

ZS XPLORER SOFTWARE: v2.1 (PSS0048-11) SOFTWARE UPDATE NOTIFICATION

Introduction

This document details the release of **Zetasizer XPLORER software version 2.1** (**PSS0048-11)** for the Zetasizer Advance range of instruments. Here forward referred to as ZS XPLORER.

This release supports the Zetasizer Advance range of systems instruments only (including Pro (ZSU5800) and Ultra (ZSU5700) models).

ZS XPLORER is not compatible with the Zetasizer Nano series of instruments (Nano S90, Nano ZS90, Nano S, Nano ZS, Nano ZSE, Nano ZSP, Zetasizer µV and Zetasizer APS) nor can it read the *.dts file format from the Classic Zetasizer series software 8.01 or earlier. However, it is possible to have both the ZS XPLORER software and the Zetasizer software 7.02 or above installed on the same computer.

Installation

It is assumed that you have authority to install or update software within your company's SOPs. If you do not have this authority, please consult with your I.T. support department before proceeding.

It is assumed that you have Administrator rights for the computer. This is required by the installation process. For ZS XPLORER software, Windows 10 and later will not allow an installation if the user does not have administrator access. This is in line with Microsoft's Logo policy and is standard practice.



IMPORTANT:

Only Windows 10 64-bit Operating System is supported

Microsoft user accounts are not supported

If using Windows domain user accounts the user domain must match that of the PC where ZS Xplorer, and its components, are being installed

Before installation of the software, the instrument should be switched off and disconnected.





Recommended System Requirements

The recommended computer system requirements for running this software are highlighted in table 1 below.

Table 1 Recommended system requirements for ZS Xplorer software.

| Feature | Specification |
|--------------------|---|
| Processor Type | 4th Gen+ Intel Core i7 Processor (or equivalent) |
| Memory | 16 GB RAM |
| Hard Disk Storage | 1 TB free hard disk space, |
| Display Resolution | 1920 x 1080 full HD screen resolution |
| Connectivity | 2 free USB2.0 or higher ports |
| Operating System * | Windows 10 64 bit. * The ZS XPLORER software is not compatible with 32-bit Operating Systems |

Supported operating systems

ZS XPLORER is compatible with Windows 10 (tested on Windows 10 1903 version and later). Only 64-bit Professional versions are supported.

Supported Languages

• English

Installation Instructions

Installation process

The software suite is available as a web download. The downloaded extractor contains the ZS XPLORER Setup and License Manager Setup files. License Manager is a prerequisite of ZS XPLORER, even if you are not using OMNITRUST regulated environment software suite.

When the extractor is run (see Figure 1) it will extract the required installers to a folder named 'MPInstallers' in the location the extractor is run, and the folder and a readme with important information will be opened (see Figure 2).



| ZS Xplorer File Extractor | - | | \times |
|---|----------|--------|----------|
| Extracting files to "C: Users User B'Desktop" folder Extracting from ZS-VPLORER_2.0.0.277_EXTRACTOR.o Panalytical | exe | | |
| Extracting MPInstallers\ZSXPLORERSetup_2_0_0_277 A | LPHA.exe | | |
| Installation progress | | | |
| Pause | | Cancel | |

Figure 1 ZS Xplorer Self-Extracting Installation files

| esktop > MPInstallers | | | | ~ | Ō | 2 | Search MPIr |
|-----------------------|------------------------------------|-------------------|-------------------|----------|-------|------------|-------------|
| | Name | Date modified | Туре | Size | | | |
| | 📙 Utilities | 02/02/2021 09:04 | File folder | | | | |
| Я | 🖏 LicenseManagerSetup.exe | 02/02/2021 08:17 | Application | 41,64 | 1 KB | | |
| Ŕ | ReadMe.txt | 02/02/2021 02:01 | Text Document | | 1 KB | | |
| * | ZSXPLORERSetup_2_0_0_277 ALPHA.exe | 02/02/2021 08:17 | Application | 349,53 | 2 KB | | |
| A | | | | | | | |
| * | | | | | | | |
| * | ReadMe.txt - Notepad | | | | _ | | × |
| * | File Edit Format View Help | | | | | | |
| * | If the latest Malvern Pana | lytical License | Manager isn't ins | stalled | on yo | ur PC, | , ^ |
| * | please install it before i | nstalling ZS Xpl | orer. | | | | |
| * | | | | | | | |
| * | TMPORTANT INFORMATION | | | | | | |
| * | | | | | | | |
| ~ | | | | | | . . | |
| | - You must have administra | tor rights to in: | stall the softwar | re packa | ges i | nclude | ed |
| | - Microsoft user accounts | are not currently | v supported | | | | |
| | - If using Windows domain | user accounts, t | he user domain mu | ust matc | h tha | t of t | the PC |
| | - | | | | | | |
| | | | | | | | |

