

Analyze 12.0

Installation Instructions: Windows



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Installation Instructions: Windows

Welcome to **Analyze 12.0**, a robust, powerful, and practical research software for advanced biomedical imaging visualization, manipulation, and measurement. Analyze features integrated, complementary tools for fully interactive multi-dimensional display, processing, segmentation, registration, and measurement of biomedical imaging modalities including MRI, CT, PET, SPECT, ultrasound, and digital microscopy. It has been designed and carefully programmed to be highly efficient and user-interactive, performing powerful 3-D image processing and display operations in seconds. The applications of Analyze are broad in scope, wide in scale, and penetrating in impact.

I. Installing Analyze 12.0 on Windows Systems.....	3	IV. Dongle Installation.....	11
System Requirements.....	3	V. Running Analyze 12.0.....	12
Uninstalling Previous Versions of Analyze.....	3	Running the Analyze Program.....	12
Analyze 12.0 Installation.....	4	Analyze Patch Updates.....	12
II. Analyze Licenses.....	6	VI. Analyze Basics.....	13
BIRlic License Management and License Types.....	6	Analyze 12.0 Resources.....	13
Analyze License Files.....	6	Analyze 12.0 Tutorial Data.....	13
Requesting a License File.....	7	Analyze 12.0 Image File Format Support.....	13
III. Analyze License File Installation.....	8	VII. Analyze Developers Add-On.....	14
Installing a Node-Locked License.....	8		
Installing a Floating License SERVER.....	9		
Installing a Floating License CLIENT.....	10		

I. Installing Analyze 12.0 on Windows Systems

System Requirements

Analyze 12.0 will run on Windows systems with the following minimum configuration:

- Windows 8, 8.1, 7, XP or Vista (32- or 64-bit)
- Network card
- CD-ROM drive
- 512 MB RAM*
- 24/32-Bit graphics capability
- At least 450 MB disk space

*Analyze requires RAM equal to twice the size of the data set being processed (e.g. a 2 GB data set requires at least 4 GB of RAM).

Uninstalling Previous Versions of Analyze

Before installing Analyze 12.0, it is recommended to uninstall any previous Analyze versions resident on your system. Otherwise, make sure to choose a new directory for Analyze 12.0 during installation. To uninstall previous versions of Analyze:

1. Open the Windows Control Panel (**Start > Control Panel**) and select **Programs and Features**.
2. Select the previous version of Analyze and click **Uninstall**. A dialog box will be returned requesting confirmation, click **Yes**. The previous version of Analyze will now be removed from your system.
3. Navigate to your C: drive and delete the C:\BIR folder. Analyze 12.0 Installation

Note: If you choose not to uninstall your previous version of Analyze, you will need to create a new folder on your C: drive named BIR12 before proceeding. During Analyze 12.0 installation, set the 'Destination Folder' to this new C:\BIR12 folder by clicking the 'Change' button.

I. Installing Analyze 12.0 on Windows Systems

Analyze 12.0 Installation

The InstallShield Wizard program will lead you through the complete Analyze 12.0 installation process (including optional components, such as the AVW Developers Add-On). To begin the installation process:

1. It is recommended to close all active programs on your desktop.
2. Insert the **Analyze 12.0 Installation CD** into your computer.
3. Once the Installation CD is inserted, the **InstallShield Wizard for Analyze 12.0** should automatically open (figure 1).

note If the InstallShield Wizard does not run automatically, open a Windows Explorer window and navigate to the 'My Computer' location. Locate the CD drive that shows 'Analyze_12.0' and select 'Auto Play'.

4. The InstallShield Wizard opens to a 'Welcome' screen. Click **Next** to begin the Analyze 12.0 installation.
5. **License Agreement:** Please read the End-User License Agreement for AnalyzeDirect Software and select '**I accept**' or '**I do not accept**'. If you select '**I do not accept**', Analyze will not be installed. Click **Next** (figure 2).
6. **Destination Folder:** The default location for installation is **C:\BIR** (when Windows is installed on the C: drive); it is recommended to leave this as the destination folder. Click **Next** (figure 3).

