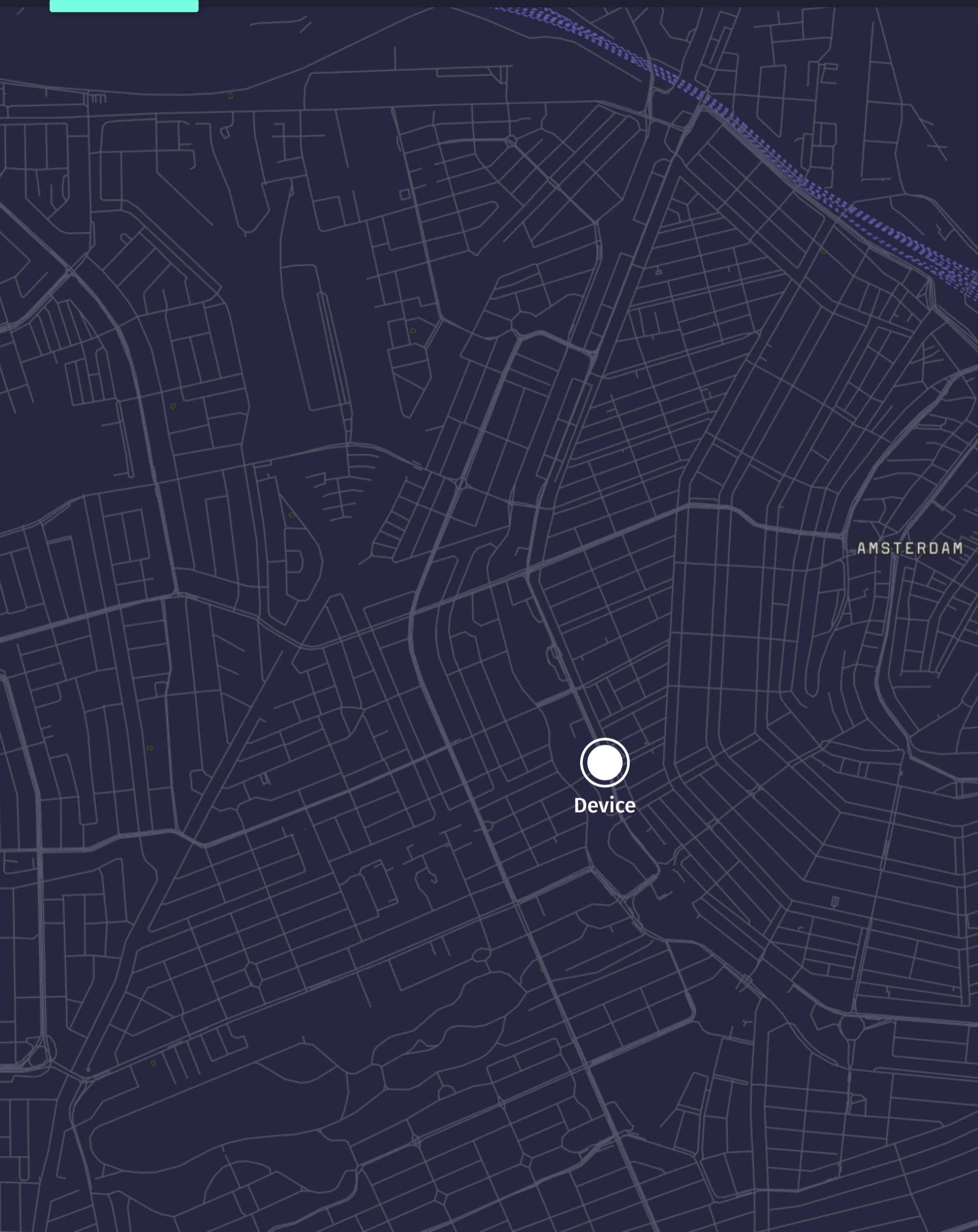


[HOW IT WORKS](#)[COVERAGE](#)[METRICS](#)[← INTRO](#)[DEVICE](#)[GATEWAY →](#)

