Set up tunnel/CLI access to EC2 without Bastion/SSH keys

This document describes how to setup tunnel to an EC2 instance without using SSH keys/Bastion host. This uses AWS **ec2-instance-connect** and **SSM** to provide access. Hence, access can be managed through IAM without the hassle of handling SSH keys.

Prerequisites(Actionable only for DevOps):

- Install ec2-instance-connect on the EC2 machine by running command

`sudo apt-get install ec2-instance-connect`

- Add the below policy to the user in addition to SSM access. Replace `instance-id` and `os-username` in policy as required

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": "ec2-instance-connect:SendSSHPublicKey"
            "Resource": [
                "arn:aws:ec2:us-east-2:532968567499:instance/
            ],
            "Condition": {
                "StringEquals": {
                    "ec2:osuser": "<os-username>"
                }
            }
        },
        {
            "Effect": "Allow",
            "Action": "ec2:DescribeInstances",
            "Resource": "*"
```

```
        }
    ]
}
```

Prerequisites(Actionable for User):

- (Only for Windows)Install a terminal(like Mobaxterm) on user machine using this link, as this works on Linux systems.
- AWS CLI and SSM setup with SSM plugin should be installed on system.

Setup Process:

1. Create SSH key pair on your system (Skip if you already have this setup).

To **generate a pair of SSH key codes**, enter the commands:

```
mkdir –p $HOME/.ssh
```

```
chmod 0700 $HOME/.ssh
```

```
ssh–keygen –t rsa 4096
```

2. Create a new file named config in .ssh directory created above.

```
nano $HOME/.ssh/config
```

3. Paste below in the config file and save.

```
host i-*
 IdentityFile ~/.ssh/id_rsa
 ProxyCommand sh -c "aws ec2-instance-connect send-ssh-public
```

4. Configuration is done. Now you can take access using the below commands:

- SSH Access to use scp/rsync:

`ssh username@instance-id` . Example:

```
ssh xyzuser@i-0664e359d17e94756
```

Note- You can also copy files using scp command now.

- Tunnel to the instance:

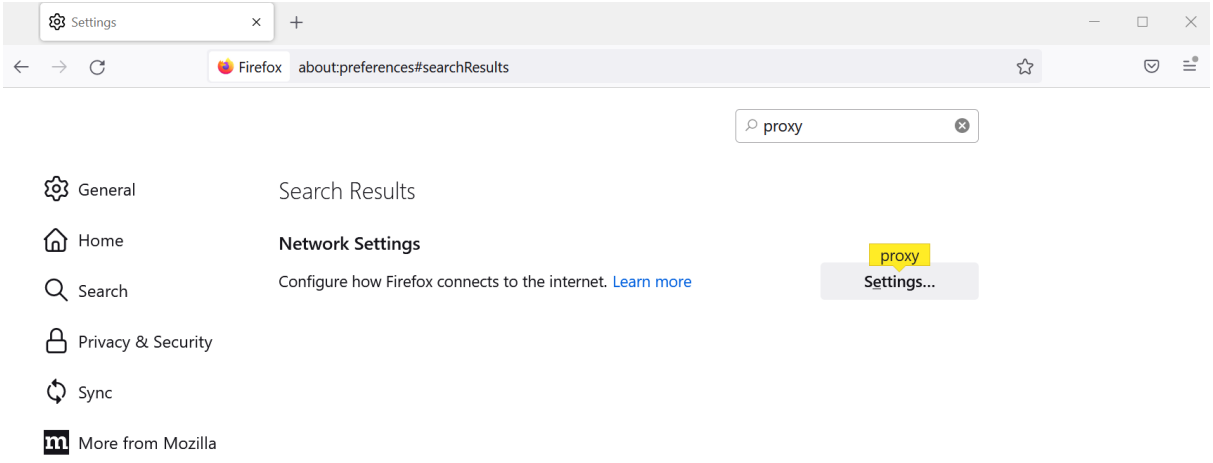
```
ssh -D 9999 -CfNq tunneluser@i-0664e359d17e90c56
```

- Tunnel to specific URL through bastion

