Video recorders NVR Series DS

For IP cameras ONVIF

Installation manual

How to connect components

How to perform the network configuration

Contents of this handbook

The VCRs DS series range is designed to allow the management and the recording of ONVIF IP cameras with H264 and H265 compression.

This manual describes how to properly install the video recorder and how to make the network connections to access the VCR remote.

Product description

The DS Series digital video recorders are destined for video surveillance systems with IP technology. This type of devices are commonly called NVR.

E 'can control DSE IP cameras or other manufacturers as long as they support the ONVIF protocol established standard in the industry today. Cameras that do not support this standard, but use proprietary protocols, you can not connect.

The DS Series video recorders support both the H.264 video compression format that the latest H265, now run by the majority of our IP cameras, allowing greater bandwidth economy.

main Functions

The DS NVR series is the latest generation of video recorders that can integrate all the latest functions required by video surveillance applications over IP.

LIVE VIEW

The NVR series DS have a variety of video outputs for displaying the cameras in real-time. E 'can connect the computer monitor to the VGA port or HDMI video output of TV sets.

The HDMI output is today the most widespread and also supports 4K ultra-high resolution monitor. There is no longer the traditional analog video output BNC type whose resolution is insufficient to support the latest technologies.

And 'possible to view each camera full screen, the cyclical scanning and multivision
4, 9 or 16 cameras simultaneously.

RECORDING VIDEO / AUDIO H264 and H265

These NVR manage video streams H264 or H265.
Registration can be made in continuous mode, motion detection or alarm, with a time-controlled. The audio and video are synchronized.

100% REAL TIME

Unlike more economic end equipment the NVR series DS are always able to record all channels at full resolution and the maximum of 25 F / sec frame rate to provide increasingly higher level of quality images.

PLAYBACK AND BACKUP

The NVR have different search systems to enable quick handling of recordings. Use the time line allows you to move quickly between times of the day. Through the USB port you can be connected to external storage media such as USB drives, external hard drives, etc. and save the interest clips in AVI format.

Playback allows modes: Slow motion, fast forward, reverse playback and frame by frame playback. During video playback, the time and date can be displayed on screen.

INTELLIGENT DIGITAL ZOOM

E 'can easily zoom in on details by using the mouse wheel on the screen, both

in real-time view that in recordings playback.

CONTROL WITH MOUSE AND MENU IN ITALIAN

All functions are controlled with the mouse in a simple and quick. The usage and configuration menu is entirely in Italian and does not require time for learning.

Hexaplex

The devices are able to continue recording during playback of recorded files, viewing real-time, remote access, backup, configuration etc.

PTZ CONTROL

The DS series VCRs support PTZ control of motorized cameras speed dome directly through the onvif protocol. The camera's movement is easily controlled using the mouse and also remote access from a PC or mobile phone.

MOTION DETECTION

The detection of the movements allows to activate the recording and any alarm actions as a result of an intrusion.

NETWORK FUNCTIONS

Through the network port can be remotely monitored in real time, searching and playback of video stored remotely and control PTZ Speed Dome cameras. And the complete configuration of programming 'also possible.

Remote access is done from a PC using the browser or the program provided for the centralized management of multiple appliances. E 'can also access by mobile phone or tablet with the free application.

ALARM FUNCTIONS

In case of alarm it is possible to generate a variety of actions such as activation of the buzzer or the recall of preset positions of the speed dome cameras. E 'can also send e-mail and real-time notifications.

REMOTE CONNECTION P2P

The recorders DN series include P2P / CLOUD technology that allows you to connect through your Intenet without the need to subscribe DDNS services, or to program the mapping of router ports.

front Panel

Our previous generation VCRs possessed of buttons for controlling functions. It was a legacy inherited from the old DVR where the few functions are commanded from the front buttons.

Today, the functions of these devices are too many to be managed with the buttons and therefore can not find any buttons on the front of these NVR. All control is done with the mouse.

There are some LEDs that let you see at a glance the status.

From the top to bottom:

POWER ON - Power LED

NETWORK - This LED is illuminated when the NVR is connected to an external network via the uplink network port. Always check that this led is on before groped to connect NVR from a PC or mobile.

CLOUD - This LED lights up when a connection is made with our P2P cloud server that allows web access without router configuration. Make sure that this LED is on before groped to access the NVR via the Internet

DISK - This LED illuminates when the NVR is writing to the hard disk. Check this LED is turned on because if it is not the unit is not recording.

Major Specifications

NVR

http://www.dseitalia.it/dati_NVR.htm

Connections

The connections are located on the back.

1 - 12VDC - Power connector where you can connect the power adapter included 2 - NETWORK PORT - RJ45 connector to connect the NVR to the LAN. This port, also known as uplink, serves to connect the device upstream in the network, typically the main router or a switch. Before using the LAN connection must set the network parameters in the DVR setup menu.

3 - POE PORTS - These ports can be connected IP cameras. The NVR incorporates a POE switch and is capable of powering the POE IP cameras connected to these ports. These NVR also act as DHCP servers on these direct ports, so, if the camera is set to DHCP, will automatically get a consistent IP address.

Remember that although these NVRs are equipped with poe ports, you do not have to use them. You can connect the cameras anywhere in the network even leave unused nell'NVR integrated ports. 4-2 x USB 2.0 PORT - There are 2 USB ports. At one of these has to be connected the mouse. The other can be used to connect USB storage drives such as USB HDD or USB flash drives for backing up movies. The ports are all the same so you can connect the mouse to the door of your choice.

5 - VGA OUT - This port is used to connect a PC monitor. It is a door able to achieve the resolution 1920x1080 1080P (2MP), lower than the HDMI monitor port. Pe this reason, if you use cameras with higher resolution 2MP and you have a 4K monitor you'll want to use the HDMI port to connect a monitor.

6 - HDMI OUTPUT - Used to connect a monitor with HDMI input. This port is the most used today in both PC monitors TV-like. Unlike VGA port, it has the great advantage to also conduct audio. To this HDMI port you can connect a monitor but also a 2MP 1080P 4K monitor to see the full screen resolution IP cameras in excess of 2 MP.

7 - AUDIO IN - Auxiliary audio input for connecting an audio input which can be useful if

using two-way audio. Unlike analog cameras, IP cameras in the audio management coming from the camera does not require a separate entrance as the audio is embedded in the digital stream. This audio input is thus not for recording but can serve to connect a microphone with which an operator seated near the NVR can talk through the audio output to the camera board (if present). 8 - AUDIO OUTPUT - mono RCA audio output to connect an external speaker that allows you to hear the audio of the live cameras and recordings. This output is only valuable if you use HDMI monitor port to a TV monitor that handles audio.

Mouse Installation

Video recorders DN series control mainly with the mouse included. The mouse is connected to a USB port of the NVR. You can connect the mouse to the USB port of your choice. The mouse can be connected to hot-swap, with the NVR in operation.

Connecting the Monitor

The NVR needs a monitor to show images and be configured. The DS range monitor with VGA port operates at up to 2MP 1080P and monitor with HDMI port, increasingly common today, at resolutions up to 4K.

We would certainly recommend to use the HDMI port found widely in both PC monitors TV-like.

Care must be taken to HDMI cable length can not exceed 2-3 meters. The HDMI signal is very delicate and to deliver them at greater distances need our special HDMI cables or our transmission devices.

The HDMI port delivers video, up to 4K resolution, and even audio, if your monitor has one.

The monitor is not essential for the operation of NVR, but must always be connected NVR, at least to allow the configuration. After completing the configuration can remain in place or be removed.

Installing the Hard Disk

Because the recorder is capable of recording you need to install a hard drive inside the equipment. The NVR is always supplied without a hard disk, so the first step needed is the install disk.

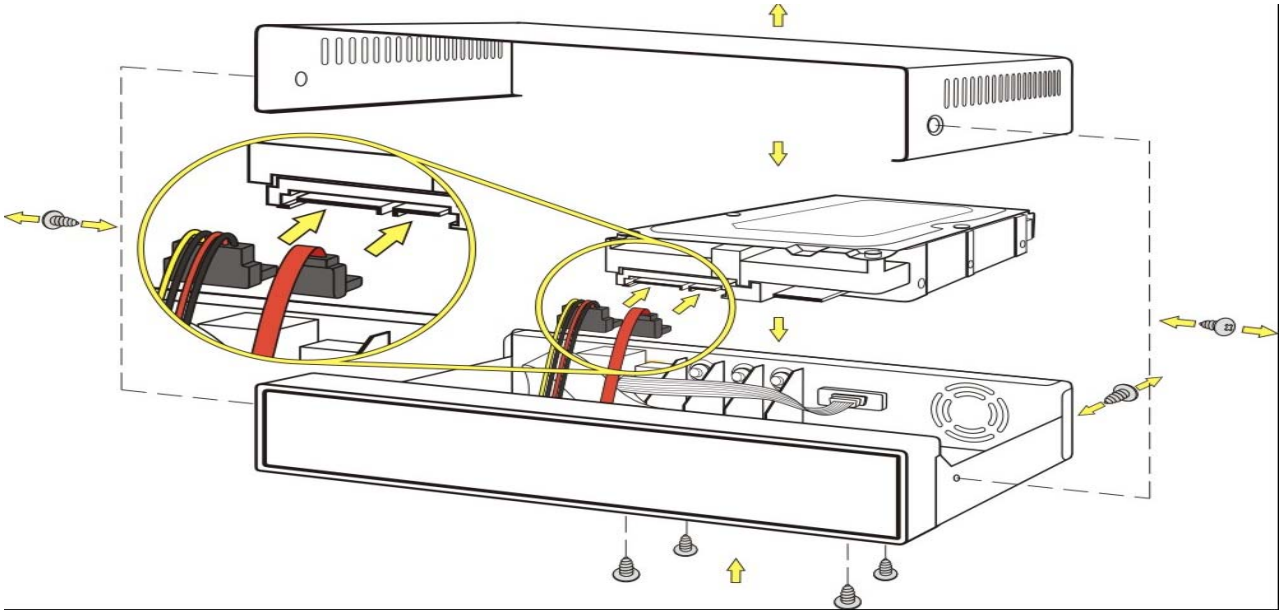
The DS series devices can accommodate 1 or 2 Hard disk depending on the model of any brand provided with SATA connector. There **maximum manageable capacity of 8000 GB (8 TB)** for each HDD.

For a better life of the disk you should use Hard Disk DVR-specific rather than normal hard drive from the computer. Proceed with the installation of the hard disk as follows:

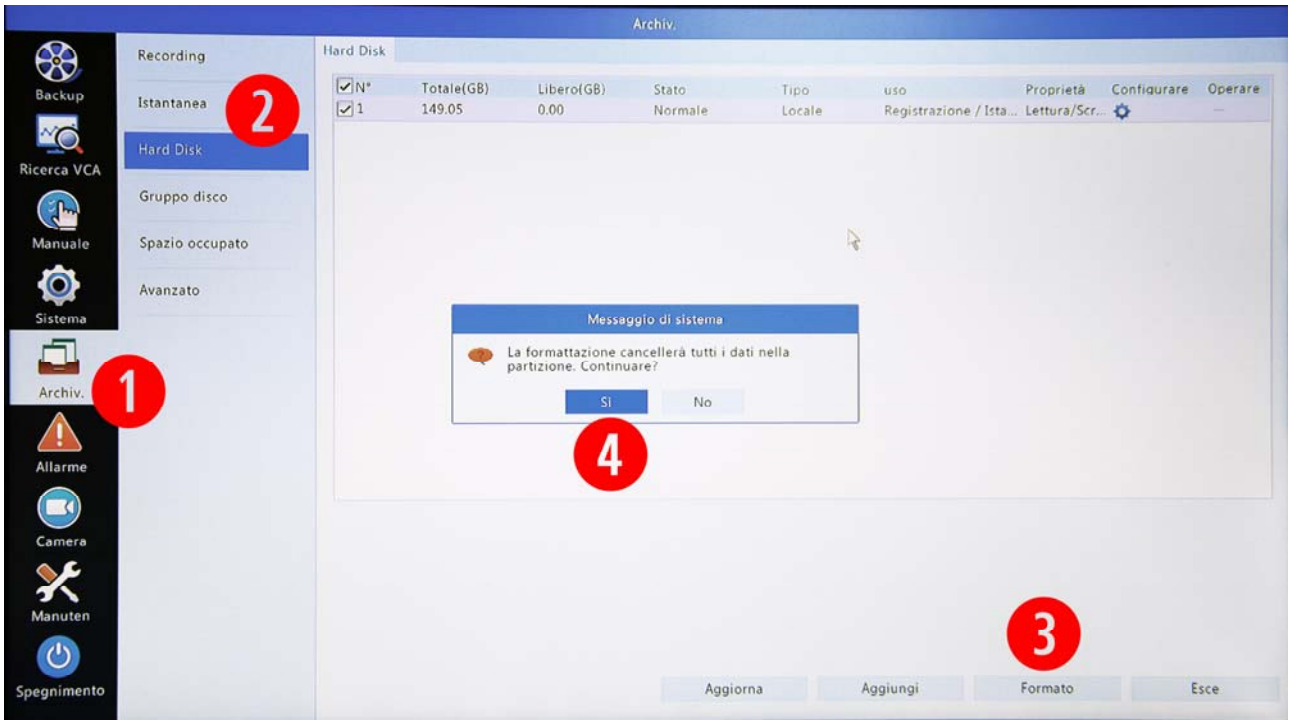
1. Turn off the appliance open the VCR by removing the top cap by unscrewing the lateral fixing screws.

2. Attach the hard disk unit in its seat by means of the fastening screws.
3. Connect the red SATA cable for data and power cable between hard drive and motherboard.

4. Close the appliance with the lid by screwing the screws.



WARNING: Before you start recording you should use the **physical formatting** hard drive in the configuration menu to HDD MANAGEMENT. See the instructions in **Configuration manual.** The device will not be able to register until you have completed the formatting.

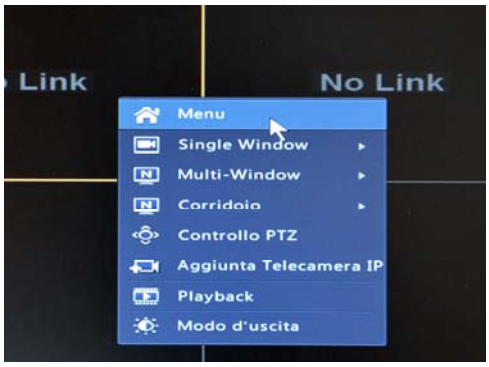


First start and login

After connecting the monitor, the mouse and the hard disk, you can try the first ignition. Connect the adapter plug on the machine and wait while the NVR make its start.

Compare the NVR multivision screen that is divided into 16 quadrants. To access the configuration of the NVR brings the mouse down the screen and when you see the toolbar choose the MENU button.

Alternatively you can also click with the right mouse button and select MENU.

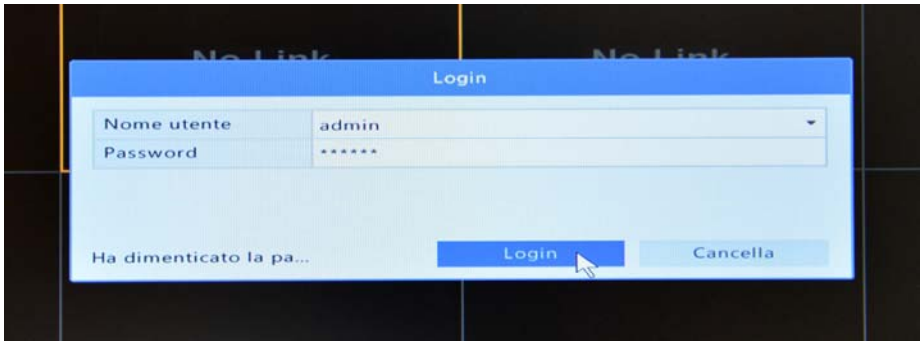


Access to the configuration menu is password protected Factory credentials NVR DS series are:

USER: admin

PASSWORD: 123456

You can of course change them later, taking care not to forget them.

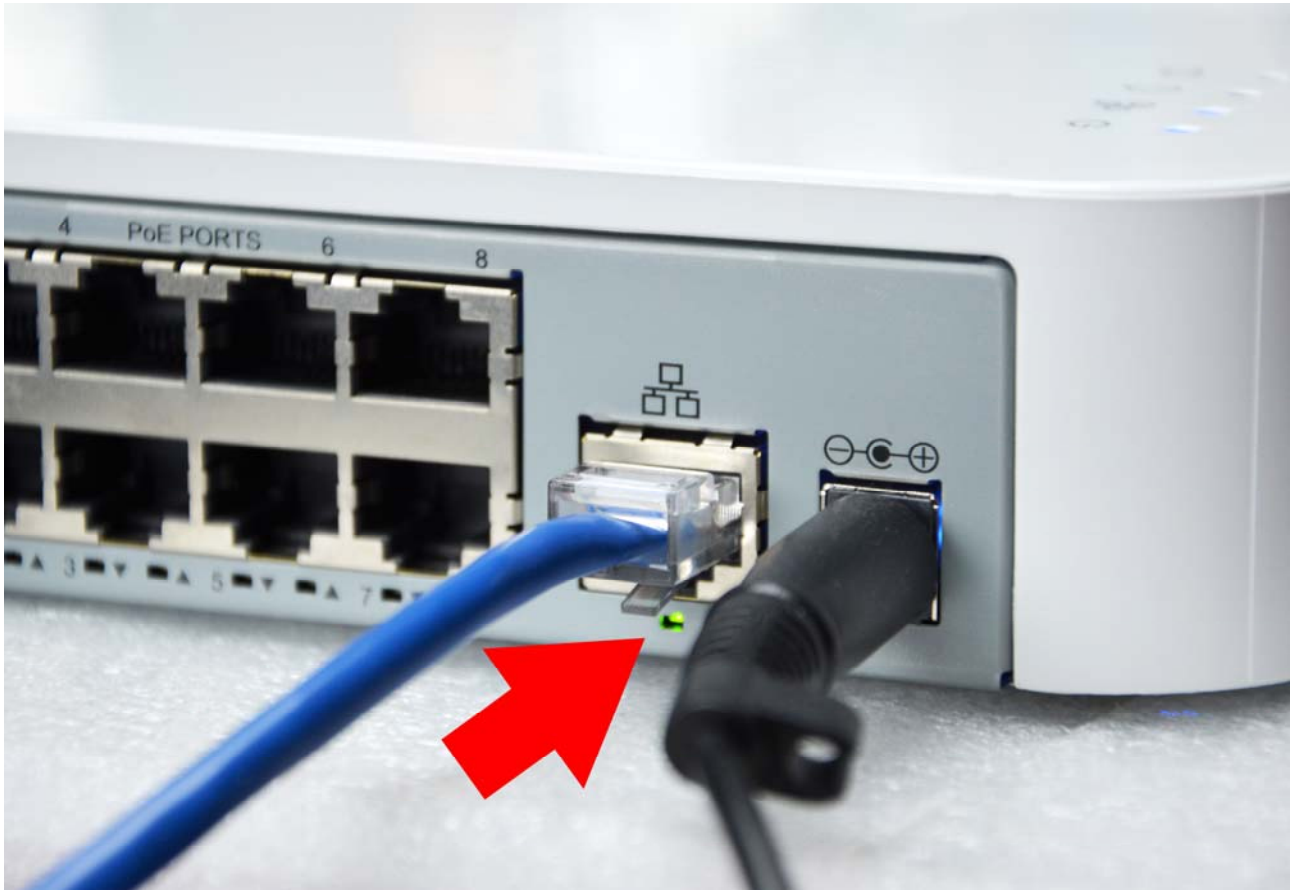

Login
Nome utente
admin
Password
Ha dimenticato la pa...
Login
Cancella

Network Configuration

The NVR video recorders are network where all communication between the device and the camera passes on the LAN.

These NVR also have integrated poe doors and are able to create their own internal network between cameras and NVR, independent from the external network.
Either way, whether you're using the POE ports on the NVR, whether you have installed the cameras elsewhere in the network, the first thing you need to do is connect the NVR to your LAN to be able to reach the outside and to enable to search cameras on your network.
To connect to a LAN, as a first step is to connect the port to the back network to your network using a straight type power cable.

Typically the NVR will link to an upstream device such as the router or one main switch. As soon as the network cable will link the green LED below the connector must light up. If it does not supervise the proper cable works.



IP ADDRESS ASSIGNMENT

The recorders are able to support the automatic address assignment (DHCP). This means that once connected to the network automatically acquire the network parameters from a DHCP server, usually the network router. This mode, though from a very simple hand, it is not the best choice in video surveillance applications since the 'NVR may change your address, following a restart, while it is more convenient to always know the exact address.

And 'advisable to use the DHCP mode of DVR to know, the first link, the correct parameters can be assigned to the DVR, then you should set them as static IP so that you can not change in the future.

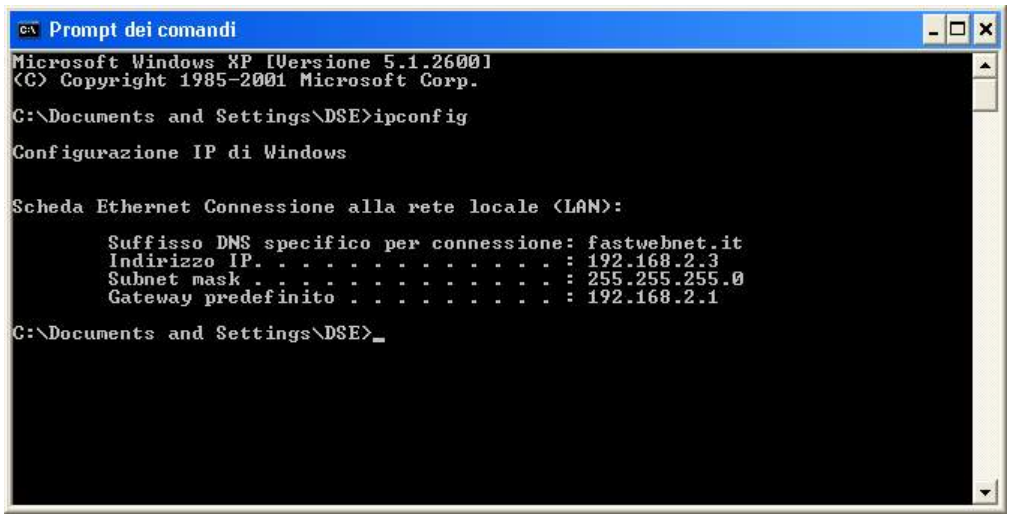
Before you must obtain from your network some information about the management of the IP addresses used on your network. E 'need to know an IP address can be assigned to the NVR that is not equal to any other existing network device. The first 3 digits of the IP address must be the same ones used by the other computers, otherwise there will be communication between network components.

If you do not feel safe in this step remember you can also leave the NVR DHCP, so our cloud server you will always and in any case to reach it.

