Middlewares em PHP

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PSR-7

Http Is The Foundation Of The Web

Um cliente manda uma request

```
$method = $request->getMethod();
$accept = $request->getHeader('Accept');
$path = $request->getUri()->getPath();
$controller = $request->getAttribute('controller');
```

O servidor retorna uma response

```
$response->getBody()->write('Hello world!');
$response = $response
    ->withStatus(200, 'OK')
    ->withHeader('Content-Type', 'text/plain');
```

Middlewares

Between the request and response

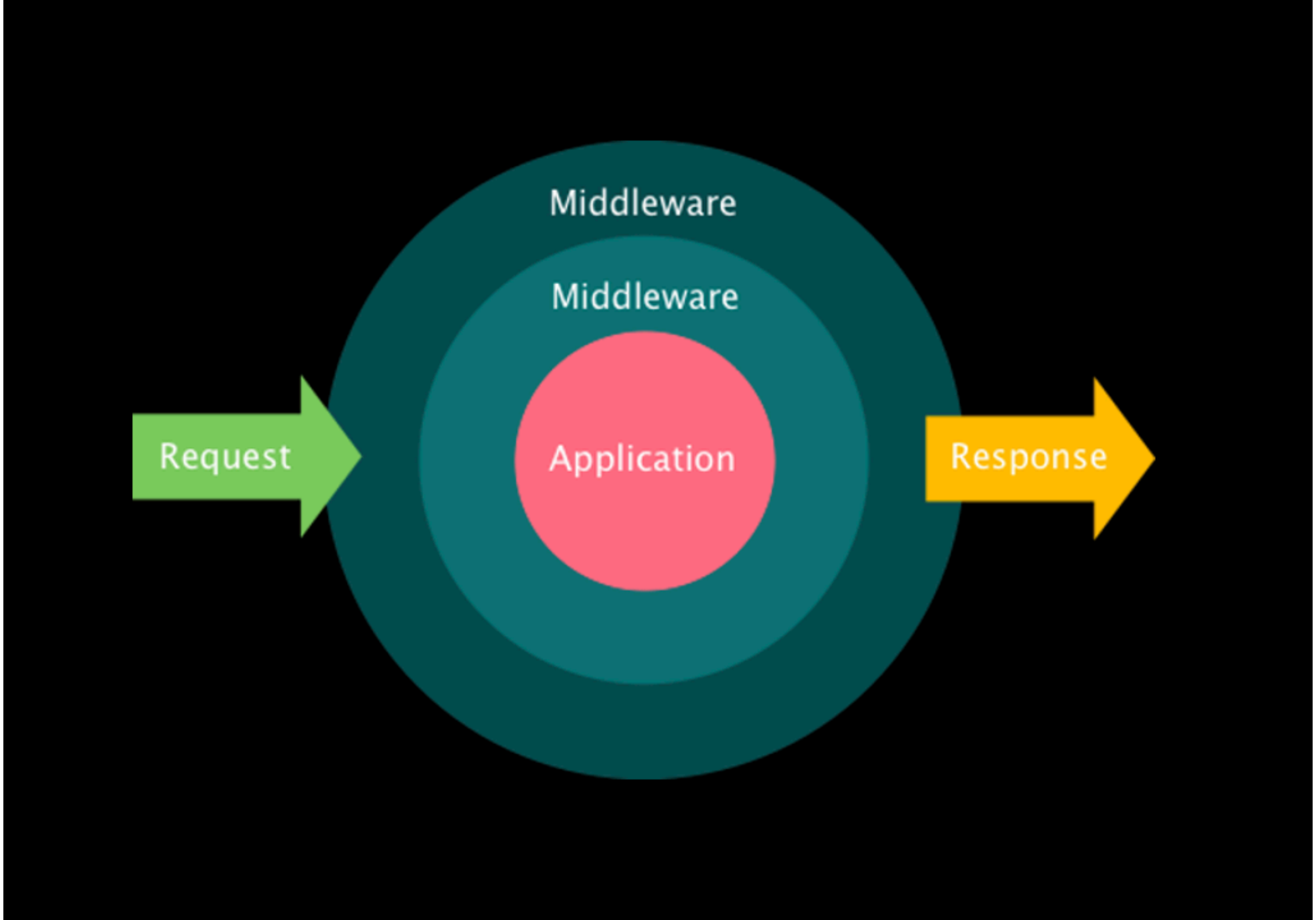
Enrico Zimuel

HTTP middleware is not for your Domain work. The middleware is a path in to, and out of, the core Domain.

