

# Troubleshooting of HO fail because of wrong eNB-ID

## 1. Production:

4G Femto V1.7.0

## 2. Issue Description:

S1 HO failed between two femtocells. Both Femtocells should be HOME eNB.

In eNBConfigurationTransfer and HandoverRequired messages (frames 22, 23, 31,32) the target eNB-ID is sent as a MACRO eNB-ID instead of HOME eNB-ID.

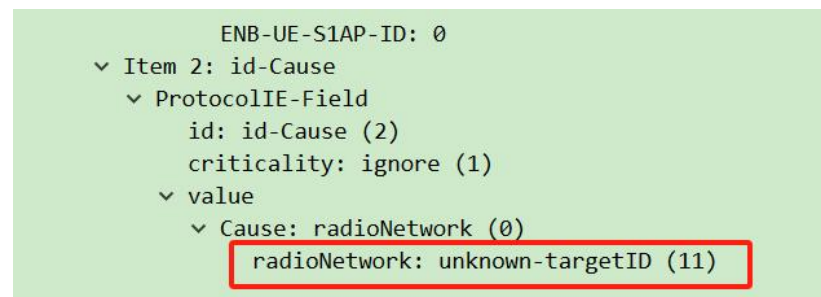
Notes: neighbourhood relations are not configured in advance in the 2 radios because we want to have the ANR based on mobiles measurements.

## 3. Issue Troubleshooting:

- 1- Captured the MME S1 log when trying to do HO.
- 2- download the device.xml and device.log for both femtos.

## 4. Root Cause:

The target cellid and TAI requested by the user are not recognized, this failure reason value is returned as follows:


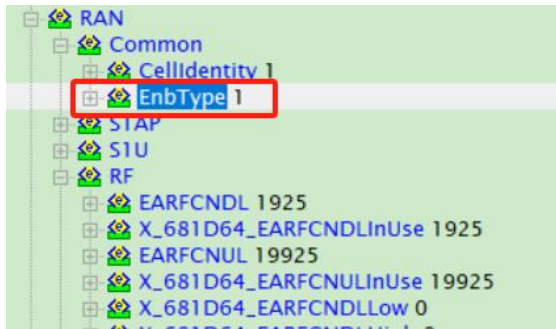


No.	Time	Source	Destination	Protocol	Length	Info
1091	298.410038	10.234.126.130	10.234.124.112	S1AP	90	UEContextReleaseRequest [RadioNetwork-cause=user-inactivity]
1093	298.434407	10.234.124.112	10.234.126.130	S1AP	86	UEContextReleaseCommand [RadioNetwork-cause=user-inactivity]
1094	298.480073	10.234.126.130	10.234.124.112	S1AP	102	UEContextReleaseComplete
1236	345.430043	10.234.126.130	10.234.124.112	S1AP/NL	122	InitialUEMessage, Service request
1238	345.433316	10.234.124.112	10.234.126.130	S1AP	174	InitialContextSetupRequest
1240	345.530110	10.234.126.130	10.234.124.112	S1AP	1130	UECapabilityInfoIndication, UECapabilityInformation
1242	345.600140	10.234.126.130	10.234.124.112	S1AP	106	InitialContextSetupResponse
1292	357.810107	10.234.126.130	10.234.124.112	S1AP	1298	HandoverRequired [RadioNetwork-cause=s1-intra-system-handover-triggered]
1294	357.813152	10.234.124.112	10.234.126.130	S1AP	90	HandoverPreparationFailure [RadioNetwork-cause=unknown-targetID]
1376	382.490040	10.234.126.130	10.234.124.112	S1AP	90	UEContextReleaseRequest [RadioNetwork-cause=user-inactivity]
1380	383.530085	10.234.126.130	10.234.124.112	S1AP	86	UEContextReleaseComplete

id: id-eNB-UE-S1AP-ID (8)  
criticality: ignore (1)  
value  
ENB-UE-S1AP-ID: 5  
Item 2: id-Cause  
ProtocolIE-Field  
id: id-Cause (2)  
criticality: ignore (1)  
value  
Cause: radioNetwork (0)  
radioNetwork: unknown-targetID (11)

## 5. Solution:

Because the enbType added by ANR is set to 0 by default.

By default =0	For home eNB should be 1
	

For home eNB, it can be distinguished whether the newly added neighboring cell is a home enb or not by limited the Range:

Path: Device.Services.FAPService.{i}.SON.ANR

HomeEnbEarfcnRange: 1900..1930 //cuz we used 1925, the range should be set less than 100, so choose 1900..1930 for example.

Notes: If there are both macro and home stations in the environment, and the frequency selection is the same, then only one can be selected for HO. If HO with macro stations (type=0), the default configuration does not need to be changed. If HO with home stations, the range needs to be limited according to the above method, and the types within this range are all 1.