NVE/IPC series
Guidance for firmware update

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INTRODUCTION

This manual describes how to update the firmware of your NVE and IPC series. There exist 2 types of firmware version for NVE and IPC series, 'non-protected firmware-K5XX' and 'protected firmware-K6XX. The required steps for each are different according to the firmware type your device has currently. Read this document carefully and follow the instructions we provide.

Just to be brief about the difference between 2 types of firmware,

- **K6XX** is a version of 'protected firmware'. The firmware files to be uploaded on the unit are encrypted by the 'company key', which is also called as 'Vender ID'. The purpose of the encryption is to prevent the files from hacking by 3rd party.
- **K5XX** is a version of 'non-protected firmware' and it doesn't include the encryption process internally.

Because of this significant change of firmware type in our development, different way of updating should be applied to the units according to your current firmware.

Now, you can start with '*Step1. Checking current version.'*

Step 1. Checking current version

Follow the steps below in order to check the current version of firmware.

Before beginning of steps, make sure if the power is being supplied to the unit and connected to the LAN properly.

1. Run the *IPAdminTool.exe* in the provided package folder.
2. Then, you might see that your NVE or IPC is scanned automatically on the list as below. If you have multiple NVE or IPC units on the network, all of them will be listed.
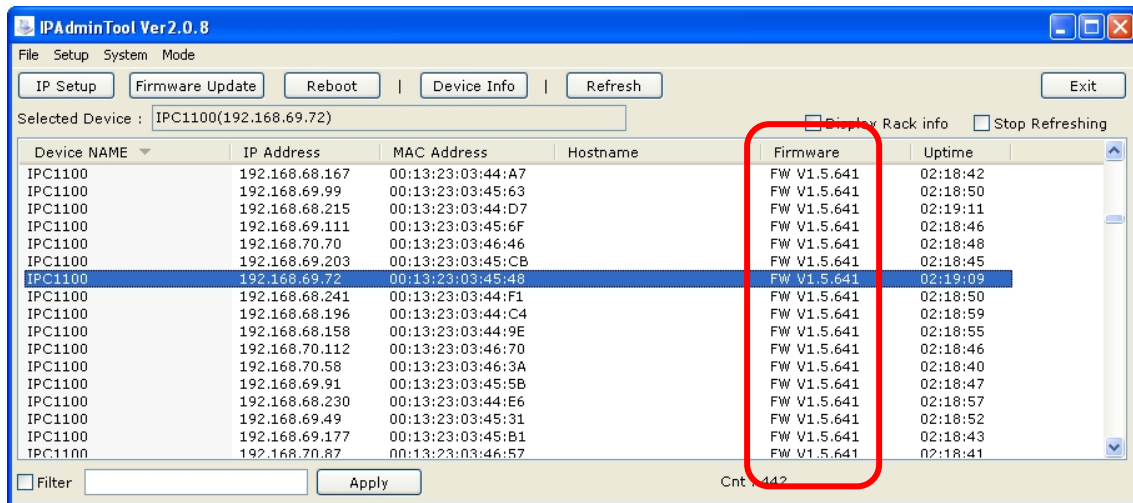

You may find the tab title of 'Firmware' and it shows the **FW V1.5.XXX**. The last 3 digits (xxx) mean the version of firmware. In case of example above, the firmware version of unit is **K641**, which is included in the group of K6XX.

If your unit is **K5XX**, go to the '**Step2. Updating K5XX**.'

If your unit is **K6XX**, skip step2 and just go to the '**Step3.Updating K6XX**.'

NOTE : If the firmware version is not shown with IPAdminTool, please check the network setting such as subnet mask or default gateway of both your PC and NVE/IPC. To configure the IP setting of your unit, select the unit first from the list of IPAdminTool and click the 'IP Setup' button on the upper menu bar. Then, you can see the dialogue window as below for configuring the IP setting.
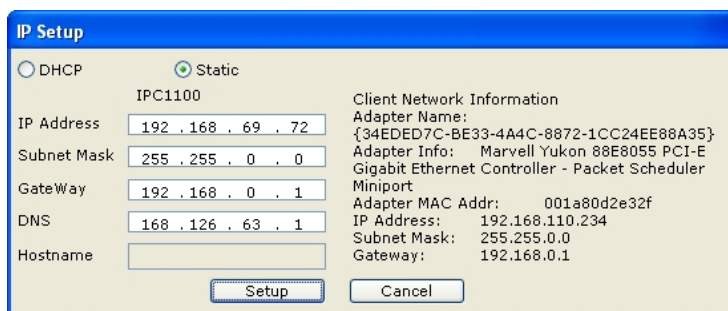
Step 2. Updating K5XX to K600

If it is found out that the current firmware version is K5XX, you should update the firmware to K600 first before updating to the desired firmware.