KNOW THE PARAMETERS OF COMPUTER NETWORK

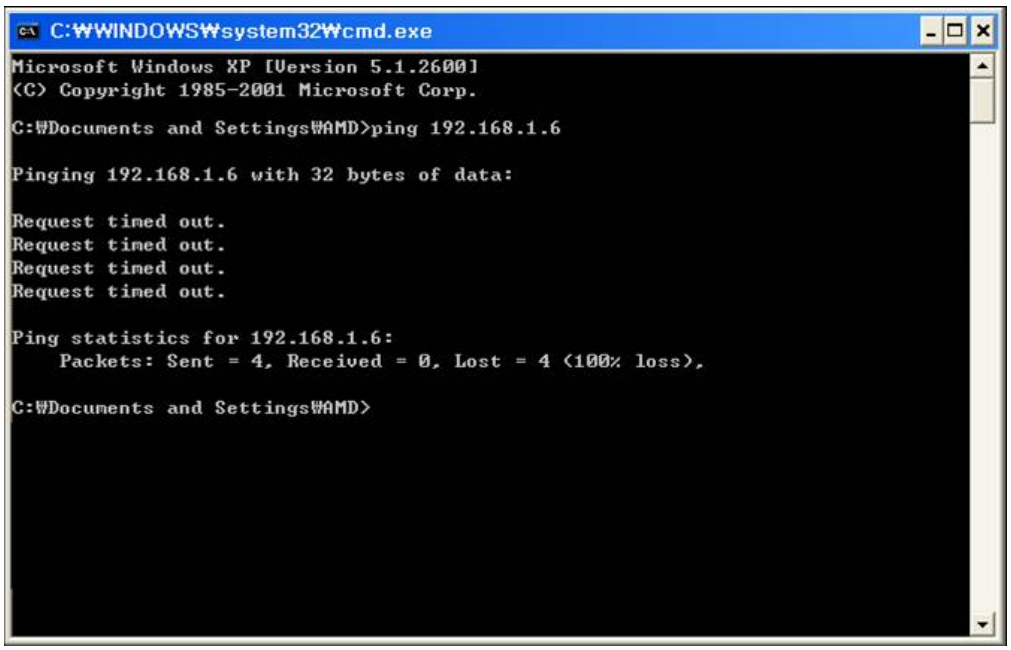
If you are unsure of your network operation and do not know which IP address to assign to the NVR you can use certain commands in DOS PROMPT.
On a PC networked launches a DOS window available between the Windows accessory programs.

Type IPCONFIG at the command prompt and press ENTER. They will see the TCP / IP parameters. The second line is the IP address assigned to your computer.



In the above example the address of the PC on which you are working is 192.168.2.3 and the subnet mask used is the classic 255.255.255.0. Al NVR You can therefore assign an address chosen by the 192.168.2.XXX type, where XXX stands for a number between 0 and 255. E '

important **choose an address that is not already used by other devices** of network. To verify that the address you chose is free, try to make a PING from the same DOS window by typing PING followed by a space and from the IP you wish to assign to the NVR. Press ENTER. If there is no device responds to that address, you will receive 4 REQUEST TIME OUT. In the example below is occurring that does not exist in a network device with IP address 192.168.1.6 typing: PING 192.168.1.6



The 192.168.1.6 address is available for use and assigned to the NVR.

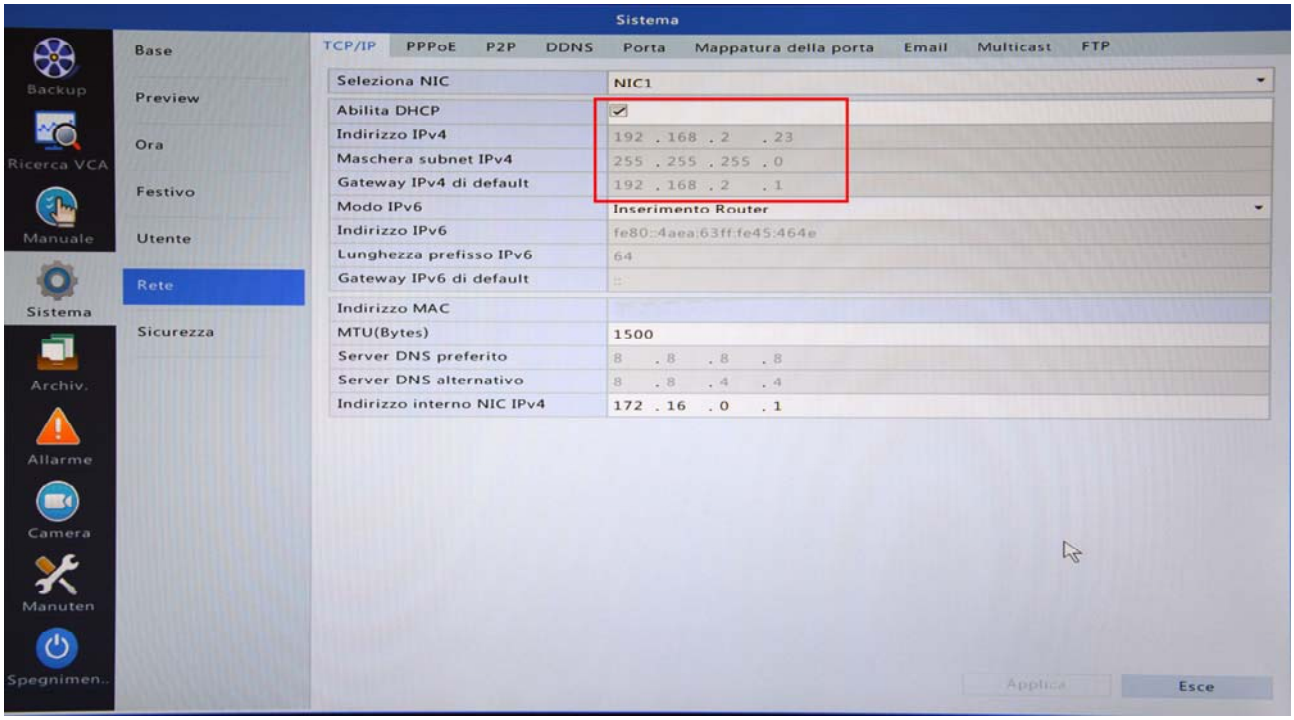
KNOW OF THE PARAMETERS NVR NETWORK WITH DHCP

Although the automatic IP assignment in DHCP mode is not very convenient in video surveillance, it is useful both because it allows you to connect the machine to a network with the certainty of not create any conflict, both because it allows to immediately know the network parameters we can assign to our VCR.

Remember that because the DHCP address assignment will be successful if that networking is a device that acts as a DHCP server, usually the router or firewall. If in your network has no DHCP server, you can not use the automatic IP assignment.

These NVR are set with DHCP enabled Factory.

If you connect the device to the network and open the OSD setup SYSTEM / NETWORK section there is already the network parameters correct page for your NVR that have been assigned by the network DHCP server.

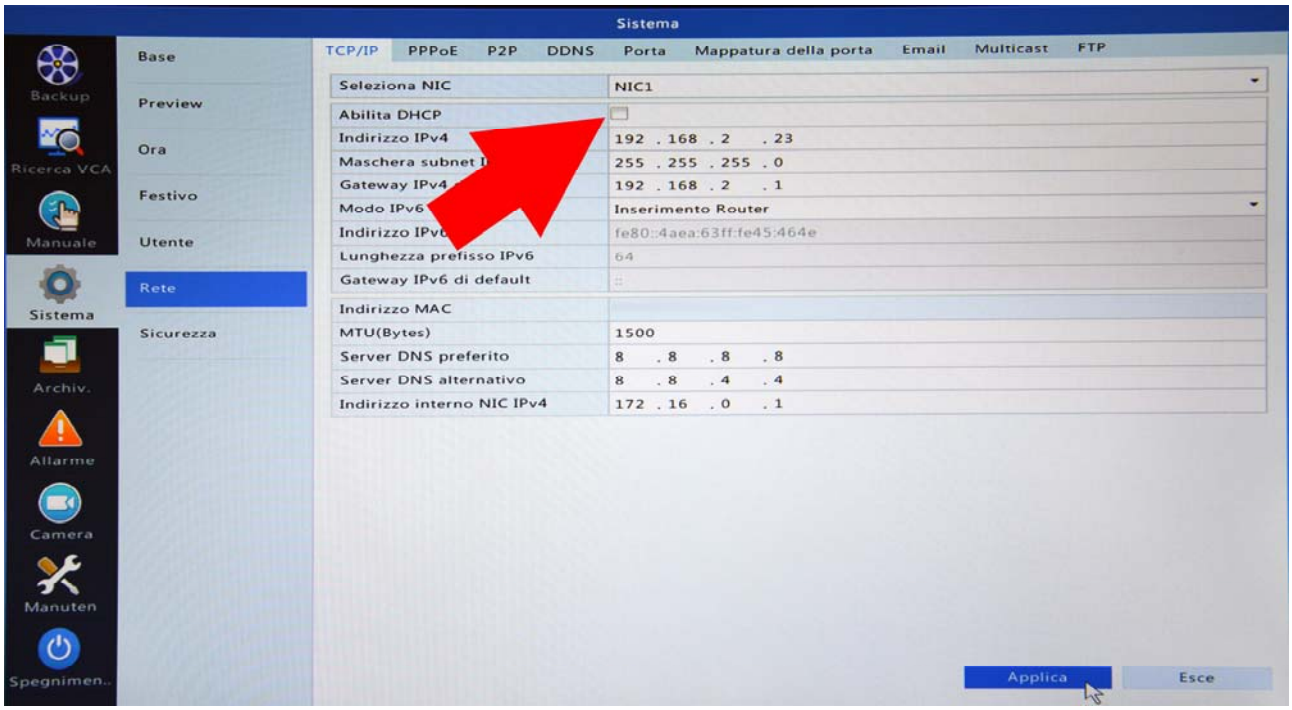


These parameters are correct for your NVR as assigned by the network DHCP server. You can leave the NVR in DHCP mode without problems, because if you use our cloud server you can still achieve, but you have to remember that the internal address of the DVR, in the example

192.168.2.23, might change in the future.

For this it would be better to switch to a fixed address.

To jump to a fixed address just disable DHCP assignment and press APPLY. The network parameters assigned automatically become fixed and will not change in the future.



MANUAL SETTING OF NETWORK PARAMETERS

If your network does not have a DHCP server you can not use the automatic assignment of parameters and you have to manually insert them into the boxes digitandfo

Because our VCR can talk to your network it is indipensabile which are set the following parameters:

IP ADDRESS

Formed by 4 digits in the xxx-xxx-xxx-xxx format where xxx represents a number between 0 and 256. The first 3 digits must be common to all network elements. The last digit must be different for each network element. In a rule or private networks using 192.168.0.xxx

182.168.1.xxx

SUBNETMASK

It must be common to all elements of the network. Normally you use 255.255.255.0

GATEWAY

And 'the address that identifies the network the device through which you access the Internet, typically the router. As a rule, the gateway is the No. 1 address class (eg. 192.168.0.1) We saw earlier how to know these settings through its network. The gateway setting is essential because the NVR can see the Internet.

DNS PRIMARY AND SECONDARY

This parameter is important if you want your NVR can use our CLOUD server, or other network services such as email, as it allows the videoregsitratore to locate internet sites. Without DNS properly set the VCR may not recognize the names of the websites.

The DNS you can get from your Internet service provider, or simply you can use Google DNS 8.8.8.8 and 8.8.4.4

NETWORK CONFIGURATION COMPLETED

Now the NVR network configuration is completed and you can switch to connect the IP cameras as we will see in the next chapter.

Configuring IP cameras connected to POE ports on the NVR

The NVR of this range have integrated POE ports to connect the NVR cameras directly. If you took all the power cables of your cameras near the NVR can connect all these built-in ports.

The NVR can however also connect to external cameras, placed anywhere in the network. If some far NVR cameras are connected through the network switch, you can leave some of these unused built-in ports to make room for remote cameras.

BETTER USE OF PORTS POE NVR OR CONNECTING THE CAMERA EXTERNAL SWITCH?

The POE ports provided with the NVR is definitely the easiest and cheapest way to connect IP cameras to the NVR. If you use these ports do not need to buy a separate POE switch.

There are, however, some situations where it is better not to use an integrated poe door, but connect the IP camera to an external switch, to another point in the network. For example, if the camera is placed far from the NVR, it may not be convenient to bring a direct cable. Better connect the camera to a closer network switch instead of using a POE port of the NVR.

Also it should be noted that the cameras connected directly to the NVR ports are not contacted directly by other network devices. This happens because the NVR creates its own internal network to communicate with the cameras that directly links to it and can not be accessed from outside except through the same NVR. In other words, the IP camera that connects to the gates of poe become SLAVE NVR NVR and you can not manage them directly with other devices if unplugging them and linking them to your normal network.

For this reason, you should not use the POE ports on the NVR if you can contact the cameras directly to a computer or a second NVR.

Remember that if you choose to connect an external camera you decide not to use a POE port built

PRELIMINARY VERIFICATION: ONVIF PROTOCOL SUPPORT

You can connect to any POE ports on the NVR IP camera that supports the **ONVIF protocol.**

Old IP-based cameras owners are not supported standards.

PRELIMINARY VERIFICATION: DHCP ENABLE THE CAMERA

To connect a camera to a poe port NVR is essential that the camera is set to **DHCP enabled,** as it is necessary that the NVR can assign an IP address automatically.

If purchases DSE cameras can request that you be provided with DHCP enabled Factory. Otherwise you can consult the camera manual for how to enter the configuration of the browser and enable DHCP in the network settings. CAUTION - With cameras that do not use POE power supply, it is necessary to feed the camera AFTER having connected NVR so that the address assignment is carried out correctly.

PRELIMINARY VERIFICATION: ENABLE ACCESS WITHOUT LOGIN TO CAMERA

If you want to connect the NVR camera does actually happen in Plug & Play without having to configure anything, should be set within the camera **access to video without login.** Almost all IP cameras allow you to set this option in the network settings.

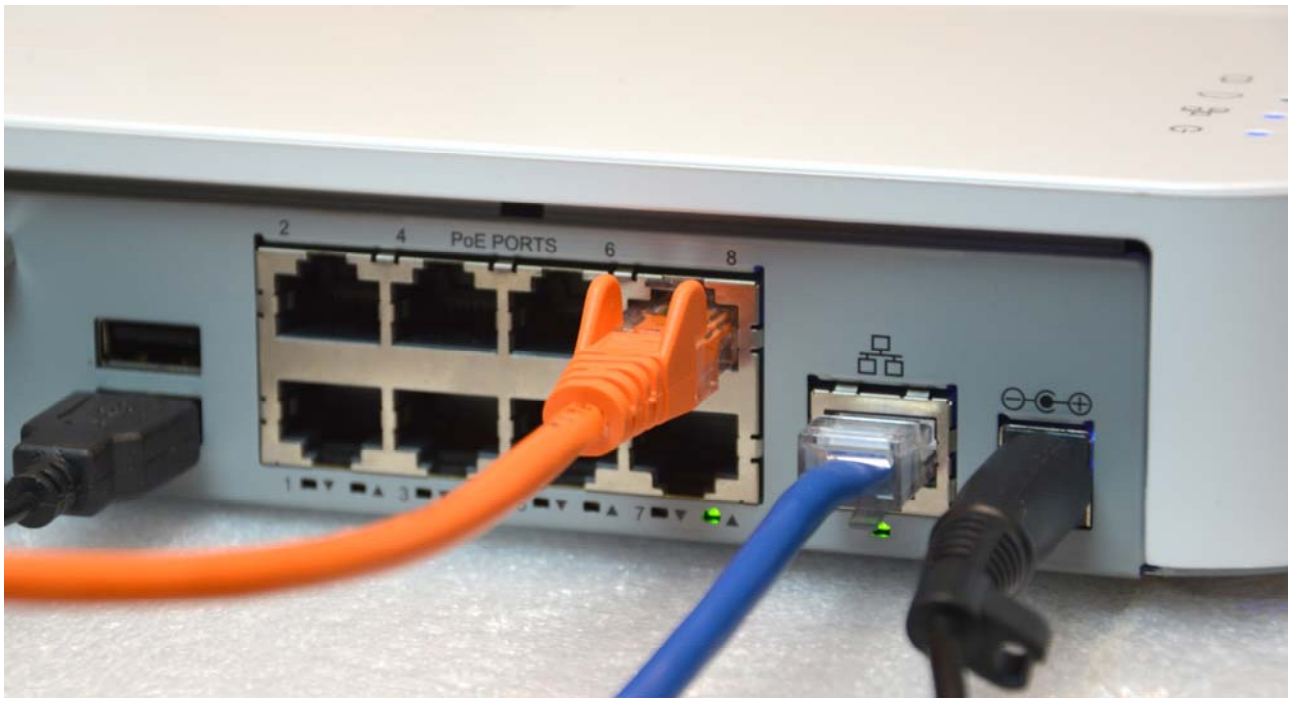
If purchases DSE cameras can request that you be provided with access without factory enabled login. Otherwise you can consult the camera manual for how to enter the configuration of the browser and enable this option in the network settings. If your camera does not support access without logging in, it is not a big deal, you just have to remember to include in the NVR of the camera access password, as discussed below.

CONNECTING A CAMERA TO A PORT POE NVR

The built-POE ports are placed on the back of NVR. They are all network ports power fitted POE for which directly provide power to the camera if it supports this technology.

In our range power POE is supported by all IP cameras with the exception of mini-cameras and motorized cameras ranging fed separately. Each port POE is numbered and its number corresponds to the channel that will occupy nell'NVR. As soon as the camera is connected with a normal right network cable, check that the green LED

below starts to flash rapidly, indicating the start of the network communication. If not, check the cable and make sure your camera supports power poe. In the picture below a camera it has been connected to port 8 of the NVR.



POE NOT CONNECT A CAMERA TO A DOOR NVR

You can also connect the NVR cameras that do not support POE and which are fed externally, such as many of our motorized models. The NVR automatically recognizes that the camera does not require power. When you connect this type of cameras remembers first connect the NVR cable and only after the camera feed, otherwise the address assignment may not operate properly.

CONNECTION PLUG AND PLAY THE CAMERA NELL'NVR

When you connect a camera to a poe port NVR, the NVR automatically assigns an internal IP address to the camera and displays the image after a short time in the box corresponding to the port number.

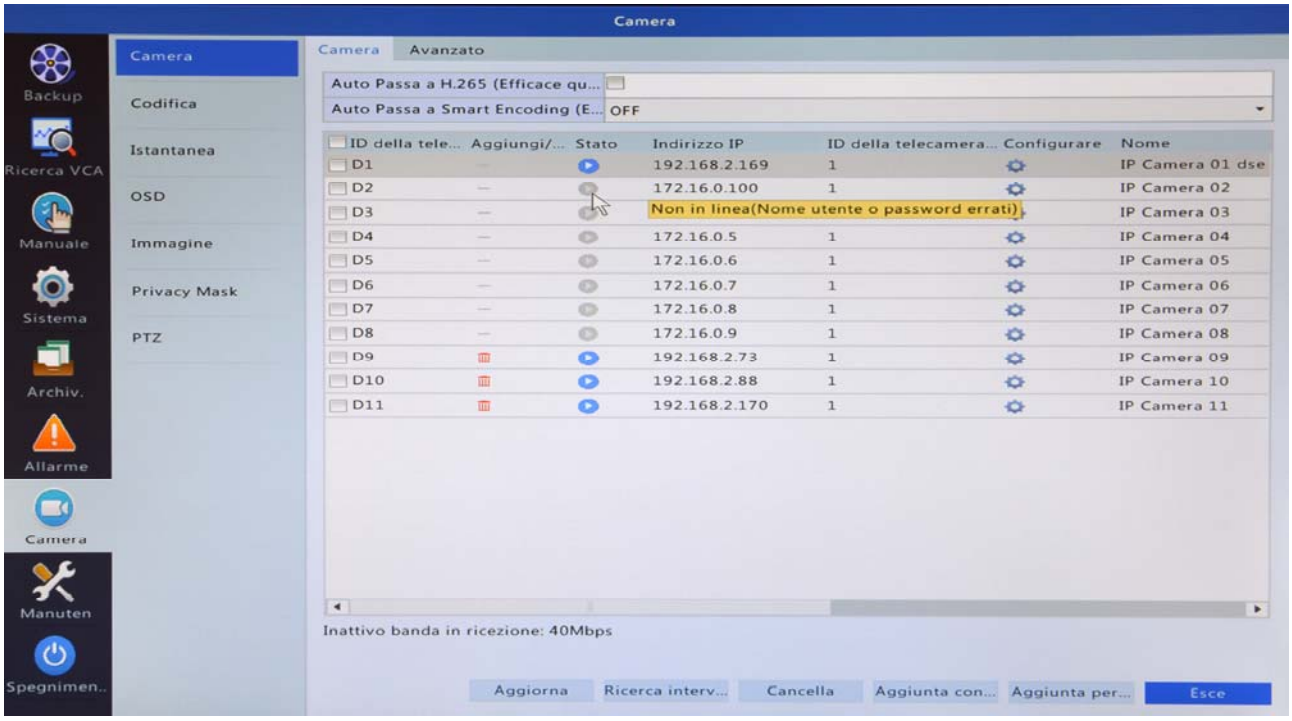
This connection is called a "plug and play" because it requires no configuration on your part.

WARNING - For the Plug and Play installation of non POE cameras it is recommended to power the camera only after connecting NVR.

INSERTING CREDENTIALS OF ACCESS TO THE CAMERA

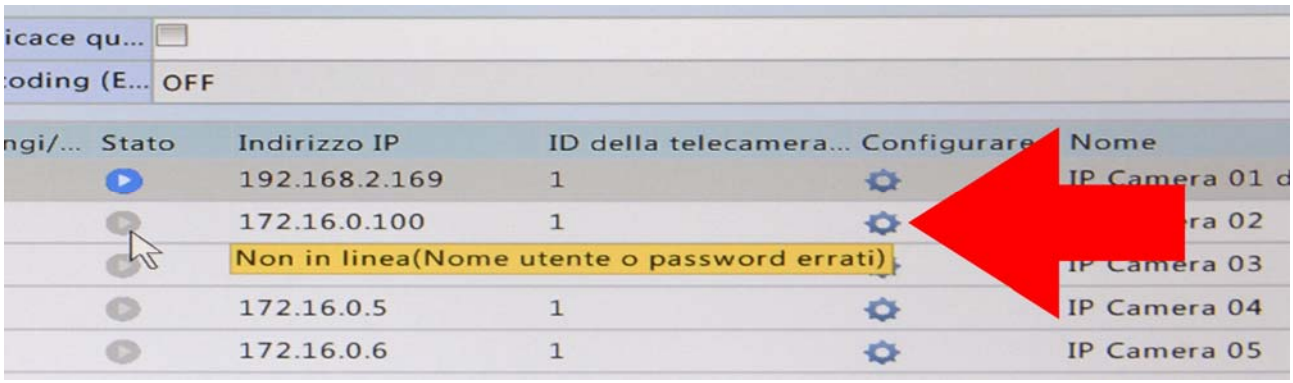
There are some situations that can prevent the Plug & Play connection to function immediately, the most frequent is the camera's request for an authentication password for access that is inserted manually by force.

If you have connected the camera to a POE port and the image appears on the screen after a period of about 1 minute it is likely that your camera requires a password to allow access NVR. To be sure leaves the status icon for a few seconds. In the example below we have connected a camera on the number 2 port of NVR which has assigned 172.16.0.100 address. The icon was, however, remained gray and placing on it the mouse find out that the reason is the incorrect password.

