

Analyze 11.0

Installation Instructions: Windows

Installation Instructions Windows

Welcome to **Analyze 11.0**, 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.

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I. Installing Analyze 11.0 on Windows Systems

System Requirements

Analyze 11.0 requires the following minimum PC configuration:

- Windows 7, XP or Vista (32- or 64-bit)
- Intel Core or comparable processor
- Network card
- CD-ROM drive
- 2 GB 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 256 MB data set requires at least 512 MB of RAM).

Uninstalling Previous Versions of Analyze

Before installing Analyze 11.0, it is recommended to uninstall any previous Analyze versions resident on your system. Otherwise, make sure to choose a new directory for Analyze 11.0 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.

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 BIR10 before proceeding. During Analyze 11.0 installation, set the 'Destination Folder' to this new C:\BIR10 folder by clicking the 'Change' button.

I. Installing Analyze 11.0 on Windows Systems

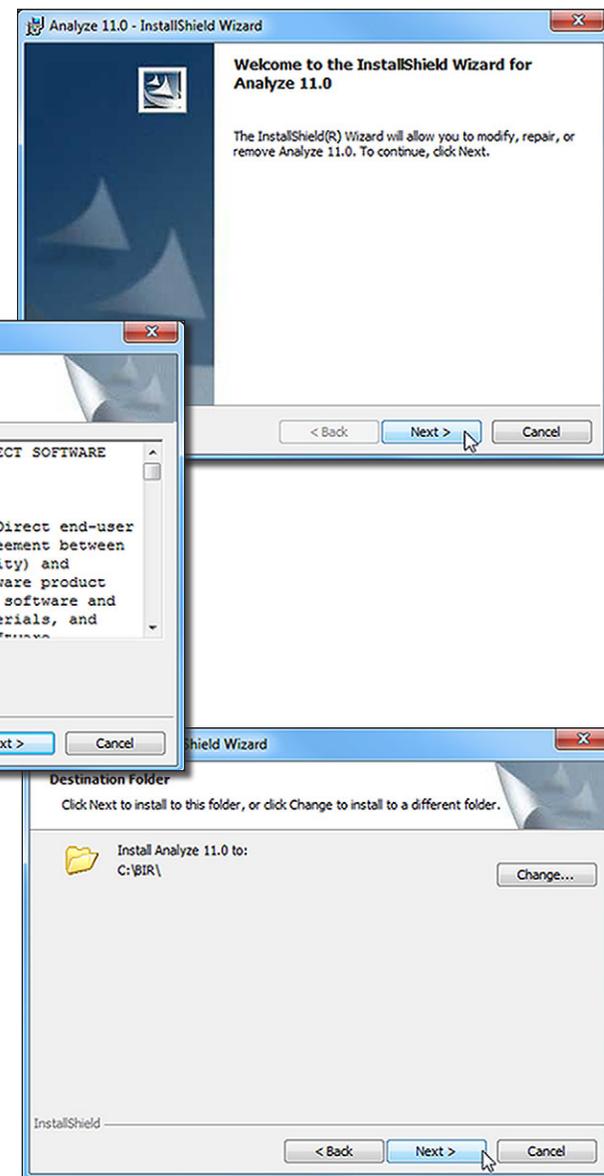
Analyze 11.0 Installation

The InstallShield Wizard program will lead you through the complete Analyze 11.0 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 11.0 Installation CD** into your computer.
3. Once the Installation CD is inserted, the **InstallShield Wizard for Analyze 11.0** should automatically open.

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_11.0' and select 'Auto Play'.

4. The InstallShield Wizard opens to a 'Welcome' screen. Click **Next** to begin the Analyze 11.0 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**.
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**.



I. Installing Analyze 11.0 on Windows Systems

7. **Setup Type:** You may choose from the following setup types:

	Required Disk Space
Analyze with Tutorials (Typical) Installs Analyze 11.0, the Analyze Tutorials, and ITK Extension*	173 MB
Analyze Only (Minimum) Only installs Analyze 11.0	125 MB
Customized Analyze (Custom) Installs Analyze 11.0 and permits selection of six optional components on the next screen:	
- AVW Developers Kit	60 MB
- AVW Examples in C and TCL	536 KB
- Data for AVW Examples	16 MB
- Analyze Tutorials	41 MB
- ITK Runtime Extension	6.7 MB
- ITK Developers Kit	944 KB

