

NEXIOT

nexvic

VIC7000  
Training  
VIC7200



Garry Huang  
Application Engineer

## Software Installation

- VMWare
- VIC7000

## Build Project

- Get IP
- Login
- New Project
- Get Data
- Font Learning
- Target
- Page & Recognition
- Play Project
- Database
- Chart
- Recorder
- Protocols

## Software Installation

- VMWare
- VIC7000

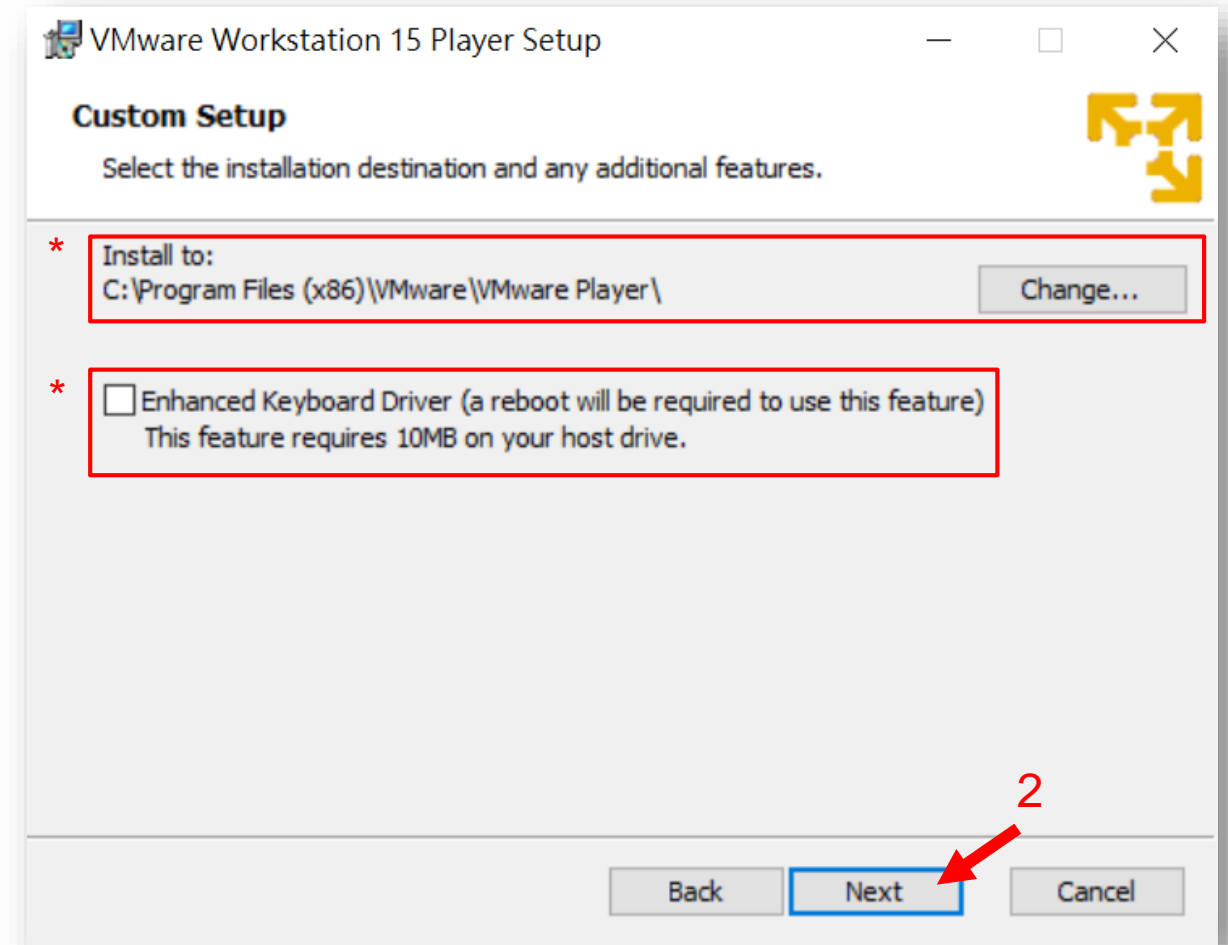
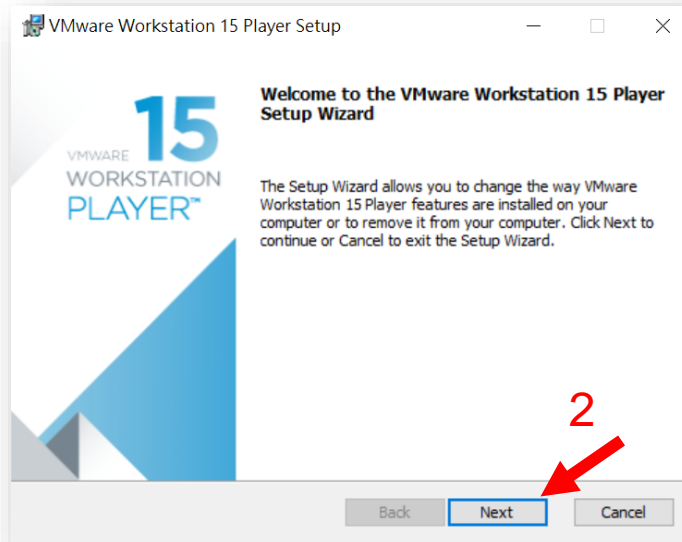
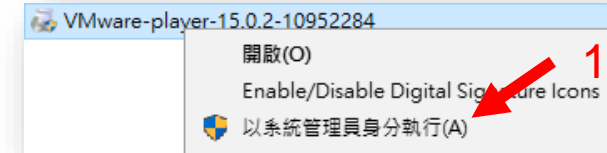
## Build Project

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# Software Installation – VMware

- **Install VMware Workstation Player**

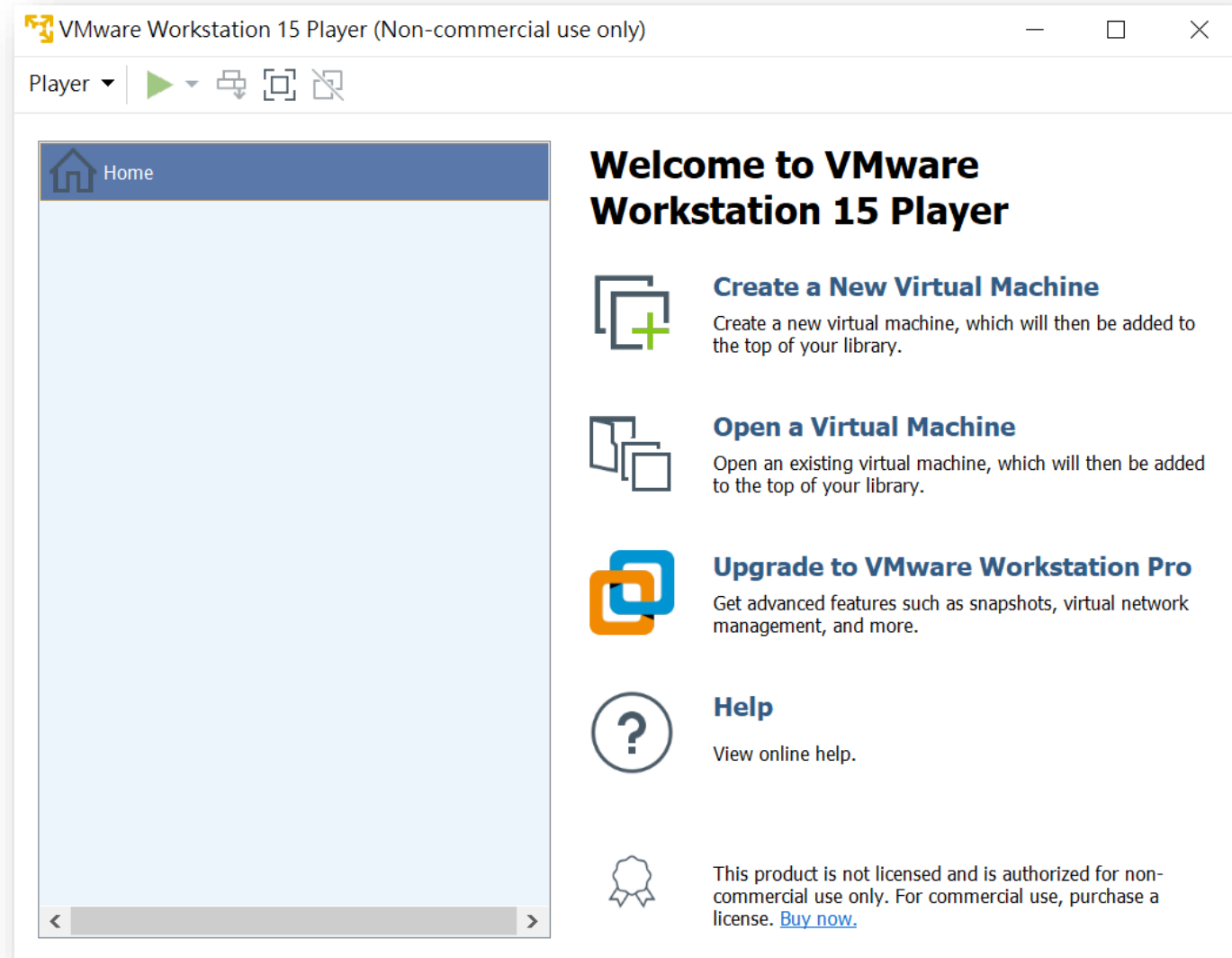
1. Execute **VMware-player-15.0.2-10952284** (Run as administrator)
2. Click **Next** till installation finished  
change the installation path (\*) if needed.  
**Enhanced Keyboard Driver (\*)** is not required





# Software Installation – VMware

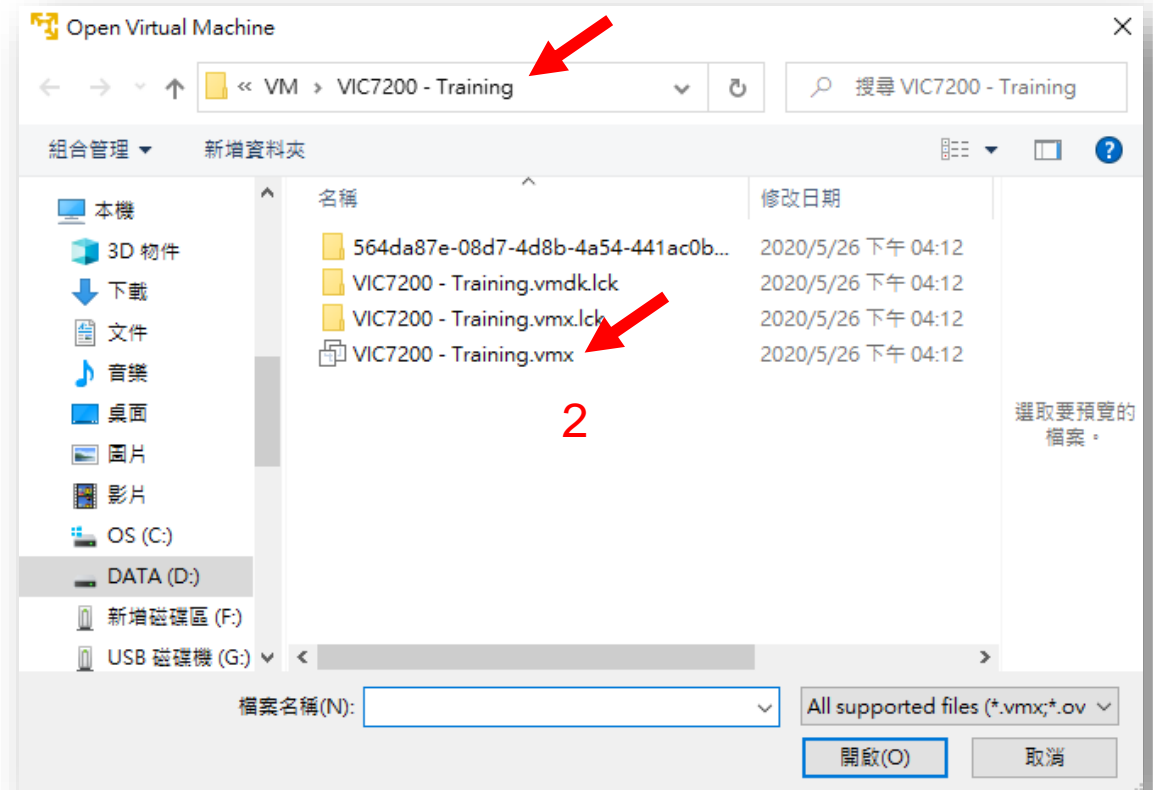
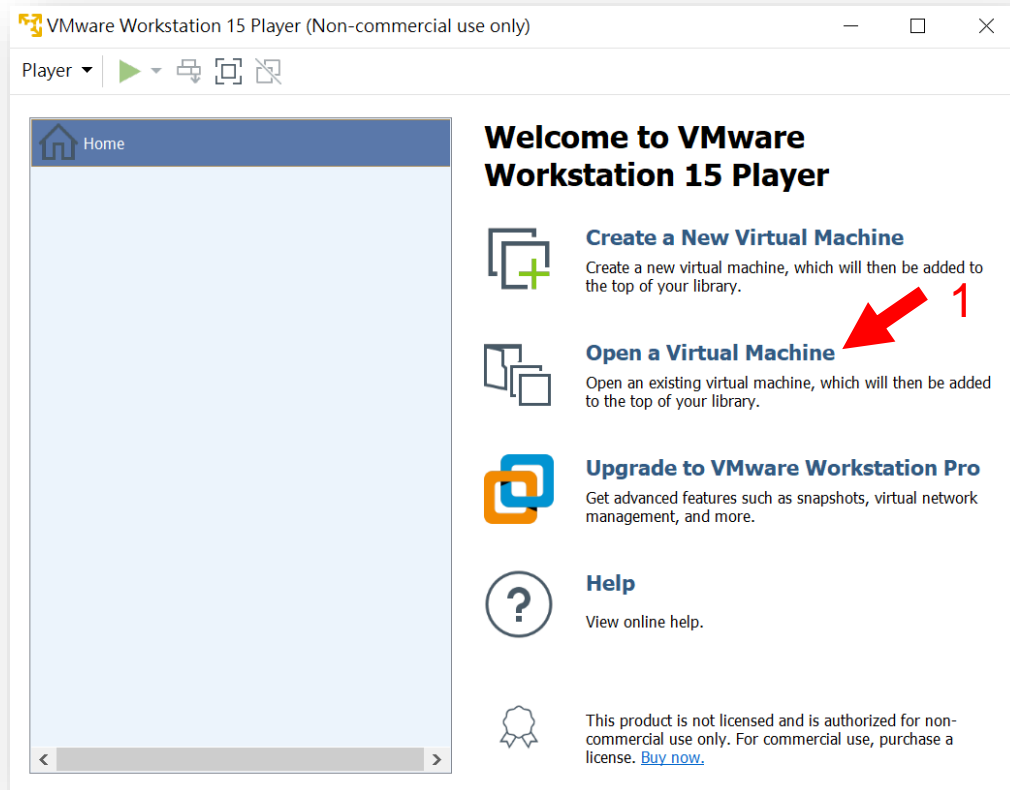
- Execute VMware Workstation Player



# Software Installation – VMware

- **Play Virtual Machine**

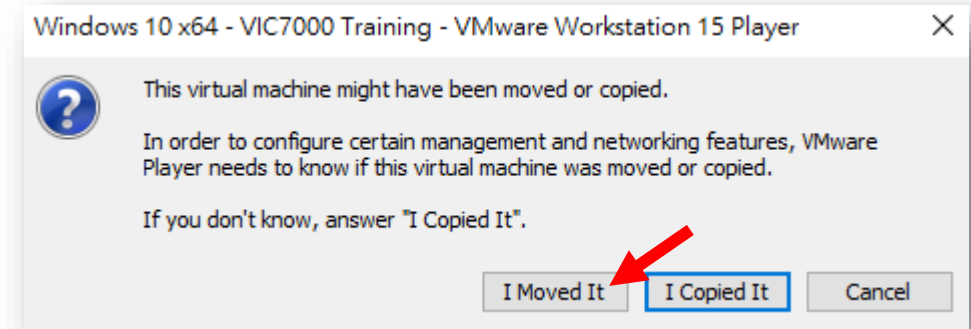
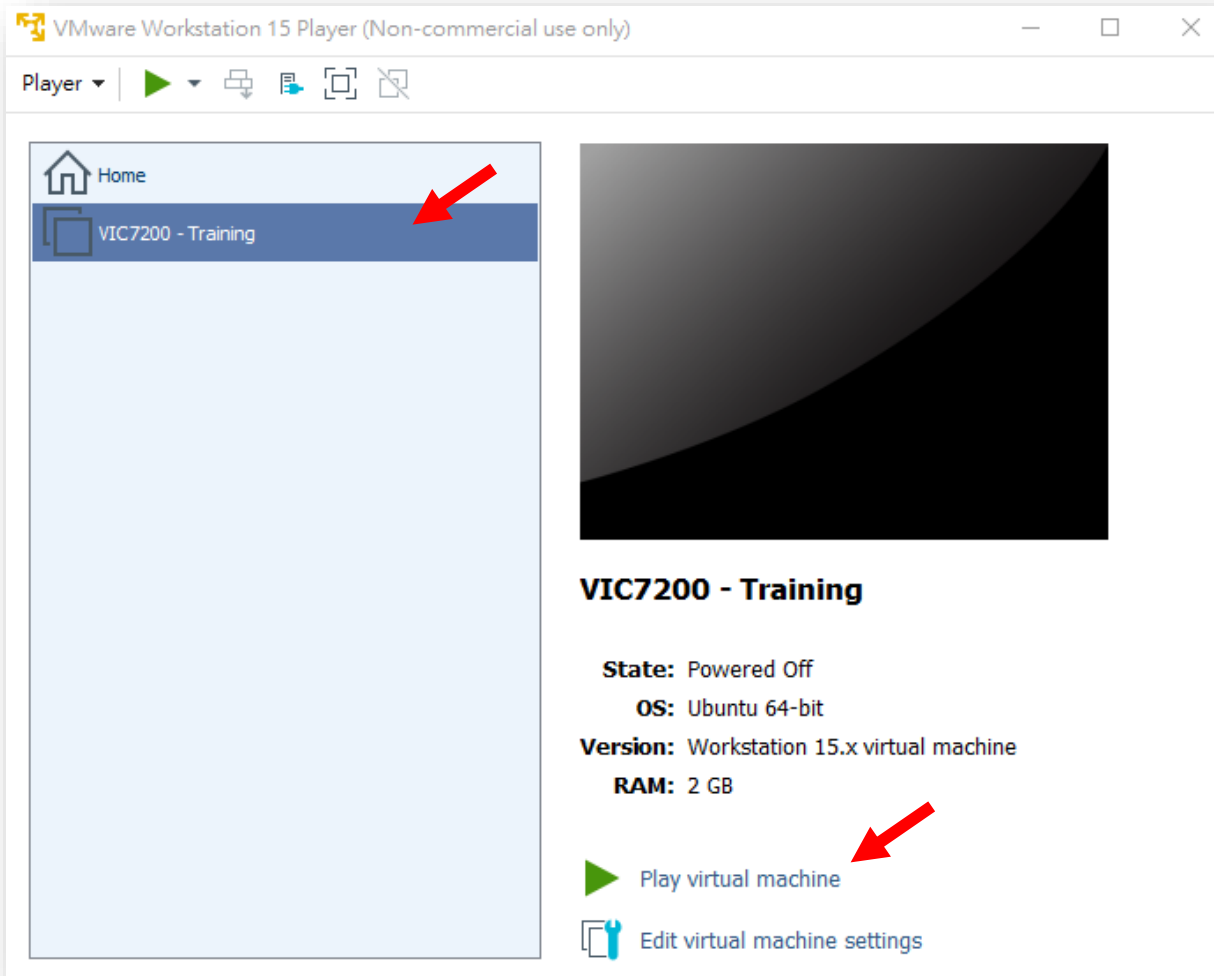
1. **Play VM:** Click on **Open a New Virtual Machine** → Select **VIC7200 - Training.vmx** in the folder named **VIC7200 - Training**



# Software Installation – VMware

- **Play Virtual Machine**

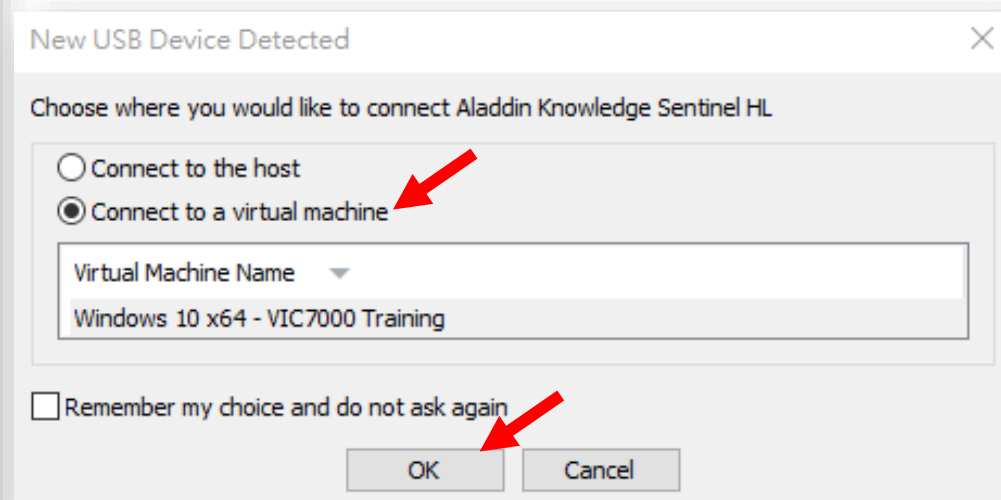
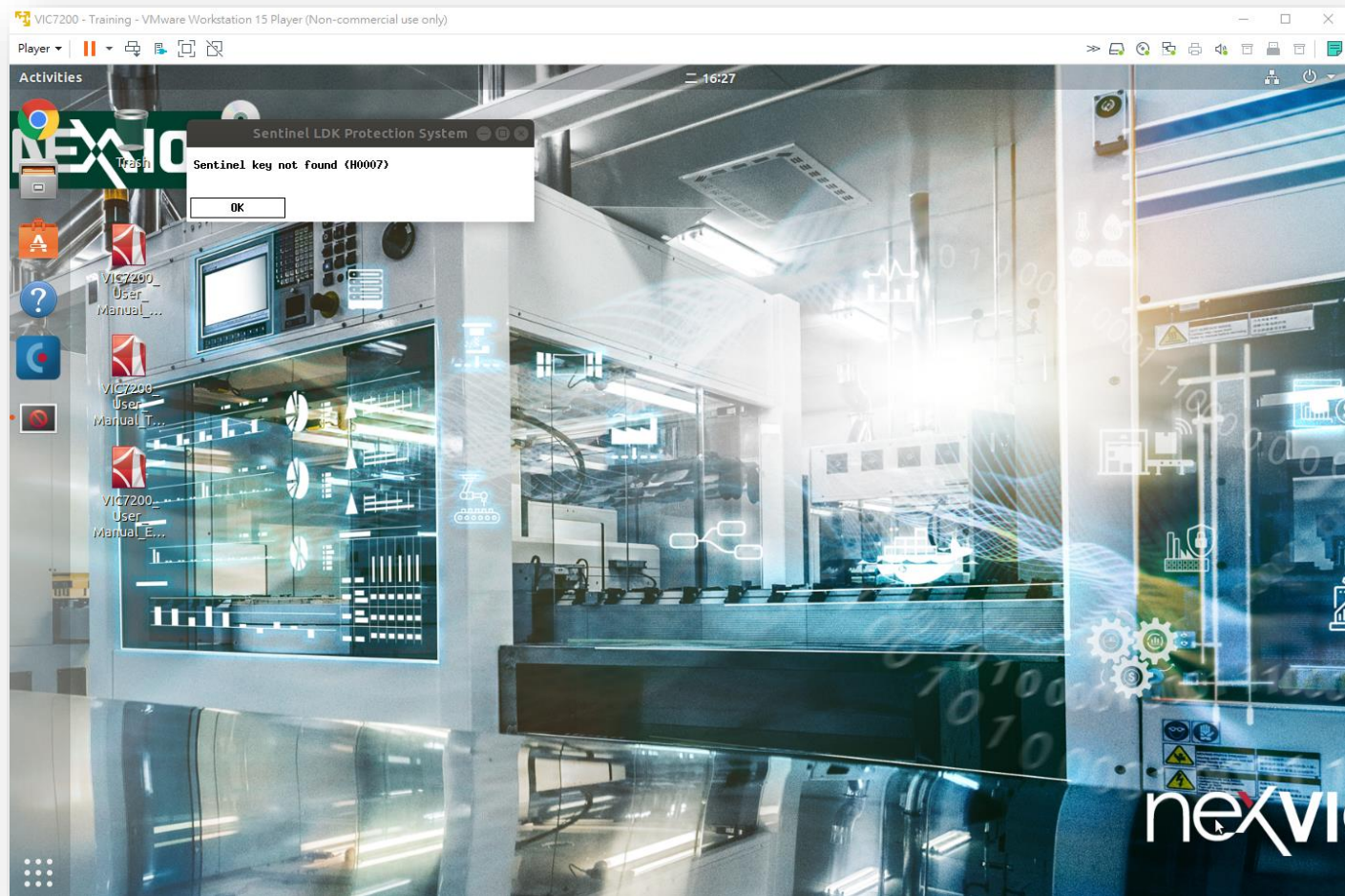
2. **Play VM:** Select the new VM → Click **Play virtual machine** → Select **I Moved It**



# Software Installation – VIC7000

- **Execute VIC7000**

1. **Plug in Training Dongle:** Select **Connect to a virtual machine**





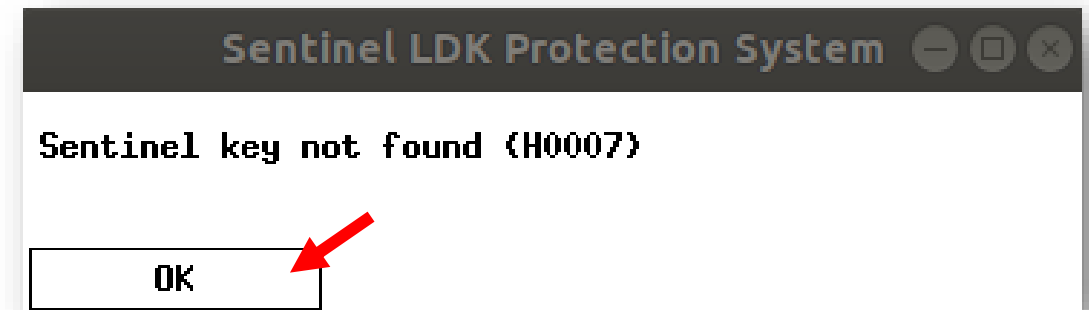
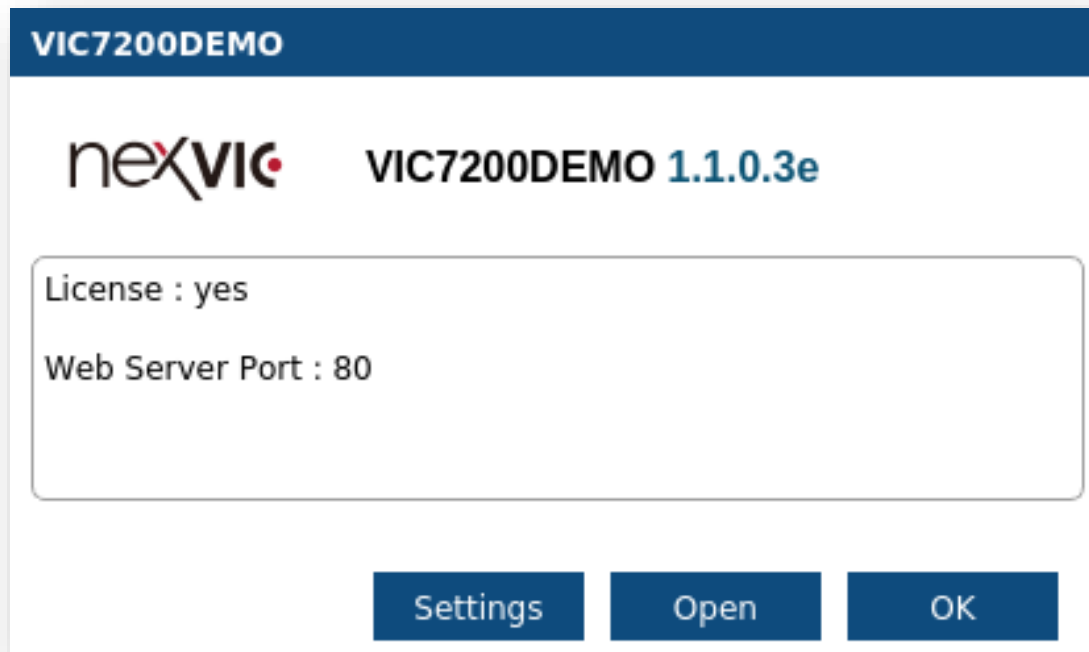
# Software Installation – VIC7000

- **Execute VIC7000**

2. **Execute VIC7000**: Click on **OK** in the error window.

Awhile, VIC7000 will be executed automatically.

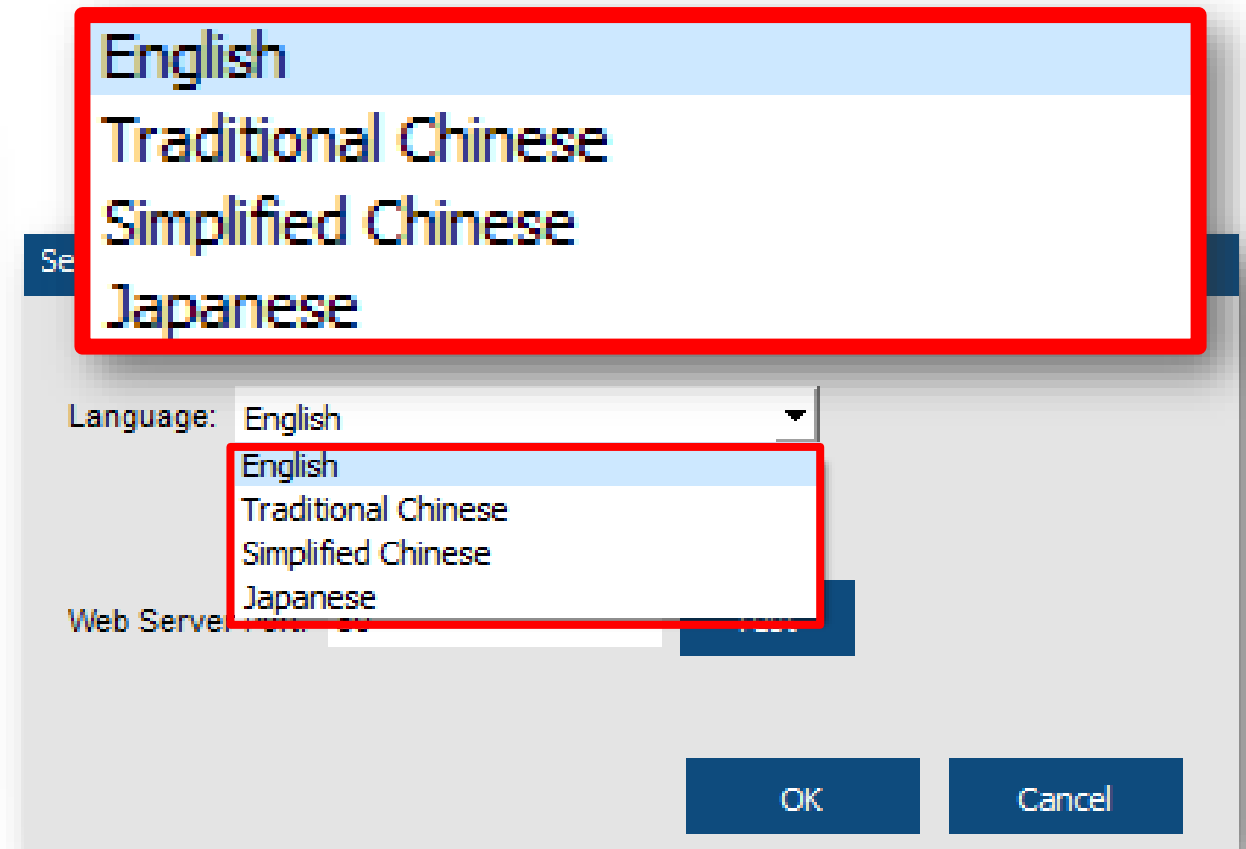
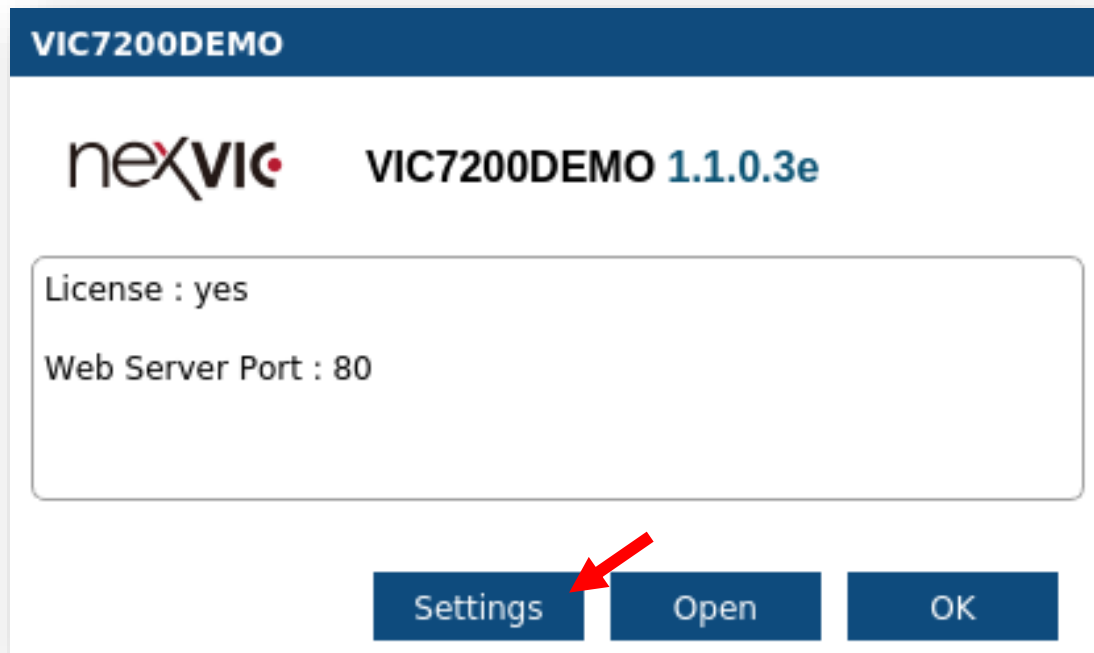
If an error window shows up, you need to check whether the USB dongle is actually plugged in, lit, linked to the VM or not.



# Software Installation – VIC7000

- **Language**

Click **Settings**, and select a suitable software language



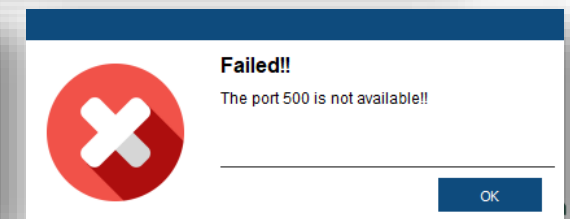
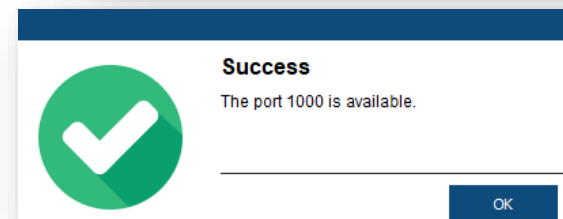
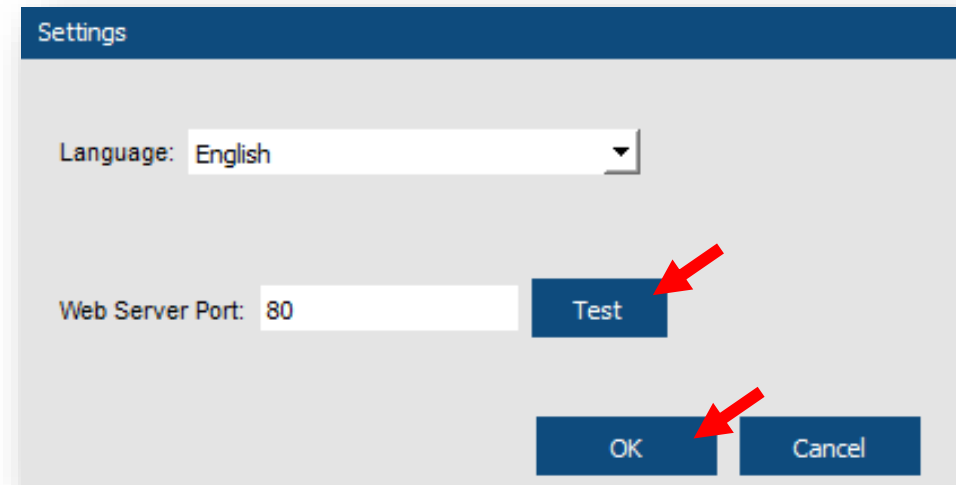
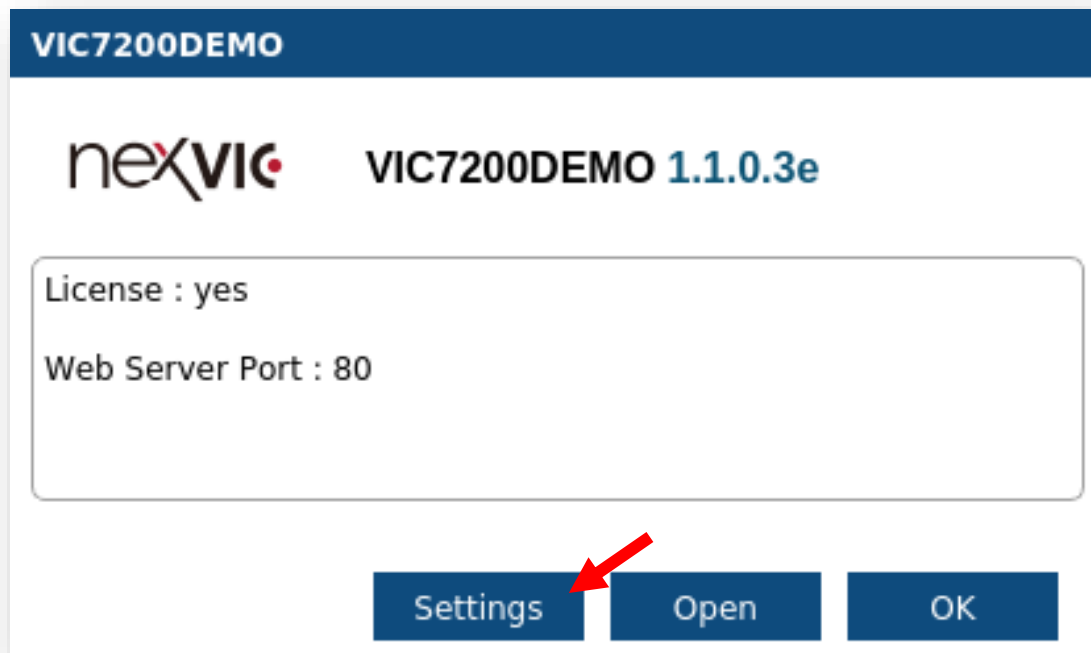
# Software Installation – VIC7000

- **Port**

Click **Settings** → **Web Server Port**. Default port is **80**.

To set a new port, please make sure that it is available.

Click on **Test** to check, hit **OK** to continue.



## Software Installation

- VMWare
- VIC7000

## Build Project

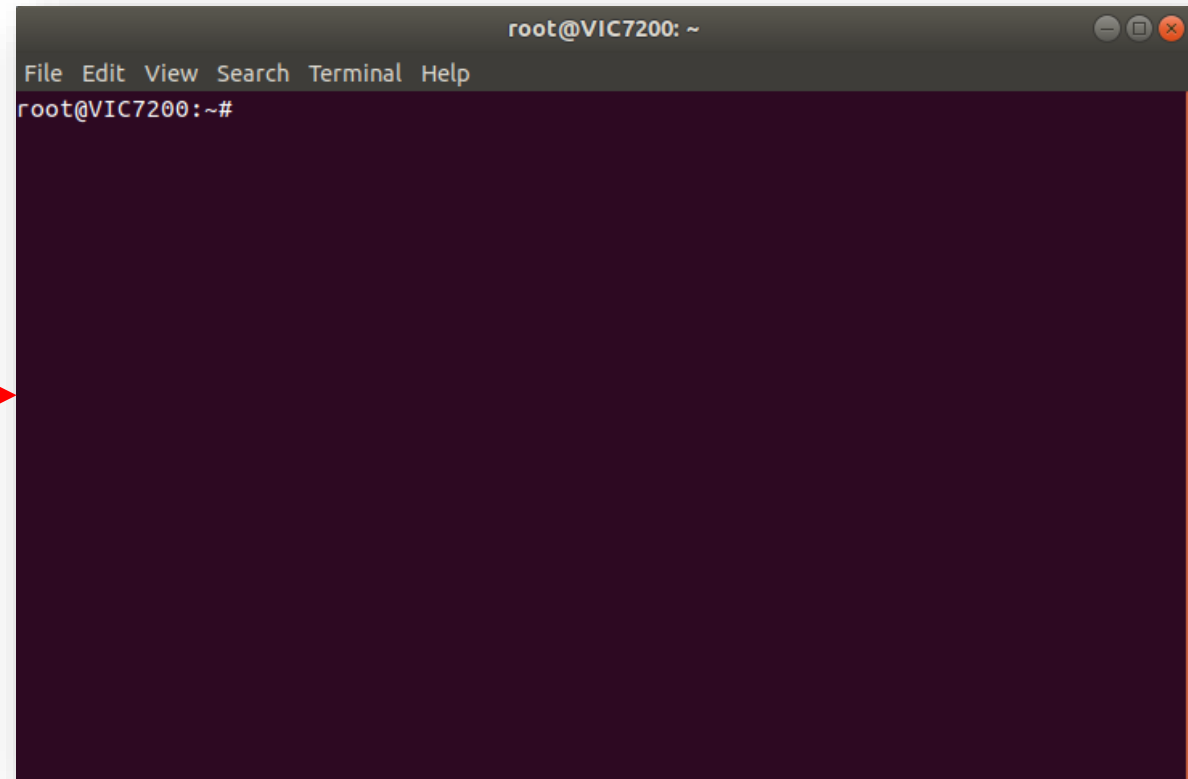
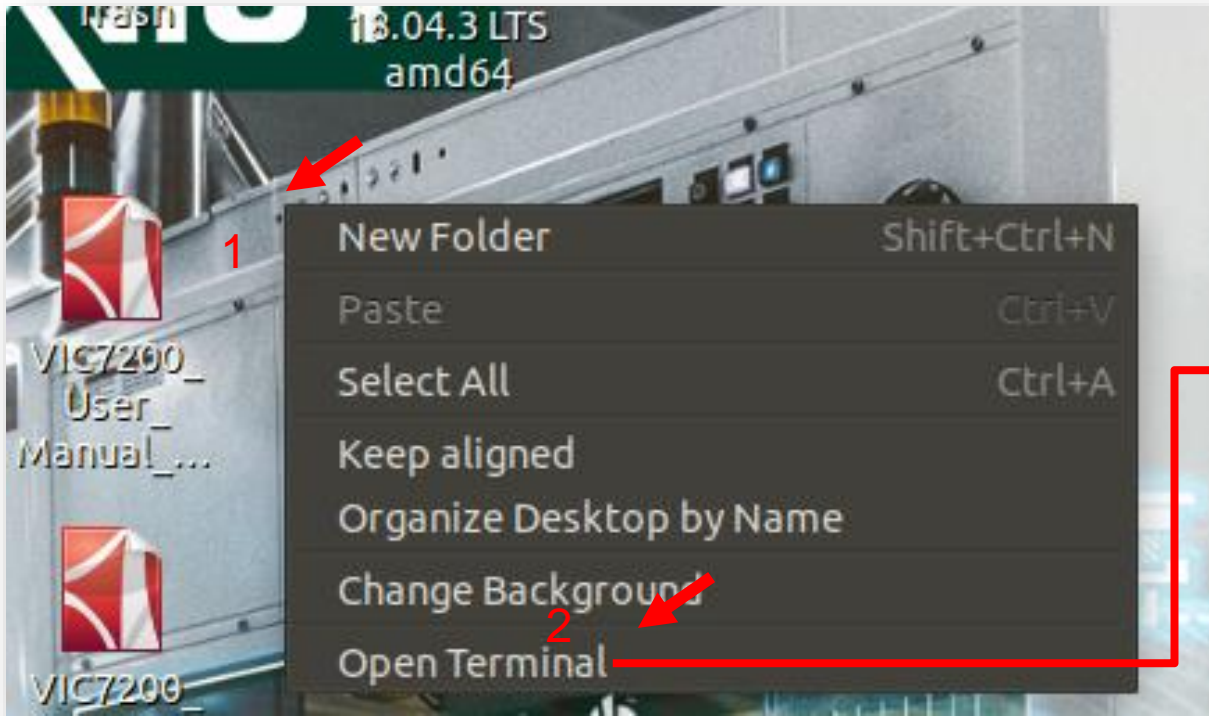
- Get IP
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# Build Project – Get IP

- **Get IP – Virtual Machine**

- **Get Remote IP:** Right click on desktop wallpaper, and select **Open Terminal**

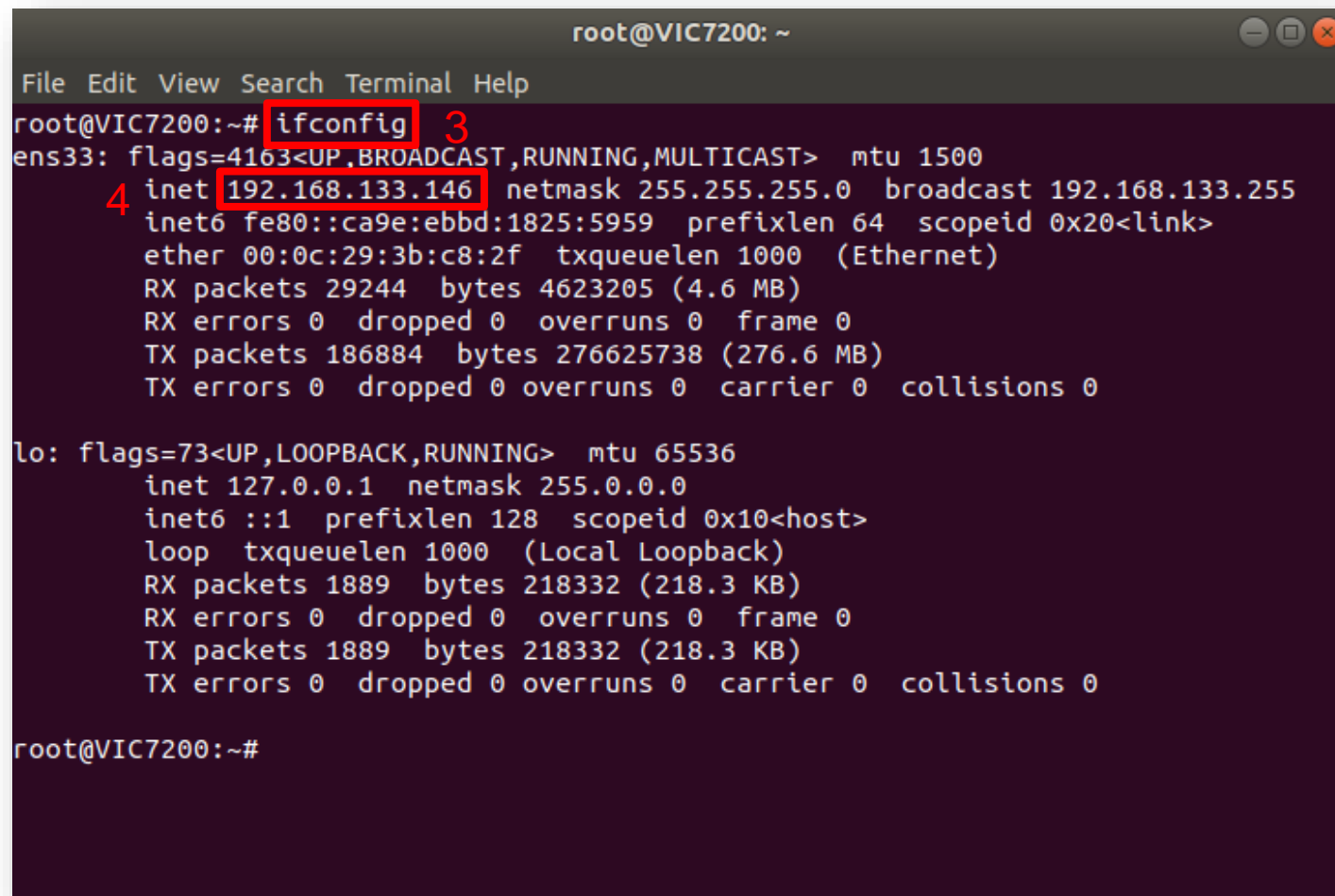


# Build Project – Get IP

- **Get IP – Virtual Machine**

- **Get Remote IP:** In terminal window, enter the command **ifconfig**.

Then press **Enter** to execute the command. The IP address of virtual machine will show up



```
root@VIC7200: ~  
File Edit View Search Terminal Help  
root@VIC7200:~# ifconfig 3  
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
4 inet 192.168.133.146 netmask 255.255.255.0 broadcast 192.168.133.255  
inet6 fe80::ca9e:ebbd:1825:5959 prefixlen 64 scopeid 0x20<link>  
ether 00:0c:29:3b:c8:2f txqueuelen 1000 (Ethernet)  
RX packets 29244 bytes 4623205 (4.6 MB)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 186884 bytes 276625738 (276.6 MB)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536  
inet 127.0.0.1 netmask 255.0.0.0  
inet6 ::1 prefixlen 128 scopeid 0x10<host>  
loop txqueuelen 1000 (Local Loopback)  
RX packets 1889 bytes 218332 (218.3 KB)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 1889 bytes 218332 (218.3 KB)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
root@VIC7200:~#
```

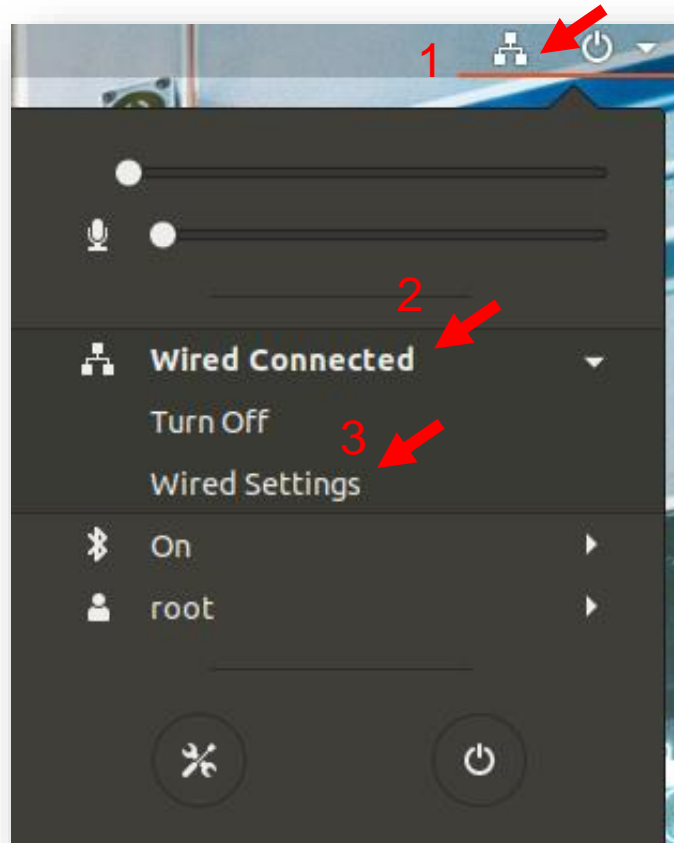
# Build Project – Get IP

- **Get IP – Real Machine**

- **Set Static IP:** See VIC7000 operating system by connecting it with a monitor.

Click on the network icon at upper-right corner.

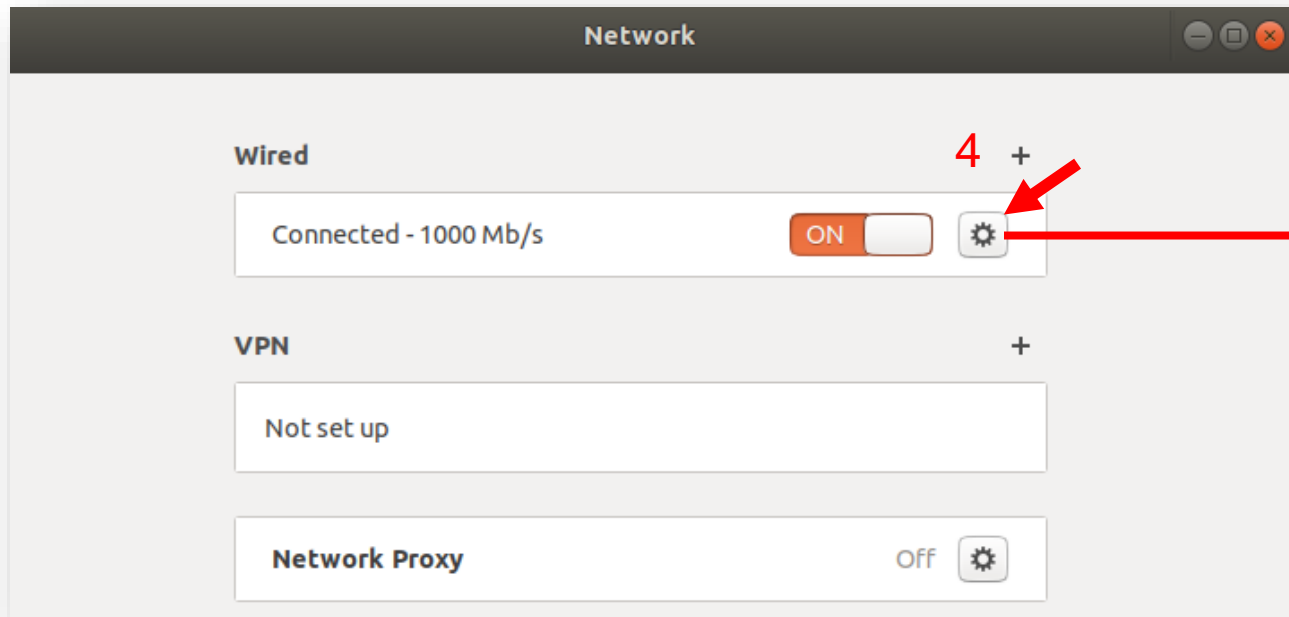
Then click on **Wired Connected**, select **Wired Settings**



# Build Project – Get IP

- **Get IP – Real Machine**

- **Set Static IP:** In Wired field, click the setting icon next to the network adaptor. The setting window of the adaptor will show up.





# Build Project – Get IP

- **Get IP – Real Machine**

- **Set Static IP:** Go to IPv4 tab, set IPv4 Method as **Manual**

Cancel **Wired** Apply

Details Identity **IPv4** IPv6 Security

Link speed 1000 Mb/s

IPv4 Address 192.168.133.146

IPv6 Address fe80::ca9e:ebbd:1825:5959

Hardware Address 00:0C:29:3B:C8:2F

Default Route 192.168.133.2

DNS 192.168.133.2

☒ Connect automatically

☒ Make available to other users

☐ Restrict background data usage  
Appropriate for connections that have data charges or limits.

Remove Connection Profile

Cancel **Wired** Apply

Details Identity IPv4 **IPv6** Security

**IPv4 Method**

☐ Automatic (DHCP) ☐ Link-Local Only

☒ **Manual** ☐ Disable

**Addresses**

Address	Netmask	Gateway

**DNS** Automatic ☒

Separate IP addresses with commas

**Routes** Automatic ☒

Address	Netmask	Gateway	Metric

☐ Use this connection only for resources on its network

# Build Project – Get IP

- **Get IP – Real Machine**

- **Set Static IP:** Set Address and Netmask in Address field. After settings is completed, click on **Apply** at top-right corner.

The set IP address must be in the same domain with the IP address of the connecting computer

More specifically, the first three fields must be the same

For example, the IP address of a connecting computer must be 192.168.0.n, with n ranges from 1 to 255 and should not be repeated

Cancel Wired Apply

Details Identity IPv4 IPv6 Security

IPv4 Method

- ☐ Automatic (DHCP)
- ☒ Manual
- ☐ Link-Local Only
- ☐ Disable

Addresses

Address	Netmask	Gateway
192.168.0.100	255.255.255.0	

DNS Automatic ON

Separate IP addresses with commas

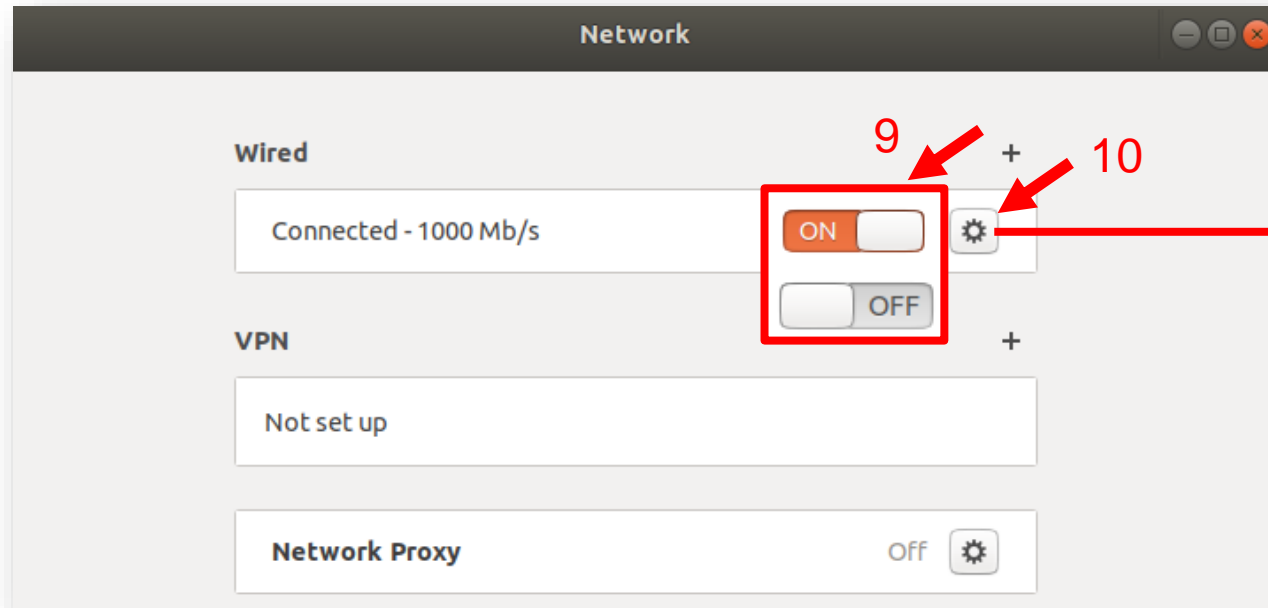
Routes Automatic ON

Address	Netmask	Gateway	Metric

# Build Project – Get IP

- **Get IP – Real Machine**

- **Set Static IP:** After applying settings, reboot the network adaptor. Then open setting window and go to **Details** tab, the set static IP address will show up

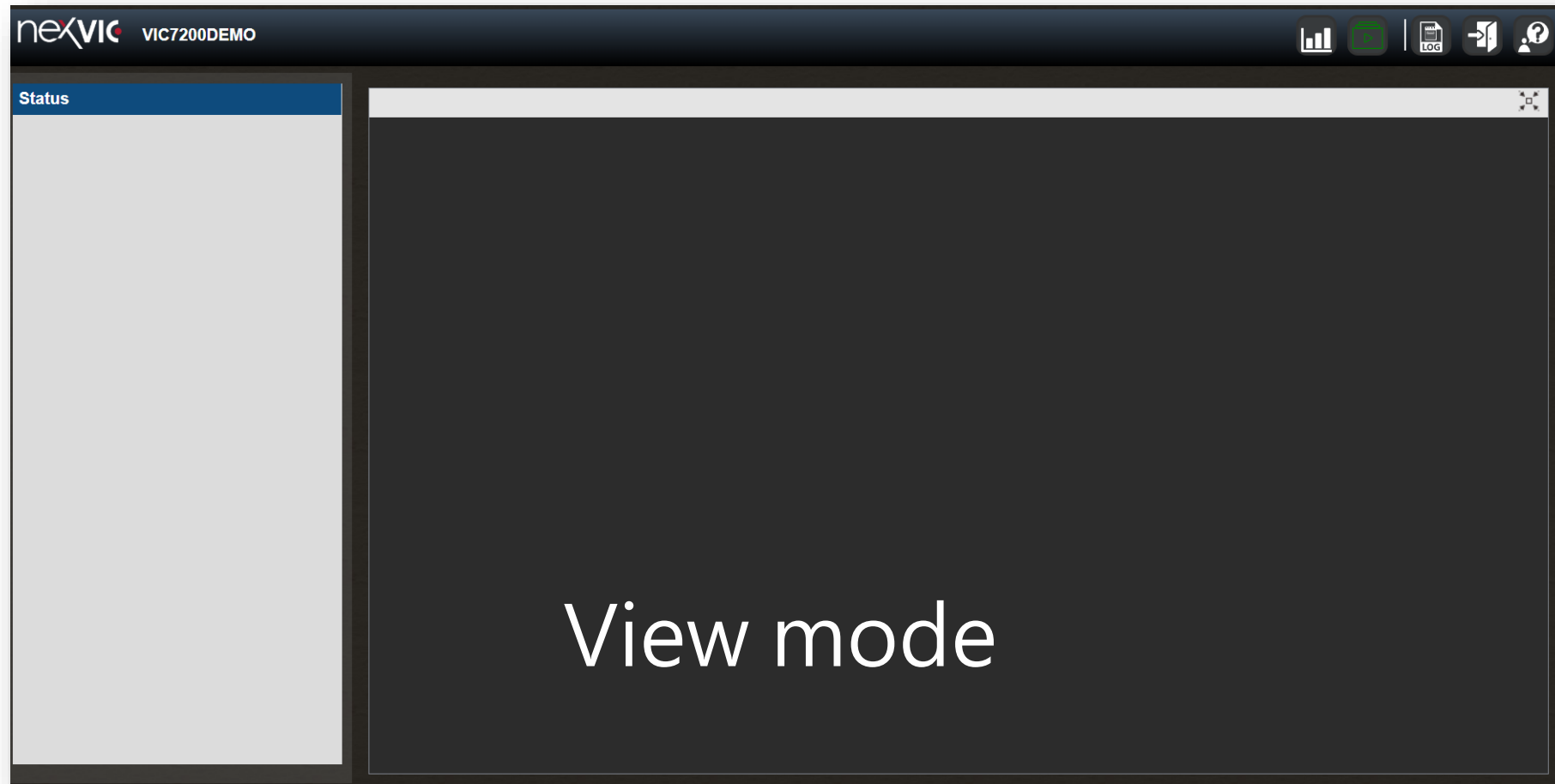


# Build Project – Login

- **Entry to VIC7000**

1. **Open browser:** Google Chrome
2. Enter **Server IP: port** in **URL field**: By default, port is not required

 192.168.133.136





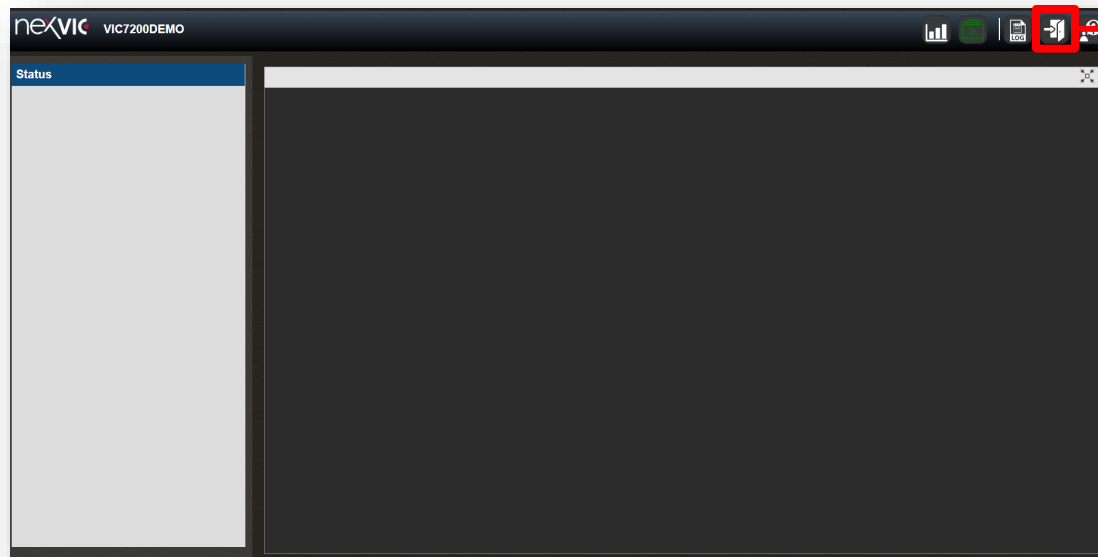
# Build Project – Login

- **Login VIC7000**

1. Click **Login** button in the top-right corner
2. Enter user or administrator name and password

User name is **user**, administrator name is **admin**, and their default password is **123456**

If an admin logs in and stays idle for more than 30 mins, he will be forced to logout



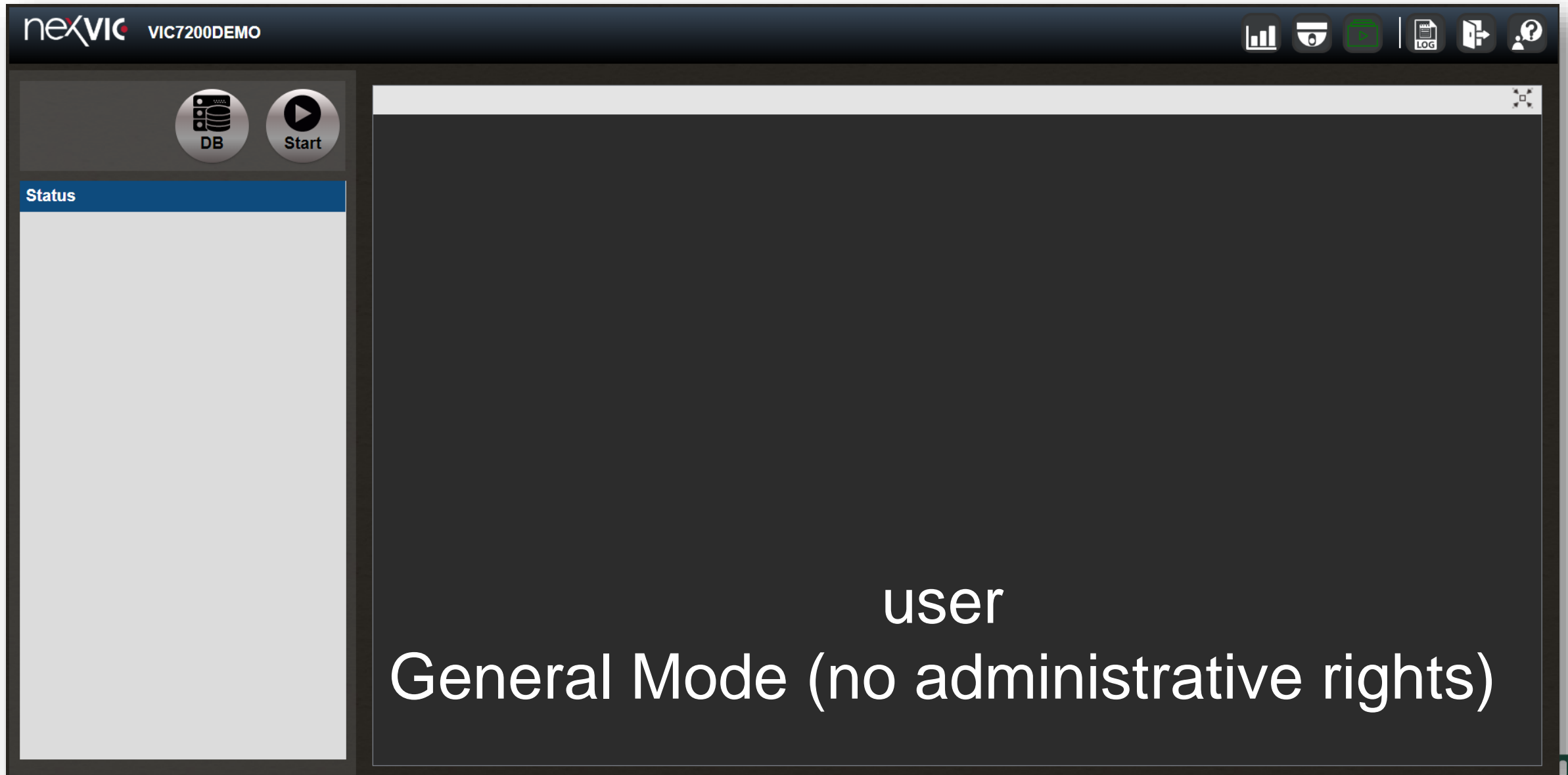
**Login**

Name:  
admin

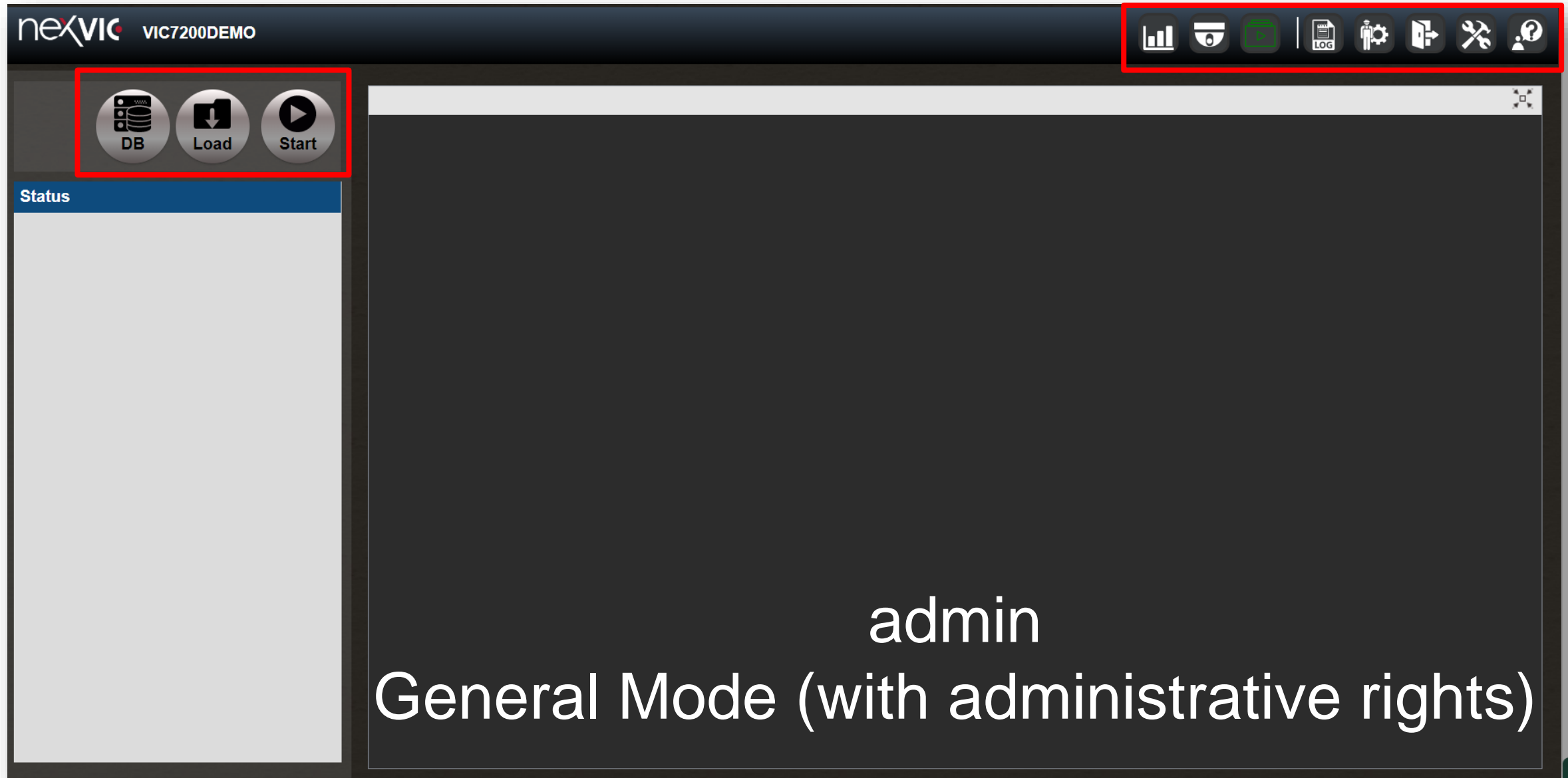
Password:  
.....

OK Cancel

# Build Project – Login

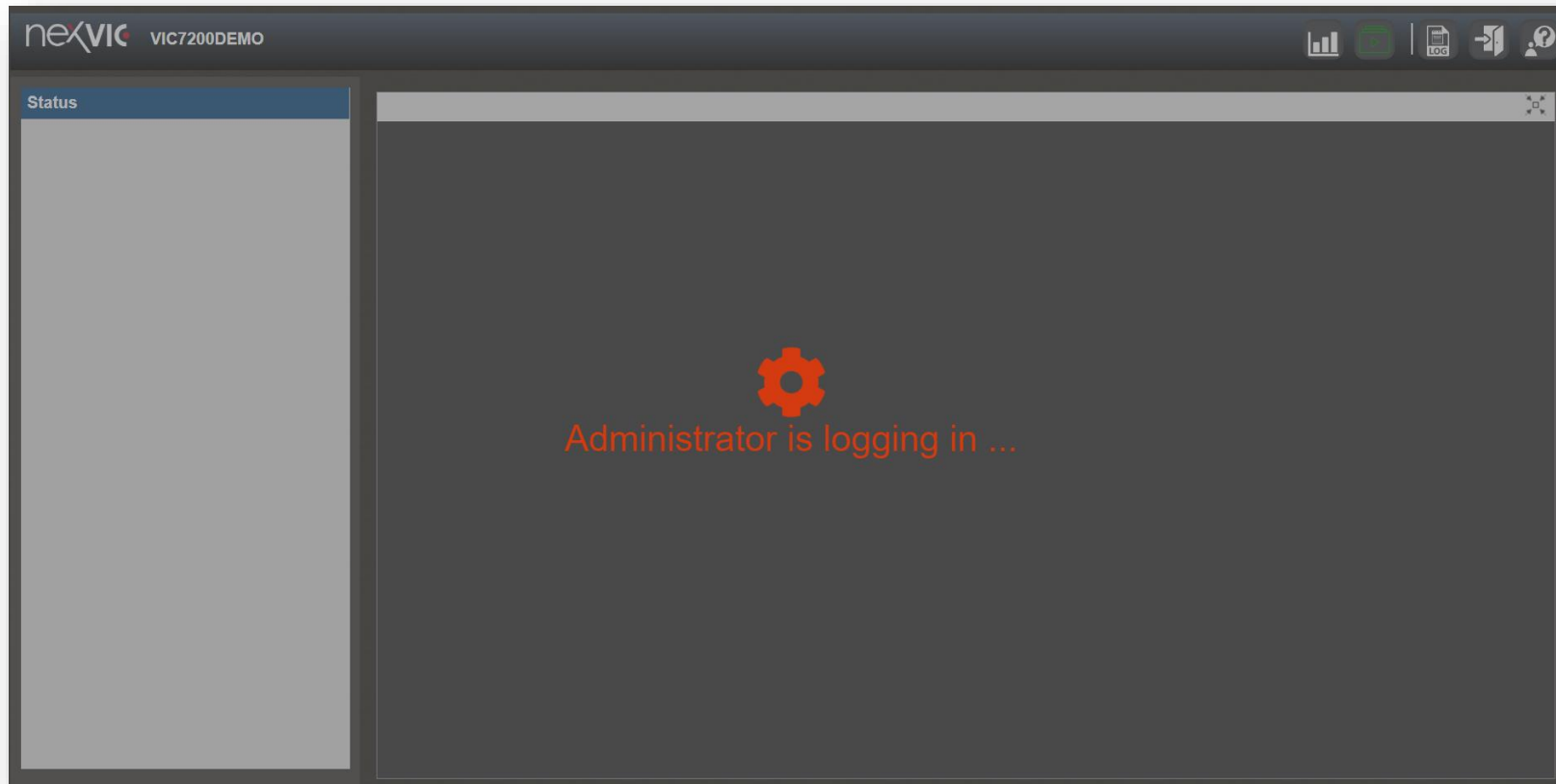


# Build Project – Login



# Build Project – Login

- **Login Limits**
  - Allow up to **16 users** to monitor the operation of VIC7000 in General Mode without administrative rights and View Mode at the same time
  - While **the administrator** logging in VIC7000, other users cannot login, monitor, or operate VIC7000

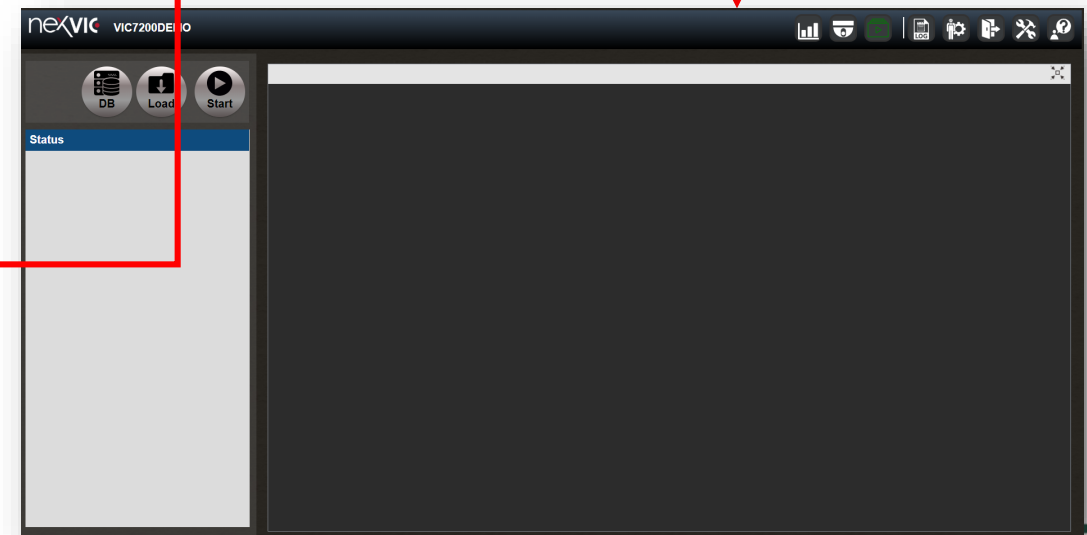
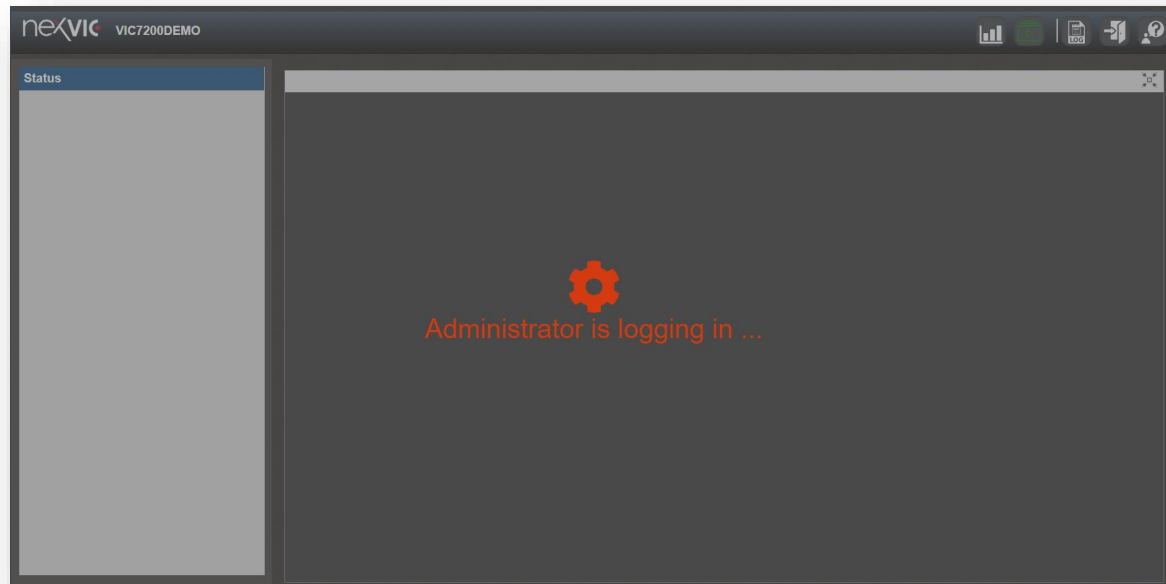


# Build Project – Login

- **Replace Login**

1. Click anywhere on the interface: A login window will show up
2. Enter administrator name and password
3. Click OK

When an administrator successfully logs in, the current administrator will be forced to logout.



# Build Project – Login

- **Buttons**

1. Database
2. Load project
3. Start/Stop project
4. Chart
5. Recorder
6. Viewer
7. System Log
8. Administrator Mode
9. Logout
10. System Settings
11. About

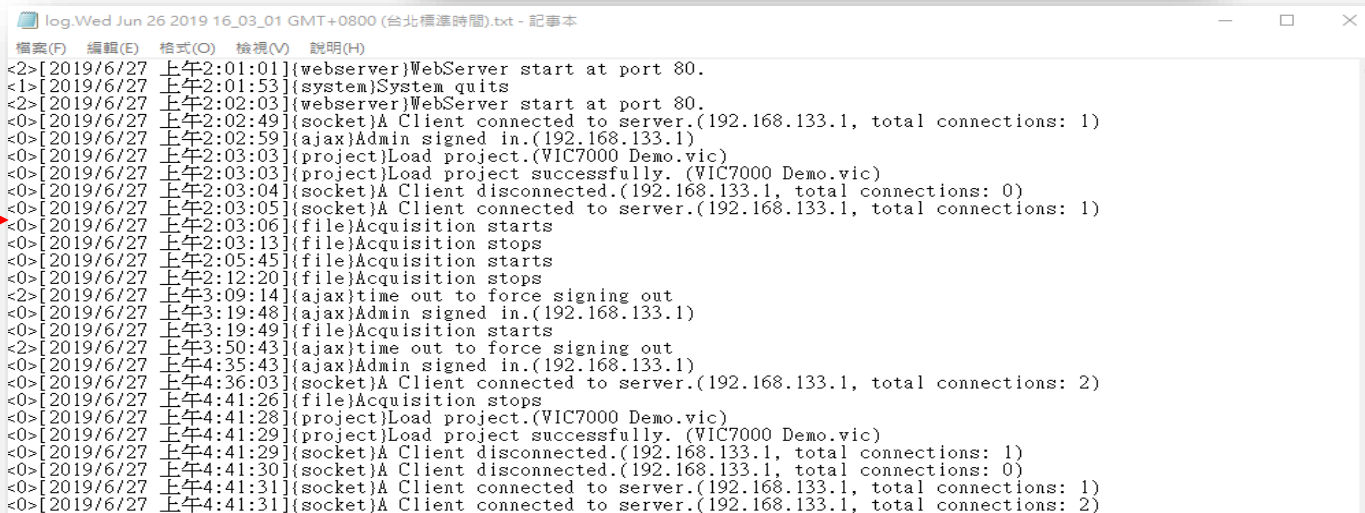
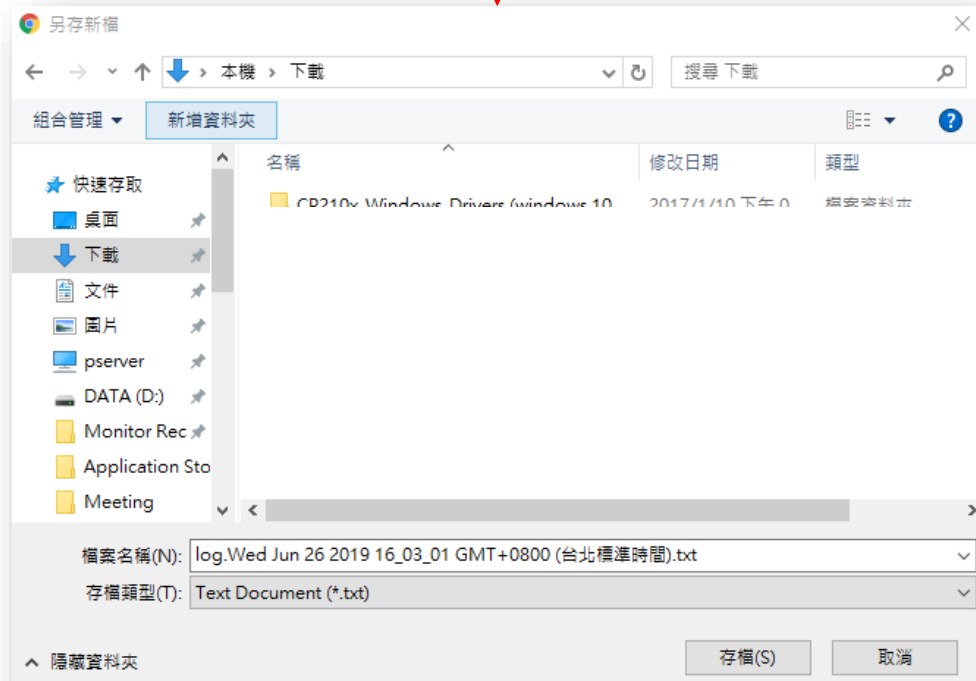
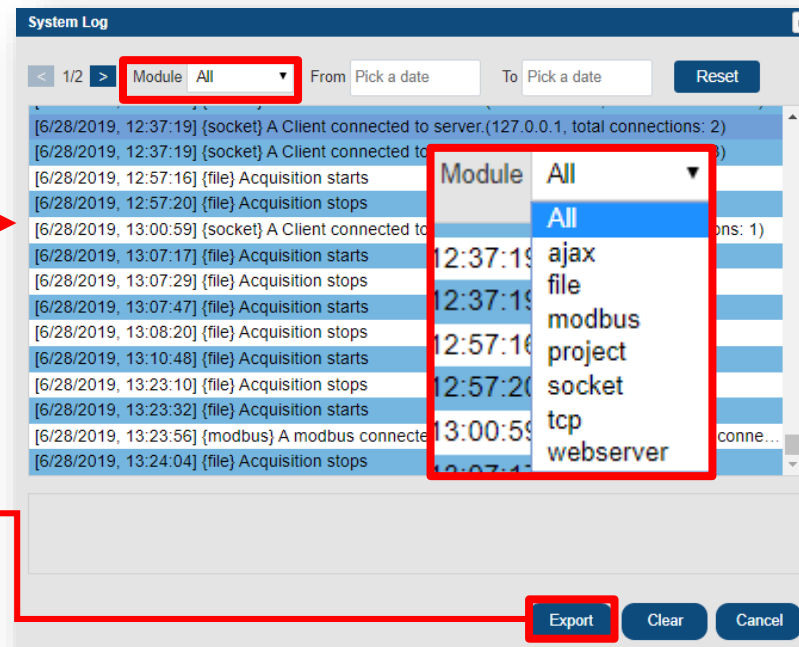




# Build Project – Login

- **System Log**

- Record important software information
- Classified recording message
- Export as .txt
- Export path is same as the browser download path



# Build Project – Login

- **System Settings**

- Name
- UI Language - English, Traditional Chinese, Simplified Chinese, Japanese
- Change Password
- Auto Load Project
- Reset Project
- Use Recorder
- Left Mouse Button To Move Canvas
- Auto Load Page Image
- System Load
- System Save
- Stacked Line Chart
- OCR Name Conversion Table
- Serial Port Control

English ▼

English

Traditional Chinese

Simplified Chinese

Japanese



System Settings	
Name	<input type="text"/>
UI Language	English ▼
Change Password	Submit
Auto Load Project	<input checked="" type="checkbox"/>
Reset Project	Submit
Use Recorder	<input type="checkbox"/>
Left Mouse Button To Move Canvas	<input type="checkbox"/>
Auto Load Page Image	<input type="checkbox"/>
System Load	Submit
System Save	Submit
Stacked Line Chart	<input type="checkbox"/>
OCR Name Conversion Table	Submit
Serial Port Control	None ▼

# Build Project – Login

- **Database & Communication Settings**
  - Whether Save Image when recognition failed
  - Whether Skip Repeated Data when storing data
  - Target Quantity
  - Target\_color Quantity
  - Target\_pattern Quantity
  - OCR Quantity
  - Color Quantity
  - Pattern Quantity
  - UDP Port
  - UDP Multicast Group Port
  - TCP Data Port
  - TCP Command Port



**System Settings**

Database Settings		
Save Image		<input type="checkbox"/>
Skip Repeated Data		<input type="checkbox"/>
Target Quantity	5	▲▼
Target_color Quantity	5	▲▼
Target_pattern Quantity	5	▲▼
OCR Quantity	20	▲▼
Color Quantity	20	▲▼
Pattern Quantity	10	▲▼
Communication Port		
UDP Port	7001	Setting
UDP Multicast Group Port	7002	Setting
TCP Data Port	7003	Setting
TCP Command Port	7004	Setting

Cancel

# Build Project – Login

- **About**

1. Version
2. Software license check
3. IP selection field of VIC7000
4. QR code of link VIC7000
5. Local user manual link
6. QR code of online user manual
7. VIC7000's PC Free Disk Space




**About**


nexVIC<sup>1</sup> **VIC7200DEMO 1.1.0.3e**

<sup>2</sup> License: yes

<sup>3</sup> Host IP: 192.168.133.146 ▾

<sup>5</sup> User Manual

<sup>4</sup> Host URL  


<sup>6</sup> User Manual  


<sup>7</sup> Free Disk Space:  
/ 22,148 MB  
/opt/database 8,978 MB (< 10,240 MB)  
/opt/recorder 8,499 MB (< 102,400 MB)

OK

# Build Project – Login



# Build Project – Login

- **Buttons**

- |                 |                            |           |
|-----------------|----------------------------|-----------|
| 1. New project  | 5. Recognition config page | 9. Wizard |
| 2. Load project | 6. Monitor page            |           |
| 3. Save project | 7. Record page             |           |
| 4. Save as      | 8. Link page               |           |

1

2

3

4

5

6

7

8

9



New



Load



Save



Save As



Page



Monitor



Record



Link



Wizard



# Build Project – New Project

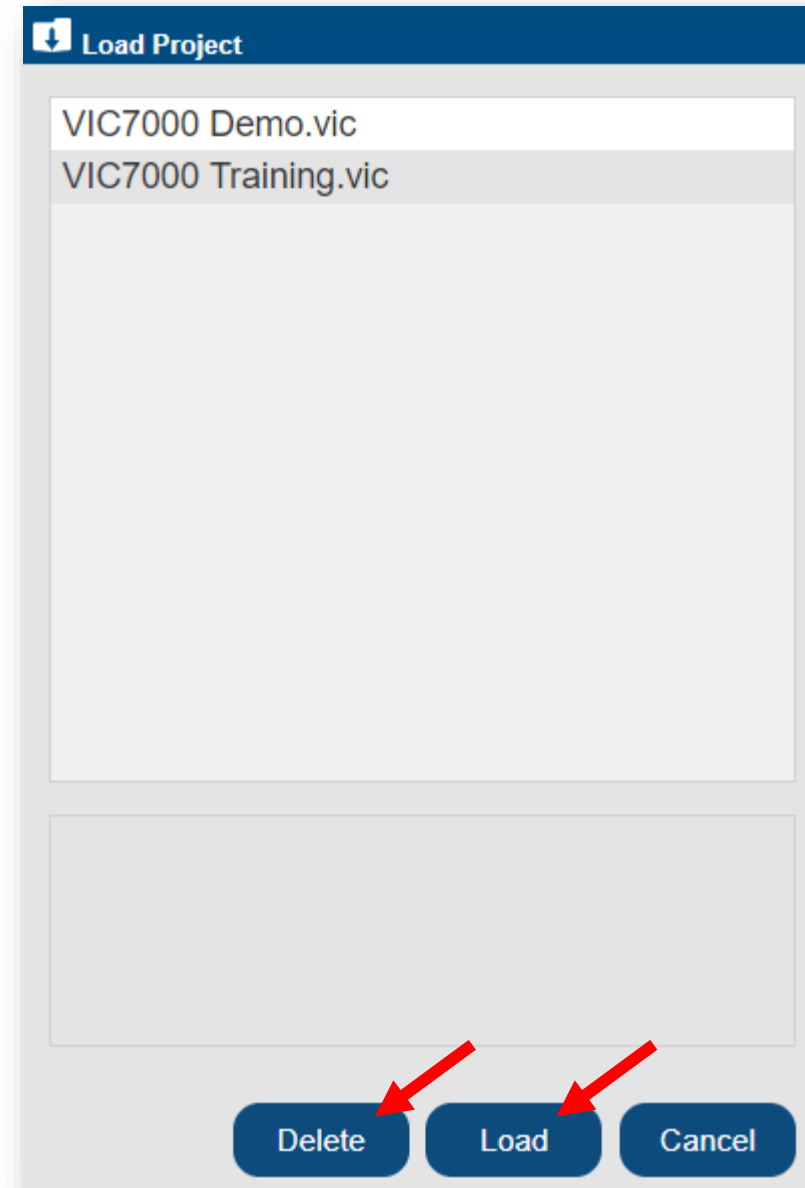
- **New project**
  1. Enter Project Name (Required and Unique)
  2. Click OK
  - Author
  - Version
  - Comment

A screenshot of the 'New Project' dialog box. It has a blue title bar with a plus icon and the text 'New Project'. The form contains four input fields: 'Project Name:' (with a red arrow pointing to it), 'Author:', 'Version:', and 'Comment:'. At the bottom right, there are two buttons: 'OK' (with a red arrow pointing to it) and 'Cancel'.



