高通协议技术期刊 –2015/03/20

Qualcomm Technologies, Inc.

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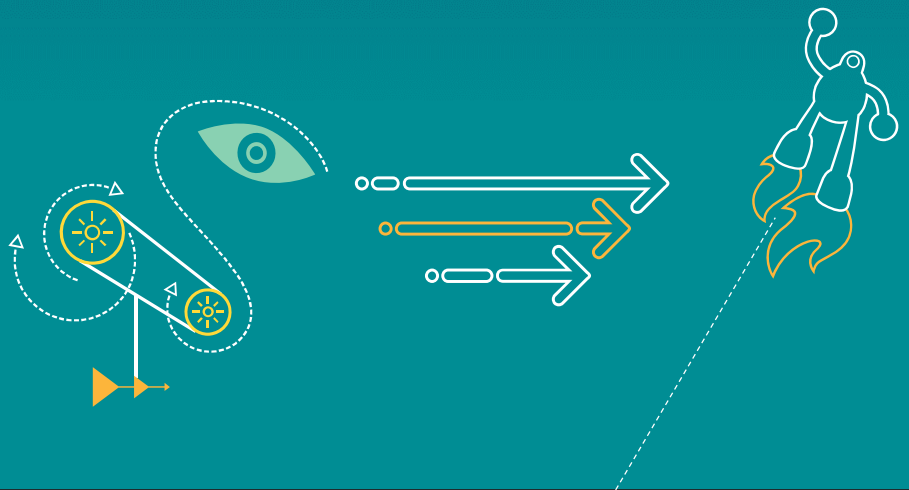

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Revision History

Revision	Date	Description
A	Mar 2015	Initial release

Note: There is no Rev. I, O, Q, S, X, or Z per Mil. standards.

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8916/8936/9x30系统解决方案Solution

- 为了直观，便于检索，我们在Saleforce系统上编写了系统解决方案。包含各个技术领域，便于大家查找。
- 8916系统解决方案
- Solution Number: 00029134
- 链接： https://qualcomm-cdmatech-support.my.salesforce.com/50130000000VfUZ?srPos=0&srKp=501

- 8939系统解决方案
- Solution Number: 00029333
- 链接：https://qualcomm-cdmatech-support.my.salesforce.com/50130000000Vg5B

- MDM9x30/9x35系统解决方案
- Solution Number 00029678
- https://qualcomm-cdmatech-support.my.salesforce.com/50130000000ViGQ

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MBN介绍

- MBN的设计需求，文档，实现方法, 请参阅Solution number:00029357.
- https://qualcomm-cdmatech-support.my.salesforce.com/50130000000VgDA?srPos=0&srKp=501

- 因为客户量产的版本可能不是高通最新的版本，但是MBN却随着软件版本不断的更新，所以推荐将高通最新软件版本的MBN，合入客户的版本中。

- Solution 00030261
- MBN build command for Windows when Excel not work.

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Standard Operation Procedure(SOP)

- 80-ND934-2，80-ND934-2EC
- DATA THROUGHPUT TROUBLESHOOTING
- 80-NJ378-1: WCDMA AUDIO ISSUE DEBUG OVERVIEW
- VD80-NJ378-1SC: VIDEO: WCDMA AUDIO ISSUE DEBUG OVERVIEW - SIMPLIFIED CHINESE
- 80-ND934-1_B GSM_OOS_AND_MT_CALL_FAILURE_APPLICATION_NOTES
- 80-NV403-1EC MODEM协议技术普及文档
- 80-NV076-1EC UE掉网问题分析指导书
- 80-NJ397-1: HSPA DATA THROUGHPUT ISSUE DEBUGGING

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Disabling Segment Loading on 8994

- We do support disabling segment loading by setting the NV 72542 to 1,0 on 8994.
- CR803719 is created to track this change.
- We are in the process of changing the default to disabling segment loading on 8994.

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PDN level鉴权方式设置

- **问题描述：**
- eHRPD网络下，在UI上设置VPDN的专网APN后，尝试专网连接失败
- **Log片段：**
- // 从QMI log packet看，Android创建的专网APN(police@police.zj)没有成功创建
- **2015 Mar 5 04:41:04.730 [08] 0x138E QMI Link 1 RX PDU**
- MsgType = QMI_WDS_CREATE_PROFILE_MSG
- MsgLength = 95
- QmiWdsCreateProfile {
- QmiWdsCreateProfileReqTlvs[0] {
- Type = 1
- Length = 1
- ProfileType {
- ProfileType = 3GPP2
- }
- }
- QmiWdsCreateProfileReqTlvs[4] {
- Type = 161
- Length = 16
- ApnStringTlv {
- apn_string = police@police.zj ß 专网APN
- }
- }
- QmiWdsCreateProfileReqTlvs[7] {
- Type = 173
- Length = 1
- PdnLevelAuthProtocolTlv {
- pdn_level_auth_protocol = PAP or CPAP ç PDN level鉴权协议
- }
- }

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PDN level鉴权方式设置

2015 Mar 5 04:41:04.731 [CA] 0x138F QMI Link 1 TX PDU

```
MsgType = QMI_WDS_CREATE_PROFILE_MSG
MsgLength = 12
QmiWdsCreateProfile {
   QmiWdsCreateProfileRespTlvs[0] {
      Type = 2
      Length = 4
      ResultCode {
         ResultCode = QMI_RESULT_FAILURE        ← Profile创建失败
         ErrorCode = QMI_ERR_EXTENDED_INTERNAL
      }
   }
```