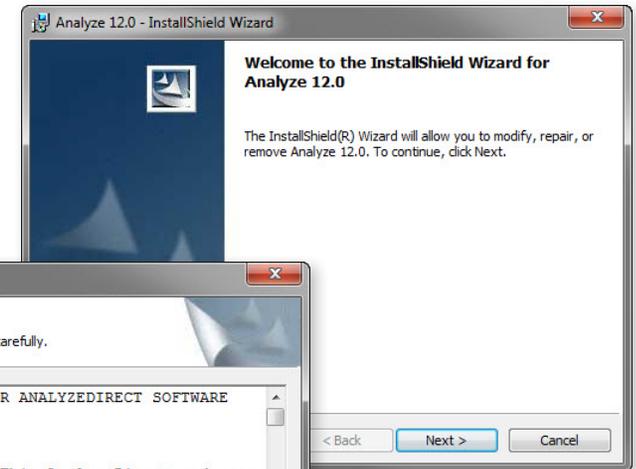


Figure 1

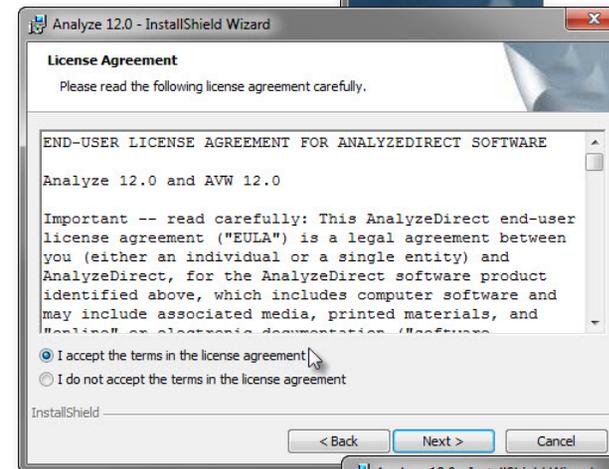


Figure 2

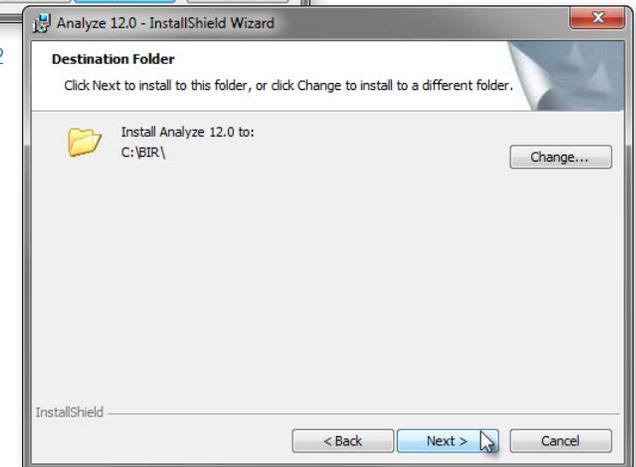


Figure 3

I. Installing Analyze 12.0 on Windows Systems

7. **Setup Type:** You may choose from the following setup types (figure 4):
- **Analyze with Tutorials** (Typical)
 - **Analyze Only** (Minimum)
 - **Customized Analyze** (Custom)

If you plan to use the *Analyze Developers Add-On*, choose the **Customized Analyze (Custom)** setup type and click **Next**. The screen that follows will allow you to deselect any components you do NOT wish to install before proceeding with installation.

note The *Analyze Developers Add-On* requires a special license file. To learn more about this Add-On, and to find out if your license file provides access, please refer to the *Analyze Developers Add-On* section at the end of this document.

For most users, it is recommended to choose the **Analyze with Tutorials (Typical)** setup type.

8. Once you have selected your setup type, click **Next**.
9. **Ready to Install the Program:** Verify that the 'Current Settings' are accurate, then click **Install**.
10. Analyze 12.0 will now be installed in the **C:\BIR** directory. During installation, an **Analyze 12.0** shortcut icon will be placed on your Desktop. A **Mayo Clinic Analyze** folder will also be added to the Windows **Start > All Programs** menu.
11. When the InstallShield Wizard notifies you that installation is complete, click **Finish** (figure 5). Note that if the **Start License Tool** option is selected, the BIRlic Tool will automatically open. To request a license, please follow the instructions in the next section of this document *Analyze Licenses*.

