



Heat harvesting

In WiX v4, Heat is available in a WiX extension NuGet Package. To use Heat to harvest directories, files, or projects:

1. Add a reference to the [WixToolset.Heat NuGet package](#).
2. Add an item group based on the kind of harvesting you want to do in your project:
 - `HarvestDirectory` to harvest files from a directory
 - `HarvestFile` to harvest data from a file
 - `HarvestProject` to harvest output from a project

Using `HarvestDirectory` to harvest files from a directory

`HarvestDirectory` items can contain the following metadata to control harvesting:

Metadata	Description
<code>ComponentGroupName</code>	Optional string metadata. When harvesting multiple directories in a project, specify this metadata to create unique file names for the generated authoring. The name of the ComponentGroup to create for all the generated authoring.
<code>DirectoryRefId</code>	Optional string metadata. The ID of the directory to reference instead of TARGETDIR.

Metadata	Description
<code>KeepEmptyDirectories</code>	Optional boolean metadata. Whether to create Directory entries for empty directories. The default is false .
<code>PreprocessorVariable</code>	Optional string metadata. Substitute <code>SourceDir</code> for another a preprocessor variable name. For example, specify <code>MyDir</code> to have Heat use <code>\$(MyDir)</code> instead of <code>SourceDir</code> .
<code>SuppressCom</code>	Optional boolean metadata. Suppress generation of COM registry elements. The default is false .
<code>SuppressRegistry</code>	Optional boolean metadata. Suppress generation of any registry elements. The default is false .
<code>SuppressRootDirectory</code>	Optional boolean metadata. Suppress generation of a Directory element for the parent directory of the file. The default is false .
<code>Transforms</code>	Optional string metadata. Semicolon-delimited list of paths to XSL transforms to apply to the generated authoring.

The following properties control harvesting:

Property	Description
<code>HarvestDirectoryAutogenerateGuids</code>	Optional boolean property. Whether to generate authoring that relies on auto-generation of component GUIDs. The default is <code>\$(HarvestAutogenerateGuids)</code> if specified; otherwise, true .

Property	Description
<code>HarvestDirectoryComponentGroupName</code>	Optional string property. When harvesting multiple directories in a project, specify this metadata to create unique file names for the generated authoring. The component group name that will contain all generated authoring.
<code>HarvestDirectoryDirectoryRefId</code>	Optional string property. The identifier of the Directory element that will contain all generated authoring.
<code>HarvestDirectoryGenerateGuidsNow</code>	Optional boolean property. Whether to generate authoring that generates durable GUIDs when harvesting. The default is <code>\$(HarvestGenerateGuidsNow)</code> if specified; otherwise, false .
<code>HarvestDirectoryKeepEmptyDirectories</code>	Optional boolean property. Whether to create Directory entries for empty directories when harvesting. The default is false .
<code>HarvestDirectoryNoLogo</code>	Optional boolean property. Whether to show the logo for heat.exe. The default is <code>\$(NoLogo)</code> if specified; otherwise, false .
<code>HarvestDirectoryPreprocessorVariable</code>	Optional string property. Substitute <code>SourceDir</code> for another a preprocessor variable name. For example, specify <code>MyDir</code> to have Heat use <code>\$(MyDir)</code> instead of <code>SourceDir</code> .
<code>HarvestDirectorySuppressAllWarnings</code>	Optional boolean parameter. Specifies that all warnings should be suppressed. The default is <code>\$(HarvestSuppressAllWarnings)</code> if

Property	Description
	specified; otherwise, false .
HarvestDirectorySuppressCom	Optional boolean property. Whether to suppress generation of COM registry elements when harvesting files in directories. The default is false .
HarvestDirectorySuppressFragments	Optional boolean property. Whether to suppress generation of separate fragments when harvesting. The default is <code>\$(HarvestSuppressFragments)</code> if specified; otherwise, true .
HarvestDirectorySuppressRegistry	Optional boolean property. Whether to suppress generation of all registry elements when harvesting files in directories. The default is false .
HarvestDirectorySuppressRootDirectory	Optional boolean property. Whether to suppress generation of a Directory element for all authoring when harvesting. The default is false .
HarvestDirectorySuppressSpecificWarnings	Optional string parameter. Specifies that certain warnings should be suppressed. The default is <code>\$(HarvestSuppressSpecificWarnings)</code> if specified.
HarvestDirectorySuppressUniqueIds	Optional boolean property. Whether to suppress generation of unique component IDs. The default is <code>\$(HarvestSuppressUniqueIds)</code> if specified; otherwise, false .

