

Lab1. Creating Windows Server Instance on Tencent Cloud

1. 목적

- 이번 Lab에서는 Tencent Cloud에서 제공하는 Compute의 제품 중 CVM(Cloud Virtual Machine)을 이용해서 Windows Server Instance를 생성하기로 한다.

2. 사전 준비물

- Tencent Cloud Account

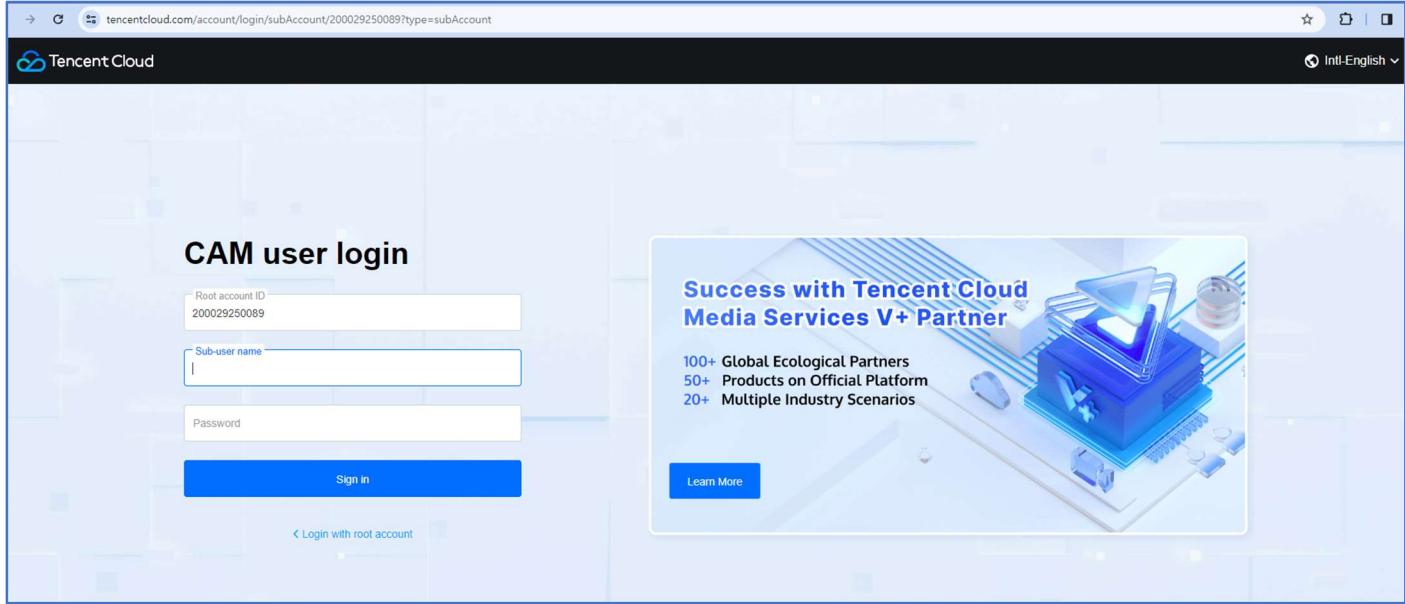
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Task1. Cloud Virtual Machine 생성 전 작업하기

1. **Tencent Cloud CAM User Sing in** 페이지를 방문한다.

<https://www.tencentcloud.com/login/subAccount/200029250089?type=subAccount>



2. **Sub-user name**과 **Password**는 교육 당일 교육 진행요원 혹은 Trainer로부터 부여 받는다. 부여 받은 **Sub-user name**과 **Password**를 입력하고 **[Sing in]** 파란색 버튼을 클릭한다. 로그인 후 **[Improve information]** 페

이지 또는 [Complete information] 페이지에서, 다음 그림처럼 [Improve related mobile phone information] 창의 **the information next time** 링크를 또는 [Add mobile number] 창의 **[Next time]**을 클릭하여 전화번호 입력을 생략한다.

The screenshot shows a web browser window titled "Improve Information - Tencent". The URL is https://intl.cloud.tencent.com/account/sub-account/addition-info?s_url=https%3A%2F%2Fconsole.cloud.tencent.com. The page header includes the Tencent Cloud logo. On the left, there's a section titled "Common problem" with three dropdown menu items: "Why do I need to improve the information?", "Where can I modify my information in the future?", and "Can I refine the information next time?". The main content area is titled "Improve information" and contains a sub-section titled "Improve related mobile phone information". This section has a form with a dropdown for country code (+86) and a text input field for "Please enter your phone number". Below it is a verification code input field with "Send Verification Code" and a "Confirm submission" button. At the bottom of this section is a blue button labeled "Improve the information next time", which is highlighted with a red rectangle. Copyright information at the bottom states "Copyright © 2013-2021 Tencent Cloud. All Rights Reserved."

The screenshot shows a web browser window titled "Complete information". The URL is https://intl.cloud.tencent.com/account/sub-account/addition-info?s_url=https%3A%2F%2Fconsole.cloud.tencent.com. The page header includes the Tencent Cloud logo. On the left, there's a section titled "FAQs" with three dropdown menu items: "Why do I need to complete my information?", "What if I want to change the information later?", and "Can I complete the information next time?". The main content area is titled "Add mobile number" and contains a form with a dropdown for country code (+93) and a text input field for "Enter your mobile number". Below it is a verification code input field with "Send code" and a "Confirm" button. At the bottom of this section is a blue button labeled "Next time", which is highlighted with a red rectangle.

3. 다음 그림은 로그인 과정을 모두 수행하면 나타나는 화면이다. 페이지 우측 상단에는 로그인한 **Sub-user name**이 나오고, 또한 페이지 상단에서 **Hello**, 다음에 **Sub-user name**이 나오게 된다.

The screenshot shows the Tencent Cloud dashboard. At the top left, there is a user profile box with a blue icon and the text "Hello, user-00" and "Account Id: 200029337219". To the right of the profile are three status indicators: "Security Center" (0), "Alarms" (0), and "Pending Tickets" (0). Below these are sections for "Recently Visited" (Cloud Object Storage, Cloud Block Storage) and "Currently in Use" (Cloud Object Storage, Cloud Block Storage, Cloud Virtual Machine). On the far right, there is a "Product Documentation" sidebar with links to various cloud services like Cloud Object Storage, Cloud Block Storage, and Content Delivery Network. The main content area is titled "All Products" and contains several categories: Compute, Data Migration, Network Security, Relational Database, Container Services, Data Development & Governance, Endpoint Security, and Enterprise Distributed DBMS. Under the Compute category, "Cloud Virtual Machine" is highlighted with a red box.

4. 로그인 후, 페이지 위쪽의 메뉴 중 [Products]에 마우스를 올려놓으면 아래와 같이 드롭다운 메뉴가 보여진다. 여기서 [Compute] > [Cloud Virtual Machine] 링크를 클릭한다.

The screenshot shows the "Products" dropdown menu from the Tencent Cloud interface. The menu items include Overview, Products (with a dropdown arrow), and a plus sign for creating new resources. Below the dropdown is a search bar with the placeholder "Search for a product by name, abbreviation, feature (such as". The main list of products is organized into columns. The first column contains "Compute" (with "Cloud Virtual Machine" highlighted with a red box), "Tencent Cloud Lighthouse", "Cloud GPU Service", "Auto Scaling", "High Performance Computing", and "Batch Compute". The second column contains "Basic Storage Se" (partially visible), "Cloud Object Storage", "Cloud File Storage", "CHDFS", "Cloud Block Storage", "Storage Data Se" (partially visible), "Cloud Log Service", and "Cloud Infinite".

5. Cloud Virtual Machine의 대시보드 페이지이다. 좌측 메뉴가 [Instances]에 맞춰져 있다.

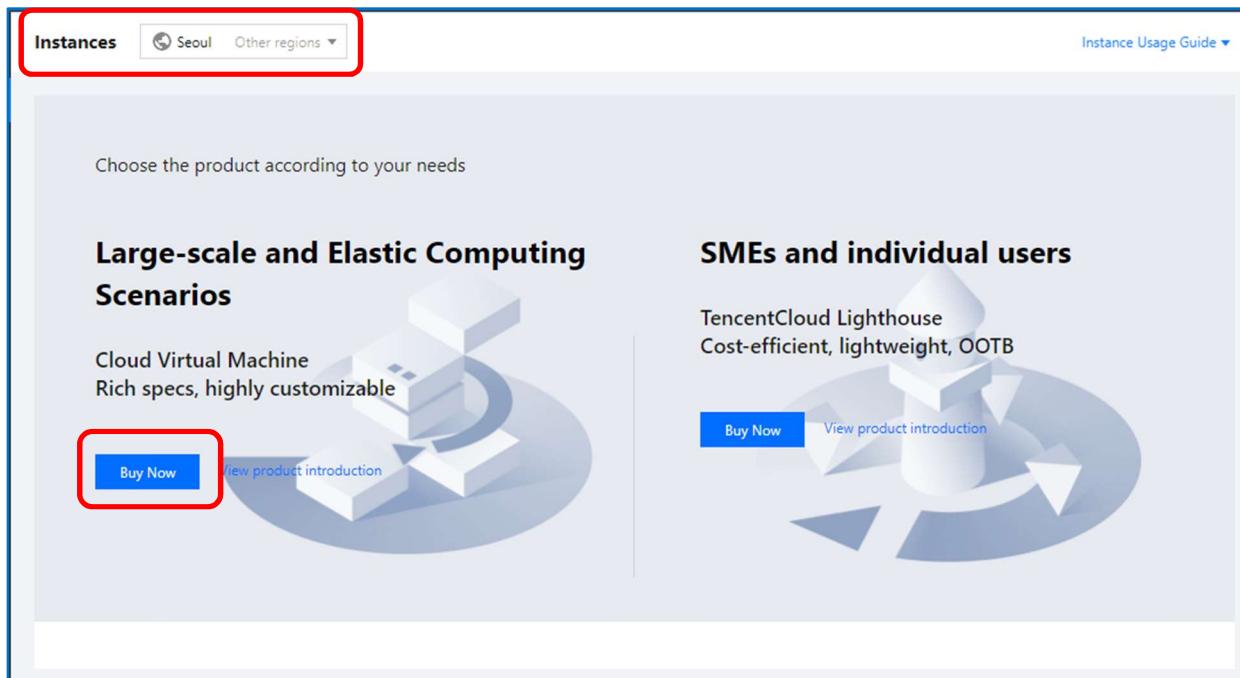
The screenshot shows the Tencent Cloud Cloud Virtual Machine Instances dashboard. The left sidebar has a red box around the 'Instances' link. The main content area displays two product scenarios: 'Large-scale and Elastic Computing Scenarios' featuring 'Cloud Virtual Machine' with 'Rich specs, highly customizable' and 'Buy Now' and 'View product introduction' buttons; and 'SMEs and individual users' featuring 'TencentCloud Lighthouse' with 'Cost-efficient, lightweight, OOTB' and 'Buy Now' and 'View product introduction' buttons.

6. 먼저 해당 Instance가 어느 Region에 생성되는지 설정해야 하는데, 기본값은 현재 [Guangzhou]에 맞춰져 있다. [Guangzhou Other regions]를 클릭하여 [Seoul] 리전으로 맞춘다.

The screenshot shows the 'Other regions' dropdown menu. It lists several regions in a grid format. The 'Northeast Asia' section is highlighted with a red box, and 'Seoul' is selected. Other regions listed include South China, Hong Kong, Macau and Taiwan (China), US West, South America, East China, Hong Kong, China, Silicon Valley, São Paulo, Shanghai, Northeast Asia, Seoul, Europe, North America, Nanjing, Tokyo, Frankfurt, Toronto, North China region, Southeast Asia, South Asia, Beijing, Singapore, Mumbai, Bangkok, Southwest China, Jakarta, US East, Chengdu, Virginia, and Chongqing.

