

Blue Screen Simulator Plus

advanced bugcheck simulation technology

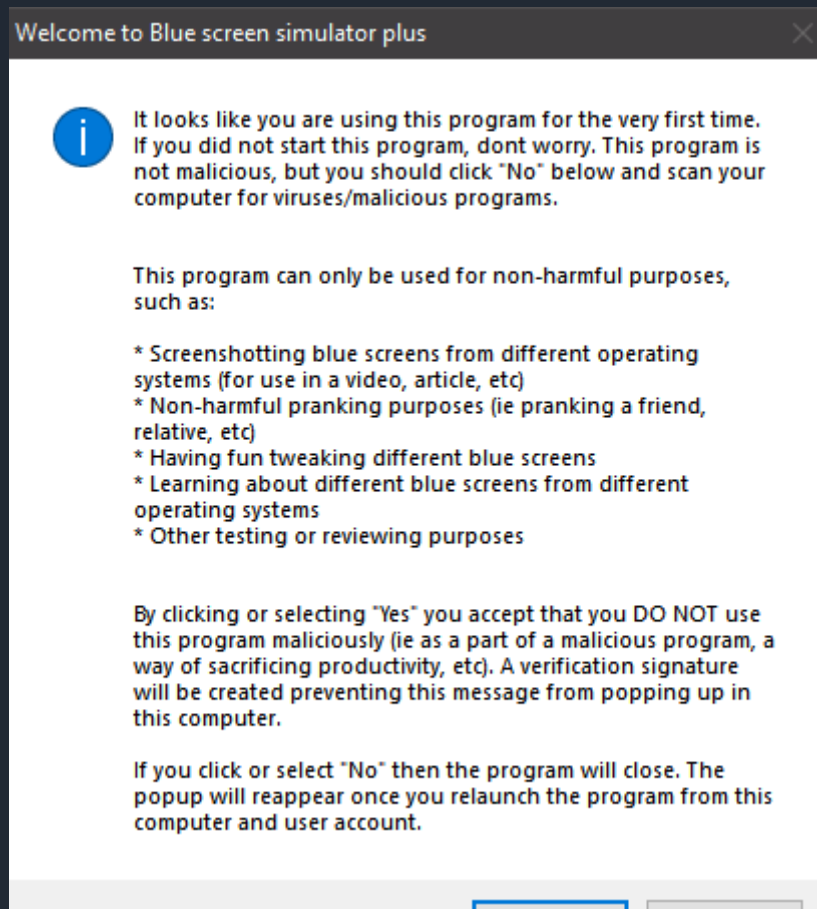
Offline Electronic User's Manual

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1. First launch

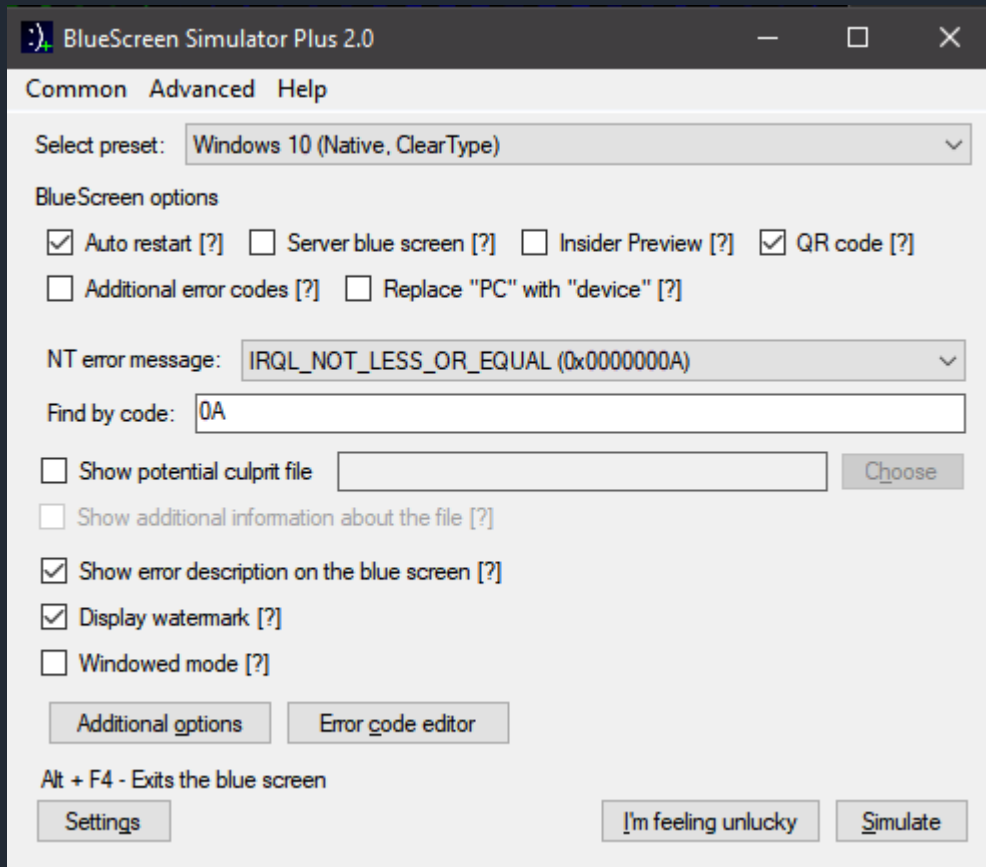
After launching the program for the first time, you'll see the following message:



This message only appears if you launch the program for the first time or when you switch user account/computer. Read the message carefully and click "Yes" to continue. Please note that if this message appears when you didn't mean to launch the program, you are free to click "No". If you are launching the program from a read-only media (such as a CD-R or a write-protected SD-card), this message will appear every single time.

2. User interface

After successfully launching the program, you'll see a simple user interface, that allows you to choose a blue screen that suits your needs!



The menu bar consists of the following menu items:

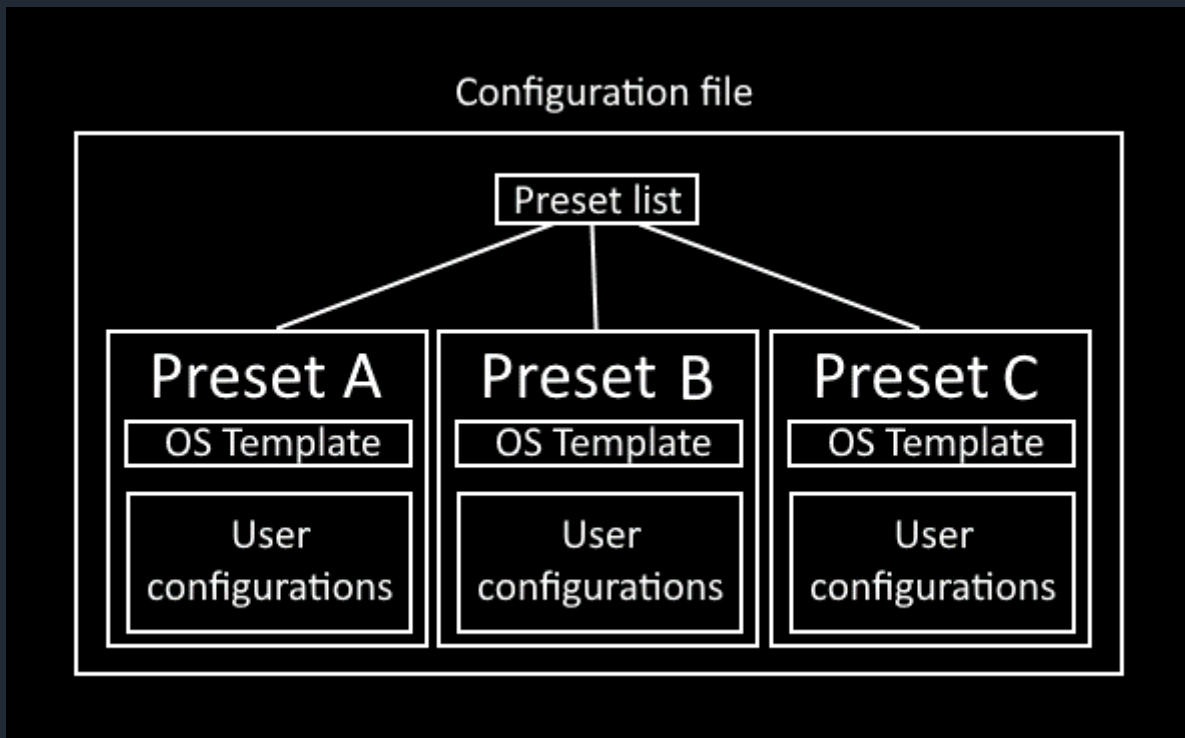
1. Common – This is where you find options that apply to every configuration you might be using
 - a. Simulate – Simulates a blue screen with selected configuration
 - b. Settings – Alternate way to access the settings panel
 - i. AutoUpdate settings – Change settings related to updates and also check for any new version update
 - ii. Simulator settings – Configure presets and misc simulator settings
 - c. Night theme – Use a darker color scheme, good when using the program during night time
 - d. Exit – Closes the program and saves the settings