• • • •



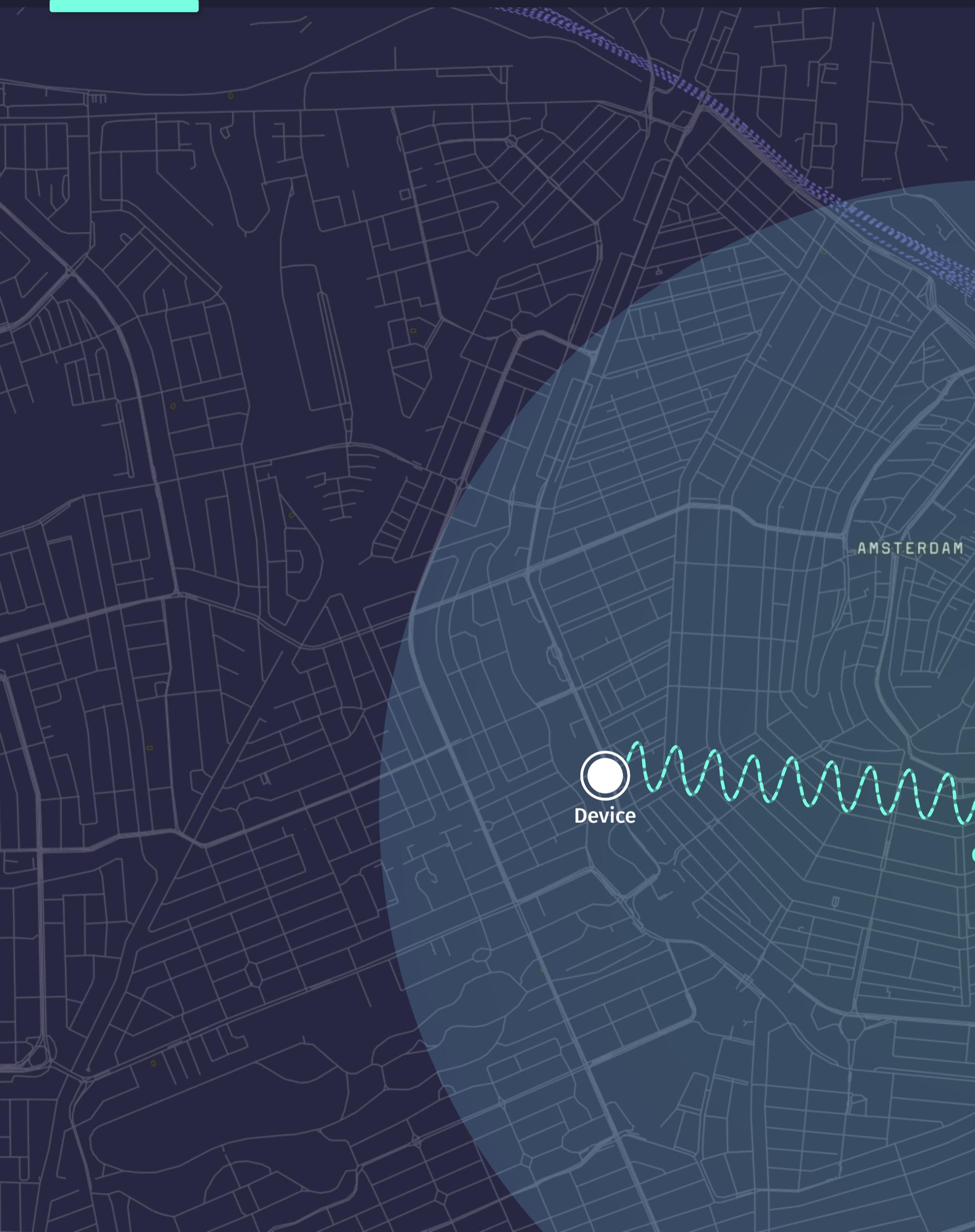
## Your connected solution.

[HIDE ^](#)

*Things Uno with external antenna and 3D hubs printed enclosure!*

[SEE WHAT USERS MADE](#)

Whether you are a developer or someone fairly new to the world of IoT and LoRaWAN, building your proof of concept is possible within a day. It is quite an important step towards realizing your solution in the market as it allows you to validate the design and check for issues without having large scale consequences.