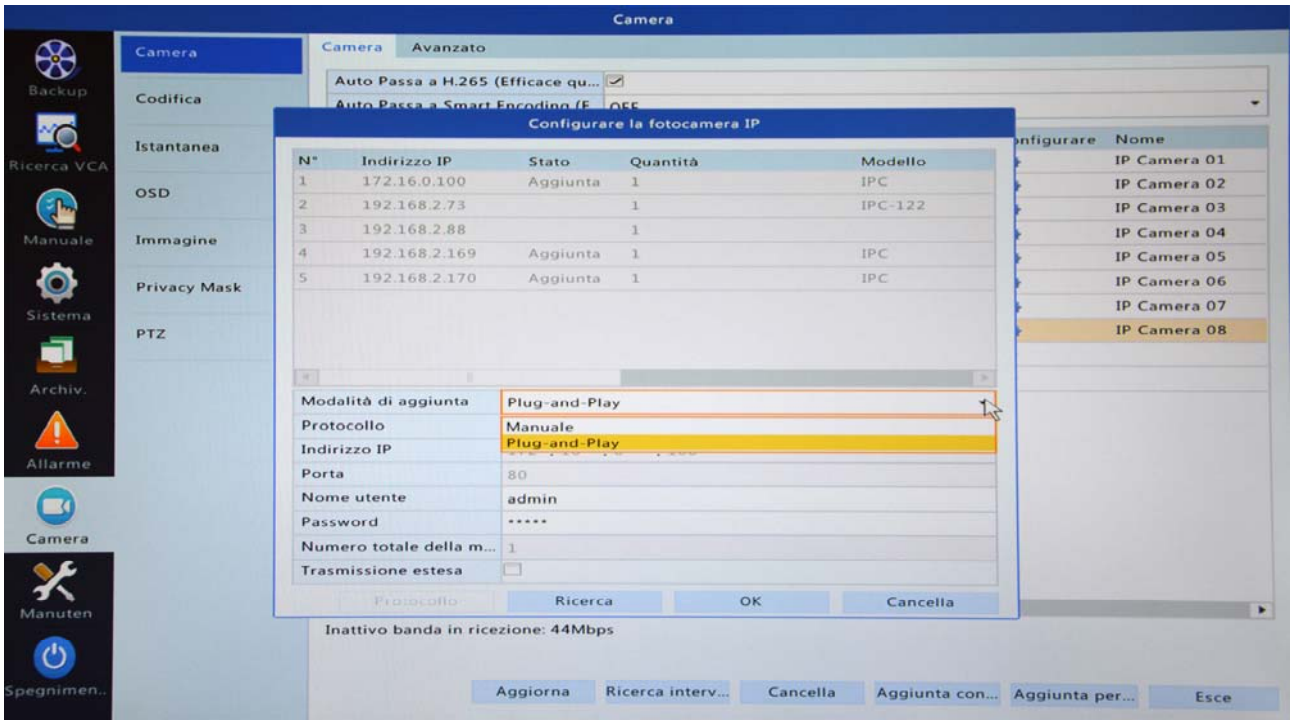


If you find yourself in this situation means you have to go and change the camera configuration in the NVR manually. Proceed as follows:

1 - Access the OSD menu / Camera and get access to the window you see above. 2 - Click the icon to the side of the camera settings that you just added



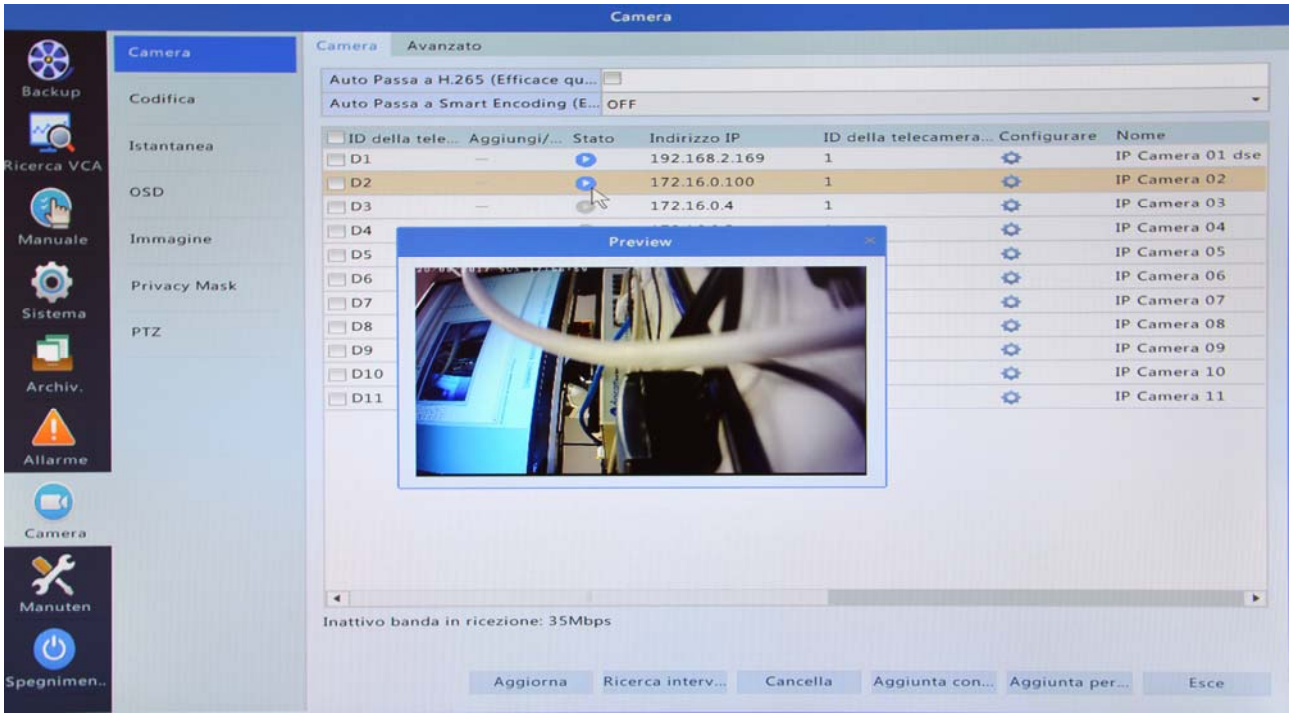
3 - In the first box passes from the Plug and Play mode to manual mode that allows you to edit the connection parameters



4 - Enter your user name and password correctly that are needed to access your camera and save with OK. Please do not enter the NVR login credentials that do not

nothing to do here. You must enter a user name and password set in the camera setup.

5 - Press the REFRESH button at the bottom of the window to check the new situation after entering the credentials. The camera status icon turns blue, and clicking on it you can see the live preview image.



If even after entering the correct password, the camera status icon remains gray, then something is wrong on the camera settings. Leave icon status for clues on why the connection failed.

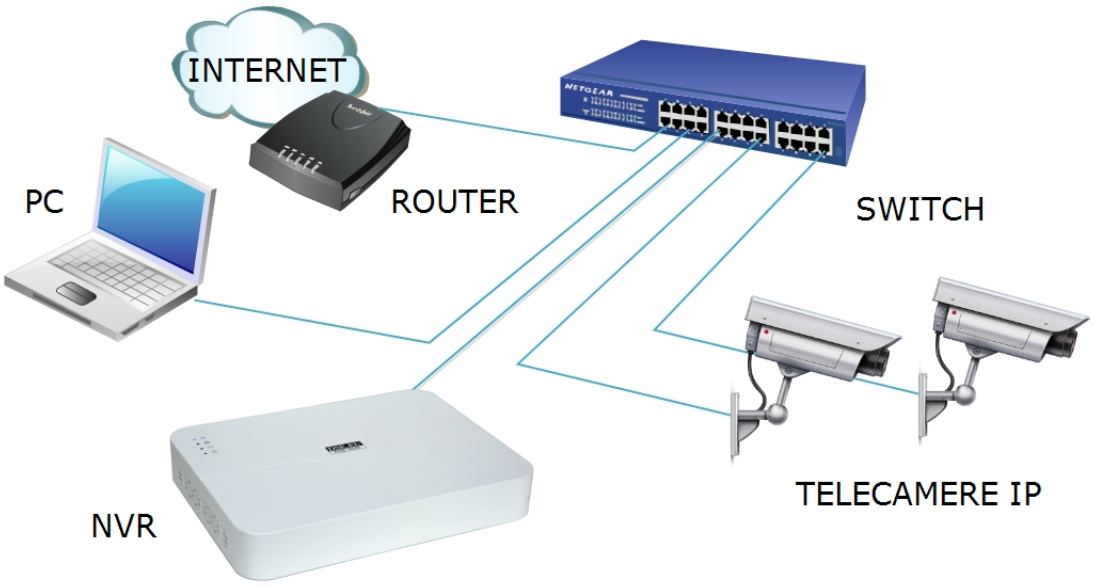
It will be necessary to disconnect the camera and connect it to the external network so as to be able to verify the configuration with a PC and the browser.

Typical causes of failure to connect may be the login settings and the video streaming compression format.

Configuring IP cameras on LAN

The NVR in this range have built-in ports for the connection of the cameras. You can however also connect the cameras installed on the LAN without using, or using only in part, the integrated ports.

In this situation both the NVR that the cameras are connected to the local network, such as in the diagram below.



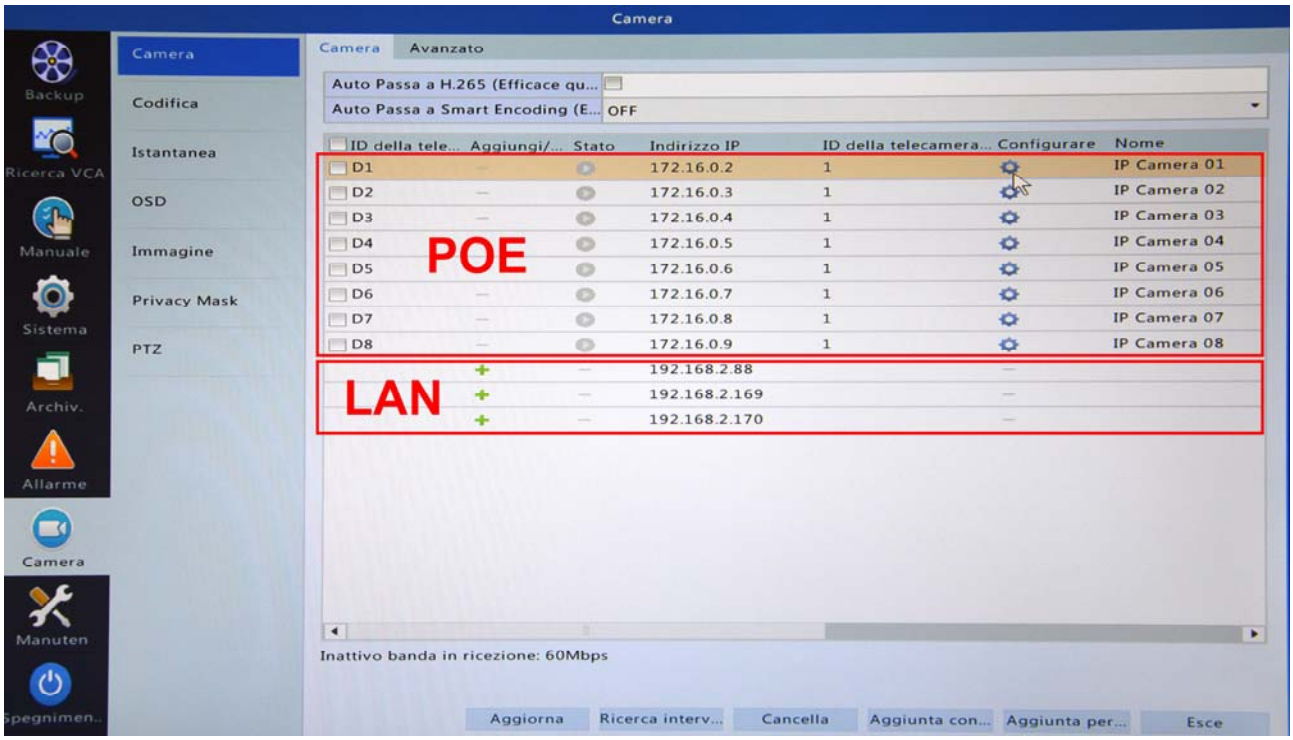
Before proceeding to the connection of external cameras is necessary that the NVR is connected to the LAN, as described above, and that the cameras are installed correctly and accessible on the network, each with its own address.

CONNECTING A ONVIF IP CAMERA

To connect an IP camera NVR ONVIF installed on the LAN, proceed as follows: 1 - Access the OSD menu as explained above.

2 - Open the CAMERA tab. You will find a list of cameras loaded in the NVR. In an NVR new table it looks like the one below which shows, by way of example, an NVR from 16 channels with 8 POE ports. The first 8-channel NVR are factory paired with 8 POE ports on

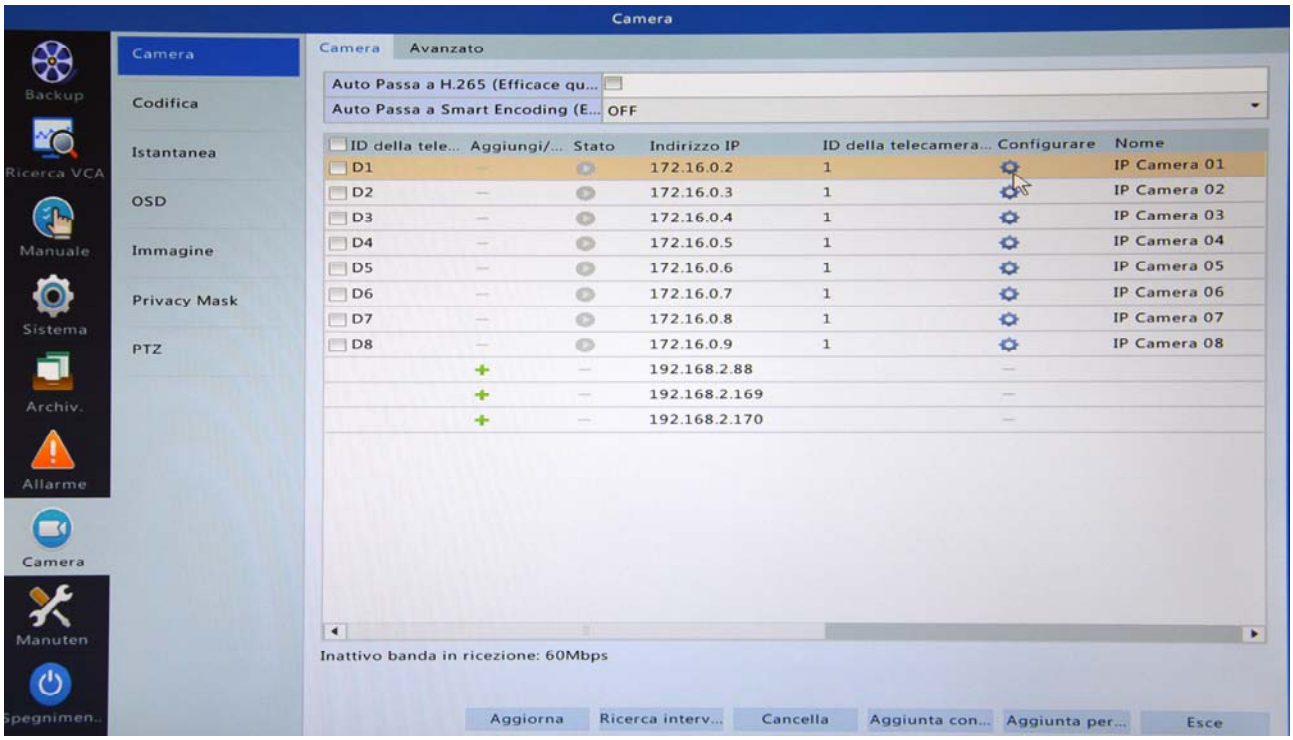
NVR back. Below you'll find external IP cameras to the NVR has automatically detected on the network.



If your NVR manages a maximum number of cameras beyond his POE ports, as in the case shown above, you can add the LAN network cameras directly by clicking the sign

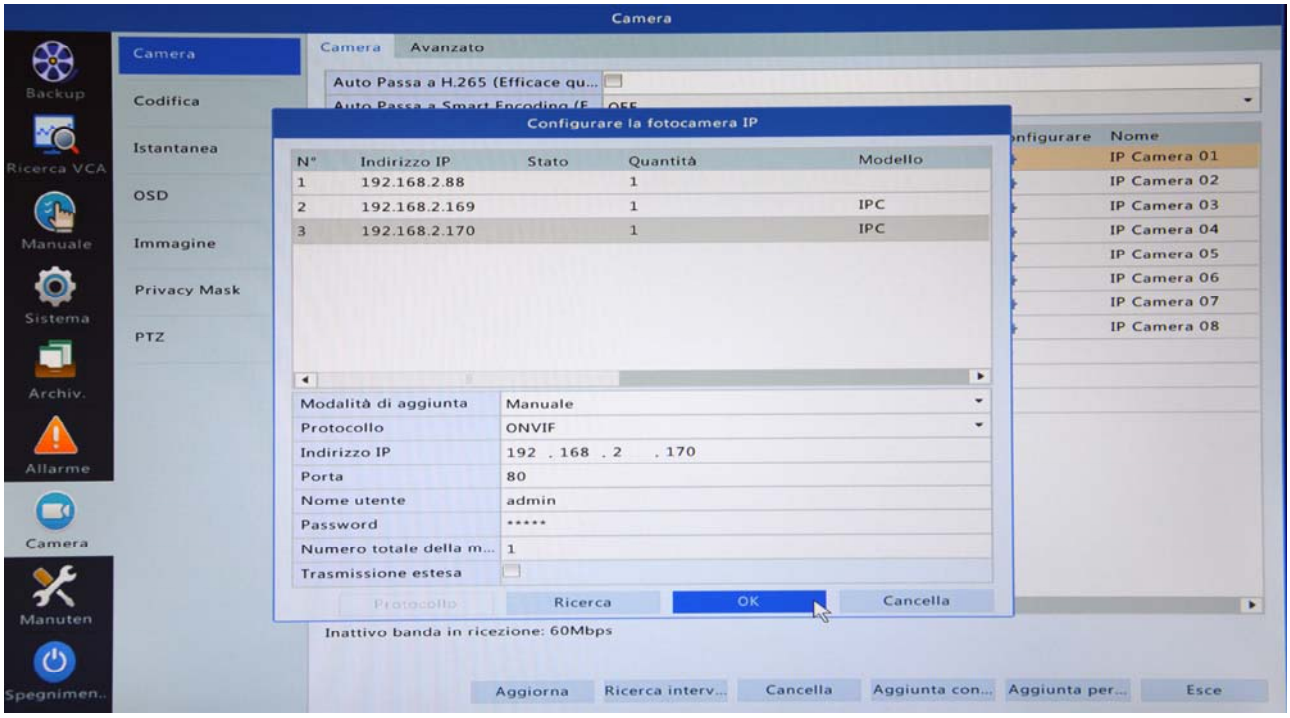
\+ green side of the camera.

If your NVR has many POE ports as usable channels, you can not add the NVR cameras clicking the + sign beside them because the NVR channels are all already occupied factory by POE ports and no further addition it would be permitted. In this case, to add the external camera to your NVR, you must choose a channel coupled to a POE port and change it. In the example below we decide not to use the POE port coupled to channel 1 and connect its place an external camera.

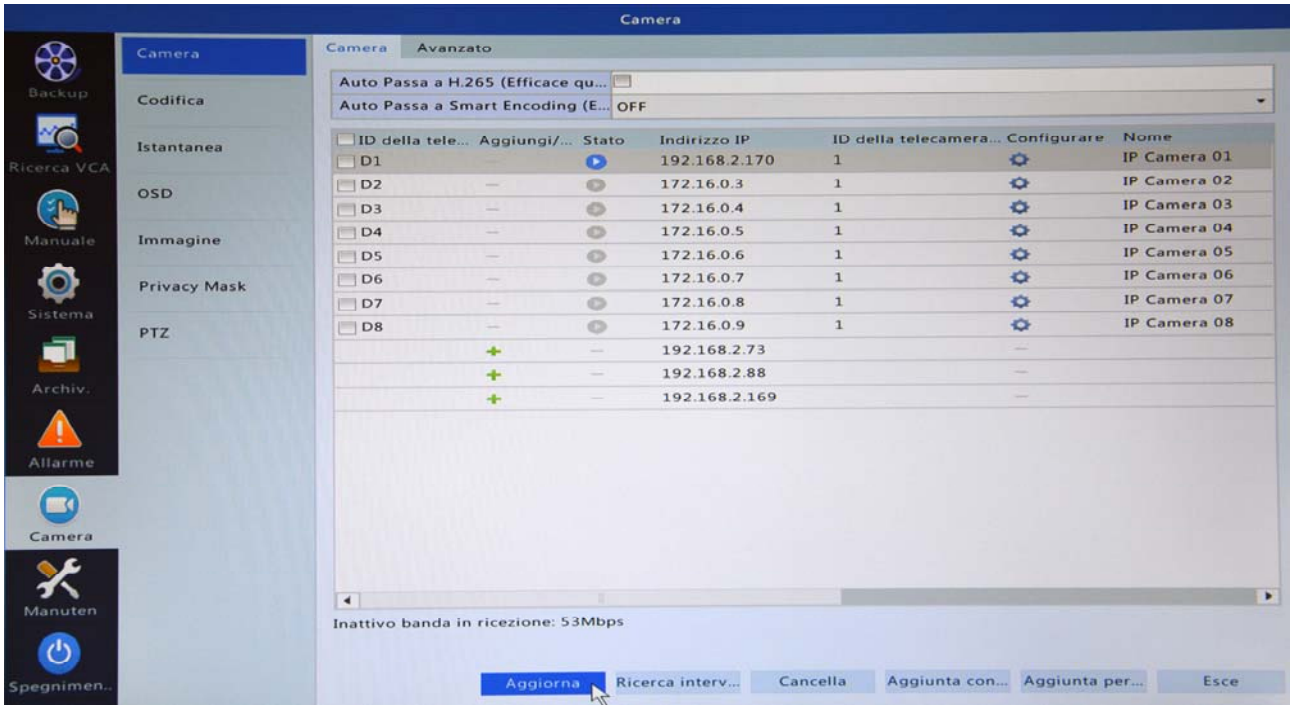


3 - Click the SETTINGS icon (gear icon) of the channel where you want to insert the camera. In the window that appears, change the mode by bringing Plug-And-Play to MANUAL so that you can enter data freely.

4 - In the upper part of the window are listed all ONVIF IP cameras to the NVR has automatically detected on the network. Select the one you want to add. **Always overwrite the user name and password** inserting the correct credentials required by the camera. This is important because the connection can take place.



5 - Press OK. The camera is now added NVR. To check for proper connection, click the REFRESH button at the bottom of the window and you'll see a small blue icon next to the camera confirming the connection has, as you see in the picture below.



If the connection fails, the status icon remains gray. Leave your mouse for clues on why the connection failed.

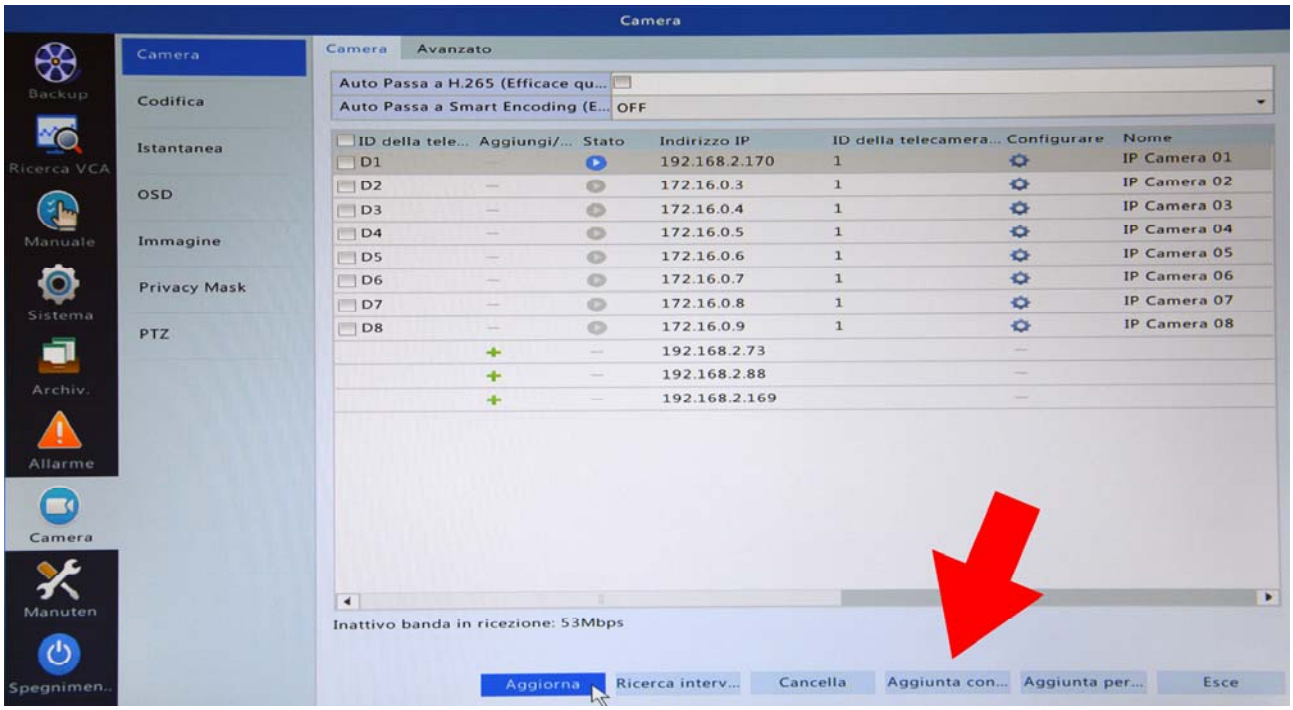
6 - Exit OSD menu and you will see the live camera image you just added appear in the tile of the channel. Repeat for all system cameras.

