Assignment #01

Sep, 11, 2018

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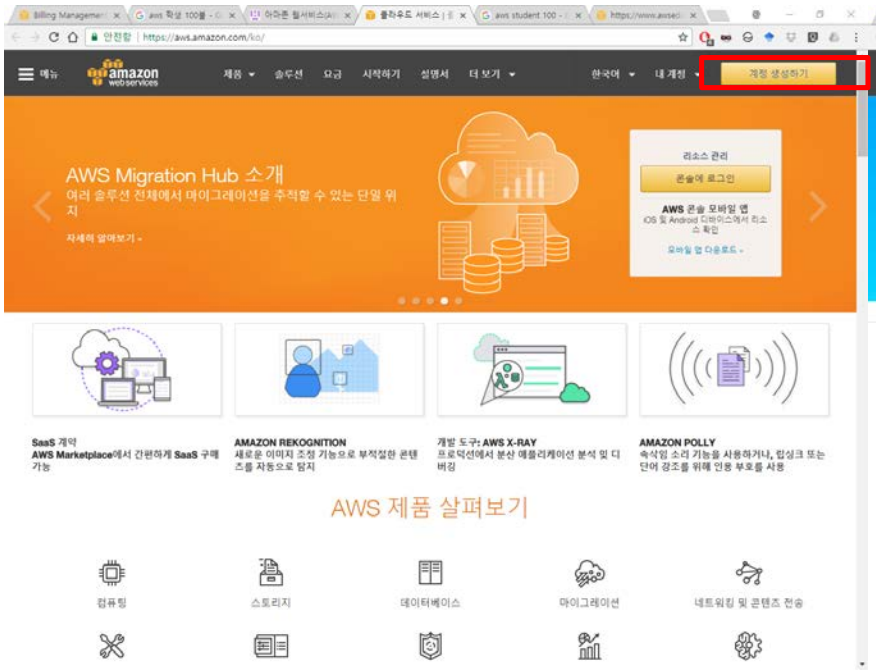
Damin Lee
Parallel Computing Lab.
Mechanical Engineering
Hanyang University

AWS - Amazon Web Services

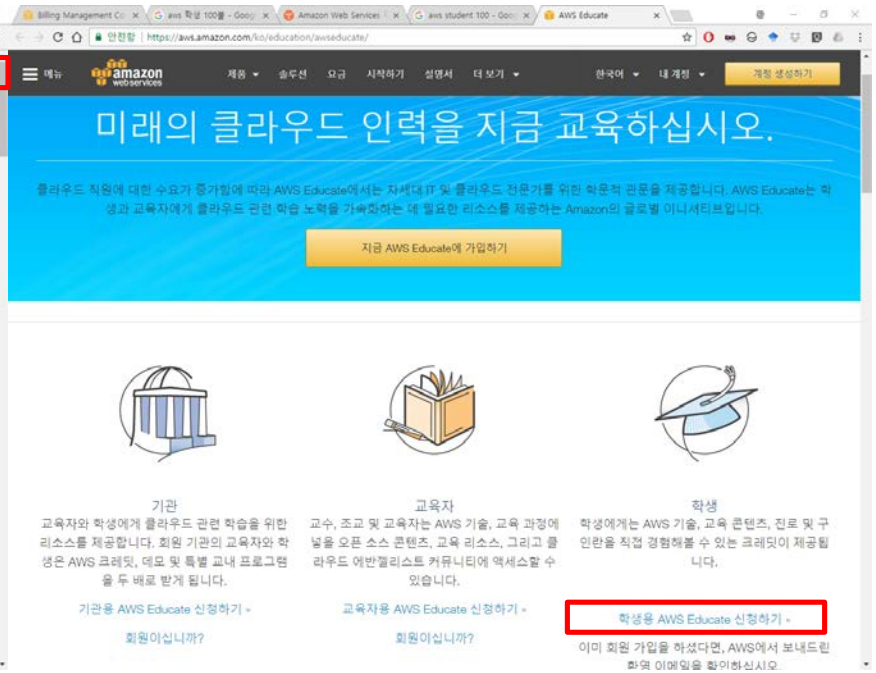
- https://imyeonn.github.io/blog/web/42/ (In Korean)

