



# Getting Started with VibroSight®

## An installation guide




### INTRODUCTION

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This is the VibroSight® software installation guide. You should have received this guide together with the VibroSight 3.7.x software.

This installation guide is intended for integrators and operators of machinery protection and/or condition monitoring systems from Meggitt Sensing Systems' Vibro-Meter product line that use the following hardware:

- » VM600 rack-based monitoring systems containing XMx16 extended monitoring card pairs such as the XMC16/XIO16T, XMV16/XIO16T and/or XMVS16/XIO16T.
- » VibroSmart® distributed monitoring systems containing devices such as the VSV300 monitoring module, VSI010 communications interface module and/or VSN010 real-time Ethernet switch.

Further documentation concerning the VibroSight software and the system hardware – VM600 XMx16 cards and/or VibroSmart devices – is provided in the  *VibroSight help* (VibroSight.chm), which is copied to the computer by the VibroSight 3.x.x installer as part of the software installation process.

### VIBROSIGHT 3.x.x – COMPELLING PERFORMANCE IMPROVEMENTS

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VibroSight 3.x.x introduces two important new features that significantly improve overall system performance.

- » Full support for VibroSight historical data repositories

VibroSight historical data repositories are a specialised system of files designed and optimised for the high-speed storage and retrieval of data generated by high-performance machinery monitoring systems. It is a proprietary data repository system, consisting of VibroSight historical data folders (\* .vshdf) for the handling and logging of data by a VibroSight Server, and VibroSight historical data archives (\* .vshda) for the display, analysis and sharing of historical data without a VibroSight Server.

VibroSight historical data repositories and the optimised data handling implemented by the VibroSight software significantly reduce the performance bottlenecks associated with the use of standard databases: VibroSight is now very fast

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**NOTE:** The use of VibroSight historical data repositories replaces the use of databases based on Sybase® SQL Anywhere required by previous versions of VibroSight.

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- » Full support for 64-bit computing

VibroSight is now separately compiled and made available as 64-bit software (“x64 native”) that runs on 64-bit Windows and 32-bit software (“x86 native”) that runs on 32-bit Windows.

This allows the 64-bit version of VibroSight to take full advantage of the power of 64-bit computing, notably: more physical memory, more continuous memory and a faster bus architecture, resulting in a greater overall application speed. These are important gains, particularly for demanding machinery monitoring systems such as large-scale vibration applications and combustion applications, but there are other benefits too, such as security improvements and a longer lifespan for new projects, leading to a lower total cost of ownership.

Previously, VibroSight was available as 32-bit software only that could run on both 32-bit and 64-bit Windows.



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## COMPUTER SYSTEM REQUIREMENTS

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To install and use the VibroSight 3.7.x software for standard machinery monitoring applications, the following typical computer configuration is recommended:

- » 2.0 GHz or faster multi-core 64-bit (x64) processor
- » 8 GB of system memory (RAM)
- » 500 GB or more of available hard disk space, preferably on a dedicated hard disk drive
- » DirectX 11 graphics device
- » 27" 1280x1024 (SXGA) high-colour (32-bit) display or better
- » Gigabit Ethernet network interface adapter (card)
- » CD/DVD optical drive and/or Internet access for software installation
- » Optional 100 GB (or larger) backup media
- » Microsoft® Windows 7, Windows 8.1, Windows 10, Windows Server 2008 R2, Windows Server 2012 or Windows Server 2016 operating system (64-bit) with Microsoft .NET Framework 4.7.2 or later.

To install and use the VibroSight 3.7.x software for more demanding machinery monitoring systems, such as large-scale vibration applications and combustion applications, the following computer configuration is recommended:

- » 3.0 GHz or faster multi-core 64-bit (x64) processor
- » 16 GB of system memory (RAM)
- » 1000 GB or more of available hard disk space, preferably on a dedicated hard disk drive
- » DirectX 11 graphics device
- » 27" 1280x1024 (SXGA) high-colour (32-bit) display or better
- » Gigabit Ethernet network interface adapter (card)
- » CD/DVD optical drive and/or Internet access for software installation
- » Optional 250 GB (or larger) backup media
- » Microsoft® Windows 7, Windows 8.1, Windows 10, Windows Server 2008 R2, Windows Server 2012 or Windows Server 2016 operating system (64-bit) with Microsoft .NET Framework 4.7.2 or later.

To install and use the VibroSight 3.7.x software for less demanding machinery monitoring applications, the following computer configuration could be used:

- » 2.0 GHz multi-core 32-bit (x86) processor
- » 4 GB of system memory (RAM)
- » At least 250 GB of available hard disk space
- » DirectX 11 or higher graphics device
- » 24" 1280x1024 (SXGA) high-colour (32-bit) display
- » Gigabit Ethernet network interface adapter (card)
- » CD/DVD optical drive and/or Internet access for software installation
- » Microsoft® Windows 7, Windows 8.1 or Windows 10 (32-bit) with Microsoft .NET Framework 4.7.2 or later.

## SOFTWARE INSTALLATION

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**NOTE:** Machinery monitoring projects using VibroSight OPC Servers that were created using VibroSight 2.12.7 or earlier must manually migrate their VibroSight OPC Servers before they can be used with VibroSight 3.x.x.  
It is very important to note that migrating a VibroSight OPC Server from VibroSight 2.12.7 or earlier to VibroSight 3.x.x requires that certain steps must be performed using the existing version of VibroSight (that is, VibroSight 2.12.7 or earlier) BEFORE it is removed (uninstalled).  
See *VibroSight OPC Server migration* on page 14.

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**NOTE:** If the VibroSight 3.x.x software and MatrikonOPC™ software are to be installed and run on the same computer, then the software must be installed in the following order:

1. Install the MatrikonOPC software.
2. Install the Microsoft Visual C++ Redistributable Package for Visual Studio 2010 (version 40219).  
Note: This redistributable package is required by the MatrikonOPC software.
3. Install the Microsoft Visual C++ Redistributable Package for Visual Studio 2015 (version 23026 or later). Note: This redistributable package is required by the VibroSight software.
4. Install VibroSight 3.x.x.

Refer to the  *VibroSight 3.x.x release notes* for further information.

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### 1. Software prerequisites

During the installation of the VibroSight 3.7.x software, the following prerequisite software is automatically installed by the VibroSight 3.7.x installer as part of the software installation process:

» Microsoft .NET Framework 4.7.2

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**NOTE:** Microsoft .NET Framework 4.7.2 replaces .NET Framework versions 4.0 to 4.7.1.  
Different versions of Microsoft .NET Framework can coexist on the same computer, so do not remove other versions, which could be required by other software running on the computer.

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See the Appendix of this installation guide for further information on VibroSight software and Microsoft .NET Framework requirements.

