



“Configurability enables flexibility and differentiation”

This manual has been updated for MultiOne Workflow version 2.3

1 Introduction

1.1 System requirements

The minimum system requirements for using MultiOne can be found in the MultiOne user manual.

1.2 Working with the various MultiOne interfaces

A description of the various MultiOne interfaces can be found in the MultiOne getting started and the MultiOne user manual.

Note: MultiOne Workflow only supports the USB2DALI and SimpleSet® interfaces.

1.3 Assumed knowledge

To be able to use MultiOne Command Line basic programming skills and a basic understanding of MS-DOS commands is assumed.

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3 Attention points

3.1 General

Before starting MultiOne Workflow, make sure that the correct interface (USB2DALI, USB2ZigBee or SimpleSet®) has been connected to your computer.

When upgrading the Windows Operating System, make sure the connection settings are correct when using MultiOne again.

When starting multiple instances of MultiOne Workflow for parallel configuring, make sure every instance of MultiOne Workflow uses another interface. The unique id of an interface is shown in the Connection Settings window where the interface port/reader is selected. Also, for the currently selected interface the unique id can be found in the About box and in the tooltip of the connection status indicator in the status bar at the bottom-right part of MultiOne Workflow.

3.2 DALI

Lighting applications with DALI devices can be seriously affected by the presence/absence of the DALI short address. Make sure the DALI short address is as you expect, after finishing working with MultiOne.

3.3 SimpleSet® interface

For SimpleSet® there are two interfaces which can be used for communication (see the MultiOne user manual): the Philips LCN9600 MultiOne interface SimpleSet®, the FEIG ID ISC.PRH101-U or the FEIG ID CPR30.xx interface.

4 Starting with MultiOne Workflow

4.1 Warning

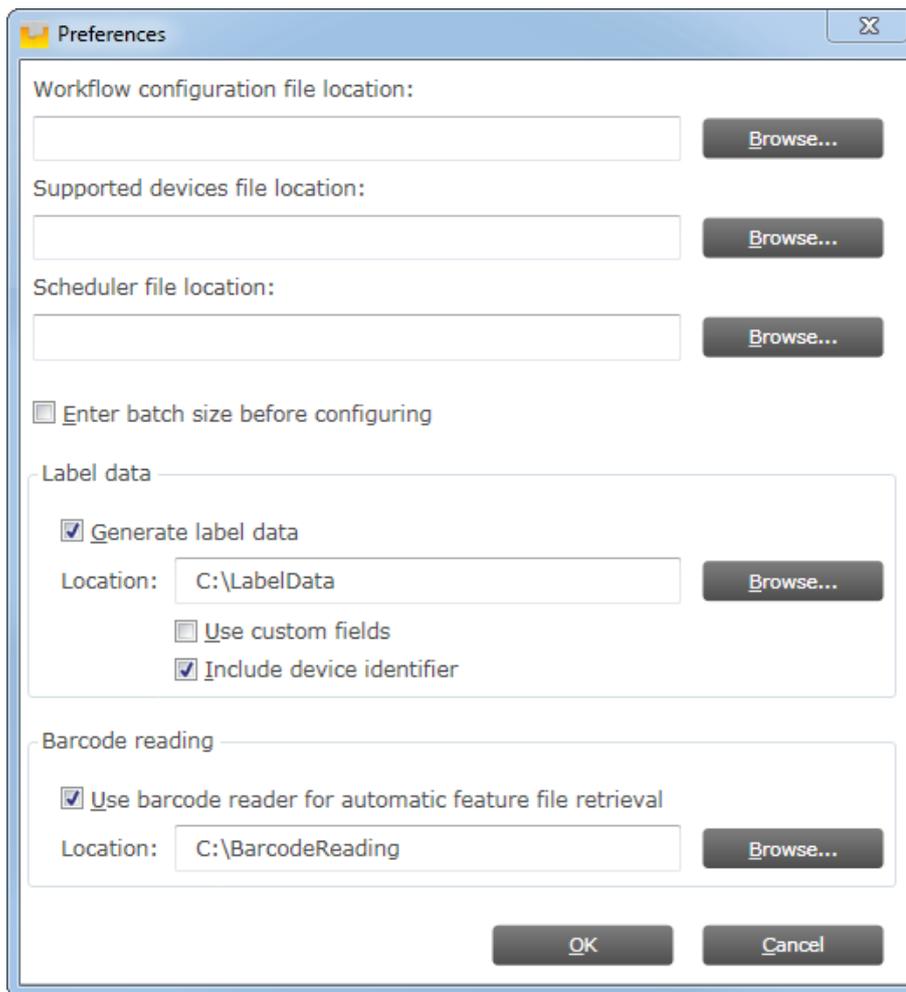
To be sure that the correct feature configuration file is used, it is strongly advised to use the latest version of MultiOne Engineering to create a feature configuration file.

Otherwise a feature configuration file can be validated by using MultiOne Basic to write the feature configuration file to the device that needs to be configured.

4.2 Preferences

Within the preferences window you can:

- select the workflow configuration file
- select the supported devices file
- select the scheduler file location
- enable or disable batch configuring
- select the label data location
- enable or disable specific label data
- enable or disable including the device identifier into the label data
- enable or disable barcode reading for automatic feature file retrieval
- select the location of the feature files which are associated with the defined barcodes



4.2.1 Workflow configuration

To configure Workflow a configuration file is located in: {Your install location}\WorkflowConfig-TEMPLATE.txt. This file can be used as a template to create your own configuration file. The created file can be placed in any location on the pc and is used by selecting it via the **Tools->Preferences** menu.

To learn how to use this configuration file see chapter: **7 The Workflow configuration file**

4.2.2 Supported devices configuration

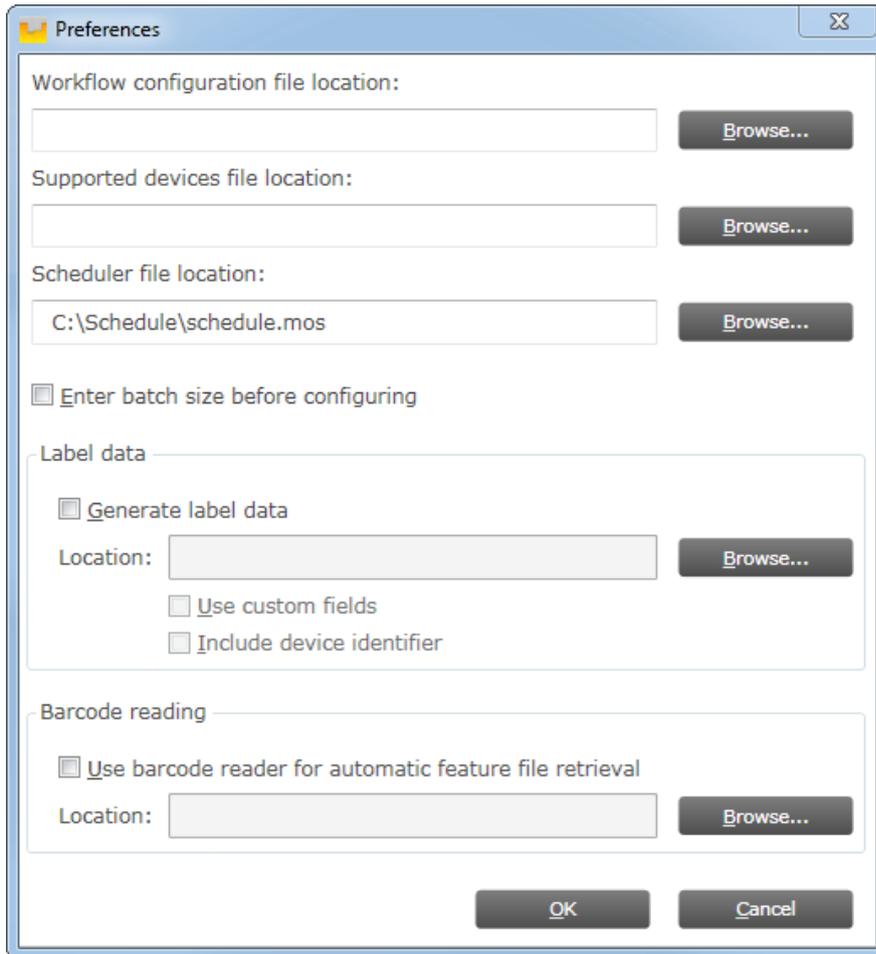
To make sure only supported devices can be configured a supported devices file can be created. The created file can be placed in any location on the pc and is used by selecting it via the **Tools->Preferences** menu.