2. Advanced – more options specific to the preset you might be using
 - a. Additional options – More settings for the current operating system/preset
 - b. Code customization – Allows you to customize memory address codes that appear on the blue screen
 - c. Advanced NT options – Allows you to customize the codes on culprit files that might appear on Windows NT and XP/Vista/7 blue screens
 - d. Prank mode – Allows you to setup and run a blue screen prank
3. Help – in case you don't know what to do
 - a. User manual – This document
 - b. Quick help – Describes system requirements, how to get help, and the purposes of Blue Screen Simulator Plus
 - c. Command line syntax – Displays arguments and switches you can use when launching the program from command line
 - d. About – Version info and other stuff about the program

3. Presets

3.1. Explaining the concept

This program uses presets, which contain settings about themselves (User configurations) and what operating system blue screens they should use and thus what options should be visible for the user (OS template). These presets are stored in a list, which can be saved inside a configuration file.

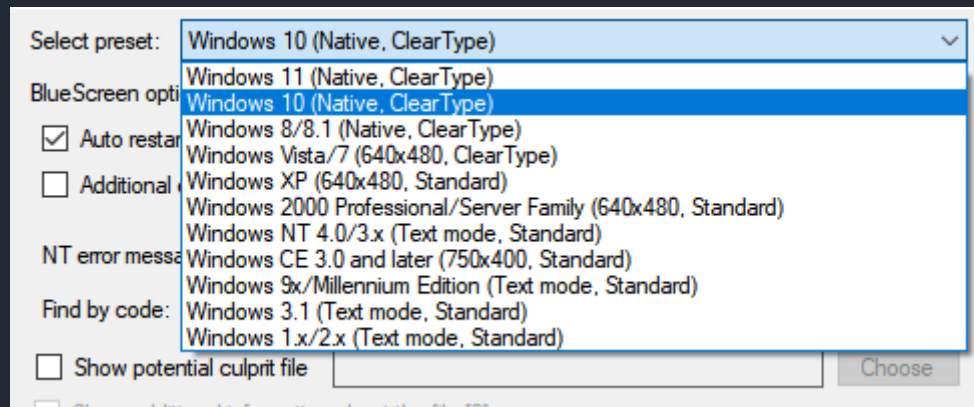


The default presets are the following (the name in brackets is the OS template):

- Windows 11 (Native, ClearType) [Windows 11]
- Windows 10 (Native, ClearType) [Windows 10]
- Windows 8/8.1 (Native, ClearType) [Windows 8/8.1]
- Windows Vista/7 (640x480, ClearType) [Windows Vista/7]
- Windows XP (640x480, Standard) [Windows XP]
- Windows 2000 Professional/Server Family (640x480, Standard) [Windows 2000]
- Windows NT 4.0/3.x (Text mode, Standard) [Windows NT 3.x/4.0]
- Windows CE 3.0 and later (750x400, Standard) [Windows CE]

- Windows 9x/Millennium Edition (Text mode, Standard) [Windows 9x/Me]
- Windows 3.1 (Text mode, Standard) [Windows 3.1x]
- Windows 1.x/2.x (Text mode, Standard) [Windows 1.x/2.x]

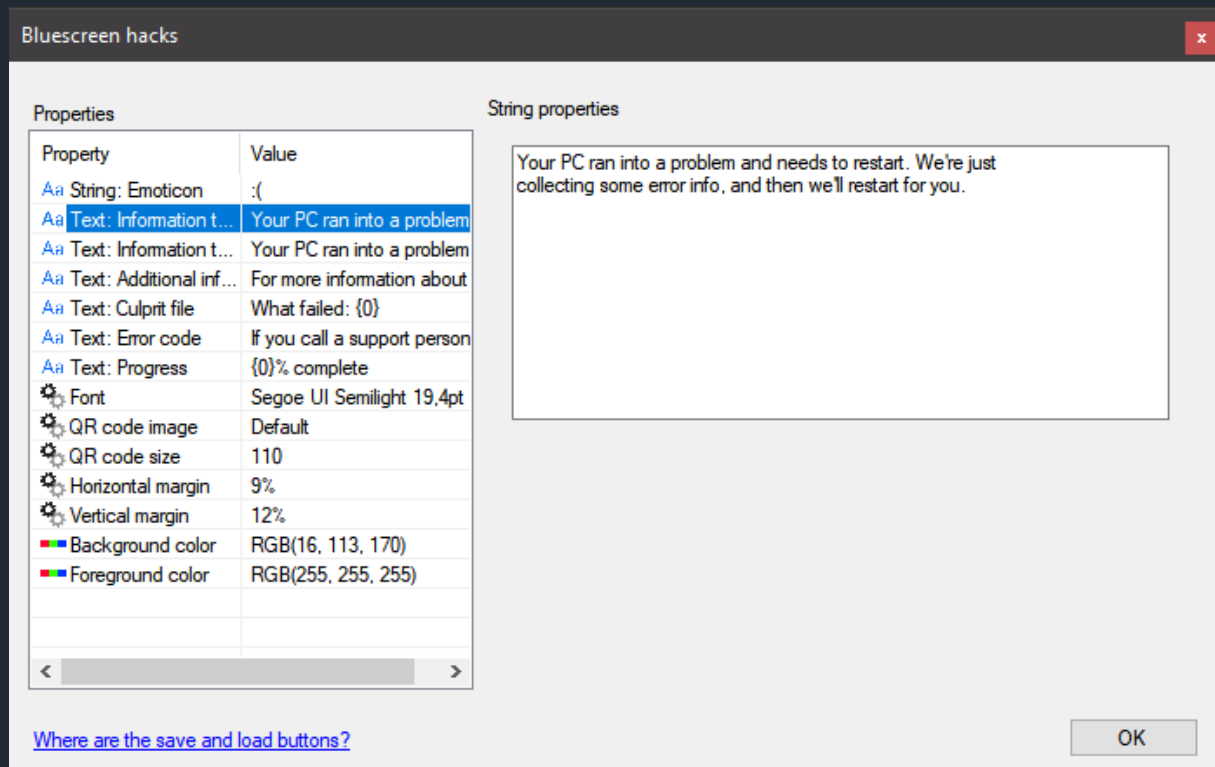
Each one of these presets can be seen in a drop down list at the main interface.



Selecting each one, will display a different set of configurable blue screen options. To see a quick overview of each option, you can move your mouse over one and see how this option is going to affect how the blue screen looks. As mentioned before, all of these options are stored inside the preset, meaning any changes made in one preset will NOT carry over to another preset (e.g. if you enable windowed mode in one preset, it will be disabled in other presets).

3.2. Additional options

To see even more settings you can change, click on the additional options button. This will open up a window, that should look something like this:



In the „Properties“ section, you can see all of the settings you are able to modify for this particular preset. The property column displays the name of a setting you may want to see/modify. The „value“ column displays what this setting is currently set to. Clicking on one of these settings will let you change the value on the right side.

The types of settings are displayed with icons. String values (basically anything text) is displayed with an „Aa“ symbol. Color settings are displayed with Red, Green, and Blue rectangles. Other settings use gears as the icon. All settings are applied immediately as soon as they are changed.

You can click OK to close this window.

