How to set up a WordPress Website on Amazon Web Services (AWS)

SCREENSHOT GUIDE



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1 Abstract

This end-to-end procedure is intended for anyone that is setting up a WordPress website on Amazon Web Services (AWS). It provides information on how to create an account on Amazon Web Services, select and purchase a domain name, configure DNS through Route 53, launch an instance through Elastic Cloud Compute (EC2), update and secure the instance, install all the required software, and set up a WordPress website.

The guide is targeted at system administrators, web developers, and those who are interested in learning something new. It is beneficial to have prior Linux experience, but it's certainly not required.

The guide includes images as well as explicit instructions for those using the text-only version. Amazon and WordPress constantly add new features and update existing components so the information in the guide may have changed since publication.

At the time of this release, AWS is running the following versions:

- Elastic Computer Cloud: July 30, 2014 5:00 PM GMT
- Route 53: July 31, 2014 7:00 PM GMT

2 Overview

WordPress is one of the most popular content management systems (CMS) on the market. It's used in industries around the world and provides a stable platform for companies and individuals to build their web presence. There are many different domain registrars, DNS providers, and hosting providers from which to choose, but for this guide, you'll see how to utilize AWS for all your web needs. AWS is an industry leading, highly scalable collection of services in the cloud.

3 Pricing

WordPress is free. It is open-source software which means all the code is available for you to view. The benefit to open source software is developers everywhere can add new features, fix bugs, and improve security. Even you can contribute to the code that everyone uses. The downside is hackers can find vulnerabilities much quicker when they can view the code in open source software than they can with proprietary software. WordPress has been around for a long time so you can rest assured that there are very few vulnerabilities. If there are any, they will be fixed ASAP since WordPress is one of the most popular content management systems in the world. There are themes and plugins for WordPress that cost money, but you are not required to use any of them since there are plenty of free themes and plugins.

The Amazon account is free, but many of the services pricing is based on usage. If you don't use any of the services, then it won't cost any money. If you do use a service for only a few minutes, you'll only be charged for that usage. Amazon is very transparent with the costs. Pricing is available for each of the services on their website. A quick Google search for *EC2 Pricing* will bring up the information you need.

If you've never used AWS before, you are eligible for the **AWS Free Tier** which is explained at http://aws.amazon.com/free/. You are able to use a few of the AWS services like EC2 and S3 for free for a year which is perfect when evaluating whether the services fit your needs.

4 Create an Amazon Web Services (AWS) Account

In order to use AWS, you need an Amazon account. If you never purchased from Amazon.com, you'll have to create an account. If you have purchased from Amazon.com, you can use your existing account to access AWS.

C 🗋 aws.amazon.com Sign Up My Account / Console - English amazon Q AWS Products & Solutions -Entire Site Developers - Support -Get Started with AWS for Free Create a Free Account Easily build or enhance your app with AWS Mobile Services Amazon EC2 750 hours of Linux & Windows Learn more and download the SDK » Micro Instances/month View AWS Free Tier Details WS FREE TIEF WHAT IS CLOUD COMPUTING? GET STARTED WITH AWS

Open your web browser to <u>http://aws.amazon.com</u> and click on **Sign Up**.

If you already have an Amazon account, you can type in your email address and password to log in. If you don't have an Amazon account, type in your email address, select I am a new user and click Sign in using our secure server.



On the Login Credentials page, fill in all the name, email, and password textboxes and click Continue.

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Login Cree	dentials		
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On the **Identify Verification** page, fill in your telephone number and click **Call Me Now**. You will receive an automated telephone call.

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Once you answer the call, the automated voice will tell you to enter in your pin.

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	Provide a telephone number ✓ Call in progress Please follow the instructions on the telephone and key in the following Personal identification Number (PIN) on your telephone when prompted.		
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On the **Support Plan** page, select the type of support you would like to use. Click **Continue**.

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You should see the **Welcome to Amazon Web Services** page once you finish registration. Click **Launch Management Console**.



On the Sign In page, fill in your email and password. Click Sign in using our secure server.

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webservices	
Sign In or Create an AWS Account You may sign in using your existing Amazon.com account or you can create a new account by selecting "I am a new user." My e-mail address is:	AWS Invent
email@domain.com I am a new user. I am a returning user and my password is: Sign in using our secure server	Register Now November 11 - 14, 2014 The Venetian - Las Vegas, NV Register Now
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5 Overview of AWS Management Console

You should now see the **AWS Management Console** page with the title **Amazon Web Services.** The page lists all of the available AWS services. To access the AWS Management Console directly, open your web browser to <u>https://console.aws.amazon.com</u>.



5.1 Shortcut Bar

At the top of the page, you'll see the shortcut bar. You can add the services you use most often to the shortcut bar for quicker navigation. To customize the shortcut bar, click **Edit** and then drag the services of your choice to the bar. On the top right of the shortcut bar, you'll see your name menu, a region menu, and the Help menu. The name menu provides access to your **Account** page, **Billing & Cost Management** page, and **Security Credentials** page. It also allows you to sign out. Amazon set the login sessions to expire after 12 hours so you'll have to log in again to continue using the services.

5.2 Categories and Services

Below the shortcut bar, you'll see all the Amazon services divided into categories. At the time of this publication, the categories are:

- Compute & Networking
- Storage & Content Delivery
- Database
- Deployment & Management
- Analytics
- Mobile Services
- App Services
- Application

5.3 Sidebar

On the right side of the page, you'll see the **Additional Resources**, **Service Health**, and **Set Start Page**. All of these sections provide you with additional tools to enhance your usage of AWS.

6 Launch an Instance using Amazon EC2

An instance in Amazon Elastic Compute Cloud (EC2) is a virtual server. It will boot up and behavior just like a physical server, but it shares resources like CPU and RAM with other virtual servers. There are different instance size and each one costs a different amount per hour. You can launch either a Linux instance or a Windows instance. Windows instances typically cost twice the amount of a Linux instance because there are additional licensing fees associated with Windows. All licensing costs are included in the price per hour. Along with the price per hour which is charged when an instance is running, there are additional costs for each GB of data in and out as well as storage used. Be sure to look at the pricing model before continuing. For a micro instance running a typical WordPress website, it will cost around \$15 a month.

6.1 Linux Distributions vs Windows

Linux is much different from Windows. Windows is created by Microsoft and every few years, a new major version is released like Windows 7 and Windows 8. For the most part, if a piece of software is created for Windows 7, it will also run on Windows 8. Linux distributions are created by many different companies. A few of the available Linux version on Amazon are Amazon Linux, Red Hat Linux, SuSE Linux, and Ubuntu Server Linux. If a piece of software is developed for Red Hat Linux, it must be recompiled before use on any other version of Linux. This sounds complicated, but it's actually a process that developers have already done for you. Linux uses software called **package managers** to automate the compilation and installation of software. In Windows, you usually go to a website, download software, and then click through the installation process. In Linux, you type in a single command and then it installs the software. One of the other big differences to note is Linux is designed to run without a clickable graphical user interface (GUI). There are desktop versions of Linux with GUIs, but they will not be used in this tutorial because they require more resources and in the cloud, higher resource usage means more money.

6.2 Launch an Instance

Navigate to the <u>AWS Management Console</u>. Click on EC2. To access the EC2 service directly, open your web browser to <u>https://console.aws.amazon.com/ec2</u>. Click Launch Instance.



On the **Step 1: Choose an Amazon Machine Image** page, locate **Ubuntu Server 14.04 LTS (HVM)** and click **Select**. If you are more comfortable with a different version of Linux, you may select it, but it will make pieces of the guide difficult to follow.



On the Step 2: Choose and Instance Type page, select the t2.micro instance. Click Next: Configure Instance Details.

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	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
	General purpose	m3.medium	1	3.75	1 x 4 (SSD)	100	Moderate
	General purpose	m3.large	2	7.5	1 x 32 (SSD)	-	Moderate
	General purpose	m3.xlarge	4	15	2 x 40 (SSD)	Yes	High
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© 2008 - 1	2014, Amazon Web Services, Inc. o	or its affiliates. All rig	hts reserved. Privac	y Policy Terms of Us	e		Feedback

On the **Step 3: Configure Instance Details** page, select Stop from the **Shutdown behavior** dropdown. Check the box, **Enable termination protection**. If you would like the ability to make requests to the AWS API easily, you'll need to create an IAM Role and then select it the **IAM role** dropdown. This piece is not necessary to setup WordPress. Click **Next: Add Storage**.

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Network interfaces								
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On the **Step 4: Add Storage** page, you can see the volume that will be created for the instance. The volume will essentially be the hard drive for your instance. All the files will be stored on the volume. No changes need to be made to this page unless you know you're going to have a very large amount of rich content like videos on your website. You can also change the size of the volume later, but it will require a few steps documented on

<u>http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-expand-volume.html</u>. To take maximum advantage of the **Free Tier**, you can change the size to 30 (GB). Click **Next: Tag instance**.

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On the **Step 5: Tag instance** page, create a **Key** called Name with a **Value** of the name you would like to give to your instance. Click **Next: Configure Security Group**.

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On the **Step 6: Configure Security Group** page, give the security group a name and a description. Click **Add Rule**, select **HTTP** from the **Type** dropdown, and select Anywhere from the **Source** dropdown. The security group controls the firewall for the instance. In order to access a website, you must connect to port 80 to retrieve the website. By default, Amazon disables access to all ports so you must explicitly define a rule that allows traffic to access port 80 (HTTP). Click **Review and Launch**.

A choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review ttp 2 (Choose Instance Type 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review externed allow Internet traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you v set up a web server and allow Internet traffic to reach your instance. Con this page, you can add rules to allow specific traffic to reach your instance. For example, if you v set up a web server and allow Internet traffic to reach your instance. Con this page, you can add rules to allow specific traffic to reach your instance. For example, if you v set up a web server and allow Internet traffic to reach your instance. Continuer of the HTTP and HTTPS ports. You can create a new security group let from an existing one below. Learn more about Amazon EC2 security group Security group name: estol 1 security group Select an existing security group Select an existing security group Security group name: test01 issecuritygroup Security group name: test01 issecuritygroup Security for Protocol ① Port Range ① Source ① Security TCP 80 Anywhere ▼ 0.0.0.00 Anywhere ▼ 0.0.0.00 Anywhere ▼ 0.0.0.00	📔 Servic	es 🗸 Edit 👻				John I	Doe 👻 N. Virginia 👻 H	elp
the figure security group is a set of frewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you is set up a web server and allow intermet traffic to reach your instance. Add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group is a set of frewall rules that a new security group. Assign a security group: Create a new security group: Created 2014-08-13117.04.45.153-04.00 Created 2014-08-13117.04.45.153-04.00 Created 2014-08-13117.04.45.153-04.00 Created 2014-08-13117.04.45.153-04.00 Created 2014-08-13117.04.45.153-04.00 Add Rule	I. Choose AMI	2. Choose Instance Type	3. Configure Instance 4. Add Sto	rage 5. Tag Instance	6. Configure Security Group	7. Review		
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Add Rule	HTTP	•	TCP	80		Anywhere •	0.0.0/0	
			l≽					

On the **Step 7: Review Instance Launch** page, verify all the information and click **Launch**.

