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# HOW TO INSTALL ZEND AND IONCUBE LOADER ON VESTACP (CENTOS)

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Sawiyati | January 9th, 2016 | [How To](#) | [5 Comments](#)

Being free web hosting control panel, Vestacp has managed to become popular panel with active development. Installation process made easy plus a bunch of useful features included within like Nginx, PHP-fpm, complete LAMP stack, and so on. But there is still something missing, the Ioncube Loader. In this tutorial I will show you step by step guide how to install ionCube PHP loader which of course including how to install Zend Guard Loader which is needed by ionCube.

## SHORT INTRODUCTION

**ionCube Loader** is a PHP module needed for your server to read / decode any encoded and secured PHP scripts used by some apps. PHP can use the Loader with one line added to a PHP configuration file (*php.ini*). Well, as not all apps are using this technology so basically in common Vestacp install, ionCube loader is not necessary

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especially if you just want to host WordPress. But however some apps like ClientExec or any other PHP apps are using ionCube PHP encoder technology to protect PHP source code from easy observation, theft and change by compiling to bytecode.

**Zend Guard Loader** is previously known as Zend Optimizer. The Zend Guard itself is the most widely accepted PHP encoding and obfuscation product to protect PHP application from unlicensed use and reverse engineering. This technology compiles and converts the plain-text PHP scripts into a platform-independent binary format known as a **Zend Intermediate Code** file. These encoded binary files can then be distributed instead of the plain text PHP protecting developers' hard programming efforts. While Zend Guard Loader is shortly a tool to read and decode the encoded PHP scripts. *Zend Guard Loader is a free runtime application that enables PHP to run the scripts encoded by Zend Guard.* It can be used freely by anyone looking to run encoded applications.

Also, in order for ionCube Loader to work, the Zend Guard Loader is necessary to install. So in the first part of this guide I'll start with the Zend.

## PREREQUISITES

What you may need:

1. A SSH client like Bitvise or [Putty and basic knowledge about how to use it](#) .
2. [Basic knowledge about common Unix command to SSH to your server](#) .
3. A server or VPS with at least 512MB of RAM (*1GB or more is recommended*).
4. Make sure your VestaCP server is installed and running on CentOS server.  
**Read:** [How to install VestaCP on CentOS](#)
5. About 30 minutes of your time
6. a cup of coffee or tea.

Confused on choosing which VPS provider to install VestaCP? Read my [recommended VPS providers](#) or [top low end cloud server providers](#) . **Quick recommendation:** [Digital Ocean](#) , [Atlantic.net](#) or [Ramnode](#) .

In this guide I'm using a 512MB RAM Cloud VPS from [Digital Ocean](#) running **CentOS 7.1 x64**.

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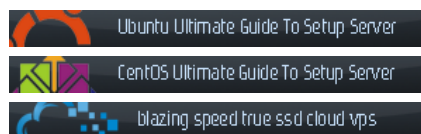
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# INSTALL ZEND GUARD LOADER

**Step 0** – Install VestaCP on your server

**Step 1** – Login to your server via Putty (or any SSH client) as root or as user with root privilege (sudo).

**Step 2** – Check your PHP version. This is necessary and important since Zend has made Guard Loader to every specific PHP version.