» Microsoft Visual C++ Redistributable Package for Visual Studio 2015

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**NOTE:** Different versions of Microsoft Visual C++ Redistributable Packages can coexist on the same computer, so do not remove other versions, which could be required by other software running on the computer.  
Both the 64-bit and the 32-bit versions of a Microsoft Visual C++ Redistributable Package package can coexist on the same computer.

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The Microsoft Visual C++ Redistributable Package installed depends on the version of VibroSight software to be used: the 64-bit version of the package (“vc\_redist.x64.exe”) is installed by the 64-bit version of VibroSight and the 32-bit version of the package (“vc\_redist.x86.exe”) is installed by the 32-bit version of VibroSight.

» OPC Core Components Redistributable

The OPC Core Components Redistributable used depends on the version of VibroSight software used: the 64-bit version of the package (“OPC Core Components Redistributable (x64) 106.0”) is installed by the 64-bit version of VibroSight and the 32-bit version of the package (“OPC Core Components Redistributable (x86) 106.0”) is installed by the 32-bit version of VibroSight.

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## SOFTWARE INSTALLATION *(continued)*

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On a Windows computer, the software installed can be checked at any time using the Windows Control Panel. For example, on Windows 7, click the **Start** button, then click **Control Panel** and then click **Programs/Programs and Features**.

### 2. Installing VibroSight

The VibroSight software is available as two separate versions:

- » VibroSight Standard Edition (64 bit) – 64-bit software (“x64 native”) compiled to run on 64-bit Windows.
- » VibroSight Standard Edition (32 bit) – 32-bit software (“x86 native”) compiled to run on 32-bit Windows.

Installing the VibroSight 3.x.x software simply requires that the appropriate VibroSight 3.x.x installer is run, depending on the version of Windows run by a computer (64-bit or 32-bit).

On a Windows computer, the version of Windows run by the computer can be checked at any time using the Windows Control Panel. For example, on Windows 7, click the **Start** button, then click **Control Panel** and then click **System and Security/System**: under **System** and **System type**, either **64-bit Operating System** or **32-bit Operating System** is displayed.

To install the appropriate version of VibroSight 3.x.x software:

- » On a 64-bit Windows computer, run the 64-bit version of the VibroSight 3.x.x installer (“VibroSightSetup\_64\_bit”).
- » On a 32-bit Windows computer, run the 32-bit version of the VibroSight 3.x.x installer (“VibroSightSetup\_32\_bit”).

The latest VibroSight 3.x.x installers can be found on the VibroSight CD (or can be distributed in another way).

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**NOTE:** The 64-bit version of VibroSight can be installed on 64-bit Windows computers only.  
The 32-bit version of VibroSight can be installed on 32-bit Windows computers only.  
The prerequisite software described in *1. Software prerequisites* on page 3 is automatically installed by the VibroSight 3.4.x or later installer as part of the software installation process  
Only a single version of VibroSight can be installed and exist on a computer at any one time.

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During the installation of VibroSight 3.4.x or later:

- » When prompted, accept the terms of the Meggitt Sensing Systems (Meggitt SA) software licence agreement and click **Install** or **Advanced** to continue.
- » Use **Install** to install VibroSight using the default installation options.
- » Use **Advanced** to install VibroSight changing the default installation options:
  - Installation scope – install VibroSight for a single user or for all users of the computer.
  - Destination folder – specify a different folder to install the VibroSight software to.
  - Destination folder – specify a different default folder for use by VibroSight data files.
  - Advanced options – reset (clear) the user-configurable application settings used by the VibroSight software.
  - Product features – selectively install the different components of the VibroSight software, including example data repositories.

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**NOTE:** For more demanding machinery monitoring applications, it is recommended that VibroSight (software destination folder) and VibroSight data (data destination folder) use different hard disks in order to improve overall system performance.

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## SOFTWARE INSTALLATION *(continued)*

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- » If the VibroSight 3.4.x or later installer installs the OPC Core Components Redistributable:  
When prompted, agree to the terms of the OPC licence agreement and click **Next** to continue.  
It is recommended to accept the default installation options (installation folder and scope), although they can be changed if required.  
Once the OPC Core Components Redistributable is installed, click **Close** to return to the VibroSight 3.4.x or later installer and continue.
- » Before finishing, the VibroSight 3.4.x or later installer runs and configures OldVSBlocker in order to prevent earlier versions of the VibroSight installer from running (as earlier VibroSight installers are not compatible with the latest versions of VibroSight).

### 3. VibroSight licensing

Once installed, VibroSight software operates in a fully-functional demonstration mode for up to 30 days. However, the Meggitt Sensing Systems (Meggitt SA) software licence agreement should be activated as soon as possible in order to avoid being limited to the evaluation period and to have full access to Meggitt Sensing Systems customer support.

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**NOTE:** VibroSight 3.7.x is a minor level release and a new licence key file is not required for upgrades from VibroSight 3.6.x.  
However, a new licence key file is required for upgrades from VibroSight 2.x.x.

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Details of the software activation process that should be followed can be found in the *Licensing* topics of the



*VibroSight help.*

### 4. After installing VibroSight

After installing the VibroSight software, some configuration of the Windows operating system is required.

#### Windows 7

Windows Firewall is on by default in Windows 7, so VibroSight systems running on Windows 7 require that either Windows Firewall is turned off or all VibroSight software modules are selected in the list of allowed programs (the exceptions list) in Windows Firewall.

The VibroSight software modules that must be allowed to communicate through the Windows Firewall are:

- » VibroSight Welcome Center (XmsWelcomeCenter.exe)
- » VibroSight Configurator (XmsConfigurator.exe)
- » VibroSight Event Viewer (VibroSightEventViewer.exe)
- » VibroSight Mimic (VibroSightMimic.exe)
- » VibroSight Scope (VibroSightScope.exe)
- » VibroSight Server (Xms.Server.Client.exe, XmsServerService.exe and XmsHostService.exe)
- » VibroSight System Manager (XmsSystemManager.exe)
- » VibroSight Vision (VibroSightVision.exe).

**SOFTWARE INSTALLATION** *(continued)*

In addition, the IP (TCP and UDP) port numbers listed in Table 2 must be added as allowed ports to the exceptions list in Windows Firewall.