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You should see a popup called **Select an existing key pair or create a new key pair**. A key pair is a public and private key that allows you to connect and log in to your instance. The private key should NEVER be shared with anyone else because it's the equivalent of a password. The public key can be given to anyone and will actually be stored on the instance in the /home/ubuntu/.ssh/authorized_keys file. If someone adds your public key to this file on their server, you will be able to log in to their server.

Choose AMI 2. Choose Instance Ty tep 7: Review Instance ase review your instance launch de	pe 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review Ce Launch tails. 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.
Ubuntu Server 14 Ubuntu Server 14.04 L Bigitibie Root Device Type: ebs	Select an existing key pair or create a new key pair X	nvices).
Instance Type	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.	Edit instance type
Instance Type ECUs t2.micro Variab	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.	Network Performance
Security Groups	Choose an existing key pair	Edit security groups
Security group name Description	No key pairs found	
Type (j) SSH	You don't have any key pairs. Please create a new key pair by selecting the Create a new key pair option above to continue.	(j) d)
HTTP Instance Details	Cancel Launch Instances) Edit instance details
		Cancel Previous Laur

Select **Create a new key pair** from the first dropdown. Fill in the **Key pair name** textbox. Click **Download Key Pair**. Save the downloaded .pem file somewhere safe. If you've already created a key pair, you can select it from the first dropdown and use the same key pair for multiple instances. Click **Launch Instances**.

1. Choose AM 2. Choose Instance Type 3. Configure Instance 4. Add Storage 6. Tag Instance 7. Review Store P. Choose Ministance 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. A MI Details • Ministance Type Edit an existing key pair or create a new key pair Edit AMI • Ministance Type • Merry Brook Stores A key pair consists of a public key that AWS stores, and a private key file private key file allows you to connect to your instance. For Linux AMIs, the private key file allows you to connect to your instance. Securely, Orning existing key pairs from a public AMI. • Security Groups Security Groups Create a new key pair Security Groups Create a new key pair Security Groups Create a new key pairs from a public AMI. Security Groups Create a new key pairs from a public AMI. Set HITP Ou have to download the private key file (*) pem file) before you can conthine. Satistical and first created. Cancel Launch Instances	🎁 Services 🕶 Edit 🛩	د د	ohn Doe 👻 N. Virginia 👻 Help 👻
Ubuntu Server 14 Worthb Server 14 04 Rect Device Type: Select an existing key pair or create a new key pair x wrces) Instance Type A key pair consists of a public key that AWS stores, and a private key file that you store. Together, they alow you to connect to your instance securey. 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. Edit instance type 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. 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. 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. Note: The selected key pair mane bescription Ype @ SSH HTTP 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 Cancel Previous Launch	1. Choose AMI 2. Choose Instance Ty Step 7: Review Instance Please review your instance launch de AMI Details	pe 3. Configure Instance 4. Add Storage 5. Tag Instance 6. Configure Security Group 7. Review The Launch tails. 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
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	Type () SSH HTTP	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	(i) d) Cancel Previous Launch

On the Launch Status page, you should see Amazon setting up the instance.



Once the instance is ready, you should see the message, **Your instance is now launching**. Click **View Instances**.

EC2 Management Consol 🗙						
→ C 🔒 https://console.aws.amazon.com	/ec2/v2/home?region=L	us-east-1#LaunchInstanc	eWizard:			52
🎁 Services 🗸 Edit 🗸				John Doe 👻	N. Virginia 🖌 F	telp ≁
Launch Status						
Your instance is now launching The following instance launch has been in	itiated: (removed) View	launch log				
Get notified of estimated charges Create billing alerts to get an email notific	ation when estimated char	ges on your AWS bill excee	ed an amount you define (for e	xample, if you exceed	the free usage tier	·).
How to connect to your instance						
Your instance is launching, and it may take a few n continue to accrue until you stop or terminate your	inutes until it is in the runr instance.	ning state, when it will be re	eady for you to use. Usage hou	urs on your new instar	nce will start immedi	iately an
Click View Instances to monitor your instance's st nstance.	atus. Once your instance is	s in the running state, you	can connect to it from the Ins	stances screen. Find	out how to connect	t to your
 Here are some helpful resources to How to connect to your Linux instance 	get you started	Guide				
Learn about AWS Free Usage Tier	Amazon EC2: Discu	ussion Forum				
While your instances are launching you can also						
Create status check alarms to be notified when Create and attach additional EBS volumes (Add Manage security groups	these instances fail status (litional charges may apply)	checks. (Additional charge:)	s may apply)			
		S.			View Ins	stances
© 2008 - 2014, Amazon Web Services, Inc. or its affili	ates. All rights reserved. P	Privacy Policy Terms of Us	e .		Feedl	back

On the Instances page, you should see **Initializing** in the **Status Checks** column. Once the instance is fully started, it will change to **2/2 checks passed.**



6.3 Assign an Elastic IP

IP stands for Internet Protocol. An IP address is the equivalent of a home address for a person. If I want to visit a friend, I'll use the home address to find out where he or she lives. An IP address is the location for a server on the internet. Every device on the internet has a public IP. The EC2 instance has two IPs: a private IP and a public IP. The private IP is used by other instances on the same network. The public IP is used by everything else on the internet. Amazon assigns a public IP to every instance, but if you restart your instance, the public IP will change. The domain name needs to be pointed at a public IP that does not change so Amazon a solution called Elastic IPs. Elastic IPs are public IPs that do not change. Every instance can have one Elastic IP free of charge.

Navigate to the <u>AWS Management Console</u>. Click on EC2. To access the Ec2 service directly, open your web browser to <u>https://console.aws.amazon.com/ec2</u>. Click Elastic IPs on the left menu under the Network & Security menu. Click click Allocate New Address.

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EC2 Dashboard Events 4	Allocate New Address				0 ¢	0
Tags Reports	Filter: All addresses ~	Q Search Addresses	×		I< < No Addresses >	>
Limits		Y	'ou do not have any elas	tic IPs in this region.		
INSTANCES		Click on the "Al	locate New Address" but	ton to allocate your first elastic I	IP.	
Instances			Allocate New	Address		
Spot Requests			ų,			
C hunces						
AMIS			0	6		
Bundle Tasks						
ELASTIC BLOCK STORE						
Volumes						
Snapshots						
NETWORK & SECURITY						
Elastic IPs						
Placement Groups	Select an address above				88	
Load Balancers						
Key Pairs Network Interfaces						
Launch Configurations						
Auto Scaling Groups						
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On the Allocate New Address dialog, click Yes, Allocate.

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← → C A https://conso	le.aws.amazon.com/ec2/v2/	home?region=us-east-1#Addresses:		☆ =
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Tags	Filter: All addresses 😁	Q, Search Addresses	×	I< < No Addresses > >I
Limits		You do not have any e	lastic IPs in this region.	
INSTANCES		Click on the "Allocate New Address"	button to allocate your first elastic IP	
Instances Spot Requests Reserved Instances		Allocate No	w Address	
IMAGES AMIs Bundle Tasks		Allocate New Address	×	
ELASTIC BLOCK STORE Volumes Snapshots		Are you sure you want to allocate a new IP a	address?	
Security Groups				
Elastic IPs				
Placement Groups Load Balancers Key Pairs Network Interfaces	Select an address above			888
AUTO SCALING Launch Configurations Auto Scaling Groups				
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Click on the new IP address and click **Associate Address**. Save the IP so you can reference it later.

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On the **Associate Address** dialog, select the instance to receive the Elastic IP and then click **Associate**.

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7 Access an Instance

To connect to an AWS instance, you will need an SSH client. SSH stands for Secure Shell and allows you to send commands to a server through an encrypted connection. PuTTY, a free SSH client, will be used for this tutorial. You'll also need PuTTYgen to convert the .pem file into a PuTTY compatible private key.

7.1 Convert .PEM Key to .PPK PuTTY Key using PUTTYgen

Open your web browser to <u>http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html</u> and click on putty.exe and puttygen.exe to download both applications.

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There are crypto signature policy, author.)	ographic signatures availab , visit the <u>Keys page</u> . If yo	ole for all the files we offer be u need a Windows program	low. We also sup to compute MD5	ply cryptographically sig checksums, you could t	ned lists of checksums. To download our public keys and find out more <i>i</i> ry the one at <u>this site</u> . (This MD5 program is also cryptographically signed	ibout our d by its
Binaries						
The latest relea latest developm	ase version (beta 0.63). I ent snapshot (below) to se on Intel x86	This will generally be a version te if I've already fixed the bug	n I think is reasona g, before reporting	ably likely to work well. it to me.	If you have a problem with the release version, it might be worth trying o	at the
PuTTY:	putty.exe	(or by FTP)	(RSA sig)	(DSA sig)		
PuTTYtel:	puttytel.exe	(or by FTP)	(RSA sig)	(DSA sig)		
PSCP:	pscp.exe	(or by FTP)	(RSA sig)	(DSA sig)		
PSFTP:	psftp.exe	(or by FTP)	(RSA sig)	(DSA sig)		
Plink:	plink.exe	(or by FTP)	(RSA sig)	(DSA sig)		
Pageant:	pageant.exe	(or by FTP)	(RSA sig)	(DSA sig)		
PuTTYgen:	puttygen.exe	(or by FTP)	(RSA sig)	(DSA sig)		
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Run puttygen.exe. Click Load to load a private key.

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Actions Generate a public/private key pair Load an existing private key file Save the generated key Parameters Type of key to generate: O SSH-1 (RSA) O SSH-2 BSA	Save pyblic key	Generate Load Save private key

On the Load private key screen, navigate to the .pem file you downloaded from Amazon and click Open.

😴 Load private key:							×
Solution → aws				- ↓	Search aws		٩
Organize 🔻 New folde	er					• 🗊	0
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File <u>n</u> a	ame: test01key.pem			•	All Files (*.*) Open 😽	Cancel	•

You should receive a notice that says, Successfully imported foreign key. Click OK.



On the **Putty Key Generator** form, you should see the public key at the top. This is the public key that is already stored in the /home/ubuntu/.ssh/authorized_keys file on the EC2 instance. Fill in the **Key passphrase** and **Confirm Passphrase** textboxes with a new password that you will type in every time you connect to your EC2 instance. Click **Save private key**.

ile <u>K</u> ey Con <u>v</u> ersio	ons <u>H</u> elp		
Key		2/	
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Key fingerprint:	ssh-rsa 2048 32:60:86:3c:1f:bb	e4:00.f6:58:d0:2e:8c:92:2b:b3	
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On the **Save private key as** dialog, navigate to a secure location for the key and type in a name. Click **Save**.

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Save as <u>t</u> ype:	PuTTY Private Key Files (*.ppk)						•
Alide Folders					Save	Cancel	

You can exit out of PuTTYgen.

7.2 Connect to an Instance using PuTTY

Run putty.exe. Type in the Elastic IP (public IP) or domain name for the instance into the **Host Name** textbox.