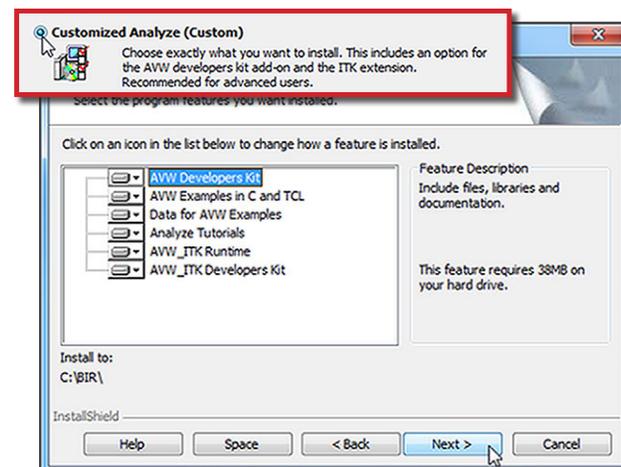
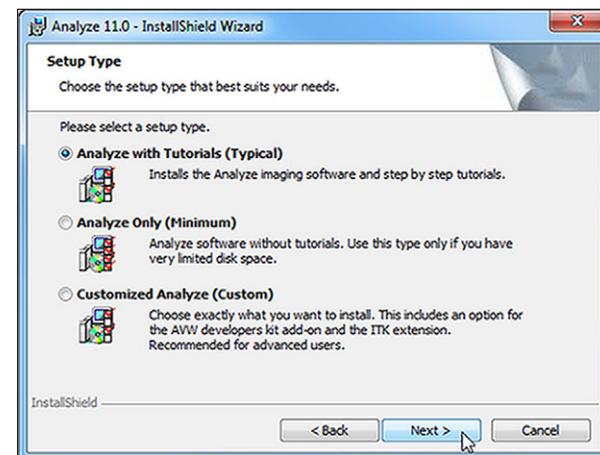
* The ITK Extension component installs additional filtering, segmentation, and registration modules in Analyze that have been developed with functions from the ITK Library.

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.

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.

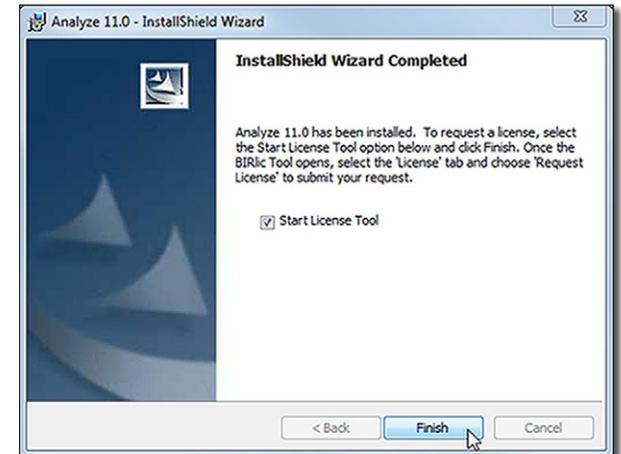
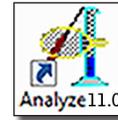
For most users, it is recommended to choose the **Analyze with Tutorials (Typical)** setup type.

8. Once you have selected your setup type, click **Next**.



I. Installing Analyze 11.0 on Windows Systems

9. **Ready to Install the Program:** Verify that the 'Current Settings' are accurate, then click **Install**.
10. Analyze 11.0 will now be installed in the **C:\BIR** directory. During installation, an **Analyze 11.0** 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**. 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**.



II. Analyze Licenses

BIRlic License Management and Analyze Licenses

Analyze 11.0 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-11.0** directory. BIRlic administers two types of Analyze licenses – node-locked and counted floating licenses.

A **node-locked license** will allow Analyze 11.0 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.

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-11.0\Licenses** directory in a file named AnalyzeDirect.lic. During Analyze 11.0 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 11.0 will not run!

Once your AnalyzeDirect.lic license file has been generated, you will be notified by AnalyzeDirect via e-mail. To retrieve your license, please refer to the **Analyze License Installation** section and follow the instructions for your license type. 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 license must be installed before Analyze 11.0 will run. You can obtain this license file from AnalyzeDirect.

In order to generate your license file, 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 1).
3. Click on the **License** tab (figure 2).
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 3). 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) found under the section entitled “**Analyze License Installation**” on page 9.

