

## **The Cloud Hosting Revolution: Learn How to Cut Costs and Eliminate Downtime with GlowHost's Cloud Hosting Services**

For years, companies have struggled to find an affordable and effective method of building IT systems that ensure business continuity even in the most demanding circumstances. For many organizations that have an online presence, the number one critical factor that influences business continuity is uptime. Ideally, the availability of a system should be 100%, but in practice, downtime occurs frequently, due to unexpected problems or scheduled maintenance.

It is easy to see why downtime has negative consequences for businesses. Imagine how many transactions are lost by the giant online retailer Amazon in a single minute of downtime. However, downtime has other, more insidious effects, besides lost revenue. Downtime affects the image of the company, decreases its ability to compete on the market, and it can lead to customer loss.

Learn how GlowHost cloud hosting solutions can reduce or eliminate downtime, improve performance, and reduce costs of operation. Explore the features that make GlowHost's cloud hosting a better option than traditional hosting solutions like VPS and dedicated servers. You will learn about the unique redundant infrastructure used by GlowHost to deliver cloud hosting services that are superior to competing offers. To begin, let's analyze the shortcomings of conventional hosting solutions currently available on the market.

## **Drawbacks of the classic approaches to web hosting shared hosting, VPS, and dedicated servers**

Up until recently, web hosting infrastructures were severely limited by costs and technical difficulties. Cheaper hosting solutions, such as shared hosting plans and virtual private servers, simply did not meet the demands of mission-critical environments. To get a reliable hosting solution, companies needed to invest heavily in oversized IT departments, with all the associated costs - salaries, training, licenses, hardware, etc. The alternative was to rent a dedicated server from a hosting provider, often for a substantial monthly fee.

In addition to the hefty recurring costs, dedicated servers have other drawbacks. Perhaps the most significant is the fact that dedicated servers do not provide true redundancy. In fact, while dedicated servers are usually more reliable than shared hosting or VPS hosting, dedicated servers are single points of failure that can affect the functions of an entire network. Another major problem of classic hosting solutions is their lack of flexibility. If a website experiences a sudden growth in popularity and the server is not technically prepared for the spike, the results are slow loading times and even downtime. To upgrade the server by adding RAM for example, the provider needs to take it offline to execute the operation, which leads to more downtime.

A solution was needed to solve the reliability, performance, and cost issues of dedicated servers and other forms of web hosting. The answer to this problem came under the form of cloud hosting. In cloud hosting, web sites are hosted on a network of servers, rather than a single machine. Together, all the machines in the network form one giant "cloud" of hardware and software resources. Clever virtualization techniques allow hosting providers to allocate virtual machines and hardware resources to each client, as needed.

Unfortunately, the term "cloud hosting" is commonly misused, creating confusion among businesses and individuals who do not always fully understand the service that they are paying for, especially when it comes to cloud hosting services. Many hosting providers use this very modern sounding term to market their business and give the impression of scale and flexibility in their services. In practice, though, customers will often find that their hosting is supplied through conventional dedicated servers, shared hosting or VPS plans, and eventually run into the limitations that these types of hosting create.

GlowHost's cloud hosting services are truly "in the cloud," and provide a cost-effective hosting solution that is ideally suited for the systems where availability is crucial. Next, we will see how the cloud hosting solutions provided by GlowHost are superior to other types of hosting and to the cloud services offered by other providers.

 **Access the amazing power of the cloud with GlowHost's cloud hosting services**

By its truest definition, the cloud is a high-performance hosting solution. Customers gain access to the awesome capabilities of an entire network of powerful servers, and not just a single machine. The combined performance of dozens of state-of-the-art servers cannot be matched by

any dedicated server or other classic hosting solutions. To build the GlowHost cloud hosting platform, the company invested in numerous modern servers located in a world - class data center located in Atlanta, Georgia. The server farm is composed of machines powered by the latest generation of enterprise multicore processors and a minimum of 32 GB of RAM per machine. Each server on its own can handle large amounts of traffic. Imagine the raw power generated by a cluster of servers connected in a low-latency network.

The technology that makes GlowHost cloud hosting viable by allowing customers to tap into the combined pool of resources of the entire cloud is called virtualization. The concept of virtualization is not new. In fact, for years, providers have offered virtual private servers (VPS), which are virtual machines that run on a single physical server. The virtual machine is an exact replica of a physical machine, down to hardware components, such as RAM and disk space. The similarities go so deep that most users will never realize that they are using a virtual machine instead of a complete dedicated server.

