**3GPP TSG- S4 Meeting #117e *S4-220149***

**Electronic Meeting, – 23rd February 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **Pseudo CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **Rev** | **<Rev#>** | **Current version:** | **<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 |  |

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|  | | | | | | | | | | |
| ***Title:*** | [5MBUSA] Clause 8: Network Function Services | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson LM, BBC | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBUSA | | | | |  | ***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:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The intention of this document is to start defining the MBSF and MBSTF Service APIs (Nmbsf and Nmbstf). It is assumed that the text needs to evolve over multiple conference calls. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\*\* First 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) |
| 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 |

Editor’s Note: Service exposure to AF is FFS.

### 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 (Required, Optional):** Parameters in table 4.5.3-1 assigned by the MBS Application Provider.

**Output (Required, Optional):** Parameters in table 4.5.3-1.

#### 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 (Required, Optional):** MBS User Service Identifier

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

**Output (Required, Optional):** Result indication. 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 (Required, Optional):** MBS User Service Identifier.

**Output (Required, Optional):** 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).

Editor’s Note: It might be better to expose an MBS Distribution Session (with some Ingest subresources).

**Input (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 (Required, Optional):** Result indication. MBS User Data Ingest Session Identifier.

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**(, Optional)** UserData Ingest Sessiondentifier.

**(, Optional)**i 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 (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 (Required, Optional):** Result indication.

#### 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 (Required, Optional):** MBSUser Data Ingest Session Identifier.

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

**Output (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, Required:** Subscription correlation ID.

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

**Output, Required:** 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 (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, Required:** 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 (Required, Optional):** MBS Distribution Session Identifier.

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

**Output, Required:** Result indication.

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

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

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

**Input (Required, Optional):** MBS Distribution Session Identifier.

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

**Output:** 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 (Required, Optional):** Subscription correlation ID.

**Output:** 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 (Required, Optional):** MBS Distribution Session Identifier, Event ID(s).

**Output:** Result indication.

\*\*\*\* Last Change \*\*\*\*