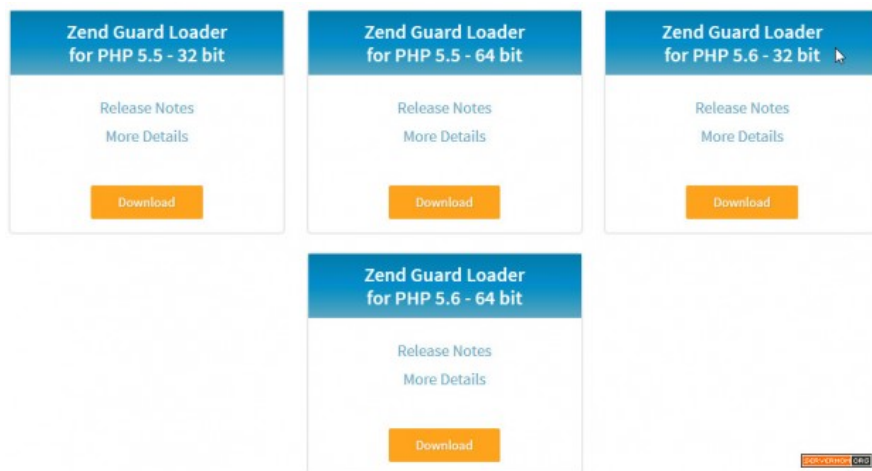
```
1 | php -v
```

```
[root@vesta ~]# php -v
PHP 5.4.45 (cli) (built: Jan 6 2016 16:48:34)
Copyright (c) 1997-2014 The PHP Group
Zend Engine v2.4.0, Copyright (c) 1998-2014 Zend Technologies
```

Until this article is posted, the last time I checked VestaCP is using PHP 5.4.x on its build for CentOS while its Ubuntu version is PHP 5.6.x

**Step 3** – Next, you need to download Zend Guard Loader package appropriate to the version of PHP you have and type of operating system your server is running (it is Linux but whether it is 32-bit or 64-bit). Go ahead grab the package from:

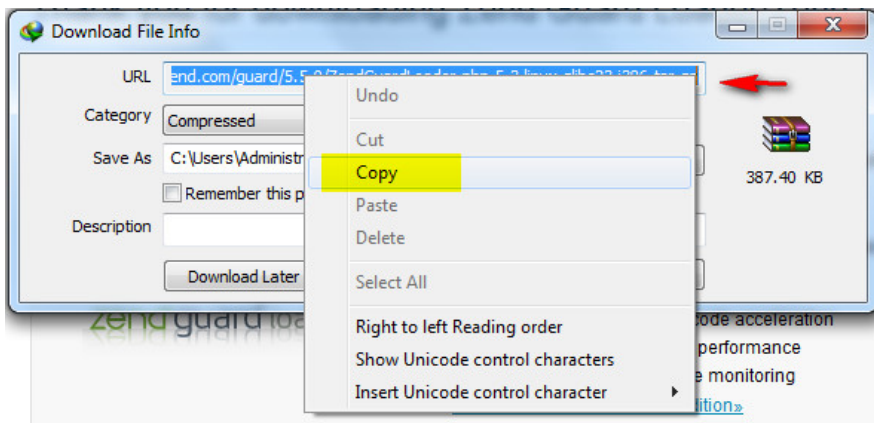
<http://www.zend.com/en/products/loader/downloads#Linux>



Because in my case I need the one for PHP 5.4, then I need to scroll down the page a bit and click the **Download Older Versions** link.

You may also need to login or register for an account first. It's free.

Now all you need to do is to grab the download url. You can achieve that by copying the URL once the *Download Dialog* box appears.



or, you can use these shortcut if you don't mind using current latest version (do visit Zend website to check newer version – if available):

Zend Guard Loader for PHP 5.4 – 32 bit :

```
1 | http://downloads.zend.com/guard/6.0.0/ZendGuardLc
```

Zend Guard Loader for PHP 5.4 – 64 bit :

```
1 | http://downloads.zend.com/guard/6.0.0/ZendGuardLc
```

Since I'm using VestaCP on CentOS 7.1 which is 64-bit, so I picked the last one.

