New issue

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Core dumped when invoking TFLite model converted using latest nightly TFLite converter (2.4.0dev2020929) #43661

Closed yousef-xailient opened this issue on Sep 29, 2020 · 15 comments

Assignees 

Labels 2.6.0 comp:lite stat:awaiting tensorflower TF 2.3 TFLiteConverter type:bug

yousef-xailient commented on Sep 29, 2020 • edited

System information

- OS Platform and Distribution (e.g., Linux Ubuntu 16.04): **Linux Ubuntu 20.04**
- TensorFlow installed from (source or binary): **binary**
- TensorFlow version (or github SHA if from source): **2.4.0.dev20200929**

Command used to run the converter or code if you're using the Python API

```
import tensorflow as tf

import numpy as np


def wrap_frozen_graph(graph_def, inputs, outputs):
    def _imports_graph_def():
        tf.compat.v1.import_graph_def(graph_def, name="")
    wrapped_import = tf.compat.v1.wrap_function(_imports_graph_def, [])
    import_graph = wrapped_import.graph
    return wrapped_import.prune(
        tf.nest.map_structure(import_graph.as_graph_element, inputs),
        tf.nest.map_structure(import_graph.as_graph_element, outputs))


graph_def = tf.compat.v1.GraphDef()
_ = graph_def.ParseFromString(open('minimal_093011.pb', 'rb').read())
dnn_function = wrap_frozen_graph(graph_def, inputs='import/first_graph_input:0',
outputs='import_1/second_graph_output/Mean:0')
converter = tf.lite.TFLiteConverter.from_concrete_functions([dnn_function])
```

```
converter.experimental_enable_mlir_converter = True
converter.optimizations = [tf.lite.Optimize.DEFAULT]
converter.target_spec.supported_ops = [tf.lite.OpsSet.TFLITE_BUILTINS,
tf.lite.OpsSet.SELECT_TF_OPS]


def representative_dataset_gen():
    image = np.random.randint(low=0, high=255, size=(1, 480, 640, 3), dtype='uint8')
    yield [image]


converter.representative_dataset = representative_dataset_gen
converter.inference_input_type = tf.uint8
converter.inference_output_type = tf.uint8

model = converter.convert()
```

Link to Google Colab Notebook

```
https://colab.research.google.com/drive/1U8UVDl6lIs1zKjfpFc7hrr3jAo-0eh_i?usp=sharing
```

Also, please include a link to the saved model or GraphDef

```
https://drive.google.com/file/d/1Hvr9hfvaxj3sBi0D0U0iAAe1kEaiJJWB/view?usp=sharing
```

Failure details
The conversion is successful in that it generates a tflite graph. However, when I invoke the graph, I get a core dump error:
[1] 511859 abort (core dumped) python src/reproduce_minimal_tflite_test.py

Code used to invoke the graph. Also included in Colab notebook linked above.

```
image = np.random.randint(low=0, high=255, size=(1, 480, 640, 3), dtype='uint8')

tflite_model = tf.lite.Interpreter('models/minimal_093011.tflite')
tflite_model.allocate_tensors()

input_details = tflite_model.get_input_details()
tflite_model.set_tensor(input_details[0]['index'], image)
tflite_model.invoke()
```

