

A large, light grey arrow points from the right side of the page towards the left, pointing towards the center of the page. The arrow is filled with a solid light grey color and has a sharp point on the left side.

***Certificate update  
instruction***



You need to execute 3 steps to be able to update a certificate in the keystore file.

1. Export the certificate from the browser
2. Check the certificates you have in the keystore file
3. Remove an old certificate from the keystore file
4. Import a new certificate into the keystore file.

**Note:** *This document's example shows how to update eMTR certificate for training environment. In case of another application or environment the certificate file and alias names will be different from the example.*

### **1. Export the certificate from the browser to a file (i.e emtrtrn.cer).**

To do this export from the Microsoft Internet Explorer:

1. Go to <http://esuitetest.pjm.com>
2. Right click on the eMTR home page and select **Properties**
3. Click the certificates button on the bottom of the Properties Window
4. Select the Details tab on the Certificates window on the **Copy to File...** button
5. Accept the defaults on the first two windows of the wizard
6. On the "File to Export" window name the file **emtrtrn.cer**
7. Click the **Next>** and then **Finish** buttons (the default location is on your desktop)

### **2. Check the certificates you have in the keystore file.**

1. From the command prompt change to the JAVA\_HOME/lib/security directory
2. Check certificates you have in the keystore file.
3. From the command prompt in the JAVA\_HOME/lib/security directory use this command:

```
D:\Tools\jdk1.3.1_07\jre\lib\security>D:\Tools\jdk1.3.1_07\jre\bin\keytool.exe -list -keystore jssecacerts -storepass emtr1234
```

The above command will show you the following result:



```
C:\WINNT\system32\cmd.exe
D:\Tools\jdk1.3.1_07\jre\lib\security>D:\Tools\jdk1.3.1_07\jre\bin\keytool.exe -list -keystore jssecacerts -storepass emtr1234
Keystore type: jks
Keystore provider: SUN

Your keystore contains 16 entries:

ecaptest.pjm.com, Wed Mar 24 14:18:43 EST 2004, trustedCertEntry,
Certificate fingerprint (MD5): 4D:AC:41:F5:8E:95:85:DB:7D:C8:9D:4A:AB:1C:27:9D
eestest.pjm.com, Wed Mar 24 14:20:49 EST 2004, trustedCertEntry,
Certificate fingerprint (MD5): 87:1E:64:DB:54:A9:95:DD:2C:8E:22:29:83:2C:C3:04
ecapacity.pjm.com, Thu Jun 02 15:09:24 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): 8B:19:EB:8E:5E:91:27:76:B8:68:34:8B:30:13:11:EA
entrol.pjm.com, Wed Mar 24 15:35:48 EST 2004, trustedCertEntry,
Certificate fingerprint (MD5): DC:B1:0C:B3:73:36:1E:07:D0:89:AA:7F:17:2B:E3:58
eschedtest2.pjm.com, Tue Sep 23 09:33:33 EDT 2003, trustedCertEntry,
Certificate fingerprint (MD5): 47:63:9C:3A:40:7D:73:B9:72:22:36:2A:01:F7:E7:70
emtrtest.pjm.com, Thu Mar 31 17:21:08 EST 2005, trustedCertEntry,
Certificate fingerprint (MD5): A0:49:42:81:08:65:BD:55:27:57:10:78:4B:5B:83:D8
enktrn.pjm.com, Wed Aug 03 16:47:10 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): 05:89:9C:EF:05:7C:B4:91:3A:36:E8:87:E0:CF:05:DC
enkttst.pjm.com, Tue Nov 04 10:41:01 EST 2003, trustedCertEntry,
Certificate fingerprint (MD5): 20:61:5E:2C:7A:5C:EB:9C:5C:E4:DE:D3:7E:9F:9A:FB
ees.pjm.com, Thu Jun 02 15:09:38 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): A0:49:42:81:08:65:BD:55:27:57:10:78:4B:5B:83:D8
edatafeed.pjm.com, Mon Nov 17 15:35:38 EST 2003, trustedCertEntry,
Certificate fingerprint (MD5): 6A:21:A4:04:93:E3:43:3A:B7:38:E9:0A:EC:C6:56:DD
entr.pjm.com, Thu Jun 02 15:09:58 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): FA:B7:DA:CB:D8:95:69:AF:A8:A7:B5:71:18:EA:A9:0D
esuiteest.pjm.com, Thu Mar 31 17:20:44 EST 2005, trustedCertEntry,
Certificate fingerprint (MD5): 4D:06:36:19:F1:38:5B:BA:22:6A:A0:0F:B4:EE:B7:1E
enkt.pjm.com, Wed Oct 29 11:39:00 EST 2003, trustedCertEntry,
Certificate fingerprint (MD5): 12:DF:C3:C3:7F:51:5B:CB:9C:7C:63:5C:2B:16:82:50
esched.pjm.com, Fri May 13 10:56:08 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): 60:78:AD:97:56:B0:D3:B2:91:EA:54:6C:EC:CF:6E:EE
nicap.pjm.com, Thu Jun 02 15:10:25 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): E8:11:03:37:03:0D:F3:8F:60:59:4D:52:67:C5:0C:A0
esuite.pjm.com, Thu Jun 02 15:10:10 EDT 2005, trustedCertEntry,
```

