



Particle

INTRODUCING PARTICLE MESH

WHY MESH NETWORKING MATTERS

PARTICLE MESH NETWORK ROLES

PARTICLE MESH DEVICES

SETTING UP A MESH NETWORK

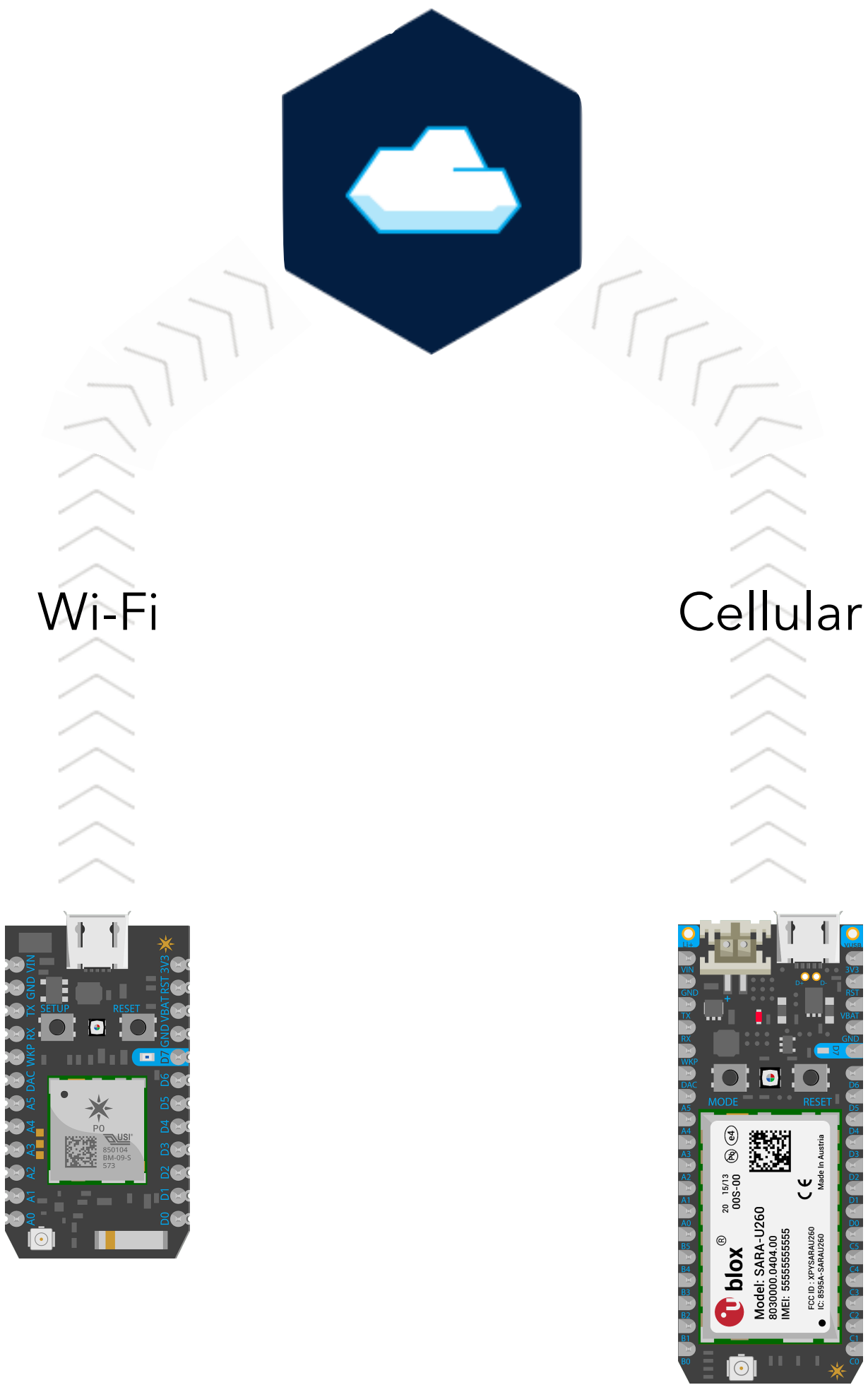
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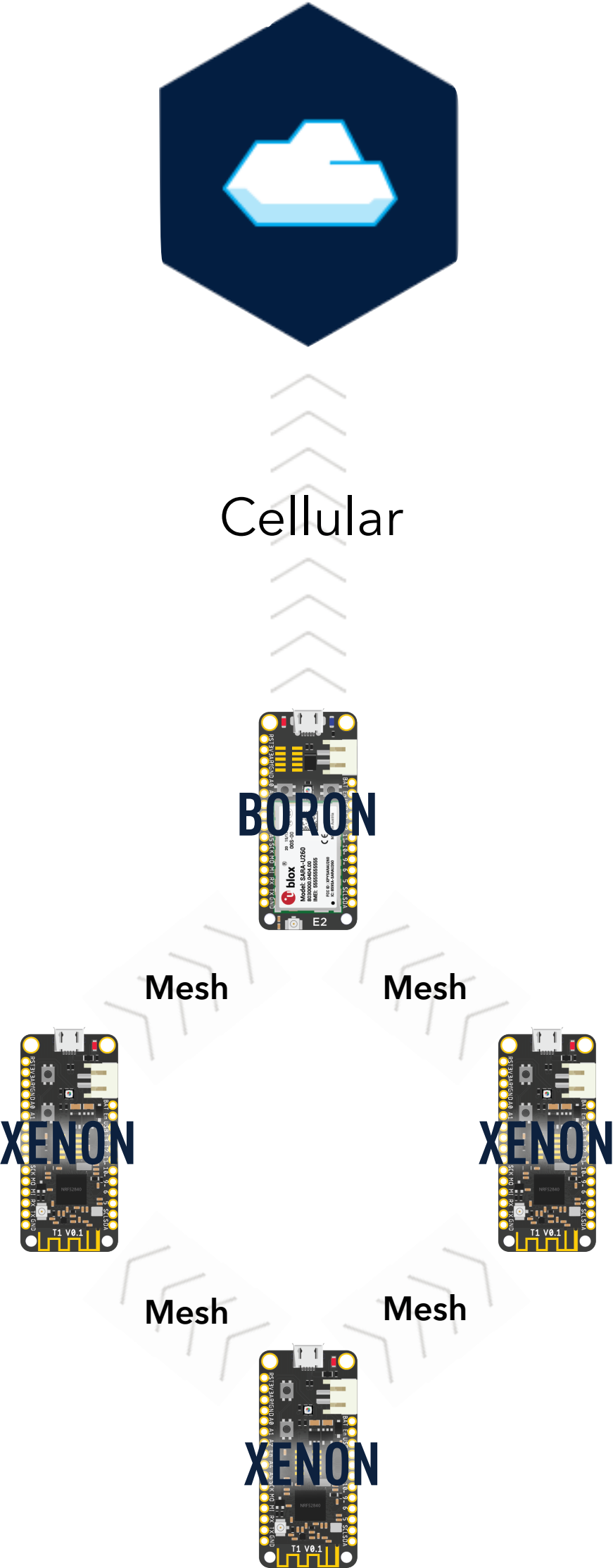
PARTICLE MESH DEVICES

SETTING UP A MESH NETWORK

CURRENTLY, EVERY PARTICLE DEVICE CONNECTS DIRECTLY TO THE CLOUD



PARTICLE MESH ALLOWS DEVICES TO PARTICIPATE IN A LOCAL NETWORK



MESH MAKES EXISTING IOT SOLUTIONS SMARTER



FLOOD DETECTOR



SMART WATER METER



PUMP CONTROLLER

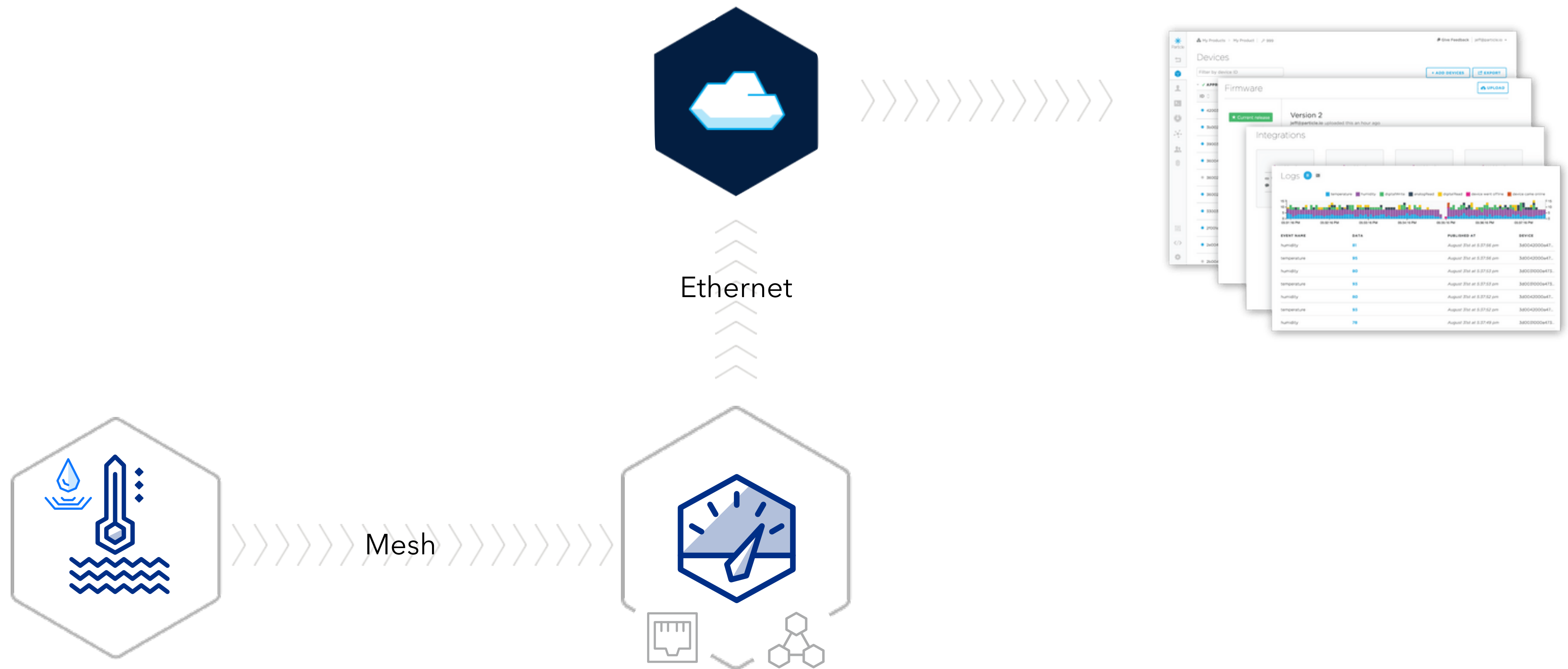
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MESH DEVICES CAN PUBLISH DATA LIKE ANY PARTICLE DEVICE



