

# ezFMD Installation Guide

V.1.7  
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## Contents

Prerequisites .....	2
Stage 1: IMVO – Create Location, Equipment & Client Secrets.....	2
Stage 2: Configure Barcode Scanner.....	8
Example Scanner Setup - Dialog QuickScan QD2430.....	8
Stage 3: Install & Configure ezFMD .....	9
Run SETUP Package.....	9
ezFMD Administrator – Start & Configure.....	9
ezFMD Administrator – Configure Location Secret .....	10
ezFMD Scanner – Start & Configure .....	10
ezFMD Scanner – Test Scan .....	14
Add ezFMD Scanner to Computer Startup .....	16
Stage 5: Demo of ezFMD.....	17
Add ezFMD Scanner to Computer Startup .....	18
Information : ezFMD –Addresses and Ports for Firewall configuration .....	19
ezFMD Configuration details – location.....	20
Issue with Ping .....	21

## Prerequisites

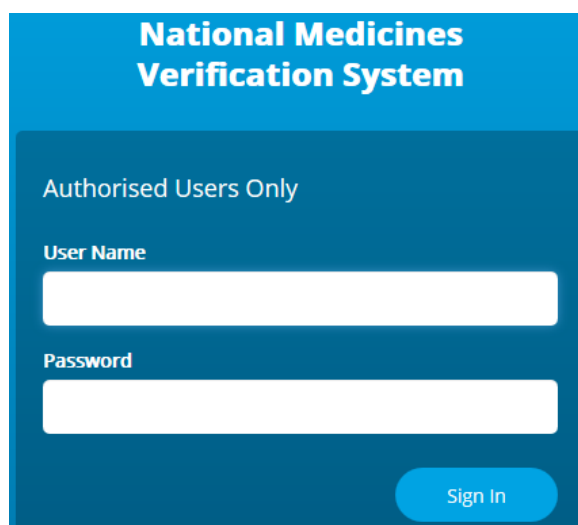
- Customer must have completed the onboarding process, and have an account with their National System such as the IMVO / MAMVO etc
- Site Configuration File obtained from HE Clissmann
- PC with Windows 7 or higher
- If a USB Scanner is to be used then the PC must have one free USB port.
- If a Bluetooth scanner is to be used and the PC does not have Bluetooth built in, then one free USB port may be required for a Bluetooth dongle.
- The correct driver for the barcode scanner. Windows 10 supports many USB barcode scanners “out of the box”. Windows 7 and 8 usually need drivers installed. Drivers may also be needed for Bluetooth dongles etc.
- The PC should have passed the ezFMD Firewall Test (if applicable)
- Administrator or elevated privileges to install software on the PC

## Stage 1: IMVO – Create Location, Equipment & Client Secrets

***This stage should normally performed once for each customer, regardless of the number of PC's ezFMD will be installed.***

Ask the customer to login to their IMVO account. The address for the IMVO portal is

<https://nbsieprod.emvs-nbs.eu:8640>:

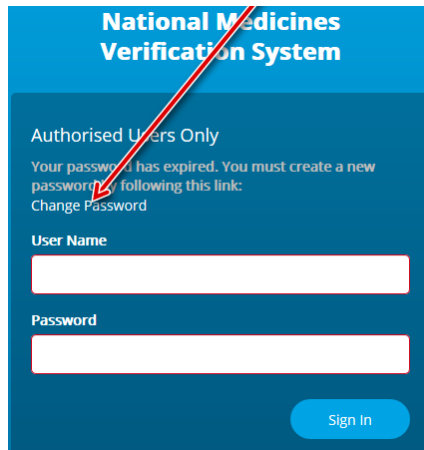


The image shows a login interface for the National Medicines Verification System. It features a blue header with the text "National Medicines Verification System". Below the header, there is a dark blue box containing the text "Authorised Users Only". Underneath, there are two input fields: "User Name" and "Password". A "Sign In" button is located at the bottom right of the form.

The customer should enter the username and password they created during the IMVO signup (onboarding) process.

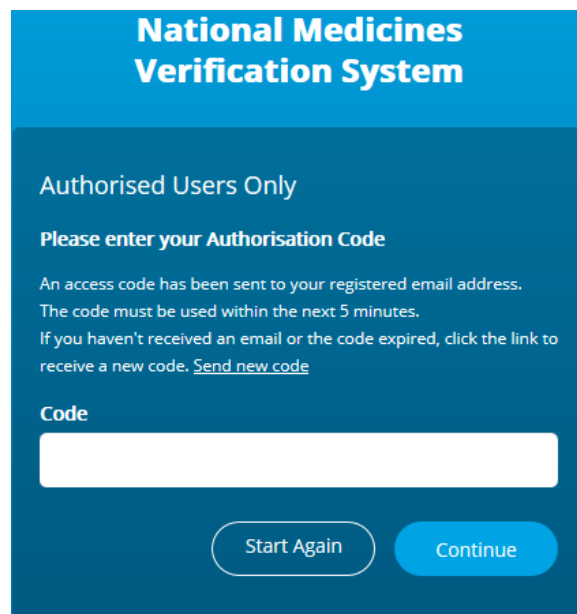
If it has been a while since the customer last logged in, you may see the following screen – click on the Change Password link and follow the onscreen instruction to select a new password according to their rules:

- Uppercase characters
- Lowercase characters
- Digits and Non alphanumeric characters (!\$%&=+@#.-\_)



The screenshot shows the 'National Medicines Verification System' login interface. At the top, it says 'Authorised Users Only'. Below that, a message states: 'Your password has expired. You must create a new password following this link: Change Password'. There are two input fields: 'User Name' and 'Password'. A red arrow points from the 'Change Password' link to the 'Password' field. A 'Sign In' button is located at the bottom right.

