DEPLOY EC2 Instance with Terraform:

version.tf > terraform

```
terraform {
  required_providers {
    aws = {
      source  = "hashicorp/aws"
      version = "~>4.0"
    }
  }
}
```

providers.tf > provider "aws"

```
provider "aws" {
  region = "us-east-1"
}
```

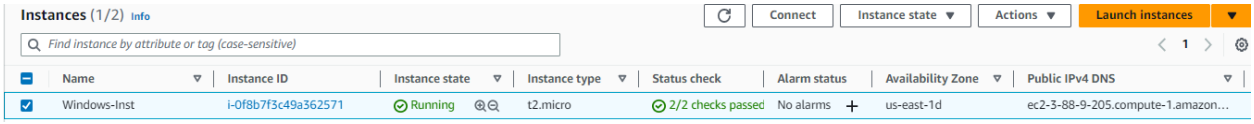
main.tf > resource "aws_instance" "Win-EC2" > user_data

```
resource "aws_instance" "Win-EC2" {
  ami             = "ami-05b0cd1af6c0c34e3"
  instance_type   = "t2.micro"
  key_name        = "skeypair"

  user_data = <<-EOF
              <powershell>
              # Update system packages
              Get-PackageProvider -Name NuGet -ForceBootstrap
              Install-PackageProvider -Name NuGet -MinimumVersion 2.8.5.201 -Force
              Install-Module PSWindowsUpdate -Force
              Get-WindowsUpdate -Install -AcceptAll -IgnoreReboot

              </powershell>
              EOF

  tags = {
    Name        = "Windows-Inst"
    description = "Managed by Terraform"
  }
}
```



MAKE SURE SECURITY RULE ALLOWS INGRESS HTTP and RDP TRAFFIC

CONNECT TO THE REMOTE SERVER (RDP) WITH THE DEFAULT ADMIN and PWD generated from the access key

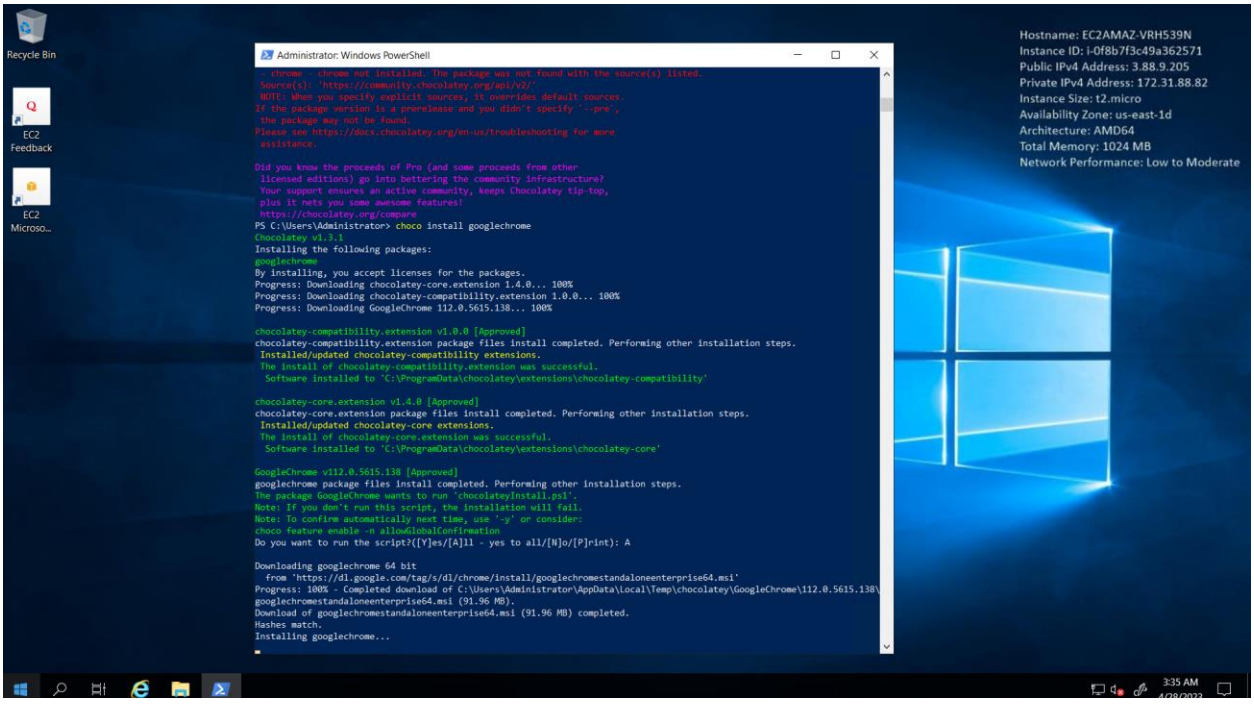
INSTALL GOOGLE CHROME WITH CHOCOLATEY CMD