1. Go back to the *IPAdminTool* and right-click on the selected unit.
2. Select the '*Firmware Update*' menu (This menu is enabled only when the selected unit is K5XX).
3. Then, you may see the window below. Click '*Browse*' button and select the file '**Kernel 16X600**'from the package folder and click '*Open*' button.
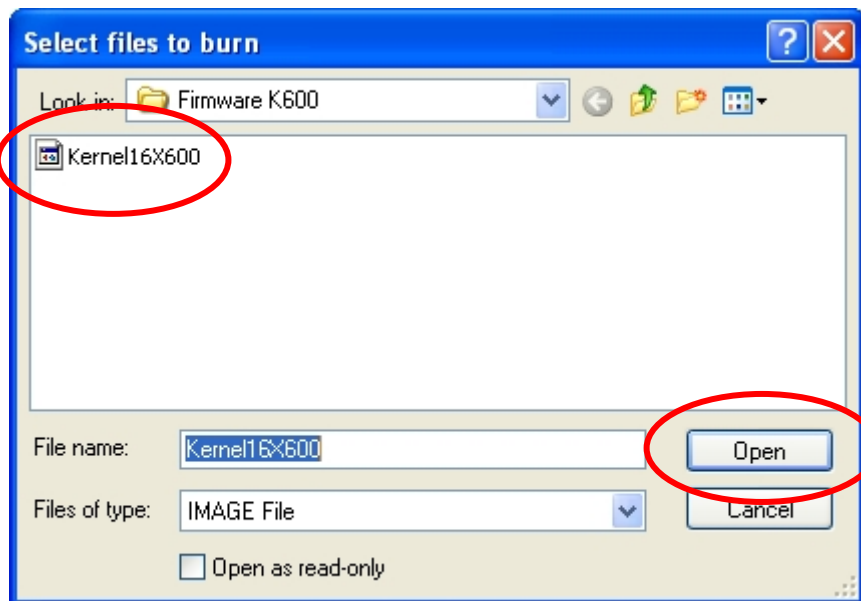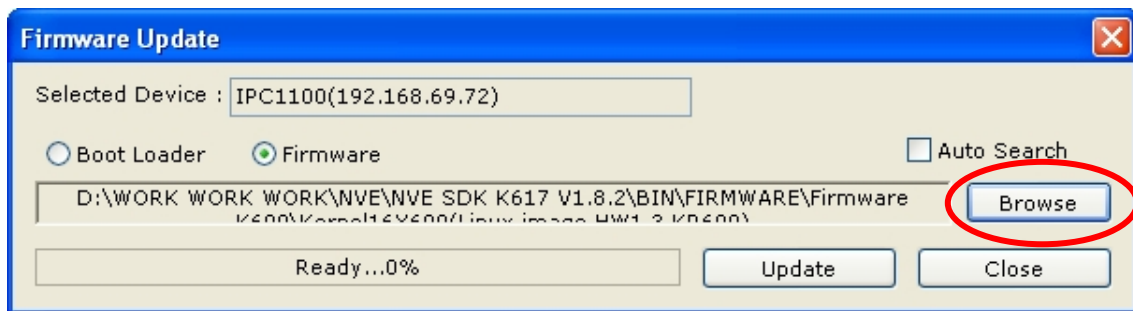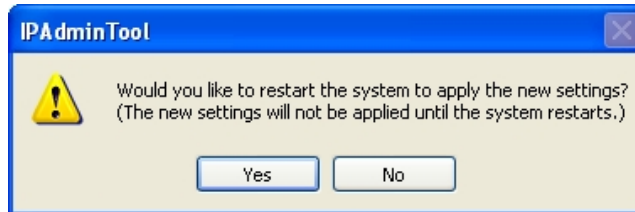