1. https://aws.amazon.com/ko/
2. https://aws.amazon.com/ko/education/awseducate/

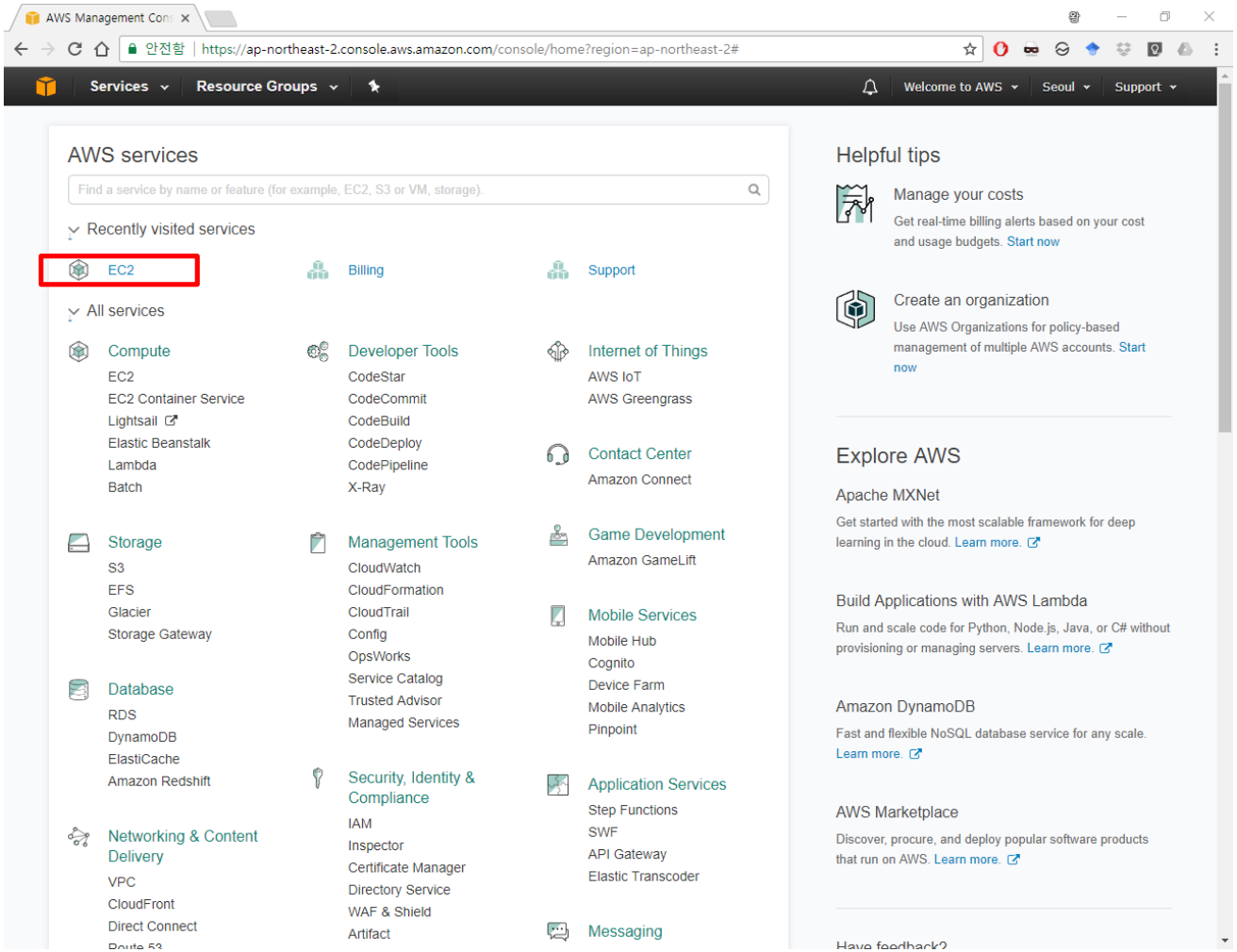
1. Join AWS



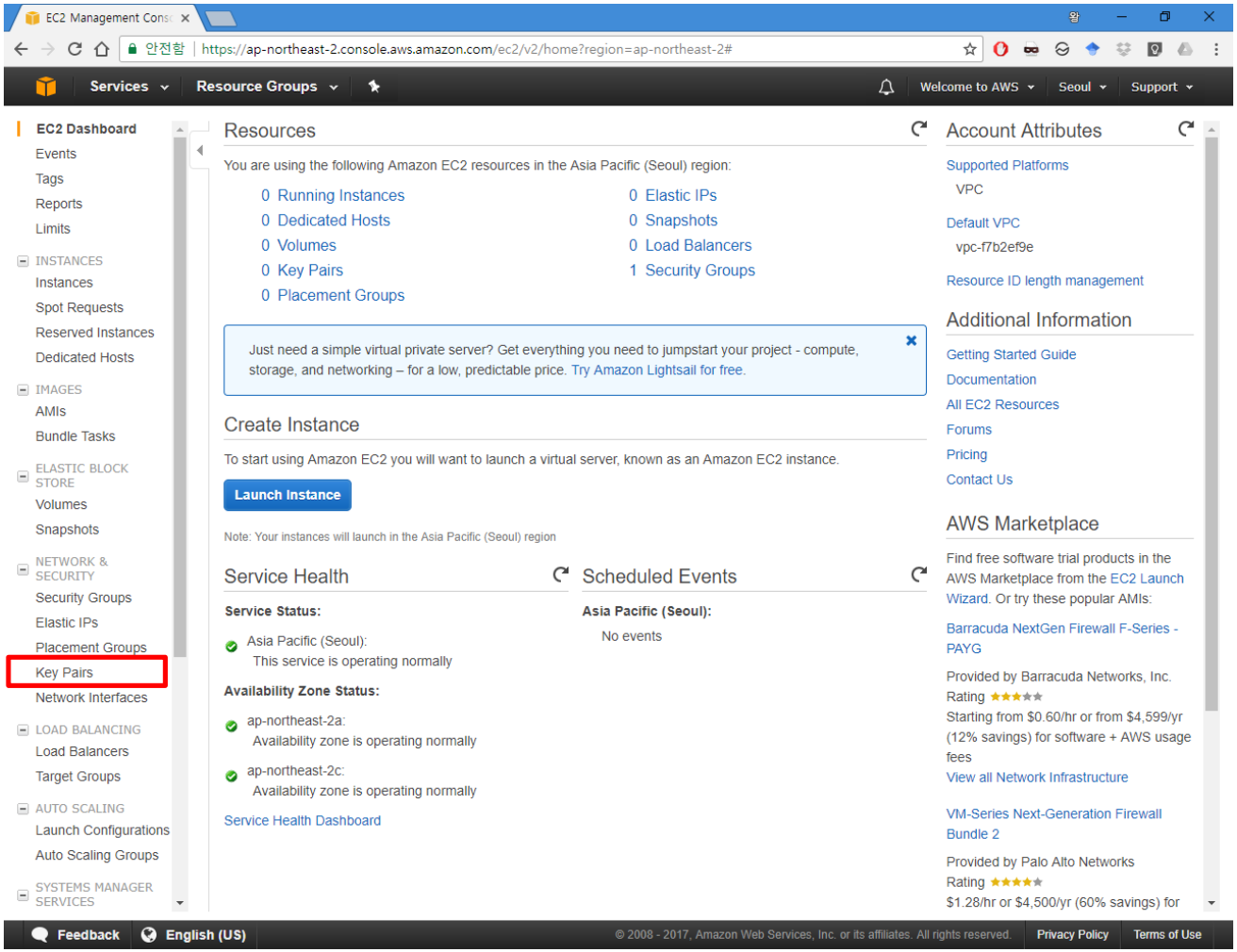
2. Join AWS Educate



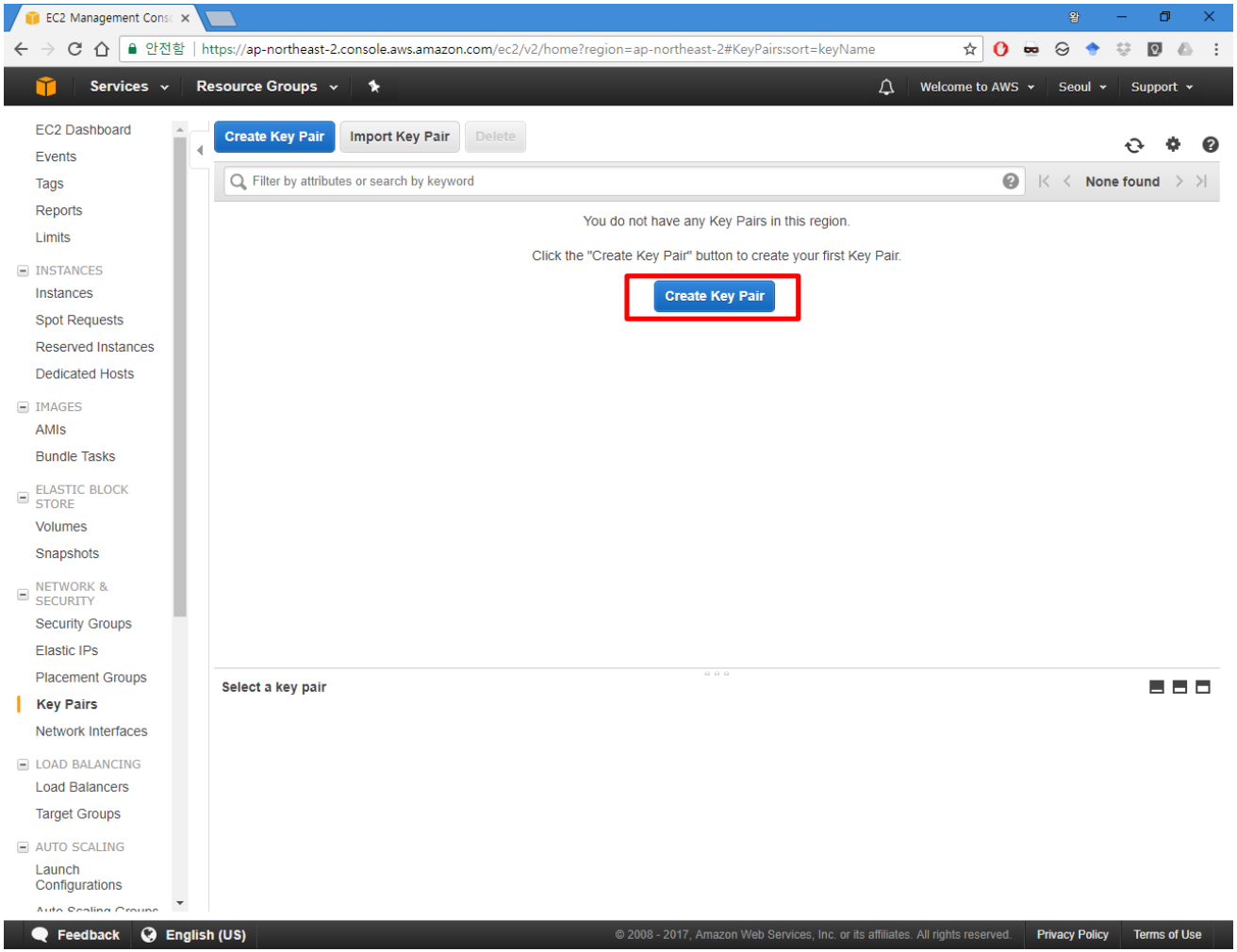
Login to AWS

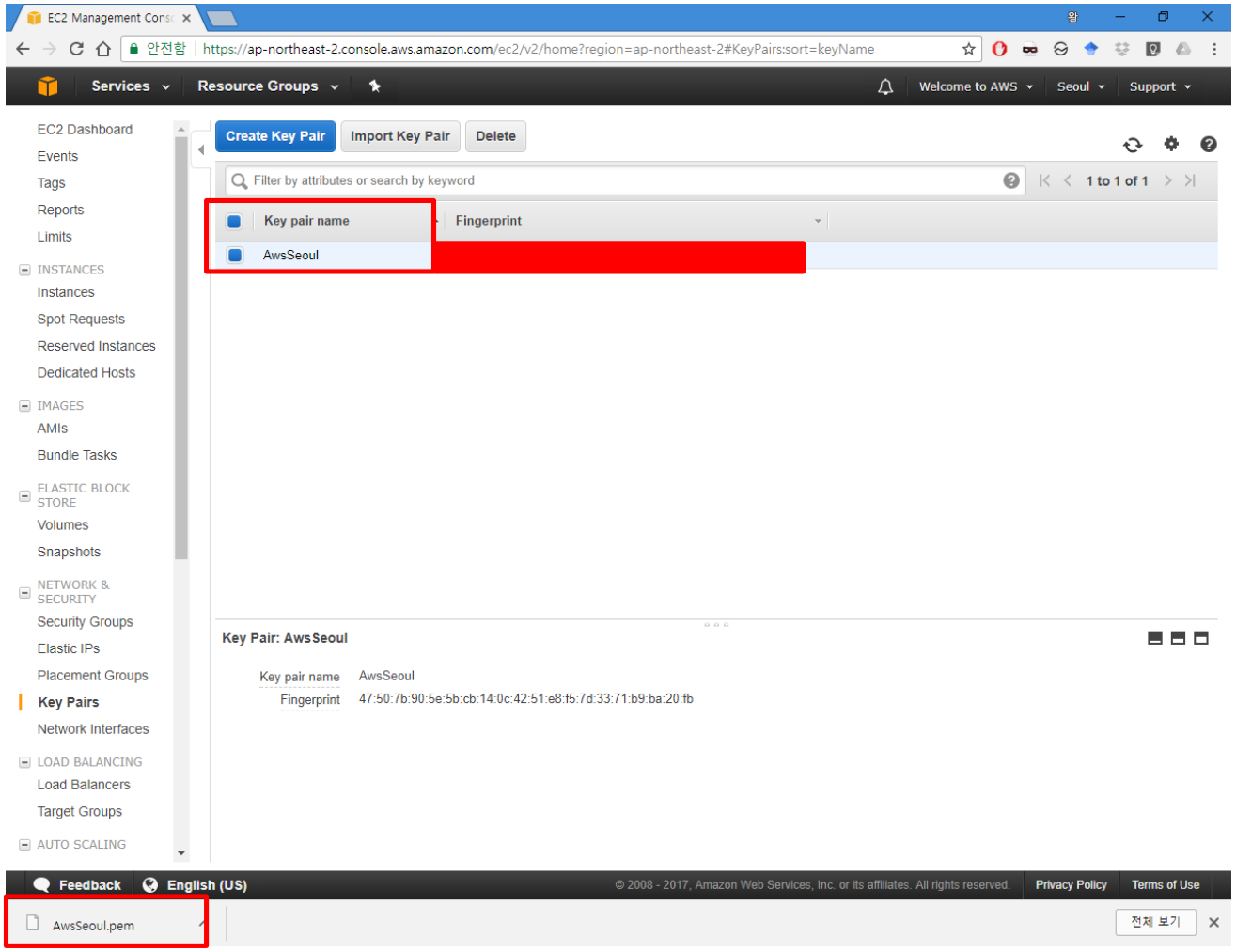

AWS Management Con
안전함 | https://ap-northeast-2.console.aws.amazon.com/console/home?region=ap-northeast-2#
Services
Resource Groups
Welcome to AWS
Seoul
Support
AWS services
Find a service by name or feature (for example, EC2, S3 or VM, storage).
Recently visited services
EC2
Billing
Support
All services
Compute
EC2
EC2 Container Service
Lightsail
Elastic Beanstalk
Lambda
Batch
Developer Tools
CodeStar
CodeCommit
CodeBuild
CodeDeploy
CodePipeline
X-Ray
Internet of Things
AWS IoT
AWS Greengrass
Contact Center
Amazon Connect
Storage
S3
EFS
Glacier
Storage Gateway
Management Tools
CloudWatch
CloudFormation
CloudTrail
Config
OpsWorks
Service Catalog
Trusted Advisor
Managed Services
Game Development
Amazon GameLift
Mobile Services
Mobile Hub
Cognito
Device Farm
Mobile Analytics
Pinpoint
Database
RDS
DynamoDB
ElastiCache
Amazon Redshift
Security, Identity & Compliance
IAM
Inspector
Certificate Manager
Directory Service
WAF & Shield
Artifact
Application Services
Step Functions
SWF
API Gateway
Elastic Transcoder
Networking & Content Delivery
VPC
CloudFront
Direct Connect
Messaging
Helpful tips
Manage your costs
Get real-time billing alerts based on your cost and usage budgets. Start now
