

## Seriallogical FMD User Guide v1.5

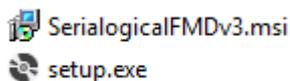
This document describes installation and use of the basic Seriallogical program to verify and dispense FMD codes through the Arvato UK NMVS portal. We distribute a live and demo system. With the demo software connections are real but only codes provided by Seriallogical will be properly processed. 'Real' codes on drug products will either not be processed or passed to the portal and not recognised.

The live software requires an account and certificate issued by SecurMed. Seriallogical has no barriers against the use of credentials provided for the use of other suppliers on its software. When applying for credentials for Seriallogical software the following information will be required:

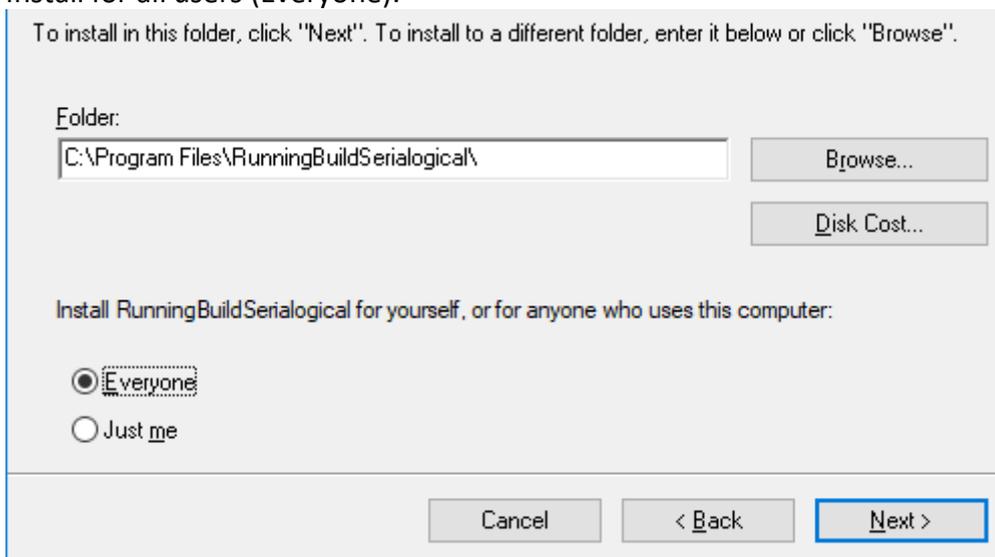
Company - Seriallogical  
Software - Seriallogical: FMD Solution  
Software version - 3.1

On the demonstration software program operations that would change connection credentials have been disabled.

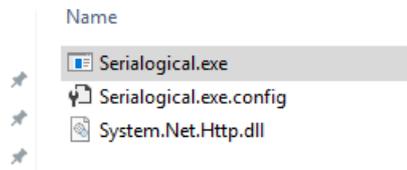
1. When setting up the Seriallogical FMD program for the first time, double click on RunningBuildSoftware.msi to install the software. Follow all the on-screen instructions to complete the installation.



2. Install for all users (Everyone):

The screenshot shows a Windows installation wizard window. At the top, it says: "To install in this folder, click 'Next'. To install to a different folder, enter it below or click 'Browse'." Below this is a "Folder:" label and a text box containing "C:\Program Files\RunningBuildSeriallogical\". To the right of the text box are two buttons: "Browse..." and "Disk Cost...". Below the folder selection is the text: "Install RunningBuildSeriallogical for yourself, or for anyone who uses this computer:". There are two radio button options: "Everyone" (which is selected) and "Just me". At the bottom of the window are three buttons: "Cancel", "< Back", and "Next >".

