

NISSAN

NERS

(NISSAN J2534 ECU Reprogramming Software)

Applies to software version 4.00.01
Nissan North America, Inc.
OPM Version 5.6

December 15, 2017

Contents

1	INTRODUCTION	0
2	SYSTEM REQUIREMENTS	1
3	INSTALLATION	2
4	APPLICATION PROCEDURE	9

List of Tables

TABLE 1: HARDWARE REQUIREMENTS	1
TABLE 2: SOFTWARE REQUIREMENTS	1
TABLE 3: INSTALLATION.....	5
TABLE 4: NERS - UNINSTALLATION.....	8
TABLE 5: NERS GRAPHICAL USER INTERFACE	37

List of Figures

FIGURE 1: NERS – FOLDER STRUCTURE	6
-----------------------------------	---

List of Abbreviations

Abbreviation/ Acronym	Description
ECU	Electronic Control Unit
ISO	International Standard Organization
NCT	NERS Conformance Tester
NERS	NISSAN ECU Reprogramming Software
VCI	Vehicle Communication Interface

1 Introduction

1.1 Introduction

The Nissan ECU Reprogramming Software (NERS) is a J2534-1 based ECU Reprogramming tool that is used for the reprogramming of ECUs. NERS application can be used with any J2534-1 compliant passthru device (Vehicle Communication Interface). However before using a new passthru device with NERS application, the device needs to be validated for compatibility with NCT application.

1.2 Functionalities supported

NERS application supports the following functionalities:

- Reprogramming of ECM (Engine Control Module) and TCM (Transmission Control Module)
- Write/Modify VIN
- Configuration of Transmission
- Programming of service part replacement “blank” control modules

2 System Requirements

This section explains the hardware and software specification for NERS application.

2.1 Hardware Requirements

Hardware Platform	- CPU : Pentium 4, 1.6 GHz or higher recommended - 512MB RAM recommended - USB Port x1 (USB2.0)
-------------------	---

Table 1: Hardware Requirements

2.2 Software Requirements

Software Platform	- Operating Systems • Microsoft Windows XP Service Pack 2” or higher • Microsoft Windows – 7, 32 bit and 64 bit • Microsoft Windows – 10, 64 bit
-------------------	---

Table 2: Software Requirements

3 Installation

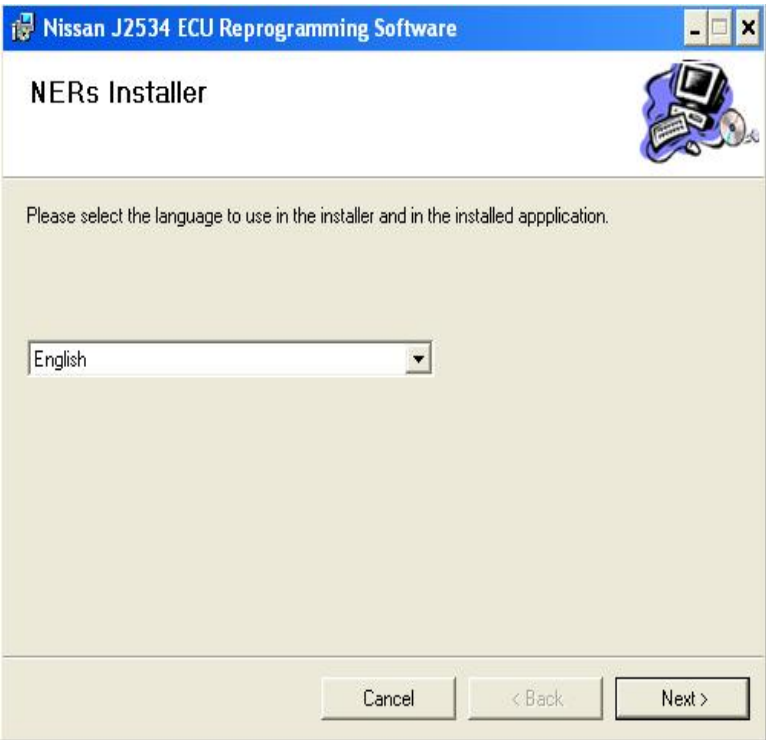
3.1 Prerequisites

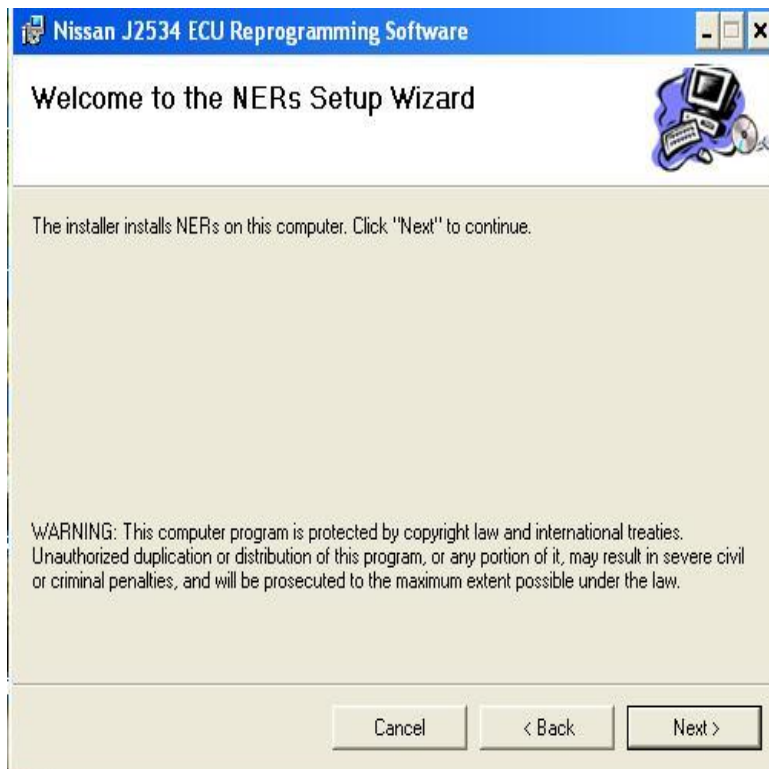
The following conditions need to be satisfied before installing NERS Application.

1. Installer will check available disk space on the system. If required space is not available on the system then installation process will be aborted.
2. If NERS Application is already installed on the system then installer will check its version. If the version is not higher than that of installer version then the installed version will be upgraded else the installation will be aborted.
3. The PC should not have CONSULT-III Plus application pre-installed on it.

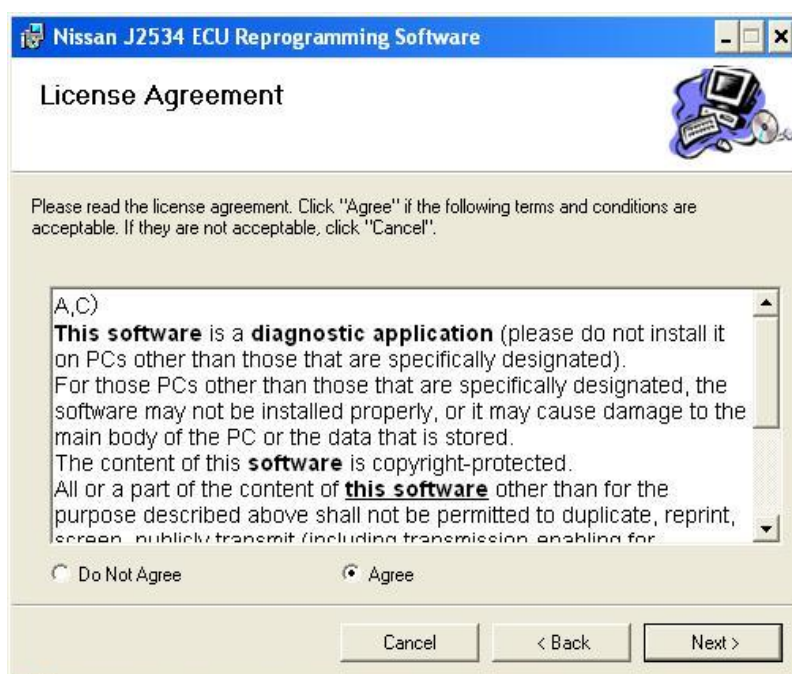
3.2 NERS Installation Procedure

The following table explains the procedure for installing NERS application:

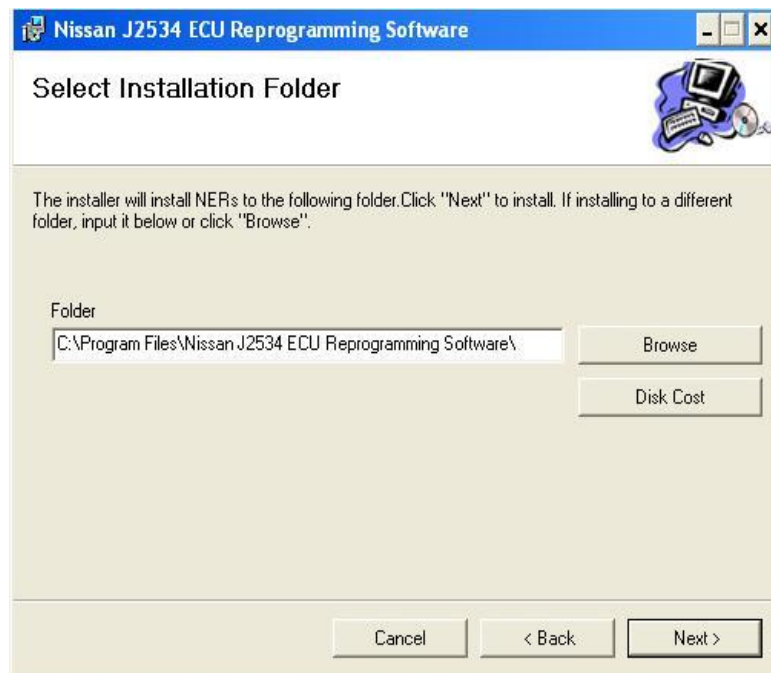
	1. Double click on the setup.exe file.
	2. Select the language of preference from the drop down list. 3. Click [Next].



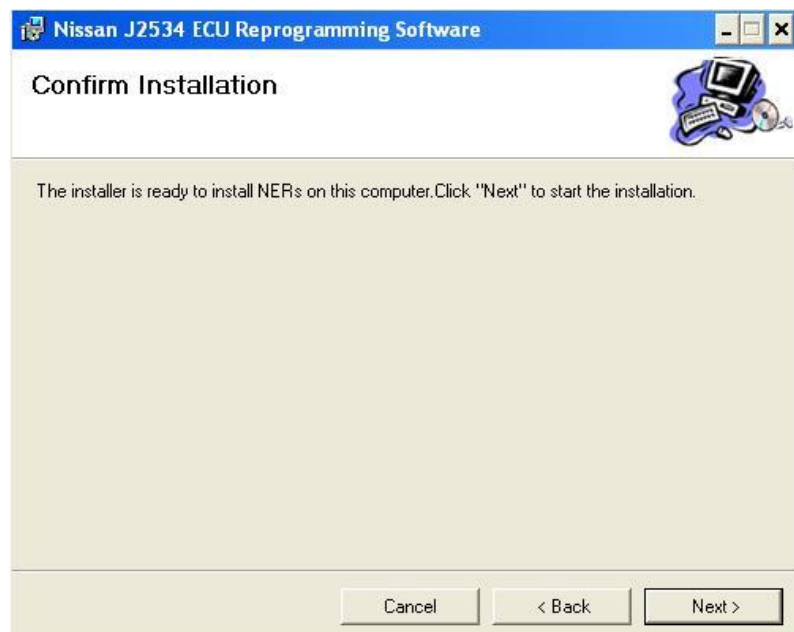
4. Click [Next].



5. Select [Agree] and click [Next].



6. Select the folder to be installed and click [Next].



7. Click [Next] to start the installation.

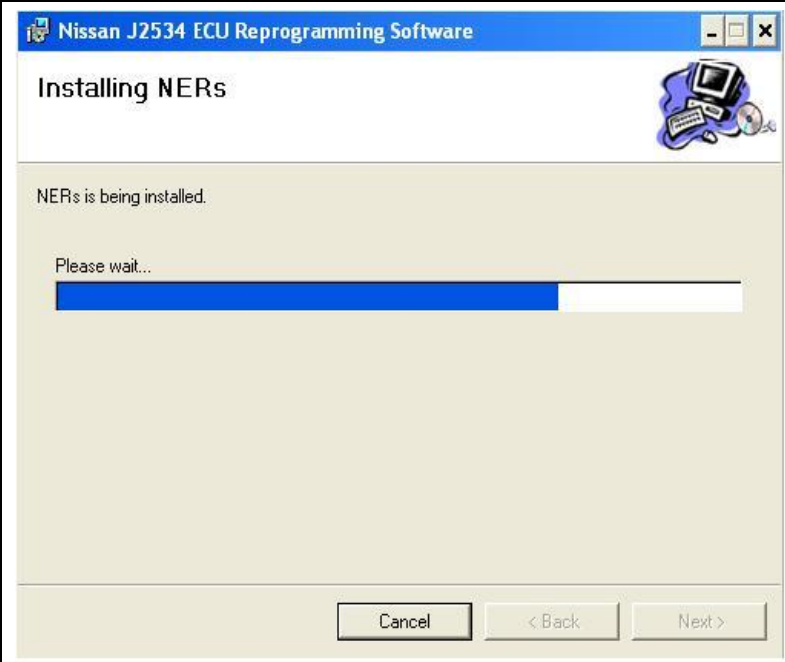
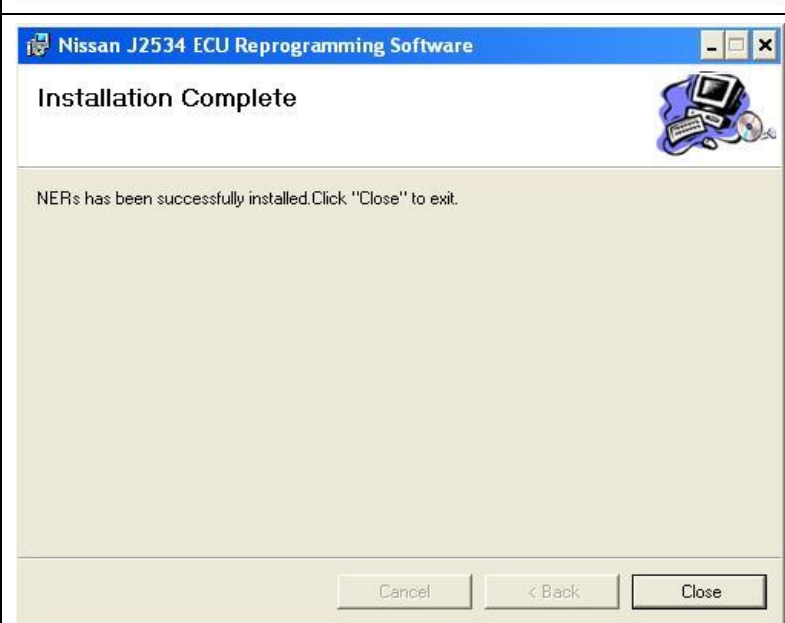
	8. The Installation is in progress.
	9. This screen is displayed on the successful installation of J2534 ECU Reprogramming Software. 10. Click [Close].

