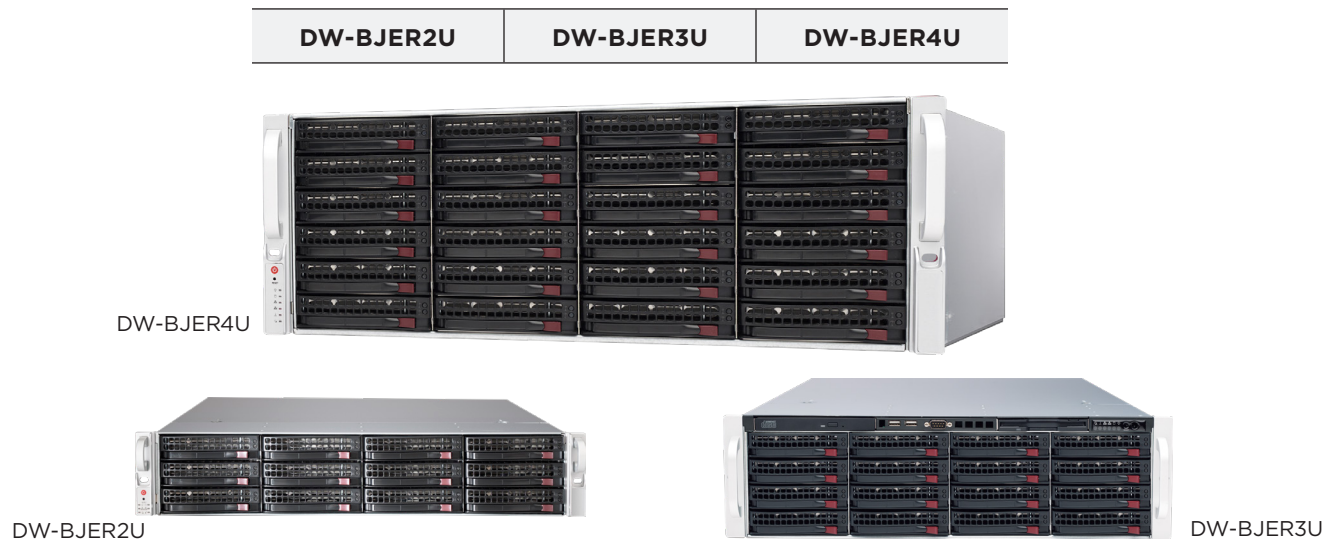


Blackjack® E-RACK

Servers Powered by DW Spectrum® IPVMS

State of the art hyper-optimized video management platform designed for ease, speed and efficiency.

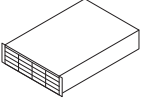
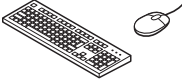
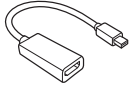


Blackjack® E-Rack™ — Up to 128 2.1MP/1080p IP cameras (true HD resolution)



Default Login Information for DW Spectrum® IPVMS

Username: admin	Password: admin12345
------------------------	-----------------------------

WHAT'S IN THE BOX

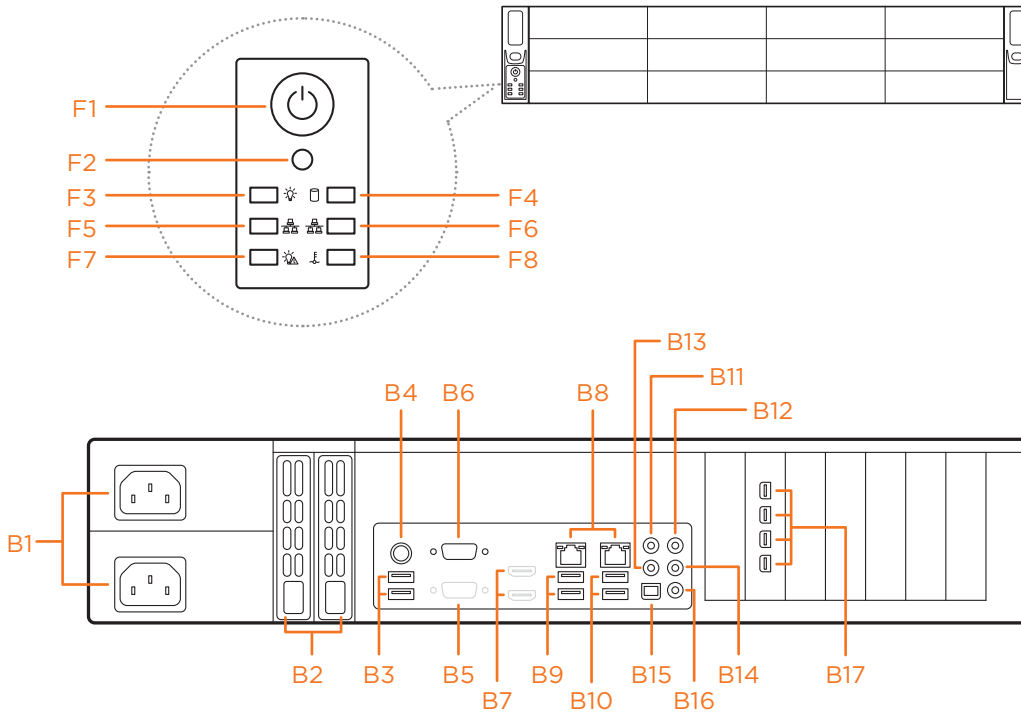
E-Rack™ server		1	Keyboard and mouse		1 set	miniDP to true HD output adapter		4 sets
Quick start guide		1	Power cable		2 set			

