**CLOUD SOFTWARE**

## DIGITAL OCEAN

* DigitalOcean was formed in 2011 by Ben and Moisey Uretsky.Mitch Wainer joined the co-founding team in March of 2012, by then composed of the Uretsky brothers, Jeff Carr, and Alec Hartman.In 2012, DigitalOcean was accepted into the [TechStars](http://en.wikipedia.org/wiki/TechStars) accelerator program.
* In October 2014, DigitalOcean surpassed Rackspace as the fourth largest hosting provider in the world.
* Digital ocean was a maker of wireless products from 1992 to 1998, when it was bought by [Harris Semiconductor](http://en.wikipedia.org/wiki/Harris_Semiconductor) and its assets made part of Harris's Intersil Division, which was spun off in 1999 into [Intersil Corporation](http://en.wikipedia.org/wiki/Intersil)..
* It was a co-developer of the [IEEE 802.11](http://en.wikipedia.org/wiki/IEEE_802.11) wireless standard and of the industry’s first 802.11 chipset. Digital Ocean was founded and led by [Jeffery Alholm](http://en.wikipedia.org/w/index.php?title=Jeffery_Alholm&action=edit&redlink=1), an entrepreneur in multiple categories, such as the technology, medical, and engineering fields.

# Migrated to Digital Ocean

After a solid week of being down due to a power outage, all site content is moved over to Digital Ocean. I did break down and use the $10 1GB Linode option but that’s only because I had to give up on nginx to replace apache as the Web server.

* Moving from Windows to Linux. WP moved fine but the backup SQL script had to be modified; look for entries beginning within your drive letter like “E:/” and update accordingly.
* Migrate certificate from IIS to Apache. This turned out to be easy; I had actually made a good, easy-to-locate backup of the .pfx file I used to request softwareab.net from GoDaddy. Then I located [SSL Converter](https://www.sslshopper.com/ssl-converter.html) to do the translation. I was able to open the converted file and get the private key.

**Technology**

All Digital Ocean [wireless LAN](http://en.wikipedia.org/wiki/Wireless_LAN) (WLAN) products utilized the company’s patented protocol and software technologies along with a [direct-sequence spread spectrum](http://en.wikipedia.org/wiki/Direct-sequence_spread_spectrum) radio, giving Digital Ocean products superb penetration through walls, exceptional range, reliable data transfer, secure transmissions, and excellent throughput, especially when compared to infrared LAN communication. Digital Ocean products required no additional network operating hardware or software, and fully supported [AppleTalk](http://en.wikipedia.org/wiki/AppleTalk) protocol services.

Digital Ocean developed and sold a complete family of [LocalTalk](http://en.wikipedia.org/wiki/LocalTalk) and [ethernet](http://en.wikipedia.org/wiki/Ethernet) wireless network adapters for use with [Macintosh](http://en.wikipedia.org/wiki/Macintosh) desktops, [PowerBooks](http://en.wikipedia.org/wiki/PowerBook), and [Newtons](http://en.wikipedia.org/wiki/Newton_%28platform%29). In addition, the company’s [microcellular](http://en.wikipedia.org/wiki/Microcellular) roaming permitted virtually unlimited wireless coverage areas. Their Starfish Access Points deployed microcellular roaming over a building or campus, allowing seamless wireless LAN connections over the entire area, similar to cellular telephones.

In 1996, Digital Ocean partnered with two other companies to provide Apple and PC platforms with their first ability to be on the same wireless LAN network through a single access point. The solution viewed each computer as an agnostic system when accessing the network, which placed all computers on equal footing in regards to their ability to communicate across an enterprise.

**Chipsets**

In 1995 and 1996, Digital Ocean entered into three-way development contracts with AT&T/Lucent and Aironet to license Digital Ocean's [Media Access Control](http://en.wikipedia.org/wiki/Media_Access_Control) (MAC) chipset technology in return for access to AT&T/Lucent's semiconductor line, the [PHY](http://en.wikipedia.org/wiki/PHY) companion chips for each partner (DSSS and FHSS), plus broad development support from all parties. This work led to one common MAC chip for the three parties. Although branded differently for each partner, this common chip came from one manufacturing line and was then sorted and sold by AT&T/Lucent, Harris Semiconductor/Intersil (which by 1998 had acquired Digital Ocean and its assets), and Aironet/Cisco.

**Patents**

Some of Digital Ocean's patents included:

* Session management across multiple cells in a microcellular domain without using special or expensive hubs (microcellular roaming).
* Ultra-fast direct sequence acquiring correlator in the RF modem (low power).
* Dynamic priority reservation media access slot assignments in a wireless domain (low power).
* Dynamic migration of coordinating hub functions (unplug and play; no additional software).
* Media access protocol for selectively activating and deactivating the transmitters (low power).
* Media access control technique for user transparent bridging function (unplug and play).
* Technique for bridging LANs having non-unique node addresses (bridging functions between LocalTalk and ethernet networks)
* An adaptive technique for multi-cell operation using a single-channel wireless data link.

## Features

### DigitalOcean Community

DigitalOcean currently offers a Community resource, which provides developer-to-developer forums and tutorials on open source and sysadmin topics. As of August 2014, the Community resource receives 2 million visitors per month and has more than 800 vetted tutorials.

