ADVANTECH
Embedded
Design-In Forum

ePaper Solution Introduction – EPD-662 Hands on

Homer Wang AE

Agenda

Outline

- Advantech’s ePaper Solution
- EPD solution Architecture
- EPD-662 Network Topology
- Hands on

Wireless ePaper Solution Suites

Device Management

EPD Content Delivery

EPD Content Design

Edge Event Feedback

台灣精品 2022

DeviceOn/ePaper

IEEE 802.15.4 | UHF | NFC | Wi Fi | Bluetooth | Lte

Full sizes of Solution Suites

Smart Factory

2.9” Inventory Management

5.6” Production Cart

Smart Hospital

13.3” Clinic Information Board

Bedside Card

Smart Building

4.37” Ubiquitous Interactive Device

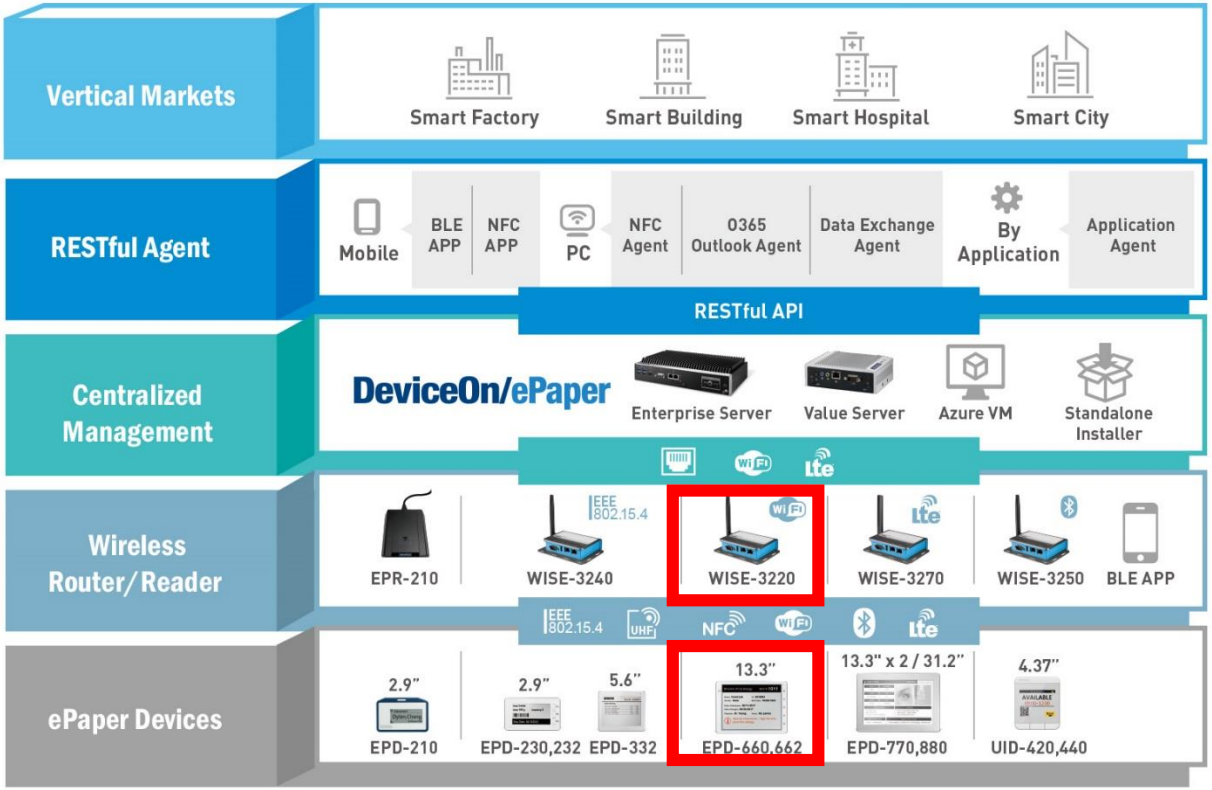
5.6” Scheduling Card

Smart City

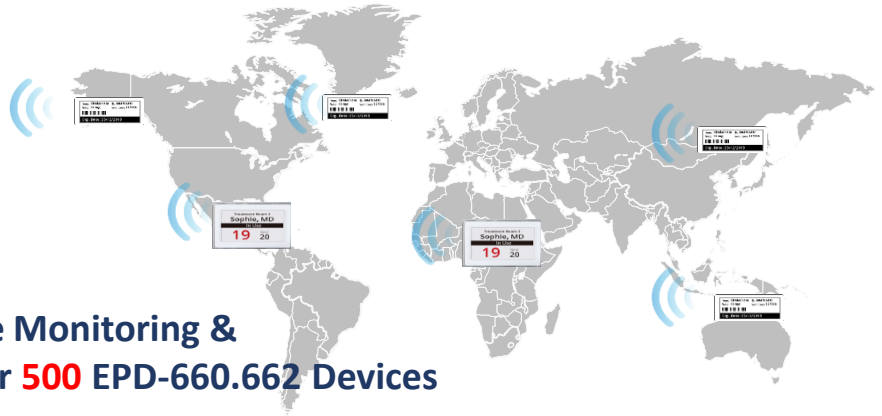
26” Bus Stop

31.2” Smart Lighting

EPD Solution Suite Architecture



Content Management Software



Real-Time Monitoring &
Firmware OTA for over 500 EPD-660.662 Devices

Device Management
- Device monitoring
- Battery/Status Report
- Task report
- Remote control

Service Management
- FW/image to device
- Scheduling execution
- Event management

Image Generator
- Drag & Drop the image design component
- Image preview
- Data field setting to receive restful API
- Image file transform to system format

Integration
- Provide API for device update
- Provide sample code for SI integration

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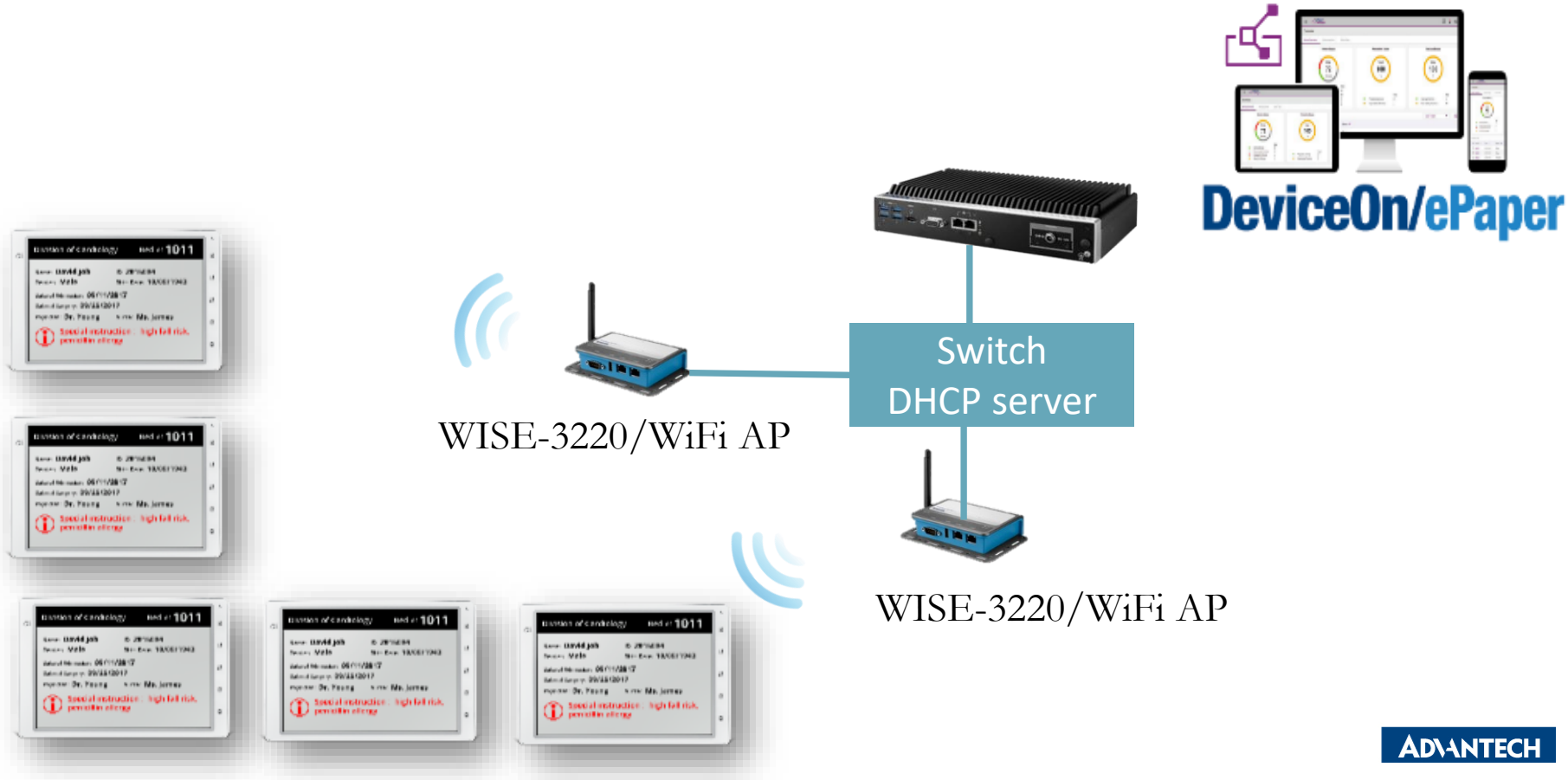
EPD-662 Network Topology



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Enabling an Intelligent Planet

“Hands-on for DeviceOn/ePaper”

