

Network Administrator's Guide and Getting Started with Autodesk Ecotect Analysis

This document describes how to install and activate Autodesk® Ecotect® Analysis 2011 software on your computer using a network license. For information about installing stand-alone versions of the program, see the *Stand-Alone Installation Guide*. This guide also includes some basic introduction to the user interface and the operation of this tool.

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Introduction

Autodesk® Ecotect® Analysis 2011 software is a comprehensive concept-to-detail sustainable design analysis tool, providing a wide range of simulation and analysis functionality on a single platform. Powerful web-based whole-building energy, water, and carbon analysis capabilities¹ converge with desktop tools for visualizing and simulating performance of the building model within the context of its environment.

Use the desktop tools and web-service functionality together to help create more sustainable designs.

System Requirements

Autodesk Ecotect Analysis 2011 is a Microsoft Windows® application. While it will run on quite modest hardware, some of its analysis functions can be processor-intensive, and many of its advanced graphical display abilities are best viewed using a hardware-accelerated graphics card. Before you begin installing the program on a network, make sure that your servers and client workstations meet the following minimum recommended hardware and software requirements for a deployment:

Hardware/Software of server	Requirement	Notes
Operating system	Windows® Vista® 32-bit	The Network License Manager supports Ethernet network configurations only.
	Windows® XP® 32-bit	
	Windows® 2003 Server Edition	
Computer/processor	Intel® Pentium® IV, 800 MHz 32-bit (x86) or 64-bit (x64) processor (or faster)	
Network interface card	Compatible with existing Ethernet network infrastructure	The Network License Manager supports multiple network interface cards.
Communication protocol	TCP/IP	The Network License Manager uses TCP packet types.

Minimum Software System Requirements of workstation

- Windows® 95 operating system (or later)
- Windows NT® 3.5x operating system
- Windows® XP operating system
- Windows® Vista operating system
- Windows® 7 operating system

Note: Windows® XP 64, Windows® Vista 64 and Windows® 7 are supported in 32-bit compatibility mode only.

¹ Customers who purchase a Subscription to their Autodesk Ecotect Analysis license can access the Autodesk® Green Building Studio® web-based service for the duration of their Subscription term in order to conduct whole building energy, water, and carbon analysis.

Minimum Hardware System Requirements of workstation

- Intel® Pentium® II processor or equivalent, 300 MHz or faster
- 128 MB RAM or higher
- 85 MB free hard disk space or higher
- OpenGL® hardware accelerated video card
- 1,024 x 768 high-color (16-bit) screen resolution or higher

The location where you set up the license manager should be a shared location so that users can access the server across the network.

Getting Started with Network Administration

Network administration requires careful planning and execution. This section gives you information about how to set up a license server.

Before you begin installing the program on a network, make sure that your servers and client workstations meet the minimum recommended hardware and software requirements for a deployment.

The location where you set up the license manager should be a shared location so that users can access the server across the network.

Choose an Installation Type

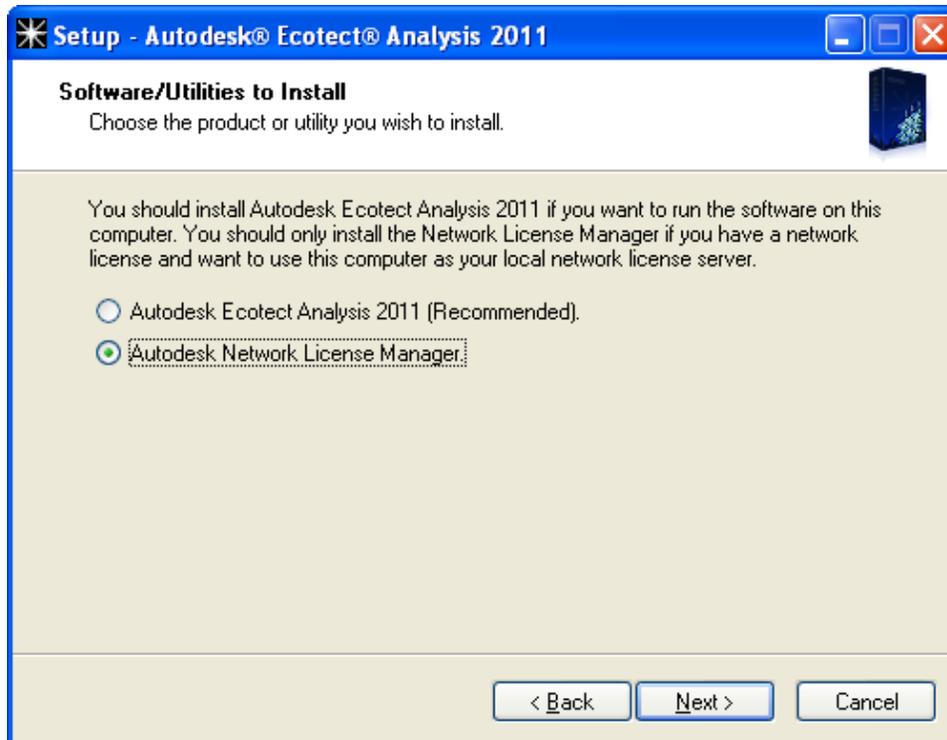
When you set up your deployment, you need to choose the type of installation to deploy. Ecotect Analysis can be installed as one of the following:

Network License installation With this type of installation, you install the program to workstations with the files and registry entries that allow the program to communicate with the Network License Manager. You also define the configuration of the Network License Manager so that the licenses can be accessed. Workstations running the program based on a network installation do not require individual activation. Licensing of this program is managed by at least one license server.

