

```
Windows PowerShell
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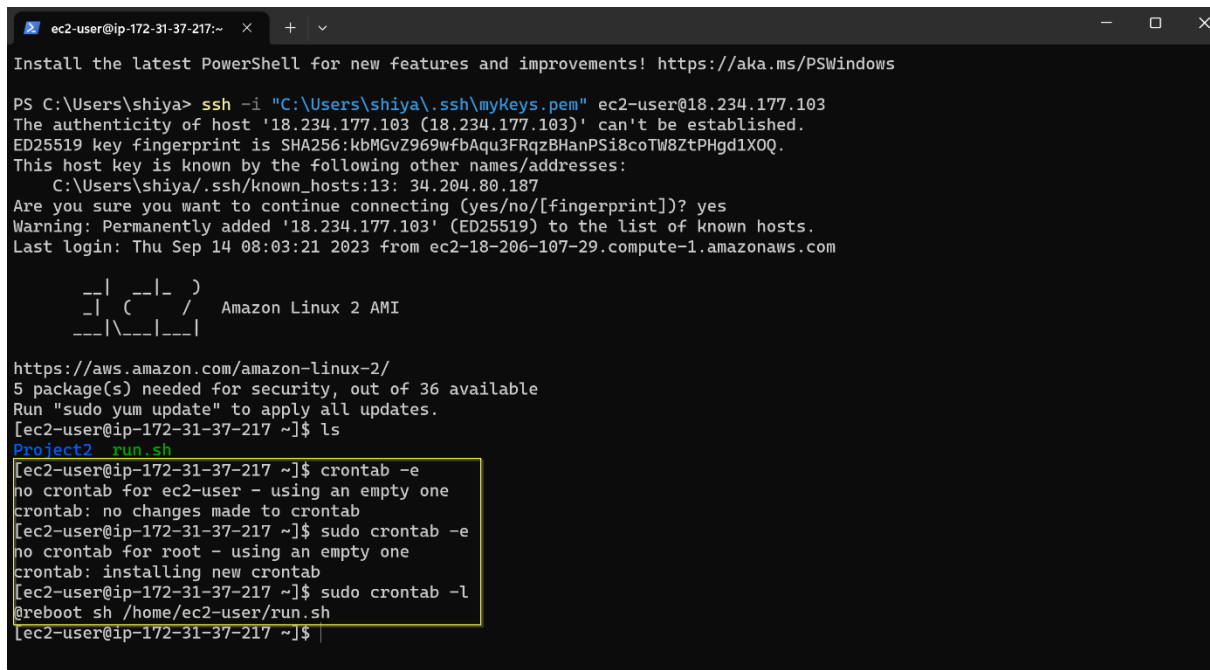
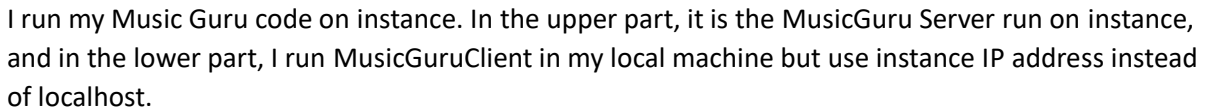
PS C:\Users\shiya> cd "C:\Users\shiya\OneDrive - Victoria University of Wellington - STUDENT\NWEN243\Project2\out\production\Project2"
PS C:\Users\shiya\OneDrive - Victoria University of Wellington - STUDENT\NWEN243\Project2\out\production\Project2> C:\Users\shiya\.jdk\corretto-1.8.0_382\bin\java.exe -cp . MusicGuruServer
MusicGuru server is listening on port 5000....
The client connection is successful!?
The client request: 2022
The client connection is successful!?
The client request: 1990

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PS C:\Users\shiya\OneDrive - Victoria University of Wellington - STUDENT\NWEN243\Project2\out\production\Project2> C:\Users\shiya\.jdk\corretto-1.8.0_382\bin\java.exe -cp . MusicGuruClient localhost 5000 2022
Year Range: 1959-2010
input year is not in the database, will random year...
server response: Specified year out of range (1959-2010), using random data instead: 1975The song is: The Eagles - "One of These Nights"
PS C:\Users\shiya\OneDrive - Victoria University of Wellington - STUDENT\NWEN243\Project2\out\production\Project2> C:\Users\shiya\.jdk\corretto-1.8.0_382\bin\java.exe -cp . MusicGuruClient localhost 5000 1990
Year Range: 1959-2010
server response: Recommend songs from 1990 : Sinead O'Conn or - "Nothing Compares 2 U"
PS C:\Users\shiya\OneDrive - Victoria University of Wellington - STUDENT\NWEN243\Project2\out\production\Project2>
```

