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DIGITAL WATCHDOG I-View Now Spectrum Video Recorder-Video Management System Instruction Manual

Digital Watchdog

I-VIEW NOW

**Spectrum
Installation Manual
November 11, 2021 v1.0**

DW spectrum PVMS
Complete Scalable Video Management

Contents

Introduction

Once the Network Video Recorder/Video Management System (NVR/VMS) has been set up it is ready to be tested with I-View Now.

The following illustration shows the path of two message flows comprising a typical "Video Verification" scenario: 1-3 – An onsite alarm 'event' causes a Simple Mail Transfer Protocol (SMTP) message to be sent to the I-View Now system. The alarm event is usually the result of a simple contact closure wired into the back panel of the NVR/VMS. 4, 5 – The resulting message path I-View Now initiates upon receipt of the SMTP message to retrieve the 'pre' and 'post-alarm video associated with the alarm event. The number of pre and post-seconds can vary but it's usually not less than 3 and normally about 10 on either side of the alarm condition that initiates the sequence.

The user can view one or more consecutive alarm event 'clips' as they arrive from the I-View Now portal via a cell phone, or a PC or tablet device's browser. With each clip is the ability to see one or more "Live Views" for various cameras associated with the NVR/VMS that generated the SMTP alarm.
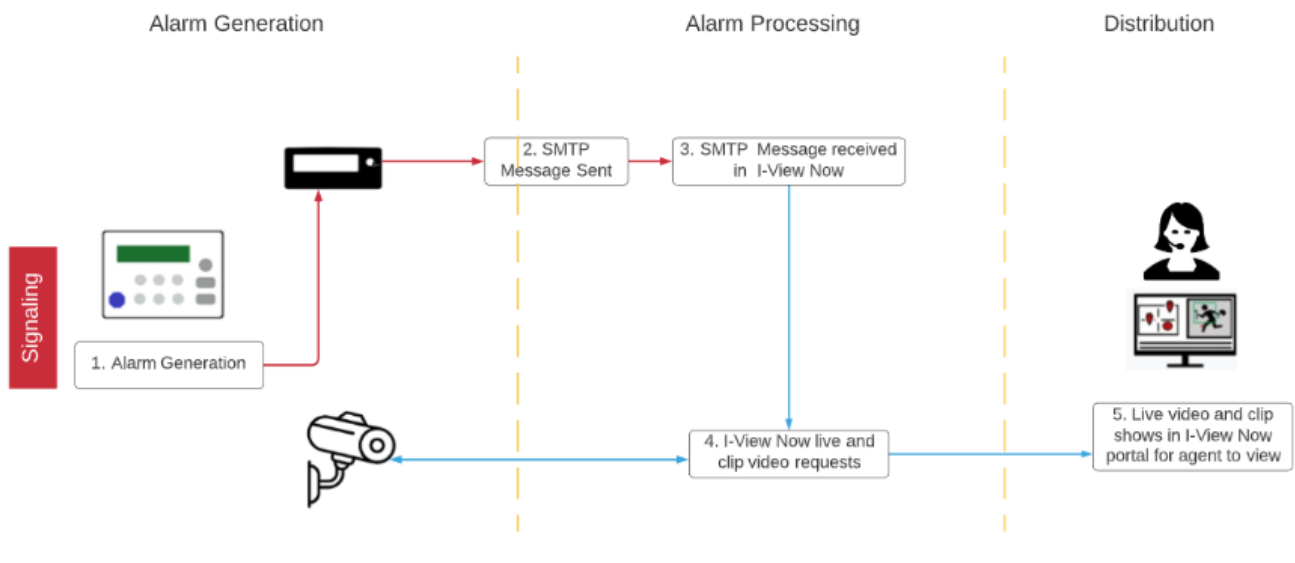
Alarm Path Workflow Example

Figure 1

Workflow

The following steps describe a high-level workflow to be followed in order to properly configure and install a Digital

Watchdog – Spectrum system to work with I-View Now. Subsequent sections will provide more detail on each step outlined here.

