Avid® FastServe™ | Ingest

Administrator's Guide

Version 2023.3

Legal Notices

Product specifications are subject to change without notice and do not represent a commitment on the part of Avid Technology, Inc.

This product is subject to the terms and conditions of a software license agreement provided with the software. The product may only be used in accordance with the license agreement.

This product may be protected by one or more U.S. and non-U.S patents. Details are available at www.avid.com/patents.

This document is protected under copyright law. An authorized licensee of may reproduce this publication for the licensee's own use in learning how to use the software. This document may not be reproduced or distributed, in whole or in part, for commercial purposes, such as selling copies of this document or providing support or educational services to others. This document is supplied as a guide for . Reasonable care has been taken in preparing the information it contains. However, this document may contain omissions, technical inaccuracies, or typographical errors. Avid Technology, Inc. does not accept responsibility of any kind for customers' losses due to the use of this document. Product specifications are subject to change without notice.

Copyright © 2023 Avid Technology, Inc. and its licensors. All rights reserved.

Copyright 2003-2007 of MOG Solutions

The following disclaimer is required by Apple Computer, Inc.:

APPLE COMPUTER, INC. MAKES NO WARRANTIES WHATSOEVER, EITHER EXPRESS OR IMPLIED, REGARDING THIS PRODUCT, INCLUDING WARRANTIES WITH RESPECT TO ITS MERCHANTABILITY OR ITS FITNESS FOR ANY PARTICULAR PURPOSE. THE EXCLUSION OF IMPLIED WARRANTIES IS NOT PERMITTED BY SOME STATES. THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY PROVIDES YOU WITH SPECIFIC LEGAL RIGHTS. THERE MAY BE OTHER RIGHTS THAT YOU MAY HAVE WHICH VARY FROM STATE TO STATE.

The following disclaimer is required by Sam Leffler and Silicon Graphics, Inc. for the use of their TIFF library:

Copyright © 1988–1997 Sam Leffler
Copyright © 1991–1997 Silicon Graphics, Inc.

Permission to use, copy, modify, distribute, and sell this software [i.e., the TIFF library] and its documentation for any purpose is hereby granted without fee, provided that (i) the above copyright notices and this permission notice appear in all copies of the software and related documentation, and (ii) the names of Sam Leffler and Silicon Graphics may not be used in any advertising or publicity relating to the software without the specific, prior written permission of Sam Leffler and Silicon Graphics.

THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL SAM LEFFLER OR SILICON GRAPHICS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

The following disclaimer is required by the Independent JPEG Group:

This software is based in part on the work of the Independent JPEG Group.

This Software may contain components licensed under the following conditions:

Copyright (c) 1989 The Regents of the University of California. All rights reserved.

Redistribution and use in source and binary forms are permitted provided that the above copyright notice and this paragraph are duplicated in all such forms and that any documentation, advertising materials, and other materials related to such distribution and use acknowledge that the software was developed by the University of California, Berkeley. The name of the University may not be used to endorse or promote products derived from this software without specific prior written permission. THIS SOFTWARE IS PROVIDED ``AS IS'' AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Copyright (C) 1989, 1991 by Jef Poskanzer.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation. This software is provided "as is" without express or implied warranty.

Copyright 1995, Trinity College Computing Center. Written by David Chappell.

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation. This software is provided "as is" without express or implied warranty.

Copyright 1996 Daniel Dardailler.

Permission to use, copy, modify, distribute, and sell this software for any purpose is hereby granted without fee, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of Daniel Dardailler not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. Daniel Dardailler makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

Modifications Copyright 1999 Matt Koss, under the same license as above.

Copyright (c) 1991 by AT&T.

Permission to use, copy, modify, and distribute this software for any purpose without fee is hereby granted, provided that this entire notice is included in all copies of any software which is or includes a copy or modification of this software and in all copies of the supporting documentation for such software.

THIS SOFTWARE IS BEING PROVIDED "AS IS", WITHOUT ANY EXPRESS OR IMPLIED WARRANTY. IN PARTICULAR, NEITHER THE AUTHOR NOR AT&T MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND CONCERNING THE MERCHANTABILITY OF THIS SOFTWARE OR ITS FITNESS FOR ANY PARTICULAR PURPOSE.

This product includes software developed by the University of California, Berkeley and its contributors.

The following disclaimer is required by Nexidia Inc.:

© 2010 Nexidia Inc. All rights reserved, worldwide. Nexidia and the Nexidia logo are trademarks of Nexidia Inc. All other trademarks are the property of their respective owners. All Nexidia materials regardless of form, including without limitation, software applications, documentation and any other information relating to Nexidia Inc., and its products and services are the exclusive property of Nexidia Inc. or its licensors. The Nexidia products and services described in these materials may be covered by Nexidia's United States patents: 7,231,351; 7,263,484; 7,313,521; 7,324,939; 7,406,415, 7,475,065; 7,487,086 and/or other patents pending and may be manufactured under license from the Georgia Tech Research Corporation USA.

The following disclaimer is required by Paradigm Matrix:

Portions of this software licensed from Paradigm Matrix.

The following disclaimer is required by Ray Sauers Associates, Inc.:

"Install-It" is licensed from Ray Sauers Associates, Inc. End-User is prohibited from taking any action to derive a source code equivalent of "Install-It," including by reverse assembly or reverse compilation, Ray Sauers Associates, Inc. shall in no event be liable for any damages resulting from reseller's failure to perform reseller's obligation; or any damages arising from use or operation of reseller's products or the software; or any other damages, including but not limited to, incidental, direct, indirect, special or consequential Damages including lost profits, or damages resulting from loss of use or inability to use reseller's products or the software for any reason including copyright or patent infringement, or lost data, even if Ray Sauers Associates has been advised, knew or should have known of the possibility of such damages.

The following disclaimer is required by Videomedia, Inc.:

"Videomedia, Inc. makes no warranties whatsoever, either express or implied, regarding this product, including warranties with respect to its merchantability or its fitness for any particular purpose."

"This software contains V-LAN ver. 3.0 Command Protocols which communicate with V-LAN ver. 3.0 products developed by Videomedia, Inc. and V-LAN ver. 3.0 compatible products developed by third parties under license from Videomedia, Inc. Use of this software will allow "frame accurate" editing control of applicable videotape recorder decks, videodisc recorders/players and the like."

The following disclaimer is required by Altura Software, Inc. for the use of its Mac2Win software and Sample Source Code:

©1993–1998 Altura Software, Inc.

The following disclaimer is required by Ultimatte Corporation:

Certain real-time compositing capabilities are provided under a license of such technology from Ultimatte Corporation and are subject to copyright protection.

The following disclaimer is required by 3Prong.com Inc.:

Certain waveform and vector monitoring capabilities are provided under a license from 3Prong.com Inc.

The following disclaimer is required by Interplay Entertainment Corp.:

The "Interplay" name is used with the permission of Interplay Entertainment Corp., which bears no responsibility for Avid products.

This product includes portions of the Alloy Look & Feel software from Incors GmbH.

This product includes software developed by the Apache Software Foundation (http://www.apache.org/).

© DevelopMentor

This product may include the JCifs library, for which the following notice applies:

JCifs © Copyright 2004, The JCIFS Project, is licensed under LGPL (http://jcifs.samba.org/). See the LGPL.txt file in the Third Party Software directory on the installation CD.

Avid Interplay contains components licensed from LavanTech. These components may only be used as part of and in connection with Avid Interplay.

This product includes the Warlib library, for which the following notice applies:

Copyright Jarle (jgaa) Aase 2000 - 2009

COPYRIGHT file which is included in the distribution:

warlib is copyright Jarle (jgaa) Aase 2000 - 2009

The warlib C++ Library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 3.0 of the License, or (at your option) any later version.

The warlib C++ Library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

Portions copyright © 2012 Avid Technology, Inc.

Attn. Government User(s). Restricted Rights Legend

U.S. GOVERNMENT RESTRICTED RIGHTS. This Software and its documentation are “commercial computer software” or “commercial computer software documentation.” In the event that such Software or documentation is acquired by or on behalf of a unit or agency of the U.S. Government, all rights with respect to this Software and documentation are subject to the terms of the License Agreement, pursuant to FAR §12.212(a) and/or DFARS §227.7202-1(a), as applicable.

Trademarks

003, 192 Digital I/O, 192 I/O, 96 I/O, 96i I/O, Adrenaline, AirSpeed, ALEX, Alienbrain, AME, AniMatte, Archive, Archive II, Assistant Station, AudioPages, AudioStation, AutoLoop, AutoSync, Avid, Avid Active, Avid Advanced Response, Avid DNA, Avid DNxcel, Avid DNxHD, Avid DS Assist Station, Avid Ignite, Avid Liquid, Avid Media Engine, Avid Media Processor, Avid MEDIArray, Avid Mojo, Avid Remote Response, Avid Unity, Avid Unity ISIS, Avid VideoRAID, AvidRAID, AvidShare, AVIDstripe, AVX, Beat Detective, Beauty Without The Bandwidth, Beyond Reality, BF Essentials, Bomb Factory, Bruno, C|24, CaptureManager, ChromaCurve, ChromaWheel, Cineractive Engine, Cineractive Player, Cineractive Viewer, Color Conductor, Command|24, Command|8, Control|24, Cosmonaut Voice, CountDown, d2, d3, DAE, D-Command, D-Control, Deko, DekoCast, D-Fi, D-fx, Digi 002, Digi 003, DigiBase, Digidesign, Digidesign Audio Engine, Digidesign Development Partners, Digidesign Intelligent Noise Reduction, Digidesign TDM Bus, DigiLink, DigiMeter, DigiPanner, DigiProNet, DigiRack, DigiSerial, DigiSnake, DigiSystem, Digital Choreography, Digital Nonlinear Accelerator, DigiTest, DigiTranslator, DigiWear, DINR, DNxchange, Do More, DPP-1, D-Show, DSP Manager, DS-StorageCalc, DV Toolkit, DVD Complete, D-Verb, Eleven, EM, Euphonix, EUCON, EveryPhase, Expander, ExpertRender, Fader Pack, Fairchild, FastBreak, Fast Track, Film Cutter, FilmScribe, Flexevent, FluidMotion, Frame Chase, FXDeko, HD Core, HD Process, HDpack, Home-to-Hollywood, HYBRID, HyperSPACE, HyperSPACE HDCAM, iKnowledge, Image Independence, Impact, Improv, iNEWS, iNEWS Assign, iNEWS ControlAir, InGame, Instantwrite, Instinct, Intelligent Content Management, Intelligent Digital Actor Technology, IntelliRender, Intelli-Sat, Intelli-sat Broadcasting Recording Manager, InterFX, Interplay, inTONE, Intraframe, iS Expander, iS9, iS18, iS23, iS36, ISIS, IsoSync, LaunchPad, LeaderPlus, LFX, Lightning, Link & Sync, ListSync, LKT-200, Lo-Fi, MachineControl, Magic Mask, Make Anything Hollywood, make manage move | media, Marquee, MassivePack, Massive Pack Pro, Maxim, Mbox, Media Composer, MediaFlow, MediaLog, MediaMix, Media Reader, Media Recorder, MEDIArray, MediaServer, MediaShare, MetaFuze, MetaSync, MIDI I/O, Mix Rack, Moviestar, MultiShell, NaturalMatch, NewsCutter, NewsView, NewsVision, Nitris, NL3D, NLP, NSDOS, NSWIN, OMF, OMF Interchange, OMM, OnDVD, Open Media Framework, Open Media Management, Painterly Effects, Palladium, Personal Q, PET, Podcast Factory, PowerSwap, PRE, ProControl, ProEncode, Profiler, Pro Tools, Pro Tools|HD, Pro Tools LE, Pro Tools M-Powered, Pro Transfer, QuickPunch, QuietDrive, Realtime Motion Synthesis, Recti-Fi, Reel Tape Delay, Reel Tape Flanger, Reel Tape Saturation, Reprise, Res Rocket Surfer, Reso, RetroLoop, Reverb One, ReVibe, Revolution, rS9, rS18, RTAS, Salesview, Sci-Fi, Scorch, ScriptSync, SecureProductionEnvironment, Serv|GT, Serv|LT, Shape-to-Shape, ShuttleCase, Sibelius, SimulPlay, SimulRecord, Slightly Rude Compressor, Smack!, Soft SampleCell, Soft-Clip Limiter, SoundReplacer, SPACE, SPACEShift, SpectraGraph, SpectraMatte, SteadyGlide, Streamfactory, Streamgenie, StreamRAID, SubCap, Sundance, Sundance Digital, SurroundScope, Symphony, SYNC HD, SYNC I/O, Synchronic, SynchroScope, Syntax, TDM FlexCable, TechFlix, Tel-Ray, Thunder, TimeLiner, Titansync, Titan, TL Aggro, TL AutoPan, TL Drum Rehab, TL Everyphase, TL Fauxlder, TL In Tune, TL MasterMeter, TL Metro, TL Space, TL Utilities, tools for storytellers, Transit, TransJammer, Trillium Lane Labs, TruTouch, UnityRAID, Vari-Fi, Video the Web Way, VideoRAID, VideoSPACE, VTEM, Work-N-Play, Xdeck, X-Form, Xmon and XPAND! are either registered trademarks or trademarks of Avid Technology, Inc. in the United States and/or other countries.

Avid FastServe | Ingest Administrator’s Guide v2023.3 • Created 5/16/23 • This document is distributed by Avid in online (electronic) form only, and is not available for purchase in printed form.

Contents

Symbols and Conventions 9

Chapter 1 **Introduction** 10

FastServe | Ingest Recordings and Clips 10

Technical Specifications 11

FastServe | Ingest UHDS (Gen 1). 11

FastServe | Ingest UHDS2 (Gen 2). 12

Chapter 2 **Working with the FastServe | Ingest Web Configurator** 13

The Login Page 13

Logging In 13

General Information 14

The OVS Page 15

The Status Section 15

The Video Settings 15

The Controller Settings. 18

The Audio Settings 19

General 19

Audio Router. 19

Embedded Inputs Distribution 20

The In/Out Settings. 21

General 21

Configuration 21

OSD Settings. 22

The Maintenance Settings 23

Storage 23

Network Settings. 24

License 25

Database 25

Diagnostic 25

Server Upgrade 26

System Backup 26

The Data Settings 27

General 27

Strip Recordings 28

Record Mode. 28

The Import/ Export Settings 30

Share Points. 30

Interplay Settings 31
Export Settings 32
Proxy Settings 33
The Send to Playback Settings 35
NetStream 38
The Dual Export Settings 40
The GPIO Settings 41
The Automation Settings 44
The System Page 46
The Status Section 46
The Licenses Settings 47
The Mounts Settings 47
Client Management 48
Adding Mounts 48
Editing Mounts 50
Removing Mounts 50
ZFS Settings 51
The Network Configuration Settings 53
Dual 10Gigabit Network Redundancy 54
The Time & NTP Settings 55
FTP & Samba User Accounts 57
SNMP Settings 57
The Debug Settings 58
The Admin Page 58
The Info Settings 59
The User Credentials Settings 59
The Configuration Settings 59
The User Management Settings 60
The SVIP Page 61
The Status Section 62
The Boards Settings 62
The In/Out Settings 63
The PTP Settings 67
The PTP Status 69
The NMOS Settings 69
Chapter 3 Working with the FastServe | Ingest Remote Console 70
About the Remote Console 70
Configuring Channel Settings 72
Configuring Ingest Templates 73
Exporting Templates 76

Configuring Crash Recording . . . 77
The Channel Preview Window . . . 77
The Playout Settings . . . 80
The OSD Settings . . . 80
The Inventory Panel . . . 81
Context Menu Options . . . 82
Chapter 4 Workflows . . . 83
Integration with Avid NEXIS Storage . . . 83
Update of the NEXIS Client Driver on Linux . . . 83
Integration with Interplay and MediaCentral Environments . . . 84
Integration with Avid MediaCentral | Capture . . . 85
Configuring FastServe | Ingest for MediaCentral | Capture Workflows . . . 85
Setting Up Avid Service Configuration . . . 86
Configuring Avid Interplay Administrator . . . 88
Scheduling Recordings in the MediaCentral | Capture Client . . . 92
Status of FastServe | Ingest Recordings in MediaCentral | Capture . . . 94
Removing a FastServe | Ingest Machine from a Capture Environment . . . 95
FastServe | Ingest Proxy Workflow with MediaCentral | Capture . . . 96
Triple Proxy Workflow with MediaCentral | Capture . . . 96
Re-transferring Clips from MediaCentral | Capture . . . 100
FastServe | Ingest and MediaCentral | Capture Integration - Best Practices . . . 101
Integration with MediaCentral | Acquire . . . 107
Working with Proxy Recording . . . 108
Chapter 5 FastServe | I/O Configuration . . . 109
Setting up FastServe | Ingest in the IO mode . . . 109
Configuring Send-to-Playback . . . 111
Prerequisites . . . 112
STP Workflow Description . . . 113
Compatible Formats . . . 113
Invalid Characters In STP Asset Names . . . 113
Configuring Send-to-Playback . . . 114
Executing Send-to-Playback . . . 116
Working with MediaCentral | Command . . . 118
Configuring FastServe | I/O for Command . . . 118
Managing FastServe Inventory with MediaCentral | Command . . . 123
MediaCentral | Command Redundancy Configuration . . . 123
Mirrored Playout Configuration . . . 127
Converting FastServe | I/O to Standard Configuration . . . 129
Appendix A FastServe | Ingest Supported Configurations . . . 131

Available SDI Configurations 131
Available SVIP Configurations 132
Available FastServe | I/O Configurations 133

Using This Guide

Symbols and Conventions

Avid documentation uses the following symbols and conventions:

Symbol or Convention	Meaning or Action
	A note provides important related information, reminders, recommendations, and strong suggestions.
	A caution means that a specific action you take could cause harm to your computer or cause you to lose data.
	A warning describes an action that could cause you physical harm. Follow the guidelines in this document or on the unit itself when handling electrical equipment.
>	This symbol indicates menu commands (and subcommands) in the order you select them. For example, File > Import means to open the File menu and then select the Import command.
▸	This symbol indicates a single-step procedure. Multiple arrows in a list indicate that you perform one of the actions listed.
(Windows), (Windows only)	This text indicates that the information applies only to the specified operating system.
Bold font	Bold font is primarily used in task instructions to identify user interface items and keyboard sequences.
Italic font	Italic font is used to emphasize certain words and to indicate variables.
`Courier Bold font`	Courier Bold font identifies text that you type.
Ctrl+key or mouse action	Press and hold the first key while you press the last key or perform the mouse action. For example, Command+Option+C or Ctrl+drag.
| (pipe character)	The pipe character is used in some Avid product names, such as Interplay | Production. In this document, the pipe is used in product names when they are in headings or at their first use in text.