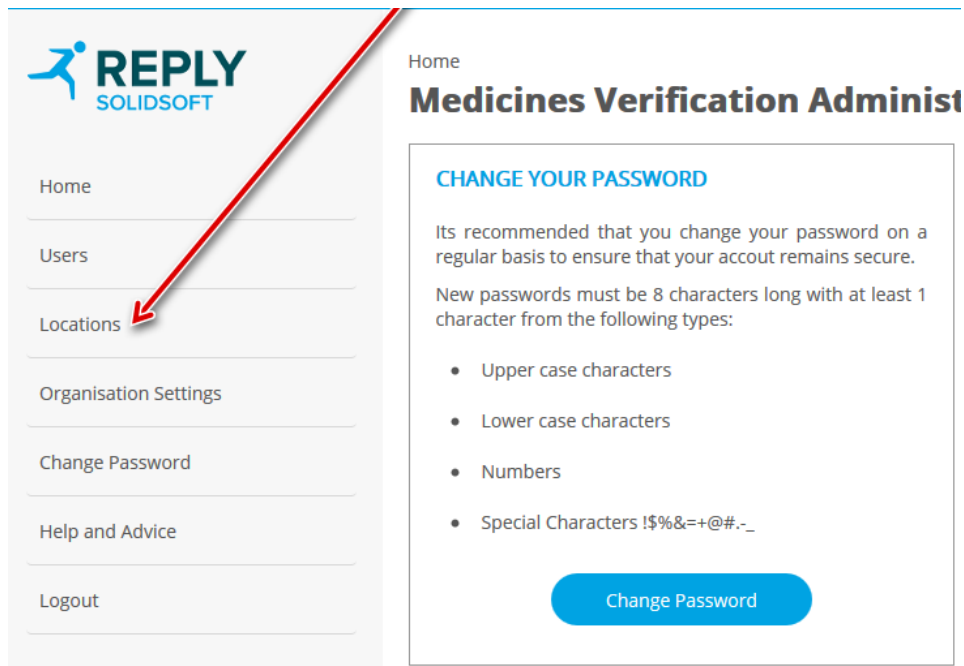
Once the email address and password have been accepted, you will see this screen:



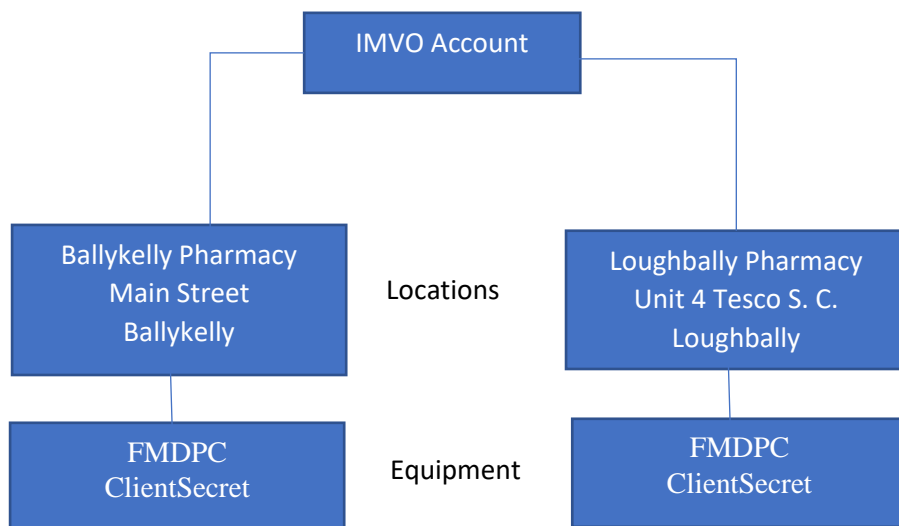
The screenshot shows the 'National Medicines Verification System' login interface. At the top, it says 'Authorised Users Only'. Below that, it says 'Please enter your Authorisation Code'. A message states: 'An access code has been sent to your registered email address. The code must be used within the next 5 minutes. If you haven't received an email or the code expired, click the link to receive a new code. [Send new code](#)'. There is a 'Code' input field. At the bottom, there are two buttons: 'Start Again' and 'Continue'.

Check the customers email for this authorisation / access code. When received, enter it and click Continue.

The portal screen for the customer is now displayed. Click on Locations:



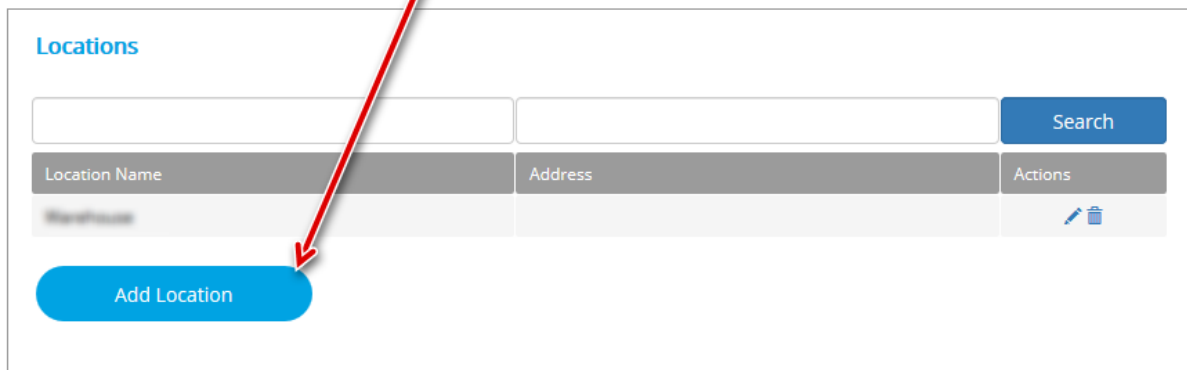
The customer may have registered more than one pharmacy during the on-boarding process. In such a case you must create the appropriate number of Locations in the portal, and then add client equipment for each one.





Click on “the Add Location” button to add your location:

Home > Locations

## Medicines Verification Administration Portal



The screenshot shows the 'Locations' page in the Medicines Verification Administration Portal. At the top, there is a breadcrumb 'Home > Locations' and the title 'Medicines Verification Administration Portal'. Below this is a 'Locations' section with a search bar and a 'Search' button. A table lists existing locations with columns for 'Location Name', 'Address', and 'Actions'. A red arrow points to a blue 'Add Location' button at the bottom left of the table.

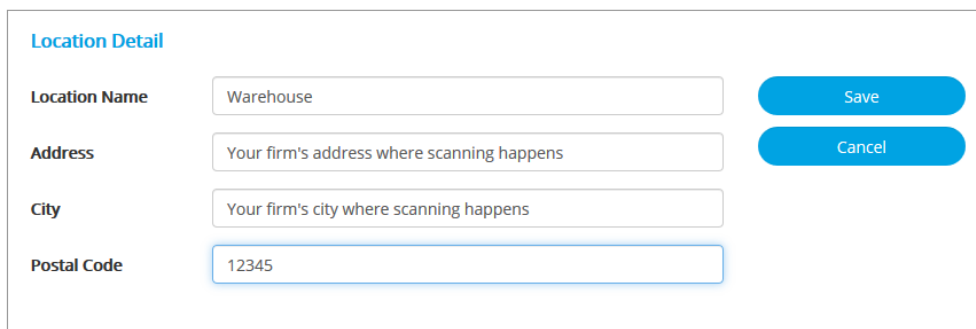
Location Name	Address	Actions
Warehouse		 

[Add Location](#)

Create the location as per your own details and then click Save. NOTE: The IMVO has requested that the location name and address reflect the details provided during the on-boarding process. Avoid using Pharmacy1, Pharmacy2 etc. for the name.

