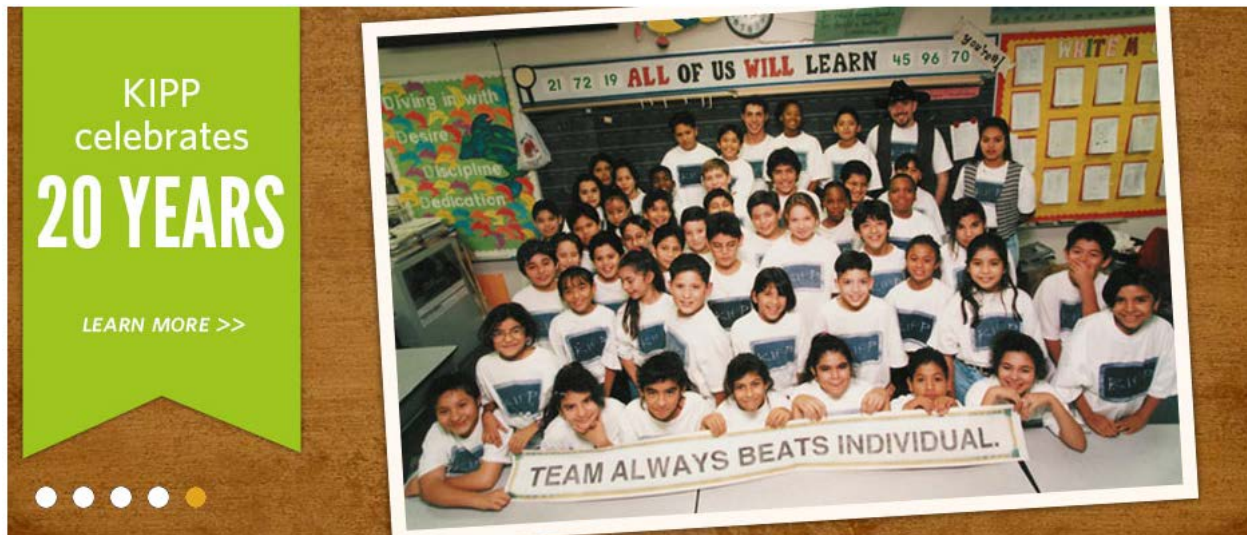


Turning a High-Wire Juggling Act into a Walk in the Park

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About KIPP

- ◆ KIPP (Knowledge Is Power Program) is a national network of free, open-enrollment, college-preparatory public charter schools with a track record of preparing students in underserved communities for success in college and in life.



- ◆ 141 schools in 20 states and DC
- ◆ 50,000 students

The KIPP Datacenter

- ◆ 90% of the datacenter is virtualized (VMware)
- ◆ Supporting 5,000 users who access
 - ◆ Email
 - ◆ SharePoint,
 - ◆ SQL databases
- ◆ Microsoft Exchange and backup servers are physical
- ◆ Small team of IT generalists (no dedicated storage admin)

Datacenter Projects

- Infrastructure upgrade
 - ◆ Datacenter move
 - ◆ Network/Compute upgrade
- Data protection
 - ◆ Incorporate SAN Snapshots
 - ◆ Virtual aware software
- Email update
 - ◆ Version upgrade
 - ◆ Migrate to virtual or hosted solution

Overview of previous storage

➤ HP Lefthand

- ◆ Total capacity: 29TB usable
 - › across 2 clusters (5 nodes total)
- ◆ Performance (IOPS / latency)
 - › IOPs spikes to 1300
 - › latency unknown, but errors
- ◆ Used only for shared storage
- ◆ Support virtualized workloads only
- ◆ Rackspace: 10U

Overview of previous storage

➤ Limitations / issues

- ◆ Performance
- ◆ Redundancy
- ◆ Issues with expandability
 - > Power
 - > Network ports
 - > Rack space
 - > What is gained ?

Storage Platform - Timeline

- ▶ Previous Storage Platform: HP LeftHand
 - ◆ MAY 2012: Purchased storage
 - ◆ FEB 2013: Considered replacing storage to alleviate performance strain from multiple applications
 - ◆ AUG 2013: Purchased/Installed Nimble Storage array
 - ◆ SEPT 2013: Migrated workloads over from previous storage

Considerations for Selecting New Storage

- Pricing
 - ◆ Hardware
 - ◆ Software
 - ◆ Maintenance
- Hidden costs
 - ◆ Power consumption
 - ◆ Networking protocols and ports
 - ◆ Rack space
- Performance
- Features (more than shared storage)
- Scalability
- Ease of use (setup, administration)

- ◆ Nimble Storage benefits:
 - ◆ Flexible solution: no exhaustive sizing exercises upfront
 - ◆ In-line Compression
 - ◆ Simple Deployment
 - ◆ Ease of management
 - ◆ Performance (especially SQL jobs)
 - ◆ Pre/post sales support team
 - ◆ Training
 - ◆ Snapshots

Thank You!

Questions?