



# **Software Update Notification**

Malvern Link II v3.47.1

Date

1 September 2021

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## 1. Update Summary

This release introduces a REST (Representational state transfer) service as part of the Malvern Link II software suite. This REST service uses standard HTTP operations (GET, POST, PUT, etc) to implement control over the data items that are exposed in Malvern Link. All items that are exposed to one of the OPC servers are also exposed to the REST service, allowing the manipulation of these items by third party software.

## 2. Software Product Overview

Malvern Panalytical manufactures analyser instruments used for particle-size measurement. The Analyzer instrument is used to monitor and optimize a manufacturing process. Malvern Link II software will provide a single uniform platform for automating the process line interface, analyser instruments and additional hardware.

1. Malvern Link II product suite has five product editions:
2. Malvern Link II Essential
3. Malvern Link II Lite  
(simple version for reporting analyser data only)
4. Malvern Link II OEM  
(version for controlling analyser only)
5. Malvern Link II Pro  
(includes remote reporting and control)
6. Malvern Link II Ultra  
(includes remote reporting/control and 21 CFR Part 11 compliance – compatible with Insittec Only)

*Note: When you install the Malvern Link II product first time it will install the Malvern Link II version. To update the application version from basic to Pro or Ultra version you must use the License Manager.*

### 2.1. Malvern Link II Edition matrix

Features	Essential	Lite	OEM	Pro	Ultra
Automation Cabinet OPC Server	✓	✓	✓	✓	✓
Device Configuration	✓	✗	✗	✓	✓
Mimic Designer	✓	✗	✗	✓	✓
Analyser Interface	✓	✓	✓	✓	✓
Document Portfolio	✓	✗	✗	✓	✓
SOP Studio	✓	✗	✓	✓	✓
Alarm E-Mail notification	✓	✗	✓	✓	✓
User Security Management	✓	✗	✗	✓	✓
Modbus OPC Server	✗	✓	✓	✓	✓
Malvern Link II OPC Server	✗	✓	✓	✓	✓
Remote Control	✗	✗	✓	✓	✓
Data export (Fieldbus, Wired IO, OPC)	✗	✓	✓	✓	✓
LIMS Integration	✗	✗	✓	✓	✓
SOP versioning	✗	✗	✗	✗	✓
Changes tracking	✗	✗	✗	✗	✓
Advanced Security	✗	✗	✗	✗	✓

## 3. Installation

It is assumed that you have authority to install or update software within your facility. It is also assumed that you have Administrator rights for the system upon which the software is installed, as this is a requirement of the installation process. If you do not have this authority, please consult with your I.T. support department before proceeding.

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### 3.1. Instrument compatibility

The Malvern Link II v3.20 software is compatible with:

- the following model of Insittec
  - ITB5xxx and ITT5xxx : Insittec 2000 model
  - IDC5xxx : Insittec 2004 model
  - ITX5xxx : Insittec X model
  - ILC5xxx : Insittec Liquid
- the Mastersizer 2000
- the Mastersizer 3000
- the Zetasizer family:
  - Zetasizer
  - APS

### 3.2. Mastersizer software compatibility

The recommended version of Mastersizer software for this release of Malvern Link II software is version 3.72.

### 3.3. Minimum System Requirements

The key minimum requirements for running this software are highlighted in the table below:

Feature	Specification
CPU	Intel Core i7
Memory	4GB
Hard Disk Storage	160 Giga Byte
Display Resolution	1024 x 768
Operating System	Windows 8 Professional Windows 10 Professional (preferred)

### 3.4. Windows Security Policy

The user must have the Administrator rights in order to install Malvern Link II software

### 3.5. Prerequisites

The Malvern Link II automation software requires that the following already be installed on the PC, in addition to the Operating System requirements:

Software	Description
1. Microsoft .NET Framework 3.5 and 4.x	Microsoft .Net core components
2. OPC Core Components Redistributable (x86) 101.2	OPC foundation redistributable components
3. RTSizer Software (version 7.40 minimum)	Insittec Software (if applicable)
4. Mastersizer 2000 Software	Mastersizer 2000 software (if applicable)
5. Mastersizer 3000 Software (version 3.72)	Mastersizer 3000 software (if applicable)
6. Zetasizer Software	Zetasizer software (if applicable)