Home > Locations > Create

## Medicines Verification Administration Portal



The screenshot shows the 'Create' page for adding a new location. It features a 'Location Detail' section with four input fields: 'Location Name' (containing 'Warehouse'), 'Address' (containing 'Your firm's address where scanning happens'), 'City' (containing 'Your firm's city where scanning happens'), and 'Postal Code' (containing '12345'). To the right of the fields are two blue buttons: 'Save' and 'Cancel'.

**Location Detail**

**Location Name**  [Save](#)

**Address**  [Cancel](#)

**City**

**Postal Code**

On the next screen, select "Add Client Equipment" :

Home > Locations > Edit

### Medicines Verification Administration Portal

**Location Detail**

**Location Id**

**Location Name**

**Address**

**City**

**Postal Code**

**Client Equipments**

Equipment Id	Client Id	Status	Actions
No client equipments found.			

Enter a generic name for the PC, as the same credentials can be used on more than one PC. Then click Create:

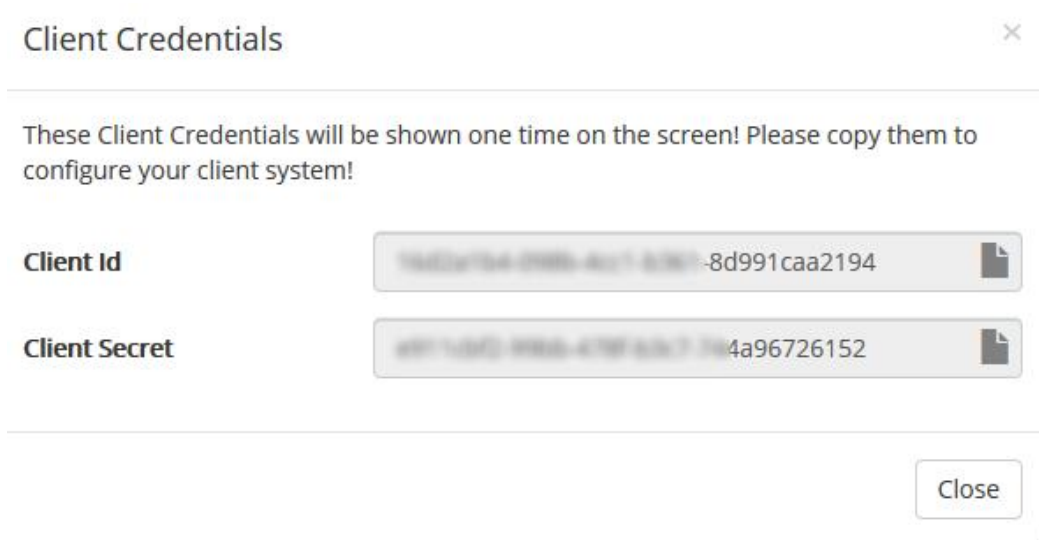
### Create Client Equipment

Location : Warehouse2

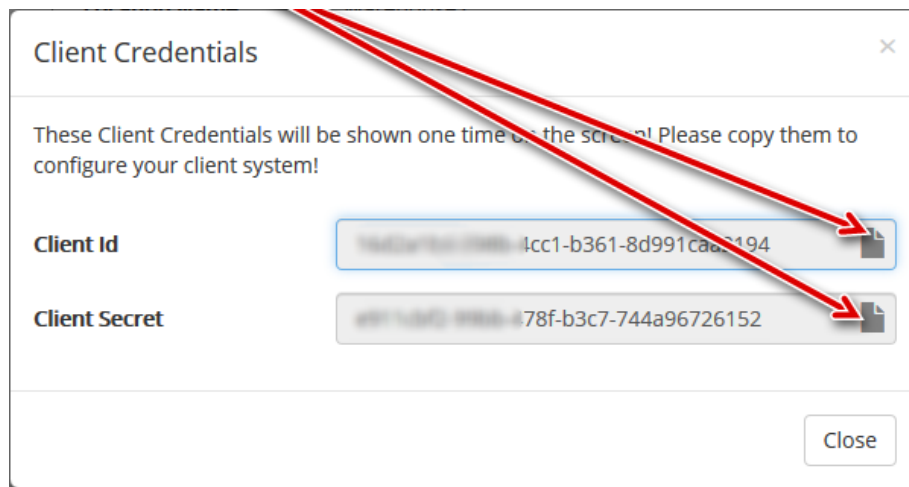
**Equipment Id**

THE **CRUCIAL STEP**: The “Client ID” and “Client Secret” are entered into ezFMD later. You must take care to record them accurately.

**DO NOT CLICK OUTSIDE THIS WINDOW UNTIL YOU HAVE NOTED THESE DETAILS!**



Copy and paste these values into Notepad. If you click on the icons highlighted below to the right of each field, that field will be copied to the clipboard. Alternatively click in the field and select the text with the mouse.



Once the details are pasted into Notepad save them in a file as you may need to reboot the PC later in the installation procedure when the scanner hardware and driver is configured.

## Stage 2: Configure Barcode Scanner

ezFMD is compatible with RS232 scanners. If the scanner has a USB interface then you must ensure that it is configured to operate in Serial over USB mode. This may be called Serial USB, USB Serial, USB-COM or USB-COM-STD, Serial over USB, etc. by different manufacturers.

In most cases scanners are supplied operating in “Keyboard Wedge” mode. In such a case you must program the scanner with one or more special barcodes to switch it to Serial over USB mode. For some scanners scanning one barcode is enough. For others, you may need to scan an “Enter Setup” barcode first, then scan a barcode to select Serial Over USB mode, and possibly finish by scanning a “Save/Exit Setup” barcode. Each manufacturer has their own way of performing this procedure.

Windows 7 and 8 usually require the installation of a driver in order for the scanner to function in USB Over Serial Mode. You should install the driver before attempting to program the scanner. Once the scanner is visible as a COM port in windows it can be configured with ezFMD.

NOTE: When installing wireless and Bluetooth scanners allow lots of time for the hardware to connect, register and configure. This can take 60 seconds or more.

### Example Scanner Setup - Dialog QuickScan QD2430

If running on Windows 7 then download and install the driver USBCOMInstaller.msi.

