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## Big Data Analytics



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# AWS Cloud Tutorial

## EC2 Instance

TERBUKA  
UNTUK  
DISABILITAS

BREAK  
FOR  
LINKS!





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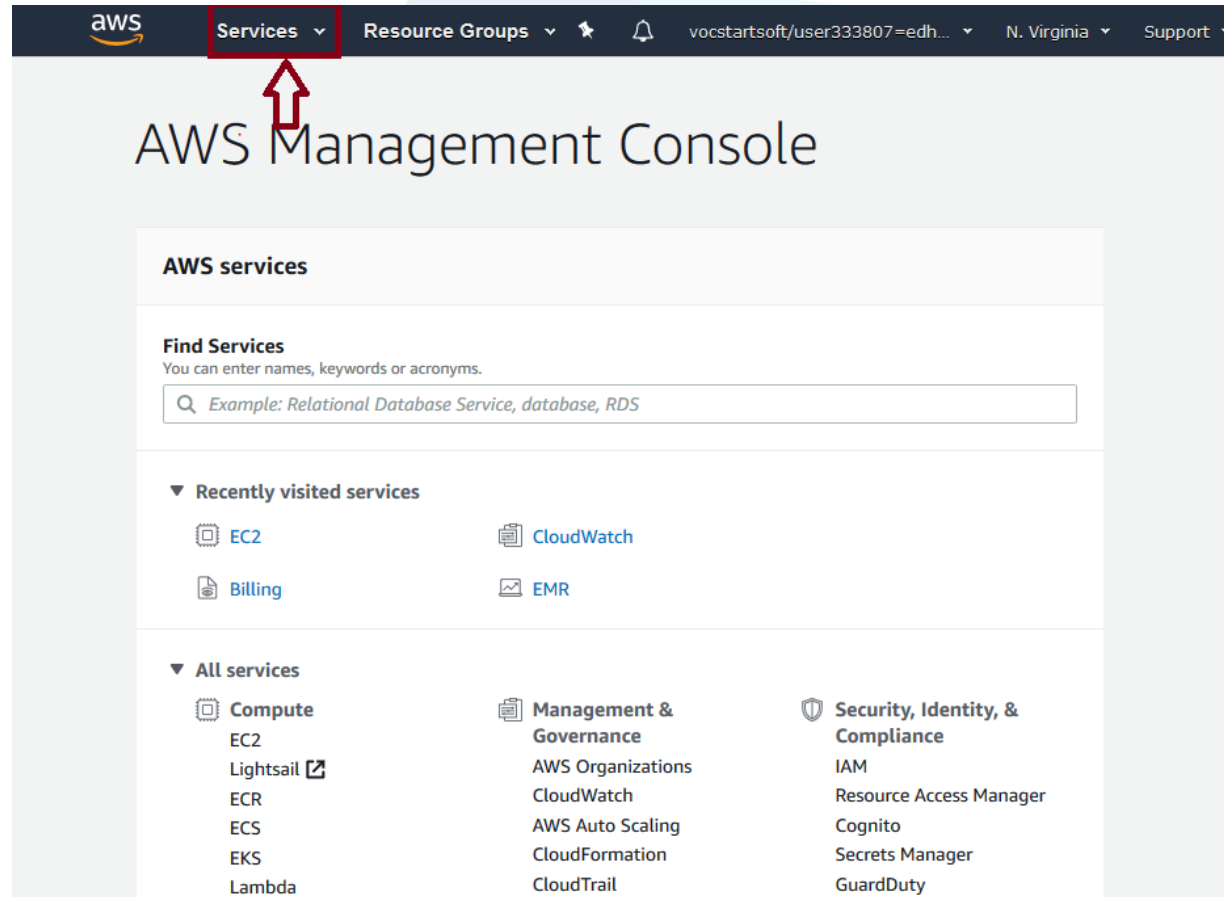
# Pembuatan Instance EC2 AWS