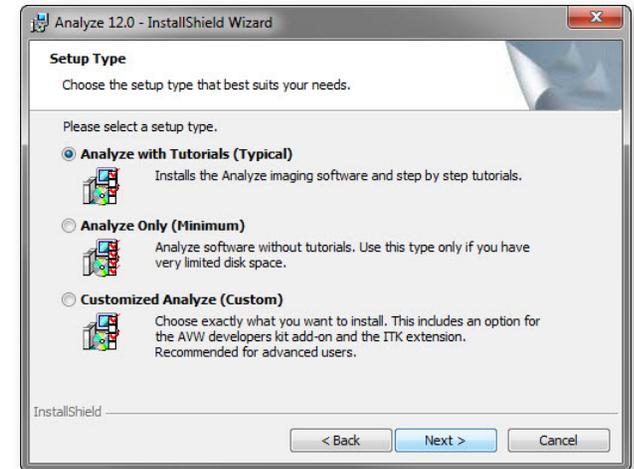


Figure 4

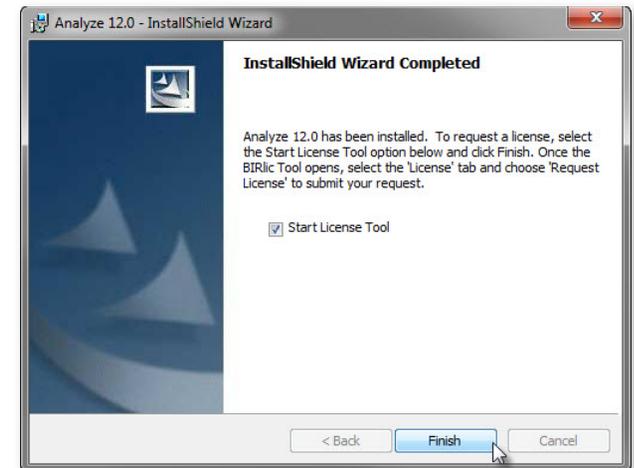


Figure 5

II. Analyze Licenses

BIRlic License Management and License Types

Analyze 12.0 uses the **BIRlic license management** system for Analyze validation and runtime license administration. The BIRlic license management software can be found in the **C:\BIR\BIRlic-12.0** directory. BIRlic administers two types of Analyze licenses – node-locked and counted floating licenses.

A **node-locked license** will allow Analyze 12.0 to be run on one system only. With a node-locked license, all license file administration is handled local to the specific system. Additionally, on Windows systems the BIRlic license manager does not need to be configured for a node-locked license.

note Windows users can also purchase a dongle as an add-on to their node-locked license. A dongle is a USB device that allows you to easily move the license between different Windows computers.

A **floating license** allows one system to act as a license server, “floating” the license across a network to a client system. Any client system with access to the license server can check out a license if one is available. Note – if only one floating license is purchased, two or more client system cannot run Analyze simultaneously.

For information on license pricing and options, please contact sales@analyzedirect.com.

Analyze License Files

Your license will be stored in the **C:/BIR/BIRlic-12.0/Licenses** directory. During Analyze 12.0 installation, a default AnalyzeDirect.lic license file is placed in this Licenses directory.

The default AnalyzeDirect.lic license file MUST BE REPLACED by a system-specific license file, otherwise Analyze 12.0 will not run!

To request a license, please refer to the instructions on the following page under “**Requesting a License**”. Once your license has been generated, you will be notified by AnalyzeDirect via e-mail. You can then retrieve and install your license file using the steps provided for your license type under the “**III. Analyze License File Installation**” on page 8. If you are unsure what type of license you have, or encounter any difficulties with license file installation, please contact support@analyzedirect.com.

note All 30-day evaluation license files are node-locked licenses.

II. Analyze Licenses

Requesting a License File

A system-specific AnalyzeDirect.lic license file must be installed before Analyze 12.0 will run. You can obtain this license file from AnalyzeDirect.

In order to generate your license, AnalyzeDirect must receive two pieces of information specific to the computer: 1) the Host Name and 2) the Host ID. The instructions below will explain how to send this information to AnalyzeDirect.

1. Open the **BIRlic Tool** (Start > All Programs > Mayo Clinic Analyze > BIRlic Tool).
2. The **BIRlic Tool** will open to the System Info tab (figure 6).
3. Click on the **License** tab (figure 7).
4. Click the **Request License** button.
5. Your **Host Name** and **ID** will be automatically populated for you. To submit a license request, you must enter your **Company Name**, **Email** and **Phone**. The Comments field is optional.
6. Click the **Send Request** button.
7. A dialog will appear once your license request is submitted (figure 8). If you are unable to submit a request, please send the information in the license request form, along with your system type to validate@analyzedirect.com.
8. Once AnalyzeDirect receives your system information, a license will be generated, and you will be notified via e-mail. To retrieve and install your license, please refer to the instructions for your license type (node-locked or floating) “**Analyze License Installation**” on page 8.