Figure 2 Extracted installation files and ReadMe file.

License manager Installation

The Malvern Panalytical license manager component is a requirement for the ZS XPLORER software to run correctly and must be installed prior to the installation of ZS XPLORER. Please note that users upgrading from 2.00 or later do not require to re-install License Manager. Those upgrading from ZS Xplorer vers.1.50 or earlier must install License manager.



ZS XPLORER Installation

During the installation process, you will be prompted with the following message (Figure 3).



Figure 3: "Disconnect Zetasizer Unit" message

Note:

You must unplug the USB cable from the computer or Zetasizer and then press OK. If you press the OK button without performing these previous steps, then the installation will not continue.

Microsoft .Net Framework and Microsoft C++ Redistributable

The Microsoft .Net Framework 4 (version 4.6.2 or greater) and the Microsoft Visual C++ Redistributable must be installed for the ZS XPLORER software to run. This is installed during the ZS XPLORER software installation progress and under certain circumstances can involve the computer needing to restart. Completion of this stage of the installation can take a few minutes and can take over 10 minutes. Whilst these components are being installed a window such as below will be displayed, figure 4.



| - | Microsoft Visual C++ 2010 x86 Redistributable Setup | |
|---|--|---------|
| | Installation Progress Please, wait while the Microsoft Visual C++ 2010 x86 Redistributable is being installed. | |
| | | |
| | | |
| | File security verification: | |
| | | |
| | All files were verified successfully. | |
| | | |
| | Installation progress: | \odot |
| | | |
| | Installing Microsoft Visual C++ 2010 Redistributable | |
| | | |
| | | |
| | | |
| | | |
| | | Cancel |
| _ | | |

Figure 4: Microsoft Visual C++ Redistributable Installation Window

USB Driver Installation

During the installation of the USB drivers you may be prompted several times with a message as shown in *Figure 5*.



Figure 5: Install USB window

This warning can safely be ignored as the software installation has been fully tested on Windows 10. Press **Install** to continue installation of the USB drivers.



Connecting the Zetasizer to the computer

When the software has been installed and the instrument has been connected via the USB port, and switched on, the ZS XPLORER software may need to upgrade the firmware on the Zetasizer, in which case the status icon on the lower right of the software screen will indicate such (see *Figure 6*).



Figure 6 instrument firmware updating status icon

Users should not disconnect or power off their PC or instrument during normal firmware updating. In some rare occasions the firmware may fail to update correctly, in such circumstances a notification will be displayed indicating the issue – please restart the instrument and software to reset and repeat the firmware upgrade process.

With the correct firmware version installed the Zetasizer will connect to the instrument. A successful connection is indicated with an icon in the corner of the software (see *Figure 7*) showing green and with a tick.



Figure 7: Instrument connected icon



Uninstall Procedure

The software can be uninstalled using the standard Apps & Features panel in Windows Settings.

Running the installer with the ZS XPLORER software running

If the installer is run whilst the software is running, the window in *Figure 8* will display.



Figure 8: Running installer with software open



Connecting the MPT-3 Titrator to the PC

Ensure the computer is turned on and connected to a Zetasizer Advance system.

Connect the MPT-3 Autotitrator to the computer using the USB cable provided, ensuring that it is turned on. Click on the settings button in the top left corner of the ZS XPLORER software. See *Figure 9*.



