

CES + Five9 for Amex Overview

April 1st , 2025



Google Cloud

Five9

Pre-Workshop Sessions (virtual)

These sessions will be recorded and shared with the team to work around everyone's calendars.

An Introduction to core Five9 CCaaS Components (March 21st) [60 mins]

- Contact Routing
- WEM
- Outbound Dialer
- Agent Workspace
- Call recording

CES: Speech (STT, TTS, Voices) and GenAI foundations initiatives (March 27th) [60 mins]

- Review key customer and agent facing AI features

CES + Five9 for Amex - Overview (April 1st) [60 mins]

Agenda Tuesday April 1st (EDT) - Remote

	Time	Session Title	Duration	Overview
1	10:55 - 11:00		5 min	Arrivals
	11:00 - 11:05	Kick-off & Google Welcome	5 min	Lily Britt Gloria Vargas
2	11:05 - 11:20	Vision for American Express' next generation cloud + AI first solution	15 min	Tomás Coyne
3	11:20 - 11:35	Overview of the key technical components of the solution	15 min	David Paine
4	11:35 - 11:50	Accelerating Transformation with Syndeo	15 min	Oliver Lennon
	11:50 - 12:00	Next Sessions & Workshop Details	10 min	Lily Britt Derek Bakker



01

Building a next generation cloud solution



What We Heard: Priorities for Transformation



Enterprise grade and globally scalable in line with American Express' global footprint

Adheres to and is in line with your approved corporate data & cloud strategy

Modular solution - no single vendor lock-in preventing you from innovating

Co-teamed innovation - American Express & Google will co-create products

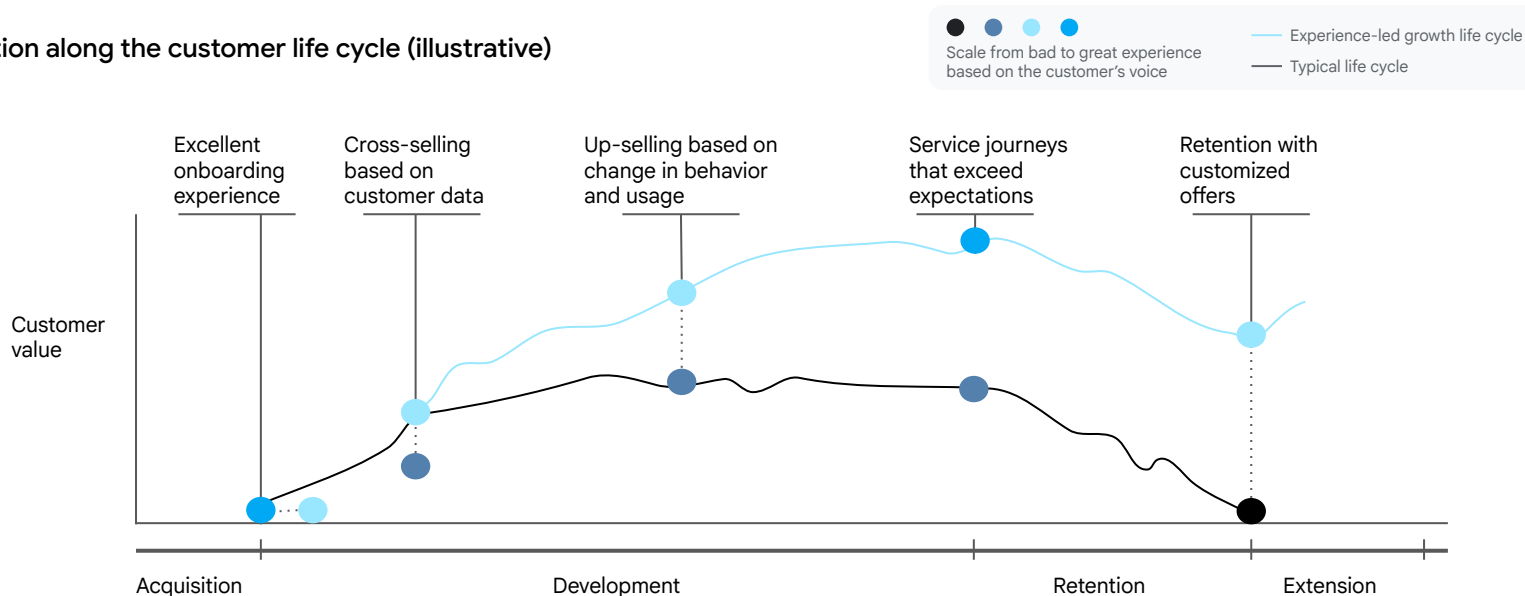
Google's \$75bn investment in AI infrastructure - outpacing any other vendor