**Step 4** – Use wget to download it into your server:

```
1 | wget http://downloads.zend.com/guard/6.0.0/ZendGu
```

```
[root@vesta public_html]# wget http://downloads.zend.com/guard/6.0.0/ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64.tar.gz
--2016-01-08 18:55:04-- http://download.zend.com/guard/6.0.0/ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64.tar.gz
Resolving downloads.zend.com (downloads.zend.com)... 174.35.73.108, 174.35.73.167
Connecting to downloads.zend.com (downloads.zend.com)|174.35.73.108|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 426278 (416K) [application/x-gzip]
Saving to: 'ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64.tar.gz'
100%[=====] 426278 * 0.0 MB/s in 0s for http://download.zend.com/guard/6.0.0/ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64.tar.gz
2016-01-08 18:55:04 (32.4 MB/s) - ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64.tar.gz saved [426278/426278]
```

**Step 5** – Once the package has been downloaded, extract the package using command below:

```
1 | tar xzvf name-of-package-file.tar.gz
```

for example in my case it is:

```
1 | tar xzvf ZendGuardLoader-70429-PHP-5.4-linux-glib
```

**Step 6** – Now enter the the new folder extracted and find the **ZendGuardLoader.so** file. See example below (use cd command):

```
1 | cd ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x8
```

```
[root@vesta public_html]# tar xzvf ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64.tar.gz
ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64/
ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64/php-5.4.x/
ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64/php-5.4.x/ZendGuardLoader.so
ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64/README.txt
[root@vesta public_html]# ls
index.html  ioncube_loaders_lin_x86-64.tar.gz  ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64
ioncube     robots.txt                          ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64
[root@vesta public_html]# cd ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64
[root@vesta ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64]# ls
README.txt
```

then copy the **ZendGuardLoader.so** file to following location :

**32-bit server:** `/usr/lib/php/modules`

**64-bit server:** `/usr/lib64/php/modules`

example :

```
1 | cp ZendGuardLoader.so /usr/lib64/php/modules
```

```
[root@vesta ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64]# ls
php-5.4.x  README.txt
[root@vesta ZendGuardLoader-70429-PHP-5.4-linux-glibc23-x86_64]# cd php-5.4.x
[root@vesta php-5.4.x]# ls
ZendGuardLoader.so
[root@vesta php-5.4.x]# cp ZendGuardLoader.so /usr/lib64/php/modules
cp: cannot stat 'ZendGuardLoader.so': No such file or directory
[root@vesta php-5.4.x]# cp ZendGuardLoader.so /usr/lib64/php/modules
[root@vesta php-5.4.x]#
```

**Step 7** – Now create **ZendGuard.ini** file inside **/etc/php.d** directory (use your favorite text editor like nano) :

```
1 | nano /etc/php.d/ZendGuard.ini
```

**Step 8** – Next, copy paste following codes to that file in nano text editor:

for 32-bit server :

```
1 | ; Enable Zend Guard extension
2 | zend_extension=/usr/lib/php/modules/ZendGuardLoad
3 | zend_loader.enable=1
```

for 64-bit server :

```
1 | ; Enable Zend Guard extension
2 | zend_extension=/usr/lib64/php/modules/ZendGuardLc
3 | zend_loader.enable=1
```

```
GNU nano 2.3.1
zend_extension=/usr/lib64/php/modules/ZendGuardLoader.so
zend_loader.enable=1
```

Do not forget to Save and Exit the editor which in Nano it is Control+O then Control+X.

**Step 9** – Also, restart Apache web server to make sure the Zend Loader module is loaded:

```
1 | service httpd restart
```

**Step 10** – Drink your coffee or tea you've prepared.

```
[root@vesta php.d]# service httpd restart
Redirecting to /bin/systemctl restart httpd.service
[root@vesta php.d]# php -v
PHP 5.4.45 (cli) (built: Jan 6 2016 16:48:34)
Copyright (c) 1997-2014 The PHP Group
Zend Engine v2.4.0, Copyright (c) 1998-2014 Zend Technologies
with Zend Guard Loader v3.3, Copyright (c) 1998-2013, by Zend Technologies
[root@vesta php.d]#
```

