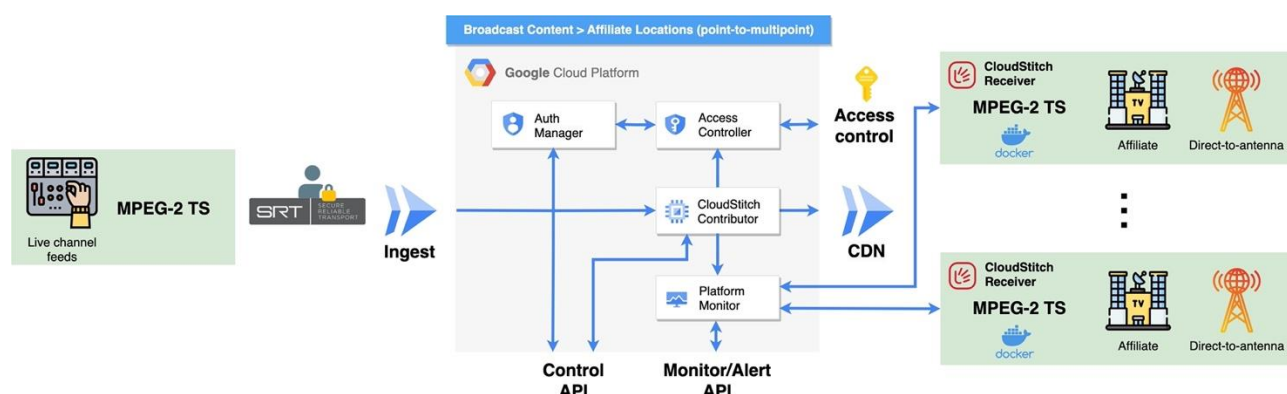# Introducing CloudStitch™

Your Local to Global Gateway to Effortless Video Transporting

mediathand

Introduction to CloudStitch™ by mediathand

The CloudStitch™ contribution solution is designed to help broadcasters securely distribute live MPEG2-TS channel/video feeds to any number of remote receivers around the world. This is done in a cost-effective manner over the public Internet, by leveraging the cloud and conventional CDN solutions. These factors make it highly flexible and significantly reduce costs and operational complexity compared to traditional fiber or satellite contribution links. The reliability is maintained through multiple redundancy options, depending on SLA requirements.

The solution comprises two primary components. The first is the **CloudStitch™ Contributor**, which is deployed in a lightweight VM on your cloud infrastructure, exposing an HTTP origin that a CDN can ingest. The second and optional component is the **CloudStitch™ Receiver**, a Docker® image designed for easy on-prem deployment at remote sites. Importantly, it does not require specialized hardware for ingestion into IP-based workflows.

Additionally, the **Authentication (Auth) manager** and **Access Controller** are used in the cloud to securely manage access control for individual receivers at a per-program level. The solution also includes extensive monitoring and alerting capabilities via RESTful APIs, providing valuable insight into all aspects of the delivery chain.

CloudStitch™ serves as a comprehensive one-to-many live channel distribution solution, streamlining content delivery from local to global audiences via the internet. Originally designed for both on-premises and cloud service infrastructures (e.g., AWS), the most recent implementation includes Google Cloud Platform (GCP). CloudStitch™ emphasizes delivering broadcast-quality content, ensuring reliability, enhancing security, and optimizing cost-efficiency.

Key Features and Benefits

- **Reduced Operational Complexity:** No specialized hardware or domain-specific personnel required.
- **Highly Scalable:** Supports any number of channels and remote receivers through CDN and cloud solutions.
- **Not a Service:** Delivered as virtual appliances, keeping you in control.
- **Minimal Hardware Footprint:** Utilize standard hardware and VMs for easy installation and operation.
- **Monitoring:** Stay in control through RESTful APIs, enabling you to monitor, receive alerts, and manage affiliates and antenna site(s) with ease.
- **Transparent Pricing:** Enjoy a straightforward pricing model with a fixed monthly fee and clear data costs.
- **Cost-Effective Delivery:** Achieve the best price for delivery via the internet, compared to dedicated fiber and satellite links.
- **Secure Delivery:** End-to-end encrypted delivery with individually authenticated receivers.
- **Broadcast Reliability:** Carrier-grade availability guarantee depending on your SLA requirements, backed by responsive 24/7 customer support.

