



Manager  
for WVD

# QuickStart Guide

Find more:

[getnerdio.com/wvdmanager](https://getnerdio.com/wvdmanager)

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This document will guide you through the process of installing Nerdio Manager for WVD in your own environment. By following this guide, you are registering an *Enterprise Application* in your own Azure tenant, in a subscription that you select and into a new Resource Group. Once the install is completed, you'll gain access to a URL and be able to login to Nerdio Manager for WVD web application.

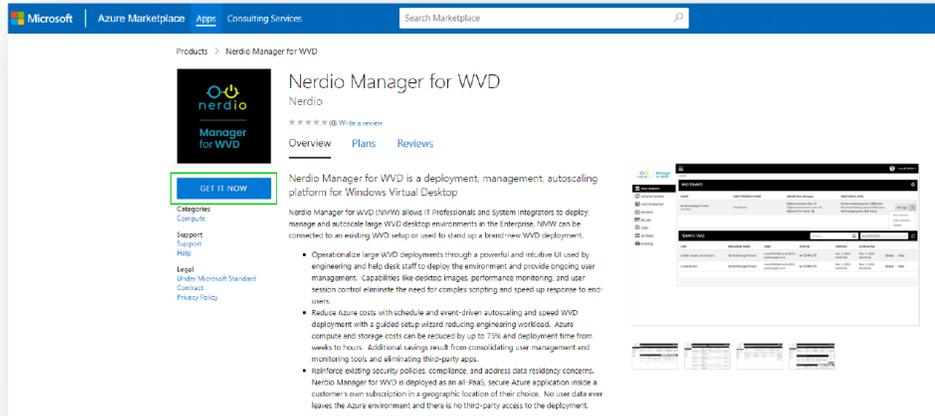
A list of resources will be created in the subscription in order to run the application and the permissions granted to service principals so that Nerdio Manager for WVD can manage your WVD environments and are available in the Security Appendix.

# Prerequisites

1. You must be logged into **Azure AD as a Global Administrator** before starting the deployment process via the Azure Marketplace.
2. You need to have an **Azure subscription** that is accessible to your Azure AD user with **owner role**. The subscription must be able to deploy Azure SQL, Web Application, Key Vault, Application Insights and Automation account in your selected region.
3. You must have a **virtual network and subnet** available to deploy WVD session host VMs. You will be prompted to select this virtual network and subnet during the installation process.
4. You must have **Windows Active Directory or Azure AD DS** deployment accessible from the virtual network where WVD session host VMs will be deployed. The custom default DNS server setting specified on the virtual network subnet must be pointing at a DNS server that is AD-aware.
5. **Windows Active Directory must be synchronized** with Azure AD.
6. You need an Active Directory user account with **rights to join and un-join** VMs from domain. This user account must be able to create computer objects in at least one OU in AD domain and be able to disable these computer objects.
7. You need an SMB **file storage location for FSLogix** Profile containers. This SMB share can be on a file server VM, Azure Files, Azure NetApp Files or any other location accessible via a UNC path (e.g. [\\server.domain.local\share\profiles](#)). Server name must be in FQDN format. This file share must be in Azure in the same region as the WVD session host VMs.
8. **WVD app must be registered in your Azure AD tenant.**

