



**STORMSHIELD**



TECHNICAL NOTE

**STORMSHIELD NETWORK SECURITY**

# CONFIGURING A 3G/4G MODEM ON SNS

Product concerned: SNS 4.x

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Reference: [sns-en-configuring\\_3G\\_4G\\_modem\\_technical\\_note\\_v4](#)



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## Getting started

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3G/4G modems can be linked up to Stormshield Network Security firewalls in order to provide Internet access.

Supported modem types for SNS v4 are only Ethernet over USB modems.

In this document, you will learn how to identify the various parameters needed for configuring a 3G/4G modem on the firewall. While we are unable to set out the configuration for all modems on the market, configuration examples for some of the most common models can be found in the [Stormshield Knowledge Base](#) (authentication required).



# Configuring a 3G/4G modem using the Ethernet over USB protocol

The configuration of such modems requires the creation of a "USB stick / Modem" interface and needs the following parameters:

- *VendorId* (VID): identifier of the modem vendor.
- *ProductIdInit*: identifier of the product when it is initially detected as a storage device.
- *ModeSwitchString*: string that allows switching from storage device mode to modem mode.
- *ProductId* (PID): identifier of the product as a modem.

Once the modem is connected to the firewall and configured, the public IP address will be assigned to the modem, which will then act as a router for the firewall.

## Retrieving the configuration parameters *VendorId* and *ProductIdInit*

1. Log on to the firewall console via SSH using a *Putty* program.
2. Enable debug mode for the 3G/4G modem manager using the command:

```
sysctl hw.usb.u3g.debug=1
```

3. Connect your modem to the firewall's USB port.
4. Enter the command:

```
ndmsg
```

5. Identify the lines that begin with the string *u3g\_test\_autoinst* and note the parameters between brackets after the name of the modem vendor:

### Example:

```
[2018-01-10 09:19:24]ugen4.2: <XXX> at usb4
[2018-01-10 09:19:24]u3g_test_autoinst: checking if device XXX:XXX
(12d1:1f01) is a umass device and needs to be ejected
[2018-01-10 09:19:24]u3g_test_autoinst: device XXX:XXX (12d1:1f01) was not
matched => will not be ejected
[2018-01-10 09:19:24]umass0: <Mass Storage> on usb4
```

For the modem in this example, the *VendorId* is "12d1" and the *ProductIdInit* "1f01".

## Retrieving the parameters *ModeSwitchString* and *ProductId*

1. Refer to the file [device\\_reference.txt](#) which lists a large number of modem references.
2. In this file, look for the *ProductIdInit* value noted earlier. It should match a *DefaultProduct* string.  
The associated parameters *ProductId* and *ModeSwitchString* are respectively identifiable in the file by the strings *TargetProduct* and *MessageContent*.

A few configuration examples for common models can be found in the [Stormshield Knowledge Base](#) [authentication required].



## Creating the USB/Modem interface on the firewall

1. In the menu **Configuration > Network > Interfaces**, click on **Add**.
2. Select **Add a USB stick / modem**.
3. In the **Identification of the USB stick / modem** section, name the interface.
4. In the **Address range** section, enter the IPv4 address associated with this interface or leave it as *Dynamic IP (DHCP)* if this modem does not have a set address.
5. In **Modem parameters** select one of the available customized profiles (*Custom modem 1* or *Custom modem 2*) and click on **Configuration of the modem**.
6. In the window **Configuration of the modem X**, select **Enable** and enter the following parameters:
  - **Name** of the modem {for information only},
  - **Model** of the modem {for information only},
  - **Vendor ID**: enter the value of the *VendorId* parameter,
  - **Initial product ID**: enter the value of the *ProductIdInit* parameter,
  - **MessageContent for modem mode**, enter the value of the *ModeSwitchString* parameter,
  - **Target product ID**: enter the value of the *ProductId* parameter.

The screenshot shows the 'ADD A USB STICK / MODEM' wizard in two steps. The main window is 'ADD USB STICK / MODEM WIZARD - (STEP 1 OF 1)'. It has three sections: 'Identification of the USB stick / modem' with fields for Name (My-usbethernet), Comments, Color, and This interface is (external (public)); 'Address range' with IPv4 address (Dynamic IP (DHCP)); and 'Modem parameters' with USB modem (Custom modem 2) and a 'Configuring the modem...' button. A secondary dialog box 'CONFIGURING THE MODEM 0' is open, showing 'Enable' checked, Name (4G USB-Ethernet Modem), Model (Modem Model), Vendor ID (12d1), Initial product ID (1f01), MessageContent for modem mode (55534243123456780000), Target product ID (14dc), and three empty initialization string fields. At the bottom are 'Apply' and 'Cancel' buttons.

7. Click on **Apply** then on **Finish**.
8. Disconnect your modem from the firewall's USB port.
9. Reconnect your modem to the firewall's USB port.



## Further reading

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Additional information and responses to questions you may have about high availability are available in the [Stormshield knowledge base](#) (authentication required).



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