Create an organization
Use AWS Organizations for policy-based management of multiple AWS accounts. Start now
Explore AWS
Apache MXNet
Get started with the most scalable framework for deep learning in the cloud. Learn more.
Build Applications with AWS Lambda
Run and scale code for Python, Node.js, Java, or C# without provisioning or managing servers. Learn more.
Amazon DynamoDB
Fast and flexible NoSQL database service for any scale. Learn more.
AWS Marketplace
Discover, procure, and deploy popular software products that run on AWS. Learn more.

EC2 dashboard



Create Key Pair




EC2 Management Cons
안전함 | https://ap-northeast-2.console.aws.amazon.com/ec2/v2/home?region=ap-northeast-2#KeyPairs:sort=keyName
Services
Resource Groups
Welcome to AWS
Seoul
Support
EC2 Dashboard
Events
Tags
Reports
Limits
INSTANCES
Instances
Spot Requests
Reserved Instances
Dedicated Hosts
IMAGES
AMIs
Bundle Tasks
ELASTIC BLOCK STORE
Volumes
Snapshots
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
LOAD BALANCING
Load Balancers
Target Groups
AUTO SCALING
Create Key Pair
Import Key Pair
Delete
Filter by attributes or search by keyword
1 to 1 of 1
Key pair name
Fingerprint
AwsSeoul
Key Pair: AwsSeoul
Key pair name AwsSeoul
Fingerprint 47:50:7b:90:5e:5b:cb:14:0c:42:51:e8:f5:7d:33:71:b9:ba:20:fb
Feedback
English (US)
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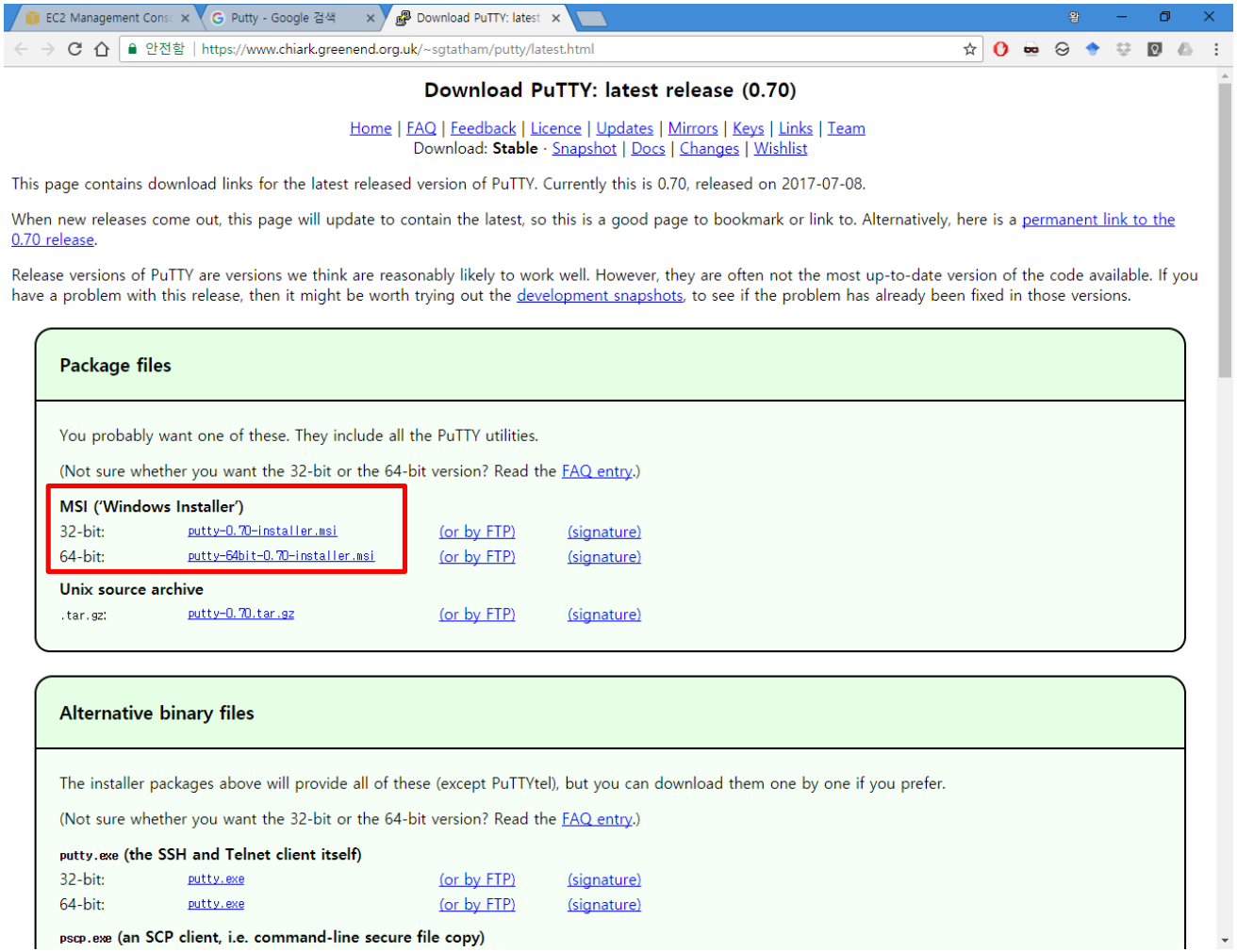
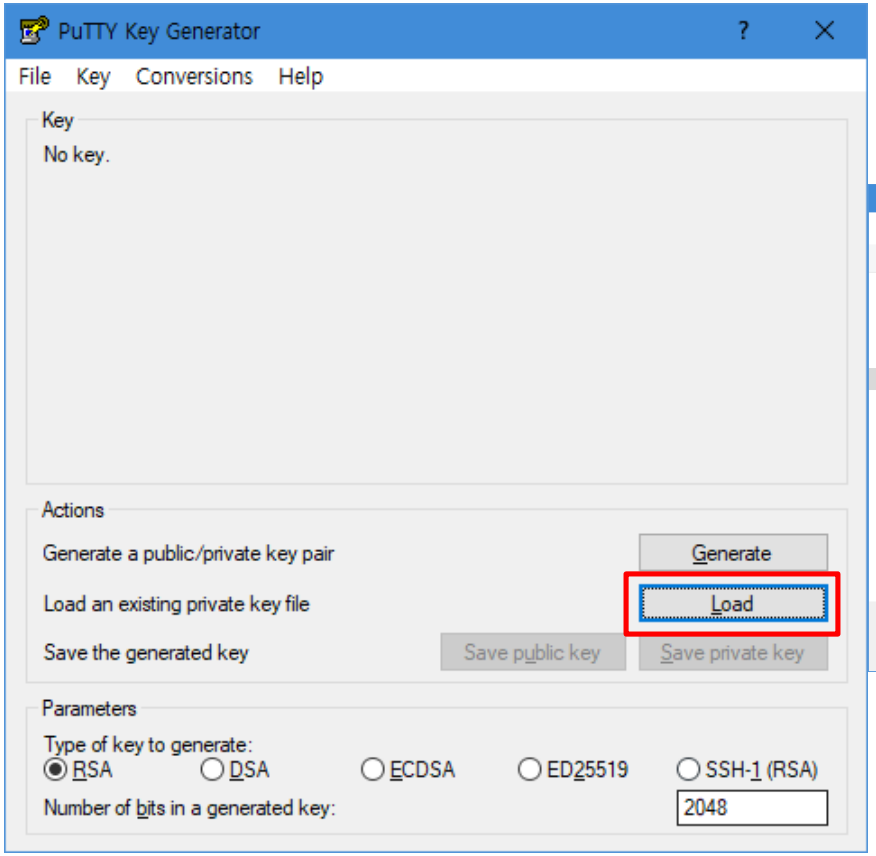
Privacy Policy
Terms of Use
AwsSeoul.pem
전체 보기

