Users Guide

Device OEM Domain Transfer

Simply Enabling a Smarter World

Version: 1.0

Date Released: July 13, 2017

Document Number: AY006UDT3-1

Ayla Networks

Copyright Statement

Trademarks Statement

Referenced Documents

Ayla Networks does not supply all documents that are referenced in this document with the equipment. Ayla Networks reserves the right to decide which documents are supplied with products and services.

Contact Information

Ayla Networks TECHNICAL SUPPORT and SALES

Contact Technical Support: https://support.aylanetworks.com
or via email at support@aylanetworks.com

Contact Sales: https://www.aylanetworks.com/company/contact-us

Ayla Networks REGIONAL OFFICES

Chicago
10 N. Martingale Road, Suite 400
Schaumburg, IL 601073

HEADQUARTERS
Silicon Valley
4250 Burton Drive, Suite 100
Santa Clara, CA 95054
Phone: +1 408 830 9844
Fax: +1 408 716 2621

Boston
275 Grove Street, Suite 2-400
Newton, MA 02466

Table of Contents

1 Introduction

Ayla technology partners should review this document before transferring their Design Kit-based devices from the default domain (which the device is originally associated with) to the private OEM domain assigned to their organization. There are important specifications and procedures to follow to ensure a successful transfer.

1.1 About this Document

This guide provides all of the information necessary to transfer an Ayla Design Kit device from one OEM domain to another successfully.

1.2 Intended Audience

This document is written for all users of Ayla Networks products.

1.3 Related Documentation

Refer to the following documents available on support.aylanetworks.com for more information.

- *Getting Started Guide (AY006AIO02)*
- *Design Kit - USB and TTL Serial Communication User Guide (AY006TTL2)*
- *Ayla Command Line Interface (CLI) Reference Guide (AY006UCL3-6)*
- *OEM Installation Guide for Black Box (AY006DBB3)*

1.4 Software and Hardware Prerequisites

The procedures in this document were written with the assumption that you have the software and hardware outlined in this section.

NOTE If you have any questions or concerns with these requirements, please contact Ayla Networks Technical Support.

The hardware requirements are:

CAUTION

Make sure that the firmware is upgraded to the latest version (see *Module Firmware Update Guide* (AY006MUU3)

- A workstation grade computer with the following configuration:

  For Windows: **8 GB RAM** and **256 GB storage** or better, preferably a Solid State Drive (SSD) based storage for the best performance.

  For Apple: **8 GB RAM** and **256 GB storage** or better.

- **Ayla Design Kit** – Make sure that the firmware is upgraded to the latest version (see *Module Firmware Update Guide* (AY006MUU3)
  - USB to TTL 3.3V 6-Pin Serial Cable FTDI for Win 7/8/10, Mac, Linux, etc., such as: https://amzn.com/B004LBXO2A
  - USB Type A Male to Mini B (5 Pin) Male Cable, such as: https://amzn.com/B000GHXTBO

The software requirements are:

- Workstation "on the metal" OS:

  Windows 7 Pro or better (Windows 10 Pro version 1511 or better)

> **NOTE** If you are new to Windows 10, use the Settings App to find out which build and version of Windows 10 you have. Navigate to `System | About`, and then scroll down to the Version and Build numbers.

  Mac OS (OS X 10.11.6 or better)

- Required Utility Software

  Mac OS: Apple Terminal (Part of OS base install)

  Windows: Putty: http://www.putty.org
  Alternatively: Tera Term: https://ttssh2.osdn.jp/index.html.en

1.5 Document Conventions

This document uses the following Ayla documentation conventions:

- Text that you type (i.e. commands) and the contents of downloaded files are shown as:

```
cd wmsdk_bundle-3.1.16.1
tar xfz ada-wmsdk-src-1.0.tgz
```

- File names, scripts, names of commands, properties in a file, code, and the like are in `Courier New` font, for example: Use the `psm-dump` command to …

- Ancillary information that is important to emphasize is shown as:

NOTE The commands in this example assume your evaluation board is `mw300_rd` and your chip is `mw300`. If otherwise, make the appropriate substitutions.

