



Enterprise and Cloud Storage

Next-Gen Data Protection and Recovery

Bill Basinas



Bill Basinas
Senior Director, Product
Marketing
Infinidat

Biography

Bill Basinas is Senior Director, Product Marketing at Infinidat (<https://www.infinidat.com>) and has been focused in the storage industry since 1994 when he joined Legato Systems as the first field systems engineer.

He was also an early employee at Avamar and spent time at enterprise companies such as EMC and HPE Storage in Global Marketing and Engineering roles.

Bill blogs at <https://www.infinidat.com/en/blog>

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Abstract

In the early days of enterprise storage, how to back up 1TB of data over 200 systems with a 10Mb/s network presented as a huge challenge. Fortunately, technology has evolved, and while tremendous challenges still exist, at least in storage it's not how data is protected that presents the challenge, but more importantly, how safely and accurately data can be recovered when faced with the extraordinary challenges which cyber-criminals bring to the ever-changing challenge of enterprise storage.

Introduction

I have been around the block on data protection for decades. I started my career in storage, specifically around data backup at Legato Systems, then, a small 70-person company. In those days enterprise customers were concerned about how to back up 1TB of data over 200 systems with a 10Mb/s network. It was a huge challenge. How times have changed! This is not intended to be a history lesson, I am fast forwarding to today and the tremendous challenges that still exist, though not in how we protect data. But, much more importantly, how we safely and accurately recover the data and the extraordinary challenges that cyber-criminals bring to this ever-changing challenge.

Let's be right up front on this, doing things the same old way is not bad for data protection and the recovery of data, but is that the most effective way to think about



comprehensive “business recovery”? After all, isn’t that why we backup? By no means am I saying you need to stop doing your backups, etc. But what I am saying is that it is important to rethink the problem and strongly augment your data protection strategies to counter the way cyberattacks work.

Cyber criminals need leverage. This comes in more than a couple of forms, encryption, partial encryption, data exfiltration, etc. Another point of cyber-criminal leverage is trying to eliminate your ability to recover data. As a result, traditional backup environments are high-value targets in the plan of the attack, and unfortunately, this is nothing new; it has been a well-known fact for years. Again, we must rethink about many other things.



Do you have **Business Recovery Objectives** as a central part of your cyber strategy? That is what Next-Generation data protection and recovery is completely focused on. **A Cyber-Focused, Recovery First** strategy is built on the end result...”

It is focused on business recovery, period — not the database file, table, home directory, corrupted volume, and all your other datasets. The most important thing is how do you recover your enterprise business? It’s the question you need to ask yourself time and time again. What are the data assets, where do they live, how are you protecting them today, how fast do they need to be recovered to avoid huge financial and other business impacts, and is that enough?

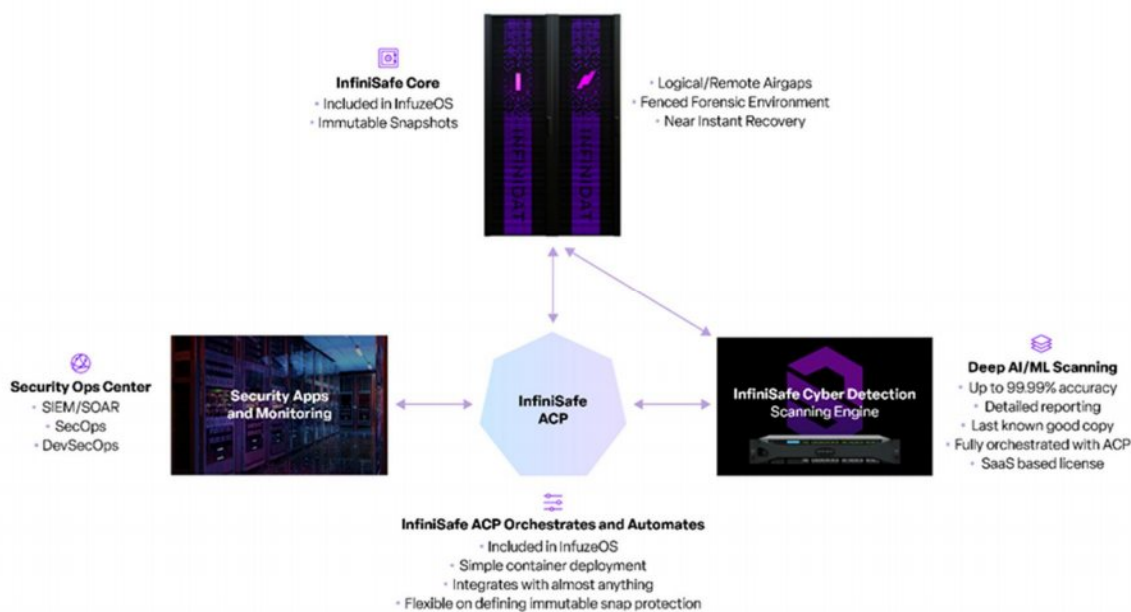
Do you have ‘Business Recovery Objectives’ as a central part of your cyber strategy? That is what Next-Generation data protection and recovery is completely focused on. A ‘Cyber-focused, Recovery-first’ strategy is built on the end result and everything supporting that result. Anything else will cost you money and lots of it.

