

DVS-100/200 Installation Guide

DVS-100/200 can be installed on any system running the Ubuntu 14.04 64 bit Linux operating system, the guide below covers some common installation scenarios.

The installation procedure for DVS-100 and DVS-200 is the same. Once installed the software will be running in free mode (DVS-100) you must install a valid licence to enable DVS-200 features.

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System resource recommendations

The guide below makes some recommendations on system specifications, please use these as guidelines only. We assume one 1Mbps video stream with 96Kbps audio, the max viewer count is per instance (per server).

On-Premise Installations

8GB of RAM and a SSD (Solid state drive) is recommended for larger audiences, approximate network limitations are as below.

Network Speed	Viewers (Per Instance)
10 Mbps	8
100 Mbps	80
1000 Mbps	800

Add more instances or additional network interfaces as audience size increases

For encoding / transcoding HD video we recommend a 4 core 7th generation i7 CPU and 8GB ram at minimum.

Cloud hosting installations

Hosting Examples

Digital Ocean

Digital Ocean is ideal for scenarios with low viewer counts.

All Digital Ocean instances share a 1Gbps connection to the internet, Digital Ocean recommend consistently not exceeding 300Mbps I/O.

Hosting Plan	Viewers (Per Instance)
\$5 USD PM	50
\$10 USD PM	150

Add more instances as audience size increases

Amazon AWS

Hosting Plan	Viewers (Per Instance)
M1.small	120
M1.medium	285
m1.xlarge	570

Add more instances as audience size increases

Massive Grid

Massive grid offer affordable dedicated servers with dedicated 1Gbps connectivity.

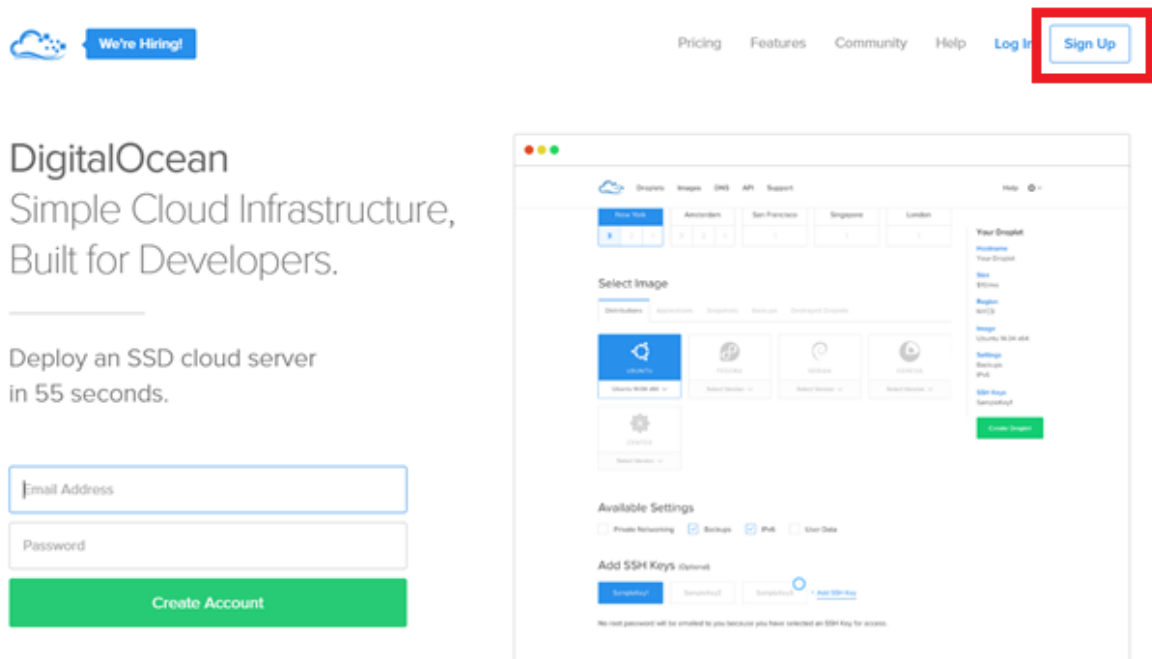
Hosting Plan	Viewers (Per Instance)
Managed Dedicated I	800

Add more instances as audience size increases

Installation Walkthroughs

Digital Ocean

Visit www.digitalocean.com and sign up for a new account



Once you have created your account click the 'Create Droplet' button



You will see the page below.






