



LINODE

CLOUD HOSTING

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CS531 Web Server Design

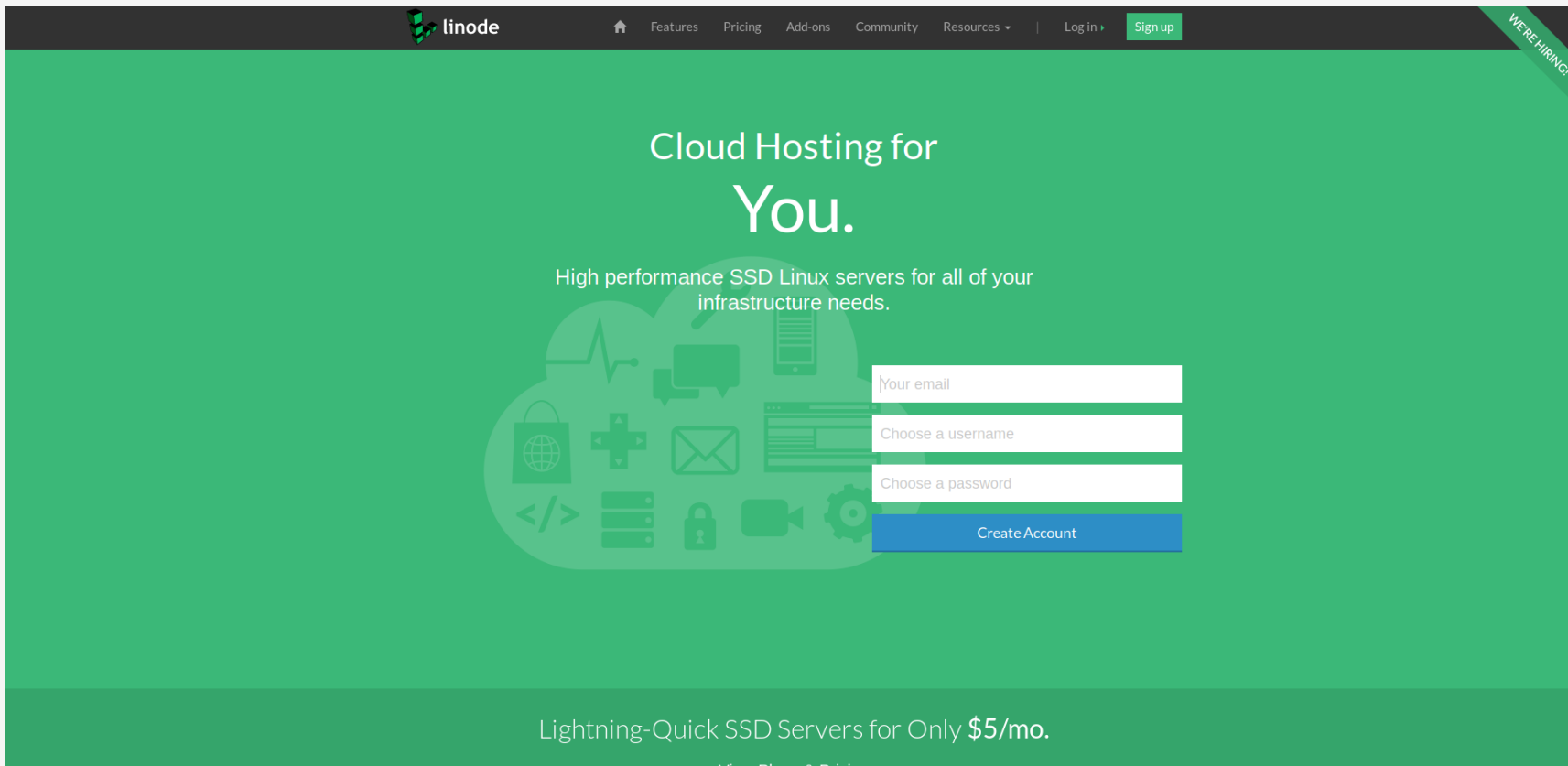
CS Department -Old Dominion University

Content...

- Sign up for Linode
 - Log in
 - Create a Linode
 - Run your echo server
 - Connect to the echo server externally
 - References
-

Sign Up

- Create a new account at the [Sign Up page](#).
- Sign in and enter your billing and account information.



