



Release Notes for Cisco Virtual Media Packager Release 2.12.1

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This publication describes the requirements, dependencies, and caveats for Cisco Virtual Media Packager (VMP) System Release 2.12.1.

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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 component of V2P, 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 the latest virtualization and cloud orchestration technology to let you elastically instantiate and scale critical media functions independently for deployment flexibility. 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:

- Support for Validated Manifest Renaming for Live, VOD, and cDVR use cases
- Support for SCTE 35 Ad Insertion for Live, VOD, and cDVR use cases
- Support for MPEG-4 DASH, HEVC, and Widevine for Live, VOD, and cDVR use cases
- Support for configurable I-Frame Segment Duration

This release also incorporates features and enhancements from earlier VMP releases. For complete feature descriptions, see the *Cisco Virtual Media Packager 2.12.1 User Guide*.

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 2.12.1 and V2PC 3.3.4 software components and build numbers at initial release are as follows:

Component	File Name
V2PC 3.3.4 Repo ISO Image	v2p-repo-3.3.4-br_v2pc_3.3.4-17331.iso
VMP 2.12.1 V2PC Bundle Image	vmp-2.12.1-v2p-bundle-3.3.4-17331.tar
VMP 2.12.1 Manifest JSON File	vmp-2.12.1-v2p-bundle-23112.b5.json
VMP 2.12.1 Repo Bootstrap RPM File	cisco-mos-repo-bootstrap-2.4.1-23112.x86_64.rpm
VMP 2.12.1 Minimal Repo Bootstrap RPM	cisco-mos-minimal-bootstrap-2.4.1-23112.x86_64.rpm
VMP 2.12.1 OVA Image	2.12.1-cisco-mos-pismo.23112.b5.ova
VMP 2.12.1 ISO Image	2.12.1-cisco-mos-pismo.23112.b5.iso

Installing VMP

For information about installing the VMP software and deploying the VMs, see the *Cisco Virtual Media Packager Release 2.12.1 User Guide*.

Updating Publish Templates After Upgrade

VMP 2.12.1 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 2.12.1 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 2.12.1.

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

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
CSCvh18018	dash audio/subtitle are not in sync
CSCvh47671	Live: HLS Master playlist non-compliant with HLS spec
CSCvh52364	VGC_ABR_EXCEPTION:Failed to get a key from DRM data Workaround: For Live case with VGC-Fairplay or with VGC CENC: 1) In V2PC GUI, when a Live workflow was configured with VGC Fairplay/CENC, the Rotation Interval MUST be set to a non-zero value (1 should suffice) 2) On the KSM the rotation period be set to a maximum value (so that KSM will not change the key))
CSCvi67177	DASH playout fails for a certain VOD assert on the new Chrome version (>=64.0.3282.119)
CSCvi61589	HEVC DASH Widevine encrypted playback is failing with 404 errors - No support for HEVC w/widevine.
CSCvi96365	Wrong I-frame variant listed in HLS manifest

Resolved Caveats

Defect ID	Headline
CSCvh50365	CC adaptation timelines are getting ahead of the reference muxed adaptation
CSCvh80427	Outdated content not cleaned properly for some channels at NET
CSCvi09977	tolerate unpaired end message
CSCvi23192	utctiming disabled for default
CSCvi24591	make iframe segment duration be configurable for live and cdvr
CSCvi50599	play cDVR in-prog and completed streaming audio glitch
CSCvi56954	MPE IPVS ARP size need to increase
CSCvi58463	support for filtering ac-3 from client manifest
CSCvi71687	audio should be able to filter by Codec only or Bitrate only
CSCvi72178	fix audio playlist duration mismatch with segment duration
CSCvi75540	MPE: audio playlist duration mismatch with segment duration 2.12.1
CSCvi62166	Support custom/bespoke HTTP response header in MPE

Related Documentation

VMP Documentation

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

- *Cisco Virtual Media Packager 2.12.1 User Guide*
- *Cisco Virtual Media Packager 2.10 API Guide*
- *Open Source Used in VMP 2.11.4*

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