To learn how to use this supported devices file see chapter: **8 The supported devices file**

4.2.3 Scheduler file execution

The scheduler file contains a series of DALI commands which were already created using MultiOne and saved on the PC. This scheduler file will then be executed on a connected device. The scheduler files gets executed just after writing the feature data to connected device. The scheduler file will be the same for MultiOne Workflow and MultiOne Command Line.

MultiOne Workflow accepts two scheduler file formats: MOS and XML. The created file can be placed in any location on the PC and is used by selecting it via the **Tools->Preferences** menu.



4.2.4 Specifying the batch size

In the **Tools->Preferences** menu, if **Enter batch size before configuring** is checked, MultiOne Workflow lets you specify the exact number of devices to configure with a given feature file. MultiOne Workflow will keep track of progress during configuring. When all devices have been configured, the current batch will be completed and a new feature file can be selected.

If **Enter batch size before configuring** is cleared, an infinite number of devices can be configured with a given feature file. To select a new feature file click **Cancel batch** at any time.

To learn how to enter the batch size see chapter: [5.4 Entering the number of devices](#)

4.2.5 Generating and exporting label data

In the **Tools**->**Preferences** menu, if **Generate label data** is enabled and the **Location** field is filled in with a valid folder, MultiOne Workflow will generate and export label data (after every driver configuration) to this folder.

If **Use custom fields** is enabled, MultiOne Workflow lets you specify 2 extra values that will be added to the exported label data. This setting can only be enabled when the **Location** is provided.

To learn how to enter the custom fields see chapter: [5.43 Entering the custom fields](#)

By enabling **Include device identifier** MultiOne Workflow retrieves the device identifier from the device and adds it to the exported label data.

The generated label data is stored into a comma separated value file. The filename is constructed using the device name and the date and time the label data was generated. For detailed information about the content of the label data file see chapter: [10 Label data file contents](#)

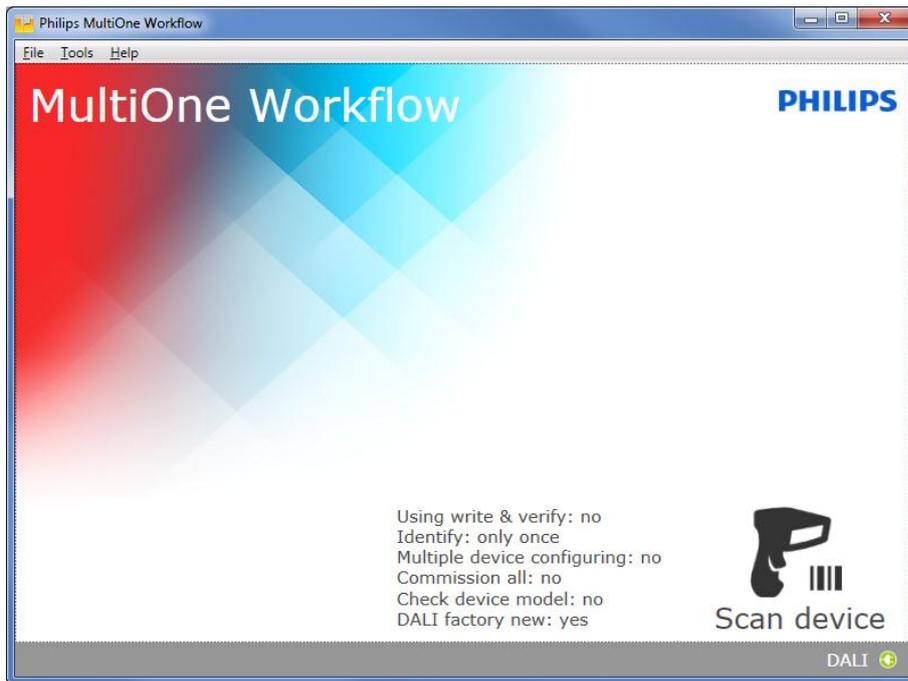
4.2.6 Automatic retrieval of feature files using a barcode reader

In the **Tools** -> **Preferences** menu, if **Use barcode reader for automatic feature file retrieval** is checked, MultiOne Workflow will run in barcode reading mode meaning you can scan a barcode to automatically open its associated feature file. In normal mode you would need to manually select the feature file by clicking the 'Open...' button.

To configure where the feature files (which are associated with the barcodes on the devices) are located, browse for or fill in the location of the feature files at the **Location** field.

By the combination of the configured location and the filename which the barcode resembles MultiOne Workflow can load the feature file.

The screenshot below shows the startup screen when in barcode reading mode.



Scan the barcode on the device when you are in this screen. When the barcode was scanned successfully and the feature file is loaded, MultiOne Workflow continues with the configuration workflow.

For more information about how to setup a barcode reader and how to generate the barcodes see chapter: **10 Barcode reader and barcode requirements**

5 MultiOne Workflow

5.1 Connection settings

Before you start working with MultiOne Workflow you will need to set the connection settings. On first start MultiOne Workflow will detect what interfaces are connected to your PC or laptop.

- When only one interface is connected this one will be automatically chosen.
- Otherwise the Connection Settings window will appear.

Whenever MultiOne Workflow is started again and a previously selected interface is not connected anymore the following selection or action will take place:

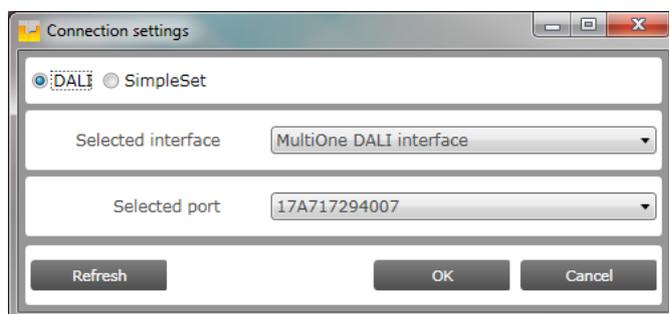
- When only one interface is connected (independent of the type of interface) this one will be automatically chosen.
- When two interfaces are connected and one of them is of the same type as the previously selected interface this interface is automatically selected.
- Otherwise the Connection Settings window will appear.

Connecting multiple similar SimpleSet[®] interfaces is currently only supported when using a FEIG interface.

5.1.1 Changing the connection settings

To change the connection settings go to **Tools** → **Connection settings...** This option is only available on the main application window.

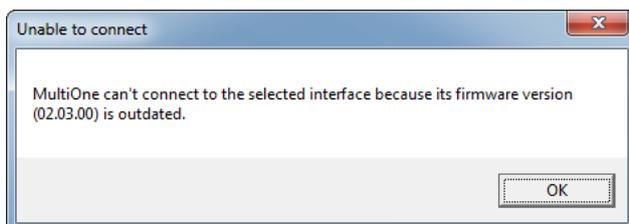
Choose the protocol you want to use, DALI for the USB2DALI interface and SimpleSet[®] for the SimpleSet[®] interface.



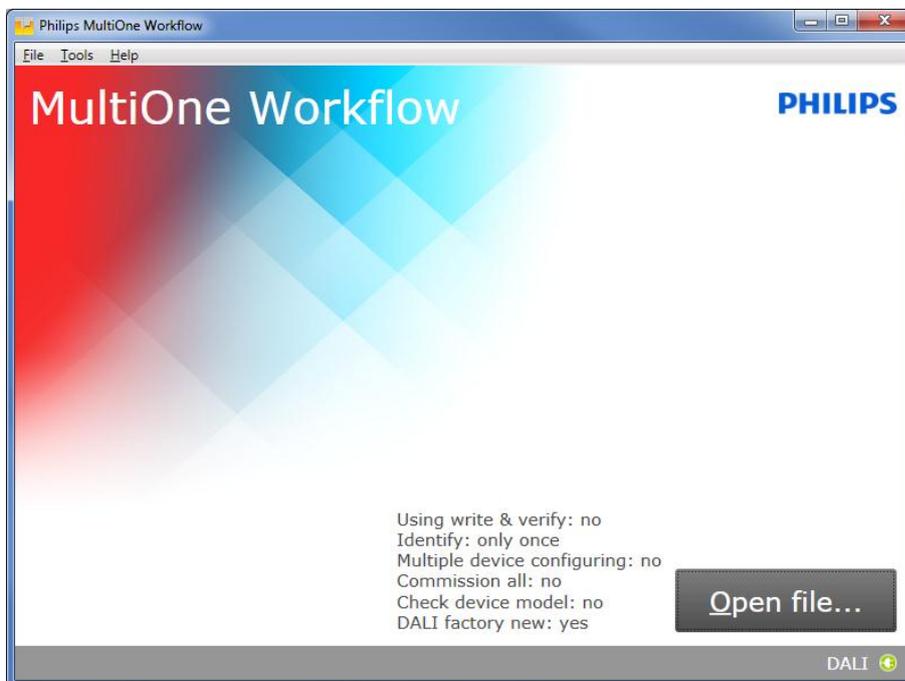
Then, select the interface. When a DALI interface is selected or when when a FEIG interface is selected as SimpleSet interface, then also the selected port/reader (depending on the interface) can be selected.