*Table 2: IP port numbers used by VibroSight*

IP port	Required by	Description
TCP 55000	VibroSight Server (Xms.Server.Client.exe)	Used by a VibroSight Server for communication with (client) VibroSight software modules. Note: VibroSight Servers support TCP port binding in order to allow a VibroSight Server to always use a specific TCP port. The TCP port number used by a VibroSight Server is displayed in the main VibroSight Server window, under Connection Info, and in VibroSight System Manager in the VibroSight Hosts view.
TCP 50000 (TCP 50001, TCP 50002, ...)	VibroSight Host Service (XmsHostService.exe)	Used by the VibroSight Host Service for communication with VibroSight System Manager. By default, when the VibroSight Host Service starts, it will take the next available TCP port number starting at 50000. That is, if TCP port 50000 is being used, the VibroSight Host Service will take TCP port 50001, and so on.
TCP 30740 TCP 50003 UDP 50003	VM600 XMx16 cards	VM600 XMx16 cards use three services for communication: <ul style="list-style-type: none"> <li>• Main service for commands such as configuration and data, using TCP port number 30740.</li> <li>• System configuration such as firmware updates and NTP Configuration, using TCP port number 50003.</li> <li>• System configuration such as network interface (IP address), using UDP port number 50003.</li> </ul>
TCP 30740 TCP 30741 UDP 30750	VibroSmart devices	VibroSmart distributed monitoring system devices use three services for communication: <ul style="list-style-type: none"> <li>• Main service for commands such as configuration and data, and system configuration such as firmware updates and NTP Configuration, using TCP port number 30740.</li> <li>• Service for diagnostic data, using TCP port number 30741.</li> <li>• System configuration, such as network interface (IP address), using UDP port number 30750.</li> </ul>
UDP 5353	Zero-configuration networking (zeroconf)	Used by the multicast Domain Name System (mDNS) messages required for device discovery.
UDP 123	Network time protocol (NTP)	Used by NTP (UDP/IP packets are used because of the fast connection setup and response times). Note: Only required if the VibroSight system is being used with an NTP server as a time reference.

Note: Since VibroSight 2.9.7, it is no longer necessary for incoming ICMP echo requests to be allowed through Windows Firewall, as the use of ICMP was replaced entirely by TCP.

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**SOFTWARE INSTALLATION** *(continued)*

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**5. VibroSight-compatible hardware**

There are no firmware updates for VM600 cards or VibroSmart devices corresponding to VibroSight 3.7.0.

**NOTE:** In order to run VibroSight 3.7.0 for machinery monitoring systems containing VM600 racks and/or VibroSmart devices, no firmware upgrades are required.

Refer to the  *VibroSight 3.7.0 release notes* for further information.

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**DATA MIGRATION**

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**VibroSight data repositories**

To work with historical data, VibroSight requires a data repository for the storage (and retrieval) of machinery monitoring system data. Since VibroSight 3.0.0, VibroSight historical data repositories are exclusively used:

- » VibroSight historical data folders (\*.vshdf) are used for the handling and logging of data by a VibroSight Server (live data).
- » VibroSight historical data archives (\*.vshda) are used for the display, analysis and sharing of historical data without a VibroSight Server.

A VibroSight database based on Sybase SQL Anywhere (\*.vssrvdb) can no longer be used as a data repository. Accordingly, the Sybase SQL Anywhere 11 database software is no longer included and distributed as part of the VibroSight software.

**NOTE:** VibroSight 3.x.x exclusively uses data repositories based on the VibroSight historical data system. VibroSight 2.12.7 used data repositories based on Sybase SQL Anywhere databases and introduced initial support for working with data repositories based on the VibroSight historical data system for data analysis. VibroSight 2.12.6 or earlier exclusively used data repositories based on Sybase SQL Anywhere databases.

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Therefore, it is important to note that:

- » New machinery monitoring projects created with VibroSight 3.x.x will automatically use VibroSight historical data repositories.
- » Existing machinery monitoring projects created with versions of VibroSight earlier than VibroSight 3.x.x must be manually migrated from Sybase SQL Anywhere databases to VibroSight historical data repositories before they can be used with VibroSight 3.x.x:

To migrate an existing machinery monitoring project to VibroSight 3.x.x so that the existing historical data can be displayed and analysed using VibroSight Vision, it is simply necessary to copy the existing VibroSight database (\*.vssrvdb) to a VibroSight historical data archive (\*.vshda) using the VibroSight System Manager Data Repositories Copy command. Then VibroSight Vision can be used to display and analyse the data in the VibroSight historical data archive.

See *Migrating an existing VibroSight database to a VibroSight historical data archive (\*.vshda)* on page 8.

To migrate an existing machinery monitoring project to VibroSight 3.1.0 or later so that the existing configuration can be used to acquire and log new data using a VibroSight Server, it is necessary to (1) update the existing VibroSight database (\*.vssrvdb) using the VibroSight System Manager Data Repositories Database update command, and then (2) copy the updated VibroSight database to a VibroSight historical data folder (\*.vshdf) using the VibroSight System Manager Data Repositories Copy command.

See *Migrating an existing VibroSight database to a VibroSight historical data folder (\*.vshdf)* on page 10.

**DATA MIGRATION** *(continued)*

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**Migrating an existing VibroSight database to a VibroSight historical data archive (\*.vshda)**

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**NOTE:** The Sybase SQL Anywhere software must be available (installed) in order to migrate an existing data repository for use with VibroSight 3.x.x. This is the case for existing machinery monitoring projects created with versions of VibroSight earlier than VibroSight 3.x.x.

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To migrate an existing machinery monitoring project to VibroSight 3.x.x so that the existing historical data can be displayed and analysed using VibroSight Vision, VibroSight System Manager is used to copy the database:

- 1- Start VibroSight System Manager and in the System Explorer window, select your computer from the VibroSight Hosts tree structure.  
Note: The first (top) computer displayed in the VibroSight Hosts tree structure is typically the computer running the VibroSight System Manager being used.
- 2- In the Actions window, under Access Rights, click Login to log in to VibroSight System Manager at the Admin user level (Default password: admin).  
Note: You must be working at the correct user level (with the necessary access rights) to access the Data Repositories commands.
- 3- In the Actions window, under **Data Repositories**, click **Copy** to start a data repository copy operation.  
Note: Copying the data in a VibroSight data repository does not affect the contents of the source data repository in any way.
- 4- When prompted to **Select your source type**, select **VibroSight database**, then click **Next**.
- 5- When prompted to **Select the database you would like to copy**, either select the required database file from the list of those available, use the **Choose file** text box or use the browse button (...) to navigate the folders on the computer and select the database. Then click **Next**.  
Note: The data sources listed include all relevant VibroSight data repositories (databases) under VibroSight's default data folder, typically, C:\VibroSight Data
- 6- When prompted to **Select your destination type**, select **Historical data archive**, then click **Next**.
- 7- When prompted to **Configure your destination historical data archive**, specify the location for the copied data repository in the **Archive location** text box (alternatively, the browse button (...) and dialog box can be used). Specify the file name for the copied data repository in the **Archive file name** text box. Then click **Next**.  
Note: Note that a timestamp (date-time string derived from the local computer clock) placeholder is automatically included in the archive file name by a timestamp sequence in the format <yyyyMMddHHmmss>, where yyyy is the year, MM is the month, dd is the day, HH is the hour, mm is the minute and ss is the second. This timestamp can be removed from the file name if it is not required.  
If the **Auto** control is selected, the **Archive file name** text box automatically updates to use the default file name, based on the source data repository file name.  
If the **Overwrite files** control is selected, an existing data repository in the archive location will automatically be overwritten if it has the same file name as the copied data repository.  
If a timestamp placeholder is included in the archive file name, the **Naming strategy** controls are used to select which time to use for the timestamp: the execution time of when the command is run or the timestamp of the first data included in the copied data repository
- 8- When prompted to **Select the data you want to copy**, select the type of measurement data to copy based on the data type: **Variables**, **Spectra**, **Orbits**, **Waveforms** and/or **Alarms/events**. In addition, select the actual measurement data to copy using either **For entire configuration** or **For selected items**. If the **For selected items** control is used, the actual measurements to copy are selected using the hierarchical tree structure displayed (Hardware view or Machinery view). Then click **Next**.  
The list of actual measurements available to be copied is displayed as a Hardware view or a Machinery view, which is dynamically updated depending on the controls selected.  
The **Show selected only** control can be used in order to selectively filter the hierarchical tree structure and display only the measurements selected to be copied.  
The search box can be used to selectively filter the hierarchical tree structure and display only the measurements containing the search term.

