

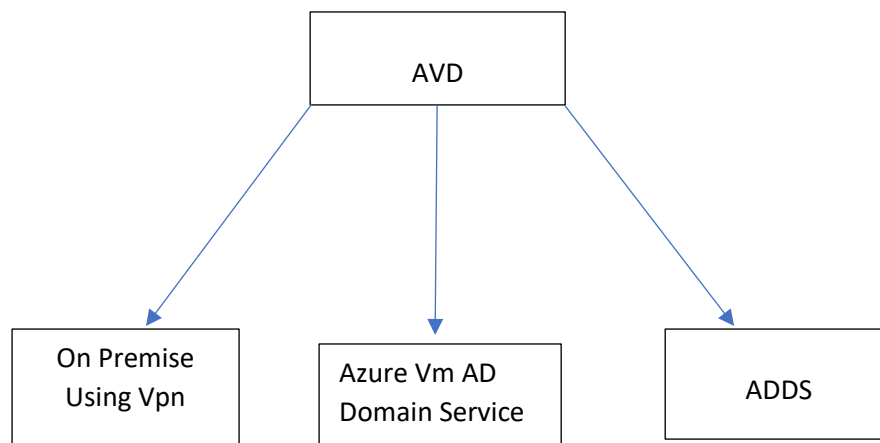
Complete Guide to Setting up Azure Virtual Desktops

Agenda:

Section 3:

1. Method we can used to Setup AVD
2. Steps to setup Azure Virtual Desktop
3. Step by Step Implementation
4. Reference: - <https://www.youtube.com/watch?v=Y5AB7AShdi0>

1) Method we can used to Setup AVD:



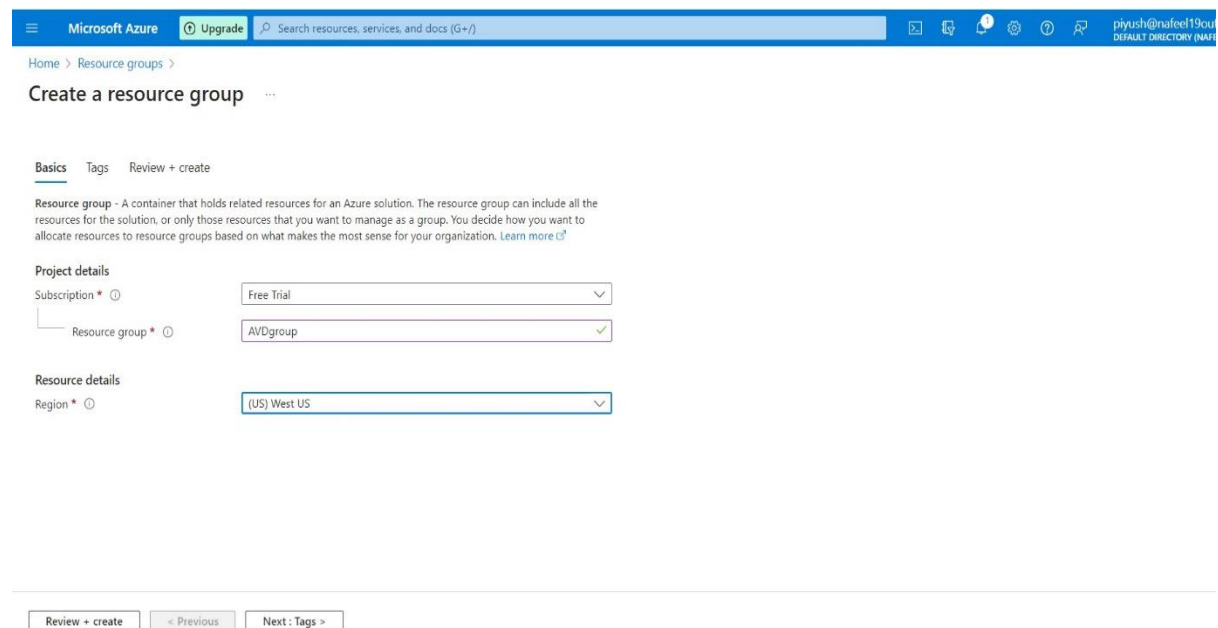
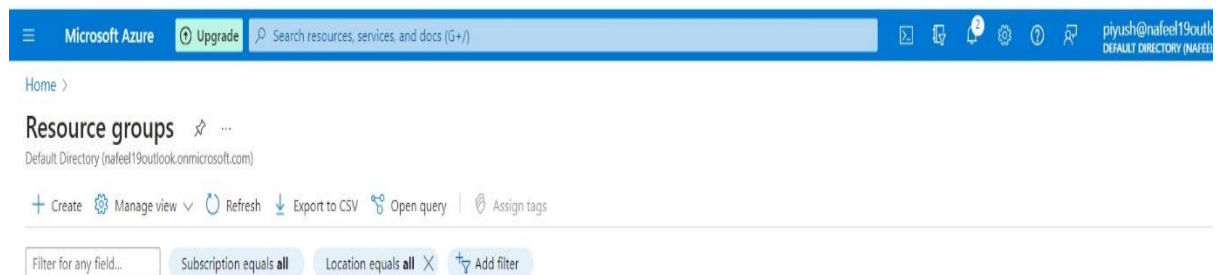
2) Steps to setup Azure Virtual Desktop:

1. Create resource group
2. Create Virtual Network (internal)
3. Create a host pool
4. Create Azure virtual desktop (create a session host)
5. Assign an AD user
6. Add Role Assignment and Add members.
7. Add virtual desktop workspaces
8. Configure Virtual Desktop host pool
9. Log in to the Azure Virtual Desktop (Session Desktop).

3) Step by Step Implementation to Setup Azure Virtual Desktop:

1. Creating a New Azure Resource Group:

- In the Azure portal, select 'Resource groups' from the left-hand menu, then select '+ Add resource group'.
- In the 'Create resource group' blade, enter a name for your resource group and select the 'Subscription', 'Resource group location', and 'Pricing tier' fields. Then, select 'Create'.



