Avamar
Backup as a Service

Deduplication backup software and system.

GREEN HOUSE DATA

Essentials

- Offered as Backup as a Service (BaaS) from Green House Data
- Data is deduplicated at the client, before transfer across the network.
- Ideal for protecting VMware environments, remote offices, NAS servers and desktops / laptops.
- Reduce backup windows up to 90%; single step recovery.
- Reduces network bandwidth for backup by up to 99%.
- Secure backup and replication via existing LAN/WAN links
- Redundant Array of Independent Nodes (RAIN)
- Daily server and data recoverability checks
- Flexible deployment options: Avamar software only. Avamar Data Store, Avamar Virtual Edition for VMware

Speed & Security

Organizations are rethinking their data protection methods as a result of exponential data growth, regulatory compliance, strict service-level agreements, and shrinking backup windows. In addition, IT departments face additional challenges brought on by aggressive virtualization and the need to better protect data residing at remote offices.

Developed to solve the challenges associated with traditional backup, EMC Avamar backup and recovery software, equipped with integrated global, client-side data deduplication technology, facilitates fast, daily full backups for VMware environments, remote offices, enterprise applications, and desktops/laptops.

Unlike traditional backup software, Avamar eliminates redundant sub-file data segments at the client before it is transferred across the network and stored to Avamar Data Store. As a result, the network bandwidth required is reduced by up to 99% — enabling fast daily full backups across existing WAN/LAN and virtual infrastructure.

Drawbacks of Conventional Data Protection

One of the key drivers impacting backup performance is the amount of data that must be protected within the available backup window. Traditional solutions are inefficient because they repeatedly backup everything. When combined with traditional daily incremental and weekly full backups, the amount of duplicate data is staggering. The impact is especially severe when dealing with virtual environments, remote offices, and NAS files. For example, in virtual environments, each virtual machine (VM) represents an individual backup job, often with overlapping backup windows, and includes redundant operating system, application, and file data.

Never Back Up the Same Data Twice

EMC Avamar enables fast, efficient backup and recovery by reducing the size of backup data at the client - before it is transferred across the network and stored. Unlike traditional backup, Avamar completes daily full backups in a fraction of the time, providing the benefits of long-term retention of data on disk while dramatically lowering capital and operating expenses. In addition, Avamar backups can be quickly recovered in just one step—eliminating the hassle of restoring full and subsequent incremental backups to reach the desired recovery point. The backup data is encrypted during transit across the network and at rest for added security. A centralized web-based

EMC²

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Features

management and at-a-glance dashboard view make it easy to protect hundreds of offices worldwide from a single location over existing network bandwidth.

Efficient Data Deduplication

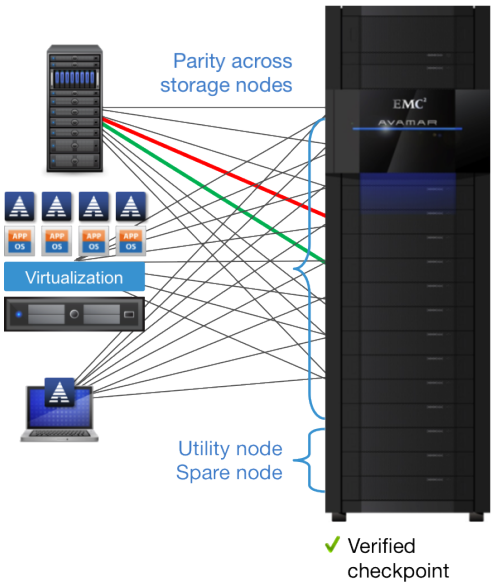
The method for determining segment size is a key factor in eliminating redundant data at a sub-file level. Some solutions on the market use fixed-length segments when performing data deduplication. With this approach, even small changes to a dataset (for example, inserting data into the beginning of a file) can change all subsequent fixed-length segments in a dataset. Despite the fact that very little of the data has actually changed, the entire file will appear as new data that must be backed up again.

Avamar solves this problem by examining the data to determine logical boundary points using variable-length data segments, reducing the amount of data sent and stored, while eliminating backup bottlenecks and increasing performance.

Scalability & High Availability

Unlike many server deployments, the Avamar Data Store uses a grid architecture that facilitates linear performance increases by simply adding storage nodes. Each incremental node increases CPU, memory, I/O, and disk capacity for the entire grid. When a storage node is added, data is automatically load-balanced without compromising system performance.

When traditional backup solutions fail, companies are exposed to potential data loss. Avamar eliminates single points of failure by employing patented redundant array of independent nodes (RAIN) technology to provide high-availability and fault tolerance across nodes in the Data Store. In addition, system and data integrity is verified daily to ensure recoverability.



Optimized for VMware

Avamar deduplicates backup data globally, across physical and virtual servers. For virtualized environments, flexible backup options include guest- and image-level backups that leverage the latest VMware vStorage APIs for Data Protection. In all cases, only new, unique sub-file, variable-length data segments are transferred across the virtual/physical infrastructure. Avamar deduplicates the data stored within the VMDK image files, enabling efficient replication for disaster recovery. Avamar leverages Changed Block Tracking for faster backups and restores. For image backup, Avamar maximizes throughput by load balancing across multiple proxy VMs. Fast, single-step recovery of individual files or complete VMDK images to the original VM, an existing VM, or a new VM are provided. Avamar is approved for protecting the VCE Vblock.

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