Install Chocolatey on Powershell with

Set-ExecutionPolicy Bypass -Scope Process -Force; iex ((New-Object System.Net.WebClient).DownloadString('https://chocolatey.org/install.ps1'))

Install Google Chrome with

Choco install googlechrome



CREATE AN ADMIN USER IN POWERSHELL WITH CHOCO COMMAND:

> New-LocalUser -Name "ad-kamdem" -Description "My Admin" -FullName "sims kamdem" -Password (ConvertTo-SecureString "********" -AsPlainText -Force) -AccountNeverExpires -PasswordNeverExpires -UserMayNotChangePassword**

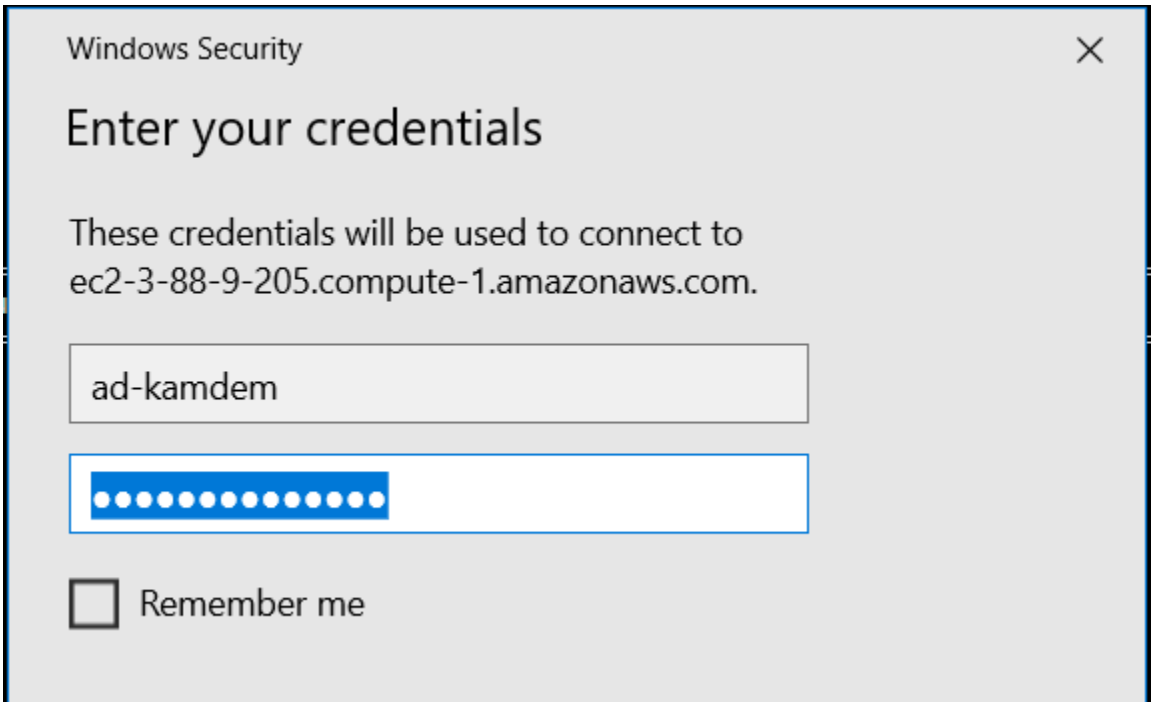
> Add-LocalGroupMember -Group "Administrators" -Member "ad-kamdem"

```
PS C:\Users\Administrator> New-LocalUser -Name "ad-kamdem" -Description "My Admin" -FullName "sims kamdem" -Password (Co
nvertTo-SecureString "[redacted]" -AsPlainText -Force) -AccountNeverExpires -PasswordNeverExpires -UserMayNotChangeP
assword

Name      Enabled Description
----      ------- -----------
ad-kamdem True    My Admin


PS C:\Users\Administrator> Add-LocalGroupMember -Group "Administrators" -Member "ad-kamdem"
PS C:\Users\Administrator>
```