Big Data  
EC2 AWS



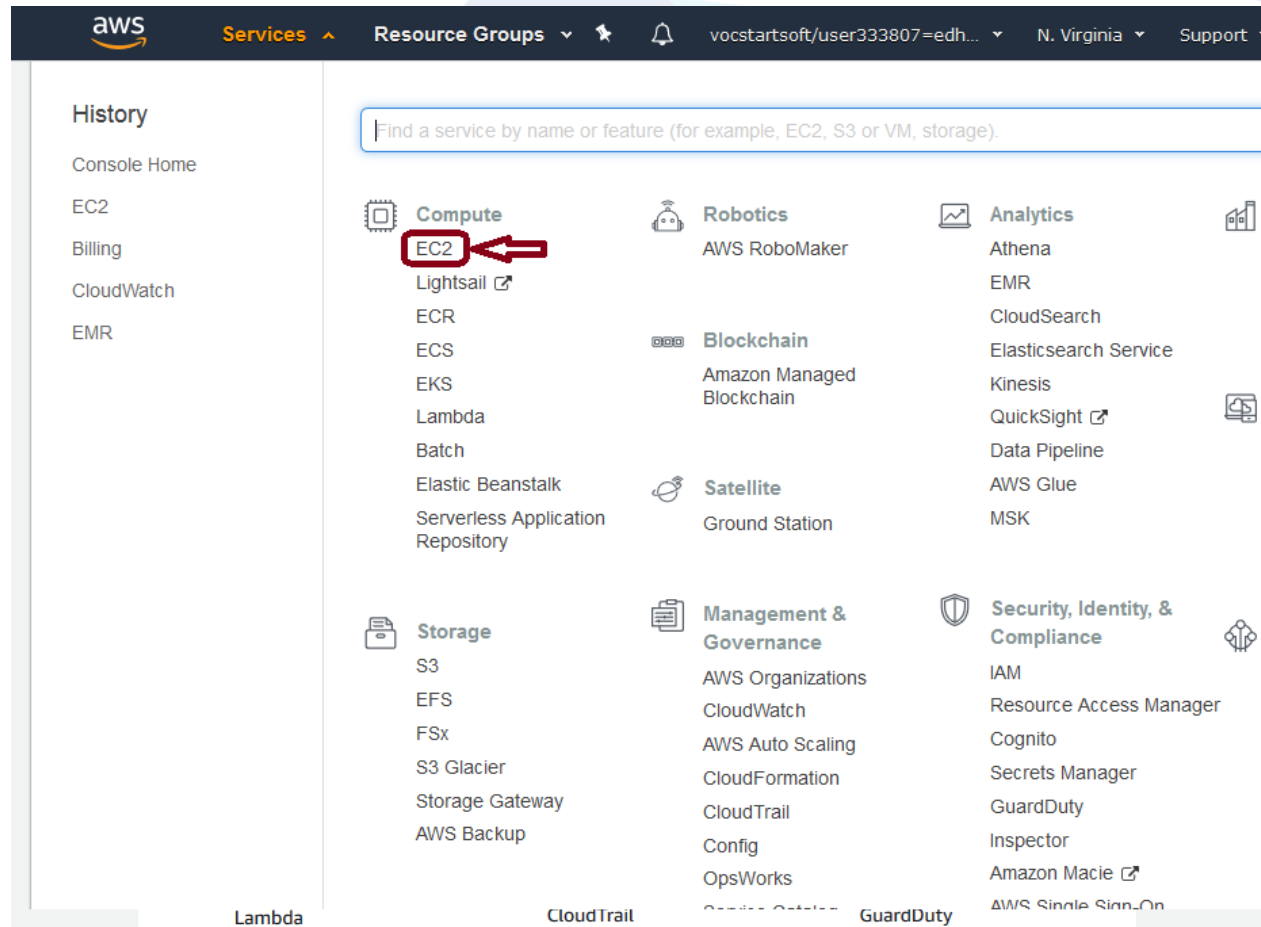
# Pilih Menu Service

- Pilih Menu Service Pada AWS Console



# Pilih EC2 Service

- Pilih EC2 service pada Bagian Compute



# Pilih Menu Instance

- Pilih Menu Instance Pada Instances

**EC2 Dashboard**

- Events
- Tags
- Reports
- Limits
- INSTANCES**
  - Instances**
  - Launch Templates
  - Spot Requests
  - Reserved Instances
  - Dedicated Hosts
  - Scheduled Instances
  - Capacity Reservations
- IMAGES
  - AMIs
  - Bundle Tasks
- ELASTIC BLOCK STORE
  - Volumes
  - Snapshots
  - Lifecycle Manager

**Resources**

You are using the following Amazon EC2 resources in the US East (N. Virginia) region:

0 Running Instances	0 Elastic IPs
0 Dedicated Hosts	2 Snapshots
0 Volumes	0 Load Balancers
2 Key Pairs	2 Security Groups
0 Placement Groups	

[Learn more about the latest in AWS Compute from AWS re:Invent by viewing the EC2 Videos.](#)

**Create Instance**

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

[Launch Instance](#)

Note: Your instances will launch in the US East (N. Virginia) region

**Service Health**

**Service Status:**

US East (N. Virginia): ✔

**Scheduled Events**

**Scheduled Events:**

US East (N. Virginia): No events

**Account Attributes**

**Supported Platforms**

VPC

**Default VPC**

vpc-07086a7d

**Resource ID length management**

Console experiments

**Settings**

**Additional Information**

[Getting Started Guide](#)

[Documentation](#)

[All EC2 Resources](#)

[Forums](#)

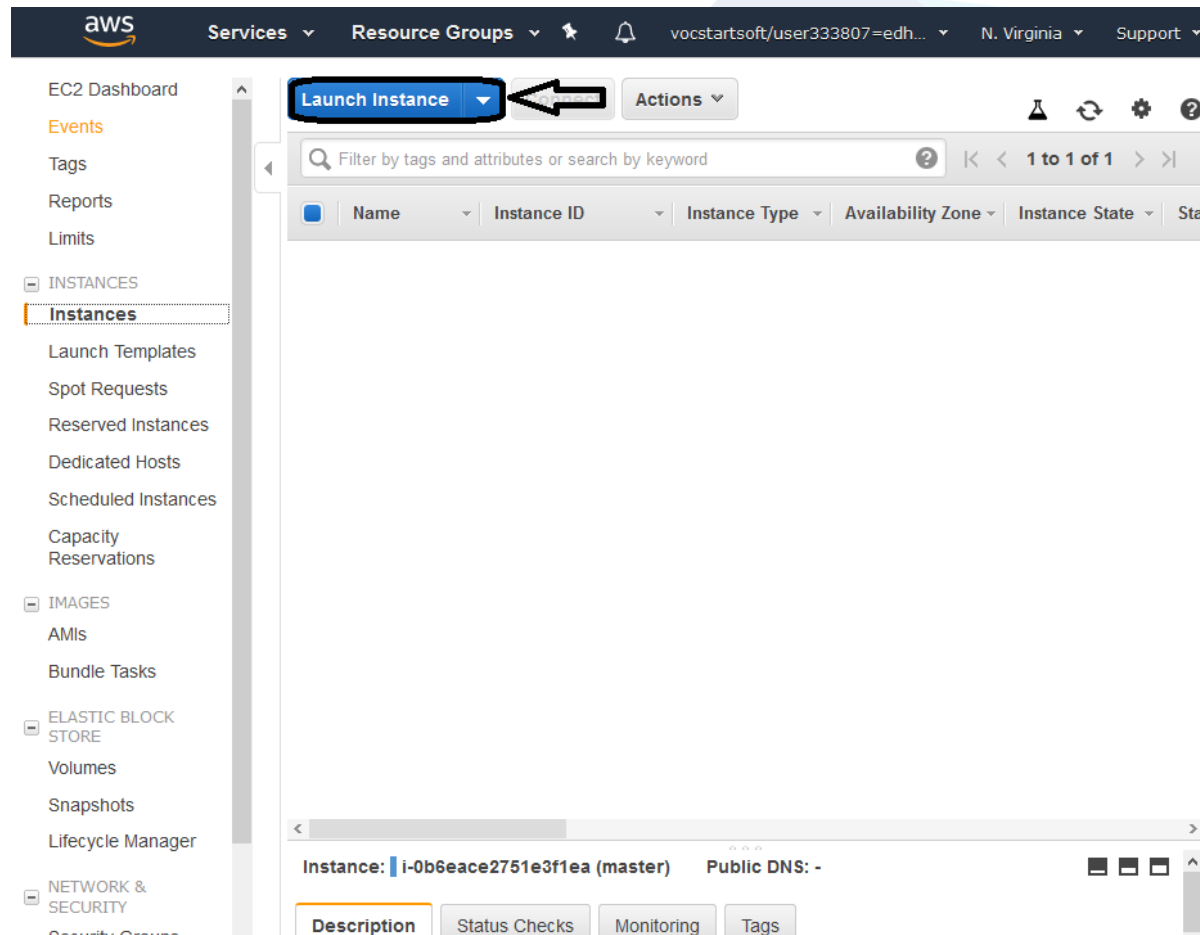
[Pricing](#)

[Contact Us](#)

**AWS Marketplace**

Find free software trial products in the AWS Marketplace from the [EC2 Launch Menu](#).

# Pilih Launch Instance



The screenshot shows the AWS Management Console interface. The left-hand navigation pane is expanded, showing the 'INSTANCES' section with 'Instances' selected. The main content area displays the 'Launch Instance' button, which is highlighted with a black box and a white arrow pointing to it. Below the button, there is a search bar and a table with columns: Name, Instance ID, Instance Type, Availability Zone, Instance State, and Status. The table is currently empty. At the bottom of the console, the instance ID 'i-0b6eace2751e3f1ea (master)' and the public DNS are visible.