The Microsoft .NET Framework 4.0 should be activated in windows, before the installation is done. The computer needs to be connected to the internet or have access to the appropriate Windows installation media. The Microsoft .NET Framework 4.0 can be activated by following the steps below:

- Open the windows Control Panel
- Click on Programs
- Click on Turn Windows Feature on or off
- Select .NET Framework 3.5 and .NET Framework 4.x (ASP.NET 4.x), where x is a number 0 or higher depending on the Windows version and the update state of the computer.
- Click on the OK button



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### 3.6. Installing the software

The Malvern Link II software can be installed by running the executable “setup.exe” in the root of the installation medium. If prompted to install prerrequired software components, install these components first. Malvern Link II installation will resume after all required software is installed.

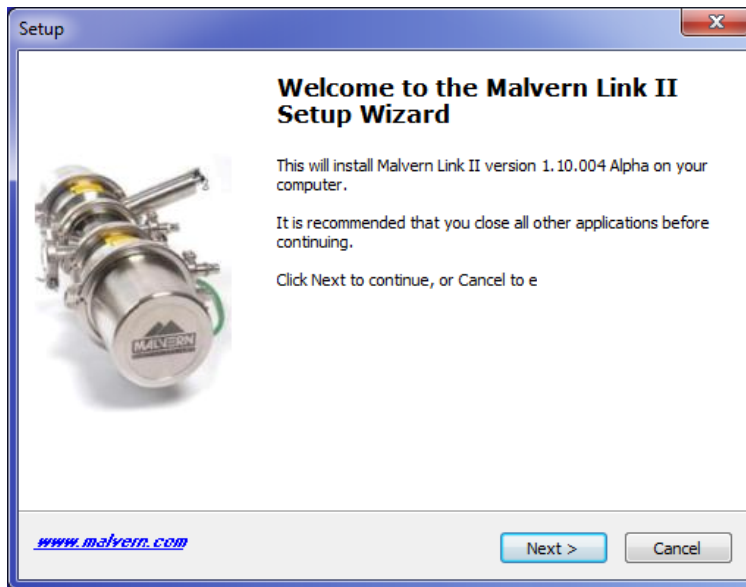
### 3.7. Upgrading previous versions of Malvern Link II

You must uninstall any previous version before installing Malvern Link II. Please backup the existing configuration first, using the Malvern Link Backup Tool.

### 3.8. Installation Steps

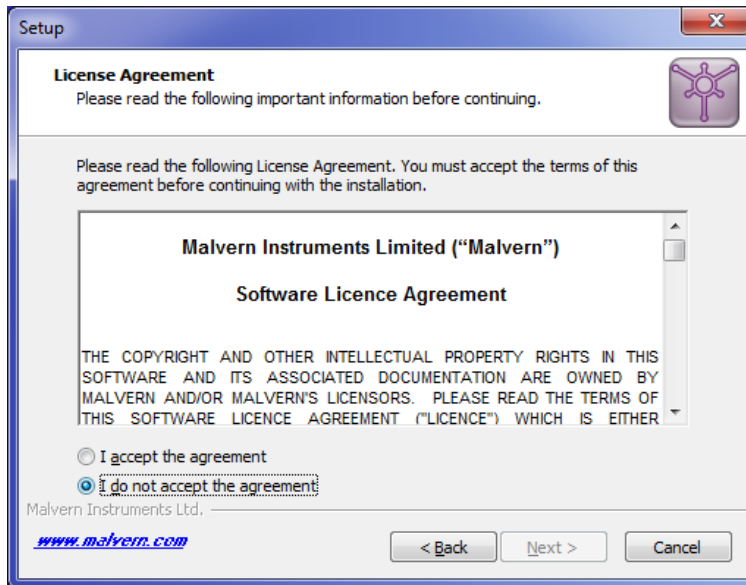
This section describes the installation steps of Malvern Link II product.

