Facecast

Software Ecosystem Live + VoD

- Distributed transcoding and storage solution
- Hybrid approach (cloud + local servers)
- Enterprise information systems integration
- Versatile and friendly API
- Specialised video delivery network (VDN)
- Network solutions based on Multipath TCP and BBR

Est. 2012

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TODAY'S LIFE IS IMPLAUSIBLE WITHOUT ONLINE VIDEO SERVICES

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LIVE & VOD

Today Live streaming and VOD content are increasingly in demand.
Audience gets access to more relevant and selected content, while the streamers can earn more money.
At the same time high quality video streaming is impossible without utilization of cutting edge video processing and delivery technologies.
Some of them are yet to be invented.

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TO MAKE VIDEO AVAILABLE ONLINE...

RECEIVING

PROCESSING

STORAGE

DELIVERY

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...ONE NEEDS AT LEAST

HARDWARE

NETWORKING

SOFTWARE
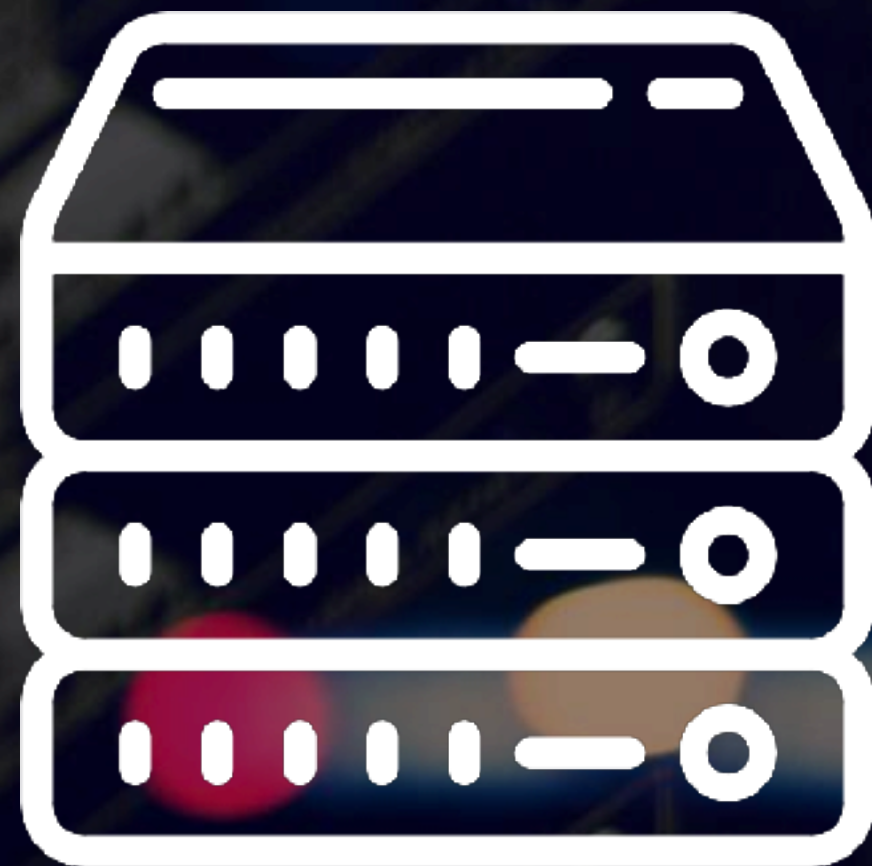
MAINTENANCE

LIVE & VOD MARKET TODAY

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There are many companies on the onlie media market offering a range of solutions.

Big players bring forward complex and scalable approaches.
Making use of such systems means considerable investments not everyone can afford.

Smaller highly specialized companies aim to solve isolated problems, offering cheaper but also inferior services.

Both have a very significant drawback – closed architecture, – that makes the product less scalable and adjustable for a specific task.

STANDALONE SOLUTIONS DRAWBACKS

★ Software offers no scaling mechanisms

★ Need for third–party CDNs and storage systems

★ No fail–safe storage solutions and reliable data backup system

★ No capacity for content security

★ No single integrated API – need to combine several third–party products

★ No extended statistics

★ High maintenance costs

★ Closed architecture of the products utilized

★ Considerable time expenditures on system deployment

★ Complicated administration

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CLOUD SOLUTIONS DRAWBACKS

★ Loose grip on the system's performance and utility

★ No out–of–the–box solutions for data backup

★ High costs on today's market

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WE CREATE WORKING SOLUTIONS

MANAGING LIVE AND VOD SINCE 2012

Our company constantly works on finding the best solutions for Online video market, addressing front line and relevant challenges every day and making use of cutting edge technologies in combination with our extensive knowledge of the field.

