



# VMware App Volumes 2.12 Release Notes

VMware App Volumes 2.12 Release Notes | 08 DEC 2016

Check frequently for additions and updates to these release notes.

## What's in the Release Notes?

The release notes for App Volumes 2.12 include the following topics:

- [Key Features](#)
- [What's New](#)
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## About VMware App Volumes

VMware App Volumes provides a system to deliver applications to desktops through virtual disks. Applications are bundled in AppStacks and delivered by attaching a standard VMDK file to a virtual machine. You can centrally manage the applications with the App Volumes Manager and there is no need to modify the desktops or individual applications. Applications delivered by using App Volumes look and feel natively installed and you can update or replace the applications in real time.

All applications are provisioned during login time and App Volumes enables users to have a persistent user experience wherein users can install their own applications and have them persist across sessions.

App Volumes is intended for use on non-persistent desktops.

For more information, see [VMware App Volumes documentation](#).

## What's New?

The latest release of App Volumes includes many enhancements that improve end user login times, security, Microsoft Office support, and Windows 10 support.

### Performance improvements for faster user login and application launch

- Optimized handling of application registry hives by not blocking end-user login.
- Addressed a bug that caused the App Volumes agent to scan Appstacks and Writable Volumes before the Windows explorer shell is available.

### Integration with Active Directory

- You can manage application and Writable Volumes assignments across multiple Active Directory domains and forests.
- You can add multiple domain controllers that App Volumes Manager leverages to query Active Directory users, computers, groups, and OUs.
- You can move and retain application and Writable Volumes assignments even when Active Directory objects are moved out of an OU or Group.

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## Security Enhancements

- By default, communication between App Volumes Manager and agent occurs over HTTPS. The App Volumes Manager is installed with a port number of 443. See [KB 2148178](#) for more information.
- By default, certificate validation is required for all communication between the App Volumes Manager and vSphere. See the SSL section in the [App Volumes User Guide](#) for detailed information.
- Ruby version in App Volumes Manager is upgraded to 2.2.4.

## Support for Delivering Office 365 (Office 2016) Applications Through AppStacks

You can deliver Office 365 (Office 2016) applications through AppStacks. See [KB 2146035](#) for detailed information.

## Support for Windows 10 Anniversary Update (AU) build 1607

You can now deliver applications, user-installed applications, and profiles through AppStacks and Writable Volumes to Windows 10 version 1607 (Windows 10 Anniversary Update) on Current Branch, Current Branch for Business and Long-term Service Branch. Windows 10 version 1511 is not supported with App Volumes 2.12. See [KB 2148177](#) for more information.

## Tech Preview Features

See the following VMware Knowledge Base articles to learn about the Tech Preview features that are included with App Volumes 2.12.

**Note** - The Tech Preview features and capabilities are **not supported for production deployment**, rather they are available as a preview of potential upcoming innovations to test in a lab or UAT environment. You can provide feedback to improve these features through [VMWare Communities](#).

- **Centralized Log Collection** - You can redirect logs from all App Volumes Managers and agents to a central location. This helps in uploading the logs more easily to VMWare Support and also makes troubleshooting easier. See [KB 2148180](#) for more information.
- **Read-only Administrator** - A read-only administrator can only log in to App Volumes Manager and view the App Volumes configuration details but cannot make any modifications. See [KB 2147984](#) for more information.
- **Asynchronous Mounting** - You can configure asynchronous mounting of AppStacks on App Volumes Manager to improve scalability. See [KB 2147985](#) for more information.

## Miscellaneous

### AppVolumes Manager Nginx supports TLSv1.0

The App Volumes Manager 2.12 continues to allow communication using TLSv1.0. However, future releases of App Volumes Manager will not support TLSv1.0 which will affect older agents (App Volumes 2.11 and earlier).

## System requirements for App Volumes 2.12

Ensure that your system meets the following software and hardware requirements before you install App Volumes 2.12.