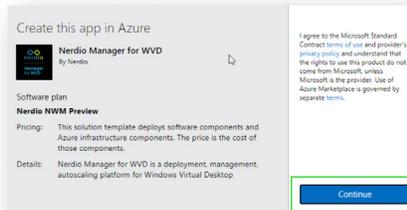
# Installation

1. Visit [Azure Marketplace](#) and search for “Nerdio Manager for WVD.”

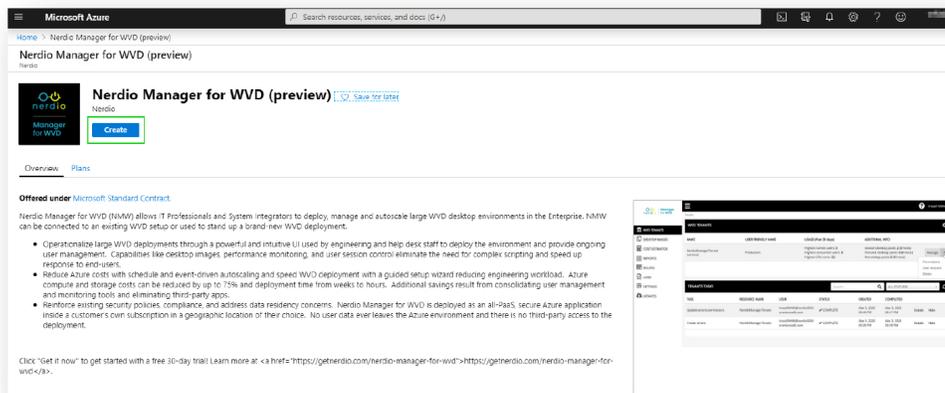


**Note:** Be sure you're installing “Nerdio Manager for WVD” and not “Nerdio for Azure.” Those are different products.

2. Click the **Get It Now** button and then click on the **Continue** button.

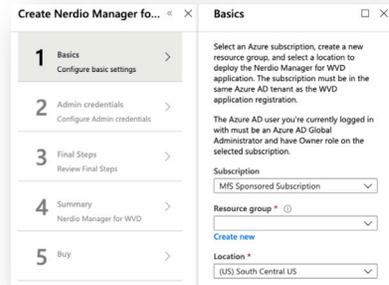


3. Once redirected to the Azure Portal, click on the **Create** button to proceed.



4. Fill out the **Basic** deployment blade.

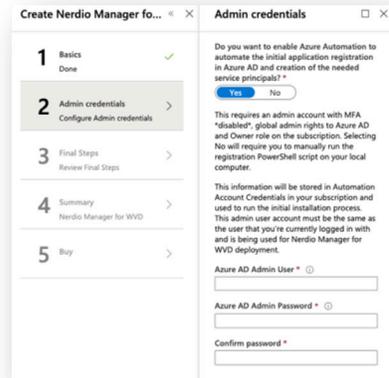
- Select subscription.
- Create a new resource group.
- Select location for the Nerdio Manager for WVD application deployment.
- Click **OK**.



5. Fill out the “Run As” **Admin Credentials**

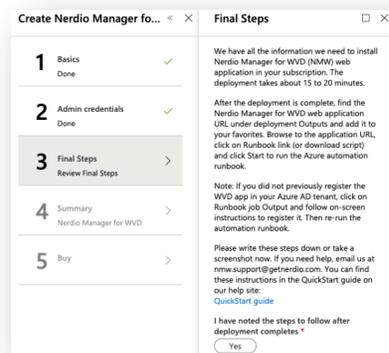
deployment blade. These credentials are needed only for the installation of Nerdio Manager for WVD and not needed for ongoing operation.

- This step requires an admin account with MFA **\*disabled\***, global admin rights to Azure AD and Owner role on the subscription. Selecting No will require you to manually run an installation Powershell script on your local computer later on in the process.
- This information will be stored in Automation Account Credentials in your subscription and used to run the initial installation process. This admin user account must be the same as the user that you’re currently logged in with and is being used for Nerdio Manager for WVD deployment.
- Type in the user’s password.
- Confirm the user’s password.
- Click **OK**.



6. Review the **Final Steps** deployment blade.

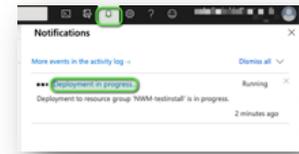
- Review the instructions on where to find the application URL once the deployment is done.
- Click **Yes**.
- Click **OK**.



