

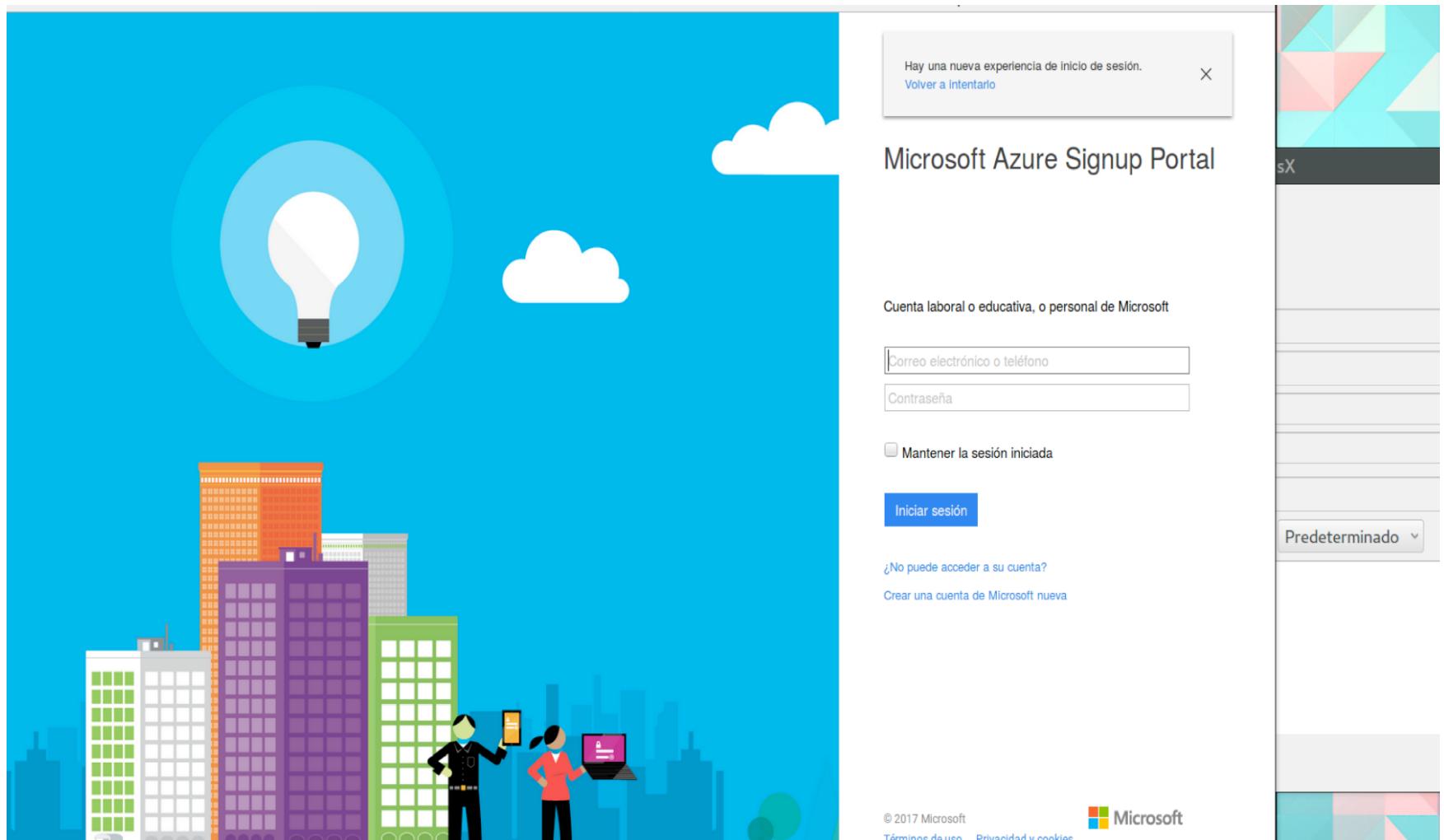
Fast Guide for Virtual Machines in Microsoft Azure

