

Contributing to Core

**My Journey to Add
`array_column()` to PHP**

Ben Ramsey



HI, I'M BEN.

I'm a web craftsman, author, and speaker. I build a platform for professional photographers at ShootProof. I enjoy APIs, open source software, organizing user groups, good beer, and spending time with my family. Nashville, TN is my home.

❖ Books

- ❖ *php|architect's Zend PHP 5 Certification Study Guide*
- ❖ *PHP5 Unleashed*
- ❖ Nashville PHP & Atlanta PHP
- ❖ `array_column()`
- ❖ Rhumsaa\Uuid library
- ❖ virtPHP
- ❖ PHP League OAuth 2.0 Client
- ❖ Nashville Code User Group Leadership

ShootProof []



ShootProof []

We're hiring.

**Our
journey
begins**



array_column()

```
array array_column ( array $array , mixed  
$column_key [, mixed $index_key = null ] )
```

```
$records = array(  
    array(  
        'id' => 2135,  
        'first_name' => 'John',  
        'last_name' => 'Doe',  
    ),  
    array(  
        'id' => 3245,  
        'first_name' => 'Sally',  
        'last_name' => 'Smith',  
    ),  
    array(  
        'id' => 5342,  
        'first_name' => 'Jane',  
        'last_name' => 'Jones',  
    ),  
    array(  
        'id' => 5623,  
        'first_name' => 'Peter',  
        'last_name' => 'Doe',  
    )  
);
```

```
$first_names = array_column($records, 'first_name');  
print_r($first_names);
```

```
Array
(
    [0] => John
    [1] => Sally
    [2] => Jane
    [3] => Peter
)
```

```
$last_names = array_column($records, 'last_name', 'id');  
print_r($last_names);
```

```
Array
(
    [2135] => Doe
    [3245] => Smith
    [5342] => Jones
    [5623] => Doe
)
```

My story



A brief history of internals





changes

RFC Process

wiki.php.net/rfc/howto

Subversion

wiki.php.net/rfc/phpvcs

Release Process

wiki.php.net/rfc/releaseprocess

Voting Process

wiki.php.net/rfc/voting

DVCS (Git)

wiki.php.net/rfc/dvcs

So, you
have an
idea?



1. Email internals

`internals@lists.php.net`

Don't be intimidated

Propose your idea

Get feedback

Don't get discouraged

2. Create an RFC

Get wiki karma, if needed

Create your RFC on the wiki by going to a URL like wiki.php.net/rfc/my_rfc and clicking “Create this page”

Follow the RFC template provided

Add your RFC to the “In Draft” section on wiki.php.net/rfc

3. Open discussion

Change the status of your RFC to “Under Discussion”

Move your RFC to the “Under Discussion” section on wiki.php.net/rfc

Send email to internals to introduce your RFC

Try to answer/resolve all questions; incorporate the feedback into your RFC

4. Call for votes

When all questions have been resolved
and a minimum of 2 weeks have passed,
change the RFC status to "Voting"

Move your RFC to the "Voting" section on
wiki.php.net/rfc

Add the voting macro to the RFC page

Start a new thread on internals with
"[VOTE]" in the subject line

5. Voting ends

Your RFC will be:

1. Accepted
2. Declined
3. Needs more discussion

In any case, update the status of the RFC
on the wiki

6. Implementation

Once implemented, update the RFC again with:

1. The version it was merged into
2. Links to the commits/pull request
3. A link to the PHP manual entry

**The
mailing list**

Here be
Dragons?



Not really

**Just passionate
people**

1. Respect other people working on the project.
2. Do not post when you are angry.
3. Make sure you know what you are talking about.
4. Be aware of what previous posters have said.
5. Use your real name & keep signatures to two lines.
6. Now and then, step back from an active thread.
7. Do not top post.
8. Do not hijack threads.

Creating an RFC

php PHP: rfc:my_rfc

https://wiki.php.net/rfc/my_rfc?do=edit&rev=0

php Edit this page Admin Logout ramsey (ramsey)

Search

references > start

Edit the page and hit Save. See [syntax](#) for Wiki syntax. Please edit the page only if you can improve it. If you want to test some things, learn to make your first steps on the [playground](#).