Droplet Hostname

DVSS

Select Size

\$5/mo \$0.007/hour 512 MB / 1 CPU 20 GB SSD Disk 1000 GB Transfer	\$10/mo \$0.015/hour 1 GB / 1 CPU 30 GB SSD Disk 2 TB Transfer	\$20/mo \$0.030/hour 2 GB / 2 CPUs 40 GB SSD Disk 3 TB Transfer	\$40/mo \$0.060/hour 4 GB / 2 CPUs 60 GB SSD Disk 4 TB Transfer	\$80/mo \$0.119/hour 8 GB / 4 CPUs 80 GB SSD Disk 5 TB Transfer
\$160/mo \$0.238/hour 16 GB / 8 CPUs 160 GB SSD Disk 6 TB Transfer	\$320/mo \$0.476/hour 32 GB / 12 CPUs 320 GB SSD Disk 7 TB Transfer	\$480/mo \$0.714/hour 48 GB / 16 CPUs 480 GB SSD Disk 8 TB Transfer	\$640/mo \$0.952/hour 64 GB / 20 CPUs 640 GB SSD Disk 9 TB Transfer	

Select Region

 New York 3 2 1	 Amsterdam 3 2 1	 San Francisco 1	 Singapore 1	 London 1
--	---	---	---	--

Your Droplet

Hostname
DVSS

Size
\$5/mo

Region
London 1

Image
14.04 x64

Settings
none

SSH Keys
none

First give your Droplet a hostname, here I have chosen DVSS.

Droplet Hostname

DVSS






Next choose a size, the size required depends on how many users you need to serve. Use the guide at the begging of this document to help with selection.

Select Size

\$5 /mo \$0.007/hour 512 MB / 1 CPU 20 GB SSD Disk 1000 GB Transfer	\$10 /mo \$0.015/hour 1 GB / 1 CPU 30 GB SSD Disk 2 TB Transfer	\$20 /mo \$0.030/hour 2 GB / 2 CPUs 40 GB SSD Disk 3 TB Transfer	\$40 /mo \$0.060/hour 4 GB / 2 CPUs 60 GB SSD Disk 4 TB Transfer	\$80 /mo \$0.119/hour 8 GB / 4 CPUs 80 GB SSD Disk 5 TB Transfer
\$160 /mo \$0.238/hour 16 GB / 8 CPUs 160 GB SSD Disk 6 TB Transfer	\$320 /mo \$0.476/hour 32 GB / 12 CPUs 320 GB SSD Disk 7 TB Transfer	\$480 /mo \$0.714/hour 48 GB / 16 CPUs 480 GB SSD Disk 8 TB Transfer	\$640 /mo \$0.952/hour 64 GB / 20 CPUs 640 GB SSD Disk 9 TB Transfer	

Next select the region closest to you for best performance.

Select Region

 New York	 Amsterdam	 San Francisco	 Singapore	 London
321	321	1	1	1

Finally you need to select an image, please choose Ubuntu 14.04 x64.







Select Image

Distributions

Applications

Snapshots

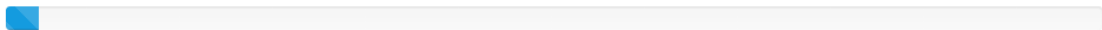
Backups

 UBUNTU 14.04 x64 ▾	 FREEBSD Select Version ▾	 FEDORA Select Version ▾	 DEBIAN Select Version ▾
 COREOS Select Version ▾	 CENTOS Select Version ▾		

Ignore the 'Available Settings' and 'Add SSH Keys (optional)' sections and create the droplet.

Create Droplet

We are now creating your droplet



Approximately 58 seconds remaining

Once the droplet has been created you will see the page below. We are now ready to install the stream server software.

DV-SS ACTIVE

178.62.78.236 512MB Ram 20GB SSD Disk London 1 Ubuntu 14.04 x64

Access

Power

Resize

Snapshots

Settings

Graphs

History

Destroy

Console Access

This will open up a console VNC connection to your droplet and is the equivalent of plugging a monitor and keyboard directly to your virtual server.

Console Access

Reset Root Password

This will shut down your droplet and a new root password will be set and emailed to you.

Do you wish to proceed?