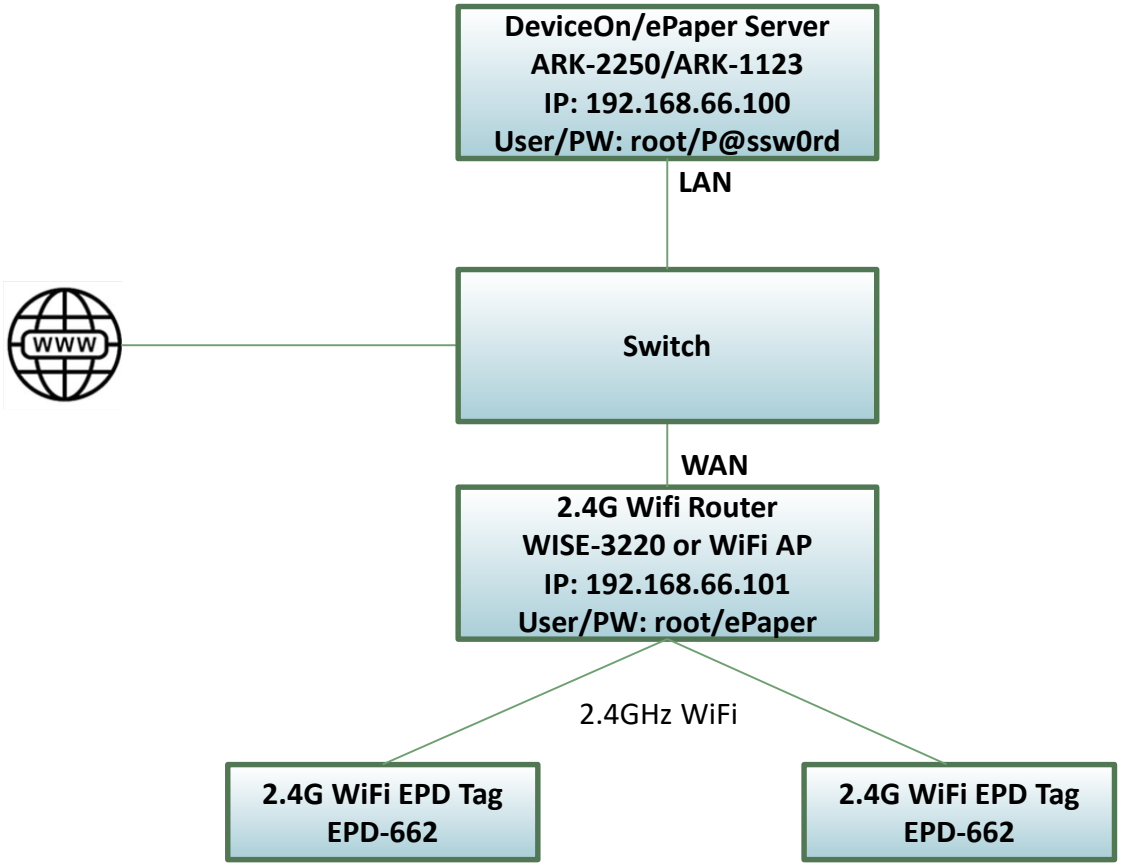
Agenda

- **Preparation**
  - Hardware Equipment
  - Network Architecture
- **Tag Devices Deployment**
  - Add tag devices into ePaper Manager
- **Image Generation**
  - Template generation
  - Data Binding
- **Refresh Tag Devices**
  - Image Refresh /Transmit (Device,Group)
- **Firmware upgrade**
- **Resful API & SampleCode**

Preparation- Hardware Equipment

- EPD-662 x1
- WISE-3220 or other AP
- ARK-1123H DeviceOn/ePaper Server x1
- WiFi Hub x1

EPD DemoKit's Network Architecture



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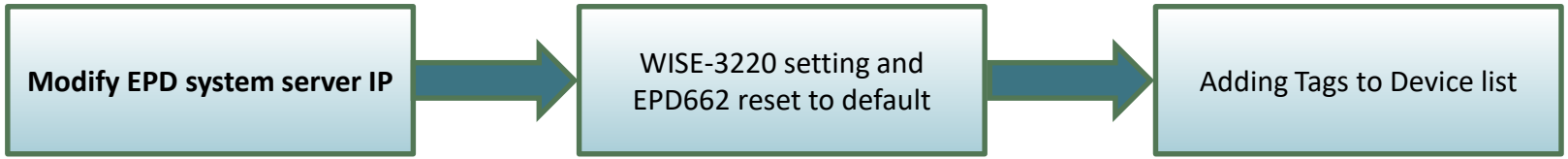
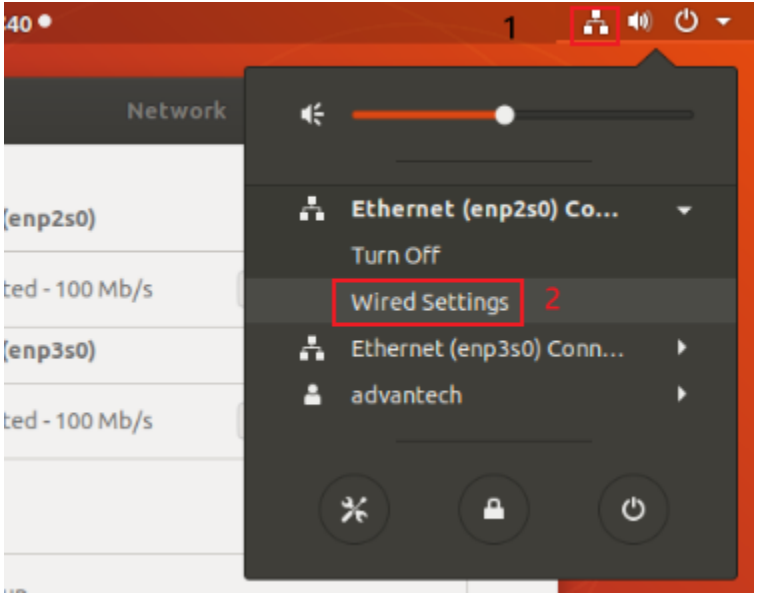
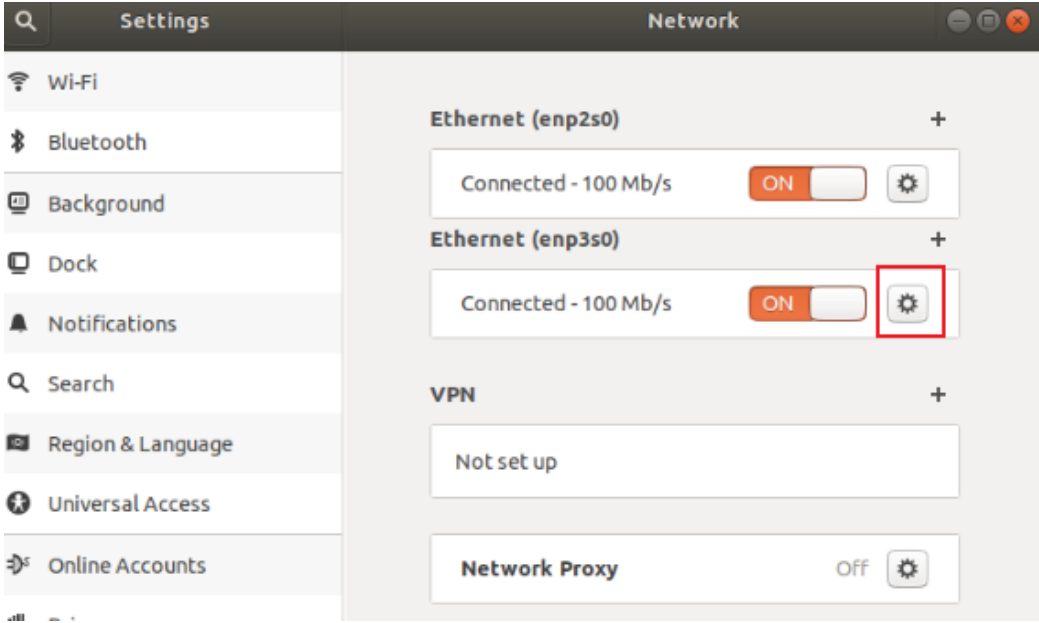
EPD System setting workflow



