

# TinyloT Zeroconf

김동현



# 이전까지의 진행 상황

App에서 Device List를 요청하고 Device List를 Server로 부터 받는 것 까지 구현.

GET ▼ http://192.168.234.129:3000/TinyIoT Send ▼

Params Auth Headers (8) Body Pre-req. Tests Settings Cookies

Headers 7 hidden

	KEY	VALUE	DESCRIP	...	Bulk Edit	Presets	▼
<input checked="" type="checkbox"/>	X-fc	Zeroconf					
	Key	Value	Description				

Body Cookies Headers (5) Test Results 200 OK 1044 ms 714 B Save Response ▼

Pretty Raw Preview Visualize Text ▼ 🔍

```
1
2 DeviceList
3
4
5 Type:      _TinyIoT_App._tcp
6 Device Name: TinyIoT Application
7 Network:   local
8
9
10 Type:      _ssh._tcp
11 Device Name: quri-virtual-machine
12 Network:   local
13
14
15 Type:      _ssh._tcp
16 Device Name: quri-virtual-machine
17 Network:   local
18
19
20 Type:      _sftp-ssh._tcp
21 Device Name: quri-virtual-machine
22 Network:   local
```

Session ID 인증 후,  
등록 완료 메시지 응답 과정 구현

POST ▼ http://192.168.234.129:3000/TinyIoT Send ▼

Params ● Auth Headers (15) Body ● Pre-req. Tests Settings Cookies

Headers 9 hidden

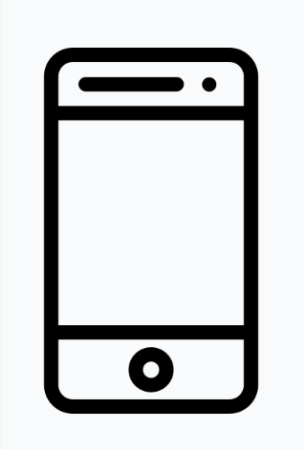
	KEY	VALUE	DESCRIP	...	Bulk Edit	Presets	▼
<input checked="" type="checkbox"/>	X-fc	Create					
<input checked="" type="checkbox"/>	Accept	application/json					
<input checked="" type="checkbox"/>	X-M2M-Origin	TAEC					
<input checked="" type="checkbox"/>	X-M2M-RI	12345					
<input checked="" type="checkbox"/>	X-TinyIoT_ID	SejongTinyIoT					
<input checked="" type="checkbox"/>	Content-Type	application/json; ty=5					
	Key	Value	Description				

Body Headers (4) Test Results 200 OK 17 ms 295 B Save Response ▼

Pretty Raw Preview Visualize Text ▼ 🔍

```
1 {"m2m:dbg": "Regist Success"}
```

# 구현 진행 상황



Application

POST http://192.168.234.129:3000/TinyIoT Send

Params Authorization Headers (15) Body Pre-request Script Tests Settings Cookies

Headers 9 hidden

KEY	VALUE	DESCRIPTION	***	Bulk Edit	Presets
<input checked="" type="checkbox"/> X-fc	Create				
<input checked="" type="checkbox"/> Accept	application/json				
<input checked="" type="checkbox"/> X-M2M-Origin	TAEC				
<input checked="" type="checkbox"/> X-M2M-Ri	12345				
<input checked="" type="checkbox"/> X-TinyIoT_ID	SejongTinyIoT				
<input checked="" type="checkbox"/> Content-Type	application/json; ty=5				

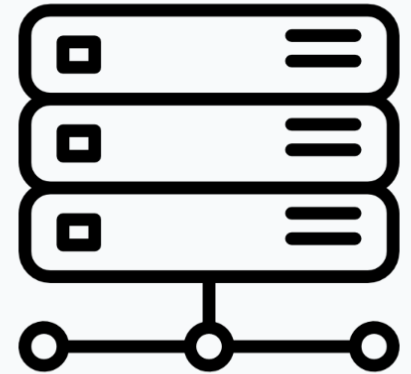
POST http://192.168.234.129:3000/TinyIoT Send

Params Auth Headers (15) Body Pre-req. Tests Settings Cookies Beautify

raw JSON

```
1 {"_oneM2MDevice._tcp/Device/Tem"}
```

Fc: Create Post 요청 (Create)



