

Building Console and Silent Installers

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Introduction

In a contemporary environment, an end user is likely to find a number of heterogeneous systems. They will be installing and uninstalling with different platforms, different operating environments, and different interaction environments. InstallAnywhere helps you meet the needs of these end users by presenting installer options that can run in any number of environments.

Beyond the basic installer wizard, graphical user tools, and variable-based rules, InstallAnywhere offers additional options for you to use when building an installer. This white paper describes additional installation-related concepts, including:

- Console-mode, for command-line-driven installations
- Silent installations, for working with limited or no user interaction

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Console Installers

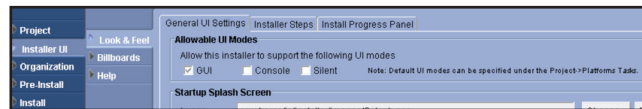
In enterprise-level environments, it is not uncommon for end users to install applications to servers and other remote systems. In these cases, a rich graphical user interface (GUI) such as that provided by InstallAnywhere's standard installer modes is not always desirable. You may find that your end users will need command-line interface mode installer, or even a silent installation that requires no end-user interaction.

InstallAnywhere Enterprise Edition supports both console-mode and silent-mode installations. Console mode provides your end user with a text-only interface, similar to that found in ANSI terminal applications. Silent mode provides an automated non-interactive installation mode, which can either run entirely using the default settings you defined in the project, use intelligent logic to determine installation parameters, or read configuration information from a simple response file.

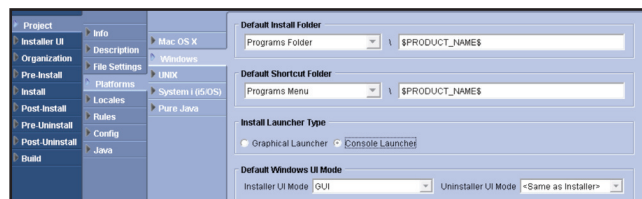
These modes provide enormous flexibility in your installation, enabling you to give end users a choice of installation mode that best meets their needs.

Console-mode installers enable your end users a non-graphical user interface structured to enable interaction through text only. Console mode is intended to add support for non-graphical environments such as those common on so called "headless" Unix systems. Console mode mimics the default GUI steps provided by InstallAnywhere, and uses standard input and output. The biggest advantage to console mode is that Unix developers no longer need X Windows (X11) to run their installers.

To enable console mode for your project, you must select the **Console** check box in the **Installer UI > Look & Feel** task.



Additionally, to enable console mode for a Windows installer, choose the **Console Launcher** option for the **Install Launcher Type** in the task **Project > Platforms > Windows**, pictured in the following figure. Starting with InstallAnywhere 2009, you can set the default UI mode of the uninstaller independently of the installer.



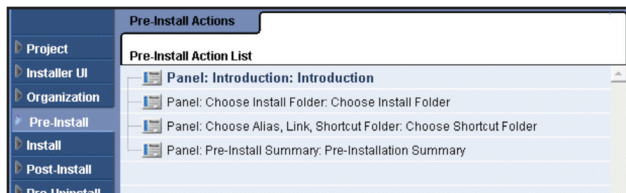
To run an installer in console mode, the user runs the installer with the `-i console` argument, as in the following:

```
install -i console
```

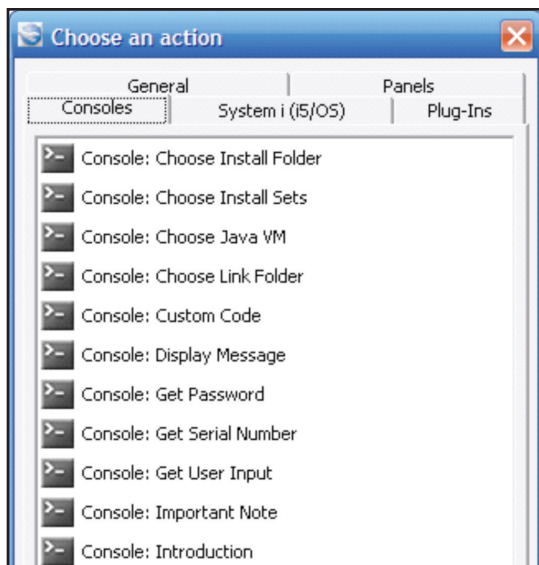
Note: If console mode has not been enabled for your project, the installer displays an error message that begins, "Installer User Interface Not Supported".

