

# MediaKind

## Aquila On-Demand



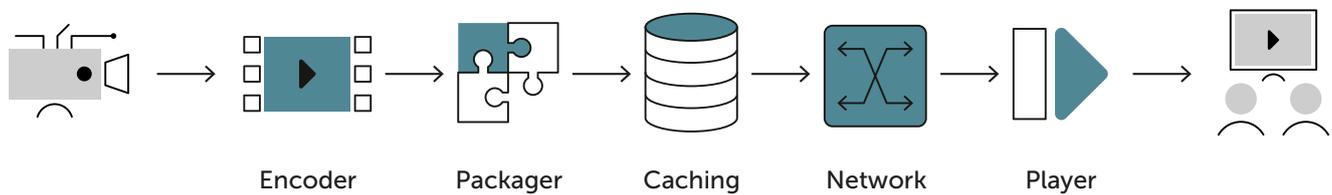
**AQUILA**  
Consumer Delivery

Aquila On-Demand is a professional video on demand solution for the processing & delivery of video files over any network (Cable, IPTV & OTT) to any device, ensuring a premium experience



MediaKind's cutting-edge Consumer Delivery solutions embody creative thinking for today's challenging world of media delivery. Video is no longer stagnant nor immobile and no longer comes in limited flavors. Today's world of video requires bold solutions capable of ingesting any type of video feed and format, dynamically storing video when and where appropriate, doing so on a heterogeneous mix of physical storage hardware, and streaming live and stored video on demand to a wide variety of device types, each with their own technical requirements.

Aquila On-Demand is the MediaKind solution addressing video on demand use cases within the area of Consumer Delivery. It enables the ingest, transformation, processing, storage and delivery for file-based video content. In addition to traditional on-premise deployments, Aquila On-Demand can also be deployed on a variety of public clouds due to its micro-service based, cloud native software.



Aquila On-Demand workflow

### Premium on-demand streaming market challenges

With drivers such as innovation, convergence and cost rationalization, OTT streaming is increasingly becoming the right technical solution to deliver content to end users.

There has been significant growth in usage of on demand content, driven by changing consumer behavior towards more personalized experiences, which has led to an increasing number of new players entering the video on demand market. This has created a new potential revenue source, but also provided a tough competitive landscape for these providers.

There are many challenges to provide a premium experience when leveraging this streaming delivery method.

Challenges such as **picture quality** and offering content for consumption on **multiple devices** both inside and outside of the home continue to exist for TV Service Providers either already in the streaming world or new to the market.

Individual streaming of videos results in a huge **demand for bandwidth**, and therefore **distribution costs**, which must be minimized to ensure the viability of service.



## Aquila On-Demand solution values

### Single solution, multiple use cases

MediaKind's Aquila On-Demand solution delivers an end-to-end system designed to ingest, process and deliver video files for OTT and IPTV consumption. This solution addresses the challenge to provide a high-end user experience while ensuring operational costs remain under strict control. Along with the MediaKind PRISMA advertising and alternate content portfolio, it also enables new revenue streams leveraging advertising and content distribution rights capabilities.

- **Push your video quality higher** leveraging MediaKind's On-Demand Encoding technology to provide the highest video quality and guaranteed performance across multiple codecs (MPEG-2, H.264 & HEVC)
- **Enabling a better consumer experience** with support for a wide variety of devices by leveraging MediaKind's packager with support for all major segment and manifest formats (HLS, SS, DASH, CMAF)
- **Faster time to market** by deploying a software solution designed for cloud, using latest technology tools such as containers and K8S
- **Reduce operational complexity** using a single point of entry for all services and servers' operations
- **Optimize server footprint** with the elasticity allowed by orchestration layers, and auto-scalability functions. Resources are constantly adapted to the load

MediaKind empowers global operators to enable the most unique and immersive ways to distribute and consume video content to their subscribers and viewers.

## A cloud evolution

The emergence of public clouds offers highly flexible processing resources that perfectly match VOD (Video On Demand) transcoding requirements. Key to which are the peaks of transcoding loads when bulks of assets need to be added to the service, as well as delivery of packaged assets that significantly vary during a day or week.