1. Portal Setup: Create site and device in the I-ViewNow portal and get an auto-generated device identifier from the portal.
2. Network Setup: Configure the DVR/NVR/VMS and router/firewall at the site so the DVR/NVR/VMS can connect to the Internet. Router/firewall instructions will vary by location, manufacturer and site LAN configuration. In addition, data from this step needs to be input into the I-viewnow.com portal, such as the External IP Address for the site, as well as the "Client Port". These are necessary so that the I-View Now portal can gain access to the NVR/VMS for "Live Views" and retrieving video "Clips" associated with alarm events. Finally, a static IP must be available for the DVR/NVR/VMS on site which the router will send I-View Now requests to as well as services on specific ports.
3. TCP Port: The TCP port, which has a default of 7001, must be forwarded from the router/firewall's external interface to the DVR's static internal address. In the I-View Now Portal, the TCP Port should be set as the TCP/IP port.
4. Configure SMTP settings: This will be used to communicate alerts and alarms to I-View Now. The SMTP server and SMTP ID provided on the "Installer Data" Worksheet obtained from the I-viewnow.com portal is necessary for this step.
5. Camera Setup: The DVR/NVR/VMS can be set to record by schedule or by events. Event recording from alarm inputs is the recommended approach for I-View Now although other modes, such as motion detection, are possible with some caveats. These are described in more detail in this section.
6. User Setup: In the NVR/VMS please create a user account that has a unique password. I-View Now will be using this password to log into the device programmatically for 'Live View' and 'Clip' retrieval and therefore must have the appropriate permissions to do such.
7. Event Setup: The technician will configure event settings in the DW spectrum client to perform two actions:
    1. Trigger recording on all connected cameras
    2. Send SMTP (email) alerts to I-View Now when an alarm event occurs
    PLEASE NOTE THE, EVENTS (soft triggers) MUST BE CONFIGURED IN A SPECIFIC WAY TO WORK WITH I-VIEW NOW SERVICE WHICH IS DESCRIBED BELOW. PLEASE SEE SECTIONS:
8. Configure I-View Now Entry Delay: Entry delay is configured through the I-View Now portal.
9. Test: Here you will test the individual inputs on the DVR/NVR/VMS as they are connected to your alarm panel relays or other input devices. It is recommended that you test all inputs for functionality and to ensure the proper workflow is configured within the I-Viewnow.com portal.
10. Troubleshooting: This section is provided to help the technician troubleshoot common problems encountered while installing this particular type of NVR/VMS.

Creating the Device in the I-View Now Portal

In the sites section of the I-ViewNow portal click the create site button.
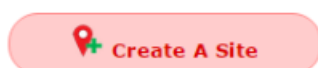
Proceed by filling out the appropriate site information and pressing the Create Site button at the bottom of the page.

Sites Add a Site

User Full Name * :		Required
User E-mail * :		Required
Confirm User E-mail * :		Required
User Cell Phone :		
User Cell Provider :	Choose One...	
Site Name * :		Required
Site Zip Code :		
Timezone * :	Choose a time zone...	
Default Notification Language * :	English	
Central Station Account Number * :		Required
Dealer * :	Choose Dealer...	
Branch :		
Central Station * :	Choose dealer to get central stations...	
Clip Retention Length :	Indefinite	
Address :		

Then select the appropriate signaling device

Relay / Standalone   + Add Signal Path

- Relay / Standalone
- ADT Pulse Pulse-Enabled Alarm Panel
- Avigilon Webhook
- Bosch Receiver
- DMP (Beta) Panel
- Honeywell AlarmNet
- I-View Now MasterMind Module
- IPDatatel IPDatatel

Then add the appropriate DVR/NVR/VMS and press confirm

+ Add New Video Device

Name

DigitalWatchdog   Spectrum   ✓ Confirm   ⊘ Cancel

- Choose Make...
- Arlo
- Avigilon
- Bosch
- Dahua
- DigitalWatchdog
- Eagle Eye

Once the device has been added, press the edit button next to the device. It will take you to the device configuration page. There you will find a Device Identifier like the one below. Make note of this address, it will be needed later while setting up users and smtp server settings.

