

# Launch AWS EC2 Instance with Intel® Distribution of OpenVINO™ toolkit

*Enabling developers to optimize pre-trained models and accelerate the deployment of deep learning solutions with a write-once-deploy-anywhere approach across Intel® powered CPUs, integrated GPUs, Intel® Movidius™ VPUs, and FPGAs.*

The Intel® Distribution of OpenVINO™ toolkit on Amazon Machine Image (AMI) enables developers to optimize pre-trained models and accelerate the deployment of deep learning solutions with a write-once-deploy-anywhere approach across Intel-powered CPUs, integrated GPUs, Intel® Movidius™ VPUs, and FPGAs.

AMI comes pre-equipped with the Intel® Distribution of OpenVINO™ toolkit development and deployment components, such as the Model Optimizer and the Inference Engine. This AMI also includes OpenVINO Deep Learning Workbench.

This document illustrates all the steps required to deploy AMI in your AWS account and access the Jupyter environment from your local machine. Please note that the AWS account you are using for deploying this AMI needs to have public IP assigned for Jupyter notebooks to be accessed from a local system.

## Quick Launch Instructions:

1. Search for [OpenVINO AMI in AWS Marketplace](#) and Launch the AMI.

**Note:** Make sure the public IP address is enabled and is launched in a VPC with internet access.

2. Open Jupyter Notebook by navigating to port 8888,  
the URL is **http://<ec2-instance-public-ip>:8888**

3. The Jupyter Notebook password is <ec2-instance-id>

4. Launch OpenVINO Deep Learning Workbench (DL Workbench) by navigating to port 5665,  
the URL is **http://<ec2-instance-public-ip>:5665**

5. The DL Workbench password can be obtained from

**http://<ec2-instance-public-ip>:8888/notebooks/Access-OpenVINO-Workbench.ipynb**

6. You can get started with these sample notebooks: [https://github.com/openvinotoolkit/openvino\\_notebooks](https://github.com/openvinotoolkit/openvino_notebooks)

## Table of Contents

<b>Search for AMI and Subscribe .....</b>	<b>3</b>
1. Click on “Continue to Subscribe”.....	3
2. Click on “Continue to Configuration”.....	4
3. Click on “Continue to Launch”.....	4
4. You have two options to launch the AMI under “Choose Action”,.....	5
<b>AMI Launch Option 1: “Launch from Website”:.....</b>	<b>6</b>
1. Select your desired EC2 Instance Type.....	6
2. Select your VPC Settings.....	6
3. Select your Subnet Settings.....	7
4. Under Security Group Settings, click on “Create New Based on Seller Settings”.....	7
5. Select an existing Key Pair or create a new key pair.....	8
6. After selecting all the required fields above, click “Launch”.....	8
<b>AMI Launch Option 2: “Launch through EC2”:.....</b>	<b>11</b>
1. Choose instance type.....	11
2. Configure Instance.....	11
3. Add storage .....	12
4. Add tags .....	12
5. Security Group.....	13
6. Launch your instance.....	13
7. Choose or create a new private key file.....	14
8. Click on the “instance id” to see your instance status.....	15
9. Click “Connect” to view instructions to SSH into the instance.....	15
10. Connect to Jupyter Notebook.....	15
11. Connect to DL Workbench.....	17
1. [Optional] Connect to your instance via Terminal.....	20
2. [Optional] Change the Jupyter Notebook password.....	20
<b>Appendix.....</b>	<b>21</b>
<b>Create VPC with internet access .....</b>	<b>21</b>
1. Navigate to VPC then click on Create VPC .....	21
2. Create an internet gateway with the following details.....	23
3. Attach the created VPC to the internet gateway.....	24
4. Create Public Subnet.....	24
5. Create “Route Table”.....	25
6. Attach the created internet gateway in the “route table”.....	26

7. Attach the created public subnet in the “route table”.....	26
8. Create Network ACL.....	27
9. Click Edit inbound rules and add the following rules.....	28
<b>Create a Security Group.....</b>	<b>29</b>
<b><i>Summary:</i>.....</b>	<b>29</b>

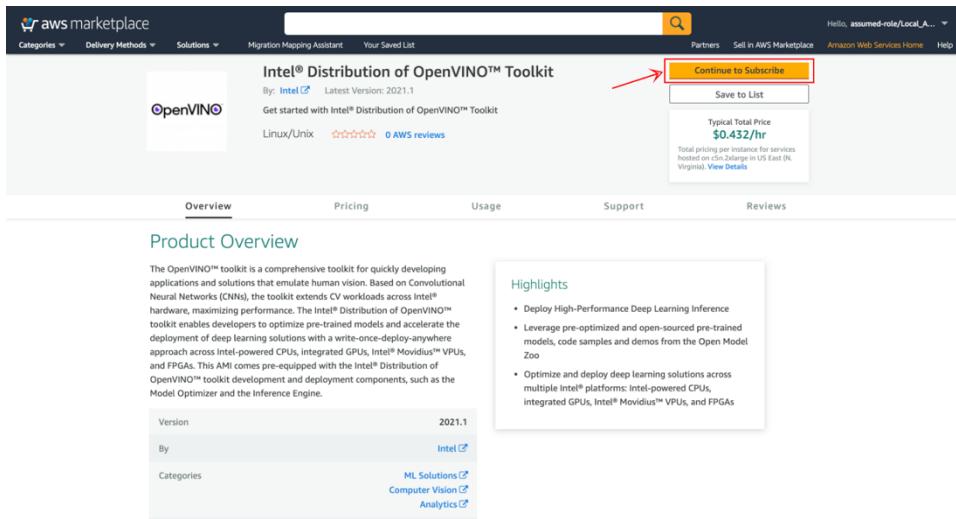
# Search for AMI and Subscribe

There are two ways to subscribe to the OpenVINO™ marketplace offering:

- **Option 1:** Navigate to the AMI webpage directly by using this link.  
<https://aws.amazon.com/marketplace/pp/prodview-sa76mydxlmwk>
- **Option 2:** Navigate to the AWS marketplace by using the link <https://aws.amazon.com/marketplace> and then search for “Intel® Distribution of OpenVINO™ Toolkit”. Select the “Intel® Distribution of OpenVINO™ Toolkit” AMI.

After selecting the AMI in the AWS marketplace:

## 1. Click on “Continue to Subscribe”



## 2. Click on “Continue to Configuration”

The screenshot shows the AWS Marketplace interface. At the top, there's a navigation bar with links like 'Categories', 'Delivery Methods', 'Solutions', 'Migration Mapping Assistant', 'Your Saved List', 'Partners', 'Sell in AWS Marketplace', 'Amazon Web Services Home', and 'Help'. Below the navigation, the product title 'Intel® Distribution of OpenVINO™ Toolkit' is displayed. To the right of the title is a yellow 'Continue to Configuration' button, which is highlighted with a red rectangular border and a red arrow pointing to it. Below the title, there's a section titled 'Subscribe to this software' with a note about being subscribed and terms and pricing details. Further down, there's a 'Terms and Conditions' section and an 'Intel Offer' section. At the bottom, there's a table showing product details: Product (Intel® Distribution of OpenVINO™ Toolkit), Effective date (10/22/2020), Expiration date (N/A), and Action (dropdown menu with 'Show Details').

