

# COMPARISON BETWEEN VERCEL AND NETIFY

QUES-1:Determine the better performance between Vercel and Netlify,highlight their hosting performance.

=> Both Vercel and Netlify offer excellent performance for hosting Frontend applications. However, there are some differences in their performance:

## Build Times

According to the articles, Vercel has slightly faster build times compared to Netlify. Vercel offers 100 build hours per month on the free tier, while Netlify offers only 300 build minutes (5 hours). For most applications, this difference is negligible. But for larger builds, Vercel's build times may be a bit faster.

## Scalability and Uptime

Both platforms offer high scalability and uptime guarantees of 99.95% for Vercel and 99.99% for Netlify. They utilize underlying infrastructure from Google Cloud and AWS to achieve this. So in terms of scalability and uptime, both platforms perform very well.

## CDN Performance

Both Vercel and Netlify utilize CDNs to deliver content quickly to users. However, the articles do not provide enough details to conclusively determine which platform has a faster or better performing CDN. In practice, the difference in CDN performance is likely small.

## Serverless Functions

Vercel's serverless functions offer some performance advantages like Edge caching and slightly longer function execution times. Edge caching can help avoid running the same function repeatedly, improving performance. Netlify Functions offer asynchronous background functions, which may be useful for some use cases.

In summary, while both platforms offer excellent performance, Vercel's slightly faster build times and Edge caching for serverless functions give it a small performance advantage. However, for most applications, the difference in performance between Vercel and Netlify is negligible. Performance will depend more on factors like application complexity, asset size, and location of users.

Ques2-List limitation of their free plan and pricing detail for basic/premium monthly-plan.

## => **Build**

Vercel is ahead here, with a soft limit of 100 build hours / month for free and 400 with the Pro plan (\$20/month per member) compared to Netlify's 300 build minutes / month free and then \$7/500 minutes. Most projects won't need anywhere near this much time anyway, so it probably won't matter for you.

## **Edge**

Both Netlify and Vercel give you 100GB of bandwidth free (although that's a soft limit for Vercel). Netlify sells additional bandwidth at \$20/100 and Vercel gives you 1 TB with the Pro plan (also a soft limit).

## **Serverless Functions**

Netlify bills based on the number of invocations, whereas Vercel bills based on GB-hours since you can customize your serverless function instances. Netlify gives you 125k invocations free, and then charges "\$25+ when exceeded" (your guess is as good as mine). Vercel gives you 100GB-hours free, and 1000GB-hours with the Pro plan.

## **Netlify Forms, Identity, and Analytics**

Forms get 100 free submissions, then cost "\$19+ when exceeded." Identity gives you 1000 free monthly active users, then charges \$99 when exceeded. Analytics costs a flat rate of \$9/month.

Ques3:-Enumerate the application types and framework suitable for hosting on vercel and netlify

=> Both Vercel and Netlify are well-suited for hosting a variety of application types, especially those that follow modern web development practices. Here are some application types and frameworks that are suitable for hosting on Vercel and Netlify:

#### Vercel:

1. Static Websites: Vercel is excellent for hosting static websites, including personal blogs, portfolios, documentation sites, and marketing landing pages. •
2. Next.js Applications: Vercel is the creator of Next.js, a popular React framework. Next.js applications, including server-rendered, static-generated, and client-rendered apps, work seamlessly on Vercel.
3. React Applications: Vercel supports hosting React applications built using various tools and frameworks, making it a great choice for frontend-heavy applications.
4. Vue.js Applications: Vercel can host Vue.js applications, providing quick performance and global distribution through its CDN.
5. Svelte Applications: Svelte applications, known for their small bundle sizes, can also be hosted on Vercel.
6. APIs and Serverless Functions: Vercel's serverless functions make it suitable for hosting APIs, microservices, and backend logic.

#### Netlify:

1. Static Sites and JAMstack Apps: Netlify is renowned for hosting static websites and JAMstack applications (JavaScript, APIs, and Markup), which decouple frontend and backend for better performance and security.
2. React, Vue.js, and Angular Applications: Netlify supports popular frontend frameworks like React, Vue.js, and Angular, allowing you to deploy single-page applications (SPAs) with ease.
3. Serverless Functions: Netlify Functions enable you to host serverless APIs and backend functions, suitable for various tasks like data processing, user authentication, and more.

