AR8x application note

This guide provides simple steps to quickly start using your new Nordic ID AR8x RFID reader and a high-level overview of the configuration and monitoring options available for your reader.

1. Getting started

Now that you have a brand new Nordic ID AR8x device in front of you, first step is to plug in the ethernet cable to the device. The other end of the cable should be connected to a DHCP-enabled network. Ensure your PC has Bonjour Print Services installed(install if needed). If your ethernet setup does not have power over ethernet, plug in the power cable to the device and connect it to a power outlet.

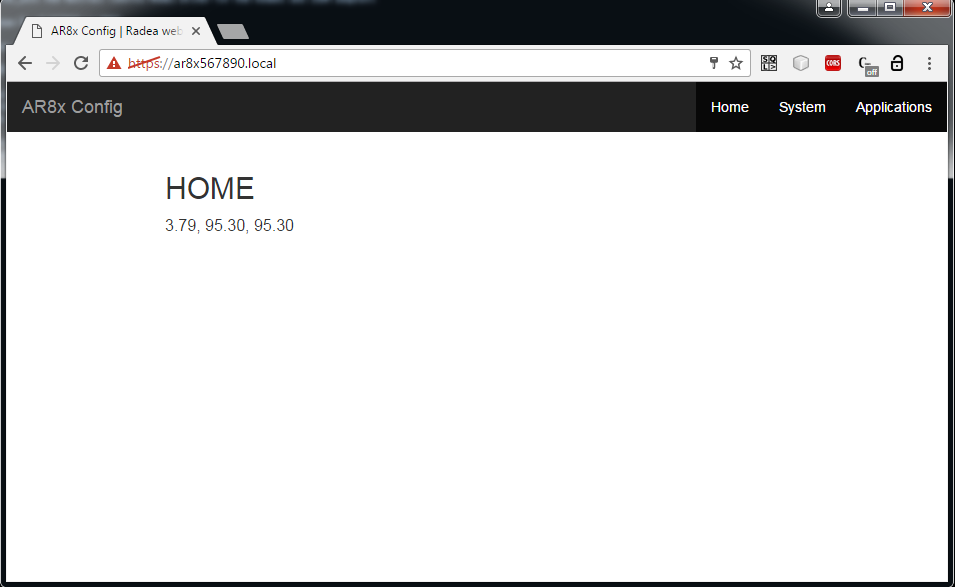
Once the device has powered up, check from the label(found from the bottom of the device) what is the MAC-address of the device. Let’s assume that the address you are seeing is 00-12-34-56-78-90. Take the last 3 values from the MAC and you should have 56-78-90. This last 3 bytes of the MAC is used as a part of the hostname for the device by default. The address is formatted as ar8x**567890** where the first 4 character are for identifying the device type and the last 6 are from the MAC address. You can test this configuration by performing a ping from your PC using command similar to this: *ping ar8x567890.local*

If the ping receives replies properly, you should be able to access the web configuration on the device through a web browser as well. The address would then be something like this: <https://ar8x567890.local> Replace 567890 with your MAC-address values and open it in your web browser.

Since self-signed certificates are used on the platform, your browser will most likely prompt you that there’s a “problem with this website’s security certificate”. Depending on your browser, you’ll need to click “Continue to this website (not recommended)” or other similar buttons.

If you are able to reach the device, you should be prompted with a username and password request. The default the configuration is **admin** & **admin**. The password can be changed in the Web Config view.

After the above has been completed successfully, you should see a view similar to this in your web browser:



Button-actions:

* Home
  + Loads the home-page
* System
  + Loads the System-page where you can find:
    - System performance log
    - Log file viewer
    - OS/Recovery image update tool
    - Network settings
    - Time service settings
    - Access settings
* Applications
  + Application management
    - Tool which allows you to start, stop and configure your own applications as also pre-installed applications provided by Nordic ID
  + Application upload
    - Tool which allows you to upload your own applications to the platform
  + See **AN002\_AR8x\_appinterface.docx** for more information.