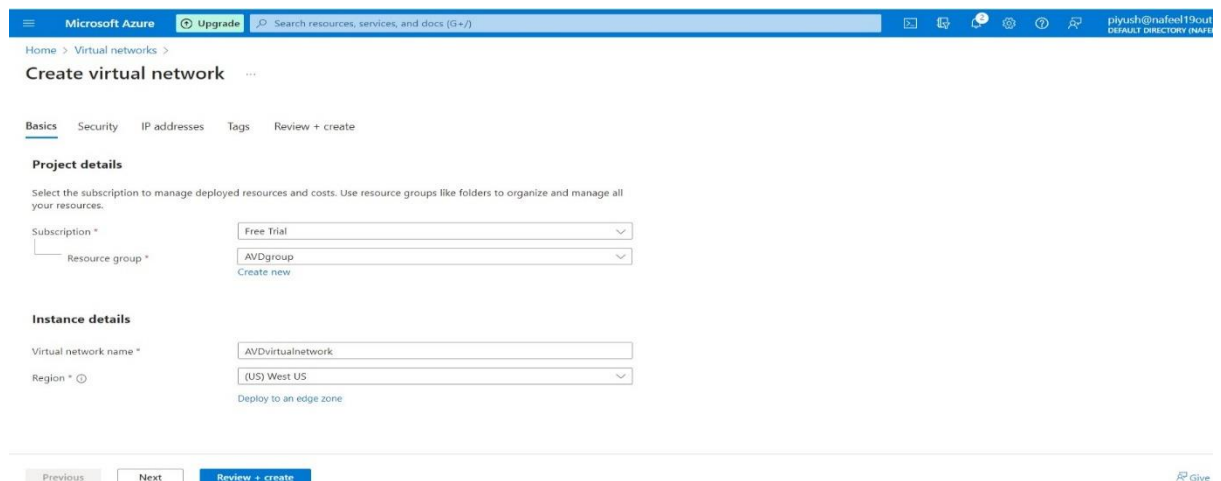
2. Create a virtual network:

We need to create a virtual network for the machines we are going to use later on. To do this, perform the following steps:

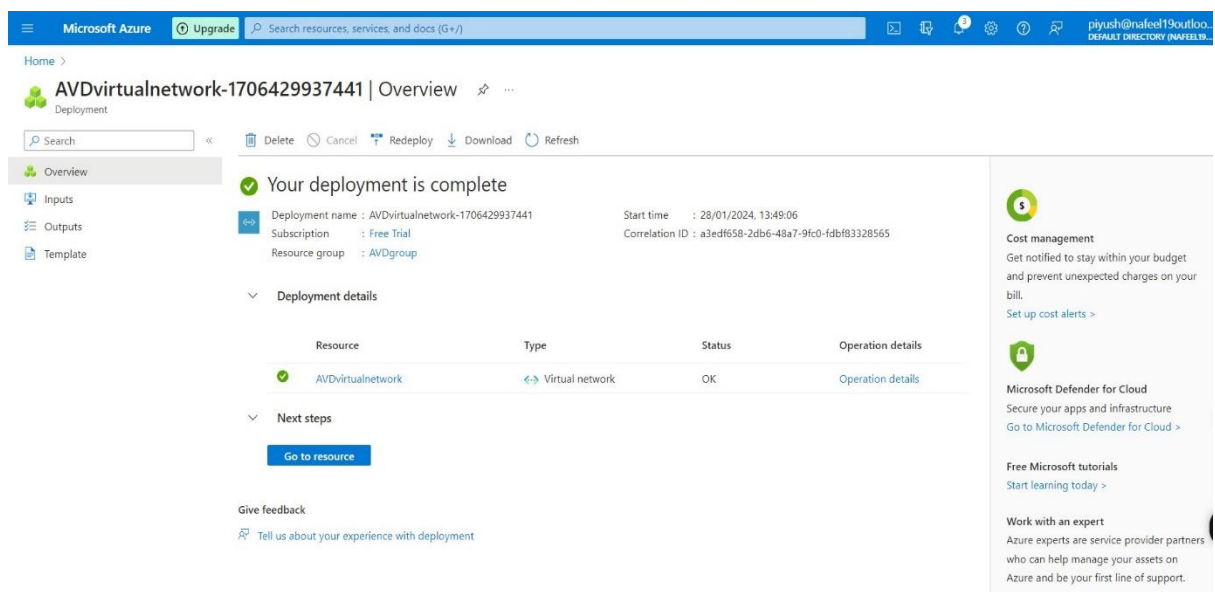
- Open Azure Portal as an Administrator.
- Search for Virtual Networks.
- Click on Create.



- Select your subscription type and add the existing created AVDgroup resource group that will have access to the network.
- Give a name to the virtual network and select the region.



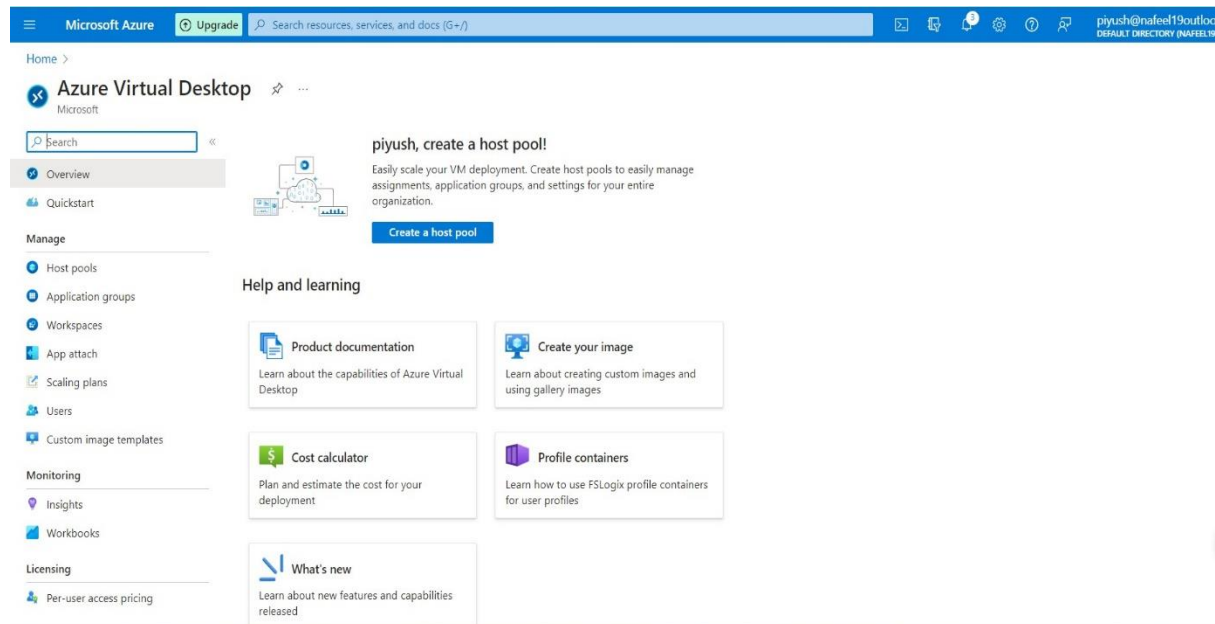
- In the IP Addresses tab, leave everything as default.
- Click to create virtual network



3. Create a host pool:

After the virtual network is configured, we need to create a host pool for the virtual machines. To do this, perform the following steps:

- In Azure Portal, search for Azure Virtual Desktop.
- Click on Create a host pool.



