

OVF Highlights

OVF is an International Standard Framework and Packaging format used in the creation, deployment and management of Virtual Appliances (VAs) and Virtual Machines (VMs).

OVF is a platform-independent, extensible, open, packaging and distribution format for virtual appliances.

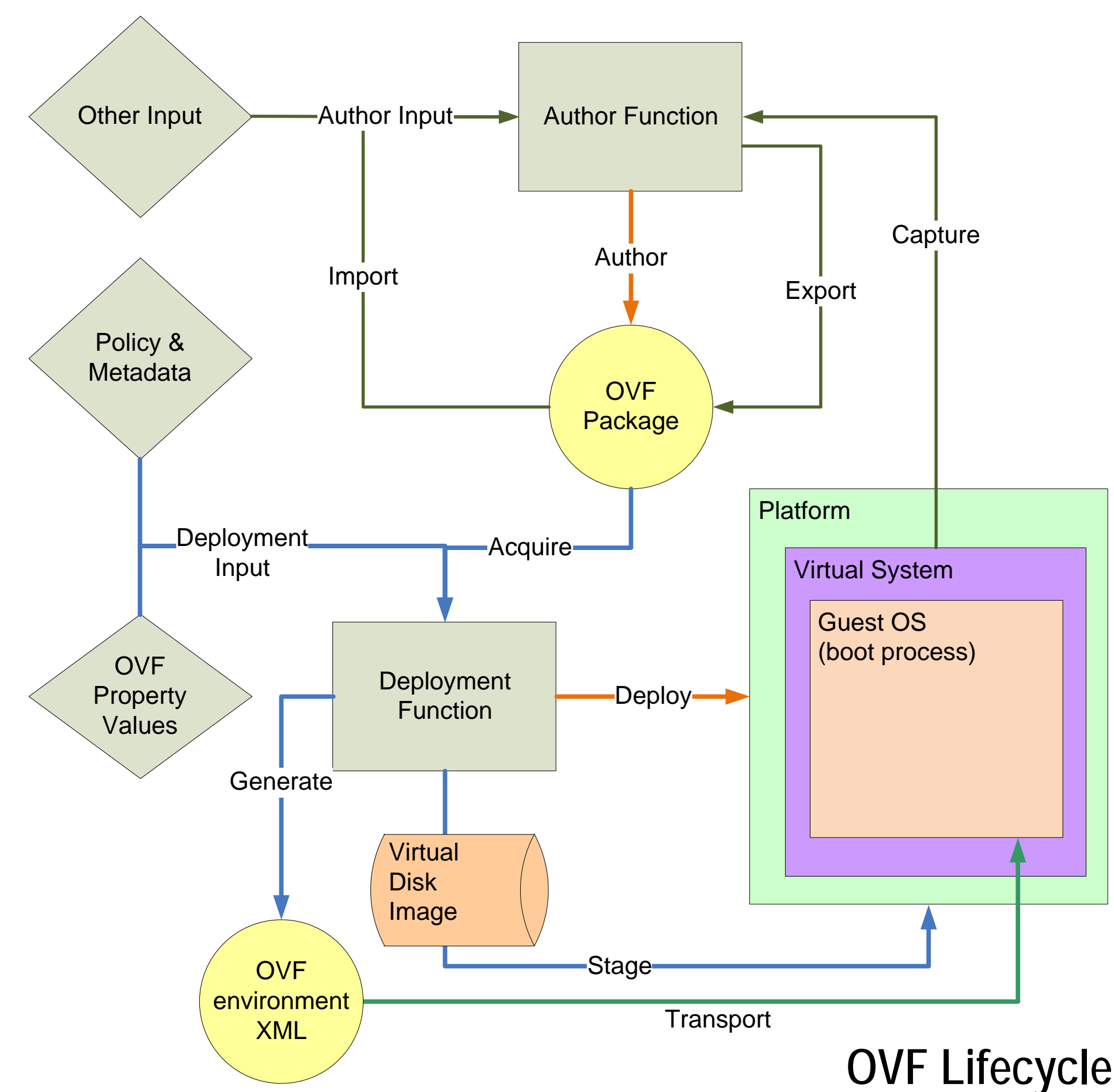
OVF, as 'metadata', can be used in the full lifecycle of any VA or VM.

OVF uses 'XML' for representing this metadata about VAs and VMs and their deployment and operating environments.

Utilizing OVF- Vendors can package VAs and VMs in a single pre-packaged appliance that can be deployed on customers' virtualization platforms.