CONNECT WITH NEW ADMIN USER



INSTALL AND START APACHE

Download link: https://www.apachelounge.com/download/#google_vignette

Requirement= latest 14.34.31938 Visual C++ Redistributable Visual Studio 2015-2022 : vc_redist_x64

To extract the downloaded zip file

> Expand-Archive -Path "C:\Users\ad-kamdem\Downloads\httpd-2.4.55-o111s-x86-vs17.zip" -DestinationPath "C:\Users\ad-kamdem\Downloads\Extracted"

INSTALL APACHE:

Install

You must first install the Visual C++ Redistributable for Visual Studio 2015-2022 x64.
Download and Install, if you have not done so already, see:

https://www.apachelounge.com/download/

Unzip the Apache24 folder to c:/Apache24 (that is the ServerRoot in the config).
The default folder for your your webpages is DocumentRoot "c:/Apache24/htdocs"

When you unzip to an other location:
change Define SRVROOT "c:/Apache24" in httpd.conf, for example to "E:/Apache24"

Run and test

Open a command prompt window and cd to the c:\Apache24\bin folder.

To Start Apache in the command prompt type:

>httpd.exe

Press Enter. If there are any errors it will tell you.
Warnings will not stop Apache from working, they do need to be addressed none the less.
If there are no errors the cursor will sit and blink on the next line.

You can test your installation by opening up your Browser and typing in the address:

http://localhost

You can shut down Apache by pressing Ctrl+C (It may take a few seconds)

To install as a service. Open command prompt as Administrator and type:

>httpd.exe -k install

You can start/stop the service with the command:

>services.msc

To see all Command line options:

>httpd -h

ApacheMonitor:

Double click ApacheMonitor.exe, or put it in your Startup folder.