The main advantage is that you can install Ecotect Analysis on more systems than the number of licenses you have purchased (for example, purchasing 25 licenses but installing on 40 workstations). At any one time, Ecotect Analysis runs on the maximum number of systems for which you have licenses. This means you get a true floating license.

Stand-Alone installation Choose this type of installation for stand-alone installations where a single serial number and product key are used for a single seat. You do not use the Network License Manager to manage product licensing, but installation, registration, and activation occurs on each workstation.

'The Software/Utilities to Install' screen of the Setup Wizard will offer the following choices:



Chose 'Autodesk Ecotect Analysis 2011 (Recommended)' option if you would like to install a Stand-Alone version of the product. To install a Network version, opt to setup the 'Autodesk Network License Manager'.

If you choose Stand-Alone installation, you should refer to the steps outlined in the *Stand-Alone Installation Guide* for Ecotect Analysis for the rest of the installation.

Choose a License Server Model

If you chose the Network License option, you need to decide which license server model to use to distribute the product licenses.

For the network installation, use one of the following license server models:

Single license server model. The Network License Manager is installed on a single server, so license management and activity is restricted to this server. A single license file represents the total number of licenses available on the server.

Distributed license server model. Licenses are distributed across more than one server. A unique license file is required for each server. To create a distributed license server, you must run the Network License Manager on each server that is part of the distributed server pool.

Redundant license server model. You use three servers to authenticate a single license file. One server acts as the master, while the other two provide backup if the master server fails. With this configuration, licenses continue to be monitored and issued as long as at least two servers are still functional. The license file on all three servers is the same. You must install the Network License Manager on each server.

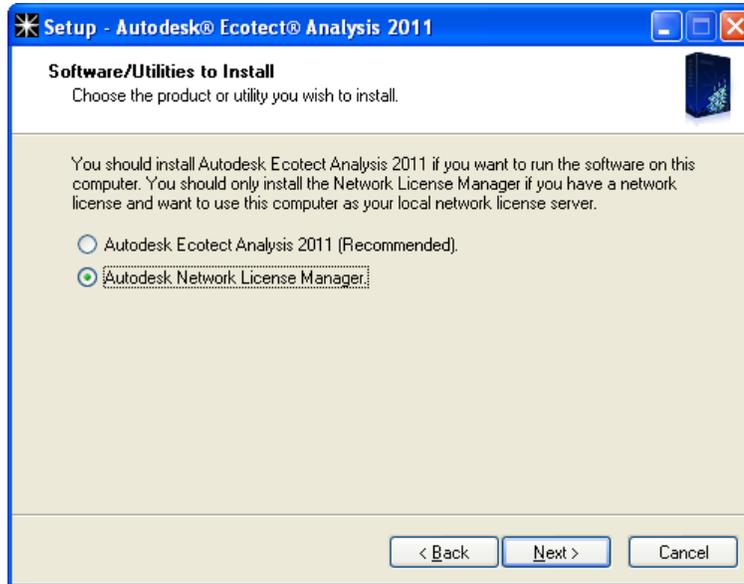
Setting Up Network Tools and Your License Server

If you are planning to have users run the program using network licenses, you need to use the Network License Manager. The Network License Manager helps you configure and manage license servers.

Installing the Network License Manager

The Network License Manager is used to configure and manage the license servers.

