



Release Notes for Cisco Virtual Media Packager Release 2.16.1

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This publication describes the requirements, dependencies, and caveats for Cisco Virtual Media Packager (VMP) System Release 2.16.1.

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Introduction

Cisco Virtual Media Packager (VMP) is a component of Cisco Virtualized Video Processing (V2P), a software solution that provides an open, programmable, scalable, and extensible platform for rapid innovation. V2P supports video processing applications in headends and data centers without being tied to the operational features of their underlying infrastructure.

As a V2P component, VMP provides the linear and just-in-time packaging functions needed for OTT services such as live streaming, VOD, and cloud DVR (cDVR). VMP uses virtualization and cloud orchestration technology to elastically instantiate and scale critical media functions independently. You can prepare and originate media for distribution to the latest HTTP ABR streaming clients on mobile devices, set-top boxes (STBs), PCs, and laptops.

New Features

This VMP release incorporates the following new features and enhancements:

- EXT-X-SESSION-KEY tag added to HLS manifests to allow encryption keys from media playlists to be specified in a master playlist.

This release also incorporates features and enhancements from earlier VMP releases. For complete feature descriptions, see the *Cisco Virtual Media Packager 2.16.1 User Guide*.

Additionally, this release resolves certain previously open caveats. For details, see [Caveats, page 5](#).

System Requirements

External Servers

Configuring external DNS and NTP servers is mandatory for all VMP components (MCE, AppEngines, CLS, and MPE).

Cisco UCS

All VMP components run on top of VMware on Cisco Unified Computing System (UCS) B200 M3 Blade Servers. For information about running the VMP components on other types of servers, contact your Cisco representative.

The following table shows the minimum UCS hardware requirements for this VMP release:

Part Number	Description	Quantity
UCSB-B200-M3-U	UCS B200 M3 Blade Server w/o CPU, mem, HDD, mLOM/mezz (UPG)	4
UCS-CPU-E52680B	2.80 GHz E5-2680 v2/115W 10C/25MB Cache/DDR3 1866MHz	2 (Total 40 CPUs)
UCS-MR-1X082RY-A	8GB DDR3-1600-MHz RDIMM/PC3-12800/dual rank/1.35v	16 (Total 128 GB)
A03-D600GA2	600GB 6Gb SAS 10K RPM SFF HDD/hot plug/drive sled mounted	2 (1200 GB total disk space available)
UCSB-MLOM-40G-01	VIC 1240 modular LOM for M3 blade servers	2
UCSB-HS-01-EP	Heat Sink for UCS B200 M3 server	2

VMware, vCenter, vSphere

VMP support for VMs requires the following virtualization software programs and releases:

- VMware ESXi hypervisor version 6.0, Update 3, build 5050593 or later
- VMware vCenter version 6.0 or later
- VMware vSphere version 6.0 or later

VM System Resources

The following table lists the VM and hardware sizing recommended for each VMP component.

Component	Flavor Name	vCPUs	RAM	Hard Drive Partition 1	Hard Drive Partition 2	Network Interfaces
V2PC Masters (3)	2X-Large	8	32 GB	40 GB	–	1 X 10 GE
MCE	2X-Large	8	32 GB	40 GB	–	3 X 10 GE
MPE	2X-Large	8	32 GB	40 GB	–	3 X 10 GE
Repository	2X-Large	8	32 GB	40 GB	–	1 X 10 GE
IPVS Nodes (2) *	X-Large	8	16 GB	40 GB	–	2 X 10 GE
Redis Nodes (2) **	X-Large	8	16 GB	40 GB	–	2 X 10 GE
HAProxy Nodes (2) **	X-Large	8	16 GB	40 GB	–	2 X 10 GE
AM (2)	X-Large	8	16 GB	40 GB	–	1 X 10 GE
ELK Node	2X-Large	8	32 GB	40 GB	512 GB	1 X 10 GE

* Two required *per service*: one pair for MCE and another pair for MPE.

** Two required *per device type*: one set for SCE-StateCacheEndpoint and one set for VOD service.

System Requirements

Note: Legacy deployments using Cisco Media Origination System (MOS) do not require V2PC Masters or an ELK node, but instead, require VMs for the Platform and Application Manager (PAM) and Centralized Logging Server (CLS). See the *User Guide* for your MOS release for complete deployment information for these nodes.

These recommended minimum system resource numbers are based on the following assumptions:

- Hyper-threading is enabled in the ESXi compute nodes.
- There is no virtual CPU oversubscription. That is, the recommended number of virtual CPUs is the same as the number of actual physical cores.

These numbers include VMware overhead. You may need to adjust these numbers based on your specific deployment.

VMP Service Manager GUI Requirements

The VMP Service Manager GUI can run on the following operating systems and browsers:

- Windows Internet Explorer 9 (IE9) or later for Windows 7
- Mozilla Firefox 20 or later for Windows 7
- Google Chrome 30.x for Windows 7
- Apple Safari 7.x for Windows 7 or MAC OS Version 10.9 or later

The VMP Service Manager GUI requires a display resolution of 1600 x 900 or better.

VMP Software Components

Note: VMP Release 2.16.1 was tested for compatibility with both V2PC Release 3.3.6 build 17976 and V2PC Release 3.3.7 build 18035. Later builds (for example, V2PC Release 18254) should maintain compatibility.

