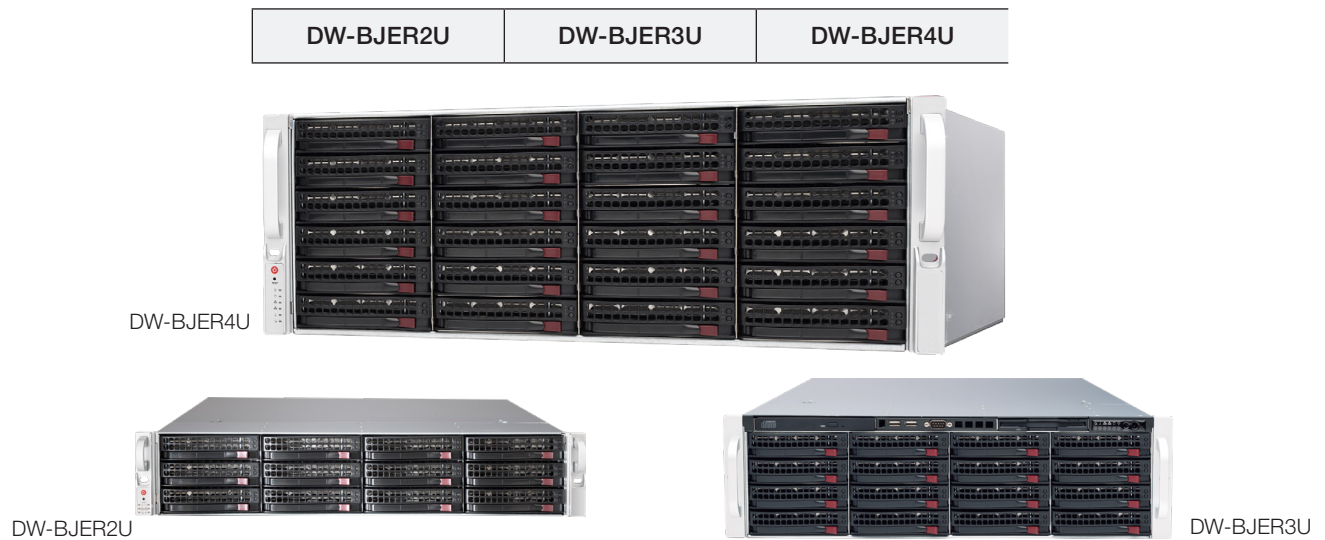# Blackjack® E-RACK

Servers Powered by DW Spectrum® IPVMS

State of the art hyper-optimized video management platform designed for ease, speed and efficiency.
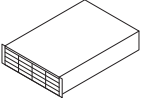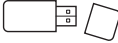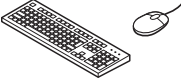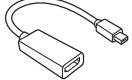
Blackjack® E-RACK — Up to 128 2.1MP Cameras (1080p True HD Resolution)

DW-BJER2U	DW-BJER3U	DW-BJER4U

DW-BJER4U

DW-BJER2U

DW-BJER3U

Default Login Information for DW Spectrum® IPVMS

Username: **admin**	Password: **admin1234**

WHAT'S IN THE BOX							
E-RACK Server		1 Set	Recovery USB (LX models only)		1 Set	Power Cable		2 Set
Quick Start Guide		1 Set	Keyboard and Mouse		1 Set	miniDP to True HD Output Adapter		4 Sets

NOTE: Download All Your Support Materials and Tools in One Place

1. Go to: **http://www.digital-watchdog.com/support-download/**
2. Search your product by entering the part number in the '**Search by Product**' search bar. Results for applicable part numbers will populate automatically based on the part number you enter.
3. Click '**Search**'. All supported materials, including manuals, Quick Start Guides (QSG), software and firmware will appear in the results.

**Attention: This document is intended to serve as a quick reference for initial set-up.
See the DW Spectrum full manual for more information on features and functionality.**

BLACKJACK E-RACK HARDWARE
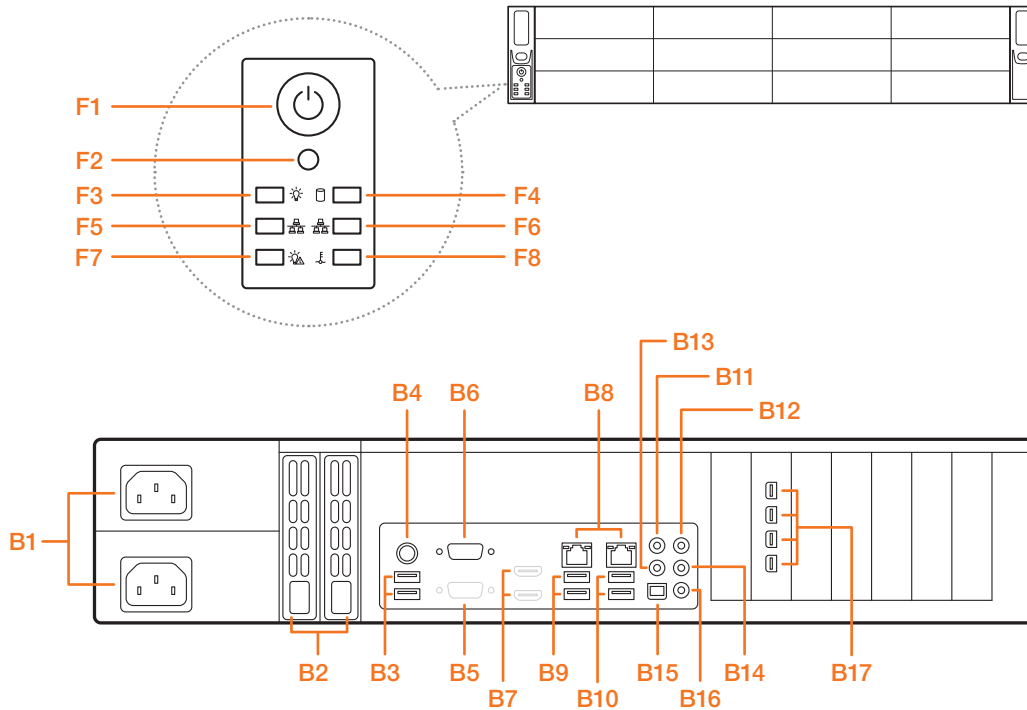
F1 Power Button
F2 Reset / Reboot System
F3 Power LED
F4 HDD LED
F5 Network 1 LED
F6 Network 2 LED
F7 Power Failure LED
F8 Overheat LED

