

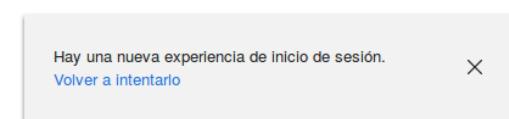
Fast Guide for Virtual Machines in Microsoft Azure

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Advanced Natural Language Processing Course
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Register a Account in Microsoft Azure

- <https://azure.microsoft.com/>



Microsoft Azure Signup Portal

Cuenta laboral o educativa, o personal de Microsoft

Mantener la sesión iniciada

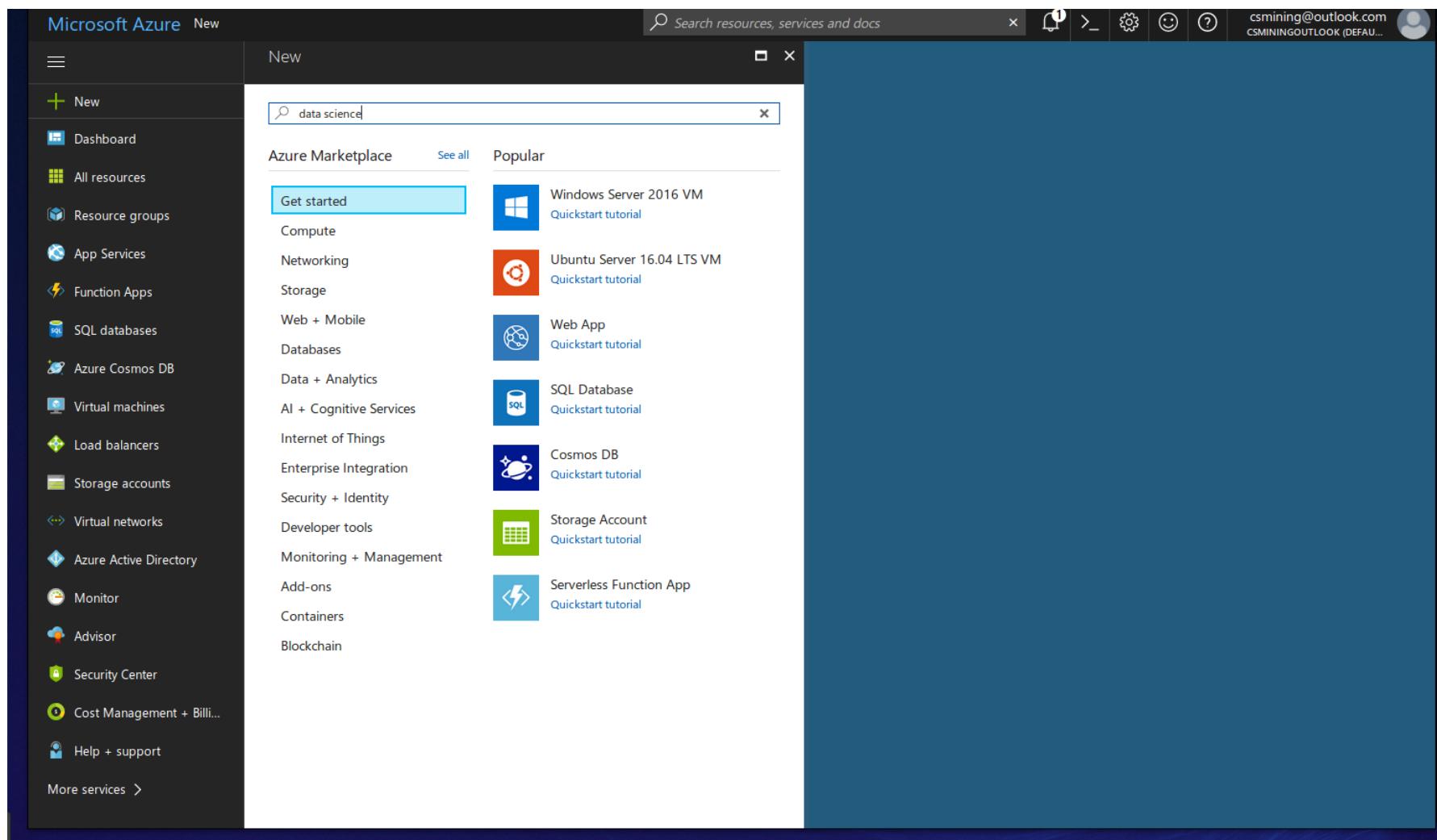
Iniciar sesión

[¿No puede acceder a su cuenta?](#)

