

## Tech Note 64

# Integrating Hanwha WAVE NVR with NetBox

This tech note provides instructions for integrating a Hanwha WAVE NVR with a NetBox™ system. The section below lists the hardware, software, and licenses required for the integration. In addition to these, you will need the following:

- Direct access to the Hanwha WAVE NVR in order to install the required OVID service.
- A login username and password that allows access to the controller with setup privileges.

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## Prerequisites

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Contact LenelS2 Customer Service at [Orderentry.lenels2@carrier.com](mailto:Orderentry.lenels2@carrier.com) for assistance with any of these prerequisites.

The End User needs the information below to complete the integration:

- NetBox version 5.6.2 and higher
- Hanwha WAVE version tested: 5.0.0.35745
- Hanwha OVID service is required
- Part # for Integration License: S2-VMS-B-HW (includes 4 cameras)
- Part # for additional camera licenses: S2-VMS-C-HW

## Requirements

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This section describes the hardware and software requirements.

### Hardware Requirements

The following are the hardware requirements:

- NetBox 5.6.2 running software version 5.6.2 or higher
- A Windows-based Hanwha WAVE NVR v5.0 (version tested 5.0.0.35745)

### Software Requirements

The following are the software requirements:

- NetBox 5.6.2 or higher licensed for VMS
  - LenelS2 VMS Licensing: In new systems, a VMS License File is already enabled. To verify VMS Licensing select **Command Palette : About** and look for the line **VMS** in the list of licenses.
  - To order the Video Management System feature for an existing system, select **Command Palette : About**, create a screen capture of the About page, and email the screen capture to [Orderentry.lenels2@carrier.com](mailto:Orderentry.lenels2@carrier.com), along with a purchase order for the VMS product you want to add.

LenelS2 will send you a Product Key and Activation key that are tied to the system license identifier. Once you receive these keys, select **Configuration : Site Settings : Software License**, enter the keys into the appropriate boxes, read and accept the terms of the license agreement, and then click **Apply**.

- Part # for the Integration License: S2-VMS-B-HW (includes 4 cameras)
- Part # for additional camera licenses: S2-VMS-C-HW
- Hanwha WAVE NVR v5.0 (version tested 5.0.0.35745)
- Hanwha WAVE OVID Service v0.8.0.0
- Hanwha WAVE NVR configured with cameras, a user account for integration purposes, and desired recording settings (motion, continuous, etc.)

## Installing the Hanwha WAVE OVID Service

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The Hanwha WAVE OVID service provides a connection between the Hanwha WAVE NVR and NetBox. The OVID service must be installed and running on the Hanwha NVR. The OVID service is available for download from Support Central (Integrator Portal web site at: <https://portal.lenels2.com/support/3rd-party-video.aspx/>). Install instructions are included with the OVID download.

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**Note:**

The only changes that need to be made to the Hanwha WAVE OVID Configuration are the **WAVE VMS Server** settings. The **service**, **Config**, and **Action** settings are to remain as is. Changing them will result in the two systems not being able to connect to each other.

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The screenshot shows the 'Hanwha WAVE OVID Configuration Editor' window. It contains the following fields and values:

- Service:** Port: 3010
- Config:** Username: s2v1adm, Password: s24configure
- Action:** Username: s2v1user, Password: s24event
- Wave VMS Server:** Address: (empty), Port: 7001, Username: (empty), Password: (empty)

A 'Save' button is located at the bottom right of the window.

Enter the following in the fields in the Wave VMS Server section:

- Address - The IP address of the WAVE NVR
- Port - The web port set for WAVE NVR (The default is 7001)
- Username - The username defined in Hanwha NVR for use by NetBox
- Password - The password of above user to connect the NetBox

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**Note:**

The user account configured in Hanwha WAVE cannot have permissions for more cameras than both the licenses for WAVE NVR and NetBox. If the check connection on the NetBox is successful, cameras are imported into NetBox, but no video is displaying, you may have assigned more cameras to the user defined in WAVE than the licenses for WAVE and NetBox.

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## Completing the Windows Firewall Setup

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Once the Hanwha WAVE OVID Service is installed, you may need to allow the service through a local firewall in order to connect with NetBox.

To complete the Windows Firewall setup:

1. In the Windows Control Panel, open **Windows Firewall**.
2. In the left pane, click **Allow a program or feature through Windows Firewall**.
3. Make sure the Hanwha WAVE OVID Service is selected in the list of allowed programs and features.

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**Important:**

You might need assistance from your IT department to configure your firewall to allow access to port 3010 for the Hanwha WAVE OVID Service, and access to port 80 (or another port as defined during setup) for the Hanwha WAVE server.