Reset Root Password

Click the blue 'Console Access' button, you will see the page below

DV-SS

[Back to droplet](#)

```
Ubuntu 14.04.3 LTS DV-SS tty1
DV-SS login: Cloud-init v. 0.7.5 running 'modules:final' at Thu, 13 Aug 2015 08:34:35 +0000. Up 7.24 seconds.
ec2: #####
ec2: -----BEGIN SSH HOST KEY FINGERPRINTS-----
ec2: 1024 a0:51:2d:29:46:86:bd:64:0a:98:2b:f8:6b:87:d0:58 root@DV-SS (DSA)
ec2: 256 56:5d:5c:80:e5:62:aa:bb:9b:73:e9:dd:8d:8c:c6:53 root@DV-SS (ECDSA)
ec2: 2048 3e:00:20:7e:5e:d5:1a:cb:32:30:30:cf:b7:4b:9b:3b root@DV-SS (RSA)
ec2: -----END SSH HOST KEY FINGERPRINTS-----
ec2: #####
ec2: -----BEGIN SSH HOST KEY KEYS-----
ecdsa-sha2-nistp256 AAAAE2UjZHNhLXNoYTItbmlzdHAgNTYAAAAIbm1zdHAgNTYAAABBBBC727Fr4Mf n2pC1QY7xMa114UuvcBSkjt80QfeIHsVLJNoN0VduYe.j+
iRDbiE1TaPBD3uB6ZmhqSG68M jP7UI= root@DV-SS
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCe3Lc jU1uoQ3WfXqaD2kS10r9ukEXE1VasM1h0QXUCQbs9BEC9BU0E11Ne3Xf1cMh5CwY2a3M4E7YxGikAv11rU2Yp
omudGUEHR3pJewlaoBnoBo2gKncx3zzBC009NFU3LISkQ19V+QhuHtsXDTi7rWuDnDdS9+0Zz/chuXU5oE/1qY1y/a6bbbGde7h1uQ9GSD3ru43bxs9AEgget1p10+8
EZGFecG6sBJu79Mgm/G3S3o2BACL0cBc/eDqMWM1nHbAFly6GCR2Un5UzB5QBunY5GAoJAFUp2TCeuaUDEUKbxUey/f7I2yPW1C71cfUfaGznXTk1PeJilKpKOL roo
t@DV-SS
-----END SSH HOST KEY KEYS-----
Cloud-init v. 0.7.5 finished at Thu, 13 Aug 2015 08:34:36 +0000. DataSource DataSourceDigitalOcean. Up 7.39 seconds
```

Hit return on the keyboard and you will be asked to login. The username and password for your server will have been e-mailed to you by Digital Ocean. Enter your username and hit the return key, then enter your password and again hit the return key to login (**please note you will not see any characters appear on screen when typing your passwords**).

You will be asked to change your password the first time you login, please ensure you use a password that is at least 10 characters long it should be uppercase and lowercase and contain characters such as \$%&@# for security.

```
ec2: #####
ec2: -----BEGIN SSH HOST KEY FINGERPRINTS-----
ec2: 1024 a0:51:2d:29:46:86:bd:6d:0a:98:2b:f8:6b:87
ec2: 256 56:5d:5c:88:e5:62:aa:bb:9b:73:e9:dd:8d:8c:
ec2: 2048 3c:00:28:7c:5e:d5:1a:b3:32:30:30:cf:b7:4b
ec2: -----END SSH HOST KEY FINGERPRINTS-----
ec2: #####
ec2: -----BEGIN SSH HOST KEY KEYS-----
ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTY
iRDbiE1TaPBD3vBAZmhJqsGG8MjP7WI= root@DU-SS
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCe3LcjUivoQ3W
onwdGUEHR3pWewlaoBnoBo2gKmcx3zzBC009NfW3LISkQ19Y+Qh
EZGFecG6sBJw79Mgm/G3S3o2BACL0cBc/eDqMWM1mHbAFLy6GCR
t@DU-SS
ec2: -----END SSH HOST KEY KEYS-----
Cloud-init v. 0.7.5 finished at Thu, 13 Aug 2015 08

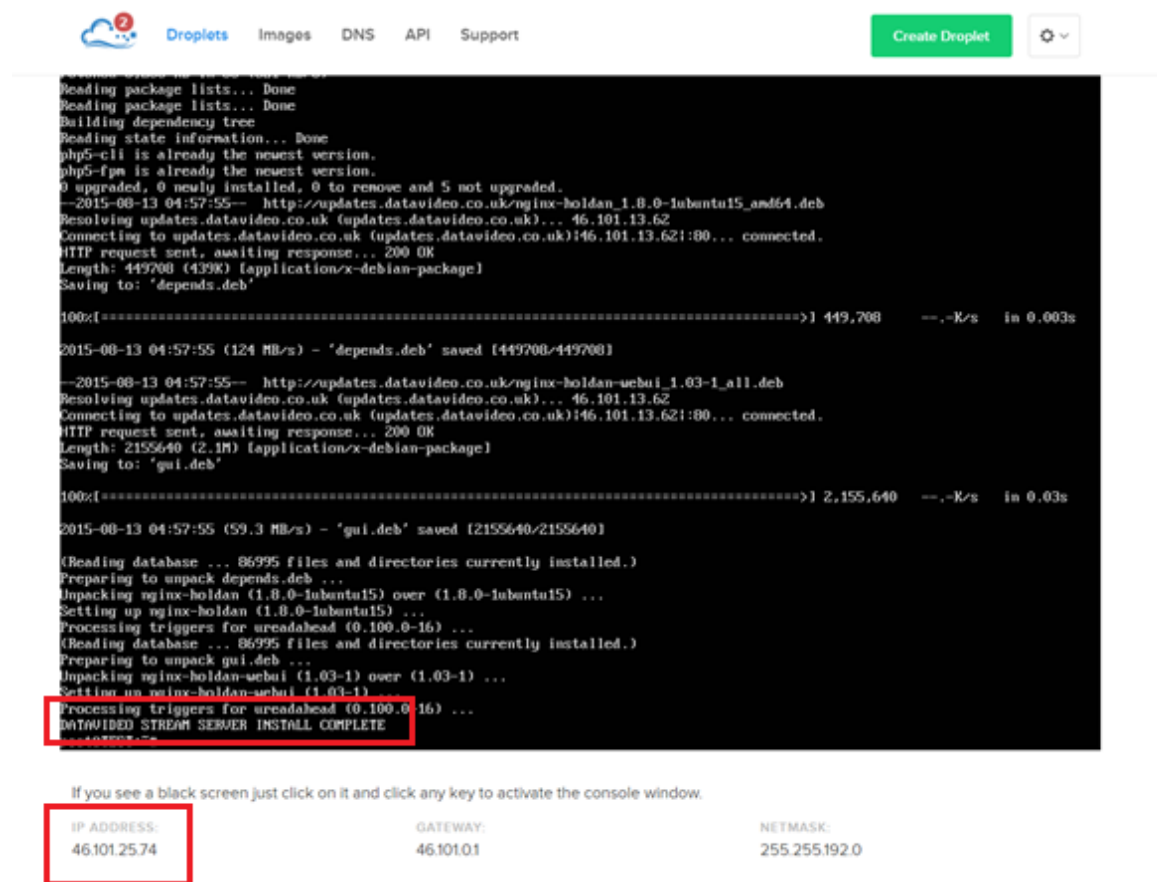
Ubuntu 14.04.3 LTS DU-SS tty1
DU-SS login:
```