Click Options and navigate to the Titrator tab as seen in *Figure 10*.

| $ \blacksquare $ | Home | Measure | Analyze | Keport Designer | Instrument |
|------------------|--------------------|------------------------|---------------------|---|------------------------|
| | | | | | |
| | | | | | |
| Opt | ions | | | | |
| Folde | ers Titrator | ļ | | | |
| Con | nection settir | ngs | | | |
| The t | itrator connection | n settinas allow confi | auration of how the | titrator connection is detected by the Figure 10 Titrator option | e software. 15 page |

On the COM Port drop down menu, select USB Serial Port (COMXX) as shown in figure 8. (Note that the COM port number and description may vary). If the titrator has been detected on this port, then a green tick will be visible See *Figure 11*.

Folders Titrator*

Connection settings

The titrator connection settings allow configuration of how the titrator connection is detected by the software.

Figure 11 Titrator successfully detected

If the titrator is not detected on the selected COM port, then a red exclamation icon will be displayed with a message. See *Figure 12*.



Connection settings

The titrator connection settings allow configuration of how the titrator connection is detected by the software.

| COM Port: Communications Port (COM1) |) |
|--------------------------------------|---|
|--------------------------------------|---|

Ditrator not detected.

Figure 12 Unable to detect titrator

Once the titrator has been detected, click to save the settings.

Once the settings are saved an icon and a saved message will appear next to the saved COM port as shown in *Figure 13*.



The titrator icon at the bottom right of the screen should turn green indicating that the titrator is successfully connected as shown in *Figure 14*.



Figure 14 Titrator successfully connected



New Features

ZS Xplorer 2.1 offers improvements to OmniTrust regulated environment users by providing improved control of methods and provision of a method audit trail. This version also provides improvements by provision of major size distribution percentiles and automatic size averaging function. A critical bug that could affect zeta potential data for very low scattering samples has also been fixed. Details below.

Default Roles

ZS Xplorer is now installed with default roles available, these can be imported and setup in OmniAccess and from their deployed to ZS Xplorer. These have been provided as example roles and to help with validation of OmniTrust.

The default roles location is: "C:\ProgramData\Malvern Panalytical\Regulated Environment\Default Authorizations\ZS Xplorer\Restricted"

Method version number and method name

Methods created and used within an OmniTrust regulated environment are now versioned and the method version increments upon saving a change to the method.

The method version can be seen on the method tile and is available to be selected in the record selector grid and parameter tables for measurement results, see figure 15.



Figure 15 version number shown in Method Tile, Record Grid and Parameter Table

The method name is also now shown on the method tile regardless if regulated or non-regulated environment. The method name shows a "manual" for methods that have not been saved prior to running.

Method restrictions for invalid method audit trail

If a method audit trail has become invalidated, for instance by unauthorized editing, the method will be blocked from running in a regulated environment, see figure 16.



| 🗐 Home | Measure | Analyze | Re | port Designer | Instrument |
|----------------|--|---------------------------------|-----------------|--|------------|
| 68 | | H | | Properties | 53 > |
| Name | | | Can | not start the method: | |
| Sample 1 | | | Inva | lid method audit trail | 0 |
| Parameters | | | | 25.0 | |
| Cell | Material | Dispersant | | Return to default tempe | rature |
| DTS0012 ~ | Polystyrene I 🕥 | Water | | Yes | \sim |
| Project | | | | Equilibration time (s) | |
| Project 1 | | ~ | | 120 | |
| Method builder | | | | | |
| Invalid me | thod audit trail This method faile For more details, | d validation a view the meth | nd car od au | nnot be run, edited, or idit trail. | r saved. |
| | | | | | ОК |

Figure 16 method with corrupt method audit trail being prevented from running.

Persist methods

Methods now persist upon being run; this means that a method will remain open in the method list allowing for change of details, i.e. sample name, and ready to be run again.