## INSTALL IONCUBE LOADER

**Step 1** – Again, login to your server via Putty.

**Step 2** – Go to your site's public folder (root directory of your site) which in Vestacp it is usually at :

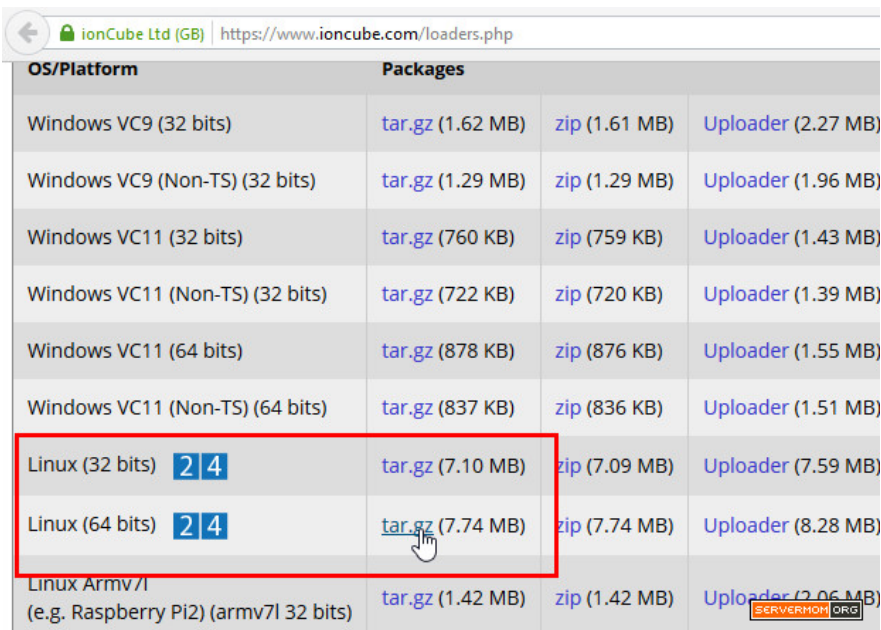
**/home/username/web/domain.tld/public\_html**

replace username with your vestacp username but it is preferable as admin, then replace domain.tld with your own domain name but it is recommended to use your hostname. Example :

```
1 | cd /home/admin/web/vesta.servermom.org/public_html
```

**Step 3** – Use wget again to download ionCube Loader package into your server. You can check download links of its latest version at :

<https://www.ioncube.com/loaders.php>



OS/Platform	Packages		
Windows VC9 (32 bits)	<a href="#">tar.gz</a> (1.62 MB)	<a href="#">zip</a> (1.61 MB)	<a href="#">Uploader</a> (2.27 MB)
Windows VC9 (Non-TS) (32 bits)	<a href="#">tar.gz</a> (1.29 MB)	<a href="#">zip</a> (1.29 MB)	<a href="#">Uploader</a> (1.96 MB)
Windows VC11 (32 bits)	<a href="#">tar.gz</a> (760 KB)	<a href="#">zip</a> (759 KB)	<a href="#">Uploader</a> (1.43 MB)
Windows VC11 (Non-TS) (32 bits)	<a href="#">tar.gz</a> (722 KB)	<a href="#">zip</a> (720 KB)	<a href="#">Uploader</a> (1.39 MB)
Windows VC11 (64 bits)	<a href="#">tar.gz</a> (878 KB)	<a href="#">zip</a> (876 KB)	<a href="#">Uploader</a> (1.55 MB)
Windows VC11 (Non-TS) (64 bits)	<a href="#">tar.gz</a> (837 KB)	<a href="#">zip</a> (836 KB)	<a href="#">Uploader</a> (1.51 MB)
Linux (32 bits) 2 4	<a href="#">tar.gz</a> (7.10 MB)	<a href="#">zip</a> (7.09 MB)	<a href="#">Uploader</a> (7.59 MB)
Linux (64 bits) 2 4	<a href="#">tar.gz</a> (7.74 MB)	<a href="#">zip</a> (7.74 MB)	<a href="#">Uploader</a> (8.28 MB)
Linux Armv7l (e.g. Raspberry Pi2) (armv7l 32 bits)	<a href="#">tar.gz</a> (1.42 MB)	<a href="#">zip</a> (1.42 MB)	<a href="#">Uploader</a> (2.06 MB)

use wget to download it,.

