CSM為SSL通訊啟用強加密演算法

目錄

問題

預設情況下，思科安全管理器(CSM)為HTTPS通訊提供以下密碼：

```
%ASA-7-725011: Cipher[1] : AES128-SHA
%ASA-7-725011: Cipher[2] : DHE-RSA-AES128-SHA
%ASA-7-725011: Cipher[3] : DHE-DSS-AES128-SHA
%ASA-7-725011: Cipher[4] : DES-CBC3-SHA
%ASA-7-725011: Cipher[5] : EDH-RSA-DES-CBC3-SHA
%ASA-7-725011: Cipher[6] : EDH-DSS-DES-CBC3-SHA
%ASA-7-725011: Cipher[7] : DES-CBC-SHA
%ASA-7-725011: Cipher[8] : EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[9] : EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[10] : EXP-DES-CBC-SHA
%ASA-7-725011: Cipher[11] : EXP-EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[12] : EXP-EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[13] : ECDHE-ECDSA-AES128-SHA256
%ASA-7-725011: Cipher[14] : ECDHE-RSA-AES128-SHA256
%ASA-7-725011: Cipher[15] : AES128-SHA256
%ASA-7-725011: Cipher[16] : DHE-RSA-AES128-SHA256
%ASA-7-725011: Cipher[17] : DHE-DSS-AES128-SHA256
%ASA-7-725011: Cipher[18] : ECDHE-ECDSA-AES128-SHA
%ASA-7-725011: Cipher[19] : ECDHE-RSA-AES128-SHA
%ASA-7-725011: Cipher[20] : AES128-SHA
%ASA-7-725011: Cipher[21] : DHE-RSA-AES128-SHA
%ASA-7-725011: Cipher[22] : DHE-DSS-AES128-SHA
%ASA-7-725011: Cipher[23] : ECDHE-ECDSA-DES-CBC3-SHA
%ASA-7-725011: Cipher[24] : ECDHE-RSA-DES-CBC3-SHA
%ASA-7-725011: Cipher[25] : DES-CBC3-SHA
%ASA-7-725011: Cipher[26] : EDH-RSA-DES-CBC3-SHA
%ASA-7-725011: Cipher[27] : EDH-DSS-DES-CBC3-SHA
%ASA-7-725011: Cipher[28] : ADH-AES128-SHA256
%ASA-7-725011: Cipher[29] : ADH-AES128-SHA
%ASA-7-725011: Cipher[30] : ADH-DES-CBC3-SHA
%ASA-7-725011: Cipher[31] : DES-CBC-SHA
%ASA-7-725011: Cipher[32] : EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[33] : EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[34] : ADH-DES-CBC-SHA
%ASA-7-725011: Cipher[35] : EXP-DES-CBC-SHA
%ASA-7-725011: Cipher[36] : EXP-EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[37] : EXP-EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[38] : EXP-ADH-DES-CBC-SHA
%ASA-7-725011: Cipher[39] : NULL-SHA256
%ASA-7-725011: Cipher[40] : ECDHE-ECDSA-NULL-SHA
%ASA-7-725011: Cipher[41] : ECDHE-RSA-NULL-SHA
%ASA-7-725011: Cipher[42] : NULL-SHA
%ASA-7-725011: Cipher[43] : NULL-MD5
```

但是，如果將ASA配置為僅支援強加密演算法（如AES256-SHA）：

通訊將失敗，我們將在ASA上看到以下系統日誌：

```
%ASA-7-725014: SSL lib error. Function: ssl3_get_client_hello Reason: no shared cipher
```

CSM上的以下日誌：

```
"Unable to communicate with the Device"
The Security Manager Server and the device could not negotiate the security level"
```

解決方案

由於某些國家/地區的進口法規，Oracle實施提供了預設的加密管轄區策略檔案，從而限制加密演算法的強度。如果需要配置更強大的演算法，或者已在裝置上配置更強大的演算法（例如，具有256位金鑰的AES、具有5、14、24的DH組），請執行以下步驟：

1. 從http://www.oracle.com下載Java 7無限強度加密策略.jar檔案。思科建議在Oracle網站上搜尋以下內容：

Java加密擴展(JCE)無限強度管轄策略檔案Java 7

http://www.oracle.com/technetwork/java/javase/downloads/jce-7-download-432124.html

