

# AWS cloud platform for device analytics and population health



## Client Requirement

Client is a leading provider for medical devices, cloud analytics and CitiusTech partner for 4+ years.

Client has several patient therapy devices interfaced with Hospital EHR systems through one-to-one binary interfaces.

This siloed data presents a challenge due to a focus on expanding patient care and device analytics from the client. Client would want to access device data seamlessly for clinical and administrative efficiencies

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**<12h**

Access to  
Device data

**>99%**

Platform availability  
on cloud

**6+**

KPI  
Screens

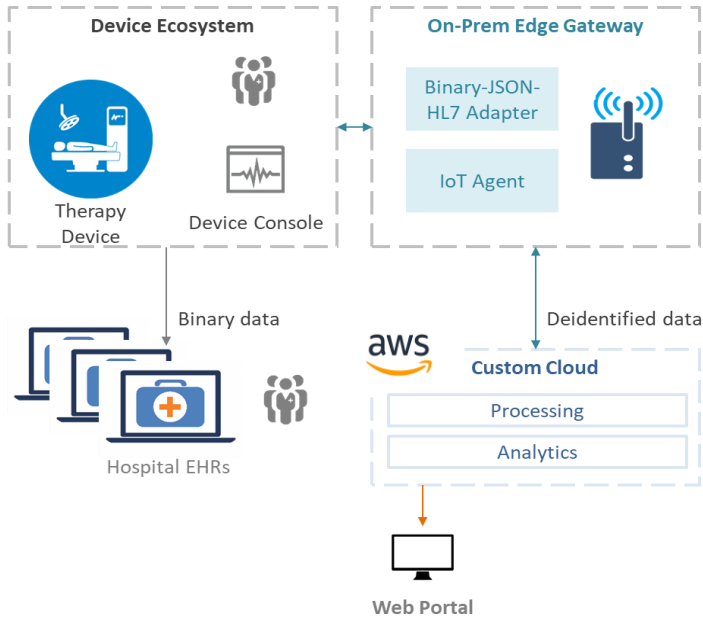
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## CitiusTech Solution

- Embedded development and testing on device SoC to convert binary data to HL7 and push to AWS cloud
- Development of an on-prem Edge gateway for bi-directional data transfer from Device to Cloud
- Development of device portal for insights with following features:
  - Patient clinical statistics: Effluent dose, FF etc.
  - Facility admin statistics: Downtime, utilization etc.
  - Remote configuration of devices
- Overall development enables the device to communication to other on-prem HIT devices and seamless update data from remote locations

## Technologies Used

- Python, JavaScript, jQuery, C++ for portal and SoC
- Amazon S3, lambda functions, Redshift, Postgres, Redshift, IAM



Solution Schematic

## Value Delivered

By partnering with CitiusTech the client was able to –

- Enable siloed devices to become interconnected ecosystem
- Reduce binary interface dependency through standard HL7 format
- Scale up analytics operations through seamless device data access
- Enable remote monitoring and configuration for their devices
- Analyze device operations & mitigate workflow gaps
- Open to future use-cases for AI-based population health and predictive device maintenance

## About CitiusTech

CitiusTech is a specialist provider of healthcare technology services and solutions to healthcare technology companies, providers, payers and life sciences organizations. With over 4,000 professionals worldwide, CitiusTech enables healthcare organizations to drive clinical value chain excellence - across integration & interoperability, data management (EDW, Big Data), performance management (BI / analytics), predictive analytics & data science and digital engagement (mobile, IoT). CitiusTech helps customers accelerate innovation in healthcare through specialized solutions, platforms, proficiencies and accelerators. With cutting-edge technology, world-class service quality and a global resource base, CitiusTech consistently delivers best-in-class solutions and an unmatched cost advantage to healthcare organizations worldwide.

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