Lab Assignment 7

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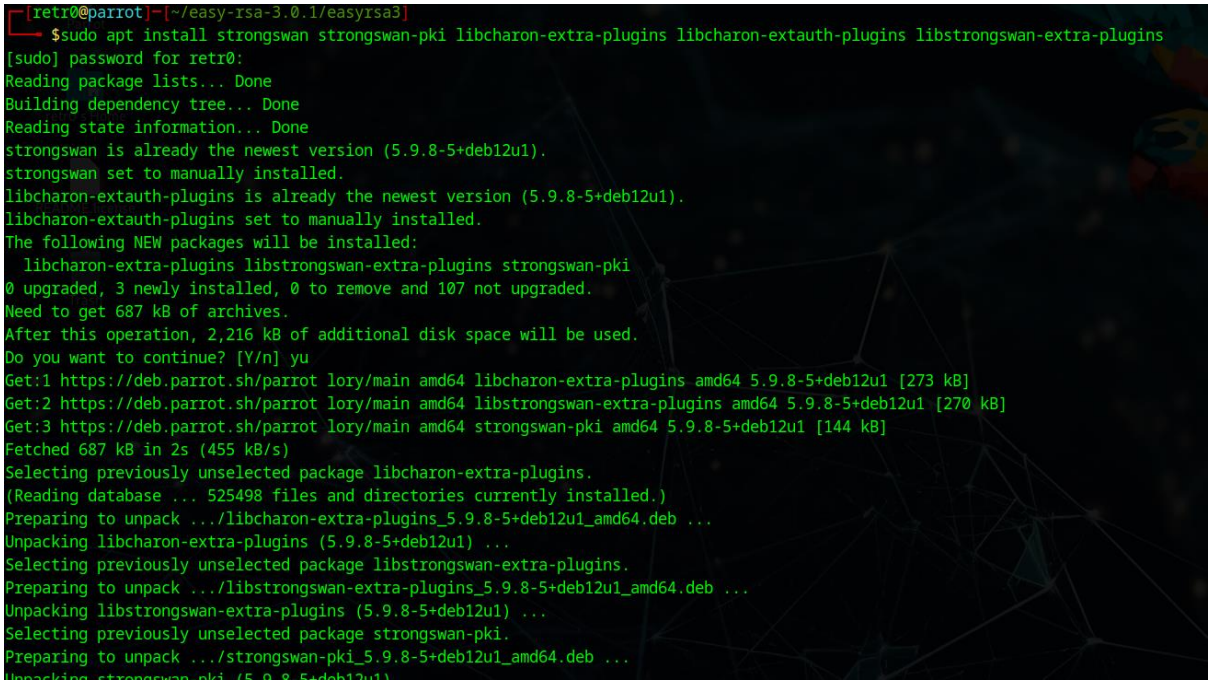
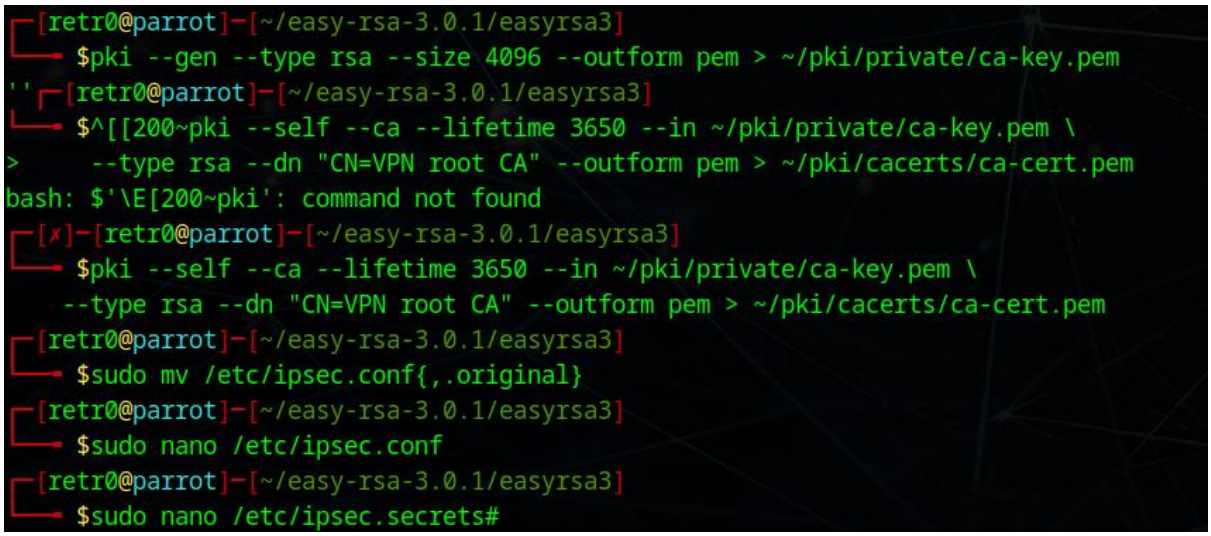
CSE – E
Network Security – CSE 315L





```
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo systemctl restart strongswan-starter
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo ufw allow OpenSSH
Rules updated
Rules updated (v6)
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo ufw enable
Firewall is active and enabled on system startup
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo ufw allow 500,4500/udp
Rule added
Rule added (v6)
```

```
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo ufw enable
Firewall is active and enabled on system startup
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo ufw allow 500,4500/udp
Rule added
Rule added (v6)
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $ip route show default
default via 10.0.2.2 dev enp0s3 proto dhcp src 10.0.2.15 metric 100
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo nano /etc/ufw/before.rules
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo nano /etc/ufw/sysctl.conf
┌[retr0@parrot]-[~/easy-rsa-3.0.1/easyrsa3]
└─► $sudo ufw disable
Firewall stopped and disabled on system startup
```

```
-----BEGIN CERTIFICATE-----
MIIDUTCCAjmgAwIBAgIUPJXzZ93MMzRyvJ6Dw7CWBOZDqZQwDQYJKoZIhvcNAQEL
BQAwGDEWMBQGA1UEAwwNa3Jpc2hob3N0bmFtZTAeFw0yNDAzMzExNzI2NDhaFw0z
NDAzMjkxNzI2NDhaMBgxFjAUBgNVBAMMDWtyaXNoaG9zdG5hbWUwggEiMA0GCSqG
SIb3DQEBAQUAA4IBDwAwggEKAoIBAQDlJ5Sx4qHpfTce47SE6mCJbNutUASp5lPv
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9XO0f4Km/oojjaUgCbpWhfrkNQshIvamrcOzgKS+VKEQ+MlbT39XAgMBAAGjgZIw
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UBXgWbUF3gDXtlNSmmPgY6KcoRykGjAYMRYwFAYDVQQDDA1rcmlzaGhvc3RuYW1l
ghQ8lfNn3cwzNHK8noPDsJYE5kOplDAMBgNVHRMEBTADAQH/MAsGA1UdDwQEAwIB
BjANBgkqhkiG9w0BAQsFAAOCAQEAYVHT0yPhWxsZzaqjy3CLREcsJV2OnEWRVHIV
