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| INPUT CONTRIBUTION |
| Group Name:\* | TDE |
| Title:\* | Interop Test Cases for Subscriptions & Notifications management |
| Source:\* | KETI and EGM |
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| Date:\* | 2020-10-06 |
| Abstract:\* | The contribution proposes some Interoperability Test Descriptions for Subscriptions & Notifications management to be added to TS-0013 |
| Agenda Item:\* | TBD |
| Work item(s): |  |
| Document(s) Impacted\* | TS-0013 |
| Intended purpose ofdocument:\* | [x]  Decision[x]  Discussion[ ]  Information[ ]  Other <specify> |
| Decision requested or recommendation:\* | Incorporate the proposed text into TS-0013 |

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1. **Introduction**

This contribution consists of some test descriptions about Subscriptions & Notifications management to be included into the TS-0013.

The clause numbers and the TD identifier names in the following proposal may change when included in to TS-0013.

1. **Proposal**

### -----------------------Start of change 1-------------------------------------------

## 8.8 Subscriptions & Notifications management

### 8.8.1 Notification Target removal procedure

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_137 |
| **Objective:** | AE removes notificationTargetMgmtPolicyRef via a notificationTargetMgmtPolicyRef Delete Request |
| **Configuration:** | M2M\_CFG\_10 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.8oneM2M TS-0004 [2], clause 7.4.33.2.4 |
|  |
| **Pre-test conditions:** | * AE1 has created an Application Entity resource <AE> on Registrar CSE
* AE1 has created a <subscription> resource on Registrar CSE
* AE1 has created a <notificationTargetPolicy> resource on Registrar CSE, where policyLabel = “default”, action = “accept”
* AE2 has created an Application Entity resource <AE> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE2 is requested to send a notificationTargetSelfReference Delete Request |
| 2 | Mca | PRO Check Primitive  | * op = 4 (Delete)
* to = {CSEBaseName}/URI of <subscription> resource/ntsr
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc = 2002 (DELETED)
* rqi = (token-string) same as received in request message
* pc = empty
 |
| 4 |  | IOP Check | Check if possible that the registrar CSE has removed the AE2 in the notificationURI attribute in the <subscription> resource |
| 5 |  | IOP Check | AE2 indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

### 8.8.2 NotificationTargetMgmtPolicyRef management

#### 8.8.2.1 NotificationTargetMgmtPolicyRef Create

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_138 |
| **Objective:** | AE creates a notificationTargetMgmtPolicyRef resource in registrar CSE via a notificationTargetMgmtPolicyRef Create Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.10oneM2M TS-0004 [2], clause 7.4.30.2.1 |
|  |
| **Pre-test conditions:** | * AE has created an application resource <AE> on registrar CSE
* AE has created a <subscription> resource on registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE sends a request to create a notificationTargetMgmtPolicyRef> |
| 2 | Mca | PRO Check Primitive  | * op = 1 (Create)
* to = {CSEBaseName}/URI of <subscription> resource
* fr = AE-ID
* rqi = (token-string)
* ty = 25 (notificationTargetMgmtPolicyRef)
* pc = Serialized representation of <notificationTargetMgmtPolicyRef> resource
 |
| 3 |  | IOP Check | Check if possible that the <notificationTargetMgmtPolicyRef> resource is created in registrar CSE. |
| 4 | Mca | PRO Check Primitive | * rsc = 2001 (CREATED)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <notificationTargetMgmtPolicyRef> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.2.2 NotificationTargetMgmtPolicyRef Retrieve

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_139 |
| **Objective:** | AE retrieves notificationTargetMgmtPolicyRef resource from Registrar CSE |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.11oneM2M TS-0004 [2], clause 7.4.30.2.2 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a subscription resource <subscription> on Registrar CSE
* AE has created a <notificationTargetMgmtPolicyRef> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a Retrieve Request for a <notificationTargetMgmtPolicyRef> |
| 2 | Mca | PRO Check Primitive  | * op = 2 (Retrieve)
* to = {CSEBaseName}/URI of <notificationTargetMgmtPolicyRef> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc =2000 (OK)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <notificationTargetMgmtPolicyRef> resource
 |
| 4 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.2.3 NotificationTargetMgmtPolicyRef Update