- Select your subscription and choose the existing created resource group - AVDgroup you previously added for the virtual network.
- Add a host pool name and location West US, keep same location for all the process in AVD.
- Under the host pool type, select pooled.
- Under the Load balancing, select Breadth-first
- Max session limit as per requirement.
- Click Next.

The screenshot shows the 'Create a host pool' form in the Azure Portal. The form is titled 'Create a host pool' and has several fields: 'Resource group' (set to AVDgroup), 'Host pool name' (set to jumpin), 'Location' (set to West US), 'Validation environment' (set to No), and 'Preferred app group type' (set to Desktop). Below these fields, there's a section for 'Host pool type' with 'Host pool type' (set to Pooled), 'Load balancing algorithm' (set to Breadth-first), and 'Max session limit' (set to 1). At the bottom, there are three buttons: 'Review + create', '< Previous', and 'Next: Virtual Machines >'. The 'Review + create' button is highlighted in blue.

4. Create Azure virtual desktop (create a session host):

- In the Virtual Machines tab, select Yes to add a virtual machine.
- Add existing created Resource group AVDgroup.
- Add a prefix name and location West US, keep same location for all the process in AVD.

The screenshot shows the 'Create a host pool' page in the Azure Virtual Desktop console. The 'Virtual Machines' tab is selected. The page includes a description of a host pool and a form with the following fields:

- Add virtual machines:** Radio buttons for 'No' and 'Yes' (selected).
- Resource group:** Dropdown menu showing 'AVDgroup'.
- Name prefix *:** Text input with 'jumpin' and a green checkmark. A message below states: 'Session host name must be unique within the Resource Group.'
- Virtual machine type:** Radio buttons for 'Azure virtual machine' (selected) and 'Azure Stack HCI virtual machine (Preview)'.
- Virtual machine location:** Dropdown menu showing 'West US'.
- Availability options:** Dropdown menu showing 'No infrastructure redundancy required'.

At the bottom, there are three buttons: 'Review + create' (blue), '< Previous' (grey), and 'Next: Workspace >' (grey).

- Under Image as per requirement, windows 10 or 11.
- You can add as many machines as you want in this step. We only added one and left everything else to standard.

The screenshot shows the 'Create a host pool' page in the Azure Virtual Desktop console, with the 'Advanced' tab selected. The page includes a description of a host pool and a form with the following fields:

- Security type *:** Dropdown menu showing 'Trusted launch virtual machines'.
- Enable secure boot:** Checkmark.
- Enable vTPM:** Checkmark.
- Integrity monitoring:** Unchecked checkbox.
- Image *:** Dropdown menu showing 'Windows 10 Enterprise multi-session, Version 21H2 + Microsoft 365 ...'. A link 'See all images' is below.
- Virtual machine size *:** Dropdown menu showing 'Standard D2s v3'. Below the dropdown, it says '2 vCPU's, 8 GiB memory' and 'Change size'.
- Number of VMs *:** Text input with '1' and a green checkmark.
- OS disk type *:** Dropdown menu showing 'Standard SSD'.
- OS disk size *:** Dropdown menu showing 'Resize to 256 GiB (P15)'.
- Boot diagnostics:** Radio buttons for 'Enable with managed storage account (recommended)' (selected), 'Enable with custom storage account', and 'Disable'.

At the bottom, there are three buttons: 'Review + create' (blue), '< Previous' (grey), and 'Next: Workspace >' (grey).

- Under the Network and security, make sure to select the previously created Virtual Network. No other network configurations are necessary.

Create a host pool ...

Network and security

Use Azure Firewall to secure your VNET and host pool resources. [Learn more](#)

Virtual network * ⓘ

Subnet ⓘ

Network security group type ⓘ

Public inbound ports ⓘ ☐ Yes ☒ No

Inbound ports to allow
All traffic from the internet will be blocked by default.

Domain to join

Select which directory you would like to join

Enroll VM with Intune ⓘ ☐ Yes ☒ No

[Review + create](#) [< Previous](#) [Next: Workspace >](#)

- Under Domain to join.
- In our case, we don't have a separate AD site, so we chose to join with the Azure Active Directory. We also went with the option to not enrol the VM with Intune.
- As a last step in this tab, create an administrator account so you can access the VM.
- Click Next.

Create a host pool ...

Select which directory you would like to join

Enroll VM with Intune ⓘ ☐ Yes ☒ No

Virtual machine administrator account

User name * ⓘ

Password * ⓘ

Confirm password * ⓘ

Custom configuration

Provide location of an ARM template (inline deployment script, desired state configuration, custom script extension) for custom configuration on your session hosts. Provisioning azure resources in the template is not supported. [Learn more](#)

Custom configuration script url ⓘ

[Review + create](#) [< Previous](#) [Next: Workspace >](#)

- Click to Create AVD Host pool.

Home > Azure Virtual Desktop >

Create a host pool ...

✓ Validation passed.

Basics Virtual Machines Workspace Advanced Tags Review + create

Basics

Subscription	Free Trial
Resource group	AVDgroup
Host pool name	jumpin
Location	West US
Preferred app group type	Desktop
Host pool type	Pooled
Max session limit	2
Load balancing algorithm	Breadth-first
Assign multiple desktops to a single user	No

Networking

Public network access	Enabled
-----------------------	---------

Virtual Machines

Create < Previous Download a template for automation

- Host pool is ready.