1. available CONFIGURATION and info tools

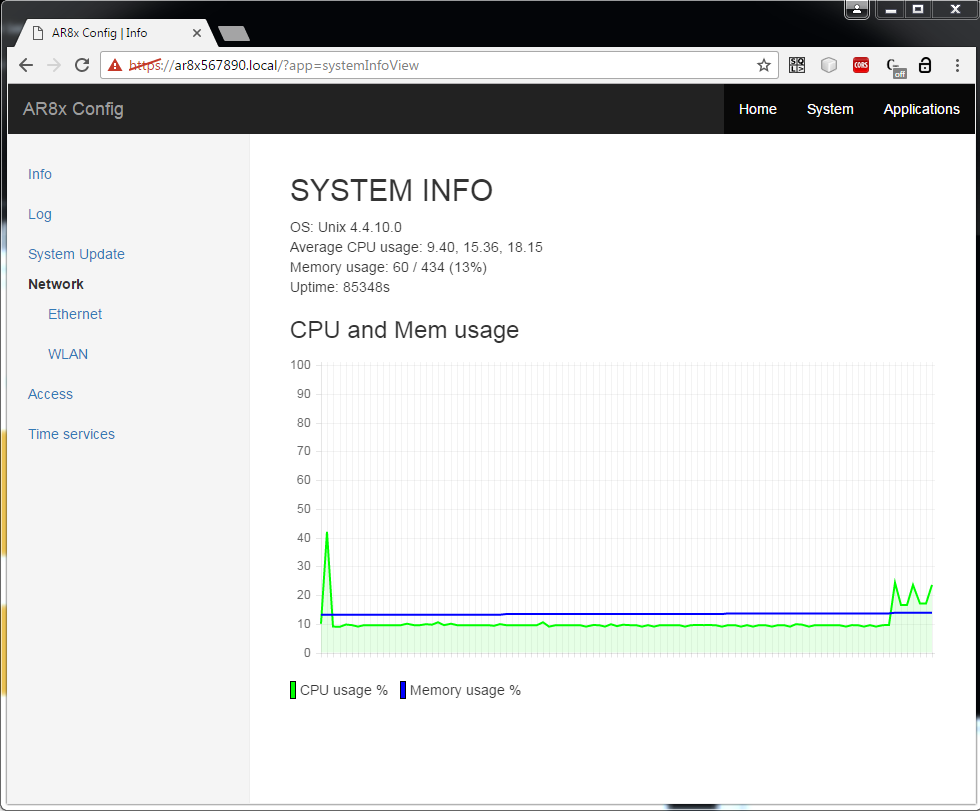
In this chapter we describe the tools available in the Web config UI. The backend of the web config can be accessed also using HTTP GET/POST requests. See **AN003\_AR8x\_webservice.docx** for more information

* 1. SYSTEM

The System-page contains tools for retrieving information about the platform and for changing certain platform settings. Below you can find more details about them.