# Pilih OS

- Pilih OS yang anda inginkan (Dalam Tutorial ini Ubuntu Server 16.04 LTS)

aws Services Resource Groups vocstartsoft/User333807=edh... N. Virginia Support

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

Step 1: Choose an Amazon Machine Image (AMI) Cancel and Exit

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

Search: Ubuntu

Quick Start (7)

- My AMIs (0)
- AWS Marketplace (232)
- Community AMIs (34369)
- ☐ Free tier only ⓘ

AMI ID	AMI Name	Architecture	Root Device Type	Virtualization Type	ENA Enabled	Action
ami-024a64a6685d05041 (64-bit x86) / ami-01ac7d9c1179d7b74 (64-bit Arm)	Ubuntu Server 18.04 LTS (HVM), SSD Volume Type -	64-bit (x86) / 64-bit (Arm)	ebs	hvm	Yes	Select
ami-07b4156579ea1d7ba (64-bit x86) / ami-036ede09922dad9b (64-bit Arm)	Ubuntu Server 16.04 LTS (HVM), SSD Volume Type -	64-bit (x86) / 64-bit (Arm)	ebs	hvm	Yes	Select
ami-0757fc5a639fe7666	Deep Learning AMI (Ubuntu) Version 23.1 -	64-bit (x86)	ebs	hvm	Yes	Select



# Pilih Instance Type

- Pilih Instance Type yang diinginkan (dalam tutorial ini adalah t2.micro)

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
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate
<input checked="" type="checkbox"/>	General purpose	t2.micro <small>Free tier eligible</small>	1	1	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate
<input type="checkbox"/>	General purpose	t3a.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit
<input type="checkbox"/>	General purpose	t3a.micro	2	1	EBS only	Yes	Up to 5 Gigabit
<input type="checkbox"/>	General purpose	t3a.small	2	2	EBS only	Yes	Up to 5 Gigabit
<input type="checkbox"/>	General purpose	t3a.medium	2	4	EBS only	Yes	Up to 5 Gigabit

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

# Konfigurasi Instance

- Konfigurasi Instance sesuai kebutuhan (dalam tutorial ini adalah konfigurasi default)

## Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances	1	<a href="#">Launch into Auto Scaling Group</a>
Purchasing option	<input type="checkbox"/> Request Spot instances	
Network	vpc-07086a7d (default)	<a href="#">Create new VPC</a>
Subnet	No preference (default subnet in any Availability Zone)	<a href="#">Create new subnet</a>
Auto-assign Public IP	Use subnet setting (Enable)	
Placement group	<input type="checkbox"/> Add instance to placement group	
Capacity Reservation	Open	<a href="#">Create new Capacity Reservation</a>
IAM role	None	<a href="#">Create new IAM role</a>
Shutdown behavior	Stop	
Enable termination protection	<input type="checkbox"/> Protect against accidental termination	
Monitoring	<input type="checkbox"/> Enable CloudWatch detailed monitoring <a href="#">Additional charges apply.</a>	
Tenancy	Shared - Run a shared hardware instance <a href="#">Additional charges will apply for dedicated tenancy.</a>	
Elastic Inference	<input type="checkbox"/> Add an Elastic Inference accelerator <a href="#">Additional charges apply.</a>	
T2/T3 Unlimited	<input type="checkbox"/> Enable <a href="#">Additional charges may apply.</a>	

[Cancel](#)
[Previous](#)
[Review and Launch](#)
[Next: Add Storage](#)



# Menambahkan Storage

- Tambahkan storage sesuai kebutuhan (dalam tutorial ini adalah konfigurasi default)

## Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type <sup>i</sup>	Device <sup>i</sup>	Snapshot <sup>i</sup>	Size (GiB) <sup>i</sup>	Volume Type <sup>i</sup>	IOPS <sup>i</sup>	Throughput (MB/s) <sup>i</sup>	Delete on Termination <sup>i</sup>	Enc
Root	/dev/sda1	snap-0e384451033d3767e	8	General Purpose <sup>5</sup>	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

< \_\_\_\_\_ >

Cancel Previous **Review and Launch** **Next: Add Tags**



# Menambahkan Tag

- Tambahkan Tag (dalam tutorial ini tidak ditambahkan)

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 (128 characters maximum)	Value (256 characters maximum)	Instances ⓘ	Volumes ⓘ
This resource currently has no tags			
Choose the Add tag button or <a href="#">click to add a Name tag</a> . Make sure your <a href="#">IAM policy</a> includes permissions to create tags.			

[Add Tag](#) (Up to 50 tags maximum)

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Configure Security Group](#)



# Konfigurasi Security Group

- Konfigurasi sesuai kebutuhan.

- Open port (Hadoop):

- 8020
- 50010
- 50020
- 9000

- (Spark):

- 7077
- 8080

## 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:

Description:

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ	Description ⓘ
SSH ▾	TCP	22	Custom ▾ 0.0.0.0/0	e.g. SSH for Admi
Add Rule				



### Warning

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.



# Review Instance

- Review Instance anda dan re-konfigurasi sesuai kebutuhan

## Step 7: Review Instance Launch

access from known IP addresses only.

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

### AMI Details

[Edit AMI](#)



Ubuntu Server 16.04 LTS (HVM), SSD Volume Type - ami-07b4156579ea1d7ba

Free tier  
eligible

Ubuntu Server 16.04 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](#)

Security group name

launch-wizard-1

Description

launch-wizard-1 created 2019-06-26T18:38:22.118+07:00

Type <a href="#">i</a>	Protocol <a href="#">i</a>	Port Range <a href="#">i</a>	Source <a href="#">i</a>	Description <a href="#">i</a>
SSH	TCP	22	0.0.0.0/0	

### Instance Details

[Edit instance details](#)

### Storage

[Edit storage](#)

### Tags

[Edit tags](#)

[Cancel](#)

[Previous](#)

[Launch](#)



# Key Pair

- Buat dan unduh private key untuk mengakses instance


**Select an existing key pair or create a new key pair** ×


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

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

**Create a new key pair** ▼

**Key pair name**  
digitalent

 **Download Key Pair**

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

**Cancel** **Launch Instances**



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# Launch Instance

### Select an existing key pair or create a new key pair

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

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

Create a new key pair

**Key pair name**  
digitalent

Download Key Pair

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

Cancel

Launch Instances







# View Instance

## Launch Status



### Your instances are now launching

The following instance launches have been initiated: [i-0f0471df57f30de5f](#) [View launch log](#)



### 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.

Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

### ▼ Here are some helpful resources to get you started

- [How to connect to your Linux instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

[Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)

[Create and attach additional EBS volumes](#) (Additional charges may apply)

[Manage security groups](#)

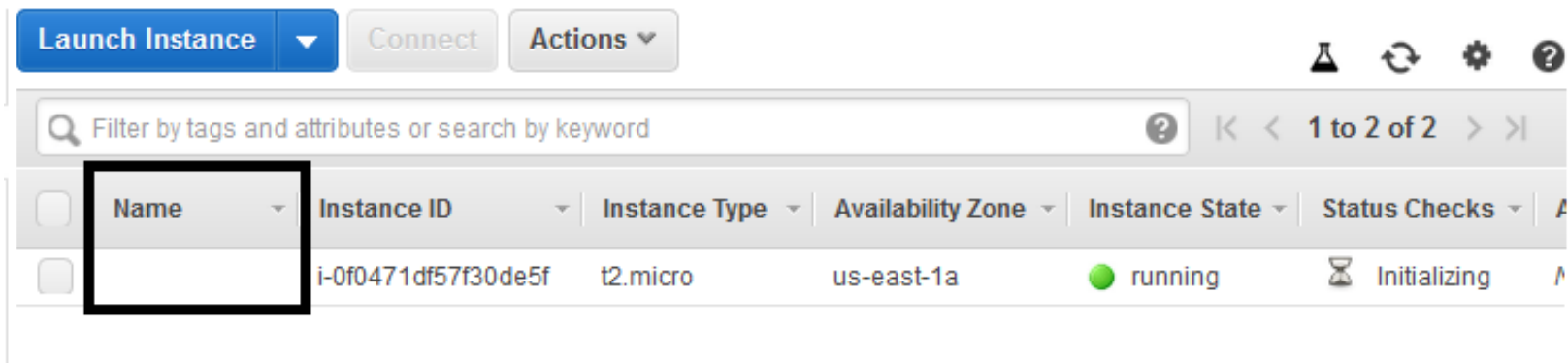


[View Instances](#)