Property	Description
<code>HarvestDirectoryTransforms</code>	Optional string property. Semicolon-delimited list of paths to XSL transforms to apply to the generated authoring. The default is <code>\$(HarvestTransforms)</code> if specified.
<code>HarvestDirectoryTreatSpecificWarningsAsErrors</code>	Optional string parameter. Specifies that certain warnings should be treated as errors. The default is <code>\$(HarvestTreatSpecificWarningsAsErrors)</code> if specified.
<code>HarvestDirectoryTreatWarningsAsErrors</code>	Optional boolean parameter. Specifies that all warnings should be treated as errors. The default is <code>\$(HarvestTreatWarningsAsErrors)</code> if specified; otherwise, false .
<code>HarvestDirectoryVerboseOutput</code>	Optional boolean parameter. Specifies that the tool should provide verbose output. The default is <code>\$(HarvestVerboseOutput)</code> if specified; otherwise, false .

Example:

```
<Project Sdk="WixToolset.Sdk">
  <ItemGroup>
    <HarvestDirectory Include="FilesDir">
      <ComponentGroupName>HarvestedComponents</ComponentGroupName>
      <DirectoryRefId>ApplicationFolder</DirectoryRefId>
      <SuppressRootDirectory>true</SuppressRootDirectory>
    </HarvestDirectory>
  </ItemGroup>
</Project>
```

```
<BindPath Include="FilesDir" />
</ItemGroup>

<ItemGroup>
  <PackageReference Include="WixToolset.Heat" />
</ItemGroup>
</Project>
```

Using HarvestFile to harvest data from a file

HarvestFile items can contain the following metadata to control harvesting:

Metadata	Description
ComponentGroupName	Optional string metadata. The name of the ComponentGroup to create for all the generated authoring.
DirectoryRefId	Optional string metadata. The ID of the directory to reference instead of TARGETDIR.
PreprocessorVariable	Optional string metadata. Substitute SourceDir for another a preprocessor variable name. For example, specify MyDir to have Heat use \$(MyDir) instead of SourceDir.
SuppressCom	Optional boolean metadata. Suppress generation of COM registry elements. The default is false .
SuppressRegistry	Optional boolean metadata. Suppress generation of any registry elements. The default is false .

Metadata	Description
<code>SuppressRootDirectory</code>	Optional boolean metadata. Suppress generation of a Directory element for the parent directory of the file. The default is false .
<code>Transforms</code>	Optional string metadata. Semicolon-delimited list of paths to XSL transforms to apply to the generated authoring.

The following properties control harvesting:

Property	Description
<code>HarvestFileAutogenerateGuids</code>	Optional boolean property. Whether to generate authoring that relies on auto-generation of component GUIDs. The default is <code>\$(HarvestAutogenerateGuids)</code> if specified; otherwise, true .
<code>HarvestFileComponentGroupName</code>	Optional string property. When harvesting multiple directories in a project, specify this metadata to create unique file names for the generated authoring. The component group name that will contain all generated authoring.
<code>HarvestFileDirectoryRefId</code>	Optional string property. The identifier of the Directory element that will contain all generated authoring.
<code>HarvestFileGenerateGuidsNow</code>	Optional boolean property. Whether to generate authoring that generates durable GUIDs when harvesting. The default is