Microsoft Azure Search resources, services, and docs (G+/I)

Home >

jumpin Host pool

Search

Registration key Refresh Delete Start Restart Stop

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

Settings

- Scaling plan
- RDP Properties
- Properties
- Networking
- Scheduled agent updates
- Locks

Manage

- Application groups
- MSIX packages
- Session hosts

Essentials

Resource group (move) : AVDgroup
Location : West US
Subscription (move) : Free Trial
Subscription ID : 07a8a12b-1a6b-4e95-a12b-95424b3d585c
Tags (edit) : Add tags

Host pool type : Pooled
Assignment type : ---
Management type : ---
OS disk type : Standard SSD

Virtual machines

Total machines	Can connect	Can't connect
1	1	0

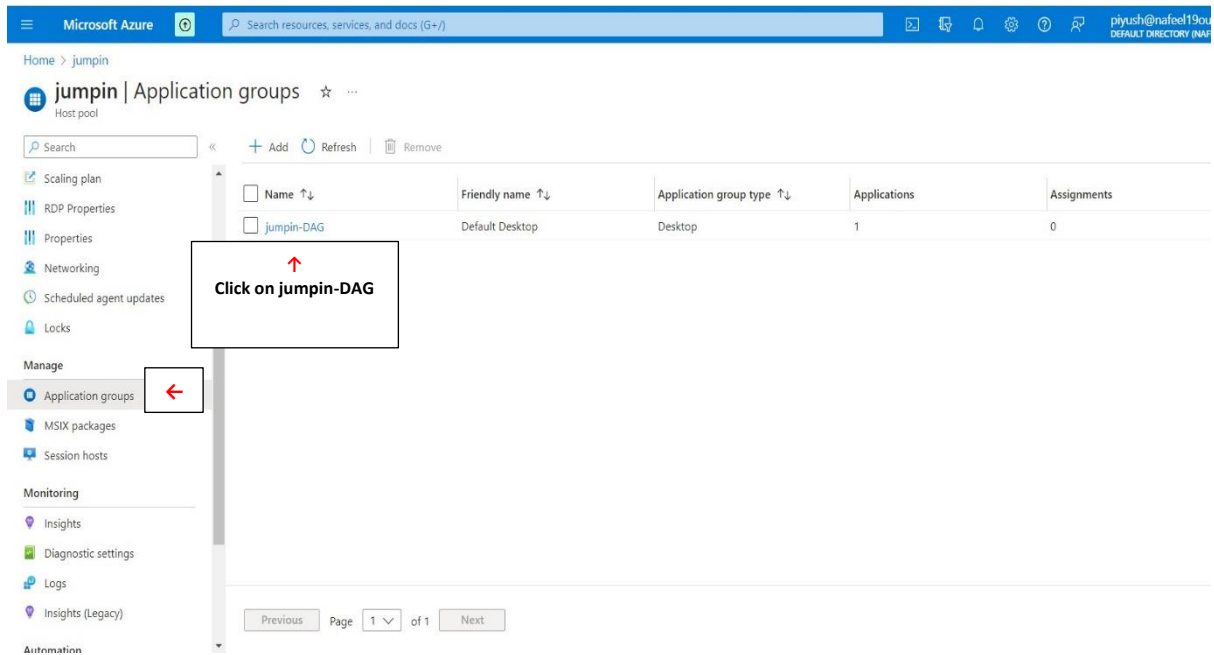
Active sessions	Disconnected sessions	Pending sessions	Total sessions
0	0	0	0

Applications

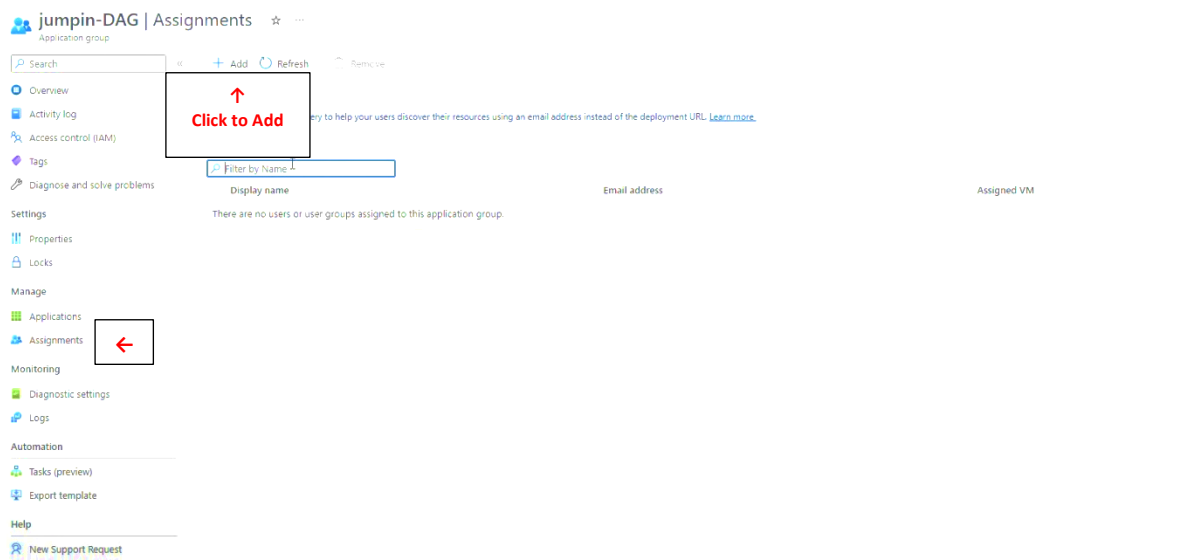
JSON View

5. Assign an AD user:

- In Manage → Application groups



- In Application groups → Click on jumpin-DAG → In Manage → Assignments
- Click to Add member to Access AVD.



- Select Users as per requirements

Select Azure AD users or user groups

Select ⓘ

piyush

No users, groups, or service principals found.

Selected members:

PI

piyush

piyush@nafeel19outlook.onmicrosoft....

Remove

Select

Close

6. Add Role Assignment and Add members:

- To Access AVD, required some Additional Access Role.
- In the Azure portal, select 'Resource groups' which we Created AVDgroup.
- Click on Access Control (IAM)

The screenshot displays the Microsoft Azure portal interface. The top navigation bar includes the 'Microsoft Azure' logo, an 'Upgrade' button, a search bar, and user information for 'piyush@nafeel19outlook.onmicrosoft.com'. The left sidebar shows the 'Access control (IAM)' option highlighted with a red arrow. The main content area shows the 'AVDgroup' resource group. Under the 'Resources' tab, a list of resources is displayed, all located in 'West US'.