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_140 |
| **Objective:** | AE updates information about a notificationTargetMgmtPolicyRef via notificationTargetMgmtPolicyRef>Update Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.12oneM2M TS-0004 [2], clause 7.4.30.2.3 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a subscription resource <subscription> on Registrar CSE
* AE has created a subscription resource <notificationTargetMgmtPolicyRef> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a notificationTargetMgmtPolicyRef Update Request to update the notificationlPolicyID attribute of the resource. |
| 2 | Mca | PRO Check Primitive  | * op = 3 (Update)
* to = {CSEBaseName}/URI of <notificationTargetMgmtPolicyRef> resource
* fr = AE-ID
* rqi = (token-string)
* pc = Serialized representation of updated <notificationTargetMgmtPolicyRef> resource
 |
| 3 |  | IOP Check | Check if possible that the <notificationTargetMgmtPolicyRef> resource is updated in Registrar CSE. |
| 4 | Mca | PRO Check Primitive | * rsc = 2004 (Updated)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <notificationTargetMgmtPolicyRef> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.2.4 NotificationTargetMgmtPolicyRef Delete

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_141 |
| **Objective:** | AE removes notificationTargetMgmtPolicyRef via a notificationTargetMgmtPolicyRef Delete Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.12oneM2M TS-0004 [2], clause 7.4.30.2.4 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a notificationTargetMgmtPolicyRef resource <notificationTargetMgmtPolicyRef> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a notificationTargetMgmtPolicyRef Delete Request |
| 2 | Mca | PRO Check Primitive  | * op = 4 (Delete)
* to = {CSEBaseName}/URI of <notificationTargetMgmtPolicyRef> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc = 2002 (DELETED)
* rqi = (token-string) same as received in request message
* pc = empty
 |
| 4 |  | IOP Check | Check if possible that the <notificationTargetMgmtPolicyRef> resource has been removed in registrar CSE. |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

### 8.8.3 NotificationTargetPolicy management

#### 8.8.3.1 NotificationTargetPolicy Create

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_142 |
| **Objective:** | AE creates a notificationTargetPolicy resource in registrar CSE via a notificationTargetPolicy Create Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.14oneM2M TS-0004 [2], clause 7.4.31.2.1 |
|  |
| **Pre-test conditions:** | * AE has created an application resource <AE> on registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE sends a request to create a <notificationTargetPolicy> |
| 2 | Mca | PRO Check Primitive  | * op = 1 (Create)
* to = {CSEBaseName}
* fr = AE-ID
* rqi = (token-string)
* ty = 26 (notificationTargetPolicy)
* pc = Serialized representation of <notificationTargetPolicy> resource
 |
| 3 |  | IOP Check | Check if possible that the <notificationTargetPolicy> resource is created in registrar CSE. |
| 4 | Mca | PRO Check Primitive | * rsc = 2001 (CREATED)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <notificationTargetPolicy> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.3.2 NotificationTargetPolicy Retrieve

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_143 |
| **Objective:** | AE retrieves notificationTargetPolicy resource from Registrar CSE |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.15oneM2M TS-0004 [2], clause 7.4.31.2.2 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a <notificationTargetPolicy> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a Retrieve Request for a <notificationTargetPolicy> |
| 2 | Mca | PRO Check Primitive  | * op = 2 (Retrieve)
* to = {CSEBaseName}/URI of <notificationTargetPolicy> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc =2000 (OK)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <notificationTargetPolicy> resource
 |
| 4 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.3.3 NotificationTargetPolicy Update

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_144 |
| **Objective:** | AE updates information about a notificationTargetPolicy via <notificationTargetPolicy> Update Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.16oneM2M TS-0004 [2], clause 7.4.31.2.3 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a notificationTargetPolicy resource <notificationTargetPolicy> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a notificationTargetPolicy Update Request to update the policyLabel attribute of the resource. |
| 2 | Mca | PRO Check Primitive  | * op = 3 (Update)
* to = {CSEBaseName}/URI of <notificationTargetPolicy> resource
* fr = AE-ID
* rqi = (token-string)
* pc = Serialized representation of updated <Subscription> resource
 |
| 3 |  | IOP Check | Check if possible that the <notificationTargetPolicy> resource is updated in Registrar CSE. |
| 4 | Mca | PRO Check Primitive | * rsc = 2004 (Updated)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <notificationTargetPolicy> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.3.4 NotificationTargetPolicy Delete

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_145 |
| **Objective:** | AE removes notificationTargetPolicy via a <notificationTargetPolicy> Delete Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.17oneM2M TS-0004 [2], clause 7.4.31.2.4 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a notificationTargetPolicy resource <notificationTargetPolicy> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a notificationTargetPolicy Delete Request |
| 2 | Mca | PRO Check Primitive  | * op = 4 (Delete)
* to = {CSEBaseName}/URI of <notificationTargetPolicy> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc = 2002 (DELETED)
* rqi = (token-string) same as received in request message
* pc = empty
 |
| 4 |  | IOP Check | Check if possible that the <notificationTargetPolicy> resource is deleted in registrar CSE. |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

