

Getting Started Guide

Vaisala DigiCORA® Sounding System
MW41



VAISALA

PUBLISHED BY

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1. About this document

1.1 Version information

This manual provides information for installing Sounding System MW41. For information on maintaining the sounding system, see *Vaisala DigiCORA Sounding System MW41 Technical Reference*. For operating instructions, see the online help embedded in the MW41 sounding software.

Table 1 Document versions

Document code	Date	Description
M211429EN-T	October 2020	Updated for MW41 sounding software version 2.17. <ul style="list-style-type: none"> • Removed instructions for RS92 and GC25, as they are no longer supported. • Added new instructions for taking a remote connection to MW41
M211429EN-R	February 2019	Updated for MW41 sounding software version 2.14.
M211429EN-P	December 2018	Updated for MW41 sounding software version 2.13.

1.2 Related manuals

Table 2 Related manuals

Document code	Name
M211415EN	<i>Vaisala DigiCORA Sounding System MW41 Technical Reference</i>
-	<i>Vaisala DigiCORA Sounding System MW41 Online Help</i> , available in the software web user interface
M210843EN	<i>Vaisala Portable Antenna Set CG31 User Guide</i>
M210538EN	<i>Vaisala Telemetry Antenna RB31 User Guide</i>
M211725EN	<i>Vaisala Telemetry Antenna RM32 User Guide</i>
M210546EN	<i>Vaisala GPS Antenna GA31 User Guide</i>
M211030EN	<i>Vaisala GPS Antenna GA31N User Guide</i>
M211633EN	<i>Vaisala GPS Antenna GA41 User Guide</i>
M211933EN	<i>Backing Up and Restoring Windows 10 for MW41 Sounding System</i>
M211596EN	<i>Vaisala Sounding Processing Subsystem SPS311G Technical Reference</i>
M212199EN	<i>Vaisala Sounding Processing Subsystem SPS341AG Technical Reference</i>
M211731EN	<i>AUTOSONDE AS15 Installing and Configuring Software Technical Reference</i>

Document code	Name
M212225EN	<i>AUTOSONDE AS41 Installing and Configuring Software</i>
DOC235403	<i>Vaisala Observation Network Manager NM10 Field Installation for MW41</i>

1.3 Documentation conventions



WARNING! **Warning** alerts you to a serious hazard. If you do not read and follow instructions carefully at this point, there is a risk of injury or even death.



CAUTION! **Caution** warns you of a potential hazard. If you do not read and follow instructions carefully at this point, the product could be damaged or important data could be lost.



Note highlights important information on using the product.



Tip gives information for using the product more efficiently.



Lists tools needed to perform the task.



Indicates that you need to take some notes during the task.

1.4 Trademarks

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2. Product overview

2.1 Introduction to Vaisala DigiCORA Sounding System MW41

Vaisala DigiCORA Sounding System MW41 processes, analyses, archives, and relays sounding data. The system consists of a computer (sounding workstation) that runs the sounding software and is connected to a sounding processing subsystem via a network adapter. The sounding processing subsystem contains the processor units for PTU (Pressure, Temperature and Humidity) and wind finding, and appropriate connections to the required antennas.

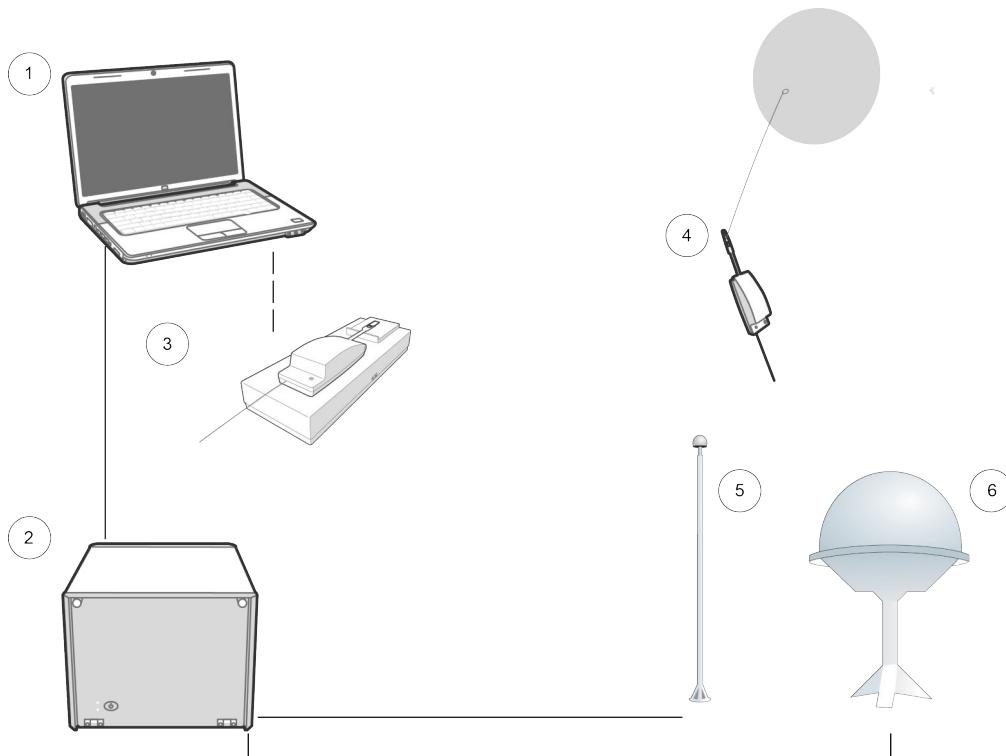


Figure 1 DigiCORA Sounding System MW41 setup

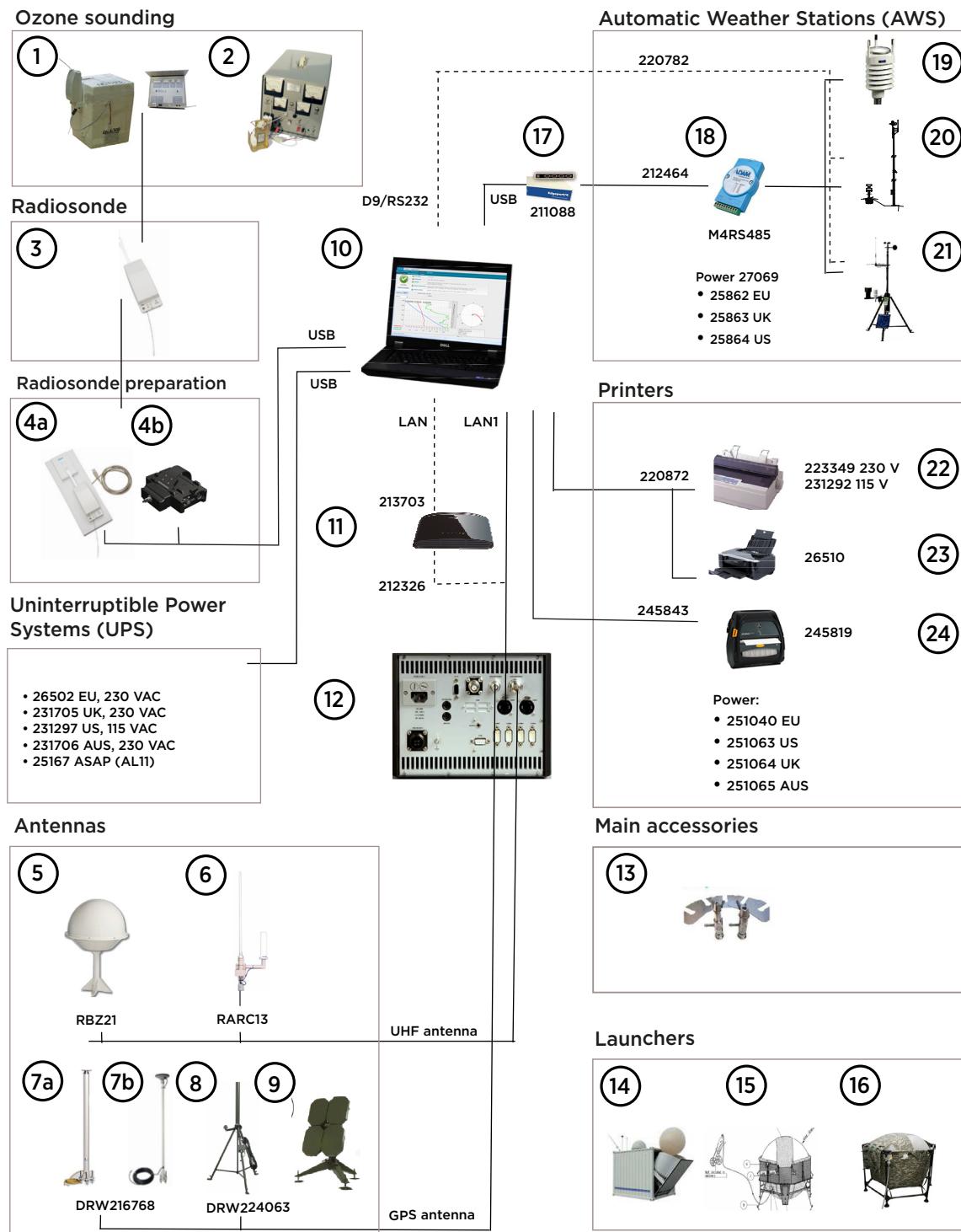
- 1 Sounding workstation
- 2 Sounding Processing Subsystem SPS3xx
- 3 Ground Check Device RI41
- 4 Radiosonde RS41
- 5 GPS antenna
- 6 UHF antenna

Table 3 Compatibility

Item	Description
Radiosondes	Vaisala Radiosonde RS41-SG Vaisala Radiosonde RS41-SGP Vaisala Radiosonde RS41-SGM Vaisala Radiosonde RS41-D RS41 refers to all Radiosonde RS41 models.
Sounding processing subsystems	Vaisala Sounding Processing Subsystem SPS311G Vaisala Sounding Processing Subsystem SPS341AG SPS3xx refers to both SPS311G and SPS341AG.
Ground check devices	Vaisala Ground Check Device MWH322 Vaisala Ground Check Device RI41 Vaisala Ground Check Device RI41-B with a barometer module. RI41 refers to both RI41 and RI41-B.
Wind finding	Vaisala Radiotheodolite RT20 Vaisala Radiotheodolite RT20A Vaisala Radiotheodolite RT20M RT20 refers to all the above.
Printing sounding data	Printer options: <ul style="list-style-type: none">• Matrix printer 23• Inkjet printer 24• Portable thermal printer
Remote monitoring	Vaisala Observation Network Manager NM10 software

2.1.1 Sounding System MW41 system architecture

The next figure presents Sounding System MW41 system architecture with optional components. For detailed information on the system components, see the appropriate documentation.



- 1 RS41 with flight box and Ozone Sensor Interface Card OIF411
- 2 Ozonizer/Test Unit TSC-1
- 3 Vaisala Radiosonde RS41
- 4a Ground Check Device RI41 for RS41
- 4b Ground Check Device MWH322 for RS41
- 5 Directional Antenna RB31, ASAP-specific model RB31AL

- 6** Omnidirectional Antenna RM32 or RM31N, ASAP-specific model RM32AL
- 7a** GPS Antenna GA31/N, ASAP-specific model GA31AL
- 7b** GPS Antenna GA41
- 8** Portable Antenna CG31
- 9** Radiotheodolite RT20
- 10** Sounding workstation PC
- 11** Ethernet switch
- 12** Sounding Processing Subsystem SPS3xx
- 13** Vaisala Filling Balance FB13
- 14** ASAP Launcher ALS211
- 15** Balloon Launcher FB15 for 100 ... 350 g balloons, FB16A for 100 ... 600 g balloons
- 16** Balloon Launcher FB32
- 17** Edgeport. Not needed with desktop computer.
- 18** RS232/485 converter
- 19** Weather Transmitter WXT536
- 20** QML201-based weather station, for example AWS310 or AWS430
- 21** MAWS201M TacMet® Weather Station
- 22** Matrix printer
- 23** Inkjet printer
- 24** Portable thermal printer

2.1.2 MW41 sounding software

MW41 sounding software provides user-friendly tools for preparing radiosondes, for following soundings, creating messages and sending them forwards. It consists of the sounding processing software running as services on the sounding workstation and an optional remote client for remote access/use.

More information

- Requirements for sounding workstation (page 11)
- Requirements for remote client (page 12)

2.1.2.1 Requirements for sounding workstation

Table 4 Sounding workstation requirements

Property	Description/Value
Supported operating systems	Windows 10 Pro 64-bit (English) .NET version 4.5 or later is required.
Supported web browsers	<ul style="list-style-type: none"> • Microsoft Edge (latest version) • Mozilla Firefox (latest version) • Google Chrome (latest version)

Property	Description/Value
Minimum hardware requirements	<ul style="list-style-type: none"> • Processor Intel Pentium Dual Core or equivalent, Quad core recommended • Memory 8 GB RAM • Hard Disk Space 160 GB • Display 1366 × 768 • Serial port, either integrated or via USB/RS232 converter, for possible Automatic Weather Station (AWS) • USB port for RI41 • Ethernet adapter



CAUTION! When taking computers not delivered by Vaisala into use, check energy saver and similar settings of the computer. Default settings may cause shutdown of computer parts if there is a long time period with no input from the user, for example, during a sounding. This might result in a lost sounding.



CAUTION! Make sure that your computer name follows the URI RFC syntax. For example, the name may not contain an underscore _. If some characters are not recognized as valid URI, this may prevent MW41 from starting.

2.1.2.2 Requirements for remote client

It is recommended to use devices that fulfill the same requirements as for sounding workstations. However, it is likely that devices with lower hardware specifications, or other browsers can be used.

2.2 Safety

Vaisala DigiCORA Sounding System MW41 delivered to you has been tested for safety and approved as shipped from the factory. Note the safety precautions.



WARNING! Ground the product and verify outdoor installation grounding periodically. Failure to provide proper grounding can result in injury or death from electrical shock and can severely damage the equipment.



WARNING! Do not substitute parts or modify the system, or install unsuitable parts in the system. Improper modification can damage the product or lead to malfunction.

2.2.1 ESD protection

Electrostatic Discharge (ESD) can damage electronic circuits. Vaisala products are adequately protected against ESD for their intended use. However, it is possible to damage the product by delivering electrostatic discharges when touching, removing, or inserting any objects in the equipment housing.

To avoid delivering high static voltages to the product:

- Handle ESD-sensitive components on a properly grounded and protected ESD workbench or by grounding yourself to the equipment chassis with a wrist strap and a resistive connection cord.
- If you are unable to take either precaution, touch a conductive part of the equipment chassis with your other hand before touching ESD-sensitive components.
- Hold component boards by the edges and avoid touching component contacts.

3. Sounding station setup summary

The summary contains everything you need to do when setting up a new MW41 system. In other cases, such as when upgrading from an older system, some steps do not apply. For upgrade instructions, see *Upgrading MW11/12/15, MW21 and MW31 to Sounding System MW41 Technical Reference*.