I am running my "Music Guru" code on my local machine. On the right side, I have the server, and on the left side, I have the client. To navigate to my project folder in PowerShell, I am using the "cd" command. Once in the project folder, I am using the "-cp" option to execute my MusicGuruServer code in Java. Next, I will open another PowerShell session to run the client. I will use the same command as I did for the server, but this time, I will execute the client code.



I use ssh to connect my instance in powershell and to show how I configured crontab in the instance. After that, my Music Guru Server will run automatically when the instance starts.

The image shows two side-by-side Windows PowerShell terminal windows. The left window displays a crontab configuration for a MusicGuruServer and a client connection. The right window shows the MusicGuruClient output.

```

root      3143   3135   0 08:39 ?      00:00:00 [sh] <defu
nct>
root      3144     1 0 08:39 ?      00:00:00 java Music
GuruServer 5000
root      3150     1 0 08:39 tty1    00:00:00 /sbin/aget
ty --noclear tty1 linux
root      3151     1 0 08:39 ttyS0   00:00:00 /sbin/aget
ty --keep-baud 115200,38400,9600 ttyS0 vt220
root      3169   3135   0 08:39 ?      00:00:00 /usr/sbin/
sendmail -FCronDaemon -i -odi -oem -oi -t -f root
root      3171   3169   0 08:39 ?      00:00:00 /usr/sbin/
postdrop -r
root      3181     1 0 08:39 ?      00:00:00 /bin/bash
/usr/bin/log4j-cve-2021-44228-hotpatch -w 1800 -m 10
root      3222     1 0 08:39 ?      00:00:00 /usr/sbin/
acpid
root      3821   3106   0 08:40 ?      00:00:00 sshd: ec2-
user [priv]
ec2-user 3848   3821   0 08:40 ?      00:00:00 sshd: ec2-
user@pts/0
ec2-user 3858   3848   0 08:40 pts/0    00:00:00 -bash
root      3934   3181   0 08:40 ?      00:00:00 sleep 1
ec2-user 3935   3858   0 08:40 pts/0    00:00:00 ps -ef
[ec2-user@ip-172-31-37-217 ~]$ ps -ef | grep java
root      3144     1 0 08:39 ?      00:00:00 java Music
GuruServer 5000
ec2-user 3991   3858   0 08:40 pts/0    00:00:00 grep --col
or=auto java
[ec2-user@ip-172-31-37-217 ~]$

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PS C:\Users\shiya> cd "C:\Users\shiya\OneDrive - Victoria
University of Wellington - STUDENT\NWEN243\Project2\out\p
roduction\Project2"
PS C:\Users\shiya\OneDrive - Victoria University of Wellin
gton - STUDENT\NWEN243\Project2\out\production\Project2> C
:\Users\shiya\.jdk\corretto-1.8.0_382\bin\java.exe -cp .
MusicGuruClient 18.234.177.103 5000 2012
Year Range: 1959-2010
input year is not in the database, will random year...
server response: Specified year out of range (1959-2010),
using random data instead: 1977 The song is: The Emotions
- "Best of My Love" (Server IP: 172.31.37.217)
PS C:\Users\shiya\OneDrive - Victoria University of Wellin
gton - STUDENT\NWEN243\Project2\out\production\Project2>

```

The right side of the image illustrates the successful automatic setup of my instance, while the left side of the image demonstrates my use of a client to establish a connection with the instance.

