

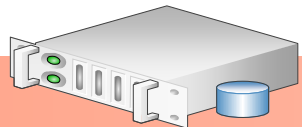
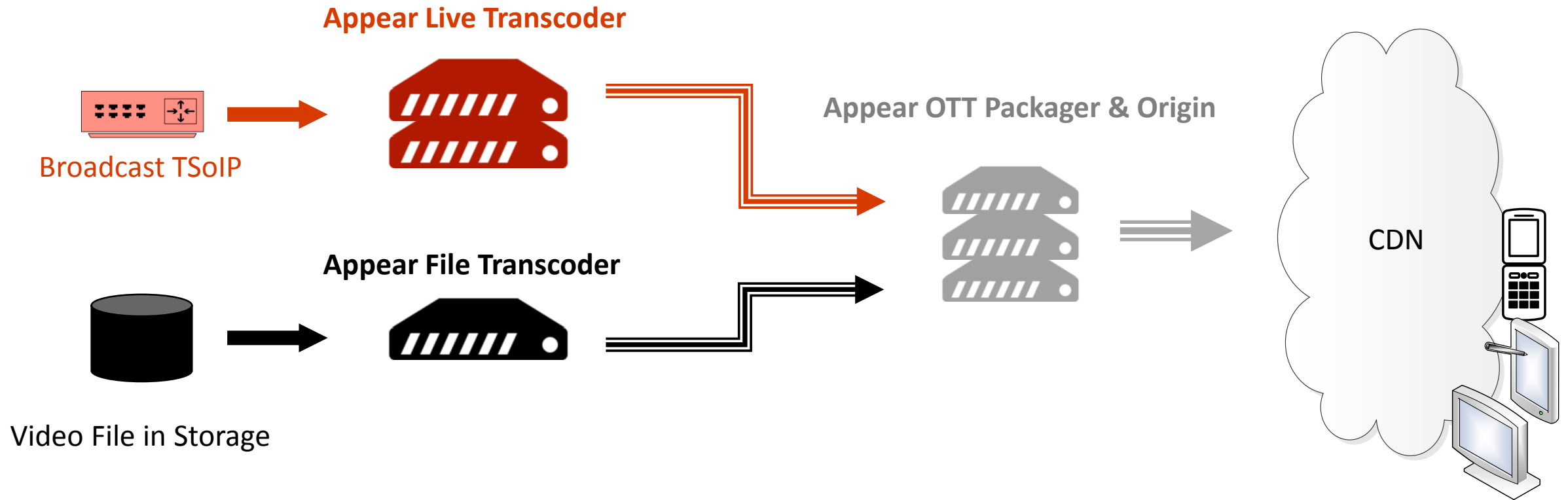


 **Apppear** *tv*
redefining video delivery

Software Transcoding

The **Software Transcoder**, a part of the Appear Software Portfolio has been developed in order to meet requirements for **pure software** based compression as this has become a preferred strategy for many video distributors.

TRANSCODING FOR OTT



Software
Transcoder

Compression

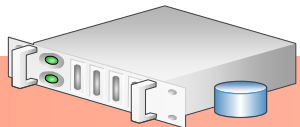
- Transcoding to AVC / HEVC Up to 4K
- File and Live
- HDR

Virtualization

- Docker on Linux
- COTS Hardware
- Scalable Cluster as One System

Management

- Resource Allocation
- Server Redundancy
- Dynamic Quality Control



Software
Transcoder

VIRTUALIZATION

Our Focus: True Software



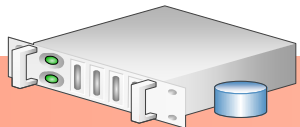
CPU as Processing Unit



Graphic Accelerator

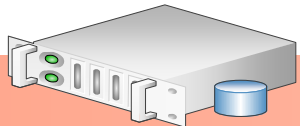
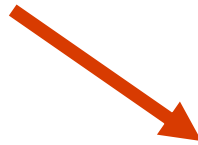


FPGA



Software
Transcoder

VIRTUALIZATION



Software
Transcoder

VIRTUALIZATION

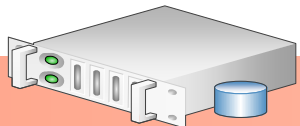
- A system that runs inside Docker virtualization
- A system that runs in Linux



Linux



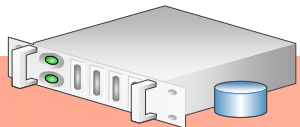
And etc.



