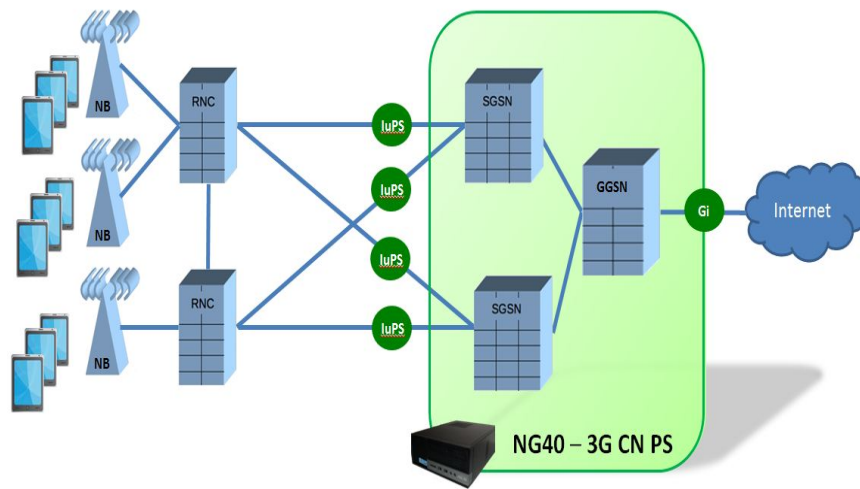


NG40-CN-IuPS-Eth-DT

DEMONSTRATION TEST Core Network (CN) emulator for multiple SGSNs with Control Plane and User Plane functionality over Ethernet

*** FEATURES ***

- RANAP/NAS Release 8+9+10
- Integrated HSS / HLR / GGSN functionality
- Multiple User Support: standard 2 users, extendable

*** SESSIONS ***

- IPv4/IPv6 Transport-IP and Application-IP
- PDP-Context creation/modification/deletion (UE/Network initiated)
- 11 simultaneous PDP-Context per UE (primary, secondary)

*** SECURITY ***

- Authentication (XOR/Milenage for 3G USIM's, A3/A8 for 2G SIM's)
- Ciphering, Integrity Protection

*** EXTENSIONS ***

- LTE EPC / 4G Handover / IuCS Mobility

*** MOBILITY ***

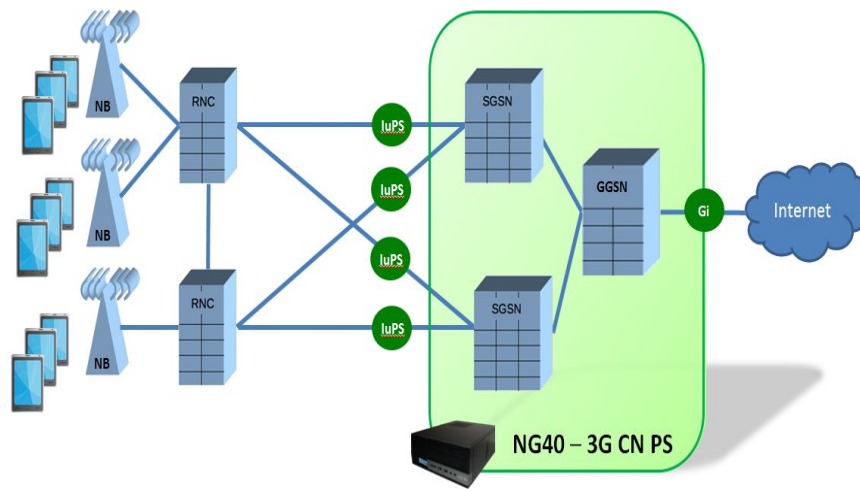
- Attach, Detach, Routing Area Update, Service Request, Relocation-PS
- 2G/3G/4G Mobility and Handover (4G Mobility optional)
- Idle Mode Paging for Downlink Data
- IuFlex NRI-based including NULL-NRI and MOCN

*** SERVICES ***

- HSDPA/HSUPA-support
- IP-Bridge to external application servers via Gi-interface
- Integrated IuPS/Gi-Interface User Plane packet generator
- SMS-Generator including concatenated (long) SMS
- Alpha Tagging
- PS/EPS-correlation
- APN-based routing

*** DEMONSTRATION TEST KPI's ***

- 2 simulated SGSN's
- 10 procedures/sec
- 10 concurrent PS calls
- Up to 200 UE's
- Up to 4 RNC's

NG40-CN-IuPS-Eth-FT

FUNCTIONAL TEST Core Network (CN) emulator for multiple SGSNs with Control Plane and User Plane functionality over Ethernet