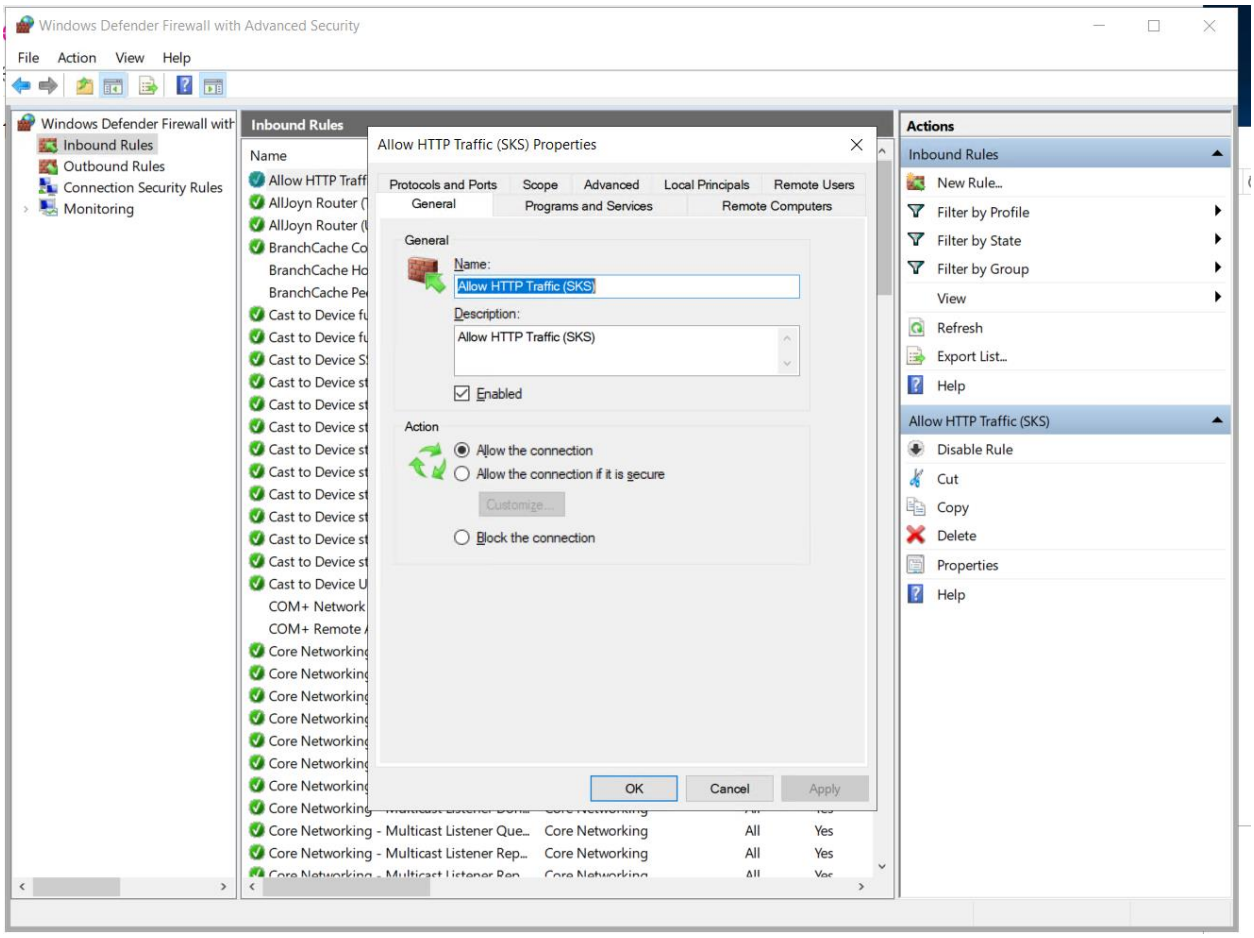
Upgrading

- Upgrading from 2.2.x see: httpd.apache.org/docs/2.4/upgrading.html
and see httpd.apache.org/docs/2.4/new_features_2_4.html .

- Updating from 2.3.x
copy all the files over, except your changed .conf files.

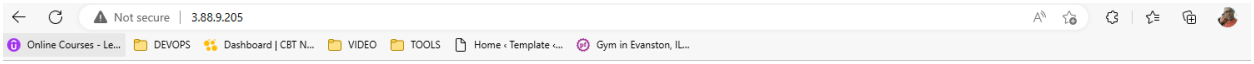
Problem: Apache works locally but can't be accessed remotely.

Fix: Created a rule in Windows firewall to allow ingress traffic



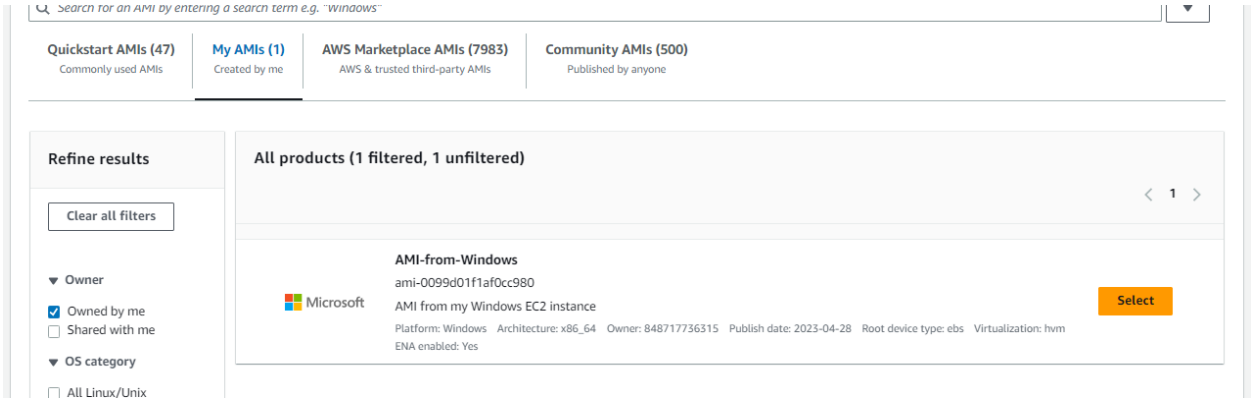
Result: Apache is accessible from remote:

CREATING AMI FROM WINDOWS EC2 (WITH APACHE INSTALLED)

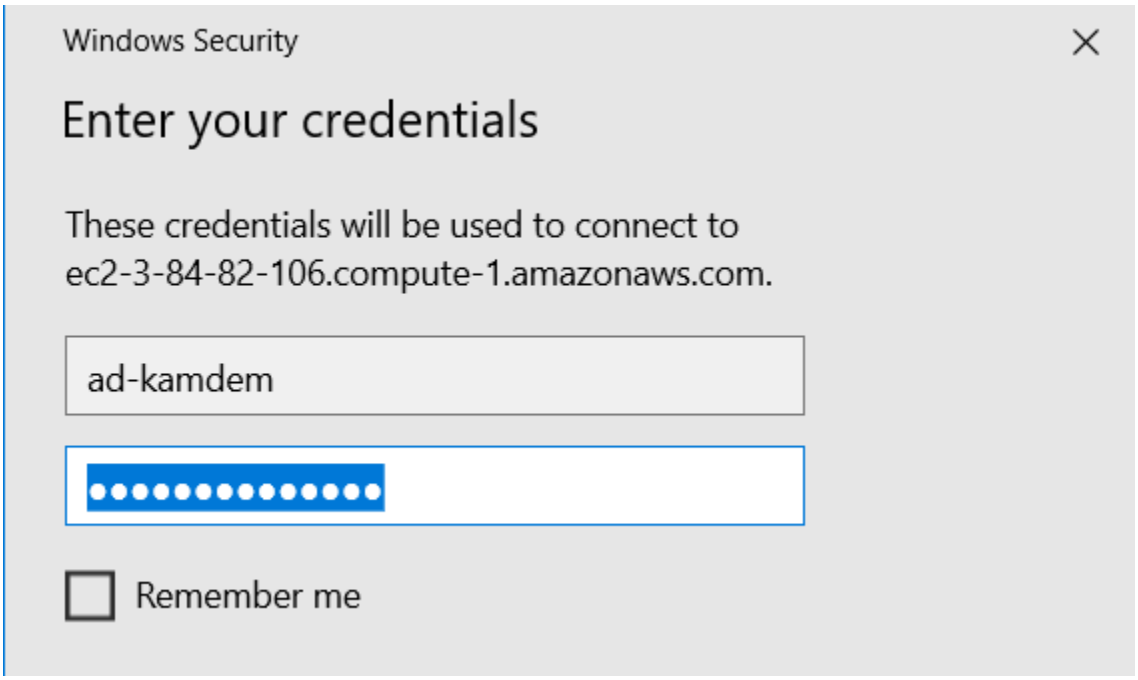


Hello World from Sims Kamdem Empire! If you get this, then you're NICE!

