



Release Notes for Cisco Videoscape Distribution Suite Origin Server Release 2.1.2

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This publication describes the requirements, dependencies, and caveats for the Cisco Videoscape Distribution Suite Origin Server (VDS-OS) Release 2.1.2.

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Introduction

Media origination is a critical function for the delivery of advanced revenue-generating media services to consumers. The VDS-OS is a cloud-based software platform that supports HTTP media origination and on-demand encapsulation (ODE) as a service. The VDS-OS provides a unified media ingest, preparation, optimization, and delivery framework for live, video-on-demand (VOD), and time-shifted TV (TSTV) content. The VDS-OS supports multi-format HTTP adaptive streaming media origination for Adobe HTTP Dynamic Streaming (HDS), Apple HTTP Live Streaming (HLS), and Microsoft HTTP Smooth Streaming (HSS) formats. The VDS-OS management and services framework provides rapid service creation and deployment on the operator's computing infrastructure in a simple, flexible, and scalable manner.



The VDS-OS works with the following Cisco Videoscape products:

- Cisco Anyres Live (CAL) Release 7.2: Supports transcoding and the HLS packaging function.
- Cisco Anyres Packager (CAP) Release 2.5: Supports the HLS packaging function.
- Cisco Anyres VOD (CAV) Release 5.2: Supports native ABR (HLS and HSS) and Common Format (CF) VOD transcoding and asset preparation.

The VDS-OS accesses VOD content stored on the network-attached storage (NAS) devices managed by the operator. The VOD content is used for recording and DVR buffering.

Features

VDS-OS R2.1.2 provides the following new features:

- Interoperability with CAP 2.5
- Support for directory delete (HTTP DELETE) from CAP
- Key acquisition support with Vualto DRM for Playready HSS
- Support for HLS Live playout with 2-second segment
- Support for no-store and must-revalidate cache-control directives
- Channel alarm enhancements for missing master manifest file
- Other enhancements

This section lists all of the existing features in VDS-OS R2.1.2. For full descriptions of these features, see the *Cisco Videoscape Distribution Suite Origin Server Release 2.1.1 Installation and Configuration Guide*.

Feature Set	Features
Components	<p>The following VDS-OS software components are required for a minimal setup:</p> <ul style="list-style-type: none"> • Virtual Origin System Manager (VOSM) • Service Router (SR) • VDS-OS Servers
VMware Virtualization	<ul style="list-style-type: none"> • Supports deployment of the VDS-OS as a virtual machine (VM) via an Open Virtual Appliance (OVA) image

Feature Set	Features
Element Management	<p>Provided by the VOSM, which supports:</p> <ul style="list-style-type: none"> • Secure GUI over HTTPS • Configuration of VDS-OS servers • Provisioning of origin services • Provisioning of live programs • Traffic statistics and system health monitoring • Authentication, authorization, and accounting (AAA) and role-based management • Active-standby redundancy • Device group for easy management of hundreds of servers • Centralized system upgrade manager for easy upgrading of servers • Configuration of any number of network ports as dedicated management ports on the Cisco Content Delivery Engine (CDE) • Web services APIs • XML flexible rules template for origin service policies and rules
Application Programming Interfaces	Web services APIs for origin service provisioning and management
Service Routing	<p>SR supports service routing incorporating the following factors:</p> <ul style="list-style-type: none"> • DNS service routing • Load-based routing • Origin service-aware routing • Application failure • Live source failure
HLS Live Origination	<ul style="list-style-type: none"> • HLS Live service with time-shift buffer on Network Attached Storage (NAS) • HLS Live service with time-shift buffer in-memory • HLS Live pass-through mode • High availability—resiliency and redundancy • Multiple master manifest file support for HLS pass-through mode • Web Video Text Tracks (WebVTT) support for HLS pass-through mode
Native Adaptive Bit Rate (ABR) VOD Origination	<ul style="list-style-type: none"> • HTTP progressive download (any codec) from NAS • HDS VOD HTTP origination from NAS • HLS VOD HTTP origination from NAS • HSS VOD HTTP origination from NAS