Addons: Tailor your solution with optional features such as transcoding, DRM protection, VOD cloud storage, and support for various output formats.

CloudStitch™ Q/A

CloudStitch™ is designed to empower networks, broadcasters, and operators in innovative ways, reducing costs and enhancing flexibility in the distribution of **single** channels to **multiple** local, regional, or global locations. CloudStitch™ is a cloud operated solution that leverages advanced cloud, internet delivery, and CDN capabilities to securely and reliably distribute live channels worldwide.

To address potential queries, we've provided answers to key questions below. If your specific question is not listed, please don't hesitate to reach out.

i.   What is CloudStitch™?

In essence, CloudStitch™ serves as an all-in-one live video transport solution, meticulously crafted to deliver content seamlessly to local, regional, and global destinations exclusively through the internet. Built to be operated in VMs in your cloud infrastructure and on-prem, we utilize a mature OTT solution with a primary focus on ensuring stable delivery at a fixed latency of typically 2-4 seconds. Optional features, such as channel security (incl. DRM), cloud storage for VOD and support for multiple output formats targeting OTT streaming services (encoding, packaging etc.), can be added upon request. For further details, please don't hesitate to contact us.

ii.   Who can benefit from CloudStitch™?

CloudStitch™ is designed for networks, broadcasters, and operators seeking cost-effective alternatives for distributing channels to remote antenna locations and affiliated partners on a local, regional, and global scale. Traditionally, this has been accomplished through costly satellite links or dedicated fiber connections to ensure reliable throughput. Our solution minimizes costs by utilizing the internet as the delivery method and scaling exclusively on the CDN. Whether you are using the solution on Google Cloud Platform (GCP) or Amazon Web Services (AWS), data can be seamlessly transferred to your preferred CDN. We are here to assist you in selecting the most suitable option for your specific needs.

We offer straightforward RESTful APIs for monitoring and managing the service. Our service includes automatic crash recovery for each process, ensuring continuous operation even in the event of failures. Any errors are promptly communicated through alarms via API access.

iii.   What are the "true costs" of CloudStitch™?

The cost structure of CloudStitch™ is transparent and straightforward, with a fixed setup fee and a monthly service fee per instance. Variable expenses relate to CDN costs, determined by content bitrate and the number of active CloudStitch™ receivers.

For clients with numerous channels and/or affiliates, we have products that can significantly reduce the data load on the CDN, without compromising the visually high quality. We will always assess the requirements and assist in identifying the most cost-effective solution tailored to your specific needs, but the choice is always yours.

Additional features can be incorporated for an agreed-upon monthly service fee. Product setup assistance is also available, billed on an hourly basis.

iv.   Is it "yet-another-SRT-gateway"?

At its core, CloudStitch™ can be compared to an advanced SRT gateway cloud service, purpose-built for a point-to-multipoint architecture that seamlessly scales on the CDN. Unlike SRT-based solutions available, we solely distribute using the HTTP protocol in a low latency OTT streaming configuration. This ensures best practice delivery of content over any IP network and fewer issues when traversing networks and firewalls as most network equipment is optimized for HTTP content delivery. Operating within a major cloud service provider's infrastructure further allows for effortless content distribution across global locations, guaranteeing both broadcast reliability and cost-effectiveness.

It's important to note that CloudStitch™ is not intended to replace existing point-to-point SRT solutions. Instead, it is tailored for scenarios where a single channel needs to be delivered to multiple locations, simplifying the process of managing

access to channel feeds, handling monitoring, and operation tasks with automatic failover and recovery mechanisms.

v.   Is the point-to-multipoint referring to a multicast solution?

CloudStitch™ is primarily designed for the efficient delivery of media channels over the open internet. As multicast is not yet supported by internet technologies, it is not part of the distribution method within this product. The term 'point-to-multipoint' refers specifically to the distribution architecture, where a single channel is effortlessly distributed to any number of receivers, with scaling occurring solely on the CDN side. This eliminates the need for configuring individual receivers to originate from the source.