We are proud to present unique software ecosystem for professional Live and VoD service deployment, that takes care of every step of the process, from receiving of the data up until high quality content delivery to the end user. Our ecosystem is available as

★ Standalone solution for local systems

★ Cloud solution

★ Hybrid solution, taking full advantage of client's hardware and our cloud capacities

DISTRIBUTED ARCHITECTURE

Distributed receiving, transcoding, storage and delivery systems enhance capabilities and ensure fault tolerance of our product.
We make use of a vast number of metrics in order to optimize every step of the process: georeferencing, server availability and workload, resource availability and many others.

All functions in our system is distributed between many clusters, and one node failure has no impact on the whole system stability and integrity.

Distributed architecture advantages:

★ Efficient load distribution between all parts of the system

★ Fault tolerance

★ Geographical distribution means high speed of content delivery to the end user

★ Effortless scaling and enhancement of system capacity and performance

★ Optimized maintenance expenses

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MPTCP PROTOCOL

Every part of our system makes use of Multi Path TCP protocol, allowing to utilize all available connection channels simultaneously and at full capacity. At every step of the process we use all the most reliable connections at once, considerably increasing both the speed and stability of data transfer.

Advantages of MPTCP:

★ Increased access speed

★ Increased connection quality and stability

★ Increased fault tolerance of the whole system

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HYBRID APPROACH

EASY TO USE

Choosing our unique hybrid system, you can combine our software and cloud services with your own servers. By doing so you can use your own resources at full capacity, reducing the costs of the system maintenance.

You can use your own hardware for the most demanding processes such as transcoding and data storage, leaving the cheapest parts of the process to us.

The more data you work with, the more you profit from using the hybrid approach.

Hybrid mode does not alter API request structure

FACECAST CDN

We use our own smart worldwide CDN making use of the servers on all continents, always close to the end user.

Taking many metrics into account, Group Cache system distributes user requests between available clusters, considerably increasing the speed of content delivery. The system does not need constant synchronization and uses data from the available cash-memory resources in the most efficient way.

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COSTS

We care not only about the quality of our product, but also of its affordability. We optimized our own costs in order to offer the best price to our clients.

In order to optimize the maintenance costs we make use of the solutions that have already proved their efficiency on the market, such as Docker, Kubernetes, gRPC API, ELK stack, Intel Quick Sync Video.

Smart solutions to cut the costs:

★ Completely in–house development

★ Modern approaches in software design

★ Distributed architecture allows to use the hardware at full capacity

★ Storage system and CDN are fully optimized to work with video content

★ Administration simplified by making use of Kubernetes

CLOUD PRICES

Storage starting at **$0,029/GB per month**

Video & Audio decoding FREE

Audio transcoding FREE

Video Transcoding starting at **$0,01/minute**
Example presets:
★ transcode to 720+480+360 from $0,05/minute
★ transcode to 1080+720+360 from $0,07/minute

CDN Content Delivery starting **$0,03/GB**

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STREAMBOX HARDWARE-BASED ENCODER

We are proud to present Streambox – intelligent encoder for professionals, that allows to perform virtually any video delivery task.

Streambox makes use of HLS protocol, partitioning large video fragments into smaller pieces and sending them successively to Facecast CDN.

Streambox utilizes Multipath TCP, allowing fast and flawless transfer of high quality content.

Software and hardware system components are highly integrated, ensuring extremely high efficiency of Streambox.

STREAMBOX ADVANTAGES

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STREAMBOX IS UNIQUE AND UNRIVALLED!

- ★ Guaranteed content delivery – even with unstable Internet connection
- ★ Highest quality video encoding (1080p up to 20mbit/s)
- ★ Making use and aggregating of all available Internet connections at once

- ★ Fully functional as recorder
- ★ 24-hour offline buffer. Stores the data in case of connection failure
- ★ Intel i7 – based

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DISTRIBUTED CONTENT RECEIVING

In our CDN media content is received by the clusters closest to the signal source by all channels available simultaneously. As a result we reach the highest possible data transfer speed and minimize the risk of data loss.

