Open Source Web Analytics

http://www.openwebanalytics.com

Presented by:
Peter Adams, Founder
Mozilla Headquarters, Silicon Valley
03/10/08

What is OWA?

- Open source web analytics framework
  - GPL
  - written in PHP
  - extensible, embed-able, customizable
- Provides web analytics toolkit for popular web applications and frameworks:

MediaWiki

WordPress

Gallery
YOUR PHOTOS ON YOUR WEBSITE

WordPressμ
COMING SOON

Drupal
COMING SOON

Open Web Analytics

Why OWA?

- No clear open source effort behind web analytics
  - 12 years later, everyone still re-creating this wheel over and over again
- In-house solutions prove risky/costly
  - calculations are often flawed, hard to scale as volume grows
- Outsourced services are far from perfect
  - good for manual decision support (i.e. looking in rear view mirror)
  - not suitable/possible to drive features in your application
  - javascript invocation = doubling of http requests, incongruous with AJAX patterns.

Open Web Analytics

Reports

- Dashboard
  - Dashboard Spy
- Visitor
  - Visitor Loyalty
  - Geo-location (map, earth)
  - Domains
  - Browsers
- Session
  - Click-stream
- Traffic Sources
  - Inbound Link Text
  - Keywords
  - Referring Sites
  - Search Engines
- Content
  - Entry / Exit Pages
  - Click plot / heat-map
- Feeds
  - Feed Dashboard

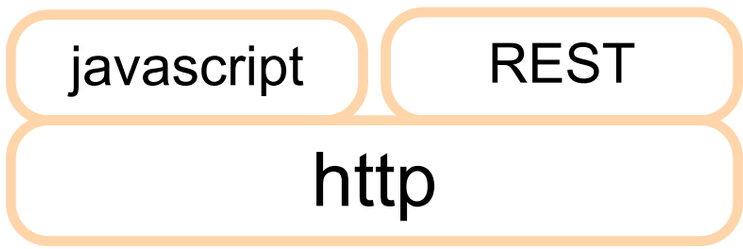
Open Web Analytics

Invocation

- Multiple ways to invoke OWA.