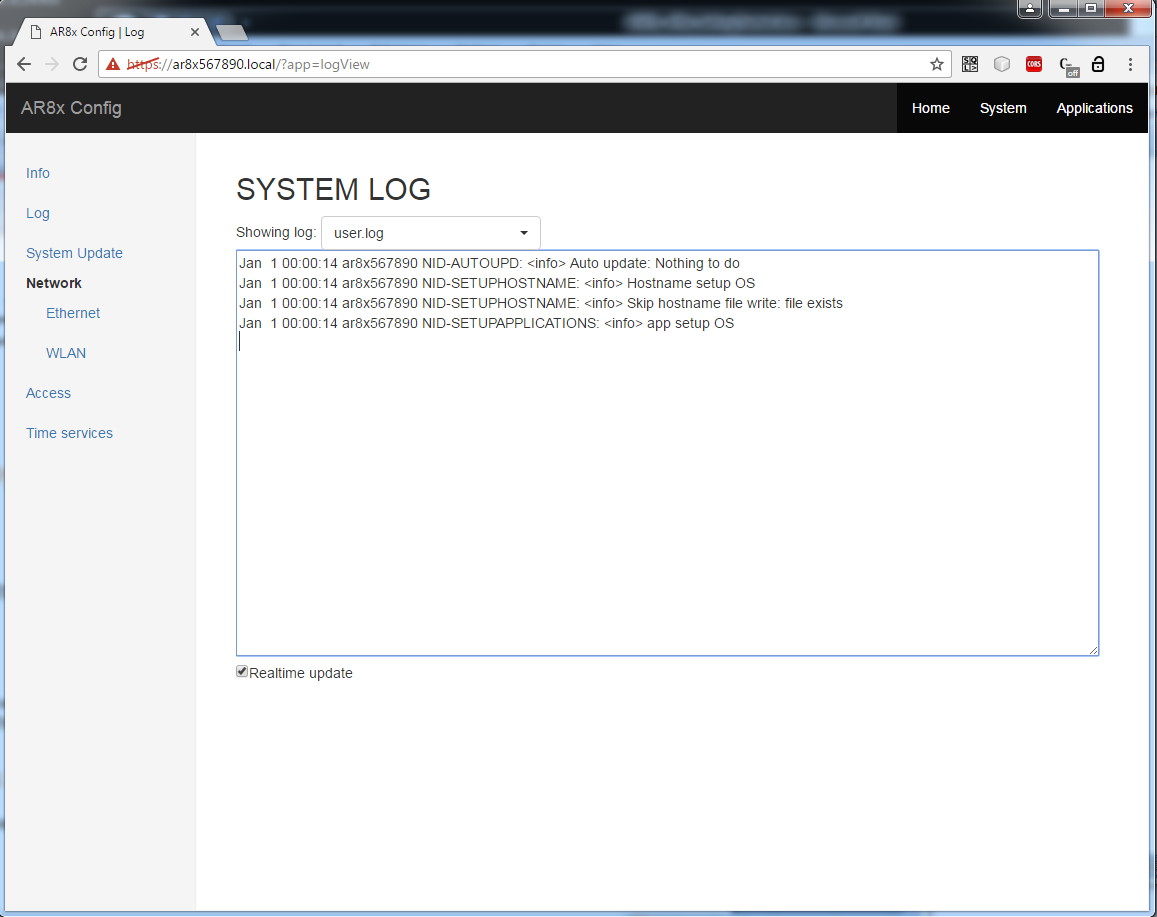
* + 1. INFO

The info view shows the OS version, CPU and memory usage and the uptime of the device. It also shows you a graph of the mem & CPU usage.



* + 1. LOG

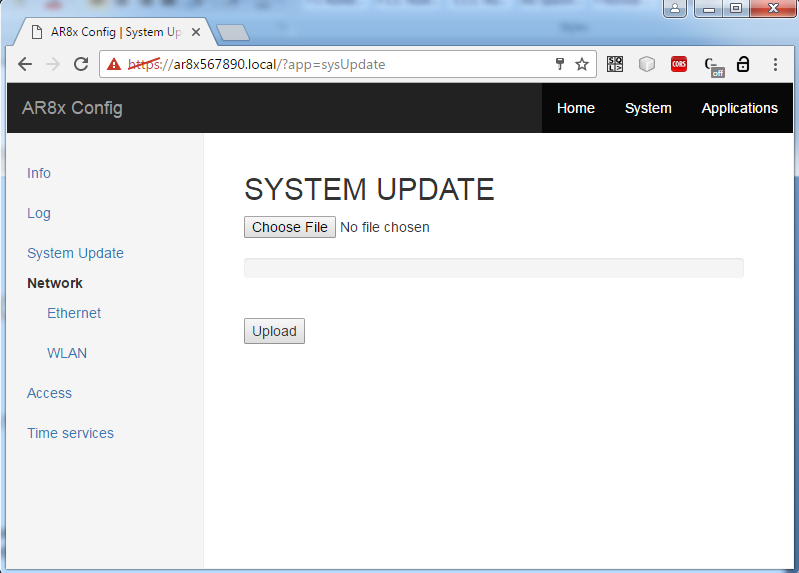
On the Log-page you retrieve the list of the available log-files and view their contents. If your applications should also display their log content here, make sure that they write their log to /var/log. Keep in mind that /var/log is mounted to temporary file storage so content will be lost during system reboot.



* + 1. SYSTEM UPDATE

The OS and also the recovery image can be updated through the web config. The System Update accepts only zip-files which are created by Nordic ID to ensure correct contents for the update. Please see <http://www.nordicid.com/en/downloads/> for more SW updates.

When updating the OS or the recovery image, first choose the file from your PC and then upload it. After the upload has finished, the backend will verify the contents. If verification succeeds, you need to click the “Begin”-button(Upload => Begin) to apply the update. At this step the device will restart itself so it might take a while before the update tool notifies you that the update has finished.