Paul M. Jones

In other words, we'll no longer write Zend Framework or Symfony or Laravel or framework-flavor-of-the-day applications or modules/bundles/packages/what-have-you. We'll write middleware that solves a discrete problem, potentially using other third-party libraries, and then compose them into our applications — whether those are integrated into a framework or otherwise.

Matthew O'phinney


Middleware
Middleware
Application
Request
Response

```php
class Auth implements MiddlewareInterface
{
    public function __invoke(Request $request, Response $response, callable $out = null)
    {
        if(! $request->hasHeader('authorization')){
            return $response->withStatus(401);
        }

        if (!$this->isValid($request)) {
            return $response->withStatus(403);
        }

        return $out($request, $response);
    }
}
```

```php
$api = AppFactory::create();
$api->get('/', function ($request, $response, $next) {
    $response->getBody()->write('Hello, beers of world!');
    return $response;
});
$api->get('/doc', function ($request, $response, $next) {
    $response->getBody()->write('Hello, beers of world!');
    return $response;
});

$app = AppFactory::create();
$app->pipe(new Auth());
$app->pipe($api);
$app->pipe(new Format());

$app->run();
```

PSR-15

PSR-15 HTTP Middleware describes a common standard for HTTP middleware components using HTTP Messages defined by PSR-7.

Currently, PSR-15 is a PHP Standards Recommendation Proposal of the Framework Interoperability Group (FIG).

```php
use Interop\Http\ServerMiddleware\DelegateInterface;
use Interop\Http\ServerMiddleware\MiddlewareInterface;
use Psr\Http\Message\ServerRequestInterface;

class Authentication implements MiddlewareInterface
{
    public function process(ServerRequestInterface $request, DelegateInterface $delegate)
    {
        //do some logic

        return $delegate->process($request, $delegate);
    }
}
```

Exemplo

RestBeer

API about 🍻

Multiple response formats (JSON, HTML)

```
http://restbeer.com/brands
http://restbeer.com/styles
http://restbeer.com/beer/1
```

Zend Expressive 2

Expressive allows you to write PSR-7 middleware applications for the web. It is a simple micro-framework built on top of Stratigility, providing:

Dynamic routing

Dependency injection via container-interop

Templating

Error Handling

http://devzone.zend.com/6615/announcing-expressive/

Arquitetura

Router

→ FastRoute

→ Zend Route

→ Aura.Router

Container

→ Aura.DI

→ Pimple

→ Zend Service Manager

Template Engine

→ Twig

→ Plates

→ Zend View

Instalando

```
curl -s http://getcomposer.org/installer | php

php composer.phar require zendframework/zend-expressive

php composer.phar require zendframework/zend-expressive-fastroute

php composer.phar require zendframework/zend-servicemanager
```

Hello World!

```php
<?php
use Zend\Expressive\AppFactory;

require 'vendor/autoload.php';

$app = AppFactory::create();

$app->get('/', function ($request, $response, $next) {
    $response->getBody()->write('Hello, world!');
    return $response;
});

$app->pipeRoutingMiddleware();
$app->pipeDispatchMiddleware();
$app->run();
```

Testando

```
php -S localhost:8080
```

Mostrando as cervejas

```php
$beers = array(
    'brands' => ['Heineken', 'Guinness', 'Skol', 'Colorado'],
    'styles' => ['Pilsen' , 'Stout']
);

$app->get('/brands', function ($request, $response, $next) use ($beers) {
    $response->getBody()->write(implode(',', $beers['brands']));

    return $response;
});

$app->get('/styles', function ($request, $response, $next) use ($beers) {
    $response->getBody()->write(implode(',', $beers['styles']));

    return $response;
});
```

