

3 clients:

WARNING flwr 2024-03-23 10:35:52,352 | logger.py:118 |
DEPRECATED FEATURE: `FedXgbNnAvg` strategy

This is a deprecated feature. It will be removed
entirely in future versions of Flower.

WARNING flwr 2024-03-23 10:35:52,356 | app.py:211 | Both server and strategy
were provided, ignoring strategy
INFO flwr 2024-03-23 10:35:52,357 | app.py:178 | Starting Flower simulation, config:
ServerConfig(num_rounds=5, round_timeout=None)
Data partitioned across 3 clients and 0.0 of local dataset reserved for validation.
FL experiment configured for 5 rounds with 3 client in the pool.
FL round will proceed with 100.0% of clients sampled, at least 1.
2024-03-23 10:35:55,005 INFO worker.py:1621 -- Started a local Ray instance.
INFO flwr 2024-03-23 10:35:56,796 | app.py:213 | Flower VCE: Ray initialized with
resources: {'CPU': 40.0, 'object_store_memory': 27515675443.0, 'memory':
55031350887.0, 'node:__internal_head__': 1.0, 'node:10.10.1.148': 1.0, 'GPU': 1.0}
INFO flwr 2024-03-23 10:35:56,798 | app.py:219 | Optimize your simulation with
Flower VCE: <https://flower.dev/docs/framework/how-to-run-simulations.html>
INFO flwr 2024-03-23 10:35:56,799 | app.py:242 | Flower VCE: Resources for each
Virtual Client: {'num_cpus': 1}
INFO flwr 2024-03-23 10:35:56,850 | app.py:288 | Flower VCE: Creating
VirtualClientEngineActorPool with 40 actors
INFO flwr 2024-03-23 10:35:56,851 | 2437557820.py:20 | Initializing global
parameters
INFO flwr 2024-03-23 10:35:56,853 | 2437557820.py:226 | Requesting initial
parameters from one random client
[2m[36m(DefaultActor pid=733408)[0m /home/user/.local/lib/python3.10/site-
packages/torch/cuda/__init__.py:141: UserWarning: CUDA initialization: Unexpected
error from cudaGetDeviceCount(). Did you run some cuda functions before calling
NumCudaDevices() that might have already set an error? Error 803: system has
unsupported display driver / cuda driver combination (Triggered internally at ../c10/
cuda/CUDAFunctions.cpp:108.)
[2m[36m(DefaultActor pid=733408)[0m return torch._C._cuda_getDeviceCount() >
0
[2m[36m(DefaultActor pid=733408)[0m /home/user/.local/lib/python3.10/site-
packages/torch/utils/data/_utils/collate.py:183: UserWarning: The given NumPy array
is not writable, and PyTorch does not support non-writable tensors. This means
writing to this tensor will result in undefined behavior. You may want to copy the array
to protect its data or make it writable before converting it to a tensor. This type of
warning will be suppressed for the rest of this program. (Triggered internally at ../
torch/csrc/utils/tensor_numpy.cpp:206.)
[2m[36m(DefaultActor pid=733408)[0m return collate([torch.as_tensor(b) for b in
batch], collate_fn_map=collate_fn_map)
INFO flwr 2024-03-23 10:36:24,793 | 2437557820.py:231 | Received initial
parameters from one random client
INFO flwr 2024-03-23 10:36:24,795 | 2437557820.py:23 | Evaluating initial

parameters

/home/user/.local/lib/python3.10/site-packages/torch/cuda/__init__.py:141:

UserWarning: CUDA initialization: Unexpected error from cudaGetDeviceCount(). Did you run some cuda functions before calling NumCudaDevices() that might have already set an error? Error 803: system has unsupported display driver / cuda driver combination (Triggered internally at ../c10/cuda/CUDAFunctions.cpp:108.)

return torch._C._cuda_getDeviceCount() > 0

f off

INFO flwr 2024-03-23 10:37:48,052 | 2437557820.py:26 | initial parameters (loss, other metrics): 0.01497905547214261, {'accuracy': tensor(0.0013)}

