



## CASE STUDY

# cQube

## Accelerates Enterprise Data Integration with Agentic AI Using AWS and Shri Sai Tech DBA SST

### Executive summary

cQube is an AI-powered data integration platform that connects any source and destination system — commerce platforms, file servers, and REST APIs — without custom code, letting users describe a data sync in plain language and get a production-ready integration built through a guided, conversational experience. As enterprises increasingly depend on data flowing reliably between disparate systems, the manual effort of discovering endpoints, mapping schemas, and configuring workflows became a major bottleneck, prompting cQube to remove this friction with agentic AI.

cQube partnered with SST to design and deploy a secure, cloud-native agentic AI platform on AWS. Using Amazon Bedrock foundation models, autonomous AI agents, and intelligent schema extraction, SST built an end-to-end solution that automates integration discovery, creation, and validation while maintaining security and scalability — resulting in an AI Integration Builder that dramatically cuts the time and expertise needed to launch a new integration.

### The challenges

- **Challenge 1 – Manual, Expertise-Heavy Integration Setup**  
Connecting systems required engineers to read API docs and hand-configure every connection, demanding specialist knowledge per platform.
- **Challenge 2 – Discovering Correct Endpoints and Schemas**  
Teams spent significant time locating exact REST endpoints and schemas, often from incomplete documentation.
- **Challenge 3 – Duplicate and Inconsistent Integrations**  
Without a reuse-first approach, organizations accumulated duplicate integrations, causing inconsistent configurations.
- **Challenge 4 – Heterogeneous Protocols and Transports**  
Systems used different transports — REST APIs, webhooks, S3, FTP/SFTP — each with unique parameters.
- **Challenge 5 – Schema Mapping and Data Modeling**  
Aligning fields between source and destination systems required tedious manual mapping.
- **Challenge 6 – Security, Secrets, and Compliance**  
The platform needed to securely capture, mask, and store credentials while authenticating every action.
- **Challenge 7 – Scalability and Reliability**  
cQube required a scalable, cloud-native architecture to run AI agents and integration workloads reliably.



### About cQube

cQube is an AI-powered enterprise integration platform that helps businesses connect applications, automate workflows, and synchronize data across multiple systems. Designed to simplify complex integrations, cQube enables organizations to streamline operations, improve efficiency, and accelerate digital transformation through scalable, low-code/no-code solutions. Its intelligent integration capabilities help organizations reduce manual effort, improve data accuracy, and achieve faster business outcomes across their digital ecosystem.

### Anubhav Raina

#### Founder & CEO, cQube

Anubhav Raina is a digital commerce and enterprise technology leader specializing in eCommerce integrations, business automation, and AI-driven solutions. As the Founder & CEO of cQube, he helps organizations streamline operations, connect enterprise systems, and accelerate digital transformation through innovative technology.



## Simplify Digital Transformation with AWS

Amazon Web Services (AWS) provided cQube with a secure, scalable cloud platform to deliver agentic AI integration at enterprise scale. By leveraging managed AWS services and Amazon Bedrock foundation models, cQube avoided the complexity of building and operating its own large-scale AI infrastructure while gaining access to advanced reasoning, tool-use, and document-intelligence capabilities.

AWS managed services allowed SST to focus on the agentic experience — autonomous discovery, configuration, and validation — rather than on undifferentiated infrastructure, accelerating delivery of a production-ready platform.

## Why Shri Sai Tech?

cQube selected SST because of its expertise in cloud-native architecture, AWS services, agentic AI and LLM application development, and enterprise data integration.

### Key reasons cQube selected SST included:

- Agentic AI and large language model application expertise
- AWS cloud architecture and Amazon Bedrock experience
- Enterprise data integration and API engineering experience
- Secure handling of credentials and compliance-aware design
- Multi-provider LLM resilience and prompt engineering
- Agile delivery methodology
- Ability to rapidly deliver a production-ready MVP

## The solution

SST designed an agentic AI integration platform using AWS managed services and Amazon Bedrock foundation models. AI agents drive each step of the build through a conversational interface, with deterministic guardrails ensuring a reliable flow.

