Node.js benefits include :

**1)High Performance**

One of the most important features of node.js is the ability to create lightning-fast apps that produce results in seconds.

The ability to multitask that Node.js provides is extremely beneficial to web apps. Its event-driven, single-threaded design rapidly processes several simultaneous requests without clogging the RAM. Additionally, its event-loop and non-blocking I/O operations allow code to be executed at a rate that indirectly influences the application's overall performance.

Node.js advantage is that it is powered by the V8 engine in Google Chrome, written in C++. It rapidly and efficiently converts JavaScript to machine code.

This engine is significant because Google makes significant investments in improving efficiency and security and providing strong support for sophisticated JavaScript capabilities.

Furthermore, because it allows non-blocking I/O operations, the run-time environment speeds up code execution.

Google released the V8 benchmark set to improve node.js performance with faster execution, better compilers, security patchworks, and scalability.

**2)Scalability**

One of the Node.js advantages is that developers can easily grow applications in both horizontal and vertical orientations. The applications can be horizontally scaled by adding additional nodes to the existing system.

Furthermore, during the vertical scaling of the application, Node.js allows you to add extra resources to single nodes. As a result, it is extremely scalable and offers a superior alternative to existing JavaScript servers.

**3)Easy to Learn**

Most frontend developers are familiar with JavaScript because it is one of the most extensively used programming languages.

It will be lot easier for them to get started using Node.js on the backend. It is simpler to understand Node.js, and working with it takes less time.

**4)Cost-Effective**

Node.js allows programmers to develop server-side JavaScript and frontend JavaScript codes with simplicity. One of the major node.js advantages is that it eliminates the need for two resource teams, saving time, money, and energy for overall project development.

**5)Extensibility**

Node.js offers a lot of extensibility, which means it can be changed and improved to fit unique requirements.

Data may be sent between the web server and the client using the JSON format. It also has APIs for constructing HTTP, TCP, and DNS servers, among other features.

**6)Large Community Support**

Millions of developers actively contribute to the Node.js community. To address even the most bizarre development difficulties, anticipate widespread cooperation from development specialists all across the world.

**NPM**is the world's most comprehensive package manager registry. It includes a number of tools and libraries that you may use right away in your project. Developers will also have access to a wide pool of resources on GitHub, including ready–to–use solutions, scripts, modules, libraries, and registries created by developers to help them do more with less.

**7)Improves Response time and boosts performance**

The single-threaded event-loop approach in Node.js provides a non-blocking asynchronous design. This design uses fewer resources since it does not spawn more threads. It improves the responsiveness of your application by dealing with several concurrent users.

**8)Reduces Loading Time using caching**

The Node.js Caching module makes it simple for developers to decrease task workload and code re-execution. It is one of the major node.js advantages.

As a result, the initial module of the web application is cached in the in-app memory each time it is accessed. A user may browse online sites quickly without having to wait long.

**9)Helps in building the cross-functional teams**

You can use Node.js to construct cross-platform real-time web apps using platforms like Electron and NW.js. This eliminates the need to write separate code for different desktop versions such as Windows, Linux, and macOS.