3.3. Error code editor

Most blue screens in BSSP have a section that contains memory address codes, and in Windows 8 and above OS-s, they can be enabled if you tick „Additional error codes“. Here’s an example of where the memory address codes are located on a Windows XP blue screen:

```
bluescreen simulator plus
A problem has been detected and windows has been shut down to prevent damage
to your computer.

DRIVER_IRQL_NOT_LESS_OR_EQUAL

If this is the first time you've seen this Stop error screen,
restart your computer. If this screen appears again, follow
these steps:

Check to make sure any new hardware or software is properly installed.
If this is a new installation, ask your hardware or software manufacturer
for any windows updates you might need.

If problems continue, disable or remove any newly installed hardware
or software. Disable BIOS memory options such as caching or shadowing.
If you need to use Safe mode to remove or disable components, restart
your computer, press F8 to select Advanced Startup Options, and then
select Safe Mode.

Technical information:

*** STOP: 0x0000000A (0x2B797968, 0x5C237A51, 0x7ECC7C3A, 0xA0777D13)

Beginning dump of physical memory
Physical memory dump complete.
Contact your system administrator or technical support group for further
assistance.
```

By default these are set to always display random symbols every character. But depending on your needs, this may not be realistic enough. If this is the case, you can use the error code editor to make some characters fixed and others random.

After clicking on the „Error code editor“ button in the main interface, you’ll be presented with this window:

Error code generation - Windows 10 (Native, ClearType)

The following error code method will be used
0xFFFFFFFFFFFFFFFF, 0xFFFFFFFFFFFFFFFF, 0xFFFFFFFFFFFFFFFF, 0xFFFFFFFFFFFFFFFF

☒ Code 1 ☐ Code 2 ☐ Code 3 ☐ Code 4

Null code Random code

Code 1	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Random	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set
Null (0)	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set	Set
Fixed (0-F)																

Cancel OK

Below the text „The following error code method will be used“, you can see a bunch of characters that represent how the memory address codes are generated. If a character is set to „R“ (as is the case in this screenshot for every character), then that character will be randomly chosen. If it isn’t, it’ll always be that particular value.

The radio buttons with a label „Code N“ (where N is a number) represent which particular memory address code you are editing. Click on one of them to change to that particular code.

The „Random code“ button sets the entire block, which you’ve selected, to all random characters. The „Null code“ button sets the entire block, which you’ve selected, to all zeroes.

In the middle, you find a table. On the first row, you see all characters layed out into columns, and aligned with buttons.

Click on the first „Set“ button below a desired character, will set it to „R“ (random character).

Click on the second „Set“ button will set it to „0“.

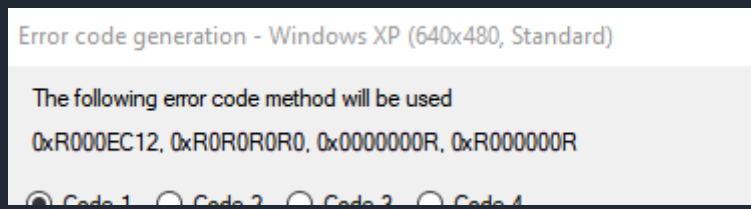
Clicking on a space right below the second set button, will allow you to enter a custom character with a keyboard. If you enter an invalid character, it will not be modified. Valid characters are numbers from 0-9 and letters from A-F.

All changes made will be displayed on the first column, as well as the preview outside the table.

If you don’t like the changes you’ve made, click on the „Cancel“ button. If you want to keep these changes, click on the „OK“ button.

If you try to edit codes on an operating system that doesn’t support memory address codes (such as Windows CE), you’ll receive an error message.

Here's an example configuration and how it might look like on an error screen:



```
bluescreen simulator plus
A problem has been detected and windows has been shut down to prevent damage
to your computer.

DRIVER_IRQL_NOT_LESS_OR_EQUAL

If this is the first time you've seen this Stop error screen,
restart your computer. If this screen appears again, follow
these steps:

Check to make sure any new hardware or software is properly installed.
If this is a new installation, ask your hardware or software manufacturer
for any Windows updates you might need.

If problems continue, disable or remove any newly installed hardware
or software. Disable BIOS memory options such as caching or shadowing.
If you need to use safe mode to remove or disable components, restart
your computer, press F8 to select Advanced Startup Options, and then
select Safe Mode.

Technical information:

*** STOP: 0x0000000A (0x1000EC12, 0x40D01070, 0x0000000E, 0x30000008)

Beginning dump of physical memory
Physical memory dump complete.
Contact your system administrator or technical support group for further
assistance.
```

3.4. Advanced NT options

On a few operating systems, such as Windows XP, Vista/7, and NT 3.x/4.0, you'll have access to advanced NT options. In the case of Windows NT 3.x/4.0 blue screen, you'll be able to use this tool to modify every file that appears on the error screen as well as every code next to it. In other screens, you'll be able to modify the codes that appear when the „Show additional information about the file“ checkbox is checked.

Windows XP example:

```
bluescreen simulator plus
A problem has been detected and windows has been shut down to prevent damage
to your computer.

The problem seems to be caused by the following file: NTFS.SYS

DRIVER_IRQL_NOT_LESS_OR_EQUAL

If this is the first time you've seen this stop error screen,
restart your computer. If this screen appears again, follow
these steps:

Check to make sure any new hardware or software is properly installed.
If this is a new installation, ask your hardware or software manufacturer
for any windows updates you might need.

If problems continue, disable or remove any newly installed hardware
or software. Disable BIOS memory options such as caching or shadowing.
If you need to use safe mode to remove or disable components, restart
your computer, press F8 to select Advanced Startup Options, and then
select Safe Mode.

Technical information:

*** STOP: 0x0000000A (0xE000EC12, 0x20D02050, 0x00000009, 0x10000002)

*** NTFS.SYS - Address 9EC9C49B base at C173C684, DateStamp 022cc76c
```

Windows NT 3.x/4.0 example:

```
bluescreen simulator plus
*** STOP: 0x0000000A (0x868B3737, 0x4BE8A788, 0x7D93A871, 0x9E4C8A5A)
IRQL_NOT_LESS_OR_EQUAL

CPUID: GenuineIntel 6.3.3 irql:1f SYSVER 0xf0000565

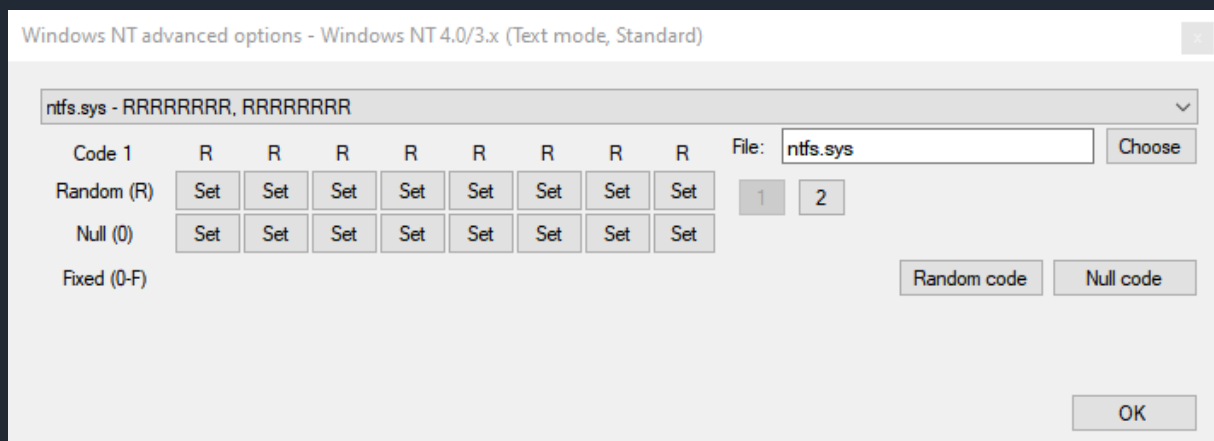
Dll Base DateStamp - Name
6dc7dc4c 13245c9c - ntfs.sys
45cd5d86 76785e6e - rt640x64.sys
a8225147 6e8eb098 - srv2.sys
66ac8339 2c19039a - vmswitch.sys
5db30473 8064055c - storport.sys
b117e745 77646696 - clfs.sys
a81d687e dab86957 - bam.sys
1b626a41 b2ceda91 - vmbkmclr.sys
e479db7a 2523dc53 - volume.sys
56ccde4b 1c2a4d9c - ndistapi.sys
4ec44075 708d416e - cng.sys
a2374247 5785b298 - mrxsmbs20.sys
893eb371 bad8b569 - emvscard.sys
ec83b642 a3e02593 - usbccgp.sys
d499277c 16442865 - Msfs.SIS
47ed294d c4cd5b57 - iorate.sys
Ba2bcaa8 bbc5cb81 - ndis.sys
ed7ecd79 2e28ce52 - srvnet.sys
c5864ea3 0630408c - ndiscap.sys
38d94175 6984435d - gt680x.sys

Dll Base DateStamp - Name
20d1a2ae 518aa497 - bowser.sys
8335a571 b4dea659 - hvservice.sys
6a4b26aa 9ce62793 - drmk.sys
cd90287b 0e492a54 - msisadrv.sys
b59789a5 e7418b9e - kd.dll
280a8c77 5aa48d60 - vmssproxyhnic.sys
d675be69 182eb152 - hdaudbus.sys
ce8b30a3 0036328b - lxc0re.sys
32d03364 6389345d - volsnap.sys
19d7a4ae 4a91a587 - ACPI.sys
7c4a9770 ade49858 - sgrmagent.sys
644217a9 96eb1983 - kbdclass.sys
c7951a7b 08401b54 - vmci.sys
aeac8ba5 d1568c8d - mup.sys
12018e76 44aa8050 - dxgmm2.sys

Address dword dump Build [1381] - Name
d08ab168 86d831b9 b8822293 e93b238b 2bd62564 d14394b5 - tcpip.sys
d9606756 76419860 2c9d18b1 5d4719a9 8ee20a82 b19b0c6a - acpi.sys
4d7b4d74 7e264e6c 3583aebd 663ca096 98d7a170 c981a368 - wmlib.sys
5661d472 1cbe53c3 4d6855ab 70125684 a1bc577c 6729c7cd - fltmgr.sys

Restart and set the recovery options in the system control panel
or the /CRASHDEBUG system start option.
```