- Session	Basic options for your Pu	TTY session
⊡ Logging ⊒ Teminal Keyboard	Specify the destination you want to Host Name (or IP address)	connect to Port 22
Bell Features Features Window Appearance Behaviour Translation Selection Colours Connection Proxy Telnet Rlogin SSH SSH Serial	Connection type:	● <u>S</u> SH
	Load, save or delete a stored sessi Sav <u>e</u> d Sessions	on
	Default Settings	Load Sa <u>v</u> e Delete
	Close window on exit: Always Never Onever	ly on clean exit

Using the left menus, navigate to **Connection** -> **SSH** -> **Auth**. Click the **Browse** button to the right of the **Private key file for authentication** textbox.

^	Options controlling SSH authentication
	Bypass authentication entirely (SSH-2 only)
	☑ Display pre-authentication banner (SSH-2 only)
	Authentication methods
	Attempt authentication using Pageant
	Attempt TIS or CryptoCard auth (SSH-1)
	Attempt "keyboard-interactive" auth (SSH-2)
	Authentication parameters
	Allow agent forwarding
=	Allow attempted changes of usemame in SSH-2
	Private key file for authentication:
	Browse
	Ν
	45
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	E

On the **Select private key file** dialog, select the .PPK private key and click **Open** so it shows up in the **PuTTY Configuration** form.

	Options controlling SSH authentication	n
Appearance Behaviour Translation Selection Colours Colours Data Proxy Telnet Rlogin SSH Kex E Kex E Auth	Bypass authentication entirely (SSH-2 only) Display pre-authentication banner (SSH-2 only) Display pre-authentication banner (SSH-2 of Authentication methods Attempt authentication using Pageant Attempt TIS or CryptoCard auth (SSH-1) Attempt "keyboard-interactive" auth (SSH- Authentication parameters Allow agent forwarding Allow attempted changes of usemame in S Private key file for authentication:) pnly) 2) SH-2
	pemo01key.ppk	sro <u>w</u> se

Using the left menus, navigate to **Connection** -> **Data**. Fill in the **Auto-login username** textbox with **ubuntu**.

itegory.	-1	-		
Window Appearance Behaviour Translation Colours Connection Data Proxy Telnet Rlogin SSH Kex GSSAPI TTY X11 Tunnels Bugs Serial		Data to set Login details Auto-login username When username is not spo Prompt Use syst Terminal details Terminal type string Terminal speeds Environment variables Variable Value	nd to the server ubuntu ecified: tem usemame (Coil xterm 38400,38400) Add Remove
•	*			

Using the left menus, navigate to **Session**. Fill in the **Saved Sessions** textbox with the name of the server so you can recognize it. Click **Save**. The next time you open PuTTY, you can easily click on the session name and it will reload all the settings. Click **Open** to connect to the server.

tegory:	_	r	
Session	-	Basic options for your PuTTY se	ession
Logging ∋- Terminal Keyboard		Specify the destination you want to conne Host Name (or IP address)	ect to <u>P</u> ort 22
Features Features ∃- Window		Connection type: ◎ Ra <u>w</u> ◎ <u>T</u> elnet ◎ Rlogin ◎ <u>S</u> SI	H 🔘 Serjal
Appearance Behaviour Translation	E	Load, save or delete a stored session Sav <u>e</u> d Sessions	
Selection		Test01	
Colours Connection Data Proxy Telnet Riogin		Default Settings Test01	Load Save Delete
⊡- SSH Kex ⊡- Auth GSSAF	4 +	Close window on e <u>xi</u> t: Always Never Only on o	lean exit

If you are prompted with a PuTTY Security Alert, just click **Yes**. You will see this alert the first to you connect to every server. If this prompt appears more than one, it may mean you're not connecting to the correct instance.



You should get a terminal window that asks for the passphrase you created in PuTTYgen. Type in the passphrase and press **Enter**.



You should see a terminal window that says **Welcome to Ubuntu** at the top. You've successfully connected to the Amazon EC2 instance.

P	\$	
Welcome to Ubuntu 14.04	LTS (GNU/Linux 3.13.0-29-gene:	ric x86_64)
* Documentation: https	://help.ubuntu.com/	
System information as	of Wed Aug 13 21:32:08 UTC 20	14
System load: 0.0	Processes:	97
Usage of /: 9.7% of	7.74GB Users logged in:	0
Memory usage: 6%	IP address for eth0:	172.31.38.134
Swap usage: 0%		
Graph this data and ma https://landscape.ca	nage this system at: nonical.com/	E
Get cloud support with http://www.ubuntu.co	u Ubuntu Advantage Cloud Guest m/business/services/cloud	:
0 packages can be update	ed.	
0 updates are security u	updates.	
Last login: Wed Aug 13 2 net	1:32:08 2014	
ubuntu :	~\$	*

HOW TO SET UP A WORDPRESS WEBSITE ON AMAZON WEB SERVICES (AWS) | PAGE 26

8 Buy a Domain Name using Amazon Route 53

You don't actually need a .com or .net domain name to setup WordPress. You can run it directly from an IP address if you would like. Domain names just make it much easier for you and other people to access your website. The .com domains are \$12 a year, .net domains are \$10 a year, and .org domains are \$12 a year. There are also many other top-level domains (TLDs) (.me, .name, etc) available for purchase and range in price. The DNS will cost about \$0.90 per month for a typical website.

8.1 Domain WHOIS Record Privacy Protection

Amazon also offers privacy protection for your WHOIS record at no additional cost. When you buy a domain name, you have to provide information like a name, address, email, and phone number that is publically available. If you use your home address when you register for your domain and you don't want other people to see that information, you can enable privacy protection. Many other domain registrars charge an additional fee for privacy protection.

8.2 Register a Domain

Navigate to the **AWS Management Console**. Click on **Route 53**. To access the Route 53 service directly, open your web browser to <u>https://console.aws.amazon.com/route53</u>. Scroll to the bottom of the f so you can see the **Domain Registration** section. Click **Get Started Now**.



On the **Domains** page, click **Register Domain**. You also have the ability to transfer a domain to Amazon if you own one.

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🎁 Services 🗸 Ed				Jot	in Doe 👻 Global 👻 Help 👻
Dashboard Hosted Zones Health Checks Domains	Register Domain	Transfer Domain	View Domain Details	K	↔ 🕑
	Domain Name	 Expiration Date 	Privacy Protection	Auto Renew	Transfer Lock
			₽.		
© 2008 - 2014, Amazon Web Se	rvices, Inc. or its affiliates. A	ll rights reserved. Privacy	Policy Terms of Use		Feedback

On the **Choose a domain name** page, fill in the textbox with the domain name you would like to purchase. Choose the TLD from the dropdown. Click **Check**.

	sole.aws.amazon.com/route53/nometre	3gion=us-east-1#DomainRegistration:			20
🎁 Services 🗸	Edit 🗸		John Doe 🕶	Global 🕶	Help 🗸
Domain Search	Choose a domain n	ame	Shopping Cart		
Contact Details	demostack	.com - \$12.00 • Check			
Review & Purchase	To register a domain name, start by finding example in example.com), choose an exte it's available and whether you can get it wi	g one that's available. Enter the first part of the name (such as ension (such as .com or .org), and click Check. We'll tell you whether ith other extensions. Learn more.			
	ß				
		Cancel Continue			

If the domain name you want is available, click **Add to cart**. Scroll to the bottom of the page and click **Continue**.

Ealt Y					John Doe 👻 Global 👻 H
Availability for demostack.com	1			fine of	r rournogionation 🤤
Domain Name		Status	Price /1 Year	Action	SUBTOTAL \$
demostack.com	~	Available - In Cart	\$12.00	Add to cart	
Availability for popular TLDs					Monthly Fees for DNS Management
Domain Name		Status	Price /1 Year	Action	View pricing details for Route
demostack.ca	~	Available	\$13.00	Add to cart	queries and for the hosted zon we create for each new domain
demostack.co.nz	~	Available	\$45.00	Add to cart	
demostack.co.uk	~	Available	\$9.00	Add to cart	
demostack.info	~	Available	\$12.00	Add to cart	G.
demostack.jp	~	Available	\$100.00	Add to cart	
demostack.me.uk	~	Available	\$8.00	Add to cart	
demostack.net	~	Available	\$10.00	Add to cart	
demostack.net.nz	~	Available	\$45.00	Add to cart	
demostack.org	~	Available	\$12.00	Add to cart	
demostack.org.nz	~	Available	\$59.00	Add to cart	
demostack.org.uk	~	Available	\$9.00	Add to cart	

On the **Contact Details** page, fill in the contact information. You have the option to enable **Privacy Protection** on this page. Click **Continue**.

	isole.aws.amazon.com/routes	Synometregion=us-east-1=Domaintegistra	uon.		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
🎁 Services 🗸	Edit 🗸			John Doe 👻 Global 👻	Help 🛛
: Domain Search	Contact Detai	ils for Your 1 Domain		Shopping Cart	
Contact Details	Enter the details for your Reg unless specified otherwise. I	jistrant, Administrative and Technical contacts below. ∟earn more.	All fields are required	One time fees	
Review & Purchase	My Registrant, Administrative	${\rm e}$ and Technical Contacts are all the same: ${\ensuremath{ \rm e}}$ Yes (D No	1 Year Registration	\$12.0
		Registrant Contact		SUBTOTAL	\$12.0
	Contact Type 🛈	Person		Monthly Fees for DNS Manageme	ent
	First Name	John		View pricing details for Route 53 qu for the hosted zone that we create for	ueries and for each
	Last Name	Doe		new domain.	
	Organization	Optional			
	Email	email@domain.com	S		
	Phone	+ 123 - 5556789 Enter country calling code and phone number			
	Address 1	123 Sesame Street Street address, P.O. box			
	Address 2	Optional			
	Country	Apt, suite, unit, building, floor, etc.			

On the Review details and complete your purchase page, verify all your information and read the **AWS Domain Name Registration Agreement**. Once you are ready, click **Complete Purchase**.

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← → C 🔒 http:	://console.aws.amazon.com/rout	53/home?region=us-east-1#DomainRegi	stration:	☆ =
î Services	▼ Edit ∽			John Doe 👻 Global 👻 Help 👻
1: Domain Search	Review details an	d complete your purcha	se	Shopping Cart
2: Contact Details	When you complete your purchase, v	ve'll assign the following contacts to all of the doma	ins in your shopping cart.	
3: Review & Purchase	Registrant Contact	Administrative Contact	Technical Contact	demostack.com 1 Year Registration \$12.00
				SUBTOTAL \$12.00
	US	US	US	Monthly Fees for DNS Management
	Managing DNS for	Your New Domain	Privacy protected	View pricing details for Route 53 queries and for the hosted zone that we create for each
	To make it easier for you to use Rout where you store information about ho domain right now, you can delete the queries that we receive for your doma	e 53 as the DNS service for your new domain, we'll w to route traffic for your domain, for example, to ar hosted zone. If you will use your domain, Route 53 in. For more information, see Amazon Route 53 Pr	automatically create a hosted zone. That's Amazon EC2 instance. If you won't use your charges for the hosted zone and for the DNS icing.	new domain.
	AWS does not register or host doma you to register and transfer domain n domain with our domain registration p review the contact details and renew	n names. We've partnered with Gandi, a company mes using your AWS account. By purchasing dor artner. Our partner will periodically contact the regi registration.	hat offers these services, to make it easier for nains through AVVS, you are registering your strant contact that you specified above to	
	Registration is powered by: Gandi			
	I have read and agree to the AW	S Domain Name Registration Agreement		
		Cano	Back Complete Purchase	1
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On the **Domains** page, you should see a notice at the top that says **Your domain registration request has been successfully submitted**.