Mostrando uma em específico

```php
$app->get('/beer/{id}', function ($request, $response, $next) use ($beers) {
    $id = $request->getAttribute('id');
    if (!isset($beers['brands'][$id])) {
        return $response->withStatus(404);
    }

    $response->getBody()->write($beers['brands'][$id]);

    return $response;
});
```

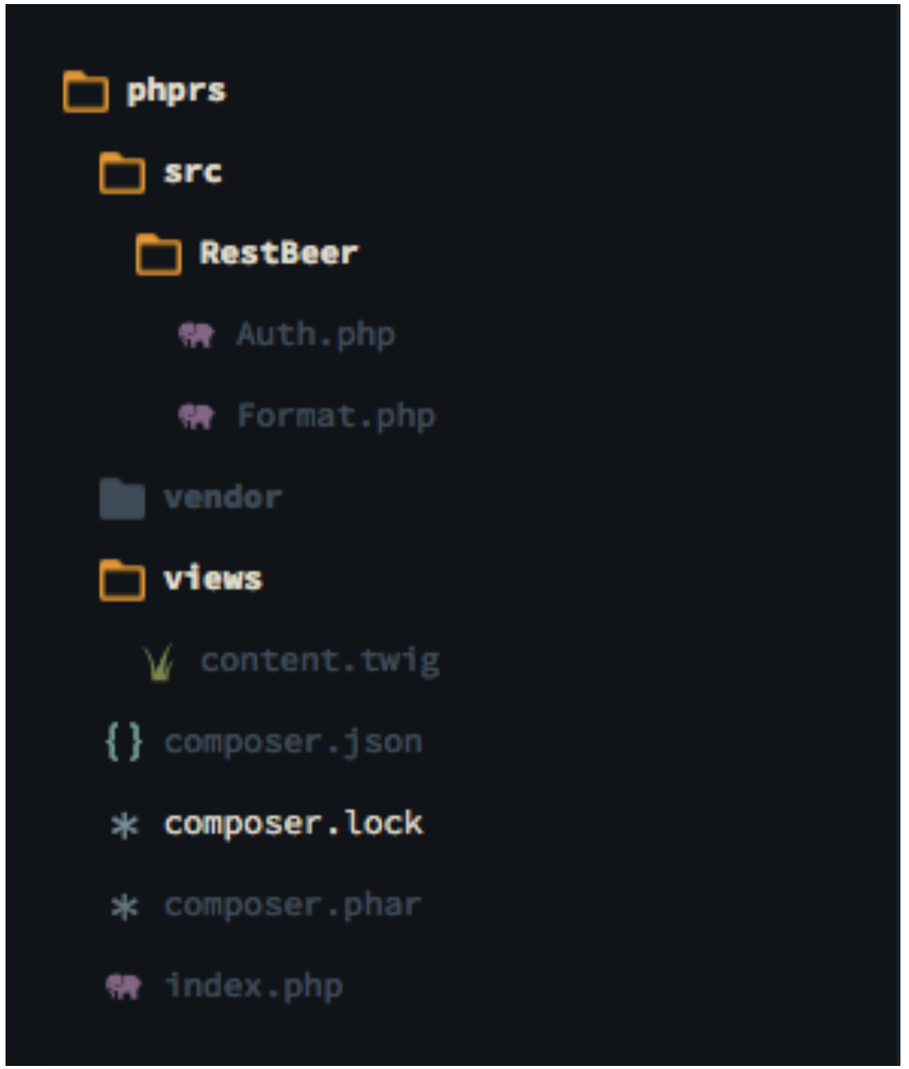
Adicionando uma cerveja

```php
$db = new PDO('sqlite:beers.db');
$app->post('/beer', function ($request, $response, $next) use ($db) {
    $db->exec(
        "create table if not exists
beer (id INTEGER PRIMARY KEY AUTOINCREMENT, name text not null, style text not null)"
    );

    $data = $request->getParsedBody();
    //@TODO: clean form data before insert into the database ;)
    $stmt = $db->prepare('insert into beer (name, style) values (:name, :style)');
    $stmt->bindParam(':name',$data['name']);
    $stmt->bindParam(':style', $data['style']);
    $stmt->execute();
    $data['id'] = $db->lastInsertId();

    $response->getBody()->write($data['id']);

    return $response->withStatus(201);
});
```

