



## 5G Capable SPGW Selection by MME

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### Feature Summary and Revision History

#### Summary Data

Applicable Product(s) or Functional Area	MME
Applicable Platform(s)	<ul style="list-style-type: none"><li>• ASR 5500</li><li>• VPC-DI</li><li>• VPC-SI</li></ul>
Default Setting	Enabled - Configuration Required
Related Changes in This Release	Not Applicable
Related Documentation	<ul style="list-style-type: none"><li>• <i>Command Line Interface Reference</i></li><li>• <i>MME Administration Guide</i></li><li>• <i>Statistics and Counters Reference</i></li></ul>

#### Revision History

Revision Details	Release
First introduced.	21.12.2

## Feature Description

With this release, MME is enabled to select 5G capable and co-located SPGW during initial attach, and additional PDN and SGW relocation scenarios. When multiple entries are configured, selection of a candidate is based on weight.

## Configuring 5G Capable SPGW Selection by MME

This section provides information on the CLI commands to configure 5G capable SPGW selection by MME.

### collocated-node, ue-usage-type in apn-profile mode

Use the following configuration to configure co-located-node/ue-usage-type for SPGW selection at MME.

```
configure
  apn-profile apn_profile_name
    pgw-address ip_address [ co-located-node collocated_node_name [
primary | secondary | weight value ] | [ ue-usage-type ue_usage_type_value
[ collocated-node | primary | secondary | weight value ] ]
    no pgw-address [ collocated-node collocated_node_name ] [
ue-usage-type ue_usage_type_value collocated-node collocated_node_name ]
  end
```

#### NOTES:

- **no**: Disables the following options.
- **collocated-node** *collocated\_node\_name*: Configures the collocation name to select the co-located SPGW node IP addresses for MME. *collocated\_node\_name* must be string of size 1 to 255.
- **ue-usage-type** *ue\_usage\_type\_value*: Configures the ue-usage for the gateway. *ue\_usage\_type\_value* must be an integer between 1 and 255.
- **weight** *value*: Enter a weight for this address. *value* must be an integer from 1 and 100.

### collocated-node, ue-usage-type in mme-service mode

Use the following configuration to configure collocated-node/ue-usage-type for SPGW selection at MME.

```
configure
  context context_name
    mme-service mme_service_name
      pgw-address ip_address [ collocated-node collocated_node_name [
weight value ] ] | [ ue-usage-type ue_usage_type_value [ collocated-node |
weight value ] ]
      no pgw-address [ collocated-node collocated_node_name ] [
ue-usage-type ue_usage_type_value collocated-node collocated_node_name ]
    end
```

#### NOTES:

- **no**: Disables the following options.
- **collocated-node** *collocated\_node\_name*: Configures the collocation name to select the collocated S/PGW node IP addresses for MME. *collocated\_node\_name* must be a string of size 1 to 255.
- **ue-usage-type** *ue\_usage\_type\_value*: Configures the ue-usage for the gateway. *ue\_usage\_type\_value* must be an integer between 1 through 255.
- **weight** *value*: Enter a weight for this address. *value* must be an integer from 1 through 100.

## collocated-node, ue-usage-type in lte-emergency-profile mode

Use the following configuration to configure collocated-node/ue-usage-type for SPGW selection at MME.

```
configure
    lte-policy
        lte-emergency-profile lte_emergency_profile_name
            pgw-address ip-address ip_address protocol { both | gtp | pmip }
            weight value [ collocated-node collocated_node_name ] | [ ue-usage-type
                ue_usage_type_value [ collocated-node collocated_node_name ] ]
            no pgw-address ip-address ip_address [ collocated-node
                collocated_node_name ] [ ue-usage-type ue_usage_type_value collocated-node
                collocated_node_name ]
        end
```

### NOTES:

- **no**: Disables the following options.
- **collocated-node** *collocated\_node\_name*: Configures the collocation name to select the collocated SPGW node IP addresses for MME. *collocated\_node\_name* must be an alphanumeric string of 1 through 255.
- **ue-usage-type** *ue\_usage\_type\_value*: Configures the ue-usage for the gateway. *ue\_usage\_type\_value* must be an integer between 1 and 255.
- **weight** *value*: Specifies the weight used for pgw selection. *value* must be an integer from 1 and 100.

## collocated-node, ue-usage-type in tai-mgmt-obj mode

Use the following configuration to configure collocated-node/ue-usage-type for SPGW selection at MME.

```
configure
    tai-policy
        tai-mgmt-db tai_mgmt_db_name
        tai-mgmt-obj tai_mgmt_obj_name
            sgw-address ip_address s5-s8-protocol { both | gtp | pmip }
            weight value [ attach-only | collocated-node collocated_node_name [
                attach-only ] ] | [ ue-usage-type ue_usage_type_value [ collocated-node
                collocated_node_name [ attach-only ] ] ]
            no sgw-address ip_address s5-s8-protocol { both | gtp | pmip }
        } [ collocated-node collocated_node_name ] [ ue-usage-type ue_usage_type_value
            collocated-node collocated_node_name ]
    end
```

**NOTES:**

- **no**: Disables the following options.
- **attach-only** : Specifies the SGW preference for SGW-relocation.
- **collocated-node** *collocated\_node\_name*: Configures the collocated node name to select the collocated S/PGW node IP addresses. *collocated\_node\_name* must be an alphanumeric string of 1 through 255.
- **ue-usage-type** *ue\_usage\_type\_value*: Specifies the S-GW supported ue-usage-type. *ue\_usage\_type\_value* must be an integer between 1 and 255.
- **weight** *value*: Specifies the protocol supported by the SGW (GTP, PMIP or both). *value* must be an integer from 1 and 100.

## Monitoring and Troubleshooting

This section provides information regarding show commands available to monitor and troubleshoot the 5G Capable SPGW Selection by MME feature.

### Show Commands and Outputs

#### **show mme-service name**

The output of this command includes the following fields:

- ue\_usage\_type
- collocated\_node


**Important**

"ue\_usage\_type" and "collocated\_node" appears more than once based on number no of P-GW addresses configured.

#### **show lte-policy tai-mgmt-db name**

The output of this command includes the following fields:

- ue-usage-type
- collocated-node


**Important**

"ue\_usage\_type" and "collocated\_node" appears more than once based on number no of S-GW addresses configured.

#### **show apn-profile full name**

The output of this command includes the following fields:

- ue-usage-type
- collocated-node

**Important**

"ue\_usage\_type" and "collocated\_node" appears more than once based on number no of P-GW addresses configured.

**show lte-policy lte-emergency-profile name**

The output of this command includes the following fields:

- ue-usage-type
- collocated-node

**Important**

"ue\_usage\_type" and "collocated\_node" appears more than once based on number no of P-GW addresses configured.