DigitalWatchdog Spectrum

Device Name :	DigitalWatchdog Spectrum	
Device Identifier (SMTP/E-Mail Address) * :	2rjw4jn7ap4xjiah@ivnview.com	
Device IP Address / Hostname :		Test Settings
Device Username :	*****	⌕

Installation Worksheet

The I-View Now Portal Installation Worksheet is created after entering the DVR/NVR/VMS make and model into the system. A portion of an example worksheet is printed below. This sheet should be generated from the system before attempting to set up the site for integration with I-View Now as it enables setup of the DVR/NVR/VMS onsite login and password as well as the means to send SMTP messages back to the I-View Now server. There is a place on the form for recording the Location IP Address which is the external IP address used for the router at the site facing the Internet. In addition, the ports on the external router that will be forwarded to the DVR/NVR/VMS should be noted on this form. This information needs to be input into the I-viewnow.com system so it will know the external IP address and ports used to communicate from the site through the router at the site and onto the DVR/NVR/VMS.

Figure 2

Retrieve the IP address by asking the Customer/IT department for the IP address, or visit **http://whatismyip.org** while on-site for a possible correct address; however, verify with the IT department that the IP address discovered is valid to use as a target from the I-View Now servers. The IT Site Administration must enable port forwarding from their router/firewalls to the port address.

Default NVR Login

Using the DW Spectrum Client, connect to the spectrum server.
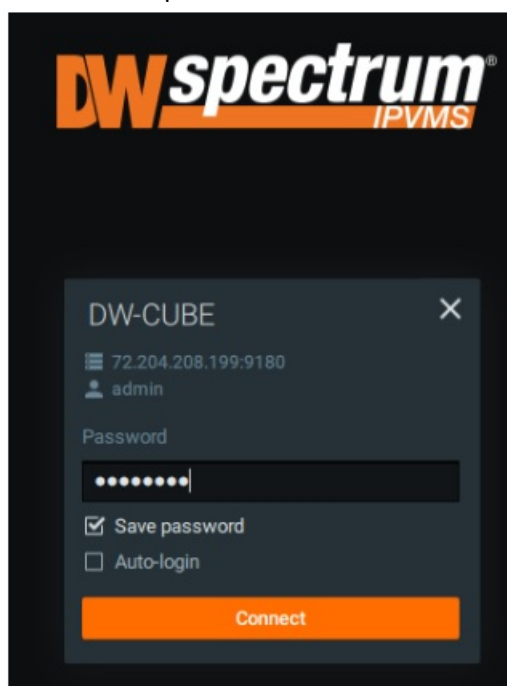
Default User: admin
Default Password: admin
Once logged in, you should see a display like below

Network Configuration

After logging into the device for the first time and setting the proper login and password, the first setting that should be changed is the IP address. The DVR requires a static internal IP address at the site behind the router/firewalls. This must be done in the host operating system running the Spectrum software. Once a static IP is set, you will need to reconnect using the new IP address. In addition, the Digital Watchdog server port will have to be forwarded to it from the firewall/router on site. Be sure to write the installation note on the external IP address representing the Internet-facing location where the DW Spectrum device is installed (Location IP Address). This value is typically the IP address of the router facing the Internet for the site. In addition, the Device Port Number is vital to enable the router to 'port forward' incoming I-View Now requests to the DW Spectrum machine. The IT staff responsible for the site needs to assist you in ensuring these prerequisites are in effect in their network facilities.