# Pilih Menu Service

- Beri nama instance anda



Launch Instance ▾ Connect Actions ▾

Filter by tags and attributes or search by keyword ? < 1 to 2 of 2 >

<input type="checkbox"/>	Name ▾	Instance ID ▾	Instance Type ▾	Availability Zone ▾	Instance State ▾	Status Checks ▾	A
<input type="checkbox"/>		i-0f0471df57f30de5f	t2.micro	us-east-1a	● running	⌚ Initializing	A

TERBUKA  
UNTUK  
DISABILITAS

BREAK  
YOUR



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# Akses EC2 Instance

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EC2 AWS

TERBUKA  
UNTUK  
DISABILITAS

BREAK



# Requirement

- Windows
  - Putty : <https://www.putty.org/>
  - WinSCP : <https://winscp.net/eng/download.php>
  - Pirant lunak lainnya.
- Linux
  - SSH Client.





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# Akses EC2 Instance (Konversi Key)

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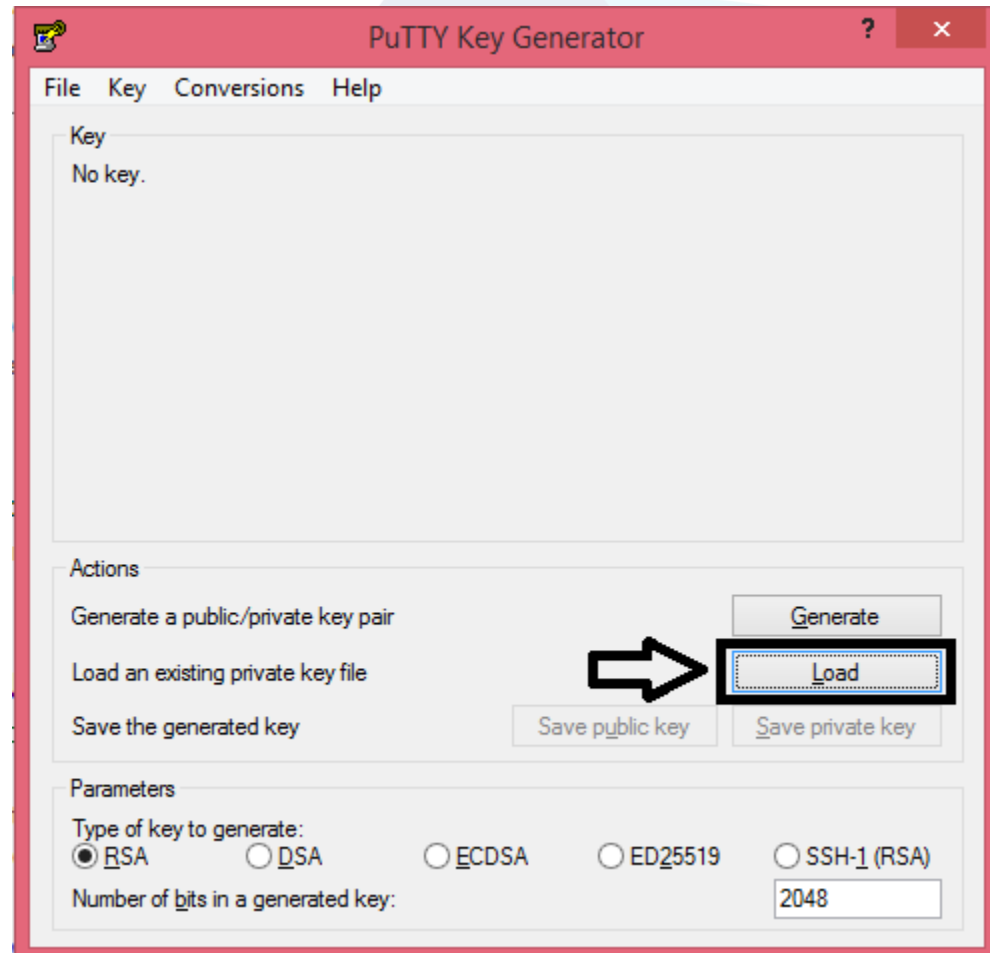
TERBUKA  
UNTUK  
DISABILITAS

BEYOND  
YOUR  
LIMITS



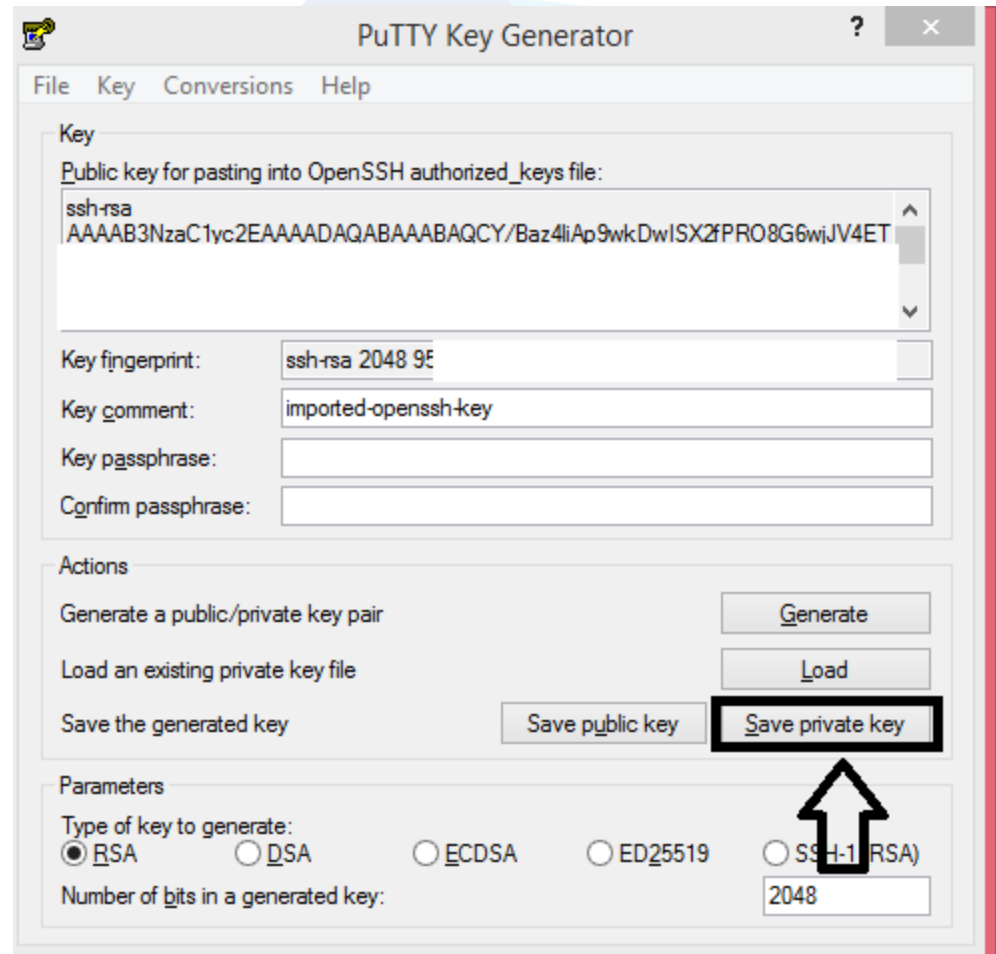
# Konversi Key (PuttyGen)

- Load .pem key yang diunduh sebelumnya.