B1 Power - SMPS
B2 2x SSD Drive Bay for OS
B3 2x USB 2.0 Ports
B4 Keyboard / Mouse Connector
B5 VGA Port (Disabled)
B6 Serial Port
B7 2x HDMI Ports (Disabled)
B8 2x Network Ports
B9 2x USB 2.0 Ports
B10 2x USB 3.0 Ports
B11 Center / LFE Out
B12 Line In
B13 Surround Out
B14 Line Out
B15 SPDIF Out
B16 Mic In
B17 Mini Display Ports

Default Login Information for Pre-Installed DW Spectrum® IPVMS

Username: **admin**	Password: **admin1234**

> **NOTE** VGA and HD outputs are DISABLED on the back of the NVR. For local monitoring connection, please use the 4x mini display ports on the right side of the hardware (B17). Use the mini DP to DVI and DVI to HDMI converters included in the E-RACK's accessory box.

SPECIFICATIONS E-RACK

| MODEL		Blackjack E-RACK 2U - 12 Bay	Blackjack E-RACK 3U - 16 Bay	Blackjack E-RACK 4U - 24 Bay	Blackjack E-RACK 4U - 36 Bay
Maximum IP Cameras		128			
Included IP Licenses		8			
Form Factor		Rack Mount			
Operating System	Windows® 10 64 bit	DW-BJER2UXXT	DW-BJER3UXXT	DW-BJER4UXXT	
	Linux® Ubuntu®	DW-BJER2UXXT-LX	DW-BJER3UXXT-LX	DW-BJER4UXXT-LX	
	OS on SSD	2x 150GB SSD (1 RAID Mirrored)			
CPU		Intel® i7® Processor			
Memory		16GB			
NIC		2x Gigabit Ethernet (RJ45)			
System	Max Video Storage Rate (Mbps)	600 Mbps			
Storage	Maximum Hard Drives	2 x SSD + 12 x HDD	2 x SSD + 16 x HDD	2 x SSD + 24 x HDD	2 x SSD + 34 x HDD
	Maximum Storage	44TB RAID 5	90TB RAID 5	198TB RAID 5	210TB RAID 5
Video-Out	Outputs	4x HD Display Port Outputs, Simultaneous Monitors			
	Video Card	AMD FinePro W4100			
Keyboard & Mouse		Included			
Railkit		Included			
Power		Dual 920W**, Redundant Power Supply			Dual 1280W**, Redundant Power Supply
Operating Temperature and Humidity		41°F-104°F / 20-90% RH			
Dimension (WxDxH) (inches)		17.2" x 25.5" x 3.5"	17.2" x 25.5" x 5.25"	17.2" x 25.5" x 7"	
Warranty		5 Year Limited			

* The actual size will differ, depending on the RAID configuration. The actual size HDD with RAID6 = the total size of the HDD - 2HDD size.

** UPS Recommended

2

SETTING UP THE E-RACK

STEP 1:   Connect Peripherals, power and network

1. Connect a monitor, USB keyboard, USB mouse and network cable to one of the ethernet ports (B8 on the diagram) Configure the camera network first then will configure local network later.
2. Connect the server to an appropriate power source. Recommend to use UPS system
   *recommend to use 3000VA or higher.
3. Turn on the server if the server does not turn on automatically.
   (Press the Power Button on the front of the E-RACK. F2 on the diagram).

   * Connecting the power cable to the live power source may turn on the server automatically

PoE Switch for cameras
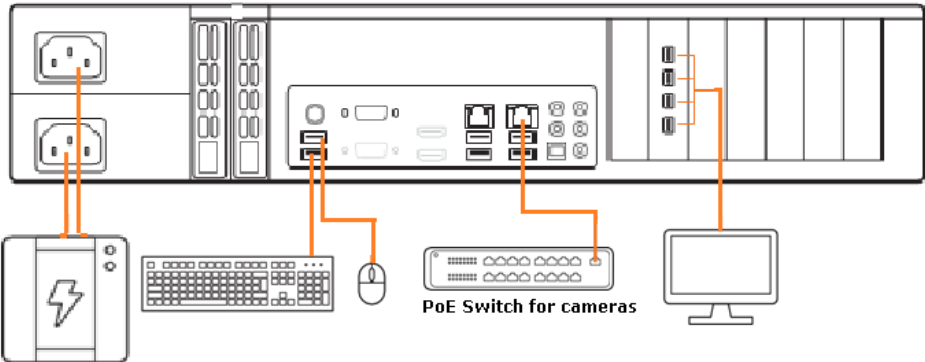
STEP 2:   Configure Date and Time

Windows
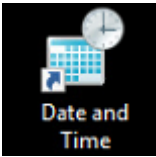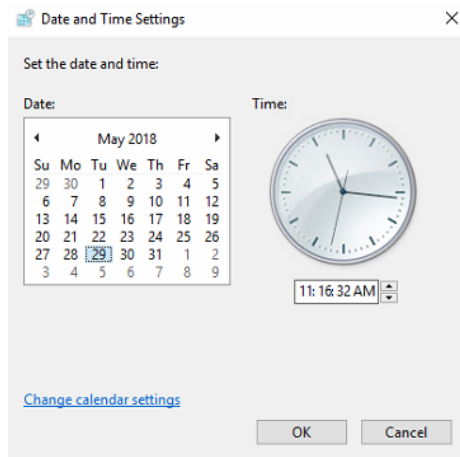

1. Double click Date and Time icon on the Desktop.
2. Change Time zone if not correct   (default is UTC-08:00 Pacific Time)
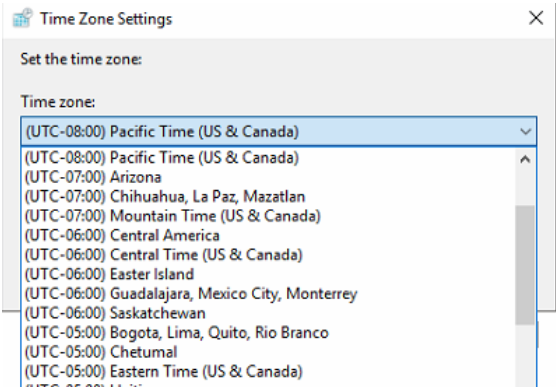
Press OK after selecting the correct Time zone.