Highly strategic relationship between American Express & Google



EXPERIENCE-LED GROWTH STRATEGIES BOOST ENGAGEMENT, SATISFACTION, AND RETENTION

Value creation along the customer life cycle (illustrative)



McKinsey

Typical impact

15 - 25%

Typical increase in cross-selling

5 - 10%

Higher wallet share

20 - 30%

Higher satisfaction and engagement





THE CURRENT STATE PROHIBITS AMERICAN EXPRESS FROM CONSISTENTLY PROVIDING **HIGH-QUALITY CUSTOMER EXPERIENCES**

SITUATION

Complex infrastructure that prevents American Express from modernizing its customer and agent experiences without significant toil, time, and, cost

Based on end-of-life Genesys Engage and Nuance voice recognition technology. These legacy, on-premise, technologies include (but not limited to):

- Genesys GAAP
- Nuance Recognizer
- Nuance Vocalizer
- Nuance Gatekeeper
- Genesys Workspace Desktop Edition (WDE)
- Genesys WFM (highly customized)
- GVP, Outbound Dialler and Routing/IRD

IMPACT



Outdated Technology Stack



Legacy Business Logic



Lack of Customer + Agent Insights



Customer Data Fragmentation



Omnichannel Execution





THE VISION: AN AI-POWERED, CLOUD-NATIVE FUTURE THAT ALLOWS AMERICAN EXPRESS TO INNOVATE AT ITS OWN PACE



Best of breed solutions

Built with best-of-breed components and providers, designed to meet American Express' specific needs and the ability to enhance capabilities with Generative AI as and when required.



Surrounded by Google AI

Ensuring continuous investment and advancement. We provide cutting-edge AI capabilities from day one and a future-proof foundation for ongoing innovation and evolution – directly from the vendor who owns the AI capability.



A De-Risked Approach

A commitment to transform away from current architecture with a de-risked approach, that minimizes disruption and allows American Express to innovate at their pace



Global Scalability

A globally scalable platform that aligns with American Express' data strategy, providing the security, compliance, and flexibility needed to support operations across the globe



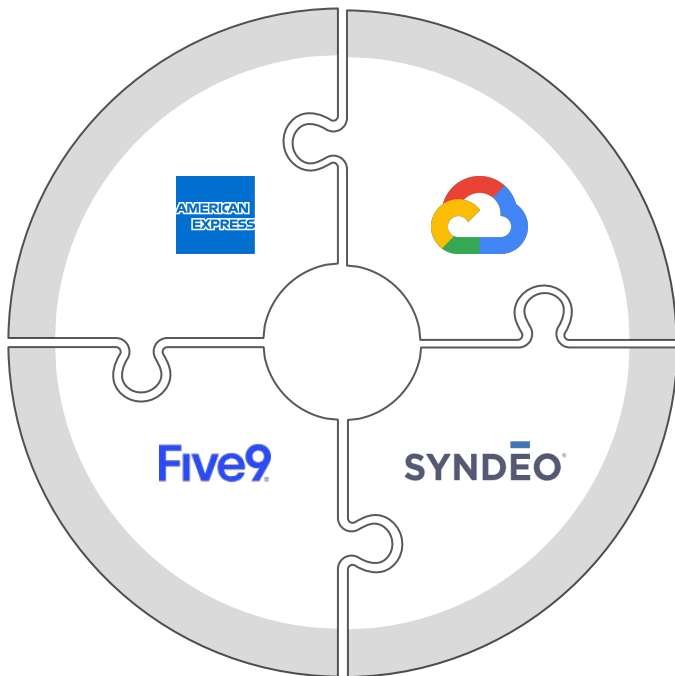
Your Vision: Provide the world's best customer experience every day.