Table 5 MW41 system setup steps

Step	Instructions
1. Selecting a suitable location for the soundings.	Requirements for sounding operation room (page 15) Placing antennas (page 16) Requirements for balloon-filling shed (page 17)
2. Installing and connecting the antennas.	For instructions, see the antenna manuals.
3. Installing and connecting Sounding Processing Subsystem SPS3xx	Sounding processing subsystem (page 19)
4. If you are not using a computer provided by Vaisala, preparing the computer for MW41 installation.	Installing serial port extension (page 22) Installing printer (page 23)
5. If you are not using a computer provided by Vaisala, installing the MW41 software.	Installing MW41 sounding software (page 23)
6. If you are not using a computer provided by Vaisala, installing a security certificate.	Installing security certificate (page 32)
7. Creating user accounts.	Starting User Management (page 42)
8. Installing the ground check device.	Connecting Ground Check Device RI41 or MWH322 (page 68)
9. Configuring station-specific settings.	Configuring the sounding software (page 52)

4. Selecting installation location

4.1 Requirements for sounding operation room

The sounding operation room not only provides good working conditions for the operator, but also protects the ground equipment.

Environmental requirements for indoor equipment are as follows.

Table 6 Operating environment for indoor equipment

Property	Description/Value
Temperature	+10 ... +35 °C
Humidity	0 ... 90 %RH, non-condensing

Environmental requirements for outdoor equipment are as follows.

Table 7 Operating environment for outdoor equipment

Property	Description/Value
Temperature	-40 ... +55°C
Humidity	0 ... 100 %RH

For condition requirements of individual system components, see the corresponding documentation.

In addition, direct weather influences must be totally excluded.

Equip the sounding operation room with the following:

- Adequate lighting
- Grounded electrical power outlets located close to the instrument tables
- Desk for handling the radiosonde before release

In a tropical environment, installing an air conditioner in the sounding operation room is recommended.

At all sounding sites where a stable line voltage is not secured, installing and constantly using an uninterruptible power supply (UPS) to guarantee successful soundings is recommended.

More information

- [Using UPS with MW41 \(page 18\)](#)

4.2 Placing antennas

For best results, select an installation site for the antenna set that is:

- Clear of obstacles such as buildings, dense forests, or metal masts.
- Even, in other words, the ground is even and relatively firm.

A single tree has no significant effect on signal reception, unless it is very dense or less than 20 m from the antenna set. Sparse forest can cause some attenuation but is usually not a real hindrance.

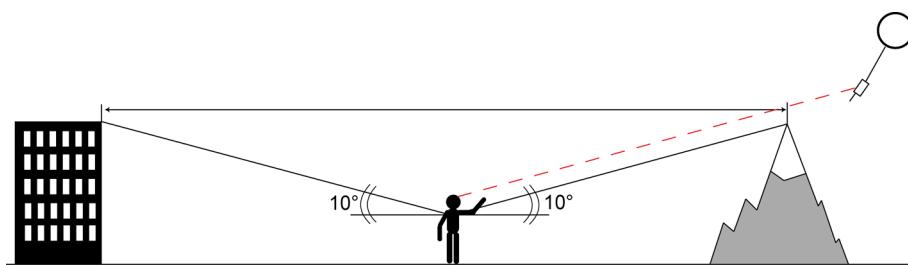


Figure 2 Signal path line-of-sight requirement

Other antenna masts and metal structures of small diameter do not disturb reception if situated more than 20 m away from the antenna set. Metal roofs or other large surfaces may reflect signals, causing short-duration fading. Large obstacles may block reception. To maintain the line of sight, ensure that the angle from the antenna to the top of large obstacles is less than 10°, as shown in the figure above.

4.2.1 Supported antenna types

The sounding instrument requires antennas for GPS and UHF reception. The following antennas manufactured by Vaisala can be used:

- GA31, GA31N, and GA41 GPS antenna
- RB31 directional UHF antenna
- RM31N and RM32 omnidirectional UHF antenna
- CG31 portable antenna
- Radiotheodolite RT20 for RDF wind finding



Antenna description and installation instructions are provided with each antenna.

4.2.2 Antenna cables

The standard length of the antenna cable is 33 meters. Lay the cables in protective tubing to avoid mechanical wear. Secure the maximum possible clearance from radar antennas. See the appropriate antenna user guide for details.

4.3 Requirements for balloon-filling shed

A balloon-filling shed enables proper inflation and handling of the balloons, which is essential for a successful radiosonde ascent.

When building the balloon-filling shed:

- Make sure that the shed is large enough to allow the operator to handle all normal types of balloons conveniently.
- Make sure that the doorway is wide enough for you to carry an inflated balloon through without the balloon touching sharp corners or anything else that can break it.
- Make sure that the door is on the leeward side of prevailing winds.
- Make sure that there is free space for the gas generator or gas cylinders, if there is no separate chamber for them outside the shed.
- Make sure that ventilation is adequate, especially when the doors are closed.
- Make sure that all electrical installations within the shed, both permanent and temporary, are of spark-proof construction.

Note the following recommendations for placing the balloon-filling shed:

- Place the shed near the sounding operation room so that the radiosonde operator is able to view the shed from a window or the door of the sounding operation room.
- Make sure that the terrain around the shed is free of obstacles such as trees, telephone poles, antenna structures, and similar, that might prevent free ascent of the radiosonde in windy conditions.

Observe the following recommendations when operating hydrogen balloons:

- When training personnel for radiosonde operation at a new station, follow the *Safety Instructions for Radiosonde Operators* given in the radiosonde user guides.
- Avoid inflating the balloon in the same building where the sounding operation room is located because of the risks related to handling gases.
- Ground the inflation nozzle (Vaisala Filling Balance) through a metal plate fixed to the floor. Connect the nozzle permanently to a well-grounded piping system or some other construction with good earth contact.
- Carry out regular inspections for all electrical installations within the shed to prevent any oversights.



Since hydrogen mixed with air is highly inflammable, the use and storage of hydrogen generators or cylinders are subject to safety regulations issued by authorities.

5. Installing hardware

5.1 Installing hardware

If you are not using hardware provided by Vaisala, make sure that your sounding workstation complies with the hardware requirements.

More information

- [Requirements for sounding workstation \(page 11\)](#)
- [Requirements for remote client \(page 12\)](#)

5.2 Using UPS with MW41

If the MW41 input power source, typically mains power, fails for some reason, an optional UPS (Uninterruptible Power System) can be used to provide emergency power. The UPS provides near-instantaneous protection from input power interruptions by supplying energy to the connected devices.

To avoid any power interruptions, make sure that all sounding equipment are connected through a UPS system. The sounding computer and the UPS are connected with a USB cable. The correct USB connector is marked with a UPS sticker at the back of the computer.



CAUTION! Make sure to select the correct, country-specific output voltage on the UPS display. See the manufacturer's instructions for more details.

The UPS includes internal batteries to provide power in case AC input power is not available. Make sure to inspect the condition of the batteries regularly and, if necessary, replace the batteries according to the manufacturer's instructions.



CAUTION! Before taking the UPS into use, make sure the UPS internal batteries are connected.

During a power interruption, the UPS provides power for 25 minutes, after which Windows is run down. The rundown takes a maximum of 5 minutes. All other values are the default values provided by the UPS.

5.3 Sounding processing subsystem



Figure 3 Vaisala Sounding Processing Subsystem SPS311G and SPS341AG



Unless otherwise mentioned, SPS3xx refers to all Sounding Processing Subsystem models (SPS311G and SPS341AG).

Sounding Processing Subsystem SPS3xx is a desktop instrument intended for use in the sounding operation room. You can fasten it to the installation shelf with mounting straps.

- All power, signal and I/O connectors are located at the rear.
- Plug-in units can be replaced through the front panel.

The following plug-in units are part of SPS311G when it is used with MW41 Sounding System:

- MRR111 400 MHz Receiver Unit
- MRP111 Receiver Processor Unit
- MRG114 GPS Receiver Unit
- MWP312 DC Power Supply Unit
- MWP411 Mains Power Supply Unit

The following plug-in units are part of SPS341AG when it is used with MW41 Sounding System:

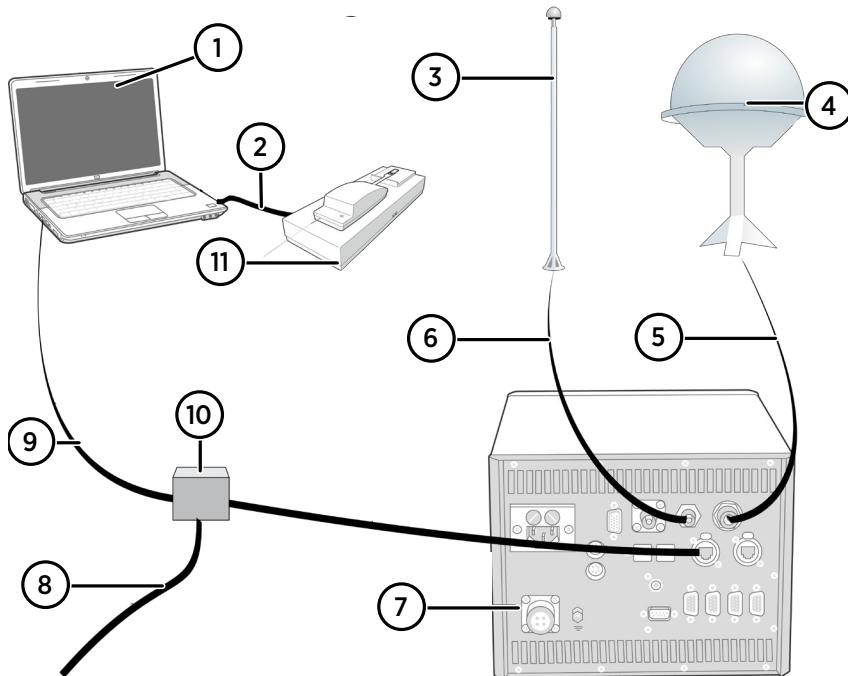
- MRR111 400 MHz Receiver Unit
- MRP121A Receiver Processor Unit
- MPU121A Main Processor Unit
- MWP312 DC Power Supply Unit
- MWP411 Mains Power Supply Unit

SPS3xx uses forced air cooling. Three fans are located below the card frame.



Do not block the air inlet at the lower front corner of the chassis. Air outlet is located at the upper rear corner.

5.3.1 Connecting SPS3xx and Sounding System MW41



- 1 Soundings workstation
- 2 USB cable
- 3 GPS antenna
- 4 UHF antenna
- 5 UHF cable (N connector)
- 6 GPS cable (TNC connector)
- 7 Sounding Processing Subsystem SPS3xx
- 8 Line to external network (optional)
- 9 Ethernet cable (RJ45 connector)
- 10 LAN switch (optional)
- 11 Ground Check Device RI41 for RS41

To connect antennas, the sounding workstation, and optional equipment to the sounding processing subsystem, do the following:

- ▶ 1. Connect the antennas to the subsystem. Refer to the instructions in the appropriate antenna user guide.

2. If you are connected to an external network, connect the Sounding Processing Subsystem LAN1 connector via the LAN switch to the workstation's LAN card using the 210973 cable (Ethernet cable with RJ45 connectors).
3. Connect the Ethernet cable to the computer's Ethernet port.
4. Connect the Ground Check Device RI41 for RS41.
5. Connect the RI41 USB cable to the sounding workstation.

5.3.2 Connecting the power supply and grounding SPS3xx



WARNING! Make sure that the SPS3xx power cable is grounded.

- ▶ 1. Connect SPS3xx to mains power 100 ... 240 V, 1.2 A maximum, 50/60 Hz, or to a 24 VDC power system. The DC power input connection is floating.
-
- Mains power and 24 VDC system power are alternative power sources and need not be used at the same time.
2. Ground SPS3xx using the external chassis ground screw provided for system grounding.

5.3.3 Switching the SPS3xx power on and off

The power switch is located on the lower left corner of the front panel. Before the subsystem power can be switched on, the system must be in the standby state. This is indicated by the yellow standby LED. For more information on the indicator LEDs, see *Vaisala DigiCORA Sounding System MW41 Technical Reference*.

- ▶ 1. Check that the standby LED is lit yellow. When the standby LED is lit yellow, the system is ready for power-up.
- 2. To switch the subsystem power on or off, press the power switch once.
 - After the power is switched on, the standby LED is blank.
 - During the power-up, the power/status LED blinks green. When the power/status LED turns into steady green, the system is ready for operation.



With SPS341AG, it can take up to 4...5 minutes until the subsystem is ready for operation.

- Red color indicates an error in one or more units during the power-up or operation. See the applicable Sounding Processing Subsystem *Technical Reference*.

6. Installing software

6.1 Operating system settings



If Vaisala has provided the computer for your Sounding System MW41, the software installation has been done by Vaisala. In this case, you can move on to making other connections. Start with connecting Sounding Processing Subsystem SPS3xx.

For the operating system to function properly, make sure that the following settings have been selected and installed:

- The workstation has a network with TCP/IP Protocol installed.
- Time zone is UTC.

More information

- [Connecting Sounding Processing Subsystem SPS3xx \(page 55\)](#)

6.2 User requirements for installing the software

To perform the needed installations, you need administrator rights for Windows. Vaisala recommends that after the sounding software has been installed, you access the sounding workstation computer with operator-level privileges (not administrator).



When you install the MW41 sounding software, you must belong to the **Administrators** level. See your operating system documentation for more information.



On computers delivered from Vaisala, you need to give a password to log in the computer as **Administrator**. The Administrator password is **adpw_VA1**.
Vaisala recommends that you change the password after the first login.

6.3 Installing peripheral devices

6.3.1 Installing serial port extension

It is likely that a serial port extension device is needed to meet the MW41 sounding workstation requirements. For computers not delivered by Vaisala, this is your responsibility. Refer to the instructions supplied with the device.

6.3.2 Installing printer

If your MW41 sounding system includes a printer, set it up to work with Windows. Refer to the instructions supplied with Windows and the printer.

For instructions on adding a new printer, see *DigiCORA Sounding System MW41 Technical Reference*.

6.4 Installing MW41 sounding software



Before installing the software, check the requirements for the MW41 workstation.

If some components needed for installing the MW41 sounding software are missing, the Installer prompts you to install them first and possibly restart your computer.

The software installation consists of three phases:

1. Installing the MW41 sounding software.
2. Activating a software license.
3. Installing a security certificate.

If you are also installing AUTOSONDE Control software, Vaisala recommends that you do not restart the computer after installing the MW41 software and license. When the restart window opens, click **No**, close the window, and proceed with the AUTOSONDE software installation. When you restart the computer after the AUTOSONDE software installation, both MW41 and AUTOSONDE software installations are ready.

AUTOSONDE Control software is installed in the same location on your computer as the MW41 sounding software.

More information

- [Requirements for sounding workstation \(page 11\)](#)

6.4.1 Selecting type of software activation

Using the MW41 sounding software requires a software license. When you install the software for the first time, you have two options for using it. You can either use a trial version of the software or activate the license software.

