KAA Platform

IoT Lab @ AUT
Amirkabir University of Technology
February 29, 2016

Outline

- What is Kaa ?
- Where is Kaa ?
- What does Kaa do for us ?

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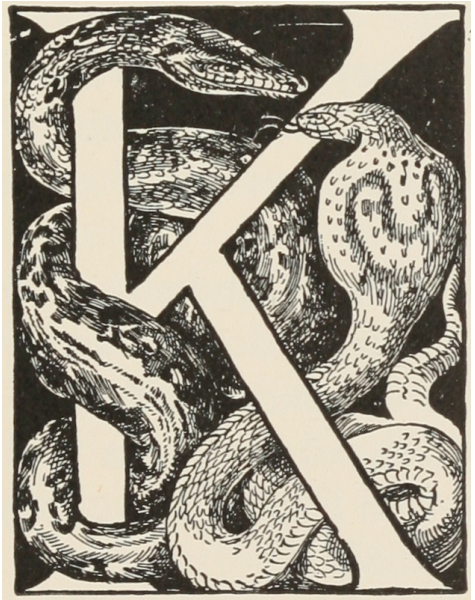
Kaa ?!

What is Kaa...

[Kaa]: 100% open-source Internet of Things middleware platform for everyone.

What is Kaa...

[Wikipedia]: Kaa is a fictional character that Rudyard Kipling describes him as an exceptionally long, yellowish Indian rock python.