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Advanced Natural Language Processing Course
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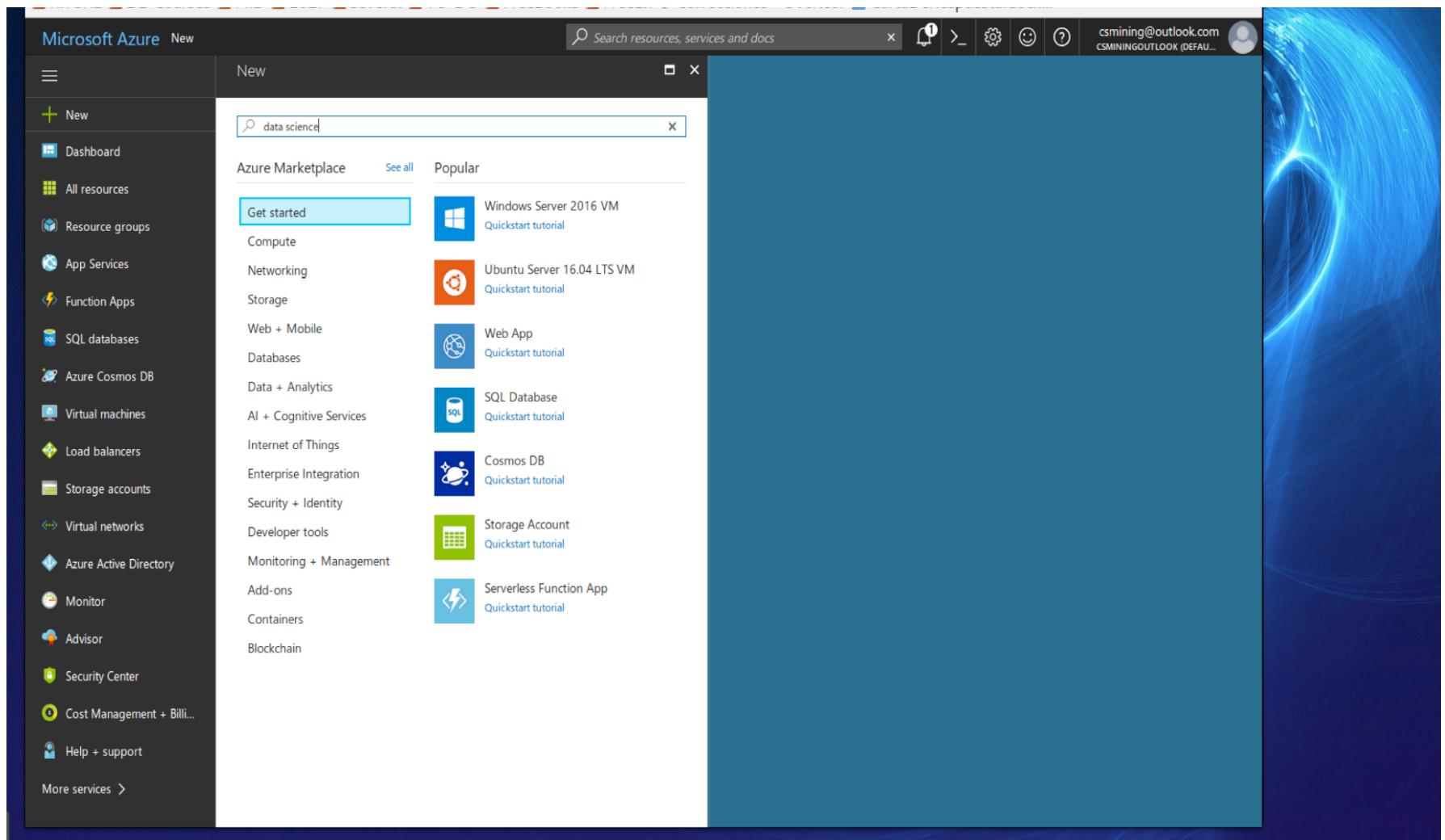
Register a Account in Microsoft Azure