1 Introduction

Avid FastServe | Ingest offers media ingest, editing, and playout capabilities in a single versatile solution. It can capture up to four simultaneous UHD feeds or eight simultaneous HD sources—24/7 if needed. With on-the-fly real-time editing on the video server itself, you can turn around content within seconds, speeding your time to air—ideal for press conferences, political debates, sports highlights, replays, and other live events.

The Avid FastServe | Ingest hardware architecture is robustly built to address the most demanding news, sports, and entertainment production environments. The server is equipped with hot-swappable dual power supplies, dual port network connections, and RAID-protected hard disks running the virus-free and stable Linux operating system.

A versatile production environment offers a better return on investment, and Avid FastServe provides the flexibility you need to meet every production demand. Turning around breaking news stories quickly, Avid FastServe | Ingest can handle the complex and ever-changing needs of modern broadcasters. It also reduces production costs, as only a single operator is required to orchestrate media for a multitude of workflows and needs.

FastServe | Ingest Recordings and Clips

In the FastServe | Ingest system, the terms **Recording** and **Clips** are not used interchangeably.

A **recording** is a complete recorded file stored on the FastServe | Ingest server. For more information on how to work with recordings, see the *FastServe | Ingest User Guide*.

A FastServe | Ingest **clip** is a reserved portion of a recording for which you determine the start (In) and end (Out) points. By default, a clip is saved with a few seconds added before its start point and after its end point (safety zone). For more information on working with clips, see the *FastServe | Ingest User Guide*.

Technical Specifications

The tables below table present the current hardware specification of the FastServe | Ingest systems.

FastServe | Ingest UHDS (Gen 1)

CPU	2 x Intel Xeon 8-Core 2.1 GHz
Operating System	CentOS Linux 7.4
Memory	64 GB RAM
Data Interfaces	1 x Serial 4 x USB 3.0 (2 front, 2 back) 2 x 10 Gb Ethernet (SFP) 2 x 1 Gb Ethernet (RJ45) 1 x VGA maintenance (back) 1 XLR LTC input
Internal storage	HD / UHD / 4K media server—16 x 2 TB SATA 3, RAID 60 System disk—2 x 240 GB SSD, RAID 1
Video inputs	HD-SDI/3G-SDI with clean and OSD loops 12G-SDI/Quad-Link 3G-SDI (SQD)
Video outputs	HD-SDI/3G-SDI, 12G-SDI/Quad-Link 3G-SDI (SQD), 3G-SDI down convert OSD
Audio	Embedded audio—PCM; up to 8 stereo audio channels per video input
Video references	Genlock, Analog Black Burst / Tri level sync / 75O with loop through
Timecode output	ATC ST12-2
Timecode input	Internal free run LTC–XLR ATC ST12-2

FastServe | Ingest UHDS2 (Gen 2)

CPU	AMD EPYC 7313P, 16 cores, 3GHz
Operating System	CentOS Linux 7.9
Memory	128 GB RAM
Data Interfaces	1 x Serial 4 x USB 3.0 (2 front, 2 back) 2 x 10 Gb Ethernet (SFP) 2 x 1 Gb Ethernet (RJ45) 1 x 1Gb (detected for IPMI-RJ45) 1 x VGA maintenance (back) 1 XLR LTC input
Internal storage	HDD Media server up to 4x3.84TB System disk—2 x 480 GB SSD, RAID 1
Video inputs	HD-SDI/3G-SDI with clean and OSD loops 12G-SDI/Quad-Link 3G-SDI (SQD)
Video outputs	HD-SDI/3G-SDI, 12G-SDI/Quad-Link 3G-SDI (SQD), 3G-SDI down convert OSD
Video outputs (monitoring)	HD-SDI/3G-SDI 12G-SDI/Quad-Link 3G-SDI (SQD) OSD On/Off
Available configurations	HD: 1080i/720p - 8 inputs FastServe I/O: XDCAM 50/35 - 4 inputs / 4 outputs 3G: 1080p - 8 inputs UHD: 3840x2160 - 4 inputs
Audio	Embedded audio—PCM; up to 8 stereo audio channels per video input (4 stereo audio channels for XDCAM)
Video references	Genlock, Analog Black Burst / Tri level sync / 75O with loop through
Timecode output	ATC ST12-2
Timecode input	Internal free run LTC–XLR ATC ST12-2

2 Working with the FastServe | Ingest Web Configurator

The FastServe | Ingest Web Configurator is a web-based interface that you will use to configure and maintain your FastServe | Ingest server.

Prior to proceeding with FastServe | Ingest configuration using the Web Configurator, please ensure that your FastServe | Ingest server is installed and connected using the information in the *FastServe | Ingest Setup Guide*.

If you have already configured your FastServe | Ingest server, then you can log in.

The following main topics describe how to use the FastServe | Ingest Web Configurator to setup and administer your FastServe | Ingest system:

- The Login Page
- The OVS Page
- The System Page
- The Admin Page
- The SVIP Page

The Login Page

The Login page provides you with the controls you need to navigate to and log in to the FastServe | Ingest Web Configurator.

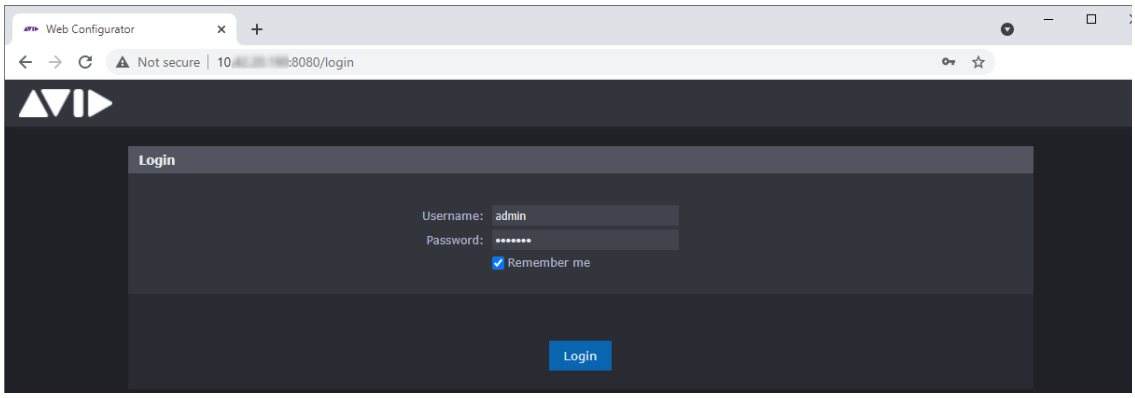
Logging In

This topic contains information on how to log into the FastServe | Ingest Web Configurator.

To sign into FastServe | Ingest:

1. Launch a web browser and enter the FastServe | Ingest IP address or the host name, with the suffix :8080.

   The FastServe | Ingest Web Configurator sign-in page appears.



2. Enter your user name and password and click the “Login” button.

The default user name is “admin” and the corresponding password is “Avid123”. It is highly recommended to change the default credentials upon first login.

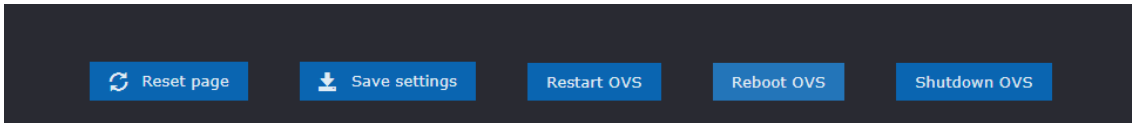
If one or more users has signed in before on this workstation, a list of users might appear when you click on the user name field.

3. The FastServe | Ingest Web Configurator opens.

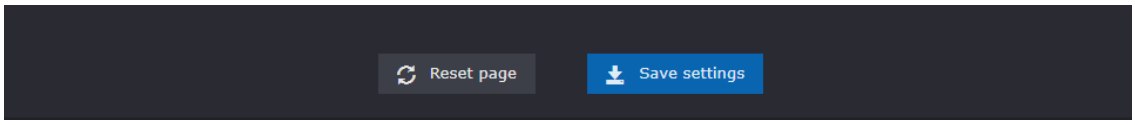
Depending on the entitlements assigned by administrators through the Admin tab, the front page can vary. It can be the OVS or any of the configuration tabs (System, SVIP, etc.).

General Information

Once you log in to the Web Configurator interface, you can use the bottom panel buttons to restart the OVS engine directly from your browser. This bottom panel also includes buttons dedicated to rebooting or turning off the FastServe | Ingest machine.

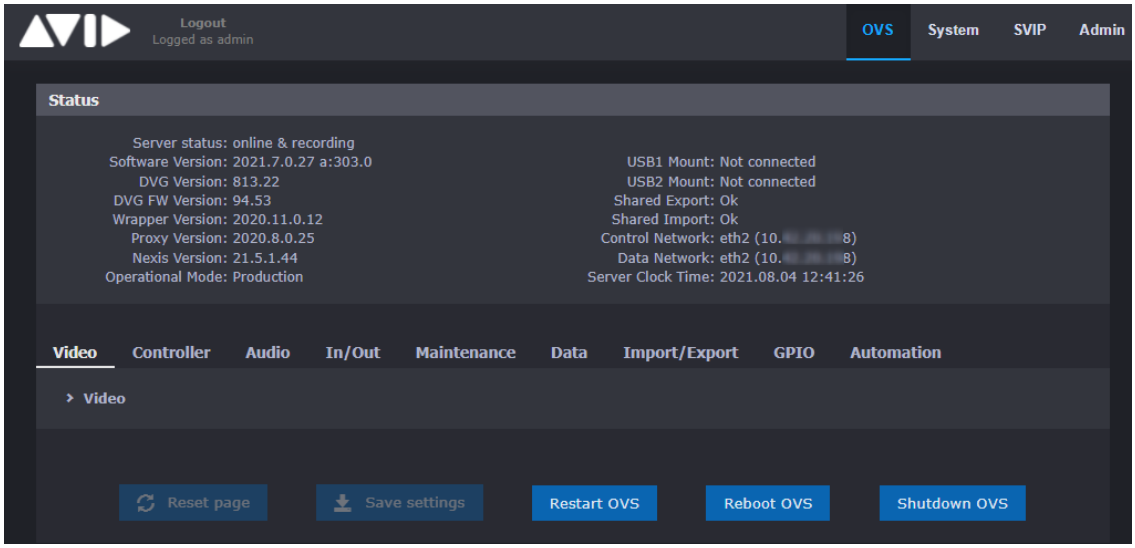


Once you open the **System** page, you can reset the changes applied but not saved or you can save your new configuration.



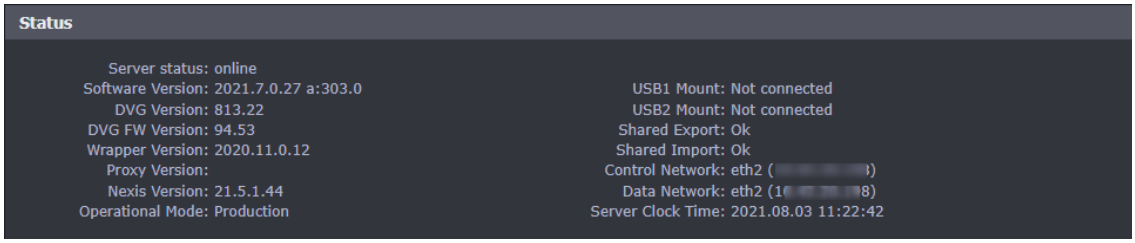
The OVS Page

The OVS tab allows to configure parameters related directly to the FastServe | Ingest Server.



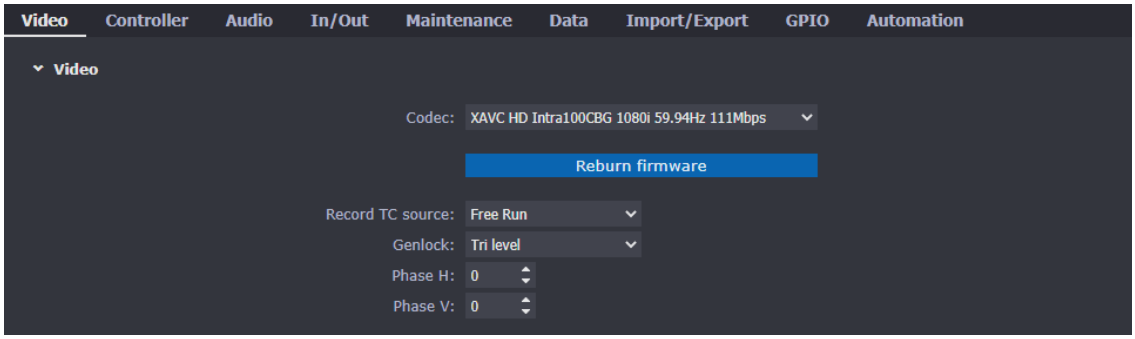
The Status Section

The Status section provides you with basic information about the current communication status and version of the server.



The Video Settings

The **Video** section provides means to configure video mode related functions, such as the codec, video standard, or the recorded TC source.



The following table describes the fields used on the Video settings section.