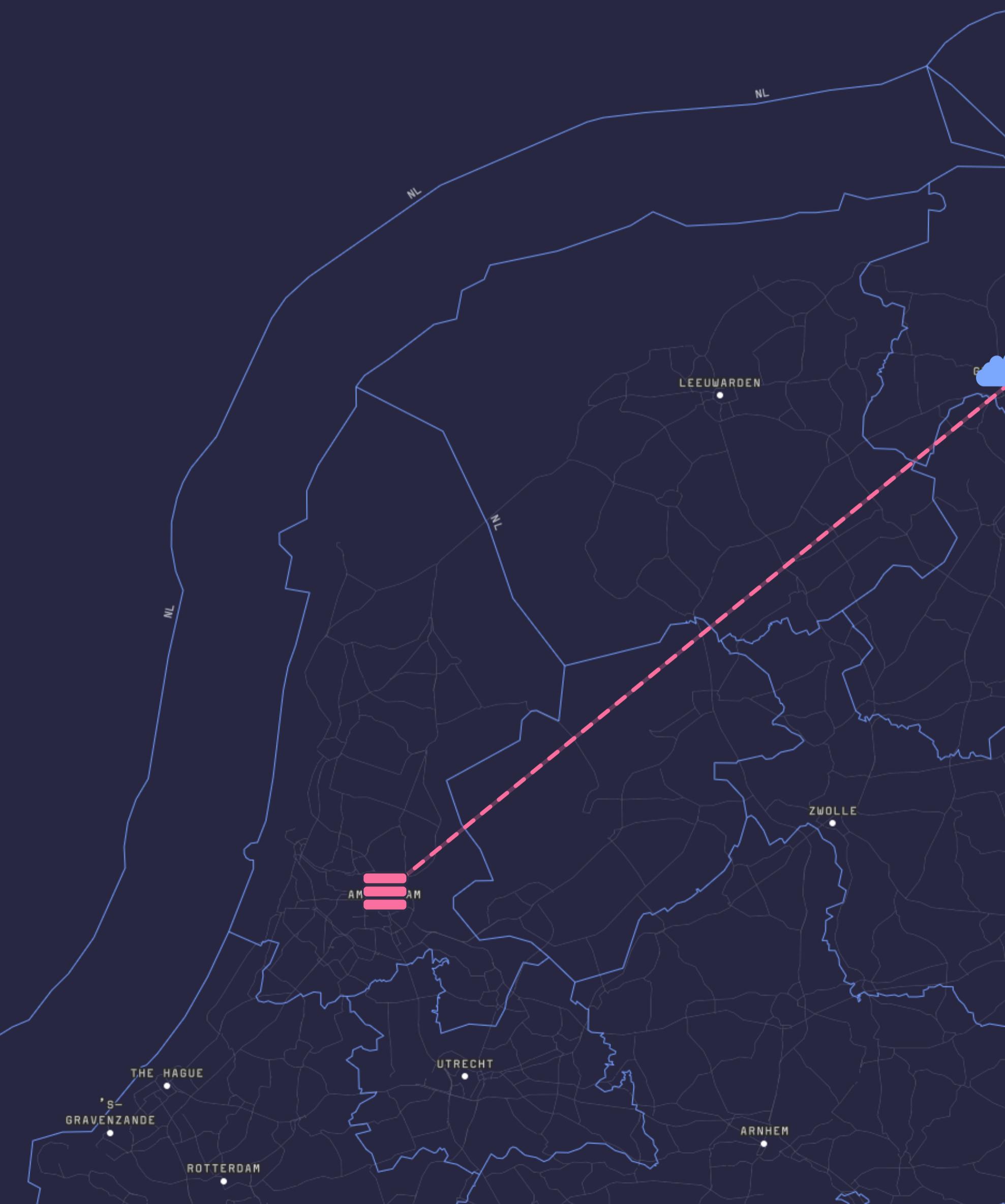
## The main building block of the network.

