

Install Guide



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Chapter 1. Introduction

Z and I Emulator for Windows provides 3270, 5250, and VT emulation, connecting to z/OS™, z/VM™, eServer™ i5, iSeries™, System i5™, zSeries™, and ASCII systems.

Z and I Emulator for Windows uses Microsoft® Windows Installer technology for all installation procedures. This book details how to successfully install and customize installation of Z and I Emulator for Windows using the Windows Installer service. For more information on the Windows Installer service, see [Microsoft Windows Installer on page 6](#). For detailed information on the Z and I Emulator for Windows product functionality, refer to *Quick Beginnings*.

The following sections discuss getting help when you are installing, configuring, or using Z and I Emulator for Windows.

Information Center

You can find documentation and links to other resources at the Z and I Emulator for Windows Information Center, at the following address:

<https://ziewin.hcldocs.com/help/index.jsp>

The Information Center contains reference material that is not found in this book, such as keyboard layouts and host code page tables.

The Z and I Emulator for Windows Information Center provides information in English.

Chapter 2. Planning to Install Z and I Emulator for Windows

This chapter describes the companion products provided with Z and I Emulator for Windows and topics that should be considered before installing Z and I Emulator for Windows Version 2.0.

For instructions to install the HCL ZIE License Manager, refer to [Installation of HCL ZIE License Manager on page 17](#), and refer the topic [Configuration of License Manager settings](#) to configure the ZIE License Manager for ZIEWin.

Considerations Before Installing

Java Runtime Environment

In version 2.0, by default, the Open JDK version of "1.8.0_232" is installed with Z and I Emulator for Windows on systems. You may use the custom JAVA_HOME environment variable, to select a different Java™ Runtime Environment (JRE).



Note: From version v2.1 onwards, OpenJDK JRE is no longer bundled with HCL Z and I Emulator for Windows. The features dependent on JRE will work with system JRE.

Disk Space Requirements

Installation of Z and I Emulator for Windows to a drive other than the Windows® volume (the drive containing the Windows® folder) may still require as much as 180 MBs of available free space on the Windows® volume. This is due to the installation of files to the Windows® and system folders, as well as the caching of the Installer database by the Windows Installer service, and the use of temporary disk space by the Windows Installer service during the installation.

Migration Considerations

Z and I Emulator for Windows offers several migration options. To ensure that your session profiles, batch files, and other configuration information are migrated so you can use them with Version 2.0, see [Custom Installation on page 9](#).

When migrating, you might be prompted to close all active Z and I Emulator for Windows sessions and actions.

Multi-Boot Environment Installation

If you want to install Z and I Emulator for Windows into a Z and I Emulator for Windows subdirectory that was originally installed under another operating system, you must remove the previous version first. Failure to do this

may cause unpredictable results, including not being able to run Z and I Emulator for Windows from either operating system.

Coexistence support

iSeries Access

Co-existence is restricted for other Emulators that are similar to ZIEWin. HCL Z and I Emulator for Windows cannot be installed on a system where a similar product exists, and vice versa.

Coexistence support for iSeries Access PC5250 component is not provided. The iSeries Access PC5250 component must be removed prior to installing Z and I Emulator for Windows.

Following are some of the coexistence scenarios for which Users get appropriate notification messages :

- Installation of **HCL Z and I Emulator for Windows** over a similar product displays the following message :
 - "Installation of HCL ZIE for Windows cannot proceed further as a similar product is already installed on the system."
 - Installation of other emulators similar to ZIEWin over **HCL Z and I Emulator for Windows** displays the following message :
 - "Setup has found a previous version of a similar product already installed on this system. You must uninstall the existing version before running setup again."
 - Installation of **HCL Z and I Emulator for Windows** Refresh Pack Update Installer on a system, without having the Base/Refresh pack version installed, displays the following message :
 - "HCL Z and I Emulator for Windows RP** cannot continue as the Base version is not installed."
-

Windows x64 Platform Support

The x64-based versions of Microsoft Windows Server 2003, Microsoft Windows server 2008, Microsoft Windows 7, Microsoft Windows 8 and Microsoft Windows 10 are optimized to run native 64-bit programs, but do not support 32-bit drivers or 16-bit applications.

For these platforms, Z and I Emulator for Windows does not install the following features and libraries.

- 16-bit API support:
 - Standard EHLLAPI 16-bit interface
 - WinHLLAPI 16-bit interface
 - PCSAPI 16-bit interface

Chapter 3. Installing Z and I Emulator for Windows

Z and I Emulator for Windows provides the below installation options:

- Administrative installation, including installing or running from source, where source medium is a network server. See [Administrative Installation on page 21](#) for more information.
- Remote installation using Microsoft® Systems Management Server (SMS). See [Remote Installation of Z and I Emulator for Windows on page 25](#) for more information.
- Installation and Uninstallation of HCL Z and I Emulator for Windows must be done manually using *setup.exe* or by using SCCM (Deployment tool). as the configuration and prerequisite checks will happen only with *setup.exe*.

Z and I Emulator for Windows also offers the ability to customize the installation procedure. For information on customizing with initialization file processing, including performing silent installations, see [Installing Z and I Emulator for Windows Using an Initialization \(response\) File on page 19](#).

. Typical and custom setups are described in this chapter, as well as silent installation options. Additionally, this chapter provides an introduction to the Microsoft® Windows Installer service.

Microsoft® Windows Installer

Z and I Emulator for Windows utilizes the Windows Installer service. When the Z and I Emulator for Windows installation image is first run, it examines the target system and, if necessary, automatically installs the proper version of the Windows Installer service.