All regions			
South China	Hong Kong, Macau and Taiwan (China)	US West	South America
Guangzhou	Hong Kong, China	Silicon Valley	São Paulo
East China	Northeast Asia	Europe	North America
Shanghai	Seoul	Frankfurt	Toronto
Nanjing	Tokyo	Northeastern Europe	
North China region	Southeast Asia	South Asia	
Beijing	Singapore	Mumbai	
	Bangkok		
Southwest China	Jakarta	US East	
Chengdu		Virginia	
Chongqing			

7. [Seoul]에 설정되었다. 이제 Instance를 생성하기 위한 2가지 옵션이 보인다. 이번 랙에서는 가상 머신 생성에 대해 학습하기 때문에 2가지 옵션 중 왼쪽 옵션을 선택하기로 한다. [Buy Now] 파란색 버튼을 클릭한다.



Task2. Cloud Virtual Machine 생성하기 – Select basic configurations

1. CVM 생성 페이지이다. 다음의 각 단계별로 진행해 보자. 먼저 [Basic configurations] 섹션에서, [Billing mode]는 과금방법을 선택하는 것이다. [Billing Mode]는 사용한 만큼 지불하는 [Pay as you go](종량제)를 선택한다.

The screenshot shows the 'Cloud Virtual Machine (CVM)' creation interface. At the top, there's a navigation bar with the Tencent Cloud logo and a link to 'Purchase other cloud products'. Below it, the title 'Cloud Virtual Machine (CVM)' is displayed. Underneath, the 'Custom configuration' tab is selected. A progress bar indicates '1 Select basic configurations' and '2 Configure network and host'. An 'Instructions' section states: 'Tencent Cloud launches 2C2G configuration for standard CVM instances in some regions. The same price is applied to the same instance with either 1C2G or 2C2G configuration in the same AZ.' The 'Basic configurations' section contains two options: 'Billing mode' (highlighted with a red box) and 'Spot instances'. The 'Billing mode' section includes a 'Pay-as-you-go' icon, a 22% off offer for regions outside the Chinese mainland, and a note about fluctuating demands. The 'Spot instances' section includes an icon of a server, a 95% off offer for Hong Kong and other regions outside China, and a note about being automatically repurchased by Tencent.

2. [Region]은 [Seoul]에 맞추고, [Availability zone]은 [Seoul Zone 2]을 선택한다.

The screenshot shows the region and availability zone selection interface. It features a header with tabs for 'Region', 'China', 'Asia Pacific' (which is selected), and 'Europe and America'. Below this, a row of buttons for 'Seoul' (highlighted with a red box), 'Tokyo', 'Singapore', 'Bangkok', 'Jakarta' (with a 'New' badge), and 'Mumbai'. A note below says: 'Tencent Cloud products in different regions cannot communicate via a private network. The region cannot be changed after the creation. Please select the region closest to your customers to reduce access latency.' In the 'Availability zone' section, buttons for 'Random', 'Seoul Zone 1', and 'Seoul Zone 2' (also highlighted with a red box) are shown. A note below says: 'Tencent Cloud products in different AZs in the same region can communicate via a private network.'

3. 두번째 [Instance configurations] 섹션에서는 CPU와 Memory등을 선택할 수 있다. 기본값은 Standard Model이다. [Instance] > [Instance family]는 [Standard]를 선택하고 [Model]에서는 [Standard S5]를 선택한다. 기본적으로 [Standard S5]가 보이지 않기 때문에 [Show all]을 클릭한 후, [Standard S5]를 선택한다.

The screenshot shows the 'Instance configurations' section of a cloud provider's interface. At the top, there are filters for 'All CPU cores', 'All MEMs', and 'All architectures', along with a 'Reset' button. Below these, the 'Instance family' dropdown is set to 'Standard' (highlighted with a red box). In the 'Model' dropdown, 'Standard S5' is also highlighted with a red box. The 'Selected model' field at the bottom shows 'S5 SMALL1 (Standard S5, 1C1G)'. A note at the bottom right says 'The current selected AZ is Seoul Zone 2. To increase the quota, please apply in the console.'.

4. 위에서 선택한 [Standard S5]는 기본적으로 1Core vCPU에 1GB의 Memory를 가진다. 이번 랩에서는 Windows Server의 가상머신을 사용하기 때문에 2Core vCPU, 2GB의 Memory를 사용하기로 한다. 스크롤 다운하여 [Specifications]를 S5.MEDIUM2를 선택한다.

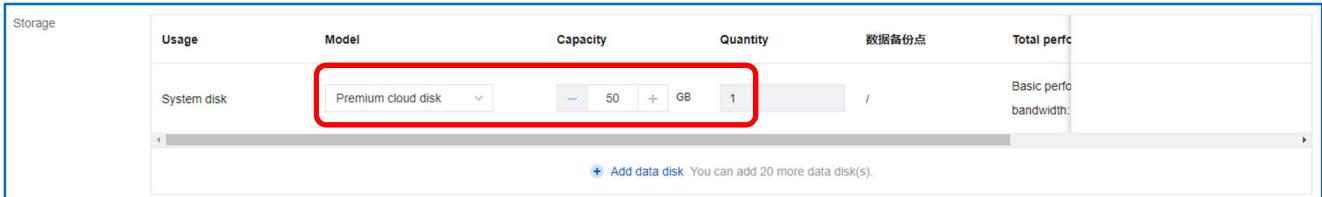
The screenshot displays a table of instance specifications. The columns include Instance, Specifications, vCPU, MEM, Processor, Private network bandwidth, Packets in/out, Supported AZ, and Reference fee. The 'Specifications' column lists options like S5.SMALL1, S5.SMALL2, S5.SMALL4, S5.MEDIUM2, S5.MEDIUM4, and S5.MEDIUM16. The row for 'S5.MEDIUM2' is highlighted with a red box. The table shows 18 total items at the bottom.

Instance	Specifications	vCPU	MEM	Processor	Private network bandwidth	Packets in/out	Supported AZ	Reference fee
Standard S5 (22% off)	S5.SMALL1	1Core	1GB	Intel Xeon Cascade Lake 8255C...	1.5Gbps	250K PPS	20 AZ(s)	0.01USD/hour
Standard S5 (22% off)	S5.SMALL2	1Core	2GB	Intel Xeon Cascade Lake 8255C...	1.5Gbps	250K PPS	28 AZ(s)	0.02USD/hour 0.03 USD/hour
Standard S5 (22% off)	S5.SMALL4	1Core	4GB	Intel Xeon Cascade Lake 8255C...	1.5Gbps	250K PPS	29 AZ(s)	0.05USD/hour 0.08 USD/hour
Standard S5 (22% off)	S5.MEDIUM2	2Core	2GB	Intel Xeon Cascade Lake 8255C...	1.5Gbps	300K PPS	30 AZ(s)	0.02USD/hour 0.03 USD/hour
Standard S5 (22% off)	S5.MEDIUM4	2Core	4GB	Intel Xeon Cascade Lake 8255C...	1.5Gbps	300K PPS	31 AZ(s)	0.04USD/hour 0.06 USD/hour
Standard S5 (22% off)	S5.MEDIUM16	2Core	8GB	Intel Xeon Cascade Lake 8255C...	1.5Gbps	300K PPS	31 AZ(s)	0.09USD/hour
Total 18 items								

5. 서버 이미지를 선택하는 순서이다. [Public image]의 목록에서 Windows, 64-bit를 선택하고 [Windows Server 2022 DataCenter 64bit EN]를 선택한다.

The screenshot shows the 'Image' selection page. It has tabs for 'Public image', 'Custom image', and 'Shared image'. Under 'Public image', there are icons for OpenCloudOS, TencentOS, CentOS, and Windows. The 'Windows' icon is highlighted with a red box. Below the images is a dropdown menu containing 'Windows Server 2022 DataCenter 64bit EN', which is also highlighted with a red box. At the bottom, there are 'Reminders' and 'Instructions' sections.

6. [Storage]에서 [Premium cloud disk]를 선택하고, 용량은 기본 용량 [50GB]를 사용하기로 한다.

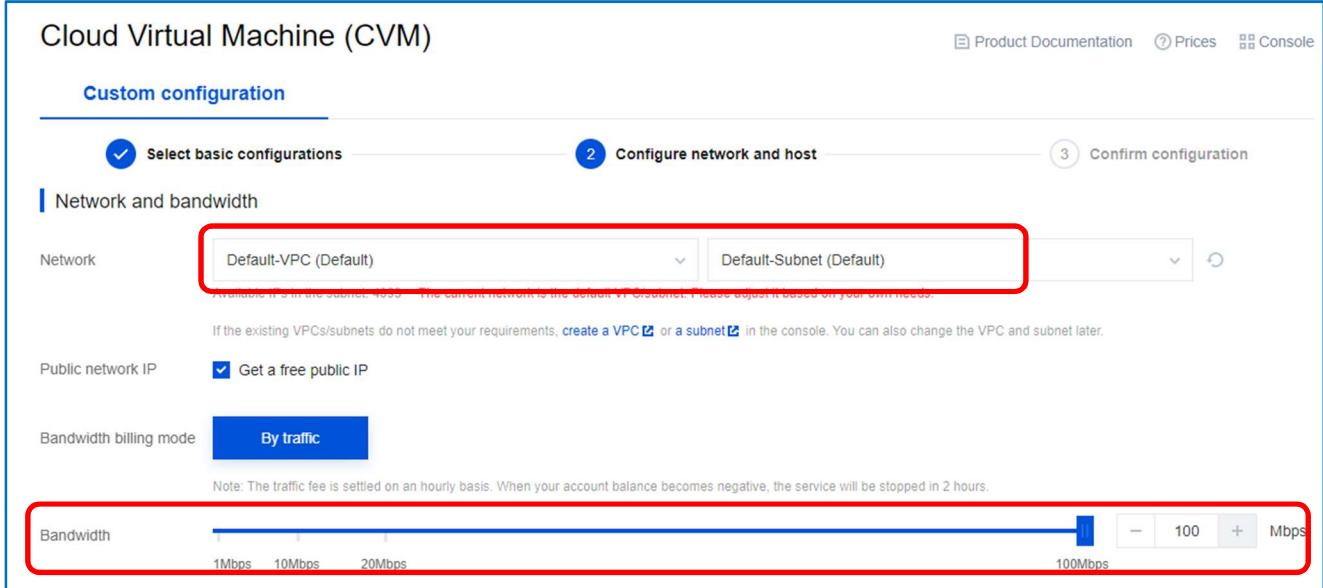


7. 페이지를 스크롤 다운하여 첫번째 설정 단계를 확인한다. 그리고 [Next: Configure network and host] 파란색 버튼을 클릭한다.

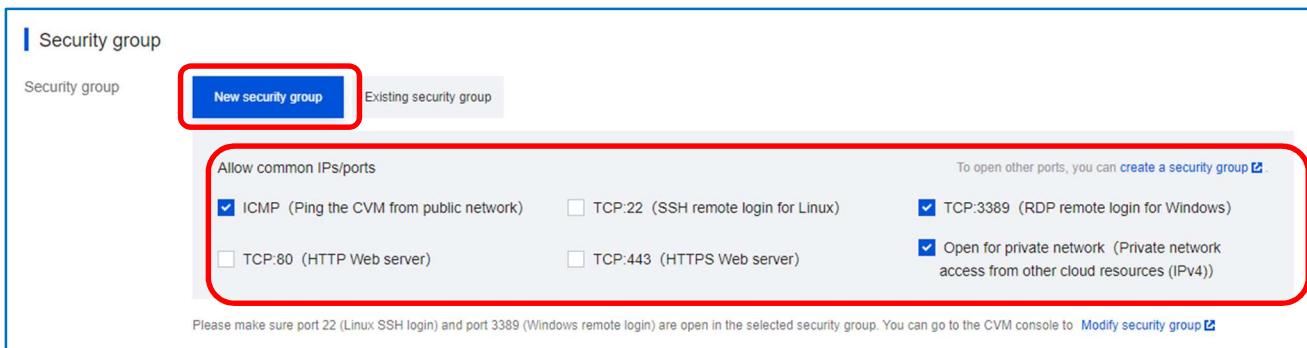


Task3. Cloud Virtual Machine 생성하기 – Configure network and host

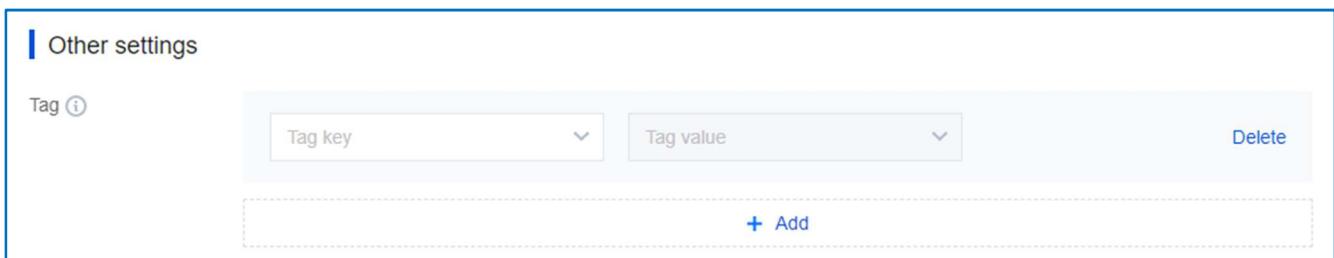
1. [Network and bandwidth] 섹션에서, [Network]는 기본값 그대로 [Default-VPC(Default)]와 [Default-Subnet(Default)]를 선택한다. 또한 [Public network IP] 역시 기본값 그대로 [Get a free public IP]가 체크되어 있는지 확인하고, [Bandwidth]는 최대 100Mbps로 설정한다.



