IO NODES

HVR8 User Manual

8-Port Hybrid Cloud NVR

Document Version 1.0

HVR8 Hybrid Cloud NVR
User Manual

The following words and symbols mark special messages throughout this guide:

Warning:	Text set off in this manner indicates that failure to follow directions could result in damage to persons or equipment.

Note:	Text set off in this manner indicates special instructions which should be paid attention to.

Contents

1 Important Safety Instructions

WARNING: Read and save these instructions! Follow all warnings and instructions specified within this document and/or on the equipment.

CAUTION: There is no ON/OFF SWITCH for the power supply. The unit will be powered on upon connecting a valid power supply source. Please make sure to properly shutdown the device's operating system prior to removing its power source.

This HVR8 equipment is designed to be installed within indoor conditions only. There are several options available for installing the equipment: FIXED 19" RACKMOUNT, WALL MOUNT and DESKTOP MOUNT. It should be installed by qualified personnel only (person having the appropriate technical training and experience necessary for product installation).

When installing the equipment, please make sure that cables are installed so that accidents cannot occur. Cables connected to the equipment must not be subject to any mechanical strain.

To reduce the risk of fire, electric shock and/or injury, observe the following:

- Do not position the equipment as such that persons could walk on the connected cables.
- Do not spill any type of liquid substance on or near the equipment.
- Do not touch the equipment and its connected cables during an electrical storm; there may be a risk of electric shock.
- Do not attempt to connect this equipment to electrical outlets controlled by switches or automatic timers.
- The equipment should be situated away from heat sources such as radiators, heat registers, stoves, or other products that generate heat.
- Do not place a heavy object on or step on the product. The object may fall, causing serious personal injury and serious damage to the product.
- Do not connect the power cord to the power outlet until after the power supply of the equipment is connected.

2 FCC/CE Statement

Europe
This product is in conformity with:
- THE ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 2014/30/EU based on results using harmonized standards in THE LOW VOLTAGE DIRECTIVE 2014/35/EU, and
- THE ROHS2 DIRECTIVE 2011/65/EU based on results using harmonized standards.

The product is labeled with the CE mark as proof of compliance with the above mentioned European Directives.

FCC Compliance Statement
CAUTION: Changes or modifications not expressly approved by IONODES could void your authority to use this equipment. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

The user may find the following booklet prepared by the FCC useful: 'How to Identify and Resolve Radio/Television Interference Problems'. This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock # 004-000-00345-4.

Innovation, Science and Economic Development Canada Statement
This device complies with Part 15 Class A of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.
CAN/ICES-3 (A) / NMB-03 (A)

3 Cleaning Instructions

To clean the surface of the equipment, carry out the following instructions:

1. Shut down your equipment and unplug the power adapter.
2. Gently wipe the surface with a damp, soft, lint-free cloth.
3. Avoid getting moisture in any opening.

Note: Do not use abrasives, water, thinners, solvents, aerosol cleaners (spray polish), or any aromatic solvents, etc. that may enter through holes in the equipment and cause damage.

4 Handling Notes

When shipping the product, the original shipping carton and packing materials should to be used. For maximum protection, repack the unit as it was originally packed at our factory.

Do not use volatile liquids, such as insect spray, near the unit. Do not leave rubber or plastic products in contact with the product for long periods of time. They will leave marks on the surface finish.

5 Moisture and Condensation Notes

Moisture condensation will damage the product. Read the following notes carefully.

Moisture condensation can occur in the following situations:

- Transferring the product directly from a cold place to a warm place.
- Using the product in a room where you just turned on the heater, or a place where the cold wind from an air conditioning unit directly hits the product.
- In the summer, when moving the product to a hot and humid place after leaving an air-conditioned space.
- Using the product in a humid environment.

Do not use the product when moisture or condensation may occur. If the product is used in such an environment, it may damage discs and internal parts.

6 Product Description

The Hybrid Cloud NVR series of compact IP video appliances delivers enterprise-class video recording and management solutions to small, medium and large single or multi-site surveillance deployments. These appliances provide an embedded, high-performance networked video platform capable of recording multiple cameras with high sustained data throughputs to meet a multitude of requirements. The HVR8 series appliances can host enterprise class video management (VMS) software solutions commonly used in the market. With a pre-loaded operating system and Milestone XProtect® for on-premise video recording together with innovative cloud-based features, IONODES takes the hassle away from complex set-up and configuration of an IP video management environment. Validating, certifying and embedding all OS and software components into a simple and easy to use platform means you spend less time configuring your system, and more time operating it to secure your environment. The cloud features allow you to gain important benefits such as simple and secure remote live video access to your cameras and off-site archiving of event-based video clips to secured cloud storage.

Combining the HVR8 series appliances with your IP cameras and IP video encoders of choice provides a cost-effective means to convert legacy analog video systems to IP, and build new, state of the art, IP video surveillance deployments. The HVR8 series supports all IP cameras and IP video encoders supported by all major VMS solutions. In order to facilitate deployment in the field, the HVR8 series appliances come with 8 built-in PoE ports, allowing direct connection of up to 8 PoE capable IP cameras. Expansion beyond 8 cameras is possible via external networking equipment.

The HVR8 Series appliances and VMS software combine to provide innovative configuration options and tools that significantly decrease the deployment time and the effort needed to deploy your security solution. Simply connect a USB keyboard, mouse and monitor to the appliance and you are ready to add your IP cameras and encoders to your video system. Alternatively, remote configuration is also possible via network web access or VMS client application(s).

To support a wide range of deployment scenarios, while ensuring reliability and high availability, the HVR8 Series appliances use industrial grade components and high-performance storage drives designed for 24/7 video recording.

7 HVR8 Product Features

This chapter introduces you to the basic features of your HVR8 appliance. Read this chapter to learn:

- About unpacking your appliance
- How to identify the features of your appliance
- How to locate your appliance's model and serial number
- What accessories are available for your appliance

7.1 What is in the Box

Note: Verify that the shipping box contains the following parts and ensure no damage was sustained during shipment. If there is anything missing or damaged, please contact your sales representative.

Your appliance should be packed with the following:

1. 1 x HVR8 appliance
2. 1 x Quick Install Guide
3. 1 x AC 24VDC power adapter
4. 4 x Stick-on rubber bumpers
5. 2 x Wall mount brackets (includes the 4 screws required to assemble the mounting brackets onto the product's bottom plate)

Below are additional items which are not included, but may be required:

1. USB mouse & keyboard
2. Computer monitor(s) (VGA, DVI or HDMI)
3. Internet router and/or a network switch
4. Power bar with surge protection
5. Region specific power supply cord (can be ordered from IONODES or sources externally)

7.2 Front and rear panel controls and LEDs
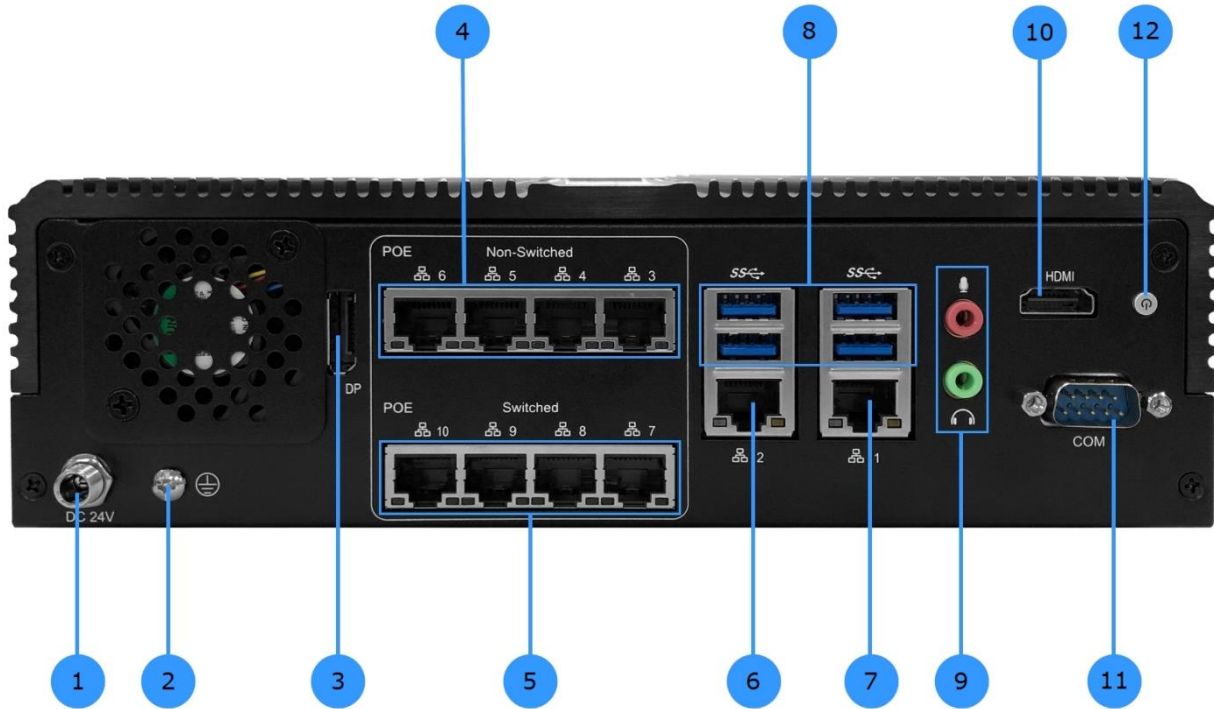
1	Power Supply Jack (DC 24V)
2	Grounding Screw
3	DisplayPort Output
4	Non-Switched PoE Ports (Ports 3 to 6)
5	Switched PoE Ports (Ports 7 to 10)
6	Gigabit Ethernet (Port 2)
7	Gigabit Ethernet (Port 1)
8	4 x USB 3.0 Ports
9	Audio In / Out
10	HDMI Output
11	Serial Port (COM)
12	Power Button w/ Status LED

7.2.1 Status LED behaviour

- RJ45 Network Jacks
    - LINK/ACT (right side of the port)
        - On/Blinking: port is connected and is transmitting data
        - Off: port is not connected
    - SPEED (left side of the port)
        - Amber: 1000 Mbps
        - Green: 100 Mbps
        - Off: 10 Mbps
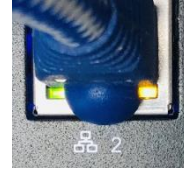
- Power Button Status LED
    - On (Blue): unit is powered on
    - Off: unit is powered off

- Front bezel ambient blue LED (visible through ventilation)
    - Is used to indicate if the unit is connected to power

7.3 Identifying your product model and serial number

7.3.1 Product Model

The label located on the bottom side of your appliance contains information that identifies your exact product model. A similar label is also located on the product box.

Note: IONODES technical support staff may need this information if you issue a support request.

7.3.2 Serial Number

You can locate the product's serial number:
- Printed on a white label located on the bottom side of your appliance.
- Printed on the packing slip that came with your appliance.
- Displayed in appliance's web interface:
  - o Double-click on the **Device Config** icon located on the system desktop.
  - o Log into the web interface (default username and password are both "admin").
  - o Once logged in, select the **Configuration** tab from the left-hand side bar.
  - o The Default tab shown is the System tab which contains your device serial number along with the Product type and Firmware version.
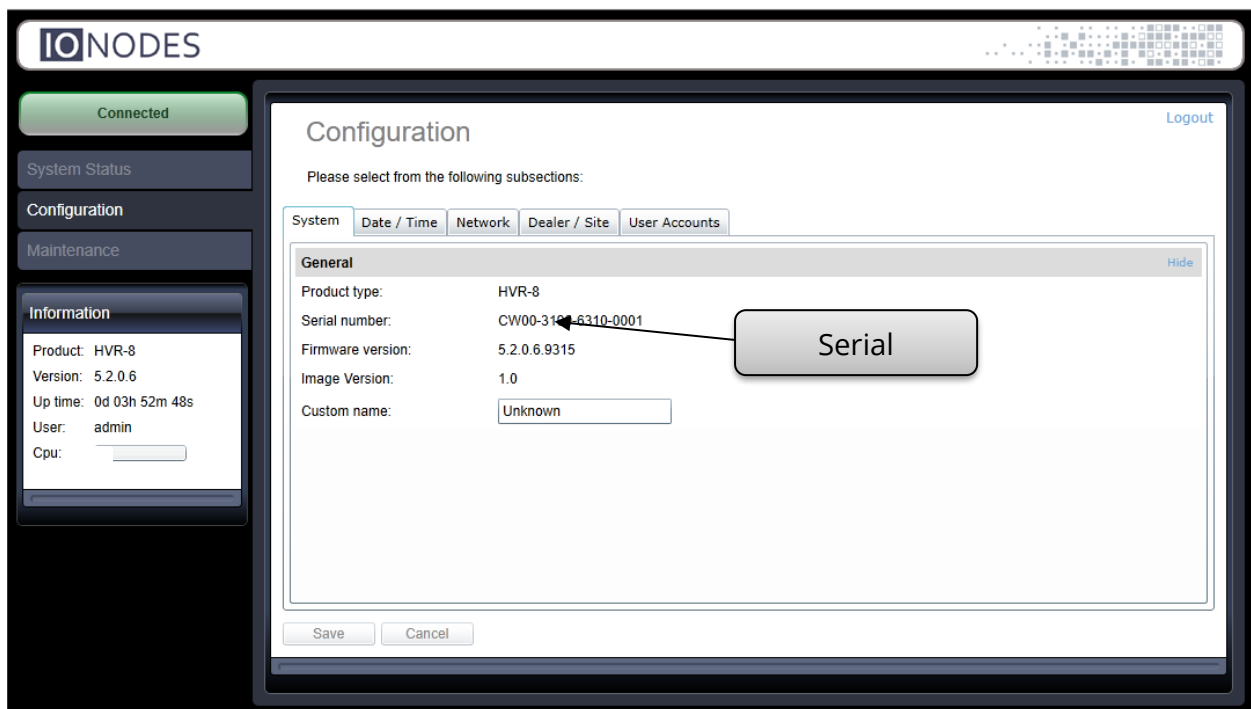
Note: A Microsoft Windows Certificate of Authenticity label is located on the inside of the chassis

