

AEP 1.1.2 Release Notes

What's New

Support for No-Radio Model

The AEP Conduit can now be ordered without a Cellular radio. This allows the buyer to utilize LoRa features and others without paying for the integrated Cellular radio, saving money. This model comes with an ethernet interface that can be used for the back-haul functionality.

LoRa Packet Forwarder Mode in LoRa Network Server Config

The AEP Conduit can now be configured to be a packet forwarder in a public network environment. Packet forwarder mode allows the Conduit to be a gateway for a third party network server. Most installations are expected to use the ethernet as a WAN settings to ensure low latency. This feature has been tested over cellular and works with keepalive set to 1 second to keep latency below 300ms. If latency is more than that, packets arrive too late.

The global_conf.json file for the packet forwarder process can be uploaded through the GUI. The gateway_ID will be set to the MAC address of the Conduit with 0100 appended as requested by Semtech.

Node-RED and nodejs Upgrade

The versions of Node-RED and node-js that the AEP Conduit is running have been upgraded. Node-RED has been updated to version 0.11.1. Nodejs has been updated to version 0.10.40.

LoRa Network Server Updates

Several fixes and enhancements have been incorporated into the LoRa Network server running on the AEP 1.1.0 Conduit.

Add packet Port to udb/mqtt message json. LoRa packets have a port field that was not being forwarded to the application.

Downstream messages can be queued with the port field. Some third party nodes expect a certain port number for downstream packets. This feature allows mac commands to be sent to a device from outside network server on port 0 (zero).

Allow disabling Rx windows. This allows testing of each window on devices.

Bugfix – node in the database with an FFFFFFFF address could cause a Segmentation Fault. A segmentation fault was happening when the node list in memory did not match the database. A node with a bad address was entered manually caused the issue to appear. The network server would stop reading records from the database when the FFFFFFFF address was seen as it is defined as the end of the node records. Code was added to delete all node records on startup with the FFFFFFFF address and checks so the cannot be added manually through the command port were also added.

Fixed default AppPortUp and AppPortDown settings. If ports were not defined in the lora-network-

server.conf, these ports would be set to opposite of what was in the documentation.

Known Issue – LoRa Network Server

Manually joined nodes will not be reloaded from the database after restart of the network server or reboot of the device.

Miscellaneous Enhancements and Bug Fixes

Numerous enhancements and bug fixes have been integrated into AEP 1.1.0 in a number of areas including the user interface, SMS functionality, firewall functionality and Node-RED nodes. For a more detailed list of changes go to <http://www.multitech.net/developer/software/aep/aep-firmware-changelog/>.

User Interface

1. Several enhancements to the help including adding multiple help pages to the display tree, and hover help text on multiple pages including the Installed Apps, LoRa Stats, Firewall, and Remote Management pages.
2. Support for configuring Node-RED access via WAN.
3. Improved Time Configuration page.

Firewall

1. Numerous enhancements and bug fixes to make the feature more usable including hover helps, and removal of configuration options not applicable to the AEP product.

Node-RED Related Enhancements and Fixes

1. Updated the SMS node to be more efficient and to handle UTF-8 characters.
2. Change Node-RED log name to be node-red.log fixed value.
3. Other performance improvements and bug fixes in the GPIO node and the Multi-Tech m-card detection.
4. Added the M2X node from github.
5. Several fixes were made to the MTAC-MSFER serial node in Node-RED on the AEP Conduit.
 - Some exception handling was fixed for stability purposes.
 - The Node UI was combined into one tab from three making configuration simpler.

Initial Setup Wizard Improvements

The Initial Setup Wizard was enhanced to improve the user experience by changing the ordering of some of the pages in the wizard, creating more intuitive defaults, and providing support for configuration of default gateway and DNS on the eth0 when it is still in LAN mode.