1. application specific plugins

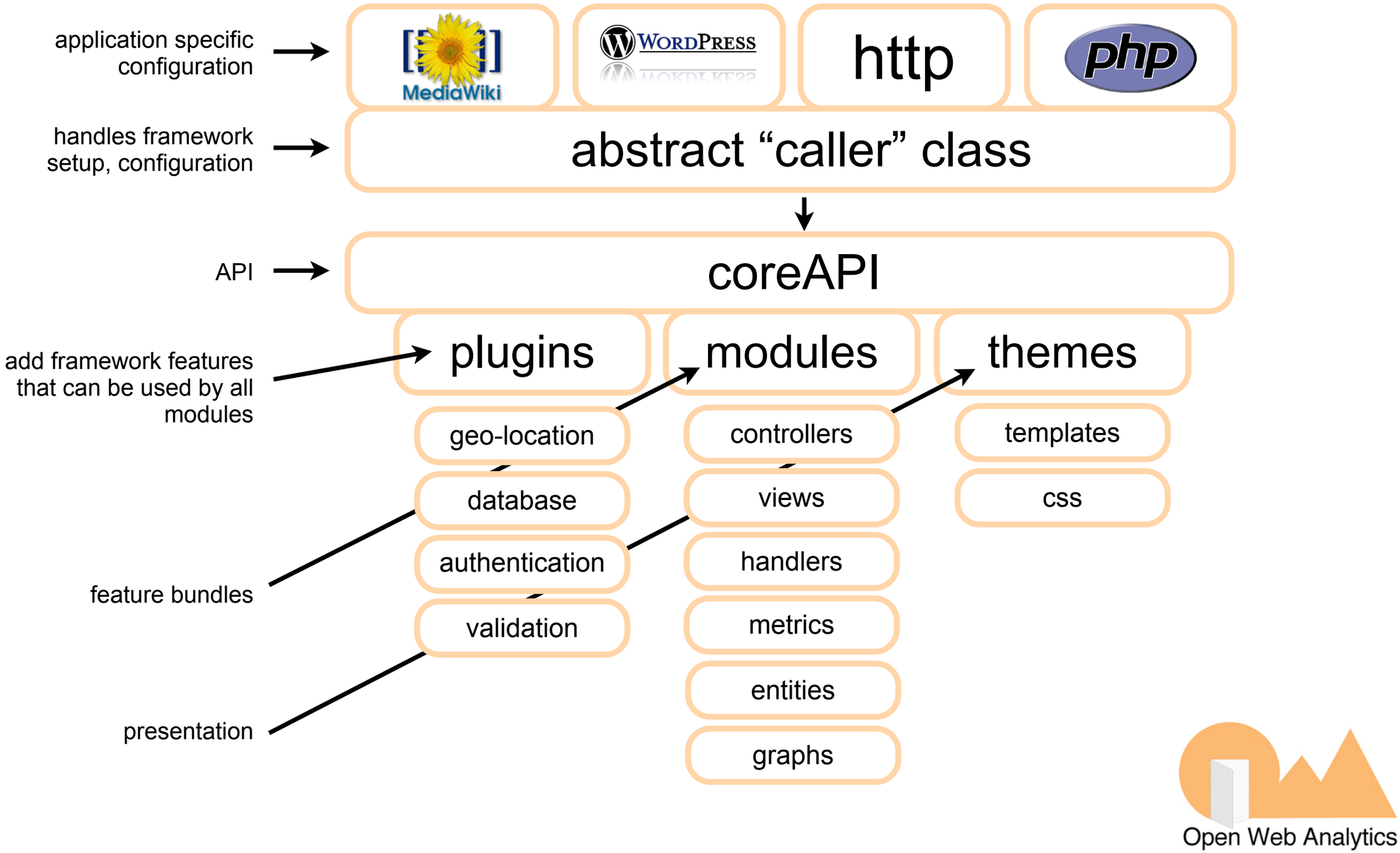
2. client or server initiated http



3. php class

Open Web Analytics

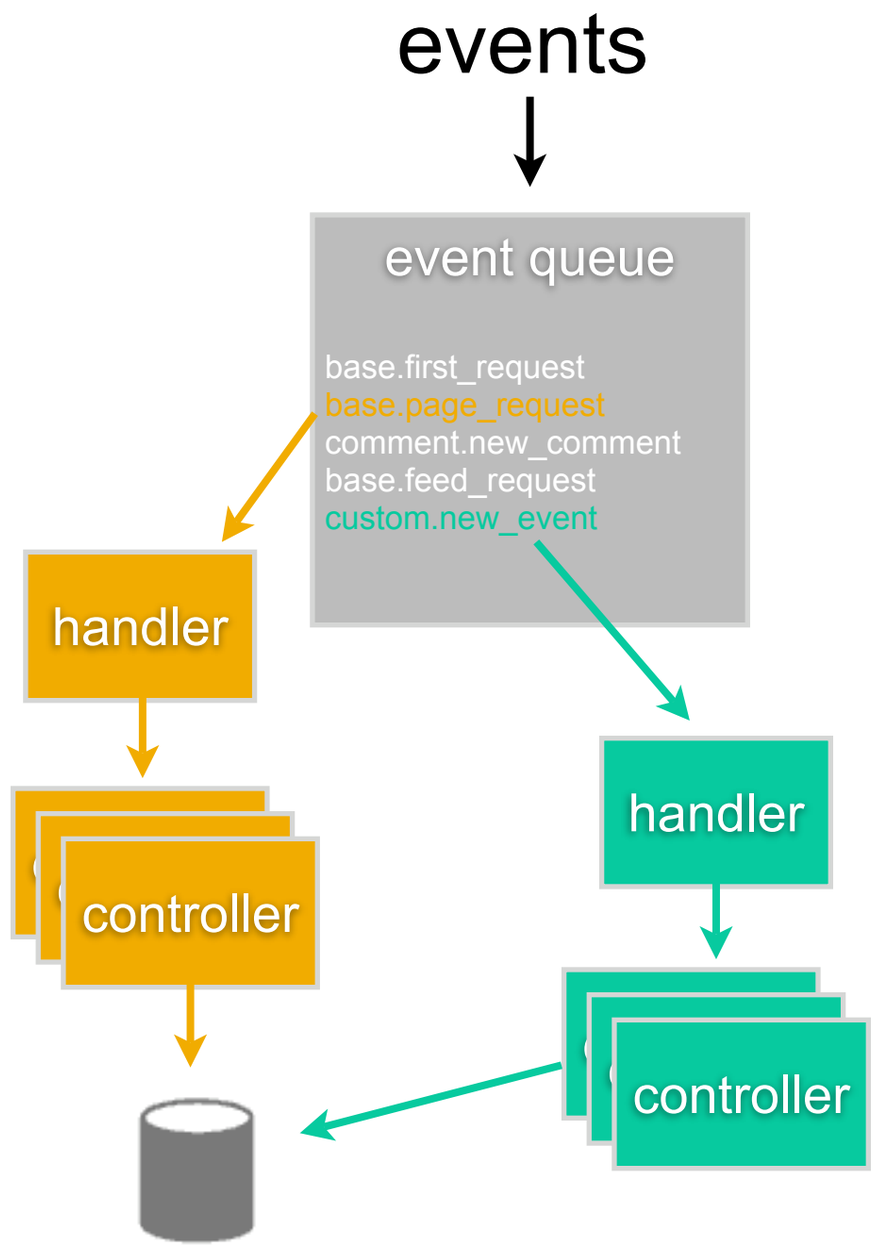
Architecture



Open Web Analytics

Logging = Events

- Event based logging framework
  - observer design pattern
- logging = firing events
  - events are added to in event queue
  - handlers listen for events, handle appropriately
  - events can be processed synchronously or asynchronously
- Standard events
  - first_request, page_request, new_session, session_update, feed_request
- Custom events
  - create your own, consumable by custom handlers



Open Web Analytics

Logging Events

- Logging a page view via php.

```
$owa = new owa_php;

$params = array();
$params['page_title'] = 'my page title';
$params['page_type'] = 'some page type';

$owa->log($params);
```

Open Web Analytics

Logging Custom Events

```
$owa = new owa_php;

$params = array();
$params['foo'] = 'bar';

$owa->logEvent('namespace.event', $params);
```

Open Web Analytics

Handling Events

- Events are consumed by handlers
  - handlers register themselves to handle certain event types
  - multiple handlers can listen for the same event
  - handlers invoke controllers to do something with the event

```
... from module.php ...

/**
 * Registers Event Handlers with event queue
 *
 */
function _registerEventHandlers() {

    // Clicks
