

## 1. 安裝 802.1X 測試工具(wpa\_supplicant)

- 安裝方式

```
#yum install openssl openssl-devel gnutls gnutls-devel libnl* -t
#wget https://w1.fi/releases/wpa_supplicant-2.2.tar.gz
#tar zxvf wpa_supplicant-2.2.tar.gz -C .
#cd wpa_supplicant-2.2/wpa_supplicant
#cp defconfig .config
#make
#make eapol_test
#cp eapol_test /usr/bin/
```

## 2. 測試方式

- 新增測試檔案

```
#mkdir /eapol_test
#cp /usr/bin/eapol_test /eapol_test
#cd /eapol_test
#vim test.conf
```

- 檔案內容如下

```
network={
    ssid="eduroam"
    key_mgmt=WPA-EAP
    eap=TTLS      #第一階段驗證方式
    identity="test@test.niu.edu.tw"    #要驗證的使用者帳號
    password="test"    #要驗證的使用者密碼
    phase2="auth=PAP"    #第二階段加密方式
}
```

- 測試指令

```
#eapol_test -c test.conf -a 127.0.0.1 -s testing123
```

-c : 要測試的檔案名稱

-a : 內部 Radius Sever IP

-s : share secret

### 3. 測試結果

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- 認證成功

```
WPA: EAPOL processing complete
EAPOL: SUPP_PAE entering state AUTHENTICATED
EAPOL: SUPP_BE entering state RECEIVE
EAPOL: SUPP_BE entering state SUCCESS
EAPOL: SUPP_BE entering state IDLE
eapol_sm_cb: success=1
EAPOL: Successfully fetched key (len=32)
PMK from EAPOL - hexdump(len=32): 9d 9e be 9d ef 00 19 1b c7 50 65 7d 54 bf da e1 ca
EAP: deinitialize previously used EAP method (21, TTLS) at EAP deinit
ENGINE: engine deinit
MPPE keys OK: 1 mismatch: 0
SUCCESS
```

- 認證失敗

```
CTRL-EVENT-EAP-FAILURE EAP authentication failed
EAPOL: SUPP_PAE entering state HELD
EAPOL: SUPP_BE entering state RECEIVE
EAPOL: SUPP_BE entering state FAIL
EAPOL: SUPP_BE entering state IDLE
eapol_sm_cb: success=0
EAPOL: EAP key not available
EAP: deinitialize previously used EAP method (21, TTLS) at EAP deinit
ENGINE: engine deinit
MPPE keys OK: 0 mismatch: 1
FAILURE
```