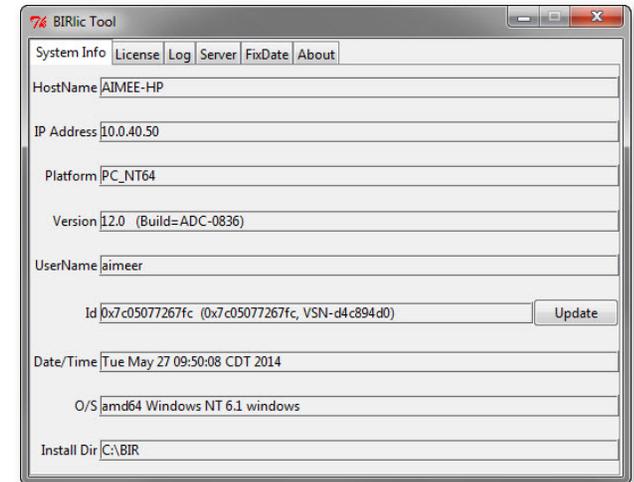


Figure 6

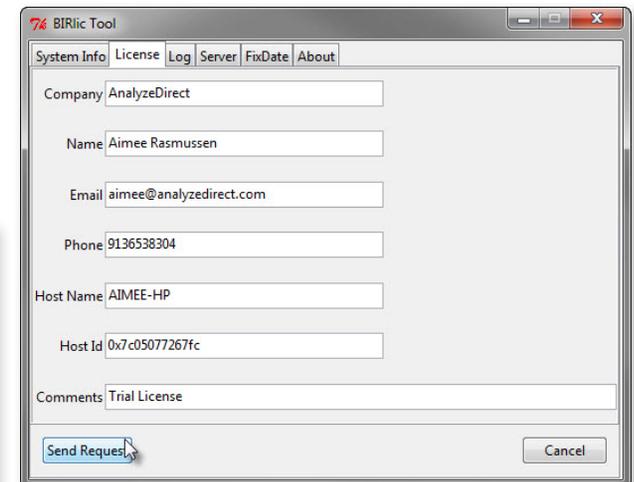


Figure 7

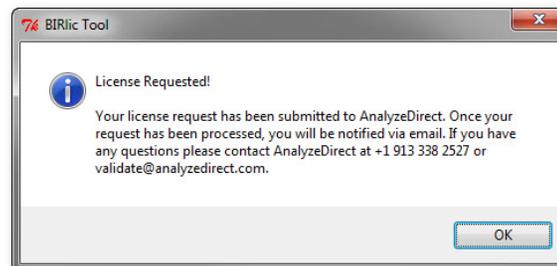


Figure 8

III. Analyze License File Installation

Installing a Node-Locked License

Once you have been notified by AnalyzeDirect that your AnalyzeDirect.lic license file has been generated:

1. Open the **BIRlic Tool** (**Start > All Programs > Mayo Clinic Analyze > BIRlic Tool**).
2. Click on the **License** tab.
3. Click the **Auto Retrieve** button. A dialog will be returned telling you that your license file has been retrieved successfully (figure 9).

note If license retrieval is unsuccessful, please contact AnalyzeDirect at validate@analyzedirect.com or +1 913-338-2527

4. No further configuration is needed for a node-locked license on a Windows system. To run Analyze 12.0, please refer to “**Running Analyze 12.0**”.

