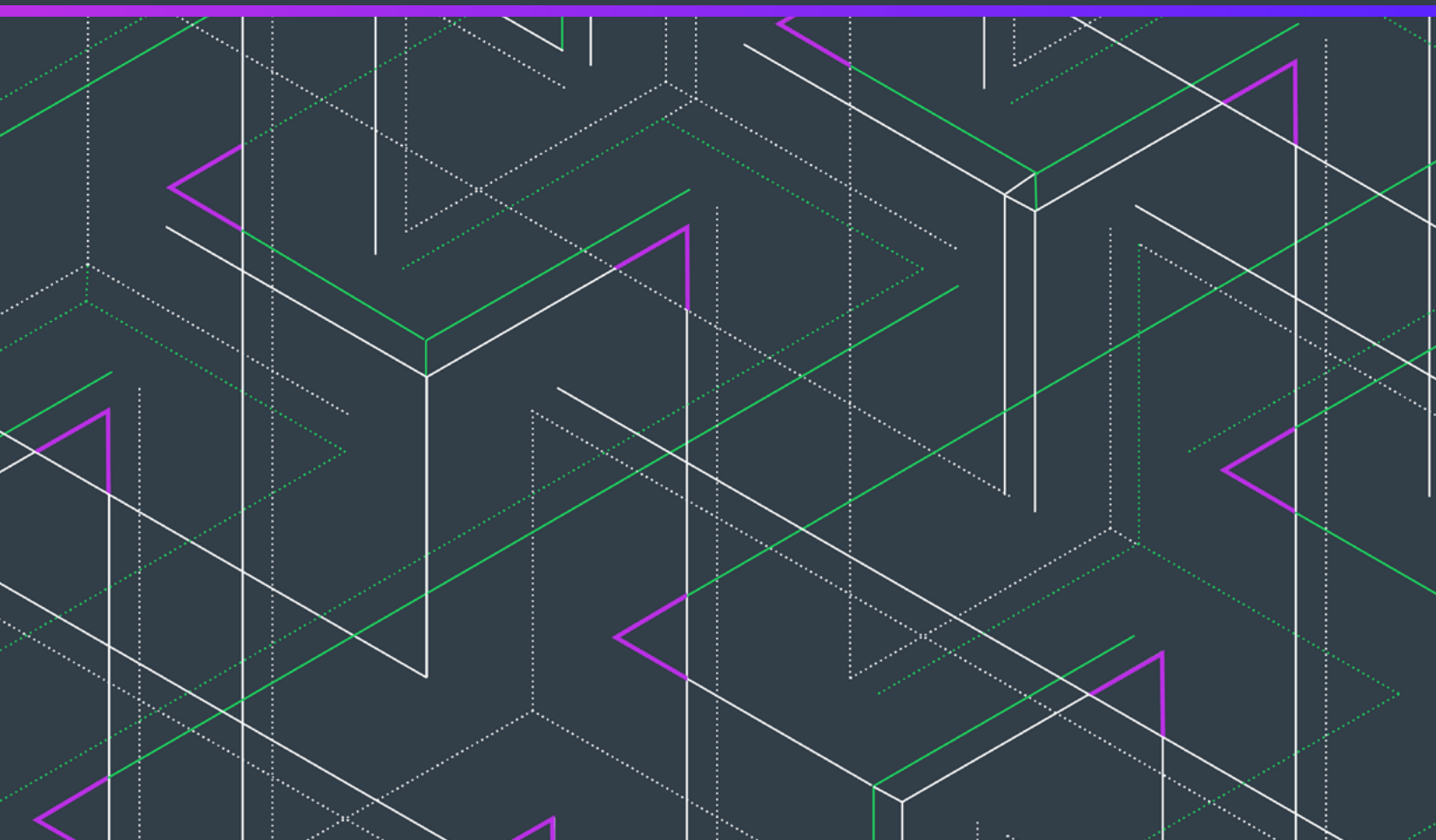
WHITE PAPER

revenera

InstallShield Secrets

Time-saving tips for faster installation builds



InstallShield offers all sorts of ways to build installations better and faster. In fact, there are probably ways to use it that you didn't realize were there. Here are some great secrets and practical tips to help you get even more out of InstallShield.