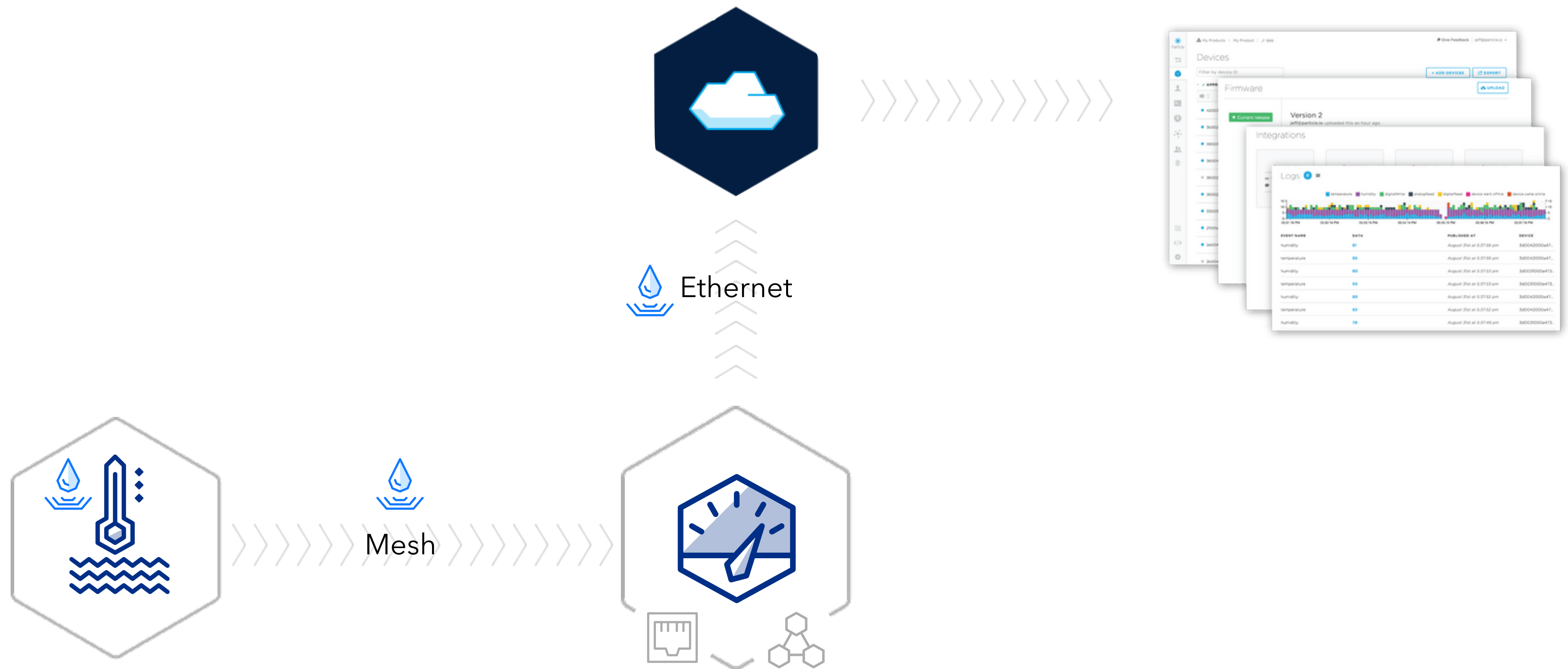
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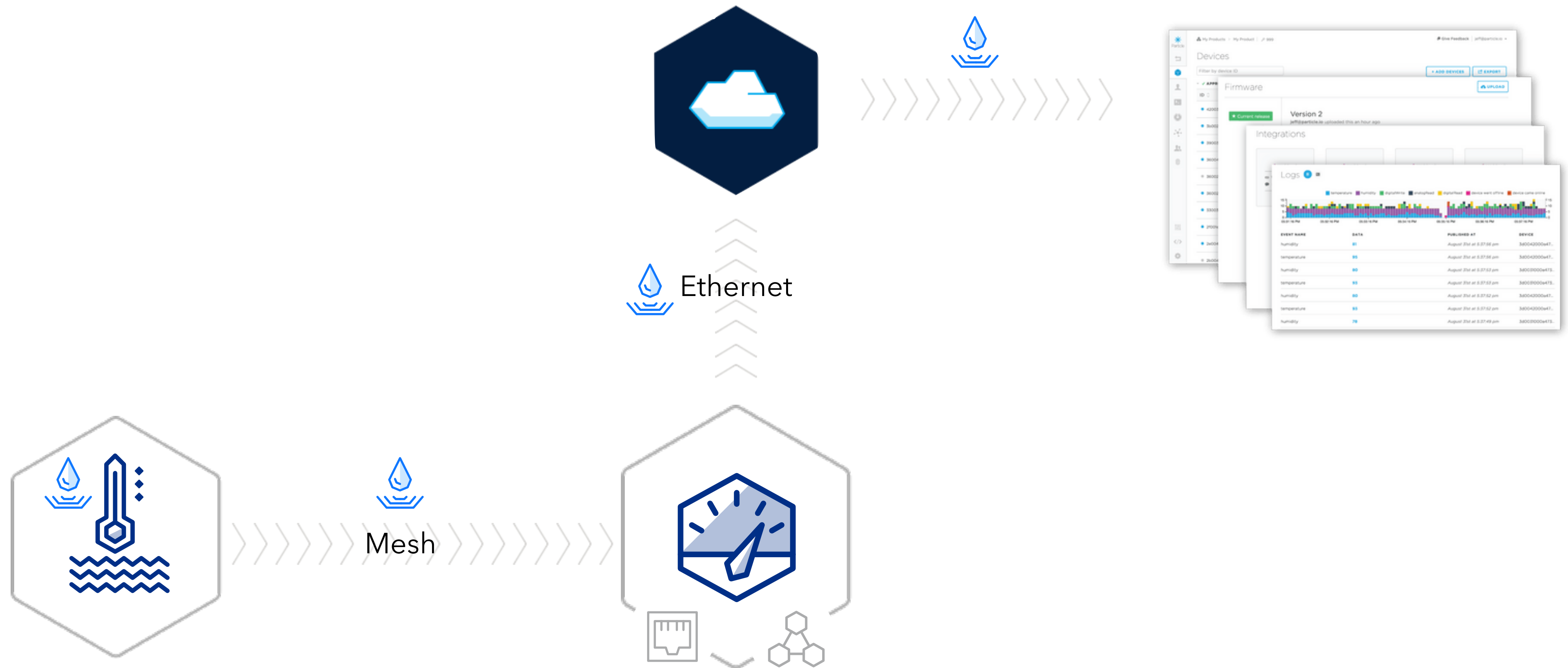
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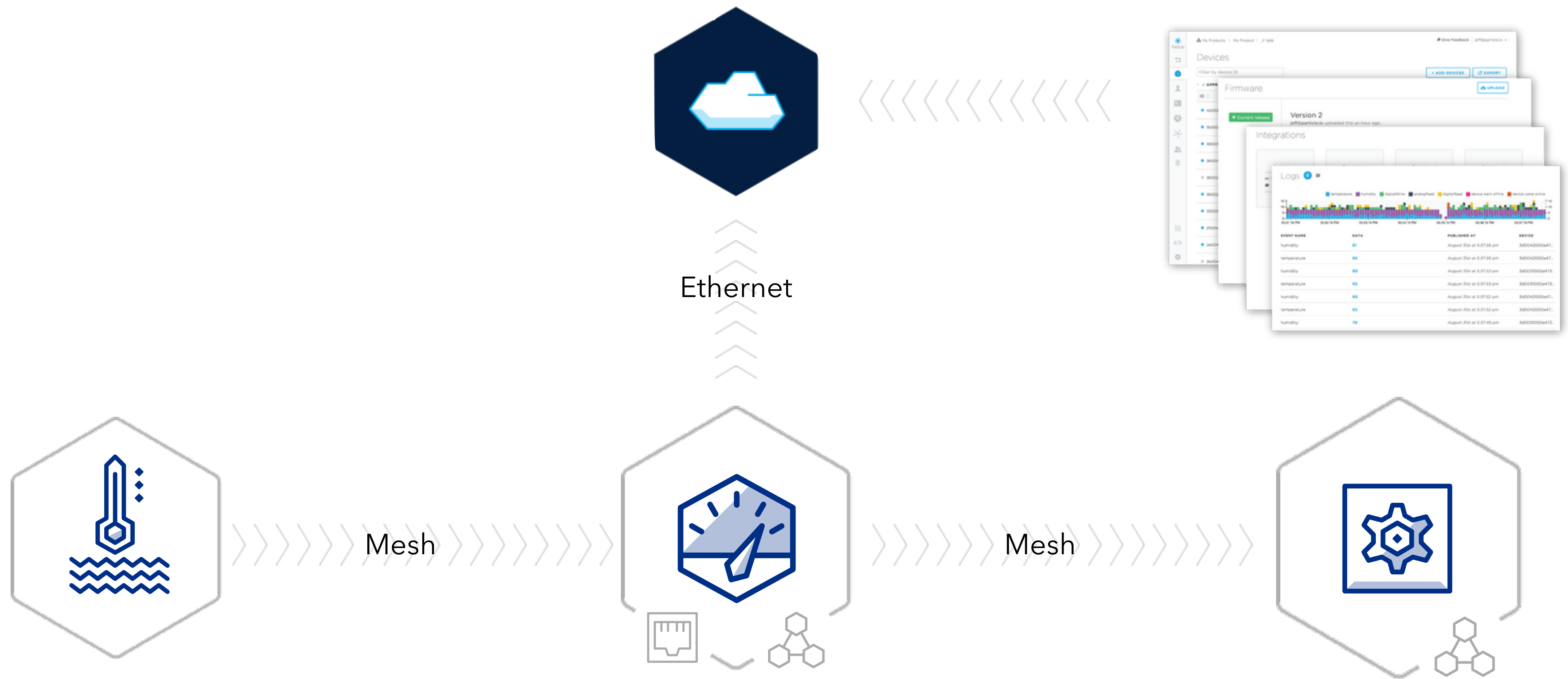
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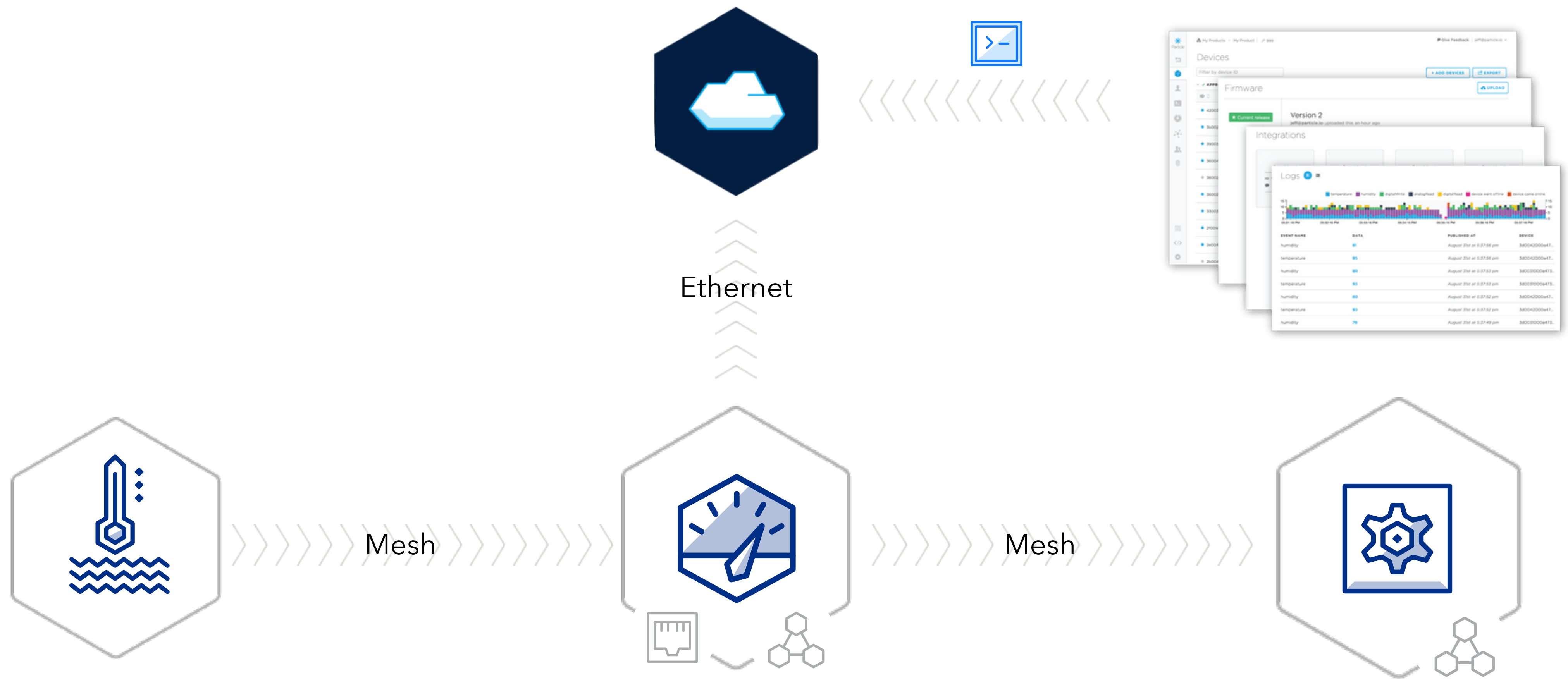
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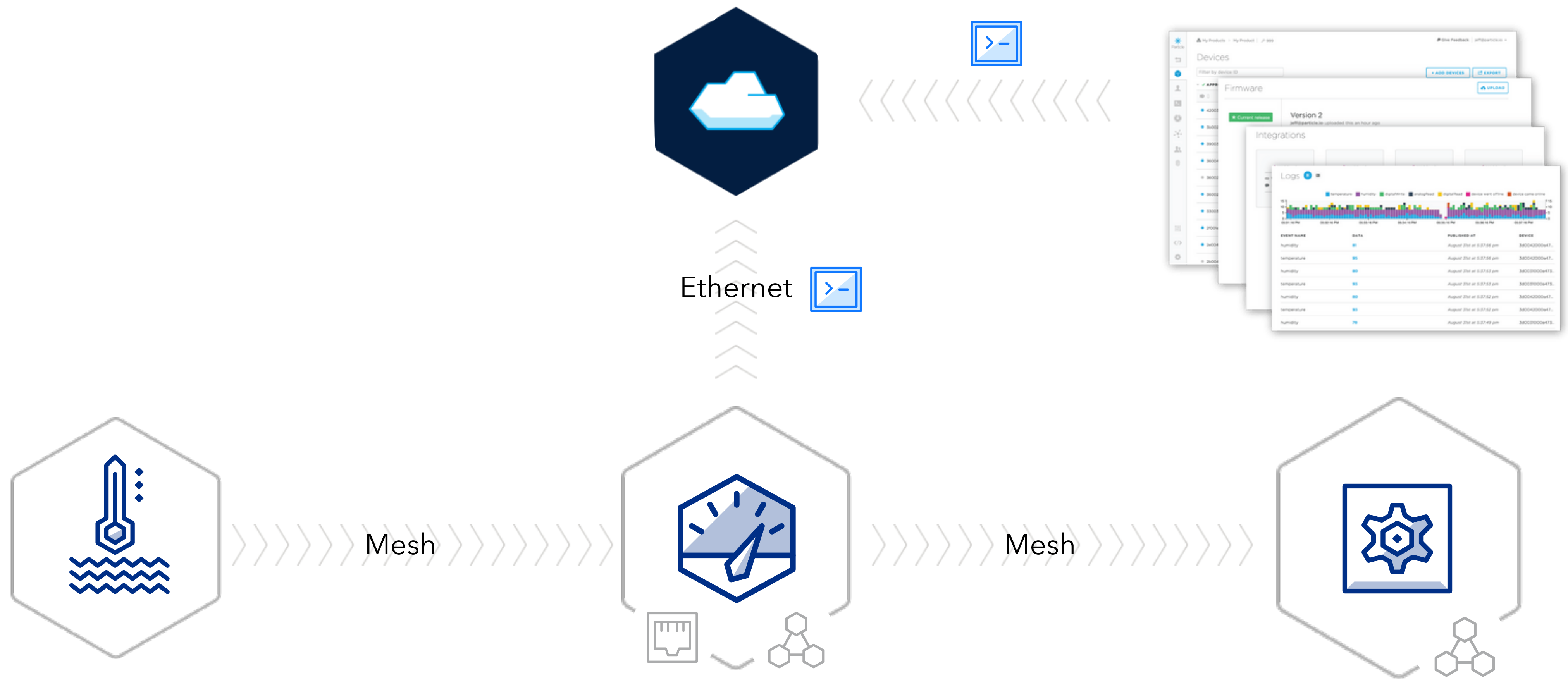
MESH DEVICES CAN BE REMOTELY CONTROLLED LIKE ANY PARTICLE DEVICE



