NetVault Backup 10 Server Sizing Guide

Recommended Dell Hardware and Storage Configurations

Abstract

This document is designed to aid customers in choosing the appropriate server configuration for their new NetVault Backup server. The configurations outlined in this guide are designed to provide NetVault with the resources it needs to perform properly in a given environment.

Introduction

NetVault Backup 10 is a cross-platform backup and recovery software solution that safeguards your data and applications in both physical and virtual environments. It's scalable and supports multiple server and application platforms across your enterprise. A single, intuitive web interface requires minimal experience, simplifying your data backup and recovery.

To get the most out of NetVault it is essential that NetVault is installed on hardware that is capable of supporting such a robust application. While no two NetVault Backup environments are exactly the same, there are general guidelines to ensure the optimal performance of NetVault Backup. It is important to remember that the guidelines provided in this document are recommendations, and that some environments may fall outside of these recommendations and require a custom configuration. In this document you will find sizing recommendations for small (1-300 clients) and large (301-1000 clients) environments. If the recommended hardware cannot be sourced it is suitable to use equally powerful hardware.

Storage Considerations

NetVault Backup 10 is an enterprise backup application, supporting many different storage locations for backups. Backups can be stored on local storage, [DR Series appliances](#), Direct Attached Storage (DAS), Network Attached Storage (NAS), and much more. When deciding where to store NetVault backups, the DR Series appliances should be considered first as they offer the highest level of space savings, fastest backup speeds and a great degree of flexibility and integration. Using the DR series appliances can yield backups speeds of 22TB/hr and savings over 90%. NetVault and DR series appliances have deep integration between the two known as Rapid Data Access (RDA). This plugin provides for fast and efficient client slide deduplication that is done in-line. This integration also allows for easy site-site replication between appliances, offloading the work the appliance and not the NVBU server.

An alternative to using a DR series appliance is the [Dell PowerVault MD1200 Direct Attached Storage](#). When using the MD1200 either NetVault Virtual Tape Library (VTL) or NetVault SmartDisk can be used. The NetVault VTL will pose a 1-to-1 storage requirement, requiring 1TB of storage space for every 1TB of data backed up.(Example: In an environment using a small sized NetVault server and protecting 30TB of data, a 30TB MD1200 array will be required if using a VTL.) NetVault SmartDisk will provide up to a 90% storage savings utilizing target side post-process deduplication. NetVault SmartDisk also provides the ability to replicate from NetVault SmartDisk instance to NetVault SmartDisk instance.

If using NetVault SmartDisk, a dedicated server with a MD1200 array will be required in addition to the NetVault server. It is important to note that NetVault SmartDisk cannot be installed on the same server as NVBU and that NetVault SmartDisk has a maximum capacity of 15TB deduplicated data. This is roughly 150TB of pre- deduplicated data assuming a 10:1 deduplication ratio. Please see NetVault SmartDisk Server Recommendations for proper sizing.

NetVault Server Sizing Recommendations

Small

Number of protected clients: 1 to 300 NetVault clients per NetVault Backup 10 server

Recommended NetVault Server OS: Windows Server 2012R2 Standard

Recommended NetVault server configuration:

- **Model**: Dell PowerEdge R520
- **U Size**: 1U
- **Chassis**: 3.5" with up to 8 Hard Drives
- **RAM**: 16GB RAM Single or Dual Ranked
- **CPU**: Single Intel® Xeon® E5-2407 2.20GHz Quad Core
- **Raid controller**: H310 Integrated RAID Controller RAID 1
- **Hard drive**: 2x 1TB HDD 7.2k RPM SATA 3Gbps
- **External Controller**: SAS 6Gbps HBA External Controller and/ Fiber Channel HBA
- **Storage**: DR Series appliance (DR4100 or DR6000) or MD1200 array
- **Network interface card**: On-Board Broadcom 5720 Dual Port 1GB

Large

Number of protected clients: 301 to 1000 NetVault clients per NetVault Backup 10 server

Recommended NetVault Server OS: Windows Server 2012R2 Standard

Recommended NetVault server configuration:

- **Model**: Dell PowerEdge R520
- **U Size**: 1U
- **Chassis**: 3.5" with up to 8 Hard Drives
- **RAM**: 32GB RAM Single or Dual Ranked
- **CPU**: Single Intel® Xeon® E5-2450 v2 2.50GHz Eight Core
- **Raid controller**: H310 RAID 1
- **Hard drive**: 2x 1TB HDD 7.2k RPM SATA 3Gbps
- **External Controller**: SAS 6Gbps HBA External Controller and/or Fiber Channel HBA
- **Storage**: DR Series appliance (DR4100 or DR6000) or MD1200 array
- **Network interface card**: Broadcom 57810 Dual Port 10GB

NetVault SmartDisk Server Recommendations

If you require deduplication in either a small or large environment a DR series appliance should be considered first. Deep integration with NetVault backup and the DR series appliance via RDA provides performance advantages over NetVault SmartDisk. Visit Resources at dellsoftware.com/products/netvault-backup for more information.

When using NetVault SmartDisk instead of a DR Series appliance or NetVault VTL you will need a dedicated server in addition to a properly sized NVBU server with the specifications listed below.

NetVault SmartDisk Server

Recommended NetVault Server OS: 64bit OS

Recommended for up to 15TB of deduplicated data:

- **Model**: Dell PowerEdge R520
- **U Size**: 1U
- **Chassis**: 3.5" with up to 8 Hard Drives
- **RAM**: 16GB RAM Single or Dual Ranked
- **CPU**: Single Intel® Xeon® E5-2450 v2 2.50GHz Eight Core
- **Raid controller**: H310 Integrated RAID Controller RAID 1
- **Hard drive**: 2x 1TB HDD 7.2k RPM SATA 3Gbps
- **External Controller**: SAS 6Gbps HBA External Controller and/ Fiber Channel HBA
- **Storage**: MD1200 array
- **Network interface card**: On-Board Broadcom 5720 Dual Port 1GB

NetVault 10 Compatibility Documents

- NetVault Backup Compatibility Guide
  - Supported Applications
  - Supported Operating Systems
  - Supported NAS\NDMP Devices
- NetVault Backup Supported VTLs, Libraries, Tape, and Optical Drives

Resources

For more guides like this visit the Resources tab at: dellsoftware/products/netvault-backup/

For NetVault user guides visit: dellsoftware.com/netvault-backup/release-notes-guides

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