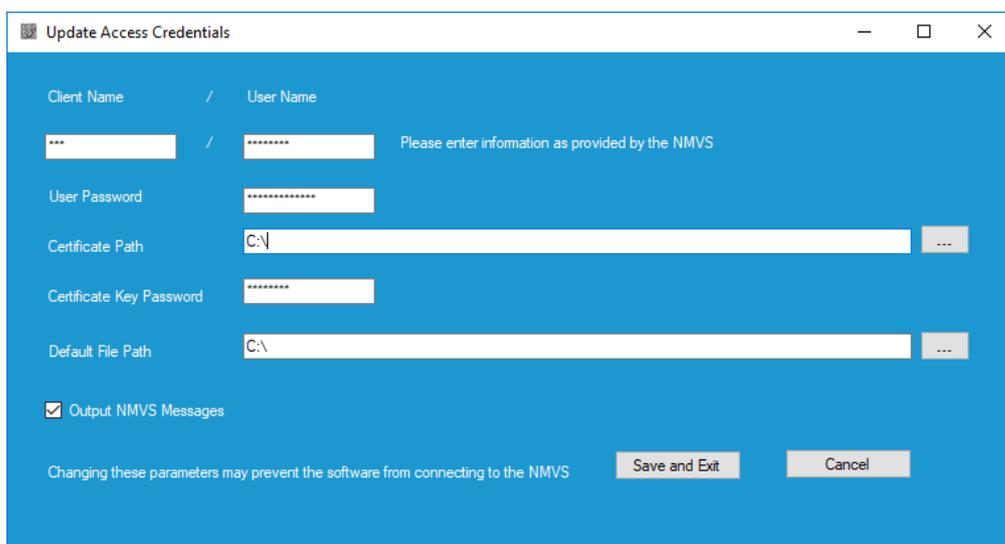
- By default, the files will install to Program Files (x86), but this can be changed on set up. Double clicking on Seriallogical.exe from within the directory where it has been installed will open the software.



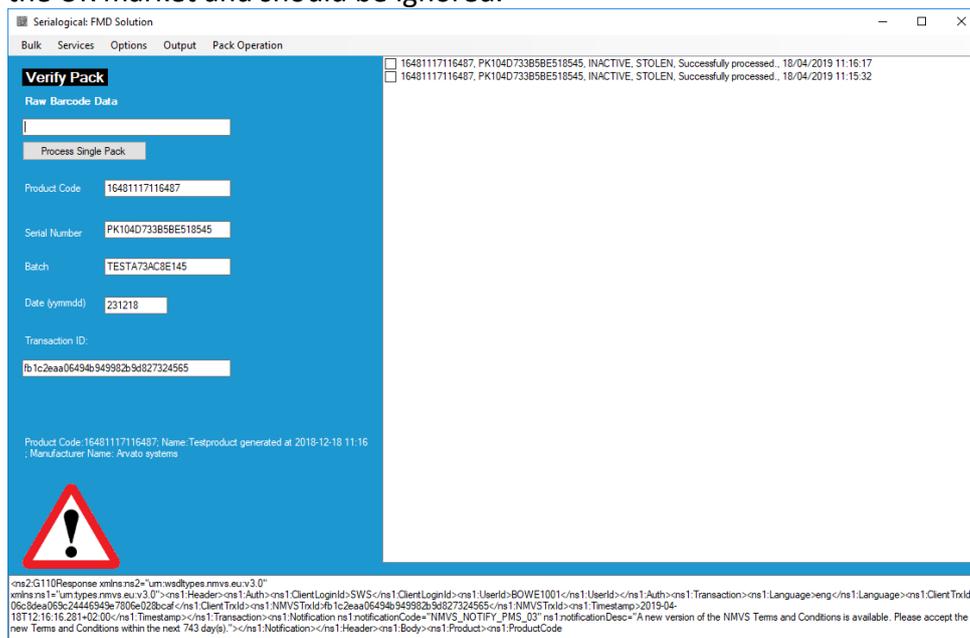
- CSV files are available from Seriallogical with examples of test data, and can be opened in Excel, Notepad or imported as 'Load Bulk File' to the Seriallogical FMD program. These files will only verify or dispense with the demo software. The live version will pass the data to the NMVS but report that the codes are invalid. When using the live software files in the same format should be uploaded. The format is: 'Product code', 'batch', 'date', 'serial number' for example:

```
51878852643393,TEST9E03DCBABB,240122,PK004354FDFE018364A
51878852643393,TEST9E03DCBABB,240122,PK005F282B6B9194444
51878852643393,TEST9E03DCBABB,240122,PK006BBA598D7FDA145
```

