

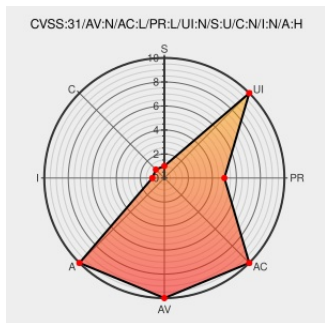


CVE-2022-23567

Published on: 02/03/2022 12:00:00 AM UTC

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CVE-2022-23567 - advisory for GHSA-rrx2-r989-2c43

[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. The implementations of `Sparse\*Cwise\*` ops are vulnerable to integer overflows. These can be used to trigger large allocations (so, OOM based denial of service) or `CHECK`-fails when building new `TensorShape` objects (so, assert failures based denial of service). We are missing some validation on the shapes of the input tensors as well as directly constructing a large `TensorShape` with user-provided dimensions. The fix will be included in TensorFlow 2.8.0. We will also cherry-pick this commit on TensorFlow 2.7.1, TensorFlow 2.6.3, and TensorFlow 2.5.3, as these are also affected and still in supported range.

CVE-2022-23567 has been assigned by security-advisories@github.com to track the vulnerability - currently rated as **MEDIUM** severity.

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	Integrity Impact	Availability Impact
NONE	NONE	PARTIAL

CVE References		
Description	Tags	Link
Add missing validation to sparse dense cwise ops. · tensorflow/tensorflow@1b54cad · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/commit/1b54cadd19391b60b6fcc
tensorflow/tfsa-2021-198.md at master · tensorflow/tensorflow · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/blob/master/tensorflow/security/a
tensorflow/sparse_dense_binary_op_shared.cc at 5100e359aef5c8021f2e71c7b986420b85ce7b3d · tensorflow/tensorflow · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/blob/5100e359aef5c8021f2e71c7b986420b85ce7b3d
Integer overflows in most sparse component-wise ops · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-rr
Prevent overflow in sparse dense cwise ops. · tensorflow/tensorflow@e952a89 · GitHub	github.com text/html	MISC github.com/tensorflow/tensorflow/commit/e952a89b7026b98fe8cbe
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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-2022-23567 : Tensorflow is an Open Source Machine Learning Framework. The implementations of `Sparse*Cwise` op... twitter.com/i/web/status/1...	2022-02-03 11:56:36
/r/netcve	CVE-2022-23567	2022-02-03 12:38:48

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