VOLVO

WORKSHOP SYSTEM REQUIREMENTS & GUIDELINES

LEVC

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1   INTRODUCTION

This document describes the technical specifications and standards that need to be incorporated for running VIDA in a workshop process and environment.

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2   VIDA REQUIREMENTS

2.1   Mandatory specifications for VIDA workstation

Having the right infrastructure is one of the first building blocks of a retail business. Understanding the retail infrastructure requirements and going just a few steps above and beyond those requirements could significantly improve the bottom line.

Take action to implement these four simple, yet effective methods:

- **Surge Protection** – Providing surge protection for PCs and network devices is the easiest and most effective way to extend the life of the equipment and avoid expensive downtime.

- **Network workstations using common, modern methods** – Use the STAR DIG, http://www.starstandard.org/index.php/star-standards/dig-dealer-infrastructure-guidelines to implement a computer network with common and standard devices and protocols. Sharing internet connections and printers can directly improve the dealership's bottom line.

- **Provide virus protection** – Virus protection software helps prevent expensive downtime of systems.

- **Maintain reasonable and useful equipment warranty services** – When negotiating for warranty services, keep in mind that the average PC life is three years and onsite repair services are less disruptive and can be less expensive.

> **Note**
>
> Installing and running VIDA in terminal server environments or on other operating systems than the listed is not supported. The functionality of VIDA cannot be guaranteed in such environments.

VIDA is delivered as a desktop application but an installation package has to be installed on the computer to get the necessary software components. Download the VIDA Prerequisites installation package from: http://vidainstaller.volvocars.biz/client-installer-levc/VIDALEVCSetup.exe

> **Note**
>
> It is important to always have the latest VIDA Prerequisites installed in order for VIDA to function properly.

> **Note**
>
> Only install VIDA on a physical computer having the operating system Windows 10 or 11 installed.
>
> **It is not supported to install VIDA on:**
>
> - Windows 10 or 11 installed on a Windows Server, Remote Desktop, Citrix or similar
>
> - Windows 10 or 11 installed on a virtual operating systems such as VMware, Alienware or similar.
>
> Any issues occurring on above non-supported configurations will not be resolved in any updates of VIDA and users will not get any support.

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Item	Specifications for VIDA	
Processor	Intel Core i5 or equivalent[1]	
Memory	8 GB or more	
Free local disc space	120 GB[2] or 750 GB[2] for Mobille Service[3]	
Connections	2 x USB 2.0 or higher[4]	
Operating system	Windows 10 Professional/Enterprise Only 64-bit operating system[5]	
Installed browser	Microsoft Internet Explorer 11 and Google Chrome.	
File system	NTFS	
Display resolution	**Aspect ratio**	**Recommended resolution**
	16:9[6]	1920 x 1080
Internet connection (internal)	100 Mbit/s[7]	
Bandwidth	10 Mbit/s Download or higher for better performance[8] 10 Mbit/s Upload or higher for better performance[8]	
NAS drive	2 TB[9] RAID 1 capable with a minimum of 1 Gbit/s LAN port, with the capability of supporting at least 5 concurrent users[9]	
Smartphone	USB and Bluetooth tethering capabilities[10] Wi-Fi hotspot feature for internet sharing[10]	

[1]Name of processors is frequently changed. This is examples of what to use.

[2]Amount of disc space which should be available before VIDA is installed. The recommendation is based on the increase of used disc space over three years. If you have other applications, allow extra space for these according to their requirements.

[3]Mobile Service is a concept that allows technicians to service vehicles off-site and to do that hassle free the software files should be stored locally on the computer.

[4]Additional USBs may be needed for other equipment, such as mouse and keyboard.

[5]Minimum retail infrastructure requirements for VIDA. Windows Update must be enabled and all available updates from Microsoft need to be installed.

[6]The application is optimized for widescreen format. However, the application design is "fluid" based, i.e. the application stretches to completely occupy available screen space. This makes it possible to use smaller screens but bear in mind that it can be difficult to read wiring diagrams and other features that contain a lot of information.