# Build Project – New Project

- **Load Project**
  - Load project
  - Delete project



# Build Project – New Project

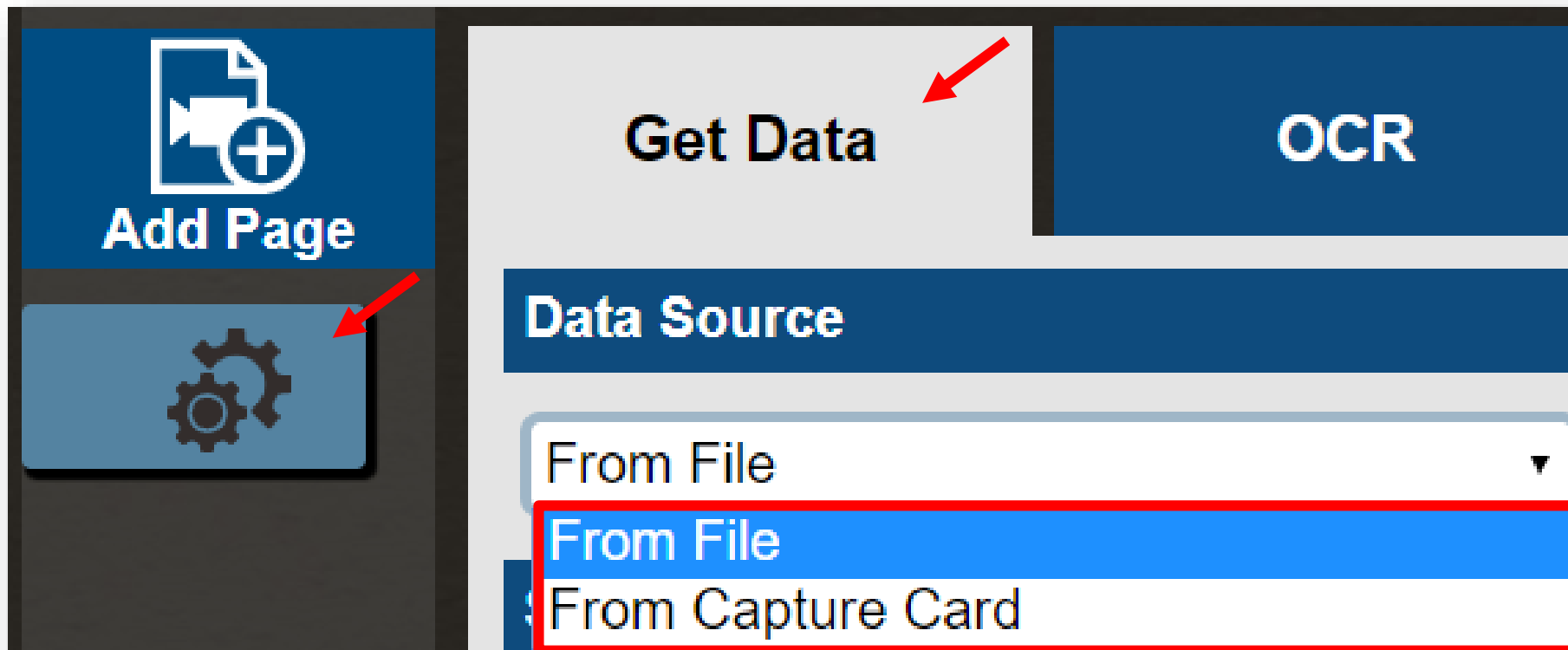
- Recognition Config Page



# Build Project – Get Data

- **Image Source**

- **From File:** Read images from a folder (.bmp or .tif)
- **From Capture Card:** Read images captured by capture card

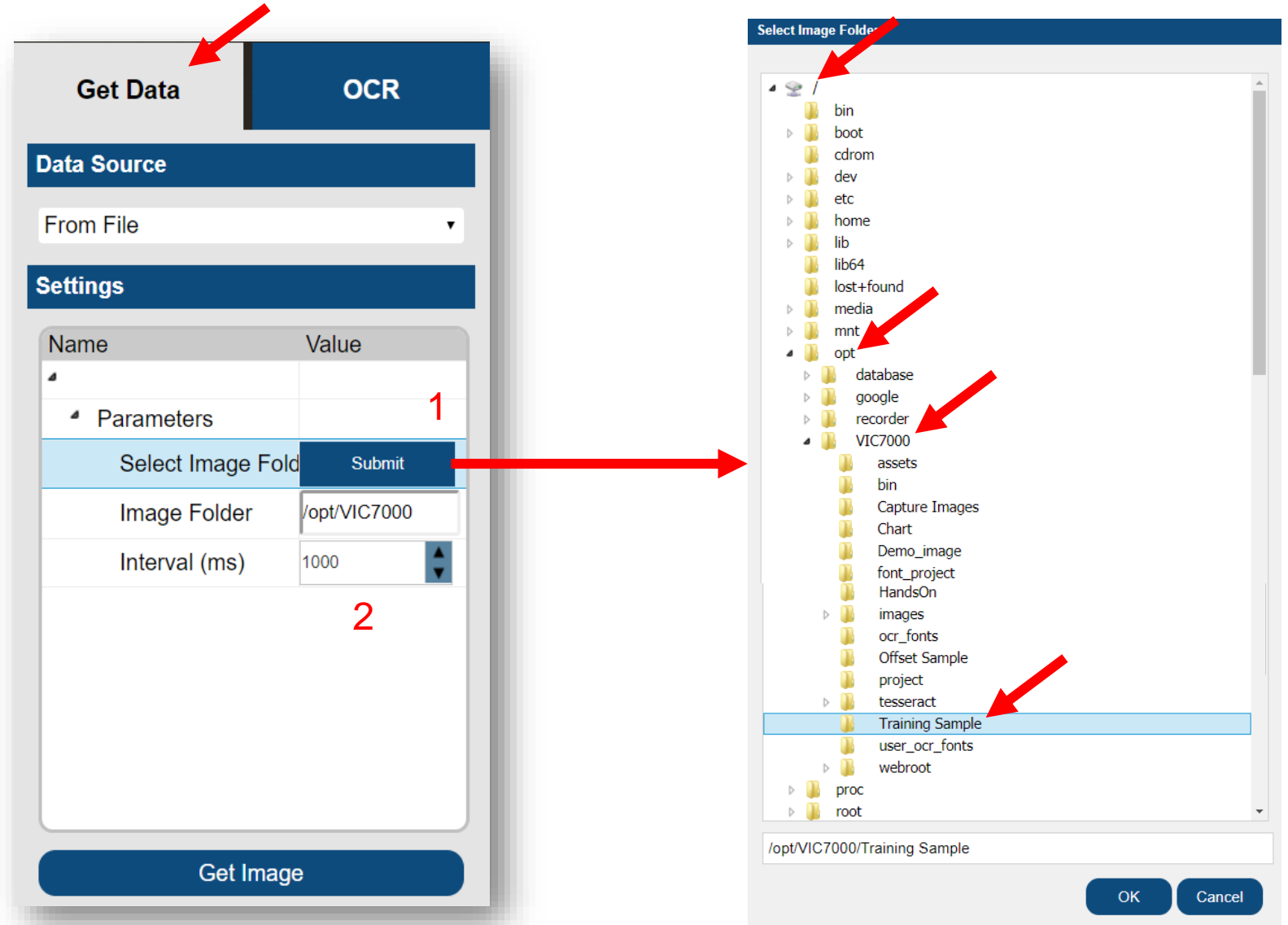


# Build Project – Get Data

- **From File**

1. Select the path of the folder where image is located
2. Read interval

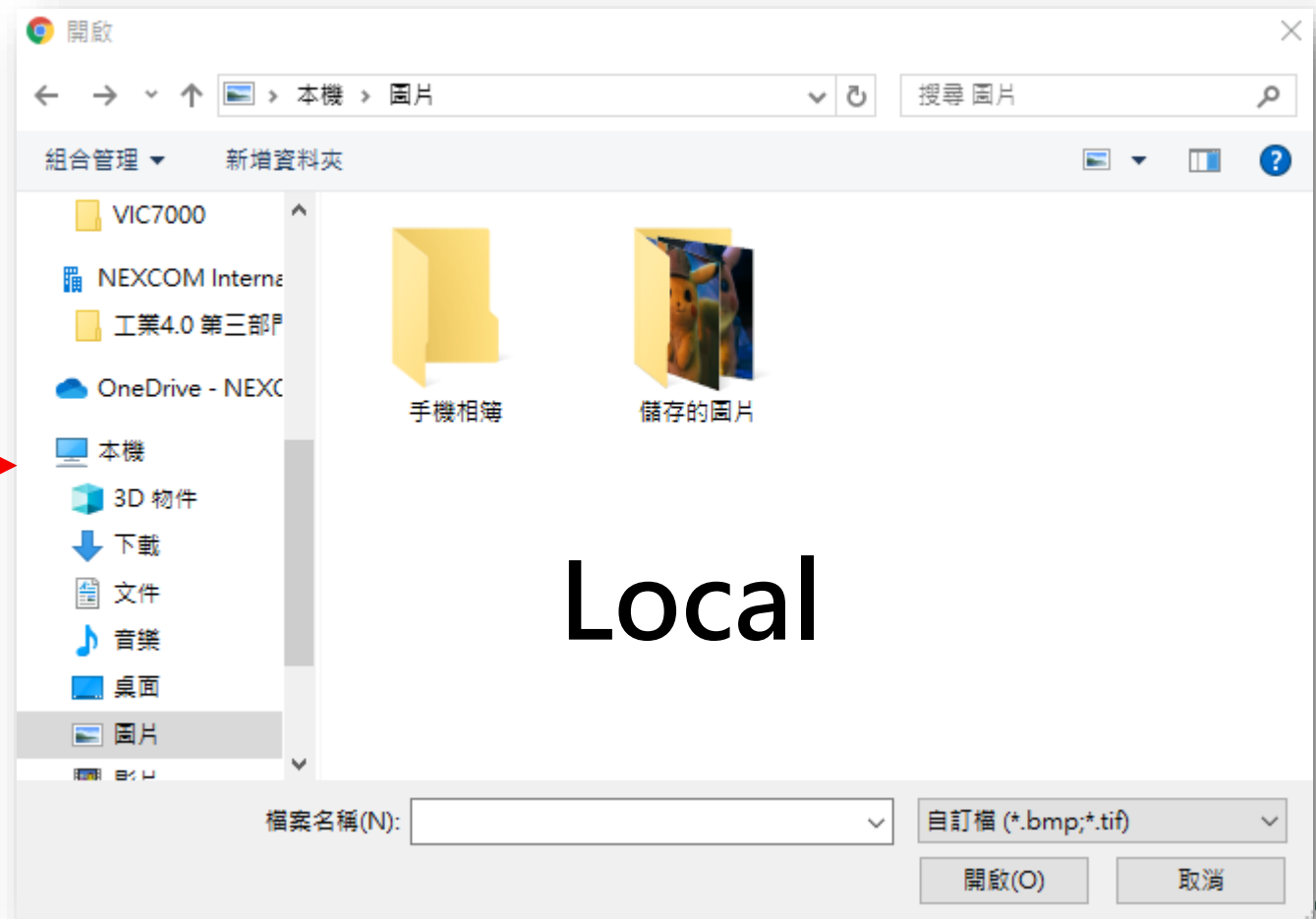
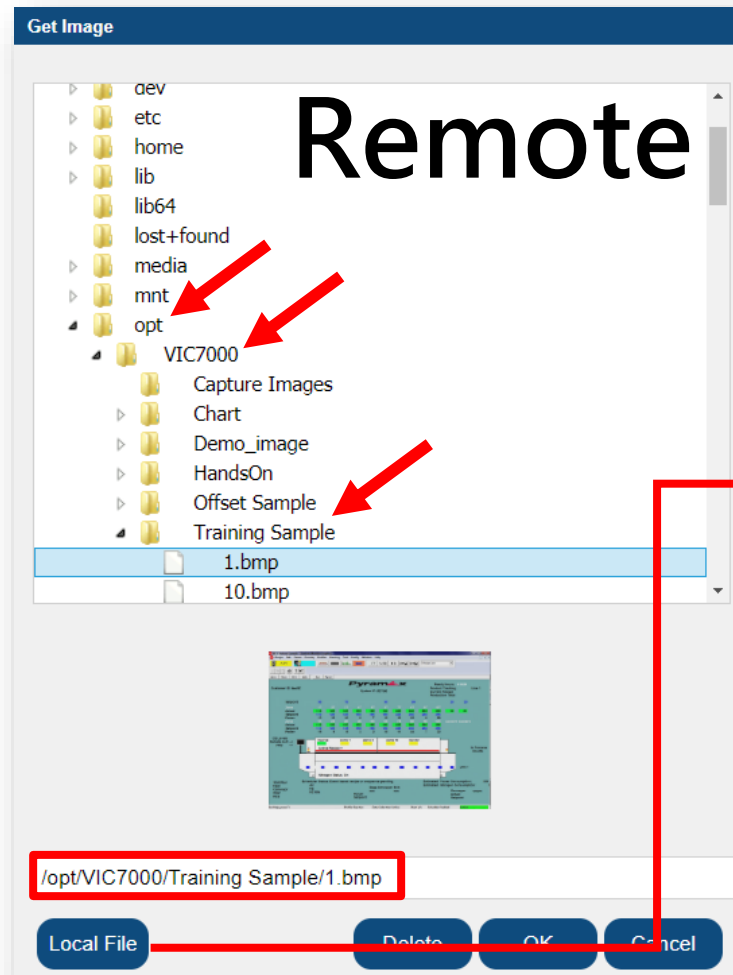
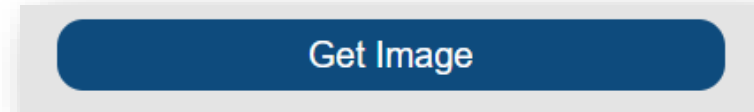
The folder path is inside VIC7000 computer hard drive



# Build Project – Get Data

- From File

- Get Image: Read images from a local folder or a remote folder



# Build Project – Get Data

- From File

3. **Start/Stop**: Read and recognize images from a folder

- Get Image: Read images from a local folder or a remote folder

The screenshot displays the nexVIC software interface. On the left, the 'Get Data' tab is active, showing the 'Recognition Method' as 'Matching target' and the 'Settings' section. The 'Result' section shows 'Name: TARGET01' and 'Value: ////===◆===/-+//=='. Below this, a red box highlights the 'Stop' and 'Start' buttons, with a red arrow pointing to the 'Start' button. The main area shows a detailed system monitor window titled 'Pyramax' with various data tables and a process flow diagram.

**Pyramax System Monitor Data:**

Setpoint	85	75	80	85	25	20						
Zone	1T	2T	3T	4T	5T	6T	7T	8T	9T	10T	25	20
Actual	112	125	125	155	165	190	239	260	285	295	30	21
Setpoint	110	125	125	125	165	225	225	260	285	295		
Power	24	14	15	6	7	12	11	11	4	27		
Zone	10	20	30	40	50	60	70	80	90	100		
Actual	110	125	125	155	165	190	225	260	285	295		
Setpoint	110	110	125	155	165	190	225	260	285	295		
Power	18	13	18	3	2	10	22	22	28	32		

**Process Flow Diagram:**

Source → Zone 1 → Zone 5 → Zone 10 → Cooler → In Process Counts

Active Recipe =

Nitrogen Status: On

Scheduler Status: Event based recipe or sequence pending.

Start/Run: Heat, Conveyor, Oilier, RCS

Estimated Power Consumption: KW

Estimated Nitrogen Consumption: cmm

Conveyor Actual Setpoint: cmm

# Build Project – Get Data

- **From Capture Card**

- 1. **Video Input:** Generally, it is DVI\_A (RGB/VGA)

- 2. **Set Capture Frame Rate (fps)**

- **Video Quality**

- Brightness
  - Contrast
  - Hue
  - Saturation
  - Sharpness
  - Default: Restore quality parameters to default settings

The screenshot shows the 'Get Data' interface. At the top, there are two tabs: 'Get Data' (selected, indicated by a red arrow) and 'OCR'. Below the tabs is a 'Data Source' section with a dropdown menu set to 'From Capture Card'. Underneath is a 'Settings' section containing a table with two columns: 'Name' and 'Value'. The table lists several parameters: 'Input Parameters' (expanded), 'Video Width' (0), 'Video Height' (0), 'Video Frame Rate' (0), 'Video Signal' (false), '1 Video Input' (DVI\_A (RGB / ...)), and '2 Capture' (1). At the bottom, there are three buttons: 'Stop', 'Start', and 'Get Image'.

Name	Value
Input Parameters	
Video Width	0
Video Height	0
Video Frame Rate	0
Video Signal	false
1 Video Input	DVI_A (RGB / ...)
2 Capture	1

The screenshot shows the 'Get Data' interface. At the top, there are two tabs: 'Get Data' (selected, indicated by a red arrow) and 'OCR'. Below the tabs is a 'Data Source' section with a dropdown menu set to 'From Capture Card'. Underneath is a 'Settings' section containing a table with two columns: 'Name' and 'Value'. The table lists several parameters: 'Capture Frame R2' (dropdown), 'Video Quality' (expanded), 'Brightness' (128), 'Contrast' (128), 'Hue' (128), 'Saturation' (128), 'Sharpness' (136), 'Default' (Submit), and 'Save Images' (dropdown). At the bottom, there are three buttons: 'Stop', 'Start', and 'Get Image'.

Name	Value
Capture Frame R2	
Video Quality	
Brightness	128
Contrast	128
Hue	128
Saturation	128
Sharpness	136
Default	Submit
Save Images	



- 22



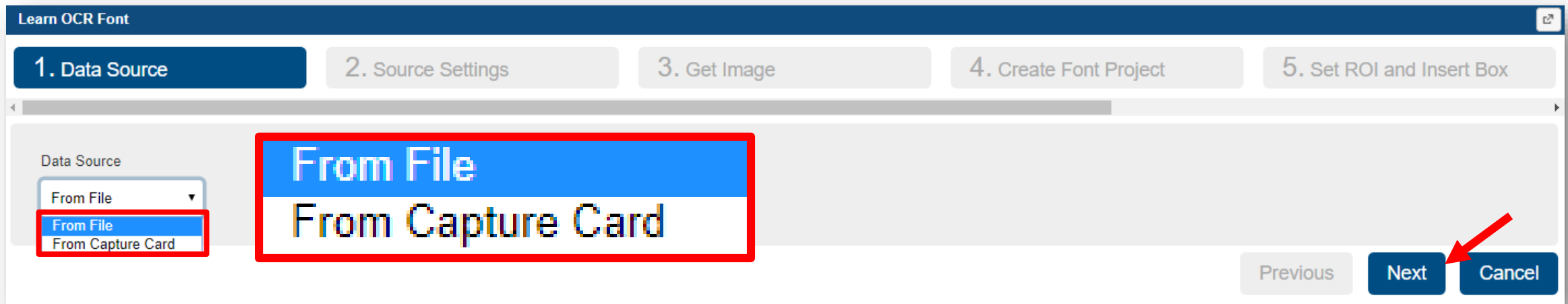
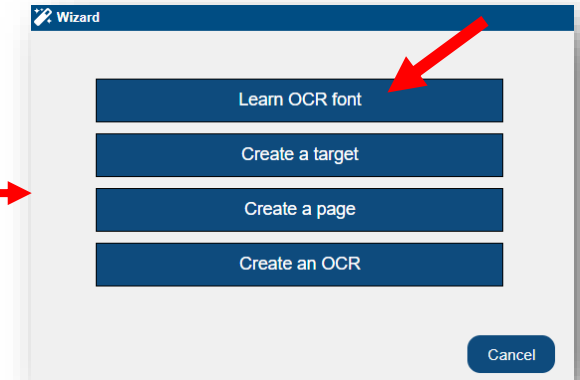
- 
- The screenshot shows the R112 System Console interface with the 'Save Image (\*.bmp)' dialog box open. The dialog is positioned over the 'Pyramax' system monitor, which displays various process parameters and a flow diagram. The 'Save Image (\*.bmp)' dialog has the following fields:
- File name (N): canvas.bmp
  - File type (T): Bitmap Image (\*.bmp)
  - Buttons: 存檔(S) (Save), 取消 (Cancel)
- The background interface shows the 'Pyramax' system monitor with various data points and a flow diagram. A red box highlights the 'Save Image (\*.bmp)' dialog, and a red arrow points to the 'Save' button.

# Build Project – Font Learning

- **Wizard: Learn OCR Font**

1. Data Source

From File or From Capture Card



# Build Project – Font Learning

- **Wizard: Learn OCR Font**

## 2. Source Settings

From File: Image folder path, Read interval

From Capture Card: Video input signal type, Capture frame rate

The image displays two screenshots of the 'Learn OCR Font' wizard, specifically the '2. Source Settings' step. The top screenshot shows the 'Image Folder' field with the path '/opt/VIC7000/Offset Sample' and the 'Interval (ms)' field set to 1000. A red arrow points to the 'Submit' button. The bottom screenshot shows the 'Video Signal' field set to 'false', the 'Video Input' dropdown menu set to 'DVI\_A (RGB / VGA)', and the 'Capture Frame Rate' field set to 1. Red arrows point to the 'DVI\_A (RGB / VGA)' dropdown, the 'Capture Frame Rate' spinner, and the 'Next' button. The wizard has five steps: 1. Data Source, 2. Source Settings, 3. Get Image, 4. Create Font Project, and 5. Set ROI and Insert Box. The 'Next' button is highlighted with a red arrow.

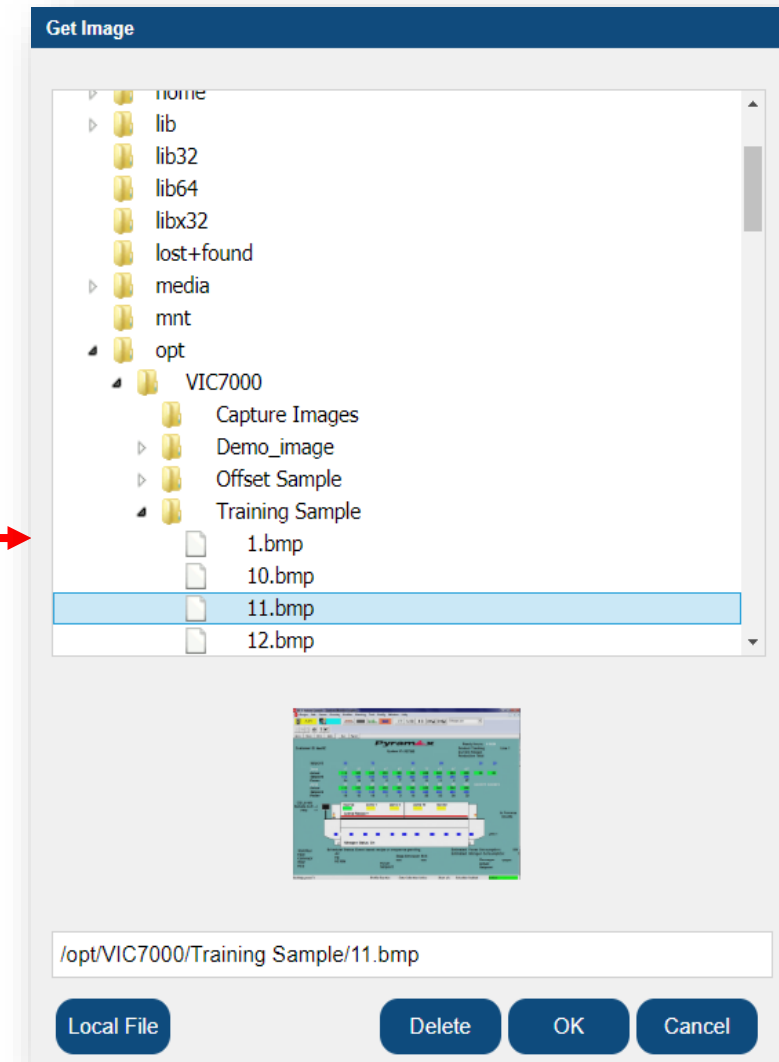
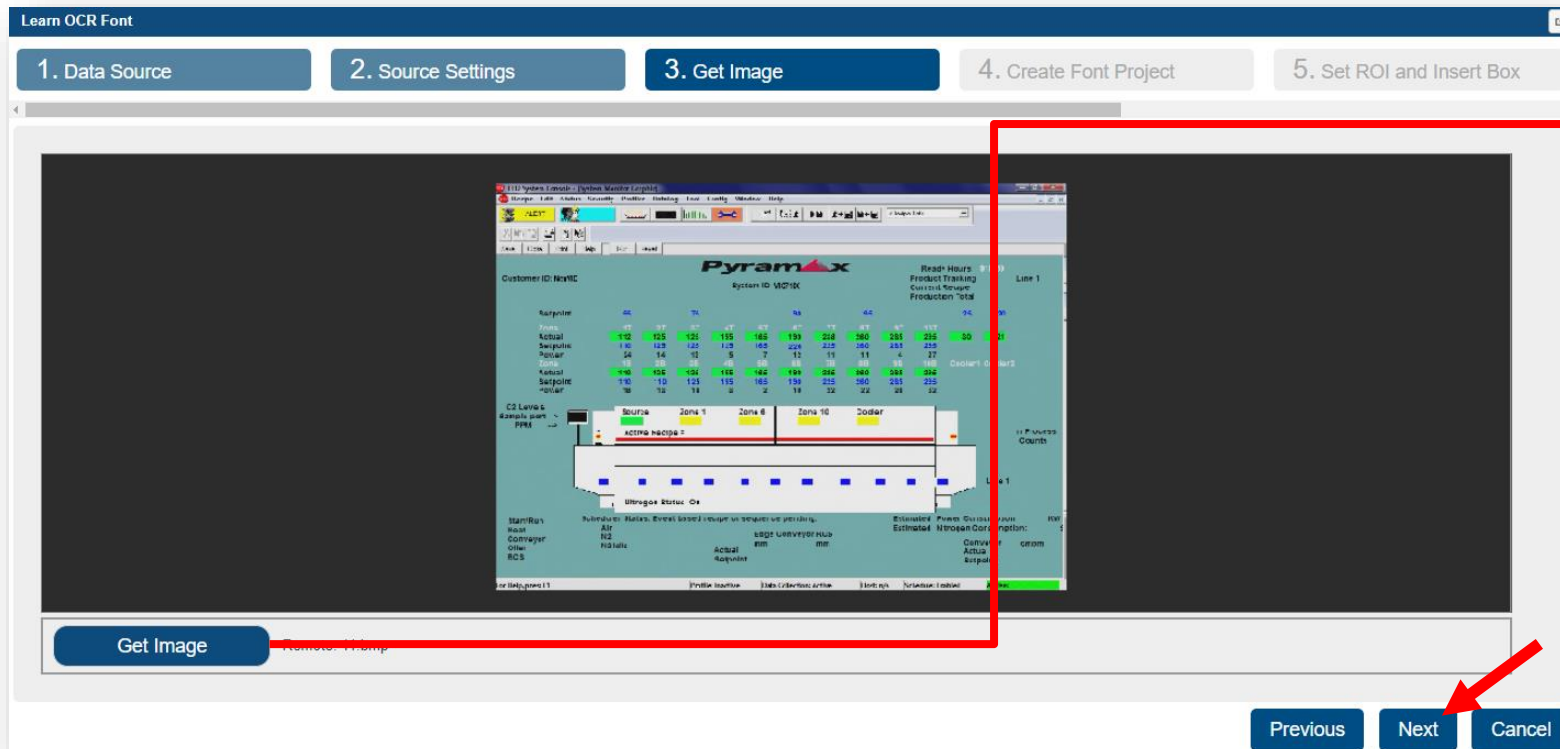
# Build Project – Font Learning

- Wizard: Learn OCR Font

## 3. Get Image

From File: Read images from a local folder or a remote folder

From Capture Card: Get an image from capture card



# Build Project – Font Learning

- **Wizard: Learn OCR Font**

4. **Create Font Project**: Enter **Project name** which is unique → Click **Check** to check the name, project name must not be same as existed font project name

Learn OCR Font

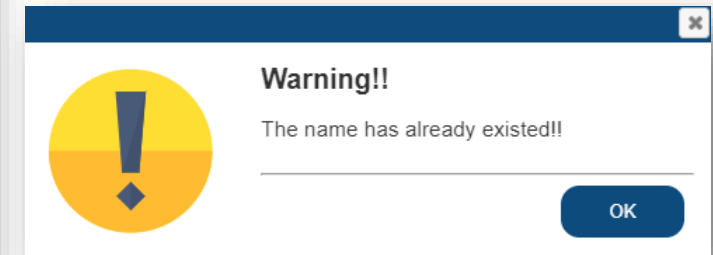
1. Data Source 2. Source Settings 3. Get Image 4. Create Font Project 5. Set ROI and Insert Box

The font project name must be unique

Project name TrainingDemo

Check Rename

Previous Next Cancel



Learn OCR Font

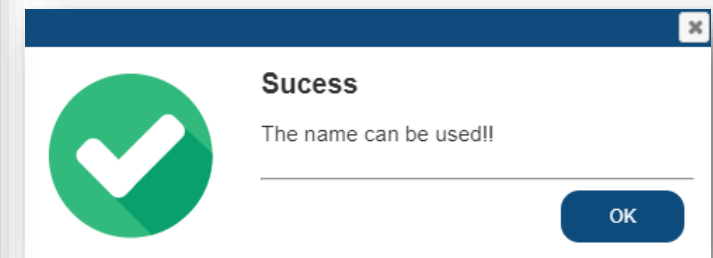
1. Data Source 2. Source Settings 3. Get Image 4. Create Font Project 5. Set ROI and Insert Box

The font project name must be unique

Project name TrainingDemo

Check Rename

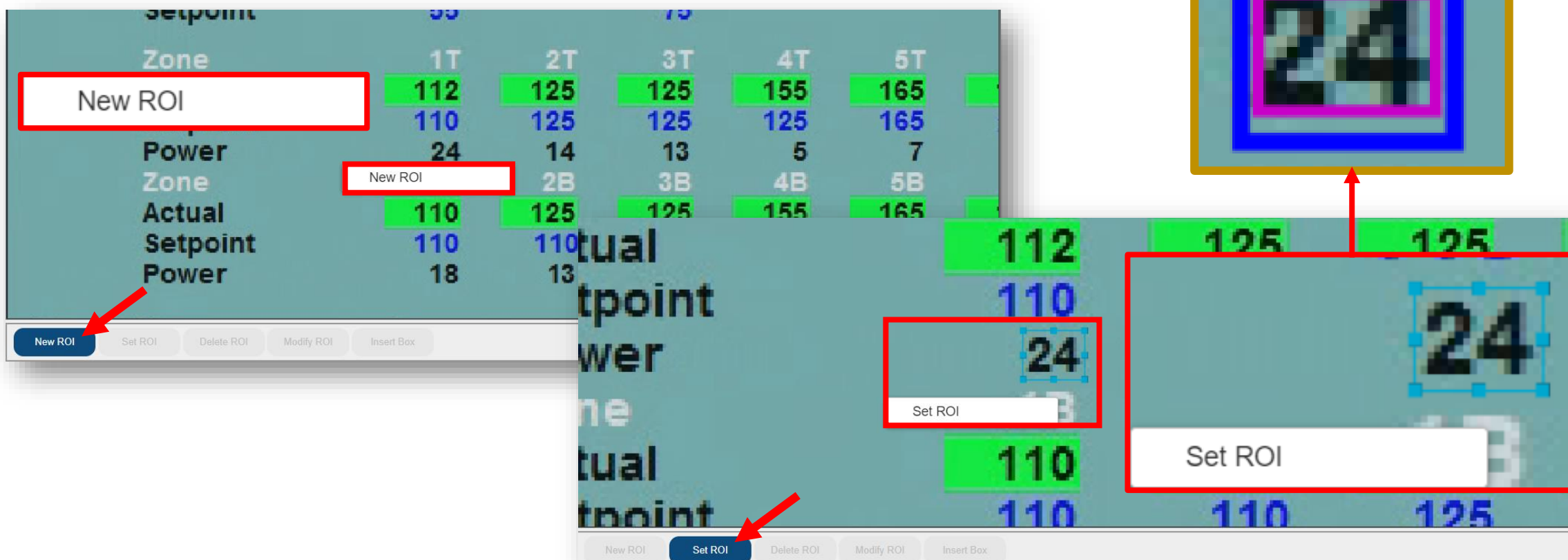
Previous Next Cancel



# Build Project – Font Learning

- **Wizard: Learn OCR Font**

5. **Set ROI and Insert Box:** Right-click on the image then select **New ROI** (or Click on **New ROI** button) → adjust location and size of ROI → Right-click on the image and click **Set ROI** (or click **Set ROI** button)



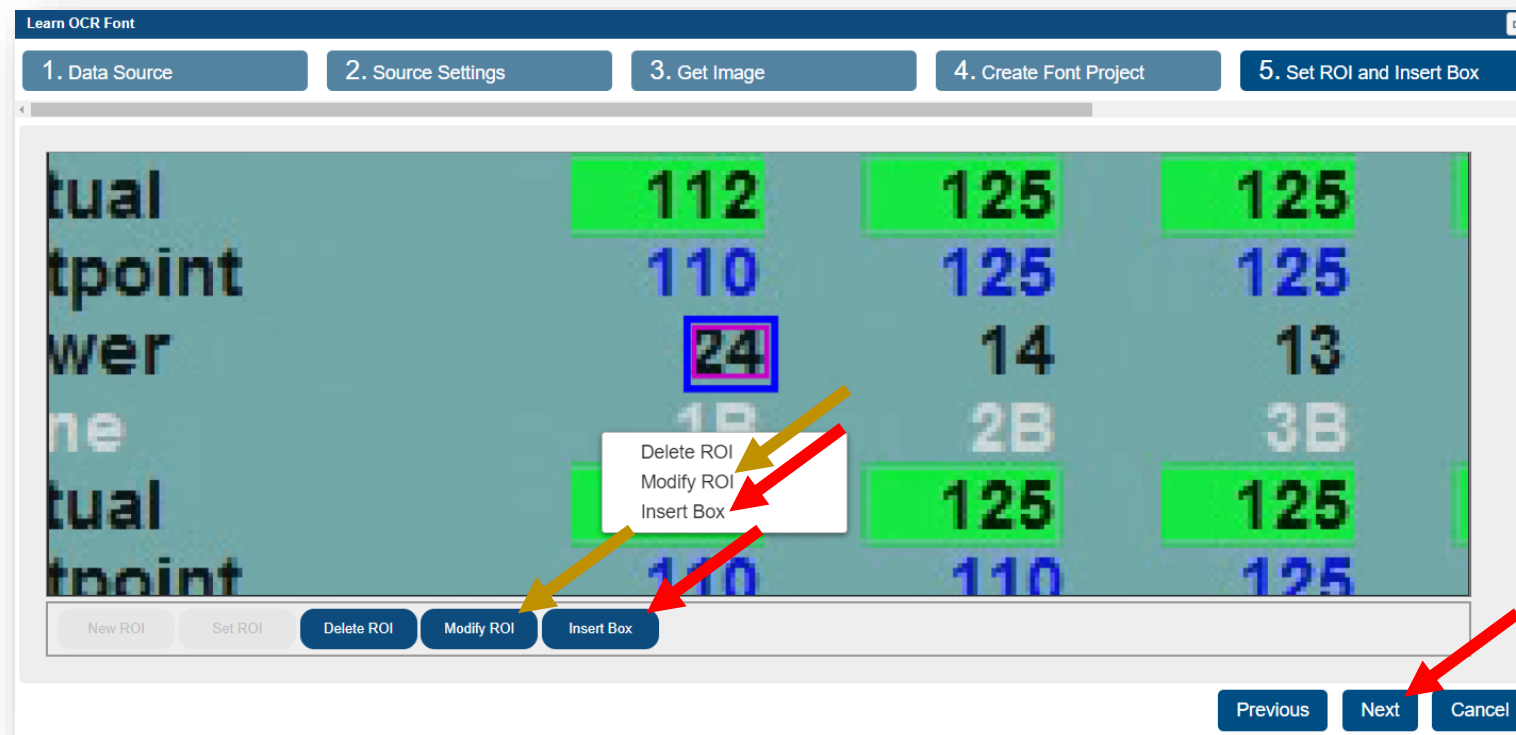


# Build Project – Font Learning

- **Wizard: Learn OCR Font**

5. **Set ROI and Insert Box:** Right-click on the image then select **Insert Box** (or Click on **Insert Box** button) → Right-click on the image then select **Modify ROI** (or Click on **Modify ROI** button) → adjust location and size of ROI → Right-click on the image and click **Set ROI** (or click **Set ROI** button)

Note: Repeat those steps to insert box for all characters we need



# Build Project – Font Learning

- **Wizard: Learn OCR Font**

6. **Setting Box Parameter:** Set Resize Method and multiple → Set Threshold Method, Algorithm, and Value to make every character circled by a single pink circle.

**Learn OCR Font**

3. Get Image   4. Create Font Project   5. Set ROI and Insert Box   **6. Setting Box Parameters**   7. Generate Trained Font File

**Box**

0

Char	Coordinates
T	2 2 15 10

Delete Box Strings   Make Box

Recognize

**Results**

Resize Method	Nearst	Threshold Method	None
Resize	x1	Threshold Algorithm	OTSU
		Threshold Value	120

Next   Cancel

# Build Project – Font Learning

- **Box parameter**

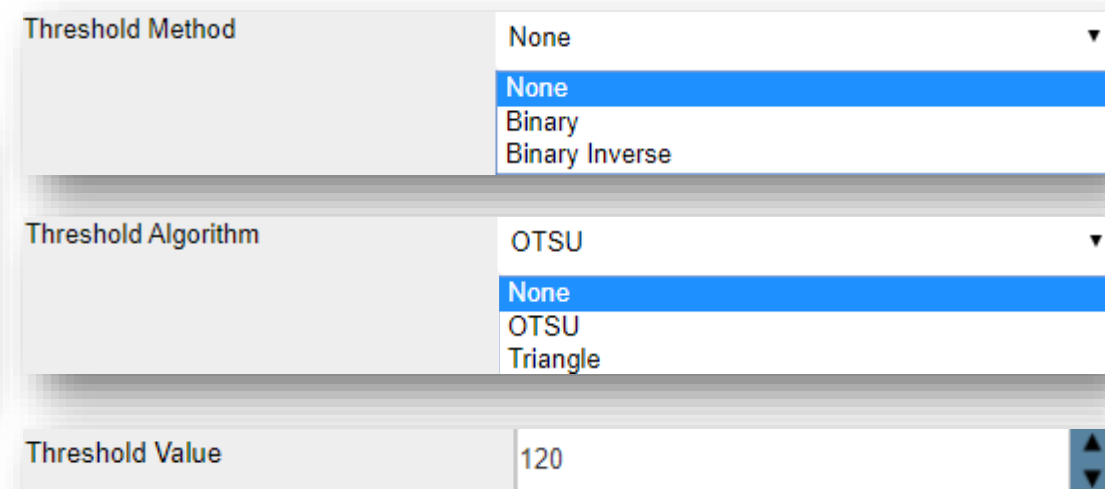
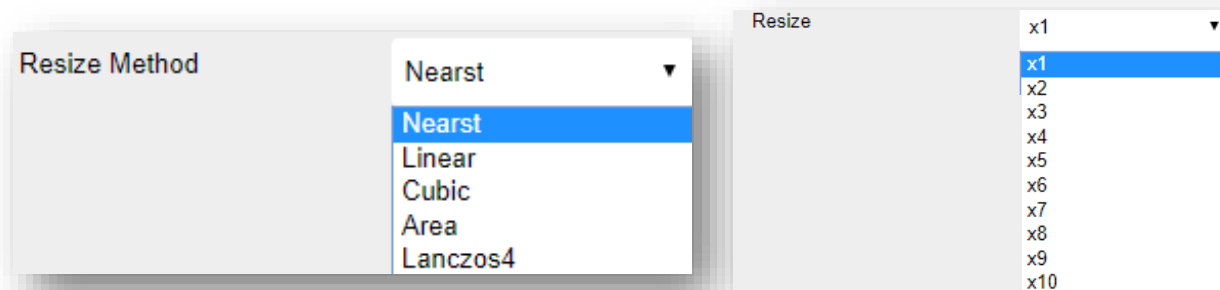
Resize Mode: Nearst, Linear, Cubic, Area, Lanczos4

Resize: x1 ~ x10

Threshold Method: None, Binary, Binary Inverse

Threshold Algorithm: None, OTSU, Triangle

Threshold Value: If **Threshold Method is Binary or Binary Inverse** and **Threshold Algorithm is None**, that means threshold value is needed to adjust



# Build Project – Font Learning

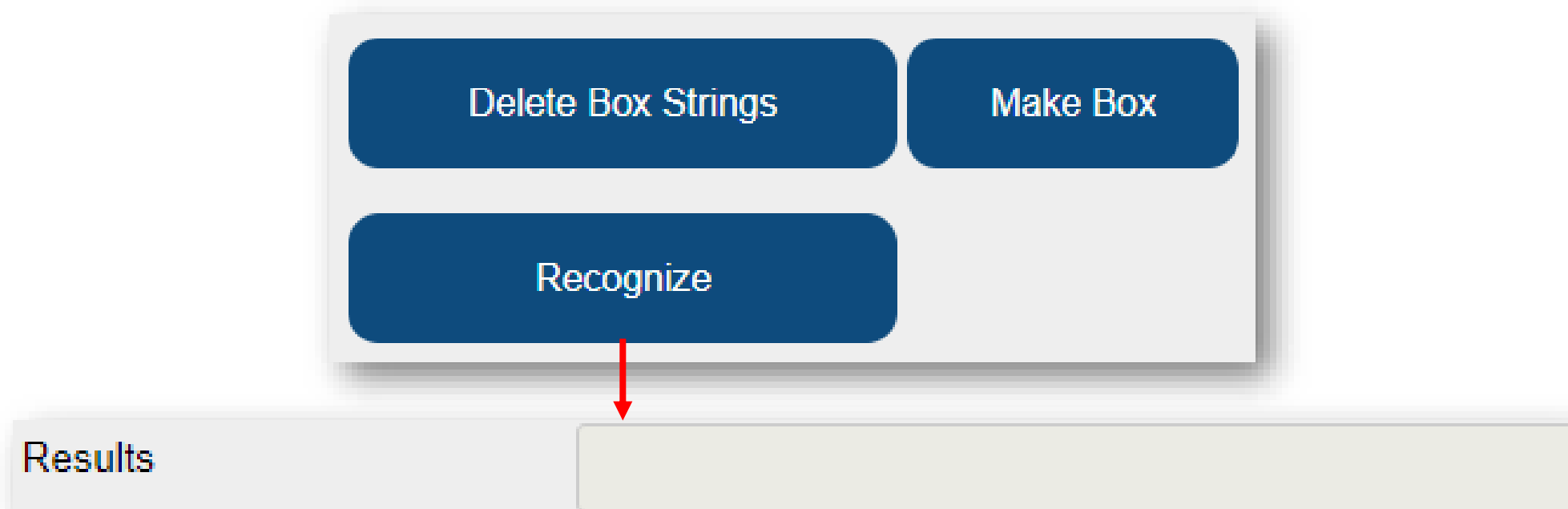
- **Wizard: Learn OCR Font**

- 6. **Setting Box Parameter:**

Delete Box Strings: Delete current box

Make Box: Make character box on current box

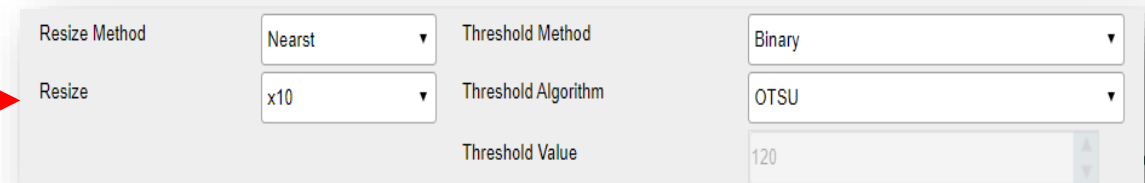
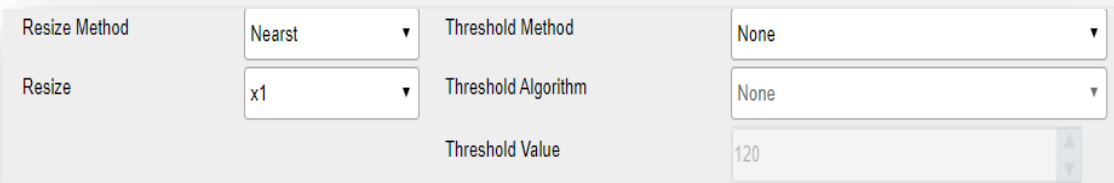
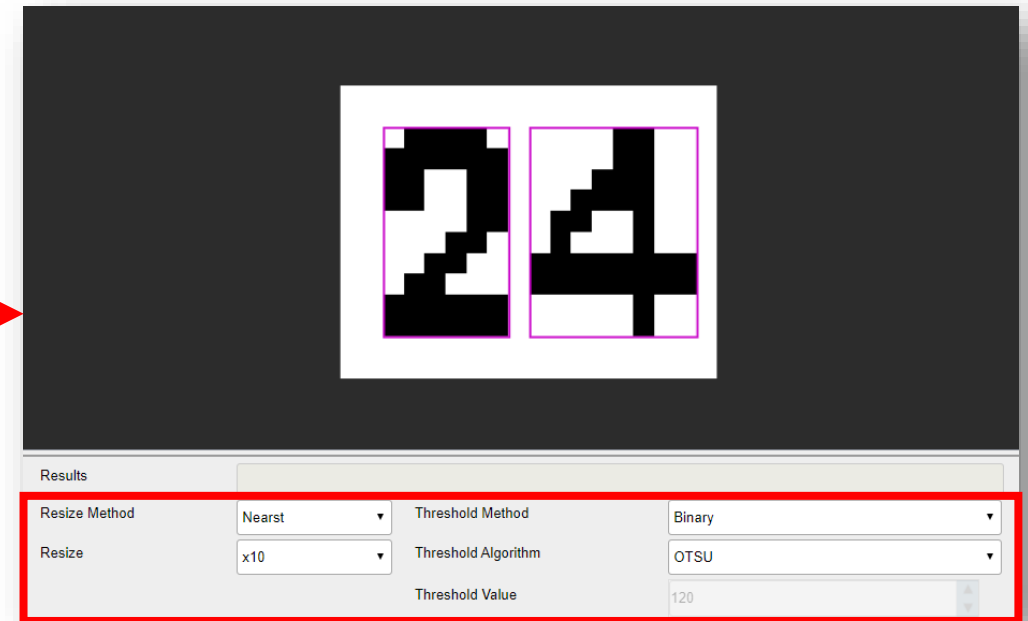
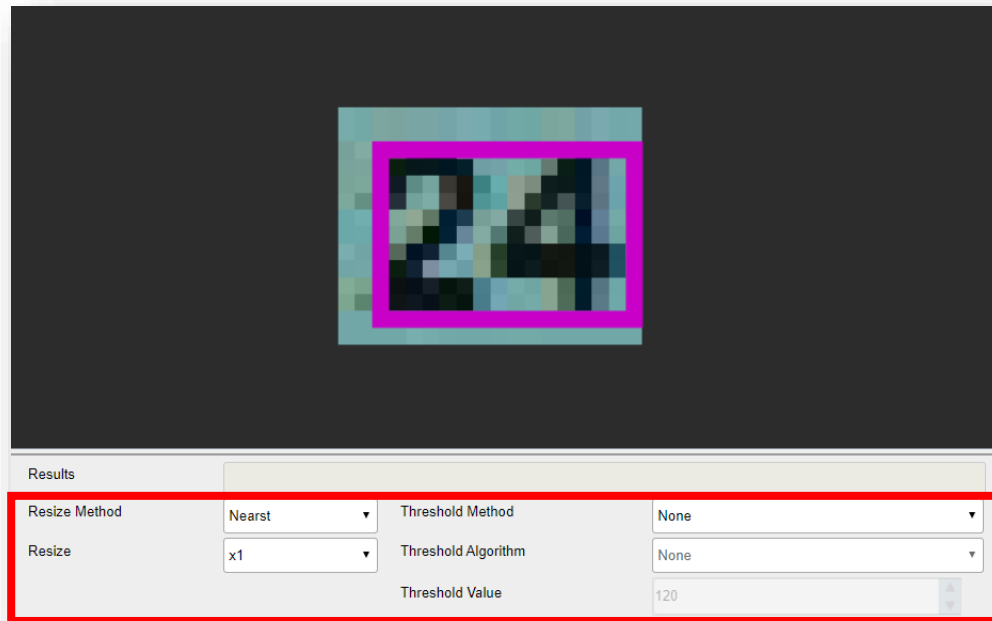
Recognize: Recognize current box immediately, and display the recognition result



# Build Project – Font Learning

- **Wizard: Learn OCR Font**

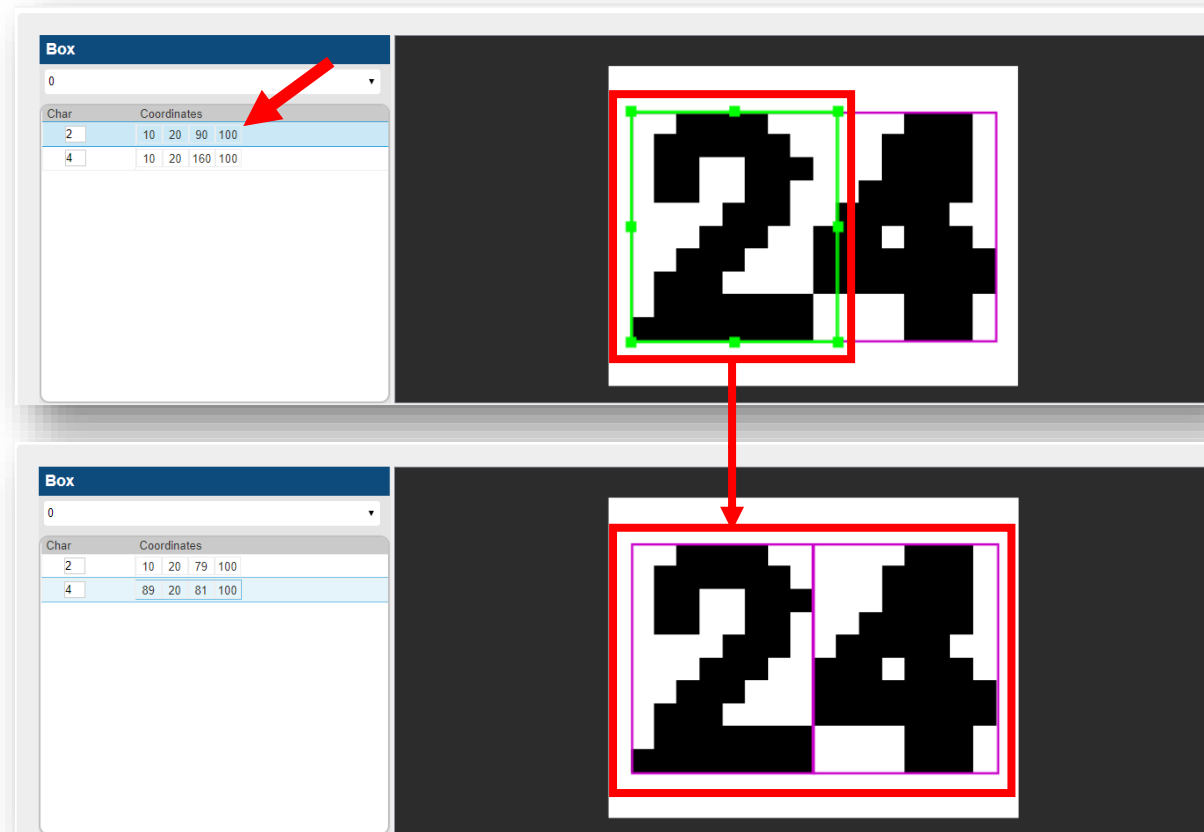
6. **Setting Box Parameter:** Set Resize Method and multiple → Set Threshold Method, Algorithm, and Value to make each character circled by a single pink circle



# Build Project – Font Learning

- Wizard: Learn OCR Font

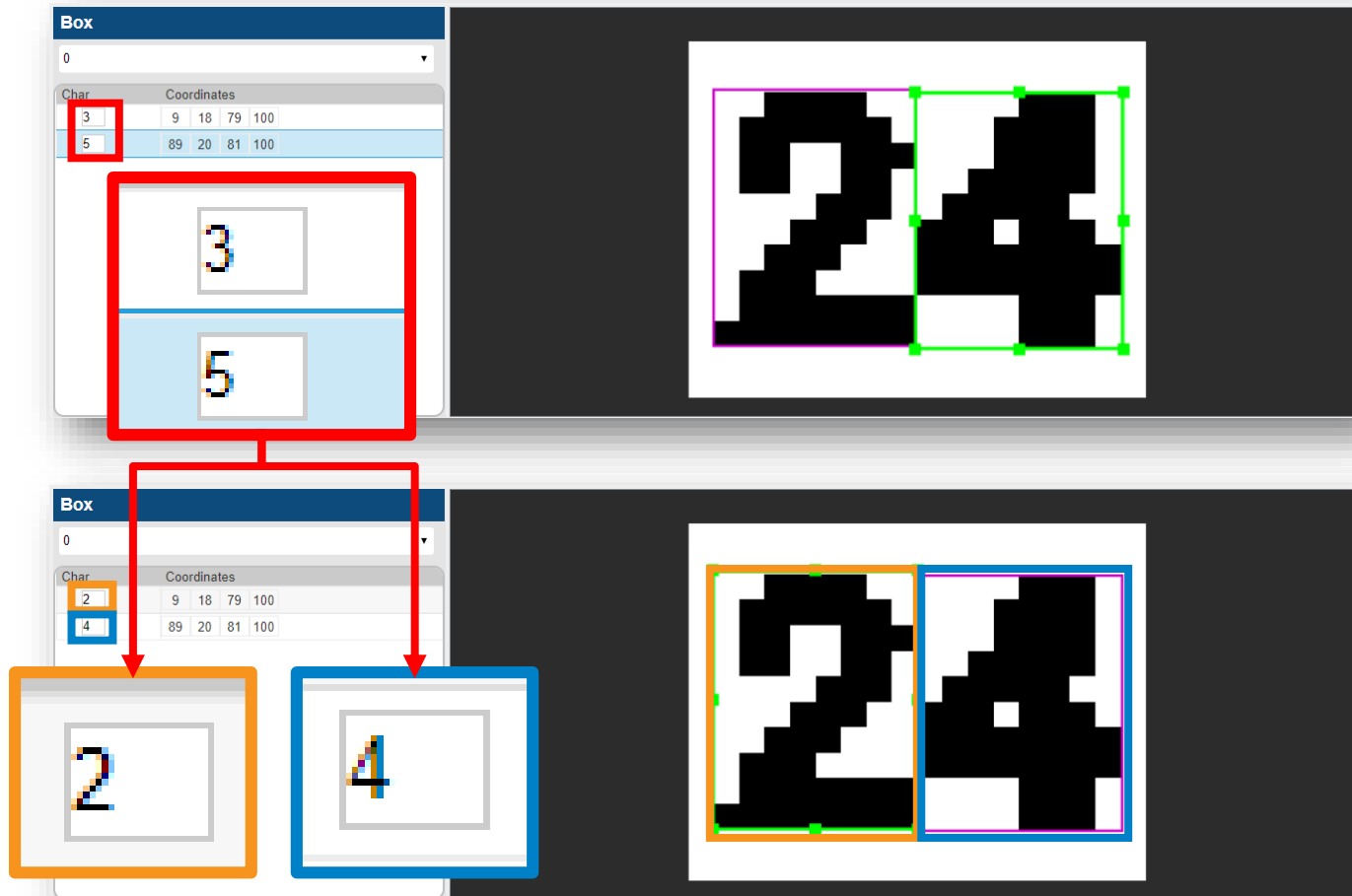
6. **Setting Box Parameter:** Click on the character in the box, the position of recognized character will show up. If the circled region is not like expected. We need to adjust it by dragging the box manually.



# Build Project – Font Learning

- Wizard: Learn OCR Font

6. **Setting Box Parameter:** If the recognition result is not like expected. We need to correct character in the box.



# Build Project – Font Learning

- Wizard: Learn OCR Font

6. **Setting Box Parameter:** If recognition box is missing, right click and select **Add Box** → adjust location and size of character box so that the character is circled → Correct the character in the box.

The diagram illustrates the 'Add Box' process in the OCR font learning wizard. It shows a sequence of steps:

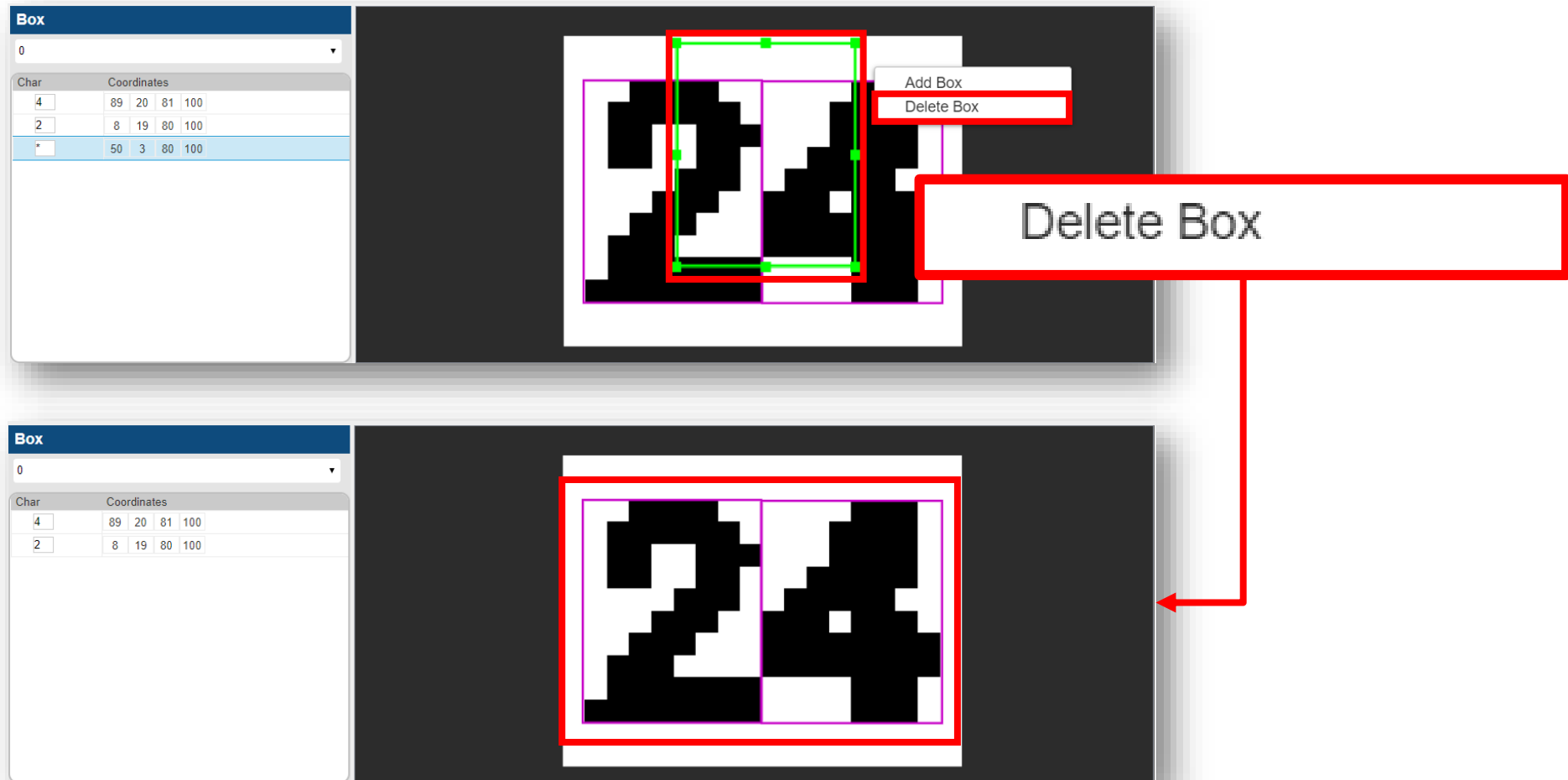
- A character '2' is selected in a table. The table has columns 'Char' and 'Coordinates'. The 'Char' column contains '2' and the 'Coordinates' column contains '89 20 81 100'.
- A red box is added around the character '2' in the image. A red arrow points from the 'Add Box' button to the box.
- The box is adjusted to fit the character. A green box is shown around the character '2'.
- The final result is a corrected character '2' in a box. A yellow arrow points from the green box to the final result.



# Build Project – Font Learning

- Wizard: Learn OCR Font

6. **Setting Box Parameter:** If there is a redundant character box, select it → Right click on it and select **Delete Box**. It will be removed.



# Build Project – Font Learning

- **Wizard: Learn OCR Font**

6. **Setting Box Parameter:** After box setting is completed, click on **Recognize** → Confirm whether the recognition result in Result field is correct or not.

**Box**

0

Char	Coordinates
4	89 20 81 100
2	9 19 79 99

**Results** 24

Delete Box Strings Make Box

Recognize

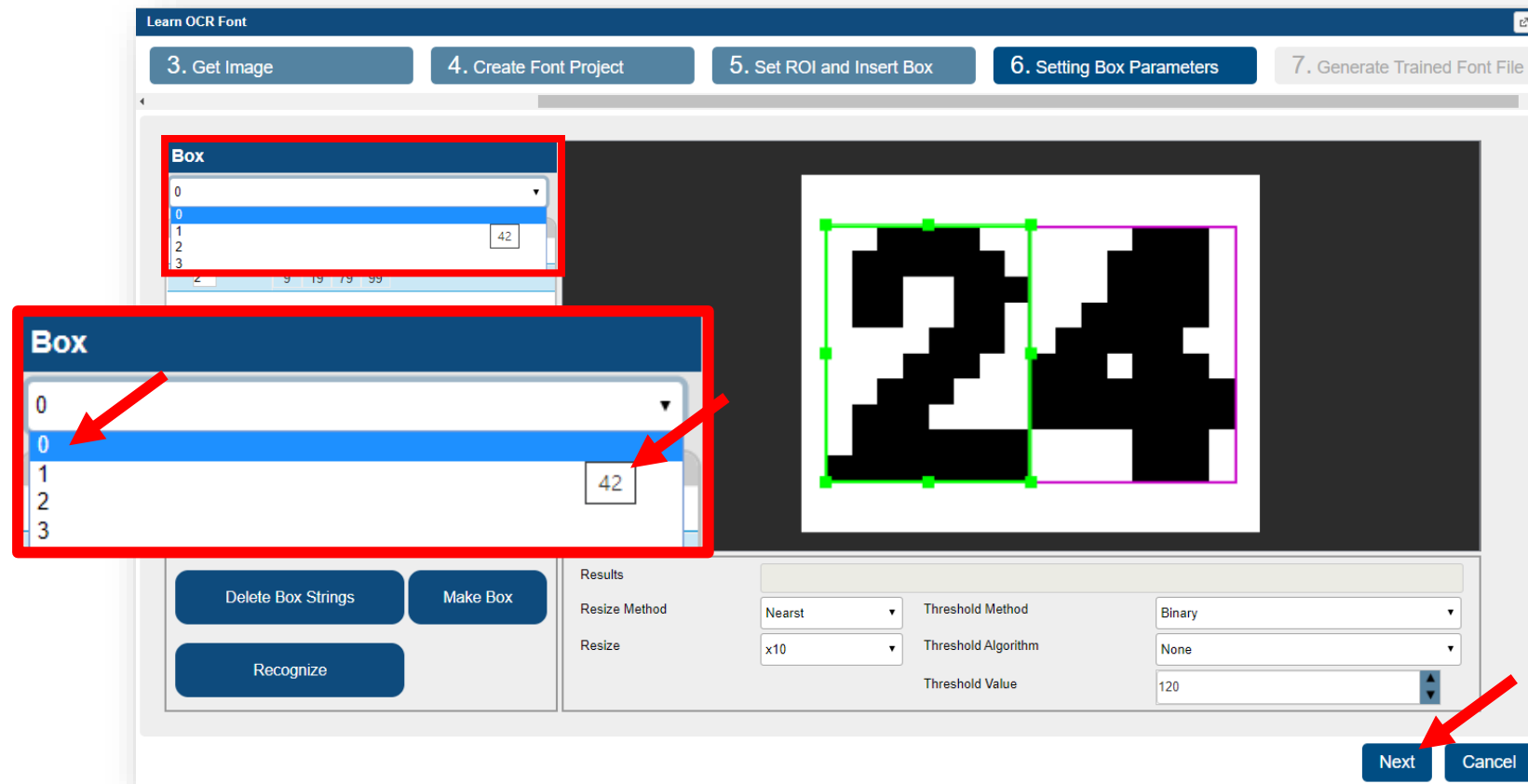
Results 24

Resize Method: Nearst  
Threshold Method: Binary  
Resize: x10  
Threshold Algorithm: None  
Threshold Value: 120

# Build Project – Font Learning

- **Wizard: Learn OCR Font**

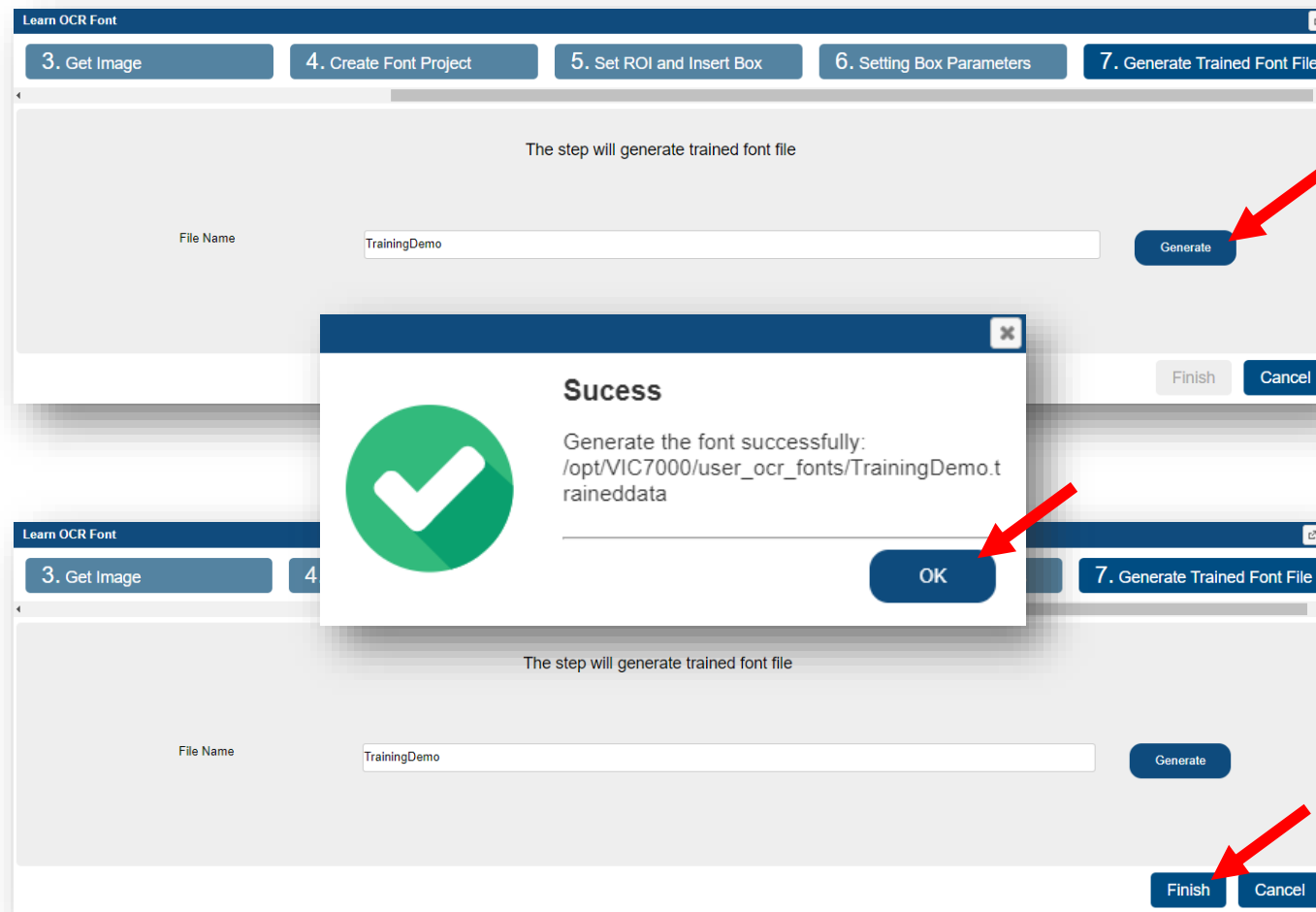
6. **Setting Box Parameter:** Open the dropdown menu of box list and follow the previous steps to set boxes. Move cursor to the box index, the character of the box will show up. It is recommended that all boxes' size and threshold parameters should be same.



# Build Project – Font Learning

- **Wizard: Learn OCR Font**

7. **Create Trained Font File**: Users can modify the File Name → Click on **Generate**, to generate the trained font file, which is later used for recognizing → Click on **Finish**



# Build Project – Font Learning

- **General: Learn OCR Font**

1. Open OCR Font Learning Window

2. Get Image

- a. Direct Load: Directly load the images loaded in OCR tab

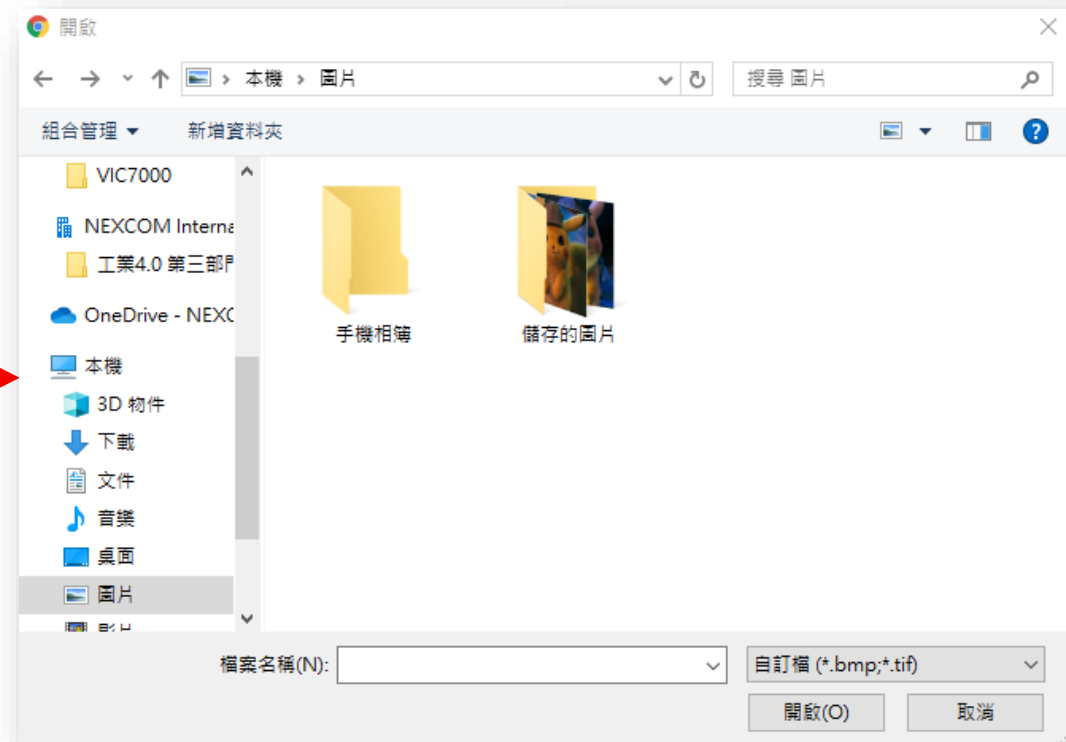
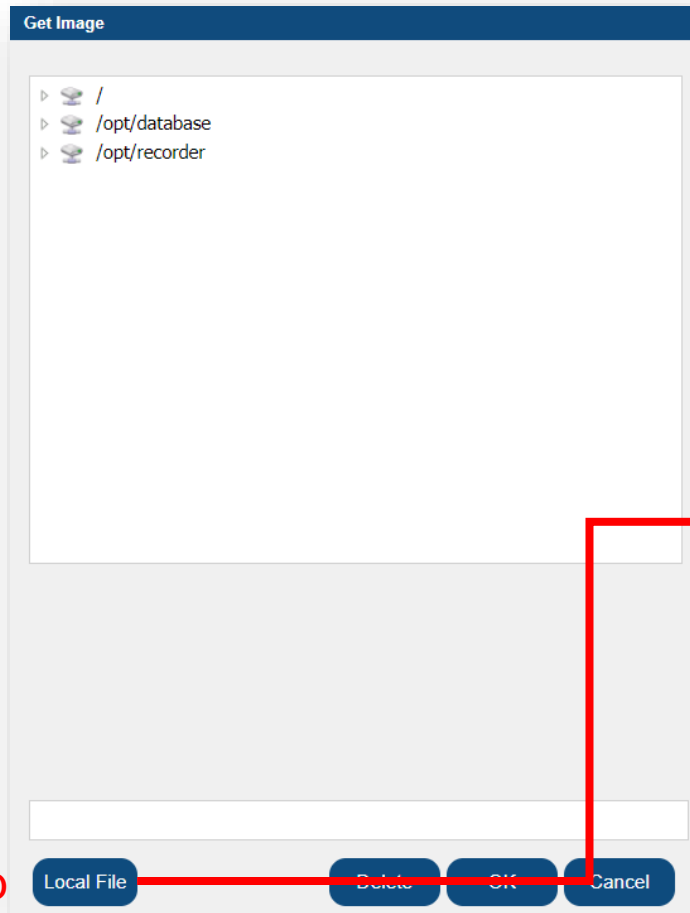
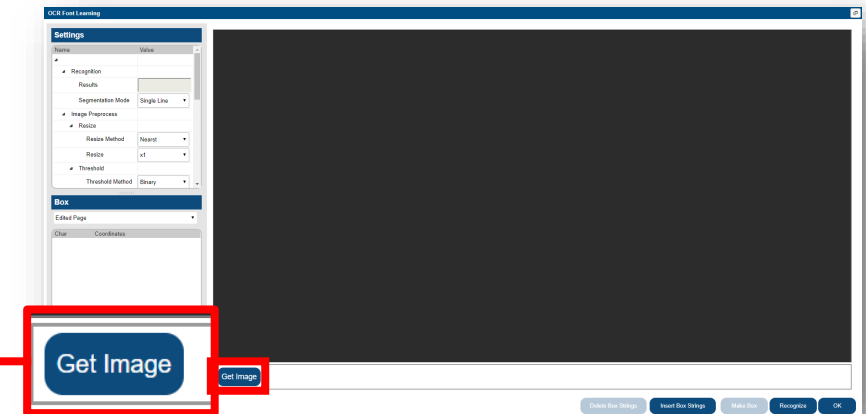
The screenshot displays the nexVIO OCR Font Learning interface. On the left, a sidebar contains an 'Add Page' button (document with plus icon) and a settings gear icon. The main panel has tabs for 'Get Data', 'OCR', 'Over View', and 'TARGET01'. The 'OCR' tab is active, showing a 'Recognition Method' dropdown set to 'Matching target' and a 'Settings' section. The settings include 'Threshold Method' (Binary), 'Threshold Algo' (OTSU), 'Threshold Value' (120), 'OCR Font' section with 'Segmentation Mode' (Single Line), 'Select Font' (English), 'Load Font' (Submit), 'Font File' (input field), and '1 Learn Font' (Submit). A red arrow points from the '1 Learn Font' button to the 'TARGET01' tab. Another red arrow points from the 'TARGET01' tab to the 'Get Image' button in the 'OCR Font Learning' window. This window also shows a 'Settings' panel with 'Recognition' (Results), 'Image Preprocess' (Segmentation Mode: Single Line), 'Resize' (Resize Method: Nearest, Resize: x1), and 'Threshold' (Threshold Method: Binary). Below the settings is a 'Box' section with 'Edited Page' and a table with 'Char' and 'Coordinates' columns. At the bottom of the 'OCR Font Learning' window are buttons for 'Delete Box Strings', 'Insert Box Strings', 'Make Box', 'Recognize', and 'OK'.

# Build Project – Font Learning

- **General: Learn OCR Font**

- 2. Load Image

- b. Open local image: Load images from a local folder

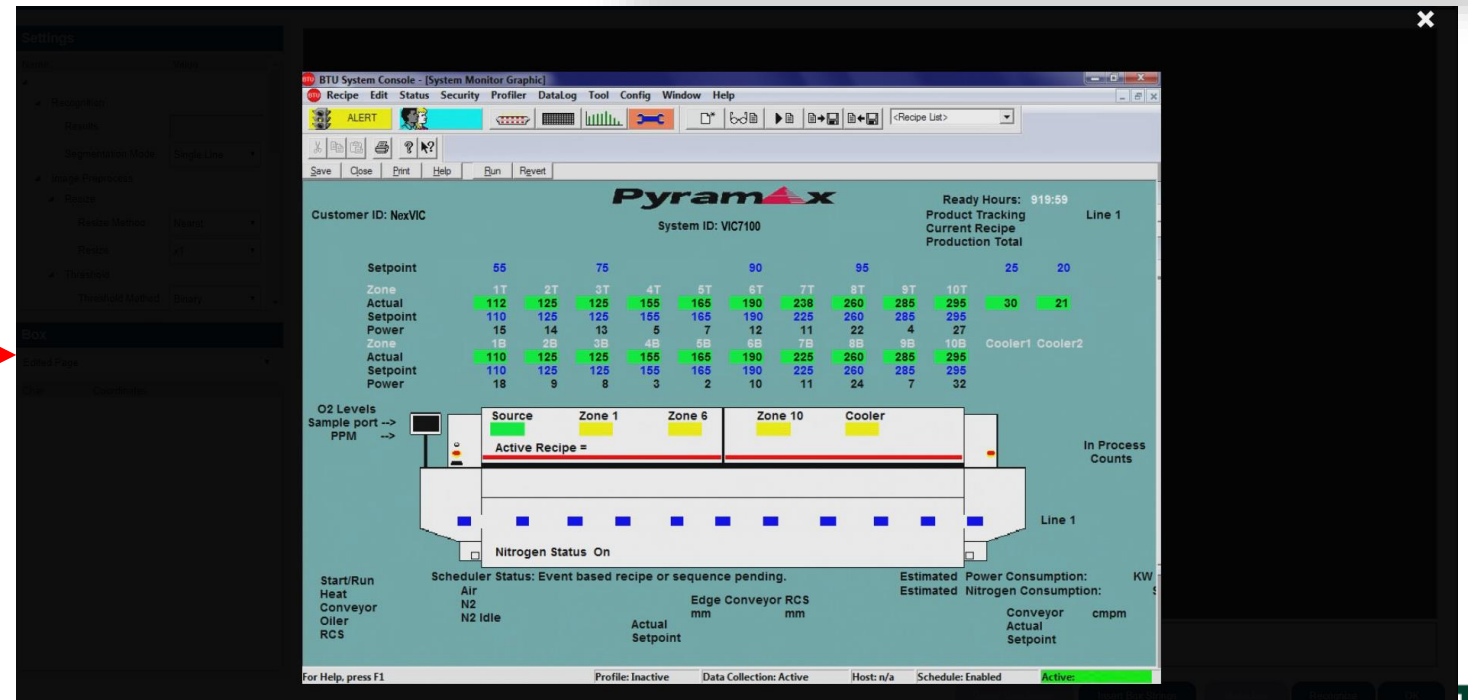
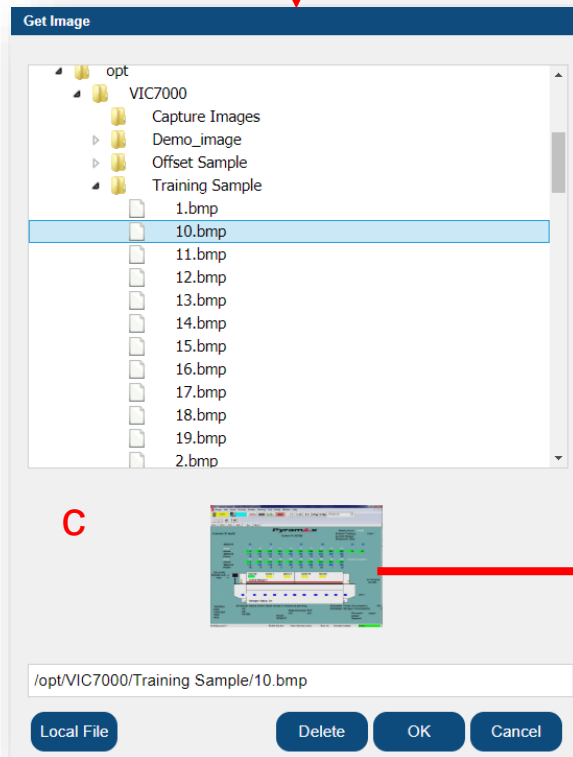
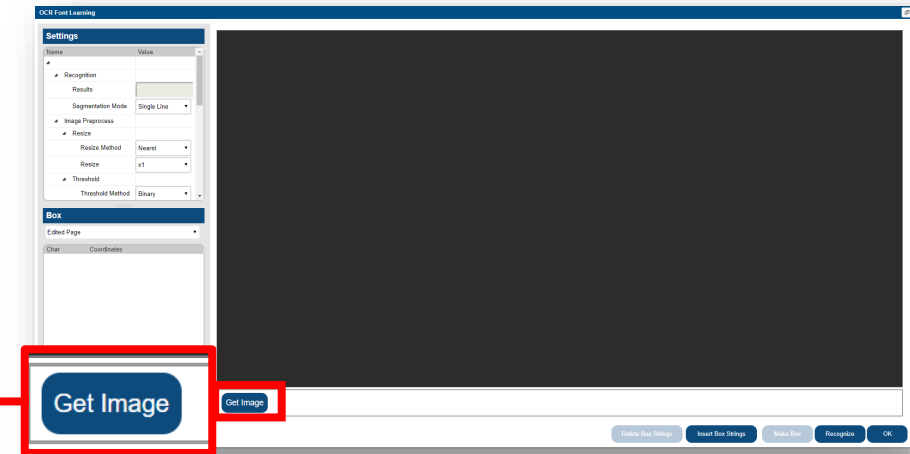


# Build Project – Font Learning

- General: Learn OCR Font

- 2. Load Image

- c. Open remote image: Load images on a remote VIC7000 computer. Click on the preview block to enlarge selected image.