Backing Our Customers | Backing Our Colleagues | Backing Our Communities





MODERNIZING AMERICAN EXPRESS' ENGAGEMENT PLATFORM BY TRANSITIONING TO **A NEXT-GENERATION CLOUD SOLUTION**

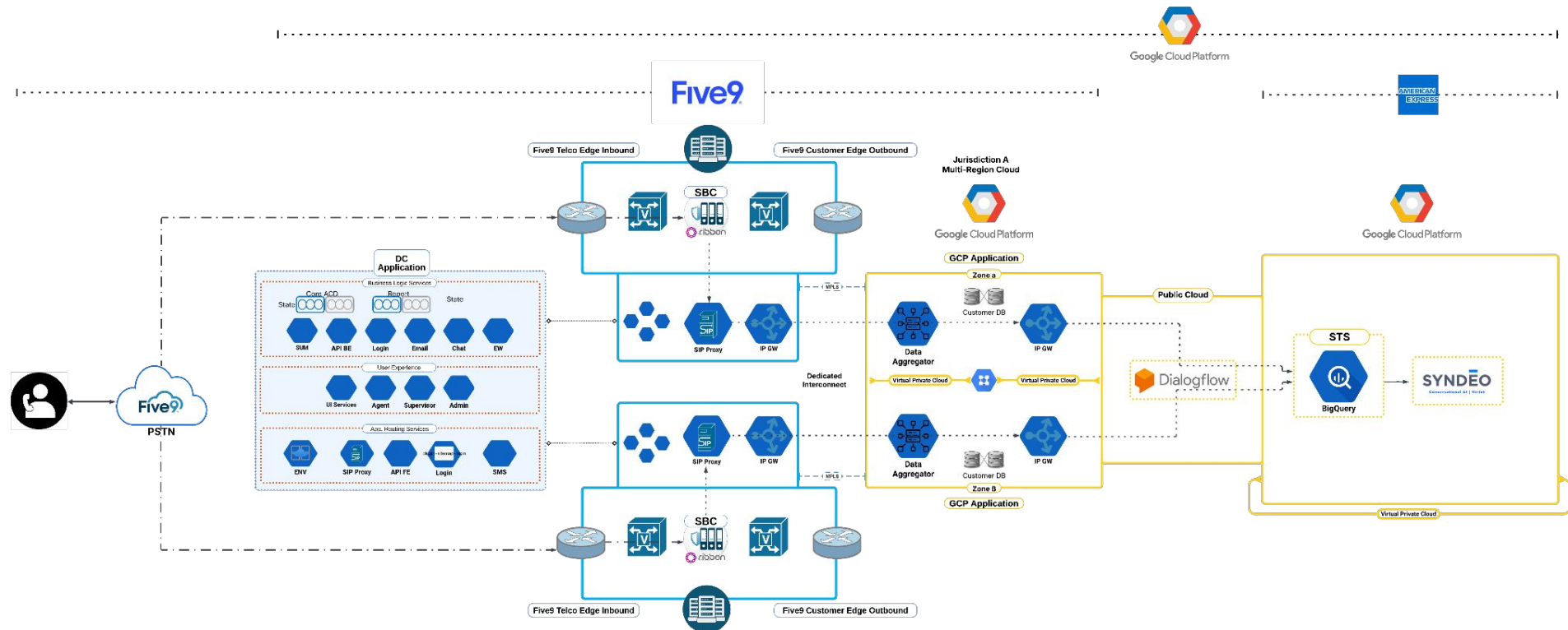


- **Accelerated and low risk move to the Cloud** – months rather than years to move American Express' existing “as is” IVR and core contact center into Google's Customer Engagement Suite (CES) with Syndeo and Five9.
- **Conversational AI at Scale** – replacing Genesys & Nuance IVR with Google's diverse and broad portfolio of AI models, tools, and services to deliver AI agents and applications.
- **Agentic AI Experiences** – build agentic experiences rapidly using while leveraging existing data and integrations, built during the Darwin project
- **Cloud Resilience & Scalability** – Five9's global CCaaS infrastructure natively operates within Google's world class compute availability layer and is engineered for global scale, ensuring operational continuity and cost efficiency.
- **Enterprise 360 Customer View** - the only provider that allows American Express to know more about their card members before they engage, while they engage, and after they engage to drive hyper-personalization
- **Real-time Data & Analytics** that is tightly integrated with American Express' Lumi data strategy and enables rich data insights, improving decision-making and optimizing customer and agent experience.
- **Alignment with Corporate Strategy** - a Google cloud solution aligned to the approved American Express cloud and data governance blueprints.