Setup.exe is the bootstrap loader that calls the Windows Installer service (msiexec.exe) and launches the installation dialogs. For a detailed description of the Microsoft® Windows Installer service, refer to the Windows Installer SDK available online at <http://www.msdn.microsoft.com>. For more information on setup.exe, see [IPWI Command line parameters on page 26](#).



Note: The following should be taken into account when installing Z and I Emulator for Windows:

- In some cases, installation of Windows Installer triggers a reboot of the system. If you are required to reboot, upon subsequent startup you are taken immediately back to Windows Installer to continue installation of Z and I Emulator for Windows.
- After Windows Installer has been successfully installed, if the installation of Z and I Emulator for Windows fails or is cancelled by the user, Windows Installer rolls back all partially installed Z and I Emulator for Windows files and returns the system to its original state.



- You must be a member of the Administrator's group to perform these installations.
- Before you begin installation, make sure all other applications are stopped. If you are reinstalling Z and I Emulator for Windows or are upgrading Z and I Emulator for Windows, make sure that Z and I Emulator for Windows is not running before you start setup.

Typical Installation

Typical installation selects all default features for installation. Features are defined as the specific functions of a program. See [Feature Selection on page 10](#) for a list of default features. You can customize Z and I Emulator for Windows features by selecting the custom installation option (see [Custom Installation on page 9](#)).

To start a typical installation, click **Next** in the installation type panel. A panel appears, indicating that Z and I Emulator for Windows is computing the disk space requirements.



Note: Once the installation has passed this point, you cannot change the installation type. You would then need to cancel the installation on the Application Data panel, and begin a new installation.

To continue with the typical installation, use the following installation procedure.

1. The Application Data Location dialog opens. Select from the following application data location options:
 - User's application data folder ([UserProfile]\Application Data)
 - All users' common application data folder (All Users\Application Data)
 - Classic private directory

Z and I Emulator for Windows uses multiple configuration files: user-class files can be stored individually by user profile, while system-class files are stored in a common location. Refer to *Quick Beginnings* for more information about user-class and system-class files and locations.

If the [UserProfile]\Application Data location is selected, the following profile paths are used:

Operating System	User-Class Directory (Current User) ³	System-Class Directory
Windows® Server 2003	C:\Documents and Settings\%USERNAME%\Application Data\HCL\ZIE for Windows	C:\Documents and Settings\All Users\Application Data\HCL\ZIE for Windows
Windows Vista, Windows 7, Windows server 2008, Windows 10 x64	C:\Users\%USERNAME%\AppData\Roaming\HCL\ZIE for Windows	C:\ProgramData\HCL\ZIE for Windows

If the All Users\Application Data location is selected, the following profile paths are used:

Operating System	User-Class Directory (Current User) ³	System-Class Directory
Windows® Server 2003	C:\Documents and Settings\All Users\Application Data\HCL\ZIE for Windows	C:\Documents and Settings\All Users\Application Data\HCL\ZIE for Windows
Windows Vista, Windows 7, Windows server 2008, Windows 10 x64	C:\ProgramData\HCL\ZIE for Windows	C:\ProgramData\HCL\ZIE for Windows

If the classic Private directory location is selected, the following profile paths are used:

Operating System	User-Class Directory (Current User) ^{1, 2, 3}	System-Class Directory
Windows® Server 2003, Windows Vista, Windows 7 & Windows Server 2008, Windows 10 x64	C:\Program Files\HCL\ZIE for Windows\Private	C:\Program Files\HCL\ZIE for Windows\Private

¹If the User Preference Manager (UPM) was set to a directory other than the default directory, Z and I Emulator for Windows will utilize that directory to store the user-class files. System-class files are always stored in the Private directory.

²For the classic Private directory locations, `C:\Program Files\HCL\ZIE for Windows` is the drive where Z and I Emulator for Windows is installed.

³The FTP Client configuration files are stored in the profile path mentioned the above, under the **FTP** folder.



Note: For installations on Windows x64 platforms, the directory path `Program Files` is replaced by `Program Files (x86)`.

After selecting your application data location, click **Next** to continue with the installation.

2. The Ready to Install the Program dialog opens. Click **Back** to change your previous settings, or click **Cancel** to terminate the installation process. Click **Install** to continue with installation.

The typical setup uses the `C:\Program Files\HCL\ZIE for Windows` directory for program installation.



Note: If there is not enough disk space on the C: drive, you are prompted to choose the custom installation setup type in order to choose an alternate installation destination.

After installation is complete, the Installation Complete dialog opens. Click **Finish** to exit the installation process.

After installation is complete, you are prompted to reboot the computer. You must reboot the computer before configuration changes take effect and you can use Z and I Emulator for Windows.

**Note:**

1. **Typical** installs the most common features for the applicable emulators.
2. **Typical** does not include API sample programs.

Custom Installation

Though the default feature selection for a custom setup is the same as for a typical setup, a custom configuration allows you to modify feature selection for your system. To continue with the custom installation setup:

1. Click the button to choose **Custom** setup type. Click **Next** to continue.
2. The English language product is automatically installed. Only the system default language locale and English are default. Select any additional languages that you want to install. Click **Next** to continue. A panel appears, indicating that Z and I Emulator for Windows is computing the disk space requirements.



Note: Once the installation has passed this point, you cannot change the installation type. You would then need to cancel the installation on the Application Data panel, and begin a new installation.