For CentOS 32-bit use:

```
1 | wget http://downloads3.ioncube.com/loader_downlo
```

For CentOS 64-bit use :

```
1 | wget http://downloads3.ioncube.com/loader_downlo
```

**Step 4** – Extract the package once it's downloaded :

CentOS 32-bit :

```
1 | tar xvfz ioncube_loaders_lin_x86.tar.gz
```

CentOS 64-bit :

```
1 | tar xvfz ioncube_loaders_lin_x86-64.tar.gz
```

```
[root@vesta public_html]# wget http://downloads3.ioncube.com/loader_downloads/ioncube_loaders_lin_x86-64.tar.gz
--2016-01-08 18:37:39-- http://downloads3.ioncube.com/loader_downloads/ioncube_loaders_lin_x86-64.tar.gz
Resolving downloads3.ioncube.com (downloads3.ioncube.com)... 54.231.10.12
Connecting to downloads3.ioncube.com (downloads3.ioncube.com)[54.231.10.12]:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 7744822 (7.4M) [application/x-tar]
Saving to: 'ioncube_loaders_lin_x86-64.tar.gz'

100%[=====]
2016-01-08 18:37:39 (12.8 MB/s) - 'ioncube_loaders_lin_x86-64.tar.gz' saved [7744822/7744822]

[root@vesta public_html]# tar xvfz ioncube_loaders_lin_x86-64.tar.gz
ioncube/
ioncube/ioncube_loader_lin_5.0.so
ioncube/ioncube_loader_lin_4.3.so
ioncube/ioncube_loader_lin_4.2.so
ioncube/ioncube_loader_lin_5.6.so
ioncube/ioncube_loader_lin_5.3.so
ioncube/USER-GUIDE.md
ioncube/ioncube_loader_lin_5.5 ts.so
ioncube/ioncube_loader_lin_5.4.so
ioncube/loader-wizard.php
ioncube/ioncube_loader_lin_4.3 ts.so
ioncube/ioncube_loader_lin_5.5.so
ioncube/LICENSE.txt
ioncube/ioncube_loader_lin_5.4 ts.so
ioncube/ioncube_loader_lin_5.3 ts.so
ioncube/ioncube_loader_lin_4.4.so
ioncube/ioncube_loader_lin_4.4 ts.so
ioncube/ioncube_loader_lin_5.2.so
```

**Step 5** – Open up your favorite web browser (e.g: Mozilla Firefox, Chrome, etc) and navigate to thsi url :

<http://domain.tld/ioncube/loader-wizard.php>

example:

<http://vesta.servermom.org/ioncube/loader-wizard.php>

# Initialising

## ionCube Loader Wizard

Stage 3/4: Getting platform information



**Step 6** – From there simply read the instruction and the wizard will tell you which Loader version is suitable for your PHP version. In this case you choose whether Dedicated / VPS or Local Install.

```
Please note also the following issue:  
• The correct loader for your system has been found at /home/admin/web/vesta.servermon.org/public_html/ioncube  
/ioncube_loader_lin_5.4.so. You may wish to copy the loader from /home/admin/web/vesta.servermon.org/public_html/ioncube  
/ioncube_loader_lin_5.4.so to /usr/lib64/php/modules.
```

