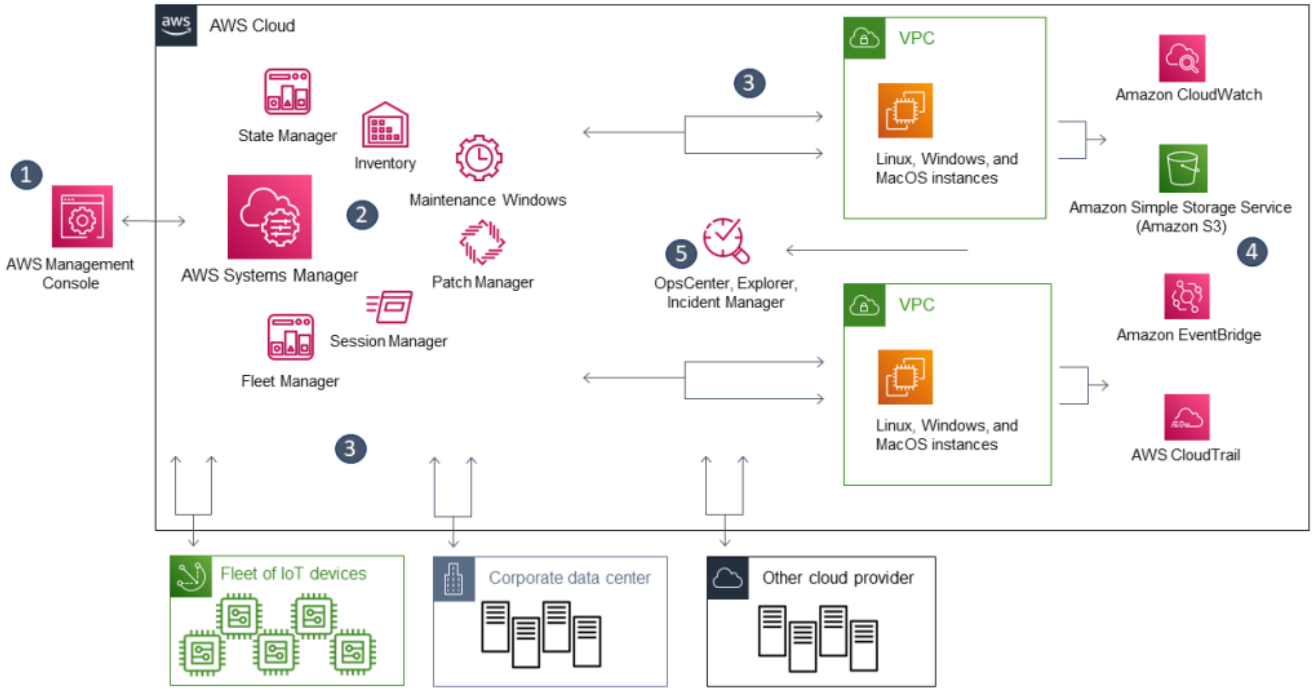
AWS SSM 을 통한 VPC Private Network 접근



목적

- VPC 내의 Private Network 에 외부 공인 대역에서 Shell 로 접근 (VPN 역할)

특징

- SSM 을 통해 AWS 연결을 하는 것으로, IGW 나 EIP 등의 VPC내 별도 제약이 필요없다
- EC2 SSH 접근 용도의 Password 나 Key-Pair 가 필요없다.
- Shell 전환으로 SSH 와 거의 동일하게 사용할 수 있다.
- AWS Client VPN 과 비교 시, 비용적으로 유리하다.