[7]An internet connection must be available at all workshops and is used for the communication between the VIDA workstations and the VIDA central servers. This is the mandatory minimum internal network capacity.

[8]Mandatory minimum bandwidth for acceptable performance. However, the larger the bandwidth, the better VIDA will work.

[9]A NAS drive enables every VIDA workstation in the network to access the data stored on it. To locally cache VIDA data, a business grade local network storage of the specified value per customer organisation (Partner ID) is needed. This is managed by a network attached storage (NAS). The amount of storage space necessary for VIDA will increase at given occasions.

[10]The vehicles need mobile internet access in the workshop for the purpose of loading in-car apps, in the same way as the customers would provide internet to their vehicles. Mobile internet is normally supplied to the vehicles by means of a smartphone connected to the vehicles using USB, Bluetooth or Wi-Fi technology (by setting up a Wi-Fi hotspot). USB dongles with 3G/4G cannot be used. Hence, the workshop will need a smartphone for fault tracing of issues related to connectivity in order to be able to re-create what the customers would do. In addition, VIDA needs mobile internet in the case of mobile fault tracing (e.g. while driving the vehicle), where the same smartphone could be utilized. Alternatively a USB dongle could be used for a VIDA workstation.

2.2 Additional software requirements

There are different plug-ins that are needed and software prerequisites that need to be fulfilled for VIDA to work properly. These are described in the sections below.

2.2.1 Adobe Acrobat Reader

Some functions in VIDA require the software **Adobe Acrobat Reader** in order to view .pdf files. Adobe Acrobat Reader has to be installed separately and is available for free via this link: http://get.adobe.com/reader/.

2.3 Other software and software interfaces

2.3.1 TIE CLASSIC and TIE NG

TIE CLASSIC is used to report errors/discrepancies and to distribute information.

TIE NG is used to distribute Service Journals.

2.3.2 Dealer Management System

Dealers can connect to their locally installed Dealer Management System (DMS) from VIDA by configuring a locally available "VIDA DMS interface end point".

> **Note**
>
> This instruction does not cover the setup between the VIDA DMS interface implementation and the actual DMS. This is an issue for the party implementing the VIDA DMS interface.

In order for this to work, the following steps must be completed:

1. The DMS vendor must have implemented the VIDA DMS interface.
2. The customer information in VIDA Admin must be updated.
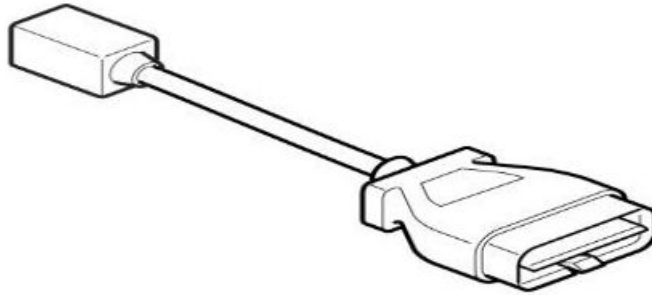
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3   PEER-TO-PEER CONNECTIVITY REQUIREMENTS

The vehicles can be connected directly to a VIDA workstation with a standard Ethernet cable using network connectors for a peer-to-peer connection for diagnostics and software download.

The following are the components required:

Mandatory components

- VOE (OBD to Ethernet) adapters.

Fig. 1   VOE adapter*

* The image is showing a generation 2 adapter. Generation 1 can still be used.

- Ethernet network input for each VIDA workstation for peer-to-peer connection. It can be either a PCI network card or a USB Ethernet adapter.
- Ethernet cable type CAT5, CAT5e or CAT6.

Fig. 2   Ethernet cable

- An Ethernet cable tester.

Optional components

- USB Ethernet adapters for internet connection when a peer-to-peer connected vehicle occupies the VIDA workstation's Ethernet port.