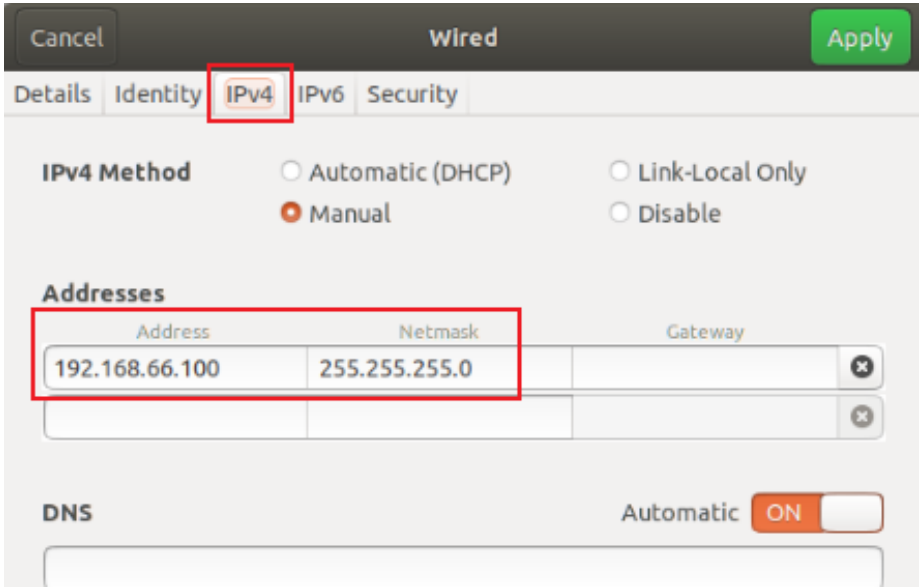
EPD system IP setting

Account: advantech
Password: P@ssw0rd

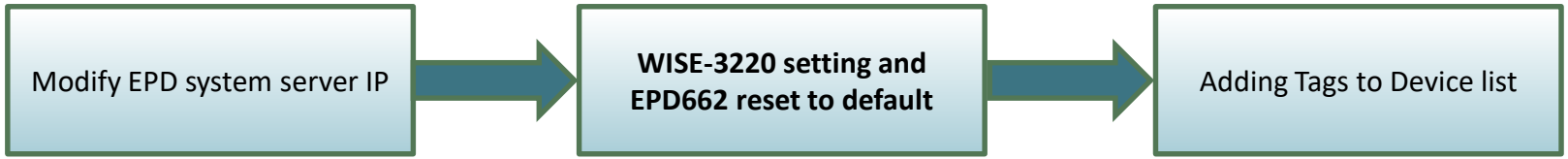




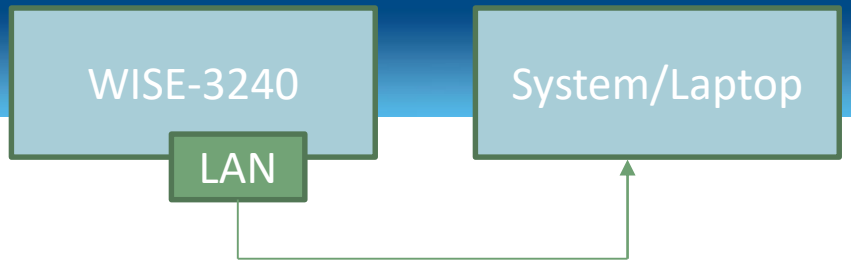
EPD system IP setting



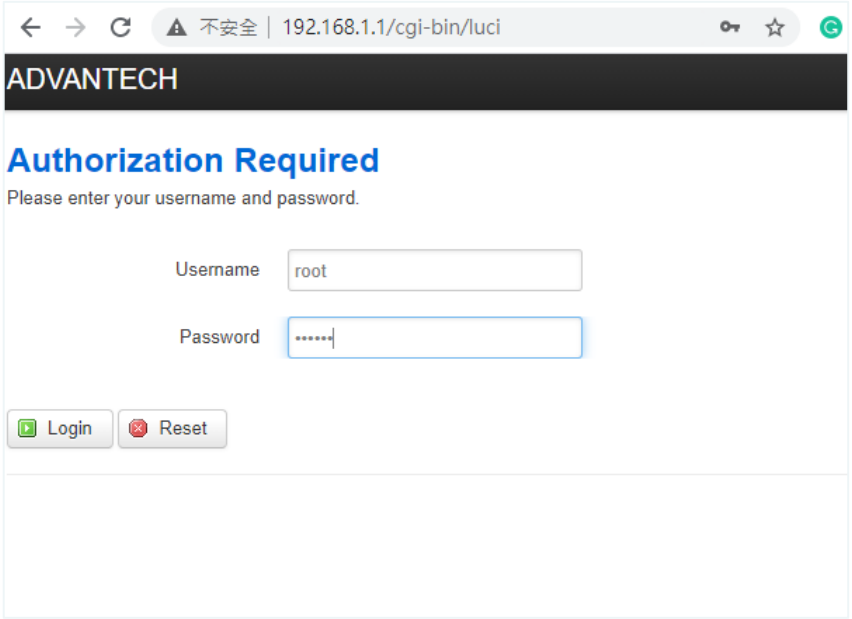
EPD System setting workflow

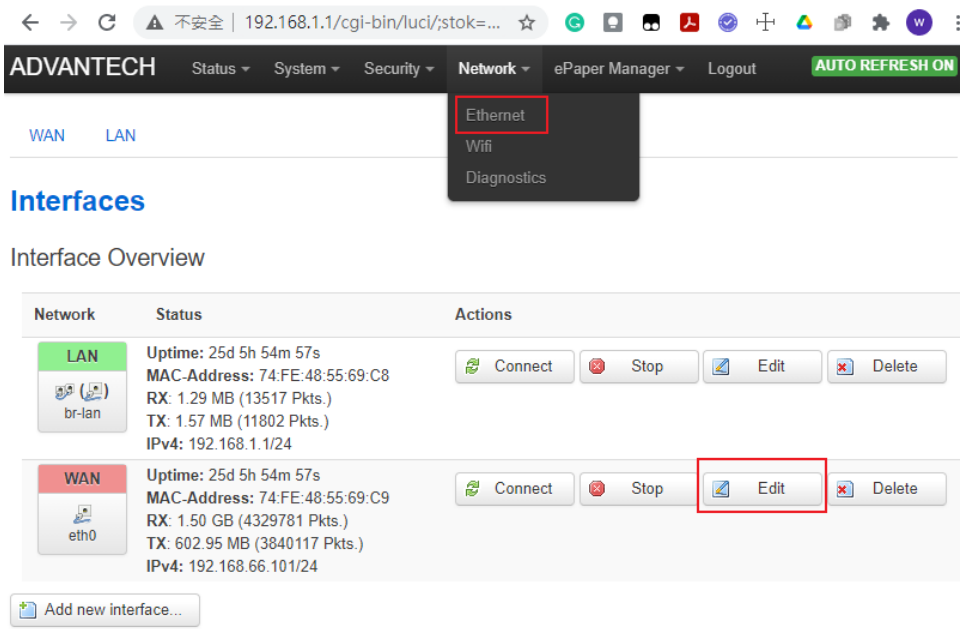


Login WISE-3240

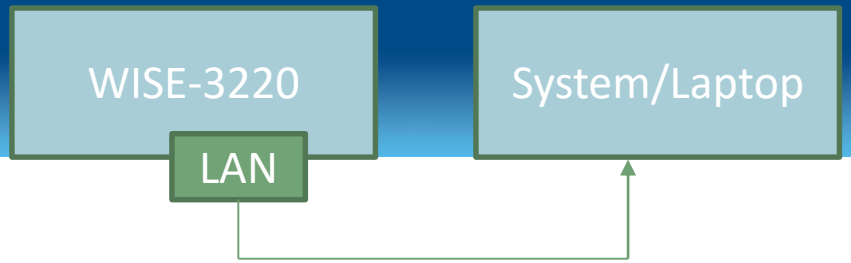


IP: 192.168.1.1
Account: root
Password: ePaper

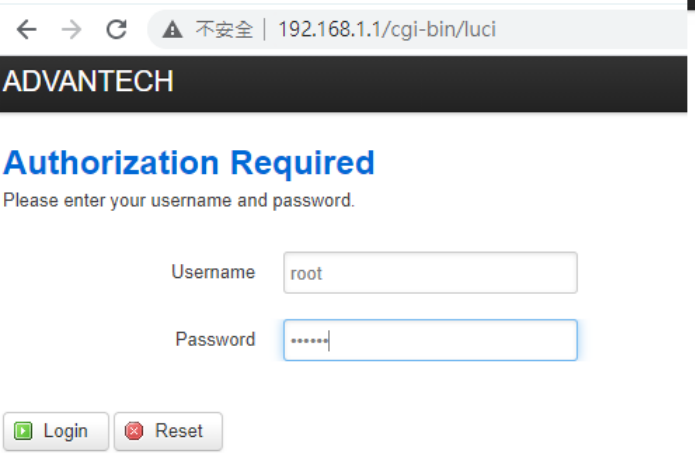


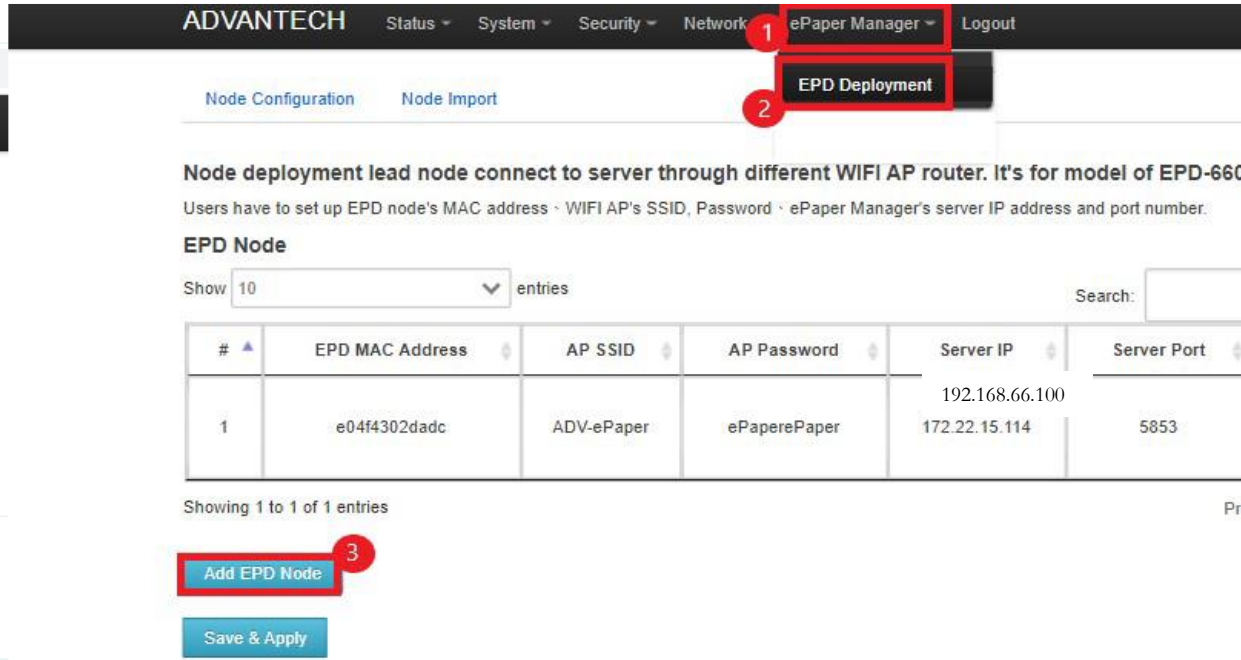


WISE-3220 setting



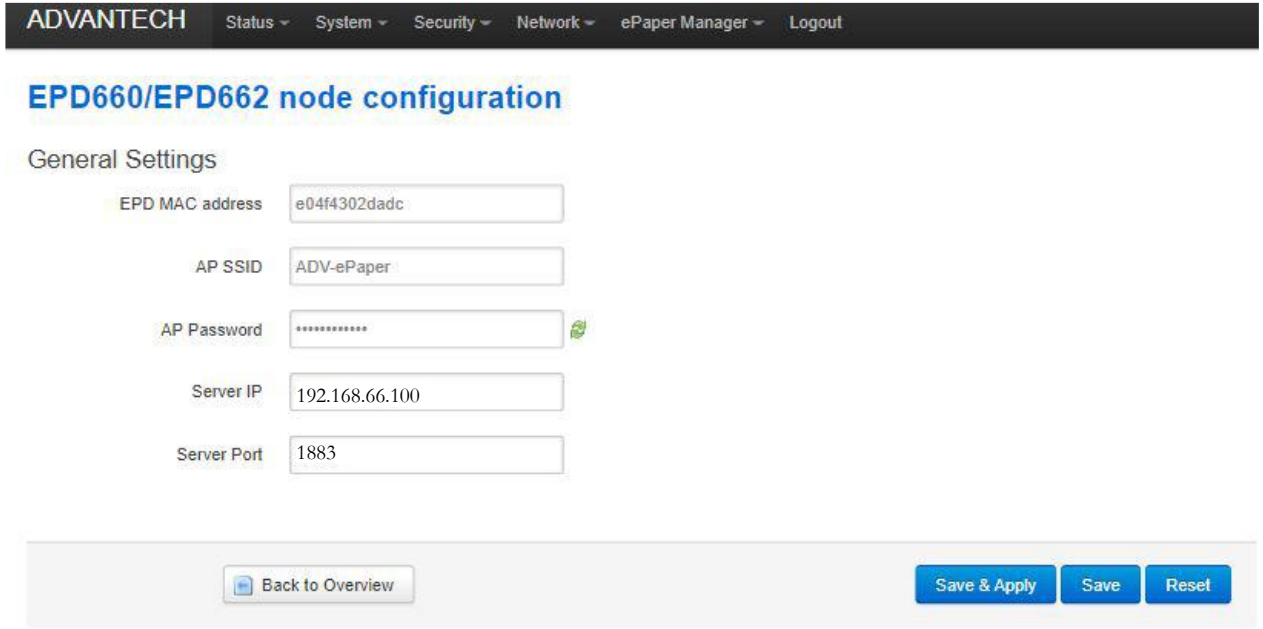
IP: 192.168.1.1
Account: root
Password: ePaper





