



lab



lab title

**Connecting to EC2
V1.03**



Course title

**BackSpace Academy
AWS Certified Associate**



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About the Lab

Please note that not all AWS services are supported in all regions. Please use the US-East-1 (North Virginia) region for this lab.

These lab notes are to support the hands on instructional videos of the Identity and Access Management (IAM) section of the AWS Certified Associate Course.

Please note that AWS services change on a weekly basis and it is extremely important you check the version number on this document to ensure you have the latest version with any updates or corrections.

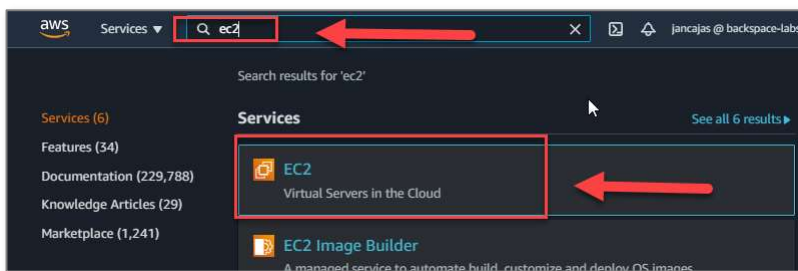
Connecting to EC2 Linux

In this section, we will use the EC2 Instance Connect service to connect to the Linux operating system of an EC2 instance.

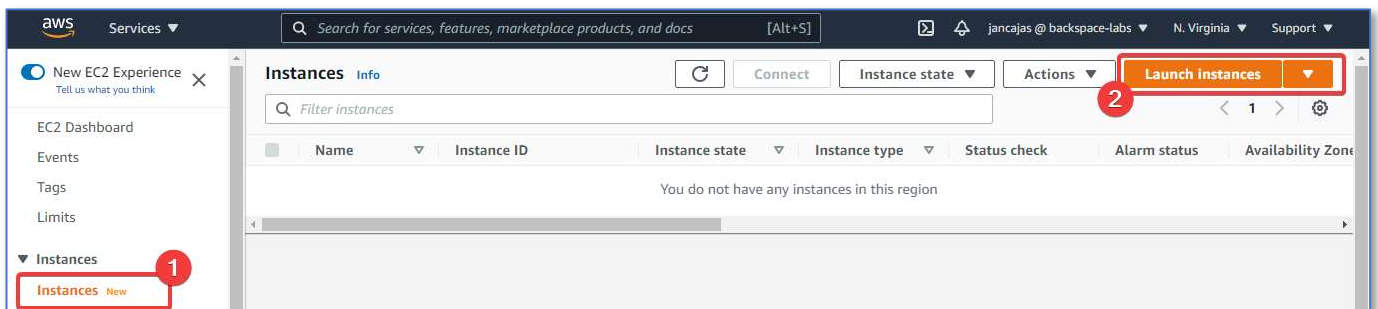
Launch an EC2 Instance

From the AWS console search *EC2*

Click *EC2*



Select *Instances* -> *Launch Instances*



Select *Amazon Linux 2 AMI*

Please note not all AMI are set up for EC2 Instance Connect

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Search by Systems Manager parameter

Quick Start

My AMIs

AWS Marketplace

Community AMIs

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-02e136e904f3da870 (64-bit x86) / ami-0e341fcaad89c3650 (64-bit Arm)

Free tier eligible

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor

Select

64-bit (x86)

64-bit (Arm)

Select *t2.micro*

Click *Review and Launch*

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All Instance families Current generation Show/Hide Columns

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.medium	2	4	EBS only	-	Low to Moderate	Yes

Cancel Previous **Review and Launch** Next: Configure Instance Details

Click *Launch*

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instances' security. Your security group, launch-wizard-8, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

Amazon Linux 2 AMI (HVM), SSD Volume Type - ami-02e136e904f3da870

Free tier eligible

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is n...

Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

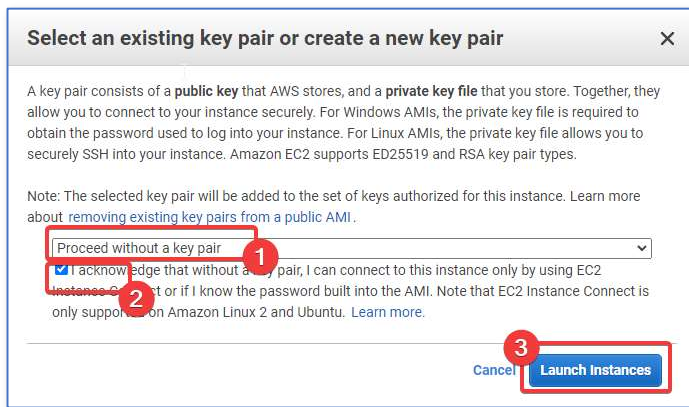
Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

Cancel Previous **Launch**

Select *Proceed without a key pair*

Click *Acknowledge* check box

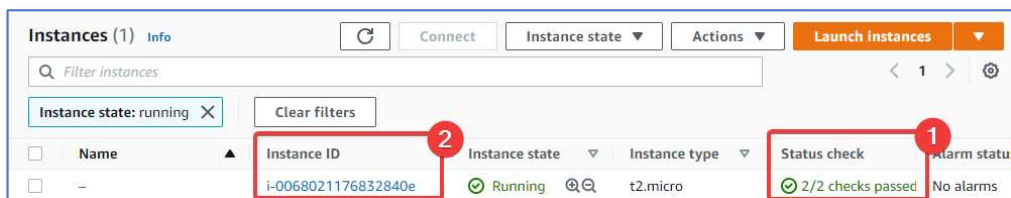
Click *Launch instances*



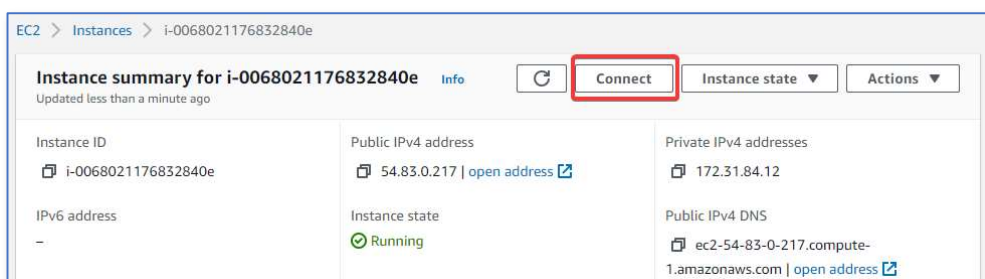
Connect to Instance

Wait for the Status checks to pass

Select the instance

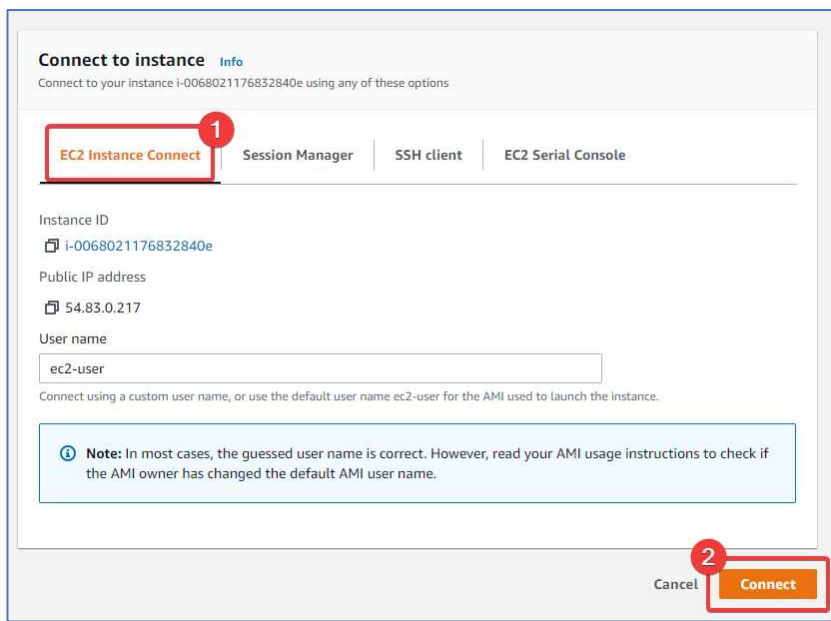