## 3. Click on “Continue to Launch”

This screenshot shows the configuration step of the AWS Marketplace process. The top navigation bar is identical to the previous screenshot. The main content area has a heading 'Configure this software' and a note about selecting deployment options and entering configuration information. On the left, there are dropdown menus for 'Delivery Method' (set to '64-bit (x86) Amazon Machine Image (AMI)'), 'Software Version' (set to '2021.1 (Oct 13, 2020)'), and 'Region' (set to 'US East (N. Virginia)'). Below these is a note about Local Zones and WaveLength infrastructure deployment. On the right, there's a 'Pricing information' sidebar with a note about estimated costs. It shows 'Software Pricing' for 'Intel® Distribution of OpenVINO™ Toolkit' running on 'c5n.2xlarge' at '\$0/hr' and 'Infrastructure Pricing' for 'EC2: 1 \* c5n.2xlarge' with a 'Monthly Estimate' of '\$311.00/month'.

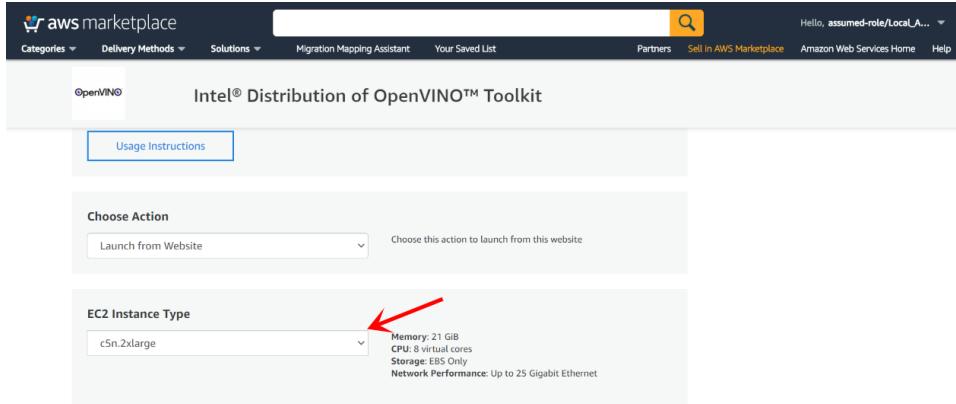
4. You have two options to launch the AMI under “Choose Action”,

- a. [Launch from Website](#)
- b. [Launch Through EC2](#)

The screenshot shows the AWS Marketplace interface for the Intel® Distribution of OpenVINO™ Toolkit. At the top, there's a navigation bar with links for Categories, Delivery Methods, Solutions, Migration Mapping Assistant, Your Saved List, Partners, Sell in AWS Marketplace, Amazon Web Services Home, and Help. Below the navigation, the product title "Intel® Distribution of OpenVINO™ Toolkit" is displayed. Underneath the title, there are buttons for Product Detail, Subscribe, Configure, and Launch. The "Launch" button is highlighted. The main content area is titled "Launch this software" and contains a section for "Configuration Details". This section includes fields for Fulfillment Option (set to "64-bit (x86) Amazon Machine Image (AMI) Intel® Distribution of OpenVINO™ Toolkit running on c5n.2xlarge"), Software Version (2021.1), and Region (US East (N. Virginia)). Below these details is a "Usage Instructions" button. Further down, there's a "Choose Action" dropdown menu with the option "Launch from Website" selected. A tooltip next to this option says "Choose this action to launch from this website". At the bottom, there's an "EC2 Instance Type" section showing "c5n.2xlarge" with "Memory: 21 GiB" and "CPU: 8 virtual cores".

# AMI Launch Option 1: “Launch from Website”:

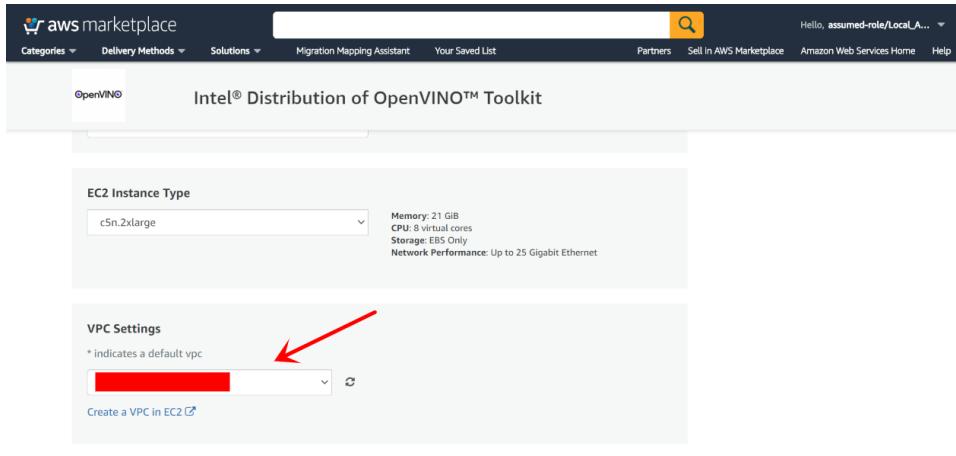
## 1. Select your desired EC2 Instance Type



## 2. Select your VPC Settings

Make sure your VPC and subnet has internet access.

Please refer to "[Create VPC with internet access](#)" on page 17 for detailed instructions.



### 3. Select your Subnet Settings

The screenshot shows the AWS Marketplace interface for the Intel® Distribution of OpenVINO™ Toolkit. In the 'Subnet Settings' section, there is a dropdown menu labeled 'Subnet Settings' with a red arrow pointing to it. Below the dropdown, it says 'IPv4 CIDR block: 10.0.0.0/24'. A link 'Create a subnet in EC2' is visible, along with a note '(Ensure you are in the selected VPC above)'. The 'Security Group Settings' section below includes a dropdown for 'Security group' set to 'launch-wizard-3'.

### 4. Under Security Group Settings, click on “Create New Based on Seller Settings”.

- Enter “Name” and “Description” for the security group.
- For Source (IP or Group), we recommend “MY IP”, you could choose “anywhere” also.
- The security group needs two open ports, “22” for SSH login, “8888” for Jupyter access and “5665” for DL Workbench access.

The screenshot shows the AWS Marketplace interface for the Intel® Distribution of OpenVINO™ Toolkit. In the 'Security Group Settings' section, there is a dropdown menu labeled 'Select a security group' with a red arrow pointing to it. Below it, a blue button labeled 'Create New Based On Seller Settings' is highlighted with a red arrow. The 'Key Pair Settings' section at the bottom notes that no other person has access to the software because it installs on an EC2 instance with a key pair created by the user.

## 5. Select an existing Key Pair or create a new key pair

## 6. After selecting all the required fields above, click “Launch”

## 7. Instance is successfully launched. Click on “EC2 Console”.

< Product Detail Subscribe Configure Launch

### Launch this software

Congratulations! An instance of this software is successfully deployed on EC2!

AMI ID: ami-034310fd178033708 ([View Launch Configuration Details](#))

You can view this instance on [EC2 Console](#). You can also view all instances on [Your Software](#). Software and AWS hourly usage fees apply when the instance is running and will appear on your monthly bill.

You can launch this configuration again below or go to the [configuration page](#) to start a new one.

#### Configuration Details

Fulfillment Option

64-bit (x86) Amazon Machine Image (AMI)

Intel® Distribution of OpenVINO™ Toolkit

running on c5n.Xlarge

## 8. Allocating Elastic IP address.

Go to “Elastic IPs”. Click on “Allocate Elastic IP address”.

Click on “Allocate”.

Go to “Actions”. Select “Associate Elastic IP address”.