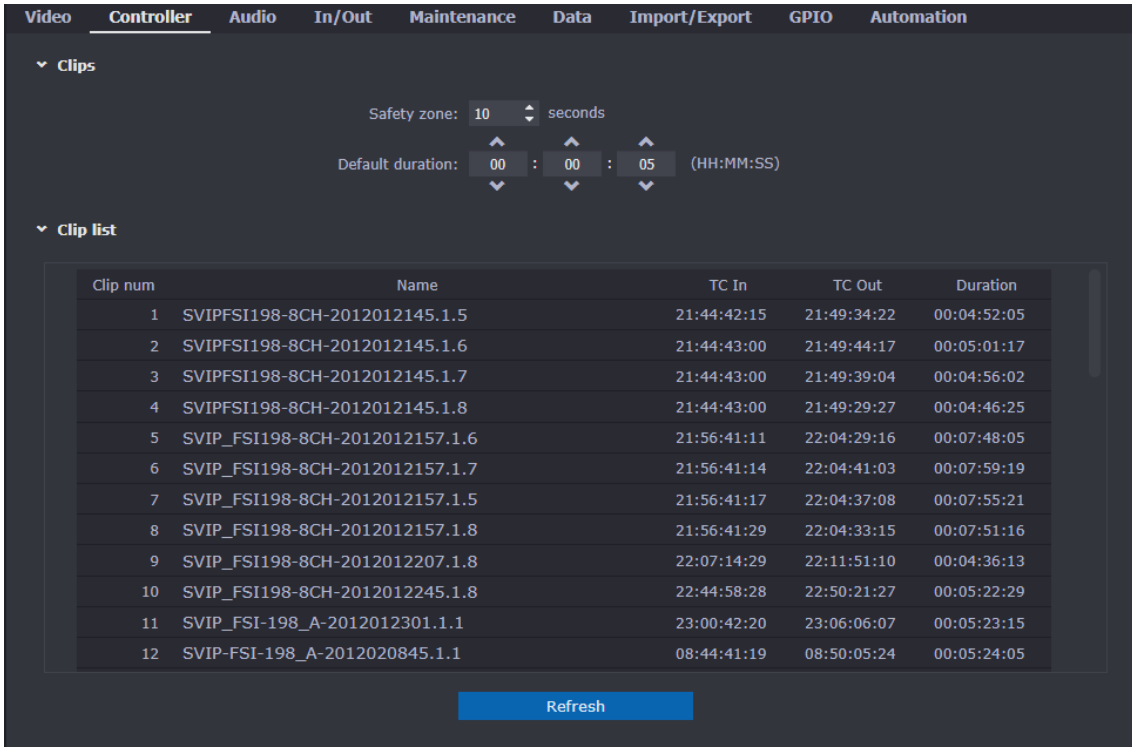
Field	Description
Codec	FastServe | Ingest can switch between video formats. However, the system must stop recording and reload different firmware. This process is automated. To switch, select the required video codec:. • DNxHR UHD 50Hz HQX 10 bit 1455Mbps • DNxHR UHD 59,94Hz HQX 10 bit 1745Mbps • DNxHR UHD 29,97 HQX 10 bit 875Mbps • DNxHR UHD 29,97 PsF HQX 10 bit 875Mbps • XDCAM HD 1080i 50Hz 50Mbps • XDCAM HD 1080i 59,94Hz 50Mbps • XDCAM HD 720p 59,94Hz 50Mbps • XDCAM EX 1080i 50Hz 35Mbps • XDCAM EX 1080i 59.94Hz 35Mbps • XDCAM EX 720p 59.94Hz 35Mbps • DNxHD HQX 1080p 50 Hz • DNxHD HQX 1080i59 Hz • DNxHD HQX 1080i 50 Hz • DNxHD HQX 720p 59,94 Hz • DNxHD HQX 1080p 59, 94 Hz • DNxHD SQ 720p 59 Hz • DNxHD SQ 1080i 50 Hz • DNxHD SQ 1080i 59 Hz • DNxHD SQ 1080p 50 Hz • DNxHD SQ 1080p 59 Hz • XAVC HD Intra100CBG 1080i 50Hz 112Mbps • XAVC HD Intra100CBG 1080i 59.94Hz 111Mbps • XAVC HD Intra100CBG 1080p 50Hz 223Mbps • XAVC HD Intra100CBG 1080p 59.94Hz 222Mbps • AVC-I HD Intra100 1080i 50Hz 100Mbps • AVC-I HD Intra100 1080i 59.94Hz 100Mbps • AVC-I Intra100 720p 59.94Hz 100Mbps *Make sure to check the latest ReadMe for an up-to-date list of supported codecs. Not all formats available from the drop-down list in the Web Configurator are supported.*

Field	Description
	When changing video codec, the appropriate firmware is installed by the system. To change a Codec, choose the needed codec from the list and then press **Save Settings**. For maintenance purposes, the codec might be re-flashed into HDVG boards by pressing the takes more than 10 minutes for XDCAM and 20 minutes for DNX/AVC/XAVC.
Record TC	Select timecode input source. This defines the timecode that is used to manage recordings. (LTC is recommended, if available). • LTC - requires linear timecode input (XLR connector is available on the server back panel) • Free run (internal system timecode) If your TC source fails, the system automatically continues from the last known TC, and checks the source every five seconds to resume usage.
Genlock	Select the genlock sync type: • Black burst • Tri level (HD and UHD)
Phase	Set the synchronization of the horizontal and vertical signal phases of the server output. Vertical phase range is +/- 540 lines, in 1 line intervals. Horizontal phase can be adjusted by 1 line, in 1 pixel intervals. (Default = 0).

The Controller Settings

The Controller section allows you to setup Clips options.

The Clips section is an obsolete feature and is no longer supported by FastServe | Ingest.



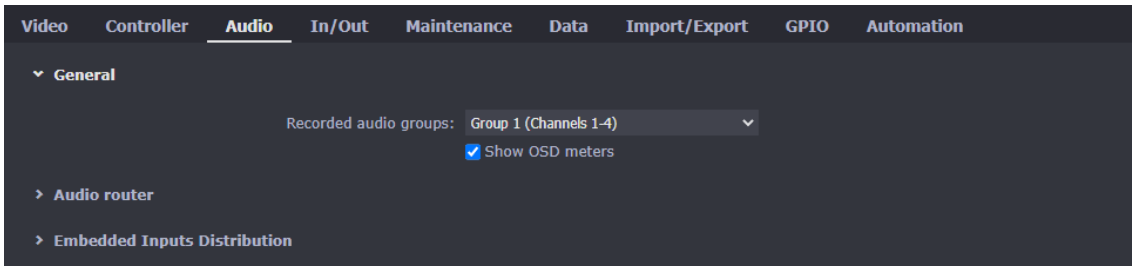
The following table describes the fields used on the Controller section.

Field	Description
Safety zone	Set the safety zone (a clip is then saved with a specified number of seconds added before its starting point and after its ending point).
Default duration	Set the default duration of clips. It is applied, when only an IN or OUT point is set and the clip is saved.
Clip list	List of all available clips.

The Audio Settings

The Audio settings allow to configure audio related features, such as routing options.

General



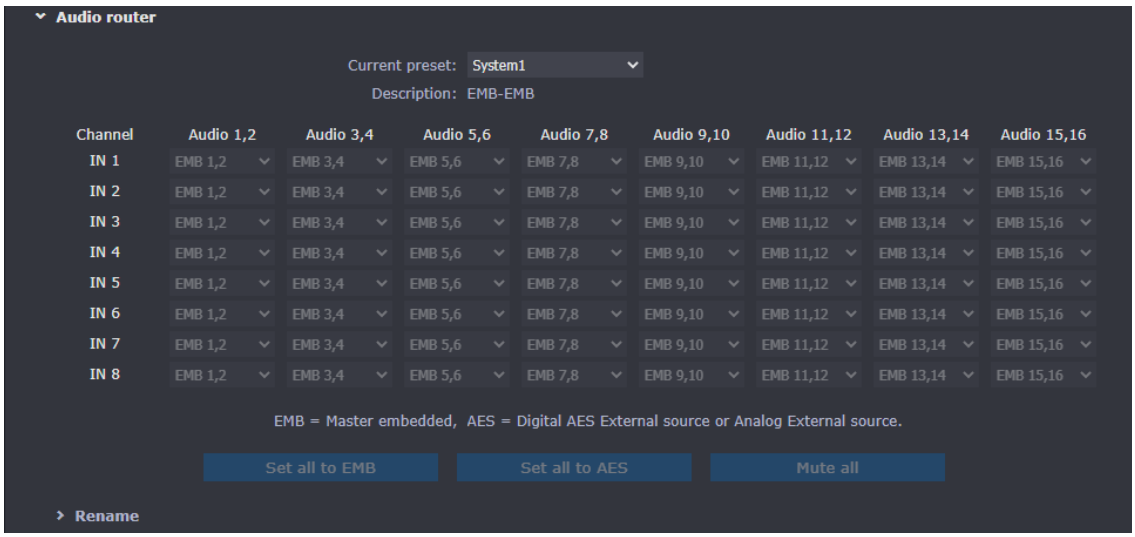
*When working with XDCAM, only the **Group 1,2 (Channels 1-8)** option is supported.*

The following table describes the fields used on the General section.

Field	Description
Recorded audio groups	Set the required audio groups to be recorded. There are four groups defined in the audio router; channels 1-4, 1-8, 1-12, 1-16. Any audio channel not defined in this group or groups is not recorded by the FastServe | Ingest Server.
Show OSD meters	Enable the audio meters display for the “dirty channel”.

Audio Router

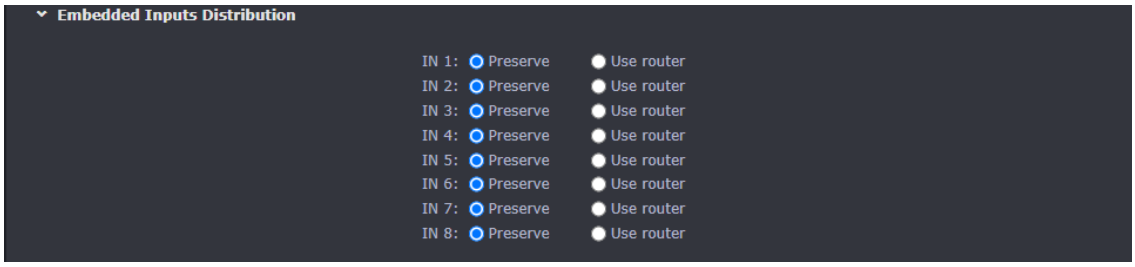
The Audio Router section is an obsolete feature and is no longer supported by FastServe | Ingest.



The following table describes the fields used on the Audio Router section.

Field	Description
Current preset	Select the current preset for the audio channels. 3 System presets are available, which cannot be modified: System 1 - EMB EMB System 2 - AES-AES System 3 - AES Cam to Out 1. It is also possible to select one of the 6 default presets, which can be customized, renamed and saved for later usage. *Only the master input can be used as the embedded audio router.*
Rename	This section allows to rename the default presets and add a short description for the customized presets.

Embedded Inputs Distribution



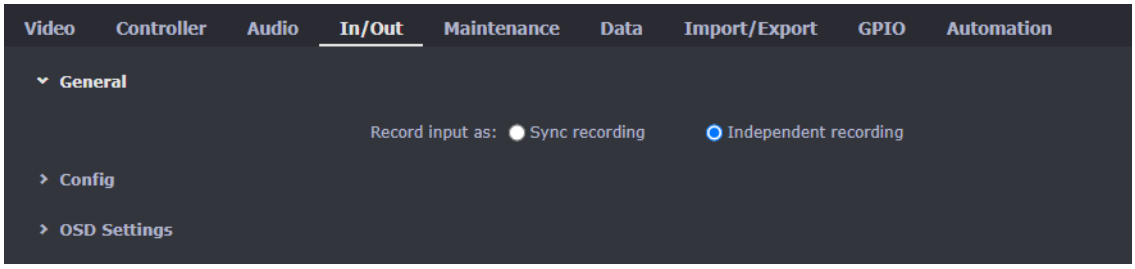
The following table describes the fields used on the Embedded Inputs Distribution section.

Field	Description
Embedded Inputs Distribution	Each input has the following options: **Use Router** - uses the internal audio router to mix the AES and the master embedded input. **Preserve** - uses the original embedded input.:

The In/Out Settings

The In/Out settings allow to configure the inputs and outputs of the server, set the working mode, name the inputs and outputs.

General

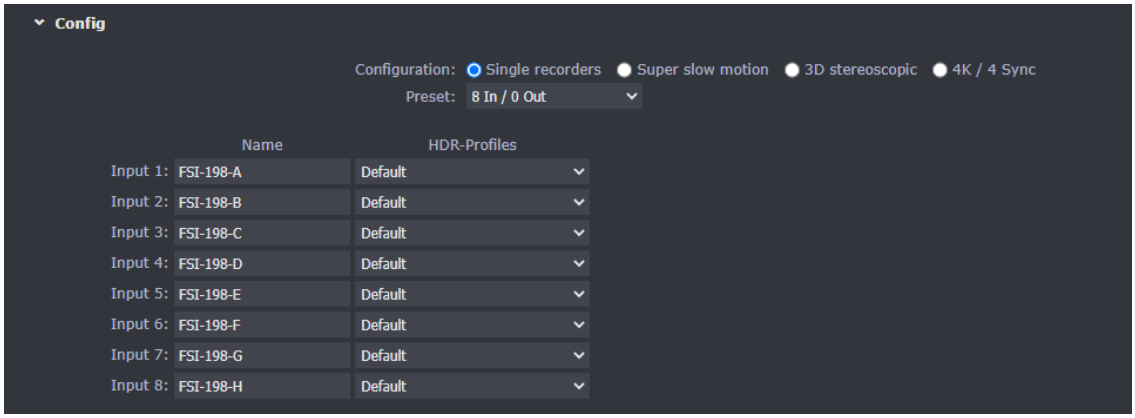


*Sync recording is an obsolete feature and is no longer supported by FastServe | Ingest. Only **Independent Recording** can be used.*

The following table describes the fields used on the General section.

Field	Description
Record inputs as	Select a recording mode: **Sync Recording** - all recorded channels are started simultaneously. When you mark a clip on one channel, it is marked on all channels (default). **Independent Recording** - recording can be started and stopped separately for each channel. When you mark a clip it is only marked on the current channel.

Configuration



*Only the **Single Recorders** option is supported. The remaining options are obsolete.*

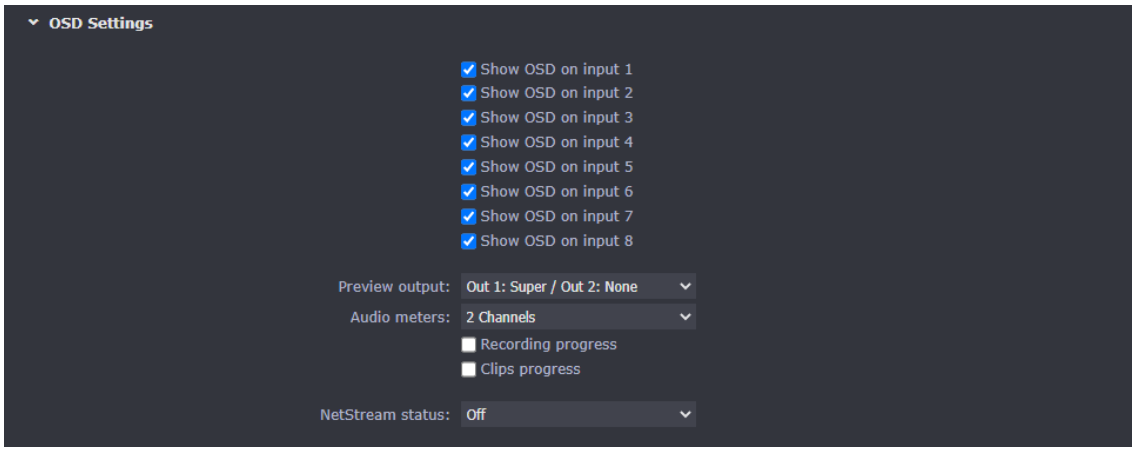
The following table describes the fields used on the Configuration section.

Field	Description
Configuration	The following settings relate to the common 8-channel configuration: Define how many inputs and outputs are used, and how they are configured. Single Recorders (UHD)- 4in/0out Single Recorders (HD) - 8in/0out To see how to connect the Inputs and Outputs according to your current setup, see the *FastServe | Ingest Setup Guide.*
Rename Inputs and Outputs	This section allows to rename the **Inputs** and **Outputs**.

Check the latest ReadMe for an updated list of supported configurations. Some configurations, which are still visible in the Web Configurator user interface (such as the PGM/PRV modes or the 2 in/ 6 out configuration) can no longer be used in FastServe | Ingest scenarios.

OSD Settings

Select to display or hide OSD data for each output (**Super** - superimpose data, **Clean** - hide data).

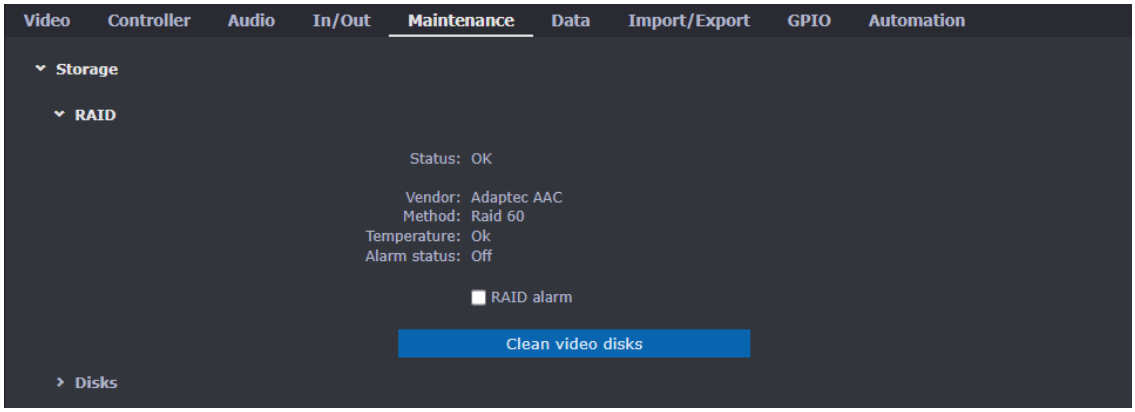


The Maintenance Settings

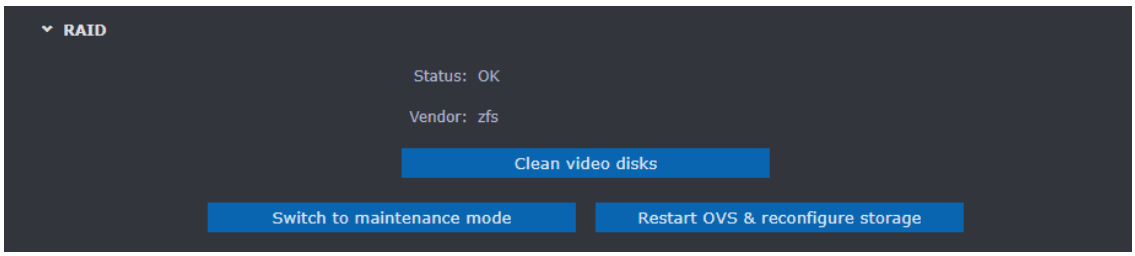
The Maintenance settings give the options to monitor and change the system settings, such as the storage level, the possibility to clean video disks, set network parameters, clean and repair the database etc. Also, diagnostic logs can be downloaded directly from this section.