7. Review the **Summary** deployment tab and click **OK**.

8. Review the **Buy** deployment tab and click **Create**. The deployment will take approximately 20 minutes.

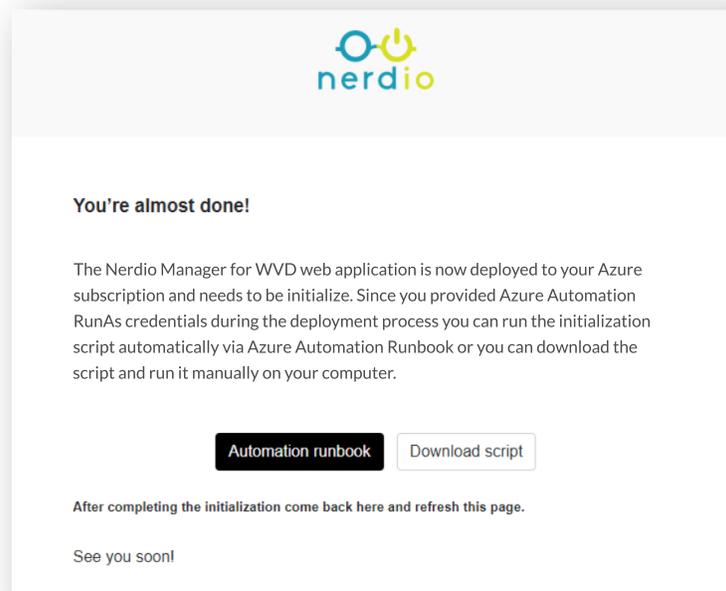
9. Click on the **Notifications** bell icon on the top right and then click on **Deployment in Progress**.



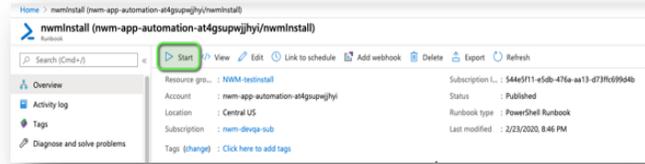
10. Once the deployment is complete, find the Nerdio Manager for WVD web application URL under Outputs and add it to your favorites.



11. Browse to the application URL copied in the previous step and **click** on **Automation Runbook** link, if you specified Admin Credentials in step 5 above. If you did not specify Admin Credentials, then download the Powershell script and run it on your computer from Administrator Powershell console.



12. You will be taken to the Azure Portal. Click Start to run the Azure automation runbook and click **Yes** to confirm.



While the Automation runbook is running, the status will be Queued at first and then Running. This process will take about 5-10 minutes.

13. When the runbook status changes to **Completed**, browse to the app URL recorded above to complete the configuration. Configure **Network** by clicking on the “**None Selected**” link.

14. Select the Network and subnet where you want the WVD session hosts to be created. The network selection will also determine the Azure region for these hosts.

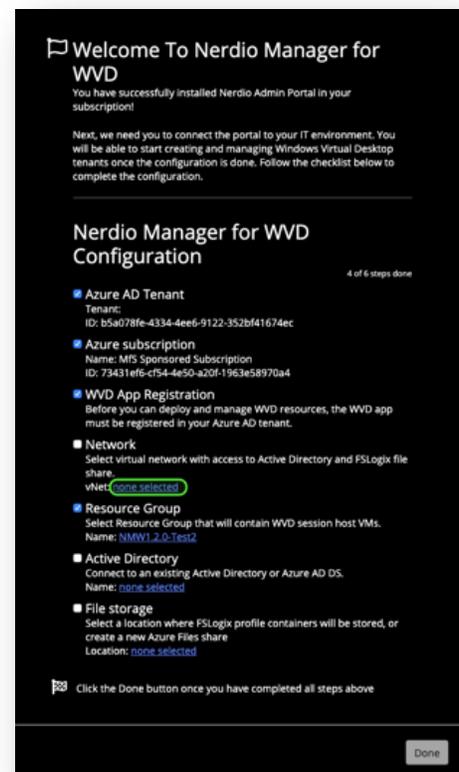
NETWORK CONFIGURATION

Resource group  
NWM-Demo

Network  
NWM-Demo-Vnet

Subnet  
NWM (10.1.254.0/24)

Cancel OK



- Enter the name of the Active Directory that WVD session host VMs will join. Use a FQDN username that has permissions to join the AD domain. Specify the OU for the computer objects to be created in or leave blank to use the default Computers container.

CONFIGURATION - ACTIVE DIRECTORY

Connect to an existing Active Directory or Azure AD DS.