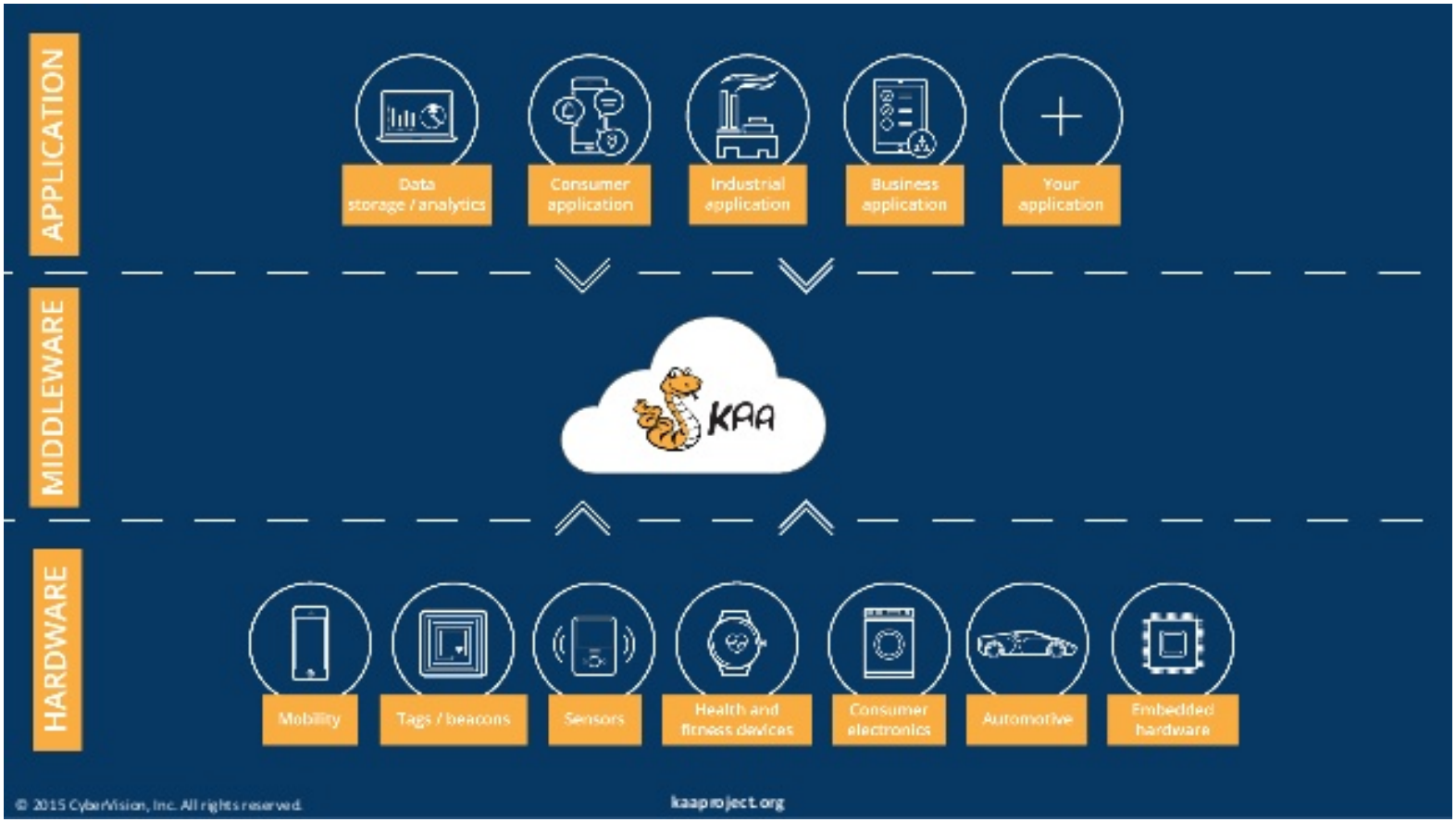


What is Kaa ?

Kaa is a middleware platform for rapid creation of IoT solutions.

- Reliable foundation for developing your connected products.
- Transport-agnostic link between the hardware and application worlds.
- Much more than just a message bus.
- Customizable middleware that implements necessary functional patterns for the IoT.
- Cloud enablement software for your hardware products.

What is Kaa ?