8   Getting Started

8.1   Specifications

| Physical	
Form Factor	Aluminum chassis with wall mount kit and fan module
Chassis Color	Black
Dimensions - unit only (W x D x H)	240mm (9.45 in) x 180mm (7.09 in) x 71mm (2.80 in)
Dimensions - with wall brackets (W x D x H)	274mm (10.79 in) x 180mm (7.09 in) x 88mm (3.46 in)
Dimensions - with rackmount (W x D x H)	480mm (18.90 in) x 204mm (8.03 in) x 88mm (3.46 in)
Weight - unit only	3.1 kg (6.8 lbs)
Weight - with wall brackets	3.3 kg (7.2 lbs)
Weight - with rackmount	3.6 kg (7.8 lbs)
Electrical	
Power requirement	Power Input Voltage: 19 - 36 VDC Power Connector: Barrel type Max total power consumption (including PoE): 160W
Supplied power adapter	Input: 100-240 VAC, 50-60 Hz, 2.5A Output: 24 VDC, 6.66A, LPS
PoE Power Consumption	Maximum 120W 25.5W max per port (IEEE 802.3at compliant)
Performance	
Boot time	30 sec. (from power on to Windows login screen)
Maximum video throughput	200Mbps (Input 128 Mbps) using all ETH ports
Environment	
Operating Temperature	32°F ~ 104°F (0°C to 40°C); indoor use only
Storage Temperature	-4°F ~ 140°F (-20°C to 60°C)
Storage Humidity	Maximum 93% (relative humidity non-condensing)
Certification	CE & FCC Class A
Vibration	0.5G / 5 ~ 500Hz / operation (mSATA for OS + 3.5" HDD for storage) 1.5G / 5 ~ 500Hz / no operation
Shock	10G peak acceleration (11 m sec. duration), operation 20G peak acceleration (11 m sec. duration), none operation

8.2 Hardware Installation

The HVR8 appliance can be mounted in any orientation (horizontally or vertically) on a desktop / shelf or a wall using the supplied mounting brackets. It can also be installed in a 19" rack by using the optional 19" Rack Mounting Kit Option 2U (HVR8-RM).
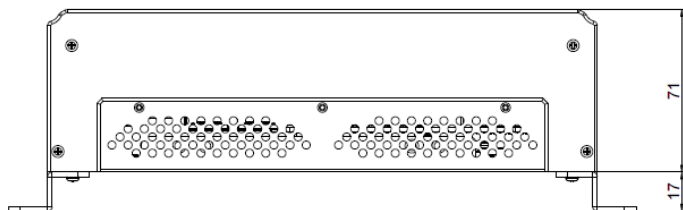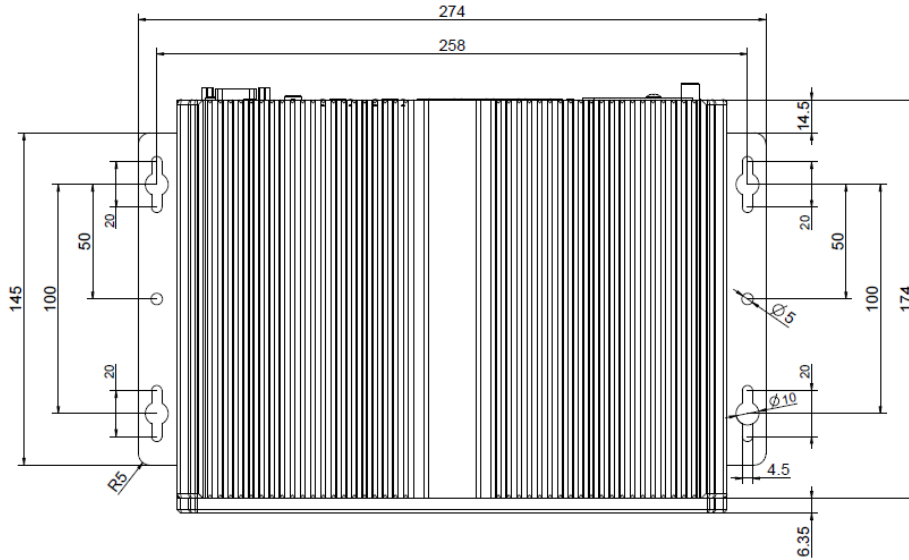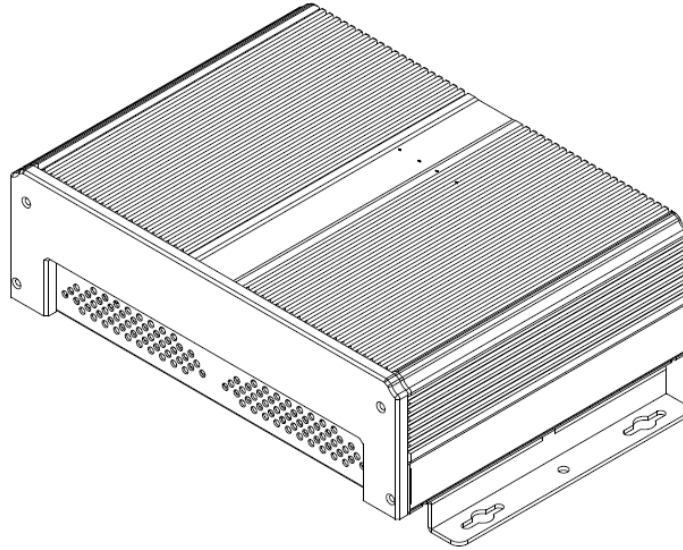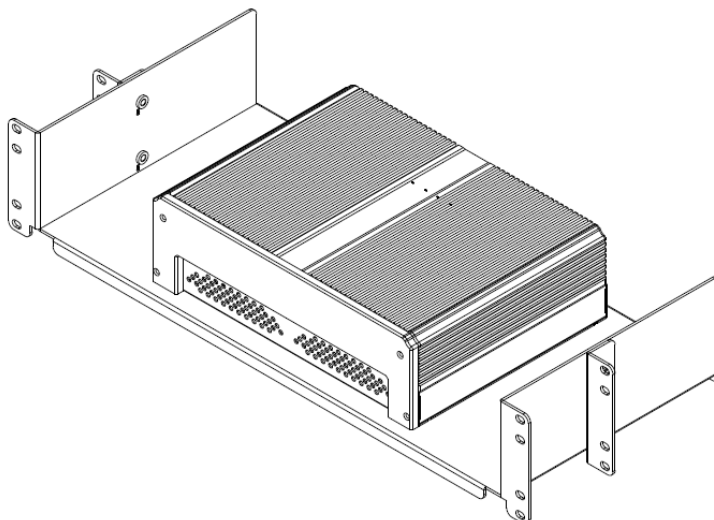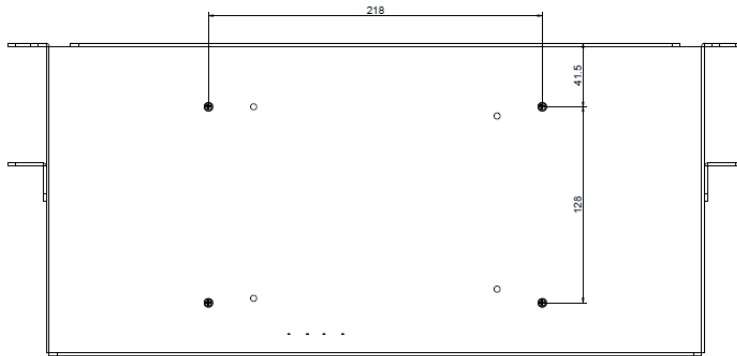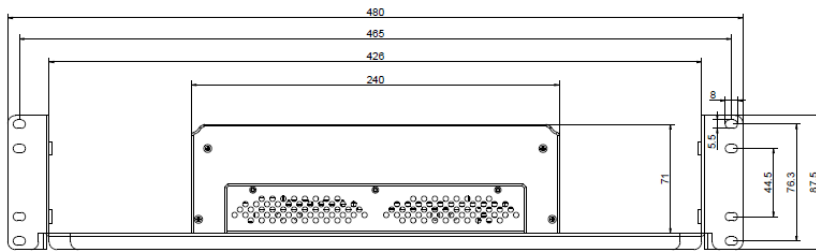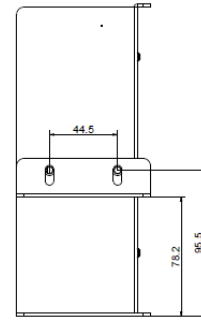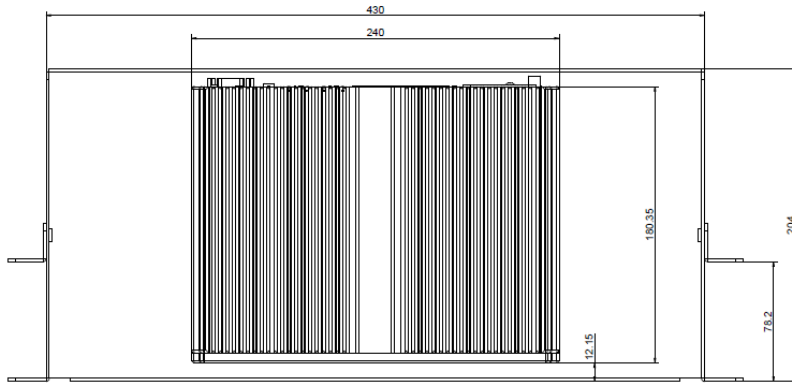
The appliance benefits from ambient air circulation. Do not obstruct ambient air circulation to avoid overheating the appliance and reducing its performance and functional lifespan. The grounding screw on the appliance should be installed using an isolated cable with a dimension above ∅ 5.5 mm2 for low voltage electrical equipment.

8.2.1 Desktop Installation

- Apply the provided rubber bumpers to the bottom of the chassis to protect from damaging surfaces.
- Place the appliance on a clean level surface.
- Ensure adequate clearance for cooling.

8.2.2 Wall Mount Installation

- Attach the wall mount brackets to the bottom of the device using the supplied screws.
- Affix the HVR8 housing to a wall using the provided brackets and 4 screws (not included). It is best practice to use stainless steel Phillips tapping screws M4.2 x 32mm (#8 x 1.25 in) (Spaenaur ST- 631P or equivalent). For drywall mounting use four 4 plastic anchors (Spaenaur EX-S5 or equivalent; not included).
- If possible, ensure at least one screw on each bracket goes into a wall stud or equivalent support.
- The maximum install height for the wall mounting installation is 2m.

8.2.3 Rack Mount Installation

- Install the appliance in a rack using the optional 19" Rack Mounting Kit Option 2U (HVR8-RM)
- Ensure that the following precautions are met:
    - Elevated Operating Ambient - If you install the device in a closed or multi-unit rack assembly, the operating ambient temperature of the rack assembly may be greater than the room temperature. Consider installing the equipment in an environment compatible with the maximum ambient temperature (T=40°C for operating conditions and respectively T=60°C for non-operating) specified.
    - Reduced Air Flow - Installation of the equipment in a rack must be such that the amount of air flow required for safe operation of the equipment is not compromised.
    - Mechanical Loading - If you are mounting the equipment in the rack, it must be such that a hazardous condition is not achieved due to uneven mechanical loading.
    - Circuit Overloading - You must consider the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings must be used when addressing this concern.

o Reliable Earthing - Reliable earthing of rack-mounted equipment must be maintained. Particular attention must be given to supply connections other than direct connections to the branch circuit. For example, use of power strips.

8.3 Keyboard & Mouse Setup

It is recommended that a USB keyboard & mouse be attached to the appliance in order to facilitate local setup and configuration, as well as for running local applications, such as the VMS client applications for video footage review. Plug the keyboard & mouse into any available USB ports located on the back panel of the appliance.

Note: The first time the system is started with your USB keyboard and mouse, please allow some time for the operating system to detect them before they are ready for use.

8.4 Monitor Setup

Your HVR8 appliance comes with a multitude of monitor display configuration options. The appliance itself provides two display output ports: one DisplayPort and one HDMI. You may use any output in single output mode, or, you may use one of the following combinations for multi-display mode:

- DisplayPort + HDMI (dual display)

In multi display mode, your system will use one display as primary display and the other as secondary display. The order and position of the displays are configurable using the operating system's display configuration menu.

Note: The dual display mode is only available within the Windows environment. Under BIOS/boot screen both monitors will show the same image.