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Note

The connection may differ and depends on the manufacturer of the USB Ethernet adapter. During development phase, LEVC found the following adapters to be best suited for this task and is therefore recommended:

D-link 3.0 Fast Ethernet Adapter

D-link DUB-1312

There may be other adapters with similar properties, but since they are not tested by LEVC they cannot be not recommended.

Fig. 3   USB Ethernet adapter

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4 CONFIGURATION SPECIFICATIONS

4.1 Universal Resource Locators

VIDA will use several URLs, all will be on *.volvocars.biz* – make sure that *.volvocars.biz* is not blocked by a proxy or firewall.

The following outbound ports in an internet firewall need to be open:

Protocol	Port number	Destination	Usage
TCP	80	Any	For VIDA to reach central systems.
TCP	443	Any	

4.2 Microsoft Windows user account

In order to install VIDA, the user account for Microsoft Windows has to be set to administrator.

Note

It is not possible to run VIDA while logged in to the operating system with a guest account. Try to avoid having a domain policy that will override the normal rights for the supported user accounts. Some restrictions might make VIDA not work. It is strongly recommended that all VIDA users log in as administrators with full admin rights.

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5 VEHICLE COMMUNICATION TOOLS

VIDA does not need to be connected to the vehicle through a communication tool. The preferred way to connect VIDA to a vehicle is to use an Ethernet cable, peer-to-peer, between a VIDA work station and a vehicle.

- Peer-to-peer gives a:
    - Significantly faster communication, especially for software down-loads.
    - A simplified connection procedure.
    - Fewer parts that can break.
    - Cheaper equipment (only standard Ethernet cable and an adapter to connect a vehicle).

5.1 J2534 devices

For all vehicles with model year 2004 and later, equipped with OBD and reprog-ramming capability, manufacturers shall comply with SAE J2534. There are two different versions of J2534:

- J2534-1 can be used to download software to vehicles from, and including, model year 2004. J2534-1 manages software to control modules on CAN HS (Controller Area Network High Speed) that are emission related. J2534-1 cannot be used for diagnostics.
- J2534-2 manages software download to control modules on both CAN HS and CAN MS (Controller Area Network Middle Speed).

The hardware used to validate VIDA's compliance with J2534 can be purchased separately from third-party suppliers. Validation has been done using the following J2534 pass-thru devices:

- J2534-1: Actia Passthru+ XS and CarDAQ2534.
- J2534-2s: CarDAQ Plus.

For more information regarding these devices, please contact the respective manufacturer.

V O L V O

6 ABBREVIATIONS

CAT   – Category (cable)
CAN HS – Controller Area Network High Speed
CAN MS – Controller Area Network Middle Speed
DMS   – Dealer Management System
NAS   – Network Attached Storage
NTFS   – New Technology File System
OBD   – On Board Diagnosis
PCI   – Peripheral Component Interconnect
TIE   – Technical Information Exchange
USB   – Universal Serial Bus
URL   – Universal Resource Locator

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7 HISTORY LOG

7.1 320EN11

The chapter *Mandatory specifications for VIDA workstation* has been reworked.

Shared drive has been removed. A NAS should always be used instead.

URLs have been updated.

7.2 320EN12

URLs used by VIDA have been removed and replaced with *.volvocars.biz*

End date for Windows 7 has been postponed until 2020-01-14.

7.3 320EN13

Destination Any, has been added to the *Universal Resource Locators* table.

7.4 320EN20

Updated information about mandatory requirements for the VIDA workstation.

Chapter about TIE is updated with information about requirements for TIE NG.

Changed required NAS drive storage space from 1 TB to 2 TB.

7.5 320EN21

Added information about TIE for independent operators for US and Canada.

Google Chrome added as possible web browser.

Removed markings for recommended VIDA workstation requirements.

Edited Ethernet phrase usage and information about Wi-Fi.

Minor adjustments in content.

7.6 320EN23

Updated operating system requirements.

Added system requirements notification about unsupported installations.

7.7 320EN27

Removed browser requirements.

Removed TIE Classic and TIE NG browser requirements.

7.8 320EN28

Added Mobile Service System Requirements.

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