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BIZ401-R

Build a resilient, scalable contact center on Amazon Connect

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Let’s meet the team



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Chalk Talk

A highly interactive content format with a smaller audience, Chalk Talks begin with a short lecture (10–15 minutes) delivered by an AWS expert, followed by a 45–50 minute open format Q&A session. Chalk Talks foster a technical discussion around real-world architecture challenges.



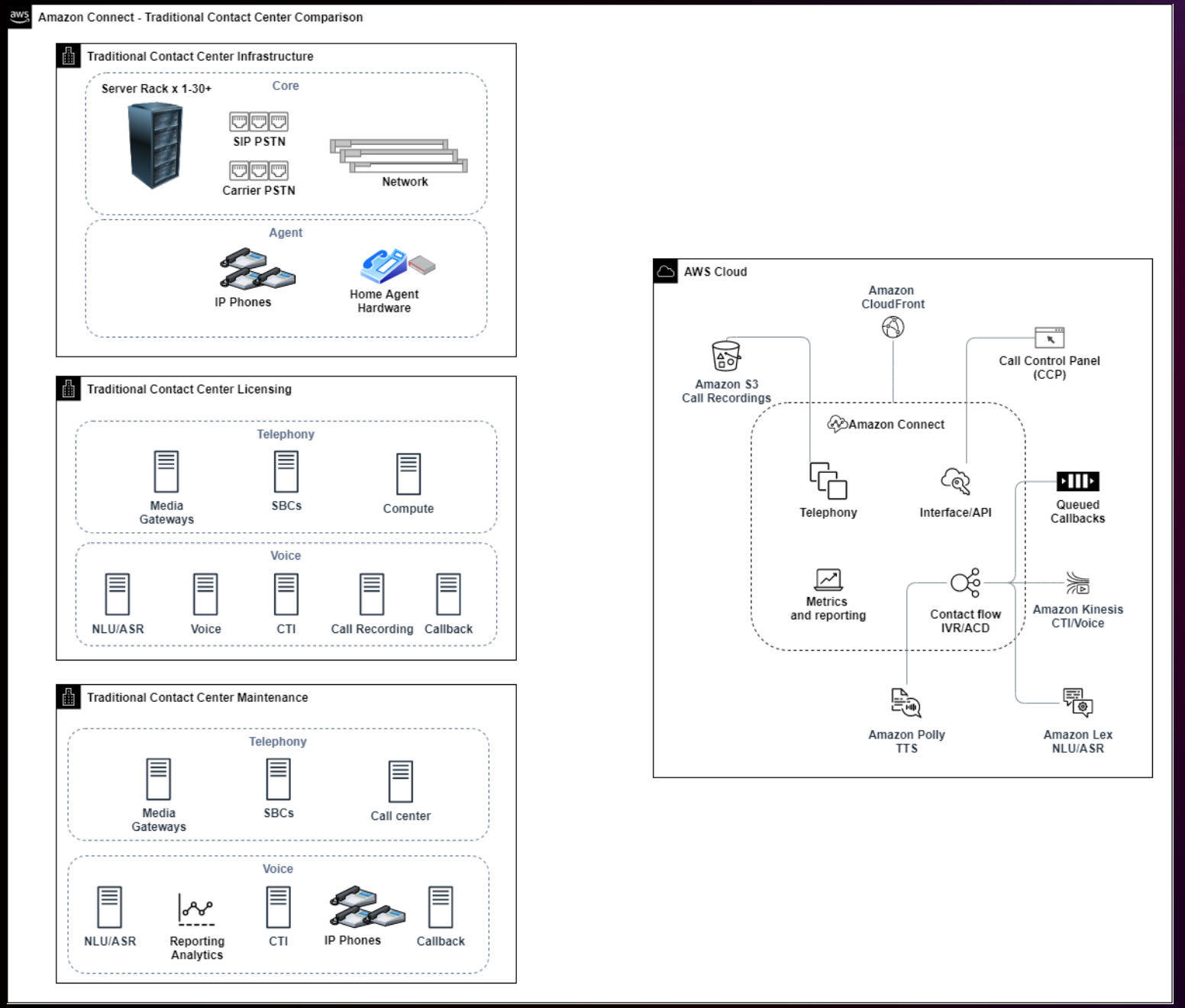
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Customer use case

“We are migrating our legacy contact center solution, implemented across two data centers, to Amazon Connect. How do we achieve the same highly available architecture?”