It's worth noting that *the receiver does also support multicast output into local networks*. Our engineering team possesses extensive expertise in configuring and delivering multicast content within managed networks. Please don't hesitate to contact us for guidance in this area.

vi.   How does it differ from other media solutions in AWS?

CloudStitch™ distinguishes itself by prioritizing cost-effective content delivery over the internet and leveraging CDN scaling. The CloudStitch™ software solution comprises two main components:

1. **CloudStitch™ Contributor:** This component is designed for cloud VM infrastructure. It includes a channel receiver with support for SRT and other ingestion formats if required. It is installed and operated on VM instances in the cloud platform, offering a seamless configuration towards the CloudStitch™ platform and reducing operational complexity.

2. **CloudStitch™ Docker® Receiver:** This receiver image is *recommended* for on-prem deployment at affiliates. It eliminates the need for specialized equipment for ingestion into IP-based workflows. All that's required is the installation of our provided Docker® image, and authenticated affiliates are ready to receive channels.

While AWS provides a versatile media solution landscape, CloudStitch™ offers flexibility by being deployable on GCP, AWS or another VM in the cloud. This flexibility allows you to choose the platform that best suits your needs.

Regardless of the platform you choose, CloudStitch™ offers a unified solution with a fixed latency of typically 2-4 seconds, achieved using Apple HLS (HTTP Live Streaming) technology. This technology ensures reliable and cost-effective content delivery via any CDN of preference.

vii.   Is CloudStitch™ an OTT platform?

CloudStitch™ is primarily centered around the distribution of single transport streaming feeds to multiple receivers. Its foundation as an OTT platform enables optional delivery of live and on-demand content as OTT channels. This flexibility extends to supporting various bitrates, codecs, and latencies to cater to diverse needs.

Our team boasts over 20 years of experience in handling media formats for multiple platforms. This wealth of expertise ensures that we can meet the specific requirements of a wide range of media delivery scenarios. Please reach out to us for further details.

viii.   What is the SLA and Support in CloudStitch™?

We ensure continuous service and provide flexible availability options to suit your specific SLA needs. Our responsive support team is available 24/7 via live chat for issue resolution. For those seeking carrier-grade levels of support, we offer personalized assistance through our premium service package. If you'd like to learn more about our offerings, please don't hesitate to contact us.

Should you wish to delve deeper into the comprehensive suite of CloudStitch services, including our supplementary offerings and an array of broadcast and OTT streaming solutions, we cordially invite you to reach out to us at your earliest convenience. We look forward to assisting you further. You may locate our contact information below:

      ✉️   Hello@mediathand.com

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Product Overview

- CloudStitch™ is an all-in-one live channel distribution solution, utilizing the internet as the primary delivery channel.
- Built for both cloud platforms and on-prem deployment, CloudStitch™ prioritizes stable delivery with a fixed latency of typically 2-4 seconds.
- Rapid deployment through lightweight virtual machines in your cloud infrastructure.
- All control, access and monitoring are available through RESTful APIs.
- Tailored for cost-effective distribution to remote locations and global partners.
- Additional features like VOD cloud storage and OTT support are available.

Core Features

- Built on two software platforms operational since 2013.
- Distribution component initially designed for MVPDs, reducing satellite costs.
- Supplementary services available from an OTT platform for versatile content delivery.

Cost Structure

- Transparent pricing with a fixed setup fee and monthly service fee.
- Variable CDN costs depending on content bitrate and the number of receivers.
- Hourly billed setup assistance available.
- Additional features available for an extra monthly fee.

Point-to-Multipoint vs. Multicast

- Point-to-multipoint architecture for efficient content distribution.
- Unicast delivery as internet limitations restricts multicast use.
- Receivers support multicast output in local networks.

Comparison with existing AWS solutions

- CloudStitch™ focuses on cost-effective delivery via the internet scaling on the CDN.
- Employs Apple HLS OTT technology with a fixed latency of typically 2-4 seconds.
- Option to encode content to reduce CDN costs, ensuring visually lossless quality upon decoding at receivers.

SLA and Support

- Choose from our flexible range of SLA tiers to match your uptime needs.
- Standard plan includes 24/7 live chat support.
- Upgrade option to choose a carrier-grade support plan.