AD DOMAIN:

AD USERNAME:

AD PASSWORD:

Specify Distinguished Name (DN) path to an Organizational Unit (OU) where session hosts will be created. Leave blank to use the Computers container.

ORGANIZATION UNIT:

Welcome To Nerdio Manager for WVD

You have successfully installed Nerdio Admin Portal in your subscription!

Next, we need you to connect the portal to your IT environment. You will be able to start creating and managing Windows Virtual Desktop tenants once the configuration is done. Follow the checklist below to complete the configuration.

### Nerdio Manager for WVD Configuration

4 of 6 steps done

- Azure AD Tenant**  
Tenant ID: b5a078fe-4334-4ee6-9122-352bf41674ec
- Azure subscription**  
Name: MFS Sponsored Subscription  
ID: 73431ef6-cf54-4e50-a20f-1963e58970a4
- WVD App Registration**  
Before you can deploy and manage WVD resources, the WVD app must be registered in your Azure AD tenant.
- Network**  
Select virtual network with access to Active Directory and FSLogix file share.  
vNet: none selected
- Resource Group**  
Select Resource Group that will contain WVD session host VMs.  
Name: NMDV1\_2.0\_Test2
- Active Directory**  
Connect to an existing Active Directory or Azure AD DS.  
Name: none selected
- File storage**  
Select a location where FSLogix profile containers will be stored, or create a new Azure Files share  
Location: none selected

- Configured **File Storage** location for FSLogix Profile containers by specifying the UNC path to a file share accessible from the network where WVD Manager application has been deployed. It is recommended that FQDN server name is used. Click **Done** button to complete the installation phase.

CONFIGURATION - FILE STORAGE

Select the default location where FSLogix Profile Containers will be stored.

UNC:

Azure Files: Coming soon

Welcome To Nerdio Manager for WVD

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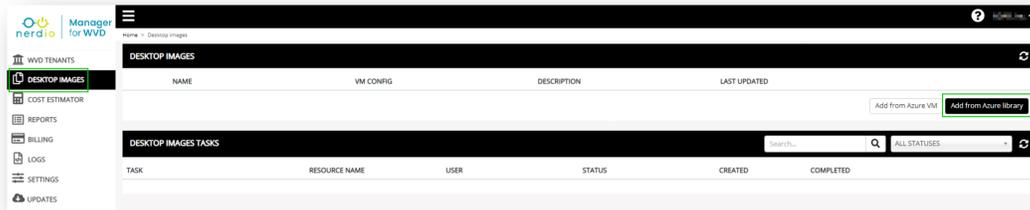
### Nerdio Manager for WVD Configuration

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- Network**  
Select virtual network with access to Active Directory and FSLogix file share.  
vNet: none selected
- Resource Group**  
Select Resource Group that will contain WVD session host VMs.  
Name: NMDV1\_2.0\_Test2
- Active Directory**  
Connect to an existing Active Directory or Azure AD DS.  
Name: none selected
- File storage**  
Select a location where FSLogix profile containers will be stored, or create a new Azure Files share  
Location: **done selected**

# Create New Desktop Image

1. Select **Desktop Images** in the WVD Manager menu and click **Add from Azure Library** button.



2. Enter a name of new VM to be created as a Desktop Image, description, select an Azure Marketplace image, VM size and OS Disk. D2sv3 VM with E10 disk is recommended to start.

**NOTE:** During VM creation, the VM is joined to the AD domain specified during the installation process. If join domain task fails, verify that the domain name, username, password, and OU are correctly specified and the WVD Manager network can access the network where AD domain controller resides.

