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TECHNICAL SPECIFICATION

**SmartM2M;
Machine-to-Machine communications (M2M);
Interoperability Test Specification for ETSI M2M Primitives**

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Smart Machine-to-Machine communications (SmartM2M).

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**may not**", "**need**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

1   Scope

The present document specifies Interoperability Test Descriptions (TDs) for the ETSI M2M Primitives as specified in ETSI TS 102 921 [1]. The purpose of the interoperability testing is to prove that end-to-end functionality between devices such as:

- dIa interface;

- mIa interface;

- Multi-Hop configuration (dIa + mId) and (mId+mIa);

- End to End configuration (dIa + mId + mIa);

and using HTTP as underlying application layer, is as required by the standard(s) on which those devices are based.

2   References

2.1   Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

[1]   ETSI TS 102 921: "Machine-to-Machine communications (M2M); mIa, dIa and mId interfaces".

[2]   ETSI TS 102 690: "Machine-to-Machine communications (M2M); Functional architecture".

2.2   Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

Not applicable.

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

aPoC	The Application Point of Contract is a URI that identifies how requests are re-targeted
App	M2M Application (DA, GA or NA)
CFG	Configuration
DA	Device Application
Device' (D')	Hosts App that communicates to a GSCL using the dIa reference point.
dIa	device application Interface
DSCL	Device SCL
EUT	Equipment Under Test
GA	Gateway Application
GSCL	Gateway SCL
MH	Multi-Hop
mIa	M2M application Interface
mId	M2M device Interface
NA	Network Application
NSCL	Network SCL
SCL	Service Capability Layer
TD	Test Description
URI	Universal Resource Identifier
XML	eXtensible Markup Language

4 Conventions

4.1 The Test Description proforma

The test descriptions are provided in proforma tables. The following different types of test operator actions are considered during the test execution:

- A **stimulus** corresponds to an event that enforces an EUT to proceed with a specific protocol action, like sending a message for instance.

- A **verify** consists of verifying that the EUT behaves according to the expected behaviour (for instance the EUT behaviour shows that it receives the expected message).

- A **configure** corresponds to an action to modify the EUT configuration.

- A **check** ensures the receipt of protocol messages on reference points, with valid content. This "check" event type corresponds to the method called 'interoperability testing with conformance check'.

4.2 Test Description naming convention

Table 1: TD naming convention

TD/<root>/<gr>/<nn>		
<root> = root	M2M	
<gr> = group	P2P	Point to Point testing on dIa, mId or mIa
	MH	Multi-Hop: management of remote ressources
	E2E	End to End
<nn> = sequential number	01 to 99	

5   Test Description Summary

5.1   ETSI M2M tests

Table 2: ETSI M2M Tests

Nb	Procedure/Resource	TD ID	TD Description
1	SCL Mutual Registration	TD_M2M_P2P_01	GSCL registers to NSCL
2	SclBase Management	TD_M2M_P2P_02	App retrieves the sclBase resource via a sclBaseRetrieveRequest
3		TD_M2M_P2P_03	App updates the sclBase resource via an sclBaseUpdateRequest
4	Application	TD_M2M_P2P_04	App registers to its local SCL via an applicationCreateRequest
5		TD_M2M_P2P_05	App retrieves application resource via an applicationRetrieveRequest
6		TD_M2M_P2P_06	App updates attribute in application resource via an applicationUpdateRequest
7		TD_M2M_P2P_07	App de-registers by deleting application resource via an applicationDeleteRequest
8	Container	TD_M2M_P2P_08	App creates a container ressource in local SCL via a containerCreateRequest
9		TD_M2M_P2P_09	App retrieves information of a container resource via a containerRetrieveRequest
10		TD_M2M_P2P_10	App updates attribute in application resource via an containerUpdateRequest
11		TD_M2M_P2P_11	App delete a specific container ressource via a containerDeleteRequest
12	ContentInstance	TD_M2M_P2P_12	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in local SCL via a contentInstanceCreateRequest
13		TD_M2M_P2P_13	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in local SCL via a contentInstanceCreateRequest using plain text data
14		TD_M2M_P2P_14	App retrieves information of a contentInstance resource via a containerRetrieveRequest
15		TD_M2M_P2P_15	Handle contentInstanceRetrieveRequest with targetID using partial addressing (content attribute)
16		TD_M2M_P2P_16	App deletes contentInstance resource via a containerDeleteRequest
17	Discovery	TD_M2M_P2P_17	App discovers resources residing in Local SCL via DiscoveryRetrieveRequest
18		TD_M2M_P2P_18	App discovers resources residing in Local SCL using specific Filter criteria via DiscoveryRetrieveRequest
19		TD_M2M_P2P_19	App discovers resources residing in Local SCL with a limited max size via DiscoveryRetrieveRequest
20		TD_M2M_P2P_20	App discovers resources residing in Local SCL limited search prefix via DiscoveryRetrieveRequest
21		TD_M2M_P2P_21	App discovers resources residing in Local SCL using multiple parameters via DiscoveryRetrieveRequest
22	Subscription	TD_M2M_P2P_22	App creates a subscription to application resource via subscriptionCreateRequest
23		TD_M2M_P2P_23	App retrieves information about a subscription via subscriptionRetrieveRequest (GET), such as expirationTime, filterCriteria, contactURI, noRepresentation, timeoutReason, etc.
24		TD_M2M_P2P_24	App updates information about a subscription via subscriptionRetrieveRequest
25		TD_M2M_P2P_25	App cancels subscription via an subscriptionDeleteRequest
26		TD_M2M_P2P_26	SCL sends notification(s) via subscriptionNotifyRequest
27		TD_M2M_P2P_27	SCL sends notification(s) via subscriptionNotifyRequest (To application container)

Nb	Procedure/Resource	TD ID	TD Description
28	NotificationChannel	TD_M2M_P2P_28	App creates a notificationChannel to application resource via notificationChannelCreateRequest
29		TD_M2M_P2P_29	App retrieves information about a notificationChannel via notificationChannelRetrieveRequest
30		TD_M2M_P2P_30	App deletes a notificaitonChannel via a notificationChannelDeleteRequest
31		TD_M2M_P2P_31	NA/DA receives notifications via a notificationChannelRetreiveRequest (GET) using long polling
32	AccessRight	TD_M2M_P2P_32	App create an AccessRight resource via an accesRightCreateRequest
33		TD_M2M_P2P_33	App retrieves accessRight resource via an accessRightRetrieveRequest
34		TD_M2M_P2P_34	App updates attribute in accessRight resource via an accessRightUpdateRequest
35		TD_M2M_P2P_35	App de-registers by deleting accessRightresource via an accessRightDeleteRequest
36		TD_M2M_P2P_36	App retrieve request is rejected due to an Empty Requesting Entity
37		TD_M2M_P2P_37	App retrieve request is rejected due to bad request Entity
38		TD_M2M_P2P_38	App delete request is rejected due to Access Rights
39	Group	TD_M2M_P2P_39	App creates a group resource via a groupCreateRequest
40		TD_M2M_P2P_40	App retrieves group resource via a groupRetrieveRequest
41		TD_M2M_P2P_41	App updates attribute in group resource via an groupUpdateRequest
42		TD_M2M_P2P_42	App deletes group resource via an groupDeleteRequest
43		TD_M2M_P2P_43	App creates multiple contentInstance using group resource
44		TD_M2M_P2P_44	App retrieves multiple contentInstance using group resource
45	Container	TD_M2M_MH_01	App creates a container ressource in remote SCL via a containerCreateRequest
46		TD_M2M_MH_02	App retrieves information of a container resource via a containerRetrieveRequest
47		TD_M2M_MH_03	App updates attribute in application resource via an containerUpdateRequest
48		TD_M2M_MH_04	App delete a specific container ressource via a containerDeleteRequest
49	ContentInstance	TD_M2M_MH_05	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote SCL via a contentInstanceCreateRequest
50		TD_M2M_MH_06	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote SCL via a contentInstanceCreateRequest using Plain text
51		TD_M2M_MH_07	App retrieves remote contentInstance resource via a containerRetriveRequest
52		TD_M2M_MH_08	Handle contentInstanceRetrieveRequest with targetID using partial addressing
53		TD_M2M_MH_09	App deletes remote contentInstance resource via a containerDeleteRequest
55	Discovery	TD_M2M_MH_10	App discovers resources residing in remote SCL via DiscoveryRetrieveRequest
56		TD_M2M_MH_11	App discovers resources residing in remote SCL using specific Filter criteria via DiscoveryRetrieveRequest
57		TD_M2M_MH_12	App discovers resources residing in remote SCL with a limited max size via DiscoveryRetrieveRequest
58		TD_M2M_MH_13	App discovers resources residing in remote SCL limited search prefix via DiscoveryRetrieveRequest
59		TD_M2M_MH_14	App discovers resources residing in remote SCL using multiple parameters via DiscoveryRetrieveRequest

Nb	Procedure/Resource	TD ID	TD Description
60	Subscription	TD_M2M_MH_15	App creates a subscription to application resource via subscriptionCreateRequest
61		TD_M2M_MH_16	App retrieves information about a subscription via subscriptionRetrieveRequest (GET), such as expirationTime, filterCriteria, contactURI, noRepresentation, timeoutReason, etc.
62		TD_M2M_MH_17	App updates information about a subscription via subscriptionRetrieveRequest
63		TD_M2M_MH_18	App cancels subscription via an subscriptionDeleteRequest
64		TD_M2M_MH_19	GSCL sends notification(s) via subscriptionNotifyRequest on NSCL
65		TD_M2M_MH_20	NSCL sends notification(s) via subscriptionNotifyRequest on GSCL
66		TD_M2M_MH_21	GSCL sends notification(s) via subscriptionNotifyRequest
67		TD_M2M_MH_22	NSCL sends notification(s) via subscriptionNotifyRequest
68	Notification Channel	TD_M2M_MH_23	App creates a notificationChannel to application resource on remote SCL via notificationChannelCreateRequest (POST)
69		TD_M2M_MH_24	App retrieves information about a notificationChannel on remote SCL via notificationChannelRetrieveRequest (GET)
70		TD_M2M_MH_25	App deletes a notificaitonChannel on remote SCL via a notificationChannelDeleteRequest
71		TD_M2M_MH_26	NA receives notifications via a notificationChannelRetreiveRequest (GET) using long polling
72		TD_M2M_MH_27	DA receives notifications via a notificationChannelRetreiveRequest (GET) using long polling
73	AccessRight	TD_M2M_MH_28	App creates an AccessRight resource via an accesRightCreateRequest
74		TD_M2M_MH_29	App retrieves accessRight resource via an accessRightRetrieveRequest
75		TD_M2M_MH_30	App updates attribute in accessRight resource via an accessRightUpdateRequest
76		TD_M2M_MH_31	App de-registers by deleting accessRightresource via an accessRightDeleteRequest
77		TD_M2M_MH_32	App delete request is rejected due to Access Rights (Empty Requesting Entity)
78		TD_M2M_MH_33	App retrieve request is rejected due to Access Rights (Bad Requesting Entity)
79		TD_M2M_MH_34	App delete request is rejected due to Access Rights on remote SCL(Insufficient Access Rights)
80	Group	TD_M2M_MH_35	App creates a group resource via a groupCreateRequest
81		TD_M2M_MH_36	App retrieves group resource via a groupRetrieveRequest
82		TD_M2M_MH_37	App updates attribute in group resource via an groupUpdateRequest
83		TD_M2M_MH_38	App delete group resource via an groupDeleteRequest
84		TD_M2M_MH_39	App creates multiple contentInstance using group resource
85		TD_M2M_MH_40	App retrieves multiple contentInstance using group resource
86		TD_M2M_MH_41	App registration with Announcement
87		TD_M2M_MH_42	App application delete with Announcement
88		TD_M2M_MH_43	App application De-Announce ressource
89	Resource management with re-targeting	TD_M2M_E2E_01	DA adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote NSCL via a contentInstanceCreateRequest
90		TD_M2M_E2E_02	NA adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote GSCL via a contentInstanceCreateRequest
91		TD_M2M_E2E_03	NA retrieves a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote GSCL via a contentInstanceRetrieveRequest
92		TD_M2M_E2E_04	NA deletes a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote GSCL via a contentInstanceUpdateRequest

6   Basic Configuration

6.1   Resources request samples

6.1.1   Application

```
POST 127.0.0.1:8080/context/nscl/applications
<tns:application xmlns:tns="http://uri.etsi.org/m2m" appId="app1" />

PUT 127.0.0.1:8080/context/nscl/applications/app1
<tns:application xmlns:tns="http://uri.etsi.org/m2m" >
 <tns:searchStrings>
       <tns:searchString>key</tns:searchString>
    </tns:searchStrings>
</tns:application>

GET 127.0.0.1:8080/context/nscl/applications/app1
DELETE 127.0.0.1:8080/context/nscl/applications/app1
```

6.1.2   Container

```
POST 127.0.0.1:8080/context/nscl/applications/app1/containers
<tns:container xmlns:tns="http://uri.etsi.org/m2m" tns:id="cont1" />

PUT 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1
<tns:container xmlns:tns="http://uri.etsi.org/m2m">
    <tns:searchStrings>
        <tns:searchString>key</tns:searchString>
    </tns:searchStrings>
</tns:container>

GET 127.0.0.1:8080/context/nscl/applications/app1

DELETE 127.0.0.1:8080/context/nscl/applications/app1
```

