OpenVPN [] CentOS 5.5 amd 64



2. IP Server 192.168.1.10

OCCOUNTED Server

[root@vpn ~]# wget
http://packages.sw.be/rpmforge-release/rpmforge-release-0.5.2
-2.el5.rf.x86_64.rpm

openvpn.x86_64 : secure tunneling daemon

[root@vpn ~]# yum -y install openvpn Loaded plugins: fastestmirror Loading mirror speeds from cached hostfile * addons: mirror.issp.co.th
* base: mirror.issp.co.th
* extras: mirror.issp.co.th
* rpmforge: apt.sw.be
* updates: mirror.issp.co.th
rpmforge

| 1.1 kB 00:00

rpmforge/primary

| 2.1 MB 00:02

rpmforge

10272/10272

Setting up Install Process

Resolving Dependencies

- -> Running transaction check
- -> Package openvpn.x86_64 0:2.1.4-1.el5.rf set to be updated
- -> Processing Dependency: lzo for package: openvpn

-> Processing Dependency: liblzo2.so.2()(64bit) for package: openvpn

- -> Running transaction check
- -> Package lzo.x86_64 0:2.04-1.el5.rf set to be updated
- -> Finished Dependency Resolution

Dependencies Resolved

x86_64 2.1.4-1.el5.rf rpmforge Installing for dependencie lzo	es:			442 k	
x86_64					
2.04-1.el5.rt				139 k	
r piirr o'r ge				199 K	
Transaction Summary					
Install 2 Package(s, Upgrade 0 Package(s,)				
Total download size: 581 H Downloading Packages: (1/2): lzo-2.04-1.el5.rf.x86_64.H	k rpm				
(2/2):	139	kВ	00:01		
openvpn-2.1.4-1.el5.rf.x80	6_64.	rpm			
	442	kB	00:01		
Total					-
182 Running rpm check debug	7 kB/	s 581	kВ	00:03	

;

Running Transaction Test Finished Transaction Test

FINISHED HANSACLION TEST

Transaction Test Succeeded

Running Transaction

Installing

lzo

Installing openvpn

2/2

Installed:
openvpn.x86_64 0:2.1.4-1.el5.rf

Dependency Installed: lzo.x86_64 0:2.04-1.el5.rf

Complete! [root@vpn ~]#

[root@vpn ~]# cd /usr/share/doc/openvpn-2.1.4/ [root@vpn openvpn-2.1.4]# ls AUTHORS COPYRIGHT.GPL PORTS README.plugins README sample-config-ChangeLog easy-rsa files contrib INSTALL README.auth-pam sample-keys COPYING NEWS README.down-root sample-scripts [root@vpn openvpn-2.1.4]#

6. OpenVPN ______Cond_____Cond____Cond___Cond___Cond__

root@vpn openvpn-2.1.4]# cd easy-rsa/2.0/ [root@vpn 2.0]# ls build-ca build-inter build-key-pass build-key-server build-req-pass inherit-inter Makefile openssl.cnf README sign-req whichoopensslcnf build-dh build-key build-key-pkcs12 build-req

;

clean-all list-crl pkitool revoke-full vars

[root@vpn 2.0]# vi vars

These are the default values for fields # which will be placed in the certificate. # Don't leave any of these fields blank. export KEY_COUNTRY="TH" export KEY_PROVINCE="Chiangmai" export KEY_CITY="Chiangmai" export KEY_ORG="RMUTL" export KEY_EMAIL="teppap@rmutl.ac.th"

[root@vpn 2.0]# chmod +x *

```
[root@vpn 2.0]# source ./vars
NOTE: If you run ./clean-all, I will be doing a rm -rf on
/usr/share/doc/openvpn-2.1.4/easy-rsa/2.0/keys
[root@vpn 2.0]# ./clean-all
[root@vpn 2.0]# ls -l keys/
total 4
-rw-r-r- 1 root root 0 Feb 10 13:21 index.txt
-rw-r-r- 1 root root 3 Feb 10 13:21 serial
[root@vpn 2.0]# ./build-ca
Generating a 1024 bit RSA private key
```