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 setup.
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: admin12345
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NOTE VGA and HD outputs are DISABLED on the back of the server. For local monitoring connection, 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

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
	Maximum storage	110TB RAID 5	150TB RAID 5	230TB RAID 5
Video-out	Outputs	4x HD display port outputs, simultaneous monitors		
	Video card	AMD FinePro W4100		
Keyboard and mouse	Included			
Rail-kit	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			

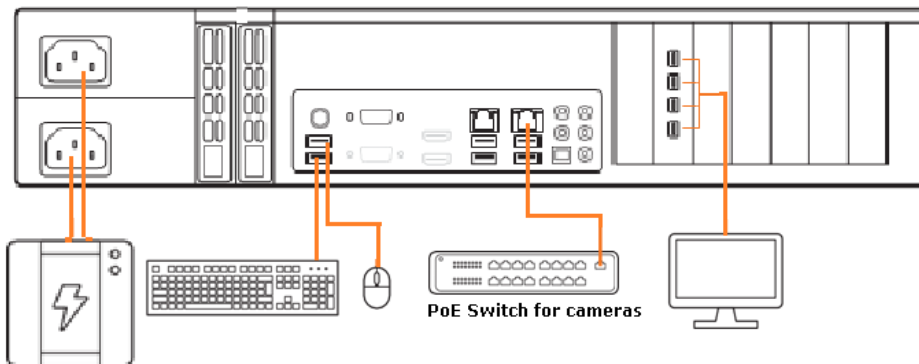
* For 10TB HDD - RAID5 Configuration reduces raw storage size by the equivalent of one (1) HDD size

** UPS recommended

SETTING UP THE SERVER

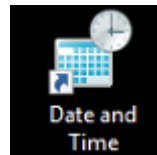
STEP 1: Connect external devices, power and network.

1. Connect a monitor, USB keyboard, USB mouse and network cable to one of the Ethernet ports (B8 on the diagram). Configure the camera's network first, then configure the server's local network.
2. Connect the server to an appropriate power source. It is recommended to use a UPS system.
* 3000VA or higher is recommended.
3. Power up the server if the server does not turn on automatically by pressing the power button on the front of the server. (F2 on the diagram).
* Connecting the power cable to the live power source may turn on the server automatically.

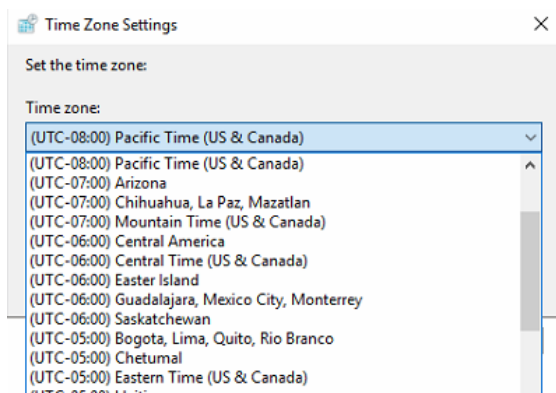


STEP 2: Configure date and time

Windows®

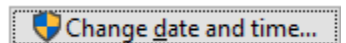


1. Double-click on the date and time icon on the desktop.
2. Change time zone if it is not correct Change time zone... (default is UTC-08:00 Pacific Time).

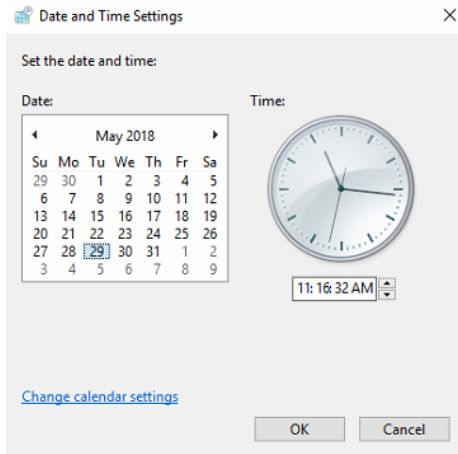


Press OK after selecting the correct time zone.

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.

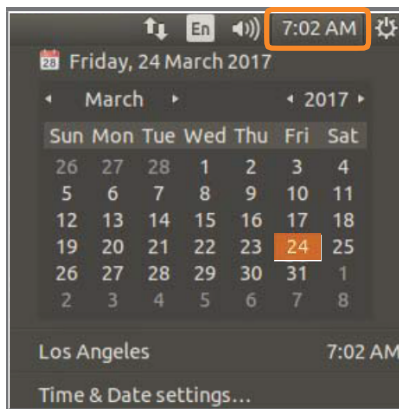


Press OK after adjusting to the correct date and/or time.

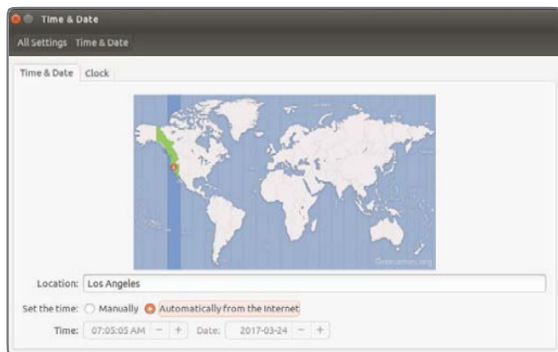
4. Press OK to close the date and time when done.