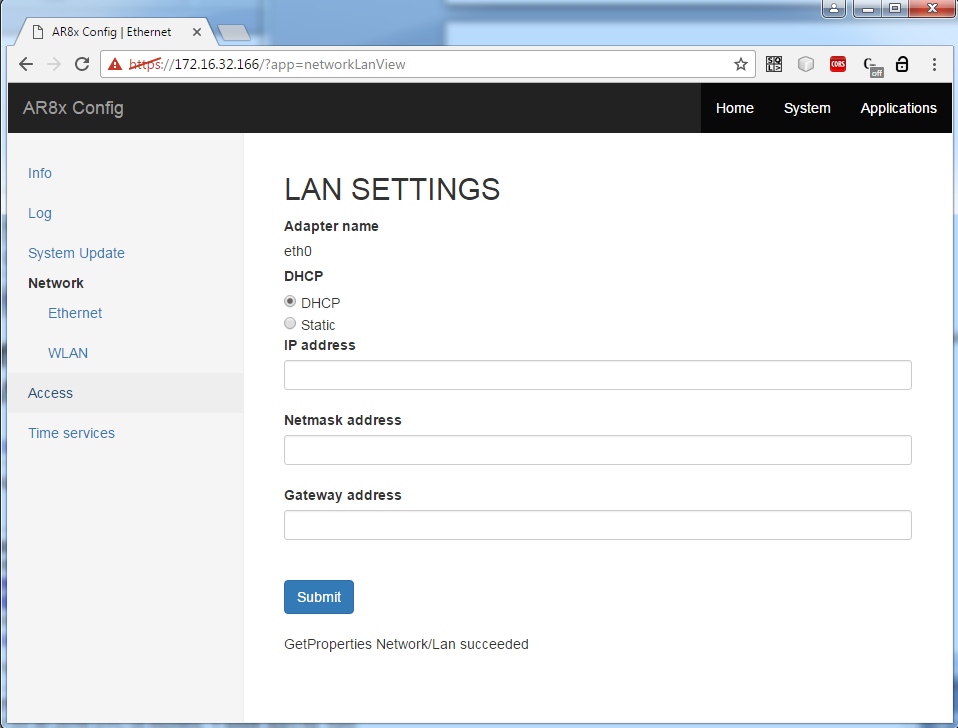


* + 1. NETWORK

Network settings allow you to change the ethernet and wlan adapter TCP/IP settings as also change the WPA Supplicant settings.