### Database Requirements

App Volumes Manager supports different versions of the Microsoft SQL database.

- SQL Server 2012 SP1, SP2, and SP3 (when App Volumes Manager is installed on Microsoft Server 2012)

- R2), Express, Standard, and Enterprise editions
- SQL Server 2008 R2 SP2, Express, Standard, Enterprise, and Datacenter editions
- SQL Server 2014 SP1 and SP2 (supported on App Volumes 2.12 and later)
- For High Availability, App Volumes supports the following database features :
  - SQL Server Clustered Instances
  - SQL Server Mirroring

## Browser Requirements

Use App Volumes Manager on one of the following supported browsers:

- Internet Explorer 9 or later
- Mozilla Firefox 28 or later
- Safari 5.1 or later
- Google Chrome 21 or later

## Infrastructure and Networking Requirements

Infrastructure and networking requirements for App Volumes include requirements for App Volumes Manager, agent, and Active Directory.

### Networking Requirements

Component	Details
App Volumes Manager	<ul style="list-style-type: none"> <li>• Microsoft Windows Server 2008 R2, Standard, Enterprise, or Datacenter editions</li> <li>• Microsoft Windows Server 2012 R2 Standard and Datacenter editions</li> <li>• .NET 3.5 framework</li> <li>• 4 vCPU required</li> <li>• 4 GB RAM</li> <li>• 1 GB disk space</li> </ul>
App Volumes Agent (client OS)	<p><b>Note:</b> Disable the GPO Control Read and Write Access to Removable Devices or Media option.</p> <ul style="list-style-type: none"> <li>• Windows Server 2008 R2 and 2012 R2 for Server VDI</li> <li>• Microsoft Windows 7 SP1 Professional and Enterprise editions (Microsoft Hot fix 3033929 applied)</li> <li>• Microsoft Windows 8.1 Professional and Enterprise</li> <li>• Microsoft Windows 10 Build 1607 Current Branch and LTSC</li> <li>• Microsoft Windows 10 Build 1607 Current Branch for Business</li> <li>• Windows 10 Anniversary edition Version 1607</li> <li>• Both 64-bit and 32-bit versions of OS are supported</li> <li>• 1 GB RAM</li> <li>• 5 MB disk space</li> </ul>
App Volumes Agent (RDSH)	<ul style="list-style-type: none"> <li>• Microsoft Windows Server 2008 R2 Standard, Enterprise, and Datacenter editions with RDSH role enabled</li> <li>• Microsoft Windows Server 2012 R2 Standard and Datacenter editions with RDSH role enabled</li> <li>• 1 GB RAM</li> <li>• 5 MB disk space</li> </ul>

VMware software for VMDK Direct Attached Mode (Preferred)	<ul style="list-style-type: none"> <li>• VSphere Version: <ul style="list-style-type: none"> <li>◦ VMware ESXi 5.5.x, 6.x and vCenter Server (ESXi and vCenter Server must be the same version)</li> <li>◦ VMware Virtual SAN 6.2</li> <li>◦ VMware Horizon View 6.0.1 or later</li> <li>◦ Citrix XenDesktop 5.5, 5.6, and 7.x</li> <li>◦ Citrix XenApp 6.5 and 7.x</li> </ul> </li> <li>• vMotion: <ul style="list-style-type: none"> <li>◦ ESXi 5.5 U3b or 6.0 U1 or later</li> <li>◦ (Storage vMotion is not supported)</li> </ul> </li> </ul>	
SMB file share if using VHD mode	<ul style="list-style-type: none"> <li>• SMB 2.0</li> <li>• SMB version 3.02 (Windows Server 2012 R2) is recommended for a better performance</li> </ul>	
Active Directory	Microsoft Active Directory domain, 2003 functional level or later. Read-only account access.	
Component	Purpose	Port Number
App Volumes Manager	Agent and Manager Communications	<ul style="list-style-type: none"> <li>• TCP 80 (HTTP)</li> <li>• TCP 443 (HTTPS)</li> <li>• TCP 5985 for PowerShell Web services</li> </ul>
App Volumes SQL database	Database Communication	TCP 1433 (SQL)

