



... emergency procedures AP-2000

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Introduction

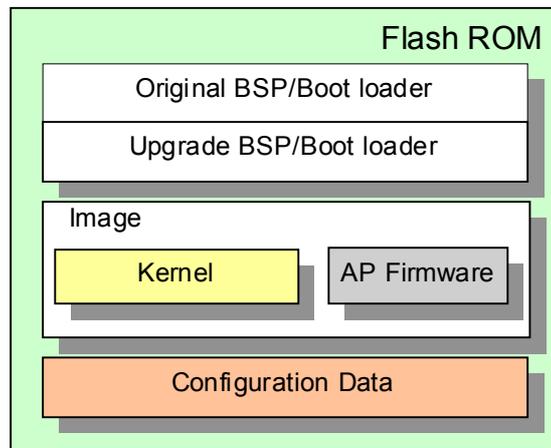
Maintaining and configuring the AP-2000, in some case the AP is not accessible anymore. This may occur in cases like:

- configuration password forgotten
- image corrupted
- configuration inconsistent

This document describes procedures and functions of the AP-2000 to reload the image and/or delete the configuration in emergency situations.

Procedures

All AP-2000's configuration data and software is stored in Flash ROM. This is shown in the diagram below.



The Emergency procedures consists of the different types:

- *Delete Image.* After deleting the Image, the AP-2000's bootloader will wait for the correct parameters to be entered to download a new Image.
- *Delete Configuration.* After deleting the Configuration, the current image in the AP-2000 will create a new configuration structure with default values.

Besides the emergency procedure it is also to reset the AP to factory defaults using the management interface. For example, using the *Commands/ Reset-to-Factory Defaults* screen in the web browser.

Forced Reload : deleting the Image

The Forced Reload deletes the Image of the AP-2000, but retains any configuration settings.

Requirements, to do Forced Reload:

- Have a PC connected with cabled network to the AP.
- Have a TCP/IP installed and a valid IP address assigned to the PC.
- Have the Scantool installed on the PC.
- Have a TFTP server containing the AP image running on the wired network.
- Have a IP Address, Subnetmask and Gateway available for the AP, either fixed or through DHCP.

Delete Image

Steps to set AP-2000 into Forced Reload mode:

1. Reboot the AP-2000, for example by pressing the reset button
2. Press in the Reload button for about 40 seconds. The AP boots. After about the first 8 seconds, the Power LED will start blinking green, indicating that the bootloder is loaded into memory. After this, the bootloder checks the status of the Reload button and deletes the image. Finally, the power LED will finally stay amber, indicating that the bootlader waits for input. The AP is in Forced Reload mode now.

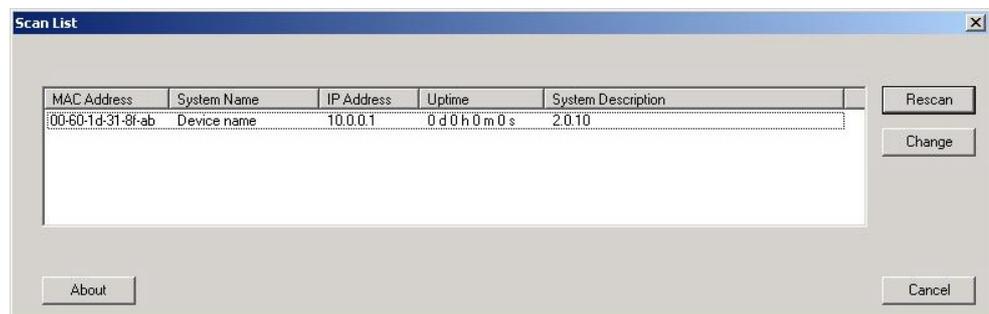
Upload new Image using Scantool

Note: if AS-2000 to AP-2000, then sometimes v1.xx bootloder. This one does not show up in Scantool, and there needs to be upload by using the CLI over serial.

Note2: if th AP-2000 is in forced Reload mode, the box can only be connected across the wired Ethernet. The wireless Ethernet is still turned off.

Note3: the Forced Reload procedure will only replace the image. The configuration will be maintained. To replace the configuration as well, follow the steps for Reset to Default.

1. Start Scantool.



The AP-2000 shows up. The System Description does show the version of the bootloder only. This indicates that the device indeed in Forced Reload mode.