OVF provides:

- Portability for VAs and VMs
- While being platform neutral OVF allows for vendor specific extensions
- Support for any open virtual hard disk format
- Optimized for secure VA and VM distribution
- Simplified installation and deployment
- Full support for single or multiple VM configurations
- Vendor and Platform Independent
- International Standard



OVF Lifecycle

Standards & Work In Progress Documents

- DSP0243** Open Virtualization Format Specification; v1.0; v1.1 and WIP v2.0
- DSP8027** OVF Environment XSD; v1.0; v1.1
- DSP8023** OVF Envelope XSD; v1.0; v1.1; v2.0
- DSP2021** OVF Examples; v1.0
- DSP2017** OVF White Paper; v1.0

OVF Technology & Tools

OVF XML Structure

Section	Locations	Multiplicity
DiskSection- Describes meta-information about all virtual disks in the package	Envelope	Zero or One
NetworkSection- Describes logical networks used in the package	Envelope	Zero or One
ResourceAllocationSection- Specifies reservations, limits, and shares on a given resource, such as memory or CPU for a virtual machine collection	VirtualSystemCollection	Zero or One
AnnotationSection- Specifies a free-form annotation on an entity	VirtualSystem VirtualSystemCollection	Zero or One
ProductSection- Specifies product-information for a package, such as product name and version, along with a set of properties that can be configured	VirtualSystem VirtualSystemCollection	Zero or more
EulaSection- Specifies a license agreement for the software in the package	VirtualSystem VirtualSystemCollection	Zero or more
StartupSection- Specifies how a virtual machine collection is powered on	VirtualSystemCollection	Zero or One
DeploymentOptionSection- Specifies a discrete set of intended resource requirements	Envelope	Zero or One
OperatingSystemSection- Specifies the installed guest operating system of a VM	VirtualSystem	Zero or One
InstallSection- Specifies that the VM needs to be initially booted to install and configure the software	VirtualSystem	Zero or One

Product Support for OVF

Product	OVF Support Since	Release Date
VirtualBox; Oracle VM	2.2.0	April 2009
RedHat Enterprise Virtualization	2.2	March 2010
VMware	ESX 3.5; Workstation 6.5; Player 3.1	December 2007
IBM Power Server AIX, Linux z/VM, IBM Systems Director (via VMControl Enterprise Edition plug-in)		
IBM SmartCloud	IBM SmartCloud Enterprise 1.4	October 2011
OpenNode Cloud Platform	1.1	November 2010
rPath	4.0	c.2008
Microsoft System Center (VMM)	Since SC 2012	June 2012

OVF Toolkits

Vendor	Product	OVF Support	Notes
Citrix Systems	Project Kensho	Yes	Open Source OVF Toolkit
Jumpbox	Powered by Jumpbox	Yes	Online Service that provides automated assembly of software components into a Jumpbox appliance.
Oracle	SuSe Studio	Yes	Appliance Toolkit for ISVs that allows customization of SuSe Linux as JeOS for appliance optimization, testing and delivery.
RedHat	Thincrust.net	Yes	Provides a virtual server-optimized version of RedHat Enterprise Linux server and Fedora tools to help ISVs lock down a good configuration of their software.
rPath	rBuilder	Yes	Appliance Management Platform that incorporates call-home, self-updating, and other capabilities.
VMware	VMware Studio	Yes	OVF-based authoring environment for building appliances, integrating them with VMware Infrastructure, and publishing updates.
Microsoft	System Center 2012 (VMM)	Yes	Provides support to export/import of OVF 1.1 packages from/to Microsoft System Center 2012 (VMM) environment using <i>OVF Export/Import</i> tool.
IBM	ICCT	Yes	Image composition tool bundled with Smart Cloud Provisioning, IBM Workload Deployer and IBM PureApplication System

OVF Pedigree

- Initial draft submitted to DMTF in 2007
- DMTF 1.0 standard in February 2009
- DMTF 1.1 standard in January 2010
- ANSI/INCITS 469-2010 Standard 2010
- ISO/IEC 17203 standard in August 2011
- DMTF 2.0 work-in-progress

OVF Version 2.0 Feature Overview

- Scaling at Deployment Time
- Support for Basic Placement Policies
- Encryption of OVF Packages
- Disk Sharing at Runtime
- Advanced Device Boot Order
- Advanced Mechanism for Passing Information to a Guest OS
- Improved I18N Support
- Support Network Port Profile for virtual Ethernet ports and switches

OVF Value Proposition

Key benefits of the OVF standard include:

- Portable virtual machine (VM) packaging
- Optimization for secure distribution
- Simplified installation and deployment
- Supports single VM & multi-VM configurations
- Vendor and platform independent
- Extensible & Localizable
- Inherent Interoperability

VCM Forum

The goal of the VCM Forum is validation and interoperability of the system virtualization and cloud management standards and OVF.



www.dmtf.org/ovf
www.dmtf.org/vman

Contact information

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Published standards at:
http://dmtf.org/standards/published_documents

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