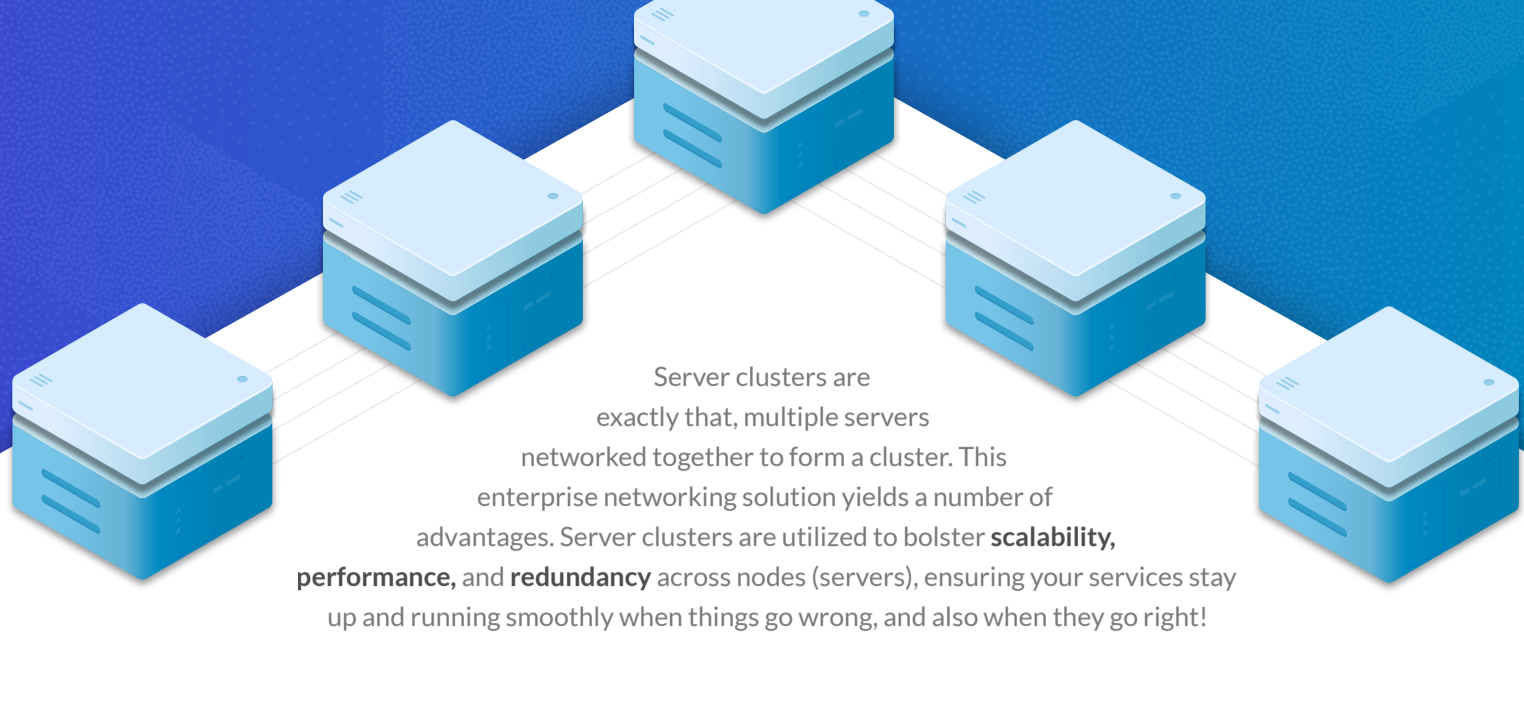


SERVER CLUSTERS

PROTECTING AND ENHANCING YOUR ENTERPRISE SERVER SOLUTION



Server clusters are exactly that, multiple servers networked together to form a cluster. This enterprise networking solution yields a number of advantages. Server clusters are utilized to bolster **scalability**, **performance**, and **redundancy** across nodes (servers), ensuring your services stay up and running smoothly when things go wrong, and also when they go right!

THE HIGH COST OF SERVER DOWNTIME



REASON FOR SERVER DOWNTIME	COST OF SERVER DOWNTIME	RECOVERY FROM SERVER DOWNTIME
In 2020, computer system failure (hardware and software) as well as power outages, failure or issues, together account for 38% of server downtime.	In 2021, 91% organizations said downtime that takes mission-critical server hardware and applications offline, averages over USD \$300,000 an hour.	In 2020, 69% of businesses required 4+ hours to recover from IT failure and 51% required more than 8 hours to recover.
How Businesses Approach IT Recovery in 2020 https://d1x6hzpuj078ym.cloudfront.net/resources/Whitepaper-How-Businesses-Approach-IT-Recovery-2020.pdf	ITIC 2021 Hourly Cost of Downtime Survey Rising Downtime Costs https://itic-corp.com/tag/hourly-cost-of-downtime/	How Businesses Approach IT Recovery in 2020 https://d1x6hzpuj078ym.cloudfront.net/resources/Whitepaper-How-Businesses-Approach-IT-Recovery-2020.pdf

KEEP YOUR BUSINESS UP AND RUNNING 24/7

Prevent the worst case scenario by considering cluster solutions in your [Business Continuity Management](#) and your [Disaster Recovery Plan](#). Deploying a server cluster can be simple when you're working with the right partner. At ServerMania, we will work with you to make sure your server cluster solution is the right fit.