Elastic IP addresses (1/5)

Name	Allocated IPv4 add...	Type	Actions
[REDACTED]	[REDACTED]	Pub	<a href="#">View details</a> <a href="#">Release Elastic IP address</a> <a href="#">Associate Elastic IP address</a> <a href="#">Disassociate Elastic IP address</a>

**Summary** **Tags**

**Summary**

Allocated IPv4 address	Type	Allocation ID	Association ID
[REDACTED]	Public IP	[REDACTED]	[REDACTED]

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Choose your instance. Click on “Associate”.

Associate Elastic IP address

Choose the instance or network interface to associate to this Elastic IP address [REDACTED]

Elastic IP address: [REDACTED]

Resource type  
Choose the type of resource with which to associate the Elastic IP address.  
 Instance  
 Network interface

If you associate an Elastic IP address to an instance that already has an Elastic IP address associated, this previously associated Elastic IP address will be disassociated but still allocated to your account. [Learn more](#)

Instance [REDACTED]

Private IP address  
The private IP address with which to associate the Elastic IP address.  
 Choose a private IP address

Reassociation  
Specify whether the Elastic IP address can be reassigned to a different resource if it already associated with a resource.  
 Allow this Elastic IP address to be reassigned

Cancel Associate

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Go to “Instances”.

Copy Public IPv4 address and instance-id, they will be public IP and password to Jupyter Notebook.

Instances (1/1) Info

Name	Instance ID	Instance state	Instance type	Status check
with_website	[REDACTED]	Running	c5n.2xlarge	2/2 checks ...

Instance: [REDACTED]

Details Security Networking Storage Status Checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
[REDACTED]	[REDACTED] <input type="button" value="open address"/>	10.0.4.98

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# AMI Launch Option 2: “Launch through EC2”:

The screenshot shows the AWS Marketplace interface for the Intel® Distribution of OpenVINO™ Toolkit. The 'Choose Action' dropdown is set to 'Launch through EC2', and the 'Launch' button is highlighted with a red arrow.

## 1. Choose instance type

Choose an instance and then click “Configure Instance Details”.

Here we have picked a *c5.4xlarge (68 ECUs, 16 vCPUs, 32 GiB memory, EBS only)*.

The screenshot shows the 'Choose Instance Type' step in the AWS EC2 wizard. The 'c5.4xlarge' instance is selected. The 'Next: Configure Instance Details' button is highlighted with a red arrow.

## 2. Configure Instance

The compute instance selected in the previous step is only available in a Virtual Private Cloud (VPC), so choose the default VPC and enable “Auto-assign Public IP”.

In case you don't have a default VPC with Public IP, follow the instructions [Create VPC with internet access](#) section to create one.

**Step 3: Configure Instance Details**

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances	<input type="text" value="1"/>	Launch into Auto Scaling Group
Purchasing option	<input type="checkbox"/> Request Spot instances	
Network	No default VPC found. <a href="#">Create a new default VPC</a>	
Subnet	249 IP Addresses available <a href="#">Create new subnet</a>	
Auto-assign Public IP	<input type="checkbox"/> Enable	
Placement group	<input type="checkbox"/> Add instance to placement group	
Capacity Reservation	<input type="checkbox"/> Open	

Cancel Previous Review and Launch Next: Add Storage

### 3. Add storage

Update the storage size based on your Requirement. We would recommend selecting a 30 GB minimum to start with as shown in the image below.

**Step 4: Add Storage**

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. [Learn more](#) about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-01b208bd4d49318b0	<input type="text" value="30"/>	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/> Not Encrypted

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. [Learn more](#) about free usage tier eligibility and usage restrictions.

Cancel Previous Review and Launch Next: Add Tags

### 4. Add tags

Click on “Next: Configure Security Group”.

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

**Step 5: Add Tags**

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum) Value (256 characters maximum) Instances (1) Volumes (1)

This resource currently has no tags.

Choose the Add tag button or [click to add a Name tag](#). Make sure your [IAM policy](#) includes permissions to create tags.

Add Tag (Up to 50 tags maximum)

Cancel Previous **Review and Launch** Next: Configure Security Group

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## 5. Security Group

Choose the existing security group and click “Review and Launch”.

In case you don't have an existing security group then follow instructions in the [Create security group](#) section to create a new security group.

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

**Step 6: Configure Security Group**

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group:  Create a new security group  Select an existing security group

Security Group ID	Name	Description
[REDACTED]	default	default VPC security group
[REDACTED]	Demo_SG	Allow SSH access to developers

Select a security group above to view its inbound rules.

Cancel Previous **Review and Launch**

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## 6. Launch your instance

Click “Launch”.

**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.

**AMI Details**

**Intel® Distribution of OpenVINO™ Toolkit**

OpenVINO Intel Distribution of OpenVINO-2021.1-AmazonLinux2

Root Device Type: ebs Virtualization type: hvm

**Hourly Software Fees:** \$0.00 per hour on c5.4xlarge instance. Additional taxes or fees may apply.  
Software charges will begin once you launch this AMI and continue until you terminate the instance.

By launching this product, you will be subscribed to this software and agree that your use of this software is subject to the pricing terms and the seller's

**Cancel Previous Launch**

## 7. Choose or create a new private key file

Choose an existing private key file or create a new one by selecting “create a new key pair” and click “Download Key Pair” to save it. Then click “Launch Instance”.

**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.

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](#).

**Choose an existing key pair**  
**Select a key pair**  
demo-key

acknowledge that I have access to the selected private key file (demo-key.pem), and that without this file, I won't be able to log into my instance.

**Cancel Launch Instances**

Please note that it might take some time for the instance to be created.

**Initiating Instance Launches**

Please do not close your browser while this is loading

Initiating launches...

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## 8. Click on the “instance id” to see your instance status.

Also, copy this instance-id, as this will be your password to your Jupyter Notebook.

The screenshot shows the AWS Launch Status page. At the top, a green banner says "Your instances are now launching" with a red arrow pointing to the text "i-0719207e3bde38334". Below the banner, there's a section about estimated charges and instructions on how to connect to instances. A blue bar at the bottom provides links for Intel Distribution of OpenVINO Toolkit and software subscription management. The footer includes standard AWS links like Feedback, English (US), Privacy Policy, and Terms of Use.