1. In the Autodesk Ecotect Analysis wizard, click Autodesk Network License Manager. Click Next.

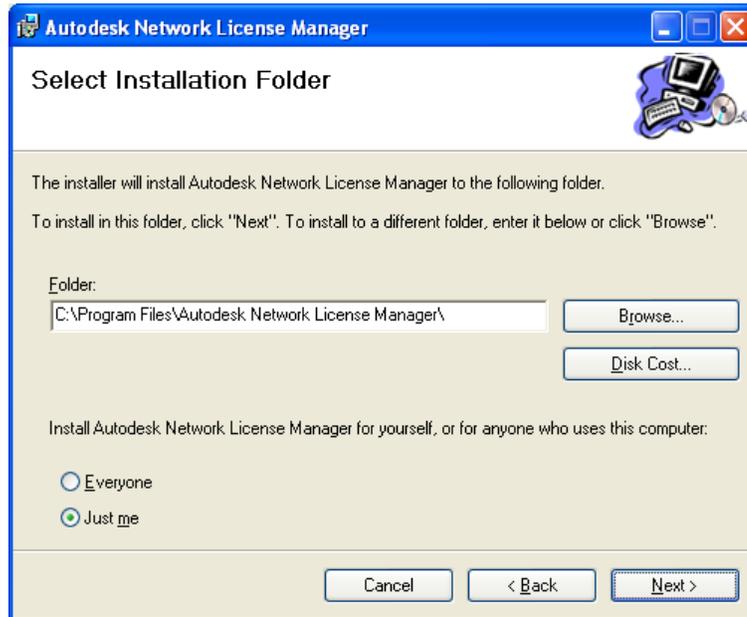


2. On the Welcome to the Autodesk Network License Manager Setup Wizard, click Next > to begin installation.

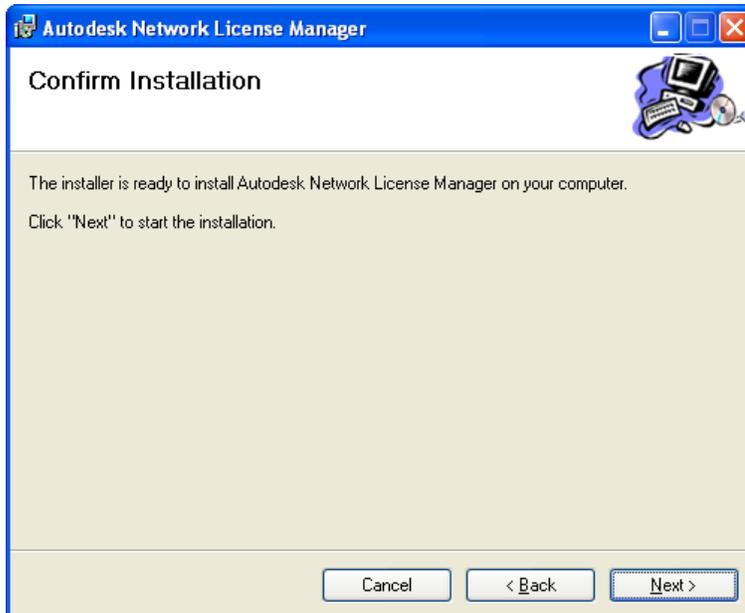


3. On the Select the Installation Folder page, accept the default installation path (C:\Program Files\Autodesk Network License Manager\), or Browse to specify a different path. If you enter a path that does not exist, a new folder is created using the name and location you provide.

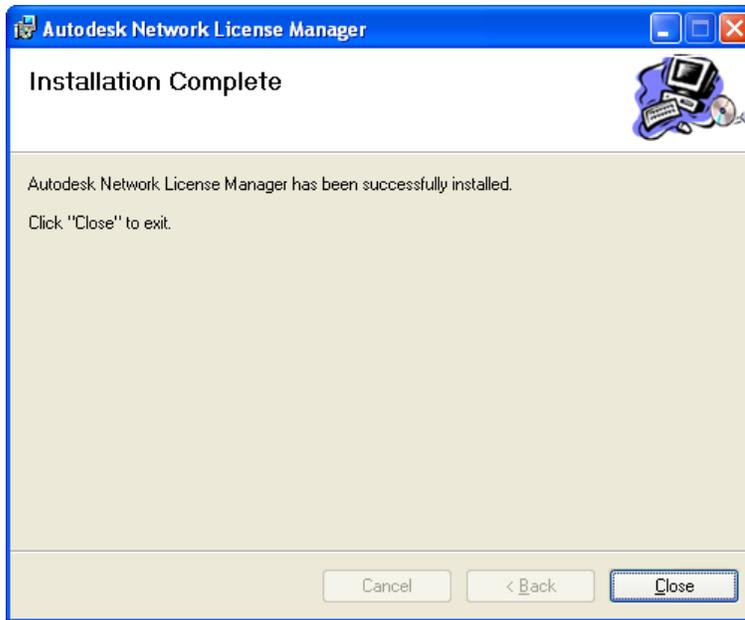
Select who will access the Network License Manager, yourself, or for anyone who uses the computer. Click Next.



4. On the Confirm Installation page, click Next to complete installation.



5. When the Installation Complete page displays, click Close.



WARNING Do not install the Network License Manager on a remote drive. When you install the Network License Manager files, you must provide a path to a local drive. You must specify the drive letter; the universal naming convention (UNC) is not supported.

Registering and receiving network license file

To register and receive your network license file, go to <http://www.autodesk.com/register> or contact your Autodesk Business Center.

Configure Your License Server

You configure a license server so that you can manage Ecotect Analysis licenses you received when you registered at <http://www.autodesk.com/register> or through your Autodesk Business Center. Configure the license server with the LMTOOLS Utility that becomes available on installing the Network License Manager 

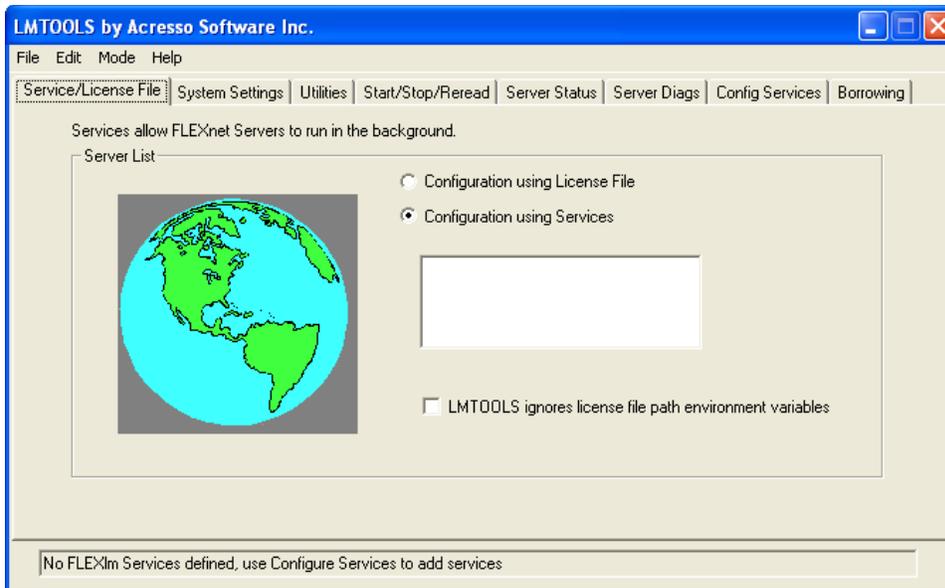
To configure your license server

You should be logged in with Administrator rights when working with the LMTOOLS utility.

