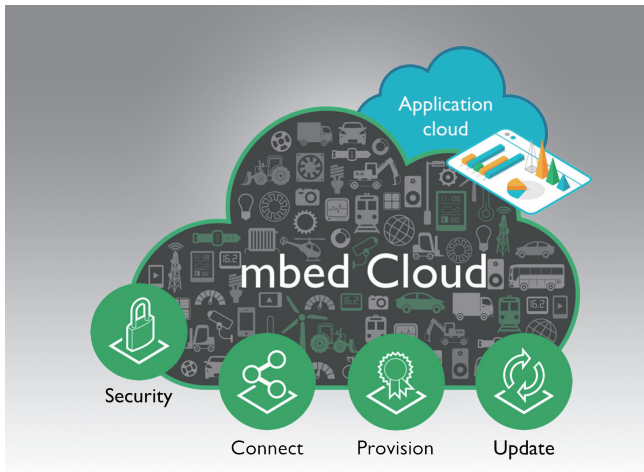# ARM mbed Cloud Services

mbed IoT Device Platform Services

Features

All the mbed cloud services are based on security mechanism.

Provision

- Trusted device identification, device on-boarding and service provisioning

Connectivity

- Powerful, secure and energy efficient device management service, built for a diversity of devices.

Update

- Ensure long product lifetime with cost-effective, secure and reliable software update.

Introduction

mbed Cloud is an IoT device management capability delivered as a service from the Cloud. mbed Cloud offers the capability to SECURELY manage ANY DEVICE on ANY ARCHITECTURE with ANY CLOUD. mbed Cloud is ARM's first Software as a Service product aimed at OEMs. It enables them to simplify connecting, securing, provisioning and updating of devices across complex networks. This allows devices to have flexibility to work with multiple clouds. It offers coverage across Cortex-A & M, and any other device with an included flexible Cloud client component.

It is optimized to take advantage of the energy efficiency of the ARM architecture on constrained devices through the use of CoAP – the constrained application protocol. Efficient caching capabilities allow to reduce operational costs for networks that need sleepy devices to conserve battery life as well as frequency of communications needed. Security and trust provisioning are built in, end-to-end, and provides security for every device transaction.

Feature Details

Provision

Secure management of device assets to enable trusted device identification, device onboarding and service provisioning, supply chain simplification and business model innovation

- Provisioning within firmware, on the production line, by management web service
- Provisioning Policy: Provisioning rights Enforcement, Supply chain rights delegation
- Native support for PRoT, mbed Provision Identity, mbed Connect Identity, FW Update key, Generic Blob
- On-device Secure Asset database
- Hardware-based security using TrustZone, TrustZone-M

Connectivity

Connect the devices together, regardless of any particular IP connectivity technology. Being standards-based, mbed Cloud implements CoAP, LWM2M+ (plus) and additional optimizations for efficient caching of devices in the networks.

- Identify and trust devices across different stages of their lifecycle
- Orchestrate how different trusted parties and devices can access sensor data
- Simplify how devices can be updated across mesh or star networks with firmware
- Ensure that such updates are done in a fail-safe and energy-efficient manner

Update

Secure update of device firmware to enable cost-effective, secure and reliable software update to IoT devices ensuring long product lifetime.

- End-to-end Orchestration the update process
- Separate publication, distribution and application flows and policies enabling flexible use cases support
- Update of individual and group/s of devices
- Authenticity, integrity and confidentiality firmware protection
- Protection from accidental and false updates and recovery mechanism from failed update
- Update Package is broadcast and mesh friendly

Minimum Requirements

Operating System

- Linux
- mbed OS

Order Information

mbed Service Package on Marketplace

- **9806WMMCH0**   mbed Device Connector with 100 devices access
- **9806WMMPH0**   mbed Device Provision with 100 devices access
- **9806WMMUH0**   mbed Device Update with 100 devices access

mbed Service

- **9806MCCT10**   mbed Device Connector with 1 devices access
- **9806MCPV10**   mbed Device Provision with 1 devices access
- **9806MCUD10**   mbed Device Update with 1 devices access