### ➤ AI Integration Builder

A conversational, agent-driven workflow guides users through building an integration end to end — workflow → inbound integration → endpoint → outbound integration → endpoint → data model — powered by Amazon Bedrock and Anthropic Claude.

### ➤ Reuse-First Integration Discovery

Before creating anything new, cQube lists existing integrations matching the user's intent, so teams reuse proven integrations instead of creating duplicates.

### ➤ Automated API Research and Endpoint Discovery

cQube performs automated web research to extract API base URLs, auth headers, and endpoint paths using Amazon Bedrock, presenting findings for user confirmation rather than fabricating secrets.

### ➤ Endpoint and Schema Generation

cQube generates endpoint definitions — HTTP method, resource path, content type, and request/response schemas — captured directly from source documentation.

### ➤ Intelligent Data-Model Mapping

The platform designs a canonical data model and maps source-to-destination fields automatically, removing manual schema alignment.

### ➤ Conversational Workflow Orchestration

A React-based UI renders option buttons, confirmation cards, and live previews, backed by a stateless, instruction-driven agent architecture for a consistent, recoverable experience.



## AWS Services

### Foundation Models

#### ➤ Anthropic Claude (via Amazon Bedrock)

- Natural-language understanding of integration requests
- Autonomous tool-use and step orchestration
- API documentation extraction (base URL, endpoints, schemas)
- Data-model design and field mapping

### AWS Services

- Amazon Bedrock
- Amazon S3
- Amazon ECS
- Amazon RDS
- Amazon Cognito

- AWS Lambda
- Amazon API Gateway
- AWS KMS
- Amazon CloudWatch
- AWS CloudTrail

## Results

#### ➤ Integration Discovery and Setup

- 80%+ reduction in time to configure a new integration.
- Reuse-first matching surfaces relevant existing integrations with high precision, eliminating duplicates.

#### ➤ Automated API Research

- Connection details (base URL and authentication headers) auto-discovered from official documentation for supported systems.
- Complete, untruncated endpoint paths and request/response schemas extracted directly from source docs.

#### ➤ Data Modeling

- Source-to-destination field mapping generated automatically, accelerating every new workflow.

#### ➤ Reliability and Consistency

- Deterministic guardrails enforce a consistent build flow regardless of how a request is phrased.
- Resilient multi-provider model chain maintains availability under provider failures.

## Benefits

- 80%+ reduction in manual integration configuration effort.
- Faster onboarding of new source and destination systems.
- Elimination of duplicate, inconsistent integrations.
- Reduced dependency on specialist API knowledge.
- Accurate, documentation-grounded endpoints and schemas.
- Secure, masked handling of credentials and secrets.
- Scalable, cloud-native AWS foundation for future growth.



## Next steps

- Expand automated discovery to additional commerce and enterprise platforms.
- Enhance data-model intelligence and transformation suggestions.
- Extend connection and mapping automation across more transports.
- Introduce monitoring, alerting, and analytics for live workflows.
- Scale platform adoption across additional teams and organizations.

## Benefits

- **80%+** Reduction in Integration Setup Effort
- Reuse-First Matching to Prevent Duplicate Integrations
- Automated API Discovery via Web Research and Amazon Bedrock
- Complete Endpoint Paths and Request/Response Schema Extraction
- Intelligent Source-to-Destination Data-Model Mapping
- Multi-Protocol Support: REST, Webhook, S3, FTP/SFTP
- Resilient Multi-Provider LLM Architecture
- Secure, Secret-Masked, Cloud-Native AWS Architecture

## About Shri Sai Tech LLC DBA SST

SST is an AWS Partner specializing in AI-driven, cloud-native architecture and secure, compliant solutions across a wide range of industries — including healthcare, finance, education, retail, manufacturing, logistics, energy, government and public sector, telecommunications, and media and entertainment. Partnering closely with our clients, SST rapidly designs and deploys production-ready AI platforms on AWS, bringing AI-powered capabilities to market with speed and confidence.

