SOLUTION BRIEF

Stop Ransomware in Its Tracks with InfiniGuard® InfiniSafe® for U.S. Government Agencies

THE CHALLENGE

Ransomware is malicious software that takes data hostage by encrypting it.

Traditionally, companies with a working backup process could restore good data to affected production systems. But ransomware code gets steadily more sophisticated, and today commonly attacks backup as well. With companies averaging a ransomware attack every 11 seconds[1], the old "If they attack us, we'll just restore the backup!" approach isn't good enough anymore.

Victims have no good options. Some choose to pay and are lucky enough to get the encryption key. Many choose to pay and get nothing. Others go with expensive encryption remediation services, and still, others use a truck, literally, to retrieve off-line tape cartridges — and prepare for an arduous recovery process.

The cost? IDC estimates that ransomware costs enterprises alone $20 billion USD per year. That number grows when you add in mid-sized and small businesses as ransomware targets.

Ransomware Today

In the first months of 2021, cybersecurity provider BlackFog[2] reported some of the largest incidents of cyberattacks: An attack on Victor Central School District in New York encrypted data and systems and locked out users. All district schools were forced to close. And in March, computing manufacturer Acer was hit with a $50 million ransom to keep the hackers from publishing exfiltrated sensitive data.

An even more recent hack is the infamous ransomware attack on Colonial Pipeline, which supplies as much as 45% of the fuel on the U.S. east coast. The attack was carried out by a Russian hacking group, and the pipeline operator quickly shut down its systems to contain the attack from spreading. Even so, gas stations throughout much of the country struggled to get fuel supplies.

Smaller companies get hit too. Security firm Infrascale estimated that 46% of small businesses have experienced ransomware attacks, and 73% reported that they paid the ransoms.[3] These ransom demands may not be $50 million, but they are costly with no guarantee that the hackers will keep their doubtful word.

Backup to the Rescue – Probably Not!

You are certainly better off if your backup survives the attack, but intruders have learned and now target backup systems first! Limiting your ability to restore only strengthens their position. Traditional backup and DR methods are not applicable to cyber recovery and, as a result, your plans need to consider specific cyber recovery needs.

Key Features and Benefits of InfiniGuard InfiniSafe include:

- Enterprise-level rapid restores at petabyte scale
- Protect backup against cyberattacks with immutable snapshots that cannot be deleted, encrypted, or changed
- Prove regulatory compliance with consolidated backup and immutable snapshots
- Support multiple simultaneous backup and recovery operations without impacting performance
- Validate recovery environment
- Redundant deduplication engines in an active/active/passive configuration protect data and fails over backup and recovery operations
- Lower energy costs and management overhead by consolidating backup up to 50PB*
- Extreme scalability and multi-protocol support for VTL, NFS, CIFS, OST, RMAN and DB/2
- Minimize lost revenue and reputation by restoring data near-instantaneously and safely
- Recover data without compromising integrity, no matter what the cause: cyberattacks, technical malfunctions, natural disasters or human error

[1] Cybersecurity Ventures https://cybersecurityventures.com/cybercrime-damages-6-trillion-by-2021
[2] BlackFog https://www.blackfog.com/the-state-of-ransomware-in-2021
[3] Infrascale 2020 survey https://www.infrascale.com/press-release/infrascale-survey-reveals-close-to-half-of-smbs-have-been-ransomware-attack-targets/

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Traditionally, IT teams augment backup speeds by adopting synthetic full backups and deduplicated backup storage. Large-scale recovery in the case of a cyberattack means assembling data from multiple generations of backups, resulting in a highly random read IO pattern on the backend storage, which means prolonged recovery and potentially serious business impact.

THE SOLUTION: InfiniGuard with InfiniSafe for U.S. Government Agencies

InfiniSafe is included in Infinidat Federal's InfiniGuard data protection and recovery solution. InfiniSafe adds to InfiniGuard's data protection architecture, which enables near-instantaneous recovery at a fraction of the cost of competing PBBAs. InfiniGuard leverages our multi-petabyte InfiniBox® as its backend and adds an innovative software layer to optimize data layout for rapid recovery, without sacrificing backup speeds.

InfiniGuard's innovative technology leverages a thick dynamic random access memory (DRAM) layer as the primary cache, coupled with an even thicker solid-state drives (SSDs) layer as the secondary cache. A proprietary TRIE algorithm (a node tree instead of a binary tree or hashing algorithm) predicts IO patterns and pre-caches data to accelerate backup and recovery time.