2. [Security group] 섹션에서, 보안그룹을 새로 설정하기 위해 [New security group]를 선택하고, [Allow common IPs/ports]에서 ICMP, TCP:3389, Open for pri...만 선택한다.



3. [Other settings] 섹션에서, [Tag]는 관리 편의성을 위해 특정 문자열을 태깅하는 옵션이다. 이번 Lab에서는 태그 없이 진행하기로 한다.



4. [Instance name]은 영문으로 입력한다. 여기서는 예제로 **lab1-cvmXX(여기서 XX는 계정번호를 의미)**으로 입력하기로 한다. 128자리까지 인스턴스 이름으로 지정할 수 있다.

Instance name lab1-cvm00

Supports batch sequential naming or pattern string-based naming. Up to 128 characters. 118 more characters are allowed.

5. [Login methods]는 로그인 방법을 설정하는 것이다. 이번 랩에서는 [Set Password]를 선택한다. Windows Server인 경우 [Login name]은 자동으로 Administrator이다. 이 계정은 Windows Server의 관리자 계정이다. [Password]에 관리자 계정의 비밀번호를 입력하고, 한 번 더 [Confirm Password]에 같은 비밀번호를 입력한다. 관리자 비밀번호는 다음의 패스워드 복잡성을 만족해야 한다.

- ① 길이는 12 ~ 30자이다.
- ② /로 시작하지 않는다.
- ③ 적어도 3가지(영문대소문자, 숫자, 특수문자) 이상 포함되어야 한다.

Login methods Set password Reset password after creation

Login name Administrator

Password Confirm password

Note Keep your password safe. Reset the password in the CVM console if necessary. Note that if you choose "Custom Password", the instance cannot be saved as a launch template.

6. 무료로 사용할 수 있는 [Security Reinforcement]와 [Cloud Monitoring] 서비스를 설정한다. 이번 Lab에서는 기본사항을 그대로 체크된 상태로 사용하기로 한다. [Scheduled Termination] 역시 필요하지 않기 때문에 기본 해제 상태 그대로 진행한다.

Termination protection Prevent instances from being accidentally terminated in the console or via API

Security services Enable for free
Install the Cloud Workload Protection agent and activate CWP Basic for free

Cloud Monitor Enable for free
FREE cloud monitoring, analysis, alarming, and server monitoring metrics (component installation required)

Scheduled termination Enable scheduled termination
Enable it to terminate the CVM instance at the specified time

7. [Advanced Settings(Hostname, CAM role, Placement group, Custom data)] 링크를 클릭하면 숨겨진 여러가지 설정 화면이 나타난다. [Hostname]에 lab1-cvmXX(여기서 XX는 계정번호를 의미)을 입력한다. 나머지 값들은 기본값 그대로 이용한다. [Placement group]은 재해복구를 위해 배치 방법을 설정하는 옵션이다. 재해복구가 필요하지 않으니 [Placement group] 체크박스는 해제하고 진행하기로 한다.

Advanced settings (hostname, CVM role, placement group, custom data) ▾

Hostname Supports batch sequential naming or pattern string-based naming
2-15 characters, including uppercase and lowercase letters, numbers, hyphens “-” and dots “.”. It supports the (R:number) format, but colons “:” and braces “[]” are not allowed. Hyphens “-” and dots “.” cannot be used consecutively, and cannot be placed at the beginning or end of the hostname. A number-only password is not allowed

Project

CAM role [Create a CAM role](#)

Placement group Add the instance to a placement group
If the existing placement groups are not suitable, please [create a new one](#).

Custom data
(Optional) It's used for configuration while launching an instance. It supports the PowerShell format. The size of original data is up to 16 KB. Shell script should start with #!, following by a path pointed to the parser to read the script (usually /bin/bash).

The above input is encoded with base64.

8. 페이지를 스크롤다운하여 다음 그림에서 [Next: Confirm configuration] 파란색 버튼을 클릭하여 다음 단계를 진행한다.

Selected S5.MEDIUM2 (Standard S5, 2C2G)
Configuration fee 0.05USD/hour Bandwidth fee 0.12USD/GB Back [Next: Confirm configuration](#)

Quantity

Task4. Cloud Virtual Machine 생성하기 – Confirm configuration

1. [Confirm Configuration] 화면에서는 지금까지 선택한 옵션들을 일목요연하게 보여준다. 설정의 마지막 화면이다. 각각의 내용을 확인하고 수정이 필요하면 [Edit] 링크를 클릭하여 수정하면 된다.

The screenshot shows the 'Cloud Virtual Machine (CVM)' configuration interface. At the top, there are three tabs: 'Select basic configurations' (marked with a checkmark), 'Configure network and host' (marked with a checkmark), and 'Confirm configuration' (marked with a checkmark). Below these tabs, there are three main sections: 'Selected configurations', 'Network and security group', and 'Other settings'. The 'Selected configurations' section contains fields for CVM billing mode (Pay-as-you-go), Region (Seoul), Availability zone (Seoul Zone 2), Instance (S5.MEDIUM2), Image (Windows Server 2022 DataCenter 64bit EN | 50GB), and Data disk (Not set). The 'Network and security group' section contains fields for Network (vpc-jpt0erk0), Subnet (subnet-n4h1p26t), Public network (Purchase IP), and Network billing mode (By traffic | 100Mbps). The 'Other settings' section contains a 'Set password' field. There are 'Edit' links next to each section header.

2. 설정을 마치기 위해 [Terms and Agreement] 체크박스에 체크하고, [Enable] 파란색 버튼을 클릭한다.

The screenshot shows a configuration summary page. It includes a 'Generate API Explorer best practice scripts' button, a 'Terms and Agreement' checkbox labeled 'I have read and agree to "Tencent Cloud Service Terms"', and a summary of selected instance details: Selected S5.MEDIUM2 (Standard S5, 2C2G), Quantity 1, Configuration fee 0.05 USD/hour, Bandwidth fee 0.12 USD/GB. A red box highlights the 'Terms and Agreement' checkbox. Another red box highlights the blue 'Enable' button at the bottom right.

3. 잠시 시간이 흐른 뒤, Instance가 생성되면 다음 그림과 같이 새로운 인스턴스가 만들어진 것을 볼 수 있다.

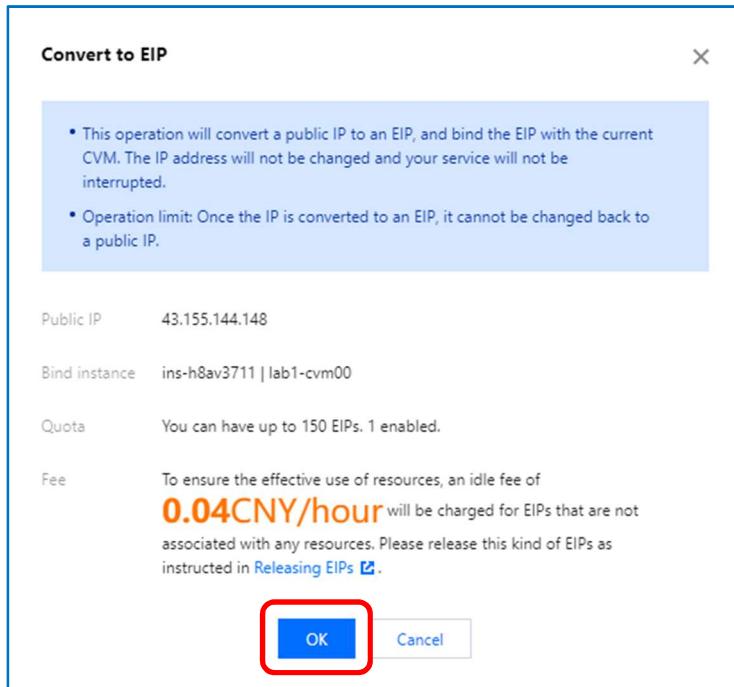
The screenshot shows the 'Instances' list page. It displays a single instance named 'ins-7hosz3q New lab1-cvm00' in the 'Project DEFAULT PRO...' project. The instance is in a 'Running' state, located in Seoul Zone 2, Standard S5, with 2-core 2GB 100Mbps System disk/Premium Cloud Disk, and a Primary IPv4 of 150.109.240.28 (Public). It was created at 2024-01-23 08:43:14. The configuration fee is 0.05 USD/hour and bandwidth fee is 0.12 USD/GB. A red box highlights the instance row.

Task5. EIP 설정하고 Windows Server Instance에 연결하기

- EIP는 고정 IP를 설정하는 것이다. 기본적으로 제공되는 Public IP는 시스템 재 부팅할 때, 다른 IP주소로 변경될 수 있다. 따라서 고정 IP로 설정하려면 EIP를 구매하고 설정해야 한다. 방금 생성한 Instance에서 [Primary IPv4]의 [Public] 오른쪽의 EIP 버튼 을 클릭한다.

The screenshot shows the 'Instances' page in a cloud service provider's interface. A single instance named 'ins-7hosz3q' is listed. The 'Primary IPv4' field for this instance shows '150.109.240.28 (Public)' with an edit icon (). This field is highlighted with a red box.

- [Convert to EIP]창이 나타나면 [OK] 파란색 버튼을 클릭한다.



3. EIP 설정이 성공적으로 마쳐지면 방금 생성한 인스턴스의 [Primary IPv4]의 Public IP가 EIP로 변경된 것을 볼 수 있다.

Result found for Project:DEFAULTPROJECT Back to previous						
<input type="checkbox"/> ins-7hosz3q5 lab1-cvm00			Seoul Zone 2	Standard S5	2-core 2GB 100Mbps System disk:Premium Cloud Disk Network:Default-VPC	150.109.240.28 (EIP) 172.29.16.15 (Private)
Pay-as-you-go Created at 2024-01-23 08:43:14						

4. 인스턴스와 연결하기 위해 방금 생성한 인스턴스를 [Instances] 목록에서 링크 클릭한다.

Result found for Project:DEFAULTPROJECT Back to previous						
<input type="checkbox"/> ins-7hosz3q5 lab1-cvm00			Seoul Zone 2	Standard S5	2-core 2GB 100Mbps System disk:Premium Cloud Disk Network:Default-VPC	150.109.240.28 (EIP) 172.29.16.15 (Private)
Pay-as-you-go Created at 2024-01-23 08:43:14						

5. 방금 생성한 Windows Server 인스턴스 요약 페이지이다. 화면 아래쪽의 [EIP]의 IP Address의 버튼을 클릭하여 주소를 복사한다.

lab1-cvm00 Running

The initial login name is Administrator. If you select "Random password" when purchasing the instance, check the password in Message Center. You can reset the password if you forget it.