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



Create a Virtual Machine

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



Get a VM for Data Science

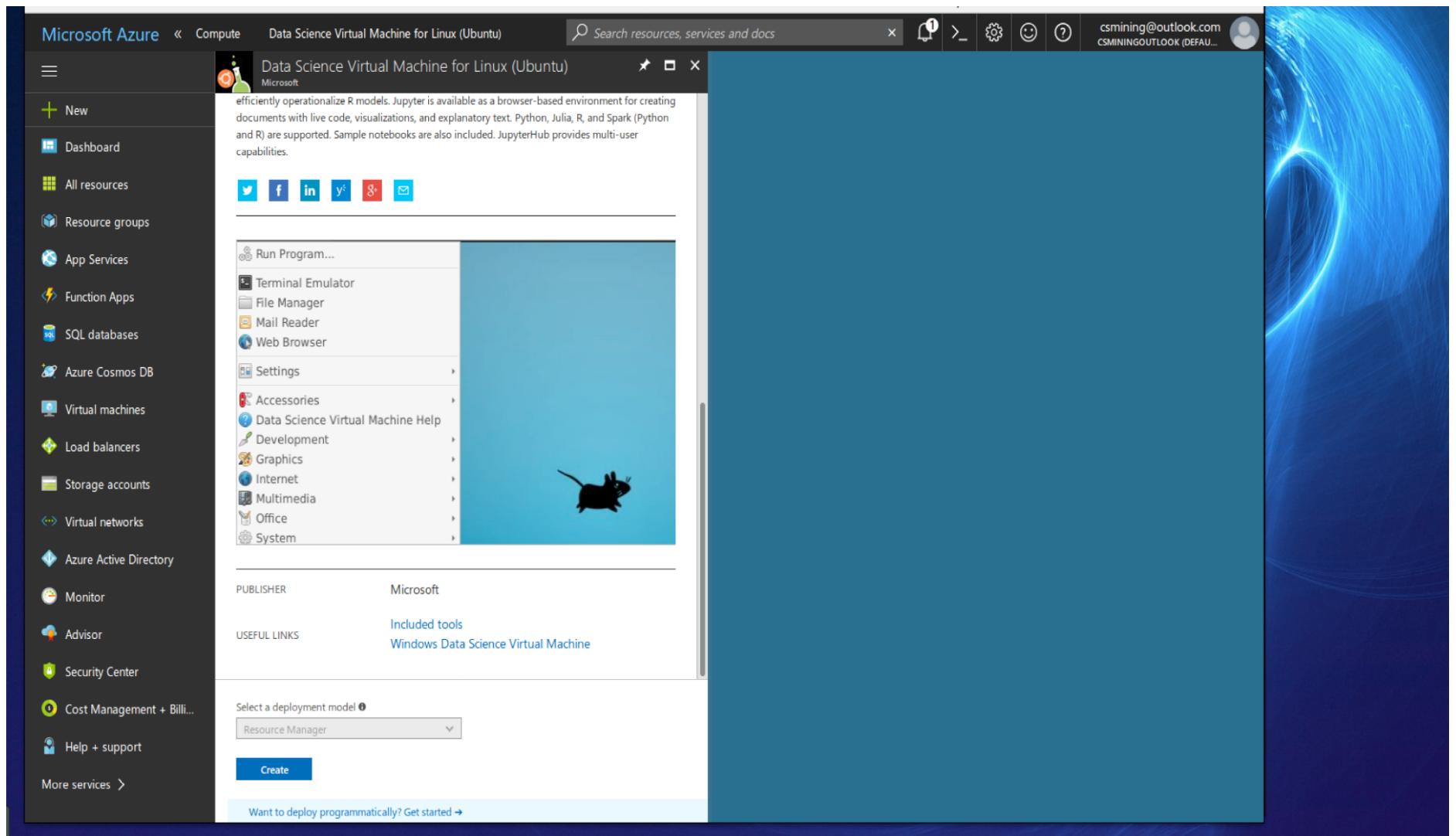
- Click on “Data Science VM for Linux (Ubuntu)”

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

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 (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

