Angel

ryanyycao

1.

Angel Angel PSModel PS Server PSModel Angel Java Scala Yarn Spark on Angel

2.

Angel

Client

Angel

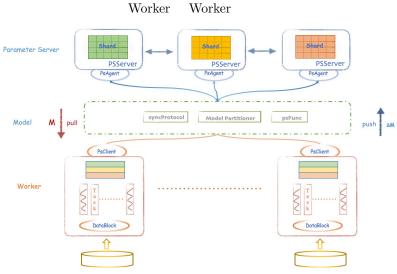
Master

Worker ParameterServer

Worker ParameterServer

Parameter Server

Worker



Angel

 $\mathbf{PSModel}$

PSModel Client Worker PSServer

${\bf MLModel}$

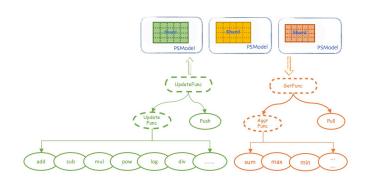
PSModel

3.

 $\begin{array}{ccc} \operatorname{BSP} & \operatorname{Task} \\ \operatorname{SSP} & \operatorname{Task} \\ \operatorname{ASP} & \operatorname{Task} \end{array}$ $\operatorname{\textbf{ASP}} & \operatorname{\textbf{Task}} \\ \operatorname{\textbf{ps}} & \operatorname{\textbf{function}}(\operatorname{\textbf{psf}}) \\ & \operatorname{Angel} & \operatorname{psf} & / & \operatorname{Angel} \end{array}$

 $\bullet \qquad \qquad \mathrm{pull}()/\mathrm{push}() \qquad \qquad \mathrm{psf} \quad \mathrm{ps}$

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• GetFunc

PSServer PSServer

• UpdateFunc PSClient

PS PS

PS checkpoint

Worker Master PS

Master hdfs Yarn Angel Master Worker PS

4. Angel

- Jdk >= 1.8 Maven >= 3.0.5 Protobuf >= 2.5.0 Hadoop Protobuf
- git clone https://github.com/Tencent/angel
- mvn clean package -Dmaven.test.skip=true dist/target
- Yarn

5.

- 1. MLModel
- 2. Task TrainTask parse() train()
- 3. Runner MLRunner train() predict()

6.

Angel

Angel

psFunc PSServer PSServer psFunc ps-Func Worker