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| CHANGE REQUEST | |
| Meeting ID:\* | PRO 31 |
| Source:\* | Poornima, C-DOT, [poornima@cdot.in](mailto:poornima@cdot.in)  Kapil, C-DOT, [kapil@cdot.in](mailto:kapil@cdot.in)  Suman, C-DOT, [ssheoran@cdot.in](mailto:ssheoran@cdot.in) |
| Date:\* | 2017-08-31 |
| Reason for Change/s:\* | See the introduction |
| CR against: Release\* | Release 3 |
| CR against: WI\* | Active <Work Item number>  MNT maintenance / < Work Item number(optional)>  Is this a mirror CR? Yes  No  mirror CR number: (Note to Rapporteur - use latest agreed revision)  STE Small Technical Enhancements / < Work Item number (optional)>  Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0004 Version 3.3 |
| Clauses \* | 10.2.6.1, CDT-responsePrimitive-v3\_3\_0.xsd |
| Type of change: \* | Editorial change  Bug Fix or Correction  Change to existing feature or functionality  New feature or functionality  Only ONE of the above shall be ticked |
| Impacted other TS/TR(s) | <TS/TR number>, <Version Number>, and <Description on which aspect should be reflected in this TS/TR> |
| Post Freeze checking:\* | This CR contains only essential changes and corrections? YES  NO  This CR may break backwards compatibility with the last approved version of the TS? YES  NO |
| Template Version: January 2017 (Do not modify) | |

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GUIDELINES for Change Requests:

Provide an informative introduction containing the problem(s) being solved, and a summary list of proposals.

Each CR should contain changes related to only one particular issue/problem.

In case of a correction, and the change apply to previous releases, a separate “mirror CR” should be posted at the same time of this CR

Mirror CR: applies only when the text, including clause numbering are exactly the same.

Companion CR: applies when the change means the same but the baselines differ in some way (e.g. clause number).

Follow the principle of completeness, where all changes related to the issue or problem within a deliverable are simultaneously proposed to be made E.g. A change impacting 5 tables should not only include a proposal to change only 3 tables. Includes any changes to references, definitions, and acronyms in the same deliverable.

Follow the drafting rules.

All pictures must be editable.

Check spelling and grammar to the extent practicable.

Use Change bars for modifications.

The change should include the current and surrounding clauses to clearly show where a change is located and to provide technical context of the proposed change. Additions of complete clauses need not show surrounding clauses as long as the proposed clause number clearly shows where the new clause is proposed to be located.

Multiple changes in a single CR shall be clearly separated by horizontal lines with embedded text such as, start of change 1, end of change 1, start of new clause, end of new clause.

When subsequent changes are made to content of a CR, then the accepted version should not show changes over changes. The accepted version of the CR should only show changes relative to the baseline approved text.

## Introduction

In TS-0001, it is mentioned that for discovered resources, if the result is being limited by the CSE then it may give warning for same. Currently there is no handling for warnings with success messages.

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| Information in Response message | All parameters defined in table 8.1.3-1 apply with the specific details for:   * Contains the address list of discovered resources expressed in any of the methods depicted in clause 9.3.1. The address list may be empty if no result matching the filter criterion is discovered. * Contains an incomplete list warning if the full list is not returned. |

The CR proposes to handle the warning for the above mentioned case of DISCOVERY response.

During discussions, it was decided that for indicating any difference in result due to system policies contentStatus and contentOffset can be used.

Also, it was felt to remove the warningInfo as it won’t be machine interoperable and contentStatus can be used to indicate whether result is full or partial.

But in certain instances, it would be useful to have this option.

First, warningInfo is not mandatory, it is optional, it is giving an option to provide a message to originator to understand the result.

An originator is getting an empty m2m:uril in result. This could be due to following reasons:

First, a valid one, that filter criteria doesn’t match any valid resource.

Second, it matches many resources, but it doesn’t have DISCOVER access rights.