Name	Type	Location
AVDvirtualnetwork	Virtual network	West US
jumpin	Host pool	West US
jumpin-0	Virtual machine	West US
jumpin-0-nic	Network interface	West US
jumpin-0_OsDisk_1_b08542eb92e34af6b4ced08199639b8f	Disk	West US
jumpin-DAG	Application group	West US

- Click to Add.

Microsoft Azure | Upgrade | Search resources, services, and docs (G+/I)

Home > AVDgroup

AVDgroup | Access control (IAM) ☆ ...

Resource group

Search

« + Add Download role assignments Edit columns Refresh Remove Feedback

Overview
Activity log
Access control (IAM)
Tags
Resource visualizer
Events
Settings
Deployments
Security
Deployment stacks
Policies
Properties
Locks
Cost Management
Cost analysis
Cost alerts (preview)

My access
View my level of access to this resource.
[View my access](#)

Check access
Review the level of access a user, group, service principal, or managed identity has to this resource. [Learn more](#)

[Check access](#)

Grant access to this resource
Grant access to resources by assigning a role. [Learn more](#)
[Add role assignment](#)

View access to this resource
View the role assignments that grant access to this and other resources. [Learn more](#)
[View](#)

View deny assignments
View the role assignments that have been denied access to specific actions at this scope. [Learn more](#)
[View](#)

- Click on Search → Virtual Machine User login → Select and Assign
- Click to Next

Home > AVDgroup | Access control (IAM) >

Add role assignment ...

virtual machine × Type: All Category: All

Name ↑↓	Description ↑↓	Type ↑↓	Category ↑↓	Details
Classic Virtual Machine Contributor	Lets you manage classic virtual machines, but not access to them, and not the virtual network or storage account they're c...	BuiltInRole	Compute	View
Desktop Virtualization Power On Contributor	Provide permission to the Azure Virtual Desktop Resource Provider to start virtual machines.	BuiltInRole	None	View
Desktop Virtualization Power On Off Contributor	Provide permission to the Azure Virtual Desktop Resource Provider to start and stop virtual machines.	BuiltInRole	None	View
Desktop Virtualization Virtual Machine Contribu...	This role is in preview and subject to change. Provide permission to the Azure Virtual Desktop Resource Provider to create...	BuiltInRole	None	View
DevTest Labs User	Lets you connect, start, restart, and shutdown your virtual machines in your Azure DevTest Labs.	BuiltInRole	Devops	View
Virtual Machine Administrator Login	View Virtual Machines in the portal and login as administrator	BuiltInRole	Compute	View
Virtual Machine Contributor	Lets you manage virtual machines, but not access to them, and not the virtual network or storage account they're connect...	BuiltInRole	Compute	View
Virtual Machine Data Access Administrator (pre...	Manage access to Virtual Machines by adding or removing role assignments for the Virtual Machine Administrator Login a...	BuiltInRole	None	View
Virtual Machine Local User Login	View Virtual Machines in the portal and login as a local user configured on the arc server	BuiltInRole	None	View
Virtual Machine User Login	View Virtual Machines in the portal and login as a regular user.	BuiltInRole	Compute	View

Showing 1 - 10 of 10 results.

[Review + assign](#) [Previous](#) [Next](#)

- Click to Select members

Home > AVDgroup | Access control (IAM) >

Add role assignment

Role: **Members** Review + assign

Selected role: Virtual Machine User Login

Assign access to: ☒ User, group, or service principal ☐ Managed identity

Members: [+ Select members](#) ← click on select

Name	Object ID	Type
No members selected		

Description: Optional

Review + assign Previous Next

Select members

Select

No users, groups, or service principals found.

Selected members:

- piyush
piyush@nafeel19outlook.onmicrosoft... [Remove](#)

Select Close

- Click to Assign

Home > AVDgroup | Access control (IAM) >

Add role assignment

Role: **Members** Review + assign

Selected role: Virtual Machine User Login

Assign access to: ☒ User, group, or service principal ☐ Managed identity

Members: [+ Select members](#)

Name	Object ID	Type
piyush	744ca71a-3792-4ed5-bc39-c250736d35...	User

Description: Optional

Review + assign Previous Next

- Again, Same Step
- Click on Search → Virtual Machine Administrator Login → Select and Assign

- Click to Next

Home > AVDgroup | Access control (IAM) >

Add role assignment

× Type: All Category: All

Name ↑↓	Description ↑↓	Type ↑↓	Category ↑↓	Details
Classic Virtual Machine Contributor	Lets you manage classic virtual machines, but not access to them, and not the virtual network or storage account they're c...	BuiltInRole	Compute	View
Desktop Virtualization Power On Contributor	Provide permission to the Azure Virtual Desktop Resource Provider to start virtual machines.	BuiltInRole	None	View
Desktop Virtualization Power On Off Contributor	Provide permission to the Azure Virtual Desktop Resource Provider to start and stop virtual machines.	BuiltInRole	None	View
Desktop Virtualization Virtual Machine Contribu...	This role is in preview and subject to change. Provide permission to the Azure Virtual Desktop Resource Provider to create,...	BuiltInRole	None	View
DevTest Labs User	Lets you connect, start, restart, and shutdown your virtual machines in your Azure DevTest Labs.	BuiltInRole	Devops	View
Virtual Machine Administrator Login	View Virtual Machines in the portal and login as administrator	BuiltInRole	Compute	View
Virtual Machine Contributor	Lets you manage virtual machines, but not access to them, and not the virtual network or storage account they're connect...	BuiltInRole	Compute	View
Virtual Machine Data Access Administrator (pre...	Manage access to Virtual Machines by adding or removing role assignments for the Virtual Machine Administrator Login a...	BuiltInRole	None	View
Virtual Machine Local User Login	View Virtual Machines in the portal and login as a local user configured on the arc server	BuiltInRole	None	View
Virtual Machine User Login	View Virtual Machines in the portal and login as a regular user.	BuiltInRole	Compute	View

Showing 1 - 10 of 10 results.