Click Change date and time… to update the date and time if they are not correct.   .

* Verify the Time zone before updating the date and time. Time may show 2 or 3 hours off due to incorrect Time zone.
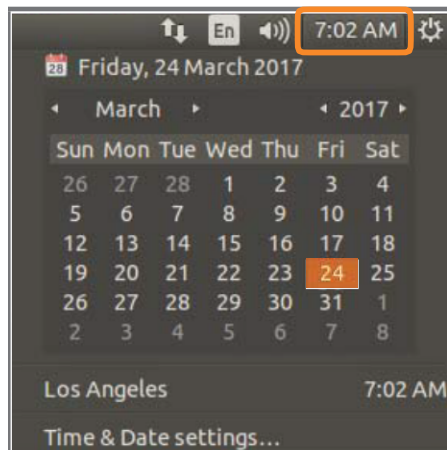
Press OK after adjusting to the correct date and/or time.

4. Press OK to close Date and Time when done.

Linux

1. Update Date and Time by clicking on the time on the upper right-hand corner then click "Time & Date settings…"

2. If the server will be connected to the Internet, leave Set the Time to "Automatically from the Internet" and update the Location to the correct Time Zone. Enter the nearest major city to select the correct Time Zone. If it shows multiple cities in the list, select the correct city. (e.g., New York for EST, Chicago for CST, Denver for MST, and Los Angeles for PST)
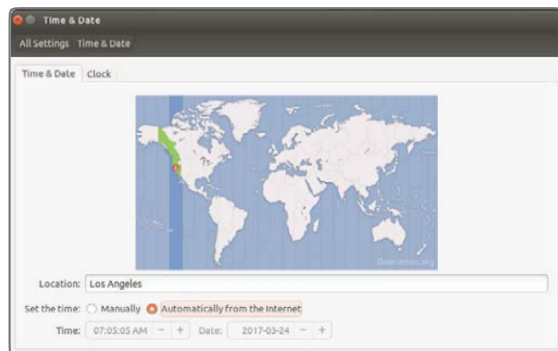
3. Click X on upper left corner of the Time and Date window when done.
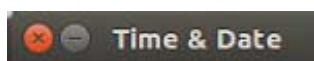
* Closing the window will automatically save the changes made.

STEP 3: Configure Network

Please have the following information ready before starting the network configuration.

	Camera Network	Local Network (LAN)
IP Address		
Subnet Mask / Netmask		
Default Gateway / Gateway	Not Applicable	
DNS Servers	Not Applicable	

* Camera Network and Local Network cannot be on the same network.

> **NOTE** The Blackjack Cube's network settings are set to DHCP as default.

> **NOTE** If you are not sure what information to enter, contact your Network Administrator or Internet Service Provider for the information.
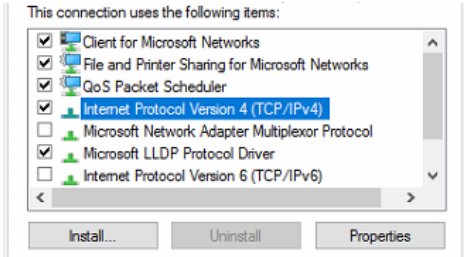
Windows

1. Double click Network Connections on the Desktop

2. Right click on the Ethernet with cable connected and click Properties.
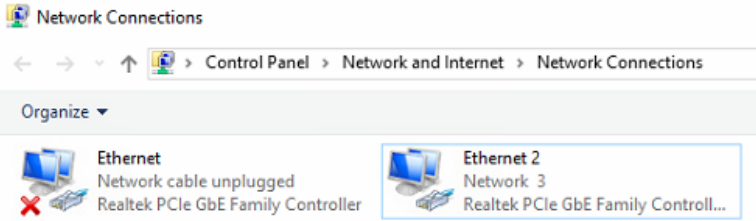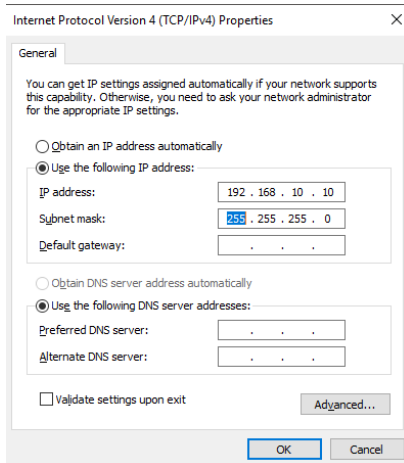

3. Click Internet Protocol Version 4 (TCP/IPv4) and click Properties
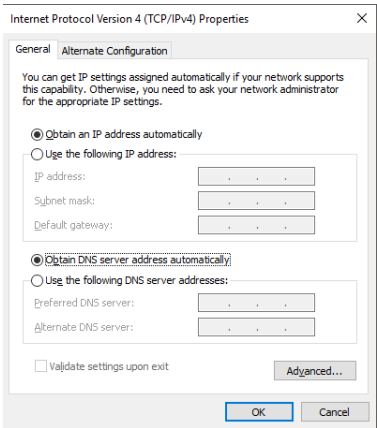
4. Select Use the following IP address (Use the following DNS server addresses will be selected automatically)

5. Enter IP address and Subnet mask of the camera network. (do not enter anything for the Default gateway, Preferred DNS server and Alternate DNS server.

