

Making your own Portable Applications as 7zip LZMA2 compressed, self extractable, and auto deletable.

First thing we need is download a Free program [7z SFX Constructor](#).

After download and expand it in a folder we see this:

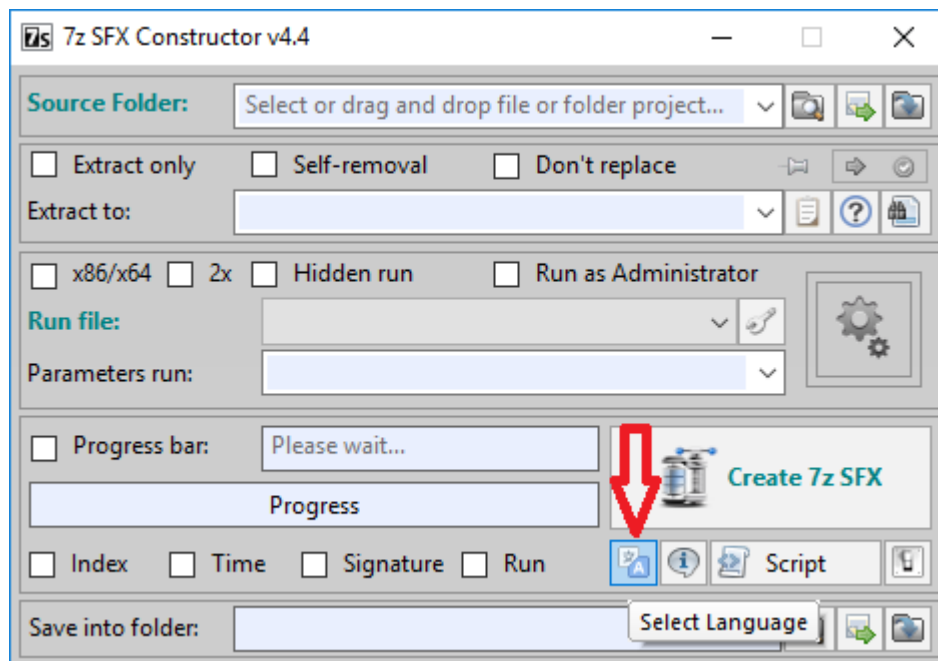
Descargas > 7zSFX Constructor v4.4 >			
Nombre	Fecha de modifica...	Tipo	Tamaño
APPS	27/11/2017 01:15 ...	Carpeta de archivos	
7zSFX_Constructor.exe	05/02/2018 12:40 a...	Aplicación	6,212 KB
Help.cmd	22/08/2017 02:39 ...	Script de comand...	1 KB
Install.cmd	17/01/2017 05:40 a...	Script de comand...	1 KB

To install it we need to run Install.cmd, and it will be installed on:

C:\ProgramData\7zSFX_Constructor

quipo > Win10x64 (C:) > ProgramData > 7zSFX_Constructor >			
Nombre	Fecha de modifica...	Tipo	Tamaño
APPS	14/03/2018 06:18 ...	Carpeta de archivos	
data	14/03/2018 06:18 ...	Carpeta de archivos	
7zSFX_Constructor.dll	05/02/2018 12:39 a...	Extensión de la apl...	86 KB
7zSFX_Constructor.exe	05/02/2018 12:39 a...	Aplicación	6,293 KB
lua5.1.dll	10/02/2015 02:10 ...	Extensión de la apl...	323 KB
lua51.dll	28/08/2008 02:04 ...	Extensión de la apl...	11 KB
Uninstall.exe	14/03/2018 06:19 ...	Aplicación	135 KB

Then we run it from the shortcut on desktop and this is how it opens for the first time:

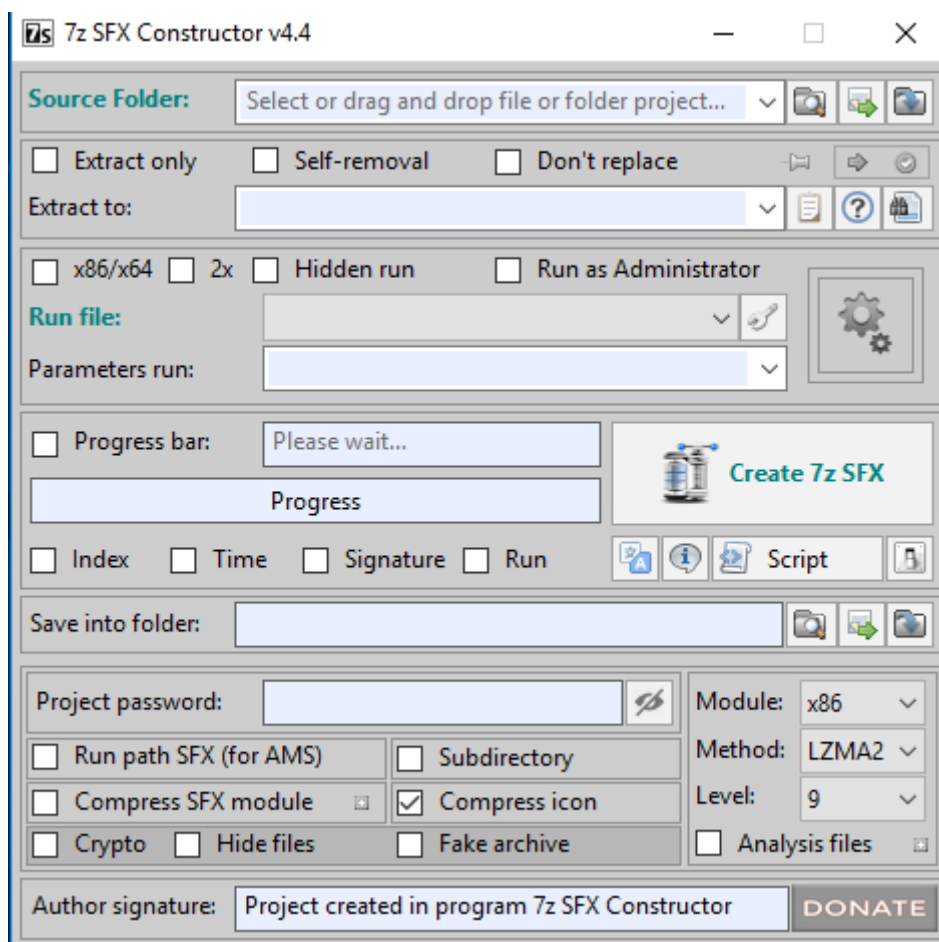


It should open on your OS language but if it is not available on the application it may open in Russian lang, for me the first time it opened on Russian language, and it was a little difficult to find where to change language, so to make it easy for you it is indicated with a red arrow on previous photo.

Next step is have available all options of the tool, to do this we need to click on the button indicated in next photo.



Then the program opens advanced mode and looks like next photo:



It seems to me, the best way to show you how to use this program for create your own Portable Applications as 7zip LZMA2 compression, self extracted, and deleted after close, is making one application that has x86 and x64 versions, I selected for this example a very well known and usefull free application: WinNTSetup wich is exelent for offline install Windows OSs.

This is WinNTSetup page: <https://msfn.org/board/topic/149612-winntsetup-v3886-389-b2/>

At the moment of writing this little tutorial Current Version is: 3.8.8.6, download and expand it to folder WinNTSetup3, then the application needs to be run at least once to download some files/folders from Windows ADK, it takes no more than a minute doing that. Once it has downloaded required files/folders we can close it.