## 9. Click “Connect” to view instructions to SSH into the instance.

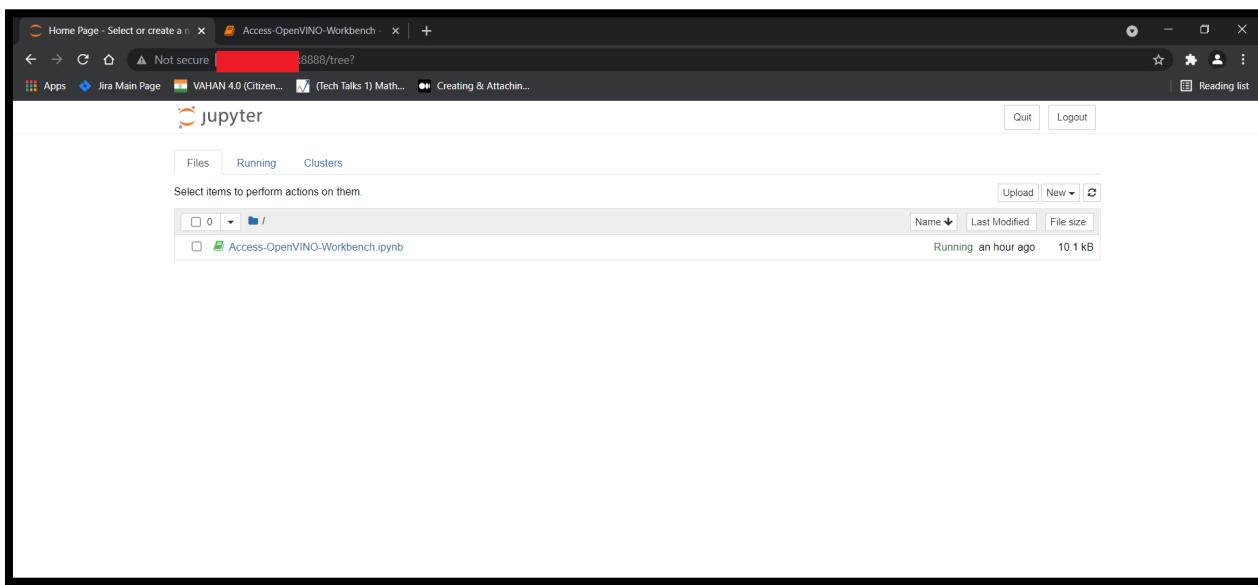
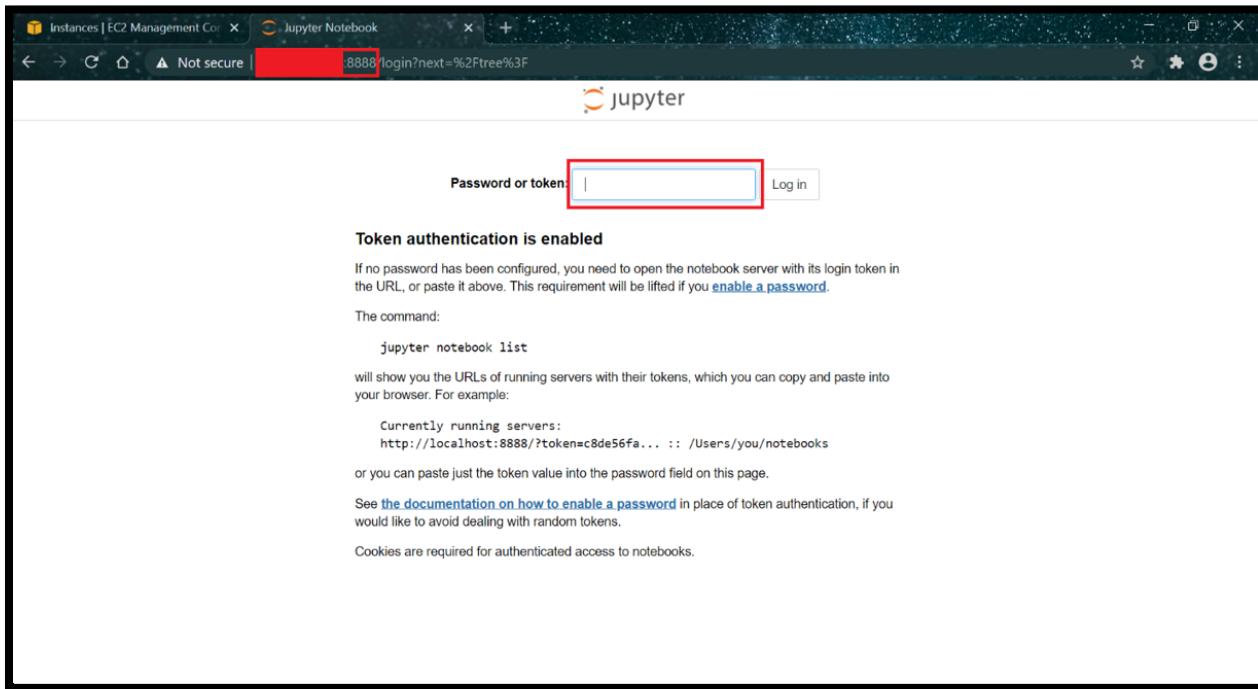
Click on the “Connect” button on top of the page to launch web CLI

The screenshot shows the AWS EC2 Instances page. On the left, a sidebar lists various EC2-related options like EC2 Dashboard, Events, Tags, Instances, and Images. The main area displays a table of instances with one row selected. A red arrow points to the "Connect" button in the top navigation bar. Another red arrow points to the "open address" link under the Public IPv4 address for the selected instance. The footer is identical to the previous screenshot.

## 10. Connect to Jupyter Notebook.

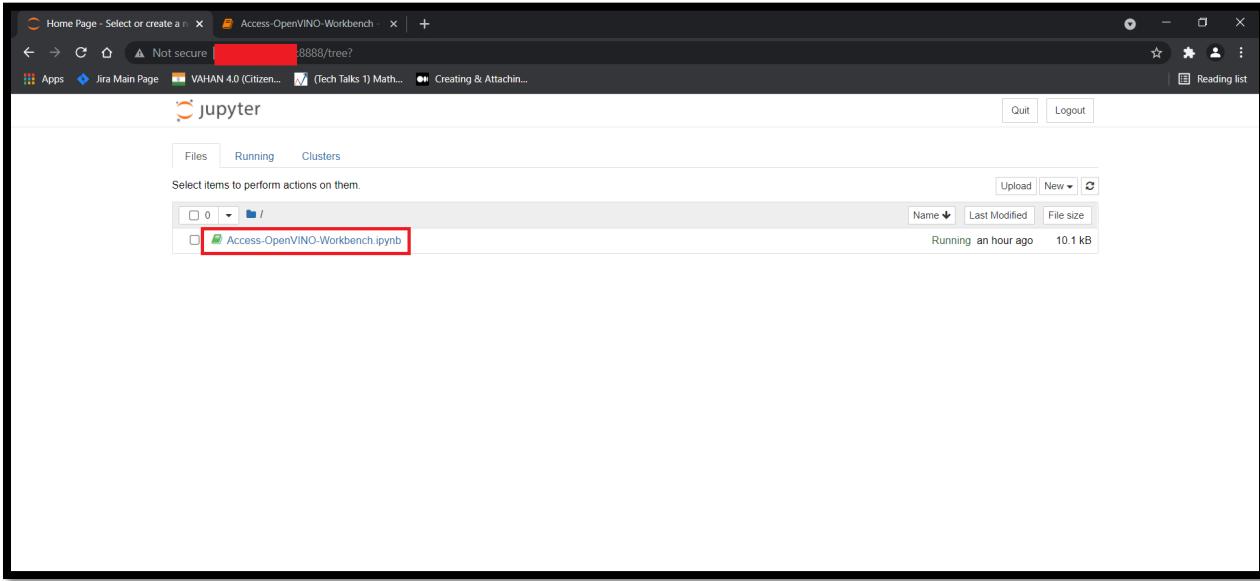
Open a browser window and navigate to the URL given below. (NOTE: Replace text below in red.)

```
http://<your instance Public IP>:8888  
Password or token: <your instance id is your password>
```