**DATA MIGRATION** (continued)

- 9- When prompted to **Select the time range you want to copy data from**, either **All** can be selected, or the **Last** or **This** controls can be used to specify the data to be copied using a relative time range, or the **From** and **To** controls can be used to specify data to be copied using an absolute time range. Then click **Next**. The **Align to full periods** control can be used when using a relative time range in order to align both ends (limits) of the time interval to the beginning of the time unit specified. When the **All**, **Last** or **This** controls are used, VibroSight System Manager displays the corresponding time range using the **From** and **To** time controls of the **Absolute time range**.  
Note: The time range displayed in the **From** and **To** time controls of the **Absolute time range** is for indication purposes only, the actual time range used by the command (available from the log and/or summary report files) can be slightly different. For example, the actual time range used can be different if there is a delay between configuring the command and running it, especially if the time range is specified using a using a relative time range.
- 10- When prompted to **Select options concerning data reduction**, select **Perform data reduction (for variables only)** to make the data reduction algorithm controls available. The data reduction algorithm can be configured to copy the **Minimum value** and/or the **Maximum value** and/or the **First value** for the time period specified using the **Copy value(s) every n msec/sec/min/hour/day/week** control. Then click **Next**.  
Note: When copying a VibroSight data repository, these data reduction options affect static measurement data (such as variables) only. More specifically, for all of the static measurement data selected to be copied, the data reduction algorithm keeps only the selected values from the selected time period, which is repeated throughout the overall time range to be copied.
- 11- When prompted to **Configure your output options**, select **Create log report file** to generate a log report file and select **Create summary file** to generate a summary file for the copy operation. The **Compress output file** control can be used order to automatically compress the generated data repository (\*.vshda) file.  
Note: Using compressed VibroSight data repositories (\*.vshda) reduces the size of the files, at the expense of the overall system performance. That is, it increases the time required to perform operations in VibroSight Vision such as opening a data source and reading data. The **Rolling output file configuration** controls can be used to control the number of data repositories. The **Limit number of kept output files** controls can be used to automatically limit the number of data repositories that can exist in a folder to the maximum specified by the user: either the **Newest n** data repositories or the **Oldest n** data repositories can be kept.  
Note: Copying VibroSight data repositories can result in a large number of (large) files that could fill a hard disk drive and lead to a disk-full situation – with the possible loss of data. To avoid this, the number of kept output files can be limited when copying a data repository in order to limit the number of files that can exist in a folder to a maximum specified by the user, thereby helping to reduce the possibility of a disk-full situation and ensure the continued operation of a system. The **Use 2 bytes format for dynamic data** control can be used to reduce the size of the copied data repository. Then click **Next**.  
Note: When copying a VibroSight data repository (\*.vshda), these data reduction options affect dynamic measurement data (such as waveforms, spectra and orbits) only. More specifically, for all of the dynamic measurement data selected to be copied, using 2 bytes for each measurement point (rather than VibroSight's native 4 bytes) reduces the size of the copied data repository, at the expense of the dynamic range of the measurement.
- 12- When prompted to **Review your choices**, if the information is correct, click **Copy** to continue and start the data repository copy operation. If the information is not correct, click **Back** to re-enter the correct information (or **Cancel**).
- 13- When **Copy** is clicked, a progress indicator is displayed to provide feedback on the progress of the operation. The amount of time required to copy a VibroSight database depends on the size of the database (data repository) and the quantity of information to be copied.
- 14- The VibroSight System Manager Copy operation is complete when the progress indication stops and **All tasks completed successfully** is displayed.

## DATA MIGRATION *(continued)*

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After the VibroSight historical data archive has been created, it can be seen with the specified file name (\*.vshda) in the specified folder.

Note: The default location for VibroSight data repositories is under VibroSight's default data folder, typically, C:\VibroSight Data

Double-clicking a VibroSight data repository (\*.vshda) in a Windows Explorer will automatically start VibroSight Vision with a new (empty) project using the data repository as the data source.

### Migrating an existing VibroSight database to a VibroSight historical data folder (\*.vsdhf)

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**NOTE:** The Sybase SQL Anywhere software must be available (installed) in order to migrate an existing data repository for use with VibroSight 3.x.x. This is the case for existing machinery monitoring projects created with versions of VibroSight earlier than VibroSight 3.x.x.

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To migrate an existing machinery monitoring project to VibroSight 3.1.0 or later so that the existing configuration can be used to acquire and log new data using a VibroSight Server, VibroSight System Manager is used to (1) update the database and (2) copy the database.

#### (1) To update the database:

- 1- Start VibroSight System Manager and in the System Explorer window, select your computer from the VibroSight Hosts tree structure.  
Note: The first (top) computer displayed in the VibroSight Hosts tree structure is typically the computer running the VibroSight System Manager being used.
- 2- In the Actions window, under Access Rights, click Login to log in to VibroSight System Manager at the Admin user level (Default password: admin).  
Note: You must be working at the correct user level (with the necessary access rights) to access the Data Repositories commands.
- 3- In the Actions window, under **Data Repositories**, click **Database update** to start a data repository database update operation.  
Note: Updating a VibroSight data repository (database) is an operation that cannot be undone. Therefore, it is recommended to ensure that you have a backup copy of the database before updating it.
- 4- When prompted to **Select the database(s) you would like to update**, either select the required database file from the list of those available, use the **Choose file** text box or use the browse button (...) to navigate the folders on the computer and select the database. Then click **Next**.  
Note: The data sources listed include all relevant VibroSight data repositories (databases) under VibroSight's default data folder, typically, C:\VibroSight Data  
Note: In order to update multiple VibroSight data repositories (databases) at the same time, CTRL+click or SHIFT+click can be used to select multiple databases before continuing.
- 5- VibroSight System Manager checks the compatibility of the selected VibroSight data repositories (databases) with the version of VibroSight being used and displays information on the updates available. Click the arrow on the **Details** bar in order to display or hide further information about the updates available, namely, the name of the underlying VibroSight database components (Component Name) to be updated, together with the current (Database Version) and latest (Target Version) versions of these database components.  
Note: For more recent VibroSight data repositories (databases), that perhaps have been updated before, there may be no new updates to apply.
- 6- Click **Update** to continue and start the database update operation. Alternatively, click **Back** to select different or additional databases (or **Cancel**).
- 7- When **Update** is clicked, a progress indicator is displayed to provide feedback on the progress of the operation. The amount of time required to update a VibroSight database depends on the size of the database (data repository) and the quantity of information to be updated.
- 8- The VibroSight System Manager Database Update operation is complete when the progress indication stops and **All tasks completed successfully is displayed**.