Traditional/modern data protection methods won’t get you there and, if they do, how much time will it take? Seconds usually means an impact of millions!



What does it entail? There must be short-term retention of data assets which are easily protected and can be easily verified/validated with the utmost accuracy proactively to know the exact state of your data. It should be easy to deploy and cost effective in a fenced forensic environment. Don't be fooled: that does not mean they have to be overly complex or expensive. It must enable you to nearly instantly restore that data.

Sounds complicated, but it really isn't the way Infinidat approaches it. Sounds expensive, but it doesn't have to be, especially since we embed most of the needed core technology right within our industry-acclaimed InfuzeOS, our software-defined data services layer, at no additional charge. Sounds like it will take you forever to implement it, but it doesn't; we can implement this in days, not weeks or months. We have developed everything we do in the InfiniSafe portfolio of the Cyber Resilience Services of our InfiniVerse Platform to support this very outcome.



Secure-by-design InfiniSafe is built on providing a very simple, easy, and comprehensive set of capabilities to protect any data on our InfiniBox storage solutions and is included with InfuzeOS. InfiniSafe includes truly immutable snapshots, logical and remote air-gapping, a fenced forensic environment, and near instant recovery. We not only guarantee the immutability of our snapshots, but also guarantee the recovery time on our InfiniBox® and InfiniBox™ SSA primary storage systems of ONE minute or less, regardless of dataset size, and guarantee the recovery time on our InfiniGuard® purpose-built backup appliance in 20 minutes or less, regardless of dataset size. In fact, in a webinar¹ we recovered a 2PB dataset on an InfiniBox in only four seconds and a 24PB Veeam backup repository on an InfiniGuard in only 13 minutes!



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That rock-solid foundation of protection is the enabler for all that follows. Next is InfiniSafe Automated Cyber Protection (ACP). Even with a great foundation, building an extensible architecture is important. Too many companies are hyper-focused on what is built into their own ecosystem, which is fine, but what about everything else that is going on?

Data should be protected via immutable snapshots on a scheduled basis as a baseline. But schedules leave gaps, which is where ACP comes into help. InfiniSafe ACP is basically a listener/trigger that is provided as a fully enabled container leveraging our extensive API's and telemetry information and seamlessly integrates with just about anything. Today, we are focusing on security applications, SIEM, SOAR data centre-wide environments and partner solutions. This means we can integrate and be alerted by whatever a customer deems as a security event of interest and should immediately trigger immutable snaps, helping to prevent or at least slow the proliferation of possible data damage at that point in time. It costs nothing on our technology to create snapshots of critical data assets. You can be very prescriptive on what they are or very broad and fill the possible gaps by being dynamic and fully automating/orchestrating this seamlessly and at the speed of compute. Then, it must go one step further – you need to validate or invalidate the data. Daunting task, for some maybe, but for us, No! That is where InfiniSafe Cyber Detection comes in, the puzzle is almost complete.

InfiniSafe Cyber Detection is developed with proven technology from our joint development partner Index Engines with whom we have worked together for almost 18 months. The result is our ability to detect data corruption, the fingerprints of latent data corruption attacks, and other cyber issues across your data with an accuracy of up to 99.99%, leveraging AI and ML technology. The underlying solution is far beyond anything our competitors have. If you have InfiniSafe Cyber Detection, InfiniSafe ACP can automatically queue the immutable snapshots to be scanned. When they are scanned, you will know the exact state of the data, you will know what if anything is compromised, you will know the last known good copy and, because of our outstanding snapshot recovery capabilities, you can recover any size volume of data at the click of the mouse, or just copy those files or datasets back.

InfiniSafe Cyber Detection is the only optional software we sell, which you buy as a service according to how much data you want to scan and for how long you want to license it. Simple stuff, both to implement and use. When you know your data is clean, you stop the fire drills; you recover the data, and you tell the cyber criminals to take a hike. Next-Generation Data Protection, this is what it is – Cyber-focused and recovery first.

Reference

- ¹ Cyber Resilient Enterprise Storage: Reduce Ransomware and Malware Exposure. https://info.infinidat.com/INF-WBN-20240916-Global-The-Register-Cyber-EN_Video-LP.html