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← → C A ttps://console	e.aws.amazon.com/rout	e53/home?region=us-eas	st-1#DomainListing:			۲ ۲	3 =
🎁 Services 🗸 Edi				Johr	n Doe 👻 Global 👻	Help	
Dashboard Hosted Zones Health Checks Domains	Your domain re	gistration request had been su	ccessfully submitted. View Domain Details	K.	No domaine to displ	Ð	0
	Domain Name	Expiration Date	Privacy Protection	Auto Renew	Transfer Loci	<.	
				l⊋			
© 2008 - 2014, Amazon Web Ser	rvices, Inc. or its affiliates. A	Il rights reserved. Privacy F	Policy Terms of Use		Fee	edback	

It may take a few minutes for the domain to appear in Route 53, but once it does, you should see the message, **Domain** registration successful.

AWS Route 53 Manageme	×		▶	×
$\leftarrow \Rightarrow C $ https://console.	.aws.amazon.com/route53/home?reg	ion=us-east-1#Dashboard:		☆ =
🎁 Services 🗸 Edit	*		John Doe 👻	Global 👻 Help 👻
Dashboard Hosted Zones Health Checks Domains	Resources I Hosted Zones Ach hosted zone contains fromation about how you want source 53 to respond to DNS uerres for one domain.	0 Health Checks Health checks monitor your applications and web resources, and direct queries to healthy resources.	1 Domains A domain is the name, such as example com, that your users use to access your application.	Documents Developer Guide FAQs Pricing Forum Request an increase in
			Ð	5
			K Clisplaying 1 to 1 out of 1 alerts X	
	Resource	Message		
	demostack.com	Domain regist	ration successful	
4 © 2008 - 2014, Amazon Web Serv	rices, Inc. or its affiliates. All rights reserved	Privacy Policy Terms of Use		Feedback

9 Set up DNS using Amazon Route 53

Once the domain name is available in Route 53, you can add different types of records. The most common records are name server (NS), address (A), and mail exchanger (MX) records. The NS records point to the server that holds all the other records. When you register a domain, the NS records are usually automatically set. The A records point a domain or subdomain to an IP address. The MX records point to your email server so services like Gmail and Hotmail know where to deliver your email.

Navigate to the <u>AWS Management Console</u>. Click on **Route 53**. To access the Route 53 service directly, open your web browser to <u>https://console.aws.amazon.com/route53</u>. Click **Hosted Zones** which is in left menu.

AWS Route 53 Managem	×	1	×		_ _ ×
← → C 🔒 https://conso	le.aws.am	nazon.com/route53/home	?region=us-east-1#hosted-zones	::	☆ =
🎁 Services 🗸 Ed	dit 🗸				John Doe 🖌 Global 👻 Help 🖌
Cashboard Dashboard Hosted Zones Health Checks Domains	Cre Search	ate Hosted Zone C	o to Record Sets Delete Ho Hosted Zone ID	Record Set Count 2	John Doe V Global V Help V Comment HostedZone created by Route53 Registrar
© 2008 - 2014, Amazon Web Se	ervices, Inc	c. or its affiliates. All rights res	rved. Privacy Policy Terms of Us	e	Feedback

Click on your domain. Click Go To Record Sets.

a nups://con	.sole.aws.am	hazon.com/route53/	'nome:region=us-east	-1#nosted-zones:		
🧊 Services 🗸	Edit 🗸				John Doe 🛩 Globa	al 👻 Help 🔪
Dashboard Hosted Zones	Cre	ate Hosted Zone	Go to Record Sets	s Delete Hosted	i Zone	Ð
Health Checks	Search:		≪ ≪ 1 to 1	of 1 Hosted Zones 📎 🔌	Hosted Zone Details	
Domains		Domain Name	Hosted Zone ID	Record Set Count	Domain Name: demostack.com.	
		demostack.com.		2	Hosted Zone ID: Record Set Count: 2 Comment: HostedZone created by	

By default, your name server (NS) record points to Amazon which. Click **Create Record Set**.

C M https://console.aws.amazon.com/route53/home?region=us-east-1#resource-record-sets.Z8TFVE3ATVXW2 Services Edit John Doe Global Help Dashboard Hosted Zones Health Checks Domains Mame Type Value demostack.com. NS ns-943.awsdns-53.net.awsd demostack.com. SOA ns-943.awsdns-53.net.awsd demostack.com. SOA ns-943.awsdns-53.net.awsd demostack.com. SOA ns-943.awsdns-53.net.awsd demostack.com. SOA ns-943.awsdns-53.net.awsd demostack.com SOA ns-9443.awsdns-53.net.awsd demostack.com SOA ns-9443.awsdns-53.net.awsd demostack.com SOA ns-9443.awsdns-53.net.awsd demostack.com SOA ns-9443.awsdns-53.net.awsd demostack.com demostack.com soA ns-9443.awsdns-53.net.awsd demostack.com demostack.com demostack.com demostack.com demostack.com demostack.com demostack.com soA ns-9443.awsdns-53.net.awsd demostack.com d	😸 🧧 AWS Route 53 Manageme	×	N	<u> </u>
Services ~ Edit ~ John Doe ~ Global ~ Help ~ Dashboard Hosted Zones Health Checks Domains Domains Search: Any Type ~ I < 1 to 2 of 2 Record Set Provide a state of the state context in the state of th	← → C Attps://console	e.aws.amazon.com/route53/home?regior	n=us-east-1#resource-record-sets:Z8TF	VE3ATYXW2 ☆ Ξ
Dashboard Hosted Zones Create Record Set Import Zone File Delete Record Set Import Zone File Health Checks Search: Any Type Value Import Zone Site Import Zone File Imp	🎁 Services 🗸 Edit	lit v		John Doe 👻 Global 👻 Help 👻
Hosted Zones Eack to Hosted Zones Create Record Set Import Zone Frie Dense Record Set Health Checks Domains Name Type Value Import Zone Frie Insert Record Set Import Zone Frie Import Zone Frie Dense Record Set Import Zone Frie Import Zone Frie Dense Record Set Import Zone Frie Import Zone Frie Dense Record Set Import Zone Frie Import Zone Frie Dense Record Set Import Zone Frie Import Zone Frie Or oget started, click Create Record Set button or click an resisting record set. Import Zone Frie Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie Import Zone Frie Value Import Zone Frie Import Zone Frie <th>Dashboard</th> <th>Back to Usedad Zeneral</th> <th>Descrit Cat</th> <th>Delete Bernel Set</th>	Dashboard	Back to Usedad Zeneral	Descrit Cat	Delete Bernel Set
Health Checks Search: Any Type Vice It to 2 of 2 Record Sets It Domains Name Type Value Image: Search: Solution on click an image: Solutio	Hosted Zones	Back to Hosted Zones	import zone File	Delete Record Set
Domains Name Type Value i demostack.com. NS ns-943 awsdns-53.net. ns-1761 awsdns-90.com, ns-1089 awsdns-90.com, ns-1089 awsdns-93.net. awsdn I Compared to the second Set button or click an existing record Set.	Health Checks	Search: Any T	Type ▼ 🛛 🛠 1 to 2 of 2 Record Sets 🔌 🔌	
demostack.com. NS ns-943 awsdns-50 net. ns-1781 awsdns-90.co.uk. ns-9378 awsdns-90.corg. existing feccid set. demostack.com. SOA ns-943 awsdns-63.net. awsdn	Domains	Name	Type Value	GTo get started, click Create Record Set button or click an
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		demostack.com.	SOA ns-943.awsdns-53.net. awsdr	
			T	
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Leave the **Name** textbox empty. Select **A** – **Ipv4 addresses** in the **Type** dropdown. Fill in your server IP address into the **Value** text area. The IP address should be the Elastic IP assigned to the EC2 instance. Leave all the other settings at the defaults. Click **Create**.

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🎁 Services 🗸 🗉	dit 🗸						John Doe 🕶	Global 🕶	Help •
Dashboard Hosted Zones	Bac	ck to Hosted Zones	reate Record S	Import Zone File	Del Create R	lete Record Se	et	0	* • •
Domains		Name	Туре	Value	Name:	[].demostack	.com.
				ns-943.awsdns-53.net.	Type:	A - IPv4 addres	SS	•	
		demostack.com.	NS	ns-1781.awsdns-30.c0.uk. ns-378.awsdns-47.com. ns-1089.awsdns-08.org.	Alias:	🔾 Yes 💿 No			
		demostack.com.	SOA	ns-943.awsdns-53.net. awsdr	TTL (S	econds):	300 1m 5m	1h 1d	
					Value:	XXX.XXX.XXX	K.XXX		
						IPv4 address. Enl on separate line Example: 192.0.2.235 198.51.100.234	ter multiple address es. 4	es	
					Routing	Policy: Sim	nple	•	
				,	Route 53 More	responds to queries	based only on the v	values in this rec	ord. Learn
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You should see your new record. Repeat the same process again, but instead of leaving the name textbox empty, enter in **www**. That way, if someone goes to example.com or www.example.com, the same page will display. WordPress will take care of the redirection. In a few minutes, you should be able to type the domain name in your web browser and your website will appear.

AWS Route 53 Managem	×					<u> </u>
← → C 🔒 https://conso	le.aws.an	nazon.com/route53/hoi	me?region=us-east-:	1#resource-record-sets:Z8TF	VE3ATYXW2	☆ ≡
🎁 Services 🗸 Ed	lit 🗸				John Doe 👻 Glol	bal 🕶 Help 🕶
Dashboard	Ba	ck to Hosted Zones	Create Record	Set Import Zone File	Delete Record Set	€ ¢ Ø
Health Checks	Search	h:	Any Type 🔻 🕷	🔦 1 to 3 of 3 Record Sets 📏 🔌		
Domains	۲	Name	Туре	Value	GTo get started, click Create Record Set butto	n or click an
		demostack.com.	NS	ns-943.awsdns-53.net. ns-1781.awsdns-30.co.uk. ns-378.awsdns-47.com. ns-1089.awsdns-08.org.	existing record set.	
		demostack.com.	SOA	ns-943.awsdns-53.net. awsdr		
		demostack.com.	A	XXX.XXX.XXX.XXX		
		www.demostack.com.	A	XXXX.XXXX.XXXX		
				"		
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10 Configure an Instance

Log in to the instance using PuTTY. You should see a shell prompt that allows you to type in commands. Your terminal will look a little different. The default shell for Ubuntu and many other Linux distributions is **Bash**.

Since this section consists of commands to type in, the guide will use this format:

Description of command: *Command to type in or paste* [Key to press] <Screenshot of command before execution> <Screenshot of command after execution>

10.1 Update the Software on an Instance

Let's clear the screen so it's easy to read: *clear* [Enter]



Next, we'll update the package lists from the repositories so the package manager has access to the latest software. The *sudo* command tells the shell to run the command as a superuser or a user with administrative privileges. The *apt-get* command is a command line interface for downloading and installing packages.