Table 3: Installation

3.3 NERS Folder Structure

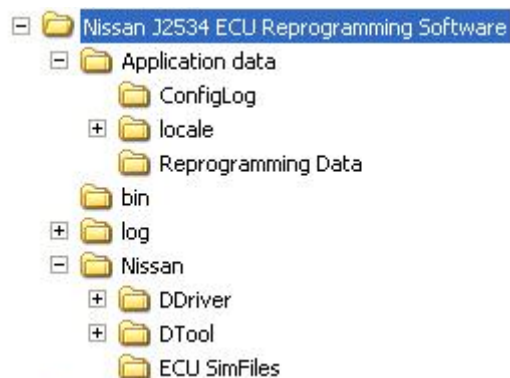


Figure 1: NERS – Folder Structure

- **Nissan J2534 ECU Reprogramming Software:** This is the root folder for all the installed files.
- **Bin:** Contains the NERS executable files along with all dependant dlls and Configuration files.
- **Application Data:** Contains reprogramming files and data files used internally by the application.
- **Nissan:** Contains the middleware set up comprising of DDriver, DTool, PDX, SCF Package, Reprog file parser and unlocking dlls.

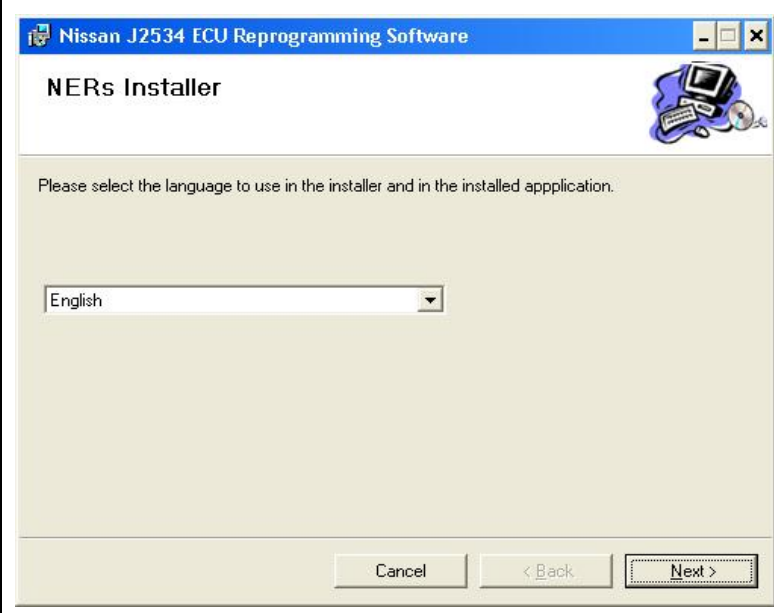
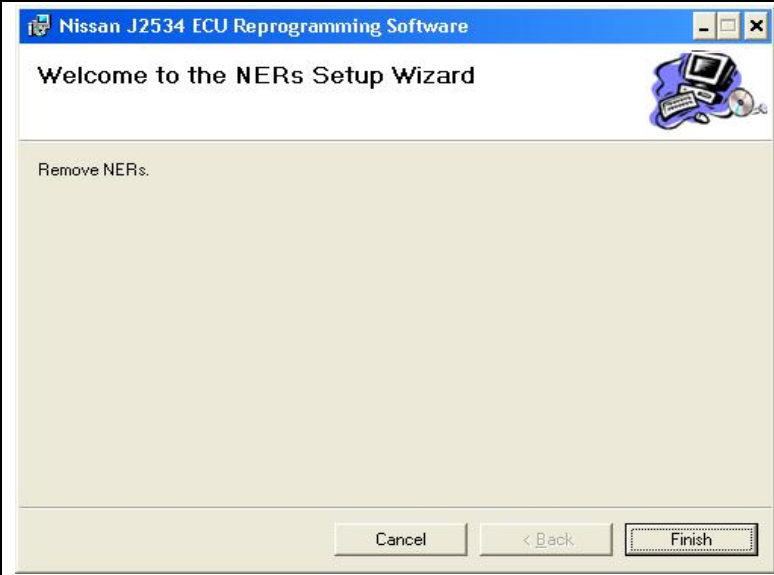
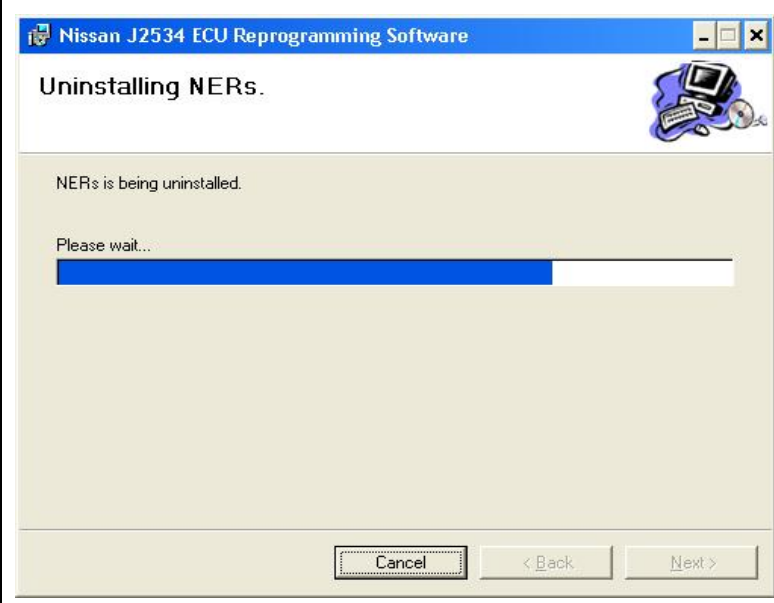
3.4 Uninstallation

Following points describe the requirements for uninstallation of NERS Application.

1. All the files installed by the installer will be deleted. The Results folder in which all the logs/reports of application are saved will not be deleted.
2. Files such as information, error and user logs that the application created after the installation will not be deleted.
3. Registry entry for version number of NERS will be deleted.
4. Shortcut for the application on desktop for all users will be deleted.

The following table explains the procedure for uninstalling NERS application:

 setup.exe Setup	1. Double click setup.exe file.
--	---------------------------------

	2. Select the language of preference from the drop down list. 3. Click [Next].
	4. Click [Finish].
	5. This screen is displayed when the uninstallation is in progress.

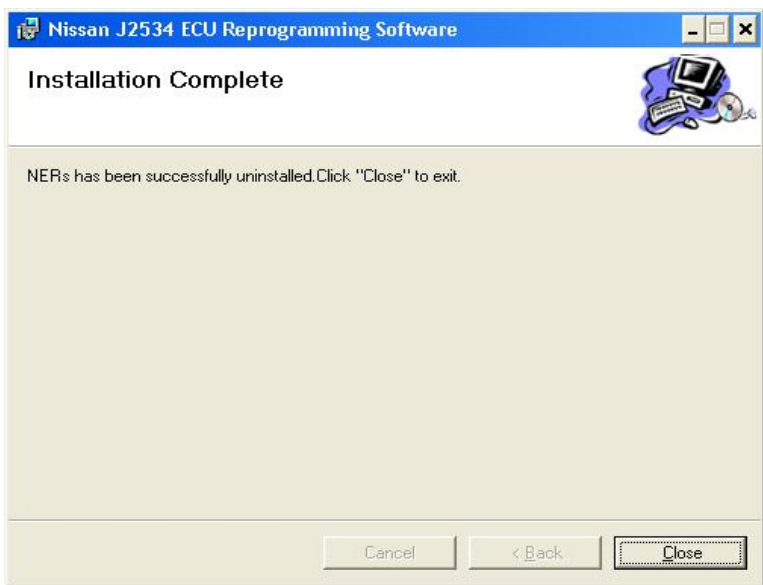
	6. This screen is displayed after the uninstallation is successful. Click [Close].
---	---

Table 4: NERS - Uninstallation

4 Application Procedure

4.1 Configuration

Following steps have to be followed for performing configuration:

1. User selects pass-thru device and proceeds to “Functionality selection” screen.
2. Select functionality as “Configuration”.
3. Supported ECU family names are displayed.
4. After selecting the ECU family,
 - a. **For IK2 Transmission ECU:** user is provided with three options “Save/Write configuration”, “Manual configuration” and “Auto configuration”.
 - i. Screen flow for Save/Write configuration, Manual configuration and Auto configuration is described below in [Table 5: NERS Graphical User Interface \(Points 1 - 25\)](#).
 - b. **For Q30/Qx30 vehicle:** user is provided with single option of “Auto Configuration”.
 - i. After selecting “Auto Configuration” one edit box is displayed to the user to enter 17digit VIN.
 - ii. After VIN entry, user will be directed to Web Browser application for Authentication.
 - iii. After successful login, Configuration data will be downloaded from server and written to ECU.
 - iv. Screen flow for Auto configuration is described below in [Table 5: NERS Graphical User Interface \(Points 1 – 6 & 26-34\)](#)

4.2 Programming

Following steps have to be followed for performing Programming:

1. User selects pass-thru device and proceeds to “Functionality selection” screen.
2. Select functionality as “Programming”.
3. Supported ECU family names are displayed.
4. After selecting the ECU family - part number selection screen should be displayed with following information.
5. A grid will be displayed containing list of part numbers.
 - Part number after reprogramming will be displayed as per selected part number in a grid.
 - Reprogramming file name will be displayed as per selected part number in a grid.
 - Size of reprogramming file will be displayed.
 - Configuration part number will be displayed if auto configuration is supported for selected part number.
6. After selecting part number - Part number Information screen is displayed.
7. On click of “Start”.
 - a. **For Q30/Qx30 vehicle & NISSAN UDS ECUs:**
 - i. One edit box is displayed to the user to enter 17digit VIN.
 - ii. After VIN entry, user will be directed to Web Browser application for Authentication.
 - iii. Programing of ECU starts after successful Authentication.
 - b. **For Cummins UDS, DDL2 ECM & Daimler ECUs:** Programming of ECU starts on click of “Start”.
 - c. **For Other vehicles:**

- i. User will be directed to Web Browser application for Authentication.
 - ii. Programing of ECU starts after successful Authentication.
8. On completion of programming IGNITION OFF-ON OPERATION pop up is displayed.
9. On selecting OK, Programming Complete screen is displayed and configuration work log information is saved if ECU auto configuration is applicable, described below in [Table 5: NERS Graphical User Interface \(Points 1 – 5 & 35 –45\)](#)

4.3 Reprogramming

Following steps have to be followed for performing Reprogramming:

1. User selects pass-thru device and proceeds to “Functionality selection” screen.
2. Select functionality as “Reprogramming”.
3. Supported ECU family names are displayed.
4. After selecting the ECU family - part number selection screen should be displayed with following information.
5. A grid will be displayed containing list of part numbers.
 - A grid will be displayed containing list of part numbers.
 - Part number after reprogramming will be displayed as per selected part number in a grid.
 - Reprogramming file name will be displayed as per selected part number in a grid.
 - Size of reprogramming file will be displayed.
 - Configuration part number will be displayed if auto configuration is supported for selected part number.
6. After selecting part number - Part number Information screen is displayed.
7. On click of “Start”.
 - a. **For Q30/Qx30 vehicle & NISSAN UDS ECUs:**
 - i. One edit box is displayed to the user to enter 17digit VIN.
 - ii. After VIN entry, user will be directed to Web Browser application for Authentication.
 - iii. Programing of ECU starts after successful Authentication
 - b. **For Cummins UDS, DDL2 ECM & Daimler ECUs:** Programming of ECU starts on click of “Start”.
 - c. **For Other vehicles:**
 - i. User will be directed to Web Browser application for Authentication.
 - ii. Programing of ECU starts after successful Authentication.
8. On completion of reprogramming IGNITION OFF-ON OPERATION pop up is displayed.
9. On selecting OK, Reprogramming Complete screen is displayed and configuration work log information is saved if ECU auto configuration is applicable, described below in [Table 5: NERS Graphical User Interface \(Points 1 – 5 & 46 -56\)](#)