Method save button

The existing "save as" button has been supplemented with a "Save" button, figure 17. The save button saves to the current open method file, assuming you have permissions to do so in a regulated environment.

| | Home | Measure | Analvze | Rei | oort Desid |
|-----------------|--------------------------|---------|---------|-----|------------------------|
| <u> </u> | Đ | | | D | Properties |
| Name Sample | 1 | | | | Measurement |
| Paramete Add | e rs parameter | | | | Temperature (* 25.0 |

Figure 17 save button added to method builder



The save button is only enabled when the method has unsaved modifications, figure 18.

| ⊜ ⊦ | lome | Measure | Analyze | Report Desigr |
|------------------------|-----------|--------------------------------|---------------------|--------------------------|
| | (| | | Properties |
| Name Sample 45 | Cannot sa | ve the method: ot modified. | | Measurement |
| Parameters Add para | meter | | | 1.0 |
| Cell DTS0012 | ~ | Material Polystyrene I | Dispersant Water | Return to default Yes |

Figure 18 save button in disabled state

Regulated method editing restrictions

Methods created in a regulated environment cannot be edited in ZS Xplorer if not in regulated environment mode, but they may be run, see figure 19. Use "Save as" to rename the method file if you require to edit the method.

| | | | | ZS XPLORER | | U |)~ _ C | × |
|---|---|--------------------------------------|---|---|---------------|--------------------|--------------------------------|------|
| 🗐 Home | Measure | Analyze | | eport Designer Instrument | | | | |
| | |)+ | D | Properties | 53 53 8 | Method list | | _ |
| Name Regulated Method | | | | Measurement | () | Sample 1 Manual | × | |
| Parameters Add parameter | | | | Temperature (°C) 25.0 | | Regulated Method | | ń. |
| Cell DTS0012 V | Material Polystyrene I | Dispersant Water | | Return to default temperature Yes | ~ | Reg Method | × | |
| Project Project 1 | | v | | Equilibration time (s) | | | | |
| Size | | | 1 | Data processing Analysis model General purpose | • | | | |
| The loade method, it r editable v | ed method is a may be run but when not in a R Environment | regulated will not be egulated | | Post analysis settings Auto size average No | • | | | |
| | | | | Advanced settings | | | | |
| | | | | | | Titrator | Zetasizer U 25.0°C Ready | itra |

Figure 19 regulated method in non-regulated ZS Xplorer, can be ran but not edited.



A non-regulated method in a regulated environment are prevented from running, see figure 20.

| | ZS XPLORER | | u A | ~ _ ¤ × |
|--|---|------|----------------------------|------------------------------------|
| 🗐 Home Measure Analyze | Report Designer Instrument | | | |
| | Properties | 53 × | Method list | |
| Name Sample 4 | Cannot start the method: Unable to run a method not created in a Regulated Environment | 0 | Sample 8 Manual | × |
| Parameters Add parameter | 25.0 | | Sample 4 Non Reg Method | × |
| DTS0012 V Polystyrene I V Water | Yes | ~ | | ~ |
| Project Size ~ | Equilibration time (s) | | | |
| Method builder (2) Size Zets Particle | Data processing Analysis model | • | | |
| The loaded method is not a regulated | Post analysis settings Auto size average | • | | |
| method, it cannot be run in a Regulated Environment | Advanced settings | | | |
| 0 | | | Titrator | Zetasizer Ultra 25.0°C Ready |

Figure 20 non-regulated methods in a regulated environment are prevented from running.

Regulated method save restrictions

Regulated methods cannot be overwritten, unless by themselves. This prevents a method being renamed to an existing method and accidentally overwritten, figure 21.



Figure 21 dialog warning when a regulated method is attempted to be overwritten by other than itself



Save and copy methods

It is no longer possible to save or copy methods whilst they are running or from the completed method list, see figure 22.