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Create a Virtual Machine

- In the upper left corner click on “+ New”.
- Then type “data science”



Get a VM for Data Science

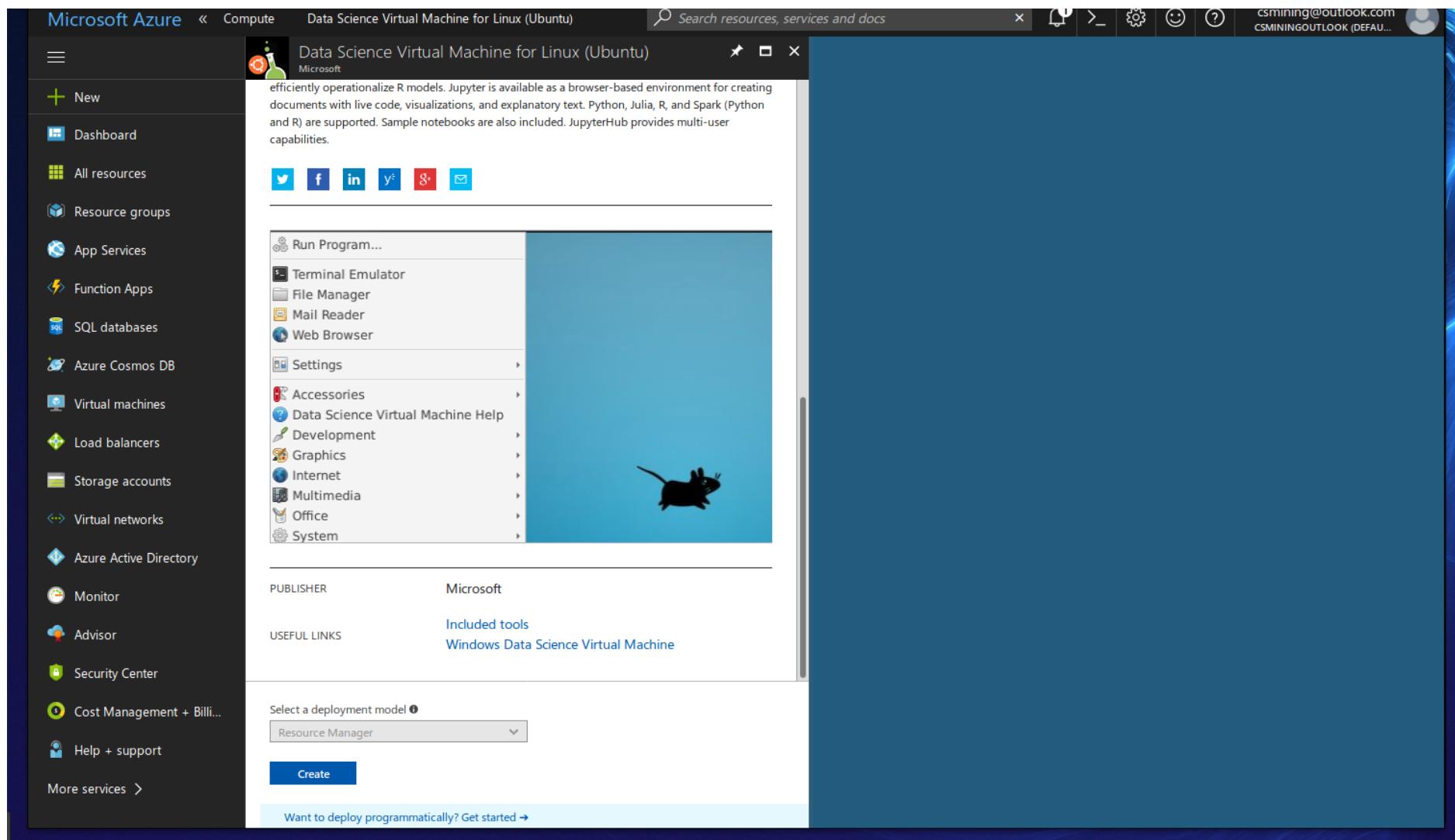
- Click on “Data Science VM for Linux (Ubuntu)”