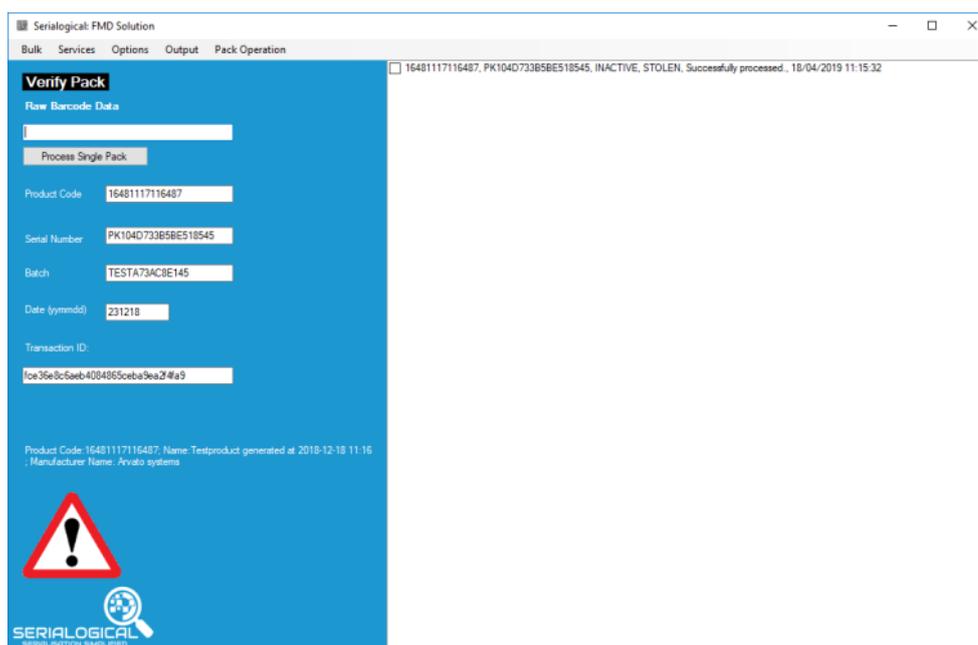
- You will require a certificate in order to secure the connection to the FMD authority. To do this, select **Services**, then **Set Connection Details** and browse for the certificate (either provided by SecurMed or for the demo the certificate from Seriallogical). The software needs to know where the certificate is because it is used to encrypt data to and from the NMVS



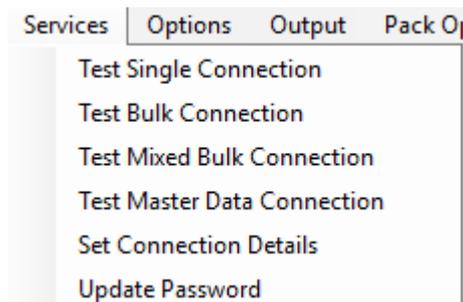
- Users will also need to set up the default file path. This is where the logs and off-line scans are written to. These files will only be used if selected in **Options**. A new file is created each day and new data appended to the existing file or a fresh file created if none exists. The files are not encrypted and can be opened in any text editor.
- 'Output NMVS Messages' is used by Seriallogical when we are supporting customers with set up and operation of the software. It captures the full details of messages sent back by the NMVS.
- Output with the box checked. The 'Terms and Conditions' notice does not apply to the UK market and should be ignored.



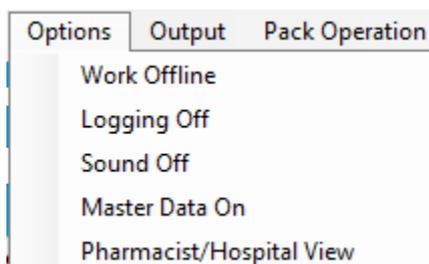
- The same data scanned with the 'output' box unchecked



- The default file path must be set to a location that the user is allowed to write files to (such as their home directory). Do not set the program to write files for example to the 'C:\' directory which does not allow file writing unless the Serialogical program is run as 'admin'.
- To test that the connection to the NMVO is working the 4 tests under the **Services** menu should be used before running live data.

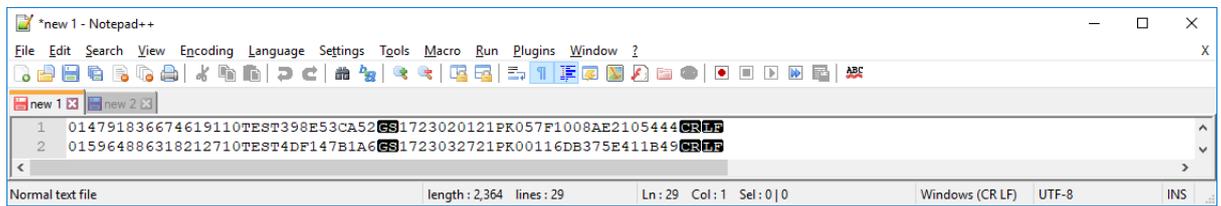


- The default pack operation is 'Verfiy' other operations can be chosen from the **Pack Operation** menu. The operations available will depend on the role of the user. For example, pharmacist/hospital or wholesaler, the program allows the user role to be switched. Illegal operations will then be greyed out. The choice of role depends on the credentials issued by SecurMed. A body approved as a pharmacist and wholesaler would be seen as 2 entities and would need to change the access credential settings or run 2 copies of the Serialogical software.