4. Then, you can see the window below again and click the '*Update*' button as below.
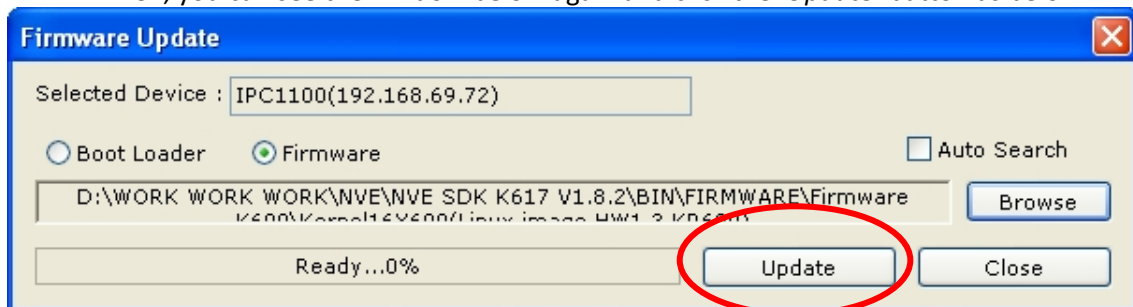
5. The progress bar will show you the status of updating. If it's completed by 100%, the system will ask you if you would like to restart the system. Click '*Yes*' and it will restarts automatically.

    NOTE : Do not turn off the system until you see the message below.

6. Now, you can check out the changed firmware (K600) by IPAdminTool as you did in *Step 1.Checking current version.*

Once you have completed to update your firmware to the K600 which is interim file, now you can go to the Step 3. Updating K6XX to the higher.

NOTE : If you have encountered any error message while updating, refer to the '*Appendix 2 : Error Messages*' and try to update the firmware again.

Step 3. Updating K6XX to the higher

NOTE : If you're handing multiple devices and want to update all of them at once, refer to the '*Appendix2. Updating multiple devices*' of this manual.

