



Healthcare payer cuts plan migration timelines by 80% with Amazon Connect

Using a chassis-based migration approach, Brillio transformed a complex contact center modernization into a repeatable delivery engine across 17 health plans.



At a glance

- The client is one of the largest managed care organizations in the United States, serving millions of members across all 50 states through Medicaid, Medicare, Marketplace and specialty health programs.
- The organization struggled with a legacy on-premise Avaya contact center estate that was expensive to run, slow to change and difficult to scale across multiple health plans and states.
- Brillio implemented a Chassis-based, configuration-driven migration to Amazon Connect, Amazon Lex and AWS Lambda, supported by development automation, Cyara QA automation and automated deployment
- 17 health plans and 25 call flows migrated, 80% shorter migration timelines per plan, 95 percent architectural reuse and \$80 million in cost avoidance

Member expectations shifted toward digital self-service while the platform stayed fixed

Healthcare members now expect the same digital, self-service and omnichannel experiences they receive from banking, retail and technology companies. Contact centers are no longer viewed as cost centers but as strategic platforms for member engagement, care coordination and customer experience.

Our client's traditional Avaya environment was not built for that. Infrastructure and maintenance costs were high, spanning hardware, software upgrades, licensing and disaster recovery. Scalability was limited, which mattered acutely during seasonal enrollment spikes and Medicaid redeterminations. Introducing new IVR capabilities, communication channels or member services meant lengthy implementation cycles.

Supporting remote and distributed agents had become harder following the shift to hybrid work models. Native AI and automation capabilities were limited, restricting opportunities to improve self-service containment and agent productivity. And integrating with modern cloud ecosystems, analytics platforms and digital engagement channels remained difficult.

Multiple plans, states and rule sets turned every change into its own program

The complexity was structural rather than technical. The client's contact center environment supported multiple plans, states and member populations, each with its own business rules, call flows, prompts, routing needs and operational nuances. A single change rarely stayed single. Migrating an estate of that shape in one move would have concentrated risk across millions of members and numerous business units, IVRs, telephony environments and applications at the same time.

An automation-led migration designed for reuse across plans

At the center of our approach was a Chassis-based delivery model: a reusable architectural foundation made up of configurable modules, microservices and integration patterns, rather than a migration built from scratch for every health plan.

The Chassis included reusable components across Amazon Connect call flows, Amazon Lex conversational bots, AWS Lambda functions, routing logic, API integrations, error handling patterns, member authentication flows, common IVR utilities, logging and monitoring frameworks, and configuration-driven plan-specific behavior. That gave the client a common baseline architecture while still supporting the unique requirements of each plan. Each

plan could be assembled from proven modules and then customized through configuration, reducing duplication and improving consistency.

Underneath it, a modern AWS-native architecture carried the workload. Amazon Connect served as the cloud-native platform for call routing, IVR orchestration, queue management and agent experience. Amazon Lex enabled conversational IVR, moving the member experience beyond traditional keypad-driven interactions. AWS Lambda functions supported backend business logic, integrations, validations and routing decisions, designed as reusable microservices so that capabilities such as member lookup, plan identification, authentication support, business rule execution and API orchestration could be shared across plans.

Plan-by-plan onboarding through a repeatable migration lifecycle

Rather than a high-risk big-bang cutover, we structured delivery around phased plan onboarding, with each plan following a repeatable lifecycle:

- discovery and current-state assessment
- call flow and IVR requirement analysis
- mapping of Avaya capabilities to Amazon Connect
- reuse of Chassis components
- plan-specific configuration
- development of Amazon Connect, Lex and Lambda component
- automated QA validation using Cyara
- deployment readiness and production validation
- go-live and post-deployment support.

Lessons learned from earlier migrations were fed back into the Chassis model, automation scripts, QA assets and deployment processes, so each subsequent migration became faster and more predictable.

Automation across development, testing and deployment to remove manual effort

Three automation layers turned the approach into a delivery factory rather than a sequence of projects.

QA automation used Cyara with a strong emphasis on block-driven reusability. Instead of writing test scripts from scratch for each plan, we designed reusable Cyara blocks covering welcome prompts, language selection, member authentication, plan selection, main menu navigation, claims and benefits inquiry paths, provider routing, agent transfer validation, error and timeout handling, after-hours routing, emergency messaging, and call disconnect and fallback flows. As new plans were migrated, QA teams could reuse existing blocks, modify only plan-specific parameters and scale coverage quickly.

Deployment automation validated and promoted all required code and configuration artifacts for production go-live, covering code validation, environment readiness checks, automated promotion of Lambda functions, version control and traceability, pre-production validation, go-live readiness checks and rollback preparedness.

Documentation-driven governance and change control to protect scope and schedule

The program ran through cross-functional squads and a documentation-driven governance model. Discovery workshops, requirements and call flow specifications, configuration documents, solution and integration designs, QA and automation plans, and go-live readiness plans each went through multiple review cycles with business, UX, development and QA stakeholders before approval. Approved documents became the baseline for execution, and any newly identified requirement was managed through a formal change request process.

Results: measurable gains in delivery speed, cost and member experience

Scale delivered

- **17** health plans migrated
- **25** call flows and IVRs migrated
- **3,000** agents supported on the new platform

Delivery and cost outcomes

- **80%** reduction in migration timeline per plan

- **80%** reduction in manual QA effort
- **95%** reuse from the microservices architecture
- **\$80** million in cost avoidance

Member experience outcomes

- **40%** higher self-service containment
- **15%** lower average handle time

Value delivered across cost, quality and member experience

- Faster plan migrations, with reusable Chassis components removing the need to rebuild common IVR capabilities for every health plan
- Reduced development and testing costs through reusable Amazon Connect, Lex and Lambda components and block-based test automation
- Improved quality and fewer production defects, supported by automated testing, deployment validation and formal sign-off
- Lower total cost of ownership through consumption-based cloud services, reduced on-premise infrastructure dependency and increased self-service adoption
- Increased scalability and business agility during annual enrollment, Medicaid renewals, regulatory changes and unexpected volume spikes
- Enhanced member experience through conversational IVR journeys, faster issue resolution and greater consistency across health plans
- Reduced dependency on niche legacy skills, with stronger cloud competency, governance and delivery predictability across teams
- A platform positioned for generative AI, intelligent virtual assistants, omnichannel engagement, real-time analytics and agent assist



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With 14 delivery locations across North America, Europe, and Asia and a team of over 6,000 customer-obsessed professionals, Brillio combines deep industry expertise, modern engineering, and accelerators to deliver measurable outcomes. Headquartered in Dallas, Texas, Brillio serves clients globally with a commitment to speed, scale, and measurable impact.



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