The screenshot shows the Microsoft Azure portal interface. On the left, there's a sidebar with various service icons like New, Dashboard, All resources, etc. The main area is titled 'Marketplace' under the 'Compute' category. A search bar at the top right contains the query 'data science'. Below the search bar, a message states '0 results in the Compute category. Showing results for "data science" in Everything.' A table lists several virtual machine offerings:

NAME	PUBLISHER	CATEGORY
Data Science Virtual Machine for Windows	Microsoft	Compute
Data Science Virtual Machine for Linux (Ubuntu)	Microsoft	Compute
Data Science Virtual Machine - Windows 2016 CSP	Microsoft	Compute
Data Science Virtual Machine - Windows 2016	Microsoft	Compute
Data Science Virtual Machine for Windows (CSP)	Microsoft	Compute
Data Science Virtual Machine for Linux (CentOS)	Microsoft	Compute
Data Science Virtual Machine for Linux Ubuntu CSP	Microsoft	Compute
Data Science Virtual Machine (CentOS) for CSPs	Microsoft	Compute
Narratives for Power BI	Narrative Science	Compute
Cloudera Enterprise Data Hub	Cloudera	Compute
DSS on HDInsight	Dataiku	Data + Analytics
Dataiku DSS	Dataiku	Compute
RapidMiner Server 7.6	RapidMiner	Compute
RapidMiner Server 7.5	RapidMiner	Compute

Start the configuration of the VM

- In the next screen click “Create”



Set the basic settings

- Use “Password” in authentication type for easier connection with Jupyter.

The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. The left sidebar contains various service icons like New, Dashboard, All resources, Resource groups, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billi..., and Help + support. The main area shows a 'Create virtual machine' wizard with four steps:

- 1 Basics**: Configure basic settings. The 'Name' field is set to 'aplml-dl'. The 'VM disk type' dropdown is set to 'HDD'. The 'User name' field is set to 'aplml'. The 'Authentication type' dropdown has 'SSH public key' and 'Password' options; 'Password' is selected. The 'Password' and 'Confirm password' fields both contain masked text. The 'Subscription' dropdown is set to 'Free Trial'. The 'Resource group' section shows 'Create new' is selected, and the 'Resource group name' is 'advnlp'. The 'Location' dropdown is set to 'East US'.
- 2 Size**: Choose virtual machine size.
- 3 Settings**: Configure optional features.
- 4 Purchase**: Data Science Virtual Machine f...

At the bottom right of the wizard window is a blue 'OK' button.

Select a Machine

- You initially have \$200.

The screenshot shows the Microsoft Azure portal interface for creating a new virtual machine. On the left, the navigation menu is visible with various service icons. The main area displays the 'Create virtual machine' wizard, currently at step 2: 'Size'. A modal window titled 'Choose a size' is open, listing different Azure VM sizes and their estimated monthly costs. The 'D2S_V3 Standard' size is highlighted with a dashed blue border, indicating it is selected. Other visible sizes include D4S_V3 Standard, D8S_V3 Standard, D16S_V3 Standard, D32S_V3 Standard, and D64S_V3 Standard. The cost for the selected D2S_V3 Standard is listed as \$74.40 USD/MONTH (ESTIMATED).

VM Size	Standard	USD/MONTH (ESTIMATED)
D2S_V3	2 vCPUs 8 GB 4 Data disks 4000 Max IOPS 16 GB Local SSD Premium disk support Load balancing	\$74.40
D4S_V3	4 vCPUs 16 GB 8 Data disks 8000 Max IOPS 32 GB Local SSD Premium disk support Load balancing	\$148.80
D8S_V3	8 vCPUs 32 GB 16 Data disks 16000 Max IOPS 64 GB Local SSD Premium disk support Load balancing	\$297.60
D16S_V3	16 vCPUs 64 GB 32 Data disks 32000 Max IOPS 128 GB Local SSD Premium disk support Load balancing	
D32S_V3	32 vCPUs 128 GB 32 Data disks 64000 Max IOPS 256 GB Local SSD Premium disk support Load balancing	
D64S_V3	64 vCPUs 256 GB 32 Data disks 128000 Max IOPS 512 GB Local SSD Premium disk support Load balancing	

More settings:

- *Take a HDD storage disk.