Traceback

```
#0  __GI_raise (sig=sig@entry=6) at ../sysdeps/unix/sysv/linux/raise.c:50
#1  0x00007ffff7dc0859 in __GI_abort () at abort.c:79
#2  0x00007fffb9386e42 in tflite::QuantizeMultiplierSmallerThanOneExp(double, int*, int*) ()
   from /home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
```

```
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#3  0x00007fffb9158090 in void tflite::ops::builtin::comparisons::(anonymous
namespace)::ComparisonQuantized<signed char, &(bool tflite::reference_ops::GreaterFn<int>(int,
int))>(TfLiteTensor const*, TfLiteTensor const*, TfLiteTensor*, bo
ol) () from /home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#4  0x00007fffb9158b7e in tflite::ops::builtin::comparisons::(anonymous
namespace)::GreaterEval(TfLiteContext*, TfLiteNode*) ()
   from /home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#5  0x00007fffb9369713 in tflite::Subgraph::Invoke() () from
/home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#6  0x00007fffb936c1f0 in tflite::Interpreter::Invoke() () from
/home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#7  0x00007fffb90f7548 in tflite::interpreter_wrapper::InterpreterWrapper::Invoke() ()
   from /home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#8  0x00007fffb90eb6ee in
pybind11::cpp_function::initialize<pybind11_init__pywrap_tensorflow_interpreter_wrapper(pybind11::mod
{lambda(tflite::interpreter_wrapper::InterpreterWrapper&)#6}, pybind11::object,
tflite::interpreter_wrap
per::InterpreterWrapper&, pybind11::name, pybind11::is_method, pybind11::sibling>
(pybind11_init__pywrap_tensorflow_interpreter_wrapper(pybind11::module&)::
{lambda(tflite::interpreter_wrapper::InterpreterWrapper&)#6}&&, pybind11::object (*
)(tflite::interpreter_wrapper::InterpreterWrapper&), pybind11::name const&, pybind11::is_method
const&, pybind11::sibling const&)::
{lambda(pybind11::detail::function_call&)#3}::_FUN(pybind11::detail::function_call) ()
   from /home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#9  0x00007fffb90ecb39 in pybind11::cpp_function::dispatcher(_object*, _object*, _object*) ()
   from /home/yousef/miniconda3/envs/tf2.3/lib/python3.7/site-
packages/tensorflow/lite/python/interpreter_wrapper/_pywrap_tensorflow_interpreter_wrapper.so
#10 0x00005555556b9914 in _PyMethodDef_RawFastCallKeywords (method=0x55555694b100,
self=0x7fffbb8c9270, args=0x7fffaf04dd98, nargs=<optimised out>, kwnames=<optimised out>)
    at /tmp/build/80754af9/python_1598874792229/work/Objects/call.c:693
#11 0x00005555556b9a31 in _PyCFunction_FastCallKeywords (func=0x7fffc08de460, args=<optimised
out>, nargs=<optimised out>, kwnames=<optimised out>) at
/tmp/build/80754af9/python_1598874792229/work/Objects/call.c:732
#12 0x000055555572639e in call_function (kwnames=0x0, oparg=<optimised out>, pp_stack=<synthetic
pointer>) at /tmp/build/80754af9/python_1598874792229/work/Python/ceval.c:4619
#13 _PyEval_EvalFrameDefault (f=<optimised out>, throwflag=<optimised out>) at
/tmp/build/80754af9/python_1598874792229/work/Python/ceval.c:3093
#14 0x00005555556b8e7b in function_code_fastcall (globals=<optimised out>, nargs=1, args=
<optimised out>, co=<optimised out>) at