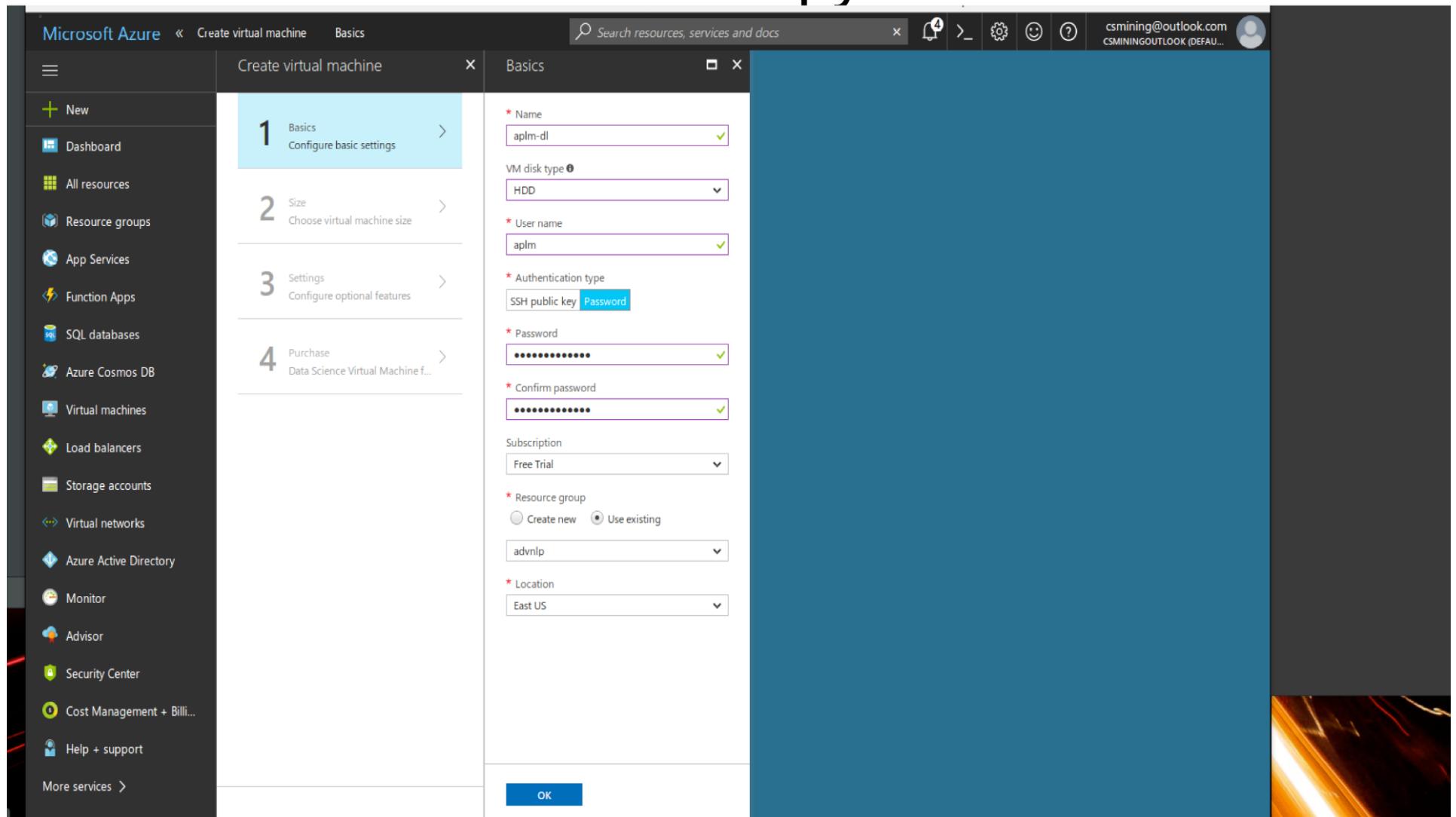
Start the configuration of the VM

- In the next screen click “Create”



Set the basic settings

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



Select a Machine

- You initially have \$200.

The screenshot shows the Microsoft Azure portal interface for creating a virtual machine. The main title bar says "Microsoft Azure << Create virtual machine Choose a size". On the left sidebar, there's 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 + Billi..., Help + support, and More services >. The "Virtual machines" option is highlighted.

The current step is "2 Size Choose virtual machine size". A modal window titled "Choose a size" is open, displaying a table of available VM sizes. The table has three columns: D2S_V3 Standard, D4S_V3 Standard, and D8S_V3 Standard. Each row provides details like vCPUs, memory, disk type, and IOPS. Below the table, estimated monthly costs are listed: 74.40 USD/MONTH (ESTIMATED) for D2S_V3, 148.80 USD/MONTH (ESTIMATED) for D4S_V3, and 297.60 USD/MONTH (ESTIMATED) for D8S_V3. At the bottom of the modal is a "Select" button.

