



XDEBUG

What is it good for?

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- Senior Software Engineer @ Inviqa
- 7+ years with PHP



- @mkilmanas
- <http://about.me/mkilmanas>



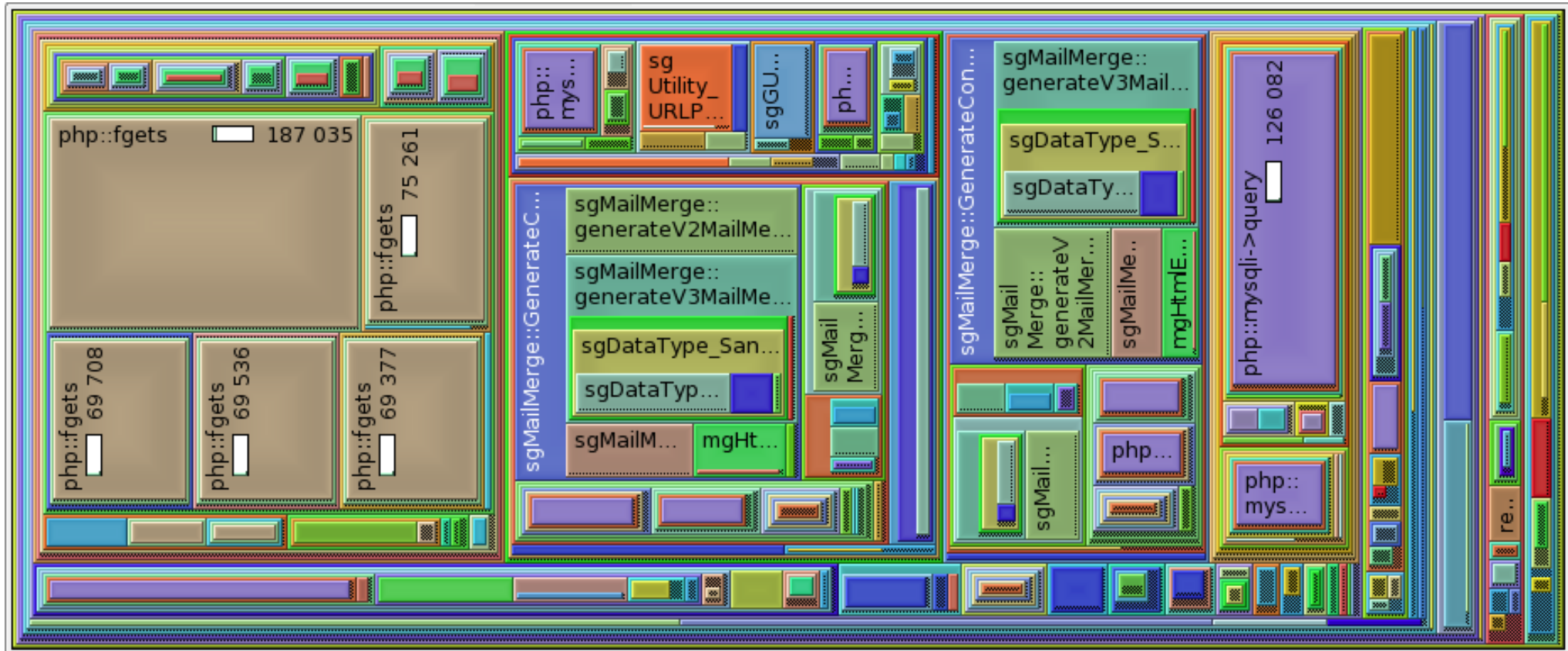
Xdebug history



- Author: Derick Rethans
- Started in 2002 (PHP 4.2)
- Current stable v2.3.3
- Support for PHP7 coming soon: 89.0% test passing

So what can it do?

- **Profiling - cachegrind output**



Is it good at it?

- Yes, adequate
- There are better alternatives though:

XHProf



blackfire

So what is it good at?