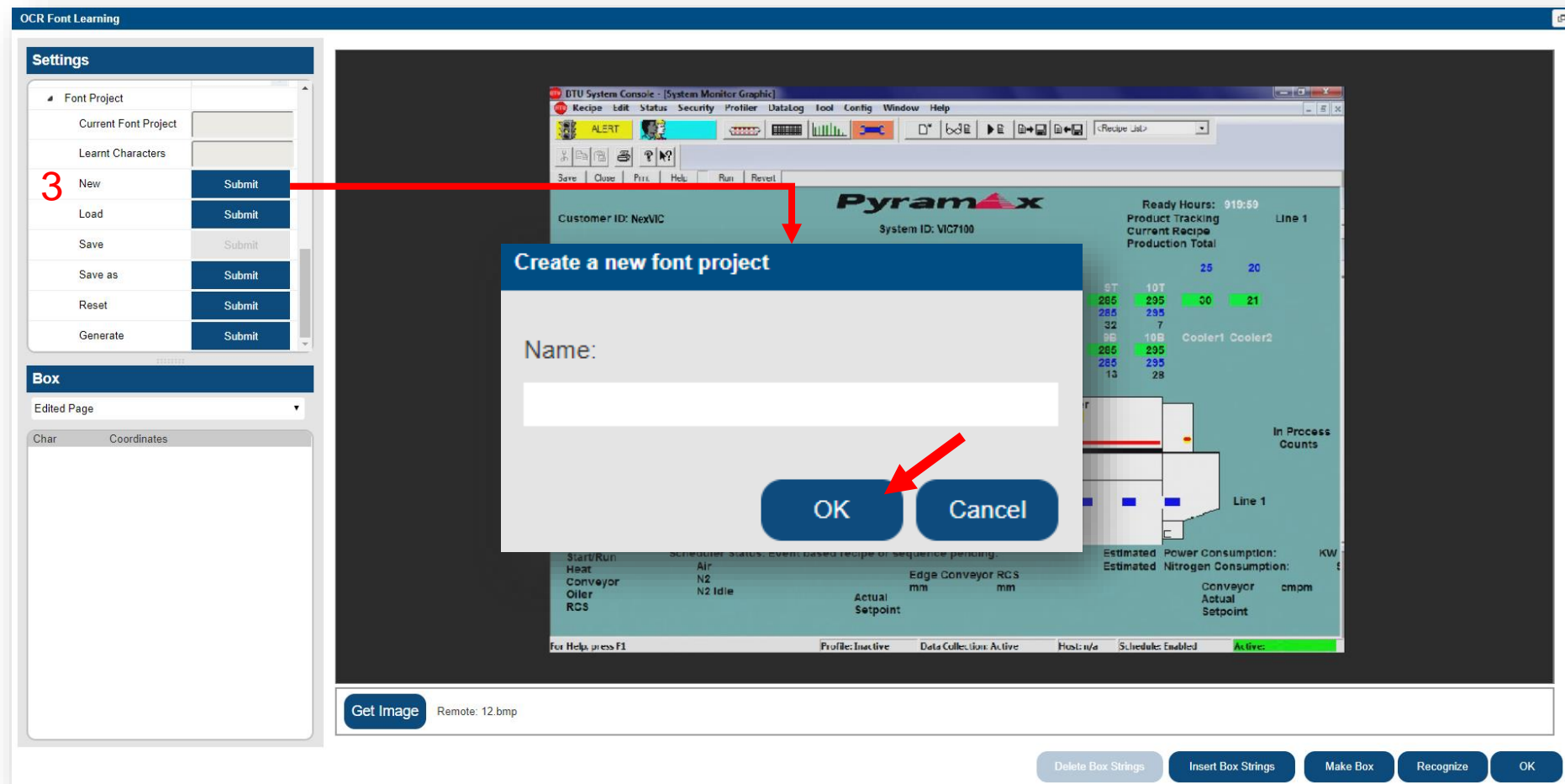




# Build Project – Font Learning

- General: Learn OCR Font

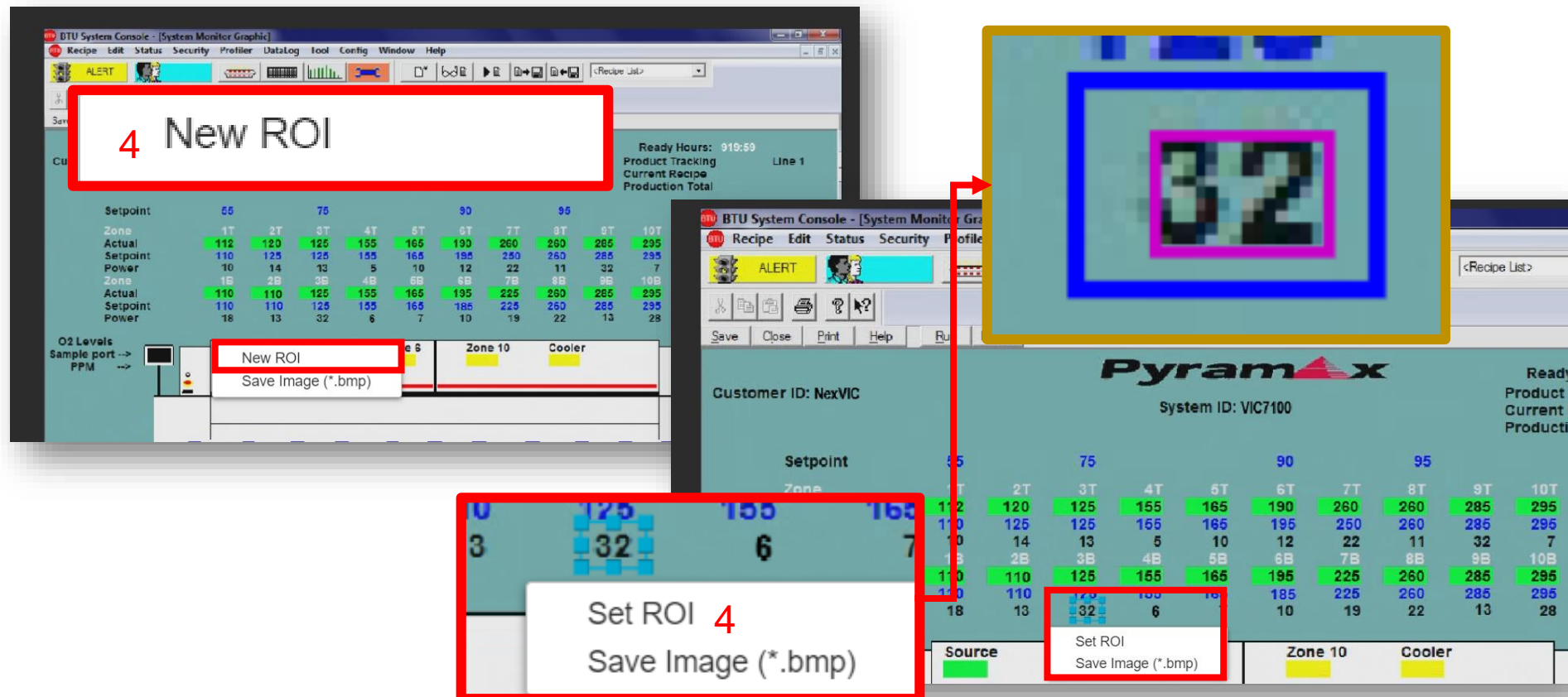
3. **Create Font Project:** Click on **New** → Enter **Name**, which must not be same as existed font project name → Click on **OK**



# Build Project – Font Learning

- General: Learn OCR Font

4. Set ROI and Insert Box: Right-click on the image then select **New ROI** (or Click on **New ROI** button) → adjust location and size of ROI → Right-click on the image and click **Set ROI** (or click **Set ROI** button)

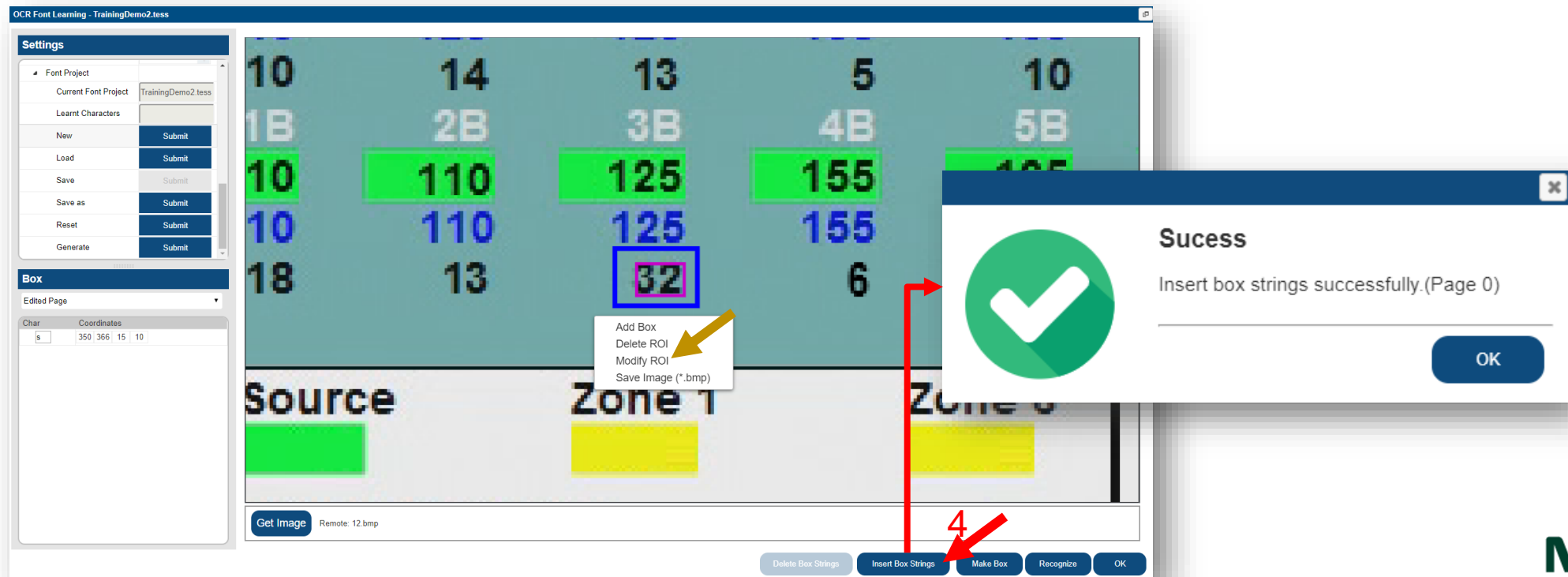


# Build Project – Font Learning

- **General: Learn OCR Font**

4. **Set ROI and Insert Box:** Click on **Insert Box Strings** → Right-click on the image then select **Modify ROI** (or Click on **Modify ROI** button) → adjust location and size of ROI → Right-click on the image and click **Set ROI** (or click **Set ROI** button).

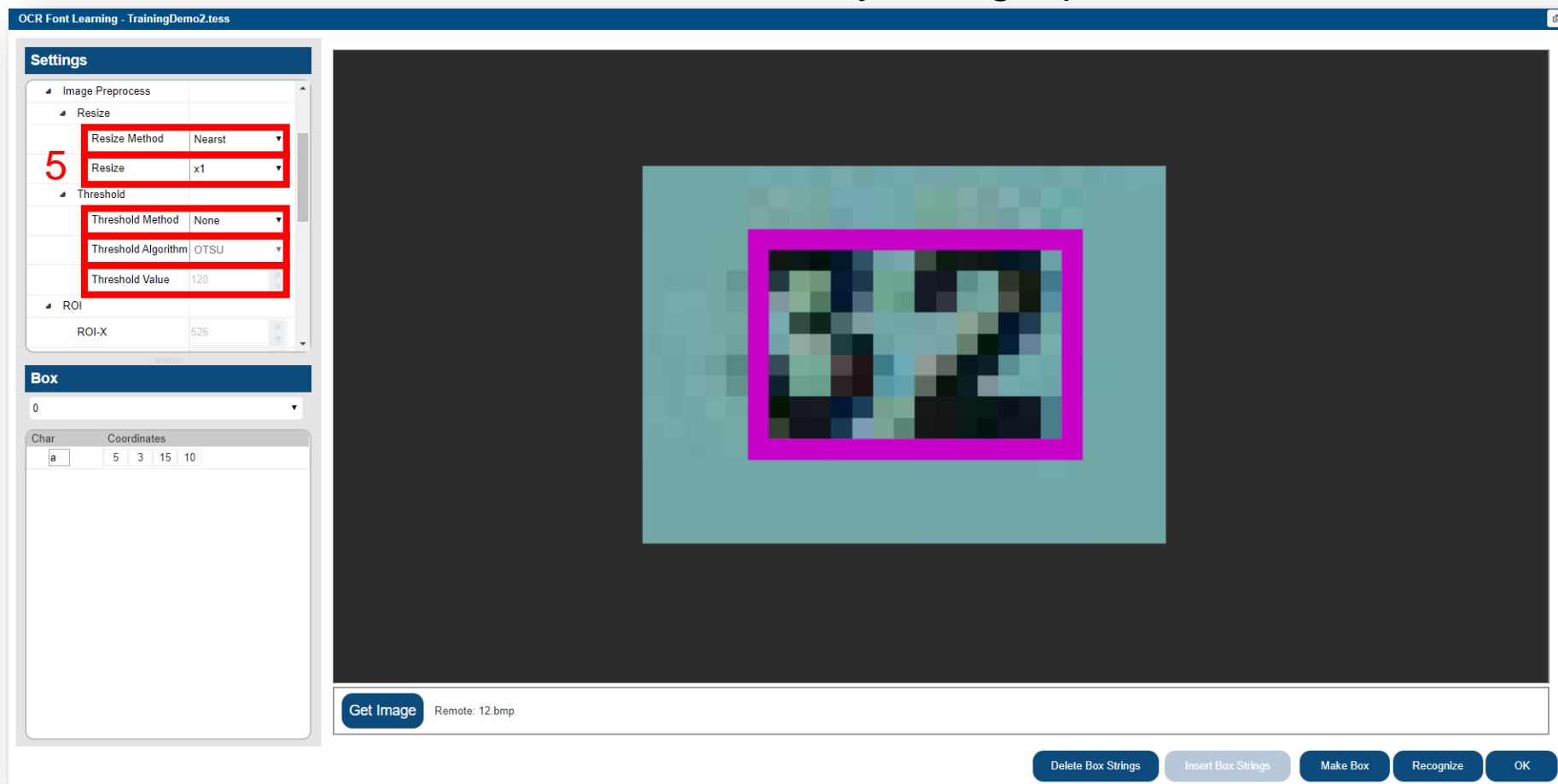
Note: Repeat those steps to insert boxes for characters that we need



# Build Project – Font Learning

- **General: Learn OCR Font**

5. **Set Box Parameter:** Set Resize Method and multiple → Set Threshold Method, Algorithm, and Value to make each character circled by a single pink box.



# Build Project – Font Learning

- **Box parameter**

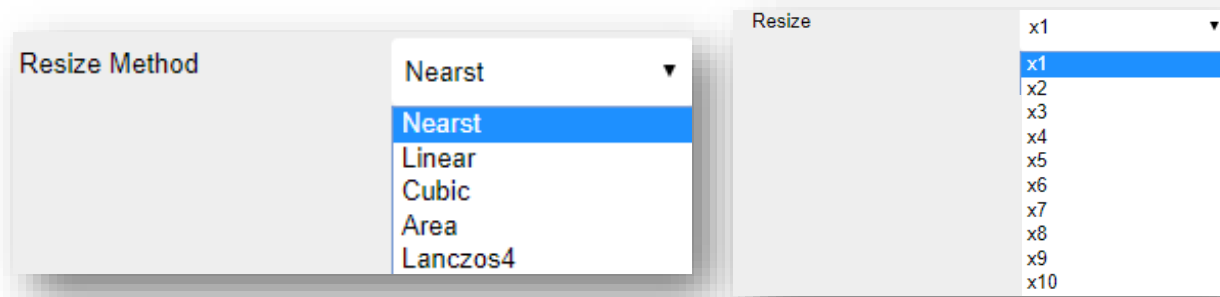
Resize Mode: Nearst, Linear, Cubic, Area, Lanczos4

Resize: x1 ~ x10

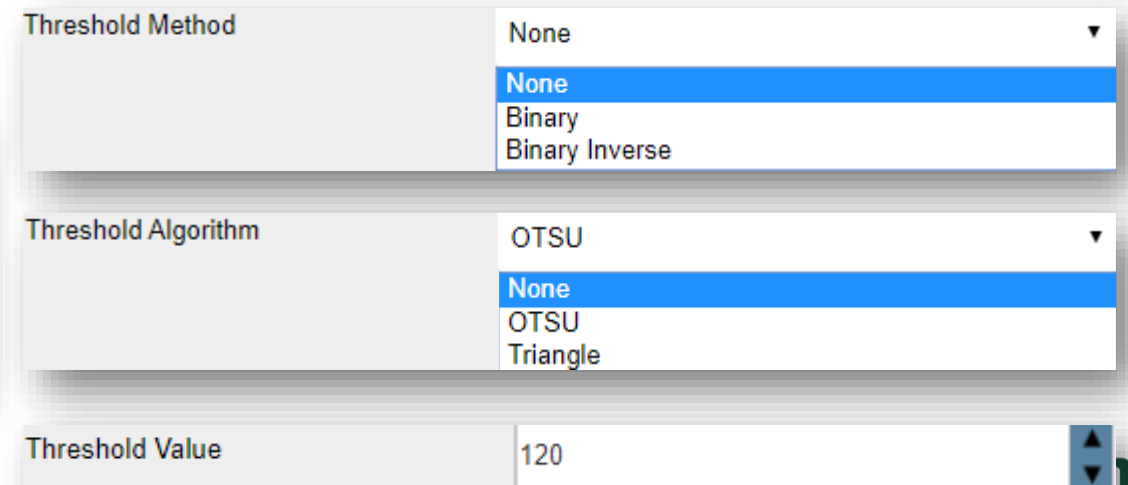
Threshold Method: None, Binary, Binary Inverse

Threshold Algorithm: None, OTSU, Triangle

Threshold Value: If Threshold Method is Binary or Binary Inverse and Threshold Algorithm is None, then we need to adjust threshold value



The image shows two dropdown menus. The first, labeled 'Resize Method', has a list of options: Nearst (selected), Linear, Cubic, Area, and Lanczos4. The second, labeled 'Resize', has a list of options: x1 (selected), x2, x3, x4, x5, x6, x7, x8, x9, and x10.



The image shows three controls. The first, 'Threshold Method', is a dropdown menu with options: None (selected), Binary, and Binary Inverse. The second, 'Threshold Algorithm', is a dropdown menu with options: OTSU, None (selected), and Triangle. The third, 'Threshold Value', is a text input field containing the number 120.

# Build Project – Font Learning

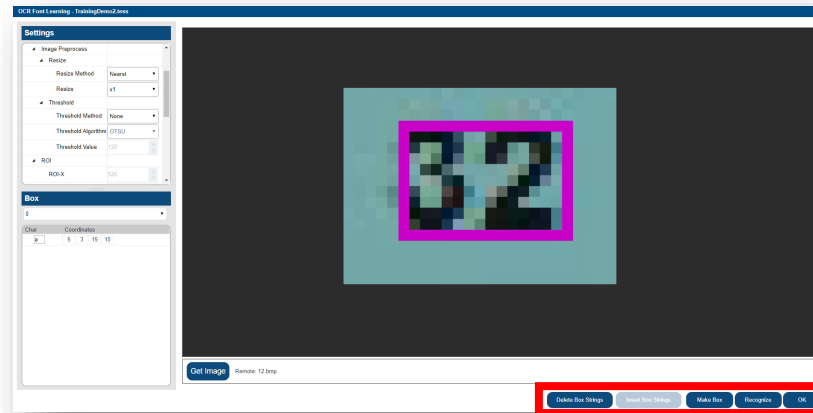
- **General: Learn OCR Font**

- 5. **Set Box Parameter:**

Delete Box Strings: Delete current box

Make Box: Create character box on current box

Recognize: Run recognition on current box immediately, and display the recognition result



Delete Box Strings

Insert Box Strings

Make Box

Recognize

# Build Project – Font Learning

- **General: Learn OCR Font**

5. **Set Box Parameter:** Set Resize Method and multiple → Set Threshold Method, Algorithm, and Value to make each character circled by a single pink box.

The image shows the nexVIC interface with the 'Settings' and 'Box' panels. The 'Settings' panel has a red box around the 'Image Preprocess' section. The 'Box' panel shows a character 'a' with coordinates [5, 3, 15, 10]. A red arrow points from the 'Threshold Value' field in the 'Box' panel to the 'Threshold Value' field in the 'Settings' panel.

Char	Coordinates
a	5   3   15   10

Settings	Box
Image Preprocess	
Resize Method	Nearst
Resize	x1
Threshold Method	None
Threshold Algorithm	OTSU
Threshold Value	120

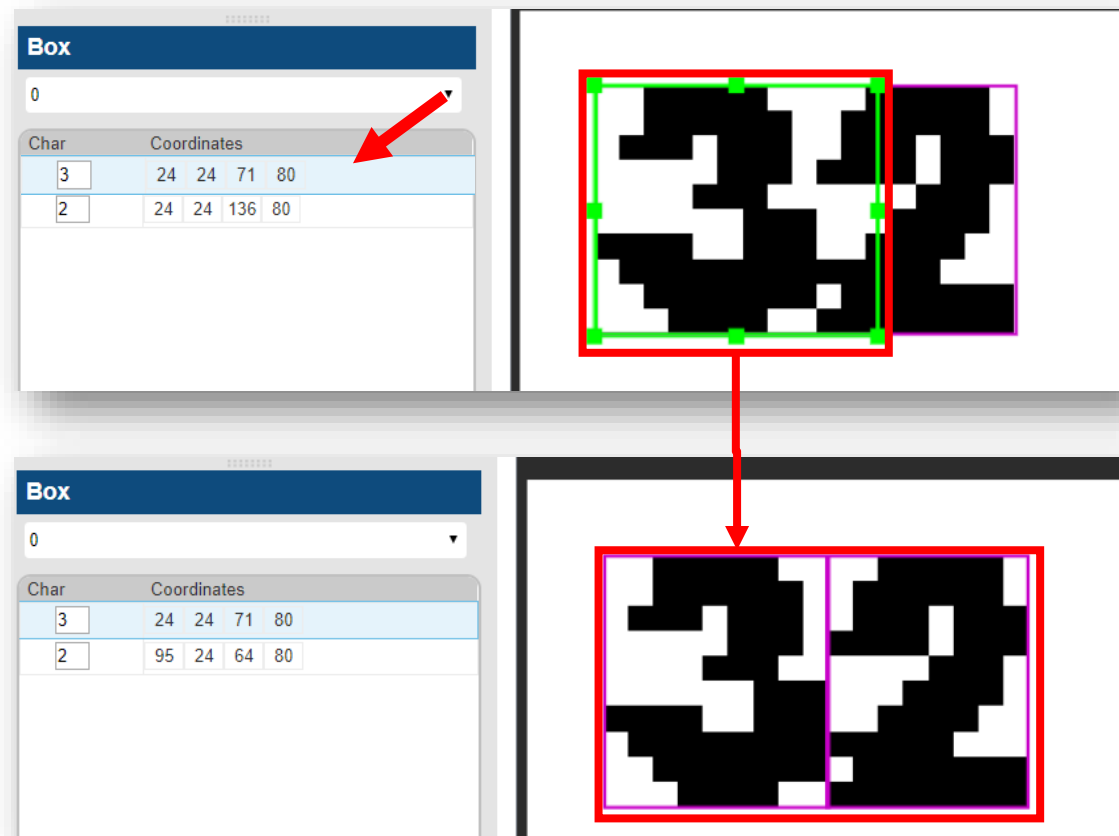
Settings	Box
Image Preprocess	
Resize Method	Nearst
Resize	x8
Threshold Method	Binary
Threshold Algorithm	OTSU
Threshold Value	120



# Build Project – Font Learning

- **General: Learn OCR Font**

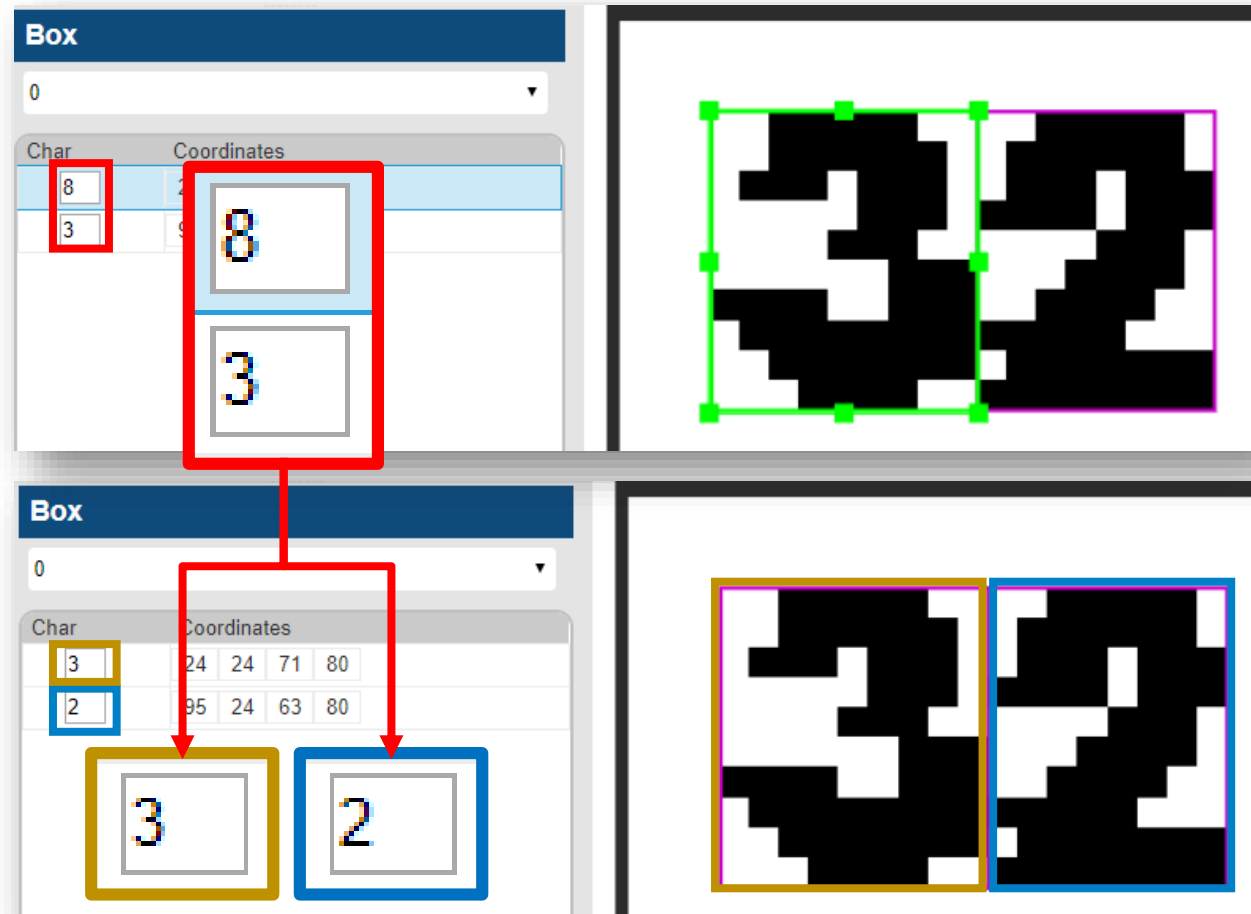
5. **Set Box Parameter:** Click the character in the box, the position of recognized character will show up. If the circled region is not like expected, we need to adjust it by dragging the box manually.



# Build Project – Font Learning

- **General: Learn OCR Font**

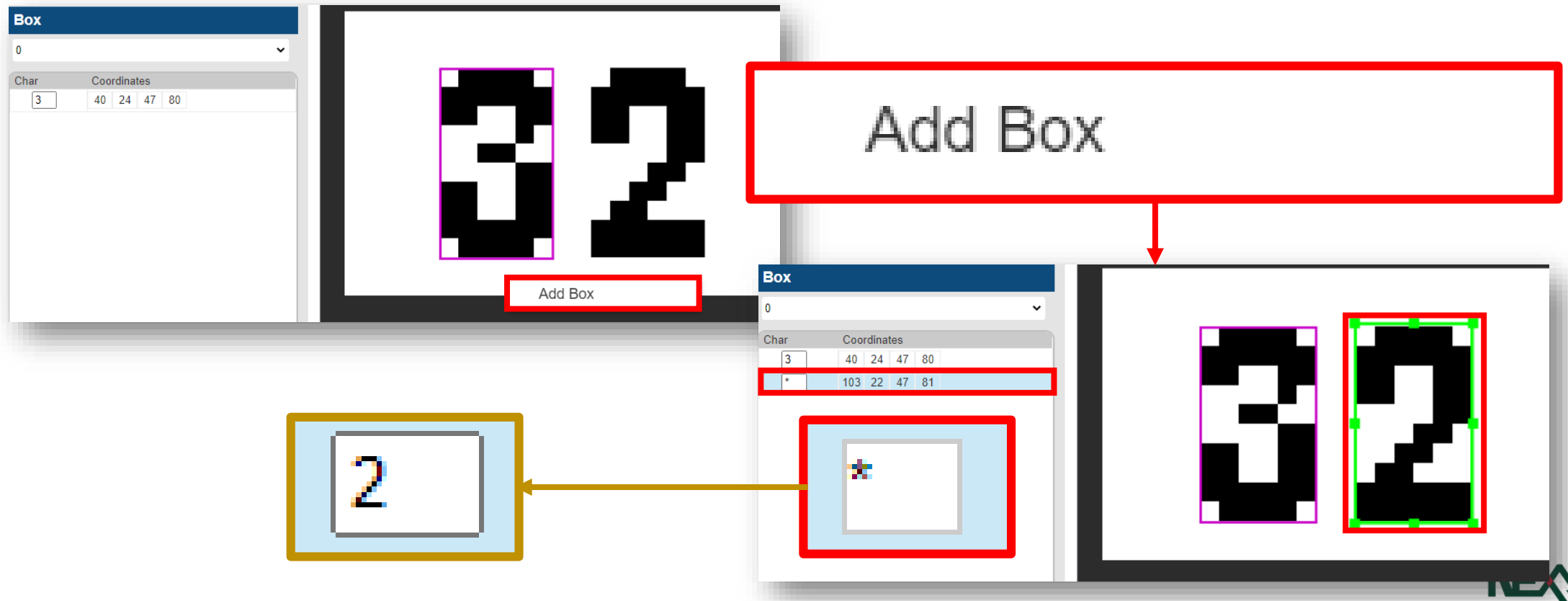
5. **Set Box Parameter:** If the recognition result is as expected, we need to correct the character in the box.



# Build Project – Font Learning

- **General: Learn OCR Font**

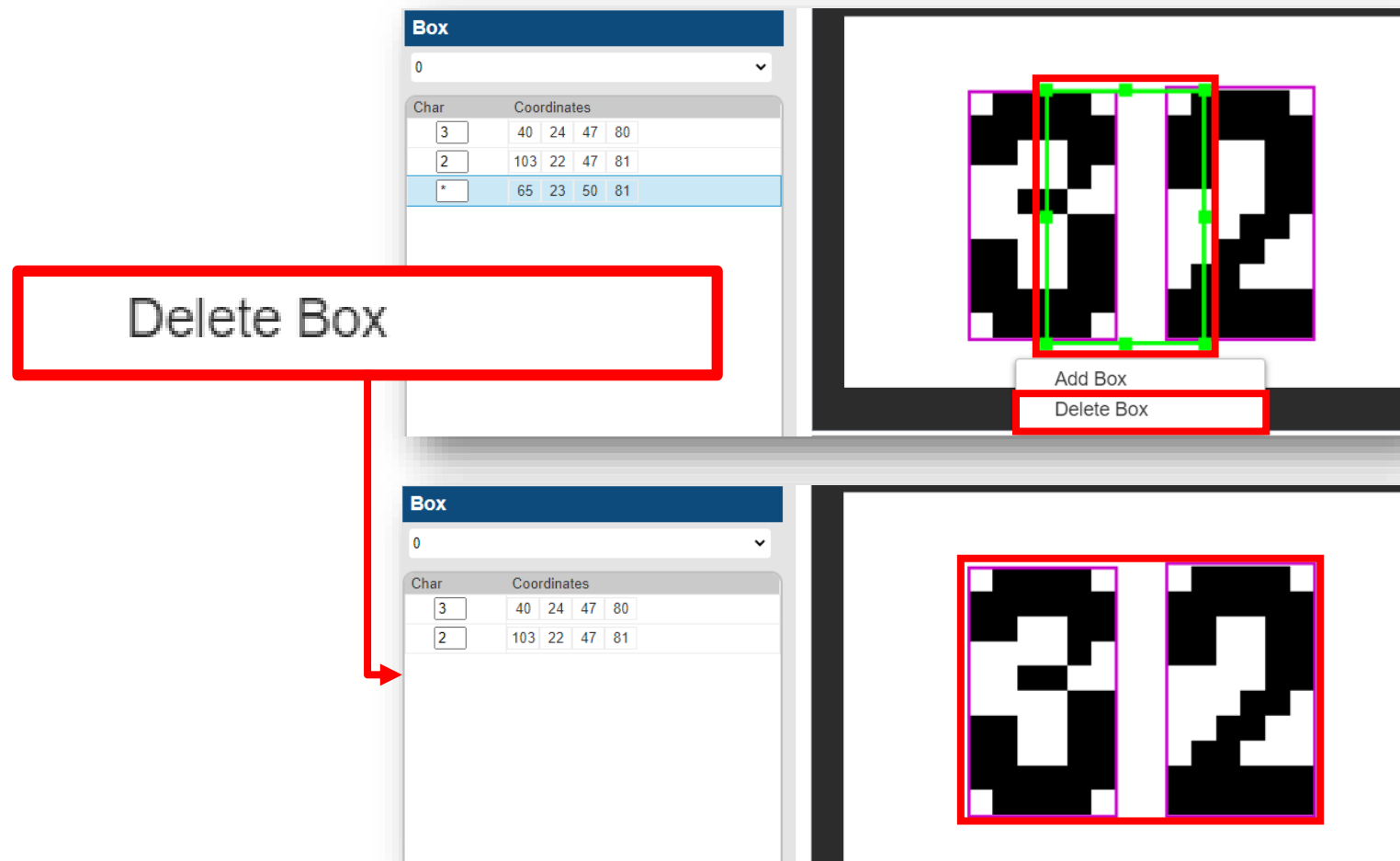
5. **Set Box Parameter:** If recognition box is missing, right click on box and select **Add Box** → adjust location and size of character box to circle the desired character to be recognized → revise the character in box.



# Build Project – Font Learning

- General: Learn OCR Font

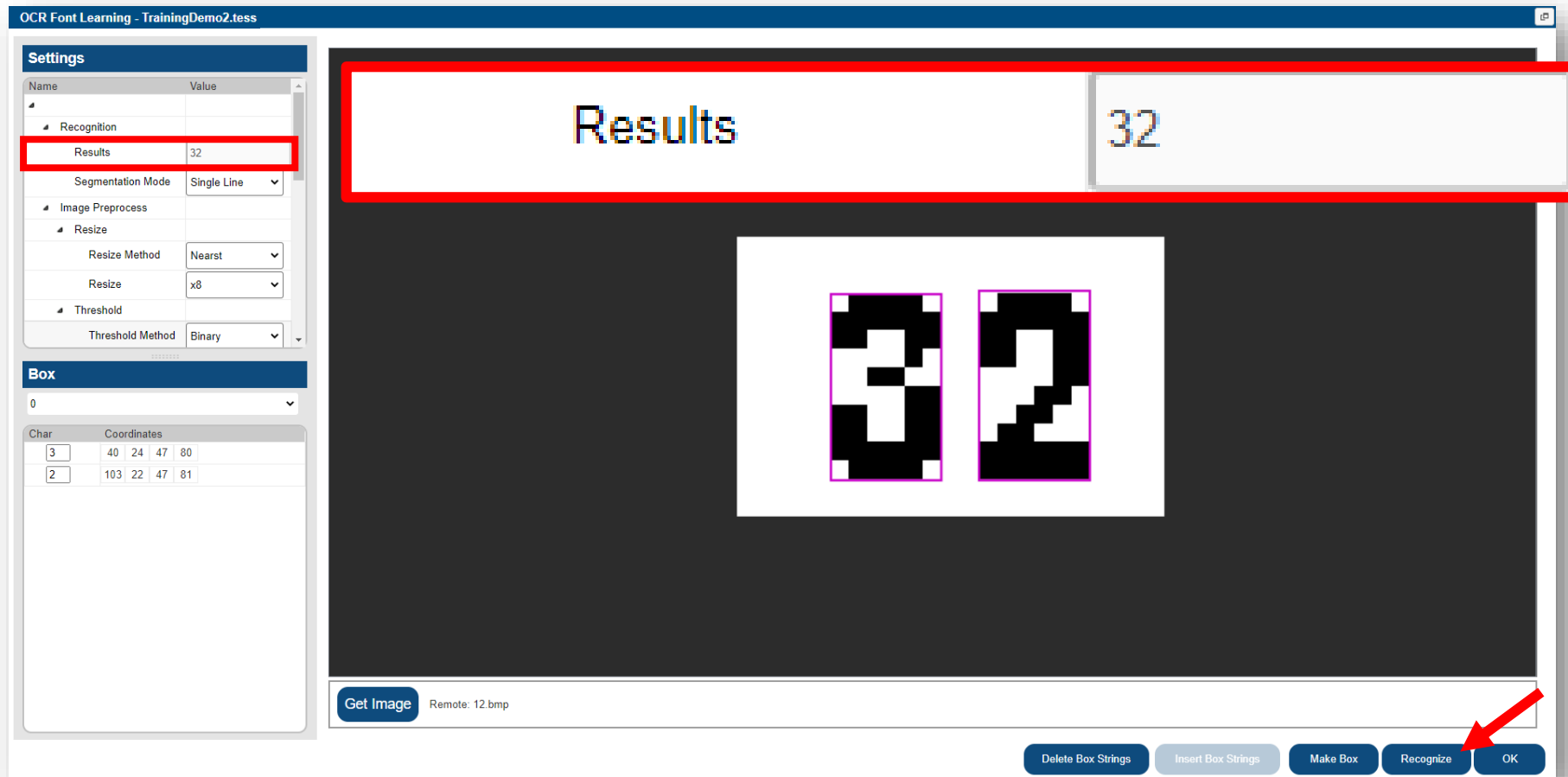
5. **Set Box Parameter:** If there is redundant character box, select it → Right click on it and select **Delete Box**. It will be removed.



# Build Project – Font Learning

- **General: Learn OCR Font**

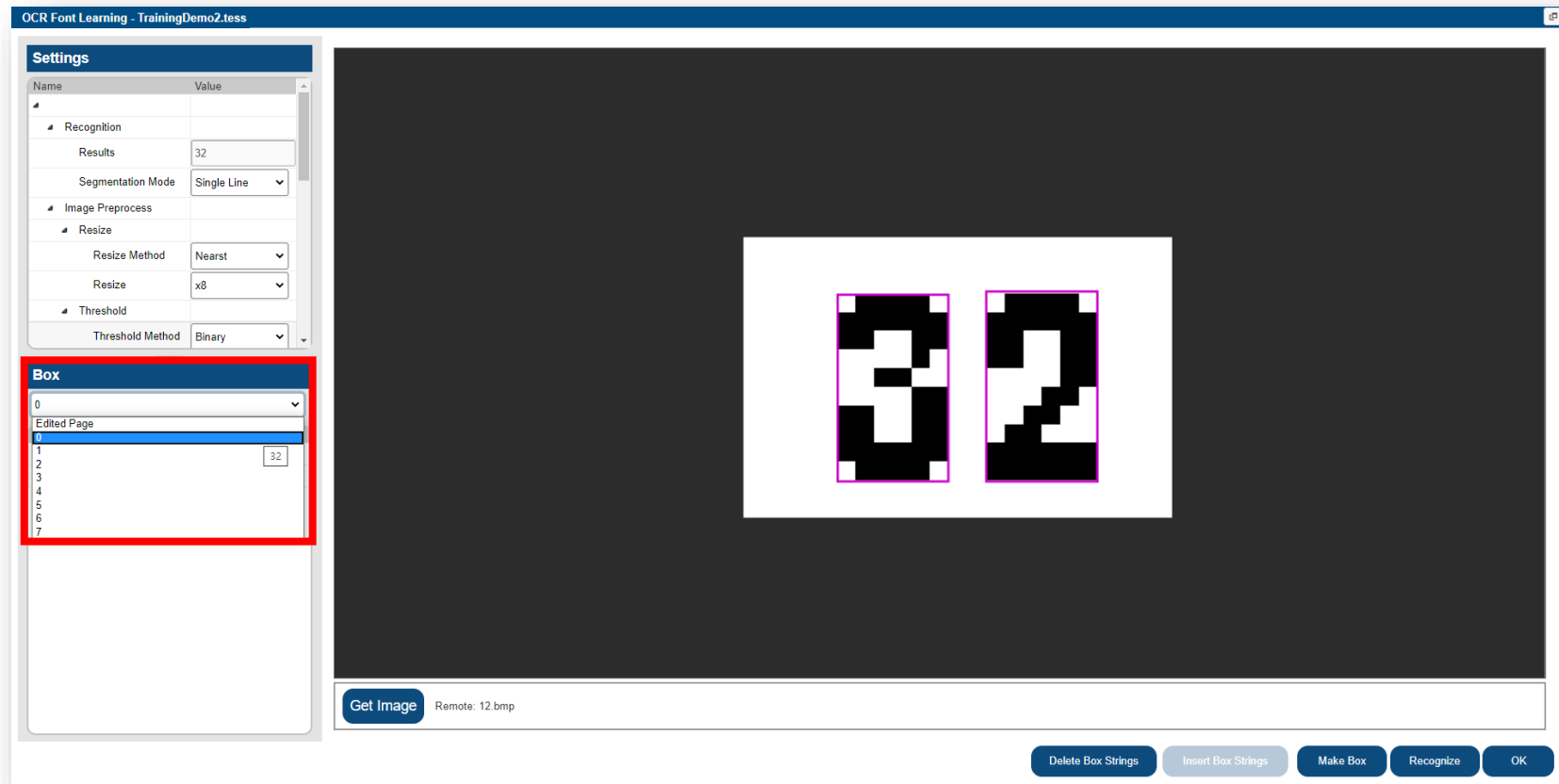
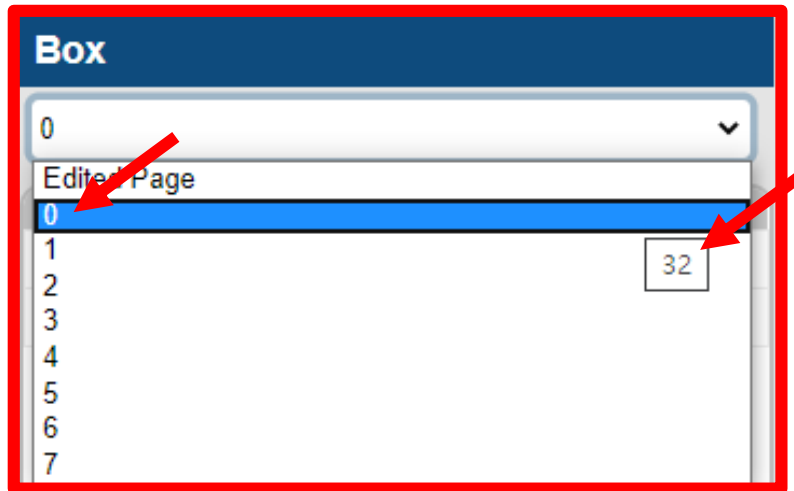
5. **Set Box Parameter:** After box setting is completed, click on **Recognize** → Confirm whether the recognition result in Result field is correct or not.



# Build Project – Font Learning

- **General: Learn OCR Font**

6. **Set Box Parameter:** Open the dropdown menu of box list and follow the previous steps to set all boxes well. Move cursor to the box index, the character of the box will show up. It is recommended that all boxes' size and threshold parameters should be the same.



# Build Project – Font Learning

- **General: Learn OCR Font**

6. **Create Trained Font File:** User can modify the File Name → Click on **Generate**, to generate the trained font file, which is later used in recognizing processes → Click on **Finish**

The screenshot displays the 'OCR Font Learning - TrainingDemo2.tess' application window. On the left, the 'Settings' panel shows the 'Font Project' section with 'Current Font Project' set to 'test.tess' and 'Learnt Characters' as 'a2,14,10,19,2e,s,6,7'. The 'Generate' button is highlighted with a red arrow and the number '6'. Below the settings is a 'Box' section with a table of character coordinates.

Char	Coordinates
3	40 24 47 80
2	103 22 47 81

The main area shows a 'Generate' dialog box with 'Name:' set to 'TrainingDemo2'. A red arrow points from the 'Generate' button in the settings to this dialog box. Another red arrow points from the 'OK' button in the dialog box to a 'Success' message box on the right. The 'Success' box contains a green checkmark icon and the text: 'Generate the font successfully: /opt/VIC7000/user\_ocr\_fonts/TrainingDemo2.traineddata'. At the bottom of the application window, there are buttons for 'Get Image', 'Delete Box Strings', 'Insert Box Strings', 'Make Box', 'Recognize', and 'OK'.



# Build Project – Font Learning

- **General: Learn OCR Font**
  - **Keep Learning:** After saving the font project or generating trained font file, move cursor to Learnt Characters field and the characters that the font project has learnt will show up. If it is needed, font project can learn more characters.

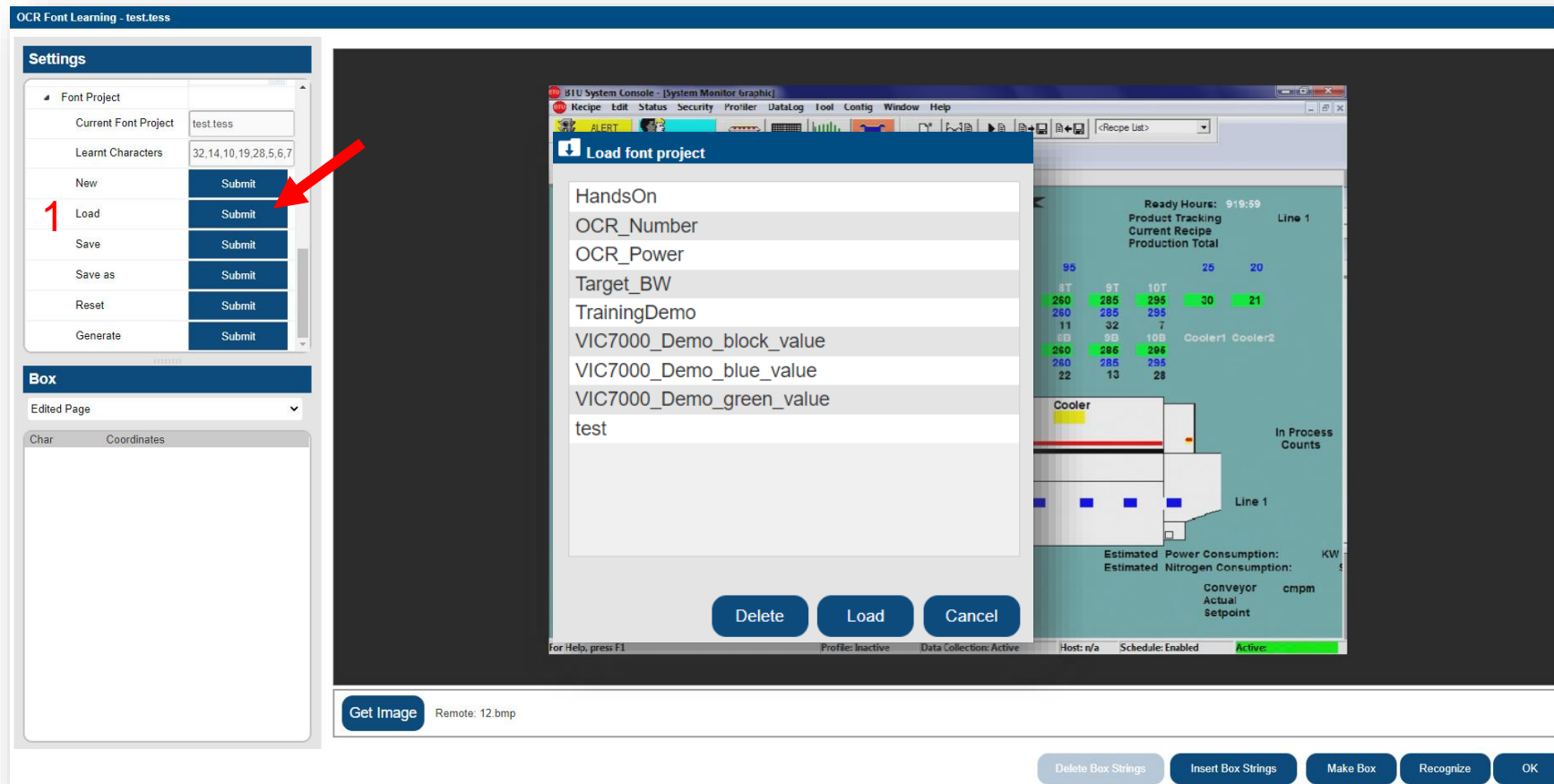
The screenshot displays the 'OCR Font Learning - test.tess' window. The 'Settings' panel on the left shows the 'Current Font Project' as 'test.tess' and the 'Learnt Characters' field containing '32,14,10,19,28,5,6,7'. The 'Learnt Characters' field is highlighted with a red box. Below the 'Settings' panel, a detailed view of the 'Learnt Characters' field is shown, with a red box highlighting the 'New' button and the 'Learnt Characters' field itself. The main area of the window shows a 'Pyramax' system monitor interface with various data points and a 'Get Image' button at the bottom.

Settings	
Font Project	
Current Font Project	test.tess
Learnt Characters	32,14,10,19,28,5,6,7
New	32 omit
Load	14 omit
Save	10 omit
Save as	19 omit
Reset	28 omit
Generate	5 omit

Learnt Characters	
32,14,10,19,28,5,6,7	
New	32 omit
Load	14 omit
Save	10 omit
Save as	19 omit

# Build Project – Font Learning

- General: Learn OCR Font
  - **Keep Learning**: Load font project to learn more characters
    1. Load: Load font file with **Load** button in Font Learning window



# Build Project – Font Learning

- **General: Learn OCR Font**

- **Keep Learning:** Load font project to learn more characters

2. Direct Load: Directly load font project whose name is same with the name of font file used in recognition config page

**Get Data** **OCR**

**Recognition Method**

Matching target

**Settings**

OCR Font

Segmentation Mo Single Line

Select Font Font File

Load Font Submit

2 Font File test.traineddata

Learn Font Submit

**OCR Font Learning - test.tess**

**Settings**

Font Project

Current Font Project test.tess

Learnt Characters 32,14,10,19,28,5,6,7

New Submit

Load Submit

Save Submit

Save as Submit

Reset Submit

# Build Project – Font Learning

- General: Learn OCR Font

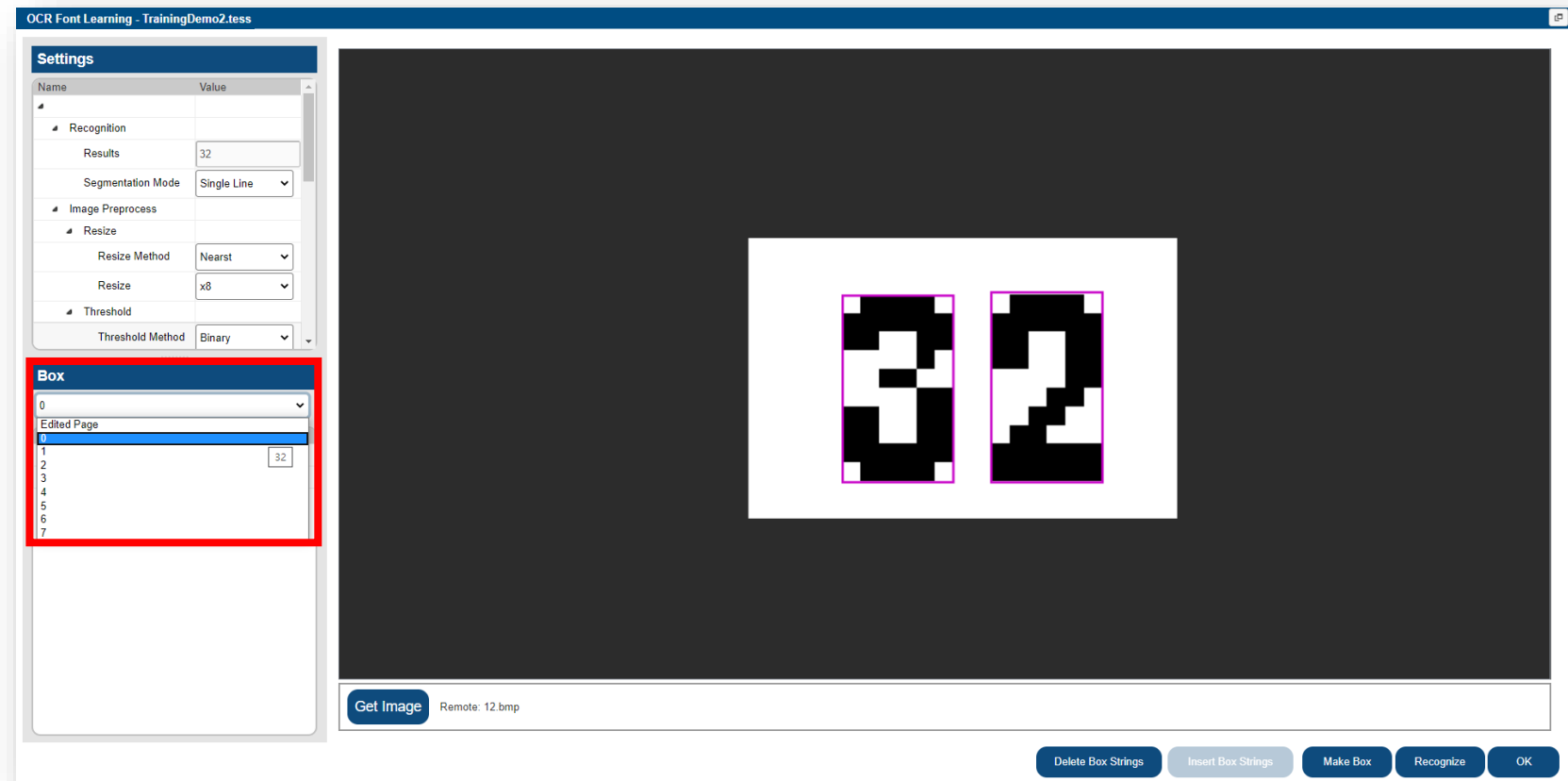
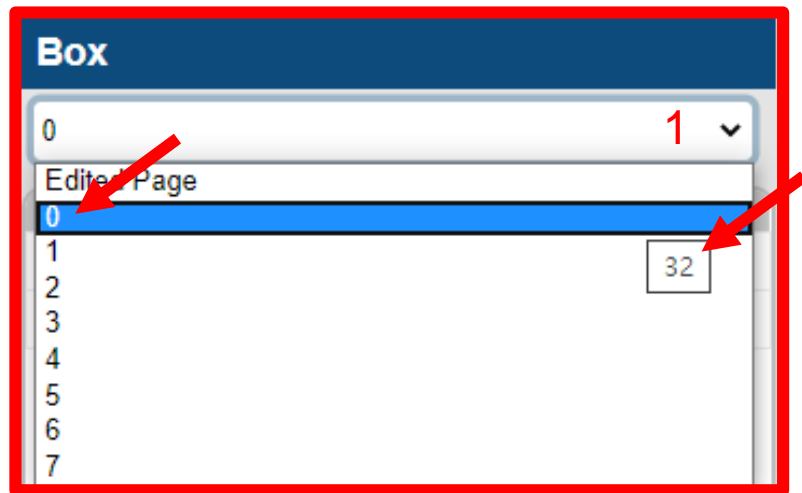
- **Keep Learning:** New and Set ROI in Edited Page → Insert Box Strings → Edit Box → Generate trained font file

The screenshot displays the 'OCR Font Learning - test.tess' application interface. It is divided into several sections:

- Settings Panel (Left):** Contains a list of actions: 'Learnt Characters' (32,14,10,19,28,5,6,7), 'New', 'Load', 'Save', 'Save as', 'Reset', and 'Generate'. Each action has a corresponding 'Submit' button. A red arrow labeled '4' points to the 'Generate' button.
- Box Panel (Left):** Features a dropdown menu currently set to 'Edited Page'. A red arrow labeled '3' points to this dropdown.
- Main System Monitor (Right):** Displays a 'Pyramax' system monitor for 'Customer ID: NoxVIC' and 'System ID: VIC7100'. It shows various data points like 'Setpoint', 'Actual', 'Setpoint', and 'Power' for different zones (1T, 2T, 3T, 4T, 5T, 6T, 7T, 8T, 9T, 10T). A red arrow labeled '1' points to a 'New ROI' button overlaid on the monitor.
- Bottom Panel:** Includes a 'Get Image' button (Remote: 12.bmp) and a row of buttons: 'Delete Box Strings', 'Insert Box Strings' (highlighted with a red arrow labeled '2'), 'Make Box', 'Recognize', and 'OK'.

# Build Project – Font Learning

- **General: Learn OCR Font**
  - **Edit Font Project:** Open the dropdown menu of box list and follow the previous steps to set all boxes well. Move cursor to the box index, the character of the box will show up. select the box which is needed to be edited.



# Build Project – Font Learning

- **General: Learn OCR Font**
  - **Edit Font Project:** Modify the character in box → Click on **Recognize** to confirm the recognition result → Click on **Generate** to generate trained font file.



# Build Project – Font Learning

- General: Learn OCR Font

8. **Finish Learning**: Click **OK** to close Font Learning window



# Build Project – Font Learning

- **General: Learn OCR Font**

- 8. **Finish Learning:** Back to OCR config page

The screenshot displays the nexVIC interface. On the left is the 'OCR' configuration panel, and on the right is the 'Pyramax' system monitor window.

**OCR Configuration Panel:**

- Get Data** | **OCR**
- Recognition Method**: Matching target
- Settings**:
  - Threshold Method: Binary
  - Threshold Algo: OTSU
  - Threshold Value: 120
  - OCR Font**:
    - Segmentation Mode: Single Line
    - Select Font: Font File
    - Load Font: Submit
    - Font File: TrainingDemo2.tra
    - Learn Font: Submit
  - Chart**:
    - Use Chart: ☐
    - Chart Maximum N: 60
    - Moving Average L: ☐
    - Standard Deviation: 1
- Result**:
  - Char: Recognition Rate(%)
  - Buttons: Stop, Start, Get Image, Simulate

**Pyramax System Monitor Window:**

Customer ID: NexVIC | System ID: VIC7100 | Ready Hours: 919:59 | Line 1

Setpoint	55	75	90	95	25	20
Zone 1T	112	120	125	155	165	190
Actual	110	125	125	155	165	195
Setpoint	10	14	13	8	10	12
Power	10	14	13	8	10	12
Zone 1B	110	110	125	155	165	195
Actual	110	110	125	155	165	195
Setpoint	18	13	32	6	7	10
Power	18	13	32	6	7	10

**O2 Levels:** Sample port --> PPM -->

**Active Recipe:** Source, Zone 1, Zone 6, Zone 10, Cooler

**Nitrogen Status:** On

**Scheduler Status:** Event based recipe or sequence pending.

**Estimated Power Consumption:** KW

**Estimated Nitrogen Consumption:** cpm

**Conveyor Actual Setpoint:** mm

**For Help, press F1** | Profile: Inactive | Data Collection: Active | Host: n/a | Schedule: Enabled | Active: Active

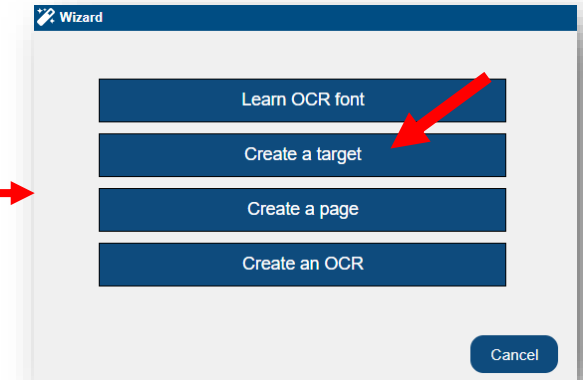


# Build Project – Target

- **Wizard: Create a target**

1. Data Source

From File or From Capture Card



The "Create a target" wizard screen features a dark blue header with the title "Create a target" and a share icon. Below the header is a horizontal progress bar with five steps: "1. Data Source", "2. Source Settings", "3. Recognition", "4. Get Image", and "5. Simulate". The "1. Data Source" step is currently active. Under the "Data Source" label, there is a dropdown menu showing "From File" with a downward arrow. Below the dropdown, the options "From File" and "From Capture Card" are listed. A red box highlights the "From File" option, and another red box highlights the "From Capture Card" option. To the right of these options, the text "From File" and "From Capture Card" is displayed in a large, stylized font, also enclosed in a red box. At the bottom right, there are three buttons: "Previous", "Next", and "Cancel". A red arrow points to the "Next" button.

# Build Project – Target

- **Wizard: Create a target**

- 2. Source Settings

From File: Image folder Path, Read interval

From Capture Card: Video input signal type, Capture frame rate

The screenshot shows the 'Create a target' wizard with five steps: 1. Data Source, 2. Source Settings, 3. Recognition, 4. Get Image, and 5. Simulate. Step 2 is active. It contains two input fields: 'Image Folder' with the value '/opt/VIC7000/Training Sample' and 'Interval (ms)' with the value '1000'. A blue 'Submit' button is located to the right of the 'Image Folder' field. Red arrows point to the 'Submit' button and the 'Interval (ms)' input field.

The screenshot shows the 'Create a target' wizard with five steps: 1. Data Source, 2. Source Settings, 3. Recognition, 4. Get Image, and 5. Simulate. Step 2 is active. It contains three input fields: 'Video Signal' with the value 'false', 'Video Input' with a dropdown menu showing 'DVI\_A (RGB / VGA)', and 'Capture Frame Rate' with a value of '2'. A blue 'Next' button is located at the bottom right, next to 'Previous' and 'Cancel' buttons. Red arrows point to the 'Video Input' dropdown menu, the 'Capture Frame Rate' input field, and the 'Next' button.

# Build Project – Target

- **Wizard: Create a target**

- 3. Recognition

1. **Matching target**: Automatically select recognition page based on target matching result
2. **Specify page**: Directly specify the page to use

Create a target

1. Data Source 2. Source Settings 3. Recognition 4. Get Image 5. Simulate

Recognition Method

Matching target ▼

Matching target

01  
02  
03

Matching target 1

01 2  
02  
03

Previous Next Cancel

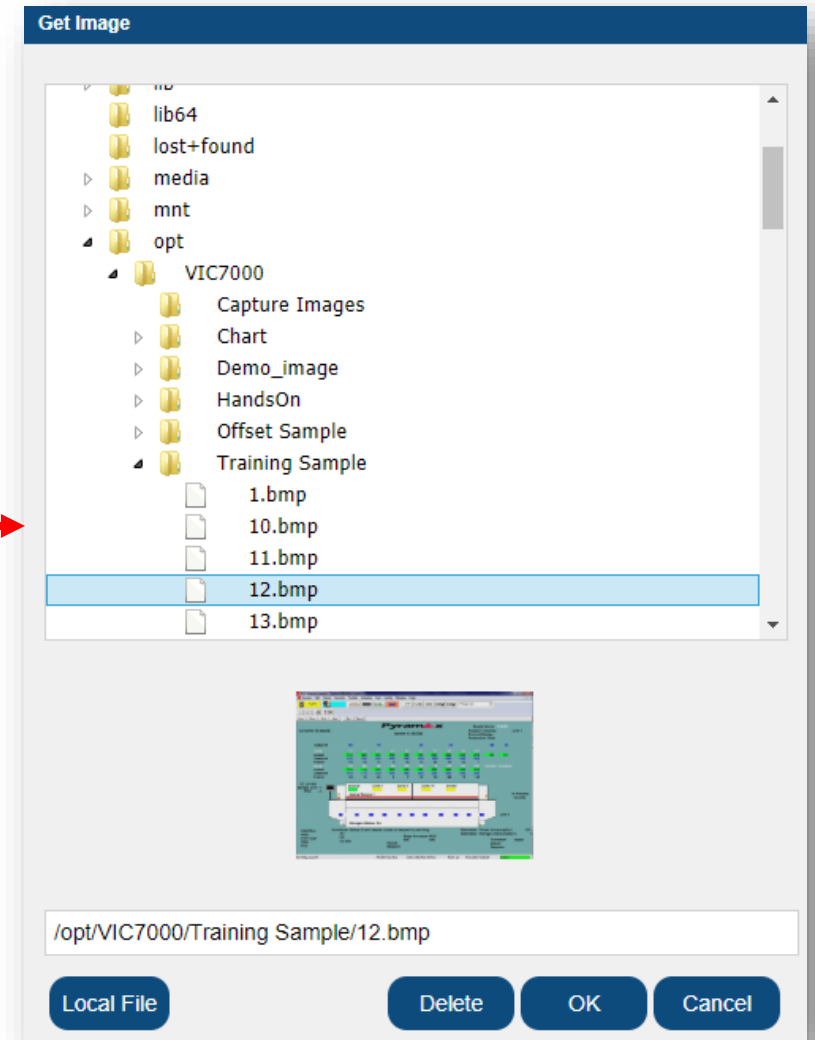
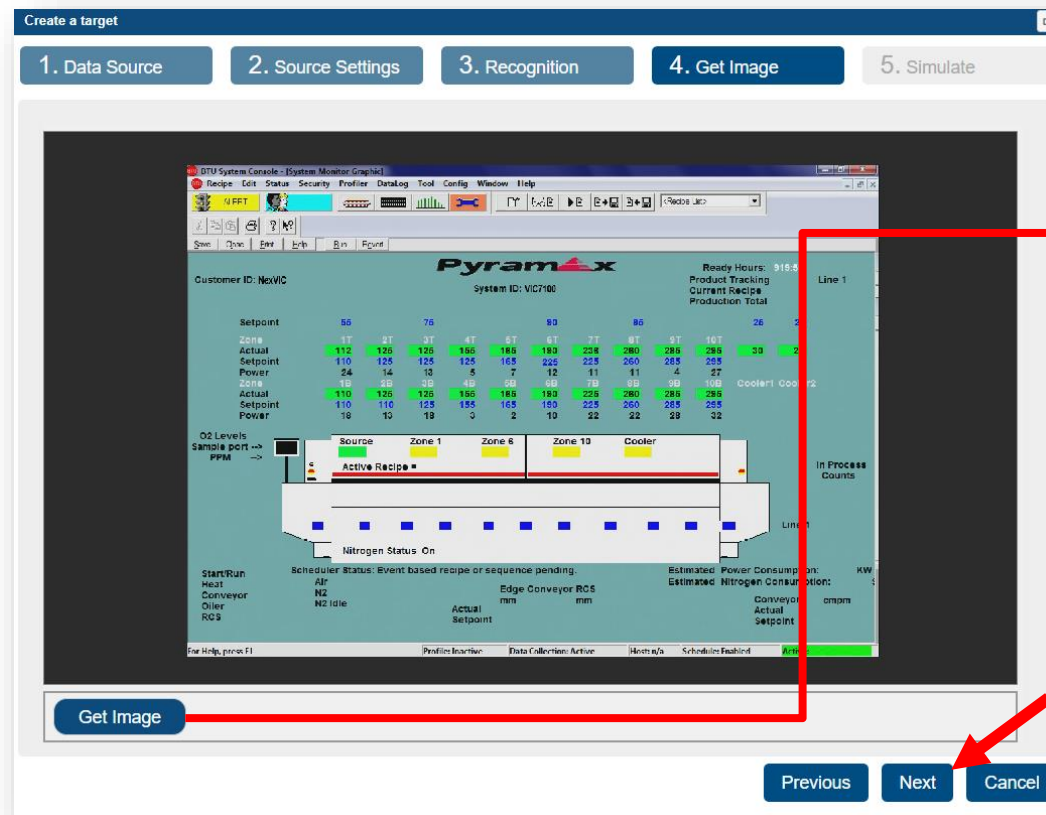
# Build Project – Target

- Wizard: Create a target

## 4. Get Image

From File: Read images from local or remote folders

From Capture Card: Get an image from the capture card



# Build Project – Target

- **Wizard: Create a target**

- 5. **Simulate**

Right-click on an image and click **New ROI** (or Click **New ROI**) → relocate and resize the ROI → Right-click on the image and click **Set ROI** (or Click **Set ROI**)



# Build Project – Target

- Wizard: Create a target

- 5. Simulate

Click **Load Font** → Select a font file for recognition process → Click **Load**



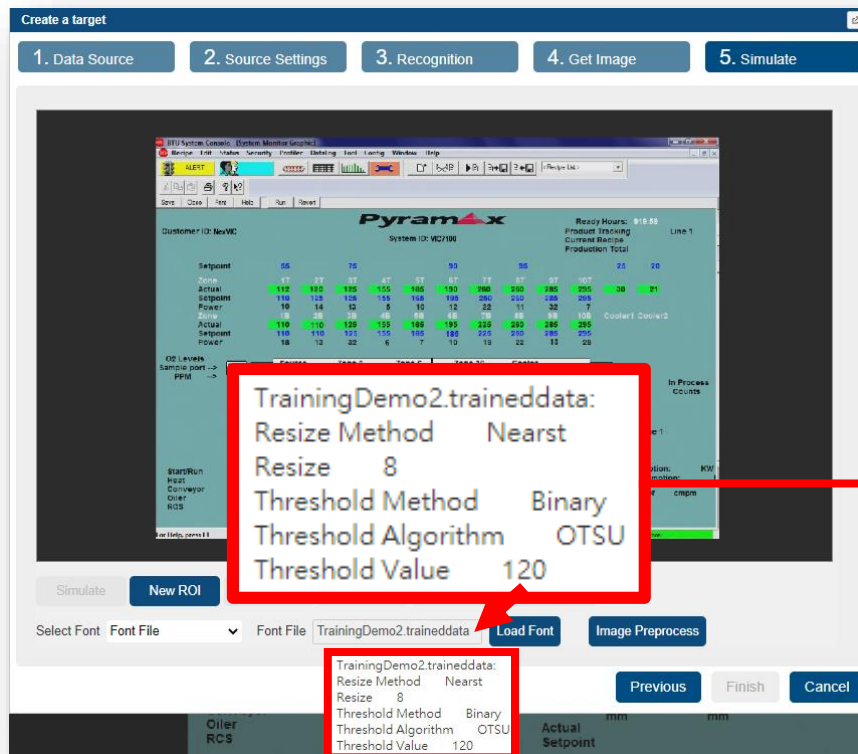
# Build Project – Target

- Wizard: Create a target

- 5. Simulate

Click on **Image Preprocess** → Set image preprocess parameters. It is recommended to be the same with the ones in font file → Click **OK**

Move cursor to the font file field, and the preprocess parameters will show up.

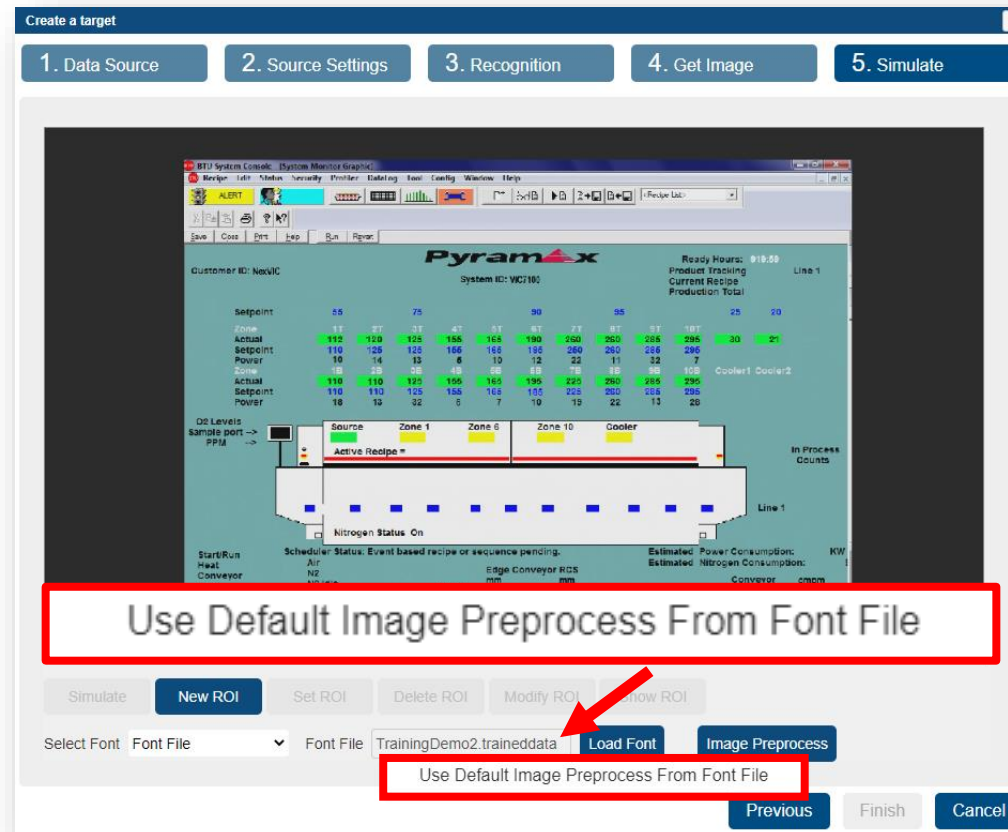


# Build Project – Target

- Wizard: Create a target

- 5. Simulate

Right click on font file field and select **Use Font Preprocess**, it can help setting image preprocess parameters smoother.





# Build Project – Target

- Wizard: Create a target

- 5. Simulate

Click **Simulate** → Confirm the recognition result, which is used as **TARGETs**

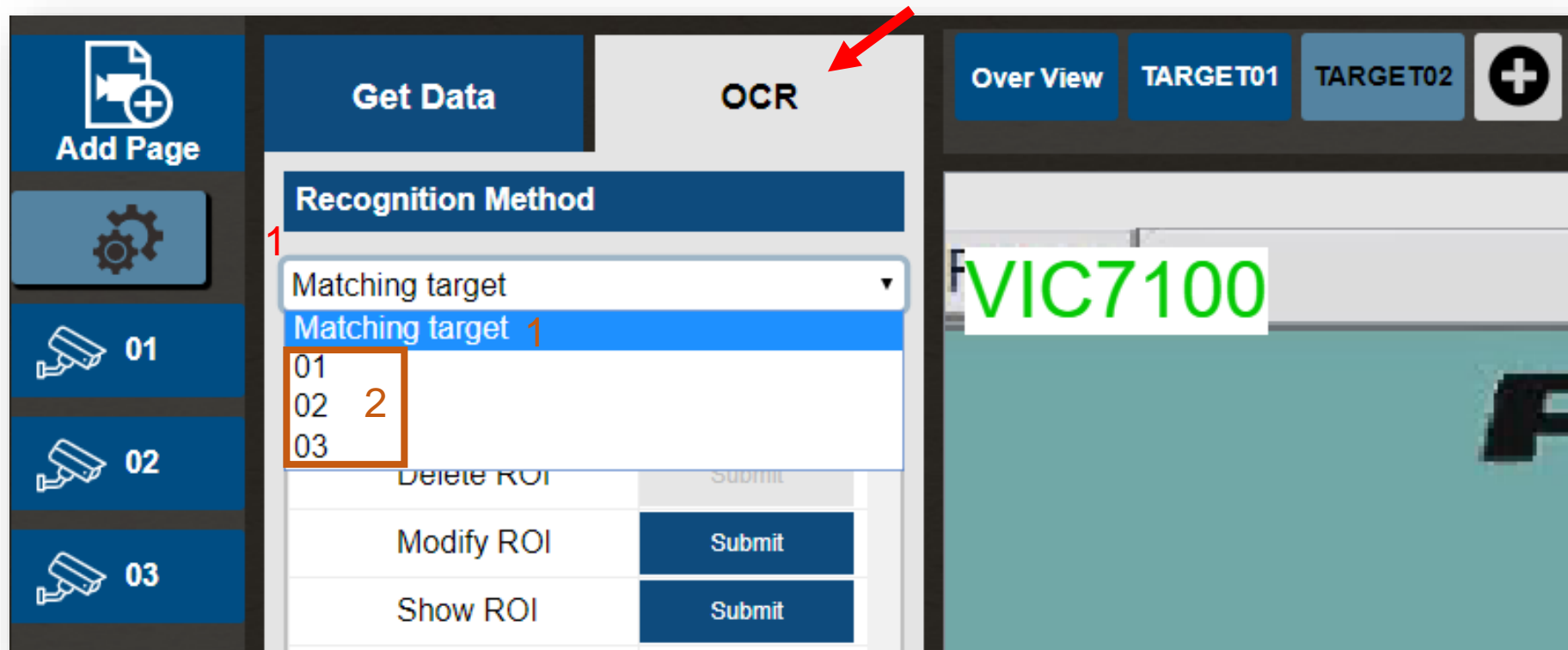


# Build Project – Target

- **General: Create a Target**

- 1. Recognition Method

- 1. **Matching target**: Automatically select recognition page based on target matching result
    - 2. **Specify page**: Directly specify the page to use

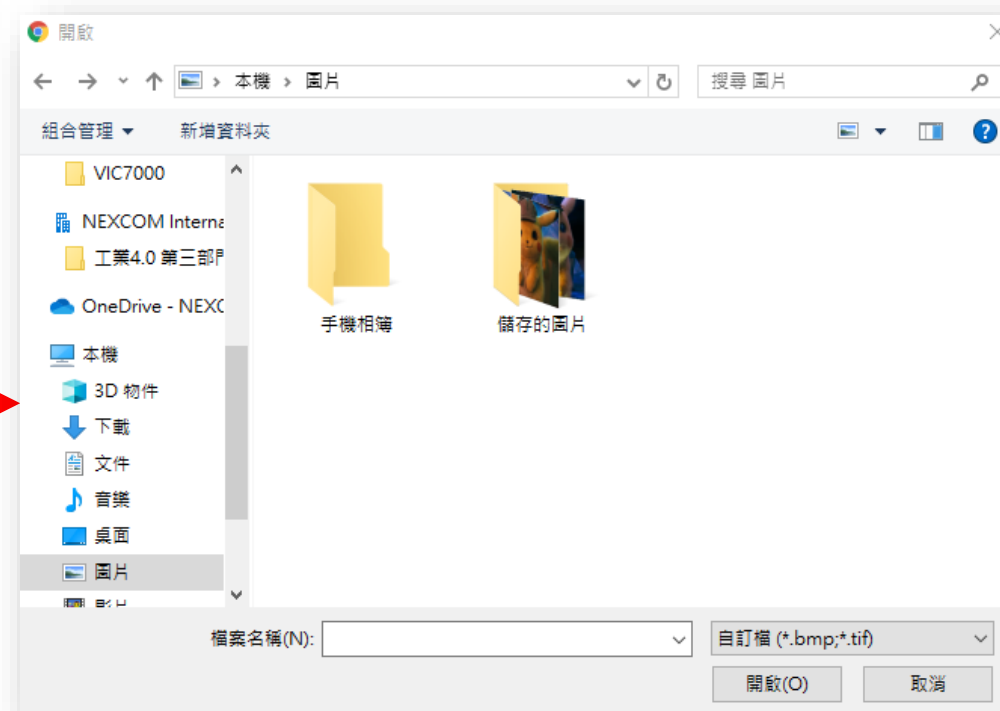
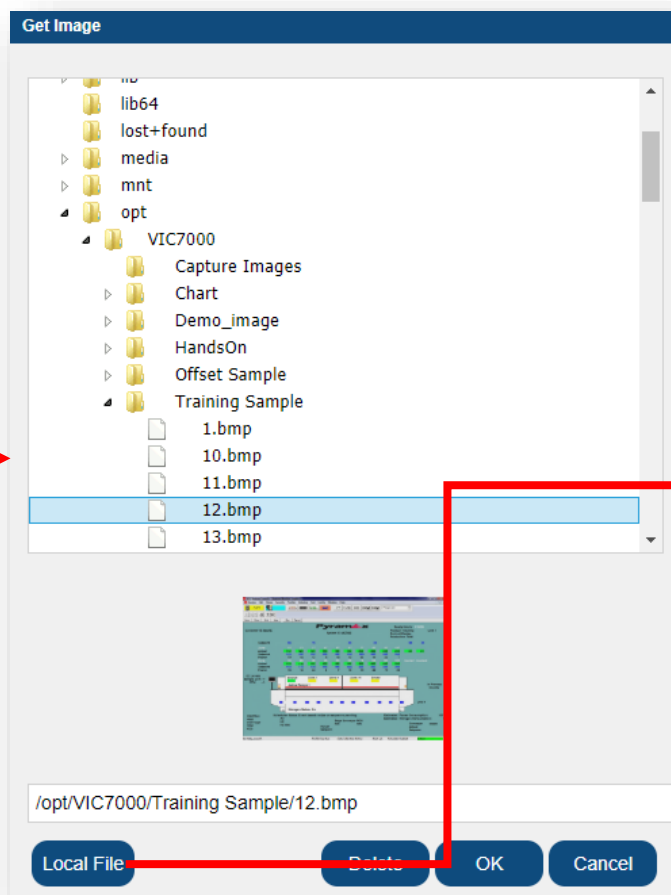
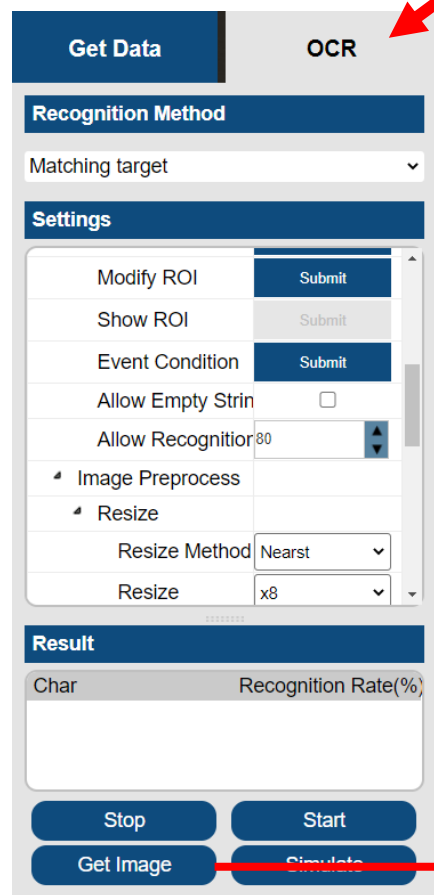


# Build Project – Target

- **General: Create a Target**

- 2. **Get Image**

- a. **From File:** Read images from a local folder or a remote folder



- ## 2. Get Image

b. **From Capture Card:** Get an image from capture card

2

# Build Project – Target

- **General: Create a Target**

3. **New ROI**: Right-click on the image and select **New ROI** (or Click **New ROI**)

The screenshot displays the nexVIC software interface. On the left, the 'Settings' panel is visible, featuring a 'New ROI' button highlighted with a red arrow and the number '3'. The main window shows a 'System Monitor Graphic' with a red box labeled '3 New ROI' and a 'New ROI' button highlighted by a red box. The interface includes various data tables and status indicators.

Setpoint	55	75	5	25	20
Zone 1T	110	125	125	155	165
Zone 1B	110	125	125	155	165
Zone 2T	110	125	125	155	165
Zone 2B	110	125	125	155	165
Zone 3T	110	125	125	155	165
Zone 3B	110	125	125	155	165
Zone 4T	110	125	125	155	165
Zone 4B	110	125	125	155	165
Zone 5T	110	125	125	155	165
Zone 5B	110	125	125	155	165
Zone 6T	110	125	125	155	165
Zone 6B	110	125	125	155	165
Zone 7T	110	125	125	155	165
Zone 7B	110	125	125	155	165
Zone 8T	110	125	125	155	165
Zone 8B	110	125	125	155	165
Zone 9T	110	125	125	155	165
Zone 9B	110	125	125	155	165
Zone 10T	110	125	125	155	165
Zone 10B	110	125	125	155	165
Cooler1	110	125	125	155	165
Cooler2	110	125	125	155	165

Active Recipe =

Nitrogen Status: On

Scheduler Status: Event based recipe or sequence pending.

Estimated Power Consumption: KW

Estimated Nitrogen Consumption: cpm

Conveyor Actual Setpoint

# Build Project – Target

- **General: Create a Target**

4. **Set ROI**: Resize location and size of ROI → Right-click on image and click **Set ROI**  
(or Click **Set ROI**)

The screenshot displays the neXVIC software interface. On the left, the 'Settings' panel is visible, featuring a 'Set ROI' button highlighted with a red arrow and the number '4'. The main window shows a 'Pyramax' system monitor with a 'NexVIC' logo. A red box highlights the 'Set ROI' button in the context menu, and another red box highlights the 'Set ROI 4' button in the bottom right. A blue box highlights the 'NexVIC' logo in the main window.



- 5. Load Font:** Click **Load Font** → Select a font file used for recognition → Click **Load**



# Build Project – Target

- **General: Create a Target**

6. **Image Preprocess**: Set image preprocess parameters. It is recommended to be same with the ones in font file. Move cursor to the font file field, and the preprocess parameter of the font file will show up.

The screenshot shows the nexVIC software interface. The 'Settings' panel on the left has a red box around the 'Image Preprocess' section. A red arrow points to the 'Font File' field. A red box highlights the 'Image Preprocess' settings in the 'TARGET01' panel. A red box highlights the 'Font File' field and the 'TrainingDemo2.traineddata' file. A red box highlights the 'TrainingDemo2.traineddata' file details.

**Image Preprocess Settings:**

- Resize Method: Nearst
- Resize: x8
- Threshold Method: Binary
- Threshold Algorithm: OTSU
- Threshold Value: 120

**Font File Details:**

TrainingDemo2.traineddata:  
Resize Method: Nearst  
Resize: 8  
Threshold Method: Binary  
Threshold Algorithm: OTSU  
Threshold Value: 120



# Build Project – Target

- **General: Create a Target**

6. **Image Preprocess**: Right click on font file field and select **Use Font Preprocess**, it can help setting image preprocess parameters smoother.

The screenshot displays the nexVIC software interface. On the left, the 'OCR' settings panel is visible, with the 'Image Preprocess' section highlighted by a red box. This section includes options for 'Resize Method' (Nearst), 'Resize' (x8), 'Threshold Method' (Binary), 'Threshold Algorithm' (OTSU), and 'Threshold Value' (120). Below this, the 'OCR Font' section is also visible, with 'Segmentation Mode' set to 'Single Line' and 'Select Font' set to 'Font File'. A red arrow points from the 'Font File' field to a button labeled 'Use Font Preprocess'. A large red box at the bottom of the image contains the text 'Use Font Preprocess'.

The main window shows the 'Pyramax' system monitor. It displays various data points for different zones and coolers, including setpoints, actual values, and power consumption. The 'Active Recipe' is shown as 'Zone 1', 'Zone 6', 'Zone 10', and 'Cooler'. The 'In Process Counts' are also visible.

7. **Simulate**: Click **Simulate** → Confirm the recognition result, which is used as **TARGET**

96.19ms

# Build Project – Target

- **General: Create a Target**

- **Multiple Target:** Click **Add** icon → Repeat the aforementioned steps to create Targets

The screenshot displays the nexVIC software interface with the following components and annotations:

- Top Bar:** Includes 'Get Data' and 'OCR' tabs. The 'TARGET01' tab is active, with a red arrow (1) pointing to the '+' icon to add a new target.
- Recognition Method:** A dropdown menu showing 'Matching target'.
- Settings Panel:** Contains several sections with 'Submit' buttons:
  - Input Parameters:** Fields for Name (TARGET01), ROI-X, ROI-Y, ROI-Width, ROI-Height, New ROI, Set ROI, Delete ROI, Modify ROI, Show ROI, and Event Condition. A red arrow (3) points to the 'Submit' button for 'New ROI'.
  - OCR Font:** Fields for Segmentation Mode (Single Line), Select Font (English), Load Font, Font File, and Learn Font. A red arrow (4) points to the 'Submit' button for 'Load Font'.
  - Chart:** A section for chart settings. A red arrow (5) points to the 'Submit' button.
  - Resize:** Fields for Resize Method (Nearst), Resize (x1), Threshold, Threshold Method (Binary), Threshold Algorithm (OTSU), and Threshold Value (120). A red arrow (6) points to the 'Submit' button.
- Result Panel:** A section for the recognition result. A red arrow (7) points to the 'Start' button.
- Main Display:** A large window showing a 'Pyramax' system monitor graphic. It displays various data points, including Setpoint, Actual, and Power for different zones (1T, 2T, 3T, 4T, 5T, 6T, 7T, 8T, 9T, 10T). It also shows 'O2 Levels', 'Active Recipe', and 'Nitrogen Status'.