NOTE It must be the same network as the cameras and must not be the same network as the local network. Contact your network administrator for more information.
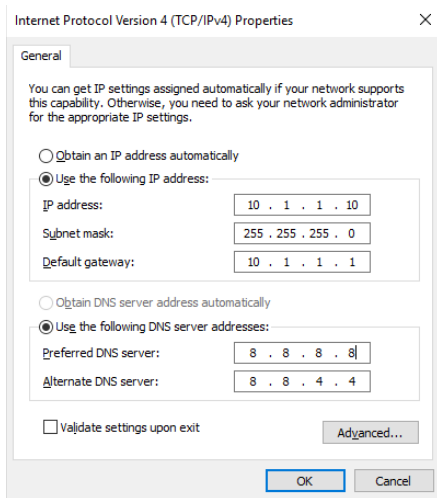

6. Click OK to close then click Close to go back to Network Connections.

Local Network

7. Right click on the other Ethernet, the one with network cable unplugged, and click Properties.

8. Click Internet Protocol Version 4 (TCP/IPv4) and click Properties
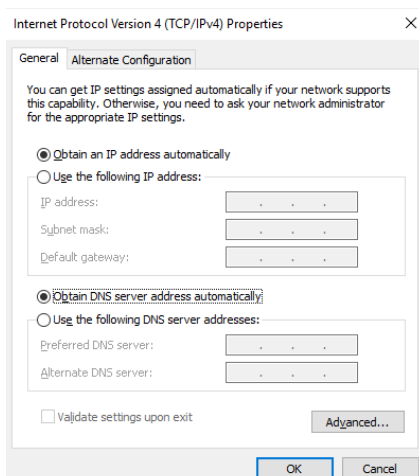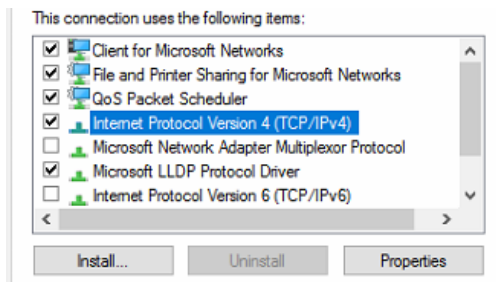
9. Select Use the following IP address (Use the following DNS server addresses will be selected automatically)

10. Enter IP address and Subnet mask of the camera network.

11. Click OK to close then click Close to go back to Network Connections.

12. Connect a network cable to the Ethernet port B8 on the diagram (page 2) to the switch on the local network.

13. Close the Network Connections by clicking X on the upper right corner of Network Connections.
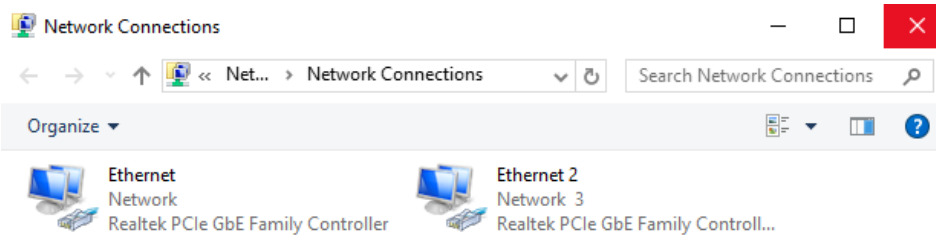
Linux

1. Double-click the Network icon on the Desktop

> **NOTE** The Blackjack Cube's network settings are set to DHCP as default.

2. Select 'Wired' that has arrows pointing up and down from the list (If neither of the "wired" are showing arrows up and downs, then make sure the network cable is connected to the PoE switch on the camera network from **STEP 1**)

3. Click 'Options' at the bottom of the window.

4. Click on the 'IPv4 Settings' tab.

5. From the drop-down menu, select connection type ("Method") as Manual.

6. Click 'Add' next to Addresses.

7. Enter IP Address then press Tab on the keyboard to move to Netmask.
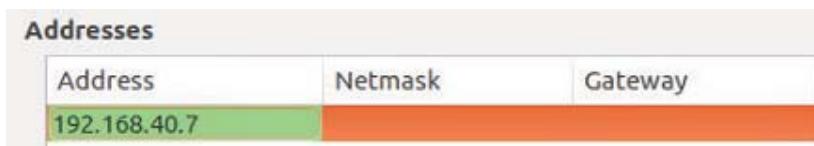
8. Ignore any populated values and enter the valid Netmask value, then press Tab on the keyboard to move to the Gateway.

9. Enter the Gateway address if required then press Enter on the keyboard.

* Gateway is not required on the camera network.

> **NOTE** It must be the same network as the cameras and must not be the same network as the local network.
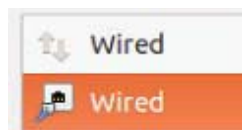> Contact your network administrator for more information.

10. Click 'Save' to save the settings.

11. In the Network Settings main page, make sure the Wired Status is marked as "Connected" or Managed" With the IP Address displayed.

Local Network

12. Select Wired with picture of network port and repeat 2 to 8 of STEP 3 Configure Network.

13. Click on the DNS Servers field box and enter DNS server address.

14. Click Save.

15. Connect a network cable to the Ethernet port B8 on the diagram (page 2) to the switch on the local network.

16. Verify the network is Connected.

> **NOTE** If you are not connecting to the Blackjack® from within the same network, you may be required to perform port forwarding on your router to access the server. Contact your Network Administrator or Installer for additional information

CONFIGURE CAMERAS USING DW IP FINDER

Refer to the camera's QSG to configure Digital Watchdog camera's IP address using DW IP finder.
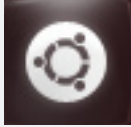
Spectrum Client

Linux OS

LINUX-BASED SOFTWARE MANUAL LAUNCH
To launch the DW Spectrum® Software on the Linux-Based E-RACK

OPTION 1: Double-click the DW Spectrum® desktop icon.

OPTION 2: Go to the dashboard on the top left side. Search 'DW'. Click the DW icon.
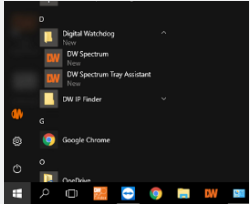
OR

Windows

WINDOWS-BASED SOFTWARE MANUAL LAUNCH
To launch the DW Spectrum® Software on the Windows-Based E-RACK:

OPTION 1: Double-click the DW Spectrum® desktop icon.

