DVS

Video Server and Software

VENICE

Administration and Configuration

User Guide

VENICE Administration and Configuration User Guide

User Guide Version 1.5 for the VENICE Server and the VENICE Software Version 1.5

DVS

Headquarters:

DVS Digital Video Systems AG
Krepenstr. 8
30165 Hannover
GERMANY

Phone:	+49-511-67807-0
Fax:	+49-511-630070
E-mail:	info@dvs.de
Internet:	http://www.dvs.de

Support:

Phone:	+49-511-67807-125
Fax:	+49-511-371985
E-mail:	support@dvs.de

For the Americas:

U.S. Headquarters:

DVS Digital Video, Inc.
300 East Magnolia Boulevard, Suite 102
Burbank, CA 91502
USA

Phone:	+1-818-846-3600
Fax:	+1-818-846-3648
E-mail:	info@dvsus.com
Internet:	http://www.dvsus.com

Support:

E-mail:	support@dvsus.com

Contents

Introduction

This document describes how to administer and configure the VENICE server and its software.

VENICE is a highly flexible server system for the capturing and play-out of audio and video content. Especially designed for broadcast workflows, it provides multiple independent channels and supports natively the most common compressed formats. With VENICE you can easily capture live content, e.g. from cameras directly, and access data for play-out operations – if required both at the same time and in the format that suits your workflow best. During each operation you can control an externally connected device via RS-422 to act as a player or recorder, either in a manual or autoedit operation mode.

This document provides information on how to set up the VENICE server and how to administer it. Additionally, it describes the configuration settings available in the VENICE client software.

1.1   Overview

This user guide informs you about how to administer and configure the VENICE server and its software.

The chapters in this user guide contain the following information:

Chapter 1	Begins with a short introduction to VENICE and its software, followed by a note regarding the audience this manual is written for and an explanation of the conventions used in this manual. Furthermore, it provides some important notes that you should read as well as the system requirements to run the software on a client.
Chapter 2	This chapter provides first some background information about the setup concept and the structure of the VENICE server and its software. Afterwards it is described how to prepare the server for a usage in a network, followed by information about the main storage of the server and the multi-device operation mode.
Chapter 3	Describes how to install the software on a client in case you want to remotely control the VENICE server.
Chapter 4	Provides a note about how to preconfigure the VENICE client software and explains the general configuration settings of the software.
Chapter 5	Describes how to administer the VENICE server, for example, how to update the software on the system and the various tools available for an administration.
Appendix	Provides further details about the system, for example, about the RS-422 control of the VENICE server.
Index	This chapter facilitates the search for specific terms.

1.2 Target Group

This manual is intended for the system administrator charged with the task to set up and administer the VENICE server and to install the VENICE client software on network clients. For this you should know how to handle computer equipment and have experience as a system and network administrator.

Additionally, this manual is intended for personnel that should be able to configure the VENICE client software. For this you should know the how to handle the VENICE client software, have experience operating with computers and working with the respective operating system where the software is installed. You should also have extensive knowledge in the field of digital video in general.

1.3 Conventions Used in this User Guide

The following typographical conventions will be used in this documentation:

- Texts preceded by this symbol describe activities that you must perform in the order indicated.
- Texts preceded by this symbol are parts of a list.

> **i** Texts preceded by this symbol are general notes intended to facilitate work and help avoid errors.

> **⚠** You must pay particular attention to text that follows this symbol to avoid errors.

" " Texts enclosed by quotation marks are references to other manuals, guides, chapters, or sections.

BUTTON	Text in small caps and bold indicates push buttons
Menu	Text in italic and bold indicates either a menu name or options in a menu list
Menu » Option	In the specified menu select the stated item
Item	Text in bold only stands for other labeled items of a user interface
Directory/*File*	Directory structure or file

`Entry`	Indicates parameters or variables, as well as selections or entries made in a program; it may also indicate a command (e.g. at a command line), a syntax or contents of a file/output
[Key]	An individual key or a key combination on a keyboard

Keyboard Shortcuts

To perform options or procedures with the keyboard often requires a simultaneous pressing of two keys.

Example:

[Ctrl + F1]	If this is given, hold down the [Ctrl] key and press simultaneously the [F1] key.
[Alt, F1]	If this is given, press the [Alt] key first and then the key [F1] successively.

Command Descriptions

Command descriptions may additionally use the following notation:

`#...`	Has to be numerical
`<...>`	Variable; this term has to be replaced by an appropriate value
`[...]`	Optional part; you don't have to specify it

Screenshots

The screenshots shown in this documentation were taken for the most part from the Windows-based version of the VENICE client software. Depending on the operating system where the software is installed, their appearance may differ from your environment. However, they should contain the relevant elements that you need to understand the described actions.

1.4 System Requirements

When installing the VENICE client software on a client system please observe the following system requirements:

Supported Hardware

These are the minimum hardware requirements that the computer system has to meet if you want to use the program on a client system:

– 2 GHz processor
– 512 MB of RAM
– 250 MB free space on system disk
– Network card to communicate with the VENICE server (at least 100 Mbit)

Supported Operating Systems

The program can be executed on the following operating systems:

> **i** Be sure that you have installed the latest system updates and/ or service packs for your system, otherwise you may encounter software and/or hardware problems.

– Linux (Red Hat Enterprise 5.3 64 bit)

> **i** DVS tested the software with the above mentioned Linux distribution. Others may work as well, but not necessarily.

– Mac OS X (10.4, 10.5 or 10.6)
– Windows XP (recommended), Windows Vista or Windows 7

Other Requirements

For any data management with the VENICE client software (e.g. the selection of paths or files in the software via the user interface) the latest Spycer application by DVS must be installed as well (version 1.4.6.2 or higher).

> **i** You can download the newest version of the Spycer application from its internet site (www.spycer.net or www.spycer.de).

1.5   Important Notes

To use VENICE correctly please heed the following:

On the DVS system only use the designated video drive (main storage) to store video and audio data. Other storage locations will be too slow for real-time operations.

Leave about 15 % of the overall main storage capacity empty of data for real-time performance reasons.

