

Mobile Hotspot Usage on RADIUS Accounting

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Feature Summary and Revision History

Summary Data

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

Revision History

Revision Details	Release
In this release, P-GW supports Mobility Hotspot (MHS) usage on RADIUS accounting.	21.23

Feature Description

In RADIUS Accounting, the subscriber data usage is monitored using the Type Length Values (TLV) namely Acct-Input-Octets and Acct-Output-Octets to receive a cumulative data usage report. In this StarOS 21.23 release, to identify Data usage differentiation effectively in RADIUS accounting for 4G Mobile Hotspot (MHS) data usage, 5G MHS data usage, and 5G composite data usage the following new TLVs are introduced:

- 4G_MHS_Acct_Input_Octets
- 4G_MHS_Acct_Output_Octets
- 5G_MHS_Acct_Input_Octets
- 5G_MHS_Acct_Output_Octets
- 5G_Comp_Acct_Input_Octets
- 5G_Comp_Acct_Output_Octets

RADIUS interim and stop messages report MHS data usage . MHS data usage reporting is allowed per bearer. These TLVs comprises of the cumulative values from the previous interim messages and raw bytes.

When MHS data usage reporting is dynamically enabled or disabled, the change takes effect only for the new calls.

Note Only EUTRAN and NB_IOT Radio Access Technology (RAT) types are supported for MHS data usage reporting.

The PRA IDs that are configured in a PRA profile which are associated with APN level are used to identify 5G data usage.

Relationship with Other Features

This feature is related to Smartphone Tethering Detection Support feature. For more information about Smartphone Tethering Detection support, refer the *PDN Gateway Overview* chapter in the *P-GW Administration Guide*.

License Requirements

The Mobile Hotspot usage on RADIUS Accounting feature requires enabling of Tethering Detection License. Contact your account representative for detailed information on specific licensing requirements. For information on installing and verifying licenses, refer to the *Managing License Keys* section of the Software *Management Operations* chapter in the *System Administration Guide*.

Limitations

The following is the known limitations of the feature:

- The MHS supports only dictionary custom76.

Configuring MHS Usage on RADIUS Accounting

This section provides information on configuring MHS Usage on RADIUS accounting.

Configuring PRA Profiles

Use the following command to configure PRA profiles to differentiate traffic.

```
configure
          context context_name
            pra-profile pra_profile_name
             [ no ] pra-id pra_id_value traffic-map-type type_value
          end
```

NOTES:

- **pra-profile**: Configures PRA profiles to differentiate traffic.
- **pra-id**: Configures the PRA ID.
- **no**: Removes the PRA ID.
- **traffic-map-type** : Configures the traffic map type.
- **type_value**: Enter enum values - 5G.

NOTES:

A maximum of three PRA IDs per PRA list and associate PRA list in APN level are allowed to differentiate 5G traffic.

Associating PRA Profiles at APN Level

Use the following CLI commands to associate PRA profiles at APN level:

```
configure
  context context_name
    apn apn_name
      [ no ] pra-profile profile_value
 exit
```

NOTES:

- **apn**: Configures the APN.
- **pra-profile**: Associates PRA profiles at APN level.
- **no**: Removes PRA profiles at APN level.

Configuring AAA Group

Use the following commands to configure AAA Group for the newly-added TLVs to send RADIUS Accounting messages.

```
configure
          context context_name
            aaa group group_name
              [ no ] radius accounting mhs-traffic enable
```

```
    radius dictionary custom76
end
```

NOTES:

- **mhs-traffic**: Specifies MHS data usage reporting.
- **enable**: Enables MHS data usage reporting.
- **no**: Disables MHS data usage reporting.

Monitoring and Troubleshooting

This section provides information on how to monitor and troubleshoot using show commands available to support this feature.

Show Commands and Output

This section provides information regarding show commands and their outputs for this feature.

show subscribers pgw-only full all

The output of the **show subscribers pgw-only full all** command displays the following details:

Field	Description
4G MHS Input Bytes	The total number of input bytes used with 4G Tethering.
4G MHS Output Bytes	The total number of output bytes used with 4G Tethering.
5G MHS Input Bytes	The total number of input bytes used with 5G Tethering.
5G MHS Output Bytes	The total number of output bytes used with 5G Tethering.
5G Composite Input Bytes	The total number of input bytes used with 5G Composite (Tethering and non-Tethering).
5G Composite Output Bytes	The total number of output bytes used with 5G Composite (Tethering and non-Tethering).

show subscribers saegw-only full all

The output of the **show subscribers saegw-only full all** command displays the following details:

Field	Description
4G MHS Input Bytes	The total number of input bytes used with 4G Tethering.
4G MHS Output Bytes	The total number of output bytes used with 4G Tethering.
5G MHS Input Bytes	The total number of input bytes used with 5G Tethering.

Field	Description
5G MHS Output Bytes	The total number of output bytes used with 5G Tethering.
5G Composite Input Bytes	The total number of input bytes used with 5G Composite (Tethering and non-Tethering).
5G Composite Output Bytes	The total number of output bytes used with 5G Composite (Tethering and non-Tethering).

show apn name

The output of the **show apn name** command displays the following details:

Field	Description
pra-profile Name	Specifies the PRA name to be associated in APN for differentiating 5G traffic..

show aaa group name

The output of the **show aaa group name** command displays the following details:

Field	Description
Allow accounting MHS Traffic	Enables reporting MHS Data usage in RADIUS accounting messages.

show pra-profile name

The output of the **show pra-profile name** command displays the following details:

Field	Description
pra profile name	The PRA profile name to be associated in APN for differentiating 5G traffic.
Context	The context name.
PRA Id	The PRA ID to be associated in APN.
Traffic mapping type	The 5G traffic map type.

show pra-profile all

The output of the **show pra-profile all** command displays the following details:

Field	Description
pra profile name	The PRA profile name to be associated in APN for differentiating 5G traffic.
Context	The context name.
PRA Id	The PRA ID to be associated in APN.
Traffic mapping type	The 5G traffic map type.