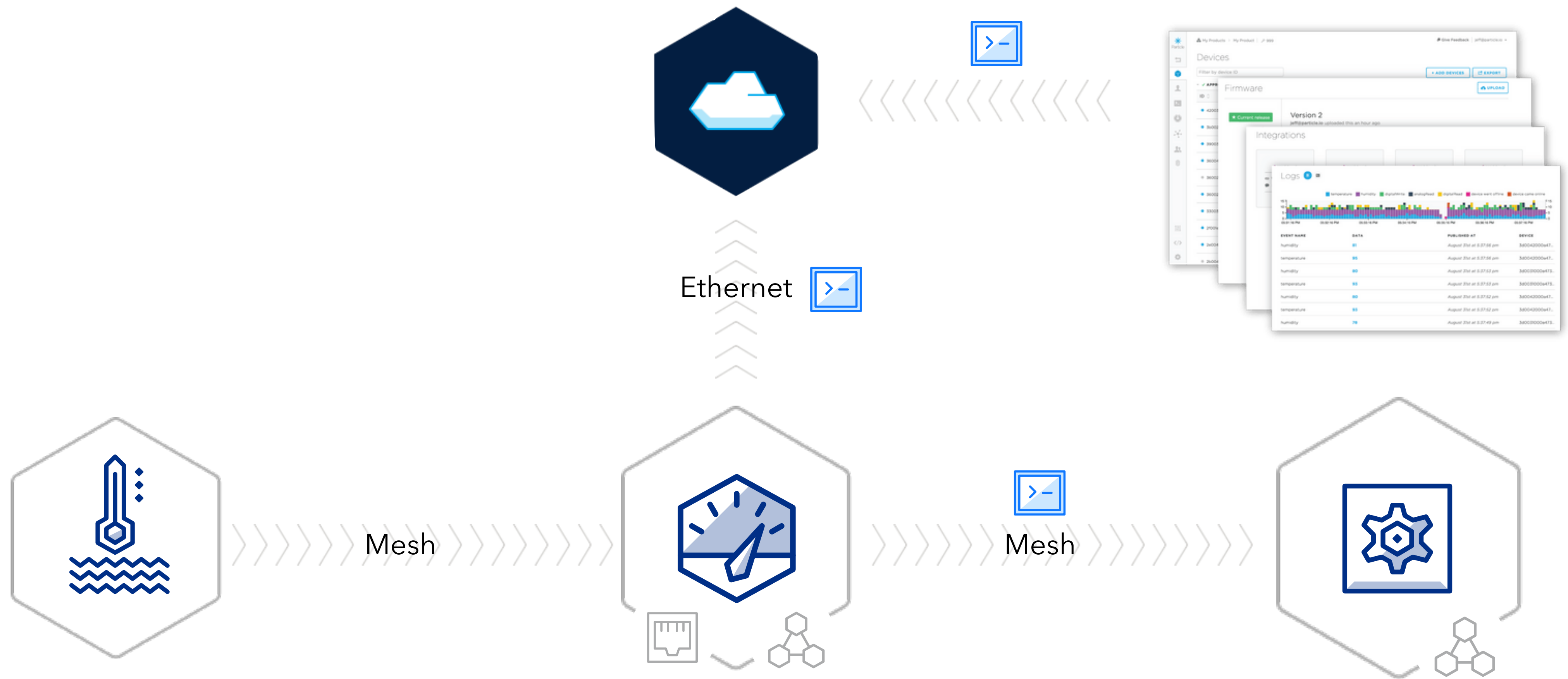
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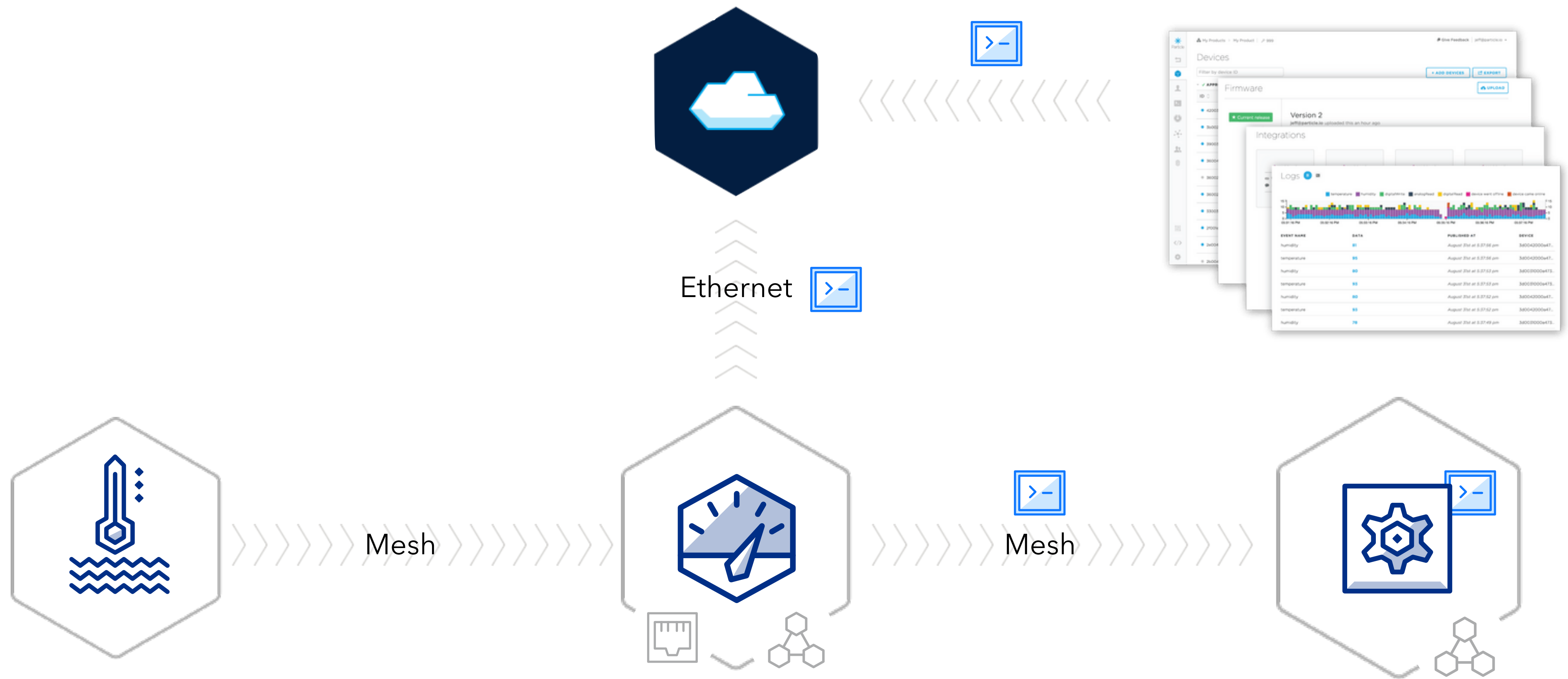
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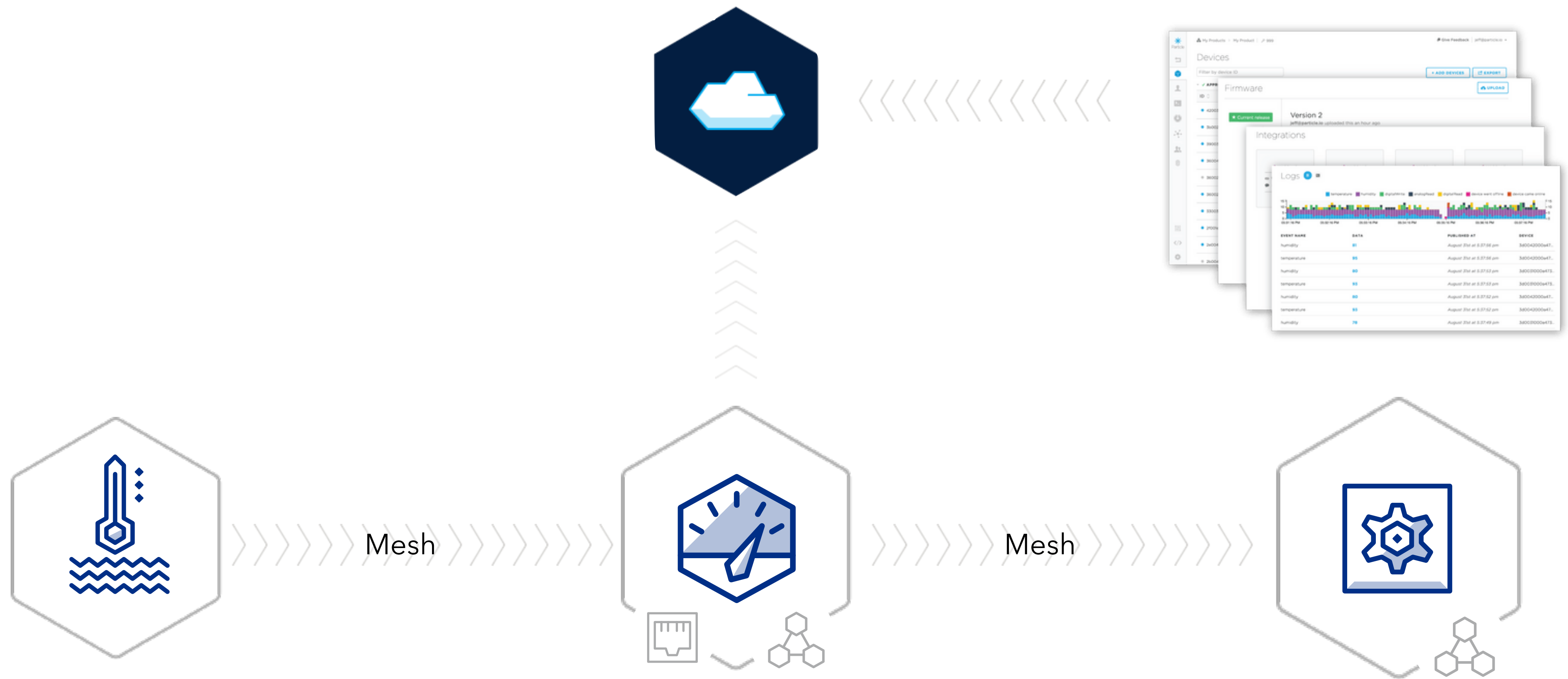
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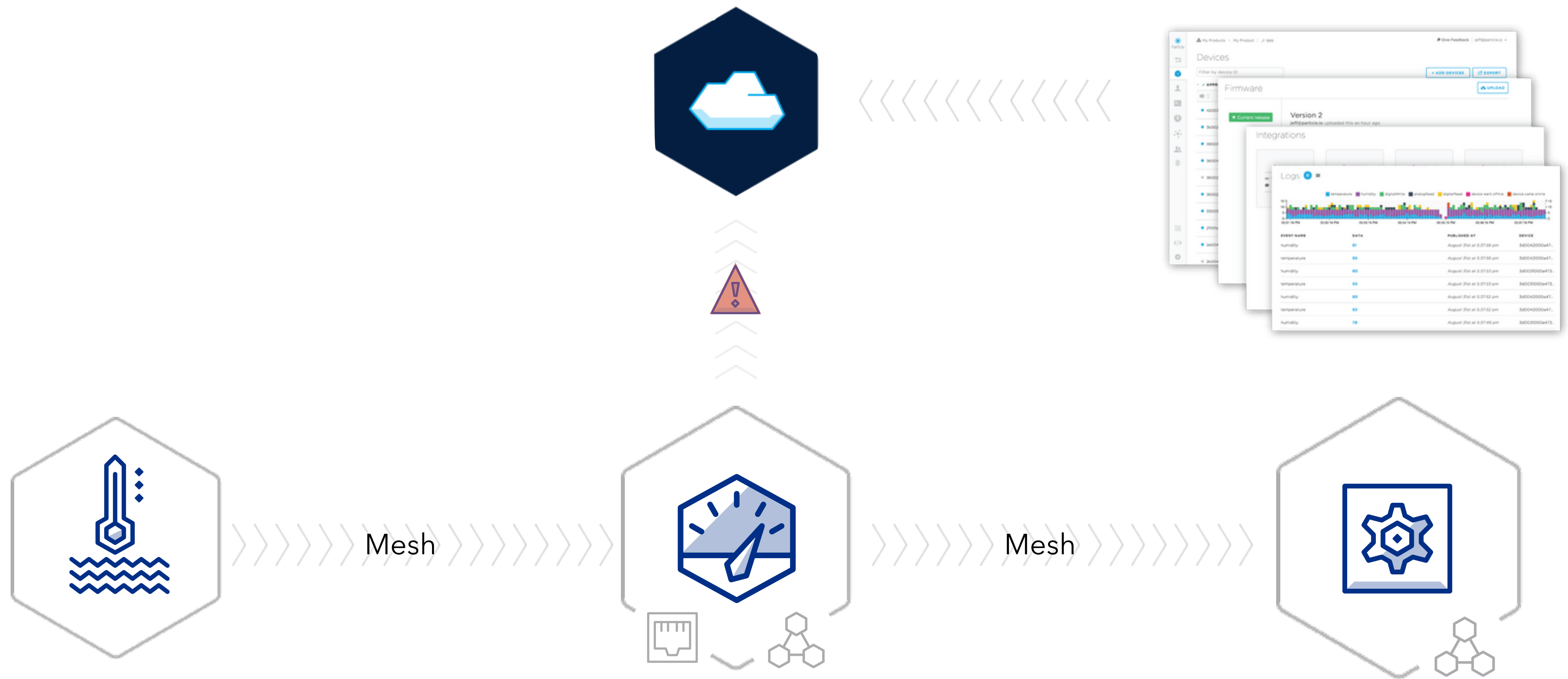
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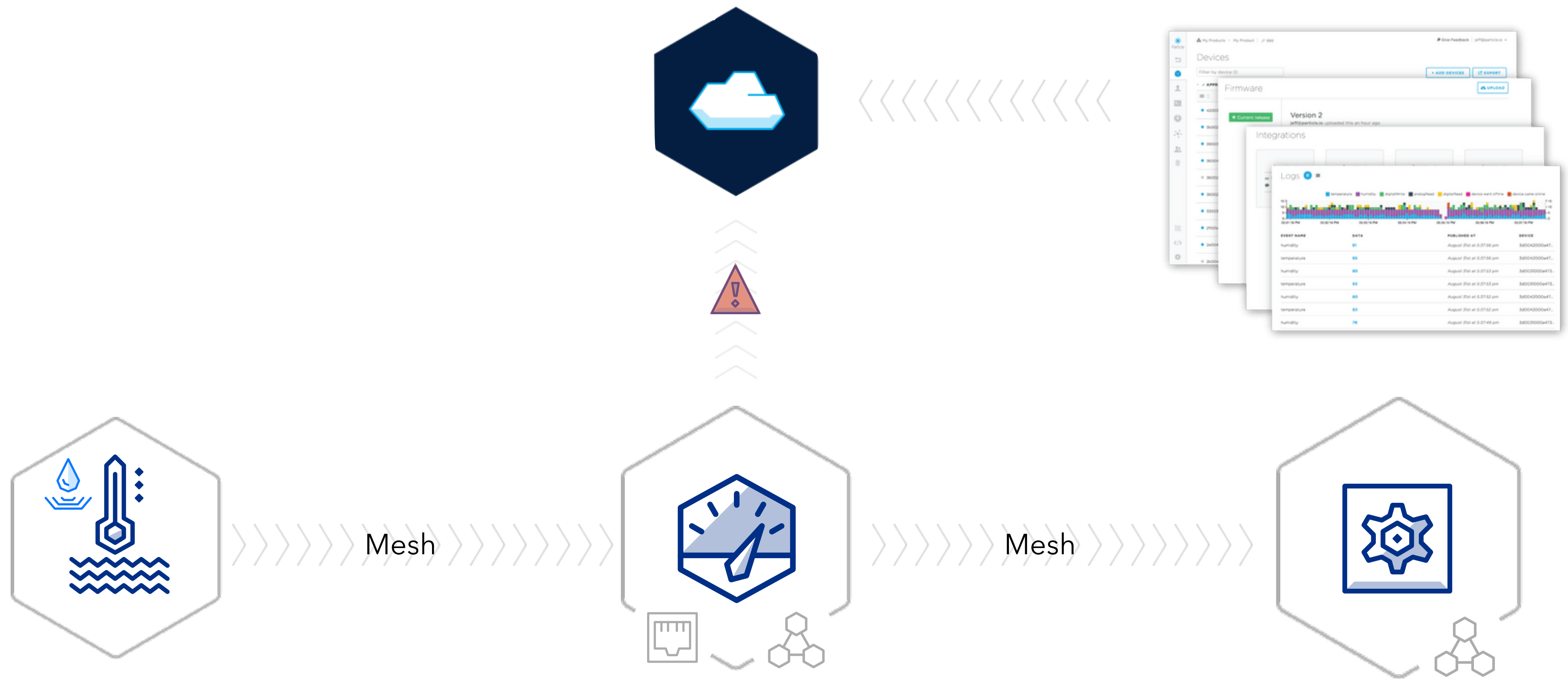
MESH DEVICES CAN COMMUNICATE WITHOUT AN INTERNET CONNECTION



