server. For example, if the maximum number of sessions is 11, the user who initiates the twelfth session will be prevented from logging on.



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See the technical document on Capacity Planning available from [support.frontrange.com](http://support.frontrange.com) for more information.

---

### Editing the Maximum Number of Sessions per Server

1. Select a server from the list of **All Servers**.
2. From the Cluster Manager, select **Tools>>Server Options>>Session Startup tab**.
3. Edit the number in the **Maximum sessions count** text box. This will set the limit for the number of sessions the server can support.
4. To prevent users from logging on when the available physical memory on a server falls below a given value, enter the value in the **Minimum available physical memory** edit box.

## Modifying the Host Port Setting

In order for users to access iGoldMine through a firewall or router, administrators are able to modify the host port setting for the Application Publishing Service. By default, the port number is set to 491.

1. Select **Tools>>Server Options>>Security**.
2. Type a new port number in the **Host port** text box.
3. After you have modified the host port setting, you need to modify the host port parameter in the logon HTML pages.




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For instructions on modifying logon HTML pages, see Chapter 6, "Running the Client Component"

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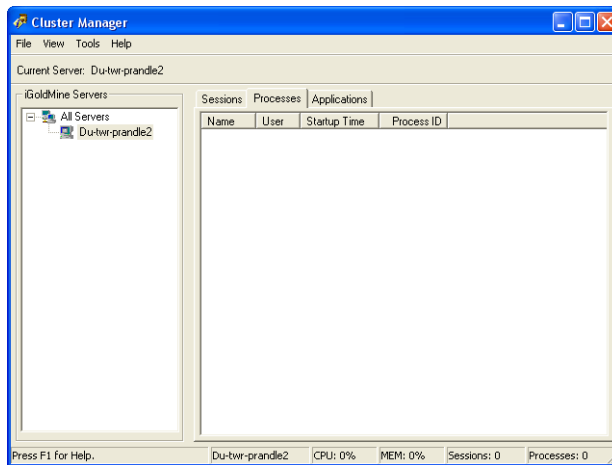
### Example:

#### Java Applet

```
<applet code="com.FrontRangeSolutions.iGoldMine.Logon"
width="800"
height="600"
archive="iGoldMine.jar,iGoldMine.res.jar">
<param name="user" value="">
<param name="password" value="">
<param name="application" value="">
<param name="args" value="">
<param name="desktopcolor" value="">
<param name="compression" value="true">
<param name="hostport" value="">
</applet>
```

## Ending a Process

A process is any action taking place on an iGoldMine server initiated by a user. A client running an application, for example, is a process. Each running application is assigned a unique name and process ID in the Windows Task Manager. These process names and IDs are duplicated in the Cluster Manager Processes tab. Administrators can end any process from the Cluster Manager.



1. Click the **Processes** tab.
2. Select the process or processes to end.
3. Select **Tools>>Processes>>Terminate Del.**

## Monitoring Server Activity

The Cluster Manager displays information about server activity and processes taking place on the server. Administrators can use this information, for example, to determine which applications are no longer being used and whether additional servers are required.

## Viewing Session Information

The Cluster Manager displays the following session information:

COLUMN	DISPLAYS THE ...
<b>Session Name</b>	Unique identifier assigned to a session.
<b>User</b>	Network user name of the user accessing applications on the server.
<b>IP Address</b>	IP address of the client computer from which the user is accessing the server. (Each computer on a network has a unique IP address.)
<b>Startup Time</b>	Date and time the user started the application.
<b>Applications</b>	Number of applications the user is accessing.

To view session information, click the **Sessions** tab.

## Viewing Process Information

A process refers to the specific application a user is running from the server. The Cluster Manager displays the following process information:

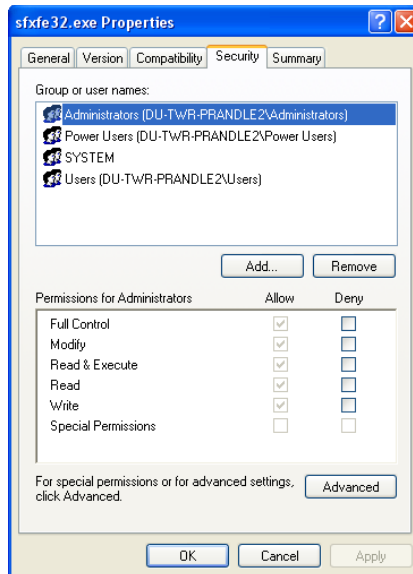
COLUMN	DISPLAYS THE ...
<b>Name</b>	Name of the application running on the server.
<b>User</b>	Network user name of the user accessing the application.
<b>Startup Time</b>	Date and time the user started the application.
<b>Process ID</b>	Process identification number assigned by the server's operating system. The number for each running application matches the process identification number displayed in the Windows Task Manager.

To view process information, click the **Processes** tab.

## Managing the iGoldMine Server from Client Computers

Administrators can connect to the Cluster Manager from any client computer. This allows the administrator to end processes, terminate sessions, and administer applications and user access from any computer running an iGoldMine client.

1. Set the permissions for the Cluster Manager so only iGoldMine administrators can access the application.
2. In Windows Explorer, locate the Cluster Manager executable file (**cm.exe**) from the iGoldMine **Programs** folder.
3. Right-click **cm.exe** and select **Properties**.
4. Click the **Security** tab.



5. In the **Permissions** area, set the permissions so only iGoldMine administrators can execute the application.

---

**Note:** For help with setting permissions in Windows Explorer, click the Help button from the Permissions text box or press **F1** while running Explorer.