# Build Project – Target

- General: Create a Target\_Color

3. Create a TARGET\_COLOR: Move cursor to **Add** icon → Select **Color**

The screenshot displays the BTU System Console interface. On the left, the 'OCR' tab is active, showing 'Recognition Method' as 'Matching target' and 'Settings' for 'ROI X Offset' and 'ROI Y Offset', both set to 0. The 'Result' section is empty. The main area shows a 'Pyramax' system monitor graphic with a data table and a process flow diagram.

**OCR Settings:**

Name	Value
ROI X Offset	0
ROI Y Offset	0

**System Monitor Data Table:**

Setpoint	55	75	80	95	25	20
Zone	1T	2T	3T	4T	5T	6T
Actual	110	125	125	155	165	180
Setpoint	110	125	135	135	185	190
Power	13	2	25	34	8	30
Zone	1B	2B	3B	4B	5B	6B
Actual	110	125	125	155	165	180
Setpoint	110	125	125	145	165	180
Power	16	27	16	23	15	20

**Process Flow Diagram:**

Source → Zone 1 → Zone 6 → Zone 10 → Cooler

Active Recipe =

Nitrogen Status: On

Scheduler Status: Event based recipe or sequence pending.

Estimated Power Consumption: KW

Estimated Nitrogen Consumption: cmm

Conveyor Actual Setpoint



4. **New ROI**: Right-click on image and click **New ROI** (or Click **New ROI** )

# IoT

# Build Project – Target

- **General: Create a Target\_Color**

5. **Set ROI**: Resize and relocate the ROI → Right-click on the image and select **Set ROI** (or Click **Set ROI**). The average RGB value of the ROI will be automatically obtained and be set as matching color

The screenshot displays the nexVIC software interface. On the left, the 'Get Data' sidebar is visible, featuring a 'Recognition Method' dropdown set to 'Matching target' and a 'Settings' section. The 'Settings' section includes a table for 'Input Parameters' and a 'Matching Parameter' section. The 'Matching Parameter' section has a 'Color Picker' dropdown and a 'Set ROI' button. A red arrow points from the 'Set ROI' button in the sidebar to the 'Set ROI' dialog box. The main window shows a 'Pyramax' system monitor with a red ROI box. A red box highlights the 'Set ROI' dialog box, which contains the text 'Set ROI' and 'Save Image (\*.bmp)'. A red box highlights the 'Matching Parameter' table, which lists 'Color Picker', 'Red', 'Green', and 'Blue' with corresponding values. A red box highlights the 'Set ROI' button in the sidebar.

Name	Value
ROI-X	168
ROI-Y	173
ROI-Width	99
ROI-Height	53
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit

Matching Parameter	
Color Picker	
Red	105
Green	155
Blue	154

# Build Project – Target

- **General: Create a Target\_Color**

6. **Set Matching Tolerance and Result Output:** Set **Matching Tolerance** (RGB±) → Enter

## Matching Result Output

The screenshot displays the neXVIO software interface. On the left, the 'Get Data' tab is active, showing the 'OCR' section. Under 'Recognition Method', 'Matching target' is selected. The 'Settings' section includes fields for 'ROI-Height' (53), 'New ROI', 'Set ROI', 'Delete ROI', 'Modify ROI', and 'Show ROI', each with a 'Submit' button. Below these, the 'Matching Parameters' section is expanded, showing a 'Color Picker' with 'Red' (105), 'Green' (155), and 'Blue' (154) values. The 'Matching Tolerance' dropdown is highlighted with a red box, showing options: 'Matching Tolerance', 'Matching Output true', and 'No Matching Output false'. The 'Matching Output' dropdown is also highlighted with a red box, showing options: 'true' and 'false'. At the bottom, there are buttons for 'Stop', 'Start', 'Get Image', and 'Simulate'. The main area shows a factory floor simulation with various equipment and status indicators. A red box highlights the 'Matching Tolerance' and 'Matching Output' dropdowns, with a red '6' next to the 'Matching Output true' option.

# Build Project – Target

- General: Create a Target\_Color

7. **Simulate**: Click **Simulate** → Confirm matching result, which is used as **TARGET\_COLOR**

The screenshot displays the Pyramax system monitor interface. On the left, a sidebar contains a 'Settings' section with a 'Color Picker' and a 'Simulate' button. A red arrow points to the 'Simulate' button. The main display area shows a 'Pyramax' system monitor window. At the top of this window, a green box highlights the text 'true' and the color code '(105,155,154)', with a red arrow pointing to it. Below this, the interface shows various system parameters, including 'Setpoint', 'Actual', and 'Power' for different zones, and a 'Scheduler Status' section. The bottom right corner of the image shows a green box with the text '0.01ms'.

0.01ms



# Build Project – Target

- **General: Create a Target\_Color**
  - **Assign color matching:** Click **Color Picker** → Enable eyedropper tool → Select the desired matching color in the image → The matching color will be set up automatically and confirm if it is correct.

The screenshot displays the nexVIC software interface. On the left, the 'Get Data' tab is active, showing the 'Recognition Method' as 'Matching target' and the 'Settings' section. The 'Color Picker' tool is selected under 'Matching Parameter'. A red arrow points to the 'Color Picker' button. In the center, the 'Pyramax' system monitor is visible, showing various parameters like Setpoint, Actual, and Power. A red arrow points to the 'Color Picker' tool's eyedropper icon. On the right, a 'Matching Parameter' dialog box is open, showing the selected color (Red) and its corresponding value (180). The dialog box also shows 'Green' (24) and 'Blue' (65) with their respective values. The background image shows a target color (Red) being selected from a target image.

Matching Parameter	
Color Picker	
Red	180
Green	24
Blue	65

- **Multiple Target\_color**: Click **Add** icon → repeat the aforementioned steps to create Target\_colors

The screenshot shows the Pyramax software interface. On the left, a sidebar contains a 'Get Data' button (1), a 'Recognition Method' dropdown (2) with 'OCR' selected (3), a 'Color Picker' (4) with values for Red (22), Green (21), and Blue (211), a 'Matching Tolerances' section (5) with 'Matching Output' set to 'true' (6), and 'Stop', 'Start', 'Get Image', and 'Simulate' buttons (7). The main window displays a detailed process control screen for a Pyramax system, showing various parameters like Setpoint, Actual, Power, and O2 Levels. A green box highlights the text 'true (22,21,211)' in the top left corner of the main window. A red arrow points to the '0.00ms' text in the bottom right corner.

# Build Project – Target

- **General: Create a Target\_Pattern**

3. Create a **TARGET\_PATTERN**: Move cursor to **Add** icon → select **Pattern**

The screenshot displays the nexVIC software interface. On the left, there is a sidebar with 'Get Data' and 'OCR' tabs. The 'OCR' tab is active, showing 'Recognition Method' (Matching target) and 'Settings' (ROI X Offset, ROI Y Offset). Below this is a 'Result' section. The main area shows 'Over View' and 'TARGET01' tabs. A red arrow points to the 'Add' icon (a plus sign) in the top bar, which has opened a dropdown menu with options: 'OCR', 'Color', and 'Pattern'. A red number '3' is placed above the 'Pattern' option. In the background, a window titled 'VIC7000 Demo Sample' is visible, showing a table of data.

Product ID	Quantity	Temperature	Voltage	Time	Result
1	549	-11.67 °C	8.6 V	1103 ms	Pass
2	337	-11.20 °C	18.5 V	681 ms	NG
3	878	-14.43 °C	3.9 V	1756 ms	Pass
4	733	14.24 °C	-3.4 V	1469 ms	Pass
5	316	26.68 °C	14.5 V	640 ms	NG
6	460	5.06 °C	0.1 V	926 ms	NG
7	583	-2.14 °C	-0.1 V	1171 ms	Pass
8	536	-11.82 °C	8.7 V	1077 ms	Pass
9	614	0.27 °C	6.7 V	1232 ms	Pass
10	510	26.98 °C	1.1 V	1025 ms	NG
11	582	3.85 °C	7.0 V	1169 ms	Pass
12	732	-10.66 °C	-3.5 V	1466 ms	Pass

# Build Project – Target

- **General: Create a Target\_Pattern**

4. **New ROI**: Right-click on the image and select **New ROI** (or Click **New ROI**)

The screenshot displays the nexVIC software interface. On the left, the 'Settings' panel is visible, showing a table of input parameters. A red arrow points to the 'New ROI' button, which is highlighted with a red box and the number '4'. The main window shows a dark image with a rainbow. A context menu is open over the image, with 'New ROI' selected and highlighted with a red box. A table of data is overlaid on the image, showing product information and test results.

Product ID	Quantity	Temperature	Voltage	Time	Result
1	549	-11.67 °C	8.6 V	1103 ms	Pass
2	337	-11.20 °C	18.5 V	681 ms	NG
3	878	-14.43 °C	3.9 V	1756 ms	Pass
4	733	14.24 °C	-3.4 V	1469 ms	Pass
5	316	26.68 °C	14.5 V	640 ms	NG
6	460	5.06 °C	0.1 V	926 ms	NG
7	583	-2.14 °C	-0.1 V	1171 ms	Pass
8	536	-11.82 °C	8.7 V	1077 ms	Pass
9	614	0.27 °C	6.7 V	1232 ms	Pass
10	510	26.98 °C	1.1 V	1025 ms	NG
11	582	3.85 °C	7.0 V	1169 ms	Pass
12	732	-10.66 °C	-3.5 V	1466 ms	Pass



# Build Project – Target

- **General: Create a Target\_Pattern**

5. **Set ROI**: adjust the location and size of the ROI → Right-click on image and select **Set ROI**  
(or Click **Set ROI**)

**Get Data** **OCR**

**Recognition Method**

Matching target

**Settings**

Name Value

Input Parameters

Name TARGET\_PATTER

ROI-X 0

ROI-Y 0

ROI-Width 840

ROI-Height 528

New ROI Submit

Set ROI Submit

**Result**

Name Value

Stop Start

Get Image Simulate

Over View **TARGET01** TARGET\_PATTERN01

(255,438)

VIC7000 Demo Sample

List Image

Product ID Quantity Temperature

1	549	-11
2	337	-11
3	878	-14
4	733	14
5	316	26

Set ROI

Save Image (\*.bmp)

5 Set ROI

VIC7000 Demo Sample

List Image

Product ID Quantity Temperature

1	549	-11
2	337	-11
3	878	-14
4	733	14
5	316	26

0.27 °C 0.7 V 1252 ms Pass

0.28 °C 1.1 V 1025 ms NO

0.28 °C 7.0 V 1169 ms Pass

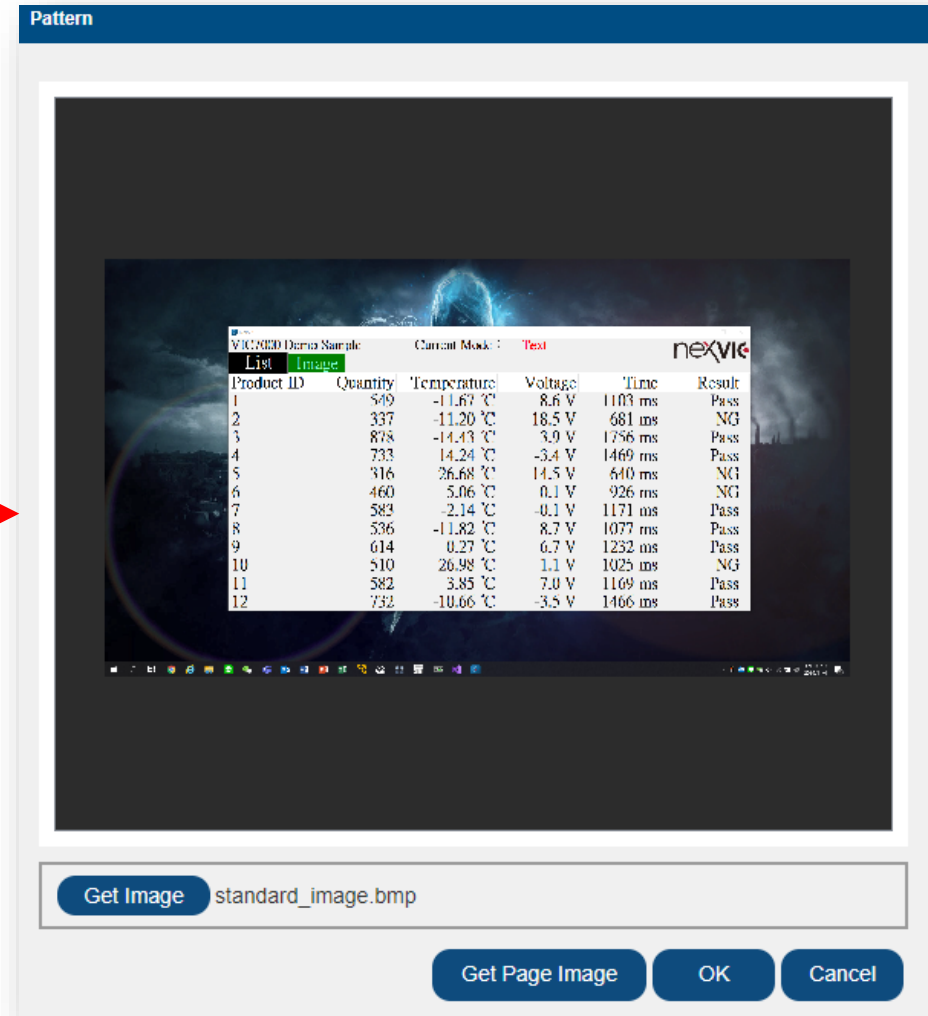
0.28 °C -3.5 V 1466 ms Pass

NEXIOT

# Build Project – Target

- **General: Create a Target\_Pattern**

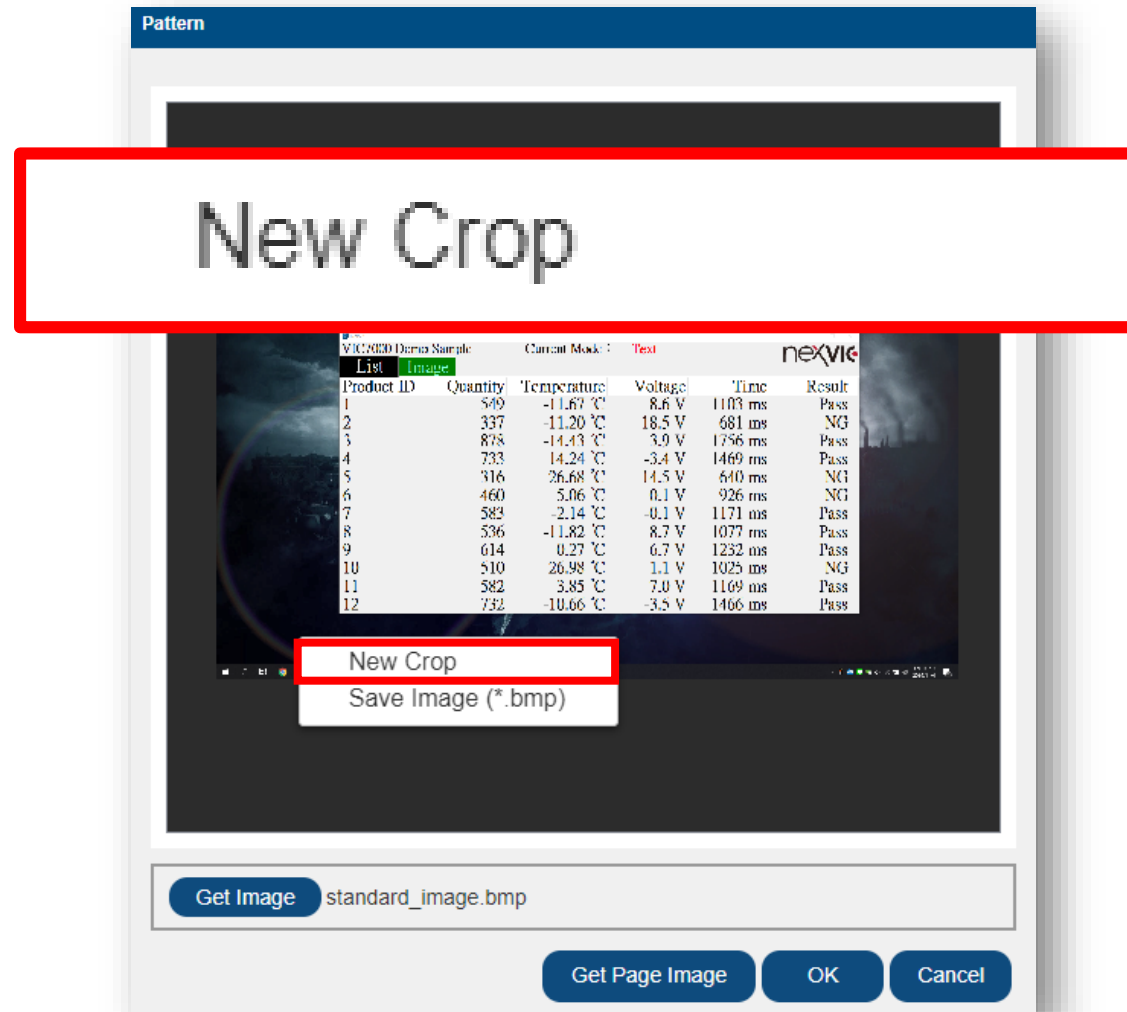
6. **Load Matching Pattern**: Click **Pattern Load** → User can enter **Pattern** window, and the image will be loaded automatically



# Build Project – Target

- **General: Create a Target\_Pattern**

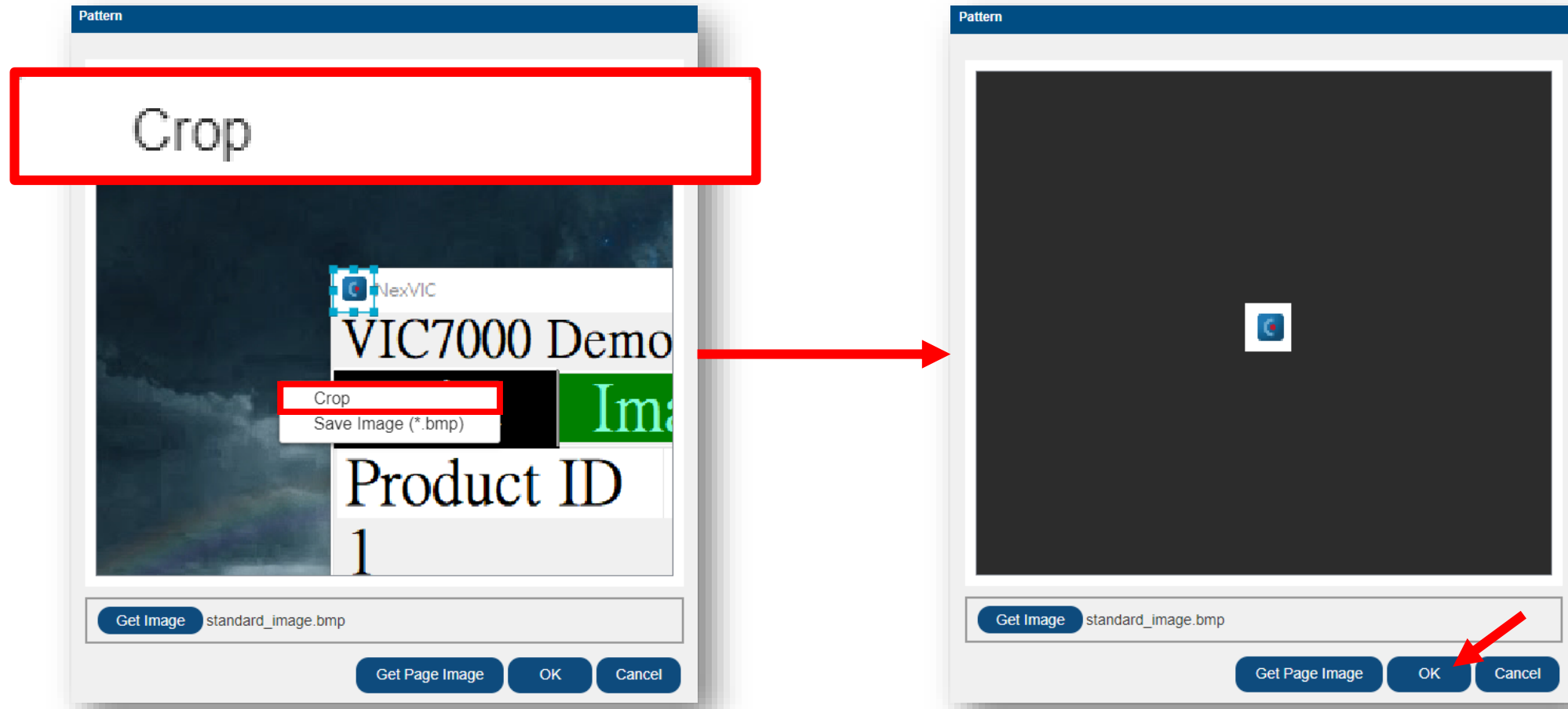
6. **Load Matching Pattern:** Right-click on the image → Select **New Crop**



# Build Project – Target

- **General: Create a Target\_Pattern**

6. **Load Matching Pattern:** Circle the matching pattern → Right-click on the image → Select **Crop** → **OK**





# Build Project – Target

- **General: Create a Target\_Pattern**

7. **Set Matching Result Output:** Enter **Matching Result Output**

The screenshot displays the 'TARGET\_PATTERN01' configuration page in the nexVIO interface. The left sidebar contains a 'Settings' section with a red box highlighting the 'Matching Output' (true) and 'No Matching Output' (false) fields. A red box with the number '7' is also present. The main area shows a video feed with a bounding box and coordinates (-96,792). A table on the right lists sample data.

No Sample	Cur
1	549
2	337
3	878
4	733
5	316
6	460
7	583
8	536

# Build Project – Target

- **General: Create a Target\_Pattern**

8. **Simulate**: It's recommended to use Gray Matching, it will speed up recognition speed.

Click **Simulate** → Confirm matching result, which is used as **TARGET\_PATTERN**

The screenshot displays the nexVIC software interface with several key elements highlighted by red boxes and arrows:

- Settings Panel (Left):** The 'Recognition Method' is set to 'Matching target'. Under 'Settings', 'Gray Matching' is checked. The 'Submit' button is visible.
- Result Panel (Bottom Left):** A table shows the match results:

Name	Value
Match	
Score	0.996686
X	318
Y	175
- Simulation Area (Center):** A large image of a city at night with a rainbow is shown. A red box highlights the 'Gray Matching 8' label, and another red box highlights the 'Simulate' button. A red arrow points from the 'Simulate' button to the 'true' label in the top left corner of the simulation area.
- Target Pattern Preview (Right):** A red box highlights a preview of the target pattern, which is a 'VIC' logo with a blue square icon.

The interface also shows a 'List' tab with a table of product data:

Product ID	Quantity	Temp
1	549	-1
2	337	-1
3	878	-1
4	733	1
5	316	2
6	460	
7	583	-2.14 °C
8	536	11.82 °C

# Build Project – Target

- **General**

- **Displacement Detection:** Based on the position of TARGET\_PATTERN on the image where Target\_Pattern is set

**Detect Page Displacement:** Make ROI of Targets and Target\_Colors move in consistent with the position of TARGET\_PATTERN

**Detect Displacement:** Make ROI of the page that match TARGET\_PATTERN move with the position of TARGET\_PATTERN

Detect Page Displacement	<input type="checkbox"/>
Detect Displacement	<input type="checkbox"/>

Get Data	OCR
Recognition Method	
Matching target	
Settings	
Pattern Name	stand
Pattern X	317
Pattern Y	175
Pattern Width	27
Pattern Height	28
Minimum Score	0.9
Detect Page Displacement	<input type="checkbox"/>
Detect Displacement	<input type="checkbox"/>
Matching Output	true
No Matching Output	false

# Build Project – Target

- **General: Create a Target\_Pattern**

- **Multiple Target\_pattern:** Click **Add** icon → repeat the aforementioned steps to create Target\_patterns

The screenshot displays the nexVIC software interface for configuring a target pattern. The main window is titled 'TARGET\_PATTERN01' and contains a 'Settings' panel with various parameters. A 'Get Data' sidebar on the left includes a 'Recognition Method' dropdown set to 'Matching target' and a 'Settings' section with input parameters like 'Name', 'ROI-X', 'ROI-Y', 'ROI-Width', and 'ROI-Height'. The 'Result' section at the bottom has buttons for 'Stop', 'Start', 'Get Image', and 'Simulate'. A 'VIC7000 Demo Sample' window is open, showing a table of data with columns for Product ID, Quantity, Temperature, Voltage, Time, and Result. Red arrows and numbers 3 through 8 highlight specific steps in the configuration process: 3 points to the 'OCR' dropdown, 4 to the 'Submit' button for 'Pattern Load', 5 to the 'Submit' button for 'Set ROI', 6 to the 'Submit' button for 'Pattern Load', 7 to the 'Matching Output' checkbox, and 8 to the 'Start' button in the 'Result' section.

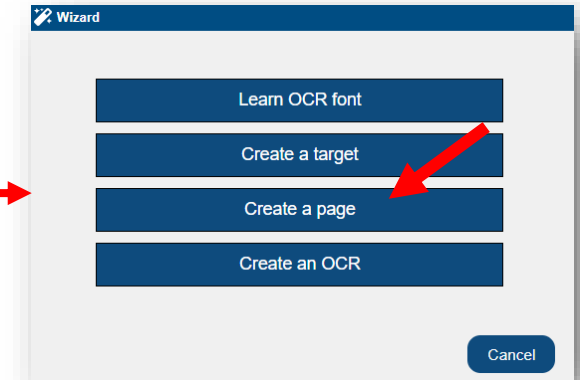
Product ID	Quantity	Temperature	Voltage	Time	Result
1	549	-11.67 °C	8.6 V	1103 ms	Pass
2	337	-11.20 °C	18.5 V	681 ms	NG
3	878	-14.43 °C	3.9 V	1756 ms	Pass
4	733	14.24 °C	-3.4 V	1469 ms	Pass
5	316	26.68 °C	14.5 V	640 ms	NG
6	460	5.06 °C	0.1 V	926 ms	NG
7	583	-2.14 °C	-0.1 V	1171 ms	Pass
8	536	-11.82 °C	8.7 V	1077 ms	Pass
9	614	0.27 °C	6.7 V	1232 ms	Pass
10	510	26.98 °C	1.1 V	1025 ms	NG
11	582	3.85 °C	7.0 V	1169 ms	Pass
12	732	-10.66 °C	-3.5 V	1466 ms	Pass

# Build Project – Page & Recognition

- **Wizard: Create a page**

- 1. Data Source

From File or From Capture Card



Create a page

1. Data Source    2. Source Settings    3. Targets    4. Get Image    5. Simulate

Data Source

From File ▼

From File

From Capture Card

From File

From Capture Card

Previous    Next    Cancel

# Build Project – Page & Recognition

- **Wizard: Create a page**

- 2. Source Settings

From File: Image folder Path, Read interval

From Capture Card: Video input signal type, Capture frame rate

The screenshot shows the 'Create a page' wizard with five steps: 1. Data Source, 2. Source Settings, 3. Targets, 4. Get Image, and 5. Simulate. Step 2 is active. It contains two input fields: 'Image Folder' with the value 'C:/VIC7000/Training Sample' and 'Interval (ms)' with the value '1000'. A blue 'Submit' button is located to the right of the 'Image Folder' field. Red arrows point to the 'Submit' button and the 'Interval (ms)' input field.

The screenshot shows the 'Create a page' wizard with five steps: 1. Data Source, 2. Source Settings, 3. Targets, 4. Get Image, and 5. Simulate. Step 2 is active. It contains three input fields: 'Video Signal' with the value 'false', 'Video Input' with a dropdown menu showing 'DVI\_A (RGB / VGA)', and 'Capture Frame Rate' with the value '2'. A blue 'Next' button is located at the bottom right, next to 'Previous' and 'Cancel' buttons. Red arrows point to the 'Video Input' dropdown menu, the 'Capture Frame Rate' input field, and the 'Next' button.

# Build Project – Page & Recognition

- **Wizard: Create a page**

3. **Targets:** Set TARGET matching logical operators and conditions

Create a page

1. Data Source 2. Source Settings 3. Targets 4. Get Image 5. Simulate

TARGET\_01

TARGET\_02

TARGET\_03

Legend:

- : Skip matching
- &&: AND
- ||: OR

Previous Next Cancel



- **Wizard: Create a page**

3. **Targets:** Set Target matching logical operators and conditions for the matching logical operators:

**:-** Skip matching this TARGET

**||**: Execute || first. If one of the TARGETs set with || is satisfied, the page is considered as matched successfully.

**&&**: When || is not satisfied then the && will be considered, the page will only be considered as successfully if all of the TARGETs set with && are satisfied

If more than one page matched successfully at the same time, the page with smaller index will be selected to be recognized.



# Build Project – Page & Recognition

- Wizard: Create a page

	TARGET01		TARGET02		TARGET03		Used Page
Actual Result	125		125		155		
PAGE01		120	&&	130	&&	155	
PAGE02		125	&&	125	&&	150	Use this page

	TARGET01		TARGET02		TARGET03		Used Page
Actual Result	125		125		155		
PAGE01	&&	120	&&	125	&&	155	
PAGE02		110	&&	125	&&	155	Use this page

# Build Project – Page & Recognition

- Wizard: Create a page

	TARGET01		TARGET02		TARGET03		Used Page
Actual Result	125		125		155		
PAGE01		120	&&	125	&&	155	Use this page
PAGE02		125	&&	125	&&	150	

	TARGET01		TARGET02		TARGET03		Used Page
Actual Result	125		125		155		
PAGE01		120	&&	125	&&	155	Use this page
PAGE02		110	&&	125	&&	155	

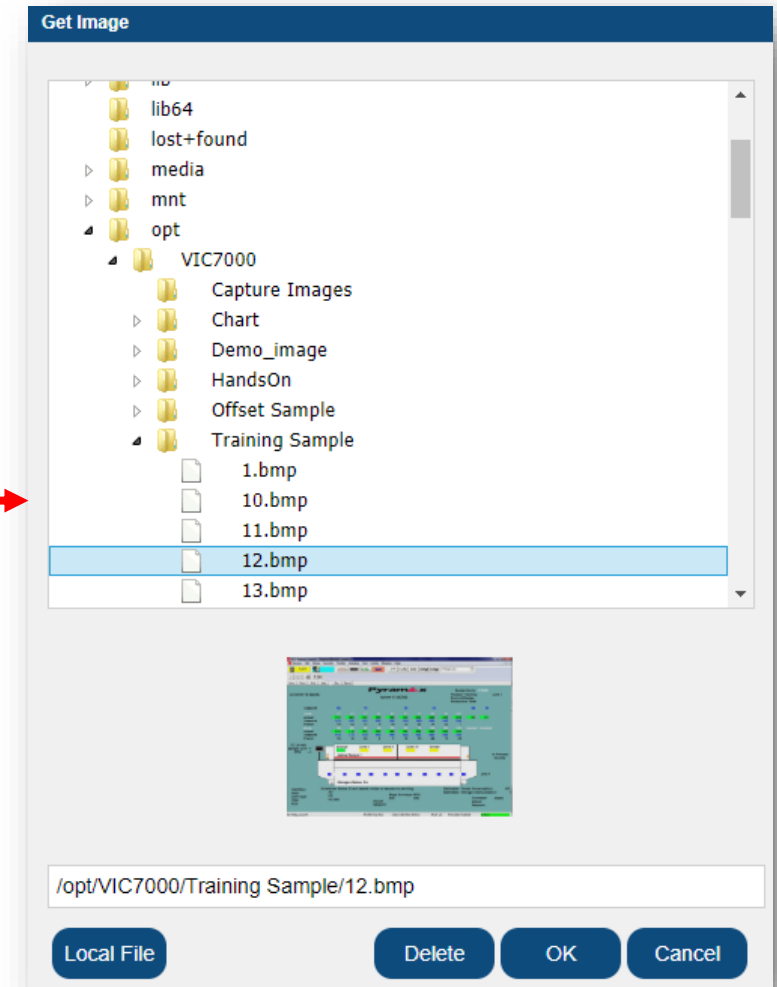
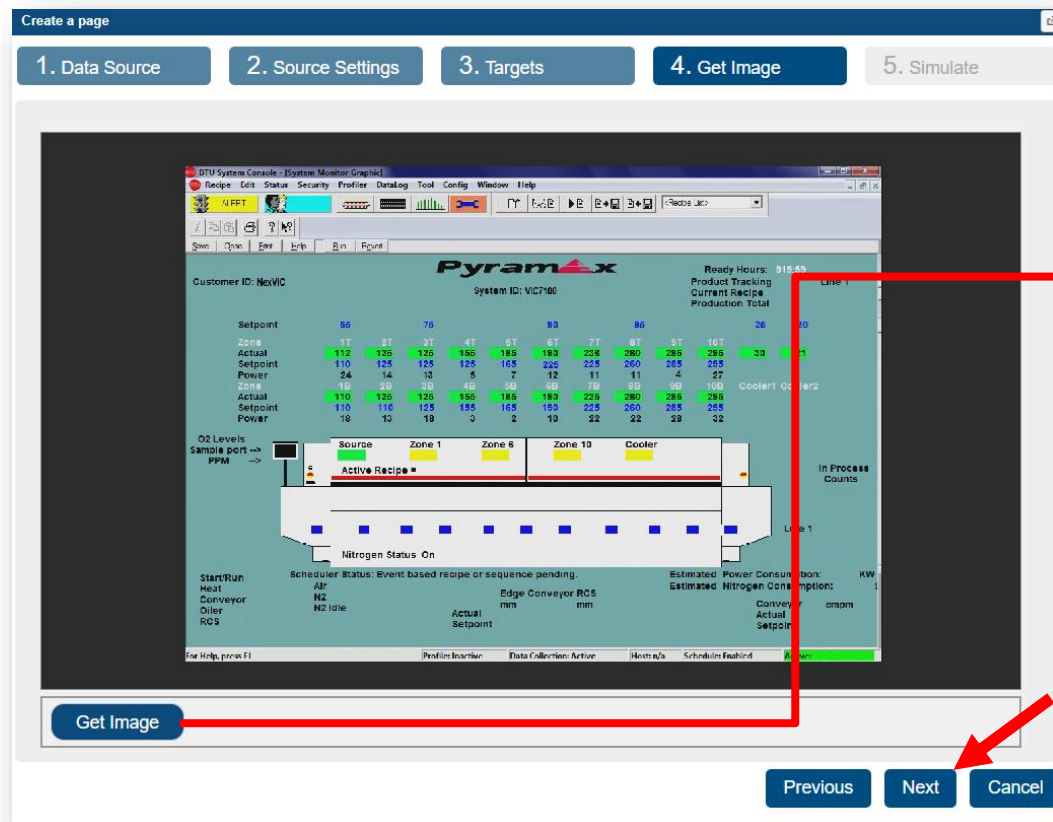
# Build Project – Page & Recognition

- Wizard: Create a page

## 4. Get Image

From File: Read images from a local or remote folder

From Capture Card: Get an image from capture card

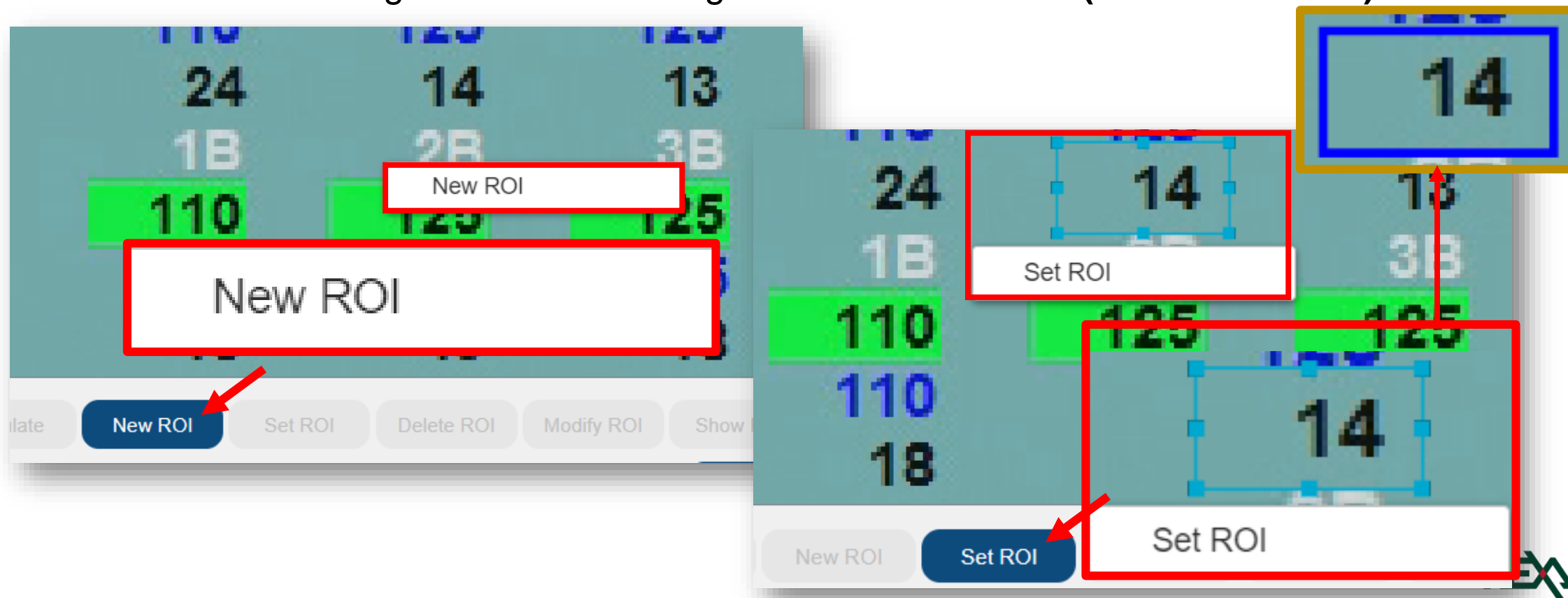


# Build Project – Page & Recognition

- **Wizard: Create a page**

- 5. **Simulate**

Right-click on the image then select **New ROI** (or Click **New ROI**) → adjust the location and size of the ROI → Right-click on the image and select **Set ROI** (or Click **Set ROI**)

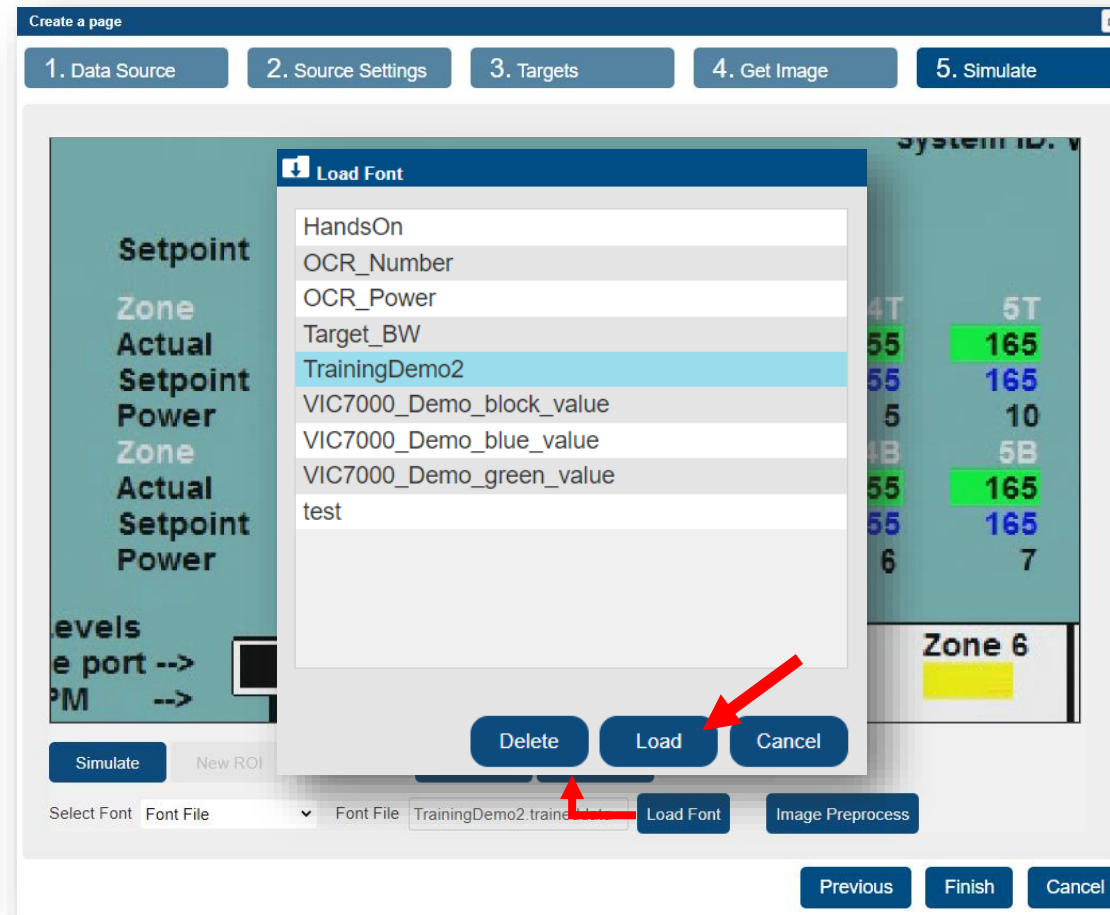


# Build Project – Page & Recognition

- **Wizard: Create a page**

- 5. Simulate

Click **Load Font** → Select a font file for recognition → Click **Load**



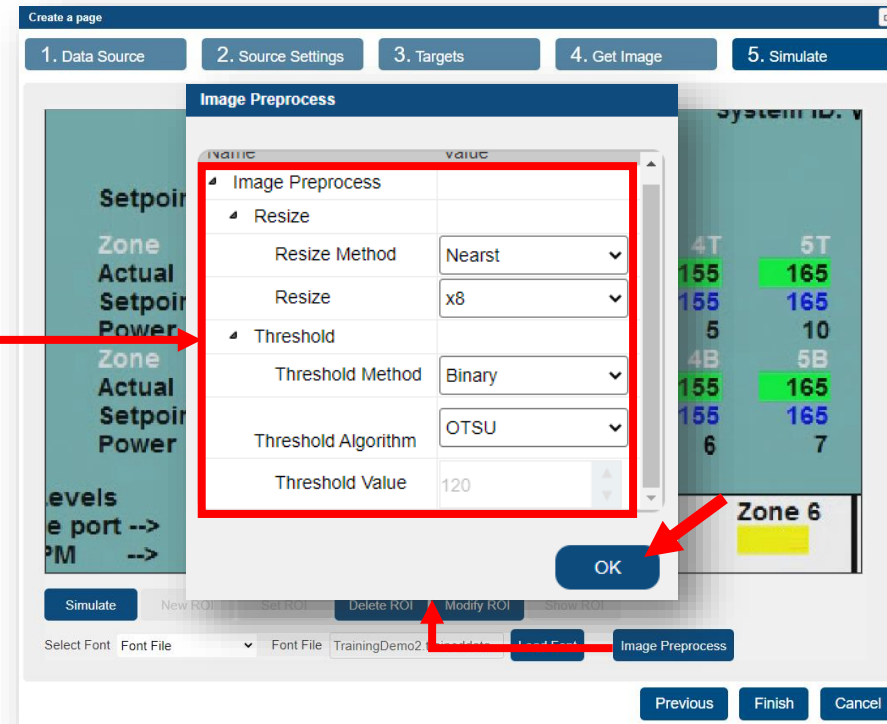
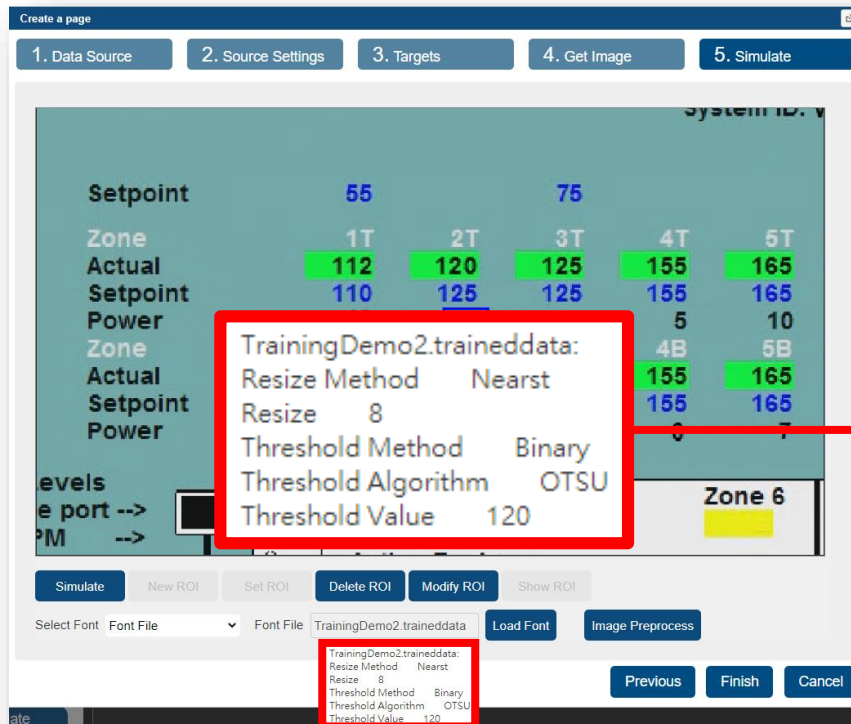
# Build Project – Page & Recognition

- **Wizard: Create a page**

- 5. Simulate

Click on **Image Preprocess** → Set image preprocess parameters. It is recommended to be same with ones in font file → Click on **OK**

Move cursor to the font file field, and the preprocess parameter of the font file will show up.

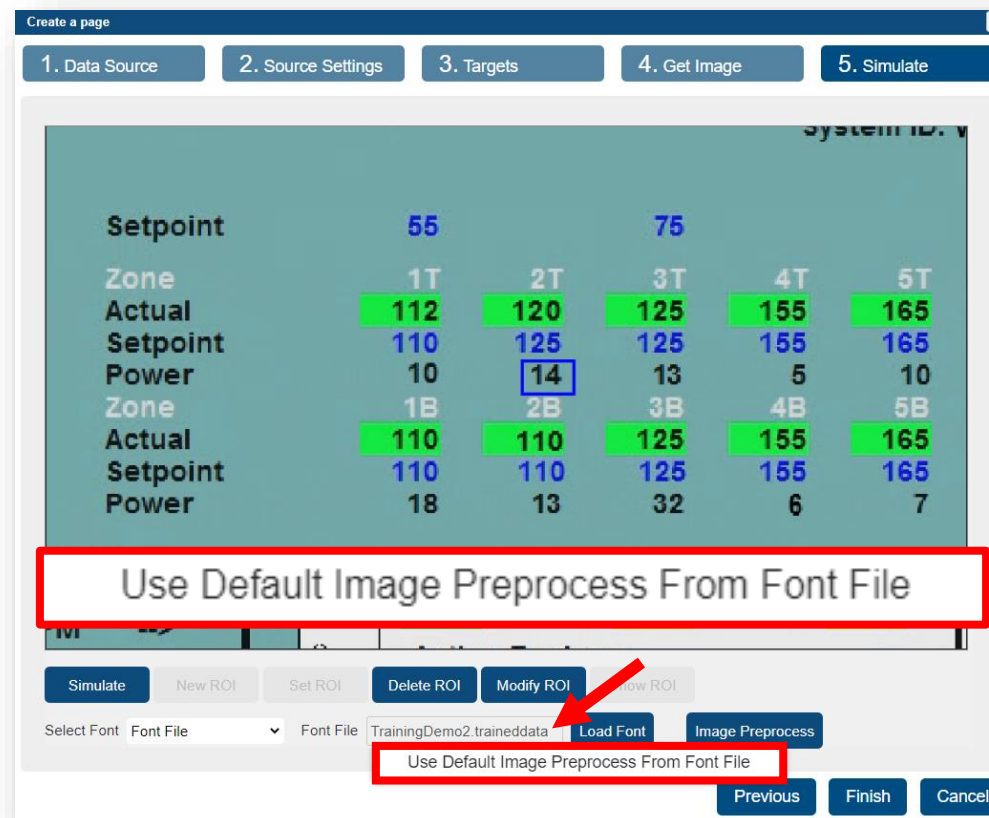


# Build Project – Page & Recognition

- **Wizard: Create a page**

- 5. Simulate

Right click on font file field and select Use Font Preprocess, it can set image preprocess parameters conveniently.



# Build Project – Page & Recognition

- Wizard: Create a page

- 5. Simulate

Click **Simulate** → Confirm the recognition result

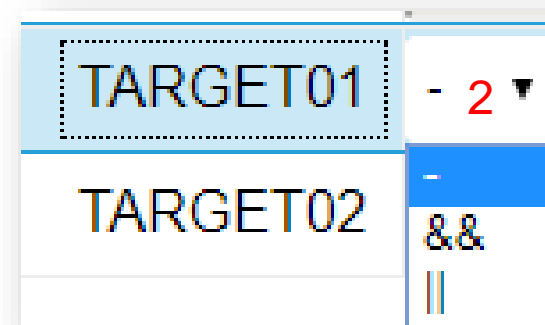
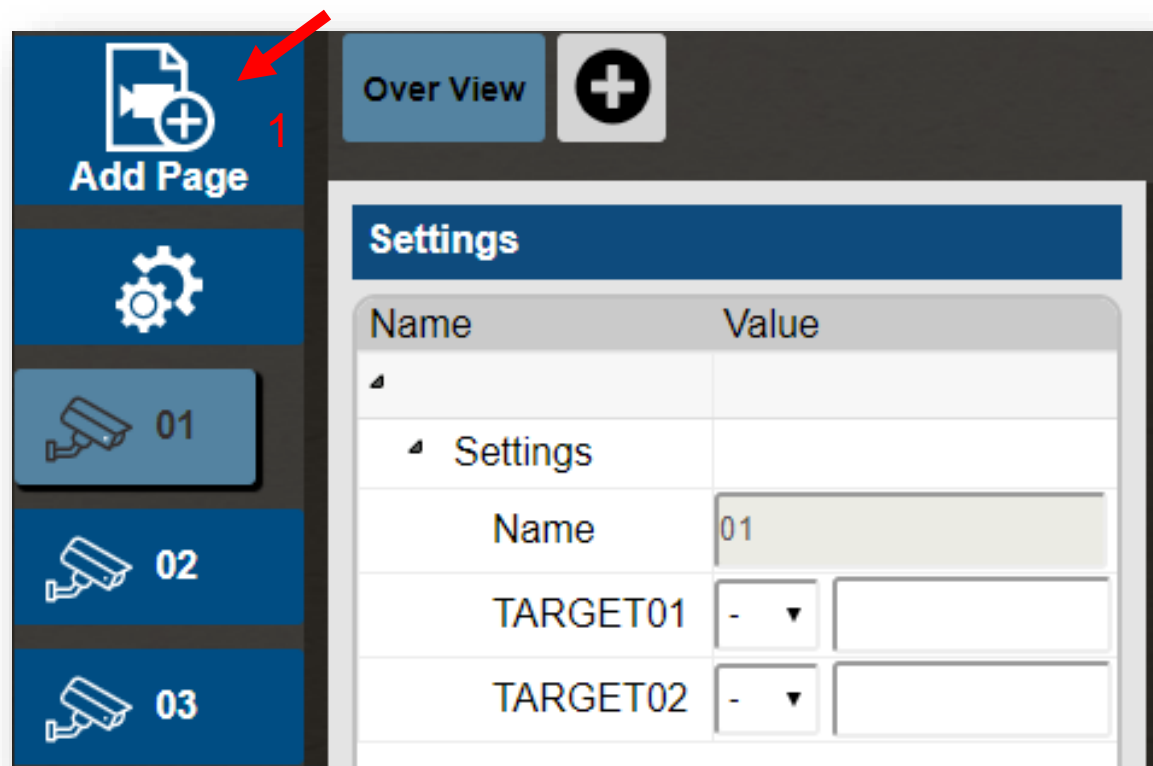




# Build Project – Page & Recognition

- **General: Create a page**

1. **Create a Page:** Click **Add Page** icon
2. **Targets:** Set TARGET matching logical operators and conditions



-: Skip matching

&&: AND

||: OR

- **General: Create a page**

- 2. **Targets:** Set TARGET matching logical operators and conditions for the matching logical operators:

- : Skip matching this TARGET

- ||: Execute || first. If one of the TARGETs set with || is satisfied, the page is considered as matched successfully.

- &&: When || is not satisfied then the && will be considered, the page will only be considered as successfully if all of the TARGETs set with && are satisfied

If more than one page matched successfully at the same time, the page with smaller index will be selected to be recognized.

# Build Project – Page & Recognition

- **General: Create a page**

3. **Create an OCR:** Click **Add** icon → Get Image → Set ROI → Load a font file → Set preprocess parameters → Click **Simulate** to confirm the recognition result

The screenshot displays the nexVIC software interface. On the left, the 'Settings' panel is visible, with a red box highlighting the 'Threshold' section. The 'Threshold' section includes 'Threshold Method' set to 'Binary', 'Threshold Algorithm' set to 'OTSU', and 'Threshold Value' set to 120. The 'OCR Font' section shows 'Segmentation Mode' set to 'Single Line', 'Select Font' set to 'Font File', 'Load Font' set to 'TrainingDemo2.tra', and 'Learn Font' set to 'Submit'. The 'Result' panel shows a table with 'Char' and 'Recognition Rate(%)' columns, with values 1 (99.6779) and 4 (99.2731). The main area displays a simulated industrial scene with a 'Customer ID: NexVIC' and 'System ID: VIC7100'. A table shows 'Setpoint' and 'Actual' values for various zones (1T to 9T). A red arrow points to the 'Add' icon (a plus sign) in the top bar. Another red arrow points to the 'Simulate' button at the bottom. A third red arrow points to the 'Submit' button in the 'Load Font' section. A fourth red arrow points to the 'Threshold Value' input field. A fifth red arrow points to the 'Font File' dropdown menu. A sixth red arrow points to the 'Simulate' button. A green box highlights the '14' value in the 'Actual' column for zone 2T. A green box highlights the '0.85ms' value in the bottom right corner. A green box highlights the '14' value in the 'Actual' column for zone 2T. A green box highlights the '0.85ms' value in the bottom right corner. A green box highlights the '14' value in the 'Actual' column for zone 2T. A green box highlights the '0.85ms' value in the bottom right corner.

Setpoint	55	75	90	95
Zone 1T	112	120	125	155
Zone 2T	110	125	165	190
Zone 3T	10	14	13	10
Zone 4T	110	110	125	155
Zone 5T	18	13	32	6
Zone 6T				7
Zone 7T				10
Zone 8T				19
Zone 9T				22

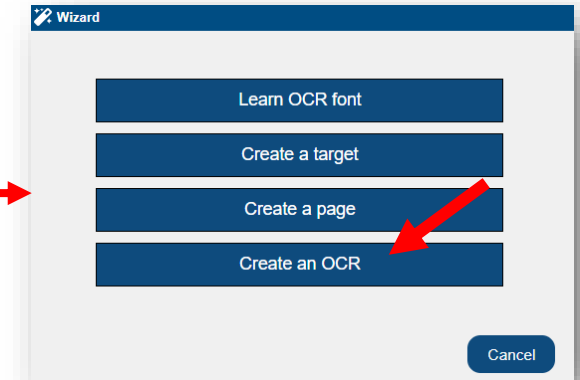
Source	Zone 1	Zone 6	Zone 10	Cooler
Active Recipe =				

0.85ms

# Build Project – Page & Recognition

- **Wizard: Create an OCR**

1. **Select a page:** Select the aimed page to create an OCR



### Create an OCR

1. Select a page

2. Data Source

3. Source Settings

4. Get Image

5. Simulate

Page

01

01

02

01

02

Previous

Next

Cancel

# Build Project – Page & Recognition

- **Wizard: Create an OCR**

- 2. Data Source

From File or From Capture Card

Create an OCR

1. Select a page   2. Data Source   3. Source Settings   4. Get Image   5. Simulate

Data Source

From File ▼

From File

From Capture Card

From File

From Capture Card

Previous   Next   Cancel

# Build Project – Page & Recognition

- **Wizard: Create an OCR**

## 3. Source Settings

From File: Image folder path, Read interval

From Capture Card: Video input signal type, Capture frame rate

The screenshot shows the 'Create an OCR' wizard at Step 3: Source Settings. The progress bar at the top indicates the current step. The 'Image Folder' field contains the path 'C:/VIC7000/Training Sample'. The 'Interval (ms)' field is set to '1000'. A 'Submit' button is located to the right of the input fields. Red arrows point to the 'Submit' button and the 'Interval (ms)' field.

Create an OCR

1. Select a page 2. Data Source 3. Source Settings 4. Get Image 5. Simulate

Image Folder  
C:/VIC7000/Training Sample

Interval (ms)  
1000

Submit

The screenshot shows the 'Create an OCR' wizard at Step 3: Source Settings. The progress bar at the top indicates the current step. The 'Video Signal' field is set to 'false'. The 'Video Input' dropdown menu is set to 'DVI\_A (RGB / VGA)'. The 'Capture Frame Rate' field is set to '2'. At the bottom right, there are 'Previous', 'Next', and 'Cancel' buttons. Red arrows point to the 'Next' button, the 'Video Input' dropdown, and the 'Capture Frame Rate' field.

Create an OCR

1. Select a page 2. Data Source 3. Source Settings 4. Get Image 5. Simulate

Video Signal  
false

Video Input  
DVI\_A (RGB / VGA)

Capture Frame Rate  
2

Previous Next Cancel

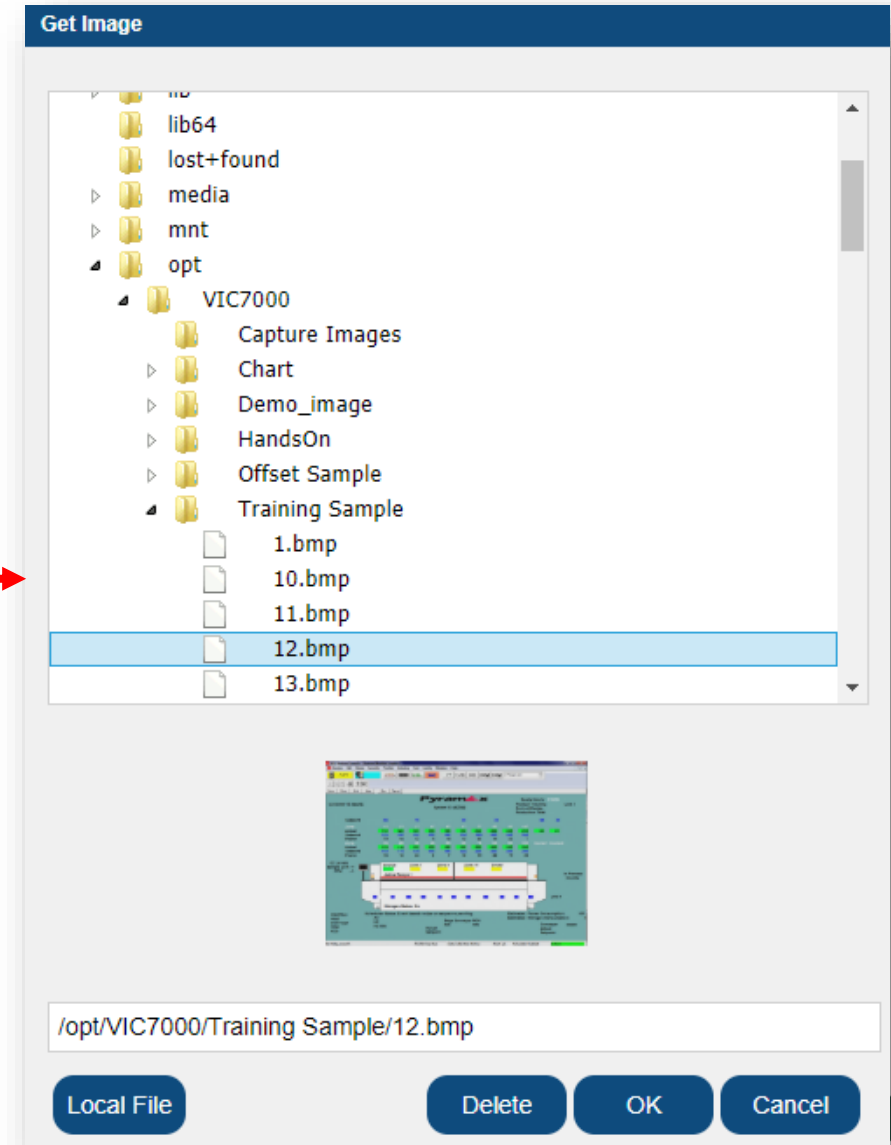
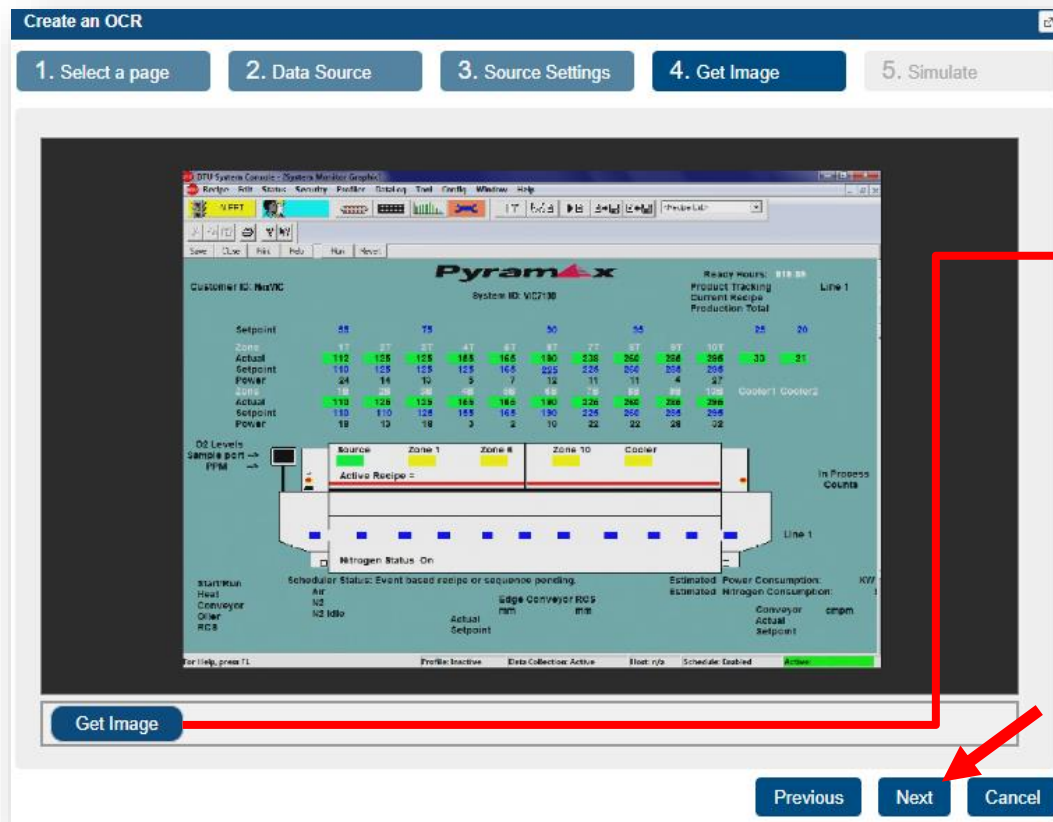
# Build Project – Page & Recognition

- Wizard: Create an OCR

## 4. Get Image

From File: Read images from a local or remote folder

From Capture Card: Get an image from capture card

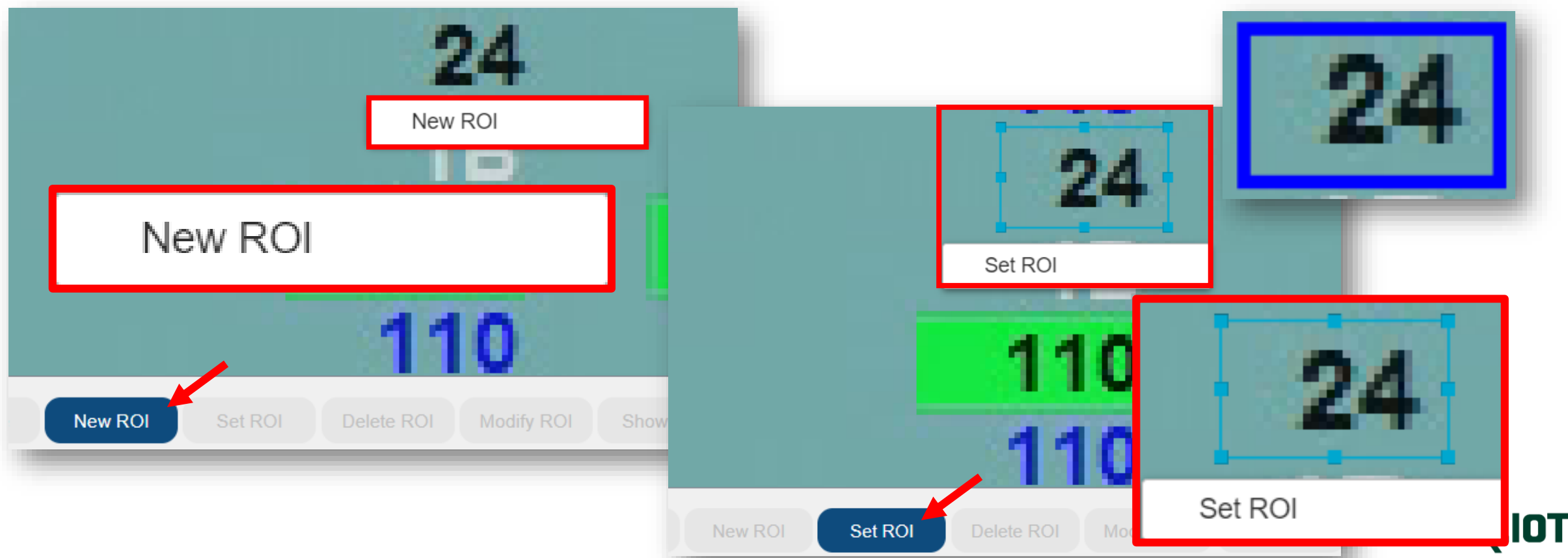


# Build Project – Page & Recognition

- **Wizard: Create an OCR**

- 5. Simulate

Right-click on the image then select **New ROI** (or Click **New ROI**) → Adjust the location and size of ROI → Right-click on an image then select **Set ROI** (or Click **Set ROI**)



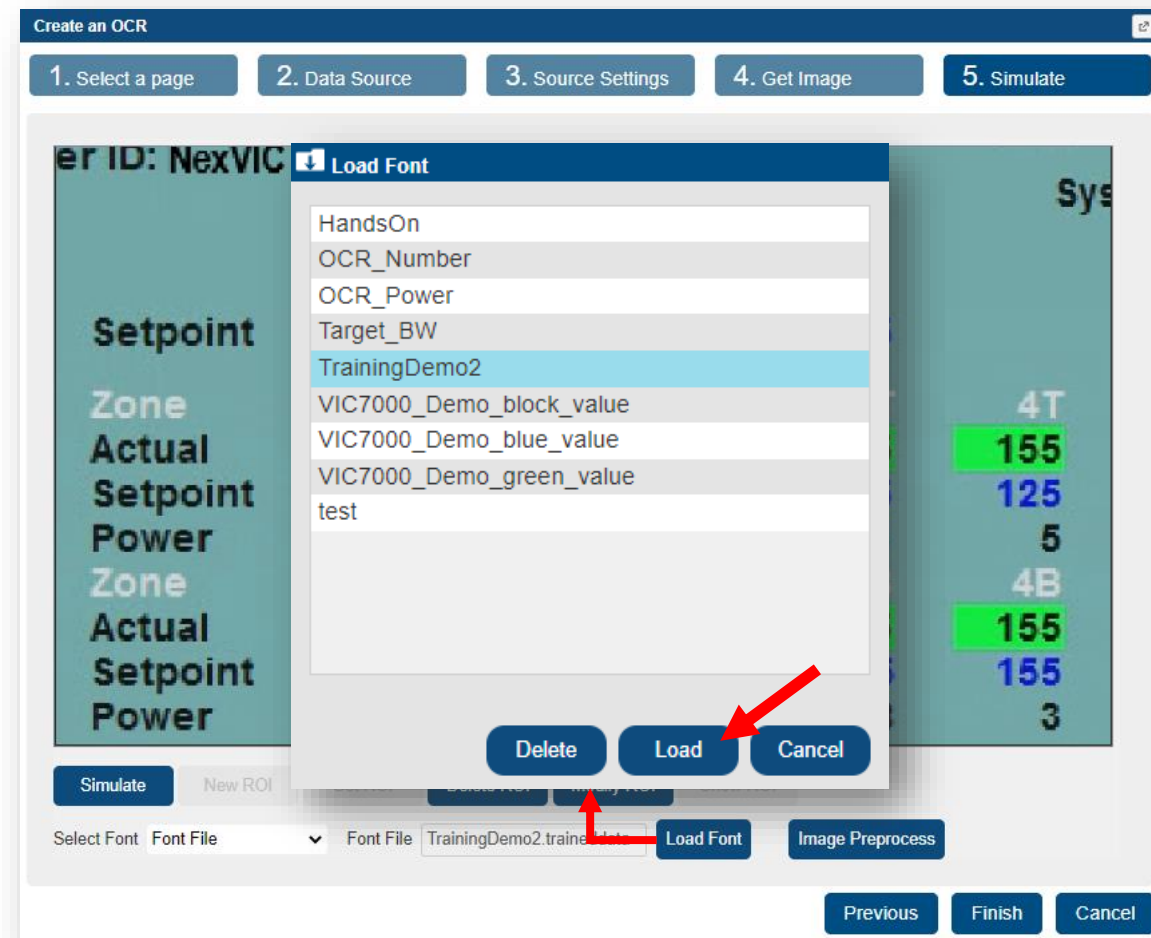


# Build Project – Page & Recognition

- Wizard: Create an OCR

- 5. Simulate

Click **Load Font** → Select a font file used for recognition → Click **Load**



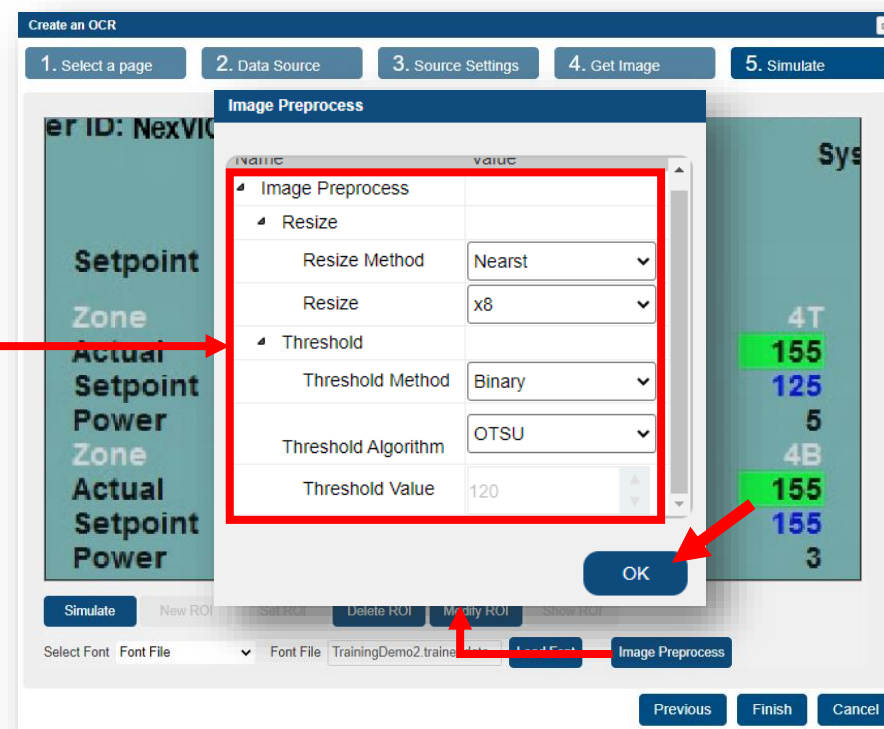
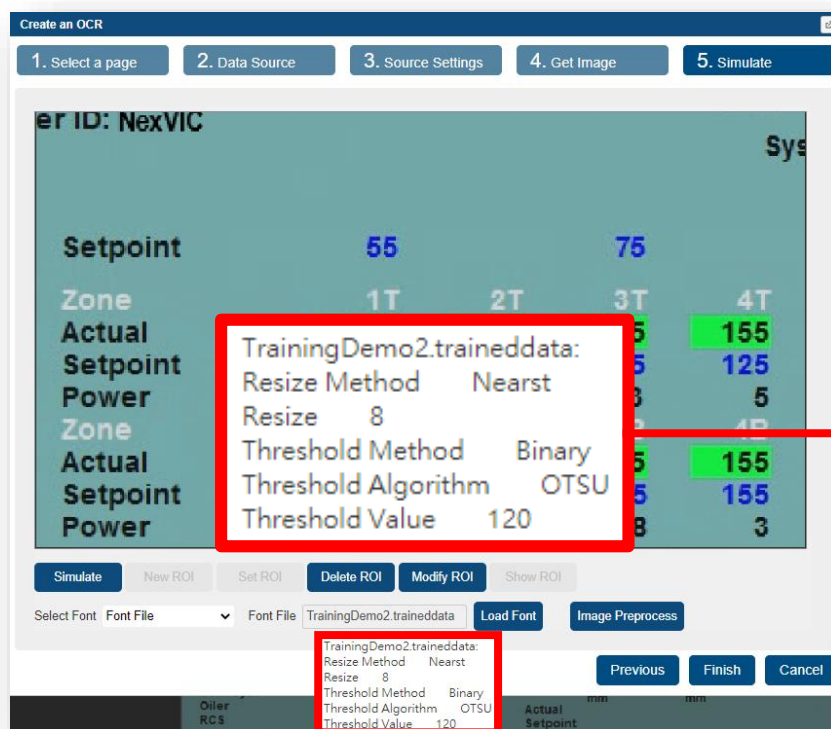
# Build Project – Page & Recognition

- Wizard: Create an OCR

- 5. Simulate

Click on **Image Preprocess** → Set image preprocess parameters. It is recommended to be the same with ones in font file → Click on **OK**

Move cursor to the font file field, and the preprocess parameter of the font file will show up.

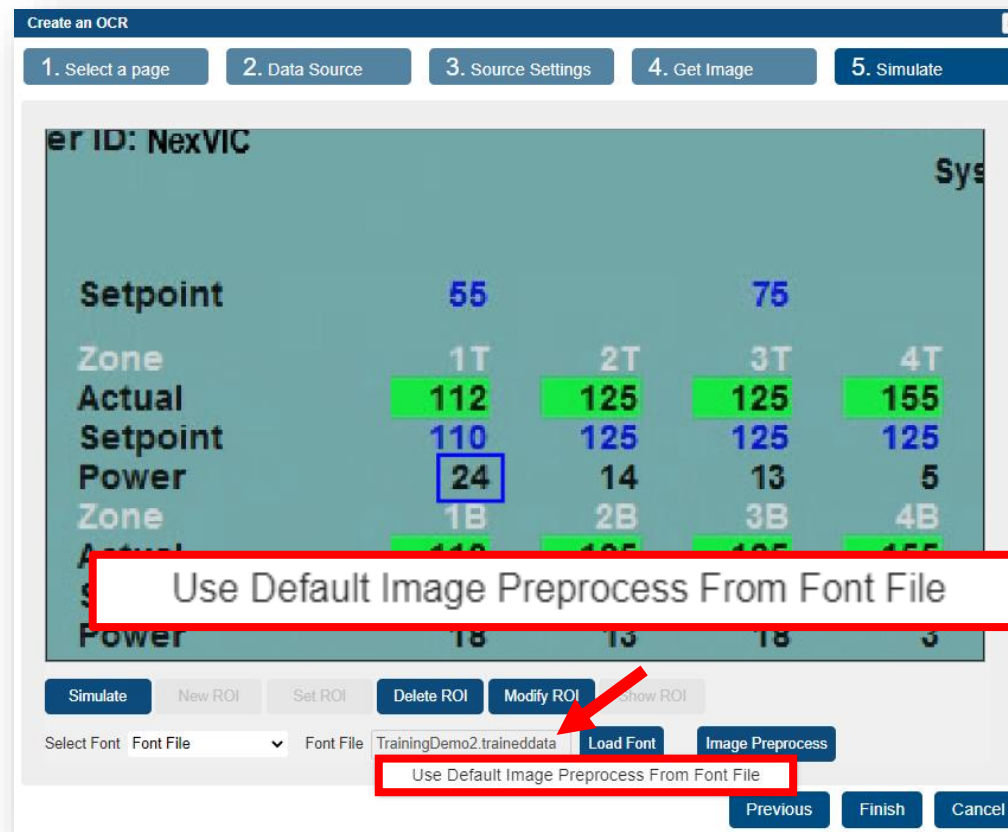


# Build Project – Page & Recognition

- **Wizard: Create an OCR**

- 5. Simulate

Right click on font file field and select **Use Font Preprocess**, it can help setting image preprocess parameters smoother.



# Build Project – Page & Recognition

- Wizard: Create an OCR

- 5. Simulate

Click **Simulate** → Confirm the recognition result

Create an OCR

1. Select a page 2. Data Source 3. Source Settings 4. Get Image 5. Simulate

24

Setpoint 55 75

Zone	1T	2T	3T	4T
Actual	112	125	125	155
Setpoint	110	125	125	125
Power	24	14	13	5
Zone	1B	2B	3B	4B
Actual	110	125	125	155
Setpoint	110	110	125	155
Power	18	13	18	18

104.16ms

Simulate New ROI Set ROI Delete ROI Modify ROI Show ROI

Select Font Font File Font File TrainingDemo2.traineddata Load Font Image Preprocess

Previous Finish Cancel

# Build Project – Page & Recognition

- **General: Create an OCR**

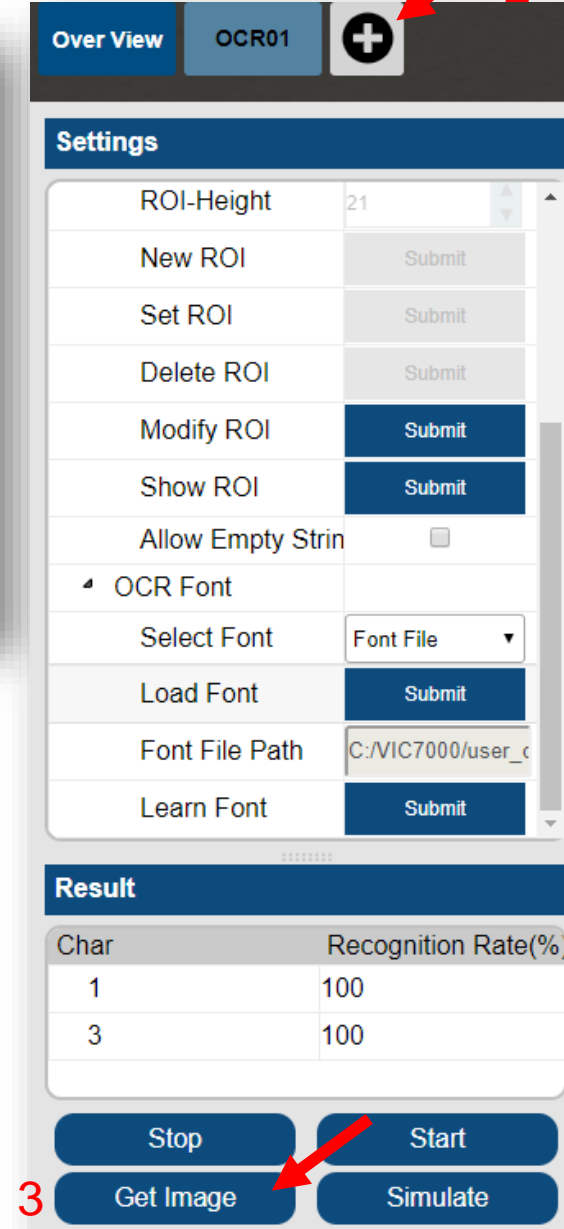
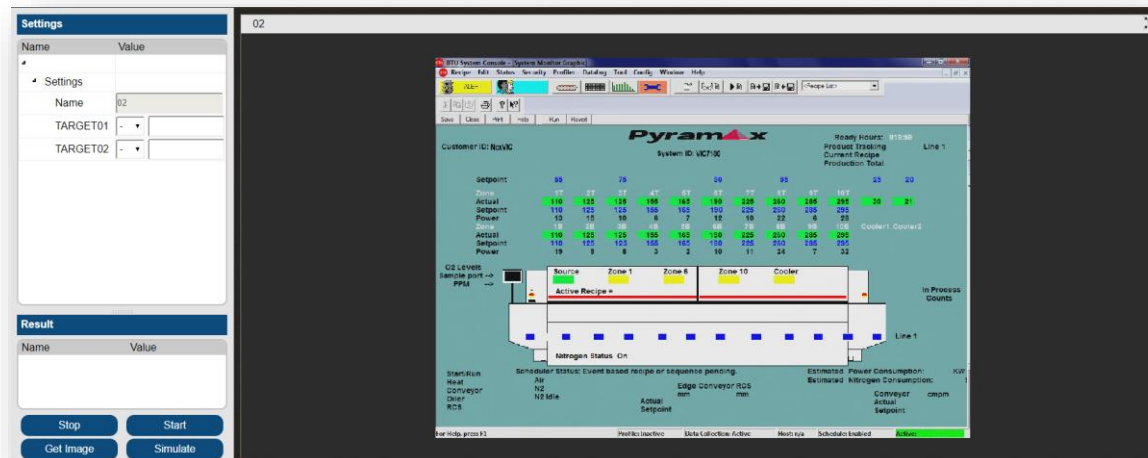
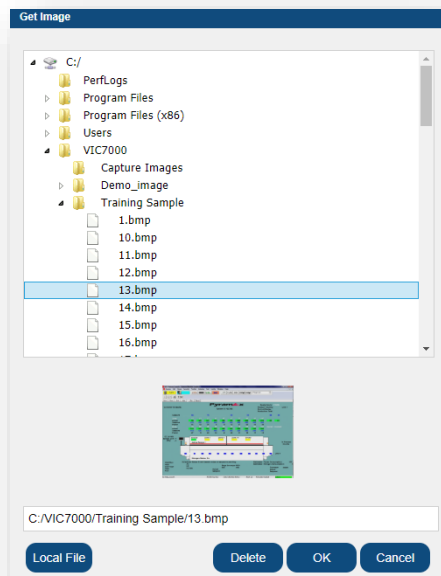
1. **Select a page:** Select the aimed page to create an OCR

2. **Create an OCR:** Add icon

3. **Get Image**

- a. **From File:** Read images from a local or remote folder

- b. **From Capture Card:** Get an image from capture card



# Build Project – Page & Recognition

- **General: Create an OCR**

4. **New ROI**: Right-click on an image then select **New ROI** (or Click **New ROI**)

The screenshot shows the nexVIG software interface. On the left is a 'Settings' panel with a table of parameters. The 'New ROI' button is highlighted with a red box and the number '4'. A red arrow points to the '+' icon in the top bar. The main display area shows a table of data with columns for 'Setpoint', 'Zone', 'Actual', 'Setpoint', and 'Power'. A red box with the number '4' and the text 'New ROI' is overlaid on the table. A context menu is visible over the table with options 'New ROI' and 'Save image (\*.bmp)'.

Name	Value
Input Parameters	
Name	PAGE01.OCR01
ROI-X	208
ROI-Y	279
ROI-Width	187
ROI-Height	86
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit

Setpoint	55	75	90				
Zone	1T	2T	3T	4T	5T	6T	7T
Actual	110	125	125	155	165	190	225
Setpoint	110	125	125	155	165	190	225
Power	13	15	10	6	7	12	10
Zone	1B	2B	3B	4B	5B	6B	7B
Actual	110	125	125	155	165	190	225
Setpoint	110	125	125	155	165	190	225
Power	19	9	8	3	2	10	1

4 New ROI

Active Recipe =



# Build Project – Page & Recognition

- **General: Create an OCR**

5. **Set ROI**: Adjust the location and size of ROI → Right-click on an image and select **Set ROI**  
(or Click **Set ROI**)

The screenshot displays the nexVIO software interface. On the left, the 'Settings' panel shows a table of parameters for 'PAGE01.OCR01'. The 'Set ROI' button is highlighted with a red box and a red arrow. The main image area shows a table of data with a red box around the 'Set ROI' button and a blue box around the 'Set ROI' button. A red arrow points to the 'Set ROI' button. The 'Result' panel at the bottom shows a table of data with a red box around the 'Set ROI' button and a red arrow pointing to it.

Name	Value
Name	PAGE01.OCR01
ROI-X	203
ROI-Y	297
ROI-Width	44
ROI-Height	18
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit

Setpoint	55	75	90				
Zone	1T	2T	3T	4T	5T	6T	7T
Actual	110	125	125	155	165	190	225
Setpoint	110	125	125	155	165	190	225
Power	13	15	15	15	15	15	15
Zone	1B	2B	3B	4B	5B	6B	7B
Actual	110	125	125	155	165	190	225
Setpoint	110	125	125	155	165	190	225
Power	13	15	15	15	15	15	15

Levels	Zone 1	Zone 6	Zone 10
le port -->			
PM -->			

Active Recipe =



# Build Project – Page & Recognition

- **General: Create an OCR**

6. **Load Font:** Click **Load Font** → Select a font file used for recognition → Click **Load**

The screenshot displays the neXVIO software interface. On the left, the 'Settings' panel is visible, with the 'OCR Font' section expanded. A red number '6' is placed next to the 'Load Font' button. A red arrow points from this button to the 'Load Font' dialog box in the center. The dialog box contains a list of font files, with 'TrainingDemo2' selected. Another red arrow points from the 'Load' button at the bottom of the dialog box to the 'Load' button in the dialog's footer. The background shows a 'Result' panel with a table of recognition rates and a main window displaying a production line diagram with various data points.

Char	Recognition Rate(%)

Buttons: Stop, Start, Get Image, Simulate

Dialog Box: Load Font

- HandsOn
- OCR\_Number
- OCR\_Power
- Target\_BW
- TrainingDemo2
- VIC7000\_Demo\_block\_value
- VIC7000\_Demo\_blue\_value
- VIC7000\_Demo\_green\_value
- test

Buttons: Delete, Load, Cancel

# Build Project – Page & Recognition

- **General: Create an OCR**

7. **Image Preprocess**: Set image preprocess parameters. It is recommended to be same with the ones in font file. Move cursor to the font file field, and the preprocess parameters of the font file will show up.

The screenshot shows the nexVIC software interface. The 'Settings' panel is open, and the 'Image Preprocess' section is highlighted with a red box. The 'OCR Font' section is also highlighted with a red box. A red box highlights the 'Font File' field, and a tooltip shows the parameters of the selected font file: TrainingDemo2.traineddata: Resize Method: Nearst, Resize: 8, Threshold Method: Binary, Threshold Algorithm: OTSU, Threshold Value: 120.

**Settings**

- Image Preprocess**
  - Resize
    - Resize Method: Nearst
    - Resize: x8
  - Threshold
    - Threshold Method: Binary
    - Threshold Algorithm: OTSU
    - Threshold Value: 120
- OCR Font**
  - Segmentation Method: Single Line
  - Select Font: Font File
  - Load Font: Submit
  - Font File: TrainingDemo2.traineddata
  - Learn Font: [button]

**Font File Tooltip:**

TrainingDemo2.traineddata:  
Resize Method: Nearst  
Resize: 8  
Threshold Method: Binary  
Threshold Algorithm: OTSU  
Threshold Value: 120

# Build Project – Page & Recognition

- **General: Create an OCR**

7. **Image Preprocess**: Right click on the font file field, and select Use Font Preprocess, it can help settings image preprocess parameters smoother.