6.4.1.1 Using a trial version

If you have no software license, you can start using the software as a trial version with standard features. The trial version is valid for 30 days.

After you have installed the sounding software and log in for the first time, the system detects whether you have a valid license or not, or whether the trial version has expired. If your trial version has not expired, you can continue to use it for the number of trial days remaining.

6.4.1.2 Activating software license

If you have a software license, you can immediately activate the software with the features you have selected after you have installed the software. Activate the license using the Product Key delivered to you by Vaisala. It is recommended to activate the license as soon as possible.



Vaisala recommends that you activate the software license as soon as possible.

Activating the MW41 software license requires Internet connection. If the computer you are using for the software installation does not have Internet connection, make sure that there is another computer nearby with an Internet connection that you can use for the activation. Vaisala License Manager automatically detects whether you are connected to Internet or not.

More information

- [Activating the license - Internet connection available \(page 25\)](#)
- [Activating the license - no Internet connection available \(page 27\)](#)

6.4.2 Installing MW41 sounding software

- ▶ 1. Insert the installation media. The installation main window opens.
If the installer does not start automatically, run the *StartHere.exe* file.
When you run the *StartHere.exe* file, a confirmation dialog about installing software packages and applying firewall rules appears.
Click **Yes** to continue the installation. Clicking **No** cancels the installation.
- 2. Click the link **Install MW41 version X.X.x**
- 3. The Install Wizard for MW41 opens. Click **Next**.
- 4. Read the License Agreement and accept it. Click **Next**.
- 5. The installation begins. Click **Next** to accept the default destination folders for the MW41 program files and log files, or choose a new folder by clicking **Change**, and select a new location.
- 6. Click **Next** to accept the default destination folder for the MW41 database, or choose a new folder by clicking **Change**, and select a new location.
- 7. Click **Install** to begin the installation.
- 8. Wait while the Install Wizard installs the software.
- 9. When the software installation is finished, a window opens with the option **Launch Vaisala License Manager** selected.

10. Click **Finish** to start Vaisala License Manager and proceed to activating the license. Vaisala recommends that you activate the software license as soon as possible. Activating the license requires access to the Internet. If you deselect the default option, you are prompted to restart the system. After the restart, the software installation is ready. In this case, you must launch the License Manager at a later stage.

More information

- [Activating the license - Internet connection available \(page 25\)](#)
- [Activating the license - no Internet connection available \(page 27\)](#)
- [Launching Vaisala License Manager \(page 25\)](#)

6.4.3 Launching Vaisala License Manager

To activate the software license at a later stage, you must launch Vaisala License Manager:

Go to Windows Start menu and click **All Programs > Vaisala > Vaisala License Manager > Vaisala License Manager**. The License Manager is installed on your computer when the MW41 sounding software is installed.

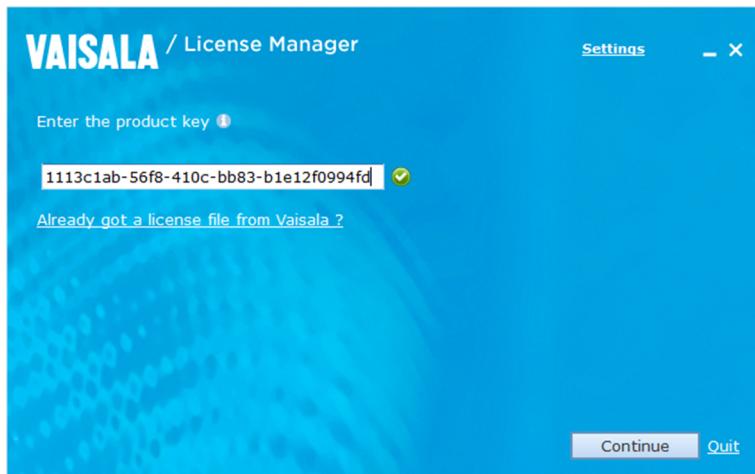
Next, proceed to activating the license.

6.4.3.1 Activating the license - Internet connection available

- ▶ 1. When the License Manager opens, click **Continue**.



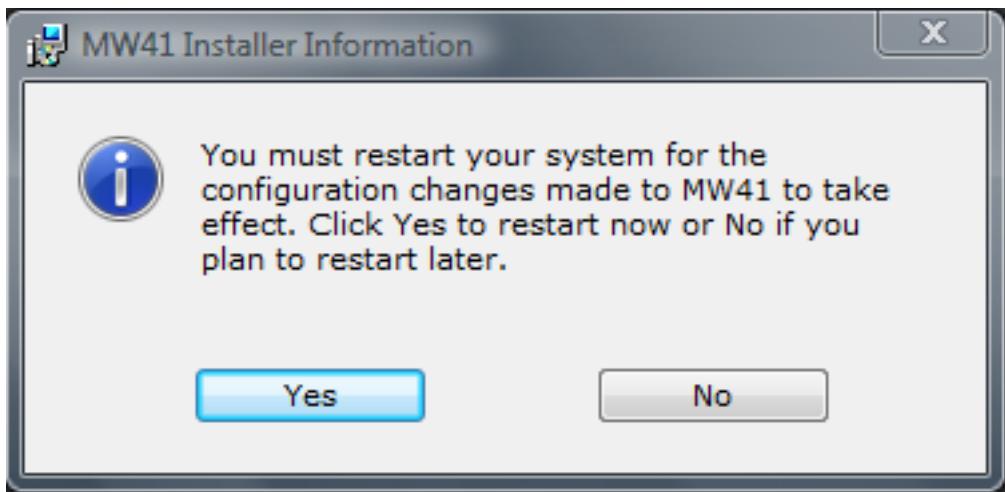
2. Enter the Product Key. Click **Continue**.



3. The product starts activating. Wait a while.
4. After a successful activation, the following window is displayed. The window displays a list of the activated features. Check that the features installed match your license. Click **Quit** to exit License Manager.



5. Click **Yes** to restart the system if prompted. If you have launched Vaisala License Manager manually, restart the system yourself.

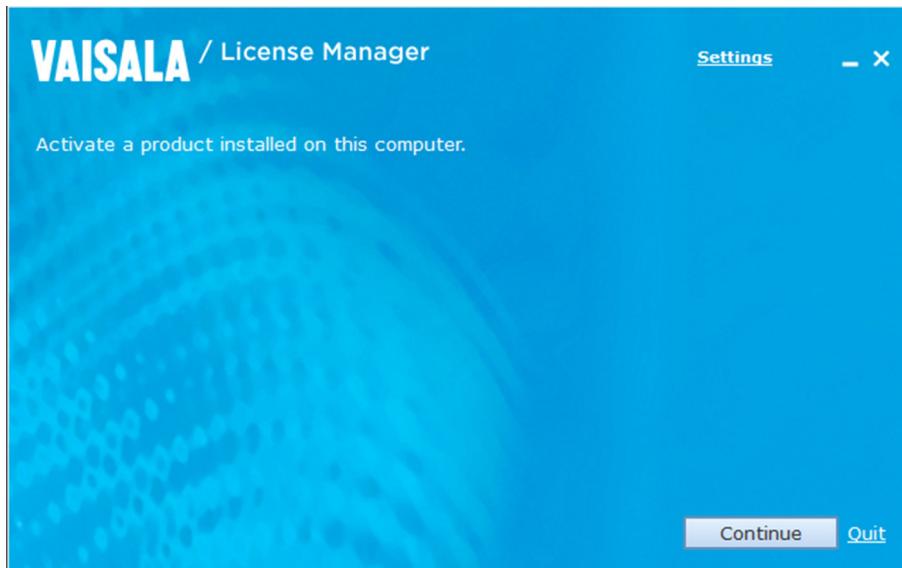


6. After the system has restarted, the MW41 installation and license activation is complete. In case the activation fails, the reason and remedy for the failure are displayed. Should you need any further assistance, contact Vaisala Help Desk at helpdesk@vaisala.com.

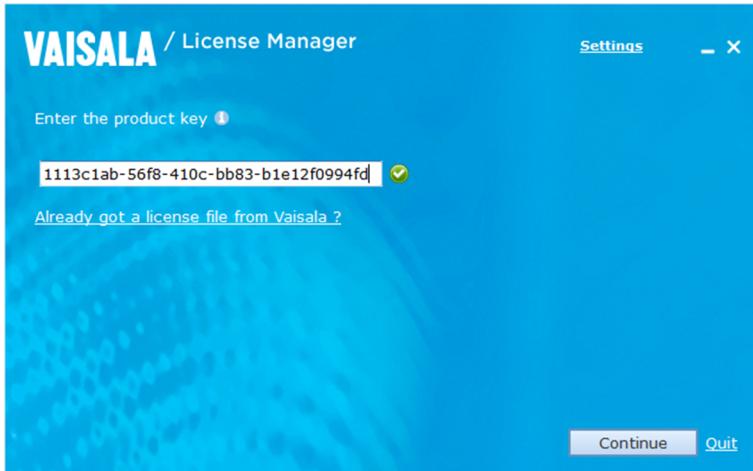
6.4.3.2 Activating the license - no Internet connection available

Before you begin, make sure that you have, for example, a memory stick for storing the license file obtained and transferring it to another computer.

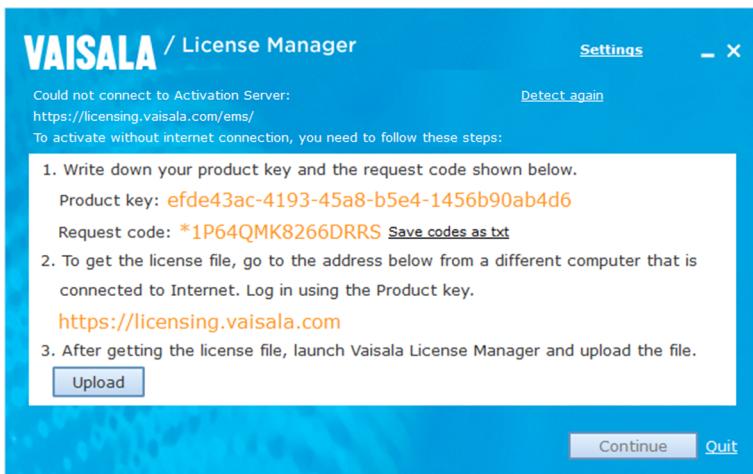
- 1. When the License Manager opens, click **Continue**.



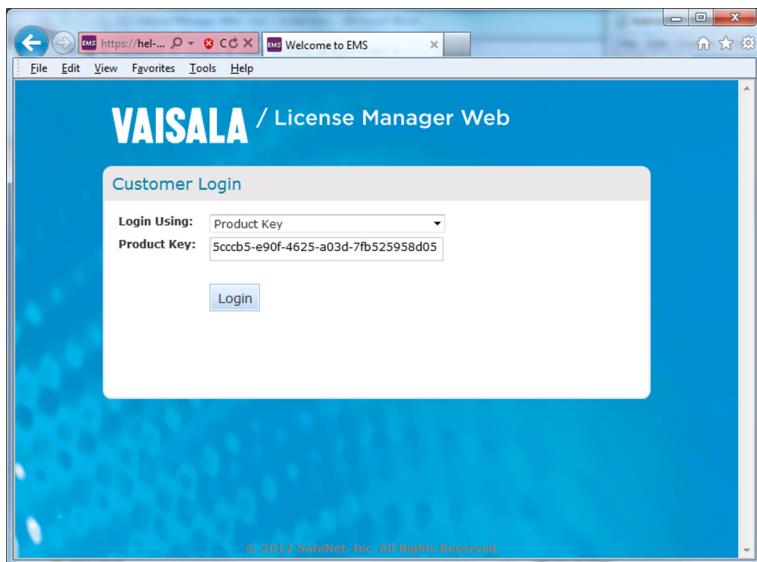
2. Enter the Product Key. Click **Continue**.



3. The following window opens with message “Could not connect to Activation Server”. Write down the Product Key and the request code shown, or click **Save codes as txt** to save the codes as a .txt file on a media that you can take with you, for example, a memory stick. Remember also to write down the Internet address you must go to. Do not close the License Manager window, you will need to upload the license file with License Manager.



4. Take the memory stick with you and go to another computer that is connected to Internet, and log on to the address provided. Select **Login Using Product Key** and enter the key in the window. Click **Login**.



5. In the window that opens, click **Product Details** open and click **Activate**.
6. Enter the request code in the **Request Code** text box, manually add spaces after every 4 characters, and click **Generate**.



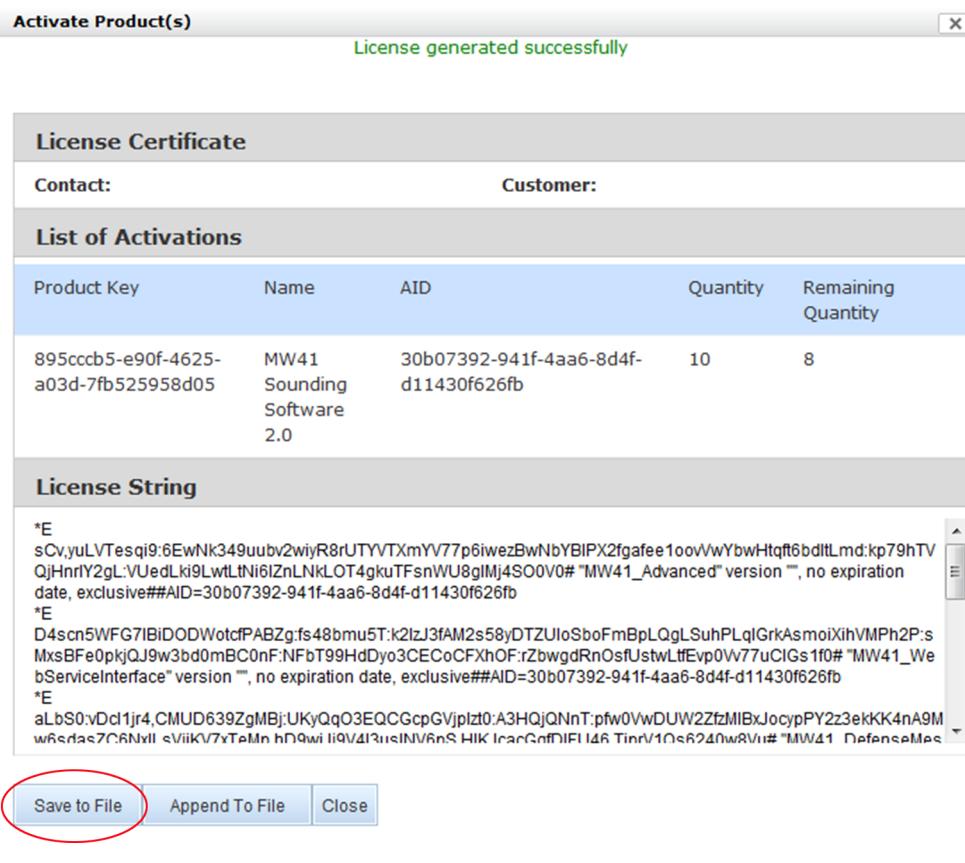
CAUTION! You have to manually add spaces after every 4 characters in the request code field.

