

# VMware App Volumes Deployment Guide for Azure Virtual Desktop Remote Apps

Timestamp: 2023 July 6 20:11 | Codestamp: 2020 January 13 23:00 UTC—VMware PDF Plugin

You can find the most up-to-date technical documentation on the VMware website at:

<https://docs.vmware.com/>

**VMware, Inc.**  
3401 Hillview Ave.  
Palo Alto, CA 94304  
[www.vmware.com](http://www.vmware.com)

Copyright © 2023 VMware, Inc. All rights reserved. [Copyright and trademark information.](#)

# Contents

- 1** About App Volumes Deployment on Azure 4
- 2** Preparing for App Volumes Deployment on Azure 5
- 3** Workflow of App Volumes Deployment on Azure 6

# About App Volumes Deployment on Azure

# 1

The *VMware App Volumes Deployment Guide for Azure Virtual Desktop Remote Apps* provides a new solution for installing and configuring App Volumes on the Azure platform. Administrators can now use lifecycle management and apps on demand features with remote app streaming capabilities in Microsoft Azure Virtual Desktop.

This deployment option is intended for applications packages and not Writable Volumes.

## Intended Audience

This information is intended for experienced IT system administrators who are familiar with virtual machine technology and data center operations.

## App Volumes Documentation

App Volumes is a real-time application delivery system that enterprises can use to dynamically deliver and manage applications. For information about installing App Volumes, see the *VMware App Volumes 4 Installation Guide*. For information about configuring and using App Volumes for delivering and managing applications, see *VMware App Volumes 4 Administration Guide*.

For more information about App Volumes, you can see various information resources on the App Volumes product documentation page.

App Volumes documentation is available at [VMware Docs](#).

# Preparing for App Volumes Deployment on Azure

# 2

To deploy App Volumes on the Azure platform, you must have an account in Microsoft Azure and a few permissions. It is necessary that you are aware of these requirements before the deployment.

Following are the requirements that are necessary for deploying App Volumes on the Azure platform:

- Ensure that you have an Azure account.  
For more information about Microsoft Azure, see the Azure documentation.
- On Azure, ensure that you have appropriate permissions to create a virtual network, virtual machines for active directory domain services and App Volumes Manager, storage account, and fileshare.
- Ensure that you have access to the on-prem Active Directory for identity and access control and the Azure Virtual Desktop for remote connectivity.

# Workflow of App Volumes Deployment on Azure

# 3

To deploy App Volumes in Azure, you must create a virtual infrastructure. This virtual infrastructure consists of creating a virtual network, virtual machines for active directory domain services and App Volumes Manager, storage account, and file share.

Components such as the Azure platform, App Volumes Manager, and App Volumes agent are required for the deployment of App Volumes. This topic gives you an overview of the various configuration steps that are necessary for this deployment.

At the end of the deployment, to create and manage applications and packages, you can use App Volumes workflows as described in the App Volumes documentation.

---

**Note** When using any of the Microsoft applications in the procedure described in this task, see the relevant Microsoft documentation. However, ensure that you follow specific configurations required for deploying App Volumes on Azure.

---

## Prerequisites

- Ensure that you are aware of the requirements necessary for deploying App Volumes on Azure.

For more information about these requirements, see [Chapter 2 Preparing for App Volumes Deployment on Azure](#).

- Ensure that you create a virtual network.

When deploying App Volumes on Azure, a virtual network must be created so that other components in the Azure infrastructure such as virtual machines (active directory domain services and App Volumes Manager) and file share can communicate with each other.

It is recommended that all virtual machines reside in the same region as the virtual network.

For information about how to create a virtual network, see the corresponding Microsoft documentation.

## Procedure

- 1 Log into the [Azure portal](#).

- 2 Create a virtual machine for Active Directory Domain Services or on-prem Active Directory.
  - a Navigate to the **Virtual machines** services.
  - b To create the virtual machine, enter the information as per your requirements for the fields displayed in the console.

**Note** When you configure the following fields in the **Basics** tab, ensure that you enter these values:

| Field           | Value  |
|-----------------|--|
| Image           | Windows Server 2022 Datacenter: Azure Edition - Gen2 |
| VM architecture | x64  |

- c Complete creating the virtual machine.
  - d Enable Active Directory Domain Services in the created virtual machine.
- 3 In the previously created on-prem Active Directory, install Azure AD Connect.
 

Azure AD Connect synchronizes users from the on-prem Active Directory to the Azure Active Directory (Azure AD).
- 4 Create an Azure storage account.
  - a Create a file share in the storage account.
  - b Domain bind the storage account to the on-prem Active Directory.
  - c Set Share-Level Permissions to `Enable Permissions` for all authenticated users and groups.
  - d Select appropriate role as either `Storage File Data SMB Share Contributor` OR `Elevated Contributor`.
- 5 Create a virtual machine for App Volumes Manager.
 

To deploy App Volumes in Azure, App Volumes Manager must be installed in a virtual machine created in the Azure platform. This virtual machine must use the virtual network created and reside in the same region as the virtual network.

  - a Navigate to the **Virtual machines** services.
  - b Enter the information as per your requirements for the fields displayed.
  - c Ensure that the virtual machine is joined to the on-prem Active Directory.
- 6 In the previously created virtual machine in Azure, install App Volumes Manager.
 

For the install procedure, see *Install App Volumes Manager* section in the *VMware App Volumes 4 Installation Guide* at [VMware Docs](#).