Third, it specifies a resource, on which discovery is not possible such as virtual resource, or any resource which doesn’t have any child resources either not created or not possible e.g. transaction etc.

Even though, originator is getting a success response containing no URI but there could be multitude of reasons for it. So in this scenario, it would be useful to give this information to originator to let it decide to what actions to take.

To make the message machine operable, warningInfo could be mapped to some status code. For Example: ORIGINATOR\_HAS\_NO\_PRIVILEGE, NOT\_FOUND etc.

### CR adds a change 4 corresponding to contentStatus and contentOffset as discussed in the meeting.-----------------------Start of change 1---------------------------------------------

Table 7.5.2‑2: Elements used for response content

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| --- | --- | --- | --- |
| **Element Name** | **Applicable Operations/rcn** | **Data Type** | **Element is Defined in** |
| m2m:<resourceType>  {other namespace identifier}:<resourceType>  NOTE 6 | C/1,9,NP  R/1,4,5,6,7,8,NP  U/1,9,NP  D/1,4,5,6,8  See NOTE1 | m2m:<resourceType>  {other namespace identifier}:<resourceType> | CDT-<resourceType>-v3\_3\_0.xsd |
| m2m:resource | C/3 | m2m:resourceWrapper | CDT-responsePrimitive-v3\_3\_0.xsd |
| m2m:URIList | R/NP  See NOTE 2 | m2m:URIListWrapper | CDT-responsePrimitive-v3\_3\_0.xsd |
| m2m:resourceRefList | R/6  See NOTE 2 | m2m:listOfChildResourceRef | CDT-responsePrimitive-v3\_3\_0.xsd |
| m2m:aggregatedResponse | C R U D  See NOTE 3 | m2m:aggregatedResponse | CDT-responsePrimitive-v3\_3\_0.xsd |
| m2m:URI | C/2  See NOTE 4 | xs:anyURI | CDT-responsePrimitive-v3\_3\_0.xsd |
| m2m:debugInfo | See NOTE 5 | xs:string | CDT-responsePrimitive-v3\_3\_0.xsd |
| m2m:securityInfo | N/NP | m2m:securityInfo | CDT-notification-v3\_3\_0.xsd |
| NOTE 1: The case rcn = 7 applies to Retrieve operation only (R/7). It retrieves the original resource in case the To parameter points to an announced resource. The case R/NP applies to Retrieve operation (Non-Discovery) only.  NOTE 2: This applies to discovery operation only. For discovery, the format of the address (structured, unstructured) depends on the ***Discovery Result Type*** parameter setting (see clause 6.3.4.2.8).  NOTE 3: This applies to CRUD operations on a <fanOutPoint> child resource of a <group> parent resource. The ***Content*** parameter of each response primitive included in aggregatedResponse is set as given in one of the other rows of this table.  NOTE 4: This also applies to the response ("acknowledgement") to non-blocking requests in asynchronous and synchronous modes for any CRUD operation.  NOTE 5: This is a plain text messages which can optionally be included as debugging information in error responses. The language and content of the message is determined by the Service Provider.  NOTE 6: "{other namespace identifier}" refers to a namespace other than m2m. | | | |

The XML schema definition of the ***Content*** primitive parameter (i.e. datatype m2m:primitiveContent) allows to include XML wildcard elements. An XML representation of the ***Content*** primitive parameter shall include a root element which is associated with an XSD Global Element. The root element shall be prefixed with a namespace prefix identifier (e.g. *m2m:*) specified in the associated XSD which defines the respective Global Element. The ***Content*** primitive parameter allows to include namespaces other than m2m.