writing new private key to 'ca.key' You are about to be asked to enter information that will be incorporated into your certificate request. What you are about to enter is what is called a Distinguished Name or a DN. There are quite a few fields but you can leave some blank For some fields there will be a default value, If you enter '.', the field will be left blank. Country Name (2 letter code) [TH]: State or Province Name (full name) [Chiangmai]: Locality Name (eq, city) [Chiangmai]: Organization Name (eg, company) [RMUTL]: Organizational Unit Name (eg, section) []:RMUTL Common Name (eg, your name or your server's hostname) [RMUTL CA]:vpn.rmutl.ac.th Name []:vpn.rmutl.ac.th Email Address [teppap@rmutl.ac.th]: [root@vpn 2.0]# ls -l keys/ total 12 -rw-r-r-1 root root 1424 Feb 10 13:22 ca.crt -rw-r-r-1 root root 0 Feb 10 13:21 index.txt -rw-r—r— 1 root root 3 Feb 10 13:21 serial [root@vpn 2.0]# ./build-key-server vpn.rmutl.ac.th Generating a 1024 bit RSA private key writing new private key to 'vpn.rmutl.ac.th.key'

You are about to be asked to enter information that will be incorporated into your certificate request.

What you are about to enter is what is called a Distinguished Name or a DN. There are quite a few fields but you can leave some blank For some fields there will be a default value, If you enter '.', the field will be left blank. Country Name (2 letter code) [TH]: State or Province Name (full name) [Chiangmai]: Locality Name (eg, city) [Chiangmai]: Organization Name (eg, company) [RMUTL]: Organizational Unit Name (eq, section) []:RMUTL *Common Name (eg, your name or your server's hostname)* [vpn.rmutl.ac.th]: Name []:vpn.rmutl.ac.th Email Address [teppap@rmutl.ac.th]: Please enter the following 'extra' attributes to be sent with your certificate request A challenge password []: An optional company name []: Using configuration from /usr/share/doc/openvpn-2.1.4/easyrsa/2.0/openssl.cnf Check that the request matches the signature Signature ok The Subject's Distinguished Name is as follows :PRINTABLE:'TH' countryName stateOrProvinceName :PRINTABLE:'Chiangmai' :PRINTABLE:'Chiangmai' localityName organizationName :PRINTABLE:'RMUTL' organizationalUnitName:PRINTABLE:'RMUTL' commonName :PRINTABLE: 'vpn.rmutl.ac.th' :PRINTABLE: 'vpn.rmutl.ac.th' name emailAddress :IA5STRING:'teppap@rmutl.ac.th' Certificate is to be certified until Feb 7 06:23:57 2021 GMT (3650 days) Sign the certificate? [y/n]:y

1 out of 1 certificate requests certified, commit? [y/n]yWrite out database with 1 new entries Data Base Updated [root@vpn 2.0]# [root@vpn 2.0]# ls -l keys/ total 48 -rw-r-r-1 root root 4200 Feb 10 13:24 01.pem -rw-r-r-1 root root 1424 Feb 10 13:22 ca.crt -rw--- 1 root root 891 Feb 10 13:22 ca.key -rw-r-r-1 root root 148 Feb 10 13:24 index.txt -rw-r-r- 1 root root 21 Feb 10 13:24 index.txt.attr 0 Feb 10 13:21 index.txt.old -rw-r—r— 1 root root -rw-r-r-1 root root 3 Feb 10 13:24 serial -rw-r-r-1 root root 3 Feb 10 13:21 serial.old -rw-r-r-1 root root 4200 Feb 10 13:24 vpn.rmutl.ac.th.crt -rw-r-r-1 root root 745 Feb 10 13:23 vpn.rmutl.ac.th.csr -rw—- 1 root root 887 Feb 10 13:23 vpn.rmutl.ac.th.key [root@vpn 2.0]# cat keys/vpn.rmutl.ac.th.key -BEGIN RSA PRIVATE KEY-MIICX0IBAAKBa0C3FvB9xhcMiFXl/H9cCA5fteVmHwu+BzioudvNMi33zRF11 WGK wYmtp1C2biSHtsm66y4JqE3t6/oNBhKHhtAwpYmDHuHXPo15VKmH/DkaeouRO rbc CYy/eF0dmKc0ug0j4WwjY7233611mKY5wM9acGyEfbVQJioF1mjGV13oTwIDA OAB AoGAAzlSLsTILx5hfNU/YN17c0/+pBez2zrBUqdDLPFPiqeAYTTKr0jPhdFGa I/z8LfVQYdWnjDqfmADXStYNC65h7oh/Ll5n4jM9nVLPf3R0B1zqGeP7k1ZuzfrQ Nm0 yGsl870a3vDXUUiLs0A7GsQ4BvNnkb5acLCHjqnEY0oazqECQQDeHY4biDrwt aBJ cHKNlDo80hl4RpV55pFB6kxtgi03XnixCjlwHEYM97Gklw37/MPoNfIs7gINL DKv MK2BvaDPAkEA0wVHNkuh+lJ3Y0sn1N080fZIdZvJKScp2oDYDfGJFBaNcz33U 2qu 288ZmQb2rZNTqdEovP6Ico85VkKCw2oqqQJBAJJ9XZcM7wqITzGARxzXEN3CF