For both protocols the unique id of the interface is shown (when available). This, to be able to identify which interface is used by which MultiOne instance (when configuring devices in parallel using multiple instances of MultiOne).

When a selected interface contains an outdated firmware version, MultiOne will show a message that it is unable to connect to the selected interface:

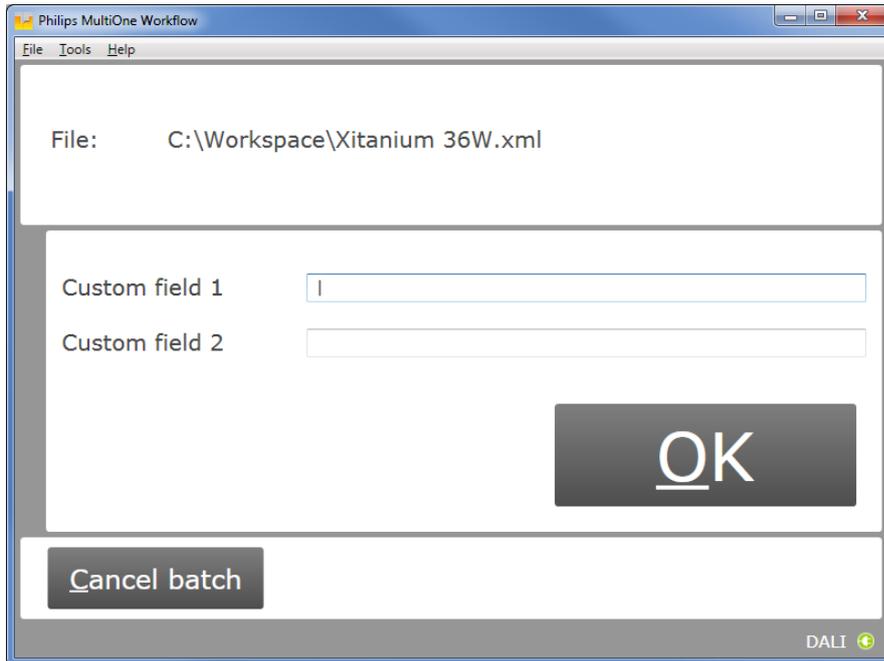


5.2 Opening a feature file



To open a feature configuration file, select **File** → **Open...** or click **Open file...** . Select a file and click **Open**.

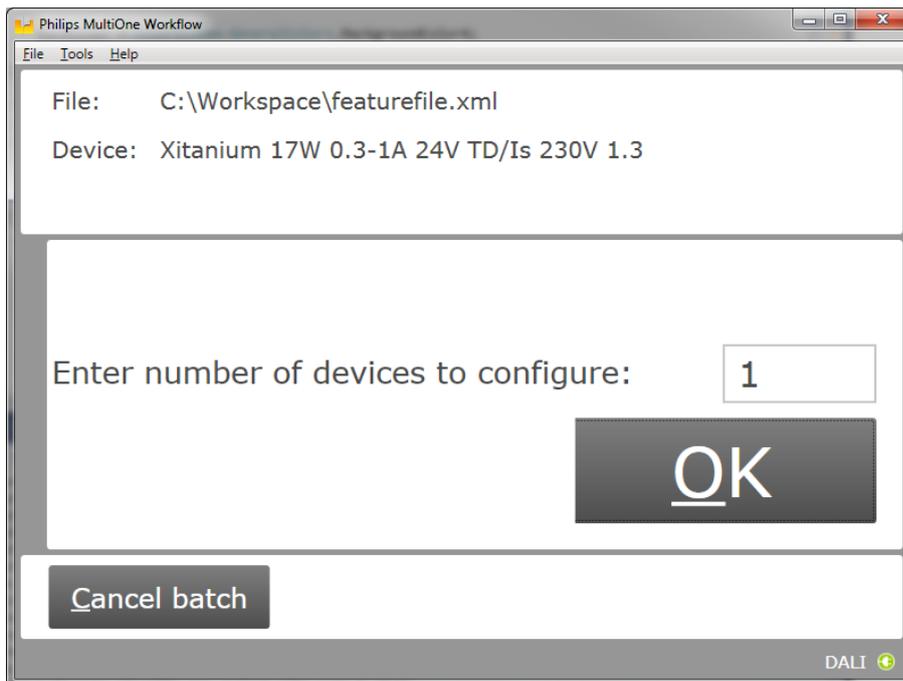
5.3 Entering the custom fields



If in the preferences the option **Use custom fields** as checked, MultiOne Workflow will display a window in which two custom fields can be filled in. These fields will be stored together with the generated label data (when filled in).

Click **OK** to continue.

5.4 Entering the number of devices



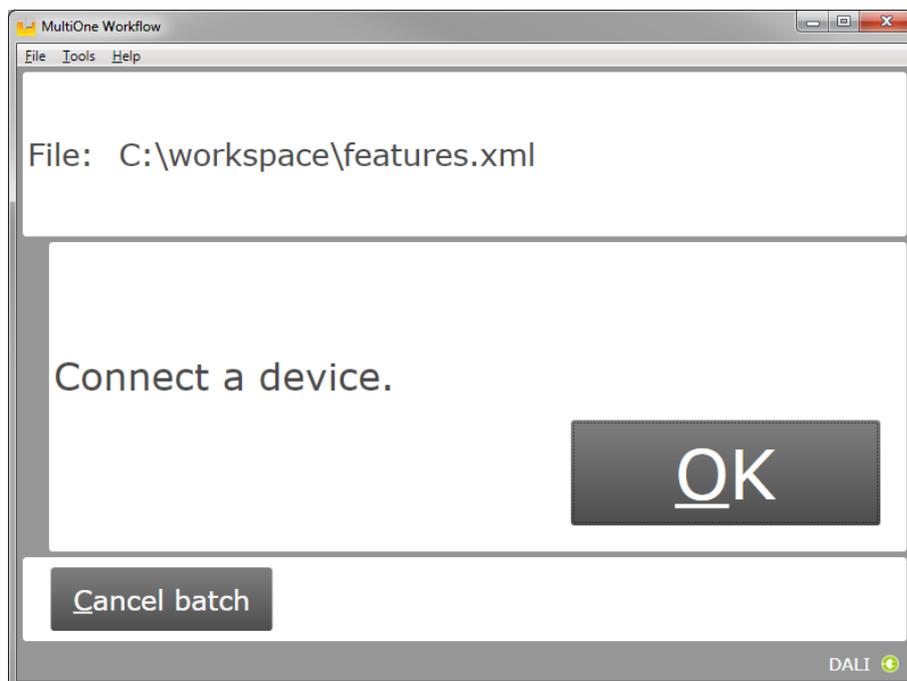
If in the preferences the option **Enter batch size before configuring** was checked, MultiOne Workflow will display a window in which the number of devices for this batch can be entered. The minimum number of devices is 1.

If the loaded feature file contains device information it will be shown (see screenshot above).

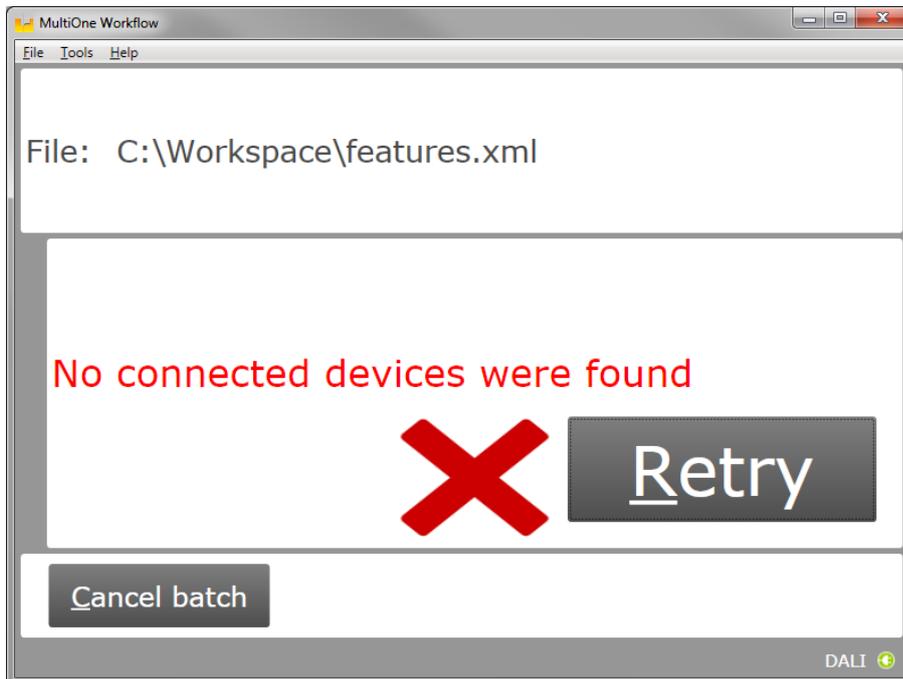
Click **OK** to continue. MultiOne Workflow will now keep track of batch progress during configuring (the amount of successfully configured devices is shown against the amount of devices to configure).