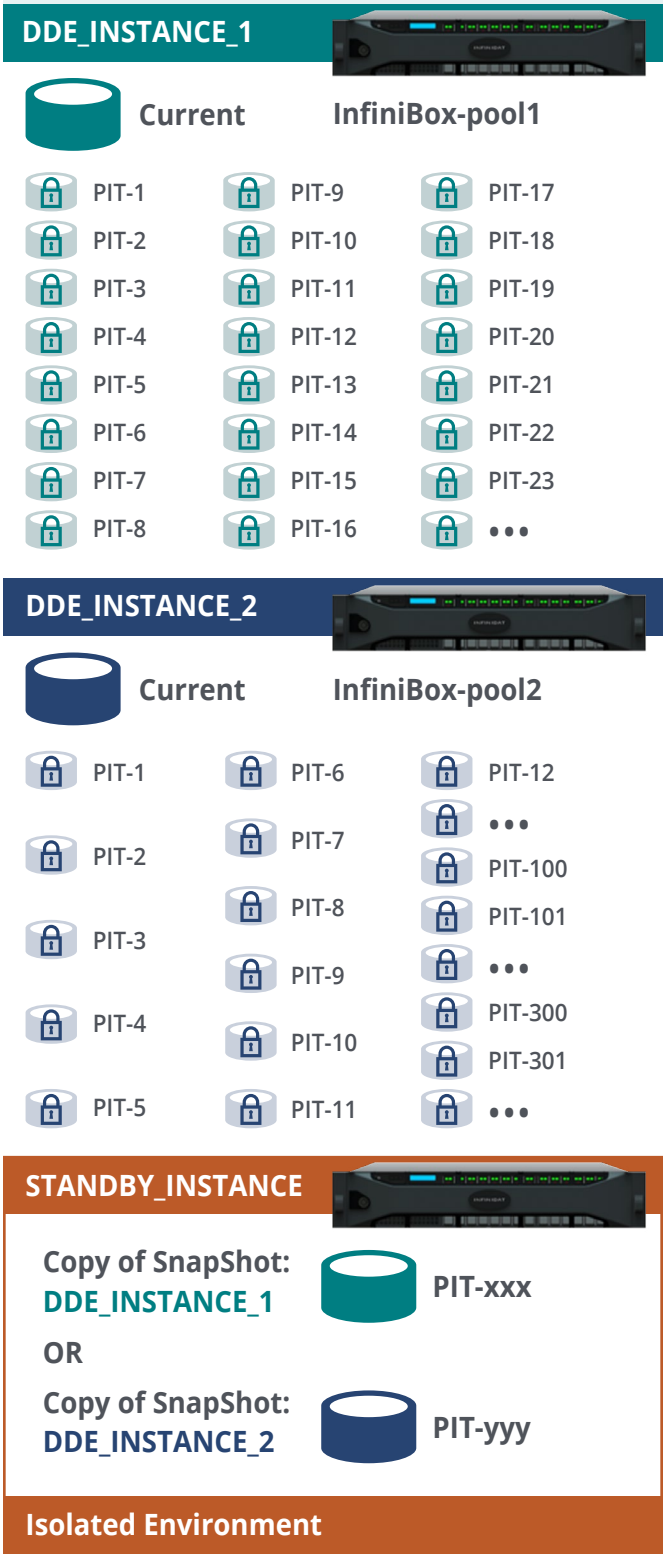
Instead of trying to recover data from multiple backup appliances, media types and storage sites, InfiniGuard consolidates multiple backups into a single, easily manageable appliance that scales to 2PB of usable capacity and up to 50PB* of effective capacity.

A Closer Look at InfiniSafe

InfiniGuard's native InfiniSafe capabilities take protection and recovery even further. InfiniSafe protects against the effects of ransomware attacks with four foundational technologies which are key to a cyber recovery solution:

1. **Immutable Snapshots**
   Immutable snapshots cannot be deleted or changed. Infinidat Federal's expert support works with you to configure your system snapshots to be optimized for your cybersecurity needs, including retention settings, schedules, and associated policies. It is not possible for a malicious actor, or an inexperienced IT staff member, to change these settings or delete any existing immutable snapshot.
2. **Logical Air-Gapped Protection**
   Ensuring that the data being protected is isolated from other areas of the system is of the utmost importance. Other solutions require the data to be moved by copy or replication to a separate system adding cost and complexity. InfiniSafe technology does this locally, saving cost and removing complexity.
3. **Fenced Forensic Network**
   A completely private network that is utilized for data validation and recovery.

InfiniGuard with InfiniSafe enables the protection of your entire backup storage via immutable snapshots. Each deduplication engine (DDE), can be restored to a point in time separately. InfiniSafe or discovery tests can also be enabled in a standby environment.



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4. **Near-instantaneous Recovery**

   Making data available as quickly as possible is key when trying to restore if attacked. InfiniSafe allows you to get all of your known good and validated data back and available for restore in minutes, regardless of the backup repository size. You pay no penalty in time even at petabyte-scale.

Recovery must become systematic, fast, and verifiable with near-instantaneous recovery from any point in the history of the data. A simple-to-use, isolated test environment enables businesses to verify data before restoring it to the business operational environment. Additionally, this environment supports routine validation of secure backups without interrupting day-to-day backup operations, all without secondary systems and with no data movement.

SUMMARY

Cyberattacks are a real and growing threat, and organizations should not underestimate the potentially painful consequences. It has been well established that cyberattacks will target your backup environment first! Thus, reducing your ability to effectively respond, and gaining leverage for their demands. Be smarter. Implement InfiniGuard with InfiniSafe to guard against a plethora of threats from cyberattacks, technical breakdowns, and disasters, to sheer human error. InfiniGuard with InfiniSafe gives you the confidence you need to rapidly recover your data and get your organization back up and running.

** Effective capacities. Actual results may vary.*

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