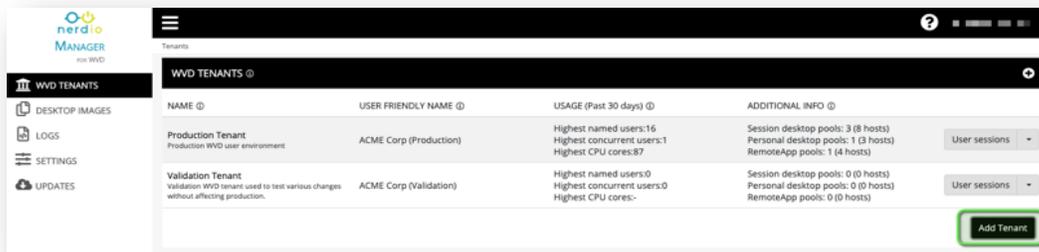
3. It will take about 15 minutes for the new Desktop Image VM created and you can track the progress in the DESKTOP IMAGES TASKS section. Once the Desktop Image is added, you can power it on and RDP to using the listed IP address or host name. After the changes are made to the Desktop Image, click **Power Off & Set As Image** button to commit these changes to an image that can be used to create WVD session host VMs.

NAME	VM CONFIG	DESCRIPTION	LAST UPDATED	
Executive EXECUTIVE.NERDIO.INT 10.1254.3	OS: Windows 10 for WVD + Office ProPlus VM Size: E4s_v3 (4C/32GB/Standard) OS Disk: 128 GB (P10/Premium SSD)	Personal Desktop Template for Executive Team	Feb 9, 2020 01:20 PM	Power off & set as image
FieldTechs01 FIELDTECHS01.NERDIO.INT 10.1254.9	OS: Windows 10 EVD VM Size: D2s_v3 (2C/8GB/Standard) OS Disk: 128 GB (E10/Standard SDD)	Field Techs desktop image with LOB apps	Feb 9, 2020 01:26 PM	Power on

4. Once the changes to the Desktop Image are committed, the **Last Updated** date stamp will be updated, and the Desktop Image can be used to provision new session hosts or re-image existing session hosts.

# Create New WVD Tenant

1. Select **WVD Tenants** in the WVD Manager menu and click **Add Tenant** button.



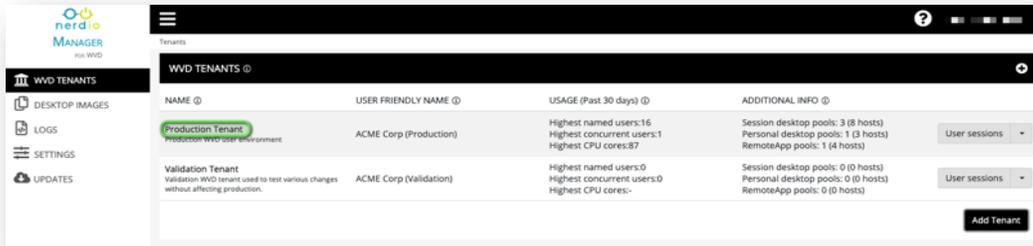
2. Enter new tenant name, friendly name, and description and click **OK**.

The dialog box titled "CREATE WVD TENANT" contains the following fields and controls:

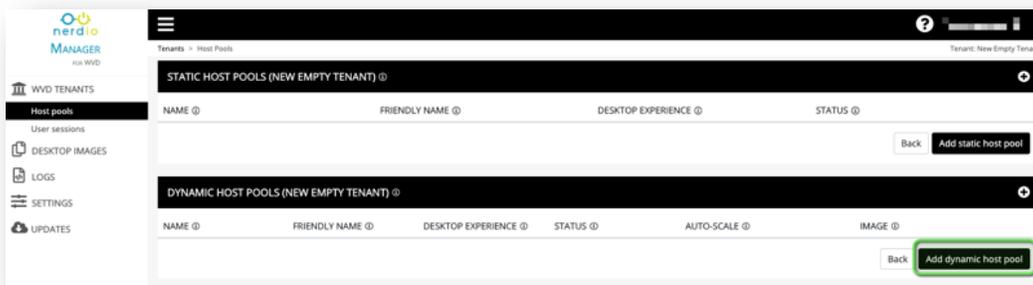
- Name (not visible to user and cannot be changed later):** A text input field with the placeholder "Tenant name".
- Friendly Name (visible to user and can be changed later):** A text input field with the placeholder "Friendly name".
- Description:** A larger text area for entering a description.
- Buttons:** "Cancel" and "OK" buttons at the bottom right.