Install Putty when using Windows OS

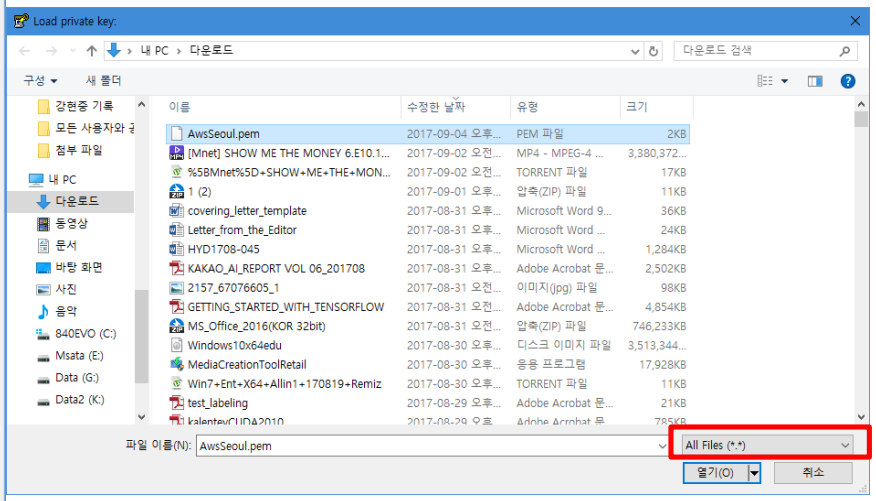


Using Puttygen to convert *.pem to *.ppk

Load Key

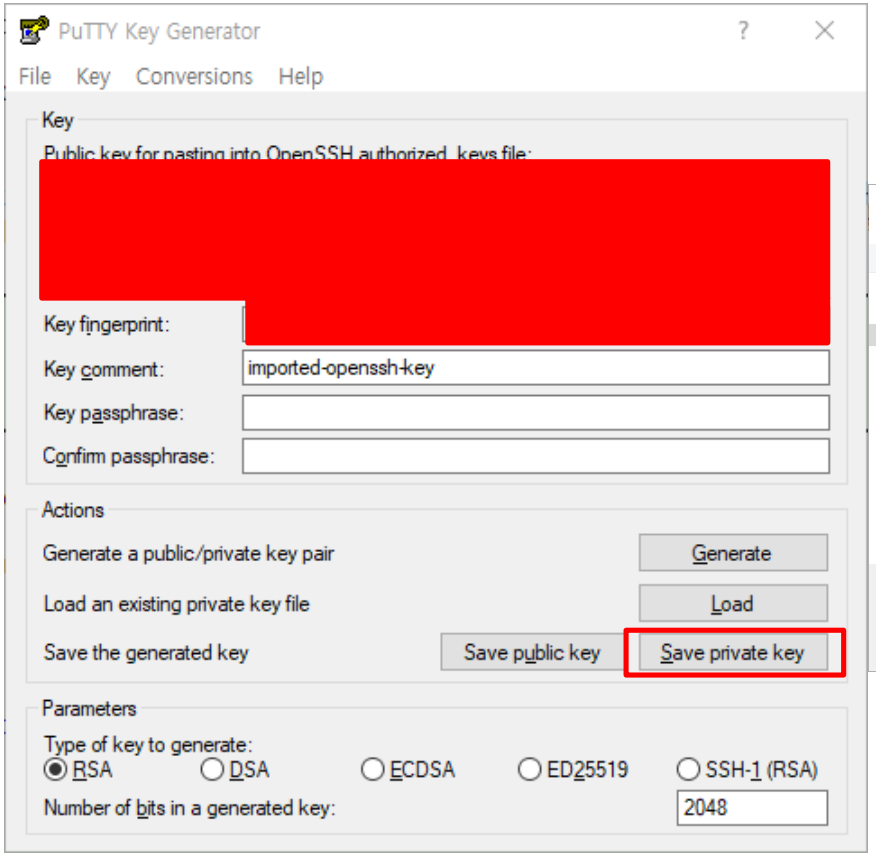


Load Key

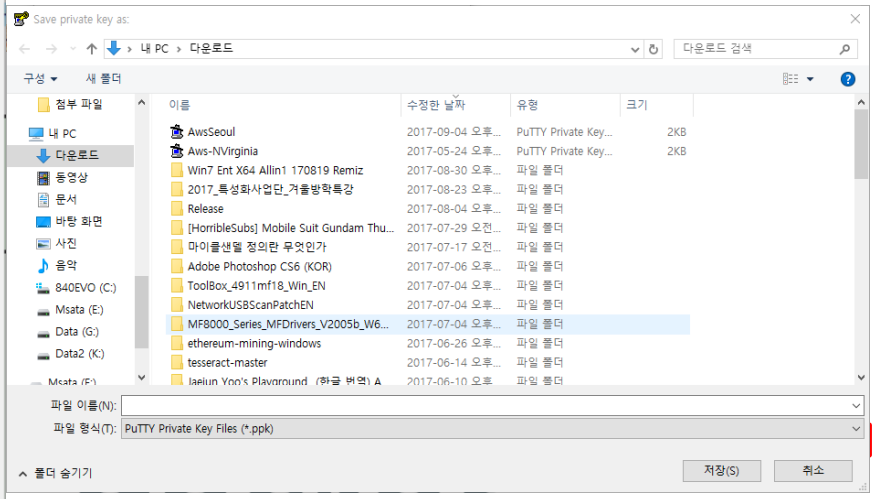


Using Puttygen to convert *.pem to *.ppk

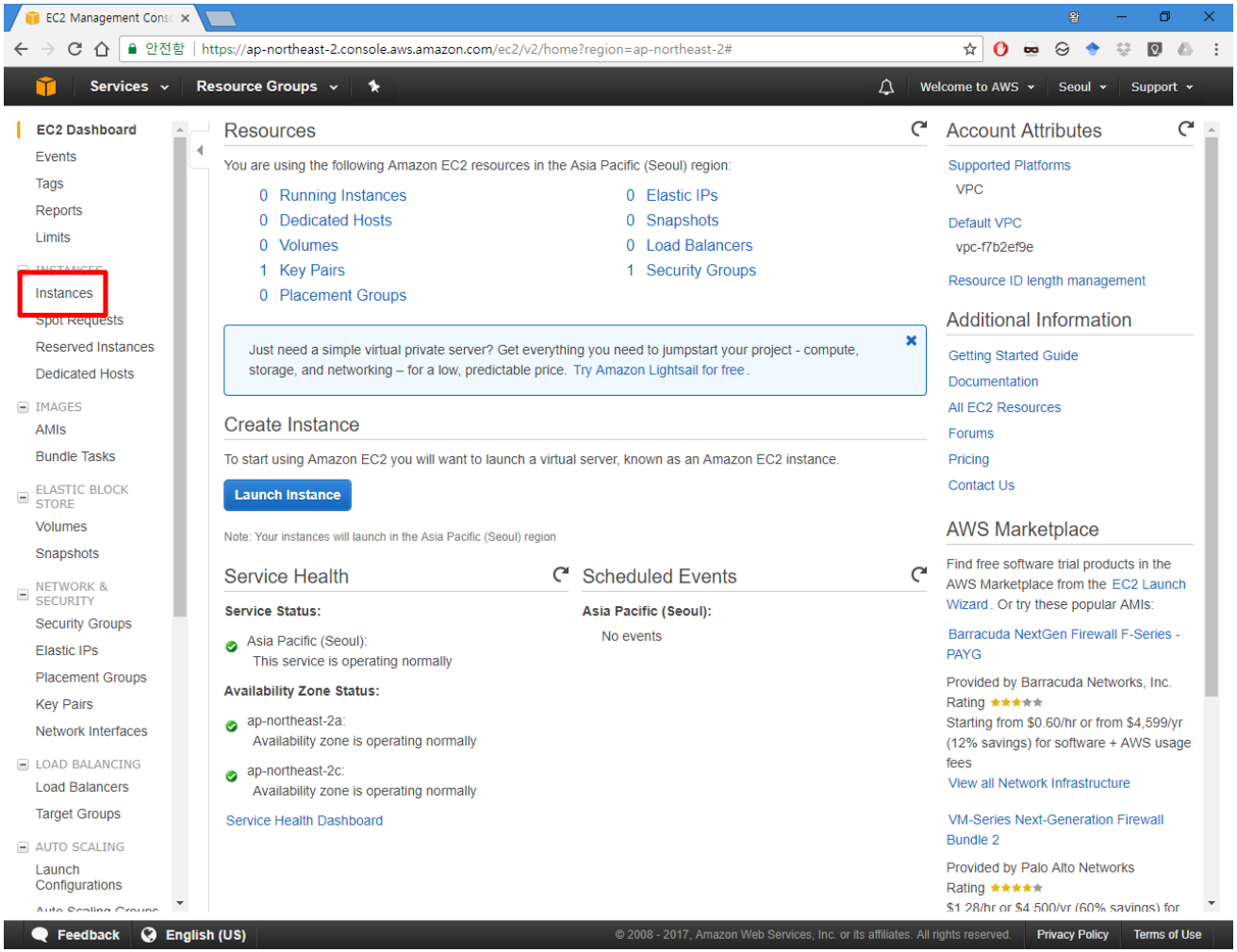
Save Private Key



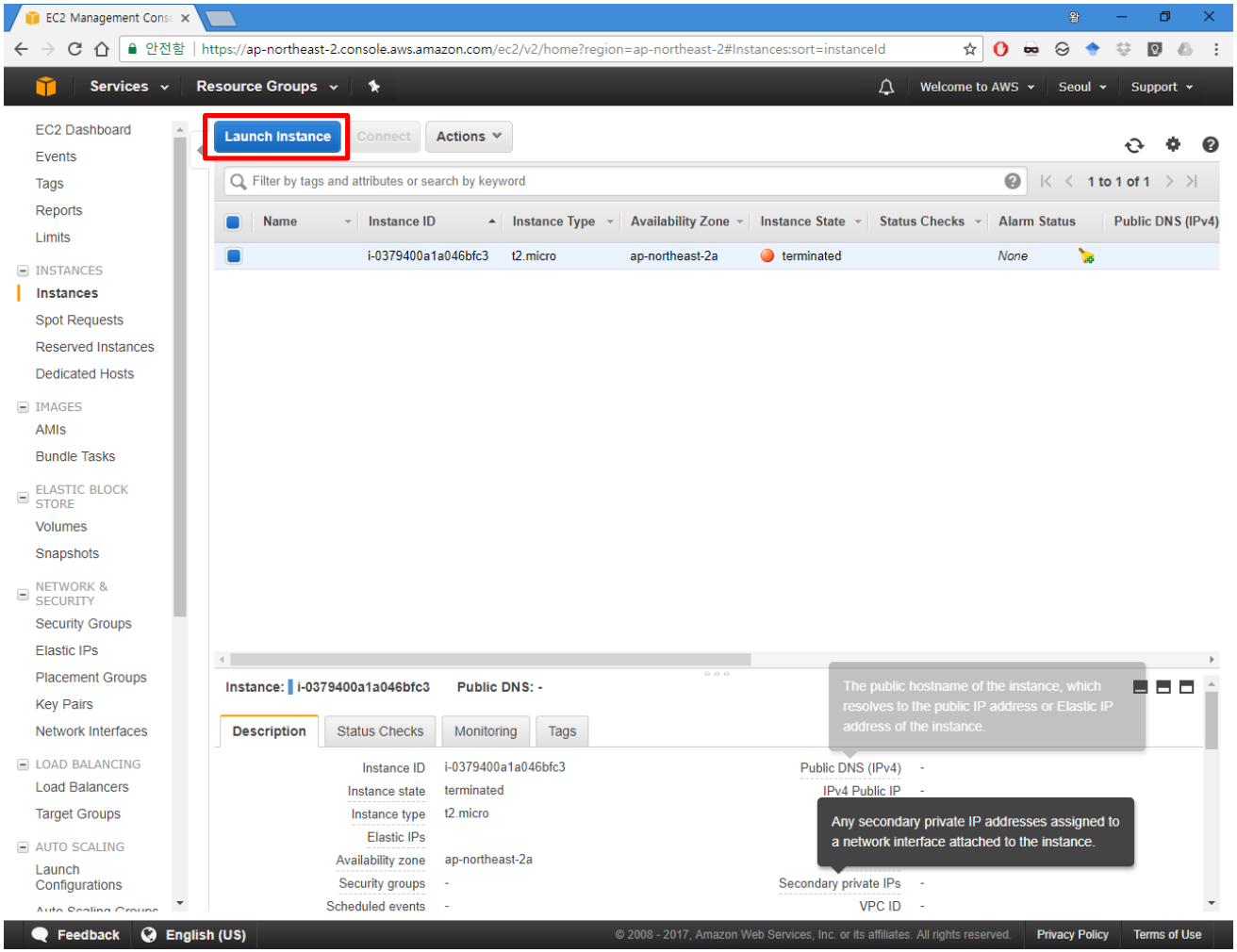
Save Private Key



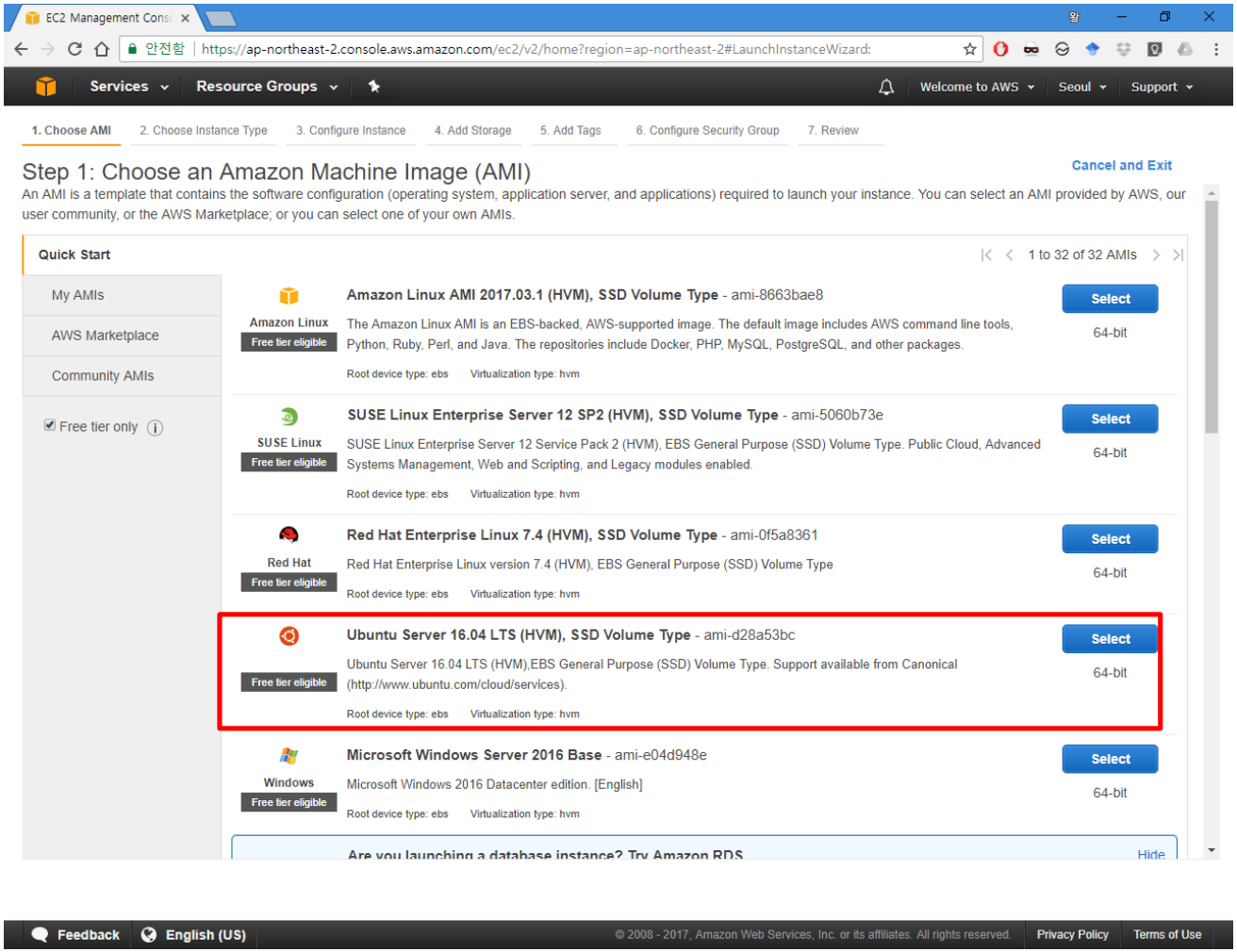
Make EC2 instance



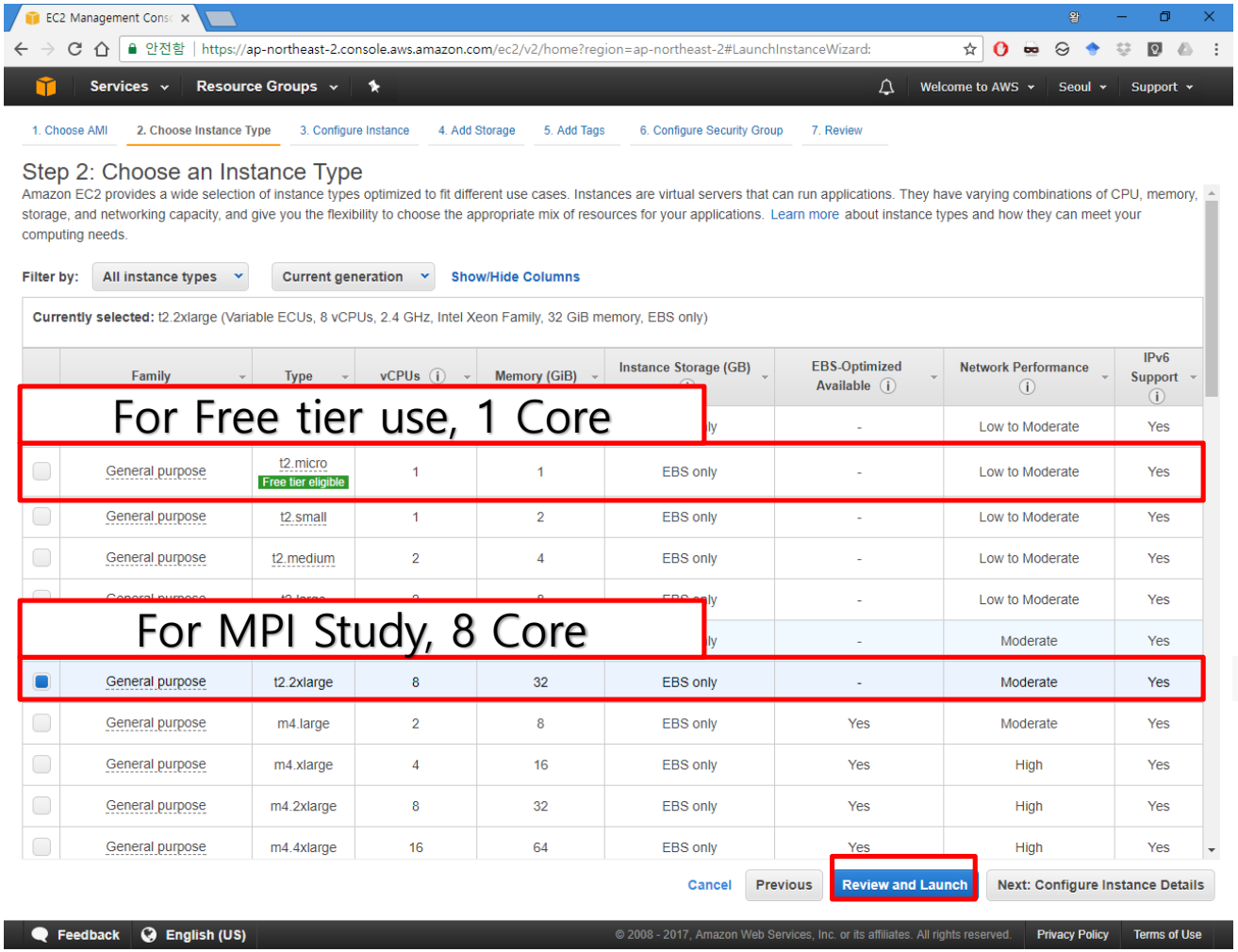
Launch Instance



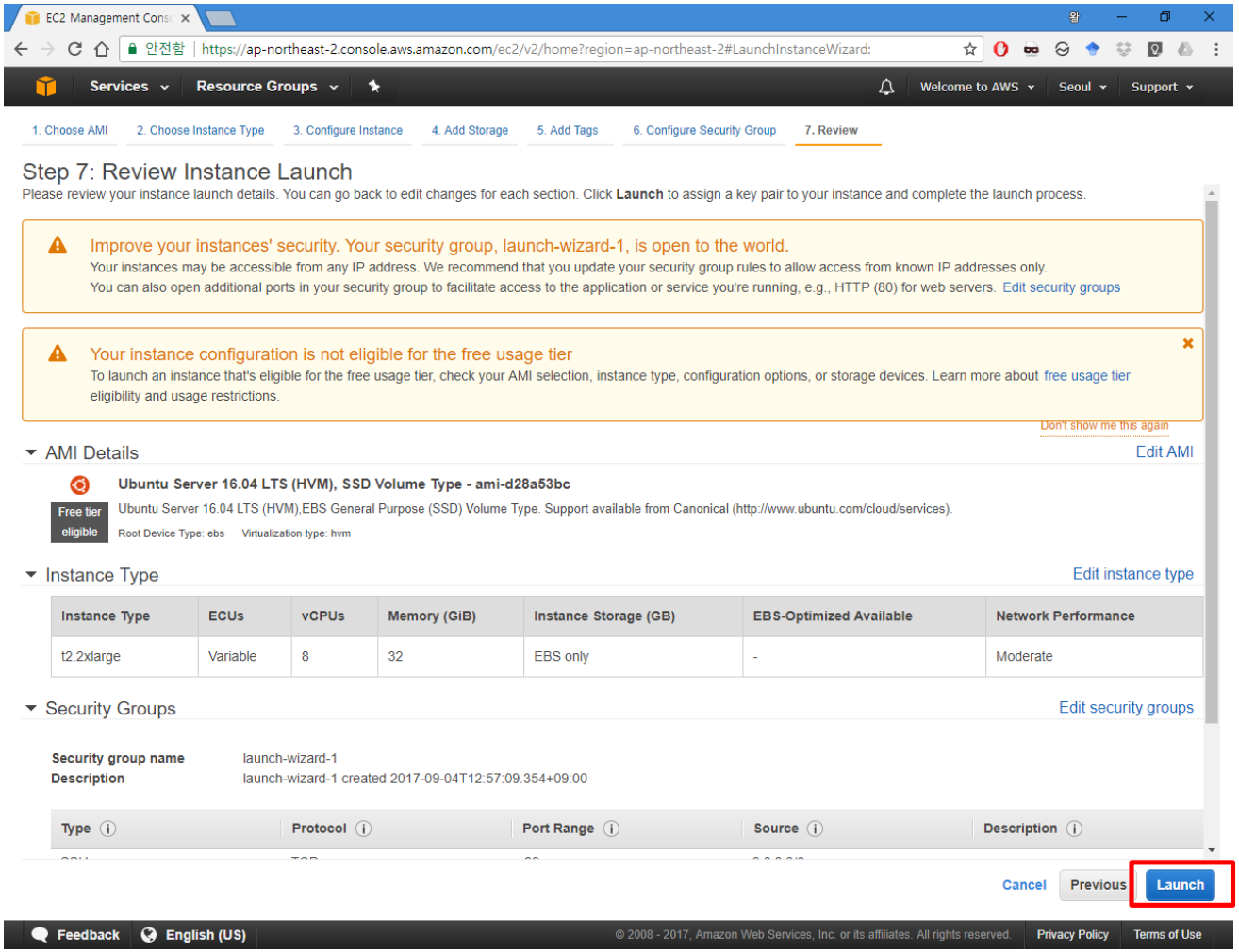
Select Ubuntu 16.04 LTS



Select H/W Type



Launch EC2


EC2 Management Cons
안전함 | https://ap-northeast-2.console.aws.amazon.com/ec2/v2/home?region=ap-northeast-2#LaunchInstanceWizard:
Services
Resource Groups
Welcome to AWS
Seoul
Support
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
Please review your instance launch details. You can go back to edit changes for each section. Click Launch to assign a key pair to your instance and complete the launch process.
