AWS re:Invent

NOV. 29 – DEC. 3, 2021 | LAS VEGAS, NV

BIZ201

Embed scalable communication services into applications with AWS

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AWS

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MEDHOST

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Enterprise communications is undergoing a massive transformation

1.4 million voice or video calls per minute globally

2.2 billion SMS messages sent in 2020 in the US alone

319 billion emails sent globally in 2021

38x ↑ "Telehealth utilization has stabilized at levels 38x higher than before the pandemic" – McKinsey, 7/21

38.5% "38.5% of internet users worldwide used their mobile to make a video call in the past month [2nd qtr, 2021]" – Hootsuite, 10/21

80% "By 2023, 80% of the Global Fortune 500 will be leveraging API enabled CPaaS to enhance competitiveness, up from 20% today" – Gartner, 12/20

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Current AWS customers





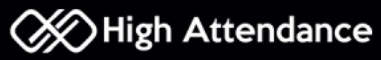
































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Applications for many industries, use cases

Healthcare | Financial services | Retail | Hospitality | Travel | and more

Build faster

Extend your existing apps

Simplify operations



Remote health and fitness



Distance education



Focus groups



Unified communications

Marketing promotions | Order status | Invoices | Password resets
Bulk notifications | Announcements | Scheduling | Appointments | Meetings



Video



Voice



Text/SMS



Email



Mobile in-app placement



Push notifications

Communication developer services



Amazon Chime SDK



Amazon Pinpoint



Amazon SES

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Amazon Chime SDK

BRINGING REAL-TIME COMMUNICATIONS TO YOUR APPLICATIONS



Amazon Chime SDK

Media services
Media sessions and services to support audio calling, video calling, and screen sharing

Phone integration
Inbound and outbound calling controlled by apps you build in AWS Lambda functions; SIP trunking

Messaging SDK
Highly scalable persistent messaging enabling AI/ML-enhanced workflows

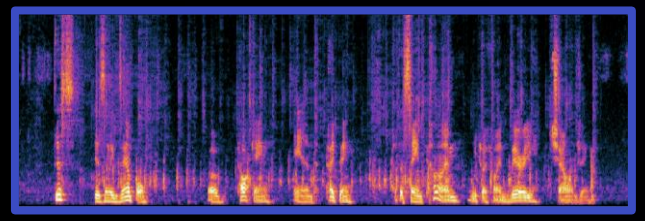
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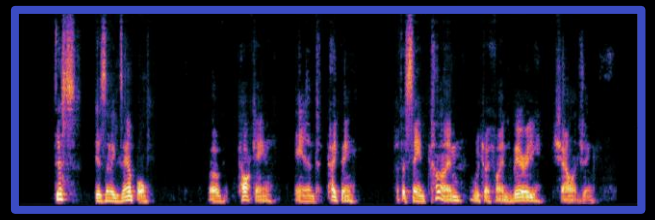
Amazon Chime speech enhancement

Noise reduction

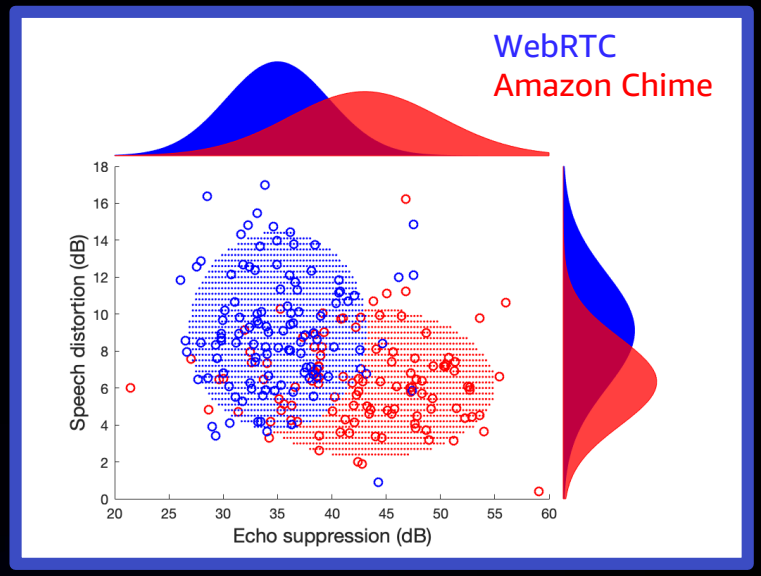
Noisy signal



Cleaner signal



Echo reduction and robust double-talk



Mic signal

WebRTC

Amazon Chime

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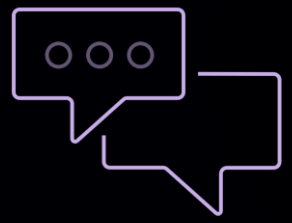
What’s new in 2021