The screenshot displays the BTU System Console interface. On the left, the 'Settings' panel is open, showing the 'OCR Font' section. A red box highlights the 'Font File' field, which contains 'TrainingDemo2.tra'. A red arrow points from this field to a 'Use Font Preprocess' button located below it. Another red box highlights the 'Use Font Preprocess' button. A large red box at the bottom of the screen contains the text 'Use Font Preprocess'. The main display area shows the 'Pyramax' system monitor, displaying various data points and a conveyor belt diagram.

**Settings Panel:**

- Resize
  - Resize Method: Nearst
  - Resize: x8
- Threshold
  - Threshold Meth: Binary
  - Threshold Algo: OTSU
  - Threshold Value: 120
- OCR Font
  - Segmentation Mo: Single Line
  - Select Font: Font File
  - Load Font: Submit
  - Font File: TrainingDemo2.tra
  - Learn Font: Use Font Preprocess

**Main Display:**

BTU System Console - [System Monitor Graphics]

Recipe Edit Status Security Profiler DataLog Tool Config Window Help

Save Close Print Help Run Revert

**Pyramax**

Customer ID: NexVIC System ID: VCT100

Ready Hours: 919:59

Product Tracking Current Recipe Production Total

Line 1

Setpoint	55	75	90	95	25	20						
Zone	1T	2T	3T	4T	5T	6T	7T	8T	9T	10T		
Actual	110	125	125	155	165	190	225	260	285	295	30	21
Setpoint	110	125	125	155	165	190	225	260	285	295		
Power	13	15	10	6	7	12	10	22	6	28		
Zone	1B	2B	3B	4B	5B	6B	7B	8B	9B	10B		
Actual	110	125	125	155	165	190	225	260	285	295		
Setpoint	110	125	125	155	165	190	225	260	285	295		
Power	19	9	8	3	2	10	11	24	7	32		

O2 Levels Sample port --> PPM -->

Source Zone 1 Zone 6 Zone 10 Cooler

Active Recipe =

In Process Counts

Line 1

On

based recipe or sequence pending.

Estimated Power Consumption: KW

Estimated Nitrogen Consumption:

Conveyor Actual Setpoint cmpm

Actual Setpoint:

Edge Conveyor RCS mm

for Help: press F1 Profile: Inactive Data Collection: Active Host: n/a Schedule: Enabled Active:

# Build Project – Page & Recognition

- **General: Create an OCR**

8. **Simulate**: Click **Simulate** → Confirm the recognition result

The screenshot displays the nexVid OCR application interface. On the left, the 'Settings' panel is visible, showing configuration options for OCR. The 'Result' panel at the bottom left shows a table of character recognition rates. The main area displays a simulated image of a control panel with various numerical values and labels. A red arrow points to the 'Simulate' button in the bottom left, and another red arrow points to the '13' value in the simulated image. An orange arrow points to the 'Submit' button in the 'Load Font' section of the settings.

**Settings**

- Resize
  - Resize Method: Nearst
  - Resize: x8
- Threshold
  - Threshold Method: Binary
  - Threshold Algorithm: OTSU
  - Threshold Value: 120
- OCR Font
  - Segmentation Mode: Single Line
  - Select Font: Font File
  - Load Font: Submit
  - Font File: TrainingDemo2.tra
  - Learn Font: Submit

**Result**

Char	Recognition Rate(%)
1	99.6779
3	96.6395

**Simulated Image OCR Results**

01 (152, 40)

Setpoint	55	75	90			
Zone	1T	2T	3T	4T	5T	6T
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	13	15	10	6	7	12
Zone	1B	2B	3B	4B	5B	6B
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	19	9	8	3	2	10

**Levels**

ole port -->

PPM -->

**Source**

**Zone 1**

**Zone 6**

**Zone**

**Active Recipe =**

13.04ms

- **OCR Config**

- Input Parameters

- ROI X: Set X coordinates of ROI
    - ROI Y: Set Y coordinates of ROI
    - ROI Width: Set width coordinates of ROI
    - ROI Height: Set Height coordinates of ROI
    - **Allow Empty Result**: If it is checked, NG won't show up when there is no character recognized in ROI
    - **Allow Recognition Rate**: If recognition rate is lower than this value, NG will show up



# Build Project – Page & Recognition

- **General: Create an OCR**
  - **Multiple OCR:** Click **Add** icon → Repeat the aforementioned steps to create OCRs

**Settings**

Name	Value
Input Parameters	
Name	PAGE01.OCR01
ROI-X	222
ROI-Y	298
ROI-Width	24
ROI-Height	16
New ROI	<input type="button" value="Submit"/>
Set ROI	<input type="button" value="Submit"/>
Delete ROI	<input type="button" value="Submit"/>
Modify ROI	<input type="button" value="Submit"/>
Show ROI	<input type="button" value="Submit"/>

**Result**

Char	Recognition Rate(%)
1	99.6779
3	96.6395

**Settings**

Resize	
Resize Method	Nearst
Resize	x8
Threshold	
Threshold Method	Binary
Threshold Algo	OTSU
Threshold Value	120
OCR Font	
Segmentation Mode	Single Line
Select Font	Font File
Load Font	<input type="button" value="Submit"/>
Font File	TrainingDemo2.tra
Learn Font	<input type="button" value="Submit"/>

**Simulation Display**

55	75	90
1T	2T	3T
110	125	125
110	125	125
13	15	10
1B	2B	3B
110	125	125
110	125	125
19	9	8

**Active Recipe =**

Source	Zone 1	Zone 6	Zone

# Build Project – Page & Recognition

- **General: Create a Color**

4. Create a COLOR: Click on **Add** icon → Click **Color**

The screenshot displays the nexVIC software interface. On the left, the 'Settings' panel is open, showing a dropdown menu with options: OCR, Color, and Pattern. A red arrow points to the 'Color' option, which is labeled with a red '4'. Below the menu, the 'Name' field is set to '01'. The 'ROI X Offset' and 'ROI Y Offset' fields are both set to '0'. The 'TARGET01' dropdown is set to '-'. At the bottom of the settings panel, there are buttons for 'Stop', 'Start', 'Get Image', and 'Simulate'.

The main window shows the 'System Monitor' for 'Pyramax'. It displays various system parameters and a schematic diagram of the production line. The 'Setpoint' table shows values for different zones and coolers. The 'O2 Levels' section shows sample port and PPM readings. The 'In Process Counts' section shows counts for Line 1. The 'Nitrogen Status' is 'On'. The 'Scheduler Status' is 'Event based recipe or sequence pending'. The 'Estimated Power Consumption' is 'KW'. The 'Estimated Nitrogen Consumption' is 'cmppm'.

Setpoint	55	75	90	95	25	20
Zone	1T	2T	3T	4T	5T	6T
Actual	112	125	125	155	165	190
Setpoint	110	125	125	125	165	225
Power	24	14	13	5	7	12
Zone	1B	2B	3B	4B	5B	6B
Actual	110	125	125	155	165	190
Setpoint	110	110	125	165	165	190
Power	18	13	18	3	2	10

Setpoint	25	20
Zone	7T	8T
Actual	238	260
Setpoint	225	260
Power	11	11
Zone	9B	10B
Actual	285	295
Setpoint	285	295
Power	4	27

Setpoint	25	20
Zone	11T	12T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	13T	14T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	15T	16T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	17T	18T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	19T	20T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	21T	22T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	23T	24T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	25T	26T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	27T	28T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	29T	30T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	31T	32T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	33T	34T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	35T	36T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	37T	38T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	39T	40T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	41T	42T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	43T	44T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	45T	46T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	47T	48T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	49T	50T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	51T	52T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	53T	54T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	55T	56T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	57T	58T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	59T	60T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	61T	62T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	63T	64T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	65T	66T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	67T	68T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	69T	70T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	71T	72T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	73T	74T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	75T	76T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	77T	78T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	79T	80T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	81T	82T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	83T	84T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	85T	86T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	87T	88T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	89T	90T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	91T	92T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	93T	94T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	95T	96T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	97T	98T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	99T	100T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	101T	102T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	103T	104T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	105T	106T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	107T	108T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	109T	110T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	111T	112T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	113T	114T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	115T	116T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	117T	118T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	119T	120T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	121T	122T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	123T	124T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	125T	126T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	127T	128T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	129T	130T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	131T	132T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	133T	134T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	135T	136T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	137T	138T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	139T	140T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	141T	142T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	143T	144T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	145T	146T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	147T	148T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	149T	150T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	151T	152T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	153T	154T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	155T	156T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	157T	158T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	159T	160T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	161T	162T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	163T	164T
Actual	285	295
Setpoint	285	295
Power	28	32

Setpoint	25	20
Zone	165T	166T
Actual		



# Build Project – Page & Recognition

- **General: Create a Color**

5. **New ROI**: Right-click on the image and select **New ROI** (or Click **New ROI** button)

The screenshot displays the RTU System Console interface. On the left, the 'Settings' panel is visible, featuring a table for input parameters and a 'New ROI' button highlighted with a red arrow and the number 5. The main screen shows the 'Pyramax' system monitor with various data tables and a 'New ROI' button highlighted with a red box and the number 5.

**Settings Panel:**

Name	Value
Input Parameters	
Name	PAGE01.COLOR0
ROI-X	0
ROI-Y	0
ROI-Width	1
ROI-Height	1
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit
Matching Parameter	
Color Picker	
Red	0
Green	0
Blue	0

**Main Screen:**

Customer ID: NexVIC System ID: VIC7100 Ready Hours: 819.59

Product Tracking Current Recipe Production Total Line 1

Setpoint	Zone	Actual	Setpoint	Power	Zone	Actual	Setpoint	Power
18	2B	125	125	155	165	190	238	260
110	110	125	125	155	165	190	238	260
18	13	18	3	2	10	22	22	28

O2 Levels Sample port --> PPM -->

Source Zone 1 Zone 6 Zone 10 Cooler

Active Recipe =

In Process Counts Line 1

Scheduler Status: Event based recipe or sequence pending.

Start/Run Heat Conveyor Oiler RCS

Estimated Power Consumption: KW

Estimated Nitrogen Consumption: cmpm

Conveyor Actual Setpoint

Profile: Inactive Date Collection: Active | lost: n/a Schedule: Enabled Active:

# Build Project – Page & Recognition

- **General: Create a Color**

6. **Set ROI**: Adjust the location and size of ROI → Right-click on the image and select **Set ROI** (or Click **Set ROI**) The average value of the RGB within the ROI is automatically obtained and be set as matching color

The screenshot displays the nexVIC software interface. On the left, the 'Settings' panel is visible, featuring a 'Set ROI' button highlighted with a red arrow and a red callout box containing the number '6'. The main image area shows a product with a red ROI box. A red callout box with the number '6' points to this ROI box. On the right, the 'Matching Parameters' table is shown, displaying the average RGB values for the selected ROI.

Matching Parameters	
Color Picker	
Red	105
Green	155
Blue	154

# Build Project – Page & Recognition

- **General: Create a Color**

7. **Set Matching Tolerance and Result Output:** Set **Matching Tolerance**(RGB±) → Enter

## Matching Output Result

The screenshot displays the RTU System Console interface. On the left, the 'Settings' panel is visible, showing various ROI parameters and a 'Matching Parameters' section. The 'Matching Parameters' section includes a 'Color Picker' and three color selection fields (Red, Green, Blue) with corresponding numerical values. Below these, the 'Matching Tolerance' is set to 'true', and the 'Matching Output' is set to 'true'. The 'No Matching Output' is set to 'false'. The main window shows a 'Pyramax' system monitor with a 'Ready Hours' of 819.59 and 'In Process Counts' for Line 1. A red box highlights the 'Matching Tolerance' settings in the 'Settings' panel.

Parameter	Value
ROI-X	187
ROI-Y	190
ROI-Width	62
ROI-Height	36
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit
Matching Parameters	
Color Picker	
Red	105
Green	155
Blue	154
Matching Tolerance	true
Matching Output	true
No Matching Output	false

# Build Project – Page & Recognition

- **General: Create a Color**

8. **Simulate**: Click **Simulate** → Confirm matching result

The screenshot displays the neXVIC software interface. On the left is a 'Settings' panel with various parameters for ROI (Region of Interest) and Matching. The 'Matching Parameters' section includes a 'Color Picker' with 'Red' (105), 'Green' (155), and 'Blue' (154) values. The 'Matching Output' is set to 'true'. At the bottom of the settings panel are 'Stop', 'Start', 'Get Image', and 'Simulate' buttons. A red arrow points to the 'Simulate' button. The main window shows the 'Pyramax' control interface. At the top left of the main window, the text 'true (105,155,155)' is displayed, with a red arrow pointing to it. The main window also shows a 'Customer ID: NexVIC', 'System ID: VICT100', and a 'Ready Hours: 919:59'. Below this is a table of 'Setpoint' and 'Actual' values for various zones (1T, 2T, 3T, 4T, 5T, 6T, 7T, 8T, 9T, 10T) and 'Cooler1' and 'Cooler2'. The 'Active Recipe' is set to 'Zone 1'. The 'In Process Counts' section shows 'Line 1' with a count of 21. The 'Nitrogen Status' is 'On'. The 'Scheduler Status' is 'Event based recipe or sequence pending'. The 'Estimated Power Consumption' is 'KW'. The 'Estimated Nitrogen Consumption' is 'cmppm'. The 'Conveyor Actual Setpoint' is 'cmppm'. The 'Actual Setpoint' is 'mm'. The 'Edge Conveyor RCS' is 'mm'. The 'Air N2 Idle' is 'mm'. The 'Start/Run Heat Conveyor Oiler RCS' is 'mm'. The 'For Help, press F1' is displayed at the bottom left. The 'Profile: Inactive', 'Data Collection: Active', 'Host: n/a', 'Schedule: Enabled', and 'Active: [green bar]' are displayed at the bottom right. A red arrow points to the 'Simulate' button in the bottom left of the settings panel. A red arrow points to the 'true (105,155,155)' text in the top left of the main window. A red arrow points to the 'Simulate' button in the bottom left of the settings panel. A red arrow points to the 'Simulate' button in the bottom left of the settings panel.

8

0.01ms



# Build Project – Page & Recognition

- **General: Create a Color**

- **Assign color matching:** Click **Color Picker** → Enable eyedropper tool → Select the desired matching color in the image → The matching color will be set up automatically and confirm if it is correct.

The screenshot displays the nexVIC software interface. On the left, the 'Settings' panel is visible, featuring a 'Matching Parameter' section with a 'Color Picker' button. A red arrow points to this button. The main area shows a 'Pyramax' system monitor window with various data tables and a 'Ready Hours' display. A red arrow points to a color selection tool in the top right corner of the main image area.

Matching Parameter	
Color Picker	
Red	180
Green	24
Blue	65

# Build Project – Page & Recognition

- **General: Create a Color**
  - **Multiple COLOR:** Click **Add** icon → Repeat the aforementioned steps to create Colors

The screenshot shows the neXVIC software interface. On the left, the 'Settings' panel is visible. The 'Color Picker' section is highlighted with a red box, containing 'Matching Tolerance' and 'Matching Output' settings. A dropdown menu is open for 'Color', showing 'OCR', 'Color', and 'Pattern'. The main monitor displays a 'Pyramax' system status with various data tables and a process flow diagram. Red arrows and numbers 4 through 8 indicate the steps to create a color.

4: Click the '+' icon in the top bar.

5: Click the 'Color' option in the dropdown menu.

6: Click the 'Add' icon in the 'Color Picker' section.

7: Click the 'Matching Tolerance' dropdown menu.

8: Click the 'Simulate' button at the bottom.

Setpoint	55	75	90	95	25	20
Zone 1T	112	125	125	155	165	190
Zone 2T	110	125	125	155	165	190
Zone 3T	110	125	125	155	165	190
Zone 4T	110	125	125	155	165	190
Zone 5T	110	125	125	155	165	190
Zone 6T	110	125	125	155	165	190
Zone 7T	110	125	125	155	165	190
Zone 8T	110	125	125	155	165	190
Zone 9T	110	125	125	155	165	190
Zone 10T	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1B	112	125	125	155	165	190
Zone 2B	110	125	125	155	165	190
Zone 3B	110	125	125	155	165	190
Zone 4B	110	125	125	155	165	190
Zone 5B	110	125	125	155	165	190
Zone 6B	110	125	125	155	165	190
Zone 7B	110	125	125	155	165	190
Zone 8B	110	125	125	155	165	190
Zone 9B	110	125	125	155	165	190
Zone 10B	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1C	112	125	125	155	165	190
Zone 2C	110	125	125	155	165	190
Zone 3C	110	125	125	155	165	190
Zone 4C	110	125	125	155	165	190
Zone 5C	110	125	125	155	165	190
Zone 6C	110	125	125	155	165	190
Zone 7C	110	125	125	155	165	190
Zone 8C	110	125	125	155	165	190
Zone 9C	110	125	125	155	165	190
Zone 10C	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1D	112	125	125	155	165	190
Zone 2D	110	125	125	155	165	190
Zone 3D	110	125	125	155	165	190
Zone 4D	110	125	125	155	165	190
Zone 5D	110	125	125	155	165	190
Zone 6D	110	125	125	155	165	190
Zone 7D	110	125	125	155	165	190
Zone 8D	110	125	125	155	165	190
Zone 9D	110	125	125	155	165	190
Zone 10D	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1E	112	125	125	155	165	190
Zone 2E	110	125	125	155	165	190
Zone 3E	110	125	125	155	165	190
Zone 4E	110	125	125	155	165	190
Zone 5E	110	125	125	155	165	190
Zone 6E	110	125	125	155	165	190
Zone 7E	110	125	125	155	165	190
Zone 8E	110	125	125	155	165	190
Zone 9E	110	125	125	155	165	190
Zone 10E	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1F	112	125	125	155	165	190
Zone 2F	110	125	125	155	165	190
Zone 3F	110	125	125	155	165	190
Zone 4F	110	125	125	155	165	190
Zone 5F	110	125	125	155	165	190
Zone 6F	110	125	125	155	165	190
Zone 7F	110	125	125	155	165	190
Zone 8F	110	125	125	155	165	190
Zone 9F	110	125	125	155	165	190
Zone 10F	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1G	112	125	125	155	165	190
Zone 2G	110	125	125	155	165	190
Zone 3G	110	125	125	155	165	190
Zone 4G	110	125	125	155	165	190
Zone 5G	110	125	125	155	165	190
Zone 6G	110	125	125	155	165	190
Zone 7G	110	125	125	155	165	190
Zone 8G	110	125	125	155	165	190
Zone 9G	110	125	125	155	165	190
Zone 10G	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1H	112	125	125	155	165	190
Zone 2H	110	125	125	155	165	190
Zone 3H	110	125	125	155	165	190
Zone 4H	110	125	125	155	165	190
Zone 5H	110	125	125	155	165	190
Zone 6H	110	125	125	155	165	190
Zone 7H	110	125	125	155	165	190
Zone 8H	110	125	125	155	165	190
Zone 9H	110	125	125	155	165	190
Zone 10H	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1I	112	125	125	155	165	190
Zone 2I	110	125	125	155	165	190
Zone 3I	110	125	125	155	165	190
Zone 4I	110	125	125	155	165	190
Zone 5I	110	125	125	155	165	190
Zone 6I	110	125	125	155	165	190
Zone 7I	110	125	125	155	165	190
Zone 8I	110	125	125	155	165	190
Zone 9I	110	125	125	155	165	190
Zone 10I	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1J	112	125	125	155	165	190
Zone 2J	110	125	125	155	165	190
Zone 3J	110	125	125	155	165	190
Zone 4J	110	125	125	155	165	190
Zone 5J	110	125	125	155	165	190
Zone 6J	110	125	125	155	165	190
Zone 7J	110	125	125	155	165	190
Zone 8J	110	125	125	155	165	190
Zone 9J	110	125	125	155	165	190
Zone 10J	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1K	112	125	125	155	165	190
Zone 2K	110	125	125	155	165	190
Zone 3K	110	125	125	155	165	190
Zone 4K	110	125	125	155	165	190
Zone 5K	110	125	125	155	165	190
Zone 6K	110	125	125	155	165	190
Zone 7K	110	125	125	155	165	190
Zone 8K	110	125	125	155	165	190
Zone 9K	110	125	125	155	165	190
Zone 10K	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1L	112	125	125	155	165	190
Zone 2L	110	125	125	155	165	190
Zone 3L	110	125	125	155	165	190
Zone 4L	110	125	125	155	165	190
Zone 5L	110	125	125	155	165	190
Zone 6L	110	125	125	155	165	190
Zone 7L	110	125	125	155	165	190
Zone 8L	110	125	125	155	165	190
Zone 9L	110	125	125	155	165	190
Zone 10L	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95	25	20
Zone 1M	112	125	125	155	165	190
Zone 2M	110	125	125	155	165	190
Zone 3M	110	125	125	155	165	190
Zone 4M	110	125	125	155	165	190
Zone 5M	110	125	125	155	165	190
Zone 6M	110	125	125	155	165	190
Zone 7M	110	125	125	155	165	190
Zone 8M	110	125	125	155	165	190
Zone 9M	110	125	125	155	165	190
Zone 10M	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

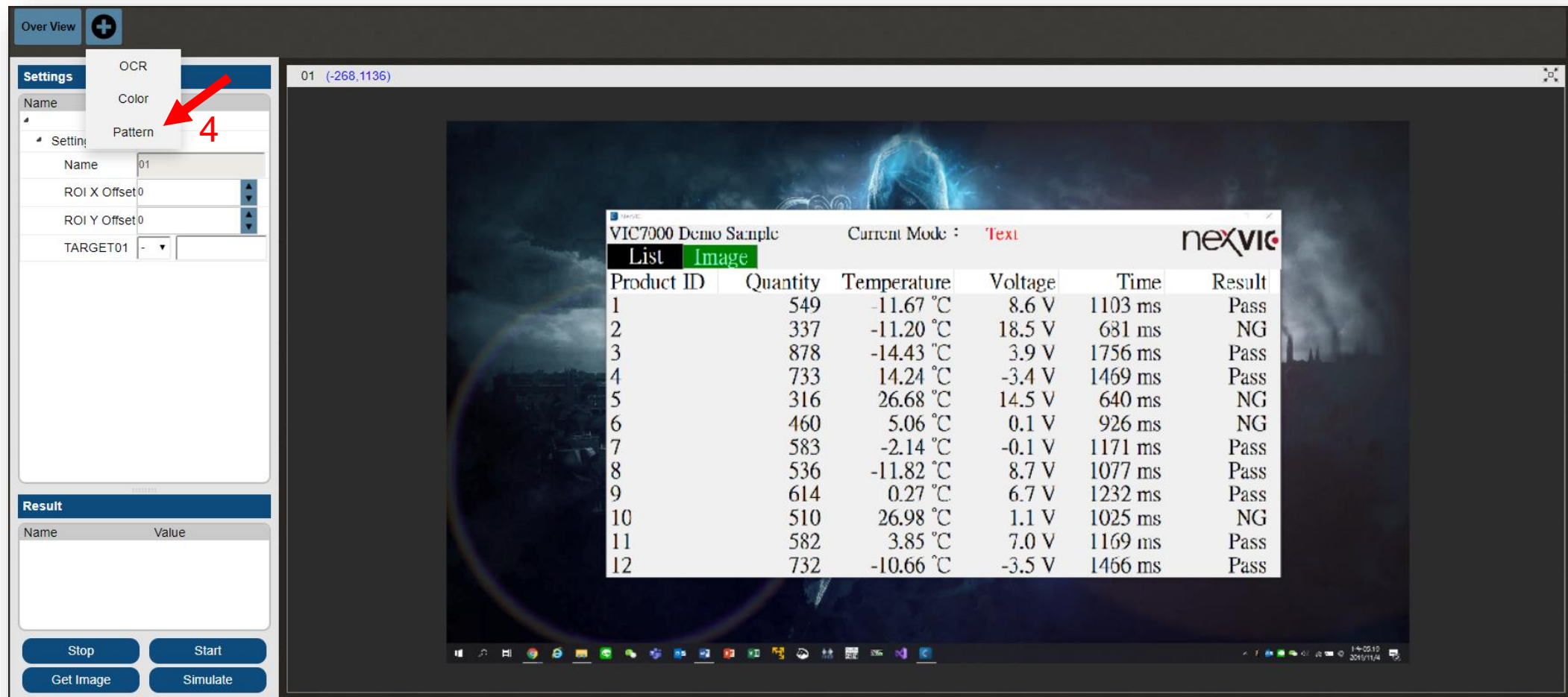
Setpoint	55	75	90	95	25	20
Zone 1N	112	125	125	155	165	190
Zone 2N	110	125	125	155	165	190
Zone 3N	110	125	125	155	165	190
Zone 4N	110	125	125	155	165	190
Zone 5N	110	125	125	155	165	190
Zone 6N	110	125	125	155	165	190
Zone 7N	110	125	125	155	165	190
Zone 8N	110	125	125	155	165	190
Zone 9N	110	125	125	155	165	190
Zone 10N	110	125	125	155	165	190
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	18	18	3	2	10

Setpoint	55	75	90	95
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# Build Project – Page & Recognition

- **General: Create a Pattern**

4. **Create a PATTERN:** Click **Add** icon on the page user wants to create a Pattern → Click **Pattern**



The screenshot shows the nexVIC software interface. On the left, the 'Settings' panel is open, and the 'Pattern' option is selected under the 'Add' icon. A red arrow points to the 'Pattern' option, and a red number '4' is next to it. The 'Result' panel shows a table with 12 rows of data. The table has columns for Product ID, Quantity, Temperature, Voltage, Time, and Result. The data is as follows:

Product ID	Quantity	Temperature	Voltage	Time	Result
1	549	-11.67 °C	8.6 V	1103 ms	Pass
2	337	-11.20 °C	18.5 V	681 ms	NG
3	878	-14.43 °C	3.9 V	1756 ms	Pass
4	733	14.24 °C	-3.4 V	1469 ms	Pass
5	316	26.68 °C	14.5 V	640 ms	NG
6	460	5.06 °C	0.1 V	926 ms	NG
7	583	-2.14 °C	-0.1 V	1171 ms	Pass
8	536	-11.82 °C	8.7 V	1077 ms	Pass
9	614	0.27 °C	6.7 V	1232 ms	Pass
10	510	26.98 °C	1.1 V	1025 ms	NG
11	582	3.85 °C	7.0 V	1169 ms	Pass
12	732	-10.66 °C	-3.5 V	1466 ms	Pass



# Build Project – Page & Recognition

- **General: Create a Pattern**

5. **New ROI**: Right-click on the image and select **New ROI** (or Click **New ROI** )

The screenshot displays the nexVIC software interface. On the left, the 'Settings' panel is visible, featuring a table with 'Name' and 'Value' columns. Under 'Input Parameters', the 'New ROI' button is highlighted with a red arrow and the number 5. The main image area on the right shows a thermal image of a person's head. A red box labeled '5 New ROI' is overlaid on the image, and a context menu is open with 'New ROI' selected. Below the image, a table displays test results.

				Time	Result
1	549	-11.67 °C	8.6 V	1103 ms	Pass
2	337	-11.20 °C	18.5 V	681 ms	NG
3	878	-14.43 °C	3.9 V	1756 ms	Pass
4	733	14.24 °C	-3.4 V	1469 ms	Pass
5	316	26.68 °C	14.5 V	640 ms	NG
6	460	5.06 °C	0.1 V	926 ms	NG
7	583	-2.14 °C	-0.1 V	1171 ms	Pass
	536	-11.82 °C	8.7 V	1077 ms	Pass
	614	0.27 °C	6.7 V	1232 ms	Pass
10	510	26.98 °C	1.1 V	1025 ms	NG
11	582	3.85 °C	7.0 V	1169 ms	Pass
12	732	-10.66 °C	-3.5 V	1466 ms	Pass

# Build Project – Page & Recognition

- **General: Create a Pattern**

6. **Set ROI**: Adjust the location and size of ROI → Right-click on the image then select **Set ROI** (or Click **Set ROI**)

The screenshot shows the nexVIC software interface. On the left, the 'Settings' panel is visible, showing a table of input parameters. The 'Set ROI' button is highlighted with a red arrow and the number 6. In the main image area, a blue ROI box is shown over a thermal image. A context menu is open, showing the 'Set ROI' option highlighted with a red box. Below the main image area, a red box highlights the text '6 Set ROI'.

Name	Value
ROI-X	961
ROI-Y	0
ROI-Width	958
ROI-Height	576
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit

Name	Value
ROI-X	961
ROI-Y	0
ROI-Width	958
ROI-Height	576
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit

Temperature	Voltage	Time	Result
1.67 °C	8.6 V	1103 ms	Pass
1.20 °C	18.5 V	681 ms	NG
4.43 °C	3.9 V	1756 ms	Pass
4.24 °C	-3.4 V	1469 ms	Pass
6.68 °C	14.5 V	640 ms	NG
5.06 °C	0.1 V	926 ms	NG

Temperature	Voltage	Time	Result
7.33 °C	14.24 V	1103 ms	Pass
316 °C	26.68 V	681 ms	NG
460 °C	5.06 V	1756 ms	Pass
583 °C	-2.14 V	1469 ms	Pass
536 °C	-0.1 V	1171 ms	Pass
614 °C	-11.82 V	640 ms	NG
0.27 °C	0.1 V	926 ms	NG
1.98 °C	1.1 V	1023 ms	Pass
8.85 °C	7.0 V	1169 ms	Pass
6.66 °C	-3.5 V	1466 ms	Pass

# Build Project – Page & Recognition

- **General: Create a Pattern**

7. **Load Matching Pattern**: Click **Pattern Load** → **Pattern** window will appear, and an image will be loaded automatically

**Over View** **PATTERN01**

**Settings**

Matching Paramete

Gray Matching ☐ 7

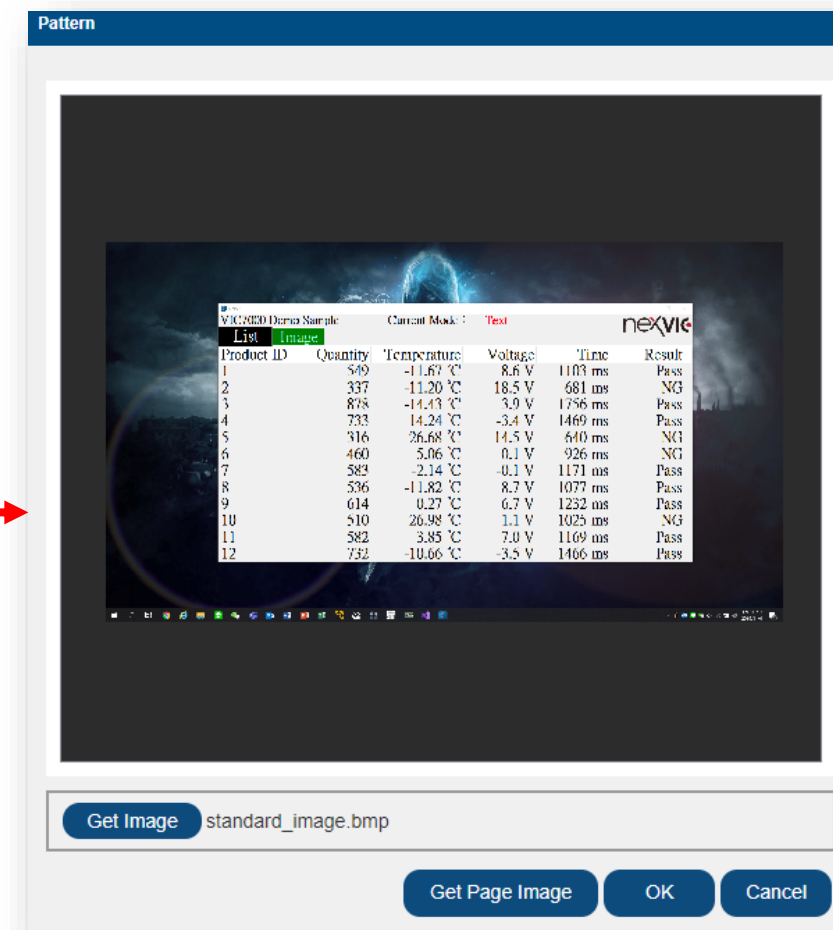
Pattern Load **Submit**

Pattern Name

Pattern X 0

Pattern Y 0

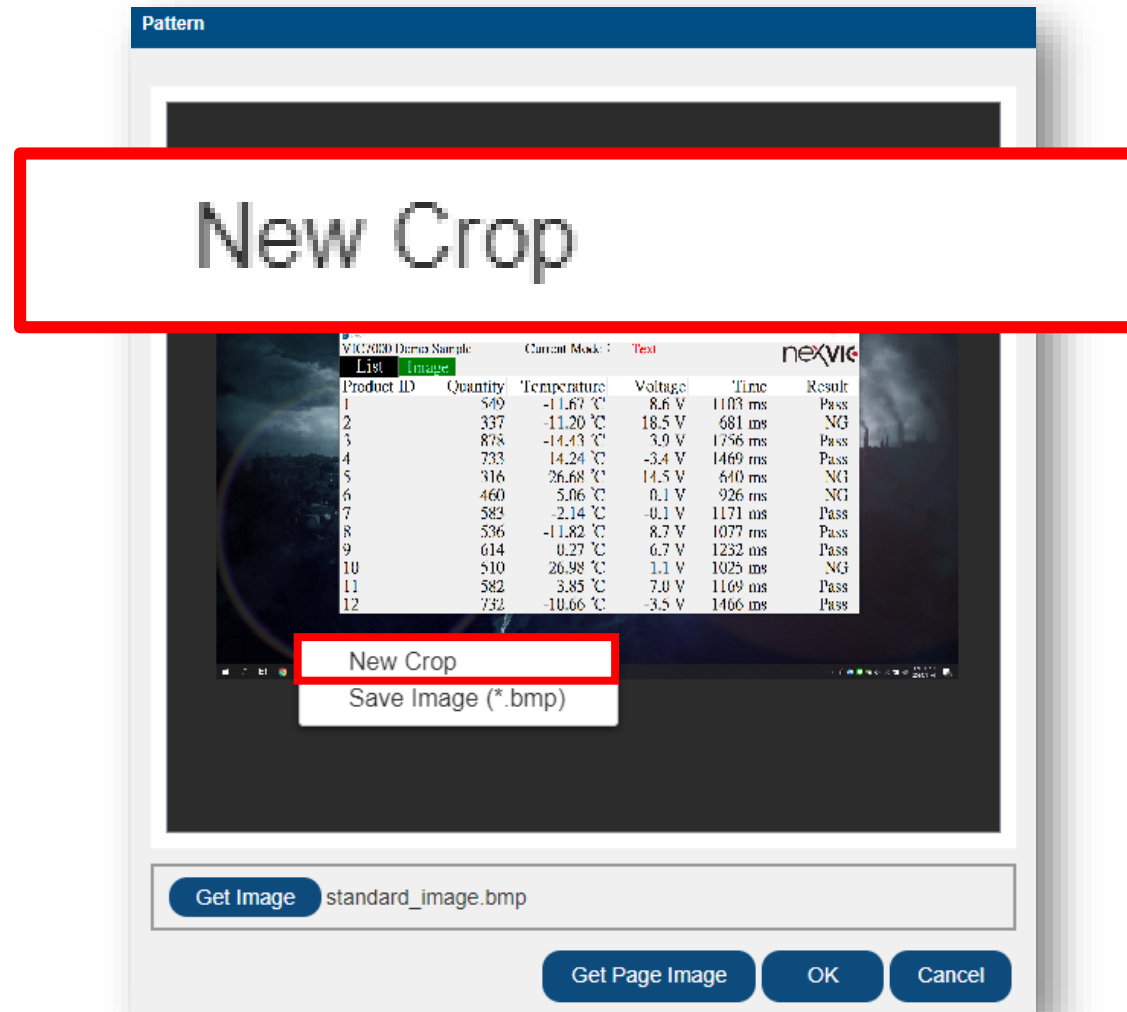
Pattern Width 0



# Build Project – Page & Recognition

- **General: Create a Pattern**

7. **Load Matching Pattern:** Right-click on the image → Select **New Crop**



# Build Project – Page & Recognition

- **General: Create a Pattern**

7. **Load Matching Pattern:** Circle the matching pattern → Right-click on the image

→ Select **Crop** → Click **OK**





# Build Project – Page & Recognition

- **General: Create a Pattern**

8. **Set Matching Result Output:** Enter the **Output of the Matching Result**

Over View PATTERN01 +

Settings

Matching Paramete

Gray Matching ☐

8 Matching Output true

No Matching Out false

Pattern Width 200

Pattern Height 65

Minimum Score 0.95

Detect Page Disp ☐

Matching Output true

No Matching Out false

01 (820,769)

Temperature	Voltage
-11.67 °C	8.6 V
-11.20 °C	18.5 V
-14.43 °C	3.9 V

# Build Project – Page & Recognition

- **General: Create a Pattern**

9. **Simulate**: It's recommended to check Gray Matching to speed up recognition processes.

Click **Simulate** → Confirm matching result

**Settings**

Matching Parameters

- Gray Matching ☒
- Pattern Load
- Pattern Name
- Pattern X
- Pattern Y
- Pattern Width
- Pattern Height
- Minimum Score
- Detect Page Disp ☐
- Matching Output
- No Matching Output

**Result**

Name	Value
Match	
Score	0.999549
X	1455

**01 (975,714)**

**Gray Matching 9**

**Current Mode : Text**

Quantity	Temperature	Voltage	Time	Result
549	-11.67 °C	8.6 V	1103 ms	Pass
337	-11.20 °C	18.5 V	681 ms	NG
878	-14.43 °C	3.9 V	1756 ms	Pass
733	14.24 °C	-3.4 V	1469 ms	Pass
316	26.68 °C	14.5 V	640 ms	NG
160	5.06 °C	0.1 V	926 ms	NG
583	-2.14 °C	-0.1 V	1171 ms	Pass
536	-11.82 °C	8.7 V	1077 ms	Pass

**42.57ms**

**nexVIC**

**nexVIC**

**Simulate**



# Build Project – Page & Recognition

- **General**

- **Displacement Detection**: Based on the positions of PATTERNS on the image where Patterns are set

**Detect Page Displacement**: Making ROI of OCRs and Colors move with the positions of PATTERNS

Detect Page Displacement



The screenshot shows the 'Settings' panel for 'PATTERN01' in the nexVid software. The panel is titled 'Settings' and contains a list of configuration options. The 'Detect Page Displacement' option is highlighted with a red box. The other options are:

Setting	Value
Matching Parameters	
Gray Matching	<input checked="" type="checkbox"/>
Pattern Load	Sub
Pattern Name	standi
Pattern X	145
Pattern Y	204
Pattern Width	206
Pattern Height	65
Minimum Score	0.95
Detect Page Displacement	<input type="checkbox"/>
Matching Output	true
No Matching Output	false

# Build Project – Page & Recognition

- **General: Create a Pattern**

- **Multiple PATTERN:** Click **Add** icon → Repeat the aforementioned steps to create Patterns

**Settings**

**Input Parameters**

Name	Value
ROI-X	961
ROI-Y	0
ROI-Width	958
ROI-Height	576
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit

**Matching Parameter**

Parameter	Value
Gray Matching	<input checked="" type="checkbox"/>
Pattern Load	Submit
Pattern Name	standard_image.br
Pattern X	1455
Pattern Y	204
Pattern Width	206
Pattern Height	65
Minimum Score	0.95
Detect Page Disp	<input type="checkbox"/>
Matching Output	true
No Matching Out	false

**Result**

Name	Value
Stop	Start
Get Image	Simulate

**01 (-315,1127)**

**Matching Parameter**

Gray Matching ☒

Pattern Load **Submit**

Pattern Name standard\_image.br

Pattern X 1455

Pattern Y 204

Pattern Width 206

Pattern Height 65

Minimum Score 0.95

Detect Page Disp ☐

Matching Output true

No Matching Out false

**VIC7000 Demo Sample** Current Mode : **Text**

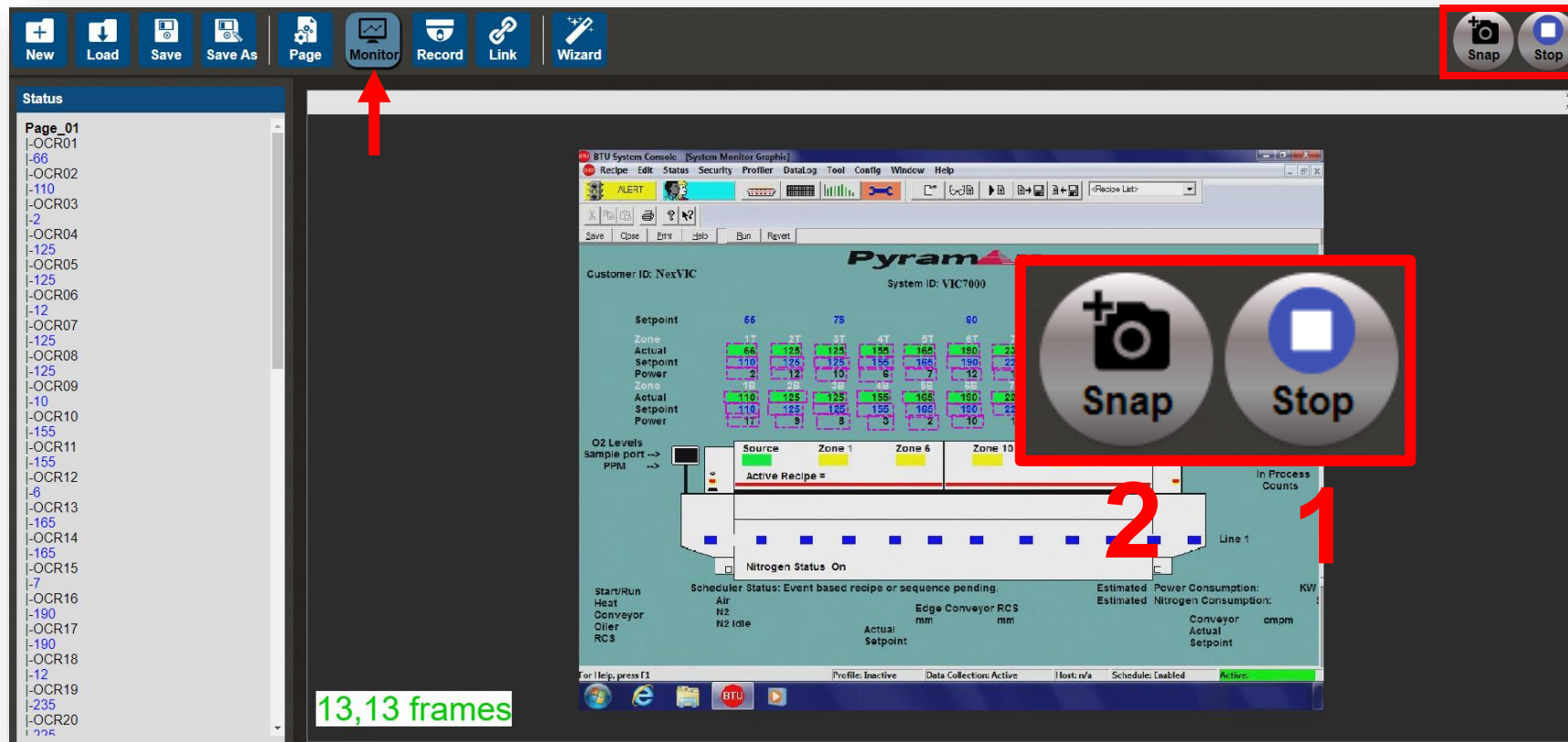
**List Image**

Product ID	Quantity	Temperature	Voltage	Time	Result
1	549	-11.67 °C	8.6 V	1103 ms	Pass
2	337	-11.20 °C	18.5 V	681 ms	NG
3	878	-14.43 °C	3.9 V	1756 ms	Pass
4	733	14.24 °C	-3.4 V	1469 ms	Pass
5	316	26.68 °C	14.5 V	640 ms	NG
6	460	5.06 °C	0.1 V	926 ms	NG
7	583	-2.14 °C	-0.1 V	1171 ms	Pass
8	536	-11.82 °C	8.7 V	1077 ms	Pass
9	614	0.27 °C	6.7 V	1232 ms	Pass
10	510	26.98 °C	1.1 V	1025 ms	NG
11	582	3.85 °C	7.0 V	1169 ms	Pass
12	732	-10.66 °C	-3.5 V	1466 ms	Pass

# Build Project – Play Project

- **Monitor**

1. Start/Stop: Get images and push them into recognition continuously
2. Snap: Get an image and process recognition on it



Recognition results **will not** be stored in Database and transported through **Protocols**.

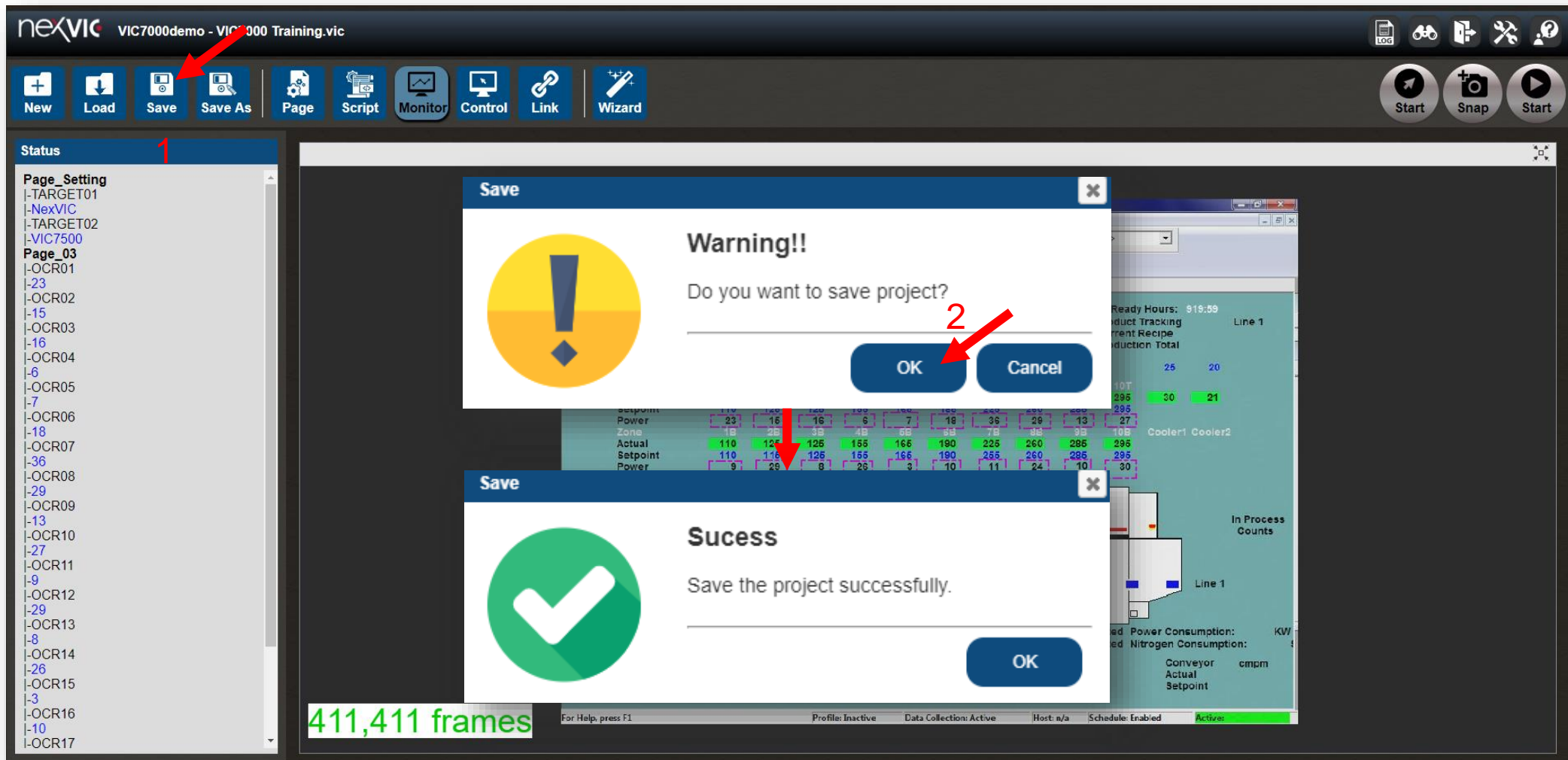
While recognition process is running, **Scripts will be executed**.

# Build Project – Play Project

- **Save Project**

1. **Save Project:** Click **Save**

2. Click **OK**





# Build Project – Play Project

- Play Project

1. Back to User Mode

The screenshot displays the nexVIC software interface for a VIC7000demo. The top toolbar contains icons for New, Load, Save, Save As, Page, Script, Monitor, Control, Link, and Wizard. A red arrow points to the 'Start' button in the top right corner. The main display area shows a 'Pyramax' system monitor graphic with various data fields and a table of values. A green box at the bottom left indicates '411,411 frames'.

**Table Data:**

Setpoint	55	75	90	95	25	20						
Zone	1T	2T	3T	4T	5T	6T	7T	8T	9T	10T		
Actual	155	125	125	155	165	190	235	260	285	295	30	21
Setpoint	110	125	125	155	165	185	225	260	285	295		
Power	23	16	16	6	7	18	36	26	13	27		
Zone	1B	2B	3B	4B	5B	6B	7B	8B	9B	10B		
Actual	110	125	125	155	165	190	225	260	285	295		
Setpoint	110	116	125	155	165	190	235	260	285	295		
Power	9	25	8	25	3	10	11	24	10	30		

**Other Data:**

- Customer ID: NexVIC
- System ID: VIC7500
- Ready Hours: 919:59
- Product Tracking: Current Recipe, Production Total
- Line 1
- Line 2
- Line 3
- Line 4
- Line 5
- Line 6
- Line 7
- Line 8
- Line 9
- Line 10
- Line 11
- Line 12
- Line 13
- Line 14
- Line 15
- Line 16
- Line 17

**Active Recipe =**

**Nitrogen Status On**

**Scheduler Status: Event based recipe or sequence pending.**

**Estimated Power Consumption: (KW)**

**Estimated Nitrogen Consumption:**

**Conveyor Actual Setpoint**

**Conveyor cmpm**

**Actual Setpoint**

**For Help, press F1**

**Profile: Inactive**

**Data Collection: Active**

**Host: n/a**

**Schedule: Enabled**

**Active**

# Build Project – Play Project

- Play Project

2. Click Start Project

The screenshot shows the nexVIC software interface for a VIC7000 system. A red arrow points to the 'Stop' button in the top-left toolbar, with the number '2' next to it. The interface displays various system parameters and a diagram of the production line.

**Status Panel (Left):**

- Page\_01
- OCR01
- 155
- OCR02
- 110
- OCR03
- 23
- OCR04
- 125
- OCR05
- 125
- OCR06
- 15
- OCR07
- 125
- OCR08
- 125
- OCR09
- 10
- OCR10
- 155
- OCR11
- 155
- OCR12
- 6
- OCR13
- 165
- OCR14
- 165
- OCR15
- 7
- OCR16
- 190
- OCR17
- 190
- OCR18
- 12
- OCR19
- 285
- OCR20

**Main Display (Right):**

Customer ID: NexVIC System ID: VIC7000 Ready Hours: 919:59

Product Tracking Current Recipe Production Total Line 1

Setpoint	55	75	90	95	25	20						
Zone	1T	2T	3T	4T	5T	6T	7T	8T	9T	10T		
Actual	155	125	125	155	165	190	285	260	285	295	30	21
Setpoint	110	125	125	155	165	190	225	260	285	295		
Power	23	15	10	6	7	12	37	24	8	27		
Zone	1B	2B	3B	4B	5B	6B	7B	8B	9B	10B		
Actual	110	125	125	155	165	190	225	260	285	295		
Setpoint	110	125	125	155	165	190	225	260	285	295		
Power	19	9	8	3	2	10	11	24	7	32		

O2 Levels Sample port --> PPM -->

Source Zone 1 Zone 6 Zone 10 Cooler

Active Recipe =

Nitrogen Status On

Scheduler Status: Event based recipe or sequence pending.

Start/Run Heat Conveyor Oiler RCS

Air N2 N2 Idle

Edge Conveyor RCS mm mm

Actual Setpoint

Estimated Power Consumption: KW

Estimated Nitrogen Consumption: cmpm

Conveyor Actual Setpoint

In Process Counts

Line 1

For Help, press F1 Profile: Inactive Data Collection: Active Host: n/a Schedule: Enabled Active:

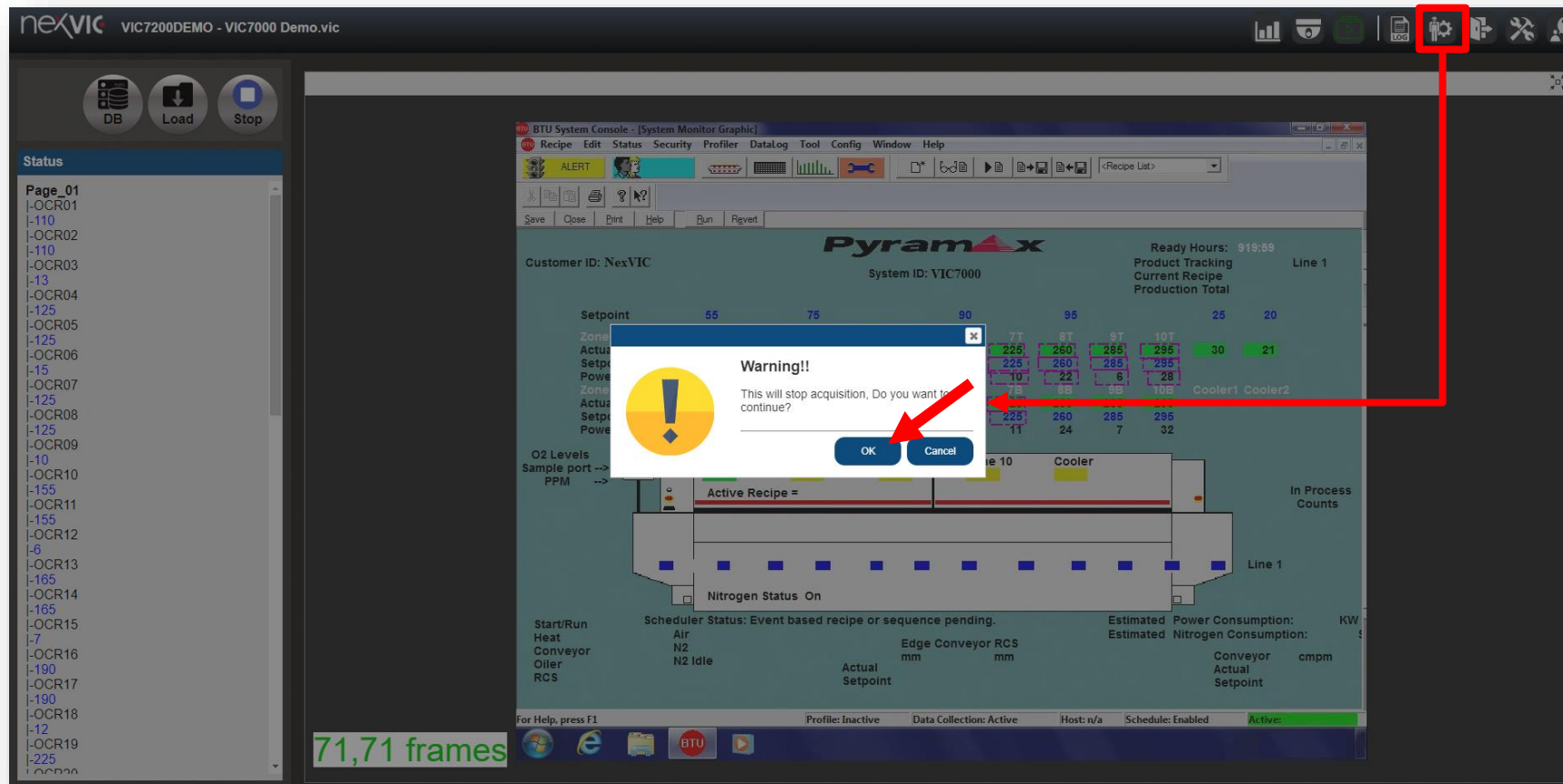
# Build Project – Play Project

- **Stop Warning**

If user switch to administrator mode while the project is playing, the project will be interrupted.

Click on **Administrator Mode** → the Warning window will appear → Click **OK**

Then user can switch to administrator mode to go on

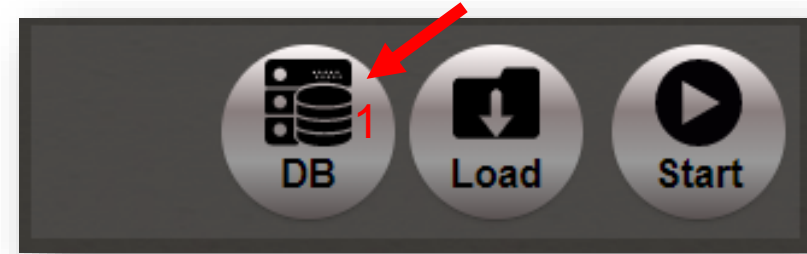




# Build Project – Database

- Use Database

1. Enter Database Page: Click **DB** in User Mode



neXVIC VIC7200DEMO:Database

export export

**Form**

**Target**

Quantity 5

**Target\_Color**

Quantity 5

**Target\_Pattern**

Quantity 5

**OCR**

Quantity 20

**Color**

Quantity 20

**Pattern**

Quantity 10

**Date**

From Pick a date

To Pick a date

**Keyword**

search

# Build Project – Database

- Use Database

2. **Set Searching Parameters:** Set the amount of **Targets**, **Target\_Colors**, **Target\_Patterns**, **OCRs**, **Colors**, **Patterns**, **CALC. Date**, **Keyword of Page**, **Result**

3. **Search:** Click **Search**

Page :

Result : 

- 01
- 02
- 03
- 04
- 05

Result :

Pass

NG

No Matching

**Date**


From

To

**Keyword**

Page

Result

 search

2

**Form**

**Target**

Quantity

**Target\_Color**

Quantity

**Target\_Pattern**

Quantity

**OCR**

Quantity

**Color**


Quantity

**Pattern**

Quantity

**Date**

From

 search

3

# Build Project – Database

- Use Database

4. **Searching Result:** Seeking data following given parameters. A small page contains 20 records, and a large page contains 10 small pages

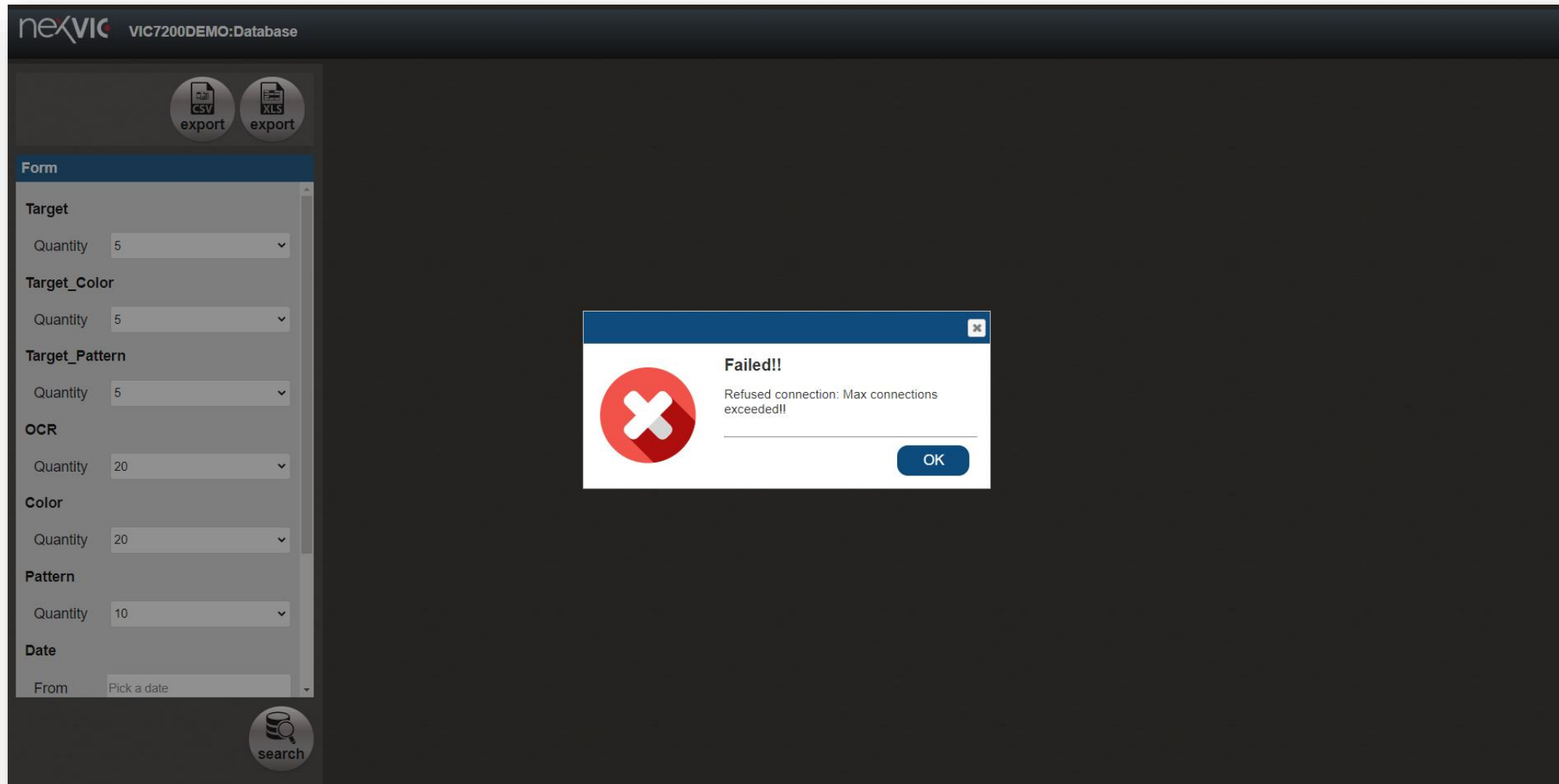
The screenshot displays the nexVIC VIC7200DEMO:Database interface. On the left, a 'Form' section contains search filters: Target (Quantity: 1), Target\_Color (Quantity: 0), Target\_Pattern (Quantity: 0), OCR (Quantity: 20), Color (Quantity: 20), Pattern (Quantity: 10), and Date (From: 2020-06-02 16:05). Above the table are 'export' buttons for CSV and XLS. The table itself has columns: id, page, result, timeStamp, image, TARGET\_01, OCR\_01, OCR\_02, OCR\_03, OCR\_04, OCR\_05, and C. It shows 20 records of 'Pass' results from 2020-06-02. At the bottom, a pagination control shows 'page: 1' selected, with links for 'first', 'prev', 'next', and 'last'. A red box highlights the pagination area.

id	page	result	timeStamp	image	TARGET_01	OCR_01	OCR_02	OCR_03	OCR_04	OCR_05	C
54437	01	Pass	2020-06-02 16:10:17.586			110	110	13	125	125	15
54438	01	Pass	2020-06-02 16:10:18.487			90	110	6	125	125	16
54439	01	Pass	2020-06-02 16:10:19.535			66	110	2	125	125	12
54440	01	Pass	2020-06-02 16:10:20.587			110	110	13	125	125	12
54441	01	Pass	2020-06-02 16:10:21.601			155	110	23	125	125	15
54442	01	Pass	2020-06-02 16:10:22.710			195	110	26	125	125	15
54443	01	Pass	2020-06-02 16:10:23.605			225	110	35	125	125	12
54444	01	Pass	2020-06-02 16:10:24.614			185	110	32	125	125	14
54445	01	Pass	2020-06-02 16:10:25.616			125	110	21	125	125	14
54446	01	Pass	2020-06-02 16:10:26.621			112	110	15	125	125	14
54447	01	Pass	2020-06-02 16:10:27.619			110	110	13	125	125	15
54448	01	Pass	2020-06-02 16:10:28.612			90	110	6	125	125	16
54449	01	Pass	2020-06-02 16:10:29.610			66	110	2	125	125	12
54450	01	Pass	2020-06-02 16:10:30.601			110	110	13	125	125	12
54451	01	Pass	2020-06-02 16:10:31.670			155	110	23	125	125	15
54452	01	Pass	2020-06-02 16:10:32.589			195	110	26	125	125	15
54453	01	Pass	2020-06-02 16:10:33.589			225	110	35	125	125	12
54454	01	Pass	2020-06-02 16:10:34.589			185	110	32	125	125	14
54455	01	Pass	2020-06-02 16:10:35.590			125	110	21	125	125	14
54456	01	Pass	2020-06-02 16:10:36.592			112	110	15	125	125	14

# Build Project – Database

- **Login Limit**

Only allow **one** person logs in and operates



# Build Project – Database

- Save Image

Save Image

VIC7000 will save images into Database when recognition failed (NG or No Matching)  
(Enabled in System Setting window). Those saved images could be used for later training

The screenshot displays the neXVIC VIC7200DEMO:Database interface. On the left is a 'Form' panel with filters for Quantity, OCR, Color, Pattern, Date, Keyword, Page, and Result. The main area shows a table of failed recognition results. An 'image' label with a red arrow points to a specific row in the table. An inset window shows the Pyramax system monitor interface.

id	page	result	timeStamp	image	TAR	OCR_03	OCR_04	OCR_05	C
54961	01	NG	2020-06-02 16:25:46.090	image			125	125	15
54962	01	NG	2020-06-02 16:25:47.092	image			125	125	16
54963	01	NG	2020-06-02 16:25:48.096	image			125	125	12
54964	01	NG	2020-06-02 16:25:49.091	image		110	110	13	12
54965	01	NG	2020-06-02 16:25:50.090	image		155	110	23	15
54966	01	NG	2020-06-02 16:25:51.088	image		195	110	26	15
54967	01	NG	2020-06-02 16:25:52.088	image		225	110	35	12
54968	01	NG	2020-06-02 16:25:53.088	image					
54969	01	NG	2020-06-02 16:25:54.088	image					
54970	01	NG	2020-06-02 16:25:55.088	image					
54971	01	NG	2020-06-02 16:25:56.088	image					
54972	01	NG	2020-06-02 16:25:57.088	image					
54973	01	NG	2020-06-02 16:25:58.088	image					
54974	01	NG	2020-06-02 16:25:59.088	image					
54975	01	NG	2020-06-02 16:26:00.088	image					
54976	01	NG	2020-06-02 16:26:01.088	image					
54977	01	NG	2020-06-02 16:26:02.088	image					
54978	01	NG	2020-06-02 16:26:03.088	image					
54979	01	NG	2020-06-02 16:26:04.088	image					
54980	01	NG	2020-06-02 16:26:05.088	image					

Pyramax System Monitor Interface:

- Customer ID: NexVIC
- System ID: VIC7500
- Ready Hours: 919:59
- Line 1
- Product Tracking
- Current Recipe
- Production Total
- Setpoint: 65, 75, 90, 95
- Zone 1, Zone 6, Zone 10, Cooler
- Actual: 110, 125, 125, 155, 165, 190, 225, 260, 285, 295
- Power: 13, 15, 10, 6, 7, 12, 14, 12, 18, 38
- Active Recipe \*
- Nitrogen Status On
- Scheduler Status: Event based recipe or sequence pending.
- Estimated Power Consumption: KW
- Estimated Nitrogen Consumption: cmm
- Start/Run Heat Conveyor Cooler RCS
- Edge Conveyor RCS mm
- Actual Setpoint
- Conveyor Actual Setpoint

# Build Project – Database

Skip Repeated Data

- **Skip Repeated Data**

VIC7000 can skip repeated data while storing data in database (Enable in System Setting). It is recommended to use when capture frame rate is high, and causing data is duplicated.

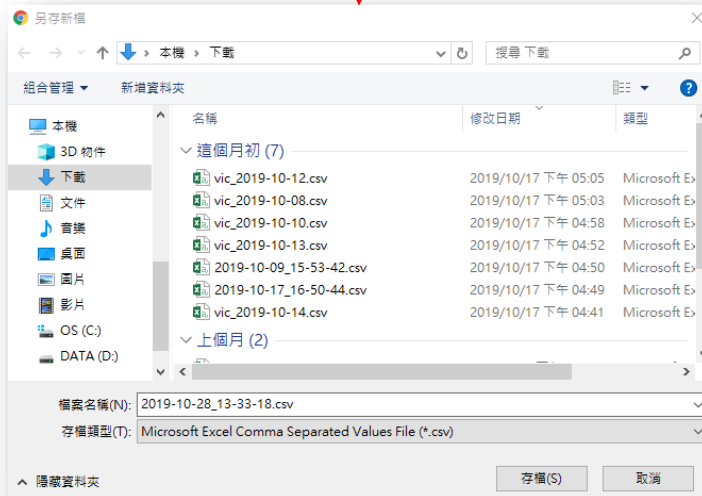
id	page	result	timeStamp	image	OCR_01	OCR_02	OCR_03	OCR_04
6378551	02	Pass	2020-03-06 15:42:14.651		0	0.078	-0.610	0.838
6378552	02	Pass	2020-03-06 15:42:15.667		0	0.953	-0.627	-0.994
6378553	02	Pass	2020-03-06 15:42:16.700		0	0.998	-0.444	-0.346
6378554	02	Pass	2020-03-06 15:42:17.701		0	0.160	0.629	-0.534
6378555	02	Pass	2020-03-06 15:42:18.717		0	-0.786	-0.969	-0.875
6378556	02	Pass	2020-03-06 15:42:19.734		0	0.697	-0.633	0.416
6378557	02	Pass	2020-03-06 15:42:20.751		0	-0.988	0.957	0.647
6378558	02	Pass	2020-03-06 15:42:21.767		0	-0.143	-0.422	-0.758
6378559	02	Pass	2020-03-06 15:42:22.784		0	0.844	-0.062	0.438
6378560	02	Pass	2020-03-06 15:42:23.800		0	0.006	0.302	-0.515
6378561	02	Pass	2020-03-06 15:42:24.818		0	0.081	-0.611	-0.305
6378562	02	Pass	2020-03-06 15:42:25.833		0	-0.278	0.880	-0.560
6378563	02	Pass	2020-03-06 15:42:26.650		0	0.350	-0.573	-0.502
6378564	02	Pass	2020-03-06 15:42:27.650		0	-0.071	0.824	0.046
6378565	02	Pass	2020-03-06 15:42:28.684		0	0.059	0.081	-0.616
6378566	02	Pass	2020-03-06 15:42:29.700		0	-0.701	0.173	0.057
6378567	02	Pass	2020-03-06 15:42:30.717		0	-0.773	0.112	-0.834
6378568	02	Pass	2020-03-06 15:42:31.717		0	0.899	0.889	-0.259
6378569	02	Pass	2020-03-06 15:42:32.733		0	-0.633	0.963	-0.386
6378570	02	Pass	2020-03-06 15:42:33.750		0	-0.469	0.845	0.829

# Build Project – Database

- Export

VIC7000 allows users to export the searching results to **.csv** and **.xls**.

When exporting is completed, user can directly download the exported file to local PC.



2019-07-18-15-46-00.csv - Excel

常用插入版面配置公式資料校閱檢視說明

新組網體12A A

自動插入通用格式

一般中等好壞計算方式

連結的儲存格...備註說明文字輸入輸出

儲存格插入刪除格式

自動加總快速填充排序與篩選尋找與提取

可能發生資料遺失如果將活頁簿儲存為磁碟分檔 (.csv) 格式，會遺失部分功能。若要保留這些功能，請將活頁簿儲存為 Excel 檔案格式。不要再顯示另存新檔...

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
10390	12275	2	Pass	29:06.2	Text	List	Image			97						5	5	204	NG	760	-	4	68	-	3	7	1
10391	12276	2	Pass	29:06.4	Text	List	Image			97						5	5	204	NG	760	-	4	68	-	3	7	1
10392	12277	2	Pass	29:06.6	Text	List	Image			97						5	5	204	NG	760	-	4	68	-	3	7	1
10393	12278	2	Pass	29:06.8	Text	List	Image			565	13	99				15	9	1134	Pass	951		16	84		11	2	1
10394	12279	2	Pass	29:07.0	Text	List	Image			565	13	99				15	9	1134	Pass	951		16	84		11	2	1
10395	12280	2	Pass	29:07.2	Text	List	Image			565	13	99				15	9	1134	Pass	951		16	84		11	2	1
10396	12281	2	Pass	29:07.4	Text	List	Image			565	13	99				15	9	1134	Pass	951		16	84		11	2	1
10397	12282	1	Pass	29:07.6	Image	List	Image			13	15	10	6	7	12	14	12	16	38	39	19	8	3	24	30		
10398	12283	1	Pass	29:07.8	Image	List	Image			35	14	13	26	7	16	11	10	14	22	32	9	3	28	2	15		
10399	12284	1	Pass	29:08.0	Image	List	Image			35	14	13	26	7	16	11	10	14	22	32	9	3	28	2	15		
10400	12285	1	Pass	29:08.2	Image	List	Image			35	14	13	26	7	16	11	10	14	22	32	9	3	28	2	15		
10401	12286	1	Pass	29:08.4	Image	List	Image			35	14	13	26	7	16	11	10	14	22	32	9	3	28	2	15		
10402	12287	1	Pass	29:08.6	Image	List	Image			15	16	13	5	7	12	11	24	4	27	8	9	18	30	2	20		
10403	12288	1	Pass	29:08.8	Image	List	Image			15	16	13	5	7	12	11	24	4	27	8	9	18	30	2	20		
10404	12289	1	Pass	29:09.0	Image	List	Image			15	16	13	5	7	12	11	24	4	27	8	9	18	30	2	20		
10405	12290	1	Pass	29:09.2	Image	List	Image			15	16	13	5	7	12	11	24	4	27	8	9	18	30	2	20		
10406	12291	1	Pass	29:09.4	Image	List	Image			15	16	13	5	7	12	11	24	4	27	8	9	18	30	2	20		
10407	12292	1	Pass	29:09.6	Image	List	Image			24	14	13	5	7	12	11	11	4	27	18	13	18	3	2	10		
10408	12293	1	Pass	29:09.8	Image	List	Image			24	14	13	5	7	12	11	11	4	27	18	13	18	3	2	10		
10409	12294	1	Pass	29:10.0	Image	List	Image			24	14	13	5	7	12	11	11	4	27	18	13	18	3	2	10		
10410	12295	1	Pass	29:10.2	Image	List	Image			24	14	13	5	7	12	11	11	4	27	18	13	18	3	2	10		
10411	12296	1	Pass	29:10.4	Image	List	Image			24	14	13	5	7	12	11	11	4	27	18	13	18	3	2	10		
10412	12297	2	NG	29:10.7	Text	List	Image			216		13	10		23	6	0	NG	968	-	15	0		0	2	1	
10413	12298	2	Pass	29:10.9	Text	List	Image			216		13	10		23	6	0	NG	968	-	15	0		0	2	1	
10414	12299	2	Pass	29:11.1	Text	List	Image			216		13	10		23	6	0	NG	968	-	15	0		0	2	1	
10415	12300	2	Pass	29:11.3	Text	List	Image			216		13	10		23	6	0	NG	968	-	15	0		0	2	1	
10416	12301	2	Pass	29:11.5	Text	List	Image			216		13	10		23	6	0	NG	968	-	15	0		0	2	1	
10417	12302	2	Pass	29:11.7	Text	List	Image			868		21	18	-	0	3	1737	Pass	966	-	3	92		23	3	1	
10418	12303	2	Pass	29:11.9	Text	List	Image			868		21	18	-	0	3	1737	Pass	966	-	3	92		23	3	1	
10419	12304	2	Pass	29:12.1	Text	List	Image			868		21	18	-	0	3	1737	Pass	966	-	3	92		23	3	1	
10420	12305	2	Pass	29:12.3	Text	List	Image			868		21	18	-	0	3	1737	Pass	966	-	3	92		23	3	1	
10421	12306	2	Pass	29:12.5	Text	List	Image			868		21	18	-	0	3	1737	Pass	966	-	3	92		23	3	1	
10422	12307	2	Pass	29:12.7	Text	List	Image			773		27	37		16	2	1547	Pass	438		0	93		21	4		

2019-07-18-15-46-00

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- **Database Notes**

1. Database only store data of **recent 7 consecutive days**.
2. VIC7000 has a **hardware remaining capacity detection mechanism**. If the available capacity is less than **10G**, the alert will show up and be recorded in Log. Data will continue to be stored in Database at this state. If the available capacity is less than **5G**, the alert will show up and still be recorded in Log, at this state, but VIC7000 will not store images to database.
3. VIC7000 has an **automatic shutdown of image saving mechanism** that checks every minute to let users know whether it is enabled or not. If it is enabled, it will be recorded in Log.

When the number of saved images exceed a threshold in a minute, this mechanism will be enabled. At this moment, Data will continue to be stored and images will not be saved when recognition failed.

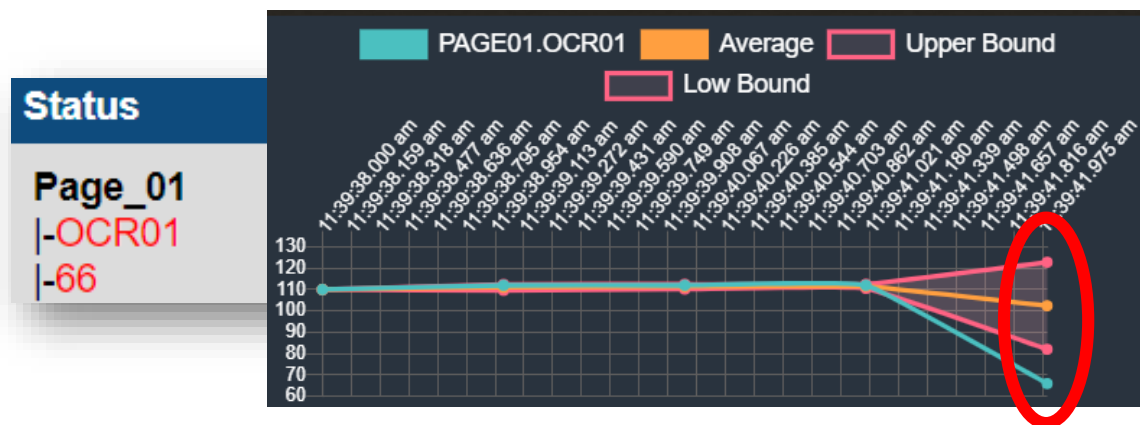
If the number of failure recognition occurs in a minute is less than the threshold, this mechanism will be disabled. Otherwise, this mechanism will still be enabled.

failure recognition means that recognition result is **NG** or **No Matching**.

# Build Project – Chart

- **Chart:** Display recognized data on chart
  - 1. **Select Data:** Find Chart settings in TARGET or OCR settings. User can enable: Use Chart, set Chart Maximum Number Of Points, enable Moving Average Line, and set Standard Deviation in Chart settings.

A project can enable maximum 9 TARGET or OCR to Use Chart.  
If Moving Average Line is enabled and the data is out of standard deviation, it means that data is event trigger and it will turn red.



**Settings**

Select Font: Font File (dropdown)

Load Font: Submit

Font File: VIC7000\_Demo\_g

Learn Font: Submit

**Chart**

Use Chart: ☐

Chart Maximum Number Of Points: 60 (up/down arrows)

Moving Average Line: ☐

Standard Deviation: 1 (up/down arrows)

# Build Project – Chart

- Chart

2. [See Chart](#): After starting project in General Mode, click on **Chart** in toolbar. we can see the chart based on current recognized data. In Chart Mode, we can start/stop project by clicking on the start/stop button next to the toolbar.

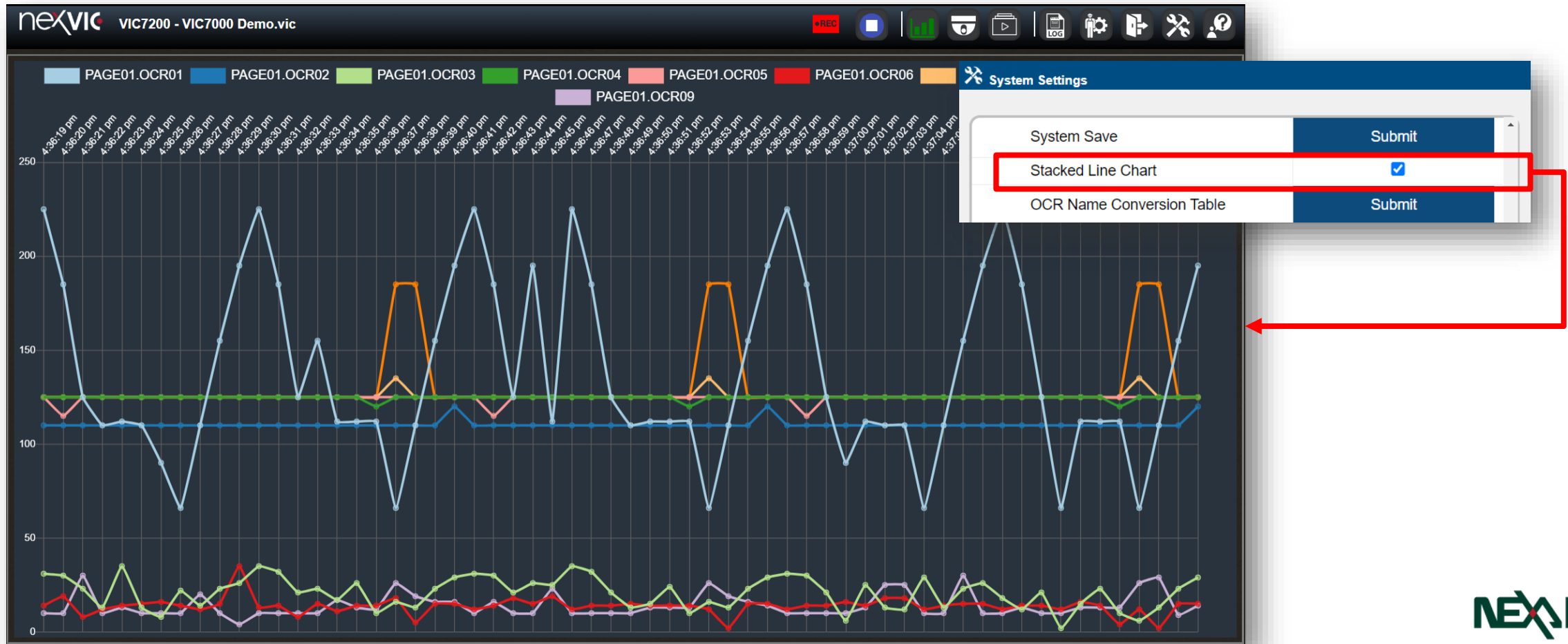


# Build Project – Chart

- **Chart**

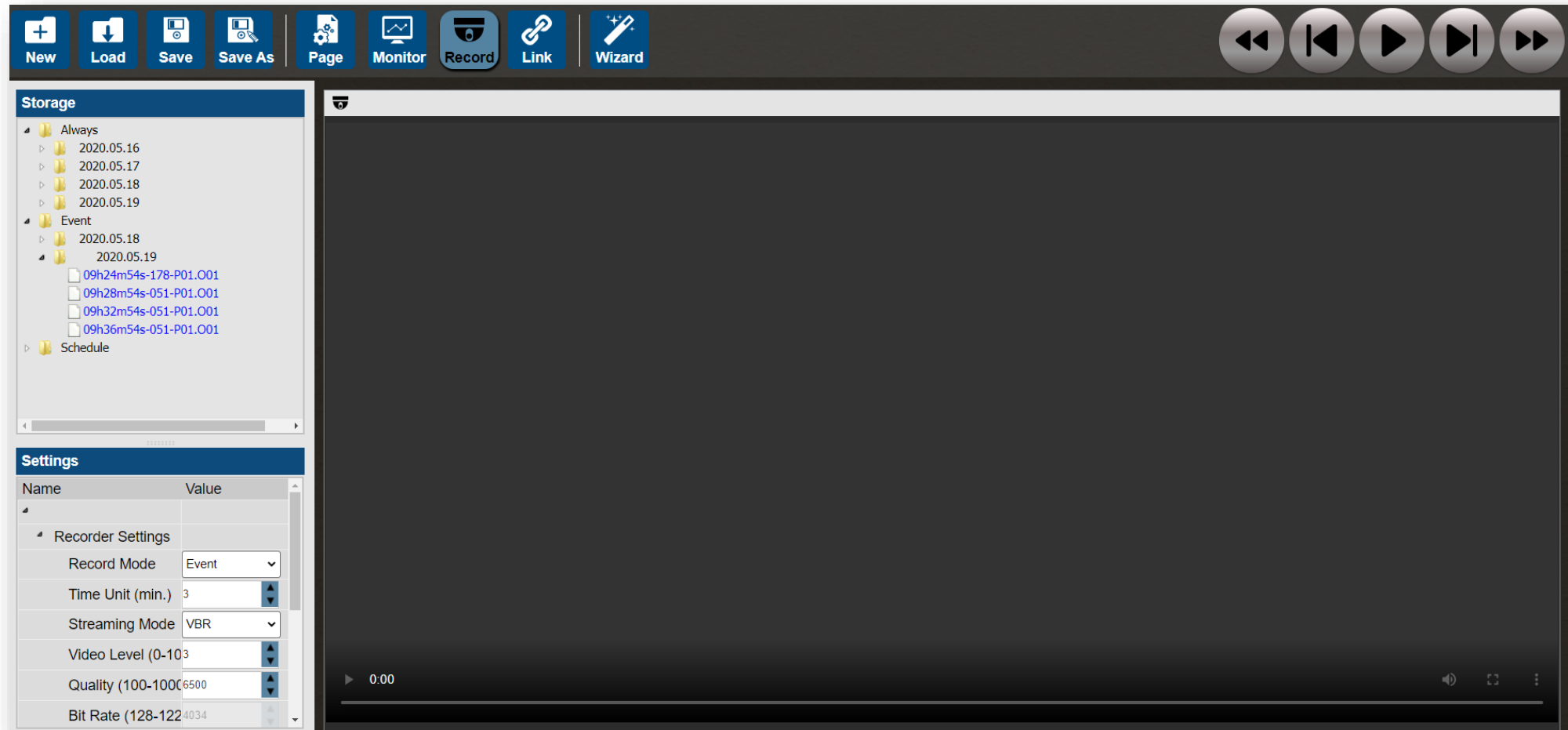
- **Stacked Line Chart:** In Settings windows, we can enable **Stacked Line Chart**.

After enabling it, system will show all line chart on a single chart.



# Build Project – Recorder

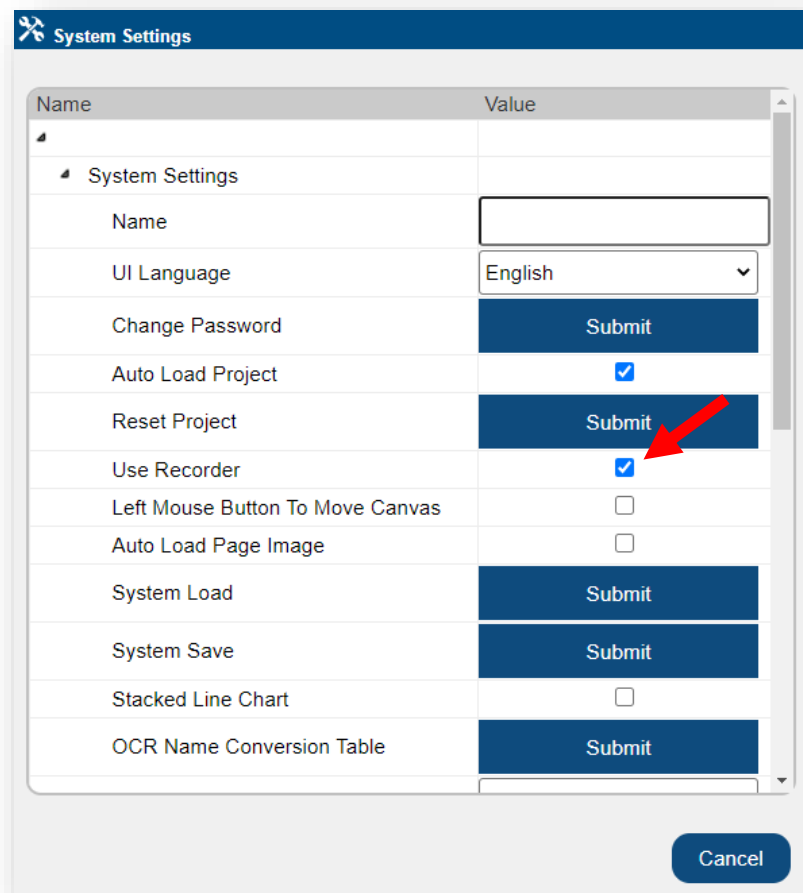
- **Recorder:** Record the input video
  1. **Entry Recorder page:** We can see the previous recording videos and set recorder parameters.