Figure 22 illustration of disabled copy button on running and completed methods

Saving methods with blank metadata

It is now possible to save methods with blank metadata, such as sample name, project name or custom parameters. This allows methods to be produced that when opened have blank fields that must be filled in before the method can be run, see figure 23.

| 66 | | |
|---|------------------------------|-----------------------|
| Name | | |
| Enter a name for the s | sample | |
| Parameters Name and units pH Add parameter | 1 | Value |
| Cell DTS0012 ~ | Material Polystyrene Ia V | Dispersant Water ~ |
| Project | | ~ + |

Figure 23 example of method with blank metadata fields



Method audit trail viewer

When ZS Xplorer is in regulated environment mode and Record Audit Trails are enabled a method audit trail viewer is now available to allow inspection of the open methods audit trail, see figure 24.

| - | | |
|--|--|----------------------------------|
| 🗐 Hor | ne <mark>Measure</mark> An | alyze Report |
| | | + Prope |
| Name | | |
| Sample 1 | | Meas |
| Parameters | r | Ter 2 |
| Cell DTS0012 | V Material Disp | ersant Ret |
| ZS XPLORER | | × |
| Method Audit Trai | l d audit trail. | |
| Report format | Standard ~ | Ê |
| Concerns record Record identifier Record audit trail integrity | C:/Users/ 7981bbde-f351-40bd-95f2-ed60155f99f8 Valid | struments/ZS XPLORER/method.zskd |
| Record creation Record data integrity | Complete Valid | |
| Created 08 March System | 2021 14:35:14.793 +00:00 - ZS XPLORER 0.0 | - |
| Signed 08 March Reason #1 | 2021 14:35:14.527 +00:00 | - |
| Created 08 March | 2024 44 26 22 664 + 00 00 | |
| System | ZS XPLORER 0.0 | |

Figure 24 Method audit trail button (highlighted) and example method audit trail.



Reporting signature widget

Added a signature widget to Analyze screen and printed reports to enable the status, approved or rejected etc. on screen and printed reports.

| Pr | oject | 9 | | | e X | Reports | Summary | / Size | Zeta | Particle Concentration | Titration | Custom ··· |
|-----|-----------|-----------|--------------------------------|---------------------------|-----|--------------|--------------------|-----------------------|---------------------------|---------------------------------|-----------|------------|
| Ø | | | | 88 | | Approval Sig | natures 🗸 | | | | | |
| Dra | g a colum | nn header | and drop it here to group by t | that column | | | Approval s | ignatures (I | Intries: 3): | | | - |
| | 1 | Qi 🍸 | Measurement Type T | Result State Completed | Ţ | | Approved System | 17/11/202 UKMAL1L1 | 0 11:01:48 000259 - 1 | .949 +00:00 - ZS XPLORER 0.0 | | |
| | | | | | , | | Rejected System | 17/11/202 UKMAL1L1 | 0 11:01:51 1000259 - 2 | .310 +00:00 - ZS XPLORER 0.0 | | |
| | | | | | | | Approved System | 17/11/202 UKMAL1L1 | 0 11:01:53 000259 - 3 | .748 +00:00 - ZS XPLORER 0.0 | | |
| | | | | | | | | | | | | |

Figure 25 signature widget in Analyze view

Duplicate record importing

When ZS Xplorer is in regulated environment mode and record audit trail is enabled importing of duplicate record IDs is now prevented, figure 26.



Figure 26 warning dialog showing imported file contains duplicate IDs that will not be imported

Auto size averaging

For size measurement methods that have multiple repeats it is now possible to create an automatic size average of the results from that size method step or per-cycle for a grouped size method step. The option is available from the post analysis options of a size method step, see figure 27.



| | Method builder 🙁 | | | |
|-----------------------|------------------|--------------------|------------------------|---|
| Size 🖌 | Size | <mark>≓ ×</mark> ≣ | Data processing | |
| 7-1- | | Duplicate | Analysis model | |
| | | | General purpose | ~ |
| Particle Concent 🖌 | | | | |
| | | | Post analysis settings | |
| Titration 🥖 | | (| Auto size average | |
| ļ≡ | | $\langle \rangle$ | Yes | ~ |
| Other 🖌 | | | | |
| | | | Advanced settings | |

Figure 27 post-analysis auto size average option

Edit sample name when manually creating an average result

A dialog now shows when creating a manual size average result that allows the average result name to be changed, see figure 28.