OPTION 2: Go to 'Start' on the bottom left and select DW Spectrum® in the Digital Watchdog folder
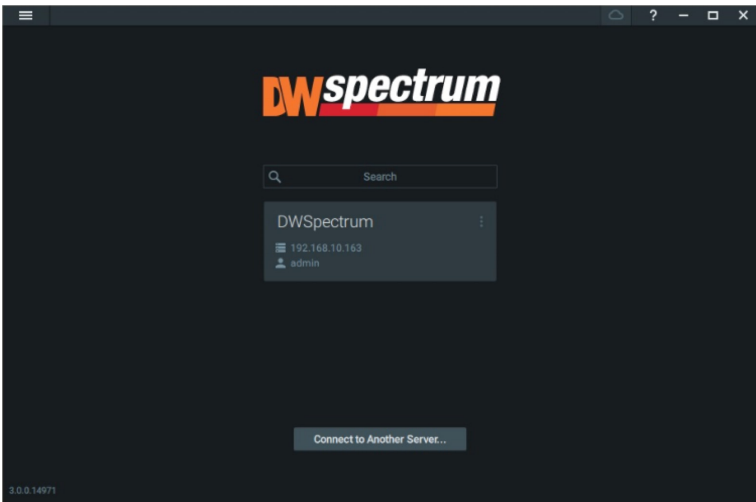
OR

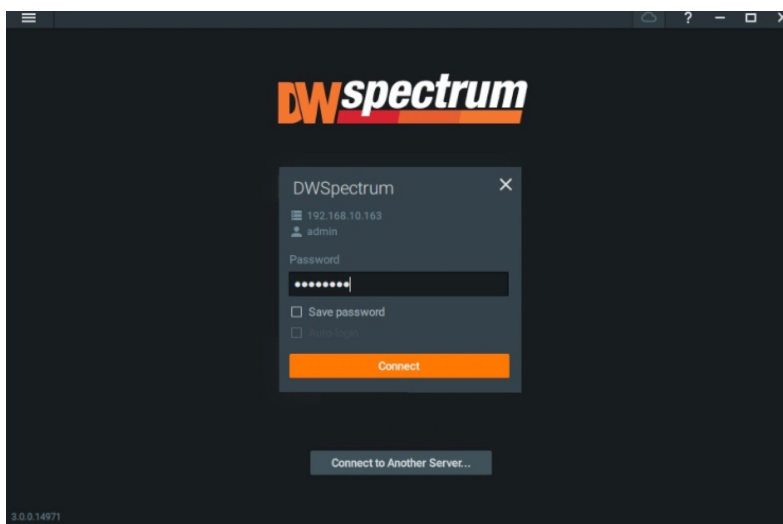# SETTING UP DW SPECTRUM® MEDIA SERVER

Login : admin
Password : admin1234

STEP 1: Initial run from Blackjack® server

1. Open DW Spectrum® Client by double click on the DW Spectrum icon
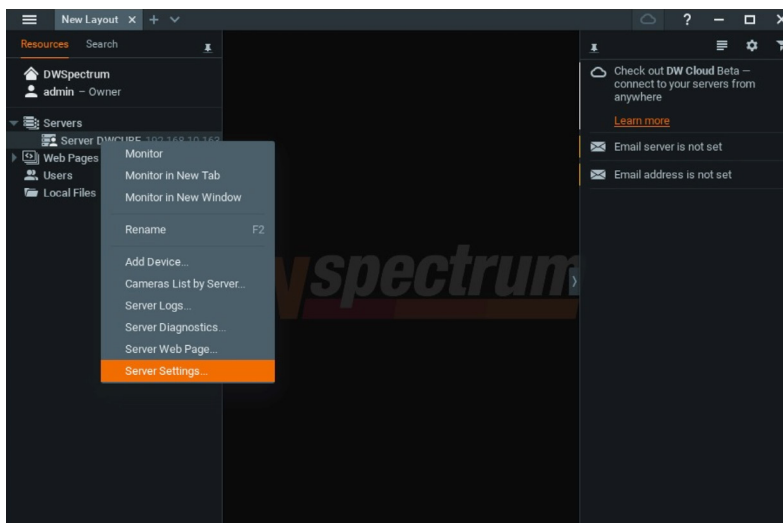
2. Click on the preconfigured server.

9

3. Enter password and click connect.

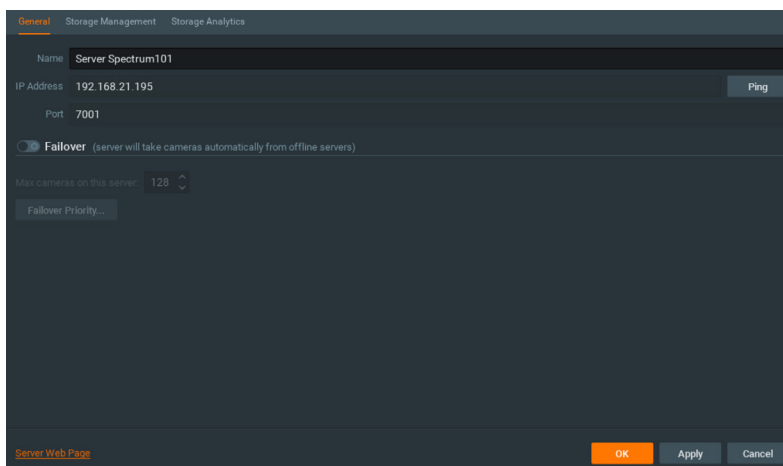   * Default password : **admin1234** (case sensitive)

STEP 2: **To rename the server**

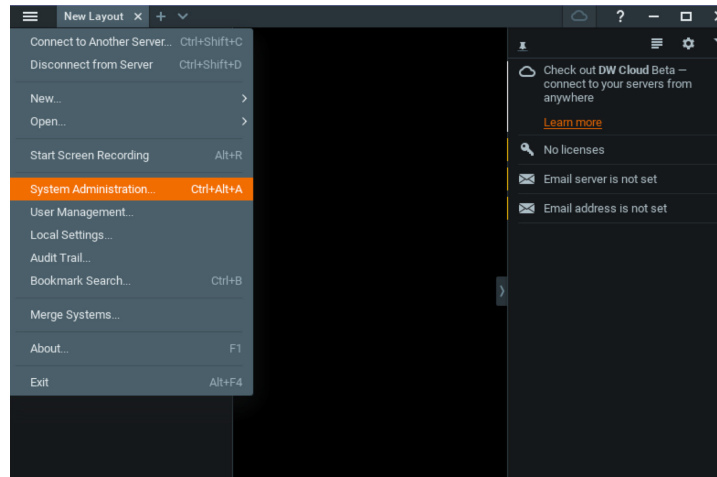1. Right click on the server name listed on the Resources then click Server Settings.