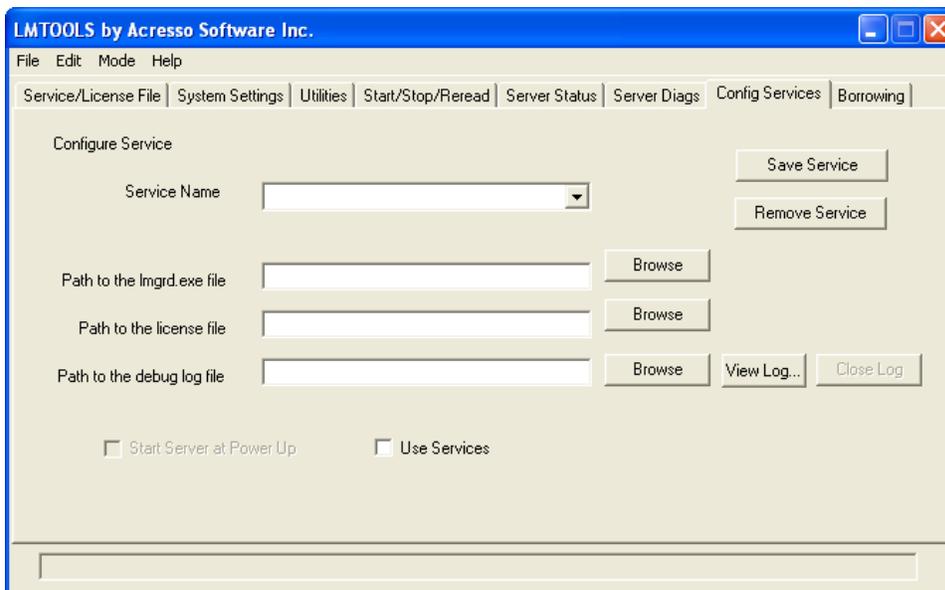
1. Do one of the following:

(Windows XP) Click Start menu > All Programs > Autodesk > Network License Manager > LMTOOLS Utility

(Windows Vista) Double-click the LMTOOLS icon on the desktop.
2. In the LMTOOLS program, on the Service/License File tab, make sure the Configure Using Services option is active.



3. Click the Config Services tab.



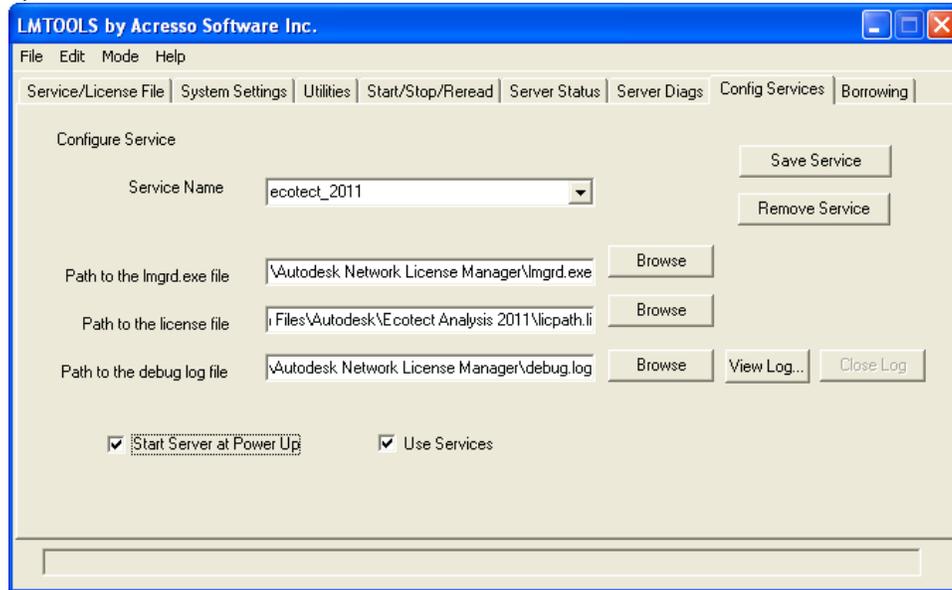
4. In the Service Name list, enter a service name you want to use to manage licenses.

NOTE If you have more than one software vendor using FLEXnet for license management, the Service Name list contains more than one option. Make sure that only one Autodesk service is listed.

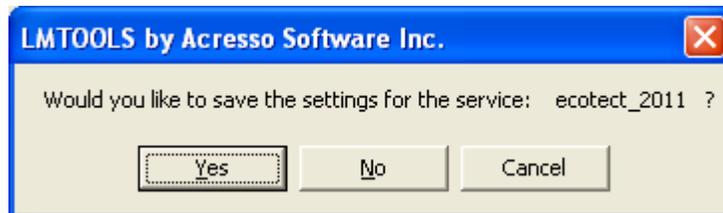
5. In the Path to Lmgrd.exe File field, enter the path to the Network License Manager daemon (lmgrd.exe), or click Browse to locate the file.
By default, this daemon is installed in the C:\Program Files\Autodesk Network License Manager folder.
6. In the Path to the License File box, enter the path to your license file, or click Browse to locate the file.

