VMware OVF Tool Release Notes

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Version 4.3.0. Last document update: 19 APR 2018
Check frequently for additions and updates to these release notes.

Note: On Windows systems the Visual C++ Redistributable for Visual Studio 2015 is required to run this version of OVF Tool. If not available on your system, you can download and install the appropriate 32-bit or 64-bit package from Microsoft.com.

New Features in This Release

OVF Tool 4.3 is an update to support vSphere 6.7. This software handles Open Virtualization Format (OVF) packages created with previous versions of the OVF Tool, and produces files compatible with OVF specifications 1.0 and 0.9.

OVF Tool 4.3 provides these new features for security and functionality:

- SHA digest mismatch eliminated; see resolved issues below.
- Updated Curl library version 7.56 to incorporate the latest security enhancements.
- Better logging for all events especially when errors occur during deployment.
- Virtualization based security (VBS) and trusted platform module (TPM) in vSphere 6.7.
- Support for non-volatile memory (NVM) and persistent memory (PMEM) datastores.

OVF Tool 4.2 gained these new features with the release of vSphere 6.5 U1.

- Retry for uploading large files (> 10GB) into vCloud Director.
- New NVRAM support for the UEFI boot type, including secure boot.
- The `allowAllExtraConfig` flag replaced by `allowExtraConfig` only.

System Requirements for OVF Tool

OVF Tool supports the following operating systems and software.

Supported Operating Systems

The OVF Tool supports the following Windows 32-bit (x86) and 64-bit (x86_64) operating systems:

- Windows 10 32-bit (x86) and 64-bit (x86_64)
- Windows Server 2012 and 2012 R2 64-bit
- Windows 8.1 32-bit (x86) and 64-bit (x86_64)
- Windows Server 2008 R2 64-bit
- Windows 7 32-bit (x86) and 64-bit (x86_64)

The OVF Tool supports the following Linux operating systems:

- CentOS 7.1 and earlier
- Fedora 22 and earlier
- Oracle Linux 7.1
- RedHat Enterprise Linux (RHEL) 7.1 and earlier
- SUSE Linux Enterprise Server (SLES) 12.1 and earlier
- Ubuntu 15.04 and earlier
- VMware Project Photon

The OVF Tool supports the following Mac OS X 64-bit operating systems:

- Mac OS X 10.11
- Mac OS X 10.10
- Mac OS X 10.9

Supported VMware Products and Platforms

Version 4.3 of the OVF Tool supports the following VMware software:

- vSphere 6.7, 6.5, 6.0, and 5.5
- vCloud Director 8.20, 8.10, 8.0, 5.6, and 5.5 (source from OVF or OVA types only)
- ESXi 6.7, 6.5, 6.0, and 5.5
- vCloud Suite 6.5, 6.0, and 5.5
- Horizon View 5.x, 6.x, and 7.x
- VMware Workstation 12.x
- VMware Fusion 8.x
- App Volumes 3.0, 2.11, 2.10, and 2.9
- VMware Studio can generate OVF packages.

OVF support is built into the vSphere (Web) Client that installs from vCenter Server. It is compatible with vSphere and ESXi hosts. Newer versions of vSphere supply later versions of the OVF Tool.

Space Requirements for OVF Packages

A virtual machine is stored as a set of files on disk. In the VMware runtime format, these files have extensions .vmx, .vmdk, .vmsd, .vmxf, and .nvram. The VMware hypervisor requires these file formats, which are optimized for efficient execution. An ESXi host often uses fully allocated flat disks in a VMFS file system to optimize virtual machine performance.

The OVF standard supports efficient, secure distribution of vApps and virtual machine templates. OVF is optimized for these goals, rather than for efficient runtime execution. OVF does not include specific information on runtime disk format because such information is not required until the virtual machine is deployed. When you package appliances with OVF, you can optimize one vApp for high performance in a production environment, and optimize another for minimal storage space during evaluation.

The following table contrasts a virtual machine in VMware file format with a virtual machine in OVF format. OVF employs a compressed sparse format for VMDK files. Virtual disks in that format cannot be used directly for execution without conversion.

	VMware Format	OVF Format	OVA Format
Files	LinuxAppliance.nvram LinuxAppliance.vmdk LinuxAppliance-s001.vmdk LinuxAppliance-s002.vmdk LinuxAppliance.vmsd LinuxAppliance.vmx LinuxAppliance.vmxf	LinuxAppliance.ovf LinuxAppliance-0.vmdk LinuxAppliance-1.vmdk LinuxAppliance-2.vmdk	LinuxAppliance.ova
Total Size	251MB using thin provisioning 4000MB using thick provisioning	132MB	132MB

Installing the OVF Tool

Download the Installer

1. Download the VMware OVF Tool as an installer or an archive (zipped/compressed) file:

Operating System	Download Filename
Linux 32-bit	`VMware-ovftool-4.3.0-*-lin.i386.bundle`
Linux 64-bit	`VMware-ovftool-4.3.0-*-lin.x86_64.bundle`
OS X 64-bit	`VMware-ovftool-4.3.0-*-mac.x64.dmg`
Windows 32-bit	`VMware-ovftool-4.3.0-*-win.i386.msi`
Windows 64-bit	`VMware-ovftool-4.3.0-*-win.x86_64.msi`