2. Select the AP.
3. Press Change.



4. *Default, IP Address Type is Dynamic. If a DHCP server provided an IP address to the AP, go to the next step. If no DHCP was provided:*
 - *Select Static.*
 - *IP Address, Subnetmask and Gateway IP Address. This IP settings will be assigned to the AP during the upload of the Image.*
5. *Fill in the IP address of the TFTP server in the field TFTP Server IP Address. From this server the AP will download a new Image.*
6. *Fill the filename of the image in the field Image File Name. This file must be available in the directory configured in the TFTP server.*
7. *Fill in the Read/Write Password. In Forced Reload mode this is public.*
8. *Press OK. The AP reboots quickly and starts downloading the image.*



9. *Verify, if possible, in the TFTP server console the correct download of the image. After the AP has downloaded the Image, the Image will be stored in flash and executed.*
10. *In Scantool, press Rescan. The AP will show up with the IP address used before the Reload.*

From now on you may proceed configuring the AP with the Web interface, CLI or SNMP-based management system. Note that the configuration password is the same as before the reload.

Reset to Default: deleting the Configuration

Use this procedure is for example the configuration (SNMP, Serial or HTTP) password is forgotten or anything else in the configuration prevents the administrator from accessing the AP. Using this procedure, the image in the AP-2000 is not deleted; merely the configuration is deleted.

Delete Configuration

Steps:

1. Have the AP-2000 up and running for at least 1 minute.
2. Press in the Reload button for about 10 seconds. All LED's will change colors, usually from green to amber. At this moment the AP is deleting the configuration. After this the AP will reboot.
3. After the LED's are changed, release the button, otherwise the Image will be deleted as well.

Set Initial settings

1. Start the Scantool
2. Select the AP.
3. Press Change.
4. Default, IP Address Type is Dynamic. If a DHCP server provided an IP address to the AP, go to the next step. If no DHCP was provided:
 - Select Static.
 - IP Address, Subnetmask and Gateway IP Address. The AP will reboot with the new IP settings.

From now on you may proceed configuring the AP with the Web interface, CLI or SNMP-based management system.

Note about old bootloaders

When using an AS-2000 that is upgraded to an AP-2000, but still has a v1.xx bootloader, the device will not show up in Scantool when enforced reload. In this case, use a serial cable to put in the TFTP settings.

It is strongly recommended to upload an AS-2000 Image first and perform a bootloader upgrade to vs v2.xx.

Using the Terminal interface

However the terminal interface is necessary, it may be easy, to have a serial cable connected to a terminal application Hyper Terminal, Microsoft Terminal or any other VT-100 compatible terminal application.

Selftest

When the AP starts, through the terminal, the self-test are shown. A shorted example is shown in the frame.

```
=====
                          Selftests OK
=====

CONFIG.SYS deleted
IMAGE deleted

Executing Upgraded BSP/BootLoader. Version 2.0.10

StrongARM HW Version-AP_2000_REV_J

                          Initial Setup Command Line Interface
=====
Type help for a description on commands and parameters

[Device name]>
```

Next step in the boot-process is the load of the boot-loader. The first task of this software is to check if the Reload button is pressed in. The second task is to display the version. This is also shown in the same example.

When no version number is shown, the version is considered to be v1.xx

After the self-test the version of the boot-loader is shown.

Delete of image

When the boot-loader detects that the Reload button is pressed in, it shows a message that the CONFIG.SYS and IMAGE are deleted. This is shown in the example.

```
=====
                          PubStation II PowerOn Selftests
=====

Running SDRAM test.....OK

SDRAM Size: 32 Mbyte
:
:
:
SLOT: 2
=====
Vendor ID: Texas Instruments (104c)
Device ID: PCI1225 (ac1c)

SLOT: 3
=====
EMPTY

=====
                          Selftests OK
=====

Executing Upgraded BSP/BootLoader. Version 2.0.10

Loading image...2999624 + 239784 + 2318872
```

Note that the CONFIG.SYS not means the settings of the AP; these are settings of the boot-loader itself, since it holds also a small portion in the memory to keeps its settings.

After this the boot-loader version is shown for versions 2.xx and higher.

Commands of the bootloader

The boot-loader has a limited command set, only intended for setting IP address and TFTP parameters. The command 'help' gives more information. With 'show' able to give the current parameters values and 'set' sets a particular value.

More Information

More information about the ORiNOCO products can be found at our web-site www.orinocowireless.com. Software Library, Document Library and other support resources are available at subsequent links on the same web-site.

Check also the next guides, both downloadable from the web-site and available on the ORiNOCO CD, that comes with the product:

- AP-2000 User Guide (UG_AP2.pdf)
- AP-2000 CLI reference manual (UG_AP2CL.pdf)