The real-time capability of the DVS system depends to a large extent on the performance of the system's hardware. Therefore, it is recommended to terminate all other programs on the DVS system while working with VENICE.

Your DVS system has been tested thoroughly and is very reliable. However, because of the vast amount of third-party software available, its reactions on the installation of such could not be tested. The installation of third-party software on the DVS system may disrupt the real-time capability and/or limit the functionality of your system.

For any data management with the VENICE client software the latest Spycer application by DVS must be installed as well (see section "System Requirements" on page 1-5).

The hibernation mode and display suspend mode are not supported for the VENICE server.

The display suspend mode will be disabled automatically on clients when installing the VENICE client software and it must remain disabled.

Server Setup

This chapter details information how to setup the VENICE server. First some background information regarding the setup concept and structure of VENICE and its software are given, followed by information how to set up the system, for example, when using it as a video server in a network, and information about the main storage of the server. The chapter will be concluded with a description about the multi-device operation (gang) mode of the VENICE system.

2.1 Setup Concept and Structure of VENICE

This section provides some general information about the setup concept and structure of the VENICE server and its software to familiarize you with it and the way it operates.

The diagram below shows a possible setup of a VENICE system in a network as well as a sketch of the structure of the DVS system and its software, thereby indicating the relation and communication processes between the individual parts:
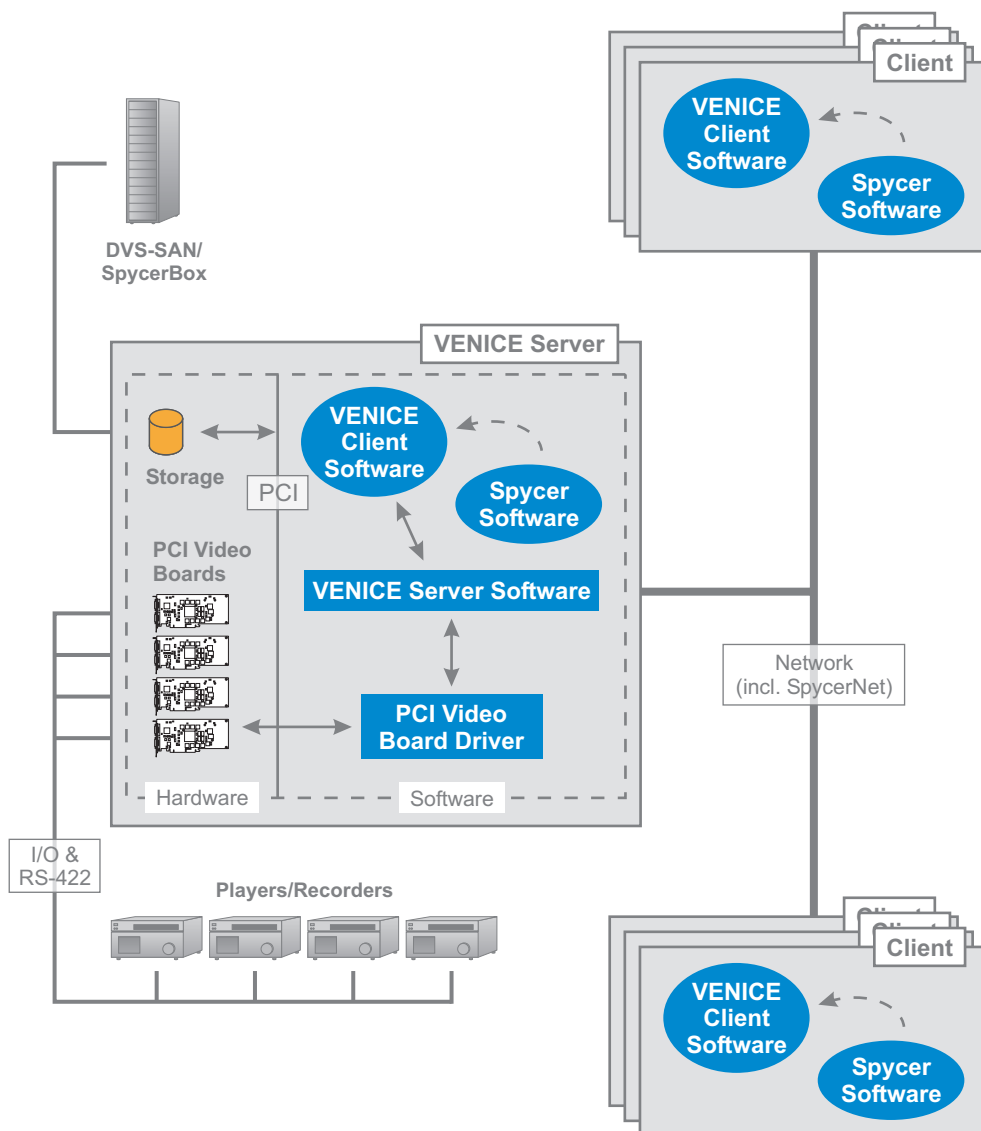

Figure 2-1: Structure of VENICE and network setup

Video Boards and Driver

The PCI video boards and their driver provide the functionality of the system for its usage as a video server. The PCI video board driver controls the installed DVS video boards (video channels) and thus the in- and output of video and/or audio signals. Furthermore, it enables the slave/master mode, where the respective video channel of VENICE can either be controlled by or controls an externally connected player or recorder via RS-422.

The VENICE Server Software

The VENICE server software installed on the system provides the video server capabilities for the locally or remotely installed VENICE client softwares. It communicates directly with the PCI video board driver and administrates and directs the in- and output channels (video boards) of the system. For example, it determines whether one channel is free to be used or already occupied and what the respective channel should do (record/play out). It is installed as a service (demon) and will be operational shortly after the VENICE server has been started.

The VENICE Client Software

The VENICE client software is the operator's interface to the server. It can be found already installed on the VENICE server, ready to be used locally. With it the operator can connect to the server (i.e. the VENICE server software) via network and allocate one of its video channels to control record or play-out operations. However, the VENICE client software can also be installed on any network client for a remote control of the server. It is available for various operating systems (see section "System Requirements" on page 1-5). After its installation, the VENICE client software can be used the same way as the locally installed one without limitation. By opening several instances of the VENICE client software the operator can control several video channels of one or more VENICE servers at the same time.