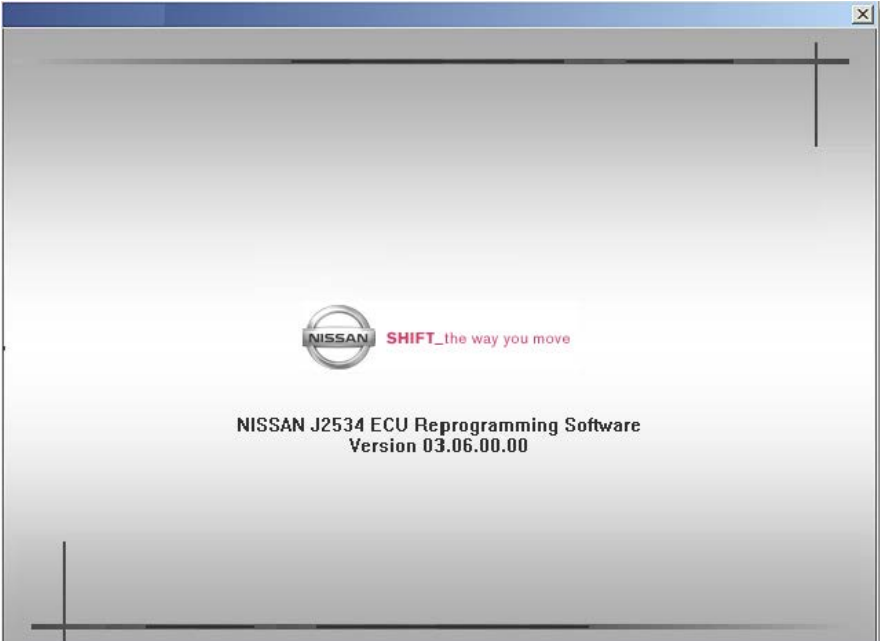
4.4 Write/Modify VIN

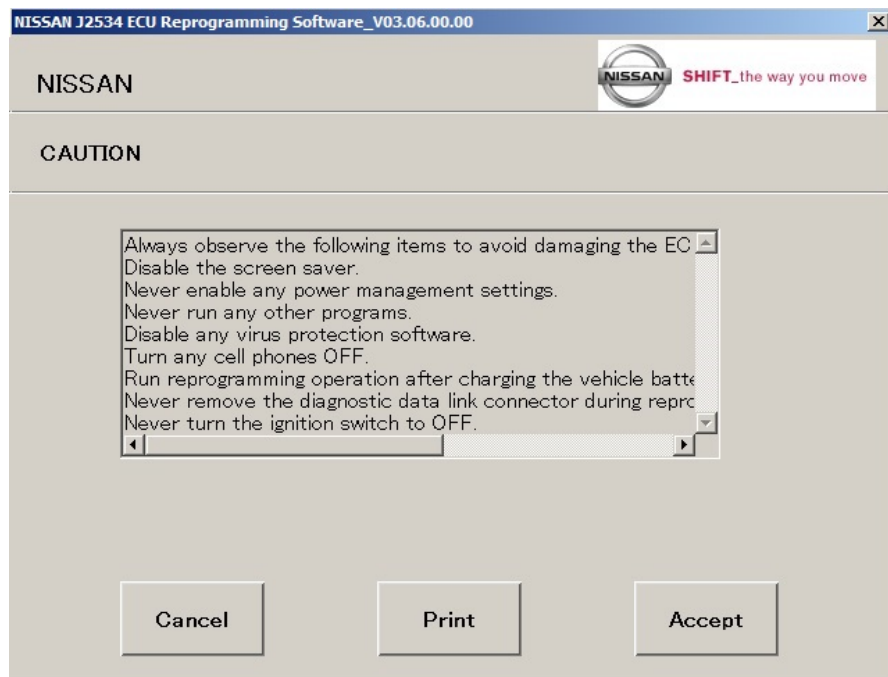
Following steps have to be followed for performing Write/Modify VIN:

1. User selects pass-thru device and proceeds to “Functionality selection” screen.
2. Select functionality as “Write/Modify VIN”.
3. Supported ECU family names are displayed.

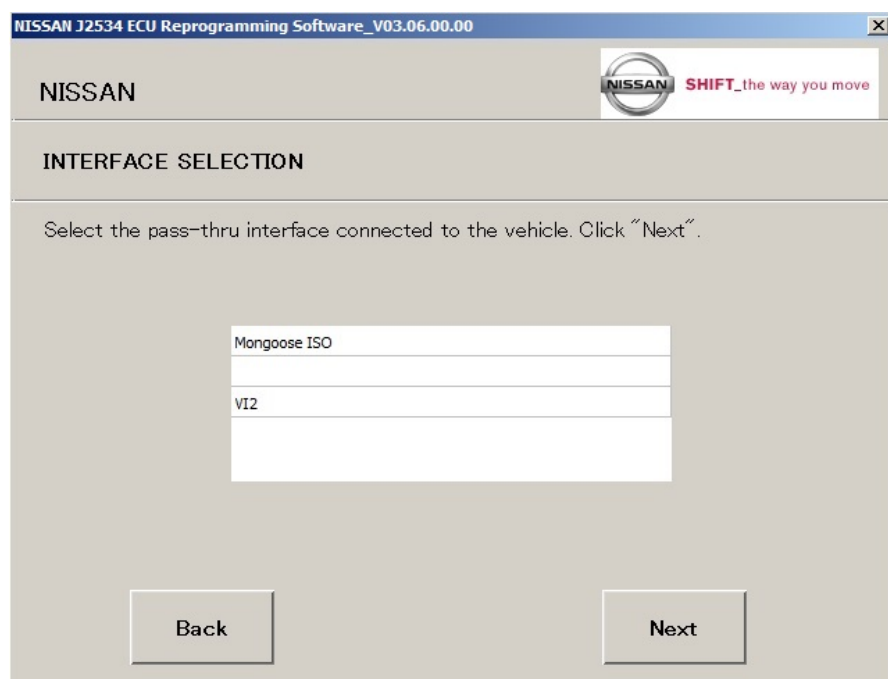
4. After selecting the ECU family, VIN registration screen will appear with two textboxes.
 - a. For non-blank ECM:
 - I. VIN read from the ECM will be displayed in the textbox1.
 - II. User has to enter new VIN or overwrite the displayed VIN in the textbox1 and enter the same VIN in the textbox2 and click on “Write” button.
 - b. For blank ECM:
 - I. No data will be displayed in the textbox1.
 - II. User has to enter same 17digit VIN in both the textboxes and click on “Write” button.
5. Before VIN writing,
 - a. For Q30/Qx30 vehicle (except the “Transmission” family ECU & K9K Engine) and NISSAN UDS ECUs: Server Authentication will take place & user will be directed to Web Browser Application.
 - b. For other vehicles: Direct VIN writing will occur.
6. For Q30/Qx30 vehicle (except the “Transmission” family ECU & K9K Engine): After successful login and VIN writing, VIN will be displayed on the screen after reading it back.
 For other vehicles: After VIN writing, VIN will be displayed on the screen after reading it back.
7. Entire flow of writing/modifying VIN is described below in [Table 5: NERS Graphical User Interface](#) (Points 1 – 5 & 55 - 61)

4.5 NERS Graphical User Interface

	1. Double click the desktop icon [NISSAN J2534 ECU Reprogramming Software] to launch the application.
	2. This screen will be displayed when the application is launched.

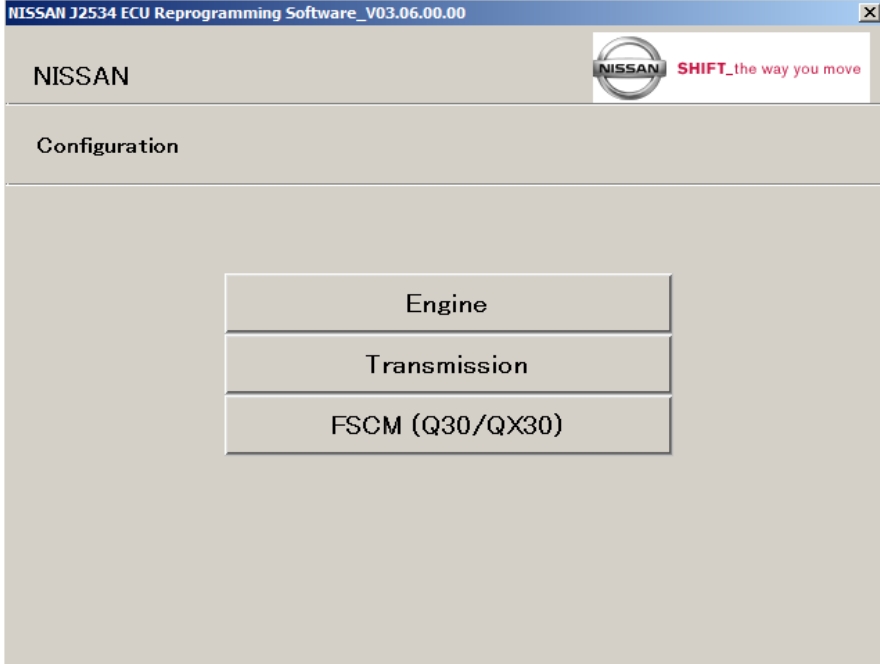
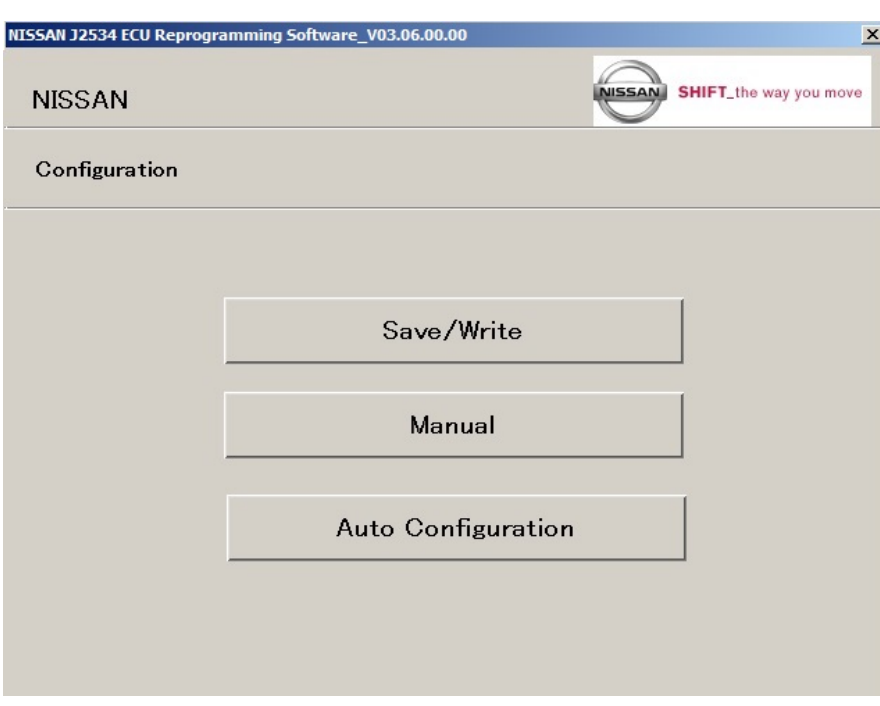


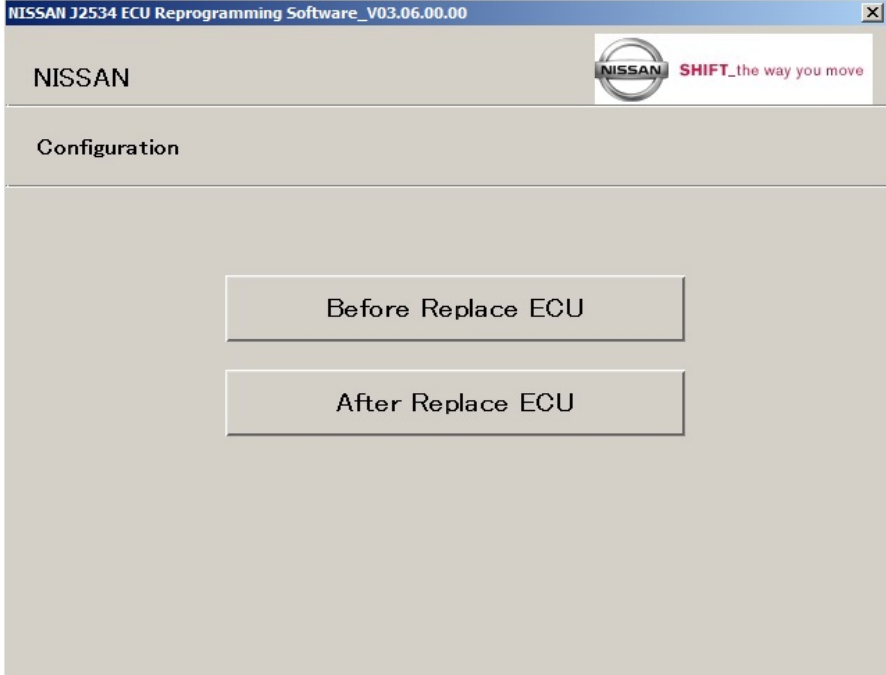
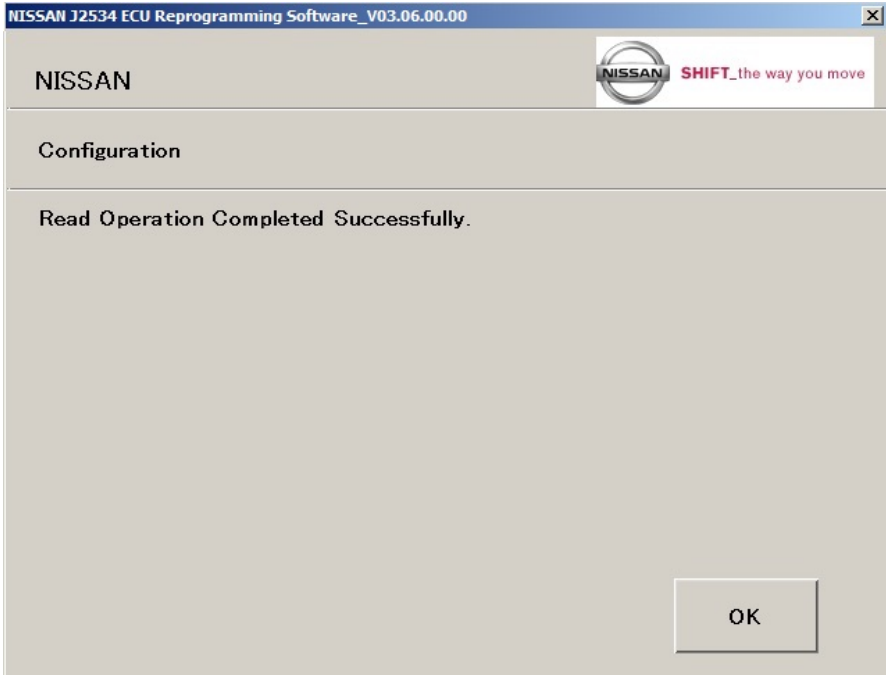
- Click [Accept] button to proceed to the pass-thru selection screen.