INFO flwr 2024-03-23 10:37:48,056 | 2437557820.py:36 | FL starting

DEBUG flwr 2024-03-23 10:37:48,057 | 2437557820.py:165 | fit_round 1: strategy sampled 3 clients (out of 3)

Evaluation on the server: test_loss=0.0150, test_accuracy=0.0013

Configuring round 1

[2m[36m(DefaultActor pid=733407)[0m /home/user/.local/lib/python3.10/site-packages/torch/cuda/__init__.py:141: UserWarning: CUDA initialization: Unexpected error from cudaGetDeviceCount(). Did you run some cuda functions before calling NumCudaDevices() that might have already set an error? Error 803: system has unsupported display driver / cuda driver combination (Triggered internally at ../c10/cuda/CUDAFunctions.cpp:108.)

[2m[36m(DefaultActor pid=733407)[0m return torch._C._cuda_getDeviceCount() > 0

[2m[36m(DefaultActor pid=733406)[0m /home/user/.local/lib/python3.10/site-packages/torch/cuda/__init__.py:141: UserWarning: CUDA initialization: Unexpected error from cudaGetDeviceCount(). Did you run some cuda functions before calling NumCudaDevices() that might have already set an error? Error 803: system has unsupported display driver / cuda driver combination (Triggered internally at ../c10/cuda/CUDAFunctions.cpp:108.)

[2m[36m(DefaultActor pid=733406)[0m return torch._C._cuda_getDeviceCount() > 0

[2m[36m(DefaultActor pid=733407)[0m /home/user/.local/lib/python3.10/site-packages/torch/autograd/_utils/data/_utils/collate.py:183: UserWarning: The given NumPy array is not writable, and PyTorch does not support non-writable tensors. This means writing to this tensor will result in undefined behavior. You may want to copy the array to protect its data or make it writable before converting it to a tensor. This type of warning will be suppressed for the rest of this program. (Triggered internally at ../torch/csrc/autograd/_utils/tensor_numpy.cpp:206.)

[2m[36m(DefaultActor pid=733407)[0m return collate([torch.as_tensor(b) for b in batch], collate_fn_map=collate_fn_map)

[2m[36m(DefaultActor pid=733408)[0m Client 0: only had its own tree

[2m[36m(DefaultActor pid=733407)[0m Client 1: only had its own tree

[2m[36m(DefaultActor pid=733406)[0m Client 2: only had its own tree

[2m[36m(DefaultActor pid=733408)[0m Client 0: training for 50 iterations/updates

[2m[36m(DefaultActor pid=733408)[0m Client 0: training round complete, 3200 examples processed

[2m[36m(DefaultActor pid=733407)[0m Client 1: training for 50 iterations/updates

[2m[36m(DefaultActor pid=733407)[0m Client 1: training round complete, 3200 examples processed

