



### **Lack of appropriate firewall protection**

Web Application Firewall (WAF) is often unsuitable for database protection, because database access requires multiple sources, apart from web-based applications. Internal organization applications that access databases are also a potential source for data breaches.

### **Ransomware attacks**

Ransomware locks valuable data with high encryption that is difficult to decrypt. It risks the loss of sensitive data, including company records, intellectual property, or customer information, which can cause irreversible damage to an organization's brand value.

### **Lack of control on security measures**

Users often access organizational data on their smartphones. Such access blurs the boundary between work and personal use of the device, with the organization having no control over what the user downloads. This can in turn compromise organizational data.

### **Physical security threats**

Insider attacks are on the rise, and employees of an organization with authorized access to sensitive data is a growing threat. Further, external individuals with malicious intentions can also potentially gain physical access to an organization's data center or other critical IT facility and breach security. This dramatically compromises an organization's availability and the integrity of its information systems.

## **Why Alibaba Cloud**

Based on its experience safeguarding major targets for cyber attacks, including the Alibaba e-commerce ecosystem, Alibaba Cloud has specialized expertise in providing security solutions to help businesses counter new security threats. Alibaba Cloud offers a range of security solutions that seamlessly integrate physical and logical security to attend to the organization's security needs.

### **Exemplary Anti-DDoS protection**

Having set world records in anti-DDoS protection, Alibaba Cloud offers Anti-DDoS Basic and Anti-DDoS Pro services. Anti-DDoS Pro, a flagship product, safeguards data and applications from DDoS and Trojan attacks, and monitors real-time visibility of security breaches and blocks common attack patterns.

### **Web Application Firewall**

WAF protects against custom web applications, which would otherwise be unprotected when guarded using other technologies that only shield against known threats. WAF also protects web applications by inspecting incoming traffic and controlling user access.

### **Secure mobility**

Alibaba Cloud Mobile Security ensures the security of mobile applications with extensive vulnerability testing and malware protection. It ensures end-to-end protection throughout the mobile application lifecycle, including the design, development, testing, and release phases.

### **Physical security solutions**

With stringent access control, decommissioning, and security monitoring, Alibaba Cloud ensures that only authorized users can enter the respective facility. It delivers optimum data security with the help of constant surveillance, protection, and fingerprint access control.

### **Logical security solutions**

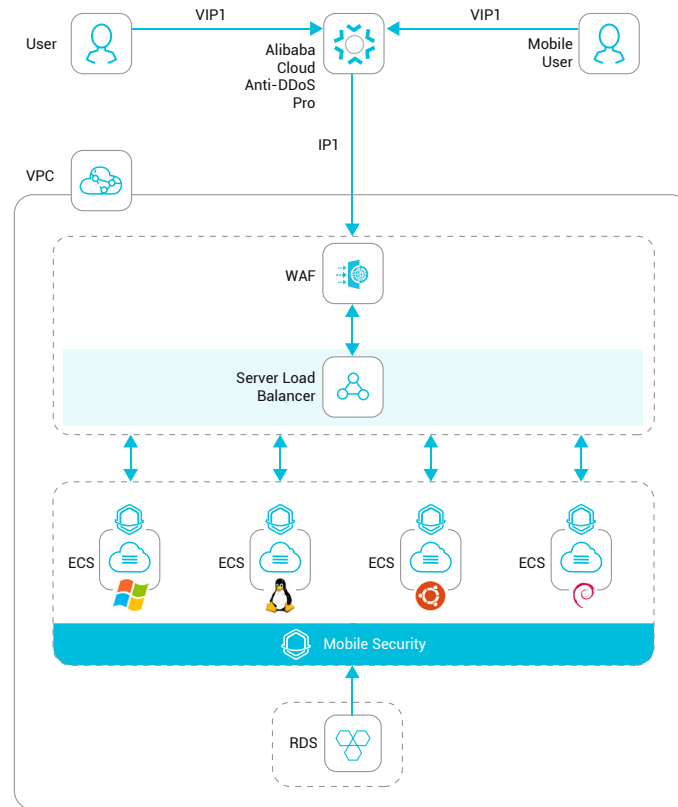
Alibaba Cloud has policies and procedures established for logical access management of employees. Network device configuration backup ensures timely recovery of configurations whenever needed. Customers have complete visibility and control over their usage, ensuring that no one can hack into their account and provision resources without their knowledge.

### **Big Data security capabilities**

Alibaba Cloud uses threat intelligence from insights derived from Big Data. With cloud computing aggregating tons of data, there is ample opportunity to detect trends for superior insights. This empowers customers to make data-driven decisions, and ensure they are ready to deal with security threats as they evolve.

## Development Architecture

**Products Used:** Anti-DDoS Pro, WAF, and Mobile Security



The architecture diagram above visualizes a typical security solution scenario. This solution comprises Anti-DDoS Pro, WAF, and Server Guard along with Mobile Solutions.

Alibaba Cloud Anti-DDoS Pro defends against layer-3 to layer-7 DDoS attacks such as SYN flood, UDP flood, ACK flood, ICMP flood, DNS Query flood, NTP Reflection and Amplification flood, HTTP flood and web application attacks. To achieve this, it resolves the domain name to the Anti-DDoS server for web services by replacing the service IP address of the application server with the IP address of the Anti-DDoS server for non-web services and configuring the user's source site IP address. This directs all public network traffic to the Anti-DDoS server, which then forwards user access traffic to the origin site IP address. In this process, the Anti-DDoS server cleans and filters out malicious traffic, with only traffic deemed safe returned, thus ensuring stable access to the origin site IP address.

WAF protects web applications by inspecting incoming traffic and controlling access. It decouples the traffic between a web server and the Internet, hence ensuring that browsers have no direct connection to the web server. It identifies and takes defensive action against threats maliciously woven into other website traffic that slips through traditional defenses. This includes blocking technical and business logic attacks before they can initiate the processing of fraudulent transactions.

Alibaba Cloud Mobile Security analyzes and tracks vulnerabilities at the granularity of the register. For dynamic vulnerability detection, it performs Fuzz testing to restore the real Android environment. It deploys various methods such as re-encoding, shelling, and modifying the command calling sequence to enhance the anti-cracking capability of the application. It also effectively prevents hackers from using static analysis tools such as APKTool, dex2jar, and JEB to analyze applications' Java-layer code.

In addition, Alibaba Cloud controls all physical and logical security solutions through access controls, network security and transmission monitoring, surveillance, and risk inventories, to ensure ironclad security at data centers.

## Key Benefits



State-of-the-art solutions with enhanced security



Smooth integration of physical and logical security



Outstanding Anti-DDoS and WAF support



Advanced Big Data-based security



Comprehensive ransomware protection

## Customer Testimonial

“ Previously we used to have many problems with server security vulnerabilities, accident warnings and malicious attacks. Since moving to Alibaba Cloud, their application servers and databases provide powerful support for our products, with Anti-DDoS and CloudMonitor services providing support for the security of our servers and data. Receiving texts and alerts informing us in real-time about the status of our servers is great. ”

*Netherfire Entertainment*

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