Software
Transcoder

COMPRESSION INPUT

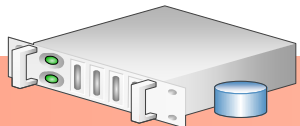
Video	Audio	Formats & Containers
MPEG-2	MPEG1 Layer 2	Single Program MPEG-TS over IP UDP/RTP
AVC / H.264	LC-AAC	SRT *
HEVC / H.265 (up to 4K 4:2:2, 10 bit)	HE-AAC v1 & v2	<i>MP4</i>
<i>Apple ProRes</i>	AC-3 (Dolby Digital) *	<i>QuickTime Self-Contained (.mov)</i>
	E-AC-3 (Dolby Digital Plus) *	<i>Transport Stream File (.ts)</i>
	PCM	<i>MXF Op-1A</i>



Software
Transcoder

COMPRESSION OUTPUT

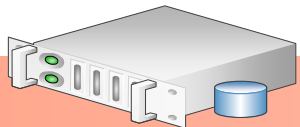
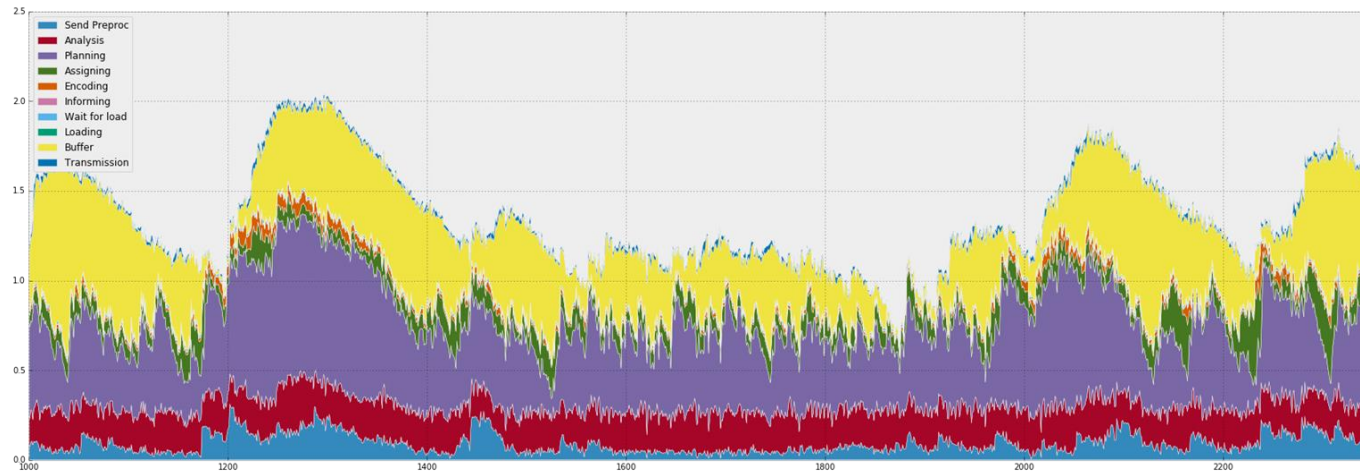
Video	Audio	Formats & Containers
AVC / H.264 (up to 1080p HP@L4.2)	MPEG1 Layer 2	Single Program MPEG-TS over IP UDP/RTP
HEVC / H.265 (4:2:0, up to 2160p, Main and Main10 profiles)	LC-AAC	Apple HLS
	HE-AAC v1 & v2	SRT *
	AC-3 (Dolby Digital) *	<i>QuickTime Self-Contained (.mov)</i>
	E-AC-3 (Dolby Digital Plus) *	<i>MP4</i>
	PCM	