IP & Port Config

- Network Type: Static
- IP, Subnet, Gateway: Site provided
- DNS: Use 8.8.8.8 / 8.8.4.4 for Primary / Secondary unless site provided
- Port: Site provided

System Settings

Access Settings
To access system settings, right-click on the Home icon in the upper left-hand corner and select System Administration.
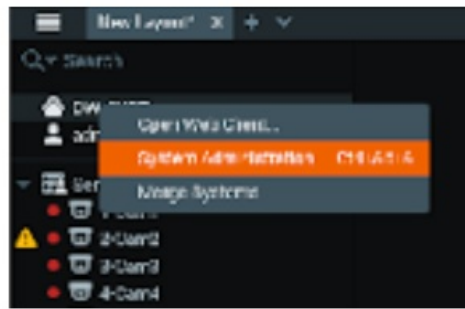
Once you have opened the administration window you can select the appropriate tab to adjust your settings.

Email Settings

From the system administration page click on the email tab to configure email. Enter the Device Id/Email address provided to you by the I-ViewNow portal in both the Email and the User field and set the SMTP server to be ivnview.com. Set the port number to 9116 and select Secure connection using SSL.
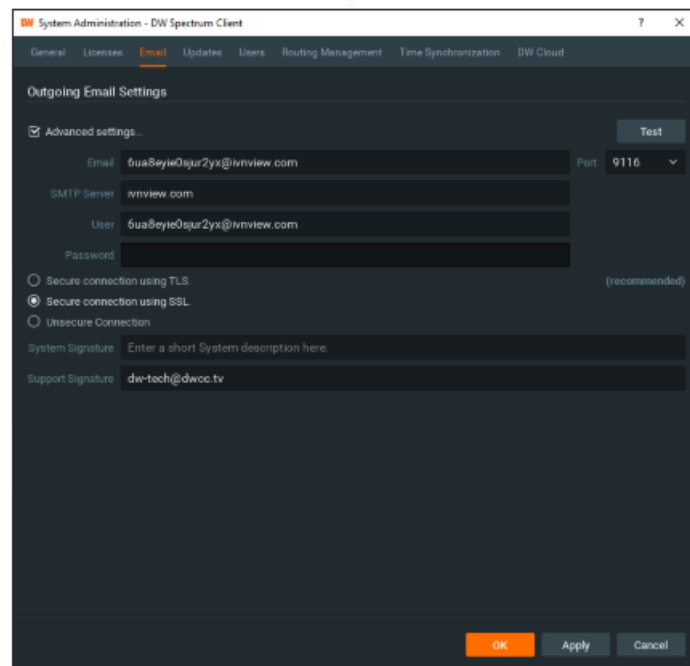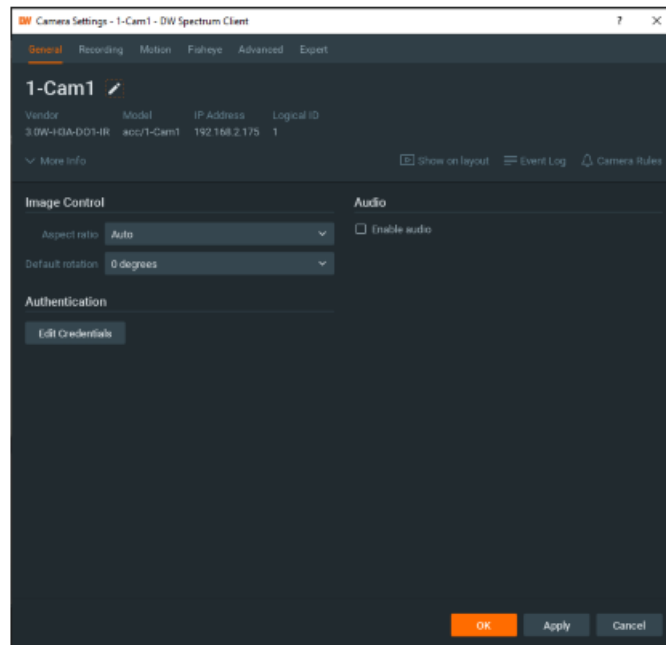

Press the test button in the upper right-hand corner to confirm the settings are correct.