* Request code: *1DE MYAW KSD7 FYAP

Remarks:

Generate Close

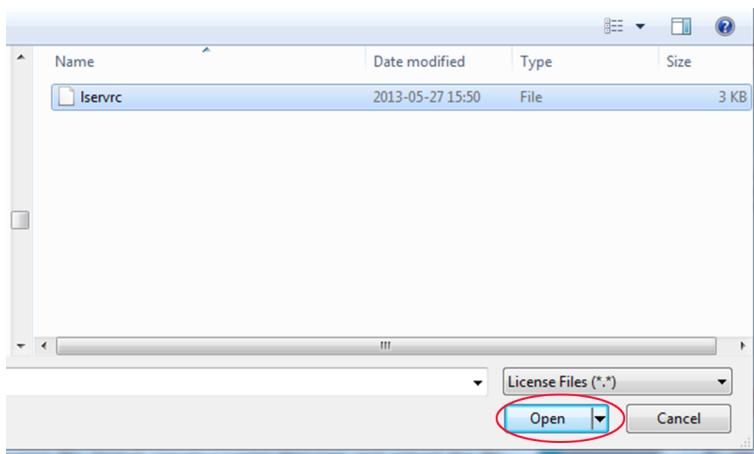
- The license file is generated. Save the license file to a media that you can transfer to the system with the MW41 sounding software, for example, a memory stick.



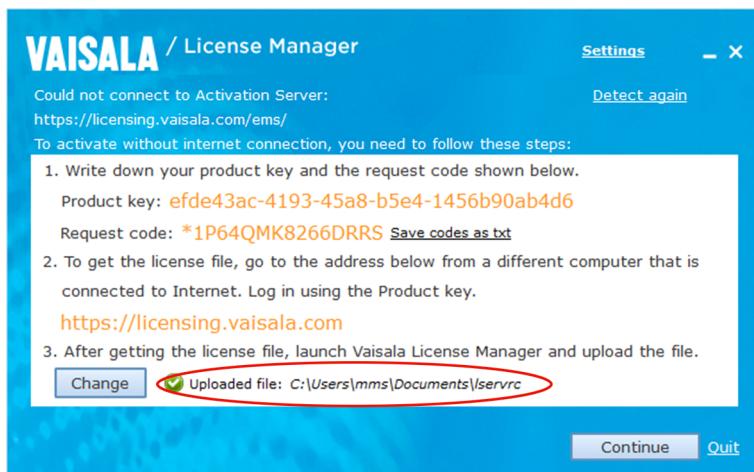
The way in which the file is saved depends on the browser used. If you do not provide a specific location on your computer, files downloaded from the Internet are usually saved in a default location, for example, *C:\users\your name\downloads*.

- Take the memory stick with you and go back to the computer where the License Manager window is still open, and the MW41 software is installed with no Internet connection. Click **Upload** to load the license file to the system.

9. Browse to the location where the license file is stored and click **Open**.



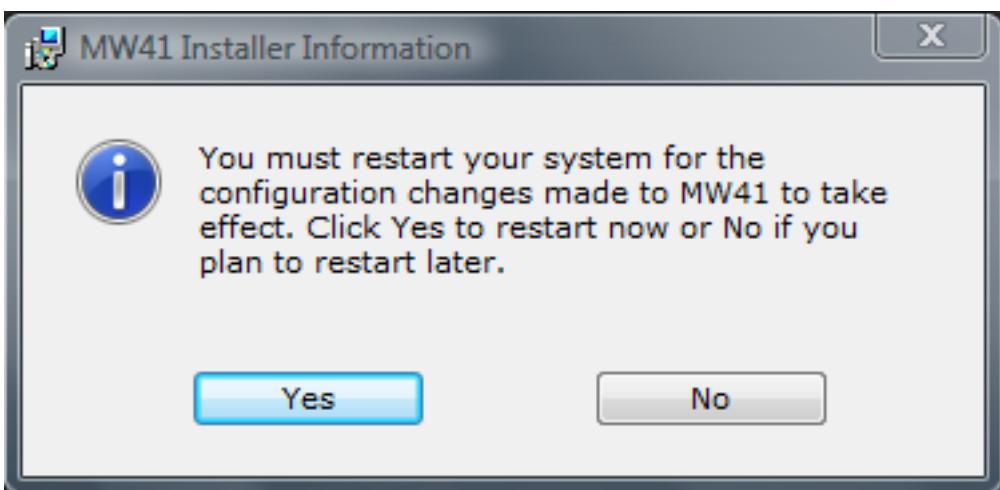
10. The green icon indicates that the upload was successful. Click **Continue**.



- After a successful activation, the following window is displayed. The window displays a list of the activated features. Check that the features installed match your license. Click **Quit** to exit License Manager.



- Click **Yes** to restart the system if prompted. If you have launched Vaisala License Manager manually, restart the system yourself.



- After the system has restarted, the MW41 installation and license activation is complete. In case the activation fails, the reason and remedy for the failure are displayed. Should you need any further assistance, contact Vaisala Help Desk at helpdesk@vaisala.com.

6.4.4 Installing security certificate

MW41 sounding software uses a security certificate for a safe HTTPS connection.



On Vaisala-delivered PCs, the security certificate is preinstalled for the local machine.



Install the security certificate after installing MW41 sounding software for the first time.



When updating from MW41 versions 2.16.2 and earlier, recreating the HTTPS certificate is recommended!

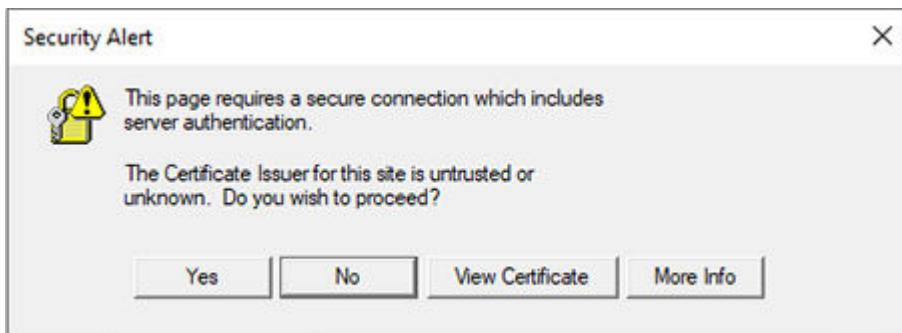


If you change the MW41 computer name, you must uninstall and then reinstall the MW41 software, and reinstall the security certificate.

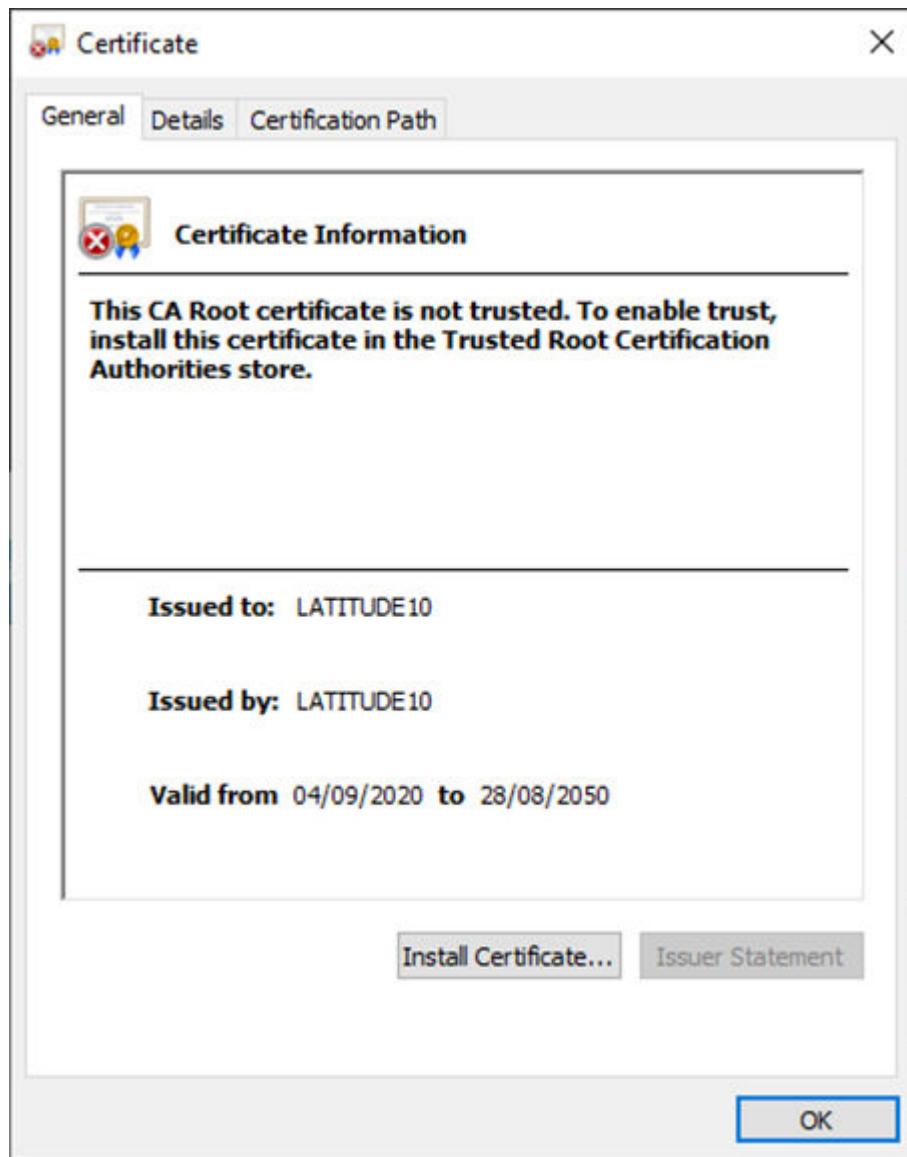
- 1. Click the icon on the desktop to start the MW41 sounding software.



- 2. The **Security Alert** window appears. Click **View Certificate**.

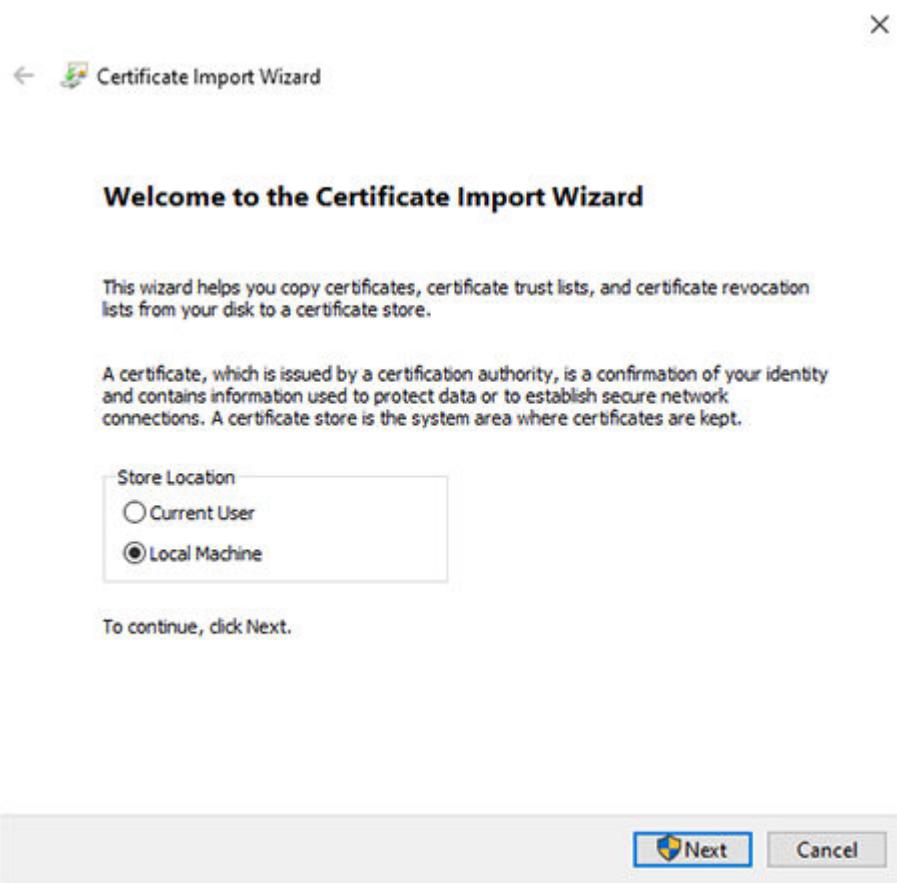


3. The **Certificate** window appears. Click **Install Certificate**.

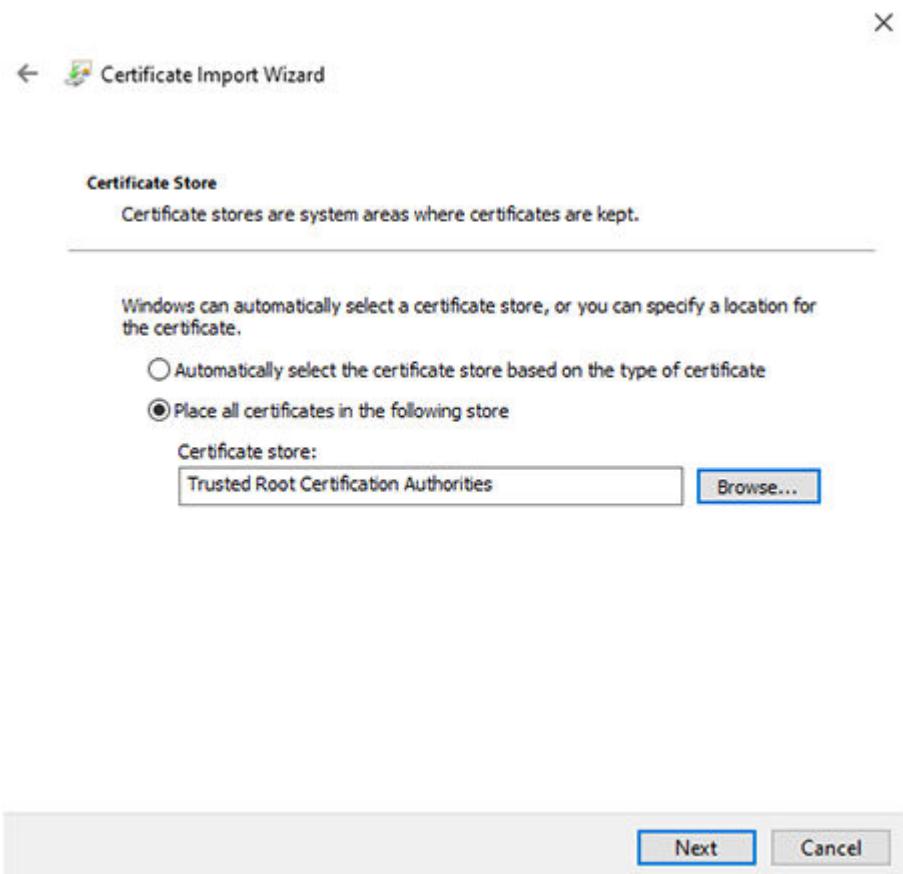


4. **Certificate Import Wizard** opens. Click **Local Machine** and then **Next**.

