



## Product Support Notice

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PSN # PSN005933u

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Original publication date: 15-Dec-21. This is issue #06, published date: 13-Jan-22.

Severity/risk level

High

Urgency

Immediately

Name of problem PSN005933u– Avaya Aura Device Services Log4j vulnerabilities

Products affected

Avaya Aura Device Services, Releases 8.0.1.X, 8.0.2.X ,8.1.3.X, 8.1.4.X, 8.1.5.X, 10.1.0.0

Problem description

Avaya is aware of the recently identified Apache Log4j vulnerabilities ([CVE-2021-44228](#), [CVE-2021-45046](#), [CVE-2021-45105](#), [CVE-2021-44832](#), [CVE-2021-4104](#)) and is conducting impact assessments across its portfolio, identifying opportunities for temporary mitigations, if possible, and developing plans for remediation. Reference the *Avaya Product Security - Apache Log4j Vulnerability - Impact for Avaya products* on [support.avaya.com](http://support.avaya.com) for updates

### Log4j 1.x Vulnerabilities

Internal analysis has determined that AADS 7.X and 8.X releases are not vulnerable to the associated vulnerability CVE-2021-4104 (Log4j 1.x JMSAppender) although Log4j 1.x is used in the software.

This is because JMSAppender is not used in any of the log4j configurations for Avaya Aura Device Services.

### Log4j 2.x Vulnerabilities

- Avaya Aura Device Services, Releases 7.X and 8.0.0.0 running Log4jv1 that are not susceptible to Log4j2 vulnerability (CVE-2021-44228, CVE-2021-45046 & CVE-2021-45105).
- Avaya Aura Device Services, Releases 8.0.1.X, 8.0.2.X ,8.1.3.X, 8.1.4.X, 8.1.5.X are impacted by the Log4j2 vulnerability (CVE-2021-44228, CVE-2021-45046). Resolution section provides the details of the fix and the plan.
- Avaya Aura Device Services, Releases 8.0.1.X, 8.0.2.X ,8.1.3.X, 8.1.4.X, 8.1.5.X are NOT impacted by the Log4j2 vulnerability CVE-2021-45105). AADS patch mentioned in Resolution section covers details across various releases.
- Avaya Aura Device Services, Release 10.1.0.0 (GA December 21 ,2021) is NOT impacted by the Log4j2 vulnerability (CVE-2021-44228, CVE-2021-45046) as it already includes 2.16 log4j jars.
- An updated, mandatory AADS log4j patch Version 2.0 (**AADS000000115**) that replaces the Version 1.0 patch (**AADS000000114**) has been created

This PSN will be updated as more information is available.

**Updated Jan 7, 2022:** An updated , mandatory AADS log4j patch Version 2.0 (**AADS000000115**) that replaces the Version 1.0 patch (**AADS000000114**) has been created which fixes all the vulnerabilities in Log4j 2.X - [CVE-2021-44228](#), [CVE-2021-45046](#), [CVE-2021-45105](#) and [CVE-2021-44832](#)

Root access is NOT required to run this AADS Log4j Version 2.0 patch **AADS000000115** (Note that version 1 AADS000000114 needed ROOT access)

This updated Version 2 patch (**AADS000000115**) can be applied on top of Version 1 patch (**AADS000000114**).

### Important Notes

- Log4j Patch Version 2 (**AADS000000115**) could be applied to 8.0.1.X,8.0.2.X,8.1.3.X,8.1.4.X,8.1.4.1,8.1.5.X,10.1.0.0 systems
- Customers who have installed log4j patch Version 1.0 (**AADS000000114**) in 8.0.1.X,8.0.2.X,8.1.3.X,8.1.4.X,8.1.4.1,8.1.5.X,10.1.0.0 releases should proceed to install AADS log4j patch Version 2 (**AADS000000115**).
- Patch should be reapplied if AADS systems are upgraded or migrated or Rolledback to previous releases.
- Customer who are in 8.1.4.1 release and already installed patch **AADS000000110** (CVE-2021-44228 & CVE-2021-45046), and log4j patch Version 1.0 (**AADS000000114**) should update the system with AADS log4j patch Version 2 (**AADS000000115**)
- Customers who are in 8.1.4.1 release and havent installed patch **AADS000000110** (CVE-2021-44228 & CVE-2021-45046), and log4j patch Version 1.0 (**AADS000000114**) should directly proceed to install with AADS log4j patch Version 2 (**AADS000000115**).

