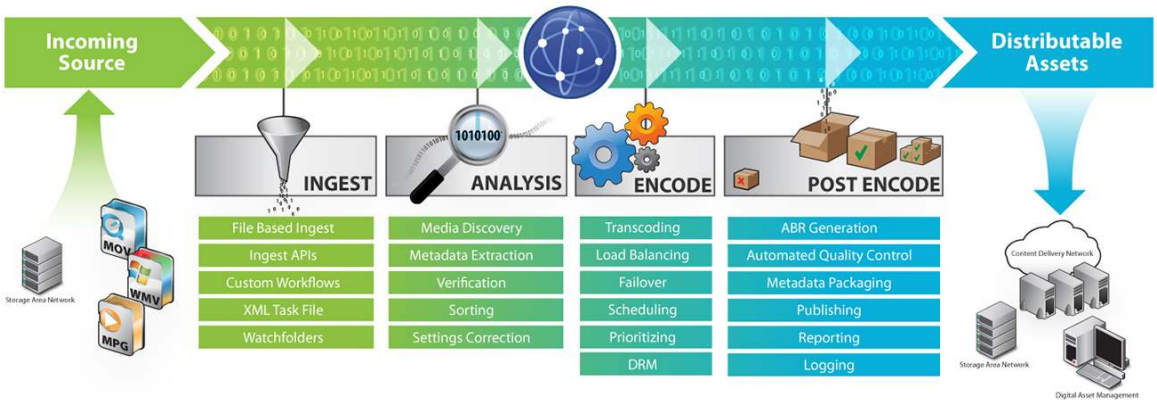
Cisco AnyRes Video on Demand

Cisco® AnyRes Video on Demand (VoD) helps expand the revenue potential of video content for service providers, media distributors, and content providers by generating high-quality VoD assets that are compatible with any device. By eliminating the manual bottlenecks typically involved with high-volume, file-based transcoding workflow, which prepares video files for set-top boxes, PCs, and mobile devices, Cisco AnyRes VoD helps lower operating expenses (Figure 1). It also produces high-quality assets for every screen with exceptional performance, maximizing advertising opportunities without compromising the viewing experience.

Figure 1. Cisco AnyRes Video on Demand Workflow



Managing the ingestion of large volumes of video content and assuring the quality of the output with other solutions is time-consuming and laborious. Cisco® AnyRes Video on Demand (VoD) helps reduce these overhead costs by analyzing the source and output files, then making the prescribed workflow decision, which allows you to focus your resources on better encoding every time (Figure 1). Cisco AnyRes VoD leads the industry with its multi-format transcoding capabilities, as well as its scalable, multi-CPU architecture. It can be installed in your existing 64-bit or 32-bit environment and immediately prepare your assets for distribution. Cisco AnyRes VoD can also plug transparently into your existing asset-management system.

Advantages of Cisco AnyRes VOD:

- Industry-leading expertise: Designed and built by industry-leading experts in video compression, Cisco AnyRes VoD continues to offer the latest innovative advancements in video transcoding.
- Hands-free automation: Cisco AnyRes VoD is a finely tuned, automated transcoding system that maximizes your resources by eliminating manual tasks that traditionally create bottlenecks in the transcoding process.
- The smart buy: With Cisco AnyRes VoD, you have a transcoding platform that will scale to match your growing business, and evolve to help ensure you always support the latest formats.

- End-to-end workflow: Direct Cisco AnyRes VoD to your source file, and high-quality, verified files are protected, packaged, and delivered to your network, ready to be played from any device.
- Analysis and quality control: Sophisticated analysis before the encoding process helps ensure that proper encoding settings and templates are used; analysis on the output files provides hands-free quality control processes.
- Easy-to-use job templates: The Cisco AnyRes VoD template editor provides access to the latest encoding settings needed to fine-tune picture quality and conform to industry and device specifications. Cisco AnyRes VoD also ships with a complete template library to get you started.
- Modular configurations and API integration: The modular Cisco AnyRes VoD system can work end to end or integrate into your existing asset management system, such as Cisco Videoscape™ Media Suite. Well-documented APIs make it easy to control Cisco AnyRes VoD remotely.
- Prioritization: You can set numeric priorities for content being fed into the system, and Cisco AnyRes VoD will intelligently calculate encoding priorities.

The Cisco AnyRes VoD system is made up of four separately licensed, and functional, nodes: server, analysis, encoding, and post-encoding. This modular and highly-scalable approach allows users to easily design a media processing system that is right for any number of workflows.

Features of Cisco AnyRes Video on Demand

- Full support for the most popular primary and secondary screen-distribution formats
- MPEG-2 for CableLabs® specifications
- Apple HTTP Live Streaming (HLS), with encryption and Microsoft PlayReady digital rights management (DRM)
- Microsoft Internet Information Server (IIS) Smooth Streaming for H.264 and VC-1, with Microsoft PlayReady DRM
- Adobe HTTP Dynamic Streaming with Adobe Flash Access DRM
- Automated analysis and decision making on ingestion and output
- Automated quality control
- Intelligent scalability and load balancing
- Modular software architecture, including virtualization
- Fully documented and supported API
- Management GUI for workflow and monitoring
- Reporting and customer management