[HIDE ^](#)

*The Things Gateway*

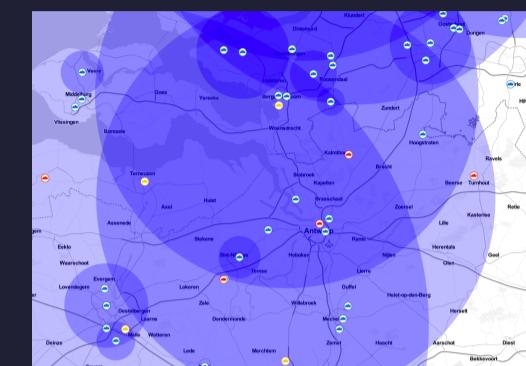
- Provides up to 10 km / 6 miles radius of network coverage
- Connects easily to your WiFi or Ethernet connection
- Security through the https connection and embedded in the LoRaWAN protocol
- Runs on open hardware
- Contains GPS to determine the gateway's location and node's location later
- Can serve up to 10,000 nodes

[FIND OUT MORE](#)



What your devices communicate with.

HIDE ^



TTN Mapper

This could be as simple as an IFTTT Maker Applet or a visual flow using Node-RED to custom code on some server.

There are multiple options to integrate applications with The Things Network, ranging from working directly with APIs, via more friendly SDKs or click-and-run Platform Integrations.

Take TTN Mapper for example, this integration allows you to upload coverage information (location, rssi and snr) to TTN Mapper directly from the TTN backend to provide a map of the actual coverage.

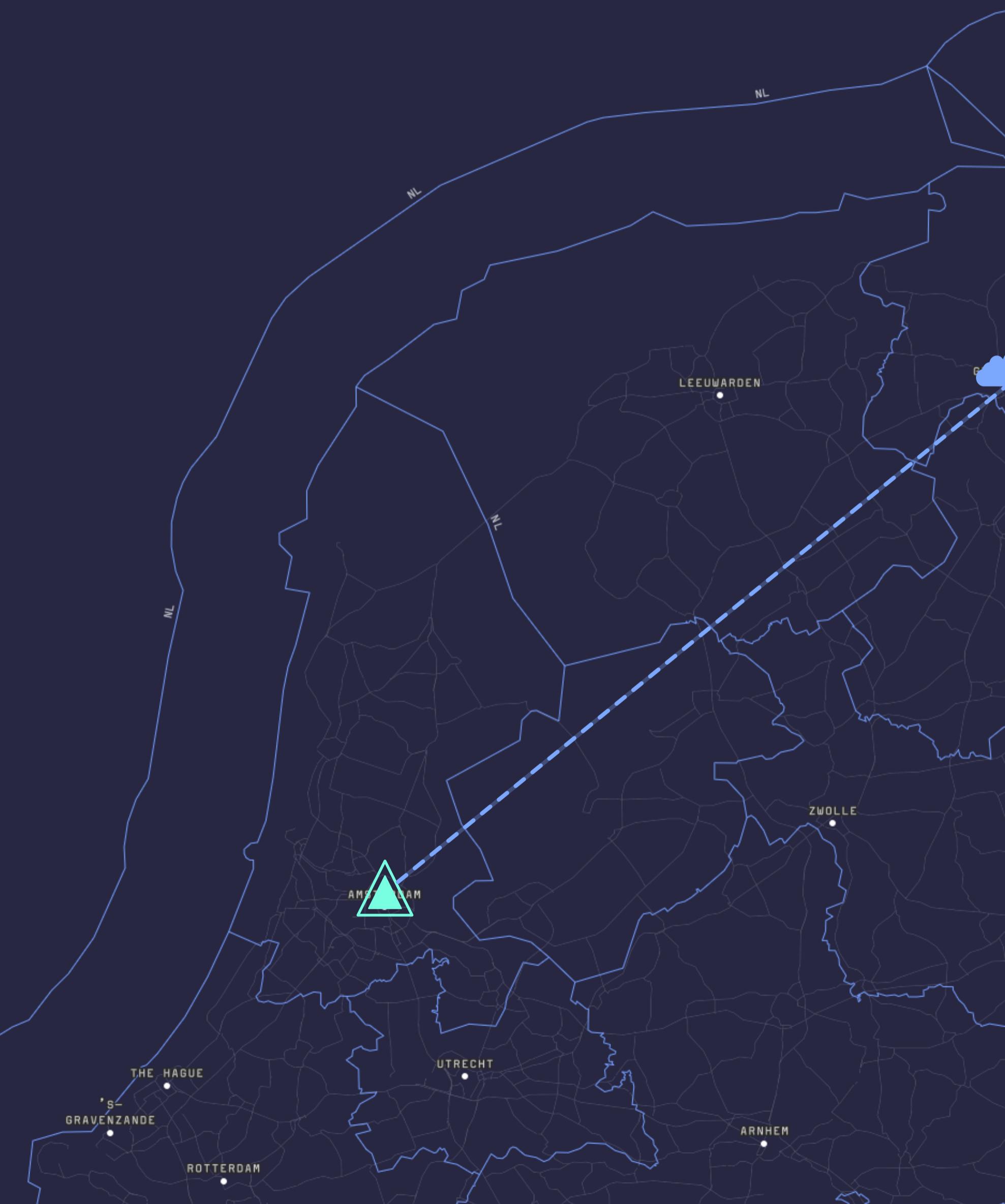
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## The backbone.