6.1.3   ContentInstance

```
POST 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances
<tns:contentInstance xmlns:tns="http://uri.etsi.org/m2m"
    xmlns:xmime="http://www.w3.org/2005/05/xmlmime" tns:id="ci1" >
    <tns:content xmime:contentType="application/xml">

    PG9iaj4KICA8aW50IG5hbWU9ImRhdGEiIHZhbD0iMjciLz4KICA8aW50IG5hbWU9InVuaXQiIHZhbD0iY2Vsc3VzIi8+Cjwv
b2JqPgoK
    </tns:content>
</tns:contentInstance>

POST(content) 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances
<obj>
  <int name="data" val="27"/>
  <int name="unit" val="celsius"/>
</obj>

PUT 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1
<tns:container xmlns:tns="http://uri.etsi.org/m2m">
    <tns:searchStrings>
        <tns:searchString>key</tns:searchString>
    </tns:searchStrings>
</tns:container>

GET 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/ci

GET (latest) 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/latest

GET (oldest) 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/oldest

GET (content)
127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/ci/content
```

```
GET (latest content)
127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/latest/content

GET (oldest content)
127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/oldest/content
```

6.1.4   Subscription

```
POST 127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/subscriptions
<tns:subscription xmlns:tns="http://uri.etsi.org/m2m" tns:id="sub1">
     <tns:contact>http://127.0.0.0:1400/monitor</tns:contact>
</tns:subscription>

GET
127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/subscriptions/sub1

DELETE
127.0.0.1:8080/context/nscl/applications/app1/containers/cont1/contentInstances/subscriptions/sub1
```

6.1.5   AccessRight

```
POST 127.0.0.1:8080/context/nscl/accessRights
<tns:accessRight xmlns:tns="http://uri.etsi.org/m2m" tns:id="ar1">
    <tns:permissions>
        <tns:permission tns:id="AllRights">
            <tns:permissionFlags>
                <tns:flag>CREATE</tns:flag>
                <tns:flag>WRITE</tns:flag>
                <tns:flag>READ</tns:flag>
                <tns:flag>DELETE</tns:flag>
                <tns:flag>DISCOVER</tns:flag>
            </tns:permissionFlags>
            <tns:permissionHolders>
                <tns:holderRefs>
                    <tns:holderRef>admin/admin</tns:holderRef>
                </tns:holderRefs>
            </tns:permissionHolders>
        </tns:permission>
        <tns:permission tns:id="RestrictedRights">
            <tns:permissionFlags>
                <tns:flag>READ</tns:flag>
                <tns:flag>DISCOVER</tns:flag>
            </tns:permissionFlags>
            <tns:permissionHolders>
                <tns:holderRefs>
                    <tns:holderRef>guest/guest</tns:holderRef>
                </tns:holderRefs>
            </tns:permissionHolders>
        </tns:permission>
    </tns:permissions>
    <tns:selfPermissions>
        <tns:permission tns:id="SelfPermission">
            <tns:permissionFlags>
                <tns:flag>CREATE</tns:flag>
                <tns:flag>WRITE</tns:flag>
                <tns:flag>READ</tns:flag>
                <tns:flag>DELETE</tns:flag>
                <tns:flag>DISCOVER</tns:flag>
            </tns:permissionFlags>
            <tns:permissionHolders>
                <tns:holderRefs>
                    <tns:holderRef>admin/admin</tns:holderRef>
                </tns:holderRefs>
            </tns:permissionHolders>
        </tns:permission>
    </tns:selfPermissions>
</tns:accessRight>

PUT 127.0.0.1:8080/context/nscl/accessRights/ar1
<tns:accessRight xmlns:tns="http://uri.etsi.org/m2m" >
    <tns:permissions>
        <tns:permission tns:id="AllRights">
            <tns:permissionFlags>
                <tns:flag>CREATE</tns:flag>
                <tns:flag>WRITE</tns:flag>
```

```
                <tns:flag>READ</tns:flag>
                <tns:flag>DELETE</tns:flag>
                <tns:flag>DISCOVER</tns:flag>
            </tns:permissionFlags>
            <tns:permissionHolders>
                <tns:holderRefs>
                    <tns:holderRef>admin/admin</tns:holderRef>
                    <tns:holderRef>guest2/guest2</tns:holderRef>
                </tns:holderRefs>
            </tns:permissionHolders>
        </tns:permission>
        <tns:permission tns:id="RestrictedRights">
            <tns:permissionFlags>
                <tns:flag>READ</tns:flag>
                <tns:flag>DISCOVER</tns:flag>
            </tns:permissionFlags>
            <tns:permissionHolders>
                <tns:holderRefs>
                    <tns:holderRef>guest/guest</tns:holderRef>
                </tns:holderRefs>
            </tns:permissionHolders>
        </tns:permission>
    </tns:permissions>
    <tns:selfPermissions>
        <tns:permission tns:id="SelfPermission">
            <tns:permissionFlags>
                <tns:flag>CREATE</tns:flag>
                <tns:flag>WRITE</tns:flag>
                <tns:flag>READ</tns:flag>
                <tns:flag>DELETE</tns:flag>
                <tns:flag>DISCOVER</tns:flag>
            </tns:permissionFlags>
            <tns:permissionHolders>
                <tns:holderRefs>
                    <tns:holderRef>admin/admin</tns:holderRef>
                </tns:holderRefs>
            </tns:permissionHolders>
        </tns:permission>
    </tns:selfPermissions>
</tns:accessRight>

GET 127.0.0.1:8080/context/nscl/accessRights/ar1

DELETE 127.0.0.1:8080/context/nscl/accessRights/ar1
```

6.1.6   Group

```
POST 127.0.0.1:8080/context/nscl/groups
<tns:group xmlns:tns="http://uri.etsi.org/m2m" tns:id="gr1">
    <tns:memberType>CONTAINER</tns:memberType>
    <tns:members>
        <reference>gscl/applications/app1/containers/cont1/contentInstances</reference>
        <reference>gscl/applications/app1/containers/cont2/contentInstances</reference>
    </tns:members>
</tns:group>

PUT 127.0.0.1:8080/context/nscl/groups/gr1
<tns:group xmlns:tns="http://uri.etsi.org/m2m">
    <tns:members>
        <reference>nscl/applications/app1/containers/cont1/contentInstances</reference>
        <reference>nscl/applications/app2/containers/cont1/contentInstances</reference>
        <reference>nscl/applications/app3/containers/cont1/contentInstances</reference>
    </tns:members>
</tns:group>

GET 127.0.0.1:8080/context/nscl/groups/gr1

DELETE 127.0.0.1:8080/context/nscl/groups/gr1
-----------------------------------------------------------------------
```

6.2 Resource Representations examples

In order to ease test setup and execution, M2M SCL and Applications are requested to support the following resources.

Table 3: M2M Resources Representations

M2M Primitive	Resource name	Resource Representation
applicationCreateRequest	\<app>	`<?xml version="1.0"?>` `<tns:application xmlns:tns="http://uri.etsi.org/m2m" tns:id="app"/>`

applicationCreateResponse	\<app>	`<?xml version="1.0"?>`
		`<tns:application xmlns:tns="http://uri.etsi.org/m2m" tns:id="app ">`
		`   <tns:expirationTime>2012-10-25T13:13:04</tns:expirationTime>`
		`</tns:application>`

applicationRetrieveResponse	\<app>	`<?xml version="1.0"?>`
		`<tns:application xmlns:tns="http://uri.etsi.org/m2m" tns:id="app">`
		` <tns:applicationStatus>ONLINE</tns:applicationStatus>`
		` <tns:expirationTime>2012-11-19T18:39:05</tns:expirationTime>`
		` <tns:lastModifiedTime>2012-11-12T19:59:05</tns:lastModifiedTime>`
		` <tns:containersReference>`
		`        /gsclBase/applications/app/containers`
		` </tns:containersReference>`
		` <tns:groupsReference>`
		`        /gsclBase/applications/app/groups`
		` </tns:groupsReference>`
		` <tns:accessRightsReference>`
		`        /gsclBase/applications/app/accessRights`
		` </tns:accessRightsReference>`
		` <tns:subscriptionsReference>/`
		`        /gsclBase/applications/app/subscriptions`
		` </tns:subscriptionsReference>`
		`</tns:application>`

applicationUpdateRequest	\<app>	`<?xml version="1.0"?>`
		`<tns:application xmlns:tns="http://uri.etsi.org/m2m">`
		`    <tns:aPoc>http://App _IP_Address:Port</tns:aPoc>`
		`</tns:application>`

applicationUpdateResponse	\<app>	`<?xml version="1.0"?>`
		`<tns:application xmlns:tns="http://uri.etsi.org/m2m">`
		`   <tns:expirationTime>2012-10-25T13:13:04</tns:expirationTime>`
		`</tns:application>`

applicationCreateRequest	\<appAnnc>	`<?xml version="1.0"?>`
		`<tns:application xmlns:tns="http://uri.etsi.org/m2m" tns:id="app_ann">`
		`   <tns:announceTo>`
		`      <tns:activated>true</tns:activated>`
		`   </tns:announceTo>`
		`   <tns:aPoc>http://App _IP_Address:Port</tns:aPoc>`
		`</tns:application>`

applicationCreateResponse	\<appAnnc>	`<tns:application xmlns:tns="http://uri.etsi.org/m2m" tns:id="app_ann">`
		`   <tns:expirationTime>2012-10-25T13:13:04</tns:expirationTime>`
		`</tns:application>`

subscriptionCreateRequest	\<sub>	`<?xml version="1.0"?>`
		`<tns:subscription xmlns:tns="http://uri.etsi.org/m2m" tns:id="sub">`
		`   <tns:contact>http://App _IP_Addr:Port/da_notif</tns:contact>`
		`</tns:subscription>`

M2M Primitive	Resource name	Resource Representation

subscriptionCreateResponse	<sub>	`<?xml version="1.0"?>`
		`<tns:subscription xmlns:tns="http://uri.etsi.org/m2m" tns:id="sub">`
		`  <tns:expirationTime>2012-10-25T13:13:04</tns:expirationTime>`
		`</tns:subscription>`

subscriptionNotifyRequest	<sub>	`<?xml version="1.0"?>`
		`<tns:notify xmlns:tns="http://uri.etsi.org/m2m">`
		`  <statusCode>1</statusCode>`
		`  <representation>`
		`     base64Binary encoded representation of application resource`
		`  </representation>`
		`  <subscriptionReference>`
		` http://GW_IP_Addr:Port/gw01/applications/app/subscriptions/sub`
		`  </subscriptionReference>`
		`</tns:notify>`

subscriptionNotifyResponse	<sub>	`<?xml version="1.0"?>`
		`<tns:notify xmlns:tns="http://uri.etsi.org/m2m">`
		`  <statusCode>1</statusCode>`
		`</tns:notify>`

containerCreateRequest	<container>	`<?xml version="1.0"?>` `<tns:container xmlns:tns="http://uri.etsi.org/m2m" tns:id="container"/>`
containerCreateResponse	<container>	`<?xml version="1.0"?>` `<tns:container xmlns:tns="http://uri.etsi.org/m2m" tns:id="container"/>`

contentInstanceCreateRequest	<contentInstance>	`<?xml version="1.0"?>`
		`<tns:contentInstance xmlns:tns="http://uri.etsi.org/m2m">`
		` <tns:content>`
		`  <tns:textContent>content</tns:textContent>`
		` </tns:content>`
		`</tns:contentInstance>`

contentInstanceCreateResponse	<contentInstance>	`<?xml version="1.0"?>`
		`<tns:contentInstance xmlns:tns="http://uri.etsi.org/m2m"`
		`tns:id="contentInstance"/>`

groupCreateRequest	<groupPOST>	`<tns:group xmlns:tns="http://uri.etsi.org/m2m" tns:id="groupPOST">`
		`  <tns:memberType>CONTAINER</tns:memberType>`
		`  <tns:members>`
		`<reference>gscl/applications/app1/containers/cont1/contentInstances</reference>`
		`<reference>gscl/applications/app2/containers/cont2/contentInstances</reference>`
		`    </tns:members>`
		` </tns:group>`

groupCreateRequest	<groupGET>	`<tns:group xmlns:tns="http://uri.etsi.org/m2m" tns:id="groupGET">`
		`  <tns:memberType>CONTAINER</tns:memberType>`
		`  <tns:members>`
		`<reference>gscl/applications/app1/containers/cont1/contentInstances/latest</reference>`
		`<reference>gscl/applications/app2/containers/cont2/contentInstances/latest</reference>`
		`    </tns:members>`
		` </tns:group>`

6.3   aPoc Re-Targeting Procedure

When App registers to its Local SCL it can:

- either use the aPoc Re-Targeting mechanism; or

- create and update contentInstance resource on the Local SCL.

As a consequence, when the Local SCL receives a resource retrieve request, it shall:

- either forward the request to App; or

- reply directly to the request itself.

6.4   M2M Settings

In order to ease test setup and execution, M2M SCL and Applications are requested to support the following settings:

- Security shall be disable as it is out of scope of the interoperability testing.

- HTTP mapping of ETSI M2M primitives is used.

- Resource names are pre-provisioned, except for content instance resources that are automatically assigned by the hosting SCL.

- Search strings are pre-provisioned identifying applications and containers.

- After each "Delete" primitive on a resource, the user shall check the resource is indeed effectively deleted.

- Unless it is indicated in the test cases prequisites, by default, all the applications shall have the required access right to manage resources on SCL.