    $this->_addHandler('base.click', 'clickHandlers');

    return;
}

... from clickHandlers.php ...

 /**
  * Notify
  *
  * @access  public
  * @param   object $event
  */
 function notify($event) {

    $this->m = $event['message'];

    switch ($event['event_type']) {

        case "base.click":

            $this->handleEvent('base.logClick');
            break;
       }

    return;
  }
```

Modules

- Feature bundles
- Discrete namespace (e.g. base)
- Explicit activation/deactivation
- module.php - concrete class methods:
  - _registerEventHandlers
  - registerAdminPanels
  - registerNavigation

Open Web Analytics

Metrics

- Module specific
- Accessible via getMetric coreAPI method
- Utilize OWA's ORM layer to construct SQL

```
class owa_pageTypesCount extends owa_metric {

	function owa_pageTypesCount($params = null) {

		$this->params = $params;

		$this->owa_metric();

		return;

	}

	function generate() {

		$r = owa_coreAPI::entityFactory('base.request');

		$d = owa_coreAPI::entityFactory('base.document');

		$this->params['related_objs'] = array('document_id' => $d);

		$this->setTimePeriod($this->params['period']);

		$this->params['select'] = "count(request.id) as count,
					document.page_title,
					document.page_type,
					document.url,
					document.id";

		$this->params['groupby'] = array('document.page_type');

		$this->params['orderby'] = array('count');

		return $r->query($this->params);

	}

}
```

