

# Create a new custom certificate or certification authority for ESET Security Management Center (7.x)

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## Issue

- Create custom certificates or Certification Authorities (CAs) for ESET Security Management Center (ESMC).

## Solution

## Prerequisites

- Verify [Java](#) is installed. Keytool, included in Java, allows you to create and store certificates.

## Solution

Enter the commands shown below to create a new certificate:

1. Open a Command Prompt as the administrator (or root on Linux systems) and navigate to the folder where keytool is located:

```
C:\Program Files (x86)\Java\jre1.8.0_40\bin
```

(The directory depends on the OS and JRE version.)

2. Generate a key pair (a public key and associated private key) which will be used as the Certification Authority (CA):

### Linux

```
keytool -genkeypair -v -alias aliasName -keystore keystore.jks -keyalg RSA -  
keysize 2048 -ext KeyUsage:critical="keyCertSign" -ext  
BasicConstraints:critical="ca:true" -validity 3650
```

### Windows

```
keytool -genkeypair -v -alias "aliasName" -keystore keystore.jks -keyalg RSA -  
keysize 2048 -ext KeyUsage:critical="keyCertSign" -ext  
BasicConstraints:critical="ca:true" -validity 3650
```

**"aliasName" represents the name of your key in keystore.jks**

Replace aliasName with your alias. It represents the name of your key in the keystore.jks

## Setting certificate validity

In the example above, the parameter `-validity` represents the duration for which the certificate is valid in days.

The `-validity` parameter must be greater than other certificates set during certificate creation in ESMC Web Console. Default validity for the ESET Management Agent certificate is 5 years and default validity for ESMC CA is 10 years. ESMC certificate validity must start at least one day after the beginning of the ESMC CA validity. For example, if your CA is valid since April 4, your ESMC certificate

can start on April 5.

3. Export the CA from the keystore:

#### **Linux**

```
keytool -exportcert -alias "aliasName" -file aliasName.der -keystore keystore.jks
```

#### **Windows**

```
keytool -export -alias "aliasName" -file aliasName.der -keystore keystore.jks
```

4. Generate a key pair for the certificate:

#### **Linux**

```
keytool -genkeypair -v -alias "aliasName" -keystore keystore.jks -keyalg RSA -keysize 2048 -storepass "yourPassword" -keypass "yourPassword"
```

#### **Windows**

```
keytool -genkeypair -v -alias "aliasName" -keystore keystore.jks -keyalg RSA -keysize 2048 -storepass "yourPassword" -keypass "yourPassword"
```

### **Common name must contain name of ESMC components**

The Common Name must contain one of these strings: "server" or "agent".

### **Unsupported characters in Agent Certificate**

The certificate passphrase must not contain following characters: " \ These characters cause critical error during the initialization of the Agent.

5. Create a certificate request (.csr file) for the certificate:

#### **Linux**

```
keytool -certreq -keystore keystore.jks -storepass "yourPassword" -alias "aliasName" -file file.csr
```

#### **Windows**

```
keytool -certreq -keystore keystore.jks -storepass "yourPassword" -alias "aliasName" -file file.csr
```

1. Create a certificate with the certificate request:

#### **Linux**

```
keytool -gencert -keystore keystore.jks -storepass "yourPassword" -alias "aliasName" -infile file.csr -outfile output.cer
```

#### **Windows**

```
keytool -gencert -keystore keystore.jks -storepass "yourPassword" -alias "aliasName" -infile file.csr -outfile output.cer
```

1. Create a .pfx file from keystore.jks:

#### **Linux**

```
keytool -importkeystore -v -srcalias aliasName -srckeystore keystore.jks -srcstorepass yourPassword -srcstoretype JKS -destkeystore aliasName.pfx -destkeypass yourPassword -deststorepass yourPassword -deststoretype PKCS12 -
```

```
destalias aliasName
```

**Windows**

```
keytool -importkeystore -v -srcalias "aliasName" -srckeystore keystore.jks -  
srcstorepass yourPassword -srcstoretype JKS -destkeystore aliasName.pfx -  
destkeypass yourPassword -deststorepass yourPassword -deststoretype PKCS12 -  
destalias "aliasName"
```

For more information about keytool, visit the [Oracle webpage](#).

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