David

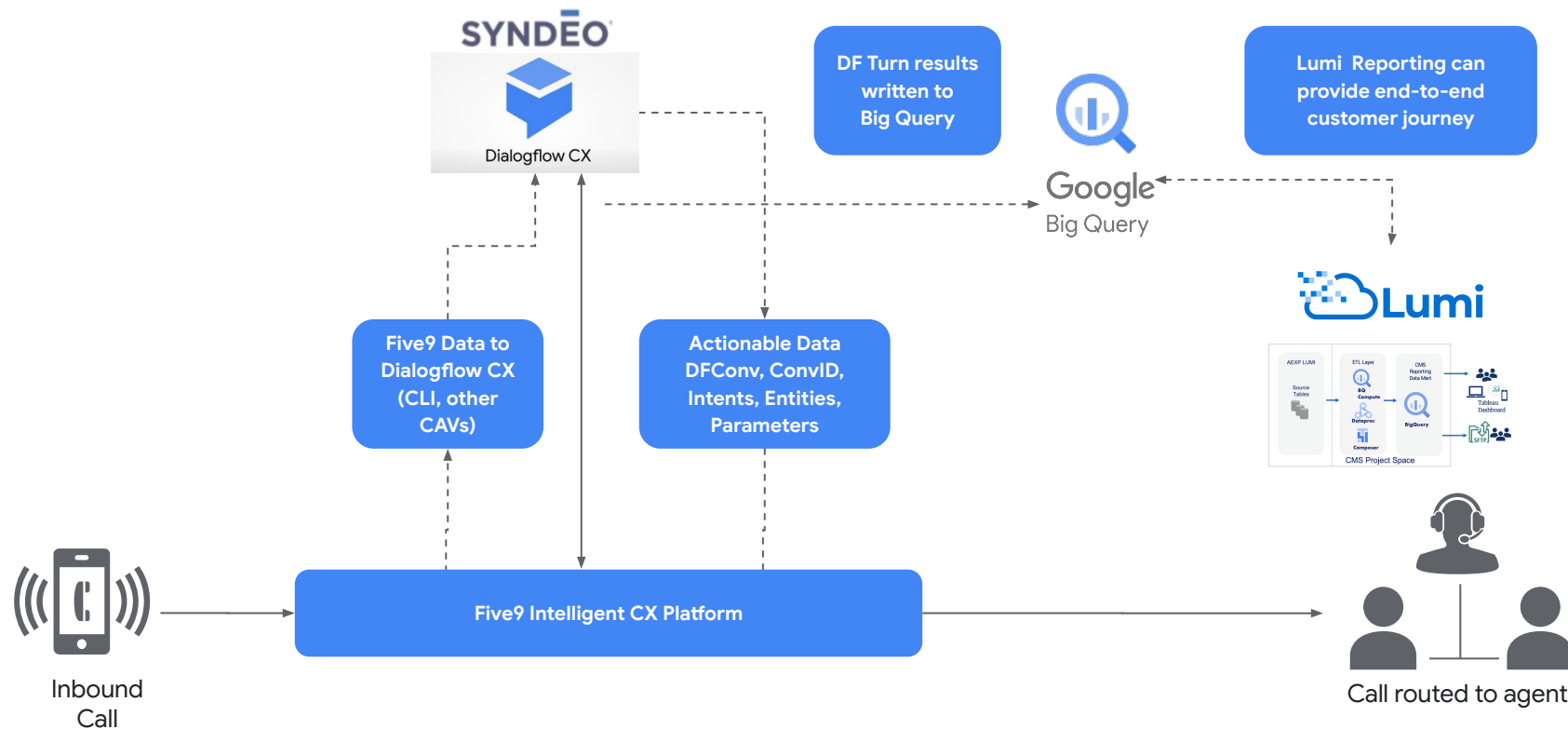
FIVE9 DIRECT GOOGLE ARCHITECTURE





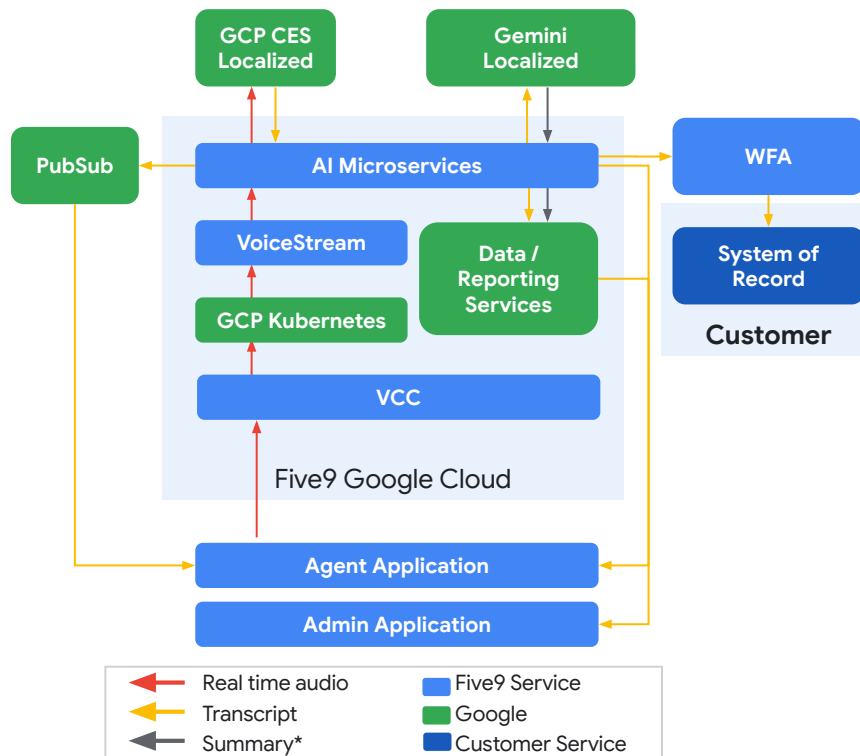
David

Five9 Direct Google Conversational Agents Integration





Five9 Agent Assist Architecture



Five9 Services

- **Admin Application:** configure Agent Assist and view dashboard/transcripts (i.e. Admin UI)
- **Agent Application:** manage how the agent interacts with the product (i.e. Agent Desk Plus, Agent Desktop Toolkit, Agent Assist)
- **VCC:** Five9 core CCaaS solution
- **VoiceStream:** Enable ability to stream real time audio
- **AI Microservices:** run algorithms, manage back-end processes, ingest and trigger actions for other applications
- **WFA (workflow automation):** send transcription or summary to an outside solution e.g. CRM, GCP (optional)

Google

- **Google CES (Customer Engagement Suite):** Convert speech to text to generate transcript and perform intent detection for NLP use case (Agent Assist Advanced)
- **Google Gemini Services:** Generate LLM summary of call transcript
- **Google Kubernetes:** Orchestration system for automating software deployment, scaling, and management
- **Data / Reporting Services:** Data warehouse and Agent Assist reporting capabilities built on Google BigQuery, Google Datastore and Looker. Transcripts retained for 60 days.
- **PubSub:** Push information (guidance, summaries, call controls) to the agent UI in real-time (data stored for 60 secs for reliability purposes, deleted afterwards)

* Note: AI Summary follows the same flow as Transcripts. Only difference is the additional flow to/from Azure for the generation of summary highlighted in purple



David

Software Component Architecture



SYNDEO



Generative Models

- Vertex with Playback
Invoked from IVA
deterministic Flows
- Multimodal Live
Models
Gemini Flash 2.0



Five9

GCP Org

Five9
SBC & Virtual
Contact Center

Five9
Data Cache
IVA Results

Intelligent Virtual Agent

Google CES
Dialogflow CX
NLP | TTS | STT

SYNDEO
Imported Amex
IVR Logic

Five9 Rest Messaging API

Realtime and
Historical Data

Data Storage

Five9
Data Aggregator

Big Query