7   Test configurations

7.1   dIa M2M DA-GSCL (M2M_CFG_01)

DA manages resources on local GSCL.
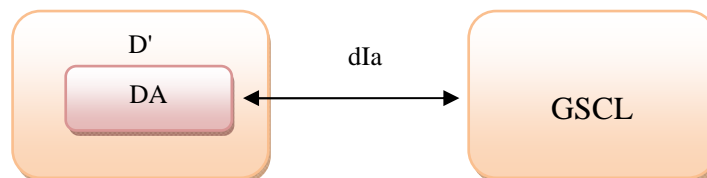
Figure 1

7.2   mId M2M (M2M_CFG_02)
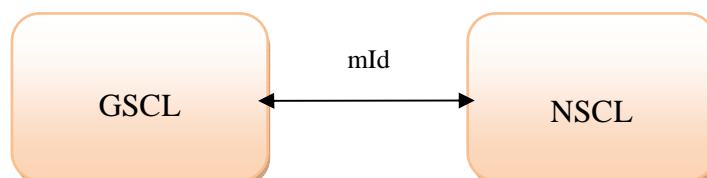
Figure 2

7.3   mIa M2M (M2M_CFG_03)

NA manages resources on local NSCL.
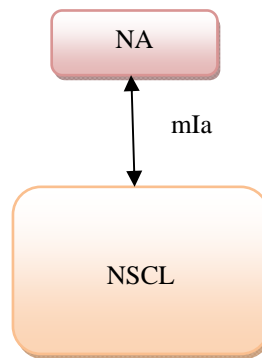
Figure 3

7.4   Multi-Hop M2M DA to NSCL (M2M_CFG_04)

DA manages resources on remote NSCL.

Figure 4

7.5   Multi-Hop M2M NA to GSCL (M2M_CFG_05)

NA manages resources on remote GSCL.
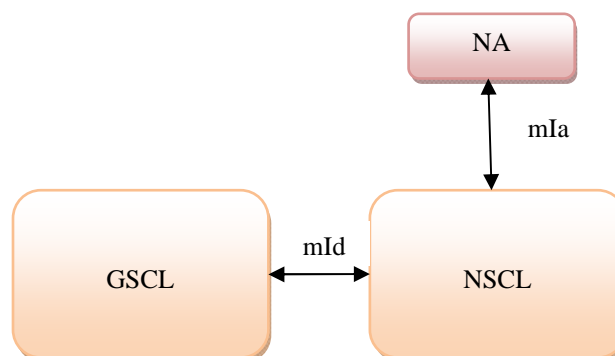
**Figure 5**

7.6   End to End M2M DA-NA (M2M_CFG_06)
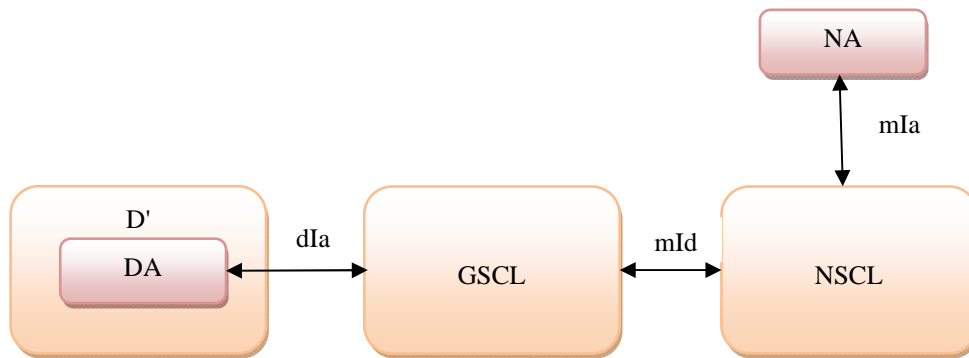

Figure 6

7.7   dIa M2M GA-GSCL (M2M_CFG_07)
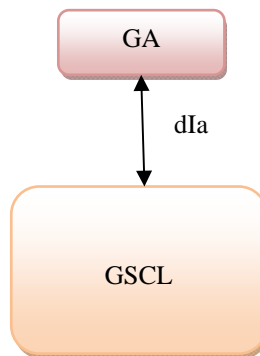
Figure 7

## 7.8   Multi-Hop M2M GA to NSCL (M2M_CFG_08)

GA manages resources on remote NSCL.
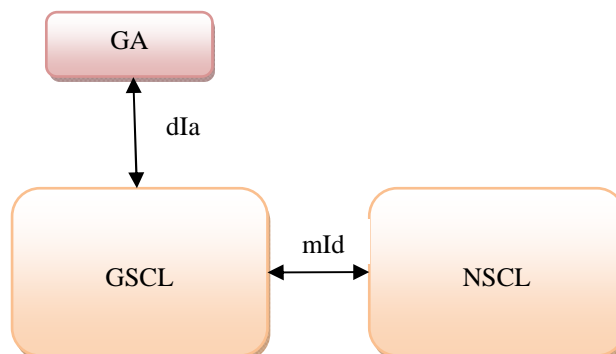
Figure 8

7.9   dIa M2M DA-DSCL (M2M_CFG_09)
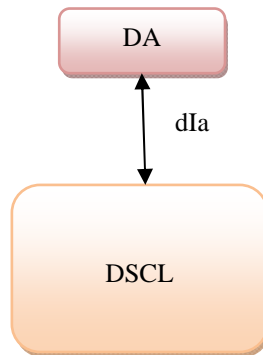
Figure 9

## 7.10   Multi-Hop M2M DA to NSCL (M2M_CFG_10)

DA manages resources on remote NSCL.
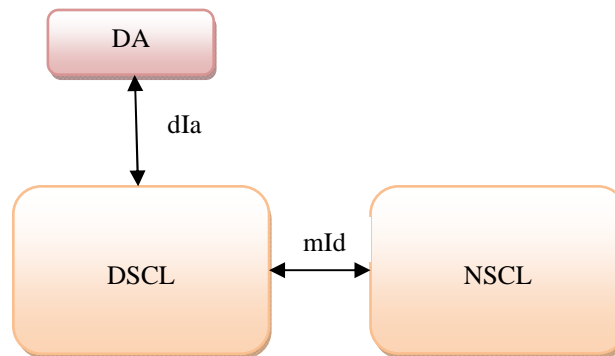
**Figure 10**

7.11   End to End M2M GA-NA (M2M_CFG_11)
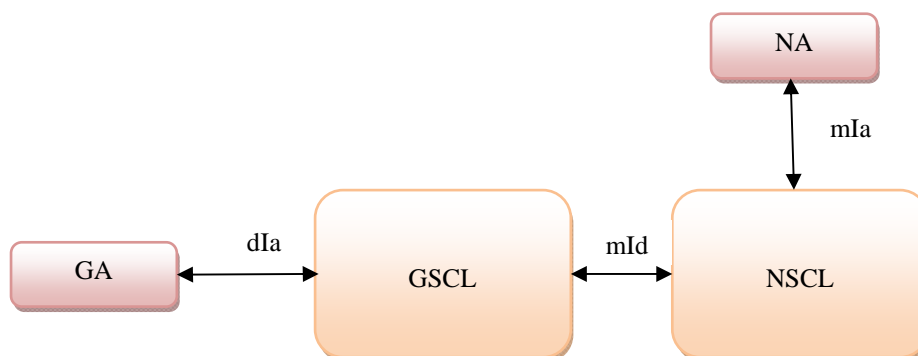
Figure 11

8 Test Descriptions

8.1 Point to Point configuration testing

8.1.1 SCL Mutual Registration

Interoperability Test Description			
Identifier:	TD_M2M_P2P_01		
Objective:	GSCL registers to NSCL		
Configuration:	M2M_CFG_02		
References:	ETSI TS 102 921 [1], clause 10.6.2 ETSI TS 102 690 [2], clause 9.3.2.2		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	GSCL is requested to send a SCLCreateRequest (POST) to NSCL
	2	Check (mId)	Sent POST request contains: • Request method = POST • Request URI <nscl>/scls • Host • Content Type option • Payload: <gscl> resource
	3	Check (mId)	NSCL sends response containing: • Status Code = 201 • Content-Location: <nscl>/scls/<gscl> • Payload: created <gscl> resource
	4	Verify	NSCL and GSCL indicate successful operation

8.1.2 SclBase Management

8.1.2.1 SclBase Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_02		
Objective:	App retrieves the sclBase resource via a sclBaseRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.4.3 ETSI TS 102 690 [2], clause 9.3.2.4		
Pre-test conditions:	sclBase resource has been automatically created in local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a retrieveRequest (GET) to local SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <sclBase> • Host: localSCL • Content Type option • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code = 200 • Payload: <sclBase> resource
	4	Verify (dIa)	App indicates successful operation

8.1.2.2 SclBase Update

Interoperability Test Description			
Identifier:	TD_M2M_P2P_03		
Objective:	App updates the sclBase resource via an sclBaseUpdateRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.4.4		
Pre-test conditions:	sclBase resource has been automatically created in local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an update Request (PUT)
	2	Check (dIa/mIa)	Sent PUT request contains: • Request method = PUT • Request URI <sclBase> • Host: localSCL • Content Type option • Payload: modified <sclBase> resource
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code = 200 • Payload: updated <sclBase> resource
	4	Verify	App indicates successful operation

8.1.3 Application Registration

8.1.3.1 Application Resource creation

Interoperability Test Description			
Identifier:	TD_M2M_P2P_04		
Objective:	App registers to its local SCL via an applicationCreateRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.8.2 ETSI TS 102 690 [2], clause 9.3.2.8		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an applicationCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request method = POST • Request URI <sclBase>/applications • Host: localSCL • Content Type option • Payload: application resource <app> to be created
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code = 201 • Content-Location: <sclBase>/applications/<app> • Payload: created <app> resource
	4	Verify	App indicates successful operation

8.1.3.2   Application Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_05		
Objective:	App retrieves application resource via an applicationRetrieveRequest (GET)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.8.3 ETSI TS 102 690 [2], clause 9.3.2.8		
Pre-test conditions:	App has created an Application resource <app> on local SCL		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send an applicationRetrieveRequest (GET)
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <sclBase>/applications/<app> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code =200 • Payload: <app> resource
	4	Verify	App indicates successful operation

8.1.3.3   Application Update

Interoperability Test Description			
Identifier:	TD_M2M_P2P_06		
Objective:	App updates attribute in application resource via an applicationUpdateRequest (PUT)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.8.4 ETSI TS 102 690 [2], clause 9.3.2.8		
Pre-test conditions:	App has created an Application resource <app> on local SCL		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send an applicationUpdateRequest (PUT)
	2	Check (dIa/mIa)	Sent PUT request contains: • Request method = PUT • Request URI <sclBase>/applications/<app> • Host: localSCL • Payload: modified application resource
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: updated <app> resource
	4	Verify	App indicates successful operation

8.1.3.4   Application Delete

Interoperability Test Description			
Identifier:	TD_M2M_P2P_07		
Objective:	App de-registers by deleting application resource via an applicationDeleteRequest (DELETE)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.8.5 ETSI TS 102 690 [2], clause 9.3.2.8		
Pre-test conditions:	App has created an Application resource <app> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an applicationDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request method = DELETE • Request URI <sclBase>/applications/<app> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Status Code = 204 • Payload: empty
	4	Verify	App indicates successful operation

8.1.4   Container Management

8.1.4.1   Container Create

Interoperability Test Description			
Identifier:	TD_M2M_P2P_08		
Objective:	App creates a container ressource in local SCL via a containerCreateRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.14.2 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	Application <app> has been created in Local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a containerCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains • Request URI <sclBase>/applications/<app>/containers/<container> • Host: localSCL • Payload: container resource <container> to be created
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 201 • Content-Location: <sclBase>/applications/<app>/containers/<container> • Payload: Created <container>
	4	Verify	App indicates successful operation
	5		Repeat step 1-4 creating container resource with short lifetime
	6		Check the created resource is removed after the expiry of its lifetime

8.1.4.2   Container Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_09		
Objective:	App retrieves information of a container resource via a containerRetrieveRequest (GET)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.14.3 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	App has created a container resource <container> in application <app> on the local SCL		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a containerRetrieveRequest (GET) for resource <container>
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase>/applications/<app>/containers/<container> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: <container> resource
	4	Verify	App indicates successful operation

8.1.4.3   Container Update

Interoperability Test Description			
Identifier:	TD_M2M_P2P_10		
Objective:	App updates attribute in application resource via an containerUpdateRequest (PUT)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.14.3 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	App has created a container resource <container> in application <app> on the local SCL		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send an containerUpdateRequest (PUT) to update the lifetime of the resource.
	2	Check (dIa/mIa)	Sent PUT request contains: • Request URI <sclBase>/applications/<app>/containers/<container> • Host: localSCL • Payload: modified <container> resource
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: Updated <container> resource
	4	Verify	App indicates successful operation

8.1.4.4   Container Delete

Interoperability Test Description			
Identifier:	TD_M2M_P2P_11		
Objective:	App delete a specific container ressource via a containerDeleteRequest (DELETE)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.14.3 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	App has created a container resource <container> in application <app> on the local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an containerDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI <sclBase>/applications/<app>/containers/<container> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 204 • Payload: empty
	4	Verify	App indicates successful operation

8.1.5   ContentInstance Management

8.1.5.1   Content Instance Create

Interoperability Test Description			
Identifier:	TD_M2M_P2P_12		
Objective:	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in local SCL via a contentInstanceCreateRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• App has created an Application resource <app> on SCL (Registered into local SCL) • App has created a container resource <container> in <app> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a contentInstanceCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI <sclBase>/applications/<app>/containers/<container>/contentInstances • Host: localSCL • Payload: ContentInstance resource <contentInstance> to be created
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 201 • Content-Location: <sclBase>/ applications/<app>/containers/<container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource
	4	Verify	App indicates successful operation
	5		Repeat steps 1-4 for a contentInstance of a **locationcontainer** resource

