



Atlas Origin

Non-linear processing and delivery

Atlas is MediaKind's product line for all long-tail content processing and delivery.

Atlas Origin covers the use cases of Cloud DVR delivery in public cloud platforms.

Atlas Origin

Atlas Origin is a highly scalable solution for ingesting, processing and delivering long-tail content to end devices. It is tailored for content owners and service providers aiming to efficiently deliver non-linear content to the consumers.

MediaKind simplifies the infrastructure complexities through a unified deployment portal and leverages native cloud orchestration and cloud object storage.

Within MediaKind's ecosystem, Atlas Origin comes pre-integrated with PRISMA for advertising use cases.

Atlas Origin benefits

- Add-on to Aquila Streaming to enable non-linear use cases
- Designed for cloud: supports native K8S and cloud storage from cloud vendors
- Optimal resource usage through orchestrated elasticity and leading to processing costs reduction
- Deliver timeshift, start-over, catchup and shared copy NPVR content
- Just-in-Time packaging and encryption

Universal origin in the cloud

Live ingest

Atlas Origin ingests content from a live packager in DASH format. The source packager can be provided by MediaKind or any third-party packager that supports the DASH format specification.

Content ingestion can be performed in the clear via a secure network or from an encrypted stream, using a decryption key obtained from a CPIX compatible key server.

CMAF format for content storage

The storage format used by Atlas Origin is based on the CMAF specification, which is the latest and most interoperable format in the industry today.

This choice offers the optimal level of segmentation for both long-tail and low-latency use cases.

Just-In-Time packaging

The just-in-time origin server included with Atlas delivers mainstream Adaptive Bit Rate formats based on playout requests.

The origin server supports multiple manifests, allowing for stream filtering, subtitle management, and thumbnail track configuration.

It seamlessly integrates with various Digital Rights Management (DRM) platforms including key rotation, track keys, and CPIX key exchange.

Additionally it interfaces with multiple CDNs and cache servers.

Cloud DVR workflows

Atlas Origin facilitates non-linear workflows such as timeshift, replay and NPVR for end users. Content can be delivered either from the rolling buffer or from saved recordings.

The delivery of timeshift, start-over and replay content can be achieved directly from the playout API using query parameters.

Alternatively, content can be saved as recordings using a dedicated recording API and played out using a recording ID, with option for individualized DRM configuration.

Backoffice integration

Management of DVR Channels and recordings is exposed through APIs, allowing for straightforward integration into existing back offices.

Atlas Origin also offers Prometheus metrics, Grafana dashboards for daily operational monitoring and alerting purposes. For more in-depth investigations, logs are available in Elastic, and Kibana dashboards are readily accessible.

Expand the scope

Atlas Origin is enhanced with additional components from the MediaKind portfolio:

- MediaKind Content Management System (CMS) for assets and workflow management
- MediaKind MediaFirst platform for a full end-to-end TV turnkey offer
- MediaKind PRISMA for stream conditioning, manifest conditioning and stream personalization to address ad-insertion and blackout use cases

Get even more using cloud

Orchestrated deployment

Atlas Origin relies on a microservices design and is deployed on cloud using Kubernetes (K8S) orchestration, providing the highest flexibility in allocating processing resources.

Automatic scaling

Just-in-time packagers are dynamically provisioned and deprovisioned in response to the traffic load generated by end-user requests from the CDN.

Auto-scaling streamlines the system's sizing for typical usage while maintaining the ability to handle peak loads. This approach helps keep the Total Cost of Ownership (TCO) as low as possible.

Native Cloud Storage

Atlas Origin supports cloud object storage for both input and output, leveraging the inherent availability and scalability provided by cloud vendors.

Once stored, the content remains immutable, untouched from its ingestion to its deletion. Throughout its lifecycle, the content can be accessed using the same access URL.

The content class can be dynamically adjusted based on content age or popularity.

High Availability

Processing nodes are designed to be resilient to failure, ensuring that the loss of a node is automatically remedied by the deployment of a new one.

Furthermore, Atlas Origin can be deployed in multiple regions, offering an even higher level of availability and the capability to upgrade seamlessly.

Specifications

Input

Input protocol	HTTP, HTTPS
Input format	DASH
Input audio and video codecs (decode)	Video: H.264 or H.265 encoding HDR Ingest: Dolby Atmos Audio: AC3, E-AC3, AAC, HE AAC and HE ACC v2

Packaging

Formatting	Apple HTTP Live Streaming Over CMAF, DASH Common CMAF segment delivery for HLS and DASH
Subtitling	Closed Captions: WebVTT for HLS, WebVTT or SMPTE-TT for DASH DVB-Teletext: WebVTT for HLS, WebVTT or SMPTE-TT for DASH DVB-Subtitles: SMPTE-TT for DASH
Multi Audio	Multiple audio streams per output for HLS, Smooth Streaming and DASH
Content Protection	Microsoft PlayReady DRM support for HLS/TS, Smooth Streaming and DASH Apple Segment for HLS / TS FairPlay support for HLS / TS and HLS / CMAF Widevine, PlayReady and Marlin support in CTR mode for DASH Widevine and PlayReady support in CBC mode for DASH Key provisioning interface to leading CAS & DRM vendors Compatible with any CPIX server for key exchange (version 2.3)

Monitoring and Control

Control	Access through API and GUI is provided by MediaKind
Alarms	Prometheus alerts
Monitoring and logs	System and application Grafana dashboards
Reports and stats	Prometheus metrics for in-depth monitoring