Spycer

Spycer, the innovative content management software by DVS, is required by the VENICE client software for data management purposes. With it you will be able, for example, to select a path and/or file via a dialog window from the user interface of the VENICE client software. Additionally, because Spycer is installed as a separate application, it can be used independently from the DVS software.

With Spycer you can manage any content stored on the system or a connected storage easily. It is a software application capable of handling large amounts of video data and their corresponding metadata, providing you with integrated browse, search and management tools

to retrieve data and gather information about them locally as well as via a network (SpycerNet). Additionally, it can be used to preview clips.

On the VENICE server the Spycer application is already installed, providing the full feature set. On client systems it must be installed separately. Furthermore, for the full feature set a license must be available, otherwise it will run as Spycer Basic (providing basic features only). Further information about Spycer, its installation as well as the SpycerNet can be found in the "Spycer" user guide.

Other Systems in the Network

Other systems in the network may share with the VENICE server the content on its storage for further processing. If the native storage of VENICE is not large enough for your needs, it can be expanded easily by connecting further DVS storage systems, such as a DVS-SAN or SpycerBox.

2.2 IP Address Configuration

After installing the hardware of VENICE as described in its hardware guide, you may want to configure the server's IP address to connect it to your local network. Ex factory the VENICE server is already preconfigured for a network usage and with this can be used immediately. However, in case you want to alter the configuration to adapt it to your local network, you can configure it easily.

This section describes the delivery status of the network configuration of the VENICE server as well as how to change it.

> **i** The set IP address is valid for the locally installed VENICE client software as well as remote installed ones. It has to be entered in the user interface of the software to allocate one of the server's channels and control it.

2.2.1 Delivery Status

The network ports of the VENICE server and its software are ex factory preconfigured:

Port	Configuration
eth0	static, `10.0.0.<x>/24`
eth1	dynamic, DHCP

The first network port (eth0) is configured as indicated in the table above. If it fits your network, it can be used as it is to hook up the system as a video server. The VENICE server software and the locally installed Spycer application are also set to this IP address. When not changing it, this address has to be used by the locally installed VENICE client software as well as remote installed ones to connect to the server and allocate one of its channels. To find out the actual IP address please use either the command line/system tools or the DVS web utility (see section "DVS Web Utility" on page 5-1).

With the preconfigured settings of the second network port (eth1) you can connect the VENICE server as a standard DHCP client to the network.

2.2.2 Changing the IP Address

The VENICE server and its software are preconfigured to the IP address of the first network port as indicated in section "Delivery Status" on page 2-5. In case you want to alter the network configuration of the VENICE server several steps have to be performed:

1. You have to change the IP address of the respective network port.
2. You have to set the IP address for the VENICE server software and restart it.
3. You have to change the IP address in the Spycer software.

These steps are described in the following.

> **i** To connect successfully to the VENICE server from a VENICE client software, the IP address configured for the network port, the one set in the configuration file and the one entered in the user interface of the VENICE client software must be the identical.

Configuring the IP Address of the Network Port

To configure the IP address of the network port you can either use the standard tools/command line of the system or the DVS web utility (see section "DVS Web Utility" on page 5-1). It is recommended to give the port a static IP address so that it can always be reached under the same address in the network. When finished, either reboot the VENICE server or restart the network service of the operating system.

Setting the IP Address for the VENICE Server Software

The IP address that you have configured for the VENICE server has to be set in a configuration file of the VENICE server software as well. This IP address will then be used by the server software to identify connection requests to the server from VENICE client softwares (from the locally installed one as well as remote ones).

> **i** The following can also be performed with the DVS web utility (see section "DVS Web Utility" on page 5-1).

*   In the path `/etc/opt/DVS/Venice/` open the file `Service.conf` with a text editor (e.g. vi).

*   In the section `[Service]` change the line `IP=10.0.0.<x>` to the IP address which you have set for the network port.

*   Then save the file.

*   Afterwards either reboot the VENICE server or restart the server software (see section "Controlling the VENICE Server Software" on page 5-2).

After this the VENICE server is prepared to receive connection requests, but to conclude the changing of the IP address you have to change the IP address for the Spycer software as well.

Setting the IP Address of the Spycer Software

To get the full functionality for the DVS system the Spycer software is already installed. When changing the IP address of the network port it should be configured correctly as well. For this start the Spycer software on the VENICE server and make sure that it is set to the following:

> ℹ️ When the Spycer software is started for the first time, the initial setup of the application may be launched. In order to run Spycer this setup should be concluded, thereby enabling the following configurations.
>
> For further information about Spycer and its configurations see the "Spycer" user guide.

– The IP address of the network port that Spycer should use for the SpycerNet must be set. Normally it is the same as configured previously (see section "Configuring the IP Address of the Network Port" on page 2-6).
– The local content management must be enabled.
– The local audio and video storage location(s) of the VENICE server (see section "Information about the Main Storage" on page 2-7) must be set as watch folders.

With this the Spycer software has been set up correctly and afterwards the user interface of Spycer can be closed.

2.3 Information about the Main Storage

The following table provides some information about the main storage:

File system:	SNFS (StorNext File System)
Location:	*/media/venice-vol0/*
License file:	*/user/cvfs/config/license.dat*

2.4 Multi-device Operation Mode (Gang)

The VENICE server provides a multi-device operation mode which allows for a simultaneous control of several video channels of one or more VENICE servers.

In the multi-device operation mode one video channel is the master that is controlled via the slave mode control window of the VENICE client software. All other channels are slaves that follow the commands of the master device.

This section describes how to setup and use the multi-device operation mode.

2.4.1 Setting up and Starting the Multi-device Operation

To operate video channels in the multi-device operation mode perform the following:

> **i** All connections have to be made with standard RS-422 cables.
>
> To connect more than two video channels an RS-422 distributor has to be used.

