STORMSHIELD

TECHNICAL NOTE
STORMSHIELD NETWORK SECURITY

SN3100 - UPDATING THE BIOS TO VERSION R2.30

Table of contents

Change log

Date	Description
July 22, 2025	New document

Getting started

This document describes the procedure of updating BIOS on an SN3100 model firewall from version R1.06 to version R2.30.

> **ⓘ INFORMATION**
> BIOS has to be in version R2.30 in order to integrate all fixes that address stability issues encountered by the chipset and the Intel® CPU on the SN3100 model firewall.

Secure Boot is disabled by default on SN3100 firewall models. If it had been enabled on your firewall, disable it during this process. You can enable it once again after the update is complete. For more information on Secure Boot, refer to the technical note Managing Secure Boot in SNS firewalls' UEFI.

Required equipment

This section describes the equipment that is required to update the BIOS version on an SN3100 firewall.

- A computer with a terminal emulator installed, e.g. PuTTy with a baud rate of 115200,
- A blank USB flash drive formatted to FAT32,
- An RJ45 to DB9F serial cable (provided with the product) and an RS232 to USB-A cable,
- An SN3100 model firewall running in BIOS version R1.06.

> **ⓘ NOTE**
> This operation can also be performed directly on a monitor, by using an HDMI/HDMI cable.
> In this case, plug a USB keyboard into the SNS firewall as well.

Preparing the USB flash drive

This section describes the procedure of preparing the USB drive that will be used during the update.
Ensure that your USB flash drive is blanks and formatted to FAT32.

Copying the update utility to the USB flash drive

1. Download the latest version of the Aptio V AMI Firmware Update Utility (AFU), which is available at the following link: https://www.ami.com/bios-uefi-utilities/#aptiov
2. Unzip the archive *Aptio_V_AMI_Firmware_Update_Utility.zip*.
3. Unzip the archive *BgtEfi64.zip* found in the sub-folder *Aptio_V_AMI_Firmware_Update_Utility/bgt/bgtefi/64/5.0*3.
4. Copy the file *BgtEfix64.efi* found in the sub-folder *Aptio_V_AMI_Firmware_Update_Utility/bgt/bgtefi/64/5.03/BgtEfi64/BgtEfi64* <u>to the root folder</u> of your USB flash drive.

Downloading BIOS version R2.30

1. In your Mystormshield personal area, go to **Downloads** > **STORMSHIELD NETWORK SECURITY** > **TOOLS** > **STORMSHIELD NETWORK SECURITY-TOOLS** > **SN3100 BIOS R230** to download the file *SN3100_BIOS_R230.zip.*
2. Verify the integrity of the downloaded file using its SHA256 hash: 14fb5675c619ccba4342807530fc9f90c8a82e954df024fb64449d7efd4aab5a.
3. Unzip the archive *SN3100_BIOS_R230.zip* to the **root folder** of your USB flash drive.
4. Verify the root folder of your USB flash drive. You should find the following files and folders in it:
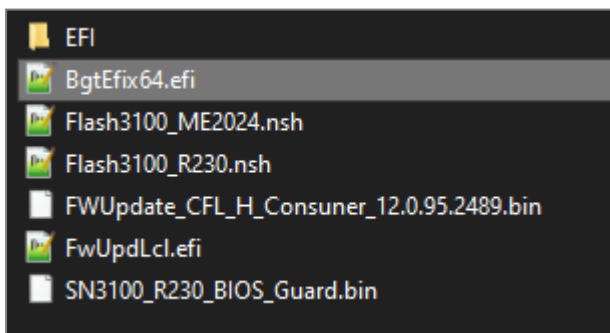
5. Verify the integrity of the binary file *SN3100_R230_BIOS_Guard.bin* using its SHA256 hash: 036113e77edaf0f6eda51ba7edbb733bbd1cfc7167110fbeda9fad2ef4967f57.
6. Verify as well the integrity of the binary file *FWUpdate_CFL_H_Consumer_120.95.2489.bin* by using its SHA256 hash: 00319e0bf2b9078f3c41b1b7c799e87b27335fe551e3eb37aad37c0270220f4f.

Your USB flash drive is ready to update BIOS to version R2.30.

Updating BIOS (SN3100)

This section describes connectors on SN3100 firewalls, and the successive steps to follow in this order to update the BIOS to version R2.30.

Most of the connectors on these firewall models are located on the front panel, except the HDMI port, which is located on the rear panel of the firewall.
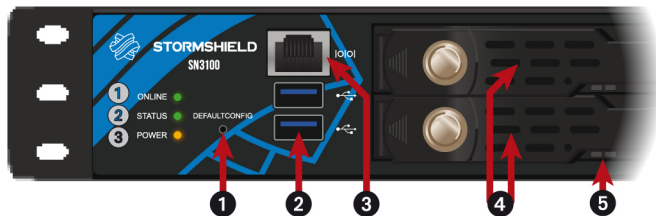
1: Button to reset the appliance to factory settings (defaultconfig).
2: USB 3.0 ports.
3: RJ45 serial port in console mode.
4: SSD racks for log storage.
5: LEDs on SSD racks.