# Konversi Key (PuttyGen)

- Simpan .ppk key.





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# Akses EC2 Instance (Putty)

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UNTUK  
DISABILITAS

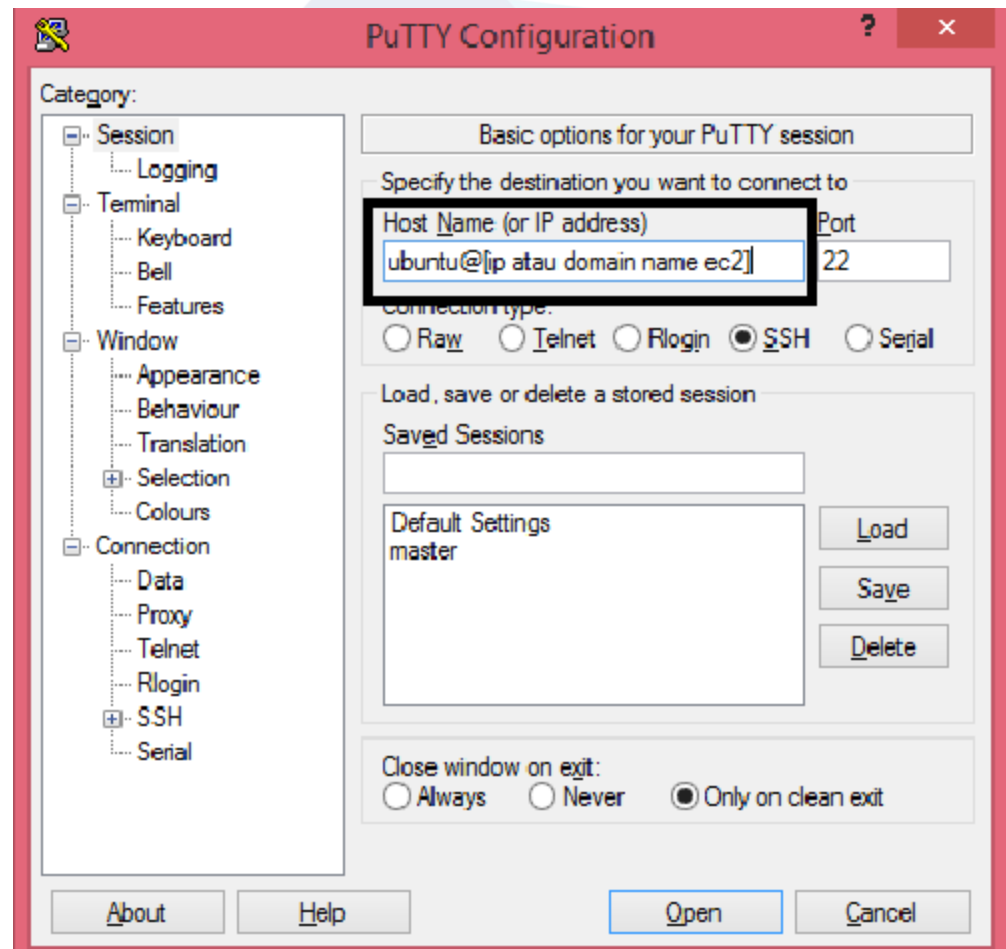
BEYOND  
YOUR  
LIMITS!





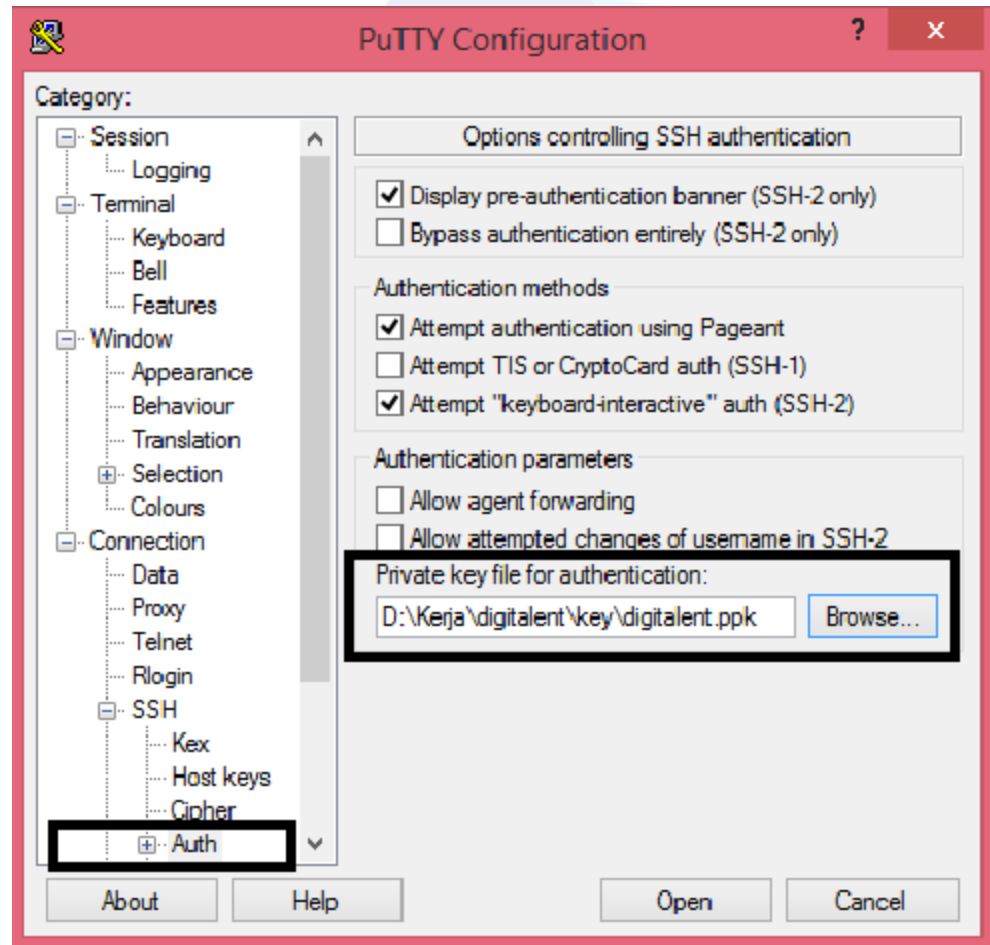
# Akses EC2 (Putty)