2. Go to General tab, then type in the new server name in the Name field and click OK.
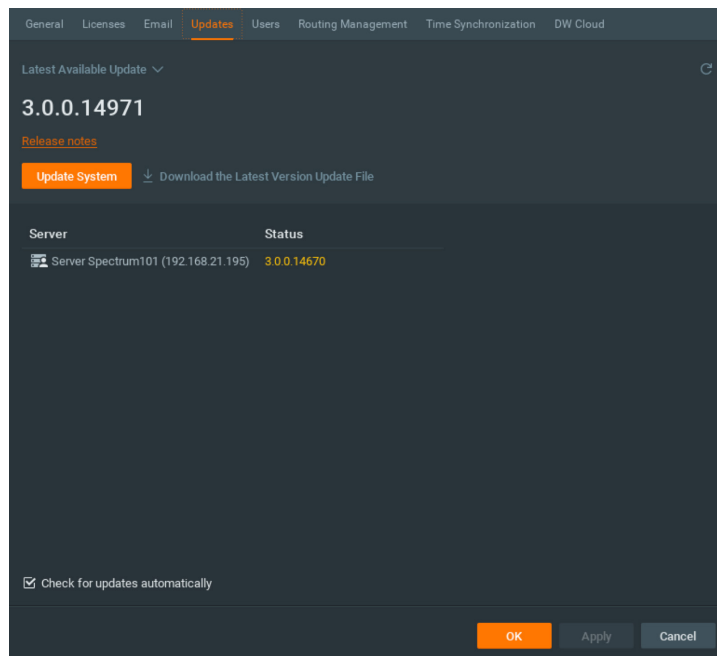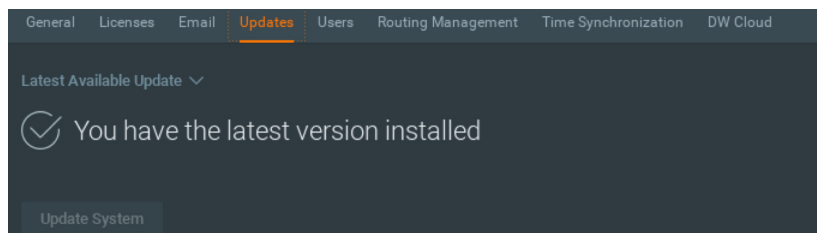
STEP 3: **To check for update**

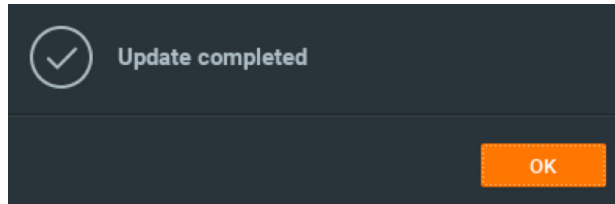1. Click on the menu [≡] then click System Administration.

2. Go to Updates tab. Click Update System if turned orange.

* If you are on the latest version, it will say "You have the latest version installed" and the Update System button will be greyed out.
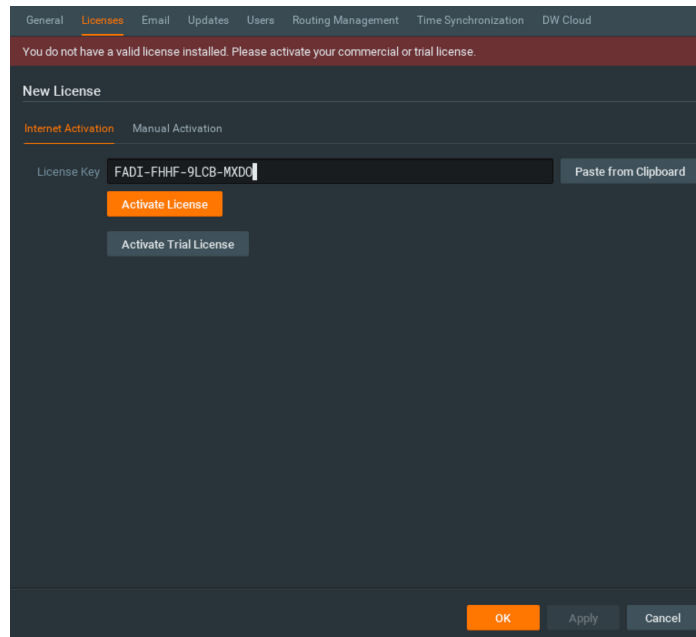
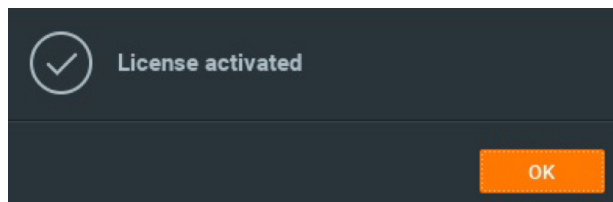**3.** Click OK when update is completed.

Enter License

1. Go to System Administration then click License tab.

2. Enter License Key then click Activate License button. (Internet connection required)
   * Click on Activate Trial License if you have not purchased the valid license.

