The Story Behind Stories
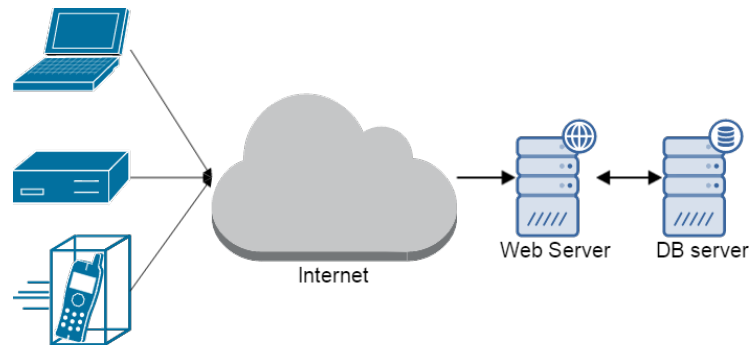
History

- 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
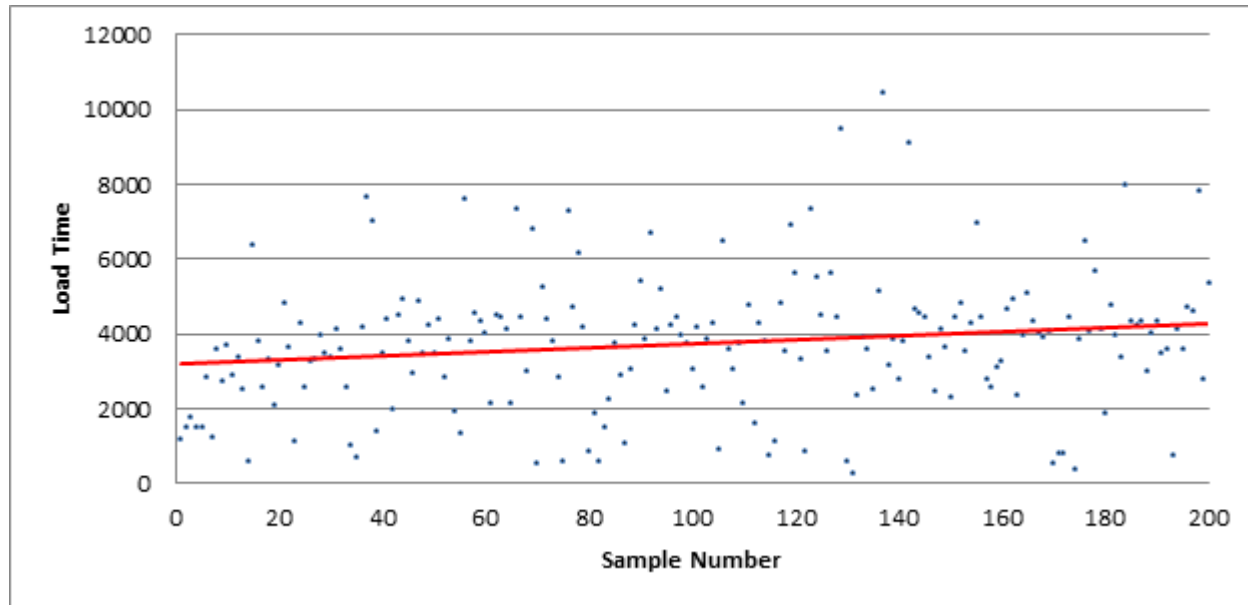- Outgrew infrastructure