Feature Set	Features
On-Demand Encapsulation (ODE) ABR VOD Origination	<ul style="list-style-type: none"> • ODE Payout for HDS, HLS, and HSS formats • ODE of CF assets produced by CAV • HDS ODE VOD HTTP origination from NAS • HLS ODE VOD HTTP origination from NAS • HSS ODE VOD HTTP origination from NAS • Trick-mode support for ODE-HDS, ODE-HLS, and ODE-HSS • Adobe-Access DRM and encryption for ODE-HDS • Standard AES-128-CBC encryption support for ODE-HLS • PlayReady DRM and AES-128-CTR encryption for ODE-HLS and ODE-HSS
Key Management Server (KMS) Support for ODE	<ul style="list-style-type: none"> • Adobe Access Server - Adobe-Access for HDS • Key acquisition from Cisco Key Store 1.1—Standard HLS only • Key acquisition support with Cisco Videoscape Media Suite Key Management Server (VMS-KMS)—Standard HLS and Playready HSS • Key acquisition support with Verimatrix Video Content Authority System (VCAS) 3.3—Standard HLS and Playready HSS • Key acquisition support with Vualto DRM—Playready HSS
Cache-Control Enhancements	<ul style="list-style-type: none"> • Cache-control headers support for native ABR (HDS, HLS, HSS) VOD origination, based on origin service setting • Cache-control headers support for HLS Live origination, based on channel setting • Cache-control header support for ODE (HDS, HLS, HSS) VOD origination, based on origin service setting • Cache-control header support based on Asset Resolver setting • If-Modified-Since (IMS) support for HLS Live and native ABR (HDS, HLS, HSS) VOD • IMS support for ODE (HDS, HLS, HSS) VOD
Operational Enhancements	<ul style="list-style-type: none"> • Cross-domain policy file for HDS and HSS playback • Asset resolution • Default Asset Resolver file • Admission control • Display usage for TMPFS and NSS • New alarms 560015 (nas_threshold) and 1100002 (channel_failure) • Enhanced alarms 9000015 (WritingToNasHasFailed) and 1100001 (channel_partial_failure)

System Requirements

The VDS-OS is a software-only product which is optimized for use on components of the Cisco Unified Computing System (UCS), such as the UCS B200 Blade Server or the UCS C-Series Rack Servers.

All VDS-OS device modes (Service Engine, Service Router, and VOSM) can run in a VM. Deployment in a VM enables the VDS-OS to run on hardware other than the UCS. You can run multiple VDS-OS device modes on a single hardware platform.

We recommend the following virtualization software:

- VMware ESX 5.1
- VMware vSphere 5.x
- VMware vCenter 5.x

We recommend the following system resources for VDS-OS devices:

VDS-OS Device Mode	Cores	RAM	Hard Disk	Network
SE (Minimal)	4	16 GB	64 GB	Ten 10GEth
SE (Standard)	8	28 GB	64 GB	Ten 10GEth
SR	4	16 GB	64 GB	Ten 10GEth
VOSM (CDSM)	4	4 GB	64 GB	Ten 10GEth

For performance information, see the release-specific performance bulletin.

Installing Release 2.1.2

The VDS-OS is a software-only product and supports VMWare virtualization on any UCS platform or third-party hardware.

For detailed information on installing the software and deploying the VDS-OS as a VM, see the *Cisco Videoscape Distribution Suite Origin Server Release 2.1.1 Software Installation and Configuration Guide*.

Known Issues

This section provides a list of open CDETS defect IDs that were identified during testing of VDS-OS 2.1.2. Resolution of these defects is in progress.

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.

Defect ID	Headline
CSCum03013	HLS Live master manifest shows stream details after stopping CME feed (Republish-Mode)
CSCum24150	TMPFS is reserved for channels on Playout Node

Related Documentation

Refer to the following documents for additional information about VDS-OS 2.1.2:

- *Cisco Videoscape Distribution Suite Origin Server Release 2.1.1 Software Installation and Configuration Guide*
- *Cisco Videoscape Distribution Suite Origin Server Release 2.1.1 API Guide*
- *Cisco Videoscape Distribution Suite Origin Server Release 2.1.1 Command Reference Guide*
- *Cisco Videoscape Distribution Suite Origin Server Release 2.1.1 Alarms and Error Messages Guide*
- *Open Source Used in Cisco Videoscape Distribution Suite Origin Server Release 2.1.1*
This document contains licenses and related license information for open-source software included in VDS-OS 2.1.1.
- *Cisco Videoscape Distribution Suite Release 2.1.1 Documentation Roadmap*
- *Cisco UCS C200 Installation and Service Guide*
- *Cisco UCS C210 Installation and Service Guide*
- *Cisco UCS B200 M3 Blade Server Installation and Service Note*

The entire VDS-OS software documentation suite is available on Cisco.com at:

http://www.cisco.com/en/US/products/ps12681/tsd_products_support_series_home.html

The Cisco UCS C-Series Rack Servers documentation is available on Cisco.com at:

http://www.cisco.com/en/US/products/ps10493/prod_installation_guides_list.html

The Cisco UCS B-Series Blade Servers documentation is available on Cisco.com at:

http://www.cisco.com/en/US/products/ps10280/tsd_products_support_series_home.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: <http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

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