5.5 Connect a device / Waiting for device

5.5.1 Connect a device (USB2DALI interface)

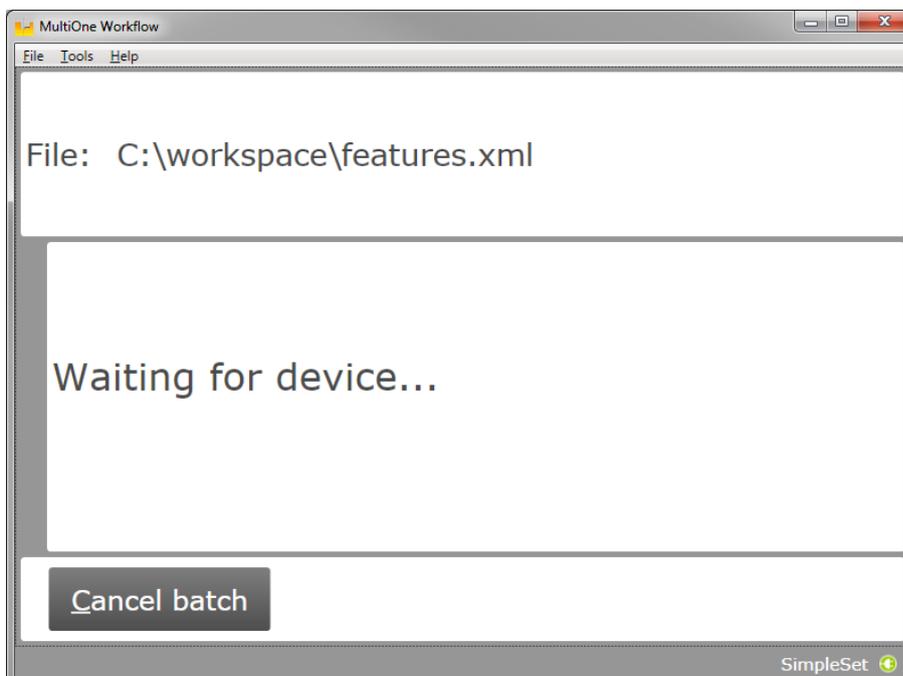


Use **Cancel batch** to go to the main application window. Click **OK** to continue. When **OK** is clicked and no device is connected, the following window will appear:



Connect a device and click **Retry** to try again, or click **Cancel batch** to go to the main application window.

5.5.2 Waiting for device.... (SimpleSet® interface)



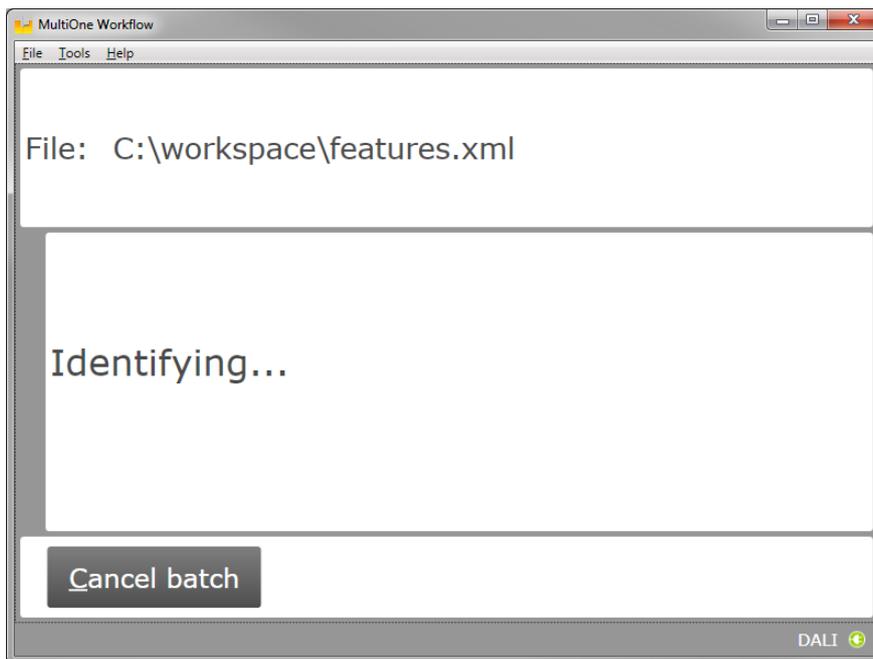
Use **Cancel batch** to go to the main application window. To continue hold the SimpleSet® interface close to the device.

5.6 Device connected / Device found

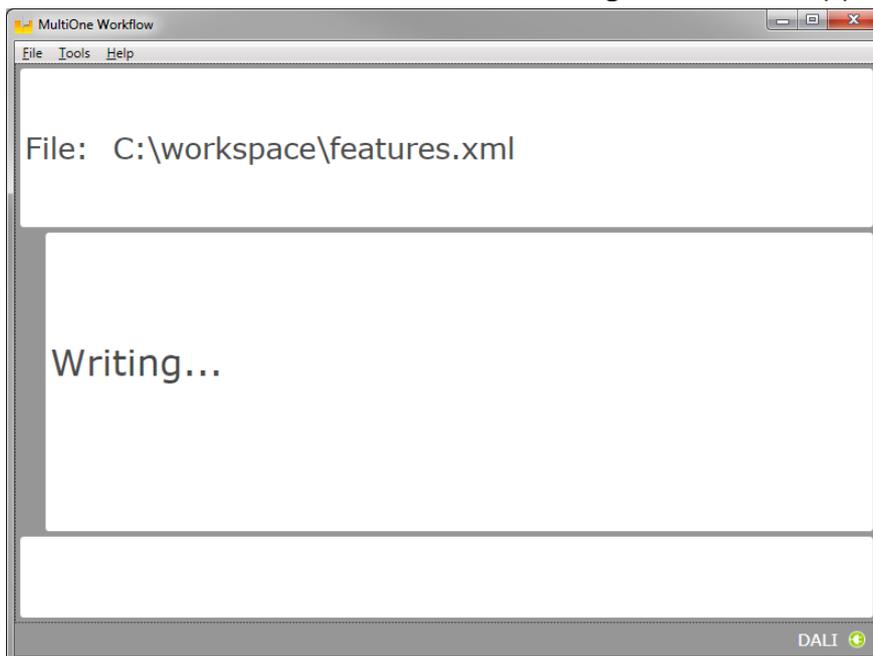
In case of **USB2DALI**: a device was connected and OK was selected.

In case of **SimpleSet**®: interface was moved close to the device.

