Snappy Driver Installer 2022

Reference Manual

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Developers

BadPointer, Glenn Delahoy, WindR, QuarQ

Tools

Snappy Driver Installer 2022 uses the following technologies:

- WebP is licensed under the terms of the BSD license.
- LibTorrent is licensed under the terms of the BSD license.
- 7-Zip is licensed under the terms of the GNU Library or Lesser General Public License version 2.
- Driver Packs courtesy of SamLab.

Official Web Site

https://t.me/Snappy_Driver_Installer

Translations

Send your updated language files to https://t.me/Snappy_Driver_Installer. Your updates will be included in the next release.

Introduction

Welcome to Snappy Driver Installer 2022, the original free and clean driver updater for technicians. It's fast, portable and scriptable to help you get your job done faster. It can be used offline via a USB drive to install drivers where Internet isn't available. It can be run over a local network for corporate or workshop environments. No more searching for drivers after a clean install, just let Snappy Driver Installer 2022 do its thing and your job will be done in no time. The perfect technician's tool.

This document is a work in progress. If you see any errors or knowledge gaps, please let me know so I can make it the most complete reference manual possible.

Getting Set Up

If you downloaded the entire package with a torrent client then you're ready to begin work immediately. There's nothing else to do. SDI is portable and does not need to be installed into Windows. You just copy it to wherever you need it to work. That might be a USB thumb drive, the program files folder of the PC or anywhere else on a computer that's convenient.

If you downloaded the zip file from the home page, you should unzip it to a disk with at least 20GB of free space.

There are two executable files: SDI.exe is the 32-bit version and SDI64.exe is the 64-bit version. You'll obviously need to run the 32-bit version in a 32-bit Windows environment but you can run either version in a 64-bit Windows environment although the 64-bit version will give you better performance. There is a batch file called SDI_auto.bat which automatically detects and runs the correct architecture.

When you run SDI for the first time you'll be presented with the Welcome screen.
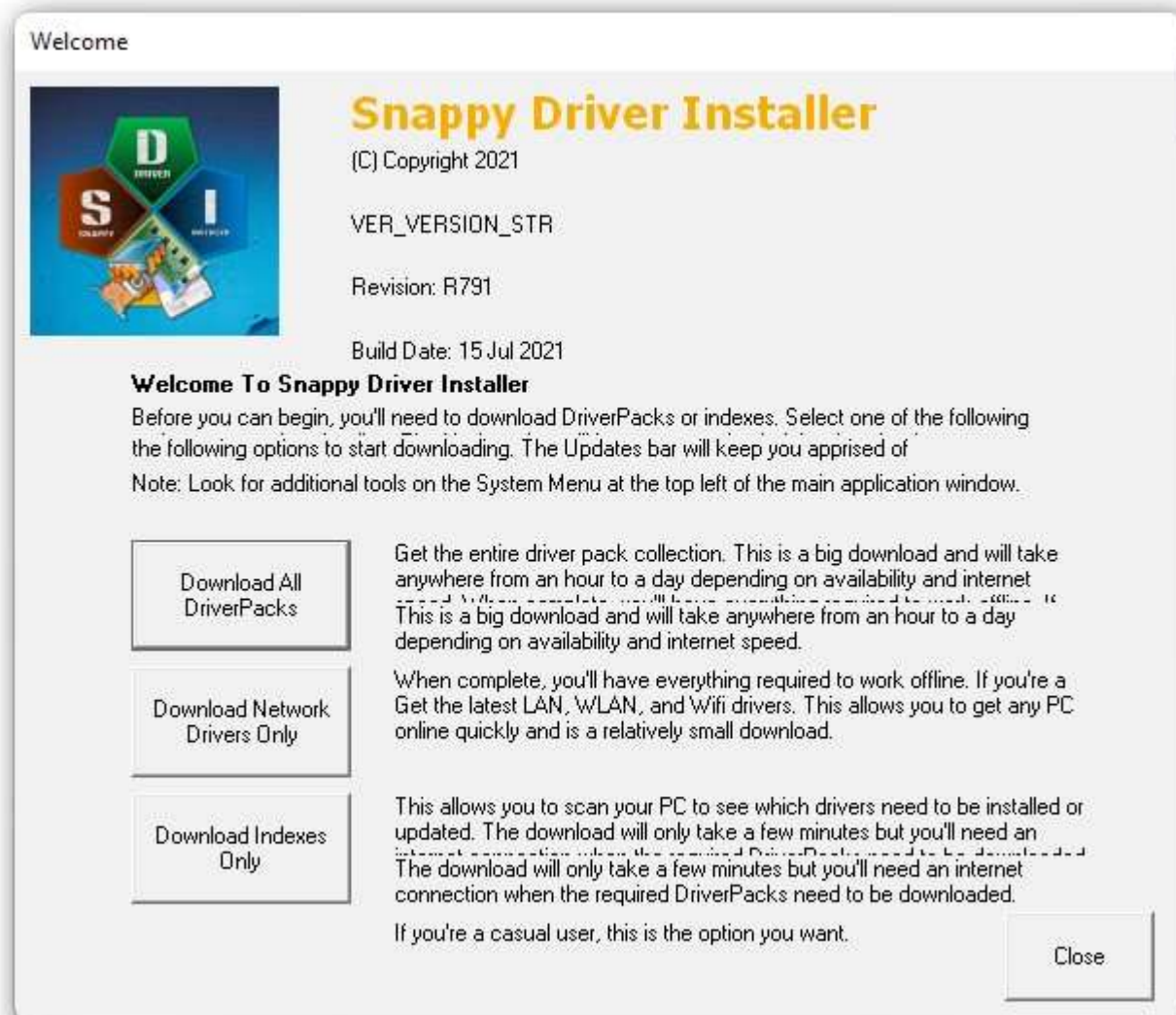
SDI can work "offline" or "online". What this means is it can have the driver packs stored locally with the application or available for download as required.

