SONY

Network Video Management System
Screen Recorder 2017 R2

Administrator Manual

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Introduction

This manual describes the Sony - Network Video Management System Screen Recorder feature. It allows a Windows computer to act as an IP video camera, sending the contents of its desktop to the recording server it is connected to. The Network Video Management System Screen Recorder feature is a small application to be installed on one or more Windows computers where you want to record desktop contents, and a camera driver included in Network Video Management System Device Pack 6.0 and later versions.

Network Video Management System Screen Recorder works with all Network Video Management System products on the following Windows platforms in both 32- and 64-bit versions:

- Client operating systems: Microsoft® Windows® 7 or newer.

- Server operating systems: Microsoft Windows Server 2008 R2 or newer.

In this document, when the term "recording server" is used, it refers to Network Video Management System recording servers.

How Network Video Management System Screen Recorder works

Once installed, Network Video Management System Screen Recorder is automatically controlled from the startup menu of the computer where it is installed and runs in the context of the user logged into this computer. This means that Network Video Management System Screen Recorder automatically and invisibly starts up every time the user logs in to the computer and closes down every time the user closes down.

If online user-switching is done via Window's **Fast User Switching** feature, the Network Video Management System Screen Recorder will continue to record in the context of the new user, however any other type of user-switching/-logging in or out will result in discontinuation of the feature. For more details about switching users without logging off, visit the Microsoft website (http://windows.microsoft.com/en-us/windows7/Switch-users-without-logging-off).

This is possible because it is a service running in the background, capturing the computer's screen at a set frame rate. It is also this service that provides the interface that your Network Video Management System surveillance system can connect to and retrieve images from similarly as any other camera.

Licensing

When you add a screen recorder device in a relevant , you need a hardware device license, just like with any other device. However, downloading and installing the Network Video Management System Screen Recorder software is free of charge and you can install it as many times as required.

Network Video Management System Screen Recorder can and may only be used with Sony software.

Installing and configuring on computer

Before you can start using the Network Video Management System Screen Recorder feature, you must first download and install it on one or more Windows computer(s) where you want to receive desktop images.

The application part of Network Video Management System Screen Recorder consists of a Windows service and a desktop capture process. When installing the feature, you must have administrator rights to the computer you are using. Uninstalling or stopping the Windows service also requires administrator rights.

Locate the file (http://www.sony.net/CameraSystem/NVMS/Software) named **SonyNetwork Video Management SystemScreen RecorderInstaller.exe** and follow the download and installation procedure. When complete, the computer will work as an IP camera. From , you can add the Network Video Management System Screen Recorder device, similar to adding a camera, to connect to it.

Towards the end of the installation, the **Sony - Network Video Management System Screen Recorder - Administrator** window appears.

Address the configuration parameters below and click **OK** to save and finish the installation process.

Set password

It is important that only the relevant recording server connects to and request video from a computer with Network Video Management System Screen Recorder installed. You do this by entering a password of your choice in the text fields displayed in the illustration below.

Sony recommends that you fill in the password fields. In addition, there is no way to be reminded of the password, so it is important to remember the password. You must enter the password in on the recording server side.

Set port number

For the relevant recording server to connect to a computer with Network Video Management System Screen Recorder installed, you must specify a Transmission Control Protocol (TCP) port. TCP ports are identified by their number. The default number is 52111. If this port is already in use by another program, change it.

