CONFIDENTIAL B

WCN 技术月刊

(专用文档，请勿转发)

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Desensitive GIONEE_BU

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WCN SW Case share

【BT】[BT tethering] PAN 连接成功不能上网					
风险高低	平台	SW版本	WCN IC	软硬件	涉及领域
中	6737	N	6625	SW	BT ,Net
现象描述	➢ 大量开关BT tethering后，PAN连接成功，但不能上网				
复现路径	➢ B手机PAU 成功连接到A 手机NAP后，B手机可以正常上网 ➢ 不停去关开A手机的bluetooth tethering 一段时间后 ➢ B手机再次 连接成功时, 发现B手机不能正常上网				
解决方案	➢修正方法：IpManager registerObserver而無unregisterObserver ➢當IpManager.shutdown時, 註銷observer ➢申请Patch：ALPS03317414				

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问题分析

PANU 端的connectity service 一直没有连接上，也没有去Register NetworkAgent

正常的时候：

```
06-29 09:16:31.264466  3167  3247 D IpManager.bt-pan: IPv4 configuration succeeded
 06-29 09:16:31.265509  3167  3247 D IpManager.bt-pan: CMD_CONFIGURE_LINKADDRESS bt-pan/27 0 0 192.168.44.186/24
 06-29 09:16:31.266374  3167  3247 D IpManager.bt-pan: newLp{{InterfaceName: bt-pan LinkAddresses: [fe80::749b:46ff:fe03:35c7/64,192.168.44.186/24,] Routes: [fe80::/64 -> ::
 06-29 09:16:31.284251  3167  3247 D IpManager.bt-pan: setLinkProperties newLp = {InterfaceName: bt-pan LinkAddresses: [fe80::749b:46ff:fe03:35c7/64,192.168.44.186/24,] Ro
Domains: null MTU: 0}
 06-29 09:16:31.284558  3167  3247 D IpManager: compareProvisioning: GAINED_PROVISIONING
 06-29 09:16:31.296450  3167  3247 D IpManager.bt-pan: handleLinkPropertiesUpdate delta = GAINED_PROVISIONING
 06-29 09:16:31.296673  3167  3247 D IpManager.bt-pan: onProvisioningSuccess()

06-29 09:16:31.304220  3167  3246 D Bluetooth Tethering: NetworkAgent: Registering NetworkAgent
06-29 09:16:31.313263   803  1206 D ConnectivityService: registerNetworkAgent NetworkAgentInfo{ ni{[type: Bluetooth Tethering[], state: CONNECTED/CONNECTED
06-29 09:16:31.314356   803  1082 D ConnectivityService: Got NetworkAgent Messenger
06-29 09:16:31.314828   803  1082 D ConnectivityService: NetworkAgentInfo [Bluetooth Tethering () - 101] EVENT_NETWORK_INFO_CHANGED, going from null to CONNECTED
```

异常的log:

```
06-29 09:25:17.229989  3167  4530 D IpManager.bt-pan: IPv4 configuration succeeded
06-29 09:25:17.231222  3167  4530 D IpManager.bt-pan: CMD_CONFIGURE_LINKADDRESS bt-pan/239 0 0 192.168.44.186/24
```

//这个 newLP 没有包含到这个 IP address, 使 Ipmanager 一直在 STILL_NOT_PROVISIONED 状态，
没有进入到正常的 GAINED_PROVISIONING 状态，所以没有注册到 NetworkAgent， 怀疑 后面一直在做 addressRemoved 动作引起的。

```
06-29 09:25:17.259330  3167  4530 D IpManager.bt-pan: newLp{{InterfaceName: bt-pan LinkAddresses: [fe80::749b:46ff:fe03:35c7/64,] Routes: [192.168.44.0/24 -> 0.0.0.0 bt-pan,0.(
06-29 09:25:17.259799  3167  4530 D IpManager.bt-pan: setLinkProperties newLp = {InterfaceName: bt-pan LinkAddresses: [fe80::749b:46ff:fe03:35c7/64,] Routes: [192.168.44.0/24
06-29 09:25:17.260116  3167  4530 D IpManager: compareProvisioning: STILL_NOT_PROVISIONED
06-29 09:25:17.260317  3167  4530 D IpManager.bt-pan: handleLinkPropertiesUpdate delta = STILL_NOT_PROVISIONED
06-29 09:25:17.260777  3167  4530 D IpManager.bt-pan: onLinkPropertiesChange()

06-29 09:25:49.323048  3167  4529 E BluetoothTetheringNetworkFactory: IP provisioning error.
```

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问题分析

问题原因:

每次 BluetoothTetheringNetworkFactory new IpManager()時, IpManager 會註冊一個 observer

```
try {
    mNwService.registerObserver(mNetlinkTracker);
} catch (RemoteException e) {
    Log.e(mTag, "Couldn't register NetlinkTracker: " + e.toString());
}
```