Linux®

1. Update the 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 the settings on “Automatically from the Internet”. 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.

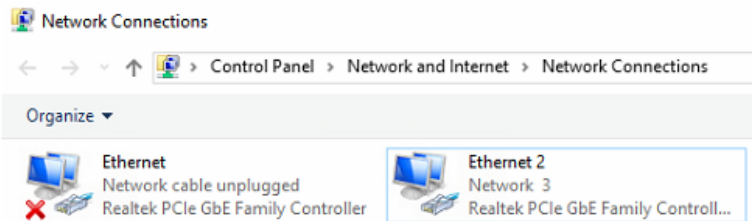
NOTE The Blackjack® server’s network settings are set to DHCP as default.

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

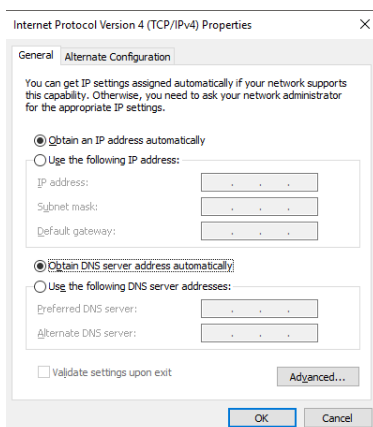
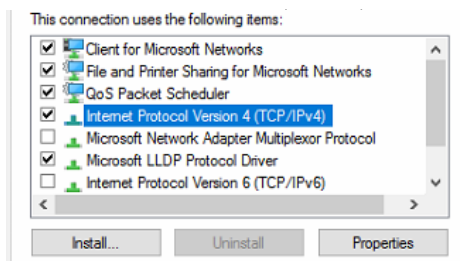
Windows®



1. Double click on the “Network Connections” on the desktop.
2. Right click on “Ethernet with cable connected” and click “Properties”.

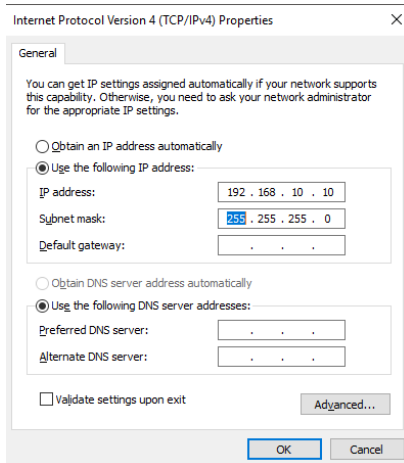


3. Select “Internet Protocol Version 4 (TCP/IPv4)” and click “Properties”.



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).

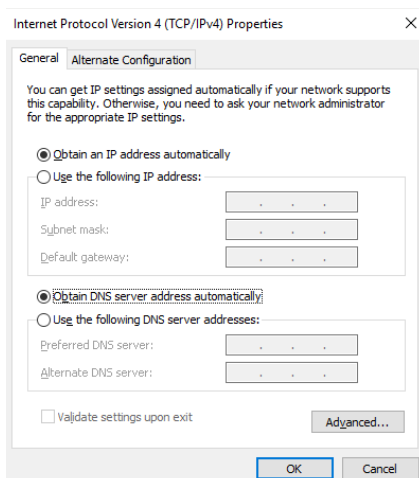
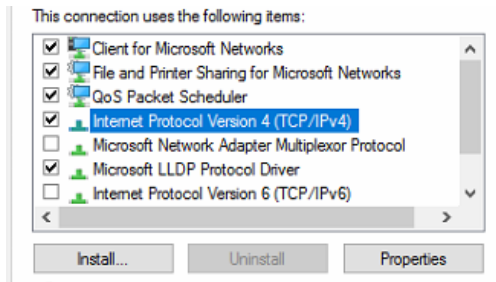
NOTE It must be the same network as the cameras and must not be the same network as the local network. Contact your network administrator for more information.



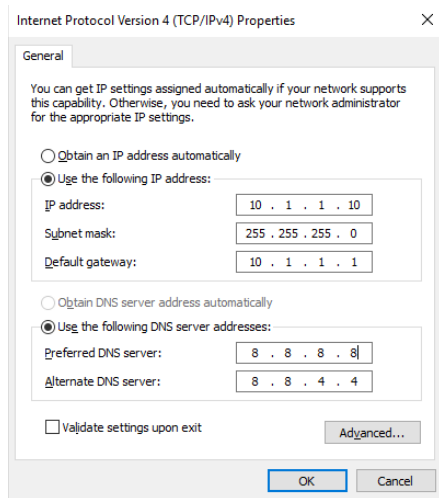
6. Click OK to close then click close to go back to network connections.

Local Network

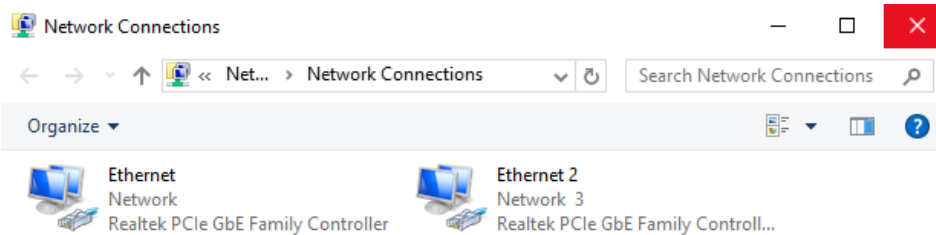
7. Right click on the other Ethernet, the one with network cable unplugged, and click “Properties”.
8. Select “Internet Protocol Version 4 (TCP/IPv4)” and click “Properties”.



