



## Next-Generation Backup and Recovery EMC Avamar Available on WSCA/NASPO EMC Master Price Agreement #B27161

Exponential data growth, regulatory compliance, and shrinking backup windows are forcing state and local government organizations to rethink their backup and recovery methods. With the American Recovery and Reinvestment Act energy efficiency initiatives, agencies are moving ahead with new technologies that stress efficiency and virtualization for increased capacity and lower costs.

### Never back up the same data twice

EMC® Avamar® backup and recovery software with integrated data deduplication technology solves the challenges associated with traditional backup by delivering fast, daily full backups for virtual environments, remote offices, LAN/NAS servers, and desktop/laptop systems.

Unlike traditional backup solutions, Avamar identifies redundant data segments at the source (client)—before they are transferred across the network. By moving only new, unique, sub-file data segments, Avamar delivers fast, daily full backups while reducing the required daily network bandwidth by up to 500 times. This enables government offices to utilize existing bandwidth for backup and disaster recovery, despite slow or congested infrastructure. Backup data is encrypted during transit across the network and at rest for added security. In addition, Avamar’s centralized web-based management makes it easy to protect hundreds of offices from a single location.

By storing just a single instance of each sub-file data segment across sites and servers, Avamar also reduces total back-end storage by up to 50 times. As a result, Avamar enables cost-effective, disk-based recovery over extended periods of time—while dramatically lowering capital and operating expenses including floor space, power, and cooling. While Avamar backs up data to disk, it can also work with existing tape and traditional backup software such as EMC NetWorker®. Avamar can export deduplicated backup data to tape for cost-effective long-term retention via Avamar Data Transport. Avamar’s intuitive interface allows desktop and laptop users to quickly recover their own data, reducing the burden on IT staff. Finally, Avamar provides fast data recovery in just one step—eliminating the hassle of restoring full and subsequent incremental backups to reach the desired recovery point.

### Scalability, high availability, and reliability

Avamar utilizes a grid architecture that enables linear performance increases by simply adding storage nodes. Each incremental node increases CPU, memory, I/O, and disk capacity for the entire Avamar grid. When additional storage is added, data is automatically load balanced for optimal performance. High availability is delivered by a patented redundant array of independent nodes (RAIN) technology, which provides fault tolerance across storage nodes and eliminates single points of failure. In addition, Avamar server integrity and backup data recoverability is verified daily, so there are no surprises. Backup data can be efficiently replicated offsite for disaster recovery purposes.

---

**“The [EMC] Avamar remote office solution enabled us to reduce administrative support requirements by 80 percent, reduce backup windows by 90 percent, and recover lost files and servers in minutes rather than hours.”**

Mike DePhillip  
Backup Administrator  
Virginia Department of Motor Vehicles

---

### Optimized protection for VMware infrastructure

Avamar deduplicates your backup data globally, across your physical and virtual servers. For virtualized environments, flexible backup options include guest or 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 can also deduplicate the data stored within your virtual disks (VMDK files), enabling efficient replication for disaster recovery. Avamar provides fast, single-step recovery of individual files or complete VMDK images.

**Backup, Recovery and Archiving** A complete range of data protection capabilities in order to meet critical backup and recovery requirements. In addition, deduplication technologies are offered providing not only reduced data backups and recoveries, but enabling unique remote data backup capabilities.

| Avamar | Centera | Data Domain | DiskXtender | EMC Disk Library | NetWorker | RecoverPoint | SourceOne |

## Efficient export to tape

If you require the use of tape media, Avamar Data Transport makes it easy to export Avamar deduplicated backup data to physical tape for cost-effective, long-term storage. By leveraging Avamar's powerful deduplication technology, daily full backups can be efficiently stored on tape via EMC NetWorker® and other popular backup software. Avamar verifies data integrity for your peace of mind, and offers a searchable catalog to simplify recovery from tape. In addition, an intuitive interface, along with streamlined reporting, make the entire process easy to manage.

## Flexible deployment options

For smaller remote offices, Avamar software agents can be installed directly on the systems to be protected without the need for additional local hardware. This enables data to be backed up directly over existing WAN connections to a central Avamar server at the data center.

To protect larger remote offices and data centers, data can be backed up to a local Avamar server for faster recovery, and then replicated to another Avamar server located at the data center or remote disaster recovery site. When an Avamar server is required, there are several deployment options available:

- **EMC certified server** — Avamar software installed on an EMC certified server.
- **EMC Avamar Virtual Edition for VMware** — The industry's first fully virtualized deduplication appliance for backup, recovery, and disaster recovery. This enables Avamar to be deployed easily and in a repeatable fashion on VMware ESX® Server hosts, leveraging the existing server and storage infrastructure for a fast return on investment.
- **EMC Avamar Data Store** — An all-in-one, pre-packaged solution consisting of Avamar software running on pre-configured EMC-certified hardware powered by Intel® Xeon® processors. The Avamar Data Store is available in two models—a scalable multi-node model and a single-node model. This approach simplifies purchasing, deployment, and service while minimizing onsite setup.

Avamar Desktop/Laptop capabilities further extend the power of Avamar to your end-users—anytime, anywhere. With data deduplication at the source, open-file backup, and CPU throttling, Avamar can quickly protect valuable data via existing network links. Since it operates in the background, Avamar is not disruptive to your end-users. Data is automatically backed up when a user logs in during normal backup windows, or users can initiate their own backups on demand. A streamlined interface enables them to recover their own data quickly and easily.

## The EMC Avamar solution can help government agencies:

- Obtain fast, daily full backups to protect virtual environments, remote offices, LAN/NAS servers, and desktop/laptop systems
- Leverage existing physical and virtual infrastructure
- Ensure the integrity and recoverability of daily full backups
- Quickly recover data in a single step
- Centralize data protection while lowering administrative and storage costs within agencies, secretariats, and overall IT
- Implement cost-effective disaster recovery

## Take the next step

Your jurisdiction is always in motion—and EMC and our WSCA-NASPO partners always keep pace. From storage, to backup and recovery, to SAN infrastructure, to RSA security, our solutions are the ones IT professionals have turned to for years.

Explore EMC's WSCA/NASPO product selection at [www.EMC.com/emcwsca](http://www.EMC.com/emcwsca) or contact us at [emcwsca@emc.com](mailto:emcwsca@emc.com) to begin building the information infrastructure that's right for you.

