

Project2:

Deploying a web server in Ubuntu Instance

Step 1: Choose an Amazon Machine Image (AMI)

Cancel and Exit

SUSE Linux Uq24t1c1ba9b2z8u3 (64-bit Arm)
Free tier eligible SUSE Linux Enterprise Server 15 Service Pack 2 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-0bbe28eb2173f6167 (64-bit x86) / ami-04adf33460efc8798 (64-bit Arm)
Free tier eligible Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).
Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Are you launching a database instance? Try Amazon RDS. Hide
Amazon RDS
Amazon Relational Database Service (RDS) makes it easy to set up, operate, and scale your database on AWS by automating time-consuming database management tasks. With RDS, you can easily deploy **Amazon Aurora**, **MariaDB**, **MySQL**, **Oracle**, **PostgreSQL**, and **SQL Server** databases on AWS. [Aurora](#) is a MySQL- and PostgreSQL-compatible, enterprise-class database at 1/10th the cost of commercial databases.

Step 2: Choose an Instance Type

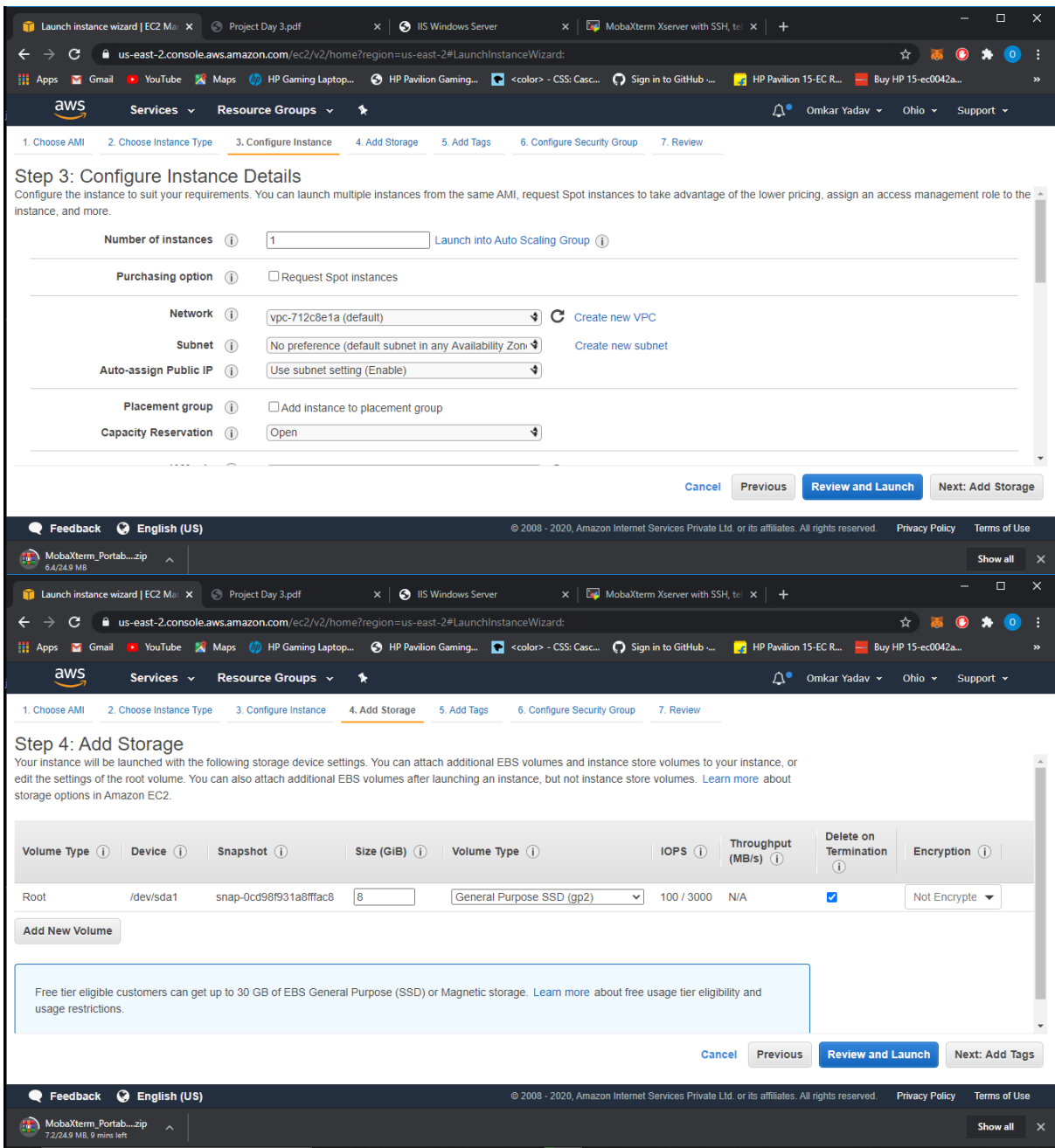
Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes

Cancel Previous **Review and Launch** Next: Configure Instance Details



The screenshot shows the AWS Management Console's 'Launch instance wizard' for an EC2 instance. The user is on the '5. Add Tags' step. The wizard progress bar shows steps 1 through 7, with '5. Add Tags' currently selected. The page title is 'Step 5: Add Tags'. Below the title, there is a brief explanation of tags and a link to learn more. The main area contains a table for adding tags. The table has columns for 'Key', 'Value', 'Instances', and 'Volumes'. A single tag is added with the key 'Name' and the value 'Ubuntu'. Below the table, there is a button to 'Add another tag' and a note that up to 50 tags are maximum. At the bottom of the wizard, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Configure Security Group'. The bottom of the screenshot shows the 'Step 6: Configure Security Group' section, which is partially visible. It includes options to 'Create a new security group' or 'Select an existing security group', and a table for configuring security group rules. The 'Create a new security group' option is selected, and the security group name is 'launch-wizard-2'. The description is 'launch-wizard-2 created 2020-08-21T22:59:01Z+05:30'. The table for rules has columns for 'Type', 'Protocol', 'Port Range', 'Source', and 'Description'. A single rule is added with 'All traffic' type, 'All' protocol, '0 - 65535' port range, 'Anywhere' source, and '0.0.0.0/0, ::0' destination. The description is 'e.g. SSH for Admin Desktop'. At the bottom of the wizard, there are buttons for 'Cancel', 'Previous', 'Review and Launch', and 'Next: Configure Security Group'.

Launch instance wizard | EC2 M... x Project Day 3.pdf x IIS Windows Server x MobaXterm Xserver with SSH, tel... x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.
A copy of a tag can be applied to volumes, instances or both.
Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key	Value	Instances	Volumes
Name	Ubuntu	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add another tag (Up to 50 tags maximum)

Cancel Previous Review and Launch Next: Configure Security Group

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MobaXterm_Portab...zip 7.9/24.9 MB Show all x

Launch instance wizard | EC2 M... x Project Day 3.pdf x IIS Windows Server x MobaXterm Xserver with SSH, tel... x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

aws Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

A security group is a set of firewall 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 want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group ☐ Select an existing security group

Security group name: launch-wizard-2

Description: launch-wizard-2 created 2020-08-21T22:59:01Z+05:30

Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Anywhere 0.0.0.0/0, ::0	e.g. SSH for Admin Desktop

Add Rule

Cancel Previous Review and Launch

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MobaXterm_Portab...zip 7.9/24.9 MB, 3 hours left Show all x

Launch instance wizard | EC2 M... x Project Day 3.pdf x IIS Windows Server x MobaXterm Xserver with SSH, tel... x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-0bbe28eb2173f6167

Free tier eligible Ubuntu Server 18.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).
Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

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

Security Groups [Edit security groups](#)

[Cancel](#) [Previous](#) [Launch](#)

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Launch instance wizard | EC2 M... x Project Day 3.pdf x IIS Windows Server x MobaXterm Xserver with SSH, tel... x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

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AMI Details [Edit AMI](#)

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Instance Type [Edit instance type](#)

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t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups [Edit security groups](#)

[Cancel](#) [Previous](#) [Launch](#)

Select an existing key pair or create a new key pair

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

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

Choose an existing key pair

Select a key pair

OmkarLetsUpgrade

☒ I acknowledge that I have access to the selected private key file (OmkarLetsUpgrade.pem), and that without this file, I won't be able to log into my instance.