Once logged in type the commands below in order, hit return after each command.

```
wget http://updates.datavideo.co.uk/install-dvss.sh
```

```
bash install-dvss.sh
```

You will see the message below once the installation is complete.



2 Droplets Images DNS API Support Create Droplet

```
Reading package lists... Done
Reading package lists... Done
Building dependency tree
Reading state information... Done
php5-cli is already the newest version.
php5-fpm is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 5 not upgraded.
--2015-08-13 04:57:55-- http://updates.datavideo.co.uk/nginx-holdan_1.8.0-1ubuntu15_amd64.deb
Resolving updates.datavideo.co.uk (updates.datavideo.co.uk)... 46.101.13.62
Connecting to updates.datavideo.co.uk (updates.datavideo.co.uk):46.101.13.62:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 449700 (439K) [application/x-debian-package]
Saving to: 'depends.deb'

100%[=====>] 449,700  --.-K/s  in 0.003s

2015-08-13 04:57:55 (124 MB/s) - 'depends.deb' saved [449700/449700]

--2015-08-13 04:57:55-- http://updates.datavideo.co.uk/nginx-holdan-ueui_1.03-1_all.deb
Resolving updates.datavideo.co.uk (updates.datavideo.co.uk)... 46.101.13.62
Connecting to updates.datavideo.co.uk (updates.datavideo.co.uk):46.101.13.62:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2155640 (2.1M) [application/x-debian-package]
Saving to: 'gui.deb'

100%[=====>] 2,155,640  --.-K/s  in 0.03s

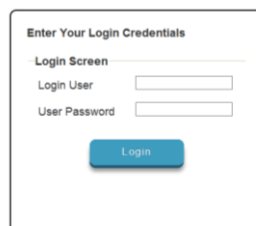
2015-08-13 04:57:55 (59.3 MB/s) - 'gui.deb' saved [2155640/2155640]

(Reading database ... 86995 files and directories currently installed.)
Preparing to unpack depends.deb ...
Unpacking nginx-holdan (1.8.0-1ubuntu15) over (1.8.0-1ubuntu15) ...
Setting up nginx-holdan (1.8.0-1ubuntu15) ...
Processing triggers for ureadahead (0.100.0-16) ...
(Reading database ... 86995 files and directories currently installed.)
Preparing to unpack gui.deb ...
Unpacking nginx-holdan-ueui (1.03-1) over (1.03-1) ...
Setting up nginx-holdan-ueui (1.03-1) ...
Processing triggers for ureadahead (0.100.0-16) ...
DATAVIDEO STREAM SERVER INSTALL COMPLETE
```

If you see a black screen just click on it and click any key to activate the console window.

IP ADDRESS:	GATEWAY:	NETMASK:
46.101.25.74	46.101.0.1	255.255.192.0

Now simply enter the IP address displayed into a web browser to access the login page.