GlowHost cloud hosting takes virtualization to the next level. With GlowHost cloud hosting, you can create virtual machines that use the resources of several servers or even entire server cluster. For companies that require raw power, GlowHost cloud hosting provides almost unlimited possibilities. In theory, it is possible to combine all the computing power of a server cluster in a virtual "superserver" that runs on an array of processors and boasts hundreds of gigabytes of RAM.

Because cloud hosting relies on virtualization, virtual machines built on cloud clusters are elastic, meaning that they are instantly configurable and adaptable. When the performance demands are high, due to heavy traffic or data-intensive operations, the cloud dynamically allocates more resources where needed, ensuring smooth performance of the virtual server. In the same way, during periods of low activity, the resources are redirected to other parts of the cloud.

Another advantage of GlowHost's cloud hosting is hardware redundancy. If one server of the cloud malfunctions or goes offline, its load is instantly taken over by other nodes in the cluster, a technique called hot failover. Another situation when the cloud proves better than conventional solutions is maintenance and hardware updates. To work on a machine, technicians simply remove (hot swap) the server from the cluster. Again, the loads are seamlessly distributed to the other machines in the cluster, without any downtime. Older solutions require complicated and expensive setups.

For example, to ensure the availability of a dedicated server, it is necessary to use a backup server that kicks in whenever the main server malfunctions. In the mean time, the backup server remains unused, but the customer still needs to pay for its maintenance and operation costs.

### **High Availability is not possible without full redundancy**

High Availability (HA) refers to the proportion of uptime in a given period. Many hosting providers claim that they provide HA, but most are unable to offer true high availability, which is an uptime to downtime ratio of over 99.999%. GlowHost guarantees that its HA cloud hosting solutions deliver 99.999% uptime. To better understand this figure, consider that the customers using GlowHost's cloud hosting services will experience a maximum of 5.26 minutes of downtime in a given year. By contrast, the 99% uptime advertised by cheaper providers translates into more than three days of downtime per year.

GlowHost has applied its expertise in the requirements of hosting customers and its years of industry experience to become the only cloud hosting provider that guarantees full redundancy of every component of its infrastructure, including dual electrical feeds from different substations.

Full redundancy, including fully redundant power supplies, is essential for any high availability system. GlowHost's server cluster is located in a world-class data center, AtlantaNAP, located in Atlanta, Georgia. This best of breed data center benefits from hundreds of thousands of dollars in investment to make GlowHost's cloud hosting services superior to other cloud solutions.

### **Power and cooling**

The AtlantaNAP data center is the only data center in the Southeast region that is powered by dual electrical feeds from two different electrical substations. Moreover, the power lines come from opposing directions, without intersecting at any point. What does this mean for customers? If a blackout hits a part of the city, cutting off one electrical feed, GlowHost's server cluster will still receive electricity from the other line, which is fed from another power substation. Many providers advertise dual-feed power connections, but only GlowHost is able to maximize uptime, by offering dual feeds with geographically diverse points of entry.

Cooling is equally important, allowing data centers to exhaust the immense heat generated by servers and electrical equipment. The AtlantaNAP facility is cooled by four redundant 500-ton cooling towers that run parallel to ensure uninterrupted availability. The water source is redundant too, with a dual feed from a private well and from the municipal network.

### **Multiple Network Connections**

As with electric power, data centers should be fitted with redundant networking equipment that can handle the most intense traffic. The GlowHost infrastructure at the AtlantaNAP facility is connected to the Internet via three 10 GB fiber lines, which provide full redundancy and large capacity. The fiber connections were engineered to be geographically separated from each other, to ensure that at least one of them remains functional in case of a localized disaster.

AtlantaNAP is connected via high-speed fiber to a major communication center that hosts more than 100 network carriers. For extra safety, a separate fiber segment connects the data center to another hub, so there is no single point of failure in the infrastructure.

### **GlowHost Cloud hosting takes storage and backup to the next level**

The cloud hosting services provided by GlowHost solve another problem that plagues conventional hosting solutions: insufficient storage. The vast majority of dedicated server solutions run a single hard drive, or at best a 2-4 drive RAID setup. When this small amount of storage begins to run short on space, the website and web apps hosted on the machine stop working properly, causing errors, or even downtime. Conventional dedicated servers are exposed to this problem, requiring administrators to permanently monitor disk space and delete old files to conserve space, or, to upgrade the hard drive size which requires prolonged downtime.