[Cancel](#) [Launch Instances](#)

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Launch instance wizard | EC2 M... x Project Day 3.pdf x IIS Windows Server x MobaXterm Xserver with SSH, tel... x +

us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#LaunchInstanceWizard:

Services Resource Groups

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Launch Status

✓ Your instances are now launching

The following instance launches have been initiated: [i-03befd4b0f65f1429](#) [Hide launch log](#)

Creating security groups	Successful (sg-018b21367022b6532)
Authorizing inbound rules	Successful
Initiating launches	Successful
Launch initiation complete	

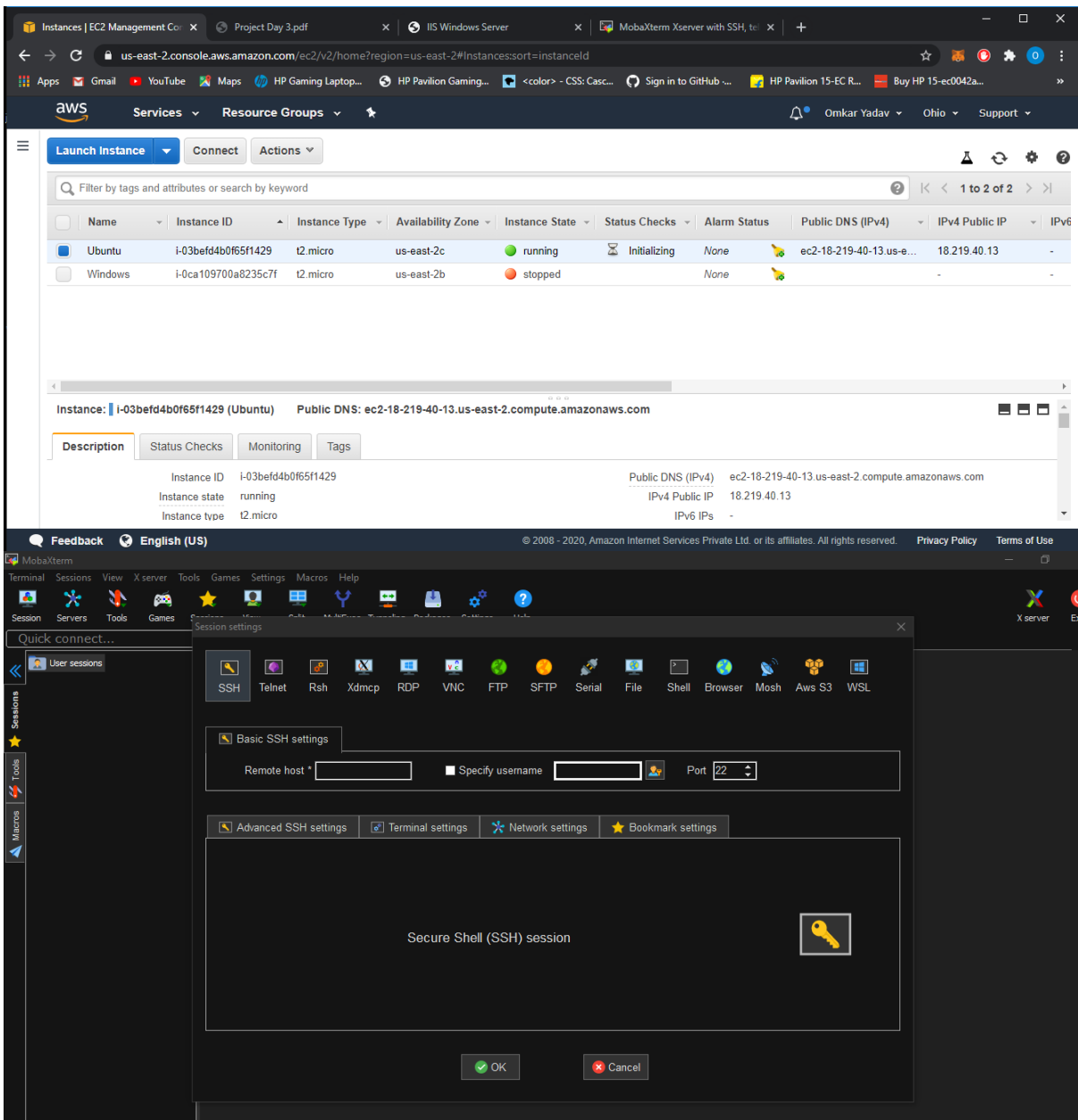
i Get notified of estimated charges

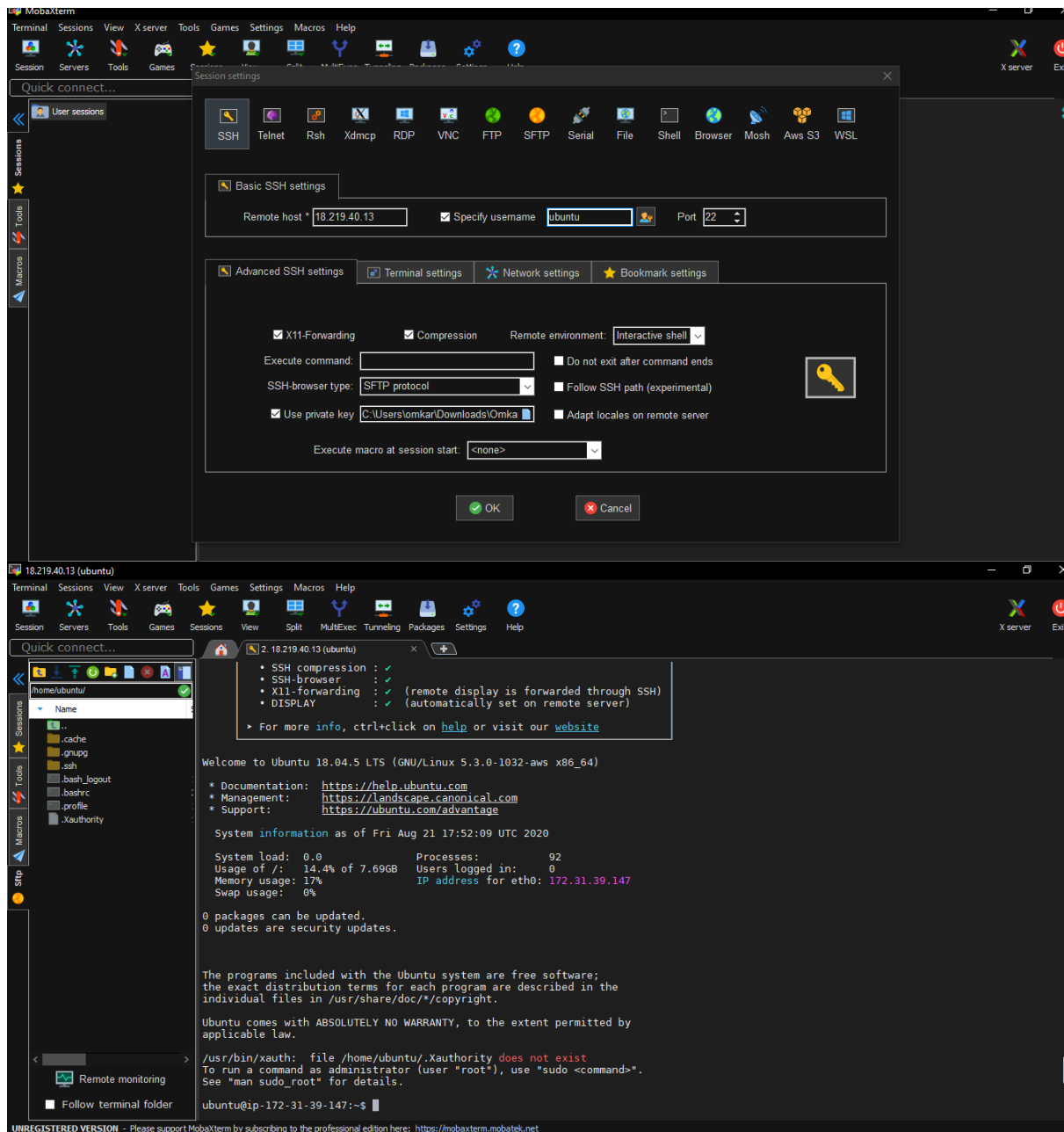
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).