The Things Network community provides open source components for routing and handling of data which is fully compliant with the LoRaWAN 1.1 specification. The two core components in the network architecture are The Things Router and The Things Handler.

Packets received from nodes are forwarded from the gateways to one or more Routers as configured by the gateway owner. The Things Gateway is pre-configured with the default Router hosted by the Foundation for plug-and-play deployment. The Routers publish the packets on their built-in MQTT broker. The Router contains MQTT topics for both uplink and downlink packets.

The Handlers receive packets from Routers by subscribing to, and send data to Routers by publishing to their MQTT brokers. Handlers are responsible for [message integrity checking](#), decryption, deduplication, buffering, transformation and dispatching to application servers. The Handler contains [Node RED](#) to handle deduplicated and decrypted data and supports custom processing, also using MQTT publishing. The Handler contains built-in integrations with existing internet of things cloud platforms, including [IBM Bluemix](#), [AWS IoT](#), [FIWARE](#), [Parse.com](#), [IFTTT](#) and [OpenSensors.io](#).

[FIND OUT MORE](#)

HOW IT WORKS

COVERAGE

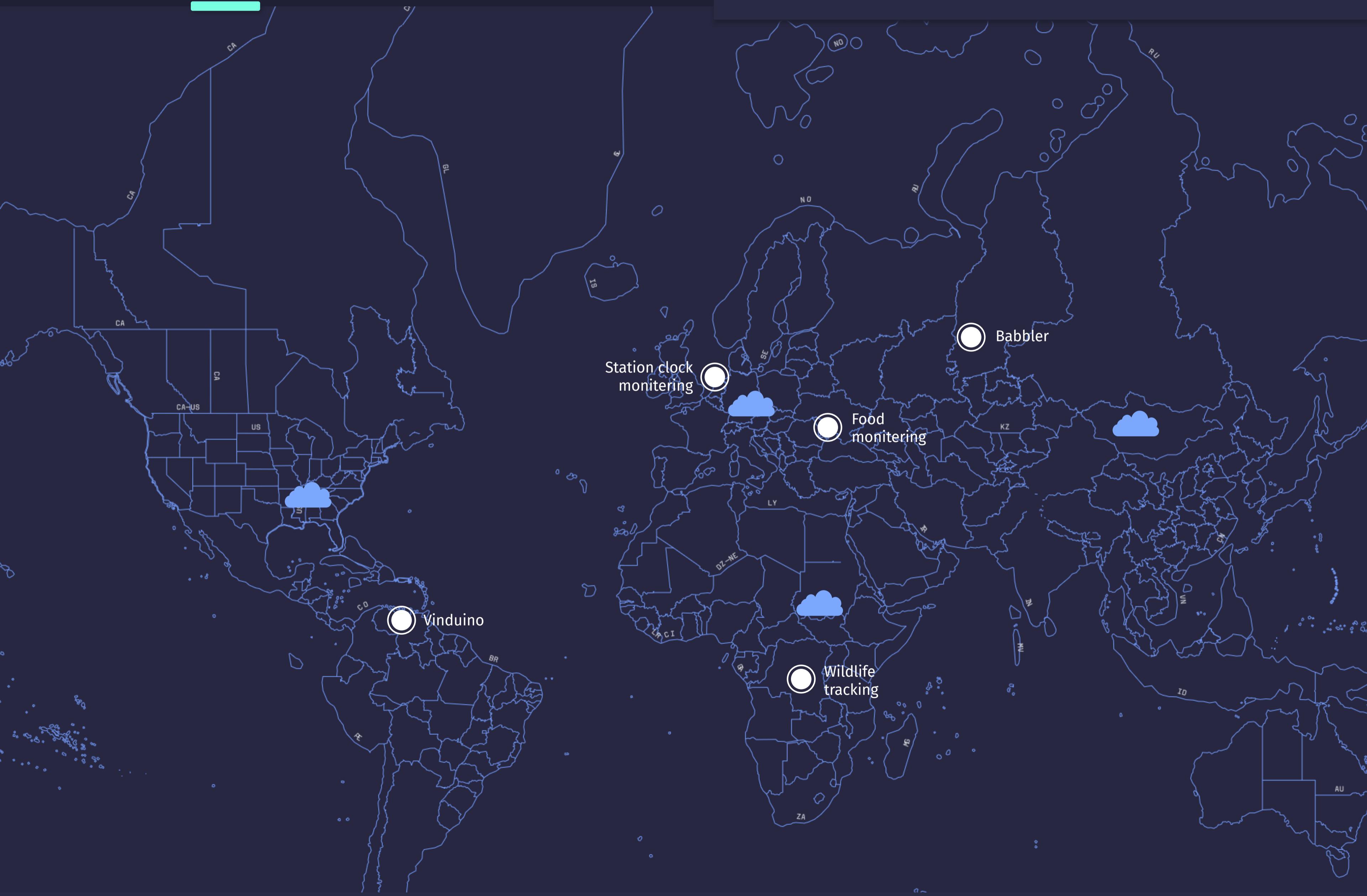
METRICS

SHOW

Stories

Gateways

Servers



HOW IT WORKS

COVERAGE

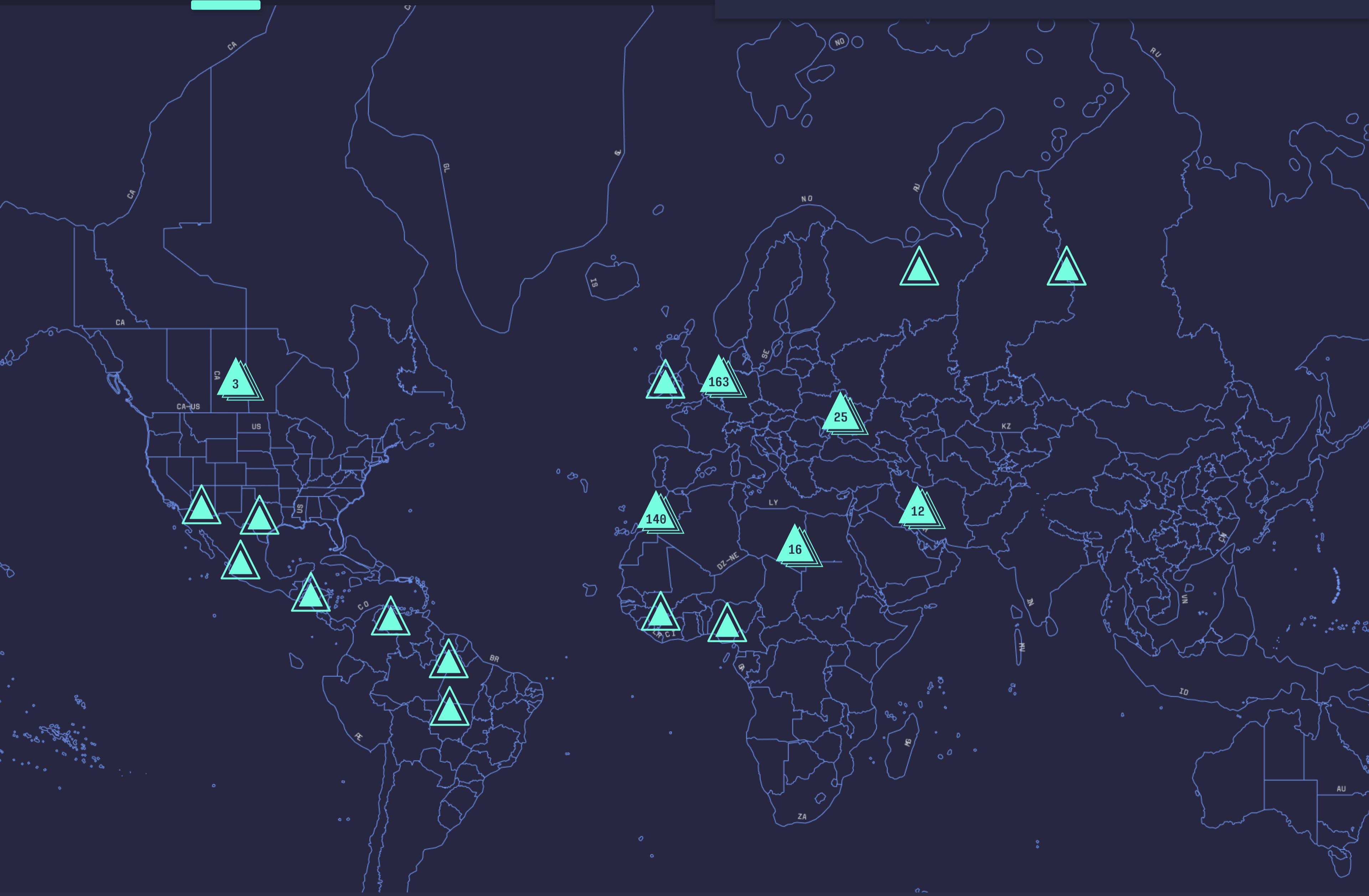
METRICS

SHOW

Stories

Gateways

Servers



## Gateway metrics

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**22.374**  
downlinks

**31.241**  
uplinks

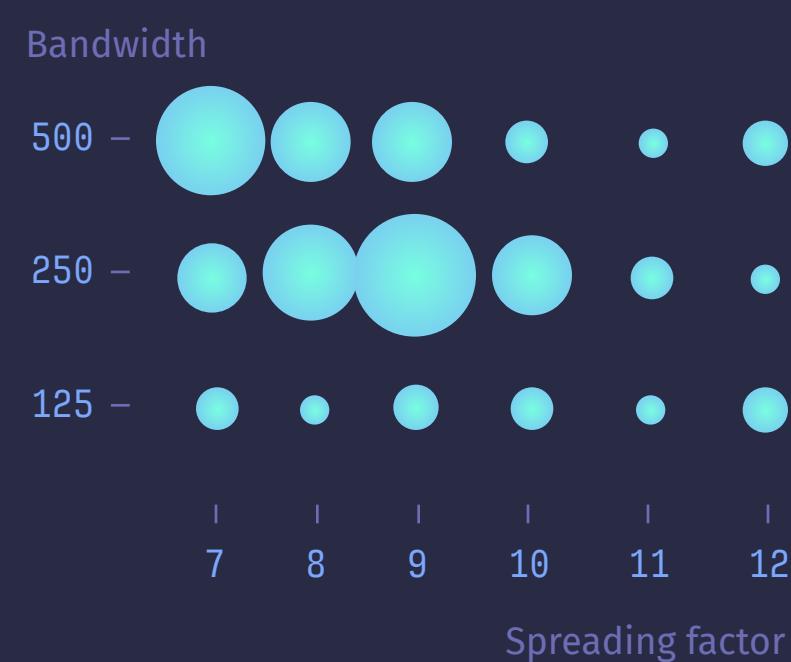
