

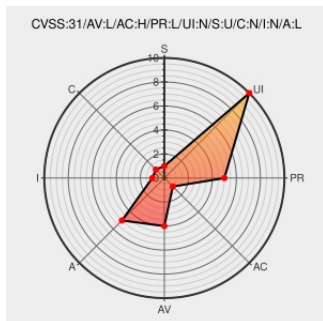


CVE-2021-29543

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CVE-2021-29543 - advisory for GHSA-fphq-gw9m-ghrv

[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. An attacker can trigger a denial of service via a `CHECK`-fail in `tf.raw\_ops.CTCGreedyDecoder`. This is because the

implementation(<https://github.com/tensorflow/tensorflow/blob/1615440b17b364b875eb06f43d0L50>) has a `CHECK\_LT` inserted to validate some invariants. When this condition is false, the program aborts, instead of returning a valid error to the user. This abnormal termination can be weaponized in denial of service attacks. 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-2021-29543 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
Fix `tf.raw_ops.CTCGreedyDecoder` CHECK failure. · tensorflow/tensorflow@ea3b43e · GitHub	github.com text/html	 MISC github.com/tensorflow/tensorflow/commit/ea3b43e98c32c97b35d52b4c66f9107452ca8fb2
`CHECK`-fail in `CTCGreedyDecoder` · Advisory · tensorflow/tensorflow · GitHub	github.com text/html	 CONFIRM github.com/tensorflow/tensorflow/security/advisories/GHSA-fphq-gw9m-ghrv

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Related QID Numbers

982506 Python (pip) Security Update for tensorflow-gpu (GHSA-fphq-gw9m-ghrv)

Known Affected Configurations (CPE V2.3)

Type	Vendor	Product	Version	Update	Edition	Language
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
Application	Google	Tensorflow	All	All	All	All
cpe:2.3:a:google:tensorflow:*.*.*.*.*.*.*.*.*.						
cpe:2.3:a:google:tensorflow:*.*.*.*.*.*.*.*.*.						
cpe:2.3:a:google:tensorflow:*.*.*.*.*.*.*.*.*.						
cpe:2.3:a:google:tensorflow:*.*.*.*.*.*.*.*.*.						
cpe:2.3:a:google:tensorflow:*.*.*.*.*.*.*.*.*.						

No vendor comments have been submitted for this CVE

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Source	Title	Posted (UTC)
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