Log in Shutdown Restart Reset password Terminate/Return More actions Check health status

Basic information ENI Public IP Monitoring Security groups Operation logs Run commands Uploading a file

Instance information

Name	lab1-cvm00	Project	Default Project
Instance ID	ins-7hosz3q5	Tags	None
UUID	b2bab650-09fd-44ca-be0b-f6bcbb48a0c42	Key	None
Instance specification	Standard S5 S5 MEDIUM2	Placement group	None
Instance termination protection	Disabled	Region	Seoul
Role	None	Availability zone	Seoul Zone 2

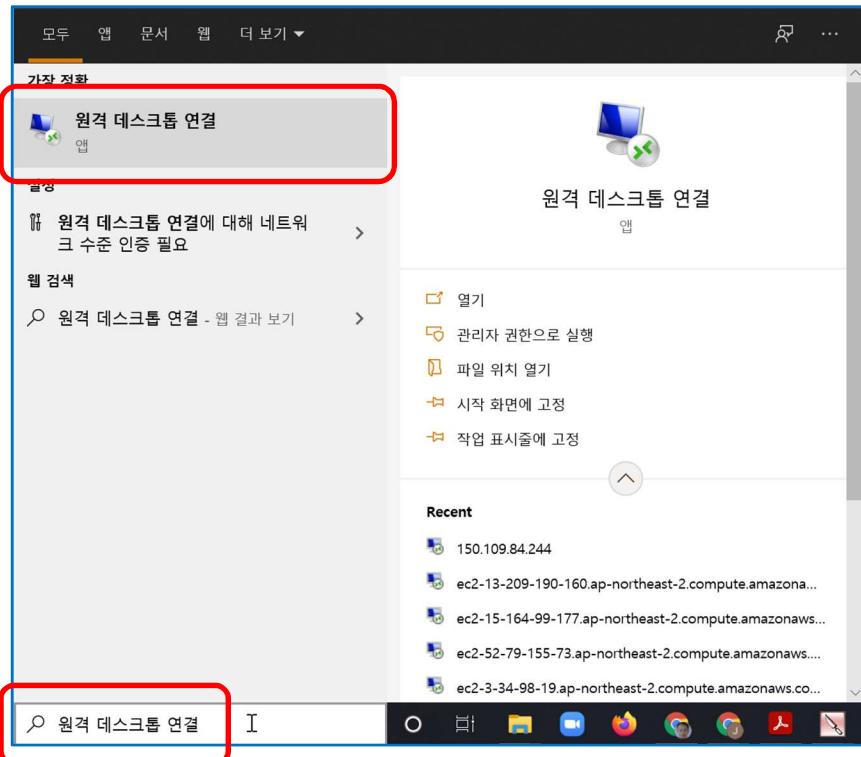
Architecture

```
graph TD; A((ins-7hosz3q5)) --- B((1 security group)); B --- C((1 ENI)); C --- D((Windows Server 2022 DataCenter 64bit EN)); D --- E((System diskdisk-kihabug(lab1-cvm00_SYSTEM_DISK))); E --- F((Premium Cloud Disk, 50GiB)); F --- G((Pay-as-you-go Creation time: 2024-01-23))
```

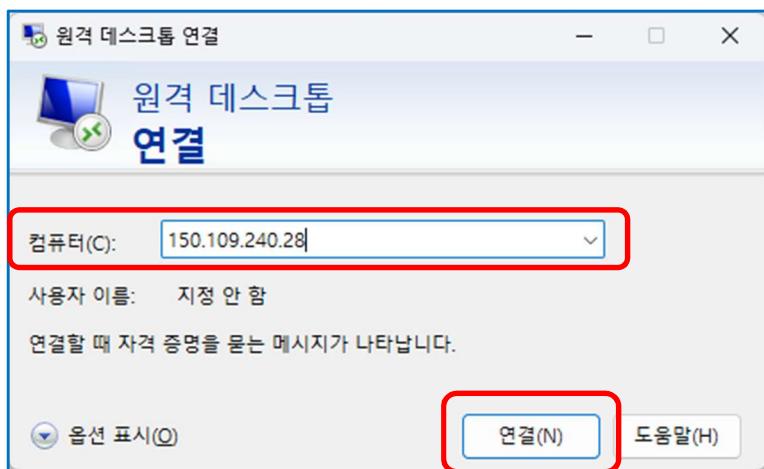
Network information

Network	vpc-pejeujei2(Default-VPC 172.29.0.0/16)	Primary private IPv4	172.29.16.15
Subnet	subnet-60hnnyi1(Default Subnet)	Act as internet gateway	No
EIP	150.109.240.28		

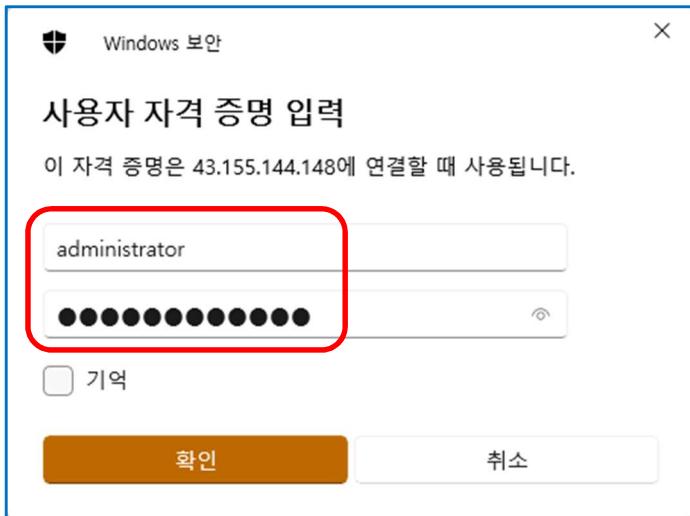
6. 컴퓨터의 시작 버튼 오른쪽의 검색 텍스트박스에서 원격 데스크톱 연결을 입력해서 [원격 데스크톱 연결] 프로그램을 실행한다.



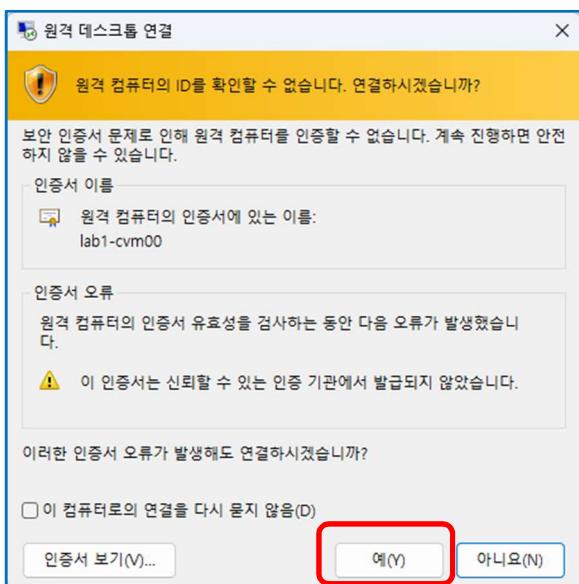
7. [원격 데스크톱 연결] 프로그램이 실행되었다. [컴퓨터(C)]에 방금 Tencent Cloud Instances에서 복사한 EIP 주소를 붙여 넣는다. 그리고 [연결] 버튼을 클릭한다.



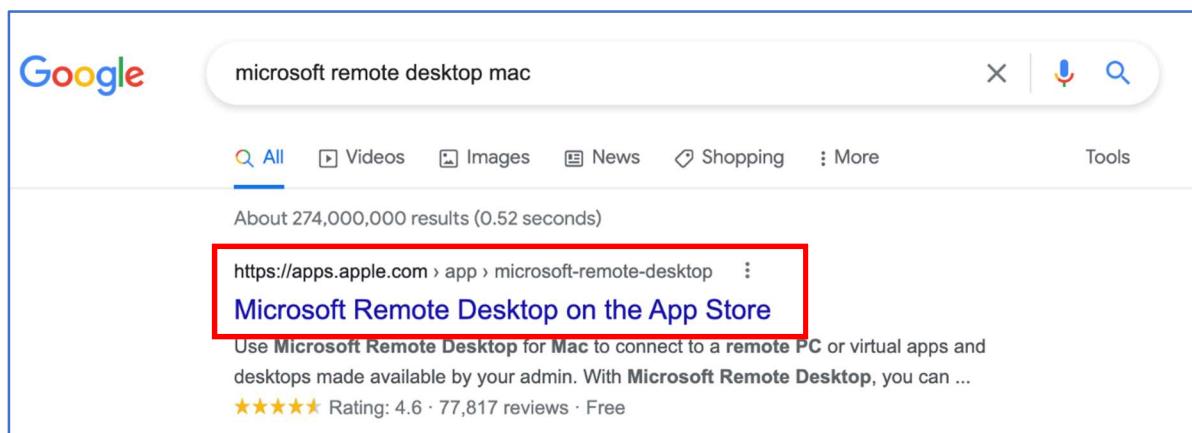
8. [사용자 자격 증명 입력]창에서 첫번째 텍스트 박스는 Windows Server Instance의 관리자 ID인 **administrator**를, 그 다음 텍스트 박스에는 관리자 비밀번호를 입력하고 [확인] 버튼을 클릭한다.



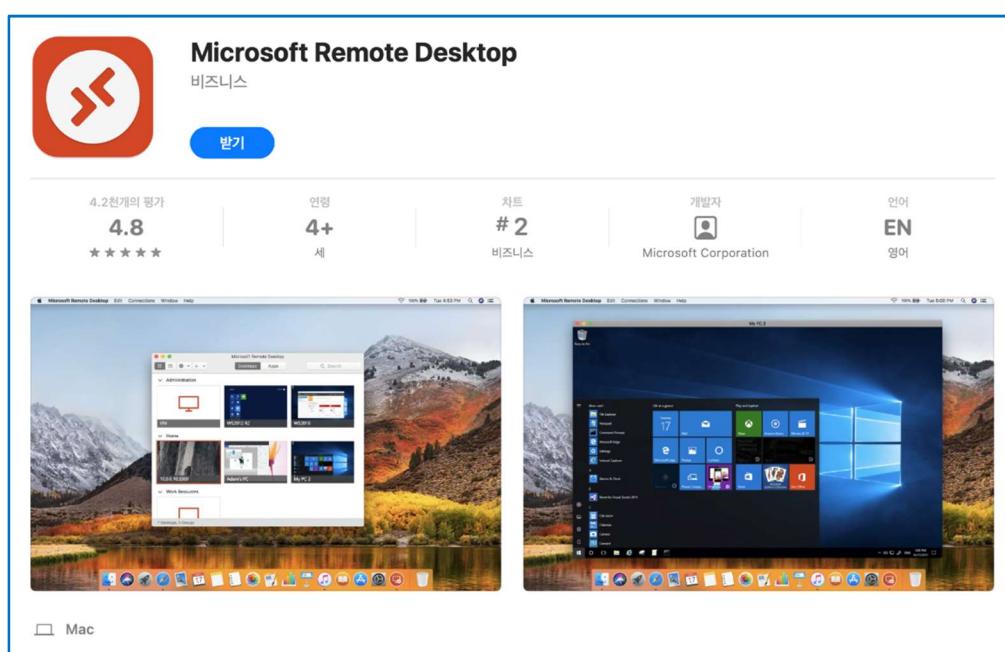
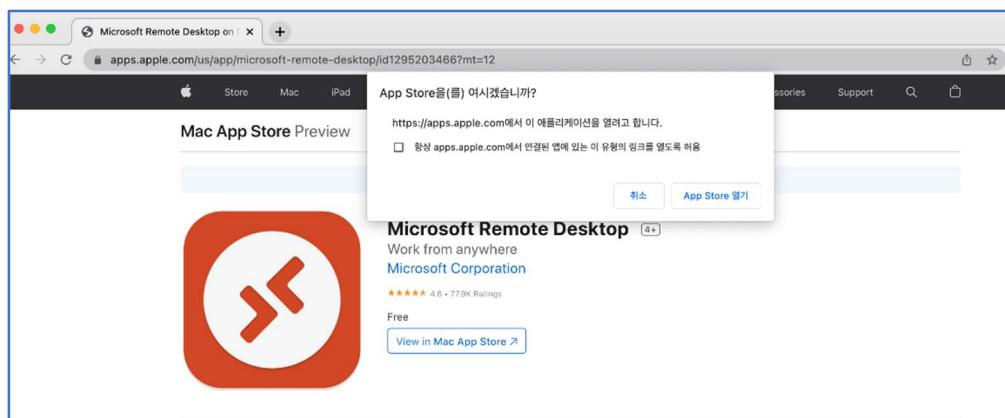
9. [원격 데스크톱 연결]창이 나타나면 [예]를 클릭한다.