NOTE - The search NVR cameras in the same network segment of its interface. In practice, if the NVR has the address 192.168.0.34, the cameras will search in the address range between 192.168.0.1 to 192.168.0.255.

'Also possible for special needs, to search for IP cameras in different segments by clicking the SEARCH button INTERVAL

CONNECTION OF ALL ONVIF IP CAMERA NETWORK WITH ONE CLICK

If your NVR has enough free channels, as well as those occupied by built-POE ports, you can also add all the IP cameras detected on the network simultaneously pressing ADDITION WITH A CLICK button.



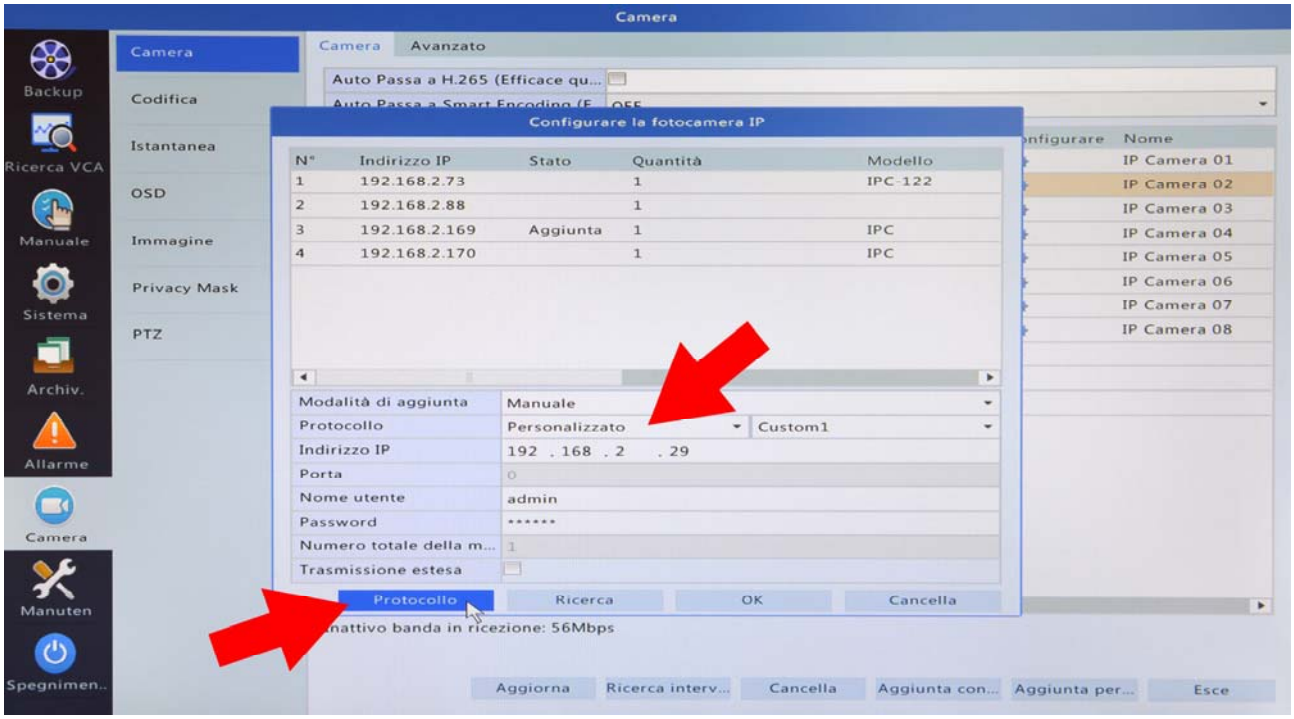
CONNECTION OF A GENERIC IP CAMERA VIA RTSP

If your camera does not support the onvif protocol or does not support it properly, you can

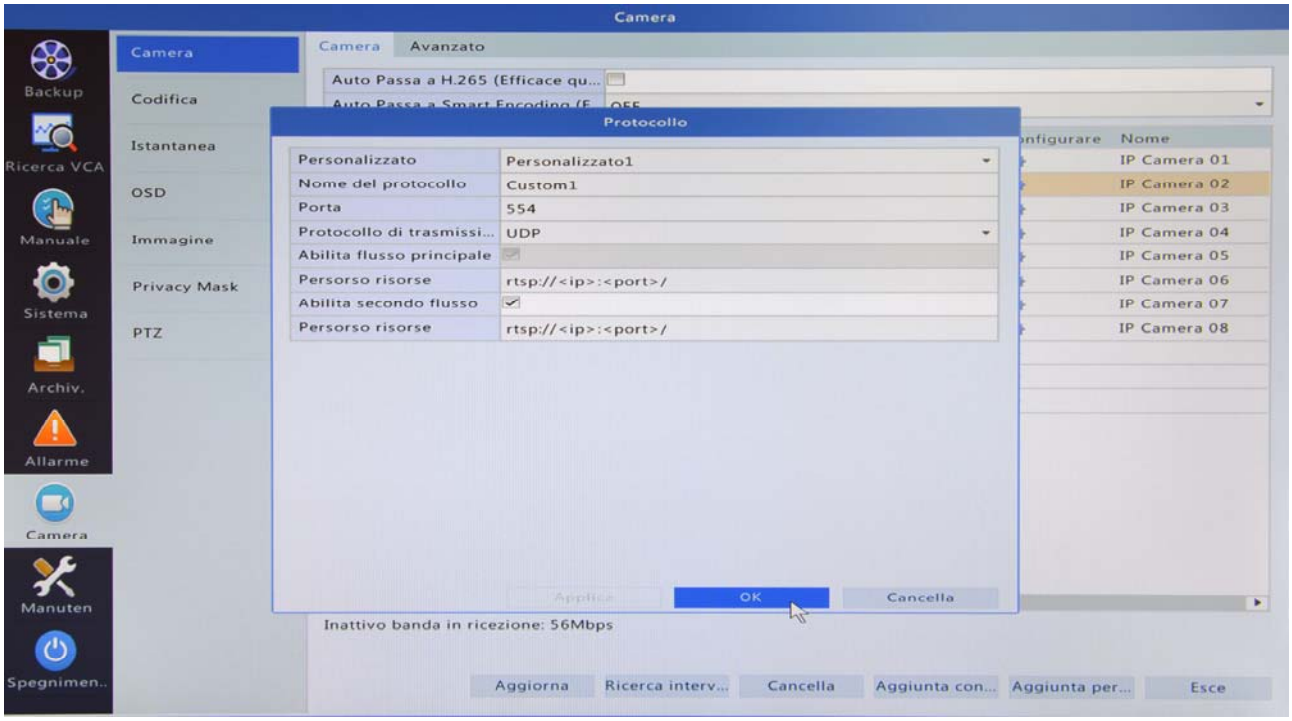
Connect your camera using the RTSP protocol. Remember that if the camera is connected RTSP you can just see the live video and recorded video and you can not handle advanced commands.

To load a camera with the RTSP protocol, do the following:

1 - Access to the settings of one of the channels on which you want to connect the camera and brings the added mode to MANUAL. Enter as usual IP address, user name and password. Then it brings the protocol setting to CUSTOM



2 - Click the button to customize the protocol PROTOCOL



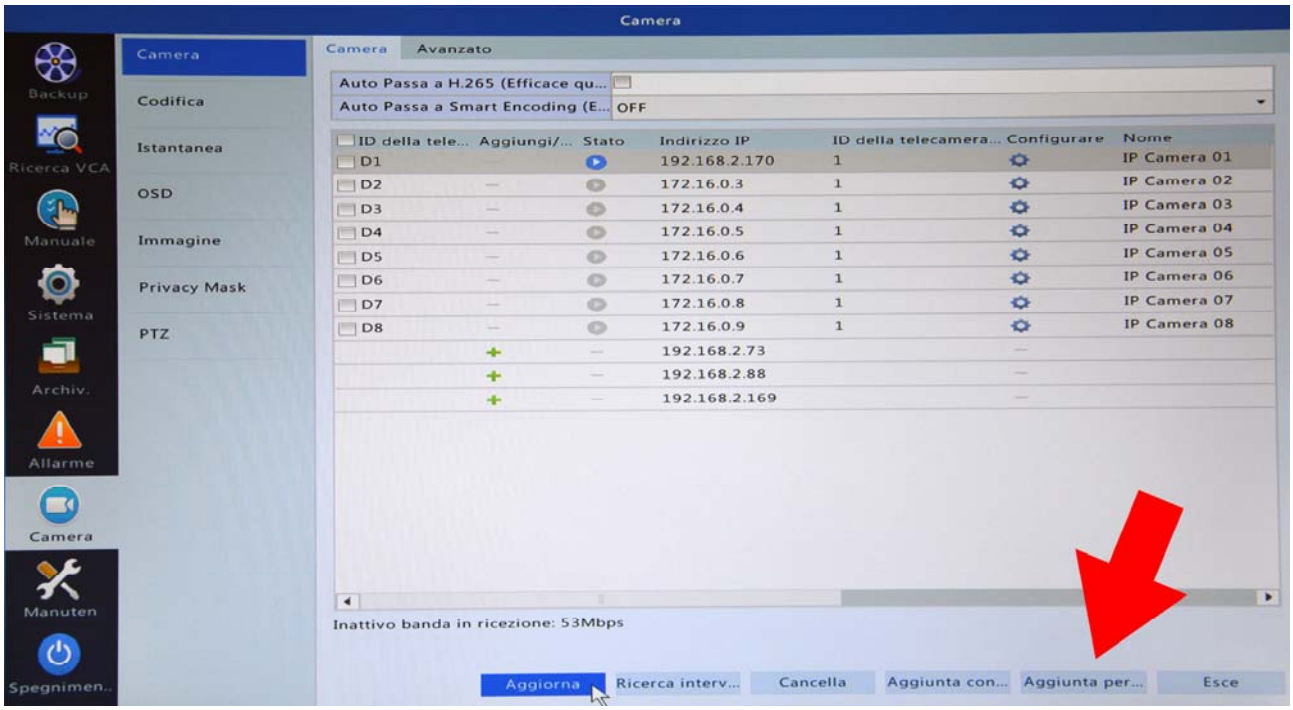
3 - Enter the data for the RTSP link. You can start with giving a name to this Protocol RTSP calling. Then it indicates the port (usually 554), the type of protocol (TCP or UDP) and the exact routes to call to evoke the primary flow and, if they enable, even the secondary. Check the camera manual to know the exact syntax of RTSP support you'll need on PATH RESOURCES boxes (factory indicated path is an example).

CONNECTION OF AN IP NETWORK CAMERA ON OTHER

E 'can connect NVR cameras on other networks including the internet as long as configured to be accessible.

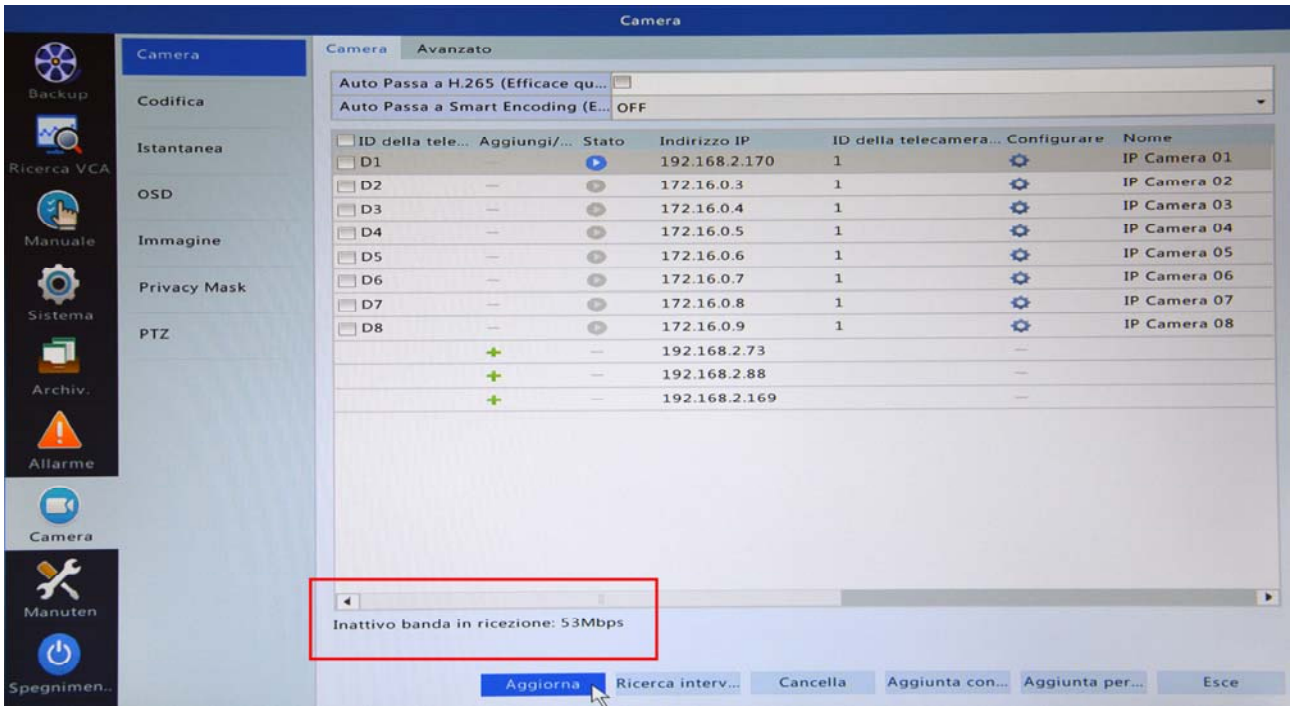
In this case, the NVR is not able to search for the camera and show already listed, so we must put it in full manual control.

To insert a camera in full manual mode, press the ADD CUSTOM button and enter all data manually.


Camera
Backup
Ricerca VCA
Manuale
Sistema
Archiv.
Allarme
Camera
Manuten
Spegnimen..
Camera
Codifica
Istantanea
OSD
Immagine
Privacy Mask
PTZ
Camera
Avanzato
Auto Passa a H.265 (Efficace qu...
Auto Passa a Smart Encoding (E...
OFF
ID della tele... Aggiungi/... Stato Indirizzo IP ID della telecamera... Configurare Nome
D1 192.168.2.170 1 IP Camera 01
D2 172.16.0.3 1 IP Camera 02
D3 172.16.0.4 1 IP Camera 03
D4 172.16.0.5 1 IP Camera 04
D5 172.16.0.6 1 IP Camera 05
D6 172.16.0.7 1 IP Camera 06
D7 172.16.0.8 1 IP Camera 07
D8 172.16.0.9 1 IP Camera 08
192.168.2.73
192.168.2.88
192.168.2.169
Inattivo banda in ricezione: 53Mbps
Aggiorna
Ricerca interv...
Cancella
Aggiunta con...
Aggiunta per...
Esce

Check the bandwidth available to the NVR

When configuring new cameras is good to keep an eye on the remaining bandwidth available to handle new channels. The value of this band, which varies depending on the model, will be pulled down as you add new cameras.



If you are running out of bandwidth available to your NVR and in any case you have to add more cameras you have to take action in the settings of the cameras already installed and set up video streaming compressed limiting the occupied bandwidth.

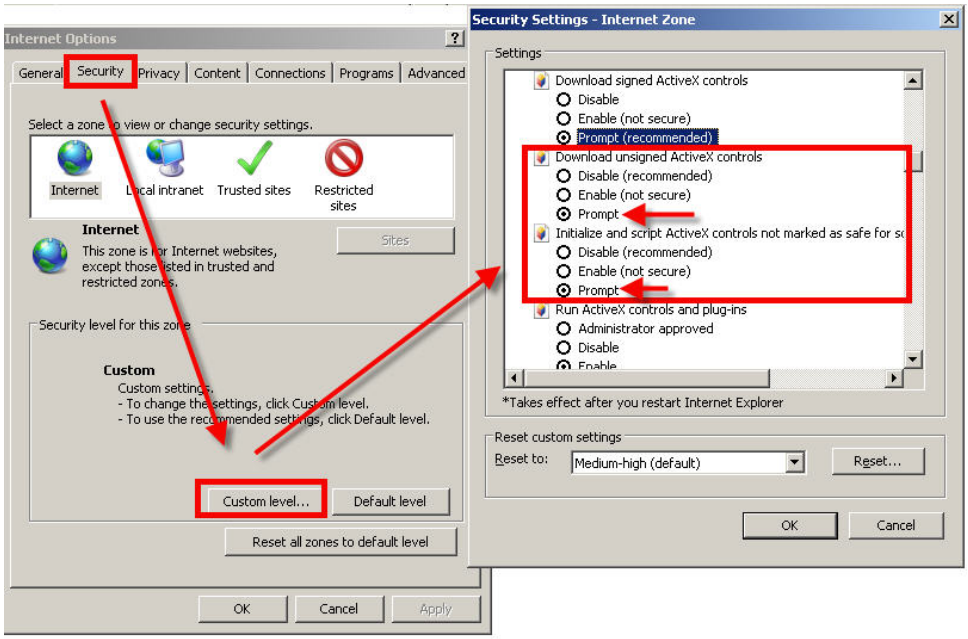
Connection with browser

The easiest way to connect to a VCR DS series through a computer using the Internet browser. The reference is to use browser **Internet Explorer**

but you can also use Firefox.

ENABLE PERFORMANCE OF ACTIVEX

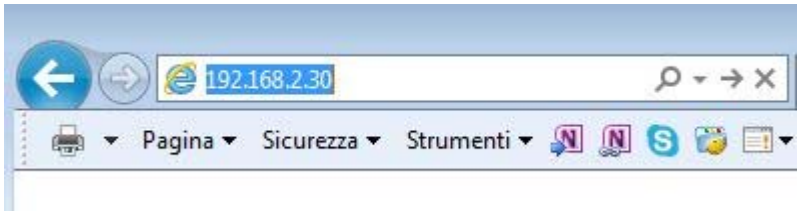
When you first connect the device installed in the Internet Explorer browser the necessary activeX components. Without these components, your browser can not display the image. However, Internet Explorer contains security settings that may prevent the installation. Before attempting to connect must be enabled **download and execution of ActiveX not marked as safe.** In Internet Explorer, select TOOLS / INTERNET OPTIONS



In the folder PROTECTION choose the area of interest (Internet or local network) and click CUSTOM LEVEL. Enable all items for the **download and execution of ActiveX particularly those NOT marked as safe.** E 'can set the items either ENABLE or ASK FOR CONFIRMATION. ASK FOR CONFIRMATION setting the browser will prompt you to click OK to confirm the installation of the component. Finally, save and restart the browser.

ENTERING THE ADDRESS OF THE RECORDER AND WEB PORT

To access with Internet Explorer, type in the address box, the IP address that you assigned to the NVR. In the example below we provide a link on the internal network to the DVR an IP address of 192.168.2.30.

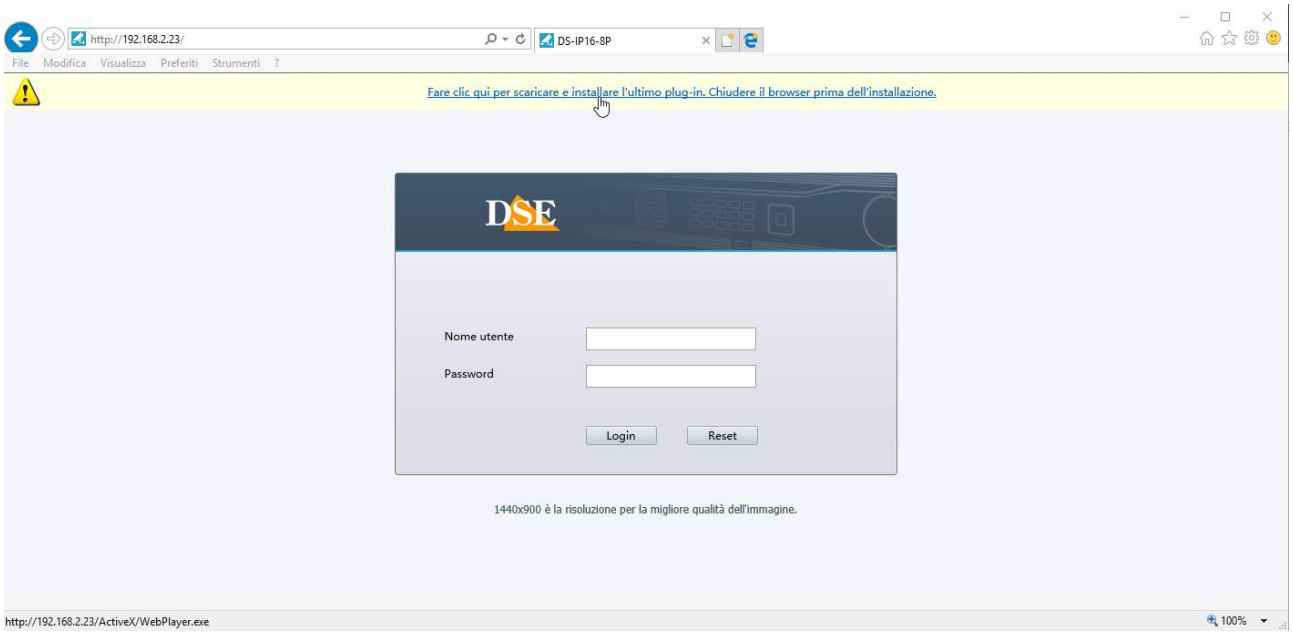


All DS Series video recorders Factory WEB port 80. Port 80 is the one that browsers use if they have not been clarified another.

