


```
peer-lns 3.3.3.3 encrypted secret +A16gnydsddbqqx3okh7ln6jrwxz3s3u3lzvzo5bz0ccc0ztr0cvsh
bind address 1.1.1.1
#exit
```

预期行为是，如果为基于L2TP的APN配置了上述选项之一，则网关GPRS支持节点/

数据包数据网络(PDN)网关(GGSN/PGW)使用IMSI或MSISDN与L2TP网络服务器(LNS)进行PPP身份验证。

如果用户设备(UE)未提供用户名，选项将按预期运行。

ii

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```
INBOUND>>>> 09:57:08:270 Eventid:141004(3)
[PGW-S5/S2a/S2b]GTPv2C Rx PDU, from 213.151.233.172:35664 to 213.151.233.230:2123 (271)
TEID: 0x00000000, Message type: EGTP_CREATE_SESSION_REQUEST (0x20)
Sequence Number: 0x317962 (3242338)
```

GTP HEADER

```
Version number: 2
TEID flag: Present
Piggybacking flag: Not present
Message Length: 0x010B (267)
```

INFORMATION ELEMENTS

IMSI:

```
Type: 1 Length: 8 Inst: 0
Value: 231014450903030
Hex: 0100 0800 3201 4154 9030 30F0
```

MSISDN:

```
Type: 76 Length: 6 Inst: 0
Value: 421917667546
Hex: 4C00 0600 2491 7166 5764
```

MOBILE EQUIPMENT IDENTITY:

```
Type: 75 Length: 8 Inst: 0
Value: 3594050557927001
Hex: 4B00 0800 5349 5050 7529 0710
```

[...]

ACCESS POINT NAME:

```
Type: 71 Length: 38 Inst: 0
Value: ltipsec.corp.test.mnc001.mcc231.gprs
Hex: 4700 2600 086C 7470 6970 7365 6304 636F
    7270 0474 6573 7406 6D6E 6330 3031 066D
    6363 3233 3104 6770 7273
```

SELECTION MODE:

```
Type: 128 Length: 1 Inst: 0
Value: MS provided APN,subscr not verified (0x01)
```

Hex: 8000 0100 01

PDN TYPE:

Type: 99 Length: 1 Inst: 0
Value: IPV4
Hex: 6300 0100 01

[...]

PCO:

Type: 78 Length: 32 Inst: 0
Container id: 0xC023 (PAP)
Container length: 0x06 (6)
Container content:
 Auth-Req(0), Name=, Passwd=
Container id: 0x8021 (IPCP)
Container length: 0x10 (16)
Container content:
 Conf-Req(0), Pri-DNS=0.0.0.0, Sec-DNS=0.0.0.0
Container id: 0x000D (IPv4-DNS-Server)
Container length: 0x00 (0)
Container content:
 DNS Address: Request for IPv4 DNS Address allocation
Hex: 4E00 2000 80C0 2306 0100 0006 0000 8021
 1001 0000 1081 0600 0000 0083 0600 0000
 0000 0D00

[...]

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<<<<OUTBOUND 09:57:08:295 Eventid:25001(0)

PPP Tx PDU (20)

PAP 20: Auth-Req(1), Name=421917667546, Passwd= <-- username is replaced with MSISDN as the APN is configured with "msisdn-auth"

如果UE提供了用户名，该选项将不起作用。在这种情况下，GGSN/PGW发送在APN内配置的用户名和密码。

如果没有配置

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INBOUND>>>> 09:47:51:254 Eventid:141004(3)

[PGW-S5/S2a/S2b]GTPv2C Rx PDU, from 213.151.233.172:35824 to 213.151.233.230:2123 (279)

TEID: 0x00000000, Message type: EGTP_CREATE_SESSION_REQUEST (0x20)

Sequence Number: 0x5C4D6C (6049132)

GTP HEADER

Version number: 2

TEID flag: Present

Piggybacking flag: Not present

Message Length: 0x0113 (275)

INFORMATION ELEMENTS

IMSI:

Type: 1 Length: 8 Inst: 0

Value: 231014450903030

Hex: 0100 0800 3201 4154 9030 30F0

MSISDN:

Type: 76 Length: 6 Inst: 0

Value: 421917667546
Hex: 4C00 0600 2491 7166 5764

MOBILE EQUIPMENT IDENTITY:
Type: 75 Length: 8 Inst: 0
Value: 3594050557927001
Hex: 4B00 0800 5349 5050 7529 0710

[...]

PCO:
Type: 78 Length: 40 Inst: 0
Container id: 0xC023 (PAP)
Container length: 0x0E (14)
Container content:
Auth-Req(0), Name=null, Passwd=null
Container id: 0x8021 (IPCP)
Container length: 0x10 (16)
Container content:
Conf-Req(0), Pri-DNS=0.0.0.0, Sec-DNS=0.0.0.0
Container id: 0x000D (IPv4-DNS-Server)
Container length: 0x00 (0)
Container content:
DNS Address: Request for IPv4 DNS Address allocation
Hex: 4E00 2800 80C0 230E 0100 000E 046E 756C
6C04 6E75 6C6C 8021 1001 0000 1081 0600
0000 0083 0600 0000 0000 0D00

[...]

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<<<<OUTBOUND 09:47:51:334 Eventid:25001(0)
PPP Tx PDU (16)
PAP 16: Auth-Req(1), Name=null, Passwd=null <-- username is the same as in the APN

解决方案

观察到的行为应符合设计要求。

当没有传入协议配置选项(PCO)用户名时，将使用身份验证imsi-auth username-strip-apn prefer-chap-pco(或authentication msisdn-auth username-strip-apn prefer-chap-pco)配置。

以下是网络访问标识符(NAI)构造配置的优先顺序：

1. 如果在APN内配置了出站用户名<1-128 char string>，则此配置会覆盖所有其他配置/IE，并以PAP/CHAP请求发送。
2. 如果UE发送PCO用户名/口令，则从UE发送该用户名/口令，在口令验证协议/质询握手验证协议(PAP/CHAP)请求中发送到LNS。
3. 如果没有从UE发送用户名，则默认将msisdn/imsi@APN作为用户名在PAP/CHAP请求中发送。
4. 此外，此CLI - authentication msisdn/imsi-auth username-strip-apn 可用于删除APN，并仅在PAP/CHAP请求中发送msisdn/imsi。

请注意，如果身份验证由Radius（本地）完成，IMSI（或MSISDN）将按照预期在访问请求消息中发送。

此外，在L2TP场景中，如果身份验证由RADIUS（在LAC端）完成，则预期用户名（IMSI或MSISDN）在Access-Request消息中可见，但在LNS的Auth-Req中不可见。