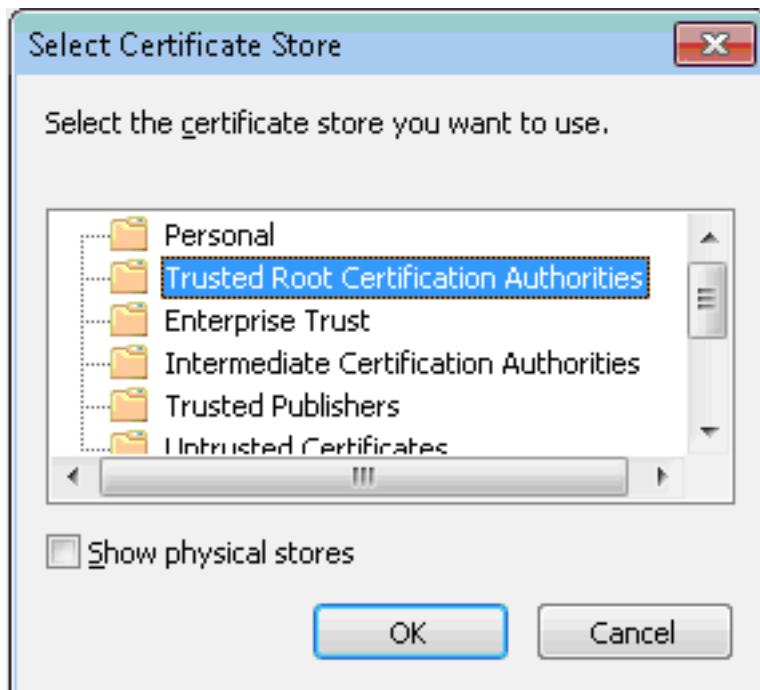
In Windows 10, you must select whether you install the security certificate to a local machine instead of current user.



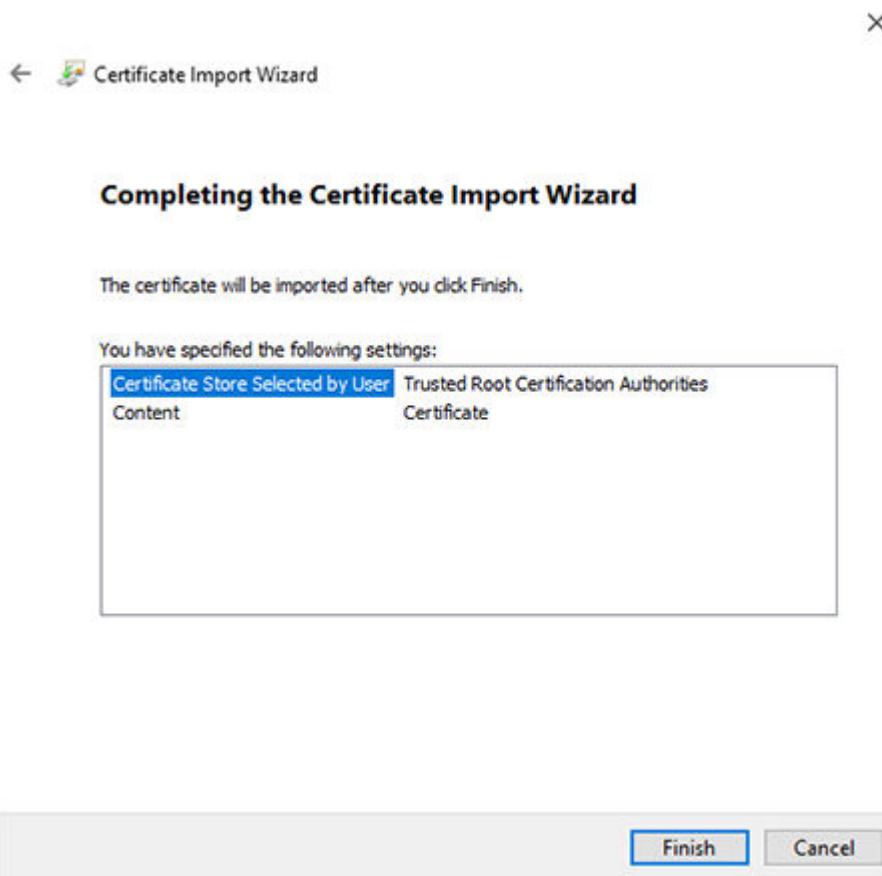
5. Select the **Place all certificates in the following store** option and click **Browse**.



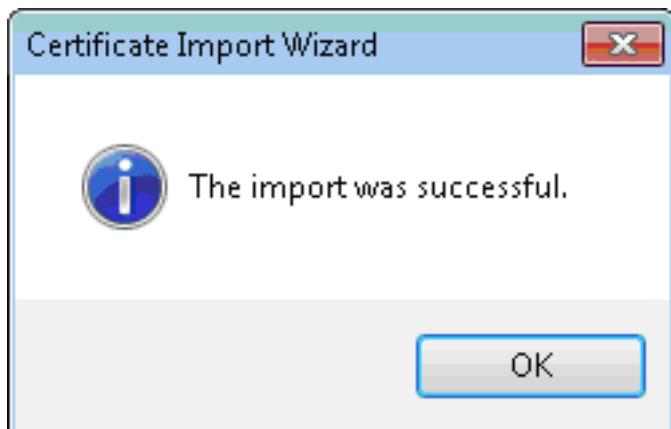
6. Select **Trusted Root Certification Authorities** and click **OK**.



7. Click **Finish**.



8. Click **OK**. The certificate has now been successfully imported.



9. Click **OK** to accept the installed certificate.

10. In the **Security Alert** window, click **Yes**.

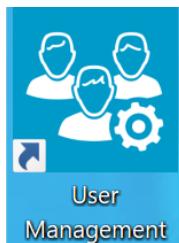


The security certificate is now installed on the sounding workstation and the MW41 sounding software uses a safe HTTPS connection.

7. Starting user management

7.1 User management overview

When you install the MW41 sounding software, an icon for starting the **User Management** application appears on the desktop:



In **User Management**, a user with the **User Administrator** role can manage all users: add, edit and delete users. If you use MW41 together with AUTOSONDE, you can also assign AUTOSONDE user roles to the users.

The application includes the following views:

Users Logged In

For viewing information on active users and sessions

Users

For adding, editing and deleting users

Password Configuration

For configuring password settings

Identity Configuration

For configuring identity settings

Audit Trail Log

For viewing information on the past login and logout events

A screenshot of the Vaisala User Management application interface. On the left is a vertical navigation sidebar with the following items: VAISALA logo, Users (selected), Users Logged In, Users (selected), Password Configuration, Identity Configuration, Audit Trail Log, and User Management. The main content area has a header with Language, Help, and User dropdowns. Below the header is a "Users" section with a "Add new user" button and a "Filter" section with a search bar. A table lists a single user: admin, Active, admin@vaisal, User Admin..., with Edit and Delete links. The "Users" item in the sidebar is highlighted in blue.

Figure 4 **User Management** main view



Only a user with the **User Administrator** role has the rights to manage users.

7.1.1 MW41 user roles

In MW41, users are categorized into four groups with different privileges.

Table 8 MW41 user roles

Role	Description
User Administrator	Has the rights to manage users in the User Management application.
MW41 Administrator	Has full access rights to the system, including the Advanced configuration.
MW41 Manager	Has extended operator rights. Allowed to perform system configuration.
MW41 Operator	Has normal sounding rights. Not allowed to delete a sounding from the archive or upload or download a sounding, or perform system configuration.



CAUTION! Make sure that the system has **User Administrator** and **MW41 Administrator** at all times. Without **User Administrator**, you are unable to do user management tasks. Without **MW41 Administrator**, you are unable to do system configuration tasks, and may need to reinstall the MW41 software.



The same user may have roles for both AUTOSONDE and MW41 software and log in to both. For example, it may be convenient that administrator-level users have both **AS41 Administrator** and **MW41 Administrator** roles.

Vaisala recommends assigning one software-specific user role per a user. If a user is assigned more than one of the MW41 user roles, only the role with the most extensive privileges is active.

7.1.2 Default username and password for User Administrator

The system comes with one preconfigured user having the **User Administrator** role and access rights to the **User Management** application. The default password is in the **Password expired** state, which means that you must change it when you log in to **User Management** for the first time.



The password is case-sensitive. You must write it in exactly the same way as shown below.

Table 9 Default username and password for User Administrator

Username	Password	Role
admin	A4uEmaCc	User Administrator

7.2 Starting User Management



Only a user with the **User Administrator** role has the rights to manage users.

User Administrator needs to take the following steps in **User Management** before other users can start using the MW41 sounding software.

- ▶ 1. Log in with the default username and password.
 - When prompted, change the default password into an individual password of your own choice.

For instructions, see [Logging in \(page 43\)](#).
- 2. Log in again with your new password.
- 3. Add users to the system:
 - Create individual username-password pairs for each user.
 - Select **Password expired** as the initial state for the new user accounts.
 - Assign the users the user roles that your operations need.

For instructions, see [Adding users \(page 44\)](#).



To maintain sufficient level of security, Vaisala recommends that you always select the default state **Password expired** as the initial state for all user accounts. This means that users must change their passwords into an individual password of their own choice when logging in for the first time.

Users can now start using the MW41 sounding software.

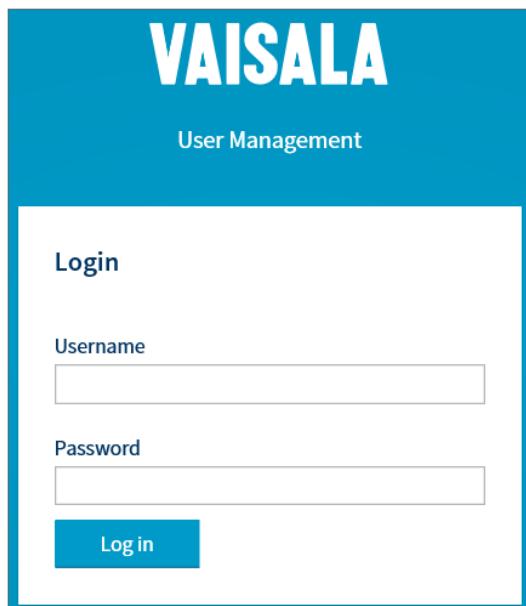
For detailed instructions on managing users and editing existing users when updating the MW41 sounding software to the new version including the **User Management** application, see *Vaisala DigiCORA Sounding System MW41 Technical Reference*.

7.2.1 Logging in

- 1. Select **User Management** on your desktop.



- 2. Log in with your username and password.
If you are logging in for the first time, type the default username and password.



3. If you are logging in for the first time, you are prompted to change the default password. Type the default password, the new password, confirm the new password, and select **Change**.

Change password

Your password has expired

Username

Password

New password

Confirm new password

You will be logged out automatically after changing the password

More information

- [Default username and password for User Administrator \(page 41\)](#)

7.2.2 Adding users



Only a user with the **User Administrator** role has the rights to manage users.

Before you add a user to the system, determine which user role(s) the user will need.

- 1. In the **Users** view, select **Add new user**.

The screenshot shows the Vaisala user management interface. On the left is a sidebar with the following menu items:

- Users
- Users Logged In
- Users
- >Password Configuration
- Identity Configuration
- Audit Trail Log

The "Users" item is currently selected, indicated by a blue background. To its right is the main content area titled "Users". This area contains a large blue button labeled "Add new user". Below this is a section titled "Filter" with a search bar labeled "Search users". A table follows, with columns for "Username", "State", and "Email". The first row of the table shows the data: "admin", "Active", and "admin@vaisala.com".

2. In the **Add user** window, fill in the user account information. The mandatory fields are marked with a circle.

Add user

• Username

• Password [Generate password](#)

Type in new password or generate it automatically Note!
New password will not be delivered to the user automatically

• State

Email

First name

Last name

• Roles

Save **Cancel**

Username

Username for the user.

Vaisala recommends that you give users individual usernames instead of generic names linked to the user role, such as operator.

Password

The user's password. Type a password or select **Generate password** to get an automatically generated password. The password must fulfill the requirements defined in **Password Configuration**.

State

The state of the user account. By default, **Password expired**.



To maintain sufficient level of security, Vaisala recommends that you always select the default state **Password expired** as the initial state for all user accounts. This means that users must change their passwords into an individual password of their own choice when logging in for the first time.

Table 10 User account states

State	Description
Password expired	Default state. The user must change the password on the first login.
Active	User account is active with the password defined in the Password field. The user can log in with the password.
Locked	User account is locked. The user cannot log in.

Email, First name, Last name

Optional fields

Roles

Role(s) for the new user. Make the selection(s) from the multi-selection drop-down list.



The same user may have roles for both AUTOSONDE and MW41 software and log in to both. For example, it may be convenient that administrator-level users have both **AS41 Administrator** and **MW41 Administrator** roles.

3. Select **Save**.

A confirmation message appears.

The new user appears in the list of users.

Username	State	Email	First name	Last name	Roles	Actions
admin	Active	admin@vaisala.cor			User Administrator	Edit Delete
Test user	Password expired				MW41 Operator	Edit Delete

More information

- [MW41 user roles \(page 41\)](#)

8. Connecting Observation Network Manager

8.1 Installing Thinfinity software

For remote desktop connection from Vaisala Observation Network Manager NM10, you must install and configure the Thinfinity Remote Desktop Workstation. The installation software is available on the software installation media in:

`\MW41\3rdPartySoftware\Thinfinity`

8.2 Installing NM10 software

For instructions on how to install the NM10 software, see *Vaisala Observation Network Manager NM10 Field Installation for MW41*, available on the MW41 installation media.

8.3 Connecting Observation Network Manager and MW41

To create a secure connection between Vaisala Observation Network Manager NM10 and MW41 computers, you must install SSL certificates in both NM10 and MW41 computers and generate a security key for MW41.

8.3.1 Required firewall settings

Firewall ports must be open at both AUTOSONDE and MW41 ends for the purposes listed in the table below. Usually these outgoing ports are always open.

The NM10 software installer automatically opens the Windows Firewall for the ports and protocols marked with the asterisk symbol * .

Table 11 Firewall settings (open ports)

From	To	Protocol	Target port	Purpose
MW41	Network Manager DCP Server	TCP	22*	SFTP file transfer from MW41
MW41	Network Manager DCP Server	TCP	8443*	HTTPS connection from MW41
Network Manager DCP Server	MW41	TCP	8443*	HTTPS connection to MW41
Network Manager user's network	MW41	TCP	8443*	MW41 Web UI

From	To	Protocol	Target port	Purpose
Network Manager user's network	MW41	TCP	8081	MW41 RDP connection

8.3.2 Copying NM10 certificate file to MW41

Before you start, make sure that both NM10 and MW41 computers are in the same network. You need a data storage device where you can copy the certificates temporarily, for example, a USB flash drive.

