3GPP TSG CN Plenary

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Title: **Except from latest version of TS 23.228 on IM services concepts**

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Introduction

The following text is taken from the draft version of TS23.228 version 2.0 which is subject to email approval prior to presentation at SA#11. The text on IM services concepts was agreed at SA2#17 and the purpose of the current email approval is only to deal with any necessary editorial corrections needed.

4.2 IM services concepts

4.2.1 Virtual Home Environment (VHE)

4.2.1.1 Support of CAMEL

It shall be possible for an operator to offer access to services based on the CSE for its IM CN subsystem subscribers. This shall be supported by a CAP interface to the Serving-CSCF. It should be noted that there is no requirement for any operator to support CAMEL services for their IM CN subsystem subscribers or for inbound roamers.

It shall be possible for a home network to provide support for CAMEL based services to a subscriber roaming in a network that does not support CAMEL on the IM CN subsystem or does not support the required CAMEL Version. To achieve this, the home operator may support the CAP capable Serving-CSCF in the home network.

4.2.1.2 Support of OSA

It shall be possible for an operator to offer access to services based on OSA for its IM CN subsystem subscribers. This shall be supported by an OSA API between the Application Server (AS) and the network.

4.2.2 Support of Local Services in the IMS

Visited network provided services offer an opportunity for revenue generation by allowing access to services of a local nature to visiting users (inbound roamers). There shall be a standardised means for providing inbound roamers with access to local services.

4.2.3 Support of roaming subscribers

The architecture shall be based on the principle that the service control for Home subscribed services for a roaming subscriber is in the Home network, e.g., the Serving-CSCF is located in the Home network.

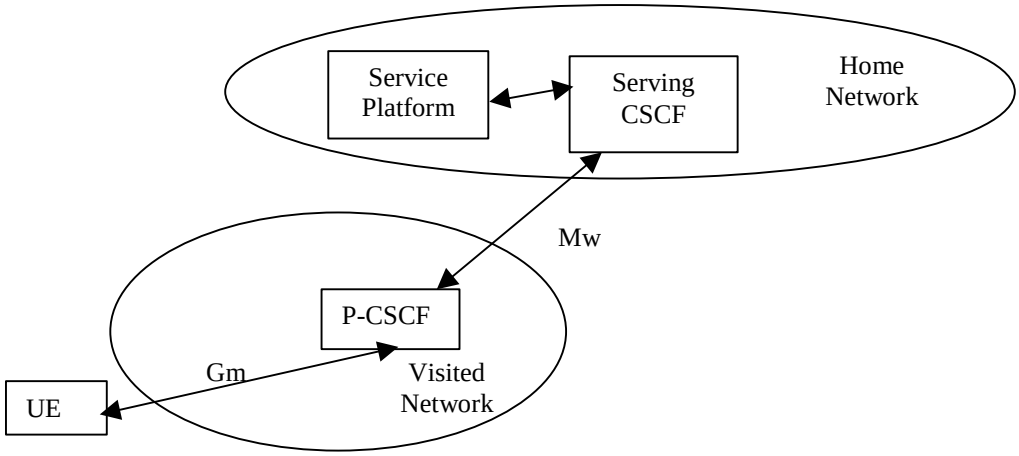

Figure 4-1: Service Platform in Home Network

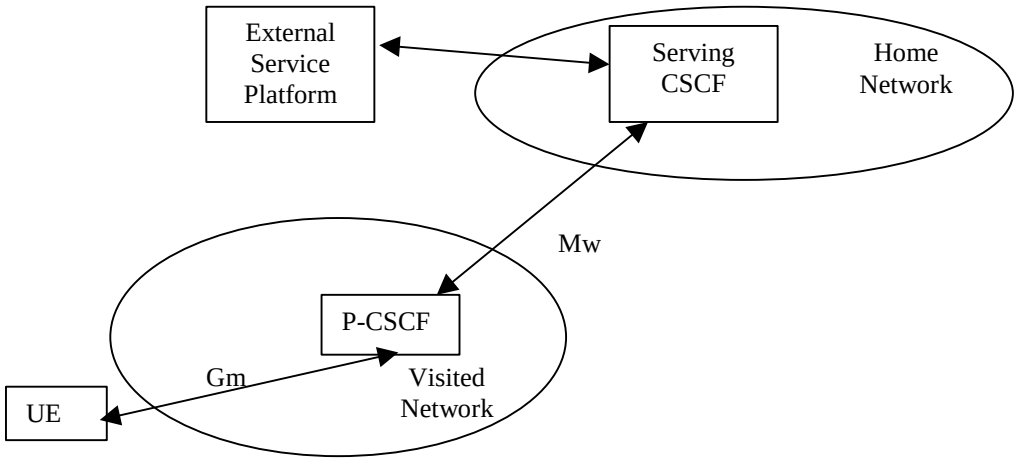

Figure 4-2: External Service Platform

There are two possible scenarios to provide services:

- via the service platform in the Home Network
- via an external service platform (e.g. third party or visited network)

The box representing the external service platform could be located in either the visited network or in the 3rd party platform.