**DATA MIGRATION** *(continued)*

After the VibroSight database has been updated, it can be seen in its folder.

Note: The default location for VibroSight data repositories is under VibroSight's default data folder, typically, C:\VibroSight Data

**(2) To copy the database:**

- 1- In VibroSight System Manager, in the Actions window, under **Data Repositories**, click **Copy** to start a data repository copy operation.

Note: Copying the data in a VibroSight data repository does not affect the contents of the source data repository in any way.

- 2- When prompted to **Select your source type**, select **VibroSight database**, then click **Next**.
- 3- When prompted to **Select the database you would like to copy**, either select the required database file from the list of those available, use the **Choose file** text box or use the browse button (...) to navigate the folders on the computer and select the database. Then click **Next**.

Note: The data sources listed include all relevant VibroSight data repositories (databases) under VibroSight's default data folder, typically, C:\VibroSight Data

- 4- When prompted to **Select your destination type**, select **Historical data folder**, then click **Next**.
- 5- When prompted to **Configure your destination historical data folder**, specify the location for the copied data repository in the **Server location** text box (alternatively, the browse button (...) and dialog box can be used). Specify the file name for the copied data repository in the **Server file name** text box. Then click **Next**.

**NOTE:** When updating existing machinery monitoring projects created with VibroSight 2.12.x to VibroSight 3.1.0 or later, a new data repository created by copying a VibroSight database (\*.vssrvdb) to a VibroSight historical data folder (\*.vshdf) must use the same server file name as the existing server in order for existing VibroSight Mimics to maintain links with the data repository and continue to work (without manual corrections).

In addition, the VibroSight Server using the new the new data repository must be running before the existing VibroSight Mimics are run for the first time, after the update.

Note: Note that a timestamp (date-time string derived from the local computer clock) placeholder is automatically included in the server file name by a timestamp sequence in the format <yyyyMMddHHmmss>, where yyyy is the year, MM is the month, dd is the day, HH is the hour, mm is the minute and ss is the second. This timestamp can be removed from the file name if it is not required.

If the **Auto** control is selected, the **Server file name** text box automatically updates to use the default file name, based on the source data repository file name.

If the **Overwrite files** control is selected, an existing data repository in the server location will automatically be overwritten if it has the same file name as the copied data repository.

If a timestamp placeholder is included in the server file name, the **Naming strategy** controls are used to select which time to use for the timestamp: the execution time of when the command is run or the timestamp of the first data included in the copied data repository

- 6- When prompted to **Select the data you want to copy**, select the type of measurement data to copy based on the data type: **Variables**, **Spectra**, **Orbits**, **Waveforms** and/or **Alarms/events**. In addition, select the actual measurement data to copy using either **For entire configuration** or **For selected items**. If the **For selected items** control is used, the actual measurements to copy are selected using the hierarchical tree structure displayed (Hardware view or Machinery view). Then click **Next**.

The list of actual measurements available to be copied is displayed as a Hardware view or a Machinery view, which is dynamically updated depending on the controls selected.

The **Show selected only** control can be used in order to selectively filter the hierarchical tree structure and display only the measurements selected to be copied.

The search box can be used to selectively filter the hierarchical tree structure and display only the measurements containing the search term.

**DATA MIGRATION** (continued)

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- 7- When prompted to **Select the time range you want to copy data from**, either **All** can be selected, or the **Last** or **This** controls can be used to specify the data to be copied using a relative time range, or the **From** and **To** controls can be used to specify data to be copied using an absolute time range. Then click **Next**. The **Align to full periods** control can be used when using a relative time range in order to align both ends (limits) of the time interval to the beginning of the time unit specified. When the **All**, **Last** or **This** controls are used, VibroSight System Manager displays the corresponding time range using the **From** and **To** time controls of the **Absolute time range**.  
Note: The time range displayed in the **From** and **To** time controls of the **Absolute time range** is for indication purposes only, the actual time range used by the command (available from the log and/or summary report files) can be slightly different. For example, the actual time range used can be different if there is a delay between configuring the command and running it, especially if the time range is specified using a using a relative time range.
- 8- When prompted to **Select options concerning data reduction**, select **Perform data reduction (for variables only)** to make the data reduction algorithm controls available. The data reduction algorithm can be configured to copy the **Minimum value** and/or the **Maximum value** and/or the **First value** for the time period specified using the **Copy value(s) every n msec/sec/min/hour/day/week** control. Then click **Next**.  
Note: When copying a VibroSight data repository, these data reduction options affect static measurement data (such as variables) only. More specifically, for all of the static measurement data selected to be copied, the data reduction algorithm keeps only the selected values from the selected time period, which is repeated throughout the overall time range to be copied.
- 9- When prompted to **Configure your output options**, select **Create log report file** to generate a log report file and select **Create summary file** to generate a summary file for the copy operation. The **Rolling output file configuration** controls can be used to control the number of data repositories. The **Limit number of kept output files** controls can be used to automatically limit the number of data repositories that can exist in a folder to the maximum specified by the user: either the **Newest n** data repositories or the **Oldest n** data repositories can be kept.  
Note: Copying VibroSight data repositories can result in a large number of (large) files that could fill a hard disk drive and lead to a disk-full situation – with the possible loss of data. To avoid this, the number of kept output files can be limited when copying a data repository in order to limit the number of files that can exist in a folder to a maximum specified by the user, thereby helping to reduce the possibility of a disk-full situation and ensure the continued operation of a system.  
Then click **Next**.
- 10- When prompted to **Review your choices**, if the information is correct, click **Copy** to continue and start the data repository copy operation. If the information is not correct, click **Back** to re-enter the correct information (or **Cancel**).
- 11- When **Copy** is clicked, a progress indicator is displayed to provide feedback on the progress of the operation. The amount of time required to copy a VibroSight database depends on the size of the database (data repository) and the quantity of information to be copied.
- 12- The VibroSight System Manager Copy operation is complete when the progress indication stops and **All tasks completed successfully** is displayed.