- System failures or hazards that could damage a product, like data loss, are shown as:

CAUTION

Make sure that the appropriate data buffering is accounted for in deployed devices, especially where the loss of data is critical to core functionality or the services provided by the systems.

1.6 Glossary

CLI	A command-line interface or command language interpreter (CLI), also known as command-line user interface, console user interface, and character user interface (CUI), is a means of interacting with a computer program where the user (or client) issues commands to the program in the form of successive lines of text (command lines).

2 Development OS Environment

The Ayla Design Kit-related toolset used in this document are primarily Microsoft Windows based. However, you can use a Mac or Linux based workstation with a hypervisor installed to host a virtual Windows instance.

Regardless of the "on the metal" type of operating system, Ayla recommends installing the development environment in a virtual machine for greatest flexibility.

NOTE Refer to *Creating a Virtual Machine User's Guide* hypervisor installation, virtual machine creation, and further discussion of the benefits of running your development in a virtual environment.

3 Physical Serial Connections

This document has references to serial communication through USB to TTL Adapter cable. Please follow the directions provided in the *Design Kit - USB and TTL Serial Communication User's Guide* to configure adequate connections between your workstation and the Design Kit. This document is available on support.aylanetworks.com.

4 Connecting Your Design Kit to the Cloud

The *Getting Started Guide* provides step-by-step instructions for starting to use the Ayla Networks platform and on how to connect and register your Design Kit to the Ayla cloud.

Please complete the device registration process in the *Getting Started Guide* before continuing to the next section.

5 Associating the Device with the New OEM Domain

Navigate to the Ayla OEM Dashboard using one of the following URLs for your region to obtain the information that you need when associating the device with the new OEM domain.

CN: https://dashboard-dev.ayla.com.cn/

EU: https://dashboard-dev.aylanetworks.com/

US: https://dashboard-dev.aylanetworks.com/

After signing in to the dashboard, click **OEM Profile** in the navigation menu on the left side of the dashboard to obtain the following information (as shown in Figure 1):

- OEM ID
- OEM Secret (also called key)

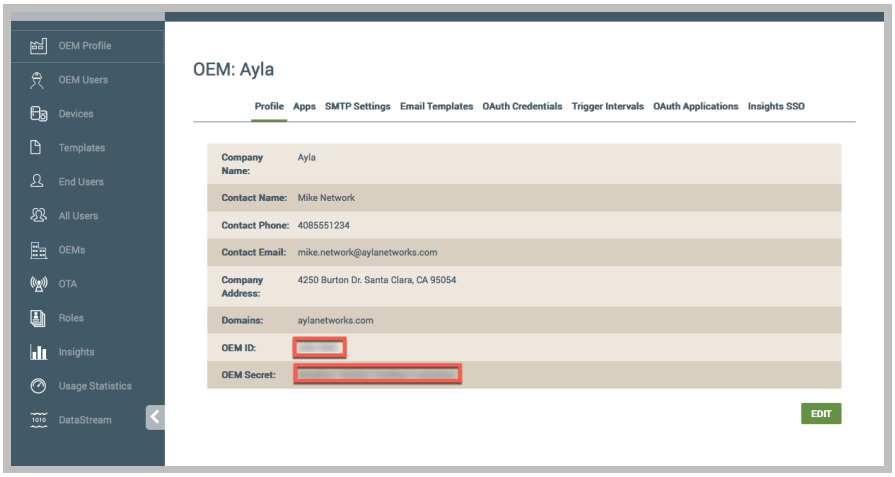

Figure 1: OEM ID and Secret in the OEM Profile

5.1 Enabling Device Setup Mode

To update the OEM configuration of the device, make sure that the device is in setup mode. Complete the following steps to do this:

1. Navigate to the regional Ayla Developer Portal of choice using:

   CN: https://developer.ayla.com.cn/

   EU: https://developer.aylanetworks.com/

   US: https://developer.aylanetworks.com/

2. After signing in, click the **Design a Device** icon, and then click the **Devices** tab to display the list of devices available for you to manage. Refer to Figure 2.