## 7 Configure App Volumes Manager.

When configuring App Volumes Manager, make note of the following:

- a Select the machine manager type as [VHD] In-Guest Services.
- b To add the file share path, see the *Configure and Register the Machine Manager* section in the *VMware App Volumes 4 Administration Guide* at [VMware Docs](#).

When adding the file share path, modify the file share URL to a path which can be understood by Windows.

For example: Modify the file

share URL `https://<storage_account_name>.file.core.windows.net/file_share_name` to the following path `\<storage_account_name>.file.core.windows.net\file_share_name`.

- c To upload the VHD templates to the files share, see the *Manually Upload VHD Templates to the File Share* in the *VMware App Volumes 4 Administration Guide*.
- d Depending on whether you provided file share credentials when adding the file share, perform the following:

| Option                                 | Procedure   |
|--|---|
| No file share credentials are provided | <p>Go to a virtual machine that is bound to the on-prem Active Directory and configure the NTFS folder permissions for the Azure file share directories.</p> <hr/> <p><b>Note</b> To configure the NTFS folder permission for an Azure file share, the file share must be mounted with the file share user name and storage key. After the file share is mounted, NTFS folder permissions can be set.</p> <p>For information about how to mount the file share on Windows, see <a href="https://learn.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows">https://learn.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows</a>.</p> <hr/> <p>For information about configuring NTFS folder permissions for agent machines when hypervisor connection type is VHD In-Guest Services, see <i>Types of Machine Manager Configurations</i> in the <i>VMware App Volumes 4 Administration Guide</i>.</p> |
| File share credentials are provided    | <p>Configure the service account (for which file share credentials were added when adding the file share within App Volumes Manager in one of the previous steps) with read permissions to access the file share. App Volumes agent uses the service account to access the volumes on the file share.</p>   |

For more information about configuring App Volumes Manager, see the *Configuring App Volumes Manager* section in the *VMware App Volumes 4 Administration Guide* at [VMware Docs](#).



**8** Capture applications which you want to deliver to end user.

- a Create a capture virtual machine.
- b Install App Volumes agent on the capture virtual machine.

For the install procedure, see *Install App Volumes Agent* section in the *VMware App Volumes 4 Installation Guide* at [VMware Docs](#).

To capture applications on the virtual machine, see *Package an Application* in the *VMware App Volumes 4 Administration Guide*.

**9** Deploy the captured applications to users as an application group.

As a prerequisite, ensure that you configure the following when creating a host pool:

- Select **Preferred app group type** as `Remote App (RAIL)`
  - Select **Host pool type** as `Pooled`.
- a Create a virtual machine for App Volumes agent.

---

**Note** Ensure that you use a multi-session image to create the virtual machine.

---

To deploy App Volumes in Azure, App Volumes agent must be installed in a virtual machine created in the Azure platform. This virtual machine must use the virtual network created and reside in the same region as the virtual network.

- b To return to a clean snapshot whenever required, take a snapshot of the virtual machine.
- c Customize the virtual machine by installing App Volumes agent.

For the install procedure, see *Install App Volumes Agent* section in the *VMware App Volumes 4 Installation Guide* at [VMware Docs](#).

- d Take another snapshot of this virtual machine.

This step ensures that we have the snapshot of the golden image.

- e Run `Sysprep`.
- f Shut down the App Volumes agent virtual machine and capture this state as an image.
- g Using the image captured in an earlier step, create an Azure Virtual Desktop.

Make a note of the host pool created during this step. This information is required when creating an application group.

## h Create an application group.

Configure the application group as per your requirements, but ensure that you use the specific values mentioned here for these fields:

- 1 On the **Basics** tab, select the host pool created during Azure Virtual Desktop creation.
- 2 On the **Applications** tab, click **Add applications**.

On the **Add application** page, configure the following information:

- a Select **Application source** as `File path`.
- b Enter **Application path** as  
`C:\Program Files (x86)\CloudVolumes\Agent\svservice.exe`
- c For **Required command line**, select `Yes`.
- d In the **Command line** text box, enter the following commands: `app run {application_guid} <exe_path> <arguments>`.

For example: `app run {77bf2642-6f23-4baf-af8a-cc882884c721} "C:\Program Files\Notepad++\notepad++.exe"`

In Azure Virtual Desktop, the application executable provides an icon. When using on-demand delivery, the icon does not appear for the application until after the application is launched. This behavior occurs because the application executable is not on the virtual machine until the first user launches the application. As a workaround, you can provide your own icon or a copy of the application executable in another folder.

For more information about the `svservice app run` command, see the *Command-line Delivery of Applications in App Volumes* section in the *VMware App Volumes 4 Administration Guide* at [VMware Docs](#).

- i Assign the application to a user in the App Volumes Manager console and assign the application group to the same user in the Azure portal.

An end user can use the <https://client.wvd.microsoft.com/arm/webclient/index.html> to log into the web client and run the application.

### What to do next

To deliver and manage applications, you can start using App Volumes. For entire supported workflow tasks, see the relevant App Volumes documentation. Here are a few examples:

- If you already have `.vhd` application packages created in another App Volumes Manager deployment, you can import these packages to the current deployment.

For more information about importing application packages, see the *Import an Application to App Volumes* section.

- To assign the application, see *Assign an Application to an Entity* section.

- If you want to create an application, see *Create an Application* section.
- For information about these tasks, see the *VMware App Volumes 4 Administration Guide*.