Update the package lists from the repositories: sudo apt-get update [Enter]



Update all the installed packages (applications): sudo apt-get upgrade [Enter]

P Terminal	N	
ubuntu:~\$ sudo apt-get upgrade	A)	
		*

Press Y to upgrade.

P Terminal		x
libpam-systemd libsystemd-daemon0 systemd-services udev	libsystemd-login0 libudev1 net-tools	^
7 upgraded, 0 newly installed, 0 to Need to get 1.202 kB of archives.	remove and 4 not upgraded.	
After this operation, 0 B of addition	onal disk space will be used.	
Do you want to continue? [Y/n]		*



HOW TO SET UP A WORDPRESS WEBSITE ON AMAZON WEB SERVICES (AWS) | PAGE 36

10.2 Updating GRUB on an Instance

If GRUB is updated when you run *sudo apt-get upgrade* and the **Configuring grub-pc** screen appears, follow the steps below to update it correctly. If you don't not see the screen, you can skip this section.

GRUB stands for GRand Unified Bootloader. It is the piece of software that tells the computer to load an operating systems. In this case, it tells the instance to load Ubuntu Linux. If GRUB is not configured correctly, the instance will not boot correctly and you will not be able to access the instance.

Use Space to select options. Use Tab to move between controls. Use Enter to execute controls.

On the Configuring grub-pc screen, press Tab and then press Enter.

P		
Pa	ckage configuration	
i	Configuring grub-pc	
	The GRUB boot loader was previously installed to a disk that is no longer present, or whose unique identifier has changed for some reason. It is important to make sure that the installed GRUB core image stays in sync with GRUB modules and grub.cfg. Please check again to make sure that GRUB is written to the appropriate boot devices.	
	If you're unsure which drive is designated as boot drive by your BIOS, it is often a good idea to install GRUB to all of them.	
	Note: it is possible to install GRUB to partition boot records as well, and some appropriate partitions are offered here. However, this forces GRUB to use the blocklist mechanism, which makes it less reliable, and therefore is not recommended.	
	KOIC	
		•

On the GRUB install devices screen, press **Space** to select the top option. Press **Tab** and then press **Enter**.

8	
Package configuration	I Configuring grub-pc GRUB install devices: [] /dev/xvda (8589 MB; ???) [] /dev/xvda1 (8578 MB; ???)
	<0k>

HOW TO SET UP A WORDPRESS WEBSITE ON AMAZON WEB SERVICES (AWS) | PAGE 37

On the Menu Selection screen, press Arrow Up to select install the package maintainer's version. Press Tab and then press Enter.



Once installation completes, you should see the **update-initramfs** command at the bottom of the screen.



10.3 Reboot an Instance

One of the nice features of Linux is the ability to run for long periods of time without requiring a restart. There are Linux servers that have run over a year without a single reboot. It is a good practice to ensure the instance reboots successfully before installing additional software.

Let's reboot the instance: sudo reboot [Enter]



You will see the message, The system is going down for reboot NOW!



You will then see the **PuTTY Fatal Error** dialog that says, **Server unexpectedly closed network connection**. The message is completely normal and expected. Click **OK** and then close the inactive PuTTY terminal.



After 30 seconds, run PuTTY.exe again and log in to verify the machine rebooted successfully.

10.4 Install MySQL Database

MySQL is one of the most popular relational database management systems. MySQL is free, open-source software and is extremely fast. WordPress requires and only supports MySQL.

Install MySQL: sudo apt-get install mysql-server [Enter]

P Terminal	
ubuntu:~\$ sudo apt-get install mysql-server	
	-

Press Y to install.

P	-
ubuntu@ip- :~\$ sudo apt-get install mysgl-server	*
Reading package lists Done	
Building dependency tree	
Reading state information Done	
The following extra packages will be installed:	
<pre>libaio1 libdbd-mysql-perl libdbi-perl libhtml-template-perl libmysqlclient18 libterm-readkey-perl mysql-client-5.5 mysql-client-core-5.5 mysql-common mysql-server-5.5 mysql-server-core-5.5</pre>	
Suggested packages:	
libclone-perl libmldbm-perl libnet-daemon-perl libplrpc-perl	
libsql-statement-perl libipc-sharedcache-perl tinyca mailx	
The following NEW packages will be installed:	
libaio1 libdbd-mysql-perl libdbi-perl libhtml-template-perl libmysqlclient18	
<pre>libterm-readkey-perl mysql-client-5.5 mysql-client-core-5.5 mysql-common mysql-server mysql-server-5.5 mysql-server-core-5.5</pre>	
0 upgraded, 12 newly installed, 0 to remove and 0 not upgraded.	
Need to get 9,011 kB of archives.	
After this operation, 96.5 MB of additional disk space will be used.	
Do you want to continue? [Y/n] Y	
	Ε
	+

On the **Configuring mysql-server-5.5** screen, type in a password for the root account. Press **Tab** and then press **Enter**.

P	
Package configuration	^
Configuring mysql-server-5.5	
While not mandatory, it is highly recommended that you set a password for the MySOL administrative "root" user.	
If this field is left blank, the password will not be changed.	
New password for the MuSOL "root" user.	
New Papersia for our Higher fore and th	

<010	
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	Ξ
	-
	Ľ

On the next screen, type in the same password again for the root account. Press **Tab** and then press **Enter**.



MySQL installation should finish successfully.

🚱 Terminal	-
debconf: falling back to frontend: Readline	^
Preparing to unpack/mysql-server_5.5.38-Oubuntu0.14.04.1_all.deb	
Unpacking mysql-server (5.5.38-0ubuntu0.14.04.1) over (5.5.38-0ubuntu0.14.04.1) Setting up mysql-server (5.5.38-0ubuntu0.14.04.1)	
ubuntu:~\$	-

10.5 Install PHP and Apache HTTP Server

PHP is a server-side scripting language that functions as both a web language and a scripting language. WordPress is written primarily in PHP along with HTML, CSS, and JavaScript.

Apache HTTP Server is one of the most widely used web servers.

Install PHP 5 and it should install Apache: *sudo apt-get install php5* [Enter]



Press Y to install.



Enable the mod_rewrite module in Apache. WordPress requires the module so it can use pretty premalinks. You can see more information in the WordPress Codex: <u>http://codex.wordpress.org/Using_Permalinks</u> sudo a2enmod rewrite

[Enter]





Restart Apache to activate the new configuration: *sudo service apache2 restart* [Enter]

N	
A.	A
	_
	•



Open your web browser to the Elastic IP (public IP) of the instance and you should see the Apache 2 Ubuntu Default Page.



The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

11 Transfer Files to an Instance

SFTP stands for Secure File Transfer Protocol. It is a secure method to transfer and manage files. It's an alternative to FTP which is unsecure since it transfers data in plaintext that is not encrypted. FileZilla, a free SFTP client, will be used for this tutorial.

11.1 Connect to Instance using FileZilla

Open your web browser to <u>https://filezilla-project.org/download.php?type=client</u> and click **Download Now**.

	🛃 🕫 EC2 Manage	ment Consoli 🗴 😰 FileZilia - Client Downlos 🗙	
<image/> <section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>	← → C 🙆 http:	s://filezilla-project.org/download.php?type=client	☆ =
Fiez/II The latest stable version of file/III all client is 3.9.0.3 Fiez/II ascrementation Please select the file appropriate for your platform below. Ovininadi Ovininadi Fiez/II ascrementation Ovininadi Fiez/II ascrementation Ovininadi Fiez/II ascrementation Ovinidows Select the file appropriate for your platform below. Ovininadi Ovinidows Select the file appropriate for your platform below. Owindows Select the file appropriate for your platform below. Ovinidows Select the file appropriate for your platform below. Ontimentation Ovinidows Select the file appropriate for your platform below. Ovinidows Select the file appropriate for your platform below. Community Project page Wiki Ovindows Vista, 7, 8 and 8.1 are supported, each both 32 and 64 bit. Ovindows Vista, 7, 8 and 8.1 are supported, each both 32 and 64 bit. Ocontatt License Privacy Policy Changelog Issue tracker Ovindows doublead options Not what you are looking for? Octochess Issue tracker Show additional download options Show additional download options Outcochess Issue tracker Show additional download options Show additional download options	Z Fil	eZilla The free FTP solution	
	Home Fiezilia Screenshots Documentation Fiezilia Server Download Documentation Fiezilia Server Download Contact License Project page Wijal General Contact License Proyecy Policy Development Source code Nighty builds Translations VChangelog Issue tracker Other projects Octochess Pagener Sensor: Senso	The latest stable version of FileZilla Client is 3.9.0.3 Please select the file appropriate for your platform below.	

Install FileZilla and then run filezilla.exe. You should see the FileZilla application appear. Click **File** -> **Settings**. Navigate to **Connection** -> **SFTP**.

🔁 FileZilla	N						×
<u>File Edit View Transfer Server Bookmarks Help</u>	New version available!						
	5° N						
Host: Username:	Pass <u>w</u> ord:	Po	rt:	Quickconn	ect		
							*
							-
Local site: \	-	Remote site:					-
Computer		Terrible siter					-
A:	_						
⊞	_						
₩ <u>₩</u> K:	=						
	*						
Filename Filesize Filetype La	st modified	Filename	Filesi	e Filetype	Last modified	Permissions	Ov
A: Floppy Disk Dri							
D: (USB01) Removable Disk				Not connected	to any server		
🔮 K: CD Drive							
M: (HD1) Local Disk							
				m			•
5 directories		Not connected					
Server/Local file Direction Remote file		Size Prio	rity Stat	us			
Queued tiles Failed transfers Successful transfers							
					Queue: empt	ty 🔍	

Click Add keyfile.

Settings			×
Select <u>p</u> age:	Public Key Authentio	ation	
Connection	 To support public ke use. Private keys: 	y authentication, FileZil	la needs to know the private keys to
Passive mode	Filename	Comment	Data
Generic proxy Generic proxy File Types File exists action Interface Date/time format Filesize format File lists Language			
OK	Alternatively you can		om PuTTV to manage your keyr
Cancel	FileZilla does recogn	ize Pageant.	on Full to manage your keys,

On the Select file containing private key dialog, select the .PPK private key and click Open.

Select file containing p	private key						
🔾 🗢 📕 🕨 aws					✓ 49 Sea	rch aws	
Organize 🔻 🛛 New f	older						
🚖 Favorites	Name		Date modified	Туре	Size		
	demo01key.ppk		8/13/2014 5:33 PM	PPK File	2 KB		
🔒 Libraries	test01key.pem		8/13/2014 5:09 PM	PEM File	2 KB		
👌 Homegroup							
🖳 Computer		S					
📮 Network							
Fi	le <u>n</u> ame: demo01key.ppk				✓ All fi	les (*.*)	•
						pen 😽 🦲	Cancel

If you receive a **Convert keyfile** dialog, click **Yes** to convert the key into an file without a password.



