Crash in `tf.transpose` with complex inputs

Low   **mihaimaruseac** published **GHSA-xqfj-cr6q-pc8w** on May 12, 2021

Package
🐍 **tensorflow, tensorflow-cpu, tensorflow-gpu** (pip)

Affected versions	Patched versions
< 2.5.0	2.1.4, 2.2.3, 2.3.3, 2.4.2

Description

Impact

Passing a complex argument to `tf.transpose` at the same time as passing `conjugate=True` argument results in a crash:

```
import tensorflow as tf
tf.transpose(conjugate=True, a=complex(1))
```

Patches

We have received a patch for the issue in GitHub commit 1dc6a7ce6e0b3e27a7ae650bfc05b195ca793f88.

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.

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 in #42105 and fixed in #46973.

Severity

Low

CVE ID

CVE-2021-29618

Weaknesses

No CWEs