# Create New Dynamic Host Pool

1. Navigate to **WVD Tenants** and click on the WVD Tenant name.



2. In the Dynamic Host Pools section click on **Add Dynamic Host Pool**.



3. Specify new host pool name, description, and select desktop experience. Specify the name prefix to be used when creating the hosts. Select the Desktop Image created previously and the VM size and OS Disk and click **OK**.

**NOTE:** At least a 2 CPU core VM with at least a Standard SSD disk are recommended. Common VM series used for WVD session hosts are Dsv3 and Esv3.

4. On the **Auto-Scale** configuration screen, click the **ON/OFF** switch on top right to turn auto-scale on. Click **Save** button at the bottom.

**MANAGE AUTO-SCALE LEGACY APPLICATIONS**

**AUTO-SCALE**  OFF

Desktop Pools scale out or scale in based on user workload. Additional hosts are provisioned when collective CPU usage across all existing hosts in the pool exceeds a preset threshold. Similarly, hosts are deleted when the collective CPU usage drops below a certain threshold. You can set an upper limit on the number of hosts added to the pool to avoid costs from spiraling out of control. You can also set a lower limit to ensure base capacity. When a host is deleted the system will intelligently remove the host with least number of users, and only after it drains connections and warns existing users they are going to loose their session.

Hosts will be provisioned based on the template for pool:

NAME PREFIX: LEGACY

DESKTOP IMAGE (TEMPLATE): Skipjoin (Mar 27, 2020 01:49 PM)

VM SIZE (TEMPLATE): D2s\_v3 (2C/8GB/Standard)

OS DISK (TEMPLATE): 128 GB (E10/Standard SSD)

Changes will only be applied to new VM.

**1 HOST POOL SIZING**

Active host defined as: WVD agent Available

Base host pool capacity: 5 host(s) in the pool

Min active host capacity: 1 host(s) in the pool

Burst beyond base capacity: up to 4 extra host(s) in the pool

**2 SCALING LOGIC**

Select autoscale trigger: CPU usage

Start or create (scale out) up to 2 host(s) if CPU utilization across all hosts exceeds 50 % for 5 minutes

Stop or remove (scale in) up to 1 host(s) if CPU utilization across all hosts drops below 30 % for 15 minutes

Stop or remove (scale in) hosts only from: 6 p.m. to 3 a.m. (UTC-06:00) Central Time (US & Canada)

**3 PRE-STAGE HOSTS**  ON

Work days: Monday - Friday

Start of work hours: 8 a.m. (UTC-06:00) Central Time (US & Canada)

Hosts to be active by start of work hours: 4

**4 MESSAGING**

Send a warning message to users on the host: 10 minutes before scaling in host

The message should say:

Sorry for the interruption. We are doing some housekeeping and need you to log out. You can log in right away to continue working. We will be terminating your session in 10 minutes if you haven't logged out by then.

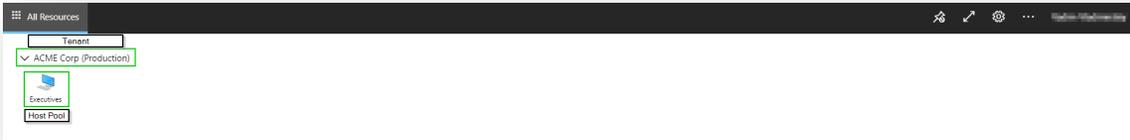
Cancel Save

**NOTE:** Turning on auto-scale will automatically create new session hosts and allow users to connect to the WVD desktop when the hosts are created. You can configure the auto-scale settings based on your requirements at any time.