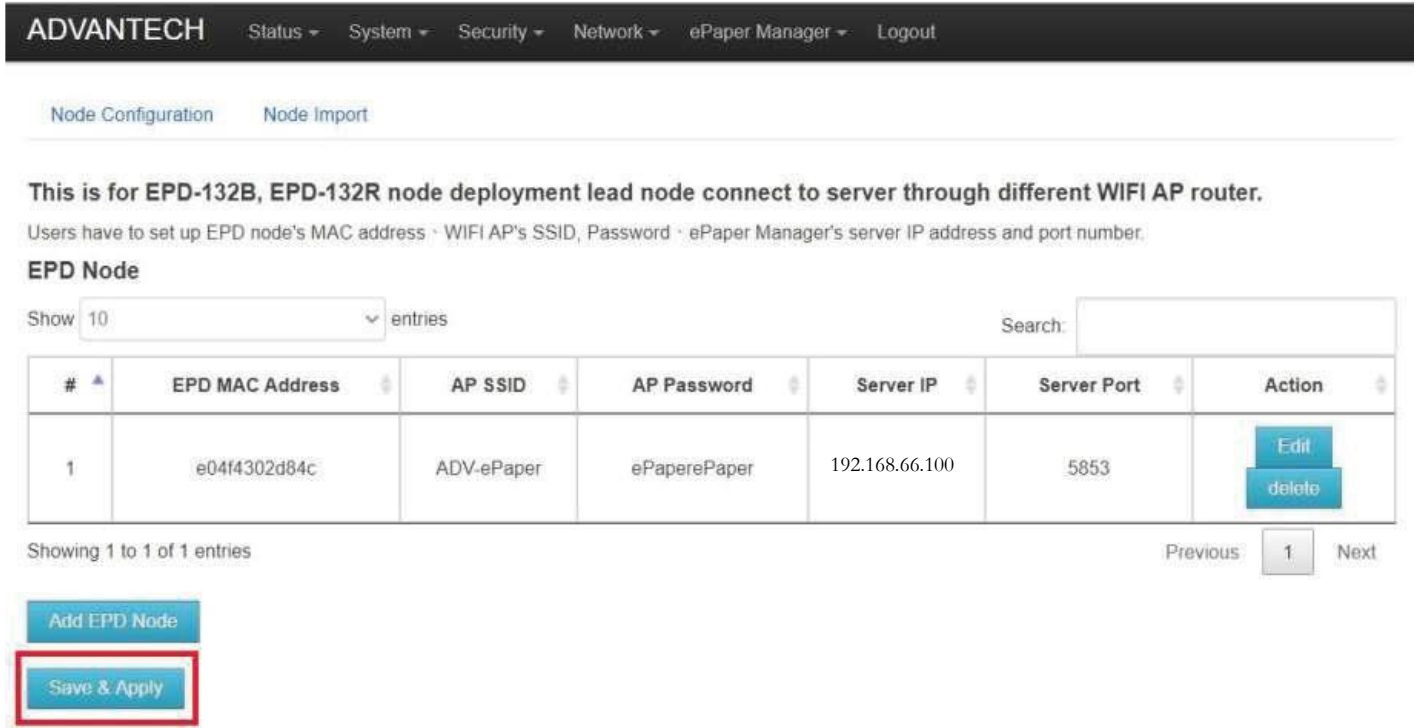
WISE-3220 setting

EPD MAC address: Please check the back of EPD device
AP SSID: ADV-ePaper
AP Password: ePaperePaper
Server IP: Depends on your server IP address
Server Port: 1883



WISE-3220 setting

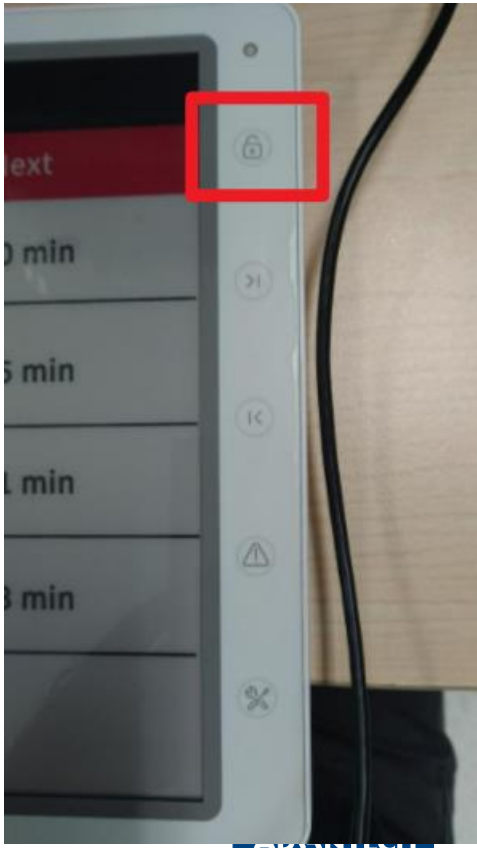
When you click “Save & Apply”, please reset EPD-660 and EPD-662 to default.



EPD Device reset to default(With Button Model)

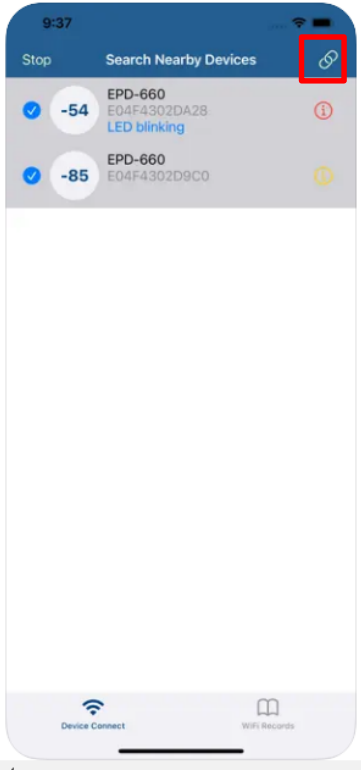
For with the button model, you can press wake up ping for 8 seconds. The LED will start to blink. Please wait for the LED doesn't blink and then release the button. You could reference below URL.

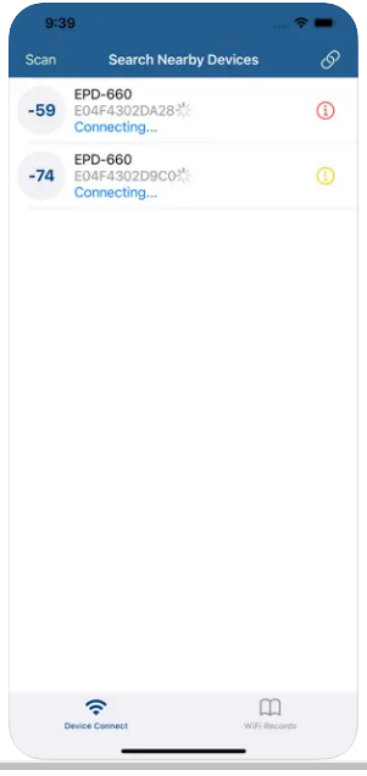
EPD-662 reset to default.mp4

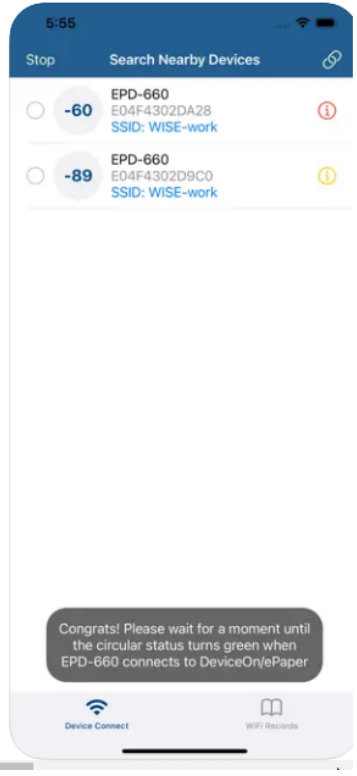


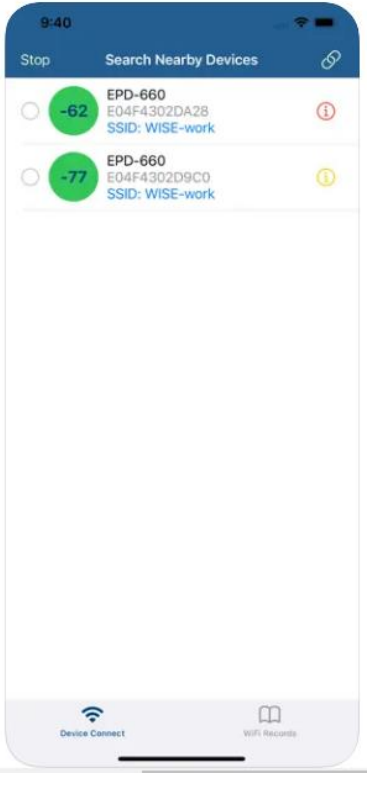
Use app to deploy connection(iphone)

Download “EPD WiFi Connector” from your phone and install it. Follow below step to deploy your EPD device.