Click **OK** to close the **Setting** dialog. Click **File**- > **Site Manager**. On the **Site Manager** form, click **New Site**.

te Manager			-				
elect Entry:		General	Adva	nced	Transfer Settings	Charset	
My Sites		Host:				Port:	
		Protocol	: F	TP - F	ile Transfer Protoc	ol	w
		Encrypti	on: [Jse pla	iin FTP		Ŧ
		Logon T	ype: 🛛	Anony	mous		÷
		Pass <u>w</u> or	d:				
		Account	:				
		Co <u>m</u> me	nts:				
New Site	New <u>F</u> older						*
New Book <u>m</u> ark	Rename						
1	Duplicate						Ŧ

In the **Host** textbox, fill in your Elastic IP (public IP). Select **SFTP – SSH File Transfer Protocol** from the **Protocol** dropdown. Select **Normal** from the **Logon Type** dropdown. Type **ubuntu** in the **User** textbox. Click **Connect**.

Site Manager			ŕ		×
Select Entry:		General Ac Host: Pro <u>t</u> ocol:	Vanced XXX.X SFTP -	छ Transfer Settings XX.XXX.XXX SSH File Transfer P	Charset Port: rotocol
	Logon Type User: Pass <u>w</u> ord: Account: Comments:	ubunt	al u		
<u>N</u> ew Site	New <u>F</u> older				*
Delete	Dupl <u>i</u> cate				*
			<u>C</u> onnect	<u>o</u> k	Cancel

You should see the **Remote Site** panel on the right side with the server folders at **/home/Ubuntu**.

Test01 - sftp://ubu	untu@ - FileZi	lla		N					×
<u>File Edit View T</u>	ransfer <u>S</u> erver <u>B</u> ookmar	ks <u>H</u> elp <u>N</u> ew version ava	ilable!	13					
	😴 😫 🕅 🐰 🖘	I 🗉 🕂 🕈 🛝							
Host:	<u>U</u> sername:	Pass <u>w</u> ord:		<u>P</u> o	rt:	Quickconnec	t		
Status: Listin	ig directory /home/ubuntu								*
Command: mtim	ne ".bash_logout"	rver							
Response: 13970	005395								_
Status: Time Status: Direc	zone offsets: Server: 0 secor tory listing successful	ids. Local: -14400 seconds. Di	ifferenc	e: -14400 secon	ids.				
Direc	tory insting successful								<u></u>
Local site: \			-	Remote site: /	/home/ubunt	u			-
E P Computer			•						
A:			100	inor	ibuntu				
⊞	B01)			⊞ 0 8 k	abuntu				
			E						
. (HC	01)								
			-						
Filename	Filesize Filetype	Last modified		Filename	Filesize	Filetype	Last modified	Permissions	Ov
A:	Floppy Dis	k Dri							
💭 C:	Local Disk	25070 N		.cache		File folder	8/13/2014 5:30:	drwx	ub
- D: (USB01)	Removabl	e Disk		嶋 .ssh	105	File folder	8/13/2014 5:10:	drwx	ub
K:	CD Drive			bash_hi	195	BASH_HIS	8/13/2014 5:45:	-rw	ub
	Local Disk			bash_io	220	BASH_LUG	4/8/2014 9:03:0	-rw-rr	ub
				Dashirc	5,057		4/8/2014 9:05:0	-IW-II	ub
					075	FIGURE	4/0/2014 9:09:0	-100-11	ub
			5	•		III			P.
5 directories				4 files and 2 dire	ectories. Total	size: 4,727 byte	es		
Server/Local file	Direction Re	mote file		Size Prior	rity Status				
Queued files Fail	ed transfers Successful t	ransfers							
						a	Oueue: empty		
						10	deres subb	11.080	- 04t

You can now transfer files between your computer (left panel) and the instance (right panel).

11.2 Transfer WordPress Files to an Instance

Open your web browser to https://wordpress.org/download/ and click **Download WordPress**.



In FileZilla, navigate to **/var/ww/html** in the **Remote Site** panel on the right side. Locate the WordPress zip file you downloaded and drag it into the **Remote Site** panel to transfer the file to the instance.

E Test01 - sftp://u	ubuntu@54.164.44.183 - FileZilla	i -						x
<u>File Edit View</u>	<u>Transfer</u> Server <u>B</u> ookmarks	Help New version ava	ilable!		ß			
-	🖱 🚅 🗱 🎦 💺 🛷	🗉 🕂 🕈 🖪						
Host:	Username:	Pass <u>w</u> ord:		Port:	Quickconne	ect 💌		
Status: loo Status: Fil Status: Re Command: Is Status: Lis Status: Dii	cal:C:\Users\Coil\Desktop\wordp le transfer successful, transferred etrieving directory listing sting directory /var/www/html rectory listing successful	oress-3.9.2.zip => remote:/ 5,914,624 bytes in 2 secon	var/www/html/w ds	ordpress-3.9.2.zip				*
Local site: \			 Remote si 	te: /var/www/h	tml			•
Compu	usB01) (HD1)			run spool tmp www btml vmlinuz.old				•
Filename	Filesize Filetype	Last modified	Filename	Filesize	Filetype	Last modified	Permissions	; O1
A: C: D: (USB01) K: M: (HD1)	Floppy Disk Local Disk Removable I CD Drive Local Disk	Dri Disk	🕌) 🗃 wordp	re 6,341,903	WinRAR ZI	8/13/2014 6:10:	-rw-rw-r	ub
			4		m			Þ
5 directories			1 file. Tota	l size: 6,341,903 b	ytes			
Server/Local file	Direction Rem	ote file	Size	Priority Statu	S			
Queued files	Failed transfers (1) Succes	sful transfers (1)						_
					E	🖥 🚥 Queue: empt	y 🔹	•

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11.3 Extract WordPress Files to an Instance

Change to the Apache html directory: cd /var/www/html [Enter]

P Terminal	N	
ubuntu:~\$ cd /var/ww	w/html	<u>^</u>
		-
P Terminal	N	
ubuntu:~\$ cd /var/ww	w/html	·
ubuntu:/var/www/ntml	÷ _	

Install Unzip:

sudo apt-get install unzip [Enter]

P Terminal	-
ubuntu:/var/www/html\$ sudo apt-get install unzip	•

ළු Terminal		
<pre>debconf: (Dialog frontend requires a screen at de.)</pre>	least 13 lines tall and 31	columns wi 🔺
debconf: falling back to frontend: Readline Setting up unzip (6.0-9ubuntu1) ubuntu:/var/www/html\$		

Extract the Wordpress files: sudo unzip wordpress-3.9.2.zip [Enter]



Rename the Wordpress folder to a name of your choice: sudo mv wordpress wpdemo01 [Enter]



Change the ownership of the files so Apache can access them: sudo chown www-data:www-data wpdemo01 -R [Enter]

ළි Terminal	
ubuntu:~\$ sudo chown www-data:www-data wpdemo01 -R	•
월 Terminal	
ubuntu:~\$ sudo chown www-data:www-data wpdemo01 -R ubuntu:~\$	· ·

Change permissions of the files temporarily. Be sure to update the permissions noted in the **Final Notes** section once WordPress is configured:

sudo chmod 777 wpdemo01 -R [Enter]



The WordPress files are now located at /var/www/html/wpdemo01.

12 Configure Apache Web Server

By default, Apache serves files that are located in the /var/www/html directory to any request whether it be for the public IP address of the server (ex. 172.16.0.0) or by the A record in DNS (www.example.com) that points to the public IP address. Apache has a feature called virtual hosts which allows running multiple websites from Apache at the same time. There are name-based virtual hosts and IP-based virtual hosts. Name-based virtual hosts allow for more than one website per IP address which is very common and utilized by many of the shared hosting companies since IPv4 addresses are so scarce. IP-based virtual hosts provides an IP address for a single website. In this guide, you'll disable the default website and create a new default configuration file. This will enable you to add more websites in the future.

Apache stores all of the **available** website configuration files in the /etc/apache2/sites-available directory and all the enabled website configuration files in the /etc/apache2/sites-enabled directory. The files in the sites-enabled directory are actually symlinks or pointers to the files in the /etc/apache2/sites-available directory. You can enable any site using **sudo a2ensite site-name** (ignore the .conf file extension). For instance, to disable the default site specified in configuration file, 000-default.conf, type **sudo a2dissite 000-default**.

Navigate to the Apache configuration directory: *cd /etc/apache2/sites-available* [Enter]

ළු Terminal	
ubuntu:~\$ cd /etc/apache2/sites-available	
P Terminal	
ubuntu:~\$ cd /etc/apache2/sites-available ubuntu:/etc/apache2/sites-available\$	

Open the Nano editor to a new configuration file: *sudo nano 001-wpdemo01.conf*

[Enter]

ළු Terminal	
ubuntu:~\$ sudo nano 001-wpdemo01.conf	*

P Terminal		x
GNU nano 2.2.6	File: 001-wpdemo01.conf	
	[New File]	
^G Get Help ^O WriteOut ^X Exit ^J Justify	^R Read File <u>^Y</u> Prev Page <u>^K</u> Cut Text <u>^C</u> Cur Pos <mark>^W</mark> Where Is <mark>^V</mark> Next Page <mark>^U</mark> UnCut Text <mark>^T</mark> To Spell	-

Below is a secure configuration file that follows many of the best practices when hardening or securing Apache. The only Apache directives you need change when setting up a new site are below:

- ServerName www.example.com
- ServerAlias example.com
- DocumentRoot /var/www/html/wpdemo01
- <Directory "/var/www/html/wpdemo01">

Update the bolded fields so they match the domain name and folder containing the WordPress files. Paste in the following code by simply right clicking in the PuTTY window: ### START OF FILE

#

Remove Apache version from response to mitigate#ServerSignature OffServerTokens Prod

#

Use the ServerName directive to set the name of the server#UseCanonicalName On

#

Disable the ability for clients to send an HTTP TRACE#TraceEnable Off

<VirtualHost *:80>

The ServerName directive sets the request scheme, hostname and port that
the server uses to identify itself. This is used when creating
redirection URLs. In the context of virtual hosts, the ServerName
specifies what hostname must appear in the request's Host: header to
match this virtual host. For the default virtual host (this file) this
value is not decisive as it is used as a last resort host regardless.
However, you must set it for any further virtual host explicitly.
ServerName www.example.com
ServerAlias example.com

ServerAdmin webmaster@localhost DocumentRoot /var/www/html/wpdemo01

Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
error, crit, alert, emerg.
It is also possible to configure the loglevel for particular
modules, e.g.
#LogLevel info ssl:warn

ErrorLog \${APACHE_LOG_DIR}/error.log CustomLog \${APACHE_LOG_DIR}/access.log combined

For most configuration files from conf-available/, which are# enabled or disabled at a global level, it is possible to

include a line for only one particular virtual host. For example the # following line enables the CGI configuration for this host only # after it has been globally disabled with "a2disconf". #Include conf-available/serve-cgi-bin.conf

</VirtualHost>

<Directory /> Order Deny,Allow Deny from all Options None AllowOverride None Require all denied </Directory>

<Directory "/var/www/html/wpdemo01">

```
#
#
Possible values for the Options directive are "None", "All",
# or any combination of:
# Indexes Includes FollowSymLinks SymLinksifOwnerMatch ExecCGI MultiViews
#
# Note that "MultiViews" must be named *explicitly* ---- "Options All"
# doesn't give it to you.
#
# The Options directive is both complicated and important. Please see
# http://httpd.apache.org/docs/2.2/mod/core.html#options
# for more information.
#
Options None
```

#

AllowOverride controls what directives may be placed in .htaccess files.