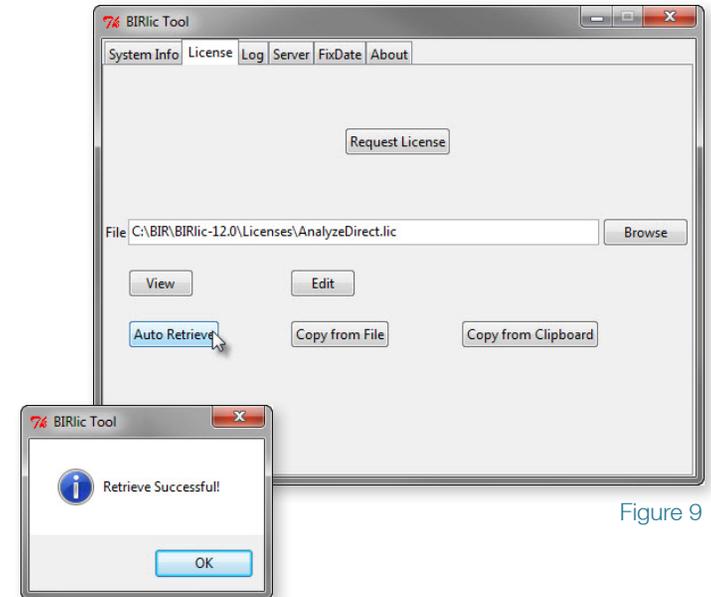


Figure 9

III. Analyze License File Installation

Installing a Floating License SERVER

Once you have been notified by AnalyzeDirect that your AnalyzeDirect.lic license file has been generated:

1. Open the **BIRlic Tool** (**Start > All Programs > Mayo Clinic Analyze > BIRlic Tool**).
2. Click on the **License** tab.
3. Click the **Auto Retrieve** button. A dialog will be returned telling you that your license file has been retrieved successfully (figure 10). To complete the license install process, start the BIRlic license server as described in the steps that follow.

note If license retrieval is unsuccessful, please contact AnalyzeDirect at validate@analyzedirect.com or +1 913-338-2527.

4. Select the **Server** tab.
5. Click **Install Service** [A] to install the BIRlic license server as a Windows Service that will automatically start the license server at system boot. Click **Yes** when prompted.
6. Once the Service has been installed, click **Start Service** [B] to start the license server service. Click **Yes** to start the 'BIRlic Server as a Service' on this computer.
7. Once the Service has been started. The BIRlic license server configuration is now complete. To configure client systems, please continue to the next page.

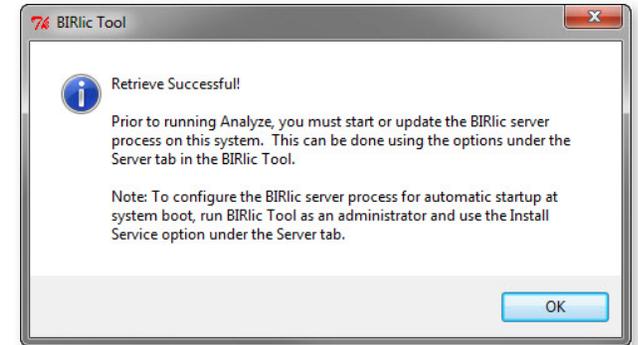


Figure 10

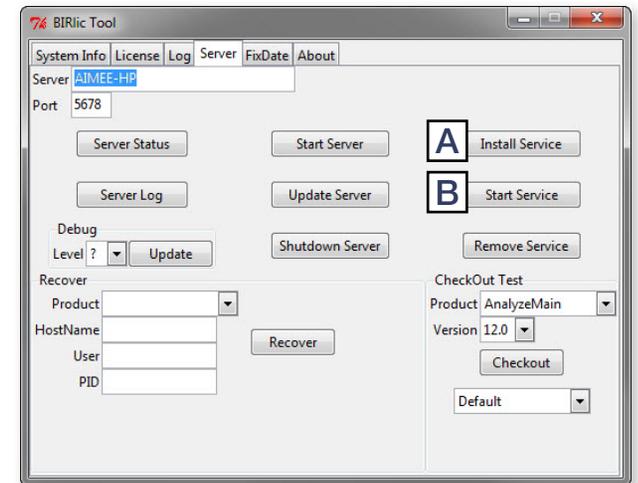


Figure 11

III. Analyze License File Installation

Installing a Floating License CLIENT

1. Open the **BIRlic Tool** (Start > All Programs > Mayo Clinic Analyze > BIRlic Tool).
2. Click on the **License** tab.
3. Click the **Auto Retrieve** button (figure 12).

note If license retrieval is unsuccessful, please contact AnalyzeDirect at validate@analyzedirect.com or +1 913-338-2527.

4. A dialog will be returned telling you that the server does not match the server listed, click **Yes** to confirm that it is a floating license client (figure 13).
5. In the window returned, enter the **Host ID** from the floating license server system (figure 14).
6. No additional configuration is necessary on client systems. You should not start the BIRlic license server on the client systems. For more information on running Analyze 12.0, please refer to “**Running Analyze 12.0**”.

If at any point you encounter difficulties getting your floating license server or client systems up and running, please contact support@analyzedirect.com.

