

Blazar Just-in-Time Transcoding (JITT), Eliminates the Need for Multiple Streaming Profiles in Content Distribution

With speeds up to 100x, igolgi's Blazar reduces time and bandwidth necessary to transcode any content.

AKRON, OH, UNITED STATES, September 11, 2023 /EINPresswire.com/ -- In a typical scenario, a Content

Distribution Network (CDN) must have a number of streaming profiles to meet a user request for

material based on continually changing resolution and the bitrate requests of the user device.

Typically, this could range from 270p up to 1080p, which means that each different profile must be transcoded from the original to the required resolution. Depending on the amount of content required by the CDN, this is a costly and time-consuming process that also requires additional

storage.

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Jeff Cooper

[igolgi](#) has developed a better way.

[Just-in-Time Transcoding \(JITT\)](#) is a method where compressed video and audio signals are converted from one format to another at the precise moment a request for the signal is made by a video or audio player. This requires the transcoding system to function at speeds much faster than real time. [Blazar](#) JITT, a dynamically scalable device,

has the unique ability to transcode at a speed up to 100 times faster than real time. In the Blazar system, only the topmost profile — the one with the highest bitrate — needs to be stored on the DVR storage system.

igolgi's Blazar highly optimized transcoder and resource manager software runs on standard Linux servers with GPU accelerator hardware. The stack efficiently manages the compute resources to match the transcode requests in a very scalable and efficient manner which is at the true heart of the innovation. Blazar is available as a software component that can run on any cloud provider such as Google Cloud, AWS, Azure, OCI etc., or is available as an on-premise solution. The Blazar Software stack is controlled from a simple but powerful API that can be integrated into any workflow.



According to igolgi CEO Jeff Cooper, “Blazar JITT fully leverages the latest developments in GPU and CPU technologies and makes optimum use of the various resources in both platforms. JITT has been contemplated in the past, but neither the COTS computer power nor the software architecture could achieve the speed and scale required for hybrid operations that Blazar is able to accomplish”.

When a client device requests the content, Blazar is capable of immediately converting the content to the best bitrate and resolution profile required by the client's device type, the available last-mile bandwidth, CDN bandwidth, and content type. Instead of having a bitrate ladder with multiple profiles, the igolgi Blazar JITT system is an infinite ladder with only one stored profile. This saves 84% storage compared to a static ladder and 59% compared to a content aware ladder, meaning lower storage and bandwidth cost. Depending on the content streamed by a CDN, this can amount to impressive cost savings. These savings get further amplified with 4K and higher resolution video content.

Dr. Kumar Ramaswamy, igolgi President continued, “Another excellent feature of Blazar JITT is its’ use with an edge cache. When an endpoint device requests the top profile, then the Origin server provides that top profile from the DVR storage, and the edge cache can cache it for future use. When an endpoint client requests a lesser profile, the edge cache redirects the request to Blazar JITT, which retrieves the top profile then transcodes it to the requested profile. Blazar JITT can be placed next to the Origin server or adjacent to edge cache depending on traffic loads”.

In addition to cost savings and higher quality video for lower profiles, the Blazar JITT solution reduces power consumed by the IPTV infrastructure. Since only the top profile is created and distributed to the edge, a tremendous amount of power is saved. In an upcoming detailed paper igolgi demonstrates that even for small user populations, 1000s of metric tons of CO2 can be reduced per year in the infrastructure; more than 70% of the CO2 is removed depending on use cases.

Blazar JITT is available now. More information is available at <https://www.igolgi.com/blazar>

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