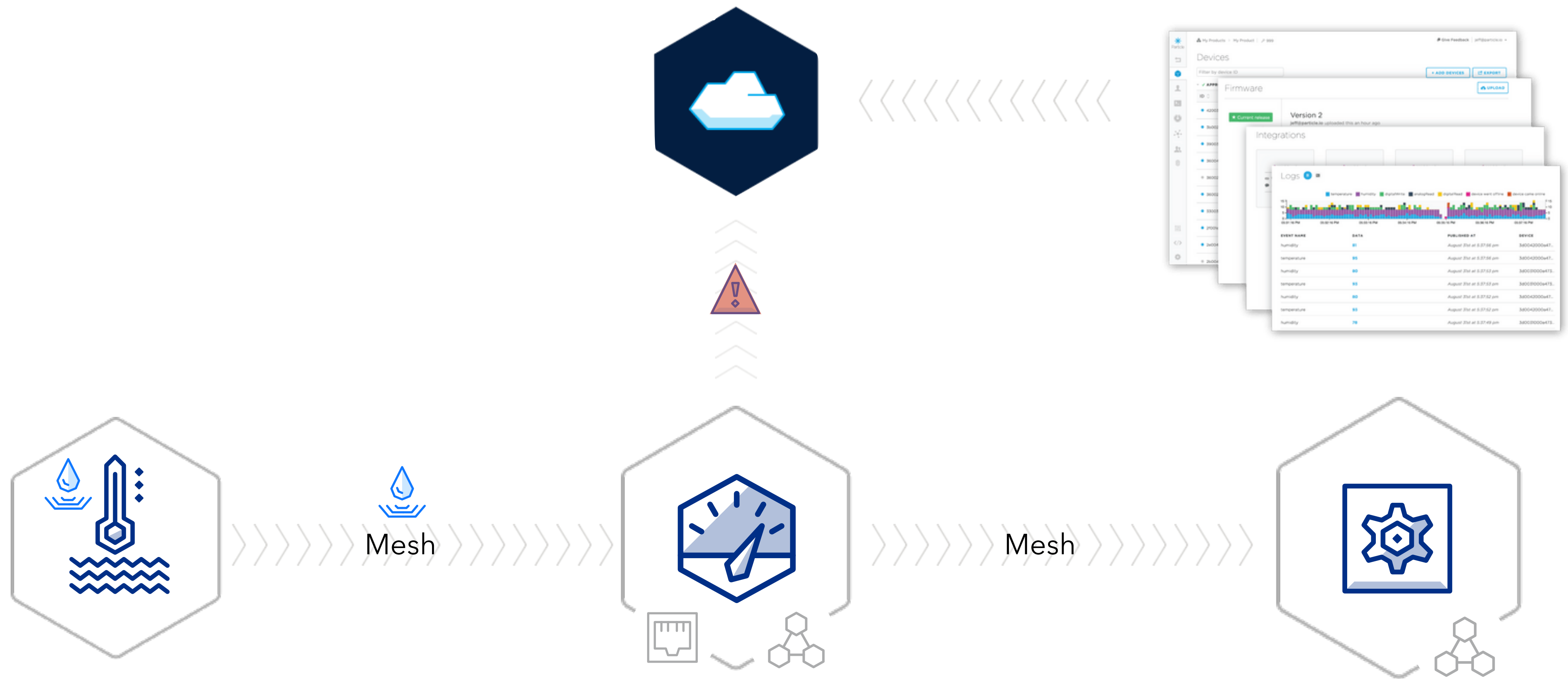
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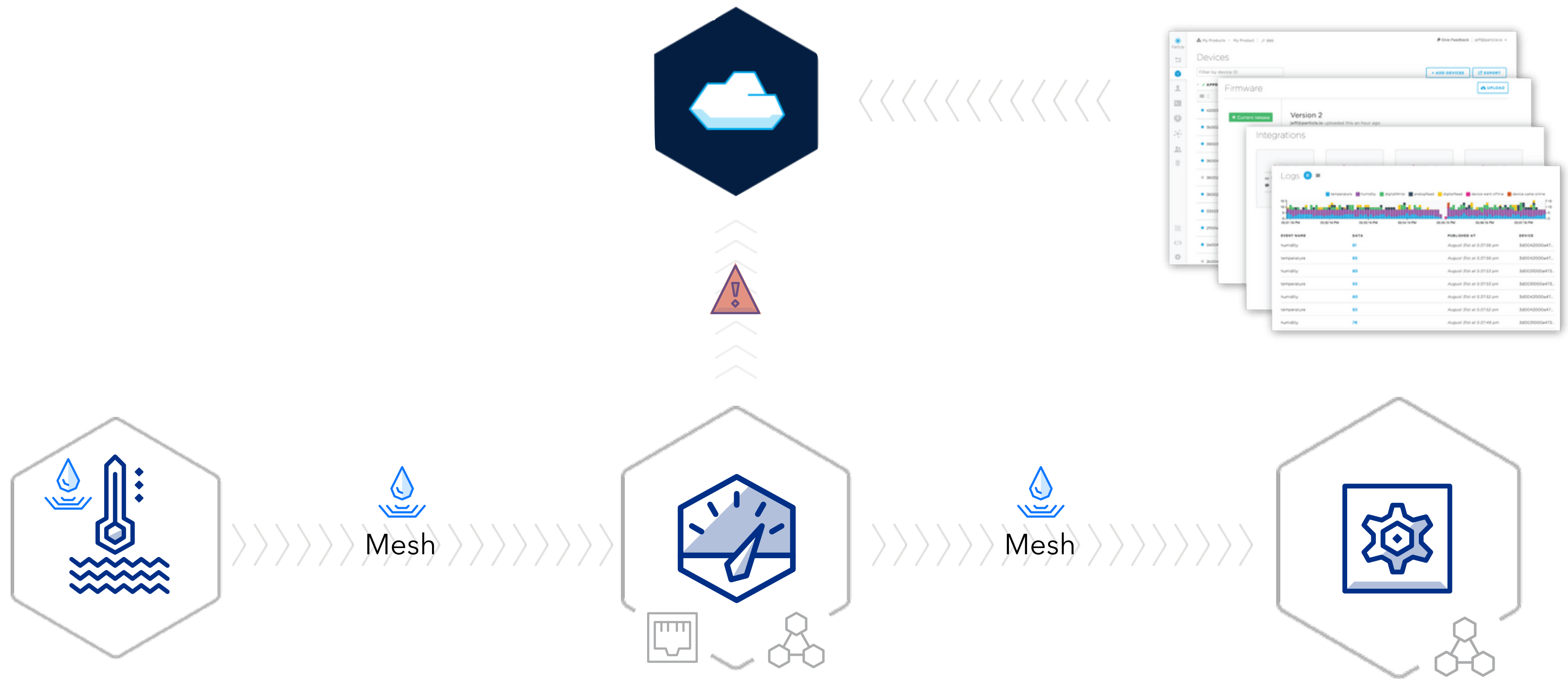
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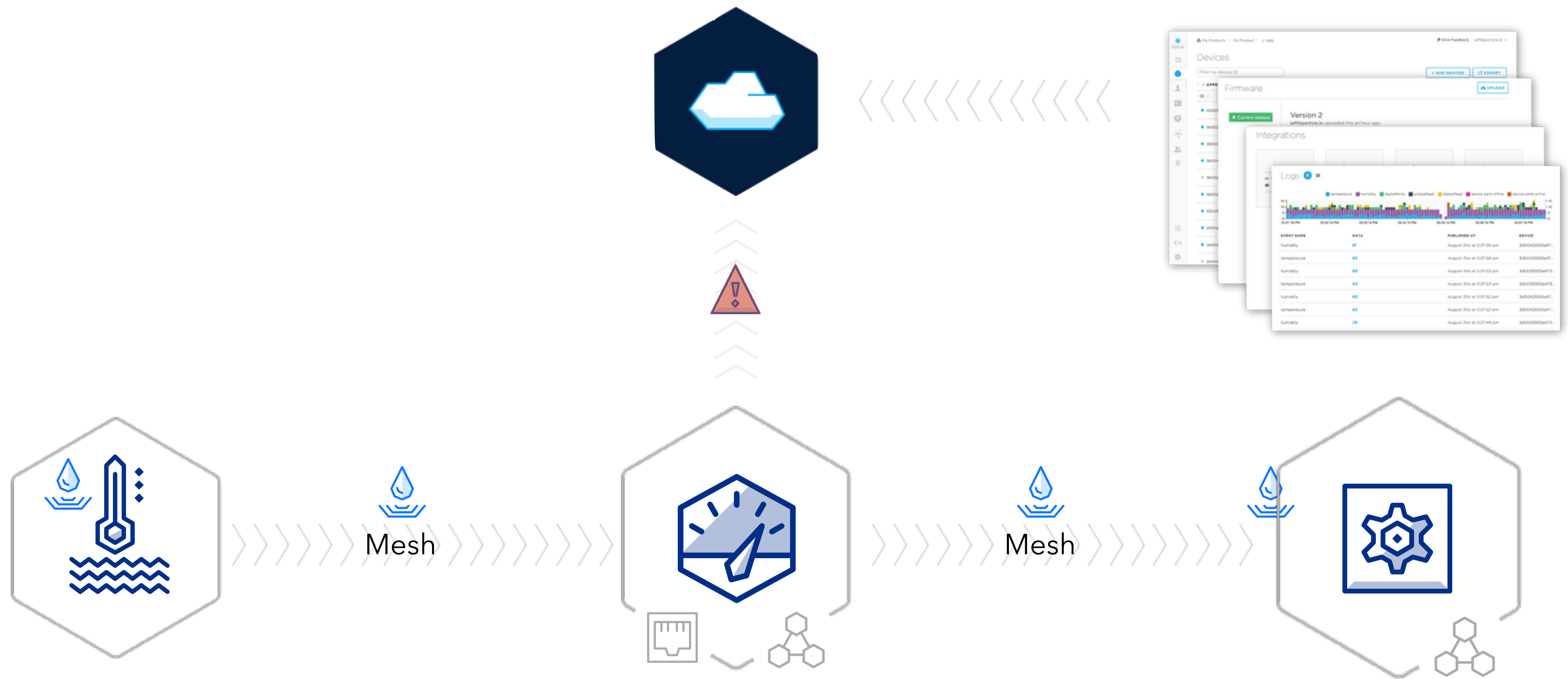