If you choose to work "offline", that is, you want to have all the drivers available locally then you should download all the driver packs now. This will some time, they are big. When the download is complete and the driver packs are indexed, you're ready to start working offline.

If you choose to work "online", that is, you want to download driver packs only as required then you should download the indexes now. When this is complete, SDI will know what driver packs are available for download and can begin matching your computer's devices. SDI automatically indexes downloaded driver packs and keeps track of what's offline and what's online. When you scan a computer, SDI will match all indexed drivers, both online and offline. If it finds a good match online, it will display a message to that effect ("Internet") so that you know the driver pack will need to be downloaded. During installation, any missing driver packs are automatically downloaded.

The third option on the Welcome screen is Download Network Drivers Only. This option is often used to get freshly installed computers online quickly by installing just the required network drivers. This will also download the online indexes.

There is another option which is to do nothing, click the Close button. SDI is not very useful in this state as it has nothing to match your devices against. However, it does report that driver packs are available to download.


When you click on that bar, a dialog will pop up where you can select which driver packs you want to download. If you know what you're looking for this is the best way to achieve it. Simply select the category you want and possibly the indexes as well and click the Ok button.
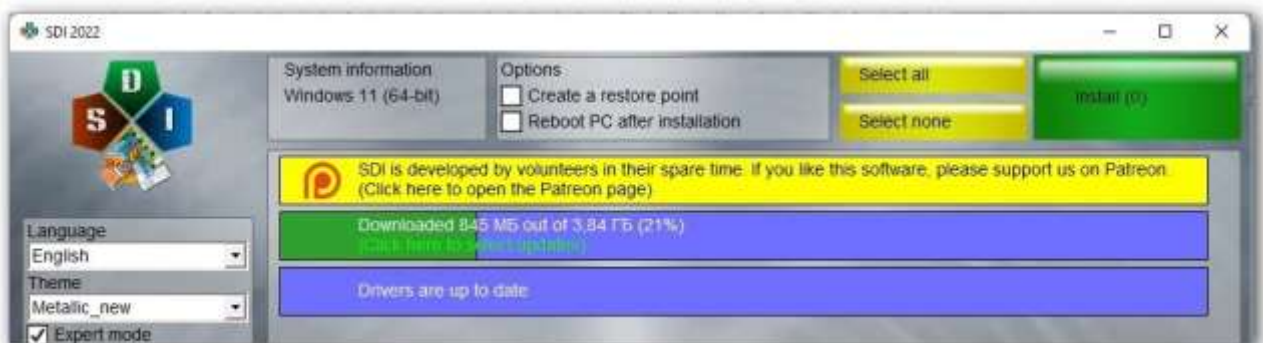
SDI will begin downloading the selected driver packs. When it's done, everything is indexed, your computer's devices are re-scanned and the results displayed.

If you're looking to get some other computer running you can either run the *Create USB Drive* wizard from the system menu or close SDI and copy the entire folder to a USB drive and run it on the other computer.

