

oneM2M API

Mahdi Ben Alaya
February 10, 2018

benalaya@sensinov.com
www.sensinov.com



Document v1.0.1

Table of contents

1. Register an Applicaton Entity.....	3
2. Create a Container inside AE.....	4
3. Create a ContentInstance inside Container.....	5
4. Subscribe to Container.....	6
5. Recieve Notification.....	7
6. Discover resources using labels (lbl).....	7
7. Discover resources using resource type (ty).....	8
8. Short Names.....	8
9. History.....	9

1. Register an Application Entity

HTTP Request

```
POST /in-name HTTP/1.1
Host: http://127.0.0.1:8080
X-M2M-Origin: Cae-test
Content-Type: application/json;ty=2
Accept: application/json
```

```
{
  "m2m:ae": {
    "rn": "aeTest",
    "rr": false,
    "api": "test.company.org"
  }
}
```

HTTP Response

```
201 Created
Content-Location:/in-name/Cae-test
Content-Type:application/json
X-M2M-Origin:/in-name
X-M2M-RSC:2001
```

```
{
  "m2m:ae": {
    "rn": "aeTest",
    "ty": 2,
    "ri": "/in-cseCAE988694263",
    "pi": "/in-cse",
    "ct": "20170223T194209",
    "lt": "20170223T194209",
    "acpi": ["/in-cse/acp-69998272"],
    "et": "20180223T194209",
    "api": "test.company.org",
    "aei": "Cae-test",
    "rr": false
  }
}
```

2. Create a Container inside AE

HTTP Request

```
POST /in-name/aeTest HTTP/1.1
Host: http://127.0.0.1:8080
X-M2M-Origin: Cae-test
Content-Type: application/json;ty=3
Accept: application/json
```

```
{
  "m2m:cnt": {
    "rn": "cntTest",
    "mni": 1000
  }
}
```

HTTP Response

```
201 Created
Content-Location:/in-name/cnt-364492354
Content-Type:application/json
X-M2M-RSC:2001
```

```
{
  "m2m:cnt": {
    "rn": "cntTest",
    "ty": 3,
    "ri": "/in-cse/cnt-364492354",
    "pi": "/in-cse/CAE267526506",
    "ct": "20170223T200338",
    "lt": "20170223T200338",
    "acpi": ["/in-cse/acp-940743520"],
    "et": "20180223T200338",
    "st": 0,
    "mni": 9999999999,
    "mbs": 10000,
    "mia": 0,
    "cni": 0,
    "cbs": 0
  }
}
```

3. Create a ContentInstance inside Container

HTTP Request

```
POST /in-name/aeTest/cntTest HTTP/1.1
Host: http://127.0.0.1:8080
X-M2M-Origin: Cae-test
Content-Type: application/json;ty=4
Accept: application/json

{
  "m2m:cin": {
    "rn": "cinTest",
    "cnf": "application/json",
    "con": "{\"temperature\":21,\"timestamp\":1517912099}"
  }
}
```

HTTP Response

```
201 Created
Content-Location:/in-name/cin-50288226
Content-Type:application/json
X-M2M-Origin:/in-name
X-M2M-RSC:2001

{
  "m2m:cin": {
    "rn": "cinTest",
    "ty": 4,
    "ri": "/in-name/cin-50288226",
    "pi": "/in-name/cnt-211484110",
    "ct": "20170223T205943",
    "lt": "20170223T205943",
    "st": 0,
    "cnf": "application/json",
    "cs": 2,
    "con": "{\"temperature\":21,\"timestamp\":1517912099}"
  }
}
```

4. Subscribe to Container

HTTP Request

```
POST /in-name/aeTest/cntTest HTTP/1.1
Host: http://127.0.0.1:8080
X-M2M-Origin: Cae-admin
Content-Type: application/json;ty=23
Accept: application/json
{
  "m2m:sub": {
    "rn": "subTest",
    "nu": ["http://subscriber-ip:subscriber-port"],
    "nct": 2,
    "enc": {
      "net": 3
    }
  }
}
```

HTTP Response

```
201 Created
Content-Location:/in-name/sub-164504268
Content-Type: application/json
X-M2M-Origin: /in-name
X-M2M-RSC: 2001
{
  "m2m:sub": {
    "rn": "subTest",
    "ty": 23,
    "ri": "/in-cse/sub-164504268",
    "pi": "/in-cse/cnt-678588091",
    "ct": "20170224T072654",
    "lt": "20170224T072654",
    "acpi": ["/in-cse/acp-663784945"],
    "nu": ["http://subscriber-ip:subscriber-port"],
    "nct": 2
  }
}
```

5. Recieve Notification

When a new content Instance is created under the Container, the subscriber will receive a notification with the following representation:

HTTP Request
POST / HTTP/1.1 Host:1270.0.1:8080 X-M2M-Origin: /in-cse Content-Type: application/json { "m2m:sgn": { "nev": { "rep": { "m2m:cin": { "con": "{\"temperature\":21,\"timestamp\":1517912099}", "cnf": "text/plain:0" }, "rss": "201" } }, "sur": "/in-cse/sub-164504268" } }

6. Discover resources using labels (lbl)

HTTP Request
GET /in-name?fu=1&lbl=lblTest1 HTTP/1.1 Host: http://127.0.0.1:8080 X-M2M-Origin: Cae-admin Accept: application/json

HTTP Response
200 OK Content-Type: application/json X-M2M-Origin:/in-cse X-M2M-RSC: 2000 {

```
"m2m:uril" : ["/in-name/aeTest"]
}
```

7. Discover resources using resource type (ty)

HTTP Request

```
GET /in-name?fu=1&ty=3 HTTP/1.1
Host: http://127.0.0.1:8080
X-M2M-Origin: Cae-admin
Accept: application/json
```

HTTP Response

```
200 OK
Content-Type: application/json
X-M2M-Origin:/in-name
X-M2M-RSC: 2000

{
  "m2m:uril" : ["/in-name/aeTest/cntTest"]
}
```

8. Short Names

- ae: Application Entity
- cnt: Container
- cin: ContentInstance
- sub: Subscription
- sgn: aggregated Notification
- rn: Resource Name
- ty: Type
- ri: Resource ID
- pi: Parent Id
- Acpi: Access Control Policies IDs
- uril: URI List
- ct: Creation Time
- et: Expiration Time
- lt: Last Modified Time
- lbl: Label
- cnf: Content Format
- con: Content
- mni: Maximum Number of Instance

- st: State Tag
- cs: Content Size
- aei: Application Entity Id
- api: Application Id
- poa: Point of Access
- rr: Request Rechability
- nev: Notification Event
- nep: Representation
- sur: Subscription URI
- Enc: Event Notification Criteria

9. History

Document history		
V1.0.0	February 02, 2018	Initial version
V1.0.1	February 10, 2018	Add platform configuration, starting and authenticaiton example