



CANape Option vCDM

Product Information

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This document provides a brief overview of option **vCDM** for CANape.

1 Introduction

1.1 Collaboration within the Team

Calibrating the ECUs requires team work. Continuous exchange and continual integration of preliminary results increases efficiency and reliability.

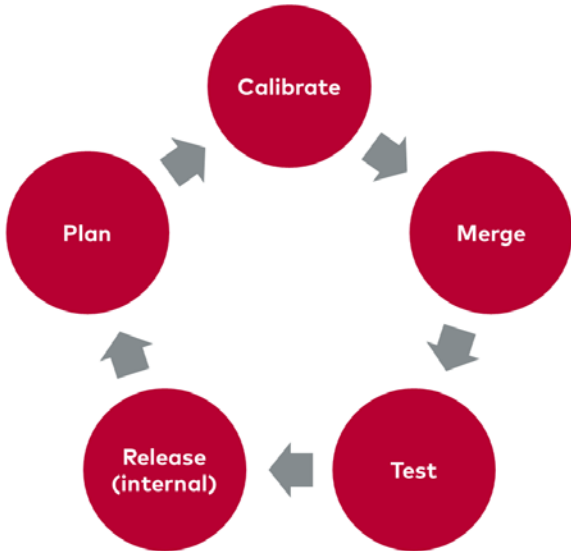


Figure 1: Calibration in the team

1.2 Challenges with Data Exchange

Several employees work at the same time on the same baseline status in their data, independently of one another.

The scope of change of individual contributions is not visible in most exchange formats. When large files are exchanged via e-mail or over the network, it is very difficult to accurately merge individual scopes of changes into a consistent cumulative state. Colleagues' changes to individual parameters can easily be lost in this way, as they are replaced by old statuses from other peoples' contributions.

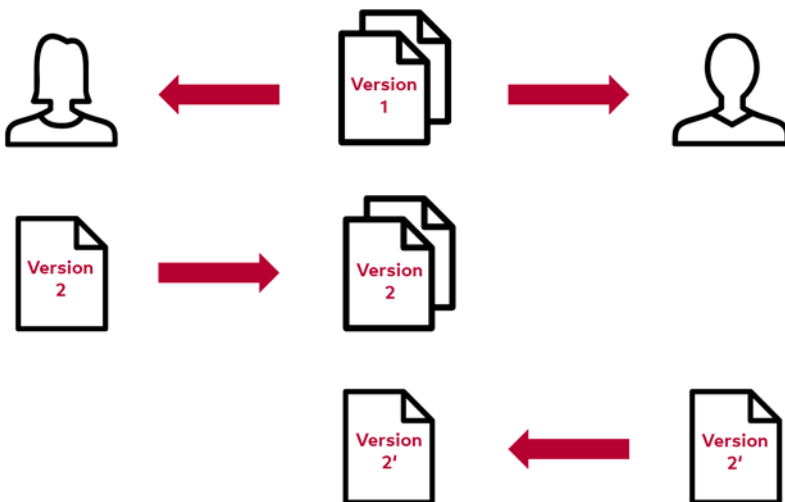


Figure 2: Changes of Version 2 get lost through incorrect data exchange

As the application tasks are partially independent of one another, the new cumulative state must be regularly communicated to everyone. With central coordination, it is possible that tasks might be carried out on the basis of old statuses. This would render the results worthless. The task would consequently have to be repeated.

1.3 A Solution with CANape and vCDM

A calibration data management system like vCDM coordinates collaboration in large teams distributed across the globe.

vCDM comprises many functions for organizing working positions and for rights and variant management. The system was designed to be open, in order to support various data sources and tools.

The CANape vCDM option gives many users the functionality they need in order to work with vCDM. The workflows have been optimized for calibration engineers and are fully integrated in the CANape user interface.

In addition, CANape vCDM provides a simple model for collaboration in small and mid-sized teams.