### CVE-2021-44832

AADS Release	Impacted by CVE-2021-44832	Resolution Patch for CVE-2021-44832	Date for Patch Release
7.X, 8.0.0.0	NO.	<ul style="list-style-type: none"> <li>Not Applicable.</li> </ul>	Not Applicable
10.1.0.0	NO. Mitigation Already in place	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000115</b></li> </ul>	1/7/2021
8.1.4.1	NO. Mitigation Already in place	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000115</b></li> </ul>	1/7/2021
8.1.5.X	NO Mitigation Already in place	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000115</b></li> </ul>	1/7/2021
8.0.1.X, 8.0.2.X, 8.1.3.X 8.1.4.X	NO Mitigation Already in place	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000115</b></li> </ul>	1/7/2021

**CVE-2021-44228 & CVE-2021-45046**

<b>AADS Release</b>	<b>Impacted by CVE-2021-44228 &amp; CVE-2021-45046</b>	<b>Patch for CVE-2021-44228 &amp; CVE-2021-45046</b>	<b>Date for Patch Release</b>
7.X, 8.0.0.0	NO.	<ul style="list-style-type: none"> <li>Not Applicable.</li> </ul>	Not Applicable
10.1.0.0	NO.	<ul style="list-style-type: none"> <li>GA Date is 12/21/2021.</li> <li>GA load has fix for <b>CVE-2021-44228 &amp; CVE-2021-45046</b></li> </ul>	Not Applicable
8.1.4.1	YES	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000110</b> <b>Recommendation is to use AADS log4j patch Version 2 (AADS000000115).</b></li> </ul>	12/17/2021
8.1.5.X	YES	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000114 - This requires Root access and is deprecated</b> <b>Recommendation is to use AADS log4j patch Version 2 (AADS000000115).</b></li> </ul>	12/21/2021
8.0.1.X, 8.0.2.X, 8.1.3.X 8.1.4.X	YES	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000114 - This requires Root access and is deprecated</b> <b>Recommendation is to use AADS log4j patch Version 2 (AADS000000115).</b></li> </ul>	12/22/2021

**CVE-2021-45105**

<b>AADS Release</b>	<b>Impacted by CVE-2021-45105</b>	<b>Patch for CVE-2021-45105</b>	<b>Date for Patch Release</b>
7.X, 8.0.0.0	NO	<ul style="list-style-type: none"> <li>Not Applicable.</li> </ul>	Not Applicable
10.1.0.0	NO	<ul style="list-style-type: none"> <li>AADS is not impacted by CVE-2021-45105 <b>Recommendation is to use AADS log4j patch Version 2 (AADS000000115).</b></li> </ul>	Not Applicable
8.1.4.1	NO	<ul style="list-style-type: none"> <li>Patch mentioned in PLDS ID <b>AADS000000110</b> covers CVE-2021-44228, CVE-2021-45046</li> <li>Patch mentioned in <b>AADS000000114</b> covers CVE-2021-44228, CVE-2021-45046 &amp; CVE-2021-45046 <b>This requires Root access and is deprecated</b> <b>Recommendation is to use AADS log4j patch Version 2 (AADS000000115).</b></li> </ul>	12/17/2021
8.1.5.X	NO	<ul style="list-style-type: none"> <li><b>PLDS ID AADS000000114 - This requires Root access and is deprecated</b></li> </ul>	12/21/2021

		<b>Recommendation is to use AADS log4j patch Version 2 (AADS000000115).</b>	
8.0.1.X, 8.0.2.X, 8.1.3.X 8.1.4.X	NO	<ul style="list-style-type: none"> <li>• <b>PLDS ID AADS000000114 - This requires Root access and is deprecated</b></li> </ul> <b>Recommendation is to use AADS log4j patch Version 2 (AADS000000115).</b>	12/22/2021

#### Workaround or alternative remediation

Not Applicable.