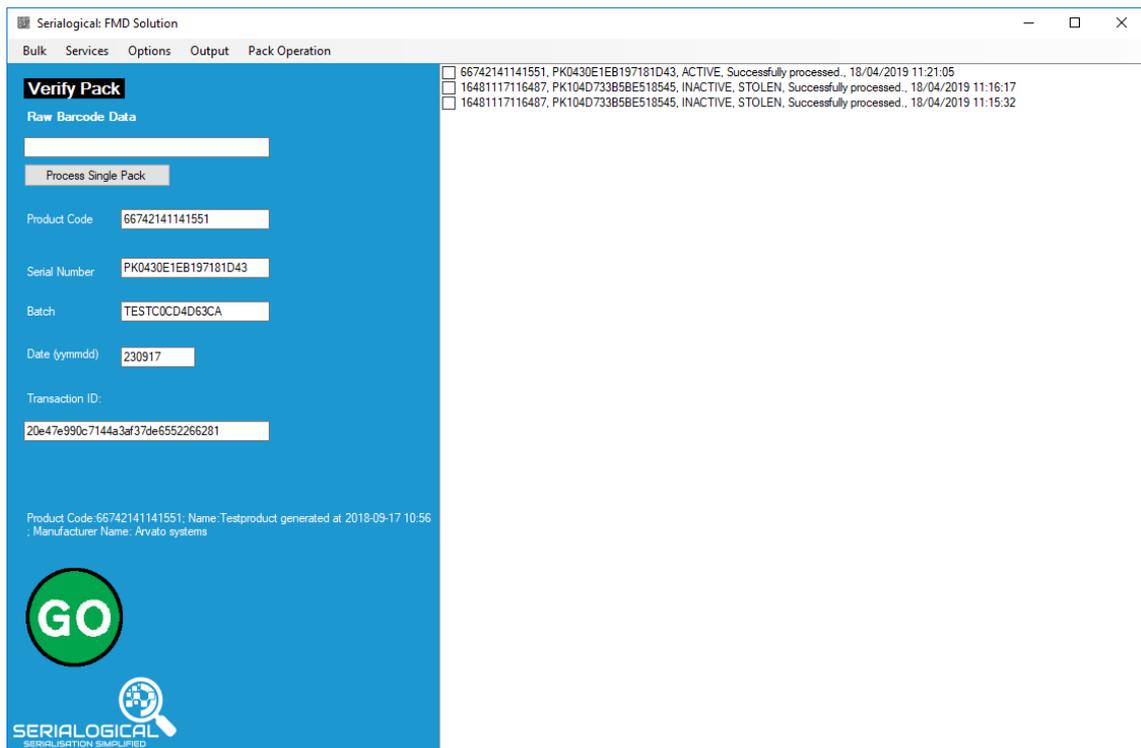


- Codes can be typed in or scanned from a 2D data matrix barcode. All operations except 'Stolen' and 'Destroyed' can be undone. The manual operation 'Manual Dispense' only requires the 'Product Code' and 'Serial Number' other operations require all 4 elements of the pack code. Note the date format is 'yymmdd'. This is the format used within 2D data matrix codes and that used in bulk files supplied with the demo software. There is no requirement to use a specific scanner but the scanner must be able to detect data matrix codes and recognise the universal separator (Ascii 29 also known as <GS> or FNC1).

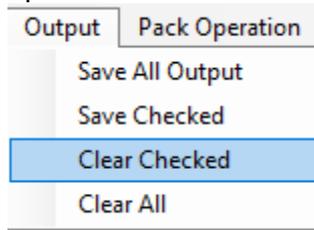
14. To check that a scanner is able to correctly see pack data Serialogical recommends the free Windows program Notepad++. The GS character needs to be picked up by the scanner.



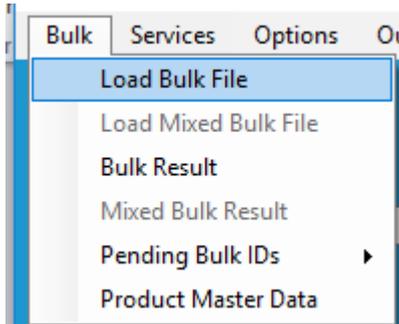
15. When a pack code is scanned it is split into the 4 component parts of the FMD code and that data is immediately sent to the NMVS. The operation is that set in the blue panel. By default the operation is 'Verify Pack'. Other operations are shown under **Pack Operation**. When a pack is scanned the full code briefly appears in the 'Raw Barcode Data' box then its component parts are shown as 'Product Code', 'Serial Number', 'Batch' and 'Date' (the expiry date). Clicking 'Process Single Pack' is not required when using a scanner but can be used to upload the last scanned pack details again using the data from the text controls.