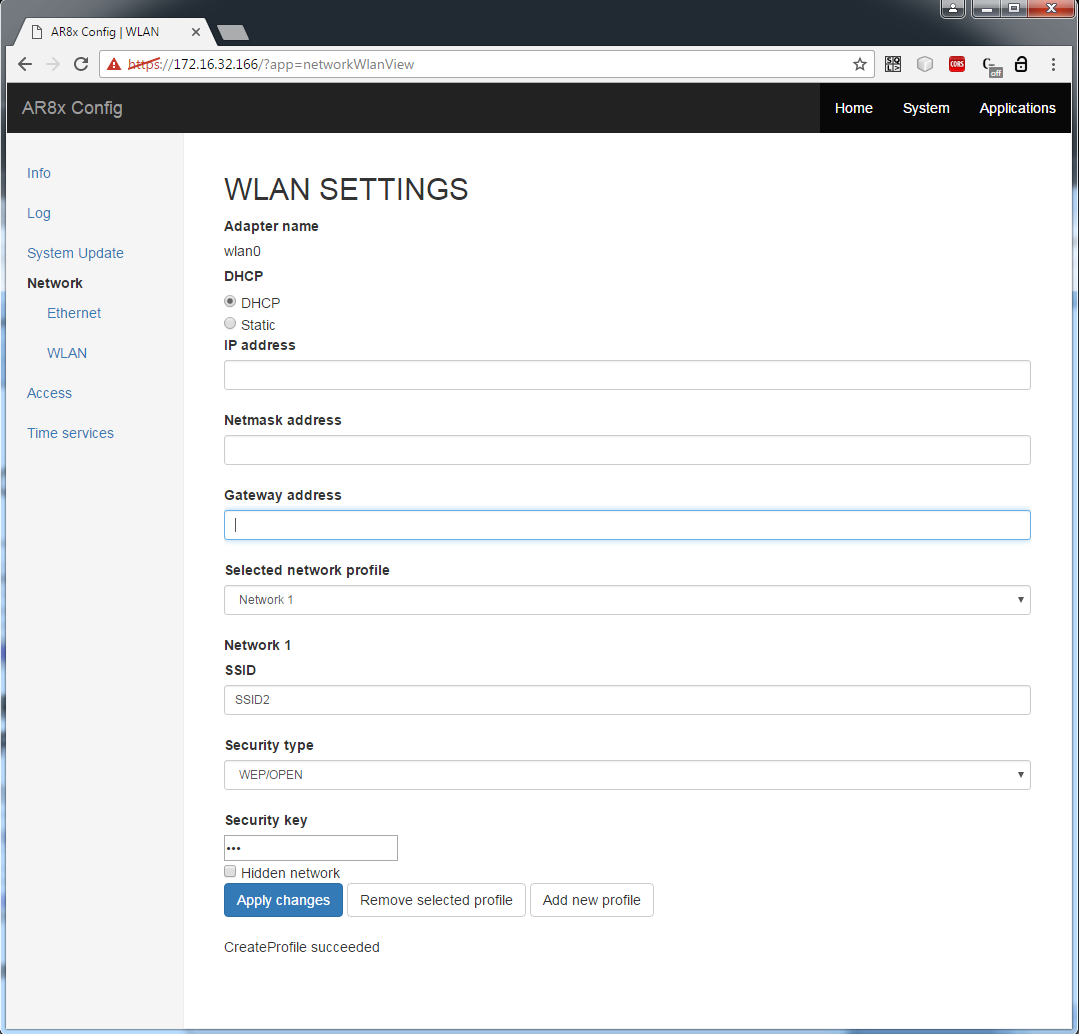
* + 1. ETHERNET

Ethernet settings allow you to define the TCP/IP settings for the eth0 adapter.



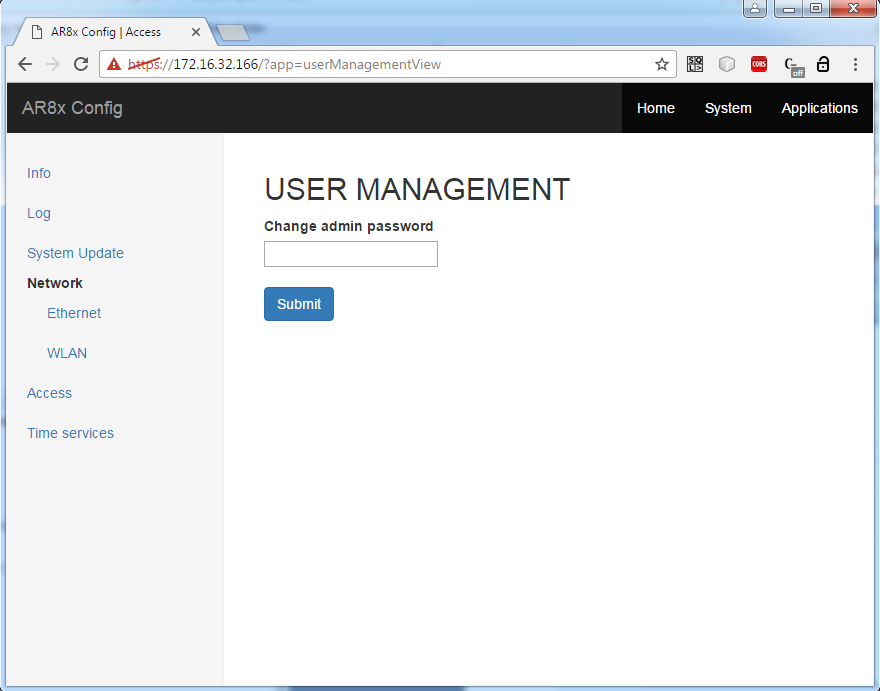
* + 1. WLAN

Wlan settings view allows you to define the TCP/IP-settings for the wlan0 adapter. It also allows you create/remove network profiles for the WPA Supplicant.



