

Fault-Tolerance in Pregel

- **Checkpointing**
 - Periodically, master instructs the workers to save state of their partitions to persistent storage
 - e.g., Vertex values, edge values, incoming messages
- **Failure detection**
 - Using periodic “ping” messages from master → worker
- **Recovery**
 - The master reassigns graph partitions to the currently available workers
 - The workers all reload their partition state from most recent available checkpoint