Conversational/
Interaction Insights

Agent Assist

Knowledge |
Summarization
Sentiment |
Translations

Reporting Dashboards

Lumi Data

Surface Data from Lumi

Five9 Operational
Management Reports

Syndeo Native
Integration

Chat Widget

Five9 Desktop
Standalone or
CRM integrated

Core Five9 CaaS

Outbound
Marketing, Collections &
Compliance

Quality Management
Marketing, Collections &
Compliance

Performance Management

Five9 Native

WEM

Five9 ASP model of Verint

Five9



Google Cloud

Five9



02

Amex VR Transformation and Acceleration

Modernize With Iva Cloud Accelerator

From Legacy To Responsible Agentic AI



Modernize

Extract Amex GAAP definitions from Genesys Engage – import into Syndeo on GCP

Remove Dependency On Genesys



Enhance

Immediate access to the best-in-class CES Speech (STT, TTS, Voices) AND chat and omnichannel

Remove Dependency On Nuance



Extend

Blend deterministic with generative agents to deliver innovation at a pace controlled by Amex

Provide A Pathway For Responsible Agentic AI

Innovation Approach VS Typical Migration

Accelerated Innovation Delivers:

- Increased Revenues & Customer Satisfaction With Personalization

Google
ACCELERATED INNOVATION
APPROACH WITH

SYNDEO + **Five9**

Delivered In Multi-Month



IMPORT &
ENHANCE



ENHANCE



SYNDEO



**GOOGLE CUSTOMER
ENGAGEMENT SUITE**

Five9

GENERATIVE AI



HYPER PERSONALIZATION



DIGITAL ENGAGEMENT

MULTI-YEAR (~4 YEARS)

Typical Migration Approach

- Migration becomes complex
- Enhancement delayed until end

ANALYZE



DOCUMENT



DESIGN &
ENHANCE



BUILD &
ENHANCE



TEST



ENHANCE



Typical Migrations Means:

- Guaranteed cost of migration
- A high risk of impacting existing business KPIs
- A 1% drop in containment ~\$8m of increased cost

Intelligent Automation Dashboard Applications Integration Reports Personas Users Import **Export**

Export

This page lets you save various details about your module(s) in XML format, including the callflow definition and any Product-specific 'Data' that has been uploaded. It also enables you to download any audio prompts that you have previously uploaded.