---

6. **Add** the Cluster Manager (**cm.exe**) as a registered application with the Cluster Manager.
7. From the client computer, log on to an iGoldMine server as an iGoldMine administrator or as a user with administrative rights on the server. This launches the **Program Window**.
8. Launch the Cluster Manager by clicking the Cluster Manager symbol.

## Keyboard Shortcuts

ACTION	RESULT
<b>Applications Tab</b>	
Double-click the application	Displays Application Properties dialog box
DELETE*	Removes selected application
CTRL+A*	Displays Application Properties dialog box
CTRL+S	Displays Application Properties for Users/Groups dialog box
<b>Sessions Tab</b>	
DELETE	Terminates the selected session
<b>Processes Tab</b>	
DELETE	Terminates the selected process
<b>General</b>	
CTRL+TAB	Cycles through tabs
CTRL+SHIFT+TAB	Reverse cycles through tabs
CTRL+P	Displays Options dialog box
CTRL+B	Turns Status Bar on or off
ALT+F4	Exits the Cluster Manager
F1	Displays Help for the Cluster Manager
F5	Refreshes the Sessions, Processes, and Applications tabs
INSERT	Displays Add Application dialog box

\*Select an application from the list of Installed Applications in order for the shortcuts to work.





# Running the Client Component

---

## Overview

The thin-client component of iGoldMine creates a user session. It transmits the GoldMine application user interface to the user's computer. The user activates function events (using the mouse and keyboard) by moving around in the application and entering data which is returned to the server and processed. The client communicates data transactions from the function events to the database.

Several client options are available for Microsoft Windows, Linux, Java, and Mac OS X. It also includes a Microsoft ActiveX Control for Windows users running Internet Explorer. Based on your business needs and computer environment, you may provide users access to all or a limited number of these clients.

iGoldMine offers two types of clients:

- **Browser-based clients** access applications using a Web browser. No installation is necessary. These clients provide options for running an application inside the browser window (embedded) or outside the browser window (loose). Running inside the browser is quick and easy; running outside the browser allows the user a little more control. Certain clients also provide limited access to additional client-side features.
- **Native clients** require a small installation on the computer and run outside of the Web browser. These native clients offer quicker, more responsive performance and full access to all client-side features.

## Available Clients

Each client is briefly described below.

- **Java Client:** Runs on any computer with a Java Virtual Machine or a Java-enabled browser. When running from a browser, users launch the Java Client by browsing to an HTML page containing the logon applet. The browser connects to the Web server (Microsoft IIS) using port 80 and automatically downloads the iGoldMine client classes and launches the logon applet. The Java Client can be deployed from a number of platforms, including Windows, Macintosh OS 8.6 - 9.2, UNIX, Solaris, and Linux.
  - **Signed Java Client:** Allows users to take advantage of the Client Clipboard, Client Printing, and Client Drive features of iGoldMine.
  - **Unsigned Java Client:** Designed for users not wanting the Java applet to have access to their computer's file system so the client features are not available.

- **Windows Client:** Provides faster processing with the applet installed on the remote user's computer. Users open a browser, type the URL of the Client selection page, and then select the Windows Client link. the client can be installed and run on any XP, 2000, or 2003 system. Users can install the Windows Client on their computer and run iGoldMine from the Start menu or a desktop shortcut.
- **Microsoft ActiveX Control:** Users can automatically download and run the ActiveX Control using Internet Explorer and then browse to an HTML page containing the ActiveX Control. Run the ActiveX Control outside (loose) or inside (embedded) the Web browser.
- **Linux Client:** Lightweight native X Windows system application delivering GoldMine functionality to Linux workstations. Users install the native Linux Client on their Linux computer and run iGoldMine from the Linux console.
- **Mac OS X Client:** Users install the Mac OS X Client from the iGoldMine Client Installation window.

---

**Note:** Your administrator must manually set up this page to use as default server web page.

---

---

**Note:** Installation of iGoldMine provides a default Web page that can be used to access the various clients.

---

## Preparing the Server for Web Access

iGoldMine was developed with ready-to-use and fully functional Web pages for each of the clients. However, business needs may require some Web pages be edited.

System administrators, for example, may decide to bypass the client selection page and set up the logon process so the user browses directly to a specific client.

Administrators may also need to modify Web pages to offer only particular clients, add corporate colors and logo, or include how-to instructions for users.

---

**IMPORTANT:** If any changes are made to the iGoldMine Web pages, they should be made by a knowledgeable Web team because changes to the Web pages may result in unpredictable operation of the Web interface. Create copies of the original Web pages and store them for future reference.

---

Locate the appropriate file for configuring the Web pages. The iGoldMine server setup installs the iGoldMine Web files into a subdirectory of your Web server folder. The default Web page for logging on to iGoldMine is **logon.html**.

The logon.html page and client HTML pages are accessible in the subfolder of the Web server folder. The startup parameters can be adjusted to configure delivery of clients to users.

## HTML Pages

The following HTML pages are located in the subfolder of the Web server folder:

HTML Page	Description
embeddedactivexlogon.html	Microsoft ActiveX logon page running in embedded Windows mode.
installnativelinux.html	Native Linux Client install page (iGoldMine.rpm).
installnativewindows.html	Native Windows Client install page (iGoldMineWindowsClient.exe).
javalogonsigned.html	Signed Java Client logon page.
javalogonunsigned.html	Unsigned Java Client logon page.
looseactivexlogon.html	ActiveX Control in loose Windows mode logon.

## Startup Parameters

Startup parameters can be specified in the logon, and you can install HTML pages. For example, you can modify the Web pages (use any HTML editor) to launch specific applications and to bypass the Logon dialog box.