## Resolved Issues

The following issues were resolved in this release:

- Assignments were not honored when the organizational unit (OU) or group membership of users or computers was changed.
- App Volumes agent would scan Appstacks and Writable Volumes before the Windows explorer shell was available.
- When a user logs in to the virtual machine and AppStacks are attached, the Windows Start menu and search menu fail to launch. This is specific to Windows 10.
- When you use special characters such as “%” or “\” for a storage name, the storage list incorrectly displays “%25” and “%5c” for the names in places such as the Default Storage Location list on the Storage tab.
- Microsoft Office 2016 applications become unresponsive after a few minutes of being launched on Windows 10 with Writable Volume attached.
- AppVolumes now enables users to handle Alternate Data Stream.
- Java fails to render with Microsoft Office AppStack attached.
- Login to App Volumes Manager fails if the user name contains space.
- App Volumes Manager occasionally goes in to a deadlock state after stopping a query which is running slow.
- If a file from the system volume is deleted when a writable volume is attached, App Volumes Manager returns false success instead of "Access\_Denied".
- Users who are from the same forest but in an alternate domain as the domain configured in App Volumes Manager are unable to login.
- svservice ends prematurely when connecting to App Volumes Manager after HttpInitializeRequest:WinHttpRequest failed (error 12175).
- Windows 10 Start button and Cortana become unresponsive when WritableVolume is attached after

recomposing the floating pool.

- If you select "Delayed creation of Writable Volume" when creating Writable Volumes for a nested group, App Volumes Manager creates WritableVolumes immediately for all the users in parent groups. Only Writable Volumes creation for users at the deepest group level is delayed.
- A VM with an Appstack attached fails to report the correct VM state to VMware Horizon View
- When a user is moved to another organizational unit (OU), the AppStacks or WritableVolume assigned to him is no longer available to him when he logs in to the VM.
- FlexEngine.exe is invoked by the allvolattached\_shellstarted.bat file. In previous releases of App Volumes, users had to update the batch file separately to ensure that UEM did not throw an error when invoking FlexEngine.exe with App Volumes. With App Volumes 2.12, the batch file has been updated to invoke FlexEngine.exe with -UEMRefreshShortcuts. FlexEngine.exe is invoked after the user logs in and all volumes have been attached.

## Known Issues

- A black screen with the error message Connection Error Unable to contact App Volumes Manager is displayed if there is a mismatch in the SSL settings in the App Volumes Manager and agent, and App Volumes may not function correctly. See [KB 2148178](#) for more information.

**Workaround:** If you disable SSL in the App Volumes agent, ensure that you have enabled HTTP connection in App Volumes Manager.

- Error when expanding writable volume in App Volumes Manager - When you configure a machine manager as an In-guest VHD in App Volumes Manager, create a writable volume for a user, and then try to expand the volume, the writable is not expanded. The following error is displayed: Error: "Error expanding writable volume <user>"

**Workaround:** None

- Storage locations in Storage Groups for In-guest services shows disk usage as (null of null) - When you configure In-Guest services, add file shares, and create storage groups, the storage locations show (null of null) as disk usage, even though the information is unavailable.

**Workaround:** None

- AppStacks and Writable Volumes fail to attach on instant clone agents if the data center name and virtual machine folder location have non-English characters.

**Workaround:** Change the data center name and the virtual machine folder name to English.

- BSOD occurs on 1 desktop during log on, in a pool of 2000 desktops when AppStacks and Writable Volumes are attached.

**Workaround:** Restart the machine or perform a delete operation to reprovision the virtual machine.

- Mass deletion of writable volumes may result in a small subset of the volumes still remaining in the datastore.