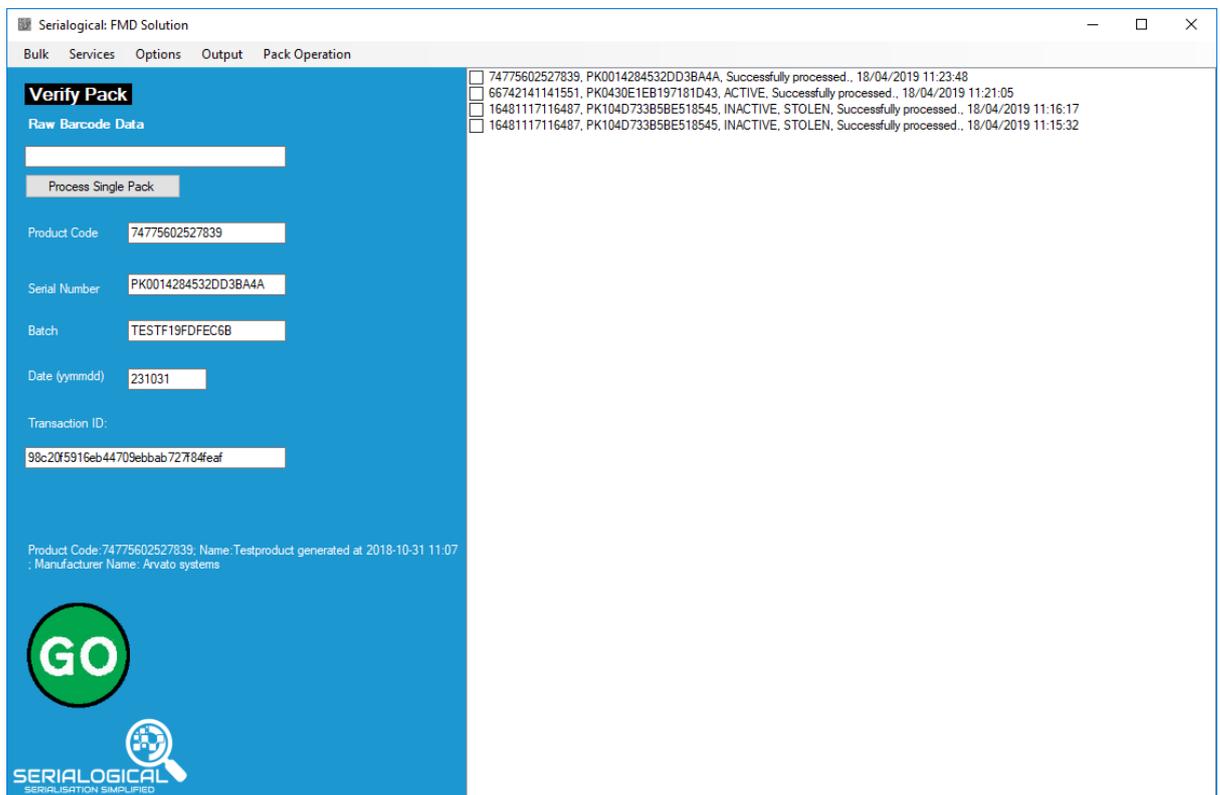
16. There are 4 possible results to a pack request:
- The pack is noted as ACTIVE.
  - The pack is INACTIVE with a description of its status.
  - There is some error with the code entered, for example an unknown code.
  - There is some error in communication with the Arvato NMVO.
17. Scan results are displayed in the output box with the most recent result at the top.
18. All of the output box contents can be cleared or just checked items. There is an option to save data before the output is cleared.



19. Bulk Processing is created for wholesalers (not pharmacists) to upload a set of data with the same 'Product Code', 'Batch' and 'Date' but with different 'Serial Numbers' for the same operation. The NMVS recommend a maximum file size of 10,000 packs. In practice wholesalers should work with smaller files until they are confident of what limit the NMVS can cope with.
20. Sets of suitable test data are provided by Serialogical for use with the demo software. Alternatively new files can be created by scanning in packs with the setting **Options** then **Work Offline**. These files can also be used for 'Mixed Bulk' uploads. When used for 'Bulk' the operation code is ignored. When creating a file for 'Bulk' all codes within the file except 'Serial Number' must be the same. If not the program will send all 'Serial Numbers' but only the other codes from the first pack in the file. This will not cause an error; erroneous code combinations will be ignored. If a file uploaded contains the same serial number twice the NMVS will reject the whole file.
21. To process a set of packs as a wholesaler, first select **Bulk**, and then **Load Bulk File**. Select the CSV file that you wish to process. This sends the data from the file to the NMVO and returns 'Success' or an error. This operation only confirms if the data has been successfully uploaded not the result of any selected operation. The operations available are the same as those for processing a single pack. If the 'Load Bulk File' options are greyed out; choose **Options** and change from **Pharmacist/Hospital View** to **Wholesaler View**.