**Step 7** – As instructed, back to your server and copy the loader .so file to:

**32-bit server:** `/usr/lib/php/modules`

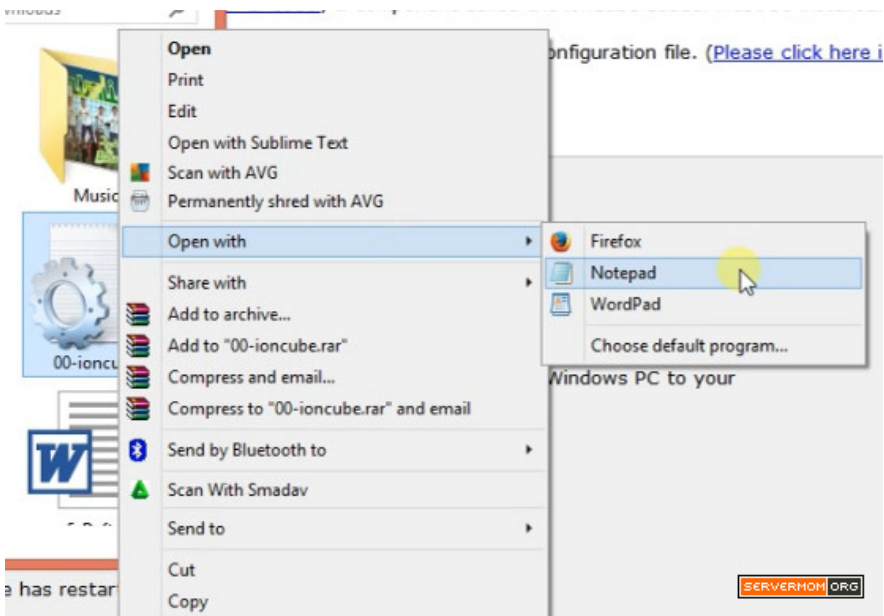
**64-bit server:** `/usr/lib64/php/modules`

example:

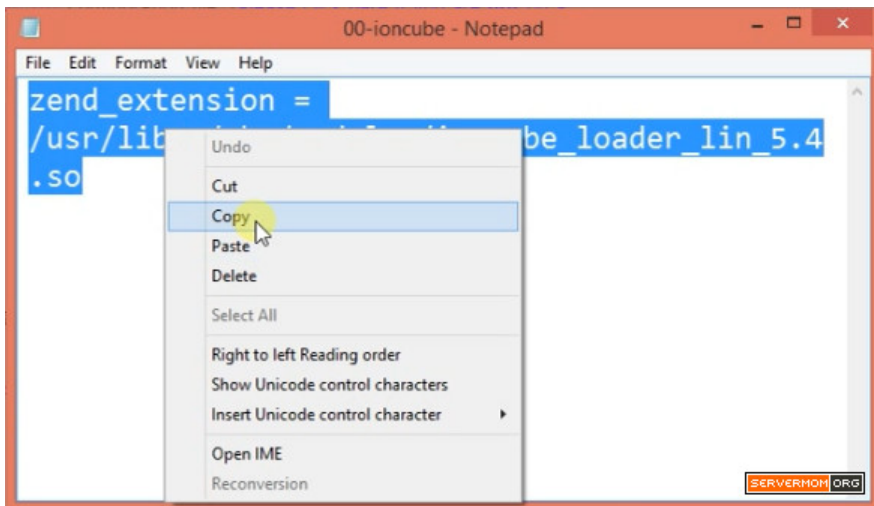
```
1 | cp ioncube_loader_lin_5.4.so /usr/lib64/php/modul
```

**Step 8** – Now go back to your web browser opening loader-wizard.php page and download the **ioncube.ini** file which is usually named with numbers prefix like **00-ioncube.ini** :





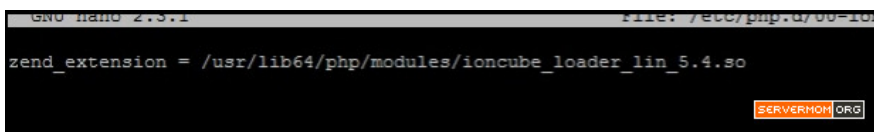
Downloaded already? Now open it in Notepad and copy the text inside it.



