

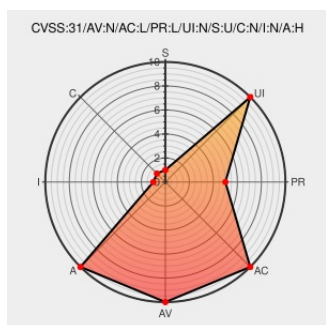


CVE-2022-23570

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CVE-2022-23570 - advisory for GHSA-9p77-mmwr-69c7

[Source: Mitre](#)[Source: NIST](#)[CVE.ORG](#)[Print: PDF](#)

Certain versions of [Tensorflow](#) from [Google](#) contain the following vulnerability:

Tensorflow is an Open Source Machine Learning Framework. When decoding a tensor from protobuf, TensorFlow might do a null-dereference if attributes of some mutable arguments to some operations are missing from the proto. This is guarded by a `DCHECK`. However, `DCHECK` is a no-op in production builds and an assertion failure in debug builds. In the first case execution proceeds to the dereferencing of the null pointer, whereas in the second case it results in a crash due to the assertion failure. The fix will be included in TensorFlow 2.8.0. We will also cherry-pick this commit on TensorFlow 2.7.1, and TensorFlow 2.6.3, as these are also affected and still in supported range.

CVE-2022-23570 has been assigned by [security-advisories@github.com](#) to track the vulnerability - currently rated as **MEDIUM** severity.

Affected Vendor/Software: [tensorflow](#) - tensorflow version $\geq 2.7.0$, $< 2.7.1$

Affected Vendor/Software: [tensorflow](#) - tensorflow version $\geq 2.6.0$, $< 2.6.3$

Affected Vendor/Software: [tensorflow](#) - tensorflow version $< 2.5.3$

CVSS3 Score: **6.5 - MEDIUM**

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

CVSS2 Score: **4 - MEDIUM**

Access Vector	Access Complexity	Authentication
NETWORK	LOW	SINGLE

Confidentiality Impact

NONE

Integrity Impact

NONE

Availability Impact

PARTIAL

CVE References

Description	Tags	Link
Prevent null dereference read in `SpecializeType()` · tensorflow/tensorflow@8a513ce · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/commit/8a513cec4bec15961bfde
tensorflow/full_type_util.cc at a1320ec1eac186da1d03f033109191f715b2b130 · tensorflow/tensorflow · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/blob/a1320ec1eac186da1d03f033109191f L106
Null-dereference when specializing tensor type · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-9p

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There are currently no QIDs associated with this CVE

Known Affected Configurations (CPE V2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Google	Tensorflow	2.7.0	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All

cpe:2.3:a:google:tensorflow:2.7.0:*****:

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

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

No vendor comments have been submitted for this CVE

Social Mentions

Source	Title	Posted (UTC)
@CVEreport	CVE-2022-23570 : Tensorflow is an Open Source Machine Learning Framework. When decoding a tensor from protobuf, Ten... twitter.com/i/web/status/1...	2022-02-04 22:45:25
@LinInfoSec	Tensorflow - CVE-2022-23570: github.com/tensorflow/ten...	2022-02-05 02:00:06

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