Storage

FastServe | Ingest UHDS Servers

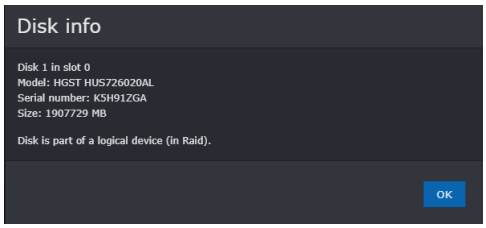


FastServe | Ingest UHDS2 Servers

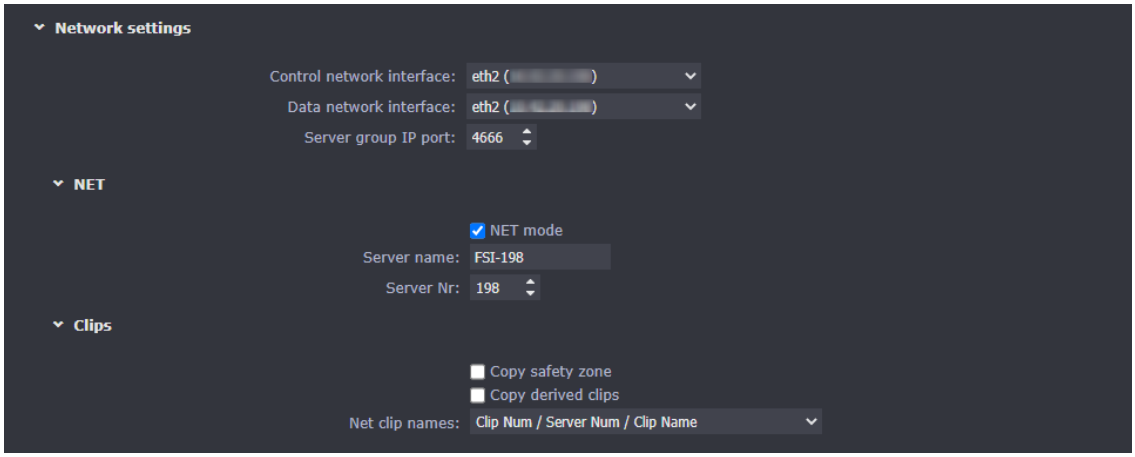


The following table describes the fields used on the Storage section.

Field	Description
RAID	**Clean Video Disks** - Use this option to erase all existing data from the disks (in all formats). This removes all cues, clips, playlists, and actual video recordings from the disks. After this command is started, video will no longer be accessible. This option also deletes locked and protected clips and playlists. **RAID Status & Info** - RAID board status. **RAID Disk Status** - Reflects the status of each disk; Green for fully operational, Yellow for disk problems, Red for disk failure, Blue for replaced disk (until recovery). **RAID Alarm** - enable or disable the audio alarm for RAID failure.

Field	Description
RAID (UHDS2 only)	**Switch to maintenance mode** - the maintenance mode needs to be enabled to allow for creation or edition of ZFS media pools. For more information, see the **Replacing ZFS Disks on FastServe | Ingest UHDS2 Server** topic in the *Maintaining and Troubleshooting Your Server* chapter of the *Avid FastServe | Ingest Setup Guide*. **Restart OVS & Reconfigure storage** - after creating new ZFS pools, press this button to reconfigure the storage.
Disks	The Disks section displays information about the available disks and their status. Click on **Info** to receive more details about the disk.  You can use this section to perform a disk replacement. For a detailed description, see the *Avid FastServe | Ingest Setup Guide.*

Network Settings



The following table describes the fields used on the Network Settings section.

Field	Description
Network Settings	**Control network interface** - set which eth interface handles data and which interface handles control operations. **Server Group IP Port** - set the common port for servers and controllers. By using various Group IP Ports, you can separate the servers and their controllers within one network. **NET** - enable the possibility to send and receive clips directly between servers. *The NET option is obsolete and no longer supported.* **Server Nr** - set the server number to distinguish between servers in a group. **Clips** - set which options should be applied when clips are copied from a remote server: *The Clips option is obsolete and no longer supported.*

License

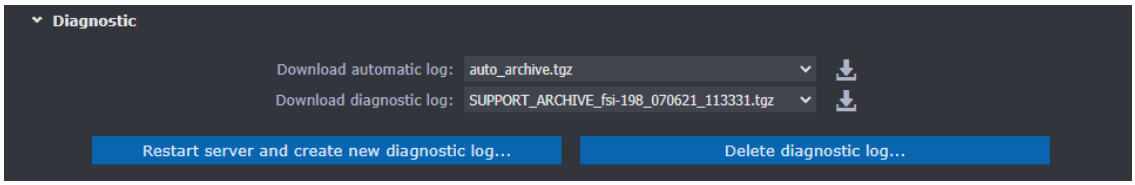
This section is obsolete and no longer used to configure licenses. Go to the System tab for license management.

Database

The following table describes the fields used on the Database section.

Field	Description
Database	**Clear DB** - delete and rebuild a database. **Repair DB** - repair a broken database. *Clean/Repair DB options will clean any smart events and watch folder parameters if they exist.*

Diagnostic

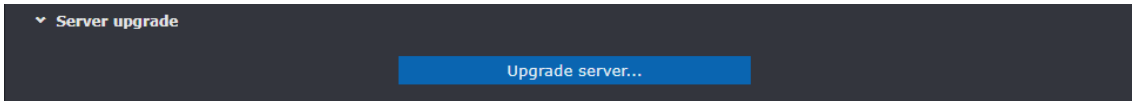


The following table describes the fields used on the Diagnostic section.

Field	Description
Diagnostic	**Download Diagnostics Log** - download the diagnostics log. This log contains data on the current system status. **Download Automatic Log** - download the automatic log. This log is created automatically if a crash occurs.

Starting with v2019.12, the vsLogs have been moved from /data/VS/bin/ to the /data/VS/logs/ folder.

Server Upgrade



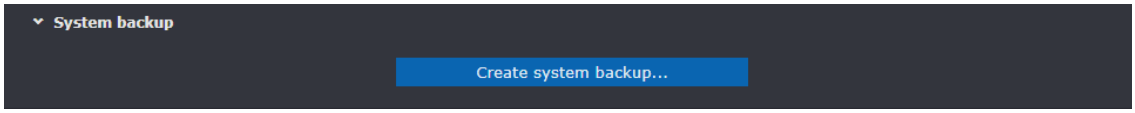
The following table describes the fields used on the Server Upgrade section.

Field	Description
Server Upgrade	Perform an upgrade of the server. *Your current settings will be preserved.*

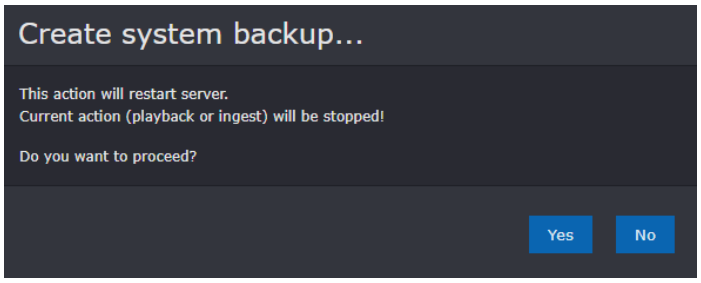
System Backup

In the System Backup section you can perform a backup of FastServe | Ingest configuration files:

Press on the **Create System Backup** button to initialize the backup process.



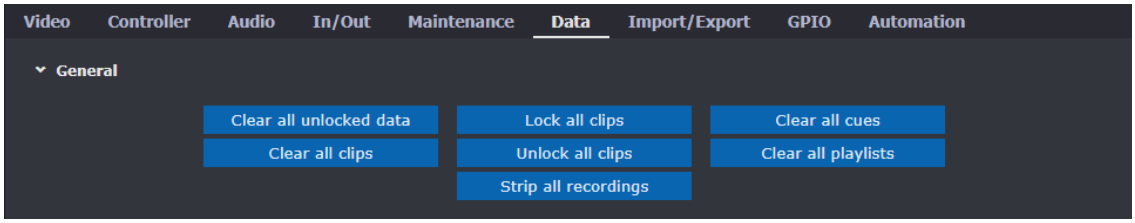
In the Create System Backup dialog window, press Yes to confirm the backup creation.



The Data Settings

The Data section provides the possibility to lock/unlock clips, clear all playlists, set the recording mode, etc.

General

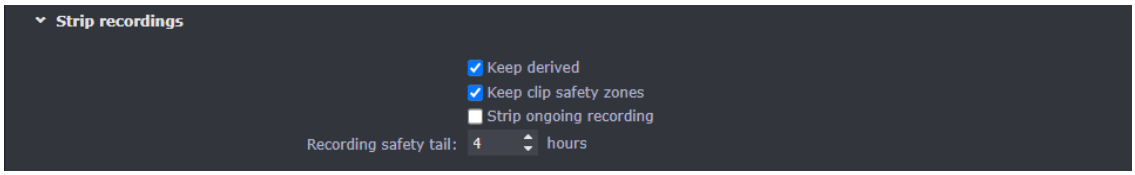


The following table describes the fields used on the General section.

Field	Description
Clear all unlocked data	Delete all unlocked cues, clips, and playlists.
Lock all clips	Lock all clips to protect them from deletion.
Clear all cues	Delete all cues.
Clear all clips	Delete all unlocked clips (that are not used in a playlist).
Unlock all clips	Unlock all clips to allow them to be deleted.
Clear all playlists	Delete all playlists.
Strip all recordings	This option allows you to delete the whole recorded footage while preserving all clips that you have marked, freeing additional storage space.

Strip Recordings

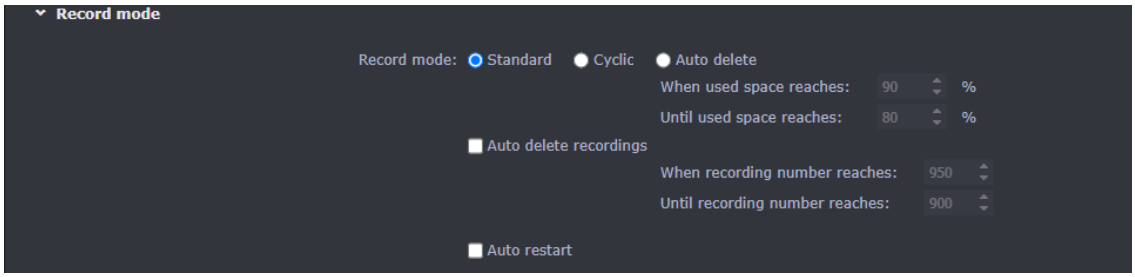
The Strip recordings section is obsolete and no longer supported.



The following table describes the fields used on the Strip Recordings section.

Field	Description
Strip Recordings	Set the following strip recording options: **Keep Derived** - enable to save the master clip and all of its derived angles. Disable to save the master clip only. **Keep Safety Clip Zone** - enable to save the clip's safety zone. Disable to discard the safety zone. **Strip Ongoing Recording** - enable or disable stripping of an ongoing recording. **Recording Safety Tail** - define the number of hours from the end of the recording that is not stripped.

Record Mode



Values presented on the image above are recommended for optimal FastServe | Ingest performance.

The following table describes the fields used on the Record mode section.

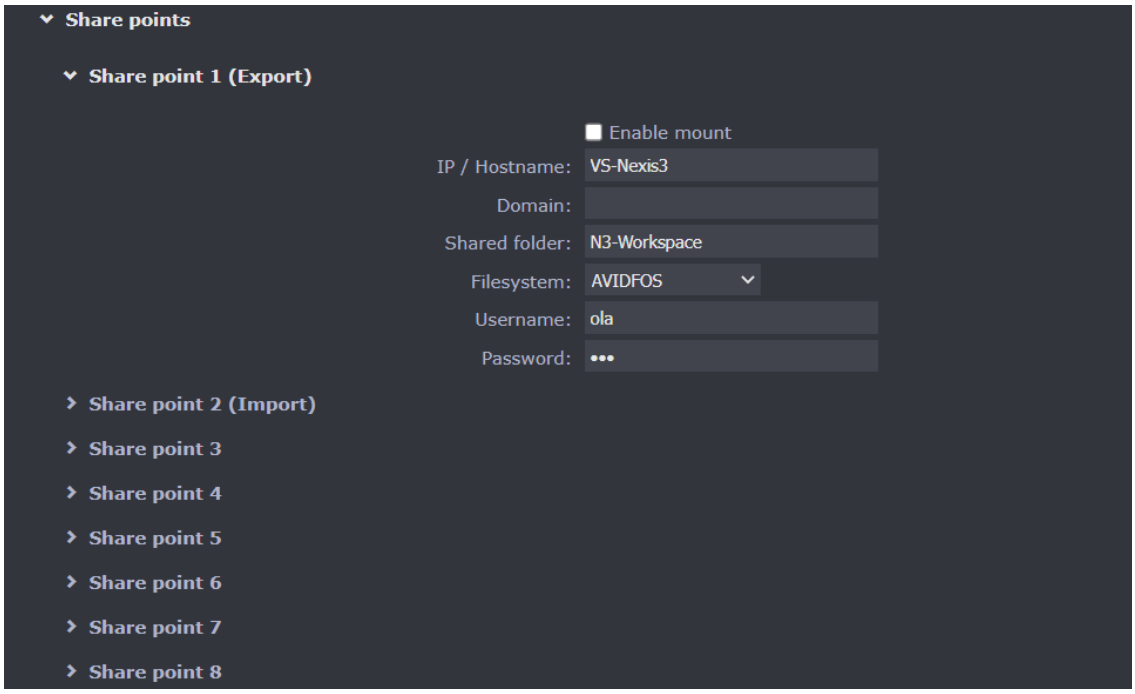
Field	Description
Record Mode	Set what happens when there is no empty disk space for recording; **Standard recording** - the recording is stopped. Remaining recording time indication in the OSD blinks if the remaining recording time is less than 30 minutes. **Cyclic recording** - the server overwrites the earliest possible materials. Every few minutes, chunks of oldest data are being removed to free space for new data. Areas in previous recordings which are within any of the saved clip boundaries are protected and will not be overwritten. **Auto delete** - To prevent the server from reaching its full capacity, the Auto delete function will delete the oldest recordings on the server, according to the parameters set below. If you want to delete the oldest recordings on the server, select the Auto delete check box, and then type a value to indicate the threshold (as a percentage) of when deletion should begin and end. Options are: • When used space reaches - Type a value in this field to indicate a threshold (server capacity in %) where the server should start deleting recordings. • Until used space reaches - Type a value in this field to indicate the threshold where the server should stop deleting recordings. *Auto delete is a standalone recording mode and cannot be combined with cyclic or standard recording modes.*
Auto delete recordings	To prevent the server from reaching a defined limit of recordings (1000 recordings is the maximum allowed), enable this option so the server can start deleting oldest recordings, according to the parameters set below. Type a value to indicate the threshold of when deletion of recordings should begin and end. Options are: • When recordings number reaches - Type a value in this field to indicate the threshold (number of recordings) where the server should start deleting recordings. • Until recordings number reaches - Type a value in this field to indicate the threshold (number of recordings) where the server should stop deleting recordings. *Unlike the Auto delete mode, the auto delete recordings option can be used in conjunction with all 3 recording modes.*
Auto restart	When auto restart is OFF, after 24 hours, the server automatically stops recording. (Recording must be restarted manually.) When auto restart is ON, after 24 hours of recording, the server stops the current recording and will start a new recording.

The Import/ Export Settings

The Import/Export section allows to define share points details, and Interplay settings in case automatic check-in to Interplay is enabled. Here, you can specify the import destination, WatchFolder configuration.You can configure up to 8 Share points.

This section is relevant to legacy FastServe | Ingest configurations. Make sure that your NEXIS workspaces are properly mounted as described in the The Mounts Settings section of the FastServe | Ingest Web Configurator. The only exception is the usage of VDCP controller to trigger ingest. In this case, when only VDCP is used as a controlling protocol, you can use the Share points section.

Share Points



The following table describes the fields used on the Share point 1 (Export) section.