## Java Client Parameters

PARAMETER	DESCRIPTION
<b>user</b>	The user's network user name.
<b>password</b>	The user's network password.
<b>host*</b>	The name of the computer the Application Publishing Service is running on.
<b>application</b>	The application the user wishes to run, as registered with the Cluster Manager. (If this parameter is not specified in the HTML file, the Program Window will launch.)
<b>compression</b>	Administrators should activate compression if the iGoldMine Client is running over a dial-up network or whenever there is low bandwidth. COMPRESSION="true" (default) enables compression. COMPRESSION="false" disables compression.
<b>desktopcolor</b>	This argument is used to set the background color of the desktop when iGoldMine is run inside the browser. Possible values are black, blue, cyan, darkgray, gray, green, lightgray, magenta, orange, pink, red, white, and yellow.
<b>args</b>	This parameter passes on specific application parameters for the application about to be launched. The signed version of the Java Client requires double \\ characters when using the args parameter. For example, "args", "C:\\word\\ test.doc"
<b>height</b>	Height of the applet in pixels.
<b>width</b>	Width of the applet in pixels.

\*The host parameter is available for the signed Java Client only. It is not available to users of the unsigned Java Client.

## Example

```
<applet code="com.FrontRangeSolutions.iGoldMine.Logon"
width="800"
height="600"
archive="iGoldMine.jar,iGoldMine.res.jar">
<param name="user" value="">
<param name="password" value="">
<param name="application" value="">
<param name="args" value="">
<param name="desktopcolor" value="">
<param name="compression" value="true">
<param name="hostport" value="">
</applet>
```

---

**Note:** By configuring logon pages to bypass the Program Window, users are unable to add or modify client printers.

---

The Java Client supports any browser that supports Java and Internet Explorer 6.0 SP1 or later. If there is a possibility a client is running older versions of Internet Explorer, you can include instructions for downloading the latest version of their Internet browser.

If a user is running a browser that does not support Java 1.4.2.03, the logon applet will not launch, and the user will be unable to log on to an iGoldMine Server.

## Example

```
<APPLET CODE= "com.FrontRangeSolutions.iGoldMine.Logon"
WIDTH= "800" HEIGHT= "600"
ARCHIVE="iGoldMine.jar, iGoldMine.res.jar">
Your browser does not support Java. Please download the latest
version of Internet Explorer.
</APPLET>
```

## ActiveX Control Client Parameters

PARAMETER	DESCRIPTION
<b>user</b>	The user's network user name.
<b>password</b>	The user's network password.
<b>host*</b>	The name of the computer the Application Publishing Service is running on.
<b>application</b>	The application the user wishes to run, as registered with the Cluster Manager. (If this parameter is not specified in the HTML file, the Program Window will launch.)
<b>compression</b>	Administrators should activate compression if the iGoldMine Client is running over a dial-up network or whenever there is low bandwidth. COMPRESSION= "true" (default) enables compression. COMPRESSION= "false" disables compression.
<b>args</b>	This parameter passes on specific application parameters for the application about to be launched.
<b>isembeddedwin</b>	Determines whether the plug-in is run in loose or embedded windows mode. isembeddedwin= "true" (default) signifies embedded windows mode.
<b>autoclosebrowser</b>	When autoclosebrowser="true" closing the Program Window closes the associated browser window and ends the user's iGoldMine session. When autoclosebrowser="false" (default), closing the Program Window ends the user's iGoldMine session but does not close the browser window.
<b>inbrowserprocess</b>	When inbrowserprocess="true" (default) closing the browser that contains the iGoldMine Plug-in or ActiveX Control will end the user's iGoldMine session. When inbrowserprocess="false" closing the browser will not end the user's iGoldMine session.



<b>autoconfigprinters</b>	Determines how printers are initialized at startup. When autoconfigprinters="all" all client printers are automatically configured. When autoconfigprinters="none" client printers are not automatically configured. When autoconfigprinter="default" (default) the default printer is configured automatically.
---------------------------	--

**Notes:**

- If **no Host** is specified in the logon HTML page, the plug-in detects the computer where the logon file was downloaded from and makes the connection to that server. The user bypasses the Connection dialog box and is presented with the Logon dialog box only.
- If **host= "?"**, the Connection dialog box appears and clients must type in a server address. If you specify a server address in the logon HTML page using the host tag (host= "server"), the user will bypass the Connection dialog box and connect to that specified server.

**Example****ActiveX Control**

```
<OBJECT ID="Control1" WIDTH=800 HEIGHT=600
CLASSID="CLSID:76850F2A-FCAA-454F-82D3-BD46CB186EF5"
CODEBASE="iGoldMine-activex.cab#Version=2,1,2,2014" >
<PARAM NAME="user" VALUE="">
<PARAM NAME="password" VALUE="">
<PARAM NAME="host" VALUE="">
<PARAM NAME="application" VALUE="">
<PARAM NAME="args" VALUE="">
<PARAM NAME="isembeddedwin" VALUE="true">
<PARAM NAME="compression" VALUE="true">
<PARAM NAME="hostport" VALUE="">
<PARAM NAME="autoclosebrowser"
VALUE="false">
<PARAM NAME="inbrowserprocess"
VALUE="true">
```

```
<PARAM NAME="autoconfigprinters"  
VALUE="default">  
</OBJECT>
```

When using parameters with the ActiveX Control, the text **&quot;** must be used to accommodate spaces in application names and application arguments. For example, if the application is registered with the Cluster Manager with a space, **&quot;** must be used.