Enter Your Login Credentials

Login Screen

Login User

User Password

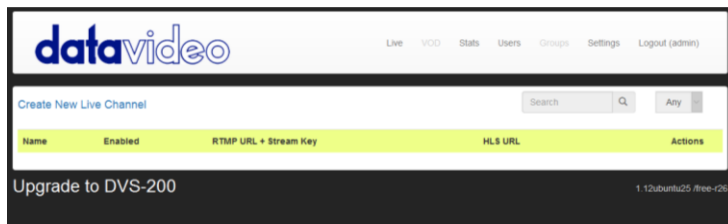
Login

The default credentials are:

User: admin

Password: 000000

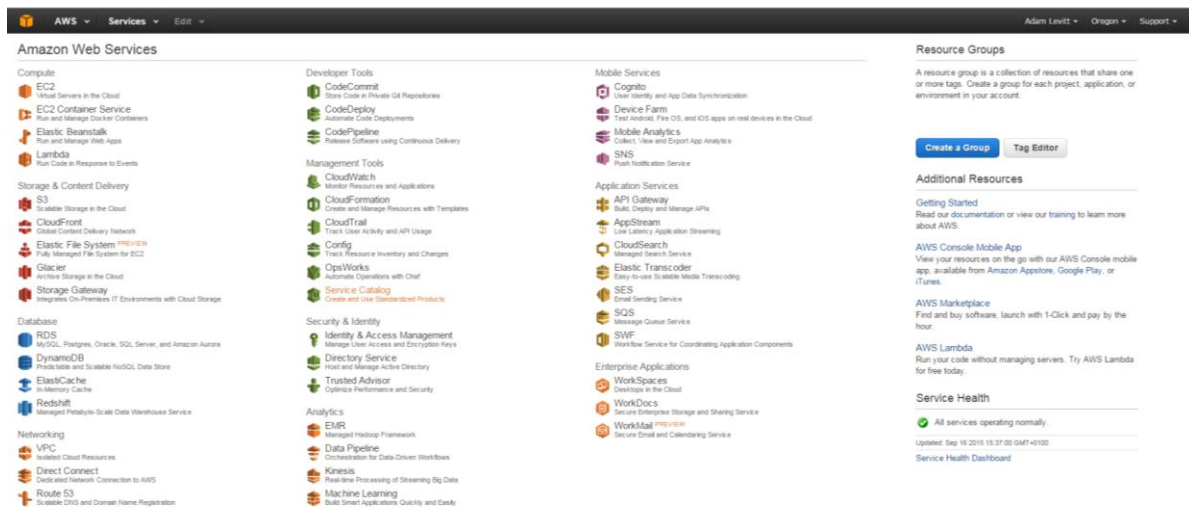
After logging in you will see the software is running in free (DVS-100) mode, to enable DVS-200 features you need a valid licence.



