



Nabto Updater user manual

NABTO/001/USM/005



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2 Introduction

This document describes how to use the Nabto Updater tool to update the firmware of devices that employ the Nabto bootloader.

Nabto Updater supports the following application binary file formats:

- Intel hex (extension .hex)
- Motorola S-record (extension .s19)
- Raw binary (extension .bin)

The device can be connected to the PC running Nabto Updater either through a switch/hub or directly to the PC using a link local connection.

3 Nabto Updater for Windows

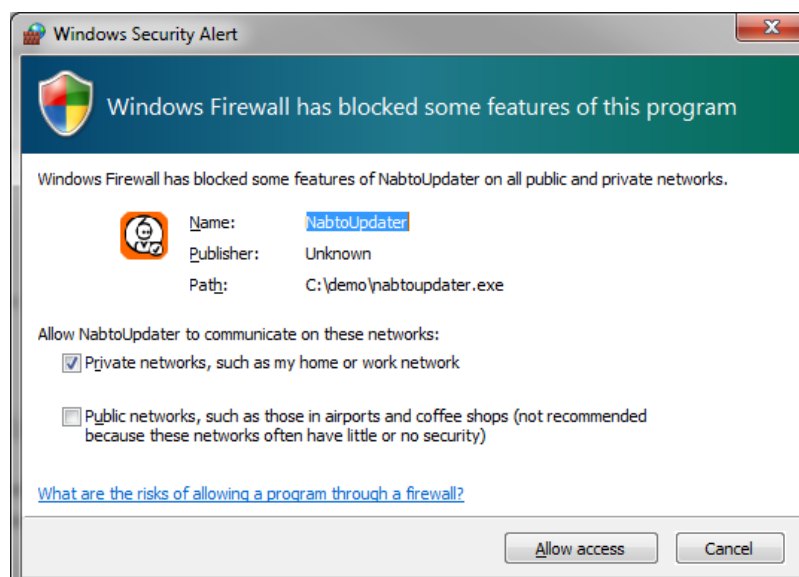
The NabtoUpdater application for Windows may be downloaded at <http://download.nabto.com/NabtoUpdater.exe>. This is a stand alone executable that requires no additional resources and no installation. The tool is a command line application that may be used from either a command prompt or invoked by other applications like for instance Windows Explorer using drag and drop.

To start Nabto Updater either:

1. Drag and drop the application binary onto the NabtoUpdater.exe executable, or
2. Execute the following command from a command prompt:

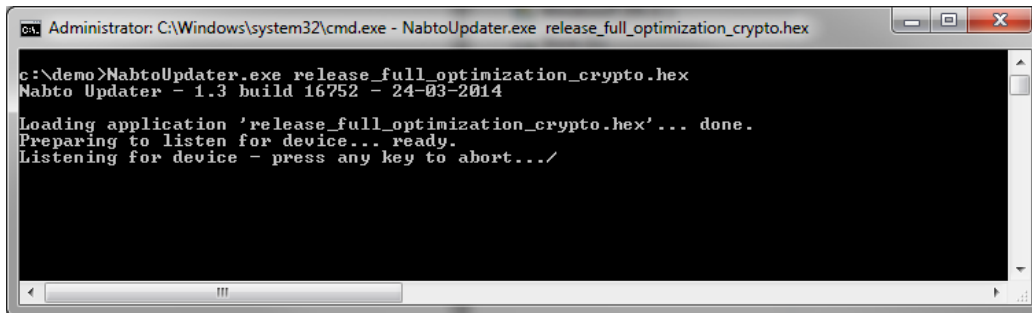
```
NabtoUpdater.exe <application_image>
```

Once started Windows' firewall may show an alert dialog indicating that NabtoUpdater.exe is trying to access the network. Depending on your version of Windows a dialog similar to the one below will be shown.



Nabto Updater is communicating with the bootloader through the network and so requires network access.

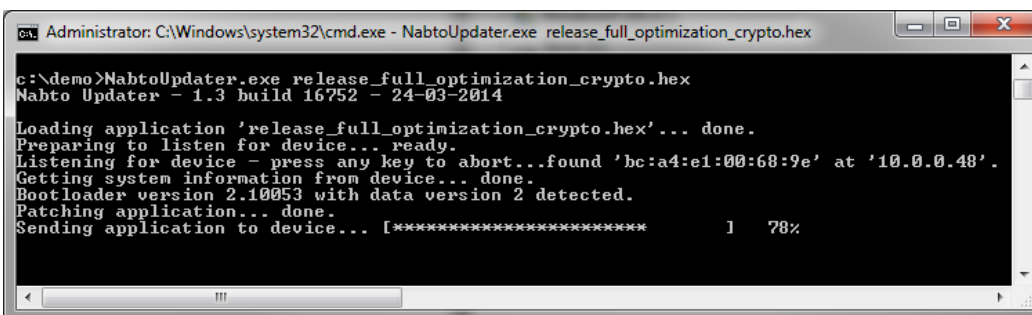
At this point Nabto Updater is waiting for a device equipped with the standard Nabto bootloader to announce itself on the network. This is reported with the message shown below.



```
Administrator: C:\Windows\system32\cmd.exe - NabtoUpdater.exe release_full_optimization_crypto.hex
c:\demo>NabtoUpdater.exe release_full_optimization_crypto.hex
Nabto Updater - 1.3 build 16752 - 24-03-2014

Loading application 'release_full_optimization_crypto.hex'... done.
Preparing to listen for device... ready.
Listening for device - press any key to abort.../
```

