

# Alibaba Cloud Offerings

BCX ALP Cloud is based on Alibaba Cloud's Apsara Stack technology platform and is deployed in two regions. Johannesburg was the first region deployed, with the primary AZ in Teraco Isando JB3 facility, while the secondary AZ is deployed in BCX's NDC1 facility in Midrand. ALP Cloud has recently been expanded to include a region in Maputo, Mozambique, with a single AZ deployed. Additional African countries are under consideration for future expansion.



Product Family	Product Category	Product	Product Overview	
IaaS	Compute	<b>Elastic Compute Service (ECS)</b>	<p>Elastic Compute Service (ECS) is a computing service that features elastic processing capabilities. Compared with physical servers, ECS instances are more user-friendly and can be managed more efficiently. You can create instances, resize disks, and add or release any number of ECS instances at any time based on your business needs.</p> <p>An ECS instance is a virtual computing environment that contains the most basic components of computers such as the CPU, memory, and storage. Users perform operations on ECS instances. Instances are core components of ECS, and operations can be performed on instances through the ECS console. Other resources, such as block storage, images, and snapshots, can only be used after they are integrated with ECS instances.</p>	
		<b>Container Services:</b>  <b>Alibaba Container Registry (ACR)</b>	<p>Alibaba Container Registry (ACR) is a platform that allows you to manage and distribute cloud-native artifacts in a secure and efficient manner. Cloud-native artifacts include container images and Helm charts that meet the standards of Open Container Initiative (OCI).</p> <p>ACR provides the following features: image permission management, synchronous image distribution, and content signing. These features allow you to manage the entire lifecycle of container images and simplify the setup and O&amp;M of ACR.</p> <p>ACR is integrated with Container Service for Kubernetes (ACK) to easily create and deliver a one-stop solution for cloud-native applications.</p>	
		<b>Container Services:</b>  <b>Alibaba Container Services for Kubernetes (ACK)</b>	<p>Container Service (ACK) provides high-performance, scalable, and enterprise-class management services for Kubernetes containerised applications throughout the application lifecycle.</p> <p>ACK simplifies the deployment and scale-out operations of Kubernetes clusters and integrates ALP Cloud capabilities of virtualisation, storage, networking, and security. Based on these capabilities, ACK provides an ideal runtime environment for Kubernetes-based containerised applications. Alibaba Cloud is a Kubernetes-certified Service Provider (KCSP).</p>	
		<b>Auto Scaling (ESS)*</b>	<p>Auto Scaling automatically adjusts your elastic computing resources based on your business requirements and policies that you define when demand for services spikes. Auto Scaling automatically scales out Elastic Compute Service (ECS) instances based on your configurations to maintain sufficient computing resources. When demand for services drops, Auto Scaling automatically scales in ECS instances to save costs.</p> <p>Auto Scaling provides the following features: Horizontal Scaling (scale-out and scale-in of ECS resources); and Elastic Recovery of instances that have failed. Auto Scaling does not provide vertical (scale-up or scale-down) capability.</p>	
		<b>Resource Orchestration Service (ROS)</b>	<p>Resource Orchestration Service (ROS) is a service provided by Apsara Stack to simplify the management of cloud computing resources. You can author a stack template based on the template specifications defined in ROS. In the template, you can define required cloud computing resources, such as Elastic Compute Service (ECS) and ApsaraDB RDS instances, and the dependencies between resources. The ROS engine automatically creates and configures all resources in a stack based on the template. This helps achieve automatic deployment and O&amp;M.</p> <p>An ROS template is a readable, easy-to-author text file. You can directly edit a JSON template or use version control tools, such as Apache Subversion (SVN) and Git, to manage the template and infrastructure versions. You can call APIs and use SDKs to integrate the orchestration capabilities of ROS with your applications to implement Infrastructure as Code (IaC).</p>	
	Storage	<b>Elastic Block Storage (EBS)</b>	<p>Block storage provides Elastic Block Storage (EBS) devices based on a distributed storage architecture. EBS is a persistent random block storage service with low latency and high reliability, and is designed for Elastic Compute Service (ECS).</p> <p>The EBS console provides an all-in-one, cloud-based management solution for EBS. You can use the EBS console to manage enterprise-level features and other features such as storage resource management, monitoring, performance analysis, disaster recovery, and alerting. As a centralised service platform for the entire EBS infrastructure, the EBS console informs you of resources in the cloud to best support business and optimise costs by analysing long-term data trends.</p>	
		<b>Object Storage Service (OSS)</b>	<p>Object Storage Service (OSS) is a secure, cost-effective, and highly reliable cloud storage service provided by ALP Cloud.</p> <p>Compared with user-created server storage, OSS has outstanding advantages in reliability, security, cost-effectiveness, and data-processing capabilities. OSS enables you to store and retrieve a variety of unstructured data objects, such as text, images, audio and video over networks, anytime.</p> <p>OSS is based on key-value pairs. Files uploaded to OSS are stored as objects in buckets. You can obtain the content of an object based on the object key.</p>	