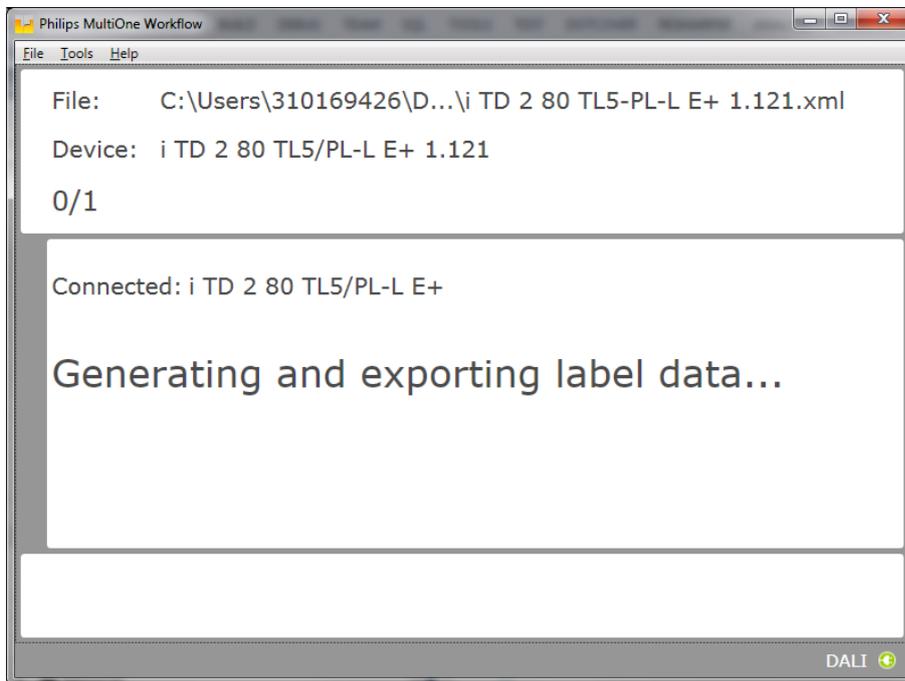
The following windows will appear:



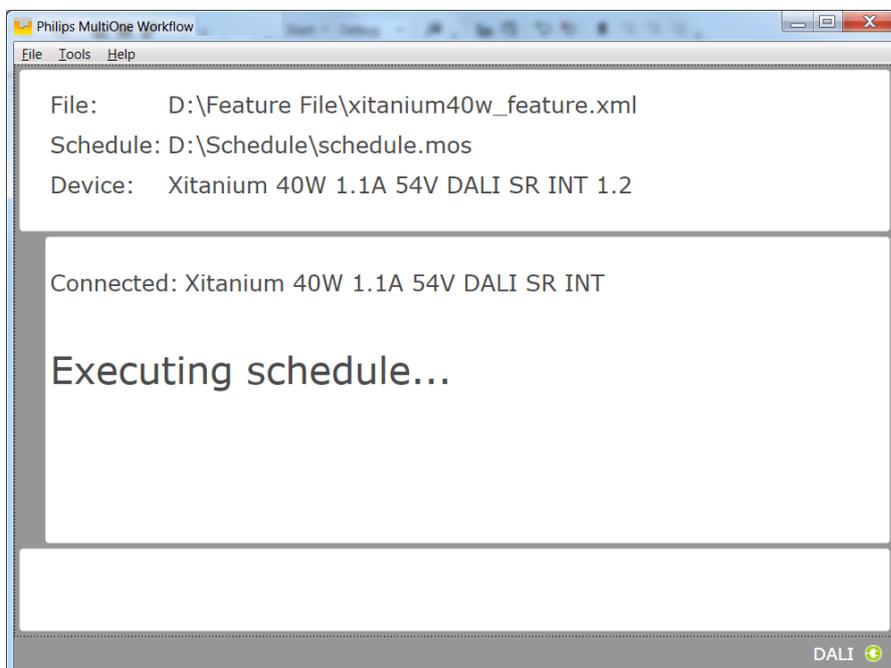
After successful identification, the following window will appear:



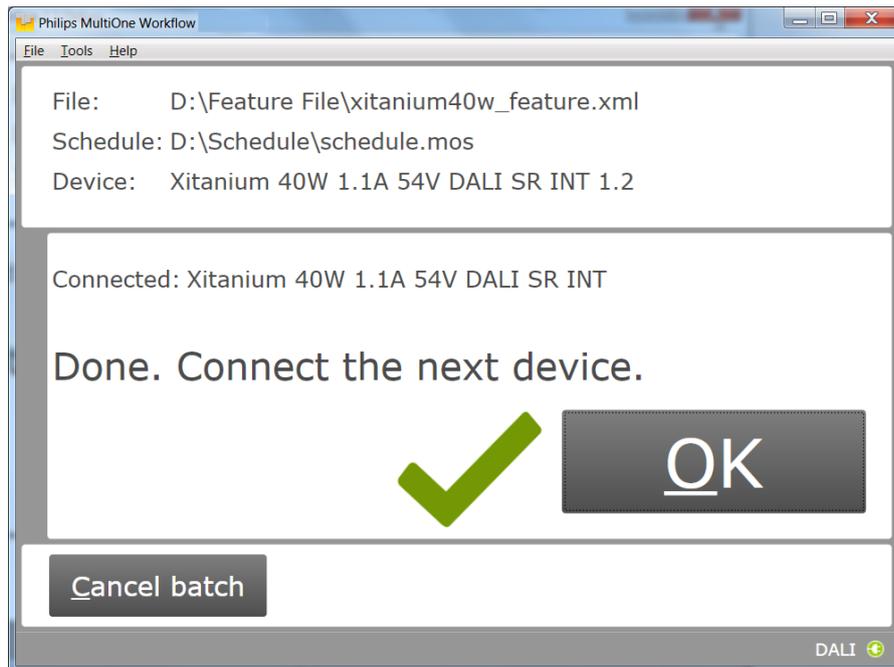
When the features have been successfully written, the following window will appear if label printing is enabled:



When a scheduler file is being executed then the following screen will appear if schedule file exists in the preferences under the scheduler file location:

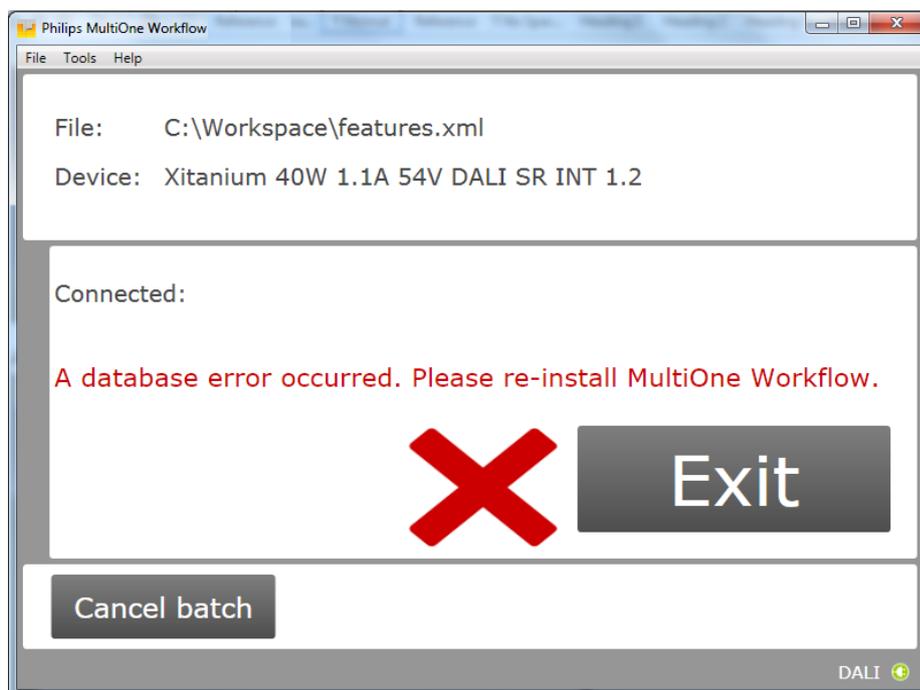


When feature data has been written and the schedule has been executed the following screen will appear:



5.6.1 Database file does not exist

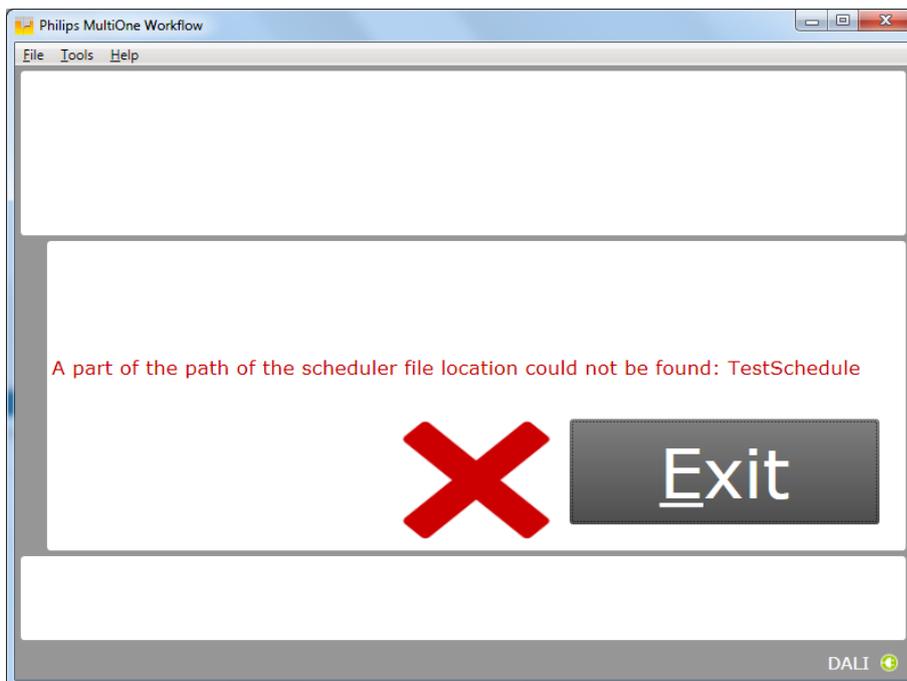
After successful identification, the following window will appear in case the database file is missing:



Click **Exit** to close the application window and re-install the MultiOne Workflow.

