**3GPP TSG-SA2 Meeting #166 *S2-2412495***

**Orlando, FL, USA, November 18 - 22, 2024** *(revision of S2-2411572)*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.228** | **CR** | **1507** | **rev** | **1** | **Current version:** | **19.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Support of MPS priority for Messaging in IMS procedures | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Peraton Labs, CISA ECD, AT&T, Verizon, T-Mobile USA, Nokia | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MPS4msg | | | | |  | ***Date:*** | | | 2024-11-19 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The text currently does not specify handling changes in MPS for Messaging indication values as was intended in TR 23.700-75. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | First change (clause 5.21):  Add the phrase “when it has received the MPS for Messaging indication from the S-CSCF (at the time of initial IMS registration, or when the indication is changed in the HSS)” to the paragraph handling P-CSCF and PCC interactions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The message may not get the intended/correct priority. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.21 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\*\*\* First change \*\*\*\*\*

## 5.21 IMS Multimedia Priority Services Procedures

The IMS Multimedia Priority Service provides Service Users access to IMS services in a prioritised manner.

The P-CSCF shall control the priority of IMS based MPS sessions, using PCC procedures. The P-CSCF shall permit any authorised Service User to originate an IMS based MPS session. The detection of MPS sessions is handled by the P-CSCF at the originating network.

The P‑CSCF may send an MPS for Messaging indication to the PCRF/PCF using PCC procedures to request the PCRF/PCF to modify the IMS signalling bearer/QoS Flow for MPS for Messaging, as described in TS 23.203 [54] and TS 23.503 [95] when it has received the MPS for Messaging indication from the S-CSCF (at the time of initial IMS registration, or when the indication is changed in the HSS).

PCC shall always be enabled in a network supporting IMS Multimedia Priority Services.

The HSS shall store the IMS Priority Indication, the Priority Level and the MPS for Messaging indication as part of the subscription information/user profile. or when the indication is changed in the HSS

The P-CSCF at the originating end shall determine whether the INVITE message requires priority handling based on the user profile as stored during the registration procedures or as subsequently updated and/or the MPS code/identifier provided by the INVITE message. For MPS Session-based Messaging, the P-CSCF shall determine whether the INVITE message requires priority handling based on the MPS for Messaging indication. If the session is determined to require priority handling, then the P-CSCF inserts/replaces the MPS priority indication in the INVITE and, if the Service User's priority level is known, may include it and forwards the INVITE to the S-CSCF.

The P-CSCF uses the MPS priority indication and Service User's priority level, if available, to derive Resource-Priority information as further described in clause 4.11 of TS 24.229 [10a].

If the Service User's priority level is not known, the P-CSCF includes the priority indication without the Service User's priority level. The S-CSCF routes (using initial Filter Criteria set for the MPS code/identifier) the INVITE to the AS for authentication/authorization for MPS (if needed), and the AS adds the Service User's priority level if it is not in the INVITE already. The AS or the S-CSCF may assert the authorization for priority in the INVITE. The AS then forwards the INVITE (with MPS priority indication and the Service User's priority level) to the next entity in the network via the S-CSCF as part of the normal IMS routing. All subsequent SIP messages carry both MPS priority indication and the Service User's priority level.

NOTE 1: Only one entity is configured to perform assertion of the authorization for priority of a request.

When the P-CSCF at the originating end determines that priority handling is required, the P-CSCF shall derive session information and interact with the PCRF/PCF providing the session information. The derived session information shall indicate the priority of the MPS session, which depends on whether the Service User's priority level is known at this stage. The PCC interaction between the P-CSCF and the PCRF/PCF is described in TS 23.203 [54] and TS 23.503 [95].

The P-CSCF at the terminating end shall determine whether the INVITE message requires priority handling based on MPS priority indication and the originating Service User's priority level received from the originating network. If priority handling is required, P-CSCF shall derive the session information based on the Service User's priority level to indicate the priority of the MPS session and interact with the PCRF/PCF providing the session information.

For IMS Immediate Messaging, the P-CSCF at the originating end shall add Resource-Priority information to the MESSAGE request and shall handle this request with priority if the MPS for Messaging indication is set (enabled) in the originating UE subscription information.

The P-CSCF at the terminating end shall handle the MESSAGE request with priority whether or not it contains Resource-Priority information, if the MPS for Messaging indication is set (enabled) in the terminating UE subscription information.

The P-CSCF shall adjust the priority treatment of transactions or dialogs according to the most recently received authorized MPS priority indication.

When the terminating user is a Service User, while the session request is from a normal user, the IMS signalling bearer/QoS Flow may be given priority treatment when operator policy and MPS (IMS) priority subscription indicates so. For a Service User originating a non-priority session, the IMS signalling bearer/QoS Flow may be given priority treatment when operator policy and MPS (IMS) priority subscription indicates so. For IMS media, priority treatment is not required in these cases.

If so configured by the operator, a P-CSCF or an IBCF shall prohibit the negotiation of ECN during SDP offer/answer exchanges and shall not invoke ECN (as described in clause 4.22) for IMS based MPS sessions.

NOTE 2: Disabling ECN in an IBCF does not prevent a P-CSCF (IMS ALG), subject to roaming agreement, from applying ECN over the access network between a UE and the P-CSCF (IMS ALG) / IMS AGW.

A conferencing AS, if enabled by local policy, shall permit an authorized host with an MPS (IMS) priority subscription (i.e. the Service User that established the conference) to request an upgrade of the host itself, specific participants, or all participants including the host in the conference, whether participants have an MPS subscription or not. Once the conference has been upgraded, the AS will upgrade new participants to MPS without explicit host invocation. For MPS conferencing sessions, upon request from a host to upgrade an existing conference, the AS shall first authenticate/authorize the host for MPS.

NOTE 3: The procedure for the AS to authorize the host for MPS is either based on internal AS information or via access to an MPS database or HSS; and is left to operator implementation. The procedure used by the host to initiate the upgrade request is out of scope.

NOTE 4: The AS decides on the MPS priority level to use for participant UEs in the conference for the purpose of the upgrade.

The session upgrade of UE conference participants is based on existing IMS routing procedures, including interaction between the P-CSCF and PCRF/PCF for that purpose.

For E-UTRAN access, priority support for an EPS bearer is described in TS 23.401 [70].

For 5GS, support of Multimedia Priority Service is described in TS 23.501 [93].

IMS Immediate Messaging and IMS Session-based Messaging delivered with MPS priority are further described in clause 5.16.

\*\*\*\*\* End of changes \*\*\*\*\*