The Story Behind Stories
History

- WordPress site
- Started by University Marketing in 2012
- Initially used by few
- Started to expand to academic departments
- Used to generate feeds included on many sites
- Moving toward a central news hub
- Outgrew infrastructure
Early Infrastructure

- Single Windows server
- IIS
- PHP
- MySQL on dbm01
- Plugin for caching
Early Performance
Issues

- Long page loading times
  - Consistently above 5 seconds
  - Some pages much longer
  - Specific page over 5 minutes
- Frequently crashed from too much traffic
Causes of Issues

- Theme complexity
- Over use of plugins
- Server and DB resource constraints
Experimentation

- Pilot server for experimentation
  - RedHat
  - Nginx
  - HHVM
  - Database on server
Experimentation Results
Host on Amazon Web Services
- Similar to the pilot structure
- Load balanced web servers
  - Minimum of 2
  - Scale when needed
- Separate database server
- S3 and CDN for image hosting
Issues After the Conversion

- Logging in would fail often
- Slow database returns
- Server crashes from HHVM memory leaks
- Deploying changes took many steps
Resolving the New Issues

- Session stickiness
- Database read replica
- Replace HHVM with PHP-FPM
- Deployment with Git
Current Infrastructure
Future Enhancements

- New theme
  - Improved performance
  - Simplified, but flexible
- Implement caching
- New versions of processors
  - PHP 7
  - HHVM updates
Demo of AWS functionality
Thank You

Questions?

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