Improve your instances' security. Your security group, launch-wizard-1, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.
You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. Edit security groups
Your instance configuration is not eligible for the free usage tier
To launch an instance that's eligible for the free usage tier, check your AMI selection, instance type, configuration options, or storage devices. Learn more about free usage tier eligibility and usage restrictions.
Don't show me this again
AMI Details
Edit AMI
Ubuntu Server 16.04 LTS (HVM), SSD Volume Type - ami-d28a53bc
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
t2.2xlarge | Variable | 8 | 32 | EBS only | - | Moderate
Security Groups
Edit security groups
Security group name launch-wizard-1
Description launch-wizard-1 created 2017-09-04T12:57:09.354+09:00
Type | Protocol | Port Range | Source | Description
Cancel
Previous
Launch
Feedback
English (US)
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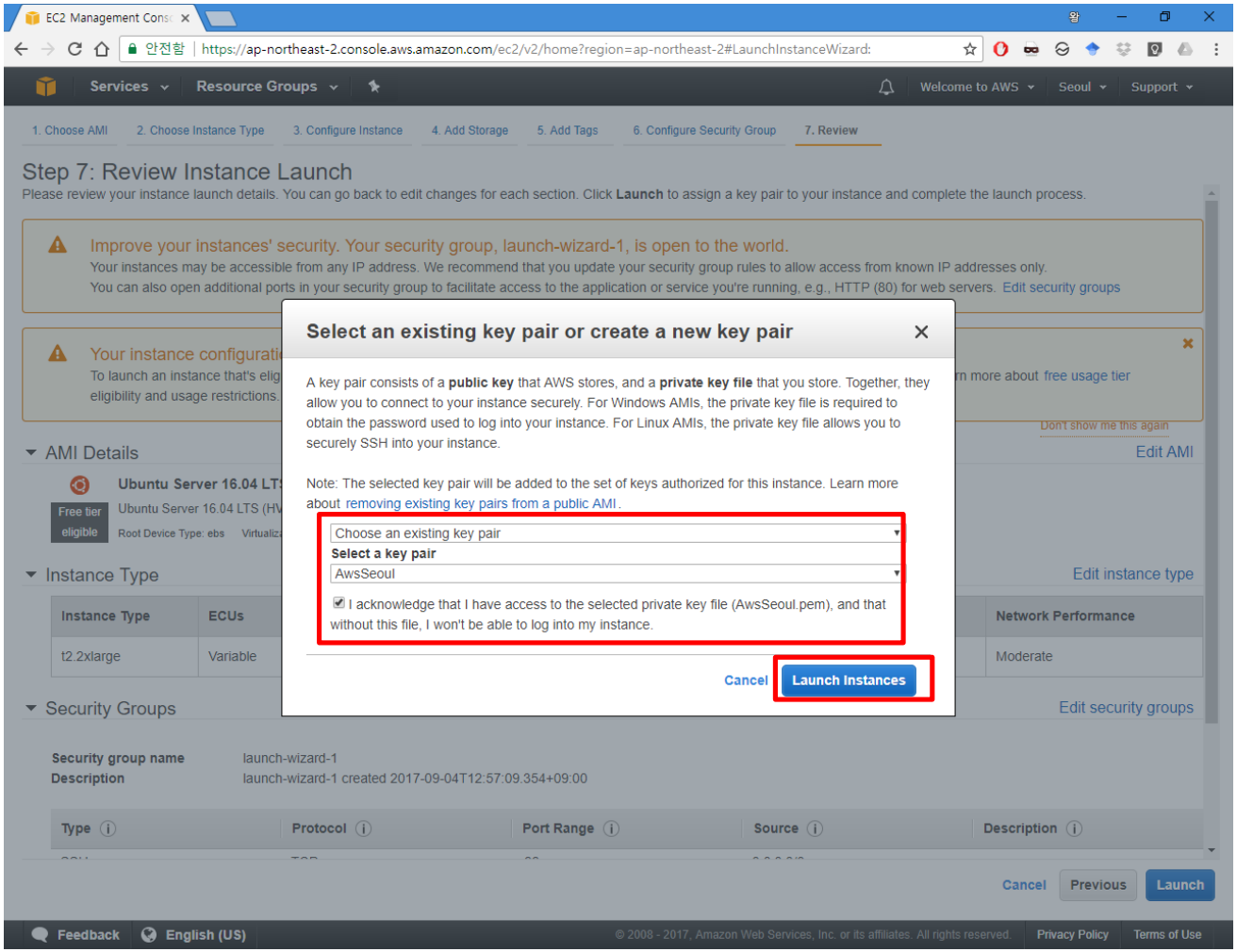
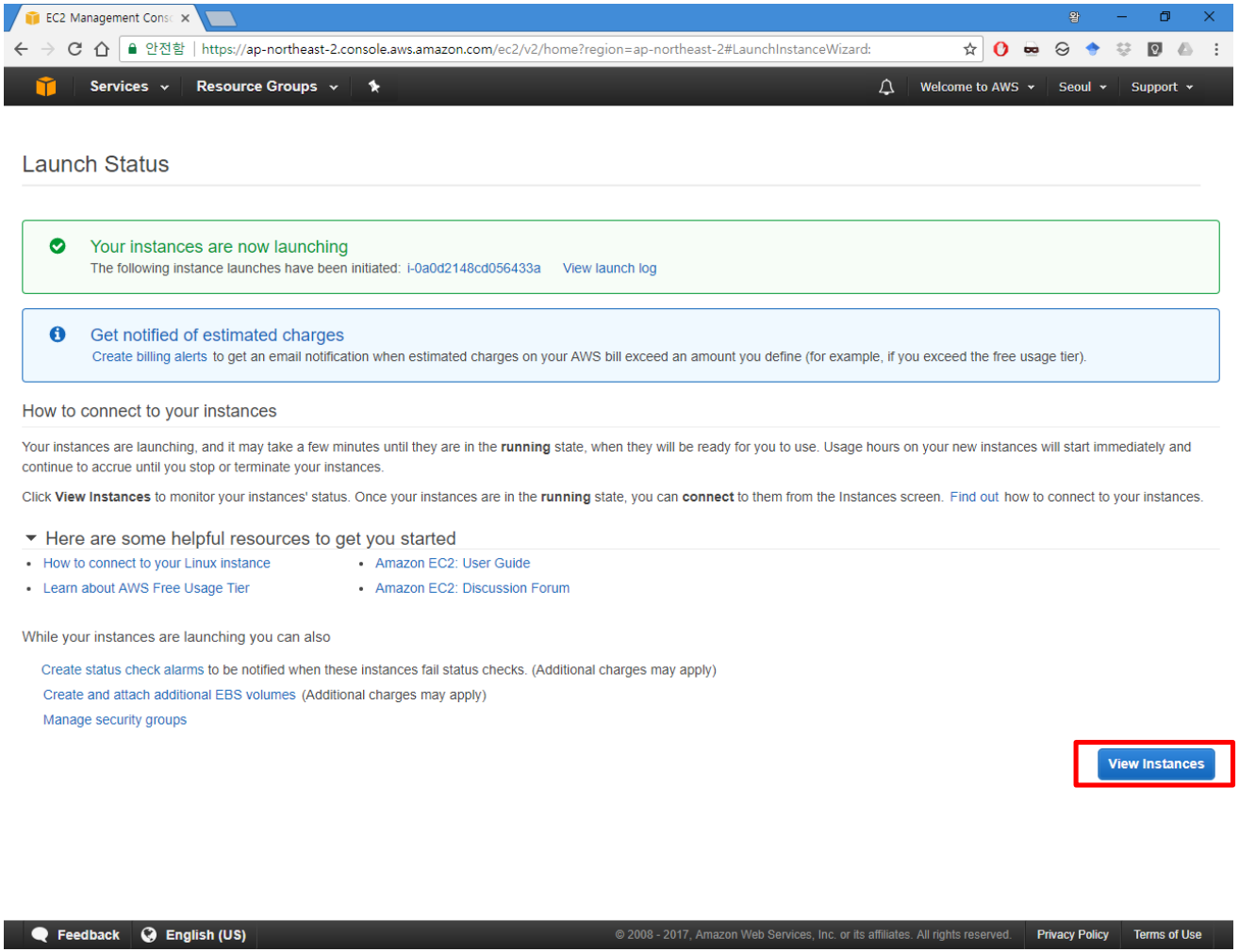
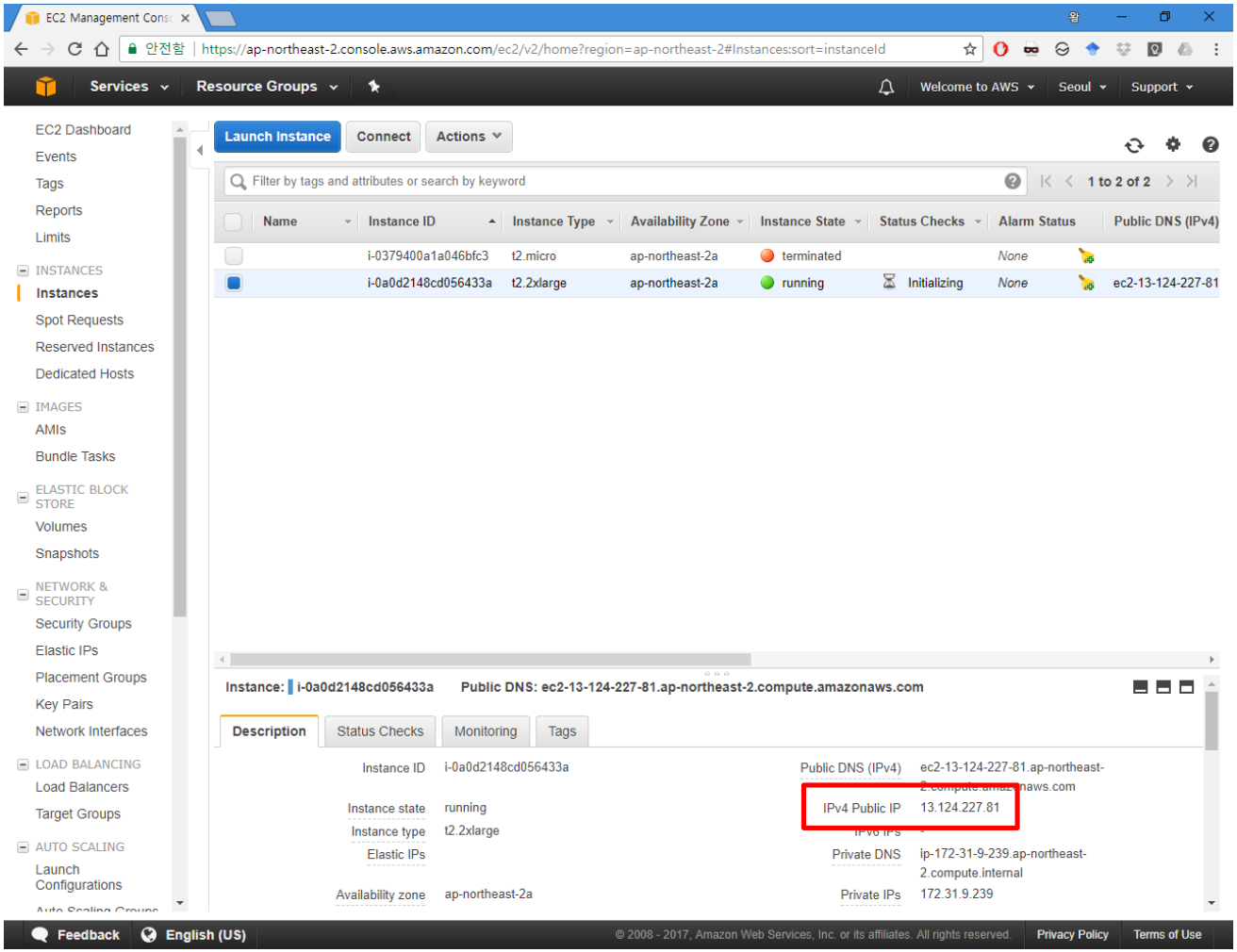
Select Key Pair