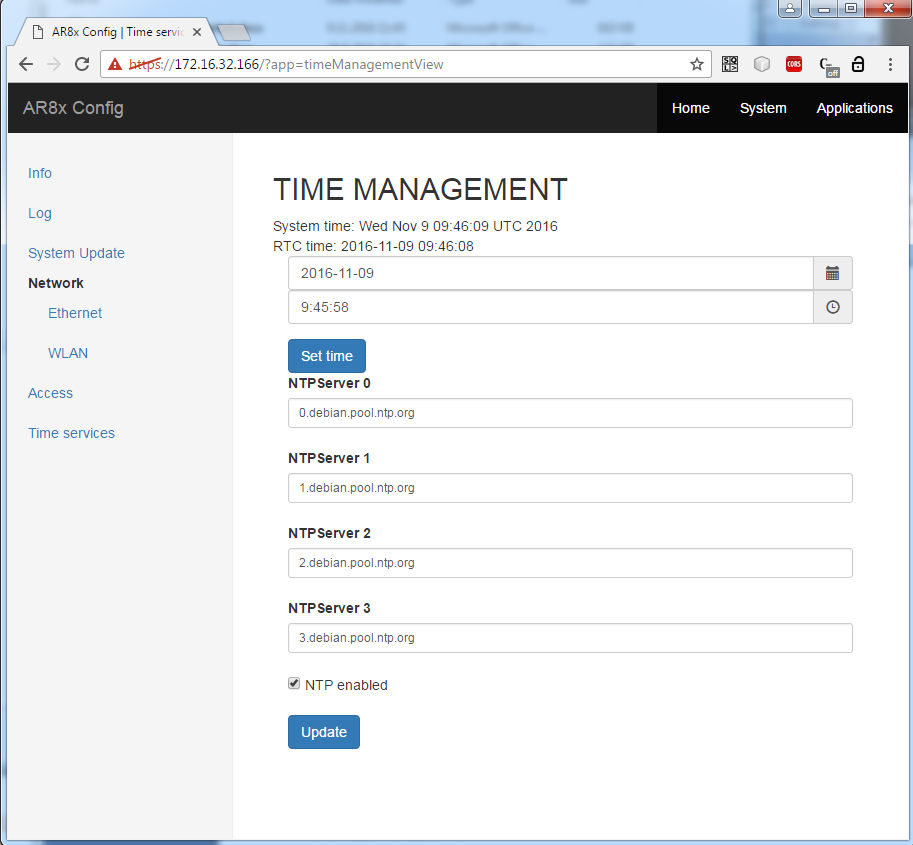
* + 1. ACCESS

On access-view you can currently only change the default admin-password.



* + 1. TIME SERVICES

Time services settings allows you to change the current RTC & System time as also enable/disable NTP and define the NTPServer addresses used.

