

WHY USE NEVERFAIL CONTINUITY ENGINE WITH FAULT TOLERANCE SOLUTIONS TO MAXIMIZE UPTIME

Every organization wants to achieve 99.999% uptime. That is just a little over five minutes of downtime a year. This is true with any Tier 0 application which in general terms is THE most critical application to the business.

It's a struggle to achieve these levels of uptime considering there are so many factors that can have an effect on delivering this SLA. These include hardware, operating system, application and networking failures along with just simple human errors. In addition you have datacenter issues to contend with power and cooling failures. The challenges are quite high and make planning for these outages overwhelming at times.

Most organizations focus in on what they can control and hardware is one of them. Many have invested millions of dollars into ensuring hardware doesn't fail. Physical servers come with redundant power, cooling, and memory. The underlying storage is also redundant. So today like no other time in history has hardware been more reliable but yet many focus on this area almost exclusively.

Today we live in a world of server virtualization. Most of the major vendors have built redundancy into the virtual infrastructure. However at the guest OS layer, you need additional protection, one of which is Fault Tolerance (FT). Products like VMWare FT and Stratus EverRun lead the pack on FT solutions.

Fault Tolerance provides business continuity for application servers by mirroring of ALL server operating system and compute resources between two different server resources so if one hypervisor host fails, the protected guest OS continues to work uninterrupted on another host. The idea is to achieve 99.999% uptime. This is not entirely possible and can lead many IT organizations into a false sense of security.

Hardware Redundancy is Not the End All for Business Continuity

Although FT does provide very good hardware availability, it does not have the ability to see what's happening within the operating system. This means if there are issues within the protected application server such as application, networking, or human errors; FT does not protect users from these types of problems. In addition, if there is a corruption of the protected application server at the OS level it doesn't matter how much hardware FT you have, the server will still fail impacting users and the delivery of a mission critical application.

Continuity Engine already provides near zero RPO and RTO of 30-90 seconds. It also isolates individual nodes in the cluster so if there is an OS level corruption, this does not flow into the other nodes in the cluster. Used in conjunction with FT, organizations can achieve even lower RTO's but with the advantage of application aware failover and node isolation. Why? This ensures true recoverability in the event of a non-hardware related application failures.

In the diagram on page 2, it illustrates how both technologies provide a heightened level of server uptime. When both Continuity Engine and FT are combined, limiting downtime to five minutes a year can be achieved reliably and cost effectively.



Continuous Availability Fills the Gap

Neverfail's approach to Continuous Availability starts internally with the application server itself. Understanding where a failure can happen and being able to orchestrate recovery is missed by FT solutions. Continuity Engine monitors these internal moving parts real time and provides automation and orchestration to restore business services to another clone copy (Secondary) of the server locally or in a remote location.

Most would think the one application server protected with FT would be more than enough. Neverfail has shown in many customer environments that you still need a secondary server which can also be protected with FT to achieve true 99.999% of uptime. In this case, Continuity Engine bridges the gap between hardware FT and Continuous Availability HA with full application aware failover.

Conclusion

Faced with the need to achieve 99.999% uptime, many organizations are turning to fault tolerance solutions. However these solutions only provide hardware availability and not Continuous Availability. There are many continuity use cases not covered by FT solutions. Using Continuity Engine can bridge the gap to ensure the highest level of protection that can be achieved.

About Neverfail

Neverfail enables businesses to achieve 100% uptime through the world's most resilient business continuity and secondary storage solutions. Made for mission-critical businesses, Neverfail solutions mitigate the risk of downtime in the face of any potential outage. By delivering seamless business continuity, we empower our partners and clients to realize their full potential without the risk of downtime.