- Interconnect the video channels via their RS-422 connection ports (see also section "RS-422 Control" on page A-1). When using an RS-422 distributor, connect the master to the input of the RS-422 distributor and the slaves to the outputs of the distributor.

- In the user interfaces of the VENICE client software (already connected to the channels) set one of them to act as the master and configure the remaining ones as slaves via their VENICE configuration settings (see section "Gang Settings" on page 4-3).

- Activate for all channels in the VENICE client software the slave mode (for the master as well as the slaves).

- The multi-device operation can now be controlled via the slave mode control window of the master channel.

With this the setup of the multi-device operation is complete. When controlling the master channel via its slave mode control window (see the "VENICE Client Software" user guide), the slave devices will follow any operation initiated on the master, including e.g. slow/fast motion, jog, shuttle, loop, and reverse play-out.

2.4.2 Synchronizing the Devices

In most multi-device applications, you will have to synchronize the connected devices.

Synchronizing via an External Sync Generator

An external sync generator synchronizes all connected devices. To integrate it in the multi-device setup perform the following:

- Connect all video channels with their sync inputs to the external sync generator.

- If appropriate, alter the sync settings of all connected channels via their sync settings (see section "Sync Settings" on page 4-9).

Once the external sync generator is active, the synchronization will take place.

Synchronizing from Within the Multi-device Setup

You can also synchronize the channels from within by selecting one of them as the sync master. For this perform the following:

- Select one channel that shall act as the sync master.

> **i** The sync master does not have to be identical with the master of the multi-device operation. You can choose any of the video channels as the sync master.

An analog sync signal can be transmitted through the sync in- and outputs, a digital sync signal through the SDI ports. You can use either a distributor to connect the slaves' sync inputs to the master's sync output, or build a chain where the master's sync output is connected to the sync input of the first slave, whose sync output is connected to the sync input of the second slave, and so on. With the termination switch at the reference inputs of the video channels, the chain can be built up with T-junction connectors at each reference input connector (except the first and the last one). Then switch off the termination of the reference inputs at the channels between the first and the last one.

> ⚠ When building a sync chain, cable elapse times may lead to synchronization problems. In such a case you have to use an external sync generator.

- Connect the other video channels which act as sync slaves to the sync master via their sync connectors.

- If appropriate, alter the sync settings of all connected systems via their sync settings (see section "Sync Settings" on page 4-9).

The setup for the synchronization from within is now complete and the synchronization will take place.

2.4.3 Notes on the Multi-device Operation Mode

This section provides some notes on how to use the multi-device operation mode:

– On all systems the same operation mode of the VENICE client soft-
ware must be running.
– The content that is displayed may be different according to the
material that is loaded in each VENICE client software.
– Static settings cannot be transmitted by the master channel and
have to be set for on each one individually, such as video raster and
format, sync source, sync output, or the essences that should be
used for the operation.

Client Software Installation

3

This chapter describes how to install the VENICE client software on a client system for a remote control of the VENICE server. With this you can place the hardware of VENICE at any location you like and still have full control over it. The installation will be described for each supported operating system separately.

3.1   Notes about Spycer

For any data management with a VENICE client software the latest Spycer application by DVS must be installed as well (see section "System Requirements" on page 1-5 and section "Setup Concept and Structure of VENICE" on page 2-2). After its installation it must be configured appropriately so that it can connect to the Spycer software on the VENICE server (SpycerNet):

When the software is started for the first time, the initial setup of the application will be launched. Then set at least the IP address of the port on the client system that is connected to the network to enable the SpycerNet. On clients the local content management of Spycer can be disabled if not required.

> **i** For information about how to install Spycer as well as its configurations see the "Spycer" user guide.
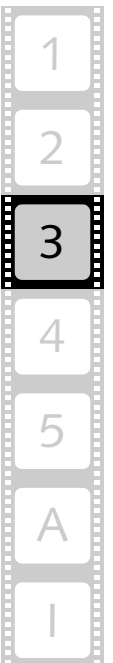
3.2 Installing under Linux

The installation routine of the VENICE client software for a Linux operating system is a single RPM package file. Usually, it can be found on the enclosed CD-ROM. To install the VENICE client software on a Linux operating system perform the following:

- If applicable, open a command line (terminal) and log on to the system as root.

- Switch to the directory on the CD-ROM that contains the installation file of the VENICE client software for the current operating system.

- Then install the VENICE client software by entering, for example:

```
rpm -ihv Venice-<version no.>_<kernel/OS archi-
tecture>.rpm
```

This installs all necessary files and libraries of the DVS software on the computer system. Afterwards the installation of the software is complete and it can be started at any time with a normal user account.

> **i** Please note that on a Linux client the driver and VENICE server software are installed as well but will not be used.
>
> The DVS software can be deinstalled by entering `rpm -e Venice` in a command line.

3.3 Installing under Mac OS

The VENICE client software for Mac OS is available in a single disk image file. Usually, it can be found on the enclosed CD-ROM. To install the VENICE client software on a Mac OS perform the following:

- Open a file manager on the computer system (e.g. Finder) and browse the CD-ROM.

- Switch to the directory on the CD-ROM that contains the installation file of the VENICE client software for the current operating system.

- Open the installation file of the DVS software which will mount it as a volume (`Venice-<version no.>.dmg`, e.g. with a double-click of the mouse).

- From this volume install the DVS software, for example, by dragging the `Venice.app` file into the *Applications* folder on the sidebar of the finder.

This installs all necessary files and libraries of the DVS software on the computer system. Afterwards the installation of the software is complete and it can be started at any time with a normal user account.

3.4 Installing under Windows

The installation routine of the VENICE client software for the Windows operating system is a single executable file. Usually, it can be found on the enclosed CD-ROM. To begin the installation perform the following:

- Open a file manager on the computer system (e.g. Windows Explorer) and browse the CD-ROM.

- Switch to the directory on the CD-ROM that contains the installation file of the VENICE client software for the current operating system.

- Execute the installation file of the VENICE client software (*Install_Venice-<version no.>.exe*), for example, with a double-click of the mouse.

This starts the installation routine which will guide you through the installation.

