防火墙web界面无法登录典型案例分析

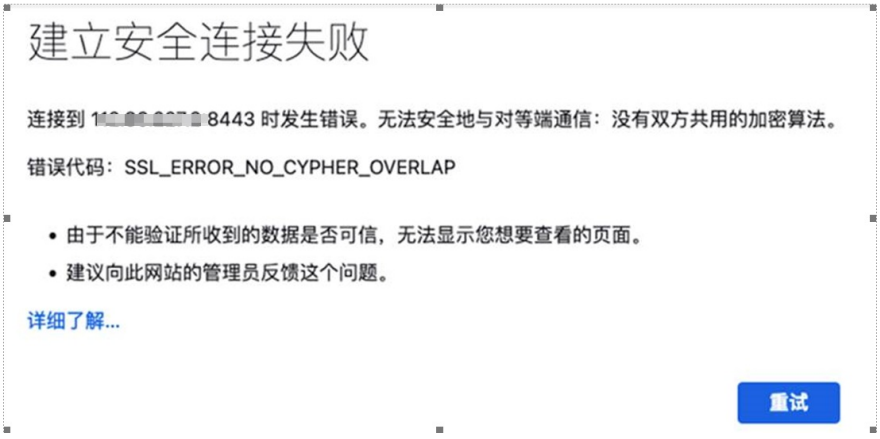
证书 SSL 孔凡安 2022-04-12 发表

组网及说明

不涉及

问题描述

登录防火墙web界面提示“SSL_ERROR_NO_CYPHER_OVERLAP”,更换电脑与浏览器无果。



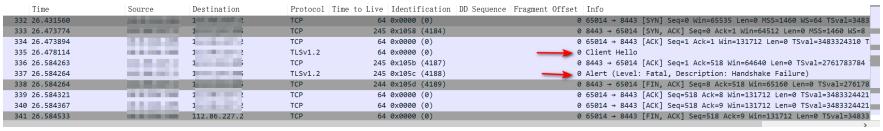
过程分析

查看配置，现场配置了ssl服务器端策略：

关键配置如下：

```
 ip https ssl-server-policy fxm
#
ssl server-policy test
 pki-domain test
 ciphersuite ecdhe_rsa_aes_128_cbc_sha256 ecdhe_ecdsa_aes_128_cbc_sha256 ecdhe_ecdsa_aes_256_cbc_sha384 ecdhe_ecdsa_aes_128_gcm_sha256
```

抓包查看，客户端发送“Server Hello”后，服务器侧直接回应握手失败。




```
    Cipher Suites Length: 34
  ▾ Cipher Suites (17 suites)
        Cipher Suite: TLS_AES_128_GCM_SHA256 (0x1301)
        Cipher Suite: TLS_CHACHA20_POLY1305_SHA256 (0x1303)
        Cipher Suite: TLS_AES_256_GCM_SHA384 (0x1302)
        Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 (0xc02b)
        Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)
        Cipher Suite: TLS_ECDHE_ECDSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca9)
        Cipher Suite: TLS_ECDHE_RSA_WITH_CHACHA20_POLY1305_SHA256 (0xcca8)
        Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 (0xc02c)
        Cipher Suite: TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030)
        Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA (0xc00a)
        Cipher Suite: TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA (0xc009)
        Cipher Suite: TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013)
        Cipher Suite: TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014)
        Cipher Suite: TLS_RSA_WITH_AES_128_GCM_SHA256 (0x009c)
        Cipher Suite: TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d)
        Cipher Suite: TLS_RSA_WITH_AES_128_CBC_SHA (0x002f)
        Cipher Suite: TLS_RSA_WITH_AES_256_CBC_SHA (0x0035)
    Compression Methods Length: 1
```

查看防火墙本地证书的情况，发现为RSA签名证书。

```
Certificate:
    Data:
        Version: 3 (0x2)
        Serial Number: 0 (0x0)
        Signature Algorithm: sha256WithRSAEncryption
        Issuer: CN=HTTPS-Self-Signed-Certificate-893300432ba7ef33
        Validity
            Not Before: Aug 24 07:07:03 2020 GMT
            Not After : Aug 19 07:07:03 2040 GMT
        Subject: CN=HTTPS-Self-Signed-Certificate-893300432ba7ef33
        Subject Public Key Info:
            Public Key Algorithm: rsaEncryption
```

分析：RSA签名证书无法使用DSA的加密算法，现场的ssl服务器端策略内大部分都是DSA的算法，无法和客户端提供的算法列表匹配，导致协商失败。

解决方法

ssl服务器端策略中添加RSA算法。