Empowering Solution

Title	**New Install SAP Router Configuration in Linux**
Version	***7.0***
Author	**Ashish Semwal**
Date	***22.11.2016***

1 Symptoms

Installing New Sap Router in Linux / Unix O.S. and Renewal Certificate Process

2 Prerequisites

- Access of root user in O.S.
- Login Access of S User (Sap Portal)
- Server Host Name and Server IP should be assign in your Sap Portal for Sap router
- Your distinguished name (Find from Sap Portal under Sap router certificate or Cmd: sapgenspe get_my_name)
- You need to open the port for SAP Router 3299 & Gateway Port 3399 3389

3 Solutions

Step 1.

1. Login to the SAP Support Portal with the S-user ID and Download latest version file

   SAPCRYPTOLIBP_8506-20011697.SAR
   SAPROUTER_34-70000854.sar

   >Support Packages & Patches
   >A-Z Alphabetical List of Products
   >S
   >SAPCRYPTOLIB.SAR
   >SAPROUTER.SAR

2. Login into server with “Root” user.
3. Create folder under path “/usr/sap/” with name of Saprouter and move downloaded file in to newly created folder *(usr/sap/Saprouter)*
4. Provide 775 permission to Saprouter Folder (chmod –R 775 /usr/sap/Saprouter)

5. Extract both file "Saprouter and Sapcryptolib" with help of tool "SAPCAR"

```
-rwxr-xr-x. 1 root root 4430400 Nov 23 12:37 SAPCAR_712-80000935.EXE
-rwxr-xr-x. 1 root root 2330807 Nov 23 12:37 SAPCRYPTOLIBP_8506-20011697.SAR
-rwxr-xr-x. 1 root root 1371881 Nov 23 12:37 saprouter_34-70000854.sar
```

```
[root@ router745]# ./SAPCAR_712-80000935.EXE -xvf SAPCRYPTOLIBP_8506-20
011697.SAR
SAPCAR: processing archive SAPCRYPTOLIBP_8506-20011697.SAR (version 2.01)
x sapcrypto.mf
x libslcryptokernel.so
x libsapcrypto.so
x sapgenpse
x libslcryptokernel.so.sha256
x sapcrypto.lst
SAPCAR: 6 file(s) extracted
[root@ router745]# ./SAPCAR_712-80000935.EXE -xvf saprouter_34-70000854.sar
SAPCAR: processing archive saprouter_34-70000854.sar (version 2.01)
x niping
x patches.mf
x saprouter
SAPCAR: 3 file(s) extracted
```

```
-rwxr-xr-x. 1 root root 5747827 Nov  7 20:58 libsapcrypto.so
-rwxr-xr-x. 1 root root  499679 Mar  2  2016 libslcryptokernel.so
-rw-r--r--. 1 root root     166 Nov 10 15:18 libslcryptokernel.so.sha256
-rwxrwxr-x. 1 root root 1385024 Jan 26  2016 niping
-rwxrwxr-x. 1 root root     306 Jan 26  2016 patches.mf
-rwxr-xr-x. 1 root root 4430400 Nov 23 12:37 SAPCAR_712-80000935.EXE
-rwxr-xr-x. 1 root root 2330807 Nov 23 12:37 SAPCRYPTOLIBP_8506-20011697.SAR
-rw-r--r--. 1 root root     102 Nov 10 15:18 sapcrypto.lst
-rw-r--r--. 1 root root     256 Nov 10 15:18 sapcrypto.mf
-rwxr-xr-x. 1 root root   34193 Nov  7 20:58 sapgenpse
-rwxrwxr-x. 1 root root 1687736 Jan 26  2016 saprouter
-rwxr-xr-x. 1 root root 1371881 Nov 23 12:37 saprouter_34-70000854.sar
```

Step 2.

1. ***Generate the certificate request using the following command:***

(Note : distinguished name should be available and PIN can enter 1234)

./sapgenpse get_pse -v -r certreq -p loc

Got absolute PSE path "/usr/sap/saprouter/local.pse".
Please enter PIN: ****
Please reenter PIN: ****
Supplied distinguished name: "CN=HOST Name, OU=Customer Number, OU=SAProuter, O=SAP, C=DE"
Creating PSE with format v2 (default)
Generating key (RSA, 2048-bits) ... succeeded.
certificate creation... ok
PSE update... ok
PKRoot... ok
Generating certificate request... ok.

