

# Release Notes for Dewberries

This document provides the release notes for Home Edge Dewberries (vD) Release

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## Summary

We are glad to announce our upcoming major release for the year'21 code names as "Dewberries". At the starting of the year we had identified and prioritized the key features for Home Edge to make it complete. To start off with we initially worked on refactoring and stabilizing the current code base. With regard to the same quality tools were integrated and fixed the issues reported by the tools, build scripts were updated and made inline by applying Go modules instead of Glide, folder structure was also made in accordance with Go format. Lint and Sonarcloud issues were fixed as part of this release. API documentation (Swagger) were updated for easier understanding by developers. As next step to enhance the security in the framework, JWT token based request authentication and RBAC (Role Base Access Control) have been added. In the Coconut release, we had integrated with EdgeX for storing device generated data as part of Data storage feature. To make this feature more effective and usable for developers, POST/GET APIs were added using which developers can send/retrieve data to/from EdgeX container. The edge devices are typically memory constrained and hence have a module to synchronize the generated data to Cloud. As a first step to provide cloud synchronization, we have enabled the MQTT based cloud synchronization provided by EdgeX. This way developers can send data to Cloud. Going ahead in the next release we would enhance and develop the Cloud module more independent.

As a part of outreach we had participated in "Embedded IoT World" conference event held between 28-29 April. To enhance the scoring mechanism and to be more dynamic, the score calculation has been improved and made self learning considering more parameters for the same. Algorithm was proposed for the same and was presented in the event. To popularize the Home Edge among the India Open Source community, a developer conference was held on 3rd July with hands-on debug session.

There is long way to go for Home Edge to mature and highly adopted among open source community. We have plans to make Home Edge more independent, add a machine learning module and explore on better adoptable user stories. And this would help us in moving to next level in LF Edge umbrella.

## Release Date

2021-10-30

## Release Content

vD: Dewberries release, features added -

1. *Refactoring & stabilization of MNEDC and DataStorage*
  - Issues related to device discovery in MNEDC, EdgeX initialization in DataStorage, and configuration setting through YAML file.
2. *Build & deployment related changes to conform with standards*
  - Moving away from Glide to Go module, coding standards, environment variable setting for secure mode, MNEDC server/client setting.
3. *Security enhancement*
  - Request authentication thru JWT, resource access through RBAC, and container whitelist system for executing only trusted containers.
4. *Sonarcloud integration for quality gate check*
  - Sonarcloud gate reported issues related to vulnerability were fixed in the various modules.
5. *Configure manager enhancement for the container platform*
  - Edge Orchestration requests offloading the service installed on the device.
6. *Lint error fixtures across the code base*
7. *Folder restructuring to follow Go standards. Restructuring of code base to follow Go type of folder structure*
8. *API's to store and retrieve data from EdgeX container (DB)*
  - API's have been exposed which the developer can use to send data to Coredata of EdgeX to store;
  - Also API for retrieving data from Coredata has been exposed.
9. *Data synchronization to Cloud endpoints is needed to make the platform complete with minimum features*
  - Currently data is stored in EdgeX (Coredata) DB. EdgeX provides support for synchronizing with Cloud end points based on MQTT;
  - Hence as a part of the this release MQTT based cloud synchronization using EdgeX has been added;
  - This is the initial step and would be making the cloud synchronization more independent in the upcoming release after vDewberries.

## GitHub code

<https://github.com/lf-edge/edge-home-orchestration-go/releases/tag/v1.1.0>

## Dockerhub image

<https://hub.docker.com/r/lfedge/edge-home-orchestration-go/tags> ("dewberries" tag)