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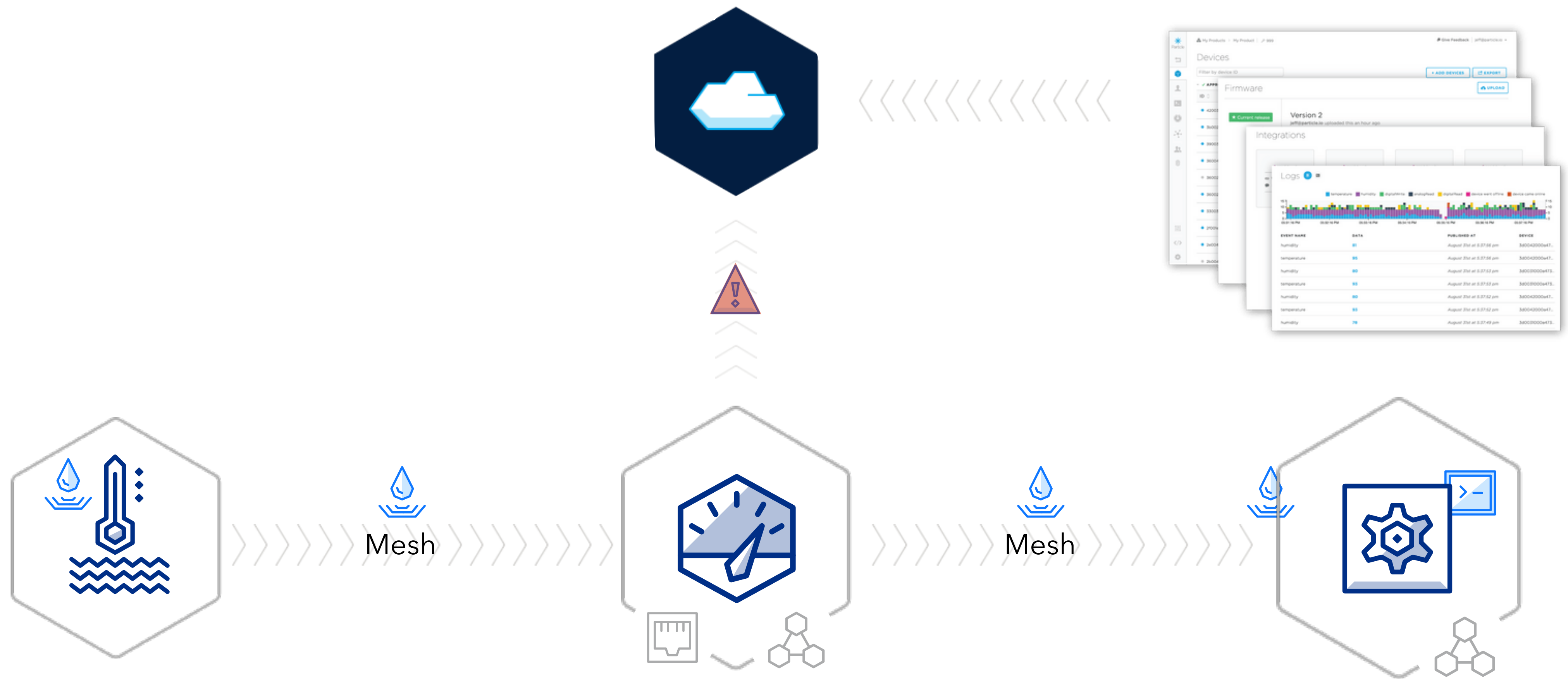
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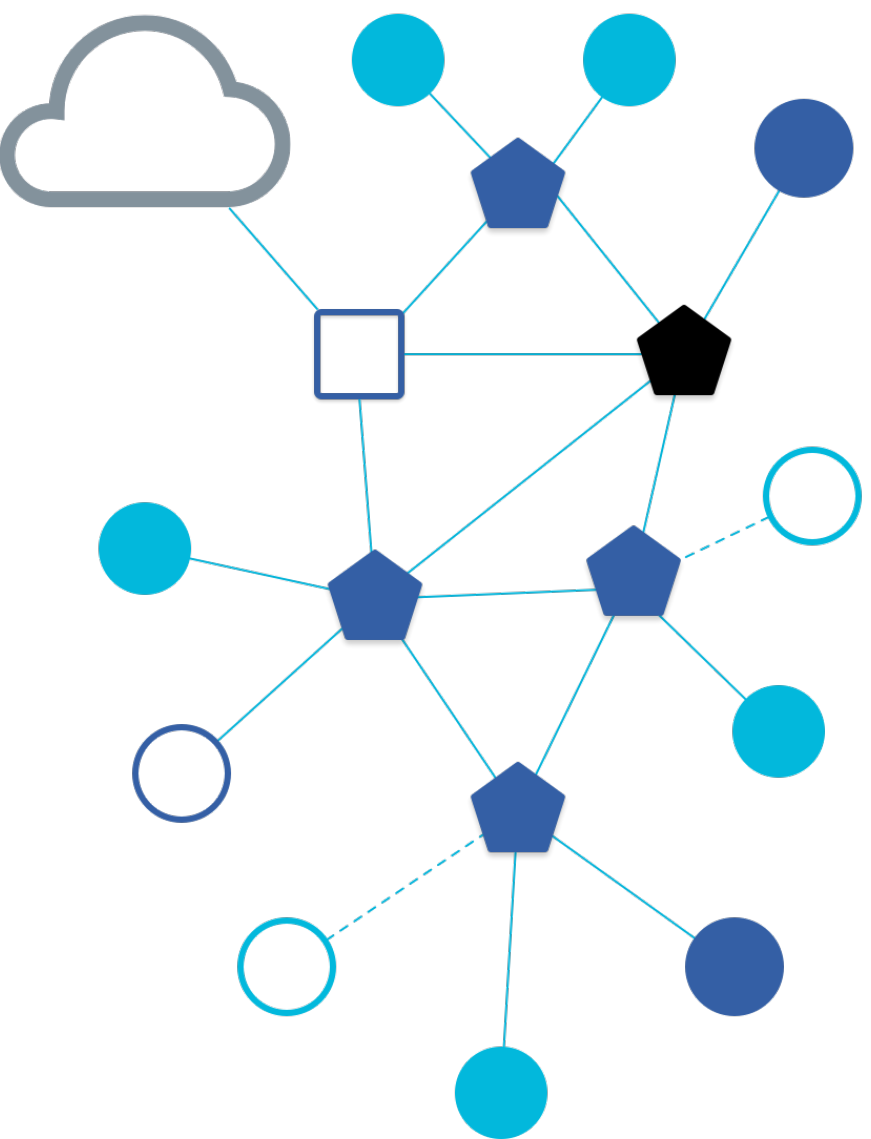
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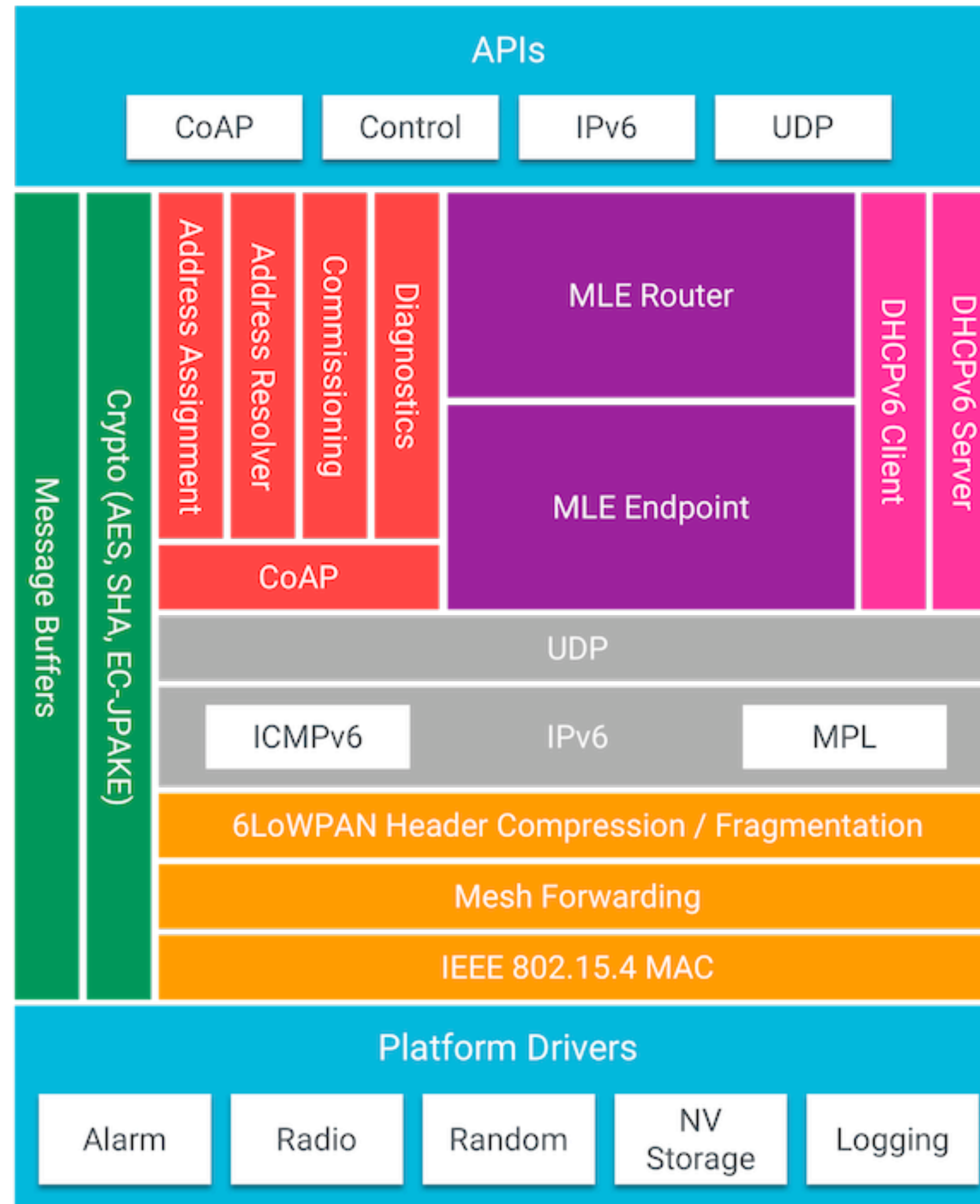


