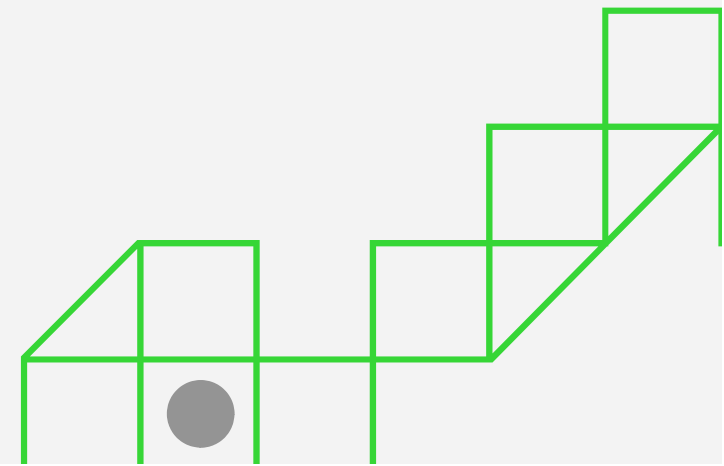




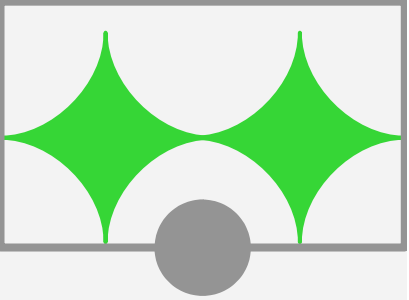
Building a Robust Web Server on Linux in Azure: A Step-by-Step Guide



INTRODUCTION TO WEB SERVERS

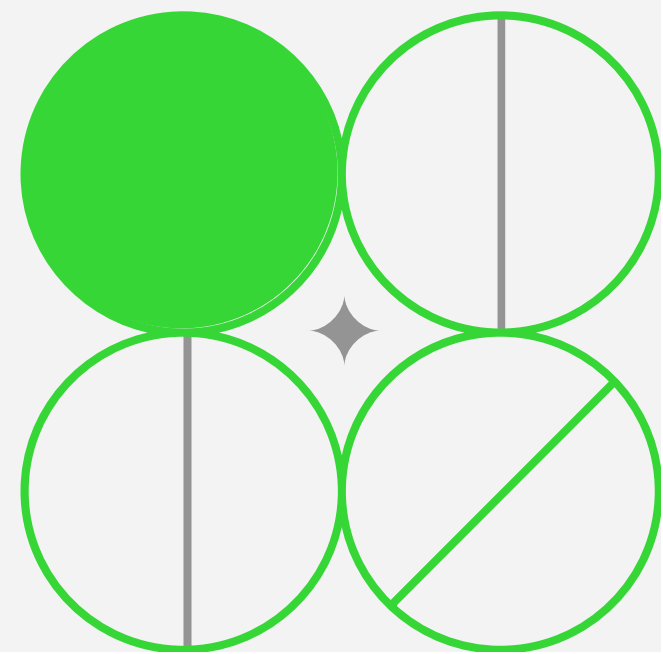
Web servers are crucial for delivering content over the internet. In this guide, we will explore how to build a robust web server on **Linux** using **Azure**. We will cover the necessary steps and best practices to ensure optimal performance and security.





