



ePDG International Roaming - Redirection Based on Outer IP

RFC 5685 defines an IKEv2 extension i.e IKEv2 Redirect that allows an ePDG to redirect current ongoing IKEv2 exchange to some other ePDG.

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Feature Description

Only one or some explicit ePDG will be handling International Roaming users, not all. When UE attaches to WIFI, public DNS server can be initially route to any ePDG randomly. If initial ePDG finds out that it is an international user, it will route it using IKEv2 redirect mechanism to corresponding ePDG which handles International Roaming Users.



Note Basic IKEv2-Redirect support on ePDG is already present, this feature will use existing Staros IKEv2 redirect framework to redirect all International Roaming users to specific ePDG.

Assumptions and Limitations:

- Zone matching done by matching zone configured with MIP6 AVP removing configured/default strip levels as per requirement
- Initial ePDG will expect that AAA response with PGW FQDN in DEA message for all International Roaming users to be redirected to specific configured ePDG
- International roaming user will be redirected to proper ePDG, PGW FQDN comes from AAA and matching zone configured under gateway-selection-profile

Configuring ePDG International Roaming Redirection Based on Outer IP

Use the following configuration to ePDG International Roaming Redirection Based on Outer IP.

Below are the newly introduced commands for the ePDG International Roaming Redirection Based on Outer IP

gateway selection profile

```
config
    gateway-selection-profile profile_name
end
```

description

```
config
    context context_name
        gateway-selection-profile profile_name
            description descriptive_string
        end
```

zone

```
config
    context context_name
        gateway-selection-profile profile_name
            zone zone_fqdn action { ignore | mandatory }
        end
```

associate gateway-selection-profile

```
config
    gateway-selection-profile profile_name
        associate gateway-selection-profile profile_name
    end
```

Performance Indicator Changes

Below are the show commands outputs added as part of this feature to support ePDG International Roaming-Redirection based on outer IP.

show apn-profile full all

- Associated Gateway Selection Profile

show gateway-selection-profile all

- `epdg_gwsel_profile1`

show gateway-selection-profile full all

- Gateway Selection Profile Name

- Details of zones configured
- zone <yyyy> action ignore
- zone <zzzz> action mandate
- Total 2 zones configured

show epdg statistics

- Zone Action Ignore Configured:
Zone Matching stats:
- Mandatory:
Session Disconnect reason:
- Roaming Mandatory:

show sessctrl config-reconciliation statistics

Task	Config-type
Sessmgr	gw-selection profile

show session disconnect-reasons

Disconnect Reason	Num Disc	Percentage
ePDG-roaming-mandatory		

Bulkstats

Below are the new bulkstats introduced in ePDG Schema as part of ePDG International Roaming-Redirection based on outer IP.

- sess-disconnect-roaming-mandatory
- alt-epdg-selection-mandatory
- redirect-zone-action-ignored