Camera Configuration

Camera Configuration Access

To access the camera's configuration settings, on the left-hand side of the Spectrum client, right-click on the desired camera and select camera settings.

Recording Schedule

The recording Schedule is determined on a per-camera basis. From the camera configuration page, on the recordings tab you can see the hours of the days and days of the week you would like to continuously record that camera.
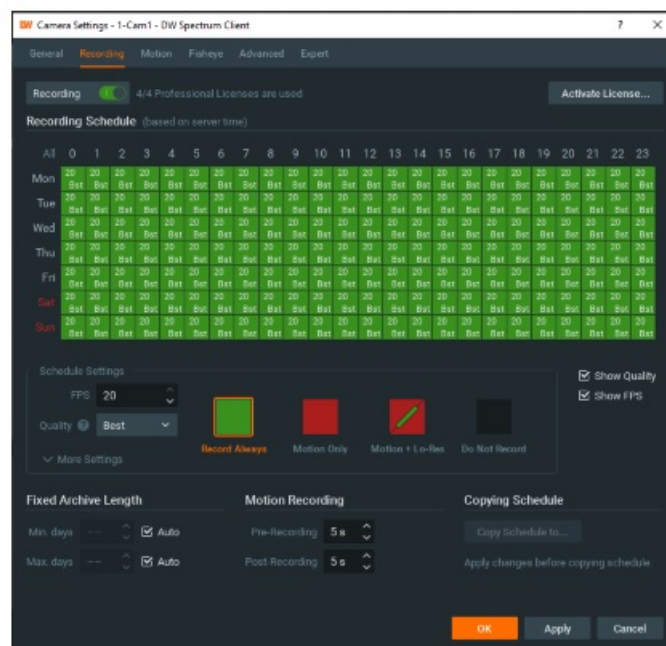
Video Quality Configuration Guidelines

With the variety of cameras available, we have determined some guidelines for the best experience.

Video Stream: We are looking for any secondary stream data first, which is generally more compressed, smaller in size, and a lower frame rate.

Video Size: CIF size or close to it

Video Frame Rate: Between 7 – 15 frames per second. With network cameras, overall network bandwidth at the site requires attention. Start with 15, then start lower with 12 and so on if the network speed is noticeably slow

Encoding: Best method is to use CBR (Constant Bit Rate) and 512k or less, with 384 preferred

Entry Delay

Entry delay is configurable in the I-View Now Dealer Portal. Log in to configure.

Users

User Setup

From the Systems Administration window click on the Users tab and click the New User button in the lower left-

hand corner.
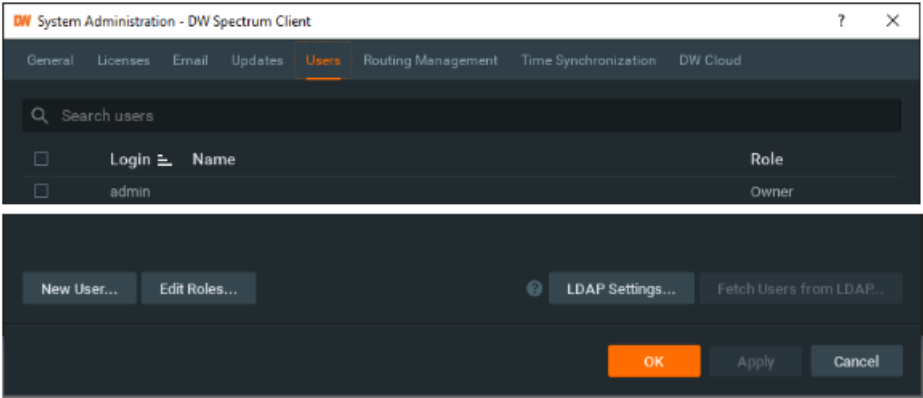
Create the new user with the email address provided to you, select Viewer as the role and press OK.
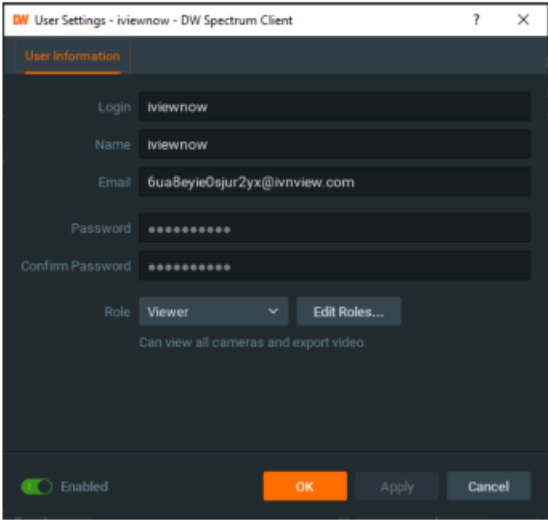
Events