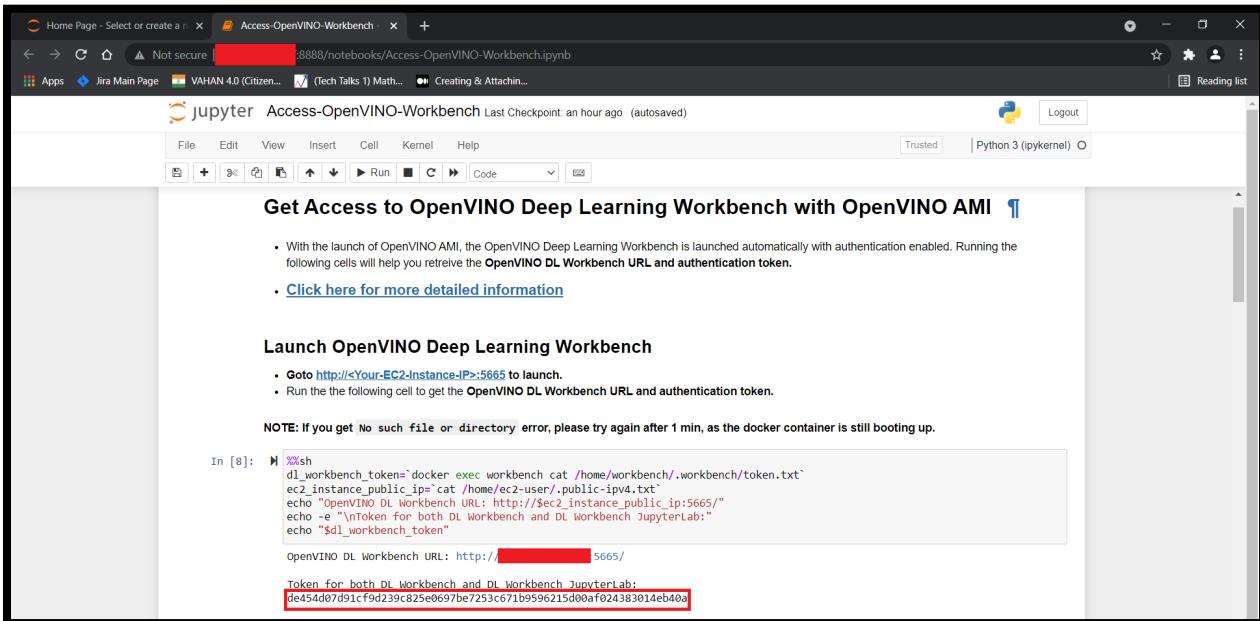


## 11. Connect to DL Workbench.

Open Access-OpenVINO-Workbench.ipynb file available in the Jupyter session.

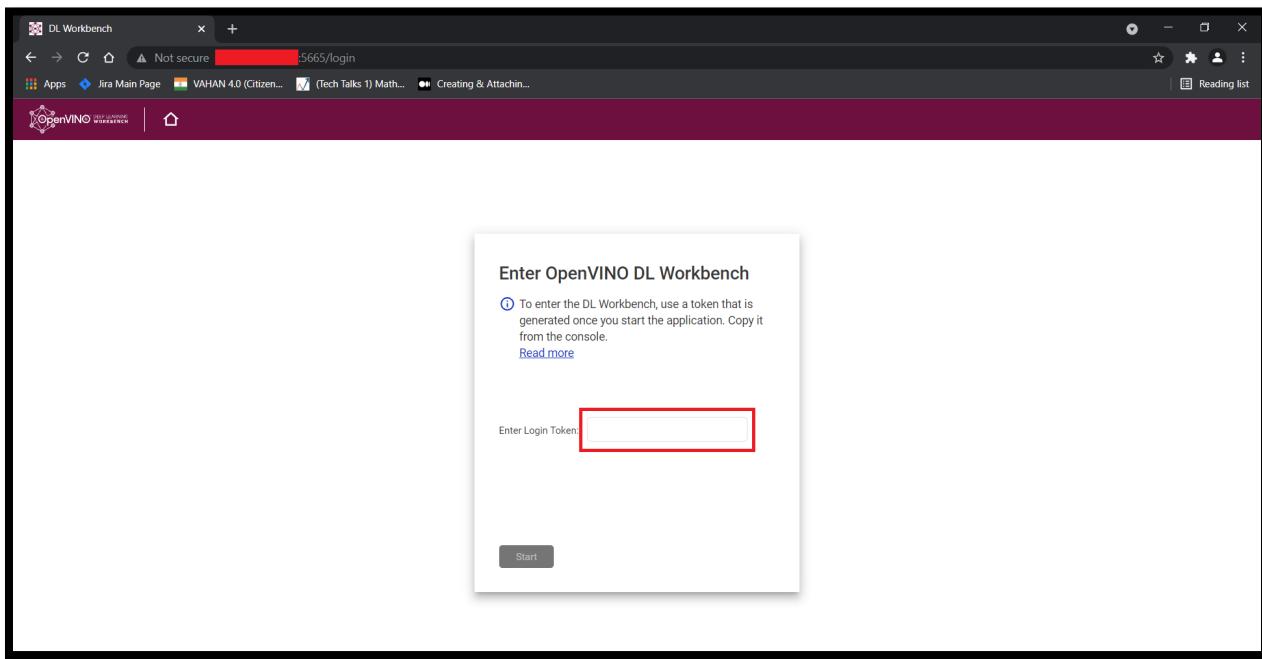


Run the first cell in **Access-OpenVINO-Workbench.ipynb** file. If you get error “No such file or directory”, DL Workbench is booting up wait for some time and try running the cell again. You will get a access token as shown in the picture below.



Click on the URL printed in the output of the cell or Open a new tab and follow below steps to login to DL Workbench.

`http://<your instance Public IP>:5665`  
`Password or token: <your access token as shown in earlier screenshot>`