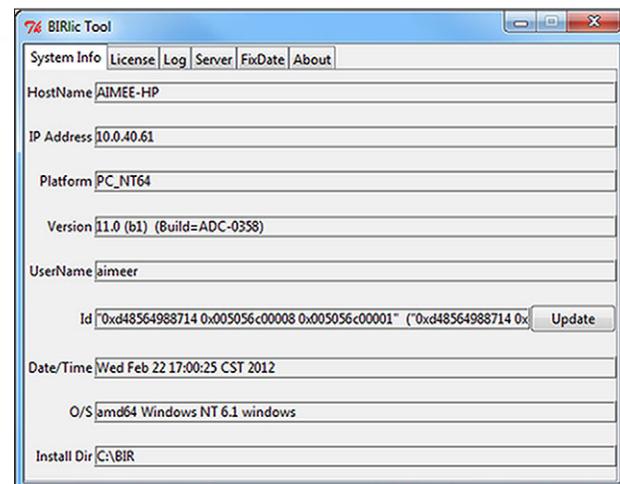


Figure 1

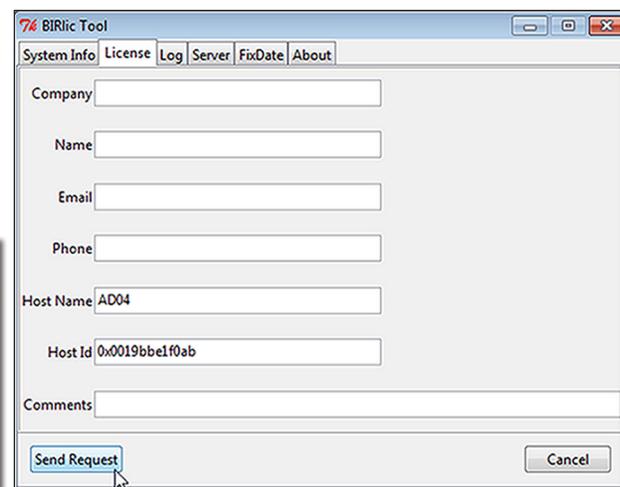


Figure 2

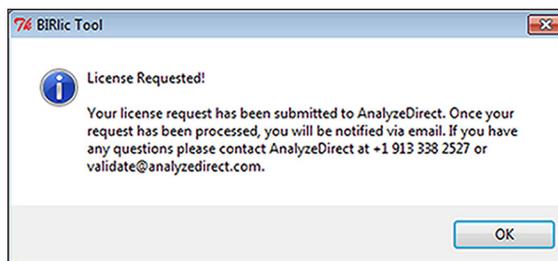


Figure 3

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 4).

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 11.0, please refer to the section entitled **Running Analyze 11.0 on page 12**.

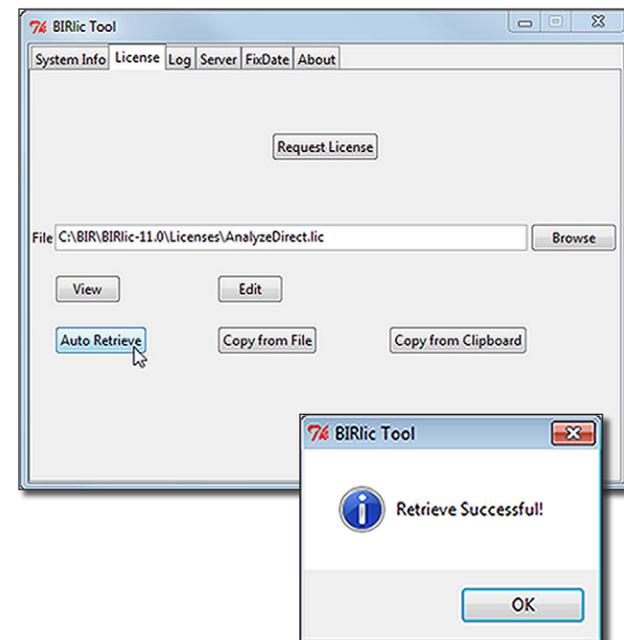


Figure 4

Installing a Floating License

Configuring 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 5). To complete the license install process, start the

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

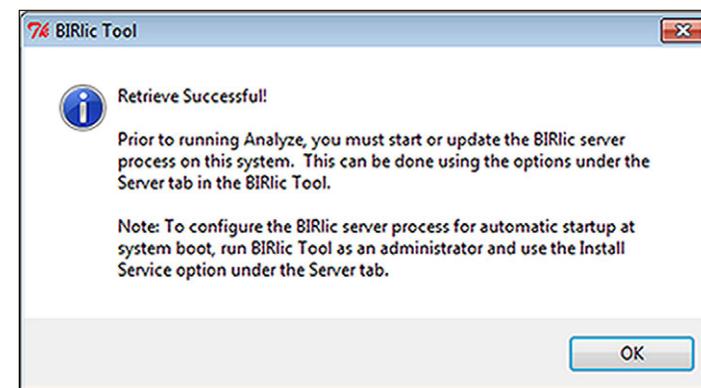


Figure 5

III. Analyze License File Installation

BIRlic license server as described in the steps that follow.