Advantages of distributed data receiving::

★ MPTCP traffic aggregation

★ Geo-distributed receiving nodes (CDN)

★ Protocols: AVI, MPEG4, MOV, MKV, MTS on HTTP, FTP, SFTP, S3

★ Streams: RTMP, RTMPS, RTMPE, TS, HLS, RTP, RTSP, WebRTC (Web browser encoder)

★ Supported codecs: H263, H264, H265, VP8, VP9, AAC, MP3, OPUS, Vorbis, G.711

DISTRIBUTED TRANSCODING

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FAST TRANSCODING: UP TO 100 TIMES FASTER THAN REAL-TIME

We invented unparelled video transcoding system, making use of virtually any hardware (even low–end servers) at full capacity.

Video content is partioned and distributed to all available hardware. As the result, transcoding speed goes up significantly, while the speed and the costs of the process go down.

By applying our hybrid approach you can use your own hardware for the most high priced processes – such as transcoding – cutting the costs even more.

DISTIRBUTED TRANSCODING ADVANTAGES

★ Fast transcoding to HLS, DASH, MPEG4

★ Preset and custom profiles

★ Adaptive streaming

★ Multiple audio tracks support

★ VoD transcoding 20–100 times faster than real–time

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DISTRIBUTED STORAGE SYSTEM

Our distributed storage system allows maintenance of any number of backup replicas as well as high–speed delivery to any end user.
You can keep your data at your own servers or in our cloud in any proportion.

Distributed storage advantages:

★ Flexible system for setting up and maintaining replicas – as many as you want

★ Hybrid storage approach – your data is safe both in our cloud and inside your own servers.

★ Intelligent data geo-distribution – closer to content–specific audience

SMART DELIVERY

Facecast CDN is specifically designed for video content, significantly increasing the speed of media data delivery to the end user.

Distributed delivery advantages:

★ Delivery nodes on every continent

★ Making use of many metrics to select the most efficient delivery node.

★ Intelligent geo-balanced data storage and caching system.

EXTENDED STATISTICS

You gain access to many statistical metrics, end–user behavior patterns etc based on your own requests.

Advanced statistics advantages:

★ All ot of data available

★ Individual and customized presets

★ High range of upload and download formats and protocols

★ Data availability, at any moment

★ End user behavior patterns

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FRIENDLY API

Our API system is reliable, fault tolerant, user–friendly and ready–to–use.

Facecast API advantages:

★ Full integration of all the products

★ Ease of use

★ Flexible presets system

★ Easy data and playlist handling

CONTENT SECURITY

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VIDEO BACKTRACE PROTECTION

Our software also allows to restrict access to selected media content.

Our API provides advanced security settings management, such as access keys expiration dates, regulation of number of devices with the access to the content and many others.

Additional protection is provided by use of in–house developed invisible user–specific marks that allow us to identify the user leaking protected content.

CONTENT
SECURITY

★ Video Watermark — Backtrace video protection

★ One key for one user

★ Individual user presets

★ Token-based authorization

ALL–IN–ONE SOLUTION FOR ANY LIVE OR VOD TASK

Our software ecosystem provides solutions for virtually any Live or VOD media streaming task.

Facecast Media Cloud allows to develop and deploy:

★ Live streaming services

★ eLearning systems

★ Mobile video applications

★ Video hosting services

★ Video surveillance

★ Webinar streaming platforms

★ Corporate TV services

★ Video content distribution systems

★ CDN development solutions

★ Reducing maintenance costs of the services based on third–party products and solutions

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OUR CLIENTS

Since 2012 we have developed the best solutions for our clients – from single Live broadcasts to complex software system design.

Microsoft · NOKIA · SIEMENS · WiX.com · Europa plus · Red Bull · IBM · IKEA · KNAUF · MOSCOW PHILHARMONIC · Sk Skolkovo · MINISTRY OF CULTURE RUSSIAN FEDERATION

Challenge:
Developing cost–efficient Live broadcast system for WIX users.

Solution:
Web-application based on Facecast Media Server software and WebRTC,
and HLS protocols, that allows WIX clients to stream high–quality and protected online
video to any number of users by one click.

Every user can make use of adaptive multibitrate streaming, DVR/Time Shift. Content is
available on every device including tablets and mobile phones.

Application developed by us is now available to all 80 000 000 Wix clients directly through
the browser with no need to install any specific software.

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OUR TEAM

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