Using Snappy Driver Installer 2022
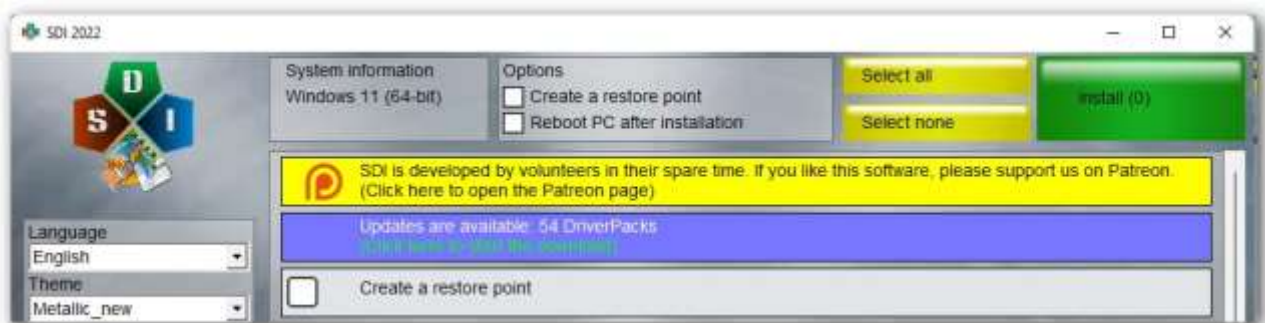
Having downloaded the driver packs and/or online indexes, you can now begin using the application.

SDI will scan your computer and display a list of devices that match the given filters. The default filters are *Not installed*, *Newer* and *Better Match*. Any device that matches any of these will be displayed. If you want to change the filters it uses, select the *Expert Mode* check box. Additional options will be displayed including the filter options.

From here, you simply check the devices you want to update and click the *Install* button. SDI will begin extracting the required device drivers from its driver packs and install them.

If you have downloaded the online indexes and SDI requires a device driver contained in a driver pack it doesn't yet have, it will download the pack before proceeding with the installation.

Here's a few recommendations:

You should always check the *Create a Restore Point* option so you can roll back if necessary. Restore points are cheap, only take a few seconds to create and can be a life saver if things go south.

Don't install too many drivers at once. Most of the time it will be fine but then you'll strike that one time you'll wreak havoc on the system that can only be undone by rolling back *all* the driver installations.

If you need to install USB 3 drivers, you should install them all at once. Essentially, the 3 drivers, iusb3hub, iusb3xhc, iusb3hcs should always be installed together. The PCI bus (iusb3hcs) must be the same version as iusb3hub and iusb3xhc. Make sure you are not running SDI from a USB 3 port.

Don't update USB drivers while running SDI from a USB drive.

Don't update network drivers while running SDI from a network share.

Newer is not always better. If you want to be conservative, uncheck the *Newer* filter so you only install missing and better matched drivers.

Application and Driver Pack Updates

Snappy Driver Installer 2022 automatically checks for updates each time you start the application. If it finds application or driver pack updates it will alert you via the Updates bar on the main window.

You should avoid downloading updates on a USB drive if it has limited space available. The updates require at least as much free space as the total download size.

To begin updating, click the bar to open the Update dialog.

Here you can select any of the available updates or use the Selection buttons at the bottom to make your selection:

Check All: Select all available updates.

Uncheck All: Clear the current selection.

This PC only: Select updates appropriate for the PC on which you are currently working. If this is the first time using SDI or you have not yet downloaded the indexes, this option cannot select appropriate driver packs. What it will do instead is select the indexes. Once you have downloaded the online indexes and your computer's devices have been rescanned, you can return to the Update dialog to select driver packs for this PC.

Network Only: This selects all the LAN, WWAN and WIFI driver packs. This is often used to get another computer online quickly by downloading and installing only the network drivers.

Other options are:

Show only updates: This will hide updates for any driver packs that you don't already have. The result being you only update the driver packs you are interested in.

Pre-allocate disk space to avoid HDD fragmentation: Allocate full file sizes on disk before starting downloads, to minimize fragmentation. Only useful for HDDs.
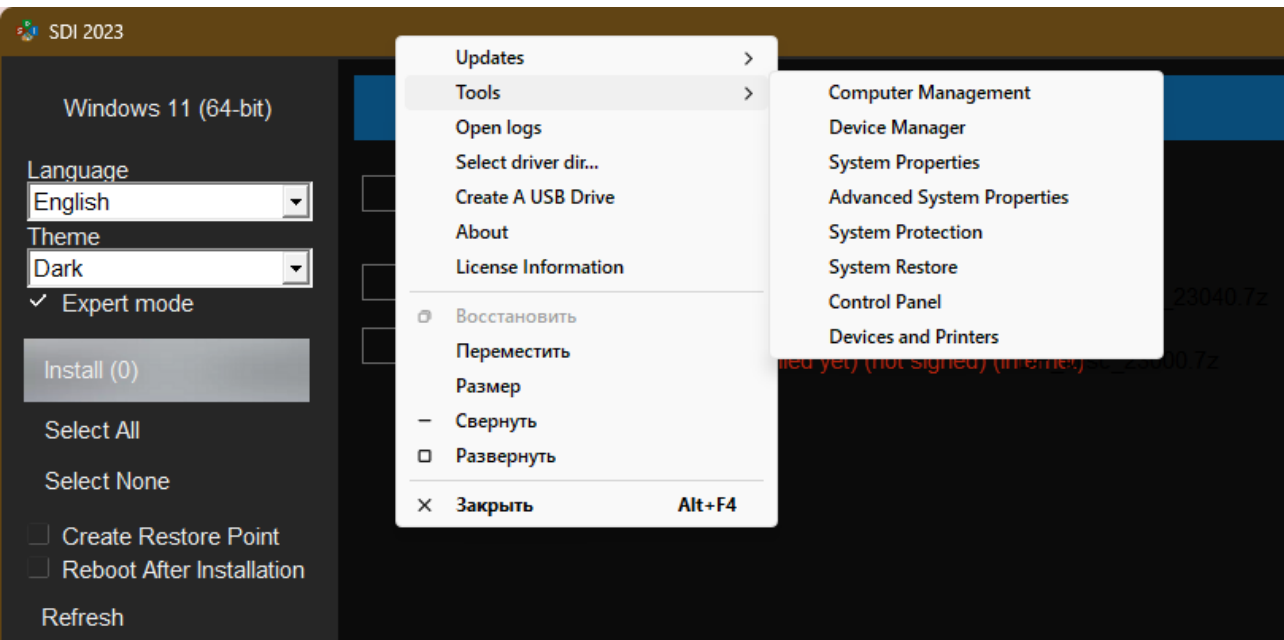
You can also click on the column headers in the list view to sort on that column in ascending or descending order.

