

# Dissecting IT infrastructure

## Amazon

Welcome to our blog series, where we explore the IT infrastructure of leading online brands. In this first instalment, we're taking a look at Amazon, a titan in ecommerce and technology. Amazon uses their own IT Infrastructure, Amazon Web Services (AWS) to handle their large volumes of data, ensure smooth transactions, and support continuous innovation.

For SMEs reading up on different IT infrastructure, understanding Amazon's IT setup can offer key insights. It can also help to understand how important it is to have custom infrastructure depending on your individual needs, as Amazon's needs will be very different from other businesses.

### Global data centres

Amazon's infrastructure operates global data centres for reliable service, fast performance, and data protection through regional replication. This is vital for the business to function given the scale of the brand.

- Cost – Global IT infrastructure like this can be costly. Local SMEs might find a smaller, regional host more cost-effective.
- Regulatory compliance – Managing data across countries may involve complex legal and security requirements.
- Disaster recovery – Coordinating recovery across global locations can be challenging and may require robust systems. At Fasthosts ProActive, we're constantly monitoring your servers for potential threats to make sure this isn't an issue.

### Elastic Load Balancing (ELB)

ELB distributes incoming traffic across multiple servers to ensure smooth application performance. This is essential for Amazon's operations because it supports their high-availability and high-performance requirements, which are critical for their large-scale and global customer base.

- Cost – Charges are based on traffic handled. Ensure this fits your budget.
- Complexity – Setting up and managing ELB can be complex. Ensure you have the right skills or support.
- Performance – Regularly monitor ELB to ensure it balances traffic effectively.

### Amazon DynamoDB and Amazon EC2

DynamoDB offers a fast, scalable database, while EC2 provides virtual servers for running applications, helping manage data and applications efficiently.

- Cost – Charges are based on usage. DynamoDB costs depend on data operations, and EC2 costs vary by server type and usage.

- Complexity – Both services require technical expertise. Make sure you have the necessary skills or support.
- Performance – Regularly monitor both services to ensure they meet your performance needs. Here at Fasthosts ProActive, we also provide you with regular reports deciphering your infrastructure metrics so you can understand your systems.

## Amazon S3 and security

Amazon S3 offers scalable storage for files, and the IT infrastructure provides security tools to protect data and ensure compliance.

- Cost – Storage and security features can add up. Plan your expenses accordingly.
- Data management – Implement effective data management rules and configure security settings properly.
- Compliance – Make sure your IT infrastructure meets your industry's regulatory standards.

## Scalability, big data, and analytics

Amazon's IT infrastructure provides auto scaling for adjusting resources based on demand and big data services for efficient data handling and analysis. This helps mitigate the impact of Distributed Denial of Service (DDoS) attacks by automatically adding more resources to handle increased traffic volumes. This can prevent your application from becoming overwhelmed and ensure continuous availability even during an attack.

- Cost – Monitor costs for auto scaling and big data services to stay within budget. With auto scaling, costs can increase rapidly and unexpectedly, potentially leading to higher expenses.
- Configuration – Properly set up auto scaling and integrate big data tools with your existing systems.
- Complexity – Managing these services requires expertise. Ensure you have the necessary skills or support. Fasthosts ProActive could be the perfect place to come for your SMEs IT infrastructure support!

For SMEs, navigating these features can seem daunting, but with the right approach and support, you can achieve similar efficiency and reliability tailored to your needs. Stay tuned as we continue to explore the IT infrastructure of other leading brands in our upcoming blog posts.



If you've got any questions about our sustainability efforts, or what services we can offer, get in touch. You can give us a call on 0333 111 2000 or book a meeting at a time that suits you.