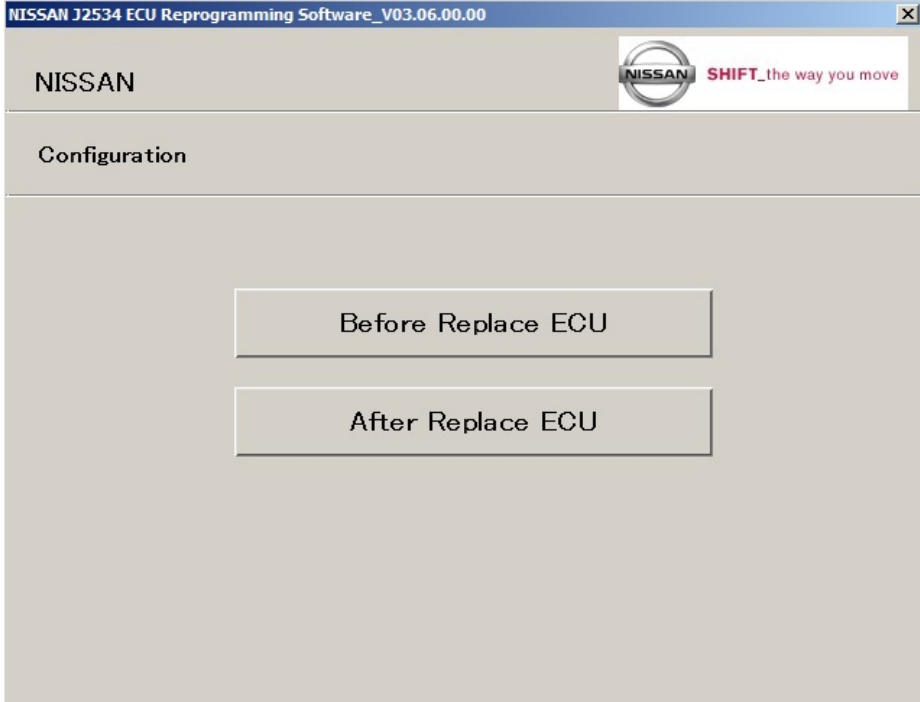
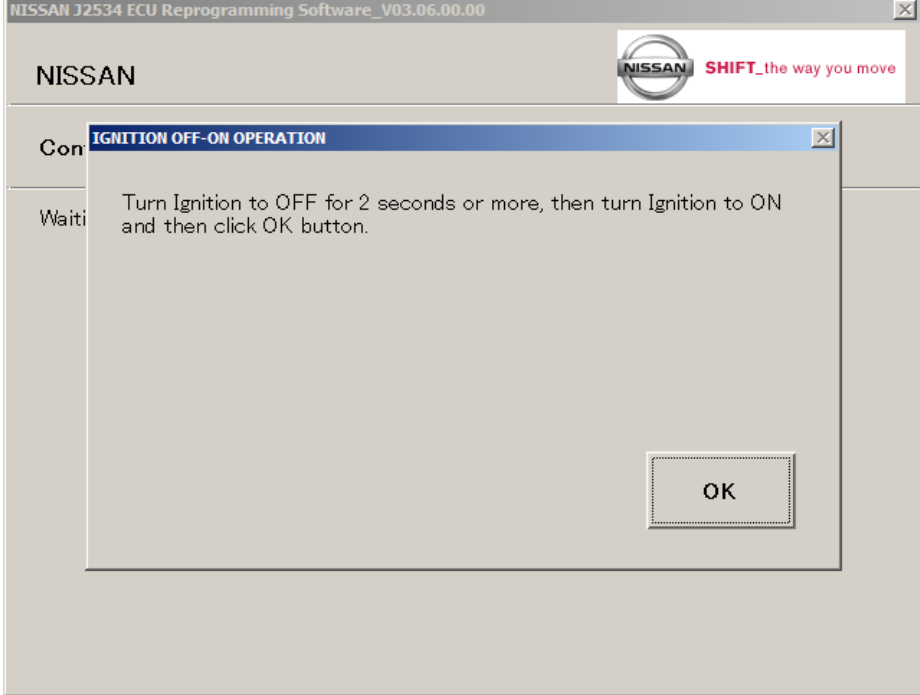


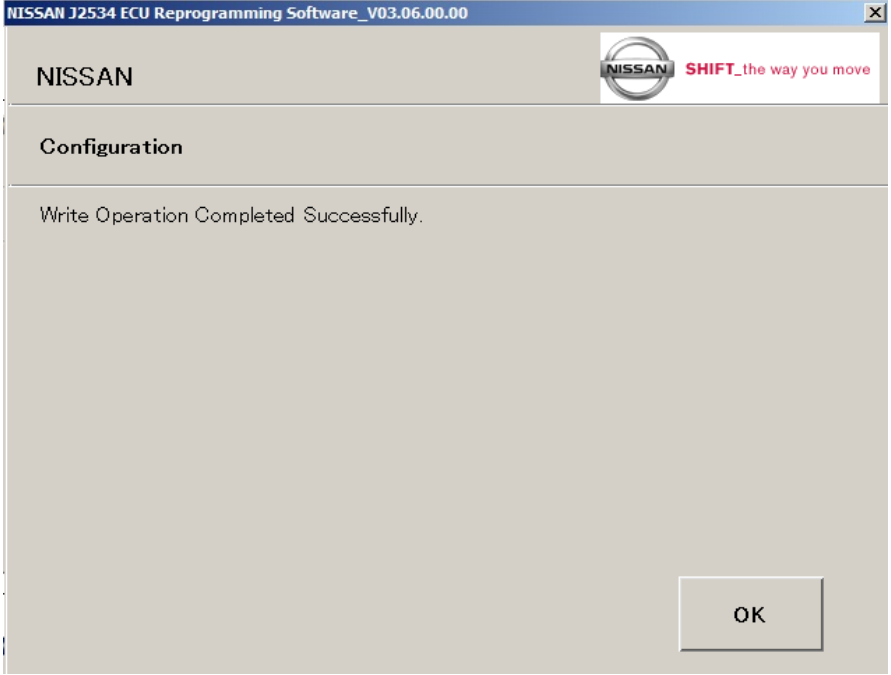
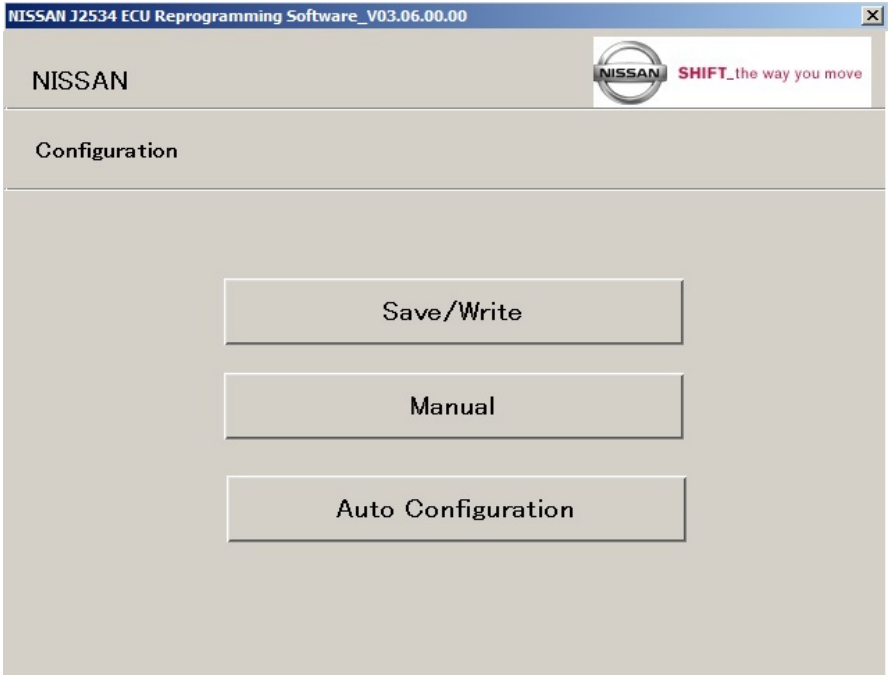
- Select the pass-thru interface and Click [Next] button.

	5. Click [Next] button and proceed to the function selection screen
	6. Click [Configuration] button and proceed to the family selection screen

	7. Click [Transmission] button to proceed to function selection screen. [For IK2 ECU]
	8. Click [Save/Write Configuration] to proceed further. [For IK2 ECU]

	9. On click of [Before Replace ECU], part number will be read from ECU and stored for future use. [For IK2 ECU]
	10. Click [OK] button to complete the process execution. [For IK2 ECU]

	11. On click of [After Replace ECU], part number stored earlier while performing “Before Replace ECU” will be retrieved and its corresponding configuration data will be written to ECU. [For IK2 ECU]
	12. Click [OK] button to complete the process execution. [For IK2 ECU]

	13. Click [OK] button to move to the configuration complete screen. [For IK2 ECU]
	14. Click [Manual Configuration] to proceed to configuration screen. [For IK2 ECU]

NISSAN J2534 ECU Reprogramming Software_V03.06.00.00

NISSAN **SHIFT**_the way you move

Configuration

Select Value for Configuration Item and Click "Write".

Engine Type	L+8	▼
Axle Type	2WD	▼
Tire Size	L+13	▼

Write

15. User can select the configuration based on the available options of each configuration item.
16. Select the Engine Type from the drop down list. Available options are [L+8 and L+9].
17. Select the Axle Type from the drop down list. Available options are [2WD and 4WD].
18. Select the Tire Size from the drop down list. Available options are [L+13, L+14 and L+15].
19. All the configuration items are interdependent and each combo box is populated based on the previous selection.
20. On click on [Write] button, the selected configuration will be written to ECU.

[For IK2 ECU]

NISSAN J2534 ECU Reprogramming Software_V03.06.00.00

NISSAN **SHIFT**_the way you move

Configuration

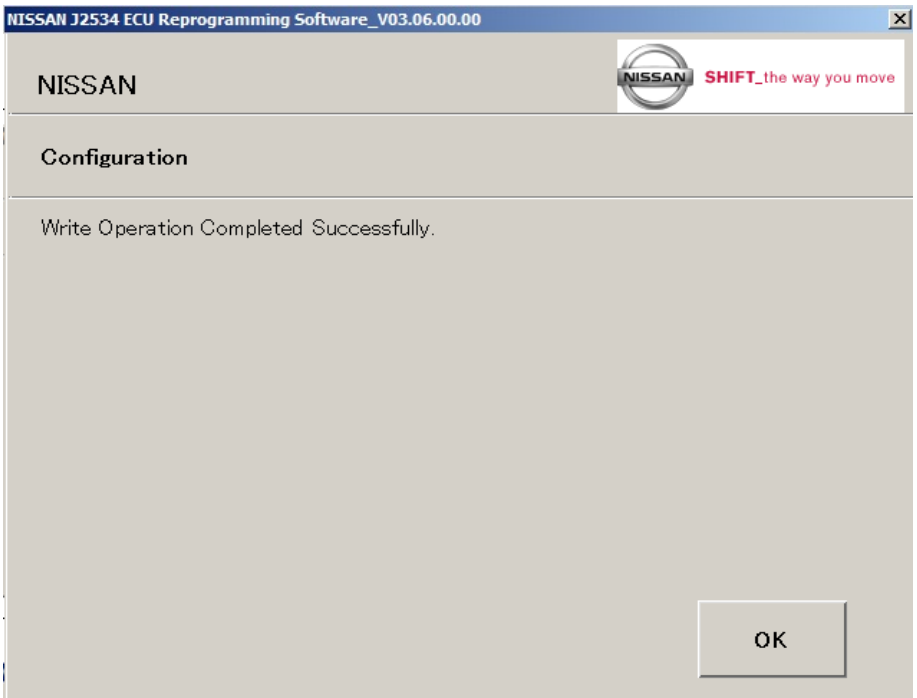
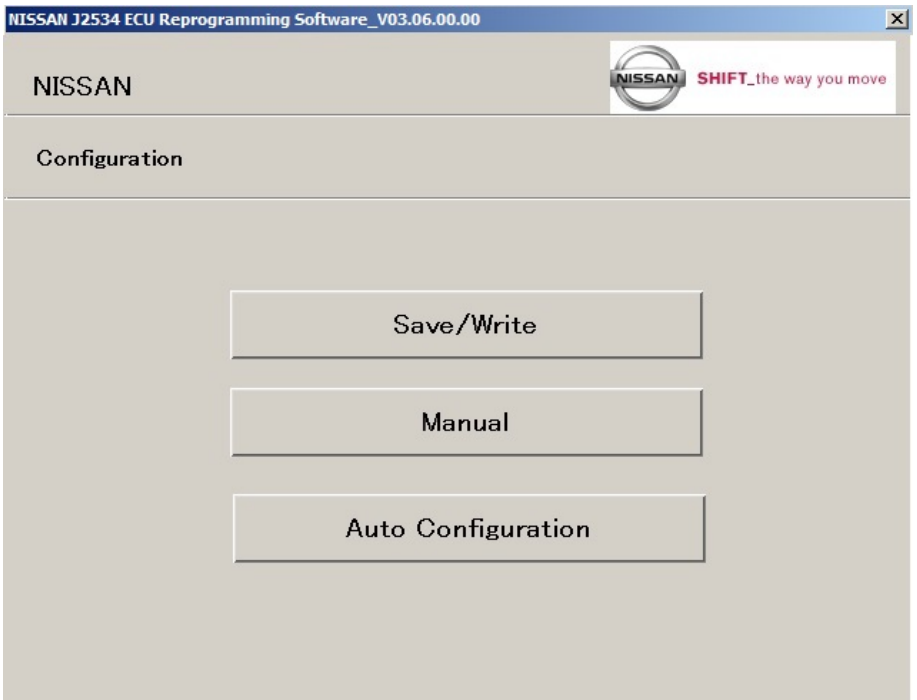
IGNITION OFF-ON OPERATION

