



vMDM

Product Information

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1 Overview

1.1 Introduction

vMDM (Vector Measurement Data Management) is the solution for efficient management of large data volumes from development, test bench operation and vehicle tests. With vMDM, you can save your measurement data securely, protect it against unauthorized access and simplify the exchange of measurement data between distributed teams. With vMDM, large-scale CPU-intensive analyses, statistical metrics and reports are performed centrally on a server without any computational requirements on the engineer’s workstation.

With the option vMDM* for CANape and vSignalizer, you have access to all the measurement data saved in vMDM directly from within CANape and vSignalizer.

* Functionality in vMeasure exp already present without vMDM option

1.2 Overview of Advantages

- > Secure storage of measurement data from test benches, road testing and endurance testing
- > Protection of data through the separation of data files into collections with user-specific permissions
- > Easy searching, filtering and display of measurement data
- > Automatic indexing of measurement data on import
- > Flexible data indexing based on metadata containing measurement attributes, calculated metrics, and data provided by other systems
- > Automated data analysis and data mining on the vMDM server without any computational load on the user’s PC
- > Project-specific reporting of measurement data and statistical analysis
- > Scalable solution for multi-user environments
- > Familiar working environment through seamless integration with the Vector tool landscape. You define scripts, data analytics and data mining functions as usual in vSignalizer or CANape.
- > Minimum IT investment and operational cost for cloud-based operation

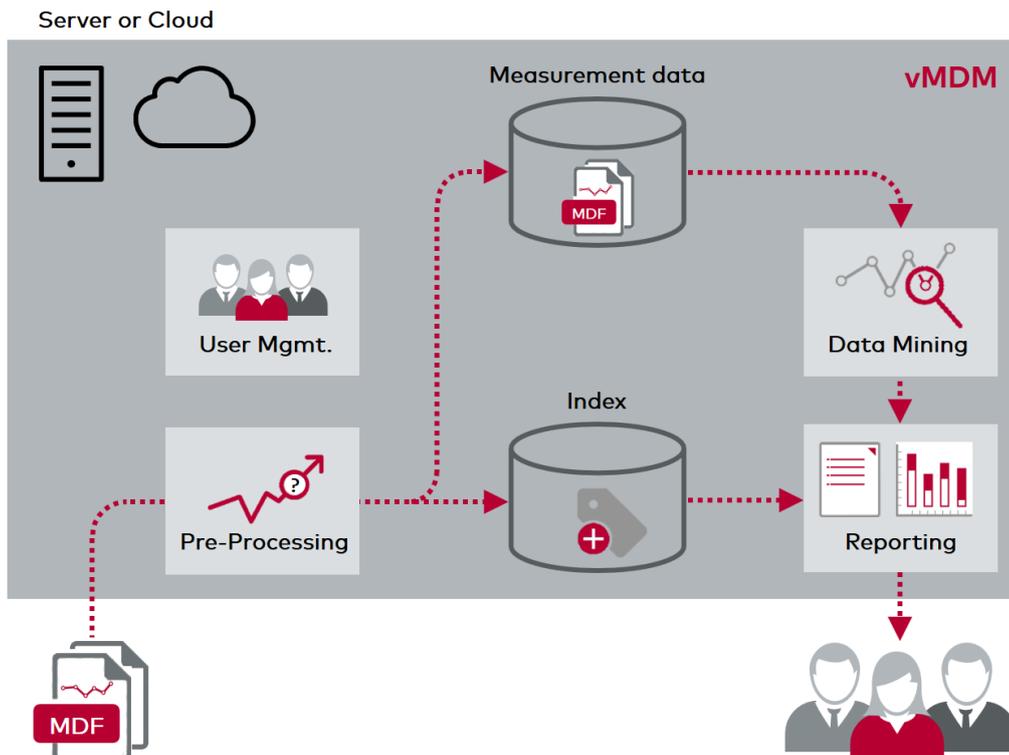


Figure 1: Overview of the most important vMDM components

1.3 System Requirements

1.3.1 Requirements for vMDM Cloud

- > Subscription license for vMDM Cloud
- > Client computer with CANape/vSignalizer starting at version 16.0 and vMDM license option
- > Internet access

1.3.2 Requirements for vMDM Enterprise

- > vMDM Enterprise Server in the corporate network
- > Client computer with CANape/vSignalizer starting at version 16.0 and vMDM license option

1.4 Further Information

Various documents are available on the web for vMDM, CANape, vSignalizer and vMeasure exp. In addition, you will find further valuable expertise in the form of technical articles and application notes. For more information, visit the [Vector Website](#).