- Follow the instructions given on the screen.

During the installation procedure all necessary files and libraries will be installed on the computer system. The installation will be finished as soon as a message reports this.

With this the installation of the software is complete and it can be started at any time.
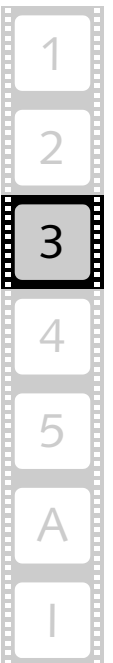
Client Software Configuration

A VENICE client software can be (pre)configured for various tasks. This chapter provides first a note about this. Then, the general configuration settings that can be made in the software are explained.

4.1 Preconfiguring the VENICE Client Software

The VENICE client software can be preconfigured for often recurring tasks so that operators are not required to do this time and again during their work. It is up to the management/administrator to decide how detailed this preconfiguration should be. They should prepare the files appropriately and the operator must act accordingly.

The VENICE client software offers various files that can be used for a preconfiguration:

  – presets
  – projects
  – playlists / transcoding lists
  – metaclips

These files and their usage are described in the "VENICE Client Software" user guide.

4.2 General Configurations

Via the menu option **Configuration…** of the menu **Options** several general configurations for the VENICE server can be set. It opens the following window:
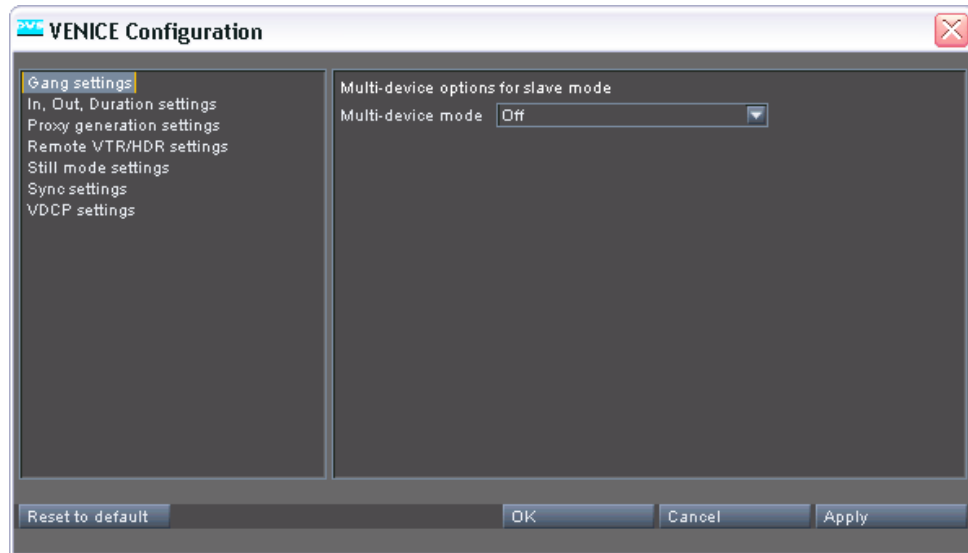

Figure 4-1: The general configurations

The available configurations can be found to the left. Once an entry is selected, the settings sorted under it will be shown in the settings pane to the right. Then they can be adjusted.

When everything is set as desired, you can apply them by using the buttons at the bottom right of the configuration window. The button **RESET TO DEFAULT** resets all configurations back to their default values.

This section describes the configuration settings in detail.

4.2.1 Gang Settings

With the **Gang settings** you can set the VENICE server into a multi-device operation mode.
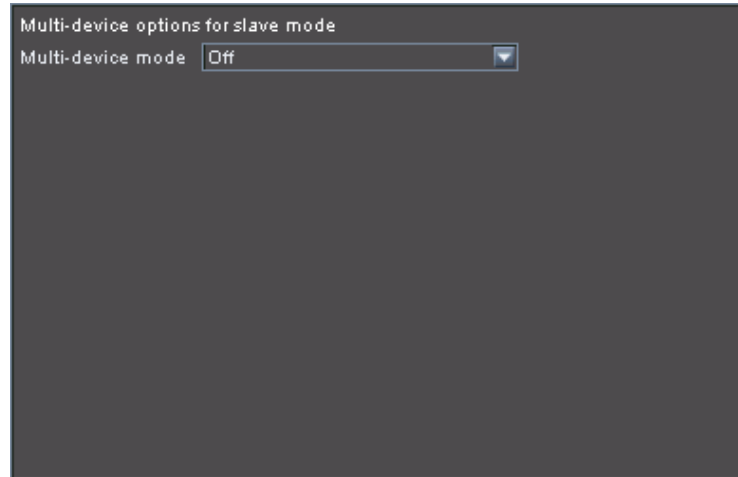
Figure 4-2: Gang settings

It provides the following items:

Multi-device mode	Sets the multi-device role for the connected channel, i.e. whether it should act as slave or master. For the slave role you can also select timecode chasing.
Timecode chase offset	If for the slave role a timecode chasing has been selected, this entry field will be available. With it you set the offset for the timecode chasing (in frames). The edit lag of VENICE will be observed as well (see section "RS-422 Control" on page A-1).

4.2.2 In, Out, Duration Settings

With the **In, Out, Duration settings** you determine whether the in-point or outpoint should be changed when altering a duration setting.
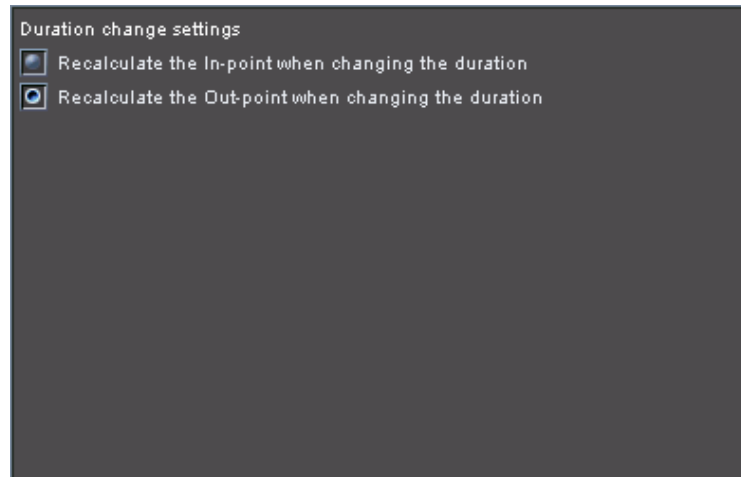
Figure 4-3: In, Out, Duration settings