Cisco AnyRes Video-on-Demand (VoD) Automated Workflow

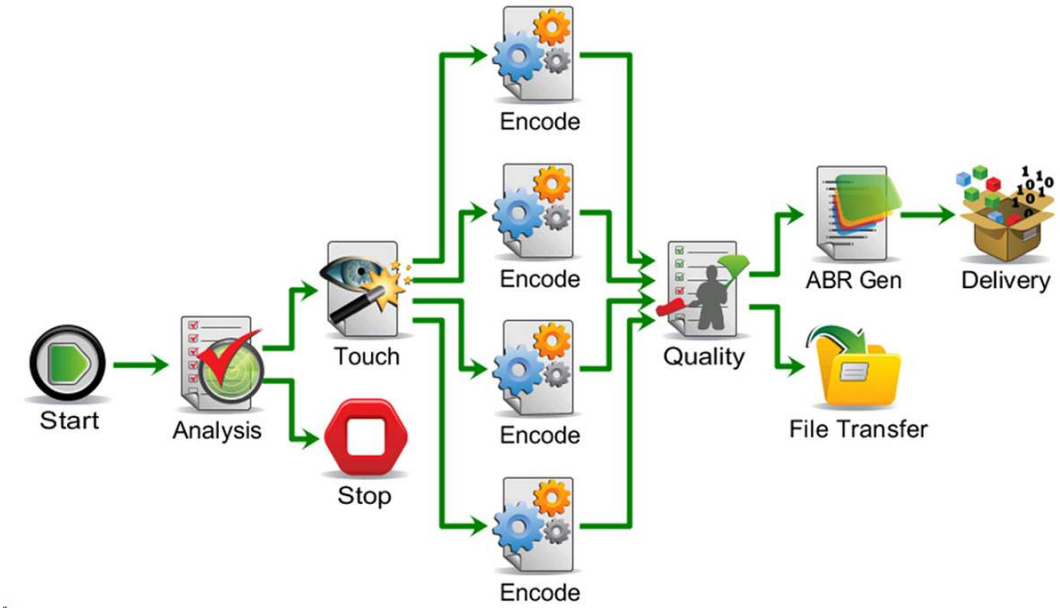
The transcoding workflow involves several stages before, during, and after the actual transcoding process. Cisco AnyRes VoD addresses this multistage process with the following unified management architecture:

- Ingestion and analysis: Critical differentiators of the Cisco AnyRes VoD encoding process include analysis, file verification, and metadata extraction that manage how videos are transcoded and moved throughout your workflow. This stage optimizes the encoding parameters and gathers important metadata that will play a critical role in the later publishing process.

- Decision Logic: Cisco AnyRes VoD reduces your touch points and increases your throughput at this step by using the results of the analysis step to modify settings on your encoding template. For example, the options include using the same template or watch folder for interlaced and de-interlaced sources, using de-interlaced processing as needed, or setting in and out points for the transcoding.
- Encode: When a file is ready to be transcoded, Cisco AnyRes VoD schedules a job in the system, in the order of your prioritization. This organization helps ensure that your valuable resources are focused on the jobs that are “on deadline.” Because load balancing and resource management are critical to ensuring the highest capacity and uptime, this process happens automatically, using a highly optimized grid-processing architecture.

Figure 2 shows how Cisco AnyRes VoD workflow can streamline source file checking, progressive and de-interlace transcoding, integrated quality checking, and ABR generation.

Figure 2. Link up the Work Order Elements to Create a Custom, Automated Workflow



- Post-encoding: After the asset has been transcoded, it is checked for quality against as many as eight parameters. In the case of adaptive bit rate (ABR) streaming, Cisco AnyRes VoD generates the index files needed by the client to manage an unbuffered session for the end user. Finally, the assets are delivered, remotely or locally. Cisco can also package and deliver companion files per job, such as poster art or a movie trailer.

Administration

Getting the job done quickly at the best possible quality is critical, but tracking and billing the job can be equally important. Cisco AnyRes VoD administrative tools allow you to report system usage, resource usage, and errors, helping you track work production. Cisco AnyRes VoD also lets you define user-access levels to secure the system against misuse and secure sensitive content from unauthorized access. Alarms and notifications, using Simple Network Management Protocol (SNMP) and Simple Mail Transfer Protocol (SMTP), help ensure that operators are up to date on system activities at any time.

Videoscape Solutions

Cisco AnyRes VOD can be bundled with several Videoscape solutions. For example, Cisco Videoscape Media Suite (VMS) has full integration with the Cisco AnyRes VoD API. Together, this solution provides a completely modular, end-to-end platform that helps you manage, transcode, publish, and deliver innovative content services to televisions, PCs, and mobile devices. Cisco AnyRes VOD can also generate “Common Index Format” VOD assets that the Cisco Video Distribution Suite Origin Server uses to provide on-demand encapsulation. And, finally, Cisco AnyRes VOD is also an integral part of the Cisco Videoscape Distribution Suite Optimization Engine, providing the transcoding and transrating functions of over-the-top (OTT) content in the mobile carrier market.

Cisco AnyRes Video on Demand automates the entire file preparation process, eliminating many of the bottlenecks and tedious, manual steps required by traditional approaches. The multi-format transcoding on a multi-CPU, high-output architecture manages your entire workflow, or integrate with your existing asset management tools.

Ordering Information

To place an order, visit the Cisco Ordering Home Page and use the information in Table 4. To download software, visit the Cisco Software Center.

Table 1. Ordering Information

Product Name	Part Number
Cisco AnyRes VoD v5.1 Software	R-ARM-SWK-510-DN=
Server Node	L-ARM-SERVR-VOD=
Common Index Format publishing (per VDS-OS)	L-ARM-CFPUB-ENHC=
Analysis Node	L-ARM-ANLZ-VOD=
Encode Node	L-ARM-ENCD-VOD=
AC-3 encoding (one per stream)	L-ARM-AC3-ENHC-U=
Generated CableLabs-compliant transport stream files	L-ARM-MANZ-ENHC-U=
Mobile optimization (per VDS-OE)	L-ARM-IPONL-ENHC=
Post-Encode Node	L-ARM-PENCD-VOD=

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Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

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