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
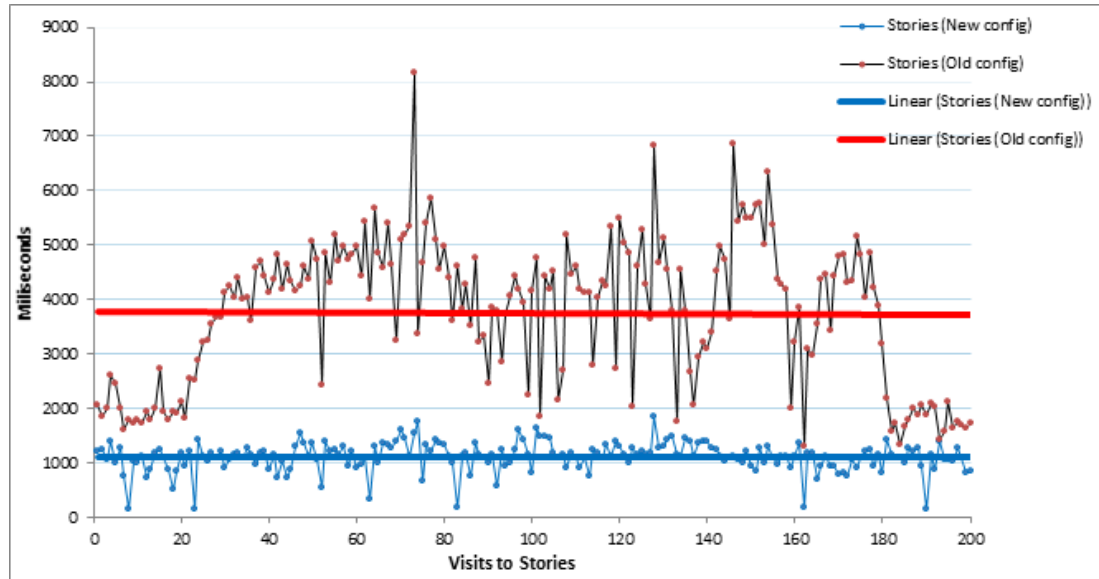- Server and DB resource constraints

Experimentation

- Pilot server for experimentation
  - RedHat
  - Nginx
  - HHVM
  - Database on server

Experimentation Results

New Infrastructure

- 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
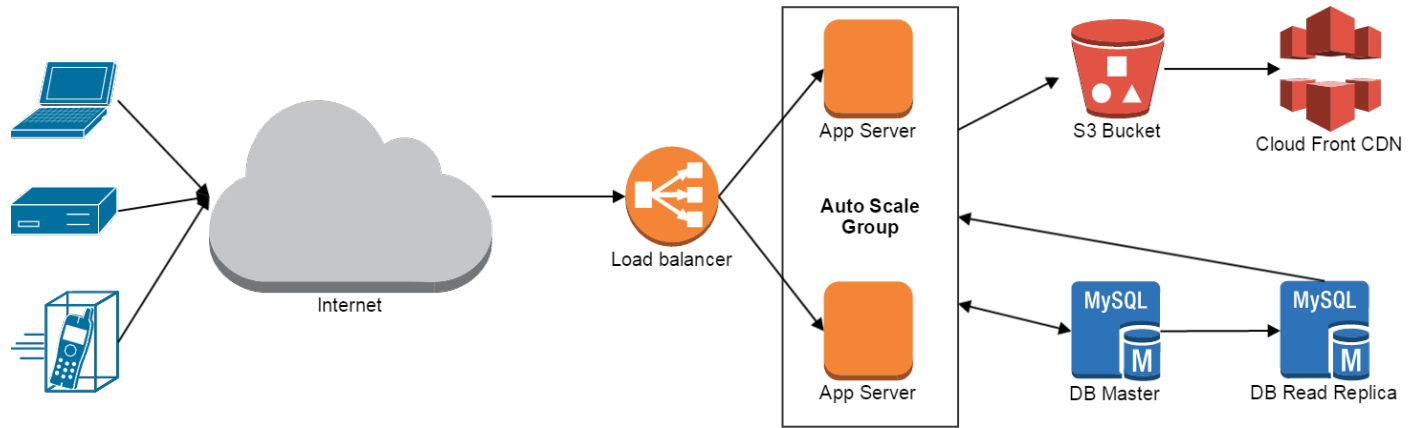- Deploying changes took many steps

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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