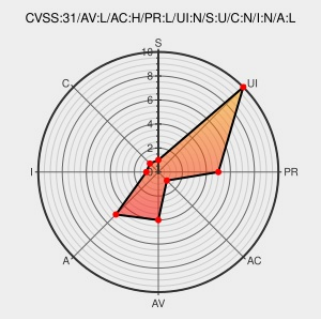
CVE-2021-29517

Published on: 05/14/2021 12:00:00 AM UTC

Last Modified on: 05/20/2021 04:27:00 PM UTC

CVE-2021-29517 - advisory for GHSA-772p-x54p-hjrv

Source: Mitre | Source: NIST | CVE.ORG | Print: PDF



Certain versions of Tensorflow from Google contain the following vulnerability:

TensorFlow is an end-to-end open source platform for machine learning. A malicious user could trigger a division by 0 in `Conv3D` implementation. The implementation(https://github.com/tensorflow/tensorflow/blob/42033603003965bffac51ae171b5L145) does a modulo operation based on user controlled input. Thus, when `filter` has a 0 as the fifth element, this results in a division by 0. Additionally, if the shape of the two tensors is not valid, an Eigen assertion can be triggered, resulting in a program crash. The fix will be included in TensorFlow 2.5.0. We will also cherrypick this commit on TensorFlow 2.4.2, TensorFlow 2.3.3, TensorFlow 2.2.3 and TensorFlow 2.1.4, as these are also affected and still in supported range.

CVE-2021-29517 has been assigned by security-advisories@github.com to track the vulnerability - currently rated as MEDIUM severity.

Affected Vendor/Software: **tensorflow** - **tensorflow** version **< 2.1.4**

Affected Vendor/Software: **tensorflow** - **tensorflow** version **>= 2.2.0, < 2.2.3**

Affected Vendor/Software: **tensorflow** - **tensorflow** version **>= 2.3.0, < 2.3.3**

Affected Vendor/Software: **tensorflow** - **tensorflow** version **>= 2.4.0, < 2.4.2**

CVSS3 Score: 5.5 - MEDIUM

Attack Vector	Attack Complexity	Privileges Required	User Interaction
LOCAL	LOW	LOW	NONE
Scope	**Confidentiality Impact**	**Integrity Impact**	**Availability Impact**
UNCHANGED	NONE	NONE	HIGH

CVSS2 Score: 2.1 - LOW

Access Vector	Access Complexity	Authentication
LOCAL	LOW	NONE
Confidentiality Impact	**Integrity Impact**	**Availability Impact**
NONE	NONE	PARTIAL

CVE References

Description	Tags	Link
Division by zero in `Conv3D` · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-772p-x54p-hjrv
Fix 2 issues with `Conv3D`. · tensorflow/tensorflow@799f835 · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/commit/799f835a3dfa00a4d852defa29b15841eea9d64f

Related QID Numbers

982529 Python (pip) Security Update for tensorflow-gpu (GHSA-772p-x54p-hjrv)

Known Affected Configurations (CPE V2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Google	Tensorflow	All	All	All	All

cpe:2.3:a:google:tensorflow:*:*:*:*:*:*:*:*:

No vendor comments have been submitted for this CVE

Social Mentions

Source	Title	Posted (UTC)
@CVEreport	CVE-2021-29517 : TensorFlow is an end-to-end open source platform for machine learning. A malicious user could trig… twitter.com/i/web/status/1…	2021-05-14 20:09:49
/r/netcve	CVE-2021-29517	2021-05-14 20:41:11

← Previous ID

Next ID→

CVE.report and Source URL Uptime Status status.cve.report