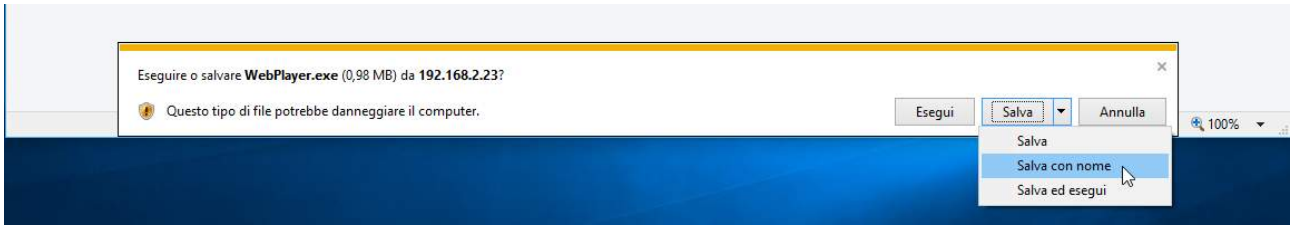
Note that if you change the web port in the device settings you will need to specify it in the address bar. The following after the IP address of the video recorder is the web port is designated 85

Proceed as follows:

1 - Click the link at the top of the window to install the plug-in

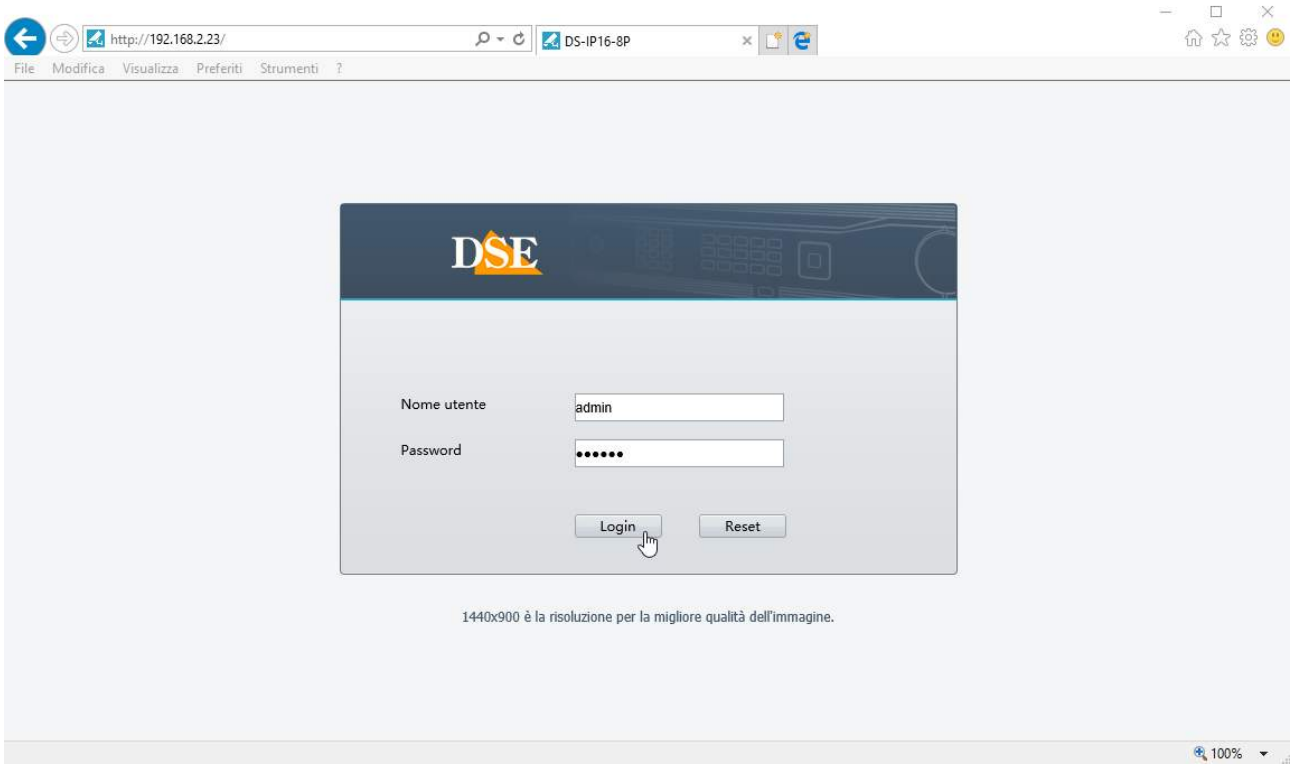


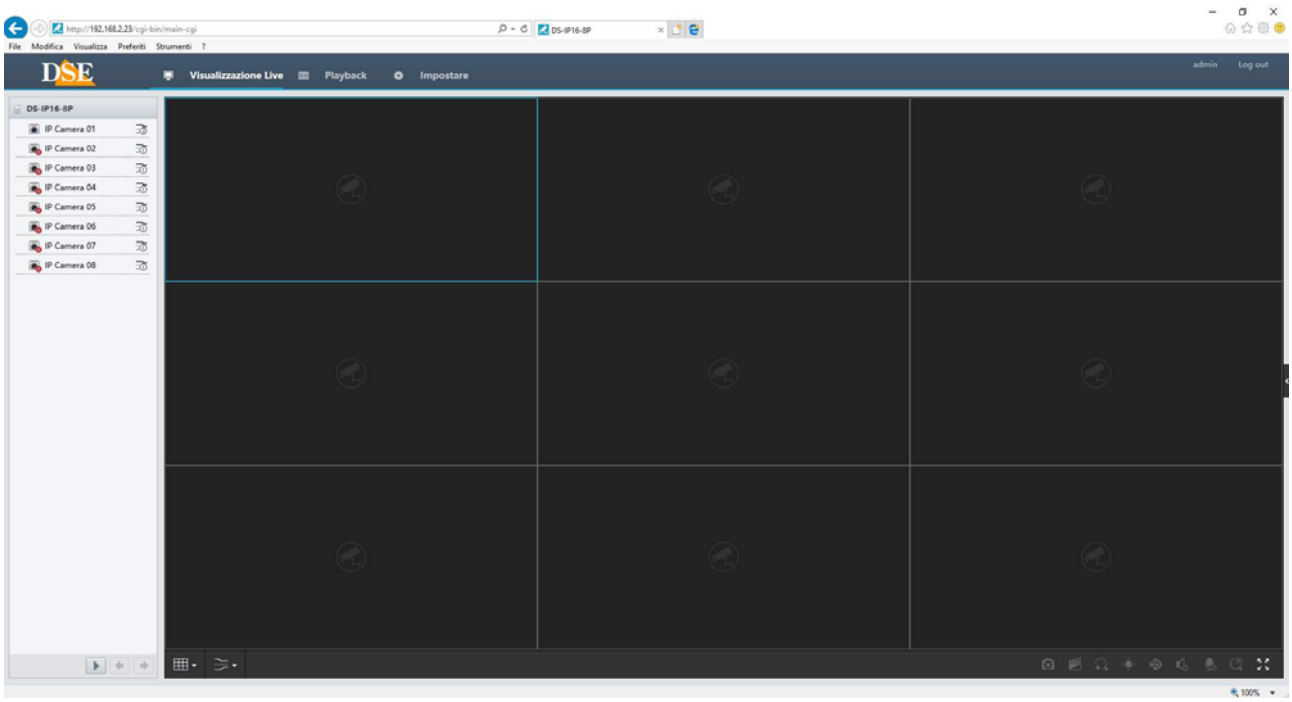
2 - Save the executable file on your PC, such as your desktop



3 - Close the browser and run the file by double clicking on the icon to install the plugin

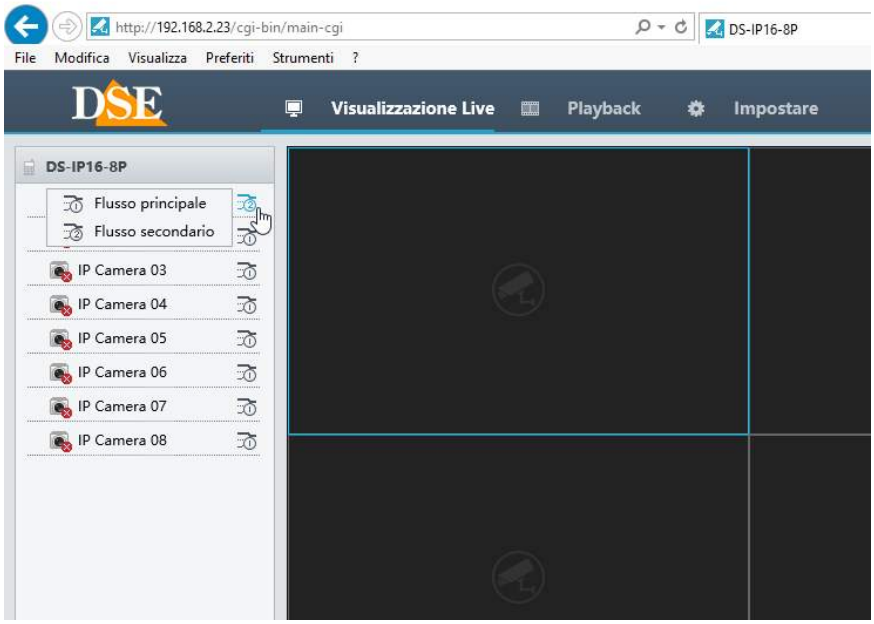
4 - Make a new shortcut with Internet Explorer. Now you will no longer be prompted to download the plugin, because it is already installed. Enter the login credentials that factory are: admin / 123456

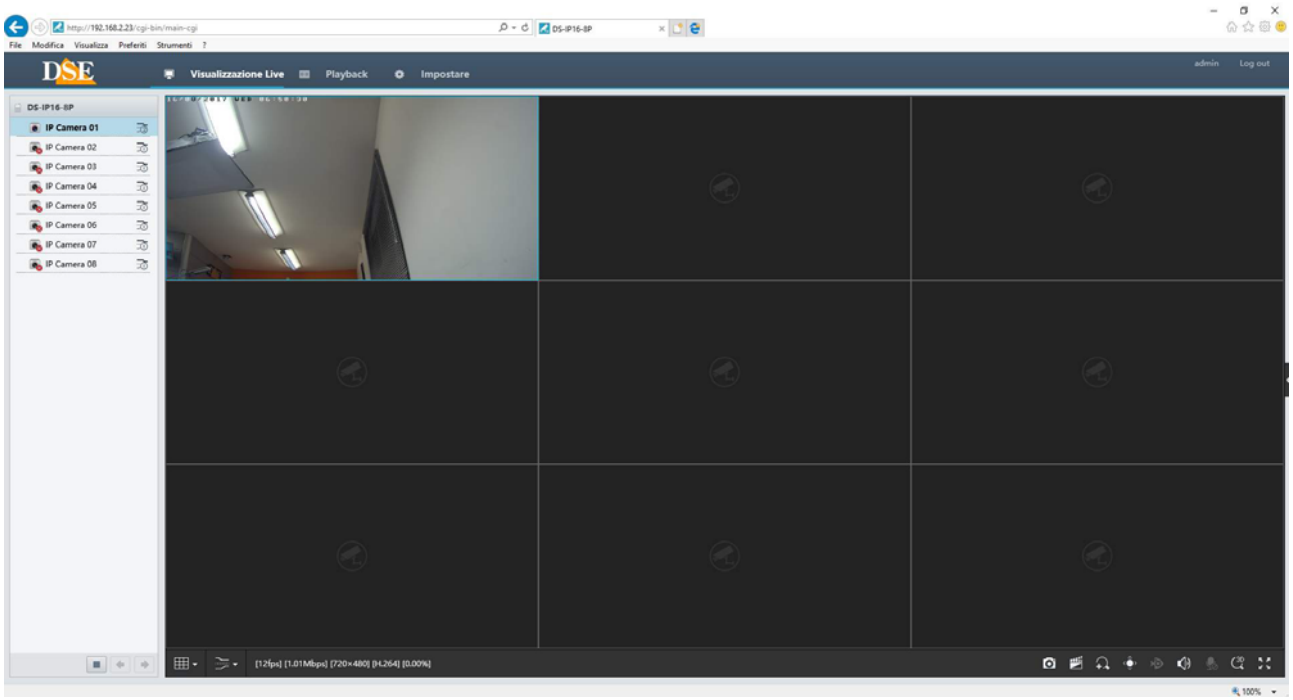




LIVE VIEWING

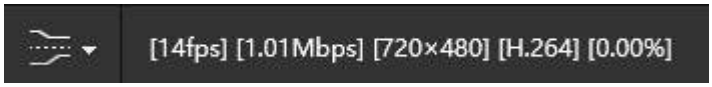
To start the live view of a camera you have to select the tab and then click the camera. You can also drag the camera with the mouse in the box where you want it to appear. For more control you can also click the icon 1-2 at the camera side, to choose whether to use the main stream, at full resolution, or the lighter side, we recommended via the Internet.


http://192.168.2.23/cgi-bin/main-cgi
DS-IP16-8P
File Modifica Visualizza Preferiti Strumenti ?
DSE
Visualizzazione Live
Playback
Impostare
DS-IP16-8P
Flusso principale
Flusso secondario
IP Camera 03
IP Camera 04
IP Camera 05
IP Camera 06
IP Camera 07
IP Camera 08


DSE
Visualizzazione Live
Playback
Impostare
admin
Log out
DS-IP16-8P
IP Camera 01
IP Camera 02
IP Camera 03
IP Camera 04
IP Camera 05
IP Camera 06
IP Camera 07
IP Camera 08

In the live view of the cameras remotely There are several commands available:

 You can change the screen layout



Switches from the stream Primary to Secondary, lighter.

 Take a live picture image in JPG format that is saved on your PC. Because the rescue to be successful you must run Internet Explorer as administrator (right click - Run as administrator). The data are saved in the set in the configuration folder.

 Record live video on the local PC in MP4 format. Because the rescue to be successful you must run Internet Explorer as administrator (right click - Run as Administrator)

 Digital zoom. Clicking this button enables the digital zoom. You can zoom using the mouse wheel or by drawing a box with your mouse in the live image.

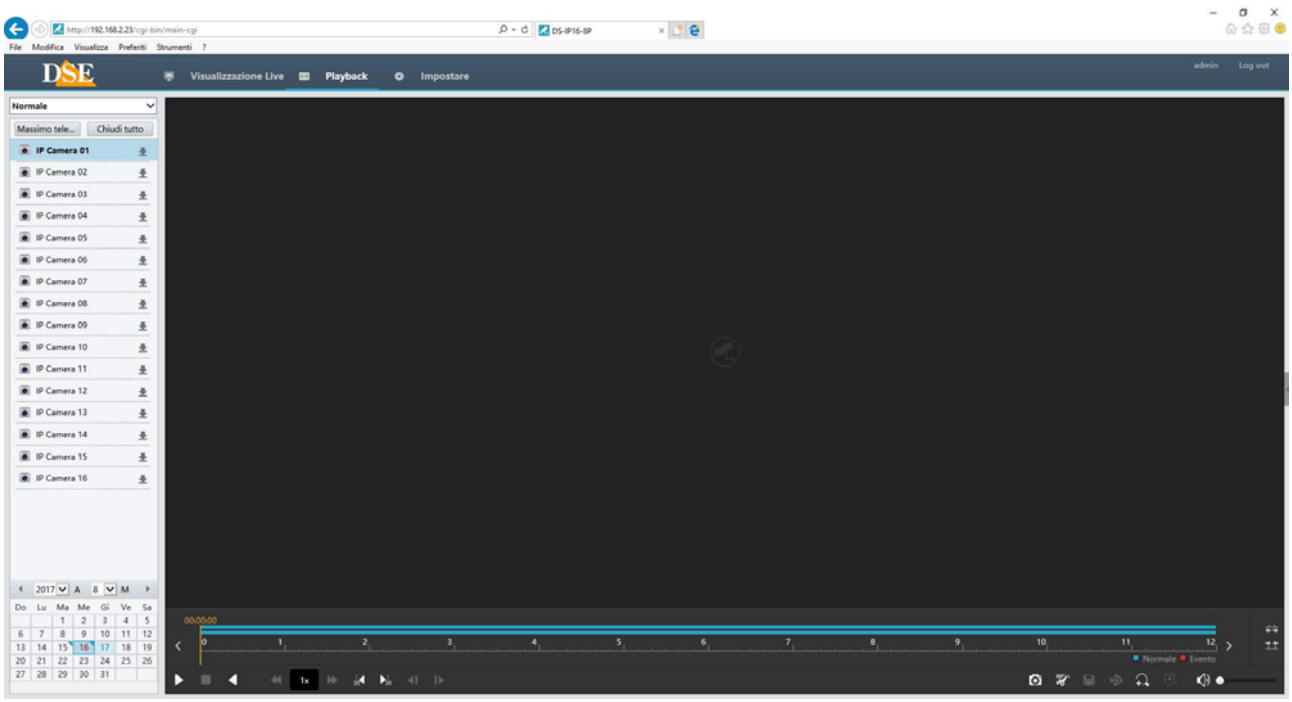
 PTZ. Press this button to open the panes in control of motorized cameras.

 Audio. Enable audio playback if the camera it is provided. If the camera is equipped with audio output it is also available the microphone icon to speak live.

3D PTZ - Enable PTZ control with the mouse.

PLAYBACK

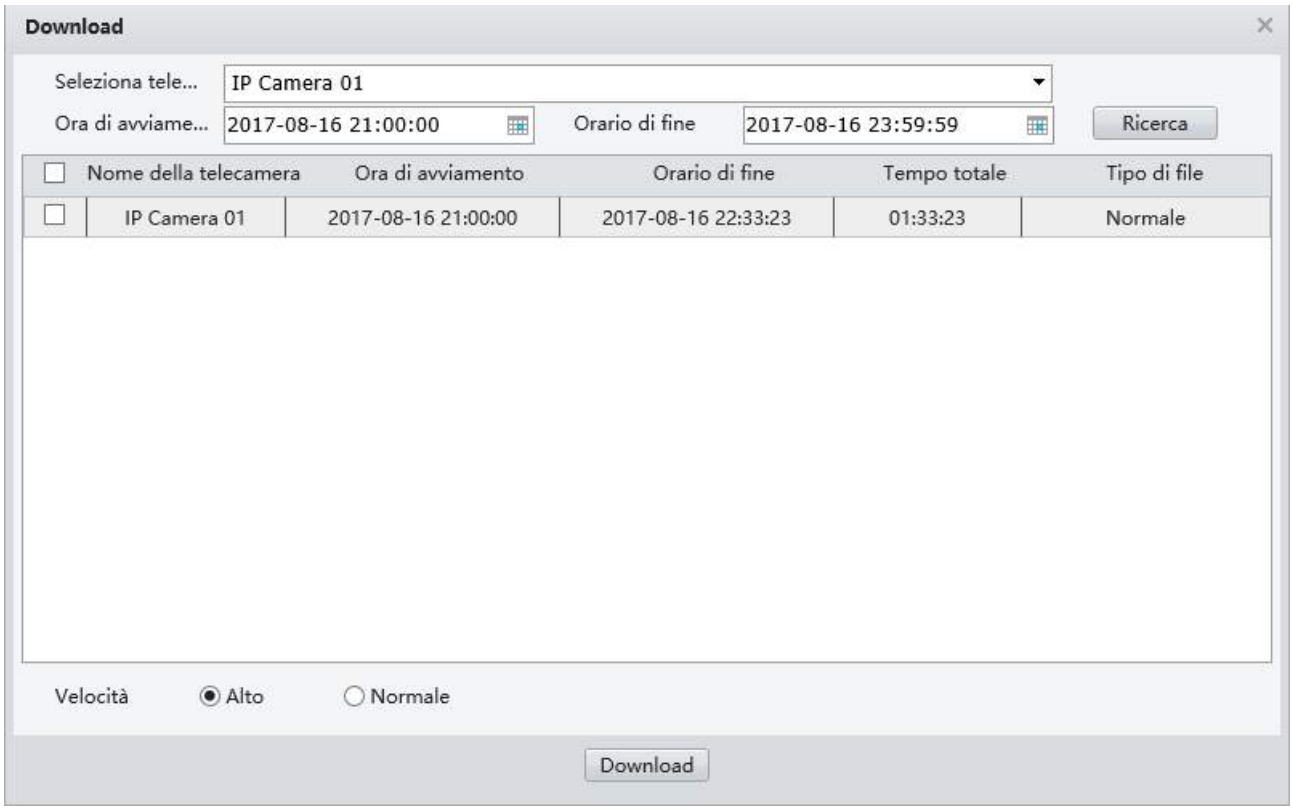
In the PLAYBACK mode, you can play movies stored nell'NVR



You should select the camera and the research day. If the NVR are the recordings will appear a blue timeline at the bottom of which you can click to play the video at different times of day. With the mouse wheel you can change the scale of the timeline. Under the timeline you come with the usual playback controls.

DOWNLOAD

In the PLAYBACK you can download movies stored in the NVR. You have to press the icon next to the camera

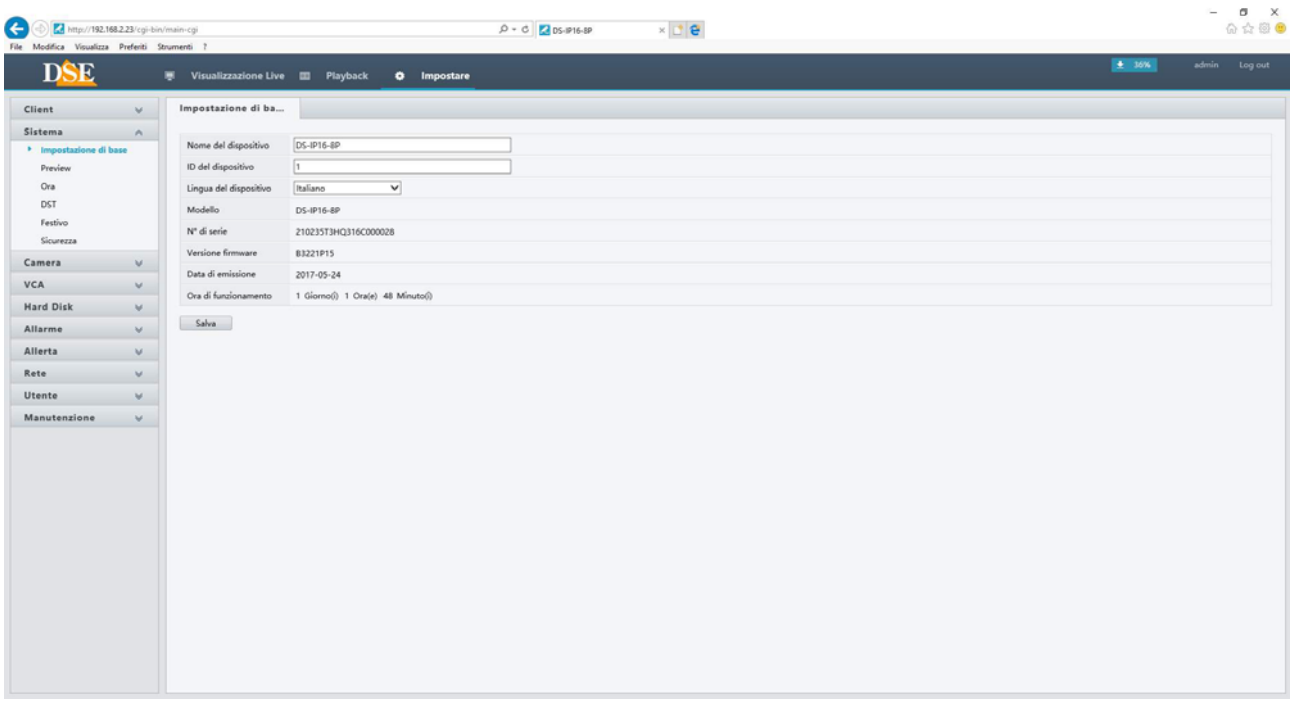


In the download window you can choose the camera and the time to press the DOWNLOAD button and download the movie.