#### Remarks

##### PSN Revision History

Issue 1 – December 15, 2021: Initial publication.

Issue 2 – December 21, 2021: Update the Resolution section with detailed plan and added CVE-2021-45046 fix details

Issue 3 – December 21, 2021: Update the PSN with CVE-2021-45105 details and Resolution section with detailed patch release plans

Issue 4 – December 22, 2021: Update the PSN with Resolution, Download and Patch install sections with detailed patch details for 8.0.1.X,8.0.2.X,8.1.3.X,8.1.4.X,8.1.4.1,8.1.5.X,10.1.0.0 releases.

Issue 5 – January 7, 2022: Patch Version 2.0 is released and Updated the PSN with CVE-2021-4104 and CVE-2021-44832

Issue 6 – January 13, 2022: Updated the Problem Description section to mention that AADS releases 8.0.1.X, 8.0.2.X ,8.1.3.X, 8.1.4.X, 8.1.5.X are NOT impacted by CVE-2021-45105

## Patch Notes

The information in this section concerns the patch, if any, recommended in the Resolution above.

#### Backup before applying the patch

Always.

Backup or VM snapshot highly recommended.

#### Download

### Avaya Aura Device Services 8.0.1.X,8.0.2.X,8.1.3.X,8.1.4.X,8.1.4.1,8.1.5.X,10.1.0.0 Patch

1. You may download the file directly from PLDS using PLDS download ID “AADS000000115”.
2. Patch would be updated in support site too soon. Once it’s approved in support PSN would be updated with details.

### Avaya Aura Device Services 8.1.4.1 Patch

**Note: Customers can download Patch AADS000000115 alternatively which covers all three vulnerability CVE-2021-44228, CVE-2021-45046, CVE-2021-45046 & CVE-2021-44832**

1. You may download the file directly from PLDS using PLDS download ID “AADS000000115”.
2. Patch would be updated in support site too soon. Once it’s approved in support PSN would be updated with details.

## Avaya Aura Device Services

### 8.0.1.X,8.0.2.X,8.1.3.X,8.1.4.X,8.1.4.1,8.1.5.X,10.1.0.0 Patch

1. Download the patch as mentioned in the "Download" section.
2. Patch File name is aads-patch-upgradeLog4j.bin.
3. Take a snapshot of AADS virtual machine. Note that this activity might impact the service.
4. Copy the "aads-patch-upgradeLog4j.bin" to administrative user's home directory.  
e.g., If administrative user is "admin", copy this script to /home/admin/
5. `chmod 750 aads-patch-upgradeLog4j.bin`
6. Run "aads-patch-upgradeLog4j.bin" using a "sudo" prefix, like this:  
`"sudo ./aads-patch-upgradeLog4j.bin -- --install`

Refer to README in patch file for detailed patch information.

#### Verification

```
sudo ./aads-patch-upgradeLog4j.bin -- --status
```

#### Failure

n/a

#### Patch uninstall instructions

This patch is not reversible. This patch can only be removed by reverting to a snapshot taken prior to applying the patch.

## Security Notes

The information in this section concerns the security risk, if any, represented by the topic of this PSN.

#### Security risks

Reference <https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-44228>

Reference <https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-45046>

Reference <https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-45105>

Reference <https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-44832>

Reference <https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2021-4104>

Reference <https://logging.apache.org/log4j/2.x/security.html>

#### Avaya Security Vulnerability Classification

Reference [www.avaya.com/emergencyupdate](http://www.avaya.com/emergencyupdate)

#### Mitigation

As noted in this PSN.

**If you require further information or assistance, please contact your Authorized Service Provider or visit [support.avaya.com](https://support.avaya.com). There you can access more product information, chat with an Agent, or open an online Service Request. Support is provided per your warranty or service contract terms unless otherwise specified in the Avaya support [Terms of Use](#).**

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