# Build Project – Recorder

- **Recorder**

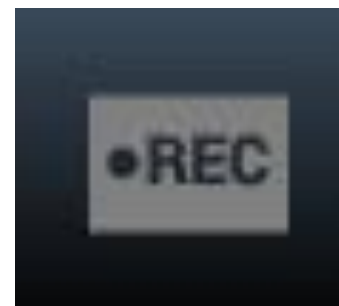
2. **Use Recorder:** Enable recorder in settings window. After enabling, we can see the recorder status next to the toolbar.



The screenshot shows the 'System Settings' window with a table of settings. The 'Use Recorder' checkbox is checked, and a red arrow points to it.

Name	Value
System Settings	
Name	<input type="text"/>
UI Language	English
Change Password	Submit
Auto Load Project	<input checked="" type="checkbox"/>
Reset Project	Submit
Use Recorder	<input checked="" type="checkbox"/>
Left Mouse Button To Move Canvas	<input type="checkbox"/>
Auto Load Page Image	<input type="checkbox"/>
System Load	Submit
System Save	Submit
Stacked Line Chart	<input type="checkbox"/>
OCR Name Conversion Table	Submit

Cancel



Stop



Recording, but there is no video input



Recording

# Build Project – Recorder

- **Recorder**

- 3. Recorder Settings

Recorder Mode: Always, Event, Schedule

Time Unit (min.): a video duration

Streaming Mode

Video Level: The larger the value, the better the image quality and the larger the video size

Quality: The larger the value, the better the image quality and the larger the video size

Bit Rate: The larger the value, the better the image quality and the larger the video size

Schedule Settings

The screenshot shows a 'Settings' form for a recorder. The 'Record Mode' dropdown is set to 'Always'. The 'Streaming Mode' dropdown is set to 'VBR'. The 'Video Level' is set to 10, 'Quality' to 7500, and 'Bit Rate' to 4034. The 'Schedule Settings' button is visible at the bottom right. Two red boxes highlight the dropdown menus: one for 'Record Mode' showing 'Always', 'Event', and 'Schedule'; and another for 'Streaming Mode' showing 'VBR' and 'CBR'.

Settings	
Name	
Recorder Settings	
Record Mode	Always
Time Unit (min.)	1
Streaming Mode	VBR
Video Level (0-105)	10
Quality (100-10000)	7500
Bit Rate (128-12288)	4034
Schedule Settings	Submit



# Build Project – Recorder

- Recorder

- Recorder Mode

Always: Continuously record screen

Event: When event triggers, record the screen before, during, and after the event happens. There will be totally three videos generated.

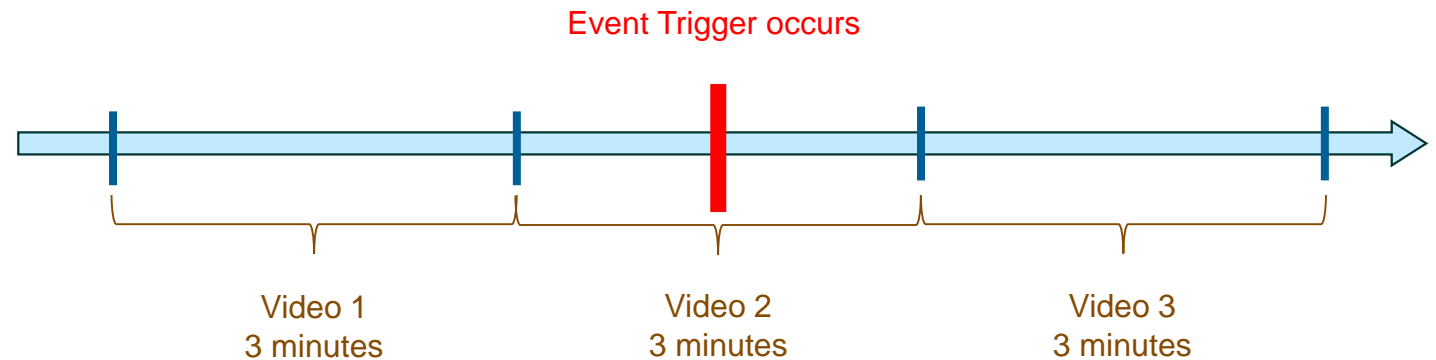
Schedule: Record screen according to a schedule.

Always

Event

Schedule

Event: Take Time Unit is 3 minutes as example



# Build Project – Recorder

- **Recorder**

- 3. Recorder settings:

- Video Status

- Video Width

- Video Height

- Video Frame Rate

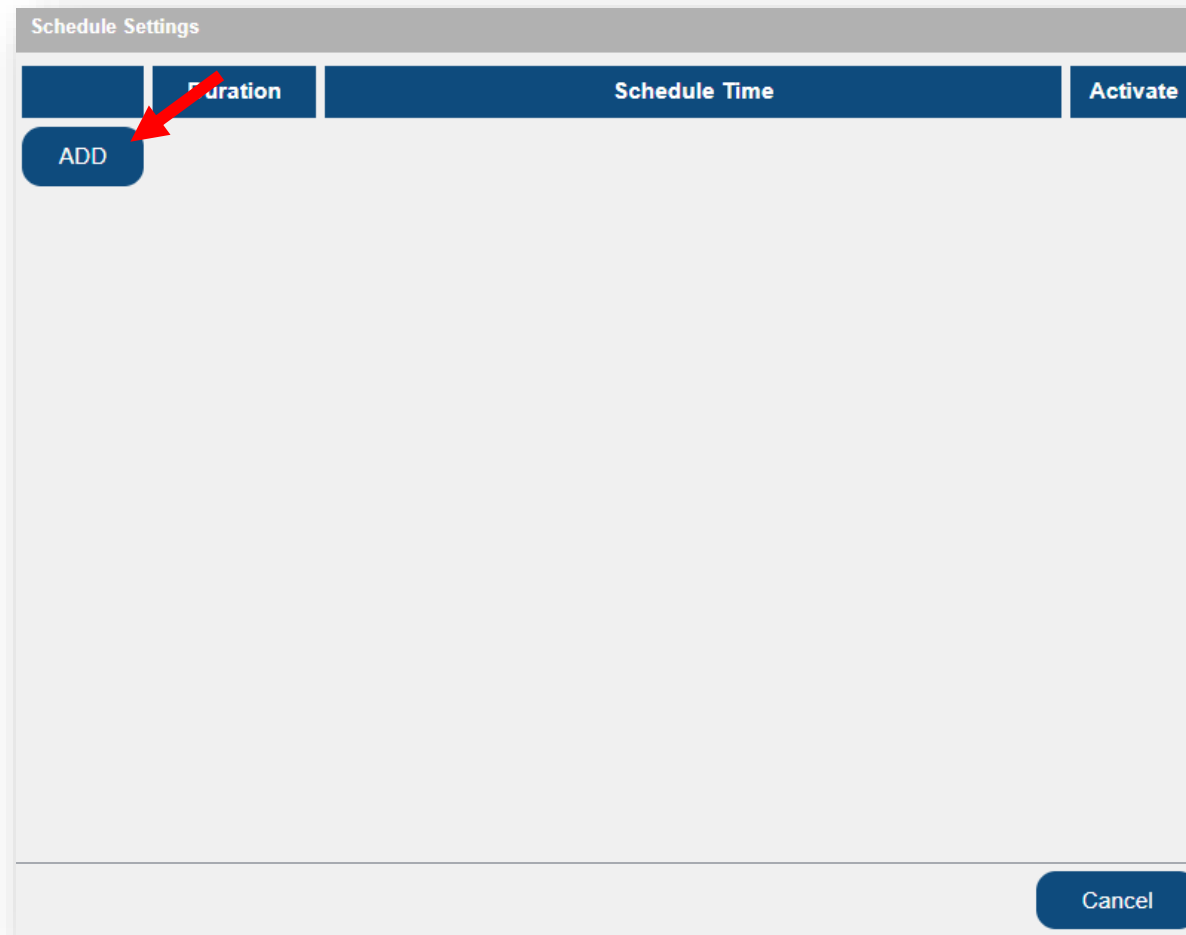
- Video Signal

- Video Input

Video Status	
Video Width	1024
Video Height	768
Video Frame Rate	60
Video Signal	true
Video Input	DVI_A (RGB / ▼)

# Build Project – Recorder

- **Recorder**
  - **Schedule Settings**: Start recording at a specific time. Click on **Schedule Settings**, and the Schedule Settings window will appear → Click **Add**



# Build Project – Recorder

- **Recorder**

- **Schedule Time Edit**

Record Duration (min.)

Minute

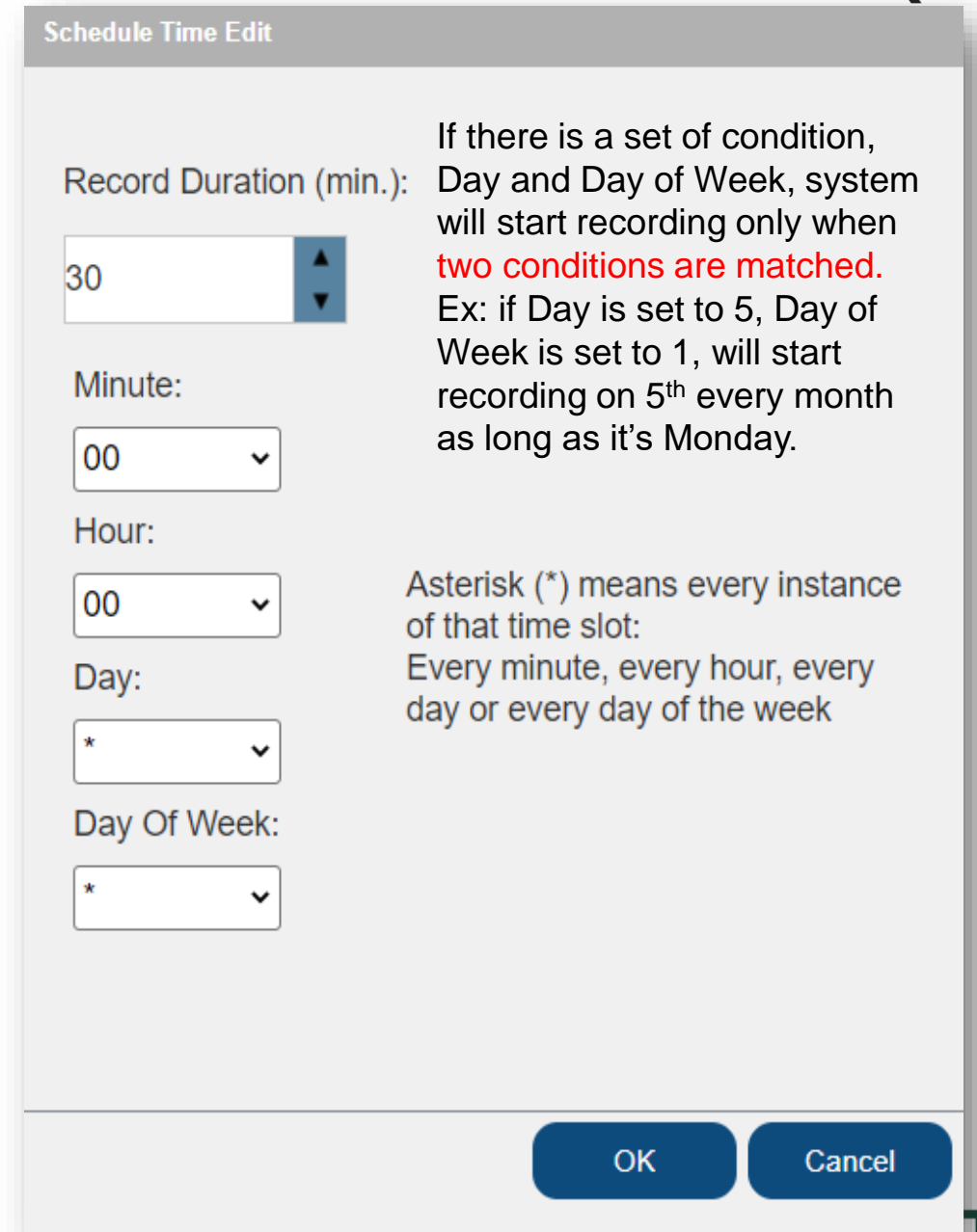
Hour

Day

Day Of Week

\*: Represent each time point in the field

Ex: If settings are minute-00, Hour-12, Day-10, Day of Week-\*, then system will execute recorder at 12:00 on 10<sup>th</sup> every month.



The screenshot shows a 'Schedule Time Edit' dialog box with the following fields and options:

- Record Duration (min.):** A numeric input field with the value '30' and a blue up/down arrow button to its right.
- Minute:** A dropdown menu with '00' selected.
- Hour:** A dropdown menu with '00' selected.
- Day:** A dropdown menu with '\*' selected.
- Day Of Week:** A dropdown menu with '\*' selected.

On the right side of the dialog, there is explanatory text:

If there is a set of condition, Day and Day of Week, system will start recording only when **two conditions are matched**.  
Ex: if Day is set to 5, Day of Week is set to 1, will start recording on 5<sup>th</sup> every month as long as it's Monday.

Asterisk (\*) means every instance of that time slot:  
Every minute, every hour, every day or every day of the week

At the bottom right, there are two buttons: 'OK' and 'Cancel'.

# Build Project – Recorder

- Recorder

4. **View Recorded Videos:** In **Storage** field, recorded videos stored in VIC7000 are listed and classified by Recorder Mode.

Click on the folder with minimum time unit, user can view the list of recorded videos.

The screenshot displays the nexVid Recorder software interface. On the left, a 'Storage' panel is highlighted with a red box, showing a tree view of folders: 'Always', 'Event', and 'Schedule'. A red arrow points to the '11 o'clock' folder under 'Always'. The main area shows a grid of video thumbnails for the selected folder, with titles like '46m55s-47m55s', '47m55s-48m55s', etc. The interface includes a top toolbar with icons for New, Load, Save, Save As, Page, Monitor, Record, Link, and Wizard. The bottom section shows 'Settings' for the Recorder.

# Build Project – Recorder

- Recorder

4. [View Recorded Videos](#): Click on video, to enlarge and display it.

The filename of the playing video will turn red.

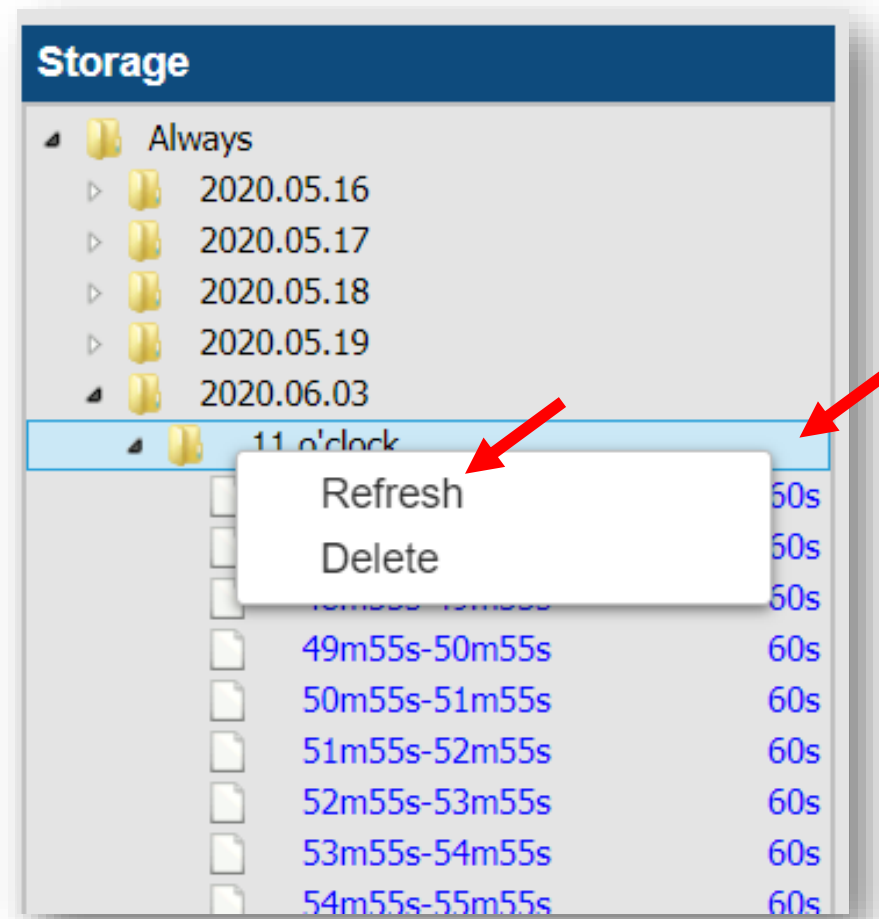
The screenshot displays the BTU System Console interface, which is divided into several sections:

- Storage:** A file tree on the left showing folders for dates (2020.05.16 to 2020.06.03) and a folder named '11 o'clock'. A video file '46m55s-47m55s 60s' is selected, highlighted in blue. A red arrow points from this file to the video player area.
- Settings:** A section at the bottom left with a table for 'Recorder Settings'.
- Main Display:** A large window titled 'Pyramax' showing system data for 'Customer ID: NexVIC' and 'System ID: VIC7500'. It includes a table of temperature setpoints and actual values for various zones (1T to 10T), power consumption, and a process flow diagram. The diagram shows a conveyor system with 'Nitrogen Status On' and 'Active Recipe ='. The status bar at the bottom indicates 'Profile: Inactive', 'Data Collection: Active', 'Host: n/a', 'Schedule: Enabled', and 'Active:'. A red box highlights the video player area, which shows the filename '/opt/recorder/always/2020Y06M03D/11h/REC\_2020Y06M03D11h46m55s-60s.mp4' in red text.

# Build Project – Recorder

- Recorder
  - Refresh

Right-click on the folder and select **Refresh** to refresh the video list





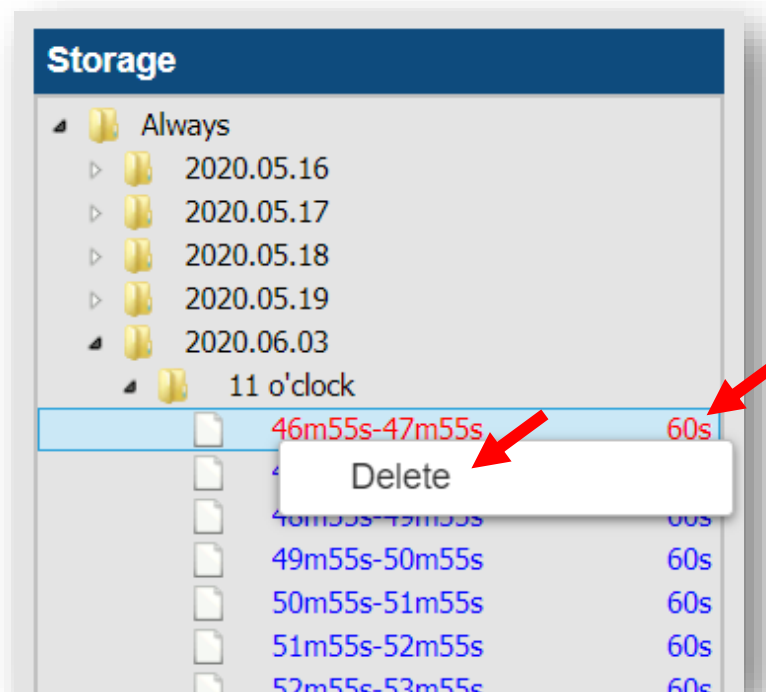
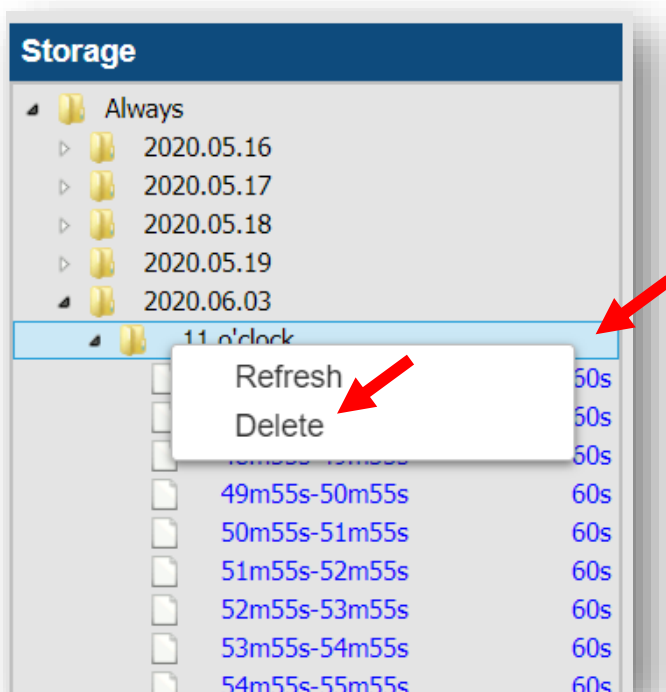
# Build Project – Recorder

- Recorder

- Delete

Right-click on the folder and select **Delete**, the entire folder will be deleted, including the videos within this folder.

Right-click on the video and select **Delete** to delete the selected video

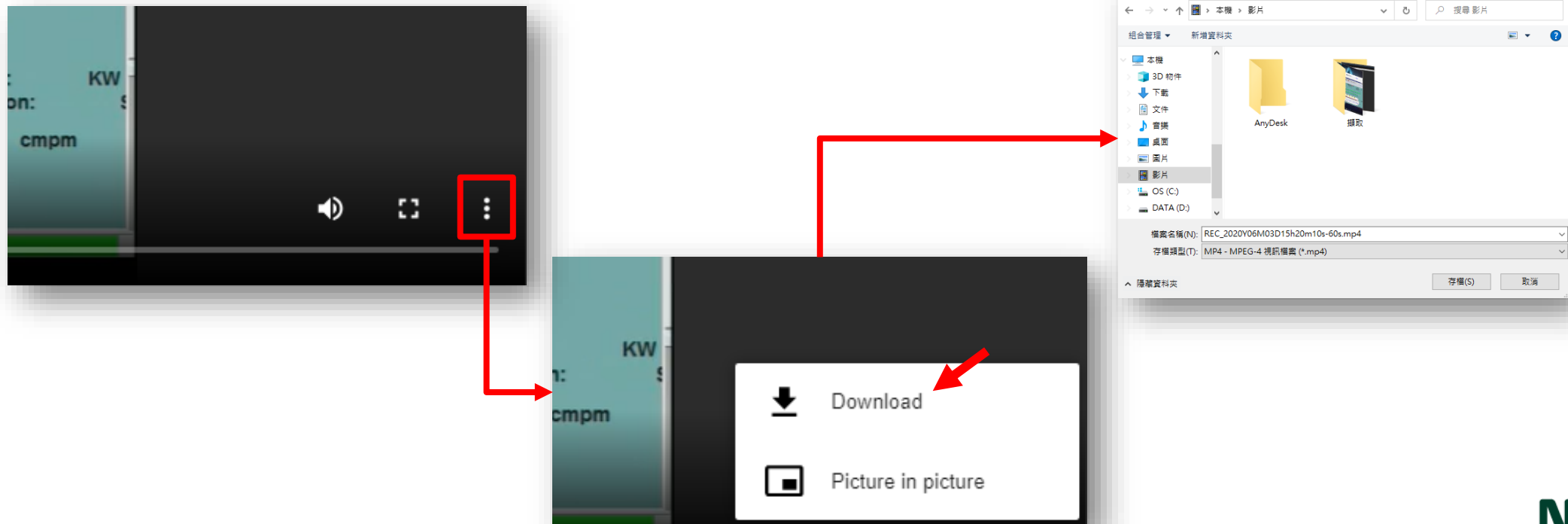


# Build Project – Recorder

- Recorder
  - Download

Click on the button at lower-right corner in playing filed and select **Download**, the current video will be downloaded to local PC.

The download path is same as the download path of the web browser.

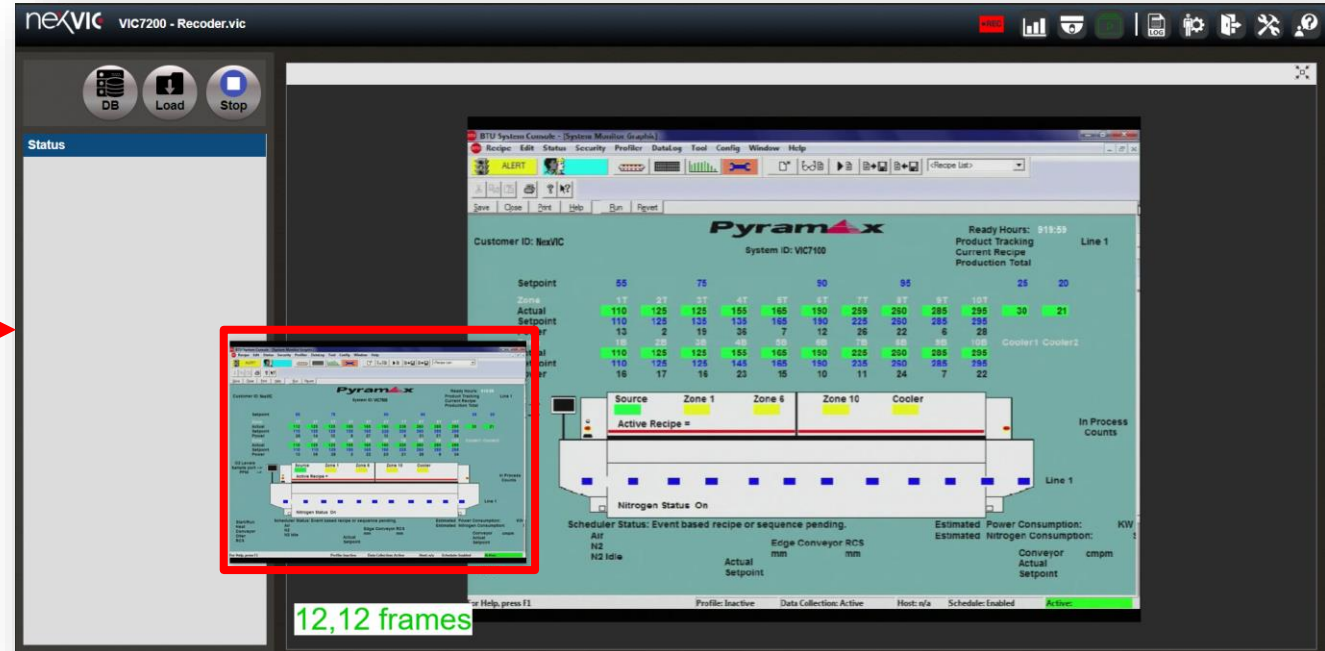
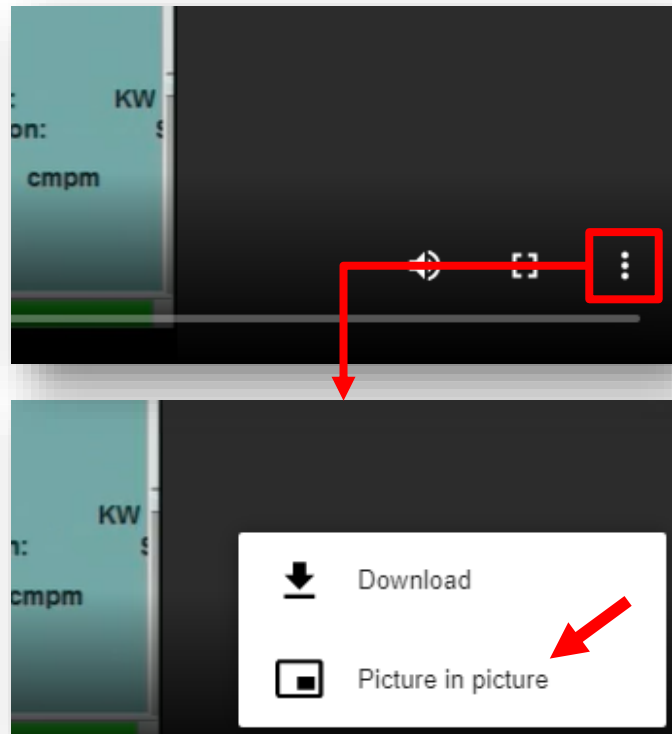


# Build Project – Recorder

- Recorder
  - Picture in Picture

Click on the button at lower right corner in playing filed and select **Picture in picture**, to extract a picture from the video player

We can process other functions and view the video playing at the same time.



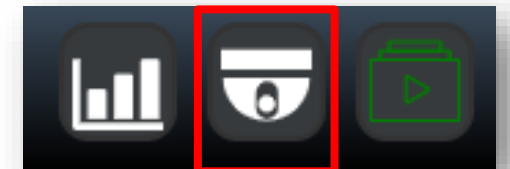
# Build Project – Recorder

- Recorder
  - Recorder

In General mode, click on the Recorder button on the toolbar, user can see the recorded videos.

The screenshot displays the nexVIC Recorder.vic application. On the left, a 'Storage' panel lists folders for 'Always' and 'Event', with a detailed list of video files under 'Always' ranging from 2020.05.16 to 2020.06.03. The main area shows a 'Pyramax' system monitor graphic for 'System ID: VIC7300'. It includes a table of setpoints and actual values for various zones and coolers, a diagram of the production line, and status information like 'Active Recipe' and 'Nitrogen Status On'. A video player at the bottom shows a timestamp of 0:59 / 0:59.

Setpoint	55	75	90	95	25	20
Zone 1T	125	125	155	165	190	230
Actual	125	125	155	165	190	230
Setpoint	110	125	125	155	165	190
Power	21	14	10	20	5	15
Zone 6T	18	28	38	48	58	68
Actual	110	125	125	155	165	190
Setpoint	110	125	125	155	165	190
Power	18	4	8	13	8	10



# Build Project – Recorder

- **Recorder**

- **Cautions**

1. Recorder is effective only when data source is From Capture Card.
2. If the available capacity is less than **100G**, the alert is shown up and recorded in Log. Data will continue to be stored in Database at this state. If the available capacity is less than **1G**, system will delete the videos whose size are about 10G in the folder of current recorder mode. If the videos in current folder is less than 10G, system will delete the videos in the other folder of recorder mode. The order of deleting is listed below.

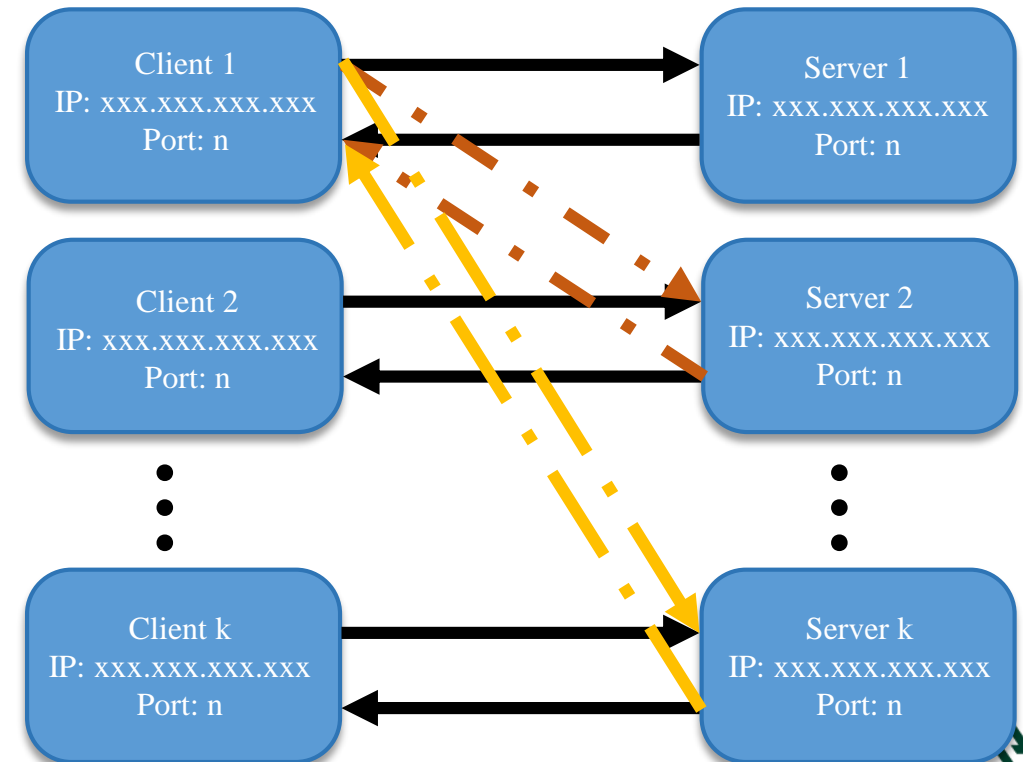
Current Mode	Second prior	Third prior
Always	Event	Schedule
Event	Always	Schedule
Schedule	Event	Always

# Protocols – TCP/IP

TCP/IP is referred to Internet protocol suite. Different computers or operating environments can communicate with each other through this protocol. It includes two core protocols: TCP (Transmission Control Protocol) and IP (Internet Protocol) .

TCP/IP provides **end-to-end data communication**. There are two roles: Server or Client. It allows multiple Servers and Clients, which are connected through IP address and TCP port.

VIC7000 plays a role as **Server**.



# Protocols – TCP/IP

- **Link Config**

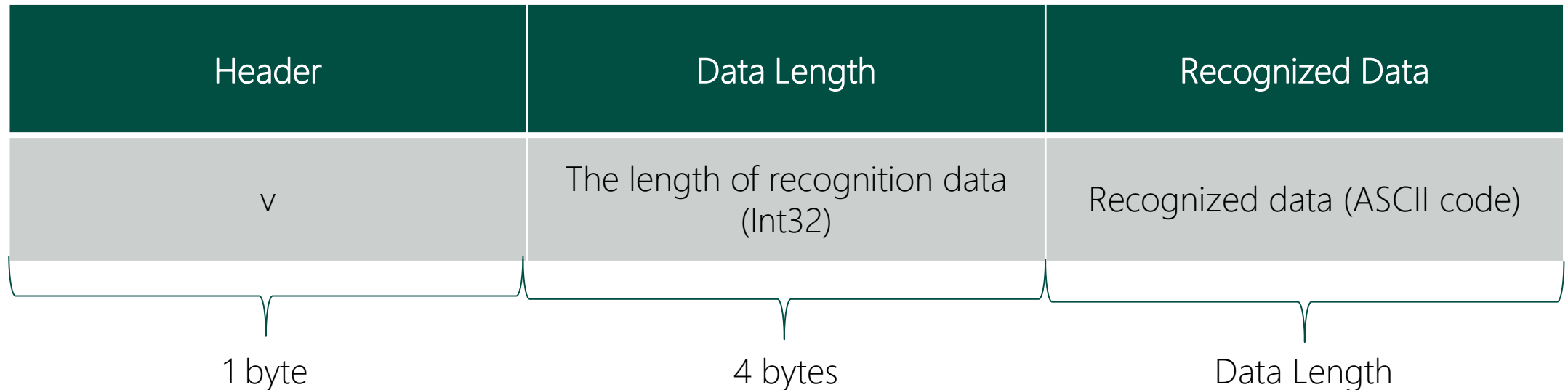
1. Enter Link page: In administrator page
2. Select TCP/IP
3. Enter Port
4. Click Add

The screenshot displays the nexVIC administrator interface. At the top, the title bar reads "nexVIC VIC7000demo - VIC7000 Training.vic". Below this is a toolbar with icons for New, Load, Save, Save As, Page, Script, Monitor, Control, Link, and Wizard. A red arrow labeled "1" points to the Link icon. Below the toolbar, a blue bar contains the "Communication Mode" dropdown menu, which is currently set to "TCP/IP". A red arrow labeled "2" points to this dropdown. Below the blue bar, the "TCP/IP Setting" panel is visible. It contains a "Port:" label with an empty text input field, a "Var Name:" label with a text input field containing "TCPC00PORT", and an "Add" button. A red arrow labeled "3" points to the Port input field, and a red arrow labeled "4" points to the Add button. Below the TCP/IP Setting panel, the "TCP/IP" panel is visible. It contains a "Connection:" label with a text input field containing "0", a "Var Name:" label with a text input field containing "TCPS00PORT500", and a "Remove" button. A red arrow labeled "Remove link" points to the Remove button.



- **Data Content**

1. Header: Its length is 1 byte
2. Data Length: The length of recognition data; Its length unit is an ASCII code (1 byte), the length is equivalent to 4 bytes (Int32)
3. Recognized Data: Its length is same as Data Length

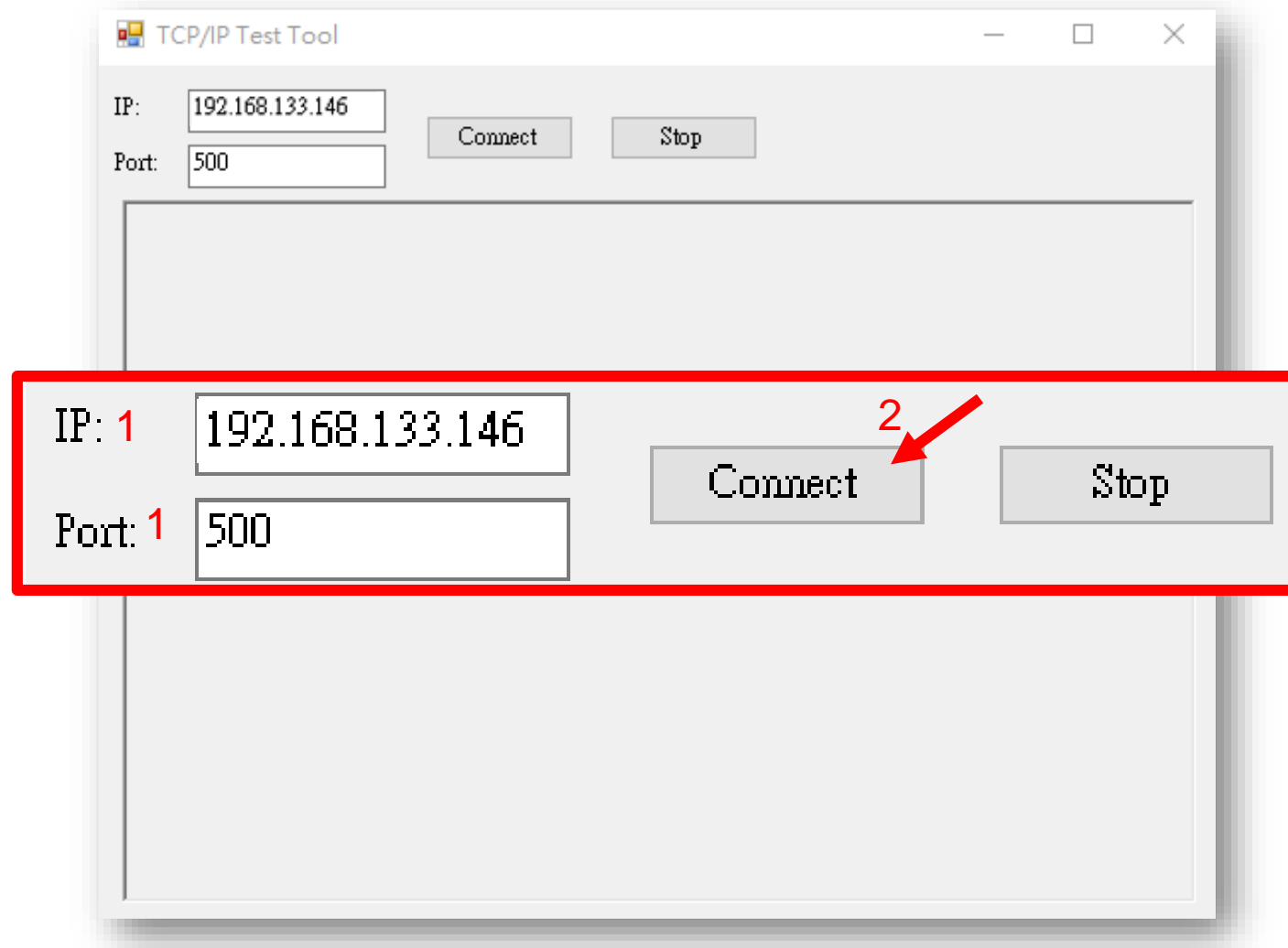


# Protocols – TCP/IP

- **Link Testing:** Use the TCP Test Tool

1. Enter IP and Port

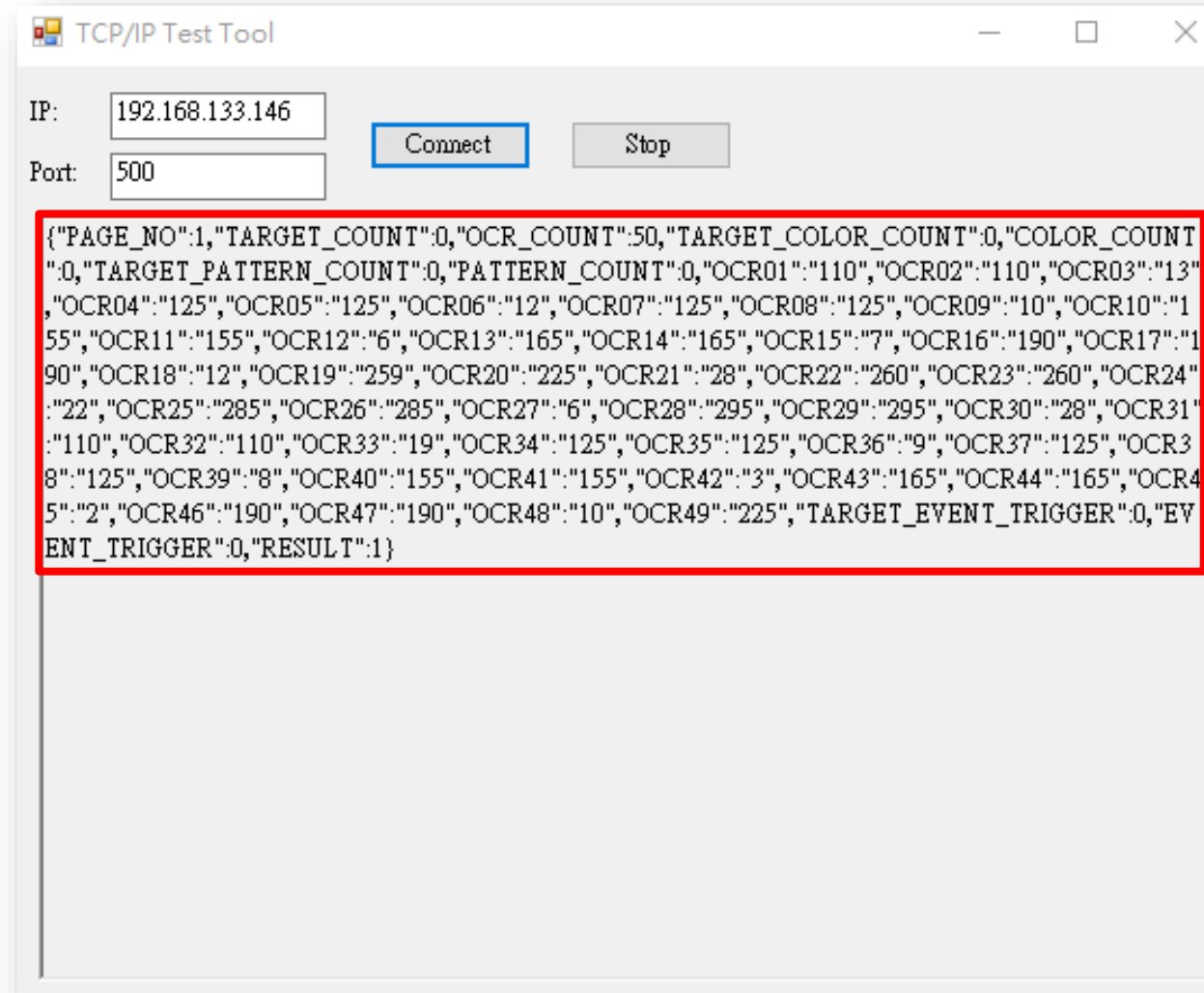
2. Click Connect



# Protocols – TCP/IP

- Link Testing

3. [Check Data Log](#): Output data type is ASCII. After transforming, it is JSON string.



The screenshot shows a window titled "TCP/IP Test Tool". It has input fields for "IP:" (192.168.133.146) and "Port:" (500). There are "Connect" and "Stop" buttons. Below the input fields, a large text area displays a JSON string, which is highlighted with a red border. The JSON string represents a collection of OCR data points and a result status.

```
{
  "PAGE_NO":1,
  "TARGET_COUNT":0,
  "OCR_COUNT":50,
  "TARGET_COLOR_COUNT":0,
  "COLOR_COUNT":0,
  "TARGET_PATTERN_COUNT":0,
  "PATTERN_COUNT":0,
  "OCR01":"110",
  "OCR02":"110",
  "OCR03":"13",
  "OCR04":"125",
  "OCR05":"125",
  "OCR06":"12",
  "OCR07":"125",
  "OCR08":"125",
  "OCR09":"10",
  "OCR10":"155",
  "OCR11":"155",
  "OCR12":"6",
  "OCR13":"165",
  "OCR14":"165",
  "OCR15":"7",
  "OCR16":"190",
  "OCR17":"190",
  "OCR18":"12",
  "OCR19":"259",
  "OCR20":"225",
  "OCR21":"28",
  "OCR22":"260",
  "OCR23":"260",
  "OCR24":"22",
  "OCR25":"285",
  "OCR26":"285",
  "OCR27":"6",
  "OCR28":"295",
  "OCR29":"295",
  "OCR30":"28",
  "OCR31":"110",
  "OCR32":"110",
  "OCR33":"19",
  "OCR34":"125",
  "OCR35":"125",
  "OCR36":"9",
  "OCR37":"125",
  "OCR38":"125",
  "OCR39":"8",
  "OCR40":"155",
  "OCR41":"155",
  "OCR42":"3",
  "OCR43":"165",
  "OCR44":"165",
  "OCR45":"2",
  "OCR46":"190",
  "OCR47":"190",
  "OCR48":"10",
  "OCR49":"225",
  "TARGET_EVENT_TRIGGER":0,
  "EVENT_TRIGGER":0,
  "RESULT":1
}
```

# Protocols – Modbus TCP

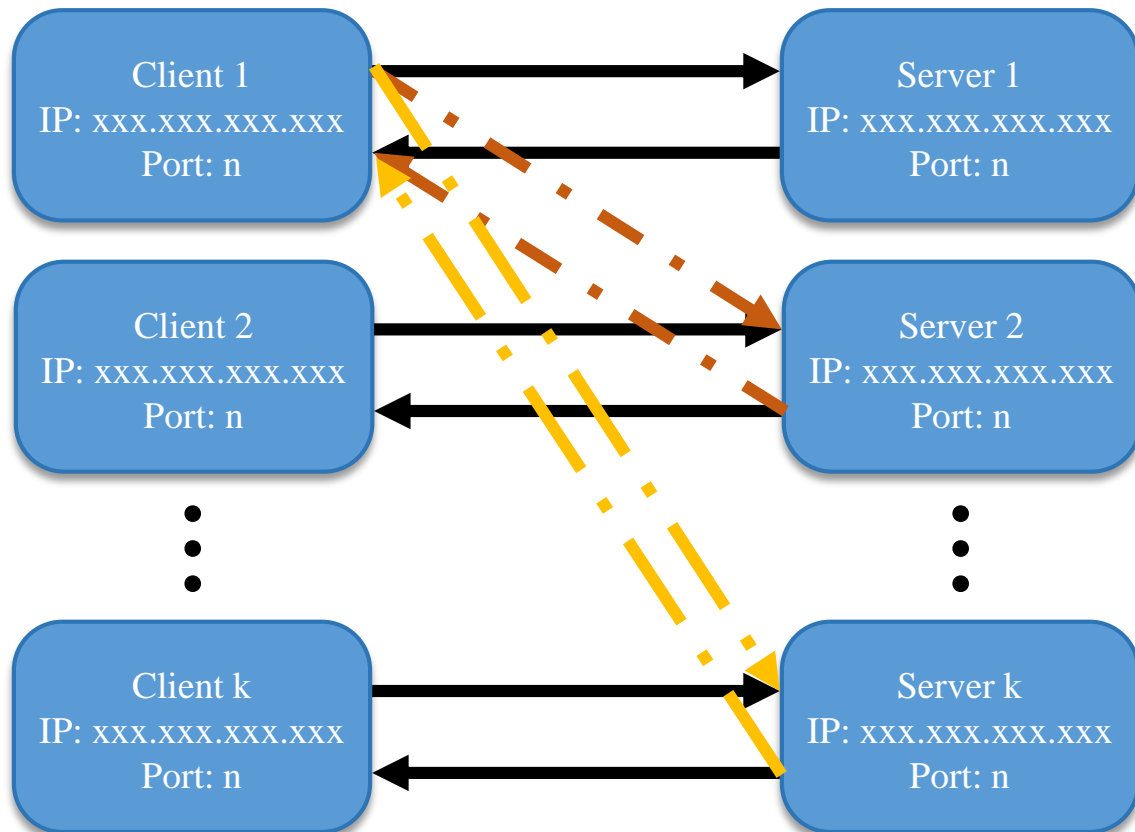
Modbus is a serial communications protocol originally published by Modicon in 1979 for use PLCs. Modbus has become a standard communication protocol and is now a commonly available means of connecting industrial electronic devices. Modbus is commonly used to connect with PLC and SCADA software. Versions of the Modbus protocol exist for serial port and for Ethernet and other protocol that the Internet protocol suite.



# Protocols – Modbus TCP

- **Modbus**

- Use **Modbus TCP**, VIC7000 plays the role as **Server**
- Recognition data is stored in Input Status and Input Register
- Coil Status and Holding Register is for Script Editor output, external writing and controlling VIC



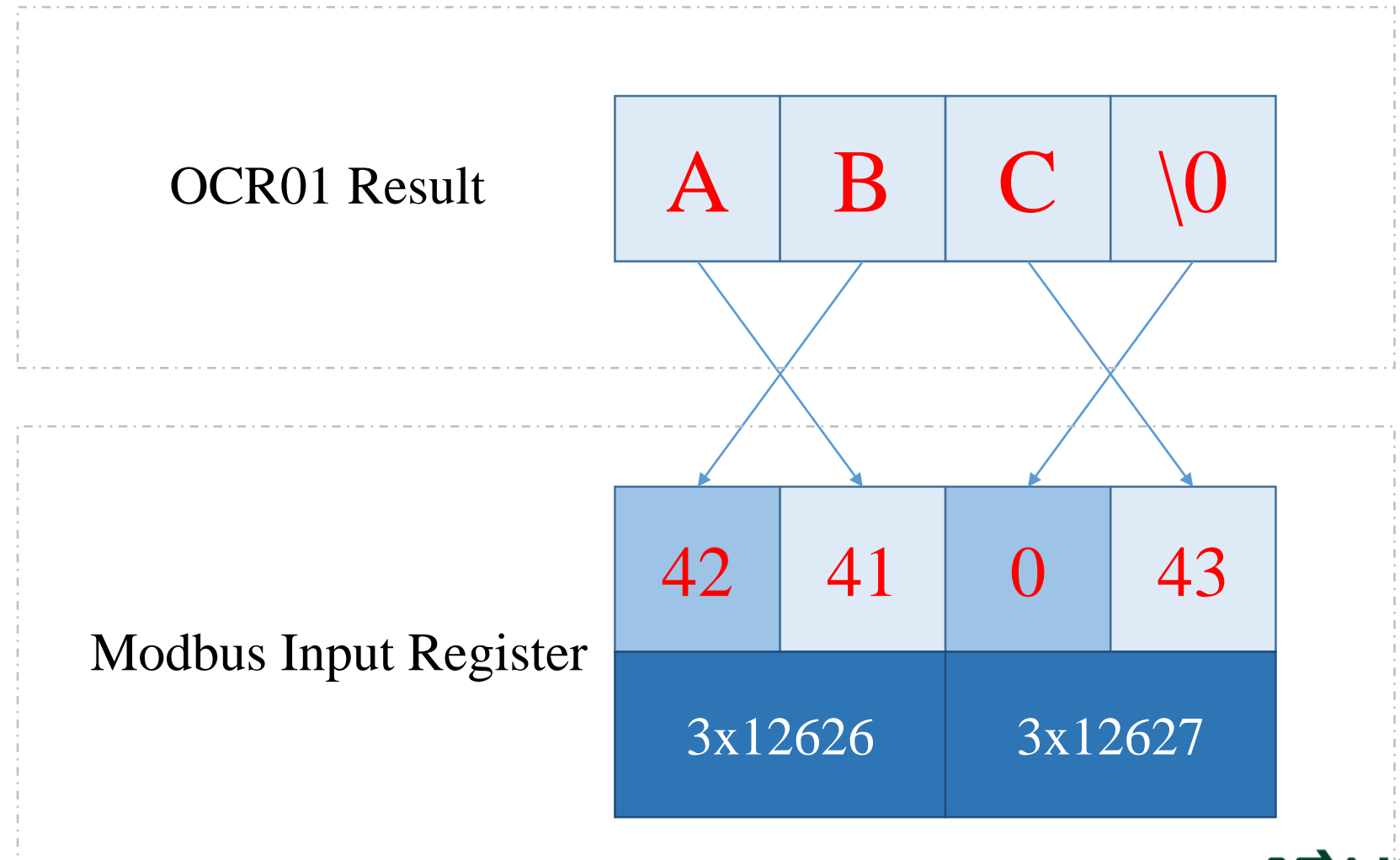
Address	Name	Data Type	Type
0X0001 ~ 0X9999	Coil Status	Bit	R/W
1X0001 ~ 1X9999	Input Status	Bit	R
3X0001 ~ 3X9999	Input Register	Word	R
4X0001 ~ 4X9999	Holding Register	Word	R/W

# Protocols – Modbus TCP

- **Modbus**

- Little – Endian

Fill in data from lower bits



# Protocols – Modbus TCP

- **Address Mapping – Input Status: System Bit**  
Store system information. The Output data type is Boolean.  
Its length is 1 bit.

Bit 7	Bit 6	Sum	Result
0	0	0	Pass
0	1	1	NG
1	0	2	No Matching

Input Status (1X)	
Address	Content
10001	Project playing Status 1 = Playing    0 = Stop
10002	Whether there is a <b>user logging in</b> . 1 = Yes    0 = No
10003	Whether the system free storage is <b>lower than 5G</b> 1 = Yes    0 = No
10004	Whether the system free storage is <b>lower than 10G</b> 1 = Yes    0 = No
10005	Whether <b>storing images is stopped</b> . 1 = Yes    0 = No
10006 (Bit 6)	<b>Recognition result</b> 0 = Pass    1 = NG    2 = No Matching
10007 (Bit 7)	

10008	Reserved
10009	Whether <b>serial port control is enabled</b> . 1 = Yes    0 = No
10010	<b>The status of serial port control</b> 1 = Connecting    0 = Disconnecting
10011	Whether the free data storage is <b>lower than 5G</b> 1 = Yes    0 = No
10012	Whether the free data storage is <b>lower than 10G</b> 1 = Yes    0 = No
10013	Whether the free recorder storage is <b>lower than 1G</b> 1 = Yes    0 = No
10014	Whether the free recorder storage is <b>lower than 100G</b> 1 = Yes    0 = No



# Protocols – Modbus TCP

- **Address Mapping** – Input Register (Int): PAGE\_NO, TARGET\_COUNT, OCR\_COUNT, TARGET\_COLOR\_COUNT, COLOR\_COUNT, TARGET\_PATTERN\_COUNT, PATTERN\_COUNT, RESULT, TARGET\_EVENT\_TRIGGER, EVENT\_TRIGGER

Store the index of the current page, the number of target\_color, target\_pattern, OCR, color, pattern, recognition result, and event triggers. The output data type is Int32. Its length is 2 words.

Input Register (3X)	
Address Range	Content
312501 ~ 312502	PAGE_NO
312503 ~ 312504	TARGET_COUNT
312505 ~ 312506	OCR_COUNT
312507 ~ 312508	TARGET_COLOR_COUNT
312509 ~ 312510	COLOR_COUNT

RESULT :

0 = Pass

1 = NG

2 = No Matching

312511 ~ 312512	TARGET_PATTERN_COUNT
312513 ~ 312514	PATTERN_COUNT
312515 ~ 312516	RESULT
312601 ~ 312602	TARGET_EVENT_TRIGGER
312603 ~ 312604	EVENT_TRIGGER

- **Address Mapping – Input Register (String): TARGET, OCR**

Store recognition results of targets & OCRs. The output data type is ASCII. Its length is 125 words.

Input Register (3X)	
Address Range	Content
30126 ~ 30250	Target01 (String)
30251 ~ 30375	Target02 (String)
30376 ~ 30500	Target03 (String)
30501 ~ 30625	Target04 (String)
30626 ~ 30750	Target05 (String)

Input Register (3X)	
Address Range	Content
312626 ~ 318875	OCR01 ~ 50 (String)

- **Address Mapping – Input Register (Int): TARGET, OCR**

If recognition result contents of OCR and target is number, they will be converted to number. With the data type is Int32 and Its length is 2 words.

Input Register (3X)	
Address Range	Content
350003 ~ 350004	Target01 (Int)
350005 ~ 350006	Target02 (Int)
350007 ~ 350008	Target03 (Int)
350009 ~ 350010	Target04 (Int)
350010 ~ 350012	Target05 (Int)

Input Register (3X)	
Address Range	Content
350203 ~ 350302	OCR01 ~ 50 (Int)

- **Address Mapping – Coil Status: System Control**  
Control VIC7000. **Play project** can be used even there is **no admin logging in**.

Coil Status (0X)	
Address	Content
00001	Play project. 1 = Play    0 = Stop
00003	Whether the recognized data is written in database 1 = written in    0 = not written in

# Protocols – Modbus TCP

- **Link Config**

1. Enter Link page: In administrator page
2. Select Modbus

3. Enter Port: 502 (default)
4. Click Add

The screenshot displays the nexVIC software interface for configuring a link. The top toolbar includes buttons for New, Load, Save, Save As, Page, Script, Monitor, Control, Link (highlighted with a red arrow and number 1), and Wizard. Below the toolbar, the 'Communication Mode' is set to 'Modbus' (highlighted with a red arrow and number 2). The 'Modbus Setting' panel shows 'TCP/IP' selected, 'Port' set to 502 (highlighted with a red arrow and number 3), and 'Var Name' set to 'MB00TSlaveCSch'. An 'Add' button (highlighted with a red arrow and number 4) is located at the bottom right of this panel. Below the 'Modbus Setting' panel, the 'Modbus' section shows 'Connection' set to 0 and 'Var Name' set to 'MB00TSaveCSch'. A 'Remove link' label with a red arrow points to a 'Remove' button in the bottom right corner.

nexVIC VIC7000demo - VIC7000 Training.vic

LOG

New Load Save Save As Page Script Monitor Control Link Wizard

Communication Mode Modbus

Modbus Setting

TCP/IP

Port: 502

Var Name: MB00TSlaveCSch

Add

Modbus

Connection: 0

Var Name: MB00TSaveCSch

Remove link

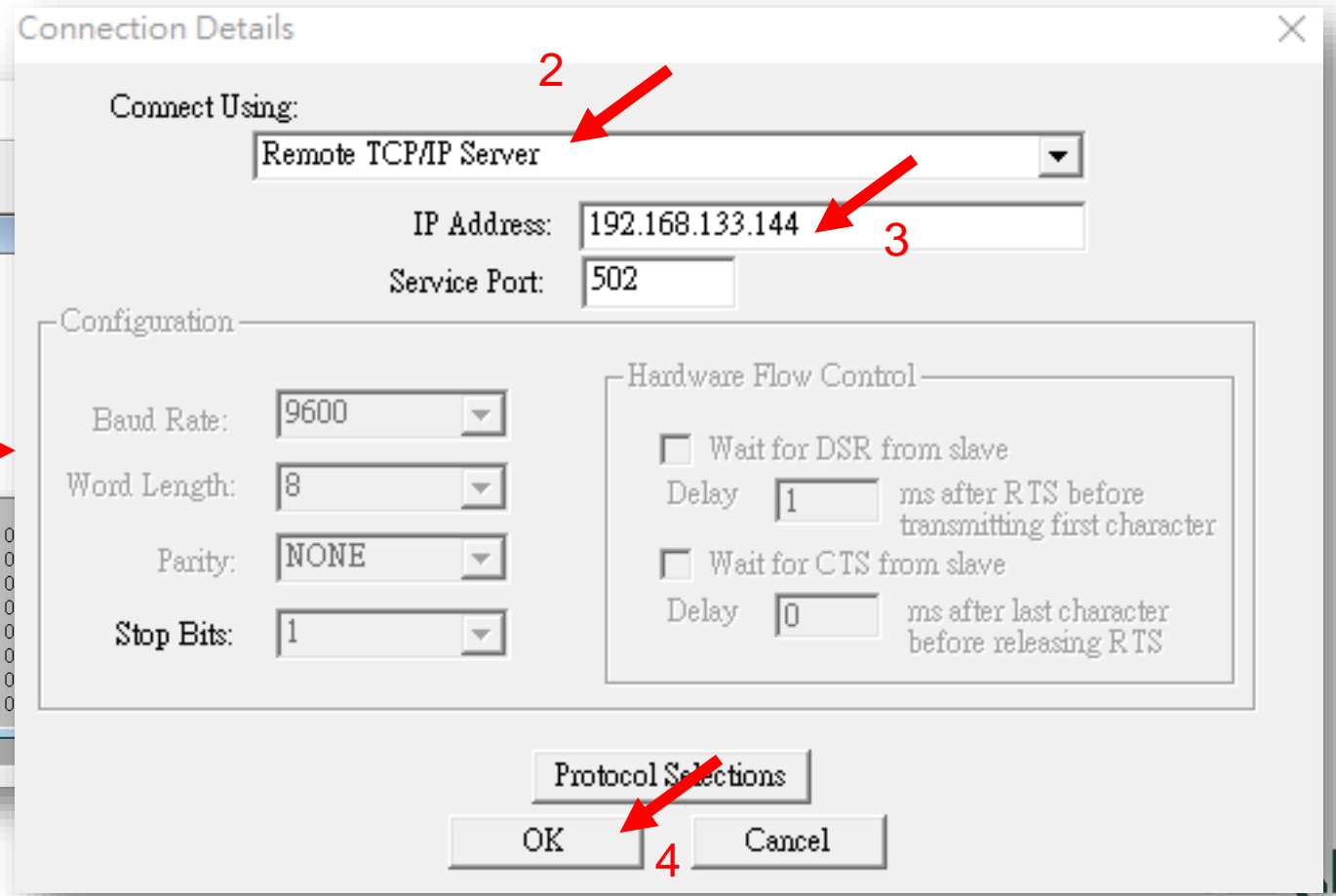
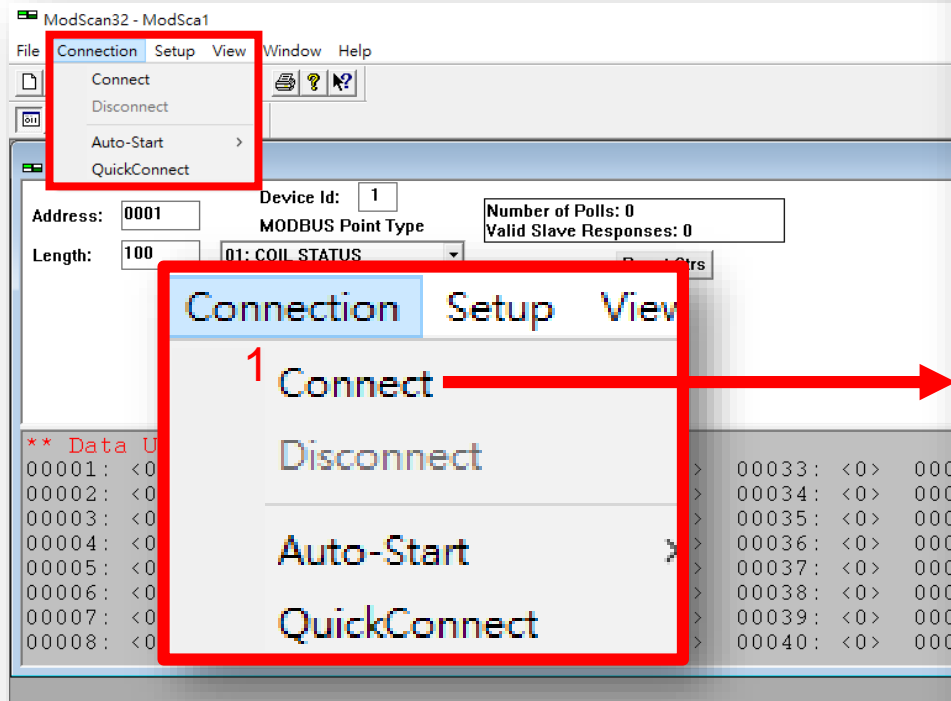
Remove

# Protocols – Modbus TCP

- **Link Testing: Use Modscan**

1. **Connect Settings:** Connection → Connect
2. **Select Remote TCP/IP Server**

3. **Enter IP Address and Service Port**
4. **Click OK**



# Protocols – Modbus TCP

- Link Testing

5. [Check got data](#): The data type of string is ASCII, and the data type of numeric data is Int32.

ModSca1

Address: 12626      Device Id: 1  
Length: 100      MODBUS Point Type: 04: INPUT REGISTER

312626: <3031H>	312634: <0000H>
312627: <0000H>	312635: <0000H>

ModSca1

Address: 50203      Device Id: 1      Number of Polls: 235  
Length: 100      MODBUS Point Type: 04: INPUT REGISTER      Valid Slave Responses: 230  
Reset Ctrs

350203: <0000000001111101>	350211: <00000000010100101>
350204: <0000000000000000>	350212: <0000000000000000>
350205: <0000000001111101>	350213: <00000000010111110>
350206: <0000000000000000>	350214: <0000000000000000>
350207: <0000000001111101>	350215: <00000000011100110>
350208: <0000000000000000>	350216: <0000000000000000>
350209: <00000000010011011>	350217: <000000000100000100>
350210: <0000000000000000>	350218: <0000000000000000>



# Protocols – RESTful API

REST(Representation State Transfer) is a software architectural style, which is used to facilitate the transfer of information between different software/programs on the network.

REST allows users to send URLs to access and manipulate network resources. It is commonly used in the IT industry. Most of REST API returning resources is XML or JSON.

**VIC7000 returning data is JSON.**

# RESTful API

GET PUT POST DELETE

# Protocols – RESTful API

- **Get Data**

1. **Call API:** Open browser → Enter **IP/restful** in URL field
2. Check returning data

1  
192.168.133.144/restful

2

```
{ "PAGE_NO":1, "TARGET_COUNT":0, "OCR_COUNT":50, "TARGET_COLOR_COUNT":0, "COLOR_COUNT":0, "TARGET_PATTERN_COUNT":0, "PATTERN_COUNT":0, "RESULT":0, "TARGET_EVENT_TRIGGER":0, "EVENT_TRIGGER":0, "TARGET01":"","TARGET02":"","TARGET03":"","TARGET04":"","TARGET05":"","OCR01":"110", "OCR02":"110", "OCR03":"13", "OCR04":"125", "OCR05":"125", "OCR06":"18", "OCR07":"125", "OCR08":"125", "OCR09":"25", "OCR10":"155", "OCR11":"155", "OCR12":"6", "OCR13":"165", "OCR14":"165", "OCR15":"27", "OCR16":"190", "OCR17":"195", "OCR18":"12", "OCR19":"225", "OCR20":"215", "OCR21":"10", "OCR22":"260", "OCR23":"265", "OCR24":"22", "OCR25":"285", "OCR26":"285", "OCR27":"26", "OCR28":"295", "OCR29":"295", "OCR30":"28", "OCR31":"110", "OCR32":"110", "OCR33":"29", "OCR34":"125", "OCR35":"125", "OCR36":"9", "OCR37":"125", "OCR38":"125", "OCR39":"8", "OCR40":"155", "OCR41":"155", "OCR42":"3", "OCR43":"165", "OCR44":"165", "OCR45":"13", "OCR46":"190", "OCR47":"195", "OCR48":"18", "OCR49":"225", "OCR50":"225", "TARGET_COLOR01":[0,0,0,0], "TARGET_COLOR02":[0,0,0,0], "TARGET_COLOR03":[0,0,0,0], "TARGET_COLOR04":[0,0,0,0], "TARGET_COLOR05":[0,0,0,0], "COLOR01":[0,0,0,0], "COLOR02":[0,0,0,0], "COLOR03":[0,0,0,0], "COLOR04":[0,0,0,0], "COLOR05":[0,0,0,0], "COLOR06":[0,0,0,0], "COLOR07":[0,0,0,0], "COLOR08":[0,0,0,0], "COLOR09":[0,0,0,0], "COLOR10":[0,0,0,0], "COLOR11":[0,0,0,0], "COLOR12":[0,0,0,0], "COLOR13":[0,0,0,0], "COLOR14":[0,0,0,0], "COLOR15":[0,0,0,0], "COLOR16":[0,0,0,0], "COLOR17":[0,0,0,0], "COLOR18":[0,0,0,0], "COLOR19":[0,0,0,0], "COLOR20":[0,0,0,0], "COLOR21":[0,0,0,0], "COLOR22":[0,0,0,0], "COLOR23":[0,0,0,0], "COLOR24":[0,0,0,0], "COLOR25":[0,0,0,0], "COLOR26":[0,0,0,0], "COLOR27":[0,0,0,0], "COLOR28":[0,0,0,0], "COLOR29":[0,0,0,0], "COLOR30":[0,0,0,0], "COLOR31":[0,0,0,0], "COLOR32":[0,0,0,0], "COLOR33":[0,0,0,0], "COLOR34":[0,0,0,0], "COLOR35":[0,0,0,0], "COLOR36":[0,0,0,0], "COLOR37":[0,0,0,0], "COLOR38":[0,0,0,0], "COLOR39":[0,0,0,0], "COLOR40":[0,0,0,0], "COLOR41":[0,0,0,0], "COLOR42":[0,0,0,0], "COLOR43":[0,0,0,0], "COLOR44":[0,0,0,0], "COLOR45":[0,0,0,0], "COLOR46":[0,0,0,0], "COLOR47":[0,0,0,0], "COLOR48":[0,0,0,0], "COLOR49":[0,0,0,0], "COLOR50":[0,0,0,0], "TARGET_PATTERN01":[0,0,0,0,0,0,0,0], "TARGET_PATTERN02":[0,0,0,0,0,0,0,0], "TARGET_PATTERN03":[0,0,0,0,0,0,0,0], "TARGET_PATTERN04":[0,0,0,0,0,0,0,0], "TARGET_PATTERN05":[0,0,0,0,0,0,0,0], "PATTERN01":[0,0,0,0,0,0,0,0], "PATTERN02":[0,0,0,0,0,0,0,0], "PATTERN03":[0,0,0,0,0,0,0,0], "PATTERN04":[0,0,0,0,0,0,0,0], "PATTERN05":[0,0,0,0,0,0,0,0], "PATTERN06":[0,0,0,0,0,0,0,0], "PATTERN07":[0,0,0,0,0,0,0,0], "PATTERN08":[0,0,0,0,0,0,0,0], "PATTERN09":[0,0,0,0,0,0,0,0], "PATTERN10":[0,0,0,0,0,0,0,0]}
```

# Protocols – RESTful API

- **Get Data**

3. **Call Separately:** Enter **IP/restful/ocr/index** in URL field, and returning data will be single data type. **Target, target\_color, target\_pattern, color, pattern, calc** can be called by this way.

192.168.133.144/restful/ocr/01

{"OCR01": "125"}

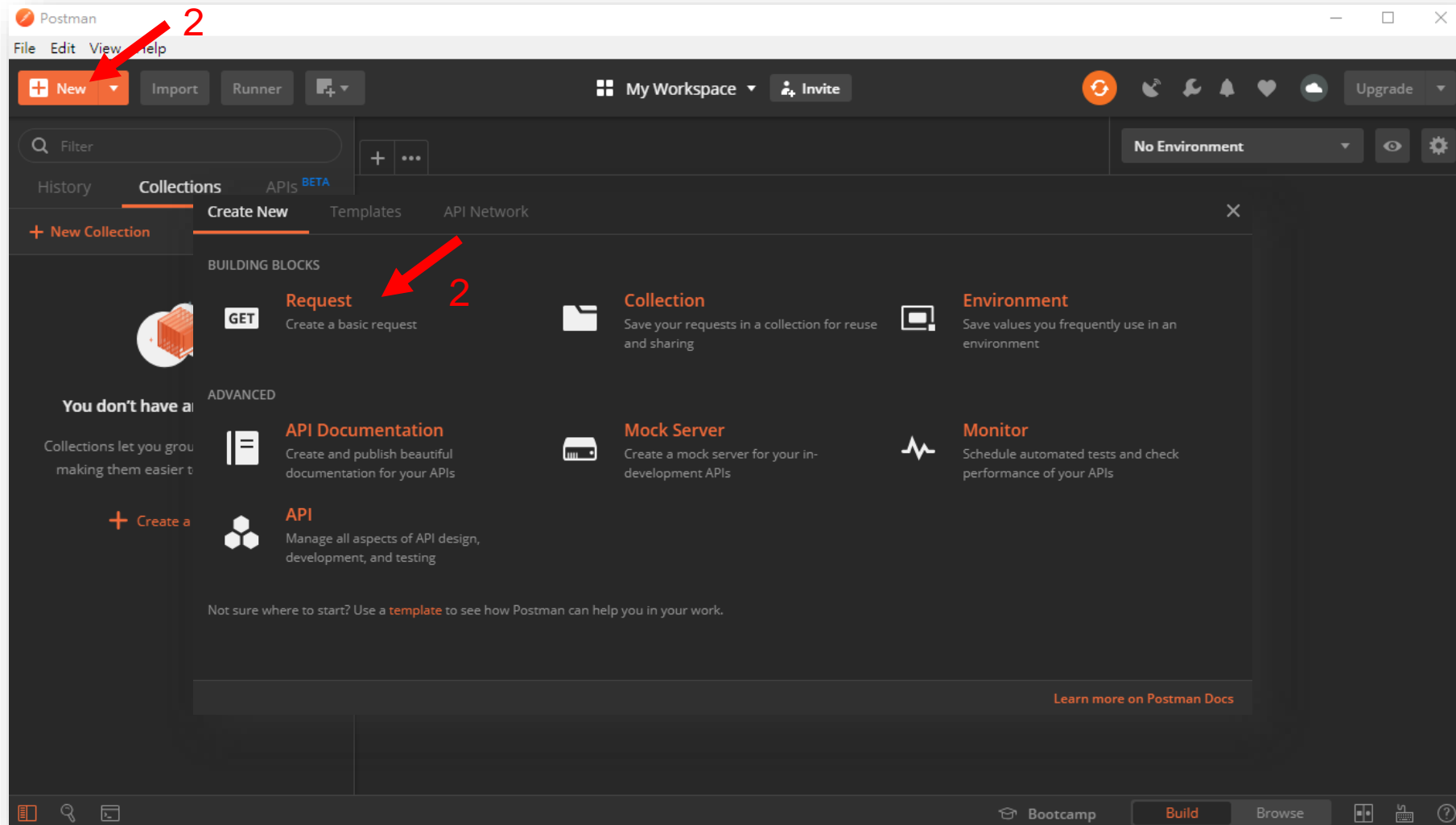
192.168.133.144/restful/target/01

{"TARGET01": "NexVIC"}

# Protocols – RESTful API

- **Control VIC: Use Postman**

1. Execute Postman
2. Add new Request: Click **New** → Select **Request**



# Protocols – RESTful API

- **Control VIC: Use Postman**

3. Enter Request name

4. Select used Collection: If there is no Collection, select **+ Create Collection** 5. Save

SAVE REQUEST

Requests in Postman are saved in collections (a group of requests).  
[Learn more about creating collections](#)

Request name

VIC Test

Request description (Optional)

Make things easier for your teammates with a complete request description.

Descriptions support [Markdown](#)

Select a collection or folder to save to:

Q Search for a collection or folder

Cancel Save

A red arrow points to the 'Request name' field, which contains 'VIC Test'. A red number '3' is next to the arrow.

SAVE REQUEST

Request description (Optional)

Make things easier for your teammates with a complete request description.

Descriptions support [Markdown](#)

Select a collection or folder to save to:

Q Search for a collection or folder

All Collections + Create Collection

VIC Demo

Cancel Save

A red arrow points to the 'VIC Demo' collection. A red number '4' is next to the arrow.

SAVE REQUEST

Request description (Optional)

Make things easier for your teammates with a complete request description.

Descriptions support [Markdown](#)

Select a collection or folder to save to:

Q Search for a collection or folder

VIC Demo + Create Folder

Cancel Save to VIC Demo

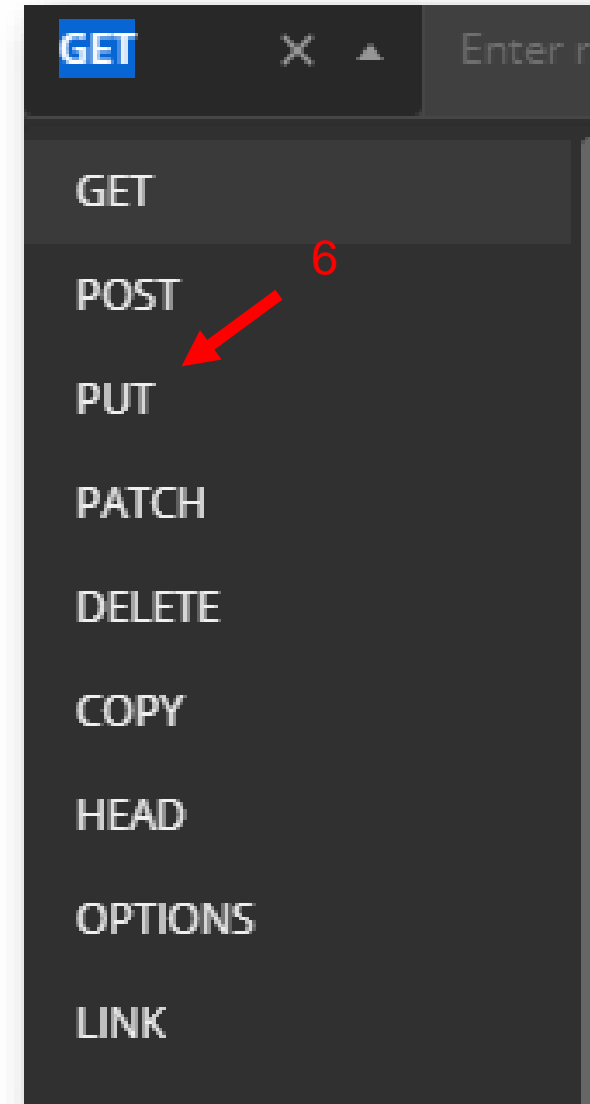
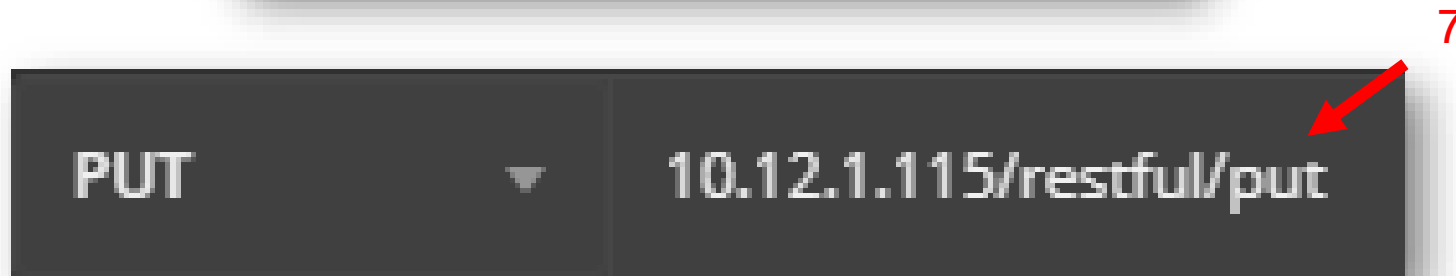
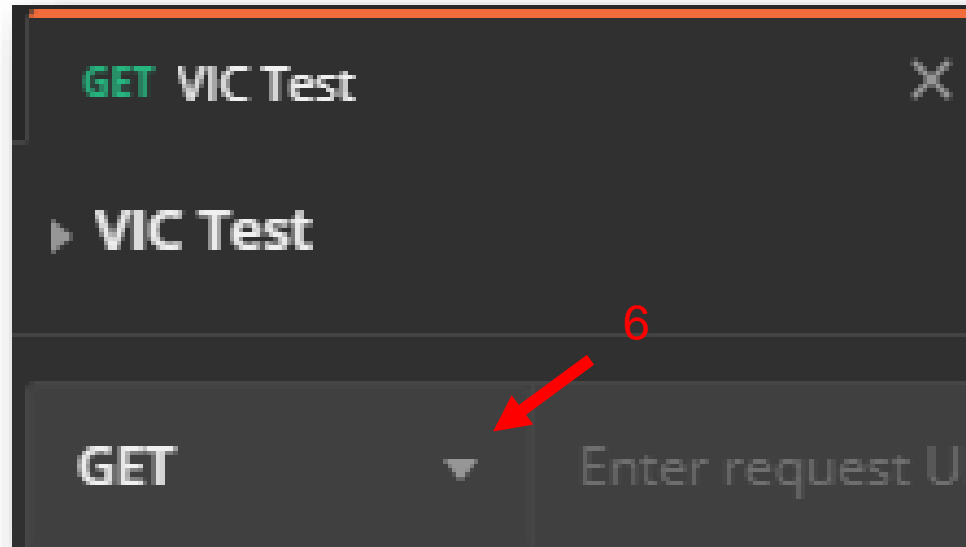
A red arrow points to the 'Save to VIC Demo' button. A red number '5' is next to the arrow.

# Protocols – RESTful API

- **Control VIC: Use Postman**

6. Select PUT

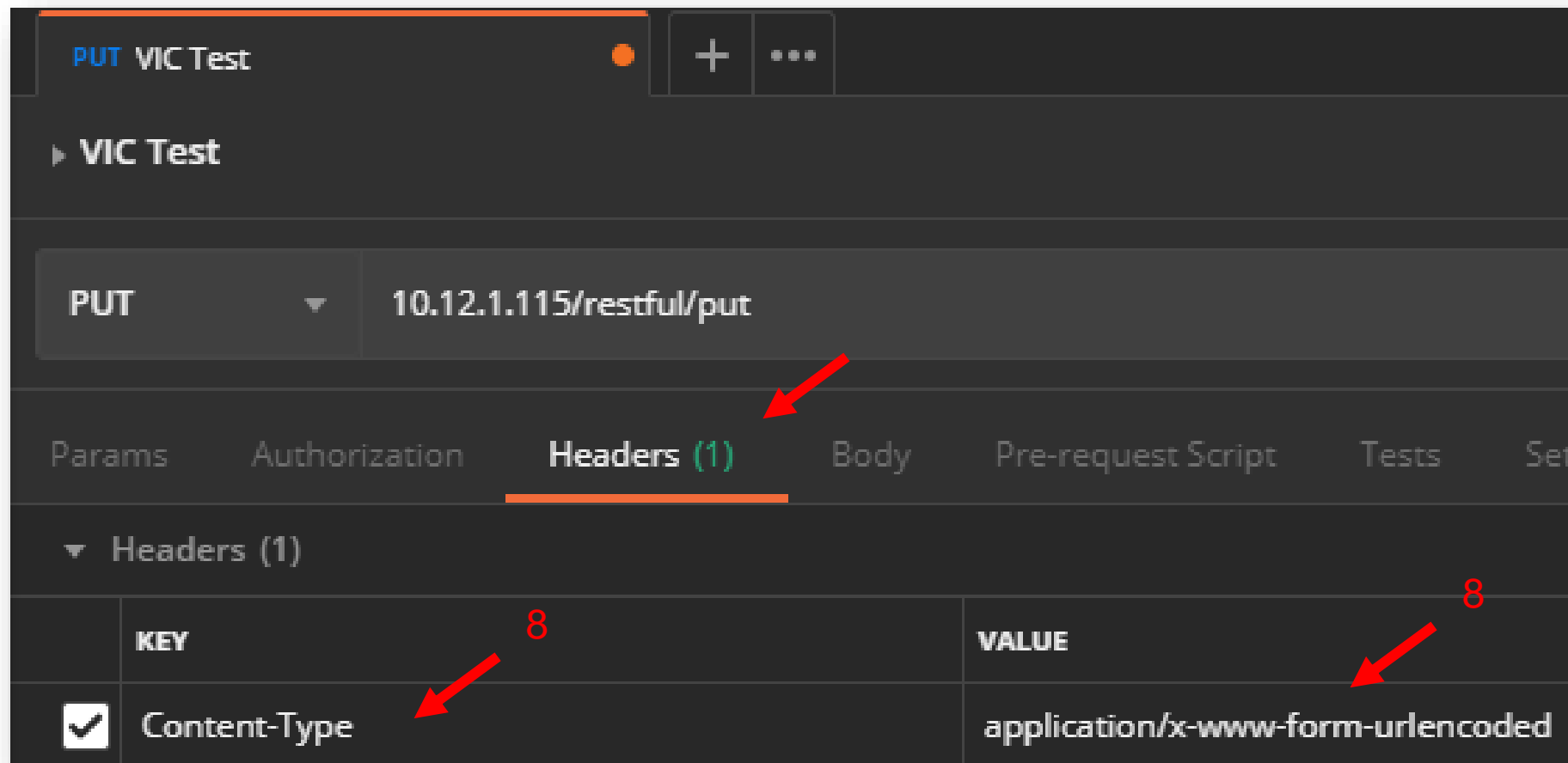
7. Enter URL: IP/restful/put



# Protocols – RESTful API

- **Control VIC: Use Postman**

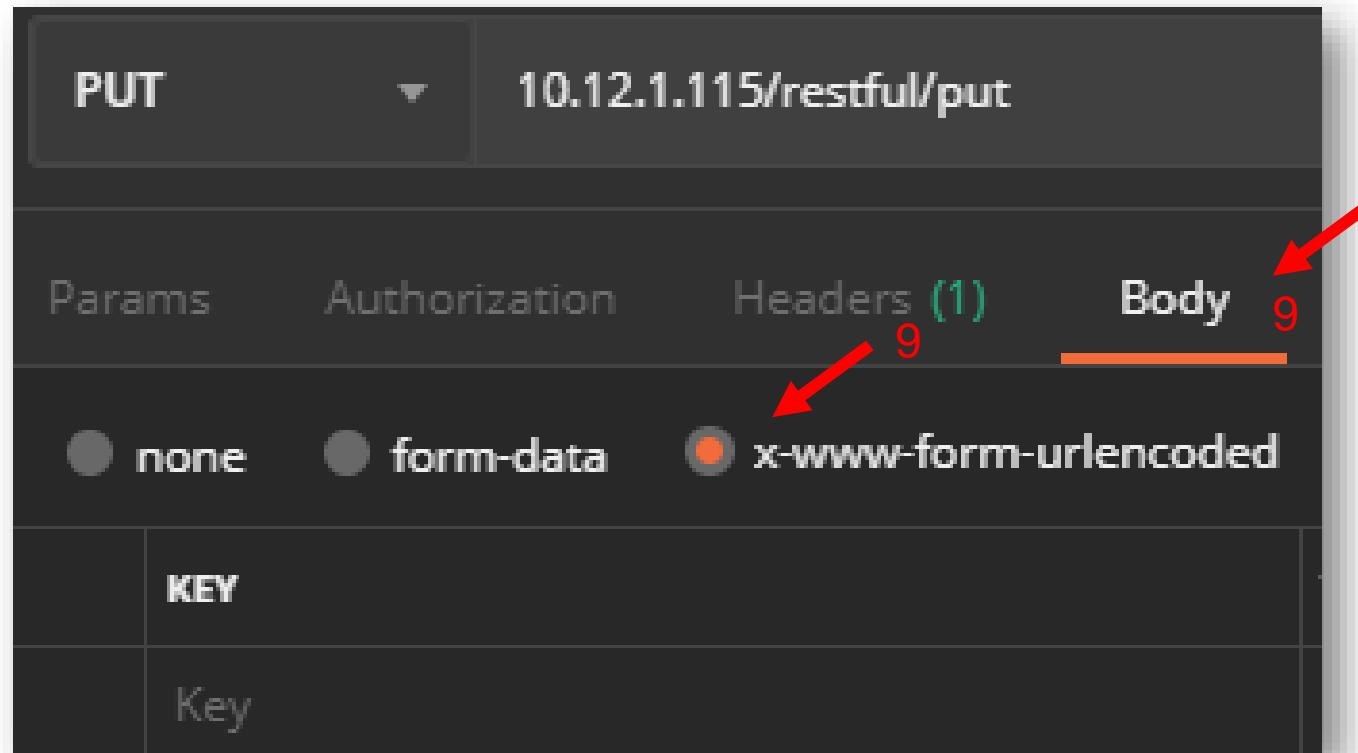
8. **Headers:** Content-Type: application/x-www-form-urlencoded





# Protocols – RESTful API

- **Control VIC: Use Postman**
  9. **Body:** x-www-form-urlencoded



# Protocols – RESTful API

- **Control VIC: Use Postman**

9. **Body:** Even **play project** can be used only when there is **no admin logging in**

	Play Project
username	admin or user
password	123456 (default)
channel_type	play
value	1 = Play   0 = Stop

# Protocols – RESTful API

- Control VIC: Use Postman

9. Body: Sample: Play Project

10. Send

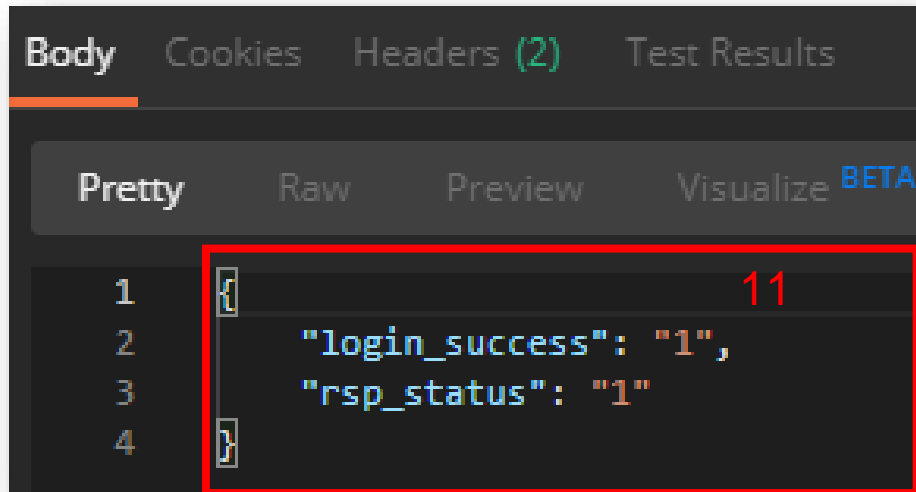
The screenshot shows the Postman interface for a RESTful API test. The top bar indicates the environment is 'No Environment'. The test name is 'VIC Test'. The request method is 'PUT' and the URL is '10.12.1.115/restful/put'. The 'Send' button is highlighted with a red arrow and the number 10. The 'Body' tab is selected, and the 'x-www-form-urlencoded' format is chosen. A table of key-value pairs is shown, with a red box highlighting the 'username', 'password', 'channel\_type', and 'value' entries. The number 9 is next to the 'VALUE' column header.

