

# FAQ on EFR32 IoT Gateway

Q. How does the gateway register itself to AWS cloud?

A. The gateway runs an application which calls the AWS API that handles gateway registration process.

Q. How does the gateway send telemetry data to AWS cloud?

A. The gateway connects to AWS cloud using secure certificates that gets stored while gateway registration. Then using MQTT protocol, the gateway sends live telemetry data to AWS Cloud.

Q. How is the gateway registered in the DynamoDB database?

A. When the gateway registration API is called, the gateway gets registered in the DynamoDB.

Q. How does the sensor connects to gateway?

A. The sensor and gateway talk to each other using the Zigbee protocol.

Q. Where can I check the gateway logs?

A. You can connect to the gateway over ssh or serial connection and check the logs in `/var/log/messages` file and in the journalctl entry for awsapp: `journalctl -f -u awsapp`

Q. How does the mobile app and gateway communicate?

A. The gateway and the mobile app connects over BLE.

Q. How user will get provisioned gateway and sensors after application reinstall?

A. while logging into application, app will fetch data from aws cloud for specific user.

Q. What will happen if user try to delete gateway and gateway is not available over BLE?

A. App will try to connect with the register gateway over BLE for 1 minute. If gateway is not available then app will ask user to "Gateway is not reachable at this time, Factory reset will be required after deletion Are you sure want to do Force delete of Gateway?". If user want to delete, then app will delete that gateway from Aws DynamoDB and local cache.

Q. Which feature used for sensor graph data?

A. We have used AWS Quicksight Dashboard feature for sensor graph.

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Q. How does the graph display data?

A. Graph will display data according to sensor and property selection and prepared by AWS quicksight.

Q. Which mechanism used for live data?

A. We have used AWS Amplify Pub/Sub for live data.

Q. What is alert means?

A. It is range value to create notification (email, SMS) for specific sensor.

Q. How gateway provision working?

A. App will connect with gateway over BLE. On successful registration, app will get success/failure response from gateway. Based on success response, app will store that gateway detail into local cache for display provisioned gateway on APP.

Q. How gateway deletion working?

A. App will connect with gateway over BLE. App will delete the gateway from cloud and then from local cache. On success of cloud deletion app will request gateway to delete configuration so that gateway can be available for provision again. When gateway gets deleted all the sensor provisioned with this gateway will also get deleted.

Q. How available sensor getting listed on application while adding?

A. Gateway will provide the list of available sensors nearby based on request from application.

Q. How sensor provision working?

A. After select sensor for register, app will connect with gateway over BLE. On successful registration, app will get success/failure response from gateway. Based on success response, app will store that sensor detail into local cache for display provisioned sensor on APP. Gateway will bind provision sensor and start to receiving sensor data and send it to cloud.

Q. How sensor deletion working?

A. App will connect with gateway over BLE. App will delete the sensor from cloud and then from local cache. On success of cloud deletion app will request gateway to delete configuration for specific sensor so that sensor can be available for provision again. Gateway will unbind and removed the sensor from Zigbee network.

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Q. What if gateway is not available over BLE during sensor deletion?

A. App will search that gateway over BLE for 1 minute. If gateway is not available then app will ask user to "Gateway is not reachable at this time, Factory reset will be required after deletion. Are you sure want to do Force delete of Gateway?". If user will select yes then app will delete that sensor from cloud and local cache.

Q. Which are the editable fields on settings page?

A. As email id is unique it is not editable by user once sign up. User can update mobile number later on after sign up as well.

Q. How notification state of email and mobile number works?

A. After provision of gateway this state can be updated by toggling button. On toggling ON/OFF it will send the information to cloud to update value and aws rules will be executed with update value.

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