Click *Connect*

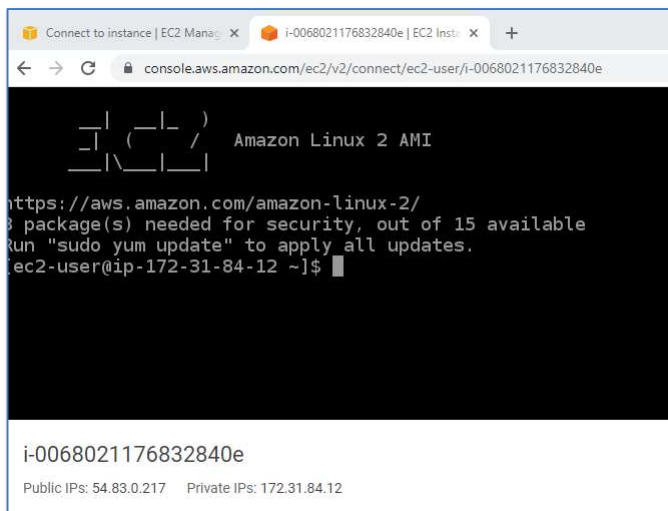


Select *EC2 Instance Connect*

Click *Connect*



You will now be connected to Linux operating system.

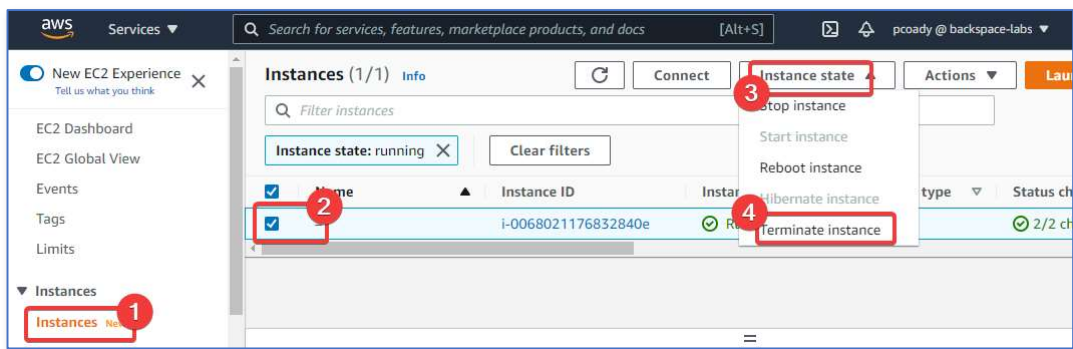


Clean Up

Go back to the *Instances* Page

Select *Instance state*

Click *Terminate instance*



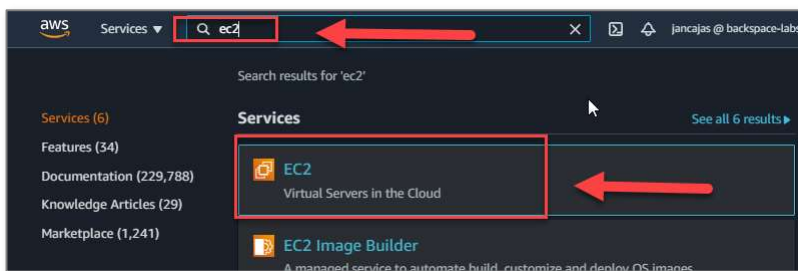
Connecting to EC2 Windows

In this section, we will use an RDP client to connect to the Windows operating system of an EC2 instance.

