



OVERVIEW AND UPDATES · CONNECTED MEDIA PRODUCTION

Non-Public Networks

Private networks replacing legacy COFDM and RF-based contribution links

3GPP

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About the project

The documents the project rests on

3GPP TS 22.263

Technical Specification

Service requirements for Video, Imaging and Audio for Professional Applications (VIAPA), the requirements most often cited for NPNs in broadcast use.

3GPP TS 23.501

Technical Specification

The system architecture of the 5G System. It defines the SNPN and PNI-NPN deployment models.

3GPP TS 33.501

Technical Specification

The security architecture and procedures of the 5G System, including NPN security.

FIND OUT MORE

Technical Analysis

Specifications

Deployment models

A standalone NPN is independent; an integrated NPN reuses the public network of an operator

SNPN Stand-alone Non-Public Network

Own 5G core

Independent of any PLMN

PLMN ID and NID

Self-assigned or coordinated NID

SNPN network selection by the UE

PNI-NPN Public Network Integrated NPN

Realised through the operator's PLMN

Part of the host PLMN

Dedicated DNN

Dedicated network slice (S-NSSAI)

Closed Access Group (CAG)

In an SNPN the organisation runs the core, so it controls the UDM, PCF and SMF configuration directly. A CAG is advertised by cells; only UEs that are members may camp on and access them.

LEARN

Identity, access and production

Release 17 separated credentials from the network; production traffic is uplink-heavy

Identity and onboarding Release 17

Credentials Holder

External AAA server

Onboarding SNPN (ON-SNPN)

Default Credentials Server (DCS)

Provisioning Server (PVS)

Access beyond the radio link

Untrusted non-3GPP access

Trusted non-3GPP access

Wired LAN, Wi-Fi, fixed backhaul

QoS and slicing for media production

Sustained uplink

5G QoS Flows and 5QI

Guaranteed Bit Rate

S-NSSAI per service class

Time Sensitive Communications

Spectrum a national regulatory matter

Locally licensed spectrum

Spectrum leased from an operator

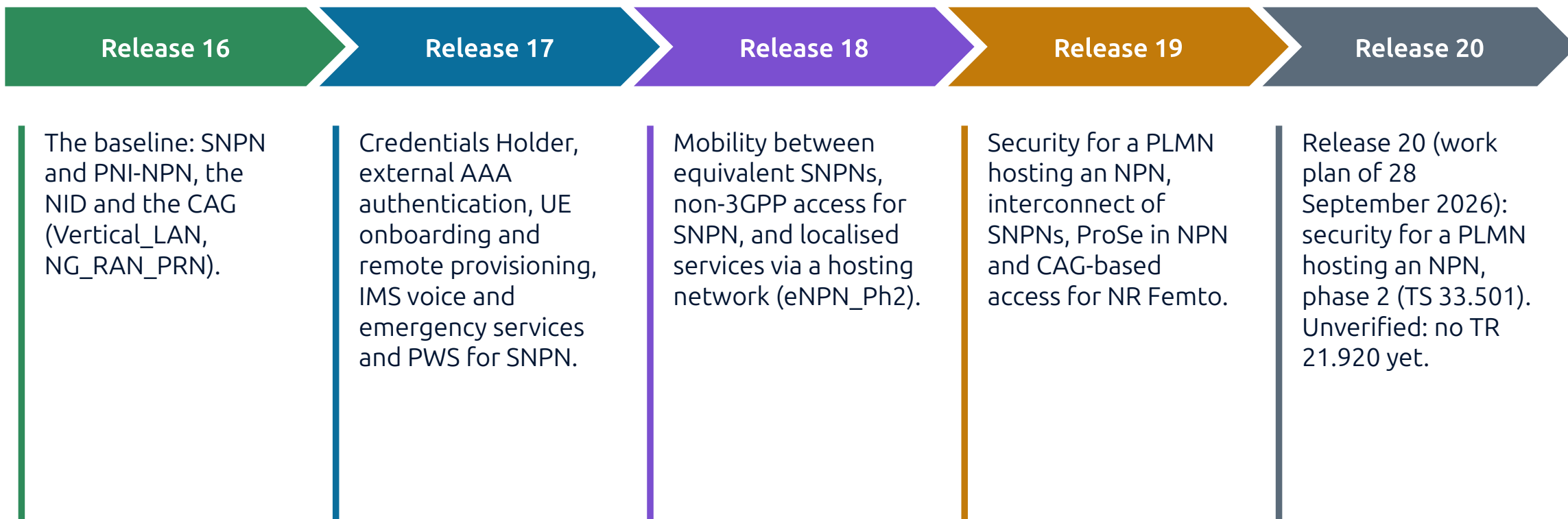
Shared access

Unlicensed bands

Spectrum bands, licence conditions and power limits differ between administrations and are checked with the national regulator. Access over non-3GPP networks is defined in TS 24.502.

How it grew

The 3GPP work on non-public networks, release by release





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