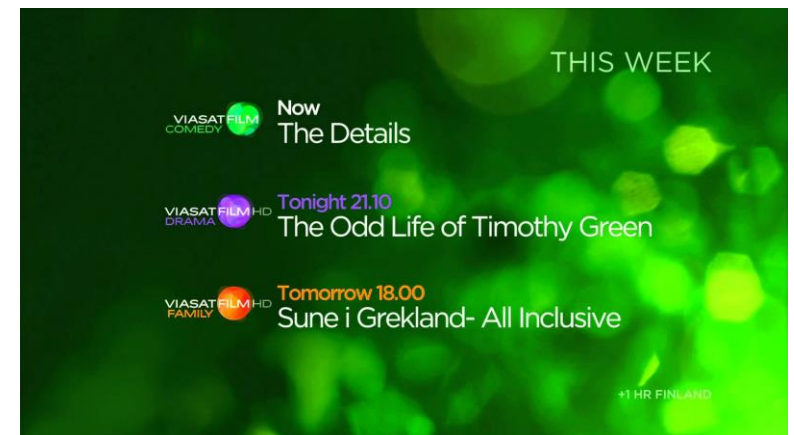
Software
Transcoder

COMPRESSION

- Optimal performance on Intel Xeon Scalable CPUs
- Multiple quality presets
- Dynamic Quality Control

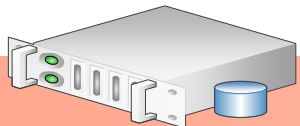


Software
Transcoder

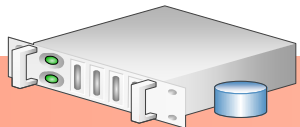
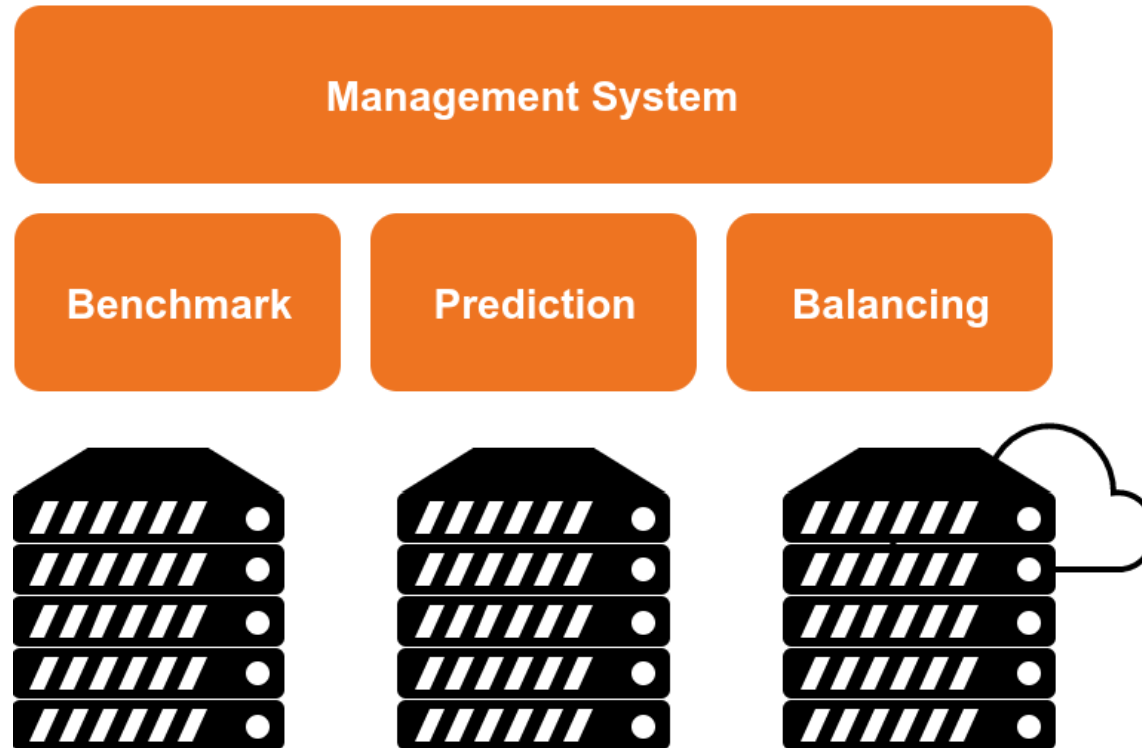


