**3GPP TSG- Meeting # *rev1***

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
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| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The definitions for file management have a couple of small errors, for example:   * The systemDN parameter is missing in the notification header. * It is not clear what the objectClass/objectInstance parameters in the notificazion header actually designate. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The small errors are corrected. | | | | | | | | |
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| ***Consequences if not approved:*** | | The errors are not removed and may lead to interoperability issues. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 11.6.1.1, 11.6.1.1.2, 11.6.1.2, 11.6.1.2.2, 11.6.1.3, 11.6.1.3.2, 11.6.1.3.3, 11.6.1.4, 11.6.1.4.2, 11.6.1.4.3, 11.6.1.5.2, 11.6.1.5.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | | **X** |  | O&M Specifications | | | | TS 28.532 CR 0164, CR 0165 | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **First modification** |

## 11.6 File management service

### 11.6.1 Operations and notifications

#### 11.6.1.1 Notification notifyFileReady

##### 11.6.1.1.1 Definition

A MnS producer sends this notification to subscribed MnS consumers when a new file is ready (available) on the MnS producer for upload by a MnS consumer. The "fileInfoList" parameter provides information (meta data) about the new file and, in addition to that, information about all other files, which became ready for upload earlier and are still available for upload when the notification is sent.

The "objectClass" and "objectInstance" parameters identify the object representing the function (process) making the file available for retrieval, such as the "PerfMetricJob" or the "TraceJob" defined in TS 28.622 [11]. When no dedicated object is standardized or instantiated, then the "ManagedElement", where the file is processed, shall be used, or the "ManagementNode", in case the file is not processed on a managed element but on a management node.

##### 11.6.1.1.2 Input parameters

| Parameter Name | S | Information Type | Comment |
| --- | --- | --- | --- |
| objectClass | M | Entity.objectClass | See clause 11.6.1.1.1 for the definition of Entity |
| objectInstance | M | Entity.objectInstance | See clause 11.6.1.1.1 for the definition of Entity |
| notificationId | M | -- |  |
| notificationType | M | "notifyFileReady" |  |
| eventTime | M | -- | Time when the file, that triggered this notification, was ready for upload. |
| systemDN | M |  |  |
| fileInfoList | M | List of struct <  fileLocation,  fileSize  fileReadyTime  fileExpirationTime  fileCompression,  fileFormat,  fileDataType,  >.  Each element is defined as following:  - fileLocation: It identifies the location of the file. The location may be a directory path or a URL, for example "\\202.112.101.1\D:\user\Files\<xxx>", or "sftp://nms.telecom\_org.com/datastore/<xxx>", where <xxx> is the filename.  - "fileSize": It identifies the size of the file. Its value is positive Integer (the unit is byte).  - "fileReadyTime": It identifies the date and time when the file was last closed and made available in the management service producer and the file content will not be changed.  - "fileExpirationTime": It identifies the date and time beyond which the file may be deleted. It shall not be empty and shall be later than fileReadyTime.  - "fileCompression": It identifies the name of the compression algorithm used for the file. An empty "fileCompression" means that there is no compression on the file. Choice of compression algorithm is vendor-specific but is encouraged to use industrial standard algorithm such as GZIP.  - "fileFormat": It identifies the encoding technique used by the file. Its value should indicate the version of the file format specification plus to indicate if "ASN1" or "XML-schema" is used.  - "fileDataType": It identifies the type of the management data stored in the file. Following are the allowed values:  - For performance data (including measurement data and KPI) files, the value is assigned to "PERFORMANCE".  - For trace data files, the value is assigned to "TRACE".  - For analytic data files, the value is assigned to "ANALYTICS".  - For proprietary data files, the value is assigned to "PROPRIETARY". | Information (meta data) about the new file, that became ready for upload and triggered this notification, and information about files, which became ready for upload earlier and are still available for upload when the notification is sent. |
| additionalText | O | -- | Allows a free form text description to be reported as defined in ITU-T Rec. X. 733 [4] |

#### 11.6.1.2 Notification notifyFilePreparationError

##### 11.6.1.2.1 Definition

A MnS producer sends this notification to subscribed MnS consumers when an error occurs while preparing a file. For many error reasons, such as low memory or hard disk full, it is very likely that all ongoing file preparation process fail at the same time. For that reason, it is possible to report with this notification that multiple file preparation processes failed.

In case the MnS producer keeps the file, where an error occurred during preparation, the "fileInfoList" parameter contains a list item with information about that file, otherwise, if the file is deleted or not created at all, the "fileInfoList" parameter has no list item related to that file.

##### 11.6.1.2.2 Input parameters

| Parameter Name | S | Information Type | Comment |
| --- | --- | --- | --- |
| objectClass | M | Entity.objectClass | See clause 11.6.1.1.1 for the definition of Entity |
| objectInstance | M | Entity.objectInstance | See clause 11.6.1.1.1 for the definition of Entity |
| notificationId | M | -- |  |
| notificationType | M | "notifyFilePreparationError" |  |
| eventTime | M | -- | Time when the file preparation error occured |
| systemDN | M |  |  |
| fileInfoList | M | See Table 11.6.1.1.2-1. | Each list item contains information about a file where a file preparation error occurred and that is kept on the MnS producer. Files, that are deleting or not created at all, have no list item. |
| reason | M | -- | Detailed error reason, including  - errorInPreparation  - hardDiskFull  - hardDiskFailure  - tooManyFiles  - collectionTimeOut  - incompleteTruncatedFile  - corruptedFile  - lowMemory  - dataNotAvailable |
| additionalText | O | -- | Allows a free form text description to be reported as defined in ITU-T Rec. X. 733 [4] |

#### 11.6.1.3 Operation subscribe

##### 11.6.1.3.1 Definition

This operation enables the authorized file data reporting service consumer to subscribe to the notification(s) related to the services provided by the file data reporting service producer.