It can be "All", "None", or any combination of the keywords:

Options FileInfo AuthConfig Limit

#

AllowOverride All

#

Controls who can get stuff from this server.#Order allow,denyAllow from all

#

Limit the number of bytes that are allowed in a request body # 1048576 is 1 MB. 10485760 is 10 MB. # LimitRequestBody 10485760

</Directory>

vim: syntax=apache ts=4 sw=4 sts=4 sr noet
END OF FILE

Save the configuration file:

[Ctrl + O]

[Enter]

P Terminal					×
GNU nano 2.2.6 ### END OF FILE	File: 001	-wpdemo01.conf		Modified	^
File Name to Writ ^G Get Help ^C Cancel	te: 001-wpdemo01.conf M-D DOS Format M-M Mac Format	M-A Append M-P Prepend	M-B Backup	File	

🚱 Terminal		
GNU nano 2.2.6	File: 001-wpdemo01.conf	-
### END OF FILE		
	[Wrote 97 lines]	
^G Get Help ^O Write	eOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos	
^X Exit ^J Just	ify <mark>^W</mark> Where Is <mark>^V</mark> Next Page <mark>^U</mark> UnCut Text <mark>^T</mark> To Spell	-

Exit Nano:

[Ctrl + X]

P Terminal	
ubuntu:~\$ sudo nano 001-wpdemo01.conf ubuntu:~\$	

Disable the default Apache website: *sudo a2dissite 000-default*

[Enter]

P Terminal	
ubuntu:~\$ sudo a2dissite 000-default	



Enable the new Apache website created above: *sudo a2ensite 001-wpdemo01*

[Enter]

B Terminal	
ubuntu:~\$ sudo a2ensite 001-wpdemo01	

ළු Terminal		×
ubuntu:~\$ sudo a2ensite 001-wpdemo01 Enabling site 001-wpdemo01. To activate the new configuration, you need to run: service apache2 reload ubuntu:~\$		

Restart Apache:

sudo service apache2 restart

[E	nte	r]

ළි Terminal	
ubuntu:~\$ sudo service apache2 restart	

P Terminal	
ubuntu:~\$ sudo service apache2 restart * Restarting web server apache2 ubuntu:~\$	[OK]

Apache is now setup. Open your web browser to your domain (ex. http://www.example.com) and you should see the **WordPress > Error** page with the **Create a Configuration File** button.

		×
← ⇒ C	mostack.com	☆ ≡
	There doesn't seem to be a wp-config.php file. I need this before we can get started.	
	Need more help? We got it.	
	You can create a wp-config.php file through a web interface, but this doesn't work for all server setups. The safest way is to manually create the file.	
	Create a Configuration File	

13 Set up MySQL Database using Adminer

There are multiple ways to set up the MySQL database, but this guide will use Adminer to create a database, create a user, and then assign the user permissions to the database. *Delete the adminer.php file once the database is setup*.

13.1 Download and Set up Adminer

To download Adminer, open your web browser to <u>http://www.adminer.org/#download</u>. Click **Adminer 4.1.0 for MySQL** to download the application.

🚭 👩 ^e Adminer - Database mana 🗙		x
← → C 🗋 www.adminer.org/#download	र् <u>य</u>	Ξ
Downloads • Adminer 4.1.0 (.php, 379 kB), English only (.php, 274 kB) • Adminer 4.1.0 for MySQL (.php, 286 kB), English only (.php, 187 kB) • Source codes (.zip, 546 kB), Current development version • Donate • Latest stable version (use e.g. by wget): http://www.adminer.org/latest[-mysql][-en].php • Change log • Debian package, Arch Linux package, Wordpress plugin, Drupal module, Joomta extension (1, 2) Moodle plugin, TYPO3 extension, CMS Made Simple Module, Laravel • Adminer is also bundled with Nette Framework (which this site runs on). • Older versions		
adminer-4.1.0-mysqphp	Show all downloads	×

Rename the downloaded file to **adminer.php**. Open up FileZilla and copy adminer.php to /var/ww/html/wpdemo01.

Test01 - sftp://ubuntu@ - FileZilla	
<u>File Edit View Transfer Server Bookmarks Help New version available</u>	k e
1 - K ? X II & X II & X / K / K	
Host: Username: Password:	Port: Quickconnect
Status: local:C:\Users\Coil\Desktop\adminer.php => remote:/var/www/h	tml/wpdemo01/adminer.php
Status: File transfer successful, transferred 16,384 bytes in 1 second Status: Retrieving directory listing	
Command: Is	
Status: Listing directory /var/www/html/wpdemo01 Status: Directory listing successful	
Local site: \	Remote site: //var/www/html/wpdemo01
Long Computer Δ:	mp spool
D: (USB01)	in the second s
₩	
⊞ ••• (HD1)	tree wpdemo01
Filename Filesize Filetype Last modified	Filename Filesize Filetype Last modified Permissions
A: Floppy Disk Dri	wn-admin File folder 8/6/2014 2:41:0 dowyr-yr-y
D: Removable Disk	wp-cont File folder 8/6/2014 2:41:0 drwxr-xr-x
EK: CD Drive	wp-inclu File folder 8/6/2014 2:41:0 drwxr-xr-x
📾 M: Local Disk	adminer 191,036 PHP File 8/13/2014 6:58:rw-rw-r
	index.php 418 PHP File 9/25/2013 -rw-rr
	license.txt 19,930 Text Docu 4/9/2014 7:50:0rw-rr
	readme 7,194 Chrome H 8/6/2014 2:27:0rw-rr
5 directories	Selected 1 file Total size 101 026 bytes
	Selected I file. Total size. 191,000 bytes
Server/Local file Direction Remote file	Size Priority Status
Queued files Failed transfers (1) Successful transfers (2)	
	🖬 🕮 Queue: empty 🔍 🔍 🕷

13.2 Create Database and Database User for WordPress

In the web browser, navigate to: <u>http://example.com/adminer.php</u>. You should see the Adminer Login screen. Type root in the Username textbox. Type the root password in the Password textbox (password set in the Install MySQL Database section of this guide). Click Login.

	WordPress - Setup Co	ntig X 0° Login - Adminer X	
C 🗋 wpdemo01.dem	ostack.com/adminer.p	np	
<i>niner</i> 4.1.0	Login		
	Guntam	14.00L -	
	Server		
	Username	root	
	Password		
	Database		

On the **Select database** screen, click **Create new database**.

🐣 📑 AWS Route 53 Manageme 🗴 🖺 W	ordPress - Setup Config × 6 ⁰ Sciect	database - Admine 🗴				<u> </u>
← → C 🗋 wpdemo01.demostack.c	:om/adminer.php?username=r	oot	_	~		☆ =
	MySQL » Server					Logout
Adminer 4.1.0	Select database					
DB:	Create new database Priv MySQL version: 5.5.38-0ul Logged as: root@localhos	vileges Process buntu0.14.04.1 t	list throug	Variables St n PHP extensio	atus n MySQLi	
	Database - Refresh	Collation	Tables	Size - Compute	9	
	information_schema	utf8_general_ci	?		?	
	performance schema	utf8 general ci	?		?	
	Drop					

On the **Create database** screen, type in **wpdemo01** or a database name of your choice. Select **utf8_unicode_ci** from the dropdown. Click **Save**.

😸 🔋 AWS Route 53 Manageme 🗴 🖺 V	VordPress - Setup Config 🗴 🔗 Create database = Admine 🗙	×
← → C 🗋 wpdemo01.demostack.	com/adminer.php?username=root&database=	☆ =
	MySQL » Server » Create database	Logout
Adminer 4.1.0	Create database	
DB:	wpdemo01 utf8_unicode_ci	
SQL command Import Dump		

You should a message at the top of the screen in green that says, **Database has been created**. Click **Privileges**.

😸 🥫 AWS Route 53 Manageme 🗴	🚡 WordPress - Setup Config 🗙 👩 Database: wpdemo01 - A 🗙	<u> </u>
← → C 🗋 wpdemo01.demos	stack.com/adminer.php?username=root&db=wpdemo01	☆ =
	MySQL » Server » Database: wpdemo01	Logout
Adminer 4.1.0	Database: wpdemo01	
DB: wpdemo01	Database has been created. 23:01:41 SQL command	
SQL command Import Dump Create table	Alter database Database schema Privileges	
No tables.	Tables and views	
	No tables.	
	Create table Create view	
	Routines	
	Create procedure Create function	
	Events	
	Create event	
1		

On the **Privileges** screen, type **wpdemo01** into the **Username** textbox and **localhost** into the **Server** textbox. Click **Create user**.

🖶 🗃 AWS Route 53 Manageme 🗴 🕒	WordPress - Setup Config ×	● [©] Privileges - Adminer	×	
← → C 🗋 wpdemo01.demostac	k.com/adminer.php?userr	name=root&db=wpde	mo01&privileges=	☆ =
	MySQL » Server » wp	odemo01 » Privileges		Logout
Adminer 4.1.0	Privileges			
DB: wpdemo01 V	Username	Server		
SQL command Import	wpdemo01	localhost	Edit	
Dump Create table	Create user			
No tables.				
		D ₂		

In the **Username** screen, enter in a new password into the **Password** textbox. Make sure the checkbox next to **All privileges** is checked. Click **Save** at the bottom of the page.

🐣 🧃 AWS Route 53 Manageme 🗴	💾 WordPress - Setup C	ionfig × 6 [®] Usemanie wp	demo01@lc ×	>	
← → C 🗋 wpdemo01.demost	ack.com/adminer.j	php?username=root&d	b=wpdemo018	user=wpdemo01&host=localhost	公
	MySQL » Se	MySQL » Server » wpdemo01 » Privileges » Username: wpdemo01@localhost			
Adminer 4.1.0	Userna	me: wpdemo0	1@localho	st	
DB: wpdemo01 •	Sorvor	localhost			
	Server	localitost	1		
SQL command Import	Username	wpdemo01			
Sump Create table	Password		Hashed		
No tables.		Privileges?	`wpdemo01`.*		
	All privilege	c			
	Grant ontio	5 n			
	Server (Treate user			
	Server F	Event			
	Server F	Process			
	Server F	Proxy			
	Server F	Reload	6		
	Server F	Replication client			
	Server F	Replication slave			
	Server 9	Show databases			
	Server S	Shutdown			
	Server S	Super			
	Server (Create tablespace			
	Server F	File			
	Database (Create routine			
	Database 0	Create temporary tables			
	Database L	ock tables			
	Table A	Alter			
	Table (Create	8		
	Table (Create view			
	Table [Delete			
	Table 0	Drop			
	Table T	index			
	Table 1				

14 Configure WordPress

Open your web browser to your domain (ex. http://www.example.com) and you should see the **WordPress > Error** page with the **Create a Configuration File** button. Click **Create a Configuration File**.