### API V2

On June 24, 2014, Digital Ocean's second version of their API ('API V2') launched in a BETA version. The new API is [RESTful](http://en.wikipedia.org/wiki/Representational_state_transfer), uses [oAuth](http://en.wikipedia.org/wiki/OAuth), and supports IPv6.

### IPv6

[IPv6](http://en.wikipedia.org/wiki/IPv6) was introduced to the Singapore location (SGP1), on June 16, 2014.On July 15, 2014, DigitalOcean released a new location, London (LON1), which had IPv6 at launch.

### CoreOS

[CoreOS](http://en.wikipedia.org/wiki/CoreOS) was introduced on September 5, 2014 and is available for use as a droplet's operating system.[[](http://en.wikipedia.org/wiki/DigitalOcean#cite_note-13)

**Steps for installing Digital Ocean**

**1.Install Apache**

Apache is a free open source software.To install apache,open terminal and type this commands:

Sudo apt-get update

Sudo apt-get install apache2

If apache is installed,then browse server IP address(eg.http://12.36.56.789) by using command

Ifconfig etho | grep inet | awk

**How to Find your Server’s IP address**

You can run the following command to reveal your server’s IP address.

ifconfig eth0 | grep inet | awk '{ print $2 }'

**2.Install MySQL**

MySQL is a powerful database management system used for organizing and retrieving data

To install MySQL, open terminal and type in these commands:

sudo apt-get install mysql-server libapache2-mod-auth-mysql php5-mysql

During the installation, MySQL will ask you to set a root password. If you miss the chance to set the password while the program is installing, it is very easy to set the password later from within the MySQL shell.

Once you have installed MySQL, we should activate it with this command:

sudo mysql\_install\_db

Finish up by running the MySQL set up script:

sudo /usr/bin/mysql\_secure\_installation

The prompt will ask you for your current root password.

Type it in.

Enter current password for root (enter for none):

OK, successfully used password, moving on...

Then the prompt will ask you if you want to change the root password. Go ahead and choose N and move on to the next steps.

It’s easiest just to say Yes to all the options. At the end, MySQL will reload and implement the new changes.

By default, a MySQL installation has an anonymous user, allowing anyone

to log into MySQL without having to have a user account created for

them. This is intended only for testing, and to make the installation

go a bit smoother. You should remove them before moving into a

production environment.

Remove anonymous users? [Y/n] y

... Success!

Normally, root should only be allowed to connect from 'localhost'. This

ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y

... Success!

By default, MySQL comes with a database named 'test' that anyone can

access. This is also intended only for testing, and should be removed

before moving into a production environment.

Remove test database and access to it? [Y/n] y

- Dropping test database...

... Success!

- Removing privileges on test database...

... Success!

Reloading the privilege tables will ensure that all changes made so far

will take effect immediately.

Reload privilege tables now? [Y/n] y

... Success!

Cleaning up...

Once you're done with that you can finish up by installing PHP.

**3.Install PHP**

PHP is an open source web scripting language that is widely use to build dynamic webpages.

To install PHP, open terminal and type in this command.

sudo apt-get install php5 libapache2-mod-php5 php5-mcrypt

After you answer yes to the prompt twice, PHP will install itself.

It may also be useful to add php to the directory index, to serve the relevant php index files:

sudo nano /etc/apache2/mods-enabled/dir.conf

Add index.php to the beginning of index files. The page should now look like this:

<IfModule mod\_dir.c>

DirectoryIndex index.php index.html index.cgi index.pl index.php index.xhtml index.htm

</IfModule>

**PHP Modules**

PHP also has a variety of useful libraries and modules that you can add onto your virtual server. You can see the libraries that are available.

apt-cache search php5-

Terminal will then display the list of possible modules. The beginning looks like this:

php5-cgi - server-side, HTML-embedded scripting language (CGI binary)

php5-cli - command-line interpreter for the php5 scripting language

php5-common - Common files for packages built from the php5 source

php5-curl - CURL module for php5

php5-dbg - Debug symbols for PHP5

php5-dev - Files for PHP5 module development

php5-gd - GD module for php5

php5-gmp - GMP module for php5

php5-ldap - LDAP module for php5

php5-mysql - MySQL module for php5

php5-odbc - ODBC module for php5

php5-pgsql - PostgreSQL module for php5

php5-pspell - pspell module for php5

php5-recode - recode module for php5

php5-snmp - SNMP module for php5

php5-sqlite - SQLite module for php5

php5-tidy - tidy module for php5

php5-xmlrpc - XML-RPC module for php5

php5-xsl - XSL module for php5

php5-adodb - Extension optimising the ADOdb database abstraction library

php5-auth-pam - A PHP5 extension for PAM authentication

[...]

Once you decide to install the module, type:

sudo apt-get install *name of the module*

You can install multiple libraries at once by separating the name of each module with a space.

Congratulations! You now have LAMP stack on your droplet!

**4.RESULTS: See PHP on your Server**

Although LAMP is installed, we can still take a look and see the components online by creating a quick php info page

To set this up, first create a new file:

sudo nano /var/www/info.php

Add in the following line:

<?php

phpinfo();

?>

Then Save and Exit.

Restart apache so that all of the changes take effect:

sudo service apache2 restart

Finish up by visiting your php info page (make sure you replace the example ip address with your correct one): http://12.34.56.789/info.php