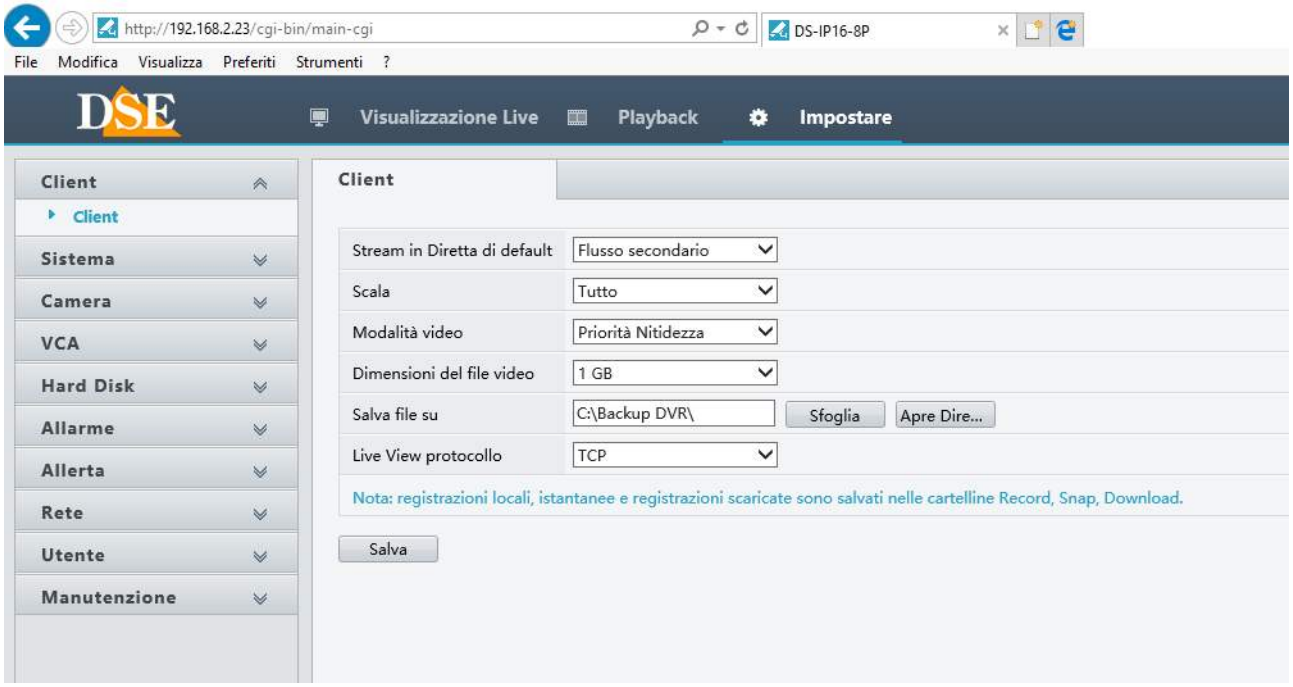
Because the rescue to be successful you must run Internet Explorer as administrator (right click - Run as administrator). The data are saved in the set in the configuration folder.

SETTINGS

In the SET folder you can remotely configure the NVR all options are explained in detail in the configuration guide.



In this section there is also a CLIENT folder where you configure some options of the client browser Internet Explorer



DEFAULT STREAM - Defines which video streams start in the live view unless specified.

SCALE - If you set ALL, the live camera image is automatically resized to ripempire the available pane. If you set PROPORTIONAL the original aspect ratio of the video is always maintained, filling the rest with black bars. METHOD 'VIDEO - E' possible to give priority to image quality (SHARP) or playback (REAL-TIME) fluency in the live video playback

SAVE FILES - Here you set the folder where the files are saved as pictures or videos on your local PC.

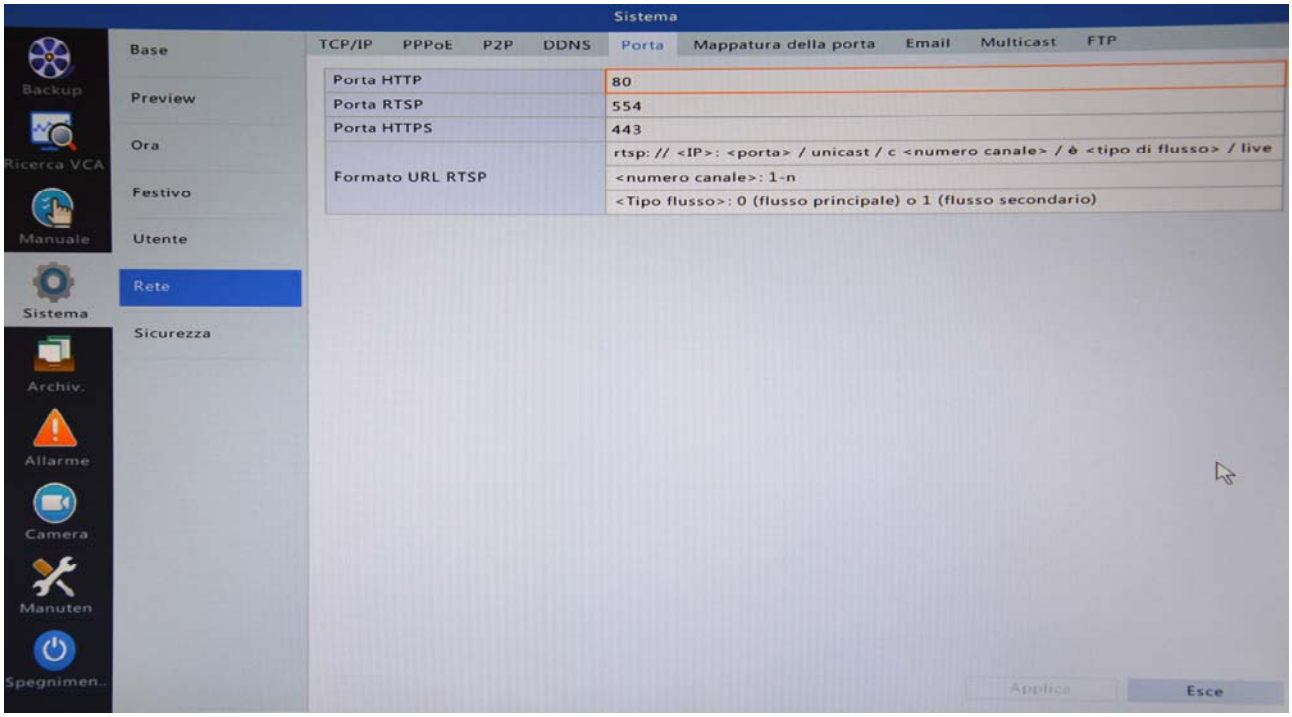
PROTOCOL LIVE VIEW - You can define TCP or multicast

Connecting player RTSP

The DS NVR series allow to connect remotely even with a simple RTSP player to receive the video of a camera.

There are many RTSP readers available online without charge, for example VLC downloadable www.videolan.org.

The address to use with RTSP protocol is clearly explained on the page of the System / Network / Port menu



The address structure is as follows:

rtsp: // <IP>: <port> / unicast / c <channel> / s <flow> / Live <channel>: n-1 instead of the data in <>

the following data must be entered: <IP>: address IP camera

<PORT>: RTSP port to use (default: 554) <CHANNEL>: channel number to be

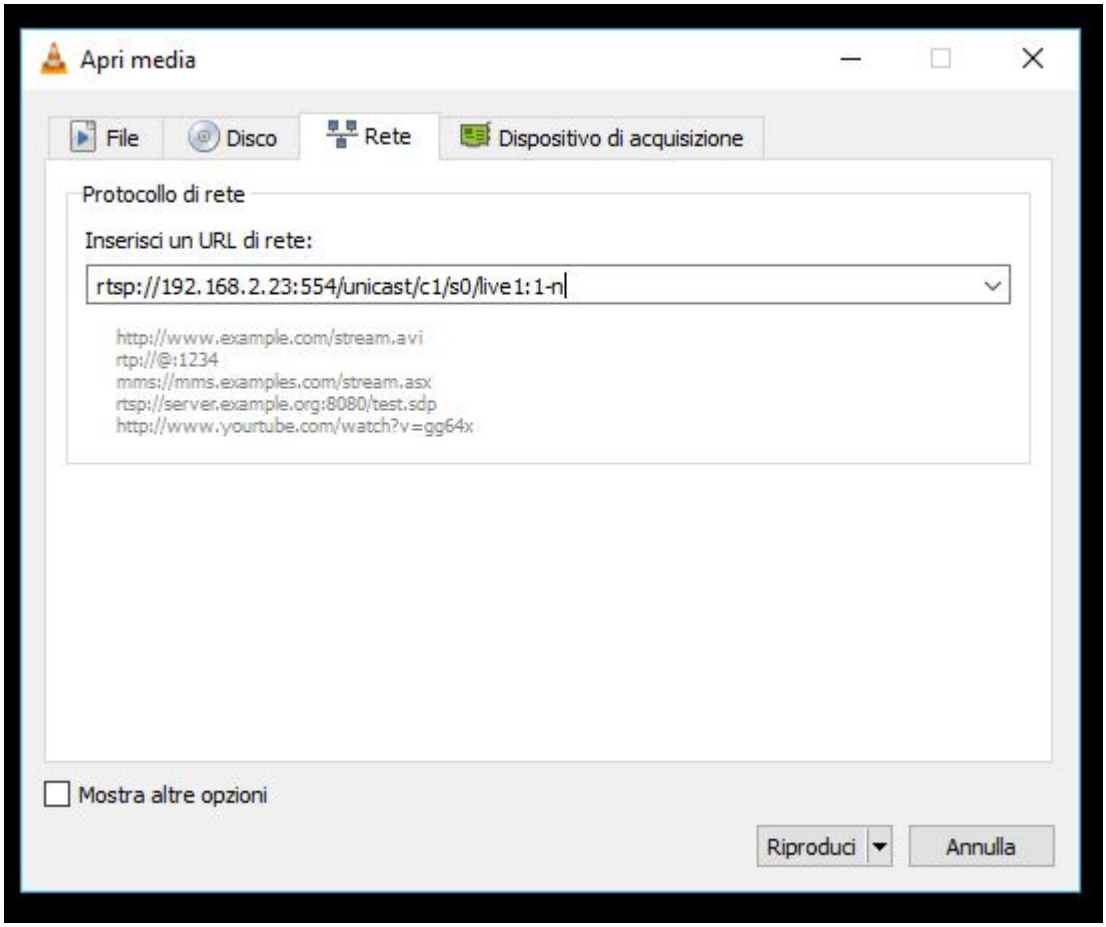
displayed

<FLOW>: Enter 0 to receive the main flow, one to receive the secondary flow

Here's an example

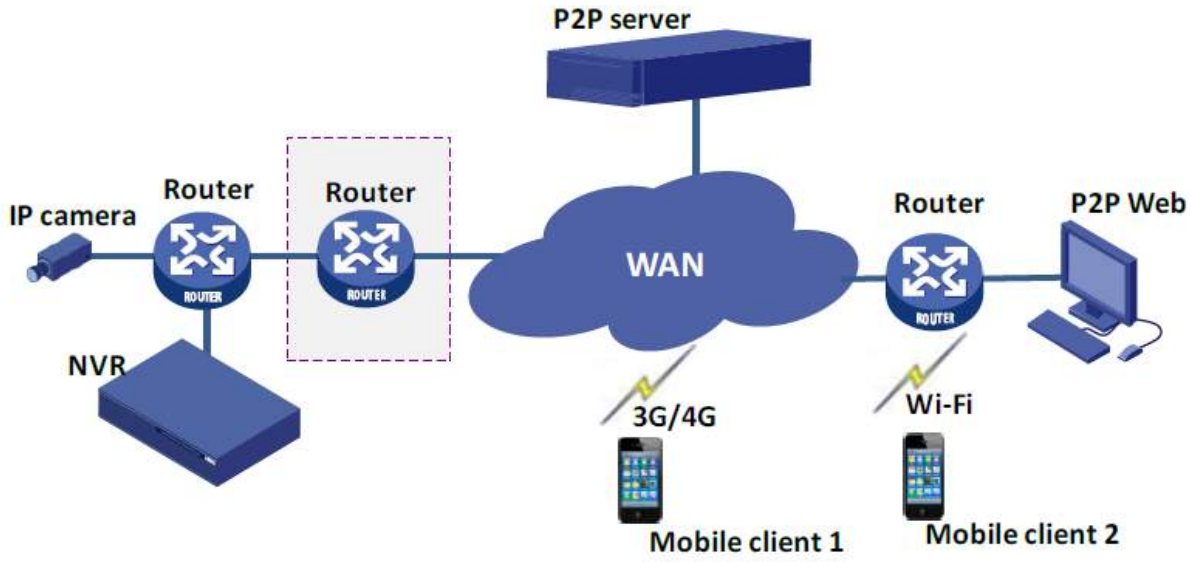
rtsp: //192.168.2.23: 554 / unicast / c1 / s0 / live1: 1-n

In this example we use eg VLC to open the main steaming of the camera 1 on the NVR that responds to the address 192.168.2.23



Internet connection mapping in the router

A VCR is normally connected to a LAN that connects to the Internet via a Router. This is a schematic representation of the most typical situation.



If we connect to the NVR using an internal PC to the network, the VCR address (typically the 192.168.XXX.XXX type) will be directly accessible. If you wish to connect through the Internet using a PC placed elsewhere, the interior of our network addresses will no longer be accessed directly as the only visible from the web IP address will be that that our router will by its WAN side that to Internet outside world.

The IP address of the router has to the Internet is assigned by the provider (ISP). To know just open a type www.mio-ip.it site or check the router configuration page. The IP address to the Internet (also called, the WAN side) no longer has a structure of the type 192 ... while maintaining the same 4-digit structure. An example of web IP may be, to give an idea,

214.67.84.123.

And 'advisable to get from the provider a fixed IP address each time you connect. If there is not the

possibility is to resort to the DDNS service or use our cloud service (see below).

In order to connect the VCR to the Internet, however, is not simply type in the browser the IP address of the router from the WAN side. The router acts as a filter and drops every external call that an outgoing call from inside the network is not paid before. To be able to connect to the VCR is therefore necessary to insert inside the router ports of directing instructions which, depending on the router manufacturers are called NAT, PORT FORWARDING, PORT MAPPING etc.

The mapping instructions of the doors are set in the router configuration and serve to make sure that the router directs the external incoming calls, to the internal IP address of the video recorder.

The NVR Series DN, to ensure maximum performance in the connection, always follow the port mapping, although the cloud server is used. But you can do this automatically, as we shall see below.

THE COMMUNICATION PORTS USED BY DVR

The communication ports used by VCRs DS series are as follows:

HTTP PORT : Default 80. And 'the port used by the recorder to communicate with the browser, the PC-program and in general with all clients for live viewing. Browsers such as Internet Explorer use the factory port 80 for communication. For example, if we type in the browser address bar: http://212.12.34.201 will be called the '

212.12.34.201 IP address on port 80.
If in the configuration of the VCR is set different from a WEB port 80 (eg. The door 85) needs to be clarified in the browser which port to use for the call after pointing the address with ":" as the separation. If, for example. http://212.12.34.201:85 we type will be called the IP address of 212.12.34.201 on port 85.

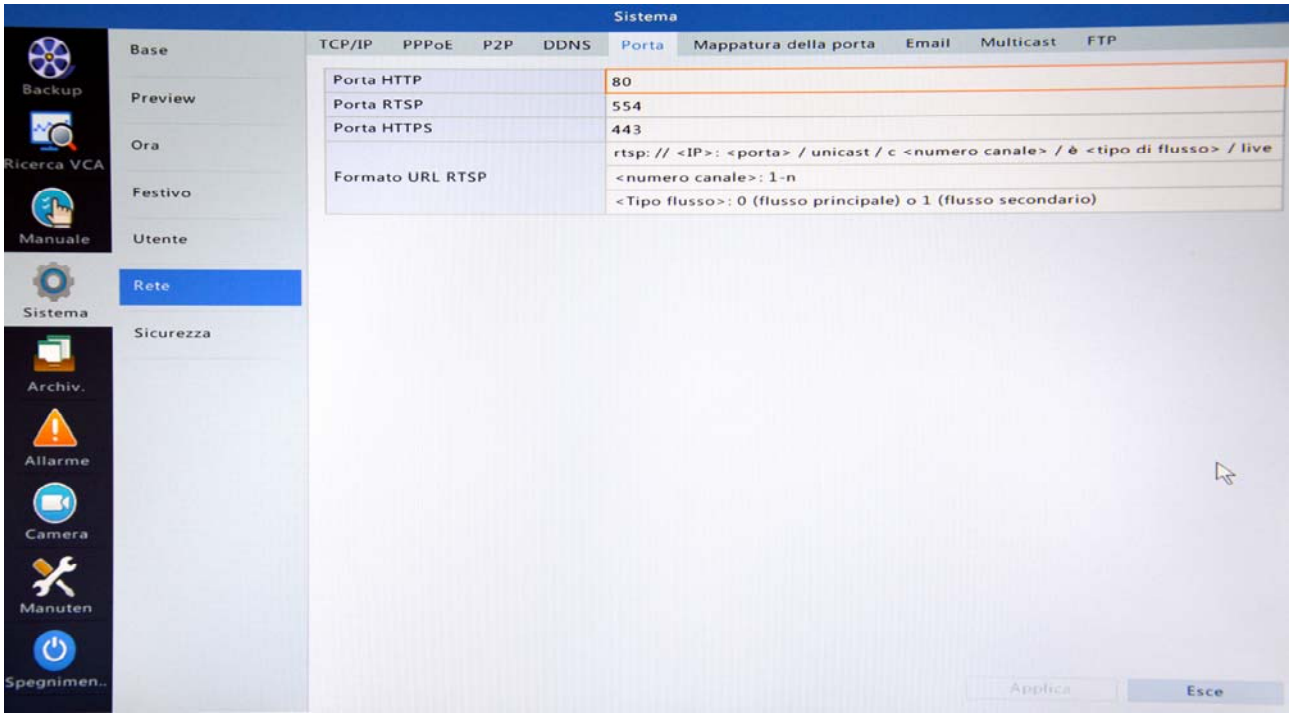
PORT HTTPS : By default 443. And 'the port used by the NVR for communication with the client when using the https security protocol

PORT RTSP : By default 554. And 'the port used for sending video streaming

In addition to these 3 main doors there are two additional ports that are used for communication with mobile devices. These ports are used by the application in access direct the mobile IP of the DVR (are not used in access via cloud)

PORT MOBILE DATA : 6060 (not modified). Communication port for the mobile application

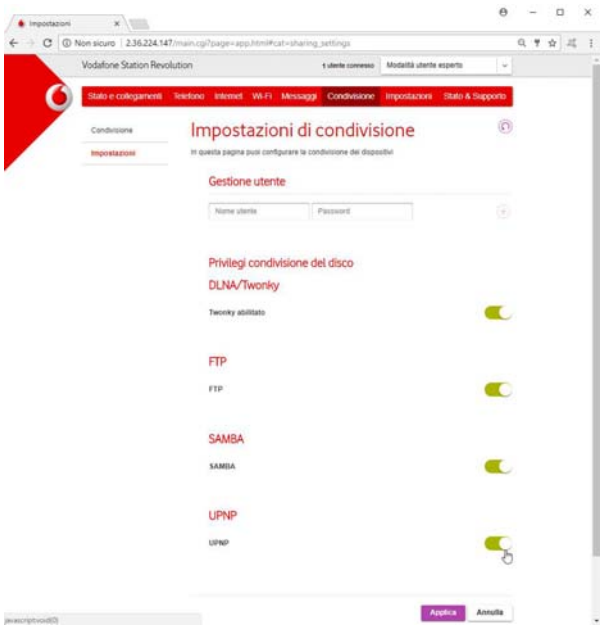
PORT MOBILE VIDEO : 7070 (not modified). Port for mobile video streaming The 3 DVR communication ports (except for furniture doors) can be changed in the configuration, but it is not advisable to do so. As we shall see in the next chapter, the DVR DS series allow to match interior doors (LAN side) to external ports (side wan) for which it is quite rare that there is a real need to change these ports.



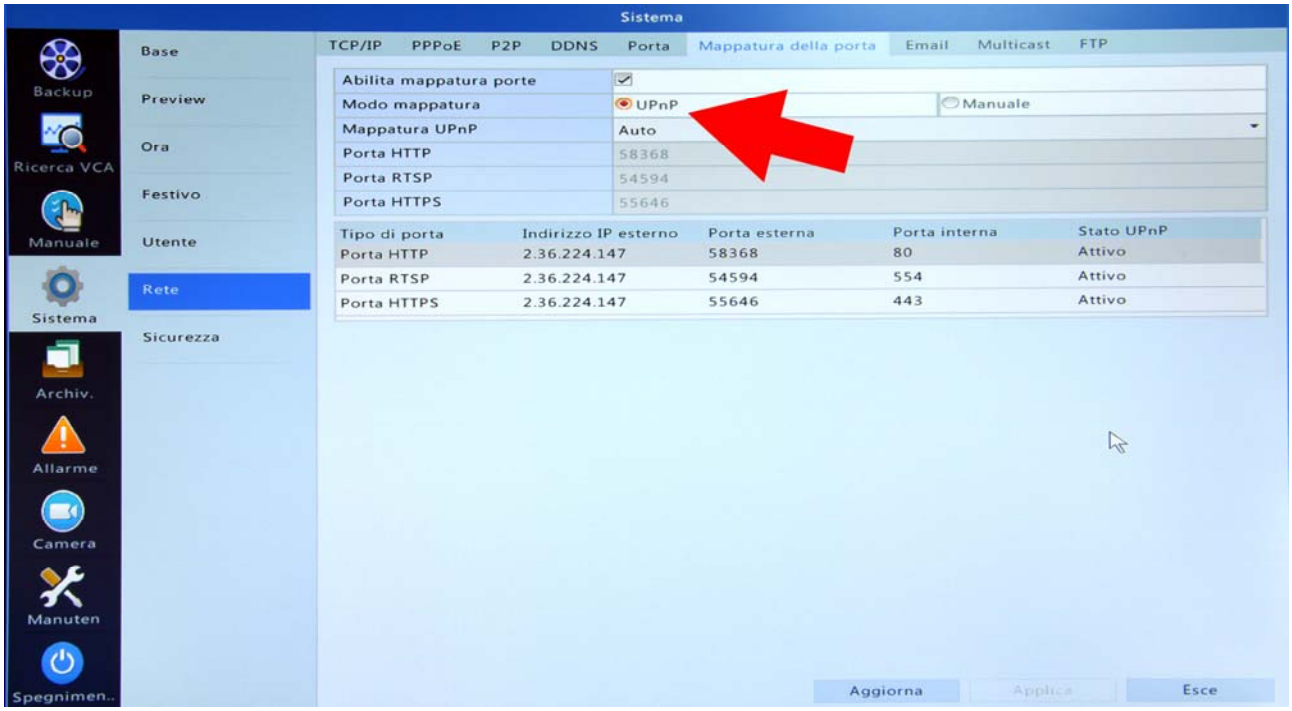
MAPPING OF AUTOMATIC DOORS WITH UPNP

The easiest way to map the router ports, and enable it to access the Internet, you use the UPnP function of the NVR. With this function, the NVR is able to communicate with the router and automatically map the required ports.

Because the UPnP configuration to succeed it is important that the router supports UPNP and that this is enabled. Check in your router's configuration, which normally meets at xxx.xxx.xxx.1 your network, but you should find the UPNP already enabled factory. In this example we see where this setting in the Vodafone Station Revolution, one of the most popular routers on the market.