VDD - var_dump () driven development

Advantages:

- **Works everywhere (even on production!)**

Disadvantages:

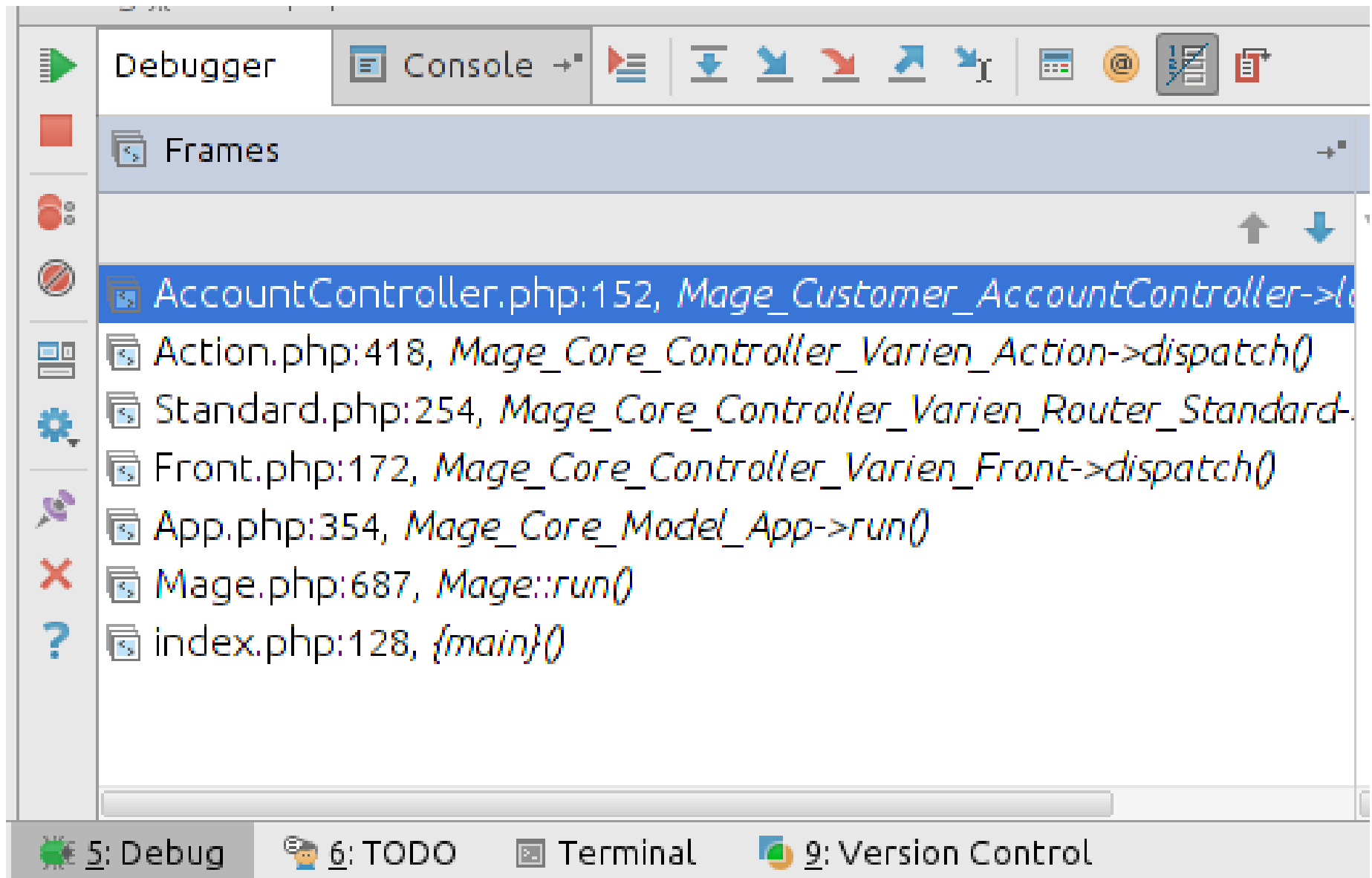
- **Have to guess the location at fault**
- **Have to guess the variable(s) at fault**
- **Have to rerun to get info at a different place**
- **Can run out of memory in some cases**
- **Accidentally ends up on production**