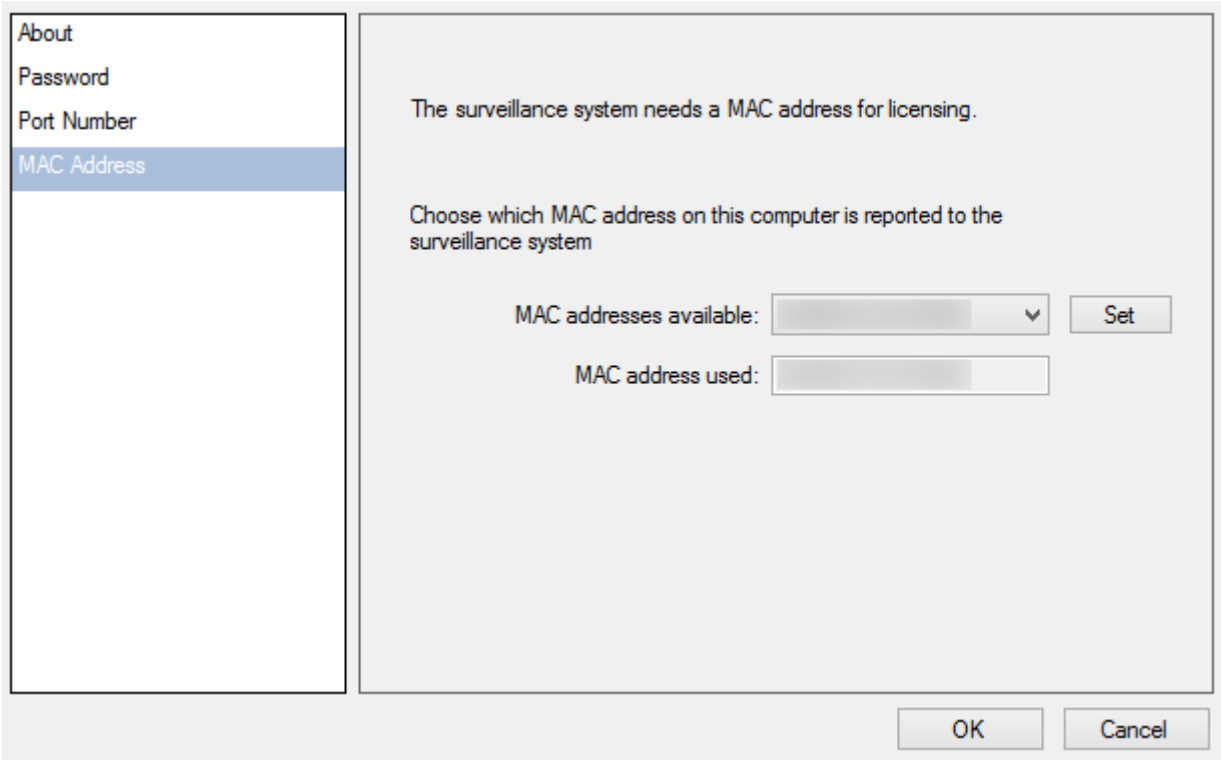Make sure that the selected port is open on your firewall so the recording server can connect to it.

Set MAC address

For licensing purposes, you must also select a MAC address. You can choose between all MAC addresses available on the computer with Network Video Management System Screen Recorder installed.

1. Make a selection in the **MAC address available** list.

2. Click **Set**.

3. The selected MAC address is displayed in the **MAC address used** field.

When you configure the screen recorder device in , you must provide a license key that matches the selected MAC address.

About

Password

Port Number

MAC Address

The surveillance system needs a MAC address for licensing.

Choose which MAC address on this computer is reported to the surveillance system

MAC addresses available: [   ] ∨   Set

MAC address used: [   ]

OK   Cancel

Configuring after installing on computer

After installing, it possible to change all Network Video Management System Screen Recorder configurations. This is done from the **Sony - Network Video Management System Screen Recorder - Administrator**'s window which can be reached in the following way:

1. Open Windows' **Start** menu.

2. Click **Sony - Network Video Management System Screen Recorder Administrator**.

3. Confirm that the Network Video Management System Screen Recorder is allowed to make changes to your hard drive. Next, the **Network Video Management System Screen Recorder - Administrator**'s window will open.

4. From the left-hand menu of the window, click **Password**, **Port Number** or **MAC Address** (depending on what you want to do).

Change password

1. In the **Administrator**'s window, on the **Password** tab, move focus to either text field to clear them both.

2. Next, click **OK** to delete the old password (you will be presented with a warning).

3. Enter a new password and click **OK**. This saves changes and restarts the Network Video Management System Screen Recorder.

4. Close the window.

Change port number

1. In the **Administrator**'s window, go to the **Port Number** tab.

2. Fill in the port number (see "Set port number" on page 9).

3. When done, click **OK**. This saves changes and restarts the Network Video Management System Screen Recorder.

4. Close the window.

Change MAC address

MAC addresses relate to hardware. If you change your network adapter, the selected MAC address may no longer be available. You must then select another valid address. This also requires that you enter a new license on the relevant Network Video Management System Management Application on the recording server side.

1. In the **Administrator**'s window, go to the **MAC Address** tab.

2. Set the MAC addresses (see "Set MAC address" on page 10).

3. When done, click **OK**. This saves changes and restarts the Network Video Management System Screen Recorder.

4. Close the window.

Installing on recording server

In , you must add a screen recorder device that connects to the Network Video Management System Screen Recorder service. It is added and configured like any other IP video camera (see relevant documentation of your surveillance system for details on how to add and configure a camera).

When you add a screen recorder device, the user name must be **Sony** and the device type **Screen Recorder**. A screen recorder device has the following configurable parameters:

- Frames per second/live frame rate

- Quality

- Capture mode.

Tip: When adding a screen recorder device, you must provide the IP address of the device. In this case, the device is a computer. But when adding a device of the Screen Recorder type, you may be in a situation where the computer does not have a permanent IP address. In that case, you can use the Domain Name System (DNS) name of the computer.

Set frames per second/live frame rate

Frames per second in Network Video Management System Enterprise Edition / **Live frame rate** in other Sony surveillance products.