The QD2430 requires a barcode to be scanned in order to place it into Serial over USB mode. A booklet is included with the scanner which contains the relevant barcode. It is usually labelled “USB-COM-STD”

NOTE: Windows 7 requires the installation of a driver before the QD2430 can operate in Serial over USB mode. You should install the driver before scanning the barcode to switch it to Serial over USB mode. On older PC’s with Antivirus software it can take a \*long\* time for the driver to install.

Reset to Factory Defaults



Enable Serial over USB mode



Select USB-COM-STD

Enable scanning of Inverse barcodes



Enter/Exit Setup Mode



Enable Normal & Inverse Scanning



Enter/Exit Setup Mode



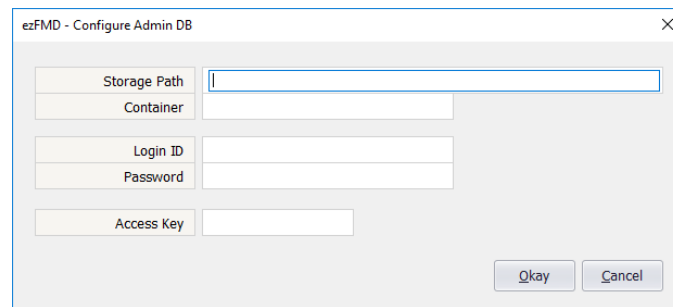
## Stage 3: Install & Configure ezFMD

### Run SETUP Package

Locate the SETUP.EXE for ezFMD and run it. (Suggestion: See <http://ezfmd.com/downloads> to obtain the latest release.) In some circumstances you may need elevated privileges or Administrator rights to run SETUP. Accept all the defaults suggested by SETUP.

### ezFMD Administrator – Start & Configure

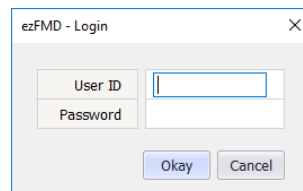
Once SETUP is complete you should run the “ezFMD Admin” application. When first run you will be asked to specify the database to be used for the customer (such as a pharmacy or wholesaler) for whom you are performing the installation. A screen similar to this will be displayed:



The screenshot shows a dialog box titled "ezFMD - Configure Admin DB". It has a close button (X) in the top right corner. The dialog contains several input fields: "Storage Path" (a long text box), "Container" (a text box), "Login ID" (a text box), "Password" (a text box), and "Access Key" (a text box). At the bottom right, there are two buttons: "Okay" and "Cancel".

At this point you should drag and drop the site configuration file for the customer onto this screen. If the configuration file is valid then the fields will be filled in and you can click the “Okay” button.

The Login dialog will then be displayed:



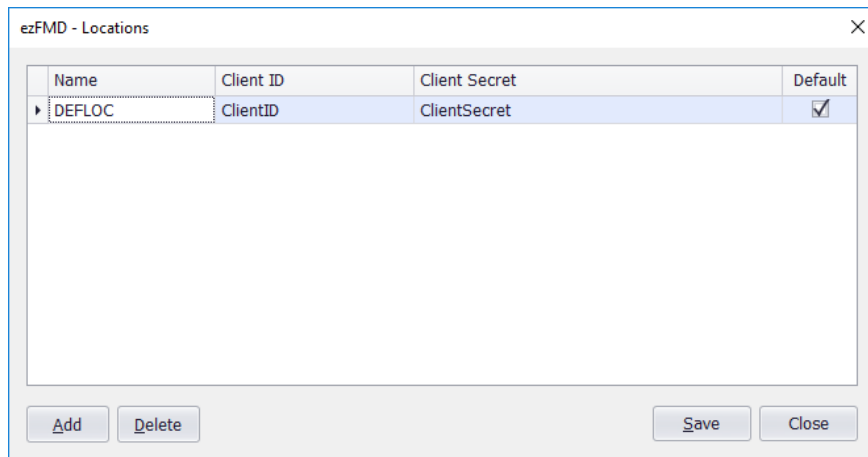
The screenshot shows a dialog box titled "ezFMD - Login". It has a close button (X) in the top right corner. The dialog contains two input fields: "User ID" (a text box) and "Password" (a text box). At the bottom, there are two buttons: "Okay" and "Cancel".

Enter “ADMIN” for the user, the default Administrator password and click “Okay”

## ezFMD Administrator – Configure Location Secret

***This step should normally be performed once on the first PC at location.***

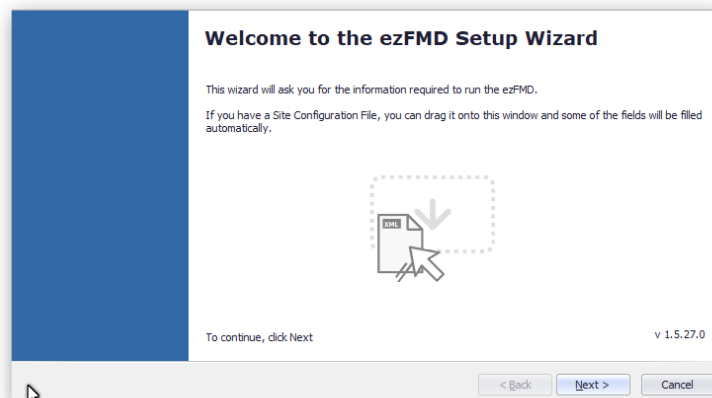
You now need to enter the ClientID and Client Secret obtained during the “IMVO – Create Location Secret” section that you completed earlier. Select Organisation:Locations and the following screen will be displayed with place holders for the secret information:



Click in the ClientID field and paste in the IMVO ClientID. Click in the “Client Secret” field and paste in the IMVO Client Secret. Click the “Save” button to save the information. You can now close the ezFMD Admin application.

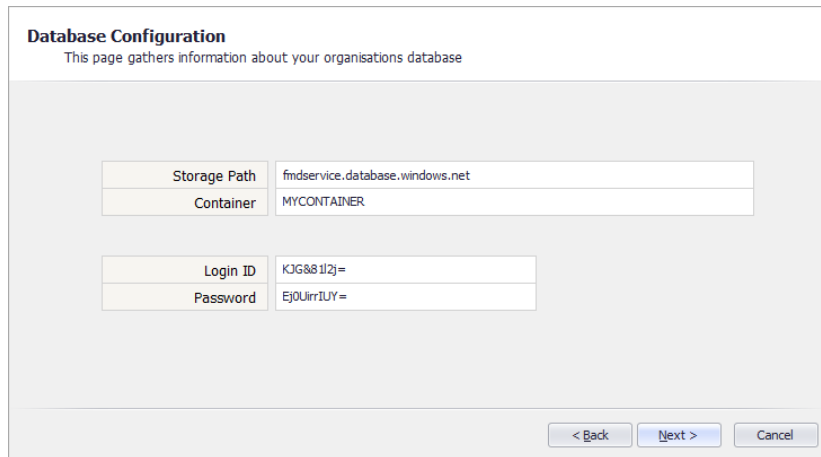
## ezFMD Scanner – Start & Configure

***Before starting this segment, ensure that you have a functioning barcode scanner which is visible as a COM port.*** Start the “ezFMD Scanner” application. The ezFMD Setup Wizard will run and ask you to provide information that will allow it to perform FMD operations:



Drag and drop the customers Site Configuration file on to the Setup Wizard.

