W3C Web of Things Interest Group

FUJITSU
shaping tomorrow with you

Fujitsu's scenarios for demonstration and plugfest of Web of Things

May. 15th, 2017

Fujitsu Laboratories Ltd.

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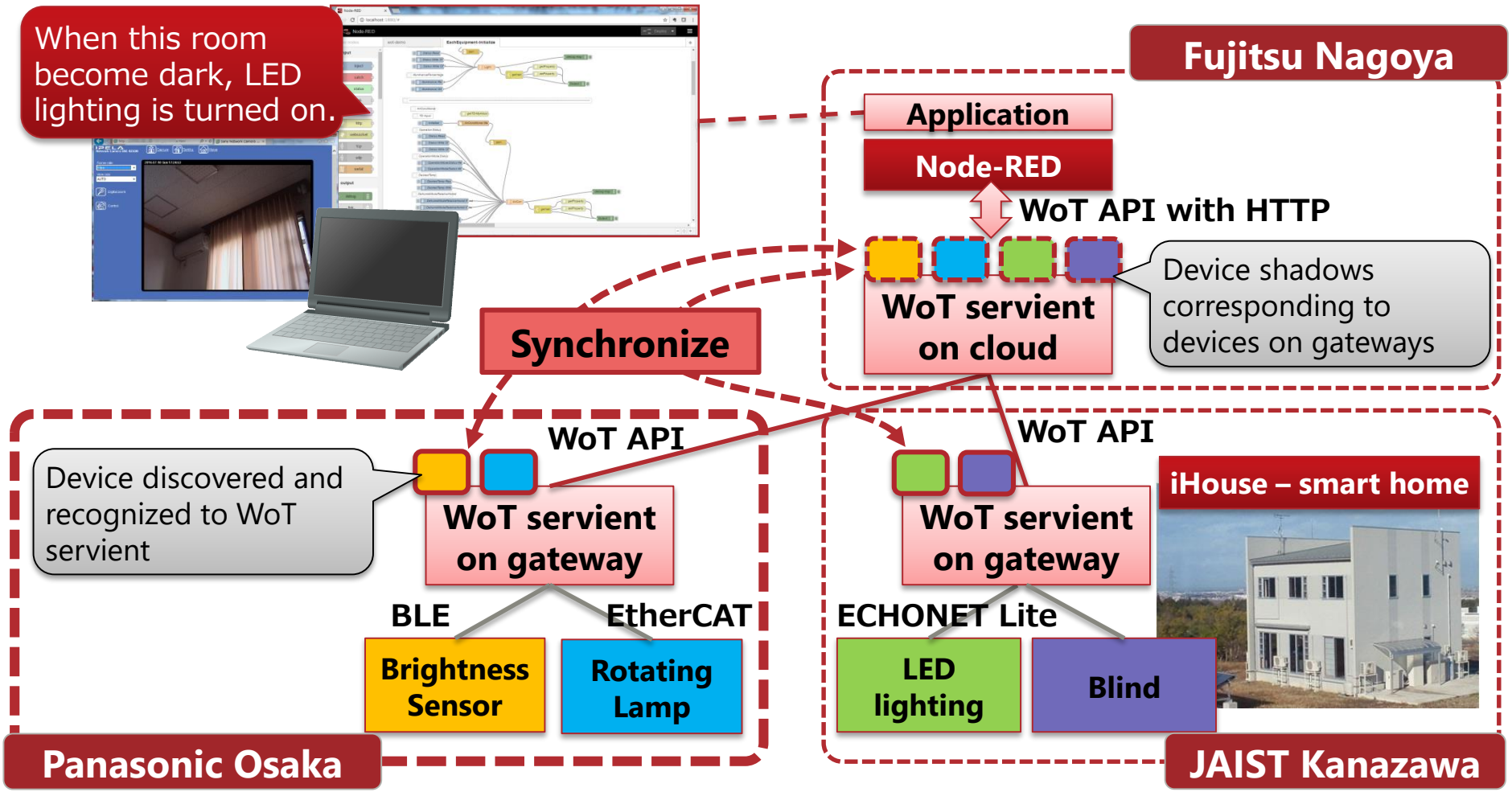
Overview of our demonstration

- Application operates Device shadows on cloud using WoT API.
- Synchronization mechanism can help to control widely distributed legacy devices via gateways.