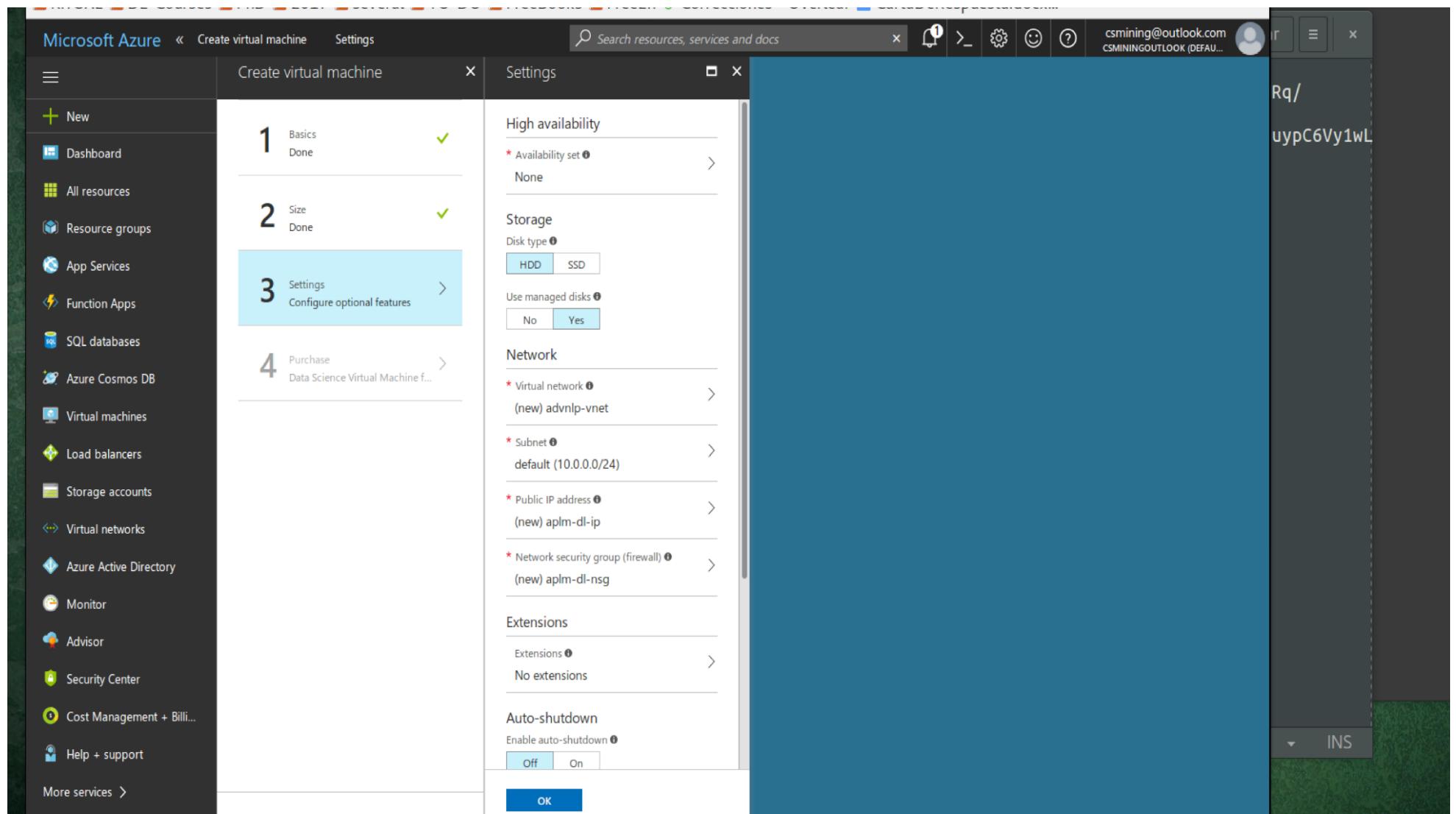
D2S_V3 Standard	D4S_V3 Standard	D8S_V3 Standard
2 vCPUs	4 vCPUs	8 vCPUs
8 GB	16 GB	32 GB
4 Data disks	8 Data disks	16 Data disks
4000 Max IOPS	8000 Max IOPS	16000 Max IOPS
16 GB Local SSD	32 GB Local SSD	64 GB Local SSD
Premium disk support	Premium disk support	Premium disk support
Load balancing	Load balancing	Load balancing

D16S_V3 Standard	D32S_V3 Standard	D64S_V3 Standard
16 vCPUs	32 vCPUs	64 vCPUs
64 GB	128 GB	256 GB
32 Data disks	32 Data disks	32 Data disks
32000 Max IOPS	64000 Max IOPS	128000 Max IOPS
128 GB Local SSD	256 GB Local SSD	512 GB Local SSD
Premium disk support	Premium disk support	Premium disk support
Load balancing	Load balancing	Load balancing

Below the tables, there are "USD/MONTH (ESTIMATED)" labels under each cost row. At the bottom of the modal is a "Select" button.

More settings:

- *Take a HDD storage disk.