[2m[36m(DefaultActor pid=733406)[0m Client 2: training for 50 iterations/updates

DEBUG flwr 2024-03-23 10:38:49,747 | 2437557820.py:180 | fit_round 1 received 3 results and 0 failures
WARNING flwr 2024-03-23 10:38:49,752 | fedxgb_nn_avg.py:102 | No fit_metrics_aggregation_fn provided
Server side aggregated 3 trees.
f off
[2m[36m(DefaultActor pid=733406)[0m Client 2: training round complete, 3200 examples processed
INFO flwr 2024-03-23 10:42:22,143 | 2437557820.py:51 | fit progress: (1, 0.00917022571678092, {'accuracy': tensor(0.9988)}, 274.0862308289943)
INFO flwr 2024-03-23 10:42:22,148 | 2437557820.py:98 | evaluate_round 1: no clients selected, cancel
DEBUG flwr 2024-03-23 10:42:22,149 | 2437557820.py:165 | fit_round 2: strategy sampled 3 clients (out of 3)
Evaluation on the server: test_loss=0.0092, test_accuracy=0.9988
Configuring round 2
[2m[36m(DefaultActor pid=733407)[0m Client 2: recieved 3 trees
[2m[36m(DefaultActor pid=733406)[0m Client 1: training for 50 iterations/updates
[2m[36m(DefaultActor pid=733408)[0m Client 0: recieved 3 trees[32m [repeated 2x across cluster] (Ray deduplicates logs by default. Set RAY_DEDUP_LOGS=0 to disable log deduplication, or see <https://docs.ray.io/en/master/ray-observability/ray-logging.html#log-deduplication> for more options.))[0m
[2m[36m(DefaultActor pid=733406)[0m Client 1: training round complete, 3200 examples processed
DEBUG flwr 2024-03-23 10:43:25,934 | 2437557820.py:180 | fit_round 2 received 3 results and 0 failures
Server side aggregated 3 trees.
f off
INFO flwr 2024-03-23 10:44:27,860 | 2437557820.py:51 | fit progress: (2, 0.005275848104488284, {'accuracy': tensor(0.9987)}, 399.8035189469956)
INFO flwr 2024-03-23 10:44:27,862 | 2437557820.py:98 | evaluate_round 2: no clients selected, cancel
DEBUG flwr 2024-03-23 10:44:27,863 | 2437557820.py:165 | fit_round 3: strategy sampled 3 clients (out of 3)
Evaluation on the server: test_loss=0.0053, test_accuracy=0.9987
Configuring round 3
[2m[36m(DefaultActor pid=733407)[0m Client 2: training for 50 iterations/updates[32m [repeated 2x across cluster][0m
[2m[36m(DefaultActor pid=733407)[0m Client 2: recieved 3 trees
[2m[36m(DefaultActor pid=733407)[0m Client 2: training round complete, 3200 examples processed[32m [repeated 2x across cluster][0m
[2m[36m(DefaultActor pid=733406)[0m Client 0: recieved 3 trees
[2m[36m(DefaultActor pid=733406)[0m Client 0: training for 50 iterations/updates
[2m[36m(DefaultActor pid=733408)[0m Client 1: recieved 3 trees
[2m[36m(DefaultActor pid=733406)[0m Client 0: training round complete, 3200 examples processed
[2m[36m(DefaultActor pid=733407)[0m Client 2: training for 50 iterations/updates
DEBUG flwr 2024-03-23 10:45:17,016 | 2437557820.py:180 | fit_round 3 received 3 results and 0 failures
Server side aggregated 3 trees.

f off

INFO flwr 2024-03-23 10:46:31,849 | 2437557820.py:51 | fit progress: (3, 0.002900565591391469, {'accuracy': tensor(0.9987)}), 523.7923428459908)

INFO flwr 2024-03-23 10:46:31,853 | 2437557820.py:98 | evaluate_round 3: no clients selected, cancel

DEBUG flwr 2024-03-23 10:46:31,854 | 2437557820.py:165 | fit_round 4: strategy sampled 3 clients (out of 3)

Evaluation on the server: test_loss=0.0029, test_accuracy=0.9987

Configuring round 4

[2m[36m(DefaultActor pid=733408)[0m Client 2: recieved 3 trees

[2m[36m(DefaultActor pid=733408)[0m Client 1: training round complete, 3200 examples processed[32m [repeated 2x across cluster][0m

[2m[36m(DefaultActor pid=733408)[0m Client 1: training for 50 iterations/updates

[2m[36m(DefaultActor pid=733408)[0m Client 2: training for 50 iterations/updates

[2m[36m(DefaultActor pid=733406)[0m Client 1: recieved 3 trees[32m [repeated 2x across cluster][0m

[2m[36m(DefaultActor pid=733408)[0m Client 2: training round complete, 3200 examples processed

[2m[36m(DefaultActor pid=733406)[0m Client 1: training for 50 iterations/updates[32m [repeated 2x across cluster][0m