SECRET #1: Script Editors in InstallShield

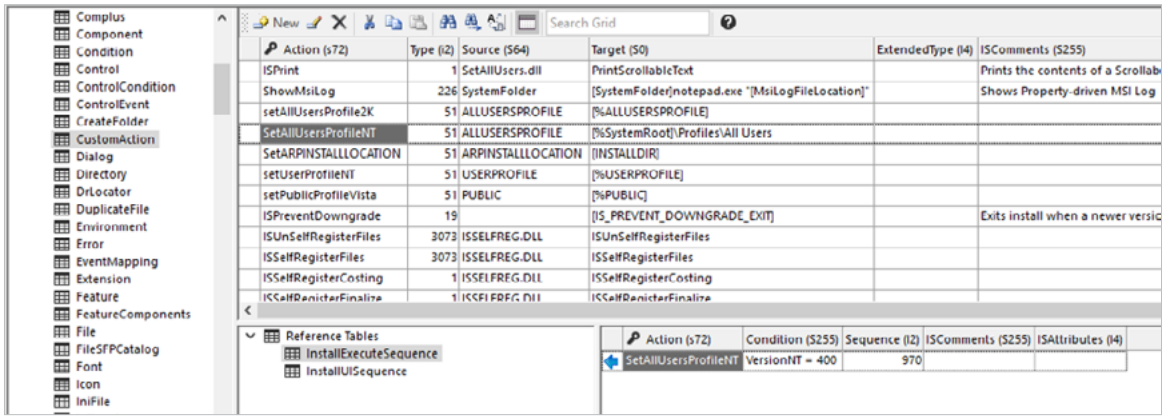
Did you want to edit a script without moving away from InstallShield? The product has you covered with a powerful intellisense for VBScript, InstallScript and Powershell. You no longer need editors outside of the product to make changes to your scripts.

SECRET #2: Standalone Build

InstallShield comes with a full GUI designer interface. While full IDE interface is very helpful and gets things done in a more intuitive fashion, it helps you out as you begin creating the installation. Once you are done authoring your project, the next stage is "builds" on a regular basis. Why should you open your project in the designer to do a build? That's where adding on Standalone Build (SAB) to InstallShield comes in handy. SAB is a very simple command line build utility, which will help you build your projects on a machine without a full designer interface.

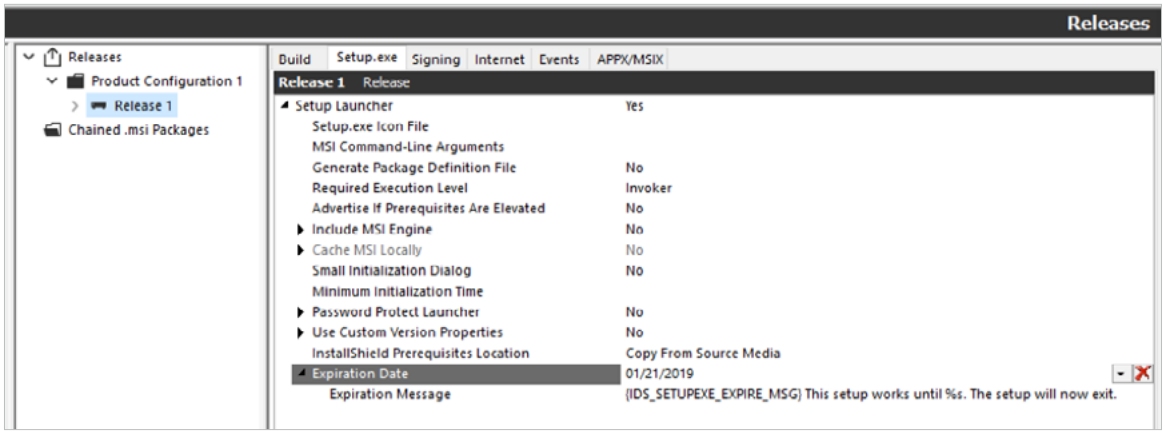
SECRET #3: Reference Tracking

While you always had access to direct editor, did you know that it now includes reference tracking to data from other tables? You can easily find out which tables refer the item you selected by merely clicking on the row. If this data is overwhelming, you can add it by using the switch in the table toolbar.



