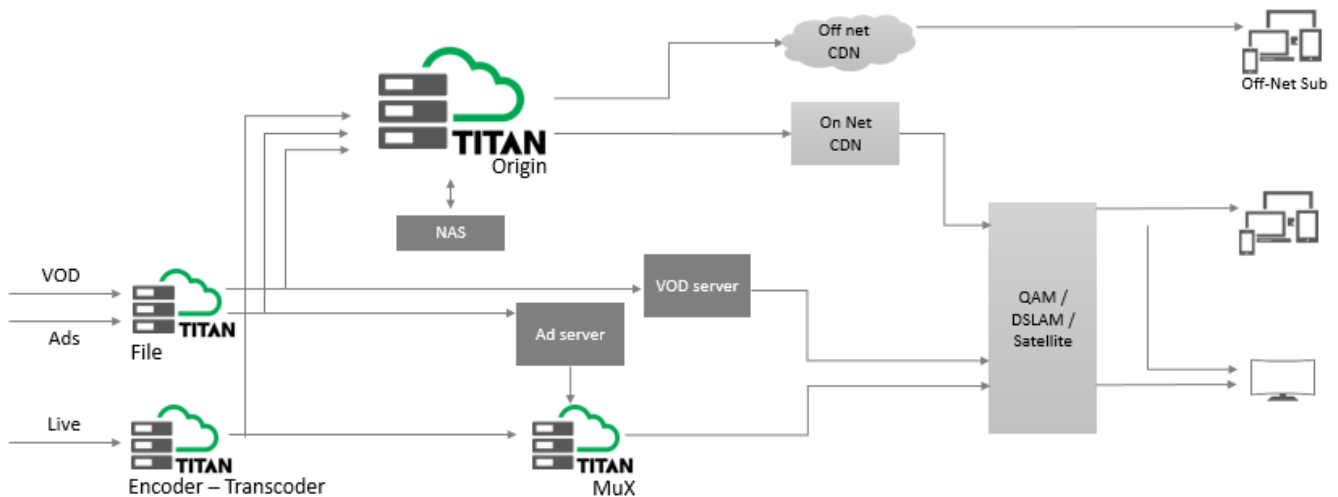


# TITAN Origin



## Software-Based Origin Server, Recorder and Just-in-Time Packager

TITAN<sup>®</sup> Origin is an agile, high density software Origin Server, Packaging and Recording solution, designed for Live and On Demand OTT delivery of SD, HD and Ultra HD content.

TITAN Origin improves multi-screen delivery and Headend storage resources by featuring any ABR Just-In-Time Packaging (JITP). In addition, TITAN Origin optimizes network efficiency and caching thanks to an intelligent manifest file selection. TITAN Origin supports advanced services like Start-Over, Time-Shifting and Catch-up TV increasing Return On Investment for Content Providers and Service Providers.

TITAN Origin can be controlled by ATEME Management System, and easily integrate with any NMS using REST API. TITAN Origin is a true hardware and OS agnostic solution running on any server, any form factor, bare-metal OS as well Virtual Machines. TITAN Origin can be deployed on-premises or off-premises, in the Headend or in the CDN at the edge.

### Key features

- Any Standard Adaptive Bit Rate, Any Codec
- Mobile to UHD resolutions
- Just-In-Time Packaging
- Pure CPU solution, Linux, Windows, VM
- Internal Recording
- Multi-DRM support
- Direct Interface with CDN

### Benefits

- Increase network efficiency and caching system
- OPEX savings with complete integrated OTT solution
- Reduce Headend CAPEX with software only and optimized storage resources

## Services

- Live
- VOD
- Cloud DVR
- Live Recording : Start-over, Time-Shifting, Catch-up

## Catch-up TV capabilities

- NAS or internal storage
- PUSH Catch-up capabilities (file preparation and push to CDN/FTP)

## Input (push mode only)

- MBTS
- HLS
- DASH
- RTMP

## Output

- HLS (push/pull, all features of v5)
- DASH (TS or MP4) (push/pull)
- RTMP (push/pull)
- HDS (pull)
- SS (pull)

## Just-In-Time Packaging capabilities

- Storage of stream in a (DASH) pivot format
- On the Fly DRM

## Processing

### Components filtering capabilities

- Remove incoming components based on tracking rules

### Metadata insertion

- Cue Points
- ID3 tag

### ESAM Manifest Confirmation and Conditioning API

- SegmentModify method
- SegmentReplace method

## DRM

### Scrambling

- DASH (CENC)
- HLS (AES 128)
- SS (AES 128)
- Support for rotative keys
- Internal key generator with key publication (HLS)

### CA/DRM Providers

- PlayReady, Marlin, FairPlay, BuyDRM, IRDETO, Verimatrix, CONAX
- NAGRA PRM, Widevine, Discretix (Viaccess)
- Support for

## Captioning

### MBTS ES (EIA 608/708) input

- HLS (WebVTT or ES)
- SS (TTML/SMPTE-TT)
- DASH (TTML/SMPTE-TT)

### MBTS DVB-SUB input

- HLS (pass-through or TTML/SMPTE-TT)
- SS (TTML/SMPTE-TT)
- DASH (TTML/SMPTE-TT)

### MBTS Teletext input

- HLS (Teletext)
- HLS (WebVTT)
- SS (TTML/SMPTE-TT)
- DASH (TTML/SMPTE-TT)

### HLS WebVTT input

- HLS WebVTT
- SS (TTML/SMPTE-TT)
- DASH (TTML/SMPTE-TT)

## Control

- Web GUI
- RESTful API for configuration and monitoring

## Density

- 500 multi-profiles streams
- Total peak output bitrate 3 x 5 Gb (through 3 x 10 GbE)

## Redundancy

- Standalone 1+1
- PMBTS: UDP/RTP/FEC support
- MBTS: Input seamless ST2022-7 redundancy
- Input stream failover
- Output "push" stream redundancy (backup publication points)

## Deliverable/Hardware requirements

- Linux OS
- Deliverable as appliance/OVA/Container/{rpm,deb} package
- Support for HP/DELL/IBM/UCS/HUAWEI specific HW (when bare-metal)

## Virtualization

- Multiple platforms and support for virtualization

## CDN integration

- Akamai certified
- Compatible with leading CDNs