If you click on the „Advanced NT code options“ button, you’ll see the following window:

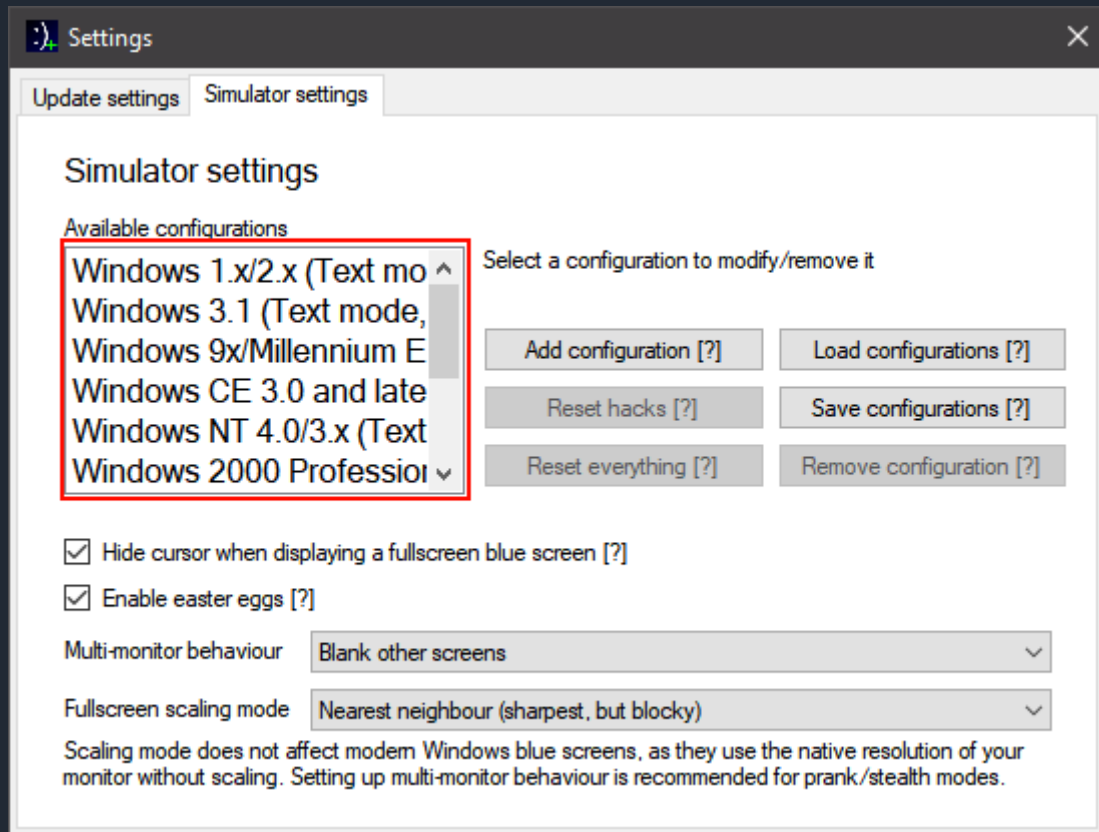


This works in a similar to the memory address code editor. You can specify error codes using the table and select sections using numbered buttons (a button representing current section is grayed out). Random code and null code buttons set the whole block to random numbers and letters or all zeroes respectively. But you can also change the filename here. You can either rename whatever is inputted or click on the „Choose“ button to choose a file from a list. To select, which file you’re editing, click on the dropdown list. From there, choose which file you want to edit.

Click OK to exit this window.

3.5. Adding or removing presets

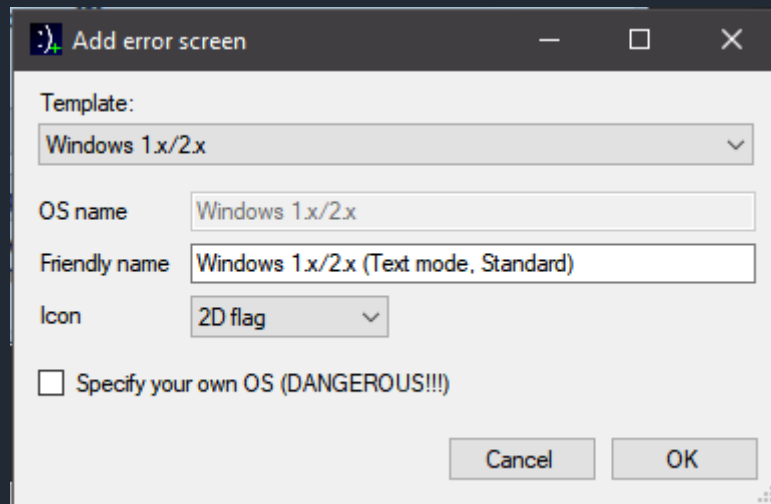
You can add your own presets and remove existing ones! To add or remove presets, click on the „Settings“ button. Then navigate to the „Simulator settings“ tab. You should see the following:



First off, to remove a preset, click on a preset you see listed on a list box that you want to remove (marked with a red box). Then the „Remove configuration“ button should become active. Once the button is active, you can click on it. You’ll be warned that all settings inside the preset will be lost. Click „Yes“ to proceed. After a preset is removed, it will no longer appear on the list and will not be listed in the main interface.

If you want to reset settings on a preset instead of deleting it, you can use either the „Reset hacks“ button or „Reset everything“ button. The „Reset hacks“ button lets you reset any setting that you set after clicking the „Additional options“ button. „Reset everything“ will recreate the entire preset with the same OS, name, and icon, which will result in all settings being reset.

To add a preset, click on the „Add configuration“ button. This will open up a window that looks like this:



As you should remember from Chapter 3.1, each configuration has an OS template. This template can be selected from the first dropdown list. This template is used to add initial OS-specific configuration to the error screen.

We'll skip over the „OS name“ for now and focus on the „Friendly name“. This is what will appear on the list of presets and on the main interface. Basically, this is a name you want to give to this preset.