8.1.5.2   Content Instance Create using plain text

Interoperability Test Description			
Identifier:	TD_M2M_P2P_13		
Objective:	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in local SCL via a contentInstanceCreateRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• Application <app> and associated container <container> have been created on local SCL • App has discovered the <app> and <container> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a contentInstanceCreateRequest (POST) using plain text data
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI <localSCL>/applications/<app>/containers/<container>/contentInstances • Host: localSCL • Payload: "plain text" to be created
	3	Verify	local SCL indicates successful operation
	4	Check (dIa/mIa)	Remote SCL sends response containing: • Code = 201 • Content-Location: <sclBase>/ applications/<app>/containers/<container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource containing "plain text" as content
	5	Verify	App indicates successful operation
	6		Repeat steps 1-5 for a contentInstance of a **locationcontainer** resource

8.1.5.3   Content Instance Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_14		
Objective:	App retrieves information of a contentInstance resource via a containerRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.19.3 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• App has created an application resource <app> on local SCL • App has created a container resource <container> in <app> on local SCL • App has created a contentInstance resource <contentInstance> residing under the <container> resource.		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a containerRetrieveRequest (GET) for retrieving the attributes/meta-data and the opaque data of a <contentInstance> resource
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase>/applications/<app>/containers/<container>/contentInstances/<contentInstance> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 200 • Payload: <contentInstance> resource
	4	Verify	App indicates successful operation
	5		Repeat steps 1-4 for a contentInstance of a locationcontainer resource
	6		Repeat steps 1-4 using "latest' instead of <contentInstance> to get the latest contentInstance
	7		Repeat steps 1-4 using "oldest" instead of <contentInstance> to get the oldest contentInstance

8.1.5.4   ContentInstance Content retrieve (partial addressing)

Interoperability Test Description			
Identifier:	TD_M2M_ P2P_15		
Objective:	Handle contentInstanceRetrieveRequest with targetID using partial addressing (content attribute)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.19.3 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• App has created an application resource <app> on local SCL • App has created a container resource <container> in <app> on local SCL • App has created a contentInstance resource <contentInstance> residing under the <container> resource		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a containerRetrieveRequest (GET) for retrieving the content attribute of a <contentInstance> resource
	2	Check (dIa/mIa)	Sent GET request contains • Request URI <sclBase>/applications/<app>/containers/<container>/contentInstances/<contentInstance>/content • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 200 • Payload: value of the content attribute
	4	Verify	App indicates successful operation
	5		Repeat steps 1-4 to get a content of a contentInstance residing in locationcontainer resource.

8.1.5.5   Content Instance Delete

Interoperability Test Description			
Identifier:	TD_M2M_P2P_16		
Objective:	App deletes contentInstance resource via a containerDeleteRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• App has created a container resource <container> on local SCL • App has created a contentInstance resource <contentInstance> residing under a <container> resource.		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a contentInstanceDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI <sclBase>/containers/<container>/contentInstances/<contentInstance> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	local SCL sends response containing: • Code = 204 • Payload: empty
	4	Verify	App indicates successful operation

8.1.6   Discovery Management

8.1.6.1   Discovery of all resources

Interoperability Test Description			
Identifier:	TD_M2M_P2P_17		
Objective:	App discovers resources residing in Local SCL via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an Application resource <app> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under resource */discovery* located in local SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase>/discovery • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: Discovery resource including references to all resources residing in Local SCL
	4	Verify	App indicates successful operation

8.1.6.2   Discovery with Filter Criteria

Interoperability Test Description			
Identifier:	TD_M2M_P2P_18		
Objective:	App discovers resources residing in Local SCL using specific Filter criteria via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an Application resource <app> on local SCL with searchString=key1		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under a well known resource */discovery* located in local SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase>/discovery?searchString =key1 • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: Discovery resource including references to <app>
	4	Verify	App indicates successful operation

8.1.6.3   Discovery with max size

Interoperability Test Description			
Identifier:	TD_M2M_P2P_19		
Objective:	App discovers resources residing in Local SCL with a limited max size via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an Application resource <app> on SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under resource */discovery* located in local SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase>/discovery?maxSize=2 • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: Trunked Discovery resource including only 2 resource references
	4	Verify	App indicates successful operation

8.1.6.4 Discovery with searchPrefix

Interoperability Test Description			
Identifier:	TD_M2M_P2P_20		
Objective:	App discovers resources residing in Local SCL limited search prefix via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an Application resource <app> on SCL		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under a resource */discovery* located in local SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI: <sclBase>/discovery?searchPrefix=<sclBase>/applications • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: Discovery resource including only resources under <sclBase>/applications
	4	Verify	App indicates successful operation

8.1.6.5 Discovery with multiple parameters

Interoperability Test Description			
Identifier:	TD_M2M_P2P_21		
Objective:	App discovers resources residing in Local SCL using multiple parameters via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an Application resource <app> on local SCL with searchString=key1 and searchString=key2		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under a well known resource */discovery* located in local SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase>/discovery?searchString =key1 &searchString=key2&maxSize=1&searchPrefix=<sclBase>/applications • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: Discovery resource including a reference to <app>
	4	Verify	App indicates successful operation

8.1.7   Subscription Management

8.1.7.1   Subscription Create

Interoperability Test Description			
Identifier:	TD_M2M_P2P_22		
Objective:	App creates a subscription to application resource via subscriptionCreateRequest (POST)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an application resource <app> on local SCL • App has created a container resource <container> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a subscriptionCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI: <sclBase>/applications/<app>/containers/<container> /contentInstances/subscriptions • Host: localSCL • Payload: subscription <sub> resource to be created
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 201 • Content-Location: <sclBase>/applications/<app>/containers/<container> /contentInstances/subscriptions/<sub> • Payload: Created <sub> resource
	4	Verify	App indicates successful operation

8.1.7.2   Subscription Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_23		
Objective:	App retrieves information about a subscription via subscriptionRetrieveRequest (GET), such as expirationTime, filterCriteria, contactURI, noRepresentation, timeoutReason, etc.		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an application resource <app> on local SCL • App has created a container resource <container> on local SCL • App has created a subscription resource <sub> on Local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a subscriptionRetrieveRequest (GET) for retrieving information about a subscription <sub>
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI: <sclBase>/applications/<app>/containers/<container> /contentInstances/subscriptions/<sub> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: <sub> resource
	4	Verify	App indicates successful operation

8.1.7.3   Subscription Update

Interoperability Test Description			
Identifier:	TD_M2M_P2P_24		
Objective:	App updates information about a subscription via subscriptionRetrieveRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created a subscription resource <sub> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a subscriptionRetrieveRequest (PUT) to update the lifetime of the resource
	2	Check (dIa/mIa)	Sent PUT request contains: • Request URI: <sclBase>/applications/<app>/containers/<container>/contentInstances/subscriptions/<sub> • Host: localSCL • Payload: Modified <sub> resource
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: Modified <sub> resource
	4	Verify	App indicates successful operation

8.1.7.4   Subscription Delete

Interoperability Test Description			
Identifier:	TD_M2M_P2P_25		
Objective:	App cancels subscription via an subscriptionDeleteRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an application resource <app> on local SCL • App has created a container resource <container> on local SCL • App has created a subscription resource <sub> on Local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a subscriptionDeleteRequest
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI: <sclBase>/applications/<app>/containers/<container>/contentInstances/subscriptions/<sub> • Host: localSCL • Payload: Empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 204 • Payload: Empty
	4	Verify	App indicates successful operation

8.1.7.5 Subscription Notify (To server-capable application)

Interoperability Test Description			
Identifier:	TD_M2M_P2P_26		
Objective:	SCL sends notification(s) via subscriptionNotifyRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App2 has created an Application resource <app> with its associated container <container> on local SCL • App1 shall be server capable • App1 has created subscription <sub> to <container> contentInstances resource on local SCL using a "contactURI" • A listener is listening on "contactURI" to check the notify		
Test Sequence:	Step	Type	Description
	1	Stimulus	App2 is requested to send a contentInstanceCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • URI:<sclBase>/applications/<app>/containers/<container>/ contentInstances • Payload: <contetnInstance> resource • Host: localSCL
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 201 • Location:<sclBase>/applications/<app>/containers/<container >/contentInstances/<contetnInstance> • Payload: created <contetnInstance> resource
	4	Verify	App2 indicates successful operation
	5	Verify	SCL sends subscriptionNotifyRequest (POST)
	6	Check (dIa/mIa)	Sent POST request contains: • Request URI: App1 listener contactURI • Host: listener host • Payload: <notify> resource containing the <contentInstance> resource
	7	Verify	App1 sends subscriptionNotifyResponse
	8	Check (dIa)	App1 sends response containing: • Code = 201 • Payload: empty
	9	Verify	App1 indicates successful operation

8.1.7.6   Subscription Notify (To application container)

Interoperability Test Description			
Identifier:	TD_M2M_P2P_27		
Objective:	SCL sends notification(s) via subscriptionNotifyRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App2 has created an Application resource <app2> with its associated container <container2> on local SCL • App1 has created an Application resource <app1> with its associated <container1> • App1 has created a subscription <sub> to <container2> contentInstances resource on local SCL using: <sclBase>/applications/<app1>/containers/<container1> as "contactURI"		
Test Sequence:	Step	Type	Description
	1	Stimulus	App2 is requested to send a contentInstanceCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • URI:<sclBase>/applications/<app2>/containers/<container2>/contentInstances • Payload: <contetnInstance> resource • Host: localSCL
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 201 • Location:<sclBase>/applications/<app2>/containers/<container2>/contentInstances/<contetnInstance> • Payload: created <contetnInstance> resource
	4	Verify	App2 indicates successful operation
	5	Verify	SCL sends subscriptionNotifyRequest (POST)
	6	Check (dIa/mIa)	Sent POST request contains: • Request URI: <sclBase>/applications/<app2>/containers/<container2>/contentInstances • Host: local SCL • Payload: <notify> resource containing the <contentInstance> resource
	7	Verify	SCL sends subscriptionNotifyResponse
	8	Check (dIa)	SCL sends response containing: • Code = 201 • Payload: empty
	9	Verify	SCL indicates successful operation

8.1.8   Notification Channel Management

8.1.8.1   NotificationChannel Create

Interoperability Test Description			
Identifier:	TD_M2M_P2P_28		
Objective:	App creates a notificationChannel to application resource via notificationChannelCreateRequest (POST)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:			
Pre-test conditions:	• App has created an application resource <app> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a notificationChannelCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI: <sclBase>/applications/<app>/notificationChannels • Host: localSCL • Payload: notificationChannel <nc> resource to be created
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 201 • Content-Location: <sclBase>/applications/<app>/notificationChannels/<nc> • Payload: NotificationChannel <nc> resource
	4	Verify	App indicates successful operation

8.1.8.2   NotificationChannel Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_29		
Objective:	App retrieves information about a notificationChannel via notificationChannelRetrieveRequest (GET).		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:			
Pre-test conditions:	• App has created a notificationChannel resource <nc> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a notificationChannelRetrieveRequest (GET) for retrieving information about a notificationChannel <nc>
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI: <sclBase>/applications/<app>/notificationChannels/<nc> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: notificaitonChannel <nc> resource
	4	Verify	App indicates successful operation

8.1.8.3   NotificationChannel Delete

Interoperability Test Description			
Identifier:	TD_M2M_P2P_30		
Objective:	App deletes a notificaiton Channel via a notificationChannelDeleteRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:			
Pre-test conditions:	• App has created a notificationChannel resource <nc> on local SCL		
Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a notificationChannelDeleteRequest
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI: <sclBase>/applications/<app>/notificationChannels/<nc> • Host: localSCL • Payload: Empty
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 204 • Payload: Empty
	4	Verify	App indicates successful operation

8.1.8.4   Long polling based notifications

Interoperability Test Description			
Identifier:	TD_M2M_P2P_31		
Objective:	NA/DA receives notifications via a notificationChannelRetreiveRequest (GET) using long polling.		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:			
Pre-test conditions:	• App1 has created an application resource <app1> with its associated container <container> on local SCL • App2 has created an application resource <app2> on local SCL • App2 has created a notificationChannel resource <nc> to <app2> and obtained a "ContactURI" and a "LongPollingURI" (element in the channelData attribute) • App2 has sent a retrieve request to the provided "LongPollingURI" • App2 has subscribed to <app1> <container> contentInstances resource using the provided "ContactURI"		
Test Sequence:	Step	Type	Description
	1	Stimulus	App1 is requested to send a contentInstanceCreateRequest (POST) to create content instance on its corresponding <container>.
	2	Check (dIa/mIa)	Sent POST request contains: • URI:<sclBase>/applications/<app1>/containers/<container>/contentInstances • Payload: <contetnInstance> resource • Host: localSCL
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 201 • Location:<sclBase>/applications/<app1>/containers/<container>/contentInstances/<contetnInstance> • Payload: created <contetnInstance> resource
	4	Verify	App1 indicates successful operation
	5	Verify	SCL correlates the "contactURI" to the notificationChannel <nc> and finds a long polling request active on "longPollingURI" related to App2 SCL sends a notificationChannelRetrieveResponse to App2
	6	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: <notify> resource containing the <contentInstance> resource
	7	Verify	App2 indicates successful operation
	8	Verify	App2 sends a new notificationChannelRetrieveResponse to the "LongPollingURI" and waits for the next event

