ankabut
عنکبوت

MOZOON
Ankabut Cloud

About ANKABUT

Ankabut is the United Arab Emirates' Advanced National Research and Education Network (NREN) offering academic institutions connectivity to other education networks around the world; is an initiative of Khalifa University. In addition to connecting universities, Ankabut can connect schools and public institutions together across the UAE with an effective cost model. Ankabut also co-operates on a national, GCC, regional and international arena representing the UAE in conferences, exhibitions and forums. Ankabut aims to offer QoS based networks with IPv4/IPv6, multicast and introduce advanced services on a "Closed Group Network" with "Public Interest Purposes".

What Does ANKABUT Do

The list of educational institutions includes one of the prominent institutions of the country:

- Connects academia to advance IP networking
- Establishes a forum to discuss and encourage collaboration
- Encourages collaborative research within the UAE
- Provides a mechanism to share lectures
- Encourages inter-library access
- Increases collaboration with international universities
- Connects international institutions to home networks
- Enables applications on the IP network.

Cloud Computing Overview

Cloud computing is a computing paradigm, where a large pool of systems are connected in private or public networks, to provide dynamically scalable infrastructure for application, data and file storage. With the advent of this technology, the cost of computation, application hosting, content storage and delivery is reduced significantly.

Cloud computing is a practical approach to experience direct cost benefits and it has the potential to transform a data center from a capital-intensive set up to a variable priced environment.

The idea of cloud computing is based on a very fundamental principal of „reusability of IT capabilities'. The difference that cloud computing brings compared to traditional concepts of “grid computing”, “distributed computing”, “utility computing”, or “autonomic computing” is to broaden horizons across organizational boundaries.

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Ankabut Cloud is a new-generation data center solution that supports physically discrete but logically unified resources, with close synergy between cloud platforms and management software.

Ankabut Cloud is a service-driven DC solution that features unified management of physically discrete but logically unified resources, cloud-pipe synergy, and service awareness. It supports sustainable service development of enterprises or branches and meets full lifecycle management requirements. The essence of Ankabut Cloud is physical distribution and logical unification.

- **Physical distribution:** indicates that multiple DCs of an enterprise are distributed in different regions. By deploying a unified cloud platform, enterprises can consolidate physically dispersed IT resources to enable unified service provisioning.
- **Logical unification:** indicates that DC management software uniformly manages multiple DCs in different regions.

Features

- Reliability: This solution enhances the reliability of the entire system, a single device, and data. The distributed architecture of the cloud platform improves the overall system reliability and reduces the system reliance on the reliability of a single device.
- Availability: The system delivers remarkable availability by employing hardware/link redundancy deployments, high-availability clusters, loose coupling between applications and underlying devices, and application fault tolerance (FT) features.
- Security: The solution complies with the industry security specifications is designed to ensure the security of data centers. It focuses on the security of networks, hosts, virtualization, and data.
- Maturity: Ankabut cloud platform uses the architecture solution, hardware, and software that are tested in large-scale commercial practices and IT management solution that complies with the Information Technology Infrastructure Library (ITIL) standards to ensure the solution maturity.
- Advancement: Customer benefits are highlighted using the advanced cloud computing technology and idea. Advanced technologies and modes such as virtualization and dynamic resource deployment are used with services, ensuring the validity and applicability of advanced technologies and modes.
- Scalability: DC resources must be flexibly adjusted to meet actual service load requirements, and the IT infrastructure must be loosely coupled with service systems. Therefore, users only need to add IT hardware devices when service systems require capacity expansion.

Services

The main features available in Ankabut Cloud Infrastructure as a Service are:

- Computing Service: Cloud Compute gives you the ability to deploy and scale virtual machines on-demand. It offers guaranteed computational resources in a secure and isolated environment with standard API access, without the overhead of managing physical servers.
- Elastic Cloud Server: An Elastic Cloud Server (ECS) is a scalable, on-demand computing server that consists of CPUs, memory, and disks. ECS works with other services such as Virtual Private Cloud (VPC) and backup services to provide a secure and efficient computing environment, ensuring reliable and uninterrupted services.
- Image Management Service: Image Management Service (IMS) allows you to easily manage images. With IMS, you can use the public images provided by the cloud platform. You can also create a private image and use this image to create ECSs in batches. If you need a Bare Metal Server (BMS), you can select a public image to quickly create one.
- Auto Scaling: Auto Scaling (AS) automatically adjusts compute resources based on your service requirements and AS policies you have configured to ensure that the number of ECSs increases or decreases as the service load changes over time and that services are running properly.
- Virtual Private Cloud: Virtual Private Cloud (VPC) enables you to create private, isolated virtual networks. You can configure IP address segments, subnets, and security groups in a VPC and apply for elastic IP addresses (EIPs) to build service systems.

- Security Group: A Security Group (SG) is a collection of access control rules for ECSs that have the same security protection requirements. SGs are used to improve the security of ECSs.
- Virtual Firewall: Virtual Firewall (VFW) meets Network ACL function requirements by providing IaaS-layer basic security access control capabilities for Ankabut Could. VFW provides multi-layer and flexible network ACL functions based on VM ports and subnets.
- Elastic IP: Elastic IP (EIP) provides independent public IP addresses. EIPs can be flexibly bound to or unbound from Elastic Cloud Servers (ECSs), Bare Metal Servers (BMSs), virtual IP addresses, or Elastic Load Balancers (ELBs).
- Virtual Private Network: Virtual Private Network (VPN) establishes a secure, encrypted communications tunnel between your local data center and your VPC on Ankabut Could. With VPN, you can build a flexible and scalable hybrid cloud environment.
- Elastic Load Balance: Elastic Load Balance (ELB) automatically distributes incoming traffic across multiple Elastic Cloud Servers (ECSs) to balance their workload, increasing the service capabilities and fault tolerance of your applications.

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