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# Connecting the NetBox to the Hanwha WAVE NVR

To point the NetBox to the Milestone NVR:

1. In the NetBox web interface, select **Configuration : Video : NVRs : Configure Hanwha WAVE NVR**.



2. Enter the **IP address**, **Port**, **Username** and **Password** from the OVIS setup into their respective fields.

**Configure Hanwha WAVE NVR**

Name:  (or [cancel](#))

Hanwha WAVE Server IP Address:

Hanwha WAVE Server Port:


Hanwha WAVE Server Username:

Hanwha WAVE Server Password:(defaults to 'Netbox')

\* = required field

3. Click **Check Connection** and wait for verification that the NetBox was able to access the NVR.
4. In the Discovered Information section, click the **List VMS Cameras** link and verify that the list of cameras is correct and complete. These cameras were set up during the configuration of the Hanwha WAVE NVR through its own web interface or client.

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 **Configure Hanwha WAVE NVR**

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**Check Connection**

Name:    
(or [add](#) [rename](#))

Hanwha WAVE Server IP Address:

Hanwha WAVE Server Port:

Modify Username/Password

Hanwha WAVE Server Username:

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**Discovered Information**

Serial Number: bae9a429-6f86-d4cc-0c34-265c683ca4d0  
 Vendor: Hanwha  
 Model: Wisenet WAVE VMS  
 Camera Count: 4  
[List NVR Cameras](#)

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**Settings**

Public IP Address:

Public HTTP port:

Combine VMD events arriving within seconds:

**Note:**

All camera configuration changes made within the Hanwha WAVE NVR must be followed by a Check Connection on the NetBox configuration page. This will ensure the changes are communicated to the NetBox.

## Verifying Live Video from the S2 NetBox Interface

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1. Open a new browser tab and enter the following: <https://hanwhanvrip:7001/api/getNonce> where hanwhanvrip is the IP address for your Hanwha NVR.
2. Go through the process of accepting the self-signed certificate for the Hanwha NVR.
3. Once the self-signed certificate has been accepted, refresh the browser tab or window where your NetBox is viewed.
4. Select **Monitor : Monitoring Desktop** and verify live video is displayed.

**Note:**

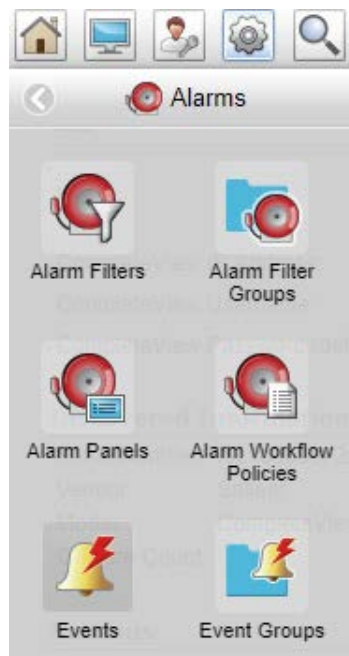
This process of verifying the self-signed certificate will need to be done on each client where live video is being viewed.

## Configuring Video Recording Events from the S2 NetBox Interface

### Note:

Recording settings such as continuous recording or record on motion must be defined within the Hanwha NVR in order for NetBox to properly execute recording events.