Purchase the VM

- Make sure to have 0.00USD/hr in the orange-triangle item.
- Click on Purchase

Microsoft Azure <> Create virtual machine Purchase

Create virtual machine X Purchase

Validation passed

Offer details

Data Science Virtual Machine for Linux (Ubuntu)
by Microsoft
[Terms of use | privacy policy](#)

Standard D2s v3
by Microsoft
[Terms of use | privacy policy](#)

0.0000 USD/hr 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.

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

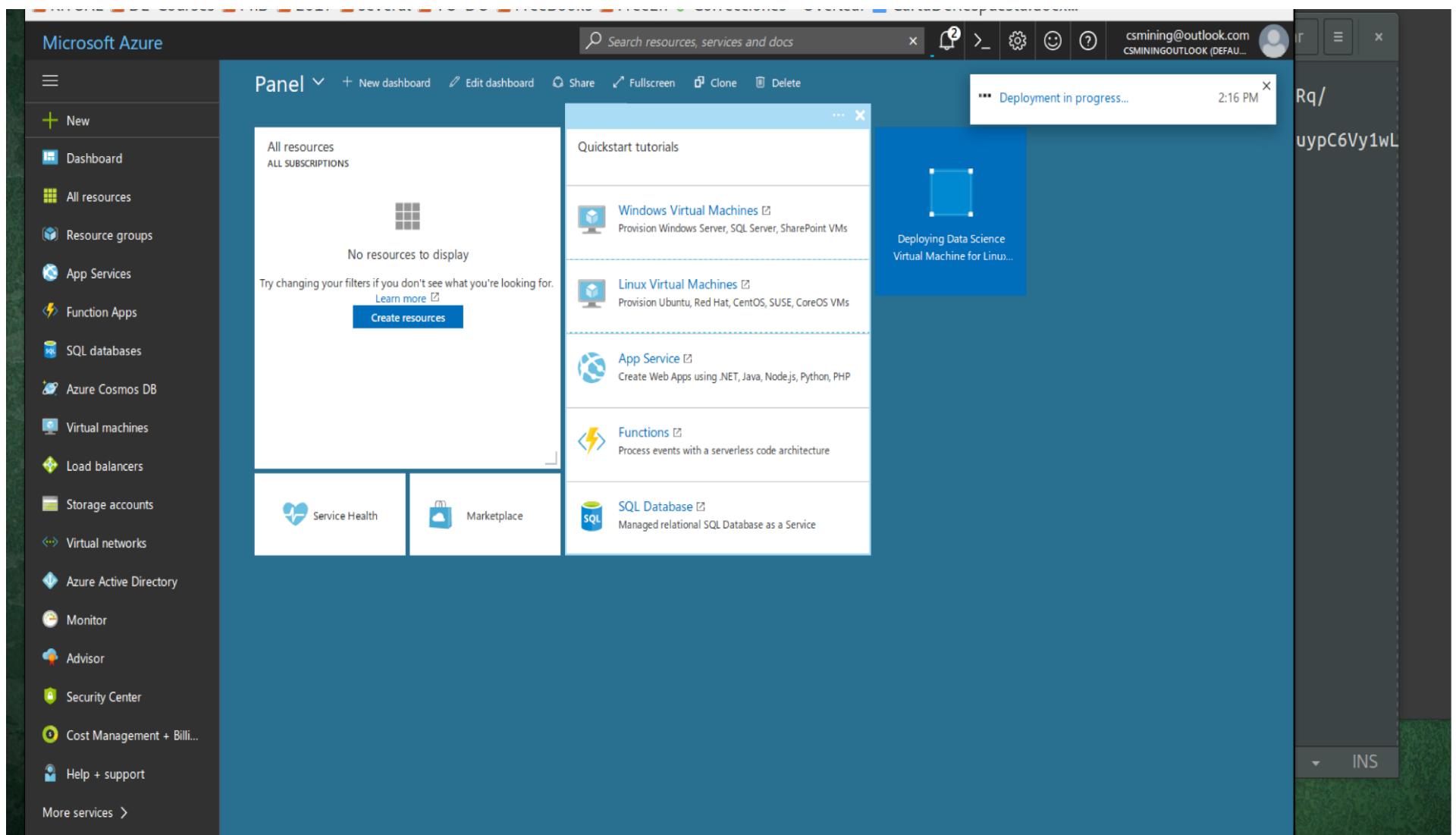
Terms of use

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

Propiedades

Carácter

Párrafo

Área

Sombra

Gráfico

Brillo: 0 %

Modo de color: Predeterminado

Línea: 0 %

0 %

0 %

Anchura:

Color:

Transparencia: 0 %

Posición y tamaño

Search (Ctrl+)/

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Networking

Disks

Size

Extensions

Availability set

Configuration

Properties

Locks

Automation script

Auto-shutdown

Backup

Disaster recovery (Preview)

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 >

Use the IP to admin your VM

The screenshot shows the Microsoft Azure portal interface. On the left is the navigation sidebar with various service icons. The main area displays a virtual machine named "aplm-dl". The "Overview" tab is selected in the left sidebar. The main content area shows the VM's status (Running), location (East US), and subscription information (Free Trial). A large red box highlights the "Public IP address" field, which contains the value "104.45.149.252". Below this, there are four performance monitoring charts: CPU (average), Network (total), Disk bytes (total), and Disk operations/sec. The "Network (total)" chart shows a sharp spike in traffic at 4:15 PM. The right side of the screen features a "Properties" pane with settings for character, paragraph, area, and graphic styles, and a color palette.

Microsoft Azure aplm-dl

aplm-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

Propiedades

Carácter

Párrafo

Área

Sombra

Gráfico

Brillo:

Modo de color:

Predeterminado

Línea

Anchura:

Color:

Transparencia: 0 %

Posición y tamaño

Click on Virtual Machines in left panel to manage your VMs

Microsoft Azure Virtual machines

Virtual machines csminingoutlook (Default Directory)

Search resources, services and docs

Add Assign Tags Columns Refresh Start Restart Stop Delete

Virtual machines and Virtual machines (classic) can now be managed together in the combined list below.

Subscriptions: Free Trial

Filter by name... All resource groups All types All locations No grouping

1 items

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

Propiedades

Carácter

Párrafo

Área

Sombra

Gráfico

Brillo:

Modo de color:

Predeterminado

Línea

Anchura:

Color:

Transparencia: 0 %

Posición y tamaño

0.10 / 1.60 10.88 x 6.60 Diapositiva 11 de 11 Predeterminado

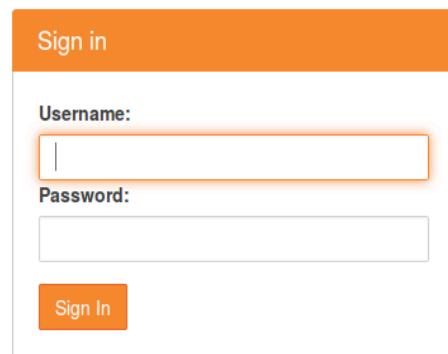
Remote connection

- 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](ssh://aplm@104.45.149.252)
 - For jupyter: <https://104.45.149.252:8000>

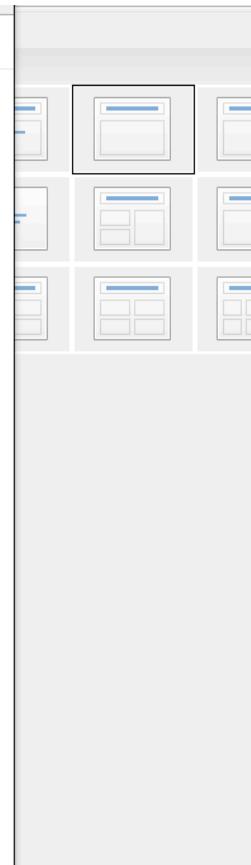
Both ways will require the username and password used in the VM creation.