System Menu Options

The System menu can be accessed either by clicking on the icon at the top left of the application main window as illustrated here:
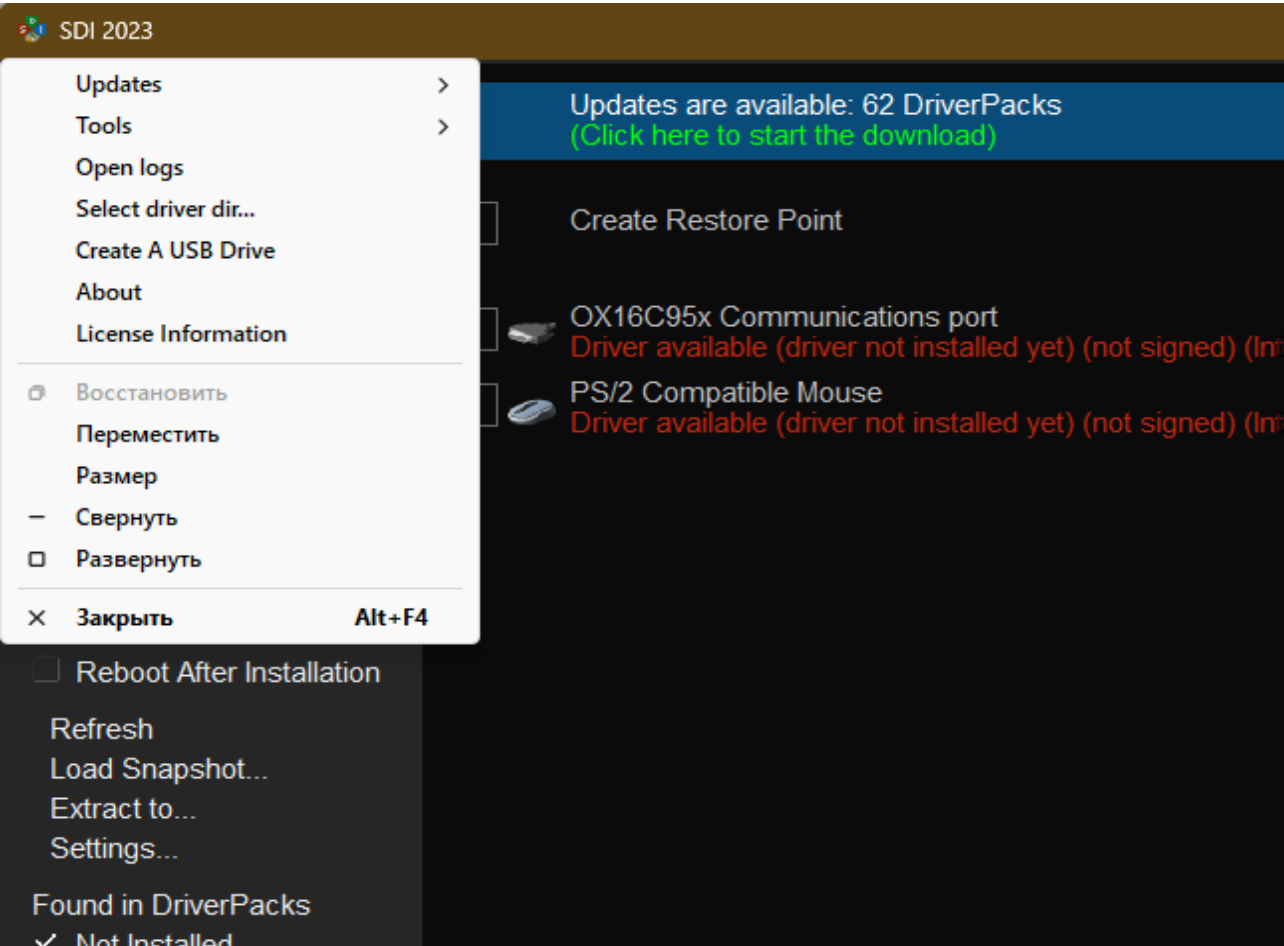

