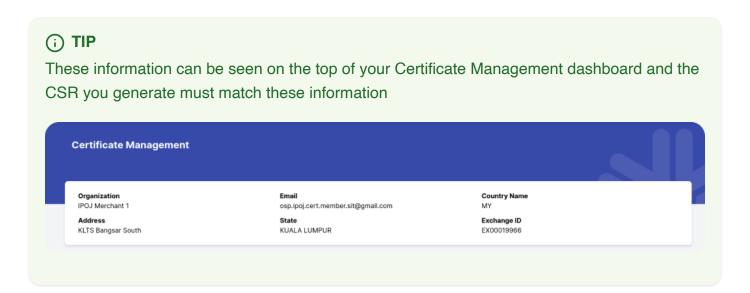# Generate CSR and Private Key

## CSR Format Guidelines

Before you begin generating your CSR (Certificate Signing Request), please ensure that you follow these format guidelines to adhere to PayNet's standards:
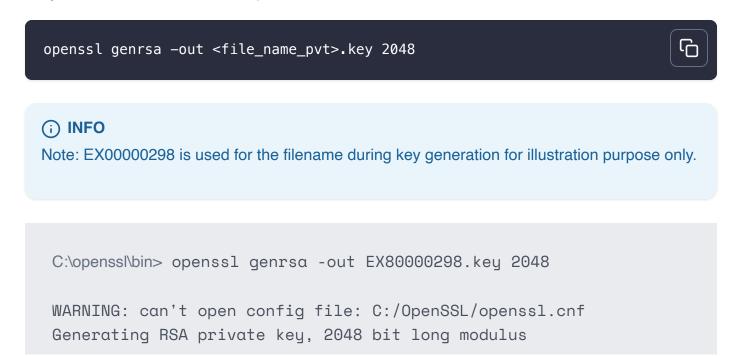
| | |
|---|---|
| Country Name (C) | MY |
| Organization Name (O) | Applicant's organization name. For example:<br><br>`XYZ Sdn. Bhd.` |
| Organizational Unit (OU) | Indicate the name of the product or service. For example:<br><br>• For FPX: `PayNet FPX`<br>• For DuitNow: `PayNet RPP`<br>• For DuitNow Pay: `PayNet DNPAY` |
| Common Name (CN) | Assign the appropriate value based on your application type:<br><br>• For Banks: `BIC Code`<br>• For Merchants: `Merchant ID`<br>• For FPX Merchants: `Exchange ID`<br>• For DuitNow Pay Acquirer: `Developer Portal Project Id` |
| Email Address (E) | Business email address |

**Certificate Management**

| | | |
|---|---|---|
| **Organization**<br>IPOJ Merchant 1 | **Email**<br>osp.ipoj.cert.member.sit@gmail.com | **Country Name**<br>MY |
| **Address**<br>KLTS Bangsar South | **State**<br>KUALA LUMPUR | **Exchange ID**<br>EX00019966 |

## Generate on Windows Platform

Generation of Private Key and CSR at Merchant's/TPA's End.

**Step 1:** Generation of Private Key

```
openssl genrsa –out <file_name_pvt>.key 2048
```

```
C:\openssl\bin> openssl genrsa -out EX80000298.key 2048

WARNING: can't open config file: C:/OpenSSL/openssl.cnf
Generating RSA private key, 2048 bit long modulus
```

```
.  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .++++
.  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .++++
unable to write 'random state'
e is 65537 (0x10001)
```

**Step 2:** Generation of CSR

```
openssl req —out <file_name_csr>.csr —key <file_name_key>.key —new —sha256
```

```
C:\openssl\bin> openssl req -out EX00000298.csr -key EX80000298.key -
new-sha256
```

**Step 3:** Information that will be incorporated into the certificate request. Please leave a challenge password and an optional company name blank.

```
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) [XX]:MY
State or Province Name (full name) []: Kuala Lumpur
Locality Name (eg, city) [Default City]: 50600
Organization Name (eg, company) [Default Company Ltd]: XYZ Sdn.
Bhd.
Organizational Unit Name (eg, section) []: PayNet FPX
```

```
Common Name (eg, your name or your server's hostname) []:
EX00000298
Email Address []: johdoe@gmail.com

Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password [ ]:
An optional company name [ ]:
```