Property	Description
	<code>\$(HarvestGenerateGuidsNow)</code> if specified; otherwise, false .
<code>HarvestFileNoLogo</code>	Optional boolean property. Whether to show the logo for heat.exe. The default is <code>\$(NoLogo)</code> if specified; otherwise, false .
<code>HarvestFilePreprocessorVariable</code>	Optional string property. Substitute <code>SourceDir</code> for another a preprocessor variable name. For example, specify <code>MyDir</code> to have Heat use <code>\$(MyDir)</code> instead of <code>SourceDir</code> .
<code>HarvestFileSuppressAllWarnings</code>	Optional boolean parameter. Specifies that all warnings should be suppressed. The default is <code>\$(HarvestSuppressAllWarnings)</code> if specified; otherwise, false .
<code>HarvestFileSuppressCom</code>	Optional boolean property. Whether to suppress generation of COM registry elements when harvesting files in directories. The default is false .
<code>HarvestFileSuppressFragments</code>	Optional boolean property. Whether to suppress generation of separate fragments when harvesting. The default is <code>\$(HarvestSuppressFragments)</code> if specified; otherwise, true .
<code>HarvestFileSuppressRegistry</code>	Optional boolean property. Whether to suppress generation of all registry elements when harvesting files in directories. The default is false .

Property	Description
<code>HarvestFileSuppressRootDirectory</code>	Optional boolean property. Whether to suppress generation of a Directory element for all authoring when harvesting. The default is false .
<code>HarvestFileSuppressSpecificWarnings</code>	Optional string parameter. Specifies that certain warnings should be suppressed. The default is <code>\$(HarvestSuppressSpecificWarnings)</code> if specified.
<code>HarvestFileSuppressUniqueIds</code>	Optional boolean property. Whether to suppress generation of unique component IDs. The default is <code>\$(HarvestSuppressUniqueIds)</code> if specified; otherwise, false .
<code>HarvestFileTransforms</code>	Optional string property. Semicolon-delimited list of paths to XSL transforms to apply to the generated authoring. The default is <code>\$(HarvestTransforms)</code> if specified.
<code>HarvestFileTreatSpecificWarningsAsErrors</code>	Optional string parameter. Specifies that certain warnings should be treated as errors. The default is <code>\$(HarvestTreatSpecificWarningsAsErrors)</code> if specified.
<code>HarvestFileTreatWarningsAsErrors</code>	Optional boolean parameter. Specifies that all warnings should be treated as errors. The default is <code>\$(HarvestTreatWarningsAsErrors)</code> if specified; otherwise, false .
<code>HarvestFileVerboseOutput</code>	Optional boolean parameter. Specifies that the tool should provide verbose

Property	Description
	output. The default is <code>\$(HarvestVerboseOutput)</code> if specified; otherwise, false .

Example:

```
<Project Sdk="WixToolset.Sdk">
  <PropertyGroup>
    <HarvestFileSuppressUniqueIds>true</HarvestFileSuppressUniqueIds>
  </PropertyGroup>

  <ItemGroup>
    <HarvestFile Include="MyProgram.txt">
      <ComponentGroupName>TxtProductComponents</ComponentGroupName>
      <DirectoryRefId>INSTALLFOLDER</DirectoryRefId>
      <SuppressRootDirectory>true</SuppressRootDirectory>
    </HarvestFile>

    <HarvestFile Include="MyProgram.json">
      <ComponentGroupName>JsonProductComponents</ComponentGroupName>
      <DirectoryRefId>INSTALLFOLDER</DirectoryRefId>
      <SuppressRootDirectory>true</SuppressRootDirectory>
    </HarvestFile>
  </ItemGroup>

  <ItemGroup>
    <PackageReference Include="WixToolset.Heat" />
  </ItemGroup>
</Project>
```

Using HarvestProject to harvest output from a project

Harvesting projects is disabled by default because it may not always work correctly. To enable it, set `EnableProjectHarvesting` to **true** in your project file.

`HarvestProject` items can contain the following metadata to control harvesting:

Metadata	Description
<code>ProjectOutputGroups</code>	Semicolon-delimited list of project output groups to harvest. Examples include <code>Binaries</code> and <code>Source</code> .
<code>Transforms</code>	Optional string metadata. Semicolon-delimited list of paths to XSL transforms to apply to the generated authoring.