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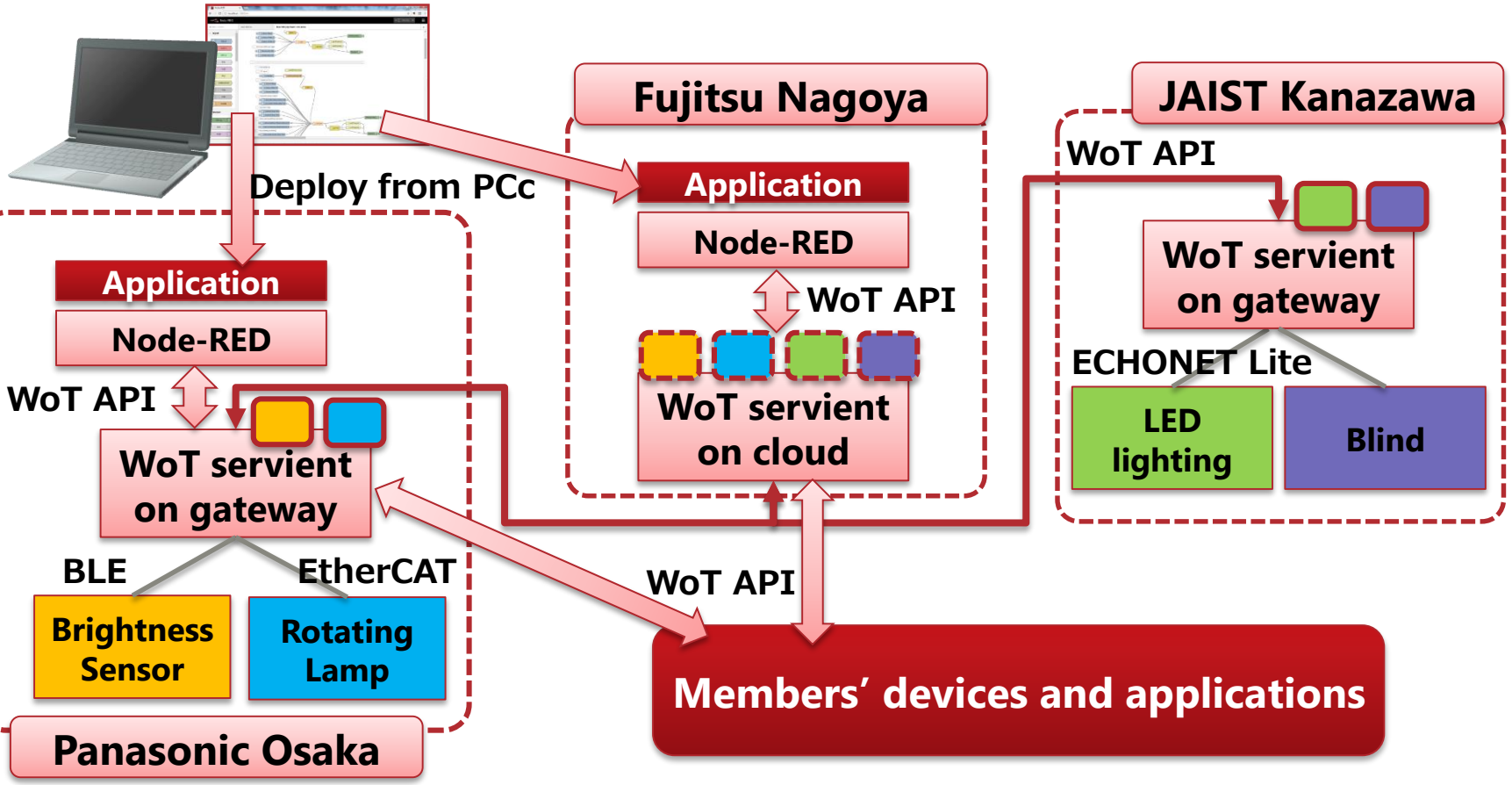
System diagram

- Applications are executed on Node-RED connecting to WoT servient with WoT API. Node-RED runs on both of gateway and cloud.
- Application will be deployed from PC browser to both.
- Members’ device and application can be connected with WoT API