What do I get from it? (1)

```
Connect/.../config.xml
\Mage_Customer_AccountController\loginPostAction

145         $this->_redirect('*/*/');
146         return;
147     }
148     $session = $this->_getSession(); $session: {_urlHostCache => [0], _encryptedSessionId => null}
149
150     if ($this->getRequest()->isPost()) {
151         $login = $this->getRequest()->getPost('login'); $login: {username => "mkilmanas@inviqa.com"}
152         if (!empty($login['username']) && !empty($login['password'])) {
153             try {
154                 $session->login($login['username'], $login['password']);
155                 if ($session->getCustomer()->getIsJustConfirmed()) {
156                     $this->_welcomeCustomer($session->getCustomer(), true);
157                 }
158             } catch (Mage_Core_Exception $e) {
159                 switch ($e->getCode()) {
160                     case Mage_Customer_Model_Customer::EXCEPTION_EMAIL_NOT_CONFIRMED:
161                         $value = $this->_getHelper('customer')->getEmailConfirmationUrl($login['username']);
162                         $message = $this->_getHelper('customer')->__('This account is not confirmed yet. Please click the link: %s', $value);
163                         break;
164                     case Mage_Customer_Model_Customer::EXCEPTION_INVALID_EMAIL_OR_PASSWORD:
165                         $message = $e->getMessage();
166                 }
167             }
168         }
169     }
170 }
```

What do I get from it? (2)