8.1.9   AccessRight Management

8.1.9.1   AccessRight Resource creation

Interoperability Test Description			
Identifier:	TD_M2M_P2P_32		
Objective:	App create an AccessRight resource via an accesRightCreateRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.11.2 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an accessRightCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request method = POST • Request URI <sclBase>/accessRights • Host: localSCL • Payload: application resource <accessRight> to be created
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code = 201 • Content-Location: <sclBase>/accessRights/<accessRight> • Payload: created <accessRight> resource
	4	Verify	App indicates successful operation

8.1.9.2   AccessRight Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_33		
Objective:	App retrieves accessRight resource via an accessRightRetrieveRequest (GET)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.11.3 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• App has created an accessRight resource <accessRight> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a accessRightRetrieveRequest (GET)
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <sclBase>/accessRights/<accessRight> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code =200 • Payload: <app> resource
	4	Verify	App indicates successful operation

8.1.9.3 AccessRight Update

Interoperability Test Description			
Identifier:	TD_M2M_P2P_34		
Objective:	App updates attribute in accessRight resource via an accessRightUpdateRequest (PUT)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.11.4 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• App has created an accessRight resource <accessRight> on SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an accessRightUpdateRequest (PUT)
	2	Check (dIa/mIa)	Sent PUT request contains: • Request method = PUT • Request URI <sclBase>/accessRights/<accessRight> • Host: localSCL • Payload: modified accessRight resource
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: updated <accessRight> resource
	4	Verify	App indicates successful operation

8.1.9.4 AccessRight Delete

Interoperability Test Description			
Identifier:	TD_M2M_P2P_35		
Objective:	App de-registers by deleting accessRightresource via an accessRightDeleteRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.11.5 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• App has created an accessRight resource <accessRight> on SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an accessRightDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains Request method DELETE • Request URI <sclBase>/accessRights/ <accessRight> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	local SCL sends response containing: • Status Code = 204 • Payload: empty
	4	Verify	App indicates successful operation

8.1.9.5   Unauthorized operation (Empty Requesting Entity)

Interoperability Test Description			
Identifier:	TD_M2M_P2P_36		
Objective:	App retrieve request is rejected due to an Empty Requesting Entity		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.11.1 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:			
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an sclBaseRetrieveRequest (GET) for resource <sclBase> with an empty requestingEntity.
	2	Check (dIa/mIa)	Sent GET request contains • Request URI <sclBase> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	4	Verify	App indicates unsuccessful operation

8.1.9.6   Unauthorized operation (Bad Requesting Entity)

Interoperability Test Description			
Identifier:	TD_M2M_P2P_37		
Objective:	App retrieve request is rejected due to bad request Entity.		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.11.1 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an sclBaseRetrieveRequest (GET) for resource <sclBase> with a bad requestingEntity.
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	4	Verify	App indicates unsuccessful operation

8.1.9.7   Unauthorized operation (Insufficient Access Rights)

Interoperability Test Description			
Identifier:	TD_M2M_P2P_38		
Objective:	App delete request is rejected due to Access Rights		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.11.1 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• App has created an application <app> on local SCL • App has created an access Right <ar1> on <app>, which forbids to delete container • App has created a container resource <container> in application <app>, using the access right <ar1>		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a containerDeleteRequest (DELETE) for resource <container>
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI <sclBase>/ applications/<app>/containers/<container> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	4	Verify	App indicates unsuccessful operation

8.1.10   Group Management

8.1.10.1   Group Resource creation

Interoperability Test Description			
Identifier:	TD_M2M_P2P_39		
Objective:	App creates a group resource via a groupCreateRequest		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.21.2 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request method = POST • Request URI <sclBase>/groups • Host: localSCL • Payload: Group resource <group> to be created
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code = 201 • Content-Location: <sclBase>groups/<group> • Payload: created <group> resource
	4	Verify	App indicates successful operation

8.1.10.2   Group Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_P2P_40		
Objective:	App retrieves group resource via a groupRetrieveRequest (GET)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.21.3		
	ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App has created a Group resource <group> on local SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupRetrieveRequest (GET)
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <sclBase>/groups/<group> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code =200 • Payload: <group> resource
	4	Verify	App indicates successful operation

8.1.10.3   Group Update

Interoperability Test Description			
Identifier:	TD_M2M_P2P_41		
Objective:	App updates attribute in group resource via an groupUpdateRequest (PUT)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.21.4		
	ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App has created a group resource <group> on SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupUpdateRequest (PUT)
	2	Check (dIa/mIa)	Sent PUT request contains: • Request method = PUT • Request URI <sclBase>/groups/<group> • Host: localSCL • Payload: modified group resource
	3	Check (dIa/mIa)	SCL sends response containing: • Code = 200 • Payload: updated <group> resource
	4	Verify	App indicates successful operation

8.1.10.4 Group Delete

Interoperability Test Description			
Identifier:	TD_M2M_P2P_42		
Objective:	App deletes group resource via a groupDeleteRequest (DELETE)		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.21.5 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App has created a group resource <group> on SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request method = DELETE • Request URI <sclBase>/groups/<group> • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	Local SCL sends response containing: • Status Code = 204 • Payload: empty
	4	Verify	App indicates successful operation

8.1.10.5 Group Operations (Create)

Interoperability Test Description			
Identifier:	TD_M2M_P2P_43		
Objective:	App creates multiple contentInstance using group resource		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.21.2 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App1 has created an application <app1> with its associated container <cont1> • App2 has created an application <app2> resource with its associated container <cont2> • App3 has created a group resource <groupPOST> on local SCL using the provided representation in ref. (the groupPOST representation should include <cont1>contentInstances and <cont2> contentInstances as members)		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App3 is requested to send a membersContentCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request method = POST • Request URI: <sclBase>/groups/<groupPOST>/membersContent • Host: localSCL • Payload: ContentInstance resource <contentInstance> to be created
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code = 201 • Content-Location: <sclBase>groups/<groupPOST> • Payload: membersContent resource
	4	Verify	App indicates successful operation Verify that <contentInstance> is created on <cont1> and <cont2>

8.1.10.6 Group Operations (Retrieve)

Interoperability Test Description			
Identifier:	TD_M2M_P2P_44		
Objective:	App retrieves multiple contentInstance using group resource		
Configuration:	M2M_CFG_01, M2M_CFG_03, M2M_CFG_07, M2M_CFG_09		
References:	ETSI TS 102 921 [1], clause 10.21.2 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App1 has created an application <app1> with its associated container <cont1> • App2 has created an application <app2> resource with its associated container <cont2> • App3 has created a group resource <groupGET> on local SCL using the provided representation in ref. (the groupGET representation should include App1contentInstaces and App2 contentInstances as members)		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App3 is requested to send a membersContentRetrieveRequest (GET)
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <sclBase>/groups/<groupGET>/membersContent • Host: localSCL • Payload: empty
	3	Check (dIa/mIa)	SCL sends response containing: • Status Code = 200 • Payload: memberContents resource
	4	Verify	App3 indicates successful operation Verify that App3 received <cont1> and <cont2> contentInstances representations

8.2 Multi-Hop configuration testing

8.2.1 Container Management on remote SCL

8.2.1.1 Container Create

Interoperability Test Description			
Identifier:	TD_M2M_MH_01		
Objective:	App creates a container ressource in remote SCL via a containerCreateRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.14.2 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	• Application <app> has been created on remote SCL • App has discovered the <app> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a containerCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI <remoteSCL>/applications/<app>/containers/<container> • Host :localSCL • Payload: container resource <container> to be created
	3	Check (mId)	Forwarded POST request contains: • Request URI • <remoteSCL>/applications/<app>/containers/<container> • Host :remoteSCL • Payload: container resource <container> to be created
	4	Verify	Remote SCL indicates successful operation

Interoperability Test Description			
	5	Check (mId)	Remote SCL sends response containing: • Code = 201 • Content-Location: <remoteSCL>/applications/<app>/containers/<container> • Payload: Created <container>
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 201 • Content-Location: <remoteSCL>/applications/<app>/containers/<container> • Payload: Created <container>
	7	Verify	App indicates successful operation
	8		Repeat step 1-7 creating container resource with short lifetime
	9	Verify	Check the created resource is removed after the expiry of its lifetime

8.2.1.2   Container Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_MH_02		
Objective:	App retrieves information of a container resource via a containerRetrieveRequest (GET)		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.14.3 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • App has discovered the <app> and <container> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a containerRetrieveRequest (GET) for resource <container>
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> • Host :localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: <container> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: <container> resource
	7	Verify	App indicates successful operation

8.2.1.3 Container Update

Interoperability Test Description			
Identifier:	TD_M2M_MH_03		
Objective:	App updates attribute in application resource via an containerUpdateRequest (PUT)		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.14.3 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • App has discovered the <app> and <container> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an containerUpdateRequest (PUT) to update the lifetime of the resource.
	2	Check (dIa/mIa)	Sent PUT request contains: • Request URI < remoteSCL>/ applications/<app>/containers/<container> • Host: localSCL • Payload: modified <container> resource
	3	Check (mId)	Forwarded PUT request contains: • Request URI < remoteSCL>/ applications/<app>/containers/<container> • Host: remoteSCL • Payload: modified <container> resource
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: Updated <container> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: Updated <container> resource
	7	Verify	App indicates successful operation

8.2.1.4 Container Delete

Interoperability Test Description			
Identifier:	TD_M2M_MH_04		
Objective:	App deletes a specific container ressource via a containerDeleteRequest (DELETE)		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.14.3 ETSI TS 102 690 [2], clause 9.3.2.12		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • App has discovered the <app> and <container> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an containerDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded DELETE request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates successful operation

		Interoperability Test Description	
	5	Check (mId)	Remote SCL sends response containing: • Code = 204 • Payload: empty
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 204 • Payload: empty
	7	Verify	App indicates successful operation

8.2.2   ContentInstance Management on remote SCL

8.2.2.1   Content Instance Create

Interoperability Test Description			
Identifier:	TD_M2M_MH_05		
Objective:	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote SCL via a contentInstanceCreateRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • App has discovered the <app> and <container> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a contentInstanceCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> /contentInstances • Host: localSCL • Payload: ContentInstance resource <contentInstance> to be created
	3	Check (mId)	Forwarded POST request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> /contentInstances • Host: remoteSCL • Payload: ContentInstance resource <contentInstance> to be created
	4	Verify	Remote SCL indicates successful operation
	5	Check (dIa/mIa)	Remote SCL sends response containing: • Code = 201 • Content-Location: <remoteSCL>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 201 • Content-Location: <remoteSCL>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource
	7	Verify	App indicates successful operation
	8		Repeat steps 1-7 for a contentInstance of a **locationcontainer** resource

8.2.2.2   Content Instance Create using plain text

Interoperability Test Description			
Identifier:	TD_M2M_MH_06		
Objective:	App adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote SCL via a contentInstanceCreateRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • App has discovered the <app> and <container> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a contentInstanceCreateRequest (POST) using plain text data
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> /contentInstances • Host: localSCL • Payload: "plain text" to be created
	3	Check (mId)	Forwarded POST request contains: • Request URI <sclBase>/ applications/<app>/containers/<container> /contentInstances • Host: remoteSCL • Payload: "plain text" to be created
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 201 • Content-Location: < remoteSCL>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource containing "plain text" as content
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 201 • Content-Location: < remoteSCL>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource containing "plain text" as content
	7	Verify	App indicates successful operation
	8		Repeat steps 1-7 for a contentInstance of a **locationcontainer** resource

8.2.2.3 Content Instance Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_MH_07		
Objective:	App retrieves information of a contentInstance resource via a containerRetrieveRequest on a Remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.19.3 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • A contentInstance resource <contentInstance> has been created under the <container> resource. • App has discovered the <app>, <container> and <contentInstance> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a containerRetrieveRequest (GET) for retrieving the attributes/meta-data and the opaque data of a <contentInstance> resource
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <remoteSCL>/applications/<app>/containers/<container>/contentInstances/<contentInstance> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI <remoteSCL>/applications/<app>/containers/<container>/contentInstances/<contentInstance> • Host: remoteSCL • Payload: empty
	4	Verify	Remote indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: <contentInstance> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: <contentInstance> resource
	7	Verify	App indicates successful operation
	8		Repeat steps 1-7 for a contentInstance of a locationcontainer resource
	9		Repeat steps 1-7 using "latest" instead of <contentInstance> to get the latest contentInstance
	10		Repeat steps 1-7 using "oldest" instead of <contentInstance> to get the oldest contentInstance

8.2.2.4   ContentInstance Content retrieve (partial addressing)

Interoperability Test Description			
Identifier:	TD_M2M_ MH_08		
Objective:	Handle contentInstanceRetrieveRequest with targetID using partial addressing (content attribute)		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.19.3 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • A contentInstance resource <contentInstance> has been created under the <container> resource • App has discovered the <contentInstance> resource on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a containerRetrieveRequest (GET) for retrieving the content attribute of a <contentInstance> resource
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <remoteSCL>/applications/<app>/containers/<container>/contentInstances/<contentInstance>/content • Host: localSCL • Payload: empty
	3	Check (mId)	Sent GET request contains: • Request URI <remoteSCL>/applications/<app>/containers/<container>/contentInstances/<contentInstance>/content • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	remote SCL sends response containing: • Code = 200 • Payload: value of the content attribute
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: value of the content attribute
	7	Verify	App indicates successful operation
	8		Repeat steps 1-7 to get a content of a contentInstance residing in locationcontainer resource