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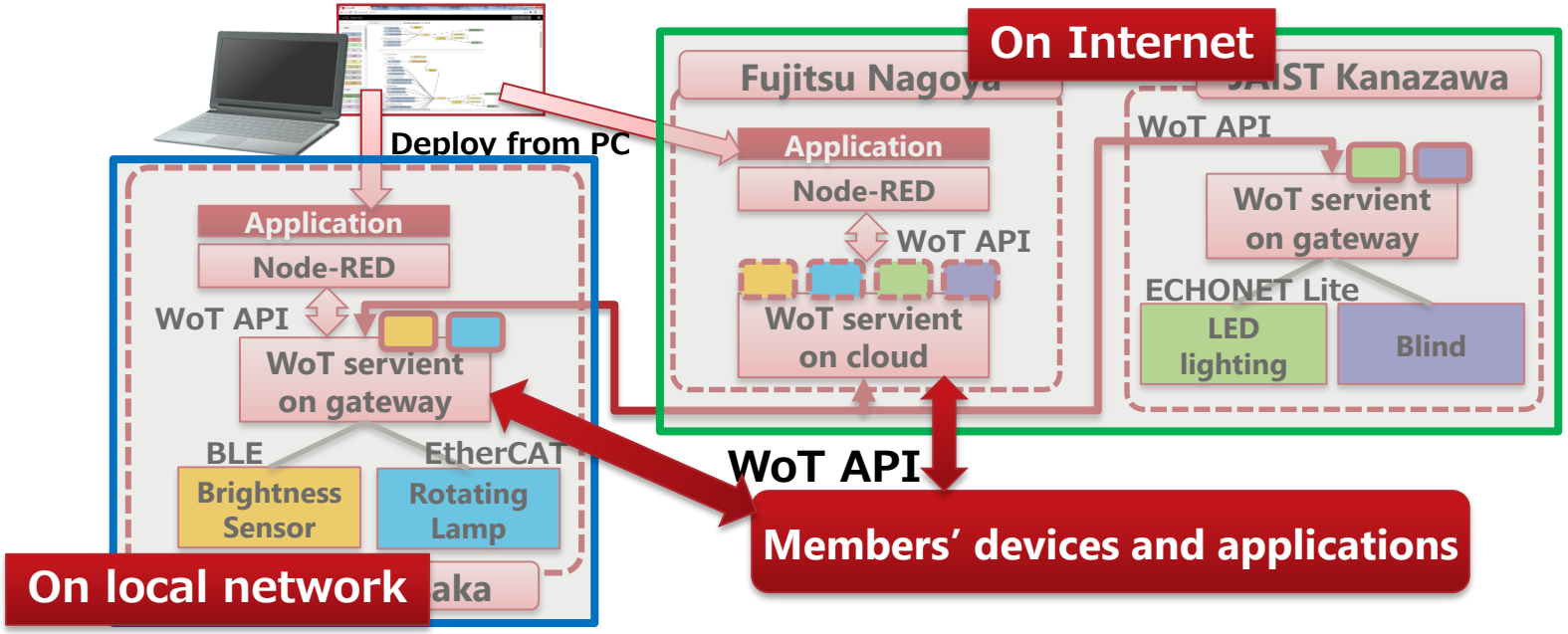
How to connect to our system

- Your devices and application can be connect to our system via WoT Servients on Cloud on the Internet or Gateway on the local network.
- If yours are on the Internet, connect to the Servient on cloud. If on the local network, connect to the gateway.
- TD will be registered manually in our system. If your devices will connect, send us your TDs. If your application will connect to our devices, we'll send you our TDs after IP addresses are assigned.
- Rest of slides show our TDs for your reference.