8.5 Network Setup

The HVR8 Series appliance features ten (10) Gigabit Ethernet network ports located on the back side.
The first two ports, labeled 1 and 2, are standard independent Gigabit Ethernet network ports. The last eight ports, labeled 3 to 6 and 7 to 10 respectively, are PoE+ enabled (IEEE 802.3at) and may be used to provide power to PoE equipment (such as IP cameras or IP encoders).

Please note the differences, as explained in the following sub-chapter, between ports 3-6 and ports 7-10 from a network connectivity point-of-view.

Note: All PoE ports can supply a maximum of 25.5W per port. The total available power for the PoE ports is 120W.

8.5.1 Network Connections

In typical deployments, your installation may require direct PoE network connection to up to eight IP cameras or IP encoders. Your deployment may also require additional network connections to a corporate network and / or maintenance laptop.

- Connect the LAN network ports 1 and / or 2 of the appliance to any corporate network, maintenance laptop or any other external network.

- Connect the LAN network ports 3 to 10 of the appliance to the IP cameras / IP encoders required for your video security network.

- LAN ports 3 to 6 are non-switched. This means that you must assign a different subnet to each port and create 4 different LANs, each connecting to a camera. That camera must have its IP address from the same subnet as the corresponding port on the HVR8. Traffic will not pass from one LAN to another. They are independent of each other. The network configuration for the ports on the HVR8 can be done from the IONODES web management interface or from Windows Control Panel\Network and Internet\Network Connections; for camera configuration please check with your camera manufacturer.

- LAN ports 7 to 10 are switched. This means that the uplink for all 4 of them is a single LAN port on the HVR8's motherboard. This means that all cameras connected to these ports, as well as the corresponding port on the motherboard, must have IP addresses from the same subnet. As before the network configuration for the ports on the HVR8 can be done from the IONODES web management interface or from Windows Control Panel\Network and Internet\Network Connections; for camera configuration please check with your camera manufacturer.

- Each PoE network port is capable of powering a single 802.3at compliant PoE device; please make sure that the total required power on the PoE interfaces does not exceed 120W.
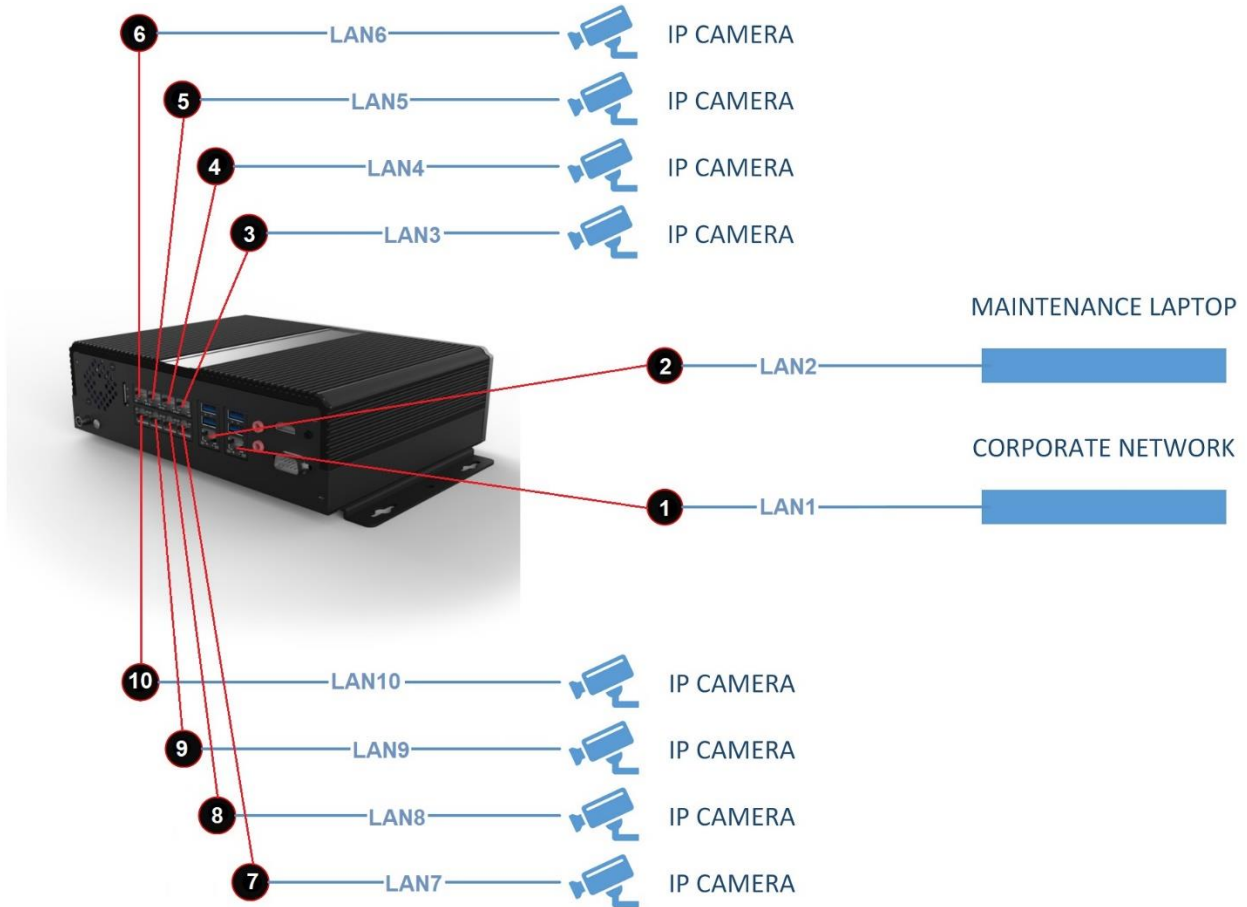
Note: You may run software clients on the corporate network to view live or recorded video content, however note that this will generate streaming on the corporate network; this may be undesirable.

8.6 External Storage

The HVR8 appliance is equipped with 4x USB 3.0 ports, as well as multiple Gigabit Ethernet ports, which may be used for connecting external storage. Using external storage is useful if the internal storage is not sufficient to meet your target video retention times.

Any of the available Gigabit Ethernet ports may be used to connect to network storage solutions such as iSCSI storage devices. The USB 3.0 port may be used to connect to a USB 3.0 storage device.

Once discovered by the appliance, external storage can be used by your video management software as a storage device.

9   Software Environment

Your appliance is pre-configured with an operating system as well as a **Quick Setup Wizard** to assist you in setting up the device's basic operating settings. It is not recommended that you remove, modify or add software to your appliance unless required by your deployment scenario.

9.1   Pre-Packaged Video Management Software (VMS)

All HVR8 Hybrid Cloud NVR appliances are delivered with a fully customizable software environment, pre-loaded and ready to go. The Milestone XProtect® VMS platform package is included with the appliance.

Note: You can also set-up your appliance with a plain Windows image if required so that you may control the software environment.

9.2   Anti-Virus Software

Because of a high risk of system performance depreciation, we recommend that your anti-virus software is configured to exclude specific files associated to the VMS, in order to keep a secured product without affecting its performance.

Also, please make sure that you qualify the performance before deployment in the field.

9.3   Software Updates

We recommend to carefully qualify any application updates before deployment in the field.

We recommend enabling automatic updates for the Windows operating system, as our enterprise version of the operating system (Windows 10 Enterprise LTSB) allows for security updates only.

Note: Automatic Windows Updates are enabled by default; this is the desired setting.

9.4   Remote Access

By default, your appliance is configured to permit remote desktop connections. This feature of the Windows operating system allows you to remotely access your appliance from any other computer on your network using your Windows account credentials.

Note: You can disable this feature via the Windows control panel. For details on how to do this, consult your IT administrator.

10 Basic Operating Instructions

10.1 Powering on the appliance

1. Turn on the monitor(s) and any external peripherals (ex. Printers, External Storage Devices, etc.) connected to the appliance.

2. Connect the power cord coming from the power adapter to the appliance.

3. Connect the power adapter to the power outlet. The device will power on automatically.

4. If the power adapter was already connected from a previous session, you can power on the appliance by pressing the **Power Button** on the back of the unit.

5. The appliance will run a series of self-tests. After a few seconds, a series of messages may be displayed as the various hardware and software subsystems are activated. Under normal circumstances you should not be asked to respond to these messages. If you are asked to respond any messages follow the instructions carefully.

6. If this is the first time you are booting the appliance, the **Quick Setup Wizard** welcome screen will appear.

7. If the **Quick Setup Wizard** has already been completed in a previous user session, a Windows login prompt will be displayed once the appliance has completed its boot up phase.

Note: Default login username is 'admin' and default password is 'admin'

10.2 Powering off the appliance

1. You may initiate a power down of the device by one of two ways:
   a. Press the **Power Button** on the back of the appliance.
      OR
   b. Click on the Windows START button located on the bottom left of the screen and then click on the SHUT DOWN button.
2. Both methods above will cause the software to shut itself down properly.
3. The appliance may take a few minutes to complete its shut down.

Warning: Always be sure to follow the proper procedures when turning off the power to the appliance. NEVER disconnect the power to the device while it is still running or in the process of shutting down. Doing so can cause data loss, file corruption, system instability and hardware failure

10.3 Quick Setup Wizard

The Quick Setup Wizard is a setup and configuration assistant which appears the first time you boot an HVR8 appliance. It is designed to simplify the configuration of basic device settings. The appliance ships with pre-loaded Milestone XProtect® VMS platform package, which is shown during the application setup phase of the wizard.

10.3.1 General Layout
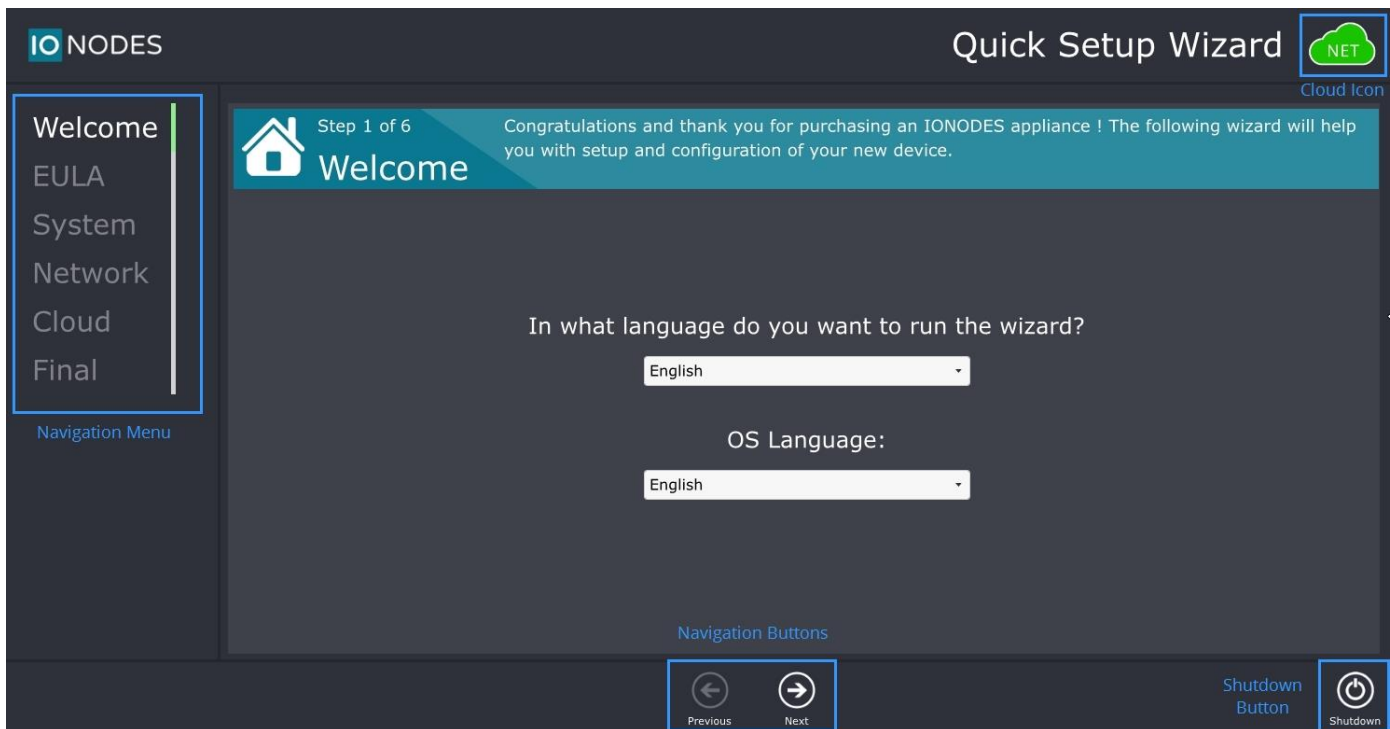
- Navigation Menu
  - This menu allows you to navigate directly to any wizard page
  - The current wizard page is highlighted
  - The colored bar on the right displays completion status of the page
    - Gray = Not Visited
    - Green = Complete
    - Red = Incomplete; invalid values
- Navigation Buttons
  - These buttons allow you to navigate forward and backwards through the wizard pages
- Shutdown Button
  - This button allows you to cancel execution of the wizard and shutdown the device
  - Upon next boot-up, the wizard will reappear since it has not been completed
- Cloud Icon
  - This icon will be coloured gray when no Internet connection is detected

- o This icon will be coloured green when a valid Internet connection is detected
- o An Internet connection is required for online operations and cloud subscription activation