It provides the following items:

Recalculate the In-point when…	The inpoint is changed when a duration setting is altered in the VENICE client software.
Recalculate the Out-point when…	The outpoint is changed when a duration setting is altered in the VENICE client software

4.2.3 Proxy Generation Settings

The **Proxy generation settings** allow you to simultaneously create proxies during a record with the VENICE server. A proxy is a down-scaled version of the original material that can be used, for example, for offline editing on other systems to enable previews of the video material in real-time.

Figure 4-4: Proxy generation settings

These settings provide the following items:

Generate proxies during record	Once this check box is activated, the proxies will be created. They will be generated from the video overlay of the VENICE client software and written in MPEG-1 format with a resolution of 640 × 480 pixels at the same location as the captured material.

4.2.4 Remote VTR/HDR Settings

The **Remote VTR/HDR settings** can be used to adapt the behavior of the currently connected video channel of the VENICE server to a certain type of VTR/HDR. Then the video channel will observe the settings when controlling the external device.
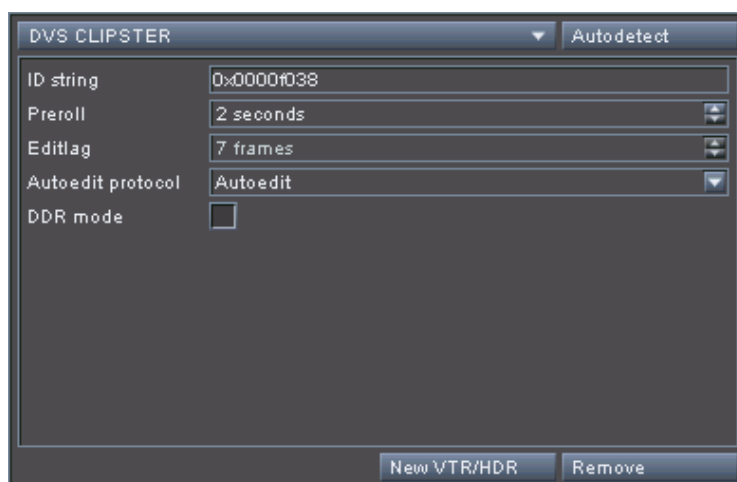
Figure 4-5: Remote VTR/HDR settings

It provides the following items:

combo box	Lists already configured external device profiles. When selecting one from the drop-down list, its settings will be displayed below and applied to the video channel.
AUTODETECT	Tries to identify the connected external device. If a device with an identical ID, preroll and edit lag can be found among the already configured device profiles, it will be automatically selected in the combo box and its settings will be displayed. If the device could not be identified, you will be asked to enter a name for the new device.
ID string	Indicates and sets the ID of the device.
Preroll	Sets the preroll time of the external device, i.e. the time needed by the device to bring it to the correct speed for the operation.
Editlag	Sets the edit lag (edit delay) of the external device, i.e. the time it takes for the external device to respond to a command.

Autoedit protocol	Sets the autoedit behavior that is supported by the external device. When `Autoedit` is selected, the edit-on/off commands are performed by the device automatically (recommended setting). With `Edit On/Off` selected the VENICE server sends out the edit-on/off commands explicitly (for older VTRs).
DDR mode	When activated, the VENICE server sends out standard goto commands. When deactivated, the goto commands will be simulated by jog/shuttle commands (for VTRs that do not execute goto commands under all circumstances).
NEW VTR/HDR	Allows you to add a new external device to the drop-down list of the combo box.
REMOVE	Removes the device profile that is currently selected with the combo box.

4.2.5 Still Mode Settings

With the **Still mode settings** you can determine what to give out when a timeline has been played fully and the play-out stops.
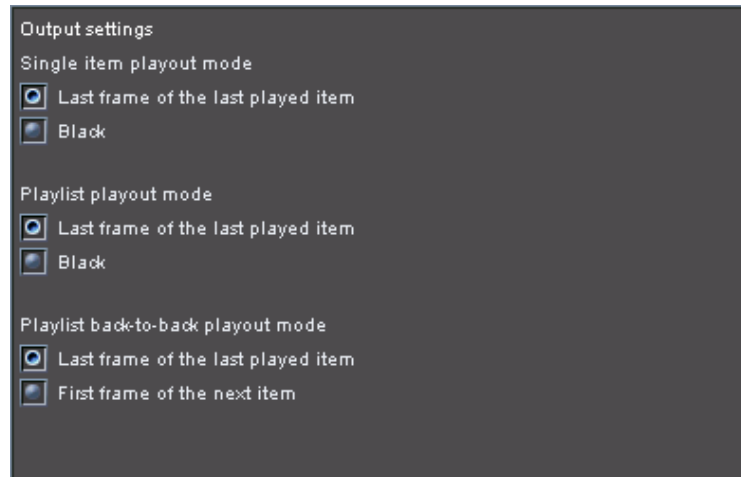
Figure 4-6: Still mode settings

It provides separate settings for the different items that can be played out in the playout mode of the VENICE client software:

– Single item
– Playlist
– Back-to-back play-out for a playlist

Select for each what should be given out when the play-out ends.

4.2.6 Sync Settings

The **Sync settings** set the synchronization of in- and output video signals for the connected video channel.

Figure 4-7: Sync settings

It provides separate settings for the sync reference and the analog output.