On the first page on the Setup Wizard you confirm the Service Configuration and should look similar to this example:

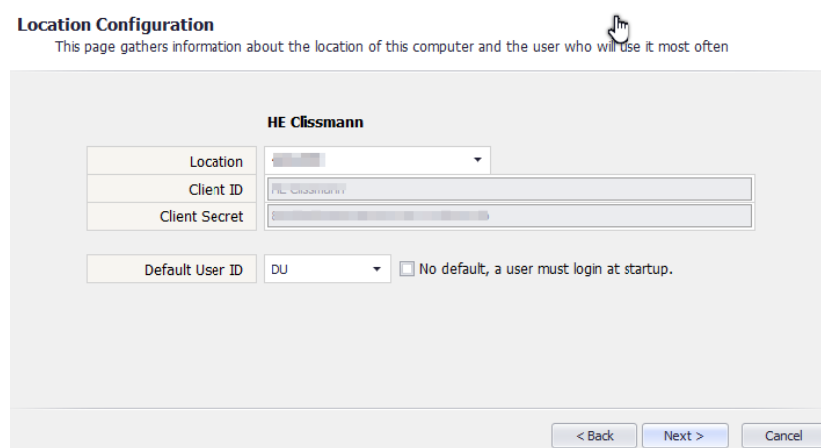


**Database Configuration**  
This page gathers information about your organisations database

Storage Path	fmdservice.database.windows.net
Container	MYCONTAINER
Login ID	KJG8812j=
Password	Ej0Uir1UY=

< Back   Next >   Cancel

On the next page you select the Location Secret and the User that will normally be scanning packs:



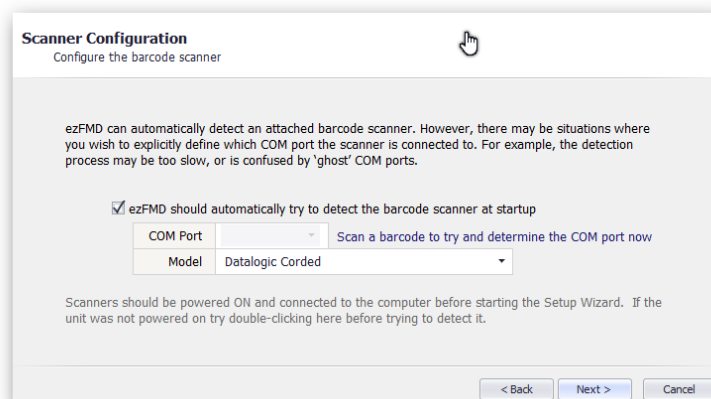
**Location Configuration**  
This page gathers information about the location of this computer and the user who will use it most often

**HE Clissmann**

Location	[Dropdown]
Client ID	HE Clissmann
Client Secret	[Text Field]
Default User ID	DU <input type="checkbox"/> No default, a user must login at startup.

< Back   Next >   Cancel

On the next page you select the COM port on which the Barcode Scanner is configured:



**Scanner Configuration**  
Configure the barcode scanner

ezFMD can automatically detect an attached barcode scanner. However, there may be situations where you wish to explicitly define which COM port the scanner is connected to. For example, the detection process may be too slow, or is confused by 'ghost' COM ports.

ezFMD should automatically try to detect the barcode scanner at startup

COM Port	[Dropdown]	Scan a barcode to try and determine the COM port now
Model	Datalogic Corded	

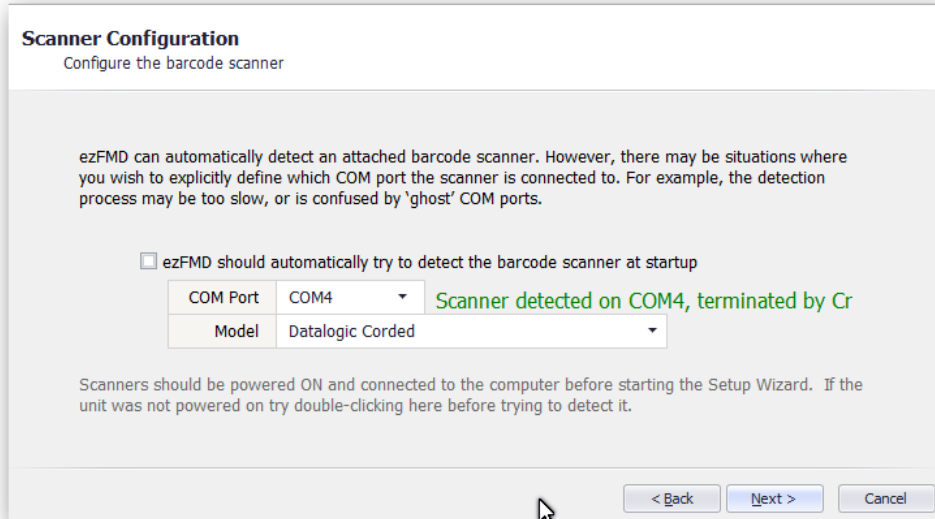
Scanners should be powered ON and connected to the computer before starting the Setup Wizard. If the unit was not powered on try double-clicking here before trying to detect it.