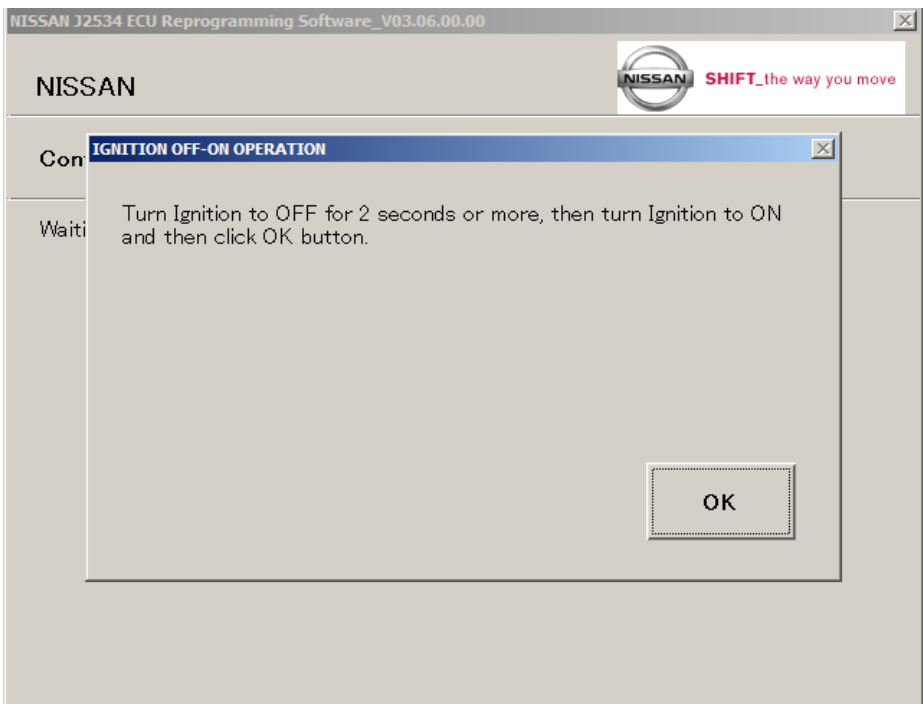
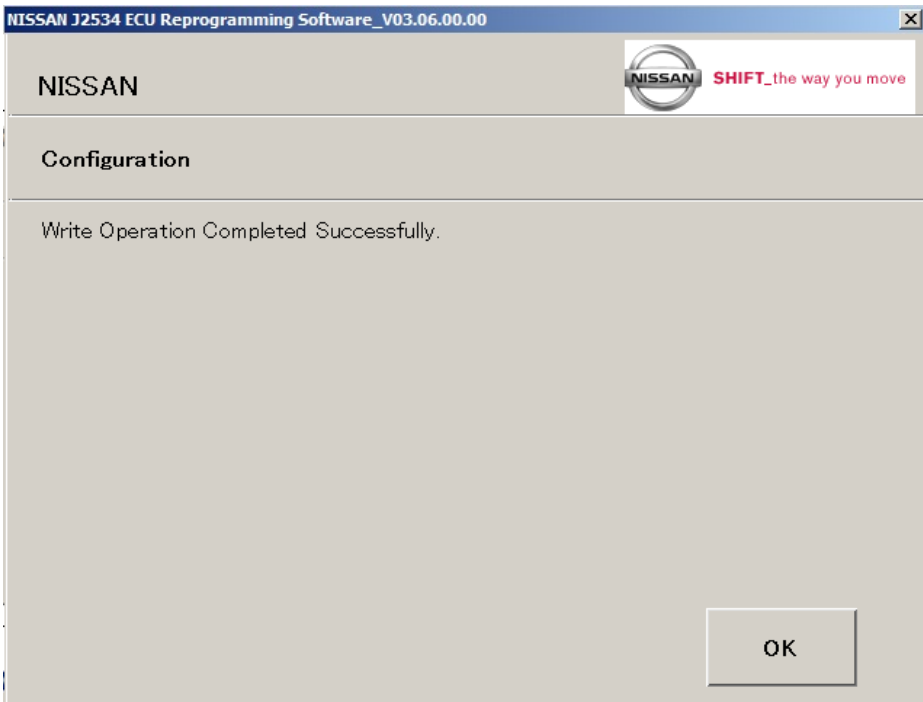
Turn Ignition to OFF for 2 seconds or more, then turn Ignition to ON and then click OK button.

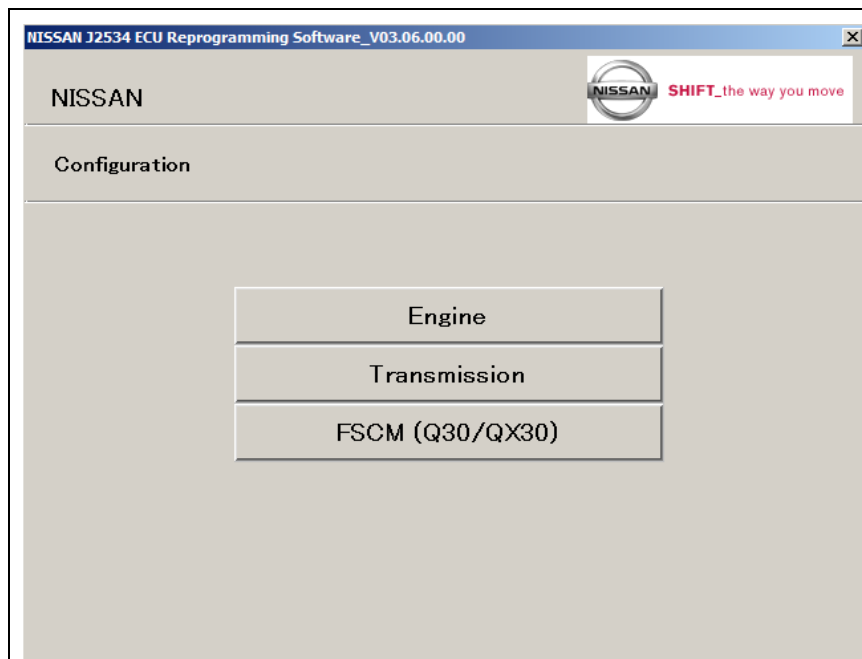
OK

21. Click [OK] button to move to the configuration complete screen.

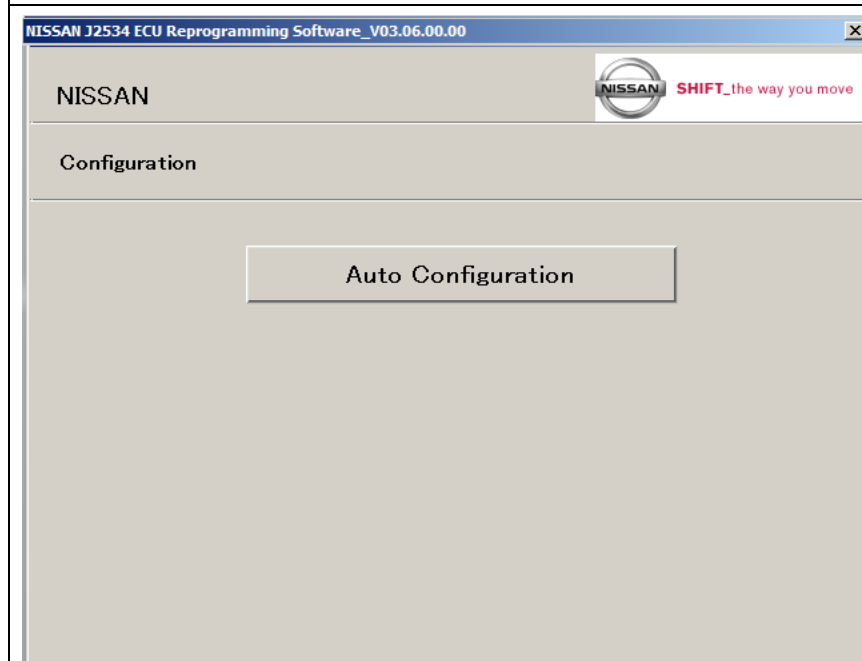
[For IK2 ECU]

 The screenshot shows the 'NISSAN J2534 ECU Reprogramming Software_V03.06.00.00' window. The title bar is blue with the text 'NISSAN J2534 ECU Reprogramming Software_V03.06.00.00'. The main area has a light gray background. At the top left, the word 'NISSAN' is displayed. To its right is the Nissan logo and the slogan 'SHIFT_the way you move'. Below this, the word 'Configuration' is centered. The main text area displays 'Write Operation Completed Successfully.' in a small font. At the bottom right, there is a single 'OK' button.	22. Click [OK] button to complete the process execution. [For IK2 ECU]
 The screenshot shows the same software window. The main text area now displays three buttons stacked vertically: 'Save/Write', 'Manual', and 'Auto Configuration'. The 'Auto Configuration' button is highlighted with a darker gray background.	23. On click of [Auto Configuration], configuration information is read from configuration operation log which are generated after successful programming/reprogramming of auto configurable ECU. [For IK2 ECU]

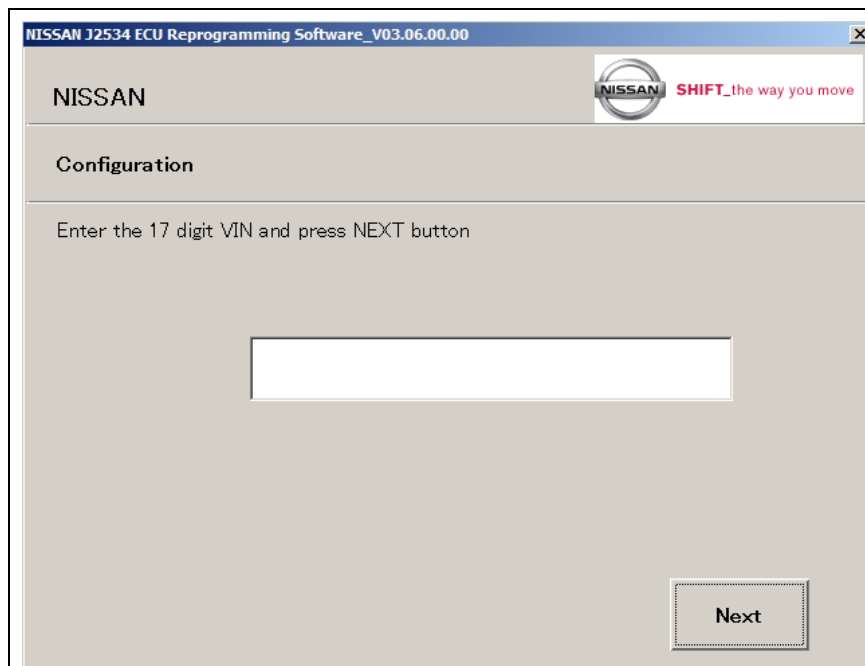
 NISSAN J2534 ECU Reprogramming Software_V03.06.00.00 NISSAN SHIFT_the way you move NISSAN Configuration Waiting IGNITION OFF-ON OPERATION Turn Ignition to OFF for 2 seconds or more, then turn Ignition to ON and then click OK button. OK	24. Click [OK] button to move to the configuration complete screen. [For IK2 ECU]
 NISSAN J2534 ECU Reprogramming Software_V03.06.00.00 NISSAN SHIFT_the way you move NISSAN Configuration Write Operation Completed Successfully. OK	25. Click [OK] button to complete the process execution. [For IK2 ECU]



26. Select [ECU Family] button to proceed.
[For Q30/Qx30]



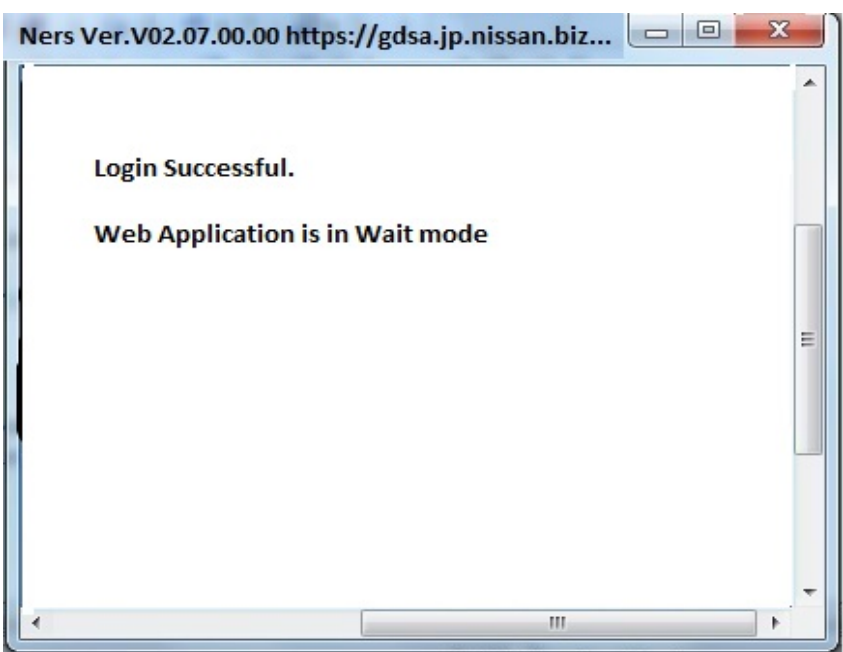
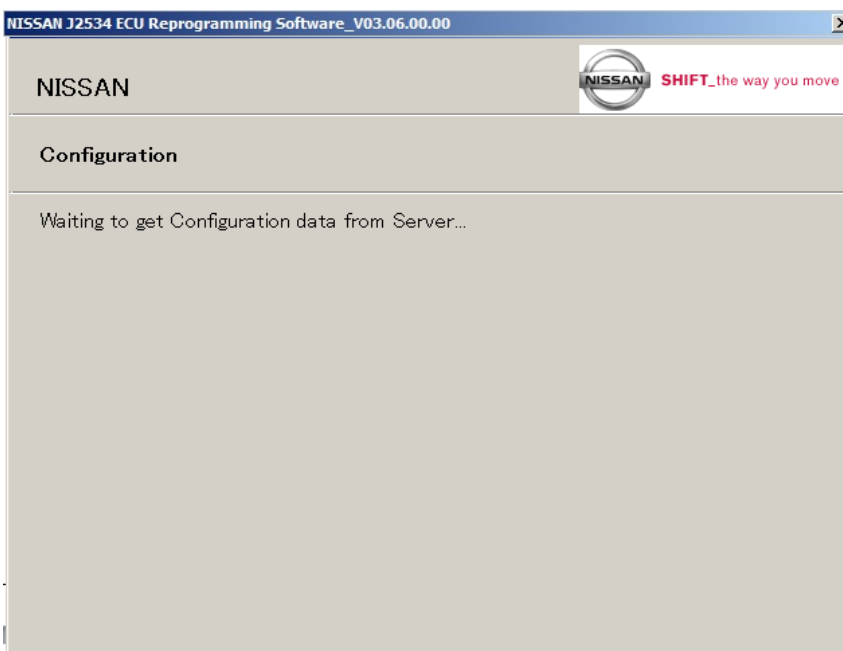
27. Select [Auto Configuration] button to proceed.
[For Q30/Qx30]