8.2.2.5   Content Instance Delete

Interoperability Test Description			
Identifier:	TD_M2M_MH_09		
Objective:	App deletes contentInstance resource via a containerDeleteRequest on Remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • A contentInstance resource <contentInstance> has been created under the <container> resource • App has discovered the <app>,<container> and <contentInstance> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a contentInstanceDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI <remoteSCL>/containers/<container>/contentInstances/<contentInstance> • Host: localSCL • Payload: empty

			Interoperability Test Description
	3	Check (mId)	Forwarded DELETE request contains: • Request URI <remoteSCL>/containers/<container> /contentInstances/<contentInstance> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 204 • Payload: empty
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 204 • Payload: empty
	7	Verify	App indicates successful operation

8.2.3 Discovery Management on remote SCL

8.2.3.1 Discovery of all resources

Interoperability Test Description			
Identifier:	TD_M2M_MH_10		
Objective:	App discovers resources residing in remote SCL via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under resource */discovery* located in remote SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <remoteSCL>/discovery • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI <remoteSCL>/discovery • Host: remoteSCL • Payload: empty
	4	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: Discovery resource including references to all resources residing in remote SCL
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: Discovery resource including references to all resources residing in remote SCL
	6	Verify	App indicates successful operation

8.2.3.2   Discovery with Filter Criteria

Interoperability Test Description			
Identifier:	TD_M2M_MH_11		
Objective:	App discovers resources residing in remote SCL using specific Filter criteria via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• Application <app> has been created on remote SCL with searchString=key1		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under the resource */discovery* located in remote SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <remoteSCL>/discovery?searchString =key1 • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI <remoteSCL>/discovery?searchString =key1 • Host: remoteSCL • Payload: empty
	4	Check (dIa/mIa)	Remote SCL sends response containing: • Code = 200 • Payload: Discovery resource including references to <app>
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: Discovery resource including references to <app>
	6	Verify	App indicates successful operation

8.2.3.3   Discovery with max size

Interoperability Test Description			
Identifier:	TD_M2M_MH_12		
Objective:	App discovers resources residing in remote SCL with a limited max size via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under resource */discovery* located in remote SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <remoteSCL>/discovery?maxSize=2 • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI <remoteSCL>/discovery?maxSize=2 • Host: remoteSCL • Payload: empty
	4	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: Trunked Discovery resource including only 2 resource references

		Interoperability Test Description	
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: Trunked Discovery resource including only 2 resource references
	6	Verify	App indicates successful operation

8.2.3.4   Discovery with searchPrefix

Interoperability Test Description			
Identifier:	TD_M2M_MH_13		
Objective:	App discovers resources residing in remote SCL limited search prefix via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under a resource */discovery* located in remote SCL
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI: < remoteSCL>/discovery ?searchPrefix=<remoteSCL>/applications • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI: < remoteSCL>/discovery ?searchPrefix=<remoteSCL>/applications • Host: remoteSCL • Payload: empty
	4	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: Discovery resource including only resources under <remoteSCL>/applications
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: Discovery resource including only resources under <remoteSCL>/applications
	6	Verify	App indicates successful operation

8.2.3.5   Discovery with multiple parameters

Interoperability Test Description			
Identifier:	TD_M2M_MH_14		
Objective:	App discovers resources residing in remote SCL using multiple parameters via DiscoveryRetrieveRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• App has created an Application resource <app> on remote SCL with searchString=key1 and searchString=key2		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a DiscoveryRetrieveRequest in order to discover resources under a well known resource */discovery* located in remote SCL
	2	Check (dIa/mIa)	Sent GET request contains • Request URI <sclBase>/discovery?searchString =key1 &searchString=key2&maxSize=1&searchPrefix=<sclBase>/applications • Host: localSCL • Payload: empty
	3	Check (md)	Sent GET request contains • Request URI <sclBase>/discovery?searchString =key1 &searchString=key2&maxSize=1&searchPrefix=<sclBase>/applications • Host: remoteSCL • Payload: empty
	4	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: Discovery resource including a reference to <app>
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: Discovery resource including a reference to <app>
	6	Verify	App indicates successful operation

8.2.4   Subscription Management on remote SCL

8.2.4.1   Subscription Create

Interoperability Test Description			
Identifier:	TD_M2M_MH_15		
Objective:	App creates a subscription to application resource via subscriptionCreateRequest (POST) on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• Application <app> and its associated container <container> have been created on remote SCL • App has discovered the <app> and <container> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a subscriptionCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI: <RemoteSCL>/applications/<app>/containers/<container> /contentInstances/subscriptions • Host: localSCL • Payload: subscription <sub> resource to be created
	3	Check (mId)	Forwarded POST request contains: • Request URI: <remoteSCL>/applications/<app>/containers/<container> /contentInstances/subscriptions • Host: remoteSCL • Payload: subscription <sub> resource to be created

		Interoperability Test Description	

	4	Check (mId)	Remote SCL sends response containing:
			• Code = 201
			• Content-Location:
			  \<remoteSCL\>/applications/\<app\>/containers/\<container\>
			  /contentInstances/subscriptions/\<sub\>
			• Payload: Created \<sub\> resource

	5	Verify	Remote SCL indicates successful operation

	6	Check (mId)	Remote SCL sends response containing:
			• Code = 201
			• Content-Location:
			  \<remoteSCL\>/applications/\<app\>/containers/\<container\>
			  /contentInstances/subscriptions/\<sub\>
			• Payload: Created \<sub\> resource

	7	Check (dIa/mIa)	Local SCL forwards response containing:
			• Code = 201
			• Content-Location:
			  \<remoteSCL\>/applications/\<app\>/containers/\<container\>
			  /contentInstances/subscriptions/\<sub\>
			• Payload: Created \<sub\> resource

	8	Verify	App indicates successful operation

8.2.4.2 Subscription Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_MH_16		
Objective:	App retrieves information about a subscription via subscriptionRetrieveRequest (GET), such as expirationTime, filterCriteria, contactURI, noRepresentation, timeoutReason, etc. on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• Application \<app\> and associated container \<container\> have been created on remote SCL • A subscription resource \<sub\> has been created under the \<container\> resource • App has discovered the \<app\>, \<container\> and \<sub\> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a subscriptionRetrieveRequest (GET) for retrieving information about a subscription \<sub\> on remote SCL

	2	Check (dIa/mIa)	Sent GET request contains:
			• Request URI:
			  \<remoteSCL\>/applications/\<app\>/containers/\<container\>
			  /contentInstances/subscriptions/\<sub\>
			• Host: localSCL
			• Payload: empty

	3	Check (mId)	Forwarded GET request contains:
			• Request URI:
			  \<remoteSCL\>/applications/\<app\>/containers/\<container\>
			  /contentInstances/subscriptions/\<sub\>
			• Host: remoteSCL
			• Payload: empty

	4	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: \<sub\> resource
	5	Check (dIa/mIa)	Local SCL sends response containing: • Code = 200 • Payload: \<sub\> resource
	6	Verify	App indicates successful operation

8.2.4.3   Subscription Update

Interoperability Test Description			
Identifier:	TD_M2M_MH_17		
Objective:	App updates information about a subscription via subscriptionUpdateRequest on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • A subscription resource <sub> has been created under the <container> resource • App has discovered the <app>, <container> and <sub> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a subscriptionUpdateRequest (PUT) to update the lifetime of the resource on remote SCL
	2	Check (dIa/mIa)	Sent PUT request contains: • Request URI: <remoteSCL>/applications/<app>/containers/<container>/contentInstances/subscriptions/<sub> • Host: localSCL • Payload: Modified <sub> resource
	3	Check (mId)	Forwarded PUT request contains: • Request URI: <remoteSCL>/applications/<app>/containers/<container>/contentInstances/subscriptions/<sub> • Host: remoteSCL • Payload: Modified <sub> resource
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: Modified <sub> resource
	6	Check (dIa/mIa)	Local SCL sends response containing: • Code = 200 • Payload: Modified <sub> resource
	7	Verify	App indicates successful operation

8.2.4.4   Subscription Delete

Interoperability Test Description	
Identifier:	TD_M2M_MH_18
Objective:	App cancels subscription via an subscriptionDeleteRequest on remote SCL
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10
References:	ETSI TS 102 921 [1], clause 10.25.2
	ETSI TS 102 690 [2], clause 9.3.2.19
Pre-test conditions:	• Application <app> and associated container <container> have been created on remote SCL • A subscription resource <sub> has been created under the <container> resource • App has discovered the <app>, <container> and <sub> on remote SCL

Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a subscriptionDeleteRequest
	2	Check (dIa/mIa)	Sent DELETE request contains • Request URI: <remoteSCL>/applications/<app>/containers/<container>/contentInstances/subscriptions/<sub> • Host: localSCL • Payload: Empty
	3	Check (dIa/mIa)	Forwarded DELETE request contains • Request URI: <remoteSCL>/applications/<app>/containers/<container>/contentInstances/subscriptions/<sub> • Host: remoteSCL • Payload: Empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 204 • Payload: Empty
	6	Check (dIa/mIa)	Local SCL sends response containing: • Code = 204 • Payload: Empty
	7	Verify	App indicates successful operation

8.2.4.5   Subscription Notify (To server capable application)

Interoperability Test Description			
Identifier:	TD_M2M_MH_19		
Objective:	GSCL sends notification(s) via subscriptionNotifyRequest on NSCL		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• DA/GA has created an Application resource <app> with its associated container <container> on GSCL • NA shall be server capable • NA has created subscription <sub> to <container> contentInstances resource on GSCL using a "contactURI" • A listener is listening on "contactURI" to check the notify		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	DA/GA is requested to send a contentInstanceCreateRequest (POST)
	2	Check (dIa)	Sent POST request contains: • URI: <gscl>/applications/<app>/containers/<container>/contentInstances • Payload: <contetnInstance> resource • Host: GSCL
	3	Verify	GSCL indicates successful operation
	4	Check (dIa)	• GSCL sends response containing: • Code = 201 • Payload: <contentInstance> resource
	5	Verify	GSCL sends subscriptionNotifyRequest (POST) to NSCL
	6	Check (mId)	Sent POST request to NSCL contains • URI: contactURI • Payload: <Notify> resource • Host: NSCL
	7	Check (mId)	Forwarded POST request to NA listening server contains • URI: contactURI • Payload: <Notify> resource • Host: NA listening server
	8	Check (mIa)	NA listening server sent response contains: • Code = 204 • Payload: empty
	9	Verify	NA indicates successful operation
	10	Check (mId)	NSCL forwards response to GSCL containing: • Code = 204 • Payload: empty
	11	Verify	GSCL indicates successful operation

Interoperability Test Description	
Identifier:	TD_M2M_MH_20
Objective:	NSCL sends notification(s) via subscriptionNotifyRequest on GSCL
Configuration:	M2M_CFG_06, M2M_CFG_11
References:	ETSI TS 102 921 [1], clause 10.25.2
	ETSI TS 102 690 [2], clause 9.3.2.19
Pre-test conditions:	• NA has created an Application resource <app> with its associated container <container> on NSCL • DA/GA shall be server capable • DA/GA has created subscription <sub> to <container> contentInstances resource on NSCL using a "contactURI" • A listener is listening on "contactURI" to check the notify

Test Sequence:	Step	Type	Description
	1	Stimulus	NA is requested to send a contentInstanceCreateRequest (POST)
	2	Check (mIa)	Sent POST request contains: • URI: <nscl>/applications/<app>/containers/<container>/contentInstances • Payload: <contetnInstance> resource • Host: NSCL
	3	Verify	NSCL indicates successful operation
	4	Check (mIa)	• NSCL sends response containing: • Code = 201 • Payload: <contentInstance> resource
	5	Verify	NSCL sends subscriptionNotifyRequest (POST) to GSCL
	6	Check (mId)	Sent POST request to GSCL contains: • URI: contactURI • Payload: <Notify> resource • Host: GSCL
	7	Check (mId)	Forwarded POST request to DA/GA listening server contains: • URI: contactURI • Payload: <Notify> resource • Host: DA/GA listening server
	8	Check (dIa)	DA/GA listening server sent response contains: • Code = 204 • Payload: empty
	9	Verify	DA/GA indicates successful operation
	10	Check (mId)	GSCL forwards response to NSCL containing: • Code = 204 • Payload: empty
	11	Verify	NSCL indicates successful operation

8.2.4.6   Subscription Notify (To application container)

Interoperability Test Description			
Identifier:	TD_M2M_MH_21		
Objective:	SCL sends notification(s) via subscriptionNotifyRequest		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• DA/GA has created an Application resource <app1> with its associated container <container1> on GSCL • NA has created an Application resource <app2> with its associated <container2> on NSCL • NA has created a subscription <sub> to <container1> contentInstances resource on GSCL using: <nscl>/applications/<app2>/containers/<container2> as "contactURI"		
Test Sequence:	Step	Type	Description
	1	Stimulus	DA/GA is requested to send a contentInstanceCreateRequest (POST)
	2	Check (dIa)	Sent POST request contains • URI:<gscl>/applications/<app1>/containers/<container1>/contentInstances • Payload: <contetnInstance> resource • Host: GSCL
	3	Check (dIa)	GSCL sends response containing: • Code = 201 • Location:<gscl>/applications/<app1>/containers/<container1>/contentInstances/<contetnInstance> • Payload: created <contetnInstance> resource
	4	Verify	DA/GA indicates successful operation
	5	Verify	GSCL sends subscriptionNotifyRequest (POST)
	6	Check (mId)	Sent POST request contains • Request URI: <nscl>/applications/<app2>/containers/<container2>/contentInstances • Host: NSCL • Payload: <notify> resource containing the <contentInstance> resource
	7	Verify	NSCL sends subscriptionNotifyResponse to GSCL
	8	Check (mIa)	NSCL sends response containing: • Code = 204 • Payload: empty
	9	Verify	NSCL indicates successful operation