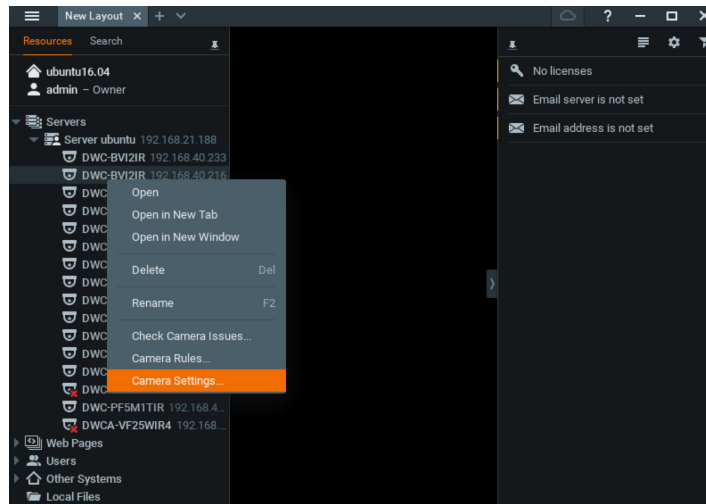

3. Click OK to when the License is activated.

STEP 5: Configure recording

1. Right click on the camera to setup recording, then click Camera Settings.

2. Go to Recordings tab.
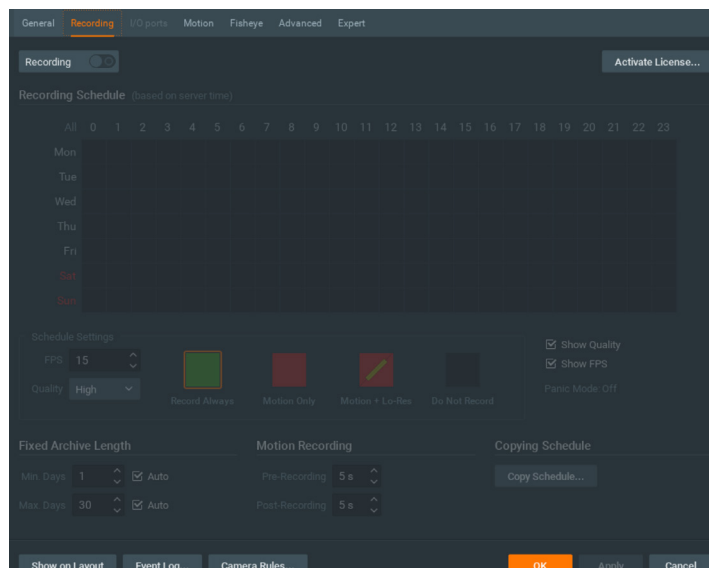
3. Click [Recording] to turn on recording.

4. Configure Schedule Settings for Quality, FPS and Recording Type.

5. Click and drag mouse over the Recording Schedule to assign the recording setting.

13
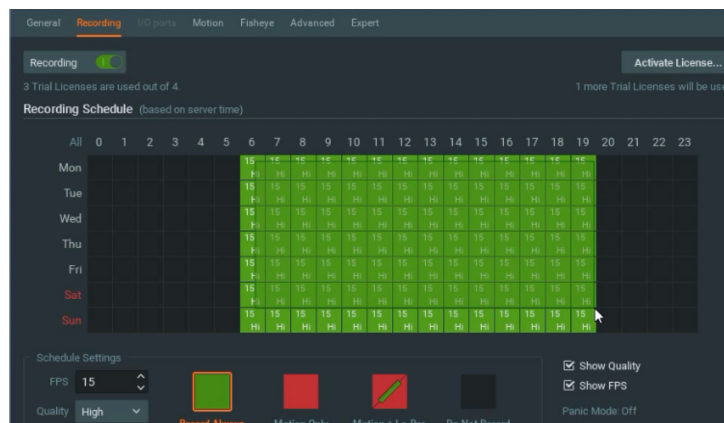
* Click on All to apply to the all schedules.
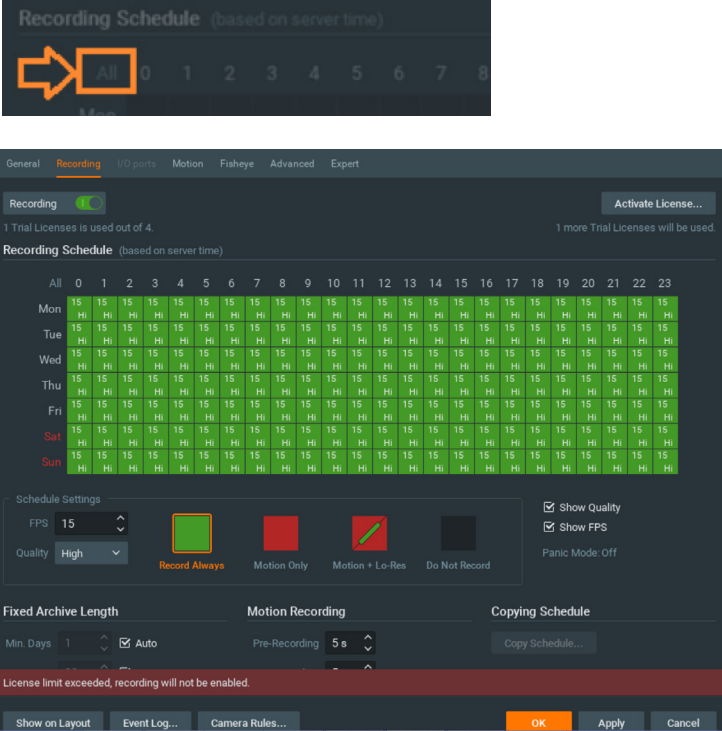
6. Red dot will appear next to the camera when the recording is started.