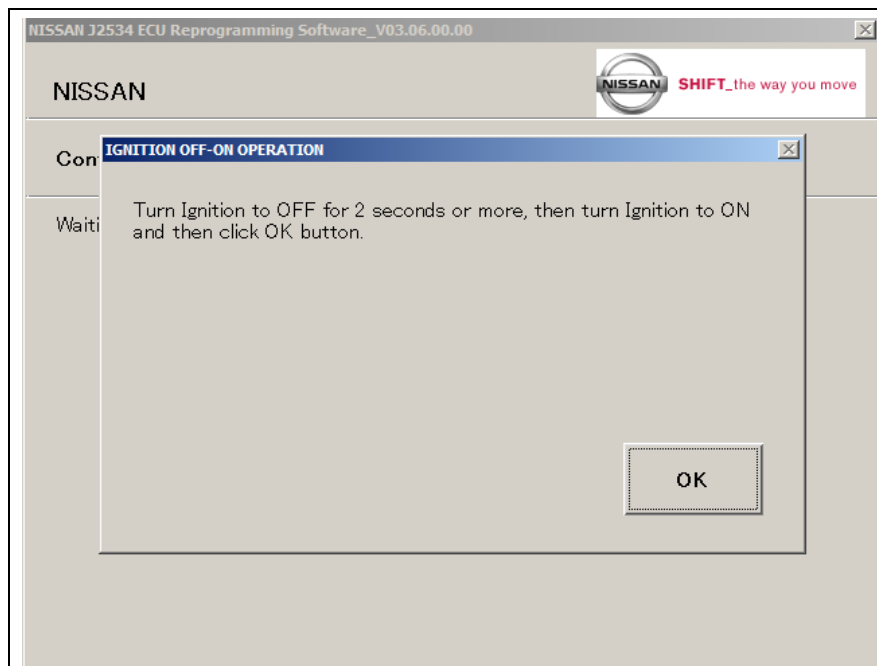


28. Enter 17digit [VIN] for Server Authentication.
29. Click [Next] to proceed to the Web Browser Application for server Authentication.
[For Q30/Qx30]

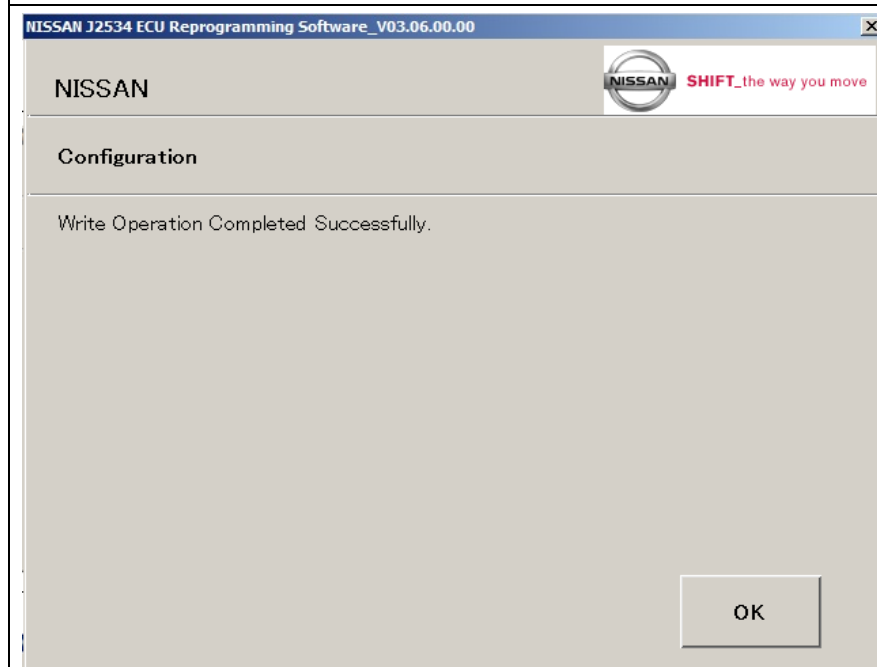


30. Please select user group for Authentication.
[For Q30/Qx30]

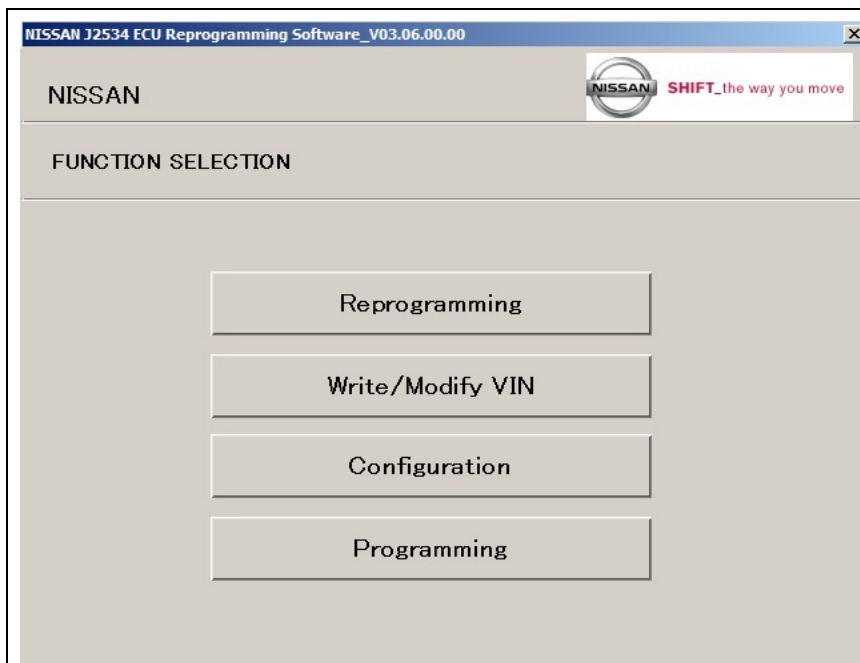
 The screenshot shows a web browser window with the address bar displaying "Ners Ver.V02.07.00.00 https://gdsa.jp.nissan.biz...". The main content area of the browser displays the text "Login Successful." followed by "Web Application is in Wait mode".	31. Enter Login Id and password for authentication and click on Login button. [For Q30/Qx30]
 The screenshot shows the "NISSAN J2534 ECU Reprogramming Software_V03.06.00.00" window. It features the Nissan logo and the slogan "SHIFT_the way you move". Below this, the text "Configuration" is displayed, followed by a status message: "Waiting to get Configuration data from Server...".	32. After successful login, wait screen will be displayed while application downloads configuration data from server and written to ECU. After successful writing, IGNITION OFF-ON OPERATION popup is displayed. [For Q30/Qx30]



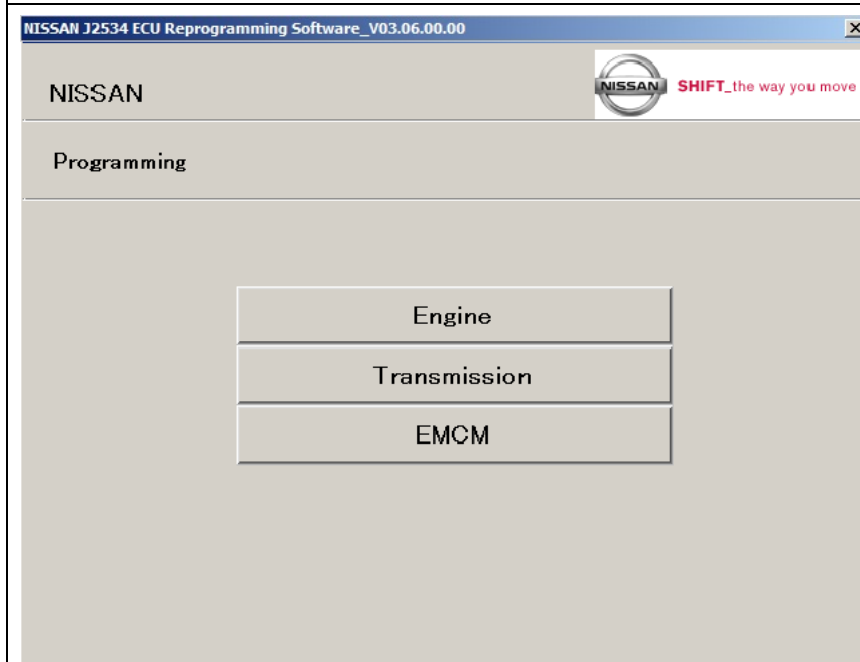
33. Click [OK] button to move to the configuration complete screen.
[For Q30/Qx30]



34. Click [OK] button to complete the process execution.
[For Q30/Qx30]



35. Click [Programming] button and proceed to the family selection screen.



36. Click [ECU Family] button to proceed to part number selection screen.

NISSAN J2534 ECU Reprogramming Software_V03.06.00.00

NISSAN  SHIFT_the way you move

P/NUMBER SELECTION

Select the part number.

JK08A
JK08A
JK08A
JK09A
-CG101
-CG101
-JK08A
23710 JD42A

P/N after repro/programming
31020-18162

Comment
F50_05MY_VK45DE_FED_2WD_

File name
e1w010_IK2_31_107_12KB.dat

File size (kb) 11

P/N after configuration
31022-CW00D

Back Next

37. Select part number and click [Next] button to proceed to part number information screen.

NISSAN J2534 ECU Reprogramming Software_V03.06.00.00

NISSAN  SHIFT_the way you move

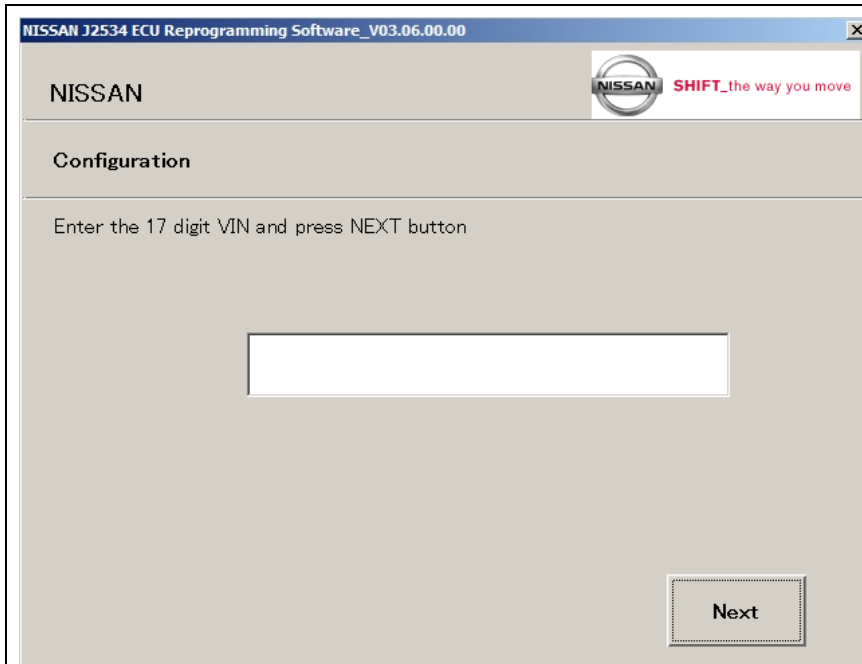
P/NO. INFORMATION

Click "Start" to start ECU repro/programming.

Current P/No.	##### -JK08A
New P/No.	31020-18162
File name	e1w010_IK2_31_107_12KB.dat
File size (kb)	11
Battery Voltage :	15.455V

Back Start

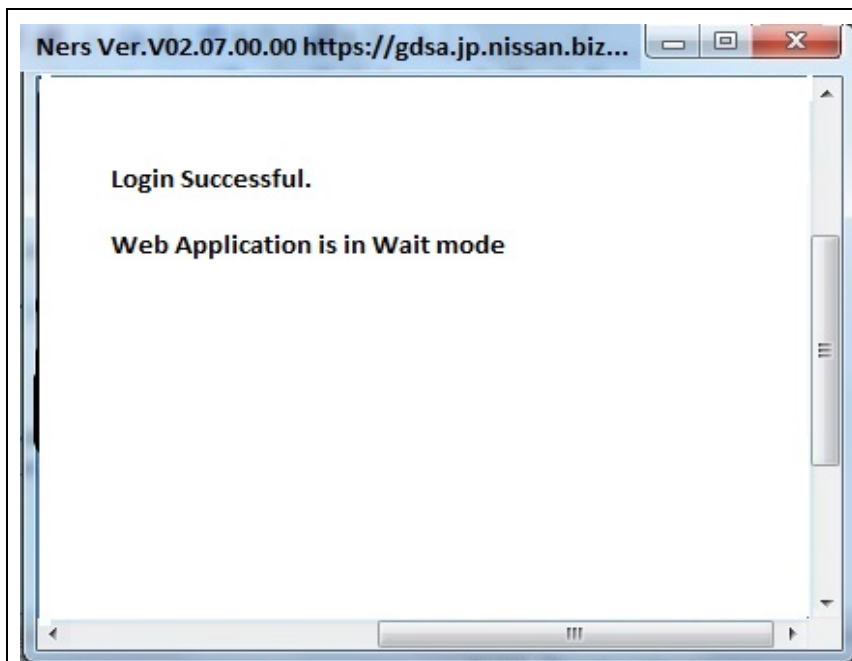
38. Click [Start] button to proceed to VIN registration screen [For Q30/Qx30 or NISSAN UDS ECUs] or to Programming screen [For Cummins UDS, DDL2 ECM & Daimler ECUs] or to User authentication screen [For other vehicles].