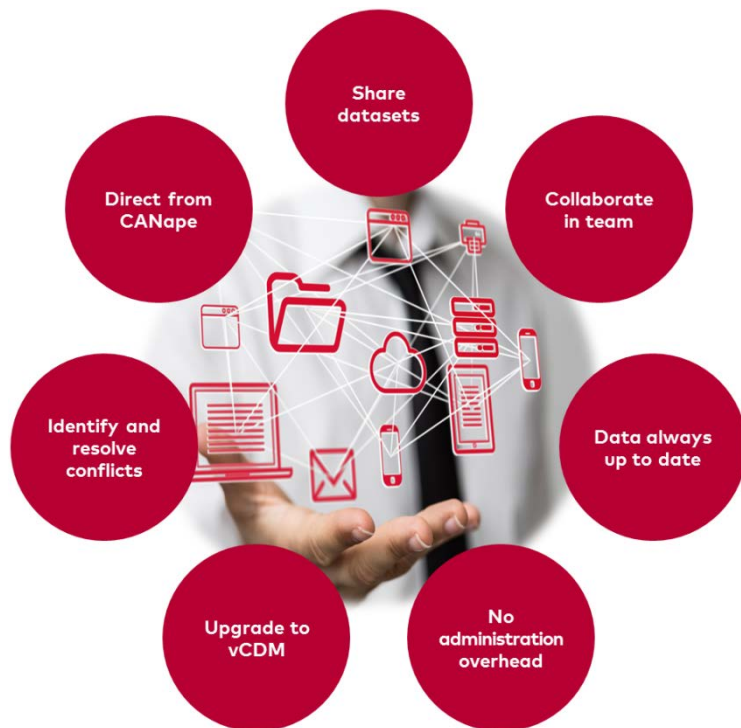


Figure 3: Collaboration within the team for calibrating ECUs

1.4 Benefits at a Glance

- > High user acceptance because of CANape's seamless integration and intuitive user interface All procedures are carried out in a single tool.
- > Secure data exchange with conflict detection and resolution during parameter changes made simultaneously by two editors
- > Great transparency through tracking changes to parameter values
- > No investment costs with the Vector Cloud offer (operating costs are written off)
- > Scalable solution: From two to two thousand users. It is possible to upgrade to vCDM.
- > CANape and vCDM server: Two perfectly matched, tried and trusted applications
- > The CANape vCDM option can also be used on an existing vCDM system

1.5 Further Information

Various documents are available on the Internet for CANape and vCDM. The demo version comes with detailed online help in which all CANape functions are described. You also benefit from valuable know-how in the form of technical articles and application notes. More information can be found in the Vector download center on

- > [CANape](#)
- > [vCDM](#)

2 Basic Functions

2.1 Overview

Users will work with CANape’s data set administration. Any data sets can easily be shared with other users. Invited colleagues can subsequently download these data sets directly onto their CANape.

Changes to parameters can be transmitted to the network. At the same time, changes by colleagues will be updated on your own PC.

Conflicts which arise from simultaneous changes to the same parameter will be displayed immediately and resolved by the user. You can see who made changes to individual parameters and when.

2.2 Sharing Data Sets

The user has created one or several data sets and has perhaps already set parameters. Until now the data has only been saved on the user’s PC and now needs to be shared and saved. To do this, the user selects “Share data sets” from the ribbon.