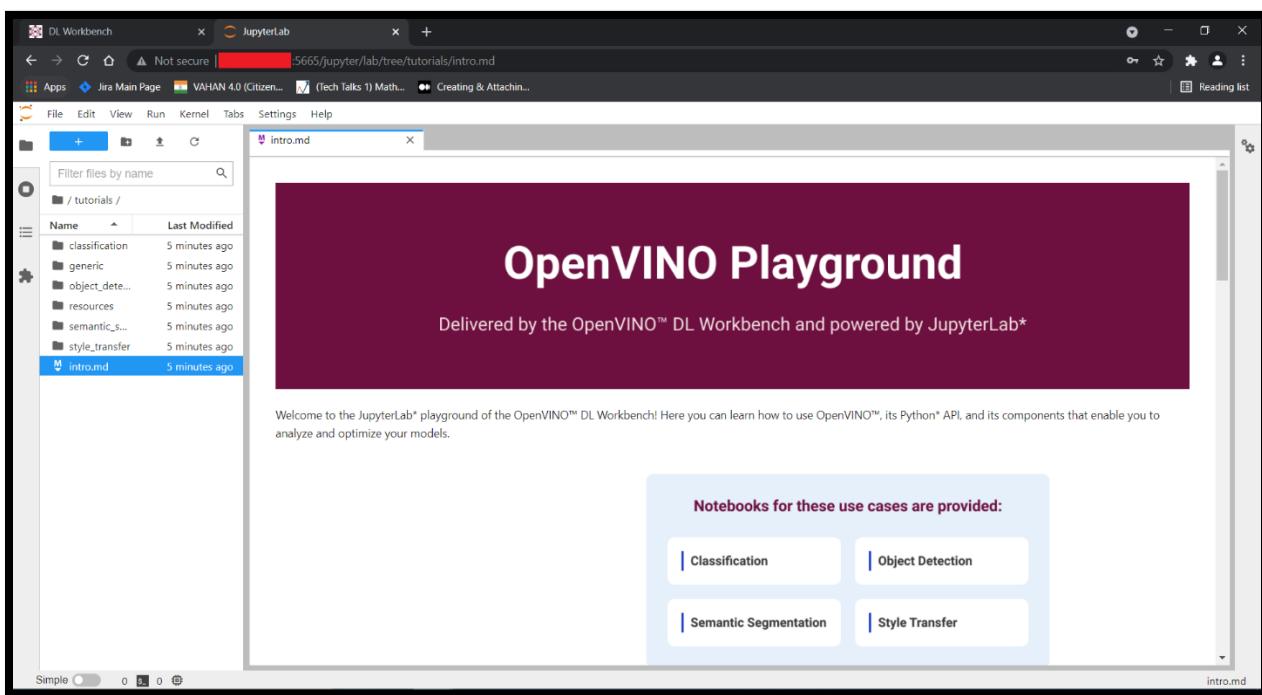
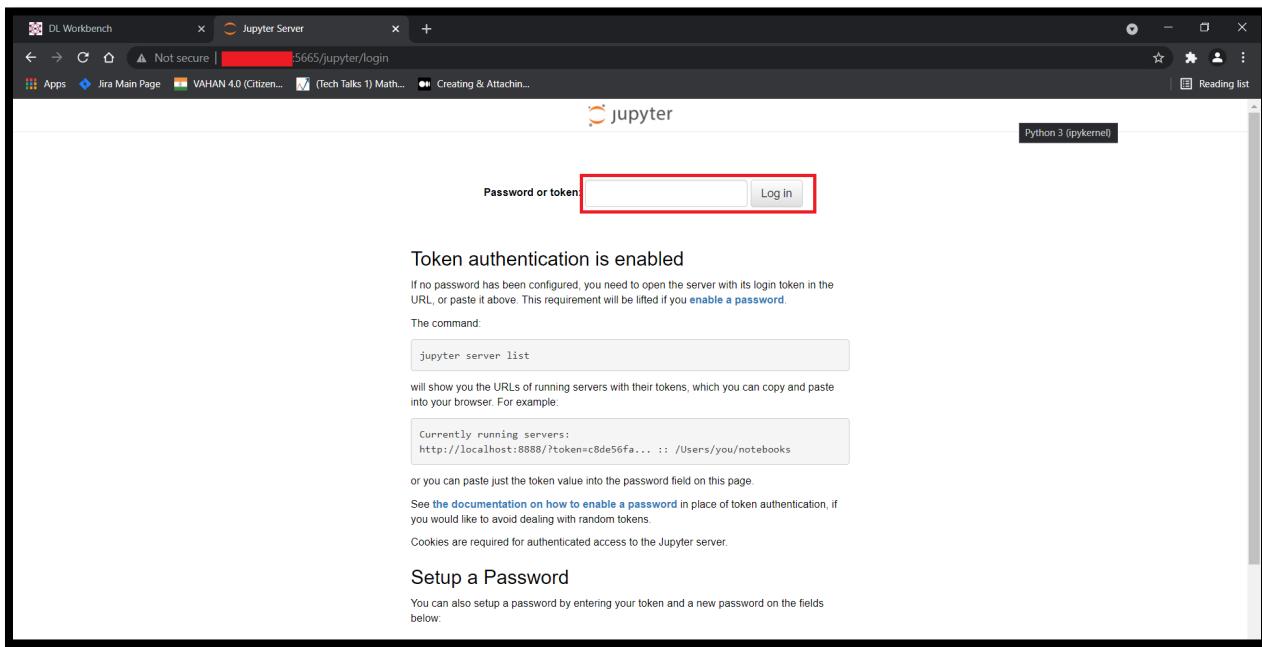


Click on **LEARN OPENVINO** on top-left corner to run OpenVINO examples.

A screenshot of the DL Workbench Start Page. The top navigation bar includes the OpenVINO logo, a home icon, a "LEARN OPENVINO" button (which is highlighted with a red box), and a gear icon. The main heading is "Start Page". Below it are four sections: "Analyze", "Optimize", "Deploy", and "Learn OpenVINO™". Each section has an illustration and a brief description. At the bottom left is a "Create Project" button, and at the bottom right is a "Explore 100+ OMZ Models" button.

Once you click on "**Learn OpenVINO**", You should see JupyterLab notebook session start from within the DL Workbench.

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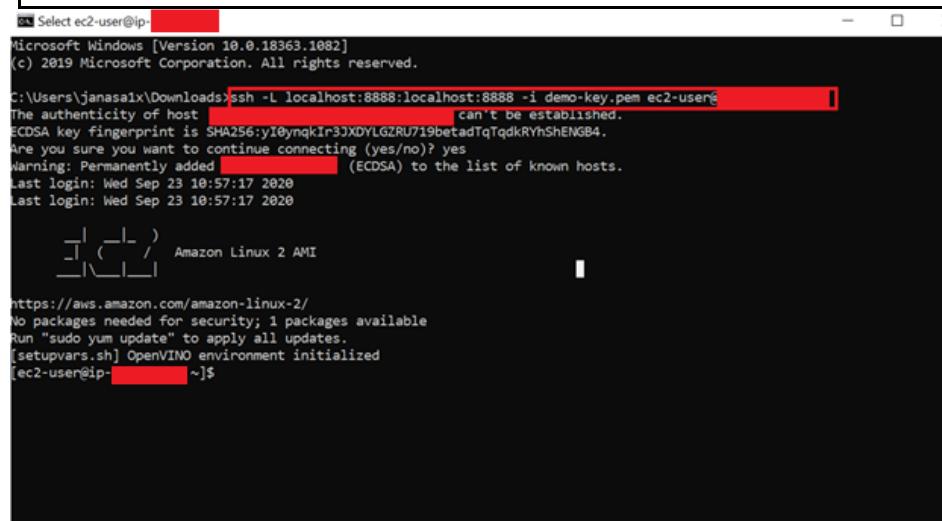


**NOTE: Stop the instance when not in use to prevent additional charges.**

## 12. [Optional] Connect to your instance via Terminal

Open a terminal then connect to your instance using SSH and Replace text below in red.

```
cd /Users/your_username/Downloads/  
chmod 0400 <your .pem file name>  
ssh -L localhost:8888:localhost:8888 -i <your .pem file name> ec2-  
user@<Your instance Public IP>  
  
#If you need to connect via proxy:  
ssh -o ProxyCommand='nc -x <your_proxy_address>:<your_proxy_port> <Your  
instance DNS> 22' -L localhost:8888:localhost:8888 -i <your .pem file  
name> ec2-user@<Your instance Public IP>
```



```
ec2-user@ip-10-0-10-82: ~ ]  
Microsoft Windows [Version 10.0.18363.1082]  
(c) 2019 Microsoft Corporation. All rights reserved.  
  
C:\Users\janasax\Downloads>ssh -L localhost:8888:localhost:8888 -i demo-key.pem ec2-user@<Your instance Public IP> [REDACTED]  
The authenticity of host [REDACTED] can't be established.  
ECDSA key fingerprint is SHA256:yI0yngkIr3JXDYLGZRU7i9betad1qTqdkRYhShENGB4.  
Are you sure you want to continue connecting (yes/no)? yes  
Warning: Permanently added [REDACTED] (ECDSA) to the list of known hosts.  
Last login: Wed Sep 23 10:57:17 2020  
Last login: Wed Sep 23 10:57:17 2020  
  
[ - ] ( - ) / Amazon Linux 2 AMI  
  
https://aws.amazon.com/amazon-linux-2/  
No packages needed for security; 1 packages available  
Run "sudo yum update" to apply all updates.  
[setupvars.sh] OpenVINO environment initialized  
[ec2-user@ip-10-0-10-82 ~]$
```

