Servium

Hewlett Packard
Enterprise

IN PURSUIT OF PERFECTION: 100% GUARANTEED AVAILABILITY

Opinion White Paper

"ALWAYS-ON" FOR MISSION-CRITICAL APPS ACHIEVED

The demands of the digital economy allow many businesses little room for error, particularly when it comes to IT downtime. Informed by experiences in their personal lives, a customer's perception of your technology is that it should be fast, seamless, and "always-on". Because of this, they can be more impatient and less forgiving when faced with stoppage, as to them technology is inherently robust and should just keep working. While this isn't necessarily true, it's still important to minimise disruptions to service wherever possible to help meet these expectations. A key part of this comes down to your storage and how available your data is to the apps that need it. Without the ability to constantly read and write data, the apps your people and customers rely on don't work, resulting in outages that can be costly and frustrating. It is therefore becoming essential that data storage be always available, so your apps work non-stop.

This matters more to mission-critical apps

This crucial need for high availability is especially true of environments that host mission-critical apps. With application uptime more important than it's ever been, any downtime is just not an option. Many can't afford for their hardware to fail at all, as any loss of availability will have a detrimental financial and reputational impact – something that can be extremely difficult to recover from.
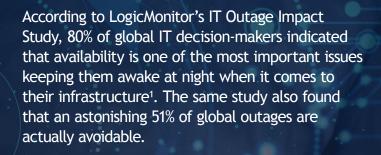
After all, if customers can't access your services or your people are unable to use the apps and data they need to work, your business is likely to grind to a halt. Depending on your app, system downtime of minutes, seconds, or even fractions of a second could still result in some serious repercussions.

Why 100% storage availability is so important to mission-critical apps

- App uptime needs to meet demands
- If unable to read data, apps cannot run
- Need access to data 24x7
- Loss of availability means financial impact
- Require zero downtime architecture

Businesses with a high dependency on mission-critical apps therefore need ultra-resilient systems and increasingly, zero downtime. An infrastructure designed to ensure their systems and data are available constantly and without interruption is the only option. They need IT perfection and always-on storage that doesn't fail and never lets them down when it matters most.

According to LogicMonitor's IT Outage Impact Study, 80% of global IT decision-makers indicated that availability is one of the most important issues keeping them awake at night when it comes to their infrastructure[1]. The same study also found that an astonishing 51% of global outages are actually avoidable.

We believe that 100% availability is the key to ensuring you sleep soundly.

80% of IT decision-makers kept awake by availability[1]

What does 100% availability actually mean?

100% availability is achieving the seemingly impossible. It means no outages, no failures, and no downtime across the infrastructure stack. By eliminating every single point of failure, a system that offers 100% availability is always-on, always-fast, and always accessible. It removes the burden of administration and maintenance from your IT team too, as there are no outages to have to recover from, ever.

The war of the nines

In the past, high availability has only really come close to 100%, with more "point nines" simply being added onto 99% with each new breakthrough. Systems that achieve four nines (99.99%) and five nines (99.999%) are commonplace now, however, as good as these offers of availability are, the inevitable downtime they promise is increasingly unacceptable. Four nines of uptime can result in a whopping 52.6 minutes of potential downtime, and though five nines sees this figure significantly reduced, a lot can still go wrong in 5 minutes. 100% availability completely eradicates this issue, offering a revolutionary change to mission-critical environments by achieving zero downtime. And although 100% is currently best suited to this kind of environment, just as the "war of the nines" has become commonplace when talking about high availability, we've no doubt that it won't be long before 100% availability becomes the norm for every single infrastructure.

Resiliency and availability go hand-in-hand

While availability plays a vital role in making sure your infrastructure stack is always-on, this means nothing without sufficient resiliency. It's imperative to ensure your infrastructure is completely prepared to protect against any kind of disruption, whether planned or unplanned, and able to provide and maintain predictable levels of service even in the face of adversity. It's not enough to simply prevent failures either, especially in mission-critical environments, but see that your system is able to recover quickly and adapt seamlessly in the rare event that something does go wrong. It needs to be ready for anything and poised to spring back into action at a moment's notice.

What is the role of data storage in the pursuit of availability?