如果在 bt tethering 結束後, IpManager 沒有 unregisterObserver(), 就會造成 NetworkManagementService 處理 event 上產生 timing issue

```
//一開始 framework 收到 netd 的 Address removed event 被延後處理, 因為 NetworkManagementService 正在通知每個 observer
06-29 09:18:28.550287   803  1008 D NetdConnector: RCV <- {614 Address removed fe80::749b:46ff:fe03:35c7/64 bt-pan 196 253 1}
06-29 09:18:28.565593   803   846 D NetworkManagement: onEvent:600 Iface linkstate bt-pan down:5
06-29 09:18:28.725649   803   846 D NetworkManagement: onEvent:600 Iface linkstate bt-pan down:5
06-29 09:18:28.774687   803   846 D NetworkManagement: onEvent:600 Iface linkstate bt-pan up:5
06-29 09:18:28.826811   803   846 D NetworkManagement: onEvent:616 Route updated fe80::/64 dev bt-pan:6
06-29 09:18:28.879172   803   846 D NetworkManagement: onEvent:614 Address updated fe80::749b:46ff:fe03:35c7/64 bt-pan 196 253 1:8
//開始處理這個 event 時, 已經慢了 550ms
06-29 09:18:29.253048   803   846 E NetdConnector: NDC event {614 Address removed fe80::749b:46ff:fe03:35c7/64 bt-pan 196 253 1} processed too late: 550ms

//跟著 bt on/off  observer 越來越多次, 使得 NetworkManagementService 需要通知的 Observer 越來越多
06-29 09:25:14.272511   803  1008 D NetdConnector: RCV <- {614 Address updated fe80::749b:46ff:fe03:35c7/64 bt-pan 128 253 1}
//最後已經被延遲了 3 分鐘才處理 Address updated
06-29 09:28:10.127209   803   846 E NetdConnector: NDC event {614 Address updated fe80::749b:46ff:fe03:35c7/64 bt-pan 128 253 1} processed too late: 181050ms

//正常在 DHCP 成功後, IpManager 設定完 bt-pan IP address, 都會收到 callback, 但因為 observer 太多, 已經無法及時處理 event
使得 IpManager 無法及時拿到 Ipv4 address 的 onEvent callback
06-29 09:25:17.219801   803  1467 D NetdConnector: SND -> {1092 interface setcfg bt-pan 192.168.44.186 24}
06-29 09:25:17.226211   803  1008 D NetdConnector: RCV <- {200 1092 Interface configuration set}
06-29 09:25:17.229989  3167  4530 D IpManager.bt-pan: IPv4 configuration succeeded
//這邊收到 netd 通知, 但是 IpManager 一直沒收到 callback
06-29 09:25:17.231692   803  1008 D NetdConnector: RCV <- {614 Address updated 192.168.44.186/24 bt-pan 128 0 1}
06-29 09:25:17.259330  3167  4530 D IpManager.bt-pan: newLp{{InterfaceName: bt-pan LinkAddresses: [fe80::749b:46ff:fe03:35c7/64,]  Routes: [192.168.44.0/24
```

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修改方法

修改方法：蓝牙PAN 是在android N 版本才开始用的Ipmanager 的方式，

IpManager.java × | BluetoothTetheringNetworkFactory.java × | EthernetNetworkFactor

```
// Shut down this IpManager instance altogether.
public void shutdown() {
    stop();


    try{
        mNwService.unregisterObserver(mNetlinkTracker);
    }catch(RemoteException e){
        e.printStackTrace();
    }
    quit();
}
```

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【GPS】TTFF 雙邊遮檔，單邊遮檔優化					
风险高低	平台	SW版本	WCN IC	软硬件	涉及领域
高	MT6750	alps-mp-n0.mp7-V1.24	MT6750		GPS
现象描述	➢ GPS静态性能测试，热启动TTFF成功率以及定位精度均不达标，冷启动定位精度不达标				
复现路径	➢ 華為測試地點執行窗邊CTTFF/HTTFF的測試				
分析过程	➢ 觀察：1. AGPS輔助資訊LLH不夠精確。2. 窗邊測試遭遇到多徑效應影響。複現概率50%。 ➢ 原因：在雙邊遮檔/單面遮擋場景，窗邊測試遭遇到多徑效應影響。				
解决方案	➢ 微調改善窗邊測試 CTTFF/HTTFF 的GNSS 定位演算法。 ➢ 打上patch：ALPS03374603 ➢ 影響Branch：alps-mp-m0.mp9, alps-mp-m1.mp3, alps-mp-n0.mp1, alps-mp-n0.mp2, alps-mp-n0.mp7, alps-mp-n1.mp7, alps-mp-n1.mp9				

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