



Release Notes for Cisco Virtual Media Packager Release 2.13.0

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This publication describes the requirements, dependencies, and caveats for Cisco Virtual Media Packager (VMP) System Release 2.13.0.

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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:

- Configuring audio groups for different bandwidths and assigning them to specific ABR profiles *
- Naming channel profiles for selection and ordering them in device-specific variant manifests
- Configuring a maximum number of audio profiles from 1-32, as opposed to a default maximum of 10

These features are configured through the V2PC GUI. For further information, see the *Cisco Virtualized Video Processing Controller User Guide*. This release also incorporates features and enhancements from earlier VMP releases. For complete feature descriptions, see the *Cisco Virtual Media Packager 2.13.0 User Guide*.

* Support for audio groups also requires the use of Cisco Virtual Media Recorder (VMR) Release 1.4 or later.

Additionally, this release resolves certain previously open caveats. For details, see [Caveats, page 4](#).

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

VMP 2.13.0 and V2PC 3.3.5 software components and build numbers at initial release are as follows:

Component	File Name
V2PC 3.3.5 Repo ISO Image	v2p-repo-3.3.5-br_v2pc_3.3.5-17605.iso
VMP 2.13.0 V2PC Bundle Image	vmp-2.13.0-v2p-bundle-3.3.5-17605.tar
VMP 2.13.0 Manifest JSON File	vmp-2.13.0-23157-v2p-3.3.5-17605.manifest.json
VMP 2.13.0 Repo Bootstrap RPM File	cisco-mos-repo-bootstrap-2.4.1-23157.x86_64.rpm
VMP 2.13.0 Minimal Repo Bootstrap RPM	cisco-mos-minimal-bootstrap-2.4.1-23157.x86_64.rpm
VMP 2.13.0 OVA Image	2.13.0-cisco-mos-malibu.23157.b52.ova
VMP 2.13.0 ISO Image	2.13.0-cisco-mos-malibu.23157.b52.iso

Installing VMP

For information about installing the VMP software and deploying the VMs, see the *Cisco Virtual Media Packager Release 2.13.0 User Guide*.

Updating Publish Templates After Upgrade

VMP 2.13.0 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 2.13.0 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 2.13.0.

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

This section provides a list of open and resolved 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.

Caveats

Open Caveats

Defect ID	Headline
CSCvj00854	Playback of common copy recording from archive failed:DO crash continuously
CSCvj09838	liveCaptureApp core generated for CDVR workflow
CSCvi57621	ABRE will throw " abreapi::BadContentException" error for DASH HEVC CENC case

Caveats

Resolved Caveats

Defect ID	Headline
CSCvg97148	Customize header to indicate MPE hostname and version
CSCvh14441	dash insys default_KID wrong
CSCvh27905	dashvgc-core
CSCvh31793	ABRE support for Fairplay & HLS - CPIXF
CSCvh32598	framerate enhance
CSCvh32601	Add to attributes
CSCvh49337	VOD: When using HLS publishing template to select variants, an extra I-frame variant is in manifest
CSCvh56413	Manifest bandwidth value must be accurate with respect to ES Video and Audio
CSCvh60812	PROGRAM-ID has been deprecated and is no longer a valid attribute for #EXT-X-STREAM-INF
CSCvh61061	<customer> core dump traffic server is coring
CSCvh65256	use Representation ID to generate HLS manifest and segment name
CSCvh65462	Support H265 parsing in MPE
CSCvh68611	Invalid content was found starting with element InbandEventStream
CSCvh70854	fix memory issue for AC3 on url passthrough mode
CSCvh70952	DASH: Encapsulate HEVC video to mp4 box
CSCvh71157	Support configure max audio streams
CSCvh71663	MPE support for Audio Grouping
CSCvh76766	MPE: Support DASH CEA-608 CC pass through
CSCvh78999	Garbled video Roku : <customer>
CSCvh80135	ads insertion dash inband support
CSCvh83387	fix core dump when periodID have '_' when VMR case
CSCvh84304	parse ac3info from SupplementalProperty
CSCvh84600	fix core dump on HSS esam case
CSCvh84764	MPE support for Profile Naming
CSCvh91786	the integer variable should be initialized before using
CSCvh94698	set the precision of PeriodStart to 6
CSCvi07965	fix coredump when CVDR multi-period case
CSCvi08137	adobe-access cause mpe core
CSCvi09977	VOD: Extra SCTE35 tag inserted into HLS playlist using ESAM template
CSCvi12848	VOD: Invalid language attribute for HLS subtitle in m3u8
CSCvi15075	Useless log message spam in diags.log and error.log
CSCvi20660	add code to check whether the acc header is valid
CSCvi20922	add audio group for audio only profile
CSCvi22717	MCE support for audioGroup, publishName
CSCvi23192	Support UTCTiming " urn:mpeg:dash:utc:http-iso:2014"
CSCvi27837	DASH case: video bandwidth will use video ES bitrate (ext:videoBitRate)
CSCvi27851	enable redirection
CSCvi28280	play dash hevc live streaming audio http-404
CSCvi35948	additional commit for code reuse

Caveats

Defect ID	Headline
CSCvi37628	fix default value for vod publishName
CSCvi37951	fix dash compliance test
CSCvi38046	MCE stops capturing while the 2nd configured audio stream is intermittent
CSCvi42064	dash should output publishName in MPD
CSCvi43766	dash selective publish based on bitrate did not work
CSCvi44578	VMP 2.12: we are getting 404 and 502 errors are related to iframe case
CSCvi46254	fix dash playout failing issue on firefox 59
CSCvi47860	iframe 404 on 2.10/2.11
CSCvi50504	hevc widevine cause trafficserver core
CSCvi50685	CODECS attribute should list every sample format in any Rendition in the Group
CSCvi56297	Raise Alerts in MCE and clearly log error message in MCE logs when a SCTE35 message is dropped
CSCvi61589	abreapi-2.113.12.tar.gz -> abreapi-2.116.4.tar.gz
CSCvi62166	Support custom/ bespoke HTTP response header in MPE
CSCvi66489	mediastreamvalitor Error: Differ
CSCvd70976	resolve a conflict
CSCvi72178	fix audio playlist duration mismatch with segment duration
CSCvi74231	IDR NAL type for hevc should be 19,20
CSCvi75540	MPE: audio playlist duration mismatch with segment duration 2.12.1
CSCvi79739	upgrade abreapi-2.113.12.tar.gz -> abreapi-2.116.4.tar.gz
CSCvi80179	i-frame with variant may hit 404 in live workflow
CSCvi82489	failed to wget playlist m3u8
CSCvi87565	fix a coredump due to corrupted PMT data, double commit in 2.13
CSCvi87629	Single http-404 for live HSS audio streaming
CSCvi87735	fix wrong #EXT-X-TARGETDURATION
CSCvi89967	Playing multiaudio HLS 404
CSCvi90543	ads insertion add hls support for both OUT/IN in same segment time
CSCvi94733	Failed to playback with lots of 404s
CSCvi94800	Core occurred while playback with 1250 client
CSCvi96556	MCE needs to correct the audio bandwidth in capture status that will be posted to ZK
CSCvj03869	set sample_is_non_sync_sample to 0 for DASH WEBVTT

Related Documentation

VMP Documentation

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

- *Cisco Virtual Media Packager 2.13.0 User Guide*
- *Cisco Virtual Media Packager 2.10 API Guide*
- *Open Source Used in VMP 2.13.0*

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