1. Double click the Malvern Link II setup. The setup will start and the following window is displayed.

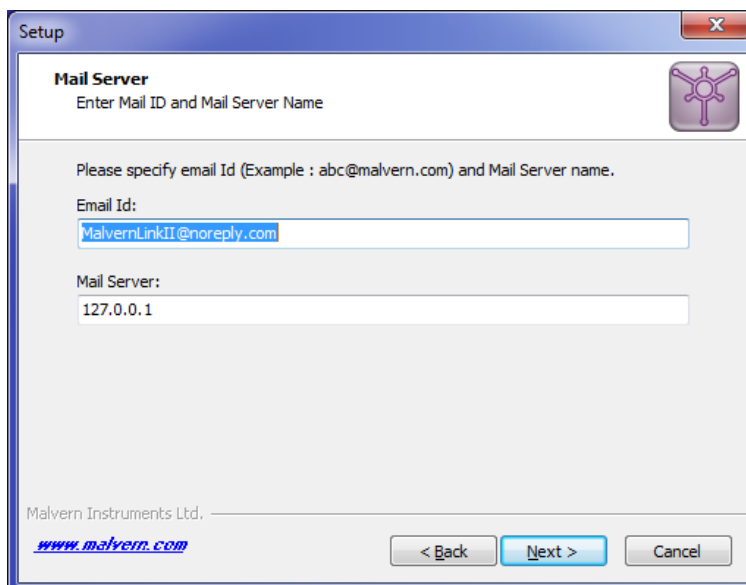


2. Click **Next**. The **License Agreement** window is displayed.

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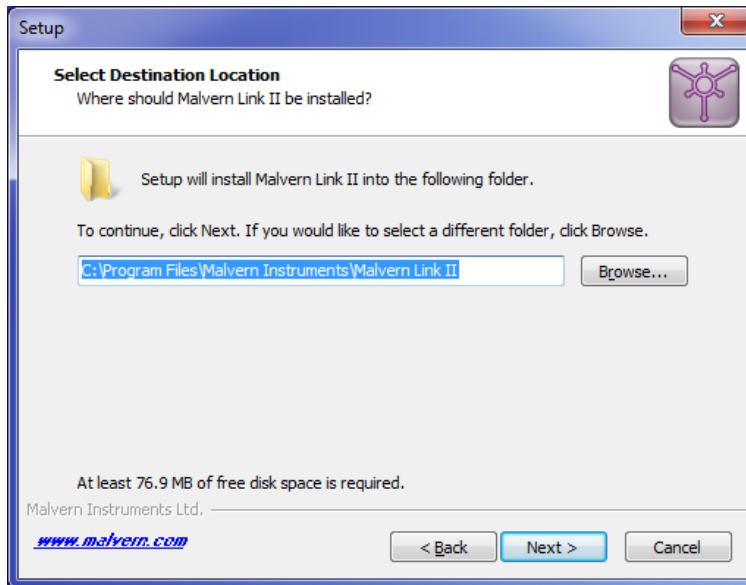


3. select **I accept the agreement** and click **Next**. The **Mail Server** window is displayed.

