

## Windows Installer - Issues and questions

*This document is my personal opinion and based on the experience in our server-based SolidWorks installations since 1998.*

Since the version 2004 it is the only choice to use Windows Installer (WI) to install SolidWorks. The announcement, that the traditional installer will be drop, was early enough, but it wasn't clear to me, why this should happened.

Now there is the official statement in the FAQ section

<http://www.solidworks.com/pages/services/InstallationBenefitsBulletinsandFAQs.html>

### Benefits of WI (Windows Installer)

There are many benefits to using WI for installing SolidWorks:

- Ability to rollback after installing web-based Service Packs
- Automatic repair of corrupt or damaged installations
- Installation can be modified without a complete reinstallation
- Microsoft Office install look and feel
- Automated (silent) install via command line

And there are several other rumors which I heard (but no more than rumors, for I didn't get an official statement from SolidWorks for that).

- Pressure from Microsoft to use ONLY the WI
- Issues and lacking function of InstallShield
- No manpower to provide two versions of installers
- No manpower to maintain the QA for two installers
- ... or better spend the manpower in other areas
- Better possibility to stop piracy

For I am fully satisfied with the functionality and performance of the traditional installer (TI) and both SolidWorks and my VAR told me, that I will be able to do anything with the WI, I started to test the WI with 2003, and found that it works okay for a local installation on my notebook.

I try to describe our active, productive environment for SolidWorks and what our disaster scenarios are and how to fight them:

- we have about 150 clients (15 x Windows NT SP6A, 120 x Windows 2000 SP4 and another 15 x Windows XP Pro SP1) in our major location
- 3 production servers, 1 test server
- SolidWorks is setup as a "real" server installation using TI, this means all clients are installed as network clients (no local install of SolidWorks!)
- We install SolidWorks to our testserver and copy (!) the full install directory to the 3 production servers
- We install SolidWorks for the clients using the drive letter P, this way we can have a kind of load balancing by simply assigning the drive letter from login script of users.
- If a production server crashes, the users only have to map their drive P from another server. Ready to run in less than 20 seconds
- If the test server crashes nobody cares
- To apply a new servicepack and have the choice of rolling back we go this way: on the testserver we copy (!) the full install directory (about 750 MB for 2003 full) from sw2003 to sw2003-sp4.0 (or whichever SP is applied), then update the test server install directory.
- We have to start the updater from a "normal" client machine, we have no login access to the servers (only our server IT department have full login access). With traditional installer it usually takes about 10 minutes to update the server install.
- If we decide to release the servicepack for the productive environment we have an automated process (like RoboCopy) to copy the install directory to the three production servers over night. We take care, that nobody accesses the files on the productive server.

- If it is necessary to rollback the servicepack it is that simple: close all running SolidWorks, rename sw2003 to sw2003-sp5.0-bad and sw2003-sp4.0 to sw2003  
This way a rollback is done in about 10 minutes for all servers and clients (and from this we need 8 minutes to chase down all the guys who ignores our message to close SolidWorks)

So this in mind and after the beta test (also a local install on two different machines) I tried to find the way to install the new SW2004 in our network for 150 machines. But I couldn't figure out how to do a server install, only the admin image, from which to install the clients. Every attempt

After several test, explicit reading of all available documentations and contacting our friends from other companies and our VAR I failed; luckily finally one guy from our VAR figured out, that there is **undocumented** option in the user defined client install, which allows to install the client the way, that it takes the files from the network location.



The client install is quiet easy and quick once you find this feature.

But there are some issues with the new kind of server installation or the administrative image (AI):

- it takes up to 2.5 GB on the server (SW2003 server full install needs 750 MB)
- it takes about 30 minutes to make the AI (2003 server install took 8 minutes)
- the "real" client install connects to the UNC-path of the server, I found no way to have the install connect to a mappable driveletter. So I made a desktop shortcut to sldworks.exe by hand, looks good and will start and run, but I don't know if there are any blowbacks
- The simple copy from testserver to production server of the AI looks good and will start and run SolidWorks, but I don't know if there are any blowbacks
- The "real" client install installs some components to the local machine (the bluebeam printer and the bluebeam environment, but also a folder in the chosen program directory with some samples and a folder toolbox with the toolbox.ini
- No idea where the databases for the new hole wizard are installed. They are **not** installed in the choose directory for common files. If I try to make a custom hole wizard table I don't have permission to do this, so I suspect the common files are anywhere on the server

These issues are not that serious, that I would rant, it's my job to figure that out and to find workarounds for that; documentation would help though.