The screenshot shows the Linode website's sign-up page. The header features the Linode logo, navigation links (Features, Pricing, Add-ons, Community, Resources), and a 'Log in' link next to a green 'Sign up' button. A diagonal banner in the top right corner reads 'WE'RE HIRING!'. The main content area has a green background with the text 'Cloud Hosting for You.' and 'High performance SSD Linux servers for all of your infrastructure needs.' Below this is a circular graphic containing various icons representing different services. To the right of the graphic is a sign-up form with three input fields: 'Your email', 'Choose a username', and 'Choose a password'. A blue 'Create Account' button is positioned below these fields. At the bottom of the page, a dark green banner states 'Lightning-Quick SSD Servers for Only \$5/mo.' with a link to 'View Plans & Pricing'.

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Features Pricing Add-ons Community Resources | Log in Sign up

WE'RE HIRING!

Cloud Hosting for
You.

High performance SSD Linux servers for all of your infrastructure needs.

Your email

Choose a username

Choose a password

Create Account

Lightning-Quick SSD Servers for Only \$5/mo.

[View Plans & Pricing](#)

Most accounts are activated instantly, but some require manual review prior to activation. If your account is not immediately activated, you will receive an email with additional instructions.



Legal Stuff

Please select your country

United States ▼

[Customer Agreement](#)

☒ I accept and agree to Linode's Customer Agreement, which details my rights and responsibilities while using Linode products and services.

[Privacy Policy](#)

☒ I accept and agree to Linode's Privacy Policy, which details Linode's commitment to privacy and data security.

Create Account

Click to Create an Account



Billing

To complete your signup, please add a valid credit or debit card to serve as the default payment method for your account. To learn more about how billing works, [please see our guide](#).

CREDIT CARD INFORMATION:

All major credit cards accepted.

Cardholder Name

Credit Card Number

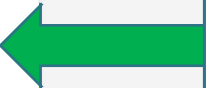
Expiration Date

CW

Promotion Code (Optional)

Referral Code (Optional)

BILLING INFORMATION:



Fill in your credit card details

Log In

- Log in to the [Cloud Manager](#) with the username and password you created when signing up.
- At the top of the page, click **Create** and select **Linode**.



Welcome Back

Please log in to continue.

Need an Account? [Sign up here.](#)

Username

jayanetti.hr@gmail.com

Password

.....




Trust this computer for 30 days

Log in

Forgot your [username](#) / [password](#)?

Log In to the
account

Welcome message

linode

Create ▾

Search for Linodes, Volumes, NodeBalancers, Domains, Tags...

jhimarsha 0

Dashboard

Linodes

Volumes

NodeBalancers

Domains


Longview

StackScripts

Images

Account


Get Help



Dashboard


Welcome to the New Cloud Manager!

We've added new features to help improve your experience and create a fresh new look. Help us build a better product for Linode customers like you. Share your feedback in the footer below.




Streamline Deployments

Deploy a Linode, NodeBalancers, Block Storage Volume, or Domain easily with step-by-step guidance.



Find Resources

Our new predictive search gives you quick access to support documentation and community posts.



Access Anywhere

With support for all major devices and screen sizes, it's easy to stay connected.

Let's go!

Go back to [Classic Manager](#).

Up Your Data and Keep it Safe

Enrollment

Setting, new Linodes will be automatically service.

la Data Center - Coming Soon


Linode is heading down under later this year west data center: Linode Sydney. This will be our side and comes on the heels of our recent global Mumbai. This is a significant milestone for us.

er's Guide to Kubernetes

team recently released a comprehensive five-ers discover and implement the Kubernetes system, often referred to as k8s. A Beginner's vers fundamental questions and introduces bernetes. The guide is supplemented by a explain new terminology while progressing

2019 Fall Events

Join us this Fall for more #LinodeOnTheRoad adventures. We'll be a busy bunch these next few months and look forward to meeting you all around the globe. MonktoberfestPortland, Maine | October 3-4 We're heading up to beautiful New England for our first event of the Fall. Monktoberfest is the only event of its kind that [...]



Create a Linode

- 1) Choose the region where you would like your Linode to reside. If you're not sure which to select, see our [How to Choose a Data Center](#) guide. You can also generate [MTR reports](#) for a deeper look at the route path between you and a data center in each specific region.
 - 2) Select a Linode plan.
 - 3) Create a root password for your Linode in the **Root Password** field. This password must be provided when you log in to your Linode via SSH.
 - 4) Click **Create**. You will be directed back to the *Linodes* page which will report the status of your Linode as it boots up.
-

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Dashboard

Linodes

Volumes

NodeBalancers

Domains

Longview

StackScripts

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Create ▾

Search for Linodes, Volumes, NodeBalancers, Domains, Tags...