The image shows two side-by-side screenshots. The left screenshot shows a PowerShell terminal window with a client connection. The right screenshot shows the AWS console page displaying the instance details for 'MusicGuru-1'.

```

https://aka.ms/PSWindows

PS C:\Users\shiya> cd "C:\Users\shiya\OneDrive - Victoria Unive
rsity of Wellington - STUDENT\NWEN243\Project2\out\production\Pr
oject2"
PS C:\Users\shiya\OneDrive - Victoria University of Wellington -
STUDENT\NWEN243\Project2\out\production\Project2> C:\Users\shiy
a\.jdk\corretto-1.8.0_382\bin\java.exe -cp . MusicGuruClient 34
.239.43.250 5000 2012
Year Range: 1959-2010
input year is not in the database, will random year...
server response: Specified year out of range (1959-2010), using
random data instead: 1996 The song is: Quad City DJ's - "C'mon N
' Ride It (The Train)" (Server IP: 172.31.47.170)
PS C:\Users\shiya\OneDrive - Victoria University of Wellington -
STUDENT\NWEN243\Project2\out\production\Project2>

```

The AWS console shows the instance details for 'MusicGuru-1' (Instance ID: i-08c7ad5a7789af96c). The Public IPv4 address is 34.239.43.250.

Name	Instance ID	Instance state	Instanc
MusicGuru	i-0f6e500e61c9287d3	Running	t2.micr
NWEN243-weis...	i-0b8e34971e1e50b91	Running	t2.micr
MusicGuru-1	i-08c7ad5a7789af96c	Running	t2.micr

Instance: i-08c7ad5a7789af96c (MusicGuru-copy1)

Instance summary Info

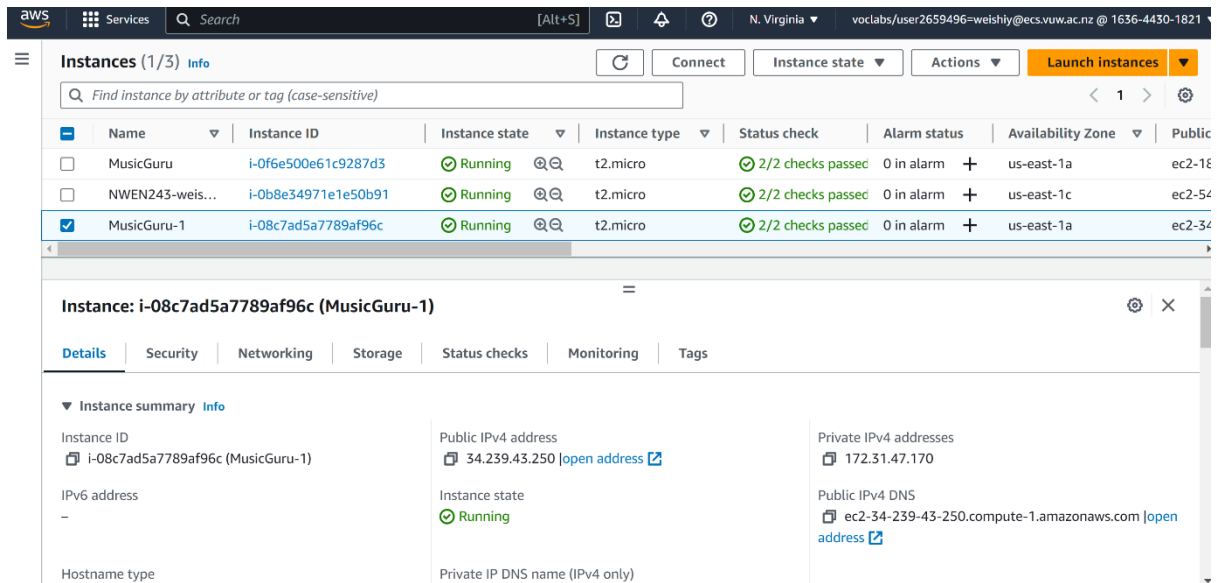
Instance ID
i-08c7ad5a7789af96c (MusicGuru-copy1)

Public IPv4 address
34.239.43.250 [open address](#)

Private IPv4 addresses
172.31.47.170

IPv6 address
-

On the left side of the image, I am using a client to test the AMI instance. On the right side of the image, the AWS console page is displayed, indicating the selection of the AMI instance and displaying its corresponding IP address.



The screenshot displays the AWS Management Console's 'Instances' page. It lists three EC2 instances, all of which are in a 'Running' state. The instance 'MusicGuru-1' is selected, and its details are shown in the expanded view. The details include the instance ID, public and private IP addresses, the instance state, and the public DNS name.