Start by copying the certificate file in the NM10 computer to the MW41 computer:

- ▶ 1. NM10 certificate files (file name ending in `.cer`) are stored in the NM10 computer's keystore directory in
`C:\Program Files (x86)\Vaisala\NetworkManager\config\jdcp_conf\certificates`.
- 2. Copy the correct `.cer` file, for example, on a USB flash drive. The file is named `<ComputerName>_nm10-backend.cer`.
- 3. Take the flash drive with you and go to the MW41 computer. Save the file in directory
`C:\ProgramData\MW41\observation-network-manager\trusted-servers`.
- 4. After saving the file, restart the MW41 computer. After the restart, the certificate has been taken into use in MW41.

Next, copy the MW41 certificate to the NM10 computer.

8.3.3 Copying MW41 certificate file to NM10

- ▶ 1. The certificates are stored in keystore directory `C:\ProgramData\MW41\keystore`. The file is named `<ComputerName>.cer`.
- 2. Copy the correct `.cer` file, for example, on a USB flash drive. Take the flash drive with you and go to the NM10 computer.
- 3. Save the `.cer` file in the NM10 keystore directory
`C:\Program Files (x86)\Vaisala\NetworkManager\config\jdcp_conf\certificates`.

8.3.4 Generating security key

- ▶ 1. If you have so far opened NM10 as read-only, log in to NM10 as an Administrator-level user.
- 2. Click the **Admin** button in the upper right corner.
- 3. Click **Security** and **Generate new key**.
- 4. Click **Export**. A .key ASCII file (for example, `auth_key_20171112111501.key`) is generated. Save the file, for example, on a USB flash drive.

5. Take the flash drive with you and go to the MW41 computer. Log in as an Administrator-level user and click **Administration > Devices and Systems > Observation Network Manager**.
6. In the **Server address** field, enter the NM10 computer name.
7. In the **Authentication Key** field, enter the NM10 authentication key. The key is available in the .key file you saved on the NM10 computer earlier. Open the file using Notepad.
8. In the **Authentication Secret** field, enter the NM10 authentication secret.
9. Click **Connect**.

To change the information in the MW41 Observation Network Manager window, click **Edit** and **Disconnect**.



If you click **Save** only, the information is saved, but connection to NM10 is not registered. You must click **Connect** to register MW41 in NM10.

10. Go back to the NM10 computer and click the **Exit Admin** button.
11. Check the **Soundings** tab in NM10. When the connection works, a new station appears here. When you click the station, the first message you see is **Source registered**.



If you are using the MW41 sounding software with AUTOSONDE and have registered a connection between NM10 and AUTOSONDE, the Observation Network Manager configuration is not available in MW41. The configuration is also not available if the MW41 station has been configured as a station that moves during the sounding.

9. Starting the sounding software

9.1 Starting the software and logging in

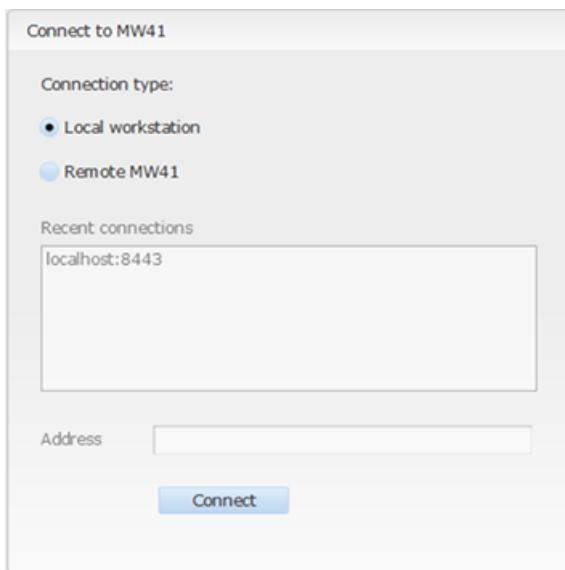


For a normal sounding, you need the **MW41 Operator** rights.

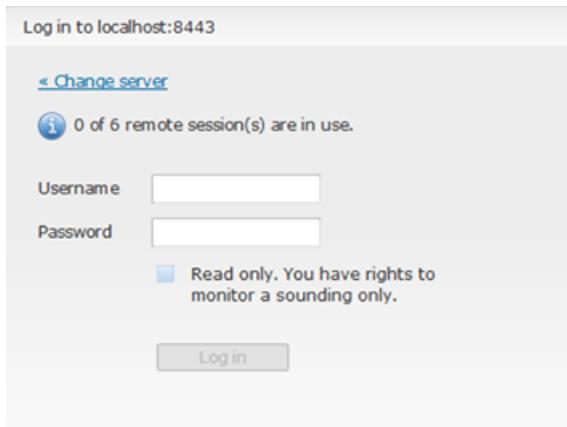
- ▶ 1. Power on Sounding Processing Subsystem SPS3xx before turning on the computer with the MW41 sounding software.
- 2. Turn on the computer.
- 3. Click the icon on the desktop to start the MW41 sounding software.



- 4. Make sure **Local workstation** is selected, and click **Connect**.



5. Log in with your username and password.



- The number of concurrent user sessions available depends on the type of the software license. The local user is always able to access the software. Local user here means a user who started the software on the local workstation where the software is installed, and who is performing the sounding.
 - If the **Read-only** check box is selected, you have read-only rights to the system, not full control. The check box is selected if another user already has full control of the system when you log in.
 - When a login message has been configured in the MW41 **Advanced** settings, you can see a notification message under the login window. For more information, see *Vaisala DigiCORA Sounding System MW41 Technical Reference*.
6. If you are logging in for the first time, change your password in **User Management** application.
- a. Type the old password, the new password, confirm the new password, and select **Change**.
7. Log in to MW41 sounding software with your new password.
All MW41 services are automatically started and a message is displayed to indicate that the system is starting.

9.2 Configuring the sounding software

Detailed instructions for making these settings are given in the online help, embedded in the MW41 sounding software. Access the help pages by clicking the help icon in the application toolbar and in the appropriate parts of the **Administration** window.



You need **MW41 Administrator** rights to be able to configure the MW41 sounding software.

When you first start the MW41 sounding software, the system prompts you to make the necessary configurations to the sounding system. Click the text links on the bottom of the window to directly access the settings you need to configure. At minimum, you must configure the station position settings and Sounding Processing Subsystem SPS3xx IP address before you can start a sounding.

If you have already made all the necessary configurations during a previous session, the software opens directly to the **Radiosonde Selection** tab.

Before you start a sounding, set the following in the **Administration** window:

- ▶ 1. In **Devices and Systems > Sounding Processing Subsystem**, give an IP address for SPS3xx.
- 2. In **Devices and Systems > Radiosonde - workstation connection**, set a serial port for the ground check device or the cable.
- 3. In **Soundings > Station**, set the station parameters:
 - WMO station name
 - WMO station number (3 digits; in case of a ship or a mobile station, enter 0.)
 - WMO block number (2 digits; in case of a ship or a mobile station, enter 0.)
 - WMO region number
 - Message type
 - Station position
- 4. In **Soundings > Messages**:
 - a. Set WMO message destinations.
 - b. Modify WMO message headers and footers.
- 5. In **Soundings > Radiosonde selection mode**, select the radiosonde preparation mode, if necessary.

For advanced-level configurations, see *Vaisala DigiCORA Sounding System MW41 Technical Reference*.

9.3 Creating operating system backup

A sounding software computer purchased from Vaisala includes a backup of the computer's hard drive on an external hard drive.

When customized settings are ready, a new backup is recommended.

On a computer not acquired from Vaisala, it is recommended to create a backup when the system setup is ready.

Backup and restore procedures are explained in the following document, available on the installation media:

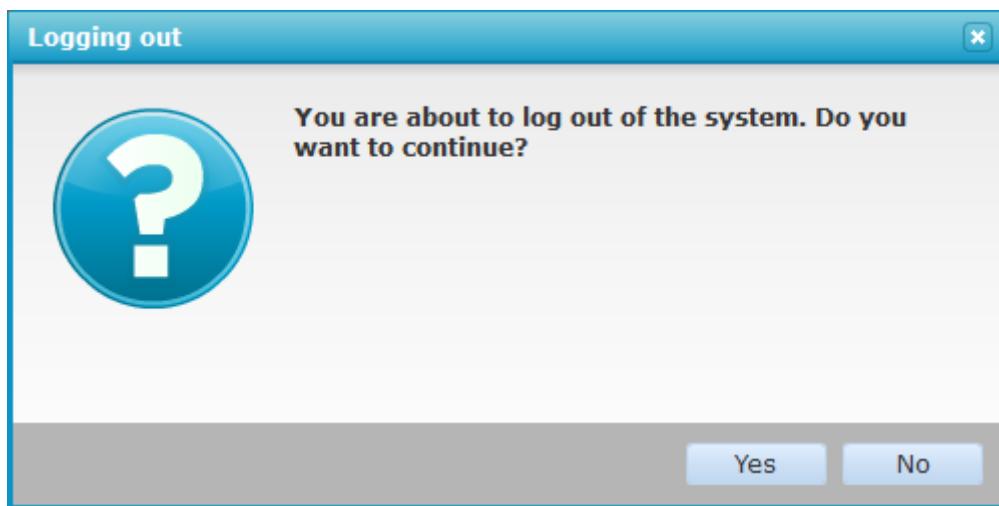
- *Backing Up and Restoring Windows 10 for MW41 Sounding System*

9.4 Logging out

- ▶ 1. To log out of the sounding software, click the **Log out** button in the application header.



A confirmation message is displayed.



10. Creating connections

10.1 Connecting Sounding Processing Subsystem SPS3xx



Unless otherwise mentioned, SPS3xx refers to all Sounding Processing Subsystem models (SPS31G and SPS34AG).

To connect the MW41 computer to Sounding Processing Subsystem SPS3xx, create the following firewall and IP address settings:

- ▶ 1. Make all the physical connections as instructed in [Connecting SPS3xx and Sounding System MW41 \(page 20\)](#).
- 2. Check that a firewall does not hinder the connections. See [Using firewall \(page 55\)](#).
- 3. To change the IP addresses, see [Changing SPS31G IP address \(page 56\)](#) or [Changing SPS34AG IP address \(page 61\)](#).



The default IP address of the sounding processing subsystem is 192.168.0.10. The workstation's default IP address is 192.168.0.1.

10.1.1 Using firewall



It is recommended to use a firewall between the MW41 workstation and the sounding processing subsystem.

Windows Firewall

You do not have to disable the Windows firewall to be able to create MW41 connections. The MW41 installer automatically opens the necessary ports.

Other Firewalls

Other firewalls require you to open the following ports manually:

- Inbound TCP port 42990 for SPS3xx
- Outbound TCP port 42900 for SPS3xx
- Inbound TCP port 8443 for HTTPS web service

You might also have to open the following ports:

- Inbound TCP port 8081 for Thinfinity remote desktop

- Inbound TCP port 443 for Axeda

10.1.2 Changing SPS311G IP address

There are two ways of connecting to SPS311G: VNC and PuTTY. The primary method is VNC, but, if that fails, you can use PuTTY.

After you have created the connection to the unit, you can change the SPS311G IP address using the RegConfig program. RegConfig is an internal program in SPS311G plug-in units for setting the communication parameters of the unit.

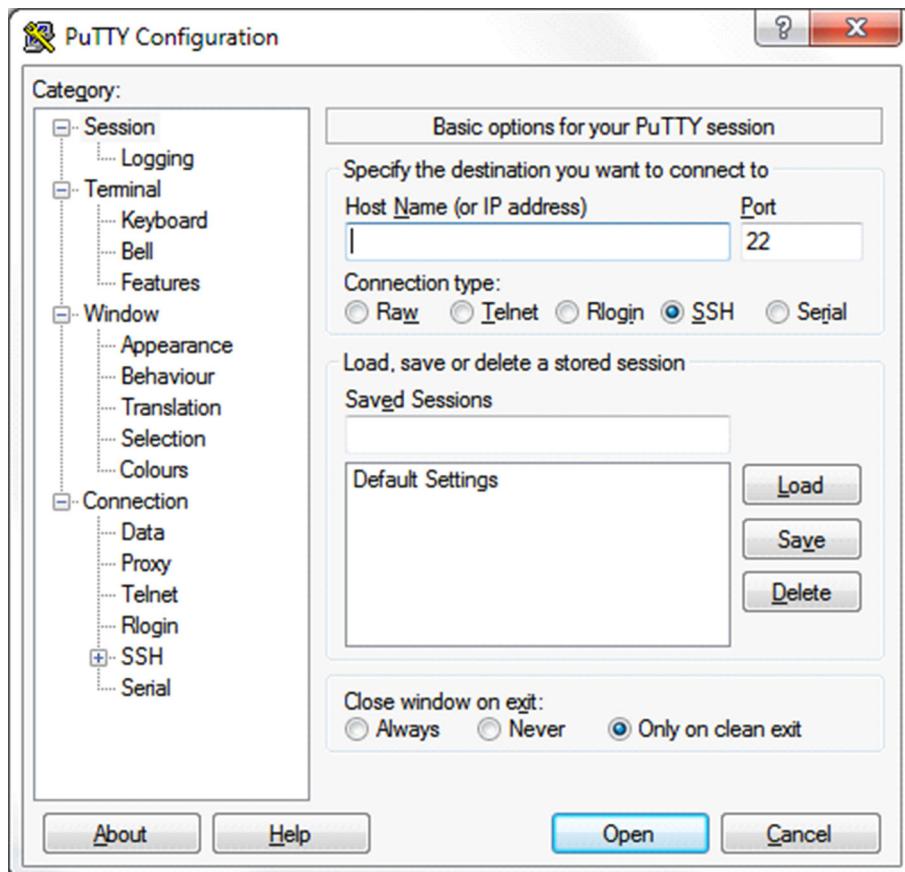
10.1.2.1 Connecting to plug-in unit with VNC

- ▶ 1. Switch on the power to the sounding processing subsystem.
- 2. Start VNCViewer by selecting **Start > Run...** and type
`<MW41 Install Directory>\Utils\VCViewer\VCViewer.exe`.
(The default MW41 install directory in 64-bit Windows 7 is `C:\Program Files (x86)\Vaisala\MW41\`).
- 3. Type the unit's default IP address in the VNC server box and click **OK**.
SPS311G: 192.168.0.10
- 4. Log in to the system by typing the following information:
Session password: Administrator
- 5. Click **OK**.
- 6. Start the RegConfig program on the unit by clicking the **Start** button and selecting **Run**.
- 7. Type **regconfig** in the **Open** text box and click **OK**.
- 8. If you have made changes with RegConfig, you are prompted to save the changes. If you choose to save your changes, the unit restarts automatically and the VNC connection ends.
- 9. If you did not make any changes, end the connection by clicking **Close**.