If it is found that the current firmware version is K6XX (such as K600, K617, K633 or higher), you're allowed to move to the next step.
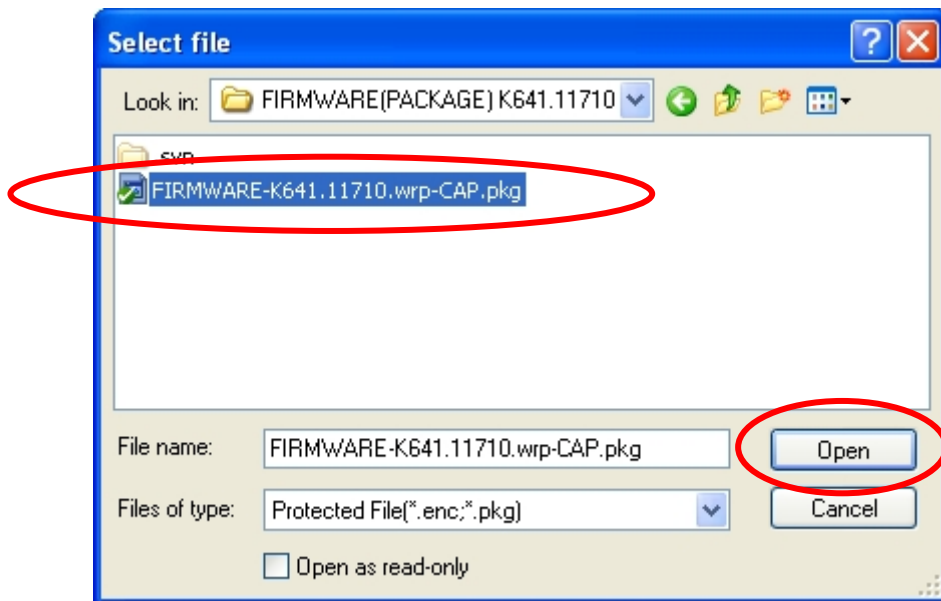
1. Go back to the list page of *IPAdminTool* and click on the device name you want to update. Then, The selected unit will turn into blue color
