SSH

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指導教授：梁明章

SSH 之認證方法

1. 密碼認證
2. 金鑰認證

SSH 欺騙

1. 觀察同學在學校的使用方式
2. 四處利用公用電腦
3. 使用 Putty or Pietty
4. 不經確認的便接受金鑰

金鑰確認錯誤的處理（ Linux ）

```
decaylala@ubuntu:~$ ssh 140.127.220.59
The authenticity of host '140.127.220.59 (140.127.220.59)' can't be establishe
RSA key fingerprint is ac:6a:3e:6b:41:6e:76:3d:37:27:00:4f:34:39:c6:a5.
Are you sure you want to continue connecting (yes/no)?
```

```
decaylala@ubuntu:~$ ssh 140.127.220.59
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@    WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED!     @
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
Someone could be eavesdropping on you right now (man-in-the-middle attack)!
It is also possible that the RSA host key has just been changed.
The fingerprint for the RSA key sent by the remote host is
ef:93:eb:83:74:7c:91:d5:7e:1e:76:9e:ca:82:88:72.
Please contact your system administrator.
Add correct host key in /home/decaylala/.ssh/known_hosts to get rid of this message.
Offending key in /home/decaylala/.ssh/known_hosts:1
RSA host key for 140.127.220.59 has changed and you have requested strict checking.
Host key verification failed.
```

金鑰確認錯誤的處理（XP）

SSH 欺騙之方式

1. 監聽網路
2. 使用 IP 欺騙
3. 拐騙 Client 連線至『假』登入環境
4. 騙取 account 和 password

SSH 欺騙之問題

若再重新連到正確 Server ，

會跳出接受金鑰的確認視窗。

SSH 金鑰認證之優點

1. 增加安全性，確保機器正確性
2. 減少主機被 try 密碼的機會
2. 不用密碼，連線很方便

SSH 金鑰認證之缺點

1. 較麻煩，若多台機器，需一一設定
2. 使用公用電腦的不便
3. Private Key == Password

SSH 金鑰認證之設定

設定檔 /etc/ssh/sshd_config

SSH 金鑰認證之作法（Linux）

$ ssh-keygen -t rsa

產生 id_rsa（Private Key）

和 id_rsa.pub（Public Key）

```
decaylala@ubuntu:~$ ssh-keygen -t rsa
Generating public/private rsa key pair.
Enter file in which to save the key (/home/decaylala/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/decaylala/.ssh/id_rsa.
Your public key has been saved in /home/decaylala/.ssh/id_rsa.pub.
The key fingerprint is:
cc:17:c7:25:75:32:79:45:48:79:b6:52:c8:fb:ea:07 decaylala@ubuntu
```