Interoperability Test Description			
Identifier:	TD_M2M_MH_22		
Objective:	SCL sends notification(s) via subscriptionNotifyRequest		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.25.2 ETSI TS 102 690 [2], clause 9.3.2.19		
Pre-test conditions:	• NA has created an Application resource <app1> with its associated container <container1> on NSCL • DA/GA has created an Application resource <app2> with its associated <container2> on GSCL • DA/GA has created a subscription <sub> to <container1> contentInstances resource on NSCL using: <nscl>/applications/<app2>/containers/<container2> as "contactURI"		
Test Sequence:	Step	Type	Description
	1	Stimulus	NA is requested to send a contentInstanceCreateRequest (POST)
	2	Check (mIa)	Sent POST request contains: • URI:<nscl>/applications/<app1>/containers/<container1>/contentInstances • Payload: <contetnInstance> resource • Host: NSCL
	3	Check (mIa)	NSCL sends response containing: • Code = 201 • Location:<nscl>/applications/<app1>/containers/<container1>/contentInstances/<contetnInstance> • Payload: created <contetnInstance> resource
	4	Verify	NA indicates successful operation
	5	Verify	NSCL sends subscriptionNotifyRequest (POST)
	6	Check (dIa)	Sent POST request contains: • Request URI: <gscl>/applications/<app2>/containers/<container2>/contentInstances • Host: GSCL • Payload: <notify> resource containing the <contentInstance> resource
	7	Verify	GSCL sends subscriptionNotifyResponse to NSCL
	8	Check (mIa)	GSCL sends response containing: • Code = 204 • Payload: empty
	9	Verify	GSCL indicates successful operation

8.2.5   Notification Channel Management

8.2.5.1   NotificationChannel Create

Interoperability Test Description			
Identifier:	TD_M2M_MH_23		
Objective:	App creates a notificationChannel to application resource on remote SCL via notificationChannelCreateRequest (POST)		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:			
Pre-test conditions:	• App has created an application resource <app> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a notificationChannelCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI: <sclBase>/applications/<app>/notificationChannels • Host: localSCL • Payload: notificationChannel <nc> resource to be created
	3	Check (mId)	Forwarded POST request contains: • Request URI: <remoteSCL>/applications/<app>/notificationChannels • Host: remoteSCL • Payload: notificationChannel <nc> resource to be created
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 201 • Content-Location: <remoteSCL>/applications/<app>/notificationChannels/<nc> • Payload: NotificationChannel <nc> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 201 • Content-Location: <remoteSCL>/applications/<app>/notificationChannels/<nc> • Payload: NotificationChannel <nc> resource
	7	Verify	App indicates successful operation

8.2.5.2   NotificationChannel Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_MH_24		
Objective:	App retrieves information about a notificationChannel on remote SCL via notificationChannelRetrieveRequest (GET).		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:			
Pre-test conditions:	• App has created a notificationChannel resource <nc> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a notificationChannelRetrieveRequest (GET) for retrieving information about a notificationChannel <nc>
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI: <remoteSCL>/applications/<app>/notificationChannels/<nc> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI: <remoteSCL>/applications/<app>/notificationChannels/<nc> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: notificationChannel <nc> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: notificationChannel <nc> resource
	7	Verify	App indicates successful operation

8.2.5.3   NotificationChannel Delete

Interoperability Test Description			
Identifier:	TD_M2M_MH_25		
Objective:	App deletes a notificationChannel on remote SCL via a notificationChannelDeleteRequest		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:			
Pre-test conditions:	• App has created a notificationChannel resource <nc> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a notificationChannelDeleteRequest
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI: <remoteSCL>/applications/<app>/notificationChannels/<nc> • Host: localSCL • Payload: Empty
	3	Check (mId)	Forwarded DELETE request contains: • Request URI: <remoteSCL>/applications/<app>/notificationChannels/<nc> • Host: remoteSCL • Payload: Empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 204 • Payload: Empty
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 204 • Payload: Empty
	7	Verify	App indicates successful operation

8.2.5.4   Long polling based notifications

Interoperability Test Description			
Identifier:	TD_M2M_MH_26		
Objective:	NA receives notifications via a notificationChannelRetreiveRequest (GET) using long polling		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:			
Pre-test conditions:	• DA/GA has created an application resource <app1> with its associated container <container1> on GSCL • NA has created an application resource <app2> on NSCL • NA has created a notificationChannel resource <nc> to <app2> and obtained a "ContactURI" and a "LongPollingURI" (element in the channelData attribute) • NA has sent a retrieve request to the provided "LongPollingURI" • NA has subscribed to <container1> contentInstances resource using the provided "ContactURI"		

Test Sequence:	Step	Type	Description
	1	Stimulus	DA/GA is requested to send a contentInstanceCreateRequest (POST) to create content instance on its corresponding <container1>.
	2	Check (dIa)	Sent POST request contains: • URI:<gscl>/applications/<app1>/containers/<container1>/contentInstances • Payload: <contetnInstance> resource • Host: GSCL
	3	Check (dIa)	GSCL sends response containing: • Code = 201 • Location:<gscl>/applications/<app1>/containers/<container1>/contentInstances/<contetnInstance> • Payload: created <contetnInstance> resource
	4	Verify	DA/GA indicates successful operation
	5	Verify	GSCL sends subscriptionNotifyRequest (POST) to NSCL
	6	Check (mId)	Sent POST request contains: • Request URI: • Host: NSCL • Payload: <notify> resource containing the <contentInstance> resource
	7	Verify	NSCL correlates the "contactURI" to the notificationChannel <nc> and finds a long polling request active on "longPollingURI" related to NA NSCL sends a notificationChannelRetrieveResponse to NA
	8	Check (mId)	NSCL sends response to GSCL containing: • Code = 204 • Payload: empty
	9	Verify	GSCL indicates successful operation
	10	Verify	NA indicates a successful operation NA sends a new notificationChannelRetrieveResponse to the "LongPollingURI" and waits for the next event

Interoperability Test Description			
Identifier:	TD_M2M_MH_27		
Objective:	DA/GA receives notifications via a notificationChannelRetreiveRequest (GET) using long polling.		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:			
Pre-test conditions:	• NA has created an application resource <app1> with its associated container <container1> on NSCL • DA/GA has created an application resource <app2> on GSCL • DA/GA has created a notificationChannel resource <nc> to <app2> and obtained a "ContactURI" and a "LongPollingURI" (element in the channelData attribute) • DA/GA has sent a retrieve request to the provided "LongPollingURI" • DA/GA has subscribed to <container1> contentInstances resource using the provided "ContactURI"		
Test Sequence:	Step	Type	Description
	1	Stimulus	NA is requested to send a contentInstanceCreateRequest (POST) to create content instance on its corresponding <container1>.
	2	Check (mIa)	Sent POST request contains: • URI:<nscl>/applications/<app1>/containers/<container1>/contentInstances • Payload: <contetnInstance> resource • Host: NSCL
	3	Check (mIa)	NSCL sends response containing: • Code = 201 • Location:<nscl>/applications/<app1>/containers/<container1>/contentInstances/<contetnInstance> • Payload: created <contetnInstance> resource
	4	Verify	NA indicates successful operation
	5	Verify	NSCL sends subscriptionNotifyRequest (POST) to GSCL
	6	Check (mId)	Sent POST request contains: • Request URI: • Host: GSCL • Payload: <notify> resource containing the <contentInstance> resource
	7	Verify	GSCL correlates the "contactURI" to the notificationChannel <nc> and finds a long polling request active on "longPollingURI" related to NA GSCL sends a notificationChannelRetrieveResponse to DA/GA
	8	Check (mId)	GSCL sends response to NSCL containing: • Code = 204 • Payload: empty
	9	Verify	NSCL indicates successful operation
	10	Verify	DA/GA indicates a succeful operation DA/GA sends a new notificationChannelRetrieveResponse to the "LongPollingURI" and waits for the next event

8.2.6 AccessRight Management on remote SCL

8.2.6.1 AccessRight Resource creation

Interoperability Test Description			
Identifier:	TD_M2M_MH_28		
Objective:	App creates an AccessRight resource via an accesRightCreateRequest on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.11.2 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a accessRightCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains: • Request method = POST • Request URI <remoteSCL>/accessRights • Host: localSCL • Payload: application resource <accessRight> to be created
	3	Check (mId)	Forwarded POST request contains: • Request method = POST • Request URI <remoteSCL>/accessRights • Host: remoteSCL • Payload: application resource <accessRight> to be created
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Status Code = 201 • Content-Location: <remoteSCL>/accessRights/<accessRight> • Payload: created <accessRight> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code = 201 • Content-Location: <remoteSCL>/accessRights/<accessRight> • Payload: created <accessRight> resource
	7	Verify	App indicates successful operation

8.2.6.2   AccessRight Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_MH_29		
Objective:	App retrieves accessRight resource via an accessRightRetrieveRequest (GET) on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.11.3 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• App has created an accessRight resource <accessRight> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a accessRightRetrieveRequest (GET)
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <remoteSCL>/accessRights/<accessRight> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request method = GET • Request URI <remoteSCL>/accessRights/<accessRight> • Host: remoteSCL • Payload: empty
	4	Check (mId)	Remote SCL sends response containing: • Status Code =200 • Payload: <app> resource
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code =200 • Payload: <app> resource
	6	Verify	App indicates successful operation

8.2.6.3   AccessRight Update

Interoperability Test Description			
Identifier:	TD_M2M_MH_30		
Objective:	App updates attribute in accessRight resource via an accessRightUpdateRequest (PUT) on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.11.4 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• App has created an accessRight resource <accessRight> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a accessRightUpdateRequest (PUT)
	2	Check (dIa/mIa)	Sent PUT request contains: • Request method = PUT • Request URI <remoteSCL>/accessRights/<accessRight> • Host: localSCL • Payload: modified accessRight resource

		Interoperability Test Description	
	3	Check (mId)	Forwarded PUT request contains: • Request method = PUT • Request URI <remoteSCL>/accessRights/<accessRight> • Host: remoteSCL • Payload: modified accessRight resource
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: updated <accessRight> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: updated <accessRight> resource
	7	Verify	App indicates successful operation

8.2.6.4 AccessRight Delete

Interoperability Test Description			
Identifier:	TD_M2M_MH_31		
Objective:	App de-registers by deleting accessRightresource via an accessRightDeleteRequest on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.11.5 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• App has created an accessRight resource <accessRight> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a accessRightDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains Request method DELETE • Request URI <remoteSCL>/accessRights/ <accessRight> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded DELETE request contains Request method DELETE • Request URI <remoteSCL>/accessRights/ <accessRight> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Status Code = 204 • Payload: empty
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code = 204 • Payload: empty
	7	Verify	App indicates successful operation

8.2.6.5   Unauthorized operation (Empty Requesting Entity)

Interoperability Test Description			
Identifier:	TD_M2M_MH_32		
Objective:	App retrieve request is rejected due to Access Rights on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.11.1 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an sclBaseRetrieveRequest (GET) for resource <sclBase> with an empty on remote SCL requestingEntity.
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI <sclBase> • Host :remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates unsuccessful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	7	Verify	App indicates unsuccessful operation

8.2.6.6   Unauthorized operation (Bad Requesting Entity)

Interoperability Test Description			
Identifier:	TD_M2M_MH_33		
Objective:	App retrieve request is rejected due to Access Rights on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.11.1 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an sclBaseRetrieveRequest (GET) on remote SCL for resource <sclBase> with a bad requestingEntity.
	2	Check (dIa/mIa)	Sent GET request contains: • Request URI <sclBase> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request URI <sclBase> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates unsuccessful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource

		Interoperability Test Description	
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	7	Verify	App indicates unsuccessful operation

8.2.6.7 Unauthorized operation (Insufficient Access Rights)

Interoperability Test Description			
Identifier:	TD_M2M_MH_34		
Objective:	App delete request is rejected due to Access Rights on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.11.1 ETSI TS 102 690 [2], clause 9.3.2.10		
Pre-test conditions:	• Application <app> has been created on remote SCL • An access Right <ar1> has been created on <app>, which forbids to delete container • A container resource <container> has been created in application <app>, using the access right <ar1>		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a containerDeleteRequest (DELETE) for resource <container> on remote SCL
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> • Host: remoteSCL • Payload: empty
	3	Check (mId)	Forwarded DELETE request contains: • Request URI <remoteSCL>/ applications/<app>/containers/<container> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates unsuccessful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 401 (unauthorized operation) • Payload: ErrorInfo resource
	7	Verify	App indicates unsuccessful operation

8.2.7   Group Management on remote SCL

8.2.7.1   Group Resource creation

Interoperability Test Description			
Identifier:	TD_M2M_ MH _35		
Objective:	App creates a group resource via a groupCreateRequest on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.21.2 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	void		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupCreateRequest (POST) on remote SCL
	2	Check (dIa/mIa)	Sent POST request contains: • Request method = POST • Request URI <remoteSCL>/groups • Host: localSCL • Payload: Group resource <group> to be created
	3	Check (dIa/mIa)	Sent POST request contains: • Request method = POST • Request URI <remoteSCL>/groups • Host: remoteSCL • Payload: Group resource <group> to be created
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Status Code = 201 • Content-Location: <remoteSCL>groups/<group> • Payload: created <group> resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code = 201 • Content-Location: <remoteSCL>groups/<group> • Payload: created <group> resource
	7	Verify	App indicates successful operation