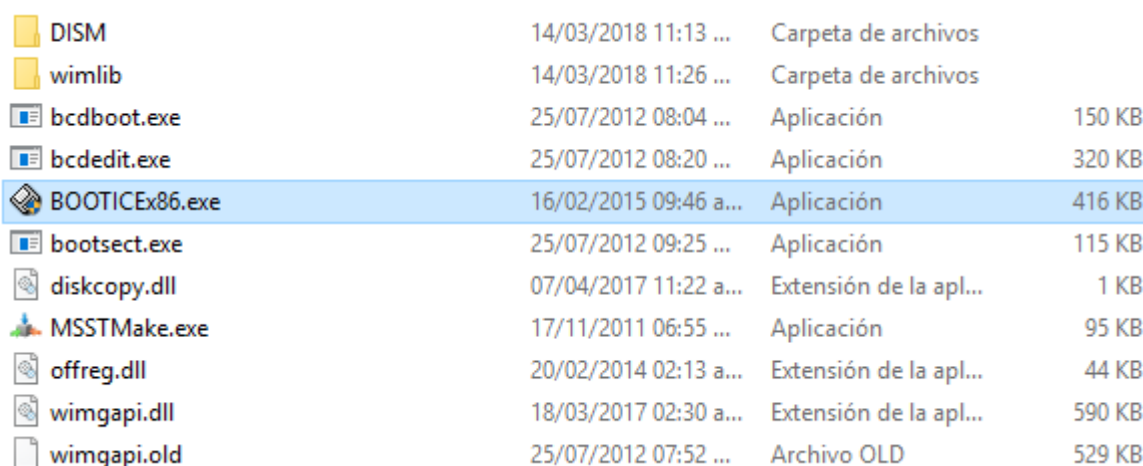
After doing this it is also good idea to download a very good complement for it, this is optional, but I suggest you should do it:

Bootlce link: <http://www.ipauly.com/2015/11/15/bootlce/>

Page is in Chinese, but you may find the links for x86 and x64 versions very easily (they are written in English).

Download both versions, extract them in a folder and then copy BOOTICEx86.exe to ...WinNTSetup3\Tools\x86 and BOOTICEx64.exe to ...WinNTSetup3\Tools\x64.

Following photo shows BOOTICEx86.exe on right location:



DISM	14/03/2018 11:13 ...	Carpeta de archivos	
wimlib	14/03/2018 11:26 ...	Carpeta de archivos	
bcdboot.exe	25/07/2012 08:04 ...	Aplicación	150 KB
bcdedit.exe	25/07/2012 08:20 ...	Aplicación	320 KB
BOOTICEx86.exe	16/02/2015 09:46 a...	Aplicación	416 KB
bootsect.exe	25/07/2012 09:25 ...	Aplicación	115 KB
diskcopy.dll	07/04/2017 11:22 a...	Extensión de la apl...	1 KB
MSSTMake.exe	17/11/2011 06:55 ...	Aplicación	95 KB
offreg.dll	20/02/2014 02:13 a...	Extensión de la apl...	44 KB
wimgapi.dll	18/03/2017 02:30 a...	Extensión de la apl...	590 KB
wimgapi.old	25/07/2012 07:52 ...	Archivo OLD	529 KB

Also optionally if you want to include wimlib on WinNTSetup you may download from following link: <https://wimlib.net/> and put only libwim-15.dll version for x86 and version for x64 on folders wimlib located on: ...WinNTSetup3\Tools\x86\wimlib and ...WinNTSetup3\Tools\x64\wimlib respectively.