InstallAnywhere does not automatically provide console alternatives for panels you have added to your installer. You must provide consoles for each panel that you want displayed during console mode. In general, InstallAnywhere console actions provide parity with panels provided in the graphical mode.

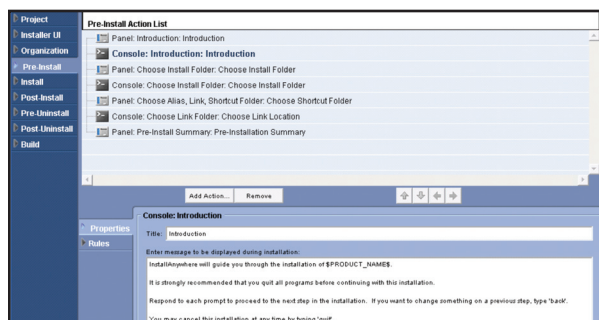
For example, the **Pre-Install** task normally includes graphical panels such as **Introduction**, **Choose Install Folder**, and **Pre-Install Summary**.



To add console equivalents to these graphical panels, begin by clicking the **Add Action** button and selecting the **Consoles** tab.



You then select the desired consoles and click **Add**, which places the console actions in the **Pre-Install** task. It is not necessary to insert the console actions next to their graphical panel equivalents, but doing so can help with the overall organization. Another approach is to group the panels and console actions separately.



As with graphical panels, the customizer for a console action enables you to modify the text and behavior of the action in console mode. The default text of a console action is generally similar to the text used by the graphical panel, though slightly reworded to reflect the text-only mode. For example, where panel text might refer to **Previous** and **Next** buttons, the console action mentions typing "back" to return to a previous step.

At run time, the console actions display the text you specified in the respective customizers. For example, the console version of the **Introduction** panel appears as follows:

```
Introduction
-----
InstallAnywhere will guide you through the installation of
SampleApp.
```

It is strongly recommended that you quit all programs before continuing with this installation.

Respond to each prompt to proceed to the next step in the installation. If you want to change something on a previous step, type 'back'.

You may cancel this installation at any time by typing 'quit'.

PRESS <ENTER> TO CONTINUE:

Similarly, the console version of the **Choose Link Location** panel appears similar to the following:

```
Choose link location
-----
Where would you like to create links?
-> 1- Default: C:\Documents and Settings\User\Start
Menu\Programs\SampleApp
    2- In your home folder
    3- Choose another location...
    4- Don't create links
```

ENTER THE NUMBER OF AN OPTION ABOVE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT:

Console-mode enables text to be output to the console line-by-line. It does not support formatted text, clearing the screen, or positioning the cursor.

Tip: Running the installer in console mode sets the InstallAnywhere variable `INSTALLER_UI` to the value "CONSOLE". If necessary, you can test the value of `INSTALLER_UI` to determine whether any action should run.

Silent Installers

Silent mode, which enables an installer to run without any user interaction, is fully supported on all Unix platforms. (A near-silent mode, displaying only progress information, is available on Windows and Mac OS X.) As with console mode, you must enable silent mode for your project in the **Look & Feel** subtask.

To perform a silent installation from the command line, a user runs the following command:

```
install -i silent
```

This command runs the silent installer with all of the project's default settings. As with console mode, the user will see an error message if the project does not support silent mode.

Using a Response File

To override the default settings in a silent installation, a user can point to a response file. A response file contains the values of InstallAnywhere variables to use during a silent installation.

To generate a response file, a user runs the installer with the `-r` switch. You can also use the setting **Always Generate Response File** in the **Project > Info** subtask. When the installer runs, it records end-user choices in a file called `installer.properties`, stored in the same directory as the installer.