Sync Reference

The sync reference settings set the synchronization of the input thereby determining the sync output:

Type	Determines the type of sync for the input thereby determining the sync output. Usually, the video channel runs in a non-genlock mode, i.e. an internal synchronization is performed (Internal). To set the video channel into an analog genlock mode connect a signal to its reference input and select an appropriate sync type here (e.g. Bilevel or Trilevel). If a synchronization should be performed via the signal received on the SDI inputs, select the setting Digital.
H phase	Adjusts the horizontal phase of the sync output signal relative to the input sync signal. The output signals will be altered accordingly, i.e. the time base of the output signals will be generally altered. The value is for SD video rasters in half-pixels, for all others in full pixels.

V phase	Adjusts the vertical phase of the sync output signal relative to the input sync signal. The output signals will be altered accordingly, i.e. the time base of the output signals will be generally altered. The value is in lines.

Sync Analog

The sync analog settings set the synchronization of the analog output:

Type	Determines the type of sync for the analog component signal (RGB). You can select between a bilevel, trilevel or TTL synchronization (e.g. with `...  HF VR` as 'horizontal falling' and 'vertical rising') on the analog sync output. Furthermore, with the `...  (on green)` settings you can enable a bilevel or trilevel sync signal on the green channel of the analog output. The setting `Automatic` uses the default sync output mode of the currently set raster.
H phase	Adjusts the horizontal phase of the sync output signal relative to the video output signal. The effect will be that you move the given out image content horizontally relative to the sync signal. The value is for SD video rasters in half-pixels, for all others in full pixels.
V phase	Adjusts the vertical phase of the sync output signal relative to the video output signal. The effect will be that you move the given out image content vertically relative to the sync signal. The value is in lines.

4.2.7 VDCP Settings

With the **VDCP settings** you set the location of the material that the video channel should output when controlled in slave mode via VDCP.
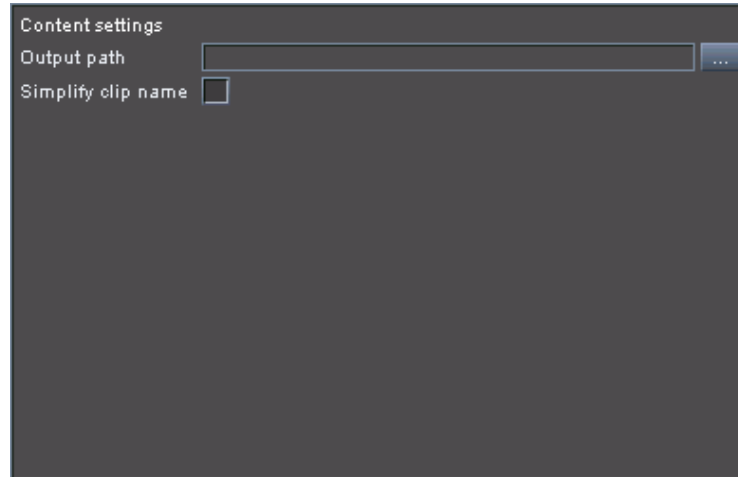
Figure 4-8: VDCP settings

It provides the following settings items:

Output path	Enter in this field the output path where the video material is located that should be output by the VENICE server when controlled in slave mode via VDCP. The material that is expected in this path (root directory directly or one level down) are VENICE metaclips.
Simplify clip name	When deactivated, you have to send the complete path and name to the clip that should be output: `<outputPath>/[<subdir>/] <clipName>.<ext>` When activated, the field **Output path** will be automatically added to the sent clip name. Additionally, you have to leave out the file extension: `[<subdir>/]<clipName>`

Server Administration

This chapter explains how to administer the VENICE server. It will be described, for example, how to update the software on the system and the various tools that are available for an administration.

5.1 Updating the Software on the VENICE Server

During the service life of the VENICE server you may be required to update its software. The update will be performed with the standard RPM installation package for VENICE. It will contain the newest versions of the PCI video board driver, the VENICE server software as well as the locally installed VENICE client software.

- If applicable, open a command line (terminal) and log on to the system as root.

- Switch to the directory that contains the new installation file.

- Then update the installed software by entering:

  ```
  rpm -Uhv Venice-<version no.>_<kernel/OS archi-
  tecture>.rpm
  ```

This updates the necessary files and libraries of the DVS software on the computer system. Afterwards the update is complete.

5.2 DVS Web Utility

The DVS Web Utility can be used to configure the VENICE server. Once the operating system is loaded, it can be found on the desktop of the system.

The DVS Web Utility will run in the standard web browser of your system. After starting it with a double-click of the mouse you have to enter a user name (default: `admin`) and password (default: `venice`).
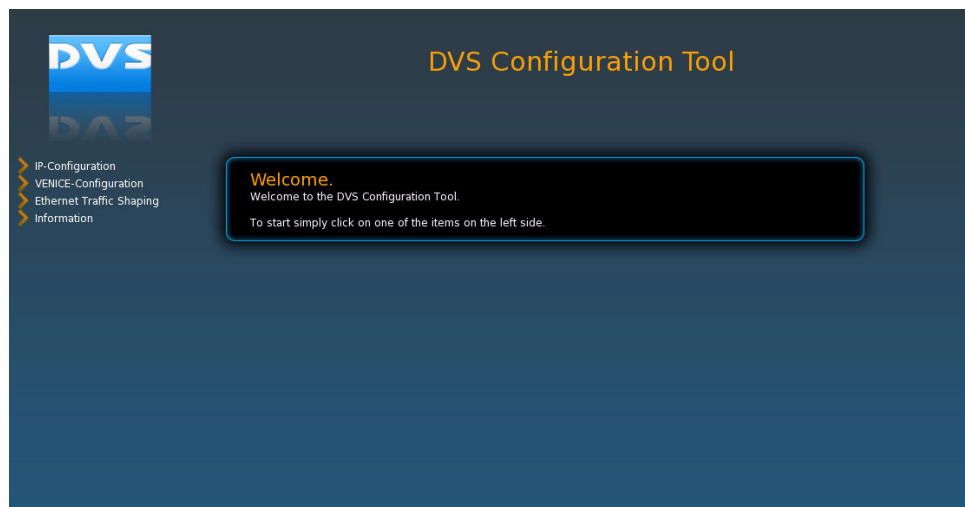
Figure 5-1: Starting screen of the DVS Web Utility

To access the DVS Web Utility from a client station enter in the web browser `https://<IP address of VENICE>` (i.e. SSL encryption at port 443).

