Anatomy of a PHP Request

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Who are we?
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Anatomy:
The science of the shape and structure of organisms and their parts.
Process Lifecycle
SAPI
(mod_php, nginx)

Extensions
(json, mysql, curl)

Core
(I/O, Request Management)

Zend 2 Engine
(compiler, vm, mm)
HTTP

GET
POST
PUT
DELETE
HEAD
SAPI
(mod_php, nginx)

Extensions
(json, mysql, curl)

Core
(I/O, Request Management)

Zend 2 Engine
(compiler, vm, mm)
Apache (mod_php) vs nginx + php-fpm
mod_php (Apache)
FastCGI / FPM (NGINX)
MINIT
Initialize Module (MINIT)

Initialize Request (RINIT)

Execute PHP script

Shutdown Request (RSHUTDOWN)

Shutdown Module (MSHUTDOWN)
What is Sentinel?
1. Create a global variable to track Redis server
2. If fails, query Sentinel again for a server
3. Value persists across requests (global in MINIT)
RINIT
Microtimers
Execute
<?php

// index.php

require __DIR__ . '/path/to/App.php';
require __DIR__ . '/path/to/Config.php';
$config = new Config();
$app = new App($config);
<?php
require dirname(__DIR__) . '/vendor/autoload.php';
<?php
$vendorDir = dirname(__DIR__);  
$classList = array(  
    'Legacy_Model' =>  
    $vendorDir . '/path/to/App/Model.php';
);
What about Opcache?
<?php

echo "Hello SCALE";
ASSIGN !0, 'Hello+SCALE'
ECHO !0
RETURN null
Opcache is global
Flatten config files
Cache the classmap
Cache file paths
stat=0
Each request is independent
<?php
$db = new PDO('mysql:host=localhost;dbname=test', 'username', 'password');
<?php
$fp = fopen('php://output', 'w');
fwrite($fp, 'Hello World!');
fclose($fp);
Warning: session_start(): Cannot send session cookie - headers already sent by (output started at on line 8)
<?php ob_start(); ?>

<p>Hello world!</p>

<?php ob_end_flush(); ?>
MSHUTDOWN
Review
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Questions?
HauteLook is hiring!

Links

- [http://blog.golemon.com/2008/01/understanding-opcodes.html](http://blog.golemon.com/2008/01/understanding-opcodes.html)