

# AWS-Enabled WorkQueue

*Peter Ivie, Nick Hazekamp, Casey Ferris*

# Problem

- WorkQueue does not support files in S3.
  - Files may already be in S3
  - Intermediate files temporarily in S3
- Transfer between local and S3
  - Price
  - Performance

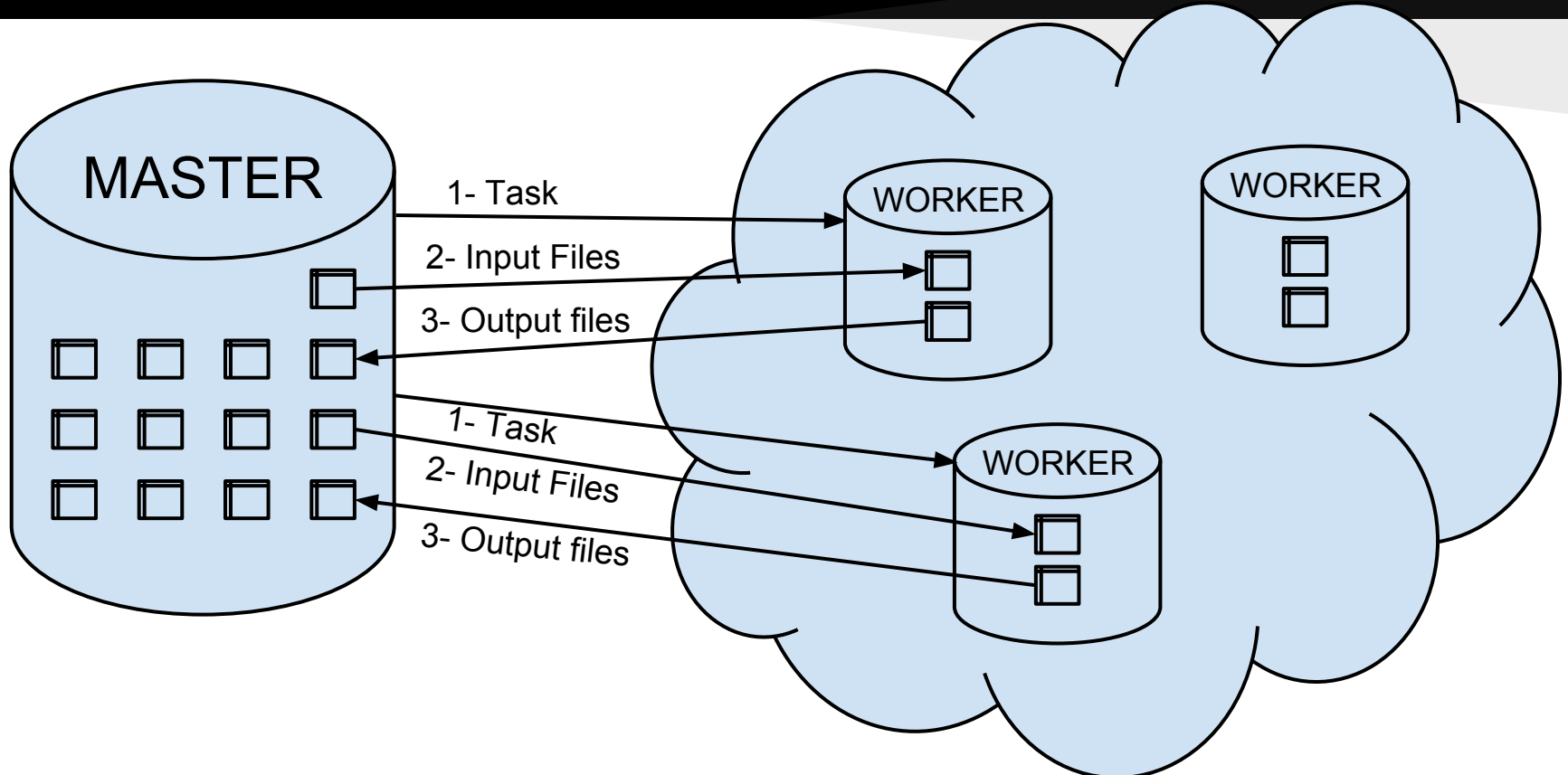
# Solution

- Add extension to WorkQueue
  - Allow the workers to access files located in S3.
  - Allow the master to specify files in S3.
- Add extensions to WorkQueue to allow for workers to be made and controlled on EC2
  - Reduce costs of using S3
  - Foreshadowing when WorkQueue becomes elastic