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Traditional contact center implementation



Typical Amazon Connect implementation

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AWS Regions and Availability Zones (AZs)

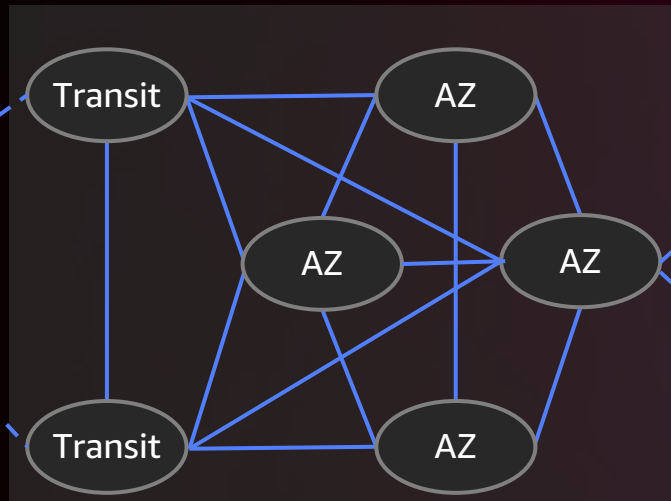
AWS Regions are physical locations around the world where we cluster data centers

Amazon Connect is available in
11 AWS Regions worldwide

us-east-1 (North Virginia)
us-west-2 (Oregon)
af-south-1 (Cape Town)
ap-northeast-1 (Tokyo)
ap-northeast-2 (Seoul)
ap-southeast-1 (Singapore)
ap-southeast-2 (Sydney)
ca-central-1 (Canada)
eu-central-1 (Frankfurt)
eu-west-2 (London)
us-gov-west-1

