ARTIK Introduction

2018.03.21
Prepare for ARTIK
• ARTIK cloud developer page https://developer.artik.cloud/

• ARTIK cloud my page https://my.artik.cloud/

• Let’s explorer these sites in class.
Sign up account

Welcome to My ARTIK Cloud!

My ARTIK Cloud is a place where you can connect and manage all the devices you own.

ARTIK Cloud supports a wide range of devices:
- Control your devices with Rules
- Visualize and export device data.

Don't have an account? SIGN UP

Sign Up to ARTIK Cloud

Full Name
Full name

Email
Email

Please choose a password that contains:
- at least one uppercase letter
Register your sensor devices

SmartThings devices can be register as following webpage.
https://www.artik.io/blog/2016/04/smartthings-meets-sami/

You can make or define your own device. You-defined devices also can send any data or listen action.

Your ARTIK cloud monitor your devices when they are registered on cloud.
ARTIK related terminology
• **Message**
  - **Data** in ARTIK system is *stored in a message*.
  - **There are two message type**. One carries only data, and the other carries **actions**.
  - **Each message is identified by some metadata:** device ID, user ID, application ID.
  - We can query data per device, per user, per application.

• **User**
  - User is defined on user creation. *(Sign on)*
  - An user can **manage his/her devices and data from those devices**.
  - User can **assign the permission of his data to applications**.
• Device
  – Any source of data in ARTIK is called a device.
  – Devices can be sensors, applications, services, etc.
  – One user can own multiple devices.
  – Devices make data and send message to store that device into ARTIK cloud.
  – A device has its unique device ID, and also has device type (Category).
  – Your own device and device type can be created.
  – Each device type has its own manifest.

• Application
  – Concept of services.
  – An application can request data from user’s cloud. And can use it.
  – Of course application can send data to cloud.
• **Manifest**
  – Manifest defines which data will be collected by a device.
  – It describe the structure of the data.
  – When a device send message as String form, manifest parse the string and store it on ARTIK cloud.

• **Action**
  – Action is a specific type of ARTIK message that sends a command to a device.
  – When a device receive action, that device analyze that action, and do something as it already defined.
What can ARTIK do?
Collecting and Storing data

User 1, device 1, 21:00, -data-
User 1, device 2, 20:00, -data-
User 1, device 1, 19:00, -data-
User 1, device 3, 18:00, -data-
User 1, device 3, 17:00, -data-
User 1, device 2, 15:00, -data-
User 1, device 1, 12:00, -data-
User 1, device 4, 11:00, -data-
Querying data

ARTIK cloud

REQUEST

MSG

PERMISSION

User 1, device 1, 21:00, -data-
User 1, device 2, 20:00, -data-
User 1, device 3, 19:00, -data-
User 1, device 3, 18:00, -data-
User 1, device 3, 17:00, -data-
User 1, device 2, 15:00, -data-
User 1, device 1, 12:00, -data-
User 1, device 4, 11:00, -data-
Sending action

ARTIK cloud

ACTION

REQUEST

User 1
Device 1
Device 2
Device 3
Device 4
App

User 1, device 1, 21:00, -data-
User 1, device 2, 20:00, -data-
User 1, device 1, 19:00, -data-
User 1, device 3, 18:00, -data-
User 1, device 3, 17:00, -data-
User 1, device 2, 15:00, -data-
User 1, device 1, 12:00, -data-
User 1, device 4, 11:00, -data-
Event driven data/action
APP is also a device

User 1, device 1, 21:00, -data-
User 1, device 2, 20:00, -data-
User 1, device 1, 19:00, -data-
User 1, device 3, 18:00, -data-
User 1, device 3, 17:00, -data-
User 1, device 2, 15:00, -data-
User 1, device 1, 12:00, -data-
User 1, device 4, 11:00, -data-
Overview

ARTIK cloud

Device 1
Device 2
Device 3
Device 4

App 1
App 2
App 3

DATA
REQUEST
ACTION

Shared repository
Management tool
If you are urgent...
• Making your own device and connect with your application
• https://developer.artik.cloud/documentation/tutorials/how-to/

Reference

• Tutorial for using ARTIK SDK (In Java)
• https://github.com/artikcloud/tutorial-java-sdksample