*** What to Export**

- ☒ Export Everything
Includes all callflows, uploaded grammars, product-specific settings (e.g. web service details in Balance Enquiry, or store information in Store Finder), and all uploaded audio prompts.
- ☐ Export Prompts Only
Includes only uploaded audio files - both those that are part of the callflow and those that are product-specific (e.g. store information prompts in Store Finder).
- ☐ Export Product-Specific Data and Prompts Only
Includes only settings and audio prompts that are product-specific; does not include callflow information or 'static' prompts or grammars.

*** Modules to Export**

- Activate Card
- App - Card Services Application
- App - Certification RM Line
- App - Commercial Credit
- App - Commercial EMEA
- App - Credit
- App - Dynamic Transfer Application (Not used)
- App - Executive Relations Application
- App - Fall Over Application
- App - GNA
- App - ICC Application
- App - ICC Premium Application
- App - Insurance Application
- App - Merchant Credit / Risk
- App - Merchant EMEA
- App - Outbound IVR Application
- App - Premium Application
- App - UK Merchant
- Availability Disabled (Outbound)

Hold Ctrl to select multiple modules

Extract
definitions from
Genesys
Engage – GAAP

Intelligent Automation Dashboard Applications Integration Reports Personas Users Import Export CTI Viewer Call Monitor Administration

Invoke

edit title

Add Description

Script Unit Tests Preferences

Switch script type
Complex script

```
def url;
if(env == 'e1' || env == 'E1')
{
    url = 'https://vruspayment-dev.aexp.com/voice/payment/v1/paymentHistory';
}
else if(env == 'e2' || env == 'E2')
{
    if(cardNumber.equals('371726645523003')){
        url = 'http://ivrapp1330-vip.phx.aexp.com/voice/Web/us-com-20230808VX/data';
    }
    else if(cardNumber.equals('372284272464009') || cardNumber.equals('372738229833004') || context.get('context.logError("inside flat file");
```

Update Cancel

SYNDEO

HOME

REPORTS

EXPERIENCE APPS

FLOWS

AI WORKBENCH

WEB

INTEGRATION

DEPLOYMENTS

TRANSFER

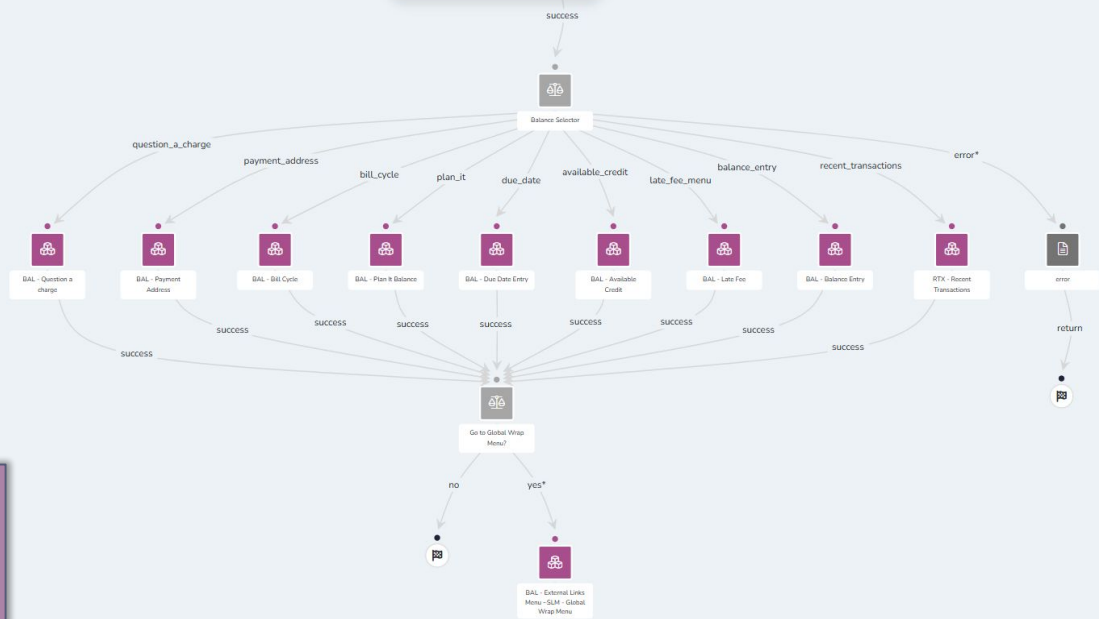
BUSINESS SETTINGS

AMEX Pilot

User Icon

BAL - Start Module

STEP



Save

- Message
- Paragraph
- Question
- Intent
- Decision
- Script
- Variables
- Notify
- Flow
- Switch
- Route
- Catch
- End

Edit Return Types

Edit Parameters

Chat Simulator

hey

Welcome to American Express.