3. The Custom setup dialog opens and asks you to select the program features that you want to install. Some features have subfeatures available. To view the subfeatures for a particular feature, click the plus sign (+) to the left of the feature name.

Included in the Custom Setup window are **Feature Descriptions**. You can view the description of any feature by clicking on that feature and then reading the description section to the right of the feature selection tree. The feature description gives basic information about each feature, as well as the disk space required for installation. For more detailed information on disk space requirements for each feature, click the **Disk Space** button. For a description of available features, see [Feature Selection on page 10](#). For a description of feature installation options, see [Feature Installation Options on page 12](#).

4. From the Custom Setup dialog, you can change the directory where Z and I Emulator for Windows is installed. Click the **Change** button to choose another installation directory.
5. After making your feature selection choices and confirming the installation directory, click **Next** to continue with the installation.



Note: If there is not enough space on the destination drive, you are prompted to choose another location.

6. The Application Data Location dialog opens. Select from the following application data location options:
 - User's application data folder ([UserProfile]\Application Data)
 - All users' common application data folder (All Users\Application Data)
 - Classic private directory

See [Typical Installation on page 7](#) for information on the profile paths used for each application data location. For more information about the location of application data, including workstation profiles, refer to *Quick Beginnings*. Click **Next** to continue.

7. The Automatic Migration Options dialog opens. By default, the **Automatic Migration of Profiles** box is checked. If you clear this check box, no migration occurs. The migration choices that are available to you are based on the information that you provided in the Application Data Location dialog. For information on the Application Data Location dialog, see #unique_22.

By default, the highest level of migration available for your application data location is selected. This is the recommended level of migration for your configuration. You can proceed with the installation using the default migration option, or you can choose another level of migration. For a description of the different levels of migration available for each Application Data Location, see #unique_23.

Click **Next** to continue with the installation.

8. The Ready to Install dialog opens. Click **Install** to complete the installation.

Feature Selection

The features and subfeatures available for Z and I Emulator for Windows are described in [Table 1: Feature Selection Tree Contents on page 10](#). This table also identifies which features are installed by default.



Note: In the custom setup window, if the icon to the left of the feature name is white, that feature and all of its subfeatures will be installed. If the icon appears grey, that feature or one or more of its subfeatures will not be installed.

Table 1. Feature Selection Tree Contents

Feature	Description	Subfeatures Available	Default
3270 Emulation and Services	Your workstation can emulate a zSeries™ terminal (display, printer, or both). The emulator APIs (such as EHLAPPI, PCSAPI, DDE and) and utilities (such as Multiple Sessions, Menu Bar, , and Zip Print) are installed.	ZipPrint	Yes
3270 Emulation and Services	Your workstation can emulate an TN3270, TN3270E terminal (display, printer, or both). The emulator APIs and utilities (such as Multiple Sessions, Menu Bar, and Data Transfer) are installed.	ZipprintDefaultYes	
5250 Emulation and Services	Your workstation can emulate an iSeries™, eServer™ i5, or System i5™	Data Transfer	Yes

Table 1. Feature Selection Tree Contents (continued)

Feature	Description	Subfeatures Available	Default
	terminal (display, printer, or both). The emulator APIs and utilities (such as Multiple Sessions, Menu Bar, and Data Transfer) are installed.	<ul style="list-style-type: none"> • iSeries™ Connection Configuration 	
VT Emulation	Your workstation can emulate an ASCII terminal. The emulator APIs (such as Multiple Sessions, and Menu Bar) are installed.	None	Yes
Fonts	Additional fonts are available, such as special 3270.	Fonts listed in dialog	Yes
Secure Sockets Layer	Allows encryption and authentication customization.	<ul style="list-style-type: none"> • MS CryptoAPI Security 	No
Administrative and PD Aids	Diagnosis and update tools are included.	<ul style="list-style-type: none"> • Log Viewer • Information Bundler <ul style="list-style-type: none"> ◦ Internet Service 	Yes
Utilities	Optional product utilities that can be installed.	<ul style="list-style-type: none"> • Convert Macro • Menu Bar Customization Utility • Multiple Sessions • User Preferences • FTP client 	Yes
Emulator Programming APIs	APIs and sample programs.	.NET Interops <ul style="list-style-type: none"> • Register to GAC • Interops Sample Sample Programs for APIs <ul style="list-style-type: none"> • Host Access Class Library for C++ • Visual Basic • Miscellaneous APIs 	No

**Note:**



1. The .NET Interops **Register to GAC** option is only available if the installation program detects that the .NET framework is present. However, the primary FTP client assembly will not be registered in the GAC.

FTP Client requires .NET Framework v2.0 or higher to be installed on the system.

Feature Installation Options

Each feature and subfeature allows several installation options. To view the options available for each feature, click on the drop down icon to the left of the feature name. Select the desired installation type by clicking on it in the drop down menu. A description of each possible installation option follows:

- **This feature will be installed to run from CD** selects the feature to run from source where source medium is the installation image at the local workstation. This option is only available for top-level features and installs only the base files needed to run the feature.



Note: If you are installing from a network, this option instead displays as, **This feature will be installed to run from network**. For more information on running from a network server, see [Install to run from network on page 22](#).

- **This feature, and all subfeatures, will be installed to run from the CD** selects the main feature and all associated subfeatures to run from source where source medium is installation image at the local workstation. This installation option installs only the base files needed to run the features.



Note: If you are installing from a network, this option instead displays as, **This feature, and all subfeatures, will be installed to run from the network**. For more information on running from a network server, see [Install to run from network on page 22](#).

