**3GPP TSG-S4 Meeting #119-e *S4-220817***

**Online, , 6th–14th April 2022**

|  |
| --- |
| *CR-Form-v12.0* |
| **DRAFT CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** | **—** | **Current version:** |  |  |
|  |
| *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 |  | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  |  |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** | 2022-05-XX |
|  |  |  |  |  |
| ***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 canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). |  |
|  |  |
| ***Reason for change:*** | Provide additional detail of the input/output parameters conveyed in Nmbsf and Nmbstf service operations. |
|  |  |
| ***Summary of change:*** | * Update to NOTE in table 7.2‑1 about NEF exposure of Nmbsf services, referencing TS 29.522.
* Clarifications to input/output parameter specifications in clauses 7.2 and 7.3.
 |
|  |  |
| ***Consequences if not approved:*** | The data model will not be clearly defined for stage 3 realisation. |
| ***Q*** |  |
| ***Clauses affected:*** | 2, 7 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 29.522 |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

FIRST CHANGE

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.501: "System architecture for the 5G System (5GS)".

[3] 3GPP TS 23.502: "Procedures for the 5G System (5GS)".

[4] 3GPP TS 23.503: "Policy and charging control framework for the 5G System (5GS); Stage 2".

[5] 3GPP TS 23.247: "Architectural enhancements for 5G multicast-broadcast services; Stage 2".

[6] 3GPP TS 26.348: "Northbound Application Programming Interface (API) for Multimedia Broadcast/Multicast Service (MBMS) at the xMB reference point".

[7] 3GPP TS 26.501: "5G Media Streaming (5GMS); General description and architecture".

[8] IETF RFC 3500: "RTP: A Transport Protocol for Real-Time Applications".

[9] IETF RFC 2250: "RTP Payload Format for MPEG1/MPEG2 Video".

[10] 3GPP TS 26.247: "Transparent end-to-end Packet-switched Streaming Service (PSS); Progressive Download and Dynamic Adaptive Streaming over HTTP (3GP-DASH)".

[11] 3GPP TS 26.531: "Data Collection and Reporting; General Description and Architecture".

[12] 3GPP TS 23.468: "Group Communication System Enablers for LTE (GCSE\_LTE)".

[13] 3GPP TS 29.522: "5G System; Network Exposure Function Northbound APIs; Stage 3".

NEXT CHANGE

# 7 Network Function services

## 7.1 General

The Network Function Services exposed by the MBSF and the MBSTF are defined in this clause.

## 7.2 MBSF Services

### 7.2.1 General

The following table illustrates the set of Network Function services exposed by the MBSF.

Table 7.2-1: NF services provided by MBSF

|  |  |  |  |
| --- | --- | --- | --- |
| Service name | Service operation name | Operation semantics | Example consumer(s)(see NOTE) |
| Nmbsf\_MBSUserService | Create | Request/Response | AF, NEF |
| Retrieve | Request/Response | AF, NEF |
| Update | Request/Response | AF, NEF |
| Destroy | Request/Response | AF, NEF |
| Nmbsf\_MBSUserDataIngestSession | Create | Request/Response | AF, NEF |
| Retrieve | Request/Response | AF, NEF |
| Update | Request/Response | AF, NEF |
| Destroy | Request/Response | AF, NEF |
| StatusSubscribe | Subscribe/Notify | AF, NEF |
| StatusUnsubscribe | AF, NEF |
| StatusNotify | AF, NEF |
| NOTE: When the MBS Application Provider (AF/AS) lies outside the trusted DN, these services shall be exposed via the NEF (N33+Nmb5) as *Nnef\_MBSUserService* and *Nnef\_MBSUserDataIngestSession* respectively, as specified in clauses ? and ? respectively of TS 29.522 [13]. |

### 7.2.2 Nmbsf MBS User Service operations

#### 7.2.2.1 Nmbsf\_MBSUserService\_Create service operation

**Service operation name:** Nmbsf\_MBSUserService\_Create

**Description:** Provision a new MBS User Service. The general data model is illustrated in figure 4.5.2-1.

**Input parameters (Required):** Parameters in table 4.5.3-1 assigned by the MBS Application Provider.

**Output parameters:** Result indication. MBS User Service identifier assigned by the MBSF.

#### 7.2.2.2 Nmbsf\_MBSUserService\_Retrieve service operation

**Service operation name:** Nmbsf\_MBSUserService\_Retrieve

**Description:** Used by the NF/NEF to retrieve the properties of an existing MBS User Service.

**Input parameters (Required):** MBS User Service Identifier in request URL.

**Output parameters:** Result indication. MBS User Service resource entity, including parameters in table 4.5.3-1.

#### 7.2.2.3 Nmbsf\_MBSUserService\_Update service operation

**Service operation name:** Nmbsf\_MBSUserService\_Update

**Description:** Update the properties of an existing MBS User Service.

**Input parameters (Required, Optional):** MBS User Service Identifier. Parameters in table 4.5.3-1 assigned by the MBS Application Provider.

