How to generate keystore and truststore

Asked 7 years, 2 months ago   Modified 5 months ago   Viewed 170k times

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How to:

1. Generate keystore

2. Generate truststore

To make SSL work between client and server, I need help in only **Generation of keystore and truststore for mutual authentication step-by-step guide with terminal commands(Keytool and openssl).**

`keystore`   `truststore`

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edited Nov 27, 2017 at 6:29

asked Nov 22, 2017 at 12:34
SOWMITHRA KUMAR G
M
1,520 🟡 3 ⚪ 12 🟤 18

The specific configuration would depend on the software you are using on the server and client end. Without further information on your specific setup, we could provide generic advice at most. – AfroThundr Nov 24, 2017 at 5:46

Thanks for the reply. I've changed the question. I've Fresh installed ubuntu 16 server machine. For making ssl connection between apps, First I need help to generate keystore, sign certificate, truststore and rest connection I'll do. – SOWMITHRA KUMAR G M Nov 27, 2017 at 6:21 ✏️

1   You may want to check out this question or maybe this or this page for info on creating a keystore and truststore using keytool and openssl. – AfroThundr Nov 27, 2017 at 14:08

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3 Answers

Sorted by: Highest score (default) ⇅

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I followed This link.

1.Generate keystore(At server):

```
keytool -genkey -alias bmc -keyalg RSA -keystore KeyStore.jks -keysize 2048
```

2.Generate new ca-cert and ca-key:

```
openssl req -new -x509 -keyout ca-key -out ca-cert
```

3.Extracting cert/creating cert sign req(csr):

```
keytool -keystore KeyStore.jks -alias bmc -certreq -file cert-file
```

4.Sign the "cert-file" and cert-signed wil be the new cert:

```
openssl x509 -req -CA ca-cert -CAkey ca-key -in cert-file -out
      cert-signed -days 365 -CAcreateserial -passin pass:yourpass
```

5.importing the ca-cert to keystore file:

```
keytool -keystore KeyStore.jks -alias CARoot -import -file ca-cert
```

6.import cert-signed to keystore:

```
keytool -keystore KeyStore.jks -alias bmc -import -file cert-signed
```

7.Copy ca-cert into client machine and generate truststore: (At client)

```
keytool -keystore truststore.jks -alias bmc -import -file ca-cert-s
```

8.Copy ca-cert into client machine and generate truststore: (At server)

```
keytool -keystore truststore.jks -alias bmc -import -file ca-cert-c
```

**Repeat the step(1-6) at client side and generate truststore at server side by importing ca-cert of client(step 8)

Renamed ca-cert after step 6.

Ex: ca-cert-s generated at server side and ca-cert-c at client and exchanged each other for generating truststore.

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edited Oct 11, 2021 at 14:00

answered Nov 30, 2017 at 4:34

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2   what doesn the `-alias bmc` means? — Kannan Ramamoorthy Aug 7, 2020 at 12:09

2   @KannanRamamoorthy -alias <keystore alias> option defines an alias fro your keystore. More infp -> stackoverflow.com/questions/5724631/... — alex_z Aug 10, 2020 at 13:39

Note on `-CAcreateserial` . It creates a `*.srl` file to keep track of serial numbers (each signed certificate should have a different one). users.skynet.be/pascalbotte/art/server-cert.htm — Aleksander Stelmaczonek Oct 21, 2020 at 15:36

@alex_z -alias isn't creating an alias for the keystore. it creates an alias within the keystore for the certificate you just imported. to list a certificate you can use keytool -list -v -alias <certificate_alias> -keystore <keystore_filename> — DerHaifisch Jun 17, 2022 at 19:56

1   How do you generate ca-cert-s and ca-cert-c? — Joao Marono Jan 4, 2024 at 11:12

1

For Windows 11 that worked for me:

```
./keytool.exe -import -file dev.local.crt -keystore dev.local.jks
```

Found `keytool.exe` binary in `C:\Program Files (x86)\Java\jre1.8.0_351\bin`

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answered Apr 8, 2023 at 18:41

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Using this command I am able to create a truststore file for the given crt file:

```
keytool -import -file  <Path of.crt file> -keystore  <Path of truststore file>
```

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edited Aug 6, 2024 at 17:16

answered Feb 6, 2023 at 5:39