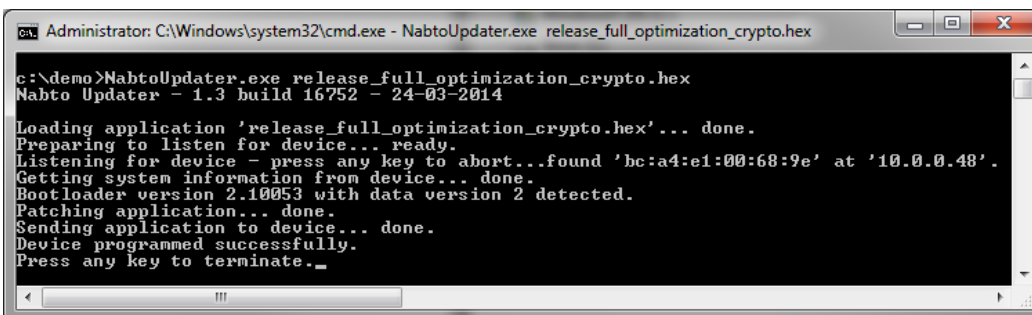
Connect the device to the network and power it up. If the device is already running reset it (using the reset button, by power cycling it or whatever means is appropriate). Within a few seconds the device should be booted and detected by Nabto Updater and the update process should be started as shown below.



```
Administrator: C:\Windows\system32\cmd.exe - NabtoUpdater.exe release_full_optimization_crypto.hex
c:\demo>NabtoUpdater.exe release_full_optimization_crypto.hex
Nabto Updater - 1.3 build 16752 - 24-03-2014

Loading application 'release_full_optimization_crypto.hex'... done.
Preparing to listen for device... ready.
Listening for device - press any key to abort...found 'bc:a4:e1:00:68:9e' at '10.0.0.48'.
Getting system information from device... done.
Bootloader version 2.10053 with data version 2 detected.
Patching application... done.
Sending application to device... [*****] 78%
```

After successful programming a message similar to the one below should be shown.



```
Administrator: C:\Windows\system32\cmd.exe - NabtoUpdater.exe release_full_optimization_crypto.hex
c:\demo>NabtoUpdater.exe release_full_optimization_crypto.hex
Nabto Updater - 1.3 build 16752 - 24-03-2014

Loading application 'release_full_optimization_crypto.hex'... done.
Preparing to listen for device... ready.
Listening for device - press any key to abort...found 'bc:a4:e1:00:68:9e' at '10.0.0.48'.
Getting system information from device... done.
Bootloader version 2.10053 with data version 2 detected.
Patching application... done.
Sending application to device... done.
Device programmed successfully.
Press any key to terminate._
```

The device will now automatically start the new application and the command prompt window may be closed.

4 Nabto Updater for Linux

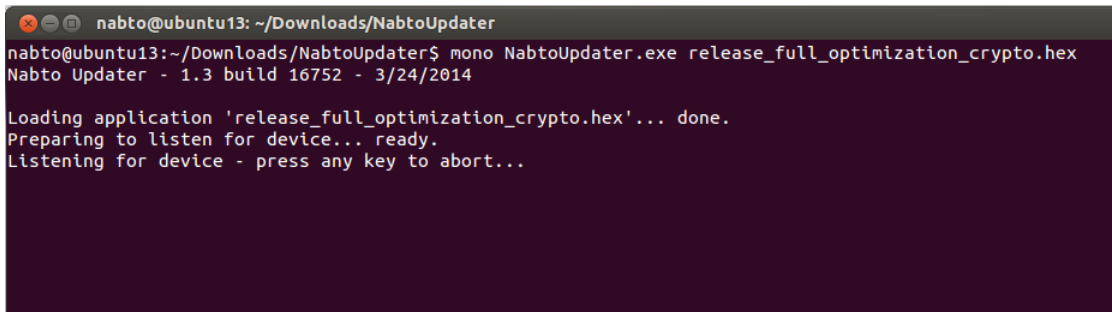
The NabtoUpdater application for Linux may be downloaded at <http://download.nabto.com/NabtoUpdater.zip>. This is an archive that contains the Nabto Updater executable and two supporting libraries.

To run the executable Mono is required. For more information on Mono please visit <http://www.mono-project.com>.