### 8.8.4 PolicyDeletionRules management

#### 8.8.4.1 PolicyDeletionRules Create

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_146 |
| **Objective:** | AE creates a policyDeletionRules resource in registrar CSE via a policyDeletionRules Create Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.18oneM2M TS-0004 [2], clause 7.4.32.2.1 |
|  |
| **Pre-test conditions:** | * AE has created an application resource <AE> on registrar CSE
* AE has created a <notificationTargetPolicy> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE sends a request to create a <policyDeletionRules> |
| 2 | Mca | PRO Check Primitive  | * op = 1 (Create)
* to = {CSEBaseName}/ URI of <notificationTargetPolicy>
* fr = AE-ID
* rqi = (token-string)
* ty = 27 (policyDeletionRules)
* pc = Serialized representation of <policyDeletionRules> resource
 |
| 3 |  | IOP Check | Check if possible that the <policyDeletionRules> resource is created in registrar CSE. |
| 4 | Mca | PRO Check Primitive | * rsc = 2001 (CREATED)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <policyDeletionRules> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.4.2 PolicyDeletionRules Retrieve

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_147 |
| **Objective:** | AE retrieves policyDeletionRules resource from Registrar CSE |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.19oneM2M TS-0004 [2], clause 7.4.32.2.2 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a <notificationTargetPolicy> on Registrar CSE
* AE has created a <policyDeletionRules> as a child of <notificationTargetPolicy> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a Retrieve Request for a <policyDeletionRules> |
| 2 | Mca | PRO Check Primitive  | * op = 2 (Retrieve)
* to = {CSEBaseName}/URI of <policyDeletionRules> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc =2000 (OK)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <policyDeletionRules> resource
 |
| 4 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.4.3 PolicyDeletionRules Update

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_148 |
| **Objective:** | AE updates information about a policyDeletionRules via <policyDeletionRules> Update Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.20oneM2M TS-0004 [2], clause 7.4.32.2.3 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a <notificationTargetPolicy> on Registrar CSE
* AE has created a <policyDeletionRules> as a child of <notificationTargetPolicy> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a policyDeletionRules Update Request to update the deletionRulesRelation attribute of the resource. |
| 2 | Mca | PRO Check Primitive  | * op = 3 (Update)
* to = {CSEBaseName}/URI of <policyDeletionRules> resource
* fr = AE-ID
* rqi = (token-string)
* pc = Serialized representation of updated <policyDeletionRules> resource
 |
| 3 |  | IOP Check | Check if possible that the <policyDeletionRules> resource is updated in Registrar CSE. |
| 4 | Mca | PRO Check Primitive | * rsc = 2004 (Updated)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <policyDeletionRules> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.4.4 PolicyDeletionRules Delete

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_149 |
| **Objective:** | AE removes policyDeletionRules via a <policyDeletionRules> Delete Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.21oneM2M TS-0004 [2], clause 7.4.32.2.4 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a <notificationTargetPolicy> on Registrar CSE
* AE has created a <policyDeletionRules> as a child of <notificationTargetPolicy> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a policyDeletionRules Delete Request |
| 2 | Mca | PRO Check Primitive  | * op = 4 (Delete)
* to = {CSEBaseName}/URI of <policyDeletionRules> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc = 2002 (DELETED)
* rqi = (token-string) same as received in request message
* pc = empty
 |
| 4 |  | IOP Check | Check if possible that the <notificationTargetPolicy> resource has been removed in registrar CSE. |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

### 8.8.5 CrossResourceSubscription management

#### 8.8.5.1 CrossResourceSubscription Create

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_150 |
| **Objective:** | AE creates a crossResourceSubscription resource in registrar CSE via a crossResourceSubscription Create Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.22oneM2M TS-0004 [2], clause 7.4.58.2.1 |
|  |
| **Pre-test conditions:** | * AE has created an application resource <AE> on registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE sends a request to create a <crossResourceSubscription> where regularResourcesAsTarget = AE-ID |
| 2 | Mca | PRO Check Primitive  | * op = 1 (Create)
* to = {CSEBaseName}
* fr = AE-ID
* rqi = (token-string)
* ty = 48 (crossResourceSubscription)
* pc = Serialized representation of <crossResourceSubscription> resource
 |
| 3 |  | IOP Check | Check if possible that the <crossResourceSubscription> resource is created in registrar CSECheck if possible that the <subscribtion> resource is created as a child of <AE> resource in registrar CSE. |
| 4 | Mca | PRO Check Primitive | * rsc = 2001 (CREATED)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <crossResourceSubscription> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.5.2 CrossResourceSubscription Retrieve

