

E-COMMERCE WEB SITE

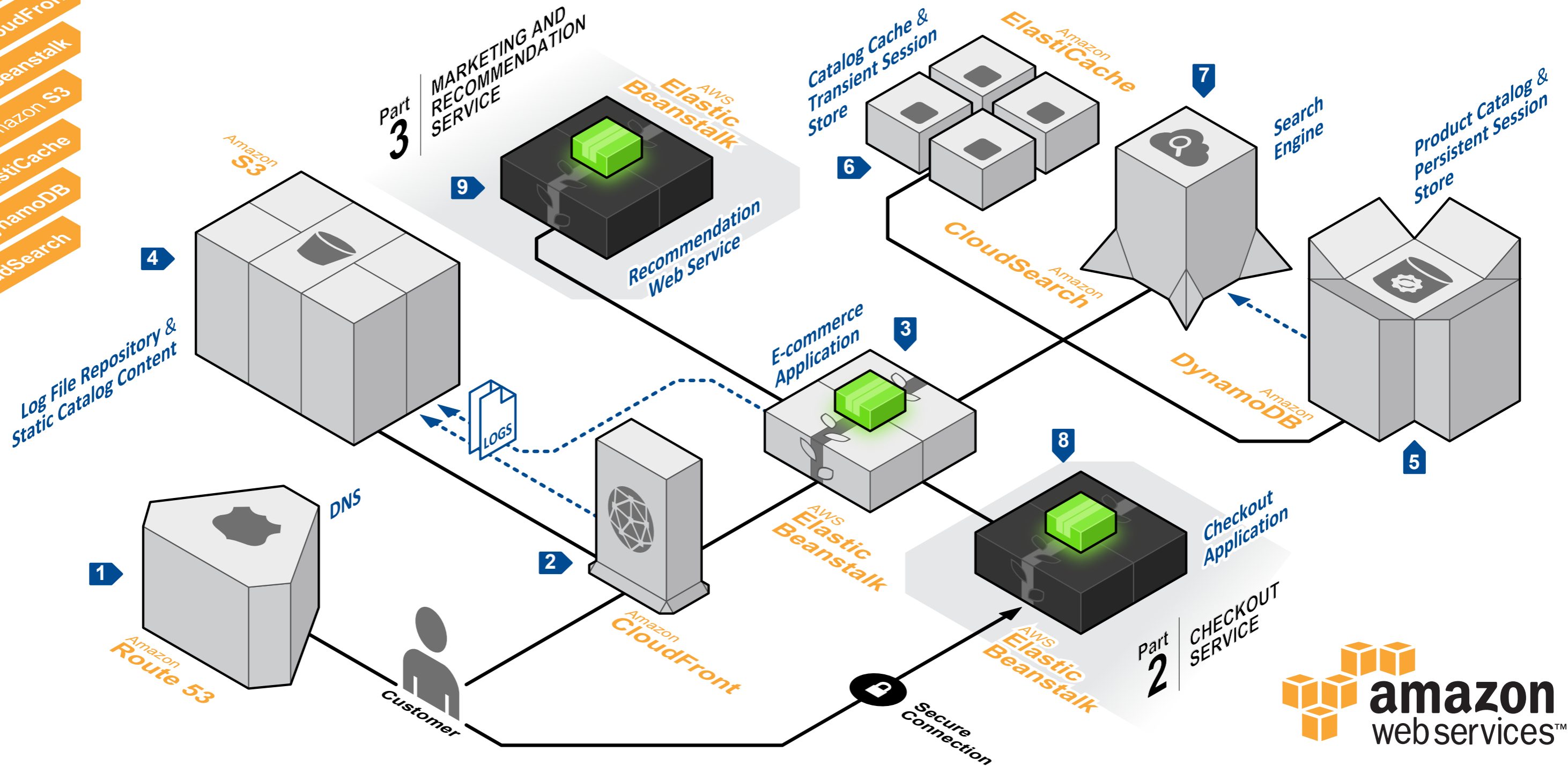
PART 1: WEB FRONT-END

With Amazon Web Services, you can build a highly available e-commerce website with a flexible product catalog that scales with your business. Maintaining an e-commerce website with a large product catalog and global customer base can be challenging. The catalog should be searchable, and individual product pages should contain a rich information set that includes, for example, images, a PDF manual, and customer reviews.

Customers want to find the products they are interested in quickly, and they expect pages to load quickly. Worldwide customers want to be able to make purchases at any time, so the website should be highly available. Meeting these challenges becomes harder as your catalog and customer base grow. With the tools that AWS provides, you can build a compelling, scalable website with a searchable product catalog that is accessible with very low latency.

AWS Reference Architectures

- Amazon Route 53
- Amazon CloudFront
- AWS Elastic Beanstalk
- Amazon S3
- Amazon ElastiCache
- Amazon DynamoDB
- Amazon CloudSearch



System Overview

- 1** DNS requests to the e-commerce website are handled by **Amazon Route 53**, a highly available Domain Name System (DNS) service.
- 2** **Amazon CloudFront** is a content distribution network (CDN) with edge locations around the globe. It can cache static and streaming content and deliver dynamic content with low latency from locations close to the customer.
- 3** The e-commerce application is deployed by **AWS Elastic Beanstalk**, which automatically handles the details of capacity provisioning, load balancing, auto scaling, and application health monitoring.
- 4** **Amazon Simple Storage Service (Amazon S3)** stores all static catalog content, such as product images, manuals, and videos, as well as all log files and clickstream information from Amazon CloudFront and the e-commerce application.
- 5** **Amazon DynamoDB** is a fully-managed, high performance, NoSQL database service that is easy to set up, operate, and scale. It is used both as a session store for persistent session data, such as the shopping cart, and as the product database. Because DynamoDB does not have a schema, we have a great deal of flexibility in adding new product categories and attributes to the catalog.
- 6** **Amazon ElastiCache** is used as a session store for volatile data and as a caching layer for the product catalog to reduce I/O (and cost) on DynamoDB.
- 7** Product catalog data is loaded into **Amazon CloudSearch**, a fully managed search service that provides fast and highly scalable search functionality.
- 8** When customers check out their products, they are redirected to an SSL-encrypted checkout service.
- 9** A marketing and recommendation service consumes log data stored on Amazon S3 to provide the customer with product recommendations.