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

jupyter

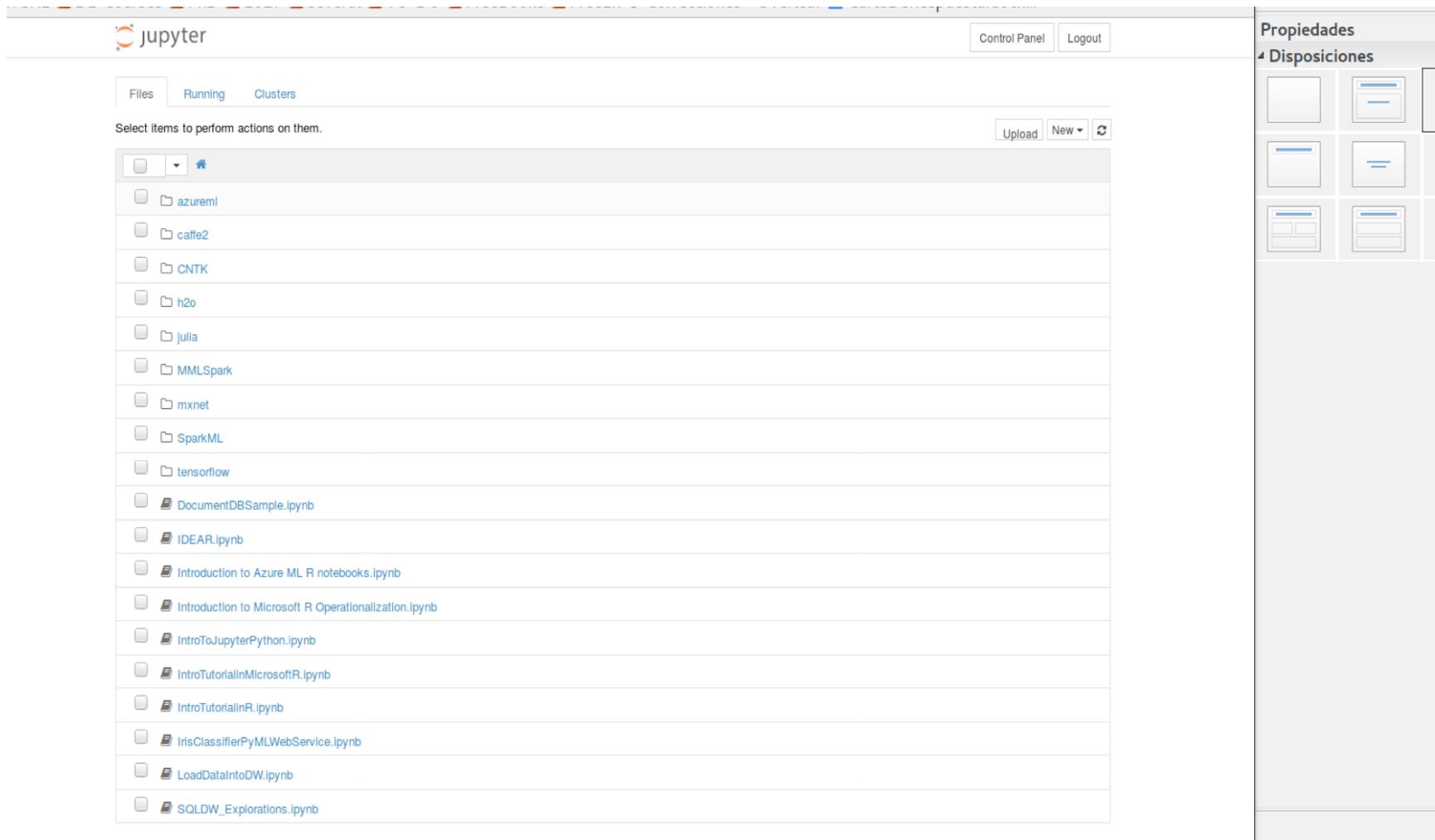


A screenshot of a Jupyter Notebook sign-in dialog box. The dialog has an orange header bar with the text "Sign in". Below the header, there are two input fields: "Username:" and "Password:", each with a corresponding text input field. At the bottom of the dialog is an orange "Sign In" button.



Jupyter

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



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 a navigation menu with various service icons and links: 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 content area is titled 'All resources' under 'csminingoutlook (Default Directory)'. It features a search bar at the top right and several filter options: Subscriptions (Free Trial), Filter by name..., All resource groups, All types, All locations, and No grouping. A table below lists 14 items, each with a checkbox, name, type, resource group, location, and subscription status. The items include storage accounts, virtual networks, virtual machines, disks, network interfaces, and public IP addresses. Most items belong to the 'advnlp' resource group, except for one which belongs to 'cloud-shell-storage-eastus'. The right side of the screen has a 'Propiedades' panel with settings for Carácter, Párrafo, Área, Sombra, Gráfico, Brillo, Modo de color, Línea, Anchura, Color, Transparencia, and Posición y tamaño.

	NAME	TYPE	RESOURCE GROUP	LOCATION	SUBSCRIPTION	...
<input type="checkbox"/>	advnlpdiaq181	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_23ddff5cff5e74a0da2fb99584929d120	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"/>	aplmdlip631	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"/>	aplmdlnsg669	Network security group	advnlp	East US	Free Trial	...
<input type="checkbox"/>	cs26c3652e9eb9ax46c9x860	Storage account	cloud-shell-storage-eastus	East US	Free Trial	...

Thank you