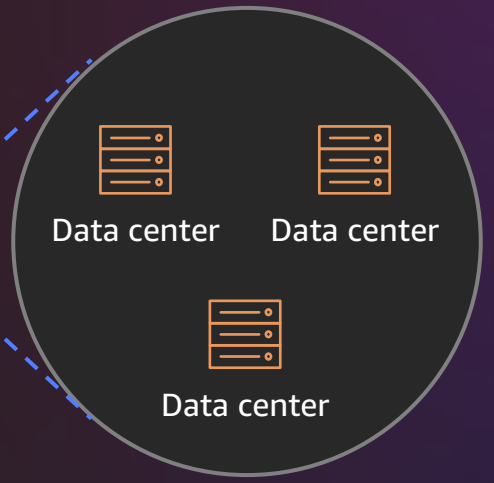


Each AWS Region has multiple AZs



A Region is a physical location in the world

Each AZ is one or more discrete data centers

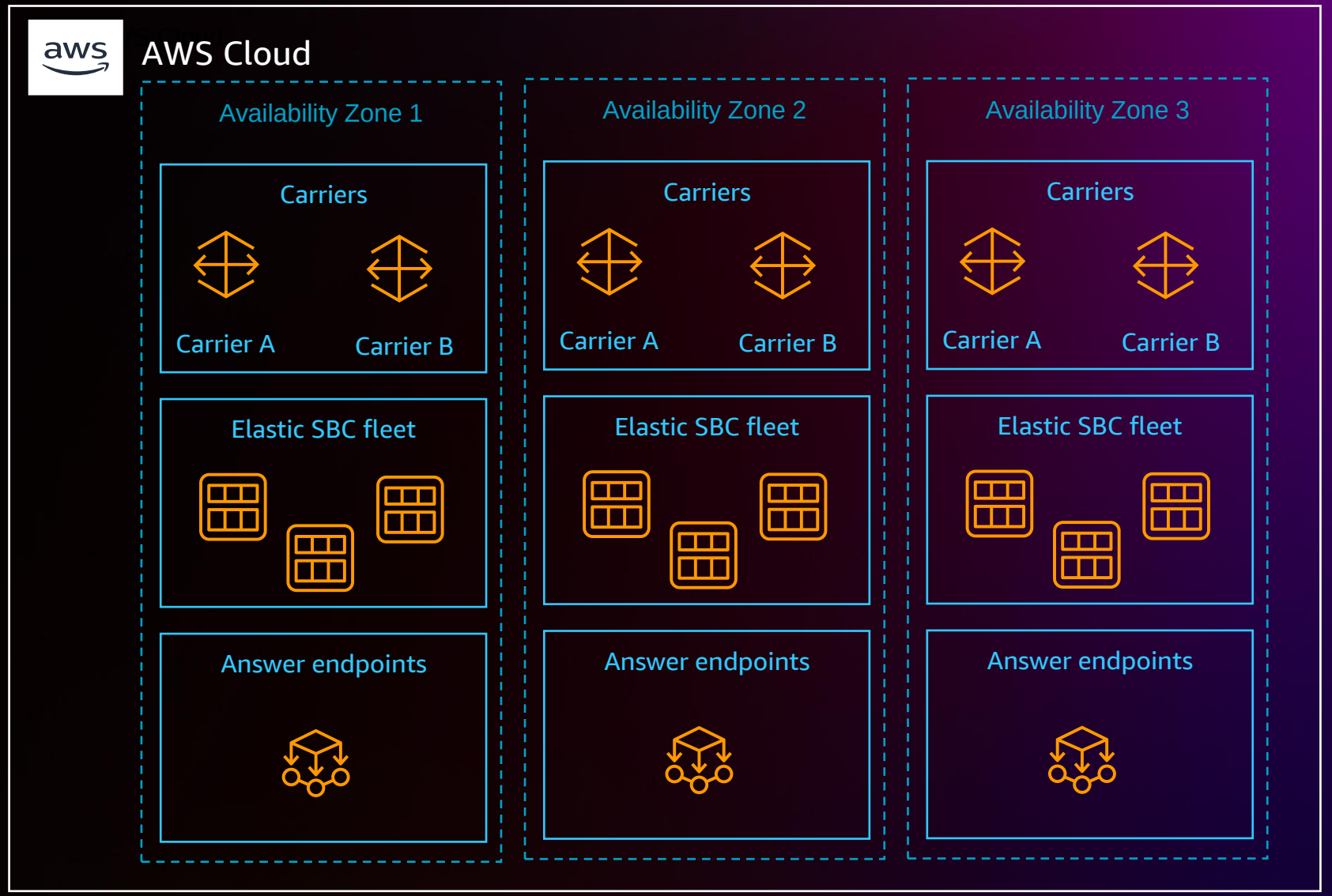


Data centers, each with redundant power, networking, and connectivity, housed in separate facilities

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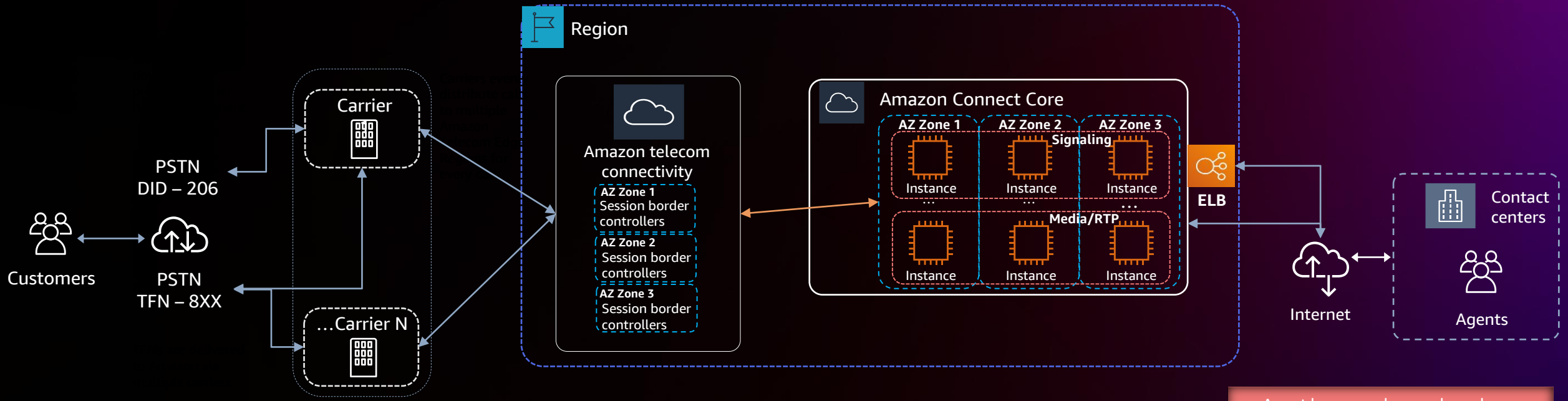
Built-in redundancy and reliability

- Amazon Connect's architecture is highly available and runs across multiple Availability Zones in an AWS region to provide fault tolerance in the event of a server failure or Availability Zone outage
- Multiple Tier-1 carriers
- Elastic and scalable Amazon SBCs
- AWS data centers are designed with significant excess bandwidth to ensure sufficient capacity in the event of an AZ disruption, should traffic need to be shifted to remaining AZs