## Example

### ActiveX Control

```
<OBJECT ID="Control1" WIDTH=800 HEIGHT=600  
CLASSID="CLSID:76850F2A-FCAA-454F-82D3-BD46CB186EF5"  
CODEBASE="iGoldMine-activex.cab#Version=2,1,2,2014" >  
<PARAM NAME="application"  
VALUE="&quot;iGoldMine answerwizard&quot;">  
<PARAM NAME="args" VALUE="&quot;c:\my  
test\my file.txt&quot;">  
</OBJECT>
```

## Running the Java Client

There are two types of Java Client available with iGoldMine: **signed** Java Client and **unsigned** Java Client.

The **signed** Java Client is designed for users who wish to take advantage of the client integration features of iGoldMine and are not concerned with the Java applet having access to their file system, clipboard, printing, sound, and drives.

Users who do not want the applet to have access to their computer's file system should select the **unsigned** Java Client.

Users launch iGoldMine by browsing to an HTML page containing the logon applet.

1. Open Internet Explorer or any Java-enabled browser.
2. In the **Location/Address** text box, type **http://** followed by the server name and the iGoldMine logon file location. For example, **http://server/iGoldMine/logon.html**.
3. Select either the signed or unsigned **Java Client** from the list of iGoldMine clients.
4. In the **Logon** dialog box, type the network user name and password in the respective text boxes.

---

**Note:** 32-bit True Color does not work well with certain applications deployed via the Java Client. Clients should change their color palette settings to anything less than True Color.

---

## Running the ActiveX Control

The ActiveX Control Client is automatically installed the first time a user accesses the HTML page containing the ActiveX Control. Users have the choice of running the ActiveX Control in either loose or embedded mode.

The Microsoft ActiveX Control is supported by Windows XP Pro and supports Internet Explorer 6.0 SP 1 or later.

1. Start Internet Explorer.
2. In the **Address** text box, type **http://** followed by the server name and iGoldMine logon page. For example, **http://server/logon.html**.

3. Select the appropriate Microsoft ActiveX Control from the list of Windows clients.
4. Trust the digitally signed ActiveX control.
5. In the **Logon** dialog box type the network user name and password in the respective text boxes.

## Running the Windows Client

The Native Windows Client is supported by the Windows XP Pro system and, unlike the other clients, must be installed to the user's computer.

1. Open Internet Explorer.
2. In the **Location/Address** text box, type **http://** followed by the server name and iGoldMine logon page. For example, **http://server/logon.html**
3. Select the native **Windows Client** link from the list of iGoldMine clients.
4. Follow the on-screen instructions which will prompt you to download the Windows client executable (.exe).

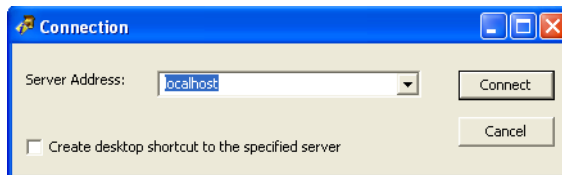
The Windows Client can also be installed by launching the self-extracting executable setup.exe from the Web folder located in Program Files >> iGoldMine.

## Running the Windows Client from the Start Menu

Users can run the Windows Client from the Start menu or from a Windows shortcut.

1. Select **Start>>Programs>>iGoldMine>>iGoldMine Client**.

The **Connection** dialog box appears.



2. Type the server address in the text box, then click **Connect**.

The **Logon** dialog box appears.

If you would like to create a desktop shortcut to the specified server, select the check box. Once the shortcut is set up, you will bypass the Connection dialog box when connecting to the specified server.

3. Type the network user name and password in the respective text boxes.

## Running the Windows Client from a Shortcut

A Windows shortcut named **iGoldMine Client** is created during installation of the Windows Client. This shortcut launches the Program Window.

1. Double-click the **iGoldMine Client** shortcut.
2. Type the server address in the **Connection** dialog box.  
  
If you would like to create a desktop shortcut to the specified server, select the check box. Once the shortcut is set up, you will bypass the Connection dialog box when connecting to the specified server.
3. In the **Logon** dialog box, type the network user name and password in the respective text boxes.

## Creating Shortcuts

Clients can create additional shortcuts that launch specific applications.

1. Right-click the desktop to access a shortcut menu.
2. Select **New>>Shortcut**.
3. In the **Create Shortcut** dialog box, browse to the iGoldMineClient executable.

The Default folder is **Program Files\Frontrange Solutions\iGoldMine Client**.

For example, select the **.exe** file from Program Files\Frontrange Solutions\iGoldMine Client.

4. Type a name for the shortcut and click **Finish**.

## Using Command-Line Arguments

Both Windows and Linux Clients support the same command-line arguments making the logon process easier. For instance, by adding the argument **-h** followed by the server name and **-u** followed by the user name, the user is only required to type a password in the Logon dialog box.

1. Right-click the iGoldMine shortcut and select **Properties**.
2. In the **Shortcut** tab, place the cursor in the **Target** edit box and append any of the following command-line arguments after the quote ("")

ARGUMENT	DESCRIPTION
<b>-h</b>	The iGoldMine server address or host name.
<b>-u</b>	The client's network user name.
<b>-p</b>	The client's network password.
<b>-a</b>	The display name of the application to be launched. The application's display name should be identical to the application registered with the Cluster Manager.
<b>-c</b>	Enables compression. (Compression is enabled by default. To disable compression, remove <b>-c</b> from the command line.)
<b>-r</b>	Startup parameters for the application
<b>-ac</b>	Determines how printers are initialized at startup. When <b>-ac</b> is followed by <b>all</b> , all client printers are automatically configured. When <b>-ac</b> is followed by <b>none</b> , client printers are not automatically configured. When <b>-ac</b> is followed by <b>default</b> , only the default printer is configured automatically.