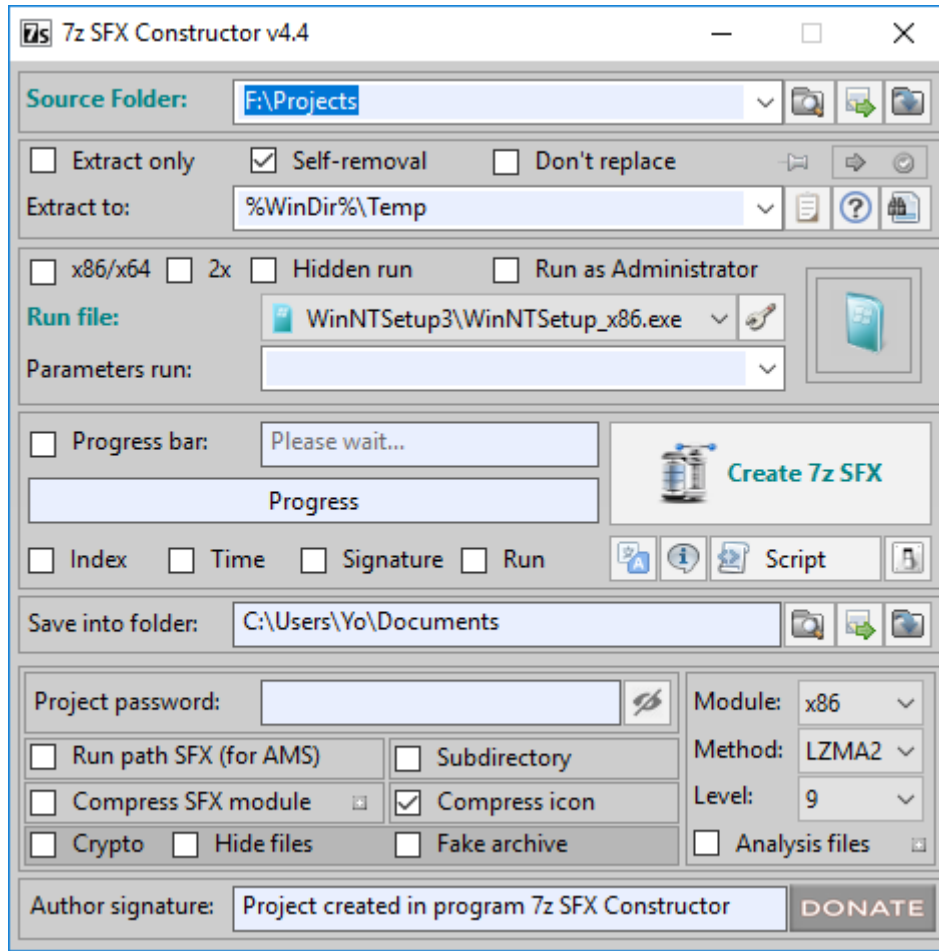
Now, finally, we are ready to start with our building.

Best practice is create another folder, I use to call it Projects but you may use any name you prefer, then copy into that folder the folder containing the application we are going to compress, in this example it is WinNTSetup3 folder but keep the original with downloaded files/folders and Bootlce and libwim-15.dll integrated, we will use it latter again.

Making an x86 Portable Compressed:

We will make first an x86 Portable compressed, to do this we open WinNTSetup3\ folder and in order to reduce our portable size we deletet WinNTSetup_x64.exe then open WinNTSetup3\Tools folder and delete x64 folder, keeping only all required to run on an x86 PE or OS.

Now let's open again 7z SFX Constuctor, make sure your program looks exactly as the following picture. Note Only Self-Removal is selected, and on extract to I wrote %WinDir%\Temp, this is: C:\Temp on OS and X:\Temp on a PE, Save into folder can be changed to your prefered location, with the button next of the path, Module is x86, Method is LZMA2, Level: 9, then we drag our Project folder to Source Folder, and your 7z SFX Creator should look like this:



Then only make click on Create 7z SFX and let it run for a moment and after finish you will have on your "Save into Folder" selected your compressed Portable WinNTSetup_x86.exe, you may see what is inside it making right click, selecting 7zip on contextual menú and then open compressed file. But I made a photo for you:

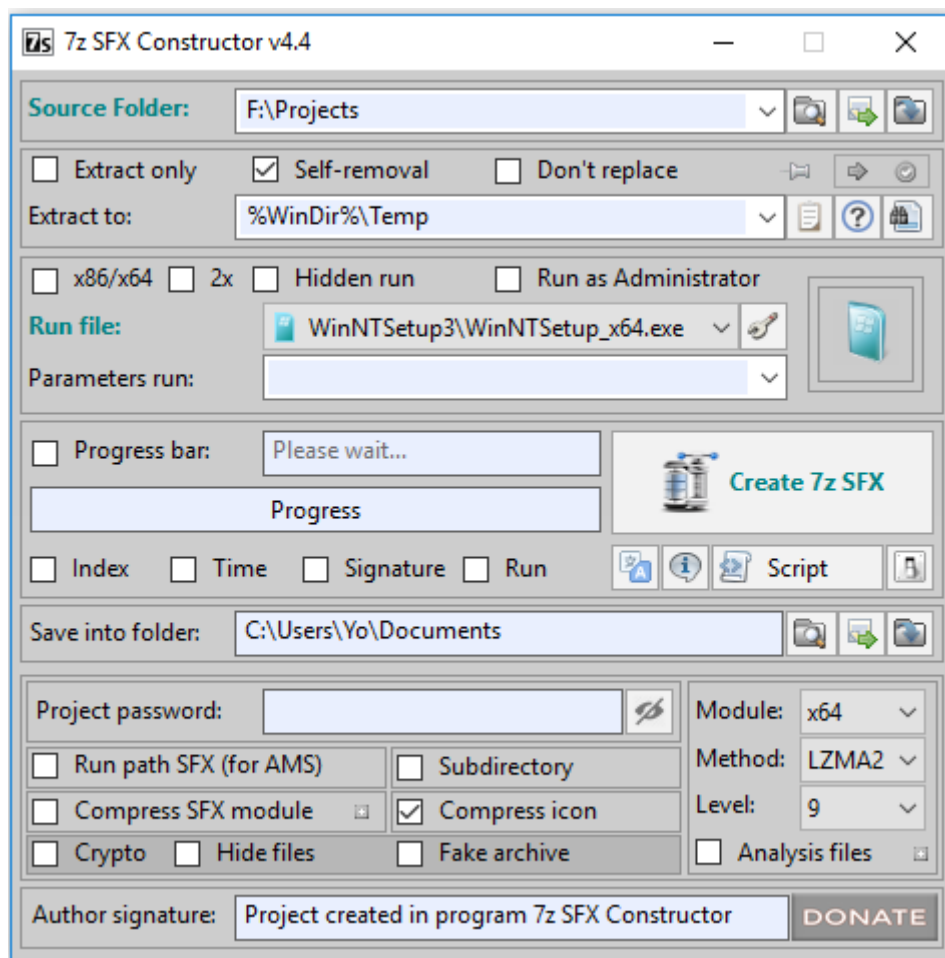
C:\Users\Yo\Documents\WinNTSetup_x86.exe\							
Nombre	Tamaño	Tamaño comp...	Modificado	Atributos	CRC	Encriptado	Método
WinNTSetup3	4 345 297	1 393 219	2018-03-15 23:50	D	42CBDFC0	-	
KillDuplicate.cmd	222	281 396	2016-12-14 06:10	HA	F14E4A56	-	LZMA2:6m

Now if you followed all steps correctly you can run it and WinNTSetupx3 folder will be decompressed on C:\Temp as we are on OS, and WinNTSetupx86 is running, then after using it (or not) just after you close it C:\Temp\WinNTSetup3 folder and all it's content will be deleted. This is done by means of KillDuplicate.cmd.

Making an x64 Portable Compressed:

To make an x64 version, we open our Project folder and delete WinNTSetup3 folder and all its content, and copy again the original folder I told you to keep, to Project folder again, once again keep it for a future dual architecture make.