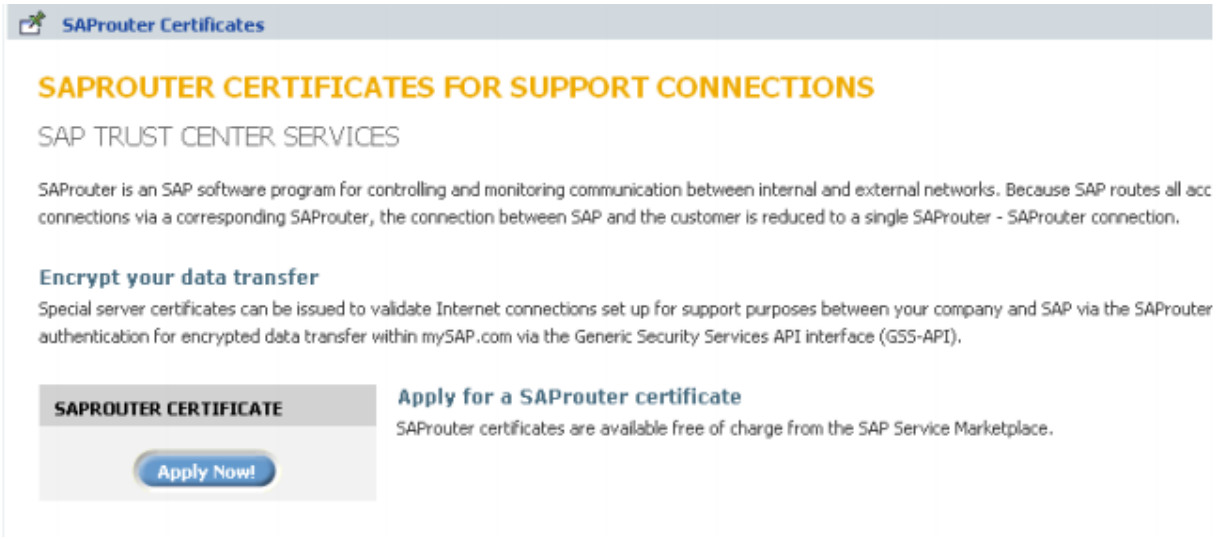
```
-rwxr-xr-x. 1 root root 5747827 Nov  7 20:58 libsapcrypto.so
-rwxr-xr-x. 1 root root  499679 Mar  2  2016 libslcryptokernel.so
-rw-r--r--. 1 root root     166 Nov 10 15:18 libslcryptokernel.so.sha256
-rwxrwxrwx. 1 root root    3159 Nov 18 12:51 loc.pse
-rwxrwxr-x. 1 root root 1385024 Jan 26  2016 niping
-rwxrwxr-x. 1 root root     306 Jan 26  2016 patches.mf
-rwxrwxrwx. 1 root root 4430400 Nov 16 18:01 SAPCAR_712-80000935.EXE
-rwxrwxrwx. 1 root root 2330807 Nov 16 18:00 SAPCRYPTOLIBP_8506-20011697.SAR
-rw-r--r--. 1 root root     102 Nov 10 15:18 sapcrypto.lst
-rw-r--r--. 1 root root     256 Nov 10 15:18 sapcrypto.mf
-rwxr-xr-x. 1 root root   34193 Nov  7 20:58 sapgenpse
-rwxrwxr-x. 1 root root 1687736 Jan 26  2016 saprouter
-rwxrwxrwx. 1 root root 1371881 Nov 16 18:00 saprouter_34-70000854.sar
```