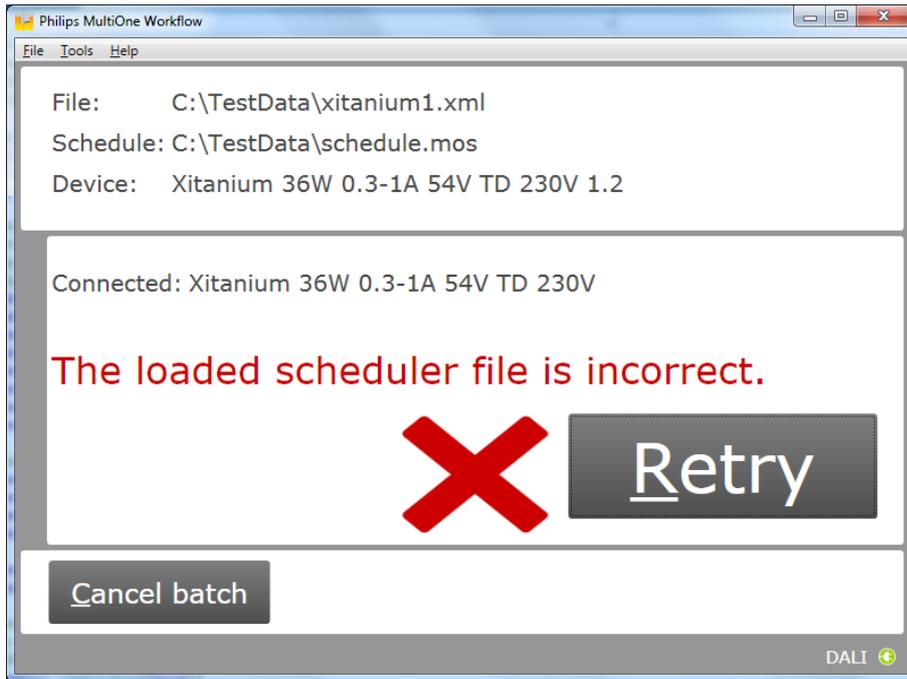
5.6.2 Scheduler file does not exist

If the scheduler file does not exist at the mentioned location (**Tools-> Preferences -> Scheduler File location**) then it shows the following error just after closing the "Preferences" window:



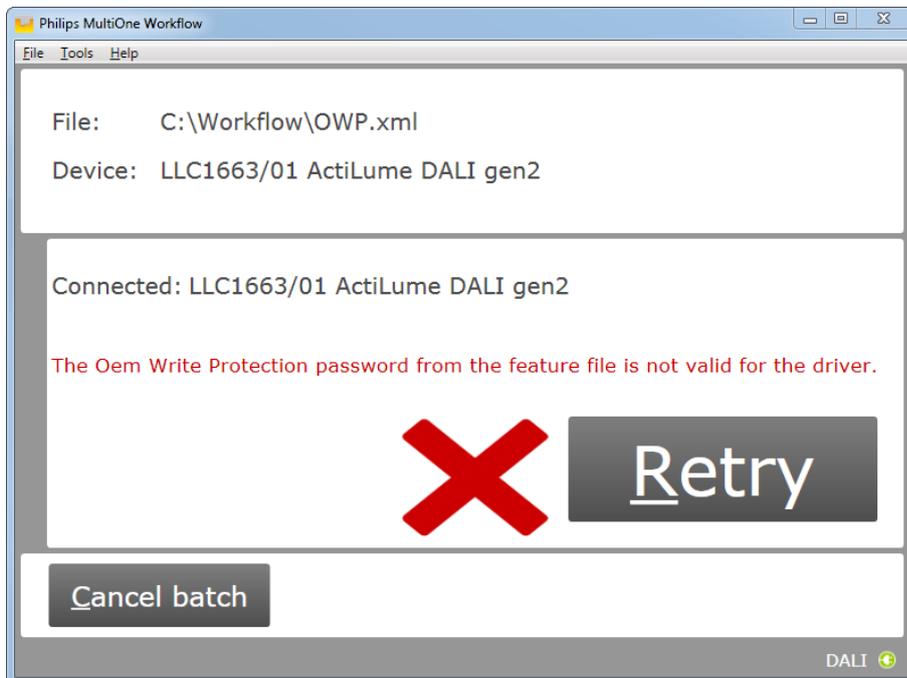
5.6.3 Scheduler file is not valid

If the scheduler file is not valid or incorrect format then just after writing feature file to the connected devices it shows the following error:



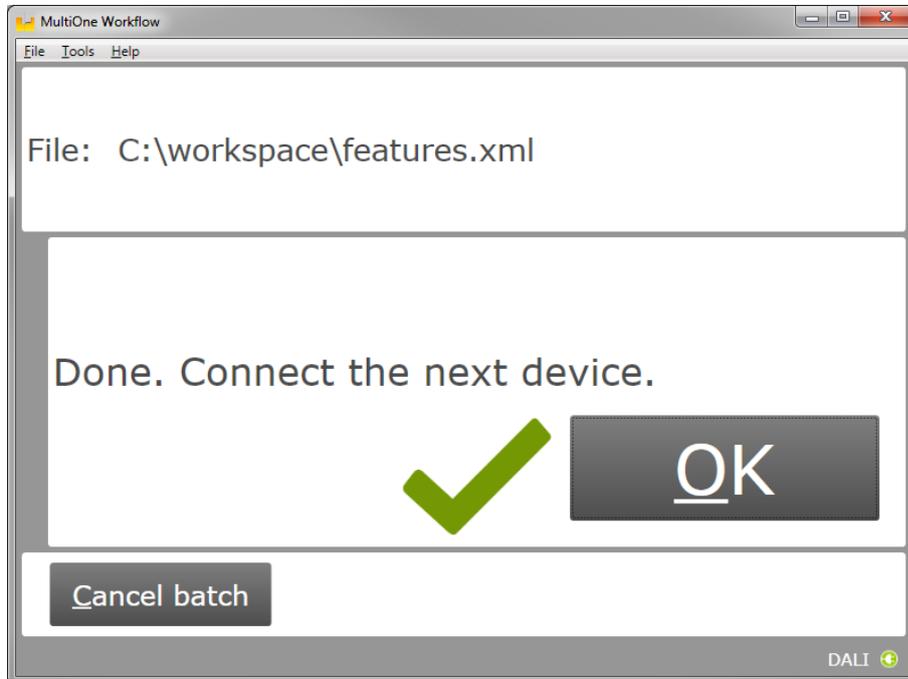
5.6.4 OEM Write Protection password is invalid

When using SimpleSet, MultiOne Workflow verifies the password (when a password is provided in the feature configuration file) with the password that is currently set in the driver. When a mismatch takes place, the following error will be shown:



5.7 Configuring done (USB2DALI interface)

After successfully configuring the device, audible feedback can be heard and the following window appears:

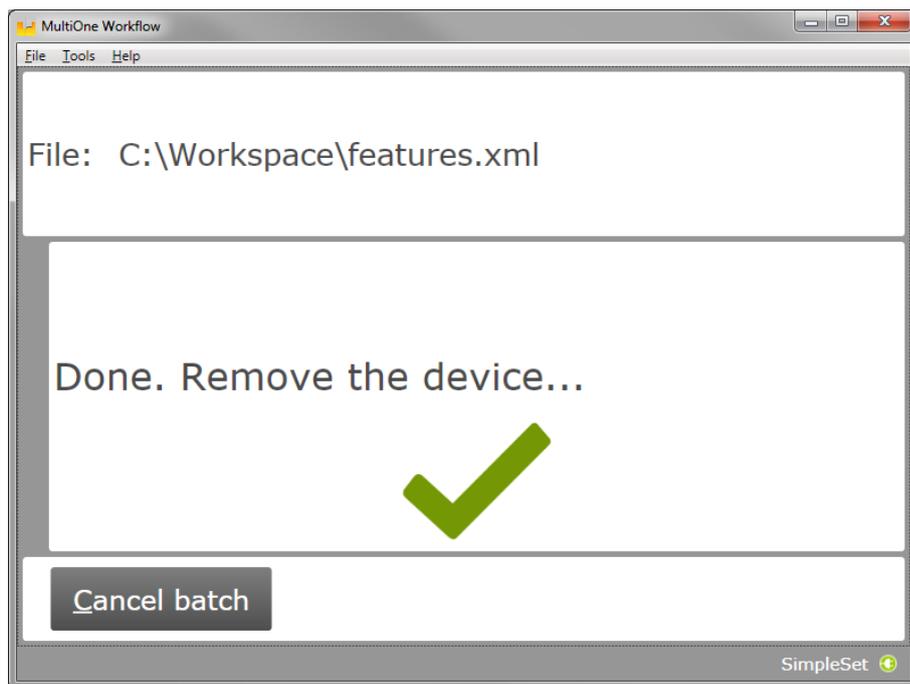


Disconnect the device and connect a new device. Click **OK** to configure the new device.