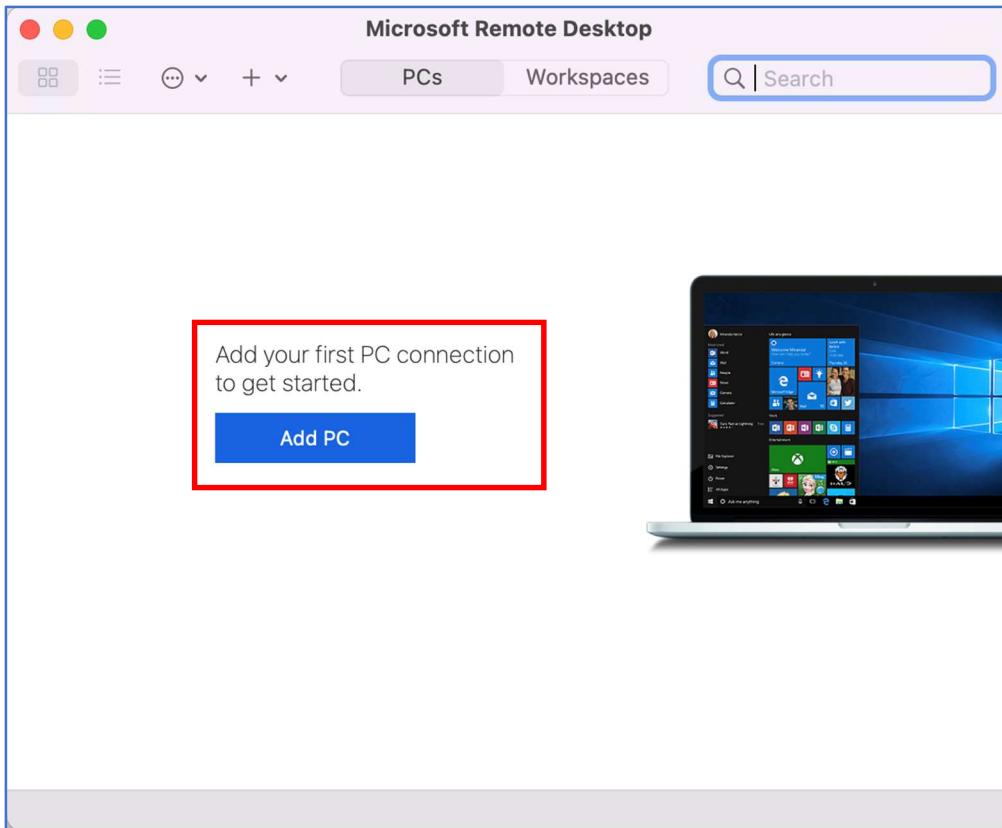


10. 만일 Tencent Cloud의 CVM 인스턴스에 접근하려는 노트북 또는 데스크탑의 OS가 macOS라면 “**Microsoft Remote Desktop**”을 설치하기 위해 검색엔진에서 다음과 같이 “**microsoft remote desktop mac**”으로 검색한다. 만일 Windows를 OS로 사용하면 아래 페이지의 M번으로 이동한다.

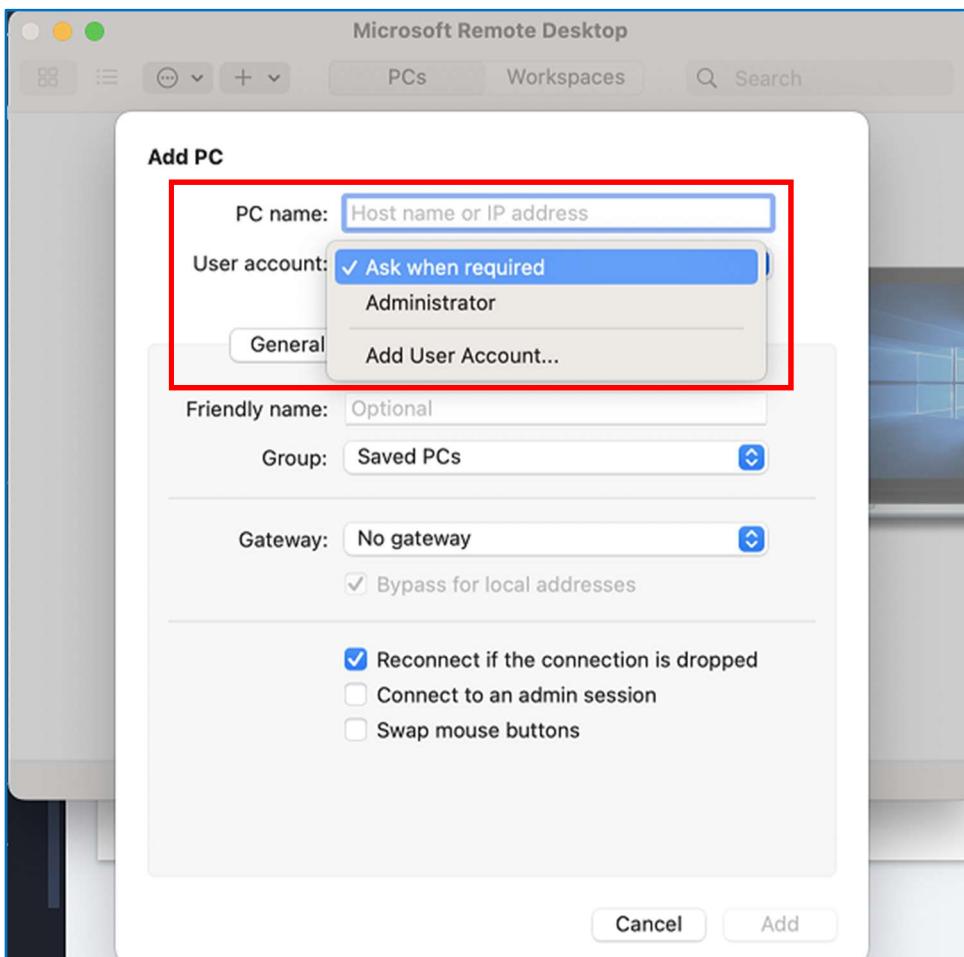


11. 앱 스토어에서 제공하는 앱을 선택해서 설치한다.

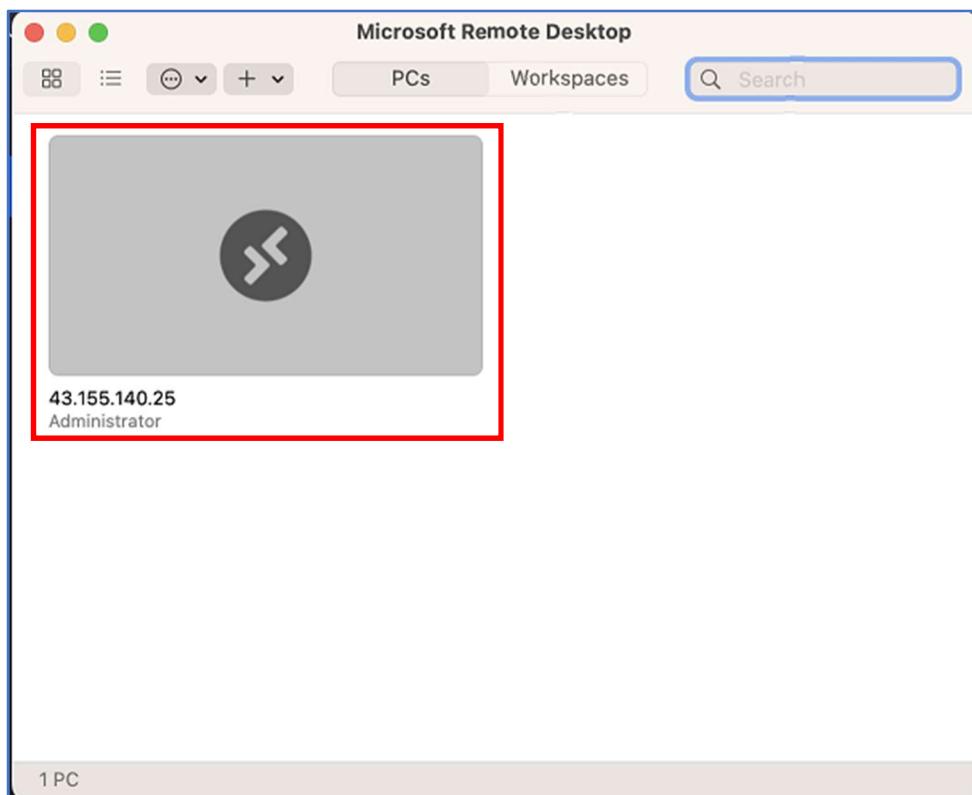




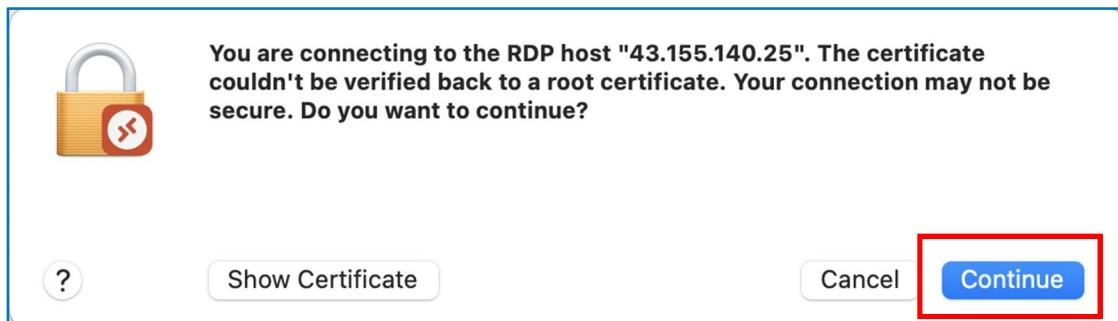
12. [Add PC] 파란색 버튼을 클릭하여 원격서버를 추가한다. [Add PC] 팝업창에서 [PC name]은 CVM의 EIP를 입력하고, [User account]에는 [Add User Account...]을 선택하여 Administrator를 입력한다.



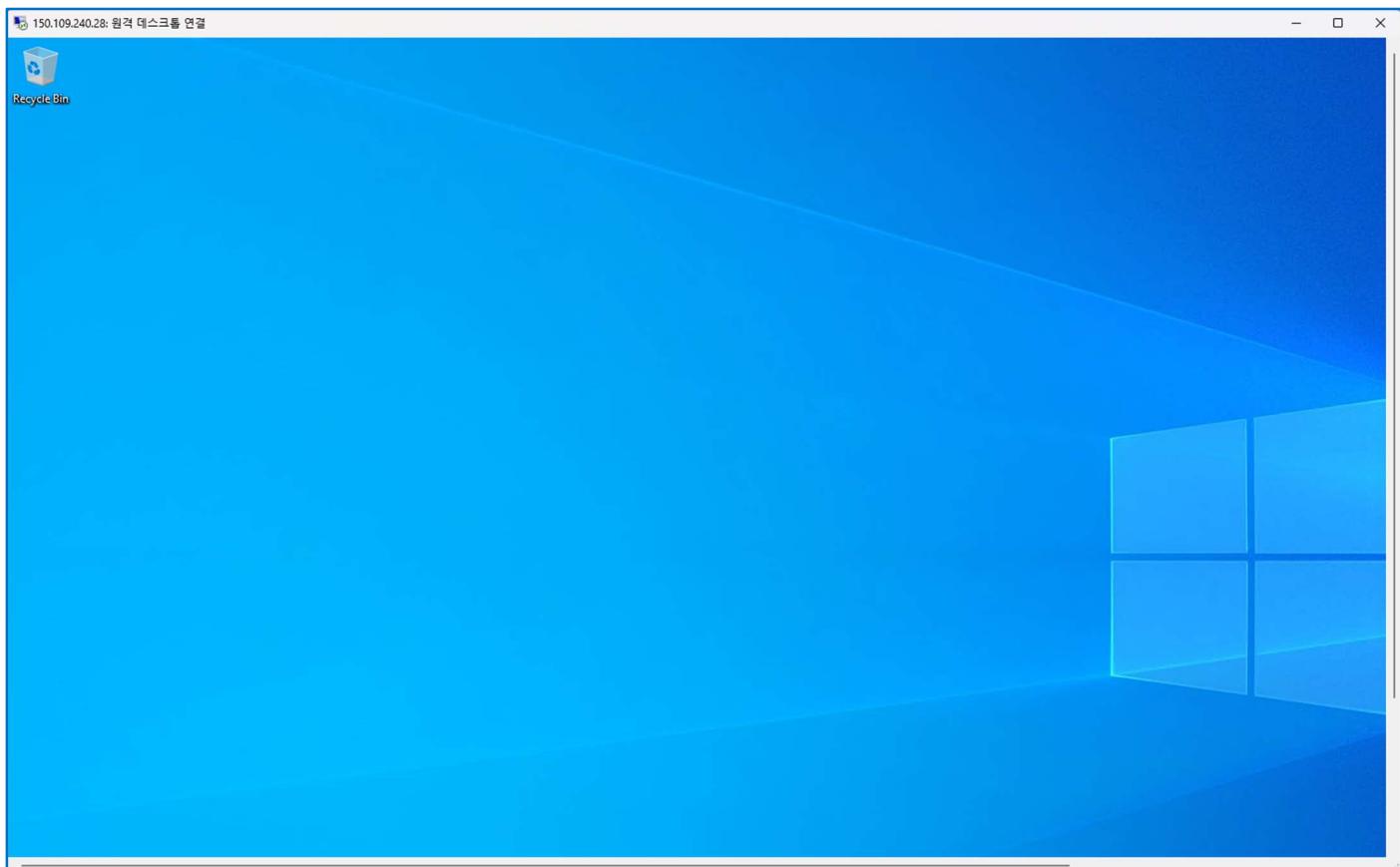
13. 새로 추가된 원격 서버의 아이콘을 더블클릭한다.