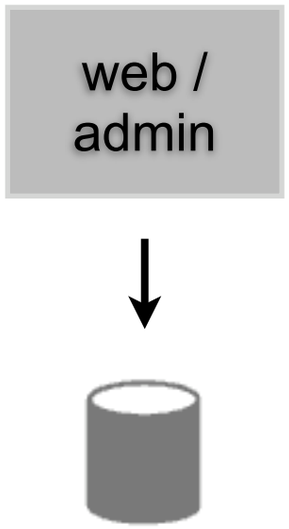
Graphing

- jpgraph wrapper
  - pie
  - bar
  - line
  - area
- utilizes metrics
- graphFactory API method

Open Web Analytics

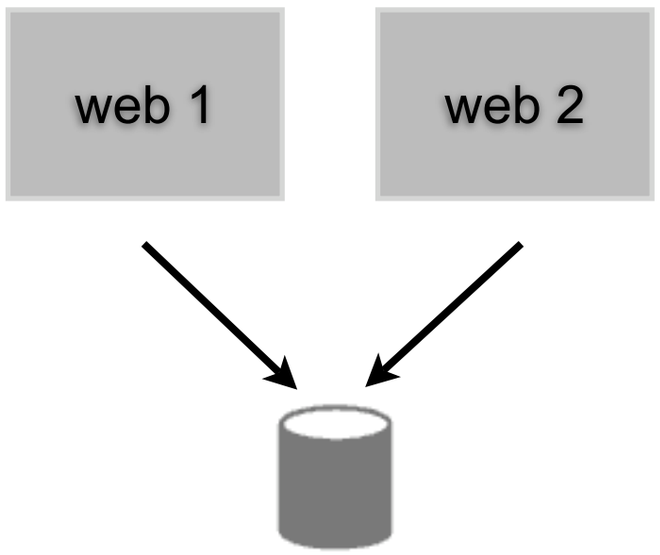
Deploying OWA

single web



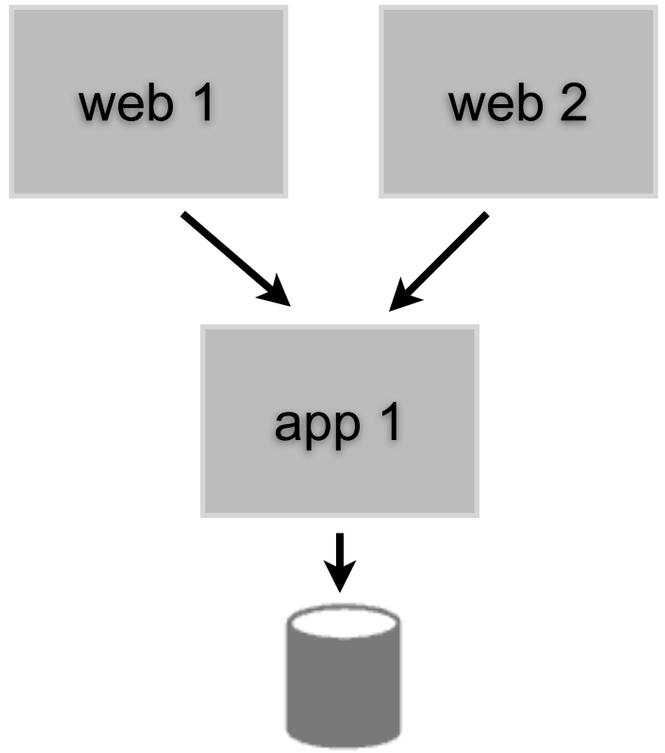
- owa installed on single web server

multiple web



- owa installed on multiple web servers
- synchronous logging

app server



- owa installed on web and/or app servers
- asynchronous logging via:
  - javascript invocation
  - syslog
  - http

Open Web Analytics

What's Next?

v1.2	v1.3	v1.4	v1.5	v2.0
"UI cleanup"	*"custom entities"*	*"preferences & permissions"*	*"summary layer"*	*"distributed processing"*
• themes • blueprint CSS standardization • jquery standardization	• module based entity registration • table creation/alter/ deletes • re-factored installer	• user specific view/ report based prefs • customizable roles/ capabilities	• true summary layer • automatic summary creation	• DB based event processing queue • distributed event playback and retries

Open Web Analytics

the code

- tar balls
  - http://download.openwebanalytics.com/owa
- SVN
  - http://svn.openwebanalytics.com/owa

Open Web Analytics