2. ***Once the request is created, it creates the file certreq:***

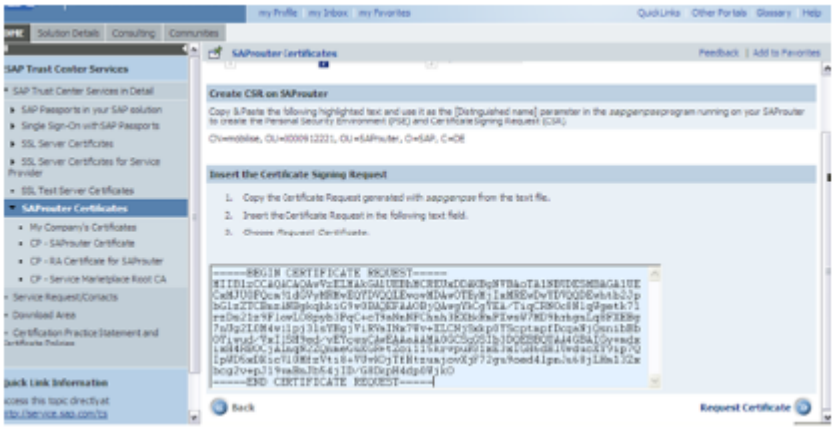
Open Certreq file in disply mode (CMD : cat certreq)

```
-----BEGIN CERTIFICATE REQUEST-----
MIICnTCCAYUCAQAwWDELMAkGA1UEBhMCREUxDDAKBgNVBAoTA1NBUDESMBAGA1UE
CxMJU0FQcm91dGVyMRMwEQYDVQQLEwowMDAxMjk4MDAzMRIwEAYDVQQDEwlSUExE
RVZRVUEwggEiMA LASDVBKCASKJDNCASLDKN  AL;KSKXM  ALSKNC LSKN s;l Nsl Nslx Nsx
 n;lsxn skjx SX JNsx SD sd HFGHGFGFSDVASDVAFVFVDFD F SADFASSFDF SDFASDFSADFA
certreq0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQD+za7CY9unsRnNADSCADCDCDCD
dTjF6SKiHXPXzwCN2dfe4+rnqJIRkGJaxkGGgxrLabI3BoIOXldLTfIlO4GtoBW8ASDCADCASDCADC
dX3HAHjjo/npKhYjFCLblOHSwY5Db2T1xsz/xj4BBJ+XaUvWhmxkQsxUJQSSqQPGXyPADCDC
NVK3YW1u4XyWbHS2f5XyfZPXdyVpqfTPTewD52ASDVASDCmEc7eVHxHEEGjux2YmwZAh//DSCw7
/XWoL1fK7dfO6G2kzLh6jD+n5kda25AT9h3DKu8NY6df494N3bASDCSDkHpHNvl0yywiL0ADCADC
f0AQJH/Vo2ryQmRKspZe2a/EA756Ozqpog/LKv2HR8CJ6wXmDmPFQWASDCzuSxrJUrx5DCDC
yOZwVg85AgMBAAGgADANBgkqhkiG9w0BAQUFAAOCAQEALHK0Qxi03TRUASSDCWjpbHXoj
Igru8mXKcRP62+CSWhtH5tV2Y9IaABm9jejpQx1DlgDgj01LnBwWFn44zMR354UzASDCADCDC
S0Uf4KGJLaI+MIRBoA79PfXqy/7Fvy5DG+TOumNpjeHKW7OLSIyr6RuchfOVjrAZACSDCASAD
rf8JNzCfSyDrpY9ZqKFE4bXsqfaY7ygbNSooILGALjesgmkvGtM6svIiWcbXZQQ/DCASDCADF
ZOj1VJaPNHi6FsRisXCym/K/RCmTfk6/dwPRmocyMiWLwYqIAQjzye6epD8x1eM8SDCASDCDF
8xjOZdoO/cWKy+uMV0xNSzqwwl8LKnK5HzvOS86RdqMZIqEMFOvqIPxkxt6drceoASDCFD
-----END CERTIFICATE REQUEST-----
```

- Copy this script from …..BEGIN to …..END…
- Then Login to service marketplace under: http://www.service.sap.com/saproutersnc add à Apply Certificate this opens the form below. Select Continue



- Paste the contents of the certreq file generated above as below, and then “Request Certificate”. See below
- Copy the details of the new certificate generated and then Create txt file with name of srcert(touch srcert) and paste it in a new file srcert in the



3. ***Importing the Certificate & Creating Credential:***

/sapgenpse import_own_cert -c srcert -p loc.pse

Please enter PIN: ****
CA-Response successfully imported into PSE "/usr/sap/saprouter/loc.pse"