AMAZON CHIME SDK



Media services

Live transcriptions, media capture, and background blur



Messaging

Push notifications and channel processors



PSTN audio

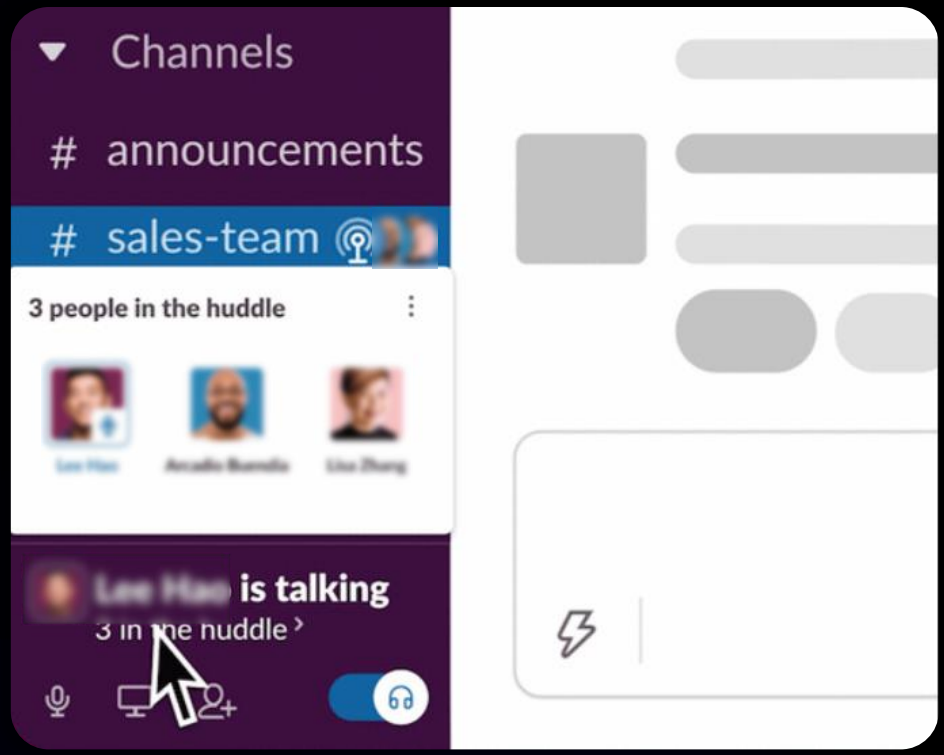
International number support, bridging, call recording

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Amazon Chime SDK

SLACK

slack



Slack and Amazon Chime SDK
Live transcription

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Amazon Pinpoint



Amazon Pinpoint

Segmentation
Dynamic or static lists

Sending across channels
SMS, email, push, voice

Analytics
Campaign and sending results

Campaigns and journeys
Automate and orchestrate

Personalization
Static or ML attributes

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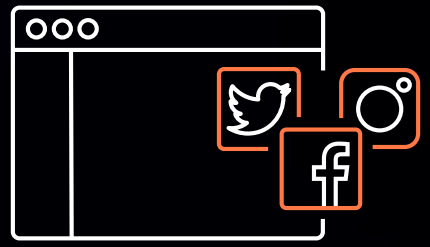
What’s new in 2021

AMAZON PINPOINT



SMS capabilities

10-digit-long codes, toll-free numbers, sandbox



Engagement investments

Journey controls, granular segmentation features



New channels

In-app messaging

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Provincial Health Services Authority

AMAZON PINPOINT



Built digital provincial vaccination system in less than 2 months

PHSA and the Ministry of Health were able to lower their costs by over 30%

More than 50 million vaccination-related SMS messages successfully delivered to citizens

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Amazon Simple Email Service (Amazon SES)

HIGH-SCALE INBOUND AND OUTBOUND CLOUD EMAIL SERVICE



Amazon SES

Send transactional messages
Keep customers up to date by sending automated emails

Send marketing communications
Promote products by sending content your customers want to see

Send notifications
Keep users informed by sending timely information, reports, alerts