- Masukkan Hostname atau IP



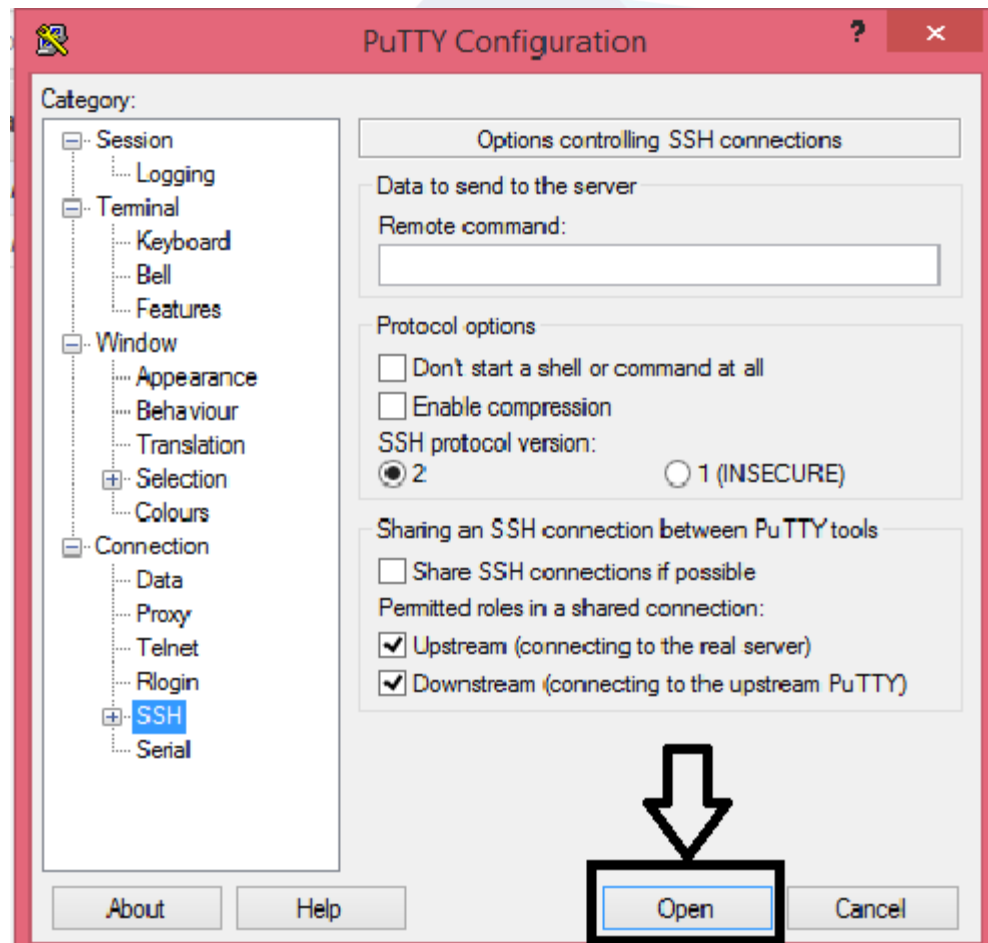
# Akses EC2 (Putty)

- Pada category SSH/Auth masukkan .ppk key.



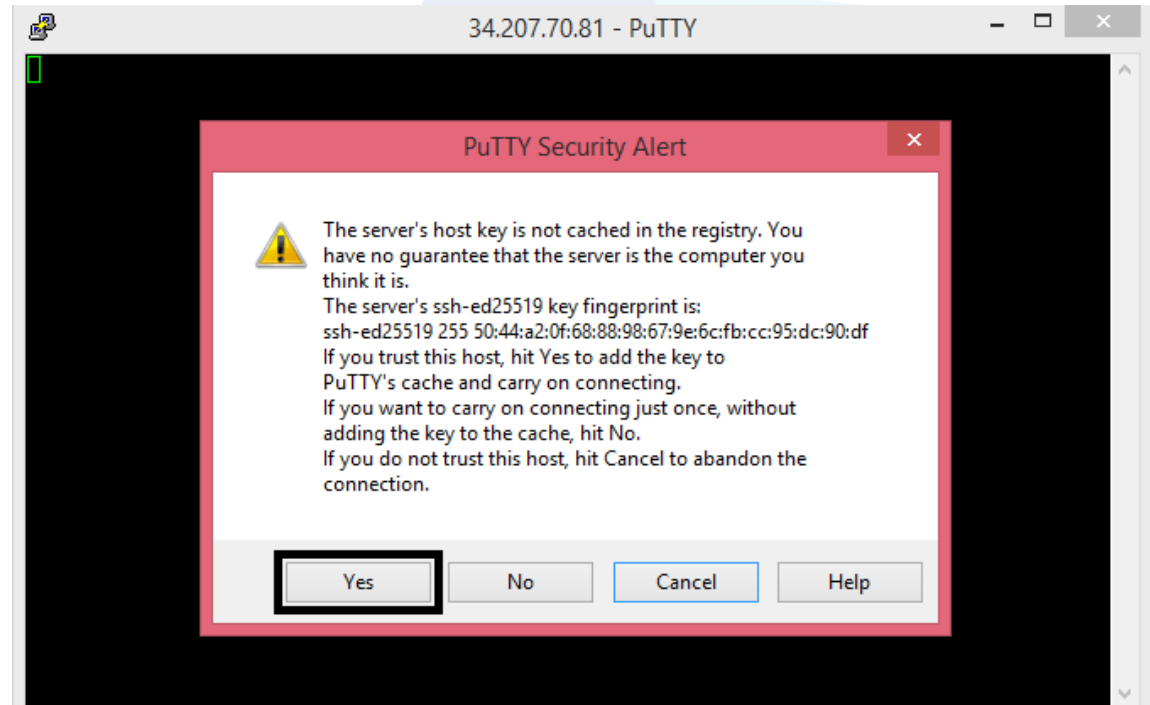
# Akses EC2 (Putty)

- Klik pada button open.