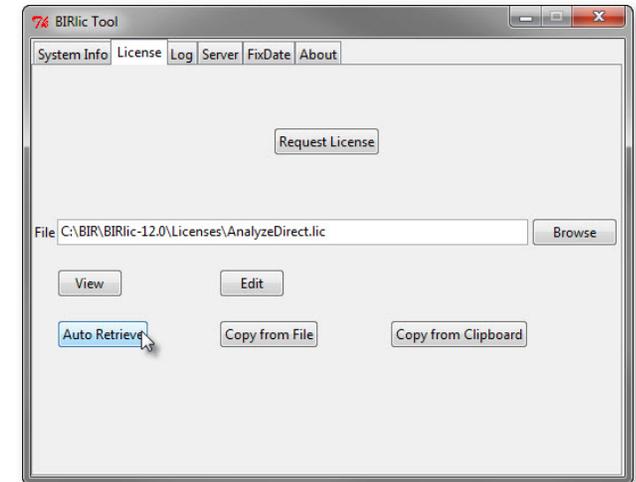


Figure 12

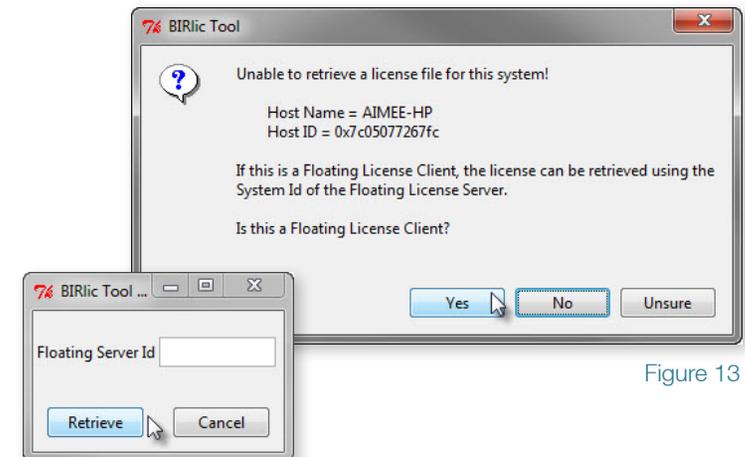


Figure 13

Figure 14

IV. Dongle Installation

The following instructions are for users who purchased a dongle for their Windows node-locked license.

Please DO NOT attach the dongle to the system until directed to do so in the instructions below.

1. Install Analyze 12.0 according to “[Installing Analyze 12.0 on Windows Systems](#)”.
2. Ensure that your dongle is **NOT** attached to your system. The dongle driver must be installed before attaching the dongle to your computer.
3. The dongle driver installation program is shipped with Analyze 12.0. To find the program, navigate to the following directory based on your version of Windows:
 - **Windows (32-bit)** – C:\BIR\BIRlic-12.0\PC_NT\USB_Dongle
 - **Windows (64-bit)** – C:\BIR\BIRlic-12.0\PC_NT64\USB_Dongle
4. Double-click on the **Install.exe** found in your respective directory to begin the dongle driver installation.
5. In the Security Key Installation window that opens, check the **USB Dongle** option.
6. A dialog box will be returned asking that you do NOT attach the dongle until the installation is completed. Click **OK** to dismiss this window (figure 15).
7. Select **Standalone** (if not already selected) and then click **Begin Install** (figure 16).
8. Once the installation process is complete, a notification will be returned, click **Close** to dismiss the window.
9. Attach the dongle to your computer’s USB port. In Windows XP, the Add Hardware Wizard will automatically open; follow the instructions in the Wizard to complete driver installation. In Windows 7 and Vista, the Add Hardware Wizard will run silently in the background - no further steps are required.
10. Next, retrieve the **AnalyzeDirect.lic** license file via the **BIRlic Tool** (**Start > All Programs > Mayo Clinic Analyze > BIRlic Tool**).
11. Click on the **License** tab.
12. Click the **Auto Retrieve** button. A dialog will be returned telling you that your license file has been retrieved successfully.
13. Analyze 12.0 will now run when the dongle is attached to your computer. Repeat these installation steps on every computer on which you plan to run Analyze 12.0 using the dongle-based license.

If you attached your dongle before installing the driver, please remove it and follow steps 3 and 4 to open the dongle driver installation program. However, instead of proceeding with step 5, select the ‘Uninstall’ option and click ‘Begin Uninstall’. Once uninstall is complete, repeat the steps above.