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	username	admin	
<input checked="" type="checkbox"/>	password	123456	
<input checked="" type="checkbox"/>	channel_type	play	
<input checked="" type="checkbox"/>	value	1	

Key Value Description

# Protocols – RESTful API

- **Control VIC: Use Postman**
  - 11. Check Response



The screenshot shows the Postman interface with the 'Body' tab selected. The response is displayed in 'Pretty' format. A red rectangle highlights the JSON body: 

```
{  "login_success": "1",  "rsp_status": "1"}
```

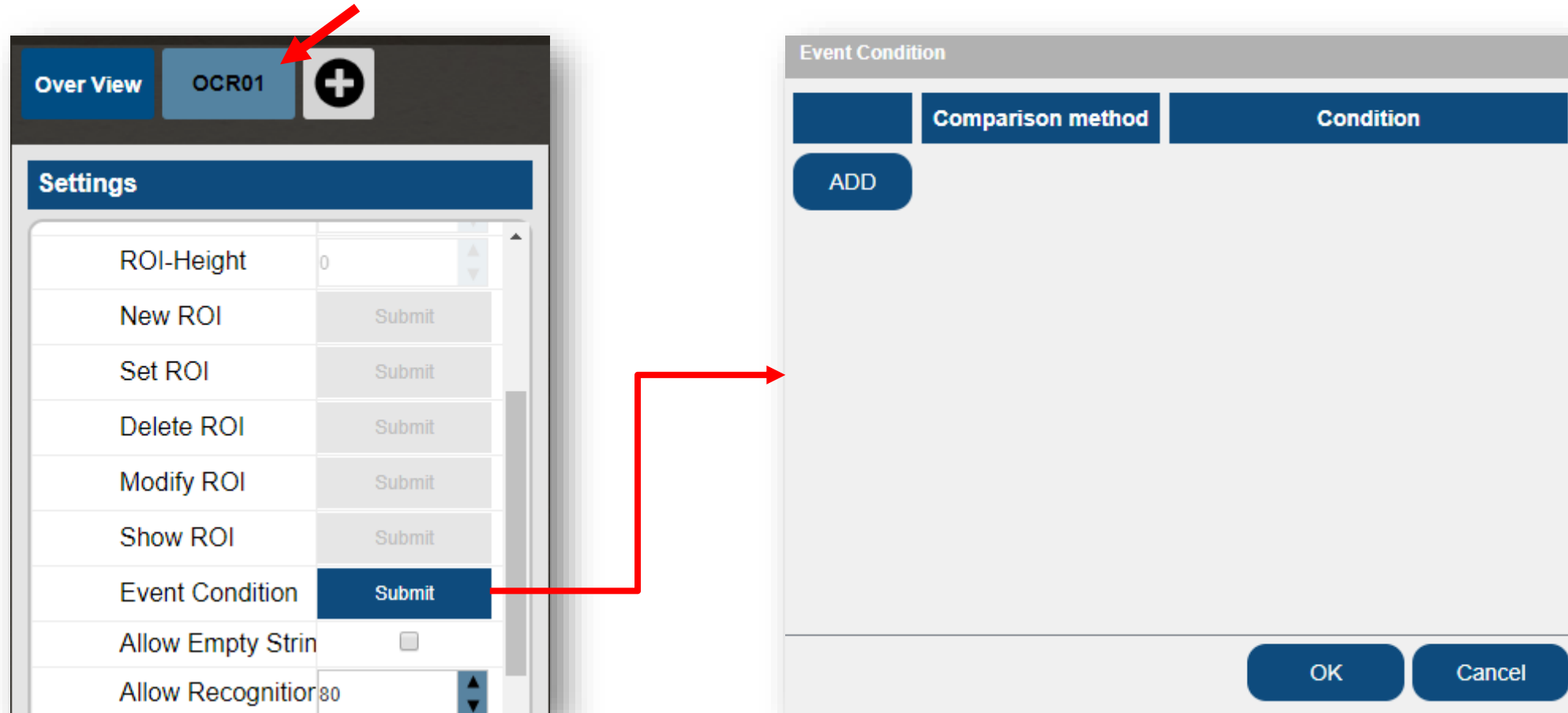
. The status code '11' is visible in the top right corner of the response area.

<b>login_success</b>	Whether logging in is successful. 1 = Successful 0 = Failed
<b>rsp_status</b>	Whether the command is executed successfully. 1 = Successful 0 = Failed

# Advanced – Event Trigger – Recorder

- **Event Trigger**

1. **Set Event Condition – OCR:** Click **Event Condition** → The window of **Event Condition** will show up



# Advanced – Event Trigger – Recorder

- **Event Trigger**

1. **Set Event Condition – OCR:** Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

Event Condition

	Comparison method	Condition
X	-	
ADD	> = < != ~	

OK Cancel

-: No comparison

>: Greater than

=: Equal

<: Less than

!=: Not equal

=~: Including (for String only)

-  
>  
=  
<  
!=  
~

# Advanced – Event Trigger – Recorder

- **Event Trigger**

1. **Set Event Condition – COLOR, PATTERN:** Click **Event Condition** → The window of **Event Condition** will show up

The image shows a software interface for setting event conditions. On the left, a 'Settings' panel contains a list of actions with 'Submit' buttons. A red arrow points from the 'Event Condition' row to a separate 'Event Condition' dialog box on the right. Another red arrow points from the 'PATTERN01' tab in the top navigation bar to the same dialog box. The dialog box has a title bar 'Event Condition', a table with headers 'Comparison method' and 'Condition', an 'ADD' button, and 'OK' and 'Cancel' buttons at the bottom.

Settings	
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit
Event Condition	Submit
Matching Paramete	

Event Condition	
Comparison method	Condition
ADD	



# Advanced – Event Trigger – Recorder

- **Event Trigger**

1. **Set Event Condition – COLOR, PATTERN:** Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

-: No comparison

=: Equal

!=: Not equal

=~: Including (for String only)

# Advanced – Event Trigger – Recorder

- **Event Trigger**

**Example – Set Event Condition – OCR:** Set the condition of OCR01 greater than 200

The screenshot shows a dialog box titled "Event Condition". It contains a table with two columns: "Comparison method" and "Condition". The first row of the table has a greater-than sign (>) in the "Comparison method" column and the value 200 in the "Condition" column. This row is highlighted with a red border. To the left of the table, there are two buttons: "X" and "ADD". At the bottom right of the dialog box, there are two buttons: "OK" and "Cancel".

	Comparison method	Condition
X	>	200

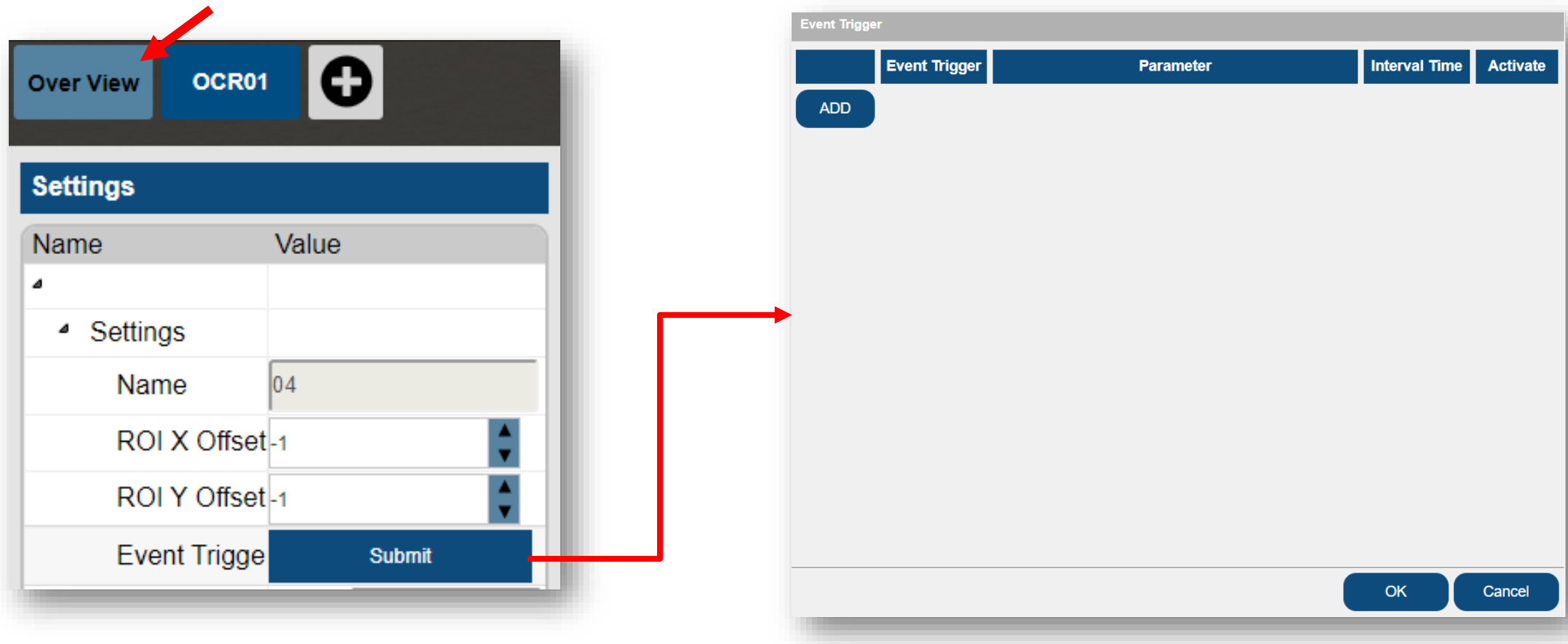
ADD

OK Cancel

# Advanced – Event Trigger – Recorder

- **Event Trigger**

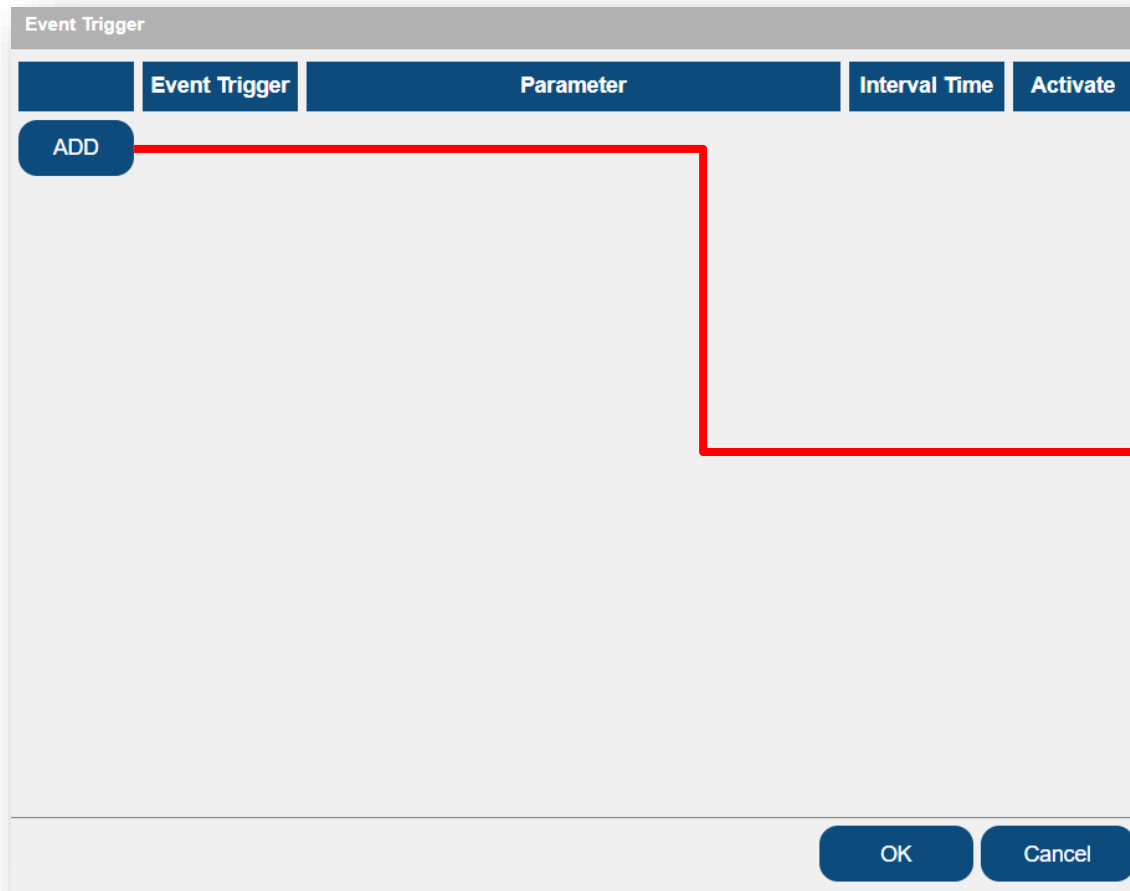
2. **Set Event Trigger**: Click **Event Trigger** → The window of **Event Trigger** will show up



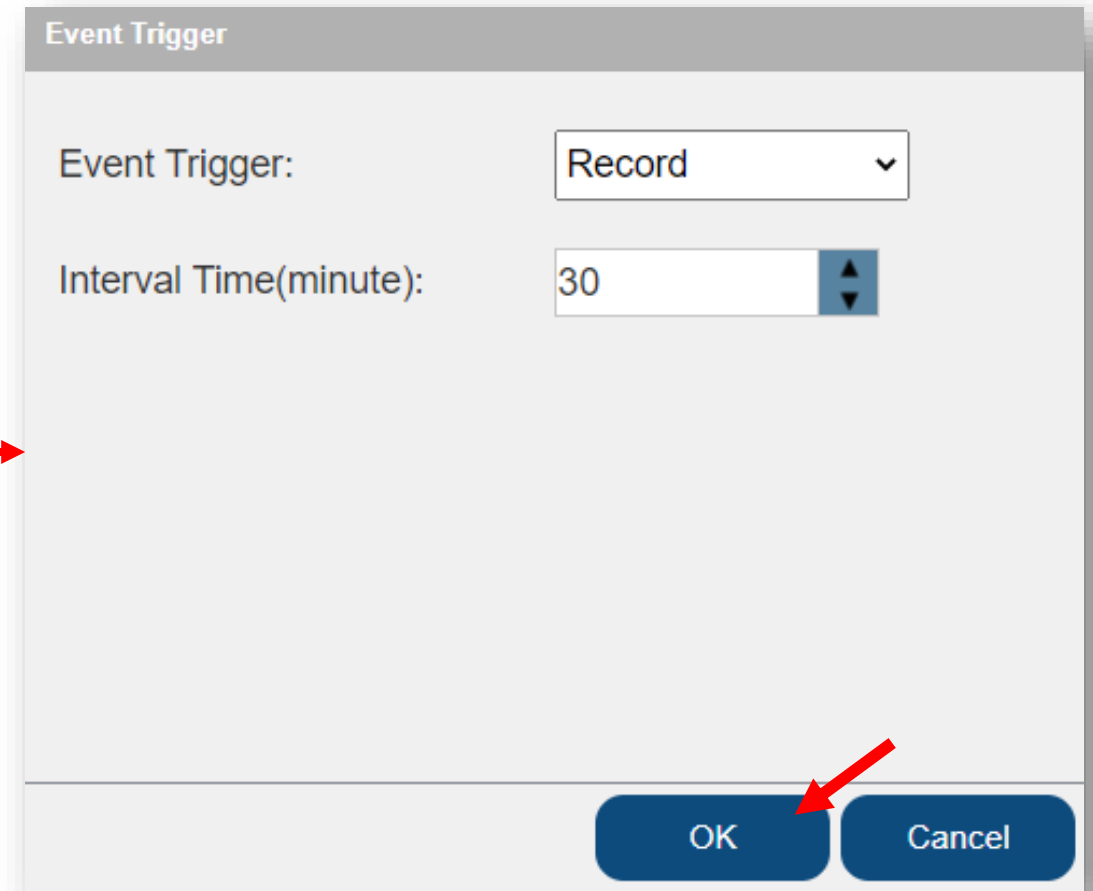
# Advanced – Event Trigger – Recorder

- **Event Trigger**

2. **Set Event Trigger**: Click **Add** → Event Trigger: **Recorder**, Set **Interval Time** → Click **OK**



The dialog box titled "Event Trigger" contains a table with the following headers: "Event Trigger", "Parameter", "Interval Time", and "Activate". Below the table is a blue button labeled "ADD". A red arrow originates from the "ADD" button and points towards the right-hand dialog box.



The dialog box titled "Event Trigger" shows the configuration options. The "Event Trigger:" field is a dropdown menu set to "Record". The "Interval Time(minute):" field is a numeric input set to "30" with up and down arrows. At the bottom right, there are "OK" and "Cancel" buttons. A red arrow points to the "OK" button.

# Advanced – Event Trigger – Recorder

- Event Trigger

3. **Simulation:** Enter **Monitor** page → Click **Snap** → Check whether the recorder is operating, when the condition is met. System will point out three videos recorded by event trigger.  
when the condition is met, the item will be shown in red text.

The screenshot displays the nexVIC software interface. The top navigation bar includes buttons for New, Load, Save, Save As, Page, Monitor, Record, Link, and Wizard. The left sidebar shows the 'Status' page with a red box highlighting 'OCR01-225'. The main area shows the 'Storage' section with a list of event trigger recordings. A red box highlights three recordings: '17h46m47s-423-P01.001 180s', '17h49m48s-423-P01.001 180s', and '17h52m47s-423-P01.001 180s'. A large red box in the foreground contains the text 'OCR01-225'. The bottom right shows a video player with a progress bar at 0:08 / 2:59. The background shows a detailed process flow diagram with various data points and status indicators.

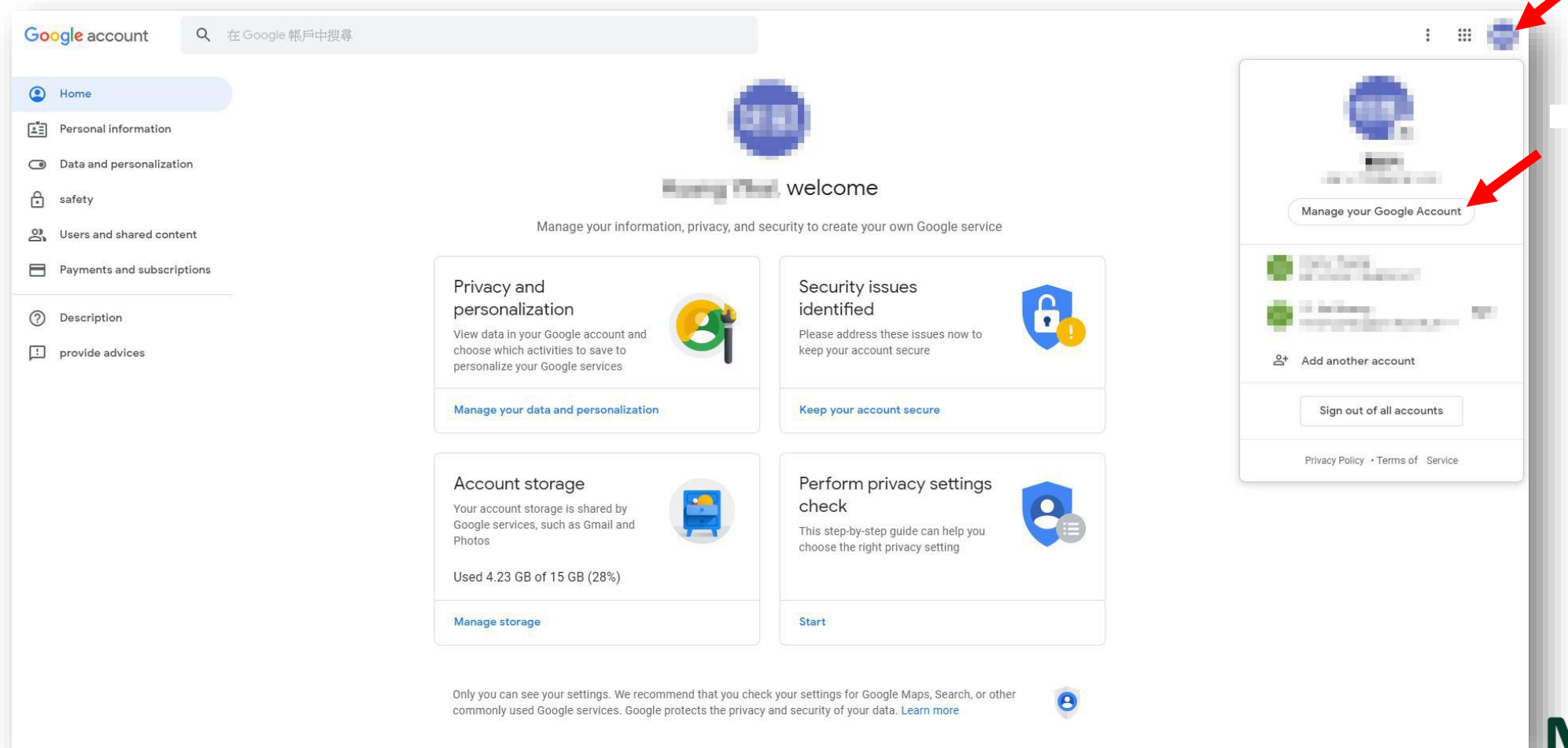
Recording Name	Duration
17h46m47s-423-P01.001	180s
17h49m48s-423-P01.001	180s
17h52m47s-423-P01.001	180s

1,11 frames

# Advanced – Event Trigger – SMTP

- SMTP

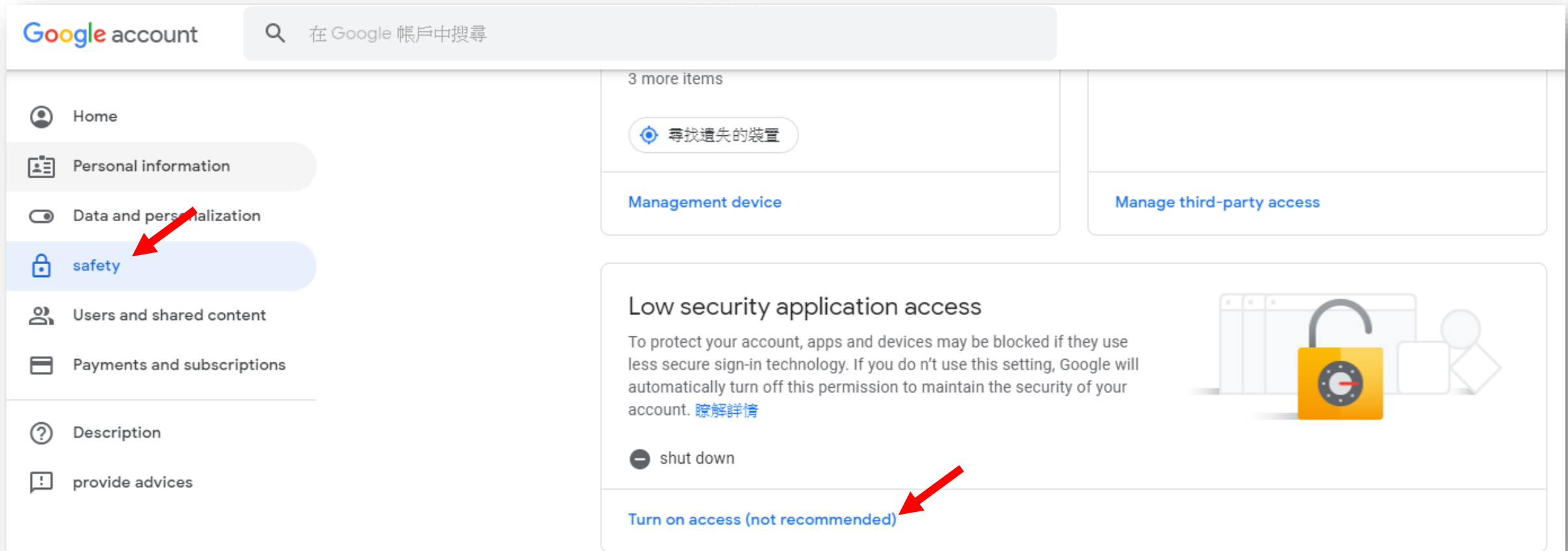
- **Get Authority:** If using Gmail, user needs to **get access authority of email**. First, go to Google account page



# Advanced – Event Trigger – SMTP

- SMTP

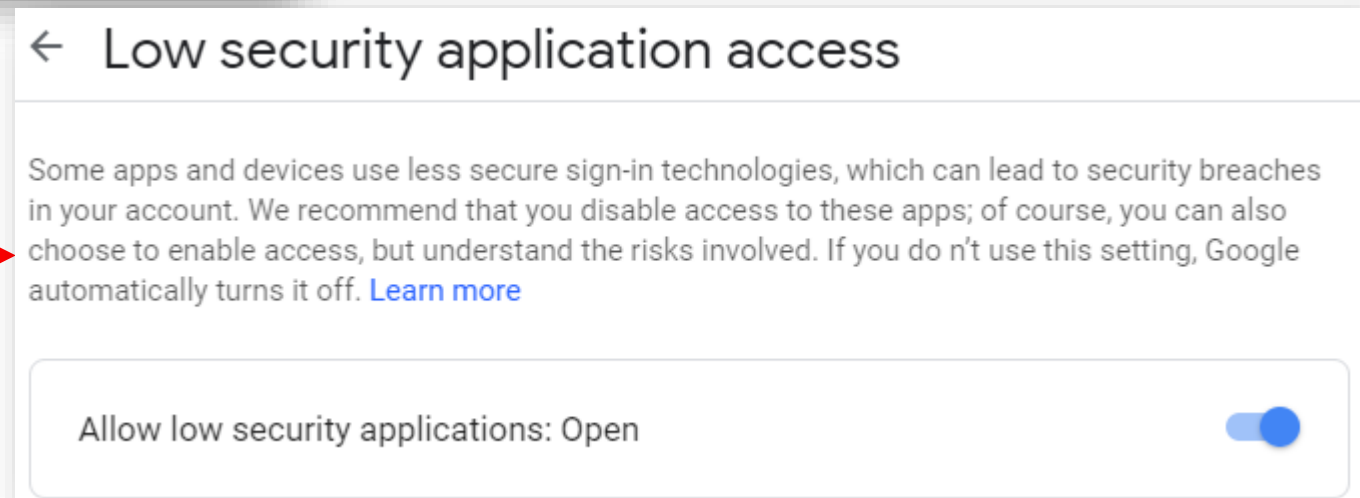
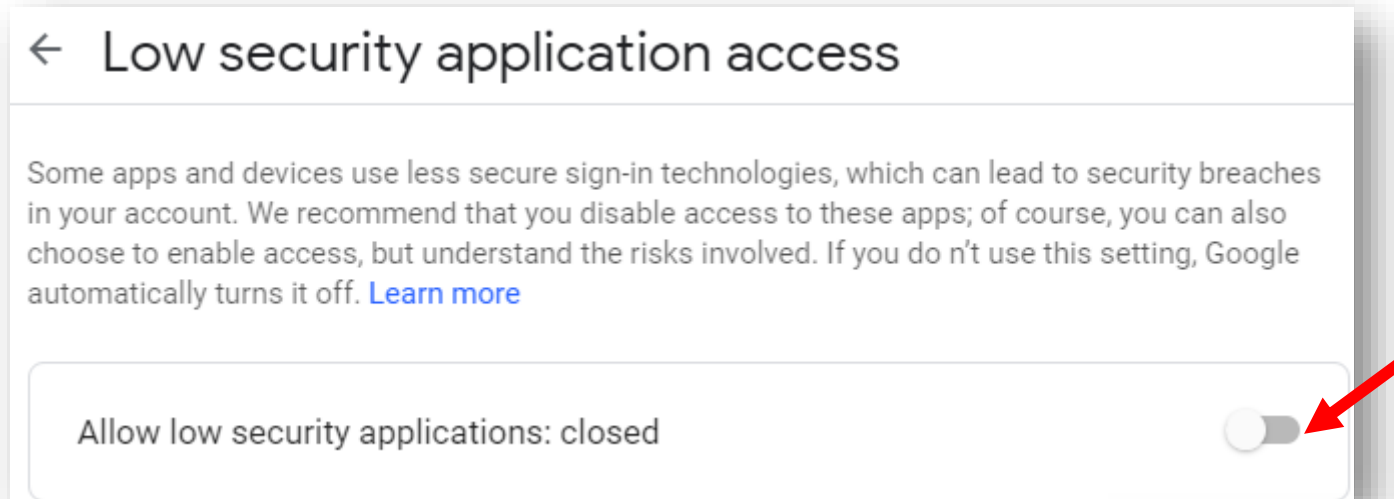
- **Get Authority:** Enter **safety** page → Find **Low security application access** → Click **Turn on access**





# Advanced – Event Trigger – SMTP

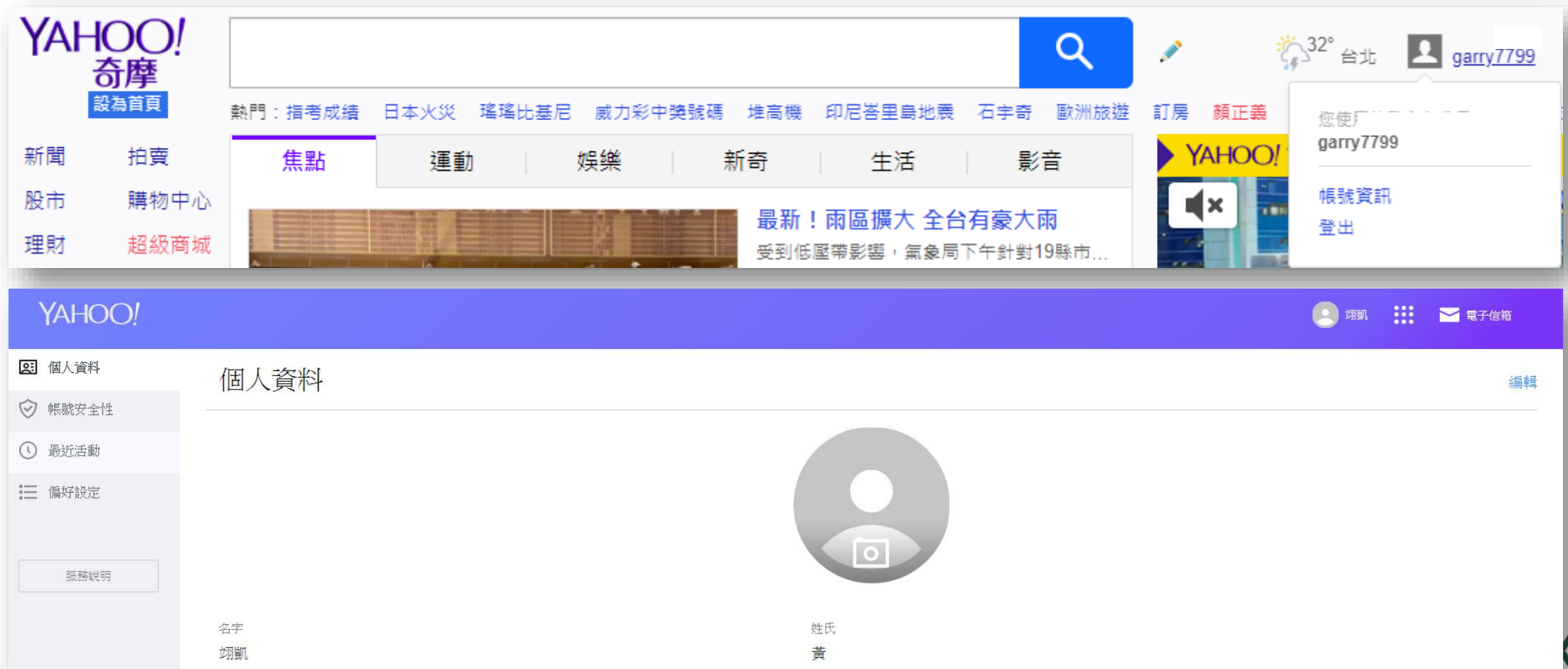
- SMTP
  - **Get Authority:** Allow low security applications



# Advanced – Event Trigger – SMTP

- SMTP

- **Get Authority:** If using Yahoo mail, user needs to **get access authority of email**. Enter account page for Yahoo homepage.



# Advanced – Event Trigger – SMTP

- SMTP

- **Get Authority:** Enter **Security** page → **Find Allows the use of applications with less secure login methods** → Click to Allow access



## 允許使用登入方式較不安全的應用程式

部分非 Yahoo 應用程式和裝置使用的登入技術較不安全，因此會讓您的帳號更容易遭受攻擊。您可關閉存取權限 (建議作法) 或選擇承擔風險繼續使用這類應用程式。

[了解更多](#)



# Advanced – Event Trigger – SMTP

- Event Trigger

1. [Link Settings](#): Enter **Link** page → Communication Mode: **SMTP** → Enter **Server Address, Port, User Name, Password, Email** → Click **Add**

The screenshot shows the 'Link' configuration page in the nexvic interface. The 'Link' icon in the top navigation bar is highlighted with a red arrow. The 'Communication Mode' dropdown menu is set to 'SMTP' and is also highlighted with a red arrow. The 'SMTP Setting' section on the left is highlighted with a red box. The form fields within this section are: 'Server Address' (smtp.gmail.com), 'Port' (465), 'User Name' (garry), 'Password' (empty), 'Email' (garry @gmail.com), and 'Var Name' (SMTP00PORT465). The 'Add' button at the bottom right is highlighted with a red arrow.

Save As | Page | Script | Monitor | Control | **Link** | Wizard

Communication Mode: SMTP

**SMTP Setting**

Server Address: smtp.gmail.com Port: 465

User Name: garry Password:

Email: garry @gmail.com

Var Name: SMTP00PORT465

Add

# Advanced – Event Trigger – SMTP

- **Event Trigger**

1. **Link Settings:** Confirm SMTP link which has been added, or remove it.

SMTP

Var Name:

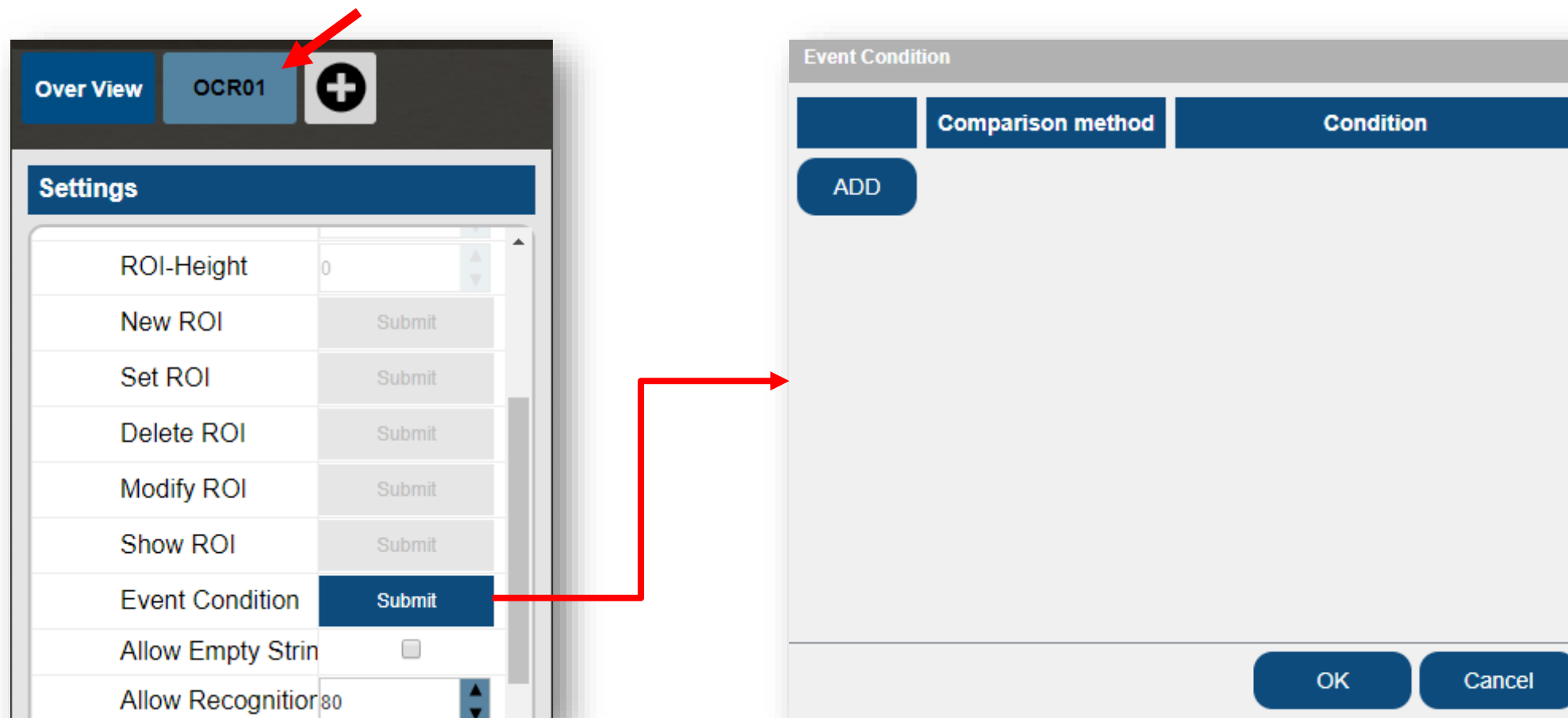
SMTP00PORT465

Remove

# Advanced – Event Trigger – SMTP

- **Event Trigger**

2. **Set Event Condition – OCR:** Click **Event Condition** → The window of **Event Condition** will show up



# Advanced – Event Trigger – SMTP

- **Event Trigger**

2. **Set Event Condition – OCR:** Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

-: Non comparison

>: Greater than

=: Equal

<: Less than

!=: Not equal

=~: Including (for String only)



# Advanced – Event Trigger – SMTP

- **Event Trigger**

2. **Set Event Condition – COLOR, PATTERN:** Click **Event Condition** → The window of **Event Condition** will show up

The image shows two screenshots of a software interface. The left screenshot shows a 'Settings' panel with a table of actions. The right screenshot shows the 'Event Condition' dialog box.

**Left Screenshot: Settings Panel**

Settings	
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit
Event Condition	Submit
Matching Paramete	

Red arrows point from the 'COLOR01' and 'PATTERN01' tabs to the 'Event Condition' row in the table.

**Right Screenshot: Event Condition Dialog**

The dialog box is titled 'Event Condition'. It has a table with two columns: 'Comparison method' and 'Condition'. An 'ADD' button is located below the table. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

A red arrow points from the 'Submit' button of the 'Event Condition' row in the left screenshot to the 'Event Condition' dialog box in the right screenshot.

# Advanced – Event Trigger – SMTP

- **Event Trigger**

2. **Set Event Condition – COLOR, PATTERN:** Click **Add** → Set **Comparison** → Set **Condition**  
→ Click **OK**

-: No comparison

=: Equal

!=: Not equal

=~: Including (for String only)

# Advanced – Event Trigger – SMTP

- **Event Trigger**

**Example – Set Event Condition – OCR:** Set the condition of OCR01 greater than 200

The screenshot shows a dialog box titled "Event Condition". It contains a table with two columns: "Comparison method" and "Condition". The "Comparison method" column has a dropdown menu with the value ">" selected. The "Condition" column has a text input field with the value "200". A red rectangle highlights the row containing the comparison method and condition. To the left of the table, there are two buttons: "X" and "ADD". At the bottom right of the dialog box, there are two buttons: "OK" and "Cancel".

	Comparison method	Condition
X	>	200

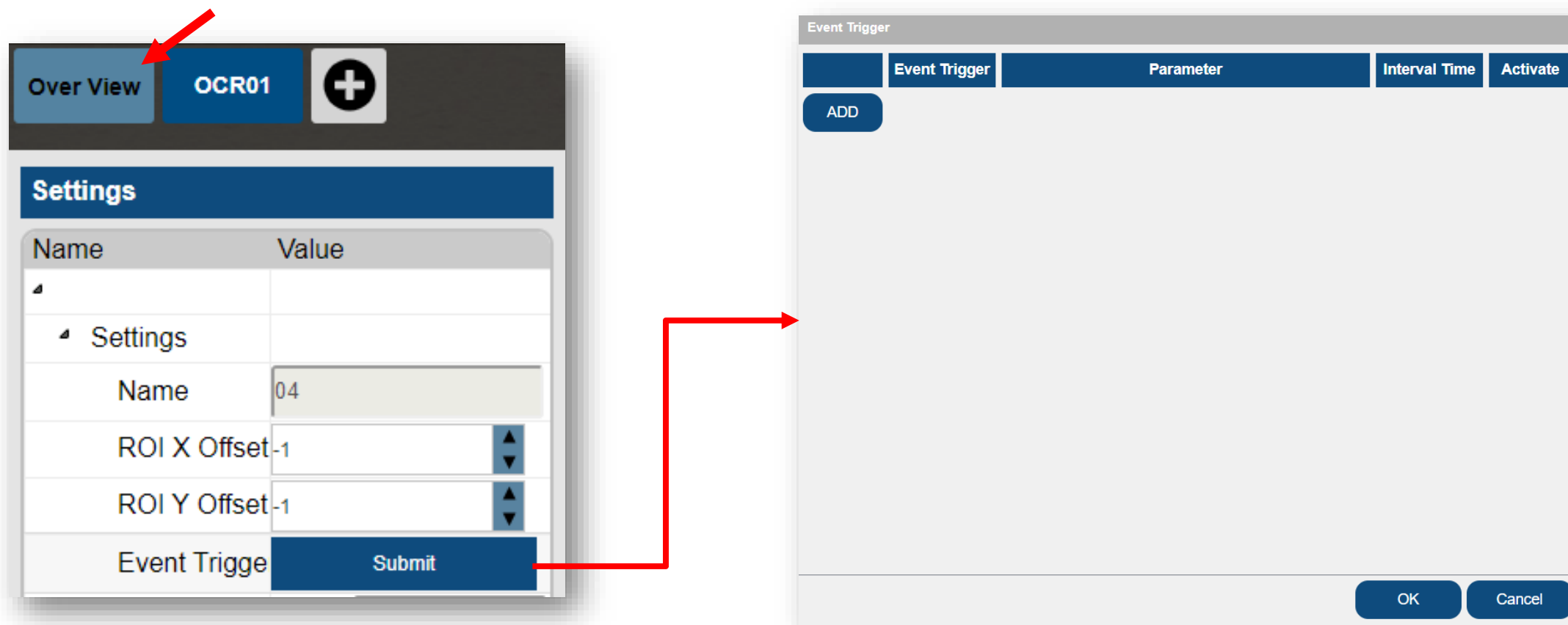
ADD

OK Cancel

# Advanced – Event Trigger – SMTP

- **Event Trigger**

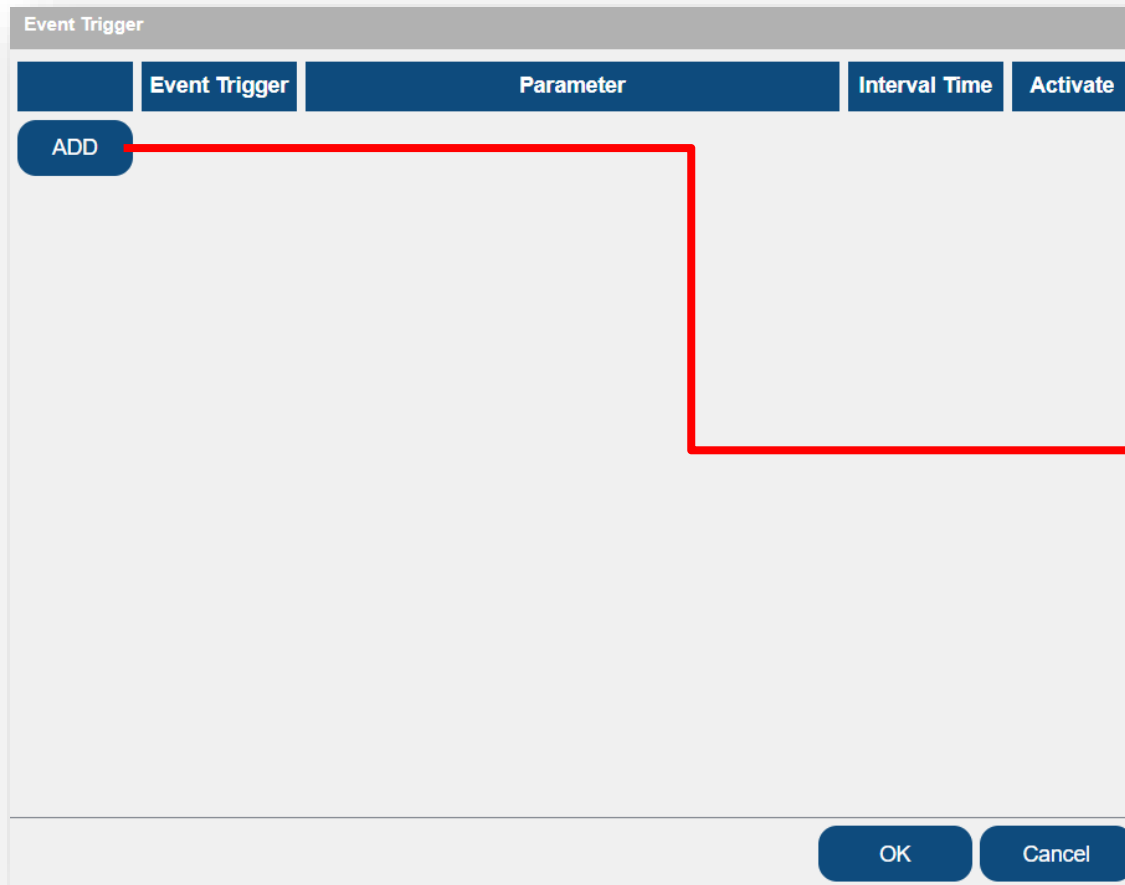
3. **Set Event Trigger**: Click **Event Trigger** → The window of **Event Trigger** will show up



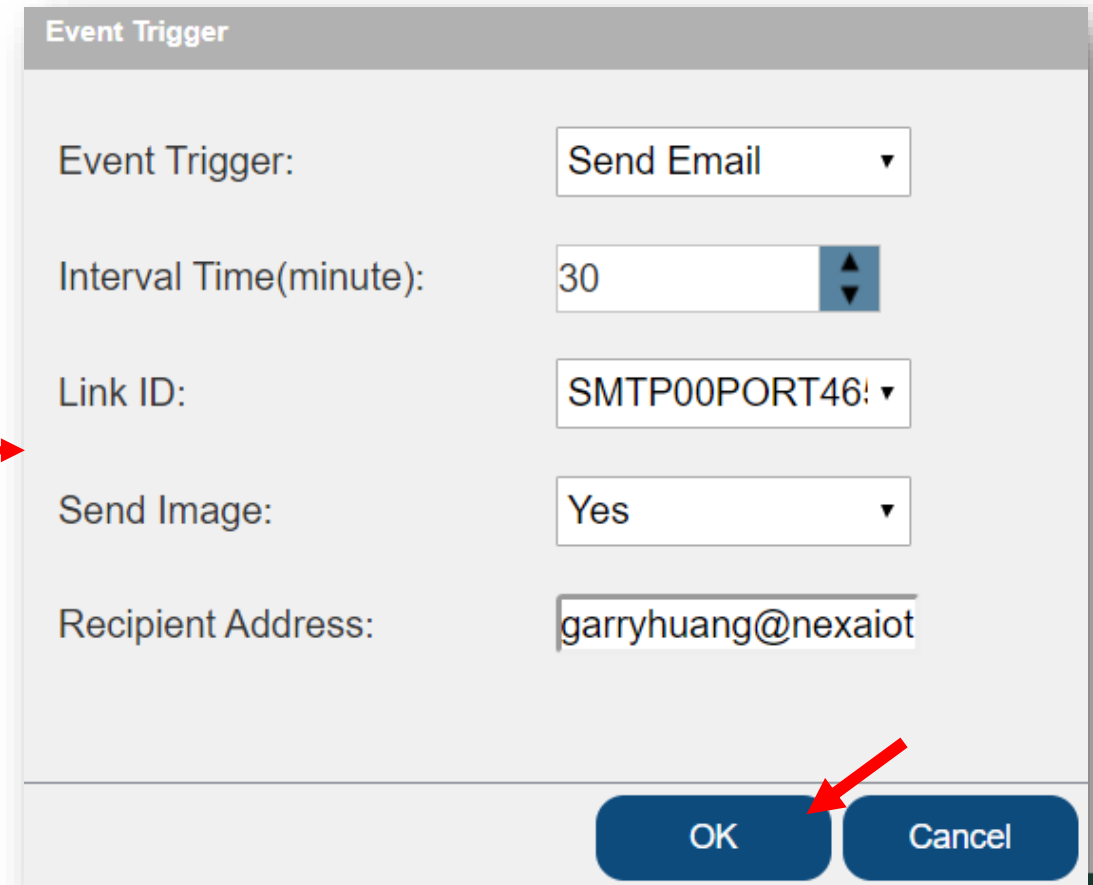
# Advanced – Event Trigger – SMTP

- Event Trigger

3. Set Event Trigger: Click **Add** → Event Trigger: **Send Email**, Set **Interval Time**, Link ID: **SMTP link**, whether to **Send Image**, enter **Recipient Address** → Click **OK**



The dialog box titled "Event Trigger" has four tabs: "Event Trigger", "Parameter", "Interval Time", and "Activate". The "Event Trigger" tab is selected. Inside this tab, there is a blue button labeled "ADD". A red arrow originates from the "ADD" button and points towards the "Send Email" dropdown in the adjacent dialog box.



The dialog box titled "Event Trigger" contains the following configuration fields:

- Event Trigger: Send Email (dropdown)
- Interval Time(minute): 30 (spinner)
- Link ID: SMTP00PORT46! (dropdown)
- Send Image: Yes (dropdown)
- Recipient Address: garryhuang@nexaiot (text input)

At the bottom right, there are two buttons: "OK" and "Cancel". A red arrow points to the "OK" button.

# Advanced – Event Trigger – SMTP

- Event Trigger

4. **Simulation**: Enter **Monitor** page → Click **Snap** → Check whether there is a new message, when the condition is met, the item will be shown in red text.

The screenshot shows the nexVIC Monitor interface. On the left, a sidebar lists 'Page 01' and 'OCR01-225' (highlighted with a red box). The main area displays a data table for 'Pyramax' with columns for Setpoint, Zone 1, Zone 8, Zone 10, and Cooler. The value '225' is highlighted in red in the first row. At the bottom, a status bar shows '1,11 frames' and '2ms'.

OUTLOOK 現在

garry @gmail.com

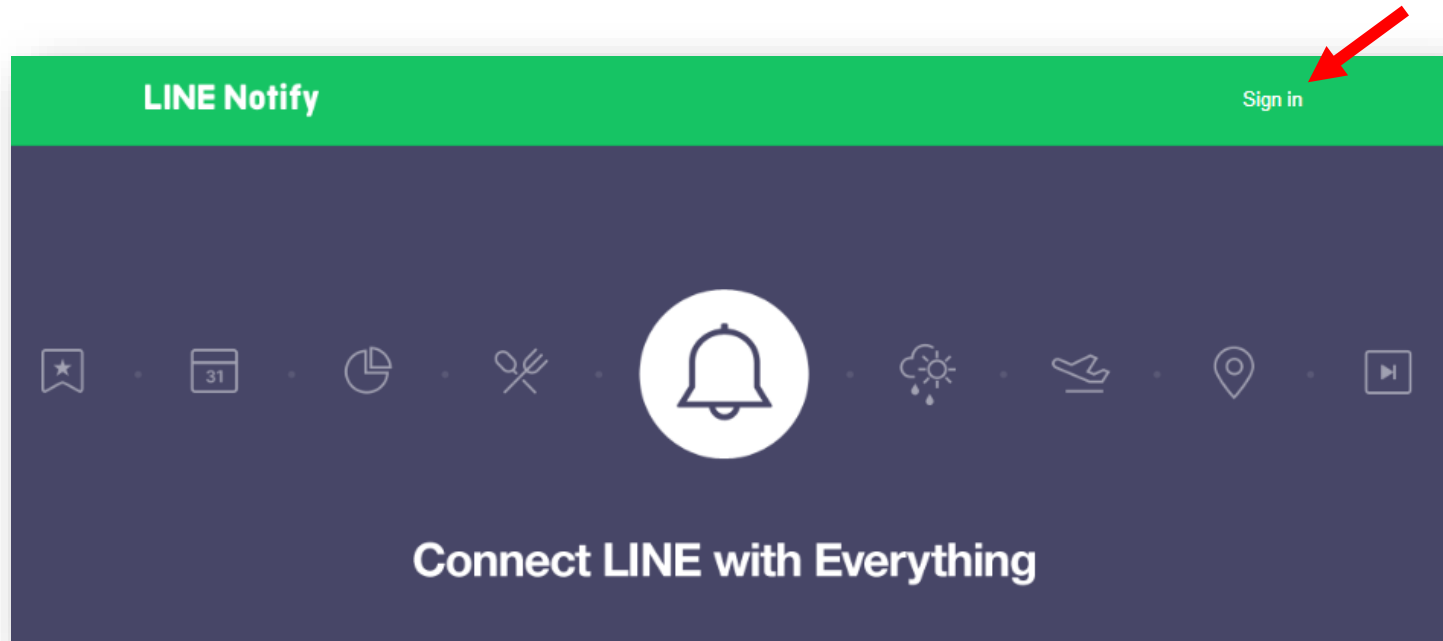
VIC7000

PAGE04.OCR01 (225) >200

# Advanced – Event Trigger – LINE

- Line Notify

1. **Get token**: Go to the website of Line Notify ([https://notify-bot.line.me/zh\\_TW/](https://notify-bot.line.me/zh_TW/)) → Click **Sign In** → Enter email account name and password

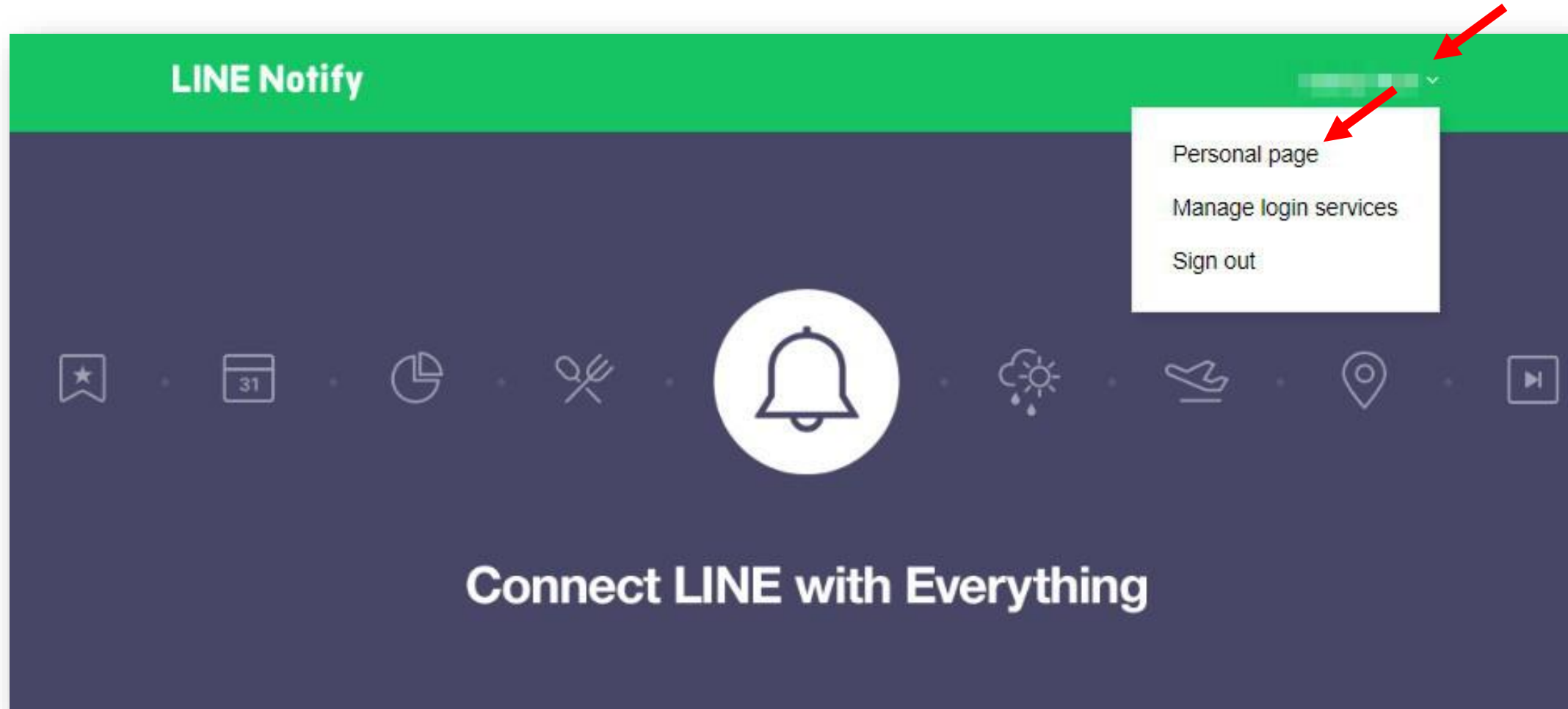




# Advanced – Event Trigger – LINE

- Line Notify

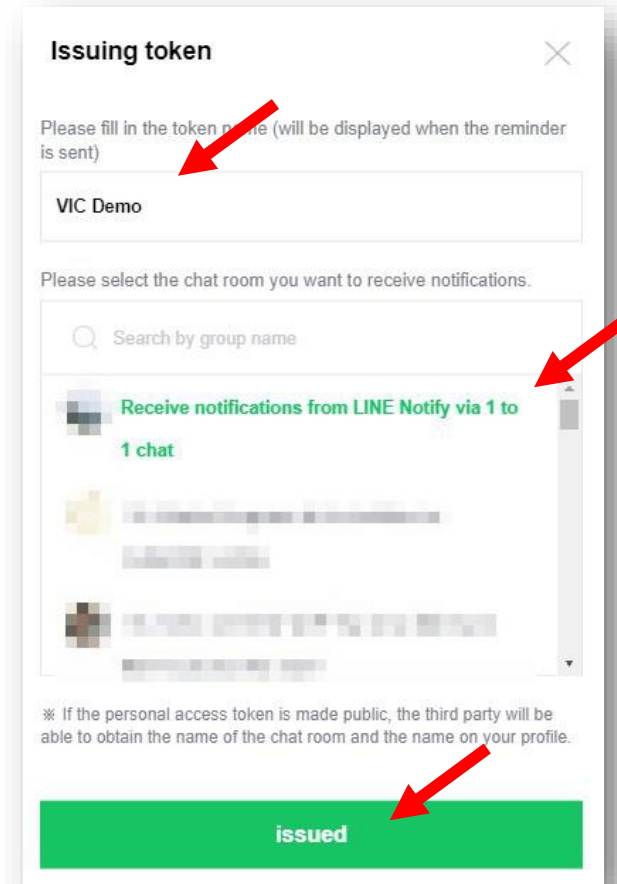
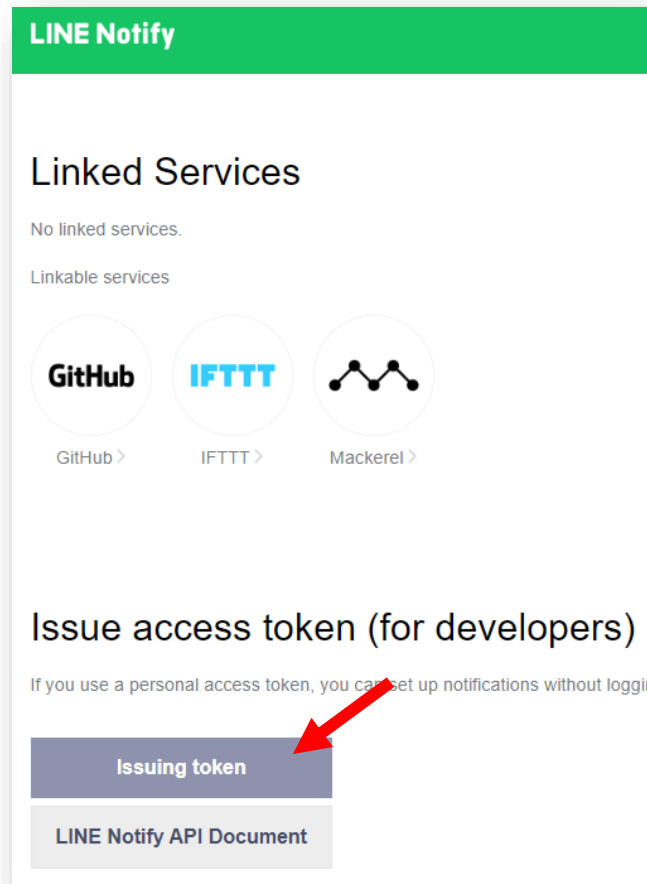
1. **Get token**: Click **account name** → Click **Personal page**



# Advanced – Event Trigger – LINE

- **Line Notify**

1. **Get token**: Click **Issuing token** → Enter Name of token → Select the chatroom which will receive message → Click **Issued**



# Advanced – Event Trigger – LINE

- Line Notify
  - **Get token:** Please copy the issued token

The issued tokens are as follows.

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Leaving this page will no longer show newly issued tokens. Before leaving the page, please copy the token.

**copy** **shut down**

# Advanced – Event Trigger – LINE

- **Event Trigger**

1. **Link Settings:** Enter **Link** page → Communication Mode: **LINE Notify** → Enter **Token**,  
**Group Name** → Click **Add**

The screenshot shows the 'Link' settings page in the nexVIC application. The top navigation bar includes buttons for 'New', 'Load', 'Save', 'Save As', 'Page', 'Script', 'Monitor', 'Control', 'Link', and 'Wizard'. The 'Link' button is highlighted with a red arrow. Below the navigation bar, the 'Communication Mode' is set to 'LINE Notify', also indicated by a red arrow. The main content area is titled 'Line Notify Setting' and contains three input fields: 'Token:', 'GroupName:', and 'Var Name:'. The 'Token:' and 'GroupName:' fields are highlighted with a red border. An 'Add' button is located at the bottom right, with a red arrow pointing to it.

New Load Save Save As Page Script Monitor Control Link Wizard

Communication Mode LINE Notify

Line Notify Setting

Token:  
[Input Field]

GroupName:  
[Input Field]

Var Name:  
[Input Field]

Add

# Advanced – Event Trigger – LINE

- **Event Trigger**

1. **Link Settings:** Confirm the LINE Notify link which has been added, or remove it.

LINE

Var Name:

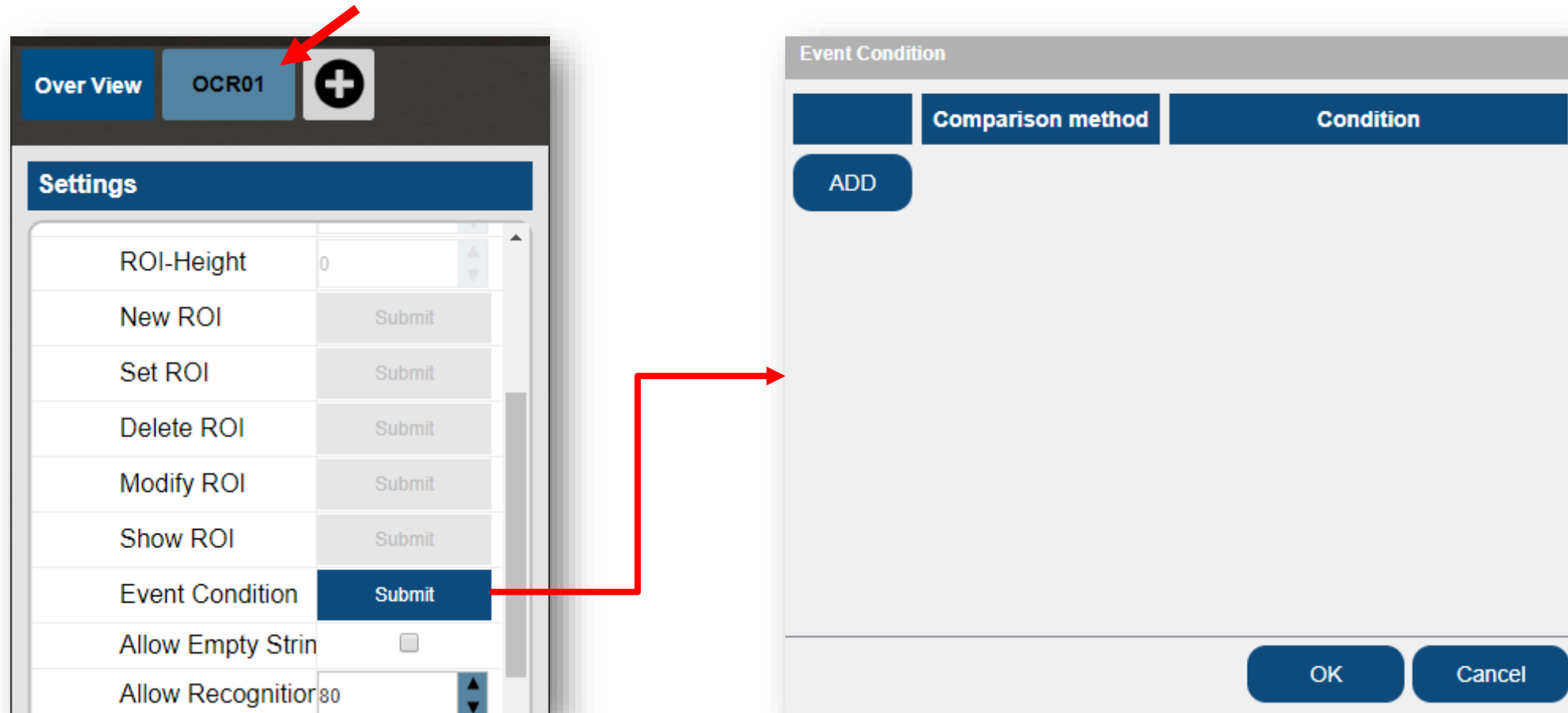
LINE00GROUPVIC Demo

Remove

# Advanced – Event Trigger – LINE

- **Event Trigger**

2. **Set Event Condition – OCR:** Click **Event Condition** → The window of **Event Condition** will show up



# Advanced – Event Trigger – LINE

- Event Trigger

2. Set Event Condition – OCR: Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

	Comparison method	Condition
X	-	
ADD	> = < != =~	

OK Cancel

-: No comparison

>: Greater than

=: Equal

<: Less than

!=: Not equal

=~: Including (for String only)

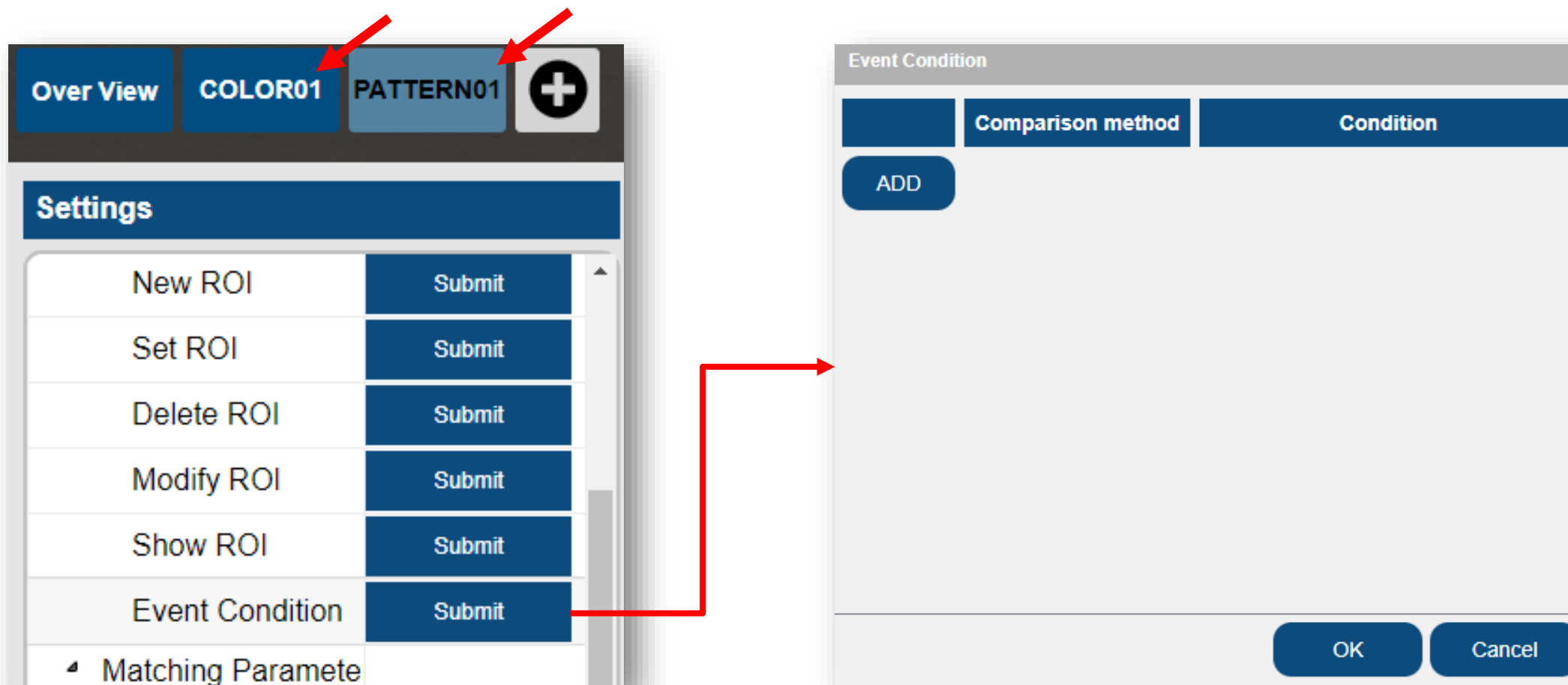
-  
>  
=  
<  
!=  
=~



# Advanced – Event Trigger – LINE

- **Event Trigger**

2. **Set Event Condition – COLOR, PATTERN:** Click **Event Condition** → The window of **Event Condition** will show up



# Advanced – Event Trigger – LINE

- **Event Trigger**

2. **Set Event Condition – COLOR, PATTERN:** Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

-: No comparison

=: Equal

!=: Not equal

=~: Including (for String only)

# Advanced – Event Trigger – LINE

- **Event Trigger**

**Example – Set Event Condition – OCR:** Set the condition of OCR01 greater than 200

The screenshot shows a dialog box titled "Event Condition". It contains a table with two columns: "Comparison method" and "Condition". The "Comparison method" column has a dropdown menu showing ">". The "Condition" column has a text input field containing "200". A red rectangle highlights the comparison method and the condition value. To the left of the table are two buttons: "X" and "ADD". At the bottom right of the dialog are "OK" and "Cancel" buttons.

	Comparison method	Condition
X	>	200

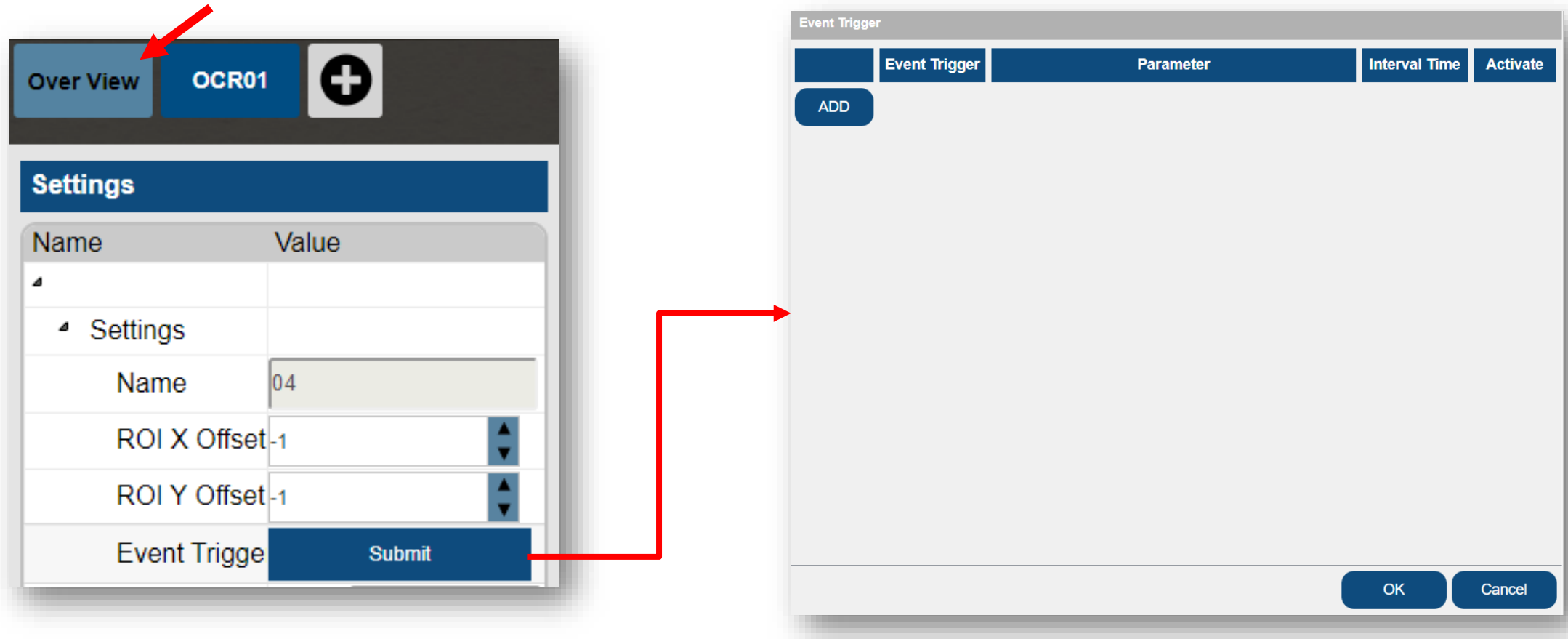
ADD

OK Cancel

# Advanced – Event Trigger – LINE

- **Event Trigger**

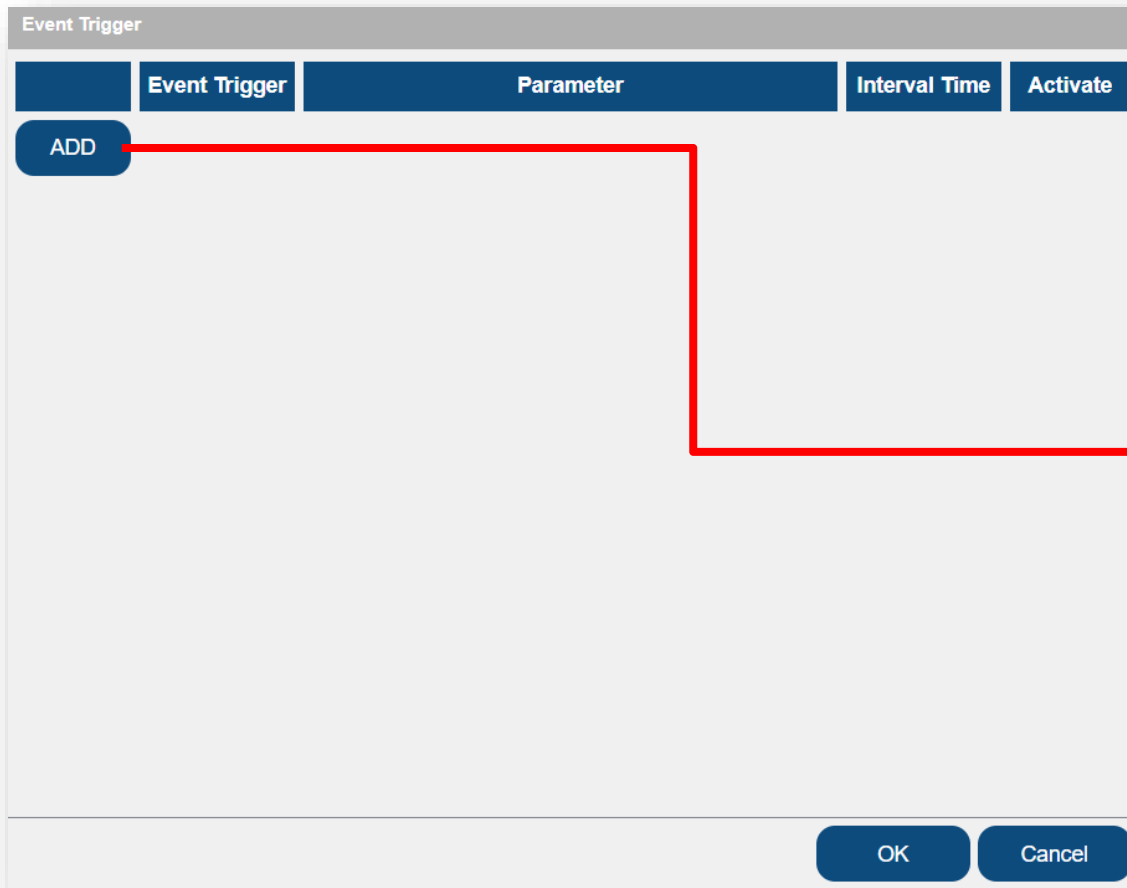
3. **Set Event Trigger**: Click **Event Trigger** → The window of **Event Trigger** will show up



# Advanced – Event Trigger – LINE

- Event Trigger

3. Set Event Trigger: Click **Add** → Event Trigger: **Send Line**, Set **Interval Time**, Link ID: **LINE**  
**Notify link**, whether to **Send Image** → Click **OK**

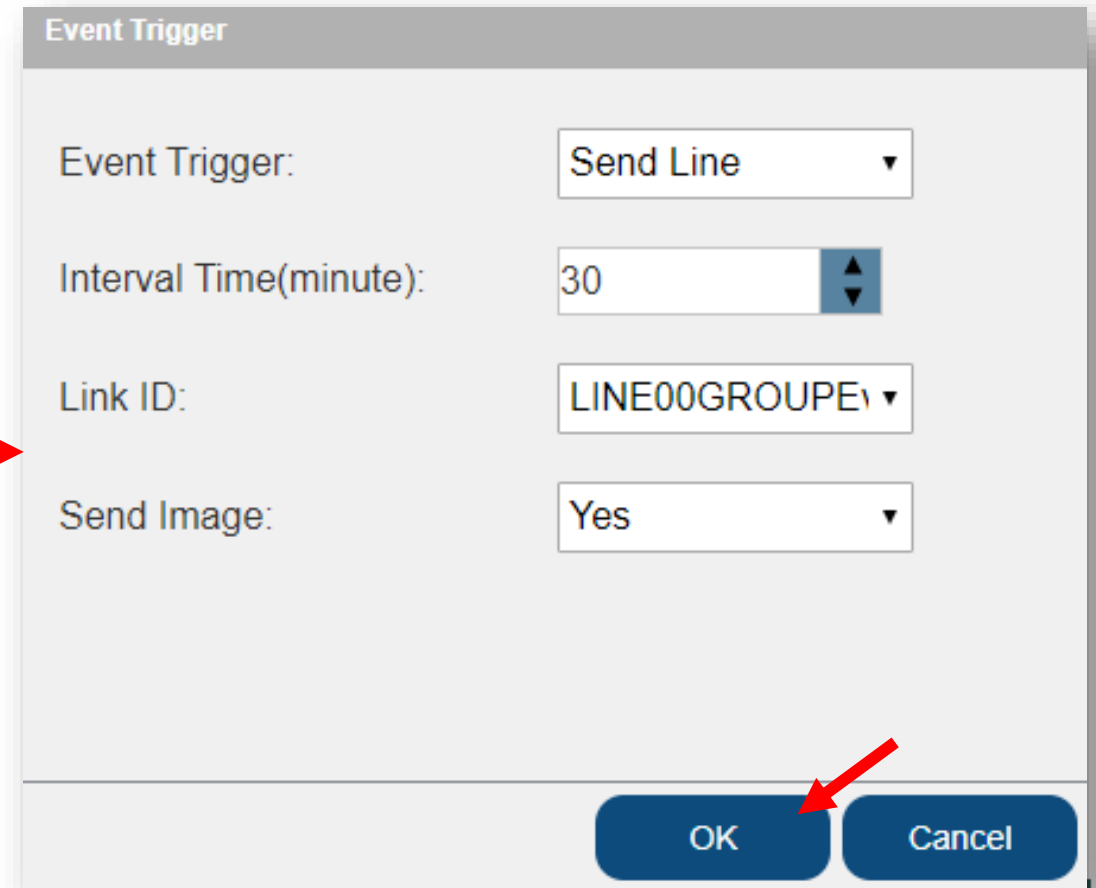


The 'Event Trigger' dialog box is shown with a table header containing 'Event Trigger', 'Parameter', 'Interval Time', and 'Activate'. An 'ADD' button is located below the header. A red arrow originates from the 'ADD' button and points to the configuration screen on the right.

Event Trigger	Parameter	Interval Time	Activate
---------------	-----------	---------------	----------

ADD

OK Cancel



The configuration screen for the 'Event Trigger' dialog box. It contains four fields: 'Event Trigger' (Send Line), 'Interval Time(minute):' (30), 'Link ID:' (LINE00GROUPE), and 'Send Image:' (Yes). A red arrow points to the 'OK' button at the bottom right.

Event Trigger: Send Line

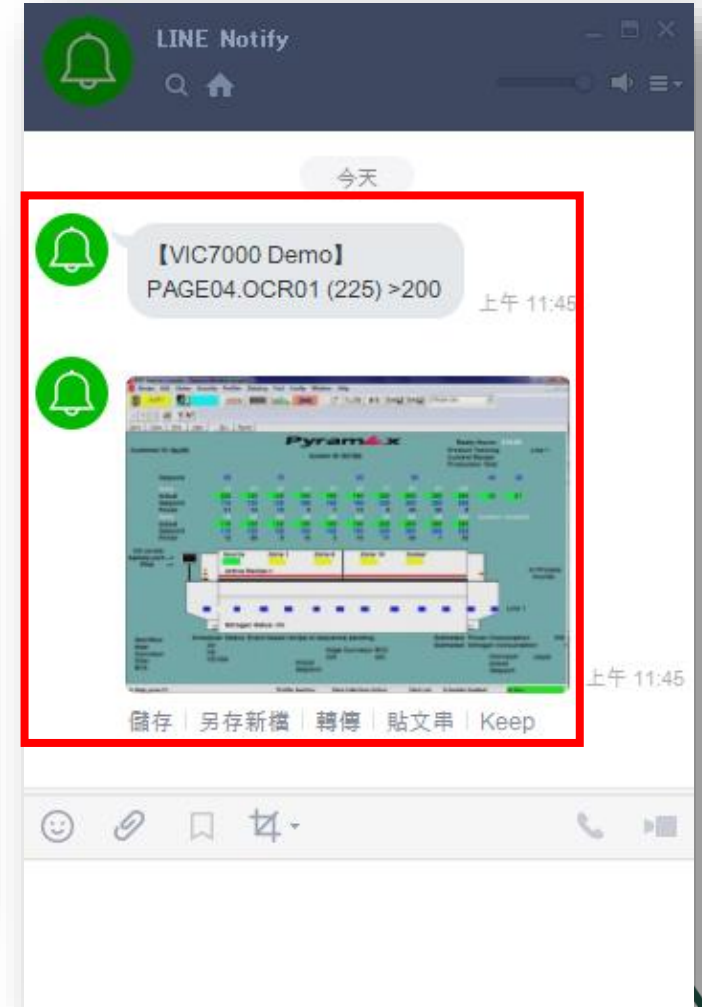
Interval Time(minute): 30

Link ID: LINE00GROUPE

Send Image: Yes

OK Cancel

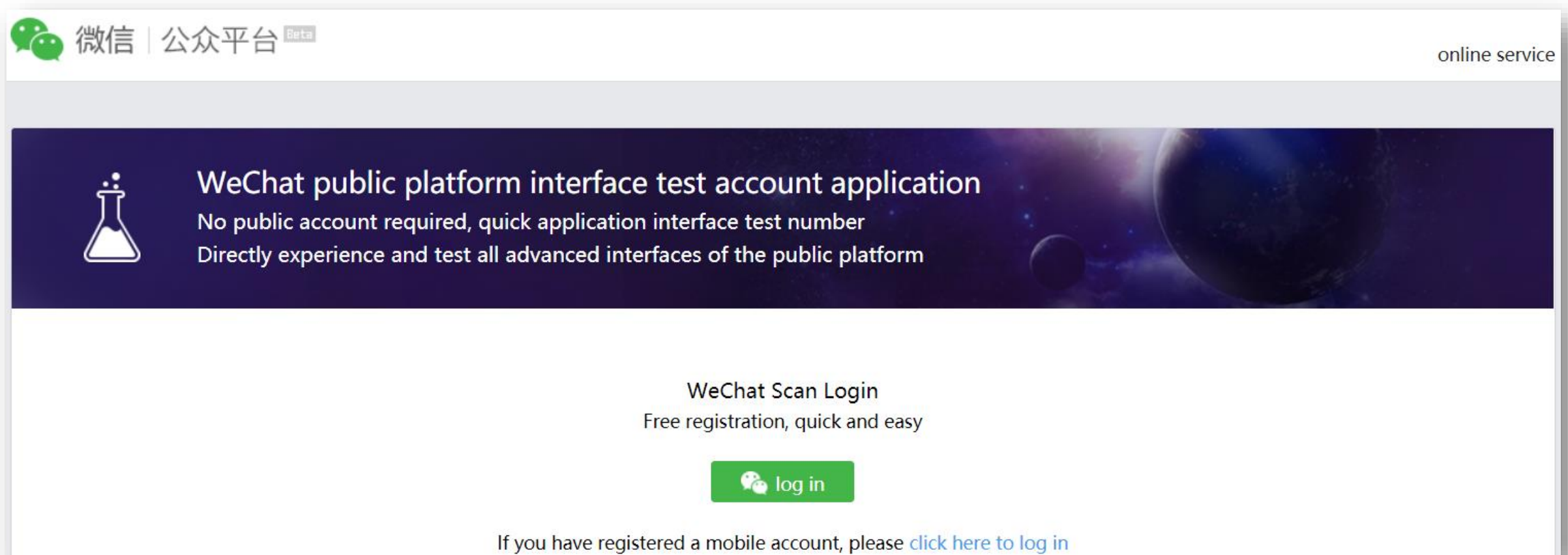
4. **Simulation**: Enter **Monitor** page → Click **Snap** → Check whether there is a new message, when the condition is met, the item will be shown in red text



# Advanced – Event Trigger – WeChat

- **WeChat**


- **Get Information:** Go to WeChat public platform website(<https://mp.weixin.qq.com/debug/cgi-bin/sandbox?t=sandbox/login>) → Click **log in** → Use a cell phone to scan QR code and login







# Advanced – Event Trigger – WeChat



- **WeChat**
  - **Get Information:** After logging in, user needs to copy **appId** and **appsecret**

 微信 | 公众平台 Betaonline service

Management test number

WeChat:   [drop out](#)

Test number information

appId	
appsecret	

# Advanced – Event Trigger – WeChat

- WeChat

- Set **templateID**: Click **New test patterns** → Enter **Template title** and **Template content**

## Template message interface

New test patterns

up to 10 Ge accept the need to focus

New test template

caution:  
1. The template ID of the test template is only used for testing and cannot be used to send template messages to the official account.  
2. For the convenience of testing, the test template can be arbitrarily specified, but in fact the template message of the official account can only be obtained from the template library.  
3. You need to apply for the official account to add a new template that meets the requirements. You need to use the official number to log in to the public platform and follow the guidelines  
4, the template content can be set parameters (template title is not available) for the interface call, the parameter must start with {{ and end with .DATA }}

Template title

Template content

submit

cancel

# Advanced – Event Trigger – WeChat

- **WeChat**
  - **Set template ID:** When editing is completed, click **submit**.

