Docker Implementation for Tensorflow Serving Document

1. INSTALL DOCKER

* sudo apt-get install \apt-transport-https \ca-certificates \curl \software-properties-common
* curl -fsSL "https://download.docker.com/linux/ubuntu/gpg" | sudo apt-key add -
* sudo add-apt-repository \"deb [arch=amd64] https://download.docker.com/linux/ubuntu \$(lsb\_release -cs)\stable-17.06"
* sudo add-apt-repository \"deb [arch=amd64] https://download.docker.com/linux/ubuntu \$lsb\_release -cs \stable-17.06"
* apt-cache madison docker-ee docker-ee | 17.06.0~ee-0~ubuntu-xenial | <DOCKER-EE-URL>/ubuntu xenial/stable amd64 Packages

1. DOCKER FUNCTION CODE
2. **Remove container**

* sudo docker rm container\_id

1. **Stop container**

* sudo docker stop container\_id

1. **Start container**

* sudo docker start container\_id

1. **List all containers**

* sudo docker ps –all

1. **Go inside container**

* sudo docker attach container\_id

1. **Exit from container**

* Press CTRL-P + CTRL-Q

1. **Error Case: connection error: desc = "transport: dial unix /var/run/docker/containerd/docker-containerd.sock: connect: connection refused"**

* sudo service docker restart

1. **IP config of single container**

* sudo docker network inspect bridge | grep IPv4Address
* sudo docker stop $(sudo docker ps -a -q)
* docker inspect <container id>
* docker inspect --format "{{ .NetworkSettings.IPAddress }}" containerId
* sudo docker inspect cd891abceb70| grep -i ip

1. **Continuous run client.py**

* Start : nohup python3 ebpredict\_image.py
* Stop : kill -9 3315

1. **Copy Container**

* sudo docker commit 10e1d075bd55 $USER/tensorflow-serving-devel\_roundplatebrackets
* sudo docker images
* sudo docker run --name=tf\_container\_roundplatebrackets -it $USER/tensorflow-serving-devel\_roundplatebrackets

1. RESTART DOCKER CONTAINERS

2. CATEGORY

* sudo docker start 4df722301e7e
* sudo docker attach 4df722301e7e
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/category model &> cat\_log &

3. RIB

* sudo docker start 10e1d075bd55
* sudo docker attach 10e1d075bd55
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_Rib &> rib\_log &

4. LINEAR BUSHING

* sudo docker start 576322b10ae5
* sudo docker attach 576322b10ae5
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LinearBushing &> linerbush\_log &

5. HEIGHT ADJUSTING PIN

* sudo docker start d4937db9dbc7
* sudo docker attach d4937db9dbc7
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_HeightAdjPin &> heightadjpin\_log &

6. INSPECTION PIN

* sudo docker start 56ea5808895c
* sudo docker attach 56ea5808895c
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_InspectionPins &> inspectionpins\_log &

7. SHAFT SUPPORT

* sudo docker start b5aea1532447
* sudo docker attach b5aea1532447
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_ShaftSupport &> shaftsupport\_log &

8. JIGBUSH

* sudo docker start e047d79ef513
* sudo docker attach e047d79ef513
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_JigBush &> jigbush\_log &

9. OILFREE BUSHING

* sudo docker start d8964963aaec
* sudo docker attach d8964963aaec
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_OilFreeBushing &> oilfreebushing\_log &

10. SUPPORT UNIT

* sudo docker start 781f1b70f22d
* sudo docker attach 781f1b70f22d
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_SupportUnit &> supportunit\_log &

11. BALL BEARING

* sudo docker start 9b4ef550d74b
* sudo docker attach 9b4ef550d74b
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_BallBearing &> ballbearing\_log &

12. CANTILEVER PIN

* sudo docker start cf0a472861e7
* sudo docker attach cf0a472861e7
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception -model\_base\_path=/serving/model\_CantileverPin &> cantileverpin\_log &

13. BEARING HOLDER

* sudo docker start 248f81ecda55
* sudo docker attach 248f81ecda55
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_BearingHolder &> bearingholder\_log &