- Sample of Private Key

```
--BEGIN PRIVATE KEY--
MIIEVAIBADANBgkqhkiG9w0BAQEFAASCBKgwggSKAgEAAoIBAQDQnJqYYBVNBEAJ
MI3jfTmo7PHTjw7ngyc0Y1sQJpGCWYvorv4nNtfWqUraq5Y69nT131pMrXWak9tA
uuwrzTDeyeE0seHaNkjaCRuLA1SpnySTBKLQ4JbMiq0gsolvHBj4eItUgLqP8Vqb
ma17zTeBsCLdW7teulzrhPqgNxKMLBQswOnisDunxBpVRRmdoYAhF6AFdIL+XOKO
t5GYENOPFrfoPQNPqV+rTD8D6TT180lXhRICwKWBZCJCgGFNKYAao8B5I/sqKajE
ju4HlKnPdky5tnaEXoiBLtQxrJJUWLP+usZ0m+EHppGArGNgW0BXP67c/W8a6rMr
4hbH+ZABAgMBAAECggEALBYRUZqjpm/Rmd/cgPgfayqXUCb1/dprzcoQmm+tYSTS
Qte0AnjEVy3hGDAKSj+HJHYAOaqMLa2KNTvRaMmwxctmhZ//pAbkkl/CpTiFFIEE
WNooG4CCHCpMw1Q+N/p3BUNoIuw9huaARFrQplcUn6XBGZGmIZfBIKQYQuKjteDR
BJCewIdh9fxRfkaa6vMdxbUK0hzwWYChwQmR/uqARKXDm1119QRTUG9Z4VpjvHNM
mI7X+ntwQTyc3KXgSedD5h80D/tDyQA16cbbX12EHY00A/zWBXXPUG/VlbMXiLjU
hrhvlnEmoiuqfEyfKowgAIlg77d0rK0crv02M5BHSQKBgQDcku16UrsHJCY2ZKym
AKALQXtn8w15RvZojHK2Hj+pUcHU9TUADrgyztem2LcyPdWSJo+CvmqCTc46fJNJ
Z4fiFv80UwbnfN1B5T6NjCuqotHwm23yyvv0m5pYVnPc5Pt/+IRz/MiugyrY/zsT
7U5q6h2QNH1peMGEE4gzvUgt9QKBgQDyHdddXRSZrzVEulHcw5PWeFSLAToaVeyj
ax34pSLB4yB9/gts0rn4t0/wH+KE3Vzv40g/xW/pjZIGMYlrsUZThzm00Qn64ZfN
SY6SsBQ2/OeLUXAe5IFCQrFNKjyjoWHvRfHtsvFcy+UKyQ+Ph4gKFwzPwgXL/rcI
```

OgB0smtrzwKBgB8FZvK6KeWSNVGVbRaX4Gv01KdE7pMs4MDJZ+SnEmr8vZb2uXJ9
n3g900R9PB6LxbqdQ7eukgoraSKenJRJRD004+nG64So8WESHYUIvqdr6Ly/D1KD
K7Dd/3IHDpp1dc2EpRQu7AZnGiKUmrltuYad@HSUFULVIdoyaQhlyX31AOGBAKTV
KTHD4XW0QqB4IK44WWY/+KGRrWglYpgMr5UjwaK90/Q4bMYMY3410p+EyQXj2pza
5LwUnuFGFNRVSJ0hXZwnQVGGG7tZlNTXKBXLd2niLUXeC3gwB91AptG/VSHPHW0n
g+B+hyfFClmnkD8hf84H18VsEhDeiwdCo+7bYIXHAOGBANTUbrrSHszHy98TNQI2
hdfge5b20Y650YVOzfGeBZZKGH88nsokEdnU02qxz1nPyc8twq@st6xEqsmKtZFH
B2nqtbf6y0g703uPFx63XDNiZ17zm7XZj6ZiDQGZgcqPgVQDc9MDMhHaiXcXbD1+
PyVhyMjcLV9kmpmhMaNz/LGK
-----END PRIVATE KEY————

```
vY7B7jyb5gqqGAhWBVt5UtUnz6x8D7606sAqh9LJdYkBUpm+FQopc40H8jEHTAOB
CLC02dJLGto6CS5xs1vu4rDmo3xgJKvm6jZaSr8h/+14oq8u/hn8n5pnB4VvMw==
-END CERTIFICATE REQUEST-
```

## Generate on Linux Platform

Generation of Private Key and CSR at Merchant's/TPA's End.