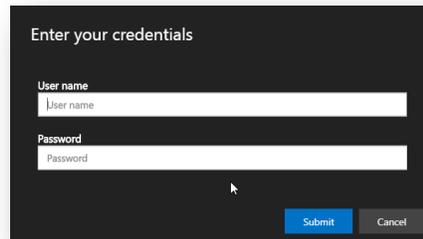


# Use WVD HTML Client to Connect to Desktop

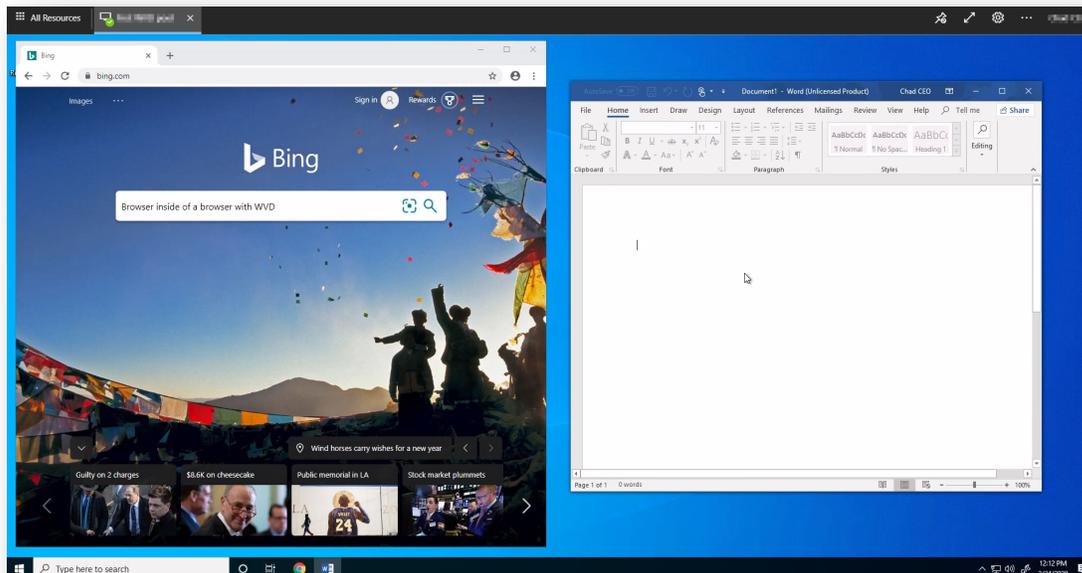
1. Navigate to WVD HTML client URL (<http://aka.ms/wvdweb>) and log in as the user assigned to a host pool.
2. You will see all WVD tenants and Host Pools that the logged in user is entitled to. Click on a **Host Pool**.



3. Type in the username and password again and click **Submit**. The user must be synchronized from Active Directory to Azure AD.

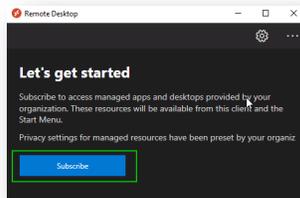


4. You will now be running a Windows Virtual Desktop Instance inside of a browser.

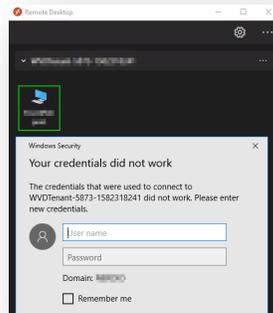


# Install WVD Remote Desktop Client for Windows and Connect

1. Download and install Windows Remote Desktop client for WVD from <https://aka.ms/wvdclient>.
2. Open Remote Desktop client and **Subscribe** to the desktop feed using Azure AD username that's assigned to a WVD Host Pool.



3. Double-click on the desktop name and type in user's credentials one more time. Click **OK** to connect. You can check **Remember Me** to avoid having to type in the password again.



4. **You are now connected** to your Windows Virtual Desktop session!