After Launch



Check IP


EC2 Management Cons
https://ap-northeast-2.console.aws.amazon.com/ec2/v2/home?region=ap-northeast-2#Instances:sort=instanceId
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Limits
INSTANCES
Instances
Spot Requests
Reserved Instances
Dedicated Hosts
IMAGES
AMIs
Bundle Tasks
ELASTIC BLOCK STORE
Volumes
Snapshots
NETWORK & SECURITY
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
LOAD BALANCING
Load Balancers
Target Groups
AUTO SCALING
Launch Configurations
Launch Instance
Connect
Actions
Filter by tags and attributes or search by keyword
1 to 2 of 2
Name
Instance ID
Instance Type
Availability Zone
Instance State
Status Checks
Alarm Status
Public DNS (IPv4)
i-0379400a1a046bfc3 t2.micro ap-northeast-2a terminated None
i-0a0d2148cd056433a t2.2xlarge ap-northeast-2a running Initializing None ec2-13-124-227-81
Instance: i-0a0d2148cd056433a Public DNS: ec2-13-124-227-81.ap-northeast-2.compute.amazonaws.com
Description
Status Checks
Monitoring
Tags
Instance ID i-0a0d2148cd056433a
Instance state running
Instance type t2.2xlarge
Elastic IPs
Availability zone ap-northeast-2a
Public DNS (IPv4) ec2-13-124-227-81.ap-northeast-2.compute.amazonaws.com
IPv4 Public IP 13.124.227.81
Private DNS ip-172-31-9-239.ap-northeast-2.compute.internal
Private IPs 172.31.9.239
Feedback
English (US)
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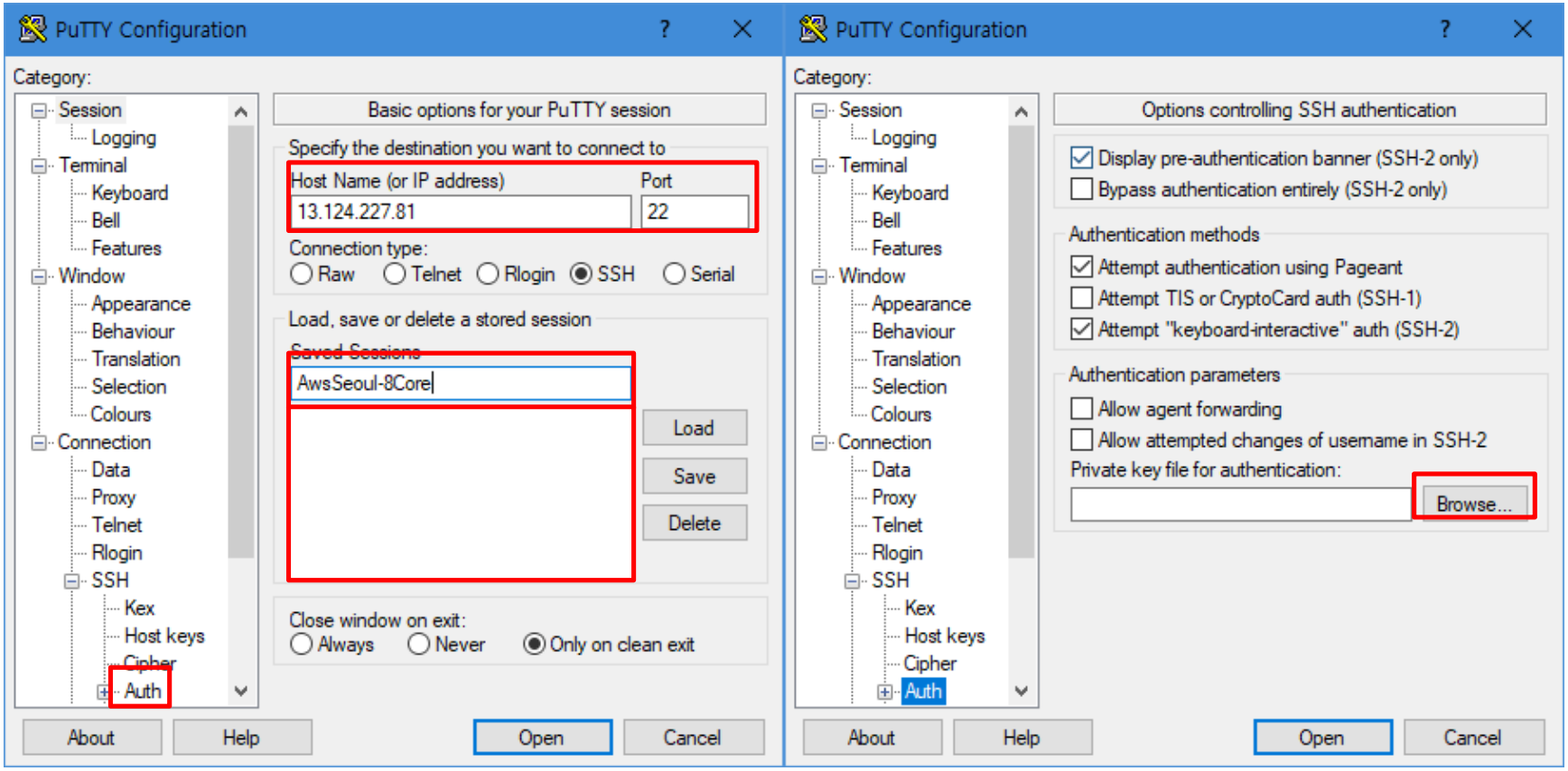
Putty Configuration