B I U TT S H H H H H

===== PHP RFC: Your Title Here =====

* Version: 0.9
* Date: 2013-02-24 (use today's date here)
* Author: Your Name, your_email_address@example.com
* Status: Draft (or Under Discussion or Accepted or Declined)
* First Published at: http://wiki.php.net/rfc/your_rfc_name

This is a suggested template for PHP Request for Comments (RFCs). Change this template to suit your RFC. Not all RFCs need to be tightly specified. Not all RFCs need all the sections below.
Read <https://wiki.php.net/rfc/howto> carefully!

Quoting [[http://news.php.net/php.internals/71525|Rasmus]]:

Save Preview Cancel

Edit summary Minor Changes

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Introduction

Proposal

Backward Incompatible Changes

Proposed PHP Version

Open Issues

Patches and Tests

Implementation

Rejected Features

php PHP: rfc:array_column

https://wiki.php.net/rfc/array_column

php Edit this page Admin Logout ramsey (ramsey)

Search

references > start > rfc > array_column

Request for Comments: array_column

Version: 2.4
Date: 2013-01-11
Author: Ben Ramsey ramsey@php.net
Status: Implemented in PHP 5.5
First Published at: http://wiki.php.net/rfc/array_column

[Edit](#) [History](#) [Link](#) [Email](#) [Up](#)

Introduction

This RFC proposes a new array function that returns the values of the specified column from a multi-dimensional array. Inspired by database methods like `PDOStatement::fetchColumn()`, `array_column()` moves useful functionality into the core that once had to be implemented in userland code with sometimes complex loops.

This has been submitted as a [pull request on GitHub](#), where there has already been a significant amount of discussion.

Specification

– Table of Contents

- Request for Comments:
- array_column
- Introduction
- Specification
- Description
- Parameters
- Return Values
- Examples
- Proposal and Patch
- Mailing list discussion
- Voting
- Changelog

A scenic mountain landscape featuring a rocky foreground with vibrant red wildflowers. In the middle ground, a steep, rocky hillside slopes upwards. The background is dominated by majestic, snow-capped mountain peaks under a sky filled with dramatic, white and grey clouds.

Set up your environment

php.net/build-setup.php

ramsey/vagrant-php-src-dev

GitHub, Inc. [US] https://github.com/ramsey/vagrant-php-src-dev

GitHub This repository Search Explore Features Enterprise Blog Sign up Sign in

ramsey / vagrant-php-src-dev Watch 3 Star 35 Fork 3

Uses Vagrant to provision a basic virtual environment for hacking on the PHP core.

15 commits 1 branch 0 releases 2 contributors

branch: master vagrant-php-src-dev / +

Add the correct version of bison for PHP

ramsey authored on Dec 19, 2014 latest commit 357a15a795

puppet Add the correct version of bison for PHP 2 months ago

.gitignore Adding .DS_Store to the ignore list 2 years ago

README.md Create README.md 2 years ago

Vagrantfile Upgrade to Ubuntu 14.04.1 LTS (Trusty Tahr) 2 months ago

README.md

vagrant-php-src-dev

Uses Vagrant to provision a basic virtual environment for hacking on the PHP core.

Code Issues 0 Pull Requests 0 Pulse Graphs

HTTPS clone URL https://github.com/ You can clone with HTTPS or Subversion.

Clone in Desktop Download ZIP

Contributing to PHP Core

bram.se/php-contrib

Build cycle

Running make can take a while; no need to run configure or make clean after every code change

Don't forget to buildconf

Compiler warning messages can be difficult to see; use:

```
make 2> tee ~/php55-make.log
```

Running tests

Running make test can also take forever

You can run individual tests:

```
sapi/cli/php run-tests.php ext/standard/  
tests/array/array_column_basic.php
```

Don't forget to set your test executable:

```
export TEST_PHP_EXECUTABLE=/home/vagrant/  
src/php-src/sapi/cli/php
```

lxr.php.net

This is your friend.

It allows you to quickly search for symbols and references within the PHP source.

0 Search lxr.php.net

{OpenGrok}

Full Search
Definition
Symbol
File Path
History

In Project(s)

OTHER_IMPLEMENT
PECL
PHP_5_2
PHP_5_3
PHP_5_4
PHP_5_5

OpenGrok - a "wicked fast" source browser!

The following trees are available:

- PHP – master branch (github)
- PHP – phpng (github)
- PHP – 5.6 (github)
- PHP – 5.5 (github)
- PHP – 5.4 (github)
- PHP – 5.3 (github)
- PHP – 5.2 (github)
- PHP – abandoned unicode tree (github)
- PECL (trunk/master branch of most extensions)
- Third party libraries (some third party libraries used by PHP)
- Other implementations of the PHP language (e.g. HipHop, Phalanger)

The trees are updated hourly, except PECL, which is updated daily.