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 follow the instructions below.

Installing a Floating License

Configuring 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.
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 7).
5. In the window returned, enter the Host ID from the floating license server system (figure 8).
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 11.0, please refer to the section entitled "**Running Analyze 11.0**" on page 12.

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

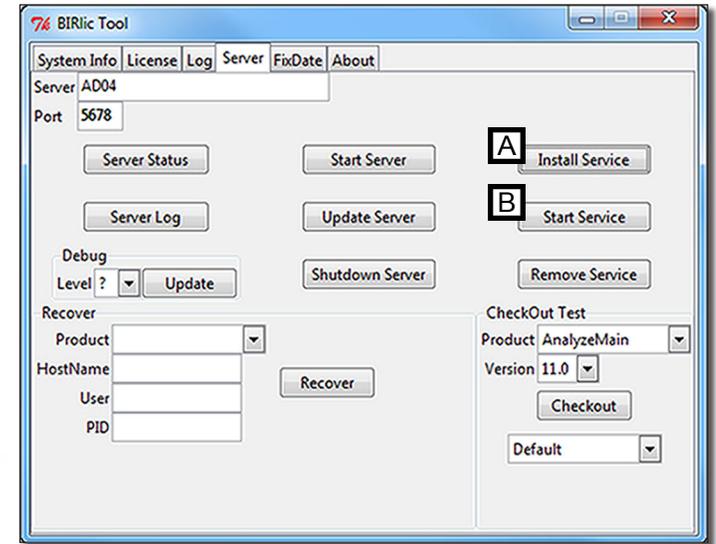


Figure 6

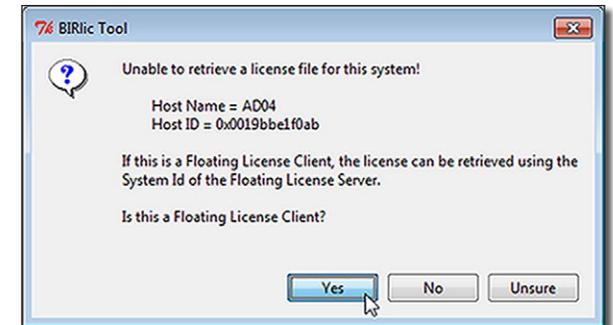


Figure 7

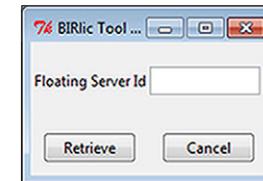


Figure 8

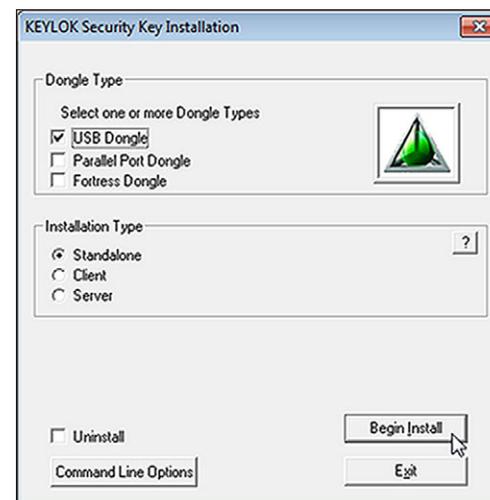
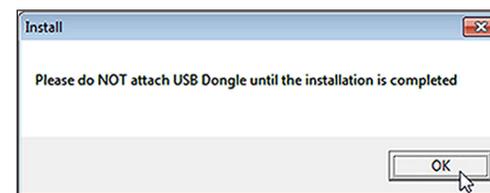
IV. Dongle Installation

The following instructions are for users who have 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 11.0 according to the instructions found in the section entitled “**Installing Analyze 11.0 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 11.0. To find the program, navigate to the following directory based on your version of Windows:
 - **Windows (32-bit)** – C:\BIR\BIRlic-11.0\PC_NT\USB_Dongle
 - **Windows (64-bit)** – C:\BIR\BIRlic-11.0\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.
7. Select **Standalone** (if not already selected) and then click **Begin Install**.
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 11.0 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 11.0 using the dongle-based license.