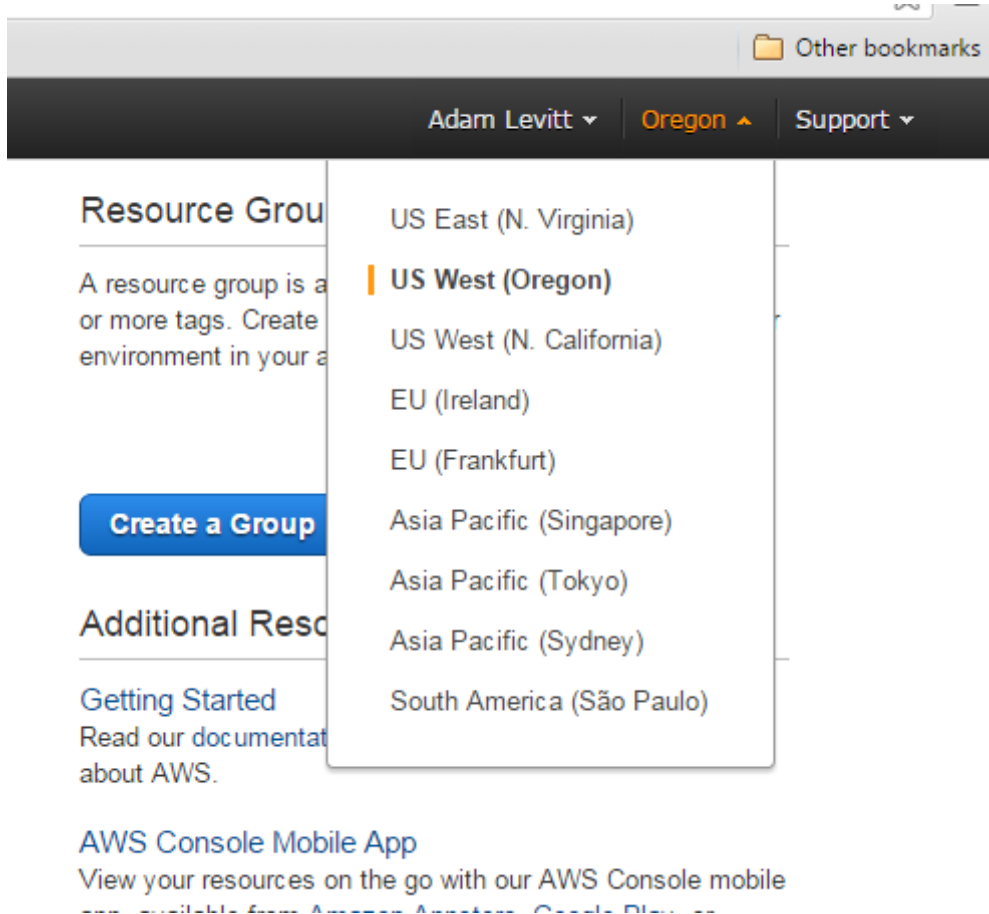
Installation on Amazon AWS Cloud

Visit <http://aws.amazon.com> and sign up for a new account

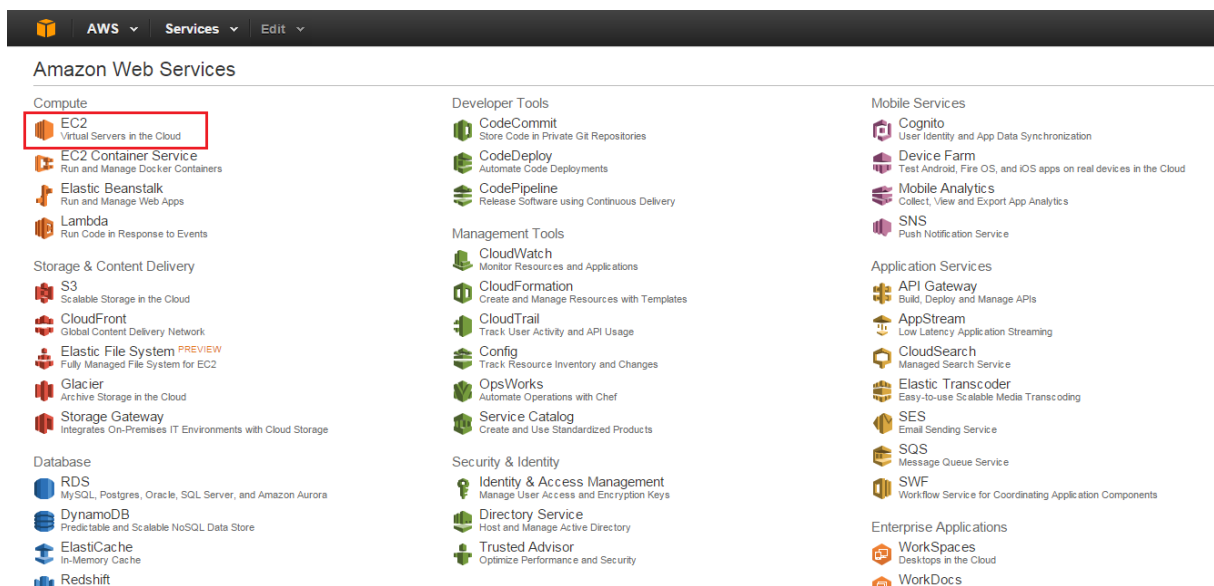
Once you have created your account sign in and you will see the page below



First change the region in the top right corner to the region where you would like to setup your cloud server



Now click the 'EC2' link under compute to the left of the page



Click the 'Launch Instance' button

Resources

You are using the following Amazon EC2 resources in the EU West (Ireland) region:

- 0 Running Instances
- 0 Elastic IPs
- 0 Volumes
- 0 Snapshots
- 0 Key Pairs
- 0 Load Balancers
- 0 Placement Groups
- 1 Security Groups

[Easily deploy and operate applications - use Chef recipes, manage SSH users, and more. Try OpsWorks now.](#)

Create Instance

To start using Amazon EC2 you will want to launch a virtual server, known as an Amazon EC2 Instance.

Launch Instance

Note: Your instances will launch in the EU West (Ireland) region

Service Health

Service Status: OK

Scheduled Events

EU West (Ireland):

Select the Ubuntu 14.04 64 bit image as shown below

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace, or you can select one of your own AMIs.

Quick Start

My AMIs
AWS Marketplace
Community AMIs

Free tier only (1)

Amazon Linux AMI 2015.03.1 (HVM), SSD Volume Type - ami-e4d19e93
The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.
Root device type: ebs Virtualization type: hvm
64-bit
Select

Red Hat Enterprise Linux 7.1 (HVM), SSD Volume Type - ami-25158352
Red Hat Enterprise Linux version 7.1 (HVM), EBS General Purpose (SSD) Volume Type
Root device type: ebs Virtualization type: hvm
64-bit
Select

SUSE Linux Enterprise Server 12 (HVM), SSD Volume Type - ami-e901af5f
SUSE Linux Enterprise Server 12 (HVM), EBS General Purpose (SSD) Volume Type: Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.
Root device type: ebs Virtualization type: hvm
64-bit
Select

Ubuntu Server 14.04 LTS (HVM), SSD Volume Type - ami-47a23a30
Ubuntu Server 14.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>)
Root device type: ebs Virtualization type: hvm
64-bit
Select

Microsoft Windows Server 2012 R2 Base - ami-1a92c95d
Microsoft Windows Server 2012 R2 Standard edition with 64-bit architecture. [English]
Root device type: ebs Virtualization type: hvm
64-bit
Select

Now select your instance type, the size required depends on how many users you need to serve. Use the guide at the begging of this document to help with selection.