### Example

```
-\"iGoldMine\"WindowsClient.exe\" -h server
-u username -p password
-a application -c -ac all
```

- Command-line arguments are optional and case insensitive. Arguments can be appended in any order, with the exception of **-r**. If **-r** is used, it must be the last argument on the command line and it must be used with the **-a** argument.
- When the **-a** argument is used, the Program Window is not launched, even if the application does not exist.
- Startup parameters passed on by the **-r** argument are specific to each application. Please refer to the application's documentation for information about launch parameters.
- If a user does not have a password, **-p ""** can be used to bypass the Logon dialog box, as long as the user name is also specified on the command line.
- In order to accommodate spaces in user names, passwords, application display names, or application arguments, quotation marks must be included when using command-line arguments. For example, the argument **-a "GoldMine"** would launch the GoldMine application. Likewise, user name Jim C would be specified as **-u "Jim C"**.



## Installing the Linux Client

The Linux Client is a lightweight native X Window system application and is available for users of Red Hat 9.0 or later.

1. Launch your Web browser.
2. In the **Location** text box, type **http://** followed by the server name and the iGoldMine logon file, for example, **http://server/logon.html**.
3. Click the **Native Linux Client** link from the list of Linux clients.
4. Save the iGoldMine package.
5. Launch the Linux console and become root (Super User).
6. Install the package using: `rpm -uvh` (for example, `rpm -uvh iGoldMine.rpm`).

## Running the Linux Client

1. In the Linux console, type **iGoldMine**.
2. Type the server address in the **Connection** dialog box.
3. In the **Logon** dialog box, type the network user name and password in the respective text boxes.

The Linux Client supports the same command-line arguments discussed earlier. For example:

```
iGoldMine -h server1 -p password -ac all
```

## Resizing the Client Window of the Linux Client

The command-line argument **-geometry** can be used to modify the size of the client window when the command-line argument **-f** is used. When the Linux Client is run in loose window mode, **-geometry** will have no effect.

Append **-geometry** to the command line, followed by the desired width and height.

### Example

```
iGoldMine -h 196.125.101.222 -geometry800x600
```

or

```
iGoldMine-xp -h 196.125.010.222 -geometry=800x600
```

## Installing the MAC OS X Client

The Mac OS X Client is a lightweight application that provides seamless integration with the native Mac environment.

1. Launch your Web browser.
2. In the location box, type **http://** followed by the server name and the iGoldMine logon file (for example, `http://server/logon.html`).
3. Click the **Mac OS X Client** link from the list of clients.
4. Download and unzip **igoldmine.tgz**.
5. Open **Terminal**.
6. Change to the directory created during the unzipping of `ggw.tgz`.
7. Type **chmod a+x InstallMacX.sh**.
8. Press **RETURN**.
9. Type **sudo ./InstallMacX.sh**.
10. Press **RETURN**.
11. If prompted, type your password and press **RETURN**.

## Running the MAC OS X Client

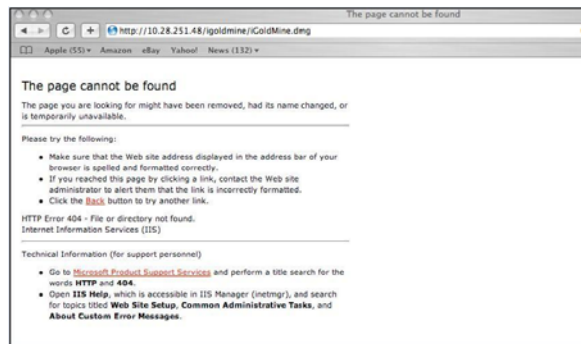
Users can run the Mac OS X Client to connect to iGoldMine and its associated applications.

1. From the menu bar, select **Go>>Applications**.
2. Double-click **ggw** to launch iGoldMine.
3. Type the server address in the **Connection** dialog box.
4. When the Logon dialog appears, enter the following information:
  - The network user name in the **User Name** box.
  - The network password in the **Password** box.

The Mac OS X Client supports the same command-line arguments as the Windows and Linux Clients.

## Defining.DMG Files for iMac OS X Client

In some cases after installing GoldMine and iGoldMine, iMac users may open the browser, type the address of the machine on which iGoldmine is installed and see the error message **The page cannot be found**:



The cause of the problem is the Windows 2003 Internet Information Service (IIS) needs to be configured to see the .DMG files

---

**Note:** A .DMG file is a disk image format file for Mac OS X.

---

Early versions of the Microsoft IIS include a wildcard character *MIME mapping*, which permits IIS to serve any file regardless of its extension. IIS 6.0 does not include this wildcard character MIME mapping and does not serve any type of extension that is not defined at the MimeMap node in the IIS metabase.

Because the .DMG file name extension is not a defined MIME type it must be defined manually.

### To define a MIME type for the .dmg file extension

1. Open the IIS Manager by clicking **Start >> Settings>> Control Panel>> Administrator Tools>> Internet Information Services (IIS) Manager**.
2. Right-click on the **Computer Name** in the left column.

3. Choose **Properties**.
4. Click **MIME Types**.
5. Click **New**.
6. In the **Extension** box, type **.dmg**.
7. In the **Mime Type** box, type **application/octet-stream** and then click **OK**.