- **This feature will be installed when required** places a shortcut on the Z and I Emulator for Windows menu allowing the feature to be installed when the shortcut is selected. This installation option is also called *advertisement*.
- **This feature will not be available** deselects the feature for installation or advertisement.

Silent Installation

Z and I Emulator for Windows is installed silently by passing command-line parameters through setup.exe to the MSI (Windows Installer database) package. When running a silent installation, the user does not provide input via dialogs or see a progress bar during the installation process. Instead, installation occurs automatically using either a typical configuration or a custom configuration created during initialization file processing.



Note: When migrating through silent installation, all active Z and I Emulator for Windows sessions and actions will be closed without any prompting.

For details on initialization file processing, see [Installing Z and I Emulator for Windows Using an Initialization \(response\) File on page 19](#). For information on performing a silent installation using setup.exe command-line parameters, see [IPWI Command line parameters on page 26](#).

Auto-Upgrade for Standard Users

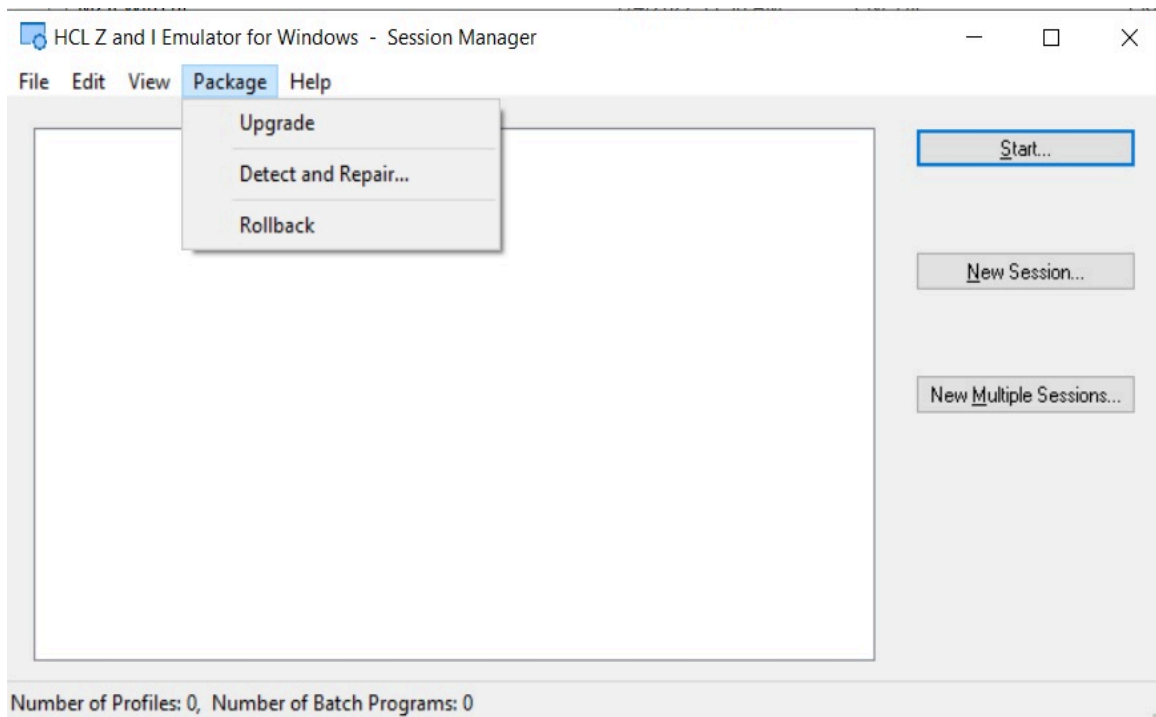
From 2.0 onwards, Auto-upgrade is enabled for Standard Users (Windows users who are not part of the “Administrator” group). *Upgrade* and *Rollback* is performed from the “**Package**” menu from the **Session Manager (Online/Offline)**.

Z and I Emulator for WindowsService” manages the Auto-Upgrade or Rollback of Z and I Emulator for Windows, and it can registered in the services during the **Base Pack installation**.

Steps to Rollback:

After the successful upgradation, to Rollback to the previous version, click “**Rollback**” menu item from the “**Package**” menu from the **Session Manager (Online/Offline)**.