10.3.2 Welcome Page

The welcome page allows you to select the language in which to run the wizard pages. This language will not be installed as the language for the operating system or installed software.
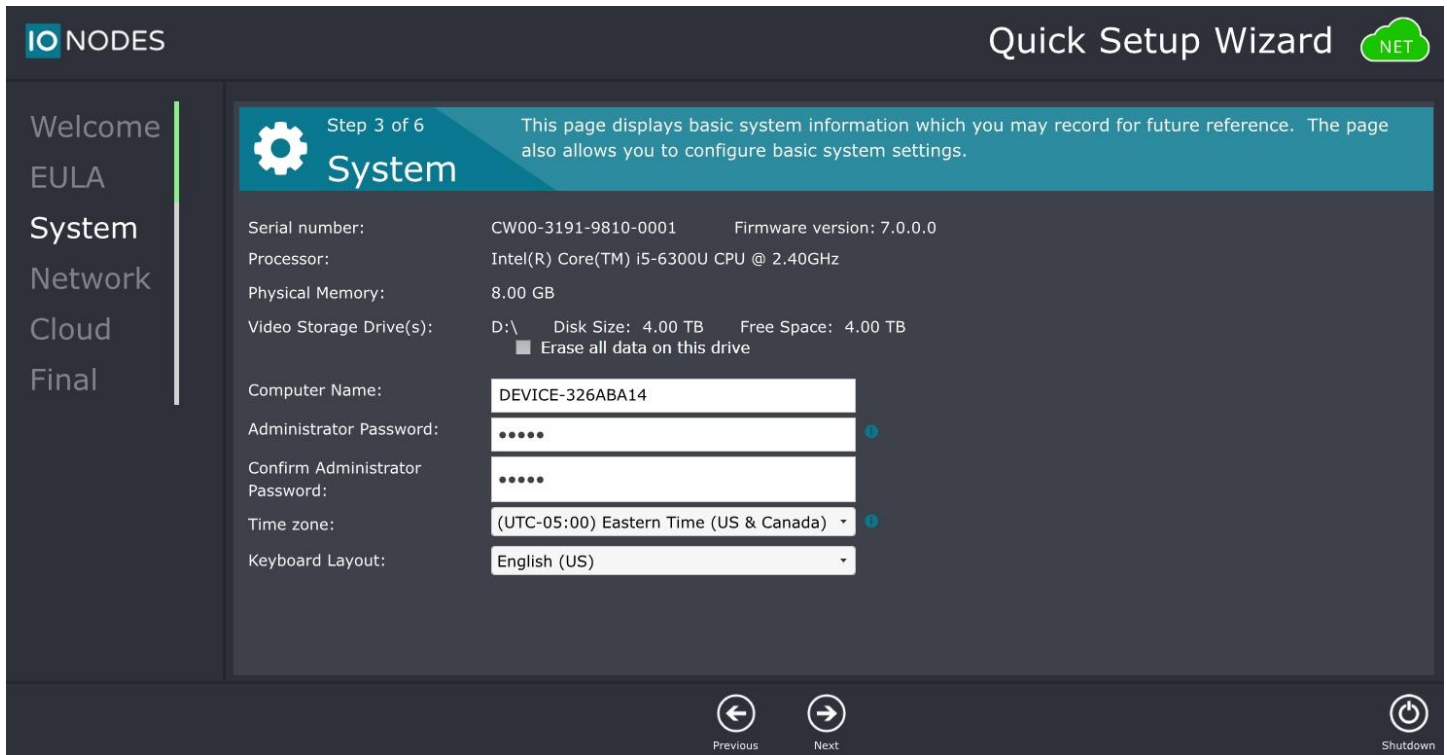
10.3.3 EULA Page

The EULA page displays the end user license agreement which you must accept prior to completing the Quick Setup Wizard. Click on the **Accept** check-box to continue.
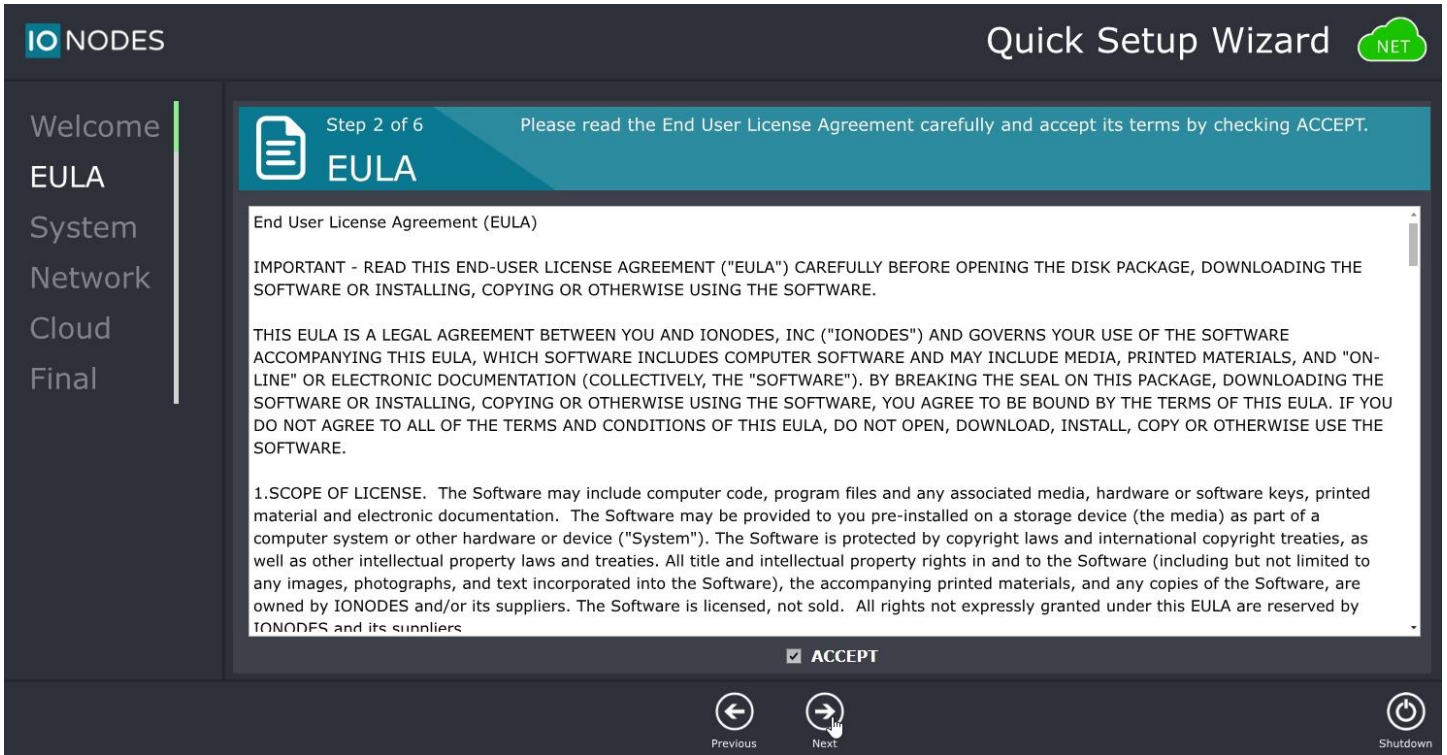
10.3.4 System Page

The system page displays basic status information on your device and allows you to specify basic system settings.


- Serial Number – This serial number may be required should you need to issue a support request.
- Firmware Version – This is the version of the device's internal software services. This is not the version of the operating system or any installed software.
- Processor – This is the processor type installed in your device.
- Physical Memory – This is the amount of RAM memory installed in your device.
- Video Storage Drive(s) – This section lists the drives which are available for video storage.
- Computer Name – This is the computer name as it will appear on the network.
- Administrator Password – This is the password which will be set for the "admin" user account. This password will be set for the administrator login account of the operating system as well as for the administrator user account of the device's web interface.
- Time Zone – This is the geographic time zone which will be set for your device.
- Keyboard Layout - This is the layout of the keyboard attached to the system

10.3.5 Network Page

The network page allows you to specify the network configuration for all 10 network ports of the device (LAN1, LAN2, LAN3, LAN4, LAN5, LAN6 and LAN 7-10). You may apply the changes immediately by clicking on **Apply network changes now** or you may complete the wizard as is which will cause the settings to become effective upon the next system reboot.
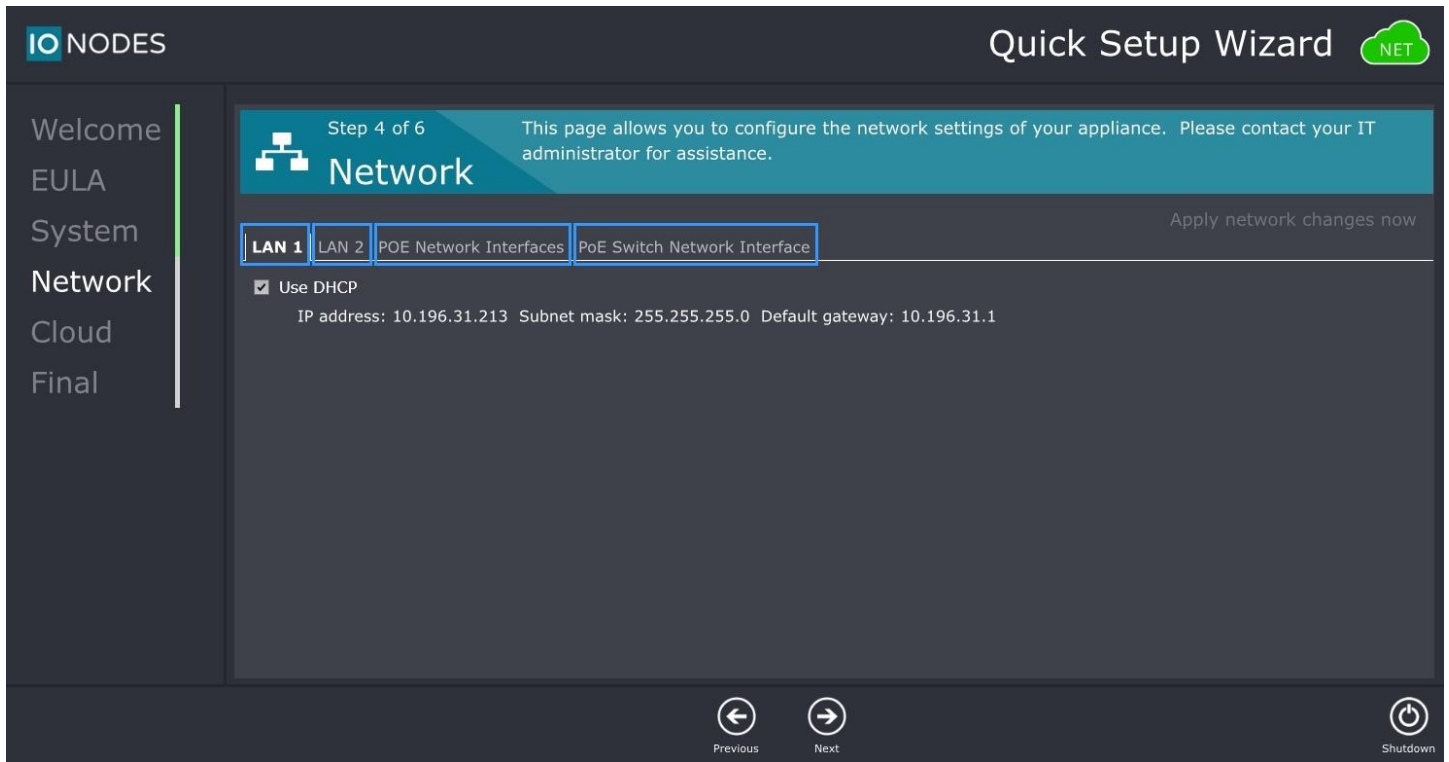
10.3.6 Cloud Account Activation
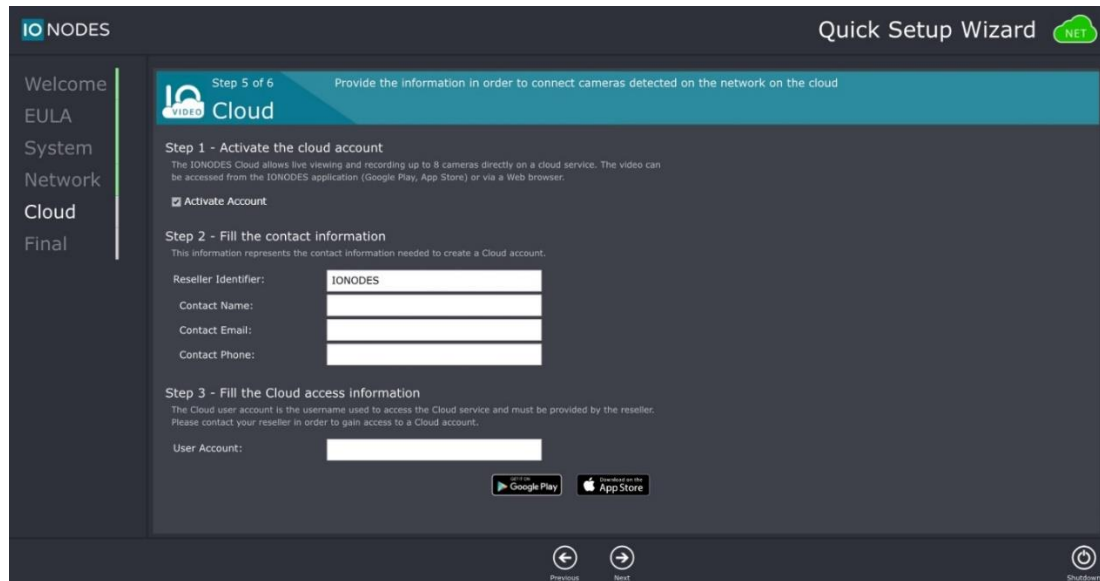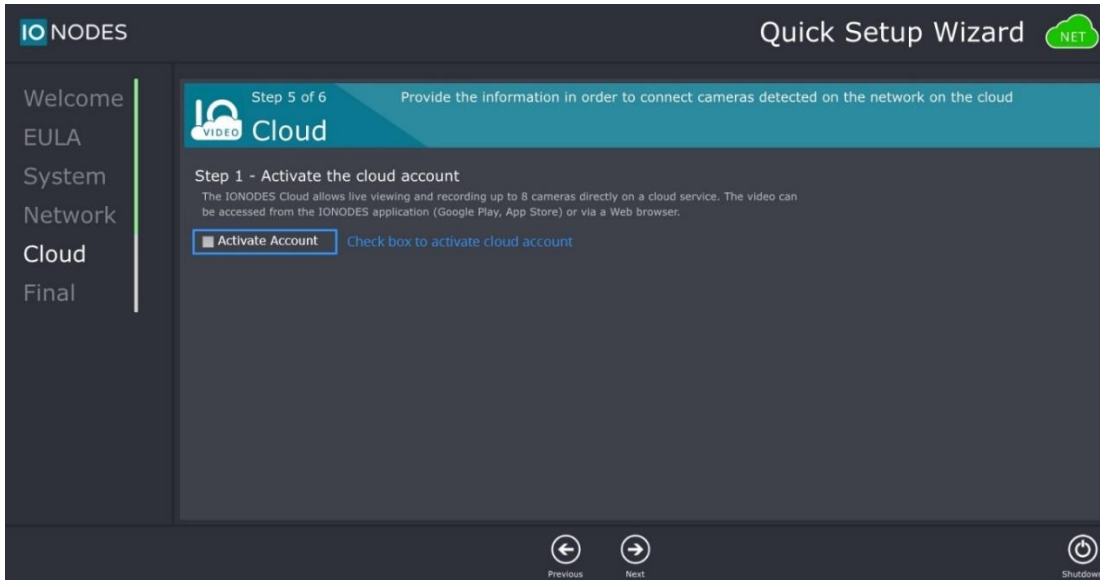
Enter all appropriate information as supplied by your Reseller in order to activate your cloud account and be able to view your surveillance cameras on your IONODES Video Cloud mobile app.