```
ssh tunneluser@i-021fa8d23587645c9 -L 7775:<URL to access>:
80 -CfNq
```

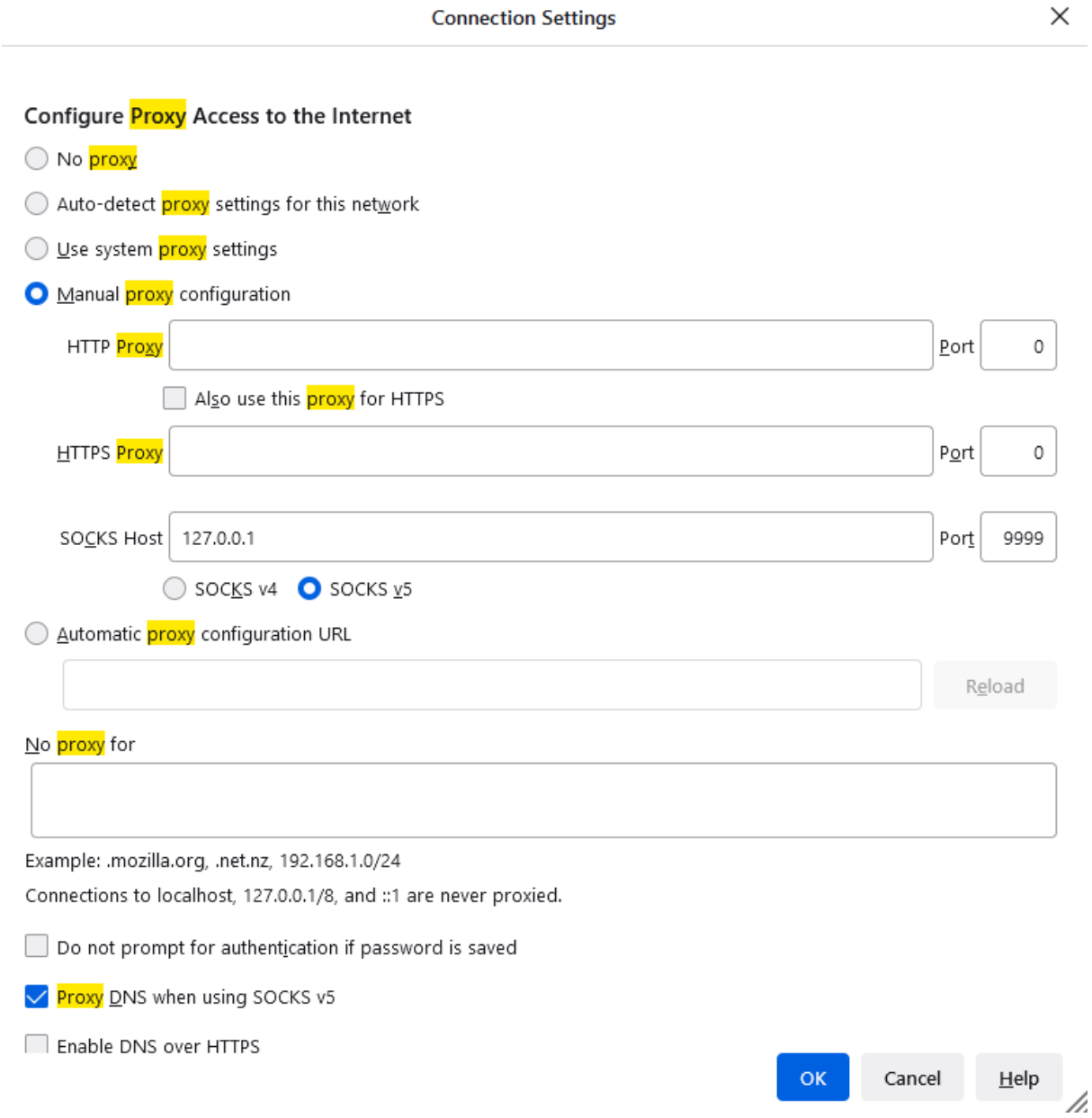
5. To access URLs through tunnel use SOCKS proxy.

- Download Firefox browser.
- Under Settings in Firefox. Search for proxy. and Go to Settings



- Check **Manual proxy configuration** and configure as shown in below image.

Note- Do not forget to check **Proxy DNS when using SOCKS v5.**



6. Now you can access the required URLs in Firefox browser.