2g6 7SSbi1u0wjlLLLUiymjA/IbTLuQojHGn6mIyH6bLxXAafSHg74KUFirGPQMCQ EWy gpj0VkulnURnpxpJkGMQ41HlCIYNJ2fCEppYYpw97q5Xky77RC7Zsmy2vhcKi CGY scngkAg2f4ucIDCHBwECQQDIWxF7c4QIFdaf4ZWUZG0uo7L0/dsjPiUuyg0FB sA1 lOFAhiCH8ZRErTejC3mLB/HdYL43futnhvix/YEDqoxr ---END RSA PRIVATE KEY---[root@vpn 2.0]# cat keys/vpn.rmutl.ac.th.crt Certificate: Data: Version: 3 (0x2) Serial Number: 1 (0x1) Signature Algorithm: shalWithRSAEncryption Issuer: C=TH, ST=Chiangmai, L=Chiangmai, O=RMUTL, OU=RMUTL, CN=vpn.rmutl.ac.th/name=vpn.rmutl.ac.th/emailAddress=teppap@r mutl.ac.th Validity Not Before: Feb 10 06:23:57 2011 GMT Not After : Feb 7 06:23:57 2021 GMT Subject: C=TH, ST=Chiangmai, L=Chiangmai, O=RMUTL, OU=RMUTL, CN=vpn.rmutl.ac.th/name=vpn.rmutl.ac.th/emailAddress=teppap@r mutl.ac.th Subject Public Key Info: Public Key Algorithm: rsaEncryption RSA Public Key: (1024 bit) Modulus (1024 bit): 00:b7:16:f0:7d:c6:17:0c:8c:55:e5:fc:7f:5c:08: 0e:5f:b5:e5:66:1f:0b:be:07:38:a8:b9:dc:8d:32: 3d: f7: cd: 11: 75: d5: 61: 8a: c1: 89: ad: a7: 50: b6: 6e: 24:87:b6:c9:ba:eb:2e:09:a8:4d:ed:eb:fa:0d:06: 12:87:86:d0:30:a5:89:83:1e:e1:d7:3e:8d:79:54: a9:87:fc:39:1a:7a:8b:91:3a:b6:dc:09:8c:bf:78: 5d:1d:98:a7:34:ba:03:a3:e1:6c:23:63:bd:b7:df: ad: 75:98:a6:39:c0:cf:5a:70:6c:84:7d:b5:50:26:

2a:05:d6:68:c6:57:5d:e8:4f

Exponent: 65537 (0x10001) X509v3 extensions: X509v3 Basic Constraints: CA: FALSE Netscape Cert Type: SSL Server Netscape Comment: Easy-RSA Generated Server Certificate X509v3 Subject Key Identifier: 9B: 37: 63: 86: 89: D8: F5: 9A: D6: A4: 5F: 8A: 50: 3A: E2: 67: 25: 0D: 18: 14 X509v3 Authority Key Identifier: keyid:8A:E7:4E:11:35:25:94:5E:F8:D3:E9:62:8E:E4:7B:00:32:57:8 0:5F *DirName:/C=TH/ST=Chiangmai/L=Chiangmai/O=RMUTL/OU=RMUTL/CN=vp n.rmutl.ac.th/name=vpn.rmutl.ac.th/emailAddress=teppap@rmutl.* ac.th serial: FC: A0: 4D: C7: BE: EB: 70: EA X509v3 Extended Key Usage: TLS Web Server Authentication X509v3 Key Usage: Digital Signature, Key Encipherment Signature Algorithm: shalWithRSAEncryption 5a:13:d3:d6:95:8c:5e:38:0e:1c:7a:a2:5d:8f:e2:40:0d:ab: 5d:6f:6b:bc:09:fe:bb:97:fc:35:d0:e4:76:e2:1c:6c:c8:75: 60:3f:44:e9:c2:ce:27:08:e4:18:b2:b2:5b:63:9c:6d:c5:36: 7f:5a:5f:d4:b3:dd:5e:2f:35:04:09:c8:11:92:12:a7:64:50: 56:18:cb:4a:f2:8d:b5:6d:b0:11:db:b8:1d:bb:44:9b:ec:11: 99:27:3c:01:8e:b6:a6:b3:ba:26:d1:a9:69:cc:7d:31:2d:bc: d4:57:10:89:3a:8a:02:a9:da:fc:ca:94:0e:b8:d4:ac:3c:00:

c3:ce

—BEGIN CERTIFICATE—

MIIETzCCA7igAwIBAgIBATANBgkqhkiG9w0BAQUFADCBrDELMAkGA1UEBhMCV Egx

EjAQBgNVBAgTCUNoaWFuZ21haTESMBAGA1UEBxMJQ2hpYW5nbWFpMQ4wDAYDV QQK

EwVSTVVUTDE0MAwGA1UECxMFUk1VVEwxGDAWBgNVBAMTD3Zwbi5ybXV0bC5hY

y50

aDEYMBYGA1UEKRMPdnBuLnJtdXRsLmFjLnRoMSEwHwYJKoZIhvcNAQkBFhJ0Z XBw YXBAcm11dGwuYWMudGgwHhcNMTEwMjEwMDYyMzU3WhcNMjEwMjA3MDYyMzU3W jCB rDELMAkGA1UEBhMCVEgxEjAQBgNVBAgTCUNoaWFuZ21haTESMBAGA1UEBxMJQ 2hp

YW5nbWFpMQ4wDAYDVQQKEwVSTVVUTDE0MAwGA1UECxMFUk1VVEwxGDAWBgNVB AMT

D3Zwbi5ybXV0bC5hYy50aDEYMBYGA1UEKRMPdnBuLnJtdXRsLmFjLnRoMSEwH wYJ

KoZIhvcNAQkBFhJ0ZXBwYXBAcm11dGwuYWMudGgwgZ8wDQYJKoZIhvcNAQEBB QAD

gY0AMIGJAoGBALcW8H3GFwyMVeX8f1wIDl+15WYfC74H0Ki53I0yPffNEXXVY YrB

ia2nULZuJIe2ybrrLgmoTe3r+g0GEoeG0DCliYMe4dc+jXlUqYf80Rp6i5E6t
twJ

jL94XR2YpzS6A6PhbCNjvbffrXWYpjnAz1pwbIR9tVAmKgXWaMZXXehPAgMBA AGj

ggF9MIIBeTAJBgNVHRMEAjAAMBEGCWCGSAGG+EIBAQQEAwIGQDA0BglghkgBh vhC

AQ0EJxYlRWFzeS1SU0EgR2VuZXJhdGVkIFNlcnZlciBDZXJ0aWZpY2F0ZTAdB gNV

HQ4EFgQUmzdjhonY9ZrWpF+KUDriZyUNGBQwgeEGA1UdIwSB2TCB1oAUiud0E TUl

lF740+lijuR7ADJXgF+hgbKkga8wgawxCzAJBgNVBAYTAlRIMRIwEAYDVQQIE wlD

aGlhbmdtYWkxEjAQBgNVBAcTCUNoaWFuZ21haTEOMAwGA1UEChMFUk1VVEwxD jAM

BgNVBAsTBVJNVVRMMRgwFgYDVQQDEw92cG4ucm11dGwuYWMudGgxGDAWBgNVB CkT

D3Zwbi5ybXV0bC5hYy50aDEhMB8GCSqGSIb3DQEJARYSdGVwcGFwQHJtdXRsL mFj

LnRoggkA/KBNx77rc0owEwYDVR0lBAwwCgYIKwYBBQUHAwEwCwYDVR0PBAQDA gWg

MA0GCSqGSIb3DQEBBQUAA4GBAFoT09aVjF44Dhx6ol2P4kANq11va7wJ/ruX/ DXQ

5HbiHGzIdWA/ROnCzicI5BiysltjnG3FNn9aX9Sz3V4vNQQJyBGSEqdkUFYYy 0ry jbVtsBHbuB27RJvsEZknPAGOtgazuibRgWnMfTEtvNRXEIk6igKp2vzKlA641 Kw8 **AMPO** ---END CERTIFICATE----[root@vpn 2.0]# [root@vpn 2.0]# [root@vpn 2.0]# [root@vpn 2.0]# ./build-dh Generating DH parameters, 1024 bit long safe prime, generator 2 This is going to take a long time++*++* [root@vpn 2.0]# [root@vpn 2.0]# ls -l keys/ total 52 -rw-r-r-1 root root 4200 Feb 10 13:24 01.pem -rw-r-r-1 root root 1424 Feb 10 13:22 ca.crt -rw-r-r-1 root root 245 Feb 10 13:25 dh1024.pem -rw-r-r-1 root root 148 Feb 10 13:24 index.txt -rw-r-r-1 root root 21 Feb 10 13:24 index.txt.attr -rw-r-r-1 root root 0 Feb 10 13:21 index.txt.old -*rw*-*r*-*r*-1 *root root* 3 *Feb* 10 13:24 *serial* -rw-r-r-1 root root 3 Feb 10 13:21 serial.old -rw-r-r-1 root root 4200 Feb 10 13:24 vpn.rmutl.ac.th.crt -rw-r-r-1 root root 745 Feb 10 13:23 vpn.rmutl.ac.th.csr -rw—- 1 root root 887 Feb 10 13:23 vpn.rmutl.ac.th.key [root@vpn 2.0]# [root@vpn 2.0]# ./build-key client Generating a 1024 bit RSA private key writing new private key to 'client.key'