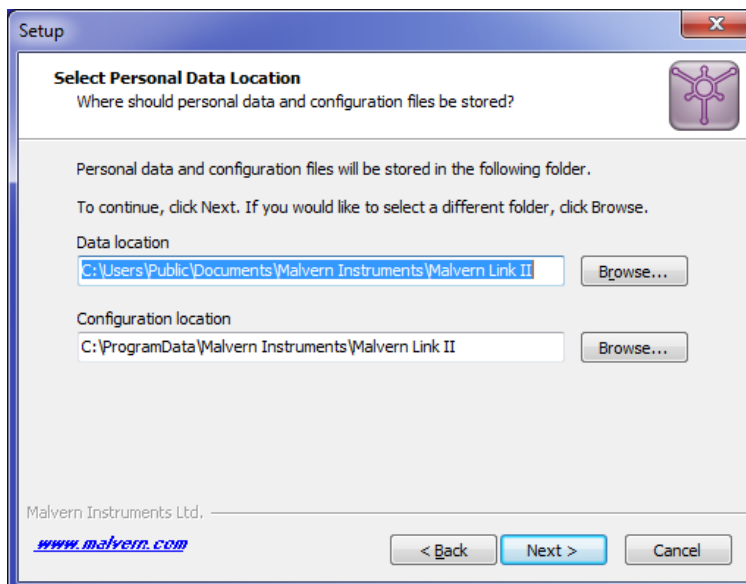


- The E-mail address is used for identifying further Malvern Link II alarms.
  - The Mail server should be the local E-mail server e.g. mail.server.com or 172.154.1.1
4. Type the e-mail Id and mail server name in the **Email Id** and **Mail Server** fields and click **Next**. The **Select Destination Location** is displayed with the default location of the installation directory.

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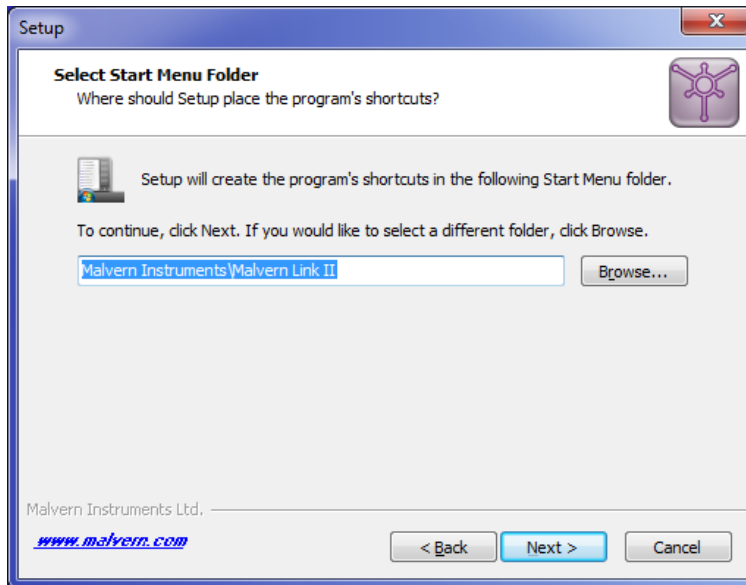


5. Default installation location is displayed, to change the installation location click **Browse** and select the required location where the Malvern Link II product shall be installed and click **Next**. The **Select Personal Data Location** window is displayed with the default locations of Malvern Link II data and configuration files.

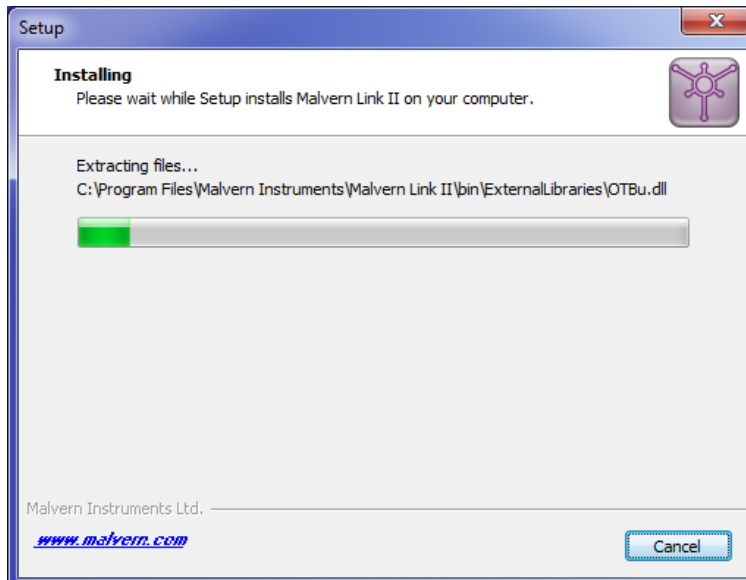


6. Default installation configuration files location and default data location are displayed, to change the locations click **Browse** and select the required location where the Malvern Link II data and configuration files shall be installed and click **Next**. The **Select Start Menu Folder** window is displayed with the default location of Malvern Link II shortcuts. Installation location for data files must be in Shared Folders to enable non-Administrator user access.