Session Manager with disabled menu options

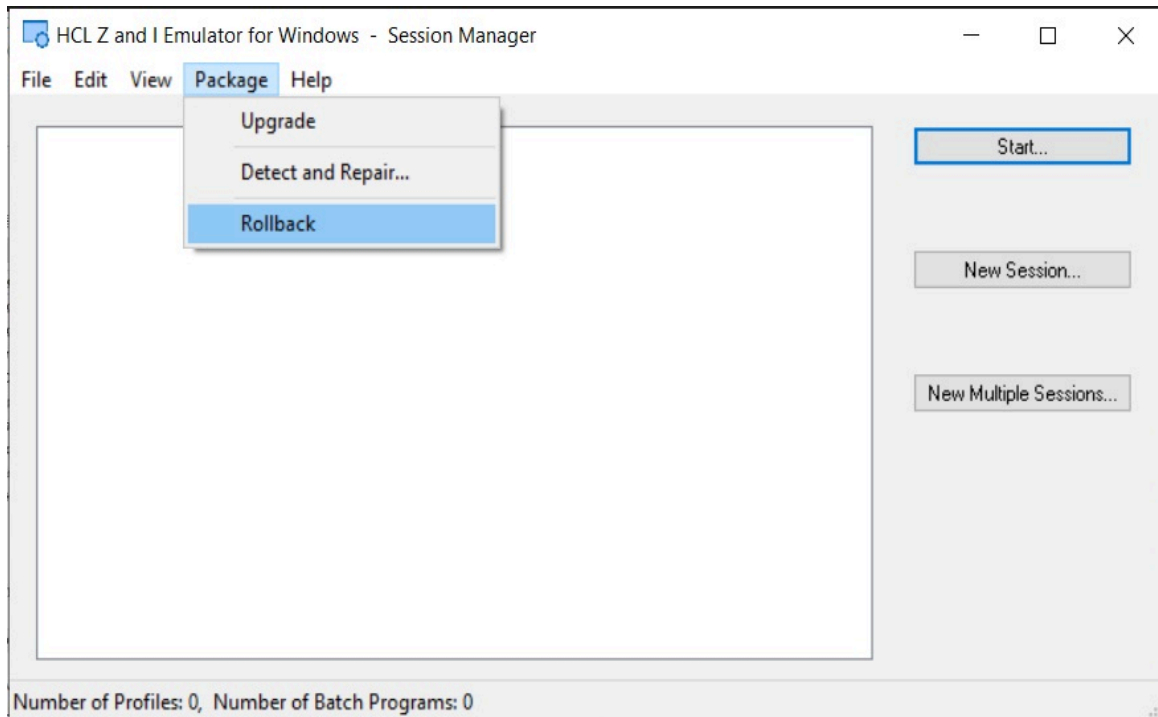



Steps to enable the Auto-Upgrade for a Standard User:

To enable the “Upgrade” and “Rollback” menu options for a Standard User, set the “EnableUpdatePrivilege” keyword value as “YES” in the **MZIEWIN.cnf** configuration file.

 **Note:** By default, the : “EnableUpdatePrivilege” value is set to **NO**.

Session Manager with disabled menu options



 **Note:** By default, “Upgrade” and “Rollback” menu options are enabled.

Pre-requisite

The base version Z and I Emulator for Windows version 2.0 full Installer must be installed in the system prior to the installation of higher version of RefreshPack update installer. The user must be Administrator to perform the Upgrade and Rollback for the base version is less than version 2.0



Note: From 2.0 onwards, the Auto-upgrade feature allows Windows users who are not part of the “Administrator” group (Standard User). A Standard User upgrade to the latest version with a base version of 2.0 or higher only.

Upgrade using ZIEWIN Refresh Pack Update Installer

Refresh Pack Update Installer is a light weight installer that contains only the fixes developed after the release of ZIEWIN version 2.0 base version. Each update installer is cumulative in nature; in other words, a new update installer also contain fixes from the previous update installers. This requires ZIEWIN version 2.0 base version or Refresh Pack installed.

When the ZIEWin Refresh Pack Update Installer is upgraded, the “Add/Remove Programs” shows both the latest Refresh Pack Update Installer version and ZIEWin base/refresh version.

As these Refresh Pack Update Installers are cumulative in nature, there will be only one Refresh Pack Update Installer installed in the system. If there is a lower version of Refresh Pack Update Installer already installed in the system, this update installer will uninstall the lower version before its installation.

If the Refresh Pack Update Installer is uninstalled manually, the ZIEWin version rolls back to its initial Base/Refresh pack version.

To uninstall the ZIEWin, it is recommended to always uninstall the Refresh Pack Update Installer first, followed by the base/Refresh pack version.

- [Prerequisites on page 14](#)
- [Auto-Upgrade for Standard Users on page 13](#)
- [Steps to Install on page 16](#)
- [Steps to Install Manually on page 15](#)
- [Steps to Install Using the Start or Configure Sessions Online Utility on page 16](#)
- [Steps to Install Using Managed ZIEWIN on page 16](#)

Steps to Install Manually

Find the following steps to install manually:

1. Ensure that Base or Refresh pack version is installed on the User's machine.
2. Extract the Refresh Pack Update installer zip to get the 'Z and I Emulator for Windows RP**.msi'.
3. Double click the 'Z and I Emulator for Windows RP**.msi' (The message, "Welcome to Installshield wizard for Z and I Emulator for Windows RP**." is displayed).

4. Click **Next**, to go to the next panel.
5. Click **Next**, to proceed with the installation in the Ready to Install panel.
6. Click **Install** and then click **Finish**.

Steps to Install Using the Start or Configure Sessions Online Utility

Find the following steps to install Using the Start or Configure Sessions Online Utility:

1. Ensure that the Base/Refresh pack is installed on the user machine.
2. Extract the Refresh Pack Update installer zip to get the Z and I Emulator for Windows RP**.msi" and *MZIEWin.cnf* files.
3. The *cnf* is the upgrade configuration file that has the properties of refresh pack update installer.
4. Copy the Z and I Emulator for Windows RP**.msi' and *MZIEWin.cnf* to the web server URL. This URL is provided by the user during the installation of the base/refresh pack or can be configured via the 'Preferences' utility.
5. Invoke the 'Start or Configure Sessions - Online' utility, if the installed version of ZIEWin is lower than the Refresh pack update installer version then the user will be prompted to upgrade.
6. Click **Yes** to proceed with the upgrade.