The screenshot shows the Microsoft Azure portal interface. On the left, a dark sidebar lists various services: New, Dashboard, All resources, Resource groups, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Billi..., Help + support, and More services >. The main area displays the 'Create virtual machine' wizard, step 3: Settings. Step 1 (Basics) and Step 2 (Size) are completed with green checkmarks. Step 3 (Settings) is selected and shows 'Configure optional features'. Step 4 (Purchase) is shown below. To the right of the wizard, a 'Settings' blade is open, containing configuration options for the virtual machine. These include:

- High availability**: Availability set set to None.
- Storage**: Disk type set to **HDD**.
- Use managed disks**: Set to **No**.
- Network**: Virtual network set to (new) advnlip-vnet, Subnet set to default (10.0.0.0/24), Public IP address set to (new) aplm-dl-ip, and Network security group (firewall) set to (new) aplm-dl-nsg.
- Extensions**: No extensions listed.
- Auto-shutdown**: Enable auto-shutdown set to **Off**.

A blue 'OK' button is at the bottom of the settings blade. The top right corner of the screen shows the user's email: csmining@outlook.com and the profile icon: CSMININGOUTLOOK (DEFAU...).

Purchase the VM

- Make sure to have 0.0USD/hr in the orange-triangle item.
- Click on Purchase

Microsoft Azure < Create virtual machine Purchase Search resources, services and docs x csmining@outlook.com csmINGOUTLOOK (DEFAU...)

Create virtual machine x Purchase

Validation passed

Offer details

Data Science Virtual Machine for Linux (Ubuntu) by Microsoft	0.0000 USD/hr
Standard D2s v3 by Microsoft	0.1000 USD/hr Pricing for other VM sizes

⚠ The highlighted Marketplace purchase(s) are not covered by your Azure credits, and will be billed separately.
You cannot use your Azure monetary commitment funds or subscription credits for these purchases. You will be billed separately for marketplace purchases.

i Azure resource
You may use your Azure monetary commitment funds or subscription credits for these purchases. Prices presented are retail prices and may not reflect discounts associated with your subscription.