Event Management
From the Systems Administration window click on the general tab and select Event Rules.
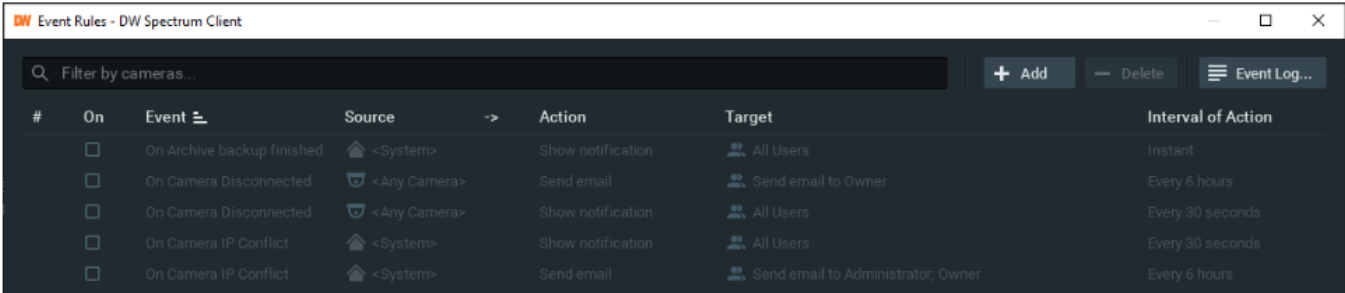
Event Notification
Click on the Add button in the upper left-hand corner to create a new event rule using the settings below. The "to" field in the Action section is the new user that was set up previously, then press apply.

Event Recording

You will also need to configure an additional event rule to start recording. Create a new event rule using the settings below. The "at" field in the Action section should be any cameras that will be configured in the I-ViewNow portal.

Disable Additional Email Events

Because all email notifications are being sent through I-ViewNow, email notifications to other destinations will not be sent. Please sort the event list by action type and for every event where the action is Send email, other than the one you just created, either uncheck the on check box or change the action to a different type.

Configure the site

Edit the site

Now that the device is configured, please return to the edit device page on the I-ViewNow portal and set the following:

IP Address/Hostname	The external IP address of the device.
Username	The username used when creating the user.
Password	The password used when creating the user.
Port	The port the Digital Watchdog Spectrum server is running on.

The last step is to configure the Alarm Events. Start by pressing the Add Event button. Set the zone to the alarm panel zone that will trigger the event. Select the camera associated with the event, select the event type and then add a Zone Description. Once you are done adding all the events, click Save Changes.

Testing

Test everything at the location to ensure normal alarm signals work, and entry delay works. If something is found to not be working correctly, troubleshoot the system and verify all settings are correct and try again.

Configuration Testing

Test everything at the location to ensure normal alarm signals work, and entry delay works. If something is found to not be working correctly, troubleshoot the system and verify all settings are correct and try again.