SECRET #4: Setups That Expire

Did you know you can create self-destructing setups that expire after a date? If you ever wanted to provide a setup to a particular customer or a run beta that expires after "sometime," this may come in handy. Configure that in the releases view and give beta builds to your customers easily.



SECRET #5: "Auto" to "Wizard" Creates Project File

File -> Open is known to you if you've tried to reverse engineer a vendor MSI Package, but did you know that by changing the Drop-Down list for "Open As" from "Auto" to "Wizard" that instead of opening the project, it will let you create a new project file?

Obviously, there are other possibilities as well. Generally, this works because most records in the project file have a 1:1 mapping with the MSI database, making backwards conversion possible.

Here is how you can use this:

- Regaining Project sources, if the original project file was lost
- Changing an Uncompressed package into a Compressed package by creating a new release configuration in the new Project file
- Converting an MSI built with a different tool to an InstalllShield project (i.e. Wise, Wix, Orca, InstallAware, etc.)

SECRET #6: XML System Searches

Need a value from an XML File? Put down that Script! While not natively supported by Windows Installer, InstallShield has quietly supported this functionality for years via a C++ *.dll custom action. Simply view the Help to find more details.

SECRET #7: Use Property References All Over the Place

If you find yourself saying, "I wish X feature could use a Property reference", there's a sort of process you can go through to figure out if this is a possibility:

1. Check to see where the Table data is stored. Basically, type a descriptive string into the UI you are using to configure whatever data, and search for it in InstallShield's Direct Editor.
2. Once you've found the table record that holds your data entered in step 1, press 'F1' to bring up the Table Reference.
3. If the field has a data type of 'Formatted', then it can use a Property Reference. There are some other field types that also support this formatting:

TEMPLATE

PATH

REGPATH

ANYPATH

FORMATTEDSDDLTEXT

SHORTCUT

InstallShield-specific tables (generally named like ISxxx…) are a separate topic, however. Since these tables are used internally and are not intended to be manipulated directly, there's no table reference for them.

However, while not advertised in all parts of the product, generally the InstallShield Developers will use the Windows Installer API "MsiFormatRecord" when processing a data table in an *.msi package:

MsiFormatRecord Function

http://msdn.microsoft.com/en-us/library/aa370109(VS.85).aspx

If a data table contains a string value of some sort that's not obviously used as a Primary key, there's a decent chance it will be formatted by the associated InstallShield Custom Action at runtime before the data is used. It's best to try a property reference if you're not certain, and see if this works for you.

SECRET #8: InstallShield MSI Tools

When you have an MSI that doesn't work quite right, what do you do? That's what these were designed for. The InstallShield Help contains information on these, but let's look at a list of what's most useful:

MSIDiff.exe—Allows a Visual Diff of two MSI databases. Incredibly useful when some new revision breaks, and you are not certain why. Also if you are trying to diagnose a tough patching issue where the state of the database tables becomes very relevant.

MsiSleuth.exe—Allows you to see the various Product, Feature and Component states for MSI packages. It's useful when Virtualizing MS Office, since Microsoft Office uses Windows Installer APIs to determine whether it should manually trigger a repair or not. You can add this tool to the sequenced App-V package.

RegSpyUI.exe—Not officially an "InstallShield MSI Tool", this tool is a standard part of InstallShield, and gets placed here:

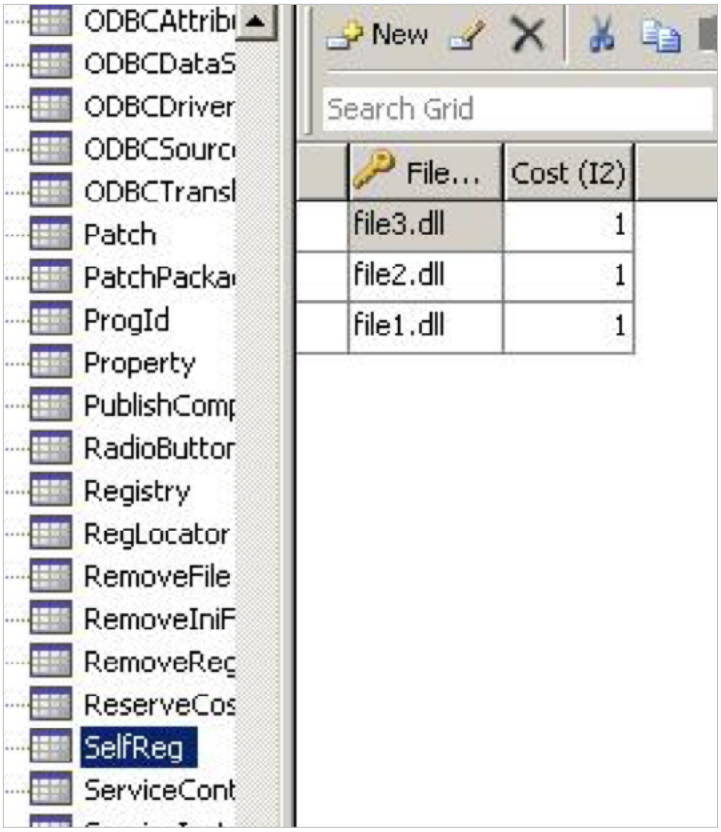
C:Program FilesInstallShield2010SupportRegSpyUI.exe

This little tool lets you take control of extracting COM Information from a particular file. In the case of *.exe files, it simply runs the *.exe file with the /RegServer parameter. If your application doesn't specifically handle this parameter, this will also capture other registry configurations that occur before the application exits.

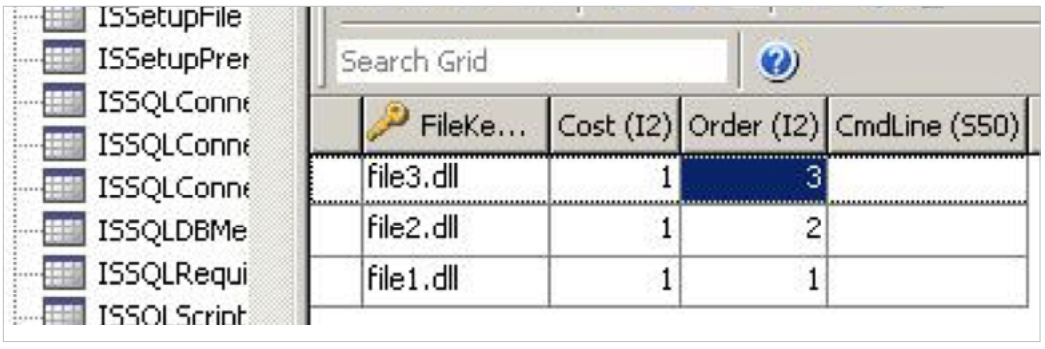
SECRET #9: Making Order from Chaos

Sometimes it becomes necessary for records to be processed in a particular order. However, Windows Installer is not designed with this in mind, since like-operations are done at once instead of installing discrete units of files and registry data piece by piece.

One common scenario is the need to register *.dll files in a particular order, due to dependencies between the modules. Which, as we can see, the SelfReg table contains no 'Order' column with which to accomplish this.



Luckily in this case, the InstallShield style of self-registration (a setting under Tools -> Options -> Preferences) uses the ISSelfReg table which contains an Order column:



But what if the table didn't have an 'Order' column? In the absence of a field that specifies the order in which records are to be processed, there are a couple of things that can be done to mitigate the issue of ordering.

Windows Installer, being just a database that gets processed by a Windows service (msiexec.exe), typically processes records in the order in which they are returned from the database. The order it uses for this is based on the order in which the records were entered into the database, so there are 2 methods of implementing the order here:

1. Changing the Project File format from Binary to XML. This stores records in a human-readable format where you can specify a particular order, which determines how InstallShield inserts the records into the table while building the project.
2. Cutting and pasting the records in question until they end up in the correct order. In some views of InstallShield, such as the XML File Changes view, records are displayed in the same order that they will be processed later, so if you've implemented it correctly, it will be visible here.

NEXT STEPS

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