8.2.7.2   Group Retrieve

Interoperability Test Description			
Identifier:	TD_M2M_MH_36		
Objective:	App retrieves group resource via a groupRetrieveRequest (GET) on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.21.3 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App has created a Group resource <group> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupRetrieveRequest (GET)
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <remoteSCL>/groups/<group> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request method = GET • Request URI <remoteSCL>/groups/<group> • Host: remoteSCL • Payload: empty
	4	Check (mId)	Remote SCL sends response containing: • Status Code =200 • Payload: <group> resource
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code =200 • Payload: <group> resource
	6	Verify	App indicates successful operation

8.2.7.3   Group Update

Interoperability Test Description			
Identifier:	TD_M2M_MH_37		
Objective:	App updates attribute in group resource via an groupUpdateRequest (PUT) on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.21.4 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App has created a group resource <group> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupUpdateRequest (PUT)
	2	Check (dIa/mIa)	Sent PUT request contains: • Request method = PUT • Request URI <remoteSCL>/groups/<group> • Host: localSCL • Payload: modified group resource
	3	Check (mId)	Forwarded PUT request contains: • Request method = PUT • Request URI <remoteSCL>/groups/<group> • Host: remoteSCL • Payload: modified group resource
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Code = 200 • Payload: updated <group> resource

Interoperability Test Description			
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Code = 200 • Payload: updated <group> resource
	7	Verify	App indicates successful operation

8.2.7.4   Group Delete

Interoperability Test Description			
Identifier:	TD_M2M_MH_38		
Objective:	App delete group resource via an groupDeleteRequest (DELETE) on remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.21.5 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App has created an group resource <group> on remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a groupDeleteRequest (DELETE)
	2	Check (dIa/mIa)	Sent DELETE request contains: • Request method = DELETE • Request URI <remoteSCL>/groups/<group> • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded DELETE request contains: • Request method = DELETE • Request URI <remoteSCL>/groups/<group> • Host: remoteSCL • Payload: empty
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Status Code = 204 • Payload: empty
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code = 204 • Payload: empty
	7	Verify	App indicates successful operation

8.2.7.5 Group Operations

Interoperability Test Description			
Identifier:	TD_M2M_MH_39		
Objective:	App creates multiple contentInstance using group resource on Remote SCL		
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10		
References:	ETSI TS 102 921 [1], clause 10.21.2 ETSI TS 102 690 [2], clause 9.3.2.17		
Pre-test conditions:	• App has created an application <app1> resource on remote SCL • App has created an application <cont1> resource on <app1> • App has created an application <app2> resource on remote SCL • App has created an application <cont2> resource on <app2> • App has created a group resource <groupPOST> on remote SCL using the provided representation in ref. (the groupPOST representation should include app1contentInstaces and app2 contentInstances as members)		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send a membersContentCreateRequest (POST)
	2	Check (dIa/mIa)	Sent POST request contains • Request method = POST • Request URI <remoteSCL>/groups/<groupPOST>/membersContent • Host: localSCL • Payload: ContentInstance resource <contentInstance> to be created
	3	Check (mId)	Forwarded POST request contains • Request method = POST • Request URI <remoteSCL>/groups/<groupPOST>/membersContent • Host: remoteSCL • Payload: ContentInstance resource <contentInstance> to be created
	4	Verify	Remote SCL indicates successful operation
	5	Check (mId)	Remote SCL sends response containing: • Status Code = 201 • Content-Location: <remoteSCL>groups/<groupPOST> • Payload: membersContent resource
	6	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code = 201 • Content-Location: <remoteSCL>groups/<groupPOST> • Payload: membersContent resource
	7	Verify	App indicates successful operation Verify that <contentInstance> is created on <app1> and <app2>

Interoperability Test Description	
Identifier:	TD_M2M_MH_40
Objective:	App retrieves multiple contentInstance using group resource on remote SCL
Configuration:	M2M_CFG_04, M2M_CFG_04, M2M_CFG_08, M2M_CFG_10
References:	ETSI TS 102 921 [1], clause 10.21.2 ETSI TS 102 690 [2], clause 9.3.2.17
Pre-test conditions:	• App has created an application <app1> resource on remote SCL • App has created an application <cont1> resource on <app1> • App has created an application <app2> resource on remote SCL • App has created an application <cont2> resource on <app2> • App has created a group resource <groupGET> on remote SCL using the provided representation in ref. (the groupGET representation should include app1contentInstaces and app2 contentInstances as members)

Test Sequence:	Step	Type	Description
	1	Stimulus	App is requested to send a membersContentRetrieveRequest (GET)
	2	Check (dIa/mIa)	Sent GET request contains: • Request method = GET • Request URI <remoteSCL>/groups/<groupGET>/membersContent • Host: localSCL • Payload: empty
	3	Check (mId)	Forwarded GET request contains: • Request method = GET • Request URI <remoteSCL>/groups/<groupGET>/membersContent • Host: remoteSCL • Payload: empty
	4	Check (mId)	Remote SCL sends response containing: • Status Code = 200 • Payload: memberContents resource
	5	Check (dIa/mIa)	Local SCL forwards response containing: • Status Code = 200 • Payload: memberContents resource
	6	Verify	App indicates successful operation Verify that App received <app1> and <app2> contentInstances representations

8.2.8 Announcement

8.2.8.1 Application registration with announcement

Interoperability Test Description			
Identifier:	TD_M2M_MH_41		
Objective:	App registration with Announcement		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.9.2		
	ETSI TS 102 690 [2], clause 9.3.2.28		
Pre-test conditions:	• GSCL has registered to NSCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an applicationCreateRequest with announceTo attribute activated (TRUE) and Link attribute pointing remote SCL
	2	Check (dIa/mIa)	Sent POST request contains: • Request URI <localSCL>/applications • Payload: application resource <app> to be created • Host: localSCL
	3	Check (dIa/mIa)	Local SCL sends response containing: • Status Code = 201 • Content-Location: <localSCL>/applications/<app> • Payload: created <app> resource
	4	Verify	App indicates successful operation
	5	Verify (mId)	Local SCL sends applicationAnncCreateRequest (POST) to remote SCL
	6	Check (mId)	Sent POST request contains: • Request URI <remoteSCL>/scls/<localSCL>/applications • Payload: applicationAnnc resource <appAnnc> to be created • Host = NSCL
	7	Check (mId)	Remote SCL sends response containing: • Status Code = 201 • Content-Location: <remoteSCL>/scls/<localSCL>/applications/<appAnnc> • Payload: created <appAnnc> resource
	8	Verify	Remote SCL indicates announced resource <appAnnc>Annc

8.2.8.2   Application delete with announcement

Interoperability Test Description			
Identifier:	TD_M2M_MH_42		
Objective:	App application delete with Announcement		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.9.2		
	ETSI TS 102 690 [2], clause 9.3.2.28		
Pre-test conditions:	• GSCL has registered to NSCL		
	• App has created an announceable Application resource <app> on local SCL		
	• Local SCL has announced <appAnnc> to remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an applicationDeleteRequest (DELETE)
	2	Check (dIa/mIa)	• Request URI <localSCL>/applications/<app>
			• Host :localSCL
			• Payload: empty
	3	Check (dIa/mIa)	GSCL sends response containing:
			• Status Code = 204
			• Payload: empty
	4	Verify	App indicates successful operation
	5	Verify	Local SCL sends applicationAnncDeleteRequest (DELETE) to remote SCL
	6	Check (mId)	Sent DELETE request contains:
			• Request URI <remoteSCL>/applications/<appAnnc>
			• Host :remoteSCL
			• Payload: empty
	7	Check (mId)	remoteSCL sends response containing:
			• Status Code = 204
			• Payload: empty
	8	Verify	remoteSCL indicates announced resource <appAnnc> is deleted

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8.2.8.3   Application De-Announce Ressources

Interoperability Test Description			
Identifier:	TD_M2M_MH_43		
Objective:	App application De-Announce ressource		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.9.2		
	ETSI TS 102 690 [2], clause 9.3.2.28		
Pre-test conditions:	• GSCL has registered to NSCL • App has created an announceable Application resource <app> on local SCL • Local SCL has announced <appAnnc> to remote SCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	App is requested to send an applicationUpdateRequest (PUT) with announceTo option deactivated (False)
	2	Check (dIa/mIa)	Sent PUT request contains: • Request method = PUT • Request URI <localSCL>/applications/<app> • Host :localSCL • Payload: modified application resource
	3	Check (dIa/mIa)	Local SCL sends response containing: • Status Code = 200 • Payload: updated <app> resource
	4	Verify	App indicates successful operation
	5	Verify	Local SCL sends applicationAnncDeleteRequest (DELETE) to remote SCL
	6	Check (mId)	Sent DELETE request contains: • Request URI <remoteSCL>/applications/<appAnnc> • Host :remoteSCL • Payload: empty
	7	Check (mId)	Remote SCL sends response containing: • Status Code = 204 • Payload: empty
	8	Verify	Remote SCL indicates announced resource <appAnnc> is deleted

8.3   End to End configuration testing

8.3.1   Resource management with re-targeting

Interoperability Test Description			
Identifier:	TD_M2M_E2E_01		
Objective:	DA/GA adds a contentInstance resource < contentInstance> to the contentInstances resource of a specific container in remote NSCL via a contentInstanceCreateRequest		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• NA is registered on NSCL • DA/GA has created an Application resource <app> on GSCL • DA/GA has created a container resource <container> in <app> on GSCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	NA is requested to send a contentInstanceCreateRequest (POST)
	2	Check (mIa)	Sent POST request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances • Host :NSCL • Payload: ContentInstance resource <contentInstance> to be created
	3	Check (mId)	Sent POST request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances • Host :GSCL • Payload: ContentInstance resource <contentInstance> to be created
	4	Check (mId)	GSCL sends response containing: • Code = 201 • Content-Location: <gscl>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource
	5	Verify	NSCL indicates successful operation
	6	Check (mIa)	NSCL sends response containing: • Code = 201 • Content-Location: <gscl>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource
	7	Verify	NA indicates successful operation

Interoperability Test Description			
Identifier:	TD_M2M_E2E_02		
Objective:	NA adds a contentInstance resource <contentInstance> to the contentInstances resource of a specific container in remote GSCL via a contentInstanceCreateRequest		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.19.2 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• NA is registered on NSCL • DA/GA has created an Application resource <app> on GSCL • DA/GA has created a container resource <container> in <app> on GSCL		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	NA is requested to send a contentInstanceCreateRequest (POST)
	2	Check (mIa)	Sent POST request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances • Host :NSCL • Payload: ContentInstance resource <contentInstance> to be created
	3	Check (mId)	Sent POST request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances • Host :GSCL • Payload: ContentInstance resource <contentInstance> to be created
	4	Check (mId)	GSCL sends response containing: • Code = 201 • Content-Location: <gscl>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource
	5	Verify	NSCL indicates successful operation
	6	Check (mIa)	NSCL sends response containing: • Code = 201 • Content-Location: <gscl>/ applications/<app>/containers/ <container>/contentInstances/<contentInstance> • Payload: <contentInstance> resource
	7	Verify	NA indicates successful operation

Interoperability Test Description			
Identifier:	TD_M2M_E2E_03		
Objective:	NA retrieves a contentInstance resource < contentInstance> to the contentInstances resource of a specific container in remote GSCL via a contentInstanceRetrieveRequest		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.19.3 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• NA is registered on NSCL • DA/GA has created an Application resource <app> on GSCL • DA/GA has created a container resource <container> in <app> on GSCL • DA/GA has created a contentInstance resource <contentInstance> residing under the <container> resource		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	NA is requested to send a contentInstanceRetrieveRequest (GET) for retrieving the attributes/meta-data and the opaque data of a <contentInstance> resource
	2	Check (mIa)	Sent GET request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances • Host :NSCL • Payload: empty
	3	Check (mId)	Sent POST request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances • Host :GSCL • Payload: empty
	4	Check (mId)	GSCL sends response containing: • Code = 200 • Payload: <contentInstance> resource
	5	Verify	NSCL indicates successful operation
	6	Check (mIa)	NSCL sends response containing: • Code = 200 • Payload: <contentInstance> resource
	7	Verify	NA indicates successful operation

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Interoperability Test Description			
Identifier:	TD_M2M_E2E_04		
Objective:	NA deletes a contentInstance resource < contentInstance> to the contentInstances resource of a specific container in remote GSCL via a contentInstanceUpdateRequest		
Configuration:	M2M_CFG_06, M2M_CFG_11		
References:	ETSI TS 102 921 [1], clause 10.19.4 ETSI TS 102 690 [2], clause 9.3.2.15		
Pre-test conditions:	• NA is registered on NSCL • DA/GA has created an Application resource <app> on GSCL • DA/GA has created a container resource <container> in <app> on GSCL • DA/GA has created a contentInstance resource <contentInstance> residing under the <container> resource		
Test Sequence:	**Step**	**Type**	**Description**
	1	Stimulus	NA is requested to send a contentInstanceDeleteRequest (DELETE)
	2	Check (mIa)	Sent DELETE request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances/<contentInstance> • Host :NSCL • Payload: empty
	3	Check (mId)	Sent POST request contains: • Request URI <gscl>/ applications/<app>/containers/<container> /contentInstances • Host :GSCL • Payload: empty
	4	Check (mId)	GSCL sends response containing: • Code = 204 • Payload: empty
	5	Verify	NSCL indicates successful operation
	6	Check (mIa)	NSCL sends response containing: • Code = 204 • Payload: empty
	7	Verify	NA indicates successful operation

History

Document history		
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