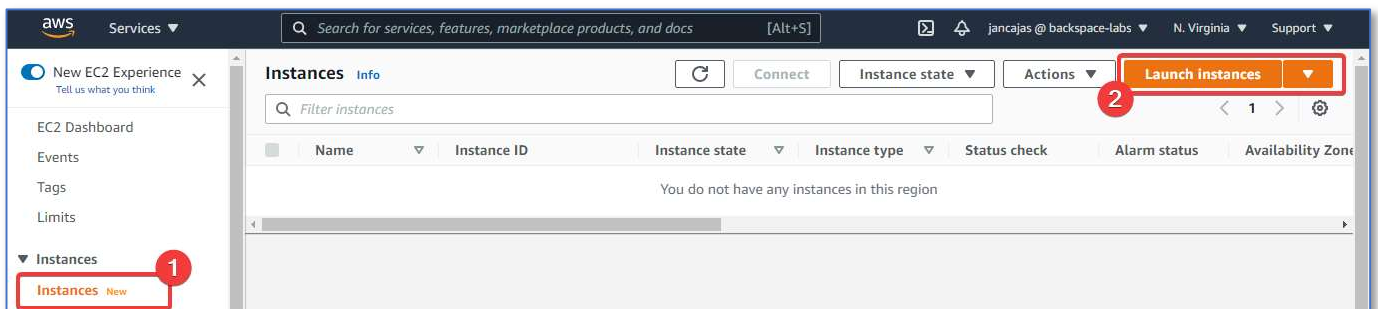
Launch an EC2 Instance

From the AWS console search *EC2*

Click *EC2*



Select *Instances* -> *Launch Instances*



Search for Windows AMI

Click *Select*

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Windows

AWS Launch Wizard for SQL Server offers an easy way to size, configure, and deploy Microsoft SQL Server Always On availability groups. Use AWS Launch Wizard for this launch

Quick Start (19)

My AMIs (0)

AWS Marketplace (954)

Community AMIs (15073)

Microsoft Windows Server 2019 Base - ami-0416f96ae3d1a3f29

Windows

Free tier eligible

Microsoft Windows 2019 Datacenter edition. [English]

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

64-bit (x86)

Select

Microsoft Windows Server 2019 Base with Containers - ami-087107f9778206adb

Select

Select a *t2.micro* instance type

Click *Review and Launch*

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All Instance families Current generation Show/Hide Columns

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.medium	2	4	EBS only	-	Low to Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Check that an inbound security group rule for RDP on port 3389 has been created automatically for us.

Click *Launch*

1. Choose AMI 2. Choose Instance Type 3. **Configure Instance** 4. Add Storage 5. Add Tags 6. Configure Security Group 7. **Review**

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

⚠ Improve your instances' security. Your security group, launch-wizard-11, is open to the world.
 Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.
 You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

▼ **AMI Details** Edit AMI

Microsoft Windows Server 2019 Base - ami-0416f96ae3d1a3f29
 Free tier eligible Microsoft Windows 2019 Datacenter edition. [English]
 Root Device Type: ebs Virtualization type: hvm

▼ **Instance Type** Edit instance type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only	-	Low to Moderate

▼ **Security Groups** Edit security groups

Security group name launch-wizard-11
Description launch-wizard-11 created 2021-10-25T09:03:15.410+11:00

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ	Description ⓘ
RDP	TCP	3389	0.0.0.0/0	

▶ **Instance Details** Edit instance details

▶ **Storage** Edit storage

▶ **Tags** Edit tags

Cancel Previous **Launch**

Select a *Create a new key pair*

Click *Download key pair*

Click *Launch instances*

Select an existing key pair or create a new key pair ✕

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.

Note: The selected key pair will be added to the set of keys authorized for this instance. [Learn more about removing existing key pairs from a public AMI.](#)