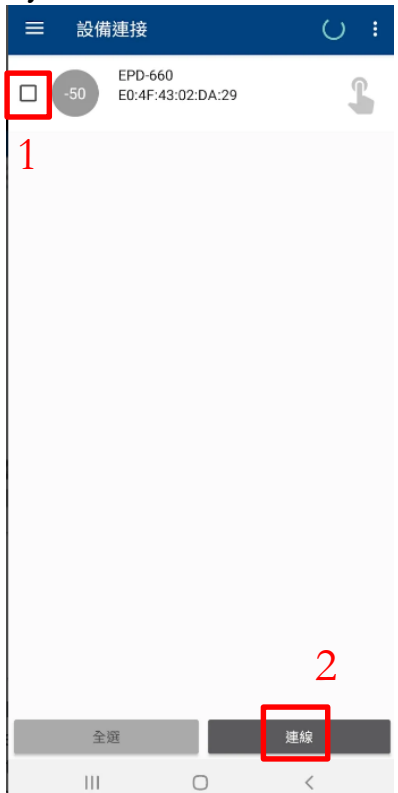


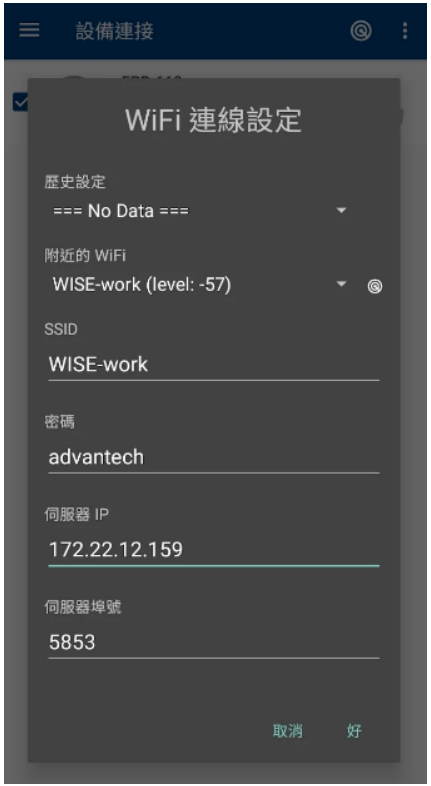


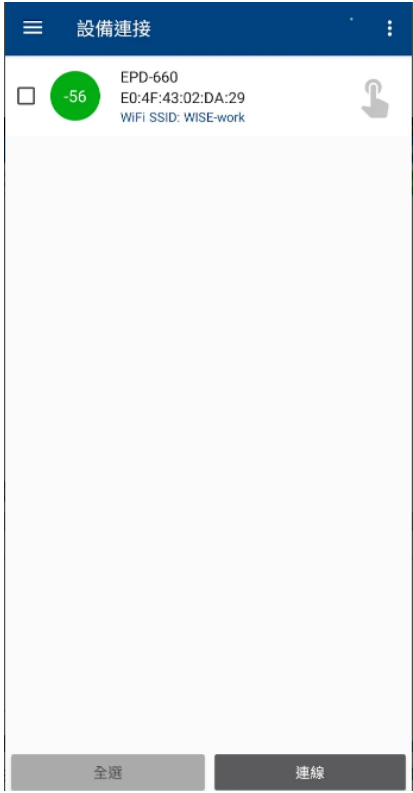


Use app to deploy connection(Android)

Download “EPD WiFi Connector” from your phone and install it. Follow below step to deploy your EPD device.



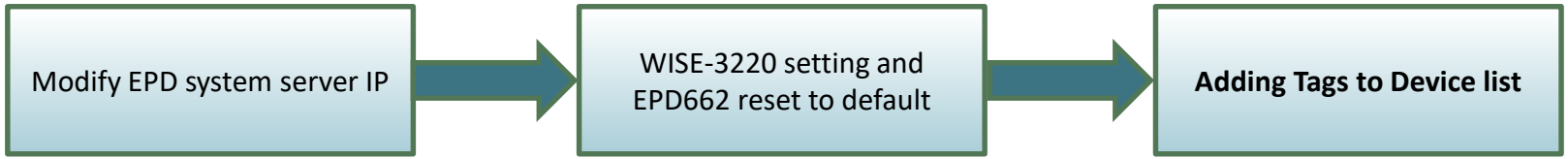




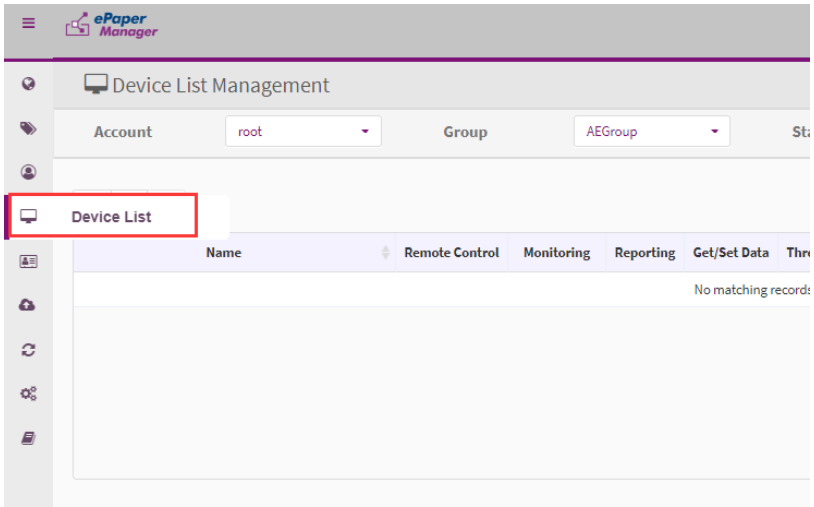
EPD Device reset to default (Without Button Model)

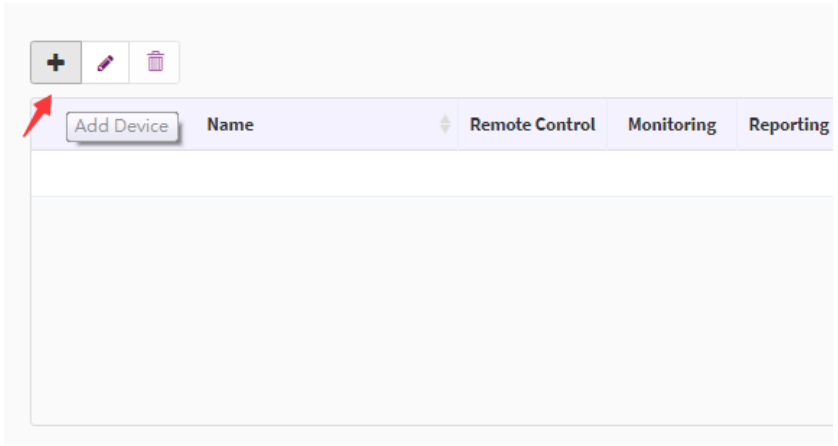
For without buttons model, there is a hole in the back. Please use a pin to wake the device

EPD System setting workflow

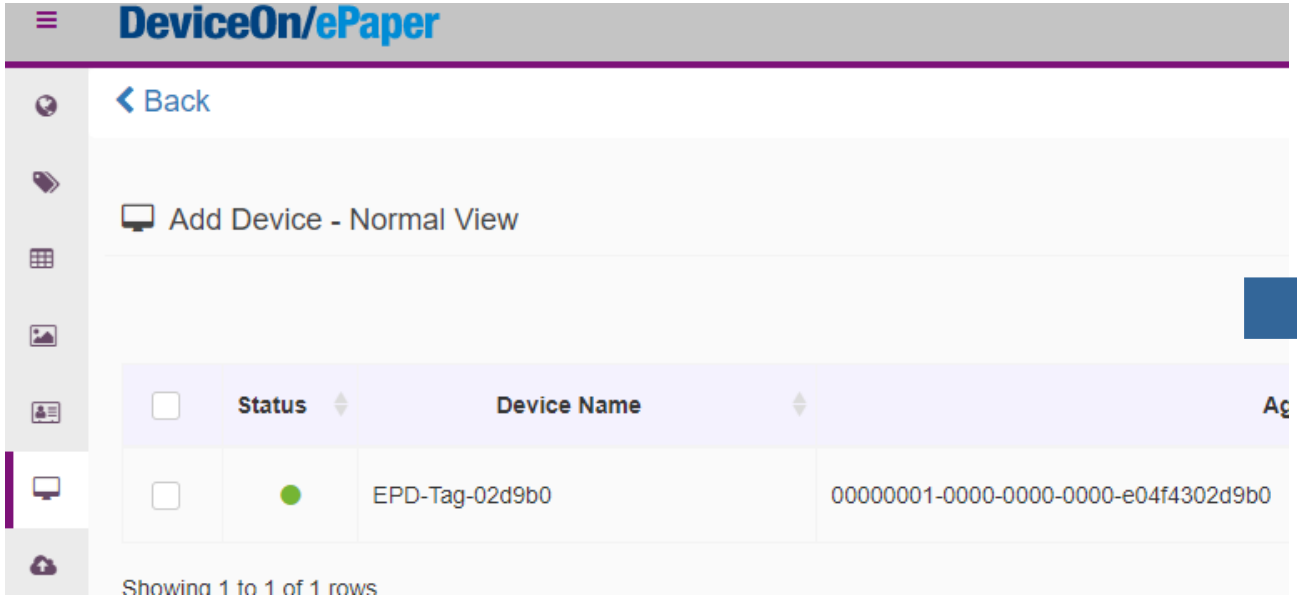


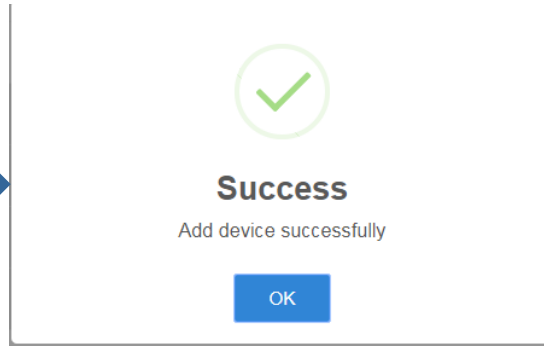
EPD Devices Deployment- Add tag devices





Add EPD devices (EPD-660/EPD-662)





Device List

- When the color of device become green, it means you can control the device in the DeviceOn/ePaper