Review + assign

Previous

Next

- Click to Select members And Assign

Home > AVDgroup | Access control (IAM) >

Add role assignment

Role

Members

Review + assign

Selected role

Virtual Machine Administrator Login

Assign access to

☒ User, group, or service principal

☐ Managed identity

Members

+ Select members

← click on select

Description

Optional

Review + assign

Previous

Next

Select members

Select ①

piyush

No users, groups, or service principals found.

Selected members:



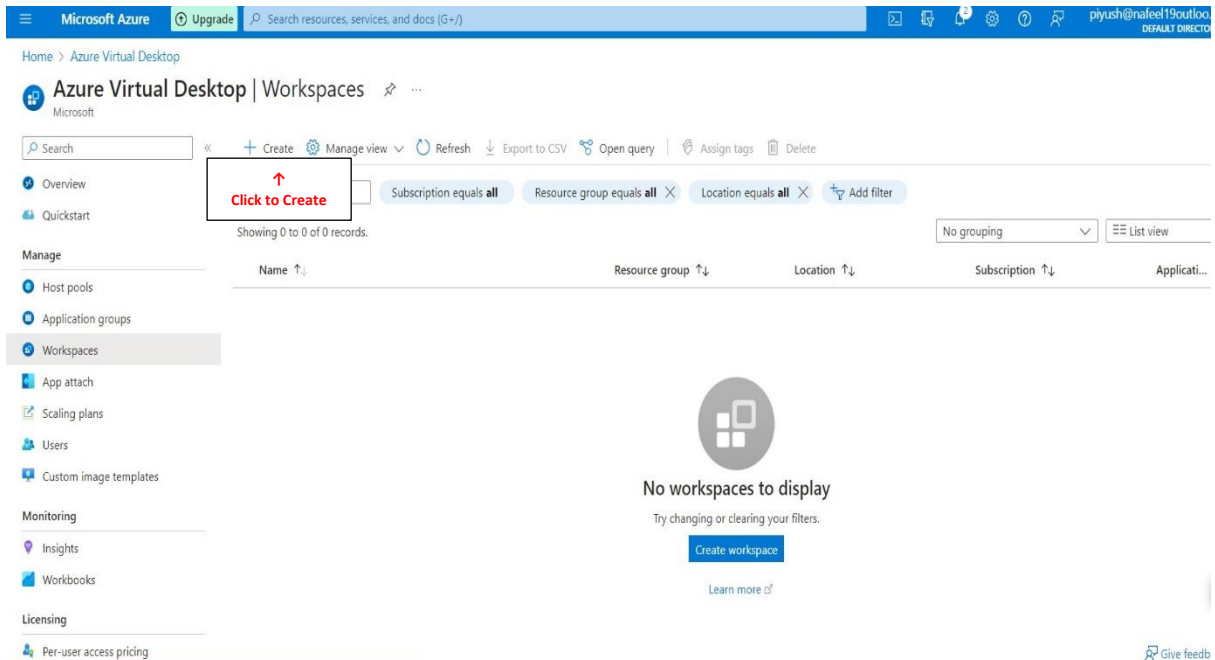
piyush
piyush@nafeel9outlook.onmicrosoft... Remove

Select

Close

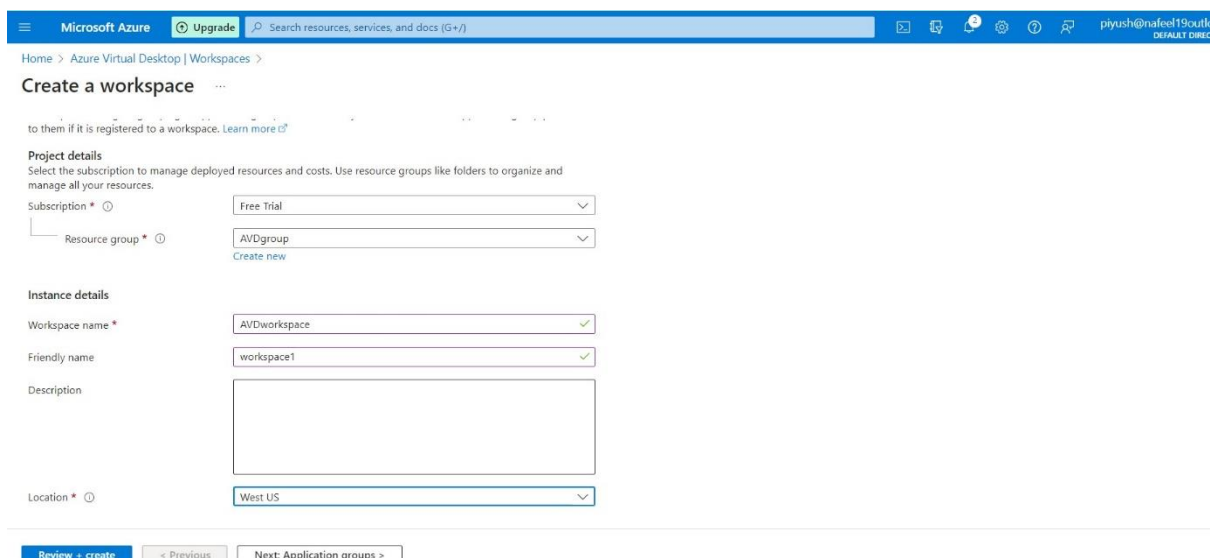
7. Add virtual desktop workspaces:

- In Azure Portal, search for Azure Virtual Desktop.
- Click on Create a host pool.
- In Mange → Click on Workspace.
- Click to Create Workspace.



The screenshot shows the Azure Virtual Desktop Workspaces page. The left sidebar contains navigation links for Overview, Quickstart, Manage (Host pools, Application groups, Workspaces, App attach, Scaling plans, Users, Custom image templates), Monitoring (Insights, Workbooks), and Licensing (Per-user access pricing). The main content area shows a table of workspaces with columns: Name, Resource group, Location, Subscription, and Application. A red box highlights the 'Click to Create' button. Below the table, there is a message: 'No workspaces to display. Try changing or clearing your filters.' and a 'Create workspace' button. The top navigation bar includes the Microsoft Azure logo, an Upgrade button, a search bar, and user information.

- Add existing created Resource group AVDgroup.
- Add a Workspace name and location West US, keep same location for all the process in AVD.