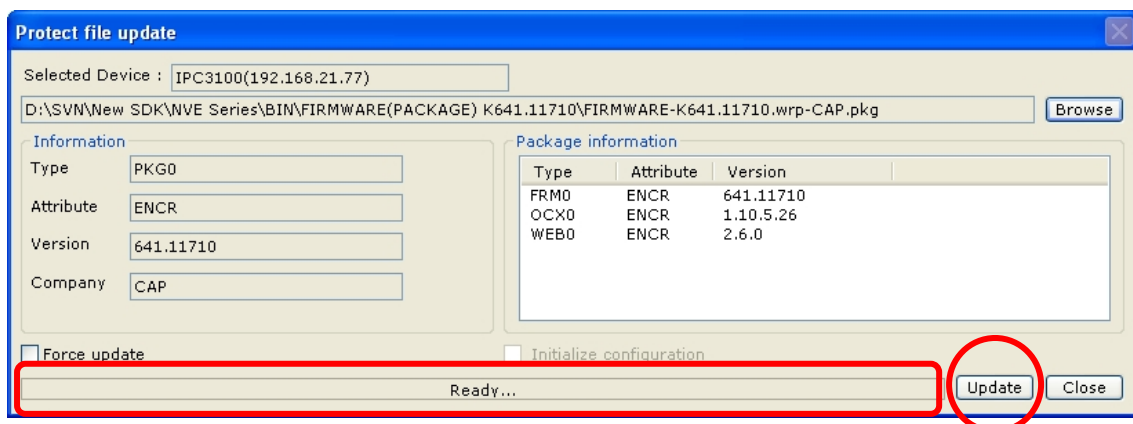2. Right-Click on the device name and select the 'Protect Update' menu.
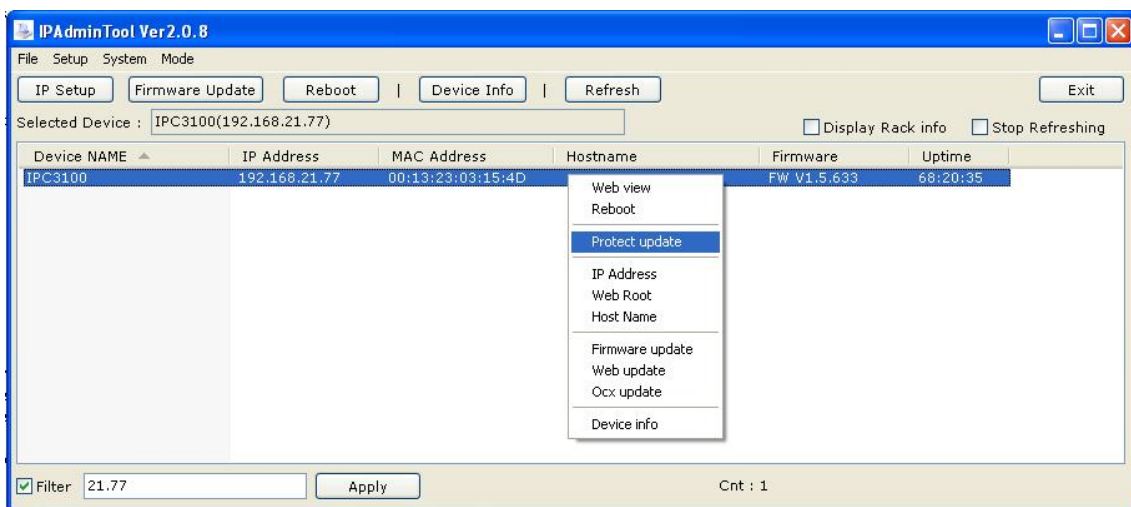
3. Then, you may see the window below. Click the 'Browse' button.
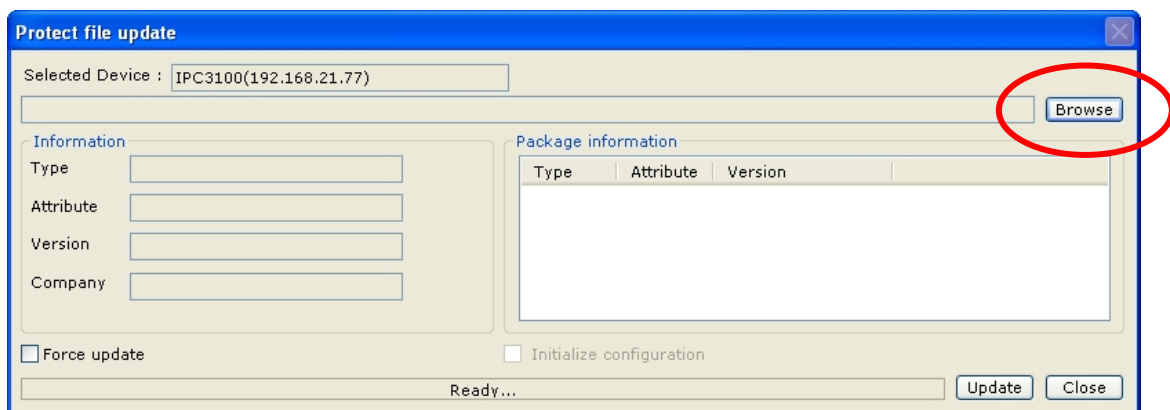
4. Select the firmware file (***.pkg**) you want to upload from the package folder and click '*Open*' button.

