

# Remediation to Address Apache Log4j Security Vulnerability in FACE Conformance Test Suite

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## Background

Recently, a critical vulnerability in the popular Java logging package, Log4j ([CVE-2021-44228](#)) was disclosed. The FACE Conformance Test Suite (CTS) has included this package in support of its data model verification activities.

## Remediation Plan

The plan to address the Log4j vulnerability includes two parts:

1. Update the most recent CTS releases and all future CTS releases. (See [Release Updates](#))
2. Provide remediation steps to modify all other affected CTS releases. (See [Updating Previously Released Test Suites](#))

## Release Updates

CTS version 3.0.3 and 3.1.2 were posted on December 21. These versions have since been replaced with new versions with updated log4j packages. To verify a user has the updated CTS 3.0.3 or 3.1.2, navigate to the `\DMVT\` directory. If the `\DAConformanceTest*\` directory name contains "2022.1.1", then the user has the updated release version.

### NOTE

All future releases of the FACE Conformance Test Suite will include the updated log4j packages beginning with versions 2.1.0r12, 2.1.1r8, 3.0.4, 3.1.3 and 3.2.0.

## Updating Previously Released Test Suites

To address the log4j security vulnerability in previously released CTS versions, the user must perform one of the following approaches in the affected directories as listed in [Affected CTS Directories \(by Release\)](#).

1. From a Linux or Windows MSYS2 command prompt, run the following command in each of the directories listed in [Affected CTS Directories \(by Release\)](#):

```
zip -q -d log4j-core-*.jar org/apache/logging/log4j/core/lookup/JndiLookup.class
```

**NOTE**

This is the [mitigation technique](#) provided by Apache when Log4j cannot be upgraded.

## Affected CTS Directories (by Release)

CTS Release	Affected Directories
<b>FACE 3.1</b>	
3.1.1	<ul style="list-style-type: none"> <li>• <a href="#">/DMVT/DAConformanceTest_v31-2021.3.1/</a></li> <li>• <a href="#">/UsmIDLgen/UsmIDLgen_v31-2021.3.1/</a></li> </ul>
3.1.0	<ul style="list-style-type: none"> <li>• <a href="#">/DMVT/</a></li> <li>• <a href="#">/UsmIDLgen/</a></li> </ul>
<b>FACE 3.0</b>	
3.0.2	<ul style="list-style-type: none"> <li>• <a href="#">/DMVT/DAConformanceTest_v30-2021.3.1/</a></li> <li>• <a href="#">/UsmIDLgen/UsmIDLgen_v30-2021.3.1/</a></li> </ul>
3.0.1	<ul style="list-style-type: none"> <li>• <a href="#">/DMVT/</a></li> <li>• <a href="#">/UsmIDLgen/</a></li> </ul>
3.0.0	<b>NO CHANGE REQUIRED</b>
<b>FACE 2.1.1</b>	
2.1.1r7	<ul style="list-style-type: none"> <li>• <a href="#">/face_conformance_app/java_apps/DMConformanceTest/</a></li> </ul>
2.1.1r6	<b>NO CHANGE REQUIRED</b>
2.1.1r5	
2.1.1r4	
2.1.1r3	
2.1.1r2	
2.1.1r1	
<b>FACE 2.1.0</b>	
2.1.0r11	<ul style="list-style-type: none"> <li>• <a href="#">/face_conformance_app/java_apps/DMConformanceTest/</a></li> </ul>

CTS Release	Affected Directories
2.1.0r10	<b>NO CHANGE REQUIRED</b>
2.1.0r9	
2.1.0r8	
2.1.0r7	
2.1.0r6	
2.1.0r5	
2.1.0r4	
2.1.3	
<b>FACE 2.0</b>	
2.0.15	<b>NO CHANGE REQUIRED</b>
2.0.12	
2.0.1r1	
<b>FACE 1.1</b>	
1.1.1	<b>NO CHANGE REQUIRED</b>
1.1.0	