NOTE If the Device page does not have any devices listed, this means that the devices are not registered to the account you used to log in to the portal. Register the device using, for example, the Android or iOS AMAP application made available by Ayla Networks on each respective OS' App store.

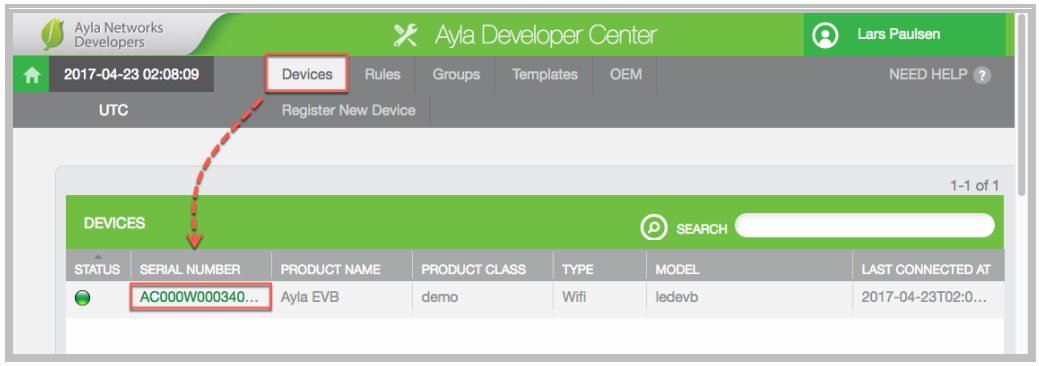

Figure 2: Device List

3. Click the **SERIAL NUMBER** of the device for which you want to enable setup mode, as shown in Figure 2 above. This displays the PROPERITES page for the selected device.