This is the location of the license file obtained by the Network License Activation. You can obtain your Network License information through the registration and activation process at <http://register.autodesk.com>

7. In the Path to the Debug Log File box, enter a path to create a debug log, or click Browse to locate an existing log file.
It is recommended that you save to the \Program Files\Autodesk Network License Manager folder. The log file must have a .log file extension. For new log files, you must enter the .log extension manually.
8. To run lmgrd.exe as a service, select Use Services.
9. To automatically start lmgrd.exe when the system starts, select Start Server at Power Up.

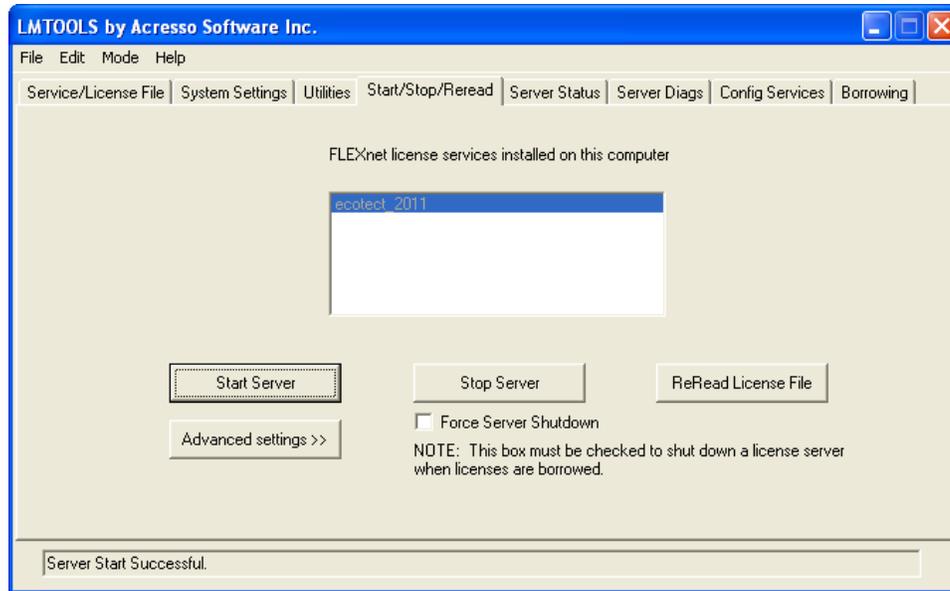


10. Click Save Service to save the new configuration under the service name you selected in step 4. Click Yes when prompted if you would like to save the settings to the service.



11. Click the Start/Stop/Reread tab and do one of the following:
 - a. If a service has not yet been defined for Autodesk, click Start Server to start the license server.
 - b. If a service for Autodesk is already defined and running, click ReRead License File to refresh the Network License Manager with any changes made to the license file or Options file.

The license server starts running and is ready to respond to client requests.



12. Close LMTOOLS Utility.

Setting up the workstation

To use the product, you must install the product on the workstation that intends to run Ecotect Analysis, and then launch it. This section provides instructions for installing and running Ecotect Analysis for an individual using a workstation.

You must have the Network License Manager setup before installing the program on a workstation.

Installing Autodesk Ecotect Analysis 2011 can be done directly from the product DVD. Depending on your operating system and its settings, the installer for the software will usually run automatically after inserting the DVD into your computer. If it does not, you can run it manually by locating the setup.exe file in the top directory of your DVD drive. Using your web browser, simply double-click the left mouse button on this file when you locate it.

Similarly, if you have downloaded the program from the internet, browse to the location where you have saved the file and double-click the left mouse button on this file.

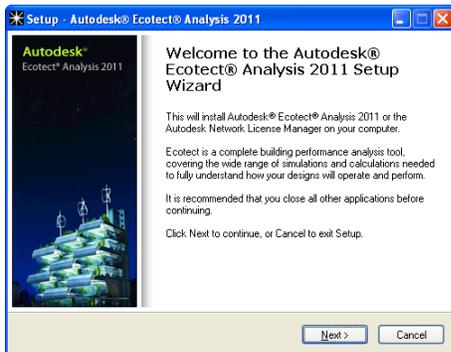
Administrator Rights

As the installation of this software also includes secure licensing features, it needs access to areas of the system registry and file system that only users with administrative privileges can go. Thus, in order to properly install this software and its licensing components, you must first log on to the computer with an account that has administrative privileges. If you do not, the installer will issue a warning and not let you continue.

The Installation Wizard

The installer will first prompt you with a series of wizard pages, many of which will require you to make choices or interact in some way.

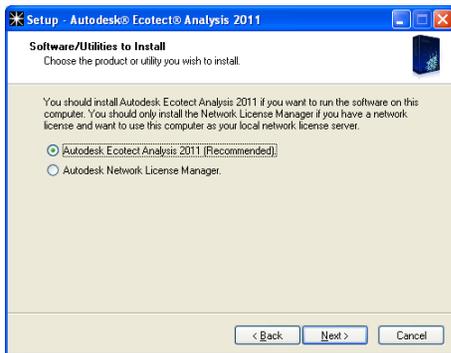
Setup—Welcome Page



This page is displayed when the installer is first run. It will indicate which software it is about to install and provide a brief description of it.

Click the Next > button to continue.