| | Home | Measure | Analyze | Report De | | | | | | |
|---|--------------------------|---------------------|---------|-----------|--|--|--|--|--|--|
| Create Average Result Set the Sample Details for the average result that will be created. Your changes will only be saved once you click the OK button. | | | | | | | | | | |
| Sampl Set the | le Name e Sample Name | for the Average Res | ult | 0 | | | | | | |
| Sam | ple 1 (Avg) | | | | | | | | | |
| | | | ОК | Cancel | | | | | | |

Figure 28 edit sample name dialog for manual average creation

Percentile parameters

Added percentile parameters for the 10th, 50th and 90th percentiles for size results in intensity, volume and number weightings. These are available for both single angle and MADLS size measurement data. Span has also been added for volume size data. These new parameters are available from the peak summary data and can be configured to show in parameter tables and statistic tables, see figure 29.



| | | | | | | | | | | KPLORER | | | | | | AH~ - | |
|--------|-------------------------------------|------------|--------------|----------|---------------------------|------------------|----------|-------------------------|----------------|--------------------|---------------|-----------|---------------|-----------------|-------------|--------------------|----------|
| | | | | | Measure | Analyze Rep | bort D |)esigner Ir | | | | | | | | | |
| | | \bigcirc | Project | 11 | | x 😳 | Rep | ports Summary | Size | e Zeta | Particle Conc | entration | Titration | Custom ··· | | | n x |
| | | Ţ | | | | D (88) | - | | | | | | | | | | |
| | | plo | Drag a colur | n header | and drop it here to group | p by that column | Size Dis | stribution by intensity | y ~ | | | • | Size Distribu | lon by volume | ~ | | • |
| | | rer | | QL T | Measurement Type | T Result State T | 30 | ^ | | | | | 30] | | | | |
| | | | 1 | | Size | Completed | 25 - | | | ٨ | | | 25 - | | ٨ | | |
| | | | 2 | ٩ | Size | Completed | (tu 20 - | | | $-\Lambda$ | | | £ 20 - | | - | | |
| | | | 3 | 0 | Size | Aborted | und 15 - | | | | | | d 15 - | | | | |
| | | | 4 | | Size | Completed | tensit | | | | | | ampo 10 | | | | |
| | | | 6 | | Size | Completed | 5 10 | | | | | | 3 10 | | | | |
| | Intensity Distribution Summary Data | | 7 | | Size | Completed | 5 - | | | | | | 5 - | | | | |
| | D: (10) | | 8 | ٩ | Zeta | Completed | 0 14 | 4 | | | | | 0 | | | | • |
| | DI (10) | | 9 | ٩ | Size | Completed | | 0.1 1 | 10 | 100 | 1e+03 | 1e+04 | 0.1 | 1 | 10 100 | 1e+03 | 1e+04 |
| | Di (50) | | 10 | • | Size | Completed | | - Sample 1 ISt | S teachy st | ize (d.nm) atel | | | | _ Samola 1 [Sta | Size (d.nm) | | |
| | Di (90) | | 11 | • | Size | Completed | | - Joinpie 1 (Jo | icaciy so | utej | | | | - sumple i (ste | buy states | | _ |
| \neg | Intensity Peak Summary Data | | | | | | Parame | eter Table 🗸 | | | | | | | | | |
| | Number Distribution Summary Data | | | | | | Drag | g a column header he | ere to g | roup by that | column. | | | | | | * |
| | Dn (10) | | | | | | 1 | Sample Name | | Span | | Dv (90) | | Dv (50) | Dv (10) | | |
| | D= (F0) | | | | | | 1 | Sample 1 | | 0.6728 | | 82.81 | | 58.37 | 43.54 | | |
| | Dn (50) | | | | | | | | | | | | | | | | |
| | Dn (90) | | | | | | | | | | | | | | | | |
| ⊳ | Number Peak Summary Data | | | | | | | | | | | | | | | | |
| | Volume Distribution Summary Data | | | | | | | | | | | | | | | | |
| | Dv (10) | | | | | | | | | | | | | | | | |
| | Dv (50) | | | | | | | | | | | | | | | | |
| | D (00) | | | | | | | | | | | | | | | | ÷ |
| | DV (90) | | • | | | • | * | | | _ | _ | | _ | | | _ | • |
| | Span | (| | | | | | | | | | | | | Titrator | Zetasize 25.0°C | r Uitra |
| | | | 7 | | | | | | | | | _ | | | | Keady | |

Figure 29 10th, 50th and 90th percentiles for size data added - parameter selection on the left and example on right.