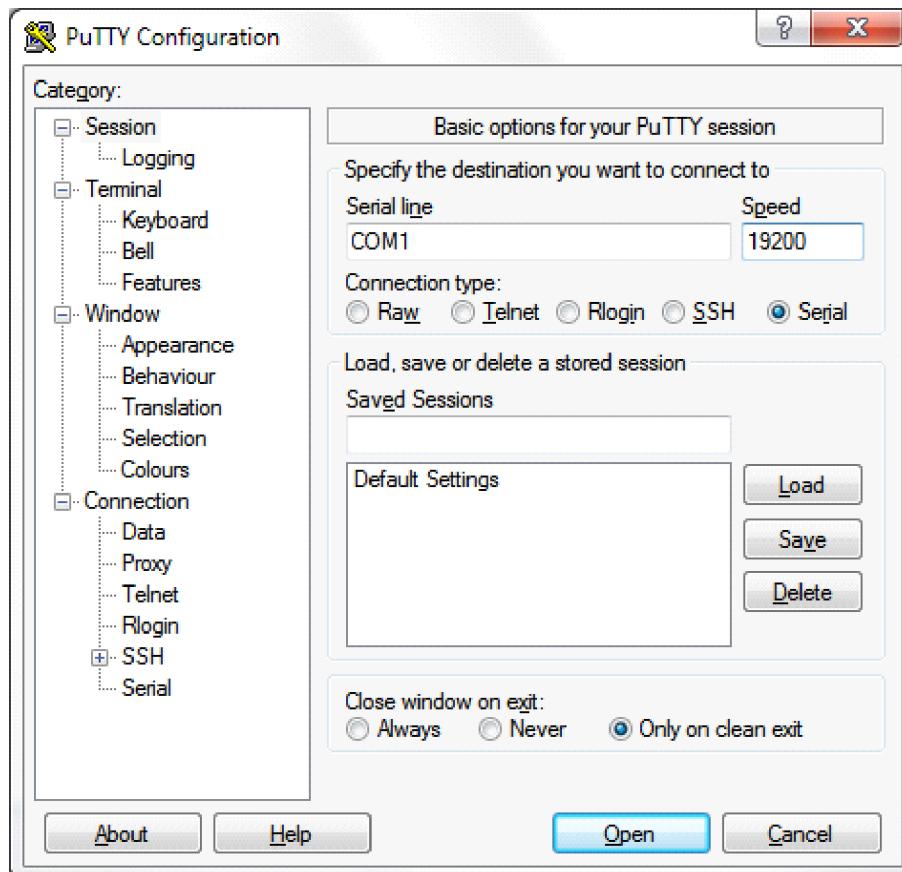
10.1.2.2 Connecting to plug-in unit with PuTTY

- ▶ 1. Open the SPS311G front cover to access the MRP111 unit's COM1 port.
- 2. Connect the workstation's COM port to the MRP111 unit's COM1 port with cable MW45042.
- 3. Start the program by selecting **Start > Run...** and type
`<MW41 Install Directory>\Utils\Putty\PuTTY.exe`
(The default MW41 install directory in 64-bit Windows 7 is `C:\Program Files (x86)\Vaisala\MW41\`).

4. Click **Connection - Serial** on the left, and set the properties of the new connection on the right. See the next step for details.



5. In the **Serial line** field, type the workstation's COM port to which the cable is connected. In the **Speed** field, type the baud rate.



6. Configure the settings:

Speed (baud):

19200

Data bits:

8

Stop bits:

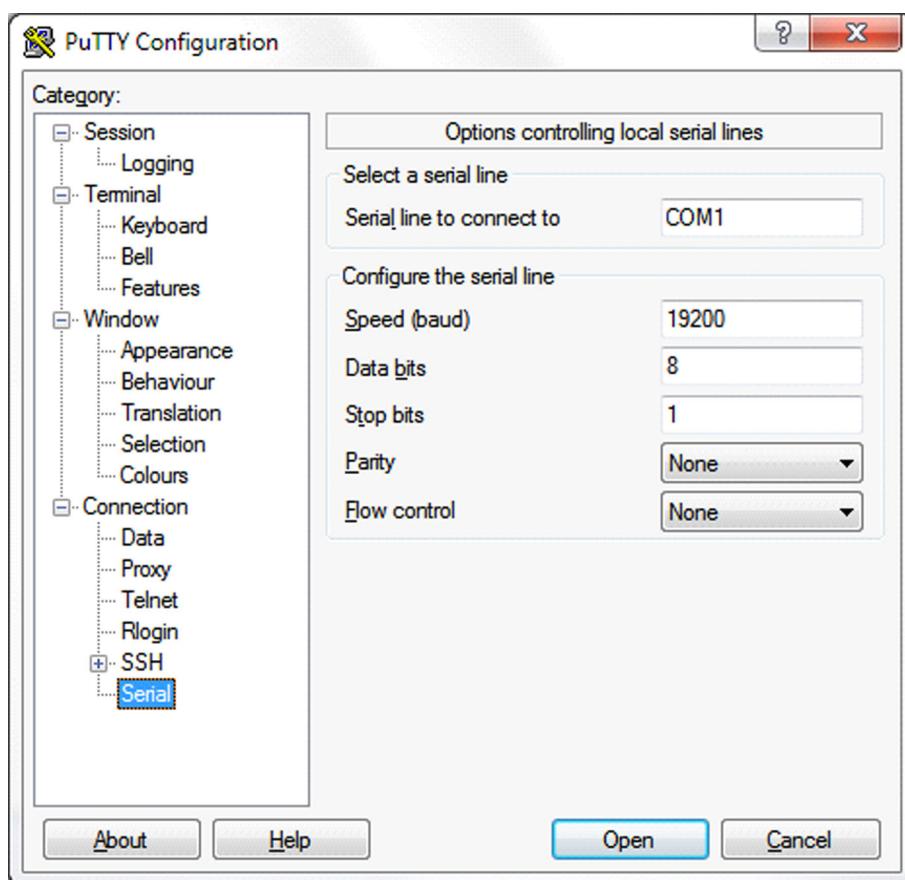
1

Parity:

None

Flow Control:

None



7. Click **Open**. The terminal opens.

8. The system prompts you for:

UserName:

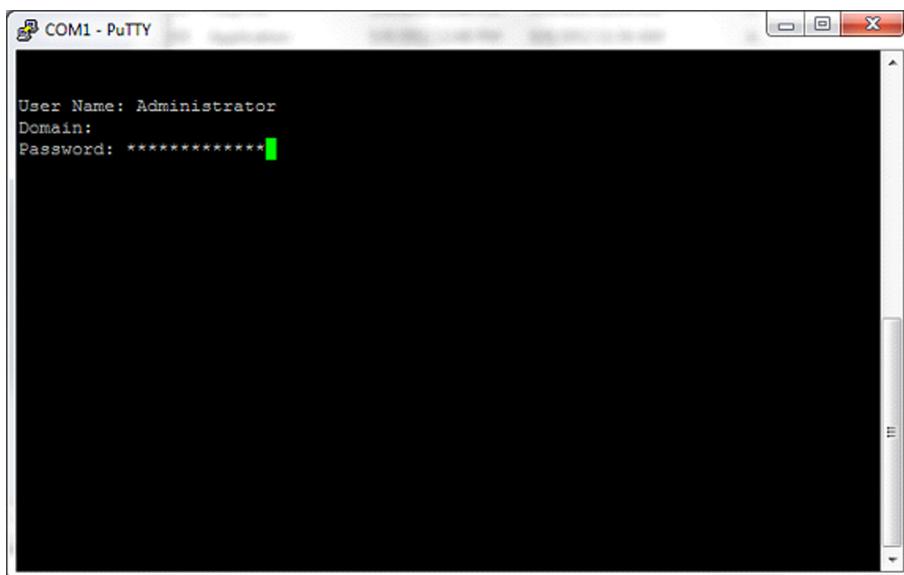
Administrator (ENTER)

Domain:

(empty) **(ENTER)**

Password:

Administrator (ENTER)



9. Start the RegConfig program by typing **regconfig** and press **ENTER**.
10. If you have made changes with RegConfig, you are prompted to save the changes. If you choose to save your changes, the unit restarts automatically and the PuTTY connection ends.
11. If you did not make any changes, end the connection in the following way:
- a. SPS311G: Type **exit** and press **ENTER**.
 - b. Close the program.

10.1.2.3 Using RegConfig to change SPS311G IP address

Table 12 SPS311G settings for RegConfig

Setting	Value	Description
Hostname/Computer name	MRP111-<serial number>	Unit's hostname
IPAddress	192.168.0.10	Unit's IP address
SubnetMask	255.255.255.0	Unit's subnet mask
DefaultGateway	0.0.0.0	Unit's default gateway
VaisalaNameServer	MMW	Cannot be edited, for viewing only.



VaisalaNameServer cannot be edited, the information can only be viewed.

RegConfig also displays hardware information: the serial number of the plug-in unit and the hardware version.

```
RegConfig edits basic communication parameters of this embedded PC.
```

```
Hostname/ComputerName MRP111-X23208
IPAddress          192.168.0.10
DefaultGateway     0.0.0.0
SubnetMask         255.255.255.0
VaisalaNameServerIP MMW
```

Hardware info:

```
X23208
000
```

10.1.2.3.1 Changing the administrator password on SPS311G

Plug-in unit MRP111 has a username **administrator**, whose default password is **Administrator**. To change the password:

- ▶ 1. Open a connection to the unit. For details, see [Using RegConfig to change SPS311G IP address \(page 60\)](#).
- 2. Start User Manager by selecting **Start > Run**. Type **cmd** to open a Command Prompt and then type **usermgr.cmd**.
- 3. Double-click **Administrator** in the **Username** list.
- 4. Type the new password to **Password** and **Confirm Password** boxes.



Do not change other options for this user. Memorize the new password carefully.

- 5. Close User Manager by selecting **User > Exit**.

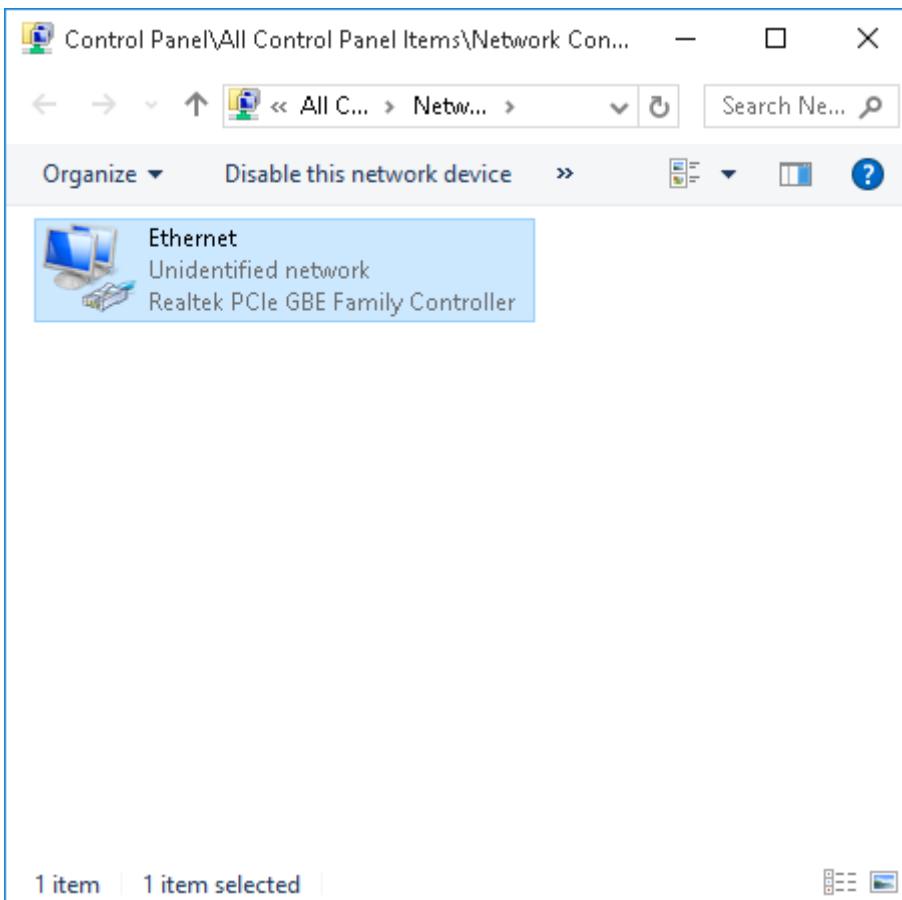
The unit will now restart. Starting the unit takes about two minutes.

10.1.3 Changing SPS341AG IP address

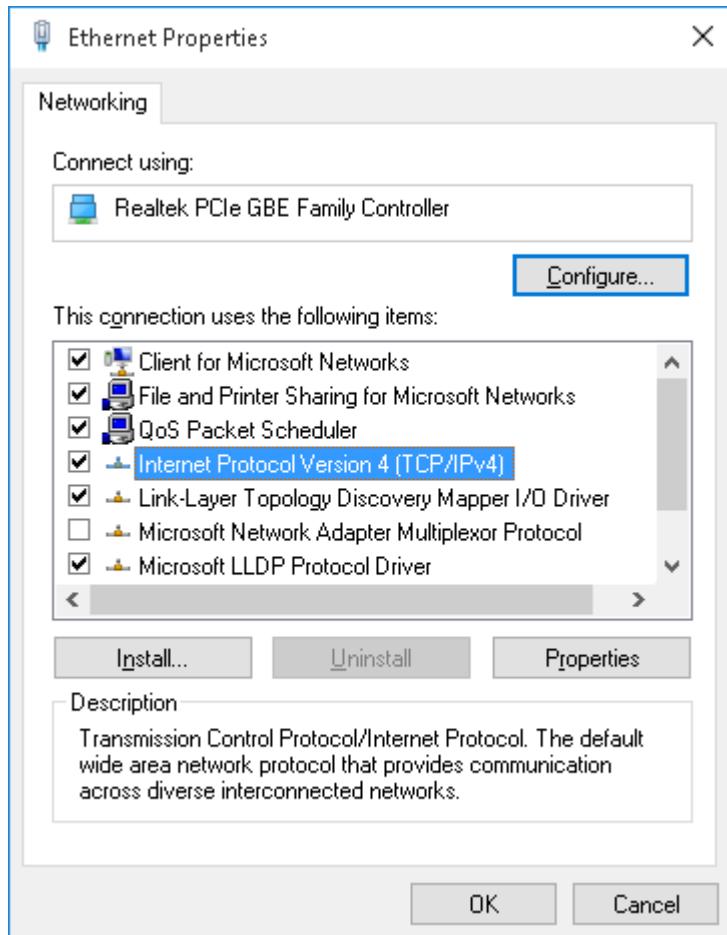
You can change the SPS341AG IP address either by using a local keyboard, mouse and display, or a remote desktop connection.