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TD（LED lighting on smart home)

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```
{
  "@type"              : "Thing"
 ,"@context"           : [ "https://w3c.github.io/wot/w3c-wot-td-context.jsonld",   "https://w3c.github.io/wot/w3c-wot-common-context.jsonld" ]

 ,"name"               : "iHouseLED"
 ,"base"               : "http://xxx.xxx.xxx.xxx:8888/api/1.0/WoT/Thing/light/"
 ,"interactions":
   [
        {
          "@type"     : ["Property"]
          ,"name"     : "OperationStatus"
          ,"links"    : [ { "href" : "property/OperationStatus",  "mediaType": "application/json"}]
          ,"writable"  : true

          ,"outputData": {"valueType": { "type": "string" }}
        },
        {
          "@type"     : ["Property"]
          ,"name"     : "IlluminancePercentage"
          ,"links"    : [ { "href" : "property/IlluminancePercentage",  "mediaType": "application/json"} ]
          ,"writable"  : true

          ,"outputData": {"valueType": { "type": "string" }}
        }
  ]
}
```


will be changed

TD（LED Lighting on local）

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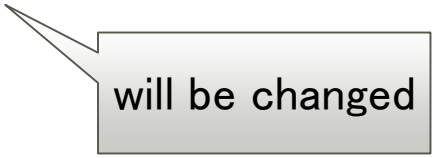
```
{
  "@type"              : "Thing"
 ,"@context"           : [ "https://w3c.github.io/wot/w3c-wot-td-context.jsonld",   "https://w3c.github.io/wot/w3c-wot-common-context.jsonld" ]

 ,"name"               : "LEDLight"
 ,"base"               : "http://10.25.154.86:4000/api/1.0/WoT/Thing/LED-Light/"
 ,"interactions":
   [
        {
          "@type"     : ["Property"]
          ,"name"     : "OperationStatus"
          ,"links"    : [ { "href" : "property/OperationStatus",  "mediaType": "application/json"}]
          ,"writable"  : true

          ,"outputData": {"valueType": { "type": "string" }}
        }
  ]
}
```

TD（Rotating Lamp on local）

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```
{
  "@type"              : "Thing"
 ,"@context"           : [ "https://w3c.github.io/wot/w3c-wot-td-context.jsonld",   "https://w3c.github.io/wot/w3c-wot-common-context.jsonld" ]

 ,"name"               : "RotaryBeaconLight"
 ,"base"               : "http://10.25.154.86:4000/api/1.0/WoT/Thing/RotaryBeaconLight/"
 ,"interactions":
   [
        {
          "@type"     : ["Property"]
          ,"name"     : "OperationStatus"
          ,"links"    : [ { "href" : "property/OperationStatus",  "mediaType": "application/json"}]
          ,"writable"  : true

          ,"outputData": {"valueType": { "type": "string" }}
        }
  ]
}
```


will be changed

TD（Brightness Sensor on local）

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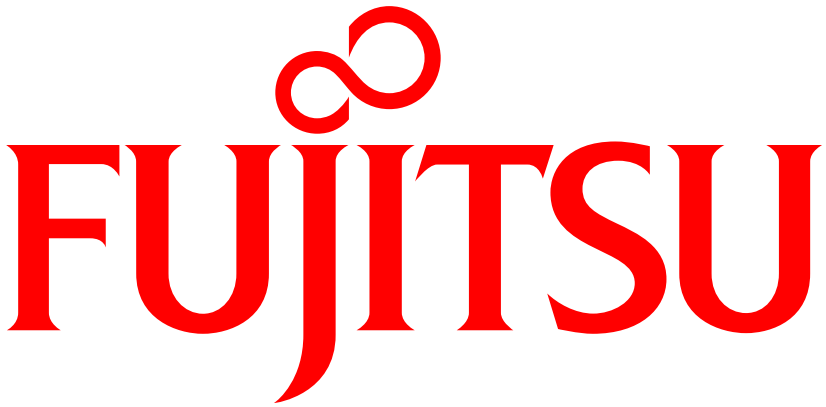
```
{
  "@type"              : "Thing"
 ,"@context"           : [ "https://w3c.github.io/wot/w3c-wot-td-context.jsonld",   "https://w3c.github.io/wot/w3c-wot-common-context.jsonld" ]

 ,"name"               : "BrightnessSensor"
 ,"base"               : "http://10.25.154.86:4000/api/1.0/WoT/Thing/CHLOG-brightness/"
 ,"interactions":
   [
        {
          "@type"     : ["Property"]
          ,"name"     : "Brightness"
         ,"links"     : [ { "href" : "property/MeasuredIllu",  "mediaType": "application/json"}]
         ,"writable"  : false
        }
  ]
}
```


will be changed



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