Steps to Install

Find the below steps to install:

1. Extract the **RefreshPack** zip file to get RefreshPack update installer Z and I Emulator for Windows RPx.msi" and configuration file **MZIEWIN.cnf** for version 2.0 which is higher than installed base version.
2. Double click Z and I Emulator for Windows RPx.msi. A message "Welcome to Installshield wizard for Z and I Emulator for Windows RPx" is displayed.
3. Click **Next**, it redirects to the next panel.
4. Click **Next** to install in Ready to Install the program panel.
5. Click **Install** and then click **Finish**.

Steps to Install Using Managed ZIEWIN

Find the following steps to Install:

1. After the base version is installed, unzip the **RefreshPack** zip file to copy the Z and I Emulator for Windows RPx.msi and **MZIEWIN.cnf** to the WebServerURL location provided.



Note: Please refer to the section Web Server Details under the topic, HACP Server Details in the Quick Beginnings book.

2. From the ZIEWIN client, invoke the Start or Configure Sessions - Online. The user gets a notification about the latest available ZIEWIN version. To upgrade, refer to the Auto-Update of Z and I Emulator for Windows.
3. Click **Update**. The application is closed and the installer is downloaded to install the RefreshPack.
4. From 2.0 onwards, *Upgrade* and *Rollback*, is performed from "**Package**" menu from Session Manager (Online/Offline).



Note: Base version of 2.0 or higher version.

Configuration Involved

Find the following configuration involved:

- The Z and I Emulator for Windows RPs are Cumulative.
- Supports Japanese the language.
- Adds all the files required for the Refresh Pack, which includes all APARs, Bugs, and PMRs.
- When a user installs Z and I Emulator for Windows 2.0, the Base Pack Z and I Emulator for Windows installation is auto-upgrade.
- The RefreshPack takes the backup of the base package files into a newly created folder BackupBase under the installation directory and restores them back to RP1.
- The RefreshPack overwrites a registry key under HKEY_LOCAL_MACHINE\SOFTWARE\HCL\Z and I Emulator for Windows\CurrentVersion\VersionNumber with RefreshPack version. The registry key is replaced back to the base version after the uninstallation.
- The new registry key is also added for the restricting coexistence under HKEY_LOCAL_MACHINE\SOFTWARE\HCL\Z and I Emulator for Windows\CurrentVersion\VersionNumber Value:- Fixpack_Version = 2.0.x and after uninstallation, the key is removed.
- Uninstallation of 2.0.x is also possible without affecting 2.0 base version
- A new ARP Entry Z and I Emulator for Windows 2.0.x is added to the control panel in addition to Z and I Emulator for Windows 2.0 and is removed after the uninstallation.

Installation of HCL ZIE License Manager

License manager is a tool that facilitates effective software management between end users and software vendors, thereby enabling organization to track and document the usage of the company's software products.

HCL ZIE License Manager is the license control tool used to track the license information for Mainframe Terminal +emulator products.

Steps to find the HCL ZIE License Manager installer files :

1. Download/copy the ***HCL_ZIE_for_Windows*.zip*** to the machine.
2. Extract the ***HCL_ZIE_for_Windows*.zip***.
3. Open the 'ZIE License Manager' sub-folder to find the 'License Manager.war' and 'License Manager.ear' files.

For details on the Installation of HCL ZIE License Manager, see [HCL ZIE License Manager](#).

To configure the ZIE License Manager for ZIEWin, see the topic [Configuration of License Manager settings](#).

Chapter 4. Installing Z and I Emulator for Windows Using an Initialization (response) File

Z and I Emulator for Windows provides an optional method of customization that allows property values and feature installation choices made during one installation to be automatically applied during subsequent installations. The initialization file (.ini) contains the properties and options for Windows Installer to use as initialization choices so that subsequent installations do not require users to provide installation input using dialogs. Then, future installations can be set to run silently using an initialization file.

Administrators create, save, and implement initialization files using command-line parameters. Z and I Emulator for Windows provides four command-line parameters:

- SAVEINI
- ONLYINI
- USEINI
- REMOVEINI

Each parameter, with a corresponding usage description, is described in the following sections.

Two sample initialization files are included on the Z and I Emulator for Windows installation image. These sample initialization files can be used during the installation if your workstation configuration matches the definitions in the sample. Z and I Emulator for Windows includes the following sample .ini files:

- **typical.ini** installs a typical setup
- **custom.ini** installs a custom setup to a user-defined path

The samples are defined for a first-time installation of Z and I Emulator for Windows.



Note: To ensure successful initialization file processing, use all syntax examples exactly as described.

Silent Installation Using Initialization File Processing

In order to ensure that property values and feature installation options designated in the initialization file are not overridden by users or to enhance the ease of installation, you can apply initialization files during silent installations.

To perform a silent installation using initialization file processing, type the following command:

```
E:\install\ZIEWin_pkgs\xxx\install\ZIEWin\setup.exe /s /v"/L*v
\ "%temp%\pcsinst.log"
USEINI="\C:\Program Files\HCL\ZIE for Windows\ZIEWin.ini" /qn"
```

where `xxx` is `mls`.

This process passes the silent installation command-line parameter (/qn) through setup.exe to the MSI package. For more information about setup.exe command-line parameters, see [IPWI Command line parameters on page 26](#). This parameter can also be added to commands that use system variables instead of path names.