Summary

Basics

Subscription	Free Trial
Resource group	(new) advnlp
Location	East US

Settings

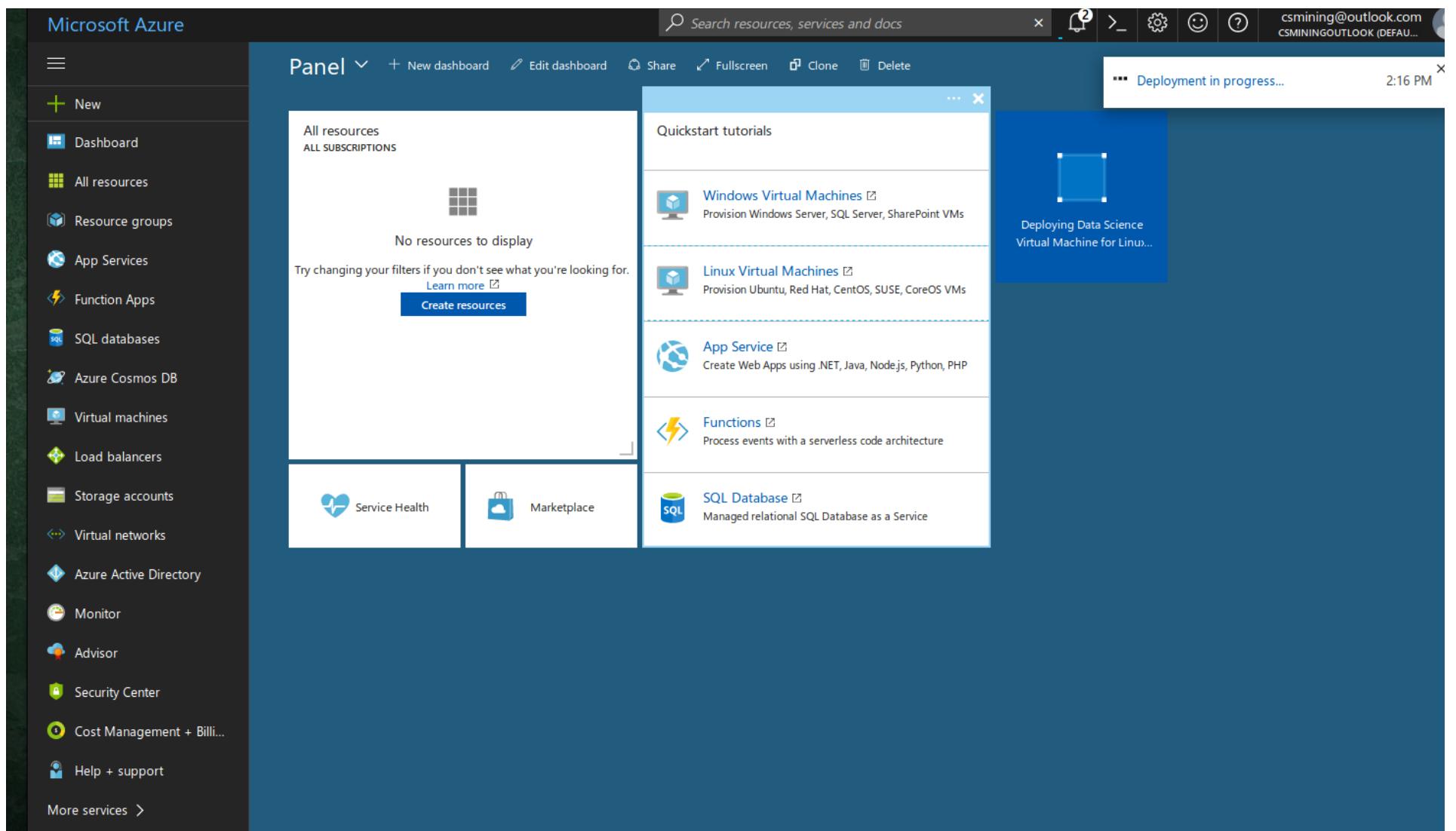
Terms of use

By clicking "Purchase", I (a) agree to the legal terms and privacy statement(s) associated with each Marketplace offering above, (b) authorize Microsoft to charge or bill my current payment method for the fees associated with my use of the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s). (c) agree that

Purchase Download template and parameters

Wait for the deployment process

- Around 5 minutes for deploying.
- Then click on the big blue square in the main board.



VM is Ready

Microsoft Azure aplm-dl

apl-m-dl Virtual machine

Search resources, services and docs

Connect Start Restart Stop Capture Move Delete Refresh

Resource group (change)
advnlp
Status
Running
Location
East US
Subscription (change)
Free Trial
Subscription ID
6c3652e9-eb9a-46c9-860b-d772dfe185e2

Computer name
aplm-dl
Operating system
Linux
Size
Standard D2s v3 (2 vcpus, 8 GB memory)
Public IP address
104.45.149.252
Virtual network/subnet
advnlp-vnet/default
DNS name
Configure

Show data for last: 1 hour 6 hours 12 hours 1 day 7 days 30 days

CPU (average)

Network (total)

Disk bytes (total)

Disk operations/sec

Navigation and User Information:

- New
- Dashboard
- All resources
- Resource groups
- App Services
- Function Apps
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks
- Azure Active Directory
- Monitor
- Advisor
- Security Center
- Cost Management + Bill...
- Help + support
- More services >

csmining@outlook.com
CSMININGOUTLOOK (DEFAULT)

Use the IP to admin your VM

Microsoft Azure aplm-dl

Search resources, services and docs

aplm-dl Virtual machine

Connect Start Restart Stop Capture Move Delete Refresh

Resource group (change)
advnlp
Status
Running
Location
East US
Subscription (change)
Free Trial
Subscription ID
6c3652e9-eb9a-46c9-860b-d772dfe185e2

Computer name
aplm-dl
Operating system
Linux
Size
Standard D2s v3 (2 vcpus, 8 GB memory)

Public IP address
104.45.149.252

Virtual network/subnet
advnlp-vnet/default
DNS name
Configure

Show data for last: 1 hour 6 hours 12 hours 1 day 7 days 30 days

CPU (average)

Network (total)

Disk bytes (total)

Disk operations/sec

Networking

Disks

Size

Extensions

Availability set

Configuration

Properties

Locks

Automation script

Auto-shutdown

Backup

Disaster recovery (Preview)

Search (Ctrl+ /)

New

Dashboard

All resources

Resource groups

App Services

Function Apps

SQL databases

Azure Cosmos DB

Virtual machines

Load balancers

Storage accounts

Virtual networks

Azure Active Directory

Monitor

Advisor

Security Center

Cost Management + Billi...