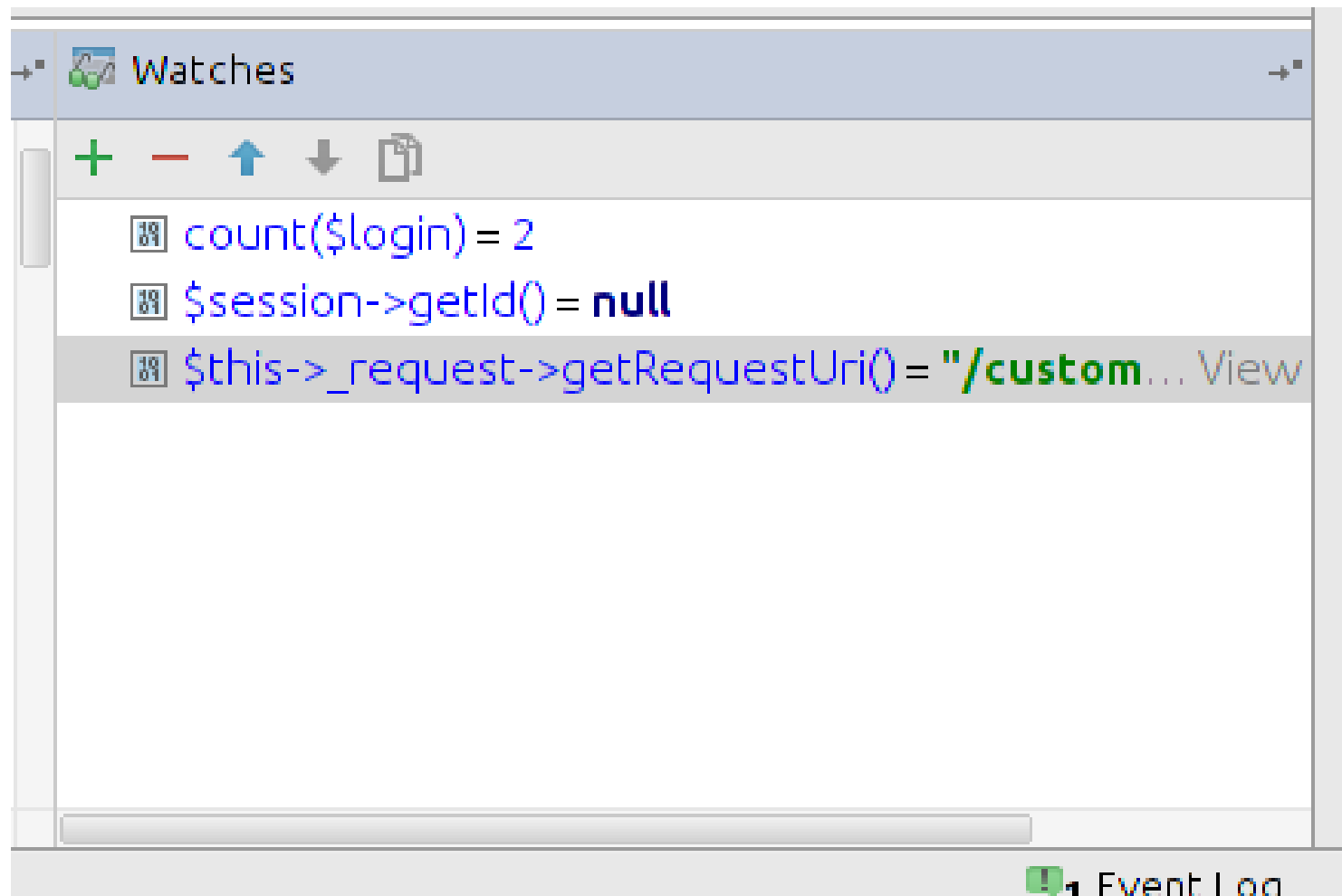


What do I get from it? (3)

Variables

```
▼ $this = {Magento_Customer_AccountController} [10]
  ► _cookieCheckActions = {array} [2]
    _currentArea = "frontend"
    _sessionNamespace = "frontend"
  ▼ _request = {Magento_Core_Controller_Request_Http} [27]
    _originalPathInfo = "/customer/account/loginPost/"
    _storeCode = null
    _requestString = "/customer/account/loginPost/"
    _rewrittenPathInfo = null
    _requestedRouteName = null
```

What do I get from it? (4)



What do I get from it? (5)

The screenshot displays the PhpStorm 9.0.2 IDE interface. The top toolbar includes standard editing and development tools. The breadcrumb navigation shows the file path: `public > app > code > core > Mage > Customer > controllers > AccountController.php`. The left sidebar shows the project structure, with the `code` directory expanded, listing sub-directories like `community`, `Adyen`, `Aleron75`, `Cm`, `Ebizmarts`, `Eschrade`, `Hackathon`, `IG`, and `Jirafe`.

The main editor window shows the `AccountController.php` file, specifically the `loginPostAction` method. The code is as follows:

```
145     $this->_redirect('*/');  
146     return;  
147 }  
148 $session = $this->_getSession(); $session: { _urlHostCache => [0], _encryptedSessionId => null, _underscoreCache => [22], _customer => [23] }  
149  
150 if ($this->getRequest()->isPost()) {  
151     $login = $this->getRequest()->getPost('login'); $login: { username => "mkilmanas@inviqa.com", password => "demo1234"} [2]  
152     if (!empty($login['username']) && !empty($login['password'])) {  
153         try {  
154             $session->login($login['username'], $login['password']);  
155             if ($session->getCustomer()->getIsJustConfirmed()) {  
156                 $this->_welcomeCustomer($session->getCustomer(), true);  
157             }  
158         } catch (Mage_Core_Exception $e) {  
159             switch ($e->getCode()) {  
160                 case Mage_Customer_Model_Customer::EXCEPTION_EMAIL_NOT_CONFIRMED:  
161                     $value = $this->_getHelper('customer')->getEmailConfirmationUrl($login['username']);  
162                     $message = $this->_getHelper('customer')->__('This account is not confirmed. <a href="%s">Click here</a> to reset your password.');  
163                     break;  
164                 case Mage_Customer_Model_Customer::EXCEPTION_INVALID_EMAIL_OR_PASSWORD:  
165                     $message = $e->getMessage();  
166             }  
167         }  
168     }  
169 }
```

The bottom panel shows the debug state for `index.php`. The `Frames` tab lists the call stack, with the current frame being `AccountController.php:152, Mage_Customer_AccountController->loginPostAction()`. The `Variables` tab shows the state of variables at this point:

- `$login` = {array} [2]
- `$session` = {Mage_Customer_Model_Session} [15]
- `$this` = {Mage_Customer_AccountController} [10]
- `$_COOKIE` = {array} [23]
- `$_ENV` = {array} [42]
- `$_POST` = {array} [3]
- `$_REQUEST` = {array} [26]
- `$_SERVER` = {array} [45]
- `$_SESSION` = {array} [4]
- `$GLOBALS` = {array} [21]

The `Watches` tab shows the state of watched expressions:

- `count($login) = 2`
- `$session->getId() = null`
- `$this->_request->getRequestUri() = "/custom... View"`



AWESOMESAUCE!