Chapter 5. Administrative Installation

An administrative installation copies a source image of Z and I Emulator for Windows installation files onto a network drive. The resulting location of this source image is called the installation point. After you complete an administrative installation, any user connected to the network can install Z and I Emulator for Windows to their own workstation by pointing to the installation point and running the setup. An administrative installation offers two installation choices to users:

- Installation directly to their system from the network server
- Installation to run from the network server

To begin an administrative installation, disable the AutoPlay function on your system or simply close the Z and I Emulator for Windows welcome window when it opens. With the installation image in the drive:

1. Open a command prompt and switch to the Z and I Emulator for Windows installation directory by typing

```
E:
```

where E: is the installation image drive.

2. At the command prompt, enter:

```
cd ZIEWin_pkgs\mls\install\ZIEWin
```

for English.

3. From this directory, type

```
setup.exe /a
```

4. The Windows Installer welcome dialog for Z and I Emulator for Windows opens. Click **Next** to continue with the installation.
5. The License Agreement dialog opens. Click the button to accept the terms of agreement. You can print the license agreement by clicking **Print**. If you decline the license agreement, the installation process terminates. Click **Next** to continue.



Note: Windows® administrators have the option to accept the license agreement on behalf of all users. This allows users who install Z and I Emulator for Windows from the network server to skip the license agreement window during installation.

6. The Network Location dialog opens. You can type the desired network installation point in the command line or click **Change** to browse for a location.
7. Click **Install** to complete the installation process.



Note: To remove the source image of Z and I Emulator for Windows from your network server you must manually delete the source image directory from the network location.

Installing from Network Server

After the administrative installation is complete, any user connected to the network can install Z and I Emulator for Windows from the network server. To install from the network server:

1. Click **Run...** on the Windows® **Start** menu.
2. Type

```
X:\MyLocation\setup.exe
```

in the command line (where X: is your network server and MyLocation is the installation point designated in the administrative installation) or click **Browse** to browse for the location on the network.

3. The Windows Installer welcome dialog opens. Proceed with the installation as described in #unique_22.

Installing to Run from Source, Where Source Medium Is a Network Server

After the administrative installation is complete, any user connected to the network can install Z and I Emulator for Windows to their workstation and designate any available features to run from source, where source medium is a network server (see [Feature Selection on page 10](#) for a description of available features). In this scenario, feature shortcuts are placed on the Z and I Emulator for Windows menu. To install and run from the network server:

1. Click **Run...** on the Windows® **Start** menu.
2. Type

```
X:\MyLocation\setup.exe
```

in the command line (where X: is your network server and MyLocation is the installation point designated in the administrative installation) or click **Browse** to browse for the location on the network.

3. The Windows Installer welcome dialog opens. Proceed with the installation as described in #unique_22, selecting **Custom** as your setup type.
4. In the Feature Selection dialog, click on the icon to the right of a desired feature to view its available installation options.
5. To select the feature to run from the network server, click on one of the following two options:
 - **This feature will be installed to run from network** to select a single feature to run from the network.
 - **This feature, and all subfeatures, will be installed to run from the network** to select the feature and all of its associated subfeatures to run from the network.
6. After making feature selection choices, proceed with the installation as described in [Custom Installation on page 9](#).



Note: If you choose to run from source, all subfeatures are available, regardless of which subfeatures were selected or deselected using the feature tree.

Chapter 6. Maintenance Installation of Z and I Emulator for Windows

After you have successfully installed Z and I Emulator for Windows on your system, users can perform maintenance installations to their Z and I Emulator for Windows program. The maintenance installation utility has three functions:

- **Modify** allows users to change their feature selection options. For details on changing feature tree selections, see [Feature Selection on page 10](#).
- **Repair** analyzes the current configuration of Z and I Emulator for Windows and either repairs or reinstalls damaged features.
- **Remove** allows users to remove Z and I Emulator for Windows from their system.



Note:

1. When removing Z and I Emulator for Windows from your system, you are given the option to save the current program configuration for future installations of Z and I Emulator for Windows. If you choose to save the current settings, when you reinstall Z and I Emulator for Windows you are asked if you would like to use the previous settings to reinstall the product.
2. To remove a source image of Z and I Emulator for Windows created during an administrative installation, you must manually delete the source image directory from the network drive.

When the **Program Maintenance** dialog opens, select **Modify**, **Repair**, or **Remove** and click **Next**.



Note: To successfully run maintenance installation, the Z and I Emulator for Windows installation image must be available on either the installation image or on the network server. If you installed from a network server, the installation image must still be present at the original network location. If the installation image is not present, when you use the Modify or Remove utility to add features or to remove Z and I Emulator for Windows from your system, you may receive one of the following error messages:

- The feature you are trying to use is on a installation image or other removable disk that is not available.
- The feature you are trying to use is on a network resource that is not available.

To continue with maintenance installation you must either insert the installation image or browse the network to find the new location of the installation image.

Chapter 7. Remote Installation of Z and I Emulator for Windows

Z and I Emulator for Windows supports remote installation using either Tivoli® Software Distribution or Microsoft® Systems Management Server (SMS) 2.0 Service Pack 2, or higher. Remote installation and uninstallation can be performed in a normal mode (attended) or silent mode (unattended).

Remote Installation Using SMS

A remote installation using SMS consists of the following steps:

1. Perform an administrative installation to copy Z and I Emulator for Windows installation files to the network (see [Administrative Installation on page 21](#)).
2. Create an SMS package containing the Z and I Emulator for Windows installation software.
3. Create an SMS job to distribute and install the software package.



Note: Z and I Emulator for Windows provides a sample SMS file, HCL Z and I Emulator for Windows.sms, for use in creating the SMS package. You can also create your own SMS file. An SMS file is the same as a Package Definition File (PDF) used in previous versions of Microsoft® SMS.