The certificate we want to update has an alias **emtrtest.pjm.com**. Let's delete an old certificate first, because we want to reuse the same alias name **emtrtest.pjm.com** for the new certificate.

### 3. Remove an old certificate from the keystore file.

From the command prompt in the JAVA\_HOME/lib/security directory use this command:

```
D:\Tools\jdk1.3.1_07\jre\lib\security>D:\Tools\jdk1.3.1_07\jre\bin\keytool.exe -
delete -keystore jssecacerts -alias emtrtest.pjm.com -storepass emtr1234
```

### 4. Import a new certificate into the keystore file.

1. Copy the certificate from the desktop to the JAVA\_HOME/lib/security directory.
2. From the command prompt in the JAVA\_HOME/lib/security directory use this command:

```
D:\Tools\jdk1.3.1_07\jre\lib\security>D:\Tools\jdk1.3.1_07\jre\bin\keytool.exe -
import -file emtrtrn.cer -keystore jssecacerts -alias emtrtest.pjm.com -storepass
emtr1234
```

3. Type "yes" when prompted by the keytool program.



The above command will show you the following result:

```
D:\Tools\jdk1.3.1_07\jre\lib\security>D:\Tools\jdk1.3.1_07\jre\bin\keytool.exe -import -file entrtrn.cer -keystore jssecacerts -alias entrtest.pjm.com -storepass entr1234
Owner: CN=entrtest.pjm.com, OU=Terms of use at www.verisign.com/rpa (c)00, OU=Network Management, O=PJM Interconnection, L=Norristown, ST=Pennsylvania, C=US
Issuer: OU=www.verisign.com/CPS Incorp.by Ref. LIABILITY LTD.(c)97 VeriSign, OU=VeriSign International Server CA - Class 3, OU="VeriSign, Inc.", O=VeriSign Trust Network
Serial number: 7b5249d274df290e38a8c63e09adb5
Valid from: Sun Mar 20 19:00:00 EST 2005 until: Tue Mar 21 18:59:59 EST 2006
Certificate fingerprints:
    MD5: 2D:2C:9A:0C:00:F5:27:BE:A9:D4:FA:F4:5C:3D:F9:4D
    SHA1: E0:F8:06:B7:E4:8C:8A:0E:BD:4F:D9:44:94:3F:D1:63:94:63:4D:1B
Trust this certificate? [no]: y
Certificate was added to keystore
```