요구사항

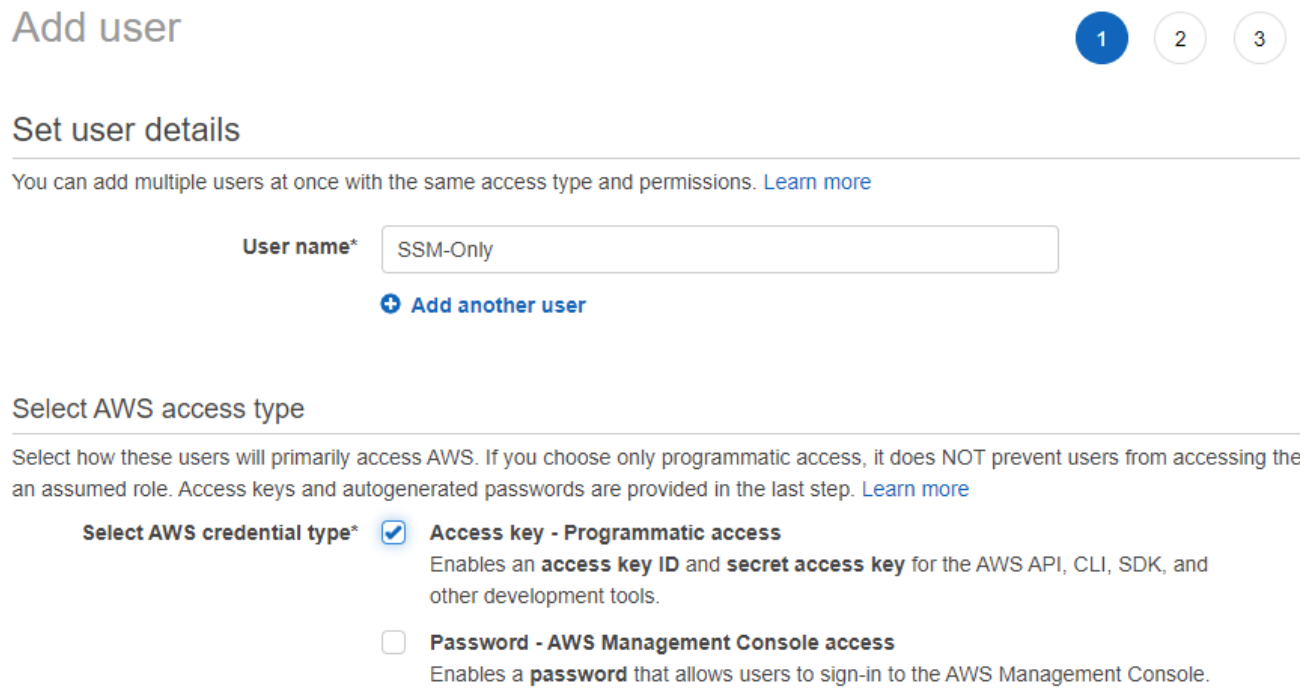
- AWS CLi 를 설치 및 AWS 리소스에 접근할 수 있는 공인망 환경 (VM / CT / Server)
  일부 리전의 경우 AWS Console 내에서 Cloudshell 사용 가능