The screenshot shows the 'Create a workspace' form. The form is divided into two main sections: 'Project details' and 'Instance details'. In the 'Project details' section, there is a 'Subscription' dropdown menu set to 'Free Trial' and a 'Resource group' dropdown menu set to 'AVDgroup'. In the 'Instance details' section, there is a 'Workspace name' field set to 'AVDworkspace', a 'Friendly name' field set to 'workspace1', a 'Description' text area, and a 'Location' dropdown menu set to 'West US'. At the bottom of the form, there is a 'Review + create' button and a 'Next: Application groups >' button.

- Click to Create Workspace.

The screenshot shows the 'Overview' page for a deployment named 'Workspace-06305187-a922-4ed4-a319-933dae070044-deployment'. The deployment is complete, with a green checkmark icon. Key details include:

- Deployment name: Workspace-06305187-a922-4ed4-a319-933dae070044-deployment
- Subscription: Free Trial
- Resource group: AVDgroup
- Start time: 28/01/2024, 21:12:38
- Correlation ID: cd529595-b603-4c33-9431-6823f131c3

 The 'Next steps' section recommends managing application groups and provides a 'Go to resource' button. A 'Cost management' sidebar on the right suggests setting up cost alerts.

- In Manage → Click on Application group.
- Click on Add

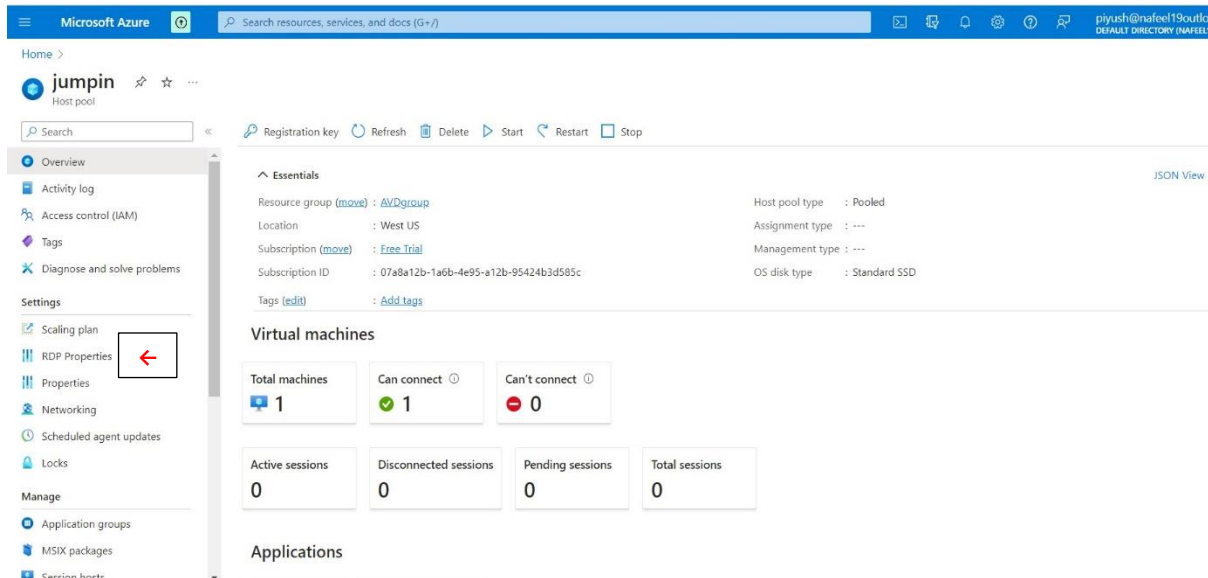
This screenshot shows the 'Application groups' page for the workspace. The left-hand navigation pane has 'Application groups' selected under the 'Manage' section. In the main content area, there is a '+ Add' button with a red arrow pointing to it and the text 'Click to Add'. Below this is a table with columns: Name, Friendly name, Type, Location, Subscription, Resource group, Applications, and Users. The table is currently empty, displaying the message 'There are no application groups matching your input.'

- Select that Application groups, which we Created by host pool.

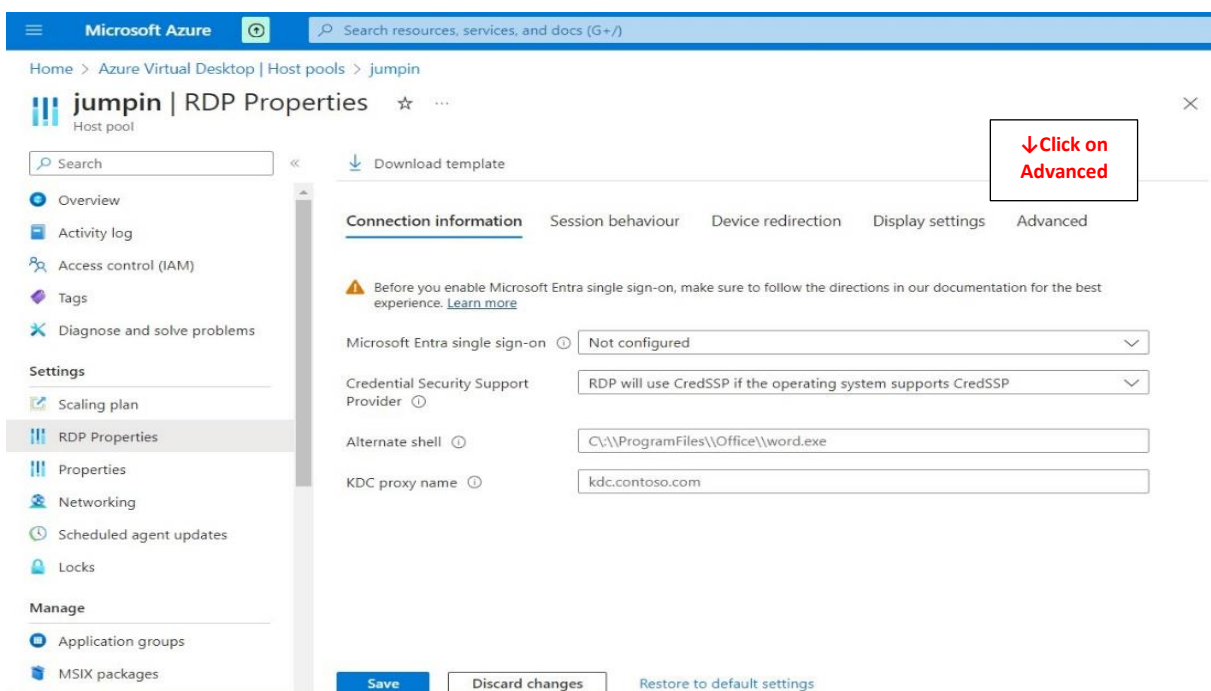
This screenshot shows the 'Add application groups' dialog box. It has a search bar 'Filter by Name' and a table with columns: Name, Host pool, and Type. The table is empty with the message 'There are no more application groups in this location.' Below the table, under 'Selected application groups', there is one entry: 'jumpin-DAG' with host pool 'jumpin' and type 'Desktop'. At the bottom, there is a 'Select' button with a red arrow pointing to it.