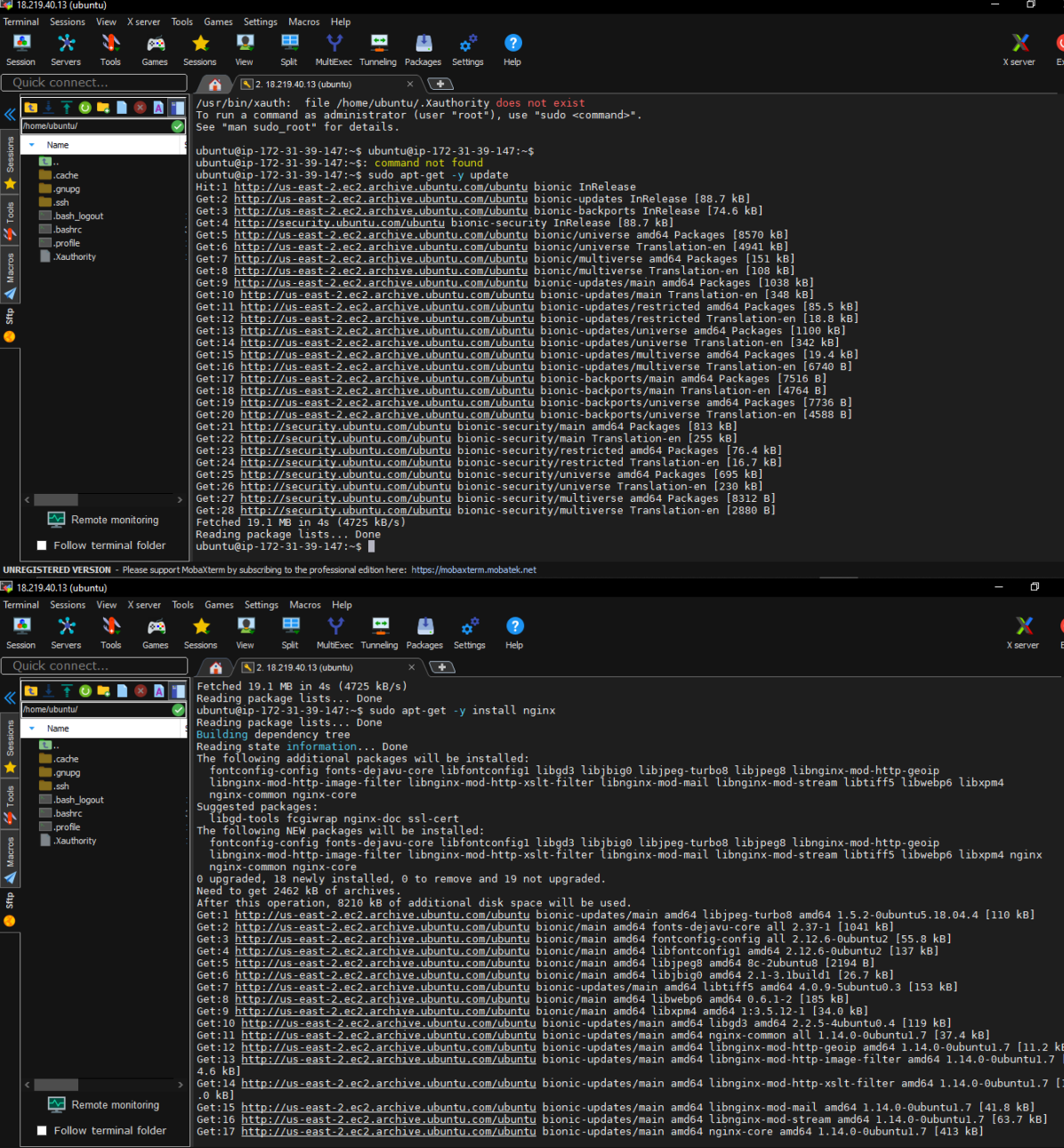
How to connect to your instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.

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```
18.219.40.13 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...
2. 18.219.40.13 (ubuntu)
home/ubuntu