Creating the Device in the I-View Now Portal
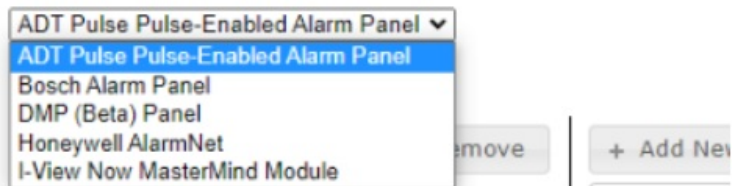
Click on Create A Site:

Complete the site setup form as needed.

Edit the site and add a device

Please make sure you properly configure the username and password information correctly. It should match the username and password for one of your administrator accounts such that it has access to Live, Events, Playback and AVI/JPEG Export at the minimum. The generated SMTP Account ID needs to be added in the Sender email address on the Server Settings Section and in the Recipient(s) field on the Message Setting Section.
So in the Sender email address field please enter the SMTP Account ID value there.
On Message Settings Please enter the same SMTP Account ID value into the Receipts(s) field.
Location IP Address: Please enter in your external IP address.
Save, and update the device, once you're done with alarm inputs.

Glossary

This section includes terminology used throughout the manual. For further information on any term, type the name in Google with "wiki" at the end to see a complete definition.

1. DDNS – Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real-time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS

2. DHCP – Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.

3. NVR/VMS – Digital Video Recorder. This is typically an analog camera-based recording system that provides a common interface into 4 to 16 cameras. In contrast, an NVR (Network Video Recorder) provides an IP-based interface to cameras.

4. IP – Internet Protocol address. IP addresses are used to identify the I-View server, the site containing the NVR/VMS and the NVR/VMS itself. The site and I-View IP addresses are Internet routable which means they can be anywhere on the Internet. The NVR/VMS typically has a private address that is specific to the site. This is why the router/firewall at the site that faces the Internet must contain a port forwarding entry to allow for messages to be passed to the NVR/VMS from I-View as well as the NVR/VMS to communicate with the I-View via an SMTP email message or in response to a request for a clip or live view.

5. MAC Address – A media access control address (MAC address) is a unique identifier assigned to network interfaces for communications on the physical network segment. MAC addresses are used as network addresses for most IEEE 802 network technologies, including Ethernet. Essentially, the MAC address can be thought of as one layer above the physical medium, e.g. wire or cable, and one level below the IP address.

The MAC address is often assigned by the manufacturer.

6. Private Network – In the Internet addressing architecture, a private network is a network that uses private IP address space, following the standards set by RFC 1918 for IPv4 and RFC 4193 for IPv6. These addresses are commonly used for home, office, and enterprise local area networks (LANs), when globally routable addresses are not mandatory or are not available for the intended network applications. Under Internet Protocol IPv4, private IP address spaces were originally defined in an effort to delay IPv4 address exhaustion, but they are also a feature of the next-generation Internet Protocol, IPv6.

7. SMTP – Simple Mail Transfer Protocol is an Internet standard for electronic mail (e-mail) transmission across Internet Protocol (IP) networks.

8. PoE – Power over Ethernet, describes any of several standardized or ad-hoc systems which pass electrical power along with data on Ethernet cabling. This allows a single cable to provide both data connection and electrical power to devices such as IP cameras. '

9. VMS – Video management software. Allows for storing, recording and retrieval of video clips.

10. VCA (video content analysis)

Documents / Resources

I-VIEW NOW Digital Watchdog Spectrum Installation Manual November 11, 2021 v1.0 DWspectrum	**DIGITAL WATCHDOG I-View Now Spectrum Video Recorder-Video Management System** [pdf] Instruction Manual I-View Now Spectrum Video Recorder-Video Management System, I-View Now Spectrum, Video Management System, Video Recorder System, Management System

References

- ⊕ **I-View Now**
- ⊕ **What Is My IP - Check your IP & Free SEO Tools**