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Single-Region telephony and softphone architecture



Callers reach the contact center via carriers operating across multiple AZs at all times

Outbound calling load-balanced across multiple telephony providers

Agent browser chooses based on reachability from at least two servers across multiple AZs

RespOrg routes US toll-free traffic across multiple carriers in an active-active fashion

Agent browser uses a WebSocket connection through ELB

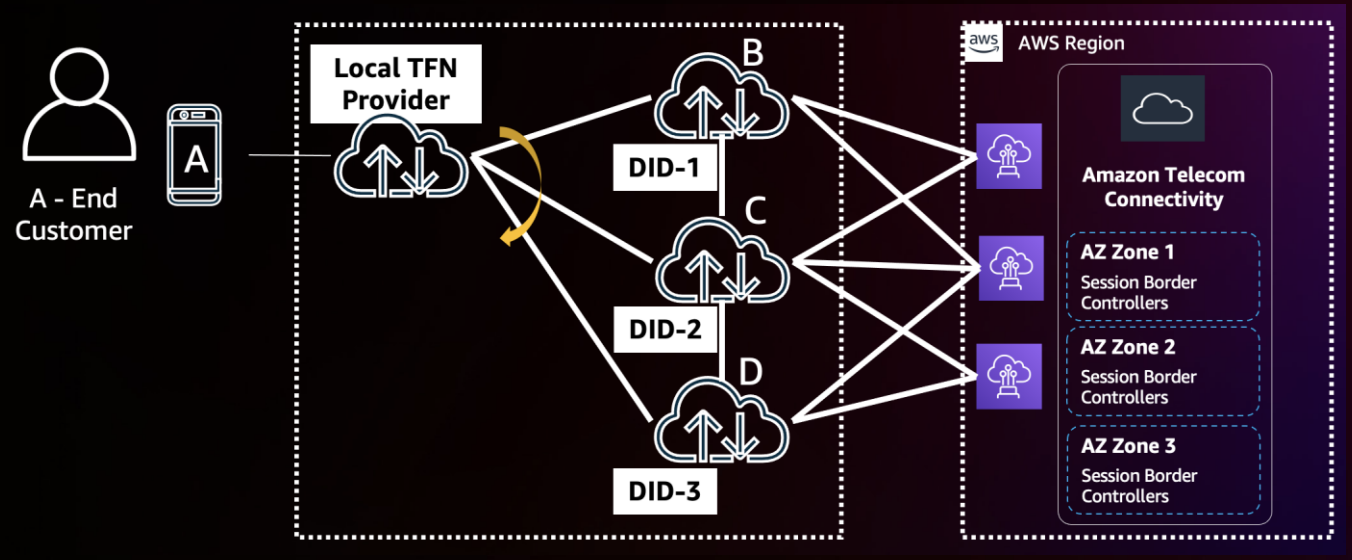
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Business continuity plan

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BCP scenario 1: Carrier redundancy

- This scenario covers the event when one of the carriers is down
- Our customers leverage the multi-carrier capabilities of Amazon Connect and configure their TFN numbers to distribute across DIDs from different carriers available in the Region
  - For US implementation, TFNs in Amazon Connect provide multi-carrier redundancy
  - Outside of the US, local TFNs distribute traffic to DIDs from multiple carriers