< Back   Next >   Cancel

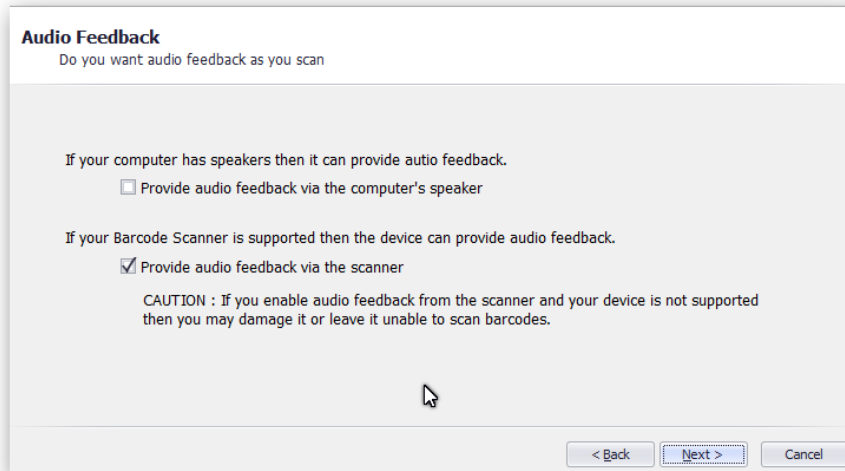
Select an appropriate scanner model. For example, when a Datalogic scanner is being used it can provide audio feedback to users to let them know the result of a scan. *If you are not sure then select*

“Generic”. Selecting the wrong model may cause ezFMD to freeze or configure the scanner incorrectly.

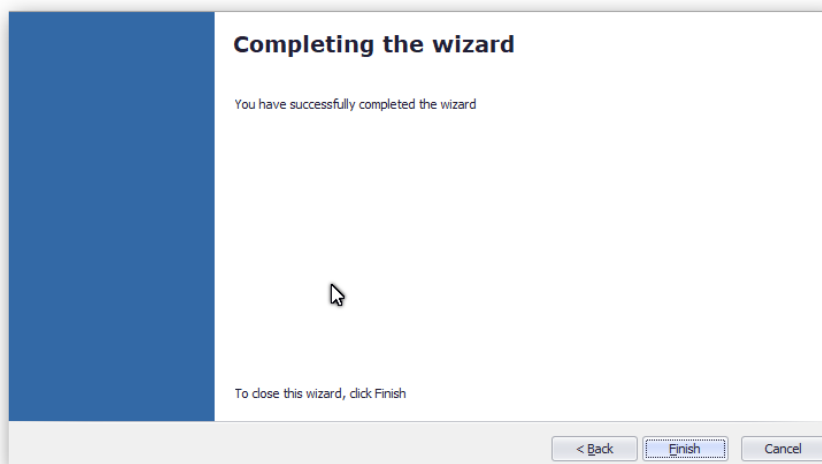
You should now scan a barcode and ezFMD will detect which COM port the scanner is on:



On the next page you configure audio feedback. In some location's a customer may prefer a quiet working environment and wish to disable audio feedback.

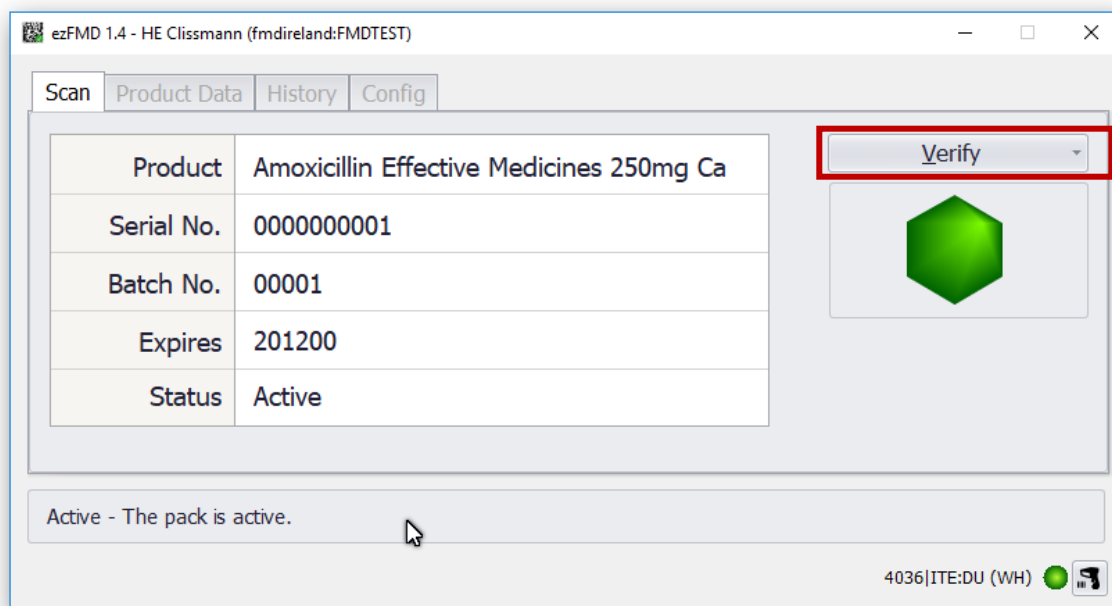


The Setup Wizard is now complete:



## ezFMD Scanner – Test Scan

Make sure that ezFMD is in “Verify” mode and scan a pack of medicine that contains a 2D Datamatrix FMD barcode.



If the scanner is configured correctly then ezFMD should display the contents of the barcode on screen and then contact the FMD National System to determine to current status of the pack. When the status has been determined you should see a green, amber or red light.

The barcode is not read by ezFMD

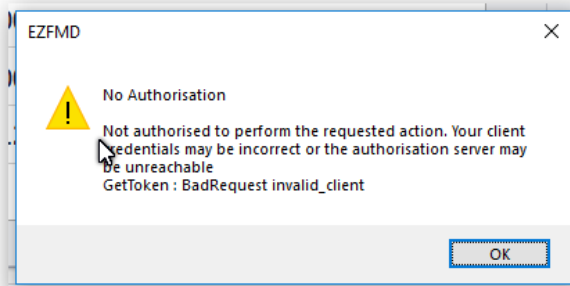
Note: occasionally a Datalogic scanner does not send the first barcode to the PC after starting ezFMD. You should try repeating the scan a second time to ensure this is not the issue.

Click on the scanner icon at the bottom right had corner of the ezFMD window:



Then configure the connection and repeat the test scan.

The following message is displayed:



You may have entered the ClientID and Client Secret incorrectly.

Start the “ezFMD Admin” application. Select “Organisation: Location” and make sure that the values are correct.

Another possible problem is that the wrong endpoints are being used. Start the “ezFMD Admin” application. Select “System:NVO Endpoints” and make sure that the Live or Production endpoint is selected. E.g. for the Irish National System the correct endpoint is “IMVO-LIVE”.

Finally, check that the required ports and endpoints are not being blocked (see next)

ezFMD is unable to reach the National System or suggests it may be offline.