2. 在資料夾CSCOpx\MDC\vms\jre\lib\security中，替換安全管理器伺服器上的local_policy.jar和US_export_policy.jar。
3. 重新啟動安全管理器伺服器。

現在，CSM將顯示以下密碼：

```
%ASA-7-725011: Cipher[1] : AES128-SHA
%ASA-7-725011: Cipher[2] : DHE-RSA-AES128-SHA
%ASA-7-725011: Cipher[3] : DHE-DSS-AES128-SHA
%ASA-7-725011: Cipher[4] : DES-CBC3-SHA
%ASA-7-725011: Cipher[5] : EDH-RSA-DES-CBC3-SHA
%ASA-7-725011: Cipher[6] : EDH-DSS-DES-CBC3-SHA
%ASA-7-725011: Cipher[7] : DES-CBC-SHA
%ASA-7-725011: Cipher[8] : EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[9] : EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[10] : EXP-DES-CBC-SHA
%ASA-7-725011: Cipher[11] : EXP-EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[12] : EXP-EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[13] : ECDHE-ECDSA-AES256-SHA384
%ASA-7-725011: Cipher[14] : ECDHE-RSA-AES256-SHA384
%ASA-7-725011: Cipher[15] : AES256-SHA256
%ASA-7-725011: Cipher[16] : DHE-RSA-AES256-SHA256
%ASA-7-725011: Cipher[17] : DHE-DSS-AES256-SHA256
%ASA-7-725011: Cipher[18] : ECDHE-ECDSA-AES256-SHA
%ASA-7-725011: Cipher[19] : ECDHE-RSA-AES256-SHA
%ASA-7-725011: Cipher[20] : AES256-SHA
%ASA-7-725011: Cipher[21] : DHE-RSA-AES256-SHA
%ASA-7-725011: Cipher[22] : DHE-DSS-AES256-SHA
%ASA-7-725011: Cipher[23] : ECDHE-ECDSA-AES128-SHA256
%ASA-7-725011: Cipher[24] : ECDHE-RSA-AES128-SHA256
%ASA-7-725011: Cipher[25] : AES128-SHA256
%ASA-7-725011: Cipher[26] : DHE-RSA-AES128-SHA256
%ASA-7-725011: Cipher[27] : DHE-DSS-AES128-SHA256
%ASA-7-725011: Cipher[28] : ECDHE-ECDSA-AES128-SHA
```

```
%ASA-7-725011: Cipher[29] : ECDHE-RSA-AES128-SHA
%ASA-7-725011: Cipher[30] : AES128-SHA
%ASA-7-725011: Cipher[31] : DHE-RSA-AES128-SHA
%ASA-7-725011: Cipher[32] : DHE-DSS-AES128-SHA
%ASA-7-725011: Cipher[33] : ECDHE-ECDSA-DES-CBC3-SHA
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%ASA-7-725011: Cipher[37] : EDH-DSS-DES-CBC3-SHA
%ASA-7-725011: Cipher[38] : ADH-AES256-SHA256
%ASA-7-725011: Cipher[39] : ADH-AES256-SHA
%ASA-7-725011: Cipher[40] : ADH-AES128-SHA256
%ASA-7-725011: Cipher[41] : ADH-AES128-SHA
%ASA-7-725011: Cipher[42] : ADH-DES-CBC3-SHA
%ASA-7-725011: Cipher[43] : DES-CBC-SHA
%ASA-7-725011: Cipher[44] : EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[45] : EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[46] : ADH-DES-CBC-SHA
%ASA-7-725011: Cipher[47] : EXP-DES-CBC-SHA
%ASA-7-725011: Cipher[48] : EXP-EDH-RSA-DES-CBC-SHA
%ASA-7-725011: Cipher[49] : EXP-EDH-DSS-DES-CBC-SHA
%ASA-7-725011: Cipher[50] : EXP-ADH-DES-CBC-SHA
%ASA-7-725011: Cipher[51] : NULL-SHA256
%ASA-7-725011: Cipher[52] : ECDHE-ECDSA-NULL-SHA
%ASA-7-725011: Cipher[53] : ECDHE-RSA-NULL-SHA
%ASA-7-725011: Cipher[54] : NULL-SHA
%ASA-7-725011: Cipher[55] : NULL-MD5
```

現在連線將成功：

```
%ASA-7-725012: Device chooses cipher AES256-SHA for the SSL session with client
asa:10.88.243.57/49949 to 10.122.160.233/443
```