5G non-standalone access

Signaling flow for 5G access via LTE-5G NR dual connectivity (EN-DC)

EventHelix Follow
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> *Updated on March 15, 2019*

Transition to 5G is being accelerated by enabling support for 5G bearers in the existing 4G-LTE infrastructure.

5G mobile broadband services will be available to users in a primarily 4G network via mobile terminals that support dual connectivity to 4G LTE and 5G NR base stations at the same time.

To enable dual connectivity, the 4G infrastructure will support connecting to a 5G NR base station (gNodeB). The

UE Capability Enquiry	MN-eNB ➔ UE
UE Capability Information └UE-MRDC-Capability └SupportedBandListNR-r15	UE ➔ MN-eNB
UE Capability Info Indication	MN-eNB ➔ MME
AS Security Mode Command	MN-eNB ➔ UE
AS Security Mode Complete	UE ➔ MN-eNB
RRC Connection Reconfiguration └Attach Accept └Activate Default EPS Bearer Context Request └MeasConfig └MeasObjectToAddModList └MeasObjectNR-r15	MN-eNB ➔ UE
RRC Connection Reconfiguration Complete	UE ➔ MN-eNB
Attach Complete └Activate Default EPS Bearer Accept	UE ➔ MME
Measurement Report └MeasResults	UE ➔ MN-eNB
SgNB Addition Request	MN-eNB ➔ SN-gNB
SgNB Addition Request Acknowledge └CG-Config	SN-gNB ➔ MN-eNB
RRC Connection Reconfiguration for 5G-NR Bearer └CG-Config	MN-eNB ➔ UE
RRC Connection Reconfiguration Complete for 5G-NR Bearer └NR RRCReconfigurationComplete	UE ➔ MN-eNB
SgNB Reconfiguration Complete └NR RRCReconfigurationComplete	MN-eNB ➔ SN-gNB

SgNB Addition Request

MN-eNB ➔ SN-gNB

TS 36.423

IE/Group Name	Presence
Message Type	M
MeNB UE X2AP ID	M
NR UE Security Capabilities	M
SgNB Security Key	M
SgNB UE Aggregate Maximum Bit Rate	M
Selected PLMN	O
Handover Restriction List	O
E-RABs To Be Added List	

E-RABs To Be Added Item [E-RAB ID]

IE/Group Name	Presence
E-RAB ID	M
DRB ID	M
EN-DC Resource Configuration	M
CHOICE Resource Configuration	M

PDCP present in SN

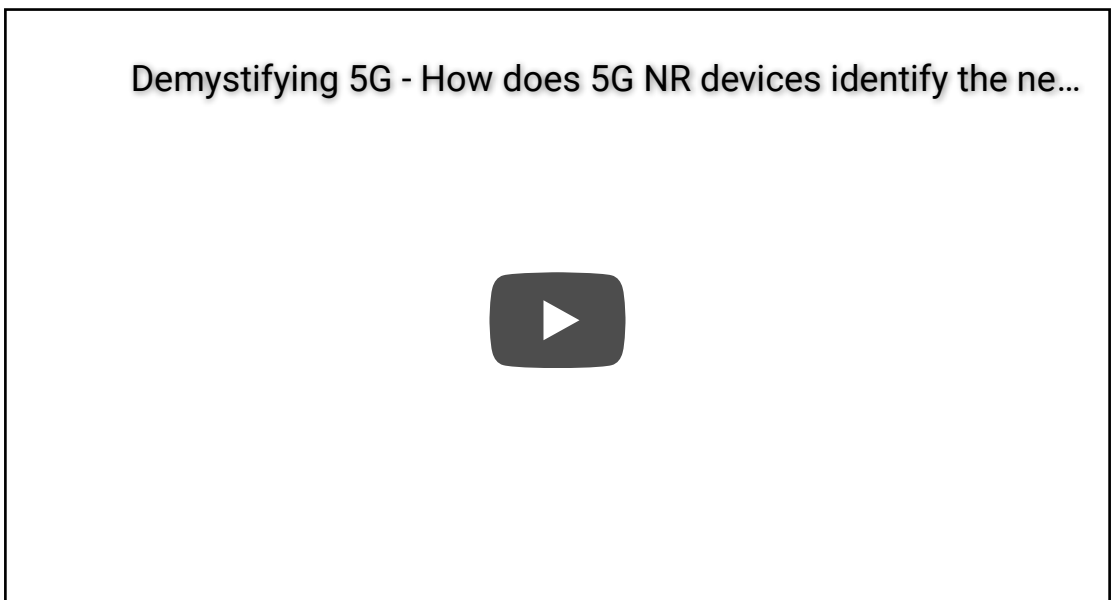
IE/Group Name	Presence
Full E-RAB Level QoS Parameters	M
Maximum MCG admittable E-RAB Level QoS Parameters	C-ifCGandSCGpresent_GBR

Non-standalone EN-DC signaling details

5G Non-Standalone Videos

Now that we have covered the 5G Non-Standalone session setup flow. Let's review what we have learned in the following videos.

Overview of the Non-Standalone Access (NSA) Architecture



5g 5g Network 5g Wireless Lte 4g Lte