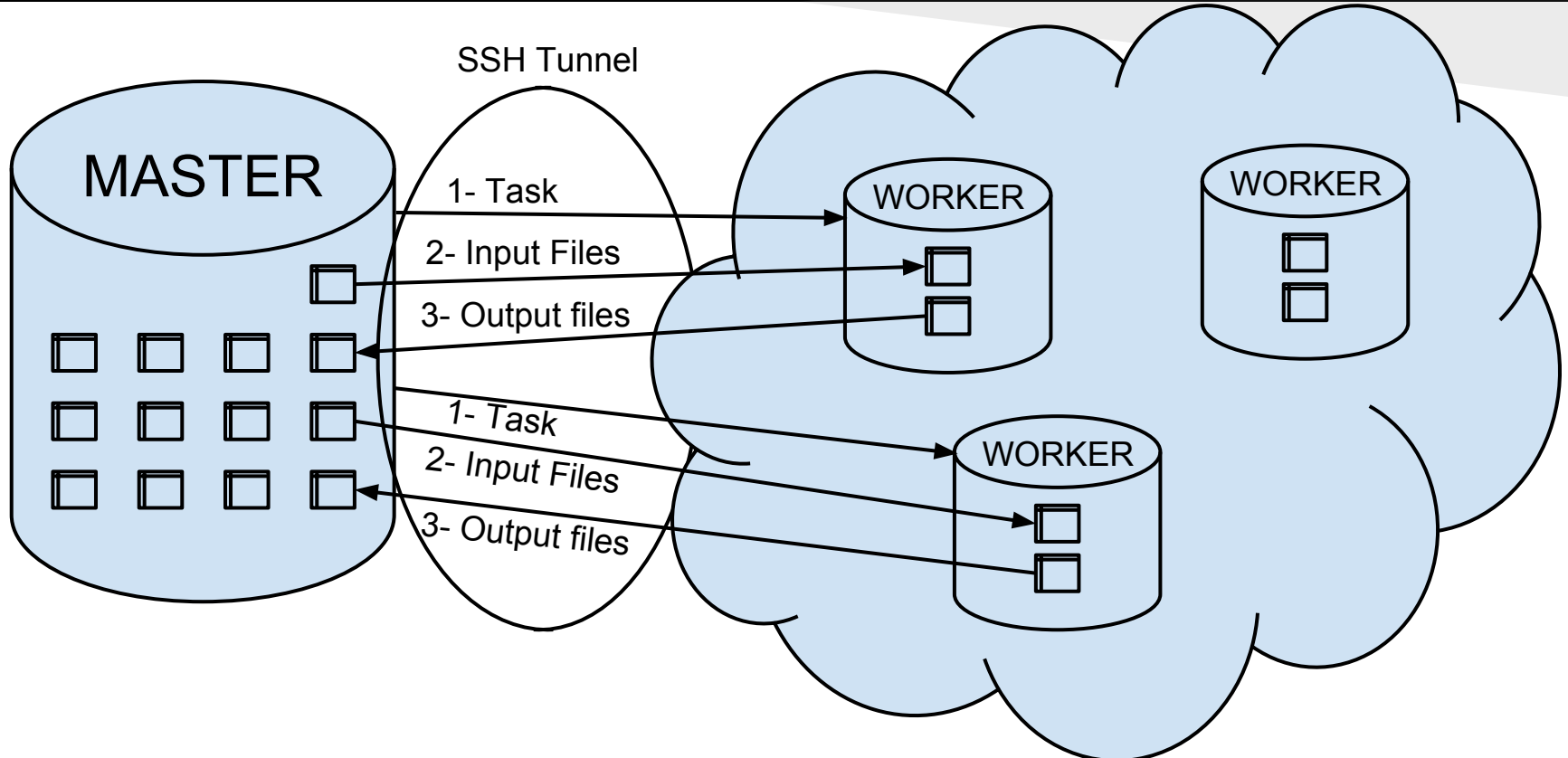
# Challenges

- Worker Creation (AMI)
  - Automatically creating Workers on EC2
- Security (Tunnel)
  - Master at Notre Dame with Workers on EC2
- Worker Control (Foreman)
  - Workers receiving tasks from Master
- Data Transfer (S3)
  - Using S3 programmatically within Workers