10.1.3.1 Changing IP address using local keyboard, mouse and display

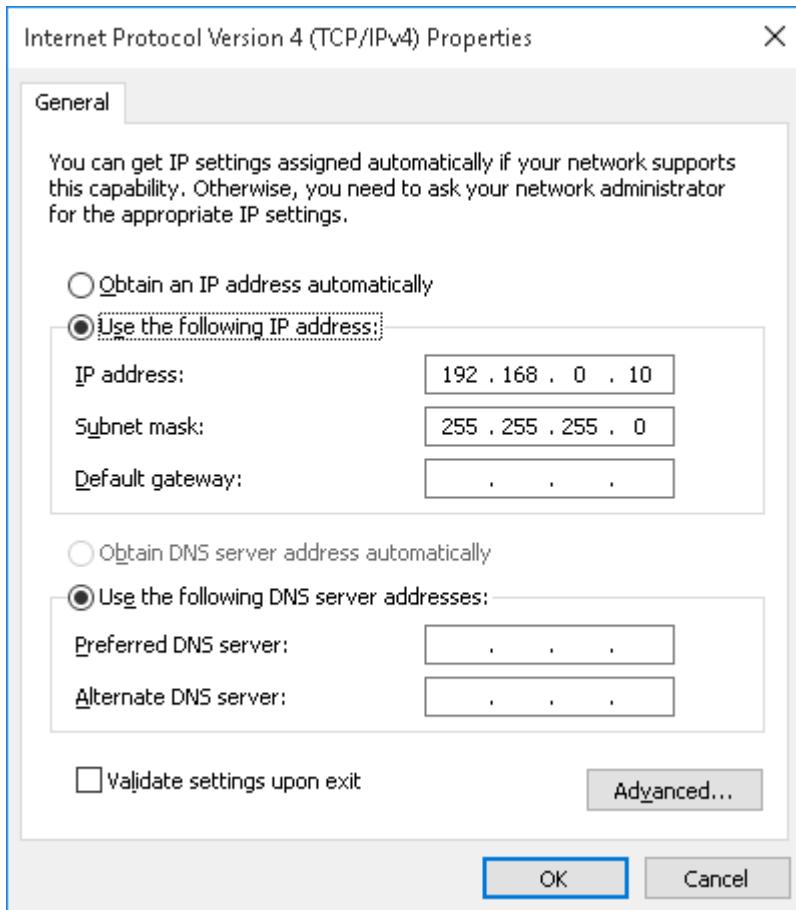
- ▶ 1. Open the front cover of the SPS341AG unit. Connect a keyboard and a mouse to the USB connectors on the MPU121A front panel.
- 2. At the back of the SPS341AG unit, connect a VGA display to the VGA connector.
- 3. Log in to the SPS341AG unit.
Username: **Administrator**
Password: **adpw_VA1**
- 4. Click the **StartIPchange** icon on the desktop.
The IP address change starts.
- 5. Wait about 30 seconds for the SPS341AG unit to reboot, and then log in to the unit again.
- 6. Click the **ChangeIP** icon on the desktop.
- 7. Right-click **Ethernet** and select **Properties**.



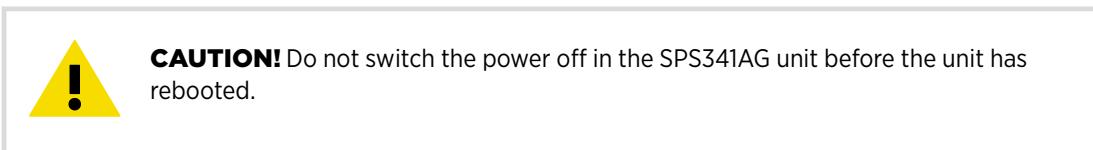
8. In the **Ethernet Properties** window, select **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.



9. In the **Internet Protocol Version 4 (TCP/IPv4 Properties)** window, change the TCP/IPv4 properties as required by your network, and then click **OK**.



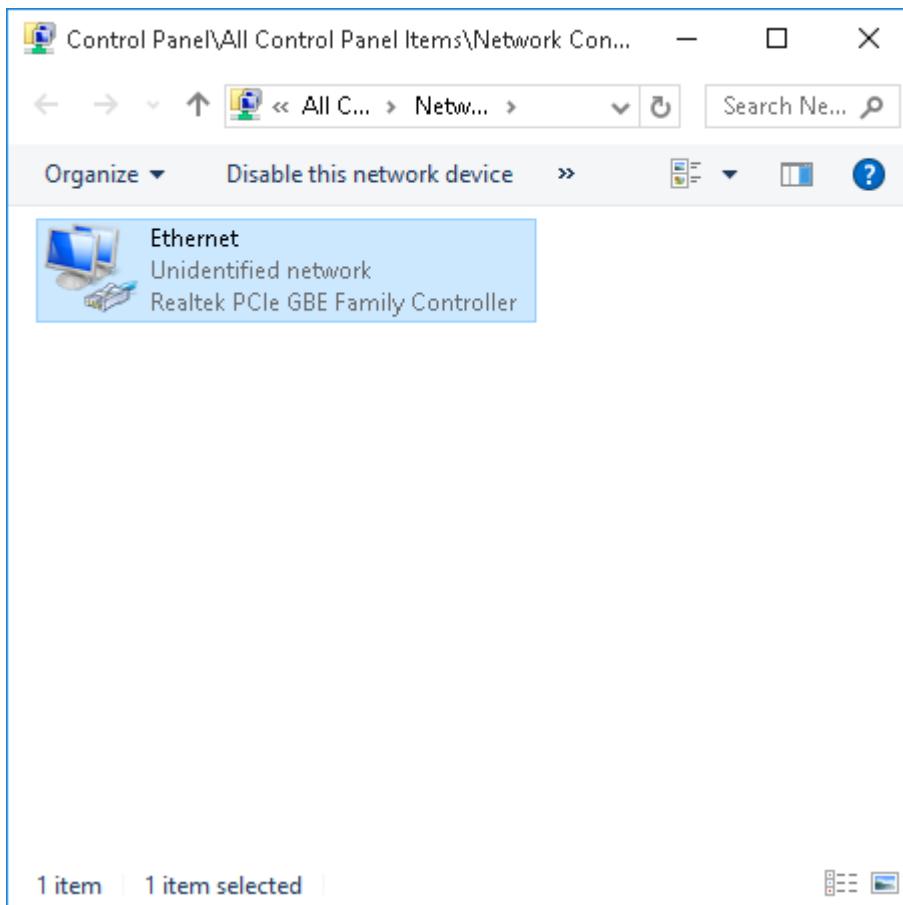
10. In the **Ethernet Properties** window, click **OK**.
11. Click the **EndIPchange** icon to finalize the IP address change.
12. Wait 3 minutes for the SPS341AG unit to reboot.



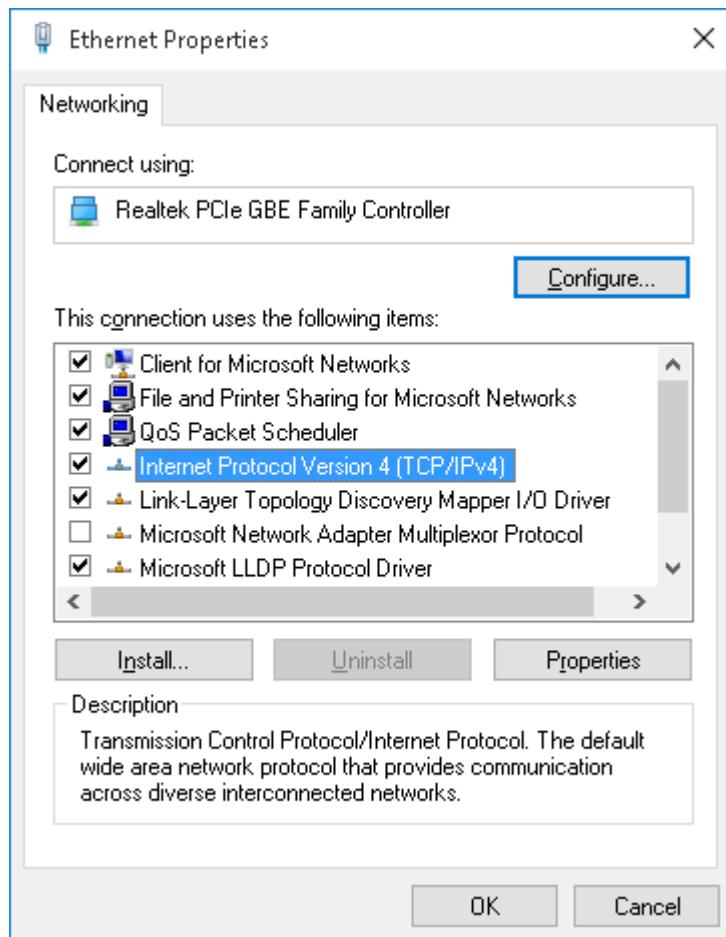
13. Switch the power off in the SPS341AG unit, wait 10 seconds, and then switch the power back on.
The SPS341AG unit is now ready for soundings.
14. Disconnect the keyboard, mouse, and display.
15. Close the SPS341AG front cover.

10.1.3.2 Changing IP address using remote desktop connection

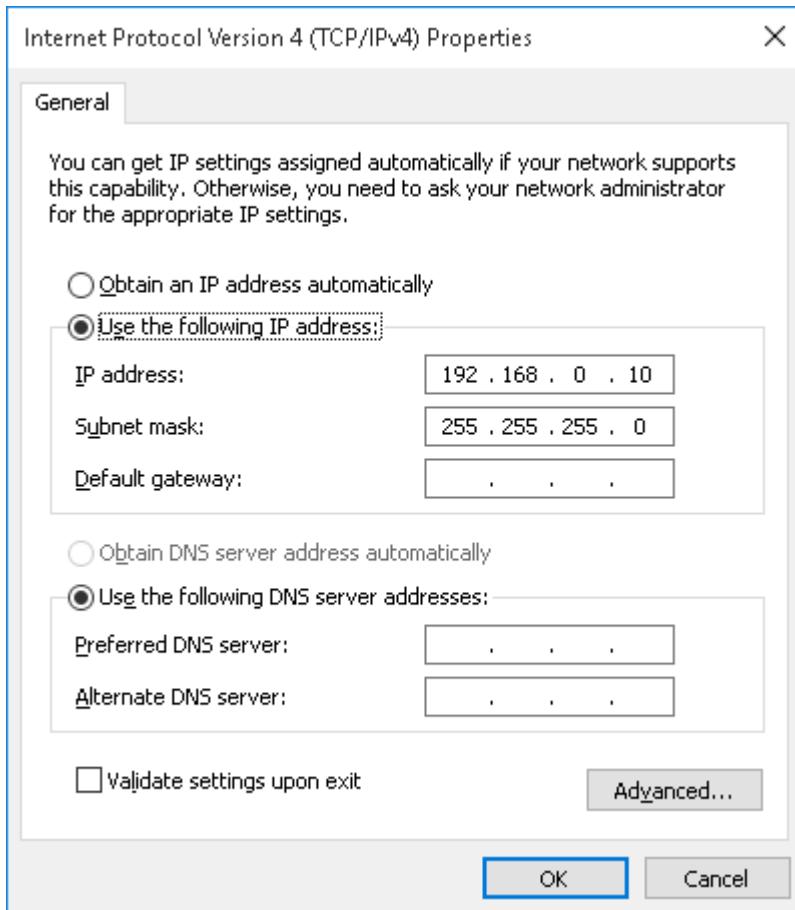
- ▶ 1. Change your computer to use IP address **192.168.0.1** and subnet mask **255.255.255.0**.
- 2. Connect an Ethernet cable from your computer to the SPS341AG unit.
- 3. Open a remote desktop connection to the SPS341AG unit. Use IP address **192.168.0.10**.
Username: **Administrator**
Password: **adpw_VA1**
- 4. Click the **StartIPchange** icon on the desktop.
The IP address change starts.
- 5. Wait about 30 seconds for the SPS341AG unit to reboot, and then log in to the unit again.
- 6. Click the **ChangeIP** icon on the desktop.
- 7. Right-click **Ethernet** and select **Properties**.



8. In the **Ethernet Properties** window, select **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.



- In the **Internet Protocol Version 4 (TCP/IPv4 Properties)** window, change the TCP/IPv4 properties as required by your network, and then click **OK**.



- In the **Ethernet Properties** window, click **OK**.
- Your remote desktop connection to the SPS341AG unit is terminated because your computer is no longer in the same address space as the SPS341AG unit. Change the IP address of your computer so that it can communicate with the SPS341AG unit.
- Open a remote desktop connection to the SPS341AG unit again. Use the new IP address of the SPS341AG unit.
- Click the **EndIPchange** icon to finalize the IP address change.
- Wait 3 minutes for the SPS341AG unit to reboot.



CAUTION! Do not switch the power off in the SPS341AG unit before the unit has rebooted.

- Switch the power off in the SPS341AG unit, wait 10 seconds, and then switch the power back on.
The SPS341AG unit is now ready for soundings.

10.2 Connecting Ground Check Device RI41 or MWH322

10.2.1 Disabling GC25

If you have used Ground Check Set GC25 for preparing the radiosonde in the previous soundings, you must disable it before taking Ground Check Device RI41 or MWH322 into use.

- ▶ 1. In MW41, select **Administration > Devices > Radiosonde – workstation connection**.
- 2. From the drop-down list, select **None**.
- 3. Select **Save**.
- 4. Switch off GC25 and disconnect the cable from the sounding workstation.
- 5. Disconnect the GC25 power cable.

10.2.2 Connecting RI41 or MWH322

- ▶ 1. Connect the ground check device USB cable to the PC's USB port.
The ground check device is powered on when it is connected to the PC.
- 2. Configure RI41 or MWH322 as the ground check device to be used as the connection between the radiosonde and the sounding workstation:
In MW41, select **Administration > Devices > Radiosonde – workstation connection**.
- 3. From the drop-down list, select the correct device. Select also the correct serial port.
- 4. Select **Save**.

10.3 Connecting to MW41 remotely



To connect to MW41 remotely, you must have an active MW41 account.

- ▶ 1. With a browser, go to MW41 login page (<https://<computername>:8443>).
You see a link where you can download the remote client.
- 2. Download and install the remote client.
- 3. Open the remote client. Define MW41 address and select **Connect**.
- 4. If you are connecting for the first time, install the security certificate when prompted.
- 5. Log in.
You can now use MW41 remotely.
Most functionalities open in the remote client, but User Management and online help open in your default browser.

More information

- Requirements for remote client (page 12)

Technical support



Contact Vaisala technical support at helpdesk@vaisala.com. Provide at least the following supporting information as applicable:

- Product name, model, and serial number
- Software/Firmware version
- Name and location of the installation site
- Name and contact information of a technical person who can provide further information on the problem

For more information, see www.vaisala.com/support.

Warranty

For standard warranty terms and conditions, see www.vaisala.com/warranty.

Please observe that any such warranty may not be valid in case of damage due to normal wear and tear, exceptional operating conditions, negligent handling or installation, or unauthorized modifications. Please see the applicable supply contract or Conditions of Sale for details of the warranty for each product.

Recycling



Recycle all applicable material.



Follow the statutory regulations for disposing of the product and packaging.

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