Receive incoming emails
Close the loop by receiving inbound email

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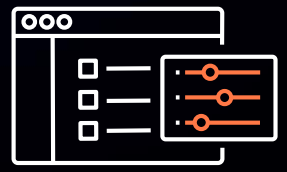
What's new in 2021

AMAZON SES



Assign configuration sets per email identity

Assign a configuration set to an email identity



Redesigned service console

New console helps to manage resources, collect activity data, and monitor reputation health



Add attachments of up to 40 MB

Request a limit increase to send/receive emails with a message size of up to 40 MB



Enhanced security with DKIM 2048

Allows senders to sign email messages with a cryptographic key

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Netflix

AMAZON SES



"We evaluated several email delivery solutions and decided on Amazon SES because it is flexible, affordable, highly scalable, has global reach, and promises excellent deliverability. Through a combination of the SES Dedicated IP offering and some strategies implemented on our end, after migrating to Amazon SES, we were able to streamline operations, improve Inbox Placement and increase our email sender reputation score."

Devika Chowla
Director of Messaging & Contact Engineering, Netflix

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Special guest

MEDHOST

Pandian Velayutham
Senior Director of Engineering
MEDHOST



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Agenda

- Who is MEDHOST?
- Challenges in hospital environments today
- Why secure communications is needed
- MEDHOST solution and architecture
- Future state

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About MEDHOST

OUR VISION: BE THE TRUSTED PARTNER THAT EMPOWERS HEALTHCARE ORGANIZATIONS TO ADVANCE THE PATIENT CARE EXPERIENCE AND IMPROVE BUSINESS OPERATIONS

Embracing healthcare's move to continuous care through community-based health strategies



Expertise for every step of your hospital's journey

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Communication challenges in hospitals today

Providers use more tools than we think

- Electronic health records
- Paper, pen, sticky notes
- Fax
- Pagers
- Intercom
- Voice messages
- Walk to another room

What is the impact to patients, hospitals, and staff?

- Delayed patient care
- Missed patient care opportunities
- Increased length of stay
- Missing patient care history
- Operational inefficiencies
- Provider burnout
- Missed communication to families

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Why secure communications?