Field	Description
Enable mount	Enable connecting to the shared directory's export folder.
IP/ Hostname	Enter the remote computer IP address where the shared directory Export folder is located.
Domain	Enter the domain name, when there is a domain name in use.
Shared Folder	Enter the name of the shared directory for exporting clips. A folder with this name must exist on the remote computer with permissions for the relevant user name.
Filesystem	Set the communication protocol to use when retrieving clips from the shared directory (Avid FOS, CIFS, SMBFS, NFS).

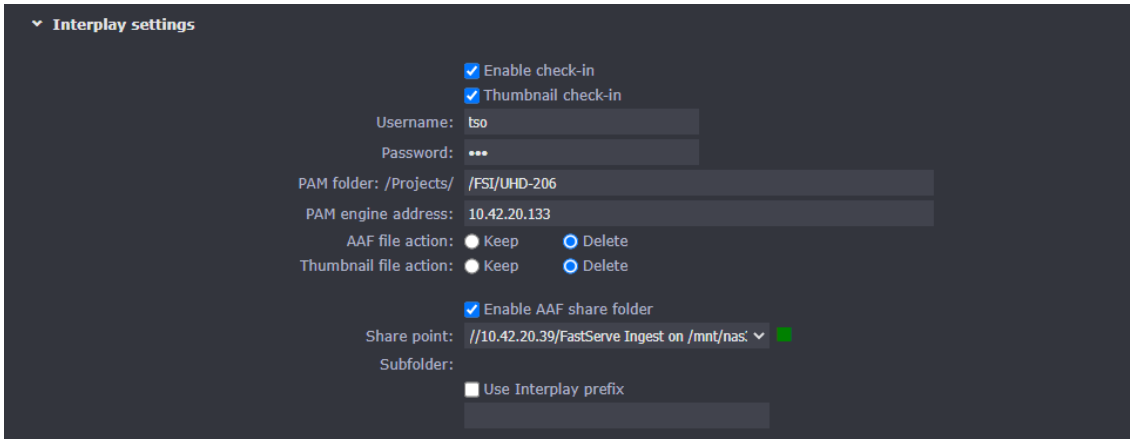
Field	Description
Username	Enter the user name for accessing the shared directory.
Password	Enter the password for accessing the shared directory.

The Share Point 2 (Import) section is not applicable to FastServe | Ingest workflows.

Interplay Settings

Checking Into Interplay

In the v2019.12 release, we introduced the JXDK method of checking clips into Interplay which replaces the previous method which employed the Interplay WebServices.

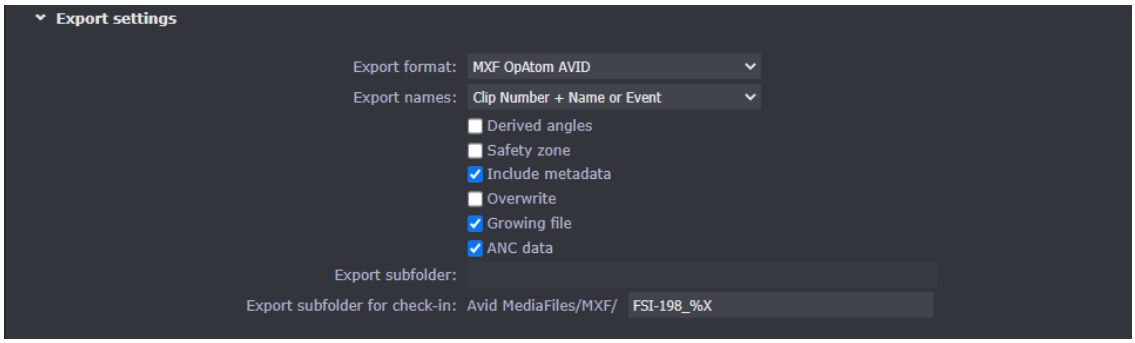


The following table describes the fields used on the Interplay Settings section.

Field	Description
Enable check-in	Enable or disable clip registration in Interplay | Production Management. *This option is mandatory when you plan to use the FastServe | Ingest and MediaCentral | Capture workflow!*
Username / Password	Enter the user name and password to log into Interplay | Production Management.
PAM Folder	Enter the name of the folder in Interplay | Production Management to import the checked files. Make sure that this folder already exists in the Interplay structure. *This folder will be a sub-folder within the **Projects** folder. For example, entering '/FSI/Capture' here will place the checked-in assets inside '/Projects/FSI/Capture'.*
PAM Engine Address	Enter the IP address of the Interplay | Production Management Engine.

Field	Description
AAF File Action	After the check-in to Interplay | Production Management, the AAF file can be deleted to prevent overloading of files in the share folder, or it can be kept for an additional use.
Thumbnail File Action	After check-in to Interplay | Production Management, thumbnails can be deleted to prevent overloading of files in the share folder, or they can be kept for an additional use. *The thumbnail file will be located in the same place as the exported file.*
Enable AAF Share Folder	Select a location on the mounted storage where the AAF files and their thumbnails should be stored.
Subfolder	Set up a shared folder where the AAF files should be stored. Enabling the 'Use Interplay prefix" option automatically adds the **Avid MediaFiles/MXF** prefix to the path.

Export Settings



The following table describes the fields used on the Export Settings section.

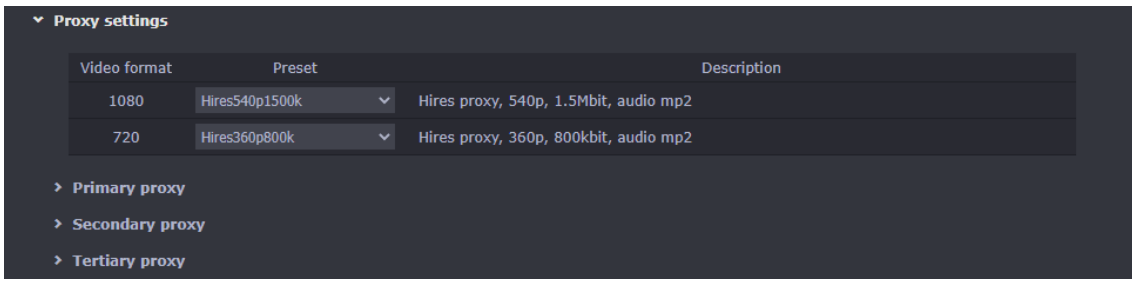
Field	Description
Export format	Select the export format. *Export of MXF RDD9 is not supported.*
Export names	Set the naming options for the exported clips.
Derived angles	Enable the export of all selected derived angles (clips) when exporting a clip to the shared directory, or disable this option to export the master clip only. *This option is obsolete.*
Safety zone	Enable this option to export safety zones when exporting a clip to the shared directory, or disable this option to export the clip only. *This option is obsolete.*

Field	Description
Include metadata	Enable to export clips with all metadata, or disable to export clips without metadata. *This option is obsolete.*
Overwrite	Enable to overwrite clips of the same name, or disable to save a new clip with the same name.
Enable growing files	Enable or disable the option to register clips in Interplay | Production Management or to load them to Media Composer directly after the start of the export.
ANC data	Enable or disable the possibility of exporting ANC data along with the clip.
Export subfolder	Enter the name of the shared directory subfolder for exporting clips
Export subfolder for check-in	Enter the path when check in to Interplay is required.

Proxy Settings

This section allows to select the required options for Proxy records.

This section is only visible when an XDCAM, XAVC-I or AVC-I codec is selected in the The Video Settings.



For each **Video format**, you can select between two presets:

- 1080:
  - Proxy270p800k (AirSpeed Compatible Proxy)
  - Hires540p1500k (Hires Proxy)
  - Hires540p3000 - a high-resolution proxy 540p and 3Mbit, audio mp2

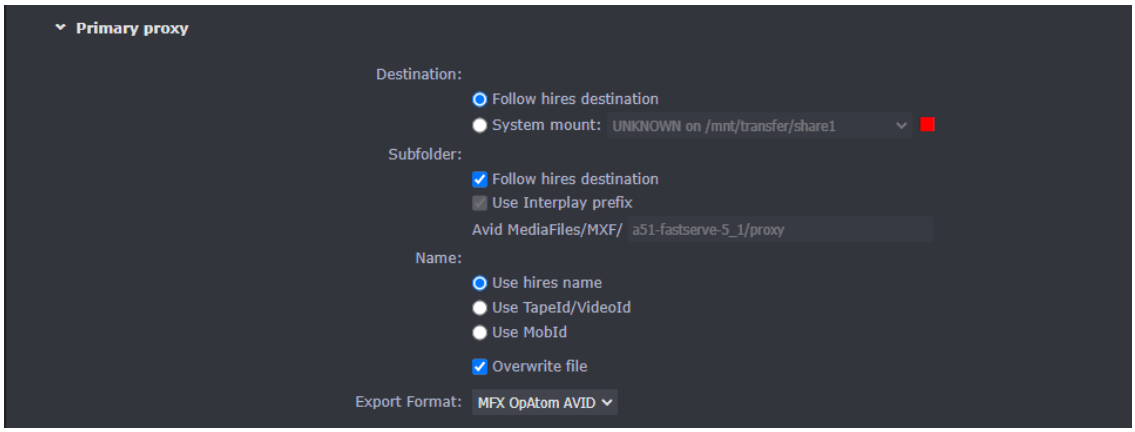
The Hires540p3000 format is only available for the AVC-i and XAVC-I workflows.

- 720:
  - Proxy180p800k (AirSpeed Compatible Proxy)
  - Hires360p800k (Hires Proxy)

Switching between presets and saving the current settings will cause the Proxy application to be restarted, which can be useful when unexpected issues with the application are encoutered. Using the Restart OVS button does not restart the Proxy application, only the complete Reboot OVS action will restart it.

Primary Proxy

The **Primary Proxy** section allows to configure the settings of the proxy files to be generated next to the NetStream ones.



Field	Description
Destination	Set the mounted share location for proxy. Selecting **Follow hires destination** will result in proxy landing in the same share as the NetStream. You can also select one of the NEXIS mounts and workspaces (defined in the System tab) from the **System mount** drop-down list.
Subfolder	Choose the specific location for proxy. Select **Follow hires destination** to have the entire information about the subfolder taken from the Netstream (high res) settings. If “Destination” and “Subfolder” are set to “Follow hires destination”, the proxy files will appear in the same destination as high resolution NetStream. You can also enable the **Use Interplay Prefix** option to add “Avid MediaFiles/MXF” before the subfolder field. The subfolder information can be entered manually.
Name	Define the naming pattern of the exported proxy: • **Use hires name** - proxy will have the same name as the high resolution NetStream. • **Use TaperId/VideoId** - proxy will use the appropriate ID assigned to the NetStream. • **Use MobId** - take MobId as the file name.
Export format	Select of the available proxy patterns.Check the ReadMe to verify which patterns are certified for which codecs.

Secondary Proxy

The **Secondary Proxy** section allows you to configure the settings of second proxy files which will be generated at the selected NEXIS workspace (**System mount**). Currently, it is impossible to check-in Secondary Proxy together with Primary Proxy files into one Production Management system (Interplay PAM). For Secondary Proxy OpAtom NetStreams, NEXIS storage is certified.

Secondary Proxy is supported only for XDCAM and AVC-I codecs.

Activate the Secondary Proxy by checking the **Enable** box. Configure the required settings as described in the Primary Proxy table.

*To see the Secondary Proxy tab, a separate license **23 - DPX (Dual Proxy)** is required.*

Tertiary Proxy

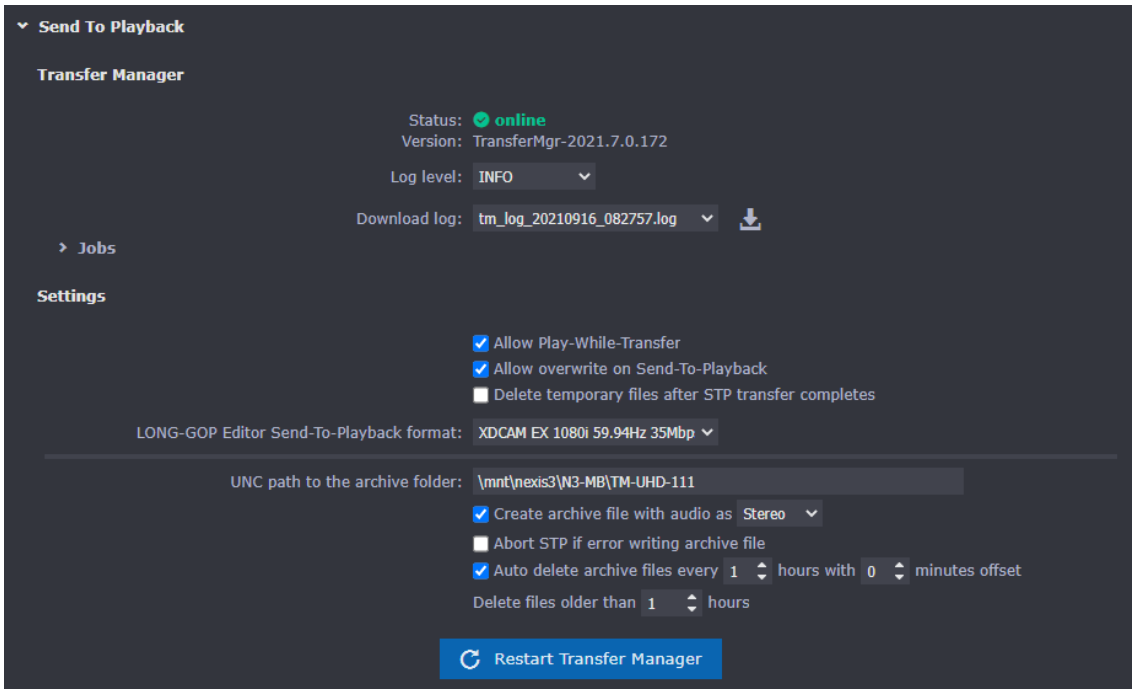
The **Tertiary Proxy** section allows you to configure the settings of third proxy files which will be generated at the selected **System mount**. For tertiary proxy - Op1A export to CIFS storage is certified. Configure the required settings as described in the Primary Proxy table.

Tertiary Proxy is supported only for XDCAM and AVC-I codecs.

*To see the Tertiary Proxy tab, a separate license **24 - TPX (Triple Proxy)** is required.*

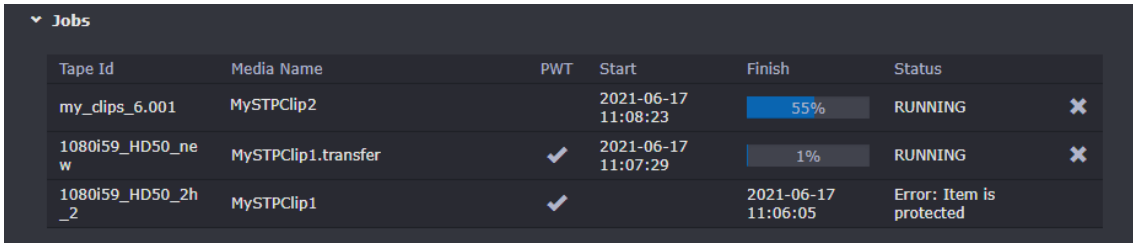
The Send to Playback Settings

This section allows to set up the “Send-to-Playback” functionality and the FastServeTM (FastServe Transfer Manager) configuration file.



The following table describes the fields used in the Send to Playback section:

Field	Description
	Transfer Manager
Log level	Set the level of logging for the Transfer Manager. The most detailed log level is FINEST, and the least detailed is SEVERE. The log is located here: /data/FastServeTM/logs/.
Download log	Select which file you want to download and press on .
	Jobs



This section shows the transfer progress of STP jobs. You can monitor the progress of all tasks, monitor errors (e.g. when a clip is protected and cannot be overwritten) or cancel jobs here.