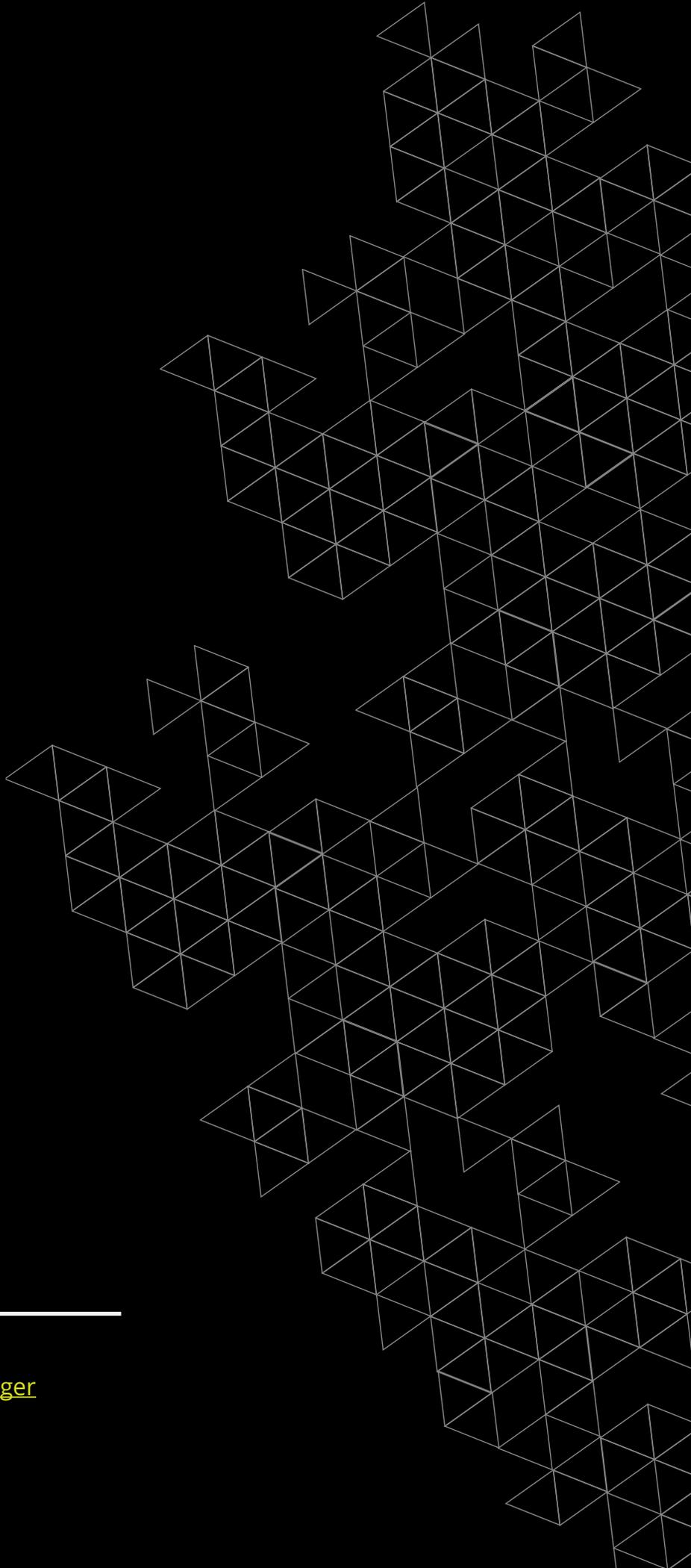
# Security Appendix

In order to run the Nerdio Manager application, the following resources will be created in the new Resource Group you specify during the install process. All resources are native Azure PaaS services. No VMs are created.

1. App Service
2. App Service plan
3. Azure SQL Database
4. Application Insights
5. Key vault
6. Storage accounts
7. Automation account and Runbook

The following roles and permissions are granted to the Nerdio Manager for WVD application in your environment. Remember, the application is private to your environment and no one has access to it unless you explicitly grant it.

Service	Permission	Function
Azure Resource Manager	Subscription – Reader Resource Group – Contributor vNet – Contributor	Manage WVD session host VMs
Azure Service Management	user_impersonation	Make requests to Azure resource manager on behalf of logged in user
Microsoft Graph	offline_access / openid / profile	User login
Microsoft Graph	AppRoleAssignment.ReadWrite.All	Assign users to NMW app to enable user login
Microsoft Graph	User.Read / User.ReadBasic.All	Read users from Azure AD
Microsoft Graph	Directory.Read.All	List service principals (to determine if WVD apps are installed)
Windows Virtual Desktop	TenantCreator (Application)	Tenant creator role for NMW service principal in WVD app
Windows Virtual Desktop	user_impersonation	Make requests to WVD on behalf of logged in user



Contact Us:

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