Reference: [OpenGrok Help](#), [Lucene Query Parser Syntax](#)

served by {OpenGrok} on Indexes created Wed Feb 18 19:18:47 UTC 2015

0 Search

lxr.php.net/search?q=array_column&defs=&refs=&path=&hist=&project=PHP_5_6

{OpenGrok}

Home Sort by: [last modified time](#) | **relevance** | path

Full Search In Project(s) [select all](#) [invert selection](#)

Definition
Symbol
File Path
History

[PECL](#)
[PHP_5_2](#)
[PHP_5_3](#)
[PHP_5_4](#)
[PHP_5_5](#)
PHP_5_6

[Search](#) [Clear](#) [Help](#)

Searched **full:array_column** (Results 1 - 4 of 4) sorted by relevance

/PHP_5_6/ext/standard/
HAD array.c 2419 * Specialized conversion rules for **array_column()** function
HAD php_array.h 2443 /* {{ proto array **array_column**(array input, mixed column_key[, mixed index_key])
HAD basic_functions.c 2446 PHP_FUNCTION(**array_column**)
74 PHP_FUNCTION(**array_column**); variable
3299 PHP_FE(**array_column**, arginfo_array_column)

/PHP_5_6/
HAD NEWS 1839 . Added **array_column** function which returns a column in a multidimensional
1840 array. https://wiki.php.net/rfc/array_column. (Ben Ramsey)

Completed in 52 milliseconds

served by {OpenGrok} on
Indexes created Wed Feb 18 19:18:47 UTC 2015

lxr.php.net/search?&q=array_column&project=PHP_5_6&sort=lastmodti

0 Cross Reference: /PHP_5_6

lxr.php.net/xref/PHP_5_6/ext/standard/array.c#2443

{OpenGrok}

Cross Reference: array.c

xref: /PHP_5_6/ext/standard/array.c

Home | History | Annotate | Line# | Navigate | Download | Search | only in /PHP_5_6/ext/standard/

```
2443 /* {{{ proto array array_column(array input, mixed column_key[, mixed index_key])
2444  * Return the values from a single column in the input array, identified by the
2445  * value_key and optionally indexed by the index_key */
2446 PHP_FUNCTION(array_column)
2447 {
2448     zval **zcolumn = NULL, **zkey = NULL, **data;
2449     HashTable *arr_hash;
2450     HashPosition pointer;
2451
2452     if (zend_parse_parameters(ZEND_NUM_ARGS() TSRMLS_CC, "hz|z!", &arr_hash, &zcolumn, &zkey) == FAILURE) {
2453         return;
2454     }
2455
2456     if ((zcolumn && !array_column_param_helper(zcolumn, "column" TSRMLS_CC)) ||
2457         (zkey && !array_column_param_helper(zkey, "index" TSRMLS_CC))) {
2458         RETURN_FALSE;
2459     }
2460
2461     array_init(return_value);
2462     for (zend_hash_internal_pointer_reset_ex(arr_hash, &pointer);
2463          zend_hash_get_current_data_ex(arr_hash, (void**)&data, &pointer) == SUCCESS;
2464          zend_hash_move_forward_ex(arr_hash, &pointer)) {
2465         zval **zcolval, **zkeyval = NULL;
2466         HashTable *ht;
2467
2468         if (Z_TYPE_PP(data) != IS_ARRAY) {
2469             /* Skip elements which are not sub-arrays */
2470             continue;
2471         }
2472         ht = Z_ARRVAL_PP(data);
2473
2474         if (!zcolumn) {
2475             /* NULL column ID means use entire subarray as data */
2476             zcolval = data;
2477
2478             /* Otherwise, skip if the value doesn't exist in our subarray */
2479         } else if ((Z_TYPE_PP(zcolumn) == IS_STRING) &&
2480             (zend_hash_find(ht, Z_STRVAL_PP(zcolumn), Z_STRLEN_PP(zcolumn) + 1, (void**)&zcolval) == FAILURE)) {
2481             continue;
2482         } else if ((Z_TYPE_PP(zcolumn) == IS_LONG) &&
2483             (zend_hash_index_find(ht, Z_LVAL_PP(zcolumn), (void**)&zcolval) == FAILURE)) {
2484             continue;
2485         }
2486     }
2487 }
```

Rasmus's php7dev

php7dev is a Debian 7.8 Vagrant image which is preconfigured for testing PHP apps and developing extensions across many versions of PHP.