8. Configure Virtual Desktop host pools:

- In Azure Portal, search for Azure Virtual Desktop.
- Click on Host pool we Created jumpin
- In settings → Click RDP properties.



- Click on Advanced



- In Advanced type this → ;targetisaadjoined:i:1
- Click to Save

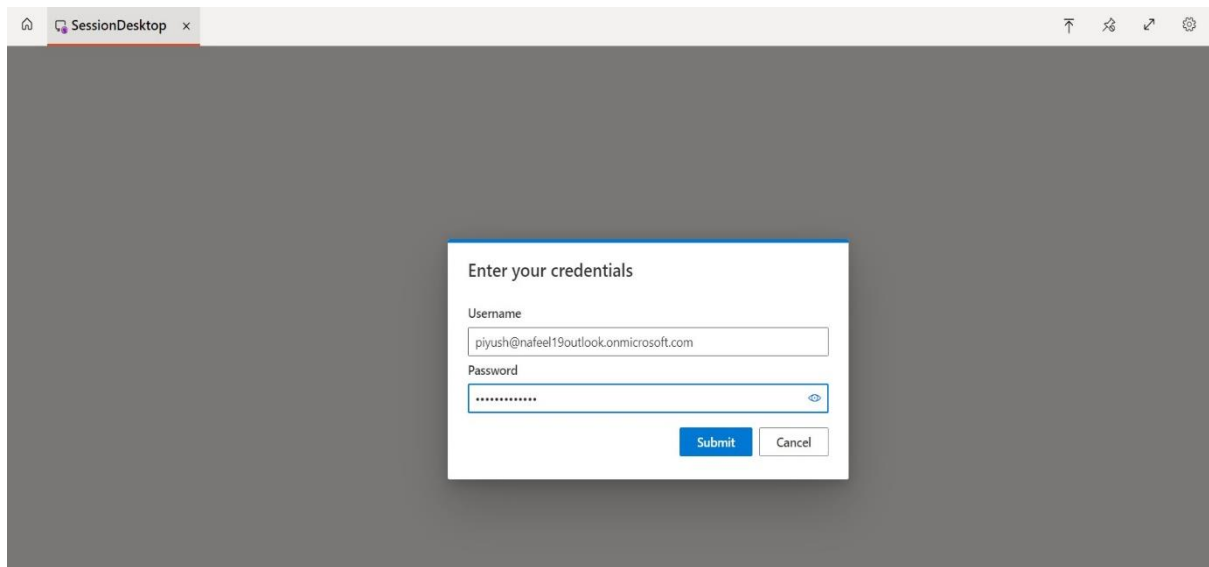
9. Log in to the Azure Virtual Desktop:

- After configuring your AVD host pool, you're ready to login to the Azure Virtual Desktop.
- You can use the following link:

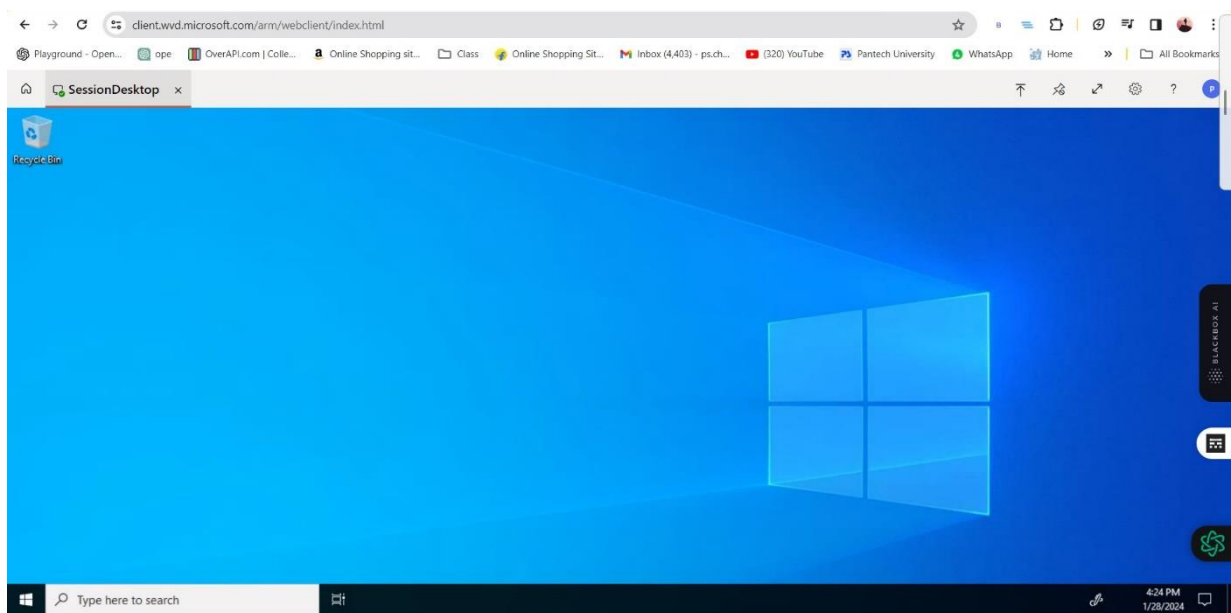
<https://rdweb.wvd.microsoft.com/arm/webclient/index.html>

- Copy this link and past in new tab
- Click on Session Desktop

- Enter Username As per Selected AD User and Assign Role
- Enter Password and Click to Submit.



- Now AVD Session Desktop Setup is Ready



Reference: - <https://www.youtube.com/watch?v=Y5AB7AShdi0>