This is documentation for WiX Toolset **v3**, which is no longer actively maintained.

For up-to-date documentation, see the **latest version** (v4.0).

Version: v3

How To: Install the Visual C++ Redistributable with your installer

If your application depends on the Visual C++ runtimes you can include them as part of your installer to simplify the installation experience for your end users. This how to describes including the Visual C++ runtime merge modules into your installer and explains the expected ICE warnings you will see.

Step 1: Obtain the correct Visual C++ runtime merge modules

The Visual C++ runtime merge modules are installed with Visual Studio and are located in **\Program Files\Common Files\Merge Modules**. The Visual C++ 8.0 runtime file is **Microsoft_VC80_CRT_x86.msm**. This same MSM is used for the Visual C++ 8.0 SP1 runtime, however it is updated in place by the Visual Studio 2005 SP1 installer. The Visual Studio 9.0 runtime file is **Microsoft_VC90_CRT_x86.msm**. There is generally no need to include the policy MSMs as part of the installation.

Step 2: Include the merge module in your installer

To include the merge module in your installer use the Merge and MergeRef elements. The following example illustrates how these elements are used.

```
<DirectoryRef Id="TARGETDIR">
  <Merge Id="VCRedist" SourceFile="MySourceFiles\Microsoft_VC80_CRT_x86.msm" DiskId="1" Language="0"/>
</DirectoryRef>
```

```
<Feature Id="VCRedist" Title="Visual C++ 8.0 Runtime" AllowAdvertise="no" Display="hidden" Level="1">
  <MergeRef Id="VCRedist"/>
</Feature>
```

The Merge element ensures the merge module is included in the final Windows Installer package. A unique id is assigned using the Id attribute. The SourceFile attribute points to the location of the merge module on your machine. The DiskId attribute should match the DiskId specified in your project's Media element. The Language attribute should always be 0.

The MergeRef element is used within a Feature element to actually install the merge module. In the example above a feature specific to the runtime is created and marked as hidden to prevent it from displaying in any UI your installer may use. The MergeRef refers to the merge module by its unique id.

A note about ICE warnings

Including the Visual C++ Runtime merge module in your installer will result in the following ICE warnings:

```
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
Component, Column: KeyPath, Key(s): downlevel_manifest.8.0.50727.762.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
```

```
Component, Column: KeyPath, Key(s): downlevel_manifest.8.0.50727.100.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
Component, Column: KeyPath, Key(s): downlevel_manifest.8.0.50727.101.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
Component, Column: KeyPath, Key(s): downlevel_manifest.8.0.50727.103.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
Component, Column: KeyPath, Key(s): downlevel_manifest.8.0.50727.104.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
Component, Column: KeyPath, Key(s): downlevel_manifest.8.0.50727.193.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
Registry, Column: Registry, Key(s):
reg_downlevel_manifest.8.0.50727.100.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
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light.exe(0,0): warning LGHT1076: ICE03: String overflow (greater than length permitted in column); Table:
Registry, Column: Registry, Key(s):
reg_downlevel_manifest.8.0.50727.762.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E
light.exe(0,0): warning LGHT1076: ICE25: Possible dependency failure as we do not find
CRT.Policy.63E949F6_03BC_5C40_FF1F_C8B3B9A1E18E@0 v in ModuleSignature table
light.exe(0,0): warning LGHT1076: ICE82: This action SystemFolder.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E has
duplicate sequence number 1 in the table InstallExecuteSequence
light.exe(0,0): warning LGHT1076: ICE82: This action SystemFolder.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E has
```

```
duplicate sequence number 1 in the table InstallUISequence
light.exe(0,0): warning LGHT1076: ICE82: This action SystemFolder.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E has
duplicate sequence number 1 in the table AdminExecuteSequence
light.exe(0,0): warning LGHT1076: ICE82: This action SystemFolder.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E has
duplicate sequence number 1 in the table AdminUISequence
light.exe(0,0): warning LGHT1076: ICE82: This action SystemFolder.98CB24AD_52FB_DB5F_FF1F_C8B3B9A1E18E has
duplicate sequence number 1 in the table AdvtExecuteSequence
```

These warnings are expected and are due to how the Visual C++ merge modules were authored.

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