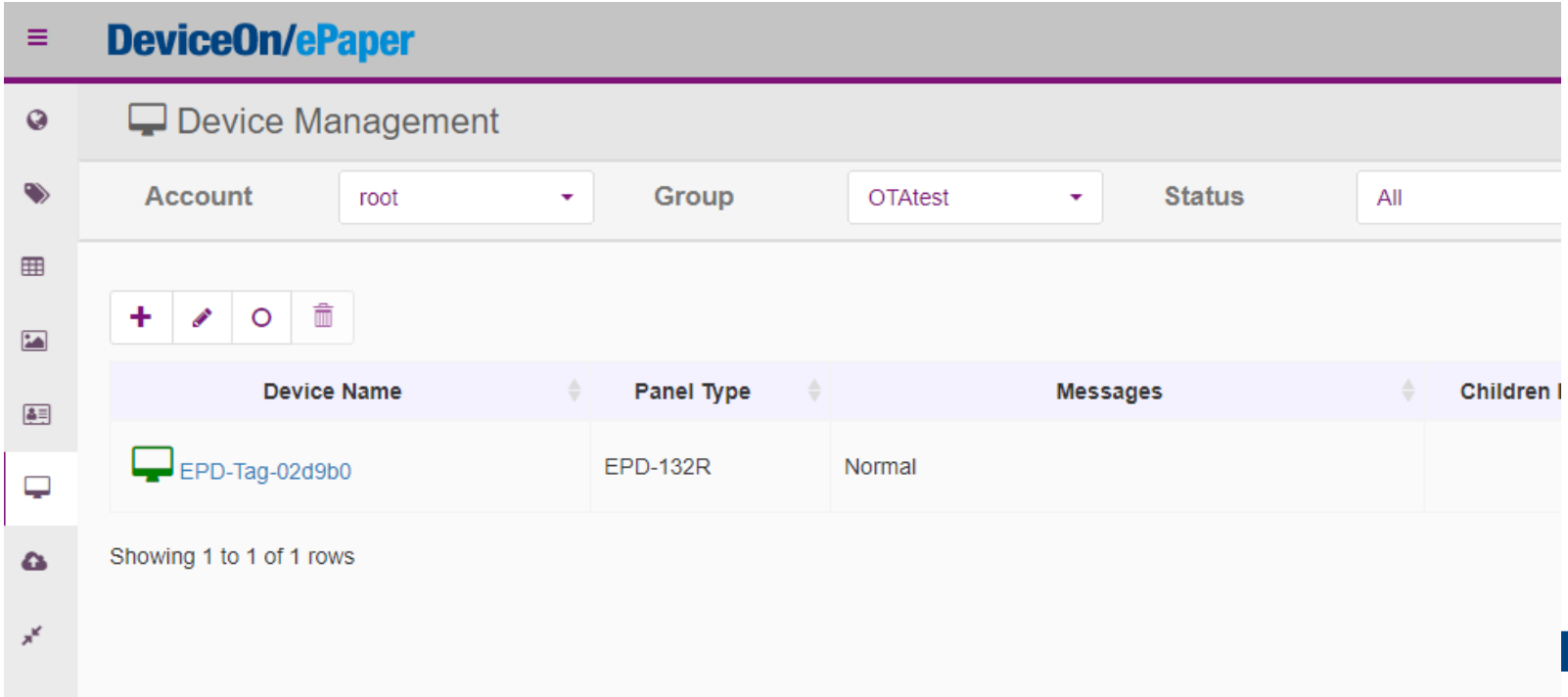


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Image Generation- Item Data imported

- Import existed Item Data from CSV file. EPD demo4.zip

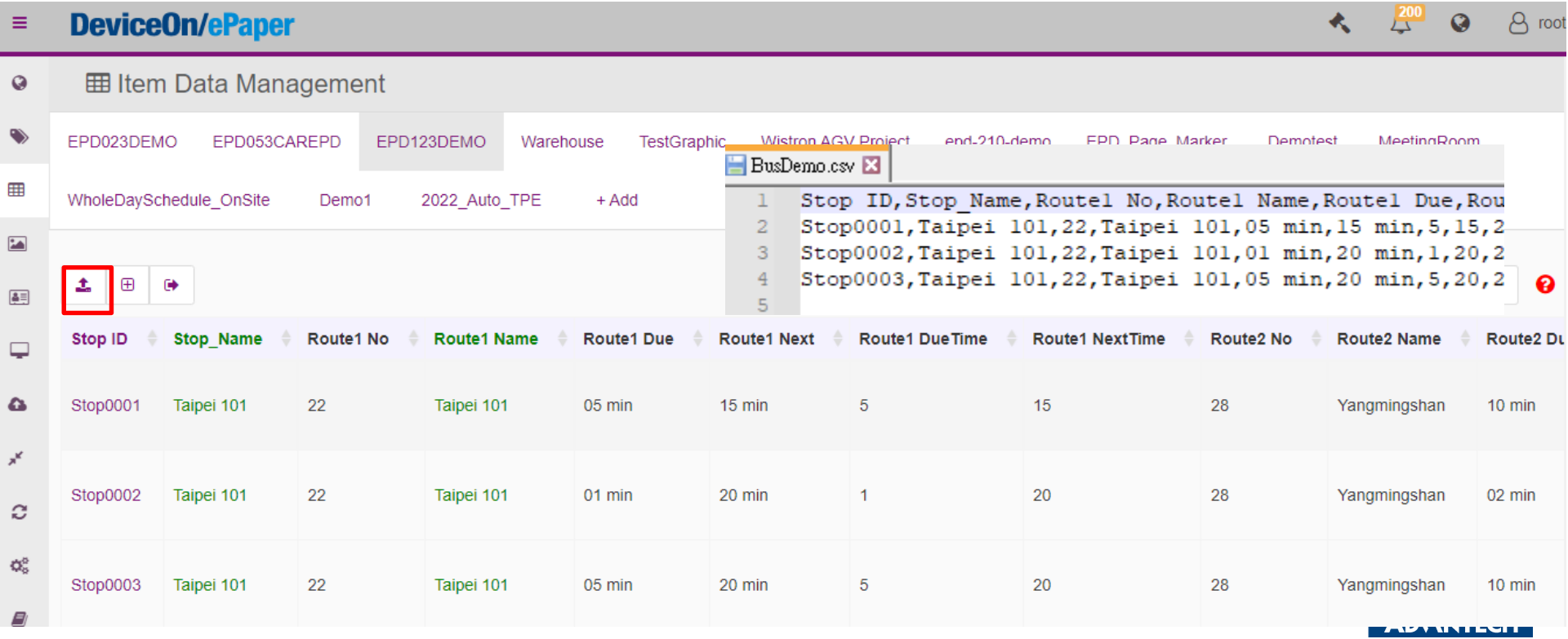
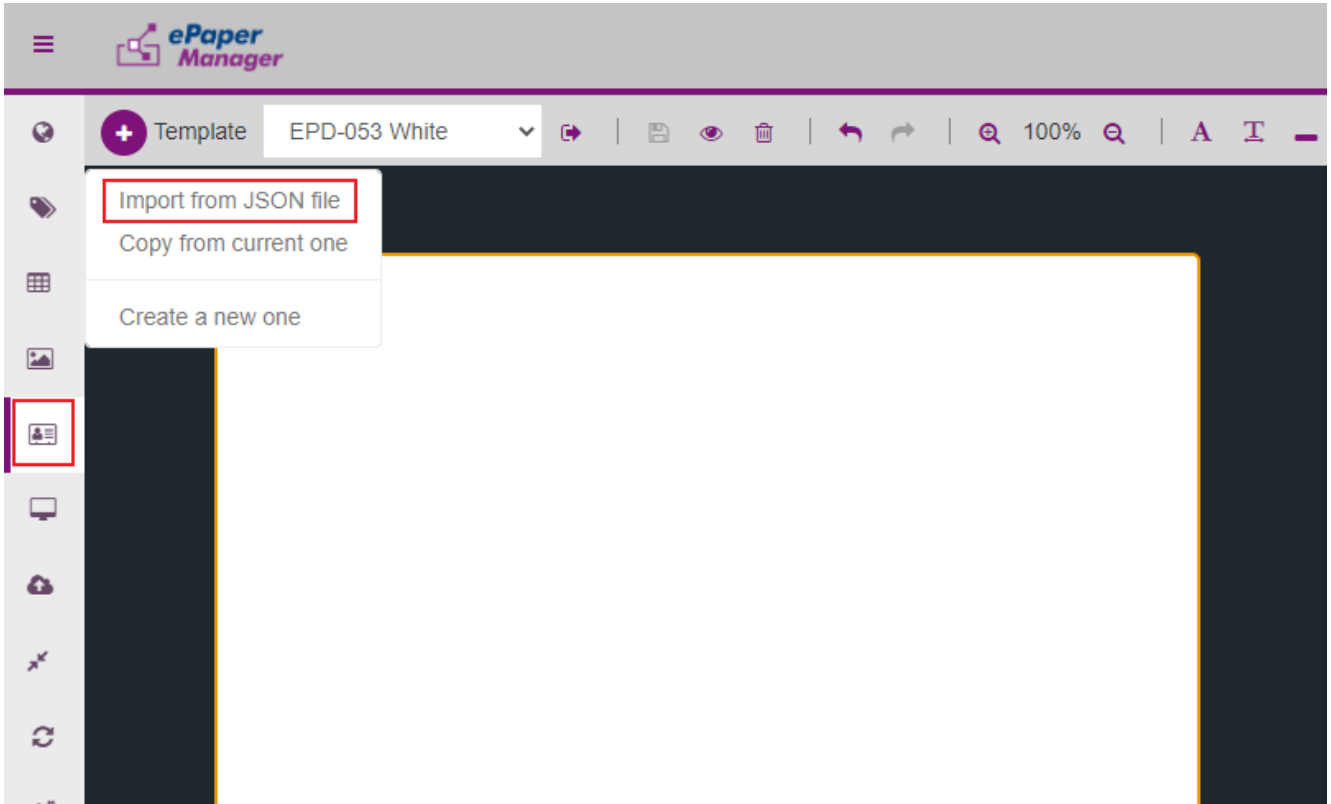
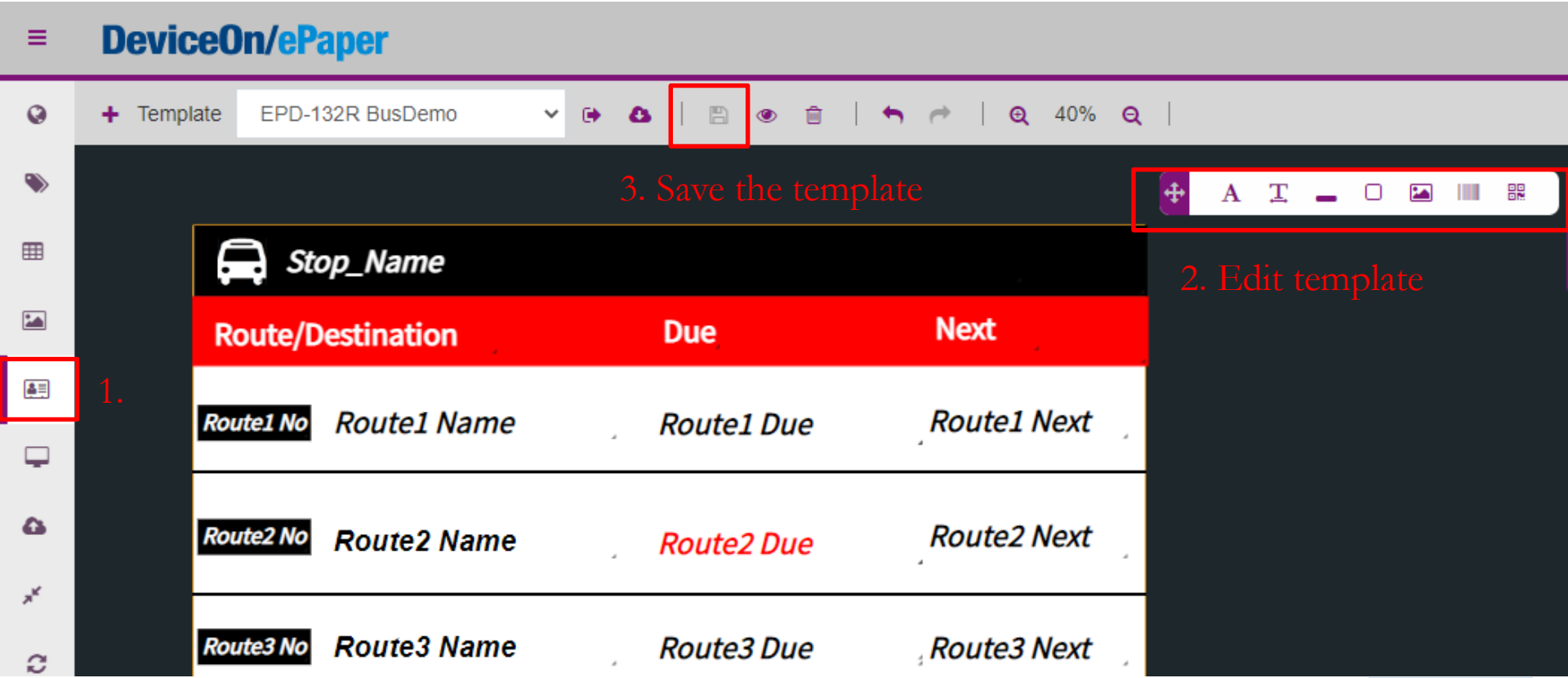


