MediaCast ATSC

Signaling & Delivery server for ATSC 3.0 network

ENENSYS' virtualized software designed to support the delivery of live contents from HEVC encoders or Non Real Time (NRT) content over ATSC3.0 networks.

Running inside the core delivery network, the MediaCast operates as a standalone ROUTE or MMTP software, supporting all the required ATSC3.0 specification and using standardized interfaces to control the delivery of broadcast content over an ATSC3.0 network.

Delivery of Live HEVC Encoders

ATSC 3.0 has defined HEVC as the video encoding format. The ATSC 3.0 encoders generate either DASH or MPU segments containing all the audiovisual content. MediaCast ATSC interfaces with multiple encoders in order to deliver DASH segments over a ROUTE IP stream and MPU segments over a MMTP IP stream.

Non-real Time Service Delivery

Non-real Time (NRT) services are applications generated by data servers for delivering Electronic Service Guide (ESG), Emergency Alert Service (AEA), interactive applications or any kind of content to be download onto the receiver. MediaCast ATSC is designed to deliver NRT services over ROUTE protocol.

Service Signaling

Service Signaling provides service discovery and description information. The Service List Table (SLT) enables the receiver to build a basic service list and bootstrap the discovery of the SLS for each ATSC 3.0 service. The SLT can enable very rapid acquisition of basic service information. The Service Layer Signaling (SLS) enables the receiver to discover and access ATSC 3.0 services and their content components. MediaCast ATSC generates both SLT and SLS and delivers them over ROUTE and MMTP protocols.

Software-based and Virtualized

The MediaCast ATSC is a pure Software-based ATSC 3.0 Signaling and Delivery server. It can run on any COTS (Commercial Of The Shelf) server. Dedicated to virtualized environment, the MediaCast ATSC can be deployed using Docker container or Virtual Machine. Being virtualized, it can be installed along with other head-end function on a same server.

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Applications

- Linear content delivery over ROUTE or MMTP
- App-based service delivery over ROUTE
- Electronic Service Guide (ESG) delivery over ROUTE
- Emergency Alert Information (AEA) delivery over ROUTE
- ATSC 3.0 signaling tables generation

Other benefits

- Virtualized application designed for the delivery of multimedia data over the ATSC 3.0 network
- Enable to aggregate up to 20 live and NRT content feeds for IP Multicast outputs
- Support of ROUTE to deliver MPEG-DASH segments and MMTP to deliver Media Processing Units (MPU)
- Intuitive GUI – Easy to setup and to monitor

Technical specifications

INPUT

Control
1x Virtual Network Interface to access GUI/SNMP/REST API

Linear and NRT
1x Virtual Network Interface to manage all Linear DASH/MPU and NRT (ESG, AEA, Apps,...) contents

OUTPUT

ROUTE and MMTP streams
1x Virtual Network Interface for all ROUTE/MMTP output streams

FEATURING

ROUTE Delivery
DASH segments encapsulation into LCT sessions and ROUTE signaling for ROUTE delivery
WebDav or HTTP PULL provisionning to interface with encoders

MMTP Delivery
MPU segment encapsulation into MMT packet and MMT signaling for MMTP delivery
WebDav or HTTP PULL provisionning to interface with encoders

NRT & App-Based Delivery
Delivery of 3rd party data over ATSC 3.0 over ROUTE protocol
FTP PUSH or HTTP PULL provisionning to interface with 3rd party servers

Electronic Service Guide Delivery
ESG delivery over ROUTE protocol
ESG metadata managed : OMA-BCAST, PSIP PCMP, ...
FTP PUSH or FTP PULL provisionning to interface with ESG servers

Advanced Emergency InformAtion Delivery
AEA delivery over ROUTE protocol
FTP PUSH provisionning to interface with EAS server

Signaling
Service description to generate LLS/SLT tables
SLS fragments generation and delivery