A low frame rate is recommended because high frame rates may cause heavy CPU usage on the computer with Network Video Management System Screen Recorder installed. For this reason, the Network Video Management System Screen Recorder feature never yields more than 4 frames per second.

Tip: Two frames per second offers a nice impression of screen activity and causes approximately 5-8% extra CPU usage on an average Windows 7 computer anno 2010. Thus, 2 or 3 frames per second is the recommended daily setting.

Note that Network Video Management System Standard Edition camera configuration displays a default of 8 frames per second. However, for a screen recorder device, no more than 4 frames per second will ever be sent.

Set quality

Video frames are sent to the recording server as a series of JPEGs. It is possible to lower network and storage consumption by configuring a lower quality. However, this will result in a more blurred image. The effective valid range is 0 (poorest quality) to 100 (best quality). Default is 75, which reduces the amount of data nicely without reducing the visual quality too much. Note however, that the JPEG algorithm is not optimized for computer images with many rectangles. So even with a high quality you will still observe glitches around straight lines.

Set capture mode

With regards to capture mode, there is a choice of:

- **Primary screen only:** the primary screen only.

- **All screens** (if there is more than one screen): a mosaic of all screens setup for the computer in question.

- **Screen 1**, **Screen 2**, etc. (if there is more than one screen): The selected screen only.

Security

As mentioned earlier, Network Video Management System Screen Recorder's recording process is controlled from the computer startup menu and runs in the context of the logged in user. This means that the user can use the Windows Task Manager to shut down the process. To prevent that, Windows must be configured so that the user has no access to Windows Task Manager or other programs with similar capabilities.

Disabling Network Video Management System Screen Recorder results in the device connecting to the Network Video Management System Screen Recorder service showing a red screen with a cross over it.

Tip: The TCP based protocol used between the recording server and the computer with Network Video Management System Screen Recorder installed, is proprietary and contains a unique token. The risk of other products intercepting a desktop is therefore minimal, but you are none the less urged to define a password in the **Sony - Network Video Management System Screen Recorder - Administrator**'s window.

Troubleshooting

A problem which may occur with Network Video Management System Screen Recorder is that the recording server and the computer with Network Video Management System Screen Recorder installed cannot connect. These are probable causes:

- The configured TCP port is not open on the firewall that the Network Video Management System Screen Recorder is installed on. Or if communication runs through a router, the router may also have a firewall that causes problems.

- The IP address defined on the recording server is different from the IP address on the computer with Network Video Management System Screen Recorder installed.

- The IP port defined on the recording server is different from the one configured on the computer with Network Video Management System Screen Recorder installed.

- The password defined on the recording server is different from the one configured on the computer with Network Video Management System Screen Recorder installed.

To investigate other problem scenarios, you can enable tracing of relevant desktop recordings:

1. In Windows Explorer, in the directory: *%PROGRAMFILES%\Sony\- Network VMS Screen Recorder*, locate the file: *ScreenRecorderService.exe.config*.

2. Using an editor, for example, Microsoft© Notepad, change the value of the attribute "Log" to "yes" as illustrated below:

   <?xml version="1.0"?>

   <configuration>

   <startup><supportedRuntime version="v2.0.50727"/></startup>

     <appSettings>

       <add key="Log" value="yes"/>

     </appSettings>

   </configuration>

3. Save the file under the same name and in the same location.

4. Start SonyNetwork Video Management System Screen Recorder Administrator (see "Configuring after installing on computer" on page 12).

5. Click **OK** to restart Network Video Management System Screen Recorder. Logging is now enabled.

6. In the **AllUsers ProgramData** folder, in the subdirectory: *Sony\Network Video Management System Screen Recorder*, two log files are now available: *Servicelog.txt* and *Desktoplog.txt*.

   - *Servicelog.txt* is a log of all network traffic and communication between the recording server and the computer with Network Video Management System Screen Recorder installed.

- *Desktoplog.txt* is a log of the process running on the computer with Network Video Management System Screen Recorder installed, capturing desktop images and sending them to the Windows service as JPEG images.

7. To avoid that the two log files grow extensively, it is important to reset the "Log" attribute to "no" when done. See step 2.

8. Restart SonyNetwork Video Management System Screen Recorder Administrator (see "Configuring after installing on computer" on page 12).

Uninstalling from computer

The following procedure describes standard system component removal in recent Windows versions; the procedure may be slightly different in older Windows versions:

1. In Windows' Start menu, select **Control Panel**, and then...

   - If using **Category** view, find the **Programs** category, and click **Uninstall** a program.

   - If using **Small icons** or **Large icons** view, select **Programs and Features**.

2. In the list of currently installed programs, right-click the required Sony program or service.

3. Select **Uninstall** if you wish to uninstall all components. Select **Change** if you only wish to uninstall some components

Follow the removal instructions.

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