4. *Creating the credential for User responsible to start SAP Router:*

./sapgenpse seclogin -p local.pse -O roo
inistrator
running seclogin with USER="root"
creating credentials for secondary user "root" ...
Please enter PIN: ****
Added SSO-credentials (#0) for PSE "/usr/sap/saprouter/loc.pse"
"CN=Host name, OU=Customer Number, OU=SAProuter, O=SAP, C=DE"

```
-rwxrwxrwx. 1 root root      985 Nov 18 12:26 certreq
-rw-r--r--. 1 root root      331 Nov 18 13:03 cred_v2
-rw-r--r--. 1 root root 32579529 Nov 23 13:16 dev_rout
-rwxr-xr-x. 1 root root  5747827 Nov  7 20:58 libsapcrypto.so
-rwxr-xr-x. 1 root root   499679 Mar  2  2016 libslcryptokernel.so
-rw-r--r--. 1 root root      166 Nov 10 15:18 libslcryptokernel.so.sha256
-rwxrwxrwx. 1 root root     3159 Nov 18 12:51 loc.pse
-rwxrwxr-x. 1 root root  1385024 Jan 26  2016 niping
-rwxrwxr-x. 1 root root      306 Jan 26  2016 patches.mf
-rwxrwxrwx. 1 root root  4430400 Nov 16 18:01 SAPCAR_712-80000935.EXE
-rwxrwxrwx. 1 root root  2330807 Nov 16 18:00 SAPCRYPTOLIBP_8506-20011697.SAR
-rw-r--r--. 1 root root      102 Nov 10 15:18 sapcrypto.lst
-rw-r--r--. 1 root root      256 Nov 10 15:18 sapcrypto.mf
-rwxr-xr-x. 1 root root    34193 Nov  7 20:58 sapgenpse
-rwxrwxr-x. 1 root root  1687736 Jan 26  2016 saprouter
-rwxrwxrwx. 1 root root  1371881 Nov 16 18:00 saprouter_34-70000854.sar
-rw-r--r--. 1 root root     3267 Nov 21 17:24 saprouttab
-rw-r--r--. 1 root root     3261 Nov 21 17:20 saprouttab_org
-rwxrwxrwx. 1 root root     2674 Nov 18 12:51 srcert
```

5. *Verifying the Configuration:*

./sapgenpse get_my_name -v -n Issuer

Opening PSE "/usr/sap/saprouter/loc.pse"...
PSE (v2) open ok.
Retrieving my certificate... ok.
Getting requested information... ok.
SSO for USER "root"
with PSE file "/usr/sap/saprouter/loc.pse"

Issuer : CN=SAProuter CA, OU=SAProuter, O=SAP Trust Community II, C=DE

6. ./sapgenpse get_my_name -n validity

SSO for USER "root"
with PSE file "/usr/sap/saprouter/loc.pse"

Validity - NotBefore: Thu Jul 14 12:57:44 2016 (160714095744Z)
NotAfter: Fri Jul 14 12:57:44 2017 (170714095744Z)

Step 3.

1. Set Environment variables from root user

export SECUDIR=/usr/sap/saprouter
export SNC_LIB=/usr/sap/saprouter/libsapcrypto.so

disply Environment variable path echo $SECUDIR

set this as permanent add it to the file .profile or .bashrc

2. SAPROUTTAB Entry

- Create saprouttab txt file (touch saprouttab)
- vi saprouttab
- sapserv2 (194.39.131.34): Connection via Internet SNC

```
P * * *
#SNC connection to SAP
KT "p:CN=sapserv2, OU=SAProuter, O=SAP, C=DE" 194.39.131.34 *
#SNC-connection from SAP to local R/3-System for Support
#SNC-connection from SAP to local R/3-System for saptelnet
#Access from your local Network to SAP R/3 Frontend (OSS)

P * 194.39.131.34 *
KT "p:CN=sapserv2, OU=SAProuter, O=SAP, C=DE" 192.168.XXX.XX *
KP "p:CN=sapserv2, OU=SAProuter, O=SAP, C=DE" 192.168.0.X3200
KP "p:CN=sapserv2, OU=SAProuter, O=SAP, C=DE" 192.168.0.X 23
KP "p:CN=sapserv2, OU=SAProuter, O=SAP, C=DE" 192.168.0.X3399
KT "p:CN=sapserv2, OU=SAProuter, O=SAP, C=DE" 194.39.131.34 *
KT "p:CN=sapserv2, OU=SAProuter, O=SAP, C=DE" 192.168.XXX.XX          *

P * * * *
#saprouter internal ip 192.168.XXX.XX
#GUI internal ip 192.168.0.X 3200(00 is instance)
```

3. Start Sap Router Command in Linux

#/usr/sap/saprouter > Enter cmd

./saprouter -r -V 2 -K "p:CN=HOSTNAME, OU=CUSTOMER Number, OU=SAProuter, O=SAP, C=DE"

Note: check proper space b/w distinguished name
Note: Don't close terminal after start sap router

4. Stop Sap Router

#/usr/sap/saprouter > Enter cmd

Saprouter –s

If facing any issue check dev_rout file

4 References

[1] SAP AG "SAProuter (BC-CST-NI)", http://help.sap.com

[2] Waddaya Solutions

Blog.waddaya.com