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 dialog.

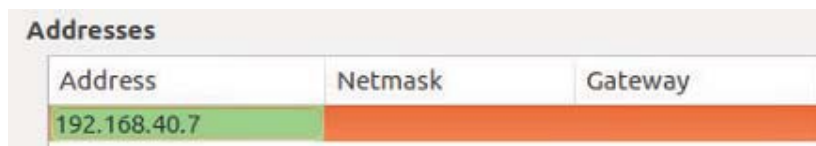


Linux®

1. Double-click the network icon  on the desktop.

NOTE The Blackjack® server'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.



- Ignore any populated values and enter the valid netmask value, then press tab on the keyboard to move to the gateway.

Address	Netmask	Gateway
192.168.40.	255.255.255.0	

- Enter the gateway address if required then press enter on the keyboard.

* The gateway is not required on the camera network.

Address	Netmask	Gateway
192.168.40.7		

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.

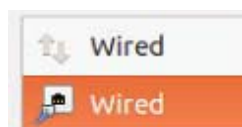
- Click 'Save' to save the settings.

- In the Network Settings' main page, make sure the Wired Status is marked as "Connected" or "Managed" with the IP address displayed.



Local Network

- Select "Wired" with the picture of a network port and repeat 2 to 8 under "STEP 3 Configure Network".



- Click on the DNS servers field box and enter DNS server address.

DNS servers:	8.8.8.8
--------------	---------

- Click save.

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

- Verify the network is connected.

NOTE If you are not connecting to the Blackjack® from 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 any DW® IP camera's IP address using DW® IP finder™.

DW Spectrum® IPVMS client



Linux OS

LINUX-BASED SOFTWARE MANUAL LAUNCH

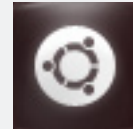
To launch the DW Spectrum® software on the Linux-based E-RACK

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



OR

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

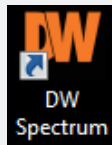


Windows

WINDOWS-BASED SOFTWARE MANUAL LAUNCH

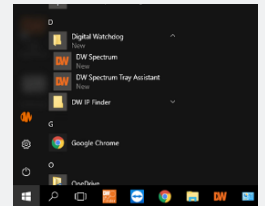
To launch the DW Spectrum® software on the Windows-based E-RACK:

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



OR

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

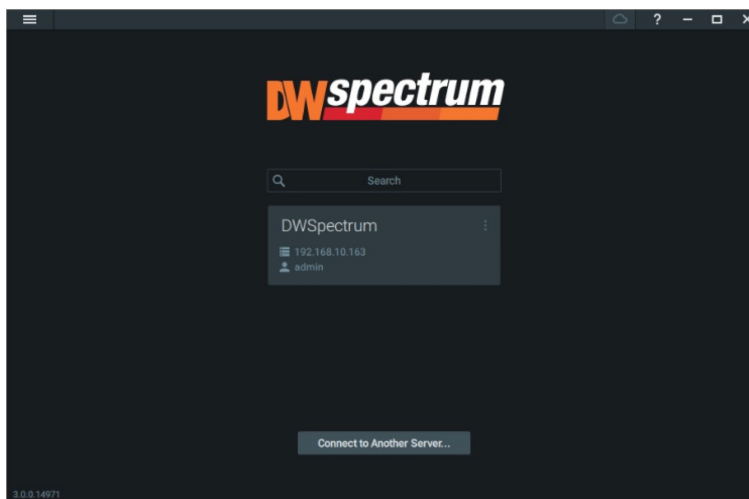


SETTING UP DW SPECTRUM® MEDIA SERVER

Login: **admin**
Password: **admin12345**

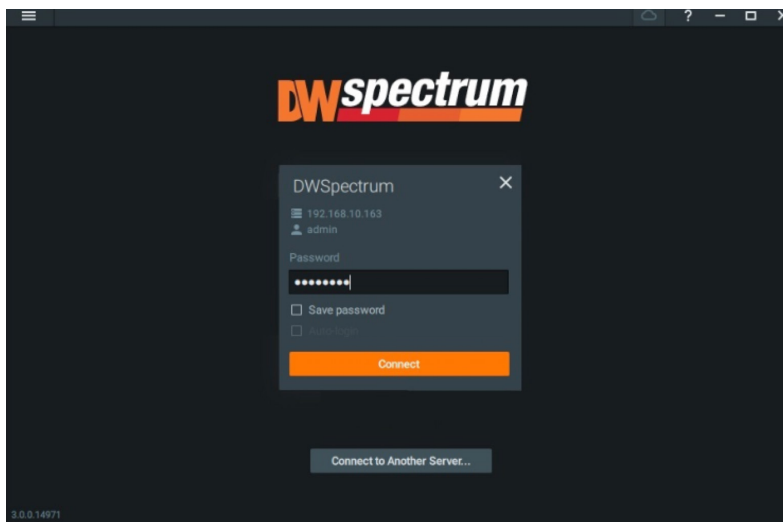
STEP 1: Initial run from the Blackjack® server