Script Parameters	Template corresponding content
keyword1	{{keyword1.DATA}}
keyword2	{{keyword2.DATA}}
keyword3	{{keyword3.DATA}}
Not Script Parameter	Template corresponding content
Current Time	{{currentTime.DATA}}

New test template

caution:

1. The template ID of the test template is only used for testing and cannot be used to send template messages to the official account.

2. For the convenience of testing, the test template can be arbitrarily specified, but in fact the template message of the official account can only be obtained from the template library.

3. You need to apply for the official account to add a new template that meets the requirements. You need to use the official number to log in to the public platform and follow the guidelines

4, the template content can be set parameters (template title is not available) for the interface call, the parameters must start with {{ and end with .DATA }}

Template title

VIC7000

Template content

Current time {{currentTime.DATA}}

keyword1 test value is {{keyword1.DATA}}

keyword2 test value is {{keyword2.DATA}}

keyword3 test value is {{keyword3.DATA}}

submit

cancel

# Advanced – Event Trigger – WeChat

- **WeChat**
  - **Set template ID**: The generated **template ID** will be used in **SEND.WECHAT** and **SEND.WECHAT\_P**

Template message interface				
<div>New test patterns</div> up to 10 Ge accept the need to focus on the message template test No.				
Serial number	Template ID (for interface calls)	Template title	Template content	operating
1	XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX	VIC7000	Current time {{currentTime.DATA}} keyword1 test value is {{keyword1.DATA}} keyword2 test value is {{keyword2.DATA}} keyword3 test value is {{keyword3.DATA}}	<a href="#">delete</a>

# Advanced – Event Trigger – WeChat

- **WeChat**

- **Set open ID:** Use WeChat APP to scan the **Test number QR code** and **follow the test public account** to receive message.

**Test number QR code**




Please use WeChat to scan and follow the test public account

User list (up to 100)

Serial number	nickname	We chat number	operating
---------------	----------	----------------	-----------

- **Set open ID:** When there is a follower, the WeChat ID of the follower's account, called **open ID**, will show up and is used in **SEND.WECHAT\_P**



# Advanced – Event Trigger – WeChat

- **Event Trigger**

1. **Link Settings:** Enter **Link** page → Communication Mode: **WeChat** → Enter **appID**, **appsecret** → Click **Add**

nexVIC VIC7300 - VIC7000 Training 2.vic

New Load Save Save As Page Script Monitor Control Link Wizard

Communication Mode Wechat

WechatSetting

appID:  
[Input Field]

appsecret:  
[Input Field]

Var Name:  
[Input Field]

Add



# Advanced – Event Trigger – WeChat

- **Event Trigger**

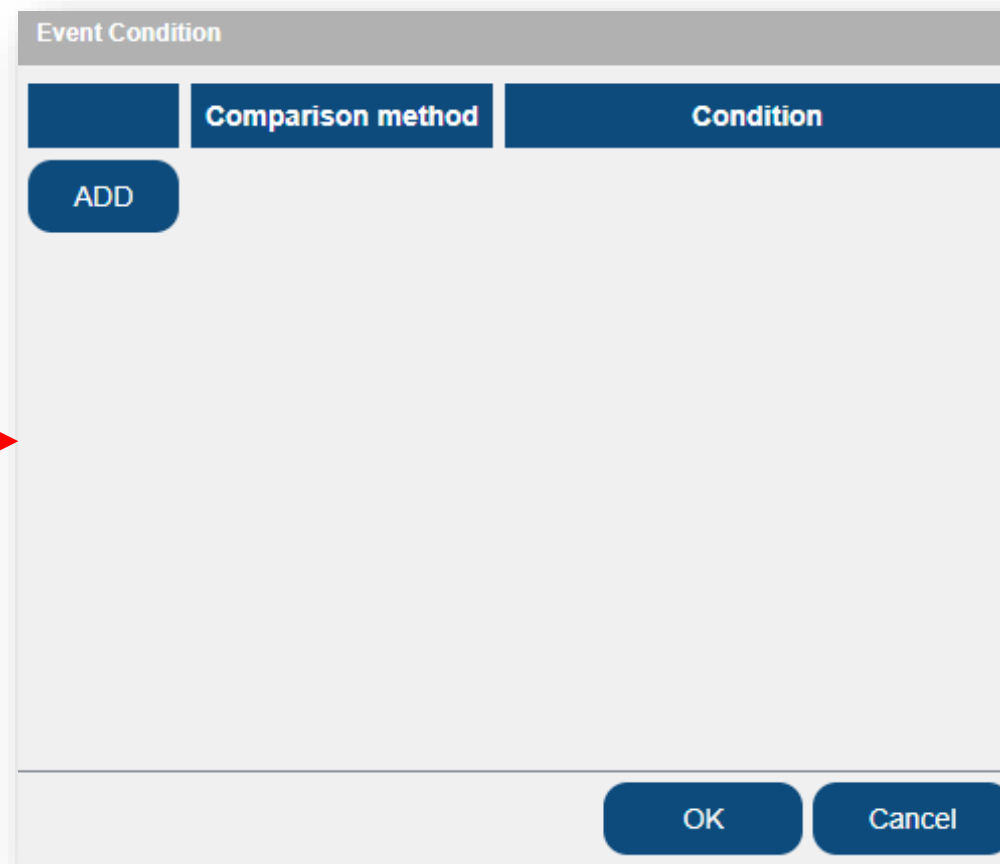
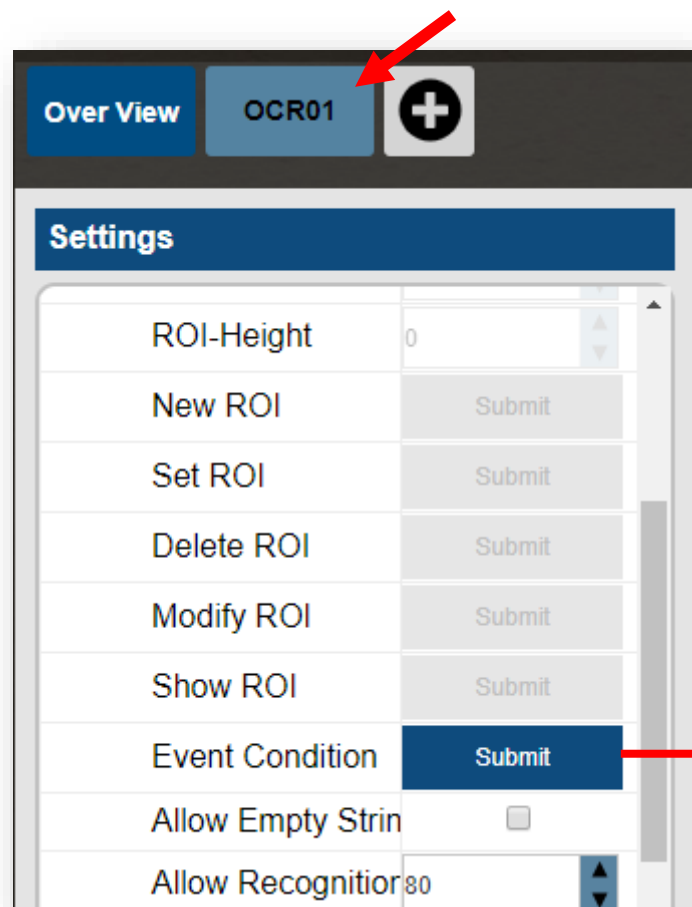
1. **Link Settings**: Confirm the WeChat link which has been added, or remove it. Check whether there is a new account following the test public account or not, click **Update Group** to refresh **Number of groups**.

The screenshot displays a configuration interface for a WeChat event trigger. On the left, there is a blue tab labeled 'Wechat'. To its right, the 'Var Name' is set to 'Wechat00APPIDwxfe4', and the 'Number of groups' is '1'. On the far right, there are two buttons: 'Update Group' and 'Remove'. A yellow arrow points to the 'Var Name' field, and a red arrow points to the 'Remove' button.

# Advanced – Event Trigger – WeChat

- **Event Trigger**

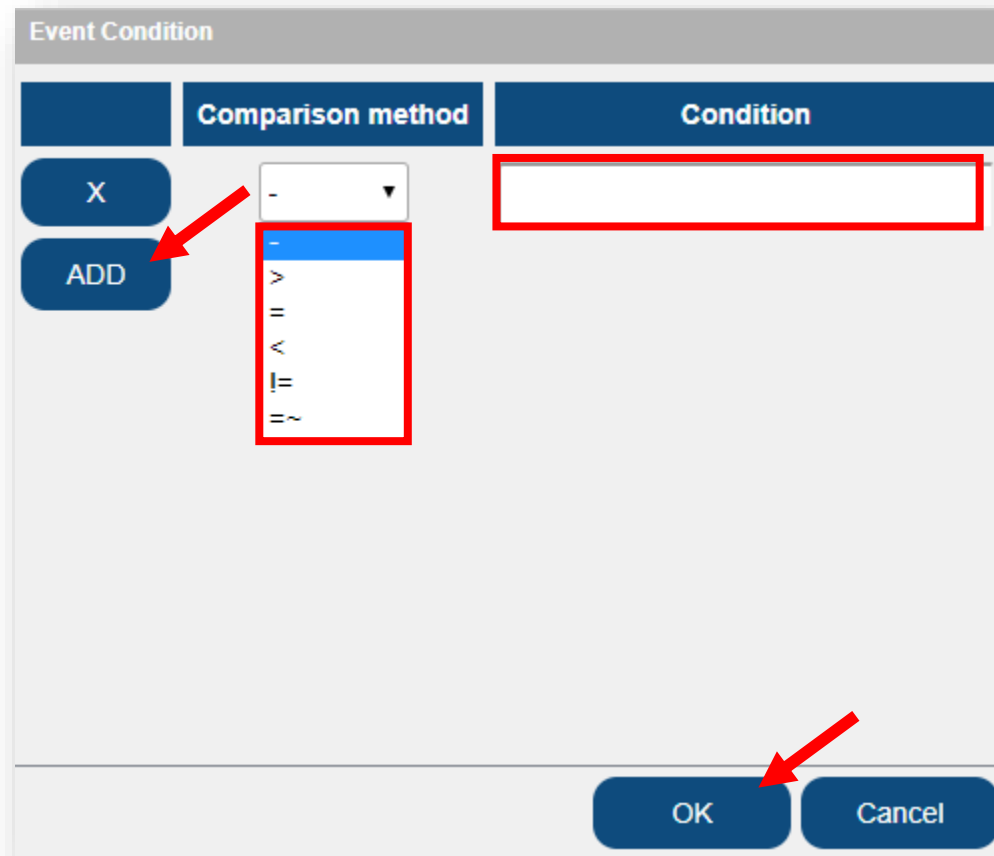
2. **Set Event Condition – OCR:** Click **Event Condition** → The window of **Event Condition** will show up



# Advanced – Event Trigger – WeChat

- Event Trigger

2. Set Event Condition – OCR: Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**



	Comparison method	Condition
X	-	
ADD	- > = < != =~	

OK Cancel

-: No comparison

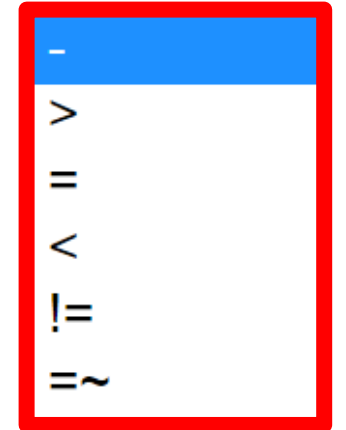
>: Greater than

=: Equal

<: Less than

!=: Not equal

=~: Including (for String only)

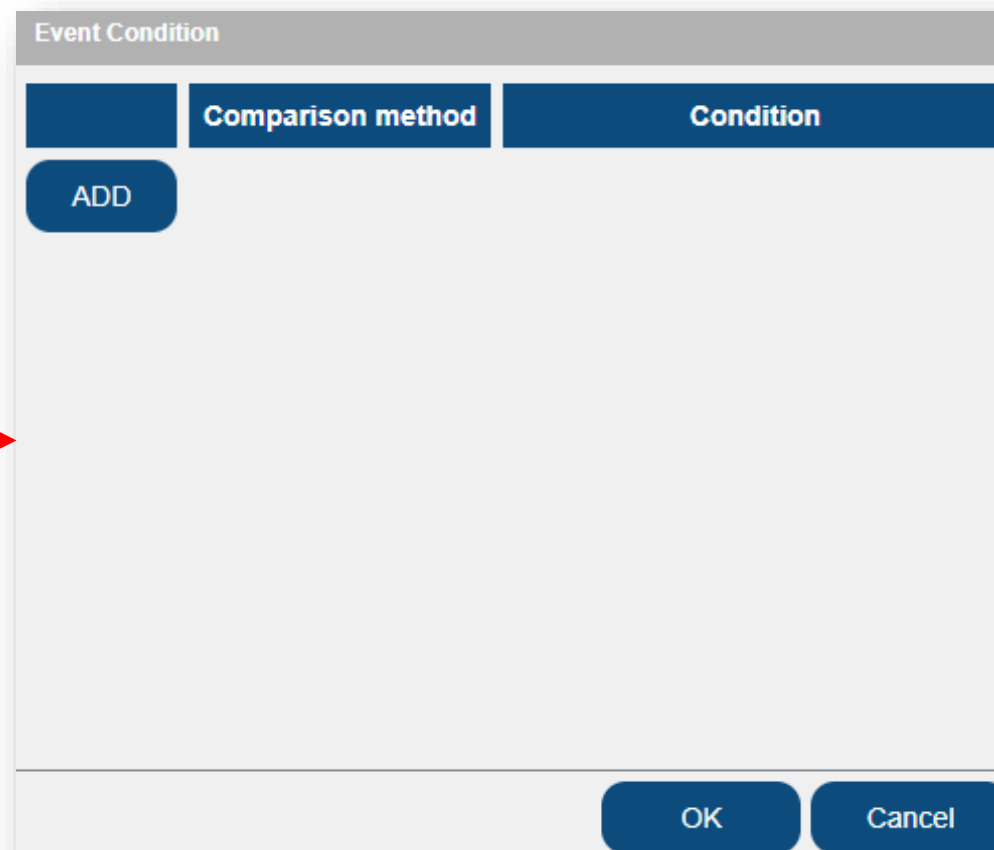
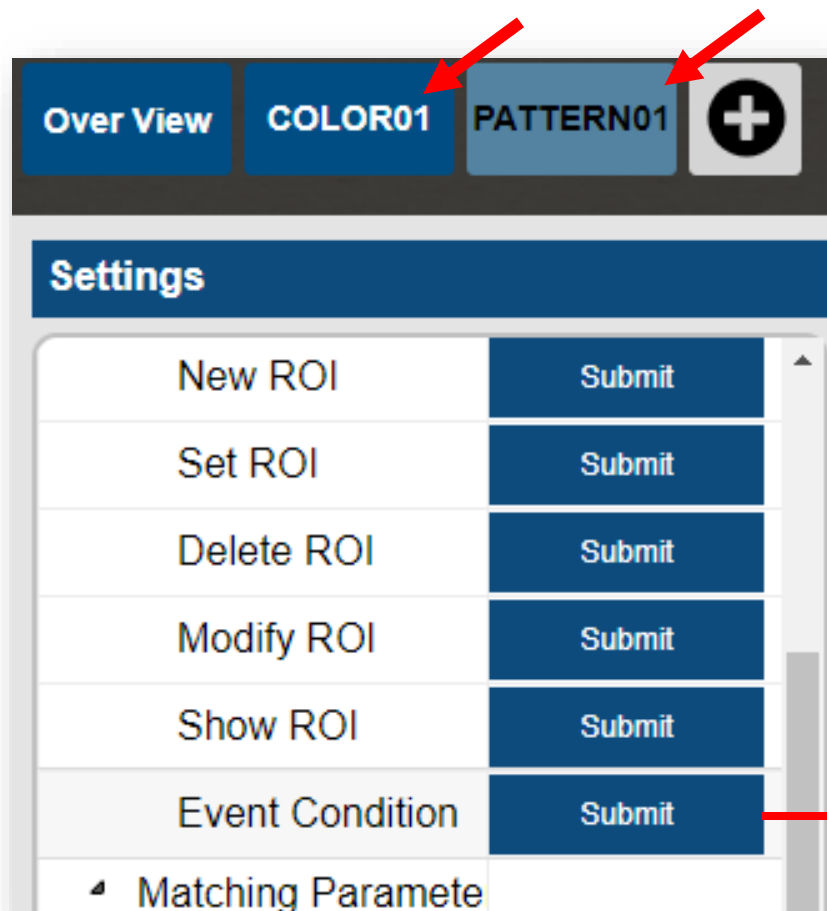


-  
>  
=  
<  
!=  
=~

# Advanced – Event Trigger – WeChat

- **Event Trigger**

2. **Set Event Condition – COLOR, PATTERN:** Click **Event Condition** → The window of **Event Condition** will show up



# Advanced – Event Trigger – WeChat

- **Event Trigger**

2. **Set Event Condition – COLOR, PATTERN:** Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

Event Condition

	Comparison method	Condition
X	-	
ADD	=	
	!=	
	=~	

OK Cancel

-: No comparison

=: Equal

!=: Not equal

=~: Including (for String only)

-

=

!=

=~

# Advanced – Event Trigger – WeChat

- **Event Trigger**

**Example – Set Event Condition – OCR:** Set the condition of OCR01 greater than 200

The screenshot shows a dialog box titled "Event Condition". It contains a table with two columns: "Comparison method" and "Condition". The "Comparison method" column has a dropdown menu showing ">". The "Condition" column has a text input field containing "200". A red rectangle highlights the comparison method and the condition value. To the left of the table are two buttons: "X" and "ADD". At the bottom right of the dialog are "OK" and "Cancel" buttons.

	Comparison method	Condition
X	>	200

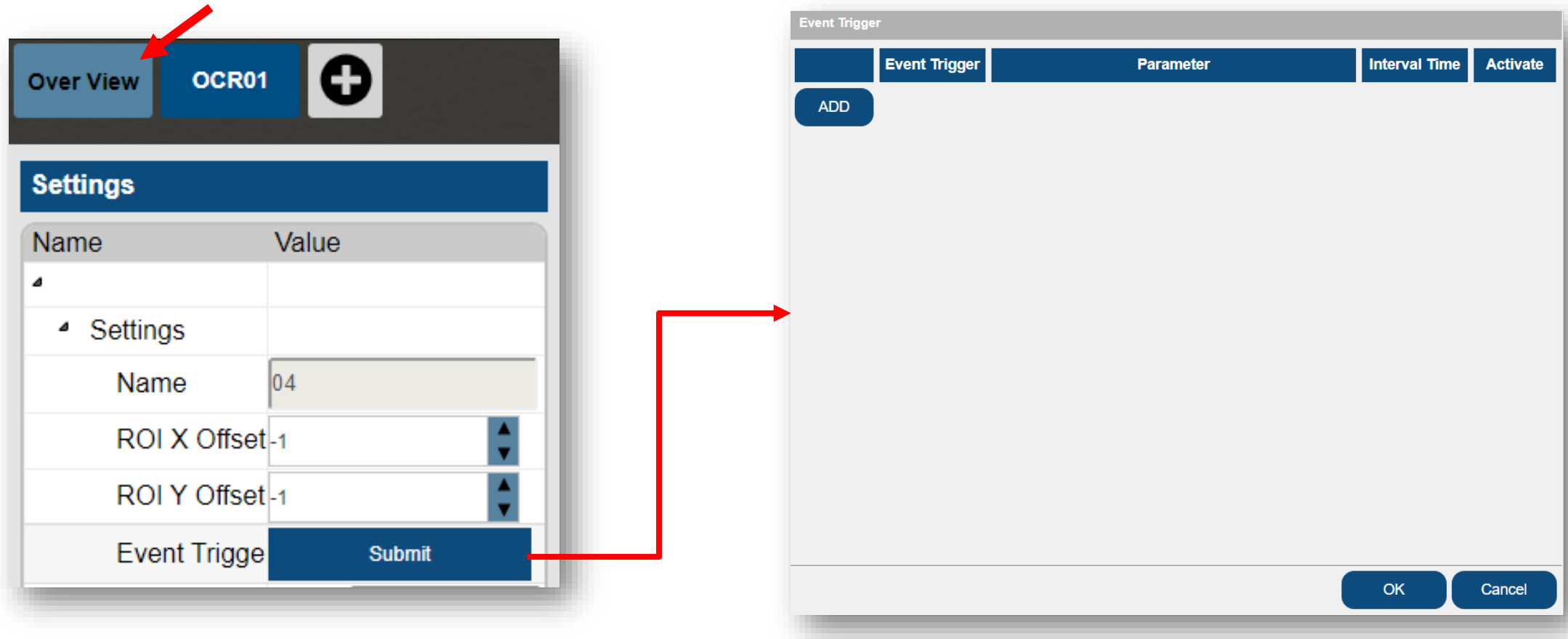
ADD

OK Cancel

# Advanced – Event Trigger – WeChat

- **Event Trigger**

3. **Set Event Trigger**: Click **Event Trigger** → The window of **Event Trigger** will show up

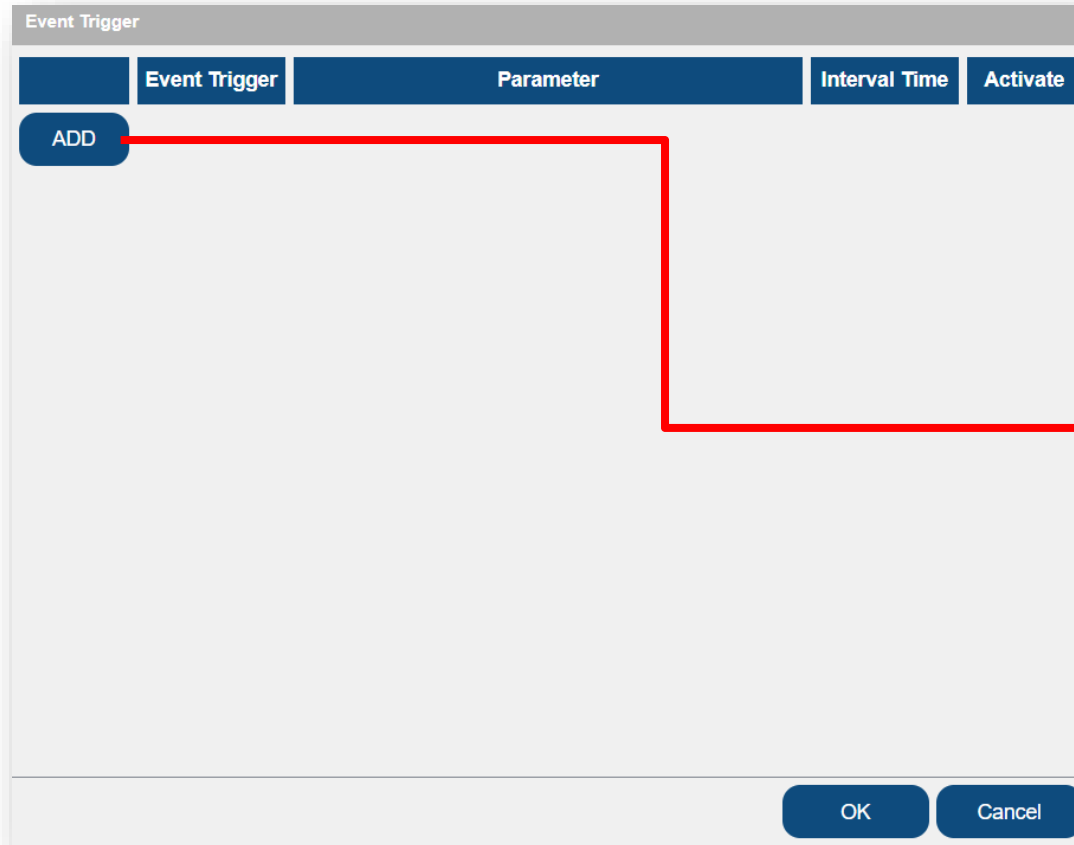




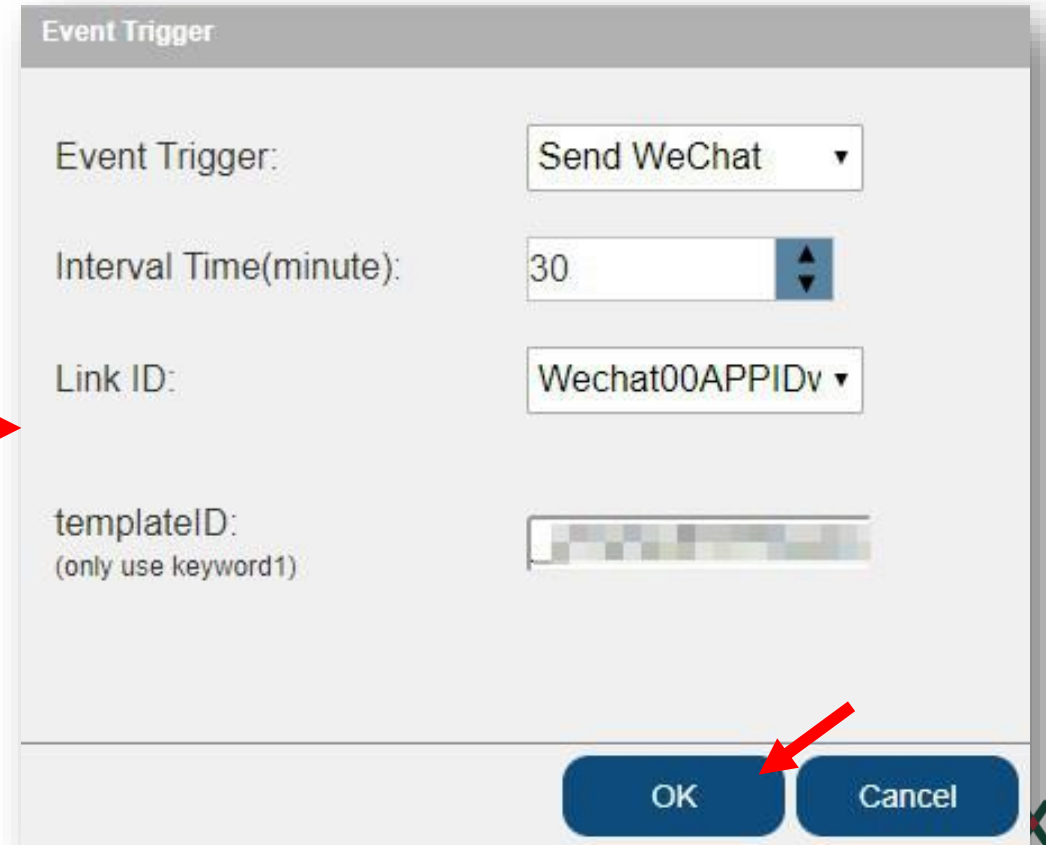
# Advanced – Event Trigger – WeChat

- **Event Trigger**

3. **Set Event Trigger – WeChat:** Click **Add** → Event Trigger: **Send WeChat**, Set **Interval Time**, Link ID: **WeChat link**, Enter **template ID** → Click **OK**  
This function will only use keyword1 in template.



The screenshot shows the 'Event Trigger' dialog box with a tabbed interface. The 'Event Trigger' tab is selected. At the top, there are four tabs: 'Event Trigger', 'Parameter', 'Interval Time', and 'Activate'. Below the tabs, there is a large 'ADD' button. A red arrow originates from the 'ADD' button and points to the configuration screen on the right.



The screenshot shows the configuration screen for the 'Event Trigger' dialog box. It contains the following fields:

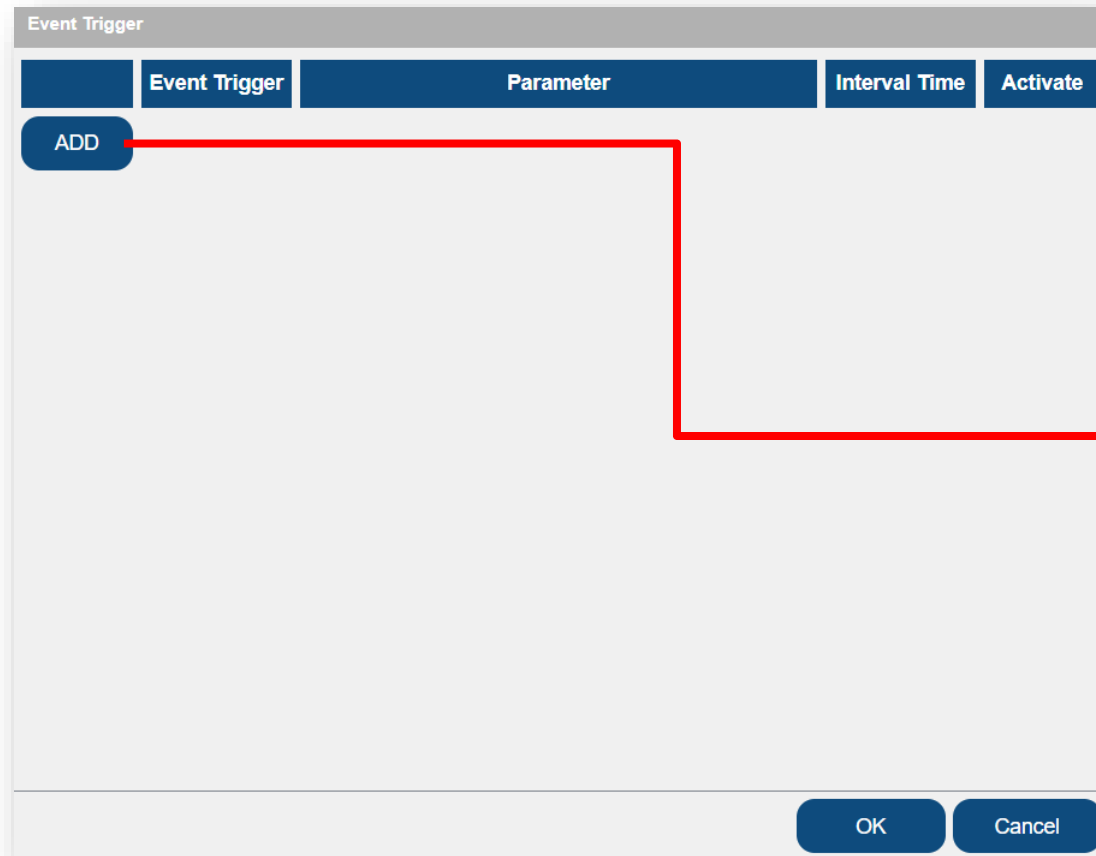
- Event Trigger:** A dropdown menu with 'Send WeChat' selected.
- Interval Time(minute):** A numeric input field with '30' and a spinner control.
- Link ID:** A dropdown menu with 'Wechat00APPIDv' selected.
- templateID:** A text input field with a placeholder image and the text '(only use keyword1)' below it.

At the bottom right, there are 'OK' and 'Cancel' buttons. A red arrow points to the 'OK' button.

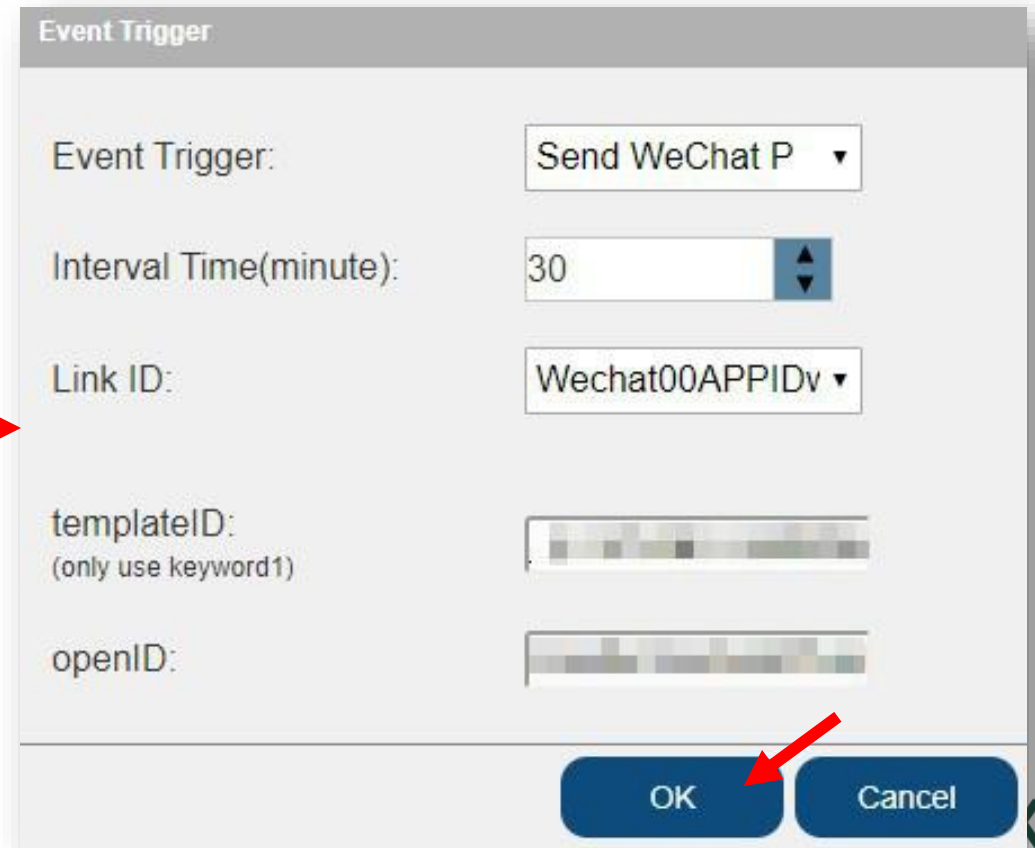
# Advanced – Event Trigger – WeCaht

- Event Trigger

3. Set Event Trigger – WeChat\_P: Click **Add** → Event Trigger: **Send WeChat P**, Set **Interval Time**, Link ID: **WeChat link**, Enter **template ID**, Enter **open ID** → Click **OK**  
This function will only use keyword1 in template.



The dialog box titled "Event Trigger" has four tabs: "Event Trigger", "Parameter", "Interval Time", and "Activate". The "Event Trigger" tab is selected. Inside this tab, there is a blue button labeled "ADD". A red arrow originates from the "ADD" button and points towards the "Event Trigger" dropdown menu in the adjacent dialog box.



The dialog box titled "Event Trigger" contains the following configuration fields:

- Event Trigger: Send WeChat P (dropdown menu)
- Interval Time(minute): 30 (spinner box)
- Link ID: Wechat00APPIDv (dropdown menu)
- templateID: (only use keyword1) (text input field)
- openID: (text input field)

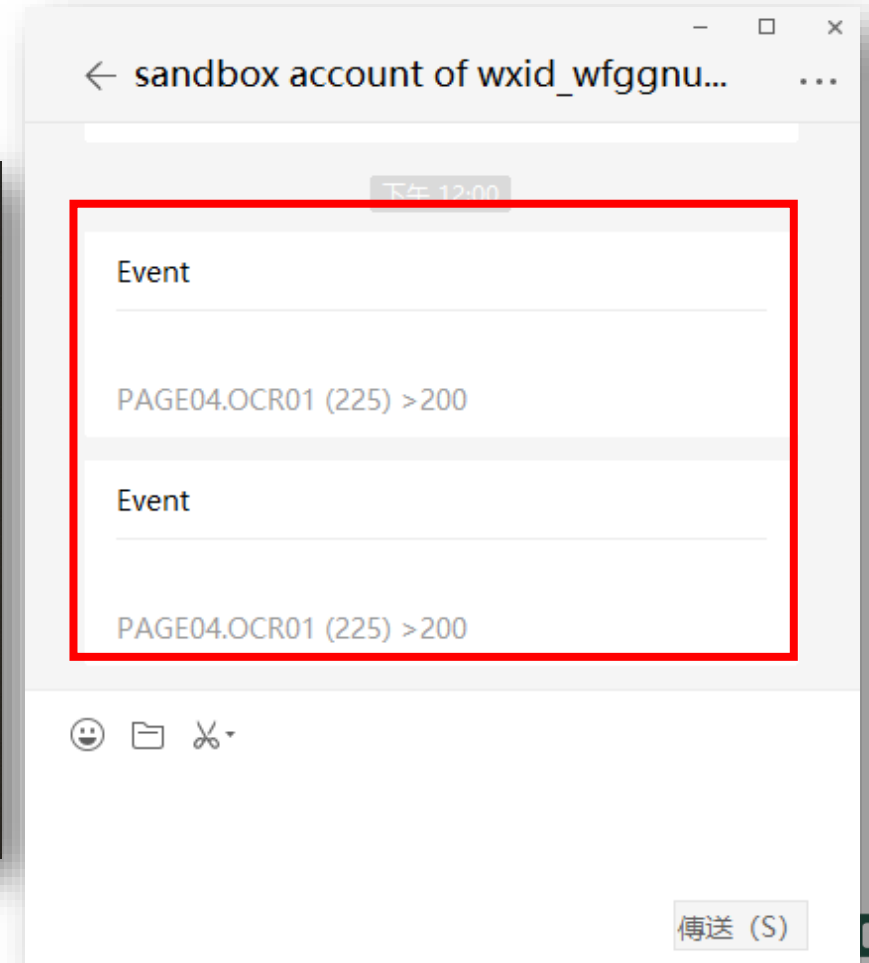
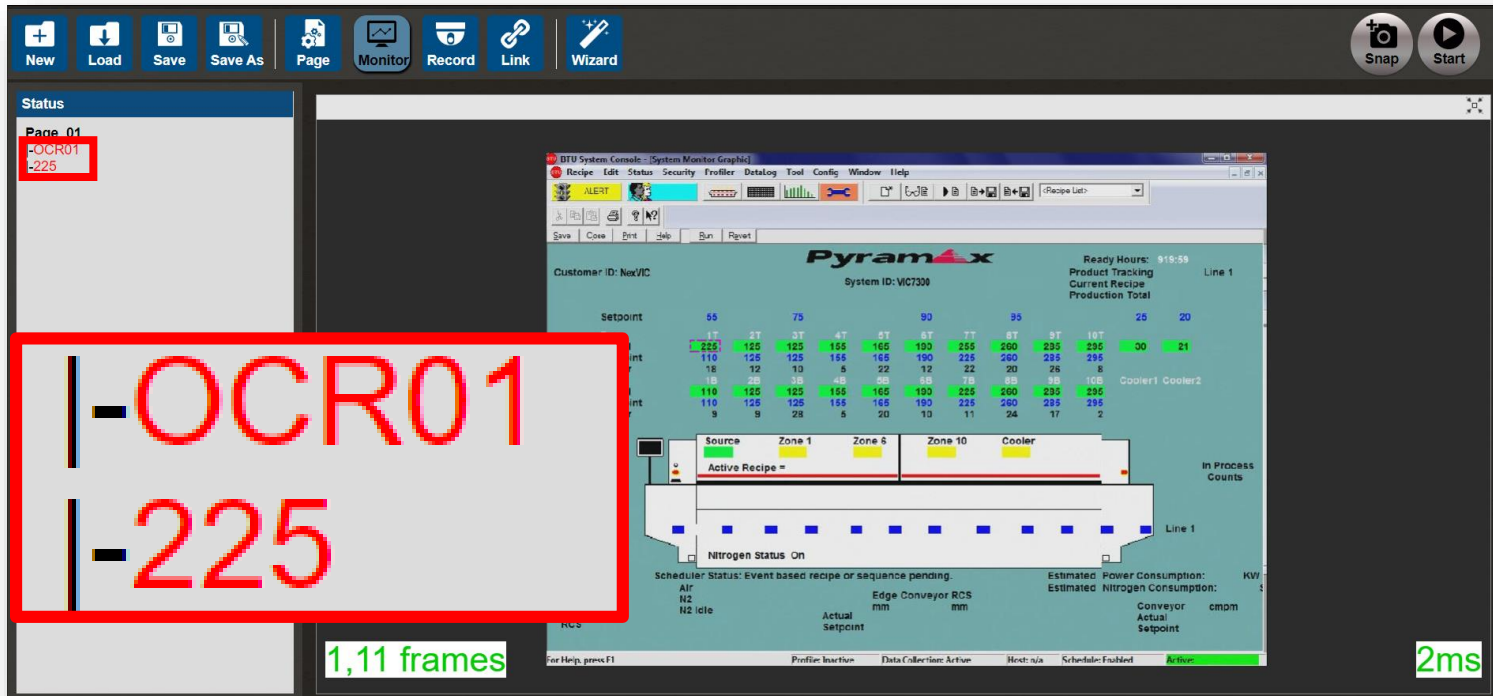
At the bottom right, there are two buttons: "OK" and "Cancel". A red arrow points to the "OK" button.

# Advanced – Event Trigger – WeChat

- Event Trigger

4. **Simulation**: Enter **Monitor** page → Click **Snap** → Check whether there is a new message.

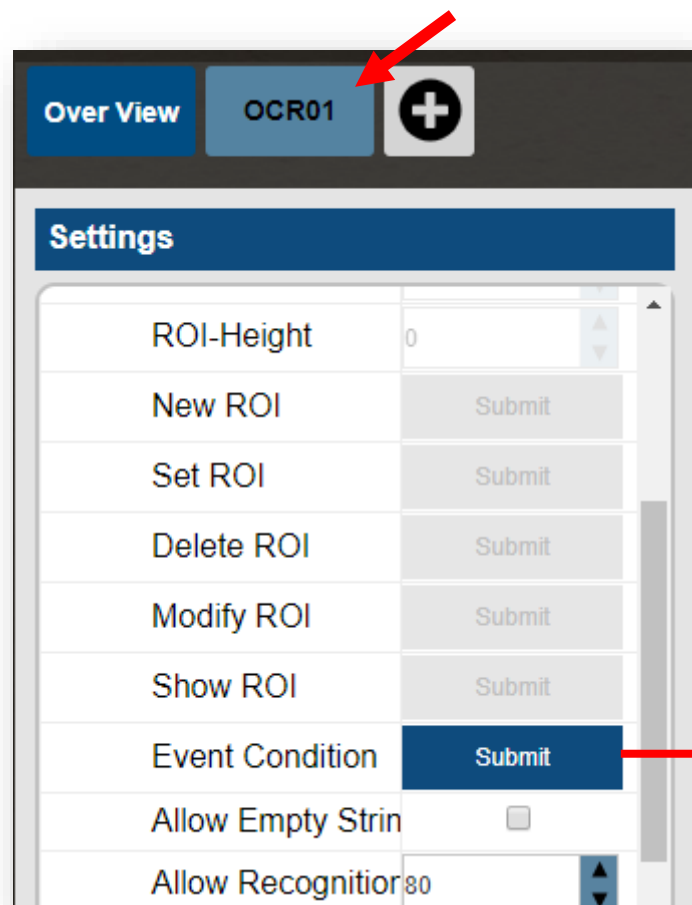
When the condition is met, the item will be shown in red text



# Advanced – Event Trigger – System Log

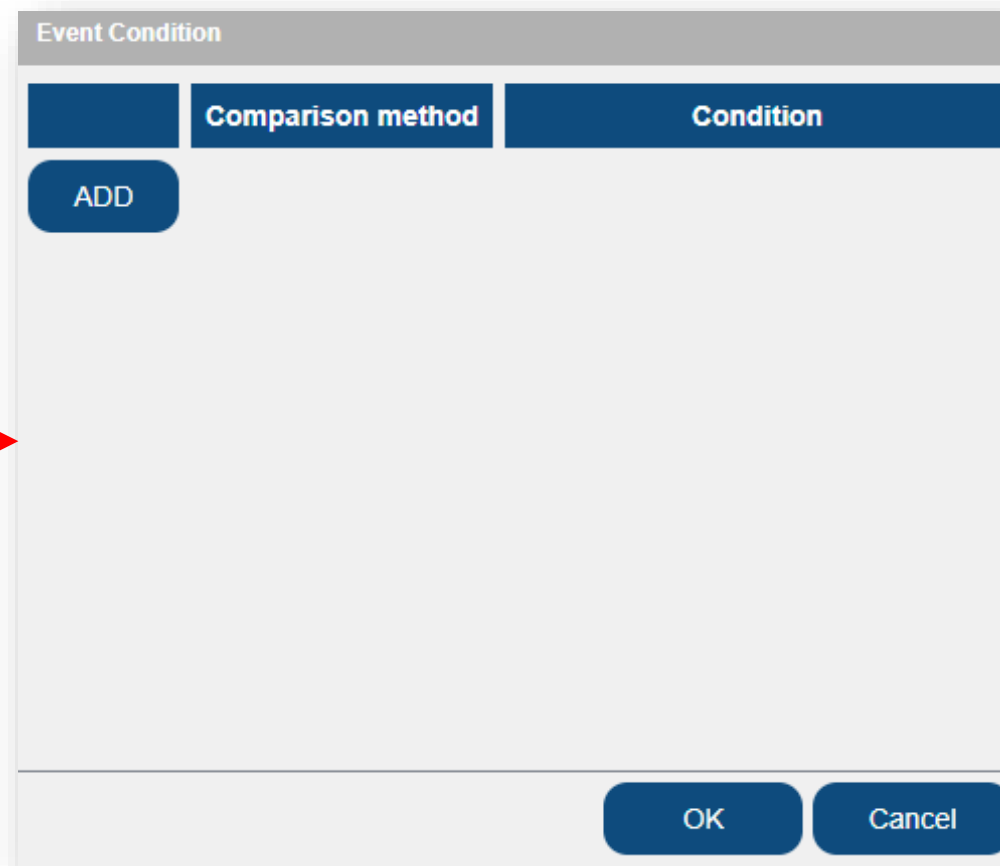
- **Event Trigger**

1. **Set Event Condition – OCR:** Click **Event Condition** → The window of **Event Condition** will show up



The screenshot shows the 'OCR01' settings window. At the top, there are tabs for 'Over View' and 'OCR01', and a plus icon. Below the tabs is a 'Settings' section with a list of options. A red arrow points to the 'Event Condition' button, which is highlighted in blue. The other buttons in the list are 'Submit'.

Settings	
ROI-Height	0
New ROI	Submit
Set ROI	Submit
Delete ROI	Submit
Modify ROI	Submit
Show ROI	Submit
Event Condition	Submit
Allow Empty Strin	<input type="checkbox"/>
Allow Recognition	80



The screenshot shows the 'Event Condition' dialog window. It has a title bar 'Event Condition' and two tabs: 'Comparison method' and 'Condition'. Below the tabs is an 'ADD' button. At the bottom, there are 'OK' and 'Cancel' buttons. A red arrow points from the 'Event Condition' button in the settings window to this dialog.

Comparison method	Condition
ADD	

# Advanced – Event Trigger – System Log

- Event Trigger

1. Set Event Condition – OCR: Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

Event Condition

	Comparison method	Condition
X	-	
ADD	> = < != =~	

OK Cancel

-: No comparison

>: Greater than

=: Equal

<: Less than

!=: Not equal

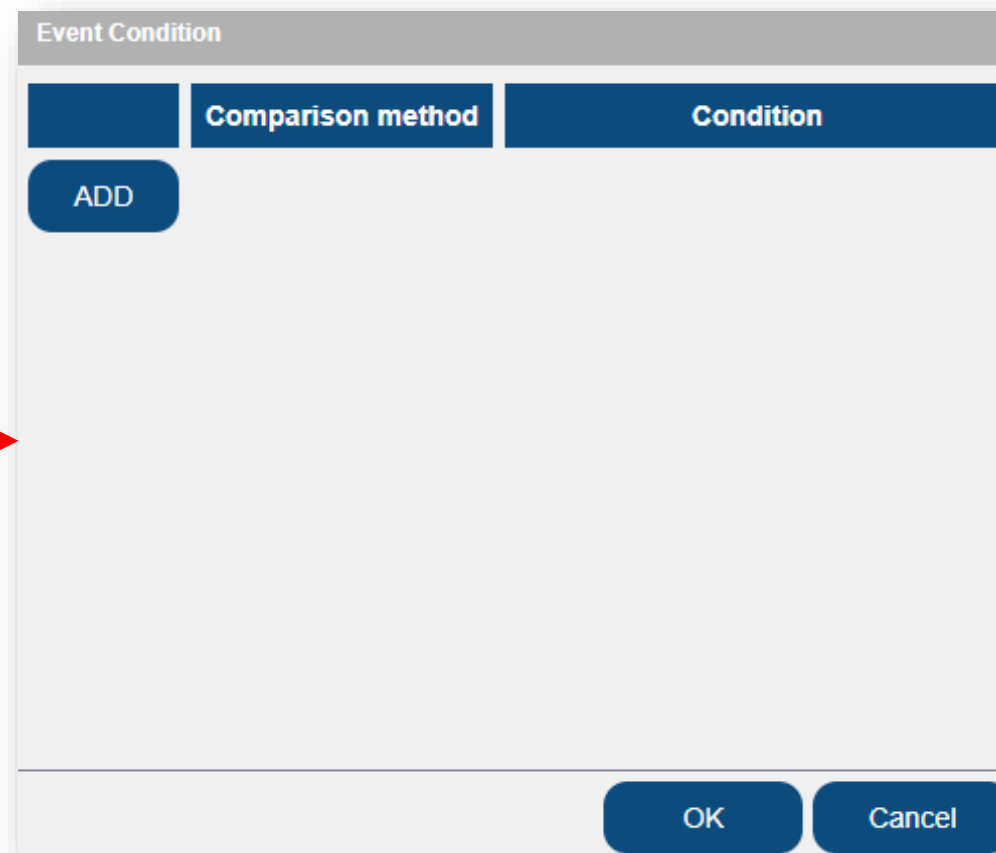
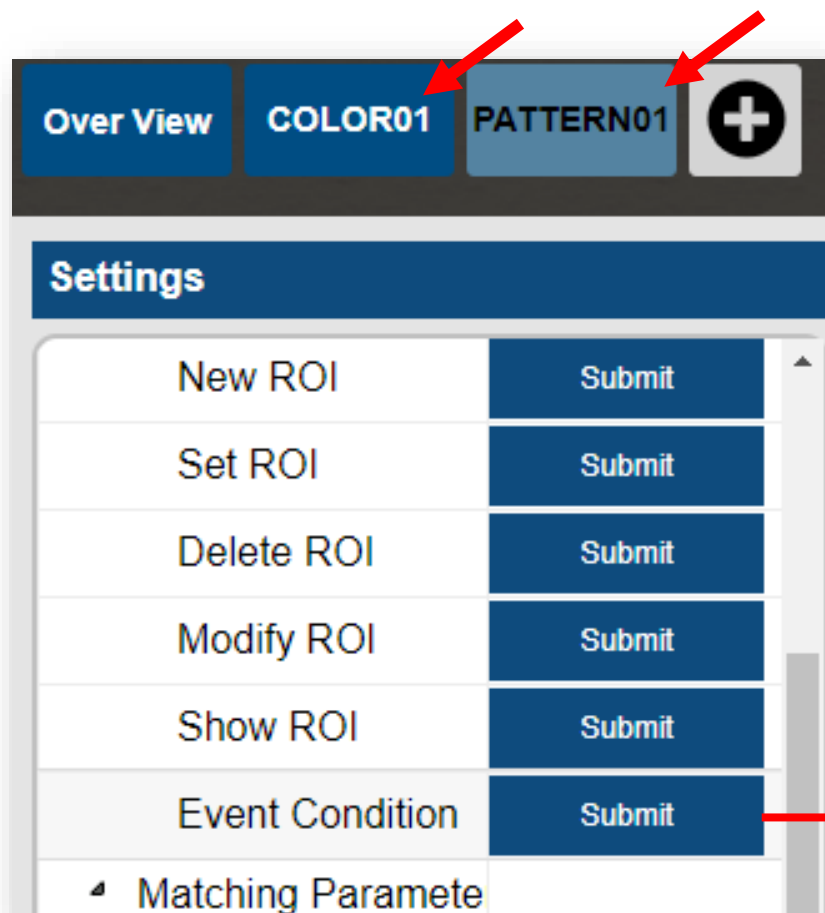
=~: Including (for String only)

-  
>  
=  
<  
!=  
=~

# Advanced – Event Trigger – System Log

- **Event Trigger**

1. **Set Event Condition – COLOR, PATTERN:** Click **Event Condition** → The window of **Event Condition** will show up



# Advanced – Event Trigger – System Log

- **Event Trigger**

1. **Set Event Condition – COLOR, PATTERN:** Click **Add** → Set **Comparison** → Set **Condition** → Click **OK**

The screenshot shows the 'Event Condition' dialog box. It has a title bar 'Event Condition'. Inside, there are two columns: 'Comparison method' and 'Condition'. Under 'Comparison method', there are buttons 'X' and 'ADD', and a dropdown menu showing options: '-', '=', '!=', and '=~'. A red arrow points to the 'ADD' button. The 'Condition' column has a red rectangular box. At the bottom, there are 'OK' and 'Cancel' buttons, with a red arrow pointing to the 'OK' button.

-: No comparison

=: Equal

!=: Not equal

=~: Including (for String only)

A red-bordered box containing a list of comparison operators: '-', '=', '!=', and '=~'. The '-' operator is highlighted with a blue background.



# Advanced – Event Trigger – System Log

- **Event Trigger**

**Example – Set Event Condition – OCR:** Set the condition of OCR01 greater than 200

The screenshot shows a dialog box titled "Event Condition". It contains a table with two columns: "Comparison method" and "Condition". The "Comparison method" column has a dropdown menu with the greater-than symbol ">" selected. The "Condition" column has a text input field containing the number "200". A red rectangle highlights the row containing the comparison method and condition. To the left of the table are two buttons: "X" and "ADD". At the bottom of the dialog box are two buttons: "OK" and "Cancel".

	Comparison method	Condition
X	>	200

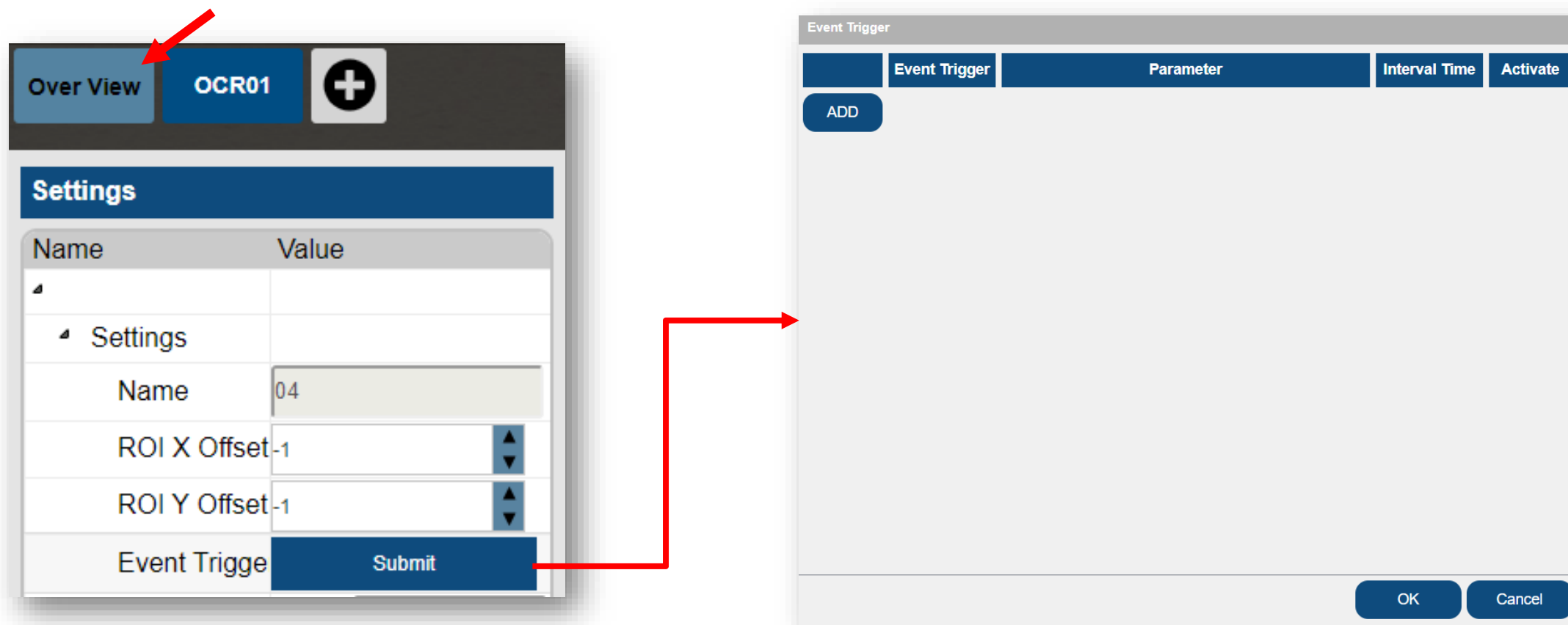
ADD

OK Cancel

# Advanced – Event Trigger – System Log

- **Event Trigger**

2. **Set Event Trigger**: Click **Event Trigger** → The window of **Event Trigger** will show up



# Advanced – Event Trigger – System Log

- **Event Trigger**

2. **Set Event Trigger**: Click **Add** → Event Trigger: **System Log**, Set **Interval Time** → Click **OK**

Event Trigger

Event Trigger	Parameter	Interval Time	Activate
---------------	-----------	---------------	----------

ADD

OK Cancel

Event Trigger

Event Trigger: System Log

Interval Time(minute): 30

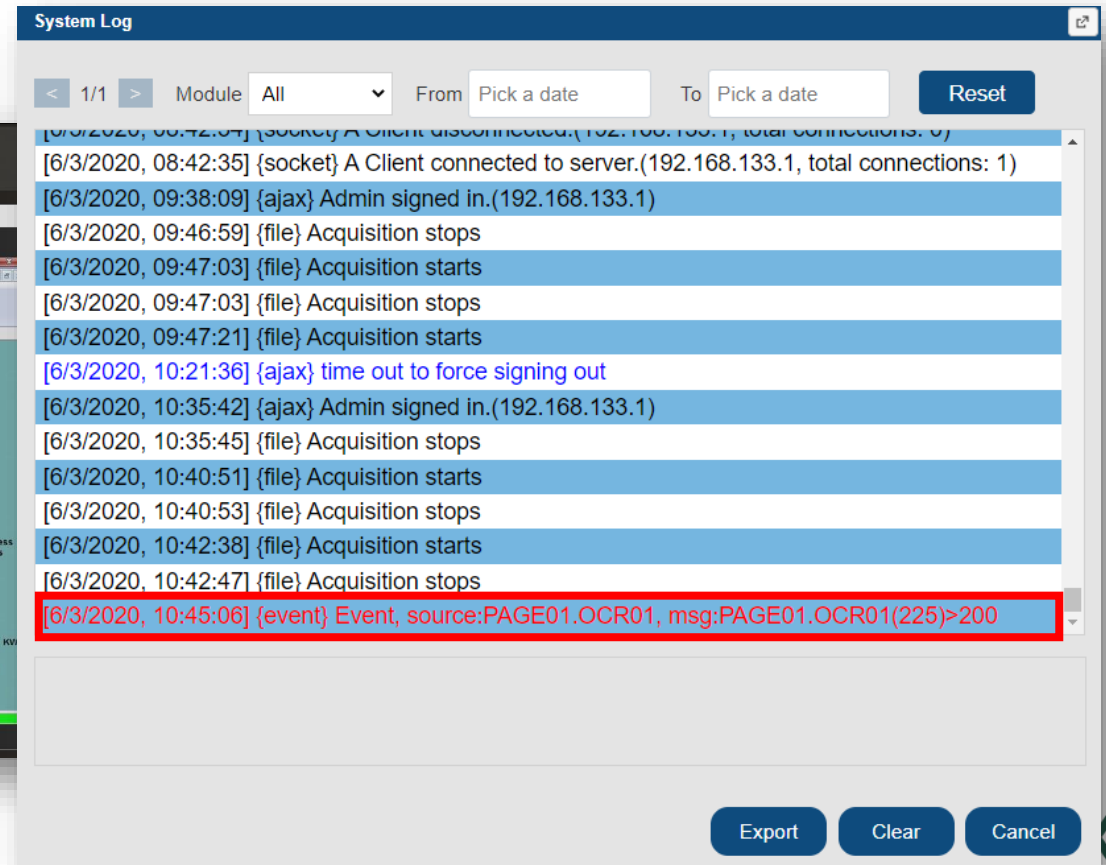
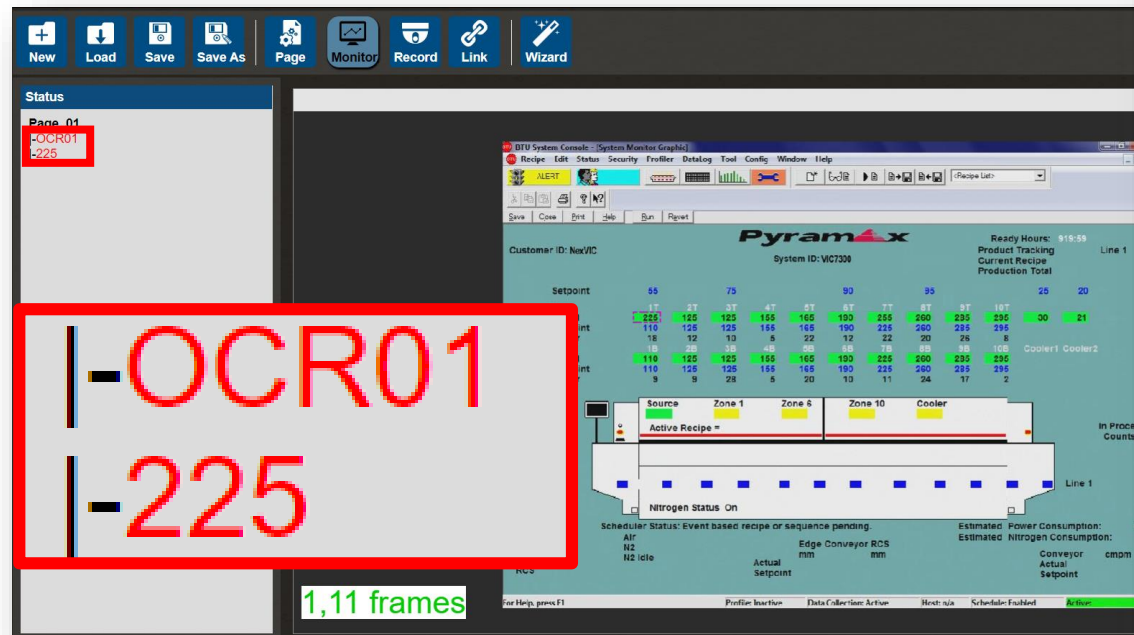
OK Cancel

# Advanced – Event Trigger – System Log

- Event Trigger

3. **Simulation**: Enter **Monitor** page → Click **Snap** → Check whether the message is recorded in Log window, when the condition is met.

When the condition is met, the item will be displayed in red text.



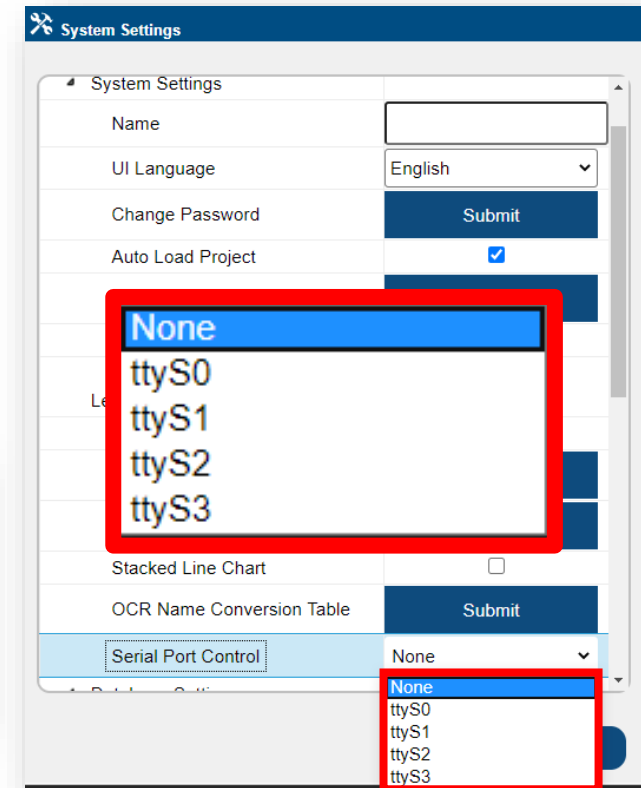
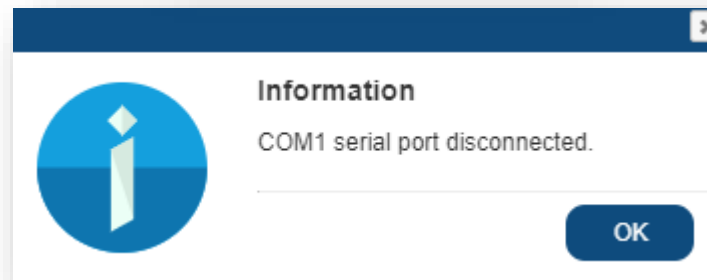
# Appendix – Serial Control



- **Serial Port Control**

The serial port can be set in System Settings. The status of serial port is based on the connection of supplied COM cable, and it is shown on the toolbar at the upper-right corner.

**If COM port is connected, project will be played, otherwise they will be paused.**

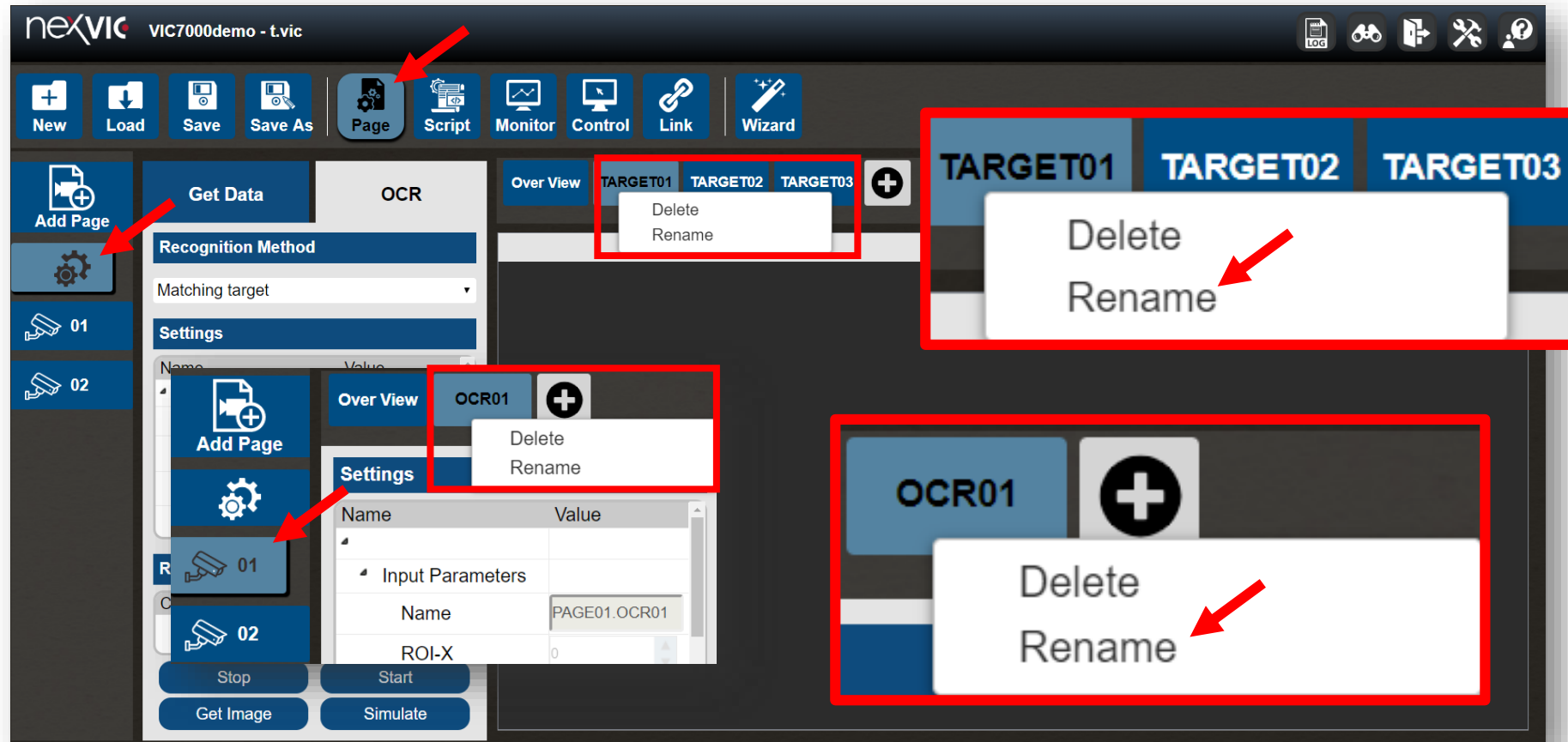


# Appendix – Rename

- Rename

1. **Rename**: Enter Recognition Config Page → Right-click **TARGET**, **TARGET\_COLOR**, **TARGET\_PATTERN**, **OCR**, **COLOR**, **PATTERN** → Select **Rename**

Here use TARGET and OCR to demonstrate this function



# Appendix – Rename

- **Rename**

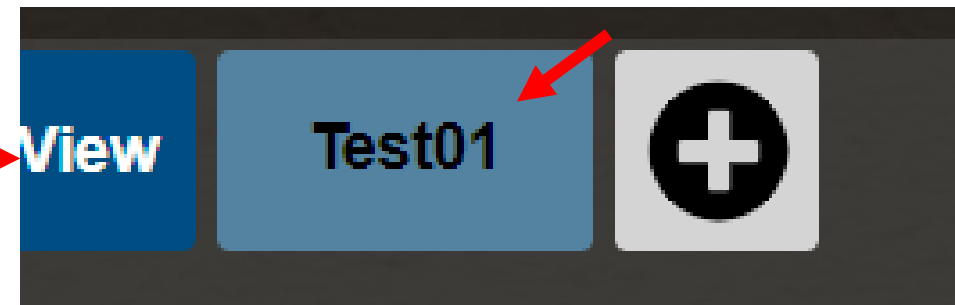
1. **Rename**: Enter the **new Name** (not repeated) → Click **OK**, then TARGET and OCR will be renamed.



A screenshot of a 'Rename' dialog box. The title bar is blue with the text 'Rename'. Below the title bar, there is a label 'Name:' followed by a text input field containing the word 'Test'. At the bottom of the dialog, there are two buttons: 'OK' and 'Cancel'. Red arrows point to the 'Test' text in the input field and the 'OK' button.



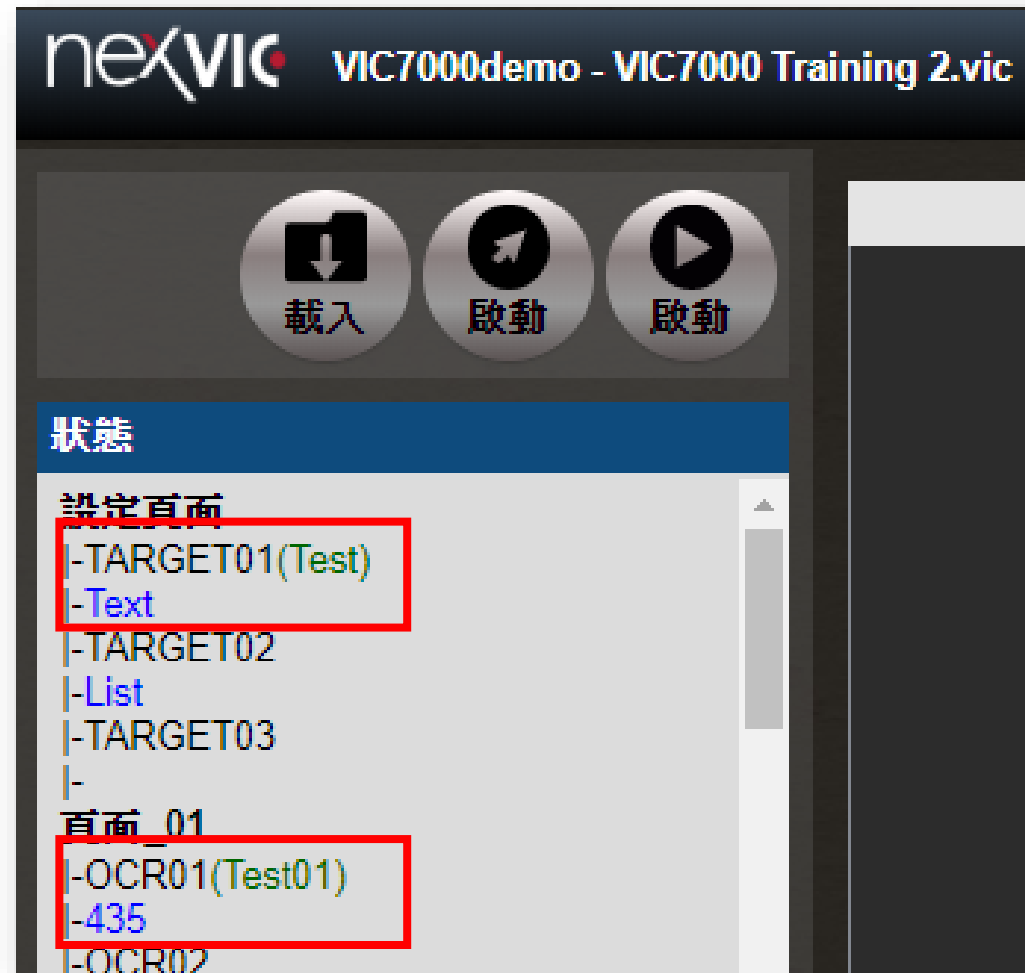
A screenshot of a 'Rename' dialog box. The title bar is blue with the text 'Rename'. Below the title bar, there is a label 'Name:' followed by a text input field containing the text 'Test01'. At the bottom of the dialog, there are two buttons: 'OK' and 'Cancel'. Red arrows point to the 'Test01' text in the input field and the 'OK' button.



# Appendix – Rename

- Rename

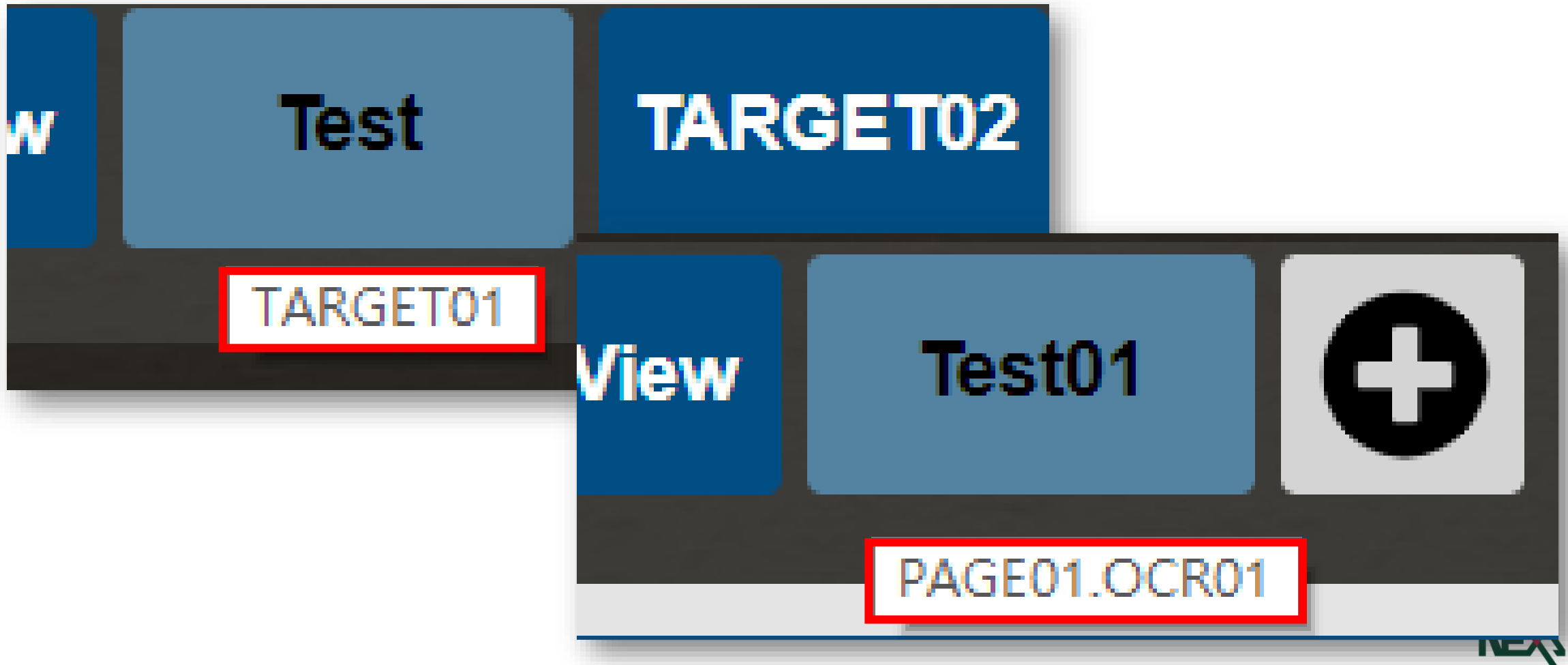
- **Check Rename:** Rename content will be denoted beside the **TARGET** and **OCR**





# Appendix – Rename

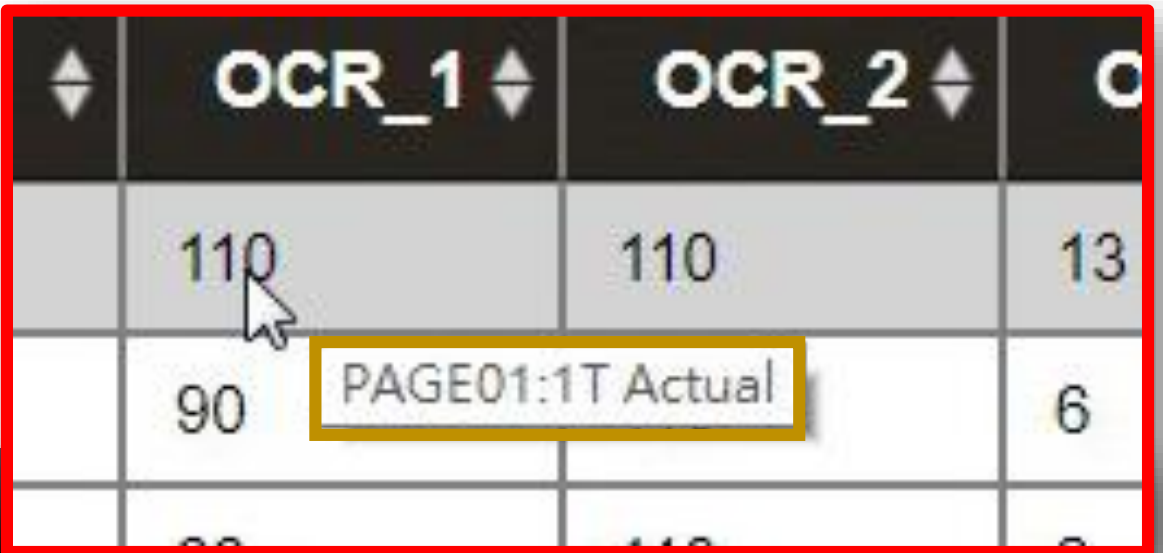
- **Rename**
  - **Check Rename:** Click the renamed TARGET and OCR, and the original name will show up



# Appendix – Rename

- **Rename**

- **Check Rename:** In Database page, select renamed TARGET & OCR, and the new name will show up



				OCR_1	OCR_2					
				110	110				13	
				90	PAGE01:1T Actual				6	

page	result	timeStamp	image	OCR_1	OCR_2	OCR_3	OCR_4	OCR_5	OCR_6	OCR_7
	Pass	2019-07-19 15:32:59.798		110	110	13	125	125	15	125
	Pass	2019-07-19 15:33:00.734		90	PAGE01:1T Actual	6	125	125	16	125
	Pass	2019-07-19 15:33:01.728		66	110	2	125	125	12	125
	Pass	2019-07-19 15:33:02.723		110	110	13	125	125	12	125
	Pass	2019-07-19 15:33:03.723		155	110	23	125	125	15	125

# Appendix – Rename

- **Rename**

- **Check Rename:** In System Settings, Click **OCR Name Conversion Table**, and the table listing renamed content will show up, the **JSON file** and can be export to **.txt**

System Settings

Name	Value
System Settings	
UI Language	English
Change Password	Submit
Auto Load Project	<input checked="" type="checkbox"/>
Reset Project	Submit
Left Mouse Button To Move Canvas	<input type="checkbox"/>
System Load	Submit
System Save	Submit
Enable Control Scheduler	<input checked="" type="checkbox"/>
OCR Name Conversion Table	Submit

OCR Name Conversion Table

PAGE01.OCR01	Test01
TARGET01	Test

t.vic\_ocr\_map (1).txt - 記事本

檔案(F) 編輯(E) 格式(O) 檢視(V) 說明(H)

```
{  
  "PAGE01.OCR01": "Test01",  
  "TARGET01": "Test"  
}
```


Export Cancel

# Appendix – Rename

- **Rename**

- **Check Rename:** Use with RESTful API, and Enter **IP/restful/ocr\_map** in URL field.

The **OCR Name Conversion** Table will show as below.



```
192.168.133.144/restful/ocr_map
```



```
{"TARGET01": "Test", "PAGE01.OCR01": "Test01"}
```

# Appendix – Rename

- **Rename**

- **Recover:** Enter Recognition Config Page → Right-click renamed **TARGET** and **OCR** →

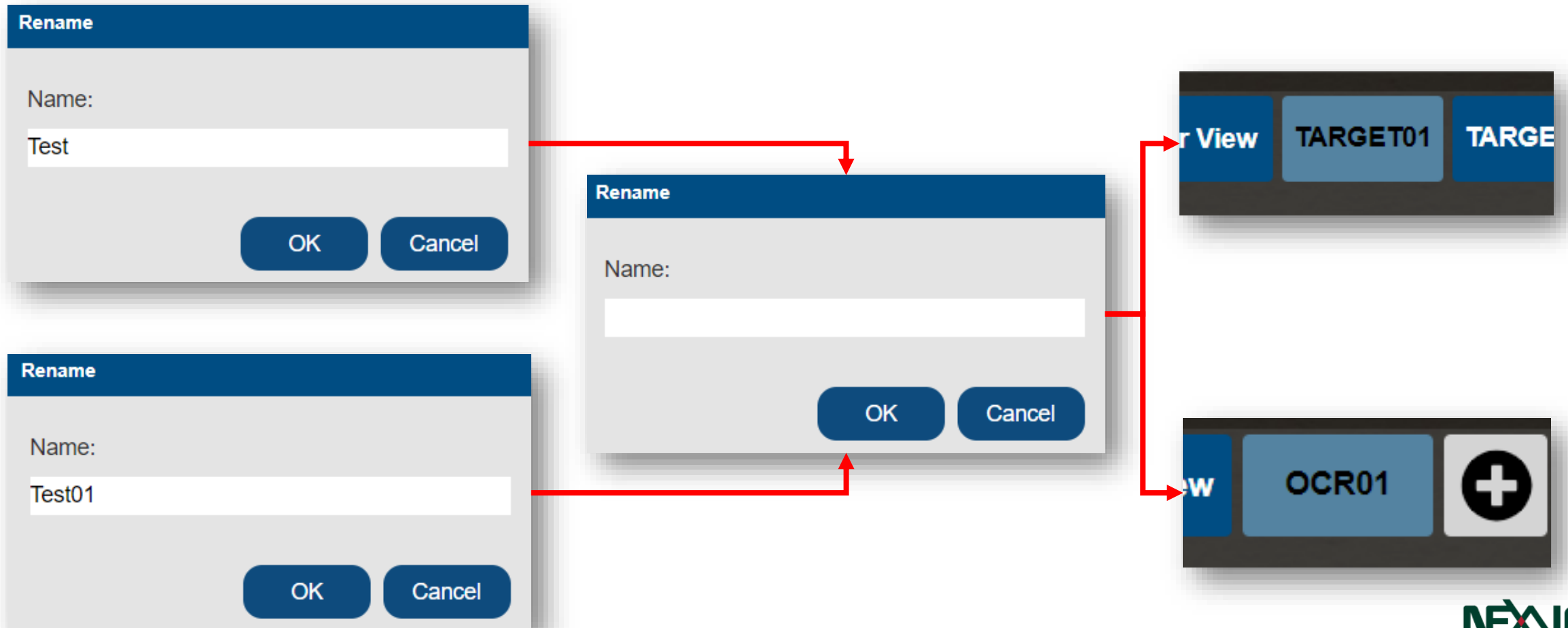
Select **Rename**

The screenshot displays the nexVIC software interface with the title bar 'nexVIC VIC7000demo - t.vic'. The top toolbar includes buttons for New, Load, Save, Save As, Page, Script, Monitor, Control, Link, and Wizard. The left sidebar features 'Add Page', a gear icon, and two camera icons labeled 01 and 02. The main workspace is divided into sections: 'Get Data' with a 'Recognition Method' dropdown set to 'Matching target'; 'Settings' with a table for 'Input Parameters' (Name: PAGE01.OCR01, ROI-X: 0); and 'Over View' showing 'TARGET01', 'TARGET02', and 'TARGET03'. Three red boxes highlight the renaming process: 1) The 'Page' button in the toolbar and the gear icon in the sidebar. 2) A right-click context menu over 'TARGET02' showing 'Delete' and 'Rename' options. 3) A right-click context menu over 'OCR01' in the 'Over View' section, also showing 'Delete' and 'Rename' options. Red arrows indicate the flow from the toolbar/sidebar to the context menus.

# Appendix – Rename

- **Rename**

- **Recover:** **Empty** new Name → Click **OK**, and TARGET & OCR will be recovered to default name.



# NEXIOT

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