Understanding Azure Services

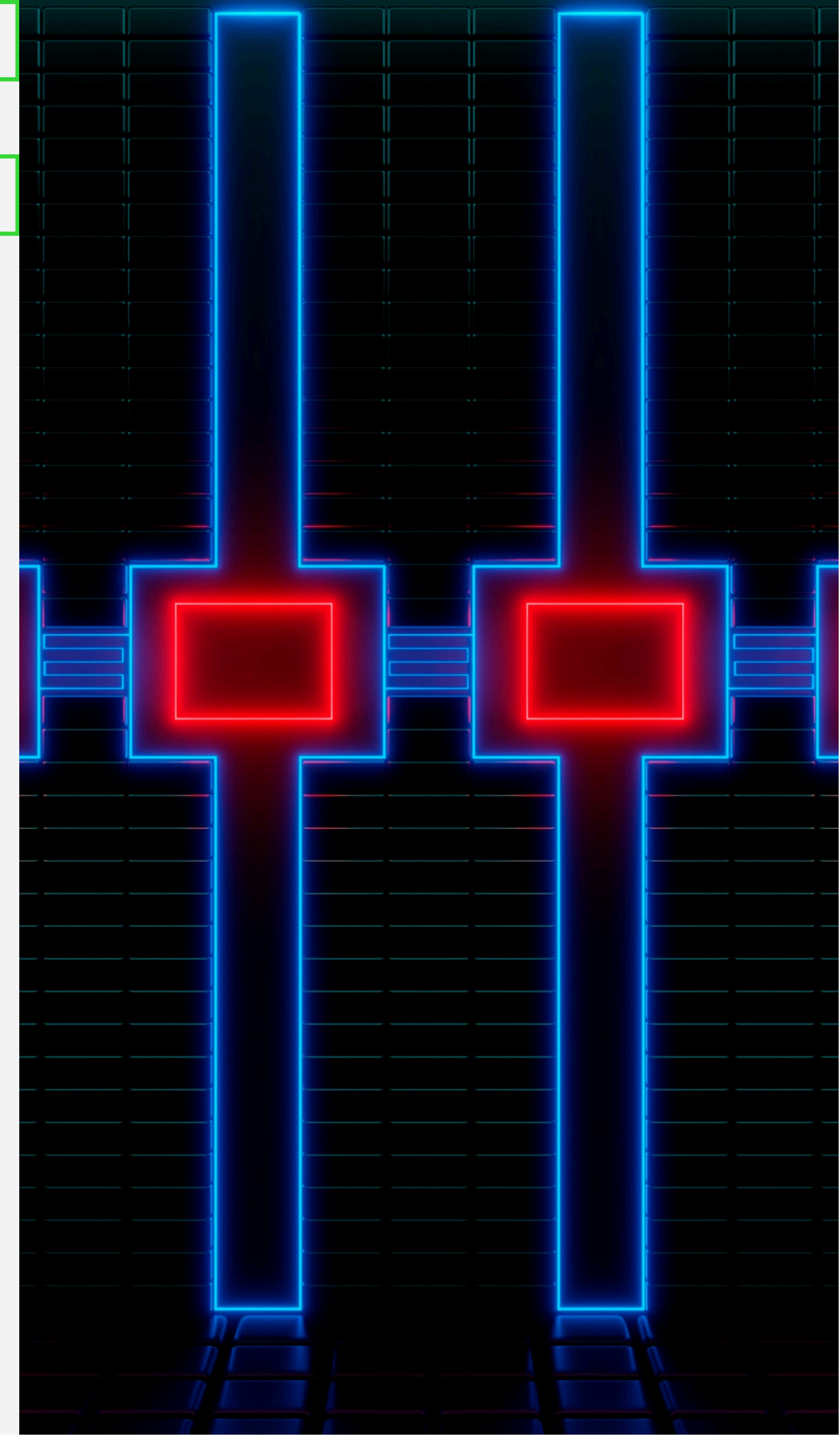
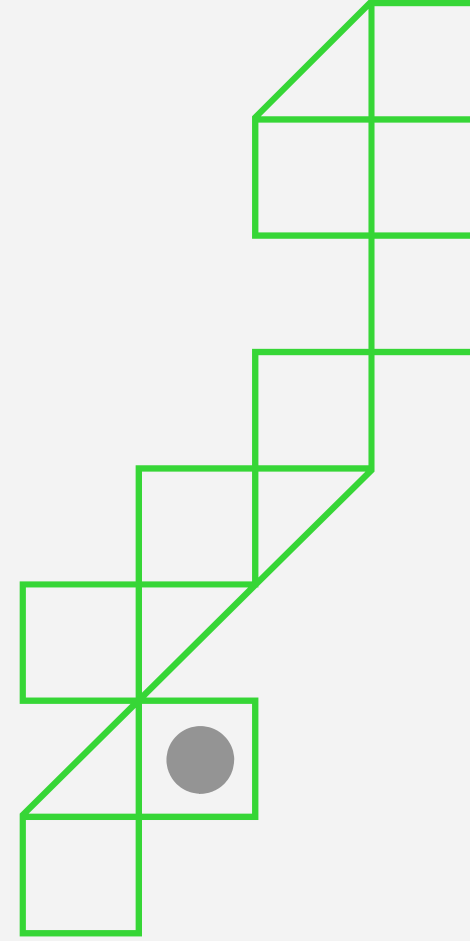
Azure offers a variety of services that can enhance your web server capabilities. Key services include **Azure Virtual Machines**, **Azure App Service**, and **Azure Storage**. Understanding these services will help you choose the right components for your web server setup.





