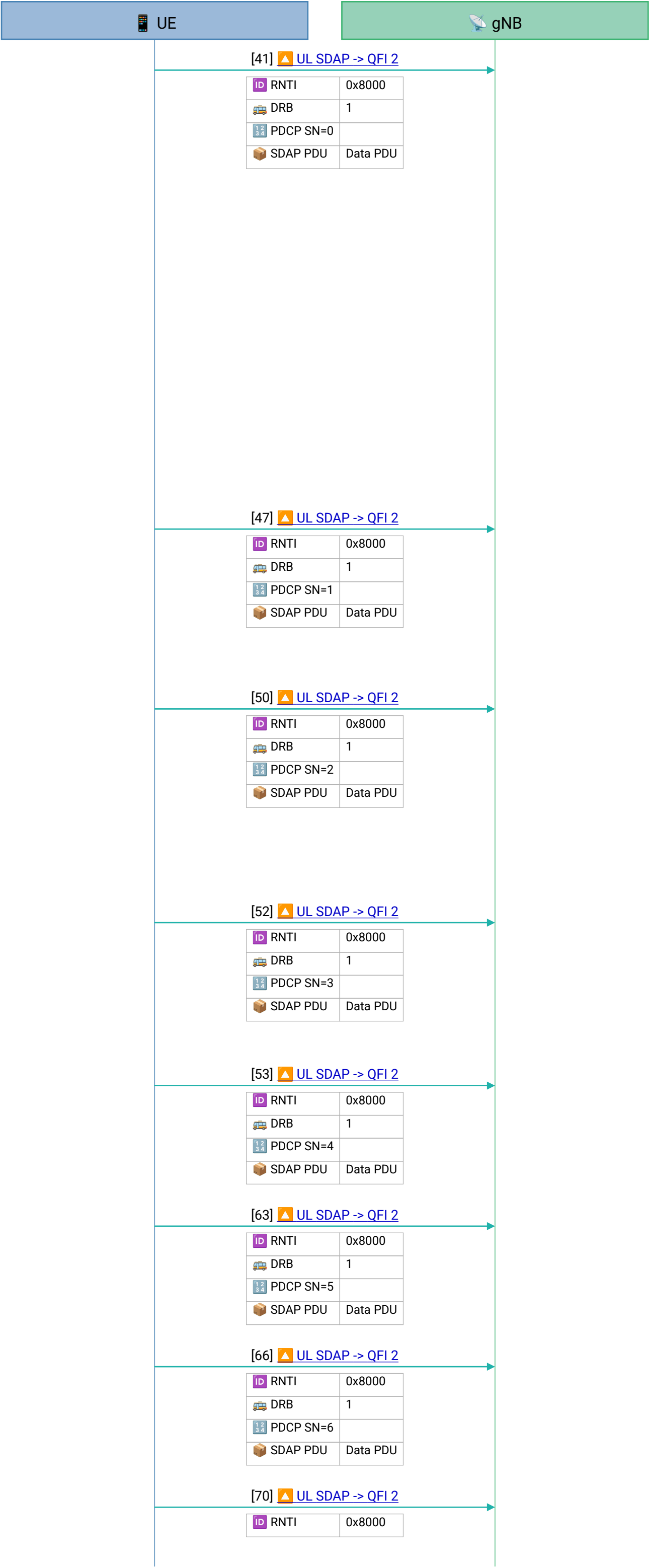






RNTI

0x8000

DRB

1

1

2

3

4

PDCP SN=10

SDAP PDU

Data PDU

[80]

UL SDAP -> QFI 2

RNTI

0x8000

DRB

1

1

2

3

4

PDCP SN=11

SDAP PDU

Data PDU

[81]

UL SDAP -> QFI 2

RNTI

0x8000

DRB

1

1

2

3

4

PDCP SN=12

SDAP PDU

Data PDU

[91]

UL SDAP -> QFI 2

RNTI

0x8000

DRB

1

1

2

3

4

PDCP SN=13

SDAP PDU

Data PDU

[97.1]

UL SDAP -> QFI 2

RNTI

0x8000

DRB

1

1

2

3

4

PDCP SN=14

SDAP PDU

Data PDU

DRB

1

1

2

3

4

PDCP SN=15

[97.2]

UL SDAP -> QFI 2

SDAP PDU

Data PDU

[107]

UL SDAP -> QFI 2

RNTI

0x8000

DRB

1

1

2

3

4

PDCP SN=16

SDAP PDU

Data PDU

[114]

UL SDAP -> QFI 2

[Frame 72] PDCP SN=8, QFI : 2 — and the packet gets bigger, 108 bytes of RLC data rather than 64. The SDAP header does not care and does not change: one byte, 82 , whatever the payload turns out to be. What that payload turns into from here is [Decrypting a 5G NR radio capture](#) 's territory.