Step 9 – Create new .ini file inside /etc/php.d directory

```
1 | nano /etc/php.d/00-ioncube.ini
```

then paste the text you copied earlier there:



Save the file and exit nano editor (Control+O the Control+X).

Now go to that location and list all files inside that directory then make sure the 00-ioncube.ini file appears before all other modules most importantly appears first before ZendGuard.ini.

```
1 | cd /etc/php.d
2 | ls
```

```

[root@vesta php.d]# cd /home/admin/web/vesta_serversmon.org/public_html
[root@vesta public_html]# ls
index.html ioncube_loader_lin_5.4-64.tar.gz ZendGuardLoader-70613-PHP-5.4-linux-glibc23-x86_64.tar.gz
ioncube robots.txt
[root@vesta public_html]# cd ioncube
[root@vesta ioncube]# ls
ioncube_loader_lin_4.1.18-0 ioncube_loader_lin_4.1.18-80 ioncube_loader_lin_4.2.0-0 ioncube_loader_lin_4.1.18-80 LICENSE.txt
ioncube_loader_lin_4.2.0-0 ioncube_loader_lin_4.0.18-0 ioncube_loader_lin_4.2.0-80 ioncube_loader_lin_4.0.18-80 loader-wizard.php
ioncube_loader_lin_4.3.0-0 ioncube_loader_lin_4.0.18-0 ioncube_loader_lin_4.3.0-80 ioncube_loader_lin_4.1.18-80 README.txt
ioncube_loader_lin_4.3.18-0 ioncube_loader_lin_4.1.18-0 ioncube_loader_lin_4.3.18-80 ioncube_loader_lin_4.3.18-80 USER-GUIDE.md
ioncube_loader_lin_4.4.0-0 ioncube_loader_lin_4.1.18-0 ioncube_loader_lin_4.4.0-80 ioncube_loader_lin_4.3.18-80 USER-GUIDE.txt
[root@vesta ioncube]# cp ioncube_loader_lin_5.4.x0 /usr/lib64/php/modules
[root@vesta ioncube]# nano /etc/php.d/00-ioncube.ini
[root@vesta ioncube]# cd /etc/php.d
[root@vesta php.d]# ls
00-ioncube.ini com.ini gmp.ini json.ini mcrypt.ini pdo.ini ghar.ini recode.ini symfony.ini tidy.ini xmlrpc.ini ZendGuard.ini
ioncube_loader_lin_5.0.18-0.ini libxml.ini mbstring.ini mysql.ini pdo_sqlite.ini soap.ini sqlite3.ini symfony.ini xmlreader.ini xml.ini
[root@vesta php.d]#

```

Step 10 – Do not forget to restart Apache web server again so the new module can be loaded:

```
1 | service httpd restart
```

Step 11 – Confirm that ionCube Loader has been installed successfully by simply issuing **php -v** command:

```

[root@vesta php.d]# service httpd restart
Redirecting to /bin/systemctl restart httpd.service
[root@vesta php.d]# php -v
PHP 5.4.45 (cli) built: Jan 6 2016 16:46:34
Copyright (c) 1997-2014 The PHP Group
Zend Engine v2.4.0, Copyright (c) 1998-2014 Zend Technologies
with the ionCube PHP Loader (enabled) + Intrusion Protection from ioncube24.com (unconfigured) v5.0.19, Copyright (c) 2002-2015, by ionCube Ltd.
with Zend Guard Loader v3.3, Copyright (c) 1998-2013, by Zend Technologies
[root@vesta php.d]#

```

It will show you something like this :

```


1 | PHP 5.4.45 (cli) (built: Jan 6 2016 16:46:34)
2 | Copyright (c) 1997-2014 The PHP Group
3 | Zend Engine v2.4.0, Copyright (c) 1998-2014 Zend
4 | with the ionCube PHP Loader (enabled) + Intrus
5 | with Zend Guard Loader v3.3, Copyright (c) 199

