**Mobile Core Low-Level Design Template**

**Facebook NaaS Runbook**

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# Table of Contents

[Table of Contents 2](#_Toc46319707)

[1. Mobile Core Low Level Design Information 3](#_Toc46319708)

[1.1. Topology 3](#_Toc46319709)

[1.2. Operator Information and EPC Data defined by the Operator 3](#_Toc46319710)

[1.3. Roaming Strategy 3](#_Toc46319711)

[1.4. RFI Results 3](#_Toc46319712)

[2. Equipment Selection & Dimensioning 3](#_Toc46319713)

[3. Naming Convention 3](#_Toc46319714)

[4. Hardware Description and Layout 4](#_Toc46319715)

[4.1. Diagrams of the Hardware 4](#_Toc46319716)

[4.2. Logical-to-Physical Relations 4](#_Toc46319717)

[5. Physical and Logical Topology 4](#_Toc46319718)

[5.1. Logical Integration 4](#_Toc46319719)

[5.2. Logical Integration 4](#_Toc46319720)

[6. IP Planning 4](#_Toc46319721)

[7. Routing and Switching Information 4](#_Toc46319722)

[7.1. Interior Gateway Protocols 4](#_Toc46319723)

[7.2. Exterior Gateway Protocols 4](#_Toc46319724)

[8. Interconnection Information 5](#_Toc46319725)

[8.1. GTP Interconnections 5](#_Toc46319726)

[8.2. Diameter Interconnections 5](#_Toc46319727)

[9. EPC Element Configuration Information 5](#_Toc46319728)

[10. Policy and Charging Rules Repository 5](#_Toc46319729)

[10.1. General P&C Rules 5](#_Toc46319730)

[10.2. Voice Strategy (If any) 5](#_Toc46319731)

[11. Bill of Materials 5](#_Toc46319732)

## Mobile Core Low Level Design Information

The Mobile Core Low-Level Design (LLD) module offers instruction on the key tasks for a detailed Mobile Core Design: IP Planning, Networking Parameter Design and the generation of the Core Network Bill of Materials (BOM).

### Topology

In Figure 1, the LTE architecture is shown.

*According to the output of the wizard or the module architecture document, paste the architecture selected.*

Figure 1. LTE core network deployment architecture

### Operator Information and EPC Data defined by the Operator

The general information for all the EPC equipment implementation, naming convention and customization:

*MNC, MCC, CC, MME Group ID, MME Code, Default APN, Default User Profile*

### Roaming Strategy

From the Mobile Core Architecture Module, the roaming strategy is gathered in order to complete the low-level design.

The following figure represents the roaming agreements, quantity of partner and customer MNOs as well as their information for interconnection.

*According to the output of the wizard or the module architecture document and the roaming agreements reached during the phase of MNO negotiations.*

### RFI Results

After an RFI process, the information for all the most promising candidates is expressed here. The participants must cover all the NaaS Requirements at the EPC equipment and service level from the previous modules. This module will be the last point of decision.

## Equipment Selection & Dimensioning

This section will contain the selected candidate after the step 1 in the Mobile Core LLD Module.

*It must contain details of the chosen solution such as vendor information, quantities, models, what includes in the selected package (if applies) as well as its purpose and definitive (or possible) location.*

## Naming Convention

From the step two in the Mobile Core Low-Level Design, the defined naming convention must be expressed in this section. It must be specified all the components, its meaning and the abbreviation to be used. Additionally, an example might be useful for a better understanding.

The subsections may contain several of the following:

* Components
* Common abbreviations
* Exceptions
* Compendium of equipment names and its correspondence

## Physical and Logical Topology

This section will contain the output of the step 4 in the Mobile Core LLD Module.

### Logical Integration

Logical diagram for the interconnection once installed.

### Logical Integration

It must show the physical connection between the NFV Infrastructure and the switching and routing equipment. Additionally, a table with all the origin and destination NICs (with its corresponding names from the naming convention section) must be included. In case of massive connection reaching a non-effective drawing, the table should suffice.

## IP Planning

The table of all (or most relevant) of the physical and logical elements with its corresponding IP addresses or ranges. If VLANs are used, they must be specified where necessary. It is the output of the step 5 from the Mobile Core LLD Module.

## Routing and Switching Information

The process 6 in the Mobile Core LLD Module will fill this section with its output. The basic information of every instance of the dynamic routing protocols must be included as well as any customization of the configuration.

### Interior Gateway Protocols

Compendium of basic parameter information for the IGP.

*It must contain Group ID, Protocol, Member Interfaces and participant Network/Subnetworks.*

### Exterior Gateway Protocols

Compendium of basic parameter information for the EGP.

*It must contain Group ID, Protocol, Member Interfaces and participant Network/Subnetworks from IGPs.*

## Interconnection Information

This section will include the information for the basic configuration of the EPC elements. It is the output of the process 7 in the Mobile Core LLD Module.

### GTP Interconnections

It includes the NAPTR records for the GTP protocol.

### Diameter Interconnections

In this section, it includes the Diameter endpoints and their information for every diameter interconnection.

## EPC Element Configuration Information

This section includes the needed information for a basic configuration of the EPC elements. It is the output of the ninth process in the Mobile Core LLD Module.

## Policy and Charging Rules Repository

After the complete definition of the Policy and Charging Rules, they must be contained in this section.

### General P&C Rules

This will include the defined rules of the tenth process of the Mobile Core LLD Module.

### Voice Strategy (If any)

The subsection will contain the rules from the voice strategy (if applicable) of the Mobile Core Architecture Module

## Bill of Materials

This section will include the Bill of Materials format with its corresponding inputs from all the process of Mobile Core definition.