Choosing the Right Linux Distribution

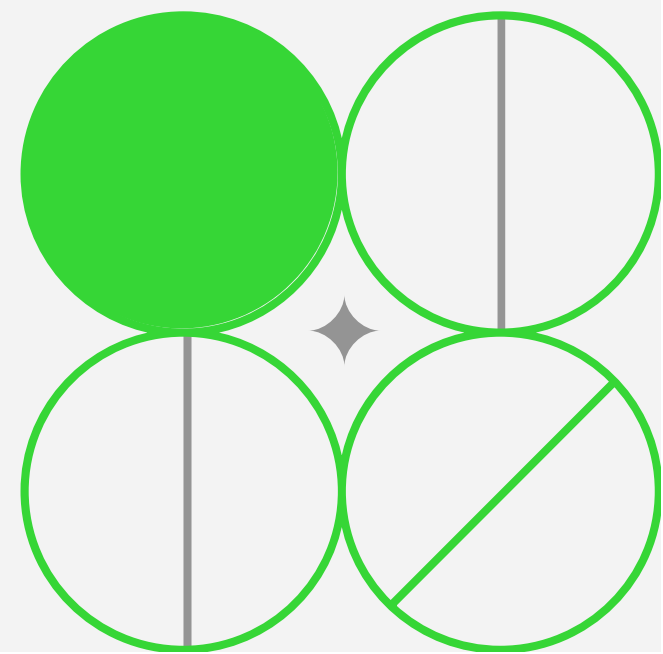
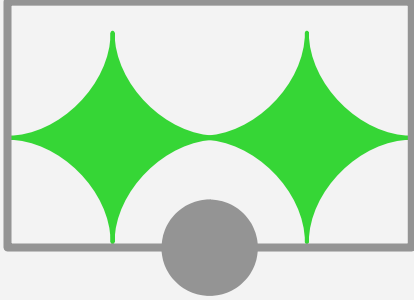
Selecting the appropriate **Linux distribution** is essential for your web server. Popular choices include **Ubuntu**, **CentOS**, and **Debian**. Each has unique features and community support, so choose one that aligns with your requirements and expertise.





Setting Up an Azure Account

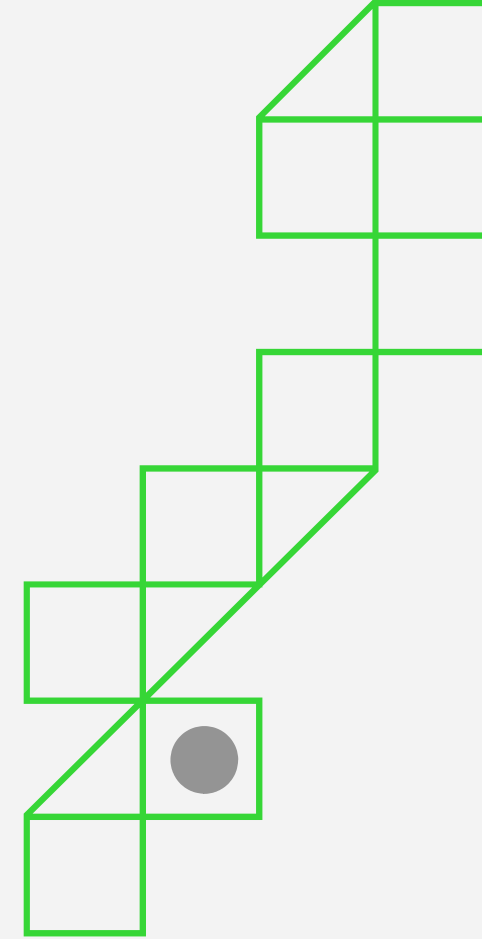
To start building your web server, you need an **Azure account**. Sign up for a free account to access Azure services. This will allow you to create and manage resources efficiently while taking advantage of Azure's capabilities.





Creating a Virtual Machine

Once your account is set up, the next step is to create a **Virtual Machine (VM)**. Choose the desired **Linux distribution**, configure the VM size, and set up networking options to ensure your server is accessible and secure.

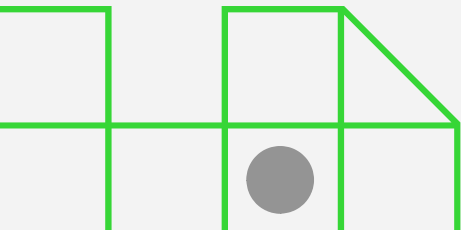
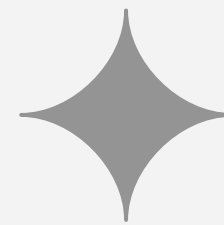




Installing Web Server Software

After setting up the VM, install the necessary **web server software**. Popular choices include **Apache** and **Nginx**.

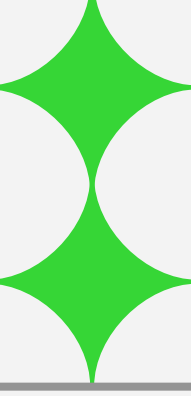
Follow the installation instructions specific to your chosen distribution to ensure a smooth setup process.