Name
...
.cache
.gnupg
.ssh
.bash_logout
.bashrc
.profile
.xauthority

Remote monitoring
Follow terminal folder

/usr/bin/xauth: file /home/ubuntu/.Xauthority does not exist
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-39-147:~$ ubuntu@ip-172-31-39-147:~$
ubuntu@ip-172-31-39-147:~$ command not found
ubuntu@ip-172-31-39-147:~$ sudo apt-get -y update
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:4 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8570 kB]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/universe Translation-en [4941 kB]
Get:7 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [151 kB]
Get:8 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/multiverse Translation-en [108 kB]
Get:9 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [1038 kB]
Get:10 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main Translation-en [348 kB]
Get:11 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/restricted amd64 Packages [85.5 kB]
Get:12 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/restricted Translation-en [18.8 kB]
Get:13 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 Packages [1100 kB]
Get:14 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/universe Translation-en [342 kB]
Get:15 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 Packages [19.4 kB]
Get:16 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/multiverse Translation-en [6740 B]
Get:17 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/main amd64 Packages [7516 B]
Get:18 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/main Translation-en [4764 B]
Get:19 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 Packages [7736 B]
Get:20 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe Translation-en [4588 B]
Get:21 http://security.ubuntu.com/ubuntu bionic-security/main amd64 Packages [813 kB]
Get:22 http://security.ubuntu.com/ubuntu bionic-security/main Translation-en [255 kB]
Get:23 http://security.ubuntu.com/ubuntu bionic-security/restricted amd64 Packages [76.4 kB]
Get:24 http://security.ubuntu.com/ubuntu bionic-security/restricted Translation-en [16.7 kB]
Get:25 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 Packages [695 kB]
Get:26 http://security.ubuntu.com/ubuntu bionic-security/universe Translation-en [230 kB]
Get:27 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 Packages [8312 B]
Get:28 http://security.ubuntu.com/ubuntu bionic-security/multiverse Translation-en [2880 B]
Fetched 19.1 MB in 4s (4725 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-39-147:~$

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18.219.40.13 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...
2. 18.219.40.13 (ubuntu)
home/ubuntu

Name
...
.cache
.gnupg
.ssh
.bash_logout
.bashrc
.profile
.xauthority

Remote monitoring
Follow terminal folder

Fetched 19.1 MB in 4s (4725 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-39-147:~$ sudo apt-get -y install nginx
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
fontconfig-config fonts-dejavu-core libfontconfig1 libgd3 libjpeg8 libjpeg-turbo8 libjpeg8 amd64 libnginx-mod-http-geoip
libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5 libwebp6 libxpm4
nginx-common nginx-core
Suggested packages:
libgd-tools fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
fontconfig-config fonts-dejavu-core libfontconfig1 libgd3 libjpeg8 libjpeg-turbo8 libjpeg8 amd64 libnginx-mod-http-geoip
libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5 libwebp6 libxpm4 nginx
nginx-common nginx-core
0 upgraded, 18 newly installed, 0 to remove and 19 not upgraded.
Need to get 2462 kB of archives.
After this operation, 8210 kB of additional disk space will be used.
Get:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libjpeg-turbo8 amd64 1.5.2-0ubuntu5.18.04.4 [110 kB]
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 fonts-dejavu-core all 2.37-1 [1041 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 fontconfig-config all 2.12.6-0ubuntu2 [55.8 kB]
Get:4 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libfontconfig1 amd64 2.12.6-0ubuntu2 [137 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libjpeg8 amd64 8c-2ubuntu8 [2194 B]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libgd3 amd64 2.1.3-1build1 [26.7 kB]
Get:7 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libtiff5 amd64 4.0.9-5ubuntu0.3 [153 kB]
Get:8 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libwebp6 amd64 0.6.1-2 [185 kB]
Get:9 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libxpm4 amd64 1:3.5.12-1 [34.0 kB]
Get:10 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libgd3 amd64 2.2.5-4ubuntu0.4 [119 kB]
Get:11 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nginx-common all 1.14.0-0ubuntu1.7 [37.4 kB]
Get:12 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-http-geoip amd64 1.14.0-0ubuntu1.7 [11.2 kB]
Get:13 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-http-image-filter amd64 1.14.0-0ubuntu1.7 [4.6 kB]
Get:14 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-http-xslt-filter amd64 1.14.0-0ubuntu1.7 [1.0 kB]
Get:15 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-mail amd64 1.14.0-0ubuntu1.7 [41.8 kB]
Get:16 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-stream amd64 1.14.0-0ubuntu1.7 [63.7 kB]
Get:17 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nginx-core amd64 1.14.0-0ubuntu1.7 [413 kB]
```

The image shows a browser window with the AWS Management Console. The top navigation bar includes the AWS logo, 'Services', 'Resource Groups', and a user profile for 'Omkar Yadav'. The main content area displays a list of EC2 instances. Below this, the 'Description' tab for a specific Ubuntu instance is open, showing details like Instance ID, state, type, and DNS information. The bottom part of the image shows a separate browser window displaying the 'Welcome to nginx!' page, indicating that the nginx web server is successfully installed and running on the instance.

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