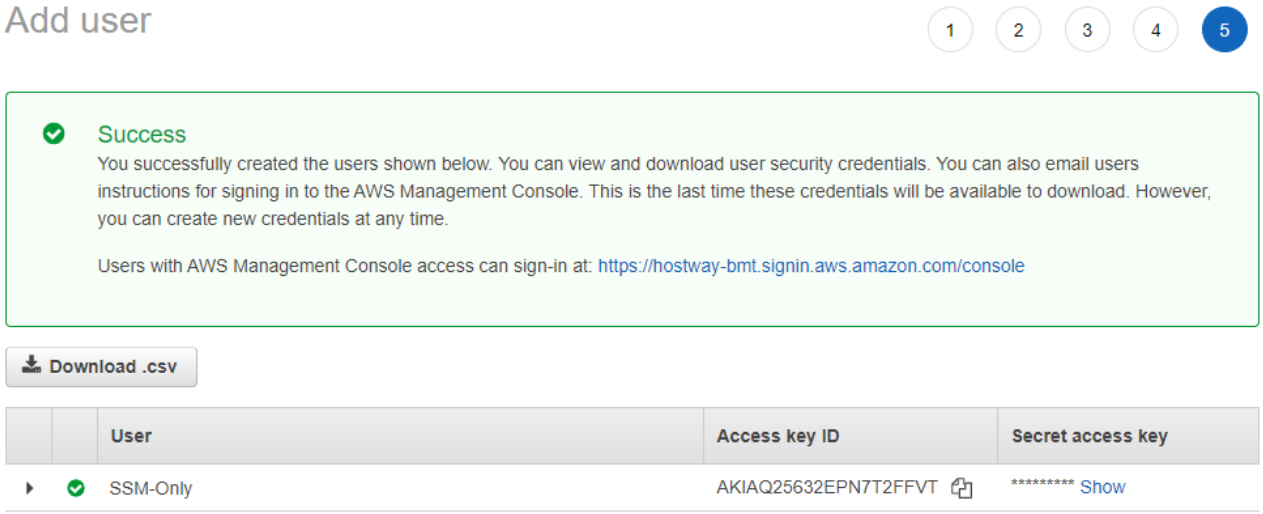
설치 순서

- 1) Private Network 에 접근할 수 있는 IAM 권한 설정

- 2) EC2 에 IAM Role 추가
- 3) EC2 에 SSM Agent 설치
- 4) AWS CLI 를 통한 EC2 연결

1. Key 방식 전용의 IAM 생성 후 권한 설정



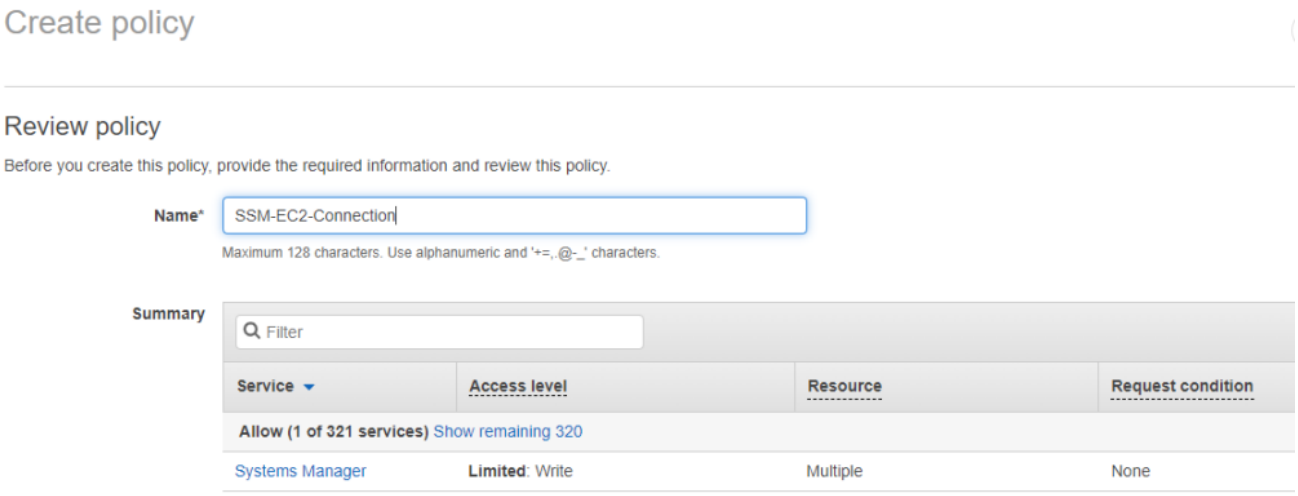


– 관리형 정책을 만들어서IAM 에 할당한다.

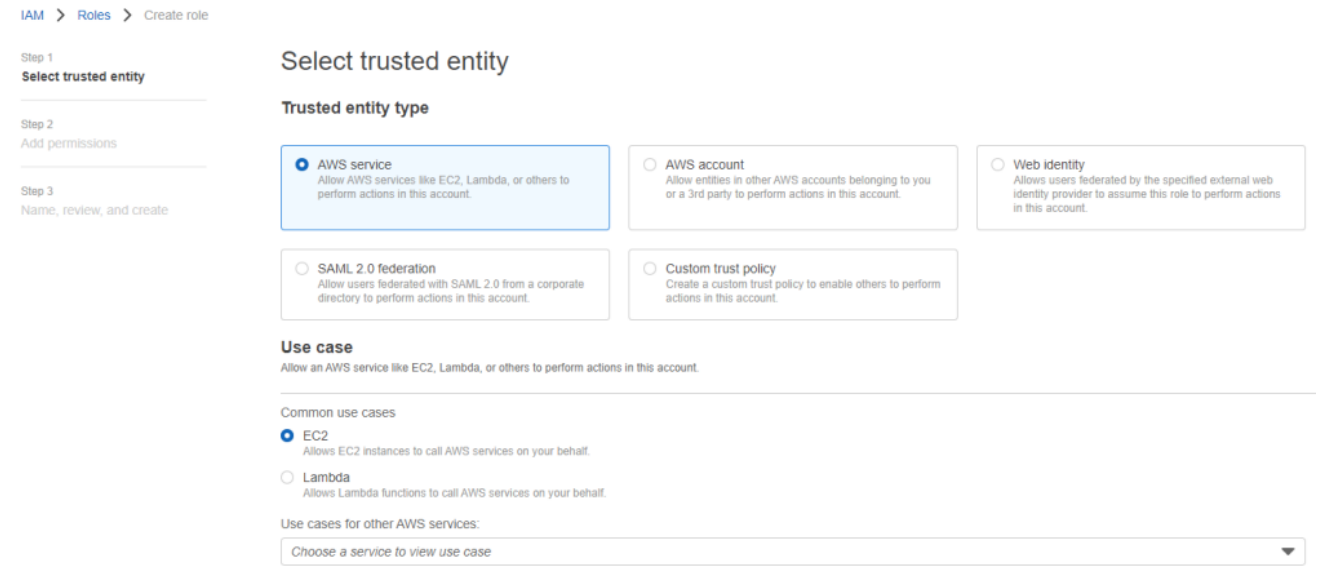
arn 은 리전과 어카운트와 접근할 EC2 ID 를 적는다

```
{
    "Version": "2012-10-17",
    "Statement": [
```