## 13. [Optional] Change the Jupyter Notebook password.

Login to instance via SSH and replace the text below in red.

```
pkill jupyter  
  
Change password in `~/.start_jupyter.sh` and run `~/.start_jupyter.sh`  
  
OR  
  
jupyter notebook --no-browser --NotebookApp.allow_password_change=False  
--NotebookApp.token='<new password>' --ip 0.0.0.0 --port 8888 >  
/tmp/jupyter.out 2>&1 &
```

```
[ec2-user@ip-10-0-4-169 ~]$ pkill jupyter
[ec2-user@ip-10-0-4-169 ~]$ cat .start_jupyter.sh
TOKEN=`curl -X PUT "http://169.254.169.254/latest/api/token" -H "X-aws-ec2-metadata-token-ttl-seconds: 21600"`
INSTANCE_ID=`curl -H "X-aws-ec2-metadata-token: $TOKEN" http://169.254.169.254/latest/meta-data/instance-id`

cd /home/ec2-user
source /home/ec2-user/.bashrc
#source /opt/intel/openvino_2021/bin/setupvars.sh

export PATH=/opt/intel/openvino_2021/deployment_tools/model_optimizer:/opt/intel/openvino_2021/data_processing/gstreamer/bin:/opt/intel/openvino_2021/data_processing/gstreamer/bin/gstreamer-1.0:/usr/local/bin:/usr/bin:/usr/local/sbin:/usr/sbin:/home/ec2-user/.local/bin:/home/ec2-user/bin

export LD_LIBRARY_PATH=/opt/intel/openvino_2021/data_processing/dl_streamer/lib:/opt/intel/openvino_2021/data_processing/gstreamer/lib:/opt/intel/openvino_2021/openvnc/lib:/opt/intel/openvino_2021/deployment_tools/graph/lib:/opt/intel/openvino_2021/deployment_tools/inference_engine/external/hddl/unit/lib:/opt/intel/openvino_2021/deployment_tools/inference_engine/external/hddl/lib:/opt/intel/openvino_2021/deployment_tools/inference_engine/external/mklitiny_lnx/lib:/opt/intel/openvino_2021/deployment_tools/inference_engine/external/tbb/lib:/opt/intel/openvino_2021/deployment_tools/inference_engine/lib/intel64
export PYTHONPATH=/opt/intel/openvino_2021/python/python3.7:/opt/intel/openvino_2021/python/python3:/opt/intel/openvino_2021/deployment_tools/open_model_zoo/tools/accuracy_checker:/opt/intel/openvino_2021/deployment_tools/model_optimizer:/opt/intel/openvino_2021/data_processing/dl_streamer/python:/opt/intel/openvino_2021/data_processing/gstreamer/lib/python3.6/site-packages:

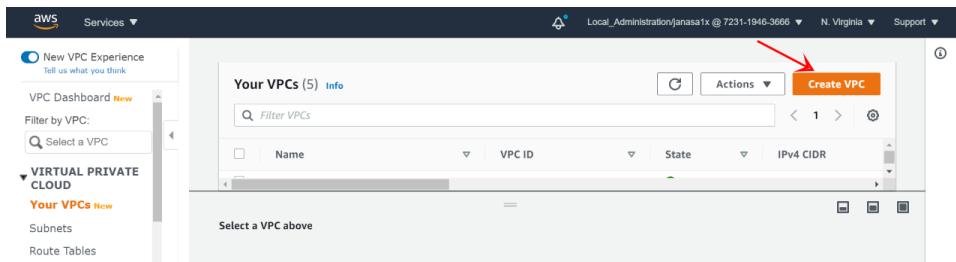
/home/ec2-user/.local/bin/jupyter notebook --no-browser --NotebookApp.allow_password_change=False --NotebookApp.token="$INSTANCE_ID" --ip 0.0.0.0 --port 8888 > /tmp/jupyter.out 2>&1 &

[ec2-user@ip-10-0-4-169 ~]$ jupyter notebook --no-browser --NotebookApp.allow_password_change=False --NotebookApp.token='openvino@123' --ip 0.0.0.0 --port 8888 > /tmp/jupyter.out 2>&1 &
[1] 4695
```

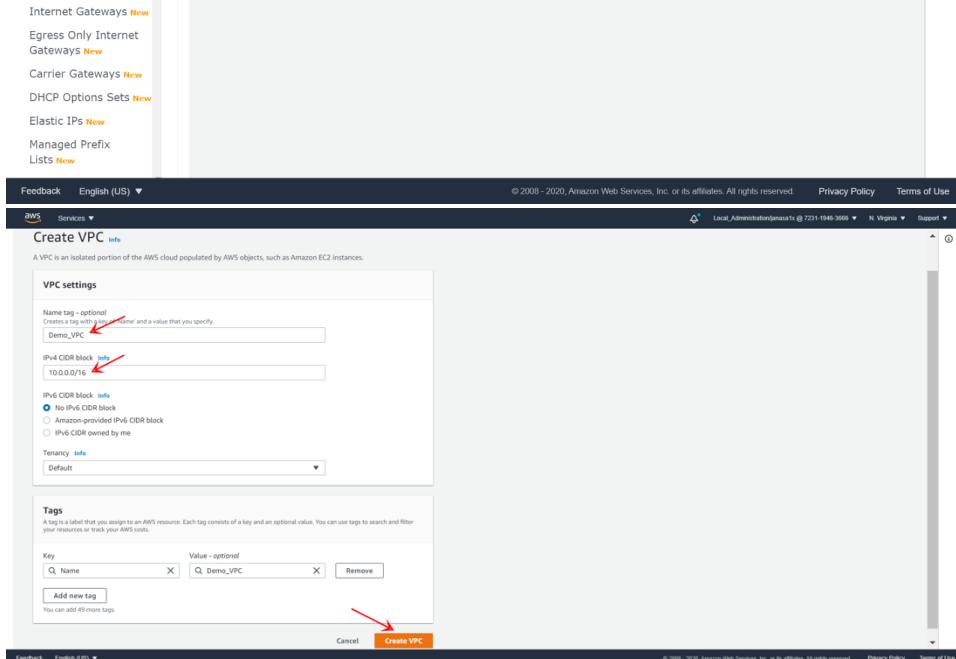
## Appendix

### Create VPC with internet access

#### 1. Navigate to VPC then click on Create VPC



The screenshot shows the AWS VPC Dashboard. On the left sidebar, under 'VIRTUAL PRIVATE CLOUD', 'Your VPCs' is selected. In the main pane, there is a table titled 'Your VPCs (5)'. At the top right of the table, there is a red arrow pointing to the 'Create VPC' button.

The screenshot shows the 'Create VPC' configuration page. It includes sections for 'VPC settings' (with a 'Name tag' field containing 'Demo\_VPC' and an 'IPv4 CIDR block' of '10.0.0.0/16'), 'Tenancy' (set to 'Default'), and 'Tags' (a single tag 'Q\_Name: Demo\_VPC'). A red arrow points to the 'Create VPC' button at the bottom right of the form.

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Please fill in the following fields on the page and click “Create VPC”:

- **Name tag – optional** → Demo\_VPC (Example Name)
- **IPv4 CIDR block** → 10.0.0.0/16
- **IPv6 CIDR block** → No IPv6 CIDR block
- **Tenancy** → Default

## 2. Create an internet gateway with the following details.

The screenshot shows the AWS VPC console. On the left, under 'VPC' > 'Internet gateways', there is a list of four existing Internet gateways. A red arrow points to the 'Create internet gateway' button at the top right of this list. Below this, a modal window titled 'Create internet gateway' is open. It contains two sections: 'Internet gateway settings' and 'Tags - optional'. In the 'Internet gateway settings' section, a 'Name tag' field has 'Demo\_IGW' entered. In the 'Tags - optional' section, a single tag 'Name' is listed with value 'Demo\_IGW'. A red arrow points to the 'Create internet gateway' button at the bottom of this modal window.

