

# AEP 1.6.2 Release Notes

## Introduction

The AEP 1.6.2 release contains numerous upgrades to the system and many new features. This firmware updates Yocto, adds numerous security features and changes, and includes new LoRa functionality.

## Yocto 2.2 (Morty)

The AEP Conduit 1.6 release is built on mLinux 4 that is based on the Yocto 2.2 (Morty) version of the Yocto Openembedded Linux distribution.

## Radio FOTA

Radio firmware updates over the air for H5 and LTE radios have been added.

## Enable/Disable Call Home Feature

1. Call Home is now disabled by default.
2. New scripts have been created to enable or disable the call home feature from the command line.
3. New AEP Conduit API commands have been created to allow customers to use the REST API interface to enable Call Home over an HTTP connection.

## Add Monit For Customer Use

Added the monit package so that customers can use the monit daemon to monitor their custom applications.

## Back Up Custom Applications With User-Defined-Defaults

Support backup of Custom Apps that are installed in the /var/config directory with the User-Defined-Defaults feature.

## Python Software Package Updates

- The pymodbus python package that supports MODBUS programming in python has been updated to version 1.3.2.
- The python-serial python package has been upgraded to version 3.4.

## Support LDC3 Radio

Add support for the LDC3 radio on AEP Conduit for use in Japan.

## Netfilter Related Additions

- Added the NFLOG and TRPOXY configuration settings in the Linux kernel.
- Added CONFIG\_NETFILTER\_XT\_MATCH\_IPRANGE and CONFIG\_NETFILTER\_XT\_MATCH\_TIME configuration settings in the Linux kernel.
- Added libnetnfnetlink and libnetfilter-log to the AEP Conduit image to support applications.

## Increase RSA Certificate Key Length

The self-signed automatically generated RSA Certificate key size has been increased to 2048 bits.

## SMS Commands

The SMS Commands feature from Multitech MTR (version 3.7.3) has been ported to the AEP Conduit.

## LoRa Features For AEP 1.6

The following features in this section are very high level descriptions of the LoRa related features that are being added since the AEP-1.4.16 release.

### *LoRaWAN Changes*

Combined **LoRaWAN** > Devices Configuration and Device Sessions

Added **LoRaWAN** menu items

- Devices
- Profiles
- Operations
- Device Groups

Fixes for Packet Forwarder LBT configuration

Updated to Network Server to v2.1.5

- Added device profiles
- Added network profiles
- Added Lens check-in
- Added Traffic Manager

### **Traffic Manager**

A Traffic Manager will be added that will allow filtering on traffic by DevEUI or JoinEUI.

### **API Changes**

New changes will be made to the AEP Conduit API to support querying the following LoRa information from the LoRa Network Server:

- Packets

- Devices
- Gateways

## **FUOTA**

The following features are being added for LoRa Firmware Update Over The Air (FUOTA):

- Multi-cast Session Setup
- Fragmentation Server
- Multi-cast Messaging Support

## **End Device Profiles Support**

Information on End Device Profiles will be provided by the LENS API to the Network Server.

## **LENS Check-in For Config Updates**

Support will be added for checking into the LENS server to obtain updates to policies. The default interval will be one hour, and the minimum interval will be one minute.

## **LoRa v2.1 Support**

LoRa v2.1 support has been added in parallel to the AEP 1.6 features.

## **Firewall: Move User Chains To Be Processed First**

With the USER\_\* rules being processed first the user will be able to have full control over the firewall rules behavior as has been requested by numerous AEP customers.

## **Configuration Upload Control**

Upload of the AEP Conduit Configuration to DeviceHQ can now be enabled and disabled. It is enabled by default.

## **OpenVPN Upgrade**

The OpenVPN software has been upgraded to version 2.4.2

## **Certificate Upload Support**

Web UI support for uploading additional root CA certificates, certificate chains, and a new server certificate for the device has been added. This provides enhanced support for managing certificates in AEP.

## **Boot Loader Login Support**

Password login is already supported on AEP (at the boot loader level). Work has been done to allow the user to configure the password in the boot loader with the Web UI. It can now be done from the command line with a Linux-based utility, and through the Web UI to set/change or clear the password.

## **WAN Fail-over Related dnsmasq Bug**

The dnsmasq process is now restarted after a WAN fail-over has occurred. There was an intermittent bug that would cause DNS to stop working when a WAN fail-over happened.