After the VibroSight historical data folder has been created, it can be seen with the specified file name (\*.vshdf) and associated `Storage` subfolder in the specified folder.

Note: The default location for VibroSight data repositories is under VibroSight's default data folder, typically, `C:\VibroSight Data`

Double-clicking a VibroSight data repository (\*.vshdf) in a Windows Explorer will automatically start a VibroSight Server using the data repository as the data source.

In VibroSight Server, under **Device drivers**, use the appropriate controls to enable communications with the required VibroSight-compatible hardware (such as **VM600** cards and/or **VibroSmart** devices), and under **Server features**, use the appropriate controls to enable the required post processing (such as **Data logging manager**), in order to be able to start logging data to the new VibroSight Server for the machinery monitoring project, after the usual configuration activation process.

## DATA MANAGEMENT

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### VibroSight integrated data management

VibroSight 3.3.x and later have been improved to include integrated support for data management that simplifies the configuration and operation of a data management strategy for a VibroSight-based machinery monitoring projects.

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**NOTE:** VibroSight's integrated data management is completely self-contained: there is no longer any requirement for a separate task scheduler such as Windows Task Scheduler to help automate data management for a system.

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Accordingly, after migrating an existing machinery monitoring project to VibroSight 3.3.0 or later, it is important that any existing data management strategy is manually migrated to use VibroSight's integrated data management operations in order to ensure that the data management continues to work.

To use VibroSight's integrated data management to implement a data management strategy and protect your data:

- » VibroSight Configurator is now used to configure the integrated data management operations that are required to be run on the VibroSight historical data repository used by the system. That is, the **Offline data storage**, **Data purge** and **Database backup** operations.
- » VibroSight Server now automatically calculates, schedules and runs individual commands on the server's data repository to implement the required data management strategy (corresponding to the operations configured in VibroSight Configurator). VibroSight Server also reports the status of the individual commands on a dedicated **Data management** tab, making it easier to know the state of the data management for a system.

It is important to note that the Data repositories commands that exist in VibroSight System Manager will continue to be supported as System Manager commands. However, the command-line equivalent of these commands are no longer supported, as for the purposes of data management strategy they are effectively replaced by VibroSight's integrated data management operations.

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**NOTE:** Starting with VibroSight 3.3.0 the command-line equivalent of the Data repositories commands that exist in VibroSight System Manager are no longer supported, that is: `vibrosightdatacopy.exe` (Copy), `vibrosightdatapurge.exe` (Purge) and `vibrosightextractsummary.exe` (Summary).

---

**NOTE:** Because of the changes to the VibroSight System Manager Data repositories commands, any existing data management and system backup procedures for a VibroSight-based machinery monitoring and protection system must be manually migrated to use VibroSight's integrated data management operations in order to ensure that the data management continues to work. Typically, such VibroSight data management procedures include batch files using the `vibrosightdatacopy.exe` and/or `vibrosightdatapurge.exe` command-line commands that are run by Windows Task Scheduler.

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Refer to the  *VibroSight 3.3.0 release notes* for further information.

## VIBROSIGHT OPC SERVER MIGRATION

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### VibroSight OPC Servers

It is important to note that:

- » New machinery monitoring projects created using VibroSight 3.x.x can create and use VibroSight OPC Servers in the usual way.
- » Existing machinery monitoring projects created using versions of VibroSight earlier than VibroSight 3.x.x must manually migrate their VibroSight OPC Servers before they can be used with VibroSight 3.x.x:

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**NOTE:** Machinery monitoring projects using VibroSight OPC Servers that were created using VibroSight 2.12.7 or earlier must manually migrate their VibroSight OPC Servers before they can be used with VibroSight 3.x.x.  
It is very important to note that migrating a VibroSight OPC Server from VibroSight 2.12.7 or earlier to VibroSight 3.x.x requires that certain steps must be performed using the existing version of VibroSight (that is, VibroSight 2.12.7 or earlier) BEFORE it is removed (uninstalled).

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### Migrating an existing VibroSight OPC Server for use with VibroSight 3.x.x

To migrate an existing VibroSight OPC Server for use with VibroSight 3.x.x, there are a number of steps that must be performed using the existing version of VibroSight (that is, VibroSight 2.12.7 or earlier) BEFORE it is removed (uninstalled) and VibroSight 3.x.x is installed.

Using the existing version of VibroSight (that is, VibroSight 2.12.7 or earlier), VibroSight System Manager must be used to unpublish and delete the existing VibroSight OPC Server:

- 1- Start VibroSight System Manager and in the System Explorer window, select your computer from the VibroSight Hosts tree structure.  
Note: The first (top) computer displayed in the VibroSight Hosts tree structure is typically the computer running the VibroSight System Manager being used.
- 2- In the Actions window, under Access Rights, click Login to log in to VibroSight System Manager at the Admin user level (Default password: admin).  
Note: You must be working at the correct user level (with the necessary access rights) to access the OPC Server commands.
- 3- In the System Explorer window, under the computer in the VibroSight Hosts tree structure, select the VibroSight OPC Server.  
Note: Information about the VibroSight OPC Server is displayed under Information in the main working window (centre).
- 4- In the Actions window, under **OPC Server**, click **Unpublish**.  
The VibroSight OPC Server is unpublished, then the OPC Server Unpublishing Succeeded window is displayed. Click **OK** to close the window.  
Note: The Status of the VibroSight OPC Server displayed under Information in the main working window will change from published to unpublished.
- 5- In the Actions window, under **OPC Server**, click **Delete**.  
The VibroSight OPC Server is deleted, that is, removed from VibroSight System Manager.  
Note: The VibroSight OPC Server configuration file (\*.opcscfg) and the VibroSight OPC Server database file (\*.vsopcdb) are not deleted by this command.

**VIBROSIGHT OPC SERVER MIGRATION** *(continued)*

A Windows Explorer should be used to temporarily back up the existing files associated with the VibroSight machinery monitoring system, including the VibroSight Server database and the associated VibroSight OPC Server, notably:

- VibroSight Server database file (\*.vssrvdb)
- VibroSight OPC Server configuration file (\*.opcscfg)
- VibroSight OPC system configuration file (OpcServer.config).

The existing version of VibroSight (that is, VibroSight 2.12.7 or earlier) must be uninstalled (using the Windows Control Panel).

The computer running the VibroSight software must be restarted (rebooted).

VibroSight 3.x.x must be installed.

