



# Etanova Enterprise Solutions

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# Amazon Web Services

Deploy entire IT systems on Amazon Web Services, the global leader in cloud based architecture. Amazon is in continuous state of innovation and improvement, routinely adding new cloud services and lowering costs. AWS has the highest number of cloud based services that allow complex custom designed IT infrastructures. Moreover Amazon offers seamless integration between its services, ensuring that cloud instances such as web servers, databases, DNS, load balancers, etc are easily intercompatible. Using AWS has many other advantages such as:

- The widest range of datacenter geographical region availability
- Multi-region low-latency high-bandwidth services
- Routine and thorough security audits
- Solid infrastructure, being the first company to offer cloud based services

## Amazon EC2

Run virtual servers in the cloud with Elastic Compute Cloud cloud service. Dynamically build server instances with custom operating systems, software and hardware resources. Dynamically resize the hardware specifications of EC2 instances to match system architecture requirements. EC2 supports a variety of instance types for distinct combinations of CPU, memory, storage and networking capacity. Instance types include: T2 and M3 - General Purpose, C3 - Compute Optimized, R3 - Memory Optimized, G2 - GPU Optimized, and I2 and HS1 - Storage Optimized.

## Amazon S3

Add public domain storage of static website files with Simple Storage Service. S3 provides a web interface to retrieve and store data such as files, zipped versions of data sets, arbitrary string of bytes, etc. S3 objects can be accessed on the public web. A single S3 instance can be used for multiple EC2 instances. Moreover, S3 instances can be integrated as an external service with network infrastructure outside of AWS. For non-critical, reproducible data use S3's Reduced Redundancy Storage (RRS) to reduce costs by storing data that is replicated fewer times.

## Amazon Elastic Block Storage

Attach network persistent storage using EBS for traditional file system capabilities. EBS volumes can be attached to single EC2 instances, and can continue to persist data even if the EC2 instance is shutdown. EBS volumes are ideal for system architectures that require constant I/O throughput such as persistent critical data that must be stored privately with the system. EBS offers varying levels of I/O performance, depending on a system's requirements.

## Elastic Load Balancing

Dynamically route web traffic to available EC2 instances depending on node workload and regional availability. ELB ensures that only healthy instances receive traffic while unhealthy

instances are ignored. When system performance slows because instances cannot handle the workload, the Auto Scaling service can be used with ELB to dynamically create new EC2 instances. Contrarily when traffic is reduced, the number of EC2 instances can be scaled down. Auto Scaling ensures system architecture can respond to all levels of traffic in a cost-effective manner and without requiring manual intervention.

## Digital Ocean

Deploy web applications on Digital Ocean's high performance Linux OS cloud instances (called droplets). Create a custom designed droplet by choosing from a selection of hardware resources, regional availability and pre-installed software including a Linux distribution and other optional software packages. All droplet instances offer SSD hard drives for extremely fast I/O performance. Once configured a droplet can be created in less than 55 seconds with immediate root access. Digital Ocean is an ideal solution for:

- Quickly starting up Linux based projects
- Lowest prices in the industry
- High performance virtual machines
- Custom designed system architecture that does not require automated services included by other cloud service providers

### Private Network

Send traffic between droplets located in a specific regional datacenter using Digital Ocean's internal private network. Any data interchange performed over the private network does not contribute to droplet bandwidth usage. Private network traffic also benefits from extremely fast speeds. It is ideal for database replication, file storage, and host-to-host communication.

### Droplet Snapshots

Multiple snapshots can be made for a droplet to save a copy of a particular droplet instance at a particular time. Digital Ocean snapshots are backed up remotely to Amazon Glacier cloud service for as an added layer data redundancy. Snapshots can be used to restore an existing droplet to the snapshot, or in the creation of a new cloned droplet.

### Digital Ocean API

Manage droplets and other resources using Digital Ocean API, for a programmatic solution to completing any action that can be performed manually though the account control panel. The API is accessed over standard HTTP requests using wrappers that can be useful for integrating the API into a software application. Using the API, autonomous or event driven actions can be performed to update or manage the system infrastructure without requiring manual intervention. An ideal use for this to offer to clients software products that are created and customized on-the-fly in an isolated virtual instance.