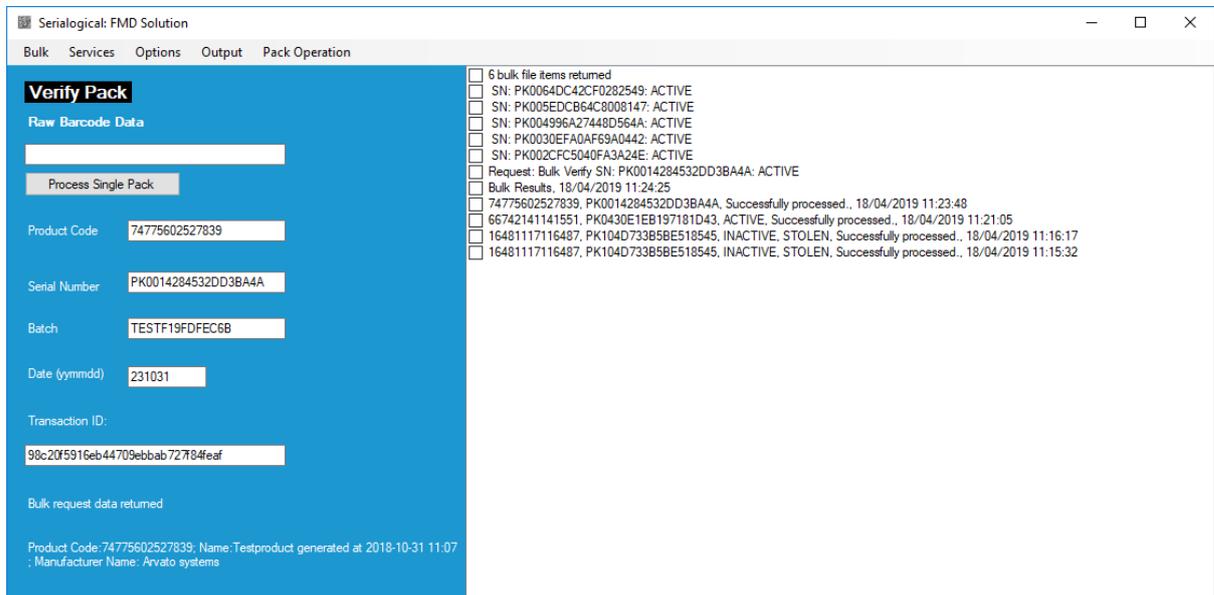


22. A transaction ID is passed back from Aravato following a bulk data upload.

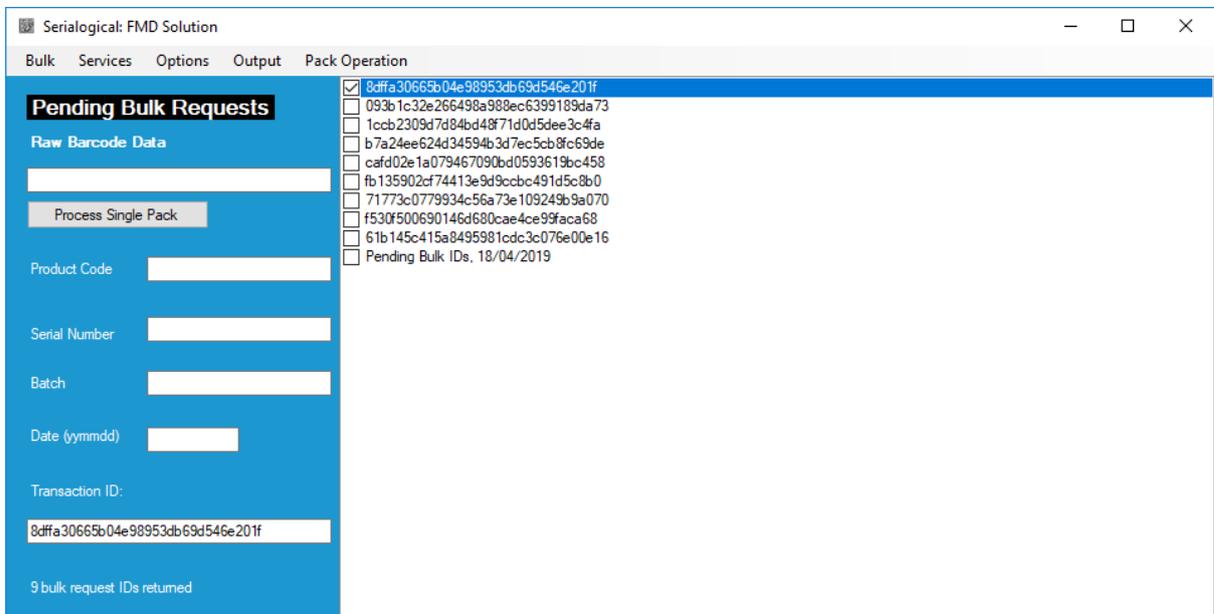


23. Choose **Bulk** then **Bulk Result** to pass this back to Arvato again and receive information on the packs uploaded.

24. The result appears as a list that can be saved to file from the Output menu. Either the whole display or just the selected items.

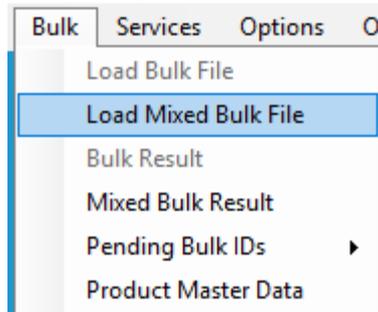