Using VibroSight 3.x.x:

- 1- Start VibroSight System Manager and migrate the existing VibroSight Server database file (\*.vssrvdb) to a VibroSight historical data folder (\*.vshdf), as described in *Data migration* on page 7.
- 2- Start VibroSight Server using the new VibroSight historical data folder (\*.vshdf), that was just created.
- 3- Start VibroSight System Manager and in the System Explorer window, select your computer from the VibroSight Hosts tree structure.
- 4- In the VibroSight System Manager Actions window, under **OPC Server**, click **Create** and use the OPC Server creation Wizard to create the new VibroSight OPC Server – using the same name (**Name**) and the same configuration (**OPC Server Configuration**) as the previous VibroSight OPC Server.  
Note: Be sure to re-use the previous VibroSight OPC Server configuration file (\*.opcscfg).
- 5- In the VibroSight System Manager System Explorer window, under the computer in the VibroSight Hosts tree structure, select the VibroSight OPC Server, that was just created.
- 6- In the VibroSight System Manager Actions window, under **OPC Server**, click **Publish**.  
The VibroSight OPC Server is published, then the OPC Server Publishing Succeeded window is displayed. Click **OK** to close the window.  
Note: The Status of the VibroSight OPC Server displayed under Information in the main working window will change from unpublished to published.

When a VibroSight OPC Server is published, VibroSight updates the VibroSight OPC system configuration file (OpcServer.config) that contains important system information about VibroSight's OPC Servers.

The default location for the OpcServer.config file is C:\ProgramData\Meggitt\VibroSight

An XML-compatible text editor (or equivalent) can be used to display the contents of the OpcServer.config file. As shown in the example extract below, the <opcServers> section of the file contains the name (applicationName) and CLSID key (serverId), also known as an OPC server ID, that will be required to configure an OPC client that communicates with the VibroSight OPC Server.

```
<opcServers>
  <opcServer applicationId=".....-.....-.....-.....-....."
    applicationName="GT_OPcServer_21277792"
    serverId=".....-.....-.....-.....-....."
    serverName="GT_OPcServer_21277792"
    databaseFileName="C:\Users\maca\Desktop\GT_OPcServer_21277792.vsopcdb" />
</opcServers>
```

---

## VIBROSIGHT OPC SERVER MIGRATION *(continued)*

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**NOTE:** While it is possible to migrate a VibroSight OPC Server from VibroSight 2.12.7 or earlier to VibroSight 3.x.x and keep the same name (`applicationName`), the CLSID key (`serverId`) is automatically generated and will change. Accordingly, an OPC client that communicates with the VibroSight OPC Server must be updated to use the new – post-migration – CLSID key (OPC server ID).

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## FINAL CHECKS AFTER UPGRADING THE VIBROSIGHT SOFTWARE

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After upgrading the VibroSight software, it is recommended to check that VibroSight has not been inadvertently modified and that it continues to operate normally.

In particular, it is recommended to check any VibroSight Servers in order to ensure that the data acquisition and external interfaces, data post-processing and/or logging are all configured as expected.

In a VibroSight Server user interface:

- On the **Status** tab under **Device drivers**, check that the **VM600**, **VibroSmart**, **OPC** and **Modbus** controls are enabled or disabled as required by your application.
- On the **Status** tab under **Server features**, check that the **Basic math**, **Air gap**, **Combustion monitoring**, **Duration counters**, **VSHDA import** and **Data logging manager** controls are enabled or disabled as required by your application.
- On the **Log messages** tab, check the listed messages (**Info** level) to ensure that the hardware (VM600 cards and /or VibroSmart modules) have been discovered and that data acquisition has resumed.

---

**NOTE:** When a VibroSight Server is running as a Windows service, the usual VibroSight Server user interface is not displayed, so VibroSight System Manager must be used to work with the VibroSight Server. That is, VibroSight System Manager can be used to connect to a VibroSight Server in order to check and configure the operation of the server's drivers and features.

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Finally, after an upgrade, it is strongly recommended to use VibroSight Vision to connect to any VibroSight Servers in order to verify that new live and/or historical data is available.

## GETTING STARTED WITH VIBROSIGHT

---

### VibroSight networking

VibroSight uses zero-configuration networking (zeroconf) in order to automatically create usable networks of VibroSight-compatible hardware with the minimum amount of network administration.

**NOTE:** The zero-configuration networking (zeroconf) protocols use multicast Domain Name System (mDNS) messages on UDP port 5353 for device discovery, so this UDP port number must be added as an allowed UDP port to the exceptions list in Windows Firewall (see Table 2).

---

If the automatic discovery does not work (for example, due to a network not fulfilling the requirements of zeroconf), then connections between the VibroSight-system components can be established manually by using the IP addresses of the components. For example:

- For (client) VibroSight software module to VibroSight Server communications:  
Use the IP address and TCP port number for a VibroSight Server that is displayed in the main VibroSight Server window, under Connection Info, and in VibroSight System Manager in the VibroSight Hosts view.
- For VibroSight System Manager to VM600 XMx16 card communications:  
It is possible to connect from VibroSight System Manager to a VM600 XMx16 card (even if the card does not have a valid IP address) if the host computer running VibroSight System Manager and the card are on the same network.  
If necessary, a direct connection between the computer and the device can be made in order to bypass the network.

### VibroSight network requirements

A network that meets the requirements of zero configuration networking (zeroconf) is recommended in order to reduce the need to establish connections between VibroSight-system components manually.

Network bandwidth and latency recommendations depend on the monitoring system hardware being used:

- VM600 XMx16 cards – A network that supports bandwidth and latency requirements equivalent to 1000 Mbps (1 Gbps) LAN or better is recommended.
- VibroSmart modules – A network that supports bandwidth and latency requirements equivalent to 100 Mbps LAN or better is recommended.

However, the highly configurable nature of the VibroSight software and monitoring system hardware, and the wide variation in machinery monitoring applications makes it impossible to define operating limits for a VibroSight network that are correct under all circumstances.

### Checking communications

Before proceeding, ensure that the computer on which the VibroSight software has been installed can communicate with the system hardware.

The computer running VibroSight and the system hardware – VM600 XMx16 cards and/or VibroSmart modules – should be connected to the same network, and the power supply to the hardware should be turned on.

It is also possible to make a direct connection between the computer and the hardware, bypassing the network.

**NOTE:** When a VM600 XMx16/XIO16T card pair is connected to a network for the first time, the front Ethernet connector (XMx16) should be used, as the factory assigned defaults are as follows:

- The front Ethernet port (XMC16, XMV16 or XMVS16) is enabled.
- The rear Ethernet port (XIO16T) is disabled.


VibroSight System Manager can be used to display and/or edit these settings by selecting the XMx16 card and running the IP Settings command.

**NOTE:** When a VibroSmart module (VSI010/VSB010 or VSV300/VSB300) is connected to a network, one of the Ethernet connectors (Ethx) on the terminal base must be used.  
The DIP switch on the terminal base is used to select the active Ethernet (SBUS) port for each side of the terminal base: either Ethernet (Eth1 and Eth2) or sidebus connectors (J10 and J11).


