LTE to 3G circuit switched fallback

The UE establishes an RRC connection with the LTE eNodeB.

The UE registers with the network with an attach type of Combined EPS/IMSI attach. This signals to the network that the UE supports circuit switched callback (CSFB).

MME authenticates the UE.

UE responds to the authentication request.

MME establishes NAS security.

Exchange additional parameters as security has been established.

The attach is successfully completed. The network signals to the UE that it has performed a Combined EPS/IMSI attach. The UE is attached to LTE for data and a 3G network for voice. The message also signals the Location Area Identifier and TMSI in the 3G circuit switched network.

The network has also triggered the setup a default bearer and a dedicated bearer.

eNodeB responds to the Initial context setup.

UE responds back with attach accept and default bearer establishment accept.

The dedicated bearer has also been setup at the UE.

UE has now connected to the 4G network.

Signal to the 4G network that the UE wishes to fall back for a circuit switched call.
The MME signals to the UE that CS fall back is required. The message also notifies the UE about the 3G location area that needs to be used in 3G access for the voice call.

Release the 4G LTE session has the UE is going to transition to a 3G UMTS network.

UE connects back to the 4G LTE network

The UE has moved back to the 4G network

UE initiates a tracking area update after moving back to the 4G network.