

# Deploying AuriStor on the Azure Cloud

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# Introduction

- Johns Hopkins ACM members
  - President: Philip
  - System Administrator: Ben
  - Secretary: Cameron
- We run OpenAFS out of our systems!

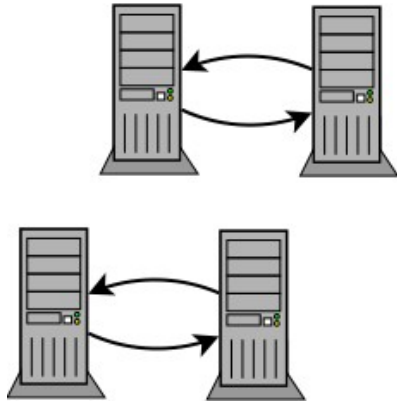
# Overview

- With Your File System Inc. we wanted to deploy Auristor and OpenAFS to the Azure Cloud
  - See if it AFS can be run out of the cloud
  - Compare it to traditional hardware options

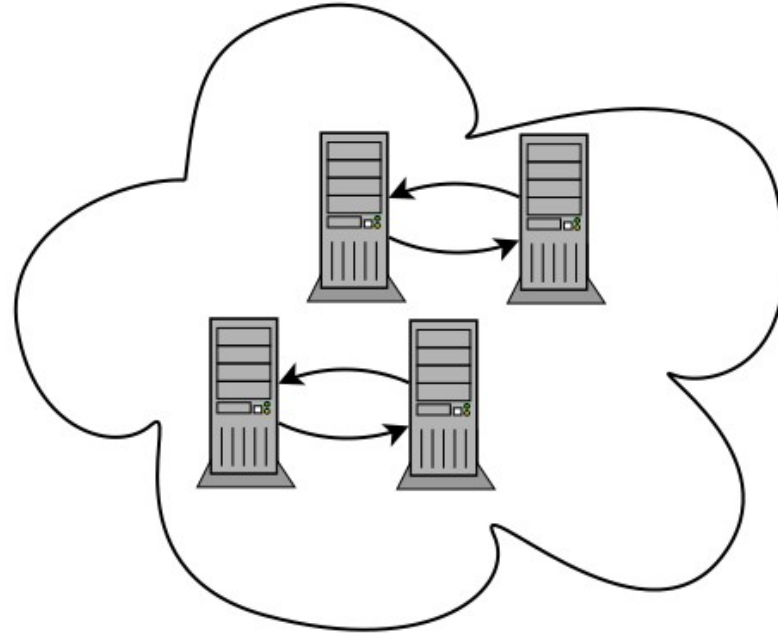
# Cell Deployments

- 4 virtual machines
  - Standard tier, 2 cores, 3.5 gb of RAM
  - 2 cells of two servers
- 4 Dell 1850's
  - 1 core, 1 gb of RAM
  - 2 cells of two servers

# Topology



Hardware Cells



Azure Cells

# Results

- Successfully able to deploy both AuriStor and OpenAFS to the Azure Cloud
  - Able to access the cells from inside and outside of Azure
- Ran the benchmarking software Iozone out of the cells to gauge the performance

