

## DELL EMC PowerScale: Data Protection with DELL EMC Avamar NDMP Accelerator

DELL EMC PowerScale scale-out NAS storage with DELL EMC Avamar NDMP accelerator provide highly efficient backup and restore



### Benefits of using Avamar for NAS device data protection

**Multiple NAS systems with one accelerator:** Single accelerator can support more than one NAS system.

**Multiple simultaneous data streams:** NDMP plug-ins have a Maximum Concurrent Data Streams setting to control the maximum number of simultaneous NDMP data streams that can be allocated to each NAS system backup or restore operation.

**PowerProtect DD system support:** Backups can be stored on either the Avamar server or a PowerProtect DD system. Backup metadata is stored on the Avamar server.

**PowerScale SmartConnect support:** Avamar backup data can be stored or restored from a backup to an PowerScale™ cluster with SmartConnect configuration.

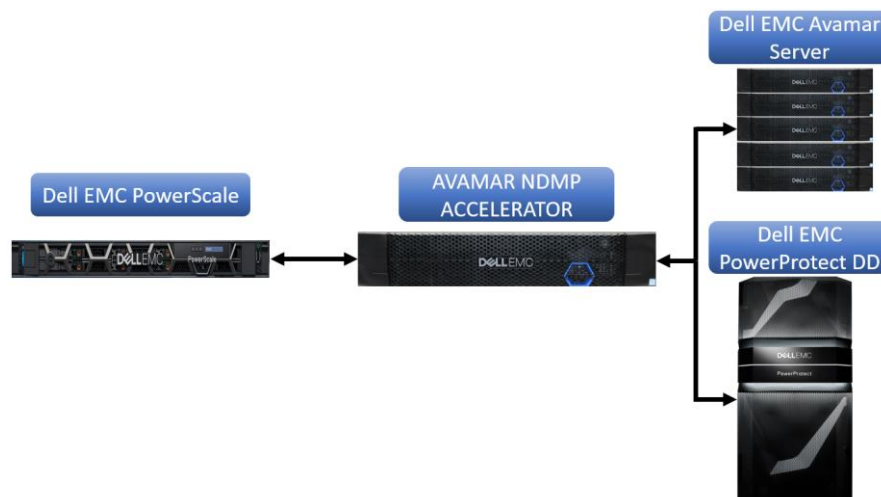
**Avamar Installation Manager:** Avamar 7.4.x and later versions install the Avamar Installation Manager on the NDMP accelerator node.

**Year 2038:** Avamar 19.2 and later server subsystems support backup retention until February 2106. For the Avamar 19.2 and later server subsystem and Avamar 19.2 or later client and plug-ins subsystems, all backup retention succeeds after 2038.

### DELL EMC Avamar for PowerScale Data Protection

DELL EMC™ Avamar™ provides fast, reliable NAS system backup and recovery through the Avamar NDMP Accelerator, dramatically reducing backup times and the impact on NAS resources, allowing an easier and faster recovery. The NDMP accelerator is available as both a virtual and hardware appliance. The fast-Incremental software architecture provides an efficient solution to protect High-Density File Systems (HDFS).

To back up and restore data residing on NAS systems, Avamar uses a device called an Avamar NDMP Accelerator (accelerator). The accelerator is a dedicated Avamar server node that functions as an Avamar client. The accelerator uses NDMP to interface with and access NDMP-based NAS systems.



Data from the NAS system is not stored on the accelerator. The accelerator performs NDMP processing and real-time data deduplication and then sends the data directly to the Avamar server.

The accelerator can be connected to either a Local Area Network (LAN) or Wide Area Network (WAN) with respect to the Avamar server. However, to ensure acceptable performance, the accelerator must be located on the same LAN as the NAS systems.

On-demand and scheduled NAS system backups can be performed with the accelerator:

- Using Avamar Administrator or the Avamar Management Console Command Line Interface (MCCLI) both on-demand and scheduled backups can be performed.
- Using the avndmp command line interface, on-demand backups can be performed.

### NDMP plug-in options for backup

- **Maximum concurrent data streams:** Maximum number of streams that can be processed concurrently
- **Filer dump mode:** Prefer Incremental, but do a Full if required, force a level 0 dump, and Force an incremental (level 1) dump
- **Backup label:** Custom descriptive label for the backup
- **Option to store backup on Dell EMC PowerProtect DD system:** Store the backup on a PowerProtect DD system instead of Avamar server
- **Encryption method to PowerProtect DD system:** Encryption method for data transfer between the client and the PowerProtect DD system during backup
- **Run user-defined script at start and end of backup:** Script to be run before and after each backup target is processed
- **PowerScale Browse username:** User account for Dell EMC PowerScale™ OneFS™ with privileges for browsing the file system
- **PowerScale Browse Password:** Password for the OneFS user account

### NDMP plug-in options for restore

- **Maximum concurrent data streams:** Maximum number of streams that can be processed concurrently
- **Encryption method to PowerProtect DD system:** Encryption method for data transfer between the client and the PowerProtect DD system during restore
- **Run user-defined script at start and end of restore:** Script to be run before and after each restore target is processed

### Virtual NDMP (vNDMP) accelerator node

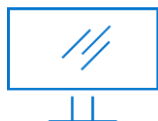
As part of the Avamar 19.3 release, a customer can leverage the vNDMP option in-order to protect the NAS workload.

vNDMP option offers the customer with a complete user experience from deploying the OVA to registering the NDMP client to the Avamar Server, to integrating the vNDMP client instance with the NAS environment. Hence, the user no longer required to manually perform the activity.

### Upgrading the accelerator software

The accelerator software upgrade workflow contains an upgrade to the SLES 12 SP5 operating system. Avamar 19.4 supports upgrading NDMP accelerator node from OS SLES 11 SP1 on Gen4S hardware platform.

For detailed information about configuring Avamar NDMP Accelerator with PowerScale, see the configuration white paper [Dell EMC Avamar NDMP Accelerator for NAS User Guide](#).



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