APPLICATION
MIDDLEWARE
HARDWARE
Data storage / analytics
Consumer application
Industrial application
Business application
Your application
KAA
Mobility
Tags / beacons
Sensors
Health and fitness devices
Consumer electronics
Automotive
Embedded hardware
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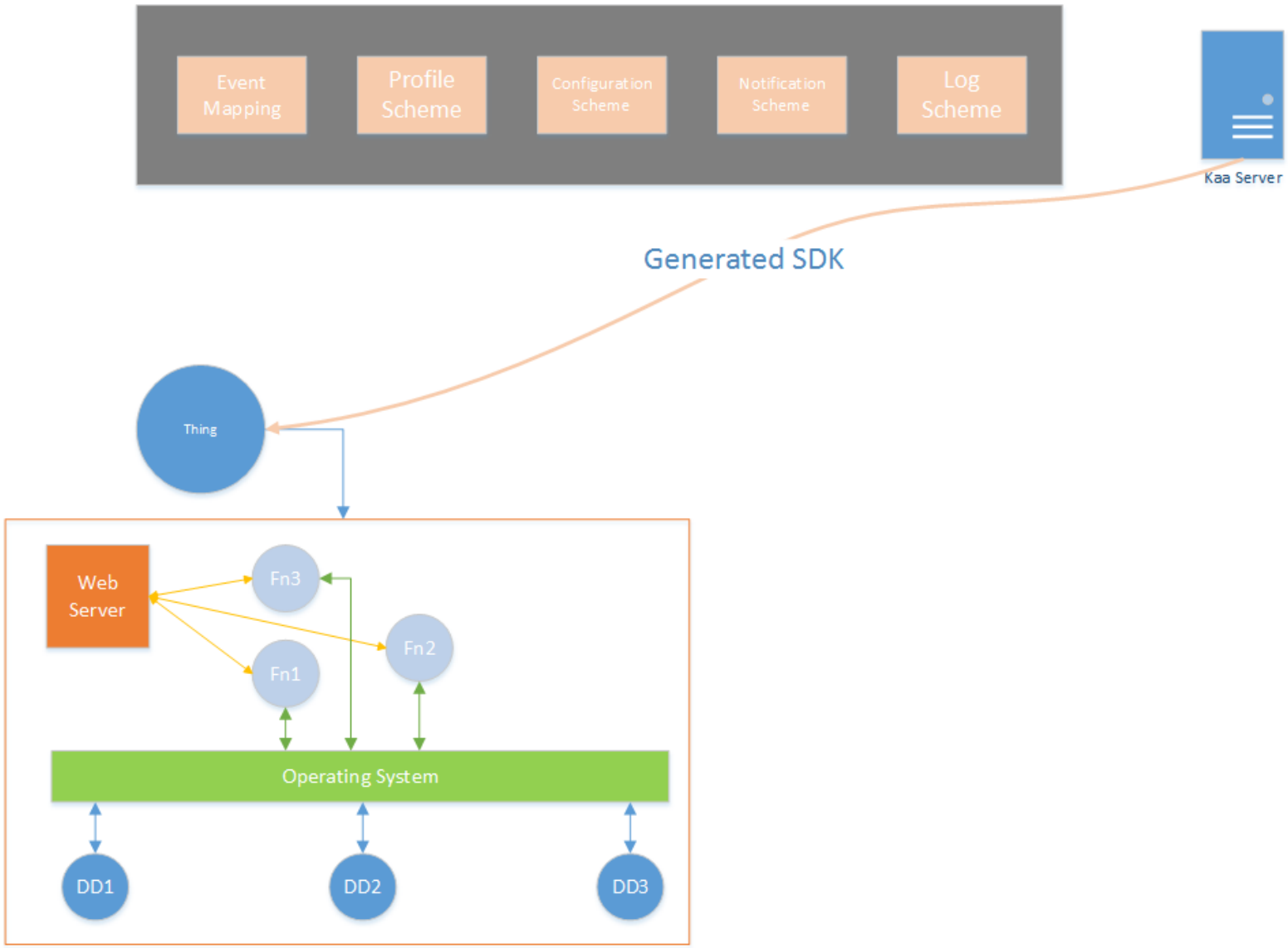
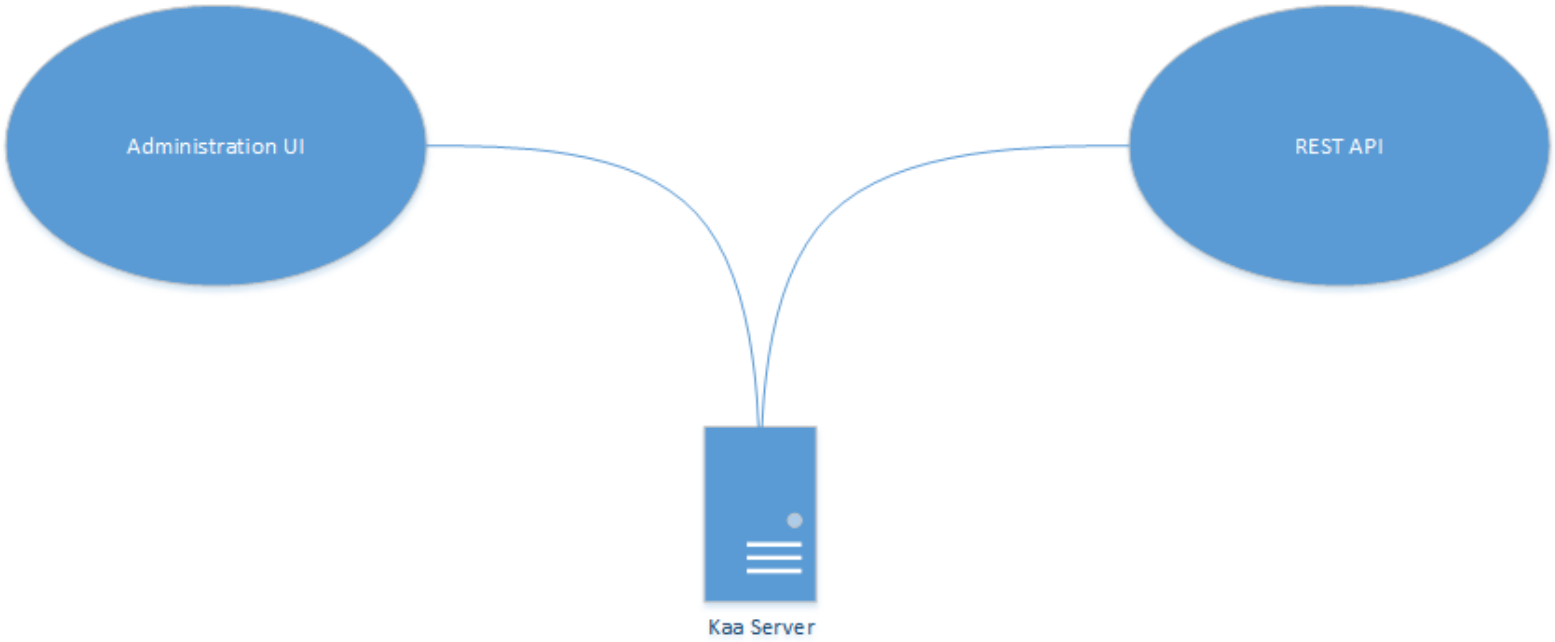
Thing Side