or by right clicking anywhere on the application title bar as illustrated here:

- Start seeding driver packs: This will share whatever driver packs exist in your working drivers directory. It will share using whichever update torrent is currently selected. It will perform a file verification check first to match your driver pack files against the torrent. If it thinks there's any pieces missing, it will download those first then switch to seeding mode and stay there until you switch it off.
- Select SDI Updates: This selects the regular SDI update torrent. This is the one we've always used which includes the application updates and the latest driver pack updates available at the time of the SDI release.
- Select Driver Packs Updates: The second update torrent is the driver packs update torrent from SamLab. If you absolutely must have the very latest driver packs then you can select this torrent to see if there are any driver pack updates released since the last official SDI release. Both updates end up in the same location, your working drivers directory, so you can freely switch between the two to ensure you have the latest of everything. You can choose to seed either torrent if you like; first select the desired updates torrent then select Start Seeding Driver Packs. It will share the contents of your working drivers directory to the selected torrent.
- Tools: This is a collection of useful Windows tools such as Device Manager, Control Panel, System Protection etc. Some tools don't work on Windows XP.
- Open Logs: This opens File Explorer to the logs directory.
- Select Driver Directory: This changes the current working drivers directory. This is useful if you have your own driver collection or have created a sub collection of drivers in a different location to your normal working drivers. This does not change the destination for driver packs when downloading updates.
- Create A USB Drive: This wizard will guide you through the process of creating a portable copy of SDI on a selected USB drive. See the *Create A USB Drive* chapter for details.
- About: Shows the application About box with copyright information, license information etc.
- License Information: Displays the entire GNU General Public License.

Running From a Network Share

There is some path information embedded in the driver pack indexes, the exact nature of which I'm still exploring. This slightly complicates running it from a network share. The paths it uses are based on the SDI configured paths. In the GUI, you can see these paths in the Setting dialog, Paths page:
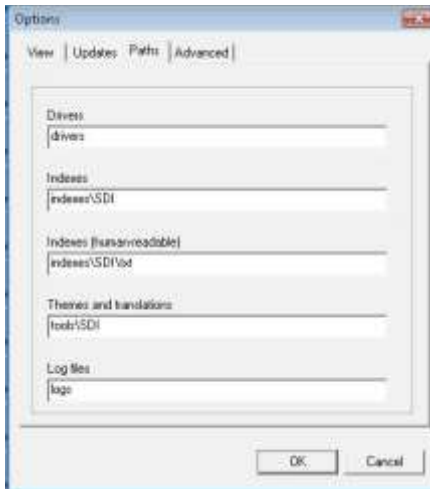
In the sdi2.cfg file they look like:

```
"-drp_dir:drivers"
"-index_dir:indexes\SDI"
"-output_dir:indexes\SDI\txt"
"-data_dir:tools\SDI"
"-log_dir:logs"
```

These values are used when creating the indexes. If you try to run SDI from a network share and these paths don't match up, the indexes will be deleted.

So, the correct approach is to create the indexes in the same scenario that they will be used. If you intend to use SDI locally, either copied on to a computer or on a USB drive then run it locally when creating the indexes. If you are setting it up to run over a network share then create the indexes while running over that network share.

To set up network share paths in the sdi2.cfg file just prefix the directories with the share UNC path:

```
"-drp_dir:\\server\SDI\drivers"
"-index_dir:\\server\SDI\indexes\SDI"
"-output_dir:\\server\SDI\indexes\SDI\txt"
"-data_dir:\\server\SDI\tools\SDI"
"-log_dir:\\server\SDI\logs"
```

Where *server* is the name of your server and *SDI* is the share name. You may choose to use a separate writable share for the *logs* path while the main *SDI* share is read-only.

```
"-log_dir:\\server\SDI-logs"
```

Where *SDI-logs* is the share name for the logs directory.

How to create indexes? Simply close the application, delete the contents of the *indexes* subdirectory then run the application again. It will automatically recreate the indexes. If you want to use SDI over a network share then run it over that share to create the indexes.

Make sure the share has write permissions, at least while you're building the indexes. You can change it back to read-only later if you want. SDI will happily run in read-only mode.