TinyIoT Server



# 구현 진행 상황

```
AE* Get_AE_data(char* data_from_app)
```

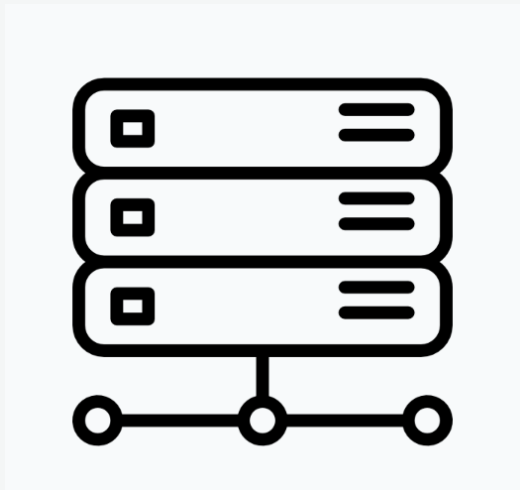
```
"_oneM2MDevice._tcp/Device/Tem"
```

Resource Name0| Device인 AE 구조체 생성.

```
CNT* Get_CNT_data(char* data_from_app)
```

```
"_oneM2MDevice._tcp/Device/Tem"
```

Resource Name0| Tem인 CNT 구조체 생성.



```
"_oneM2MDevice._tcp/Device/Tem"
```

Avahi를 통해서 \_oneM2MDevice.\_tcp 서비스 타입의 Device의 URL을 얻음.

```
1 http://192.168.234.130:3000
```

```
Parse URI /TinyIoT...OK
Retrieve CSE Create
Regist Success
Request Success
```

Device의 등록 및 Device로의 Request가 성공적.

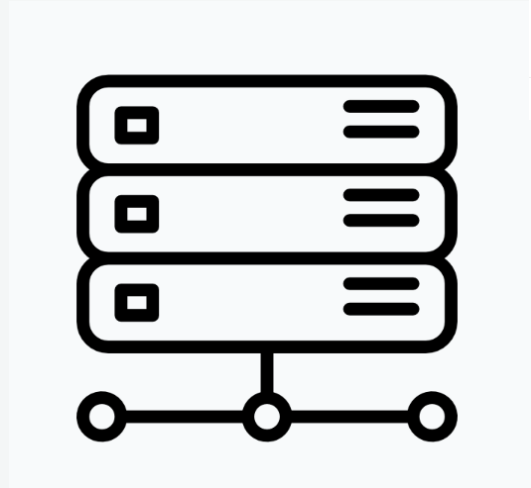
```
Failed to resolve service 'OneM2M Device at quri-virtual-machine-2' of type
'_oneM2MDevice._tcp' in domain 'local': Timeout reached
```

서비스 타입을 찾을 수 없을 경우.

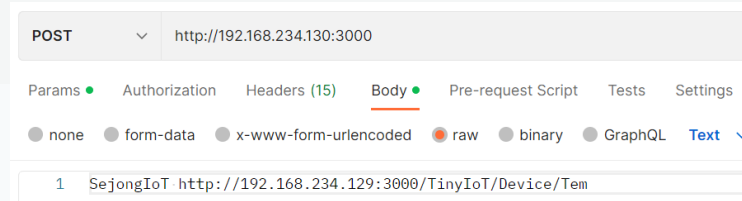
```
curl easy perform() failed: Couldn't connect to server
```

Device의 Server가 꺼져 있는 경우.

# 구현 진행 상황



TinyIoT Server



Method: Post  
Body: 인증키 및 Server URL

Avahi Broadcast 중지



Device

```
root@quri-virtual-machine:/home/quri/OneM2MDevicefile# ./OneM2MDevice  
SejongIoT http://192.168.234.129:3000/TinyIoT/Device/Tem
```



Device로 보낼 인증 키  
(없어도 무방)



Server URL

# 정리

Procedure에 기재된 내용은 모두 구현 및 TinyIoT Server에서의 테스트도 완료.

헤더 파일이나 Avahi 파일을 수정하면 추가 기능 구현 가능 (Ex 등록 취소 기능)

다음 과제:

라즈베리 파이를 사용하여 여러 Device가 있다는 가정 하에 테스트.