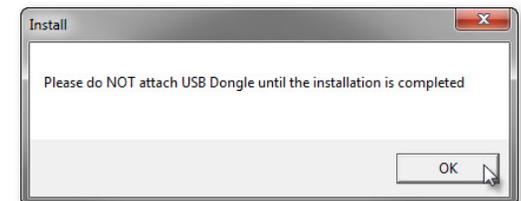


Figure 15

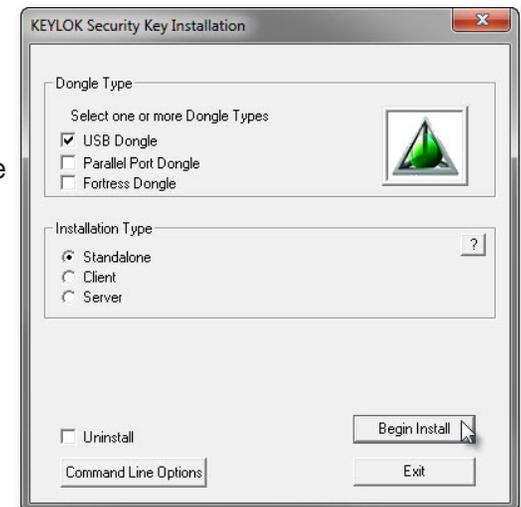


Figure 16

V. Running Analyze 12.0

Running the Analyze Program

Once you have installed Analyze 12.0 and your AnalyzeDirect.lic license, you are ready to run the program.

1. To open Analyze 12.0, select **Start > All Programs > Mayo Clinic Analyze > Analyze 12.0** or click on the Analyze 12.0 Desktop shortcut icon.
2. The first time Analyze 12.0 opens, the **End-User License Agreement for AnalyzeDirect Software** will appear. Please read the agreement carefully and then click **I Accept** or **Exit**. Note, if you click 'Exit' Analyze 12.0 will not open (figure 17).
3. Once you have accepted the End-User License Agreement, Analyze 12.0 will open.

note If Analyze 12.0 fails to open, please contact support@analyzedirect.com.

Analyze Patch Updates

As with most software products, the process of bug fixing and minor maintenance between versions is an ongoing process. Analyze has all such fixes available in the form of a patch. Patches can be automatically downloaded and installed by selecting the **Help > Analyze Update** option from the main Analyze window.

If it is detected that a new patch is available when you select **Help > Analyze Update**, a window will appear (figure 18), asking if you wish to download the update. Click **Yes** to download and install the patch update.

It is recommended that you check for new patch updates the first time you run Analyze 12.0 and then once each month.