SSH 金鑰認證之作法（Linux）

◆ Client 端

將 id_rsa 放置 ~/.ssh/ 裡

◆ Server 端

$ cat id_rsa.pub >> ~/.ssh/authorized_keys

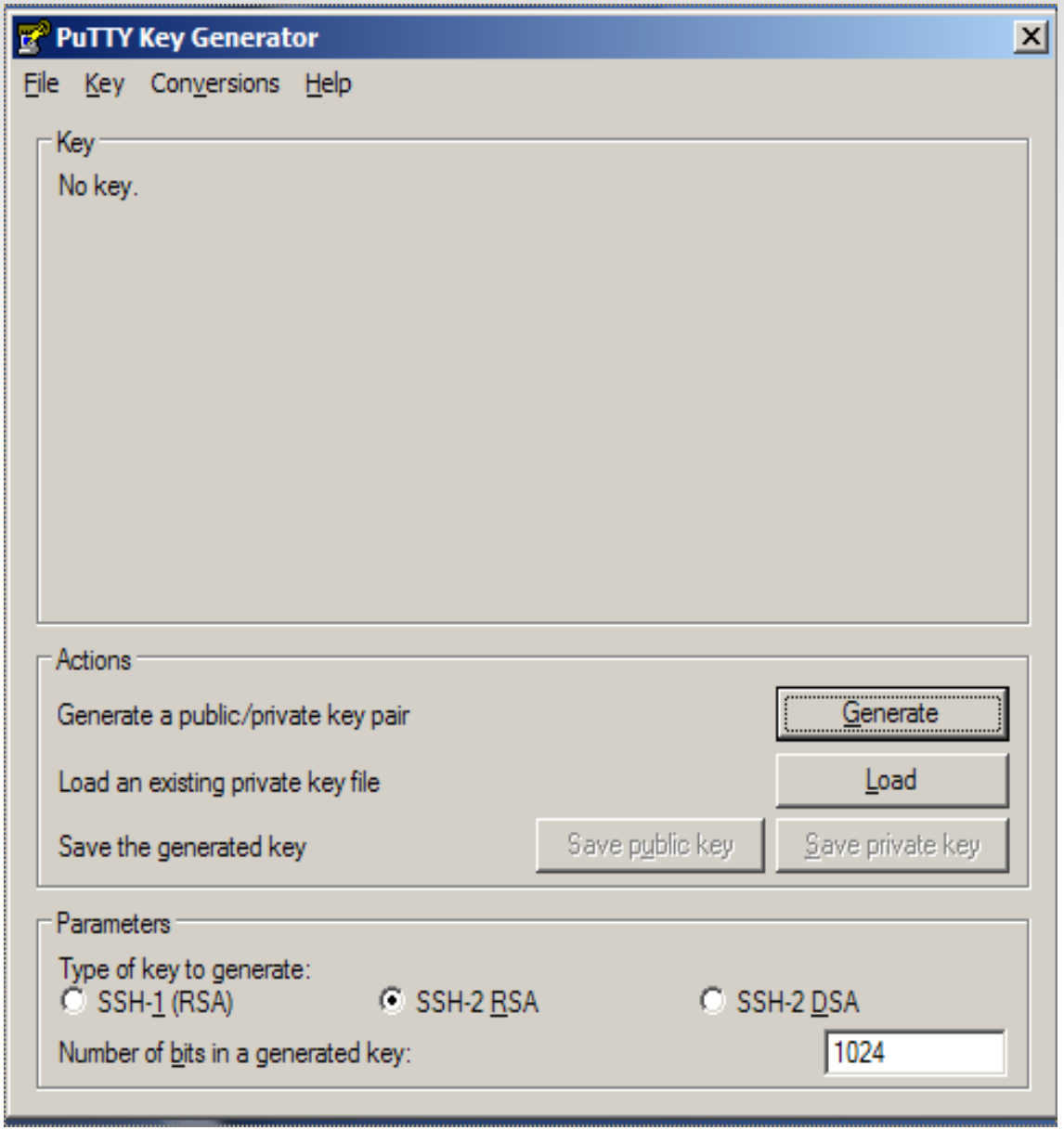
SSH 金鑰認證之作法（Linux）

```
decaylala@ubuntu:~$ ssh 140.127.220.59
Linux ubuntu 2.6.20-16-generic #2 SMP Sun Sep 23 19:50:39 UTC 2007 i686

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
Last login: Fri Jan 18 00:39:59 2008 from 122-122-103-131.dynamic.hinet.net
decaylala@ubuntu:~$
```