1. Open the DW Spectrum® client by double click on the DW Spectrum® icon.
2. Click on the pre-configured server.



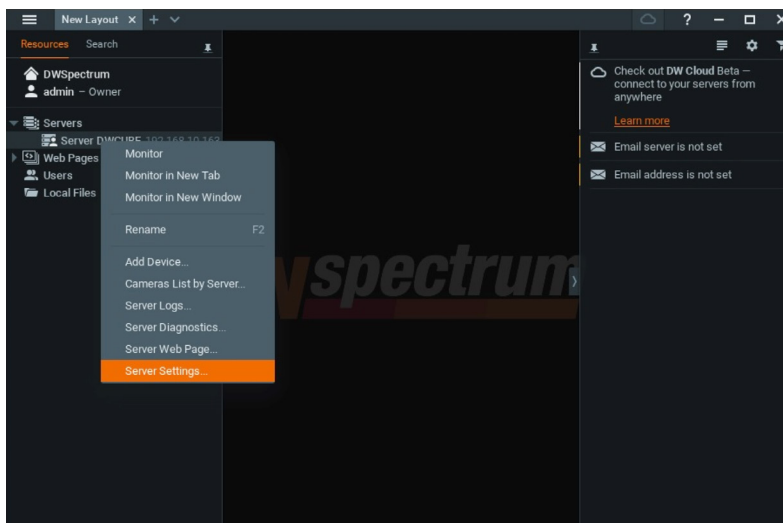
3. Enter the password and click connect.

* Default password: admin12345 (case sensitive).