This call may be recorded, monitored, and analyzed for compliance and to improve our systems.

What are the last 4 digits of your card security number?

Import definitions to the Syndeo IVA Cloud Platform

Your A.I. Settings

Training











Normalization

Tuning Parameters

LLM Configuration

Other

Create New LLM Configuration

Name	Type	Description	
Gemini-2.5-pro	 Gemini	Using gemini-2.5-pro-exp-03-25, Amex digital assistant system instructions.	View 
Gemini-Guard-Rails	 Gemini	Guard Rails using gemini-2.0-flash-001.	View 
Llama-3.2	 Meta	Using llama-3.2-3b-instruct, no set default system instructions.	View 
Claude-3.7-Sonnet	 Anthropic	Using claude-3-7-sonnet-20250219, no set default system instructions.	View 
DeepSeek-V3	 DeepSeek	Using deepseek-v3-0324, no set default system instructions.	View 

Extend with
Gemini and
Vertex Model
Garden

BAL - Start Module

STEP



Edit Return Types

Edit Parameters

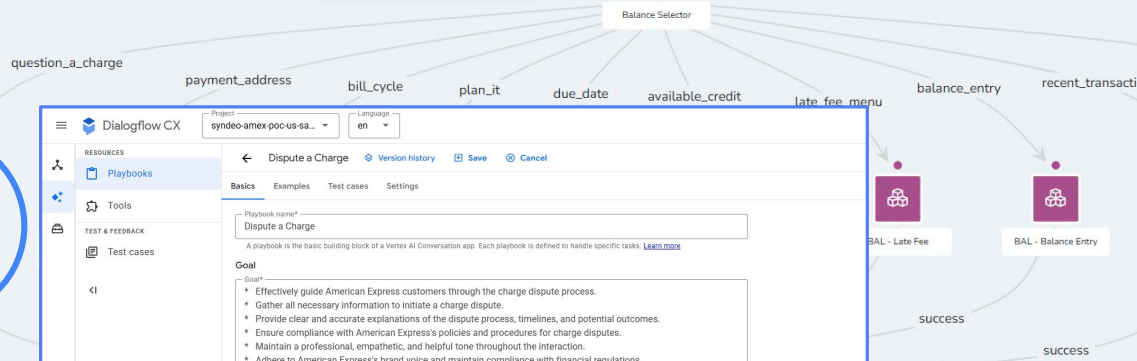
Chat Simulator

hey

Welcome to American Express.

This call may be recorded, monitored, and analyzed for compliance and to improve our systems.

Extend deterministic flows with Generative AI



Dialogflow CX

Project: syndeo-amex-poc-us-sa... Language: en

RESOURCES

Playbooks

Tools

TEST & FEEDBACK

Test cases

← Dispute a Charge

Version History Save Cancel

Basics Examples Test cases Settings

Playbook name*

Dispute a Charge

A playbook is the basic building block of a Vertex AI Conversation app. Each playbook is defined to handle specific tasks. [Learn more](#)

Goal*

- * Effectively guide American Express customers through the charge dispute process.
- * Gather all necessary information to initiate a charge dispute.
- * Provide clear and accurate explanations of the dispute process, timelines, and potential outcomes.
- * Ensure compliance with American Express's policies and procedures for charge disputes.
- * Maintain a professional, empathetic, and helpful tone throughout the interaction.
- * Adhere to American Express's brand voice and maintain compliance with financial regulations.

High level description of the goal the playbook intends to accomplish. [Learn more](#)

Instructions

Instructions

- 1. ****Understand the Customer's Request:**** Recognize and acknowledge that the customer wants to dispute a charge.
- 2. ****Gather Necessary Information:**** Prompt the customer for the following information about the disputed charge:
 - Date of the transaction
 - Merchant name
 - Transaction amount
 - Reason for disputing the charge (e.g., unauthorized, incorrect amount, goods/services not received, defective merchandise, etc.)
- 3. ****Explain the Dispute Process:**** Clearly outline the steps involved in the dispute process:
 - Investigation by American Express
 - Potential for temporary credit during the investigation
 - Timeline for resolution
 - Possible outcomes (e.g., charge removed, charge upheld)
- 4. ****Provide Documentation Guidance:**** Advise the customer on any documentation they might need to provide to support their dispute (e.g., receipts, emails, proof of delivery, etc.). Provide options on how the customer can submit the documentation.
- 5. ****Initiate the Dispute (if applicable):**** Offer to initiate the dispute on the customer's behalf, after they have provided the necessary information.
- 6. ****Confirmation and Next Steps:****
 - Provide a confirmation of the dispute being filed.
 - Provide a reference number for the dispute.
 - Inform the customer how they will be updated on the progress (e.g., email, mail, online).
 - Provide the customer with an estimated timeframe for the resolution.
- 7. ****Escalate When Necessary:**** If the customer's issue is complex, or the agent cannot resolve the issue, offer to connect them with a live agent or provide the appropriate contact information.

