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Acapulco, Mexico

Agenda item: 7.9.2 GBA
Title: BSF control of VPLMN services can be used by the UE
Source: Huawei
Document for: Discussion and Decision

1 Introduction

Support NAF in visited network has been added to TS 33.220. When UE is in a visited network, UE can bootstrap with BSF in subscriber's home network. When UE request the visited network service (a NAF in visited network), there is a D-proxy will transfer the retrieve request from visited network to subscriber's BSF in home network, after NAF in visited network get shared secrets from subscriber's BSF, the security association is established between UE and NAF in visited network. This contribution discuss the necessity that BSF control of the services that can be visited by UE in the visited network.

2 Discussion

When the subscriber's BSF and the NAF are located in different network: firstly, and the UE want to use the NAF in visited network (call thus NAF as NAFv), the agreement between the subscriber's home network and the visited network must exist, otherwise the charging and security all are problems. Secondly, after the user enjoy the service in visited network, the visited network will provide the bill to the home network, then home network act according the agreement. Even if there is an agreement between the subscriber's home network and visited network , the home network also should have ability to restrict UE to use NAFv according to the users subscription or some operator specific reasons.

Who will be in charge of checking the agreement available? After BSF return the key material and corresponding information to D-proxy (then D-proxy transfer those to NAFv), the security association will be established between UE and NAFv, in this procedure, returning key material and corresponding information to D-proxy means that the BSF authorize the UE using the service of NAFv.

Visited network check: Before the D-proxy or NAFv retrieve the Transaction Identity, they check the agreement at first , if the agreement is not available , they don't send retrieve request or transfer the retrieve request, because they can not charge the user without the agreement with home operator.

Home network check: The logical contacting entity to D-proxy in home network is BSF, so the BSF should check the agreement is available.

Whether the visited network check the agreement or not, the check at home network is needed in any way. It have to make a decision/response to the visited network, and check if the user is permitted for the service in the visited network (or a specific visited network).

Conclusion: It is important to operator that home network control the service can be used by the UE in visited network, from the current architecture, the BSF is appropriate entity to implement this control.

3 Proposal

SA3 endorse the follow summarize:

When the Transaction Identity retrieve request is from D-proxy in visited network, the BSF should check whether the UE can use the service in visited network.