2. Install the downloaded file using the appropriate method for your operating system:

Operating System	Download Filename
Linux 32 bit	Run the shell script as `./VMware-ovftool-4.3.0-*-lin.i386.bundle`
Linux 64-bit	Run the shell script as `./VMware-ovftool-4.3.0-*-lin.x86_64.bundle`
Mac OS X 64-bit	Double-click the package installer, `VMware-ovftool-4.3.0-*-mac.x64.dmg`
Windows 32 bit	Double-click the installation file, `VMware-ovftool-4.3.0-*-win.i386.msi`
Windows 64-bit	Double-click the installation file, `VMware-ovftool-4.3.0-*-win.x86_64.msi`

Complete the Installation Steps

Follow this procedure for all installations:

1. At the Welcome screen, click **Next**.
2. At the license agreement, read the license agreements, select "**I agree...**" and click **Next**.
3. Accept the path suggested or change to a path of your choice and click **Next**.
4. When you finish choosing your installation options, click **Install**.
5. When the installation is complete, click **Next**.

6. Deselect **Show the readme file** if you do not want to view the readme file, and click **Finish to exit**.

Running the OVF Tool from a Windows Command Line

After installing the OVF Tool on Windows, you can run the OVF Tool from the Windows command line.

1. From the Start menu, click **Run**.
2. In the Run dialog, enter `cmd` to open the Windows command line tool.

If you have the OVF Tool folder in your Path environment variable, you can run the OVF Tool from the command line.

Adding the OVF Tool to your Path Environment Variable

The following instructions are for Windows 7, but the steps are similar on other Windows systems.

1. Right-click **My Computer**.
2. Select **Properties**.
3. Select **Advanced system settings**.
4. Select **Environment Variables**.
5. Highlight (select) the **Path** variable in the System variable (lower) pane.
6. Click the **Edit** button and type the path to the folder where you installed the OVF Tool (at the end of the existing path).

Resolved Issues in this Release

Support for NVM or PMEM storage type and devices was extended in vSphere 6.7. Features are in the OVF parser shared by OVF Tool, ESXi, and vCenter Server. The `ovftool` command itself does not contain anything specific to PMEM, but it uses the parser, either in vSphere or locally, for OVF to/from VMX conversions.

OVF Tool ignored a host exception, sometimes causing read errors after VM deployment. After network disconnect and reconnect, if the ESXi host failed a write and responded with status code 500, the `ovftool` close function ignored the error, resulting in a partially written file and non-bootable VM. Although an exception should not be thrown after network reconnect, the fix was to pass along the write exception when closing a deployed file, informing the host that OVF import failed.

Deployment sometimes failed with secure hash algorithm (SHA) digest mismatch. Previously an OVF file transfer would complete but this error prevented deployment: “SHA digest of file https://*location* does not match manifest.” The fix was to alter the HTTP head request and use it in the URL, thereby avoiding the SHA mismatch.

The NVRAM file was not exported correctly for UEFI type virtual machines. The fix was to extend the OVF template to include components for UEFI boot enabled virtual machines in the `nvram` file.

When an OVF template is deployed from Content Library, the PMEM storage policy, and other storage policies, are disregarded. Storage policies are applied by OVF Tool but not supported for Content Library import. See KB 52370.

When it encounters an HTTP, HTTPS, or FTP style URL, OVF Tool now treats it as OVF source type, which it usually is.

On some systems the `.img` suffix indicates a disc image file, synonymous with `.iso`, so OVF Tool now treats it as such.

On rare occasions the OVF Tool would hang, sometimes for days. The cause is unknown, but the fix was simple: avoid entering a loop if zero worker threads exist.

Known Issues in This Version

As of release 6.5 U1, the `ovftool` option `--allowAllExtraConfig` is no longer supported. The `All` option never never worked as designed, so it was deprecated. The workaround is to use `--allowExtraConfig` instead to import additional configurations.

Although it supports OVF specifications 0.9 and 1.0, OVF Tool does not support OVF specification 2.0 (not to be confused with OVF Tool version 2.0). For workarounds to allow import of VirtualBox OVF 2.0, see this web page.

The `ovftool --proxy=proxy.example.com` option does not work when used within vSphere. To make a network connection through the proxy server, you must also use the `--X:viUseProxy` option as documented in the *OVF Tool User's Guide*.

You cannot use OVF Tool for deploying a VM to static DVS port groups. To work around this issue:

1. Use vCenter Server to create an ephemeral port on the desired network.
2. Deploy the appliance to that port group on an ESXi host.
3. Switch the appliance over to the static port group.
4. Use vCenter Server to delete the ephemeral port group.

Deprecated Features

The `--allowAllExtraConfig` option was deprecated in vSphere 6.5 U1.

ESXi and vCenter Server versions older than 5.5 are deprecated; the next release will not support them.

Support for Windows XP and Windows Server 2003 was discontinued in the previous release of OVF Tool, version 4.2.

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