The icon is what appears, when simulating a blue screen in both the taskbar and on the window title bar if windowed mode is enabled.

Coming back to the OS name, by default you are not allowed to change it. In order to change it, you must tick a check box labeled „Specify your own OS (DANGEROUS!!!)“. You'll be warned that this feature may lead to an unusable preset. Click „Yes“ to continue anyway.

In most cases, the OS name should be the same as the template name, but you can change it to another template name. This will allow you to create „hybrid“ error screens. Basically, the error screen will be setup with the configuration from a template you selected, but after doing so, the OS name will be changed, which will give you the ability to access options from that operating system and also attempt to simulate the error screen with another simulator. In most cases, this will result in an error, but sometimes you can use this to access forbidden settings, such as the insider preview tick box for the Windows 11 error screen. Note that pressing „Reset everything“ in the settings menu will remove any hybrid error screens and instead use configurations from the „OS name“ specified.

3.6. Loading and saving all presets

In case you want to keep configurations, even if you close the program, save and load presets.

Navigate to the „Simulator settings“ menu, as mentioned in the previous chapter.

After doing so, you can click on the „Save configurations“ button. This will allow you to save ALL presets into a file. Browsing and specifying a name, click OK to save the file.

If you want to load a configuration file, simply click „Load configurations“ on the same menu. This will open a file browser dialog. Select a valid BSSP 1.x or 2.x configuration file. Once you do, click OK to open the file. All presets should pop up and all settings (apart from global settings and prank mode settings) will be restored.

WARNING: Loading a configuration file will ERASE ALL UNSAVED PRESETS and replace them with ones found in the file.

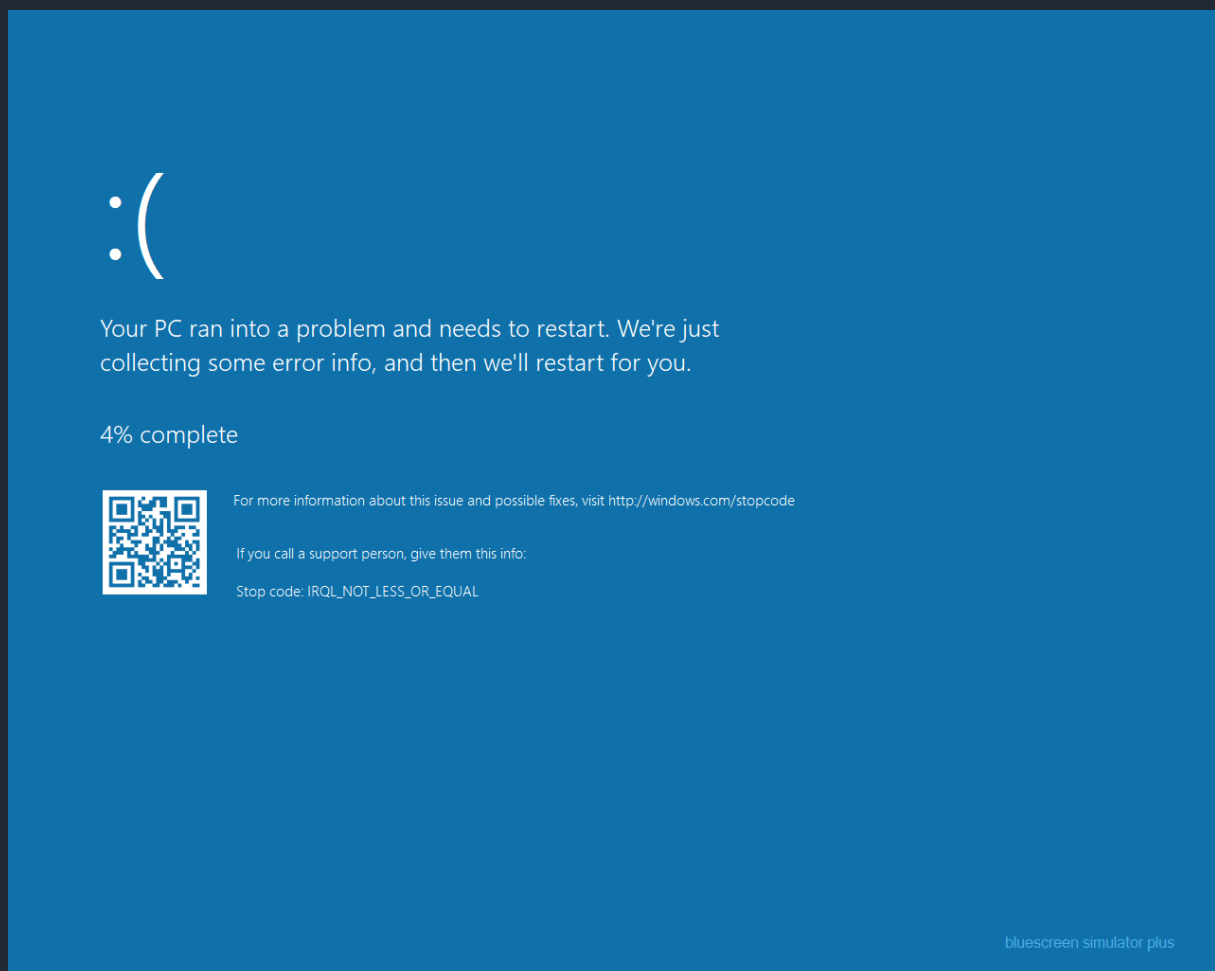
Note: If you load a 1.x configuration file, Windows 11 and 1.x/2.x presets won't be listed, because 1.x versions didn't support these types of blue screens.

4. Simulating error screens

4.1. Displaying a specific blue screen

To display an error screen with current settings, click the „Simulate“ button. This will display the error screen, with settings pulled from the currently selected preset. A window saying „Generating blue screen“ may briefly appear before the error screen is displayed. To exit the error screen, press Alt+F4 on your keyboard. In windowed mode, you can also close the window.

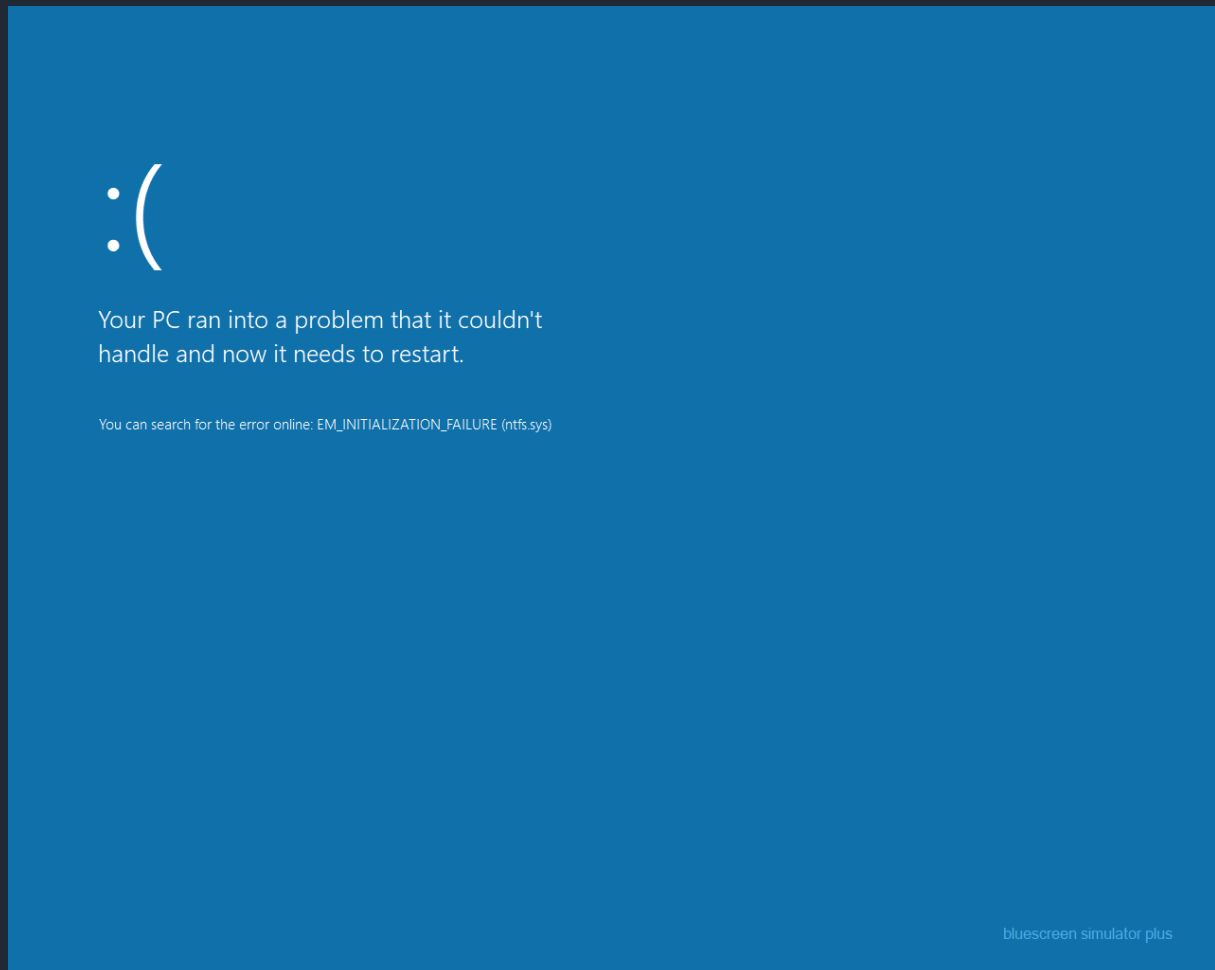
Here's an example of a Windows 10 blue screen with default settings:



4.2. Displaying a random blue screen

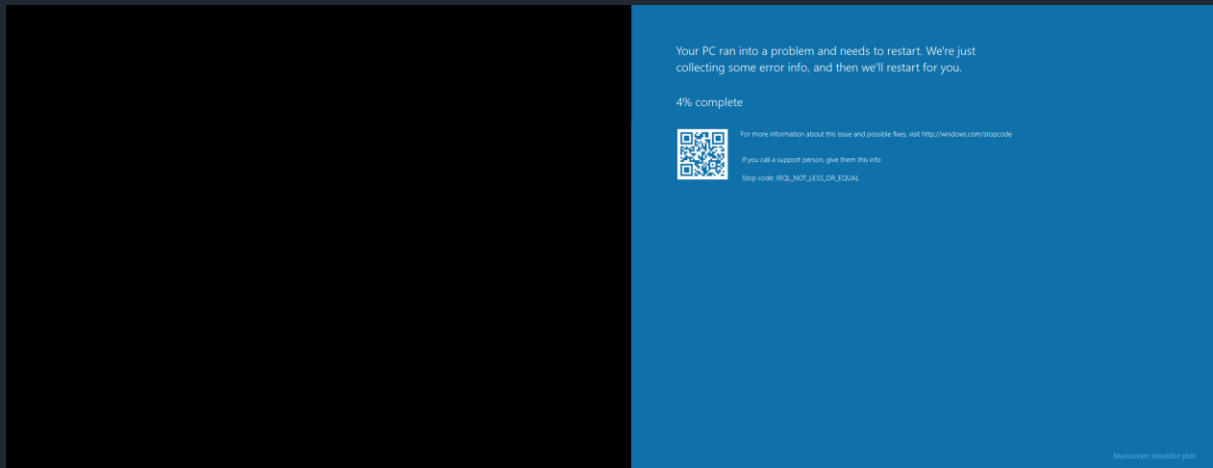
If you don't know which error to trigger specifically, you can use the randomize feature. Click on the „I'm feeling unlucky“ button, and a random preset will be selected and settings within them will be randomized. After the randomization process is complete, the blue screen will be displayed.

Here's an example of a randomized blue screen:

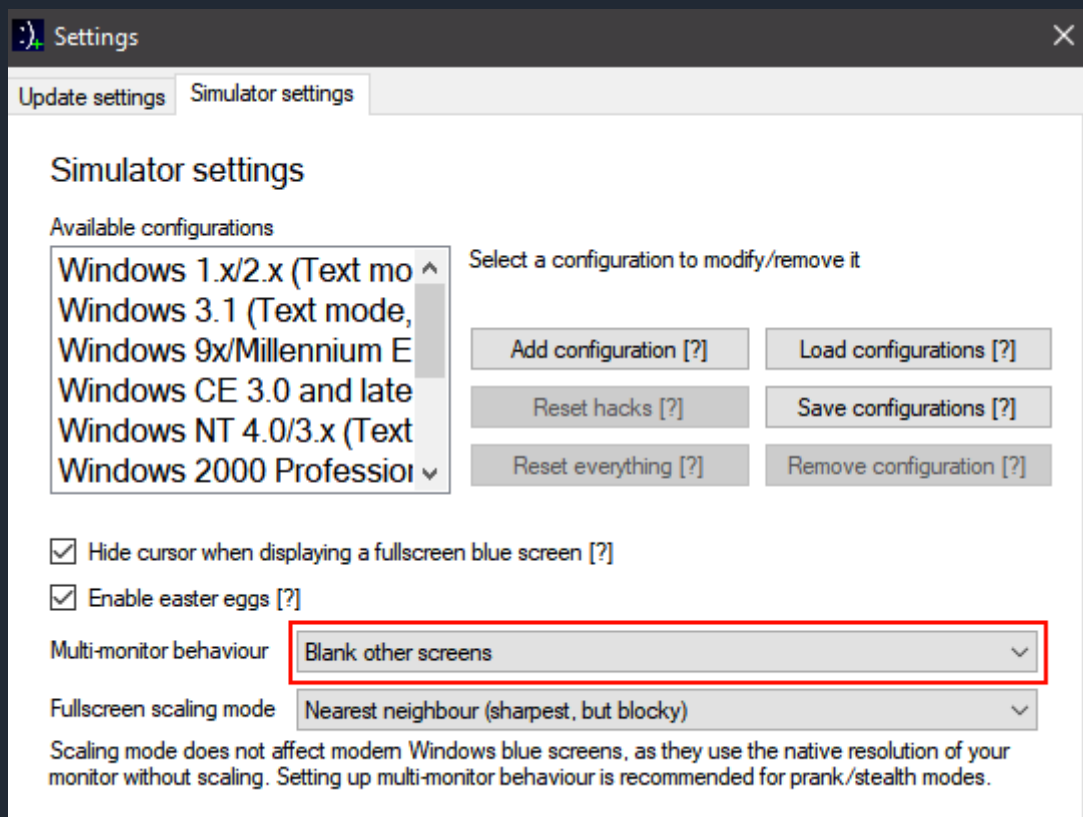


4.3. Multi-display behaviour

Blue screen simulator plus 2.0 also support multiple screens. By default, if multiple screens are connected, the primary screen will display the error screen, while other screens are blanked out. Here's how it might look like on a multi-display setup:



You can also change this behaviour, if you click on the settings button and navigate to the simulator settings tab. Then click on the following dropdown menu:



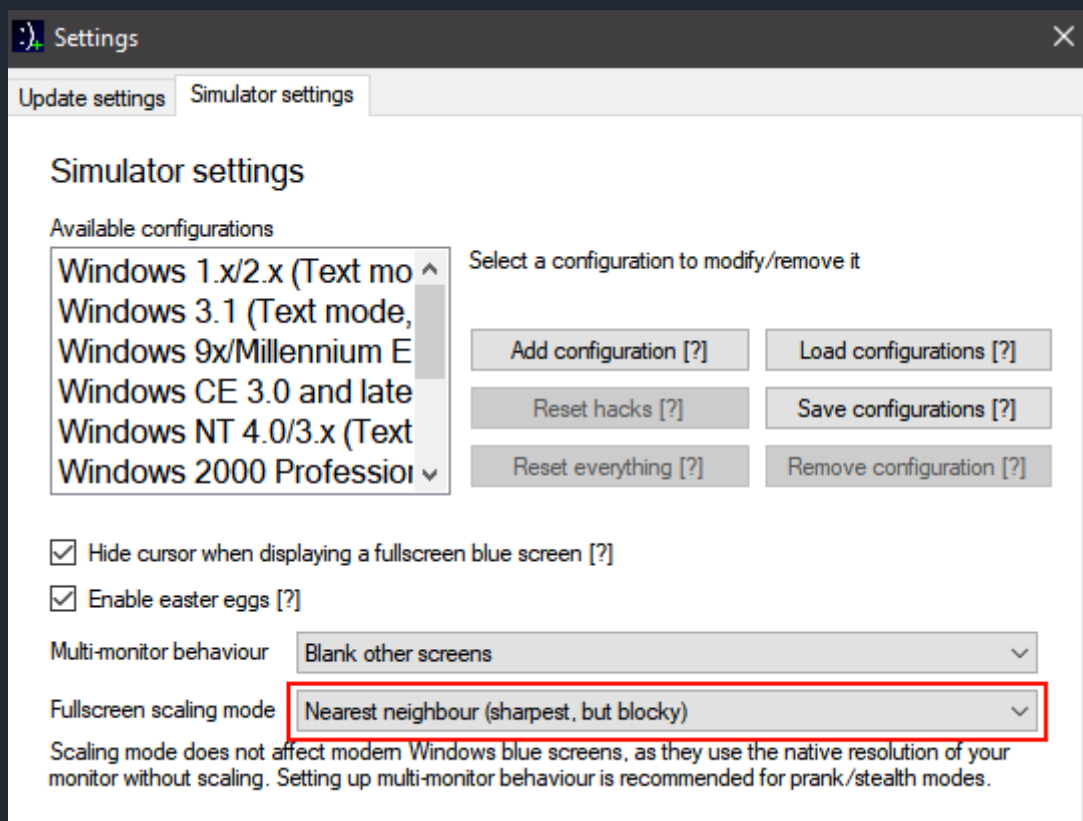
You can choose one of the following options:

- Blank other screens – Primary screen will display the error screen, secondary screens will display a black screen
- Only modify primary display – Primary screen will display the error screen, secondary screens will not be affected
- Mirror primary screen – Primary screen will display the error screen, secondary screens will stretch the image displayed on the primary screen
- Freeze secondary screens – Primary screen will display the error screen, secondary screens will display the same thing they were displaying right before you simulated the error and will keep displaying the same image until you quit the error screen

4.4. Upscaling options

Since blue screens aren't always displayed at native resolution, they sometimes need to be upscaled to get displayed in fullscreen mode. By default, BSSP 2.0 uses Bicubic as the upscaling algorithm. You may want to change this though, depending on the error screen you are generating. Scaling is also used when mirroring primary screen with a multi-display setup.

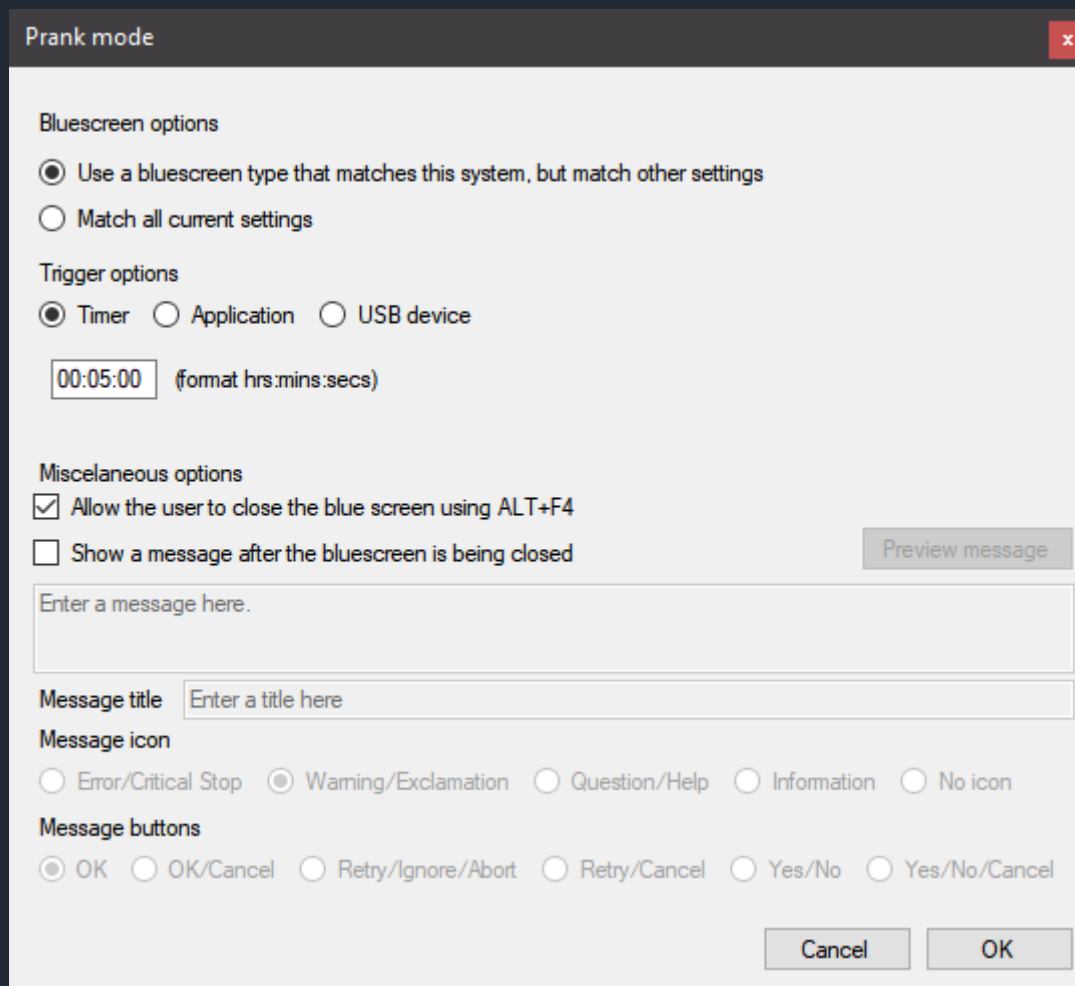
To change scaling mode, go to Settings and navigate to the „Simulator settings“ tab. Then modify the following dropdown menu:



Simulate an older blue screen in fullscreen mode how it looks.

5. Prank mode

Since the aim of this program is to simulate blue screens as accurately as possible, this program can also use „Prank mode“, which lets you prank the user with an error screen. To access prank mode, click on „Advanced“ and select „Prank mode“ from the drop down menu. You should see the following screen:



The screenshot shows a window titled "Prank mode" with a close button (X) in the top right corner. The window contains several sections of settings:

- Bluescreen options**
 - ☒ Use a bluescreen type that matches this system, but match other settings
 - ☐ Match all current settings
- Trigger options**
 - ☒ Timer ☐ Application ☐ USB device
 - Below the radio buttons is a text input field containing "00:05:00" and the text "(format hrs:mins:secs)" to its right.
- Miscellaneous options**
 - ☒ Allow the user to close the blue screen using ALT+F4
 - ☐ Show a message after the bluescreen is being closed
 - To the right of the second checkbox is a button labeled "Preview message".
 - Below these is a large text area with the placeholder text "Enter a message here."
- Message title**
- Message icon**
 - ☐ Error/Critical Stop ☒ Warning/Exclamation ☐ Question/Help ☐ Information ☐ No icon
- Message buttons**
 - ☒ OK ☐ OK/Cancel ☐ Retry/Ignore/Abort ☐ Retry/Cancel ☐ Yes/No ☐ Yes/No/Cancel

At the bottom right of the window are two buttons: "Cancel" and "OK".

The first section, labelled „Bluescreen options“ allows you to select which kind of an error to display. The „Use a bluescreen type that matches this system, but match other settings“ will find a preset that uses the OS that your computer is currently running and will apply it. „Match all current settings“ option will match everything, including the preset selected.

The second section, labelled „Trigger options“ allows you to specify what will cause the error to pop up. The first option allows you to display the error screen at a time interval. The default setting is to display the error 5 minutes after activating the prank. The second option allows you to display the error screen when a process with a specified name is running. So, for example, if you set it to „notepad.exe“, when the user opens Notepad, the blue screen will pop up. Last, but not least, you can use a USB device to trigger the error. To set the device up, just (unplug and) plug it in. BSSP will automatically detect it. If it doesn't, try using a different device.