Make sure that the following TCP ports are not blocked by the PC or by a Network Security Device:

8978  
8637  
8640  
1433

If website blocking is performed by the PC or Network Security Device then add the following to the appropriate white list:

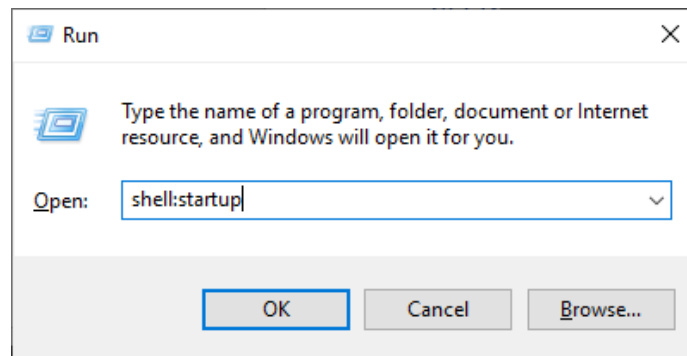
<https://nbsieprod.emvs-nbs.eu:8978/>  
<https://nbsieprod.emvs-nbs.eu:8637/connect/token>

The above URL's are for the Irish National System. The URL's for other National Systems will differ.

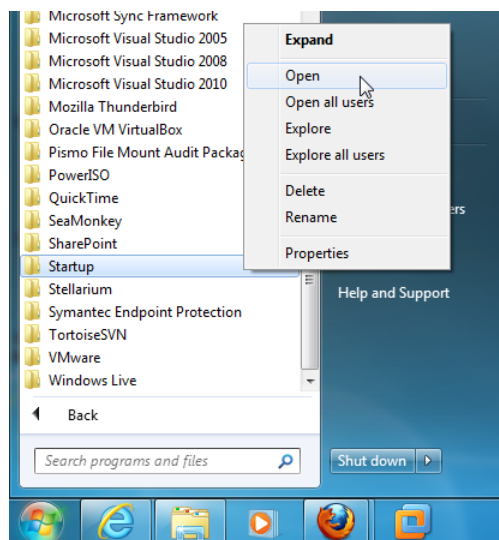
See also the [Firewall Ports Guide](#)

## Add ezFMD Scanner to Computer Startup

When you are happy that the ezFMD Scanner application is functioning correctly, add it to the computers Startup group so that it runs every time the computer is turned on. On Windows 10 Press **[Windows]R** and in the run dialog box enter “shell:startup”



On Windows 7 select **Start:Startup:Open**











## Stage 5: Demo of ezFMD

Once ezFMD is operating correctly you should give the users an overview of the system. Explain the different actions that may be performed, e.g. Verify, Dispense, Reactivate etc. Provide an overview of the History tab and downloading a given date range. For wholesalers, mention the importance of the Product Data tab – in particular the authorised wholesalers field.

Explain “off-line” mode. Show option to upload after scanning off line.

You can also show them some samples responses using the following barcodes while in Verify mode.

Pack already Supplied 	
Marked for Destined for Destruction 	
Marked Stolen 	

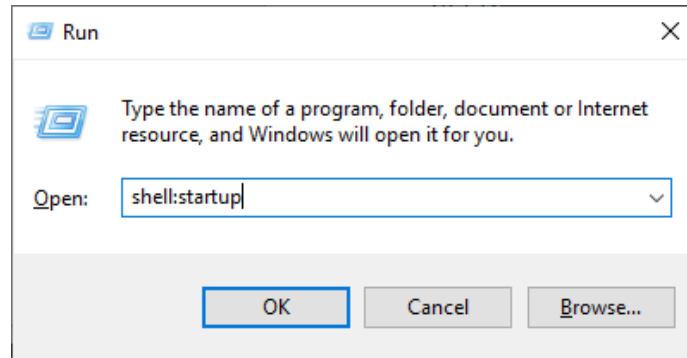
***Remember to select the Default action (for a Pharmacy this usually is “Dispense”, for a wholesaler more likely “Verify”) before leaving.***

## Add ezFMD Scanner to Computer Startup

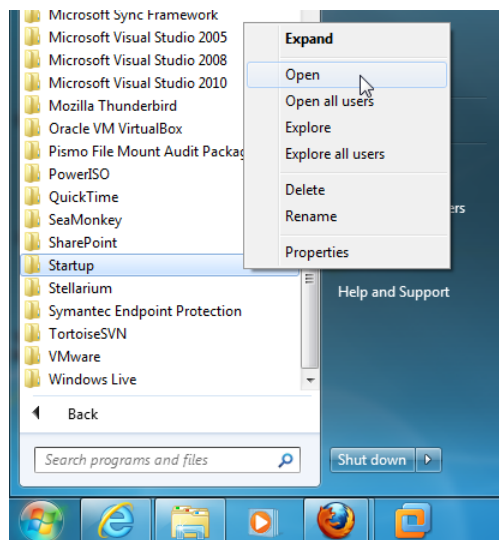
Pin the ezFMD application to the Taskbar. Also pin it to the Startup menu.

Ask the user if they wish to have the scanner application start automatically when they login. If not then you can skip the rest of this section.

Windows 10 - Press [**Windows**]R and in the run dialog box enter “shell:startup”