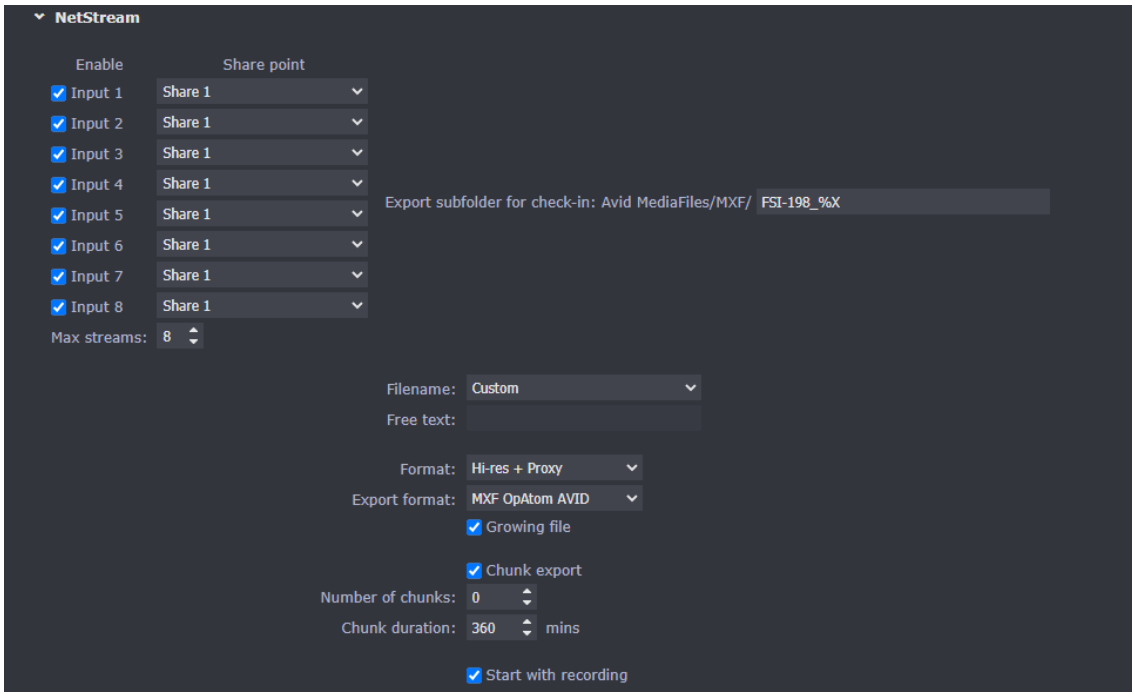
	Settings
Allow Play-while-Transfer	This option is sometimes referred to as PWT and it is also available in Media Composer. Enable this option to play the clip while it is still being transferred. *Make sure that the controller supports the PWT functionality. To support it, the controlling application must send the PlayInit command without an OUT point or DURATION parameters. Then, when the playout reaches temporary end-of-file, pressing PLAY will continue playing the clip. Temporary end-of-file may be reached if the rendering process is slower than the playout speed.*
Allow overwrite on Send-to-Playback	Enable this option to control the overwrite behavior. When this option is disabled, it will not be possible to overwrite a clip that exists on the Fastserve | Ingest server even when the “overwrite” flag in the send-to-playback dialog of the editor is selected. This is to prevent unexpected or unauthorized overwriting of assets on the server. If this is attempted, the transfer will fail with an error saying “Error: item already exists”.
Delete temporary files after STP transfer completes	Select this option to delete temporary files after the Send-to-Playback transfer is completed. Enabling this option can prevent overloading of temporary files storage.
LONG-GOP Editor Send-to-Playback format	Choose the format from the drop-down list which contains all formats currently supported by the Send-to-Playback functionality. This setting must match the Project settings in Media Composer. **Example**: if your Media Composer Project is set to 1080i59,94 then the preset in the Web Configurator must be of the same resolution and frame rate. *The format selected here must match the FastServe | IO recording format settings. The value of the “LONG-GOP Editor Send-to-Playback format” option does not automatically update and must be set in advance.*

Field	Description
	Archive Folder
UNC path to the archive folder	When an UNC path is entered in the text field, then an OP1a file for archiving will be generated along the STP incoming file. Example scenario: STP process is initiated from Media Composer. A TMF file is generated by MediaComposer in the Temp directory of Avid NEXIS. TransferManager installed on a FastServe | Ingest machine grabs the TMF file and starts to import it into the server. At the same time, the TransferManager creates an OP1a video clip which is a copy of the incoming STP, and stores it on an external NEXIS storage.
Create archive file with audio as	Select whether audio tracks in the OP1a archive file should be mono or stereo.
Abort STP if error writing archive file	If this option is selected and there is no valid UNC path for the archive OP1a file, then the incoming STP clip will be aborted.
Auto delete archive files every (X) hours with (Y) minutes offset	Enable automatic cleanup of OP1a archive files. Set the frequency of automatic file deletion.
Delete files older than (Z) hours	Set the time period, after which OP1a files will be removed.

NetStream

FastServe | Ingest can record all ingested feeds both on the server's internal storage and to an external storage device, simultaneously. The external stream is wrapped and transferred in real time to external storage, making it instantly available for post-production work.

In Proxy and Interplay workflows, FastServe | Ingest has an ability to export the second file with the smaller size to a NEXIS workspace and check in both files with dynamic relink. Dynamic relink is a feature that lets you select which media you want to use when you are working in a MultiRez environment. Typically, you use low-res media (Proxy file) for offline editing and high-res (NetStream file) media for a final master.



The following table describes the fields used on the NetStream section.

Field	Description
NetStream	In the NetStream section, you can define which recording channels should be streamed over the network to external storage, select export destination for ongoing recording, and their naming convention. *Choosing individual share point locations for input streams is no longer supported.* If the Interplay check-in is enabled, then only one subfolder can be added.
Max streams	Set the maximum number of streams that can be exported simultaneously.

Field	Description
Filename	Set the format of the naming convention for the recordings. Custom Rec name Rec name + Input Free text + Input Free text + Start TC + Input Start TC + Input If **Free text** is selected, enter the desired text in the Free text box. *If you want to send Netstream channels to different locations, a custom mode is required.*
Export format	Select the export format of the recording. When an XDCAM codec is selected in The Video Settings, you can select between two options: Hi-res Hi-res + Proxy For DNx codecs, the only option is Hi res.
Growing File	Enable this option to allow for simultaneous NetStream or export of clips that may be edited while they are still being captured. This option can be used only with the MFX OpAtom AVID export format.
Chunk export	Enable the chunk export functionality. Specify the **Number of chunks** and the **duration** of each chunk. *Chunk export is no longer supported.*
Start with recording	Enable this option to automatically start NetStream with recording on the selected inputs.

The Dual Export Settings

The Dual Export functionality allows the system to perform two parallel NetStreams to two different locations. For OPAtom Netstreams - NEXIS storage is certified. For OP1A dual export NetStream - CIFS storage is certified.

Dual Export is certified for XDCAM and AVC codecs only.

The following workflows are available:

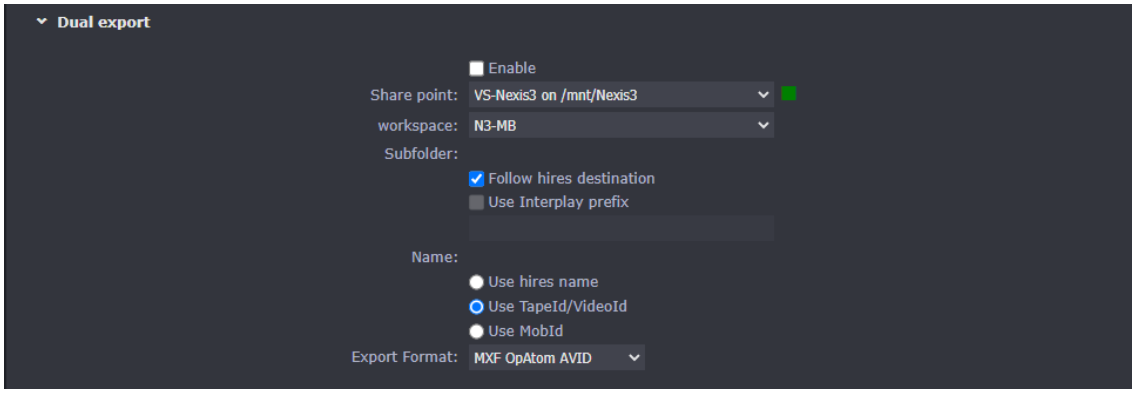
1. XDCAM ingest with active NetStream in OPAtom pattern and OPAtom proxy are checked-in to Interplay PAM. In parallel, the secondary NetStream (dual export) in OPAtom is sent to another NEXIS storage. This export is not checked-in to Interplay PAM and does not contain proxy.
2. XDCAM ingest with active NetStream in OPATom pattern and OPAtom proxy are checked-in to Interplay PAM. In parallel, the secondary NetStream (dual export) in OP1a is sent to a CIFS storage (e.g. for backup or OP1a workflows).
3. AVC ingest with active NetStream in OpAtom pattern and OpAtom primary proxy. This pair of files is being checked-in to Interplay PAM. In parallel, the secondary NetStream (dual export) in OpAtom is being sent to a second NEXIS storage. The last stream called the Tertiary proxy in OP1a is being sent to a selected CIFS storage (to be used for backup or OP1a workflows).

   For this workflow, make sure that the **Hires540p3000k** Video Format for Proxy is selected.

   Although, the NestStream and Primary proxy Workspace can be defined in Capture, you need to set up the secondary, tertiary and the Dual Export locations in the WebSetings. The additional files will be automatically generated when the **Enable** option is activated.

For this workflow, the minimum required version of the NEXIS Client driver is 2021.5.0.43.

*Depending on the mount settings, export to CIFS storage uses the FastServe | Ingest local memory. When exporting multiple channels of long recordings, it is recommended to disable the **Use local mounts option** in the CIFS mount settings.*

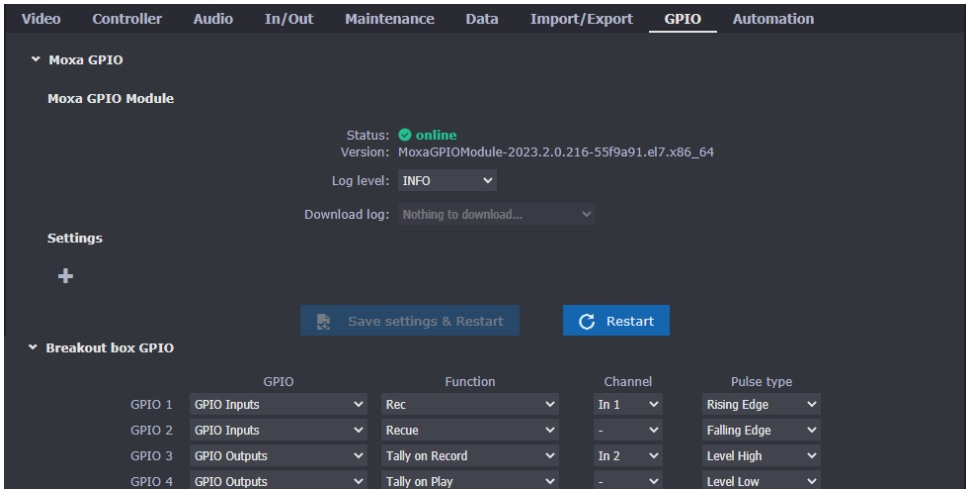


Field	Description
Enable	Enable or disable the dual export.
Sharepoint	Select the location for the dual export files from the list of available mounts.

Field	Description
Subfolder	Choose the specific location for dual export files. Select **Follow hires destination** to have the entire information about the subfolder taken from the Netstream settings. Enable the **Use Interplay Prefix** option to add “Avid MediaFiles/MXF” before the subfolder field. The subfolder information can be entered manually here.
Name	Define the naming pattern of the exported files: • **Use hires name** - dual export files will have the same name as the high resolution NetStream. • **Use TaperId/VideoId** - dual export files will use the appropriate ID assigned to the NetStream. • **Use MobId** - take MobId as the file name.
Export format	Select of the available dual export patterns. Check the ReadMe to verify which patterns are certified for which codecs.

The GPIO Settings

The GPIO page provides you with the basic controls you need to set up GPI inputs and outputs on the server. It also allows to add a GPI Moxa device and configure its behavior. You can define a function, assign a channel and a moment of triggering (pulse type).



The MOXA GPIO section is not automatically enabled in the Web Configurator!

To activate the Moxa GPIO module:

1. Install the Moxa GPIO module using the following commands:

   `rpm -Uvh /data/VS_INSTALLS/VS_FULL_CS7-2023.2.0.10031/MoxaGPIOModule-2022.6.0.190-dc6c42a.el7.x86_64.rpm` *(single line command)*

   `/data/WebSettings/modules/modOVS/stop-module.sh`

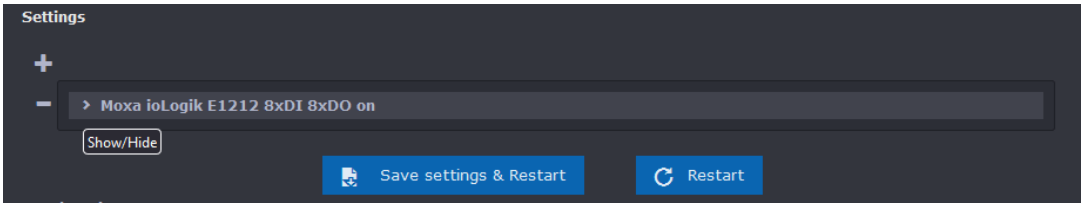
   `/data/WebSettings/modules/modOVS/start-module.sh`

2. The Moxa GPIO module now appears in the GPIO settings.

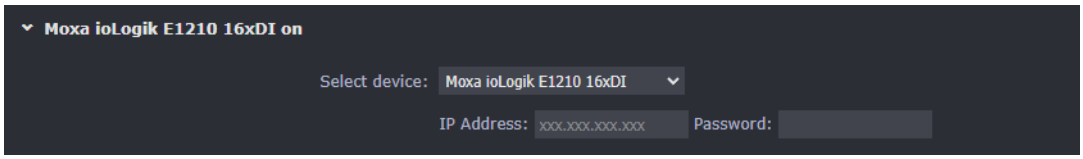
To configure a Moxa device:

1. In the Moxa GPIO Module, click on the + (*Add new item*) button in the Settings section.

   A new **Moxa ioLogik E1212 8xDI 8xDO on** section appears. Click on the Show/Hide (>) button to configure further options.



2. Select the required Moxa device. The following options are available:
   - Moxa ioLogik E1210 16 x DI
   - Moxa ioLogik E1211 16 x DO
   - Moxa ioLogik E1212 8xDI 8xDO
3. Enter the IP address of the Moxa device, and the password (if required).



4. Configure the required options:

GPI Options	GPO Options
Function:	**Function**:
• PAUSE	• TALLY ON PLAY
• CONTINUE	• TALLY ON EJECT
• EJECT	• TALLY ON REC
• ABORT	*When TALLY ON REC is selected, the **Channel** options automatically change from OUTs to INs.*
Channel:	**Channel**:
• OUT1 / OUT2 / OUT3 / OUT4	• OUT1 / OUT2 / OUT3 / OUT4
Pulse type:	**Active level**:
• Rising Edge (default)	• High
• Falling Edge	• Low

5. Once the configuration is complete, press the **Save settings & Restart** button.

Breakout box GPIO

You can also configure Breakout box GPIO options. Specify which GPIO pins are Inputs and which are Outputs. Then, specify the triggers in the **Function** column:

Inputs	Outputs
• - (Off) no triggers will work. • Rec - if no clip is specified in the channel, it initiates a crash record. However, if a clip is specified, it initiates a record in the channel. • Rec Stop - the record will be stopped. • Play - if a clip is loaded on the given channel, it initiates a playback. • Pause - if a clip is loaded on the given channel, it pauses the playback. • Recue - the currently loaded/playing clip will be recued to the headframe of that clip. • Eject - the currently loaded/playing clip will be ejected. • Goto In - go to a defined IN point in the currently loaded/playing clip. • Goto Out - go to a defined OUT point in the currently loaded/playing clip. • Goto Begin - go to the beginning of the currently loaded/playing clip. • Goto End - go to the end of the currently loaded/playing clip. • Next On Playlist - go to the next clip on the playlist. • Prev On Playlist - go to the previous clip on the playlist. • Next Clip - go to the next clip. • Prev Clip - go to the previous clip.	• - (Off) The specified tally will not light up. • Tally on Record - the tally light indicates that the server is recording a clip on the specified channel. • Tally on Play - the tally light indicates that the server is currently playing a clip on the specified channel.

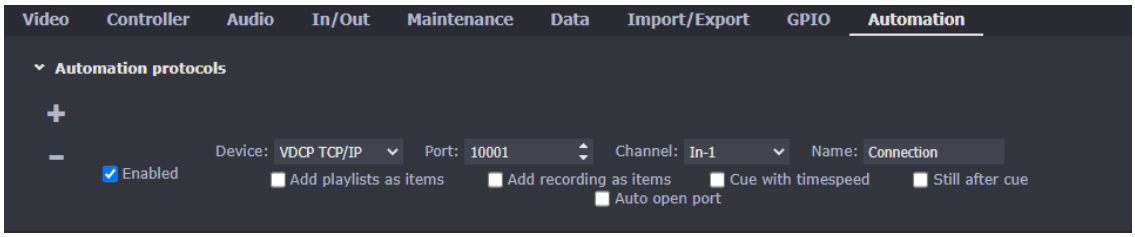
Finally, select the **Pulse** type for the specified action (Rising/Falling Edge, Level Low/High).

