



Packager

Streaming Packager

A key component in Imagine Communications' Live/Linear Multiscreen solution, the Packager is one of the world's most advanced and feature-rich software-based products for allowing video content to be viewed on the ever-expanding array of consumer screens.

Imagine's Packager uses adaptive streaming to package video content for a host of streaming services such as live/linear TV, catch-up TV, and video-on-demand. With Imagines Packager, linear and file-based video content can now be delivered seamlessly to the multiscreen world, including the wide variety of mobile devices, laptops, tablets, televisions, and other screens used for streaming. It is ideally suited for large-scale centralized or decentralized deployments.

In the most typical usage, Imagine's Packager ingests H.264/H.265-encoded video streams carried in a MPEG-2 transport stream (TS) and creates outputs in all of the major adaptive streaming protocols — Apple HTTP Live Streaming (HLS), Microsoft Smooth Streaming (MSS), Adobe HTTP Dynamic Streaming (HDS), CMAF, MPEG DASH and RTMP formats. It can also encrypt traffic using FairPlay and standard AES-128 for HLS, Widevine, CENC (common encryption) and PlayReady for DASH or PlayReady for Smooth Streaming, integrating key exchange with leading digital rights management key servers.

Packager generates playlists for the video streams which can be utilized by ad insertion solutions such as Imagines AIM to dynamically fill ad placement opportunities with more targeted advertising or to insert alternative or blackout content.

Benefits

- Real-time linear segmentation, packaging, and encryption
- Packages linear content for live, on-demand and just-in-time delivery
- Minimizes the need for multiple stored copies
- Reduces operational and network bandwidth costs
- Supports easy migration to new packaging formats
- Enables timely distribution of live captured assets
- Allows video providers to cost-effectively expand their TV Everywhere libraries
- Offers flexible deployment options — available as software license or appliance

Features

- Linear segmentation, packaging, and encryption
- Cloud-ready for virtualized deployments
- Ingest H.264/H.265-encoded video streams carried in a MPEG-2 transport stream (TS) and MPEG-2 encoded video streams carried in a MPEG-2 transport stream (TS)
- Supports all leading delivery protocols — HLS, MSS, HDS, MPEG DASH, RTMP
- Outputs segmented “packaged” streams or files with full VOD manifests suitable for HTTP delivery

- Support for Closed Caption and DVB subtitles in HLS and MSS output
- IGMP v3 Source Specific Multicast (SSM) ingest
- Integrates key exchange with leading digital rights management (DRM) servers
- CDN-friendly — Origin server, reverse proxy, expires headers
- 1+1 active / active redundancy
- Flexibility of software or hardware can be deployed in Virtual Machine environments

Specifications

Specifications and designs are subject to change without notice.

Input	H.264 over MPEG-2 TS/UDP and H.264 in MPEG-2 TS mezzanine files
Output	Apple HTTP Live Streaming (HLS); Microsoft Smooth Streaming; Adobe HTTP Dynamic Streaming (HDS); MPEG DASH; Adobe RTMP
Ancillary Data	Processes 608/708 closed captioning, DVB subtitling, other
Encryption	AES-128 for HLS; Microsoft PlayReady for Smooth Streaming
CDN/Origin Server Interface	WebDAV, HTTP PUT/POST, reverse proxy

MANAGEMENT

Features	Web browser GUI; Secure shell (SSH); XML-RPC 1.2; In-band / out-of-band support; SNMP traps; Remote upgrades
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Options

Stream-to-File Recording and Packaging

Packager can be used in a Live to File mode where packaged content can be saved to file (as an option to the traditional live streaming). Both Object Store and NFS/NAS are supported.

- Stream-to-File Recording
 - MPEG2 TS input source
 - Mezzanine output
 - Event-based for Origin - HLS, MSS, HDS, DASH, MPEG2TS
 - Event-based for JITP ingest - MPEG2TS Assets
 - Continuous Record - HLSv4 fragments
 - Object Store (Ceph) - containers
 - NAS (NFS) - directories
 - 1 + 1 Redundancy
- Active/Active configuration
 - Primary and Secondary continuously capture
 - Primary outputs to storage until failover