**Output parameters(Required:** Result indication.

**Output parameters (Optional):** MBS User Service resource entity, including parameters in table 4.5.3-1.

#### 7.2.2.4 Nmbsf\_MBSUserService\_Destroy service operation

**Service operation name:** Nmbsf\_MBSUserService\_Destroy

**Description:** Release the resources of the associated MBS User Service.

**Input parameters (Required):** MBS User Service Identifier.

**Output parameters:** Result indication.

### 7.2.3 Nmbsf MBS User Data Ingest Session operation

#### 7.2.3.1 Nmbsf\_MBSUserDataIngestSession\_Create service operation

**Service operation name:** Nmbsf\_MBSUserDataIngestSession\_Create

**Description:** Create an MBS User Data Ingest Session, including a set of subordinate MBS Distribution Session(s).

**Input parameters (Required, Optional):** Parameters in table 4.5.5‑1 and table 4.5.6‑1, and either table 4.5.6‑2 or table 4.5.6‑3 assigned by the MBS Application Provider, depending on the distribution method.

**Output parameters:** Result indication. MBS User Data Ingest Session Identifier assigned by the MBSF.

#### 7.2.3.2 Nmbsf\_MBSUserDataIngestSession\_Retrieve service operation

**Service operation name:** Nmbsf\_MBSUserDataIngestSession\_Retrieve

**Description:** Used by the AF/NEF to retrieve the properties of an existing MBS User Data Ingest Session.

**Input parameters (Required):** User Data Ingest Session Identifier in request URL.

**Output parameters:** Result indication. MBS User Data Ingest Session resource entity, including parameters in table 4.5.5‑1 and table 4.5.6‑1, and either table 4.5.6‑2 or table 4.5.6‑3, depending on the distribution method.

#### 7.2.3.3 Nmbsf\_MBSUserDataIngestSession\_Update service operation

**Service operation name:** Nmbsf\_MBSUserDataIngestSession\_Update

**Description:** Update the properties of an existing MBS User Data Ingest Session and its set of subordinate MBS Distribtion Session(s).

**Input parameters (Required, Optional):** MBS User Data Ingest Session Identifier. Parameters in table 4.5.5‑1 and table 4.5.6‑1, and either table 4.5.6‑2 or table 4.5.6‑3, depending on the distribution method.

**Output parameters (Required):** Result indication.

**Output parameters (Optional):** MBS User Data Ingest Session resource entity, including subordinate MBS Distribution Session data entities(s).

#### 7.2.2.4 Nmbsf\_MBSUserDataIngestSession\_Destroy service operation

**Service operation name:** Nmbsf\_MBSUserDataIngestSession\_Destroy

**Description:** Destroy an MBS User Data Ingest Session along with its subordinate MBS Distribution Session(s).

**Input parameters (Required):** MBS User Data Ingest Session Identifier.

**Output parameters:** Result indication.

#### 7.2.2.5 Nmbsf\_MBSUserDataIngestSession\_StatusSubscribe operation

**Service operation name:** Nmbsf\_MBSUserDataIngestSession\_StatusSubscribe

**Description:** Invoked by AF/NEF on the MBSF when it needs to create a subscription to monitor at least one event relevant to the MBS User Data Ingest Session. The AF may subscribe to multiple events in a subscription.

**Input parameters (Required):** MBS User Data Ingest Session Identifier, Event ID(s), notification target address.

**Output parameters (Required, Optional):** When the subscription is accepted: Subscription correlation ID.

#### 7.2.2.6 Nmbsf\_MBSUserDataIngestSession\_StatusUnsubscribe operation

**Service operation name:** Nmbsf\_MBSUserDataIngestSession\_StatusUnsubscribe

**Description:** Remove an existing subscription.

**Input parameters (Required):** Subscription correlation ID.

**Output parameters:** Result Indication.

#### 7.2.2.7 Nmbsf\_MBSUserDataIngestSession\_StatusNotify operation

**Service operation name:** Nmbsf\_MBSUserDataIngestSession\_StatusNotify

**Description:** Used by the MBSF to notify AF/NEF about the status change of the MBS User Data Ingest Session or the status of a file.