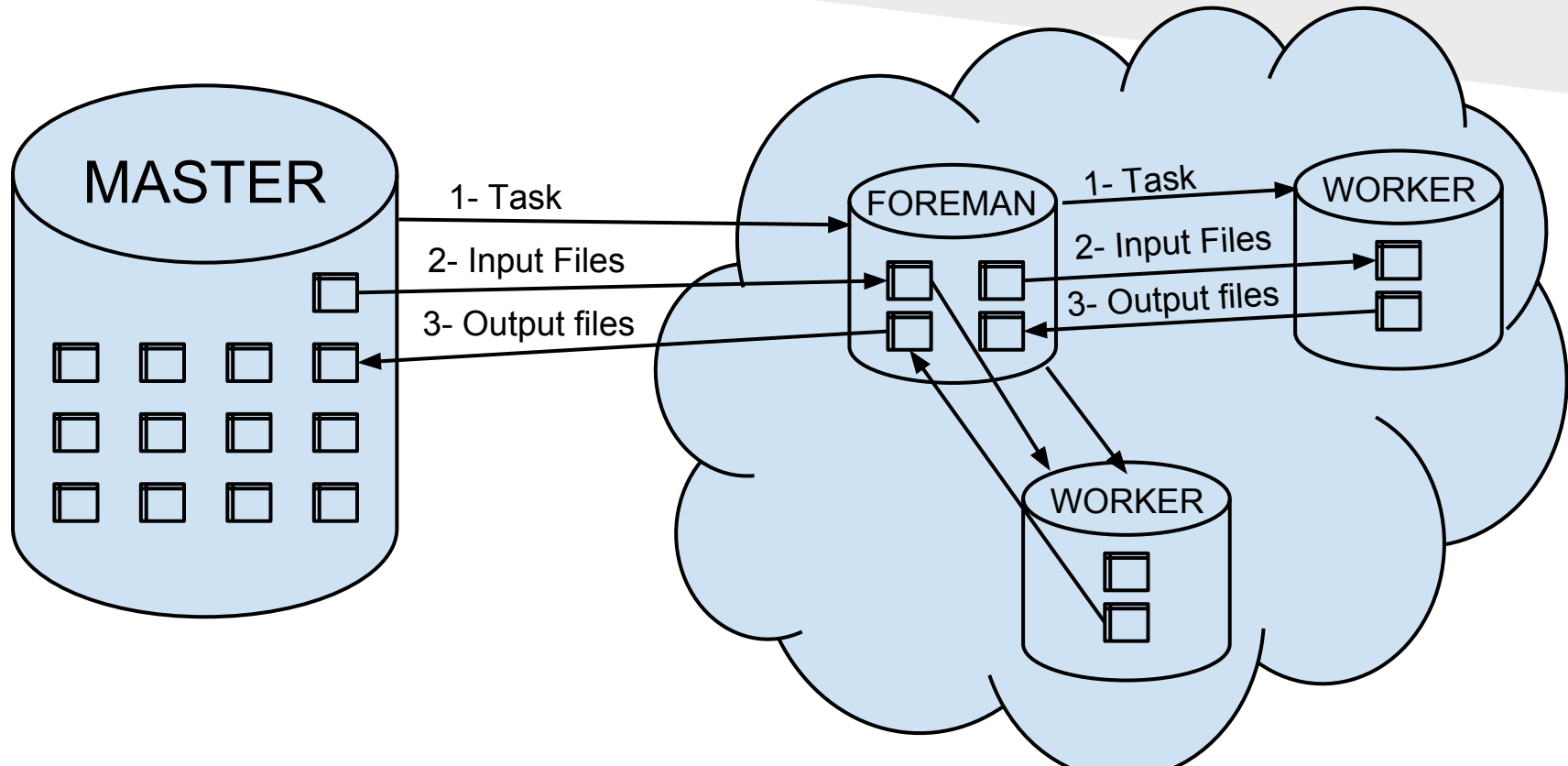
# Original System



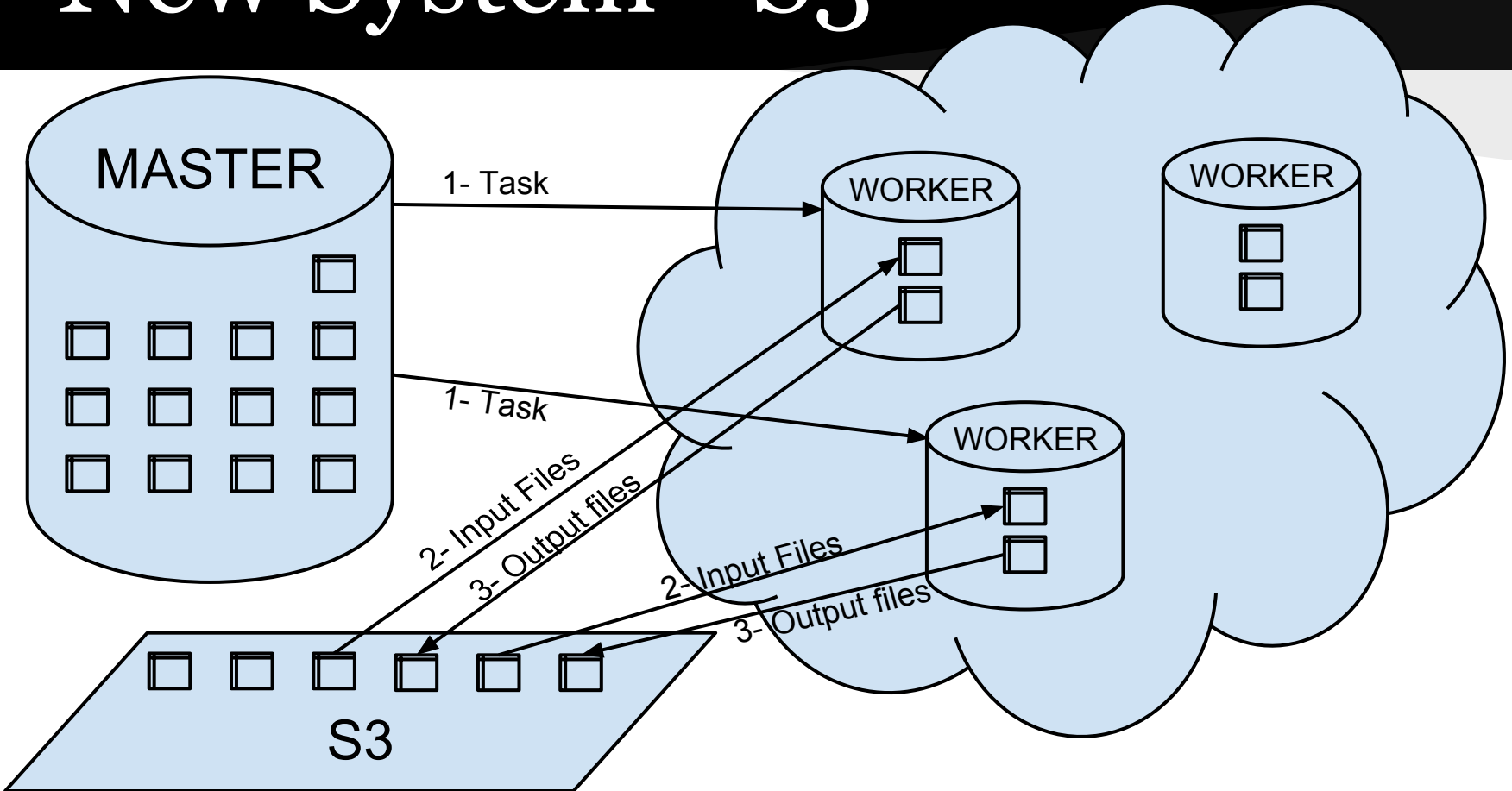