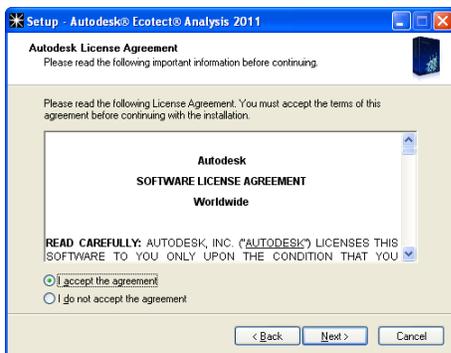
Setup—Software/Utilities to Install



For the “Software/Utilities to Install” screen, by default, the actual Autodesk Ecotect Analysis 2011 software is installed. This is the typical, and recommended, option for this page.

Select ‘Autodesk Ecotect Analysis 2011 (Recommended)’ and click the Next > button to continue.

Setup—Autodesk License Agreement



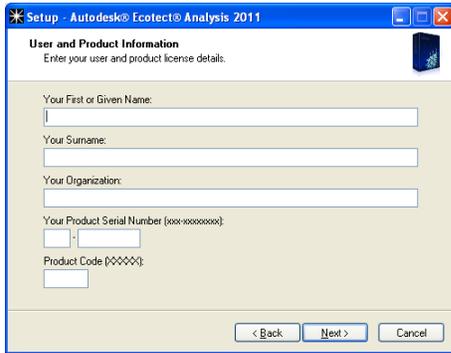
A printed license agreement is not included in your product packaging. Instead, the license agreement is displayed here during the installation process. When you accept the license agreement and complete the installation, you can find a copy of your license agreement in the *EULA.rtf* file in the install directory of your product.

If you choose the “I Do Not Accept the Agreement” option after reviewing the terms of the license agreement, the installation will be canceled. If you reject the license agreement, you have 30 days from your date of purchase to return this software. To receive a full refund, return this software along with the software package, all other items in this package, and dated proof of purchase to the location where you acquired it.

In order to continue with the installation, you must accept the terms and conditions within the Autodesk License Agreement.

Select the “I Accept the Agreement” option and click the Next > button to continue.

Setup—User and Product Information

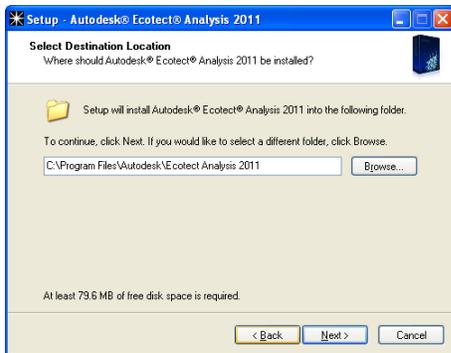


Use this page to enter your name and organization, as well as the product details you will find either on the cover of your DVD or in the electronic receipt you received after purchase.

It is important that you take care entering the product serial number and product code as these will be used later in the license activation process.

Enter all your details and click the Next > button to continue.

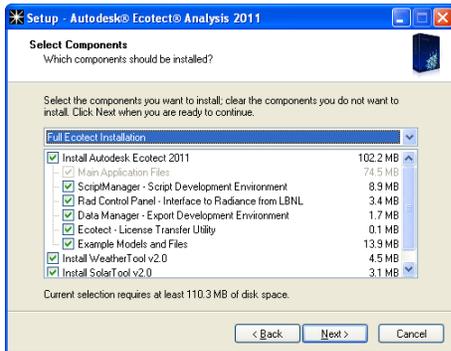
Setup—Select Destination Location



You use this page to select the folder into which the software will be installed. It is recommended that you use the default value as this will place the software in the same location as any other Autodesk products you may have installed. However, the software itself can be installed anywhere on your system.

Ensure the installation folder is where you want it and click Next > to continue.

Setup—Select Components

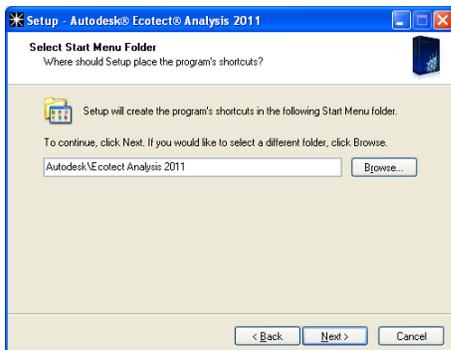


This wizard page allows you to select the individual components of the software to install. You can select from a series of default setups using the large drop-down list at the top, or manually check/uncheck the individual components you need.

All the components absolutely required for the software to run should be grayed out as these must always be installed.

Click the Next > button to continue.

Setup—Select Start Menu Folder



In addition to copying all the software and license files to the destination folder, the installer also creates a series of links in your Start Menu. You can use this page to enter the folder and subfolder(s) in which to place these links.

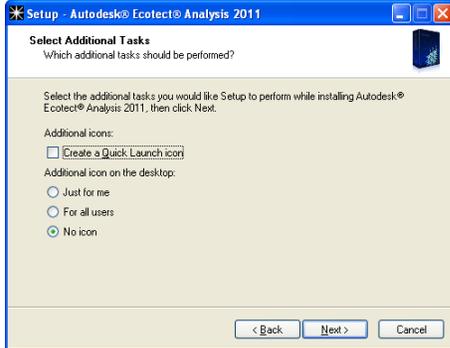
It is recommended that you manage your folders here instead of manually moving them later as the uninstaller will likely be unable to find or delete the moved links when you come

to uninstall the software.