VMP 2.16.1 and compatible V2PC software components and build numbers at initial release are as follows:

Component	File Name
VMP 2.16.1 V2PC Bundle Image	vmp-2.16.1-24113-v2p-bundle-3.3.7-18254.tar
VMP 2.16.1 Manifest JSON	vmp-2.16.1-24113-v2p-3.3.7-18254-manifest.json
VMP 2.16.1 Repo Bootstrap RPM	cisco-mos-repo-bootstrap-2.16.1-24113.x86_64.rpm
VMP 2.16.1 Minimal Repo Bootstrap	cisco-mos-minimal-bootstrap-2.16.1-24113.x86_64.rpm
VMP 2.16.1 OVA Image	2.16.1-cisco-mos-huntington.24113.b42.ova
VMP 2.16.1 ISO Image	2.16.1-cisco-mos-huntington.24113.b42.iso

Installing VMP

For information about installing the VMP software and deploying the VMs, see the *Cisco Virtual Media Packager Release 2.16.1 User Guide*.

Updating Publish Templates After Upgrade

VMP 2.16.1 uses a media playback engine (MPE) for VOD playback of Dynamic Adaptive Streaming over HTTP (DASH) formatted content. The MPE supports multiple periods in DASH content, a feature not supported in VMP 2.9.x and earlier VMP releases. As a result, customers with existing VOD DASH content who upgrade from VMP 2.9.x or earlier to VMP 2.16.1 must add a new publish template variant for playback compatibility with the existing VOD DASH content. If this is not done, errors may occur during playback of previously ingested VOD DASH content after upgrading to VMP 2.16.1.

To add the new publish template variant:

1. Log in to the V2PC GUI and, from the navigation menu, choose **Media Workflow Manager > Resources > Templates > Publish Templates**.
2. Choose an existing VOD DASH template and click **Edit** (pencil icon) to open the template for editing.
3. Open the **Package** section of the dialog and click **+ (Add)** to add a new variant.

Note: If the template you selected is already used by one or more existing workflows, the message “This Publishing Template is in use in one or more Media Workflows and cannot be modified” now appears. If you see this message, navigate to **Media Workflow Manager > Media Workflows** and stop the related VOD workflows before continuing.

4. Enter the name **fragDASH** as the name of the new variant.
5. Enter or select the following parameters for the new variant in the fields provided:
 - Selective Publish - choose **TRUE** or **FALSE**
 - Enable SMPTE-TT - choose **TRUE** or **FALSE**
 - Enable WEBVTT - choose **TRUE** or **FALSE**
6. Click **OK** to apply the new variant.
7. From the V2PC GUI navigation menu, choose **Media Workflow Manager > Media Workflows**.
8. Select the VOD media workflow and click **Assets** to view the assets for the workflow.
9. Under Publish assets, confirm that the Publish URL now identifies **fragDASH.mpd** as the publish URL.

Caveats

Caveats

This section provides a list of caveats for this release. This list is not intended to be comprehensive. If you have questions about a particular defect, contact your account representative.

Note: Defects are identified by a case tracking number (Defect ID) and a headline that briefly identifies the case. The headlines in this section are presented exactly as they appear in the issue tracking system.

Open Caveats

The following open defects for this release are tracked in CDETS. Click the links for more details.

Defect ID	Headline
CSCvm86631	Fairplay: IV attribute field is unnecessary in EXT-X-SESSION-KEY and EXT-X-KEY
CSCvm94458	2.16.0/2.15.4: 500 error while running HLS VGC stress test
CSCvn11339	Audio repeating, audio/video out of sync with HLS:CDVR
CSCvn17873	CDVR LivePoint discontinuity error
CSCvn25176	CDVR recording: audio drops with sct35 feed
CSCvn31967	MPE Core files generated with 2.15.4 build
CSCvn36285	MPE Core files generated with 2.15.4 build

Resolved Caveats

The following resolved defects for this release are tracked in CDETS. Click the links for more details.

Defect ID	Headline
CSCvk38481	rp_filter incorrectly set to 1 on data-in interface after MCE reboot and/or MCE fresh install
CSCvk67142	MCE segments are overlapping for SCTE contents
CSCvm24725	Change lookup_timeout default config
CSCvm26799	cDVR recording has Audio drops and playback jumps back during SCTE35
CSCvm45135	With URL passthrough error seen with dash dvb subtitle playback with load
CSCvm56836	If profile name contains pname MPE core occurred while playing new recordings.
CSCvm65429	Arabic subtitle set was displaying incorrectly
CSCvm70301	After upgrade, mpe fix does not take into effect
CSCvm77256	alternate audio codec not working with default variant
CSCvm85776	Fix for memory leak in Packetfilter code
CSCvn04219	Overlaps of ~1 sec are observed between recording chunks
CSCvn05594	LookupService restarts for a particular composite stream error event
CSCvn09447	MCE generating incorrect videoBitRate in MPD resulting in DASH playback issues

Related Documentation

VMP Documentation

Refer to the following documents for additional information about *VMP*:

- *Cisco Virtual Media Packager 2.16.1 User Guide*
- *Cisco Virtual Media Packager 2.10 API Guide*
- *Open Source Used in VMP 2.16.1*

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