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_151 |
| **Objective:** | AE retrieves crossResourceSubscription resource from Registrar CSE |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.23oneM2M TS-0004 [2], clause 7.4.58.2.2 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a <crossResourceSubscription> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a Retrieve Request for a <crossResourceSubscription> |
| 2 | Mca | PRO Check Primitive  | * op = 2 (Retrieve)
* to = {CSEBaseName}/URI of <crossResourceSubscription> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc =2000 (OK)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <crossResourceSubscription> resource
 |
| 4 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.5.3 CrossResourceSubscription Update

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_152 |
| **Objective:** | AE updates information about a crossResourceSubscription via <crossResourceSubscription> Update Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.24oneM2M TS-0004 [2], clause 7.4.58.2.3 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a <crossResourceSubscription> on Registrar CSE
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a crossResourceSubscription Update Request to update the regularResourcesAsTarget attribute of the resource. |
| 2 | Mca | PRO Check Primitive  | * op = 3 (Update)
* to = {CSEBaseName}/URI of <crossResourceSubscription> resource
* fr = AE-ID
* rqi = (token-string)
* pc = Serialized representation of updated <crossResourceSubscription> resource
 |
| 3 |  | IOP Check | Check if possible that the <crossResourceSubscription> resource is updated in Registrar CSE.If regularResourcesAsTarget contains new target resources, check if possible that <subscription> resources are created to each new target resource. |
| 4 | Mca | PRO Check Primitive | * rsc = 2004 (Updated)
* rqi = (token-string) same as received in request message
* pc = Serialized representation of <crossResourceSubscription> resource
 |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.5.4 CrossResourceSubscription Delete

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_153 |
| **Objective:** | AE removes crossResourceSubscription via a <crossResourceSubscription> Delete Request |
| **Configuration:** | M2M\_CFG\_01 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.21oneM2M TS-0004 [2], clause 7.4.32.2.4 |
|  |
| **Pre-test conditions:** | * AE has created an Application Entity resource <AE> on Registrar CSE
* AE has created a <crossResourceSubscription> on Registrar CSE
* Registrar CSE has created <subscription> resources as targets of <crossResourceSubscription>
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE is requested to send a crossResourceSubscription Delete Request |
| 2 | Mca | PRO Check Primitive  | * op = 4 (Delete)
* to = {CSEBaseName}/URI of <crossResourceSubscription> resource
* fr = AE-ID
* rqi = (token-string)
* pc = empty
 |
| 3 | Mca | PRO Check Primitive | * rsc = 2002 (DELETED)
* rqi = (token-string) same as received in request message
* pc = empty
 |
| 4 |  | IOP Check | Check if possible that the <crossResourceSubscription> resource is deleted in registrar CSE.Check if possible that the target <subscription> resources are deleted in registrar CSE. |
| 5 |  | IOP Check | AE indicates successful operation |
| IOP Verdict |  |
| PRO Verdict |  |

#### 8.8.5.5 Cross-Resource Notification

| **Interoperability Test Description** |
| --- |
| **Identifier:** | TD\_M2M\_NH\_154 |
| **Objective:** | AE receives a notification request from the HOST CSE |
| **Configuration:** | M2M\_CFG\_10 |
| **References:** | oneM2M TS-0001 [1], clause 10.2.10.26 |
|  |
| **Pre-test conditions:** | * AE1 has created an application resource <AE> on registrar CSE
* AE1 has created <crossResourceSubscription> on registrar CSE
* AE1 has created a container1 resource <container> on registrar CSE
* AE1 has created a container2 resource <container> on registrar CSE
* AE2 has permissions to UPDATE the container1 and container2 created by AE1
* Registrar CSE has created <subscription> resources as a child resource of a container1 and container2 as a target of <crossResourceSubscription> resource
 |
| **Test Sequence** |
| **Step** | **RP** | **Type** | **Description** |
| 1 |  | Stimulus | AE2 is requested to send an Update request to the container1 created by AE1. This triggers the timer as indicated in timeWindowSize attribute of <crossResourceSubscription> |
| 2 |  | Stimulus | AE2 is requested to send an Update request to the container2 created by AE1 within the time frame indicated in timeWindowSize after the 1st request. This triggers or causes the Registrar CSE to send a notification to AE1. |
| 3 | CheckMca | PRO Check Primitive  | * op = 5 (Notify)
* to = notificationURI of subscription resource
* from = Registrar CSE-ID
* rqi = (token-string)
* pc = Serialized representation of Notification data object
 |
| 3 |  | IOP Check | Check if the notification representation  |
| 4 | CheckMca | PRO Check Primitive | Sent response contains* rsc = 2000 (OK)
* rqi = (token-string) same as received in request message
 |
| 5 |  | IOP Check | AE1 indicates notification received |
| IOP Verdict |  |
| PRO Verdict |  |

### -----------------------End of change 1-------------------------------------------