Click **Cancel batch** to go to the main application window.

5.8 Remove the device (SimpleSet® interface)

After successfully configuring the device, audible feedback can be heard and the following window appears:

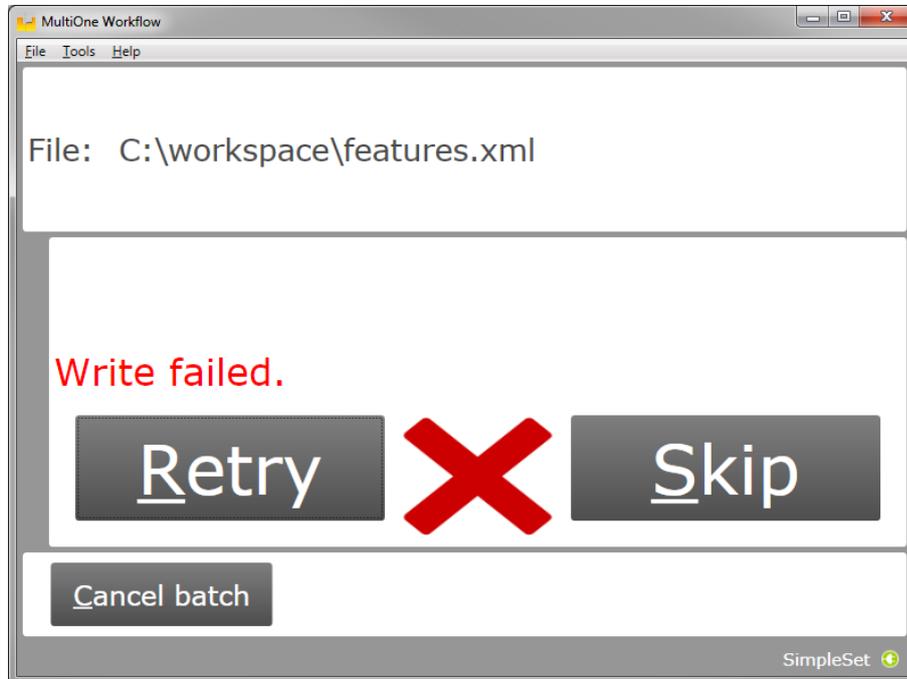


Move the SimpleSet® interface away from the device, MultiOne will then show the waiting for device view as explained in [5.5.2](#)

Click **Cancel batch** to go to the main application window.

5.9 Configuring failed

When configuring failed, an audible feedback can be heard and the following window appears (This is for both **USB2DALI** and **SimpleSet**[®] interface):



To retry the same device, click **Retry**.

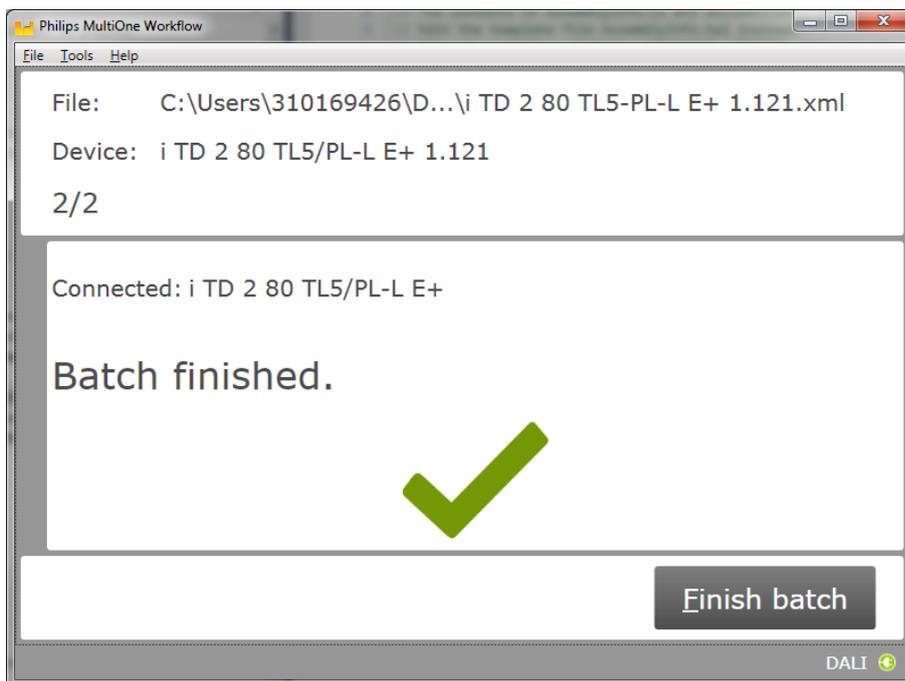
To skip configuring, disconnect the device, connect a new device and click **Skip**.

Click **Cancel batch** to go to the main application window.

5.10 Configuring finished

At any time during configuring, click **Cancel batch** to go to the main application window.

If in the preferences the option **Enter batch size before configuring** was checked and the specified number of devices have been configured correctly, MultiOne Workflow will indicate that the batch is finished. Note that devices that could not be configured correctly (and were skipped by the user) will not be counted for the batch progress.



Click **Finish batch** to go to the main application window.

Select **File** → **Exit** or click **Close** to exit MultiOne Workflow



6 MultiOne Command Line

MultiOne Command Line only runs from the Windows command line (console, MS-DOS prompt).

MultiOne Command Line is installed in the same directory as MultiOne Workflow.

6.1 Parameters

MultiOne Command Line is started using the following syntax:

MultiOneWorkflow.exe /f FeatureFile [/w WorkflowFile] [/i Interface] [/v Verbosity] [/c ContinueOnWarnings] [/l LabelDataLocation] [/id UniqueId]

Or when using a schedule the following syntax:

MultiOneWorkflow.exe /s SchedulerFile /i [/d SupportedDevicesFile] [/id UniqueId]

Note: The scheduler only works with DALI.

Or when retrieving the list of available DALI or SimpleSet® interfaces:

MultiOneWorkflow.exe /il [Interface]

Parameters between brackets are optional. The parameters have the following meaning:

Option	Parameter	Meaning
/f	FeatureFile	The feature configuration file
/w	WorkflowFile	The workflow configuration file, see 7 The Workflow configuration file
/i	Interface	The MultiOne interface used for communication. Possible values: d USB2DALI interface (default) s SimpleSet® interface
/v	Verbosity	The verbosity level (the message types that are shown in the console) Possible values: info Show info, error and fatal messages (default) error Show error and fatal messages fatal Show fatal messages only
/c	ContinueOnWarnings	Whether MultiOne should halt on warnings or ignore them and continue. Possible values: continue Continue on warnings halt Halt on warnings and produce an

		error code
/s	SchedulerFile	The scheduler file
/d	SupportedDevicesFile	The supported devices file, see 8 The supported devices file
/l	LabelDataLocation	The folder where to store the generated label data
/il	Interface	The MultiOne interface type for which to retrieve the list of available interfaces (with their unique id). Possible values: d USB2DALI interface (default) s SimpleSet® interface
/id	UniqueId	The unique id of the interface to use for communication (retrievable using the /il command line parameter). Notice! It is required to use the /i command line parameter to specify the interface type.

Example usage:

```
MultiOneWorkflow.exe /f "c:\files\FeatureConfiguration.xml" /w  
"c:\files\WorkflowConfiguration.xml" /i d /id 1A2B3C4D5E6 /l "c:\labels" /v  
fatal /c halt
```

6.2 Exit codes

In addition to console output, MultiOne Command Line produces an exit code when terminating. These codes can be used to integrate MultiOne Command Line into a custom tool chain. The exit codes are listed in the following sections.

