Introduction to AMP Technology

Technical Overview

NYPHP Internal Presentation
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AMP Setup and Implementation?

- Installing and configuring each component
  - Apache with Dynamic Shared Object (DSO) Support
  - Standard MySQL
  - PHP 4 as a DSO with native MySQL support
- Testing the install with phpMyAdmin
- Using AMP
  - Setting php.ini values at runtime
  - Array manipulation
  - Database connections and queries
  - Error checking and reporting

http://www.nyphp.org
http://apache.org
http://mysql.com
http://php.net
9/25/02
Apache 1.3.26

- `--prefix=/demo/apache`
  - Apache's tree top
- `--enable-module=so`
  - Enable DSO support (mod_php)
- `--with-port=8000`
- `--server-uid[ gid ]=praxis`
  - Only Apache children will run as this user/group
MySQL 3.23.52

Configuration and Compilation

- `--prefix=/demo/mysql`
  - MySQL's tree top
- `--with-unix-socket-path=/demo/tmp/mysql.sock`
  - Needed with multiple MySQL instances per box
- `--with-mysqld-user=praxis`
  - MySQL will completely drop root and run as this user
- MySQL offers many other configuration options:
  - DB handlers (InnoDB) provide transactions etc.
  - Compilation tweaks for improved performance
- MySQL AB binaries are recommended for production systems (notably on Linux)
MySQL 3.23.52

Configuration and Compilation

- `/demo/mysql/bin/mysql_install_db`
  - Prepare and install the 'mysql' database
    - User and permission data dictionary used internally by MySQL
- `/demo/mysql/bin/safe_mysqld &`
  - Start mysqld wrapped in a monitoring script
- `/demo/mysql/bin/mysqladmin -u root -p 'demo'`
  - Set root (superuser) password for MySQL
  - Has no bearing on operating system accounts
PHP 4.2.3

Configuration and Compilation

- **--prefix=/demo/php**
  - PHP's tree top

- **--with-apxs=/demo/apache/bin/apxs**
  - Compile PHP as an Apache DSO

- **--with-mysql=/demo/mysql**
  - Point to MySQL's native client libraries
PHP 4.2.3

Setup and Integration

- `cp php.ini-recommended /demo/php/lib/php.ini`
  - Always use `php.ini-recommended`
    - Maintainable configuration for future PHP versions
- Ensure proper `httpd.conf` directives:
  - `LoadModule php4_module libexec/libphp4.so`
    - Load PHP DSO
  - `AddType application/x-httpd-php .php`
    - Pass .php files to PHP
  - `AddType application/x-httpd-php-source .phps`
    - Pass .phps (source) files to PHP for syntax highlighting
Getting AMP Online

- The data layer (MySQL) is already started
- Fire up the interface layer:
  - `/demo/apache/bin/apachectl start`
- `http://demo.nyphp.org:8000/sql/
  - phpMyAdmin is a good test to ensure everything is properly loaded and configured`
Putting AMP to Work

initial.phps

- http://demo.nyphp.org:8000/code/initial.phps
- View source with PHP's built-in highlighting
- GET method checking as a failsafe
- Override php.ini setting
  - Show errors in browser (stdout)
- Get MySQL connection online
  - localhost connections use UNIX domain sockets
- Create array of queries
  - PHP forms a sequential integer-indexed array
Putting AMP to Work...

initial.phps

- Loop through queries, processing and error checking
- Reconnect to MySQL with the same DB resource
  - Different username/password implies new connection
  - Old resource is dereferenced and freed by garbage collector
- Create nested arrays for member information
  - Automatic sequential integer-indexed array
  - Each element contains a user-defined associative array
- Loop through members, forming proper query
  - INSERT will generate non-zero ID (auto_increment)
Resources

- Zend - The PHP Company
- PHPBuilder Tutorials, Articles and Code
- PHP Triad - AMP Technology Installer for Windows
- AMP Based Professional CMS
- phpMyAdmin, phpPgAdmin, Tutorials and more
- DMOZ Open Directory PHP Tutorials
- New York PHP Projects and Knowledge Base

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