



AI 100 - Introduction to InstallShield using MSI

5 Day Training Course Description

This course provides the information necessary to create, deploy, patch, and upgrade Windows Installer packages using InstallShield. Building upon a thorough examination of the Windows Installer technology this course covers all aspects of the InstallShield development environment. You'll learn to customize your install through custom actions, user interface design, and techniques to ease the deployment and maintenance of your application to your end users' systems.

Objectives

By the end of this course, you'll know how to:

- ✓ Design and create an install project
- ✓ Install files and create shortcuts by using features and components
- ✓ Configure special types of files and data, such as registry keys and INI data, COM servers, Windows services, and .NET assemblies
- ✓ Work with Windows Installer sequences, properties, conditions and both standard and custom actions
- ✓ Modify your installer's user interface
- ✓ Create patches, minor and major upgrades
- ✓ Use the Automation interface to modify your project

Course Prerequisites

While little or no development experience is necessary, it is helpful. You should approach the class with an eagerness to learn. You should also be comfortable using Windows Explorer, command prompts, and basic Windows application behavior. This course introduces the student to operating system concepts such as application files (executables, dynamic link libraries (dll/ocx)), binary file linking, the system registry, shortcuts, NT services, system drivers, and so on. Lastly, creating custom actions requires a background (or at least an interest) in VBScript, Visual Basic and/or C/C++.

Introduction

You'll begin by learning about Windows applications and basic operating system behavior. From there, you'll learn the background and motivation for using the Windows Installer service and how InstallShield fits in to the install development process. You'll also learn about the resources available as you work with InstallShield.

- About the Windows Installer service
- About Windows Installer install packages
- About the Windows Installer install mechanism
- About the InstallShield environment
- Getting help





About Projects

The foundation of your install program is the InstallShield project. You'll learn about general install terminology and design issues and how to create a project that reflects the design of your product.

- Install terminology
- Using the Project Assistant
- Using the Installation Designer
- Working with features and components
- Global product and project data

Installing Files

The primary job of your install program is to transfer files to the user's system. You'll learn about the different methods for adding files and folders to your install project.

- Static and dynamic file linking
- Working with destination folders
- Best Practice fundamentals
- "KeyPath" resource use
- Using *globally unique identifiers* (GUIDs)
- Creating shortcuts
- Using merge modules and prerequisites

Building Releases

Before you can test your install, you must build a set of disk images. You'll learn how to use the InstallShield graphical and command-line tools for building different types of release images.

- Using the Release Wizard
- Media types
- Command-line builds
- Using the Automation interface
- Using the Standalone build system

Deploying an Install Image

Windows Installer-based installs support several different install modes. During the course, you'll learn how to run an install from Windows Explorer or from the command prompt, how to perform silent and limited-user interface installs and how to pass information to the running install from the command line.

- Running an install
 - Maintenance and uninstall
 - Using `msiexec.exe`
 - Silent and reduced-UI installs
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- Passing properties from the command line
- MSI Command Line Builder
- MSI Log Analyzer

Non-File System Changes

In addition to installing files, most install programs need to make global changes to the user's operating system. You'll learn how to install configuration data, such as:

- Registry data
- INI files
- XML files
- Environment variables
- File associations

Installing Special Files

For most file types, the install's only responsibility is to transfer the files. Some types of files, however, require additional registration or configuration information to be written to the target system. You'll learn how to install and configure the following types of files:

- COM servers
- Windows services
- Fonts
- .NET assemblies
- Creating merge modules
- Creating configurable merge modules
- Working with repositories
- Running SQL scripts
- Forcing data removal

Conditions and Actions

Unlike traditional installs, Windows Installer installs do not use an explicit script, but instead perform actions arranged into your product's sequence tables.

- MSI properties
- Condition syntax and examples
- Install sequences
- Custom actions: action types and guidelines
- Editing MSI tables directly





User Interface

Like standard Windows Installer actions, your install's user interface is controlled by MSI tables and actions. You'll learn about:

- MSI dialog order and conditions
- Working with control events
- Working with control conditions
- MSI debugger
- Creating new dialog boxes
- Subscription to actions
- Required dialog boxes
- Localization

Updates and Patches

Windows Installer supports different types of updates and different techniques for packaging them for distribution. You'll learn about:

- Types of updates
- Creating minor upgrades
- Creating major upgrades
- QuickPatch projects
- General patch projects
- Uninstalling a patch

Additional Topics

You'll learn about additional functionality of InstallShield and Windows Installer, including:

- How to create transforms
- Direct MSI editing
- Using MSI Automation to modify a project
- Test Tools and Tricks