Sample contents of a response file are the following.

```
# Fri Oct 31 25:00:00 CST 2008
# Replay feature output
# -----
# This file was built by the Replay feature of InstallAnywhere.
# It contains variables that were set by Panels, Consoles or
# Custom Code.
#Choose Install Folder
# -----
USER_INSTALL_DIR=C:\Program Files\SampleApp3000
#Choose Shortcut Folder
# -----
USER_SHORTCUTS=C:\Documents and Settings\All
Users\Start Menu\Programs\SampleApp3000
```

Apart from comments (lines that begin with the hash sign #), the response file contains entries of the form:

```
PROPERTY_NAME=Value
```

A user can manually create a response file or modify property values inside a recorded response file as appropriate.

When a user deploys an installation, the installer executable looks for a file called `installer.properties` or `installname.properties`, and if such a file is present reads the property names and values and uses the specified property values during the installation. To specify a different file name or location, the user can specify the desired response file with the `-f` switch, as in:

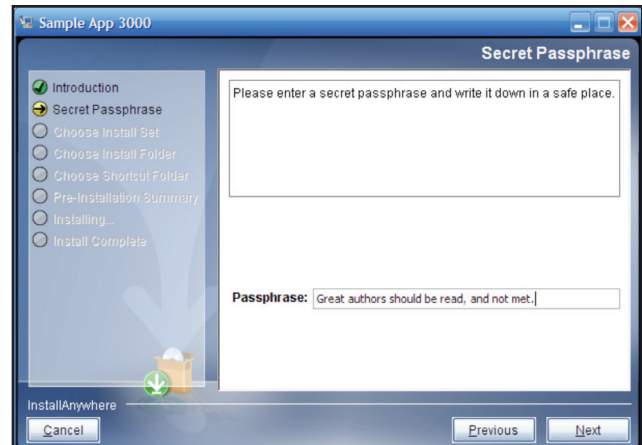
```
./install.bin -i silent -f /usr/tmp/SampleResponseFile.properties
```

The response file can specify the user-interface mode by setting `INSTALLER_UI=SILENT` (for example) in the response file. This negates the need for using the additional `-i` switch to the installer executable.

Configuring Variables Used in Response Files

In some cases it is undesirable to store property values in a response file generated with the `-r` switch. In the **Project > Info** task, you can configure variables to encrypt or exclude from a response file.

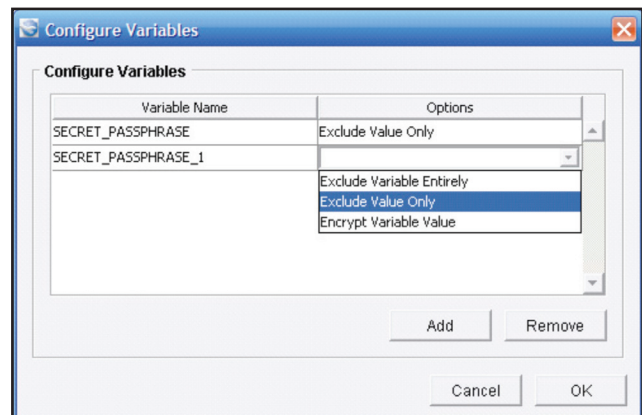
For example, suppose you have a simple **User Input** panel that asks the user to provide a sensitive passphrase.



In the InstallAnywhere project, the panel is configured to store the user input in InstallAnywhere variables with the base name `SECRET_PASSPHRASE`, which means the variables `SECRET_PASSPHRASE` and `SECRET_PASSPHRASE_1` both expose the sensitive data.



To prevent the value from being included in the response file, begin by clicking the **Configure** button in the **Project > Info** task, which displays the **Configure Variables** dialog box. Click **Add** to add the names of variables to encrypt or exclude from the response file, along with the desired behavior (whether to exclude the entire variable entry from the response file, exclude only the value, or encrypt the variable's value).



If you select **Exclude Value Only**, a user who generates a response file by running `install -r` receives the following entries for the corresponding panel:

```
#Secret Passphrase  
#-----  
SECRET_PASSPHRASE=  
SECRET_PASSPHRASE_1=
```

Summary

This white paper discussed additional installation-related concepts such as console-mode and, silent installations. It also highlighted how InstallAnywhere helps developers execute best practices for these advanced concepts.

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You can download a free trial version of InstallAnywhere from the Aceso Software Web site at:
www.aceso.com/installanywhere/eval.

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