UE Radio Capability IE Size

Feature Summary and Revision History

Summary Data

Applicable Product(s) or Functional Area	MME
Applicable Platform(s)	VPC-DI
Feature Default	Disabled – Configuration Required to Enable
Related Changes in This Release	Not Applicable
Related Documentation	• *MME Administration Guide* • *VPC-DI Administration Guide*

Revision History

Revision Details	Release
MME is enhanced to support 16K UE Radio Capability.	2024.03.0

UE Radio Capability Information Element

The UE Radio Capability Information Element (IE) provides the network with details about the radio capabilities of the User Equipment (UE), including supported RATs, power class, and frequency bands. This information helps the network manage and optimize its interactions with the UE.

MME handles and uses UE capability information to support more band combinations during handovers. The MME has increased the size limit for the UE Radio Capability information and parses the following IEs with UE Radio Capability information of size 16384 bytes.

Note To configure the UE Capability IE size below 9000 bytes, see the Configuring UE Radio Capability IE Size chapter in the *Release Change Reference Guide*.

Table 1: Supported IEs

Messages	Corresponding IEs
INITIAL CONTEXT SETUP REQUEST	UE Radio Capability
UE CAPABILITY INFO INDICATION	UE Radio Capability
HANDOVER-REQUIRED	Source eNB to Target eNB Transparent Container
HANDOVER-REQUEST	Source eNB to Target eNB Transparent Container
FORWARD RELOCATION REQUEST	E-UTRAN Transparent Container

Configure the UE Radio Capability IE

Use this task to set the default value size of UE Radio Capability IE and its size in bytes. With the range increased from 9000 to 16384, it limits the size of the UE Radio Capability IE present in UE Capability Info Indication Message. You can also disable the UE radio capability size limit.

Step 1 Create a context name.

context *context_name*

Example:

```
configure
  context context_name
```

Step 2 Specify an MME service name.

mme-service *service_name*

Example:

```
configure
  context context_name
    mme-service service_name
 end
```

Step 3 Use the following steps to enable or disable the UE Radio Capability

a) To specify the default size of UE Radio Capability IE with 9000 bytes.

s1-mme ue-radio-cap

Example:

```
configure
   context context_name
     mme-service service_name
       s1-mme ue-radio-cap
   end
```

b) To specify the size of UE Radio Capability IE in bytes. The size must be an integer in the range of 3072 to 16384.

Note To configure between 9001 and 16384 bytes the IFTASK payload size must be configured with 16K. For more information, see the *Configure IFTASK MEH Payload Size* section.

s1-mme ue-radio-cap size

Example:

```
configure
   context context_name
     mme-service service_name
       s1-mme ue-radio-cap size
   end
```

c) To disable the UE Radio Capability size limit:

no s1-mme ue-radio-cap

Example:

```
configure
   context context_name
     mme-service service_name
       no s1-mme ue-radio-cap
   end
```

Configure IFTASK MEH Payload Size

Use this task to set the maximum payload size from default (9KB) to 16KB.

Step 1 Specify the MEH payload in 16kbytes.

iftask meh-payload .

Example:

```
[local]swch82(config)# iftask meh-payload
       #end
```

Step 2 Specify **no** to use the default size of 9KB.

no iftask meh-payload

Example:

```
[local]swch82(config)# no iftask meh-payload
       #end
```

What to do next

Follow the method of procedure to deploy the **iftask meh-payload** CLI:

1. Setup the required iftask configuration.
2. Save the entire configuration into a boot config file.
3. Reload the setup. This is required to configure the huge size mbuf pool with appropriate size and the the maximum supported 16k payload size.

Monitoring and Troubleshooting

This section provides information on how to monitor and troubleshoot the UE Radio Capability IE functionality.

Show Commands and Outputs

show mme-service statistics

To view the statistics of large packet drops under Protocol error statistics, execute the **show mme-service statistics** command.

…

```
Protocol Error Statistics:
   Transmitted:
    Drops:
    Large Packet               :            0
   Received:
    Drops:
    Large Packet               :            0  Large Container IE             :      0

    Large Packet(9217-16384)   :            0
    Large Packet(16385-24576)  :            0
    Large Packet(24577-32768)  :            0
    Large Packet(32769-40900)  :            0
    Large Packet(40901-49152)  :            0
```