4. Gatsby Sites: Gatsby, a React-based framework, works well on Netlify, leveraging its build and deployment capabilities.
5. Hugo, Jekyll, and Other Static Site Generators: Netlify seamlessly integrates with static site generators like Hugo and Jekyll, offering straightforward deployment workflows.
6. CMS-Driven Sites: Netlify can be integrated with headless CMS platforms like Contentful, Prismic, and Strapi, making it ideal for content-driven applications.
7. E-commerce: Depending on the scale and complexity, both platforms can host e-commerce websites, especially those built on modern frameworks and using serverless

Ques4:- Explore whether both services offer integrated databases or require third-party integration.

=> Vercel:

Vercel specializes in hosting front-end applications and serverless functions. While you can build and deploy serverless functions that interact with databases, Vercel itself does not offer integrated databases as part of its core service. If you need to use a database in your application hosted on Vercel, you would typically integrate with third-party database services or APIs. Some popular databases and services that can be integrated with Vercel include:

1. Firebase: Firebase provides a real-time database and cloud storage that can be used with Vercel applications.
2. MongoDB Atlas: MongoDB's cloud service can be used alongside Vercel for database needs.
3. Hasura: You can deploy Hasura GraphQL Engine on your own infrastructure and integrate it with Vercel applications.
4. RESTful APIs: You can connect to various RESTful APIs that provide database functionality.

Netlify:

Like Vercel, Netlify primarily focuses on front-end and serverless hosting. Netlify does not offer integrated databases either. Instead, it encourages developers to use third-party services for databases and data storage. Some of the options for integrating databases with Netlify-hosted applications include:

1.FaunaDB: Netlify and FaunaDB have a partnership that makes it easy to set up and use FaunaDB as a backend database for your applications.

2.Firebase: Similar to Vercel, you can use Firebase's real-time database and cloud storage with Netlify.

3.Third-Party APIs: You can integrate your Netlify application with various third-party APIs that provide database functionality.

Ques4: Investigate the availability and quality of CI/CD support on both platforms.

=> Vercel:

Vercel places a strong emphasis on providing an intuitive and seamless CI/CD experience, particularly for Next.js applications. Some key features of Vercel's CI/CD support include:

1Automatic Deployments: Vercel can automatically trigger deployments whenever you push changes to your Git repository. This feature simplifies the deployment process and ensures that your live site stays up to date.

2. Preview Deployments: Vercel allows you to create preview deployments for pull requests, enabling you to test changes in isolation before merging them into the main codebase.

3. Environment Variables: You can manage environment variables directly from the Vercel dashboard, which is useful for securely storing sensitive configuration data.

4. Custom Build and Deploy Settings: Vercel offers customization options for build and deploy settings, allowing you to fine-tune the build process and specify deployment configurations.

5. Integration with Git Providers: Vercel integrates seamlessly with popular Git providers like GitHub, GitLab, and Bitbucket, making it easy to set up and manage your CI/CD workflows.

Netlify:

Netlify is well-known for its seamless integration with Git repositories and its focus on JAMstack (JavaScript, APIs, and Markup) applications. Here are some highlights of Netlify's CI/CD capabilities:

1. Git Integration: Netlify provides tight integration with Git repositories, automatically triggering deployments whenever you push changes to your repository.
2. Continuous Deployment: With Netlify, your site is automatically rebuilt and redeployed whenever you update your codebase. This ensures that your live site is always in sync with your repository.
3. Preview Deployments: Similar to Vercel, Netlify enables you to create preview deployments for pull requests, allowing you to test changes before merging them.

4. Environment Variables: Netlify offers the ability to manage environment variables directly from the dashboard, allowing you to securely configure your application settings.
5. Build Plugins: Netlify supports build plugins, which are customizable scripts that enhance your build and deployment process. You can use pre-built plugins or create your own.
6. Branch Deployments: Netlify enables you to create separate deployments for different branches, facilitating collaboration and testing.