5. Then, you can find the version information is shown in the package information section (FRM, OCX, and WEB). Click '*Update'* button as below.

6. The progress bar will show you status of updating. If it's completed by 100%, the system will ask you if you would like to restart the system. Click 'Yes' and it will restarts automatically
   **NOTE** : Do not turn off the system until you see the message below.
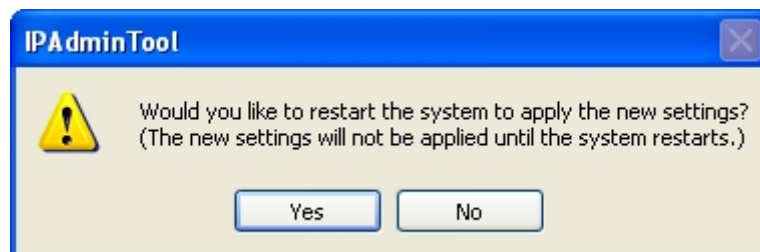
7. Wait for a minute while the unit gets restarted and check out the updated firmware version by *IPAdminTool* as you did in *Step 1.Checking current version*

NOTE : If you have encountered any error message while updating, refer to the last section of this manual 'Error Messages' and try to update the firmware again.

Appendix 1: UPDATING MULTIPLE DEVICES

IPAdminTool provides the 'Multi devices update' feature for your convenience when you need to update the multiple devices with the same firmware at once. Please follow the steps below.
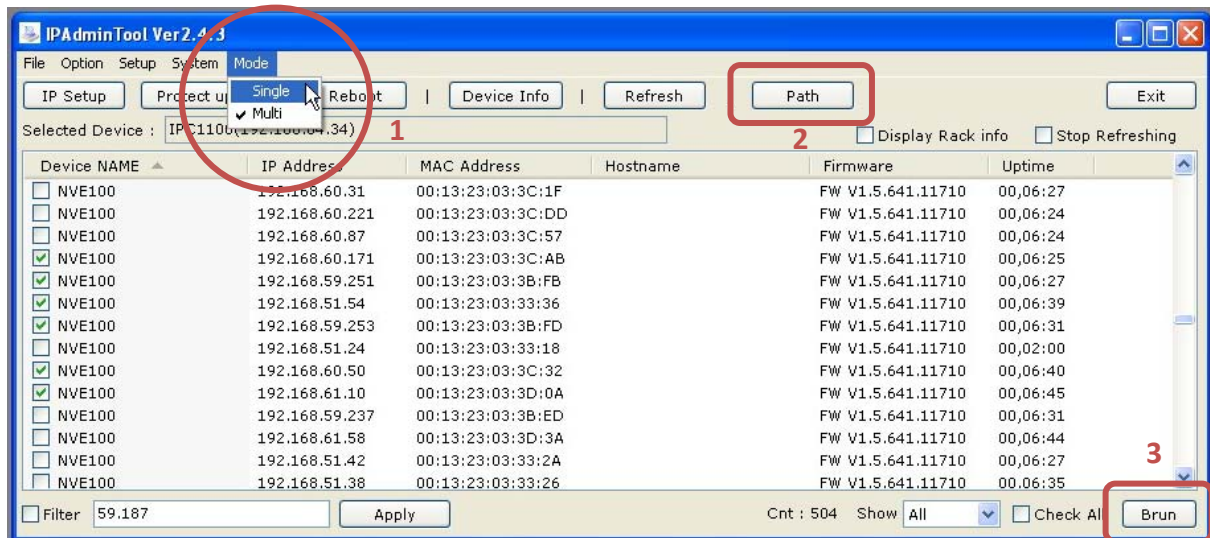
1. Choose the [Mode – Multi] and then you might see the check boxes at the left side of the device list. Enable the check boxes you want to update and click the *Path* button.
2. You can see the popup window which provides the file browsing function.
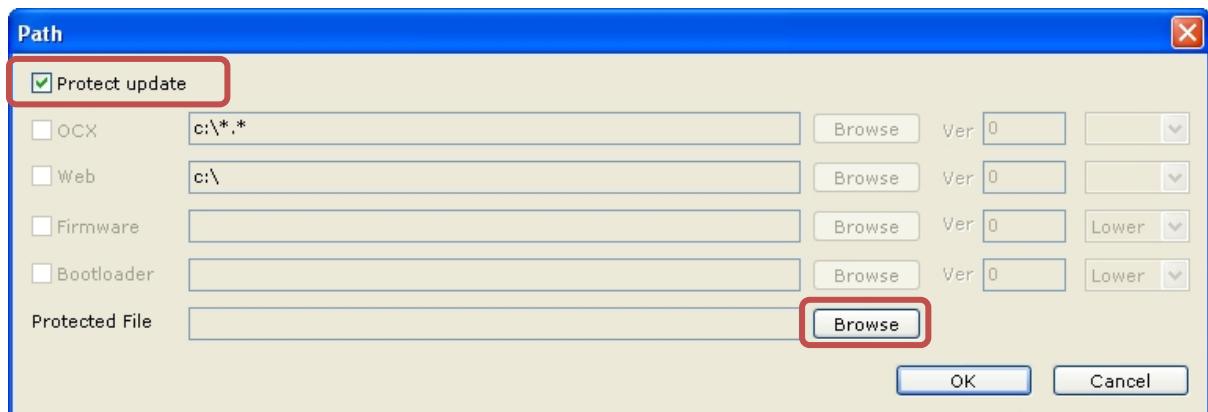
3. Enable the *Protect update* box and click the *Browse* button to select the file you want to upload on your NVE device.