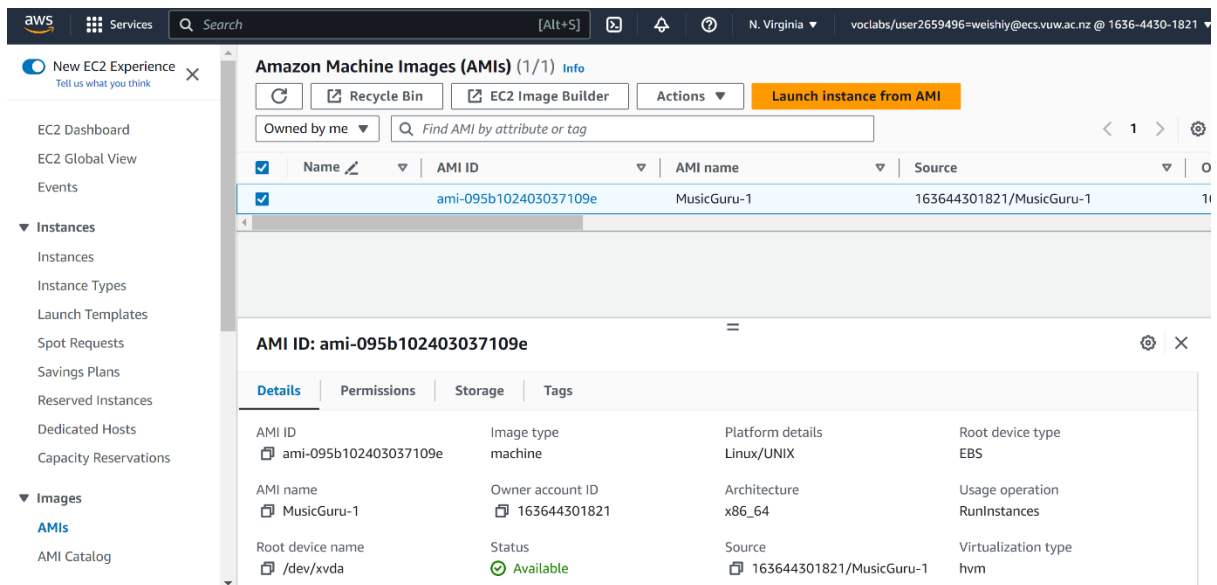
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public
MusicGuru	i-0f6e500e61c9287d3	Running	t2.micro	2/2 checks passed	0 in alarm	us-east-1a	ec2-18
NWEN243-weishiy	i-0b8e34971e1e50b91	Running	t2.micro	2/2 checks passed	0 in alarm	us-east-1c	ec2-54
MusicGuru-1	i-08c7ad5a7789af96c	Running	t2.micro	2/2 checks passed	0 in alarm	us-east-1a	ec2-34

Instance: i-08c7ad5a7789af96c (MusicGuru-1)

Instance summary

Property	Value
Instance ID	i-08c7ad5a7789af96c (MusicGuru-1)
Public IPv4 address	34.239.43.250 open address
Private IPv4 addresses	172.31.47.170
Instance state	Running
Public IPv4 DNS	ec2-34-239-43-250.compute-1.amazonaws.com open address
IPv6 address	-
Hostname type	-
Private IP DNS name (IPv4 only)	-

The AWS console displays three instances: one for Project 1 (NWEN243-weishiy) and two for Project 2 (MusicGuru and MusicGuru-1). Furthermore, it indicates that all three instances are in a running state and provides the relevant information for the AMI instances, including its IP addresses.



The screenshot displays the AWS Management Console's 'Amazon Machine Images (AMIs)' page. It lists one AMI, 'MusicGuru-1', which is in an 'Available' state. The details for this AMI are shown in the expanded view, including its image type, platform details, architecture, and status.

Name	AMI ID	AMI name	Source
MusicGuru-1	ami-095b102403037109e	MusicGuru-1	163644301821/MusicGuru-1

AMI ID: ami-095b102403037109e

Details

Property	Value
AMI ID	ami-095b102403037109e
Image type	machine
Platform details	Linux/UNIX
Root device type	EBS
AMI name	MusicGuru-1
Owner account ID	163644301821
Architecture	x86_64
Usage operation	RunInstances
Root device name	/dev/xvda
Status	Available
Source	163644301821/MusicGuru-1
Virtualization type	hvm

The screenshot for AMI instances which a copy of the Music Guru instance.