The following properties control harvesting:

Property	Description
<code>HarvestProjectsAutogenerateGuids</code>	Optional boolean property. Whether to generate authoring that relies on auto-generation of component GUIDs. The default is <code>\$(HarvestAutogenerateGuids)</code> if specified; otherwise, true .

Property	Description
<code>HarvestProjectsGenerateGuidsNow</code>	Optional boolean property. Whether to generate authoring that generates durable GUIDs when harvesting. The default is <code>\$(HarvestGenerateGuidsNow)</code> if specified; otherwise, false .
<code>HarvestProjectsNoLogo</code>	Optional boolean property. Whether to show the logo for heat.exe. The default is <code>\$(NoLogo)</code> if specified; otherwise, false .
<code>HarvestProjectsProjectOutputGroups</code>	Optional string property. Semicolon-delimited list of project output groups to harvest. Possible Values: <code>Binaries</code> , <code>Symbols</code> , <code>Documents</code> , <code>Satellites</code> , <code>Sources</code> & <code>Content</code> .
<code>HarvestProjectsSuppressAllWarnings</code>	Optional boolean parameter. Specifies that all warnings should be suppressed. The default is <code>\$(HarvestSuppressAllWarnings)</code> if specified; otherwise, false .
<code>HarvestProjectsSuppressFragments</code>	Optional boolean property. Whether to suppress generation of separate fragments when harvesting. The default is <code>\$(HarvestSuppressFragments)</code> if specified; otherwise, true .
<code>HarvestProjectsSuppressSpecificWarnings</code>	Optional string parameter. Specifies that certain warnings should be suppressed. The default is <code>\$(HarvestSuppressSpecificWarnings)</code> if specified.
<code>HarvestProjectsSuppressUniqueIds</code>	Optional boolean property. Whether to suppress generation of unique

Property	Description
	component IDs. The default is <code>\$(HarvestSuppressUniqueIds)</code> if specified; otherwise, false .
<code>HarvestProjectsTransforms</code>	Optional string property. Semicolon-delimited list of paths to XSL transforms to apply to the generated authoring. The default is <code>\$(HarvestTransforms)</code> if specified.
<code>HarvestProjectsTreatSpecificWarningsAsErrors</code>	Optional string parameter. Specifies that certain warnings should be treated as errors. The default is <code>\$(HarvestTreatSpecificWarningsAsErrors)</code> if specified.
<code>HarvestProjectsTreatWarningsAsErrors</code>	Optional boolean parameter. Specifies that all warnings should be treated as errors. The default is <code>\$(HarvestTreatWarningsAsErrors)</code> if specified; otherwise, false .
<code>HarvestProjectsVerboseOutput</code>	Optional boolean parameter. Specifies that the tool should provide verbose output. The default is <code>\$(HarvestVerboseOutput)</code> if specified; otherwise, false .

Example:

```
<Project Sdk="WixToolset.Sdk">
  <PropertyGroup>
    <EnableProjectHarvesting>true</EnableProjectHarvesting>
    <HarvestProjectsSuppressUniqueIds>true</HarvestProjectsSuppressUniqueIds>
```

```
</PropertyGroup>

<ItemGroup>
  <HarvestProject Include="..\MyProgram\MyProgram.csproj" ProjectOutputGroups="Binaries;Content;" />
</ItemGroup>


<!-- As soon as EnableProjectHarvesting set to true, Heat will try to Harvest all referenced projects.
Notice the DoNotHarvest flag, this tells Heat not to do that. -->
<ItemGroup>
  <ProjectReference Include="..\MyProgram\MyProgram.csproj" DoNotHarvest="true" />
</ItemGroup>

<ItemGroup>
  <PackageReference Include="WixToolset.Heat" />
</ItemGroup>
</Project>
```

Once harvested, you can use these output groups in your wxs file as with a ComponentGroupRef.

Example:

```
<ComponentGroupRef Id="MyProgram.Binaries" />
<ComponentGroupRef Id="MyProgram.Content" />
```

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