1. Select **Configuration : Alarms : Events**.



2. Define an event with a **Record Video** action. Be sure to select a CompleteView connected camera.

**Actions**

<p>current actions:</p> <ul style="list-style-type: none"> <li>&lt; add new &gt;</li> <li>Log Event</li> </ul>	<p>&lt; Apply changes to Action</p> <p>Delete Action</p>	<p>action details:</p> <p>Name: * Record Camera <input type="checkbox"/> Enabled</p> <p>Action: Record Video</p> <p>Priority: 10 - medium</p> <p>Threat Level Group: &lt; not applicable &gt;</p> <p>Camera: Copy Room</p> <p>Max Duration (secs): 0</p>
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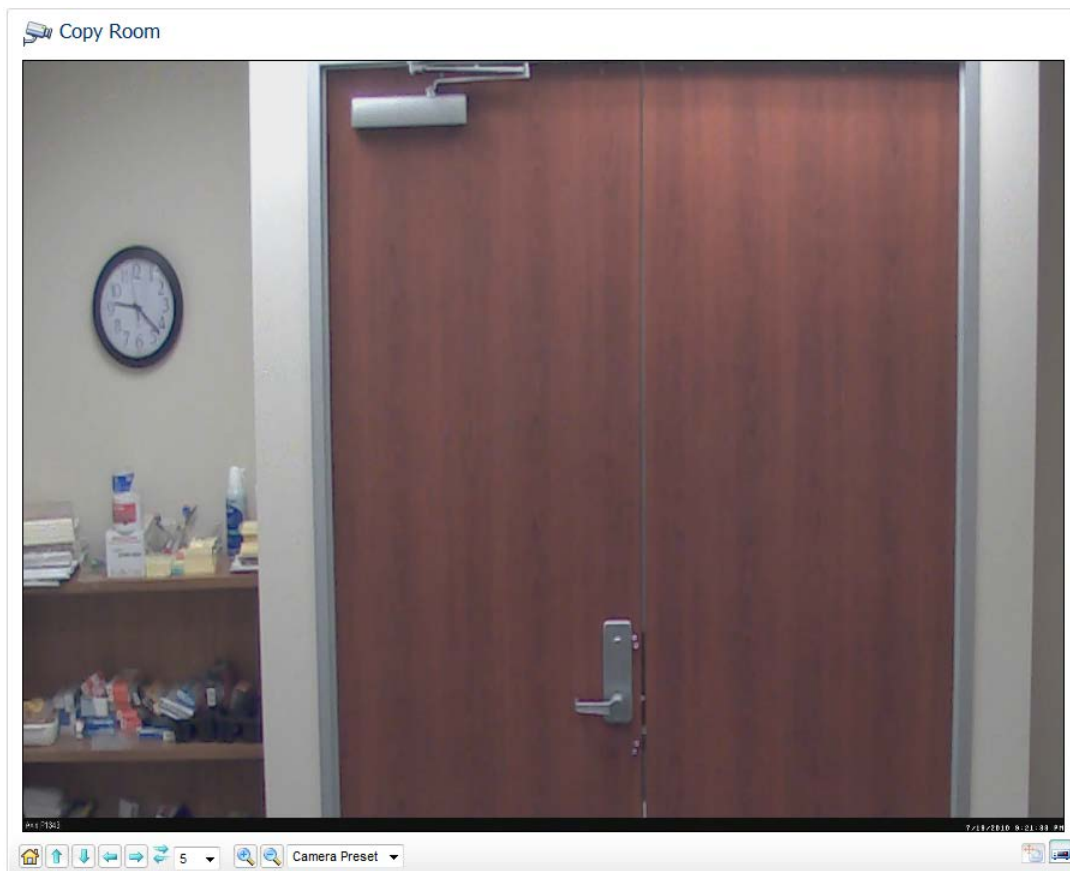
3. Assign a trigger to this record video event.
  - a. You can select **Configuration : Alarms : Inputs** and assign the event to the **Off-normal Event**.
  - b. Or you can select **Configuration : Access Control : Portals** and assign the event to the **System-wide : Held** state of a portal.

4. To test the event, select **Monitor : Monitoring Desktop** and trigger the event. (Hold the portal open or set the input into an alarm state.)
5. Verify that the event was triggered and click the video icon to view the recorded video.

## Using Live Video, Playback and Pan Tilt & Zoom Controls

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When viewing live video, controls are presented to move a PTZ capable camera. The controls will appear below the video window, as shown below.



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### Note:

If the camera loses its connection to the video server, you will see an error message in the video window. To reconnect, double-click the video window.

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# PTZ Controls

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The following describes the PTZ Controls buttons:



Toggles to live video and Pan Tilt and Zoom controls (if available).



Moves the camera to the Home, or preset 1, position.



Moves the camera up incrementally.



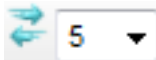
Moves the camera down incrementally.



Moves the camera left incrementally.



Moves the camera right incrementally.



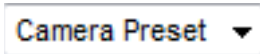
Adjusts the PTZ speed of the camera. Selecting a higher number will increase the speed.



Zoom in.



Zoom out.



Select camera preset position.



Click-In-Image control: Drag pointer around image to pan and tilt. Rotate scroll wheel to zoom in and out.

# Playback Controls

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The following describes the Playback Controls buttons:



Toggle to playback of recorded video.



Go to the beginning of the clip.



Go to the previous frame.



Pause playback.



Resume playback.



Go to the next frame.



Fast forward.



Jump back 15 seconds.

## Where to Go for More Information

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Any NetBox ecosystem documentation you might need can be downloaded from Support Central. You can access documentation on Support Central by following the instructions in the article *How to Access NetBox Ecosystem Documentation* available on the LenelS2 Knowledge Base.

<https://kb.lenels2.com/home/how-to-access-netbox-ecosystem-documentation>.

The following documentation is also available on the Integrator Portal:

- *LenelS2 NetBox Hardware Installation Guide* (#NNEQ-HW-nn)
- *LenelS2 NetBox Enterprise Hardware Installation Guide* (#EN-HW-SP-nn)
- *LenelS2 NetBox Initial Software Setup Guide* (#NB-SS-nn)

In each document number, nn refers to the latest revision.