Save

Message

Paragraph

Question

Intent

Decision

Script

Variables

Notify

Flow

Switch

Route

Catch

End

Google Cloud

Five9



CLOSE & COMMITMENT



Google Cloud | **Five9**

Continued Partnership

Represents a compelling opportunity to bring together the best of over 60 years of credit card and payments leadership along with **best of breed technology and an unparalleled history in innovation to redefine the credit card industry.**

Expand leadership in the Premium Consumer Space

American Express can continue to innovate safely and securely, handle scale and resiliency efficiently, quickly evolve to proactive understanding of customer needs and be **well positioned to be the most innovative service provider in the FSI industry.**

Establish a culture of AI innovation

Google can enable American Express with development & technology agility expertise, delivering value through product incubation, training, feedback, marketing etc.



Google Cloud | **Five9**

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CES: Speech (STT, TTS, Voices) and GenAI foundations initiatives (March 27th) [60 mins]

- Review key customer and agent facing AI features

CES + Five9 feature and technical Overview (April 1st) [60 mins]

Google Cloud

AMERICAN
EXPRESS

Upcoming Workshops



Agenda Wednesday April 16th, 2025 (PST)

Time	Session Title	Duration	Overview
8:45 - 09:00			Arrivals & Beverages
09:00 - 09:15	Kick-off and Introductions	15 min	Google Ivan Fernandez - Payments FSM Google Lily Britt - Account Executive & Gloria Vargas, AI Specialist
09:15 - 09:30	Voice of Customer	15 min	American Express Adrianna Bailey, SVP Technology American Express Ian Tomlinson, VP Prod Dev
9:30 - 10:00	A vision for AI-powered CX at American Express	30 min	Google Tomás Coyne*
10:00 - 10:30	Why Google AI?	45 min	Google Deepmind
10:30 - 11:00	CES Roadmap @ Google Cloud	45 min	Google AA PM
----- 11:30 - 12:45: Break -----			
12:45 - 1:30	Showcase: Next generation Customer Journey	45 min	Google CES + Five9 + Syndeo
1:30 - 2:00	Showcase: Enabling Hyper-Personalization	30 min	Google Applied AI Engineering Team
2:00 - 2:45	Spotlight: De-risking your migration from Genesys Engage with Syndeo	45 min	Syndeo Oliver Lennon, CEO
----- 2:45 - 3:00: Break -----			
3:00 - 4:00	Target State Design Review	45 min	Google Applied AI Engineering Team, Hamidou Dia and team
4:00 - 4:30	Recap & Day 2 Plan	30 min	Google Five9 Syndeo
----- Dinner 5:00 - 7:00 -----			



Agenda Thursday April 17th, 2025 (PST)

Time	Session Title	Duration	Overview
8:45 - 09:00			Arrivals & Beverages
09:00 - 09:15	Kick-off & Five9 Welcome	15 min	Five9 Derek Baker - Account Executive Google Lily Britt - Account Executive
09:15 - 09:30	Recap of Day 1 & Voice of the Customer for CCaaS	15 min	American Express Adrianna Bailey, SVP Technology American Express Ian Tomlinson, VP Prod Dev
9:30 - 10:30	Five9 - Platform Overview	60 min	Five9 Executive PM
10:30 - 11:15	Five9 - Partnership with Google	45 min	Five9 Executive PM
11:15 - 12:00	Migration Showcase #1: Enabling Contextual, Consistent, and, Hyper Personalized experiences	45 min	Five9 Executive PM
		12:00 - 12:45: Break	
12:45 - 1:30	Migration Showcase #2: Equipping agents with tooling to drive efficiency, quality, and, customer satisfaction	45 min	Five9 Executive PM
1:30 - 2:15	Migration Showcase #3: Full management and Reporting suite with WEM, observability, and, analytics	45 min	Five9 Executive PM
2:15 - 3:00	Migration Showcase #4: True geographic resiliency with automated, real-time failover across cloud regions	45 min	Five9 Executive PM
		3:00 - 4:00: Break	
3:00- 3:45	Migration Showcase #5: Robust, enterprise grade security, scalability, and, reliability	45 min	Five9 Executive PM
4:00- 4:30	Path to Production for American Express	30 min	Google CCAI CE Team

Thank you!



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