Getting Started

Himarsha

CS531

Inbox (22) - jayanetti....

Inbox (22) - jayanetti....

Getting Started

Himarsha

CS531

Inbox (22) - jayanetti....

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Create New Linode

DistributionsOne-ClickMy Images

Choose a Distribution

Images

Ubuntu 19.04

Region

Determine the best location for your Linode. [Use our speedtest page](#) to find the best region for your current location.

Select a region

Newark, NJ

Linode Plan

NanodeStandardDedicated CPUHigh MemoryGPU

Nanode instances are good for low-duty workloads, where performance isn't critical.

Nanode 1GB

\$5/mo (\$0.0075/hr)

1 CPU, 25GB Storage, 1GB RAM

Linode Summary

Ubuntu

Ubuntu 19.04

US

Newark, NJ

Nanode 1GB

1 CPU, 25GB Storage, 1GB RAM

Linode Label

ubuntu-us-east

\$5.00/mo

Create

Linode Label

ubuntu-us-east

Add Tags

Type to choose or create a tag.

Root Password

Strength: Good

SSH Keys

Add an SSH Key

Optional Add-ons

Backups \$2.00 per month

Private IP

Linode Summary

Ubuntu

Ubuntu 19.04

US

Newark, NJ

Nanode 1GB

1 CPU, 25GB Storage, 1GB RAM

Linode Label

ubuntu-us-east

\$5.00/mo

Create

API Reference

Provide Feedback

Create Linode

Find your Linode's IP Address

- Your Linode has a unique IP address that identifies it to other devices and users on the internet.

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Images

Account

Get Help

Linodes / ubuntu-us-east

Launch Console Running

Summary Volumes **Networking** Resize Rescue Rebuild Backups Activity Settings Advanced

Access

SSH Access: ssh root@45.79.140.173

Lish via SSH: ssh -t jhimarsha@sh-newark.linode.com ubuntu-us-east

DNS Resolvers (IPv4): 66.228.42.5 +6

DNS Resolvers (IPv6): 2600:3c03:5 +6

IPv4 Add Private IPv4 Add Public IPv4

Address	Default Gateway	Reverse DNS	Type
45.79.140.173	45.79.140.1	li1239-173.members.linode.com	Public

IPv6 Add IPv6

Address	Default Gateway	Reverse DNS	Type
2600:3c03:f03c:91ff:fe8f:6a56	fe80::1		SLAAC
fe80::f03c:91ff:fe8f:6a56	fe80::1		Link Local

Networking Actions

+ IP Transfer

+ IP Sharing

IP Address

- Click the **Linodes** menu item in the [Cloud Manager's](#) left hand navigation.
- Find your Linode, click on it's name and navigate to *Networking*.
- Your IPv4 and IPv6 addresses appear under the *IPv4* and *IPv6* sections.

Connect to your instance

Connect To Your Instance ✕

I would like to connect with

- ☒ A standalone SSH client ⓘ
- ☐ EC2 Instance Connect (browser-based SSH connection) ⓘ
- ☐ A Java SSH Client directly from my browser (Java required) ⓘ

To access your instance:

1. Open an SSH client. (find out how to [connect using PuTTY](#))
2. Locate your private key file (marshlab.pem). The wizard automatically detects the key you used to launch the instance.
3. Your key must not be publicly viewable for SSH to work. Use this command if needed:

```
chmod 400 marshlab.pem
```
4. Connect to your instance using its Public DNS:

```
ec2-13-58-206-228.us-east-2.compute.amazonaws.com
```

Example:

```
ssh -i "marshlab.pem" ubuntu@ec2-13-58-206-228.us-east-2.compute.amazonaws.com
```

Please note that in most cases the username above will be correct, however please ensure that you read your AMI usage instructions to ensure that the AMI owner has not changed the default AMI username.

If you need any assistance connecting to your instance, please see our [connection documentation](#).