10.3.7 IONODES Video Cloud Mobile Apps

To access live video from your system and to manage cloud-based event video recording, please download the free apps for iOS and Android devices.

You can also access cloud functionality through any browser by visiting:
https://videocloud.ionodes.com

10.3.8 Final Page

The final page displays the final status of the wizard prior to applying the desired configuration and before deploying the selected application package. Please confirm that all wizard pages have been completed as desired prior to clicking on the **Apply** button. Should any wizard page be incomplete or contain invalid parameters, the left-hand column line will appear red for the erroneous section and the **Apply** button will be unavailable; please correct any errors and retry.
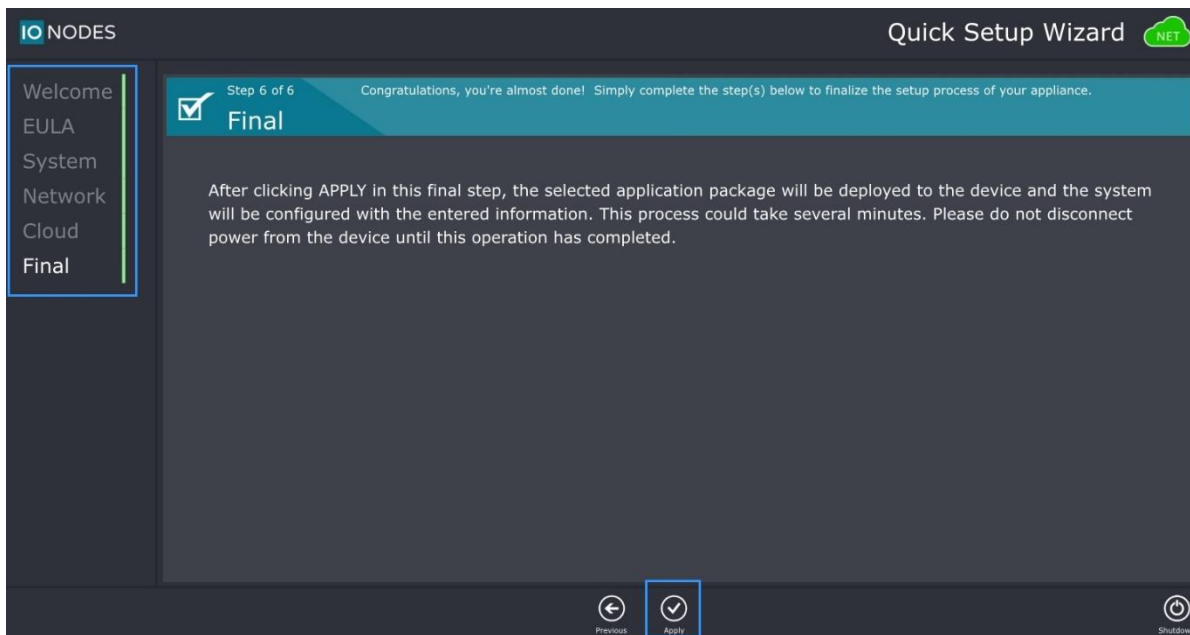
After clicking on the **Apply** button, a popup window will appear showing installation progress. Once installation is complete, the system will shut down and reboot automatically.

10.4 Milestone XProtect Installer

Upon first boot up & login, after the Quick Setup Wizard is completed, the Milestone XProtect installer will automatically start. The user will have to provide his own license file in order to finish the installation.
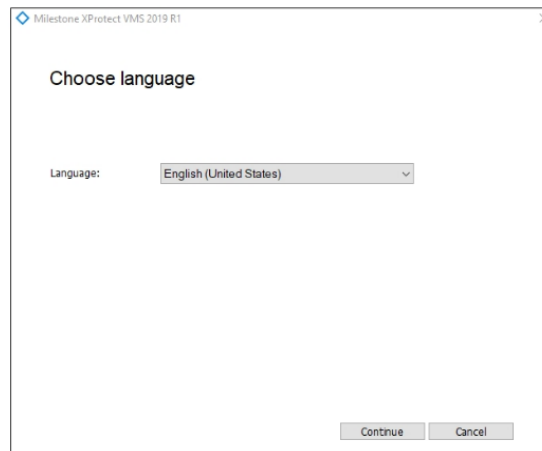
10.5 Initial Configuration Steps

10.5.1 Securing access to your appliance

By default, the appliance is shipped with default username and passwords for access to the various administrative interfaces of the system.

We strongly recommend that you change the default administrative passwords in order to ensure that no unauthorized accesses are performed.

1. Log into the Windows operating system using the default admin username and password ('admin' / 'admin').

2. Press **CTRL + ALT + DELETE** from the appliance operating system to display the Windows system menu.

3. Choose the **Change Password** menu option and follow the steps required to change the default admin password.

10.6 Accessing the web interface

The HVR8 appliances feature a web interface which provides a simple and clear display of the configurable parameters of the appliance as well as providing system status information and diagnostic tools.

The web interface can be accessed in several ways.

1. Using the **Device Config** shortcut on the desktop
2. Opening a web browser (Internet Explorer) window directly on the device and typing in the local IP address or host name. (http://127.0.0.1 or http://localhost)
3. Opening a web browser window on a remote computer located on the same network as the appliance and entering the IP address or host name of the appliance in the address box.

Once connected to the appliance's web Interface you will be asked to log in. If this is a first-time access, use the default username and password; 'admin', 'admin'.
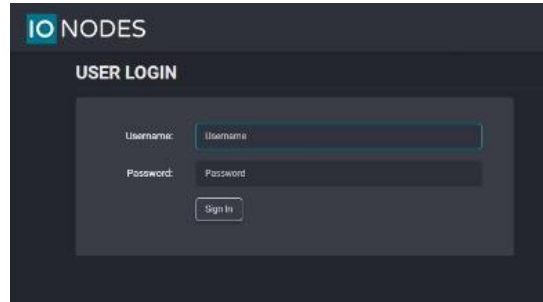
Note: IONODES provides a useful tool called the **IonConfigTool** which can assist in discovering the IP address of your appliances on your network. This tool can be downloaded from our website at http://www.ionodes.com

The appliance web interface provides the required tools to navigate and gather the appropriate information pertaining to your appliance.
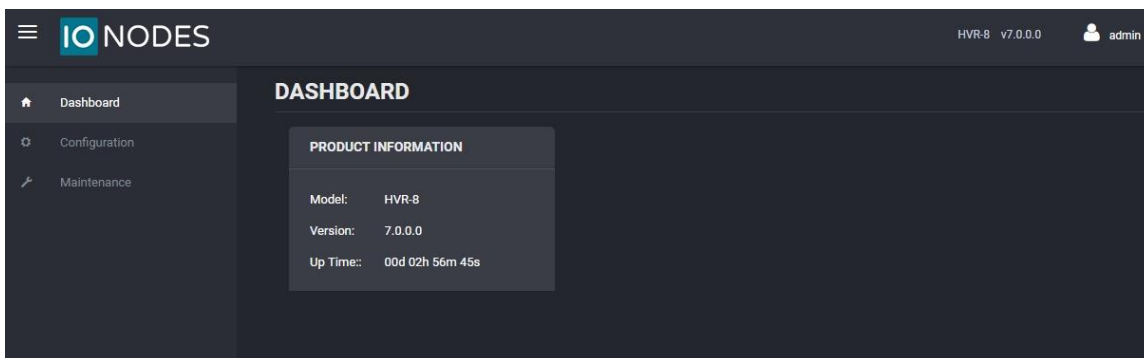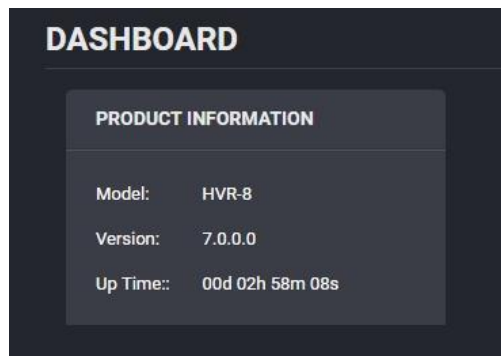
10.7 Navigating through the web interface

Menu tabs are located on the left side of the main web interface window and give you access to the different web interface sections.

10.7.1 System Dashboard

The **Dashboard page** is selected by default at the time the page is loaded into the web browser. This tab provides access to the general status of the appliance.

10.7.2 Configuration

The **Configuration** tab takes you to the configuration pages of the appliance.
The main configuration page provides access to the main system configuration parameters.
More details are available in the System Configuration section found further down in this manual.

10.7.3 Maintenance

The **Maintenance** tab allows you to access the functions used for troubleshooting and support of the appliance. More details are available in the System Maintenance section found further down in this manual.

11 System Configuration

The configuration section of the appliance web interface provides the means to modify system parameters to meet your deployment requirements.
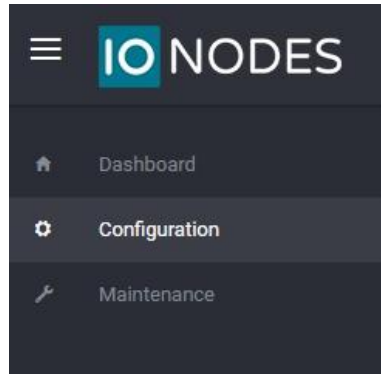
Note: For all configuration sections detailed below, saving a set of parameter changes is done via the **Save** button located at the bottom of the configuration page. Unsaved parameter changes can be cancelled using the **Cancel** button located beside the **Save** button. Cancelling parameter changes will cause these parameters to revert back to their original value.
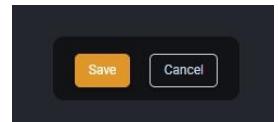
11.1 System

The **System** tab is the default landing page for the Configuration section of the web interface. This tab provides basic details on the system configuration including product type, serial number and firmware version.
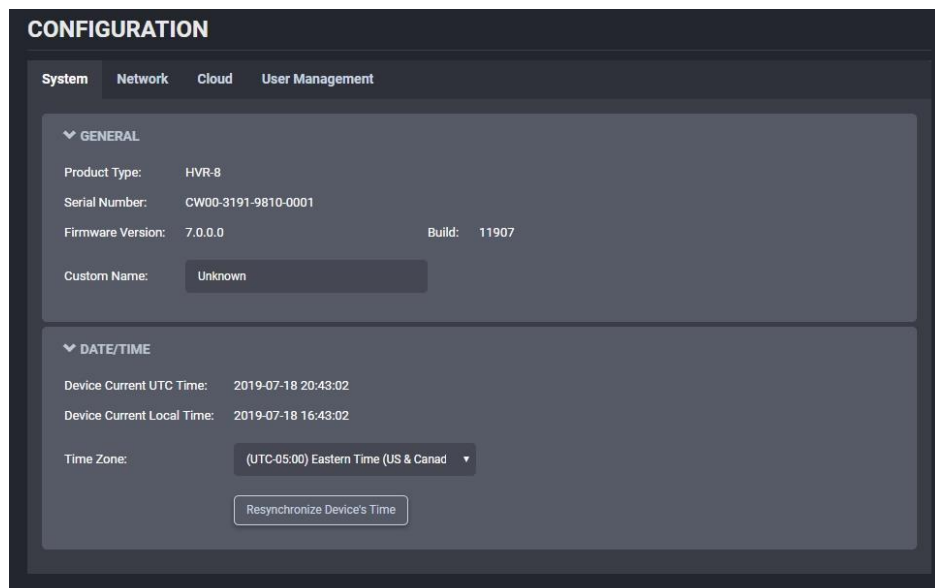
The System Tab provides a means to create a custom name for the system. To do this simply enter your custom name in the custom name box and click the **Save** button. The Custom Name can be used for identifying hardware in some VMS platforms or custom applications. The bottom section also allows you to set the appropriate time zone and synchronize the device's time.