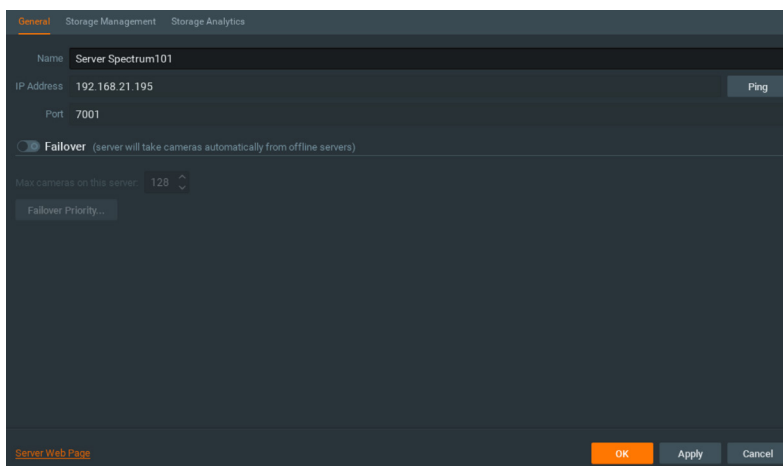


STEP 2: To rename the server

1. Right-click on the server name listed on the resources then click server settings.

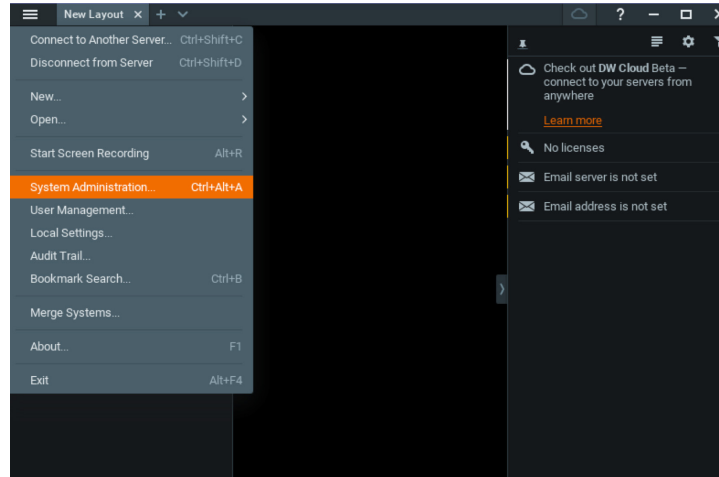


2. Go to the general tab and enter the new server name in the name field. Click OK.

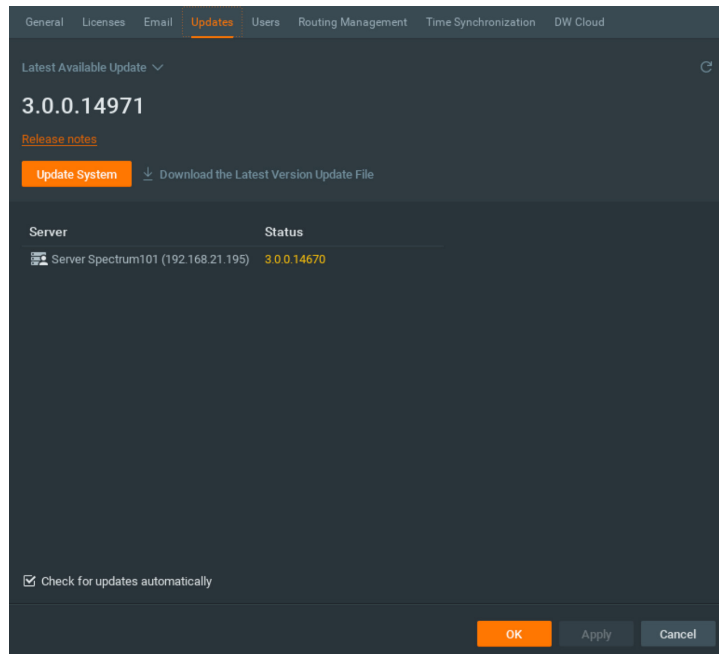


STEP 3: To check for updates

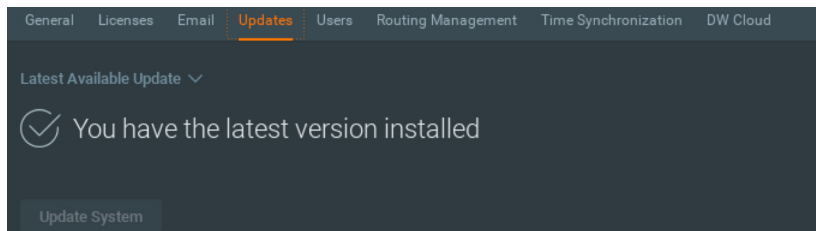
1. Click on the menu  then click “System Administration”.



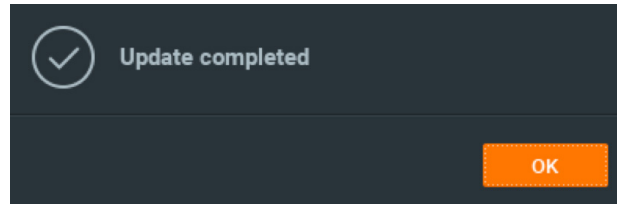
2. Go to the updates tab. If the system requires updating, click on the update system button.



* If you are on the latest version, it will say “You have the latest version installed” and the Update System button will be disabled.

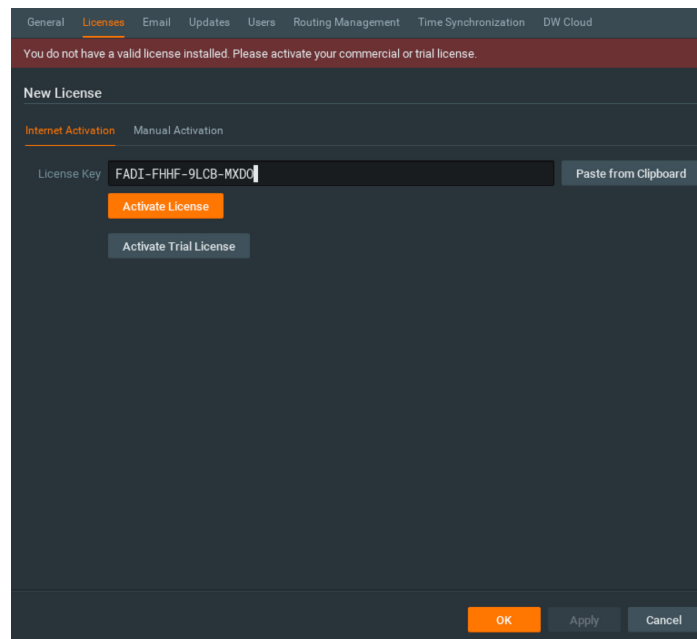


3. Click OK when the update is completed.

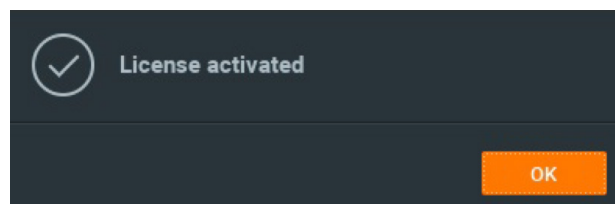


STEP 4: Enter and activate licenses

1. Go to the system administration window and click on the license tab.
2. Enter the license key and click "Activate License". An Internet connection is required.
* Click on "Activate Trial License" if you have not purchased a valid license key.