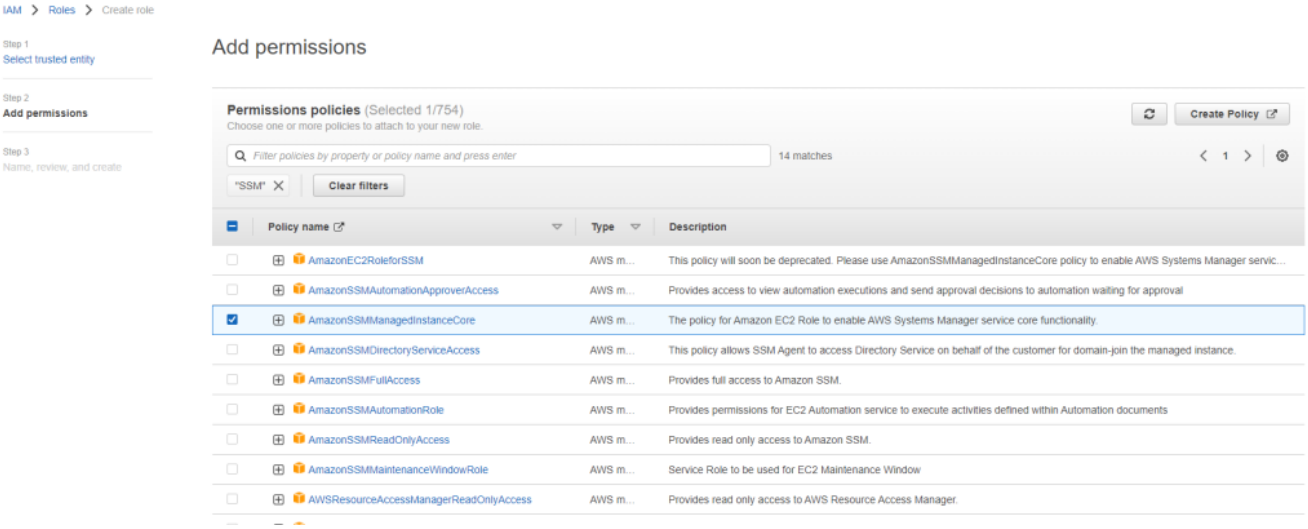
```
        {
            "Effect": "Allow",
            "Action": [
                "ssm:StartSession"
            ],
            "Resource": [
                "arn:aws:ec2:us-west-2:1234567890:instance/i-ahe52134fxed6"

            ]
        },
        {
            "Effect": "Allow",
            "Action": [
                "ssm:TerminateSession"
            ],
            "Resource": [
                "arn:aws:ssm:*:*:session/${aws:username}-*"
            ]
        }
    ]
}
```