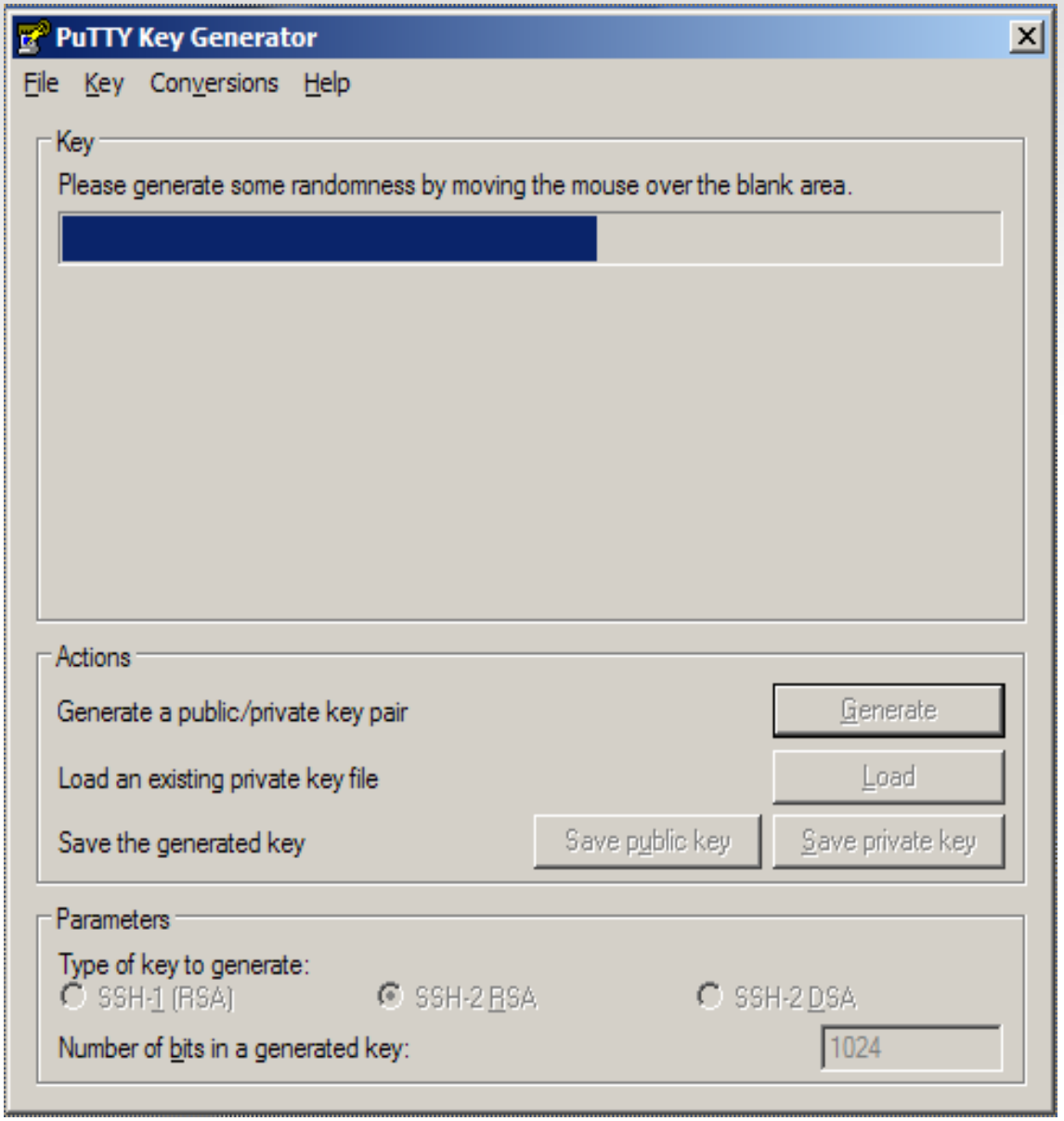
SSH 金鑰認證之作法（XP）

使用 PuTTYgen 產生公、私鑰

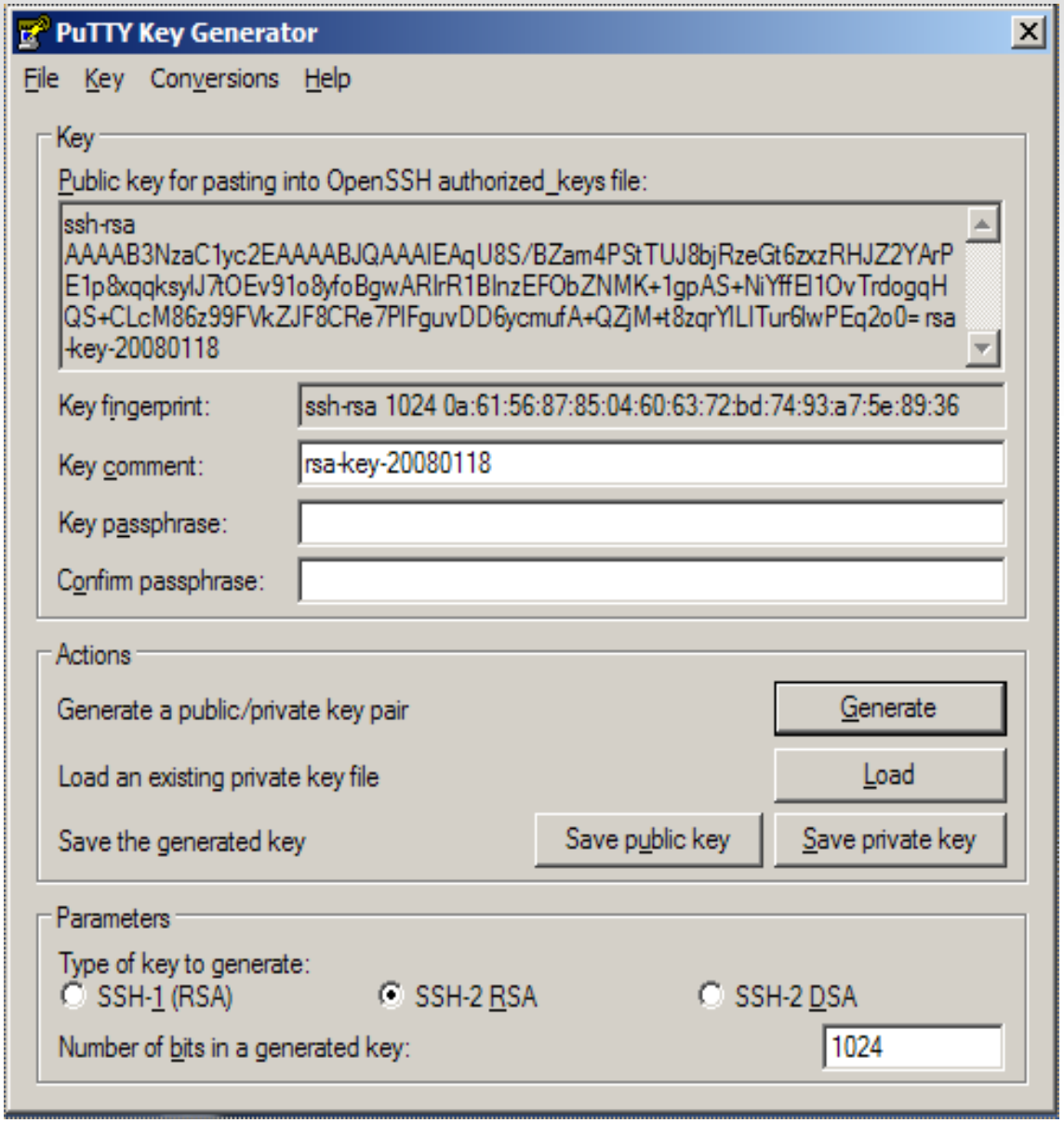
SSH 金鑰認證之作法（XP）