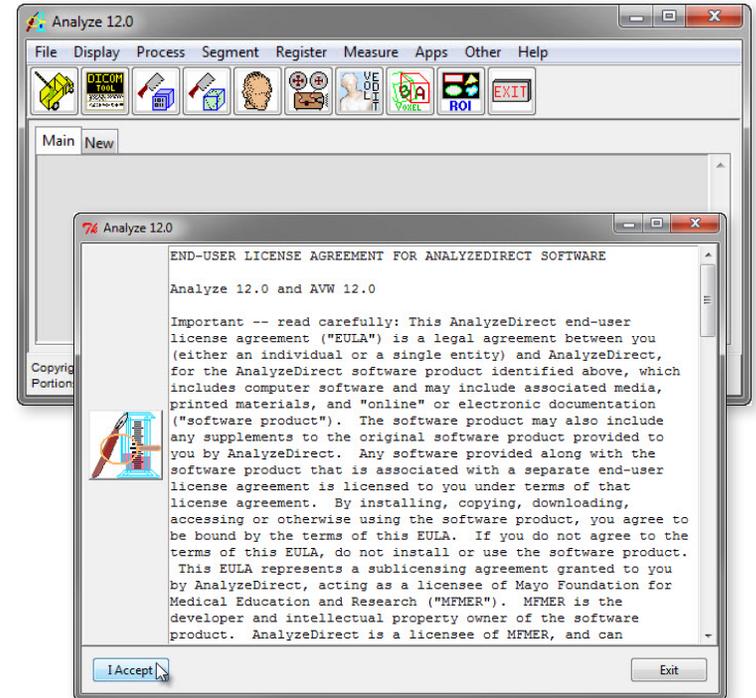


Figure 17

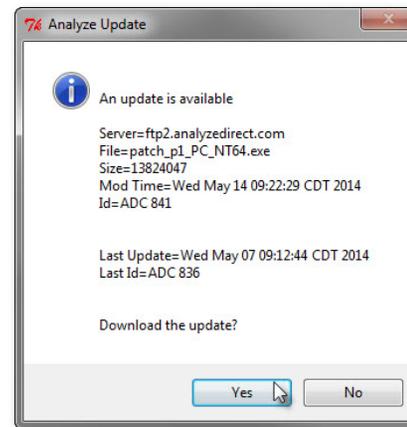


Figure 18

VI. Analyze Basics

Analyze 12.0 Resources

There are several excellent resources available to help you get started with Analyze 12.0.

To quickly learn the basics of Analyze, we recommend that you work through the Analyze 12.0 Training Guide – found on the silver Resources CD included with your software package. The Training Guide contains a series of short exercises covering the most commonly used Analyze features and functions.

Analyze 12.0 Tutorial Data

The tutorial data used in the Analyze 12.0 Training Guide exercises and the Analyze Tutorials can be found on the silver Resources CD or [downloaded from our website](#). To install the tutorial data from the Resources CD, do the following:

1. Insert the silver **Resources CD** into your computer.
2. Open **Analyze 12.0**. From the main Analyze window select **Help > Analyze Tutorials**.

Analyze 12.0 Image File Format Support

Please note: Analyze does not automatically configure all supported file formats. This keeps module startup time to a minimum, loading only those image formats that you need to use with Analyze for your purposes. To configure and load all supported file formats in Analyze, use the Import/Export module's External Libraries tool. Instructions on how to use the External Libraries tool can be found in the Training Guide, **Exercise 3: Switching on Support for Additional Formats**.

The Analyze Tutorials (optional component during installation) and the Analyze User's Guide, both available from the Help menu in the main Analyze window, are other excellent resources, providing detailed information about the Analyze modules.

Analyze Demos (help movies) can be also be selected from the Help menu. This option will direct you to a web page with a list of specific Help Movies.

3. In the Tutorials window, click the **Install Tutorial Data** button.
4. In the window returned, specify the file path to the **TutorialData** folder on the Resources CD (e.g. D:\TutorialData).
5. Click **Install**. The tutorial data will be copied into the **C:\BIR\images\TutorialData** directory.

VII. Analyze Developers Add-On

The **Analyze Developers Add-On** allows software developers to extend the capabilities of Analyze by developing their own macros and modules, using the **AVW** (A Visualization Workshop) image function library upon which Analyze is built. The library is robust and includes over 600 imaging functions that can be called at a C-language level.

Note – the Analyze Developers Add-On assumes you are familiar with programming.

To get access to AVW development capabilities, you must select the ‘**Custom**’ install during Analyze 12.0 installation. The Developers Add-On also requires a special **AnalyzeDirect.lic** license file that will allow access to the AVW development capabilities. All 30-day evaluation license files provide access to the Developers Add-On.

If you already own an Analyze license and would like to evaluate the Developers Add-On, please contact sales@analyzedirect.com.

During the ‘Custom’ install of Analyze 12.0, the AVW Programmers Guide, AVW Reference Manual, and AVW Quick Reference Guide should have been installed in the **C:/BIR/AVW-12.0/Manuals** directory. You can also find these documents under **Start > All Programs > Mayo Clinic Analyze > AVW Developers Kit**.

The best place to start practicing with the AVW functions is with the examples provided in the **C:/BIR/AVW-12.0/Extras** directory. This directory contains a number of example source files, both in C and in Tcl/Tk, for common Analyze imaging tasks (like rendering, segmentation, etc.). Note that while Analyze uses Tcl/Tk, the AVW library is interface-independent, allowing developers to work in almost any development environment. If you do want to know more about Tcl programming, we recommend starting with the ‘Bible’ of Tcl/Tk - “Practical Programming in Tcl and Tk” by Brent Welch. This comes with a CD that you can load on to your computer, which includes a full Tcl/Tk implementation and many examples.

The .tcl scripts contained in the **C:/BIR/AVW-12.0/Extras** subdirectories are full source code scripts that can be run, however, you will need to setup the Tcl/Tk environment such that these scripts can find the Tcl/Tk files needed to execute. The `develop_env.bat` script included in the **C:/BIR/AVW-12.0** directory provides an example of a script that can be used to set these development environment variables.