Every version of PHP since 5.3 is precompiled and installed in /usr/local/php*.

rlerdorf/php7dev · GitHub

GitHub, Inc. [US] https://github.com/rlerdorf/php7dev

GitHub

This repository Search Explore Features Enterprise Blog Sign up Sign in

rlerdorf / php7dev

Watch 12 Star 90 Fork 8

Documentation for the php7dev Vagrant box image

32 commits 1 branch 0 releases 4 contributors

Merge pull request #3 from Baldrs/patch-1 ...

rlerdorf authored 7 days ago latest commit f0f1186322

File	Description	Time
scripts	ssh keys issue for Windows	8 days ago
.gitignore	Add default Vagrantfile and supporting scripts / configuration files	19 days ago
LICENSE	Initial commit	20 days ago
README.md	Provide workaround info for users of vagrant < 1.5	7 days ago
Vagrantfile	Get rid of annoying "stdin: is not a tty" error	17 days ago
aliases	Revove alias for serve.sh functionality	18 days ago
newphp	Simplify and support custom builds	17 days ago
php7dev.yaml	Remove functionality for created sites and nginx vhosts. Tweak folder...	18 days ago

Code Issues Pull Requests Pulse Graphs

HTTPS clone URL https://github.com/... You can clone with HTTPS or Subversion.

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Sending a pull request

Implement new array function array_column() #257

C GitHub, Inc. [US] https://github.com/php/php-src/pull/257

GitHub This repository Search Explore Features Enterprise Blog Sign up Sign in

php / php-src Watch 693 Star 5,387 Fork 1,918

Implement new array function array_column() #257

Closed ramsey wants to merge 14 commits into [php:PHP-5.3](#) from [unknown repository](#)

Conversation 18 Commits 14 Files changed 5 +528 -0

 ramsey commented on Jan 11, 2013

This pull request supersedes pull request [#56](#). I have cleaned it up and have rebased branch PHP-5.3 onto my branch.

This pull request also includes new work as a result of feedback received on the original pull request and mailing list discussion.

References:

- https://wiki.php.net/rfc/array_column
- [#56](#)
- <http://marc.info/?l=php-internals&m=134030710017255&w=2>

 ramsey added some commits on Apr 14, 2012

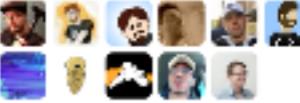
Implement new array function array_column() ... 9035a1e

Labels None yet

Milestone No milestone

Assignee No one assigned

11 participants



But I don't know C

Just how to run this program depends on the system. A specific example, on the UNIX operating system, is to source program in a file whose name ends .c, compile it with the command cc hello.c, and then run it. I haven't even tried to compile it successfully, let alone run it.

Find a mentor



phpmentoring.org

You win
some, you
lose some

About the process

PHP RFCs

wiki.php.net/rfc

How to create a PHP RFC

wiki.php.net/rfc/howto

Chris Jones's blog post, "The Mysterious PHP RFC Process..."

blogs.oracle.com/opal/entry/the_mysterious_php_rfc_process

Voting RFC

wiki.php.net/rfc/voting

Developing core

PHP Internals Book

www.phpinternalsbook.com

Extending and Embedding PHP

www.amazon.com/Extending-Embedding-PHP-Sara-Golemon/dp/067232704X

php-src on GitHub

github.com/php/php-src

References about maintaining and extending PHP

wiki.php.net/internals/references

Other ways to help

Documentation team

Sysops team

QA team

Answer questions on the PHP general user mailing list: php.net/mailing-lists.php



This presentation was created using Keynote. The design was inspired by the [Catalyst web theme](#) created by Pixelarity. The text is set in [Open Sans](#). The source code is set in [Ubuntu Mono](#). The iconography is provided by [Font Awesome](#).

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THANK YOU. ANY QUESTIONS?

If you want to talk more, feel free to contact me.

-  joind.in/13313
-  benramsey.com
-  [@ramsey](https://twitter.com/ramsey)
-  github.com/ramsey
-  ben@benramsey.com

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1



4



7



10



2



5



8



3



6



9

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