You can create subfolders by simply using a backslash (\) character between the names making up each folder.

Click the Next > button to continue.

Setup—Select Additional Tasks

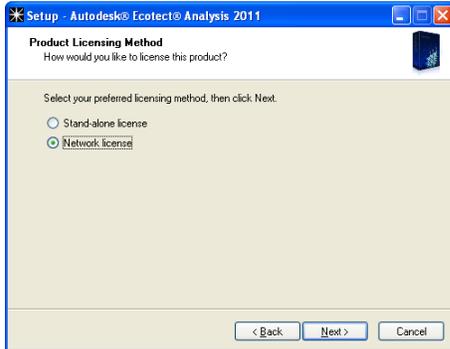


In addition to the links in the Start Menu, the installer can also create links on your desktop and in the Quick Launch area of your application bar.

When creating a desktop icon, you can choose to create this just for yourself or, as you must be an administrator to do this install, every user. You should be judicious in your use of the For All Users option as some people take great care of their personal desktop layouts.

Choose the additional icons you wish to create and click Next > to continue.

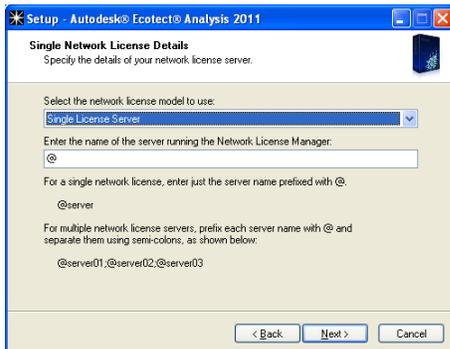
Setup—Product Licensing Method



Select Network license method and click the Next > button to continue.

For Stand-Alone licenses please refer to the *Stand-Alone Installation Guide*. Although both options are available during installation, you can only choose the one that matches the specific license you have purchased. Choosing the wrong one will mean that the wrong license files will be included and you will likely have to completely reinstall to obtain your correct license.

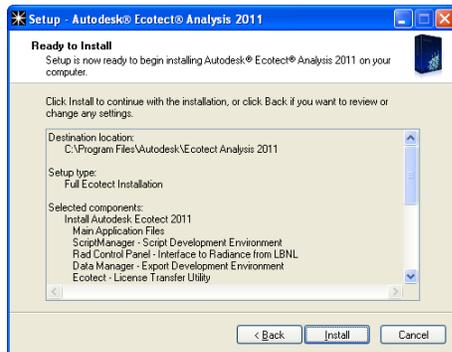
Setup—Network License Details



Select Network license model to use either (Single or Multiple License Servers)

Enter the name of the server running the Network License Manager.

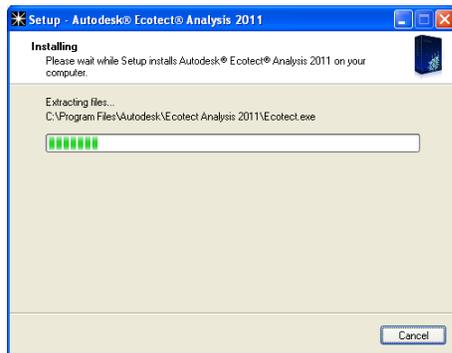
Setup—Ready to Install



Once you have answered all the questions required by the installer, a summary of all your decisions will be shown here. This gives you an opportunity to review the installation before actually proceeding with all the required tasks.

Once you are satisfied with all the options selected, click the Install button to continue.

Setup—Installing



As the installation proceeds, a message line is updated with each task being undertaken and the progress bar indicates the relative percentage complete.

You will need to wait for all tasks to complete, which could take a couple of minutes.

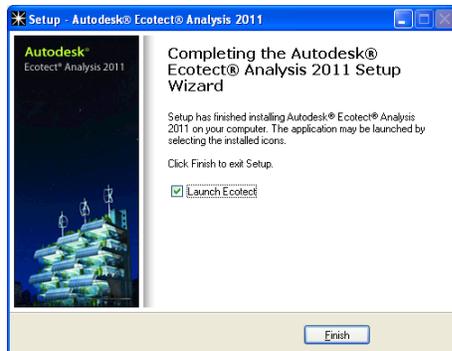
Setup—Required Components



Depending on your operating system, the installation may need to install additional Windows system components. These are widely used components that should not affect your system or other software.

Again, you will need to wait for each of these components to complete its own separate installation.

Setup—Final Page



Once all files and components have been copied and installed correctly, the installer will display this final page. If you would like to run the software immediately, make sure the Launch Ecotect option is selected.

Click the Finish button to close and complete the installation.

Working with Autodesk Ecotect Analysis 2011

When you first run Autodesk Ecotect Analysis 2011, the main application window will be displayed. This is a single-document application, meaning that you can only work on one model file at a time. However, you can simultaneously run as many copies of the desktop software as you would like, opening a different model in each.