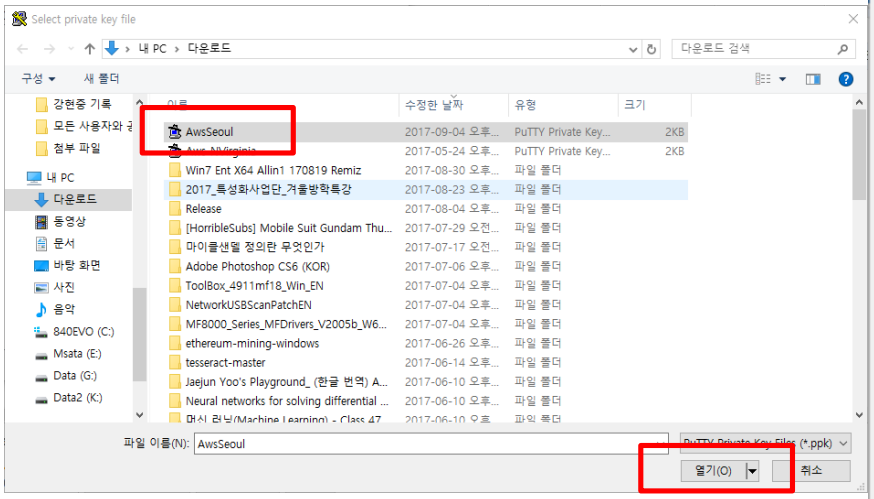
Input IP and Port

Input Private Key

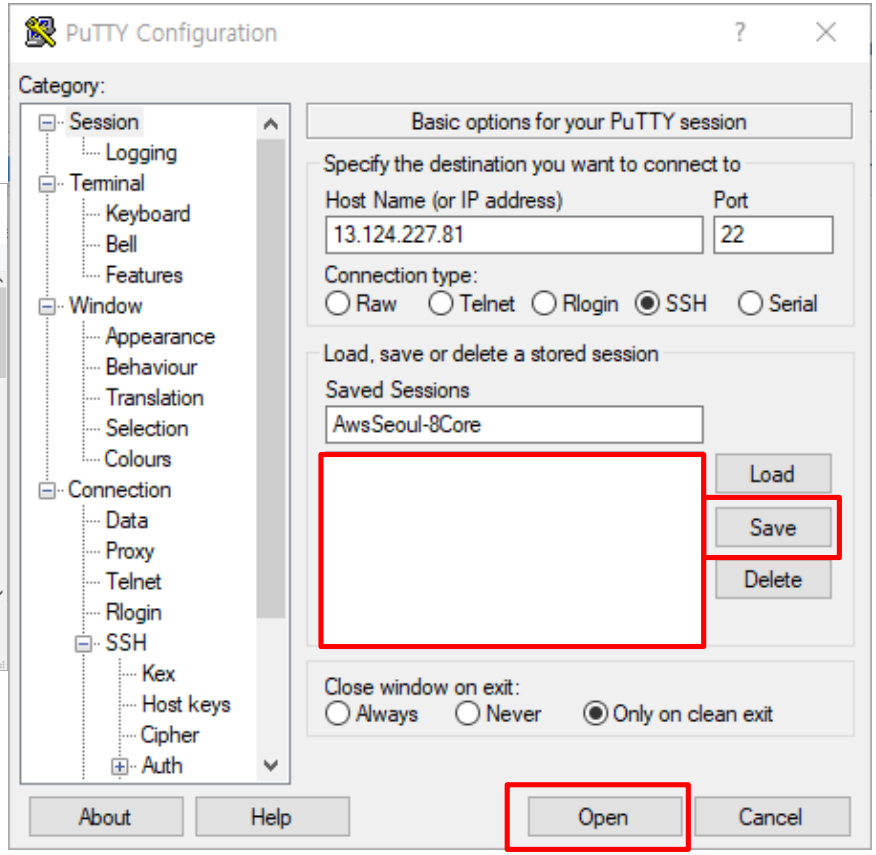


Putty Configuration

Input Private Key

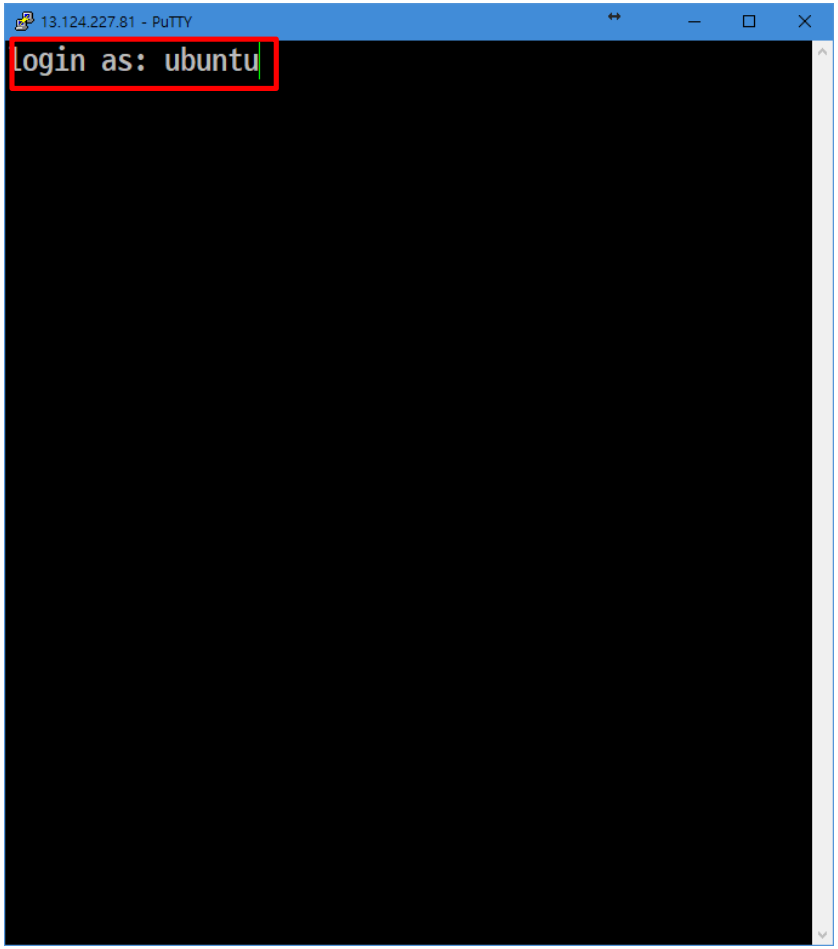


Save and Open

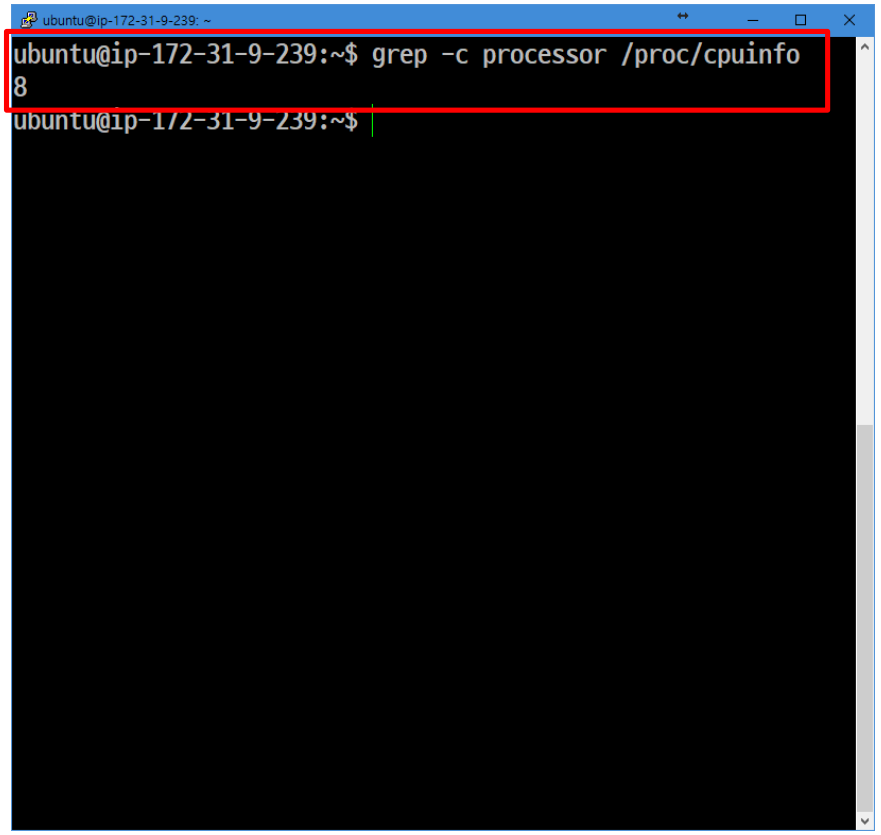


SSH Login

Login as ubuntu



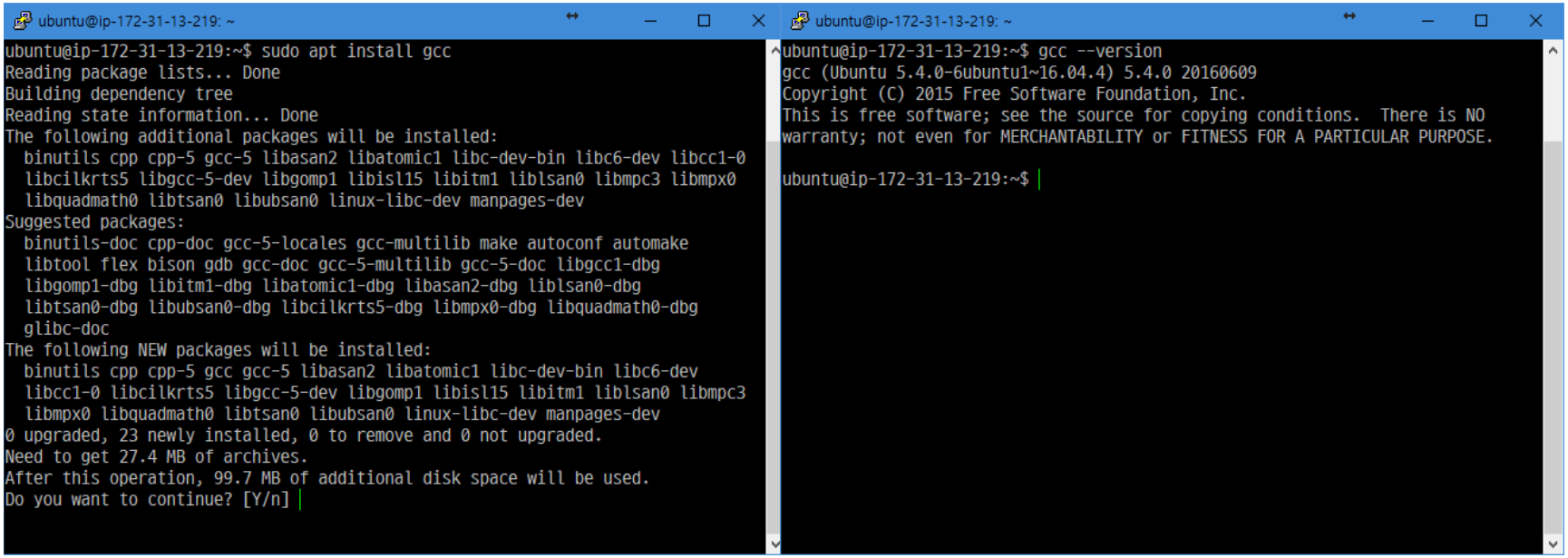
8 Core CPU



Install gcc

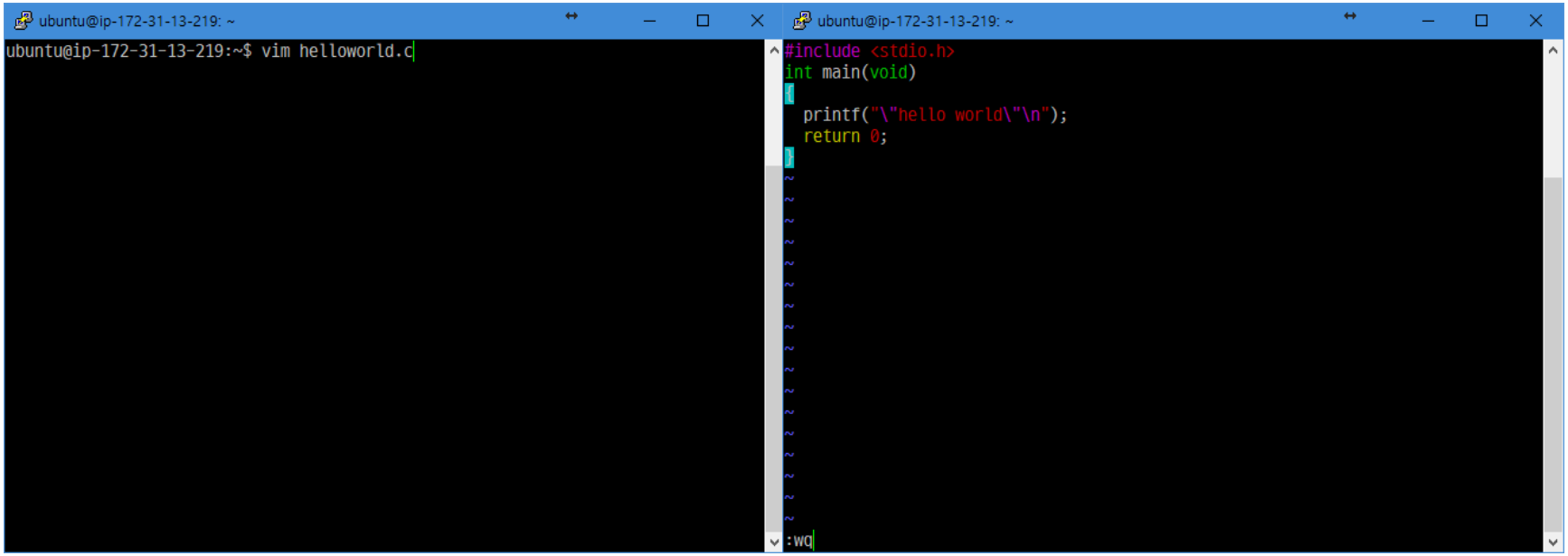
- sudo apt update
- sudo apt install gcc -y

- gcc --version



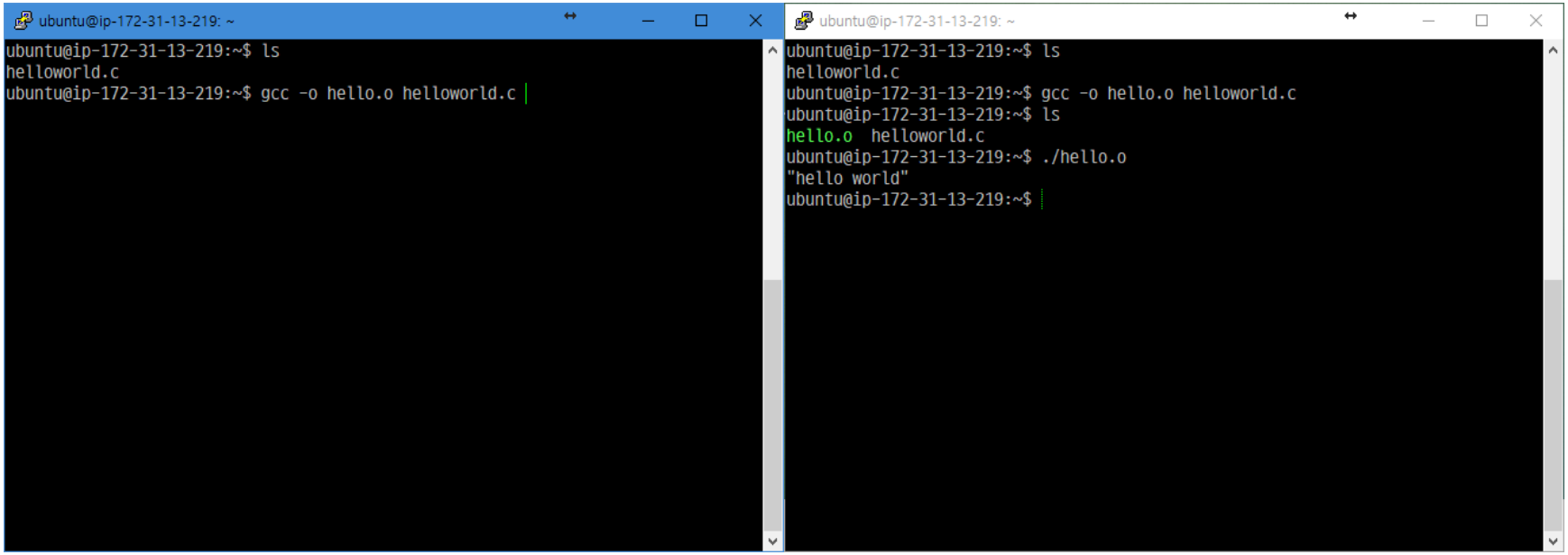
Make helloworld.c file

- Vim helloworld.c
- Write code and save



Compile code

- gcc –o hello.o helloworld.c
- ./hello.o

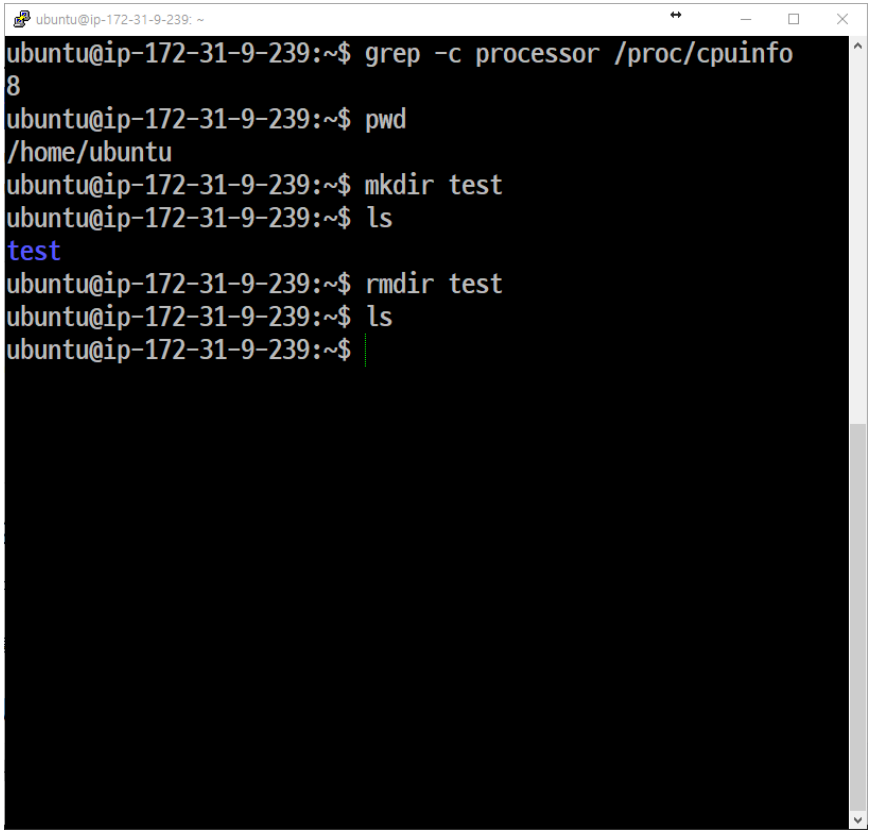


Basic commands

Commands

- pwd
  - Show path of working directory
- mkdir test
  - Make directory named test
- ls
  - Show what is in this directory
- rmdir test
  - Remove directory named test