**Workaround:** After you delete the volumes, click Rescan in the App Volumes Manager. The remaining volumes are seen in the App Volumes Manager. Select the volumes again and delete them.

- An Outlook search might generate a configuration pop-up when search indexing is enabled.

**Workaround:** Disable the Windows search service to enable search to work without indexing.

- Apple iTunes contained in an AppStack must be assigned before a user logs in to a virtual machine. Dynamic real-time assignment for this application is not supported.

**Workaround:** None

- Novell products are not supported by VMware App Volumes. Use of Novell products with App Volumes can cause unexpected behavior.

**Workaround:** None

- If multiple vCenters are used and there is a shared datastore between two or more vCenters, that datastore might be displayed more than once.

**Workaround:** None

- If a user logs in to a virtual desktop with a Writable Volume attached, and a different user later logs in without having a Writable Volume attached, a pop-up appears.

**Workaround:** Refresh or reboot after each logout when multiple users log into the same virtual desktop.

- Microsoft QuickBooks can fail to correctly install if provisioned in the same AppStack with Microsoft Office 2010 or 2013.

**Workaround:** Provision Microsoft QuickBooks and Microsoft Office 2010 or 2013 in different AppStacks

- **Workaround:** Provision Microsoft QuickBooks and Microsoft Office 2010, or 2013 in different AppStacks.
- Recommended scale limit is of 1000 concurrent VM connections to a single App Volumes Manager when using multi vCenter mode.  
**Workaround:** None
- If an Adobe Reader AppStack is provisioned on a virtual machine with Windows OS installed on a drive other than C drive, and the AppStack is attached to a virtual machine with Windows OS installed on C drive, then all PDF files viewed in Windows Explorer will not display the Adobe Reader icon and the PDF files cannot be opened by clicking on the icon. You can still open Adobe Reader.  
**Workaround:** None
- After completing provisioning on Horizon RDS virtual machine, a manual reboot is required. After provisioning is complete, the virtual machine reboots automatically. If nothing happens after clicking OK in the provisioning dialogue after several minutes, then reboot manually. Once you login again, the provisioning process will be completed as normal.  
**Workaround:** None
- If an AppStack is created in the background and it fails because an AppStack already exists with the same name on that datastore, the background job will be retried 5 times before being removed.  
**Workaround:** None
- Renaming a datastore results in disabled volumes which cannot be deleted using the App Volumes Manager.  
**Workaround:** None
- Renamed virtual machine is not reflected in the App Volumes database.  
**Workaround:** None
- When a user with an assigned Writables logs off a virtual machine and a new user with assigned Writables subsequently logs on to the same virtual machine, a message asking the user to restart the machine appears. Restarting the virtual machine displays a black screen and makes the virtual machine unusable.  
**Workaround:** Reboot the virtual machine after every user logoff.
- High CPU consumption is observed during provisioning of applications on 64-bit Windows 10 machines.  
**Workaround:** None
- Renaming a datastore from a vCenter server that is configured for use in App Volumes Manager lists both the old and new names of the datastore in the App Volumes Manager.  
**Workaround:** None
- Creation of AppStacks might fail if you use special characters such as "@:" while naming the AppStacks.  
**Workaround:** None
- When VHD In-Guest connection mode is selected during the first instance of App Volumes Manager configuration, the Summary tab displays the default storage path appended with a redundant "]" character.  
**Workaround:** None
- Unable to install Chrome browser extensions from an AppStack.  
**Workaround:**None
- The RunDll error appears when you install Adobe Reader 11 on Windows 2012 R2 and 64-bit Windows 8.1 devices.  
**Workaround:**None
- vCenter configuration on App Volumes Manager using IPv6 address fails.  
**Workaround:**None
- If multiple vCenters are used and there is a shared datastore between two or more vCenters, that datastore might be displayed more than once.  
**Workaround:**None

## Internationalization

VMware App Volumes product documentation is available in English for release 2.12.

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