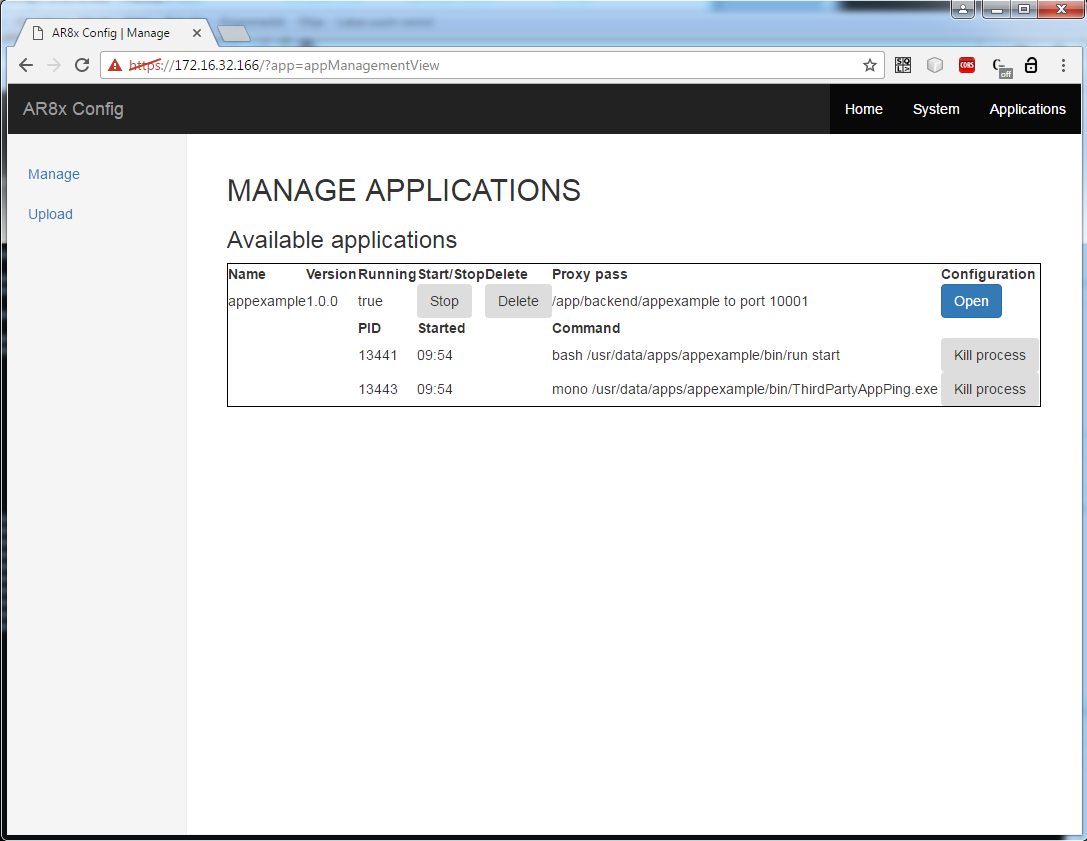


* 1. APPLICATIONS

The Applications-tool allows you to configure and monitor See **AN002\_AR8x\_appinterface.docx** for more details.

* + 1. MANAGE

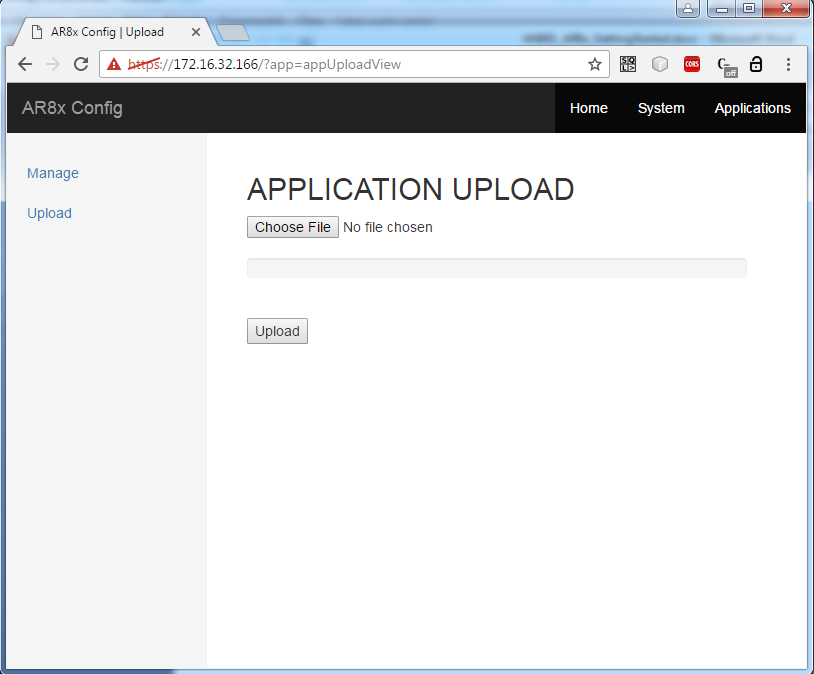
Manage-view allows you to start/stop your application as well as open your own web management view for the application(if available). Management view also lists all the processes which have been started for each application.



Possible actions in this view are:

* + - * Start the application
      * Stop the application
      * Delete the application
      * Open the configuration(if installed from the application zip-file). Keep also in mind that if the “backend” for the application configuration is not yet running, the configuration will most likely be unable to communicate with any backend service.
      * Kill individual process started by the application(app user)
    1. UPLOAD

Upload-view allows you to upload your application zip-packages to the platform. Details of the package format can be found from **AN002\_AR8x\_appinterface.docx**



1. OTHEr

The beta-version of the platform allows you also to SSH to the device. Connect to port 22 at ar8x567890.local to open the connection. Use root / nasse as the login. Note that this feature might be limited in later versions of the OS or that it might be removed completely.