```

or you can also create info.php file as usual then open it in your browser and you'll see something like this:

Registered Stream Filters	zlib*, bzip2*, convert iconv*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert*, consumed, dechunk, mcrypt*, mdcrypt*
---------------------------	--

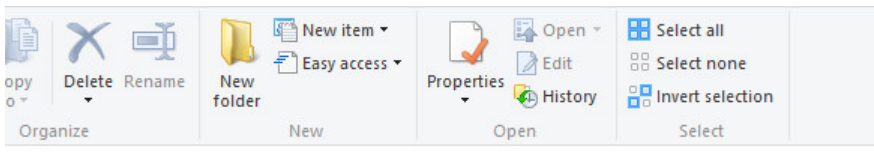
This program makes use of the Zend Scripting Language Engine:  
 Zend Engine v2.4.0, Copyright (c) 1998-2014 Zend Technologies

Powered By 

with the ionCube PHP Loader (enabled) + Intrusion Protection from ioncube24.com (unconfigured) v5.0.19, Copyright (c) 2002-2015, by ionCube Ltd.  
 with Zend Guard Loader v3.3, Copyright (c) 1998-2013, by Zend Technologies

That's it. Now you have fully working Zend and ionCube Loader installed on your VPS with VestaCP control panel. Now all websites / domains hosted in that server will be able to use both feature.

Still got confused about following the steps above? I recorded all those steps above in a video you can watch it. I hope by watching the video you'll get more detailed information which you can't get from the steps above.

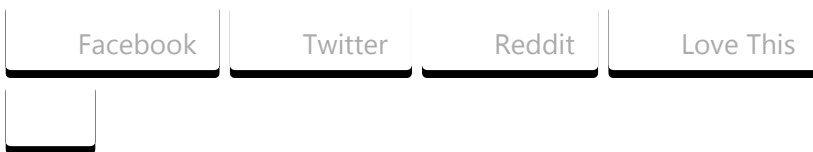


Name	Date modified	Type	Size
Vestacp Zend and Ioncube Loader - Part 1	1/9/2016 6:56 AM	VLC media file (.m...)	68.577 KB
Vestacp Zend and Ioncube Loader - Part 2	1/9/2016 7:14 AM	VLC media file (.m...)	95.106 KB

Download the video and donate \$1.5 for me to buy a JCO donut.




Thanks



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## ABOUT THE AUTHOR



**Sawiyati**

Hi! I'm Sawiyati, founder of this blog. I am a mom with passion about blogging and everything techy. Having no offline job, so I decided to start blogging while learning what I love for. You can find me at [Google+](#) or [Twitter](#).

## 5 COMMENTS



tomere | January 9, 2016

[Reply](#)

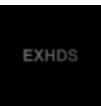
HI  
can you publish a guide – how to take a snapshot of your VPS ?



Sawiyati | January 15, 2016

[Reply](#)

probably later. just wait 😊



Paul | February 2, 2016

[Reply](#)

Can we now delete the ioncube folder from our public\_html folder ?



Ricardo Sihombing | May 2, 2016

[Reply](#)

Thanks Ibu! the ioncube loader is installed successfully . What a 'crystal clear' guidance!

Actually, I want to buy two JCOs for you, but seems like you only ask one. 😊

Thanks again... Keep on posting!



Sawiyati | May 4, 2016

[Reply](#)

You are welcome and thanks for the JCO 😊

## ADD A COMMENT

---

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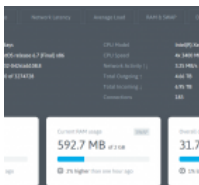
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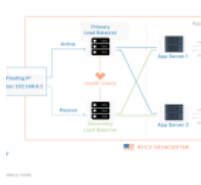
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