Command Line Reference

All commands begin with a dash, "-". In addition to the following commands, any option or setting listed in the Configuration File chapter can be added to the command line.

-?

Show the help window.

-script:<scriptfile> [options …]

Execute the given script with options. If this option is found on the command line, all options before it are ignored. See the Scripting chapter for details.

-cfg:<filename>

Loads the configuration from the given file. See the Configuration File chapter for details.

-7z

Executes the given 7-zip command. For details, see the 7-zip manual. An error of 2 usually means "File Not Found". Use this to extract driver packs manually.

```
SDI.exe -7z x DP_TV_Beholder_14020.7z
```

-install <hwid> <inffile>

-HWIDInstalled:<hwid>=<file>

-save-installed-id[:<file>]

-delextrainfs

Deletes unused inf files after extracting.

-verbose:<flags>

Sets log detail level.

-ls:<file>

Loads snapshot.

-nologfile

Suppress creating logs.

-nosnapshot

Suppress creating snapshots.

-nostamp

Creates logs and snapshot without timestamps.

-getdevicelist:<file>

Writes a text file containing details of all installed devices and drivers.

-activetorrent:<num>

Select the active update torrent. By default, the active update torrent is 1 which is the SDI application and driver pack updates. You can also select 2 which is the driver pack update torrent. The driver packs are updated more frequently than the SDI application so if you absolutely must have the very latest driver packs, you can set the active update to 2 and download the very latest.

You can also do this from the System Menu on the main application window.

-a:32

Emulate a 32-bit Windows environment.

-a:64

Emulate a 64-bit Windows environment.

-v:<version>

Emulate any given Windows version.

-extractdir:<dir>

Use the given directory to extract the driver packs. The default is "%temp%\SDI".

-keeptempfiles

Do not delete extracted driver pack files.

-finish_cmd

Specifies a command executed upon completion of driver installation.

-finishrb_cmd

Specifies a command executed upon completion of driver installation when a reboot is required.

-finish_upd_cmd

Specifies a command executed upon completion of driver pack updates.

-keepunpackedindex

Prevents updating indexes for unpacked drivers.

-failsafe

Disables indexing WINDOWS\Inf.

-disableinstall

Disables driver installation and restore point creation.

-reindex

Force reindexing of all driver packs.

-index_hr

Creates text format (so called human readable) indexes.

-preservecfg

Do not overwrite the configuration file.

-PATH <pathtodrivers>

-noGUI

Runs without GUI interface.

-autoupdate

Automatically downloads all available driver pack updates.

-autoclose

Automatically close the application after downloading driver pack updates. If -autoinstall is specified, the application will close after installation is complete.

-autoinstall

Automatically begin driver installation.

Verbose

The -verbose:<flags> switch is used to set log detail level. For example, in order to log only sections DeviceInfo and manager_print you have to calculate the sum: 4+16=20.

```
SDI.exe -verbose:20
```

LOG_VERBOSE_ARGS	0x0001	1	Sections: "Settings"
LOG_VERBOSE_SYSINFO	0x0002	2	Sections: "Windows", "Environment"
LOG_VERBOSE_DEVICES	0x0004	4	Sections: "DeviceInfo"
LOG_VERBOSE_MATCHER	0x0008	8	Sections: "{matcher_print"
LOG_VERBOSE_MANAGER	0x0010	16	Sections: "{manager_print"
LOG_VERBOSE_DRP	0x0020	32	Sections: "Driverpacks"
LOG_VERBOSE_TIMES	0x0040	64	Sections: "Times"
LOG_VERBOSE_LOG_ERR	0x0080	128	Error messages
LOG_VERBOSE_LOG_CON	0x0100	256	Misc messages
LOG_VERBOSE_LAGCOUNTER	0x0200	512	GUI lag counter
LOG_VERBOSE_DEVSYNC	0x0400	1024	Sections: "{Updated"
LOG_VERBOSE_BATCH	0x0800	2048	Batch processing of snapshots
LOG_VERBOSE_DEBUG	0x1000	4096	Debug output
LOG_VERBOSE_TORRENT	0x2000	8192	Torrent output

Configuration File Reference

The configuration file is called "sdi2.cfg" by default but you can call it anything or have many configuration files and use the "-cfg" command line option to load the required configuration file.

The following commands and settings may be added to the cfg file. If these commands or settings are included as a parameter on the command line, they will be saved to the cfg file.

If the -preservecfg command line option is used, the cfg file will not be updated.

-drp_dir:<dir>

Path to driver packs. This can be a relative path, an absolute path, a different drive, a network drive or a mapped drive. The default is "drivers", a sub-directory of the SDI application.

-index_dir:<dir>

Path to indexes.

-output_dir:<dir>

Path to indexes in human-readable format.