NEST, THREAD & PARTICLE MESH

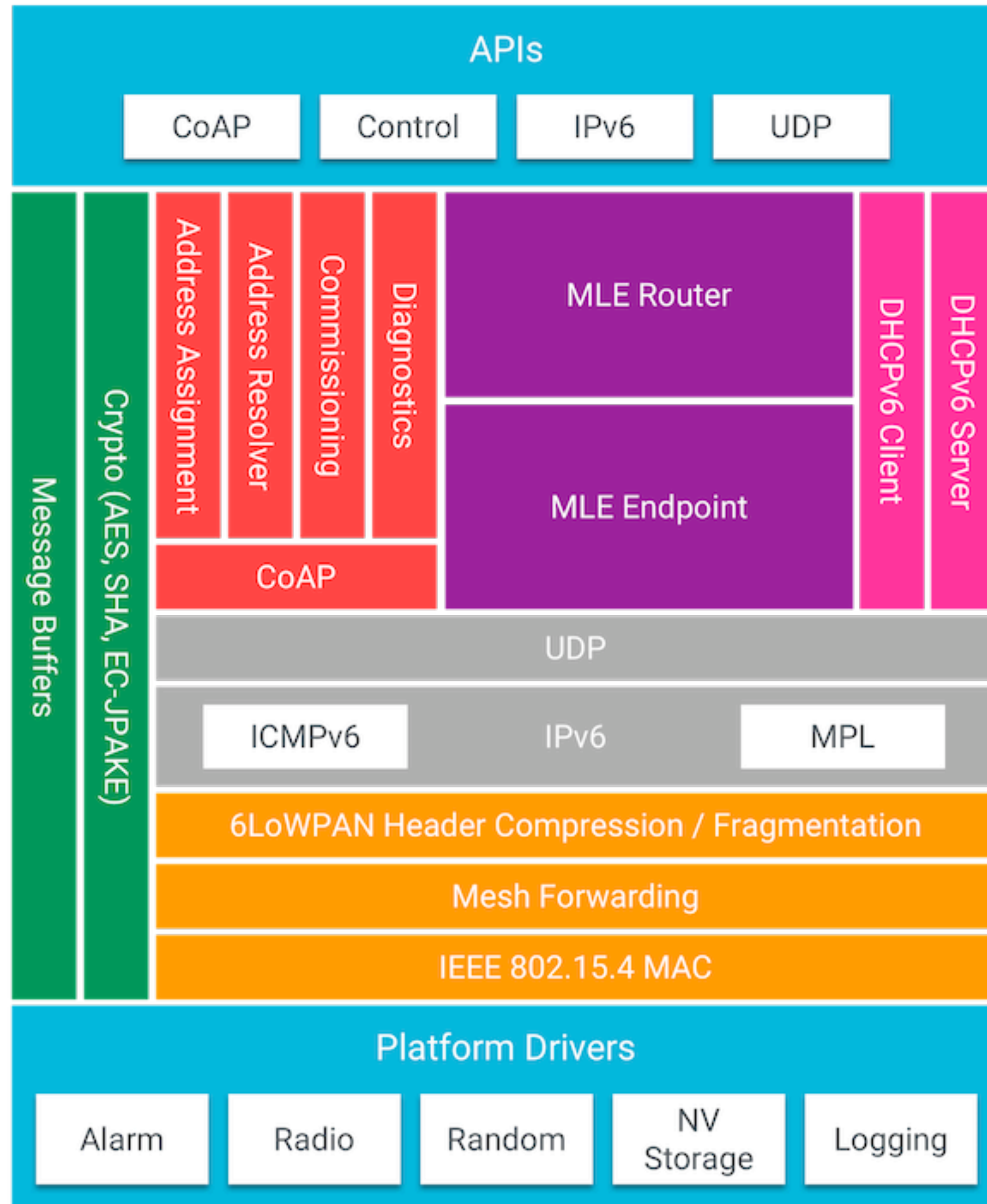


OPENTHREAD
released by Nest

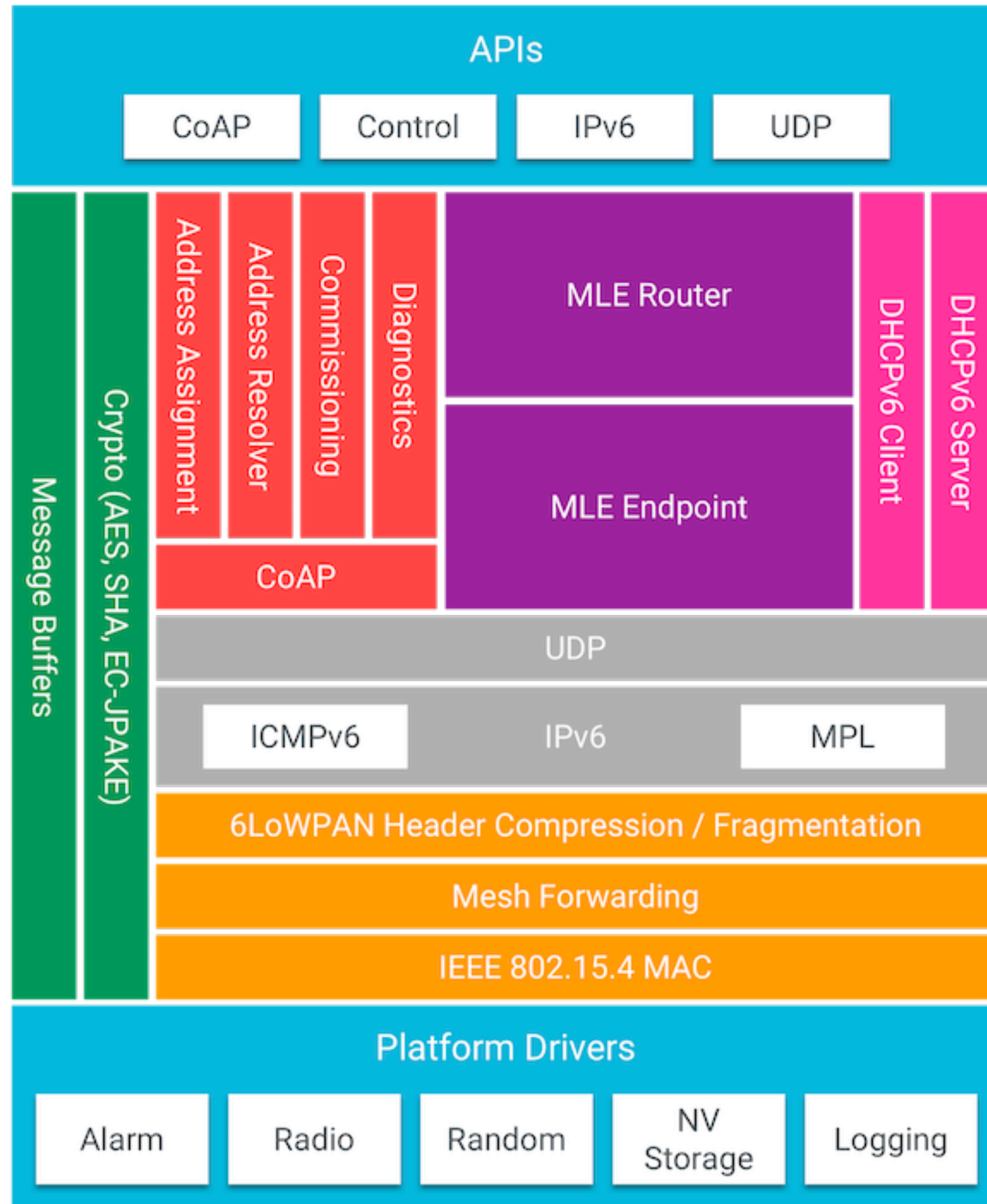
PARTICLE MESH MAKES MESH AS EASY AS WI-FI OR CELLULAR



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Search 3:19 PM 99%

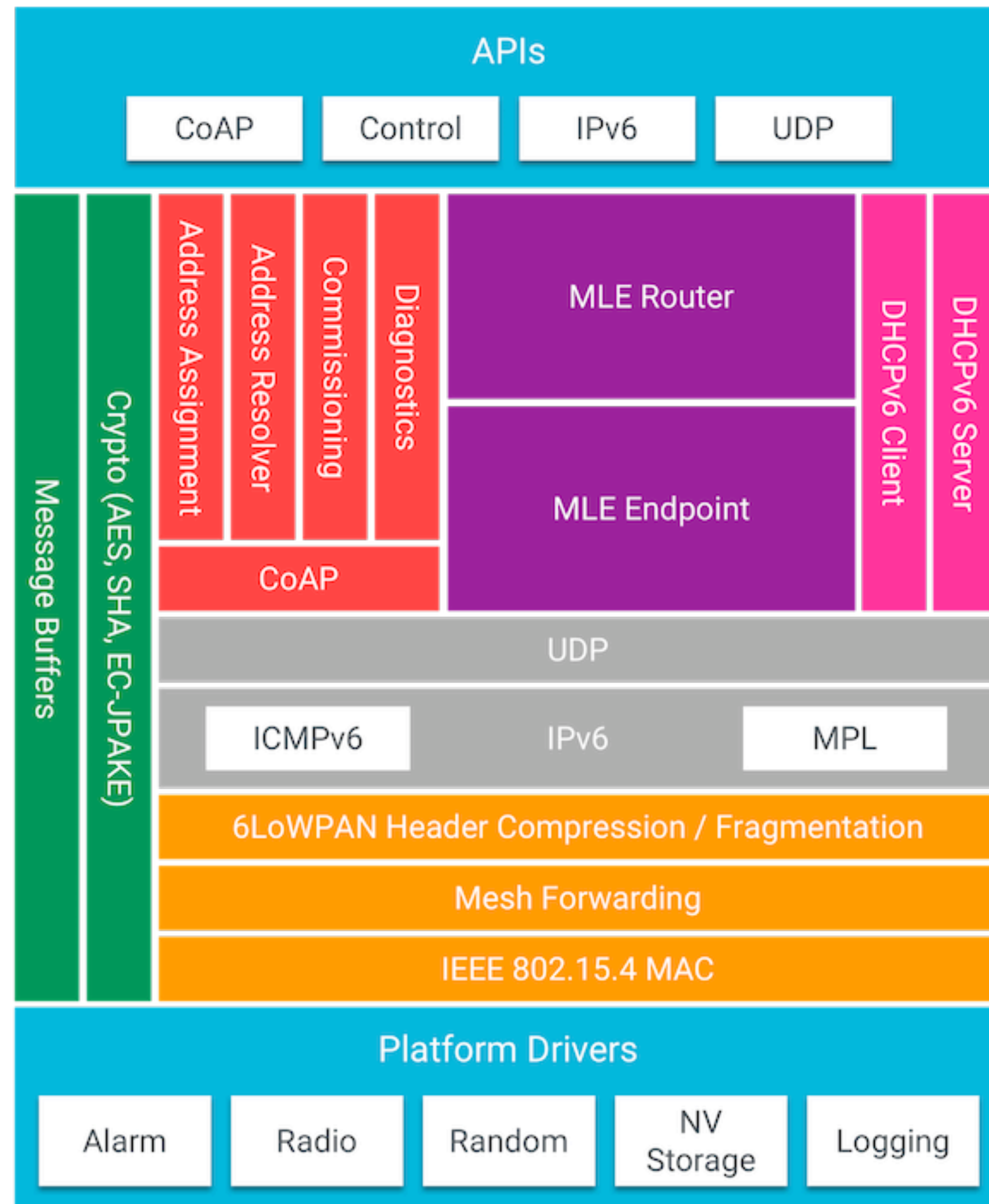
brandon@particle.io

Get your Xenon ready for setup
Plug your Xenon into a power source
Confirm your Xenon is blinking blue

XENON IS BLINKING BLUE

USE WITH ETHERNET?
Toggle ethernet featherwing setup

PARTICLE MESH MAKES MESH AS EASY AS WI-FI OR CELLULAR



```
void pong(const char *event, const char *data)
{
  Serial.println("You got a message!");
}

void setup()
{
  Mesh.on();
  Mesh.connect();
}

void loop()
{
  Mesh.publish("hello - world", "I'm meshing !");
  Mesh.subscribe("ping", pong);
}
```

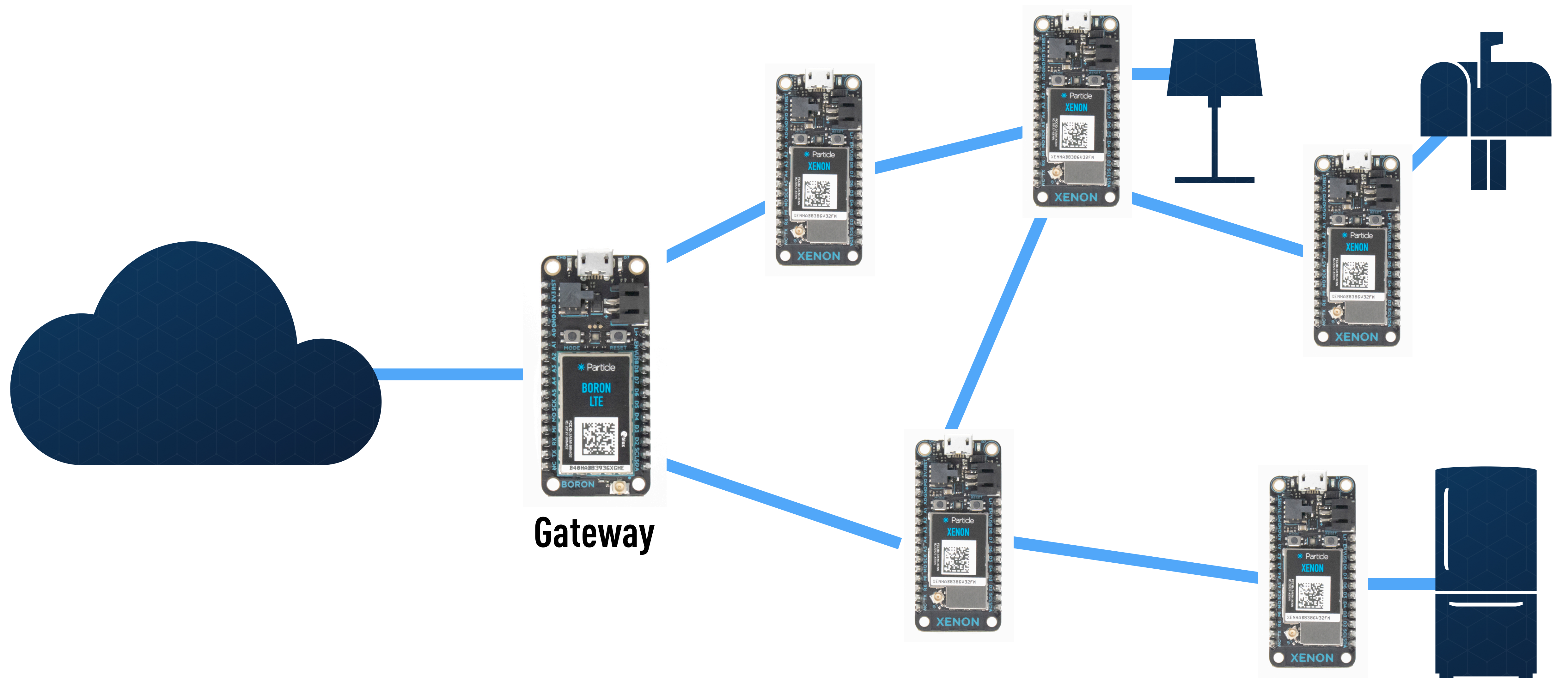
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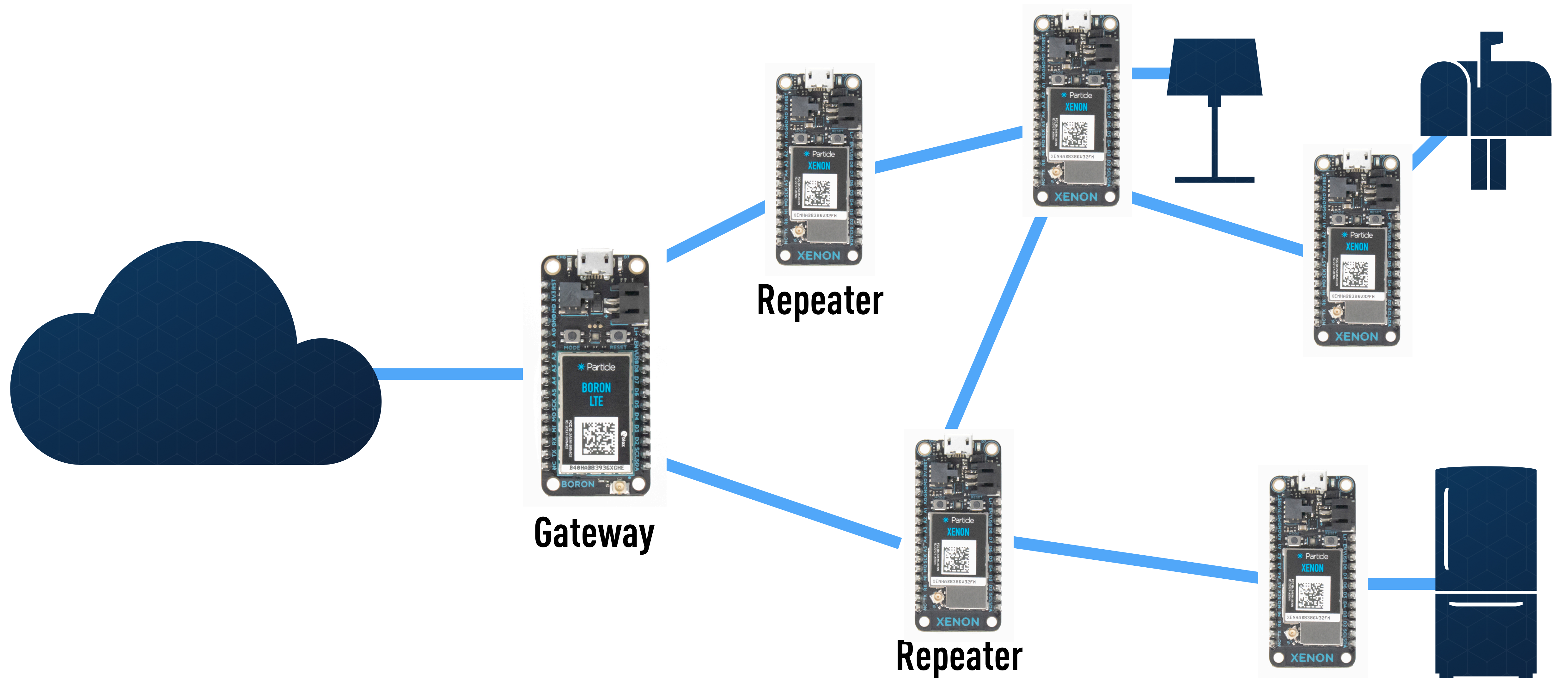
PARTICLE MESH DEVICES

