

# Agile VOD-to-Live

Convert your existing file assets to linear channels to offer curated VOD and FAST services without additional encoding.

Agile VOD-to-Live unlocks the value of your VOD assets by offering your customers the comfort of a lean-back experience, based on curated content. Agile VOD-to-Live also has a unique capability to support live sources as input mixed with VOD assets. VOD-to-Live is an add-on to Agile Streambuilder, a comprehensive bundle of video processing products based on proven Edgeware-technology.

## What it does

Agile VOD-to-Live is a powerful solution for distributing file-based audio-video assets over HTTP(S) as linear channels, offering viewers a seamless, lean-back experience. It's also a great way to enhance the value of live events by incorporating VOD content before and after the live feed. This ensures that viewers can tune in early and continue watching even after the live event has ended.

By utilizing VOD assets in the compressed domain and defining channels with meta data instead of uniquely encoded streams, Agile VOD-to-Live significantly reduces costs compared to traditional broadcast playouts. It also offers support for ad marker insertion, making it an efficient and affordable way to deploy FAST channels created from file-based VOD assets. As a result, these channels can be tailored to specific viewer segments, increasing the value of the inventory.

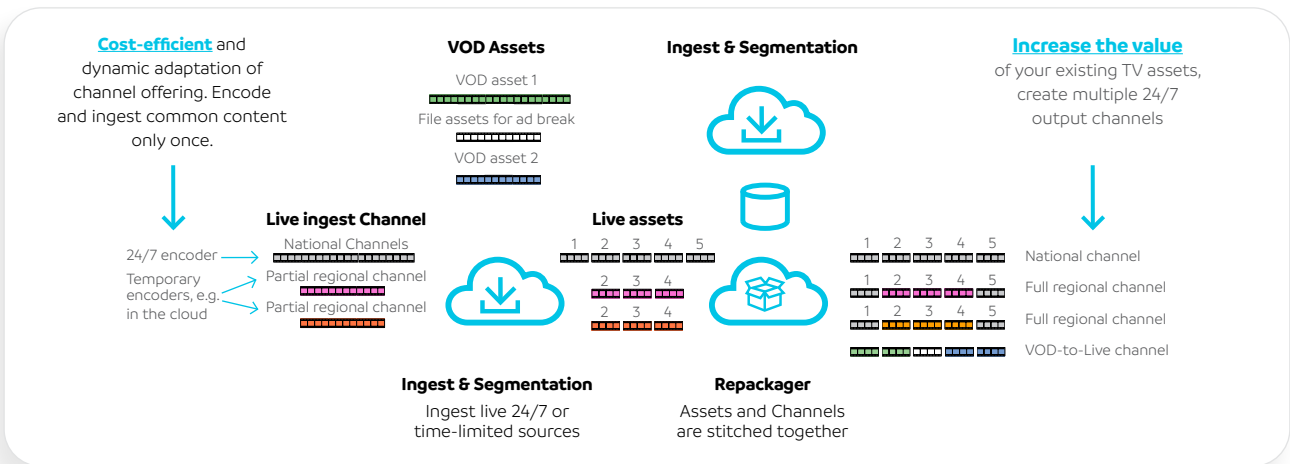
Agile VOD-to-Live provides a simple API for creating and scheduling linear channels using file-based assets. The scheduling API also enables ad marker insertion (SCTE-35 Splice Insert) in the continuous manifest file, allowing for targeted ad replacement at a later stage.

## How it works

- ① Files are ingested and segmented by Agile Streambuilder and stored in the CMAF-based [Edgeware Storage Format \(ESF\)](#).<sup>\*</sup> Ingested and segmented live content can also be stored as ESF assets.
- ② Based on a simple [API](#)<sup>\*\*</sup>:
  - a. A channel sequence is created with a scheduling tool composing assets on a time line. This can be a part of a CMS or a Playout automation tool.
  - b. Content is extracted from the storage system as ESF assets.
  - c. Timings and continuity of the retrieved assets are adapted to prepare for asset stitching.
  - d. Assets are stitched together to create a linear channel in the ESF domain.
- ③ Ad markers are prepared and inserted inside the linear channel (optional).
- ④ The ESF segments are encrypted, based on the information that is exchanged, through standard protocols such as CPIX or through proprietary ones, with DRM servers.
- ⑤ The manifests are created for the selected protocols (HLS, DASH, MSS), optionally including ad markers.
- ⑥ The content is made available to any CDN and caching nodes.

## Key features & benefits

- ✔ Capitalize on your TV rights investment and provide a seamless lean-back TV experience
- ✔ Expand the value of live events by filling out with VOD assets before and after the event
- ✔ Create targeted thematic and persona-based curations
- ✔ Simple public API enabling the creation of experiences targeted at your audience
- ✔ Flexible and redundant solution for glitch-free fail-over and optimized storage utilization
- ✔ Support for ad marker insertion for seamless ad insertion  
Reduced live encoding capacity needs by using pre-encoded file-based content, eliminating the need for additional transcoding
- ✔ Completely glitch-free experience as the generated linear channels are without any discontinuities.
- ✔ Native support for Start-over and Restart TV as long as the schedule and assets for the requested moment are still available for content processing.
- ✔ Output protocols include DASH, HLS, and MSS (unique!)
- ✔ Optional content protection with leading DRM technologies and integrations.



## How to deploy

VOD-to-Live can be deployed in public or private clouds, in data centers, on virtual machines or on COTS hardware.

The product can also be offered as part of the Agile Content Processing Platform, as a managed service, that can also optionally include:

- ✔ support for scheduling the content
- ✔ ad inventory management and replacement, including Server-Side Ads Replacement/Insertion.
- ✔ content brokerage

With these three optional services, VOD-to-Live is a uniquely simple, yet powerful, starting point for a journey towards Free Ad-supported Streaming TV (FAST) channels.

## Technical specifications

### INGEST FORMATS

Live channels as ATS live content over UDP and RTP (for content recordings)

HLS v3 (non muxed TS or f-mp4)

TS files

DASH-on-Demand files

mp4 files (+SMIL)

### STREAMING PROTOCOL

HLS (from V3, non muxed)

DASH (all variants, non muxed)

MSS (without support for Ad Markers)

### DYNAMIC AD MARKERS

Possible insertion of Ad Markers from SCTE-35 stored for later ad replacement (Splice Insert)

### CLOUD FRIENDLY

Object-based storage

S3

Azure blob

Cloud platforms

AWS

Azure

### HIGH AVAILABILITY

Node redundancy

Node synchronization

### CONTENT PROTECTION

Support for most DRM technologies, including FairPlay, PlayReady, WideVine

Support for most DRM integrations, including Nagra, Verimatrix, Irdeto, and many more

Support for CPIX, up to version 2.3

### SYSTEM HW / SW

Linux RHEL 7+ CentOS 7

Unlimited number of CPU Cores

IPv4 + IPv6

IGMPv2 + IGMPv3

HTTPS/FTPS

Delivered as licensed binary that can be deployed on any infrastructure meeting the above requirements