For patients and families



- Improve patient care
- Reduce length of stay
- Improve family communications

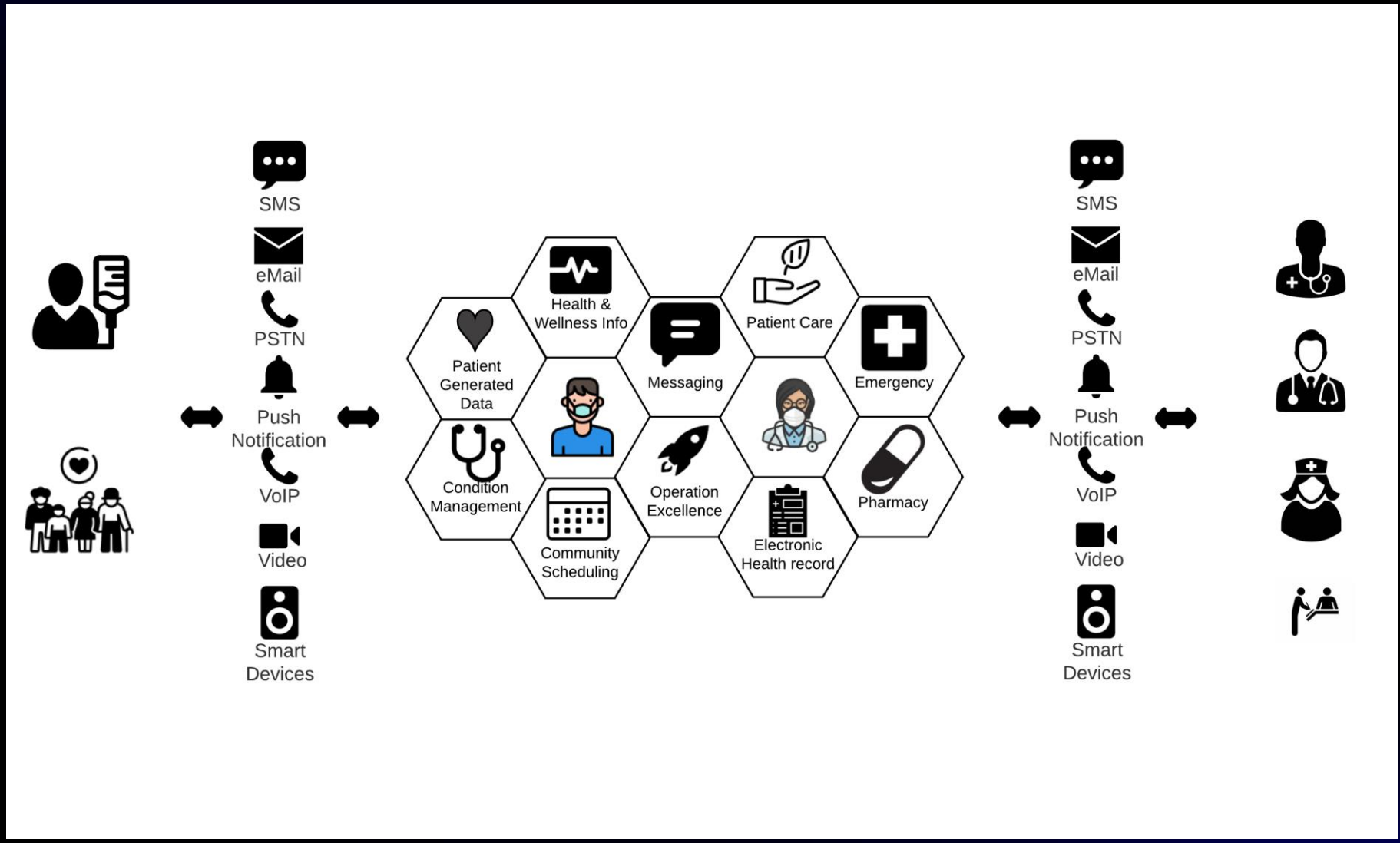
For hospitals and staff



- Improve clinician workflow
- Reduce provider burnout
- Increase operations efficiency
- Automate patient health records

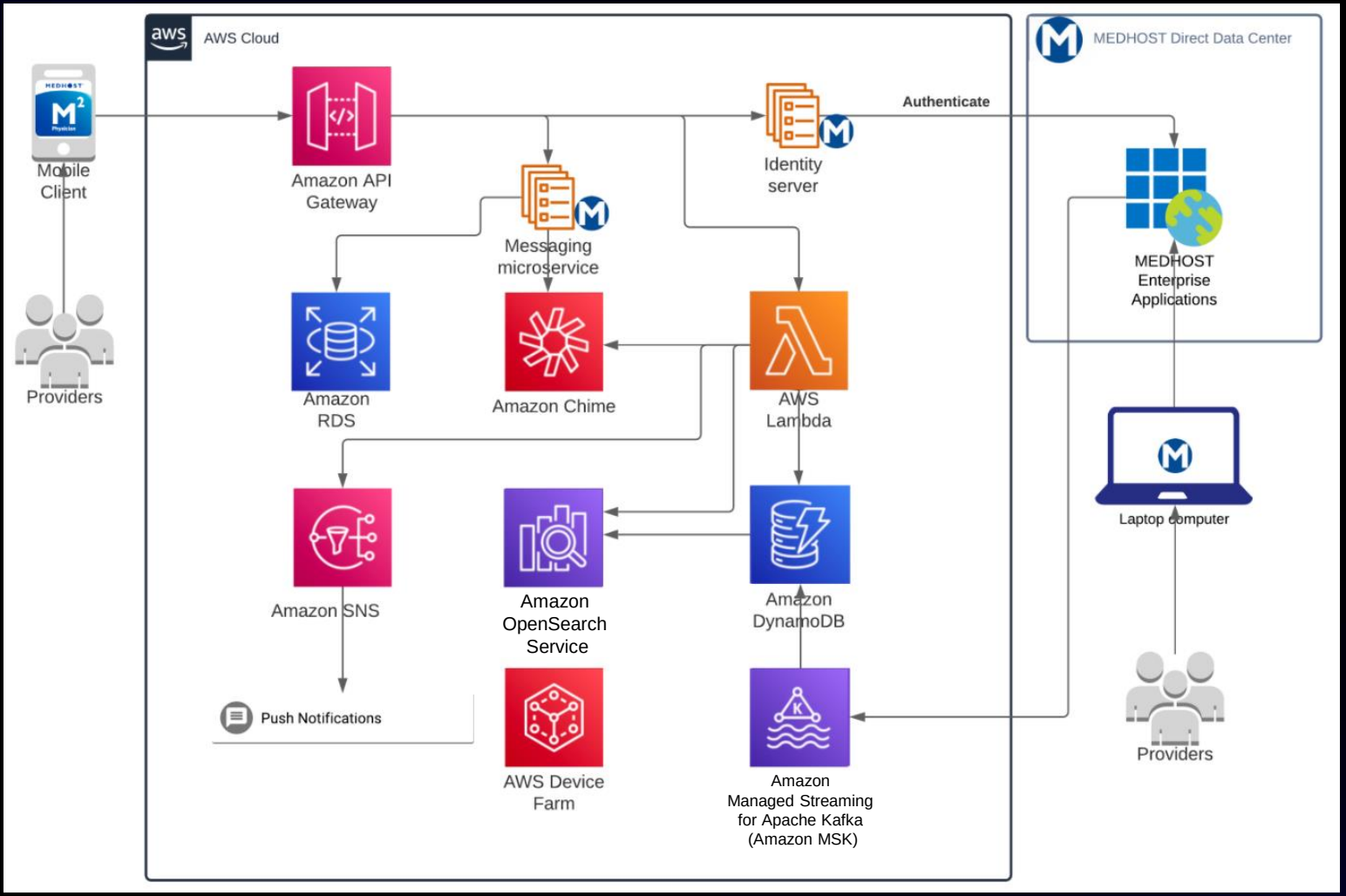
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MEDHOST secure communications solution



