Catalyst LIVE™ Telepresence

Privacy & Security Protections

Catalyst LIVE™ is a telepresence solution from ASCEND Healthcare IT that enables real-time, remote collaboration during complex or distributed clinical, interventional, surgical, and training environments.

Catalyst LIVE can be quickly and easily integrated into any healthcare systems imaging ecosystem through a highly secure plug-and-play (web-based) interface. To ensure maximum protection of systems, networks, and data Catalyst LIVE leverages a robust multi-faceted privacy and security framework including:

Privacy protections

- Zero-download, zero-footprint design ensures no images or PHI are stored on local devices
- Fully HIPAA compliant data center hosted by AWS
- BAAs in-place with all 3rd party components (AWS, Vonage/Tokbox)

User security

- AWS Identity and Access Management (IAM) for highly flexible and secure role and user-based access controls
- Passwords with strong complexity rules
- Configurable inactivity time-outs

Data security

- Encryption in transit (TLS 1.2), Qualys A+ rating
- 256 AES Encryption at rest
- Center for Internet Security (CIS) hardened systems for web-based and IoT

Network security

- Secure WebRTC for real-time image streaming and virtual presence
- Network segmentation to isolate traffic
- Penetration testing is performed on all major releases

Auditing

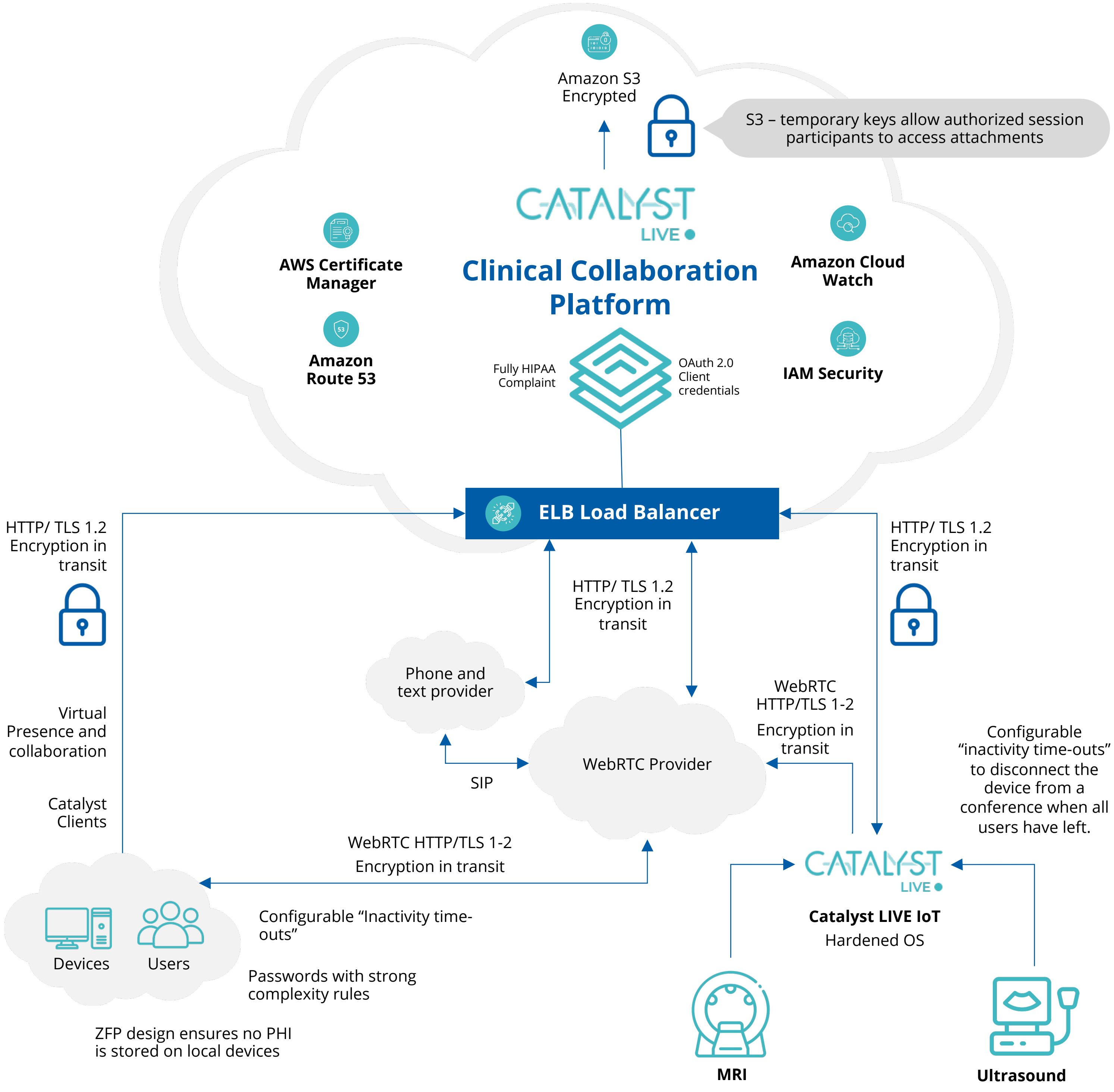
- Comprehensive event auditing using Elk Stack
- Security Information and Event Monitoring (SIEM)
- Automated CIS auditing

Benefits for IT

- Multi-media HIPAA secure telepresence technology, including:
  - HD remote enabled pan-tilt-zoom video
  - Full room audio
  - Device-agnostic connectivity
- Fast, easy integration with imaging modalities using a highly secure plug-and-play interface
- Flexible cloud-based or on premises deployment
- Fully zero-footprint on mobile, tablet, or desktop

ASCEND

Leveraging Amazon Web Services



Amazon S3 Encrypted

S3 – temporary keys allow authorized session participants to access attachments

CATALYST LIVE

Clinical Collaboration Platform

AWS Certificate Manager

Amazon Route 53

Amazon Cloud Watch

IAM Security

Fully HIPAA Complaint

OAuth 2.0 Client credentials

ELB Load Balancer

HTTP/ TLS 1.2 Encryption in transit

HTTP/ TLS 1.2 Encryption in transit

HTTP/ TLS 1.2 Encryption in transit

Phone and text provider

SIP

WebRTC Provider

WebRTC HTTP/TLS 1-2

Encryption in transit

Virtual Presence and collaboration

Catalyst Clients

WebRTC HTTP/TLS 1-2

Encryption in transit

Devices

Users

Configurable “Inactivity time-outs”

Passwords with strong complexity rules

ZFP design ensures no PHI is stored on local devices

Configurable “inactivity time-outs” to disconnect the device from a conference when all users have left.

CATALYST LIVE

Catalyst LIVE IoT

Hardened OS

MRI

Ultrasound

Encrypted at rest

- RDS service – encrypted – managed by AWS
- S3 service – encrypted – managed by AWS
- Encryption keys managed by AWS
- 256 AES encryption
- AWS has a key management service to access resources
- All server and web service resources connections require keys to access

Encrypted in transit

- TLS 1.2 for al https requests, WebSocket connections and WebRTC streams
- Qualys A+ rating

Security groups

- Only HTTPS and WSS traffic to AWS Load Balancer
- Only Load Balancer has access to EC2 Instances
- EC2 SSH access via docker generated public/private key for deployment
- Only EC2 has access to RDS, S3, Redis, Elastic Search instances

BAA with 3rd party services

- AWS – Signed Agreement
- WebRTC provider – Signed Agreement
- Phone and text message provider – No PHI sent via email, text or push

Event logging and exception logging

- Elk Stack – hosted by AWS

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