To map the doors of the router automatically enters into the NVR configuration and went to the item SYSTEM / NETWORK / PORT MAPPING

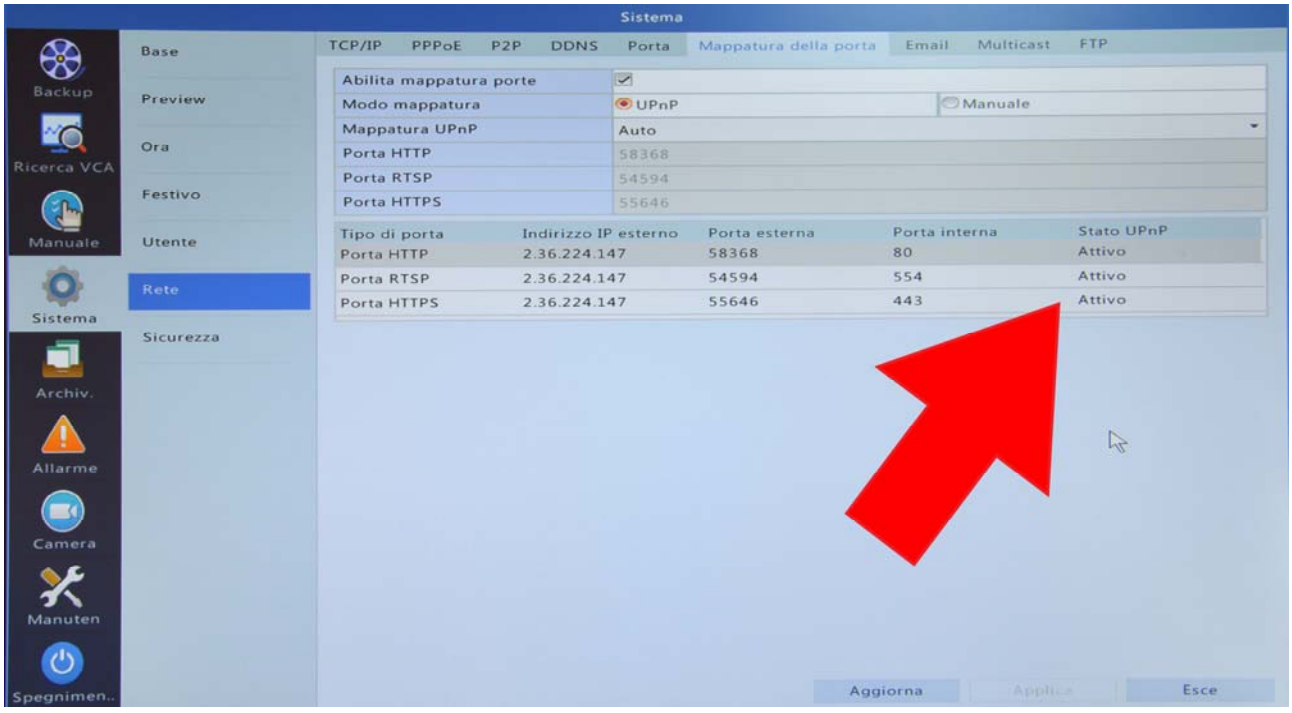


The UPnP function is enabled the factory to which there is already active with automatic mode selected (Auto). Under UPNP voice there of http / rtsp / https ports that are external ports, the WAN side, the NVR uses mapping.

The reason why the NVR uses of external ports (58368, 54594, 55646) different with respect to the internal ports (80,554,443) is to allow the upnp configuration to function properly because the UPNP configuration of common ports, such as 80, 554 and 443 , also used by other services, it is almost always blocked by the router.

If you want you can change the external ports (WAN side) proposed by the NVR, by moving the MSI setup to MANUAL and entering the exterior doors of your choice, such as
50000, 50001, 50002. However, it should leave the automatic assignment because that way you are assured to use uncommitted doors by other services and automatic mapping will surely succeed.

After you enable the UPNP feature, if it was not already active, press the APPLY button and wait a few minutes because the configuration is complete.
Then press the refresh button and verify the situation of the UPNP mapping in the table.

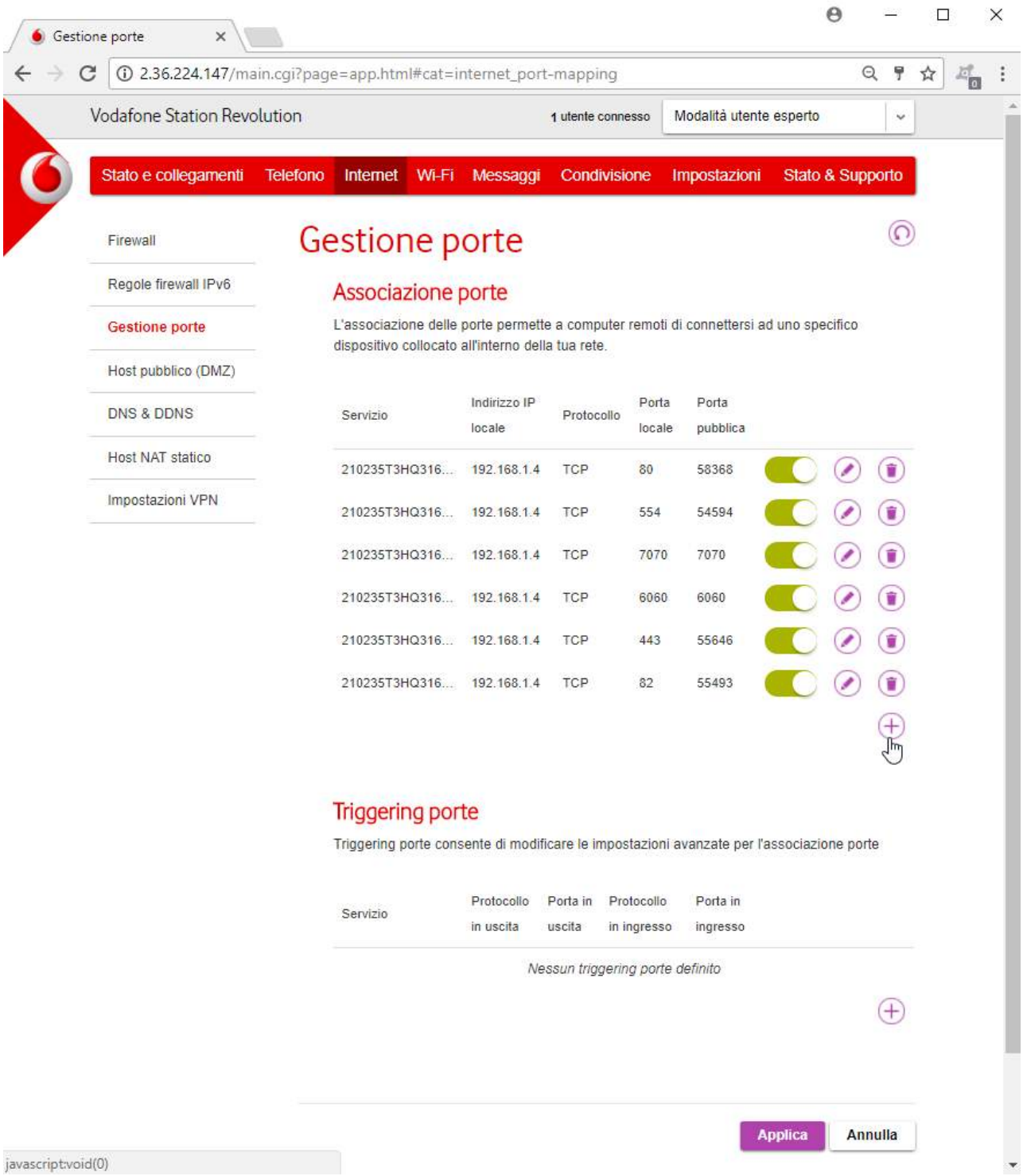


The state ACTIVE, UPNP in STATE column, it confirms that the configuration is successful. If this does not happen within a few minutes of waiting, occurs in the router configuration that the UPNP is supported and active.

In the configuration of router can control the ports that have been mapped automatically from the NVR. Oltra to 3 main doors the NVR provides mapping some doors

accessory, such as mobile ports 6060 and 7070.

Below it is shown the configuration of a Vodafone Station after the automatic configuration.



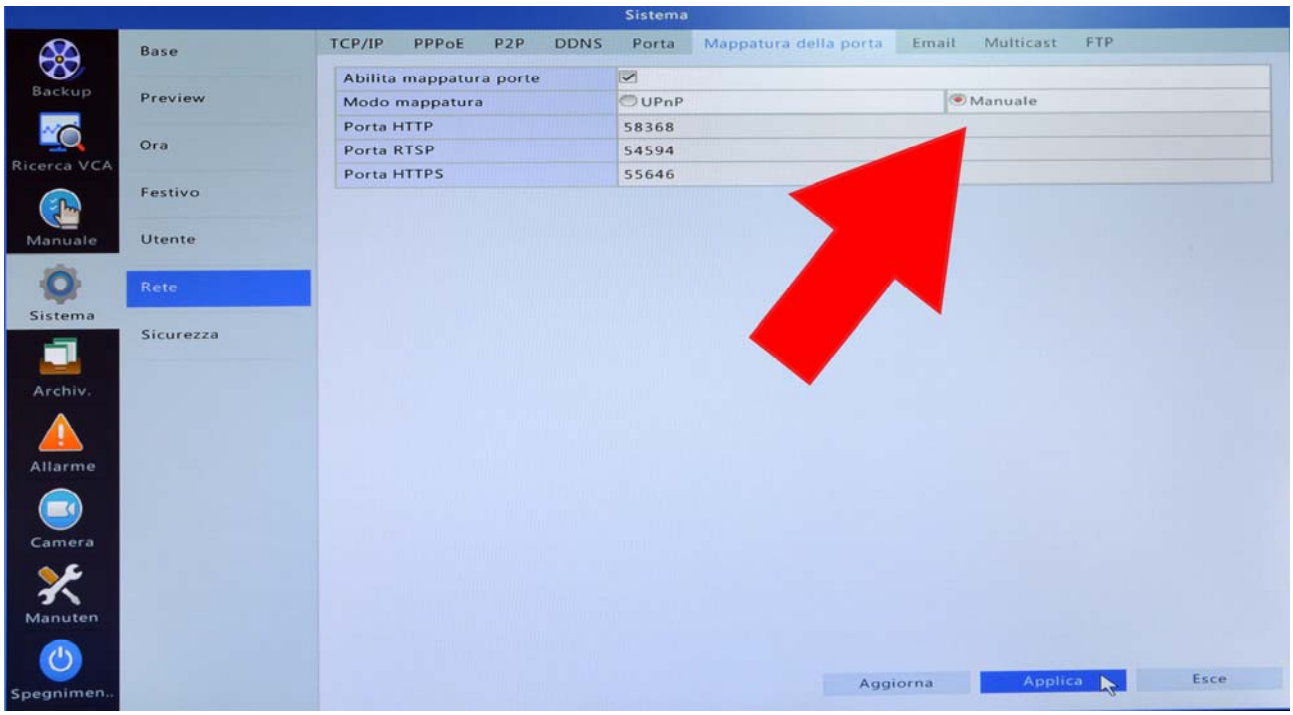
The automatic mapping of these ports allows you to use your NVR via the Internet in all its functions.

This whole UPNP configuration is done, most of the time, simply by accessing the NVR and no need of any your intervention. But now you know in detail how to possibly make manual changes.

MAPPING OF MANUAL DOORS

If your router does not support UPnP function, or this is not usable due to firewalls or other, you have to proceed with manual port mapping.

First enter the configuration of the NVR and went the voice SYSTEM / NETWORK / MAPPING THE DOOR. Select the manual option.



As explained in the previous paragraph, the NVR allows you to use the external ports (58358, 54594, 55646) different with respect to the internal doors of the NVR (80,554,443). If you want you can change the external ports (WAN side) proposed by the NVR, by inserting the exterior doors of your choice, such as 50000, 50001, 50002.

You can also embed external ports equal to interior doors (80,554,443) if not already

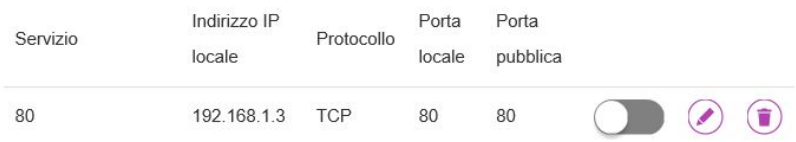
mapped by other services.

After setting the NVR on manual mapping, you have to get into your router configuration and insert the mapping instructions in the NAT or PORT FORWARDING section (check the instructions of the router)

This example shows the mapping instruction operate on Vodafone Station Revolution, one of the most popular routers. We entered the mappings of an NVR that network address 192.168.1.3 and in which we have set as the doors exterior doors

50000,50001,50002.

This NVR is ready to be accessed via the Internet, both from PC and mobile, is calling its public IP address on the web, either through the cloud server.
If port 80, the WAN side, it is not used by other devices you can add to the mapping instruction: Local port 80 on Public port 80, so you can call them from your browser from the Internet without indicating public port of the NVR , which in the example is the 50000.



Internet connection without use of cloud servers

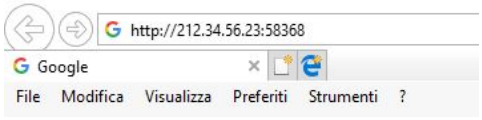
If you have a fixed IP address and have mapped ports on the router automatically or manually as explained in the previous chapters, you can proceed to the first connecting via the Internet.

TO CONNECT WITH THE BROWSER

Open the browser Internet Explorer or Firefox and type in the address bar of your static IP WAN side.

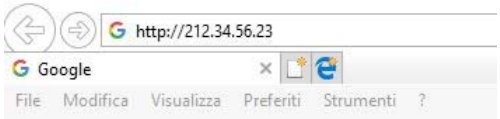
It is the same thing that we have described previously speaking in connection with the browser on your internal network, but this time, the internal address instead of the NVR, you must enter your fixed IP on the Internet.

After the IP address, separated by ":", you must indicate the public http port set in the NVR as in the following example



By calling this address are you calling the 212.34.56.23 address using port 58368. If the mapping statement inside the router is properly inserted, the router will direct your call to the NVR and the connection will start as if you It was in the internal network. If you want you can connect to your NVR via browser without specifying the connection port you must manually add the router mapping the outer door 80 towards the interior 80, as explained in the previous section.

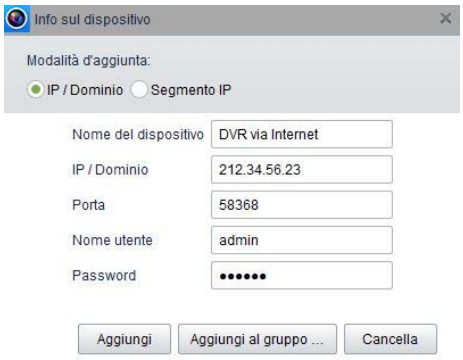
With this additional statement in the router you can omit the indication of the address port



You can also try to connect with the browser from a PC that is in the same network as the NVR. To know your real public IP using a site like www.mio-ip.it

TO CONNECT WITH GUARD STATION PROGRAM

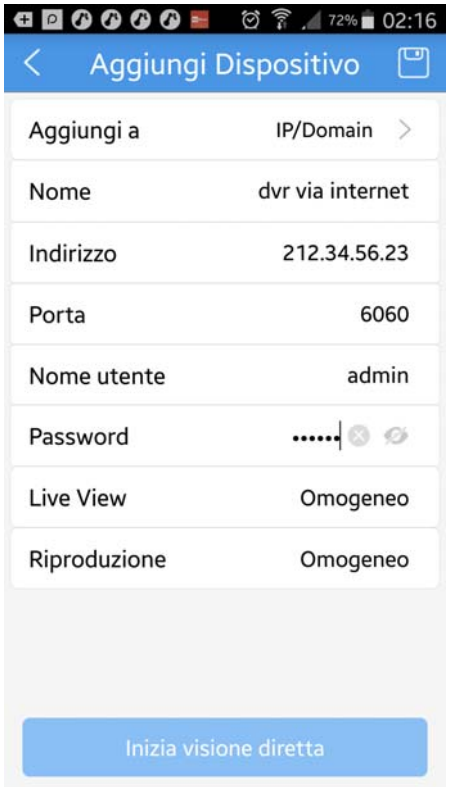
Inserts the DVR as follows



Again it must be used outside the door http set in the NVR.

TO CONNECT WITH THE MOBILE APP

Enter the DVR IP in the application indicating the public and the cabinet 6060



Internet Connection Server CLOUD

Each user of an NVR series DS acquires with the product the opportunity to enjoy free use of a CLOUD service to its online service to make connection to the NVR via the Internet simple.

Our cloud server allows to connect to the NVR via the Internet even without a static IP address on the web. It is a very useful especially benefit to the private subscriber to which different providers consedono not a static IP address.

CLOUD SOLVE THE PROBLEM OF DDNS

To connect to a VCR through the Internet you must know the IP address of the router that connects to the Internet. To find out which IP address has its own router from the WAN side that is towards Internet just consult the router configuration or by qualasiasi internal PC to the network visit a site like www.whatismyip.com or similar. If you can get from your Internet provider (ISP) a **fixed IP address,** you just need to remember your IP address in order to call your router at any time.

Many times, however, the providers do not release fixed IP addresses or require the customer to purchase them. Without a fixed IP router will have a variable IP address may therefore change over time making it impossible for the remote connection.

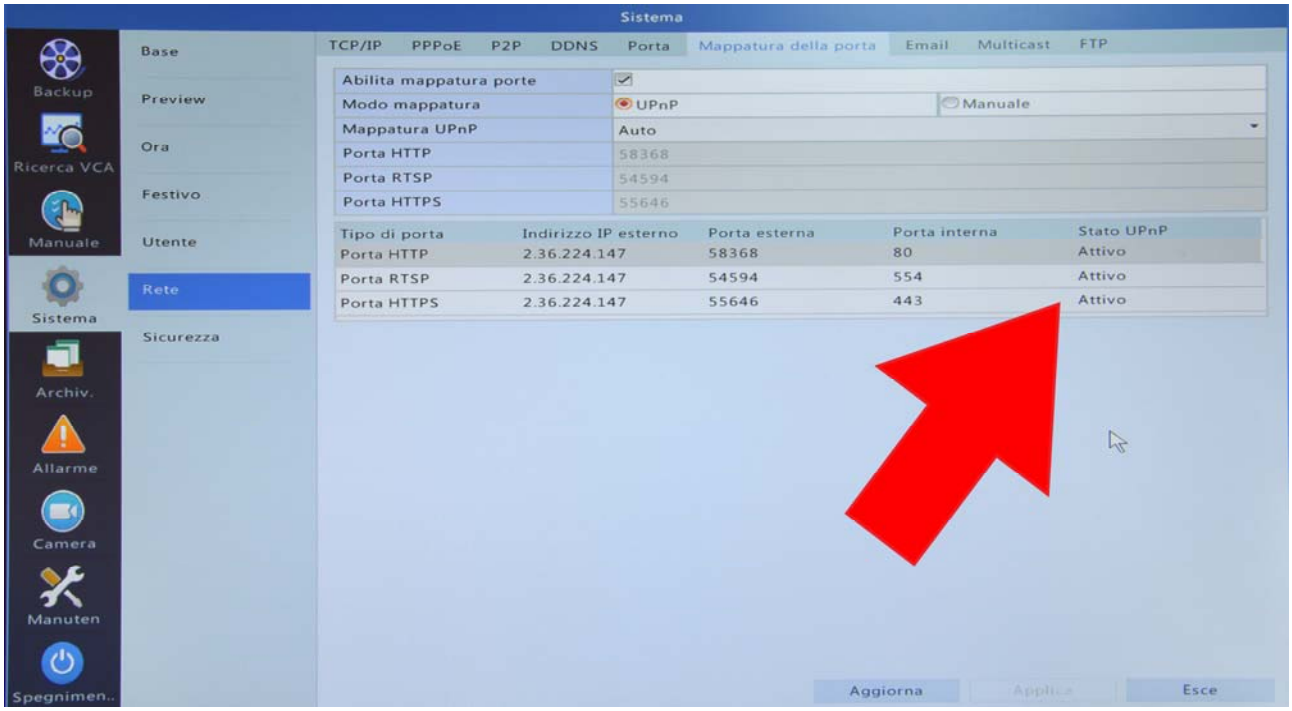
In this case you can use DDNS services that allow you to know at any time the IP address of your router / NVR. The DS Series VCRs support many popular DDNS network services like dyndns, no-ip etc. However these services are often paid but not always easy to set up.

With CLOUD services of DS Series video recorders you do not need or get a fixed IP address from your provider, or take out a subscription DDNS. We think our cloud to redirect your call to your NVR.

CLOUD REQUIRES THE MAPPING OF DOORS

Unlike our other products that use the P2P cloud server, this requires our DS range mapping in the router that the DVR is able to automatically perform as explained above in the section on port mapping.

The mapping of ports on the router allows these NVR provision of greater access than our other cloud products that do not require mapping. Before proceed to connection through cloud occurs in section SYSTEM / NETWORK / MAPPING PORT that UPNP mode is enabled (default setting) and that the table conveys the status UPNP ASSETS



If you can not find the state ACTIVE, it means that your router does not support UPnP or that this is not enabled. Check the router configuration and if you can not use UPNP recourse to the manual configuration as explained in the previous chapter on port mapping.