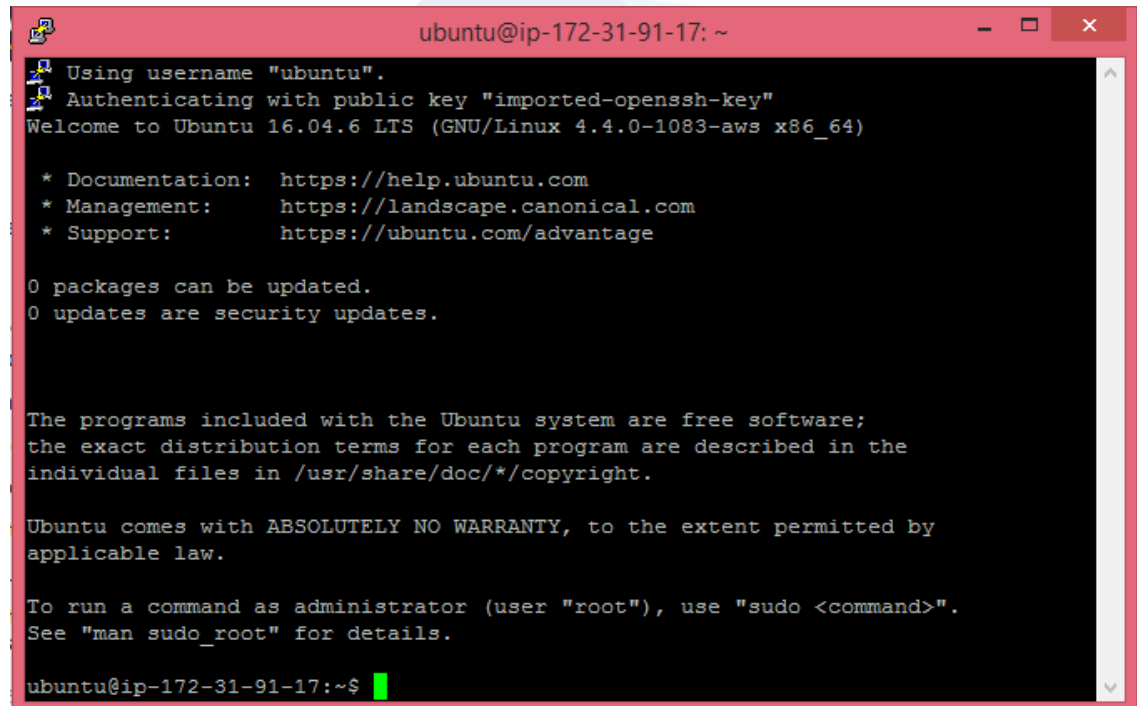
# Akses EC2 (Putty)

- Klik button Yes.



# Akses EC2 (Putty)

- Koneksi Terbuka ke EC2 Instance.



```
ubuntu@ip-172-31-91-17: ~  
Using username "ubuntu".  
Authenticating with public key "imported-openssh-key"  
Welcome to Ubuntu 16.04.6 LTS (GNU/Linux 4.4.0-1083-aws x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
0 packages can be updated.  
0 updates are security updates.  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
ubuntu@ip-172-31-91-17:~$
```



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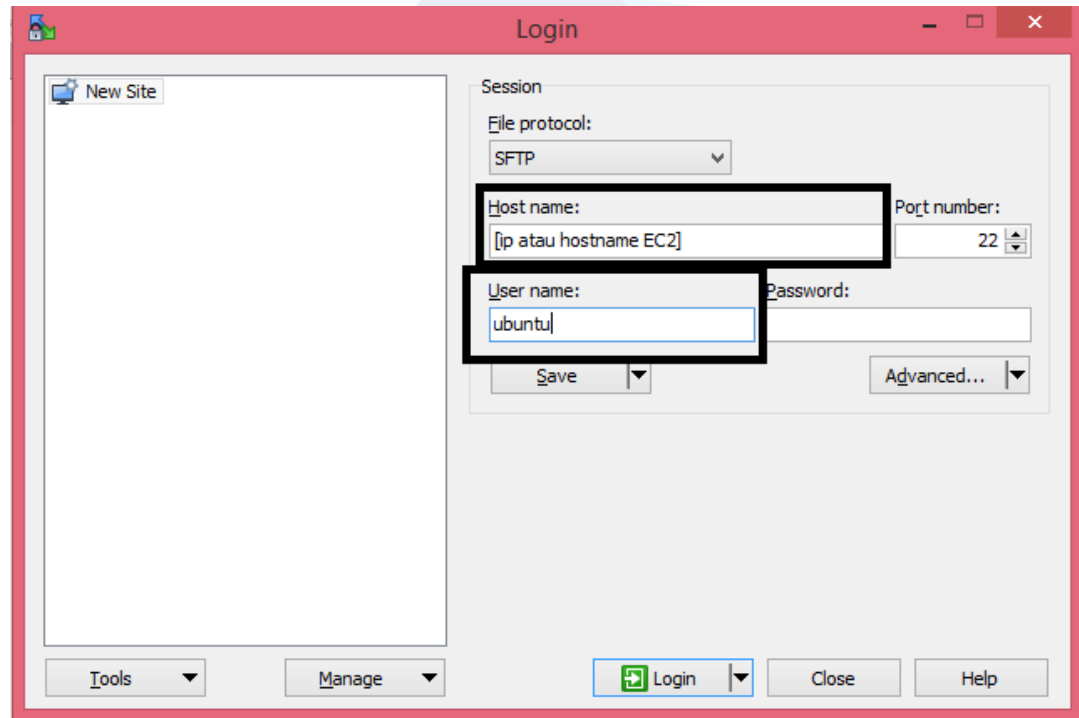
# Akses EC2 Instance (WinSCP)

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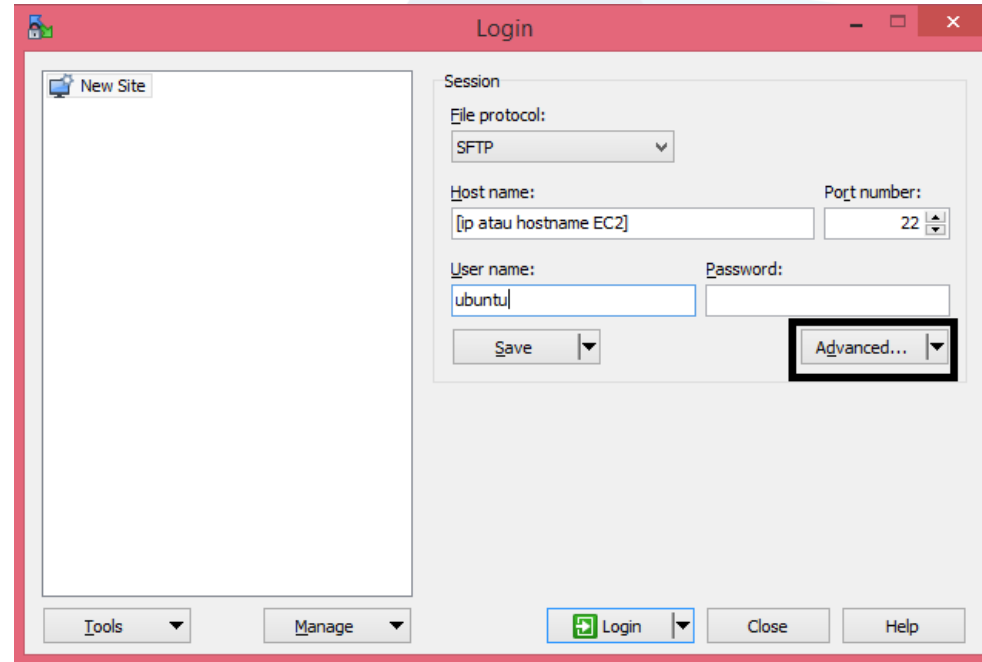
# Akses EC2 (WinSCP)

- Masukkan HostName dan Username.