---

**Note:** Always back up the metabase before you edit it.

---



# Client Integration

---

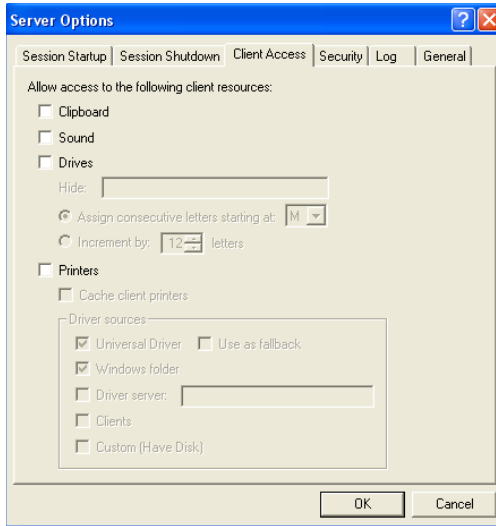
## Overview

As part of the features of the Cluster Manager, system administrators may select from several server options to provide users with tools. Each enabled option requires a certain amount of protocol and resources to operate, so balance the benefits with the capability of your environment.

This chapter describes how to access, enable, and configure these options from the Cluster Manager.

## Enabling the Options

To enable any option, open the Cluster Manager and select **Tools>>Server Options**. The **Server Options** dialog box appears. Click the **Client Access** tab.



Here you can enable support for Client Drives, Sound, Clipboard, and Client Printing and set the path to the printer drivers folder.

## Client Printing

iGoldMine provides access to client-side printers for users running the Microsoft Windows Client, the Linux Client, the Microsoft ActiveX Control, and the signed version of the Java Client.

### Enabling Support for Client Printers

Client-side printing is disabled by default. Administrators enable client-side printing and point the Printer Drivers folder to the operating system's driver files (for example, the i386 folder).

1. Open the Cluster Manager and select the server from the list of **All Servers**.
2. Select **Tools>>Server Options>>Client Access tab**.
3. Click on the **Printers** checkbox.
4. In the **Driver server** text box, browse for the folder where the printer drivers are stored.

---

**Notes:**

- Make sure printer drivers for users printing locally are included in the selected folder.
  - iGoldMineClient printers are temporarily installed on the iGoldMine server for the duration of the client's session. Printer drivers are installed permanently. Administrators can view the list of printers and drivers in the Printers folder on the iGoldMine server.
- 

**IMPORTANT:** If you configure shortcuts or HTML pages that launch applications directly, the user logon bypasses the Program Window and is unable to add or modify client printers.

---

## Enabling Client Printer Caching

When client printing is enabled, iGoldMine creates printers on the iGoldMine server that act as proxies for the client's printers. If Cache client printers is enabled, proxy printers are not deleted when sessions close but remain on the server.

When a user starts a new session from the same client computer, iGoldMine synchronizes the list of client's printers with the proxy printers on the server. If there were no printer additions or deletions on the client computer since the last time an iGoldMine connection was made, no printer changes are required on the server.

Enabling cache client printers prevents the deletion of client printers when a session closes and provides faster session initialization for subsequent sessions started from the same client computer.

1. Open the Cluster Manager and select the server from the list of **All Servers**.
2. Select **Tools>>Server Options>>Client Access tab**.
3. Select the **Printers** check box.
4. Select the **Cache client printers** check box.



## Printer Configuration

iGoldMine automatically detects the client's default printer information once the user logs on to the iGoldMine server. This includes the default printer's port and printer driver. If the user's printer driver does not exist on the iGoldMine server, iGoldMine will attempt to locate the driver and automatically install it.

Due to Java Virtual Machine limitation, users running the signed version of the Java Client must configure their printers manually using the Program Window's Client Printer Wizard.

Administrators are able to control which, if any, client printers are automatically detected at startup. The fewer printers initialized at startup, the quicker the Program Window opens. Printers not initialized at startup must be configured by the user through the Program Window's Client Printer Wizard.

Parameters can be used to indicate whether all printers, no printers, or only the default printer is automatically configured at startup. By default, iGoldMine automatically configures the user's default printer only. For the Microsoft ActiveX Control, modify the HTML pages with the following values:

Value	Description
<b>autoconfigprinters= "all"</b>	iGoldMine attempts to automatically configure all client printers at startup.
<b>autoconfigprinters= "none"</b>	iGoldMine does not attempt to automatically configure client printers at startup.
<b>autoconfigprinters= "default"</b>	iGoldMine only attempts to automatically configure the default printer at startup.

## Examples

### Microsoft ActiveX Control

```
<OBJECT ID="Control1" WIDTH=0 HEIGHT=0
CLASSID="CLSID:76850F2A-FCAA-454F-82D3-BD46CB186EF5"
```

```
CODEBASE="iGoldMine-activex.cab# Version=2,0,0,0" >  
<PARAM NAME="autoconfigprinters"  
VALUE="all">  
</OBJECT>
```

For the native Windows and Linux Clients, the argument **-ac** followed by the values **none**, **all**, and **default** can be added to the shortcut's command line. For example, **iGoldMine-ac all**

Regardless of which value is designated, users can still configure and print to any client printer by accessing the Program Window's Client Printer Wizard.

---

**Note:** If you configure shortcuts or HTML pages that launch applications directly, the user bypasses the Program Window and is then unable to add or modify client printers.

---

After a printer is configured through the Client Printer Wizard, it will be automatically configured at startup the next time the user logs on to iGoldMine. Users can prevent a printer from configuring automatically by accessing the Printer Properties dialog box and deleting the printer.

## Configuring with Client Printer Wizard

If the iGoldMine server is unable to locate the client printer driver, users can manually install a printer driver using the Program Window's **Client Printer Wizard**.

The Client Printer Wizard displays a list of the printer drivers distributed with the iGoldMine server's operating system.

The user can either select a printer driver from the list or install the driver from disk if the iGoldMine server is running Windows 2003 or Windows XP and the user belongs to the Administrators or Power Users group.

1. Open the Program Window and select **File>>Printers>>Configure Client Printer**.

The **Welcome to the Client Printer Wizard** appears. Click **Next**.