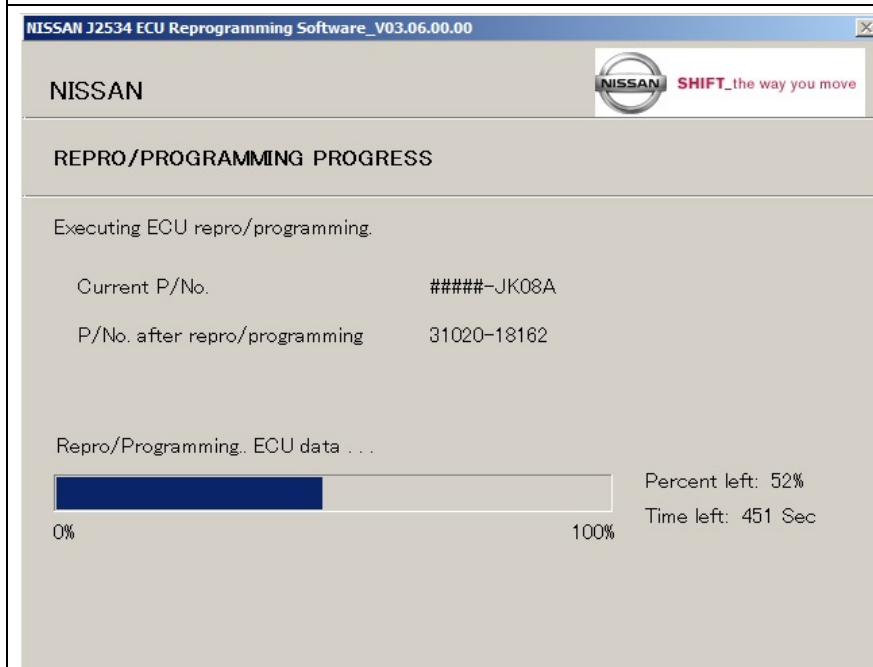
39. Enter 17digit VIN.
40. Click [Next] for user Authentication.
[For Q30/Qx30 & NISSAN UDS ECUs]



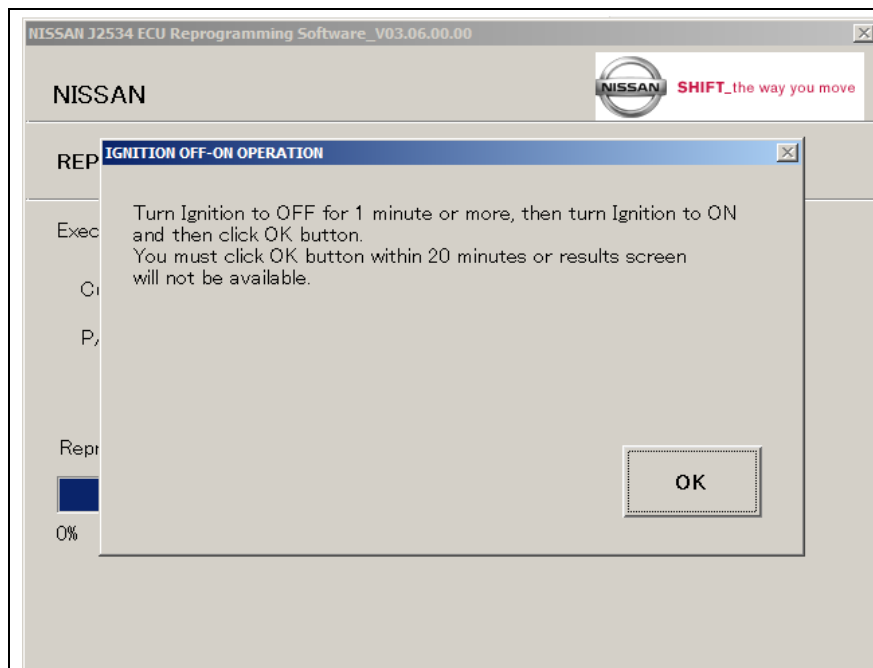
41. Select group to proceed further.
[Except Cummins UDS, DDL2 ECM & Daimler ECUs]



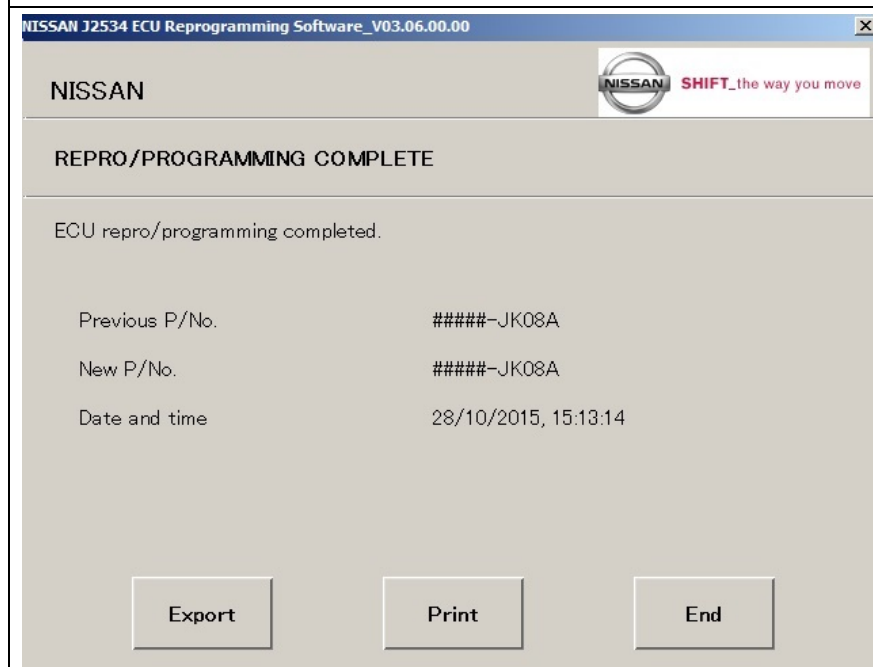
42. Enter Login Id and password for authentication and click on Login button.
- [Except Cummins UDS, DDL2 ECM & Daimler ECUs]



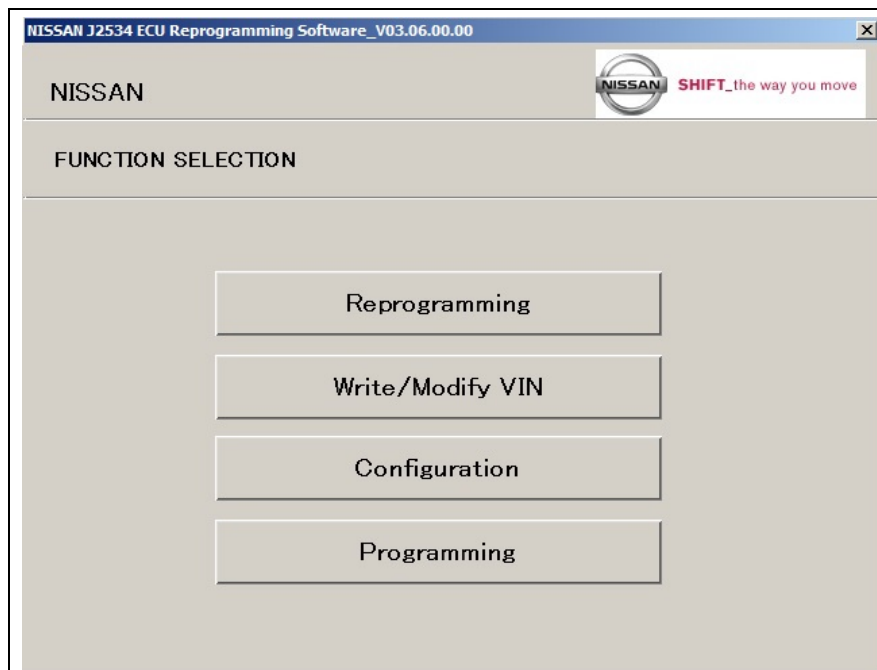
43. After successful login, user is directed to the flow of programming. When programming completes IGNITION OFF-ON OPERATION popup is displayed.



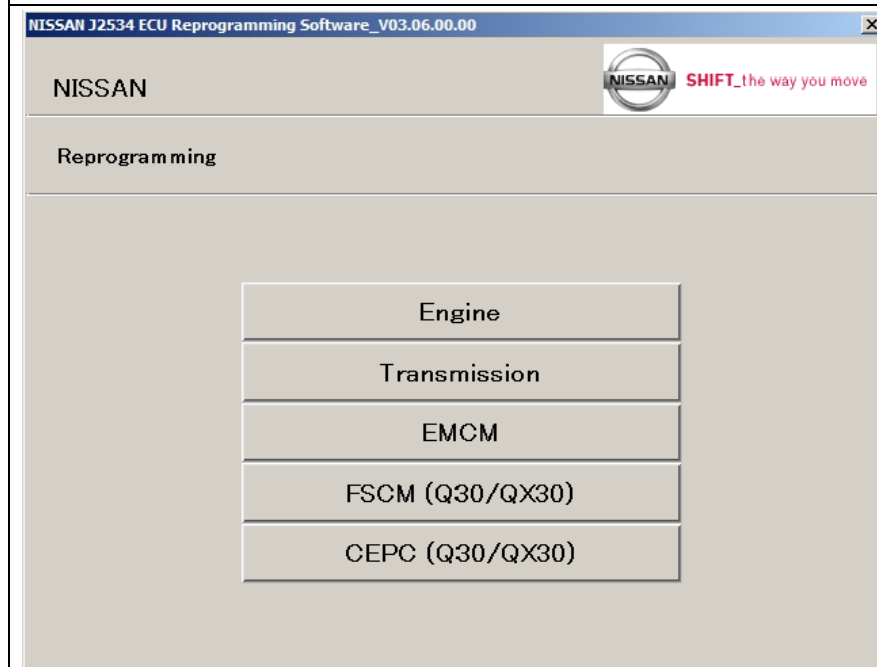
44. Click [OK] button to proceed to Programming complete screen. Configuration operation log will be generated for auto configurable ECU's.



45. Click [END] button to end Application.



46. Click [Reprogramming] button and proceed to the family selection screen



47. Click [ECU Family] button to proceed to part number selection screen.

NISSAN J2534 ECU Reprogramming Software_V03.06.00.00

NISSAN  SHIFT_the way you move

P/NUMBER SELECTION

Select the part number.

JK08A
JK08A
JK08A
JK09A
####-CG101
####-CG101
####-JK08A
23710 JD42A

P/N after repro/programming
31020-18162

Comment
F50_05MY_VK45DE_FED_2WD_

File name
e1w010_IK2_31_107_12KB.dat

File size (kb) 11

P/N after configuration
31022-CW00D

Back Next

48. Click [Next] button to proceed to part number information screen.

NISSAN J2534 ECU Reprogramming Software_V03.06.00.00

NISSAN  SHIFT_the way you move

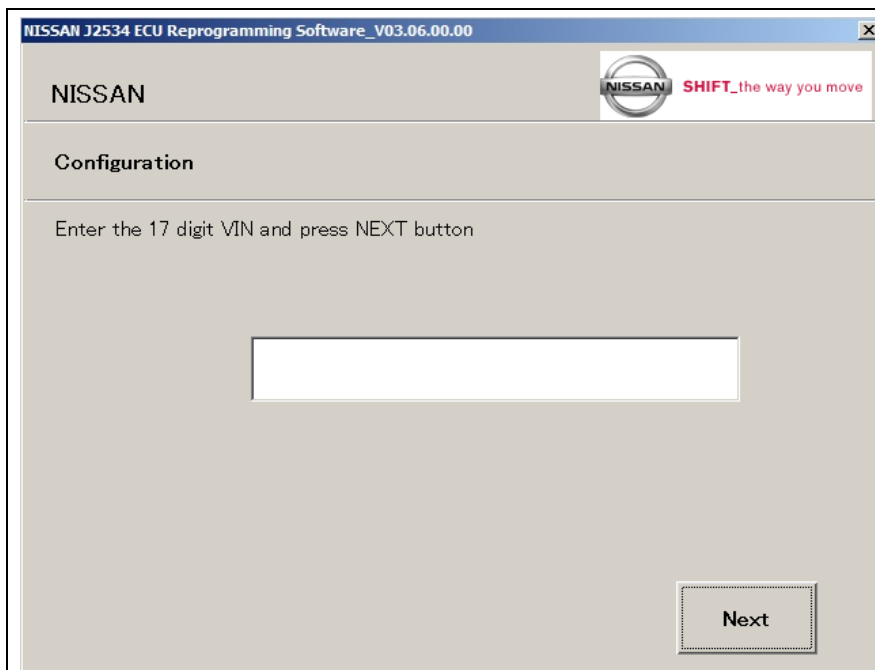
P/NO. INFORMATION

Click "Start" to start ECU repro/programming.

Current P/No.	####-JK08A
New P/No.	31020-18162
File name	e1w010_IK2_31_107_12KB.dat
File size (kb)	11
Battery Voltage :	15.455V

Back Start

49. Click [Start] button to proceed to VIN registration screen [For Q30/Qx30 or NISSAN UDS ECUs] or to Reprogramming Screen [For Cummins UDS, DDL2 ECM & Daimler ECUs] or to User authentication screen [For other vehicles].



50. Enter 17digit VIN.

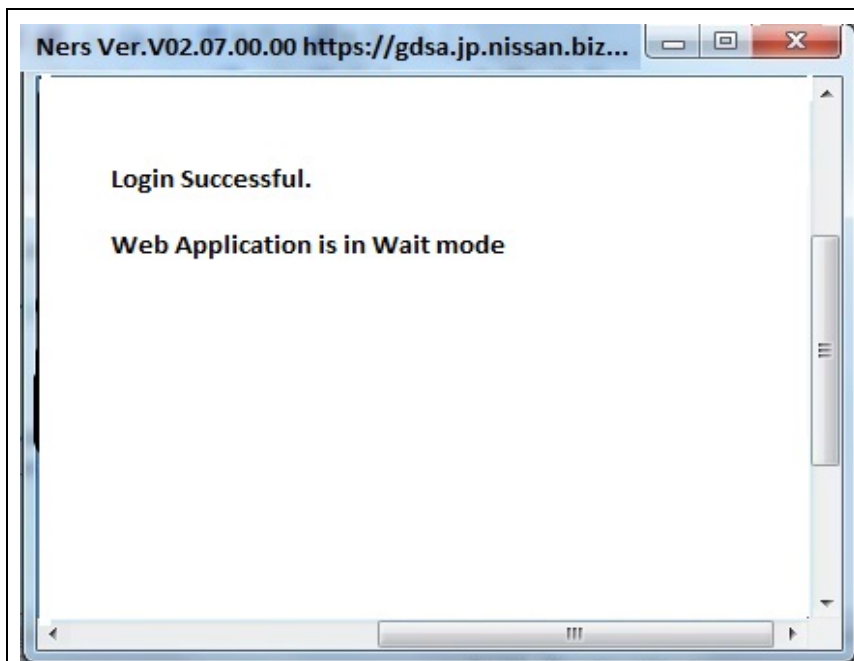
51. Click [Next] for user Authentication.