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kmbY8lXd2oUF0HxVEPOXY1yV50iSOo8lhvrowgLq7EeSYVGiksShcIJfJiHD0F7N
rC8pZ+tlNLiR58hR1zF2tHP9eKB36W5nRy6gw1nNNyhILI3Qiw==
-----END CERTIFICATE-----
```

Configuring into windows:

```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
>>     -CertStoreLocation cert:\LocalMachine\Root\
>>     -FilePath C:\lab7_ca-cert.pem


   PSParentPath: Microsoft.PowerShell.Security\Certificate::LocalMachine\Root

Thumbprint                                Subject
----------                                -------
FB7D94D035DEAA4BE9A939F7E5C350781DB15F2A  CN=VPN root CA
```

```
PS C:\WINDOWS\system32> Add-VpnConnection -Name "VPN Connection" `
>>     -ServerAddress 192.168.25.2 `
>>     -TunnelType "IKEv2" `
>>     -AuthenticationMethod "EAP" `
>>     -EncryptionLevel "Maximum" `
>>     -RememberCredential
```

```
PS C:\WINDOWS\system32> Get-VpnConnection -Name "VPN Connection"


Name                    : VPN Connection
ServerAddress           : 192.168.16.1
AllUserConnection       : False
Guid                    : {ED6D5235-78E9-4563-B662-94A9A6DB9FEB}
TunnelType              : Automatic
AuthenticationMethod    : {Eap, MsChapv2}
EncryptionLevel         : Optional
L2tpIPsecAuth           : Certificate
UseWinlogonCredential   : False
EapConfigXmlStream      :
ConnectionStatus        : Disconnected
RememberCredential      : True
SplitTunneling          : False
DnsSuffix               :
IdleDisconnectSeconds   : 0
```

```
PS C:\WINDOWS\system32> Set-VpnConnectionIPsecConfiguration -Name "VPN Connection" `
>>     -AuthenticationTransformConstants GCMAES256
>>     -CipherTransformConstants GCMAES256 `
>>     -DHGroup ECP384 `
>>     -IntegrityCheckMethod SHA384 `
>>     -PfsGroup ECP384 `
>>     -EncryptionMethod GCMAES256

Confirm
Changing the Cryptography Settings. Do you want to continue?
[Y] Yes  [N] No  [S] Suspend  [?] Help (default is "Y"): Y
PS C:\WINDOWS\system32>
```