Clouds with an orchestration layer provide efficient tools to react to these varying processing loads and optimize resources which reduces costs. Additionally, cloud deployment can also provide some object storage solutions that ease the access to assets as well as their publication, coupled with auto-scalability functions.

Aquila On-Demand (v4 and onwards) has been designed to leverage these cloud capabilities and more, with native cloud feature support.

## Simplifying integration

On-Demand service workflows involve various components from content providers to end-user delivery. Aquila On-Demand offers an open REST API as well as a Watch Folders ingest methodology that ease the integration with content providers and Content Management Systems.

The automated workflow can trigger both encoding and packaging processing from a single request, which reduces any integration complexity to a minimum and provides a quick time to market for valuable content. This ensures a rapid return on investment for expensive content assets.

For every ingested asset, resources required for processing are calculated to identify the most optimal server according to the current system load. No external load balancing mechanism is required, and resources usage is optimized due to the load balancing being enabled at application level. This results in cost efficiencies, combined with operational simplicity.



## Multi-device delivery

Traditionally delivered on TV screens via set top box only, consumer demand for video on-demand content continuously increases on other more mobile devices such as tablets, laptops, smartphones and the increasing use of streaming main screen devices such as smart TVs and consumer streaming boxes. Aquila On-Demand provides a unique solution to address all these devices by adapting both encoding and delivery formats.

Network pre-requisites or operational preferences may also impact technical requirements and Aquila On-Demand offers a delivery method that fits each

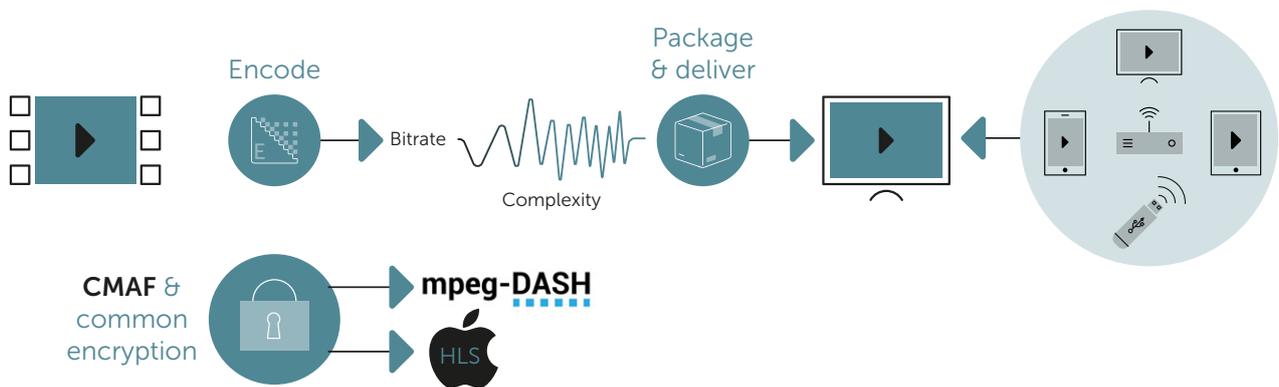
context, by a simple configuration choice which allows for a simpler and faster network integration:

- **Aquila On-Demand Origin** – leveraging embedded just-in-time packaging and encryption with a wide variety of supported formats and Digital Rights Management (DRM) integrations
- **External origin/CDN** – creating pre-packaged content publication to leading Content Distribution Networks

## Optimizing the cost of OTT delivery

Since OTT content is typically delivered via unicast, where every viewer receives a unique copy of the stream, Aquila On-Demand optimizes bandwidth usage to minimize distribution costs and network load. Techniques such as MediaKind's Constant Video Quality (CVQ) enable broadcast

quality whilst minimizing these costs. In addition, new developments such as converged CMAF chunks and common encryption reduce the number of content types required to support a wider range of devices, which further improves delivery efficiency.



Constant Video Quality (CVQ) workflow

## Value to the end consumer

- Increased variety content with optimized Picture Quality regardless of resolution (SD, HD, UHD)
- Enjoying new content more rapidly by leveraging the solution performance and internal load-balancing capabilities
- Ensuring a rich user experience across any device, anywhere
- Supporting the latest audio and video capabilities to all devices
- Enabling accessibility through subtitle, captioning and alternative audio tracks



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