If you check the keystore file one more time, you will find that a new certificate for the alias [entrtest.pjm.com](http://entrtest.pjm.com) was added.

```
C:\WINNT\system32\cmd.exe
D:\Tools\jdk1.3.1_07\jre\lib\security>D:\Tools\jdk1.3.1_07\jre\bin\keytool.exe -list -keystore jssecacerts -storepass entr1234
Keystore type: jks
Keystore provider: SUN

Your keystore contains 16 entries:

ecaptest.pjm.com, Wed Mar 24 14:18:43 EST 2004, trustedCertEntry,
Certificate fingerprint (MD5): 4D:A0:41:F5:8E:95:DB:7D:C8:9D:4A:AB:1C:27:9D
eestest.pjm.com, Wed Mar 24 14:20:49 EST 2004, trustedCertEntry,
Certificate fingerprint (MD5): 87:1E:64:DB:54:A9:95:DD:2C:8E:22:29:83:2C:C3:04
ecapacity.pjm.com, Thu Jun 02 15:09:24 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): 8B:19:EB:8E:5E:91:27:70:B8:68:34:8B:30:13:11:EA
entcold.pjm.com, Wed Mar 24 15:35:48 EST 2004, trustedCertEntry,
Certificate fingerprint (MD5): DC:B1:9C:B3:73:36:1E:07:D0:89:AA:7F:17:2B:E3:58
eschedtest2.pjm.com, Tue Sep 23 09:33:33 EDT 2003, trustedCertEntry,
Certificate fingerprint (MD5): 47:63:9C:3A:40:7D:73:B9:72:22:36:2A:01:F7:E7:70
entrtest.pjm.com, Thu Aug 25 14:58:51 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): 2D:2C:9A:0C:00:F5:27:BE:A9:D4:FA:F4:5C:3D:F9:4D
emktrn.pjm.com, Wed Aug 03 16:47:10 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): 05:89:9C:ER:05:7C:B4:91:3A:36:E8:87:E0:CF:05:DC
emkttst.pjm.com, Tue Nov 04 10:41:01 EST 2003, trustedCertEntry,
Certificate fingerprint (MD5): 20:61:5E:2C:7A:5C:EB:9C:5C:E4:DE:D3:7E:9F:9A:FB
ees.pjm.com, Thu Jun 02 15:09:38 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): AA:49:42:81:B8:65:BD:55:E7:57:10:78:4B:5B:83:D8
edafafed.pjm.com, Mon Nov 17 15:35:38 EST 2003, trustedCertEntry,
Certificate fingerprint (MD5): 6A:21:A4:04:93:E3:43:3A:B7:38:E9:0A:EC:C6:56:DD
entr.pjm.com, Thu Jun 02 15:09:58 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): FA:B7:DA:CB:D8:95:69:AF:A8:A7:B5:71:18:EA:A9:0D
esutetest.pjm.com, Thu Mar 31 17:20:44 EST 2005, trustedCertEntry,
Certificate fingerprint (MD5): 4D:06:36:19:F1:38:50:BA:22:6A:A0:0F:B4:EE:B7:1E
emkt.pjm.com, Wed Oct 29 11:39:00 EST 2003, trustedCertEntry,
Certificate fingerprint (MD5): 12:DF:C3:C3:7F:51:5B:CB:9C:7C:63:5C:2B:16:82:50
esched.pjm.com, Fri May 13 10:56:08 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): 60:78:AD:97:56:B0:D3:B2:91:EA:54:6C:EC:CF:6E:EE
nicap.pjm.com, Thu Jun 02 15:10:25 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): E0:11:03:37:03:CD:F3:8F:60:59:4D:52:67:C5:0C:AA
esuite.pjm.com, Thu Jun 02 15:10:10 EDT 2005, trustedCertEntry,
Certificate fingerprint (MD5): F9:AE:4F:92:9D:20:AA:0C:8D:CC:DD:4B:FF:F8:21:08
```