4. Click **Details** in the options across the top of the page, as shown in Figure 3.

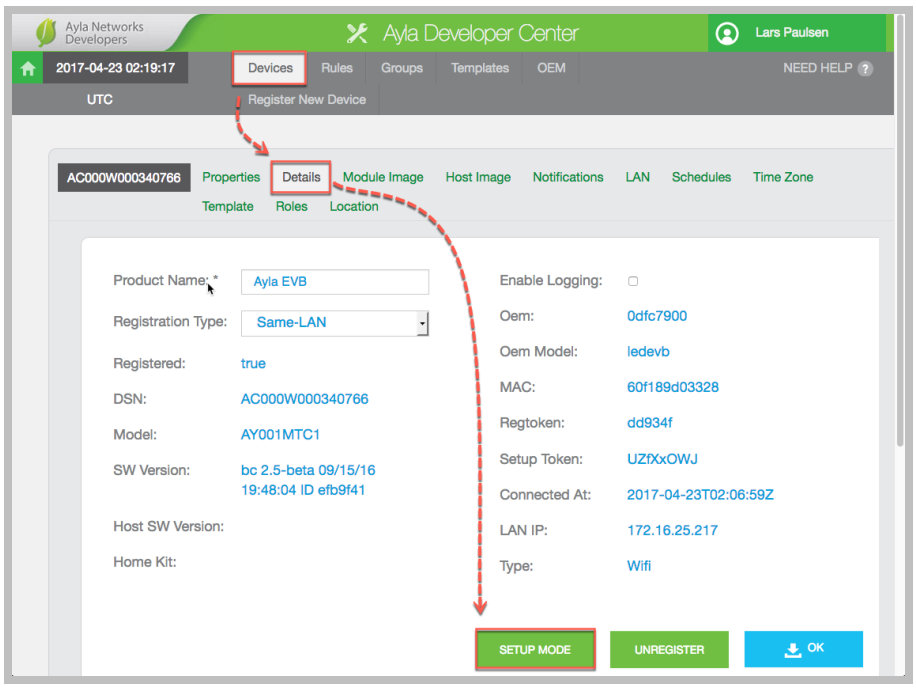

Figure 3: Device Details

5. Click the **SETUP MODE** button (shown in Figure 3). A Confirmation dialog box displays as shown in Figure 4.

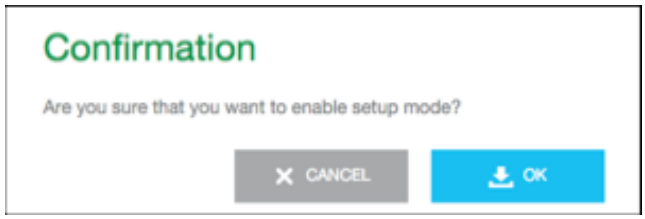

Figure 4: Confirmation Dialog Box for Setup Mode

6. Click the **OK** button to enable setup mode for the selected device.

5.2 Verifying Setup Mode

You can verify that the device is in setup mode by checking the prompt on Command Line Interface (CLI); it should show `setup->` as in Figure 5.

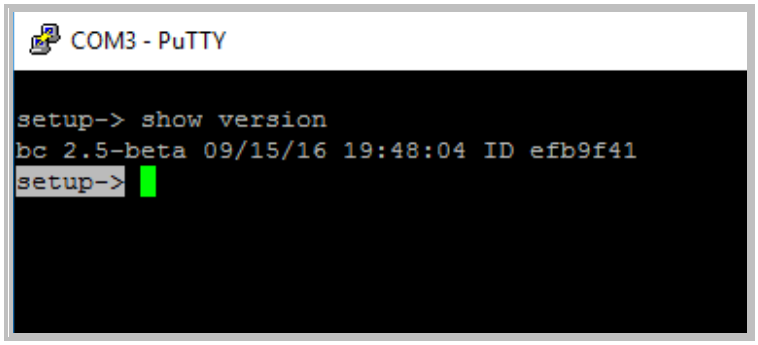

Figure 5: Example of CLI Indicating that the Device is in Setup Mode

5.3 Unregistering a Device from the Associated User

We strongly recommend that you unregister the device from its current associated user before transferring the device to a new OEM domain. This ensures that the device is not registered to a user in another OEM domain (with which the device may have been associated). To do this, follow steps 1-4 in Section 5.1, and then click the **UNREGISTER** button, as shown in Figure 6.

