

Service Name

AWS B2B Data Interchange

Service Overview

AWS B2B Data Interchange is a fully managed service that automates the transformation and generation of Electronic Data Interchange (EDI) documents between JSON and XML formats. The service enables businesses to exchange transactional data with trading partners using standardized formats like X12, EDIFACT, or HL7v2. It provides generative AI-assisted, bi-directional EDI transformation, event-driven data integration, trading partner management, and built-in HIPAA compliance. The service monitors Amazon S3 locations for new EDI documents and automatically transforms them, reducing the time, complexity, and cost associated with managing EDI data while enabling integration with AWS analytics, AI, and machine learning services.

Key Use Cases

- **Healthcare data exchange:** Transform HL7v2 and X12 EDI documents for HIPAA-compliant healthcare transactions between providers, payers, and systems
- **Supply chain and logistics:** Automate processing of purchase orders, invoices, advance ship notices, and inventory management documents with trading partners
- **Financial services:** Process payment transactions, remittance advice, and financial reporting documents in standardized EDI formats

Features

- **Generative AI-assisted EDI mapping:** Uses Amazon Bedrock and Anthropic Claude models to automatically generate mapping code for bi-directional EDI transformations
- **Event-driven processing:** Monitors Amazon S3 locations and generates EventBridge events for downstream integrations and workflow automation
- **Automatic acknowledgment generation:** Generates 997, 999, and TA1 functional acknowledgments for inbound X12 EDI transactions automatically
- **Trading partner management:** Manages partnerships with profile information, trading capabilities, and customizable EDI header configurations
- **Bi-directional transformation:** Converts inbound EDI to JSON/XML and generates outbound EDI documents from JSON/XML data
- **HIPAA compliance:** Built-in HIPAA eligibility for healthcare organizations handling protected health information

Value Proposition

AWS B2B Data Interchange eliminates the high licensing fees, operational complexity, and lengthy onboarding processes associated with traditional EDI solutions. The service provides pay-as-you-go pricing with no upfront costs or infrastructure to manage:

- Key advantages include generative AI-assisted mapping that reduces the time and technical expertise required for EDI implementations, automatic acknowledgment generation, event-driven processing for seamless integration with downstream systems, and built-in HIPAA compliance
- The fully managed nature removes operational burdens while enabling businesses to focus on gaining insights from their transactional data using AWS analytics and machine learning services

Service Integration

AWS B2B Data Interchange integrates closely with Amazon S3 for document storage and monitoring, Amazon EventBridge for event-driven workflows, and AWS Transfer Family for secure document exchange via SFTP and AS2 protocols. The service leverages Amazon Bedrock and Anthropic Claude models for generative AI-assisted mapping capabilities:

- Additional integrations include Amazon CloudWatch for logging and monitoring, Amazon SNS for notifications, AWS Lambda for custom processing, AWS Step Functions for workflow orchestration, and AWS Glue for ETL operations
- The service also works with AWS security services like Amazon GuardDuty for malware scanning and supports various Amazon S3 encryption options

Onboarding and Offboarding

Getting started requires creating four main components: a profile with organization contact information, a transformer with EDI transaction details and optional custom mapping code, a trading capability specifying EDI direction and input/output directories, and a partnership with trading partner details and contextual information. Customers can write mapping code manually or use generative AI-assisted capabilities through Amazon Bedrock:

- The process involves uploading sample EDI and data files to Amazon S3, configuring these components through the AWS Management Console, and then dropping documents into specified input directories for automatic transformation
- The service provides comprehensive documentation, tutorials, and a self-paced workshop to guide implementation

Getting Started Guide: <https://docs.aws.amazon.com/b2bi/latest/userguide/getting-started.html>

Data Removal

EDI documents, acknowledgments, and transformed data files are stored in customer-owned Amazon S3 buckets, providing full control over data retention and deletion. Customers can delete data directly from their S3 buckets following standard S3 deletion procedures. Service configurations including profiles, transformers, trading capabilities, and partnerships can be removed through the AWS Management Console or APIs. The service does not store customer data for training purposes, ensuring complete data privacy during offboarding.

Backup/Restore and Disaster Recovery

AWS B2B Data Interchange inherits backup and disaster recovery capabilities through its underlying AWS infrastructure and Amazon S3 storage. Customer data stored in S3 benefits from S3's built-in durability and availability features. The service configuration and metadata can be recreated using Infrastructure as Code approaches like AWS CloudFormation. However, the service does not provide native backup or disaster recovery features beyond those offered by the underlying AWS services it depends upon.

Backup Capabilities

The service does not have built-in backup capabilities and does not integrate with AWS Backup. Data protection relies on Amazon S3's inherent durability and versioning capabilities where documents are stored:

- Customers must implement their own backup strategies for S3 data if additional protection is required
- Service configurations can be backed up through Infrastructure as Code templates or by exporting configuration settings manually

Disaster Recovery

AWS B2B Data Interchange does not have native disaster recovery capabilities and does not integrate with AWS Elastic Disaster Recovery. Disaster recovery relies on the multi-Availability Zone architecture of the underlying AWS services. Customers must implement cross-region replication strategies for their S3 data and recreate service configurations in alternate regions if regional disaster recovery is required.

Recovery Objectives

The service can support customer RPO and RTO objectives through careful architecture design using Amazon S3 cross-region replication for data protection and AWS CloudFormation templates for rapid service configuration deployment. Recovery objectives depend on the implementation of supporting services like S3 replication frequency and the time required to deploy configurations in alternate regions. The service's event-driven architecture can help minimize processing delays during recovery scenarios.

Service Constraints

Service Quotas: <https://docs.aws.amazon.com/b2bi/latest/userguide/b2bi-quotas.html>

FAQ: <https://aws.amazon.com/b2b-data-interchange/faqs/>

Technical Requirements

Service Documentation: <https://docs.aws.amazon.com/b2bi/latest/userguide/index.html>

User Guide: <https://docs.aws.amazon.com/b2bi/latest/userguide/what-is-b2bi.html>

API Reference: <https://docs.aws.amazon.com/b2bi/latest/APIReference/index.html>

Pricing Overview

Please see the AWS UK G Cloud 15 Pricing Document accompanying this service in the Digital Marketplace.

Public Pricing: <https://aws.amazon.com/b2b-data-interchange/pricing/>

Cost Optimization

AWS B2B Data Interchange offers several cost optimization opportunities including pay-as-you-go pricing with no upfront costs or infrastructure to manage. Customers pay only for active partnerships and transformation steps used, avoiding traditional EDI solution licensing fees:

- The generative AI mapping feature incurs Amazon Bedrock charges only during mapping generation, not during runtime transformations
- Organizations can optimize costs by carefully managing the number of active partnerships, using default EDI transformations when custom mapping isn't required, and leveraging Amazon S3 storage classes for long-term document retention
- The service eliminates operational overhead costs associated with traditional EDI infrastructure maintenance and scaling

Savings Considerations

Primary cost savings come from eliminating traditional EDI solution licensing fees, infrastructure maintenance costs, and operational overhead. The service's fully managed nature reduces staffing requirements for EDI operations and system administration:

- Generative AI-assisted mapping significantly reduces development time and costs compared to manual mapping creation
- Event-driven automation reduces manual processing costs and errors

- Organizations save on hardware, software licensing, maintenance contracts, and specialized EDI expertise typically required for on-premises solutions
- The pay-as-you-use model eliminates costs for unused capacity and allows scaling based on actual business needs, providing significant savings for organizations with variable EDI volumes