11.2 Network

The **Network** tab allows you to set the network settings for all network interfaces on the appliance.
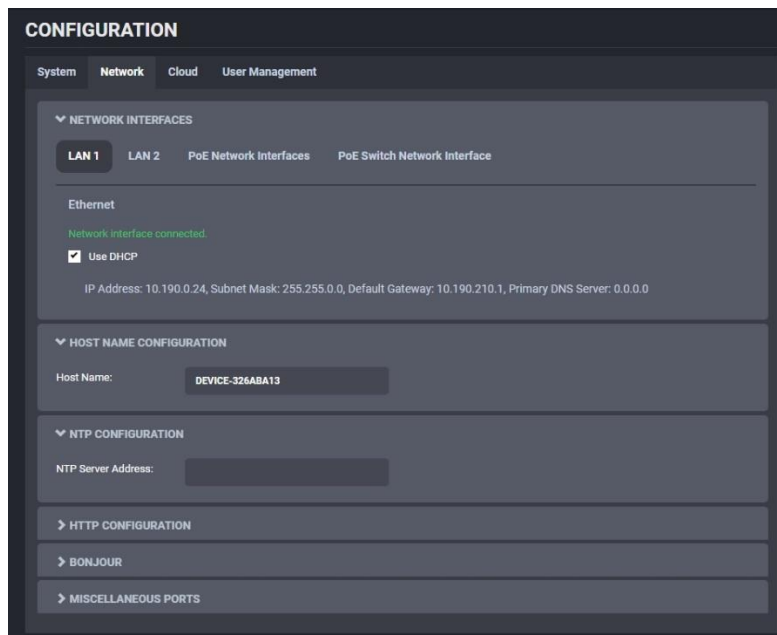
11.2.1 Network Interfaces

Each of the first 6 network interfaces, 1 thru 6, are configured independently. The last 4 network interfaces, 7 thru 10, are switched and managed as such. Each interface should be configured to use static IP addresses or DHCP depending on its intended use and the corresponding device that it is connected to. The default configuration for all interfaces is set to use DHCP.
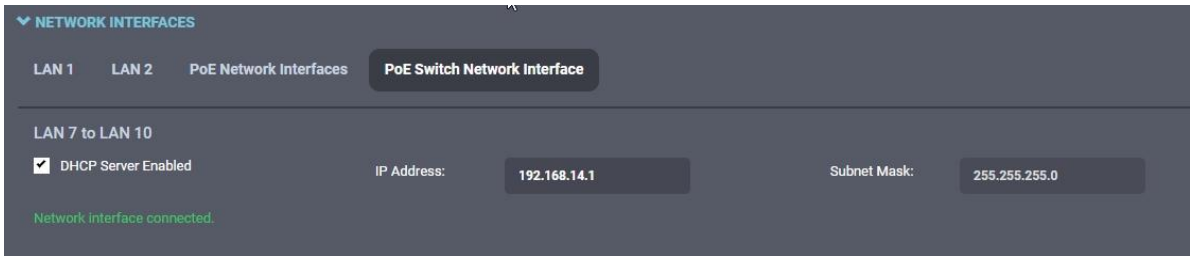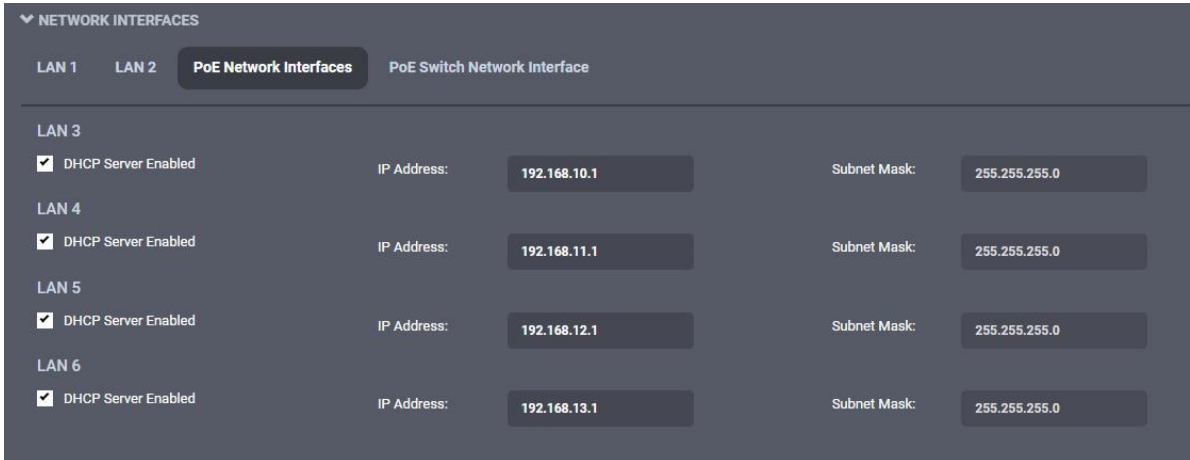
11.2.2 Using DHCP

If DHCP is to be used, simply select the **Use DHCP** check box for the network interface(s) that requires this type of configuration.
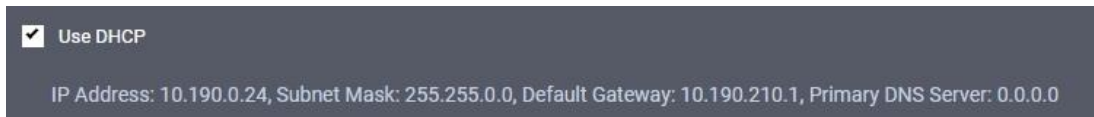
The appliance's IP address, subnet mask and default gateway will be assigned automatically and the current values for each will be displayed underneath the checkbox.

11.2.3 Using Static IP Addresses

To use a static IP address configuration:

1. Unselect the **Use DHCP** check box for the network interface you want to configure with a static IP address.

2. The IP configuration parameters window will appear.
3. Enter the desired IP address.
4. Enter the desired subnet mask.
5. Enter the desired default gateway if necessary. Note that a default gateway only needs to be specified if your network requires access to other subnets; otherwise leave to default value.
6. If available or required, add your DNS server information in the appropriate fields.

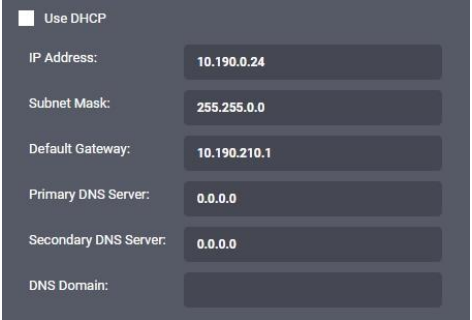|	
☐ Use DHCP	
IP Address:	10.190.0.24
Subnet Mask:	255.255.0.0
Default Gateway:	10.190.210.1
Primary DNS Server:	0.0.0.0
Secondary DNS Server:	0.0.0.0
DNS Domain:	

Warning: Specifying more than a single default gateway on your system can cause network communication issues. Please consult your IT administrator for assistance.

11.2.4 Host Name Configuration

To specify a network hostname for the appliance, simply delete the default name in the **Host name** field and enter a new one.
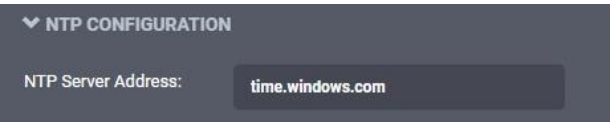
HOST NAME CONFIGURATION
Host Name: DEVICE-326ABA13

Using a network hostname can simplify remote connections to the appliance as you will not be required to know the IP address. This is particularly important in DHCP configurations as the IP addresses are subject to change based on the lease time specified by the DHCP server.

11.2.5 Using NTP Time Synchronization

The appliance supports date and time synchronization via NTP protocol. To enable NTP, enter the address of a valid NTP server in the field provided.

NTP CONFIGURATION
NTP Server Address: time.windows.com

11.2.6 HTTP Server Configuration

The HTTP port numbers provided are the standard default ports used by the appliance for the protocols listed.

support@ionodes.com | www.ionodes.com

- HTTP port by default is port 80
- HTTPS port by default is 443

These ports can be modified as required but should only be done if necessary and properly documented.

To select the authentication mode for the HTTPS connections, click the arrow on the **Authentication Mode** dropdown box to see the available choices. The available choices are **Basic** and **Digest** (Default).

To allow the appliance to accept secure HTTPS connections, select the **Accept HTTPS connections** checkbox.

To force all web connections to the appliance to use secure channels, select the **Accept HTTPS only** checkbox.

11.2.7 Bonjour Protocol Configuration

By default, the appliance is discoverable using the local domain.

If you need to segment device discovery into multiple domains, such as based on specific locations or functionality, a specific search domain can be provided.

You may disable Bonjour discovery by unselecting the **Bonjour Discovery Enabled** checkbox.

Note:	Disabling the Bonjour discovery will prevent external software and tools, such as the IonConfigTool, from discovering your appliance on the network.

11.3 User Accounts

The **User Accounts** tab allows you to manage the list of system user accounts. These user accounts differ from the Windows operating system user accounts.

The Windows user accounts are in place for controlling access to the following:

- Login to Windows interface, locally or remotely via remote desktop connections
- Features and functions of the operating system

The system user accounts discussed in this section are in place for controlling access to the following:

- HTTP based API – for integration to VMS and other software platforms
- Appliance web interface, local or remote access

Typically, Windows accounts are reserved for IT personnel while the system user accounts are set-up for system operators and security personnel.
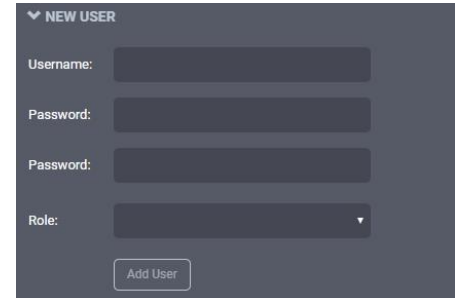
Note: Changing the usernames and passwords of the Windows accounts will NOT affect the system user accounts; they are two separate sets of user account lists.
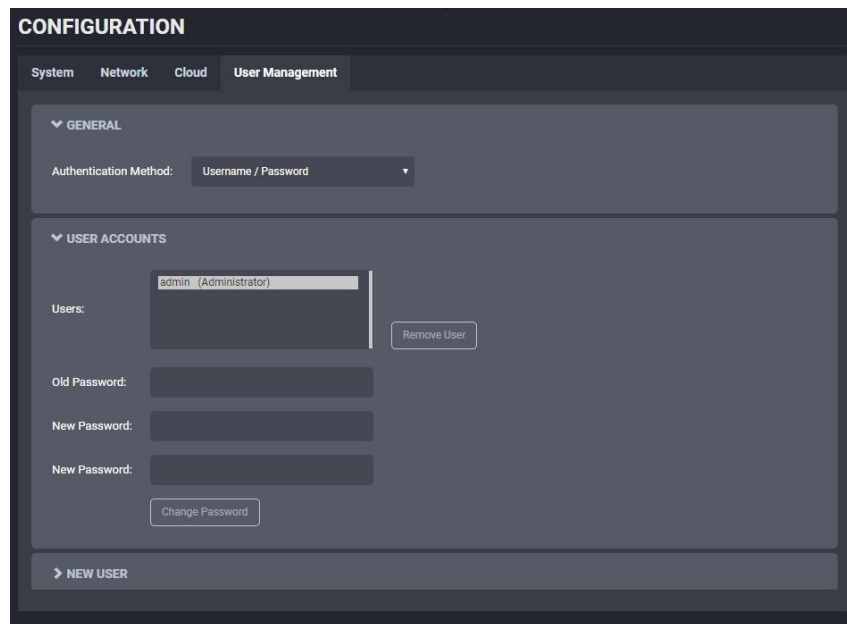
By default, the appliance contains only a single administrative user with username 'admin' and password 'admin'. The admin user account cannot be deleted; however, it is strongly recommended that you change the admin user password to avoid any unauthorized access to your system.

11.3.1 Adding a system user account

1. In the **New User** section, enter the desired **username**, **password** and **role** of the new user**.**
   a. The **User** role allows access to viewing only, no permission to change any settings
   b. The **Superuser** role allows access to viewing and changing any setting aside from the user accounts list.
   c. The **Administrator** role allows access to viewing and changing any setting in the system.