---

**IMPORTANT:** If you have not enabled Client Printing from the Cluster Manager Server Options dialog box, Configure Client Printer is unavailable from the menu.

---

2. At the **Name Your Printer** screen, select the name of the printer and click **Next**.
3. At the **Select Driver** screen, select the manufacturer and model of the printer.

If the printer comes with an installation disk, click **Have disk** and then click **Next**.

4. At the **Print Test Page** screen, click **Yes** to print a test page or **No** if you do not want to print a test page. Click **Next**.
5. At the **Completing the Client Printer** screen, click **Finish**.

Information entered through the Client Printer Wizard is stored in a printer configuration file on the client computer. The file, **print.ini** or **print.rc**, is located in the same folder as the iGoldMine executable and can be modified manually by the user. This file is used to perform client printer initialization for subsequent connections to iGoldMine servers.

## Using Client Printer Properties

Once a printer is successfully configured, users can modify the printer's properties by accessing the **Client Printer Properties** dialog box. The dialog box is accessible *only* after a printer (local or network) is configured using the wizard.

Users can specify the name of the printer and the port for the client printer and determine whether the printer is the default printer. Users can also print a test page or delete a printer.

1. Open the **Program Window**.
2. Select **File>>Printers**.

If the printer was configured, it is listed as a submenu item.

3. Select the configured printer. The printer **Client Printer Properties** dialog box appears.
4. Set the properties.

Once all client-side printers are properly configured, the Client Printer Wizard is no longer available. Users can edit the printers' properties, but they cannot configure a new printer. Any additional printers must first be installed on the client computer before they can be configured to run through iGoldMine.

---

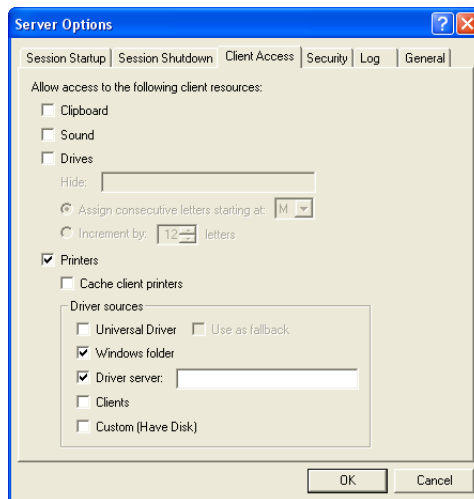
**Notes:**

- A printer designated as the default printer through the Program Window is set as the default printer for iGoldMine-deployed applications only.
  - In order to support client printing on the Macintosh, a native Macintosh printing library is automatically downloaded and installed on the client computer when a user selects the signed Java Client. The printing library supports Mac OS 8.2–9.6 running Internet Explorer 5.0 or later with Mac Runtime for Java (MRJ) 2.2 or later. All Apple Talk Printers are supported.
-

## Client Drives

iGoldMine allows users to access files stored on the client computer and to save files locally. Also known as **Client File Access**, Client Drives are listed in the application's **Open** and **Save As** dialog boxes and designated with a Client prefix, for example, Client C (K:), Client D (L:).

Users can save an attachment to a GoldMine Knowledge Base topic to one of the designated client drives.



The **Open/Save** dialog boxes list both client and server drives. Support for client drives is disabled by default.

1. Open the Cluster Manager and select the server from the list of **All Servers**.
2. Select **Tools>>Server Options>>Client Access tab**.
3. Click on the **Drives** check box and in the textbox, type in the drive name.

## Client Sound

iGoldMine supports sound capability for any application using PlaySound, sndPlaySound, or waveOut. Speakers are not required on the iGoldMine server, but a sound card is recommended. The user's computer, however, does require a sound card and speakers. Audio support is disabled by default.

---

**IMPORTANT:** The Client Sound feature is not supported with either of the Java clients.

---

1. Open the Cluster Manager and select the desired server from the list of **All Servers**.
2. Select **Tools>>Server Options** and then click the **Client Access** tab.
3. Select the **Sound** check box.

## Client Clipboard

iGoldMine allows client- and server-based applications to exchange information using the clipboard. Users can cut and copy information from applications running on the client and paste it into applications running on an iGoldMine server, and vice versa. Clipboard support is disabled by default.

1. Open the Cluster Manager and select the desired server from the list of **All Servers**.
2. Select **Tools>>Server Options>>Client Access** tab.
3. Select the **Clipboard** option.



# Keyboard Layouts

---

## Overview

The iGoldMine administrator may need to configure support for client keyboards and/or Input Method Editors (IMEs). Windows uses keyboard layouts and IMEs to map keys on a keyboard to the characters on the display. When a key is pressed on the client's keyboard, iGoldMine sends a key code to the server, and the server translates the key code to a character using the session's keyboard layout.

iGoldMine sets a single keyboard layout when the session starts, using information about the keyboard and IME provided by the iGoldMine client.

The iGoldMine default setup configures the server to support clients using the same keyboard and operating system as the server. Some configuration is needed to support clients with different operating systems, keyboards, or IMEs because the identifiers used to identify keyboards and IMEs can be different on different versions of the Microsoft Windows operating systems, and the terms do not even apply to Java or Linux.

The following section describes mechanisms and procedures to manage keyboards and IMEs in sessions on client computers that do not match the server system.

## Installing Additional Keyboards and IMEs

Before clients can use keyboards and/or IMEs that are different from the server's, they must be installed on the iGoldMine Server. You will need the original installation files (network or CD) in order to install foreign keyboard layouts.

1. Open **Control Panel**, then double-click **Regional Settings**.
2. Click the **Input Locales** tab.
3. Click the **Add** button and select the keyboard layouts required by the clients.