COMPRESSION OPTIONS & FEATURES

Configuration options	Features
GOP size	High Dynamic Range HLG support
Profile and Level	Prometheus and ELK for Monitoring and Status
Bit-depth	Keyframe alignment between streams, even across multiple servers
Resolution (all commonly used resolutions)	Supports both MPEG transport streams and direct generation of HLS
Frame rate (50/59.94/60, and half- and quarter-framerates)	Flexible rescaling, deinterlacing, framerate conversion
Bit rate, as well as VBV max-rate and buffer sizes.	Logo Insertion
Density/Quality setting (High quality, Broadcast, High density)	Audio level adjustment
Audio Channel Modes: Multichannel (up to 7.1), Stereo, Mono	



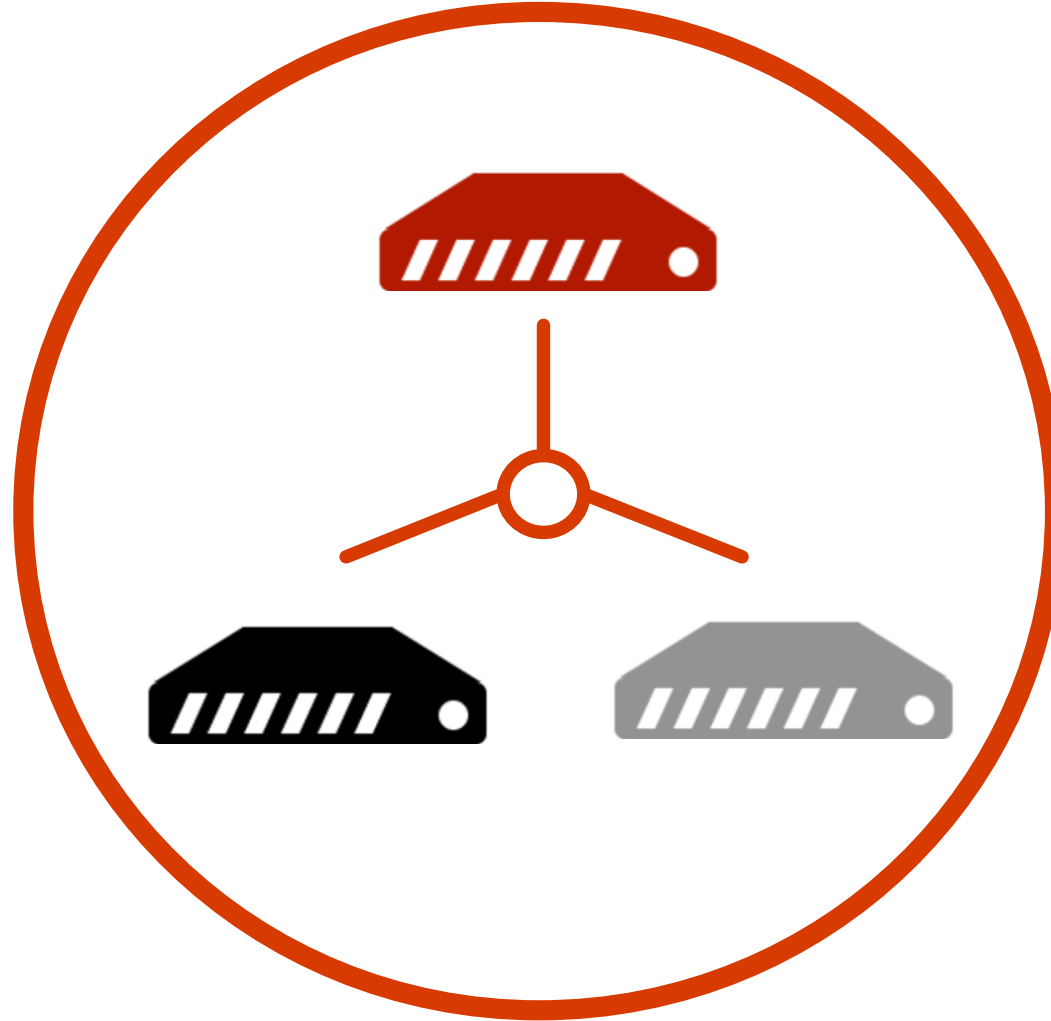
Software
Transcoder



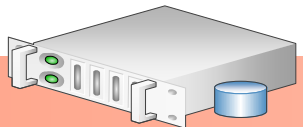
Software
Transcoder

Resource Allocation

Many Servers, Different types



One System, One Management



Software
Transcoder