The final section, labelled „Miscellaneous options“ lets you change other aspects of the prank. „Allow the user to close the blue screen using ALT+F4“ lets the user close a blue screen if ALT+F4 is pressed on keyboard. This is not required for Windows 11/10/8/8.1/CE blue screens. For other error screens, this check box must be ticked. Finally, you can also display a message after closing the bluescreen. You can click „Preview message“ to see how it'll look like.

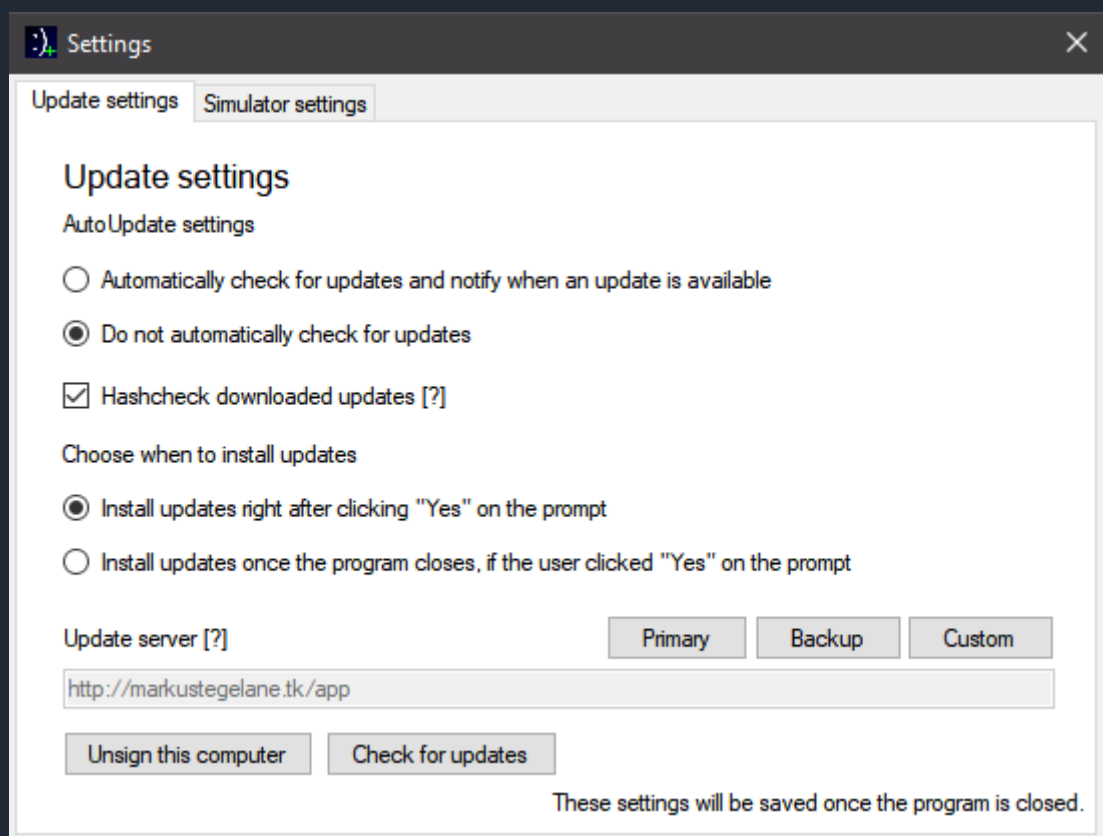
After setting everything up, you can either click „Cancel“ to avoid activating the prank or „OK“ to activate it. You'll be informed that the program will continue to run in the background and after the prank has finished, it'll be usable again. If the program gets stuck in stealth mode, use Task Manager to end it.

6. AutoUpdate

AutoUpdate allows users to upgrade to the latest version as soon as it is available.

6.1 Configuring AutoUpdate

To configure AutoUpdate, click on the Settings button. You'll see the following screen:



First, you can decide if you want to check for updates or not. If you don't, you'll not be notified if there's an update available and instead you'll have to manually check for updates in the settings menu.

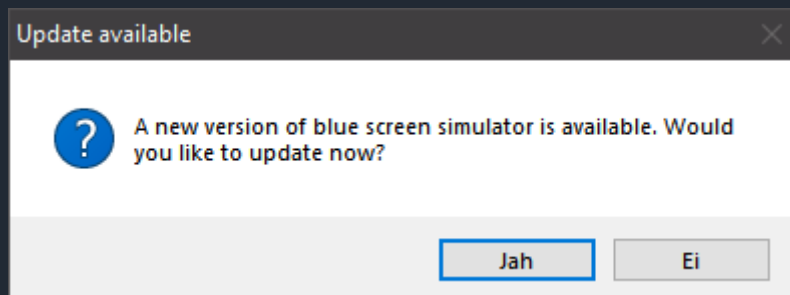
Hashchecking allows you to verify downloaded updates. If you uncheck this, you potentially risk installing a corrupted update, which is never a good thing. Only uncheck this if you know what you're doing.

Next, you can also choose when to install updates, in case you do get notified. By default, the update gets installed right after you click on „Yes“, but you can also choose to install updates after closing the program.

You can also choose, which update server to use. In most cases, the default server works fine, but you can also use the backup server, in case the primary one is down. If you want to or if none of the servers are up, you can also specify a custom server.

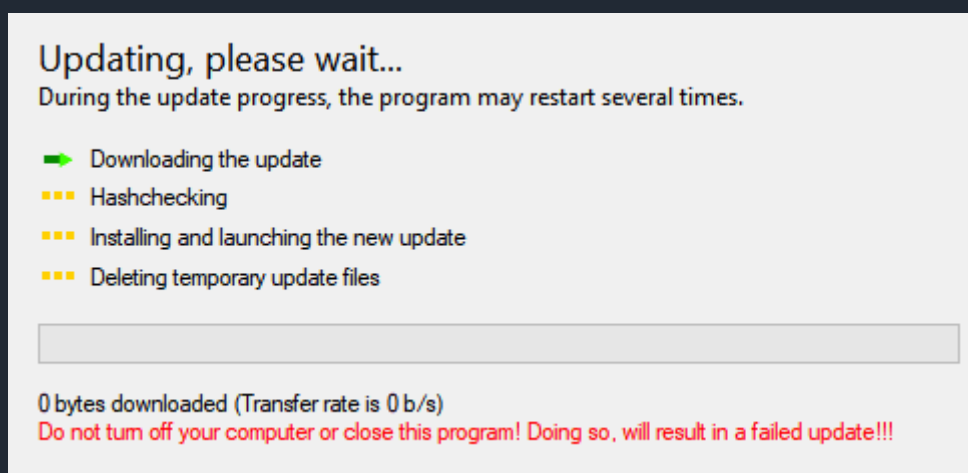
6.2. Installing the update

If AutoUpdate is enabled and there's an update available, you may see this dialog box a few seconds after starting the program:



You can click on „Yes“ to start the update process either immediately (by default) or after closing the program. You can also click „No“ to not update for now.

During the update, you'll see the following window:



Please be patient and let the program do its own thing. After closing and opening a few times, you should now be upgraded to a new version. After upgrading, you should see a changelog listing all of the latest features. After updating the program, the offline user manual will also be updated.

7. Submitting feedback

To send feedback about this project, you can use my personal website. First navigate to <https://markustegelane.ml/>, then accept or decline cookies. Then go to about and click on „Feedback“. Enter a new username and password that you can remember and which you'll be using to log in again. After signing up/logging in, click on „Send comment“. If you get an „Access denied“ error, go back and try logging in again.

After successfully clicking „Send comment“, enter a username that should appear in the comment and as the comment type what you'd like to give as feedback for BSSP 2.0. You can optionally enter a password, but it isn't required for private messages.

8. Links

Blue Screen Simulator Plus source code: <https://github.com/MarkusMaal/BlueScreenSimulatorPlus>

Online User Manual: <https://markustegelane.ml/bssp/help.pdf>

YouTube Channel: <https://www.youtube.com/MarkusTegelane>

LBRY Channel: <https://lbry.tv/@MarkusTegelane:8>

Twitter: <https://twitter.com/@MarkusTegelane>