tensorflow / **tensorflow** Public

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Core dump when loading TFLite models with quantization

Low **mihaimaruseac** published **GHSA-8wwm-6264-x792** on May 17

Package

tensorflow, tensorflow-cpu, tensorflow-gpu (pip)

Affected versions	Patched versions
< 2.9.0	2.6.4, 2.7.2, 2.8.1, 2.9.0

Description

Impact

Certain TFLite models that were created using TFLite model converter would crash when loaded in the TFLite interpreter. The culprit is that during quantization the scale of values could be greater than 1 but code was always assuming sub-unit scaling.

Thus, since code was calling `QuantizeMultiplierSmallerThanOneExp`, the `TFLITE_CHECK_LT` assertion would trigger and abort the process.

Patches

We have patched the issue in GitHub commit a989426ee1346693cc015792f11d715f6944f2b8.

The fix will be included in TensorFlow 2.9.0. We will also cherrypick this commit on TensorFlow 2.8.1, TensorFlow 2.7.2, and TensorFlow 2.6.4, as these are also affected and still in supported range.

For more information

Please consult our security guide for more information regarding the security model and how to contact us with issues and questions.

Attribution

This vulnerability has been reported externally via a GitHub issue.

Severity

Low

CVE ID

CVE-2022-29212

Weaknesses

No CWEs