14. SHAFT

* sudo docker start 03a8e69ae7bc
* sudo docker attach 03a8e69ae7bc
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model Shaft &> shaft log &

15. WASHER

* sudo docker start 934bf94d7434
* sudo docker attach 934bf94d7434
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model Washer &> washer log &

16. HINGE PIN

* sudo docker start 80ce8ee4bbca
* sudo docker attach 80ce8ee4bbca
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_HingePin &> hingepin\_log &

17.　LOCATING PIN FOR WELDING

* sudo docker start 3857fa5664c8
* sudo docker attach 3857fa5664c8
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LocatinPinWelding &> locatingpinwelding\_log &

18. LOCATING PIN

* sudo docker start 2cfa43b26b84
* sudo docker attach 2cfa43b26b84
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LocatingPin &> locatingpin\_log &

19. L-BRACKET

* sudo docker start cd891abceb70
* sudo docker attach cd891abceb70
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LBrackets &> lbrackets\_log &

20. PLATE BRACKET

* sudo docker start e765e6f6f9ce
* sudo docker attach e765e6f6f9ce
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_PlateBrackets &>platebrackets\_log &

21. ROUND PLATE BRACKET

* sudo docker start 2c6806100e0d
* sudo docker attach 2c6806100e0d
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_RoundPlateBrackets &>roundbrackets\_log &

22. CONVEX PLATE BRACKET

* sudo docker start 01134032dc7d
* sudo docker attach 01134032dc7d
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_ConvexPlateBrackets &>convexplatebrackets\_log &

23. Z-PLATE BRACKET

* sudo docker start 7df85e32cf55
* sudo docker attach 7df85e32cf55
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_ZBrackets &>zbrackets\_log &

1. BUILD CONTAINER FOR EACH CATEGORY

2. CATEGORY

* sudo docker build --pull -t $USER/tensorflow-serving-devel-gpu -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_gpu -it $USER/tensorflow-serving-devel-gpu
* sudo docker cp category\_model 4df722301e7e:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/category\_model &> cat\_log &
* python client.py --server=172.17.0.2:9000 --image=./testdata/washer2.JPG

1. RIB

* sudo docker build --pull -t $USER/tensorflow-serving-devel-rib -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_rib -it $USER/tensorflow-serving-devel-rib
* sudo docker cp ./model\_Rib 10e1d075bd55:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_Rib &> rib\_log &
* python3 client.py --server=172.17.0.3:9000 --image=../TestCase/ribtestddata/110300541220/RBDA50-50-T10\_\_iso.JPG

1. LINEAR BUSHING

* sudo docker build --pull -t $USER/tensorflow-serving-devel-linearbushing -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu
* sudo docker run --name=tf\_container\_linearbushing -it $USER/tensorflow-serving-devel-linearbushing
* sudo docker cp ./model\_LinearBushing 576322b10ae5:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LinearBushing &> linerbush\_log &
* sudo docker network inspect bridge | grep IPv4Address
* python3 client.py --server=172.17.0.4:9000 --image=../TestCase/linearbush/110300028730/2.JPG

1. HEIGHT ADJUSTING PIN

* sudo docker build --pull -t $USER/tensorflow-serving-devel-heightadjpin -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_heightadjpin -it $USER/tensorflow-serving-devel-heightadjpin
* sudo docker cp ./model\_HeightAdjPin d4937db9dbc7:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_HeightAdjPin &> heightadjpin\_log &
* python3 client.py --server=172.17.0.5:9000 --image=../TestCase/heightadjpin/110302665970/2.JPG

1. INSPECTION PIN

* sudo docker build --pull -t $USER/tensorflow-serving-devel-inspectionpin -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu
* sudo docker run --name=tf\_container\_inspectionpin -it $USER/tensorflow-serving-devel-inspectionpin
* sudo docker cp ./model\_InspectionPins 56ea5808895c:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_InspectionPins &> inspectionpins\_log &
* python3 client.py --server=172.17.0.6:9000 --image=../TestCase/inspectionpin/110302031070/3.JPG

