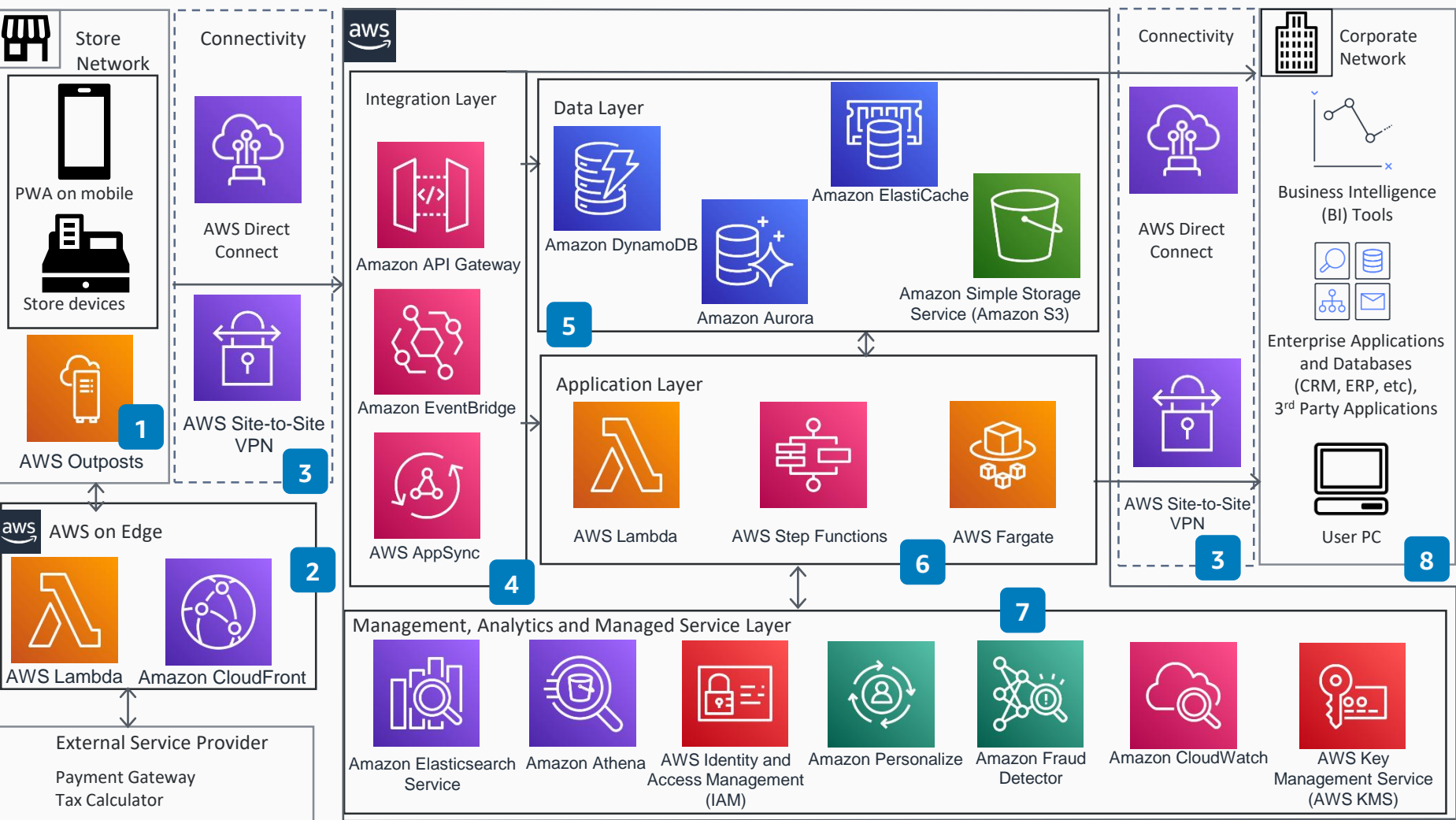


Cloud Point-of-Sale (POS) System on AWS for CPG

A modern point of sale POS system does much more than just provide checkout for customers. While these extra capabilities are welcome, they do complicate maintenance and make upgrades more complex. This reference architecture shows the four key features a cloud-based POS system should have to give the consumer packaged goods (CPG) companies a jump start in their direct-to-consumer store sales.



1. **AWS Outposts** is used at stores to add optional AWS compute & storage capability with 1U and 2U form factors
2. AWS edge services for better user experience and faster content delivery. **AWS Lambda @Edge** also plays a critical role to integrate with external third party solution providers like payment gateway and tax calculator.
3. Customers can choose either dedicated connection (**AWS Direct Connect**) or **AWS Site-to-Site VPN** for security of the data while it's in transit.
4. **Amazon API Gateway**, **Amazon EventBridge** and **AWS AppSync** are used at the integration layer to handle incoming requests and to integrate with the backend application layer for business processes, the data layer for data access, and corporate system for existing APIs.
5. The data layer purposely built with **Amazon DynamoDB**, **Amazon Aurora**, **Amazon ElastiCache** or **Amazon S3** based on the nature of different data (relational, key/value, object) and access patterns (hot/warm/cold or read-only/read-write)
6. The serverless application layer is built with **AWS Lambda**, **AWS Step Functions**, or **AWS Fargate** for the implementations of the four focused cloud POS features: 1) checkout 2) order capture 3) product 4) back office. These can be shared with a direct-to-consumer (DTC) ecommerce implementation. The application layer also has access to both the data layer on AWS cloud and internal systems on corporate network
7. The management, analytics and managed service layer enables ad hoc reporting, monitoring, security, data protection, and native AWS services integration.
8. The application layer integrates existing internal and third party applications on corporate networks. Business users and existing BI and ERP systems on the corporate network are used for day to day activities. There is also an opportunity to move these systems to the AWS at a later point.