		<b>Hybrid Backup and Recovery (HBR)*</b>	<p>Hybrid Backup Recovery (HBR) is a fully managed online backup service that allows you to back up data to the cloud in a convenient, efficient and secure manner. You can use HBR to back up data from Elastic Computing Service (ECS) instances, ECS databases, ECS files, Apsara File Storage NAS file systems, and Object Storage Service (OSS) buckets.</p> <p>You can also use HBR to back up data from self-managed data centres that store files, databases, virtual machines (VMs), and large-scale file systems. HBR allows you to implement disaster recovery and archive data based on the archive policies that you configure for the preceding resources.</p>	
		Network	<b>Virtual Private Cloud (VPC)</b>	<p>A virtual private cloud (VPC) is a private network in the cloud. You can configure the CIDR block, route tables, and gateways of your VPC. You can use ALP Cloud services in a VPC, such as Elastic Compute Service (ECS), Server Load Balancer (SLB), and ApsaraDB RDS.</p> <p>You can connect your VPC to other VPCs or on-premises networks to create a custom network environment. This way, you can migrate applications to the cloud and extend data centres.</p>
			<b>Elastic IP (EIP)</b>	<p>An elastic IP address (EIP) is a public IP address that you can purchase and use as an independent resource. You can associate an EIP with an Elastic Compute Service (ECS) instance, an internet-facing Server Load Balancer (SLB) instance, or a secondary elastic network interface (ENI) deployed in a virtual private cloud (VPC). You can also associate an EIP with a NAT gateway or a high-availability virtual IP address (HAVIP).</p> <p>An EIP is a NAT IP address provisioned in the internet-facing gateway of ALP Cloud and is mapped to the associated cloud resource by using NAT. After an EIP is associated with a cloud resource, the cloud resource can use the EIP to communicate with the internet.</p>
<b>VPN Gateway*</b>	<p>VPN Gateway is an internet-based service that securely and reliably connects enterprise data centres, office networks and internet terminals to virtual private clouds (VPCs) through encrypted tunnels.</p> <p>VPN Gateway supports both IPsec-VPN and SSL-VPN connections:</p> <ul style="list-style-type: none"> <li>IPsec-VPN connects networks based on routes. It facilitates the configuration and maintenance of VPN policies, and provides flexible traffic routing methods. You can use IPsec-VPN to connect a data centre to a VPC or connect two VPCs.</li> <li>SSL-VPN is based on OpenVPN. After you deploy the required resources, you can load the SSL client certificate on your client and initiate an SSL-VPN connection between the client and a VPC. This way, your client can access applications and services in the VPC.</li> </ul>			
<b>NAT Gateway*</b>	<p>NAT gateways are enterprise-class gateways that provide Source Network Address Translation (SNAT) and Destination NAT (DNAT) features, saving you the trouble of building your own internet gateway. Each NAT gateway provides a throughput capacity of up to 10Gbps. NAT gateways also support cross-zone disaster recovery.</p> <p>SNAT allows Elastic Compute Service (ECS) instances that are deployed in a virtual private cloud (VPC) to access the internet when no public IP addresses are assigned to the ECS instances. DNAT maps the EIPs that are associated with a NAT gateway to ECS instances. This way, the ECS instances can provide internet-facing services.</p>			
<b>Express Connect</b>	<p>Express Connect allows you to establish private connections to enable fast, stable, and secure communication between your ALP Cloud VPC and your on-premises data centre or other locations. Express Connect traffic does not traverse the public internet, resulting in a more secure, stable network service.</p>			
Security	Security	<b>Traffic Security Monitor</b>	<p>The Network Detection and Response module is deployed on the network perimeter of Apsara Stack. This module allows you to inspect and analyse each inbound or outbound packet of an Apsara Stack network, based on traffic mirroring. The analysis results are used by other Apsara Stack Security modules.</p>	
		<b>WAF (Web Application Firewall)*</b>	<p>WAF protects web applications against attacks and ensures that mobile and PC users can securely access web applications over the internet. WAF provides a comprehensive set of features, including the following:</p> <ul style="list-style-type: none"> <li>Fine-grained HTTP access control for websites.</li> <li>Detects SQL injections, Cross-site Scripting (XSS), Cross-site Request Forgery (CSRF), Server-side Request Forgery (SSRF), Hypertext Preprocessor and Java deserialisation, ASP Code Injections, file inclusion and upload attacks, PHP code injections, and various other attacks.</li> <li>HTTP flood protection.</li> <li>Logging, reporting and status monitoring.</li> </ul>	
		<b>Server Guard</b>	<p>Provides security features to protect Elastic Compute Service (ECS) instances. The features include vulnerability management, baseline check, intrusion detection, and asset management. To do this, the module performs operations such as log monitoring, file analysis, and signature scanning.</p>	
Developer Services	Developer Services	<b>CloudMonitor*</b>	<p>CloudMonitor provides real-time monitoring, alerting, and notification services for resources to protect your business. In the CloudMonitor console, cloud services such as ECS, Server Load Balancer, Object Storage Service, Elastic IP Address, etc., are supported.</p> <p>You can use the metrics of cloud services to configure alert rules and notification policies. This way, you can stay up to date on the status and performance of your instances, and scale resources at the earliest opportunity when resources are insufficient.</p>	

**Note**  
\* Denotes products that are currently only available in our newly deployed Mozambique region; deployment to our Johannesburg region is on our roadmap.

**Acknowledgement**  
Adapted from the Alibaba Cloud *Apsara Stack Enterprise – Product Introduction manual*, v3.16.2 dated 2023-07-14, the Alibaba Cloud *Apsara Stack Enterprise – Introduction to Alibaba Cloud Apsara Stack manual*, v3.18.1 dated 2023-10-27; and the Alibaba Cloud *Apsara Stack Enterprise – VPN Gateway User Guide* v3.16.2 dated 2022-09-13.