**5443**  
online during period

**60%**  
online ratio

**1365**  
gateways 99% uptime

**25%**  
ratio 99% uptime

## Gateway setting distribution



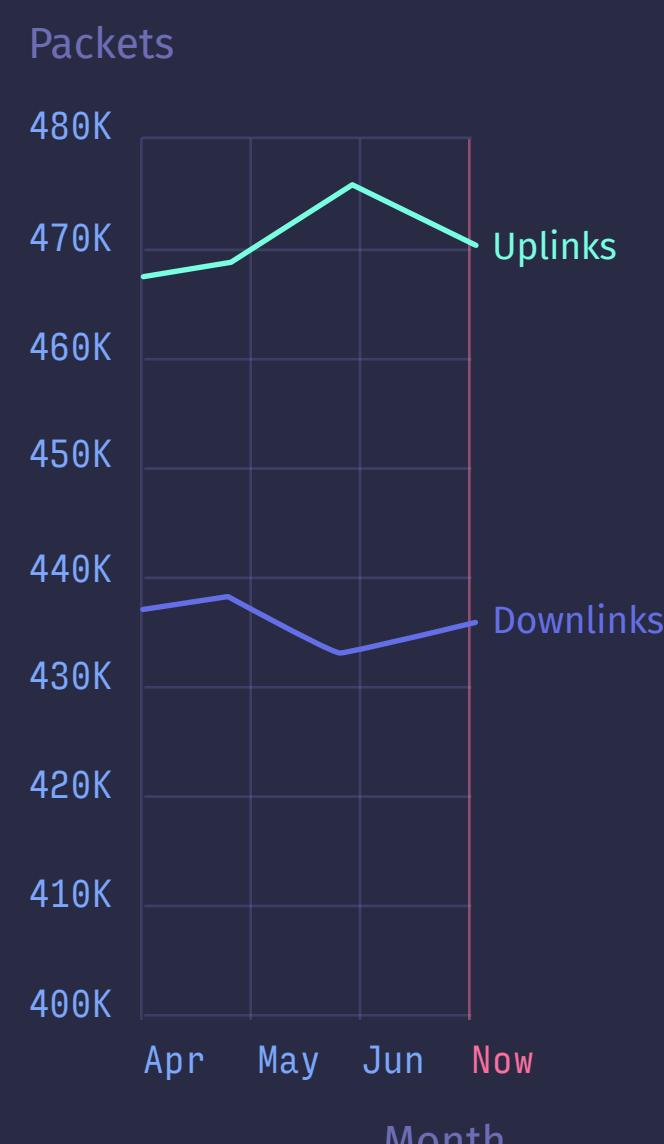
## Frequency usage



Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

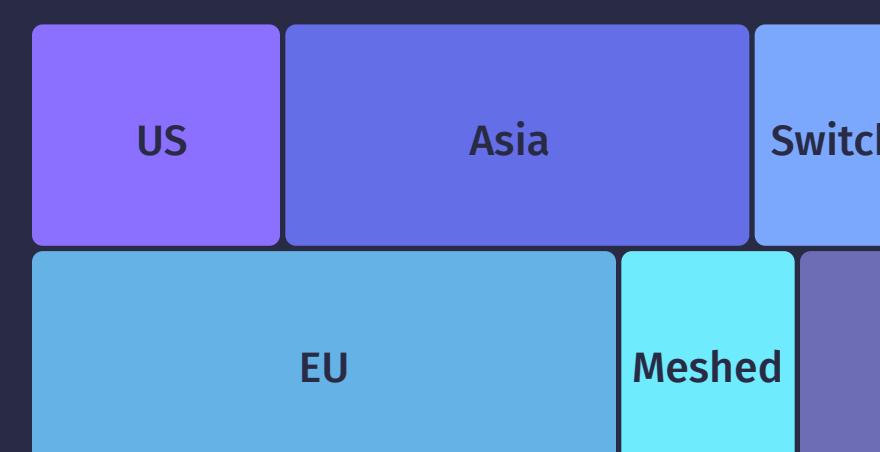
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## Packets over time



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## Region distribution



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