SETTING UP A MESH NETWORK

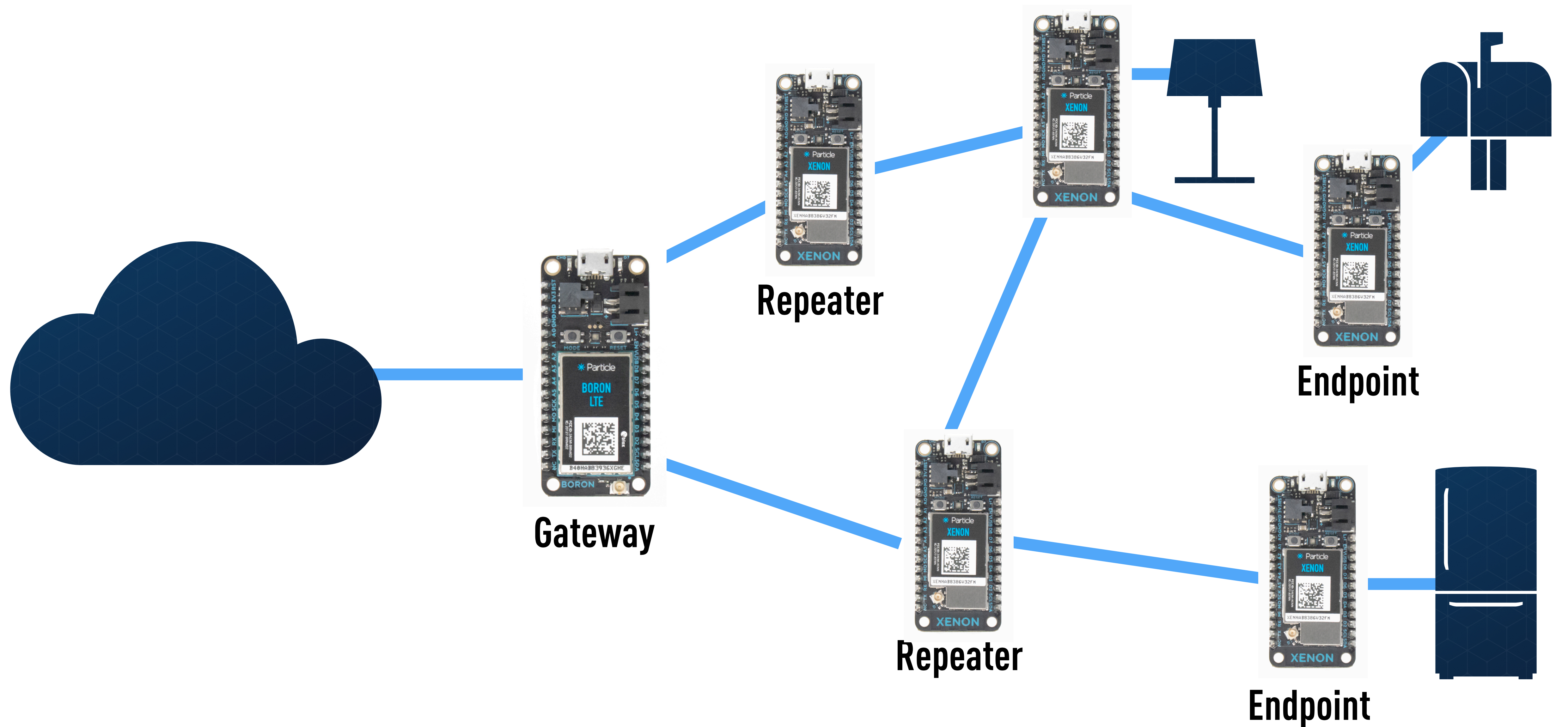
MESH DEVICE ROLES



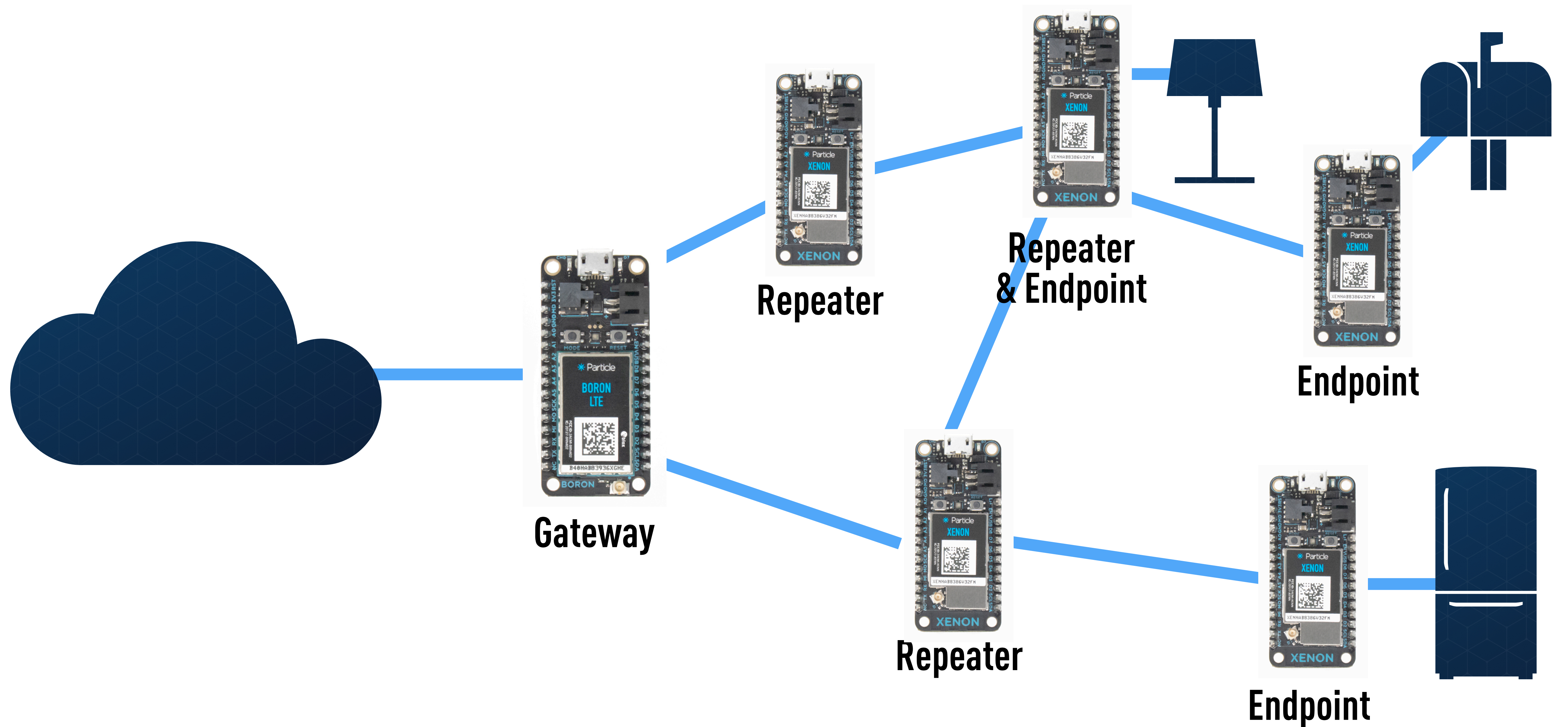
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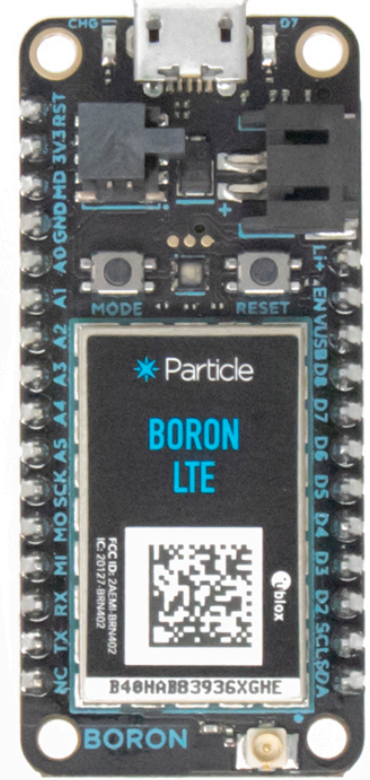


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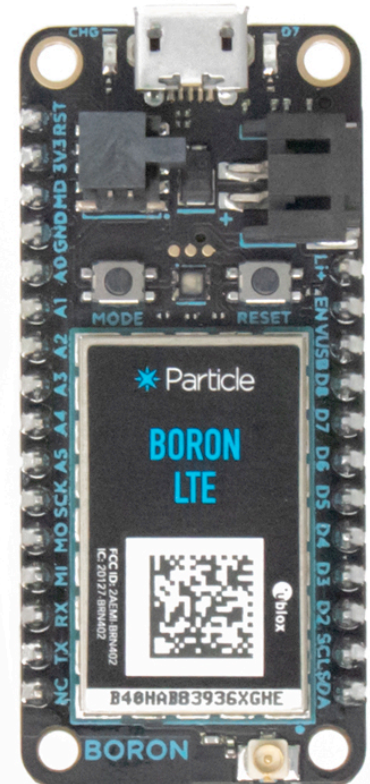
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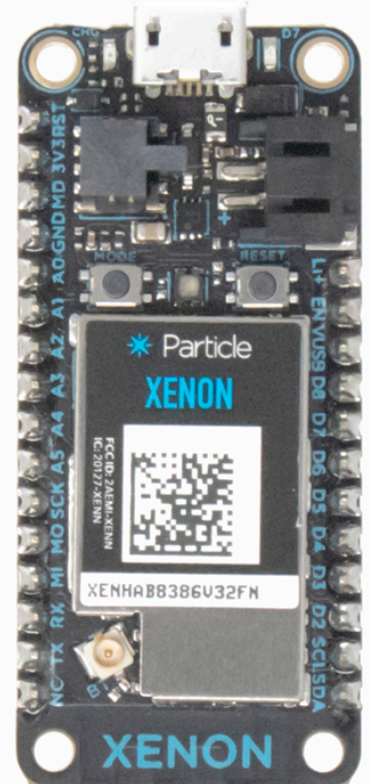
Argon

- » Wi-Fi + BLE + Mesh
- » Wi-Fi endpoint or mesh gateway
- » Starts at \$25



Boron

- » LTE-M1 + BLE + Mesh
- » Cellular endpoint or mesh gateway
- » Starts at \$49



Xenon

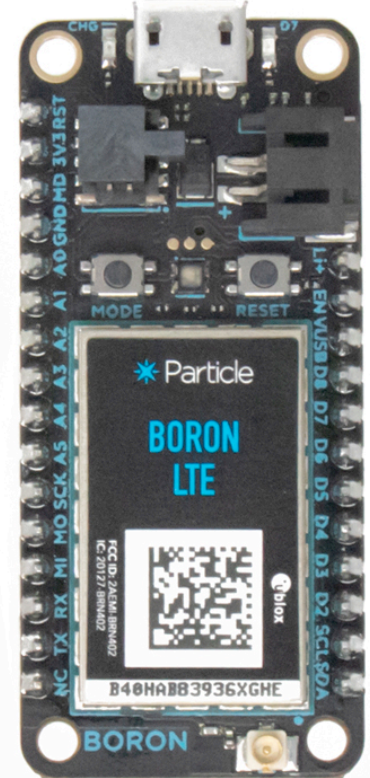
- » BLE + Mesh
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Mesh enabled, next generation

- » Feather form factor
- » OpenThread-based Mesh

Nordic nRF52840 SoC

- » ARM Cortex-M4F 32-bit
- » 1MB flash, 256KB RAM
- » IEEE 802.15.4-2006: 250
- » Bluetooth 5: 2 Mbps, 1 Mbps, 500 Kbps, 125 Kbps
- » ARM TrustZone Cryptographic security module
- » NFC-A tag



Argon

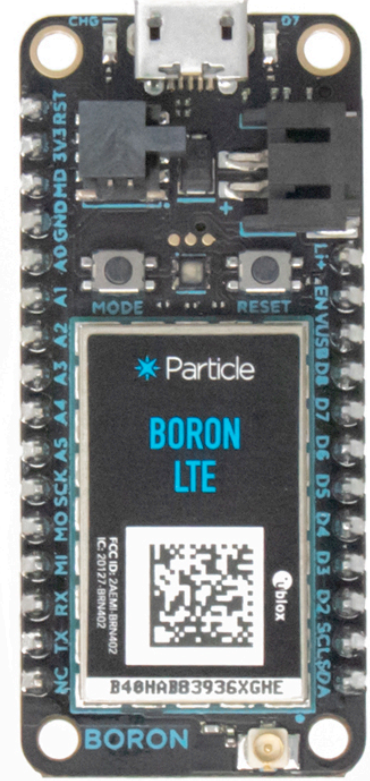
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ESP32 Wi-Fi coprocessor

- » On-board 4MB flash for ESP32
- » 802.11 b/g/n support
- » 802.11 n (2.4 GHz), up to 150 Mbps

Device Features

- » On-board add'l 2MB SPI flash
- » 20 mixed signal GPIO (6 x Analog, 8 x PWM), UART, I2C, SPI
- » Integrated Li-Po charging and battery connector
- » JTAG (SWD) Connector



Boron

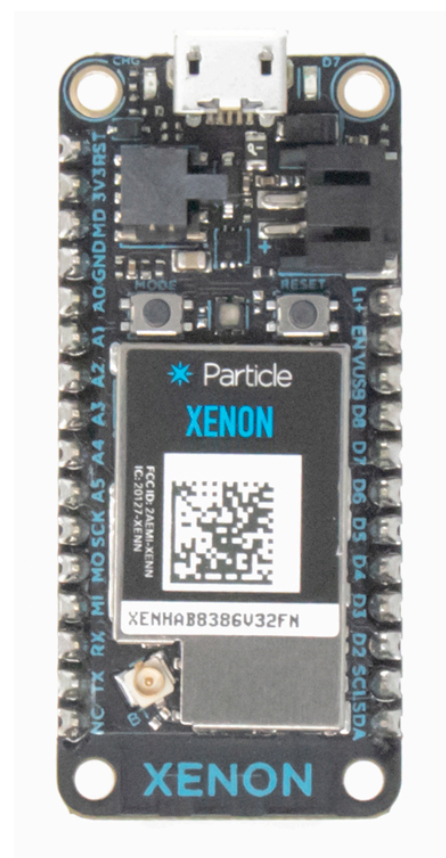
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u-blox SARA R410 LTE Modem

- » LTE CAT M1/ NB1 module with global hardware support (MVNO support for US only)
- » 3GPP Release 13 LTE Cat M1

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Mesh networking with OpenThread

