
This sequence diagram shows an IMS user creating a conference by using a conference-factory URI. The conference is created at a MRFC-AS of the users home network. The steps involved in the conference scenario covered here are:

1. The conference initiator UE uses the conference factory URI to initiate a conference with the MRFC-AS (Multimedia Resource Function Control/Application Server).
2. The MRFC-AS assigns a conference URI to the conference and configures the MRFP (Multimedia Resource Function Processor).
3. The conference call is setup and the RTP data begins flowing between the conference initiating UE and the MRFP.
4. The conference initiator then uses the refer procedure to add more users to the conference. The new users establish a call to the conference URI passed in the refer message.
5. When the conference is in progress, RTP media streams are being mixed and propagated to all the participants.
6. The conference user drops out of the conference. All users are notified for this exit from the conference.

Initiating an IMS conference using the Conference Factory URI

INVITE
Via: <Calling UE IP> :Port, <Orig P-CSCF>, <Orig S-CSCF>, Record-Route: <P-CSCF address>, <S-CSCF address>, 

100 Trying

allocate
Conference URI

H.248 interaction to create IMS connection point for Conference Initiator UE in MRFP and to determine media capabilities of the MRFP.

Select MRFP

H.248 interactions to create conference connection resources for Conference Initiator UE

183 Session Prog

PRACK

The S-CSCF forwards the INVITE request to the MRFC-AS that is indicated in the host part of the Request URI.

The MRFP responds to INVITE with 100 Trying.

The MRFC-AS allocates a conference URI, based on local information and information gained from the conference-factory URI in the Request URI field of INVITE message.

The media stream capabilities of the MRFP are returned along the signalling path, in a 183 (Session Progress) provisional response.

The Conference Initiator UE determines which media flows should be used for this session, and which codecs should be used for each of those media flows. If there is any change, Conference Caller sends a new codec request in PRACK.
### MRFC-AS Interfaces (IMS Conference Call)

<table>
<thead>
<tr>
<th>Called UE</th>
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</tr>
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<tbody>
<tr>
<td>Calling UE</td>
<td>IMS 1 MRF</td>
<td>IMS 2</td>
</tr>
<tr>
<td>Caller User Equipment</td>
<td>Initiating P-CSCF</td>
<td>Initiating S-CSCF</td>
</tr>
<tr>
<td>Conference Initiator</td>
<td>MRFC-AS</td>
<td>MRFP</td>
</tr>
</tbody>
</table>

#### H.248 interaction to modify connection

- **200 OK (PRACK)**

- **UPDATE**

- **200 OK (UPDATE)**

- **H.248 interaction to create conference connection resources for Conference Caller**

- **200 OK (INVITE)**

- **Contact:** `<sip:conf1@mrfc1.home1.net>;isfocus=allocco`

- **ACK**

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**User inviting another user to a conference by sending a REFER request**

- **INVITE**

- **100 Trying**

- **H.248 interaction to create conference connection resources for called conference participant UE**

- **183 Session Prog**

- **PRACK**

- **Allocate resources for negotiated codec**

- **200 OK (PRACK)**

- **H.248 interaction to modify conference connection resources for Called Conference Participant UE**

- **UPDATE**

- **200 OK (UPDATE)**

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The S-CSCF forwards the INVITE request to the MRFC-AS that is indicated in the message.
**MRFC-AS Interfaces (IMS Conference Call)**

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- **H.248 interaction to through connect conference connection resources for Called Conference Participant**
  - 200 OK (INVITE)
  - ACK

Notify Conference Initiator that the user has successfully entered the conference

Conference in progress

Conference Caller leaving the Conference

- **H.248 interaction to release resources**
  - 200 OK (BYE)

- **NOTIFY**
  - To: <sip: user3_public1@home1.net>, From: <sip: conf1@mrfc1.home1.net>, Subscription-State: terminated, Event: conference, Conference status information of all conference participants

Notify other Conference participants that Called Conference Participant has left conference

- **NOTIFY**
  - To: <sip: user1_public1@home1.net>, From: <sip: conf1@mrfc1.home1.net>, Subscription-State: terminated, Event: conference, Conference status information of all conference participants

- **200 CK (NOTIFY)**

The MRFC-AS interacts with the MRFP to release the resources reserved for Conference Caller in this conference.

The MRFC-AS generates a NOTIFY request to indicate that Called Conference Participant has left the conference and automatically unsubscribes it from its subscription to the conference event package.

MRFC-AS similarly notifies other conference participants that have subscribed to the conference event package that Called Conference Participant has left the conference.

The conference initiator is also notified about a user dropping out of the conference.