If there is no Windows keyboard layout available for the keyboard (for example, Apple Macintosh Italian keyboard), it might be necessary to create a keyboard driver. Consult the Microsoft Driver Development Kit (DDK) for instructions.

## Keyboard/IME Identifiers Used by iGoldMine

iGoldMine uses two identifiers, collectively known as GO-Global Input Identifiers (GGII), to specify a keyboard/IME for a session. The first is a keyboard layout. This is a nine-digit string identifier the Windows operating systems use to load keyboard drivers and IME programs. They are similar to locale IDs because the low four digits typically match the locale of the language supported by the keyboard.

Keyboard layouts specifying an IME typically start with an "E." The list of available keyboard layouts can be viewed in the registry under the key:

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\
Control\Keyboard Layouts]
```



The second identifier to use is the layout text string that is a subkey of each keyboard layout key. These strings are used by the **Regional Options** and **Keyboard Properties** dialog boxes on the **Input Locales** tab under **Keyboard layout/IME**.

### Examples

```
00000409
Layout File = KBDUS.DLL
Layout Text = US
E0010411
Ime File = imejp.ime
Layout File = Kbdjpn.dll
Layout Text = Japanese Input System (MS-IME2000)
```

## Configuring Client Keyboard Options

You may optionally specify the keyboard/IME for a session using the command-line argument **-kb** or the applet parameter **"keyboard."** These take one of the two GGIs described above. The applet parameter, for example, can be used to create Web pages to initialize the client with different keyboards.

If the command-line option is not specified, the native Windows clients will utilize the layout text of the currently active keyboard layout on the client. The Java and Linux clients do not send a layout text to the server if one is not specified on the command line.

### Examples

#### Windows client command line using a keyboard layout:

```
iGoldMine.exe -h server1 -kb 00000409
```

#### Java client using a layout text:

```
<applet code=
"com.FrontRangeSolutions.iGoldMine_xp.Logon"
Width="800" Height="600" archive=
"iGoldMine-xp.jar,iGoldMine.res.jar">
```

```
<param name = "keyboard" value = " Japanese Input  
System (MS-IME2000)">  
<param name= "user" value= "guest">  
<param name= "password" value= "guest">  
<param name= "host" value= "host">  
</applet>
```

## Specifying Layout Text Substitutions

Layout text substitutions can be specified on the server to map between client and server keyboard layout names. They can be used to:

- Overcome differences in layout text names on different versions of Windows. For example, the IME 2000 layout text on Windows 2003 can be substituted for the IME 2000 layout text from Windows 95.
- Substitute an ANSI name for a keyboard layout having a UNICODE name. For example, when specifying a keyboard layout with a UNICODE name through the “keyboard” applet parameter in an ASCII HTML page, it is necessary to substitute an ASCII name for the UNICODE name.

Keyboard Layout Substitutions are specified under the key:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\GraphOn\  
Bridges\1.0.0\System\Keyboard Layout\Substitutes]
```

Each REG\_SZ value within this key has the name of a GGII, and the value is the name of a layout text from the server that should be used in place of the client name.

## Setting the Fallback IME Layout Text

If there is no GGII specified from the client, the server uses a fallback mechanism to determine which IME should be used for the session.

The fallback IME layout text should generally be the IME most likely used by clients connecting to the server. It is set initially to the layout that was active when iGoldMine was installed.

The fallback IME may be modified after installation by editing the “Fallback Layout Text” value under the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\GraphOn\  
Bridges\1.0.0\System\Keyboard Layout
```

## Keyboard Layouts Behind the Scenes

If the previous mechanisms are unable to provide the session with a keyboard layout, iGoldMine will attempt to load a keyboard layout matching the client's keyboard.

The Windows client will send the default keyboard layout (but not an IME) of the operating system, and the Java and Linux clients will send the operating system's locale ID. These will be used to attempt to load the keyboard layout best matching the client.

The administrator is not required to perform any special configurations in most installations not utilizing IMEs.

Any client with a standard language keyboard should be able to connect to a server and communicate that fact. Standard language keyboards have Windows keyboard layouts identical to the language's locale ID. For example, the French locale ID is 0000040C and the standard French keyboard layout is 0000040C.

If the keyboard is not standard there might be mismatches. The keyboard layouts of nonstandard keyboards are not unique across all Windows platforms.

If all clients within an installation of iGoldMine use the same nonstandard keyboard, the fallback layout text registry key can be used to specify it for all sessions.

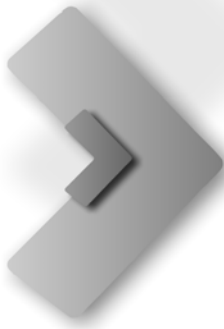
This will ensure all clients (Windows, Java, and Linux) get the proper keyboard for each session. If client computers have different nonstandard keyboards the best way to communicate this to the server is to specify the keyboard layout in the command-line option or applet tag parameter.

---

### Notes:

- When connecting to a Chinese iGoldMine server, the Logon dialog box appears from the shortcut along with the IME bar specifying Chinese as the default language. Clicking **CTRL+SPACEBAR** does not toggle the languages.
- Users must manually click the IME bar with the mouse pointer to select English. Without manually clicking the IME bar, users are unable to type a user name and password.

- When running the Java Client on a Chinese computer, users must turn off the client IME by clicking **CTRL+spacebar**. Once an application is launched through iGoldMine, users activate the server's IME by clicking **CTRL+~**.
  - When running the Java Client on a Japanese computer, users must turn off the client IME by clicking **ALT+~**. Once an application is launched through iGoldMine, users activate the server's IME by clicking **CTRL+~**.
-



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