- » IEEE 802.15.4-2006: 250
- » Bluetooth 5: 2 Mbps, 1 Mbps, 500 Kbps, 125 Kbps

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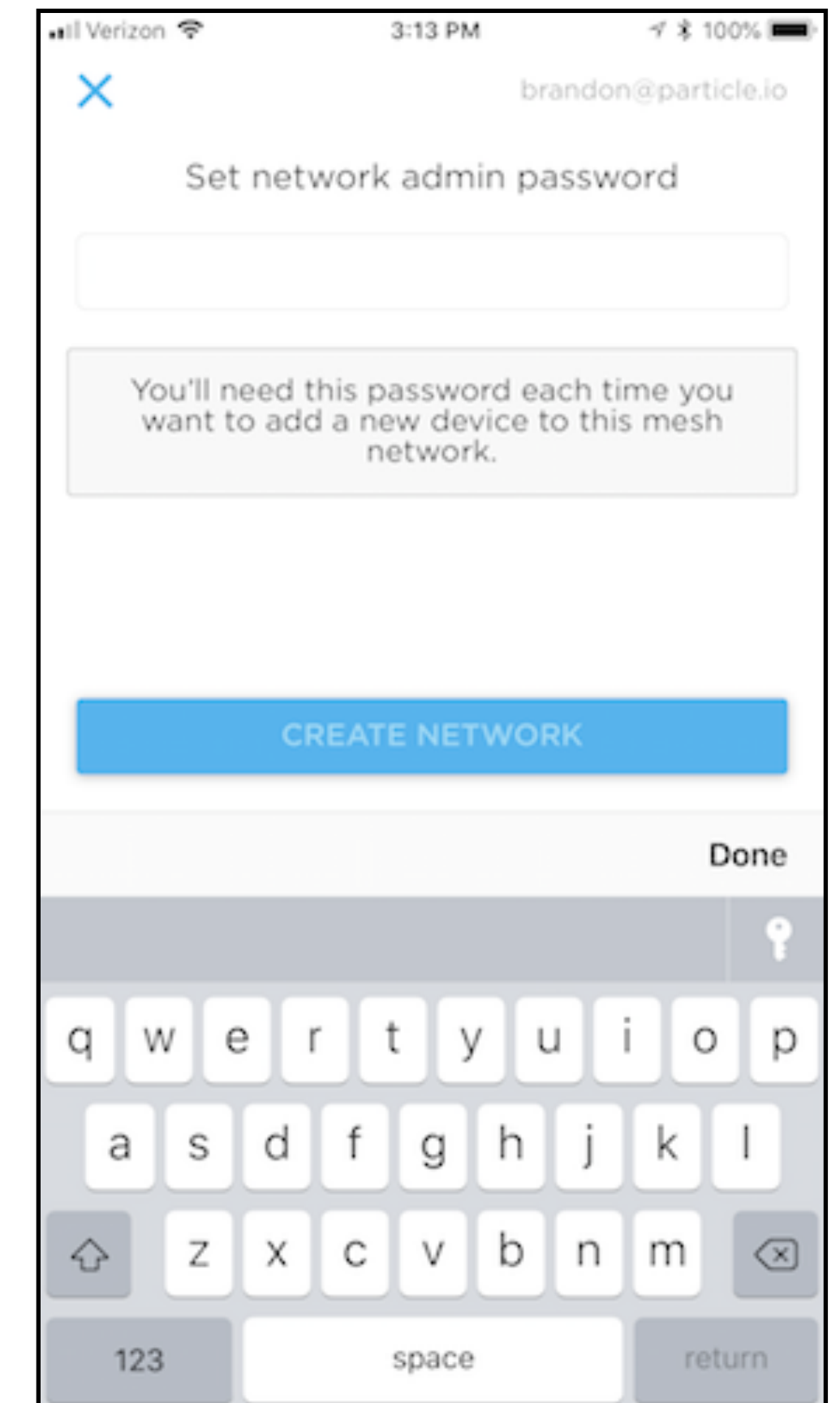
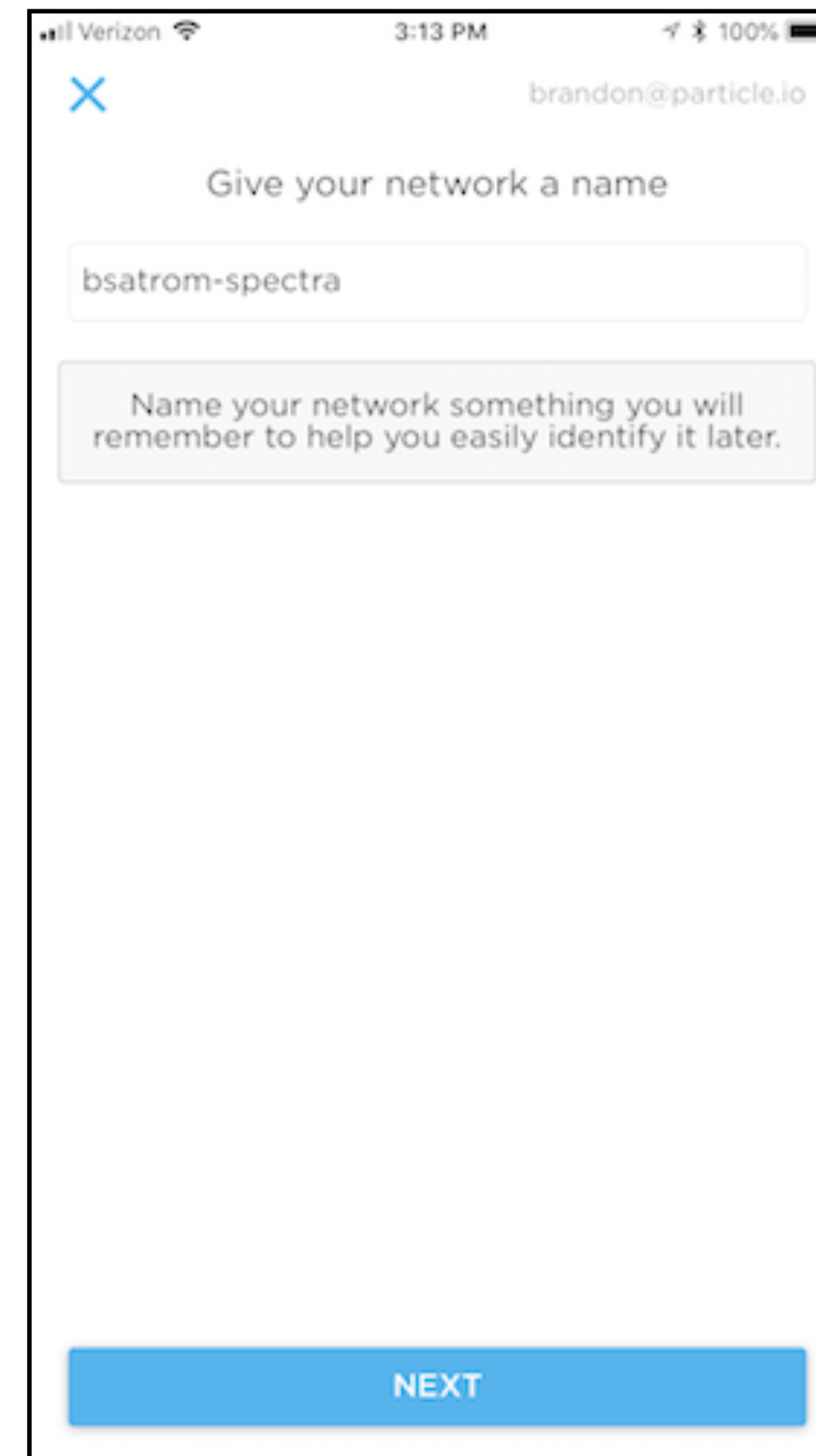
SETTING UP A MESH NETWORK

FOUR-STEP PROCESS

1. Set up an Internet-connected Device

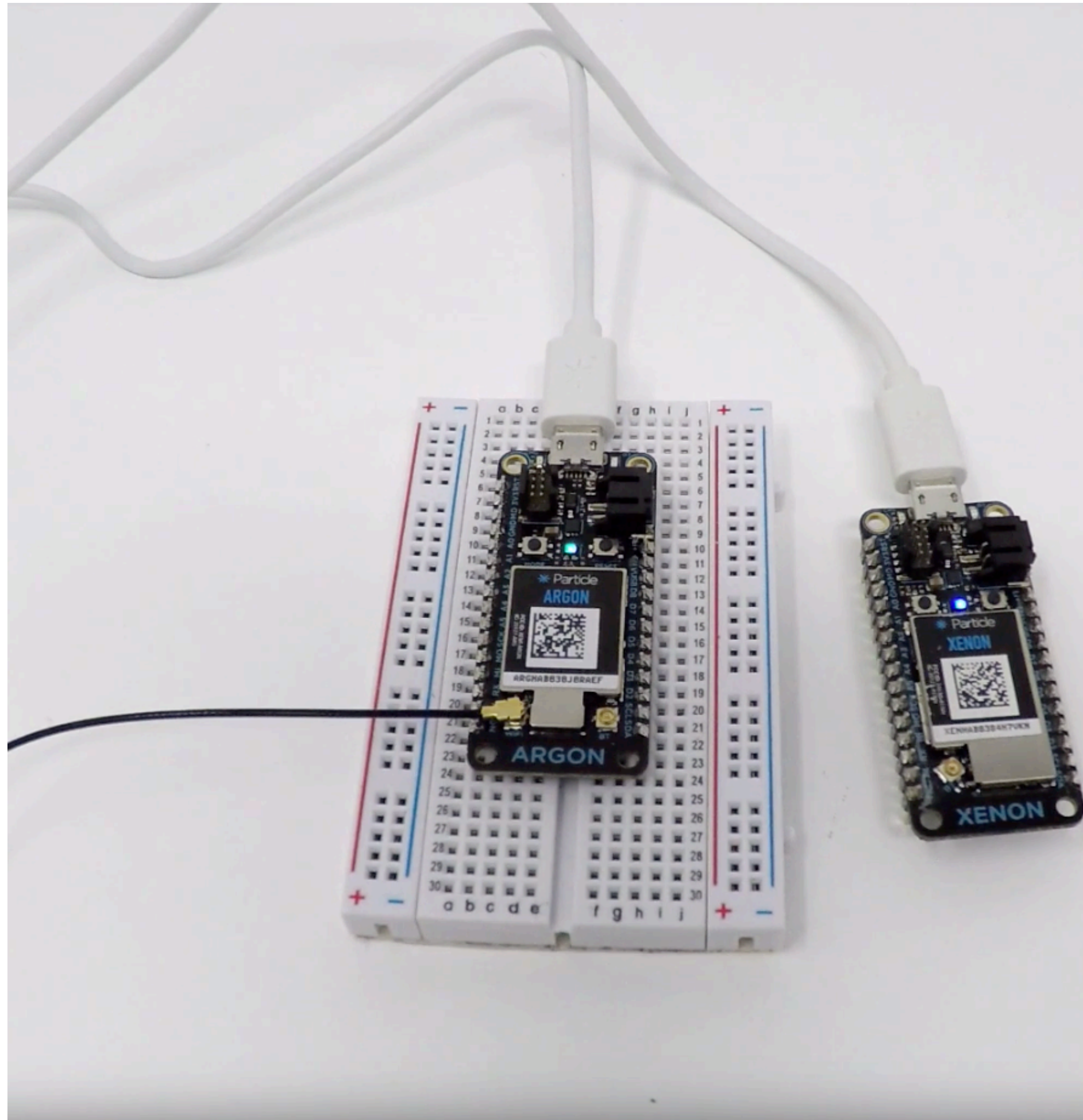


2. Create a Mesh Network

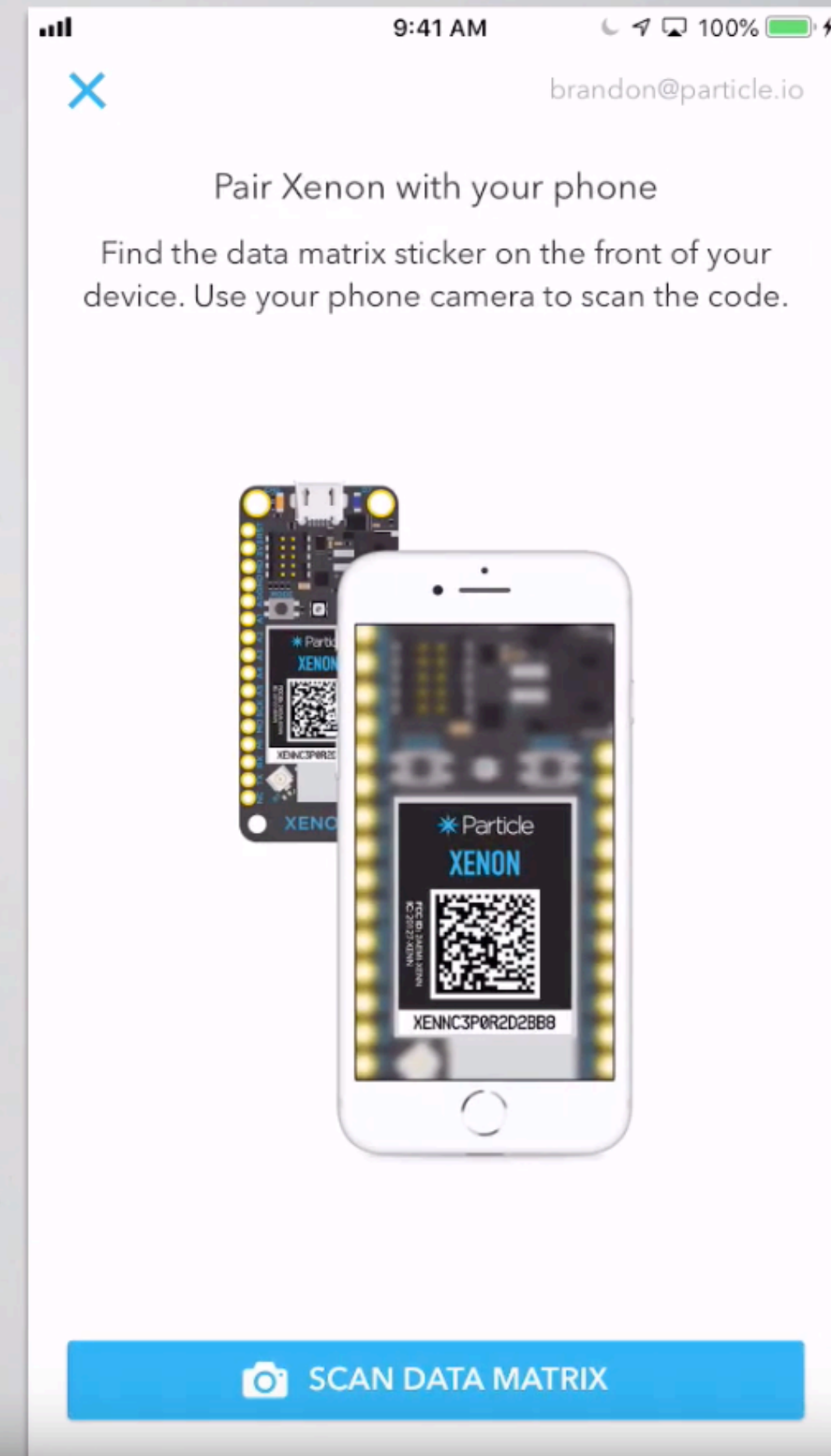


FOUR-STEP PROCESS

3. Add a second device



4. Scan an assisting device





[HTTPS://MESH-101.HEROKUAPP.COM](https://mesh-101.herokuapp.com)