

Cloud-Based Solutions for Large-scale E-commerce Enterprises

Extraordinary cloud solutions tailor-made for large-scale ecommerce set ups.

Introduction

Large enterprises require mature and stable architectures. This includes a particular need for distributed services, container services, big data applications, and analytical tools to make data-driven business decisions. At the same time, a major concern with architects is how to enable and optimize technical architecture to support rapid business development.





Background

Any downtime can hamper user experience, affect the online transaction process and company's reputation, so all services and applications should be recoverable and able to resume functionality in case of a failure. Large-scale e-commerce companies need to mine consumer insights to personalize customer experience and strengthen business outcomes. Therefore, advanced search and recommendation engines on websites are necessary to drive purchase and repurchase decisions for the customers. Additionally, established large e-commerce enterprises are prone to cyber-attacks and online fraud, including identity theft, pharming of websites, DDoS, and brute-force attacks. Along with that, these portals need a highly scalable infrastructure that can handle advertising, promotions, and other business peaks as a prerequisite.

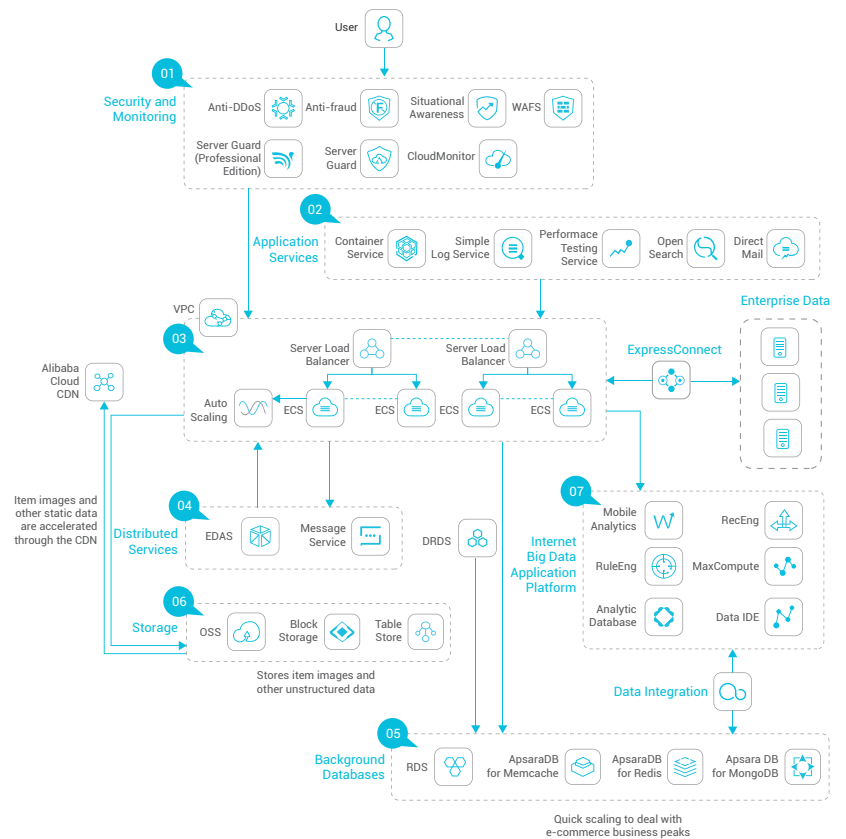
Highlights

-  Advanced big data capabilities and processing tools
-  Intelligent Operation & Maintenance services
-  In-built capabilities and tools to develop and customize recommendations
-  Easy orchestration of micro services

Benefits

-  Zero downtime with multi-availability zones
-  Advanced big data capabilities and processing tools
-  Suite of security and anti-fraud services suitable for large e-commerce websites
-  Accelerated website, ensured minimum latency and support for global expansion

Recommended Solution Architecture



This architecture diagram elucidates an advanced cloud solution for a large scale e-commerce setup.

Complete protection from heavy traffic cyber-attacks, malicious order placement, and scams are ensured through effective cyber security solutions and anti-fraud services. Application services such as Container Service for hosting micro service architecture, Simple Log Service for centralized log management, Performance Testing for website load testing, and OpenSearch to develop search engines cater to different needs for e-commerce enterprises. To process a massive amount of data generated by e-commerce businesses, Alibaba Cloud provides efficient big data analytical capabilities and processing tools based on Alibaba Group's business practices. This architecture includes services such as AnalyticDB, MaxCompute, and MobileAnalytics for seamless functioning of big data workloads. All computations run in the sandbox to ensure high security and data reliability. These services eliminate the overhead of manual management of resources and reduce the costs of implementing data warehousing and business intelligence. Server Load Balancer eliminates SPOFs while VPC helps e-commerce enterprises construct isolated network environments based on Alibaba Cloud. EDAS helps e-commerce enterprises build and host distributed application service systems and DRDS carries out extensive database resizing. ApsaraDB for Redis provides online storage services, giving fast response to primary product data and other popular data.