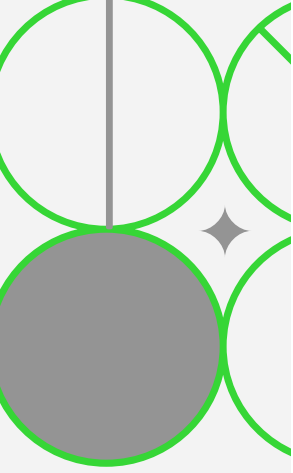




Configuring Firewall Settings

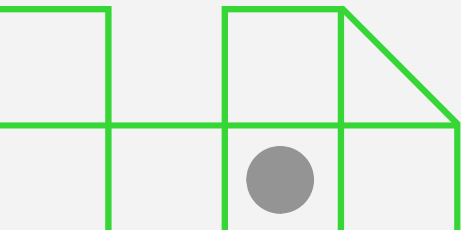
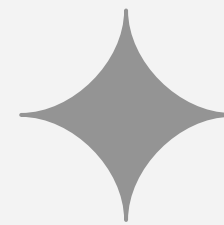
Properly configuring **firewall settings** is crucial for security. Use Azure's Network Security Groups to control inbound and outbound traffic. Ensure that only necessary ports are open to minimize vulnerabilities.





Deploying Your Application

With your web server ready, it's time to deploy your **web application**. Upload your files and configure the server to serve your content. Ensure that your application is optimized for performance and security.



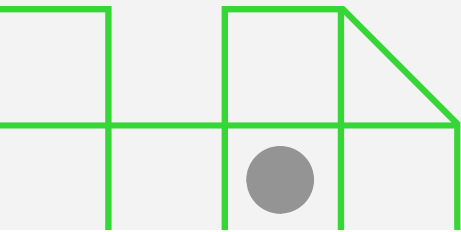
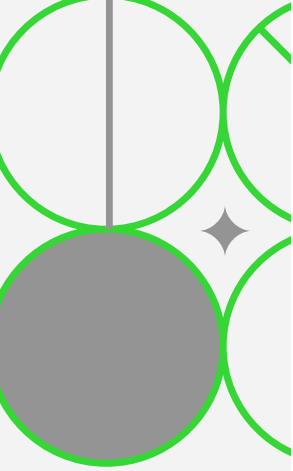
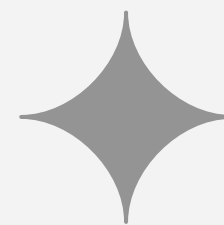
MONITORING AND MAINTENANCE

Ongoing **monitoring and maintenance** are vital for server health. Utilize Azure Monitor and logging tools to keep track of performance metrics and troubleshoot issues. Regular updates and backups will also enhance reliability.



Scaling Your Web Server

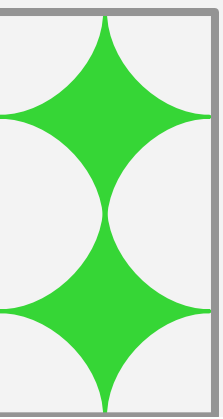
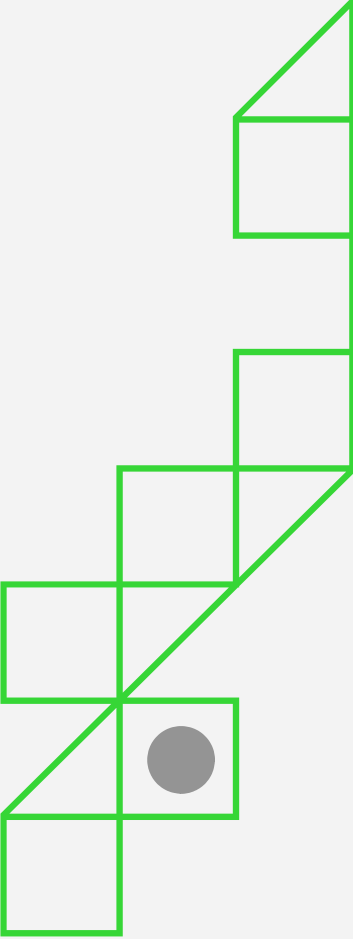
As your traffic grows, scaling your web server becomes necessary. Azure provides options for **scaling up** (increasing resources) or **scaling out** (adding more instances). Choose the right approach based on your application's demands.





CONCLUSION AND BEST PRACTICES

In conclusion, building a robust web server on **Linux** in **Azure** requires careful planning and execution. Follow best practices for security, performance, and maintenance to ensure a successful deployment and operation of your web server.



Thank you