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

### -----------------------Start of change 2---------------------------------------------

<xs:element name="URIList" type="m2m:URIListWrapper"/>

### -----------------------End of change 2---------------------------------------------

### -----------------------Start of change 3---------------------------------------------

<xs:complexType name="URIListWrapper">

<xs:sequence>

<xs:element name="URIList" type="m2m:listOfURIs"/>

<xs:element name="warningInfo" type="xs:string" minOccurs=”0”/>

</xs:sequence>

</xs:complexType>

### -----------------------End of change 3---------------------------------------------

### -----------------------Start of change 4---------------------------------------------

#### Resource discovery procedure

If the Operation Excution Time is given in the request, the Hosting CSE should perform the following procedures at the time and shall not perform the procedures before the time.

A resource discovery is used to discover resources in a CSE. A Resource discovery request is done by sending Retrieve request with *filterUsage*, one of the ***Filter Criteria*** parameters, configured as "discovery" and the request may include other ***Filter Criteria*** parameters as well. A resource discovery request procedure shall be comprised of the following actions.

*Originator*:

The Originator shall follow the steps from Orig-1.0 to Orig-6.0 specified in clause 7.2.2.1 Generic Resource Request Procedure for Originator.

In addition to Orig-1.0, the following steps shall be performed.

The ***To*** parameter in the Retrieve Request indicates the root of where the discovery begins.

The Retrieve Request shall include ***filterUsage*** element, which is not either "Discovery CriteriaConditional Retrieval" or "IPE On-demand Discovery", in ***Filter Criteria***.

The Retrieve Request may include other elements of ***Filter Criteria***.

*Receiver:*

The Receiver shall follow the steps from Recv-1.0 to Recv-7.0 specified in clause 7.2.2.2 Generic Resource Request Procedure for Receiver.

Hosting CSE shall not perform steps from Recv-6.3 to Recv-6.6 and perform the following steps instead.

The Receiver shall find resources, which match all the configured ***Filter Criteria*** and which the Originator has "Discover" privilege, among all the children/descendent resource of the addressed resource".

If the addressed resource is an <AE> resource representing the IPE by its *labels* attribute, the Hosting CSE shall find resources using the ***Filter Criteria***. When the Hosting CSE finds no match, the Hosting CSE shall check the *filterUsage* element. If the *filterUsage* element is set to "IPE On-demand Discovery", then the Hosting CSE shall send the Notify request to the IPE to trigger external discovery procedure (see clause 7.5.1.2.8 for more details). If the Hosting CSE receives successful Notify response, the Hosting CSE shall find resources among the resources on the Hosting CSE listed in the Notify response using the ***Filter Criteria*** and check the Originator's "Discover" privilege. If the Hosting CSE receives an unsuccessful Notify response from the IPE, then the Hosting CSE shall use the same ***Response Status Code*** in the response to the Originator.

In Recv-6.7, the Receiver shall include addresses for all the found resources in the CSE-relative resource identifier format.

If the Receiver has limited the result due to some system policy, then it may indicate the same by setting ***Content Status*** response primitive parameter to PARTIAL\_CONTENT and it shall include the ***Content Offset*** in the response primitive parameter to indicate the originator from where to start next search.

The Receiver shall perform Recv-6.8 and the procedure is terminated.

### -----------------------End of change 4---------------------------------------------

CHECK LIST

* Does this Change Request include an informative introduction containing the problem(s) being solved, and a summary list of proposals.?
* Does this CR contain changes related to only one particular issue/problem?
* Have any mirror CRs been posted?
* Does this Change Request make **all** the changes necessary to address the issue or problem? E.g. A change impacting 5 tables should not include a proposal to change only 3 tables?Does this Change Request follow the drafting rules?
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* Have you used change bars for all modifications?
* Does the change include the current and surrounding clauses to clearly show where a change is located and to provide technical context of the proposed change? (Additions of complete clauses need not show surrounding clauses as long as the proposed clause number clearly shows where the new clause is proposed to be located.)
* Are multiple changes in this CR clearly separated by horizontal lines with embedded text such as, start of change 1, end of change 1, start of new clause, end of new clause.?