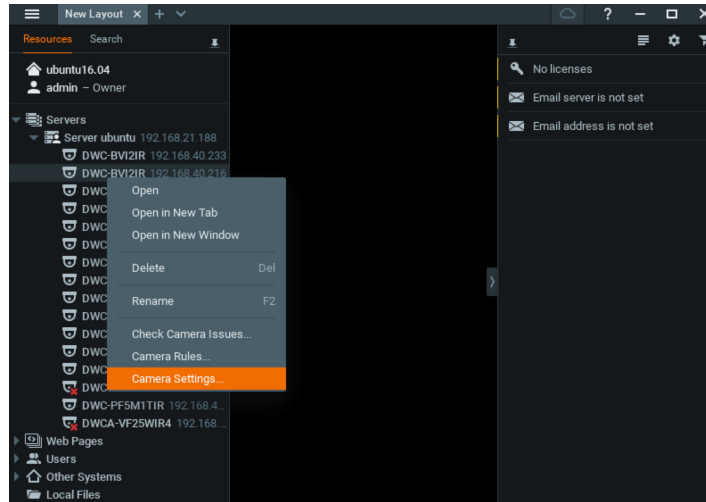


3. Click OK to when the license key is activated.

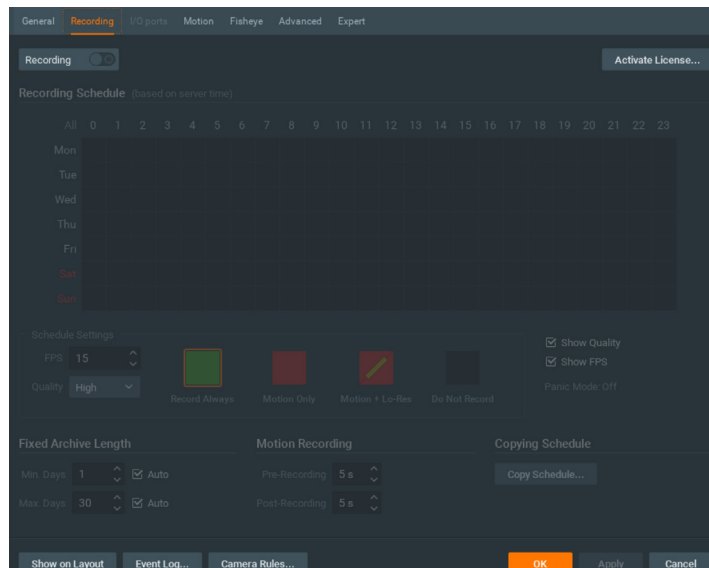


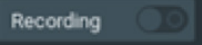
STEP 5: Configure recording

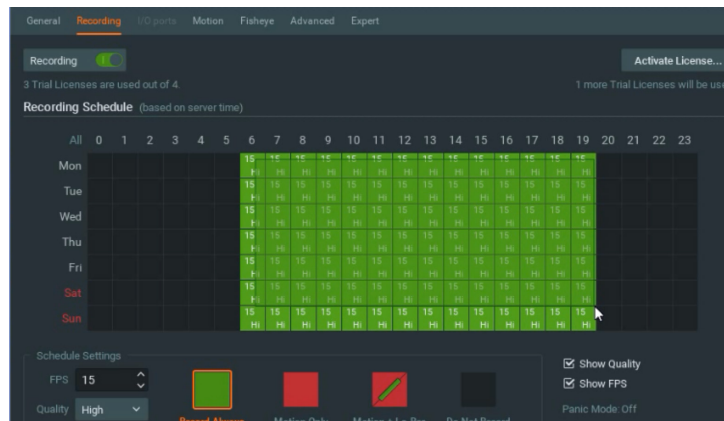
1. Right-click on a camera in the resource tree to setup recording. Click on camera settings from the context menu.



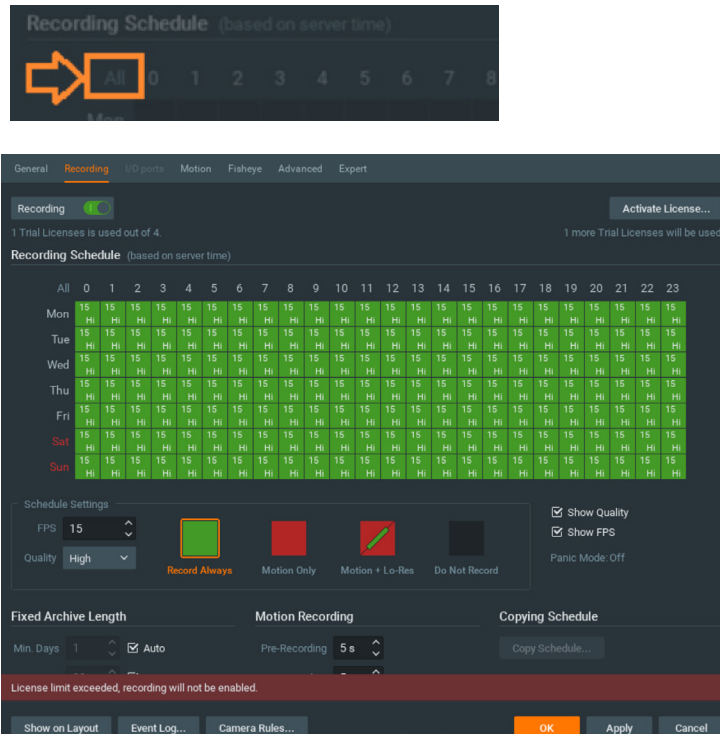
2. Go to the recordings tab.



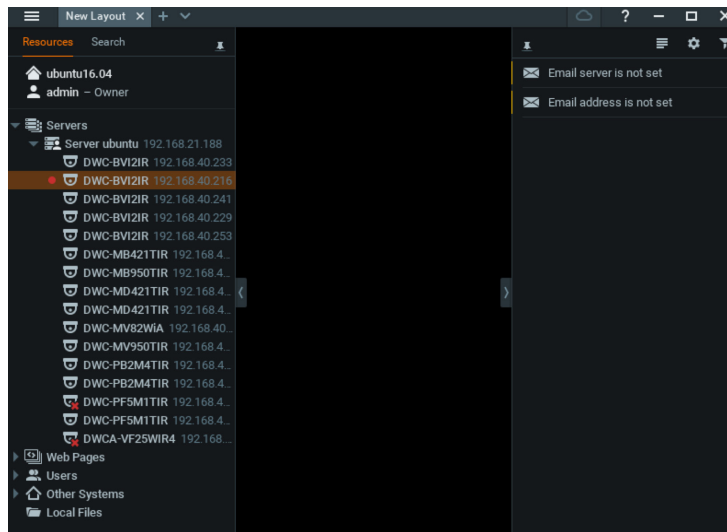
3. Click  to turn on recording.
4. Configure the camera's schedule settings for quality, FPS and recording type.
5. Click and drag the mouse over the recording schedule to apply the settings to multiple days and times.