##### 11.6.1.3.2 Input parameters

| Parameter Name | S | Information Type | Comment |
| --- | --- | --- | --- |
| consumerReference | M | It specifies the reference of the consumer to which the notifications shall be sent. | The format of the reference may have dependency on the solution set. |
| timeTick | O | It specifies the value of a timer the subscription is hold by the file data reporting service producer for the subject consumer.  The value is in unit of whole minute. | A special infinite value is assumed when parameter is absent or present but equal to zero. |
| filter | O | It specifies a filter constraint that the file data reporting service producer shall use to filter notification(s).  Filter constraint grammar is solution set dependent | If this parameter is absent, then no filter constraint shall be applied. |

##### 11.6.1.3.3 Output parameters

| **Parameter Name** | **S** | **Matching Information** | **Comment** |
| --- | --- | --- | --- |
| subscriptionId | M | An unambiguous identity of this subscription. |  |
| status | M | ENUM (OperationSucceeded, OperationFailedExistingSubscription, OperationFailed) | If subscription is successfully created, status = OperationSuceeded.  If subscription is not created because it is duplicated or conflict with existing subscription(s), status = OperationFailedExistingSubscription  If the operation is failed for any other reason than being duplicated or conflict with existing subscription(s), status = OperationFailed. |

##### 11.6.1.3.4 Exceptions

|  |  |
| --- | --- |
| **Name** | **Definition** |
| operation\_failed\_existing\_subscription | **Condition:** The subscription is duplicated or conflict with existing subscription(s)  **Returned Information:** The output parameter status |
| operation\_failed | **Condition:** The operation is failed for any other reason than being duplicated or conflict with subscription(s)  **Returned Information:** The output parameter status |

#### 11.6.1.4 Operation unsubscribe

##### 11.6.1.4.1 Definition

This operation enables the authorized file data reporting service consumer cancel subscription(s) at a management service producer.

The authorized file data reporting service consumer can cancel one subscription made with a consumerReference by providing the corresponding subscriptionId or all subscriptions made with the same consumerReference by leaving the subscriptionId parameter absent.

##### 11.6.1.4.2 Input parameters

| **Parameter Name** | **S** | **Information Type** | **Comment** |
| --- | --- | --- | --- |
| consumerReference | M | It specifies the reference of the authorized file data reporting service consumer whose subscription(s) are to be cancelled. | The format of the reference may have dependency on the solution set. |
| subscriptionId | O | It holds a subscriptionId carried as the output parameter in the subscribe operation. | If this parameter is absent, all subscriptions made with the same consumerReference shall be cancelled. |

##### 11.6.1.4.3 Output parameters

| **Parameter Name** | **S** | **Matching Information** | **Comment** |
| --- | --- | --- | --- |
| status | M | ENUM (OperationSucceeded, OperationFailed) | If subscription(s) as identified in the input parameter are cancelled, status = OperationSucceeded.  If the operation is failed, status = OperationFailed. |

##### 11.6.1.4.4 Exceptions

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| --- | --- |
| **Name** | **Definition** |
| operation\_failed | **Condition:** the operation is failed  **Returned Information:** The output parameter status |

#### 11.6.1.5 Operation listAvailableFiles

##### 11.6.1.5.1 Definition

This operation allows a MnS consumer to retrieve a list of files available for upload on a MnS producer. The request contains the file data type for the files, that shall be listed. In addition to that it is possible to specify that only files shall be included with the file ready time being within a specific time window defined by the "beginTime" and "endTime" parameters.

##### 11.6.1.5.2 Input parameters

| **Parameter Name** | **Qualifier** | **Information type** | **Comment** |
| --- | --- | --- | --- |
| fileDataType | M | It specifies the type of the management data stored in the file. | For performance data (including measurement data and KPI) files, the value is assigned to "PERFORMANCE".  For trace data files, the value is assigned to "TRACE".  For analytic data files, the value is assigned to "ANALYTICS".  For proprietary data files, the value is assigned to "PROPRIETARY". |
| beginTime | M | The consumer requests to list information about the available file(s) whose ready time(s) are later or equal to this time.  This parameter is expressed in UTC time. | This parameter indicates date and time.  If this parameter is empty or absent, no restriction on begin time is applied on the file ready time. |
| endTime | M | The consumer requests to list information about the available file(s) whose ready time(s) are earlier than this time.  This parameter is expressed in UTC time. | This parameter indicates date and time.  If this parameter is empty or absent, no restriction on end time is applied on the file ready time. |

##### 11.6.1.5.3 Output parameters

| **Parameter Name** | **Qualifier** | **Matching Information** | **Comment** |
| --- | --- | --- | --- |
| fileInfoList | M | See "fileInfoList" defined in notifyFileReady notification (clause 11.3.1.1.1) |  |
| status | M | ENUM (Success, Failure) |  |

##### 11.6.1.5.4 Exceptions

| **Exception Name** | **Definition** |
| --- | --- |
| invalidTimes | **Condition:** Either "beginTime" or "endTime" is invalid.  **Returned information:** output parameter status is set to Failure. |

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| **End of modifications** |