6.2.1 General

Exit code	Meaning
0	Success
1	User software key not activated
4	Verification failed
5	The interface provided as argument to the command line is wrong
9	Workflow configuration file not found
10	Workflow configuration file not valid
20	Supported devices file not found
21	Supported devices file not valid
30	Label data folder could not be created
31	Label data could not be generated
32	Label data could not be exported
-1	General application failure

6.2.2 Related to writing feature data

Exit code	Meaning
101	There are no features to write (there are no features in the feature file matching the features in the device)
102	Writing failed

6.2.3 Related to resetting the short address of a device

Exit code	Meaning
150	Resetting the short address of the device failed
151	The DALI factory new operation failed

6.2.4 Related to selecting a feature file

Exit code	Meaning
200	Feature file not present
201	Invalid feature configuration file
202	Feature configuration file is empty
203	Feature configuration file contains duplicate features

6.2.5 Related to device features and feature file

Exit code	Meaning
300	The device does not support all features from the feature file
301	The device is not of the model specified in the feature file
350	The OEM Write Protection password stored in the feature file does not correspond with the password in the device.
351	The ALO min value stored in the device is higher than the ALO value in the feature file.

6.2.6 Related to traceability

Exit code	Meaning
400	Writing traceability information failed

6.2.7 Related to identifying a device

Exit code	Meaning
500	No device found
501	Too many devices found
502	Unable to execute discover (There is a problem with the connection settings / connected devices. Check if the correct connection settings being used and the MultiOne interface is connected properly)
503	Multiple devices share the same short address
504	Unsupported device detected

6.2.8 Related to converting a feature file

Exit code	Meaning
600	The feature file provided does not contain any features

6.2.9 Related to reading feature data

Exit code	Meaning
650	There are no features to read (there are no features in the feature file matching the features in the device)
651	Reading failed

6.2.10 Related to system preparation

Exit code	Meaning
700	No interface connected

6.2.11 Related to converting feature data

Exit code	Meaning
800	The feature file provided could not be converted to the latest version

6.2.12 Related to the scheduler

Exit code	Meaning
900	The provided scheduler file is invalid and could not be loaded.

6.2.13 Related to the database

Exit code	Meaning
1000	The database file is not found. Please re-install MultiOne Workflow.

7 The Workflow configuration file

The workflow configuration is the same for MultiOne Workflow and MultiOne Command Line. The configuration file contains the following options (by default all options will be disabled):

Parameter	Meaning
verify	When enabled MultiOne Workflow will perform a Write & Verify while configuring the devices. When disabled only a Write will be performed. true verify is enabled false verify is disabled
identifyalways	When enabled Workflow will identify every device; otherwise it will identify only once. Disabling will increase the speed of the configuring process. (The assumption in the latter case is that MultiOne Workflow is used to consecutively configure a batch of devices of the same device type.) true identifyalways is enabled false identifyalways is disabled
multidevice	When multidevice is enabled MultiOne Workflow will allow multiple devices of the same device type to be simultaneously configured. Multidevice cannot be enabled together with the verify option. When multidevice is enabled identifyalways also has to be enabled. true multidevice is enabled false multidevice is disabled
checkdevicemodel	When enabled MultiOne Workflow will check if the connected device matches the device model that is included into the feature configuration file and raises an error if they do not match. If the feature configuration file does not contain any information about the device model (files created with MultiOne 2.6.5 or older) an error will be raised. true checkdevicemodel is enabled false checkdevicemodel is disabled
commissionall	When commissionall is enabled MultiOne Workflow will commission all connected devices. Also, when commission all is enabled the short addresses of the connected devices are not reset anymore true commission all is enabled false commission all is disabled
dalifactorynew	When dalifactorynew is enabled MultiOne Workflow will reset the short address of all connected devices, and perform a DALI reset after configuring has finished true dalifactorynew is enabled false dalifactorynew is disabled

Notice! Before **simultaneously** configuring devices, the lowest short address needs to be unique. Therefore, as part of configuring, short addresses might need to be changed. In case such a change was needed all short addresses will be reset to 255 after configuring. Remember that applications can be affected by a change of the short address.

Examples of the workflow configuration file (a template for the configuration file can also be found in the MultiOne Workflow installation directory):

For consecutive configuring	For simultaneous configuring
<code>verify=true identifyalways=true multidevice=false commissionall=false</code>	<code>verify=false identifyalways=true multidevice=true commissionall=false</code>

Notice! identifyalways is currently only supported when using DALI. When using NFC every device will always be identified.

Notice! multidevice is currently only supported when using DALI.

Notice! Files in c:\Program Files or c:\Program Files (x86) can't be edited by Windows users who don't have administrator privileges. It is recommended to choose a different location for the workflow configuration file.

8 The supported devices file

The supported devices file is a file that describes which devices are supported during execution. If a connected device is not supported the execution fails. The supported devices file is the same for MultiOne Workflow and MultiOne Command Line.

Example of the supported devices file (a template for the supported devices file can also be found in the MultiOne Workflow installation directory):

```
<?xml version="1.0" encoding="utf-8"?>
<Products xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" FileVersion="1.0">
  <Product>
    <ProductName>Xitanium 27W 1.0A Prog+ 230V J-sXt</ProductName>
    <FactoryFirmwareVersion>V01E01</FactoryFirmwareVersion>
  </Product>
  <Product>
    <ProductName>HF-Ri TD 3 14/24 TL5 E+</ProductName>
    <FactoryFirmwareVersion>1.4</FactoryFirmwareVersion>
  </Product>
</Products>
```

The first line describes the xml version. This never changes.

The second line describes the xml schema used and the version of the supported devices file. The xml schema specified is the default one and will never change. The version of the supported devices file can change in the future.

Then, depending on the amount of supported devices for every supported device a 'Product' element must be specified. Within the 'Product' element there are two subelements called 'ProductName' and 'FactoryFirmwareVersion'. The 'ProductName' subelement holds the name of the product where the 'FactoryFirmwareVersion' holds the version of the product.

9 Barcode reader and barcode requirements

To enable the possibility to automatically open feature files the following is required for the barcode reader to be able to communicate with MultiOne Workflow:

- The barcode reader must be set to USB keyboard input mode (RS232 is not supported) and to the same keyboard layout as the system it is connected to.
- The barcode reader must be configured to send a carriage return (CR) after a scan.

For the barcode the following requirements are necessary:

- The barcode must contain the filename of the feature file (**without** the file extension '.xml').
- The barcode may only contain characters allowed by the Windows filesystem. The following characters are not allowed: <, >, :, ", /, \, |, ?, and *.

Example of a 1D barcode for a Xitanium 40W 0.1-1.1A 54V 0-10V 120-277V 1.1 device:



Example of a 2D barcode (QR code) for the same Xitanium 40W 0.1-1.1A 54V 0-10V 120-277V 1.1 device:



As you can see at the examples above a 1D barcode can get quite long, and some barcode scanners won't be able to scan such long barcode anymore, so when using long filenames it is recommended to use 2D barcodes instead.

To test if your barcode reader is setup correctly open Notepad and scan one of the barcodes above. If notepad shows 'Xitanium 40W 0.1-1.1A 54V 0-10V 120-277V 1.1' and the cursor is at the beginning of the next line, then the barcode reader is setup correctly.

10 Label data file contents

When label data is generated and stored in a comma separated value file the contents of the file consists of three lines. The first line contains the column names, the second line contains the units and the third and line contains the values.

The following table describes which columns are included with which unit and its value:

Column name	Unit	Value	Included
Date	dd- MM- yyyy	The date the label data was generated	Always
Time	Hh:mm	The time the label data was generated	Always
FeatureConfigurationFilePath	n/a	The path to the feature configuration file	Always
FeatureConfigurationFileName	n/a	The name of the feature configuration file	Always
Device Id	n/a	The unique identifier of the device	If configured to be included
Configuration Result	n/a	Successful or Failed	Always
Custom Field 1	n/a	Custom value 1	If configured to be included
Custom Field 2	n/a	Custom value 2	If configured to be included
Device Model	n/a	Device model (for example: Xitanium Outdoor 150W .35 Prog+ H)	Always

If the driver contains one of the following features:

- AOC
- MTP
- Interface Selection
- Dynadimmer

Their settings are also stored in the label data file.

11 Changes

The previous configuration file used by MultiOne Workflow located in **c:\temp\workflow.xml** has been **deprecated** and will no longer be supported in a future version of MultiOne Workflow (& Command Line).

We highly advice you to start using the new configuration file as described in [7 The Workflow configuration file](#)

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