*** FEATURES ***

- RANAP/NAS Release 8+9+10
- Integrated HSS / HLR / GGSN functionality
- Multiple User Support: standard 2 users, extendable

*** SESSIONS ***

- IPv4/IPv6 Transport-IP and Application-IP
- PDP-Context creation/modification/deletion (UE/Network initiated)
- 11 simultaneous PDP-Context per UE (primary, secondary)

*** SECURITY ***

- Authentication (XOR/Milenage for 3G USIM's, A3/A8 for 2G SIM's)
- Ciphering, Integrity Protection

*** EXTENSIONS ***

- LTE EPC / 4G Handover / IuCS Mobility

*** MOBILITY ***

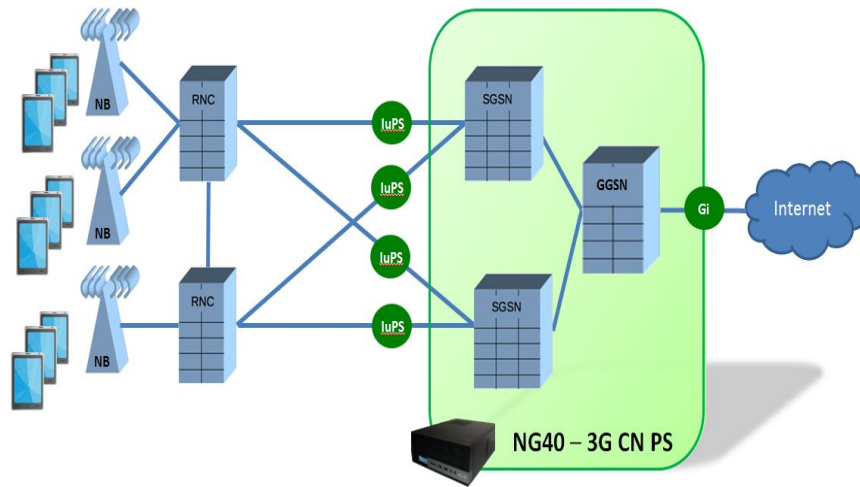
- Attach, Detach, Routing Area Update, Service Request, Relocation-PS
- 2G/3G/4G Mobility and Handover (4G Mobility optional)
- Idle Mode Paging for Downlink Data
- IuFlex NRI-based including NULL-NRI and MOCN

*** SERVICES ***

- HSDPA/HSUPA-support
- IP-Bridge to external application servers via Gi-interface
- Integrated IuPS/Gi-Interface User Plane packet generator
- SMS-Generator including concatenated (long) SMS
- Alpha Tagging
- PS/EPS-correlation
- APN-based routing

*** FUNCTIONAL TEST KPI's ***

- Message modification, deletion and insertion with commreplace emulation and Python scripts
- 10 simulated SGSN's
- 100 procedures/sec
- 100 concurrent PS calls
- Up to 20.000 UE's
- Up to 40 RNC's

NG40-CN-luPS-Eth-LT

LOAD TEST Core Network (CN) emulator for multiple SGSNs with Control Plane and User Plane functionality over Ethernet

*** FEATURES ***

- RANAP/NAS Release 8+9+10
- Integrated HSS / HLR / GGSN functionality
- Multiple User Support: standard 2 users, extendable

*** SESSIONS ***

- IPv4/IPv6 Transport-IP and Application-IP
- PDP-Context creation/modification/deletion (UE/Network initiated)
- 11 simultaneous PDP-Context per UE (primary, secondary)

*** SECURITY ***

- Authentication (XOR/Milenage for 3G USIM's, A3/A8 for 2G SIM's)
- Ciphering, Integrity Protection

*** EXTENSIONS ***

- LTE EPC / 4G Handover / luCS Mobility

*** MOBILITY ***

- Attach, Detach, Routing Area Update, Service Request, Relocation-PS
- 2G/3G/4G Mobility and Handover (4G Mobility optional)
- Idle Mode Paging for Downlink Data
- luFlex NRI-based including NULL-NRI and MOCN

*** SERVICES ***

- HSDPA/HSUPA-support
- IP-Bridge to external application servers via Gi-interface
- Integrated luPS/Gi-Interface User Plane packet generator
- SMS-Generator including concatenated (long) SMS
- Alpha Tagging
- PS/EPS-correlation
- APN-based routing

*** LOAD TEST KPI's ***

Tested on 12 Core Intel dual Xeon Server with 2 Scenarios and can be extended with licenses for additional scenarios:

- 50,000 RANAP Messages/sec
- 4,000,000 UEs (with luFlex and max NRI field length: 2,000,000)
- 8,000,000 EPS-Bearer (PDPCs)
- 800 RNCs
- 80 SGSNs