2 Basic Functions

- > Integration of vMDM in CANape and vSignalizer for navigation, searches and data transfer
- > Interactive and automated analysis of the measurement data stored in the vMDM server in CANape or vSignalizer
- > Simple drag & drop export of measurement files from the vMDM server
- > Creation of queries for the storage of dynamic search requests
- > Export of query results in CSV format for creation of statistical analyses
- > Setup and management of data catalogs and so-called collections as well as of user permissions

3 Display and Manual Evaluation of Measurement Data

With the vMDM Explorer window in CANape and vSignalizer, you have direct access to all centrally stored and managed measurement data without having to pass through an external database application or the Windows File Manager.

You use features and metadata that you are free to define yourself to filter and sort even very large volumes of measurement data in seconds in order to solve specific problems. With a single mouse click, and using the proven capabilities of your Vector tool, you can display and analyze the retrieved measurement data quickly and conveniently. Data transfer is performed automatically in the background and a data cache permits accelerated access during recurrent operations on the same data.

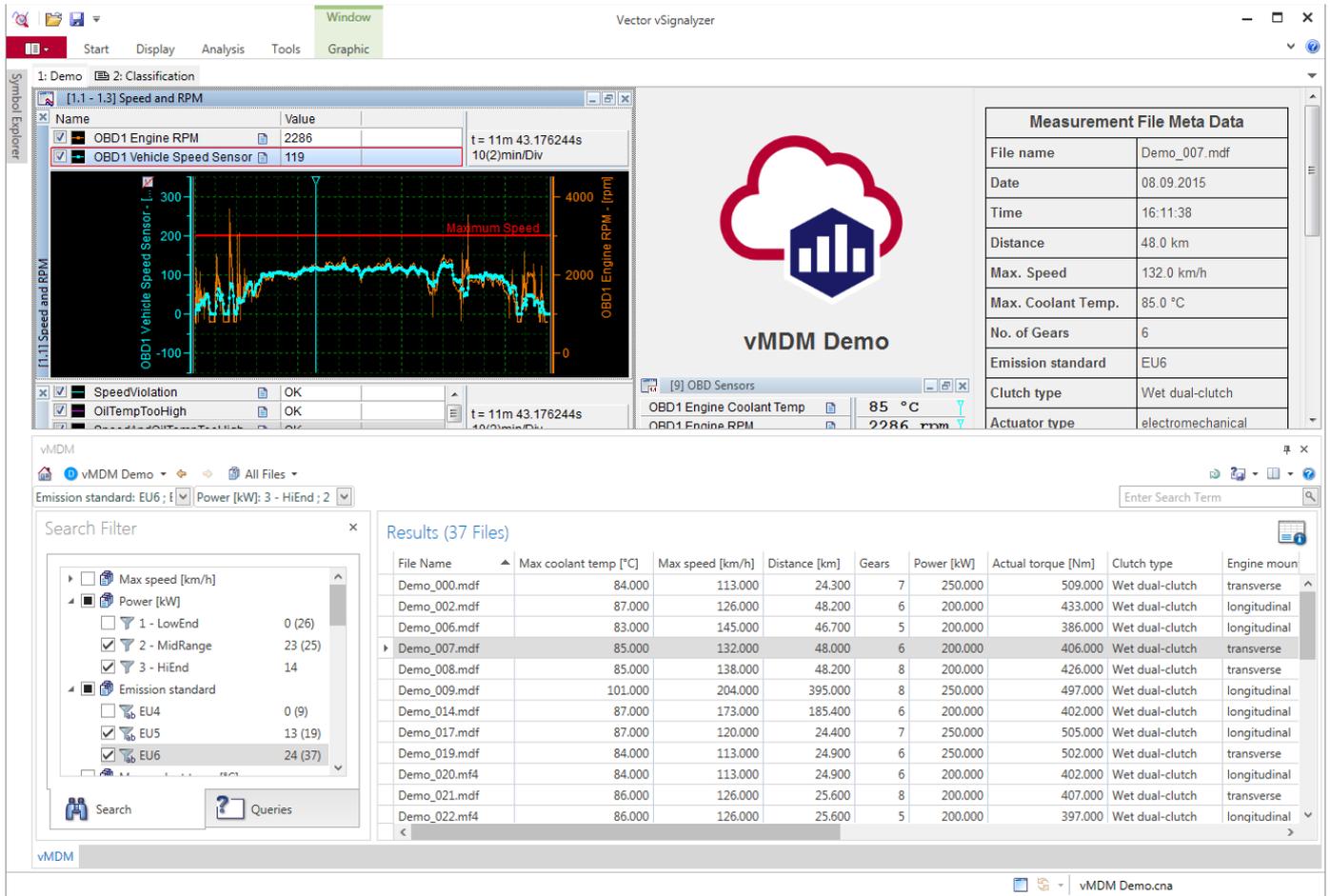


Figure 2: Search filters accelerate the search for measurement data with vMDM Explorer in vSignalizer

4 Automated Data Analysis

With their data mining functionality, CANape and vSignalizer provide a powerful and easy-to-use solution for the automated analysis of multiple measurement files. Using the vMDM option, you can not only analyze the files on your local workstation but also files from an vMDM server. As of vMDM 2.0, data mining can, if you wish, also be performed directly on the vMDM server in order to reduce the load at your local workstation.