For detailed and up-to-date instructions on installing and deploying Z and I Emulator for Windows using SMS, refer to the SMS product documentation provided at <http://www.microsoft.com/smsmgmt>.

Remote Installation Using Active Directory Group Policy

Z and I Emulator for Windows can be distributed automatically to client computers or users via Microsoft Active Directory group policy.

For more information on how to distribute Z and I Emulator for Windows with Active Directory group policy, please refer to the Microsoft Windows knowledge base article at <http://support.microsoft.com/kb/816102>.

Chapter 8. InstallShield Command-Line Parameters

InstallShield uses setup.exe as the bootstrap loader to call the Microsoft® Windows Installer service. Setup.exe can accept command-line parameters that allow you to perform administrative installations, run silent installations, and complete other administrative tasks. Using the /v parameter, other parameters can also be passed through setup.exe to the Windows Installer database (MSI package).

By default, setup.exe creates a verbose installation log with the file name pcsinst.log, and places it in the folder named by the environment variable %temp%. This behavior is overridden when command-line arguments are passed to the Windows® Installer using the /v parameter, as described in [Parameter Descriptions on page 26](#).



Note: If %temp% points to a nonexistent folder and the /v flag is not used to override the default parameters passed to the Windows® Installer, then setup.exe will fail.

Setup.exe accepts the command-line parameters listed in [Table 2: InstallShield Command-Line Parameters on page 26](#). Descriptions of each parameter are listed in [Parameter Descriptions on page 26](#).

Table 2. InstallShield Command-Line Parameters

Parameter	Description
/v	Passes parameters to MSI package.
/s	Causes setup.exe to be silent.
/l	Specifies the setup language.
/a	Performs administrative installation.
/j	Installs in advertise mode.
/x	Performs setup uninstall.
/f	Launches setup in repair mode.
/w	Setup.exe waits for the installation to finish before exiting.
/qn	A Windows® Installer MSI parameter that causes everything but setup.exe to be silent. This sets the user interface level to zero.

Parameter Descriptions

Passing parameters to the MSI package

/v

The /v command-line parameter enables you to pass parameters supported by Windows Installer through setup.exe to the MSI package. For example, you can create and save a verbose log file to a location of your choice by passing the /L parameter through setup.exe to the MSI package. To create the log file, type:

```
E:\ZIEWin_pkgs\xxx\setup.exe /v"/L*v\"%temp%\pcsinst.log"
```

where:

- `E:` is your installation image drive.
- `xxx` is `mls`.

For more information on supported command-line parameters and specific usage examples, refer to the Web site <http://www.msdn.microsoft.com>.



Note: The `/v` argument must be the last InstallShield parameter on the command line. Though supported Windows Installer parameters may be passed through to the MSI package, no InstallShield command-line parameters can follow the `/v` argument.

Running setup.exe silently

`/s`

To prevent `setup.exe` from displaying a progress bar, use the `/s` command-line parameter. To have `setup` run silently with no dialogs, pass the Windows Installer `/qn` command-line parameter through `setup.exe` using the `/v` parameter. Refer to Microsoft's documentation of command-line parameters for other `/q` user interface options. To run a silent installation, type:

```
E:\install\xxx\install\ZIEWin\setup.exe /s /v"/L*v
\ "%temp%\pcsinst.log" /qn"
```

where:

- `E:` is your installation image drive.
- `xxx` is `mls`.



Note: You can pass an initialization file to the MSI package and run the installation silently using the `/s /v /qn` parameters in the following command:

```
E:\install\xxx\install\ZIEWin\setup.exe /s /v" /L*v
\ "%temp%\pcsinst.log"
USEINI="\C:\ZIE for Windows\ZIEWin.ini" /qn"
```

where `xxx` is `mls`.

To install silently from source, where source medium is a network server, use the `/s /v /qn` parameters after pointing to the installation point in the command line.

To uninstall Z and I Emulator for Windows silently, use the `/s` parameter in conjunction with the `/x` parameter as shown in the following example:

```
X:\install\ZIEWin\setup.exe /s /x
```

where `X:` is the location of the Z and I Emulator for Windows installation directory.

Specifying the setup language

`/l`

The `/l` command-line parameter enables you to specify what language to use during setup by using the appropriate decimal language identifier. For a list of language identifiers, see #unique_40. For example, to change the setup language to Czech, type:

```
E:\install\xxx\install\ZIEWin\setup.exe /l"1029"
```

Administrative installation

`/a`

Administrative installation installs a source image to the network server. This enables users with access to the network to install Z and I Emulator for Windows directly from the network server.

Advertise mode

`/j`

Advertisement enables users to install features of Z and I Emulator for Windows when they need them rather than during setup. Features that are available for installation are advertised with shortcuts on the user's system for later installation.

Uninstall mode

`/x`

Uninstall mode removes Z and I Emulator for Windows from your system.

Repair mode

`/f`

Launching `setup.exe` in the repair mode checks the key file of every installed feature and reinstalls any feature that is determined to be missing, corrupt, or an older version.

Chapter 9. Abbreviations Used in This Book

API	Application Programming Interface
CPI-C	Common Programming Interface for Communications
EHLLAPI	Emulator High Level Language Application Programming Interface
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
LAN	Local Area Network
LSP	LAN Support Program
MSI	Windows Installer Database
MSP	Windows Installer Patch
MST	Windows Installer Transform
TCP/IP	Transmission Control Protocol/Internet Protocol
WAN	Wide Area Network

Chapter 10. Notices

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