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Solution architecture



- Secures communications
- Elastic scalability of services
- Fits well with serverless architecture pattern
- Extensible to existing cloud services
- Enforces security policies
- HIPAA eligible
- Well-defined SDK (web and mobile)
- Future-proof
- Built-in AI/ML services

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Future state

Seamless conversion between communication channels

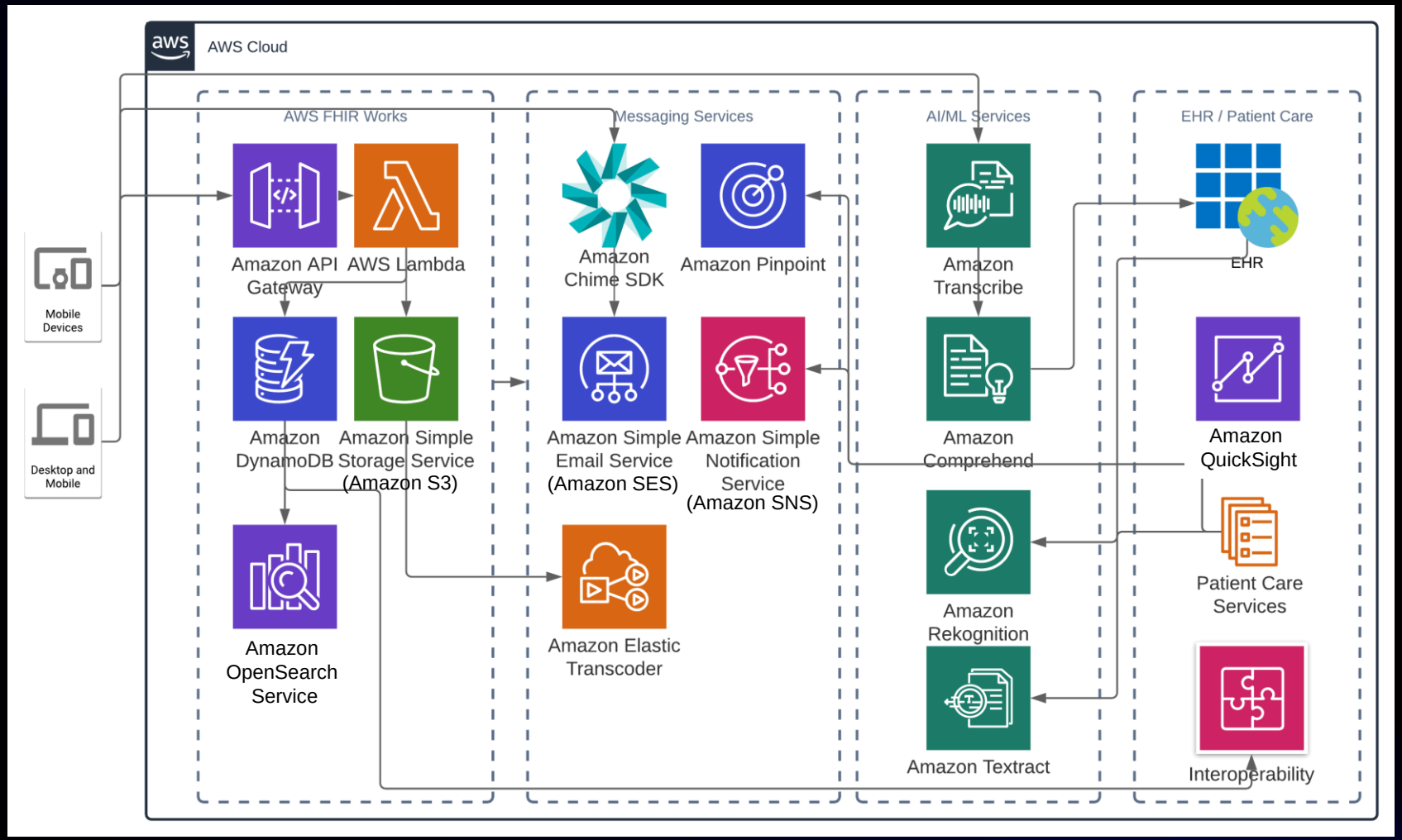
- PSTN to SMS
- SMS to voice
- SMS to video