If you did attach 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.



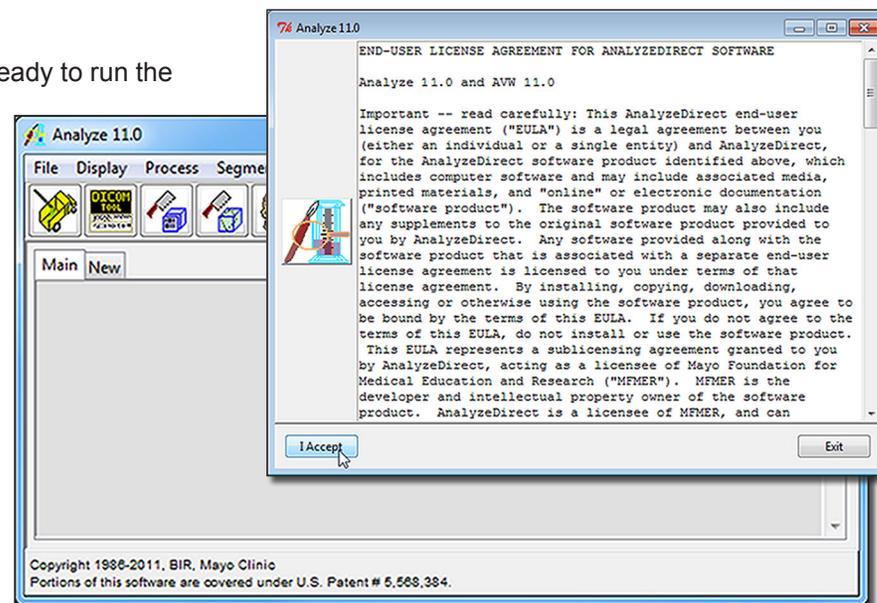
V. Running Analyze 11.0

Running the Analyze Program

Once you have installed Analyze 11.0 and your AnalyzeDirect.lic license, you are ready to run the program.

1. To open Analyze 11.0, select **Start > All Programs > Mayo Clinic Analyze > Analyze 11.0** or click on the Analyze 11.0 Desktop shortcut icon.
2. The first time Analyze 11.0 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 11.0 will not open.
3. Once you have accepted the End-User License Agreement, Analyze 11.0 will open.

If Analyze 11.0 fails to open, please contact support@analyzedirect.com.

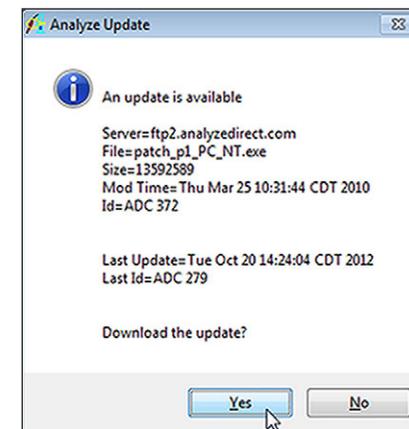


Analyze Patch Updates

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, 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 11.0 and then once each month.



VI. Analyze Basics

Analyze 11.0 Resources

There are several excellent resources available to help you get started with Analyze 11.0.

To quickly learn the basics of Analyze, we recommend that you work through the Analyze 11.0 Essential Training Guide – found on the silver Resources CD included with your software package. The Essential Training Guide contains a series of short exercises covering the most commonly used Analyze features and functions.

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 viewed by selecting Help > Analyze Demos. You will be directed to a link with a list of specific Help Movies.

Analyze 11.0 Tutorial Data

The tutorial data used in the Analyze 11.0 Essential Training Guide exercises and the Analyze Tutorials can be found on the silver Resources CD. To install the tutorial data from the Resources CD, do the following:

1. Insert the silver **Resources CD** into your computer.
2. Open **Analyze 11.0**. From the main Analyze window select Help > Analyze Tutorials.
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.

Analyze 11.0 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 Essential Training Guide,

Exercise 3: Switching on Support for Additional Formats.

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 11.0 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 11.0, the AVW Programmers Guide, AVW Reference Manual, and AVW Quick Reference Guide should have been installed in the **C:\BIR\AVW-11.0\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-11.0\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-11.0\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-11.0** directory provides an example of a script that can be used to set these development environment variables.