IDE Integrations

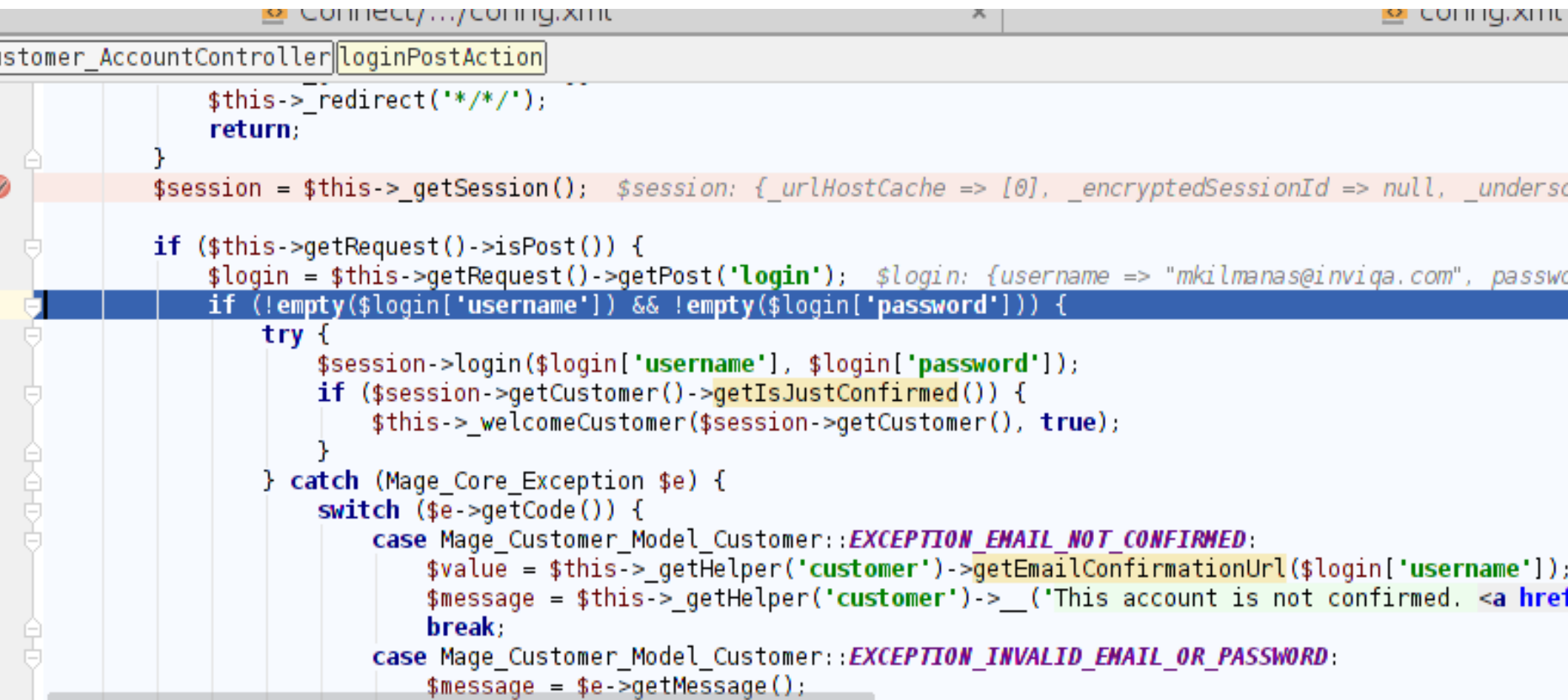
- **NetBeans**
- **Eclipse**
- **Emacs**
- **VIM**
- **....**
- **Anything else that supports DBGp protocol**

