



SOLUTION BRIEF

Power Your Blockchain Infrastructure with Vultr

Web 3.0 has opened up many opportunities for businesses across industries. This next-generation web development focuses on creating a decentralized, intelligent, and data-driven ecosystem that will unlock an entirely new level of innovation and collaboration.

VULTR.COM

The shift to remote work has only accelerated the need for cutting-edge technological solutions that empower distributed teams. As remote developers become increasingly prevalent in today's workforce, ensuring seamless access to technology is vital to staying competitive and fostering innovation in the Web 3.0 world.

Blockchain technology has emerged as a cornerstone, powering decentralized applications and transforming business operations. Companies that successfully integrate blockchain technologies into their remote work infrastructure unlock new avenues for collaboration, efficiency, and growth.



Vultr's secure and reliable blockchain infrastructure

For many digital startups, especially those in Fintech, blockchain is an essential foundation to SaaS platforms. It allows you to facilitate secure transactions and enhance trust and transparency among your user base. However, your ability to deliver on that promise depends on your infrastructure. An undependable infrastructure is prone to downtime, slow transaction processing, and potential security breaches. This undermines the core principles of blockchain technology, such as decentralization, immutability, and consensus. Unreliable infrastructure can also damage the user's faith in your company's services.

[Vultr's virtual desktop infrastructure \(VDI\) solution](#) addresses this need for a secure, reliable infrastructure to aid in the development of blockchain applications. VDI provides high-performance, low-latency virtual desktops accessible from anywhere at any time. These virtual desktops utilize the latest hardware and software, including NVIDIA GPU acceleration, to offer near-native desktop performance for resource-intensive tasks, including managing and processing blockchain transactions.

A dependable infrastructure is essential for blockchain applications. Vultr provides the agility necessary for improved performance and a fast, consistent user experience.

Blockchain nodes

A vital component of this reliable blockchain infrastructure is the effective management of blockchain nodes. Blockchain nodes are the distributed nodes that power the network, ensuring its integrity. Their job is to maintain copies of the blockchain, update it with new transactions, and verify these transactions to ensure they follow the network's consensus rules. Web developers need reliable, secure access to this network for successful development.

A blockchain network has two primary types of nodes, each with different requirements and responsibilities: full nodes and light nodes.

- **Full nodes** – provide a higher level of security and contribute significantly to the network's robustness. They store a complete copy of the blockchain, validate all transactions, and maintain an updated version of the distributed ledger. By doing so, full nodes ensure that every transaction adheres to the network's consensus rules. However, full nodes demand substantial storage space, processing power, and bandwidth, as they need to maintain the entire blockchain and communicate with other nodes on the network.
- **Light nodes** – on the other hand, are less resource-intensive and more suited for devices with limited storage and processing capabilities. They store only a subset of the blockchain, typically just the block headers and a limited number of transactions relevant to the user. Light nodes rely on full nodes to validate transactions and provide the necessary information to stay in sync with the network.

Running on-premise nodes can be costly due to the substantial hardware requirements, ongoing maintenance expenses, and security threats. Not only is the hardware expensive in and of itself, but it also contributes to high electricity and cooling costs and significant bandwidth use. This physical infrastructure also requires regular updates by qualified, in-house experts.

Upholding security for on-premise nodes also requires additional physical security measures, as any breaches in protection can lead to data loss and reputational damage. Effectively managing these nodes is essential to maintaining a robust blockchain infrastructure, and Vultr's solutions cater to these requirements.

Vultr blockchain node hosting

Vultr offers a [blockchain node hosting solution](#) as an alternative to in-house node hosting. Our cloud-based solution provides virtualized environments tailored to your specific blockchain needs, enabling you to run and manage your blockchain nodes without needing on-premise infrastructure.

By offloading the responsibility of node hosting to Vultr, you can save time and resources on setup and maintenance. And because these environments support optimal performance, security, and reliability, developers can focus on building their applications without worrying about the underlying infrastructure.