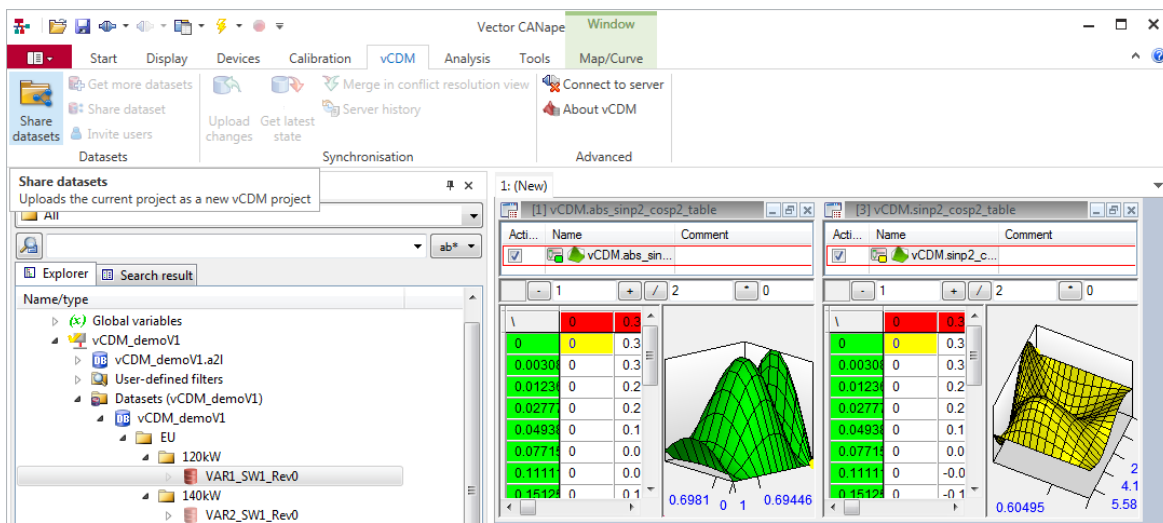


Figure 4: Quick sharing of data directly from the CANape interface

Following this, the data sets and the names of colleagues, with whom data is to be shared, are selected. These data sets are then loaded onto the server and are available to invited colleagues. The server can be in your business network or you can make use of the benefits of the [Vector Cloud solution](#).

Shared data sets are marked with a special icon in CANape. The user can see immediately that the data set is available on their PC as well as on the server.

2.3 Loading Data Sets in CANape

CANape users can very easily access shared sets. Instead of manually creating a new record for A2L and HEX files in CANape, with just a few clicks a device can be loaded from the server along with its A2L and data set onto the user’s PC and then be made available for editing.

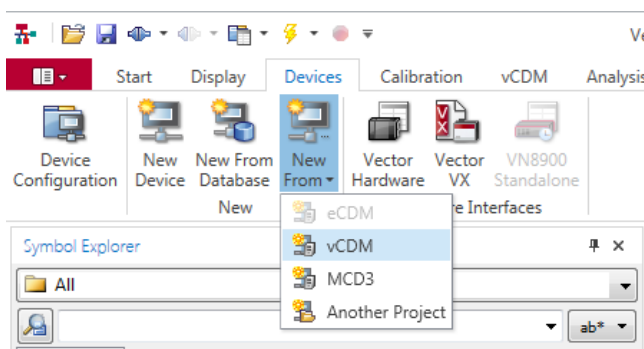


Figure 5: Simple loading of a shared data set in CANape

2.4 Exchanging Changed Parameter Values

Data sets that have been shared can be edited by several users. In addition to this, each adjustment procedure can only be seen on your local PC. Your own work results can be transferred to the server by selecting "Upload changes" from the menu. With "View current status" you can load colleagues' latest work results onto your own PC.

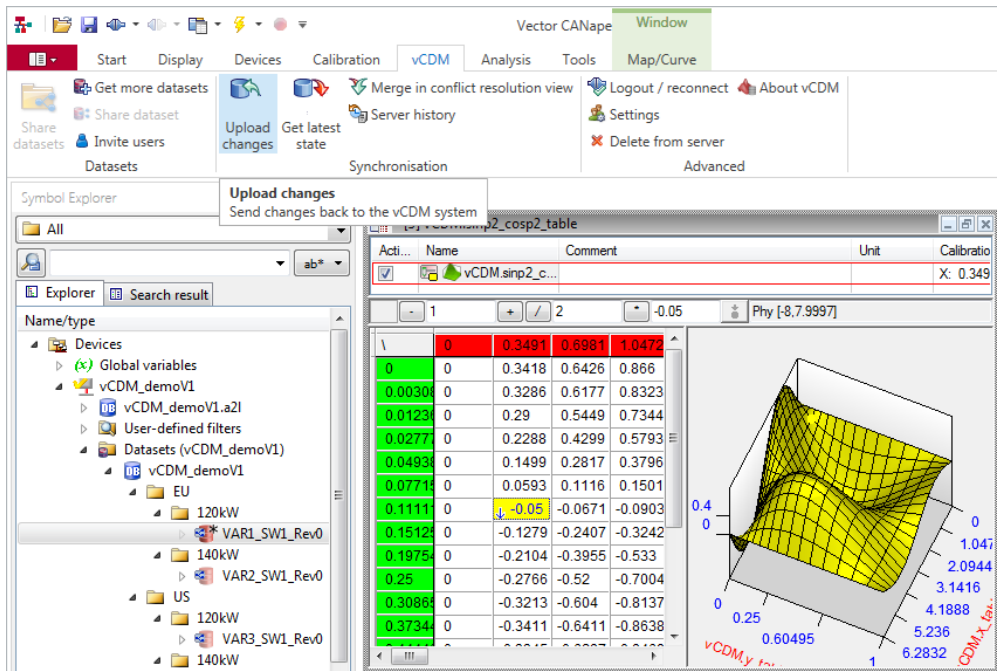


Figure 6: CANape changes and upload changes

2.5 Sharing of parameter sets

Changes are shared between vCDM projects as parameter set files. These changes are often imported into several vCDM data sets. If work packages are defined in vCDM, CANape not only exports the changed parameters to the exchange file, it also fills the entire work package.