SSH 金鑰認證之作法（XP）

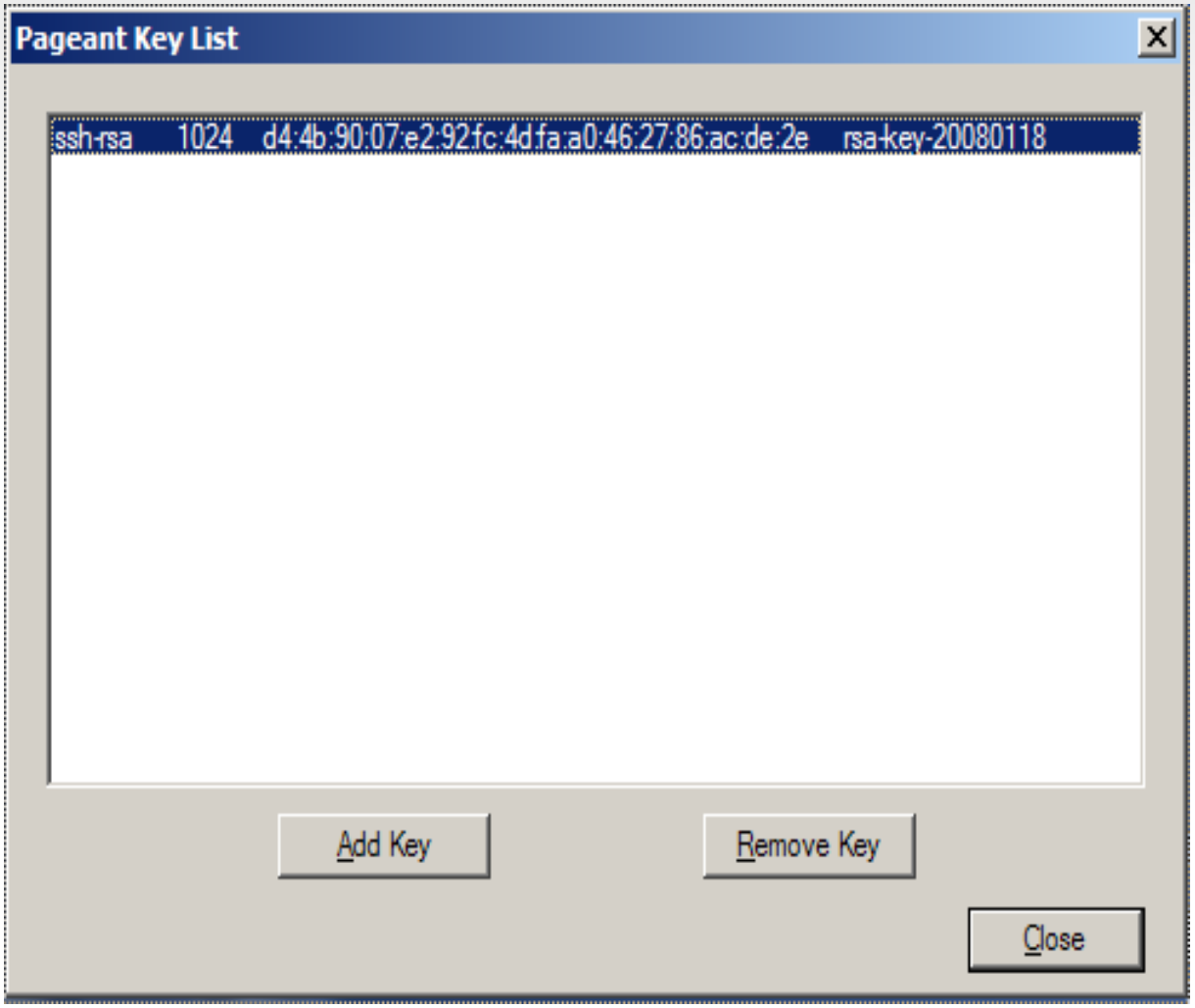


SSH 金鑰認證之作法（XP）



SSH 金鑰認證之作法（XP）

使用 Pageant 處理 Private Key



The End