IDE integrations 2 - PhpStorm

- Super easy setup
- Thousands of tutorials
- Integrated
- Just works*

* - Usually. Works all the time most of the time

IDE Integrations 3 - PhpStorm



```
customer_AccountController/loginPostAction

$this->_redirect('*/*/');
return;
}

$session = $this->_getSession(); $session: {_urlHostCache => [0], _encryptedSessionId => null, _undersc

if ($this->getRequest()->isPost()) {
    $login = $this->getRequest()->getPost('login'); $login: {username => "mkilmanas@inviga.com", passwo
    if (!empty($login['username']) && !empty($login['password'])) {
        try {
            $session->login($login['username'], $login['password']);
            if ($session->getCustomer()->getIsJustConfirmed()) {
                $this->_welcomeCustomer($session->getCustomer(), true);
            }
        } catch (Mage_Core_Exception $e) {
            switch ($e->getCode()) {
                case Mage_Customer_Model_Customer::EXCEPTION_EMAIL_NOT_CONFIRMED:
                    $value = $this->_getHelper('customer')->getEmailConfirmationUrl($login['username']);
                    $message = $this->_getHelper('customer')->__('This account is not confirmed. <a href
                    break;
                case Mage_Customer_Model_Customer::EXCEPTION_INVALID_EMAIL_OR_PASSWORD:
                    $message = $e->getMessage();
            }
        }
    }
}
```

Start modes

A) Autostart

- `xdebug.remote_autostart = 1`
- **Runs on every request**

B) Default (on-demand)

- `xdebug.remote_autostart = 0`
- **Runs based on cookie** `XDEBUG_SESSION`
- **Can be started/stopped via GET parameters**
- **Browser plug-ins as a GUI**

Remote debugging

- **Connect back mode:**
 - `xdebug.remote_connect_back = 1`
 - **Connects to the same IP where request came from**
- **Fixed remote host:**
 - `xdebug.remote_host = 192.168.10.1`
 - **Connects to the given IP address**

Bonus features

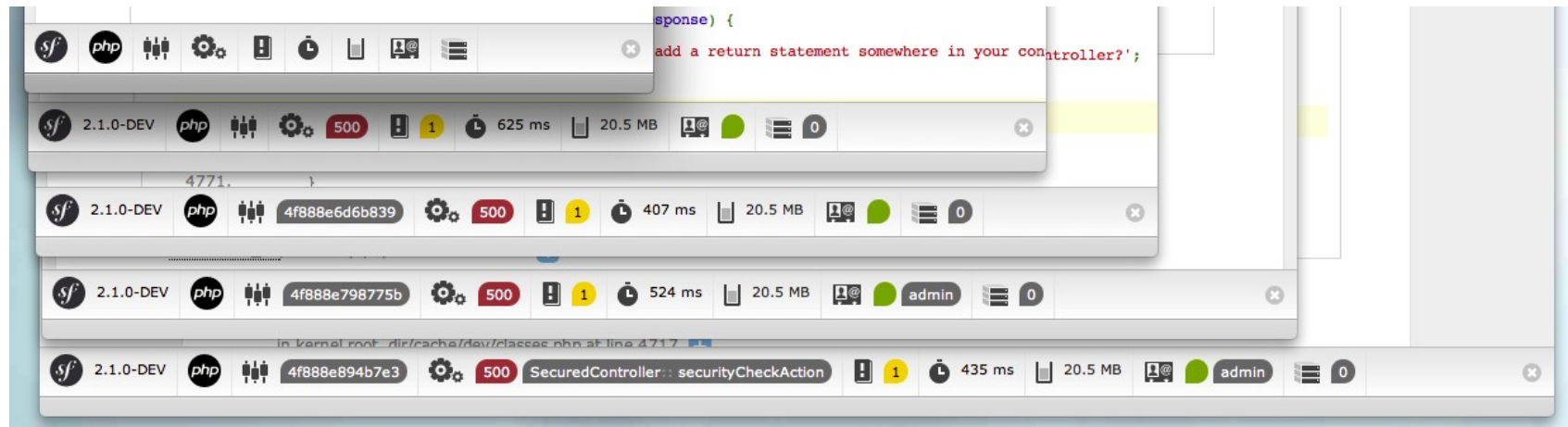
- `var_dump()` **decoration**
 - html formatted and coloured output
 - wait what?...
- **Scream**
 - Ignores @'s trying to silence errors
- **Force display error / force error reporting**
 - Shows the errors despite `ini_set()` config

Can I haz CLI?

- **Yes you can!**
- **Just export an env var:**
 - `export XDEBUG_CONFIG="idekey=phpStorm"`
 - **Stop by setting an empty value to** `XDEBUG_CONFIG`
- **Or debug just a single run:**
 - `XDEBUG_CONFIG="idekey=phpStorm" php script.php`

Alternatives?

- Zend Debugger
- Framework specific tools



- Kint 😊



THANK YOU



FOR YOUR ATTENTION