1: On/off button.
2: Fans.
3: Reset button (electrically resets the firewall).
4: Ports dedicated to the management of the appliance (MGMT1 and MGMT2).
5: HDMI port: for plugging in the monitor.
6: Mains sockets for redundant power supplies.
7: Alarm off button.

Connecting devices to the firewall

- Connect the computer that is equipped with a terminal emulator to the firewall using the RJ45 to DB9F serial cable (provided with the product) and an RS232 to USB-A cable.
- The firewall can also be connected directly on a monitor, by using an HDMI/HDMI cable. In this case, plug a keyboard into the SNS firewall as well.

Checking the BIOS version on the firewall

1. Log in to the firewall system in console.
2. Authenticate by using the *admin* account on the firewall system.
3. Enter the command: `dmidecode -s bios-version`
   The firewall will show the BIOS version, which has to be R1.06.

Updating BIOS on the firewall

Secure Boot is disabled by default on SN3100 firewall models. If it had been enabled on your

firewall, disable it before following the steps below. You can enable Secure Boot once again after the update is complete. For more information, refer to the technical note Managing Secure Boot in SNS firewalls' UEFI.

> ⚠️ **IMPORTANT**
> The update process is fully automatic and lasts around five minutes.
> Once the process is run, it **must never** be interrupted, and the firewall must not be disconnected from the power supply.   If this occurs, your firewall will be completely unable to run.

1. As SN3100 firewalls have two internal power supply units to provide a redundant power supply, ensure that you have plugged in both power cords to the electrical mains.

2. Insert the USB drive that was prepared earlier into a USB port.

3. Restart the firewall by using the `reboot` command.

4. In the command prompt, run the executable file `Flash3100_R230.nsh`. The update process will then start:

```
FS0:\SN3100_BIOS_R2.30\> Flash3100_R230.nsh
FS0:\SN3100_BIOS_R2.30\> BgtEfix64_2.efi SN3100_R230_BIOS_Guard.bin /BIOSALL
+----------------------------------------------------------------------+
|             AMI BIOS Guard Firmware Update Tool  v5.03.03.0022        |
|       Copyright (C)2018 American Megatrends Inc. All Rights Reserved. |
+----------------------------------------------------------------------+
BIOS_FV_NVRAM.bin ................. (100%)
BIOS_FV_NVRAM_BACKUP.bin .......... (100%)
BIOS_FV_OA.bin .................... (100%)
BIOS_FV_MAIN.bin_00 ............... ( 20%)
BIOS_FV_MAIN.bin_01 ............... ( 40%)
BIOS_FV_MAIN.bin_02 ............... ( 60%)
BIOS_FV_MAIN.bin_03 ............... ( 80%)
BIOS_FV_MAIN.bin_04 ............... (100%)
BIOS_FV_DATA.bin_00 ............... ( 50%)
BIOS_FV_DATA.bin_01 ............... (100%)
BIOS_FV_AfterBB.bin ............... (100%)
BIOS_FV_FSPS.bin .................. (100%)
BIOS_FV_FSPTM.bin ................. (100%)
BIOS_FV_BB.bin .................... (100%)
```

5. When the update process ends, run the command `reset` to restart the firewall, which will automatically start up on the USB drive.

Updating the Intel® Management Engine firmware

Following the BIOS update, the Intel® Management Engine firmware also needs to be updated.

1. In the command prompt, run the executable file `Flash3100_ME2024.nsh`:

```
fs1:\> Flash3100_ME2024.nsh
Flash3100_ME2024.nsh> FWUpdLcl.efi -F FWUpdate_CFL_H_Consuner_12.0.95.2489.bin
Intel (R) Firmware Update Utility Version: 12.0.95.2495
Copyright (C) 2005 - 2024, Intel Corporation. All rights reserved.

Checking firmware parameters...

Warning: Do not exit the process or power off the machine before the firmware update process ends.
Sending the update image to FW for verification:  [ COMPLETE ]



FW Update:  [ 100% (-)] Do not Interrupt
FW Update completed successfully and a reboot will run the new FW.
```

2. When the update process ends, shut down the firewall by using the `reset -s` command.

3. Unplug both power supply cords from your firewall.

4. Unplug the USB drive from your firewall.

5. Wait five minutes before plugging both power cords back in.

6. Start your firewall by holding down the Power button located on the rear panel of the firewall.

Checking the BIOS version and the Intel® Management Engine firmware version on the firewall after the update

1. Press **[Del]** several times to stop the startup sequence and access the BIOS.

2. Go to the **Main** tab and check the BIOS version, which should be R2.30.

3. Go to the **Advanced** > **PCH-FW** tab and check the Intel® Management Engine (ME Firmware Version), which should be 12.0.95.2489.

4. Press **Esc**.

Further reading

Additional information and answers to some of your questions may be found in the **Stormshield knowledge base** (authentication required).

documentation@stormshield.eu