/tmp/build/80754af9/python_1598874792229/work/Objects/call.c:283
#15 _PyFunction_FastCallKeywords (func=<optimised out>, stack=0x7ffff6d615c0, nargs=1, kwnames=
<optimised out>) at /tmp/build/80754af9/python_1598874792229/work/Objects/call.c:408
#16 0x0000555555721740 in call_function (kwnames=0x0, oparg=<optimised out>, pp_stack=<synthetic
pointer>) at /tmp/build/80754af9/python_1598874792229/work/Python/ceval.c:4616
#17 _PyEval_EvalFrameDefault (f=<optimised out>, throwflag=<optimised out>) at
/tmp/build/80754af9/python_1598874792229/work/Python/ceval.c:3110
#18 0x0000555555668829 in _PyEval_EvalCodeWithName (_co=0x7ffff6cfa1e0, globals=<optimised out>,
locals=<optimised out>, args=<optimised out>, argcount=<optimised out>, kwnames=0x0, kwargs=0x0,
kwcount=0, kwstep=2, defs=0x0, defcount=0,
```

```
    kwdefs=0x0, closure=0x0, name=0x0, qualname=0x0) at
/tmp/build/80754af9/python_1598874792229/work/Python/ceval.c:3930
#19 0x0000555555669714 in PyEval_EvalCodeEx (_co=<optimised out>, globals=<optimised out>, locals=
<optimised out>, args=<optimised out>, argcount=<optimised out>, kws=<optimised out>, kwcount=0,
defs=0x0, defcount=0, kwdefs=0x0,
    closure=0x0) at /tmp/build/80754af9/python_1598874792229/work/Python/ceval.c:3959
#20 0x000055555566973c in PyEval_EvalCode (co=<optimised out>, globals=<optimised out>, locals=
<optimised out>) at /tmp/build/80754af9/python_1598874792229/work/Python/ceval.c:524
#21 0x0000555555780f14 in run_mod (mod=<optimised out>, filename=<optimised out>,
globals=0x7ffff6dcac30, locals=0x7ffff6dcac30, flags=<optimised out>, arena=<optimised out>)
    at /tmp/build/80754af9/python_1598874792229/work/Python/pythonrun.c:1035
#22 0x000055555578b331 in PyRun_FileExFlags (fp=0x5555558c3100, filename_str=<optimised out>,
start=<optimised out>, globals=0x7ffff6dcac30, locals=0x7ffff6dcac30, closeit=1,
flags=0x7fffffffdd80)
    at /tmp/build/80754af9/python_1598874792229/work/Python/pythonrun.c:988
#23 0x000055555578b523 in PyRun_SimpleFileExFlags (fp=0x5555558c3100, filename=<optimised out>,
closeit=1, flags=0x7fffffffdd80) at
/tmp/build/80754af9/python_1598874792229/work/Python/pythonrun.c:429
#24 0x000055555578c655 in pymain_run_file (p_cf=0x7fffffffdd80, filename=0x5555558c2870
L"src/reproduce_minimal_tflite_test.py", fp=0x5555558c3100) at
/tmp/build/80754af9/python_1598874792229/work/Modules/main.c:462
#25 pymain_run_filename (cf=0x7fffffffdd80, pymain=0x7fffffffde90) at
/tmp/build/80754af9/python_1598874792229/work/Modules/main.c:1652
#26 pymain_run_python (pymain=0x7fffffffde90) at
/tmp/build/80754af9/python_1598874792229/work/Modules/main.c:2913
#27 pymain_main (pymain=0x7fffffffde90) at
/tmp/build/80754af9/python_1598874792229/work/Modules/main.c:3460
#28 0x000055555578c77c in _Py_UnixMain (argc=<optimised out>, argv=<optimised out>) at
/tmp/build/80754af9/python_1598874792229/work/Modules/main.c:3495
#29 0x00007ffff7dc20b3 in __libc_start_main (main=0x555555649c90 <main>, argc=2,
argv=0x7fffffffdff8, init=<optimised out>, fini=<optimised out>, rtld_fini=<optimised out>,
stack_end=0x7fffffffdfe8) at ../csu/libc-start.c:308
#30 0x0000555555730ff0 in _start () at ../sysdeps/x86_64/elf/start.S:103
```