**Step 1:** Generation of Private Key

```
openssl genrsa –out <file_name_key>.key 2048
```

> ⓘ **INFO**
>
> Note: EX00000298 file name is use for illustration purpose only.

```
[user@fedora ~]$ openssl genrsa -out EX00000298.key 2048
```

**Step 2:** Generation of CSR

```
openssl req –out <file_name_csr>.csr –key <file_name_key>.key –new –sha256
```

```
[user@fedora ~]$ openssl req -out EX00000298.csr -key EX00000298.key
```

```
-new -sha256
```

- Information that will be incorporated into the certificate request. Please leave a challenge password and an optional company name blank.

```
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) [XX]:MY
State or Province Name (full name) []: Kuala Lumpur
Locality Name (eg, city) [Default City]: 50600
Organization Name (eg, company) [Default Company Ltd]: XYZ Sdn.
Bhd.
Organizational Unit Name (eg, section) []: PayNet FPX
Common Name (eg, your name or your server's hostname) []:
EX00000298
Email Address []: johdoe@gmail.com


Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password [ ]:
An optional company name [ ]:
```

- Sample of Private Key

--BEGIN PRIVATE KEY--
MIIEVAIBADANBgkqhkiG9w0BAQEFAASCBKgwggSKAgEAAoIBAQDQnJqYYBVNBEAJ
MI3jfTmo7PHTjw7ngyc0Y1sQJpGCWYvorv4nNtfWqUraq5Y69nT131pMrXWak9tA
uuwrzTDeyeE0seHaNkja̲CRuLA1SpnySTBKLQ4JbMiq0gsolvHBj4eItUgLqP8Vqb
ma17zTeBsCLdW7teulzrhPqgNxKMLBQswOnisDunxBpVRRmdoYAhF6AFdIL+XOKO
t5GYENOPFrfoPQNPqV+rTD8D6TT180lXhRICwKWBZCJCgGFNKYAao8B5I/sqKajE
ju4HlKnPdky5tnaEXoiBLtQxrJJUWLP+usZ0m+EHppGArGNgW0BXP67c/W8a6rMr
4hbH+ZABAgMBAAECggEALBYRUZqjpm/Rmd/cgPgfa̲yqXUCb1/dprzcoQmm+tYSTS
Qte0AnjEVy3hGDAKSj+HJHYAOaqMLa2KNTvRaMmwxctmhZ//pAbkkl/CpTiFFIEE
WNooG4CCHCpMw1Q+N/p3BUNoIuw9huaARFrQplcUn6XBGZGmIZfBIKQYQuKjteDR
BJCewIdh9fxRfkaa6vMdxbUK0hzwWYChwQmR/uqARKXDm1119QRTUG9Z4VpjvHNM
mI7X+ntwQTyc3KXgSedD5h80D/tDyQA16cbbX12EHY00A/zWBXXPUG/VlbMXiLjU
hrhvlnEmoiuqfEyfKowgAIlg77d0rK0crv02M5BHSQKBgQDcku16UrsHJCY2ZKym
AKALQXtn8w15RvZojHK2Hj+pUcHU9TUADrgyztem2LcyPdWSJo+CvmqCTc46fJNJ
Z4fiFv80UwbnfNlB5T6NjCuqotHwm23yyvv0m5pYVnPc5Pt/+IRz/MiugyrY/zsT
7U5q6h2QNH1peMGEE4gzvUgt9QKBgQDyHdddXRSZrzVEulHcw5PWeFSLAToaVeyj
ax34pSLB4yB9/gts0rn4t0/wH+KE3Vzv40g/xW/pjZIGMYlrsUZThzm00Qn64ZfN
SY6SsBQ2/OeLUXAe5IFCQrFNKjyjoWHvRfHtsvFcy+UKyQ+Ph4gKFwzPwgXL/rcI
OgB0smtrzwKBgB8FZvK6KeWSNVGVbRaX4Gv01KdE7pMs4MDJZ+SnEmr8vZb2uXJ9
n3g900R9PB6LxbqdQ7eukgoraSKenJRJRD004+nG64So8WESHYUIvqdr6Ly/D1KD
K7Dd/3IHDpp1dc2EpRQu7AZnGiKUmrltuYada̲HSUFULVIdoyaQhlyX31AOGBAKTV
KTHD4XW0QqB4IK44WWY/+KGRrWglYpgMr5UjwaK90/Q4bMYMY3410p+EyQXj2pza
5LwUnuFGFNRVSJ0hXZwnQVGGG7tZlNTXKBXLd2niLUXeC3gwB91AptG/VSHPHW0n
g+B+hyfFClmnkD8hf84H18VsEhDeiwdCo+7bYIXHAOGBANTUbrrSHszHy98TNQI2
hdfge5b20Y650YVOzfGeBZZKGH88nsokEdnU02qxz1nPyc8twqa̲st6xEqsmKtZFH
B2nqtbf6y0g703uPFx63XDNiZ17zm7XZj6ZiDQGZgcqPgVQDc9MDMhHaiXcXbDl+
PyVhyMjcLV9kmpmhMaNz/LGK
-----END PRIVATE KEY———