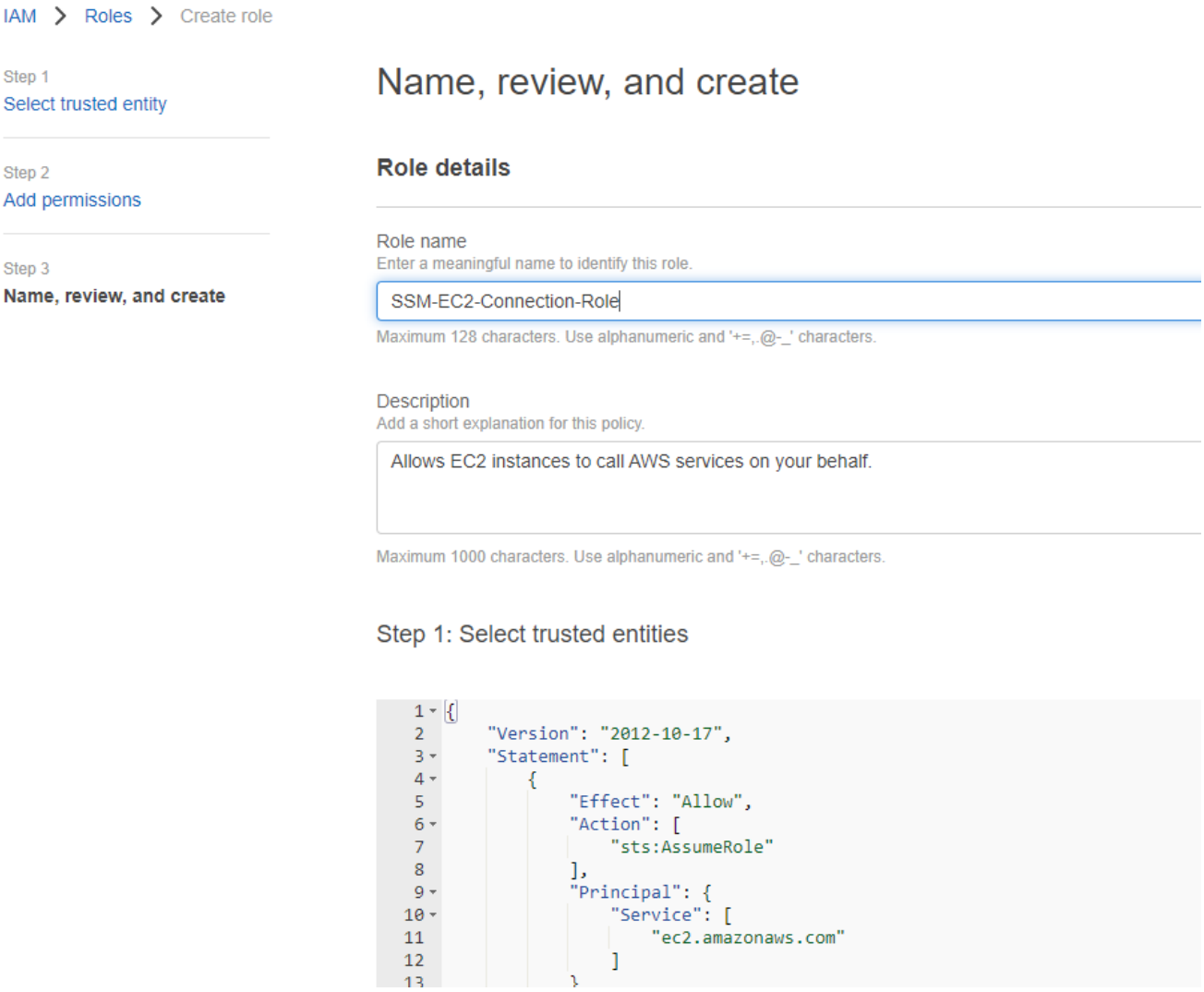
2. IAM Custom Role 을 생성한 후 VPC 내의 EC2 에 설정한다



