

# Discussion on computing efficiency

Metric \ Exp. Name	PPO-0409-1	debug	debug-41600	debug-85000
iteration	135	135	276	132
agent collision	0.03947	0.03796	0.05523	0.0121
pass rate	0.96037	0.96189	0.9447	0.98796
success rate	0.15490	0.1588	0.1645	0.16492
episode reward	1629.7544	1630.712	1514.805	1653.808
num workers	48	52	52	2
env per worker	16	8	8	16
cpu per worker	1	1	1	26
sample batch size	100	200	100	200
train batch size	80000	85000	41600	85000
grad time (ms)	933797.591	925613.702	453098.768	955638.176
load time (ms)	359.761	340.345	161.508	364.096
sample time (ms)	49862.033	59504.045	17024.831	64123.812
update time (ms)	26.568	20.213	26.619	10.313
iteration time	974.257	997.7915	476.2374	1028.4034
total time (iter avg)	129382.6396 (958)	133714.459 (990)	133056.2950 (492)	132472.352 (1003)

Note: sample batch size means the batch size sampled from **one environment**, no matter how many agents in it.

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- How to set num\_worker ?
- How many cpu should a num\_worker used (num\_cpus\_per\_worker)?
- How to improve GPU utilization?
- How to exploit CPU?

*and ... further more ...*

- What's the proper config for multiple nodes training?