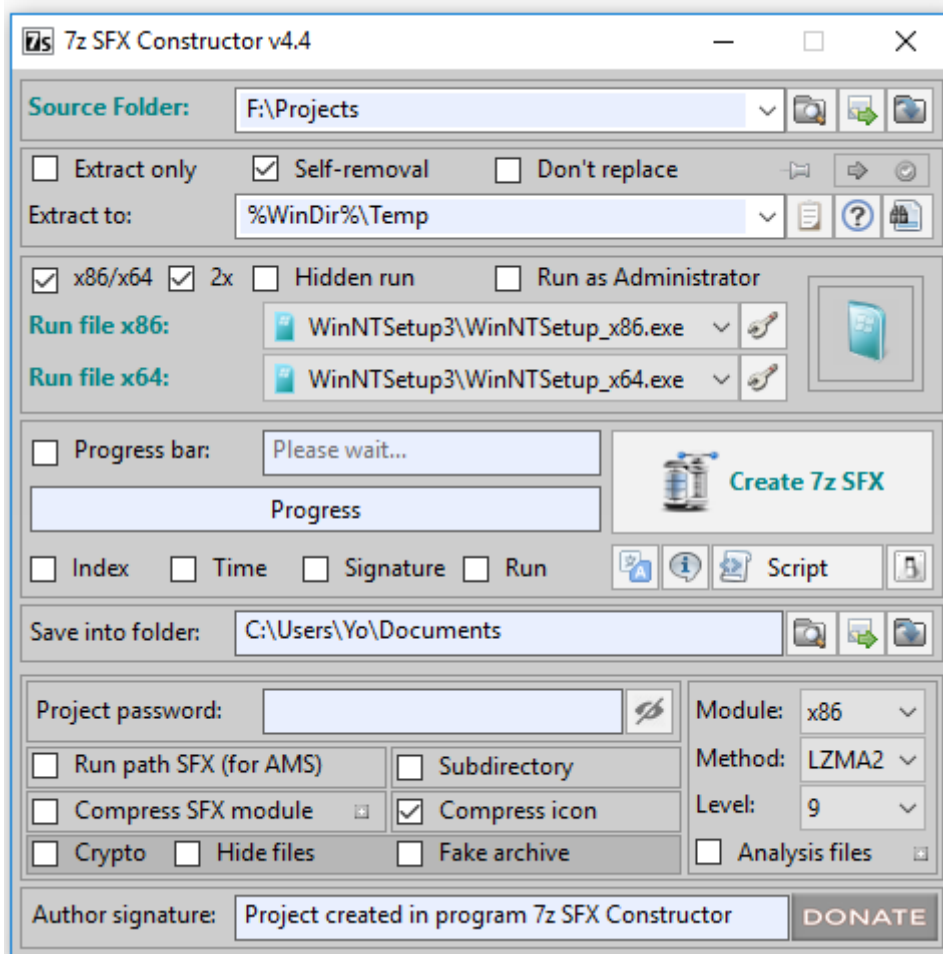
Once on Project folder we open again WinNTSetup3 folder and we delete all related to x86 as WinNTSetup_x86.exe, and ... WinNTSetup3\Tools\x86 folder, this time only thing we will change on our 7z SFX Creator is Module to x64, and drag again Project folder as in next photo .



Just make click on Create 7z SFX and in a moment you will have the WinNTSetup_x64.exe compressed file ready to use.

Making Dual Architecture Portable Compressed:

Once again we open our folder Projects and delete WinNTSetup3 folder, and copy again our original WinNTSetup3 folder, this time we will not delete anything, We run 7z SFX Creator and select x86/x64, 2X and Module x86, like in the photo:

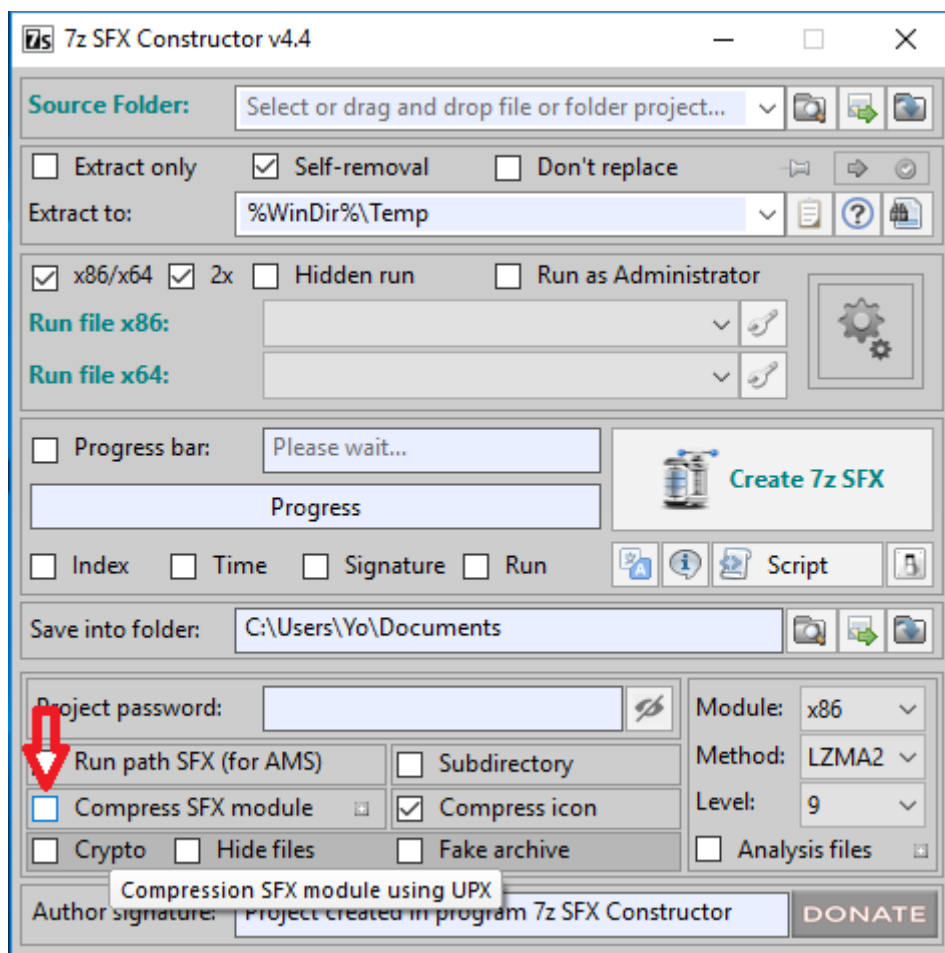


Make sure “Run file x86”, and “Run file x64” are the right ones, if not, select then manually, I most warn you the new file will be named WinNTSetup_x86.exe (as we are using Module x86), so it is a good moment to put your previous WinNTSetup_x86.exe in other location to avoid overwrite it.

Now just make click on Create 7z SFX and your dual architecture (x86/x64) Portable compressed will be made, then go to new created WinNTSetup_x86.exe and rename it to WinNTSetup_x86_x64.exe to avoid confusion.

NOTE 1: This dual architecture Portable Compressed when you execute it only the x86 or x64 version will run depending of the architecture of the PE or OS it is running in, but as it was made using x86 Module to run it on x64 PE it has to have SysWoW64 if not it will not run, on x64 OS there is no problema as all x64 Windows OS always have SysWoW64 available.

NOTE 2: There is also an option on 7z SFX Constructor to compress SFX module with UPX compression.



I strongly suggest you should not use it, because as this UPX compression is frequently used for some virus, AVs complain there is a virus on the Portable once compressed. My Avast gets crazy when this option is selected.

Hope this was clear enough for new users and not so boring for advanced users.

Best Regards

Alacran or Tavrini From PEBakeryTeam