[Frame 75] Third burst, 1030.999 ms on. RLC SN=9, 108 bytes, 800009 82 , PDCP SN=9, QFI : 2 . Ten SDAP PDUs so far — this is the tenth message of the session — and ten identical headers.

[Frame 78] One of only two frames in the session carrying three RLC PDUs, and again one SDAP PDU out of it. The transport block holds an RLC status PDU, SN=10 whole at 88 bytes, and the first 515 bytes of SN=11 . Frame 50 was the other; every remaining uplink transmission on this bearer carries one RLC PDU or two. PDCP SN=10 is the only SDU that completes here, so the only SDAP header dissected is its QFI : 2 . Note what does *not* vary. Every one of the session's 27 uplink transmissions is 691 bytes on the wire, so no frame here is a bigger grant than any other — only a more fully packed one.

[Frame 80] PDCP SN=11 completes at S0=1129 , 6.993 ms after frame 78. Three RLC transmissions — frames 78, 79 and 80 — for one SDAP PDU carrying one QFI. Segmentation is invisible from up here, and so is the number of transmissions it cost. In the same frame SN=12 starts with 80000c 82 .

[Frame 81] PDCP SN=12, QFI : 2 . SN=12 finishes at S0=450 with 538 bytes and the poll bit, 0.997 ms after frame 80. Second burst in a row that ends with a segmented SDU completing on the last frame of the run.

[Frame 91] PDCP SN=13, QFI : 2 , 272.008 ms later — an 88-byte SDU, whole, behind a status PDU. This is the fourteenth message of the session: fourteen uplink SDAP PDUs, fourteen QFI : 2 headers, and the D/C bit has read Data PDU on every one. There is no SDAP Control PDU anywhere in this capture, and there is no reason for one: the only SDAP Control PDU the spec defines is the end-marker a UE sends after a QoS flow is remapped to a different DRB (TS 37.324), and nothing here is ever remapped.

[Frame 97.1] Two SDAP PDUs in one frame — this is the first. The frame's opening RLC PDU is SN=14 at S0=1227 , the last 61 bytes of a three-segment SDU that started back in frame 95. That completes PDCP SN=14 , and its SDAP header reads QFI : 2 . Because two PDCP PDUs finish inside this single transmission, the diagram splits the frame into two arrows. They are genuinely independent packets: two sequence numbers, two SDAP headers, one radio transmission.

[Frame 97.2] The second SDAP PDU of frame 97. RLC SN=15 rides whole in the same transport block, 332 bytes, poll set, data beginning 80000f82 — PDCP Seq Num : 15 , then the familiar 82 . QFI : 2 again. Two packets of the same QoS flow, mapped onto the same DRB, delivered in the same slot: exactly the case SDAP's per-packet header exists to keep unambiguous.

[Frame 107] PDCP SN=16, QFI : 2 , 93.002 ms after frame 97. An 88-byte SDU behind a status PDU, data 800010 82 . Seventeen down, one to go.

[Frame 114] The last SDAP PDU on the bearer, 5225.955 ms after the first. RLC SN=17 completes at S0=613 with 371

📱 UE		📡 gNB									
	<table><tr><td>🆔 RNTI</td><td>0x8000</td></tr><tr><td>🚌 DRB</td><td>1</td></tr><tr><td>📄 PDCP SN=17</td><td></td></tr><tr><td>📦 SDAP PDU</td><td>Data PDU</td></tr></table>	🆔 RNTI	0x8000	🚌 DRB	1	📄 PDCP SN=17		📦 SDAP PDU	Data PDU		bytes and the poll bit; PDCP SN=17 is delivered; the SDAP header reads QFI : 2 . The session's totals: 18 SDAP PDUs across 17 frames, every one uplink, every one a Data PDU, every one carrying QFI : 2 — the single QoS flow that frame 38 mapped onto DRB 1. Six of those 18 SDUs were segmented by RLC and needed 27 uplink RLC data PDUs between them; SDAP saw 18 packets regardless. And the mirror image, which is the fact this whole diagram is shaped by: the same bearer carried 14 downlink PDCP PDUs in this window and not one of them has an SDAP header at all. Frame 38 said sdap-HeaderDL : absent (1) , so there is nothing to dissect in that direction — the gNB already knows which flow it is sending on, because the QFI arrived from the UPF over N3. Only going up does the flow have to be named again, which is why the uplink header is the one configured present. Frame 115 is the last DRB transmission of any kind in the capture; the two later RRC connections never create a data bearer, so this is the only SDAP session in the file.
🆔 RNTI	0x8000										
🚌 DRB	1										
📄 PDCP SN=17											
📦 SDAP PDU	Data PDU										
Session Result: timeout — idle 30.000s after last activity (active span: 5.226s)											