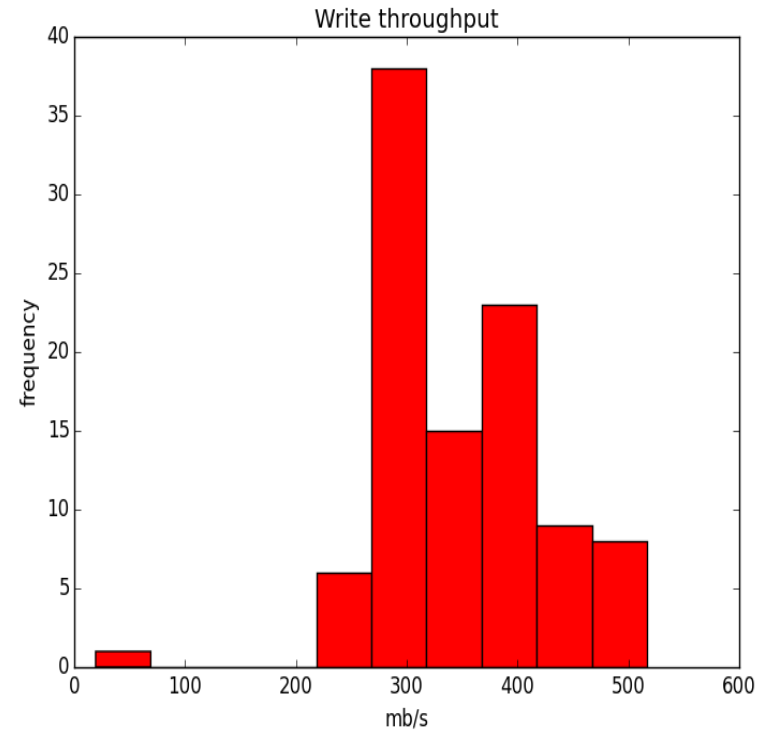
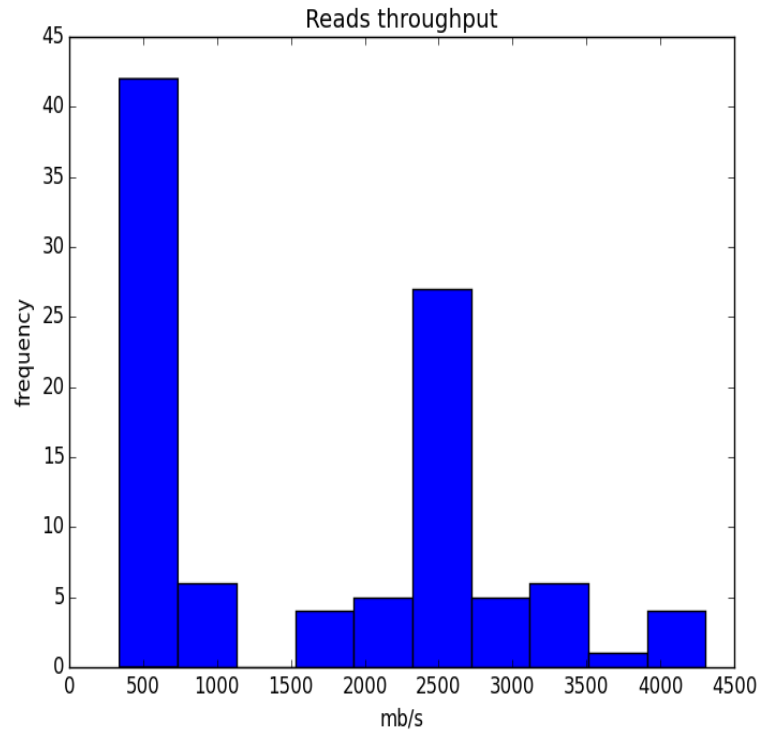
# Hardware benchmarking

- Results were pretty consistent across all our runs
- Sample run

Operation	AuriStor (local)	Auristor (remote)	OpenAFS (local)	OpenAFS (remote)
Read (mb/s)	1718.25	1619.76	1640.80	1610.04
Write (mb/s)	169.71	169.42	178.03	176.43

# Azure benchmarking

- Results varied widely across our runs





# Azure Benchmarking cont.

- Reading across the network for AuriStor
- 100 runs of Iozone
- Possible reasons:
  - We could be doing our tests wrong
  - Azure is still developing and growing rapidly
  - We picked bad hours for our tests

# Conclusions

- You can deploy AFS to the Azure Cloud
  - It may have network issues
  - No need to run your own hardware!
  - Microsoft is pushing for hybrid clouds
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