behavior

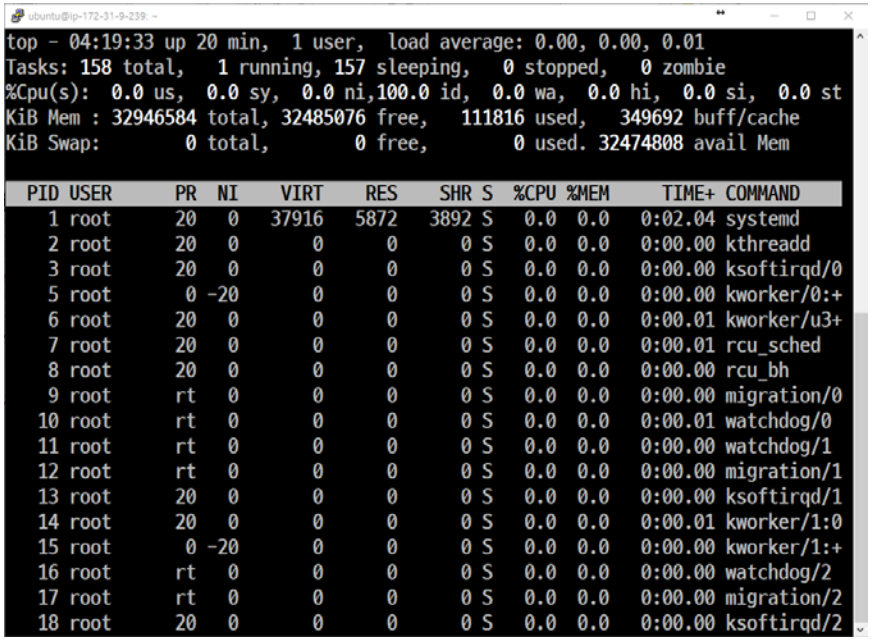


Basic commands

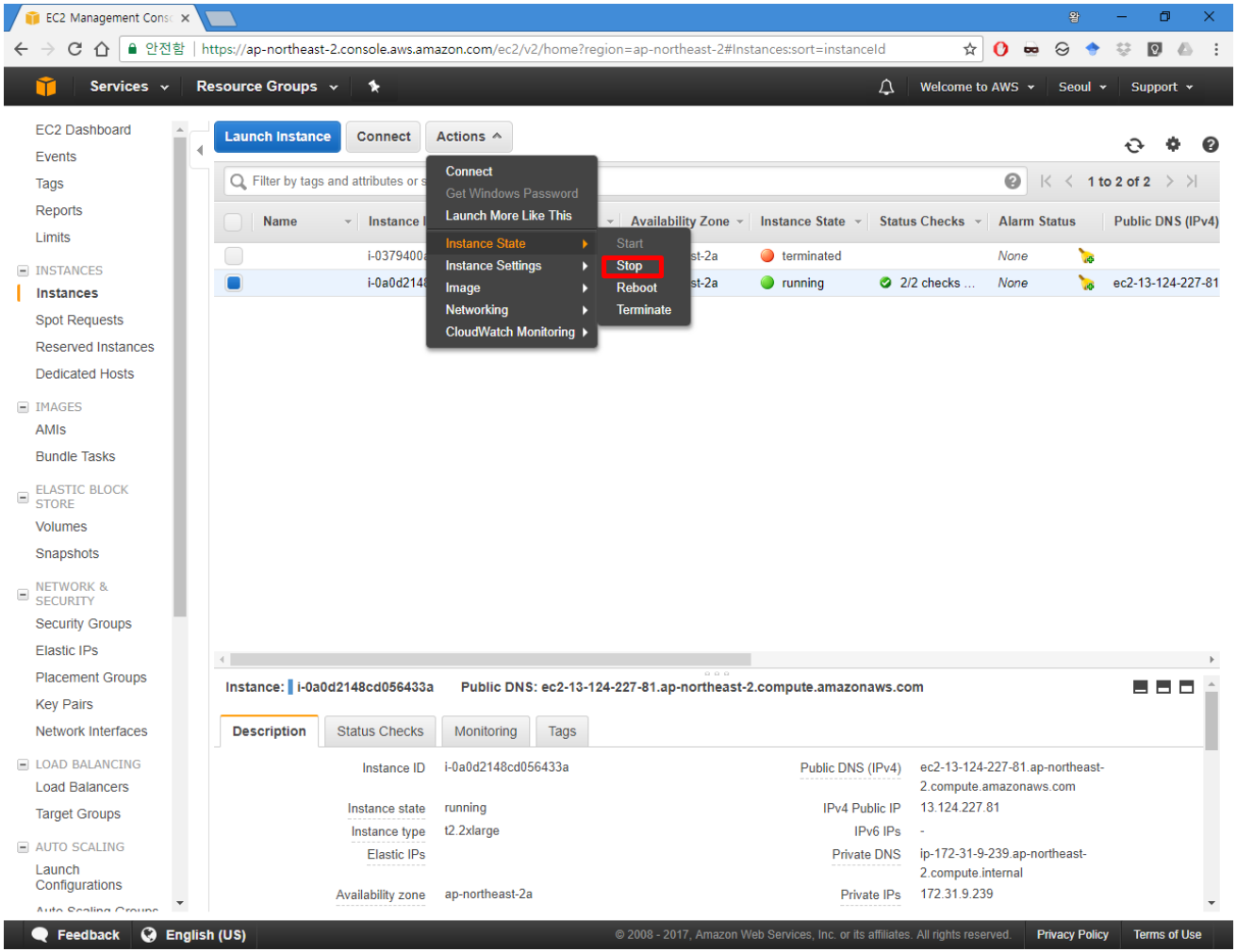
Commands

- clear
  - Clear the screen
- top
  - Show cpu workload
- cp a b
  - Copy a to b
- mv a b
  - Move a to b
- Ctrl + C
  - Cancel job running on the terminal
- Ctrl + D
  - Cancel connection

Behavior when input top



After use, You must stop instance to save the money



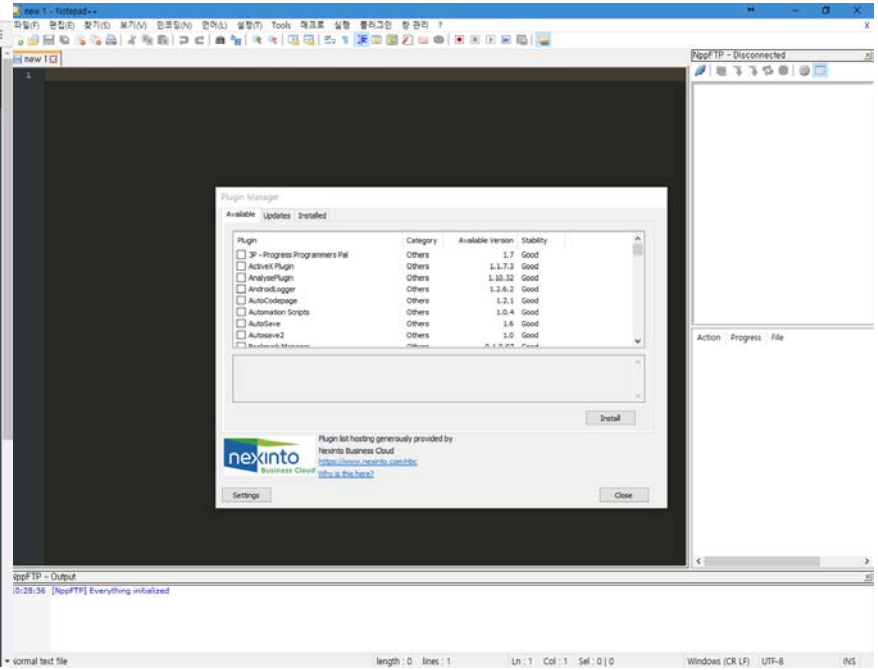
If you are not familiar with VIM

Install Notepad++

- https://notepad-plus-plus.org/download/v7.5.1.html

Install Plugin named NppFTP

- Plugin – Plugin Manager – Show Plugin Manager
- Install NppFTP

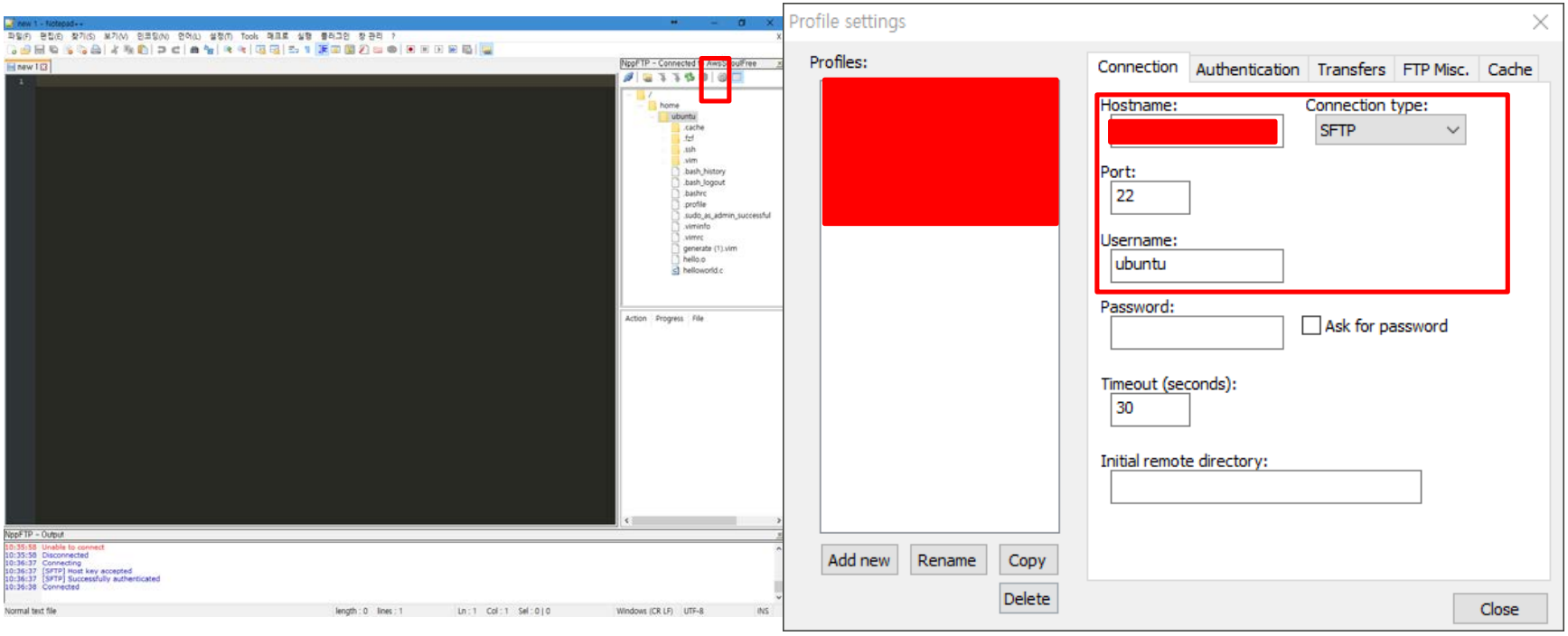


If you are not familiar with VIM

Profile settinge

Input Options

- IP, Port, Username



If you are not familiar with VIM

Input Optins

- Select Keyfile *.pem

Connect and Write Code

- Compile and execution by Putty