A server cluster will prevent hardware failure and insulate your network from other catastrophic failures, like power-outages and software crashes. **Consider deploying a cluster today to avoid:**

- Lost productivity
- Damaged brand image
- Lost business opportunities
- Data loss

TYPES OF CLUSTERS

Providing 24 hour, reliable, access to database files, printers, serial ports and other resources on a network is critical for almost every business. In addition to this, **server clusters** can be configured in different ways to help achieve other objectives, such as load-balancing and performance enhancements for your applications.

Here are some examples of how a server cluster may add value to your business.

TYPE OF CLUSTER	HIGH-AVAILABILITY	HIGH-THROUGHPUT	HIGH-PERFORMANCE
Purpose	Data Redundancy	Scalability and load-balancing	Supercomputing
Use case	Prevention of hardware failure, software failure, data loss, and power outage.	Improved database access, streaming services for videos, music, and games.	Computational calculations, stress modeling, music composition, and electronics design.



MANAGING A CLUSTER

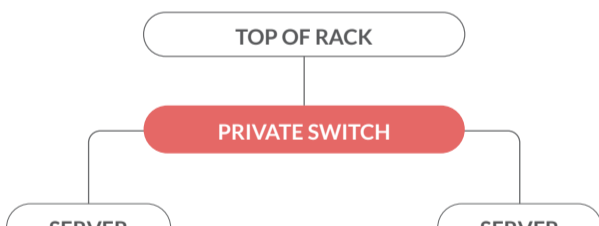
Hardware configurations

Below, we outline some common hardware configurations that will bolster the security and performance of your network solution.

Already have a configuration in mind? [Complete our quiz](#) and we'll help you get building.

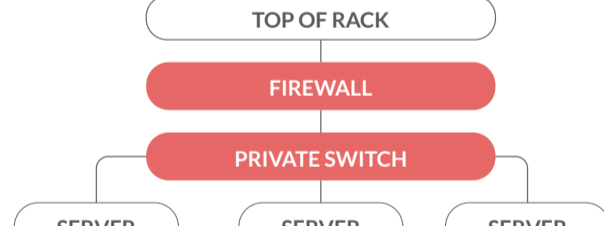
The Private Switch

This solution offers a dedicated private switch, placed below our Standard Top of Rack (TOR) switch, which represents the gateway off of our network.



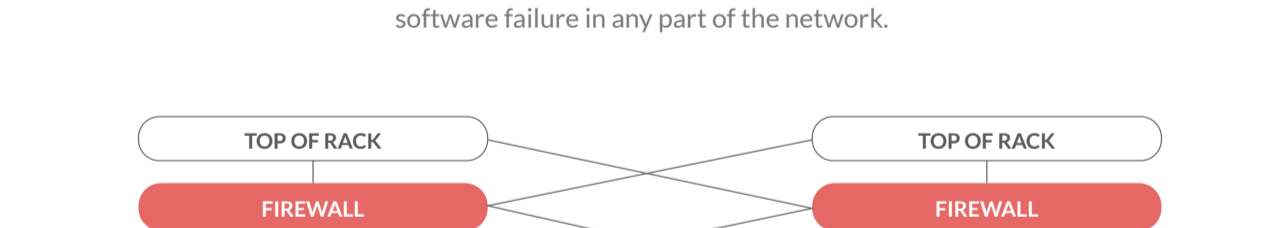
Cluster With Firewall

This solution adds a firewall in front of a private switch in order to provide a layer of protection and security for your network. The firewall is a fixed appliance - Intel 1270 v6 w/ 32Gb of RAM.



Mesh Deployment

This solution has many redundant components that would survive a catastrophic hardware or software failure in any part of the network.



Equipment Standards

A network is only as good as the components used to build it, which is why you should consider using the most robust and cutting edge technology and hardware available on the market.

Depending on your network configuration and needs, our cluster solutions include some or most of these components.

PRIVATE SWITCHES	FIREWALL SERVER
1Gb - Juniper EX4200 48 Ports 10Gb - Juniper QFX5100 or Arista 7050 48 Ports	Intel 1270 vx w/ 32Gb

Service Standards

All of our solutions follow the latest standards to ensure you are receiving the best service available. Some things we offer when deploying a new cluster include the following:

Border Gateway Protocol (BGP)
[Read More](#)

Networking infrastructure:
Firewall ([pfSense](#))

or
Bring Your Own Device (BYOD)

DEPLOYING A SERVER CLUSTER WITH SERVERMANIA



The high performance computing market is expected to grow from USD 36.0 Billion in 2022 to USD 49.9 Billion by 2027, at a CAGR of 6.7%. It's likely that your network solution and hardware are getting to the end of their lifecycles. Consider working with a trusted partner that can help build your network so that it grows with your business.

ServerMania has experience developing enterprise solutions for over 20 years and can guide and support businesses of all sizes in establishing secure, reliable and powerful cluster solutions to meet or exceed their needs.

Book a consultation to see how we can help you.

[BOOK A CONSULTATION](#)