25. Pending bulk result transaction IDs can be displayed from the **Bulk** menu. Single IDs can be dragged and dropped with the **right** mouse button to the Transaction ID box and processed.



26. **Load Mixed Bulk File** is a similar operation to **Load Bulk File** but requires an additional element in the file uploaded, the operation id. This process is available to pharmacists but not wholesalers. The total numbers of product lines in a single file

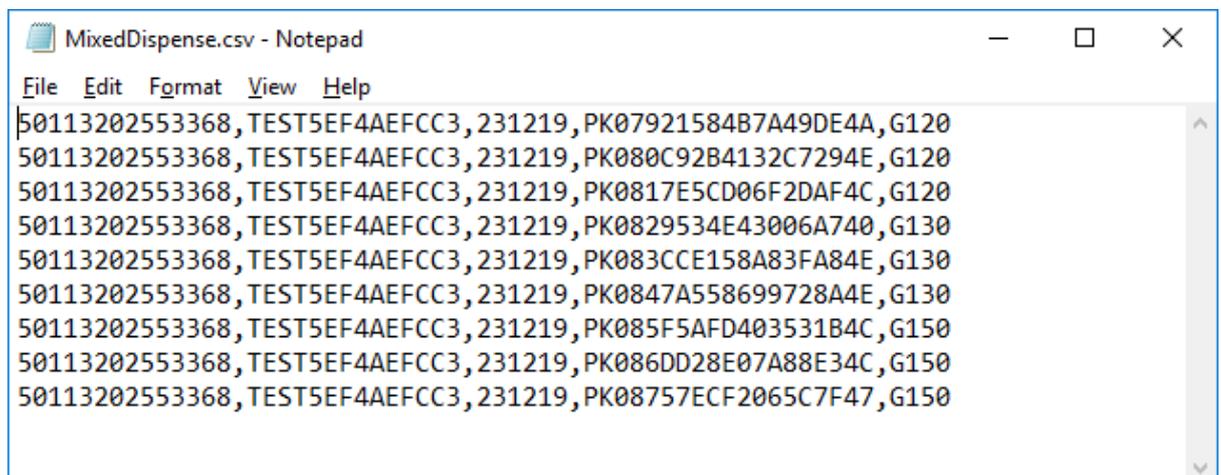
has been set to a limit of 50 packs. Larger files would need to be split up before bulk processing.