How and where your data is stored has an enormous bearing on its availability. With data on-premises, in the cloud, or even a bit of both in hybrid environments, you need to know regardless of where it resides, it's easily and instantly accessible. Doing this sees your apps are given all the freedom they need to read your data without interference or interruption, so they just work as you need them to all of the time.

What's more, as organisations continue to increase their reliance on mission-critical apps, storage has got to keep pace and deliver the continuous uptime required without compromise. According to a report from Hewlett Packard Enterprise (HPE), storage is the leading cause of app downtime, with 46% of

outages being down to storage-related issues such as updates and performance[2]. This only highlights the importance of ensuring your storage is reliable, responsive, and resilient. Importantly, it shouldn't take an age to set up, and should never block your path to a better experience with slow upgrades that keep your IT team preoccupied.

Highly available storage can also offer plenty of opportunity for innovation. The accumulation of data possibly represents untapped potential that could help you unlock significant value. Your choice of storage could give you an advantage as you seek to create new revenue streams or drive actionable insights that transform how your business is run. But data is only useful when it can be accessed at the right place and at the right time. You need storage that not only offers unstoppable uptime and blissfully simple management, but world-leading intelligence too.

46% of outages are down to storage-related issues[2]

Perfection achieved with HPE Primera

HPE Primera all-flash storage is the ideal enterprise platform for mission-critical apps. Underwritten with 100% availability, Primera is an infusion of the remarkable simplicity of HPE Nimble Storage, mission-critical heritage of HPE 3PAR, and the global intelligence of HPE InfoSight.

The world's only intelligent storage for mission-critical apps, it unlocks the true potential of data while enabling customers to accelerate their apps, achieve greater agility, and innovate without compromise.

HPE Primera redefines what's possible in mission-critical storage:

HPE Primera benefits at-a-glance

- 100% availability guaranteed
- Tier-0 resiliency
- Predictable performance
- Proactive prevention of downtime
- Global intelligence and predictive analytics
- Refreshingly simple to operate
- Gain all the agility of the cloud
- Predictable cost structure

100% availability guaranteed

Every HPE Primera array is backed with a 100% availability SLA, straight out of the box. The very first storage platform to achieve the guarantee of 100%, Primera is leading the way in making downtime a thing of the past. While other providers claim 100% uptime, HPE guarantees it. It's important peace of mind when every second of uptime counts. It's this guarantee that makes it the perfect companion for mission-critical apps.

In fact, HPE is so confident in Primera that should you experience any downtime due to it at all, then they will give you credit (up to 20% of the original purchase price) you can use towards new hardware to replace it.

Every HPE Primera array is backed with a 100% availability SLA

Tier-0 resiliency

On top of its ground-breaking 100% availability guarantee, HPE Primera also offers tier-0 resiliency, the highest tier achievable. It ensures every single point of failure, whether hardware or software, is completely eliminated thanks to N+1 or even N+2 redundancy. Redundant components mitigate failure at the hardware layer while an independent copy of the HPE Primera operating system runs on every node, protecting the software stack. And not only are any disruptions prevented quickly, but the system is able to recover seamlessly should anything ever go wrong. Primera makes certain any outages remain entirely nondisruptive and delivers consistently predictable performance for unpredictable workloads, keeping your mission-critical apps always-fast.

Storage that eliminates the unexpected

Primera was purpose-built to protect mission-critical environments from the unexpected. Thanks to several advanced features known as "persistent technologies", the storage platform is designed to proactively prevent any downtime whatsoever, constantly maintaining availability and performance throughout planned, and even unplanned, outage events. This gives you the reassurance of knowing that no matter what happens, your data is always available on request.

> **HPE InfoSight has saved businesses over 1.5 million hours of lost productivity[3]**

Global intelligence

HPE Primera harnesses the industry's most advanced artificial intelligence for infrastructure, HPE InfoSight, to bring you predictive analytics that:

- **Prevent and resolve problems in real-time**
- **Automate workload and resource planning**
- **Optimise the performance of mission-critical apps**

Its impressive prediction and prevention capabilities have saved HPE customers over 1.5 million hours of lost productivity[3], with 85% less time spent resolving storage-related trouble tickets[4]. It watches over your infrastructure (not just your storage) 24x7, so you don't have to. And thanks to instant global visibility across your entire stack, it also provides your business with key insights derived from thousands of other deployments and millions of in-product sensors. It's rich data that both informs infrastructure operation and helps drive innovation that accelerates business growth. Powered by machine learning, InfoSight learns from its experiences to inform future automations, laying the groundwork for your infrastructure to eventually become entirely autonomous.