Image Generation- Template Generation

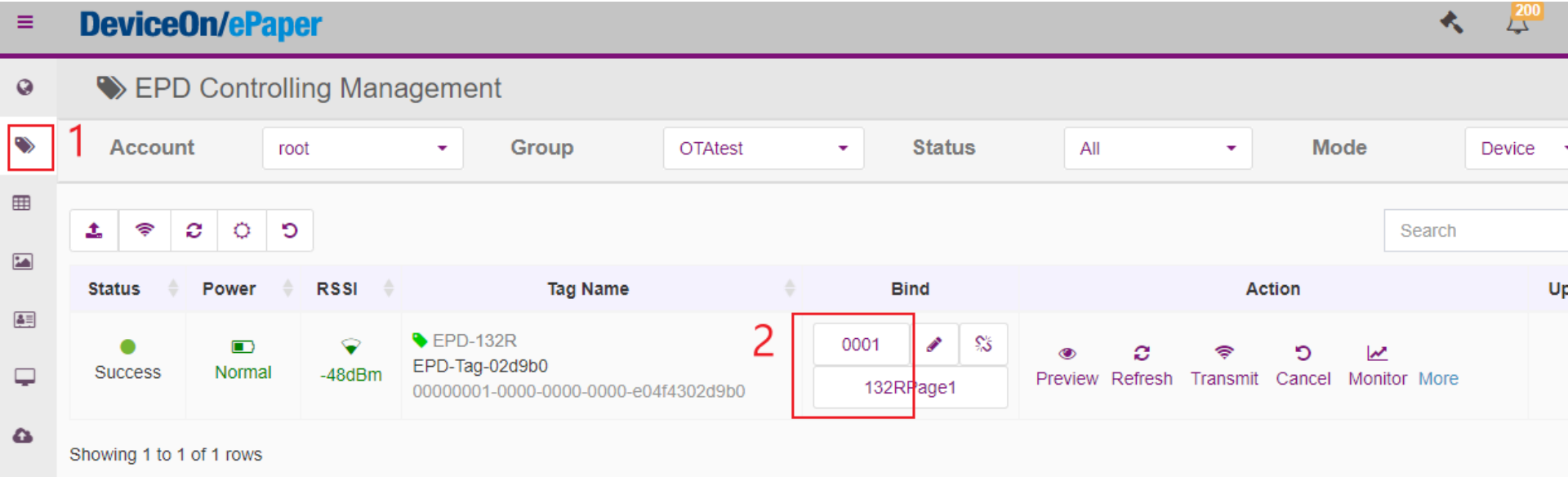
- Import existed template from JSON file



Template Generation



Data Binding



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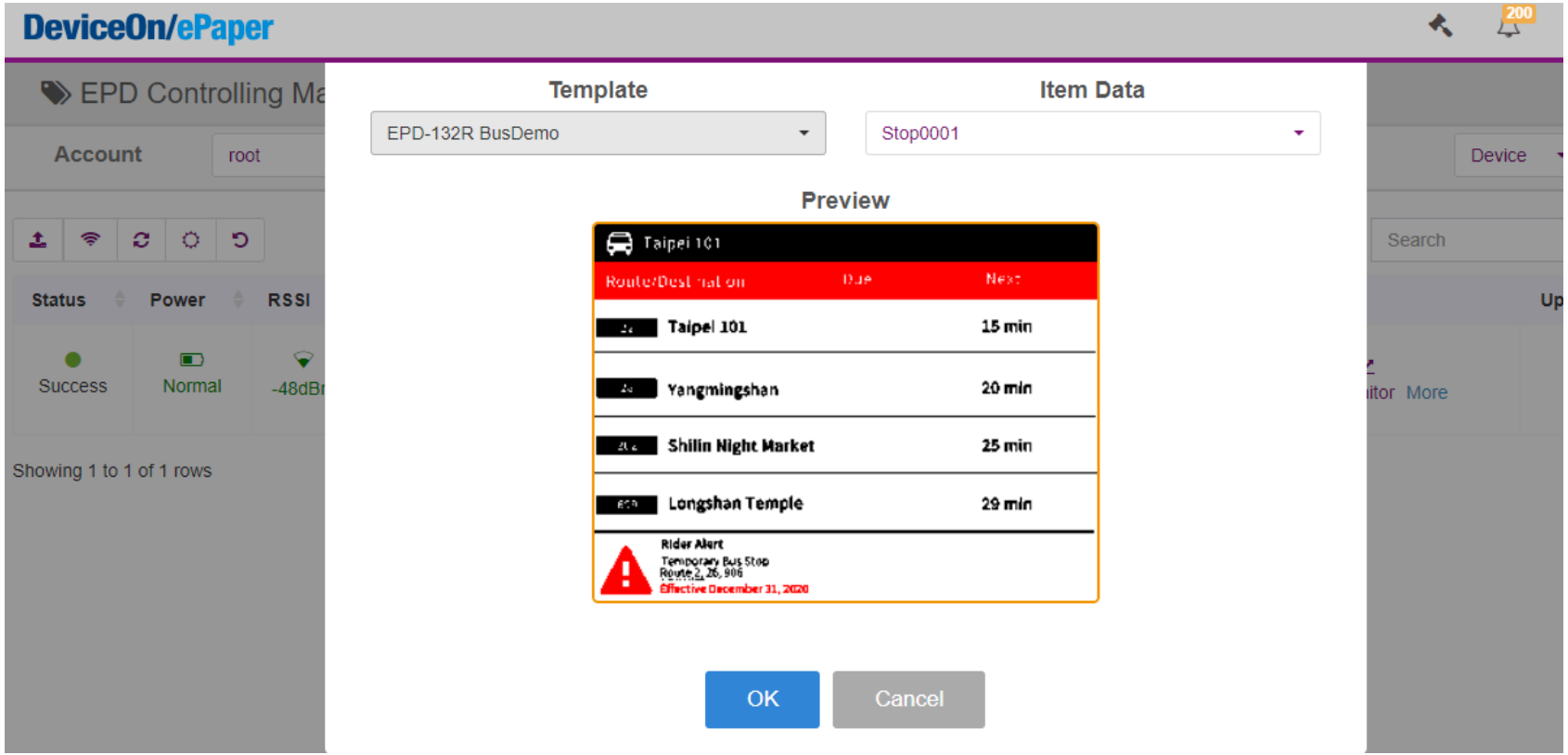
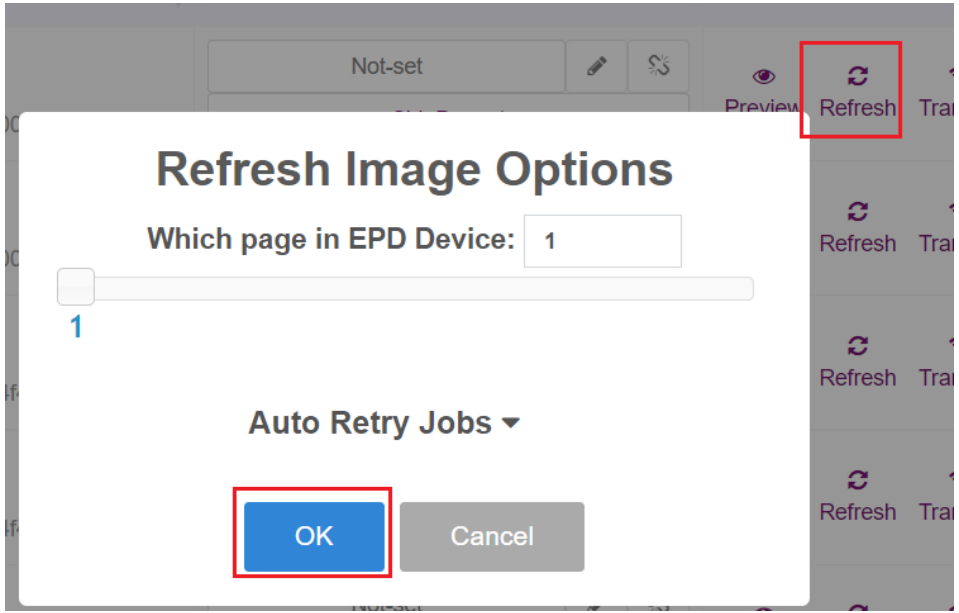
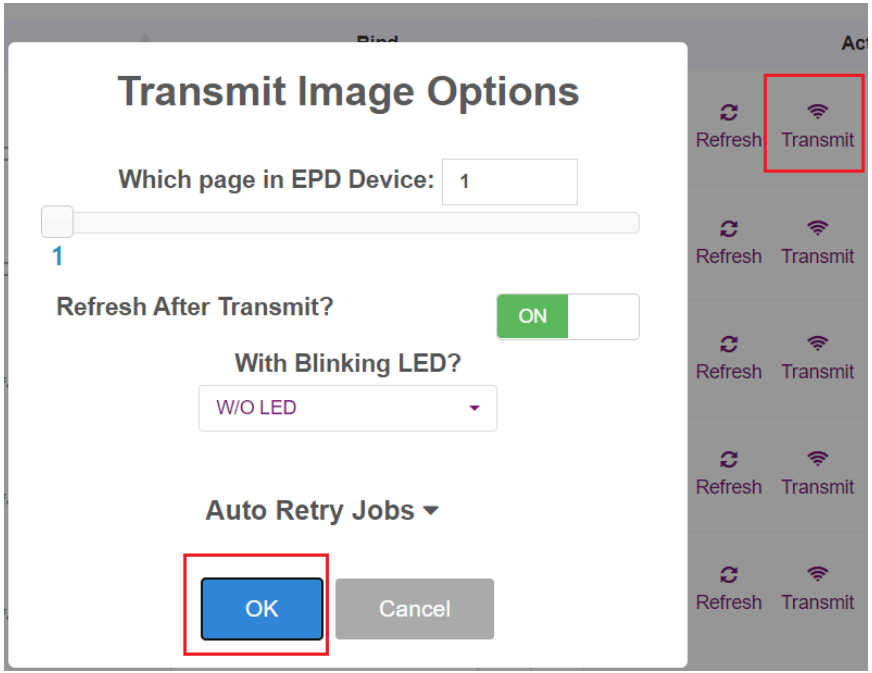
Data Binding