Editor's Note: the types of protocols to be used on the interfaces between the Serving-CSCF and the different service platforms in these different scenarios are FFS.

The roles that the CSCF plays are described below.

- When subscribers roam to visited networks, the Serving-CSCF is located in the home network , the roamed to (visited) network shall support a Proxy-CSCF. The Proxy-CSCF shall enable the session control to be passed to the home network based Serving-CSCF that shall provide service control.

A Proxy-CSCF shall be supported in both roaming and non-roaming case, even when the Serving-CSCF is located in the same IM CN SS.

Reassigning the Proxy-CSCF assigned during CSCF discovery is not a requirement in this release. Procedures to allow registration time Proxy-CSCF reassignment may be considered in future releases.

Network initiated Proxy-CSCF reassignment is not a requirement.

The use of additional CSCFs, that is Interrogating-CSCFs, to be included in the SIP signalling path is optional. Such additional CSCFs may be used to shield the internal structure of a network from other networks.

4.2.4 CSCF to service platform Interface

An Application Server (AS) offering value added IM services resides either in the user's home network or in a third party location. The third party could be a network or simply a stand-alone AS.

The CSCF to AS interface is used to provide services residing in an AS. Two cases were identified:

- Serving-CSCF to an AS in Home Network.
- Serving-CSCF to an AS in External Network (e.g., Third Party or Visited)

Regarding the general provision of services in the IMS, the following statements shall guide the further development.

1. Besides the Cx interface the S-CSCF supports only one standardised protocol for service control purposes, SIP+.
2. Guidelines for SIP+ are needed; SIP+ is based on the SIP protocol information with necessary enhancements to allow for service control; controversial enhancements should be avoided.
3. The depicted functional architecture does not propose a specific physical implementation.
4. Scope of the SIP Application Server: the SIP Application Server may host and execute services. It is intended to allow the SIP Application Server to influence and impact the SIP session on behalf of the services and it uses SIP+ to communicate with the S-CSCF. Further details are needed.
5. The S-CSCF shall decide if a SIP session request is subject to inform a service. The decision at the S-CSCF is based on (filter) information received from the HSS (or other sources, e.g. application servers). To identify the service to be informed is based on information received from the HSS.
6. The purpose of the IM SSF is to translate SIP+ to CAP and to hold the needed functions to do that.
7. The IM SSF and the CAP interface support legacy services only.

The figure below depicts an overall view of how services can be provided.

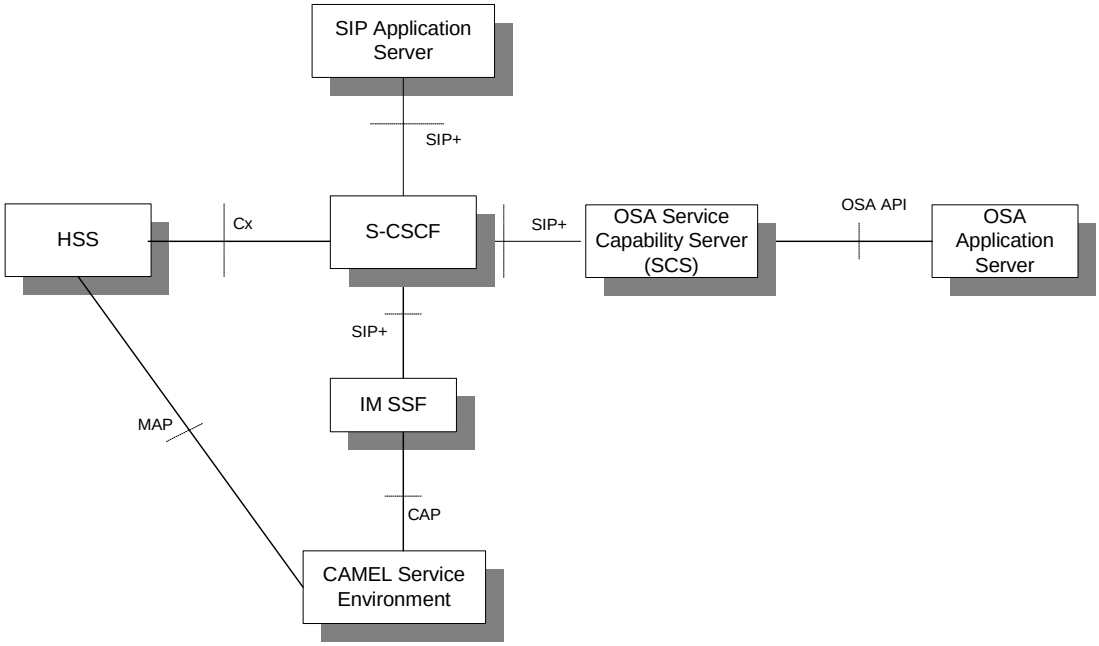

Figure 4.3: Functional architecture for the provision of service in the IMS