But now for the funny part of the WI issues and problems: **servicepack handling**

There are several issue and complains with the servicepacks for WI

- they are **huge** and need a stable and fast internet connection; fortunately we have a 2 MBit LAN connection
- There is no checksum to check download integrity; I don't know, if this an implicit function of the WI to check integrity
- Although the servicepacks is huge I have to download the (german) helpfiles in addition (another 22 MB)
- Updating the AI on the test server takes a tremendous amount of time: 1 hour 20 minutes for SP1.0 and 2 hours 5 minutes for SP2.1

We have a full switched 100 MBit network, all connections are more than stable, the test server has nothing to do but responding to the update. The answer we got from SolidWorks "Test in the USA shows that it takes 20 minutes to do a regular update" is neither helpful nor encouraging; sounds like "you are too silly". Again, we have no direct access to the server to update the AI on the local machine. On the other hand, while browsing the newsgroup it look like it is not only a problem with our environment.

- After updating the AI with the servicepack (2 hours, nobody should have access to any of the files = 2 hours no working with SolidWork, if nothing strange happens) the "SolidWorks Servicepack Packs" informs:

*"If you just upgraded an administrative image, you must now upgrade the client installations. See [To apply a service pack to client installations](#)."*

???

I did an AI and "real" client install exactly to avoid updating each client individually. Our VAR said, this passage is nonsense for our kind of installation, but I suspect this is not true; example: the Bluebeam PDF DLL in the AI is newer and larger than the one installed on my machine. Now no documentation anywhere nor any hints from VAR or SolidWorks. **What have I to do, upgrade the clients or not?**

If the answer is yes another 150 x 2 hours (not counting the time run from one machine to another).

- To try if a uninstall - reinstall for a client is faster we tried to uninstall the client. **It is not possible to uninstall a client which was installed with a previous servicepack after updating the AI.**

What is the benefit behind this?

How to deinstall a client?

Or should we deinstall all clients, update the AI and reinstall all clients?

- After installing the famous SP2.0 and found various issues I tried to rollback the AI to SP1.0. Unfortunately this isn't possible; at least this is documented in the Admin guide:

*Administrative images that have been previously upgraded cannot be rolled back to a previous service pack*

Another of the major benefits gone.

So let's look at the official statements to WI and the rumours:

- *Ability to rollback after installing web-based Service Packs*  
Sorry, not for AI **L**
- *Automatic repair of corrupt or damaged installations*  
Hope this is true, but we don't need it for AI and real clients \*
- *Installation can be modified without a complete reinstallation*  
Hope this is true, but we don't need this, for the AI includes everything. \*
- *Microsoft Office install look and feel*  
I really don't care. Never had any problems with the InstallShield look and feel
- *Automated (silent) install via command line*  
Hope this is true, but we won't use it anyway, for we have our own software installation environment (NetInstall and CA)

\* BTW, as long as a complete deinstall, cleaning and reinstall is faster than a rollback or repair I don't see any benefits from this

My personal comments for the rumours argues for WI

- *Pressure from Microsoft to use ONLY the WI*  
Well, this would be a real argument ... but even in the hard world of software engineering I can hardly believe this could be true.
- *Issues and lacking function of InstallShield*  
I didn't miss any features for 5 years, but I admit there may be any problems in the InstallShield (heard something about corrupted DLLs or something like that)
- *No manpower to provide two versions of installers*  
Where are the guys who did this in the past? What do you thing our maintenance fees are for? I would primary say to *maintain* the current functionality; IMHO this includes the TI
- *No manpower to maintain the QA for two installers*  
Where are the guys who did this in the past? For me it looks like you don't even maintain the QA for WI or never tried to do an AI and real client install at all
- *... or better spend the manpower in other areas*  
The only other area I would accept is bugfixing and maintaining or improving stability. But with the issues we, other customers, the VARs and SolidWorks have I would place this guy in the "make a reliable, fast und easy-to-use installer package" - oh yes, we had one, but it's gone
- *Better possibility to stop piracy*  
This could only be a joke ... on the other hand, may be the use of WI will discourage potential pirates, when they read about the problems they may experience when installing  
Okay, the last one was not fair, please try to forgive me

To summaries my points:

- It is not possible to rollback to a previous servicepack if using administrative images
- I suspect you have to update each client even if using AI and network setup
- It is not possible to deinstall a client once the AI is updated
- It is not documented how to do a network setup
- It takes far to long to update and to rollback a servicepack
- There is no documentation how to maintain a AI with network setup
- There is no "best practice" or even recommendation how to setup a network with > 100 seats in different locations

I would be more than happy to have a fast, small, reliable installer:

- I will happily accept that it is not possible to roll back a servicepack - I don't have the option now with WI
- I will accept that it is not possible to repair or modify the installation - we usually have a great backup and as long as it is faster to uninstall-reinstall than repair/modify I have a good workaround (BTW, why this isn't possible, other packages using InstallShield have this options?)
- I will accept, that I can't do a silent install from commandline - we use NetInstall and CA for years and wont use this feature at all
- I will try to calm down my bleeding heart, that it has not the MS office look and feel - it's only me, our users wont see none of the installers anyway

Thank you very much for taking the time to read this.

Stefan Berlitz, 01/29/2004