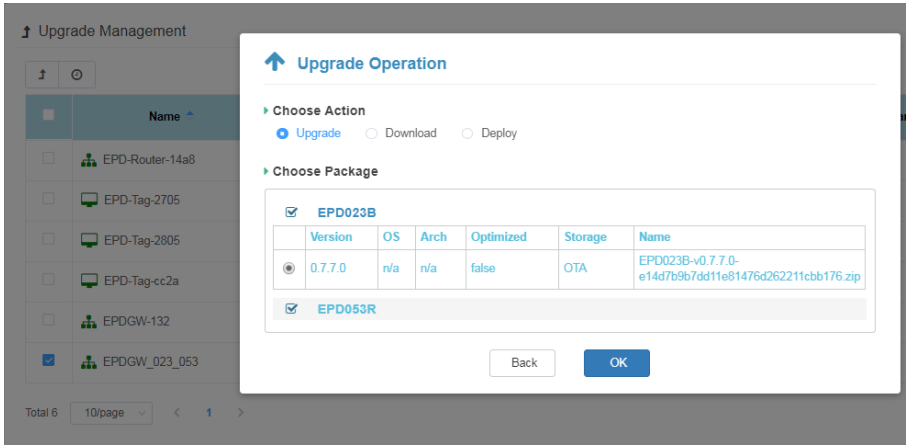


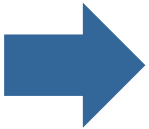
Refresh Tag Device- Image Refresh & Transmit

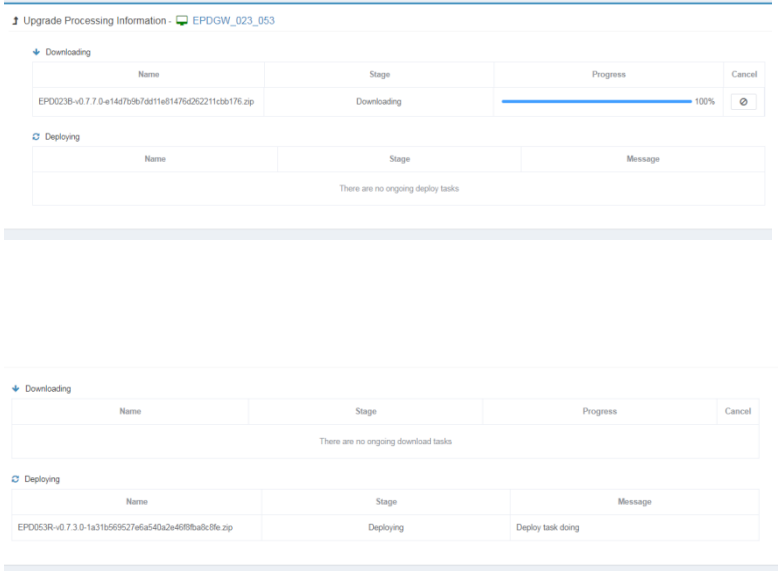




Firmware Upgrade- OTA







Resful API & SampleCode

Test Parameters

Device Group	AEGroup

Your Device Group (unique ID)

Agent ID	00000001-0000-0000-0000-e04f4302cb28

Your EPD tag agentid (unique ID)

Item Code	Stop0001

Your item data code (unique ID)

Template	ADFDemo2

Your template (unique ID)

Refresh	1

1: with refresh action; 0: without refresh action

Page	0

Your EPD tag memory available space (from 0 to maxpagesize-1)

EPD Tag Transmit

Logs 1b83 - stop0001

Sending: {"Route1 Name":"Taipei 101","Route1 Due":"19 min","Route1 DueTime":"19","Route1 Next":"29 min","Route1 NextTime":"29","Route2 Name":"Yangmingshan","Route2 Due":"04 min","Route2 DueTime":"4","Route2 Next":"24 min","Route2 NextTime":"24","Route3 Name":"Shilin Night Market","Route3 Due":"09 min","Route3 DueTime":"9","Route3 Next":"29 min","Route3 NextTime":"29","Route4 Name":"Longshan Temple","Route4 Due":"04 min","Route4 DueTime":"4","Route4 Next":"13 min","Route4 NextTime":"13"}

Response: Image Successfully Refresh!

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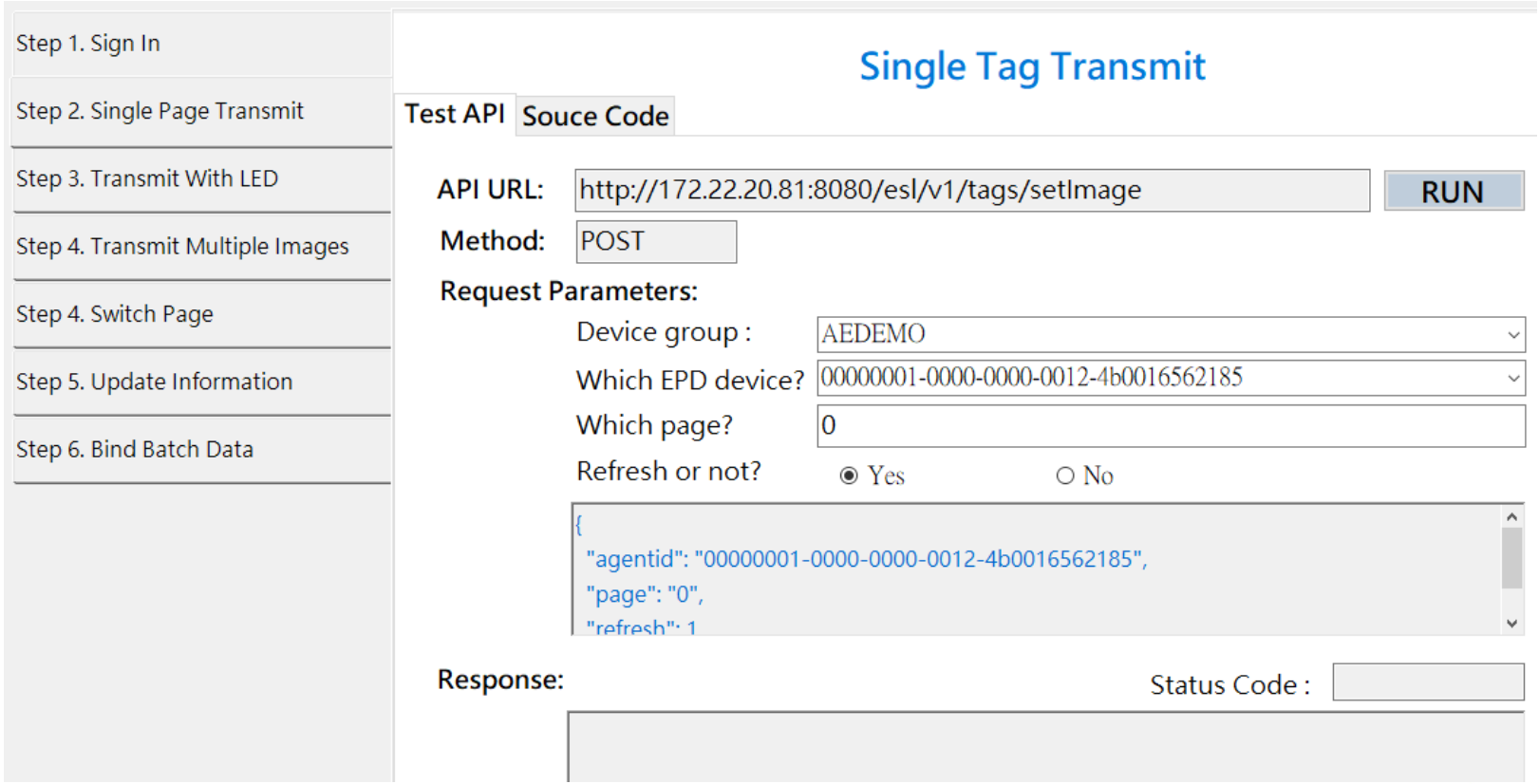
Resful API & SampleCode



Go Together,

We Go Far and Grow Big