2. Click the **Add User** button.

3. Your request will be processed and a confirmation message will appear shortly after.

11.3.2 Changing the password of an existing system user account

1. In the **User Accounts** section, click on the user account for which you need to change the password.

2. Enter the **Old Password** as well as the **New Password** of the user into the required fields

3. Click on the **Change Password** button.

4. Your request will be processed and a confirmation message will appear shortly after.

### 11.3.3 Removing a system user account

1. In the **User Accounts** section, click on the user account you wish to remove.

2. Click on the **Remove User** button.

3. Your request will be processed and a confirmation message will appear shortly after.

12 System Maintenance

Several maintenance tasks can be performed on the HVR8 Series appliance via the web interface.

To access the available maintenance tasks, follow these steps:

1. Access the web interface locally or remotely. (see section 10.6)
2. Login with an administrator account.
3. Select the **Maintenance** tab on the left-hand side of the Interface window.
4. The available maintenance tasks will be displayed.
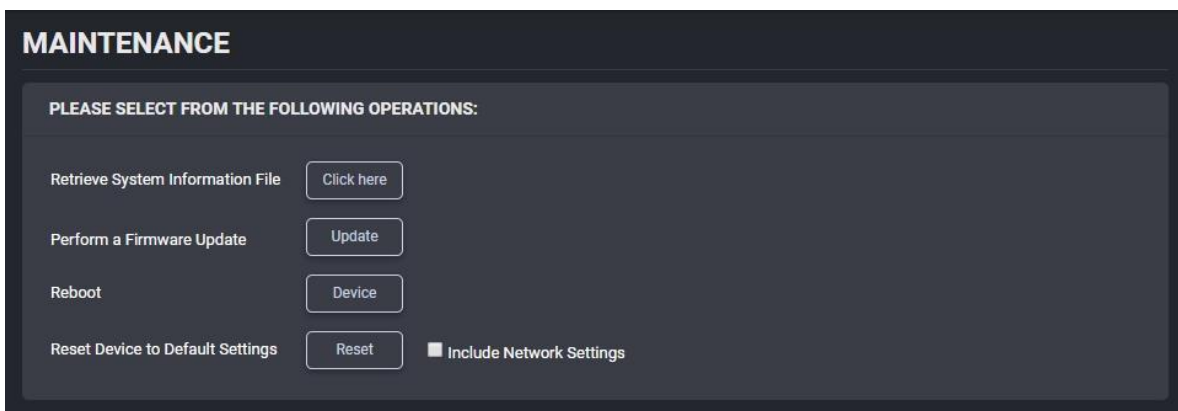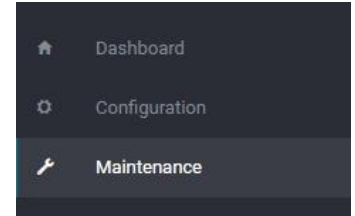
12.1 System Information File

The first option on the **Maintenance** page is **Retrieve system information file**. Clicking on this maintenance task will cause the appliance to generate a system information file which can be saved locally on your computer.

The system information file is an archive file containing configuration and diagnostics details of your appliance. The archive contains details on unit configuration, performance statistics, firmware update history and health check status. The purpose of the system information file is to help IONODES technical support staff in troubleshooting and resolving any system issues.

To generate a system information file:

1. Click on the **Click Here** link to the right of the **Retrieve system information file** label in the Maintenance window.
   a. A second web browser window will open while the system information is being created.

2. Once the second browser window closes, the file download dialog will open and ask if you would like to Open, Save or Cancel.
    a. To save the file to your local computer, click the **Save** button
    b. Click **Cancel** to stop the operation
    c. There is no need to open the file as it contains password protected system information

3. Once the file is saved, it can be sent via email to IONODES technical support for analysis.

12.2 Firmware Updates

The second option in the **Maintenance** tab is the **Firmware Update** task which allows you to update your appliance to the latest firmware version.

To update the appliance firmware:

1. From the **Maintenance** window, click on the **Update** button.
    a. You will be asked for the firmware update file
    b. Select the .iof file which was provided by IONODES (can be found at www.ionodes.com)

2. The following status messages will be displayed during the update:
    a. Firmware upload in progress... (100%)
    b. Firmware uploaded. Saving to internal storage... (0%)
    c. Validating and decompressing firmware... (0%)
    d. Firmware ready for installation. Rebooting device... (0%)

3. The web page will disconnect from the device while it is being rebooted to apply the new firmware.

4. You will be prompted for login once the device is up again.
    a. The 'Testing firmware stability...' status message will be displayed while the system validates the new firmware.

5. The 'Firmware update complete. (100%)' status message will be displayed once the process is completed.

12.3 Factory Default Configuration

The fifth option in the **Maintenance** tab is the **Reset** task which allows you to reset your appliance to the factory default settings. Note that this operation will not reset your network settings.

To return your appliance to factory default:

1. From the **Maintenance** window, click on the **Reset** button.

2. The appliance will apply the default settings and may reboot to return to factory defaults.

13 System Image Recovery

In the event your system has become corrupted or unusable in any way, or you simply wish to reload your system to its factory default operating system image, the appliance offers an image recovery mechanism. This mechanism will restore your unit to the original factory deployed state.

Doing so will delete all data on the boot drive of the system; any applications or data files which were not part of the original factory image will be lost. No information on the internal or external video recording hard drive(s) will be affected by the recovery of the factory image.

This procedure must be performed locally with a mouse, keyboard and monitor connected to the appliance being restored.

1. Reboot your HVR8 series appliance
2. During the initial boot up, continuously press on the F7 key on the keyboard
3. The **Please select boot device:** window will appear
4. Select the **Windows Boot Manager (P1: InnoDisk Corp. – mSata 3ME3** option
5. Hit Enter on your keyboard followed IMMEDIATELY by F8 repeatedly in order to go to the **Advanced Boot Options** screen
6. Select **Repair Your Computer** and hit Enter
7. The operating system will start in **Safe Mode** and present the recovery application window
8. Click on the **Start Recovery Process** button to restore the factory image
9. Click **Yes** to confirm you want to proceed
10. The current system image will be deleted and replaced with the default factory image
11. Click **OK** to complete the recovery once the process has finished.

Once completed, the unit will reboot and once back online will be back to the factory image.

14 Troubleshooting

14.1 The device does not seem to start

- Verify that the power supply is connected to the power supply plug on the back of the chassis

- Verify that the power supply can provide enough power, according to the specifications of the device (this will depend on the number of external PoE devices connected)

14.2 Nothing is displayed on the HDMI / DisplayPort video output

- Make sure you connect your display device prior to powering up the device
- Make sure you are directly connected to a digital display device - HDMI or DisplayPort
- If none of the above resolves the issue, validate that the HDMI/ DisplayPort cable and monitor are operating correctly by using a different digital video source

14.3 Cannot discover the HVR8 via IonConfigTool or communicate with it via the network

- Make sure you have connected the device to your network via one of the ETH ports
- Make sure you are in the same network segment
- Make sure the Green LED on the RJ45 connector is lit. If it is not lit, verify the network connectivity with the network switch. You can try to connect the network cable to another ETH port to verify if a problem is localized to a specific ETH port.
- The device is discovered with the IonConfigTool (ICT) via the Bonjour protocol and requires multicast networking to be supported by your network and switch equipment

14.4 Component failures

14.4.1 Boot drive failure

The HVR8 Hybrid Cloud NVR allows the boot disk to be restored in case of boot failure or corruption. This is done by a device-specific Recovery Disk that is created by IONODES Technical Support.

On request, the HVR8 Recovery Disk image will be created and made available for download to the customer. The image can then be written to an external hard drive or USB key in order to boot the HVR8 device and proceed to a complete boot disk recovery.

Please contact our support department. Our coordinates can be found on the last page of this manual.

14.4.2 Storage drive failure

In order to replace a faulty storage drive please follow these steps:

1) Unscrew the 4 screws on the back of the chassis (2 on the left-hand side and 2 on the right-hand side) using a Philips-head screwdriver

2) Flip the chassis over so that the bottom is facing upwards and unscrew the 3 screws marked below with a Philips-head screwdriver