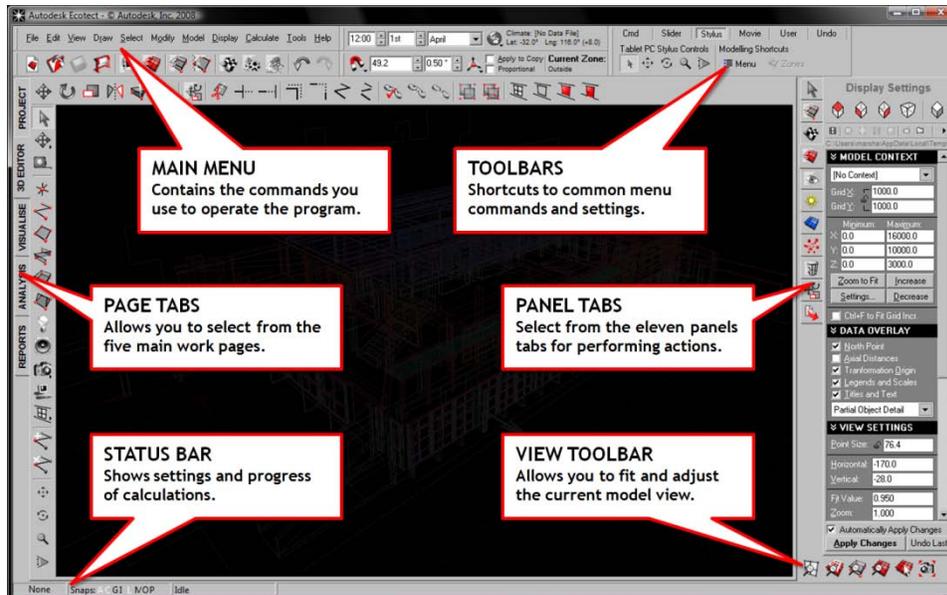


Figure 1—The components of the main Ecotect application window.

As you will spend a lot of time in the main window when using Ecotect Analysis, an attempt has been made to shape the program so that it does not rely on a labyrinth of cascading dialog boxes to perform actions and adjust parameters. To this end, the interface is laid out in different pages and a series of panels for operating on selected objects and zones.

Pages

Pages represent the main work areas in Ecotect Analysis, entered using the tabs running down the left-hand side of the main window. Each page allows you to work on a different aspect of the model, including its embedded data, geometric modeling, data visualization, analysis graphs, or tabulated summaries.

Project Page

This page allows you to add information about the project that will be stored along with the model. This information is also useful for archival and quality assurance purposes. The Notes section is entirely flexible and can contain any amount of formatted text.

3D Editor Page

This page is where the actual geometric building model is generated and edited. It consists of a main editable drawing area surrounded by edit toolbars. The drawing toolbar along the left-hand side is where all the object generation tools are found, while the model manipulation tools are found along the top in the editor toolbar.

Visualize Page

This page contains the OpenGL canvas, which uses hardware accelerated graphics to display hidden-line and rendered views of the current model. In this canvas you can store and manipulate the various camera views within the model as well as display a range of spatial analysis information.

Analysis Page

This page provides calculation functions for a wide range of analysis to be carried out on the model. These fall into different categories, each represented by a separate tab section beneath the main graph.

Reports Page

This page contains an integrated utility canvas for displaying data tables, HTML pages, and summary information about the current model. If you open an HTML or MHT file in Ecotect Analysis software, it will be displayed here. Similarly, if you run a script that uses the Report Generator, its output will also be displayed here.

Panels

A series of control panels are located on the right side of the main application window. Each panel contains controls for different aspects of the model and its analysis. Many of these panels allow you to perform operations on the current selection set, be it an object, node, or zone.

- **Selection Information**
Information and settings for the currently selected object or node. The information in this panel can be quite diverse, such as zone data, occupancy information, and measurement distances.
- **Zone Management**
A list of zones in the current model.
- **Material Assignment**
Displays and assigns the primary and alternate material assignment of the selected object(s).
- **Display Settings**
Tools for controlling what is displayed in the 3D model.
- **Visualization Settings**
Visualization controls for the OpenGL hardware rendering engine.
- **Shadow Settings**
Controls for displaying shadows and shading functions.
- **Analysis Grid**
Controls for positioning and calculating the analysis grid.
- **Rays and Particles**
Controls for spraying acoustic rays and particles within the model.
- **Scripts and Wizards**
Quick access to scripts and user-created utilities as well as controls for positioning and creating simple parametric geometry.
- **Object Transformation**
Controls for numerically transforming selected objects and nodes.
- **Export Manager**
Quick access to model export options.

Training Packages

Several training packages, including a product demonstration, are available to help you make the most of Ecotect Analysis. These can be found online at the Autodesk Ecotect Analysis product center at www.autodesk.com/ecotect-analysis-training

Accessing the Web Service Tools for Whole Building Analysis

Customers who purchase a Subscription to their Autodesk Ecotect Analysis license can access the Autodesk® Green Building Studio® web-based service for the duration of their Subscription term in order to conduct whole building energy, water, and carbon analysis. Using the Autodesk Green Building Studio technology, the web-based service provides a user-friendly front end to powerful building energy analysis software. All of the computationally intensive simulations are carried out on remote servers, and the results are provided to you in a web browser.

You will need to set up your web-service account as a separate process. For details, please refer to the *Getting Started with Green Building Studio Web Service* guide available at www.autodesk.com/ecotect-analysis-documentation on the Autodesk Ecotect Analysis product center.

Appendix A: Troubleshooting Network Licensing.

In a situation where Ecotect Analysis 2011 and other Autodesk products are running with network licensing and installed on the same system but Ecotect Analysis 2011 uses a different Network License Server, Ecotect Analysis 2011 needs to be installed with the “multiple license server” option with the Ecotect 2011 License Server specified as one of the license servers and the other applications license servers specified as the secondary servers or it will fail to start with the error “A valid license could not be obtained by the network license manager”.

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