# New System - Tunnel



# New System - Foreman

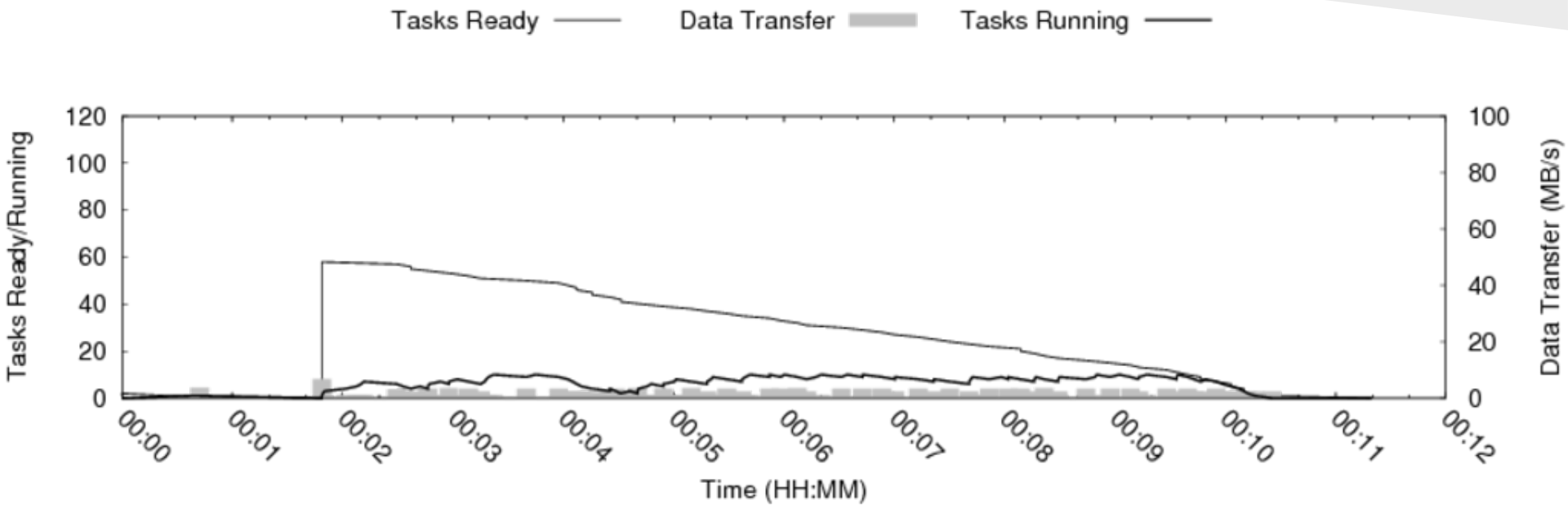


# New System - S3





# Preliminary Results



# Remaining Work

- Test with S3
- Test without makeflow
- Use second test case

Thank You!

Questions?