The Automation Settings

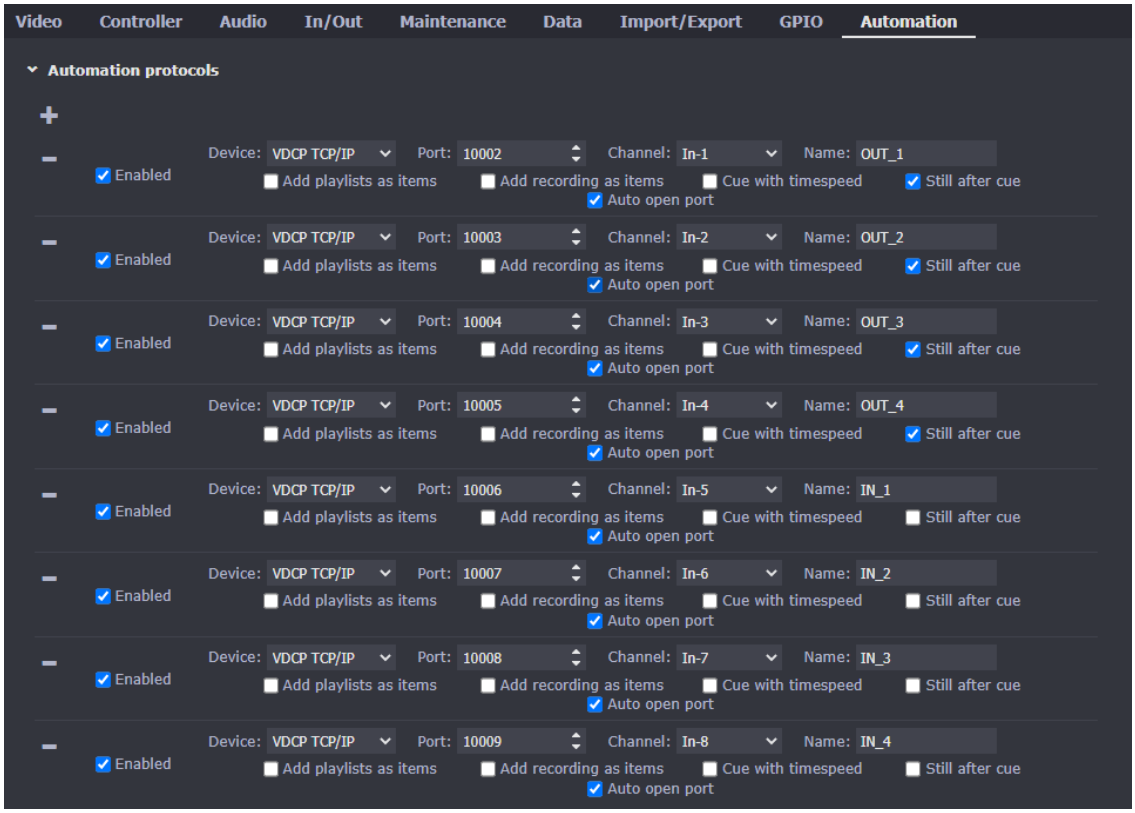
The Automation section allows to define and configure automation protocols like the VDCP, or specify the connection type (e.g. over serial or tcp/ip interface, port, etc.). You can also enable the MCUX Service here, which is required for MediaCentral | Acquire workflows.

We do not recommend to use ports: 10001, 10004 and 10011 as they may be used by the VSCommander component.

1. You can set up one VDCP connection and control channels by sending commands to the configured ports, as shown below.



2. Or, you can configure separate ports per channel:



In FastServe | IO workflows, check which channel is IN and which is OUT when setting up VDCP.

After applying any changes to the Automation tab, reboot of the OVSCommander component is required. Use the 'Reboot OVS' button in the Web Configurator, or the following commands from a SSH client:

```
/data/VS/bin/set_run -s all

/data/VS/bin/set_run -a all
```

VDCP Auto Still Delay and Disconnect Inactive TCP Port Features

You can set a time delay (in milliseconds) since executing Cue until the first still frame appears at the channel. Open the `/data/VS/bin/OVSCommander/bin/commander.xml` file, enable the **VDCP.auto-still-delay** feature and set the required **Delay**.

```
<Log Debug="No" DebugLevel="0" WriteInBackground="Yes">
    <Std Out="commander.log" Err="commander.log"/>
    <OCIP File="OCIP.log"/>
    <DebugModule SQL="No" OCIP="No" RETalk="No" Flex="No" TimeDelay="No"/>
</Log>

<ToggleSettings>
    <Feature Name="VDCP.new-port-addressing" Enabled="Yes"/>
    <Feature Name="OCIP.convert-progressive-timecodes" Enabled="No"/>
    <Feature Name="VDCP.disconnect-inactive-tcp-port" Enabled="Yes">
        <Timeout Hours="1" Minutes="0"/>
    </Feature>
    <Feature Name="VDCP.auto-still-delay" Enabled="Yes">
        <Delay Milliseconds="100"/>
    </Feature>
</ToggleSettings>
```

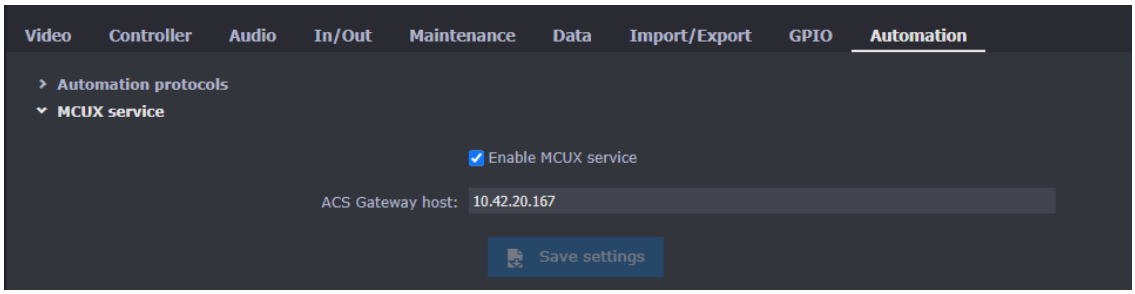
You can also set up the VDCP client to automatically disconnect after a specified time of inactivity. Open the `/data/VS/bin/OVSCommander/bin/commander.xml` file, enable the **VDCP.disconnect-inactive-tcp-port** feature and set the required **Timeout** period.

```
<Log Debug="No" DebugLevel="0" WriteInBackground="Yes">
    <Std Out="commander.log" Err="commander.log"/>
    <OCIP File="OCIP.log"/>
    <DebugModule SQL="No" OCIP="No" RETalk="No" Flex="No" TimeDelay="No"/>
</Log>

<ToggleSettings>
    <Feature Name="VDCP.new-port-addressing" Enabled="Yes"/>
    <Feature Name="OCIP.convert-progressive-timecodes" Enabled="No"/>
    <Feature Name="VDCP.disconnect-inactive-tcp-port" Enabled="Yes">
        <Timeout Hours="1" Minutes="0"/>
    </Feature>
    <Feature Name="VDCP.auto-still-delay" Enabled="Yes">
        <Delay Milliseconds="100"/>
    </Feature>
</ToggleSettings>
```

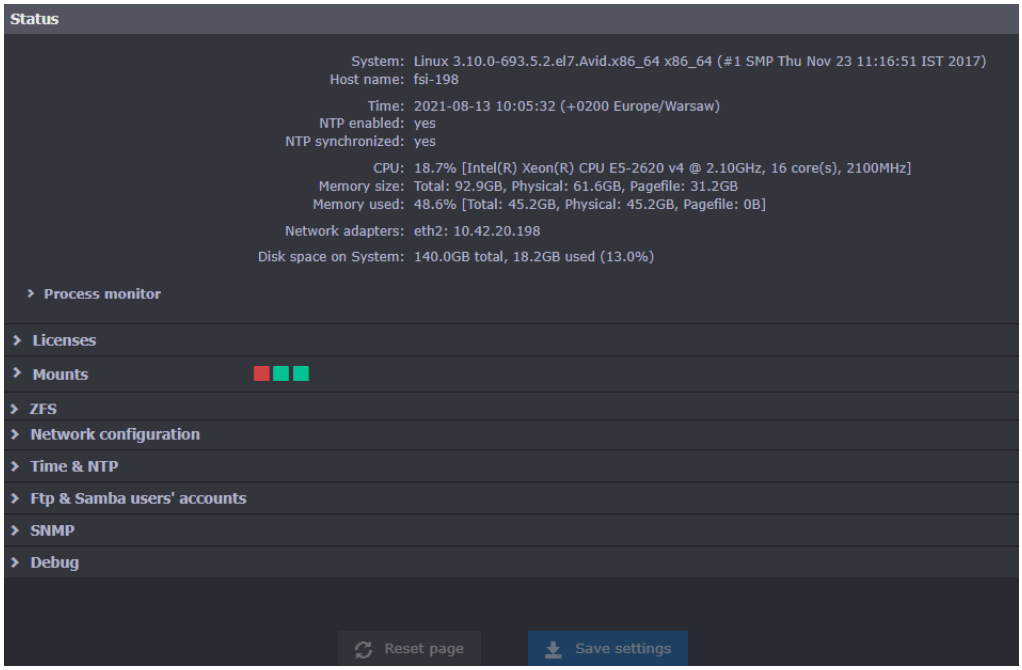
MCUX Service

The MCUX service needs to be activated, and a ACS Gateway host needs to be entered when MediaCentral | Acquire is used the controlling application.



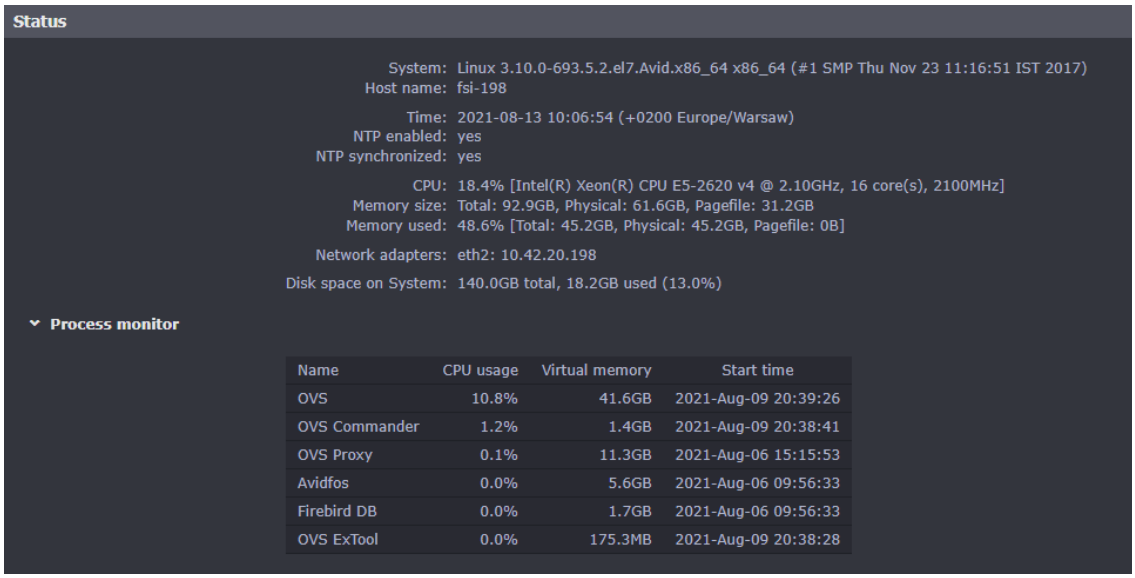
The System Page

The System page allows to monitor and define system options, that in many cases apply to the whole server's operating system. Here, the CPU/memory usage can be monitored, licenses applied and verified, NTP server defined, IP configuration completed, logs downloaded etc.



The Status Section

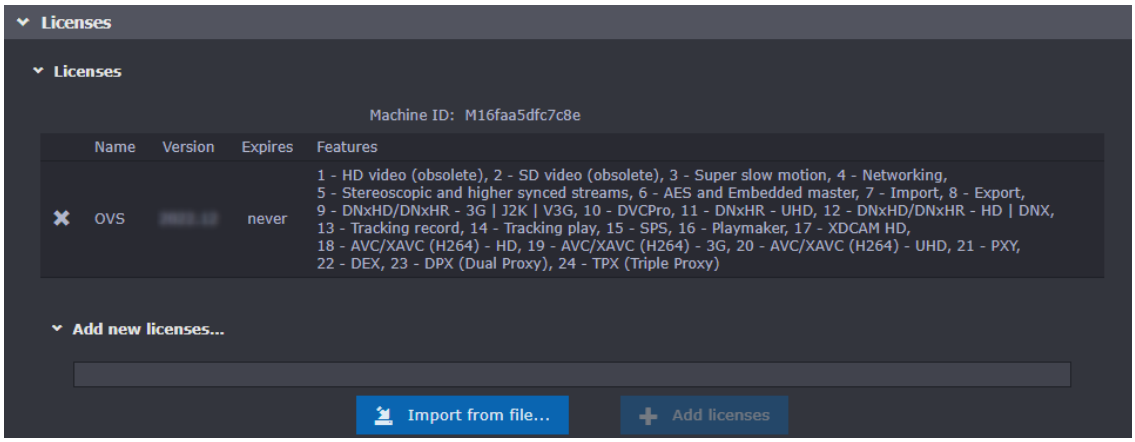
The Status section displays the system information.



Name	CPU usage	Virtual memory	Start time
OVS	10.8%	41.6GB	2021-Aug-09 20:39:26
OVS Commander	1.2%	1.4GB	2021-Aug-09 20:38:41
OVS Proxy	0.1%	11.3GB	2021-Aug-06 15:15:53
Avidfos	0.0%	5.6GB	2021-Aug-06 09:56:33
Firebird DB	0.0%	1.7GB	2021-Aug-06 09:56:33
OVS ExTool	0.0%	175.3MB	2021-Aug-09 20:38:28

The Licenses Settings

The Licenses section displays the currently installed licenses and their status. New licenses are displayed after they are installed. To add a new license, click on **Add new licenses** and select a license file from which to import data.

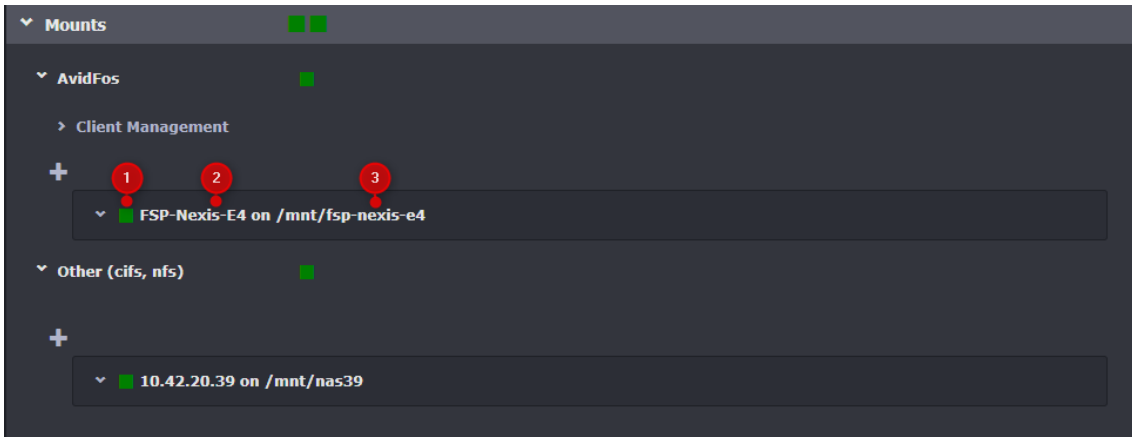


The Mounts Settings

The Mount section provides the options to add mount points to the FastServe | Ingest server.

Check if the configured mounts are working correctly after each reboot of the machine. If any of the mounts are not restored, mount them again to prevent export failures. It is recommended to have the AvidFos mount point set in the /mnt/ directory and called differently than the NEXIS hostname.

The Mounts section is split into two separate parts. One part refers to AvidFos mounts only, that is NEXIS mounts. The other one is dedicated to cifs and nfs mounts.

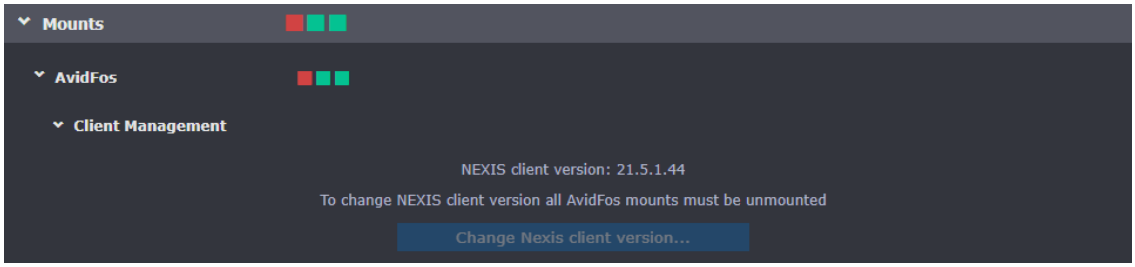


The status and host information about the mount are displayed in the following order:

1. Status of the mount: green (mounted), red (unmounted), yellow (errors),
2. Host name, usually the name of the NEXIS share,
3. Linux mount point (direct file system path to the mounted location).