Help + support

More services >

Click on Virtual Machines in left panel to manage your VMs

The screenshot shows the Microsoft Azure portal interface. The left sidebar contains a list of services: New, Dashboard, All resources, Resource groups, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, Advisor, Security Center, Cost Management + Bill..., Help + support, and More services >. The main content area is titled "Virtual machines" and shows a single item: "aplml-dl" (Virtual machine, Running, advnlp, East US, Free Trial). A search bar at the top says "Search resources, services and docs". The top right shows the user's email "csmining@outlook.com" and a profile icon.

NAME	TYPE	STATUS	RESOURCE GROUP	LOCATION	MAINTENANCE	SUBSCRIPTION
aplml-dl	Virtual machine	Running	advnlp	East US		Free Trial

Remote connection

- Using the public IP you can log in to your VM. If your public IP is **104.45.149.252** and your user name is ***aplm*** then:
 - **For SSH:** ssh **aplm@104.45.149.252**
 - **For jupyter:** **<https://104.45.149.252:8000>**
- Both ways will require the username and password used in the VM creation.**

- <https://104.45.149.252:8000>
- Use the credentials you set during the VM creation.

 jupyter



Jupyter

- Use the “upload” button to load a local notebook. Or create a new one.

The screenshot shows the Jupyter Notebook interface. At the top, there is a navigation bar with the Jupyter logo, 'Control Panel', and 'Logout'. Below the navigation bar, there are three tabs: 'Files' (selected), 'Running', and 'Clusters'. A message 'Select items to perform actions on them.' is displayed above the file list. On the right side of the interface, there are buttons for 'Upload', 'New', and a refresh icon. The main area displays a list of notebooks:

- azureml
- caffe2
- CNTK
- h2o
- julia
- MMLSpark
- mxnet
- SparkML
- tensorflow
- DocumentDBSample.ipynb
- IDEAR.ipynb
- Introduction to Azure ML R notebooks.ipynb
- Introduction to Microsoft R Operationalization.ipynb
- IntroToJupyterPython.ipynb
- IntroTutorialinMicrosoftR.ipynb
- IntroTutorialinR.ipynb
- IrisClassifierPyMLWebService.ipynb
- LoadDataIntoDW.ipynb
- SQLDW_Explorations.ipynb

Final Remarks

- By clicking in “All Resources” you can see all items that you purchased.
- Do not forget to turn off your machine. They charge you if the Machine is running.

The screenshot shows the Microsoft Azure 'All resources' page. The left sidebar contains navigation links for various services like Dashboard, All resources, Resource groups, App Services, etc. The main area is titled 'All resources' under 'csminingoutlook (Default Directory)'. It features a search bar and filter options for name, resource group, type, location, and subscription. A table lists 14 items, each with a checkbox, name, type, resource group, location, and subscription status (Free Trial). The items include storage accounts, virtual networks, virtual machines, disks, network interfaces, and public IP addresses, all associated with the 'advnlp' resource group in the East US location.

	NAME	TYPE	RESOURCE GROUP	LOCATION	SUBSCRIPTION	...
<input type="checkbox"/>	advnlpdia181	Storage account	advnlp	East US	Free Trial	...
<input type="checkbox"/>	advnlp-vnet	Virtual network	advnlp	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl	Virtual machine	advnlp	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl_lun_0_2_b8e3fd80d17242698c91cff12047f86	Disk	ADVNL	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl_lun_0_2_f6045ddc55404a76b6d60faab0ef12ce	Disk	ADVNL	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl_OsDisk_1_23ddf5cff5e74a0da2fb99584929d120	Disk	ADVNL	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl_OsDisk_1_3b2bb75da0024e6ca11ebcd7a2f7c719	Disk	ADVNL	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl852	Network interface	advnlp	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl925	Network interface	advnlp	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl-ip	Public IP address	advnlp	East US	Free Trial	...
<input type="checkbox"/>	aplmldip631	Public IP address	advnlp	East US	Free Trial	...
<input type="checkbox"/>	aplm-dl-nsg	Network security group	advnlp	East US	Free Trial	...
<input type="checkbox"/>	aplmldlnsg669	Network security group	advnlp	East US	Free Trial	...
<input type="checkbox"/>	cs26c3652e9eb9ax46c9x860	Storage account	cloud-shell-storage-eastus	East US	Free Trial	...

Thank you