

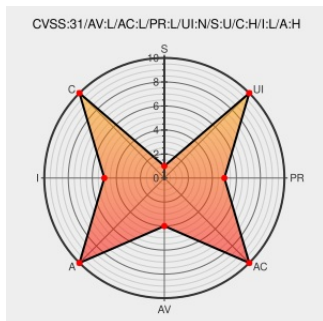


CVE-2021-37655

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CVE-2021-37655 - advisory for GHSA-7fvx-3jfc-2cpc

[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. In affected versions an attacker can trigger a read from outside of bounds of heap allocated data by sending invalid arguments to ``tf.raw_ops.ResourceScatterUpdate``. The [implementation]

(<https://github.com/tensorflow/tensorflow/blob/f24faa153ad31a4b51578f8181d3aaab77a1ddeb/L923>) has an incomplete validation of the relationship between the shapes of ``indices`` and ``updates``: instead of checking that the shape of ``indices`` is a prefix of the shape of ``updates`` (so that broadcasting can happen), code only checks that the number of elements in these two tensors are in a divisibility relationship. We have patched the issue in GitHub commit `01cff3f986259d661103412a20745928c727326f`. The fix will be included in TensorFlow 2.6.0. We will also cherrypick this commit on TensorFlow 2.5.1, TensorFlow 2.4.3, and TensorFlow 2.3.4, as these are also affected and still in supported range.

CVE-2021-37655 has been assigned by security-advisories@github.com to track the vulnerability - currently rated as **HIGH** severity.

Affected Vendor/Software: **tensorflow** - **tensorflow** version `>= 2.5.0, < 2.5.1`

Affected Vendor/Software: **tensorflow** - **tensorflow** version `>= 2.4.0, < 2.4.3`

Affected Vendor/Software: **tensorflow** - **tensorflow** version `< 2.3.4`

CVSS3 Score: **7.3 - HIGH**

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

CVSS2 Score: **4.6 - MEDIUM**

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

CVE References

Description	Tags	Link
Heap OOB in `ResourceScatterUpdate` · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	 CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-7fvx-3jfc-2cpc
Fix heap OOB due to dimension mismatch in `ResourceScatterUpdate` · tensorflow/tensorflow@01cff3f · GitHub	github.com text/html	 MISC github.com/tensorflow/tensorflow/commit/01cff3f986259d661103412a20745928c727326f
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Related QID Numbers

981524 Python (pip) Security Update for tensorflow-gpu (GHSA-7fvx-3jfc-2cpc)

Known Affected Configurations (CPE V2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	2.5.0	All	All	All
Application	Google	Tensorflow	2.6.0	rc0	All	All
Application	Google	Tensorflow	2.6.0	rc1	All	All
Application	Google	Tensorflow	2.6.0	rc2	All	All
cpe:2.3:a:google:tensorflow:*:*:*:*:*:						
cpe:2.3:a:google:tensorflow:2.5.0:*:*:*:*:						
cpe:2.3:a:google:tensorflow:2.6.0:rc0:*:*:*:*:						
cpe:2.3:a:google:tensorflow:2.6.0:rc1:*:*:*:*:						
cpe:2.3:a:google:tensorflow:2.6.0:rc2:*:*:*:*:						

No vendor comments have been submitted for this CVE

Social Mentions		
Source	Title	Posted (UTC)
🐦 @CVEreport	CVE-2021-37655 : TensorFlow is an end-to-end open source platform for machine learning. In affected versions an att... twitter.com/i/web/status/1...	2021-08-12 20:33:09
🐦 @LinInfoSec	Tensorflow - CVE-2021-37655: github.com/tensorflow/ten...	2021-08-12 22:40:42
← Previous ID		Next ID→

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