Create a new key pair

Key pair type

☒ RSA ☐ ED25519

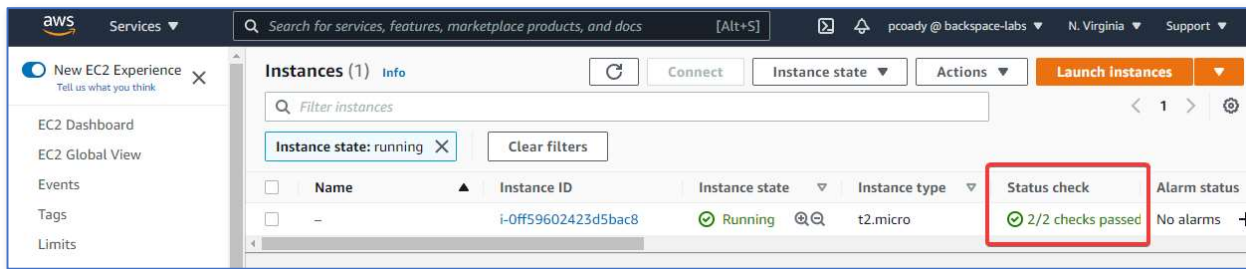
Key pair name backspace-connect

Download Key Pair

... You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

Cancel **Launch Instances**

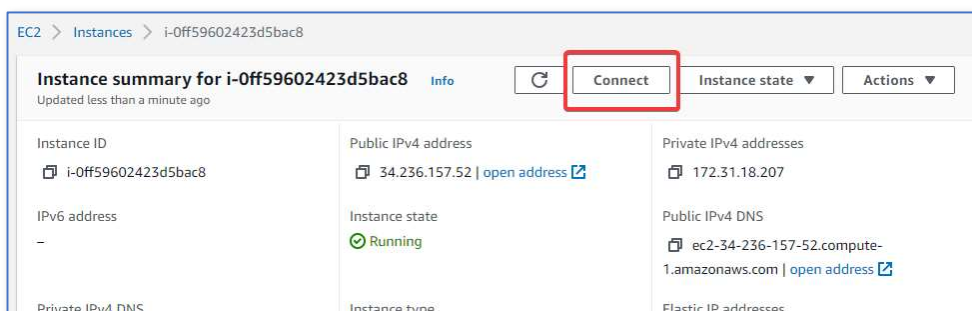
Wait until *Status checks* have passed



Connect to Instance

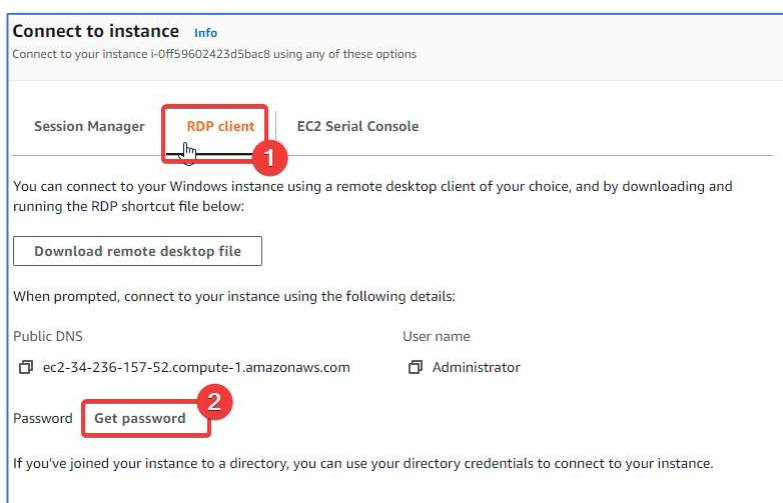
Select the instance

Click *Connect*



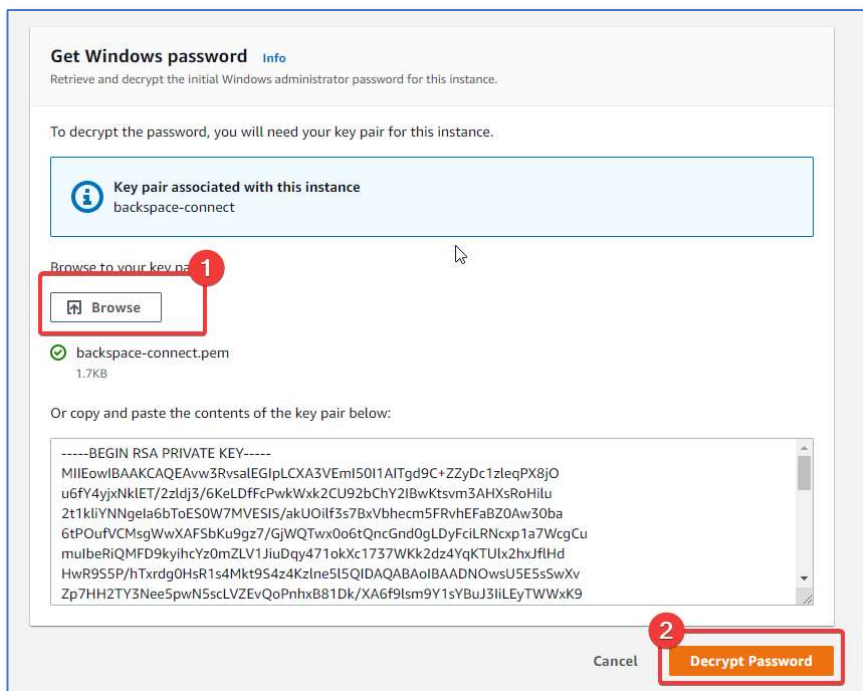
Select *RDP client*