* Click "All" to apply the recording settings to the entire schedule.

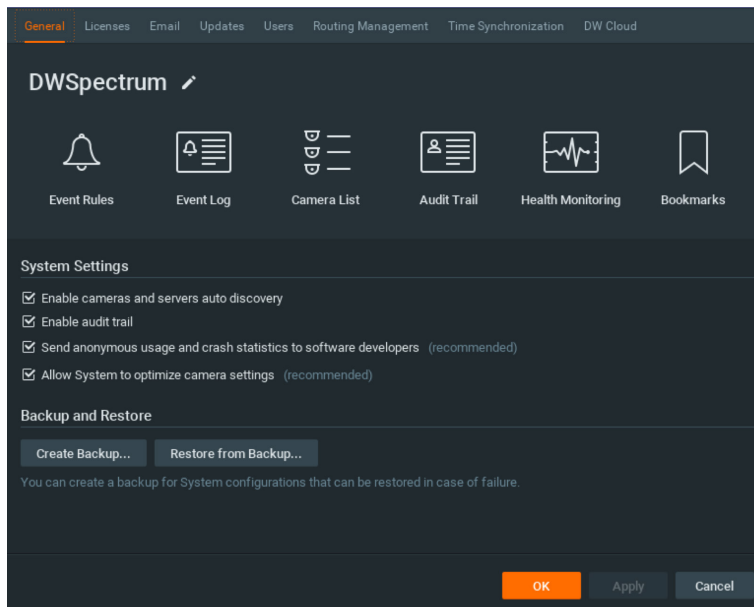


6. A red dot will appear next to the camera in the resource tree once recording is started.

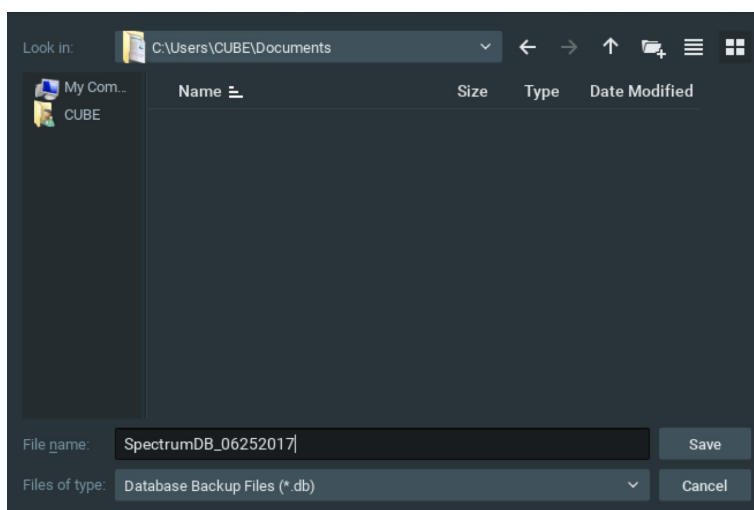


STEP 6: Backup database

1. Go to the system administration window and click on the general tab.



2. Click "Create Backup...".
3. Navigate to the folder you want to save the database and enter a name for the backup file. Click save.
* It is strongly recommended to backup your data to an external storage media as well.



NOTE More information and instructions are available in the DW Spectrum® IPVMS user manual.

TROUBLESHOOTING TIPS

Problem	Possible solutions
My camera does not auto-discover	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Are you accessing the same cameras from multiple clients? (LAN and WAN) 2. Do you have a gigabit network? Check your network speed.
My camera appears disconnected	<ol style="list-style-type: none"> 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 cannot get playback video from my camera	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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.	
Resolution	1920 x 1080	
RAM	16GB	
NIC	1Gbps	
OS supported - media server	Tested operating systems	<ul style="list-style-type: none"> • Windows®: 7, 8, 8.1, 10/Enterprise. • Windows Server®: 2008 R2, 2012, 2012 R2, 2016 v1607. • Ubuntu® LTS: 16.04, 18.04.
	Operating system no longer supported	<ul style="list-style-type: none"> • 32 Bit operating system (both Windows® and Ubuntu® Linux®). • Ubuntu® 14.04 is no longer supported. • Windows Server® 2008 no longer supported. (Only 2008 R2 is supported).
OS supported - client	Tested operating systems	<ul style="list-style-type: none"> • Windows®: 7 Home, 7 Standard, 7 Pro, 7 Ultimate, 8/8.1 Standard, 8/8.1 Pro, 8.1 Enterprise, 10 Home/Pro/Enterprise¹. • Windows Server®: 2008 R2, 2012, 2012 R2, 2016 v1607. • Ubuntu® LTS: 16.04, 18.04. • OS X 10.13: "High Sierra", 10.14: "Mojave", 10.15 "Catalina". <p>¹ For Windows 10, i5/i7 processors with 16GB RAM and video card with 2GB or higher RAM is recommended.</p>
	Operating system no longer supported	<ul style="list-style-type: none"> • 32 Bit operating system (both Windows and Ubuntu Linux) • Ubuntu 14.04 is no longer supported. • Windows Server 2008 no longer supported (Only 2008 R2 is supported)

* Except Storage Server version

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

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Fax: (813) 888-9262



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sales@dwcc.tv