To start Nabto Updater open a terminal and execute the following command:

```
mono NabtoUpdater.exe <application_image>
```

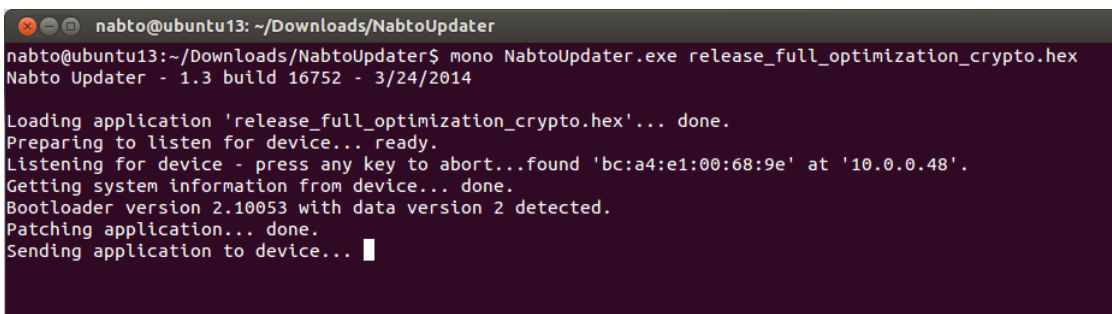
At this point Nabto Updater is waiting for a device equipped with the standard Nabto bootloader to announce itself on the network. This is reported with the message shown below.



```
nabto@ubuntu13: ~/Downloads/NabtoUpdater
nabto@ubuntu13:~/Downloads/NabtoUpdater$ mono NabtoUpdater.exe release_full_optimization_crypto.hex
Nabto Updater - 1.3 build 16752 - 3/24/2014

Loading application 'release_full_optimization_crypto.hex'... done.
Preparing to listen for device... ready.
Listening for device - press any key to abort...
```

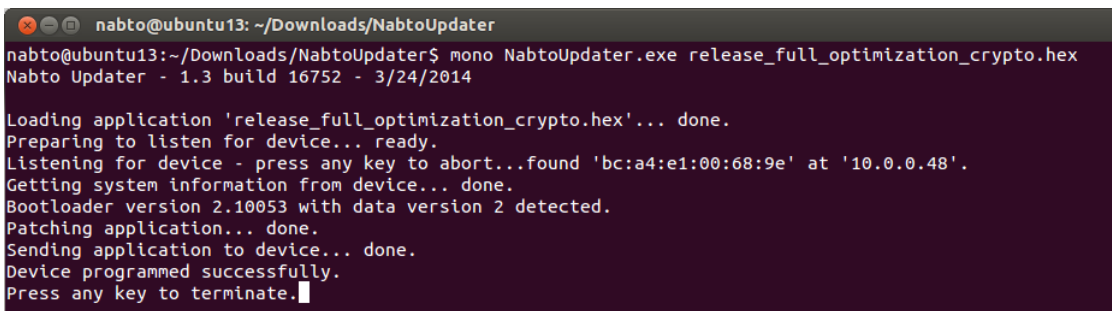
Connect the device to the network and power it up. If the device is already running reset it (using the reset button, by power cycling it or whatever means is appropriate). Within a few seconds the device should be booted and detected by Nabto Updater and the update process should be started as shown below.



```
nabto@ubuntu13: ~/Downloads/NabtoUpdater
nabto@ubuntu13:~/Downloads/NabtoUpdater$ mono NabtoUpdater.exe release_full_optimization_crypto.hex
Nabto Updater - 1.3 build 16752 - 3/24/2014

Loading application 'release_full_optimization_crypto.hex'... done.
Preparing to listen for device... ready.
Listening for device - press any key to abort...found 'bc:a4:e1:00:68:9e' at '10.0.0.48'.
Getting system information from device... done.
Bootloader version 2.10053 with data version 2 detected.
Patching application... done.
Sending application to device... █
```

After successful programming a message similar to the one below should be shown.



```
nabto@ubuntu13: ~/Downloads/NabtoUpdater
nabto@ubuntu13:~/Downloads/NabtoUpdater$ mono NabtoUpdater.exe release_full_optimization_crypto.hex
Nabto Updater - 1.3 build 16752 - 3/24/2014

Loading application 'release_full_optimization_crypto.hex'... done.
Preparing to listen for device... ready.
Listening for device - press any key to abort...found 'bc:a4:e1:00:68:9e' at '10.0.0.48'.
Getting system information from device... done.
Bootloader version 2.10053 with data version 2 detected.
Patching application... done.
Sending application to device... done.
Device programmed successfully.
Press any key to terminate.█
```

The device will now automatically start the new application and the command prompt window may be closed.

5 Troubleshooting

Problem	Solution
Nabto Updater starts sending the application but no progress is made. The device IP is reported as 169.254.1.1.	Simply retry the update process.