5G NSA NETWORK ARCHITECTURE

The 5G NSA (Non-Standalone) architecture is a transitional architecture that combines 5G New Radio (NR) with the existing 4G LTE core network (Evolved Packet Core, EPC). This allows for a gradual rollout of 5G services while still utilizing the existing 4G infrastructure.

In 5G NSA, the 5G NR radio access network (RAN) is connected to the 4G LTE core network, enabling the use of 5G radios and new spectrum bands while still relying on the existing 4G core network for mobility management, authentication, and billing.

The key components of the 5G NSA architecture include:

- 5G NR RAN: The 5G radio access network, comprising gNBs (5G base stations)
- 4G LTE EPC: The existing 4G core network, comprising MME (Mobility Management Entity), SGW (Serving Gateway), and PGW (Packet Data Network Gateway)
- NG-RAN: The next-generation radio access network, which includes both 5G NR and 4G LTE radios

The 5G NSA architecture enables a phased approach to 5G deployment, allowing operators to initially offer 5G services over existing 4G infrastructure, and later transition to a full 5G core network (5GC) with the 5G SA (Standalone) architecture.