yousef-xailient added the **TFLiteConverter** label on Sep 29, 2020

google-ml-butler bot assigned **amahendrakar** on Sep 29, 2020

yousef-xailient mentioned this issue on Sep 30, 2020

Error converting from TensorFlow frozen graph to TFLite using TF1.15 #43660

Closed

amahendrakar commented on Sep 30, 2020 Contributor

@yousef-xailient,
I do not have access to the Colab notebook and the saved model file. Could you please grant the required permissions to view the files. Thanks!

amahendrakar added comp:lite **stat:awaiting response** TF 2.3 **type:support** labels on Sep 30, 2020

yousef-xailient commented on Sep 30, 2020 Author

@amahendrakar

My bad. You can try now.

tensorflowbutler removed the **stat:awaiting response** label on Oct 1, 2020

amahendrakar commented on Oct 5, 2020 Contributor

Was able to reproduce the issue. Session crashes on running the code with TF v2.3 and TF-nightly. Please find the gist of it here. Thanks!

amahendrakar added **type:bug** and removed **type:support** labels on Oct 5, 2020

amahendrakar assigned **jvishnuvardhan** and unassigned **amahendrakar** on Oct 5, 2020

yousef-xailient commented on Oct 6, 2020 Author

Hi @jvishnuvardhan,

I noticed that you were assigned to this. Let me know if you have all you need or need any help with this.

jvishnuvardhan commented on Oct 6, 2020 Contributor

@yousef-xailient Looks like there is an `dtype` incompatibility. Please check `input_details` where dtype is mentioned as `int32` but the provided input is `uint8` .

```
print(input_details)
[{'name': 'import/first_graph_input', 'index': 0, 'shape': array([ 1, 480, 640, 3], dtype=int32),
'shape_signature': array([ -1, 480, 640, 3], dtype=int32), 'dtype': <class 'numpy.uint8'>,
'quantization': (0.0, 0), 'quantization_parameters': {'scales': array([], dtype=float32),
'zero_points': array([], dtype=int32), 'quantized_dimension': 0}, 'sparsity_parameters': {}}]
```

Need to check more to find the root-cause. Thanks!

yousef-xailient commented on Oct 6, 2020 — Author

@jvishnuvardhan the 'dtype' key is uint8, the other dtypes are shapes and other information about the graph, not involved in the graph itself, I think. I've had quantized models with shape_signature array([], dtype=int32) work fine before.

jvishnuvardhan assigned **karimnosseir** and unassigned **jvishnuvardhan** on Oct 6, 2020

jvishnuvardhan added the **stat:awaiting tensorflower** label on Oct 6, 2020

yousef-xailient commented on Oct 11, 2020 — Author

Hi, **@karimnosseir**, I see that you have been assigned to this issue. Please let me know if I can be of any help.

karimnosseir commented on Jun 25, 2021 — Contributor

Hi, is this still on going issue ?

Thanks

dx-xp-team commented on Jul 29, 2021

Hi,

I have the exact same problem and coredump.
I have searched everywhere and I did not found any solution to this issue.
The problem is still reproducible on latest version (2.7.0-dev20210729) through the Collab link : https://colab.research.google.com/gist/amahendrakar/9253e439795b5ccf487ada3ab385bb90/43661-tf-nightly.ipynb

I would be nice to have some feedback/investigation why the crash occurs...

Thanks for your support

mohantym added the 2.6.0 label on Oct 23, 2021

mohantym self-assigned this on Mar 3

mohantym commented on Mar 3 — Contributor

I was able to replicate in 2.8 version too.

karimnosseir assigned **abattery** and unassigned **karimnosseir** on Mar 3

karimnosseir commented on Mar 3 — Contributor

That looks invalid values from quantization params.
Jaesung can you please have a look

Thanks

abattery commented on Mar 3 — Contributor

Thanks. **@sngyhan** fyi

mihaimaruseac commented on Mar 4 — Collaborator

Can you please tag me too in the fix?

mohantym removed their assignment on Mar 21

mihaimaruseac commented on Mar 22 — Collaborator

This should be fixed by a989426

mihaimaruseac closed this as completed on Mar 22

google-ml-butler bot commented on Mar 22

Are you satisfied with the resolution of your issue?
Yes
No

Assignees

abattery

Labels

2.6.0 comp:lite stat:awaiting tensorflower TF 2.3 TFLiteConverter type:bug

Projects

None yet

Milestone

No milestone

Development

No branches or pull requests

9 participants