The CLOUD SERVER FOR SERIES DS NVR

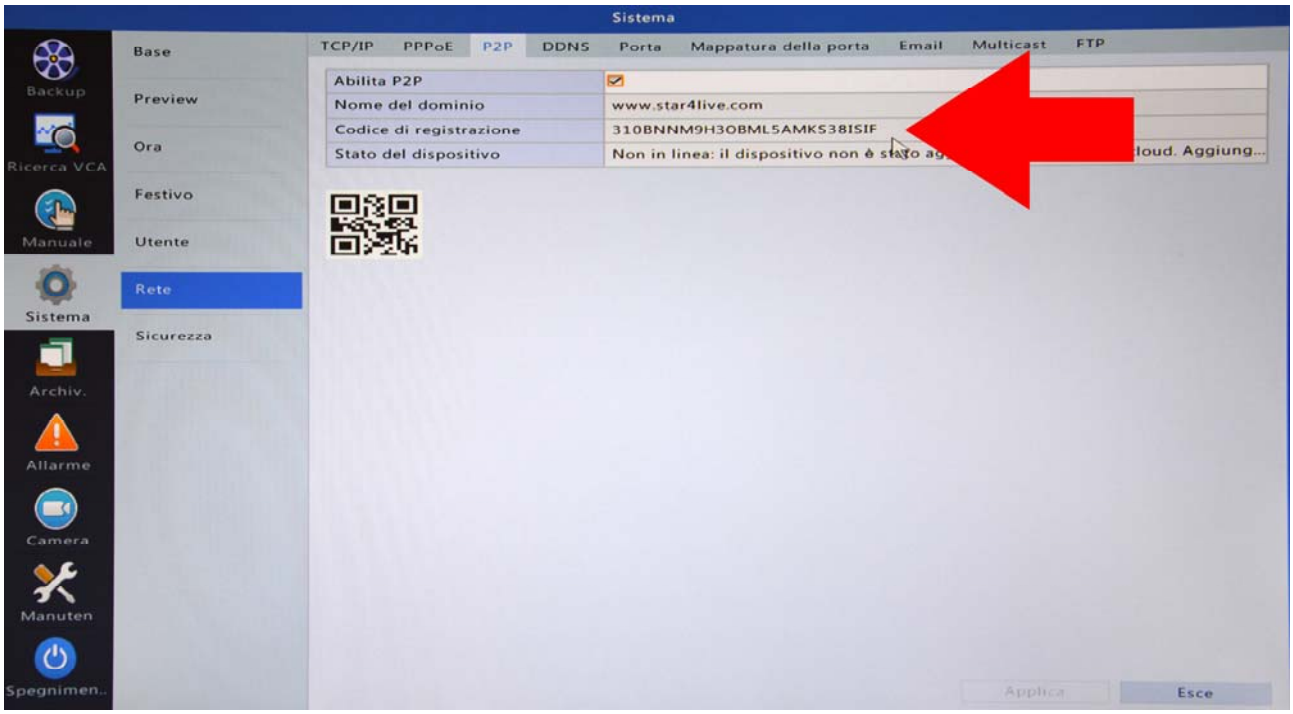
The cloud server for video recorders DS series is available at the following address:

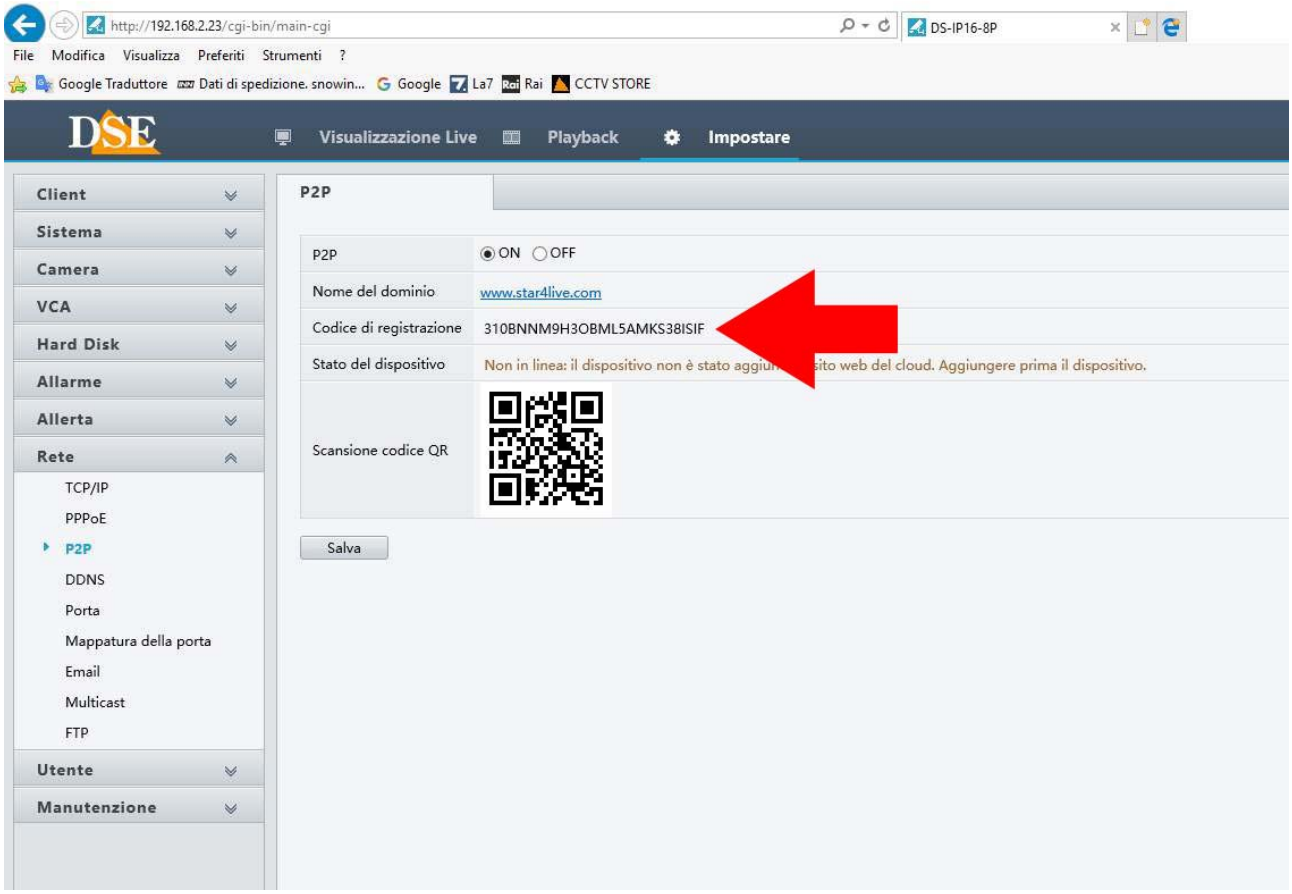
WWW.STAR4LIVE.COM

THE SERIAL NUMBER (ID) RECORDER

L 'NVR it purchased is marked with a unique ID. The ID of the video recorder is NETWORK panel of the NVR configuration menu, under P2P. And 'readable even remotely connected with the browser.

E 'can, if desired, disable the P2P cloud service which, for convenience, is enabled at the factory.





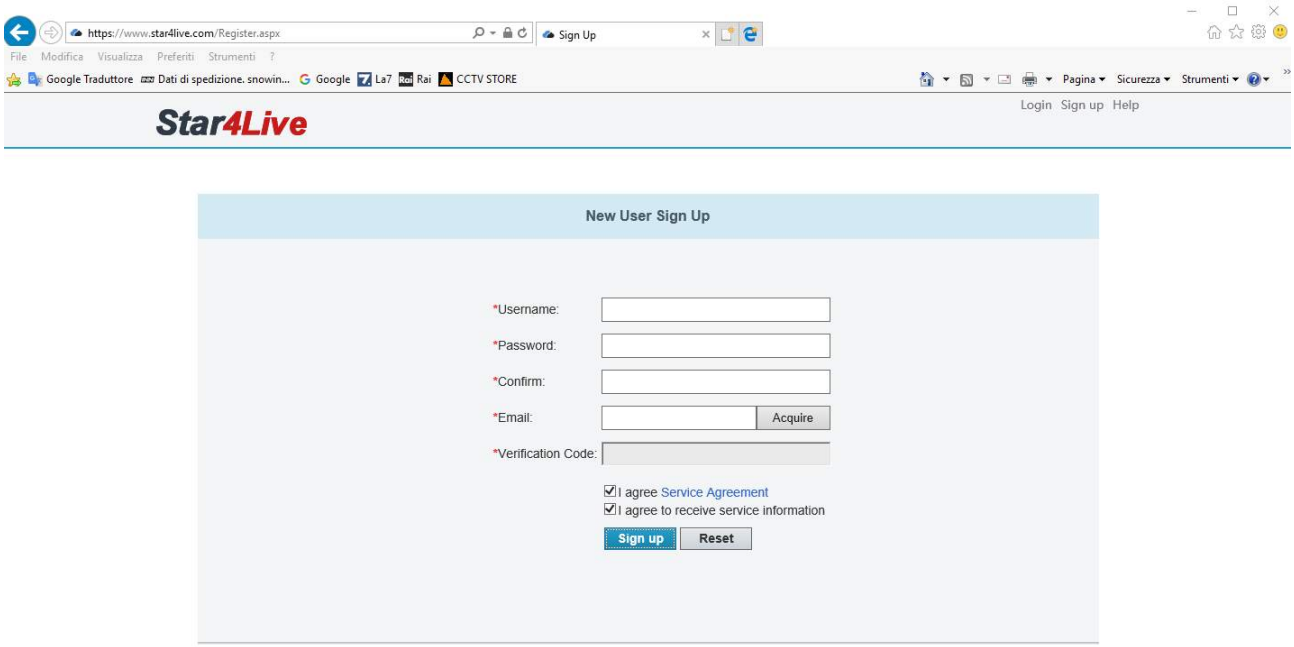
Under the registration code is given the status of the connection to the cloud. And 'normal that initially the state is listed as "offline" as the DVR is first configured in the cloud as we will show below.

CREATE AN ACCOUNT ON THE CLOUD

STAR4LIVE is a very powerful cloud that allows each user to have at his disposal a personal area where record their own video recorders.

The first thing to do is to register on the cloud by creating an account. To do this, log in www.star4live.com site and press SIGN UP.

NOTE: If you do not have a PC, you can also register via the mobile application. See separate manual for details.

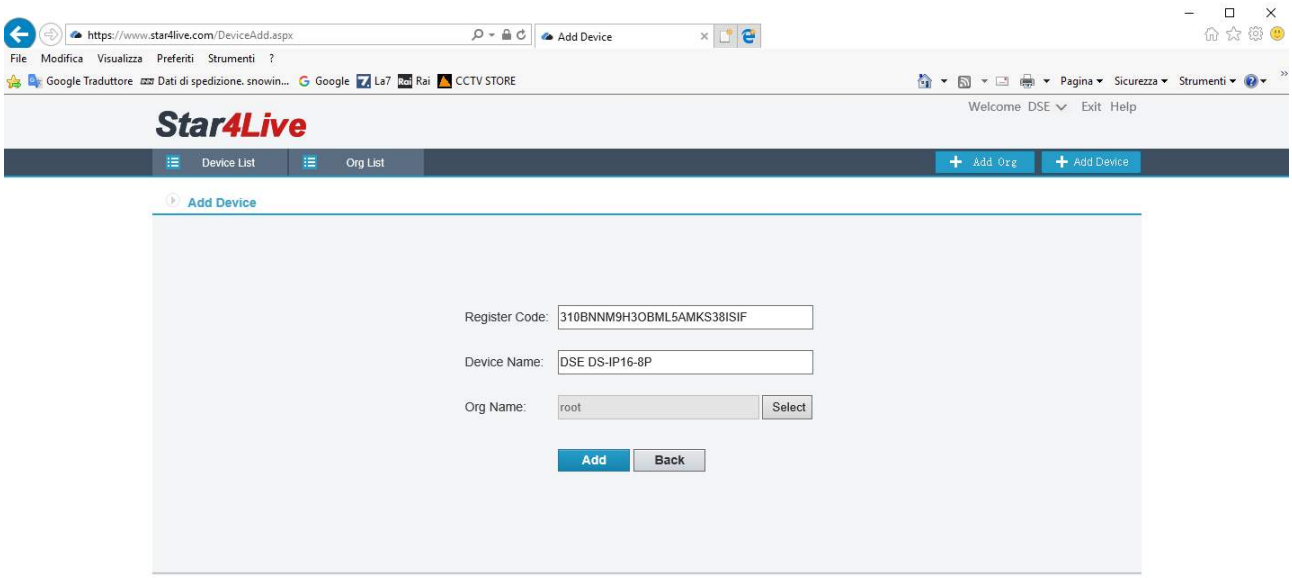


To create your account you need to choose one USER NAME and PASSWORD as well as enter a valid EMail address you will need to confirm your registration.

NVR REGISTER A CLOUD

Now that you registered on the cloud you can access it using the password you choose the LOGIN button.

On first access you are asked to register on cloud your NVR.



REGISTRATION CODE - Enter the ID of NVR

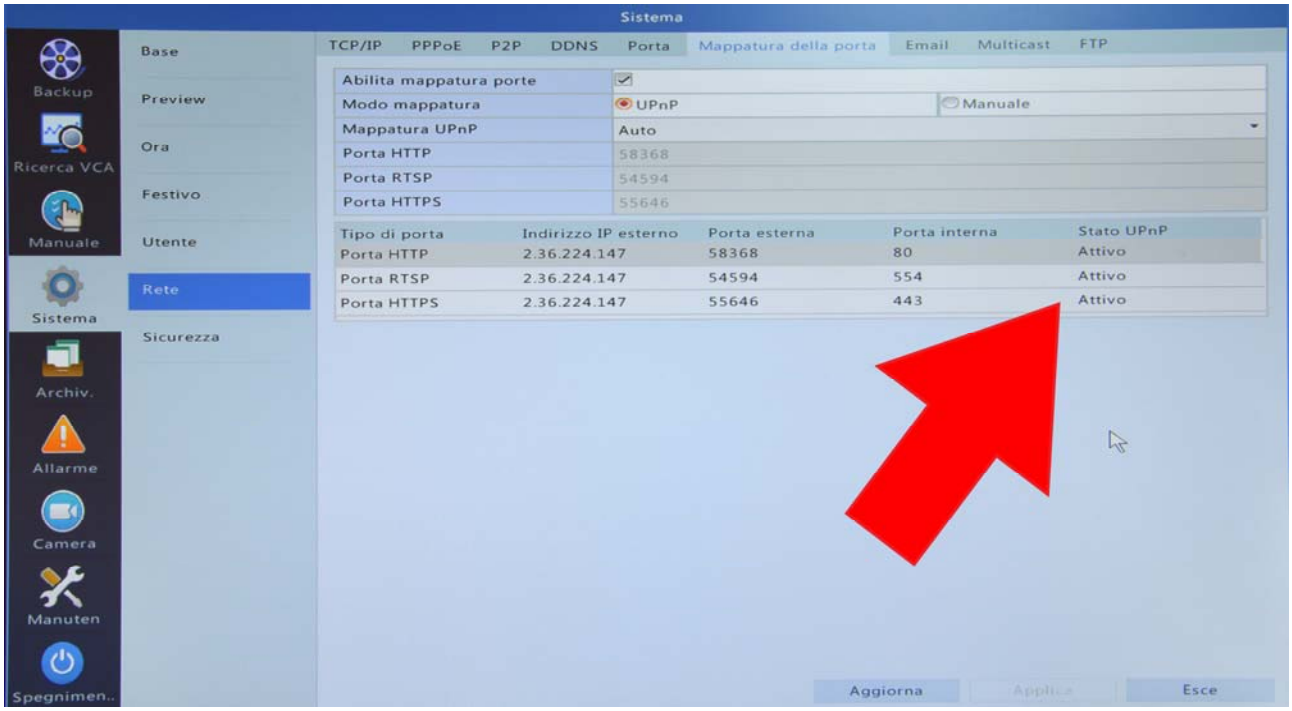
DEVICE NAME - Enter any name that will identify this NVR (eg CASA) ORG NAME - The Star4Live cloud allows you to divide into groups NVR. This is a handy feature if you have many NVR. By default there is already set group called ROOT. You can leave this group if you do not have to manage many devices.

Press ADD to add the device to your account

ACTIVATE IN UPNP NVR

To ensure maximum performance connection, the DS Series NVR automatically perform the mapping of ports on the router using UPnP technology. First, check that in settings of NVR UPNP is enabled. And 'factory enabled so you should find it already active.

If UPnP is enabled in the NVR and also in the router you should see the ACTIVE indication in UPNP STATE column, as seen in the example below. Possibly can help press the REFRESH button.



Now you're ready to connect via the cloud.

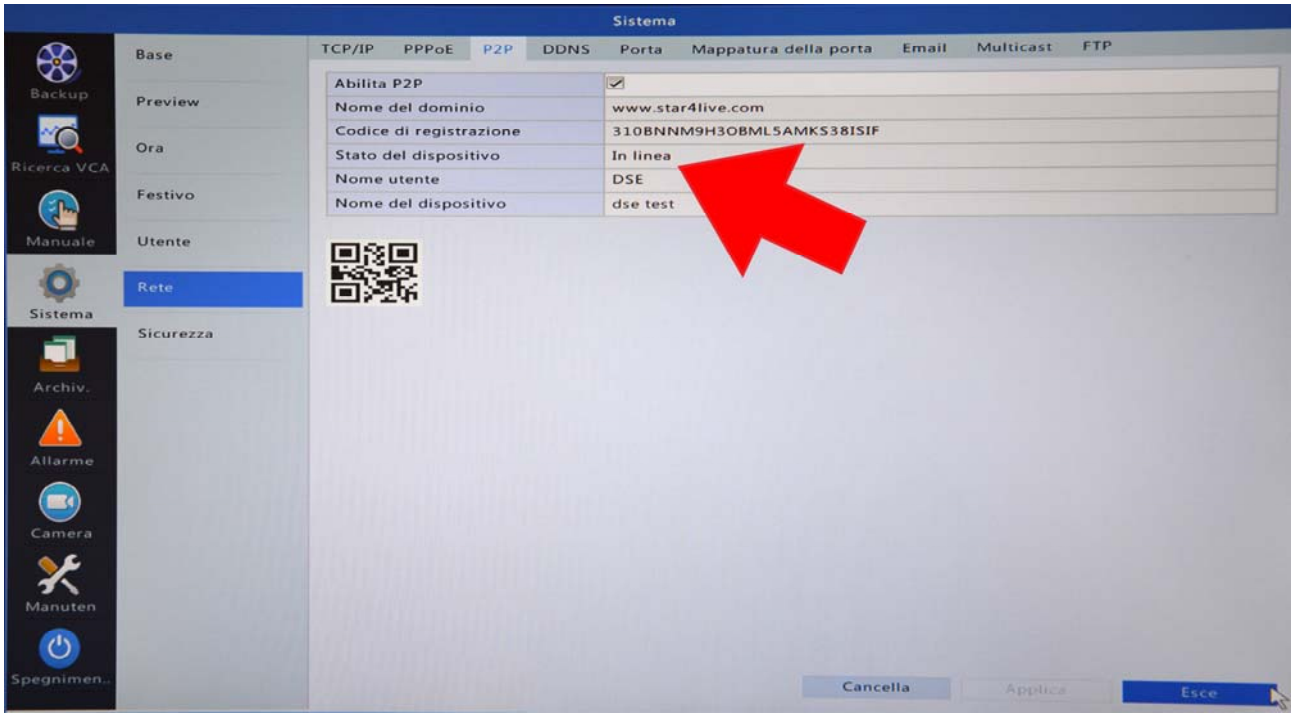
If after enabling UPNP UPNP in NVR status should remain INACTIVE must occur in the router settings because probably the uPnP protocol is not enabled.

IF THE ROUTER DOES NOT SUPPORT UPNP

If your router does not support UPnP, you can not use the automatic mapping of ports NVR, but you have to resort to manual mapping as described in the previous chapter.

CHECKING THE CONNECTION TO THE CLOUD

You can check directly on the NVR if the connection to the cloud has been successful. In NETWORK / P2P section you find the entry STATE DEVICE: LINE.

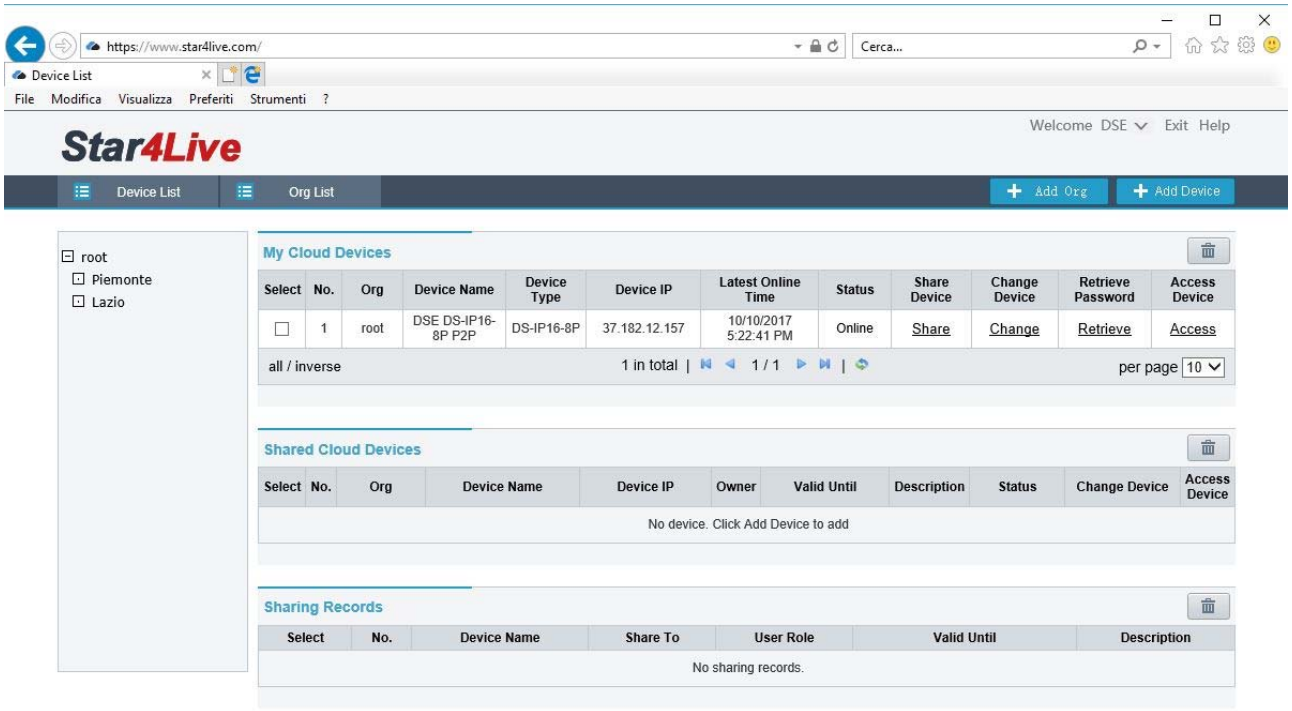


For an immediate check of the connection status of the cloud is also present a blue LED on the NVR cover.

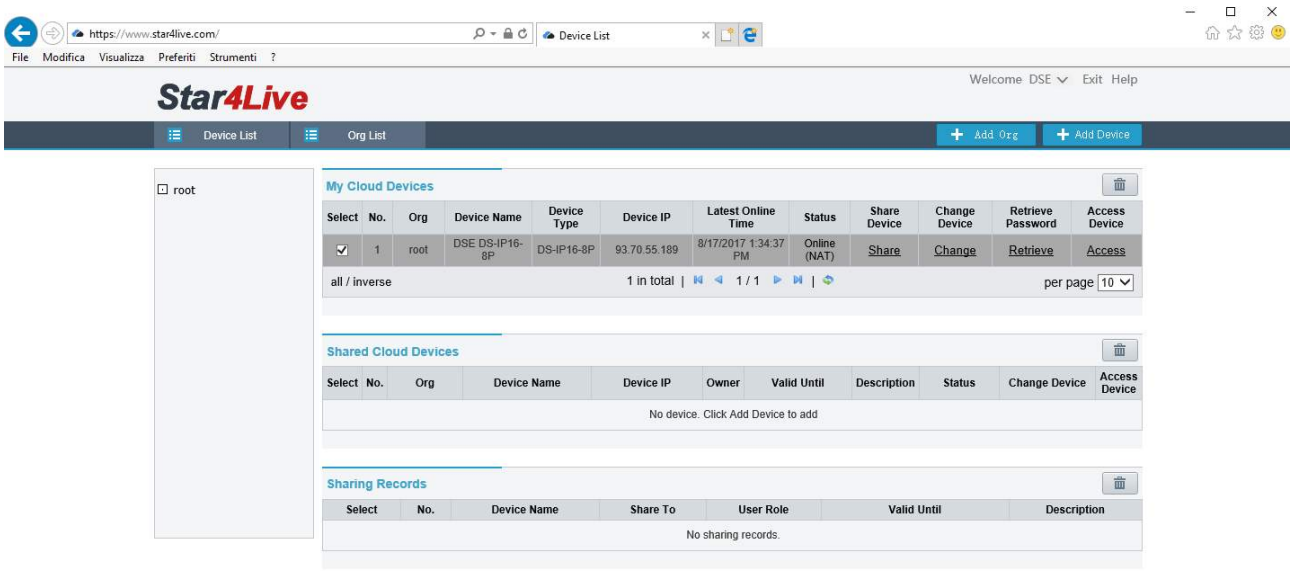
CONNECTION WITH BROWSER VIA CLOUD

Now that you've registered your NVR in the cloud and you have verified that the UPnP is active in the NVR, you can try the first link via the Internet.

You can connect to your NVR directly from the cloud with the browser site. Go in DEVICE LIST. Find the list of your NVR with the connection data. ACCESS Click to login. This will open the link in a new browser window.



If the connection is not successful it is because the NVR failed to configure the ports of the router via UPnP automatically. If you look carefully in the STATUS column of cloud you see ONLINE (NAT) instead ONLINE only, as in the following example.



The state ONLINE (NAT) means that the NVR communicates properly with the cloud server, but the communication ports are not mapped properly. Back to previous chapters and verification nell'NVR UPNP that the state is indicated ON.

ACCESS TO CLOUD WITH PROGRAM AND MOBILE PHONE

E 'can use the server CLOUD not only through the Internet Explorer browser, but also with the client program for Windows Guard Station and the app for smartphone / tablet. See the manuals of the two applications for details.