By contrast, GlowHost uses a storage technology called SAN or storage area network. SANs group together storage devices and make the storage space available to web servers, as needed. GlowHost uses three SANs, providing triple redundancy data replication across no less than 60 hard disk drives. This enables GlowHost to increase speed and efficiency. For example, the allocation of disk space to a virtual machine is simplified and can be executed instantaneously without downtime. Virtual machines have access to the entire SAN, which effectively eliminates the risk of running out of disk space.

GlowHost understands the devastating consequences for a business if data loss occurs in the event of hard drive failure and goes the extra mile to guarantee data integrity for its customers. The SAN is just the first line of defense against data loss. All data stored in the cloud is replicated on multiple hard disks and other storage devices. If one device fails or if a disaster takes out the entire primary SAN, all data can be recovered from an independent secondary or tertiary SAN.

### **Generate real savings with cloud hosting solutions from GlowHost**

GlowHost cloud hosting is truly a next generation technology. As we have seen above, it provides superior performance, redundancy, and unparalleled data integrity. But perhaps the best thing about GlowHost cloud hosting is that it allows companies to obtain substantial savings, especially when compared to the cost of classic hosting solutions, such as in-house servers and dedicated servers.

When you add up all the costs associated with using an in-house web server (hardware, licenses, salaries, training, etc.) you get a hefty price tag. In fact, the cost of hosting a web site in-house for the first month is higher than the cost of any pre-configured cloud hosting plan from GlowHost for an entire year. GlowHost cloud hosting allows you to cut costs and streamline your IT department by reducing staff or redirecting it to other projects. Because GlowHost guarantees 99.999% uptime, companies can also generate savings by reducing the costs associated with server failure, for example, the cost of lost business opportunities.

First-time customers can try GlowHost cloud hosting services for 15 days for just one penny. Even better, all GlowHost cloud hosting clients benefit from the unique "no questions asked" guarantee that allows them to get a full refund for a period of 60 days.

### **Is Cloud Hosting Right For You?**

Increasingly, businesses and individuals are discovering that they can benefit from the power and versatility of cloud hosting - if not today, then as their business grows and develops over time. If you are thinking about shopping for an improved hosting solution that better suits your needs, consider the following questions.

- ✓ Does your current server need to go offline to upgrade or downgrade hardware?
- ✓ Have you ever experienced financial damage as a result of unexpected downtime?
- ✓ Have you ever experienced permanent data loss as a result of hardware failure?
- ✓ Do you pay, or are you willing to pay, more than \$75 per month for hosting?

If you answered yes to any of these questions, a GlowHost cloud solution could be right for you, offering incredible availability and easy scalability at a surprisingly affordable price.

- ✓ Is your data replicated on 3 or more SANS for high redundancy?
- ✓ Does your current server have dual electric feeds from geographically diverse sub-stations?
- ✓ Can you instantly add resources to your hosting solution, for times when your hardware needs to serve extra traffic?
- ✓ Do you have a hardware hot failover solution in place that keeps your site safe and accessible?

If you answered no to any of these questions, consider a GlowHost cloud hosting plan to ensure that your data is always ready when you need it.

## **Join the cloud revolution by opting for a powerful cloud hosting plan from GlowHost**

Time and again, conventional hosting solutions have disappointed customers that require High Availability and uncompromised performance. VPS and dedicated servers cannot provide the performance, reliability, and cost effectiveness demanded by today's highly competitive economic environment.

Cloud hosting is the way of the future and GlowHost makes it easy for everybody to benefit from the groundbreaking advancements offered by cloud technology. With GlowHost cloud hosting plans starting from as little as \$75 per month with no activation fees, customers can get a true High Availability service at an attractive price. GlowHost is the only hosting provider to offer a fully redundant server cluster, including redundant power feeds from geographically distinct substations and grid segments. The reliability and complete redundancy extend to the entire infrastructure, positioning GlowHost as a genuine industry leader in cloud hosting solutions.

To learn more about GlowHost's cloud hosting solutions, or to order a plan, visit [www.glowhost.com](http://www.glowhost.com).