The files to be analyzed are selected via your stored vMDM queries, i.e. here again you benefit from the possibilities for the flexible search and filtering of large data volumes. One advantage of this is that data that does not match your selection criteria is not subject to any computationally intensive analysis.

5 Server- and Cloud-Based Variants of vMDM

Depending on your requirements or IT infrastructure, vMDM is available as a cloud-based solution or as the server-based vMDM Enterprise variant in which vMDM is installed on servers in your in-house network.

6 Scalable Multi-User Solution

vMDM is scalable as a multi-user system depending on the expected data volume and the required server performance. The measurement data is organized into customer- or project-specific data catalogs known as collections and is securely protected against unauthorized access by means of user-specific roles and permissions.

7 Measurement Data Index for Optimized Search Operations

Thanks to the measurement data index, data can be retrieved quickly, queries for specific views can be defined and analysis tasks can be restricted to specific measurement data. vMDM determines additional index data during its initial analysis of the measurement files as part of the pre-processing done when files are first loaded into the system. This permits extensive statistical metrics, analysis profiles and event counts in categorized measurement files in just a few clicks of the mouse.

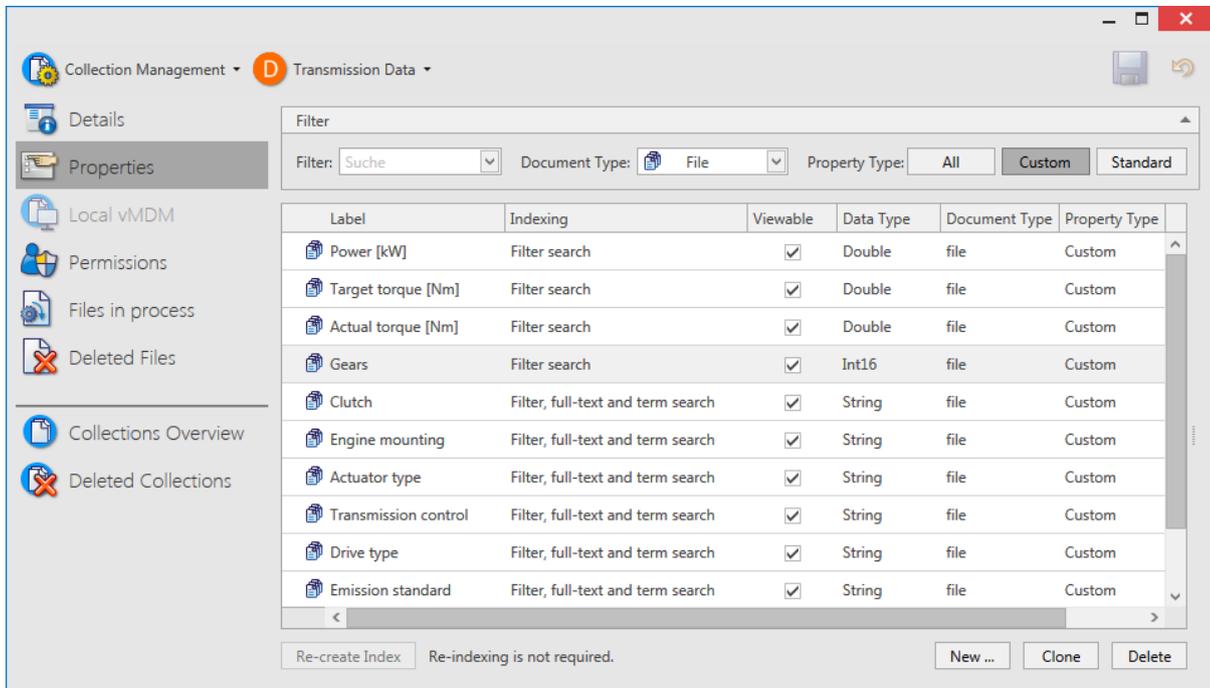


Figure 3: Configuration of the vMDM indexing schema

8 Data Security

The data in vMDM is protected against unauthorized access. vMDM user authorizations, specific read/write permissions and protection against accidental deletion all make secure data management possible.

When vMDM is used in the cloud, a number of different measures (encrypted data transfer, client separation, ISO 27001) ensure a high level of data security.

9 Engineering Services

To allow you to concentrate fully on your ECU development activities, Vector supports you both with its expertise and with its tailor-made, fully-fledged solutions for your particular tasks. The range of services extends from consulting, for example for the development of customer-specific analysis scripts, through support during integration and on to site visits by a field application engineer.

10 Training

We offer training courses for CANape and vSignalizer both in our seminar rooms and on-site at the customer's premises.

You will find more information on the training events and dates on the web at: www.vector-academy.com.



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