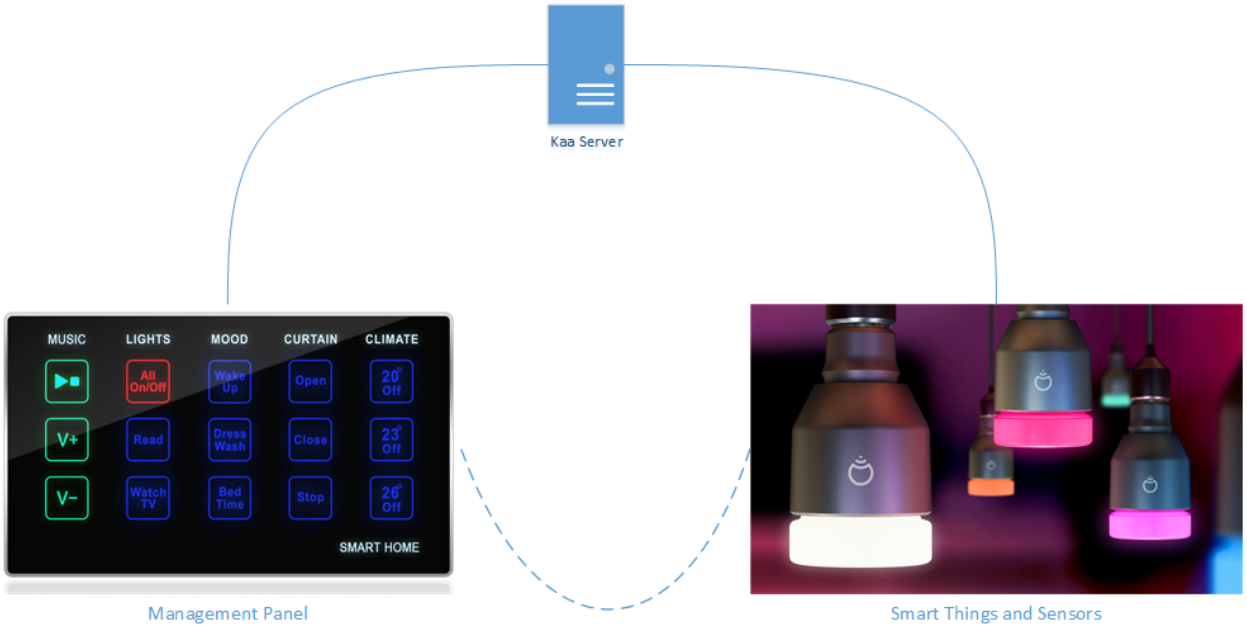

Event Mapping
Profile Scheme
Configuration Scheme
Notification Scheme
Log Scheme
Kaa Server
Generated SDK
Thing
Web Server
Fn3
Fn2
Fn1
Operating System
DD1
DD2
DD3

Administrator Side



Application Side

- In Kaa model things could be a sensor or application
- In a room we have management panel and smart things and all of them managed by Kaa.



