

Evaluation of InstallAnywhere Variables

InstallAnywhere variables can be set by reference or by value (evaluated at assignment). The default behavior for InstallAnywhere variables is to be set by reference—evaluated at execution time. However, variables defined by the Advanced Designer actions, **Set InstallAnywhere Variable - Multiple Variables** and **Set InstallAnywhere Variable - Single Variable**, can be expressly set to **Evaluate at Assignment**. Hence, these variables keep the value they have when they are set.

Using Evaluate at Assignment allows you to define variables that are self-referencing. For example, a construction like `$USER_DIR$=$USER_DIR$+"MY_SUB_DIRECTORY"` can be used to redefine the value for `$USER_DIR$`. The same expression, without the Evaluate at Assignment setting, creates an infinite loop as it attempts to resolve `$USER_DIR$`.

Example—Evaluate at Assignment Checked

```
A=$USER_DIR$
B=A //Set using Evaluate at Assignment (set by value).

A=A+"/mydir/" //Set using Evaluate at Assignment.
print B
```

In the code above, B resolves to `$USER_DIR$`.

Example—Evaluate at Assignment Unchecked

```
A=$USER_DIR$
B=A //Set without using Evaluate at Assignment (set by reference).

A=A+"/mydir/" //Set using Evaluate at Assignment.
print B
```

In the code above, B resolves to `$USER_DIR$/mydir/`.

Results of Evaluate at Assignment		
Expression	Evaluate at Assignment	Result
<code>\$MY_VAR\$=\$MY_VAR\$+".txt"</code>	Checked	Appends <code>.txt</code> to the value of <code>\$MY_VAR\$</code> .
<code>\$MY_VAR\$=\$MY_VAR\$+".txt"</code>	Unchecked	Code error. Infinite loop.

Methods of Setting InstallAnywhere Variables

InstallAnywhere variables can be set in many ways:

- Provided by the Java Virtual Machine. InstallAnywhere installers have access to all properties of the Java Virtual Machine. These are stored in the variable set `$prop.PROPERTY_NAME$` where *PROPERTY_NAME* is the name of the Java property.
- Imported from the environment. InstallAnywhere's LaunchAnywhere technology imports all environment variables on Windows and Unix based systems. These values are stored in the variable set `$lax.nl.env.VARIABLE_NAME$` (Example: On Unix systems `$lax.nl.env.PATH$` would take the value of the PATH environment variable). These variables are imported when the installer is launched and are read-only. To set environment variables, use the **Set Environment Variable** action.
- Set by specific actions. The **Set InstallAnywhere Variable - Single Variable** and **Set InstallAnywhere Variable - Multiple Variables** actions set InstallAnywhere variables to specific values.
- Set via user input. Most Panel and Console actions set InstallAnywhere variables.
- Set by installer/uninstaller progress. As the installer and uninstaller progress certain values are set or updated (such as `$INSTALL_SUCCESS$`).
- Set via custom code.

Checking the Value of a Variable

The values of many variables may change throughout the progress of the installer. The best way to check the values of variables during the install is the **Output Text to Console** and **Output Debug Information** actions. Both of these can be used to print out useful debugging information to either the console or text files. Developers can also use the **Display Message** panel to show the variable and its value.