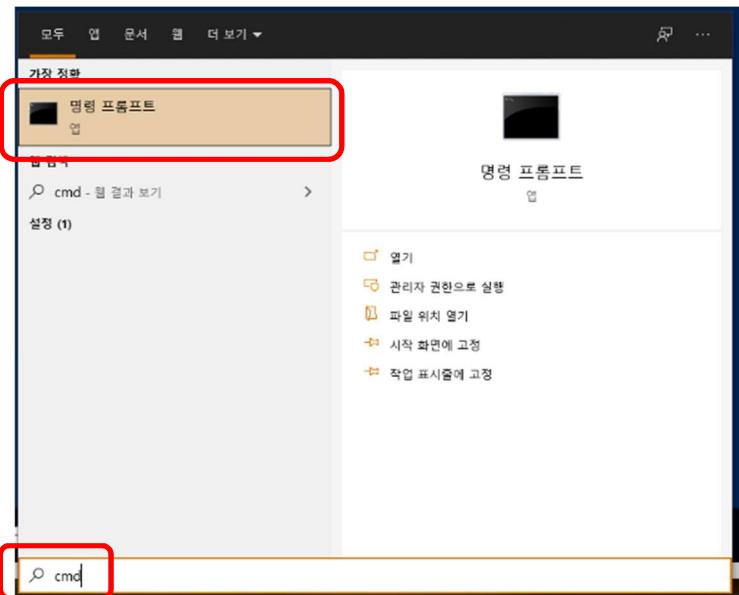
14. 연결 확인 창에서 [Continue]를 클릭한다.



15. 연결에 성공하면 아래의 그림처럼 원격으로 **Windows Server Instance**를 보게 될 것이다.

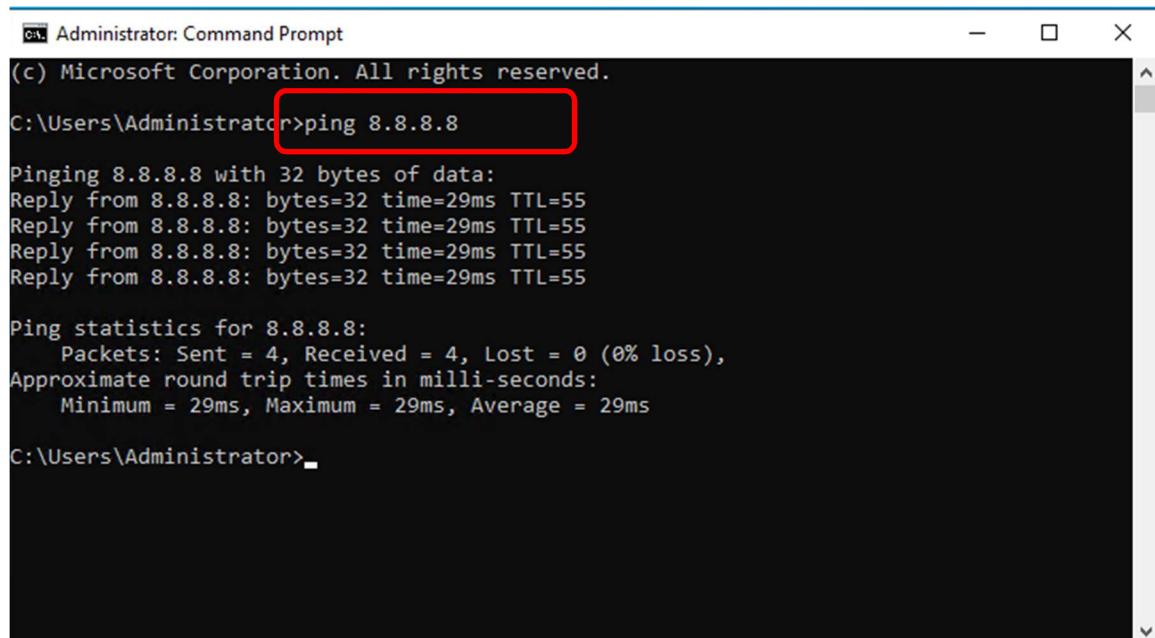


16. 방금 생성한 가상머신의 컴퓨터의 시작 버튼 오른쪽의 검색 창에서 cmd를 입력하여 [명령 프롬프트] 창을 실행한다.



17. [명령 프롬프트]창에서 다음과 같이 **PING test**를 한다. Ping 다음 주소는 **Google DNS** 주소이다.

ping 8.8.8.8



```
Administrator: Command Prompt
(c) Microsoft Corporation. All rights reserved.

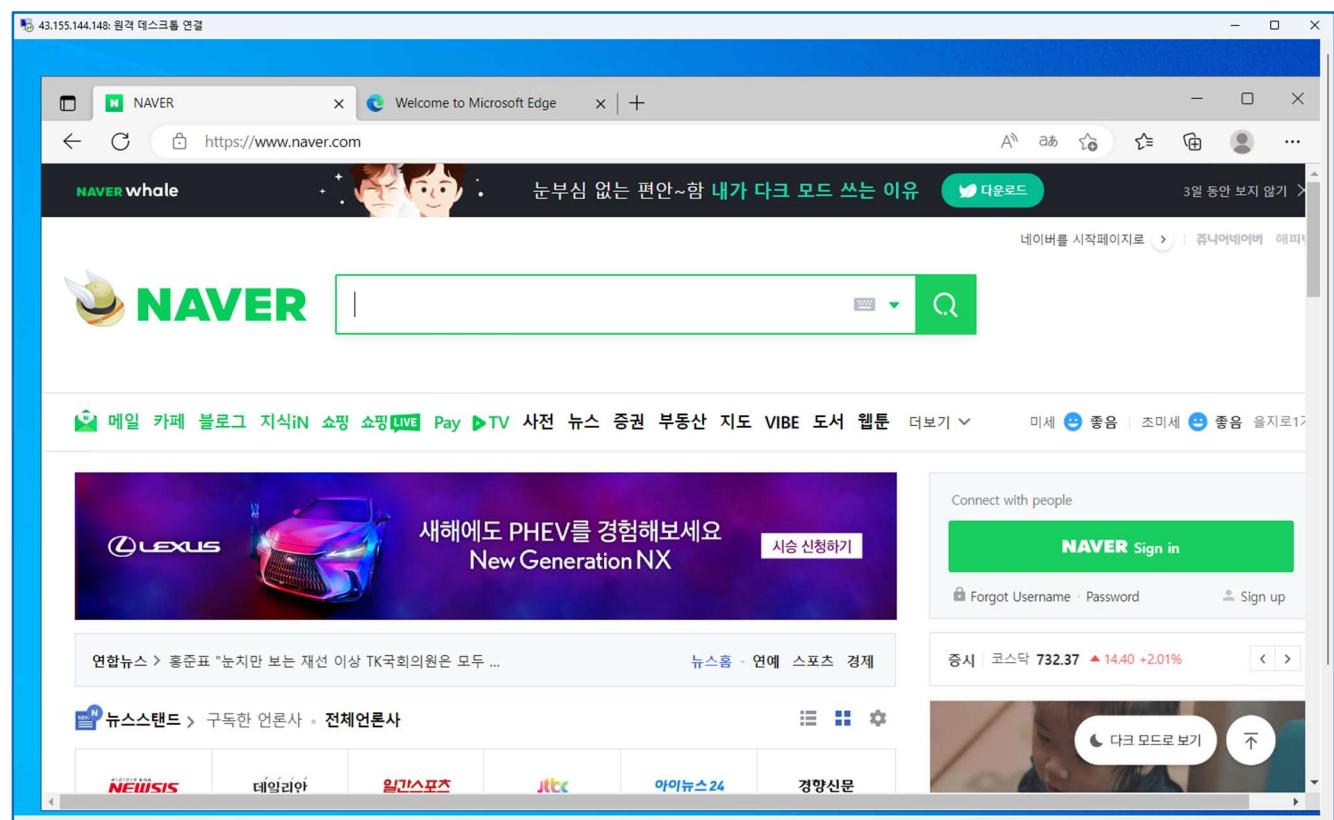
C:\Users\Administrator>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=29ms TTL=55

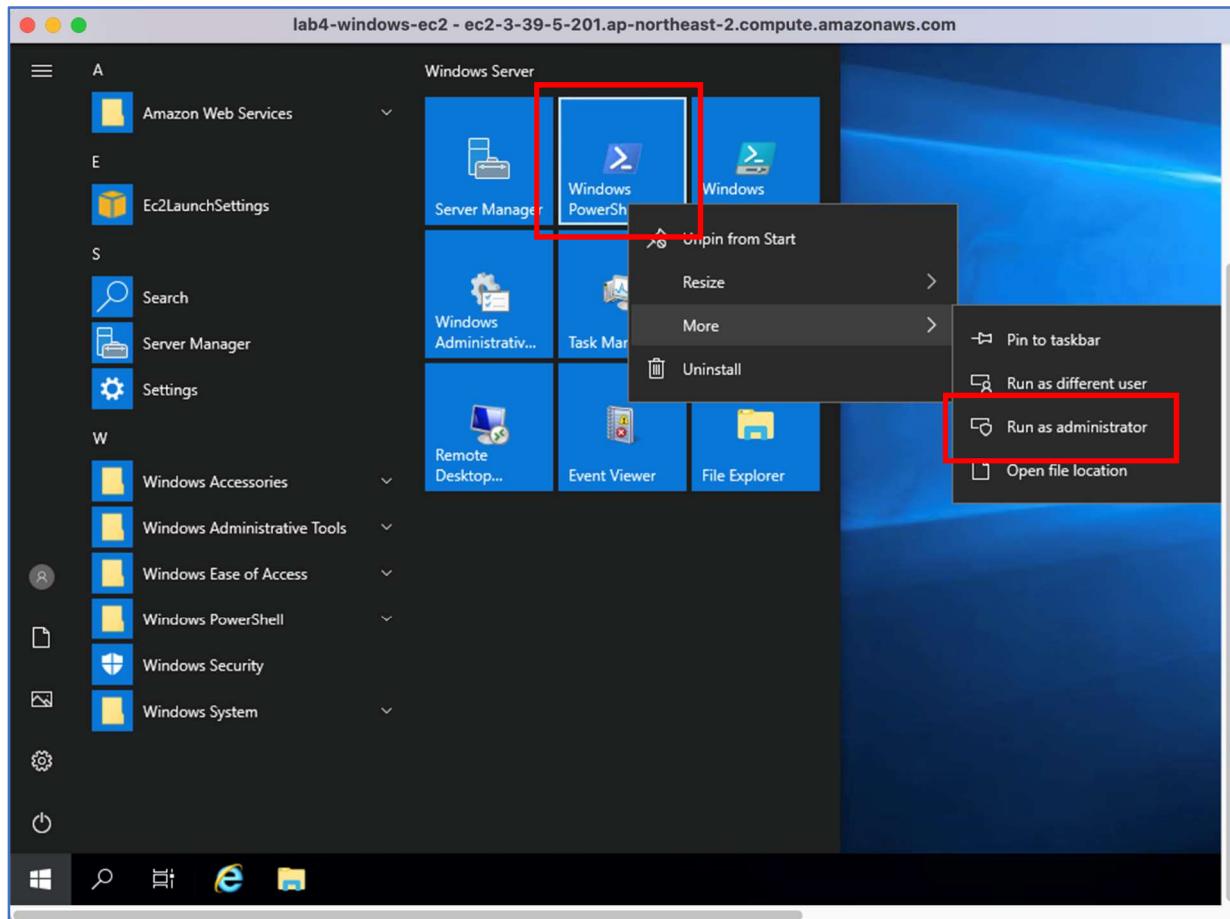
Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 29ms, Maximum = 29ms, Average = 29ms

C:\Users\Administrator>
```

18. 방금 생성한 **Windows Server Instance**가 인터넷이 잘 되는지 인스턴스 안의 **Microsoft Edge Browser**을 실행하여 네이버 사이트(<https://www.naver.com>)로 들어가본다. 이상으로 CVM 설정을 모두 마쳤다.