Note : *Protect update* is supported only when the firmware version of your NVE/IPC is K600 or higher. And the uploading file type should be the *.pkg* for the *Protect update*. If you want to upload the OCX, Web, Firmware or Bootloader separately, enable the check box and choose the required file (*.enc*) for each of them.

4. If you have done selecting the files, click the *OK* button.
5. Go to the *IPAdminTool.exe* page and click the *Burn* button at the bottom.

6. And then you can see the popup window as below. Click the *Start* button and now update status is shown. Refer to the picture below.

Note : In this example of manual, the one of NVE2000 is selected but you can choose multiple devices for update.
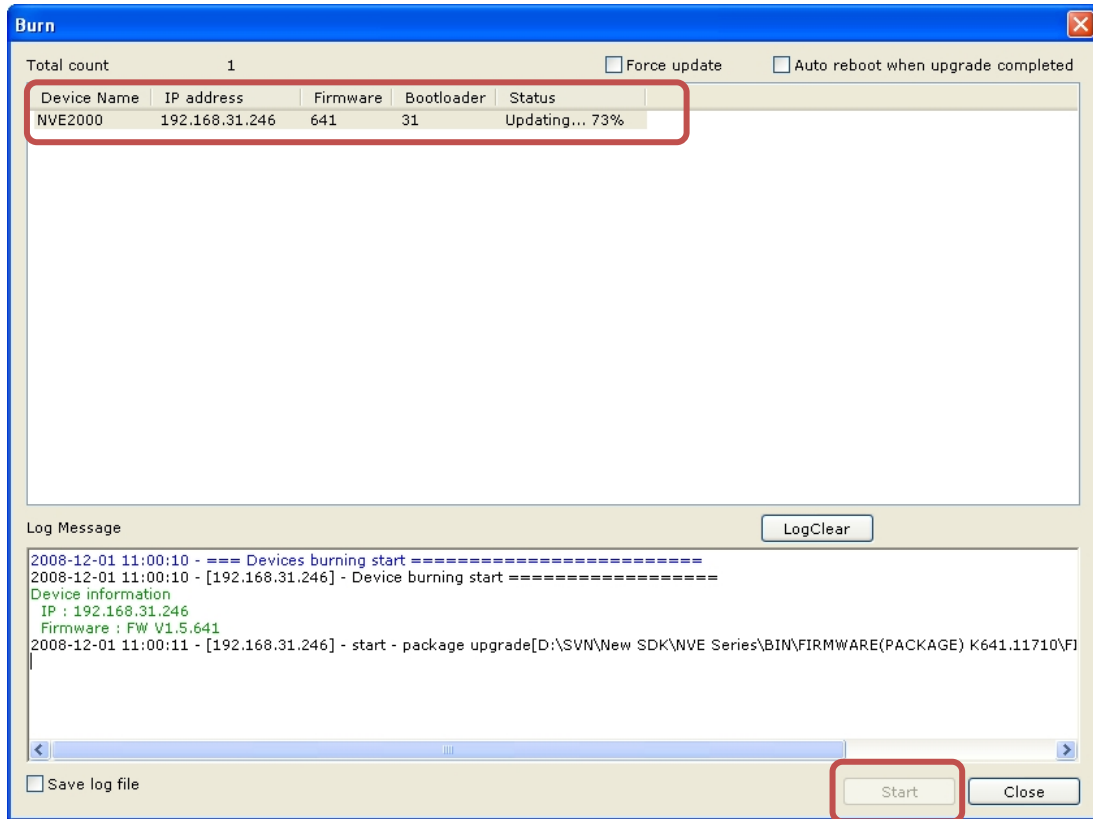
7. If the uploading process is completed, the message pops up as below. Click the *YES* button to reboot the device.
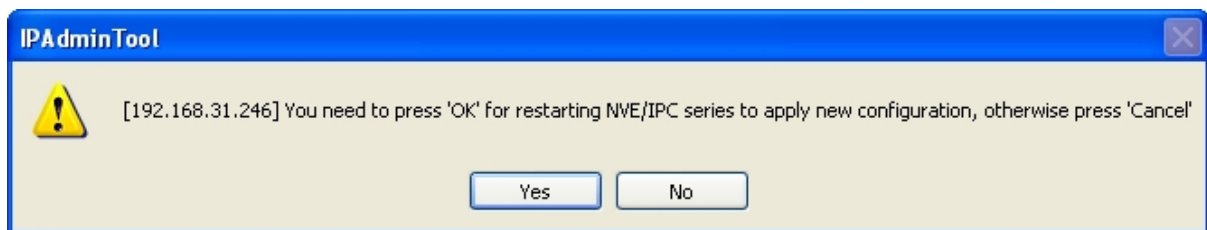
8. In a few minutes, the message box below is shown and you can check out the firmware update for multiple devices are completed.

Appendix 2: ERROR MESSAGES

FW version : K617 ~ K641 or higher
Applied to - Encoders and all types of cameras

Code	Message
-1	Not available to access to the update server process.
-11	The specified file is not found.
-12	Restart the system and try to upload the firmware again.
-13	Failed to read the data from the file.
-14	Disconnected from the device. Check out the network status or the version compatibility between IPAdminTool and the device.
-15	No response from the device. Check out the connection of the device.
-18	Connection timed out
-22	The streaming server is not closed properly.
-23	Timed out while transmitting the data from the client PC.
-29	Unknown packets are received.
-31	Damaged file
-32	The specified file is not for 'protected model'
-33	Unknown file type.
-34	Damaged file
-35	Damaged file
-36	The specified file is unacceptable for the device.
-37	Failed to generate the encryption data.
-38	Failed to change the VID.
-39	The file format is not supported for the device.
-40	The firmware file is not appropriate to the specified device.
-51	Failed to access to the firmware download mode.
-59	The dome firmware file is oversized.
-62	Changing VID is not allowed for the device.
-102	Changing VID is not allowed for the device.
-103	Failed to change a VID.
-147	You have tried to update the firmware without authentication.
-1042	Requires higher level access privileges.
-1043	Incorrect password
-1061	Incorrect ID
-1049	The device doesn't support the log-in system.

FW version : K5XX
Applied to - encoders and fixed type camera

Code	Message
-3	Error in running thread
-21	Failed to access the device.
-31	The file is not found.
-32	Error while sending the header file
-33	Error in reading the data
-34	Check the compatibility of the current firmware version and the firmware file you're trying to upload.
-35	No response from the device
-36	Failed to get the response from the device
-37	Failed to get the response from the device

FW version : K5XX
Applied to – Dome cameras

Code	Message
-1	Failed to access the device
-14	Check the compatibility of the current firmware version and the firmware file you're trying to upload.
-31	Failed to access to the firmware download mode.
-32	Not available to set the flag.
-39	The dome firmware file is oversized.

REVISION HISTORY

MANUAL#	DATE (M/D/Y)	COMMENTS
00A.00	03/26/09	Created