🐣 🧃 AWS Route 53 Manageme	WordPress> Error ×	
← → C 🗋 wpdemo01.dem	nostack.com	☆ =
	There doesn't seem to be a wp-config.php file. I need this before we can get started.	
	Need more help? We got it.	
	You can create a wp-config.php file through a web interface, but this doesn't work for all server setups. The safest way is to manually create the file.	
	Create a Configuration File	

On next screen, you will be prompted for the database information. If you followed the previous section of this guide, enter **wpdemo01** in the **Database Name** textbox, enter **wpdemo01** in the **User Name** textbox, enter in the password you created in the **Password** texbox, enter **localhost** in the **Database Host** textbox, and enter **wp_** in the **Table Prefix** textbox. Click **Submit**.

AWS Route 53 Manageme	× 🕒 WordPress - Setup Co	nfig 🗙 🕞 🕫 Select database - Admine		
← ⇒ C 🗋 wpdemo01.dem	nostack.com/wp-admin,	/setup-config.php?step=1		☆ ≡
	Below you should en host.	ter your database connection de	tails. If you're not sure about these, contact your	
	Database Name	wpdemo01	The name of the database you want to run WP in.	
	User Name	wpdemo01	Your MySQL username	
	Password	paswordgoesrighthere	and your MySQL password.	
	Database Host	localhost	You should be able to get this info from your web host, if localhost does not work.	
	Table Prefix	wp_	If you want to run multiple WordPress installations in a single database, change this.	
	Submit			

On the last configuration screen, you show see the message, **All right, sparky! You've made it through this part of the installation**. This means WordPress can communicate properly with the database. Click **Run the install**.



On the **Welcome** screen, enter in the name of your website in the **Site Title** textbox. Enter in a new username into the **Username** textbox. Enter in a new password in both of the **Password** textboxes. This username and password will be used to log in to the WordPress Admin Dashboard. Enter your email in the **Your E-mail** textbox. Check the box next to **Allow search engines to index this site** if you want your website to show up in Google and Bing search results. Click **Install WordPress**.

AWS Route 53 Manageme	x 🕒 WordPress - Installatio	m 🗙 🔗 Select database - Adminei 🛪 📃		x
$\leftarrow \rightarrow$ C \square wpdemo01.dem	nostack.com/wp-admin/	/install.php	☆	≡
	Welcome to the famou ReadMe documentatic your way to using the Information r	is five minute WordPress installation process! You may want to browse the an at your leisure. Otherwise, just fill in the information below and you'll be on most extendable and powerful personal publishing platform in the world. needed		*
	Please provide the foll	lowing information. Don't worry, you can always change these settings later.		
	Site Title	WP Demo 01		
	Username	admin Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods and the @ symbol.		
	Password, twice A password will be automatically generated for you if you leave this blank.	Strong Int:: The password should be at least seven characters long. To make it stronger, use upper and lower case letters, numbers, and symbols like ! ? 5 % ^ &.).		
	Your E-mail	email@domain.com Double-check your email address before continuing.		
	Privacy			
	Install WordPress			

If you see the **Success** screen, you've successfully configured WordPress.



Navigate your web browser to <u>http://wpdemo01.demostack.com</u>. You should see the homepage of your new WordPress website! On the page, you'll see the default **Hello World** article.



14.1 Log in and Configure WordPress using the Admin Dashboard

Navigate your web browser to <u>http://wpdemo01.demostack.com/wp-login.php</u>. You should see the WordPress **Dashboard Login** screen with a **Username** and **Password** textbox. Enter in the username and password and click **Log In**.

🚔 🗃 AWS Route 53 Manageme 🗴 🕒 Women With Promises L. 🗴	🐨 Select database - Admine 🗶		
← → C 🗋 wpdemo01.demostack.com/wp-login.php		☆	Ш
 AWS Route 52 Managem. Women With Promise 11 × ← → C wpdemo01.demostack.com/wp-login.php 	Vector database - Admin	1 I I I I I I I I I I I I I I I I I I I	=
	Lost your password? ← Back to Women With Promise		

You should see the **Dashboard** screen.

🛃 📑 AWS Route 53 Manageme × 🕒 Dashboard - Women Wrli × 👩® Select database - Admine ×						
← → C 🗋 wpdem	o01.demostack.com/wp-admin/				☆≡	
🚯 🖀 WP Demo 01 📮	0 + New			Howdy, adm	in 🖪 🌰	
🚯 Dashboard 🔸	Dashboard			Screen Options * Help	*	
Home Updates	Welcome to WordPress!	started		Dismiss		
✤ Posts ⑦ Media Pages	Get Started	Next Steps	t blog post	More Actions 岡 Manage widgets or menus		
Comments	Customize Your Site or, change your theme completely	+ Add an About	page	 Turn comments on or off Learn more about getting started 		
🖌 Plugins						
👗 Users	At a Glance		Quick Draft		A	
🔑 Tools	📌 1 Post 📗 1 Page		Title			
Settings	🗭 1 Comment		What's on your a	mind?	-	
Collapse menu	WordPress 3.9.2 running Twenty Fourteen theme. Search Engines Discouraged		whats on your i	innu:		
	Activity	A.	Save Draft			
	Recently Published					
	Today, 11:19 pm Hello world!		WordPress News	;	*	
	Comments		WordPress 3.9.2	Security Release August 6, 2014		
From Mr WordPress on Hello world! # Hi, this is a comment. To delete a comment, just log in and view the post's comments. There you will have			WordPress 3.9.2 is r versions. We strong release fixes a poss reported by Nir Gol It was fixed by Micl	now available as a security release for all previous gly encourage you to update your sites immediately. This bide denial of service issue in PHP's XML processing, Idshlager of the Salesfore.com Product Security Team. hael Adams and Andrew Nacin of the WordPress [-	

Let's change the way WordPress handles URLs so it is clean and search engine friendly. On the left menu, hover over **Settings** and then click **Permalinks**. Select the radio button next to **Post name**. Click **Save Changes** at the bottom of the page.

AWS Route 531	Managemer X	101 X Permalink Settings WP X			
← → C D wpder	mo01.demostack.com/wp-admin/	options-permalink.php	\$	≡	
🚯 📸 WP Demo 01	🛡 0 🕂 New	Ho	wdy, admin 🛔		
🍘 Dashboard	Permalink Settings		Help ▼		
📌 Posts 🗣 Media	Posts By default WordPress uses web URLs which have question marks and lots of numbers in them; however, WordPress offers you the ability to create a custom URL structure for your permalinks and archives. This can improve the aesthetics, usability, and forward-compatibility of your links. A <u>number of tags are available</u> , and here are some examples to get you started.				
Pages	Common Settings				
 Comments Appearance 	O Default	http://wpdemo01.demostack.com/?p=123			
🖌 Plugins	O Day and name	http://wpdemo01.demostack.com/2014/08/13/sample-post/			
F Tools	O Month and name	http://wpdemo81.demostack.com/2014/08/sample-post/			
F Settings	O Numeric	http://wpdemo01.demostack.com/archives/123			
Writing Reading	• Post name	http://wpdemo01.demostack.com/sample-post/			
Discussion Media	O Custom Structure	http://wpdemo01.demostack.com			
Permalinks Brute Force Login Protection	Optional				
Collapse menu	If you like, you may enter custom st like http://example.org/topics/	ructures for your category and tag URLs here. For example, using topics as your category base would make your c uncategorized/ . If you leave these blank the defaults will be used.	ategory links		
	Category base				
	Tag base			•	

Let's also add a plugin that protects the login page from too many invalid attempts. On the left menu, hover over **Plugins** and click **Add New**. Type in **Brute Force Login Protection** and click **Search Plugins**. Under the first result, click **Install Now**.

🚔 👼 AWS Route 53 Mar	nageme 🗙 🎦 Install Plugins-« WP D	lanti × 👩	⁹ Select database - Ad	minc ×
← → C 🗋 wpdemo	01.demostack.com/wp-admin	n/plugin-in:	stall.php?tab=sea	arch&s=Brute+Force+Login+Protection&plugin-search-input=Search+Plugins 섨 =
🚯 📸 WP Demo 01 📮	0 + New			Howdy, admin 📃 🌰
🚯 Dashboard	Install Plugins			Screen Options * Help *
🖈 Posts	Search Search Results Uploa	d Feature	d Popular New	vest Favorites
9) Media	Keyword 🔻 Brute Force Log	gin Protec×	Search Plugins	51 items « < 1 of 2 > »
Pages	Name	Version	Rating	Description
Comments	Brute Force Login Protection	1.3	****	A Brute Force Attack aims at being the simplest kind of method to gain access to a site: it tries
Appearance	Details Install Now			usernames and passwords, over and over again, until it gets in. Brute Force Login Protection protects your website against brute force login attacks using .htaccess.
💉 Plugins				After a specified limit of login attempts within a specified time, the IP address of the hacker will be blocked.
Installed Division				Features
Add New				Linic the by Jan-Paul Reemans.
Editor	Project Force Field	0.6.1	****	Falson Zutavern, Jon Valcq, and Emma Edgar, from Orion Group LLC, bring superior Brute Force Attack protection to WordPress with their new plugin, Project Force Field. By tracking failed
	occurs material day			login attempts and taking advantage of Apache's mod_rewrite module, Project Force Field
f Taple				Special thanks to Chris Aykroid for the plugin banner :D By Falson Zutavern.
	BulletProof Security	.50.5	*****	BulletProof Security Feature Highlights
Settings	Details Install Now			.htaccess Website Security Protection (Firewalls)
Collapse menu				Login Security & Monitoring DB Backup
				DB Backup Logging
				DB Table Prefix Changer
				Security Logging
				HTTP Error Logging FrontEnd/PackEnd Maintenance Mode
				UI Theme Skin Changer
				BulletProof Security Pro Feature Highlights
				1 Click Setup Wizard
				AutoRestore Intrusion Detection & Prevention System (IDPS)
				By All pro Edward Alexander.
	WordPress Simple Firewall	3.1.5	*****	The WordPress Simple Firewall is all you need to secure your WordPress sites in 6 Key Areas:
	Details Install Now			Plugin Admin Access Protection
				The only WordPress security plugin with a WordPress-independent security key to protects

On the Installing Plugin page, click Activate Plugin.



Congratulations! You've successfully set up a WordPress website on Amazon Web Services.

15 Final Notes

WordPress is a fantastic tool for maintaining your website. It's easy to use and has a very large library of plugins and themes to aid in customizing your website. To keep the website secure, continue to update WordPress and the plugins to ensure you have the latest versions.

To further increase security on the WordPress website:

- delete the adminer.php file so no one can access the database
- copy the values from https://api.wordpress.org/secret-key/1.1/salt/ to your wp-config.php file to make your website harder to hack

15.1 Final Permissions

Once WordPress is setup, run the commands below in PuTTY to apply the proper permissions to the WordPress files:

Set Apache as the owner of the WordPress files: *sudo chown www-data:www-data /var/www/html/wpdemo01 -R* [Enter]

Set the recommended permissions for the WordPress folders: sudo find /var/www/html/wpdemo01 -type d -exec chmod 755 {} \; [Enter]

Set the recommended permissions for the WordPress files: *sudo find /var/www/html/wpdemo01 -type f -exec chmod 644 {} \;* [Enter]