Refreshing simplicity

You have enough on your plate to worry about in a mission-critical environment, so your storage should be as simple to operate and manage as possible. Primera's on-demand experience sees you able to manage, deploy, and scale storage in 93% less time[5]. Its rack-to-application setup only takes 20 minutes, and mere seconds to provision. Any new features can be added in minutes as they become available, too, thanks to transparent, no-risk upgrades that don't require help from HPE-accredited Professional Services. The ease of use also reduces the need for training, so your IT team doesn't need to waste valuable time on learning the ins and outs of the platform before they can start to use it.

Built for cloud

HPE Primera brings the cloud experience on-premises. By combining its cloud-based global intelligence with HPE Synergy or HPE Composable Rack, organisations are able to support any mission-critical application with the agility of the cloud. This sees that time-to-market is accelerated, with automation delivering apps and services faster, predictable insights driving innovation, and cloud-based management tools enabling greater self-sufficiency.

Predictable cost structure

Incredibly flexible, HPE Primera can be aligned to suit your business' budget and capacity needs. By leveraging HPE GreenLake's pay-as-you-go consumption model, overprovisioning is eradicated, meaning you only ever pay for what you use, which could see you realise up to 30% in capital expenditure (CAPEX) savings. HPE InfoSight could also help you realise substantial savings. In 2019, The Enterprise Strategy Group conducted some research into the financial impact of InfoSight, and found customers benefitted from 79% lower storage operational expenses (OPEX). And thanks to Timeless Storage for HPE Primera, frequent and nondisruptive refreshes are provided in a subscription-based approach, meaning no more forklift upgrades, no surprise costs, and a reduced overall total cost of ownership (TCO).

References

1 LogicMonitor, (2019), 'IT Outage Impact Study'
2 Hewlett Packard Enterprise, (2017), 'Can Machine Learning Prevent Application Downtime?'
3 Based on the volume of critical issues proactively resolved for HPE customers
4 Enterprise Strategy Group, (2019), 'Assessing the Financial Impact of HPE Nimble Storage Powered by HPE InfoSight'
5 Based on HPE internal testing of a leading Tier-1 storage system versus HPE Primera, (2019)

Primera proves that perfect is possible

Designed with both agility and resiliency in mind, HPE Primera is the perfect match for mission-critical environments. Thanks to the guarantee of end-to-end 100% availability, it prevents any downtime whatsoever, ensuring data is always-on, always-fast, and always accessible. By harnessing the best global intelligence the industry has to offer and the flexibility of the cloud, it delivers an effortless on-demand experience that sees your storage is ready for every mission-critical app.

Servium and HPE

We've been partners with Hewlett Packard Enterprise since the beginnings of our business, a relationship that now spans more than a decade. As a result, our knowledge of the HPE portfolio is unparalleled, earning us the highest possible accreditations across their products and solutions. Our technical capabilities delivering HPE technology are complemented by the expertise and resources available through our Services Ecosystem, seeing us knit together exceptional solutions that help you maximise your choice of storage. We also have first-hand experience using HPE InfoSight within our own environment, so know exactly how to derive the best possible value from your data.

If you would like a free assessment of your infrastructure to evaluate the suitability of HPE Primera for your mission-critical apps, please contact your Account Manager, email us at hello@servium.com, or speak to one of the team on +44 (0)303 334 3000.

About Servium

Servium is dedicated to creating great IT experiences – we seek to win the hearts and minds of IT strategy-makers, professionals and users. Our attitude is that no challenge is too big, no detail too small. We tackle both the ordinary and the extraordinary with the same focus and originality of thought that ensures solutions make a difference. It means we're one partner ready to assemble all the technology and know-how every medium to large organisation relies on. Matched by straight-talking, real-world experience and amazing service, our customers enjoy exceptional value; the product of the best innovation, latest thinking and a thriving ecosystem of technical experts.

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