Shared storage import & export settings

When in shared storage mode the import folder location is fixed to a shared ProgramData folder and the export location is now defaulted to a shared ProgramData folder. On export the user may still chose a different export location. See figure 30.



Figure 30 options page with shared storage enabled



Security Advisories

The following section and table 2 details any security updates that have been addressed in this release, including fixes for identified vulnerabilities.

Note:

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We always recommend updating to the latest software version which will provide you with new features, bugfixes and most importantly, security updates.

Note:

Other products may also be affected by any issue described here. We recommend you regularly check the Software Updates Notifications (SUNs) for all of your Malvern Panalytical products, and register on our website to receive updates.

| Reference | Description | Recommendation |
|-----------|--|---|
| HEN-1042 | Version 2.00 and earlier of the ZS XPLORER software contains a vulnerability which could allow an attacker to craft malicious measurement (.zmes) and schedule (.zskd) files. Loading one of these malicious files could result in arbitrary code execution. Version 2.10 introduces a fix to completely mitigate this vulnerability. | Upgrade to version 2.10 of the software. Never open files from an untrusted source, even if they appear to be non-executable. |
| HEN-572 | Version 1.50 and earlier of the ZS XPLORER software contains a vulnerability in the reports feature which could allow an attacker to craft a malicious report file. Loading a malicious report file could result in arbitrary code execution. Version 2.00 introduces a fix to completely mitigate this vulnerability. | Upgrade to version 2.00 of the software. Never open files from an untrusted source, even if they appear to be non-executable. |

Table 2 Security updates

Changes and fixed issues

The main changes and issues fixed in this release of the software are listed in table 3.

Table 3 changes and fixed issues in version 2.1 ZS Xplorer software

| Reference | Issue | Туре |
|-----------|---|-------|
| HEN-339 | Analyze - Record selector - Changing projects shows Peak Two data as 0 | Bug |
| HEN-539 | When editing results restrictions on analysis are driven by the cell type rules | Story |
| HEN-560 | Record selector quick buttons cover project name | Story |



| HEN-574 | Measure - MADLS/Particle Con - Pause between repeats (s) defaults back to '0' when view from method (Analyze tab) is used | Bug |
|---------|---|-------|
| HEN-575 | Measure - Missing method parameters when loading a method and changing between methods | Bug |
| HEN-578 | Measure - MADLS/Particle Con - Number of repeats defaults back to 1 when view method (Analyze tab) is used | Bug |
| HEN-579 | Size measurement fails with "Calculated ZAverageMean 0 is not a valid value" | Bug |
| HEN-654 | Make stop button a consistent style with the other software stop button | Story |
| HEN-680 | Peak Two Area field is empty when a measurement is edited (until ZS- Xplorer is restarted) | Bug |
| HEN-686 | Make method rules shareable across application | Story |
| HEN-739 | Change text in Options Menu on Measurement Files | Story |
| HEN-744 | Auto size analysis averaging as part of a method | Story |
| HEN-749 | Create size analysis averaging algorithm in software | Story |
| HEN-750 | Reflect Shared/Private file setting in Method Open Dialog | Story |
| HEN-753 | Percentile parameters (D10 D90) | Story |
| HEN-755 | Create a UI that allows a user to set the sample name of an averaged result | Story |
| HEN-756 | method name not available in parameter grid and measure screen | Story |
| HEN-801 | Analyze - Method Path present on edited records | Bug |
| HEN-803 | Child measurement does not inherit method path | Bug |
| HEN-910 | Analyze - Method name and path appear blank for auto average size result | Bug |
| HEN-948 | Analyze - Missing method name value in record selector | Bug |
| HEN-968 | Measure - Method name for running and completed methods changes when saving methods | Bug |
| HEN-972 | Delete schedule item appears momentarily when saving completed method | Bug |
| HEN-973 | Spike: Zeta frequency plot plotting offset | Bug |
| HEN-993 | Method Name/ID - Open and edit method reports same method name | Bug |