1. SHAFT SUPPORT

* sudo docker build --pull -t $USER/tensorflow-serving-devel-shaft support -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_shaftsupport -it $USER/tensorflow-serving-devel-shaftsupport
* sudo docker cp ./model\_ShaftSupport b5aea1532447:/serving
* python3 client.py --server=172.17.0.6:9000 --image=../TestCase/shaftsupport/110300011320/1.JPG
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_ShaftSupport &> shaftsupport\_log &
* python3 client.py --server=172.17.0.7:9000 --image=../TestCase/inspectionpin/110302031070/3.JPG

1. JIG BUSHING

* sudo docker build --pull -t $USER/tensorflow-serving-devel-jigbush -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_jigbush -it $USER/tensorflow-serving-devel-jigbush
* sudo docker cp ./model\_JigBush e047d79ef513:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_JigBush &> jigbush\_log &
* python3 client.py --server=172.17.0.8:9000 --image=../TestCase/jigbush/110300133640/1.JPG

1. OIL FREE BUSHING

* sudo docker build --pull -t $USER/tensorflow-serving-devel-oilfreebushing -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu
* sudo docker run --name=tf\_container\_oilfreebushing -it $USER/tensorflow-serving-devel-oilfreebushing
* sudo docker cp ./model\_OilFreeBushing d8964963aaec:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_OilFreeBushing &> oilfreebushing\_log &
* python3 client.py --server=172.17.0.9:9000 --image=../TestCase/oilfreebush/110302640070/2.JPG

1. SUPPORT UNIT

* sudo docker build --pull -t $USER/tensorflow-serving-devel-supportunit -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_supportunit -it $USER/tensorflow-serving-devel-supportunit
* sudo docker cp ./model\_SupportUnit 781f1b70f22d:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 model\_name=inception --model\_base\_path=/serving/model\_SupportUnit &> supportunit\_log &
* python3 client.py --server=172.17.0.10:9000 --image=../TestCase/suppunit/110300077370/1.JPG

1. BALL BEARING

* sudo docker build --pull -t $USER/tensorflow-serving-devel-ballbearing -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_ballbearing -it $USER/tensorflow-serving-devel-ballbearing
* sudo docker cp ./model\_BallBearing 9b4ef550d74b:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_BallBearing &> ballbearing\_log &
* python3 client.py --server=172.17.0.11:9000 --image=../TestCase/balbearing/110302024520/2.JPG

1. CANTILEVER PIN

* sudo docker build --pull -t $USER/tensorflow-serving-devel-cantileverpin -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_cantileverpin -it $USER/tensorflow-serving-devel-cantileverpin
* sudo docker cp ./model\_CantileverPin cf0a472861e7:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_CantileverPin &> cantileverpin\_log &
* python3 client.py --server=172.17.0.11:9000 --image=../TestCase/balbearing/110302024520/2.JPG

1. BEARING HOLDER

* sudo docker build --pull -t $USER/tensorflow-serving-devel-bearingholder -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_bearingholder -it $USER/tensorflow-serving-devel-bearingholder
* sudo docker cp ./model\_BearingHolder 248f81ecda55:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_BearingHolder &> bearingholder\_log &

1. SHAFT

* sudo docker build --pull -t $USER/tensorflow-serving-devel-shaft -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_shaft -it $USER/tensorflow-serving-devel-shaft
* sudo docker cp ./model\_Shaft 03a8e69ae7bc:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_Shaft &> shaft\_log &

1. WASHER

* sudo docker build --pull -t $USER/tensorflow-serving-devel-washer -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu.
* sudo docker run --name=tf\_container\_washer -it $USER/tensorflow-serving-devel-washer
* sudo docker cp ./model\_Washer 934bf94d7434:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_Washer &>washer\_log &

1. HINGE PIN

* sudo docker build --pull -t $USER/tensorflow-serving-devel-hingepin -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_hingepin -it $USER/tensorflow-serving-devel-hingepin
* sudo docker cp ./model\_HingePin 80ce8ee4bbca:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_HingePin &>hingepin\_log &