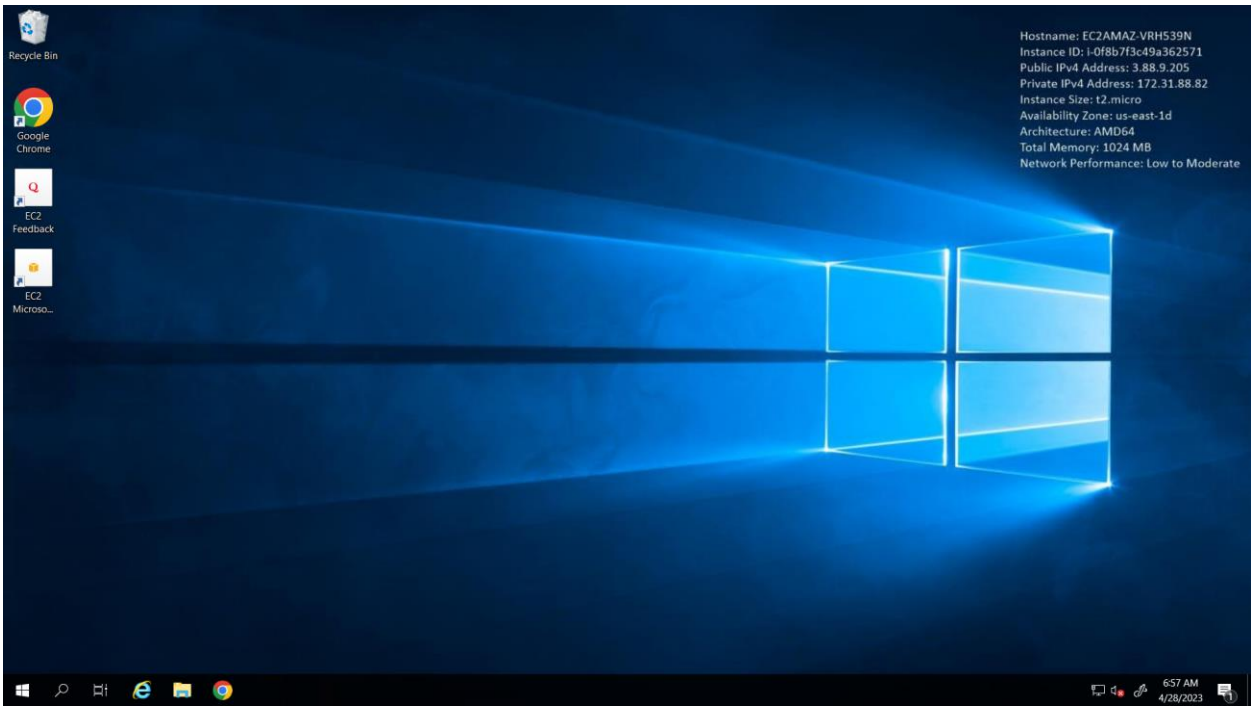
CREATING AMI FROM MY EC2 INSTANCE

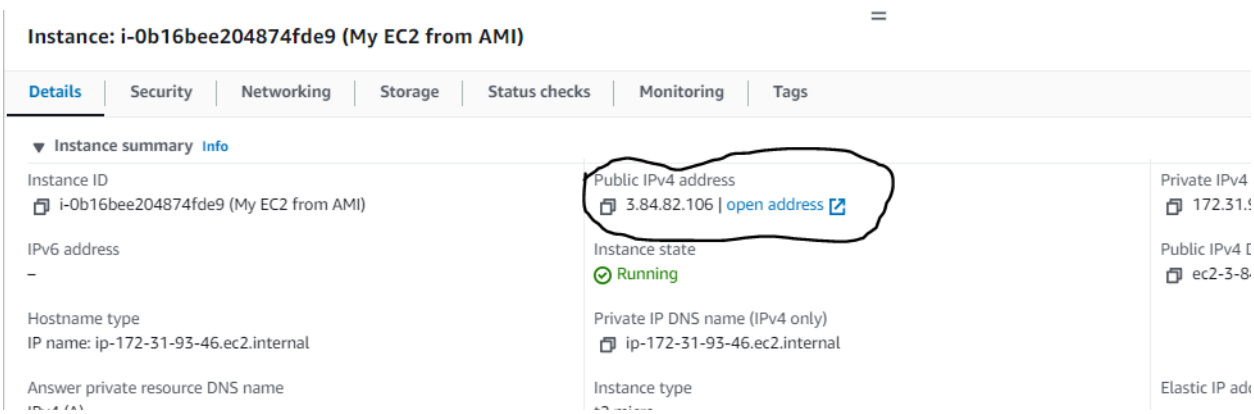


LAUNCHING NEW EC2 INSTANCE FROM MY AMI



CREATING AMI FROM WINDOWS EC2 (WITH APACHE INSTALLED)





Hello World from Sims Kamdem Empire! If you get this, then you're NICE!