// 因为profile创建失败，VSNCP请求的APN是默认的APN（例子是电信的ctlte）

```
24 2015-03-05 12:41:06.1   DTE   VSNCP   DCE   71 Configuration Request
25 2015-03-05 12:41:06.1   DTE   PPP LCP DCE   22 Vendor Specific
Frame 24: 71 bytes on wire (568 bits), 71 bytes captured (568 bits)
Point-to-Point Protocol
[Direction: DTE->DCE (0)]
Vendor Specific Control Protocol
  Code: Configuration Request (0x01)
  Identifier: 0x00
  Length: 67
  OUI: 3GPP2 vendor specific packet ID (0xcf0002)
⊟ Options: (60 bytes), PDN Identifier, Access Point Name, PDN Type, PDN Address, Protocol Configuration Options, Attach Type, IPv4 Default Router Address
    PDN Identifier: 0x00
  ⊟ Access Point Name: (8 bytes)
      Label1 (5 bytes): ctlte
    PDN Type: IPv6/IPv4 (0x03)
  ⊟ PDN Address: (3 bytes)
      PDN Type (Initial Request by UE): 0x00
  ⊞ Protocol Configuration Options: (31 bytes)
    Attach Type: Initial Attach (0x01)
    IPv4 Default Router Address: 0.0.0.0
    Address Allocation Cause: Null Value (Attach or Handover) (0x00)
```


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PDN level鉴权方式设置

- **原因分析：**
- PDN level的鉴权协议只能是PAP only或者CHAP only,不能是PAP_CHAP
- MSG [05000/01] Data Services/Medium 04:41:04.730 ds_profile_3gpp2.c 03347 dsi_profile_3gpp2_set_param: param 173
- MSG [05000/03] Data Services/Error 04:41:04.730 ds_profile_3gpp2.c 01593 **dsi_profile_3gpp2_set_pdn_level_auth_protocol: Invalid param value 3**
- MSG [05000/03] Data Services/Error 04:41:04.730 ds_profile.c 00546 _set_param: FAIL internal set function
- MSG [05000/03] Data Services/Error 04:41:04.730 ds_qmi_wds_profile.c 00868 Set Profile returns error. Profile_identifier 173, Error 7
-
- **解决方法：**
- UI上将PDN level鉴权协议类型从CHAP_PAP改为PAP或者CHAP（根据专网的鉴权方式设置）
- UI上不改，Modem需要**CR#746325**，通过**NV#73602**（/nv/item_files/modem/data/dsmgr/config_pdn_level_auth）去设置PDN level鉴权协议，
- NV#73602的可选值为CHAP或者PAP，默认值为CHAP

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FR22007 Location Aware System Selection - MCC Based Application Notes

- Please refer to 80-NU917-1. With this feature, UE will acquire service quickly if UE roam from home and power up first time.
- CR799240 is for open market to optimize power up time on open market devices with CMCC SIM card. This CR is applicable from MPSS.BO.2.0.1.c3 onwards.

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MBN comparison tool

- How to know the MBN difference between 2 build?
- The MBNs are generated from the spreadsheet in the builds. One can easily use the MS Excel 2013 compare functionality to find the differences of the MBN *.xls file.
- https://technet.microsoft.com/en-us/library/dn205148.aspx

http://www.k2e.com/tech-update/tips/722-tips-comparing-two-workbooks-excel2013-compare-files-feature

- Alternative option – you can compare the xml files that are generated as an intermediate step with your favorite merge/compare tool.

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Feature FEATURE_3G_USER_NW_REDIR_TO_LTE

- This is addressed in solution 00029839.
- This feature handles the network issue where the network issue scenario as below where UE goes for ping pong give no service to user.
- When a 3G only USIM is used in a 4G device, the UE is allowed by the 3GPP specs to try to get service on 4G NW. 4G Core Network will anyway, after having got info that this subscriber is not allowed in 4G, reject the UE request with cause #15, no suitable cells in tracking area.

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CR 787939 to deprecate EPC profile support on APSS

- On MSM8994, MSM8909 and MDM9x35 MPSS releases, as a part data profile refactoring, Qualcomm introduced new profile tech type called EPC.
- Please refer application note **80-NV271-1_A** for details.
- **We currently have CR 787939 to deprecate EPC profile support on APSS. Doc 80-NM328-87 currently explains the purpose of this in more detail.**

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References

Ref.	Document	
Qualcomm Technologies		
Q1	*Application Note: Software Glossary for Customers*	CL93-V3077-1
Standards		
S1	*Title*	Standard Number (June 2002)
Resources		
R1		

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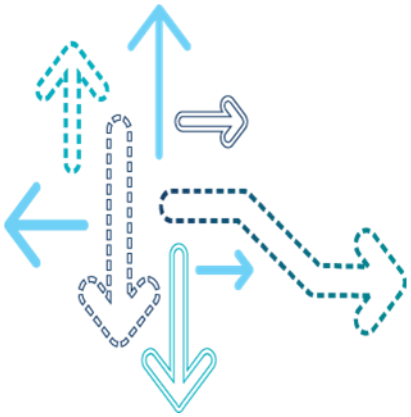

Questions?

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