19. 이번에는 웹 서버를 설치하고 **IIS Welcome** 페이지가 정상적으로 뜨는지 확인한다. 연결된 **Windows Server**에서 **PowerShell**을 실행한다. [시작] 버튼 > [**Windows PowerShell**]에서 마우스 右클릭하여 [**More**] > [**Run as administrator**]를 선택한다.

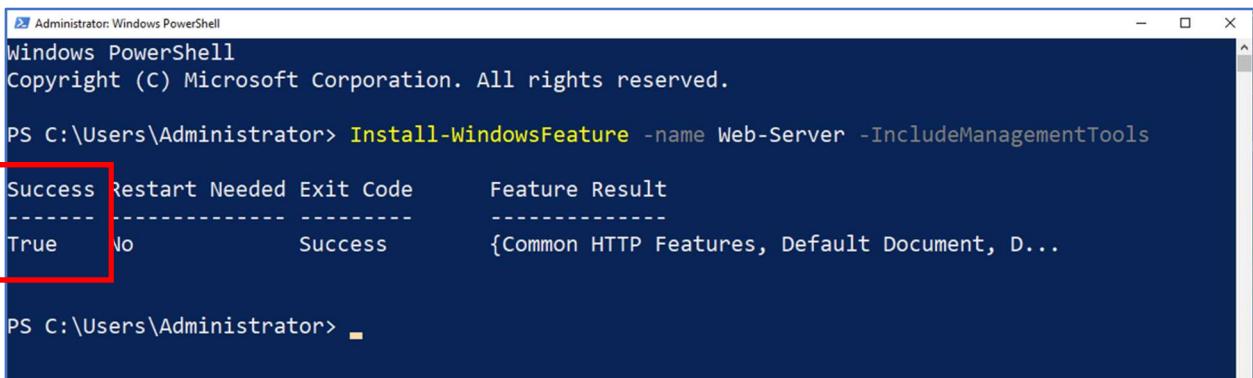


20. PowerShell 프롬프트에서 다음의 명령어를 실행해서 Windows Server에 **Web-Server** 기능을 설치한다.

> **Install-WindowsFeature -name Web-Server -IncludeManagementTools**

A screenshot of a Windows PowerShell window titled 'Administrator: Windows PowerShell'. The window shows the command 'Install-WindowsFeature -name Web-Server -IncludeManagementTools' being typed at the prompt. The background of the window is dark blue.A screenshot of a Windows PowerShell window titled 'Administrator: Windows PowerShell'. The window displays the output of the command 'Install-WindowsFeature -name Web-Server -IncludeManagementTools'. It shows the text 'Start Installation...' followed by a progress bar indicating 89% completion, with a series of yellow 'o' characters filling the bar. The background of the window is teal.

21. 설치가 완료되면 Success 설정이 True로 출력된다. 웹 서버가 정상적으로 설치된 것이다.

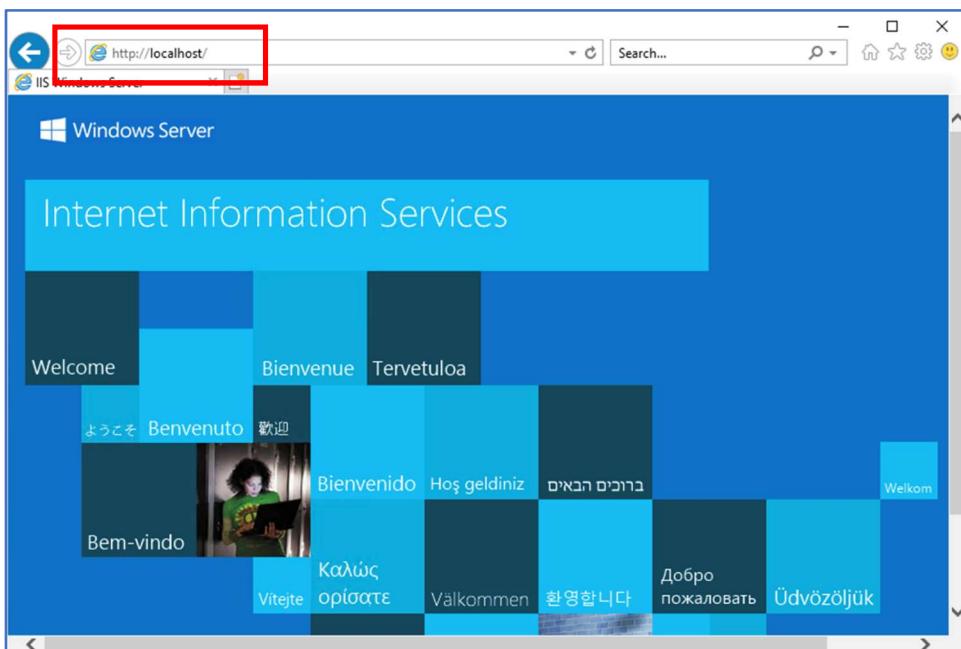


```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

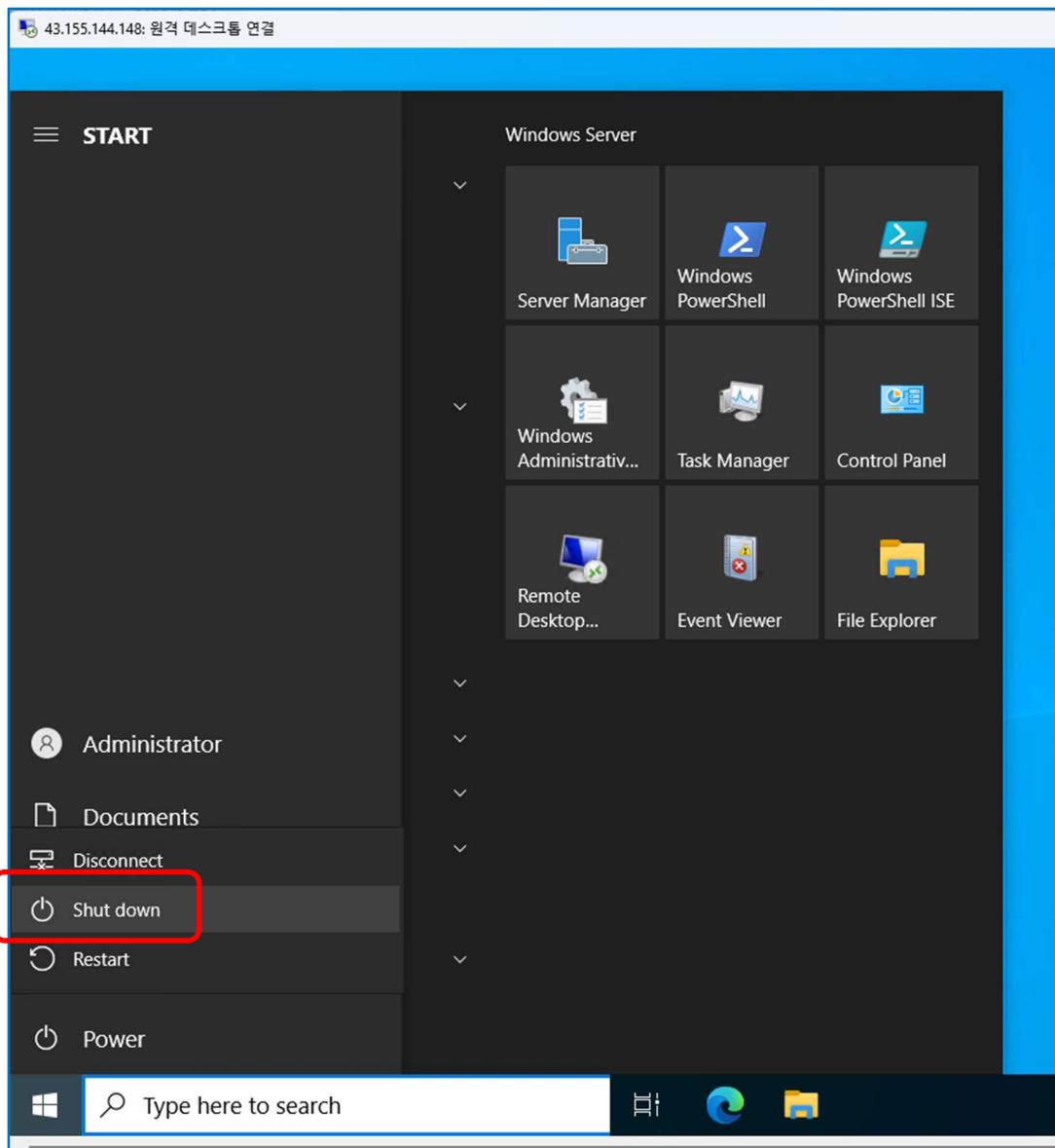
PS C:\Users\Administrator> Install-WindowsFeature -name Web-Server -IncludeManagementTools

Success Restart Needed Exit Code      Feature Result
----- -----           ----- {Common HTTP Features, Default Document, D...
True    No            Success       {Common HTTP Features, Default Document, D...
```

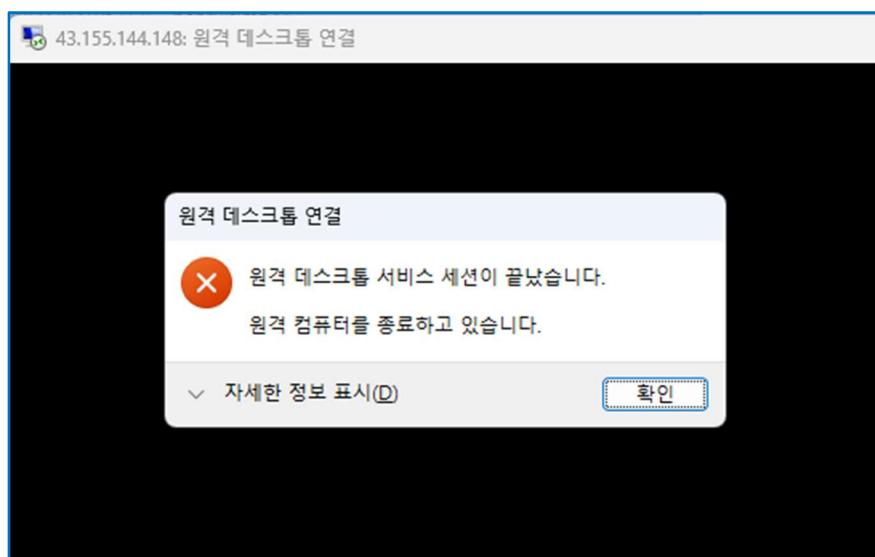
22. 이제 [인터넷 익스플로러]를 열고 주소에 <http://localhost>라고 입력한다. Welcome 화면을 확인할 수 있다.



23. Windows Server Instance를 Shutdown한다.



24. Windows Server Instance와의 연결이 끊어졌다.



25. 다시 Tencent Cloud 창으로 돌아가서, 페이지를 F5를 눌러서 다시 로딩하면 서버가 Shutdown되어 있음을 확인할 수 있다.