You are about to be asked to enter information that will be incorporated into your certificate request. What you are about to enter is what is called a Distinguished Name or a DN. There are quite a few fields but you can leave some blank For some fields there will be a default value, If you enter '.', the field will be left blank. Country Name (2 letter code) [TH]: State or Province Name (full name) [Chiangmai]: Locality Name (eq, city) [Chiangmai]: Organization Name (eg, company) [RMUTL]: Organizational Unit Name (eg, section) []:RMUTL *Common Name (eg, your name or your server's hostname)* [client]: Name []: Email Address [teppap@rmutl.ac.th]: Please enter the following 'extra' attributes to be sent with your certificate request A challenge password []: An optional company name []: Using configuration from /usr/share/doc/openvpn-2.1.4/easyrsa/2.0/openssl.cnf Check that the request matches the signature Signature ok The Subject's Distinguished Name is as follows countryName :PRINTABLE:'TH' stateOrProvinceName :PRINTABLE:'Chiangmai' localityName :PRINTABLE:'Chiangmai' :PRINTABLE: 'RMUTL' organizationName organizationalUnitName:PRINTABLE:'RMUTL' commonName :PRINTABLE:'client' emailAddress :IA5STRING:'teppap@rmutl.ac.th' Certificate is to be certified until Feb 7 06:27:42 2021 GMT (3650 days)

Sign the certificate? [y/n]:y

1 out of 1 certificate requests certified, commit? [y/n]y
Write out database with 1 new entries
Data Base Updated
[root@vpn 2.0]#

[root@vpn 2.0]# cp -rf /usr/share/doc/openvpn-2.1.4/easyrsa/2.0/keys/* /etc/openvpn/

[root@vpn 2.0]# cd /etc/openvpn/

[root@vpn openvpn]# cp /usr/share/doc/openvpn-2.1.4/sampleconfig-files/server.conf /etc/openvpn/

Any X509 key manateppapgement system can be used. # OpenVPN can also use a PKCS #12 formatted key file # (see "pkcs12" directive in man page). ca ca.crt cert vpn.rmutl.ac.th.crt key vpn.rmutl.ac.th.key # This file should be kept secret # Diffie hellman parameters. # Generate your own with: # openssl dhparam -out dh1024.pem 1024 # Substitute 2048 for 1024 if you are using # 2048 bit keys. dh dh1024.pem

[root@vpn openvpn]# service openvpn start
Starting openvpn:
OK]
[root@vpn openvpn]#

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[root@vpn openvpn]# ifconfig

eth0 Link encap:Ethernet HWaddr C2:DE:48:D6:36:24 inet addr:192.168.1.10 Bcast:10.0.1.255 Mask:255.255.255.0 inet6 addr: fe80::c0de:48ff:fed6:3624/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:76748 errors:0 dropped:0 overruns:0 frame:0 TX packets:8380 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1000 RX bytes:6582338 (6.2 MiB) TX bytes:997841 (974.4 KiB)

lo Link encap:Local Loopback inet addr:127.0.0.1 Mask:255.0.0.0 inet6 addr: ::1/128 Scope:Host UP LOOPBACK RUNNING MTU:16436 Metric:1 RX packets:8 errors:0 dropped:0 overruns:0 frame:0 TX packets:8 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:560 (560.0 b) TX bytes:560 (560.0 b)

collisions:0 txqueuelen:100 RX bytes:0 (0.0 b) TX bytes:0 (0.0 b)

[root@vpn openvpn]#

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4. DDDDDDDDDDDD client.vpn DDDDDDDD C:\Program Files\OpenVPN\config

6. _____C:\Program Files\OpenVPN\config\client.vpn ______ text editor ____ ______

. . # The hostname/IP and port of the server. # You can have multiple remote entries # to load balance between the servers. remote **192.168.1.10** 1194

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10 _______ ; remote my-server-2 1194