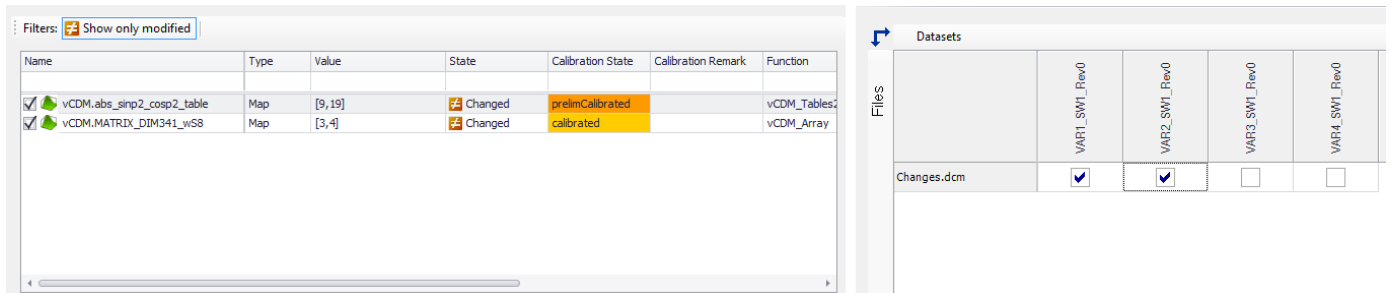


Figure 7: Data exchange by means of files

2.6 Handling Parameter Conflicts

If the same parameter is adjusted at the same time, CANape displays a conflict when synchronizing the shared data set. These conflicts can be displayed by selecting "Merge in resolve conflict view" from the menu, and can be resolved by selecting the correct value.

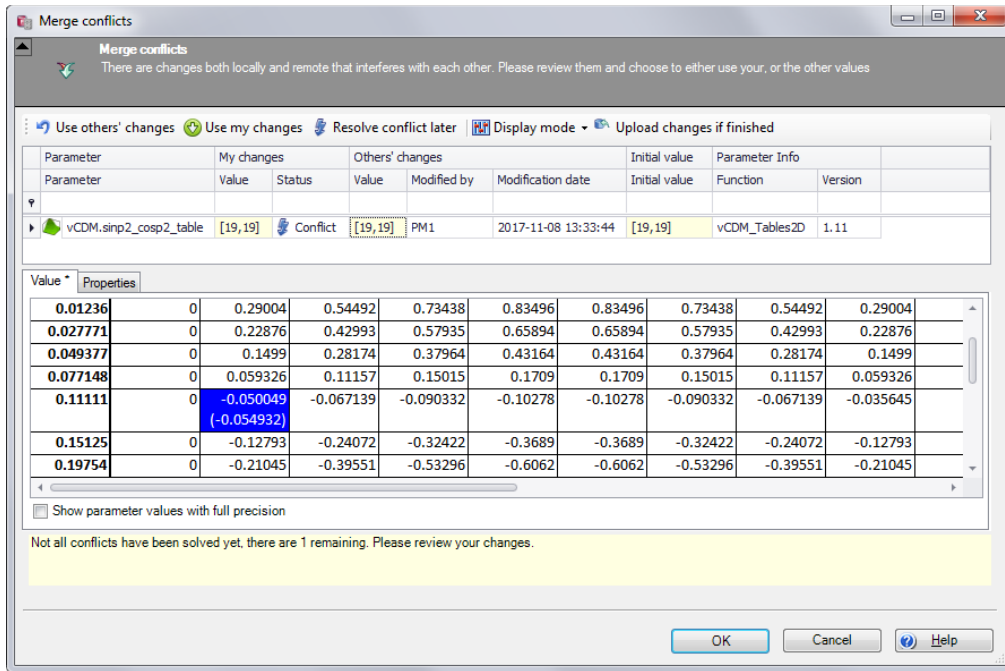


Figure 8: Resolving parameter conflicts is made easy through the clear presentation of different values

2.7 Adding More Data Sets

The CANape data set project is able to hold local and shared data sets. More local data sets can be shared at any time.