[2m[36m(DefaultActor pid=733407)[0m Client 0: training round complete, 3200 examples processed

DEBUG flwr 2024-03-23 10:47:33,804 | 2437557820.py:180 | fit_round 4 received 3 results and 0 failures

[2m[36m(DefaultActor pid=733406)[0m Client 1: training round complete, 3200 examples processed

Server side aggregated 3 trees.

f off

INFO flwr 2024-03-23 10:48:58,847 | 2437557820.py:51 | fit progress: (4, 0.0015603436968774983, {'accuracy': tensor(0.9987)}), 670.790060829997)

INFO flwr 2024-03-23 10:48:58,849 | 2437557820.py:98 | evaluate_round 4: no clients selected, cancel

DEBUG flwr 2024-03-23 10:48:58,849 | 2437557820.py:165 | fit_round 5: strategy sampled 3 clients (out of 3)

Evaluation on the server: test_loss=0.0016, test_accuracy=0.9987

Configuring round 5

[2m[36m(DefaultActor pid=733407)[0m Client 0: recieved 3 trees

[2m[36m(DefaultActor pid=733407)[0m Client 0: training for 50 iterations/updates

[2m[36m(DefaultActor pid=733408)[0m Client 2: recieved 3 trees[32m [repeated 2x across cluster][0m

[2m[36m(DefaultActor pid=733407)[0m Client 0: training round complete, 3200 examples processed

[2m[36m(DefaultActor pid=733408)[0m Client 2: training for 50 iterations/updates[32m [repeated 2x across cluster][0m

[2m[36m(DefaultActor pid=733408)[0m Client 2: training round complete, 3200 examples processed[32m [repeated 2x across cluster][0m

DEBUG flwr 2024-03-23 10:49:49,687 | 2437557820.py:180 | fit_round 5 received 3 results and 0 failures

Server side aggregated 3 trees.

f off

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INFO flwr 2024-03-23 10:56:12,617 | 2437557820.py:51 | fit progress: (5,
0.0008277318145600831, {'accuracy': tensor(0.9987)}), 1104.5597491049994)
INFO flwr 2024-03-23 10:56:12,619 | 2437557820.py:98 | evaluate_round 5: no
clients selected, cancel
INFO flwr 2024-03-23 10:56:12,619 | 2437557820.py:79 | FL finished in
1104.5623159819952
INFO flwr 2024-03-23 10:56:12,620 | app.py:226 | app_fit: losses_distributed []
INFO flwr 2024-03-23 10:56:12,621 | app.py:227 | app_fit: metrics_distributed_fit {}
INFO flwr 2024-03-23 10:56:12,621 | app.py:228 | app_fit: metrics_distributed {}
INFO flwr 2024-03-23 10:56:12,622 | app.py:229 | app_fit: losses_centralized [(0,
0.01497905547214261), (1, 0.00917022571678092), (2, 0.005275848104488284),
(3, 0.002900565591391469), (4, 0.0015603436968774983), (5,
0.0008277318145600831)]
INFO flwr 2024-03-23 10:56:12,624 | app.py:230 | app_fit: metrics_centralized
{'accuracy': [(0, tensor(0.0013)), (1, tensor(0.9988)), (2, tensor(0.9987)), (3,
tensor(0.9987)), (4, tensor(0.9987)), (5, tensor(0.9987))]}
Evaluation on the server: test_loss=0.0008, test_accuracy=0.9987
History (loss, centralized):
    round 0: 0.01497905547214261
    round 1: 0.00917022571678092
    round 2: 0.005275848104488284
    round 3: 0.002900565591391469
    round 4: 0.0015603436968774983
    round 5: 0.0008277318145600831
History (metrics, centralized):
{'accuracy': [(0, tensor(0.0013)), (1, tensor(0.9988)), (2, tensor(0.9987)), (3,
tensor(0.9987)), (4, tensor(0.9987)), (5, tensor(0.9987))]}

```