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
<input checked="" type="checkbox"/>	General purpose	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	m4.large	2	8	EBS only	Yes	Moderate
<input type="checkbox"/>	General purpose	m4.xlarge	4	16	EBS only	Yes	High
<input type="checkbox"/>	General purpose	m4.2xlarge	8	32	EBS only	Yes	High
<input type="checkbox"/>	General purpose	m4.4xlarge	16	64	EBS only	Yes	High
<input type="checkbox"/>	General purpose	m4.10xlarge	40	160	EBS only	Yes	10 Gigabit
<input type="checkbox"/>	General purpose	m3.medium	1	3.75	1 x 4 (SSD)	-	Moderate
<input type="checkbox"/>	General purpose	m3.large	2	7.5	1 x 32 (SSD)	-	Moderate


One you have selected and instance size proceed and click the 'Review and Launch' button.

[Cancel](#) [Previous](#) **Review and Launch** [Next: Configure Instance Details](#)

Click the 'Edit security groups' link

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

 **Improve your instances' security. Your security group, launch-wizard-1, is open to the world.**
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details

Ubuntu Server 14.04 LTS (HVM), SSD Volume Type - ami-47a23a30
Free tier eligible
Root Device Type: ebs Virtualization type: hvm

Edit AMI

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Edit instance type

Security Groups

Edit security groups

Add two new custom TCP rules for ports 80 and 1935 as shown below.

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ
SSH	TCP	22	Anywhere
Custom TCP Rule	TCP	1935	Anywhere
Custom TCP Rule	TCP	80	Anywhere

Click the 'Review and launch' button again

Cancel

Previous

Review and Launch

Click the 'Launch' button

Cancel

Previous

Launch

You will see the prompt below. Choose to create a new key pair and give the key pair a name.

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. [Learn more about removing existing key pairs from a public AMI.](#)