# Akses EC2 (WinSCP)

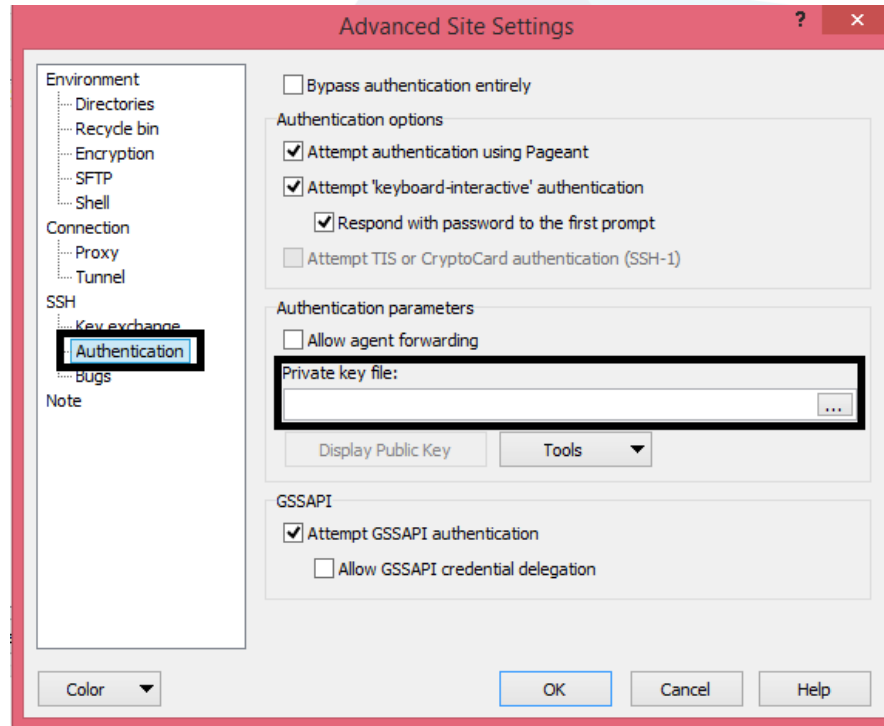
- Pilih menu Advanced.





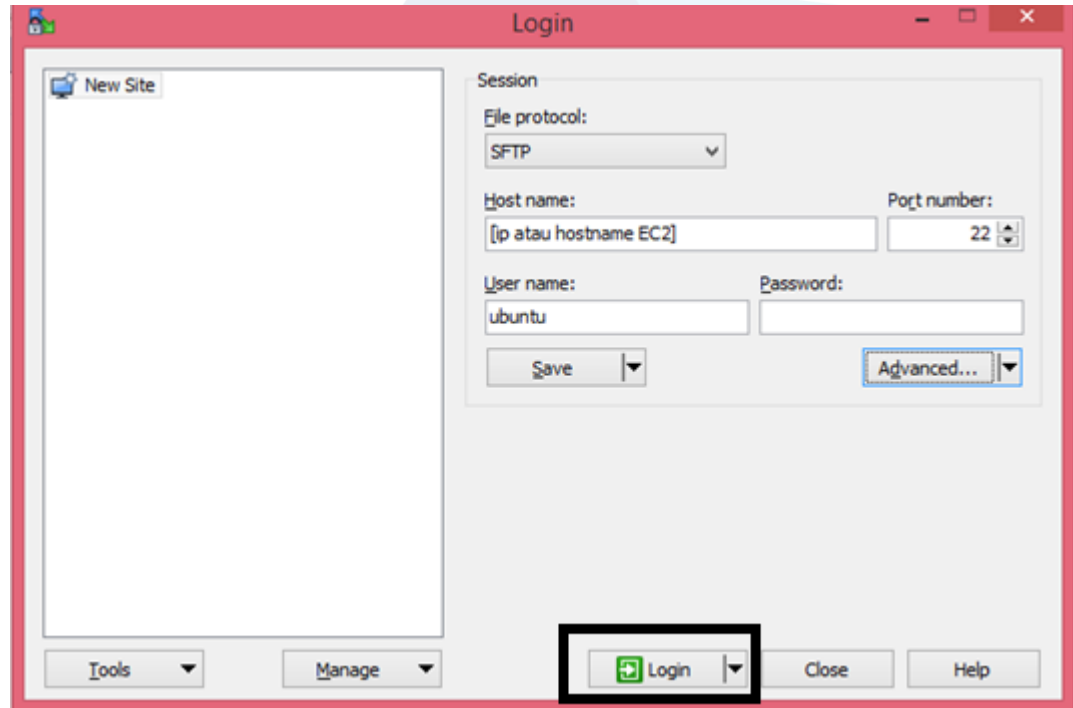
# Akses EC2 (WinSCP)

- Pada kategori SSH/Auth..., masukkan .ppk key



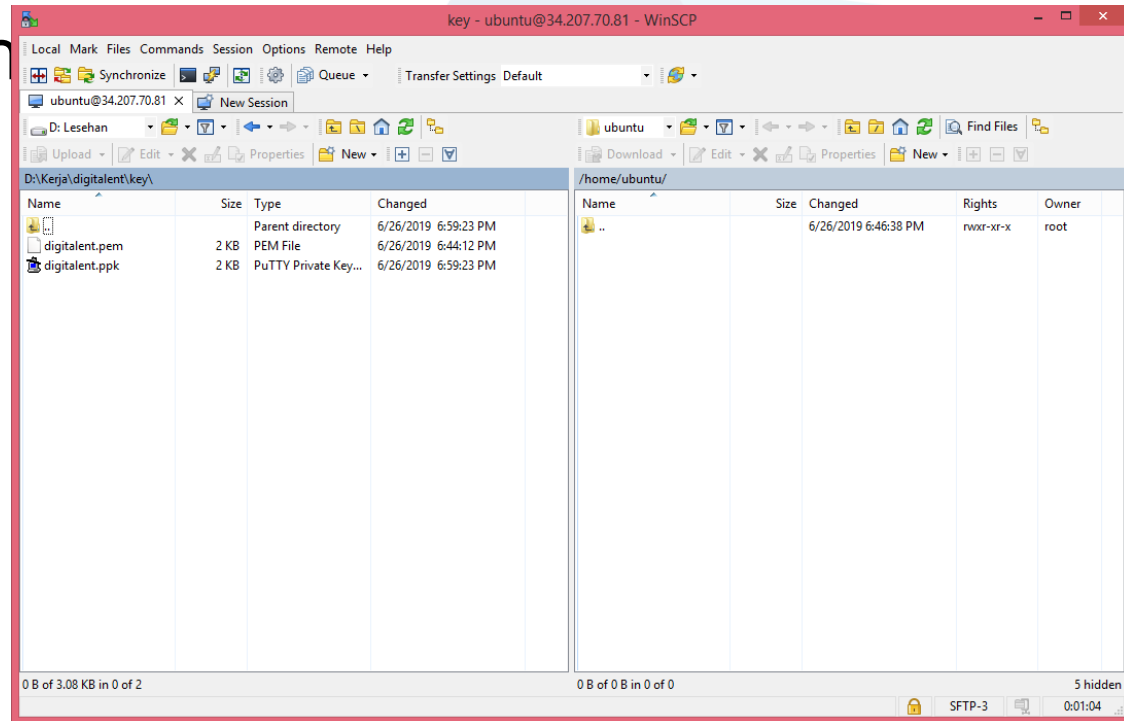
# Akses EC2 (WinSCP)

- Klik button login.



# Akses EC2 (WinSCP)

- Koneksi telah terbentuk.





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Jakarta Pusat, 10110