| HEN-1012 | Allow saving of methods with blank custom meta data fields | Story |
|----------|--|-------|
| HEN-1016 | Measure - Prevent actions whilst saving method | Bug |
| HEN-1036 | Analyze - Custom workspace appears blank or crashes the software when viewing print preview on reports and using trend chart | Bug |
| HEN-1065 | Only enable schedule save button when changes detected | Story |
| HEN-1071 | Update help files | Story |
| HEN-1103 | Measure - Use of 'Schedule' should be replaced with 'Method' | Story |
| HEN-1110 | Update Zeta Analysis to pass in the correct amount of data to the FFT Analysis | Bug |
| HEN-1121 | Methods are updated to match instrument capabilities rather than honoring original method | Bug |
| HEN-1158 | Analyze - Method ID shown when 'View method step' method is run | Bug |



Known Issues

The following software bugs have been discovered within the software and will be investigated as part of a future release. Please follow the suggested work-around where they are provided.

Table 4 Known issues in ZS Xplorer version 2.1.

| Reference | Severity | Issue | Workaround |
|-----------|----------|--|--|
| HEN-945 | Normal | Edited records display the original record created date – this is a display issue and underlying data is correct | Changing projects or re-starting the software will cause the display to be refreshed and display correctly |
| HEN-386 | Normal | Run button disabled when connecting an instrument during measurement creation | Disconnect and reconnect the instrument or add another measurement step |
| HEN-377 | Normal | Software locks-up if you cancel a measurement during the enable for size step | None- force close the application |



Error Reporting

Should persistent problems occur contact the local Malvern Panalytical Helpdesk. To speed up response time include all the following.

A full-screen screen shot of any error message and everything behind it.

Full description of what was happening at time of issue and ideally leading up to it.

Instrument serial number (e.g. MAL1060289), instrument serial number can be found inside the sample cell basin and on the instrument back panel.

The software version, which can be found as described in a section below.

The log information described below.

And, if relevant and possible, export the relevant measurement data as described in the last section below.

Extracting log information

If an error occurs, further information about the error can be found from the Windows Event Viewer.

Click the Windows Start Button.

Type Event Viewer and press enter.

Navigate to Applications and Service Logs/Zetasizer All Events.

The window will display the most recent errors that have occurred with the ZS XPLORER software.

Error information can be selected and then exported with the Save selected Events button allowing this information to be passed to the Malvern Panalytical team for troubleshooting.

The contents of the measurement log window are logged to file at Documents\Malvern Instruments\ZS XPLORER\logs

Software version

The Software Version is vital to determining the cause of problems. To retrieve the version number:

Click on Application Menu button (Figure 24)



Figure 31 Application Menu button



Click on the **About** button Read version number (Figure 25)



Figure 32 : Software Version Number

Extracting measurement data to send

In situations where the errors appear to be related to a specific record or records, the affected records can be exported from the software by selecting them and pressing the export icon, *see Figure 26*, and send the *.zmes file to the Malvern Panalytical team for investigation.

| La | ate | | | | | |
|----|-----|-----|-------------|-------------|---------------------|--|
| | Dra | * | | | | |
| | | Qua | Result Type | Sample Name | Date | |
| | 70 | | | | | |
| 1 | | | Size | 60nm latex | 11/06/2018 14:49:44 | |
| 2 | | | Size | 60nm latex | 11/06/2018 14:51:27 | |
| з | | | Size | 60nm latex | 11/06/2018 14:52:36 | |
| 4 | | | Size | 60nm latex | 11/06/2018 14:53:46 | |
| | | | Size | 60nm latex | 11/06/2018 14:55:10 | |
| | | | | | | |

Figure 33 Exporting selected record



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