## GETTING STARTED WITH VIBROSIGHT *(continued)*


The DIP switch contains two individual switches and is located in a recess between the Ethernet connectors at the bottom of the VSBxxx terminal base (looking from the front). The switch on the left selects the active SBUS connector (Eth2 or J10) on the left side of the VSB300 terminal base, and the switch on the right selects the active SBUS connector (Eth1 or J11) on the right side of the terminal base as follows:

- When a DIP switch is down (OFF), the associated Ethernet connector (Ethx) is enabled.
- When a DIP switch is up (ON), the associated sidebus connector (J1x) is enabled.

- Start VibroSight  System Manager in one of the following ways:
  - From a shortcut to the VibroSight System Manager executable program file (XmsSystemManager.exe) on the Windows desktop.
  - From the Windows Start menu, by clicking the **Start** button, then clicking **All Programs > Meggitt > VibroSight > System Manager**.
  - From the VibroSight Welcome Center, by clicking **System Manager**.

- In VibroSight System Manager, in the System Explorer window (left), the Devices tree structure displays all of the devices that the computer can see on the network by device type, such as XMx16 cards and VSV300 modules.

The information displayed in the System Explorer tree structure is updated automatically, but it can also be updated manually by clicking  **Refresh** on the toolbar (or **View > Refresh**).

- Expand any  device type node to display a list of all of the devices of this type on the network. Under the device type node, the individual devices are listed in a serial number (IP address) format:
  - xxxxxxxx (xxx.xxx.xxx.xxx) for a VM600 system card.
  - xxxxxxxxxx (xxx.xxx.xxx.xxx) for a VibroSmart distributed monitoring system device.

**NOTE:** A device's IP address (xxx.xxx.xxx.xxx) can be changed to meet the requirements of a network but the device can always be uniquely identified by its serial number (xxxxxxx or xxxxxxxxxx), which is assigned by Meggitt Sensing Systems and cannot be changed.

- To check that the device is connected to your subnet, type `ping xxx.xxx.xxx.xxx` at a Windows command prompt and then press ENTER (where xxx.xxx.xxx.xxx is replaced by the actual IP address of the device, in dot-decimal notation, as displayed by VibroSight System Manager).

If the device replies, it is ready to communicate in your subnet. If the device does not reply, this is probably because its IP address does not belong to the correct subnet, in which case it must be changed.

**NOTE:** VibroSight System Manager displays all of the VibroSight-compatible hardware (devices) that the computer can see on the network.

Although a device does not need to be in the same subnet as the computer running VibroSight in order to be detected and displayed by VibroSight System Manager, a device does need to be in the same subnet as the computer running VibroSight for a deployed VibroSight system. For example:

It is not necessary for a VibroSight-compatible device and the computer running VibroSight to be in the same subnet in order for VibroSight System Manager to run the **IP Settings** command and allow the IP address and subnet mask of the device to be changed.

It is necessary for a VibroSight-compatible device and the computer running VibroSight to be in the same subnet for normal system operation.

Refer to the *Configuring IP Settings* topic in the  *VibroSight help* for further information (search for "Configuring IP Settings" in the help).

## GETTING STARTED WITH VIBROSIGHT *(continued)*

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### Time reference requirements

A VibroSight machinery monitoring system (VibroSight Server) can use either the local clock on the host computer that is running the VibroSight Server or a network time protocol (NTP) server as its reference clock.


**NOTE:** By default, a VibroSight machinery monitoring system uses the local clock of the host computer running the VibroSight software as the time reference, that is, an NTP server is not required (NTP-free).

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The deployment of a VibroSight monitoring system without an NTP server is recommended for the vast majority of machinery monitoring applications. For example, when working with long-term historical trends.

NTP-free operation is characterised by:


- Easier to deploy as no NTP server required.
- Synchronisation:
  - Data correlation  $\leq 100$  ms for data from the same VM600 XMx16 card.
  - Data correlation  $\leq 1$  s for data from different VM600 XMx16 cards.

Refer to the *VibroSight monitoring system time reference requirements* topic in the  *VibroSight help* for further information (search for “*VibroSight monitoring system time reference requirements*” in the help).

### What happens next?


Refer to the *Before starting* topics in the  *VibroSight help* for the latest information before using the VibroSight software.

### Using the *VibroSight help*

New users can consult the  *VibroSight help* to learn more about VibroSight. It can be accessed in the following ways:

- From the Windows Start menu, by clicking the **Start** button, then clicking **All Programs > Meggitt > VibroSight > Documentation > Help Topics**.
- Clicking **Help > Contents** in any VibroSight software module.

### Important remarks on safety

Read the  *VibroSight help* carefully and observe the safety instructions before using the equipment described.

Meggitt Sensing Systems' VibroSight software and hardware (VM600 systems and VibroSmart distributed monitoring systems) are designed for integrators and operators of condition monitoring systems and machinery protection systems, who are assumed to have the necessary technical training to install, configure and use the systems. All personnel who are liable to operate the equipment described in this installation guide should be trained in the correct safety procedures and are also expected to follow all generally accepted safety procedures.

## APPENDIX

## VibroSight software and Windows operating system compatibility

	Windows 7	Windows 8.1	Windows 10
<b>VibroSight software compatible?</b>	Yes (but not recommended for new installations as Microsoft support for Windows 7 ends in January 2020)	Yes	Yes

## VibroSight software and Windows Server operating system compatibility

	Windows Server 2008 R2	Windows Server 2012	Windows Server 2016
<b>VibroSight software compatible?</b>	Yes (but not recommended for new installations as Microsoft support for Windows Server 2008 R2 ends in January 2020)	Yes	Yes

## VibroSight software and Microsoft .NET Framework requirements

VibroSight software version	Microsoft .NET Framework requirements
VibroSight 3.7.0 or later	.NET Framework 4.7.2 <sup>See note 1</sup>
VibroSight 3.4.0 or later	.NET Framework 4.7.1 <sup>See note 2</sup>
VibroSight 3.0.0 or later	.NET Framework 4.6
VibroSight 2.12.0 or later	.NET Framework 4.5 and .NET Framework 2.0 <sup>See note 3</sup>
VibroSight 2.9.4 or later	.NET Framework 4.5
VibroSight 2.9.3 and 2.9.2	.NET Framework 4 (Standalone Installer)
VibroSight 2.9.1 or earlier	.NET Framework 3.5 SP1

## Notes

1. Microsoft .NET Framework 4.7.2 replaces .NET Framework versions 4.0 to 4.7.1.
2. Microsoft .NET Framework 4.7.1 replaces .NET Framework versions 4.0 to 4.7.
3. Since Microsoft .NET Framework 3.5 also includes .NET Framework 2.0 and .NET Framework 3.0, installing Microsoft .NET Framework 3.5 SP1 is the recommended solution for most computers (rather than installing Microsoft .NET Framework 2.0).

Headquartered in the UK, Meggitt PLC is a global engineering group specializing in extreme environment components and smart sub-systems for aerospace, defence and energy markets.

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