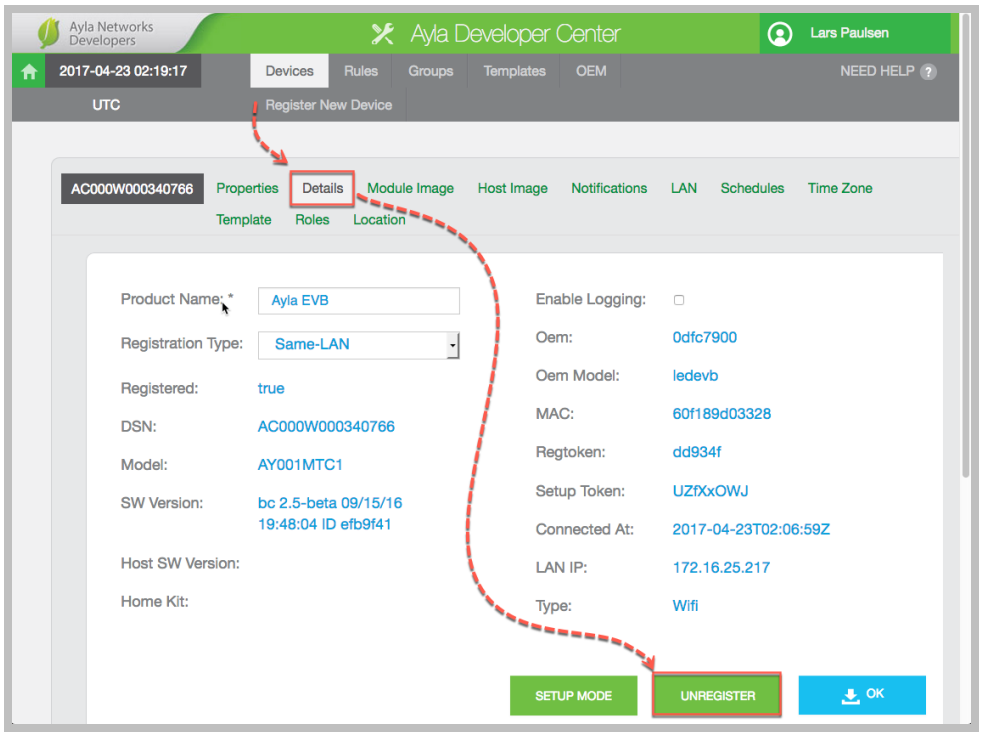

Figure 6: Unregistering the Device from the Current Associated User

5.4 Information on CLI commands

Please refer to the *Ayla Command Line Interface (CLI) Reference Guide* for descriptions of the CLI commands.

5.5 Device Model

When transferring a device from one OEM to another, you must define an OEM Model for the device in the new domain. The model name string should be the same as the one intended to be used in the cloud-based device template for the device; otherwise, subsequent attempts to perform template associations are not successful.

NOTE For information on how to define an OEM Model, refer to the *OEM Dashboard User's Guide,* which is available on support.aylanetworks.com.

5.6 Device OEM Transfer Commands

Use the following commands to set the new OEM ID, Device Model, and Key:

```
oem <copy the OEM ID to here>
oem model <copy the model-name to here>
oem key <copy the OEM secret to here>
setup_mode disable
reset
```

NOTE Also refer to the usage example in Section 5.8.

5.7 Other Commands to Consider for Device OEM Transfers

Consider the following commands when transferring a device between OEM domains: (These commands are optional.)

```
wifi ssid-mac Ayla-
wifi security none
wifi profile enable
wifi setup_ios_app iMDA
wifi commit
```

5.8 Device OEM Transfer Example

Following is a usage example of the command sequence when completing a device OEM transfer.

```
-->
setup-> show oem
oem: "0dfc7900"
oem_model: "ledevb"
oem_key: (is set)
setup->oem 0abc0001
setup->oem model examplemodel01
setup->oem key <copy the OEM secret to here>
setup-> setup_mode disable
configuration saved
--> show oem
oem: "0abc0001"
oem_model: "examplemodel01"
oem_key: (is set)
--> reset
...
--> show oem
```

```
oem: "0abc0001"
oem_model: " examplemodel01"
oem_key: (is set)
```

6 Reconnecting your Design Kit to the Cloud

Repeat the procedure referenced in Section 4 and then you should be able to view your device when logging in to the dashboard of the new OEM domain.

7 Appendix: Wi-Fi Profile

This section provides information related to the Wi-Fi Profile Configuration.

7.1 Console Based Configuration of Wi-Fi Profile(s)

Typically, we direct end-users to configure the Wi-Fi Profile using Aura or AMAP mobile applications. This process makes it easier for end-users to configure the device's Access Point (AP) parameters. The process is often referred to as Device Wi-Fi Profile Configuration, and subsequently, end-users typically perform AP-Mode or Same LAN registration methods.

NOTE For more information on Ayla Registration Methods, refer to *Device Onboarding: Ayla Registration Methods* on support.aylanetworks.com.

The Wi-Fi Profile may, however, be configured directly from the device's console interface, bypassing other methods of Wi-Fi Profile configuration, like using the mobile applications. The following shows the commands used in configuring the Wi-Fi Profile from a CLI-based console.

```
wifi profile 0 ssid <ssid> security <security_type> key
<password> profile enable
  where security_type = WPA2_Personal, WPA, WEP, none
wifi save_on_server_connect 1
save
pm-reboot
wifi profile 0
wifi join
```

7.2 Wi-Fi Profile Erase Example

```
--> wifi profile 0
--> wifi profile erase
--> save
configuration saved
--> wifi commit
```

4250 Burton Drive, Santa Clara, CA 95054
Phone: +1 408 830 9844
Fax: +1 408 716 2621