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- Click **Browse** to select the required location where Malvern Link II shortcuts should be placed and click **Next**. The **Ready to Install** window is displayed with the summary of destination location and the start menu folder location.



- Click **Install**. Malvern Link II installation starts, and the installing window is displayed.

*Note: If default process definitions exist in the configuration folder, the setup shall display a message **Default Process Definitions already exist. Do you want to overwrite?** Click "Yes" if you want to overwrite the existing configurations. Before copying the files, the setup will perform a Windows Registry Cleaning.*





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9. After successful installation, the **Completing the Malvern Link II Setup Wizard** window is displayed.



10. Click **Finish**.

## 4. Post-Installation

This section describes the procedure to be executed after installing the Malvern Link II product.

### 4.1. Select language

This section describes the language selection of Malvern Link II.

1. Go to **Start->All Programs->Malvern Instruments->Malvern Link II->Language Selector**. The application will start and the following window is displayed.



2. Select the required language and click **OK**.



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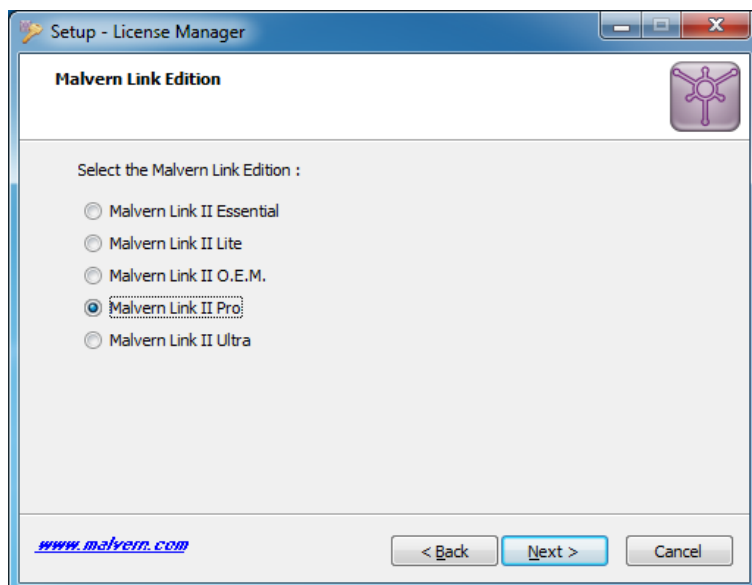
#### 4.2. Registration

The section describes the registration process from Malvern Link II version to Malvern Link II Pro version or Malvern Link II Ultra version.