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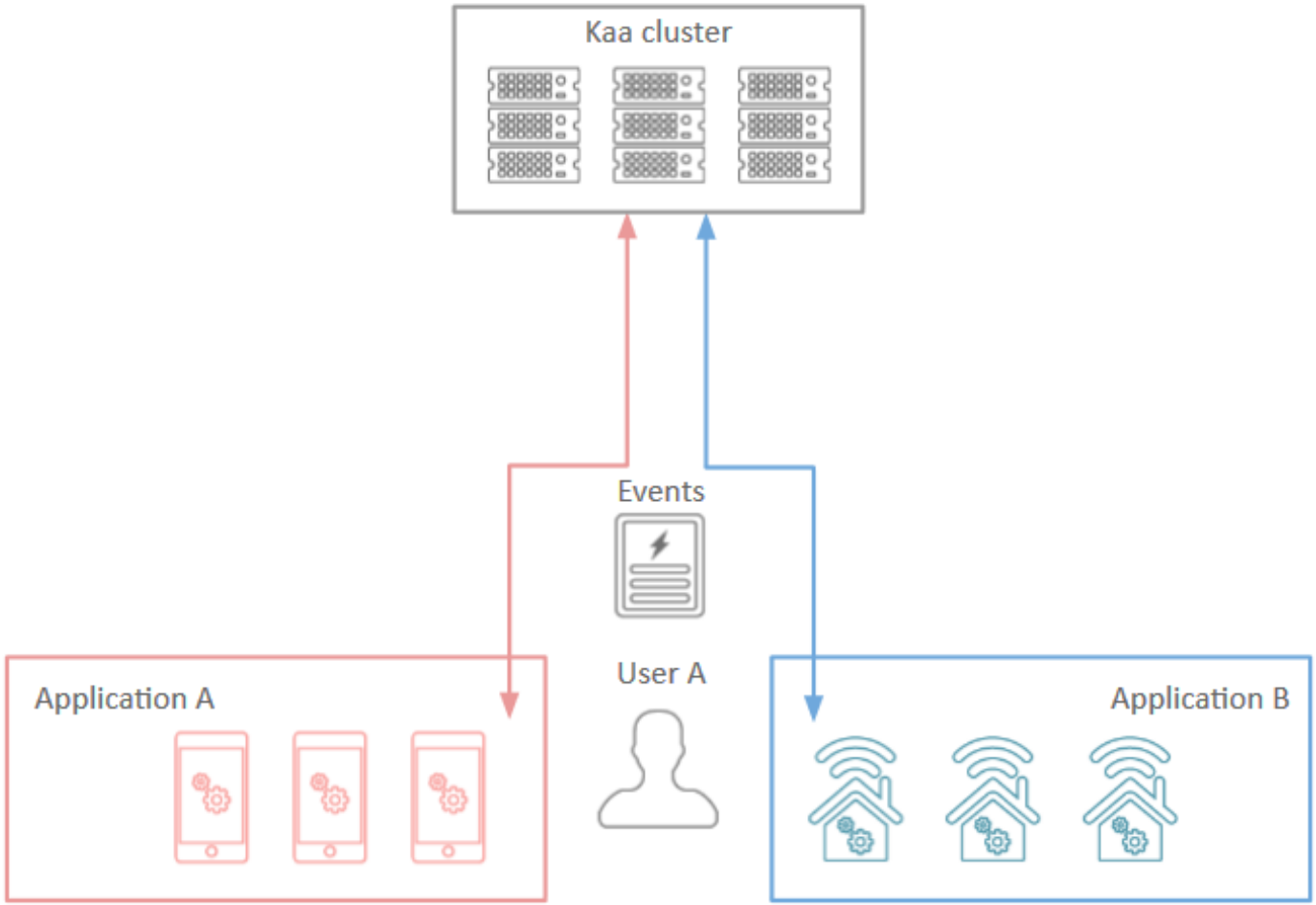
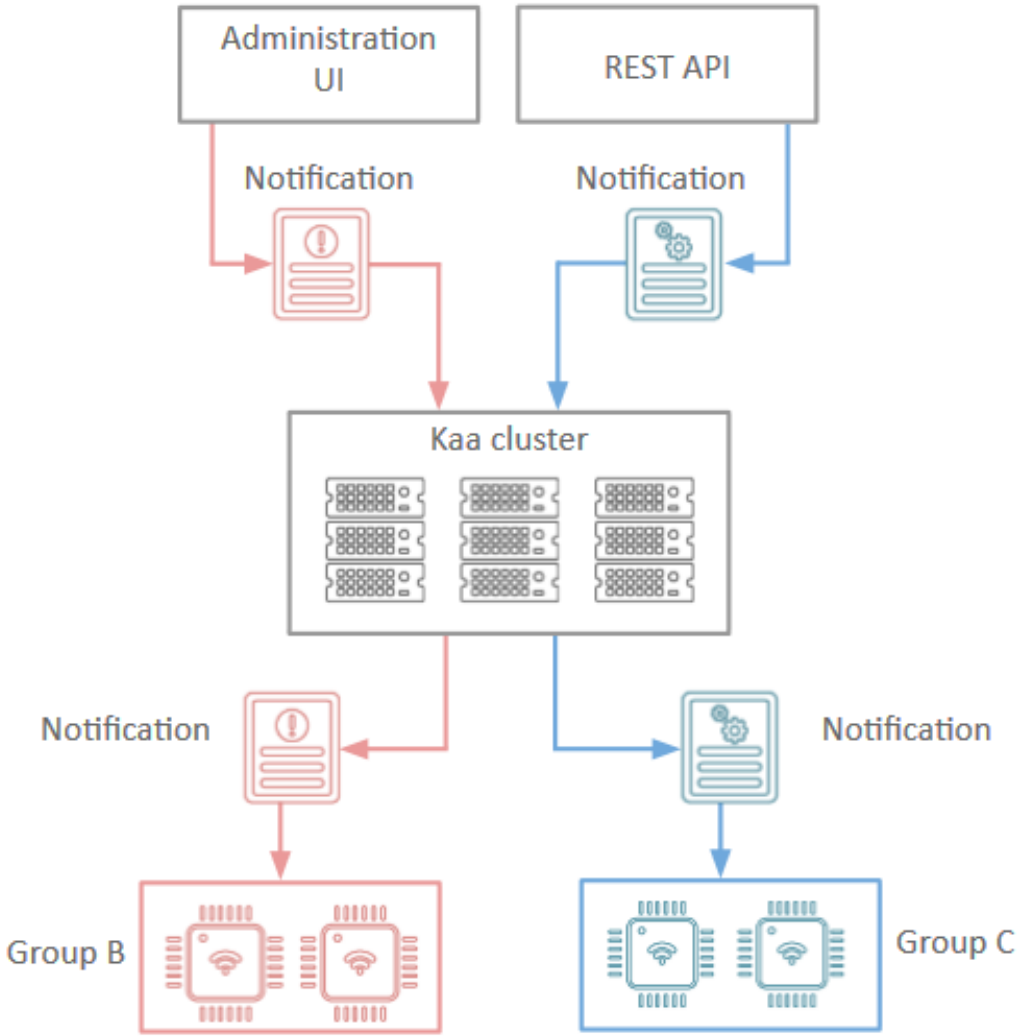
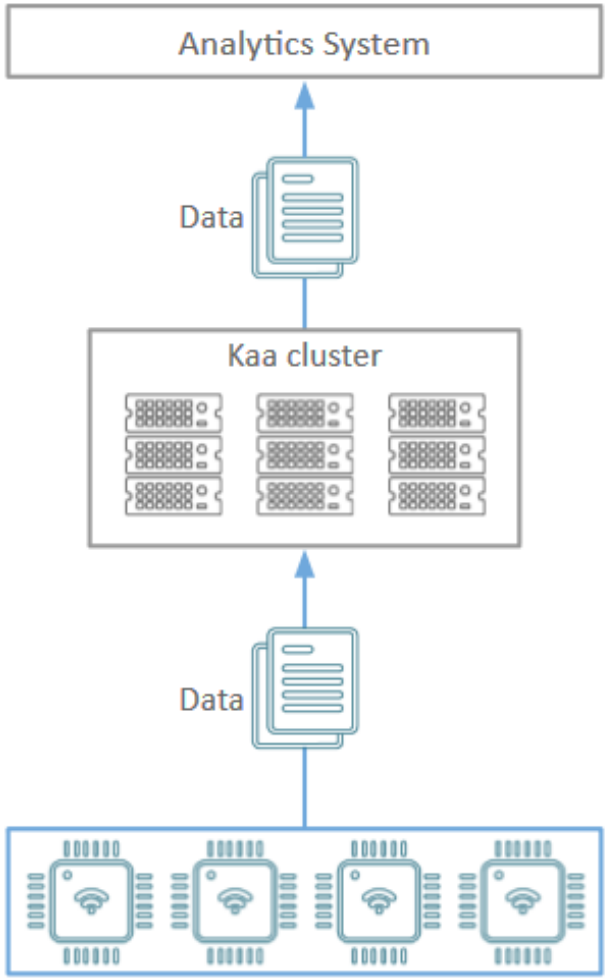
Messaging across endpoints



Messaging across endpoints

- The event class family can be used by one or multiple applications, thus the event can be shared between applications.

Notification



Collecting data from endpoints