14
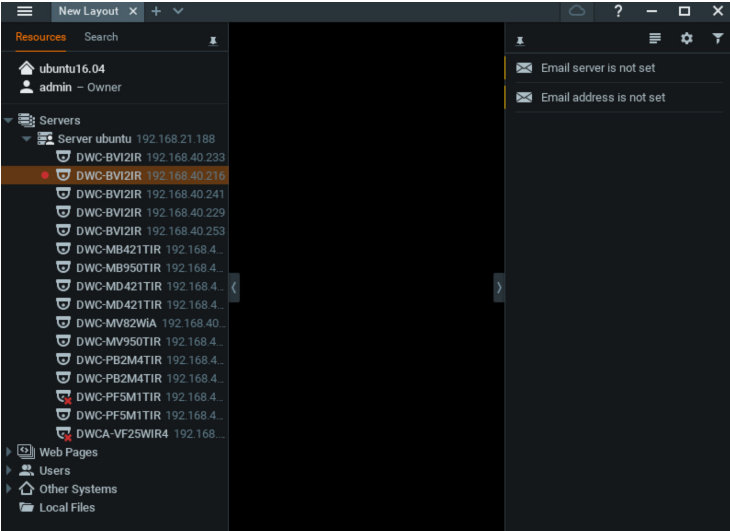
STEP 6: **Backuping Database**

1. Go to System Administration and click General tab.
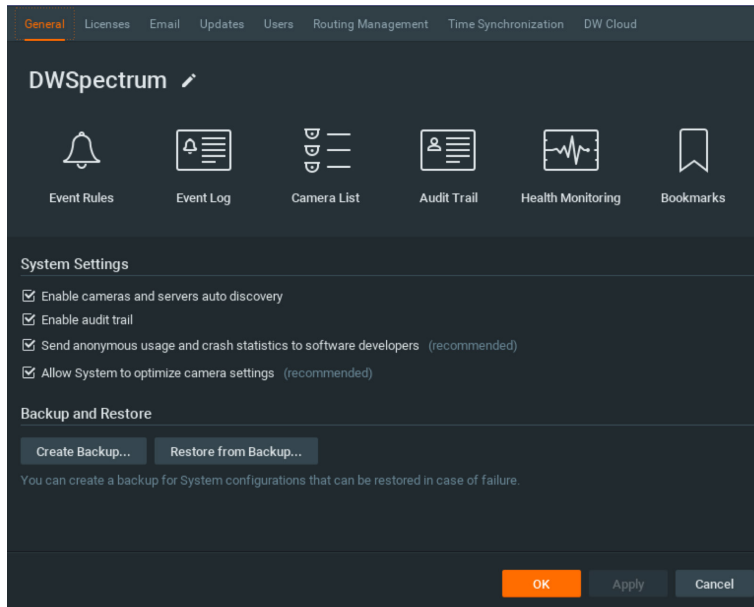
2. Click Create Backup… button.

3. Navigate to the folder where to save and enter name of the backup file then click save.

   * Strongly recommend to also backup to the external storage media.

NOTE: More information and instructions are available in the Spectrum 3.0 Manual.

TROUBLESHOOTING TIPS

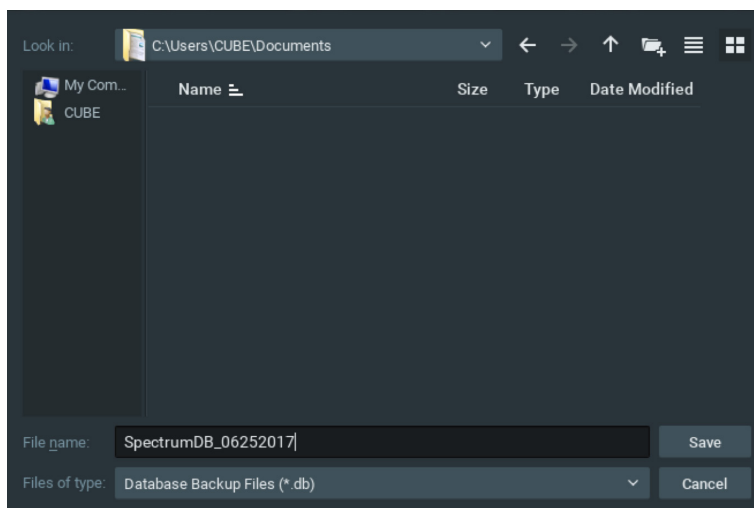| Problem	Possible Solutions
My camera does not auto-discover	1. Is the camera in the same LAN network as the Media Server? 2. Is your camera compatible with DW Spectrum? (Refer to our website for full list of supported cameras.) 3. Is the camera updated to its latest firmware? 4. If your camera is integrated with DW Spectrum via ONVIF, make sure ONVIF is enabled on your camera. 5. Try adding the camera manually. 6. Try rebooting the server after installation. Allow up to 2 minutes for the server to map your network and detect all supported devices.
Videos are slow	1. Are you accessing the same cameras from multiple clients? (LAN & WAN) 2. Do you have a Gigabit network? Check your network speed.
My camera appears disconnected	1. Under camera settings, make sure the user name and password are correct. 2. Under the camera settings, use the 'Ping' button to make sure the camera is connected to the network properly. 3. If you can connect to the camera's web viewer, try rebooting the camera and/or restore it to factory default. 4. Make sure your camera is using the latest firmware available. 5. Make sure that the camera is connected to the same network as the server. 6. If you are connecting to a camera that is integrated with DW Spectrum via the ONVIF protocol (see list), make sure ONVIF is enabled. 7. Make sure your user has permissions to view that specific camera.
I can't get playback video from my camera	1. Do you have network connection between client and server (in case server and client are not on the same machine)? 2. Make sure your user has playback viewing permissions for the selected channel. 3. Make sure the camera is set to a recording mode that would provide recorded video for the selected time and environment. 4. On the server side, check the media server log to make sure the camera you are trying to watch has not been unexpectedly disconnected.
I get an 'unauthorized' message on my camera	1. Make sure the camera's user name and password are properly entered in the camera's general information under the camera settings menu. 2. If necessary, try rebooting the camera to apply the camera's user name and password.

SYSTEM REQUIREMENTS

Recommended Specs for the Full Client

	Processor	Intel Core i5 or greater	
	Video Card	Intel HD Graphics 2500 (or higher) with 1GB Dedicated Memory Recommend NVIDIA or AMD graphics card with 2GB or more memory	
Windows	Resolution	1920 x 1080	
	RAM	16GB	
	NIC	1Gbps	
	OS Supported – Client	Windows	7 Home, 7 Standard, 7 Pro, 7 Ultimate, 8/8.1 Standard, 8/8.1 Pro, 8.1 Enterprise, 10 Home/Pro/Enterprise**
Linux OS		Windows Servers*	Any versions of 2008, any versions of 2008 R2, any versions of Server 2012, any versions of Server 2012 R2
		Linux	Ubuntu 14.04, Ubuntu 16.04
		Mac	OSX 10.11, OSX 10.12

* Except Storage Server version

 Important: OS not listed will be not be supported by DW™ Tech Support

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Fax: (813) 888-9262

DW DIGITAL WATCHDOG ®
Complete Surveillance Solutions

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