The screenshot shows the instance details for 'lab1-cvm00'. At the top, there is a red box around the 'Shut down' button. Below it, the instance status is shown as 'Shut down'. The 'Architecture' section on the right shows the server's placement: 'ins-h8av3711' in 'Northeast Asia(Seoul)/Seoul Zone 2/subnet-n4h1p26t', associated with '1 security group'. A tooltip for the 'Shut down' button indicates it is a 'Windows Server 2022 DataCenter 64bit EN' server.

26. 서버를 다시 시작하려면 [Start Up] 버튼을 클릭하면 된다. 그리고 [Start Up] 팝업창에서 [OK]를 클릭하면 된다.

The screenshot shows the instance details for 'lab1-cvm00'. The 'Start Up' button is highlighted with a red box. Below it, a 'Start Up' confirmation dialog is displayed, showing the selected instance 'lab1-cvm00' and its configuration: 'Standard S5 | \$5.MEDIUM2', 'Windows Server 2022 DataCenter 64bit EN', and 'System disk:disk-67pb86h(lab1-cvm00_SYSTEM_DISK)'. The 'OK' button in the dialog is also highlighted with a red box.

27. 서버를 다시 시작해도 **EIP**가 변경되지 않음을 확인할 수 있다.

Network information	
Network	vpc-peejuei2(Default-VPC 172.29.0.0/16)
Subnet	subnet-6ohhniyl(Default-Subnet)
EIP	150.109.240.28

Task6. Windows Server Instance 삭제 및 EIP Release하기

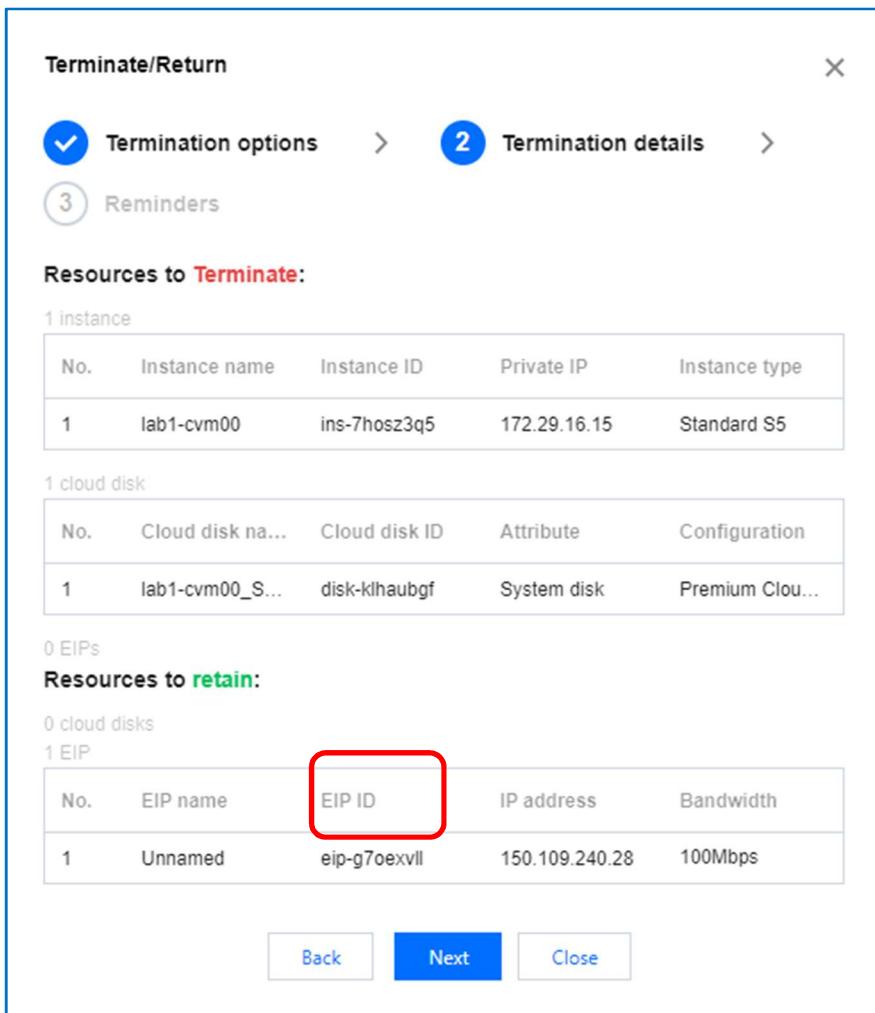
1. Windows Server를 삭제하기 위해 [Terminate/Return] 버튼을 클릭한다.

The screenshot shows the CRM interface for the instance 'lab1-cvm00'. At the top, there are several buttons: Log In, Shutdown, Restart, Reset Password, **Terminate/Return** (which is highlighted with a red box), and More Actions. Below these buttons, there is a message: 'Initial login name: Administrator. You can check the details of the newly created instances in Message Center. If you forgot your password, click Reset password.' Under the 'Basic Information' tab, there are tabs for ENI, Public IP, Monitoring, Security Groups, Operation Logs, Run Commands, and Uploading a file. The 'Instance Information' section displays the Name (lab1-cvm00), Project (Default Project), Instance ID (ins-h8av3711), Tags (None), and Architecture (ins-h8av3711, Northeast Asia(Seoul)).

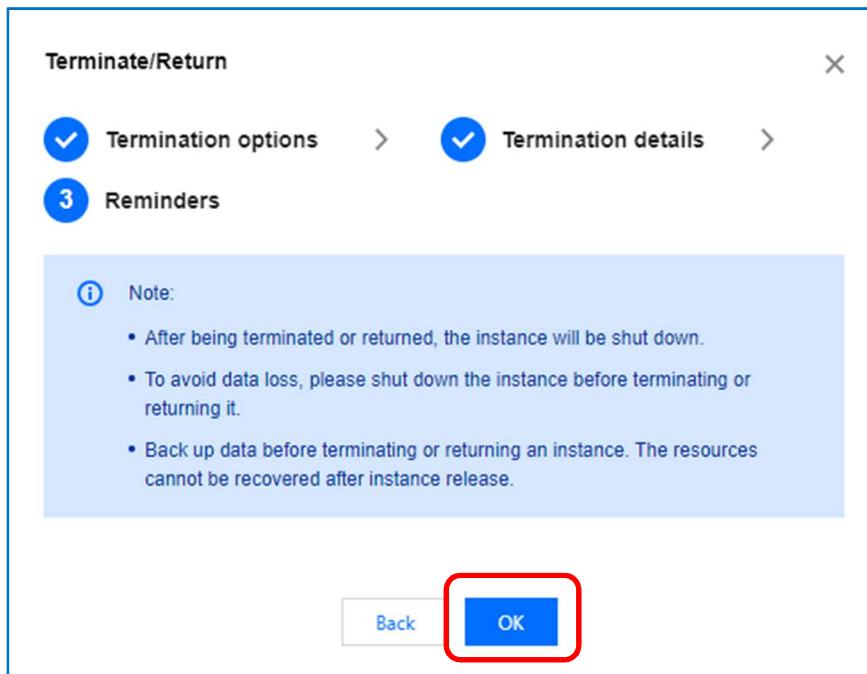
2. [Terminate/Return] 팝업창이 나타난다. 삭제 1번째 단계에서, [Start termination]에는 [Terminate now]를 선택하고 [Release resources]는 [Release now]를 선택한 후, [Next] 파란색 버튼을 클릭한다.

The screenshot shows the 'Terminate/Return' dialog box. It has three steps: 1. Termination options (selected), 2. Termination details, and 3. Reminders. In step 1, the 'Terminate now' option is selected. In step 2, the 'Release now' option is selected. The 'Reminders' section contains a note: 'After termination (immediate release and scheduled termination), all data will be cleared and cannot be recovered. Please back up your data in advance.' and 'After the instance is terminated, the bound EIP will be retained and incur an IP resource fee of 0.04 CNY/hour. You can bind it with cloud resources to avoid IP resource fee, or release it on the EIP console.' In the 'Release resources' section, the 'Release now' option is selected. The 'Next' button is highlighted with a red box.

3. 삭제 2번째 단계에서 [Next] 버튼을 클릭한다.



4. 마지막 단계에서 [OK] 버튼을 클릭한다.



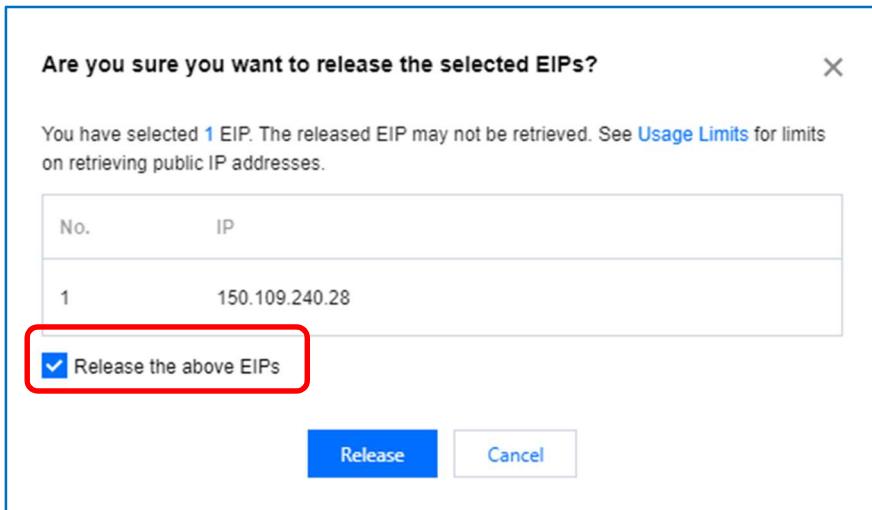
5. Windows Server Instance가 삭제된 후, 이 머신에서 사용했던 EIP도 반납해야 한다. 그렇지 않으면 계속 비용이 Charging 되기 때문이다. [Cloud Virtual Machine] 페이지의 좌측 메뉴에서 [Public IP]를 선택한다. 아래의 그림과 같이 **Not bound**되어 있는 EIP를 확인할 수 있다.

The screenshot shows the Tencent Cloud Public IP/EIP management interface. On the left sidebar, under the 'Cloud Virtual Machine' section, the 'Public IP' option is selected. In the main content area, the 'Public IP/EIP' tab is active, showing the status of public IPs. A message at the top states: 'The public IPs include common IPs and EIPs. Learn more'. Below this are buttons for 'Apply', 'Retrieve IP', 'Release', and 'More'. A search bar and filter tags input field are also present. The table lists public IPs with columns for ID/Name, Status, Type, Public IP, Billing mode, and Bandwidth cap. One row is highlighted with a red box: 'eip-g7oexvll New Unnamed' (Status: Not bound, incurring idle fee). The Public IP is 150.109.240.28, Billing mode is 'Bill by traffic', and Bandwidth cap is 100 Mbps.

6. 해당 항목을 체크하고 [Release] 버튼을 눌러 반납한다.

The screenshot shows the same Public IP/EIP management interface as above, but with a different state. The 'Release' button in the top navigation bar is highlighted with a red box. The table below shows the same list of public IPs, but the row for 'eip-g7oexvll' now has a checked checkbox next to 'ID/Name'. The rest of the information remains the same: Status: Not bound, incurring idle fee, Public IP: 150.109.240.28, Billing mode: Bill by traffic, and Bandwidth cap: 100 Mbps.

7. Release할 것인지 한 번 묻는다. [Release the above EIPs]를 체크하고 [Release] 버튼을 클릭한다.



8. 완전히 Release가 되면 [Public IP/EIP] 페이지에서 항목이 사라진다.

The image shows the "Public IP/EIP" management page. At the top, there are tabs for "Seoul" and "Other regions (0)". Below that, a note says "The public IPs include common IPs and EIPs. [Learn more](#)". There are buttons for "Apply", "Retrieve IP", "Release", and "More". A search bar with placeholder text "Separate keywords with 'T'; press Enter to separate filter tags" and a magnifying glass icon is present. Below the search bar are filters for "ID/Name", "Mo...", "Type", "Status", "Public IP", "Billing mode", "Bandwidth cap", and "Bind resource". A message "No data yet" is displayed at the bottom.