-data_dir:<dir>

Path to translations and themes.

-log_dir:<dir>

Path to logs and snapshots.

-lang:<name>

Current interface language.

-theme:<name>

Current theme.

-hintdelay:<time>

Sets hint delay.

-wndwx:<num>

Sets window width.

-wndwy:<num>

Sets window height.

-wndsc:<num>

Sets window show command (1=show normal, 2=minimized, 3=maximized).

-scale:<size>

Sets scaling for GUI (normal size: 256).

-filters:<flags>

Sets filters.

-port:<num>

Port for incoming connections

-downlimit:<num>

Download speed limit to set in Kbytes/second

-uplimit:<num>

Upload speed limit to set in Kbytes/second

-connections:<num>

Maximum number of simultaneous connections

-expertmode

Enable the expert mode.

-showconsole

Display console window.

-norestorepnt

Suppress creating of restore point.

-nostop

Don't stop if restore point fails.

-novirusalerts

Suppress alert about autorun.inf on the SDI's drive.

-showdrpnames1

Shows driver pack names on the right.

-showdrpnames2

Shows driver pack names above.

-oldstyle

Puts the match results text underneath the device name rather than to the right.

Keyboard Actions

Control

Compare the installed driver to the available one (same as expert mode)

Space

Info about alternative drivers (same as opening the sub list of available drivers)

Shift + Control

Same as Space down

Tab

Move forward through control boxes

Shift + Tab

Move backward through control boxes

Cursor Down

Move forward through controls within a control box

Cursor Up

Move backward through controls within a control box

Control + "+"

Increase GUI scale

Control + "-"

Decrease GUI scale

Control + 0

Reset GUI scale

Control + Z

Add a divider line to the log

Control + A

Select all drivers

Control + N

Deselect all drivers

Control + I

Begin driver installation

Control + F5

Rescan devices

Control + F6

Show all possible item bars. Useful for theme development.

F7

Record all desktop windows information to log. Useful for catching rogue installer dialogs.

F8

Cycle through driver pack name display modes.

Scripting

You should test your scripts thoroughly before using them on mission critical or customer machines. Let me know what bugs you find and what needs to be added. As usual, any loss is your problem, not mine.

Script mode is console only. The main thing to keep in mind is that, being a script, everything happens in a linear fashion, one thing at a time, like a batch file and certain things need to happen before others. A script is a simple text file and can be created with Notepad or your favorite text editor. There are a few example scripts included in the package. If you modify any of these, be sure to rename them so they don't get overwritten by future updates.

Running A Script

To run a script, start SDI with the -script:<scriptfile> command line argument.

For example:

```
SDI64.exe -script:scripts\example-script.txt
```

If the script command is found, all prior arguments on the command line are ignored and the following 9 arguments are fed into the script as %1 through %9 parameters. %0 represents the script file name. These replaceable parameters can be used anywhere within the script. For example, in a goto command.

An example with options:

```
SDI64.exe -script:scripts\example-script.txt option1 option2
```
where:

%0 = "scripts\example-script.txt"

%1 = "option1"

%2 = "option2"

In the script you might have a command like "goto %1" which, in the above example, would expand to "goto option1". A command of "goto %2" would expand to "goto option2".

Config File

The config file is ignored and all command line arguments prior to -script are ignored. Therefore, all configuration is done within the script. Make no assumptions except the following defaults.

Defaults:

No log file

No snapshot

Driver directory: "drivers"

Logs directory: "logs"

Indexes directory: "indexes"

Extract directory: "%temp%\SDI"

Verbose: nothing

Torrent port   50171

If the script doesn't handle your configuration requirements, let me know.

Script Commands

Each line of the script file is one command followed by any arguments, separated by spaces. There is no leading "-" or "/" sign. Any line beginning with "#" or ";" is a comment and is ignored. Any line beginning with ":" is a label used as a target for a "goto" command. Arguments given in triangular brackets, "< >", are required and will give an error if missing. Arguments given in square brackets, "[ ]", are optional and may be omitted. Defaults may or may not be used for each command.

init [reindex]

Initializes the scripting engine, loads the indexes and drivers, builds any missing indexes and scans the current PC for devices. This should nearly always be done after setting directories and before anything else. It can also be used at any point in the script to reset the engine and allow new driver packs to be indexed locally or a change of path configuration. If the optional "reindex" argument is given, all indexes are rebuilt.

checkupdates

Downloads the latest update torrent and reads it into memory. You must do this before other update commands. If you don't do this or it fails, all subsequent update commands will fail. If you're in an environment where you don't want the torrent client to activate then don't run checkupdates.

get <app | indexes | driverpacks <all | missing | updates | selected> | everything>

Downloads updates. Specify *one* of the given file types:

app
>   Downloads the latest application, tools, languages, themes and all other files that are not drivers or indexes.

indexes
>   Downloads the latest online indexes.

driverpacks <all | missing | updates | selected>

Downloads driver packs. Specify one of the given arguments.