Click *Get password*

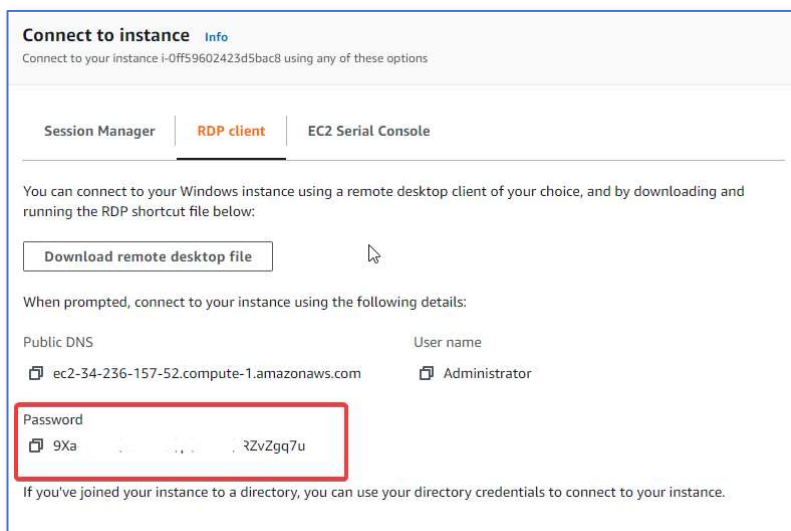


Browse for the PEM file you created when launching the instance.

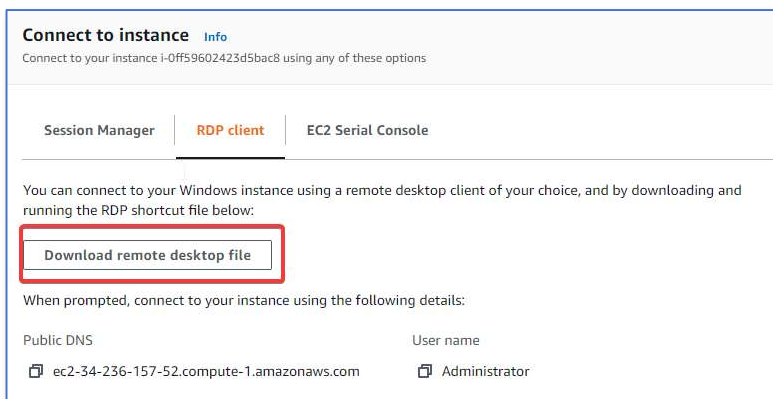
Click *Decrypt Password*



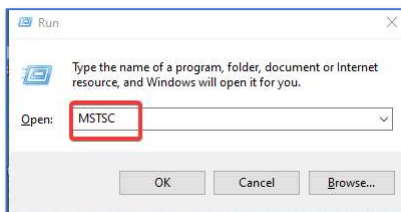
Your password has now been decrypted



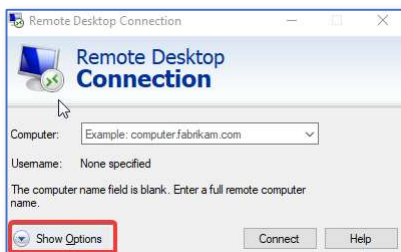
Click *Download remote desktop file*



From your Windows computer run *MSTSC* (or search *MSTSC* from the task bar) to open the Remote Desktop Connection app