- Sample of CSR File

```
-BEGIN CERTIFICATE REQUEST-
MIIDKJCCAHICAQAwgbQxCzAJBgNVBAYTAK1ZMRUWEWYDVQQIDAXLdWFsYSBMdW1w
dXIXGTAXBgNVBACMEFcuUCBLdWFsYSBMdW1wdXIXFTATBgNVBAoMDELwb20gU2Ru
IEJIZDEYMBYGA1UECwwPQ2VydCBNYW5hZ2VtZW50MRwwGgYDVQQDDBNERVZQT1JU
QUwUUEFZTKVULK1ZMSQwIgYJKoZIhvcNAQKBFhVmYWl6Lmhhc251bEBwYXluZXQu
bXkwggEiMA0GCSqGSIb3DQEBAQUAA4IBDWAwggEKAoIBAQDQnJqyYBVNBeAJMI3j
fTmo7PHTjw7ngyc0Y1sQJpGCWYvorv4nNtfWqUraq5Y69nT131pMrXWak9tAuuwr
ZTDeyeEoseHaNkja@CRuLA1SpnySTBKLQ4JbMiq0gsolvHBj4eItUgLqP8Vqbma17
zTeBsCLdW7teulzrhPqgNxkMLBQswonisDunxBpVRRmdoYAhF6AFdIL+xoK0t5G
ENOPFrfoPQNPqV+rTD8D6TTi801XhRICwKWBZCJCgGfNKYAao8B51/sqKajEju4H
lKnPdky5tnaEXoiBLtQxrJJUWLp+usZOm+EHppGArGNgW0BXP67c/W8a6rMr4hbH
+ZABAgMBAAGgMDATBgkqhkiG9w0BCQIXBgwESXBvajAZBgkqhkiG9w0BCQCXDAWK
MjEwNDkwVyFzZTANBgkqhkiG9w0BAQsFAAOCAQEADWT3wdhXxlapEjGcMqPiCsN9
7Du6AwHeUwVDkYwvFJGYOCPmZPIuk10cX4ItlY+DnJfm5AKIN834RZ90SUL2pSe+
OdeTwNbZzxxfNYUG4FisrInoInRRbSgTSXHz9TMeWYSRywTjEwOmAj/Fk9uwMW5Q
8xw09t0n/d08NTNUeqgaHcwnbRJgUYMNhL60MQhUKOY5mplkx+gheNcaT8Gj9h9Y
vY7B7jyb5gqqGAhWBVt5UtUnz6x8D7606sAqh9LJdYkBUpm+FQopc40H8jEHTA0B
CLC02dJLGto6CS5xs1vu4rDmo3xgJKvm6jZaSr8h/+14oq8u/hn8n5pnB4VvMw==
-END CERTIFICATE REQUEST-
```