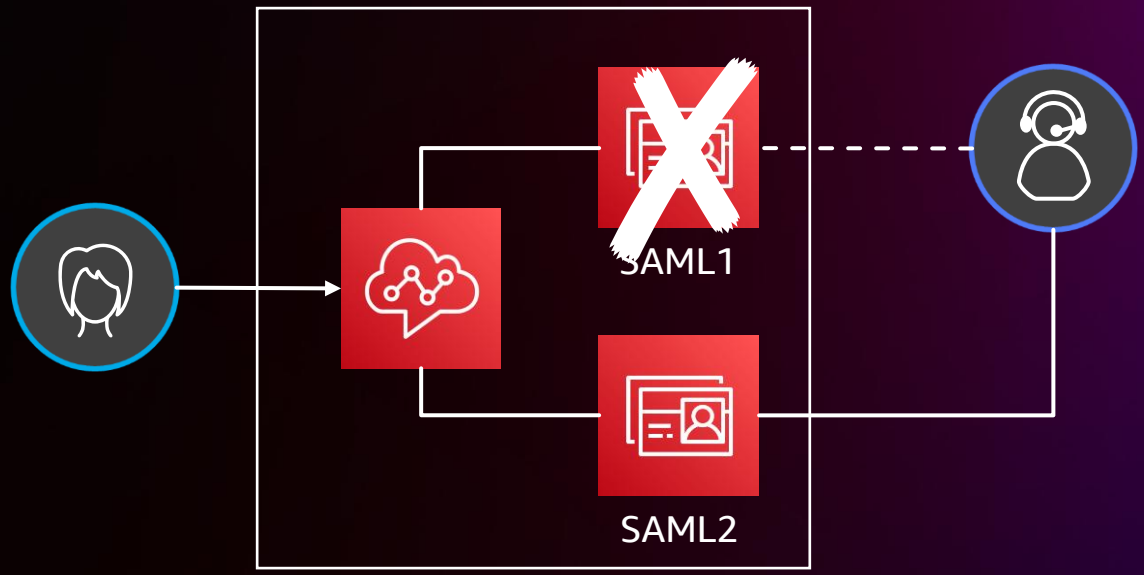


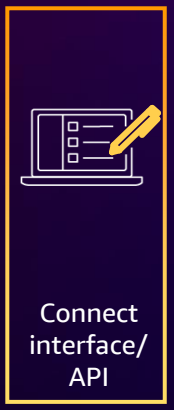
Telephony

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BCP scenario 2: Directory duplication

- IdP provider outages
- SAML duplication





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BCP scenario 3: Multiple internet access

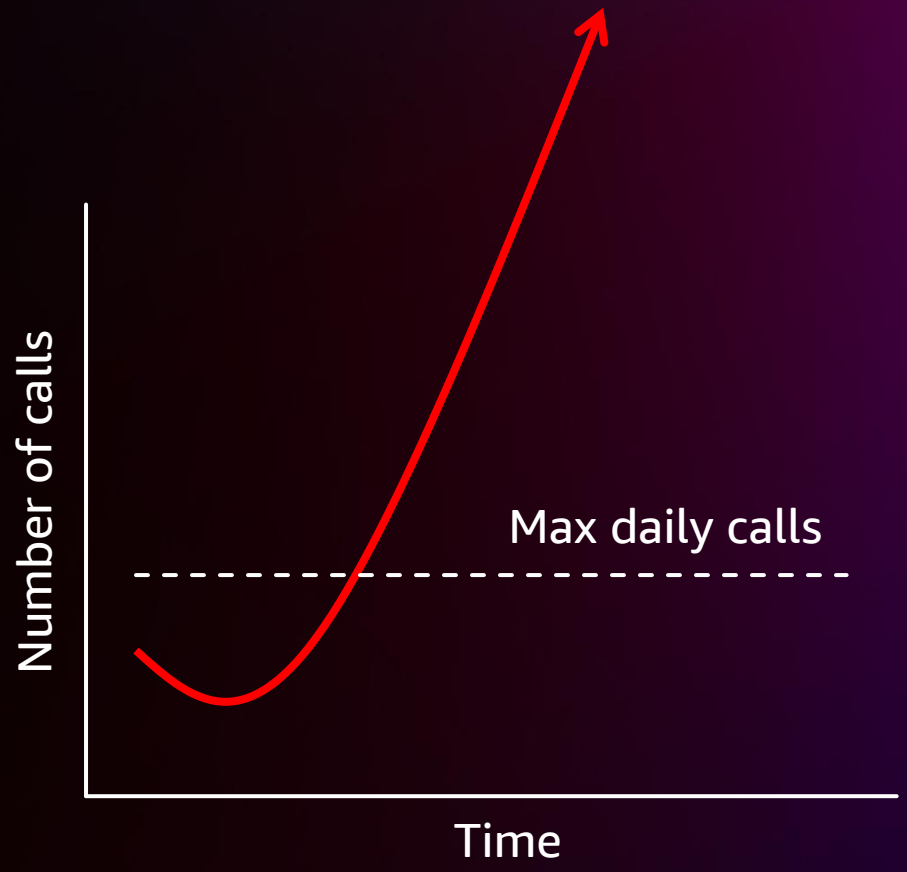
- Dual path to the internet from agent locations
- ISP1 and ISP2 / Direct Connect and ISP1



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BCP scenario 4: Avalanche

- Avalanche is the event when an unexpected very high number of calls is received by the contact center in a short period of time, and there is not enough staff to manage the traffic volume
- Set up a queue limit, deliver a ”call us back later” message, and end the call
- Bring back-up agents (no time)
- Callback would not help
- What have you done in this situation?



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Thank you!

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