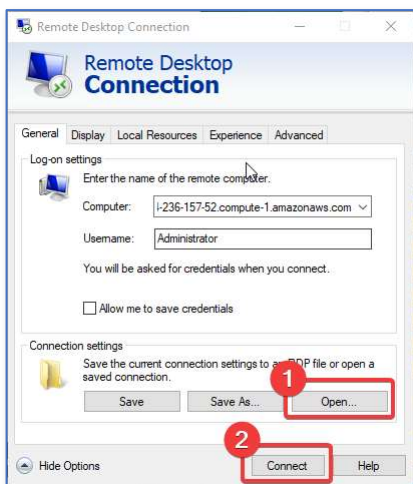
Click *Show Options*



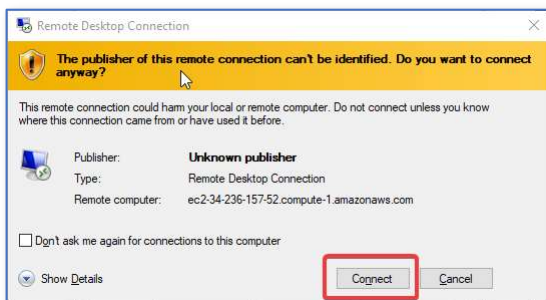
Click *Open*

Select the RDP file you just downloaded

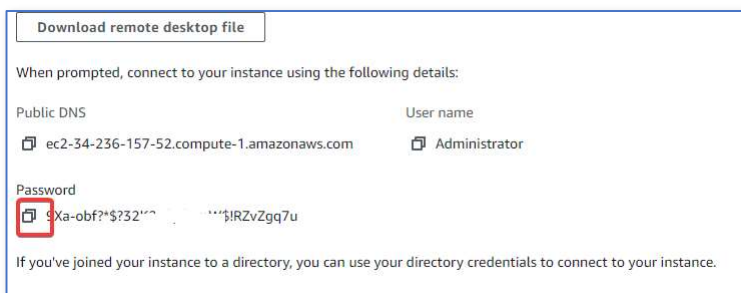
Click *Connect*



Click *Connect*

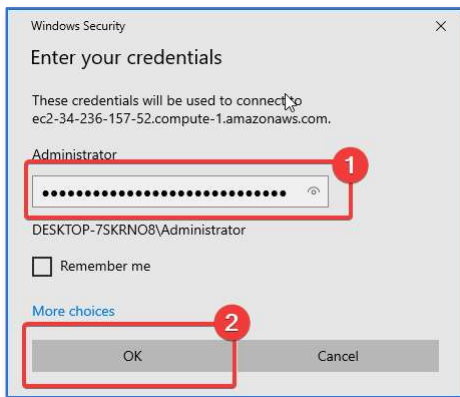


Go back to the EC2 console and copy the administrator password

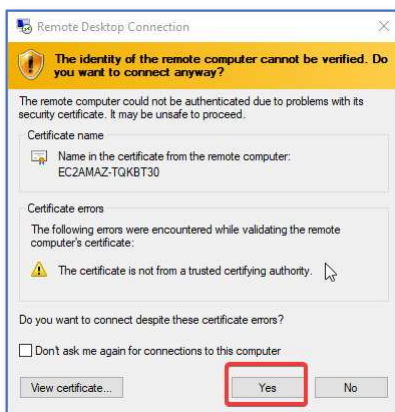