[For Q30/Qx30 & NISSAN UDS ECUs]

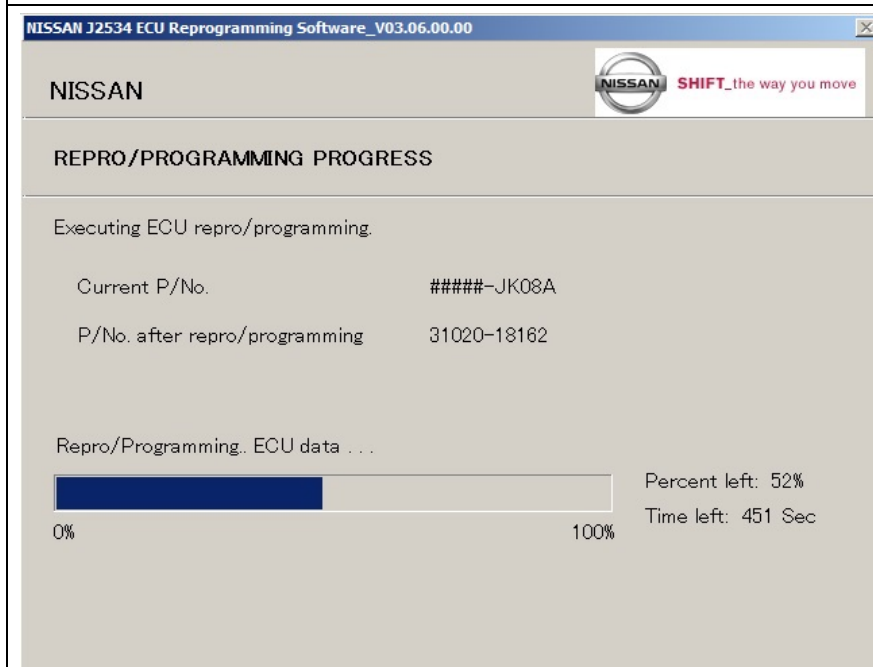


52. Select group to proceed further.

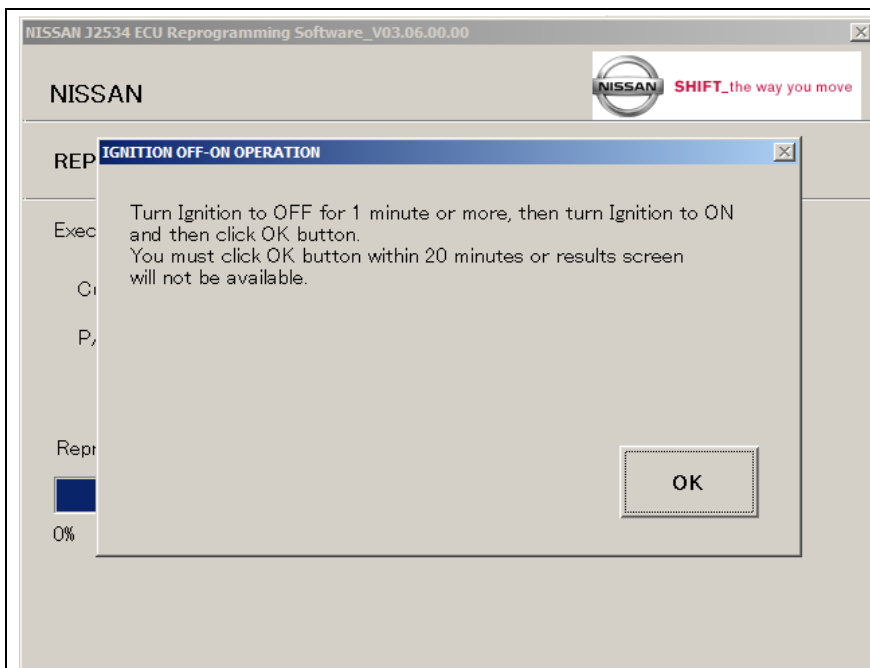
[Except Cummins UDS, DDL2 ECM & Daimler ECUs]



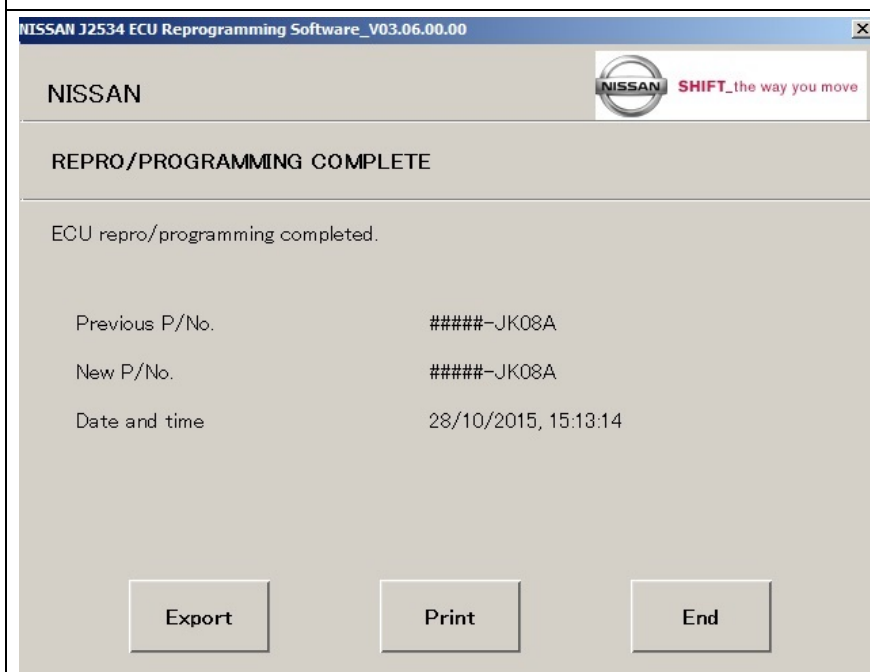
53. Enter Login Id and password for authentication and click on Login button.
- [Except Cummins UDS, DDL2 ECM & Daimler ECUs]



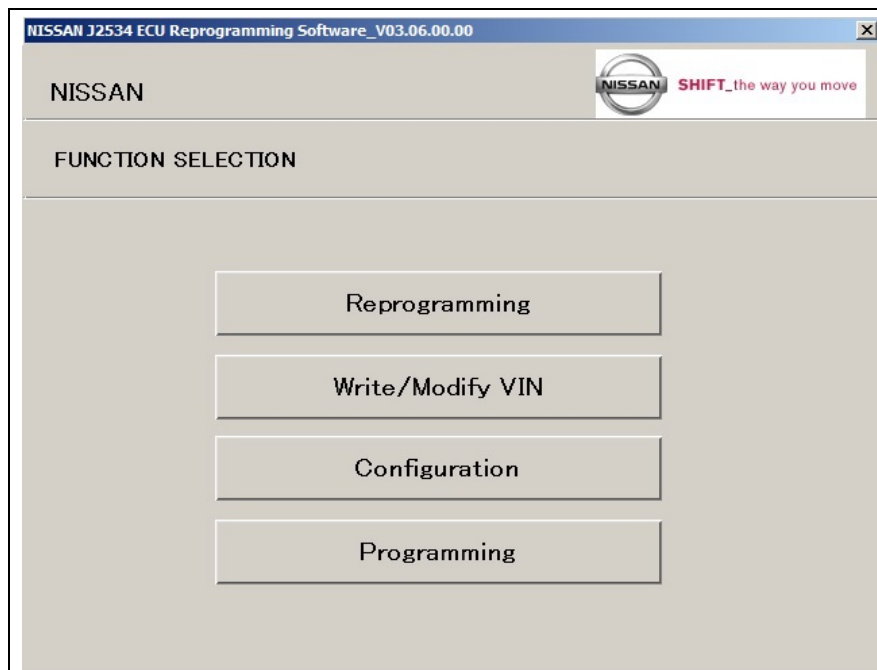
54. After successful login, user is directed to the flow of reprogramming. When reprogramming completes IGNITION OFF-ON OPERATION popup is displayed.



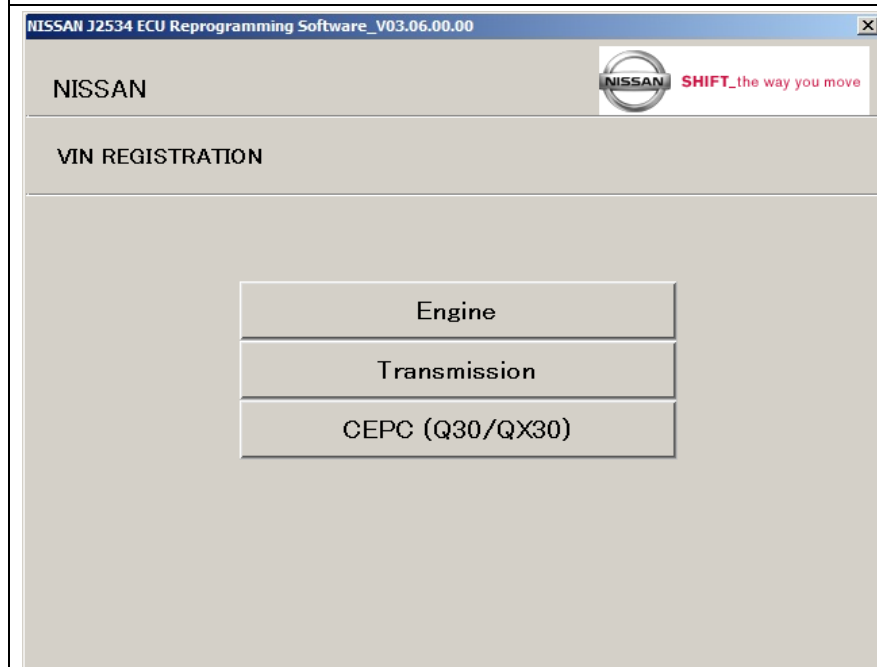
55. Click [OK] button to proceed to Reprogramming complete screen. Configuration operation log will be generated for auto configurable ECU's.



56. Click [END] button to end Application.



57. Click [Write/Modify VIN] button and proceed to the family selection screen.



58. Click [ECU Family] button to proceed to VIN reading.

NISSAN J2534 ECU Reprogramming Software_V03.06.00.00

NISSAN  **SHIFT**_the way you move

VIN REGISTRATION

Enter or Modify the 17 digit VIN twice and press Write button to Register.

111111111111111111|

Back Write

59. For blank ECM, textbox1 will be empty.
So enter 17digit VIN in both the textboxes and click on “Write” button.

For non-blank ECM, read VIN from ECM will be shown. So, enter new VIN or overwrite the displayed VIN in the textbox1 and enter the same VIN in the textbox2 and click on “Write” button

60. For Q30/Qx30 (except the “Transmission” family ECU & K9K Engine) and NISSAN UDS ECUs, user will be directed to Web Browser Application for Authentication.

For others, VIN registration complete screen will appear directly.

Ners Ver.V02.07.00.00 <https://gdsa.jp.nissan.biz...>



Please select your user group.

EUROPE

OK

NISSAN

61. Select group to proceed further.

[For Q30/Qx30 (except the “Transmission” family ECU & K9K Engine) and NISSAN UDS ECUs]

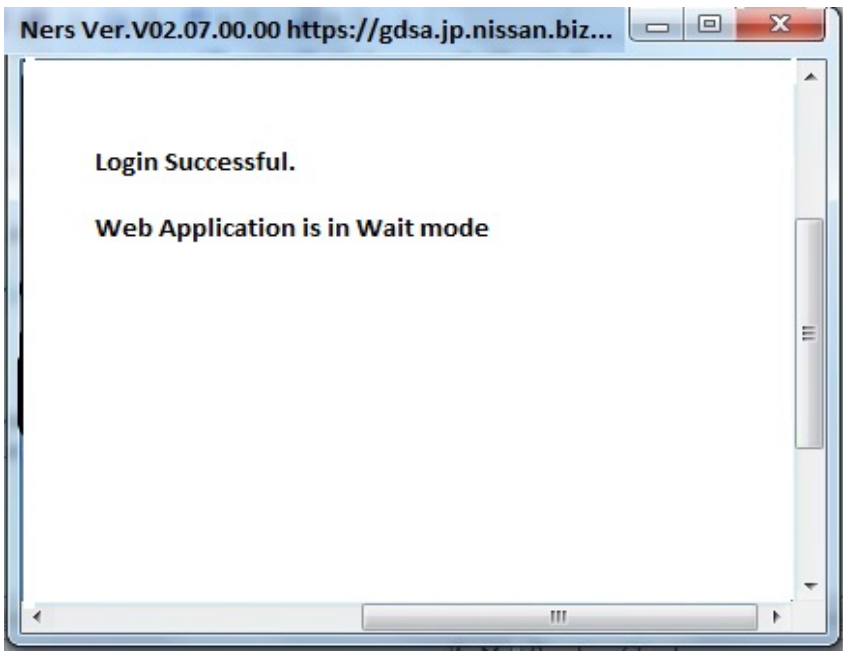
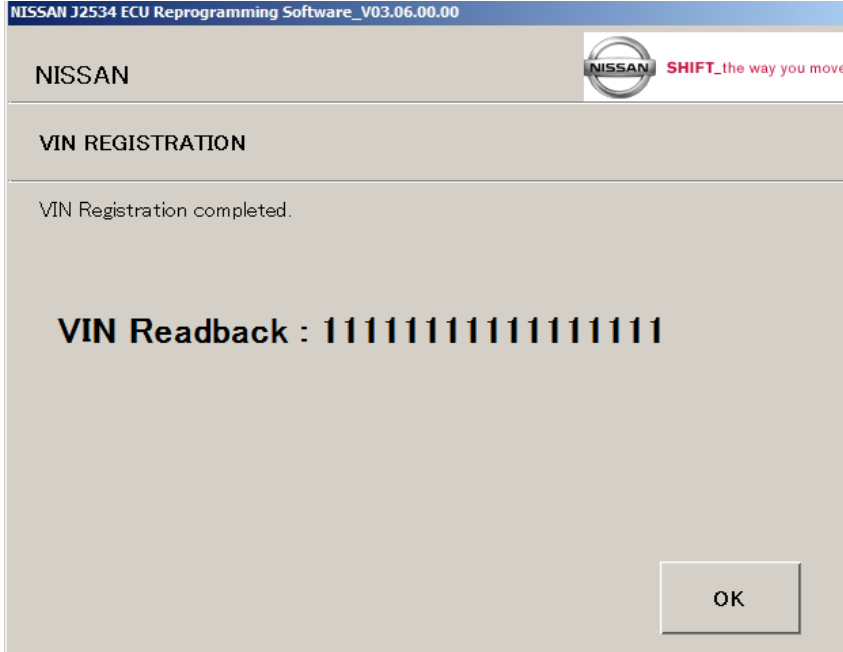
 A screenshot of a web browser window. The title bar shows "Ners Ver.V02.07.00.00 https://gdsa.jp.nissan.biz...". The main content area displays the text "Login Successful." followed by "Web Application is in Wait mode".	62. Enter Login Id and password for authentication and click on Login button.. [For Q30/Qx30 (except the "Transmission" family ECU & K9K Engine) & NISSAN UDS ECUs]
 A screenshot of the "NISSAN J2534 ECU Reprogramming Software_V03.06.00.00" application window. The interface includes the Nissan logo and the slogan "SHIFT_the way you move". It shows a "VIN REGISTRATION" section with the message "VIN Registration completed." and a large "VIN Readback : 1111111111111111" display. An "OK" button is located at the bottom right.	63. Click [OK] button to complete the process execution.

Table 5: NERS Graphical User Interface