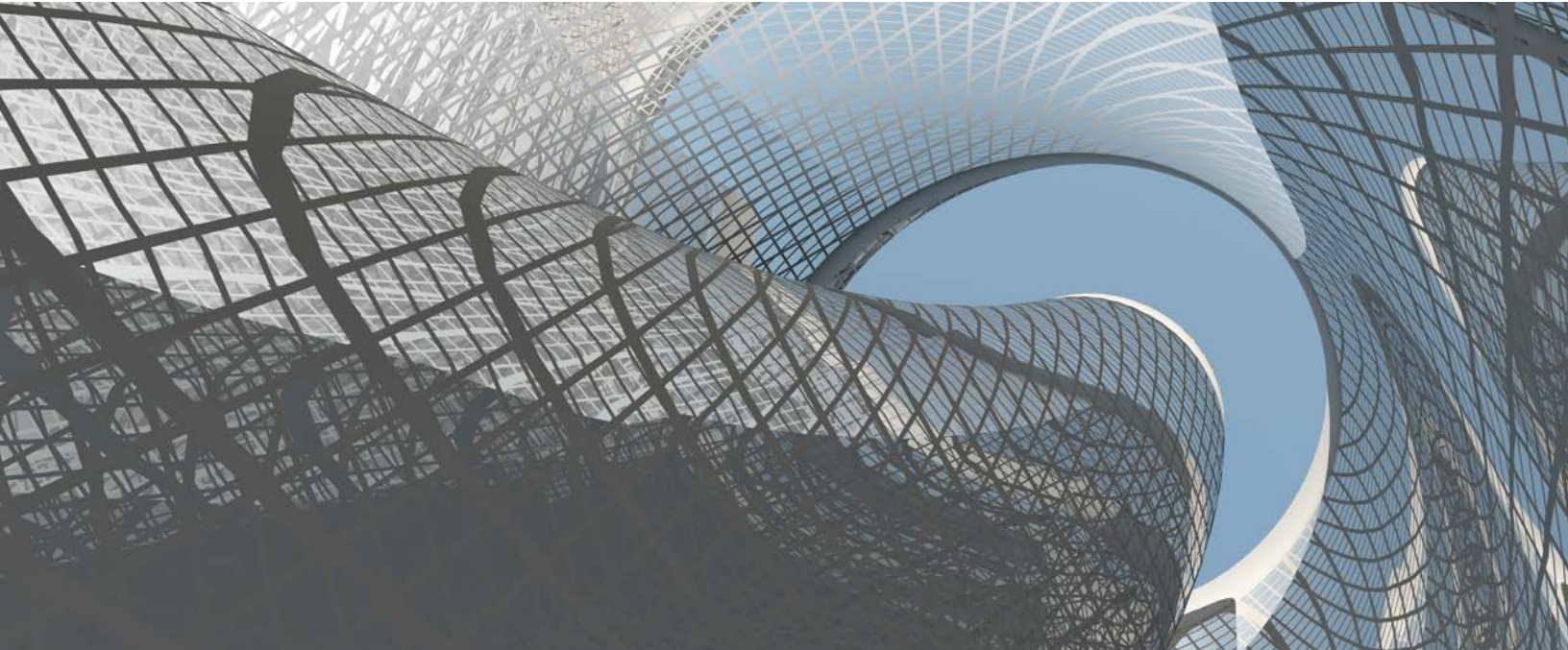


# Cloud-Native Redevelopment of \$20B EDI Platform to Increase Availability and Reduce Cost



*Candid's client, one of the largest consumer packaged goods companies in the world, was plagued by high costs and repeated downtime with its EDI platform. Candid replaced it with a modern cloud-native solution dramatically reducing costs and stopping unplanned outages.*

## BACKGROUND

Our client processes over \$20B in Electronic Data Interchange (EDI) transactions annually for its North American division making the underlying EDI Hub one of the most mission-critical systems within the organization. With over 6,000 integration partners, a single hour of downtime had a \$400K cost impact to the business. If the system was down for eight consecutive hours all product shipments were halted resulting in missed deliveries to tens of thousands of customers.

Implemented over 15 years ago, the webMethods-based EDI Hub gradually increased in complexity to eventually support hundreds of different document formats and was scaled to handle over 12 million monthly transactions. This utilization and complexity required the business to increase the operations team size to over 50 people.

## THE PROBLEM

While a cloud replatform of the webMethods EDI Hub increased some system capacity and lowered operational costs, the customer still experienced several outages with severe impact to the business resulting in lost revenue estimated at \$24M annually.

The client asked Candid to provide a solution with the primary goal of improving availability, business continuity, resiliency, and finally reducing costs associated with both software licensing and support of the solution.

## THE CANDID SOLUTION

The Candid team began with a six-week assessment to understand the webMethods-based EDI Hub failure points, categorize all integrations, and define a go-forward architecture. The output of the assessment was a phased simplification project to deliver a completely new cloud-native EDI platform in three phases performed over the course of one year:

- Phase 1 - Platform Pilot, consisting of developing the core infrastructure and selected key integration components.

- Phase 2 - Full Platform Build Out, supporting all EDI document formats within the integration platform by automating the extraction of configured webMethods integrations.
- Phase 3 - Partner Migration, consisting of a transparent and seamless zero-downtime migration of integration partners to the new platform.

# Actions speak louder than advice.



## ACTION

Candid created a Serverless Integration Platform based on native AWS Services as a replacement for the webMethods EDI Hub. Using two-week sprints, stakeholder reviews were conducted that showed regular and tangible progress on a system many thought was too complex to redevelop.

Key AWS services and technology in the Integration Platform included:

- *React, AppSync, Cognito*
- *Simple Queue Service (SQS)*
- *CloudWatch*
- *DynamoDB, Simple Storage Service (S3)*
- *Route 53, Simple Notification Service (SNS)*
- *Elastic Container Service (ECS), Fargate, Lambda*
- *CodeCommit, CodePipeline, CodeBuild*

The platform is based on a micro-service architecture whereby each component service is configured via a DynamoDB database and has its own SQS queue for managing its respective workloads, thus reducing blast radius in case of any failure.

The solution was designed with redundant functionality running in multiple geographic regions - an approach known as Multi-Region Active/Active (MRAA) which reduces outages in case any part of an entire cloud region degrades service while at the same time not increasing costs.

All development followed DevOps best practices using Infrastructure-as-Code and leveraged native AWS development tools.

## OUTCOME

Candid's solution dramatically reduced unplanned outages and significantly reduced costs. Overall platform benefits included:

- 100% Reduction of major P1 outages
- \$24M Annual gain from improved business continuity
- 75% Reduction in Recovery-Time-Objective (RTO)
- 94% Reduction in Recovery-Point-Objective (RPO)
- 61% Reduction in support and operational costs

## WHAT'S NEXT

Pursue further simplification of its IT infrastructure by extending the Integration Platform to other areas of its business traditionally served by tools for message-oriented middleware (MOM) and Extract-Transfer-Load (ETL) processing.

## ABOUT CANDID

Candid is an Atlanta-based technology and management consulting firm that develops tailored solutions for complex enterprises. We design, build, implement and manage sophisticated infrastructure for the largest organizations in the world. With no external investors or debt, Candid is the only independent cloud firm with the scale and expertise for our clients to adopt the cloud at their own pace. We've successfully performed over 250 cloud initiatives and have never failed.

# CANDID

Contact Candid to find out how we can put advice into action for you.

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