Vultr's blockchain node hosting service offers exceptional flexibility and scalability, making it an ideal solution for your business, regardless of size. As the demands of your blockchain network change, [Vultr's Cloud Compute](#) service can quickly scale up or down to accommodate these fluctuations. This adaptability is crucial for seasonal peaks or rapid growth, ensuring you can meet infrastructure needs without overprovisioning or underutilizing resources.

In addition to blockchain cloud computing, Vultr offers full-stack cloud computing at the edge, which enables developers to build and deploy blockchain applications with reduced latency and enhanced performance.



Vultr Victories

Learn how Drex Labs uses Vultr to build top-tier consumer-facing solutions that enable digital brands to monetize and engage their communities using NFTs via Web3.

[Read the case study](#)

Secure and reliable

Vultr takes the security and reliability of its infrastructure seriously. As such, it takes several measures to ensure the safety and security of its customers' data, such as two-factor authentication, enterprise-grade firewalls, and distributed denial-of-service (DDoS) protection.

Vultr also offers 24/7 [technical support](#) to ensure that you and your team can resolve issues promptly and keep your blockchain nodes operational. Its VPN offers an additional layer of protection. These safeguards aim to prevent unauthorized access and guarantee the safety of customer information.

Enhancing your blockchain project with Vultr

Web developers need blockchain network access to develop proper Web 3.0 applications, but simply giving access isn't enough. Remote workers must be empowered and supported to develop, test, and deploy modern applications seamlessly.

Regardless of their role, any remote employee working on your blockchain network needs to be enabled with a robust [virtual desktop](#) solution secured with a solid [VPN](#). This gives your employees access to the tools they need to create robust, accessible, secure, and performant blockchain apps.

Vultr's [edge computing solution](#) gives your web developers the tools to create the fastest, most efficient apps possible. Combining edge computing and blockchain technology allows your web developers to produce novel applications that incur low latency and are highly scalable. It also allows your team – including data scientists – to unlock the power of the Internet of Things (IoT), where edge devices can directly process data and interact with the blockchain.

Web developers working with ambitious applications will be in good hands with [Vultr's high performance computing \(HPC\)](#) options that allow access to all the power they need for large scale computational projects. No project is too big for Vultr's fleet of Bare Metal servers and cloud GPUs to handle.

Whatever tools your remote web developers need, Vultr can supply them. The self-service nature of the solution means your remote workers can do more with less on their own, and with Vultr cloud computing, the maintenance and upkeep is out of your hands.

Competitive pricing

Vultr's blockchain infrastructure services offer a transparent pricing structure that guarantees you only pay for the resources you use. There are no fixed or predefined packages or fixed costs to worry about, allowing you to scale your infrastructure freely to meet the changes in demand.

For instance, you can adjust the number of full nodes or light nodes in your network depending on growth or traffic. You can also monitor your resource usage in real time and make adjustments as necessary to optimize costs.

Blockchain technology was previously only available to larger organizations with substantial budgets. Vultr's competitive [pricing model](#) makes that technology more easily accessible. This affordable structure saves your company money while receiving high-quality blockchain infrastructure.

Supercharge your blockchain applications with Vultr

Blockchain technology holds the potential to revolutionize many industries. Digital startups require reliable infrastructure to maintain customers' trust in their SaaS platforms. But setting up and managing that infrastructure can be difficult and resource-intensive. On-premise blockchain technology requires expensive hardware, maintenance, and security. Downtime, latency issues, or security breaches can cause severe reputational damage.

Regardless of your company's size or your team's distributed nature, Vultr can provide a solution that allows your remote developers to have the blockchain tools they need. And when combined with other Vultr offerings, your developers will have the same experience from their home as they would from an enterprise office.

Vultr offers several solutions to avoid complications. Our blockchain node hosting solution and Block Storage and Object Storage services let your development team focus on its core competencies without worrying about managing infrastructure. With the help of Vultr, you and your team can efficiently deploy and scale your blockchain infrastructure while minimizing costs and maximizing reliability and security.

Explore Vultr's [full blockchain offerings](#) and [check out our creator guide](#) to get started.