1. Go to **Start->All Programs->Malvern Instruments->Malvern Link II->License Manager**.

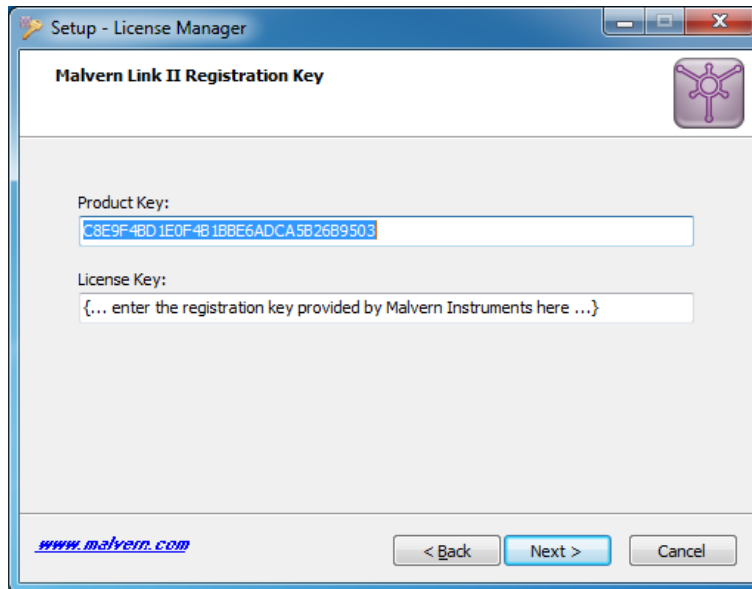


2. Click on **Next**.



3. Select the **Malvern Link II** edition and click on **Next**.

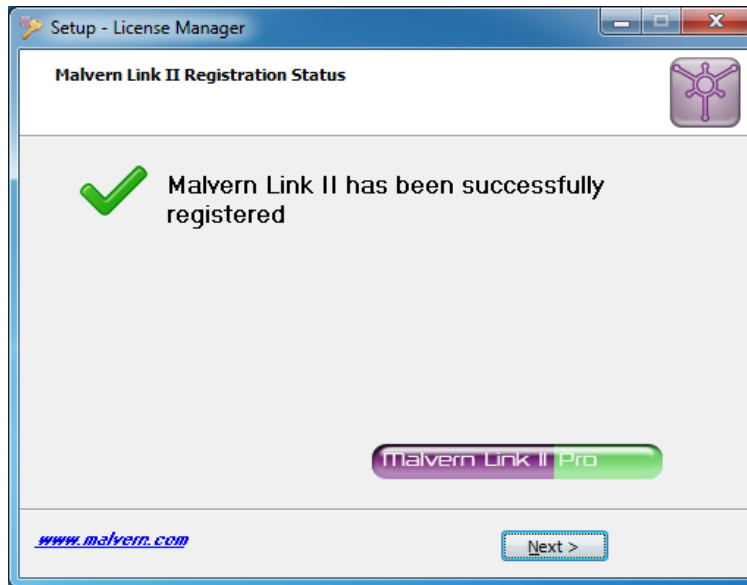
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4. Type the registration key of the selected **Product Key** in the **Registration Key** field and click **Next**.



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5. A message is displayed after registration is successful or not.

### 4.3. Uninstall Procedure

The software may be uninstalled using the standard Add/Remove Programs feature within the Windows control panel.

### 4.4. Malvern Link II Directory Structure

This section describes the Malvern Link II default directory locations after installation. Malvern Link II is installed in the following three directories:

1. **Installation Directory:** Contains all assemblies and executables of Malvern Link II. The installation setup of Malvern Link II provides the facility to select the installation directory. The default location of the installation directory is given below:
  - {Program Files (x86)}\Malvern Instruments\ Malvern Link II
2. **Configuration Directory:** Contains the configuration files of the process definitions. Malvern Link II installation also provides few default process definitions in the setup. The default location of the configuration directory is given below:
  - {ProgramData}\Malvern Instruments\Malvern Link II\Configuration
3. **Data Directory:** Contains the process definition data saved at run time in Malvern Link II application. This directory contains the measurement data, batch details and logging details. The default location of the data directory is given below:
  - {All Users}\Documents\Malvern Instruments\Malvern Link II\Data

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## 5. Fixed issues

The following issues have been fixed in this release:

### MLII-284 - REST API

This release introduces a REST webservice to the Malvern Link suite. This REST (Representational state transfer) service uses standard HTTP operations (GET, POST, PUT, etc) to implement control over the data items that are exposed in Malvern Link. All items that are exposed to one of the OPC servers is also exposed to the REST service, allowing the manipulation of these items by third party software.

The API is documented using Swagger and also a Swagger test interface is provided. The documentation can be found here:

<http://<computername>:<port>/swagger/docs/v1> (e.g. <http://localhost:9000/swagger/docs/v1>)

The test interface can be found here:

<http://<computername>:<port>/swagger> (e.g. <http://localhost:9000/swagger>)

The URL for fetching all data tags:

GET <http://<computername>:<port>>

GET <http://<computername>:<port>/api/Data>

The URL for fetching data tags having a name that starts with "StartOfName":

GET <http://<computername>:<port>/api/Data/StartOfName>

The URL for modifying data tag values:

PUT or POST <http://<computername>:<port>/api/Data>

In the body supply the following JSON:

```
{"itemName": "<tagname>", "value": <value>}
```

where:

<tagname> = full name of the tag

<value> = the new value of the tag

### 5.1. Discovery of issues

If you find an issue with this software, please report it to Malvern instruments via your local representative or directly to the UK helpdesk.