3) Carefully lift the bottom plate of the chassis from a side; the internal 3.5" HDD for storage is affixed to the panel via 4 screws with shock absorbers. By removing the screws, as well as the SATA power + data cables (marked below), you'll be able to swap the drive with a new one.
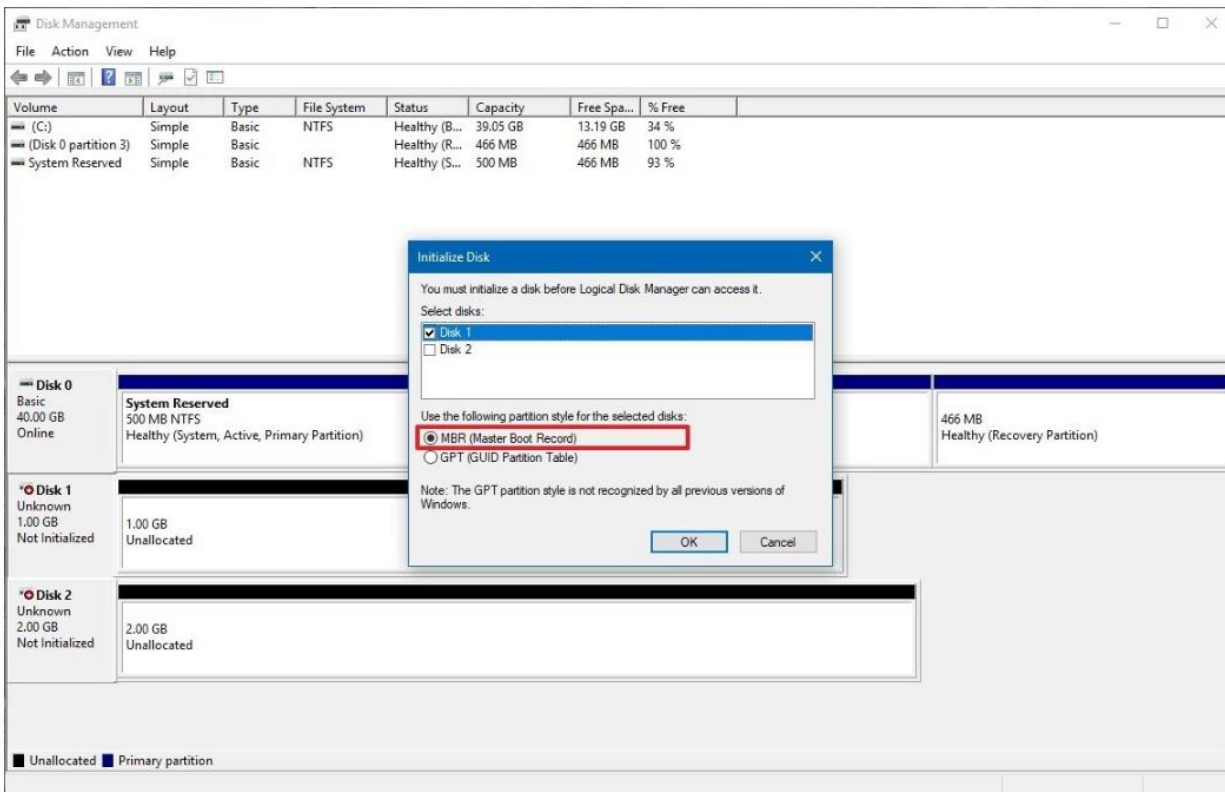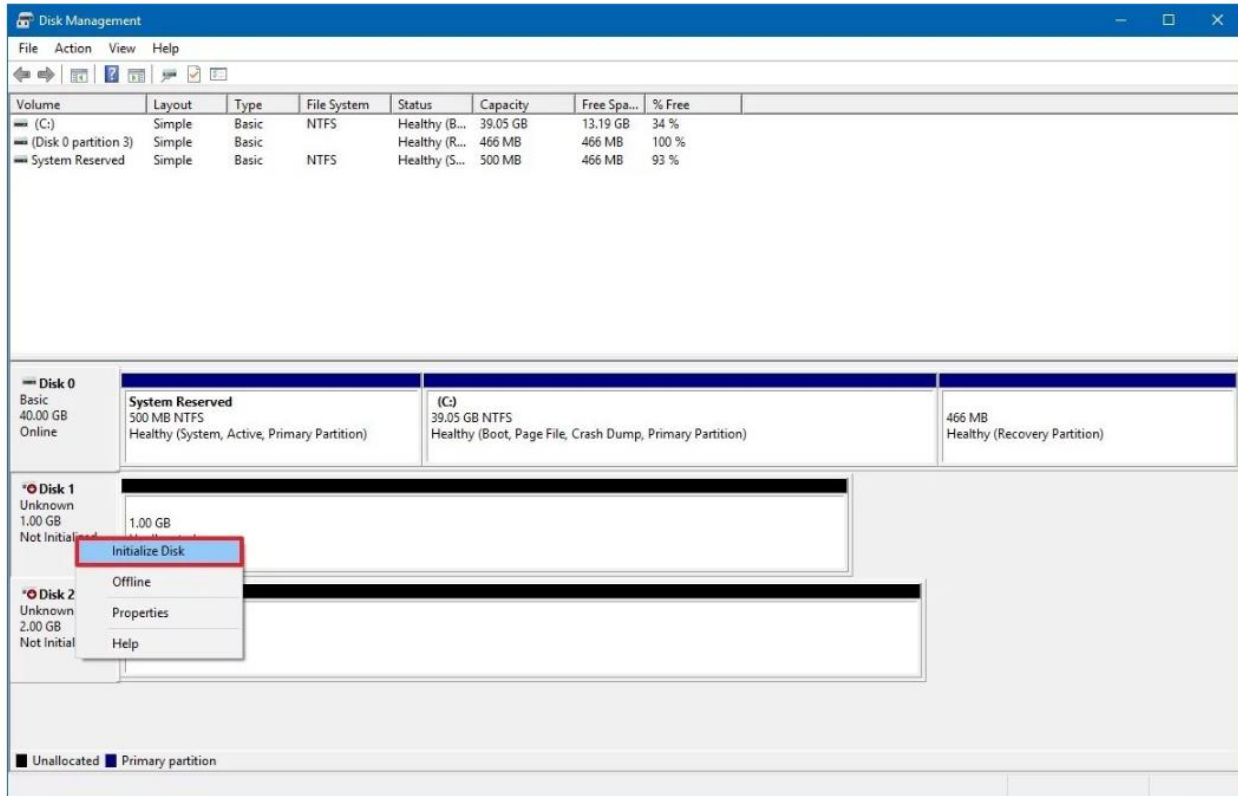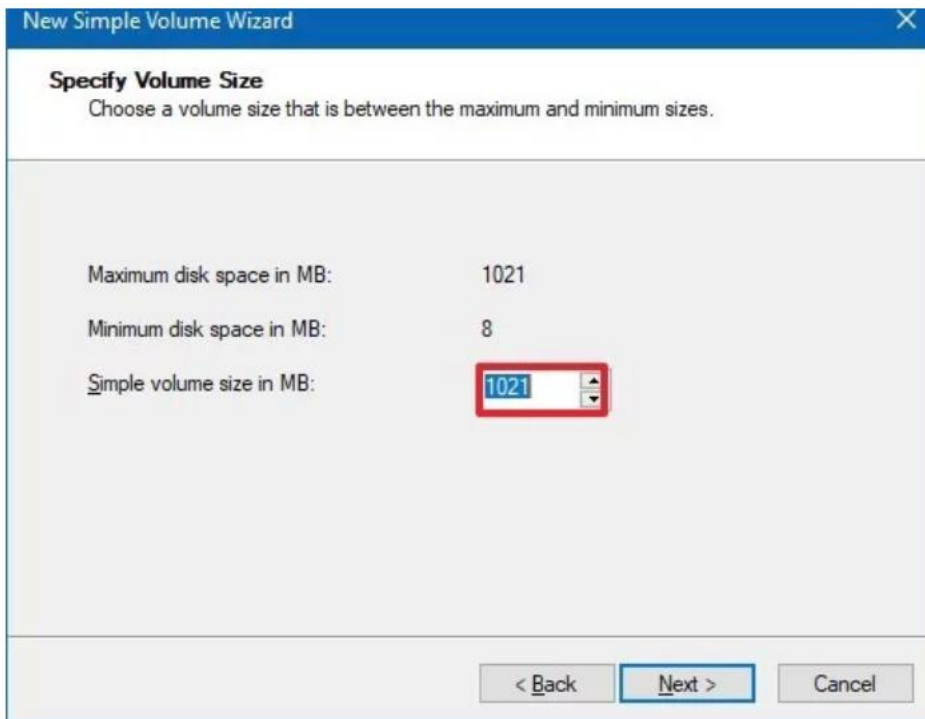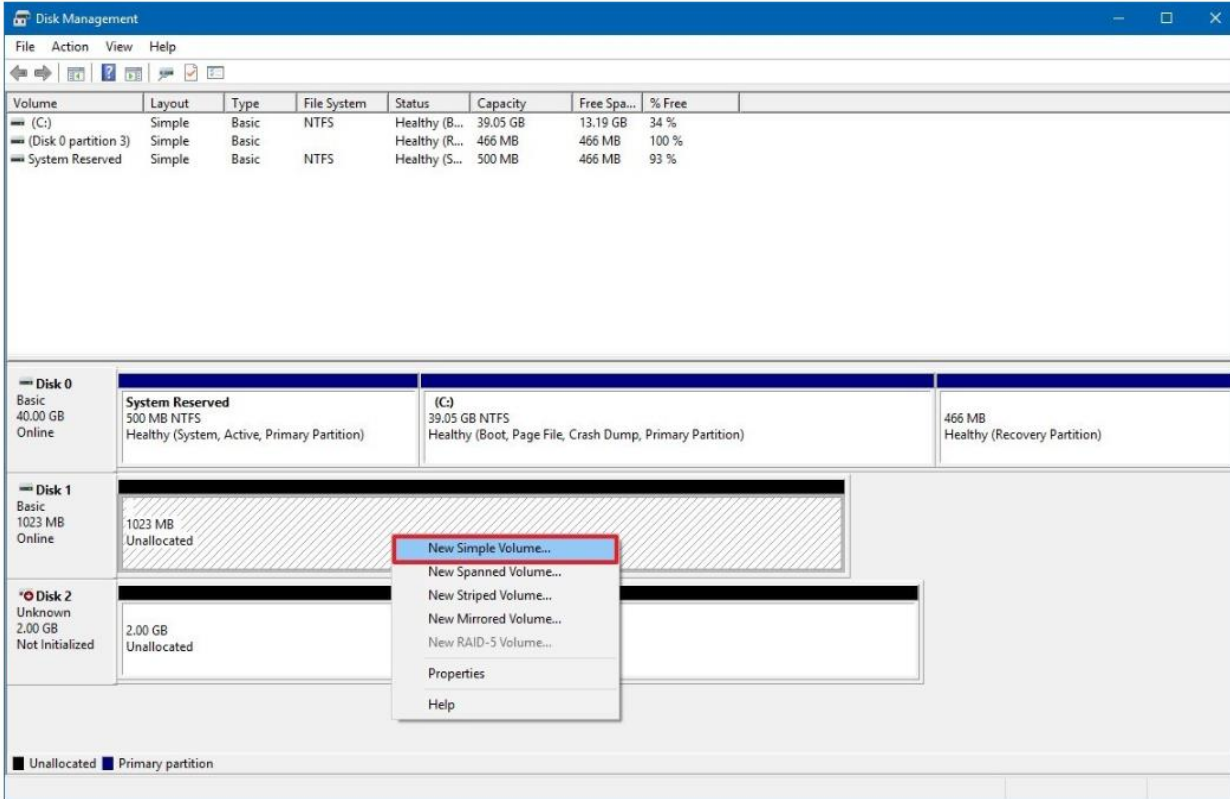
After the hardware installation is done, the new drive will need to be initialized and formatted in Windows OS before it can be used.
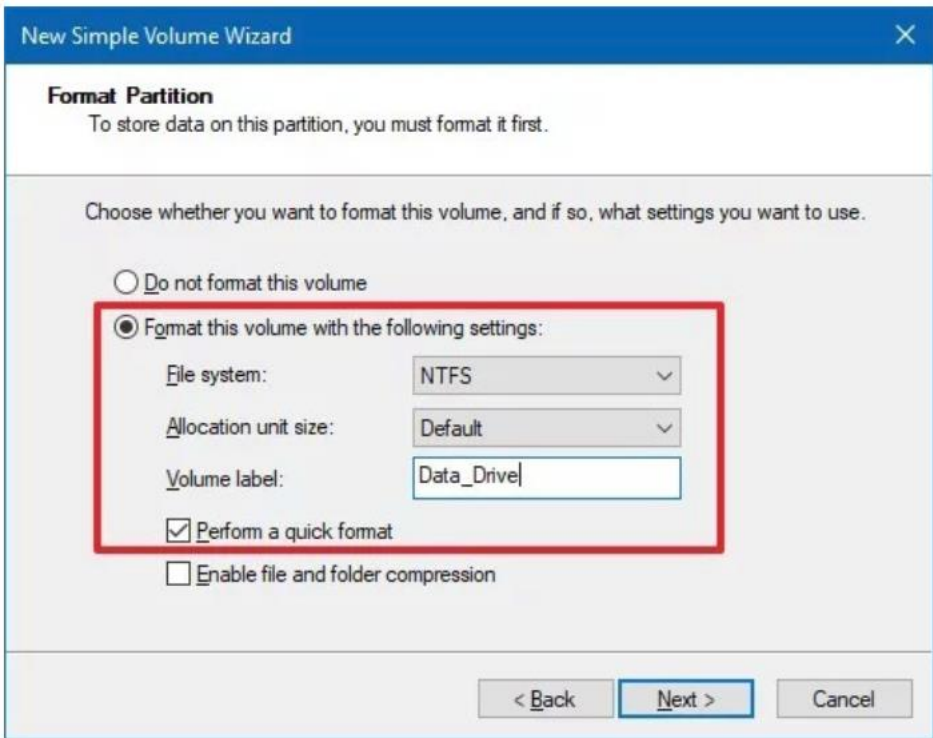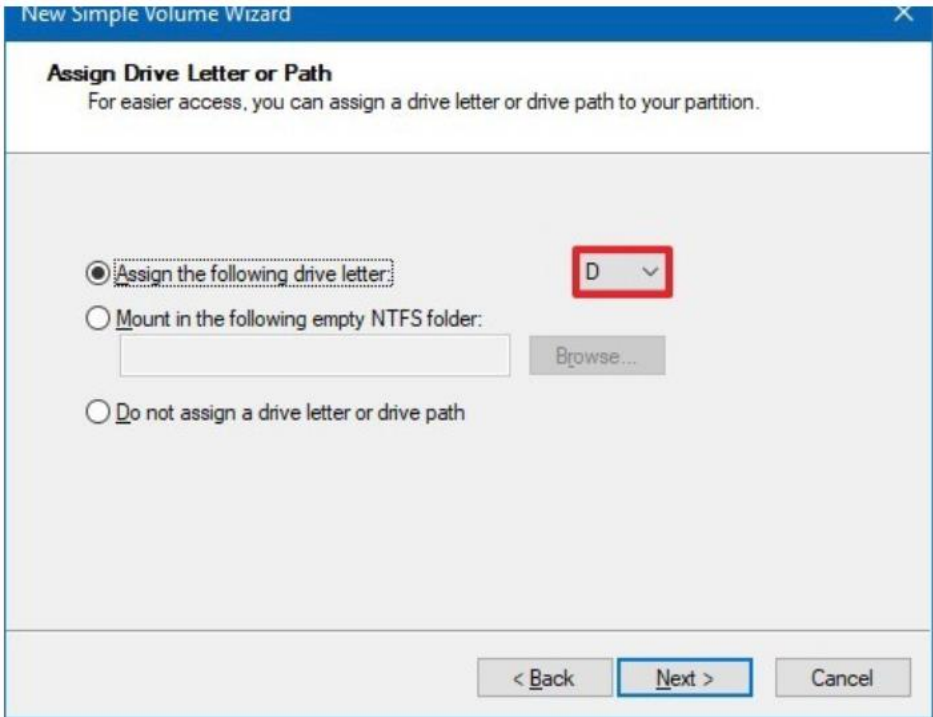
Please see below the steps to do that:

1) Open **Disk management** tool from Windows OS.

2) Right-click the hard drive marked as "Unknown" and "Not Initialized," and select **Initialize Disk**.

3) Select the partition style:
- Master Boot Record (**MBR**) for hard drives smaller than 2TB in size.
- GUID Partition Table (**GPT**) for hard drives larger than 2TB in size.

4) Right-click the Unallocated space, and select the **New Simple Value** option.

5) Under the "Simple volume size in MB" section, leave the **default size** if you're planning to use the entire hard drive to store files. Otherwise, specify the amount of space in megabytes that you want to allocate for the partition.

6) Use the "Assign the following drive letter" drop-down menu to select a letter for the new hard drive.

7) Use the "File system" drop-down menu, and select **NTFS** (recommended for Windows 10).

8) Use the "Allocation unit size" drop-down menu, and select the **Default** option.

9) In the "Value label" field, type a descriptive name for the drive, such as "*Data_Drive*".

10) Check the **Perform a quick format** option. If you prefer a full format, clear the quick format option. Just keep in mind that depending on the size of the drive, it can take hours to finish.

11) Unless necessary, clear the **Enable file and folder compression** option.

After completing the steps, the new hard drive will be initialized, partitioned, and properly formatted.

New Simple Volume Wizard

Assign Drive Letter or Path
For easier access, you can assign a drive letter or drive path to your partition.

◉ Assign the following drive letter: D

○ Mount in the following empty NTFS folder:
Browse...

○ Do not assign a drive letter or drive path

< Back   Next >   Cancel

New Simple Volume Wizard

Format Partition
To store data on this partition, you must format it first.

Choose whether you want to format this volume, and if so, what settings you want to use.

○ Do not format this volume

◉ Format this volume with the following settings:

File system: NTFS

Allocation unit size: Default

Volume label: Data_Drive

☑ Perform a quick format

☐ Enable file and folder compression

< Back   Next >   Cancel

15 Getting Help

You can get help from the IONODES technical support team in many different ways:

- By sending an email to support@ionodes.com
- By calling our office during regular work hours at:
    - +1 (844) 696-1060 (Toll Free North America)
    - +1 (450) 696-1060

Our technical support team is trained to support you with installation as well as maintenance of your IONODES products.