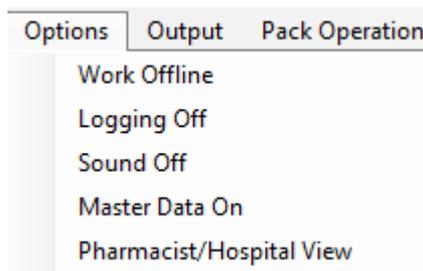
27. A suitable file can be created by selecting **Operations** then **Work Offline** or an existing file can be created or modified in Excel or Notepad. The following codes are supported:

- a. Verify Pack: G110;
- b. Dispense Pack: G120
- c. Destroy Pack: G130
- d. Export Pack: G140
- e. Sample Pack: G150
- f. Free Sample Pack: G160
- g. Lock Pack: G170
- h. Stolen Pack: G180
- i. Undo Dispense Pack: G121
- j. Undo Export Pack: G141
- k. Undo Free Sample Pack: G161
- l. Undo Lock Pack: G171
- m. Undo Sample Pack: G151

28. This file shows a set of packs from the same batch but undergoing different decommission instructions.



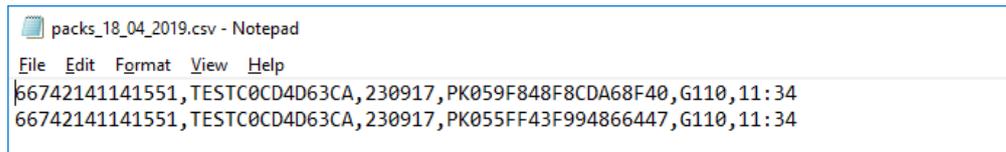
29. The **Load Mixed Bulk File** operation can also be used by pharmacists and hospitals (not wholesalers) to record pack scans when the NMVS is not available then upload them later. The 'Work Offline' option needs to be selected.



30. The packs are then scanned as usual but the Serialogical program reports that each pack is written to file.



31. The file created is a CSV file.



32. The file can be modified in Excel or passed up 'as is' through **Load Mixed Bulk File**.

33. The result of the process can then be found by calling Bulk **Mixed Bulk Result**.



34. The Serialogical PR solution works in a similar manner to the demo and live software but stores scans in a local database. This allows all historical scans to be retrieved by date and filtered. It also has the option to store scans in virtual prescription bags. Packs are scanned once as a bag is 'filled' then the entire bag can be dispensed or un-dispensed as a single event without requiring the original packs to be scanned again.

Serialogical PR: FMD Solution

Bulk Services Options Prescriptions Data Pack Operation

Verify Pack Raw Barcode Data Product Code Serial Number Batch Date (yymmdd)

Process Single Pack

Date From: 07 March 2019 Date To: 18 April 2019 Transaction ID: Summary

Product Information

Scan Packs Bulk Prescriptions

name	ProductCode	batch	expiry	serial	result	time scanned	message
▶ Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK0589FF3A916BA8F4B	ACTIVE	2019-04-15 11:18:49	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK0589FF3A916BA8F4B	ACTIVE	2019-04-15 11:18:4	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK062F66FA1490F5041	INACTIVE EXPORTED	2019-04-15 11:18:19	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK0589FF3A916BA8F4B	INACTIVE SUPPLIED	2019-04-15 11:17:53	Actual pack status doesn't...
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK062F66FA1490F5041	INACTIVE EXPORTED	2019-04-15 11:17:36	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK0589FF3A916BA8F4B	INACTIVE SUPPLIED	2019-04-15 11:17:26	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK0589FF3A916BA8F4B	ACTIVE	2019-04-15 11:17:10	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK071401624E2E66F44	ACTIVE	2019-04-15 11:15:24	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK072CF69D2E2B4A547	ACTIVE	2019-04-15 11:13:2	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK072CF69D2E2B4A547	INACTIVE SUPPLIED	2019-04-15 11:12:38	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK072CF69D2E2B4A547	ACTIVE	2019-04-15 11:12:29	Successfully processed.
Testproduct generated at 2018-09-17 10:56	66742141141551	TESTC0CD4D63CA	230917	PK052B267E933B4FB14D	ACTIVE	2019-04-15 11:11:24	Successfully processed.
Testproduct generated at 2018-12-18 11:16	16481117116487	TESTA73AC8E145	231218	PK0560C6DAA1CEEFA4F	INACTIVE SAMPLE	2019-04-11 14:36:28	Successfully processed.
Testproduct generated at 2018-12-18 11:16	16481117116487	TESTA73AC8E145	231218	PK0807CCF62DAA13944	INACTIVE SUPPLIED	2019-04-11 13:48:11	Successfully processed.
Testproduct generated at 2018-12-18 11:16	16481117116487	TESTA73AC8E145	231218	PK063289D4A9AFB574C	INACTIVE FREESAMPLE	2019-04-11 13:41:10	Successfully processed.
Testproduct generated at 2018-12-18 11:16	16481117116487	TESTA73AC8E145	231218	PK0560C6DAA1CEEFA4F	INACTIVE SAMPLE	2019-04-11 13:40:48	Successfully processed.