Synchronization
NTP/PTP based

Monitoring and Supervision
Input services monitoring (bit rate, components, ESG content,...)
REST API
SNMP v2 Support

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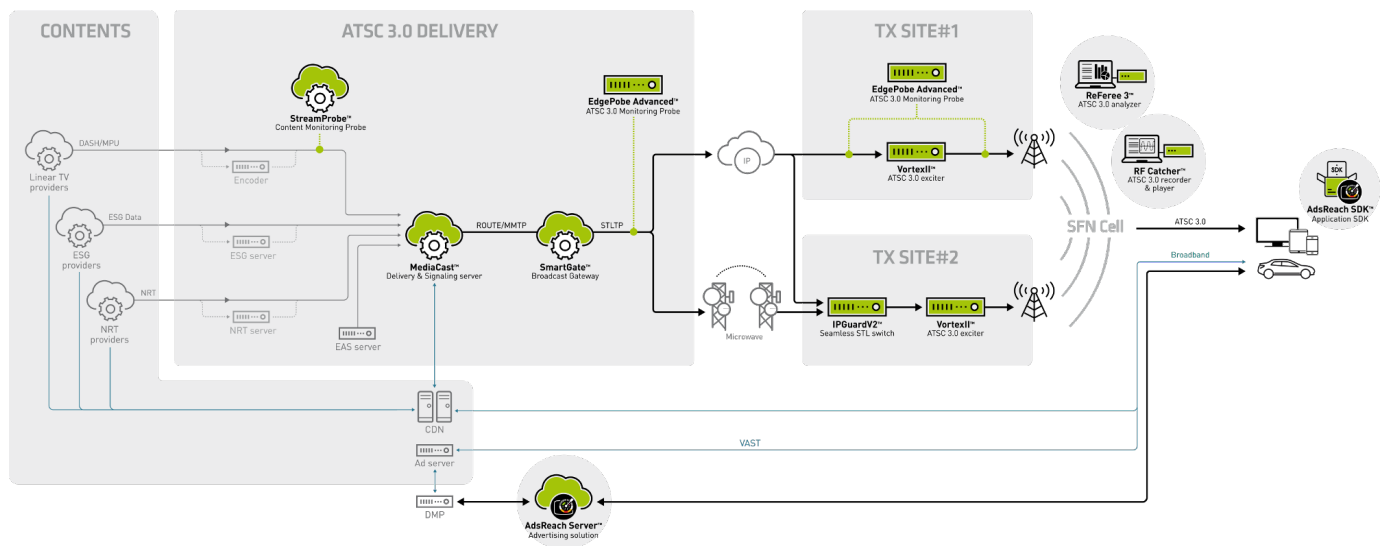| PHYSICAL			
Hypervisor		**Container**	
ESXI 6.5/7.0		Docker	
Processing		**RAM**	
2 vCPU		2GB	
HDD			
16GB			

ATSC 3.0 global architecture

Ordering codes

MediaCast ATSC

Software-based signaling and delivery server for ATSC 3.0

Ordering options

MediaCast-ATSC-ACCESS

Encapsulation of DASH segments over ROUTE protocol / Signaling tables generation and delivery (SLT and SLS) / Single ESG delivery over ROUTE / Up to 8 services support (Possibility to support some additional service(s) (max. 20) with the software option: MediaCast-AddService)

MediaCast-ATSC-ULTIMATE

MediaCast-ATSC-PERFORMANCE features / Encapsulation of MPU segments over MMT protocol / Broadband and Broadcast Apps delivery / File repair server signaling / Non-Real-Time (NRT) services delivery / Individual selection of services components (audio, video, caption...) to deliver

MediaCast-ATSC-PERFORMANCE

MediaCast-ATSC-ACCESS features / Multiple ESG delivery over ROUTE / Advanced Emergency informAtion (AEA) delivery over ROUTE / Signing of the signaling tables (SLT, SLS) / Signaling of Apps available over broadband / Up to 20 services support