With the DVS Web Utility you can change the configurations of the DVS system (e.g. its IP address and the IP address set for the VENICE server software). Click on the respective item to the left to view and change the configurations.

The DVS Web Utility can also be used to control the VENICE server software, i.e. it can start, stop or restart the video channels of the server. For further information about this see section "Controlling the VENICE Server Software" on page 5-2.

Additionally, with the configuration tool you can gather log files of the system, for example, for troubleshooting reasons. After saving the log files you will be provided with a download link where you can find the logs (see also section "Creating Log Files" on page 5-3).

5.3 Controlling the VENICE Server Software

The VENICE server software can be controlled with the VENICE script. With it you can find out the current state of the individual video channels and control them (start, stop or restart).

> ℹ️ This can also be performed with the DVS web utility (see section "DVS Web Utility" on page 5-1).

A manual stopping and restarting of video channels may be required for one of the following:

– After altering one of its configuration files (e.g. *Service.conf*, see section "Changing the IP Address" on page 2-5).
– To force a disconnection/freeing of a video channel.
– In case of a lost connection to a channel which cannot be explained otherwise.

The VENICE script is located in the path */etc/init.de/*. To execute, for example, the restart command enter (from any location) `/etc/init.de/venice restart`.

Syntax:	`venice <command> [<#channel no.>]`
Remarks:	To address all channels at once leave out the channel number.
	For help information just enter `venice`.

Commands:		
	`status`	Returns the current status of all channels.
	`start`	Starts the processes for a channel.
	`stop`	Stops the processes for a channel. An already established connection from a VENICE client software will be severed.
	`restart`	Stops the processes for a channel (if not already the case). An already established connection from a VENICE client software will be severed. Afterwards the channel will be started automatically again.

5.4 Creating Log Files

To aid a debugging the VENICE server software is able to create log files which detail the actions performed with the individual video channels. You may get asked by the DVS service department to send in these files as well as others in case of problems with VENICE.

> **i** This can also be performed with the DVS web utility (see section "DVS Web Utility" on page 5-1).

The program to gather the log information is located in the path */opt/DVS/Venice/bin/*. To execute, for example, a continuous writing of the logs for channel 1 and 2 to the directory *log* on the desktop enter (from any location) `/opt/DVS/Venice/bin/logwatch --watch`

```
AvusLog1 AvusLog2 --outdir /home/venice/Desktop/
log/.
```

Syntax:	`logwatch <option> <log module> [<argument>]`	
Remarks:	For further options and help information just enter `logwatch`.	
Options:	`--dump`	Dumps all log information stored in memory of one or more log modules to text files.
	`--print`	Activates the print mode for a single log module. New log entries will be displayed at stdout until terminated.
	`--watch`	Activates the watch mode of one or more log modules. New log entries will be written to text files until terminated.
Log modules:	The log modules for the individual video channels are named `AvusLog<#channel no.>`.	
Arguments:	`--outdir`	Specifies an output directory for watch and dump mode. If not specified, the default directory `/var/opt/DVS/logwatched/` (depends on user) will be used.

5.5 The Service.conf

The file `Service.conf` in the directory `/etc/opt/DVS/Venice/` stores various configuration settings. Among them you can find the user name and the IP address used by the VENICE server software. You can change these settings to your liking (see section "IP Address Configuration" on page 2-5).

All other settings of the configuration files should not be altered.

Whenever, you change one of the configuration files of VENICE, the VENICE server software and the VENICE client software must be restarted (see section "Controlling the VENICE Server Software" on page 5-2).

Appendix
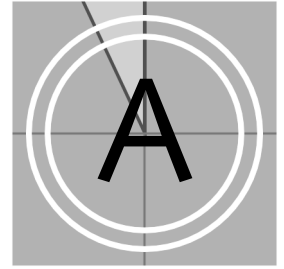
This chapter provides further details about the system, for example, about the RS-422 control of the VENICE server.

A.1 RS-422 Control

The VENICE server provides one remote control port for each channel. Its direction (In/Out, i.e. its pin-out) is determined by the selected RS-422 mode in the VENICE client software.

For slave mode the DVS system supports the RS-422 9-pin control protocol and VDCP. When acting as a master, the DVS system uses the RS-422 9-pin control protocol.

In case you want to control the DVS system in slave mode via RS-422, the following specifications have to be set on the master device to ensure frame accurate editing:

preroll	>= 1 sec.
edit lag (edit delay)	7 frames
postroll	1 sec.

A.2 Supported VDCP Commands

The VENICE server can be remotely controlled via VDCP. The following VDCP commands are supported by VENICE:

Command			Return		
CMD-1	**CMD-2**	**Description**	**CMD-1**	**CMD-2**	**Description**
10	00	Stop		04	ACK
10	01	Play		04	ACK
10	04	Still		04	ACK
10	05	Step		04	ACK
10	06	Continue		04	ACK
10	07	Jog		04	ACK
10	08	Vari.Play		04	ACK
20	21	ClosePort		04	ACK
20	22	SelectPort		04	ACK
20/A0	24	PlayCue		04	ACK
20/A0	25	CueWithData		04	ACK
30	01	OpenPort	30	81	Grant
30/B0	02	Next	30	82	NextID(s)
30	05	PortStatusRequest	30	85	Status
30	06	PositionRequest	30	86	Position
30/B0	07	ActiveIDRequest	30	87	ActiveID
30	08	DeviceTypeRequest	30	88	DeviceType
30	10	SystemStatusRequest	30	90	SystStatus
30/B0	11	ListofID(s)	30	91	FirstIDs
50/D0	66	PrepareIdToPlay		04	ACK

VENICE currently supports one channel per port, so commands such as OpenPort, SelectPort or ClosePort can only be used with 1. Any not supported command will return an ACK reply and set the 'Not Supported' status bit.

Additionally, there are DVS extensions to the VDCP commands available. For further information about them please contact DVS directly.

Index

1
2
3
4
5
A
I

1
2
3
4
5
A
I