Create a new key pair

Key pair name

DVS100

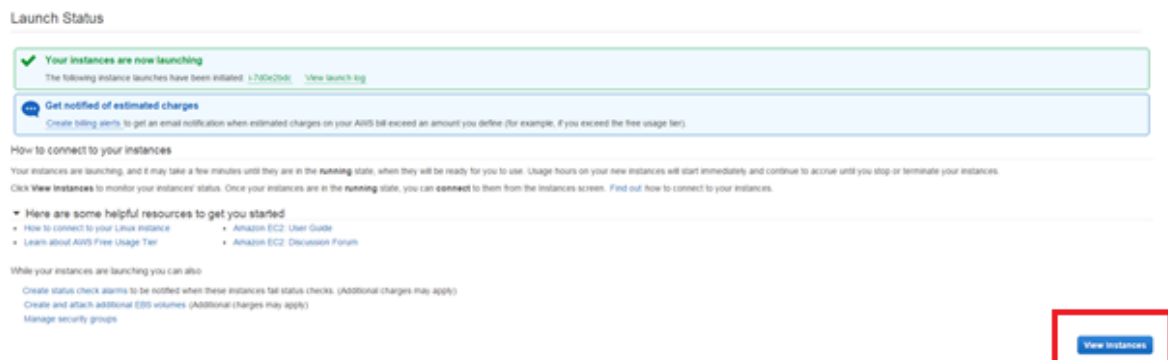
Download Key Pair

You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

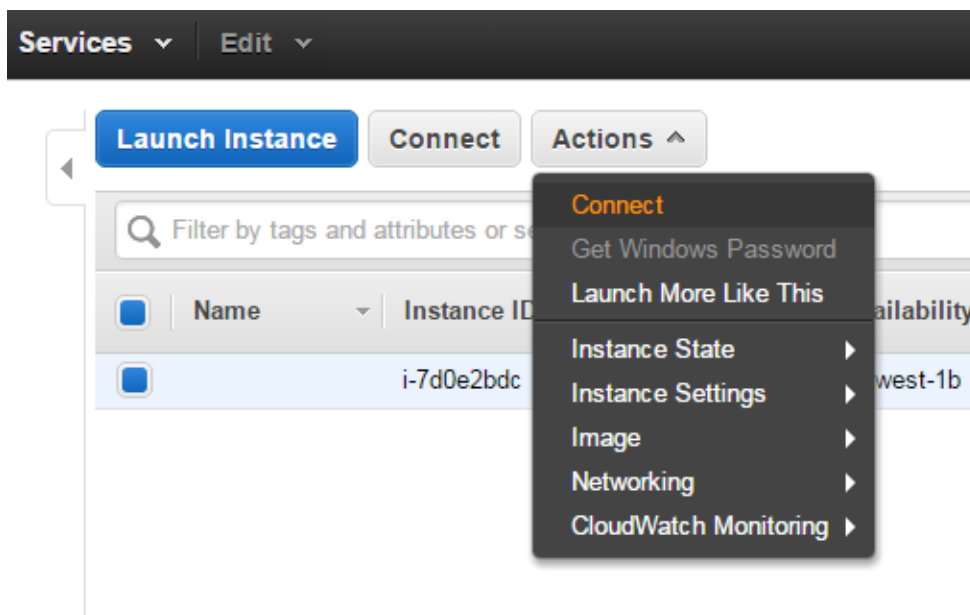
Cancel

Launch Instances

Click the 'Download Key Pair' button and save the file somewhere safe (you will need it later) before clicking the 'Launch Instance' button. You will see the page below, click the 'View Instances' button to proceed.



Select 'Connect' from the actions menu



You will see the prompt below. Follow the instructions to connect to your instance via SSH.

Connect To Your Instance

I would like to connect with

☐ A standalone SSH client
 ☒ A Java SSH Client directly from my browser (Java required)

Enter the required information in the fields below to connect to your instance. AWS automatically detects the key pair name, and Public IP for your instance. You need to enter the location and name of the .pem file containing your private key.

Public IP

54.72.253.137

User name

ubuntu

Key name

DVS100.pem

Private key path

eg. C:\KeyPairs\DVS100.pem

Save key location

☐ Store in browser cache

Launch SSH Client

Close

Once connected via SSH execute the following commands on the server.

```
wget http://updates.datavideo.co.uk/install-dvss.sh -O - | bash
```

Once installation is complete enter the instances public IP or public DNS into a web browser to connect to the DVS-200 web interface.

Enter Your Login Credentials

Login Screen

Login User

User Password

Login

The default credentials are:

User: admin

Password: 000000

After logging in you will see the software is running in free (DVS-100) mode, to enable DVS-200 features you need a valid licence.

datavideo

[Live](#)
[VOD](#)
[Stats](#)
[Users](#)
[Groups](#)
[Settings](#)
[Logout \(admin\)](#)

Create New Live Channel

Name	Enabled	RTMP URL + Stream Key	HLS URL	Actions
Upgrade to DVS-200				

1.12ubuntu25 /free-26

Generic Installation Instructions (All Providers)

Automated Script

The following command can be executed on any system running the Ubuntu 14.04 64 bit Linux operating system.

Ensure the system has internet access and execute the commands below as the root user to install DVS-200.

```
wget http://updates.datavideo.co.uk/install-dvss.sh -O - | bash
```

After a successful installation the stream server's web interface will be running on port 80.

Manual installation (Advanced Users)

Prerequisites

libasound2 libyaml-0-2 libass4 libmp3lame0 libopencore-amrnb0 libopencore-amrwb0 libopus0 libpulse0 libSDL2-2.0-0 libsoxr0 libspeex1 libva-drm1 libva-x11-1 libva1 libvdpau1 libwavpack1 libx264-142 libxcb-shape0 libxcb-shm0 libxv1 libxvidcore4 liblua5.1-2 liblua5.1-common libdouble-conversion1 liblz4-1 libpq5 libsnappy1 php5-fpm php5-cli binutils ghostscript gsfonts imagemagick-common libavahi-client3 libavahi-common-data libavahi-common3 libboost-context1.54.0 libboost-filesystem1.54.0 libboost-program-options1.54.0 libboost-regex1.54.0 libboost-system1.54.0 libboost-thread1.54.0 libc-client2007e libcups2 libcupsfilters1 libcupsimage2 libfftw3-double3 libgd3 libgflags2 libgoogle-glog0 libgs9 libgs9-common libijs-0.35 libjasper1 libjbig0 libjbig2dec0 libjemalloc1 libjpeg-turbo8 libjpeg8 liblcms2-2 liblqr-1-0 libltdl7 libmagickcore5 libmagickwand5 libmcrypt4 libmemcached10 libmysqlclient18 libonig2 libpaper-utils libpaper1 libsqlcipher0 libtbb2 libtiff5 libunwind8 libvpx1 libxpm4 libxslt1.1 mlock mysql-common poppler-data

Packages

http://updates.datavideo.co.uk/updates/debian/hhvm_3.15.2~trusty_amd64.deb

http://updates.datavideo.co.uk/updates/debian/ffmpeg_3.1.4+git1~trustyubuntu1_amd64.deb

http://updates.datavideo.co.uk/updates/debian/nginx-dvss_1.8.0-4ubuntu34_amd64.deb

http://updates.datavideo.co.uk/updates/debian/nginx-dvss-webui_1.12ubuntu25_all.deb