Alterando, excluindo e listando da base de dados

(exercício)

Formatando o resultado


phprs
src
RestBeer
Auth.php
Format.php
vendor
views
content.twig
composer.json
composer.lock
composer.phar
index.php

```
php composer.phar require zendframework/zend-expressive-twigrenderer
```

views/content.twig

```
{% for c in content %}
    {{c}}<br>
{% endfor %}
```

src/RestBeer/Format.php

```php
<?php

namespace RestBeer;

use Zend\Stratigility\MiddlewareInterface;
use Psr\Http\Message\ServerRequestInterface as Request;
use Psr\Http\Message\ResponseInterface as Response;
use Zend\Expressive\Twig\TwigRenderer;
use Zend\Diactoros\Response\JsonResponse;
use Zend\Diactoros\Response\HtmlResponse;

class Format implements MiddlewareInterface
{
    public function __invoke(Request $request, Response $response, callable $out = null)
    {
        $content = explode(',', $response->getBody());
        $header = $request->getHeader('accept');
        $accept = null;
        if (isset($header[0])) {
            $accept = $header[0];
        }
        switch ($accept) {
            case 'application/json':
                return new JsonResponse($content, $response->getStatusCode());
                break;
            default:
                $twig = new TwigRenderer();
                $twig->addPath('views');
                $html = $twig->render('content.twig', ['content' => $content]);
                return new HtmlResponse($html);
                break;
        }
    }
}
```

index.php

```php
//1 - alterar o loader

$loader = require __DIR__.'/vendor/autoload.php';
$loader->add('RestBeer', __DIR__.'/src');


//2 - alterar o /brands
$app->get('/brands', function ($request, $response, $next) use ($beers) {
    $response->getBody()->write(implode(',', $beers['brands']));

    return $next($request, $response);
});


//3 - alterar o pipe
$app->pipeRoutingMiddleware();
$app->pipeDispatchMiddleware();
$app->pipe(new \RestBeer\Format());
$app->run();
```

Autenticando

src/RestBeer/Auth.php

```php
<?php
namespace RestBeer;

use Zend\Stratigility\MiddlewareInterface;
use Psr\Http\Message\ServerRequestInterface as Request;
use Psr\Http\Message\ResponseInterface as Response;

class Auth implements MiddlewareInterface
{
    public function __invoke(Request $request, Response $response, callable $out = null)
    {
        if(! $request->hasHeader('authorization')){
            return $response->withStatus(401);
        }

        if (!$this->isValid($request)) {
            return $response->withStatus(403);
        }

        return $out($request, $response);
    }

    private function isValid(Request $request)
    {
        $token = $request->getHeader('authorization');
        //validar o token de alguma forma...
        return true;
    }
}
```

index.php

```php
//adicionar o pipe
$app->pipe(new \RestBeer\Auth());
$app->pipeRoutingMiddleware();
$app->pipeDispatchMiddleware();
$app->pipe(new \RestBeer\Format());
$app->run();
```

O futuro?

We see ZF3 as a movement: **an end to framework silos**, by providing quality, commodity code that can be used everywhere and anywhere. An **end** to saying **"I'm a ZF developer,"** or **"I'm a Laravel developer"**, and a return to, **"I'm a PHP developer."**

Matthew O'phinney

Links

→ https://zendframework.github.io/zend-expressive/

→ https://danizord.github.io/explorando-o-poder-dos-middlewares/#/

→ http://eltonminetto.net/post/2017-04-06-iniciando-novo-projeto-decisoes-arquitetura/

Avalie este workshop

https://avalie.se/phprs