2.8 Changes History on the Server

The server records any change to a parameter and displays it in the Changes History. This means that every team member knows which parameters have been changes by which colleagues and at what time.

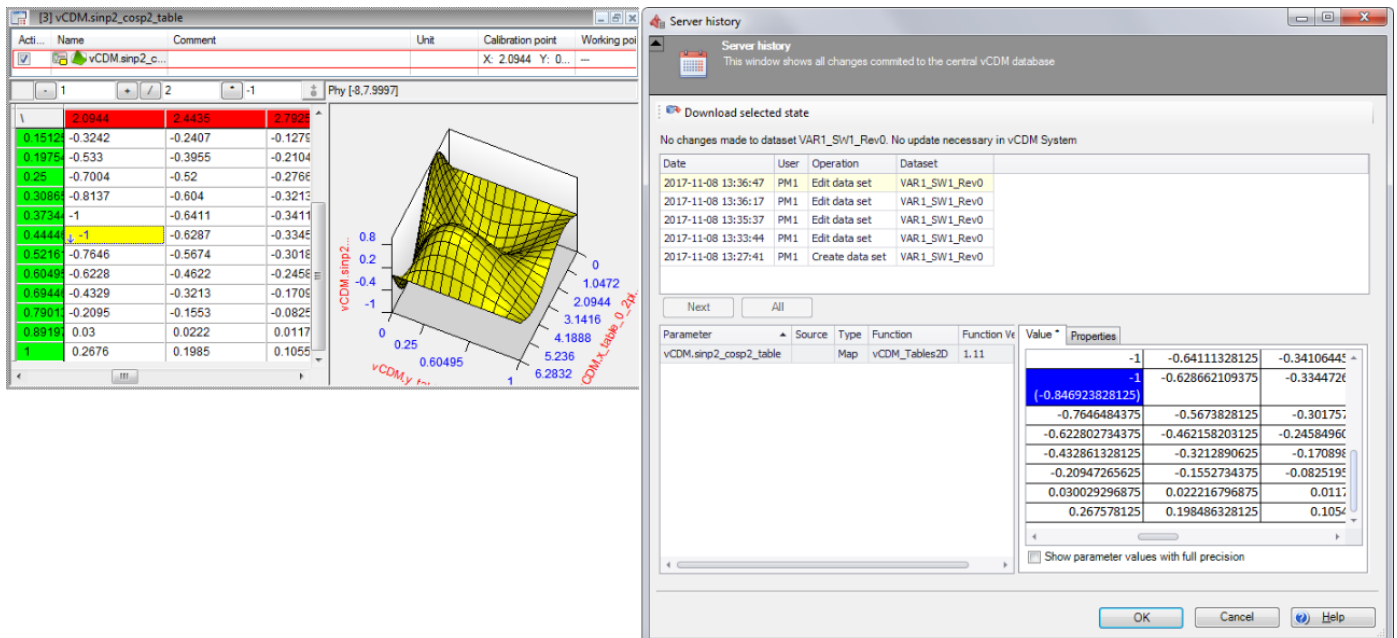


Figure 9: Tracking changes in the Changes History

2.9 Additional Functions

Calibration engineers are provided with additional useful functions that can be invoked directly from CANape.

- > Parameter set files imported into a data set can be displayed in CANape. This also applies to files from other users.
- > Attachments can be added to the data set.
- > A data set can be written with metadata (attributes)
- > Changes can be rolled back
- > Calibration progress is displayed in the data set administration