Native device integration

- Mobile
- Web
- Smart devices

AI/ML integration

- Amazon Transcribe Medical
- Amazon Comprehend
- Amazon Rekognition
- Amazon Textract

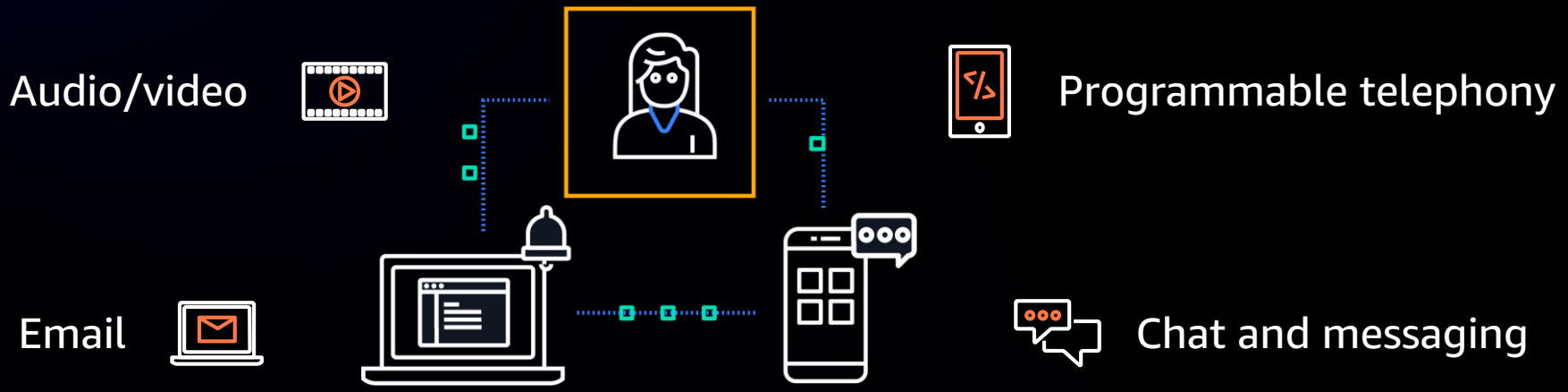


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AWS Communication Developer Services



Transactional | Asynchronous | Real-time

Amazon Chime SDK

Amazon Pinpoint

Amazon SES

Build and host your own | Build your own, host with AWS

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How to get started

AWS Communication Developer Services

Learn more at https://aws.amazon.com/business-applications/cds/

Amazon Chime SDK

Learn more at
https://aws.amazon.com/chime/chime-sdk

- Sample apps on GitHub
- Multiple use cases
- Explore samples

Amazon Pinpoint

Learn more at
https://aws.amazon.com/pinpoint/

Amazon SES

Learn more at
https://aws.amazon.com/ses

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Other AWS Communication Developer Services sessions

SESSION ID: BIZ201

Breakout: Embed scalable communication services into applications with AWS

SESSION ID: BIZ207-R1, BIZ207-R2

Chalk Talk: Email deliverability at scale with Amazon SES

SESSION ID: BIZ208-R1, BIZ208-R2

Chalk Talk: Enhancing audio and video with Amazon Chime ML and DSP

SESSION ID: BIZ303-R1, BIZ303-R2

Chalk Talk: Scaling business communications with Amazon Pinpoint

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Thank you!

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