Close

File Edit View Search Terminal Help

```
hjayanet@E-3102-15:~/Documents/Himarsha$ chmod 400 marshlab.pem
hjayanet@E-3102-15:~/Documents/Himarsha$ ssh -i "marshlab.pem" ubuntu@ec2-13-58-206-228.us-east-2.compute.amazonaws.com
The authenticity of host 'ec2-13-58-206-228.us-east-2.compute.amazonaws.com (13.58.206.228)' can't be established.
ECDSA key fingerprint is SHA256:09+MYD9NbDlPIB/FE2t375tPwcQXU6GIWlVAWDC+t1Y.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'ec2-13-58-206-228.us-east-2.compute.amazonaws.com,13.58.206.228' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 18.04.2 LTS (GNU/Linux 4.15.0-1044-aws x86_64)
```

```
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage
```

System information as of Wed Sep 18 16:30:14 UTC 2019

```
System load:  0.0      Processes:            85
Usage of /:   13.6% of 7.69GB   Users logged in:     0
Memory usage: 14%      IP address for eth0: 172.31.30.198
Swap usage:   0%
```

```
0 packages can be updated.
0 updates are security updates.
```

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo root" for details.

```
ubuntu@ip-172-31-30-198:~$
```

Connect to Your Linode via SSH

- Communicating with your Linode is usually done using the secure shell (SSH) protocol. SSH encrypts all of the data transferred between the client application on your computer and the Linode, including passwords and other sensitive information. There are SSH clients available for every operating system.
 - **Linux:** You can use a terminal window, regardless of desktop environment or window manager.
 - **macOS:** *Terminal.app* comes pre-installed and can be launched from Spotlight or Launchpad.
 - **Windows:** There is no native SSH client but you can use a free and open source application called [PuTTY](#).
-

Log in using SSH

1. Enter the following into your terminal window or application. Replace the example IP address with your Linode's IP address:

```
ssh root@198.51.100.4
```

2. If this is the first time connecting to your Linode, you'll see the authenticity warning below. This is because your SSH client has never encountered the server's key fingerprint before. Type `yes` and press **Enter** to continue connecting.

```
The authenticity of host '198.51.100.4 (198.51.100.4)' can't be established.  
RSA key fingerprint is 11:eb:57:f3:a5:c3:e0:77:47:c4:15:3a:3c:df:6c:d2.  
Are you sure you want to continue connecting (yes/no)?
```

After you enter `yes`, the client confirms the addition:

```
Warning: Permanently added '198.51.100.4' (RSA) to the list of known hosts.
```

3. The login prompt appears for you to enter the password you created for the `root` user above.

```
root@198.51.100.4's password:
```

4. The SSH client initiates the connection and then the following prompt appears:

```
root@li123-456:~#
```

File Edit View Search Terminal Help

hjayanet@E-3102-15:~\$ ssh root@45.79.140.173

root@45.79.140.173's password:

Welcome to Ubuntu 19.04 (GNU/Linux 5.0.0-13-generic x86_64)

- * Documentation: <https://help.ubuntu.com>
- * Management: <https://landscape.canonical.com>
- * Support: <https://ubuntu.com/advantage>

System information as of Wed Sep 18 18:21:33 UTC 2019

System load:	0.0	Processes:	109
Usage of /:	7.6% of 24.06GB	Users logged in:	0
Memory usage:	15%	IP address for eth0:	45.79.140.173
Swap usage:	0%		

- * Congrats to the Kubernetes community on 1.16 beta 1! Now available in MicroK8s for evaluation and testing, with upgrades to RC and GA

snap info microk8s

0 updates can be installed immediately.
0 of these updates are security updates.

Last login: Wed Sep 18 17:00:16 2019 from 128.82.7.41

root@marshmallows:~#

Run your echo server code

```
root@marshmallows:~# nano marsh_server.py
root@marshmallows:~# ls
marsh_server.py
root@marshmallows:~# ls -lr
total 4
-rw-r--r-- 1 root root 457 Sep 18 18:32 marsh_server.py
root@marshmallows:~# chmod +x marsh_server.py
root@marshmallows:~# ls
marsh_server.py
root@marshmallows:~# ls -lr
ls: cannot access '-': No such file or directory
ls: cannot access 'lr': No such file or directory
root@marshmallows:~# ls -lr
total 4
-rwxr-xr-x 1 root root 457 Sep 18 18:32 marsh_server.py
root@marshmallows:~#
```


1. Run the python file in the main terminal for your echo server

```
root@marshmallows: ~  
root@marshmallows:~# ./marsh_server.py  
Listening on 0.0.0.0:80 for HTTP connections  
□
```

2. Connect to the server via telnet from a new terminal

```
root@marshmallows: ~  
hjayanet@E-3102-15:~$ telnet 45.79.140.173 80  
Trying 45.79.140.173...  
Connected to 45.79.140.173.  
Escape character is '^I'.  
Hi  
Hi  
□
```

References

- <https://www.linode.com/docs/getting-started/>
- <https://www.linode.com/docs/networking/dns/common-dns-configurations/>

Thank you!