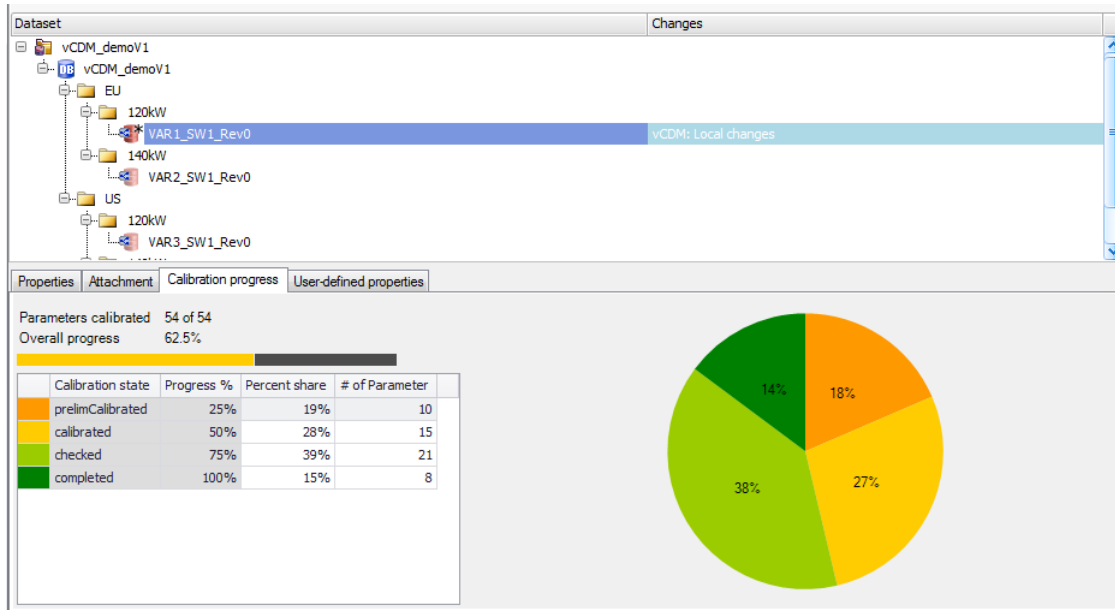


Figure 10: Calibration progress in the data set administration

3 vCDM Server

CANape option vCDM uses the vCDM server for central data exchange. You can operate the server yourself or lease the service from Vector as a cloud solution. There will be no additional costs for the server.

If a vCDM server is already available with the full range of vCDM functions, you can use the CANape vCDM option as a front end right away.

3.1 The vCDM Server in Your Own Network

This method of installation means that the vCDM Server is made available on a computer in the company's network.

System Requirements

The number of users and the number of shared data sets do not affect the system requirements. The following list contains the prerequisites for a system which supports 50 users: Please find additional information in the handbook.

- > Windows or Linux operating system
- > 2 GHz quad-core CPU
- > 4 GB RAM memory
- > 200 GB hard disk
- > Oracle Database 12c (an Oracle XE database for evaluation is included as standard)

3.2 vCDM Server as a Vector Cloud Solution

A Cloud solution offers considerable benefits for business users:

- > No need for dedicated hardware resources
- > No investment budget is needed
- > As the solution's developer, Vector knows how it can be best operated
- > Cost-effective operation
- > Faster provision (cloud system is ready to use in a very short time)

The entire infrastructure for operating the server will be provided by Vector. A high level of data security is guaranteed through many security measures (encryption, client separation, ISO 27001 certification). Selected globally distributed computing centers ensure fast response times.

All costs for hardware, software and databases are included in license fee. There are three different levels of configuration.

Vector Cloud Configuration Levels

Level of Configuration	Small	Medium	Large
Number of users	30	200	>200
CPUs	4	8	16
Memory	4 GB	8 GB	16 GB
Hard disk space	65 GB	250 GB	2500 GB
Data transfer	8 GB per month	30 GB per month	240 GB per month

Table 1: Bespoke scaling of server components according to your requirements

4 Differences between CANape Option vCDM and vCDM

If your requirements grow and additional functions for data management are needed, you can get an upgrade for the option vCDM license to the full vCDM client license.

Function	CANape Option vCDM	vCDM Client application
Collaborative work on shared data sets	✓	✓
Detection and resolution of conflicts	✓	✓
Tracking of changes using the History	✓	✓
Creation of shared data sets	✓	✓
Creation of vCDM projects	n/a	✓
Complete support of vCDM data sets	using only	✓
Roles & Rights	using only	✓
Working packages	using only	✓
Automatic Variant Management	using only	✓

Table 2: Range of functions of the CANape Option in comparison to vCDM

CANape users who work exclusively with shared data sets need a "vCDM Option" license. Calibration engineers who work with vCDM projects need a "vCDM Option" license for CANape, and data integrators / project leaders need a "vCDM Rich Client" license for the vCDM client.



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