Go back to then RDP app and paste in the password

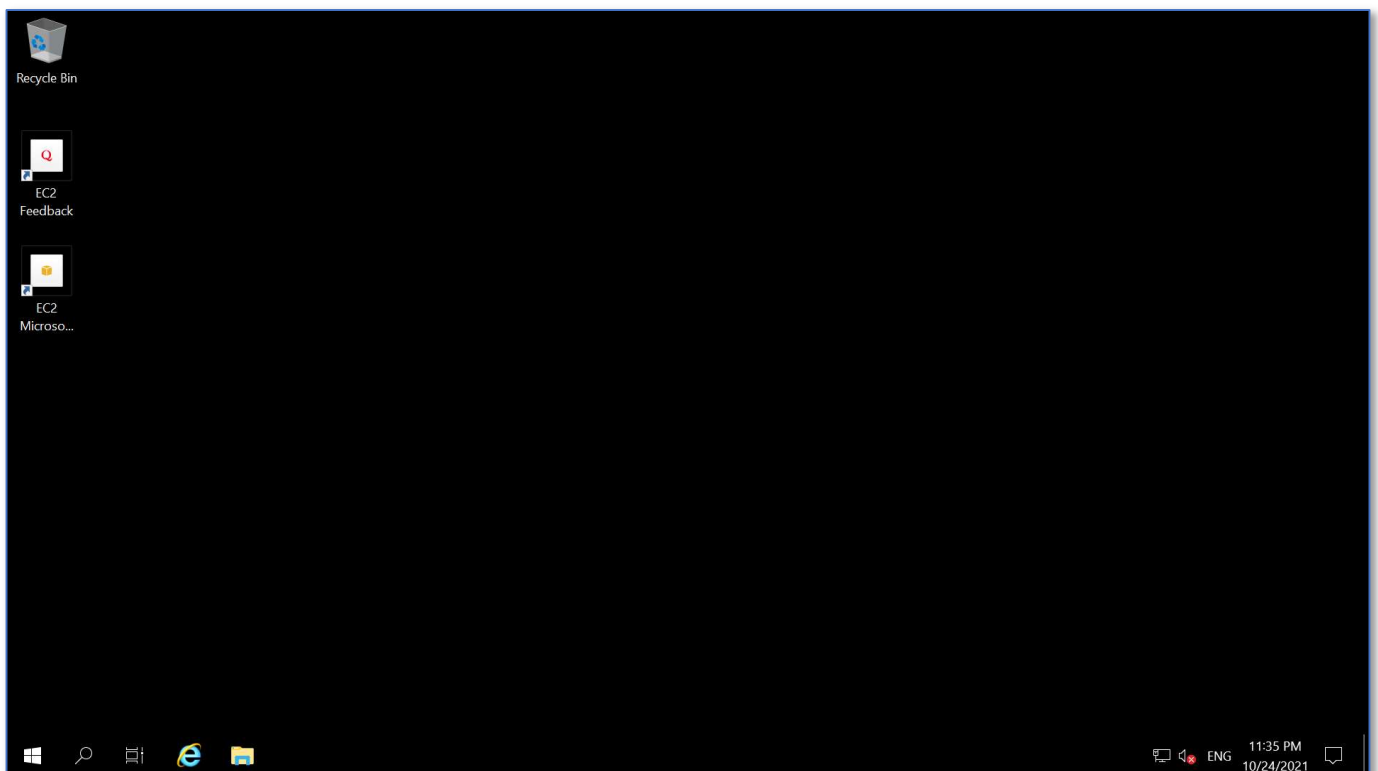
Click *OK*



Click *Yes*

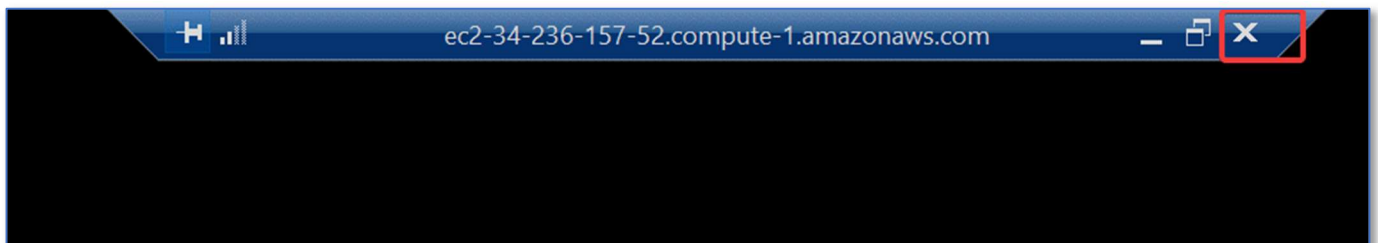


After about 5 minutes your remote desktop environment will have been created.

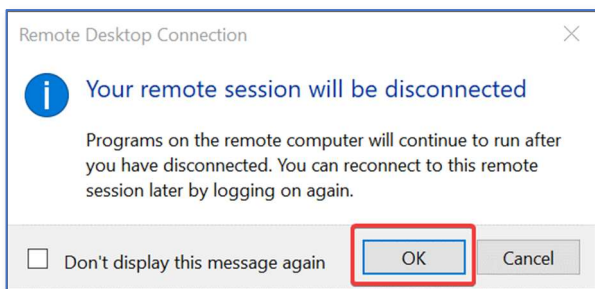


Clean Up

Close out of the RDP environment



You can now disconnect from the session



Go back to the EC2 console and terminate the instance