Windows 7 - select **Start:Startup:Open**



## Information : ezFMD –Addresses and Ports for Firewall configuration

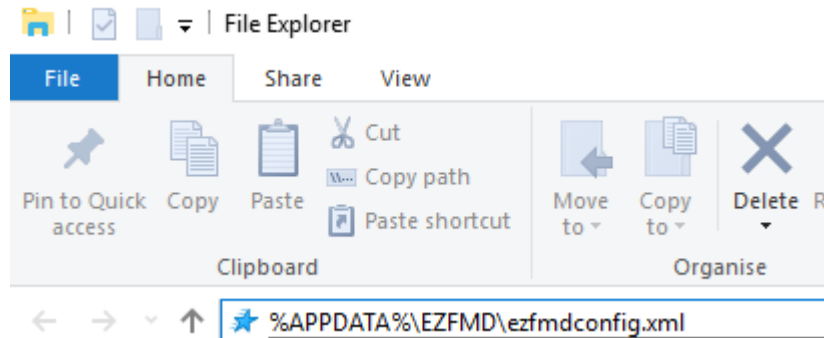
Description	Address	Ports	Critical
ITE API	http://irl-nbs-ite-domname12424.northeurope.cloudapp.azure.com:5000/api	5000	
ITE Authorisation	http://irl-nbs-ite-domname12424.northeurope.cloudapp.azure.com:5001/identity/connect/token	5001	
ITE Reporting	http://irl-nbs-ite-domname12424.northeurope.cloudapp.azure.com:5004/report	5004	
IQE API	https://nbsieiqe1.emvs-nbs.eu:8978/	8978	
IQE Authorisation	https://nbsieiqe1.emvs-nbs.eu:8637/connect/token	8637	
IQE Reporting	https://nbsieiqe1.emvs-nbs.eu:8993/	8993	
PRD API	https://nbsieprod.emvs-nbs.eu:8978/	8978	Y
PRD Authorisation	https://nbsieprod.emvs-nbs.eu:8637/connect/token	8637	Y
PRD Reporting	https://nbsieprod.emvs-nbs.eu:8993/	8993	Y
Database HEC	fmdireland.database.windows.net	1433	
Database HSE	hsefmd.database.windows.net	1433	Y
Aggregation HSE	http://hseaggregationservice.azurewebsites.net	80	Y
	http://hseaggregationservice.azurewebsites.net/ServiceHandler.svc	80	Y
	https://hseaggregationservice.azurewebsites.net	443	Y
	https://hseaggregationservice.azurewebsites.net/ServiceHandler.svc	443	Y
Aggregation TEST	http://fmdaggregateservice.azurewebsites.net	80	
	http://fmdaggregateservice.azurewebsites.net/ServiceHandler.svc	80	
	https://fmdaggregateservice.azurewebsites.net	443	
	https://fmdaggregateservice.azurewebsites.net/ServiceHandler.svc	443	
Ping / ICMP	8.8.8.8 ( <a href="#">Or see Issue with Ping</a> )		Y

## ezFMD Configuration details – location

### IT STAFF USE ONLY

All details entered above are saved in %LOCALAPPDATA%\EZFMD\ezfmdconfig.xml

(If not found at this location, try %APPDATA%\EZFMD\ezfmdconfig.xml)



Edit this file with Notepad or similar plain text editor – NOT with Word.

```
<?xml version="1.0" encoding="utf-8"?>
<Config>
  <Scanner>
    <KeepAlive>No</KeepAlive>
    <KeepAliveTimeout>300</KeepAliveTimeout>
    <Terminator>Cr</Terminator>
    <EnableScannerSounds>Yes</EnableScannerSounds>
    <InitString>E{CR}</InitString>
    <COMPort>*</COMPort>
    <Manufacturer>1</Manufacturer>
    <Model>DataLogicSound</Model>
    <SoundGood>B{CR}</SoundGood>
    <SoundBad>F{CR}</SoundBad>
    <SoundBadPauseBeforeEnable>750</SoundBadPauseBeforeEnable>
    <EnableCommand>E{CR}</EnableCommand>
    <DisableCommand>D{CR}</DisableCommand>
    <ReadTimeout>1000</ReadTimeout>
    <WriteTimeout>1000</WriteTimeout>
  </Scanner>
  <Connectivity>
    <PingHost>8.8.8.8</PingHost>
    <OfflinePingCount>5</OfflinePingCount>
    <OfflinePingTimeout>750</OfflinePingTimeout>
    <IgnoreProxyServer>No</IgnoreProxyServer>
  </Connectivity>
  <OfflineMode>
    <AutoPlaybackTime>22:00</AutoPlaybackTime>
  </OfflineMode>
  <Barcode>
    <IFAPProductNumberMode>ProductCodeAlways</IFAPProductNumberMode>
    <!-- ProductCodeAlways | GTINThenProductCode -->
  </Barcode>
  <General>
    <AutoPrintAlertReport>False</AutoPrintAlertReport>
  </General>
  <Sounds>
    <Enabled>Yes</Enabled>
  </Sounds>
  <Aggregate>
    <AllowLocalAdditionsWhileProcessing>True</AllowLocalAdditionsWhileProcessing>
    <ServiceAddress>
    </ServiceAddress>

    <ServiceAzureProd>http://hseaggregationservice.azurewebsites.net/ServiceHandler.svc</ServiceAzureProd>

    <ServiceAzureITE>http://fmdaggregateservice.azurewebsites.net/ServiceHandler.svc</ServiceAzureITE>
  </Aggregate>

```

```

<ServiceAddressLocal>http://localhost:65261/ServiceHandler.svc</ServiceAddressLocal>
</Aggregate>
<Printers>
  <LabelPrinterName>
  </LabelPrinterName>
  <labelPrinterFormat>Dymo30252</labelPrinterFormat>
</Printers>
<Storage>
  <Path>fmdireland.database.windows.net</Path>
  <Container>FMDHEC</Container>
  <ID>MzUJAAAAICA=</ID>
  <Password>AzNtBwtyEHs=</Password>
  <IntegratedSecurity>No</IntegratedSecurity>
  <Instance>
  </Instance>
</Storage>
<Organisation>
  <LocationID>site-specific</LocationID>
  <UserID>DU</UserID>
</Organisation>
</Config>

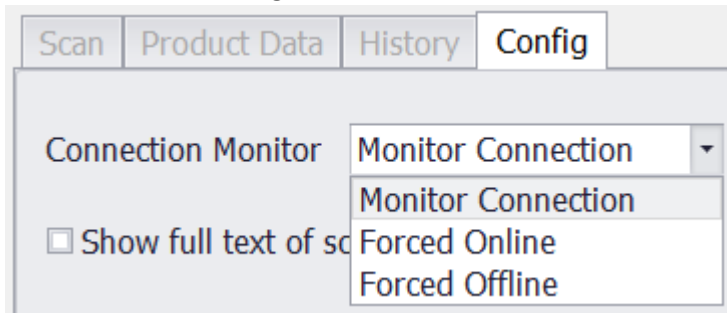
```

## Issue with Ping

ezFMD tests for Internet access to determine if it should operate in Online or Offline mode. In Offline mode, scans are stored locally until the PC in question can again reach the Internet, when they are available to be sent to the IMVO. ezFMD by default pings the address 8.8.8.8 to determine if it is online.

In certain sites, this causes an issue with the firewall or other in-house rules. The behaviour of ezFMD may be modified in one of two ways to address this:

- 1) In ezFMD on the Config tab, set “Connection Monitor” to the option Forced Online:



This is easy to do, but it does mean ezFMD will never offer to store scans on the local PC, if the IMVO cannot be reached.

- 2) The **preferred** option is to edit the ezFMD Configuration details – see related section above. Find the section <Connectivity> and edit the value x.x.x.x in <PingHost>x.x.x.x</PingHost> to a suitable value. One possibility is the default gateway for the PC, another would be an external address acceptable to the firewall / in-house rules. Once edited (in a plain-text editor) and saved, re-start ezFMD and this should resolve any issue.