Please fill the following field in the page and click “Create Internet gateway”

- **Name tag → Demo\_IGW (Example Name)**

### 3. Attach the created VPC to the internet gateway.

The screenshot shows the AWS VPC Internet Gateways page. A red arrow points to the 'Actions' dropdown menu for the selected internet gateway, which includes options like 'Attach to VPC', 'Detach from VPC', 'Manage tags', and 'Delete'. Another red arrow points to the 'Attach to VPC' button on the 'Attach to VPC' confirmation dialog.

**Internet gateway ID:** [REDACTED]  
**State:** Detached  
**VPC ID:** -  
**Owner:** 723119463666

**Tags:**

Key	Value
Name	Demo_IGW

**Attach to VPC** [REDACTED] **Info**

**VPC**  
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

**Available VPCs**  
Attach the internet gateway to this VPC.  
[Search input field]

**AWS Command Line Interface command**

**Cancel** **Attach internet gateway**

- Click “Attach to a VPC”.
- Choose the VPC (Demo\_VPC) that we created and click “Attach Internet Gateway”.

### 4. Create Public Subnet.

The screenshot shows the AWS VPC Subnets page. A red arrow points to the 'Create subnet' button at the top left. Another red arrow points to the 'Subnets' link in the left navigation menu, which is highlighted.

**Create subnet**

**Filter by tags and attributes or search by keyword**

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR
Independent...	subnet-02109222000000000000	available	vpc-0011ab180444707	10.0.0.0/16	0.0.0.0/32	-
Independent...	subnet-06154ef0a913be6d7	available	vpc-0011ab180444707	10.0.0.0/24	243	-

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Name tag Public\_Demo\_Subnet

VPC\* [redacted]

Availability Zone us-east-1a

VPC CIDRs	CIDR	Status	Status Reason
	10.0.0.0/16	associated	

IPv4 CIDR block\* 10.0.4.0/24

**CIDR Address overlaps with existing Subnet CIDR: 10.0.4.0/24**

\* Required

Create

Please fill the following field in the page & click “Create”:

- **Name tag** → Public\_Demo\_Subnet (Example Name)
- **VPC\*** → Choose the VPC (Demo\_VPC) that we created
- **Availability Zone** → us-east-1a (Choose your respective region)
- **IPv4 CIDR block\*** → 10.0.4.0/24

## 5. Create “Route Table”.

New VPC Experience

Create route table Actions

VPC Dashboard New

Filter by VPC: Select a VPC

VIRTUAL PRIVATE CLOUD

Your VPCs New

Subnets

**Route Tables** [red arrow]

Internet Gateways New

Egress Only Internet Gateways New

Carrier Gateways New

DHCP Options Sets New

Elastic IPs New

Managed Prefix Lists New

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Route Tables > Create route table

Create route table

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Name tag Public\_Demo\_RT

VPC\* [redacted]

Key	Value
(128 characters maximum)	(256 characters maximum)

This resource currently has no tags

Add Tag 50 remaining (Up to 50 tags maximum)

\* Required

Create

Please fill the following field in the page & click “Create”:

- **Name tag** → Public\_Demo\_RT (Example Name)

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- **VPC\*** → Choose the VPC (Demo\_VPC) that we created

## 6. Attach the created internet gateway in the “route table”.

The screenshot shows the AWS VPC Route Tables page. On the left sidebar, under 'Route Tables', the 'Edit routes' button is highlighted with a red arrow. The main area displays the 'Public\_Demo\_RT' route table with several routes listed. The 'Edit routes' button is located at the bottom left of the route table's content area.

Click “Edit routes” and add a route with the following details & click “Save routes”

- **Destination** → 0.0.0.0/0 (Any)
- **Target** → Choose your Internet Gateway(Demo\_IGW)

The screenshot shows the 'Edit routes' page for the 'Public\_Demo\_RT' route table. It lists two routes: one for destination 10.0.0.0/16 with target 'local' and status 'active', and another for destination 0.0.0.0/0 with target 'Demo\_IGW' and status 'active'. At the bottom right, there is a 'Save routes' button, which is highlighted with a red arrow.

## 7. Attach the created public subnet in the “route table”.

Click “Edit subnet associations” and choose the following details and click “Save”.

New VPC Experience  
Tell us what you think

VPC Dashboard [New](#)

Filter by VPC:  
[Select a VPC](#)

**VIRTUAL PRIVATE CLOUD**

Your VPCs [New](#)

Subnets

**Route Tables**

Internet Gateways [New](#)

Egress Only Internet Gateways [New](#)

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Route Table: [REDACTED]

Actions ▾

Summary Routes Subnet Associations Edge Associations Route Propagation

Edit subnet associations

Subnet ID IPv4 CIDR IPv6 CIDR

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**Subnet ID → Choose the created Public Subnet(Public\_Demo\_Subnet)**

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Route Tables > Edit subnet associations

Edit subnet associations

Route table [REDACTED] (Public\_Demo\_RT)

Associated subnets [REDACTED]

Subnet ID IPv4 CIDR IPv6 CIDR Current Route Table

\* Required

Cancel Save

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## 8. Create Network ACL.

Please fill the following field in the page and click “Create”

New VPC Experience  
Tell us what you think

Manager APIs  
Lists [New](#)

Endpoints

Endpoint Services

NAT Gateways [New](#)

Peering Connections

**SECURITY**

**Network ACLs**

Security Groups [New](#)

**VIRTUAL PRIVATE NETWORK (VPN)**

Customer Gateways

Virtual Private Gateways

Site-to-Site VPN Connections

Client VPN Endpoints

Create network ACL Actions ▾

Filter by tags and attributes or search by keyword

Name	Network ACL ID	Associated with	Default	VPC	Owner
[REDACTED]	[REDACTED]	Subnets	Yes	VPC-0278A10000000000   awsenterprise ...	723119463666

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A network ACL is an optional layer of security that acts as a firewall for controlling traffic in and out of a subnet.

Name tag: Demo\_NACL

VPC\*: [Redacted]

\* Required

Create

- **Name tag** → Demo\_NACL (Example Name)
- **VPC\*** → Choose the VPC (Demo\_VPC) that we created

## 9. Click Edit inbound rules and add the following rules.

Rule #	Type	Protocol	Port Range	Source	Allow / Deny
*	ALL Traffic	ALL	ALL	0.0.0.0/0	DENY

Edit inbound rules

Rule #	Type	Protocol	Port Range	Source	Allow / Deny
1	SSH (22)	TCP (6)	22	[Redacted]	ALLOW
2	Custom TCP Rule	TCP (6)	8888	[Redacted]	ALLOW

Add Rule

\* Required

Cancel Save

Type	Port	Source	Allow/Deny
SSH	22	Your System IP	Allow
Custom TCP Rule	8888	Your System IP	Allow
Custom TCP Rule	5665	Your System IP	Allow

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# Create a Security Group

The screenshot shows the 'Configure Security Group' step in the AWS EC2 wizard. It displays two security rules:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	My IP	e.g. SSH for Admin Desktop
Custom TCP F	TCP	8888	My IP	e.g. SSH for Admin Desktop

Red arrows point to the 'Create a new security group' radio button and the 'Review and Launch' button.

- For Source, we recommend “MY IP”, you could choose “anywhere” also.
- The security group needs two open ports, “22” for SSH login, “8888” for Jupyter access and “5665” for DL Workbench Access

## Summary:

This document walks you through in detail how to create an EC2 instance using Intel® Distribution of OpenVINO™ toolkit AMI in this tutorial. Please note that AWS charges you for the hours the server is running, so stop it when it's unused to save on your costs.



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