1. LOCATING PIN FOR WELDING

* sudo docker build --pull -t $USER/tensorflow-serving-devel-locatingpinwelding -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_locatingpinwelding -it $USER/tensorflow-serving-devel-locatingpinwelding
* sudo docker cp ./model\_LocatinPinWelding 3857fa5664c8:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LocatinPinWelding &>locatingpinwelding\_log &

1. LOCATING PIN

* sudo docker build --pull -t $USER/tensorflow-serving-devel-locatingpin -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_locatingpin -it $USER/tensorflow-serving-devel-locatingpin
* sudo docker cp ./model\_LocatingPin 2cfa43b26b84:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LocatingPin &>locatingpin\_log &

1. L-BRACKET

* sudo docker build --pull -t $USER/tensorflow-serving-devel-lbrackets -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu
* sudo docker run --name=tf\_container\_lbrackets -it $USER/tensorflow-serving-devel-lbrackets
* git clone --recurse-submodules https://github.com/tensorflow/serving.git --branch r1.8
* serving# bazel build -c opt tensorflow\_serving/...
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server
* sudo docker cp ./model\_LBrackets cd891abceb70:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_LBrackets &>lbrackets\_log &
* python3 client.py --server=172.17.0.3:9000 --image=../TestCase/lbracket/110302705710/1.JPG

1. PLATE BRACKET

* sudo docker build --pull -t $USER/tensorflow-serving-devel-zbrackets -f tensorflow\_serving/tools/docker/Dockerfile.devel-gpu .
* sudo docker run --name=tf\_container\_zbrackets -it $USER/tensorflow-serving-devel-zbrackets
* (outside serving container ) git clone --recurse-submodules https://github.com/tensorflow/serving.git --branch r1.7
* serving# bazel build -c opt tensorflow\_serving/...
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server
* sudo docker cp ./model\_PlateBrackets e765e6f6f9ce:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_PlateBrackets &>platebrackets\_log
* python3 client.py --server=172.17.0.3:9000 --image=../TestCase/lbracket/110302705710/1.JPG

1. ROUND PLATE BRACKET

* sudo docker run --name=tf\_container\_roundplatebrackets -it $USER/tensorflow-serving-devel\_roundplatebrackets
* (outside serving container ) git clone --recurse-submodules https://github.com/tensorflow/serving.git --branch r1.7
* serving# bazel build -c opt tensorflow\_serving/...
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server
* sudo docker cp ./model\_RoundPlateBrackets 2c6806100e0d:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_RoundPlateBrackets &>roundplatebrackets\_log &

1. CONVEX PLATE BRACKET

* sudo docker commit 10e1d075bd55 $USER/tensorflow-serving-devel\_convexplatebrackets
* sudo docker images
* sudo docker run --name=tf\_container\_convexplatebrackets -it $USER/tensorflow-serving-devel\_convexplatebrackets
* (outside serving container ) git clone --recurse-submodules https://github.com/tensorflow/serving.git --branch r1.7 (not need to copy container)
* serving# bazel build -c opt tensorflow\_serving/...
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server
* sudo docker cp ./model\_ConvexPlateBrackets 01134032dc7d:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_ConvexPlateBrackets &>convexplatebrackets\_log &

1. Z-BRACKET

* sudo docker commit 10e1d075bd55 $USER/tensorflow-serving-devel\_zbrackets
* sudo docker images
* sudo docker run --name=tf\_container\_zbrackets -it $USER/tensorflow-serving-devel\_zbrackets
* (outside serving container ) git clone --recurse-submodules https://github.com/tensorflow/serving.git --branch r1.7 (not need to copy container)
* serving# bazel build -c opt tensorflow\_serving/...
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server
* sudo docker cp ./model\_ZBrackets 7df85e32cf55:/serving
* bazel-bin/tensorflow\_serving/model\_servers/tensorflow\_model\_server --port=9000 --model\_name=inception --model\_base\_path=/serving/model\_ZBrackets &>zbrackets\_log &