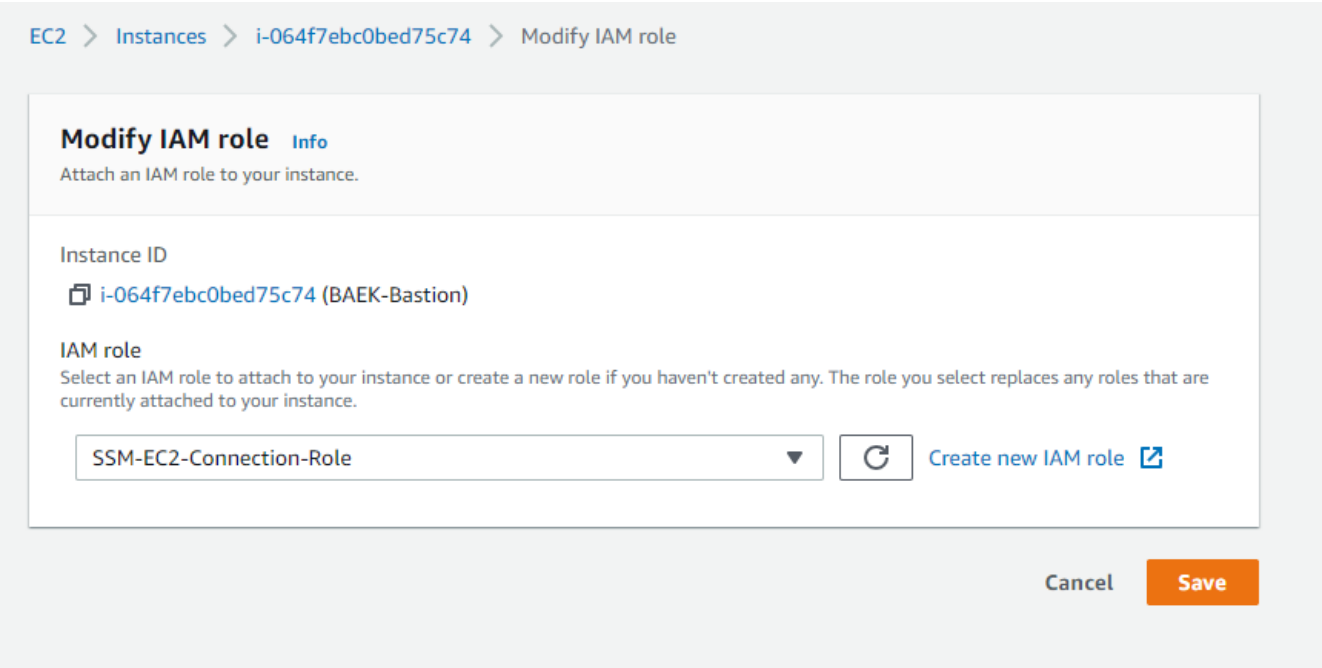
- Role 은 SSM InstanceCore 만 선택



- Role Name 지정 후 생성



EC2 의 보안 설정에서 해당 롤을 추가한다



3. EC2 에 SSM-Agent 를 설치한다

Aamazon 2 리눅스 인스턴스의 경우에는 기본 설정되어 있을 수 있다.

```
[root@ip-10-10-20-201 ~]# sudo yum install -y https://s3.region.amazonaws.com/amazon-ssm-region/latest/linux_amd64/amazon-ssm-agent.rpm
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Cannot open: https://s3.region.amazonaws.com/amazon-ssm-region/latest/linux_amd64/amazon-ssm-agent.rpm. Skipping.
Error: Nothing to do
[root@ip-10-10-20-201 ~]# wget https://s3.amazonaws.com/ec2-downloads-windows/SSMAgent/latest/linux_amd64/amazon-ssm-agent.rpm
--2022-03-29 02:49:06-- https://s3.amazonaws.com/ec2-downloads-windows/SSMAgent/latest/linux_amd64/amazon-ssm-agent.rpm
Resolving s3.amazonaws.com (s3.amazonaws.com)... 52.217.196.240
Connecting to s3.amazonaws.com (s3.amazonaws.com)|52.217.196.240|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 26724168 (25M) [binary/octet-stream]
Saving to: ‘amazon-ssm-agent.rpm’

100%[==========================================================================================>] 26,724,168  12.7MB/s   in 2.0s

2022-03-29 02:49:08 (12.7 MB/s) - ‘amazon-ssm-agent.rpm’ saved [26724168/26724168]
```