**Input parameters (Required):** MBS User Data Ingest Session Identifier, Event ID(s).

**Output parameters:** Result indication.

## 7.3 MBSTF Services

### 7.3.1 General

The following table illustrates the set of NF services exposed by the MBSTF.

Table 8.3-1: NF services provided by MBSTF

|  |  |  |  |
| --- | --- | --- | --- |
| Service name | Service operation name | Operation semantics | Example consumer(s) |
| Nmbstf\_MBSDistributionSession | Create | Request/Response | MBSF |
| Retrieve | Request/Response | MBSF |
| Update | Request/Response | MBSF |
| Destroy | Request/Response | MBSF |
| StatusSubscribe | Subscribe/Notify | MBSF |
| StatusUnsubscribe | MBSF |
| StatusNotify | MBSF |

### 7.3.2 Nmbstf\_MBSDistributionSession service

#### 7.3.2.1 Nmbstf\_MBSDistributionSession\_Create service operation

**Service operation name:** Nmbstf\_MBSDistributionSession\_Create

**Description:** Create a new MBS Distribution Session within the MBSTF.

**Input parameters (Required, Optional):** Parameters in table 4.5.6‑1 and either table 4.5.6‑2 or table 4.5.6‑3, depending on the distribution method.

**Output parameters:** Result indication.

#### 7.3.2.2 Nmbstf\_MBSDistributionSession\_Retrieve service operation

**Service operation name:** Nmbstf\_MBSSession\_Retrieve

**Description:** Retrieve the parameters of an existing MBS Distribution Session.

**Input parameters (Required):** Distribution Session Identifier in request URL.

**Output parameters:** MBS Distribution Session resource entity, including parameters in table 4.5.6‑1 and either table 4.5.6‑2 or table 4.5.6‑3, depending on the distribution method.

#### 7.3.2.3 Nmbstf\_MBSDistributionSession\_Update service operation

**Service operation name:** Nmbstf\_MBSDistribtionSession\_Update

**Description:** Update an existing MBS Distribution Session, for example to change the session stop time, object delivery session, application session, packets delivery session, files, and ancillary information.

**Input parameters (Required, Optional):** MBS Distribution Session Identifier. Parameters in table 4.5.6‑1 and either table 4.5.6‑2 or table 4.5.6‑3, depending on the distribution method.

**Output parameters (Required):** Result indication.

**Output parameters (Optional):** MBS Distribution Session resource entity.

#### 7.3.2.4 Nmbstf\_MBSDistribtutionSession\_Destroy service operation

**Service operation name:** Nmbstf\_MBSDistributionSession\_Update

**Description: D**estroy an existing MBS Distribution Session.

**Input parameters (Required):** MBS Distribution Session Identifier.

**Output parameters:** Result indication.

#### 7.3.2.5 Nmbstf\_MBSDistributionSession\_StatusSubscribe operation

**Service operation name:** Nmbstf\_MBSDistirbutionSession\_StatusSubscribe

**Description:** Invoked by MBSF on the MBSTF when it needs to monitor at least one event relevant to the MBS Distribution session. The MBSF may subscribe to multiple events in a subscription.

**Input parameters (Required):** MBS Distribution Session Identifier, Event ID(s), notification target address.

**Output parameters:** When the subscription is accepted: Subscription correlation ID.

#### 7.3.2.6 Nmbstf\_MBSDistributionSession\_StatusUnsubscribe operation

**Service operation name:** Nmbstf\_MBSDistributionSession\_StatusUnsubscribe

**Description:** Remove an existing subscription.

**Input parameters (Required):** Subscription correlation ID.

**Output parameters:** Result indication.

#### 7.3.2.7 Nmbstf\_MBSDistributionSession\_StatusNotify operation

**Service operation name:** Nmbstf\_MBSDistributionSession\_StatusNotify

**Description:** Used by the MBSTF to notify the MBSF about the status change of the MBS Distribution Session or the status of the file.

**Input parameters (Required):** MBS Distribution Session Identifier, Event ID(s).

**Output parameters:** Result indication.

END OF CHANGES