- all = missing and updated driver packs
- missing = only missing driver packs
- updates = only updates for driver packs you already have
- selected = only the selected missing and updated driver packs

everything

Downloads the latest of everything: application, indexes and driver packs.

For example:

```
get driverpacks updates
```

select < [missing newer current older better worse] [drpfilters] >

Select the drivers to be installed. The equivalent on the GUI is setting the expert filters and then click Select All. Specify one or more of the given arguments separated by a space.

For example:

```
select missing newer better
```

To further narrow your selection, you can specify one or more driver pack filters. These are specified by using the middle part (in between the underscores) of the driver pack zip file name. So, for example, specify "lan" to include only those drivers found in the "DP_LAN_xxxxx.7z" driver pack. Other examples are: chipset, printer, video, wlan-wifi, wwan-4g.

For example:

```
select missing lan
```

This will select missing lan drivers. That is, a matching driver is both missing and in the lan driver pack.

```
Select missing better lan wlan-wifi
```

This will select missing or better drivers that exist in the lan or wlan-wifi driver packs.

You can specify any combination of regular filters and driver pack filters. Anything that doesn't match one of the six regular filters is assumed to be a driver pack filter. If you specify a non-existent regular filter or driver pack filter, nothing will be selected. If you do not specify a regular filter but only a driver pack filter, nothing will be selected.

install

Install the selected drivers. If drivers are not found locally, they will be automatically downloaded if checkupdates previously completed successfully. You don't need to do a 'get' command, just the 'select' and 'install'.

snapshot [filename]

Saves a snapshot to disk. If the optional "filename" argument is specified, the snapshot is saved to that file. If the file name is not given, the snapshot is saved to the logs directory with a time stamp in the file name.

loadsnapshot <filename>

Loads the specified snapshot from disk. This must be placed immediately before the "init" command. The init command will then load the snapshot instead of scanning the PC. In theory you can do this many times in a script.

unloadsnapshot

Returns to "real" mode. This must be placed immediately before the "init" command. The init command will then perform a normal scan of the current PC.

writedevicelist <filename>

Saves the full list of devices and drivers to the given file name.

restorepoint [description]

Create a restore point using the specified description. If no description is given, a default description is used.

logdir <directory>

Sets the log directory to the given directory. Place this before the *logging* command.

drpdir <directory>

Sets the driver packs directory to the given directory. Place this before the *init* command.

indexdir <directory>

Sets the index directory to the given directory. Place this before the *init* command.

extractdir <directory>

Sets the temporary directory used for archive extraction. If it's not set, the default is "%temp%\SDI\". Place this before the *init* command.

torrentport <port>

Set the torrent listening port. The default is 50171.

activetorrent <num>

Set the active updates torrent. A value of 1 is the normal SDI updates, a value of 2 is the driver packs updates.

echo [any text]

Displays the given text to the console.

debug [on|off]

Sets the console/log verbosity to debug. This is the same as LOG_VERBOSE_DEBUG.

logging [on|off]

Enables logging to file.

verbose [verbositiness]

Controls the console/log verbosity. See the *Verbose* chapter earlier for details.

enableinstall [on|off]

Controls whether restore points are actually created and drivers are actually installed. If "on" is specified, restore points are created and drivers are installed. If "off" is specified, all the actions right up to the point of driver installation and/or restore point creation are performed but the actual installation/creation is skipped. This provides a way to test things without trashing your PC.

reboot [ifneeded]

Reboot the machine now. If the optional "ifneeded" argument is specified, reboot will be initiated only if the most recent install command has indicated a reboot is required to complete driver installation.

runlatest [arguments]

Run the latest version of SDI. Do this after an application update to start using the latest version straight away. The executable architecture is preserved. In other words, if you are currently running the 32-bit version of SDI then this command will run the latest 32-bit version. If you are currently running the 64-bit version then it will run the latest 64-bit version. You should follow this command in the script with an "end" command to shut down the previous instance of SDI.

You can include arguments to be added to the SDI command line. The following example will download the latest application, run the latest version with a script and terminate the current version (the new version will continue to run).

```
get app

runlatest -script:scripts\update-drivers.txt

end
```

pause

Pause script execution until a key is pressed.

cmd <command>

Execute the given command in a command shell.

onerror < end | goto <label> >

Performs the specified action if the previous command resulted in an error.

end
   Immediately ends execution of the script.
goto
   Transfers script execution to the line following the specified label. The label reference can contain the ":" prefix or not.

goto <label>

Transfers script execution to the line following the specified label. The label reference can contain the ":" prefix or not.

end

End script execution.