설치 후 자동시작 활성화한다.

```
[root@ip-10-10-20-201 ~]# rpm -Uvh amazon-ssm-agent.rpm
warning: amazon-ssm-agent.rpm: Header V4 RSA/SHA1 Signature, key ID 693eca21: NOKEY
Preparing...
################################# [100%]
Updating / installing...
   1:amazon-ssm-agent-3.1.1080.0-1
################################# [100%]
Created symlink from /etc/systemd/system/multi-user.target.wants/amazon-ssm-agent.service to
```

```
/etc/systemd/system/amazon-ssm-agent.service.
[root@ip-10-10-20-201 ~]# systemctl enable amazon-ssm-agent
[root@ip-10-10-20-201 ~]# systemctl start amazon-ssm-agent



[root@ip-10-10-20-201 ~]# systemctl status amazon-ssm-agent
 -- amazon-ssm-agent.service - amazon-ssm-agent
     Loaded: loaded (/etc/systemd/system/amazon-ssm-
agent.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2022-03-29 02:53:54 UTC;
21s ago
 Main PID: 3355 (amazon-ssm-agen)
   CGroup: /system.slice/amazon-ssm-agent.service
           ├─3355 /usr/bin/amazon-ssm-agent
           └─3382 /usr/bin/ssm-agent-worker

Mar 29 02:53:54 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:54 INFO Agent will
take identity f...EC2
Mar 29 02:53:54 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:54 INFO [amazon-ssm-
agent] using n...IPC
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:54 INFO [amazon-ssm-
agent] using n...IPC
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:54 INFO [amazon-ssm-
agent] using n...IPC
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:54 INFO [amazon-ssm-
agent] amazon-...0.0
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:54 INFO [amazon-ssm-
agent] OS: lin...d64
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:54 INFO
[CredentialRefresher] Iden...her
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:55 INFO [amazon-ssm-
agent] [LongRu...ess
```

```
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:55 INFO [amazon-ssm-
agent] [LongRu...ted
Mar 29 02:53:55 ip-10-10-20-201.us-west-2.compute.internal
amazon-ssm-agent[3355]: 2022-03-29 02:53:55 INFO [amazon-ssm-
agent] [LongRu...nds
Hint: Some lines were ellipsized, use -l to show in full.
```

4. AWS Cli 에서 SSM 을 통한 EC2 접속

외부 CT 에 AWSCli 를 설치 후 IAM API Key 권한을 설정한다.

```
## 접속할 Client의 IP 확인
$ curl http://icanhazip.com
1.2.3.4

## AWSCli 설치
(중요) SSM의 Session-Plugin 을 사용하기 위해서는 AWSCli 1.16 버전 이상
이어야 한다.
$ curl
"https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o
"awscliv2.zip"
unzip awscliv2.zip
sudo ./aws/install

## Linux 용 SSM Session-Manager Plugin 설치
$ curl
"https://s3.amazonaws.com/session-manager-downloads/plugin/lat
est/linux_64bit/session-manager-plugin.rpm" -o "session-
manager-plugin.rpm"
$ rpm -Uvh session-manager-plugin.rpm
$ session-manager-plugin
The Session Manager plugin was installed successfully. Use the
AWS CLI to start a session.

## 접근 정보 설정
본문 내용의 키는 임의 생성한 내용.
$ aws configure
AWS Access Key ID [None]: AKIAQ25632EPN7T7FFVT
AWS Secret Access Key [None]:
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
Default region name [None]: us-west-2
```

```
Default output format [None]: json
```

SSM 을 통한 실제 EC2 에 접근

```
[root@node1 ~]# aws ssm start-session --target i-064f7ebc0bed75c74

Starting session with SessionId: SSM-Only-0a9041d6b13f368ce
sh-4.2$ bash
[ssm-user@ip-10-10-20-201 bin]$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 9001
        inet 10.10.20.201  netmask 255.255.255.0  broadcast
10.10.20.255
        inet6 fe80::aa:14ff:fed7:abd  prefixlen 64  scopeid
0x20<link>
        ether 02:aa:14:d7:0a:bd  txqueuelen 1000  (Ethernet)
        RX packets 31846  bytes 8338621 (7.9 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 29180  bytes 6068149 (5.7 MiB)
         TX errors 0  dropped 0 overruns 0  carrier 0
collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
         TX errors 0  dropped 0 overruns 0  carrier 0
collisions 0

[ssm-user@ip-10-10-20-201 bin]$
```

※ 참고자료
https://docs.aws.amazon.com/cli/latest/userguide/getting-started-install.html
https://docs.aws.amazon.com/ko_kr/systems-manager/latest/userguide/session-manager-working-with-install-plugin.html
https://docs.aws.amazon.com/ko_kr/systems-manager/latest/userguide/session-manager-getting-started.html