# OUTLINE

* Before Optimizing
  + What is your baseline? Do you have a record of current performance?
    - Use testing tools
      * GTMetrix
      * WebpageTest.or
      * PingDom
    - Make a record or automate monitoring
    - Install Relic monitoring
      * Setup application
  + Know your limitations? What you can and cannot do?
    - Ask the client what you can do and not do on the site
    - Check the server configuration
    - Ask support
    - Research the hosting, the technologies etc.
    - Client vision
  + What are your goals for the short term and long term?
    - Know the clients short term goals
      * Get the site faster
      * Better interactivity
      * Responsive design , mobile support
    - Know long term goals
      * Are they moving to a new host in six months? Are they looking into it
      * Integrating a service or cloud application in a year
      * Are they changing design or branding?
      * Etc.
* Low Hanging Fruits
  + Change hosting
    - Webhosting Talk
  + Make fewer requests
    - Consolidate scripts and styles
    - Check styles for @import and make link tags instead
    - Check scripts for styling or class reference
  + Optimize page and assets
    - Images
    - CSS
    - HTML
    - Javascript
  + Wordpress plugins
    - Super Cache
    - W3tc Total Cache
    - Smush IT
    - Optmize DB
  + Webserver
    - Apache
      * Install Fast CGI
      * Use gzip compression
    - Litespeed
      * Tweak settings
      * Install LScache
      * Use gzip compression
    - Change to NGINX
      * Enable HHVM;
      * Or Upgrade to PHP7
  + MySQL
    - Use MariaDB
    - Optimize Database
      * Thru plugin
      * Using commands
    - Add database caching
* Web Development
  + Identify Above the fold assets, styles and scripting
    - Move styling and scripting required in the initial load to files of their own
    - Load these files early
    - Everything are loaded later
      * Use php flush
  + Minify HTML, CSS, javascript
    - Use bundling using task runners
  + Optimize images
    - Use sprites if possible
    - Use fonticons
  + PHP
    - Flush early
* Wordpress
  + Cleanup unused themes
  + Cleanup unused Plugins
  + Leverage Caching
    - Apache
      * .htaccess
    - Nginx
    - Litespeed
  + Automate
    - InfinteWP
    - ManageWP
* CDN
  + Cloudflare
  + MaxCDN
  + KeyCDN
* Offloading
  + Domain sharding
    - Cookie less domains

References:

* <http://yuiblog.com/blog/2007/12/20/video-lecomte/>
* <http://www.slideshare.net/julien.lecomte/high-performance-ajax-applications/7-Yahoos_Exceptional_Performance_rules_ulliMake>
* <http://www.ravelrumba.com/blog/static-cookieless-domain/>
* <http://www.ravelrumba.com/blog/domain-sharding-tests-in-ie7-ie8-firefox-and-safari/>
* <https://developers.google.com/speed/docs/insights/EnableCompression?csw=1#ServeFromCookielessDomain>
* <https://gtmetrix.com/parallelize-downloads-across-hostnames.html>
* <https://gtmetrix.com/parallelize-downloads-across-hostnames-common-problems.html>
* <https://en.wikipedia.org/wiki/Comet_(programming)>
* <https://www.tipsandtricks-hq.com/wordpress-optimization-tips-and-tricks-for-better-performance-and-speed-1435>
* <http://www.prelovac.com/vladimir/wordpress-optimization-guide/>