Client Management

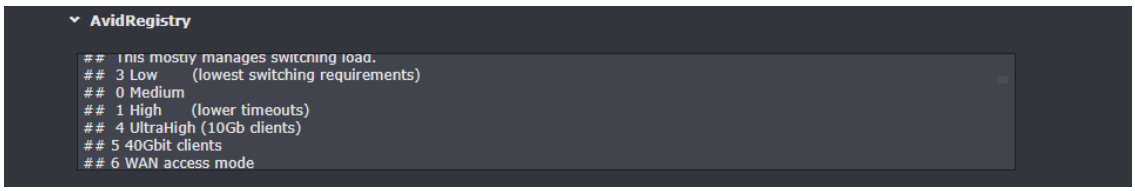
In the AvidFOS area, open the **Client Management** section to update the Avid NEXIS Client version directly from the FastServe | Ingest Web Configurator.



Make sure all AvidFOS shares are unmounted, and click on **Change Nexis client version**. In the next window, point to the NEXIS installer on your local storage and click **Next**.

Expand the **Client Management** section further to view and edit the content of the **AvidRegistry** file. You can define various parameters here, such as the default eth port used for NEXIS mounts.

Before performing an upgrade or downgrade, please backup the Avid Registry file (/etc/AvidRegistry). After upgrading or downgrading the Avid NEXIS Client, please verify if the Avid Registry file is correct or if it requires any adjustments



Adding Mounts

You can add multiple workspaces (AvidFos or Other) using the Mounts section.

To add a new AvidFos mount:

1. In the Mounts > AvidFos section, press the + button.

   A new section appears where you can define the details of your new mount.

2. Enter the parameters as described below. The Destination and Host fields are mandatory.

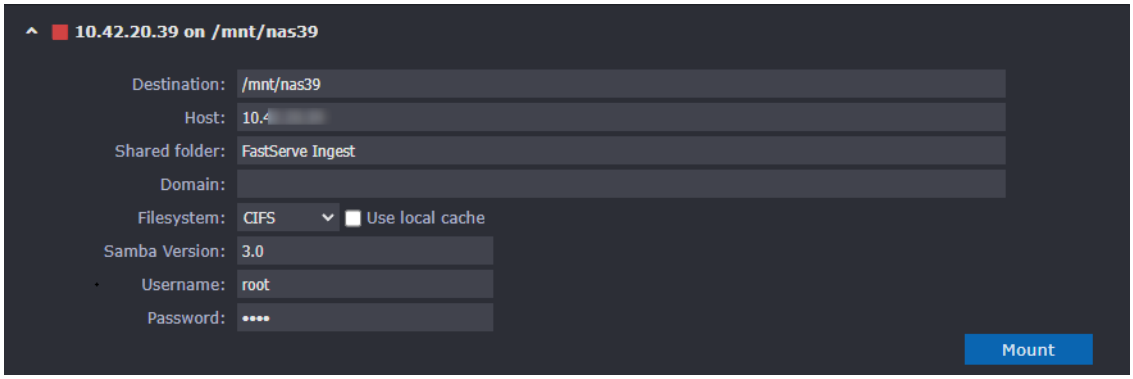
Field	Description
Destination	Enter the path under which the NEXIS will be visible from Linux. It can be /mnt/NexisSystemName or /Nexis.
Host	Enter the NEXIS host name.
Workspace	Specify the workspace from your Shared storage where the ingested media should be stored.
Domain	Enter the domain name, when there is a domain name in use.
Username	Enter the user name for the appropriate NEXIS share.
Password	Enter the password for the appropriate NEXIS share.

3. When all the required fields are entered, the **Save Settings** button becomes active. Press the **Save Settings** button to apply the new mount.

To add a new cifs or nfs mount:

1. In the Mounts > Other (cifs, nfs) section, press the button.

   A new section appears where you can define the details of your new mount.



2. Enter the parameters as described below. The Destination and Host fields are mandatory.

Field	Description
Destination	Enter the path under which the share will be visible from Linux.
Host	Enter the host name or IP address.
Shared Folder	Enter the name of the shared directory for exporting clips. A folder with this name must exist on the remote computer with permissions for the relevant user name.
Domain	Enter the domain name, when there is a domain name in use.
Filesystem	Select the file system type: CIFS or NFS.

Field	Description
Use local cache	When enabled, all exported files are stored in the FastServe | Ingest local cache memory until the export is complete. It is highly recommended to disable this option when planning to export multiple large files simultaneously, to avoid the risk of consuming the entire physical memory.

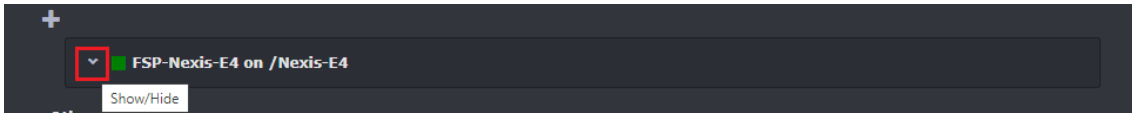
3. When the required fields are entered, the **Save Settings** button becomes active. Press the **Save Settings** button to apply the new mount.

Editing Mounts

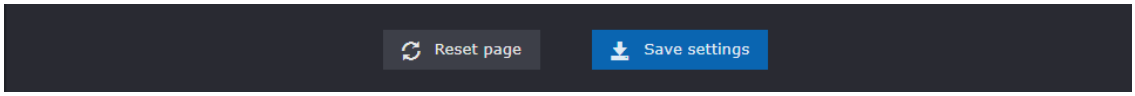
To edit the parameters of an existing and active mount, you need to unmount it first.

To edit an existing mount:

1. Select the mount for which you wish to change the parameters (change the login information, update the shared folder path) and show its details.

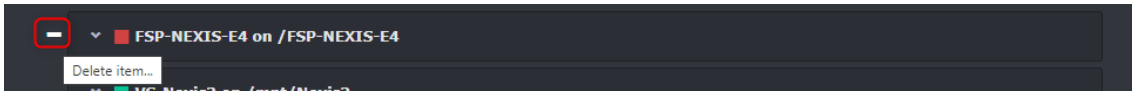


2. Press the **Unmount** button to enable editing.
3. Change the required parameters and press **Mount**.
4. Click on **Save Settings** at the bottom panel to save the configuration.



Removing Mounts

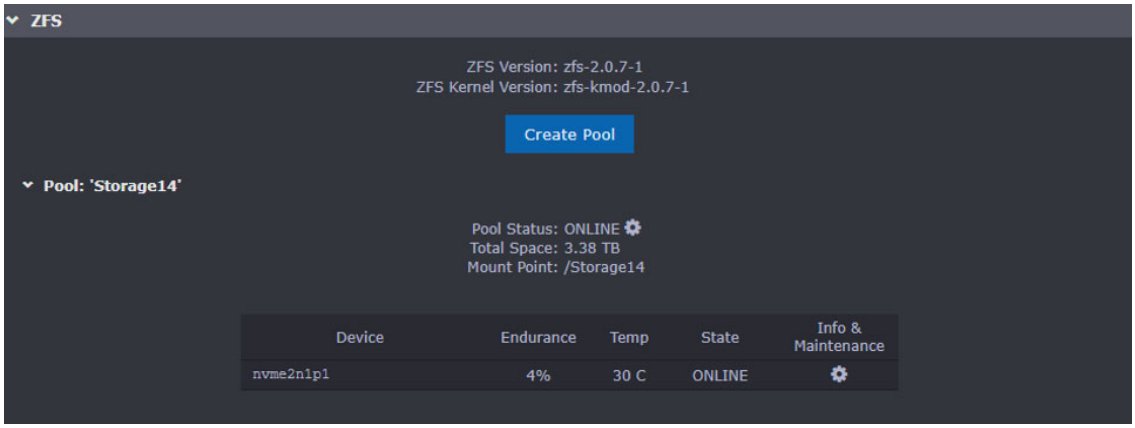
To remove a mount from the system, simply press on the - button and click on **Save Settings** to save the new system configuration.



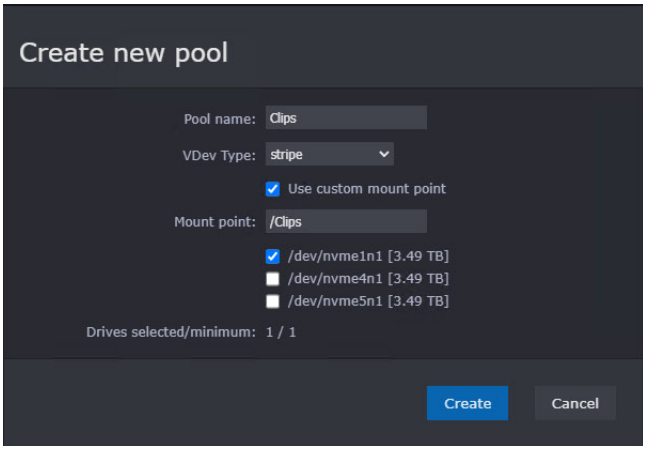
ZFS Settings

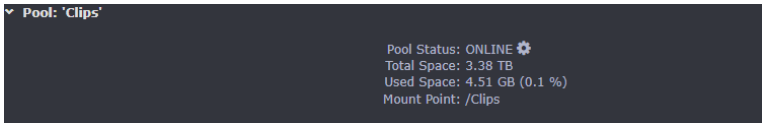
Options described in this section apply only to FastServe | Ingest UHDS2 Gen 2 machines.

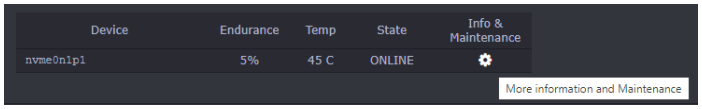
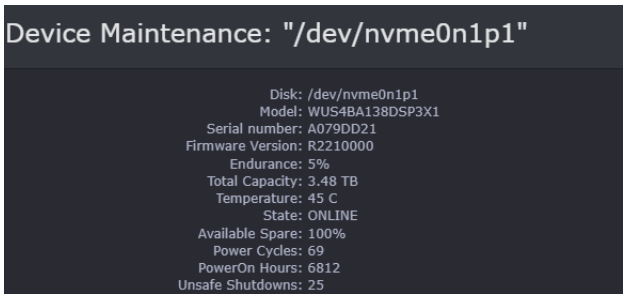
The second generation of FastServe | Ingest machines utilizes the ZFS file system for the media drive (RAID).



The following table describes the fields used on the ZFS section.

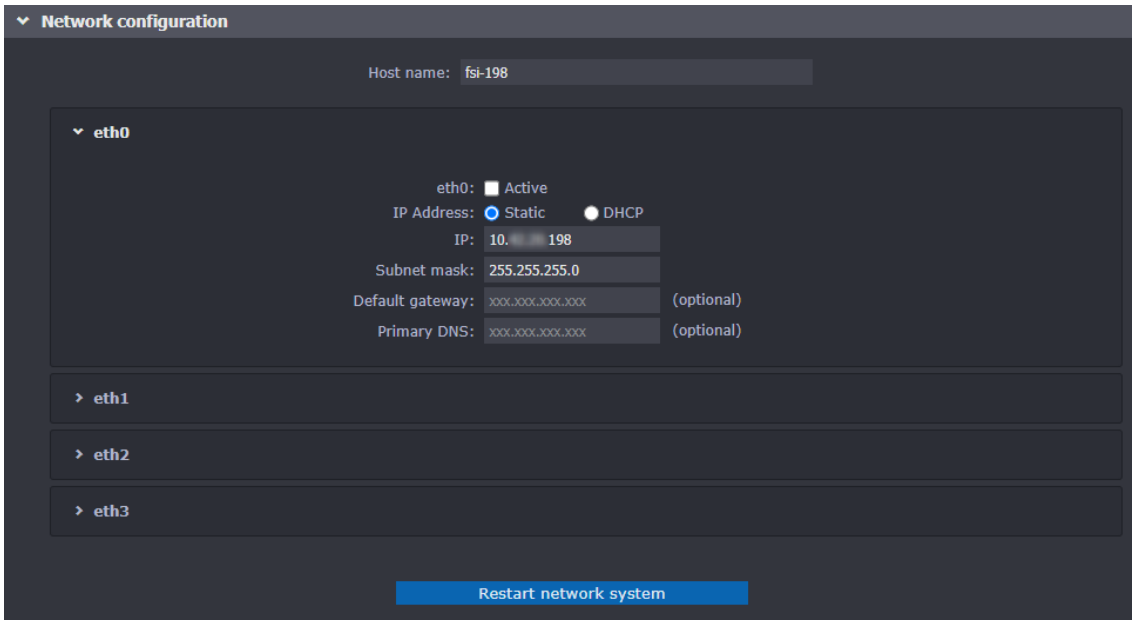
Field	Description
ZFS Version **ZFS Kernel Version**	This section displays the ZFS version and the ZFS Kernel information.
Create Pool	Create a new pool using the available drives. In the **Create new pool** dialog window, enter a name for the new pool and select the drives to be included. You can also type a custom mount point for the pool. 

Field	Description
Pools List	Once a pool is created, it has its own section in the ZFS settings.  You can view the status of the pool and other important information here. Clicking on the gear button next to the Pool Status label opens the **Pool Maintenance** dialog window. The following options are available: • **Scrub** - examine the integrity of data stored in the ZFS pool. For replicated virtual devices, ZFS automatically repairs errors. Pressing on the Scrub button brings up additional options: Start Scrub, Pause Active Scrub, Cancel Active Scrub. When the Scrub operation is started, the Pool Maintenance window closes and the status of the scan is shown in the main ZFS settings. • **Destroy** - dismantle the ZFS pool. This operation destroys all data stored in the pool. *For more information about ZFS pool maintenance, see the **Replacing ZFS Disks on FastServe | Ingest UHDS2 Server** topic in the Maintaining and Troubleshooting Your Server chapter of the **Avid FastServe | Ingest Setup Guide**.*

Field	Description
Media Drive	This section provides information about the given media drive.  Press on the gear icon in the Info & Maintenance column to open the Device Maintenance window, where detailed information about the drive is listed. 

The Network Configuration Settings

The Network Configuration section provides the options to set system network configuration, Hostname, IP, etc.



eth0 and eth1 are dedicated for 1GB ethernet connections, while eth2 and eth3 are used with 10GB networks. Using all four ports simultaneously is not permitted.

The following Ethernet configurations are available:

- Single 1Gb connection (eth0 or eth1 if IPMI is conFigured)
- 2x 1Gb connection
- 1Gb + 10Gb connection
- only 10Gb connection

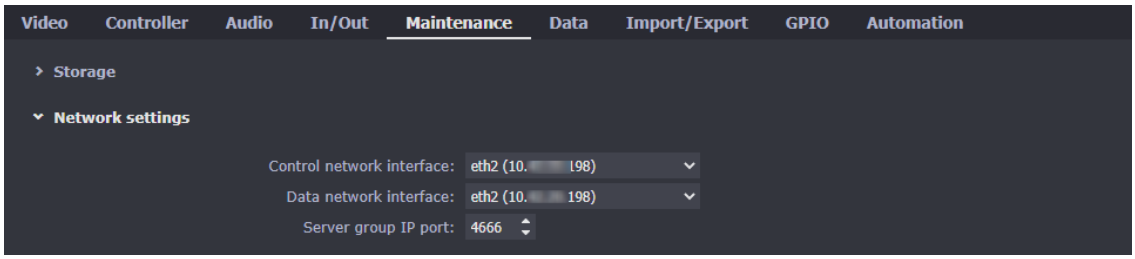
If IPMI is configured and used in the system, then:

- eth0 should be connected to a switch but remain INACTIVE in the Web Configurator,

- for a 1Gb connection (if needed), eth1 shall be used.

To select which eth connection is used for data interface and which is used for control network interface, go to **OVS > Maintenance > Network settings.** (See .)

*When deactivating an Ethernet interface, check which ports are selected in the **OVS > Maintenance > Network settings**, to avoid a situation where you disable an active port, used for example to connect to the Web Configurator.*

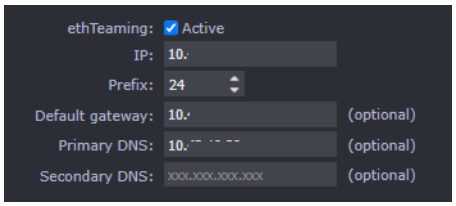


The Data network interface is used for communication with the NEXIS Client driver. After applying any change to this parameter, make sure to update the /etc/AvidRegistry file.

The gateway parameter is mandatory for NEXIS. Otherwise, the NEXIS client cannot find the NEXIS server by name. It needs to be the same gateway as the NEXIS server connected to it.

Dual 10Gigabit Network Redundancy

It is possible to set up 10 Gigabit network redundancy using the ethTeaming option. To activate the ethTeaming section, turn off both 10Gigabit (eth2 and eth3) adapters by disabling the Active check boxes next to them. Enable the ethTeaming ethernet port by selecting the Active check box. Assign an IP address to it and enter the remaining parameters of your network (Subnet mask, Default gateway, Primary DNS).



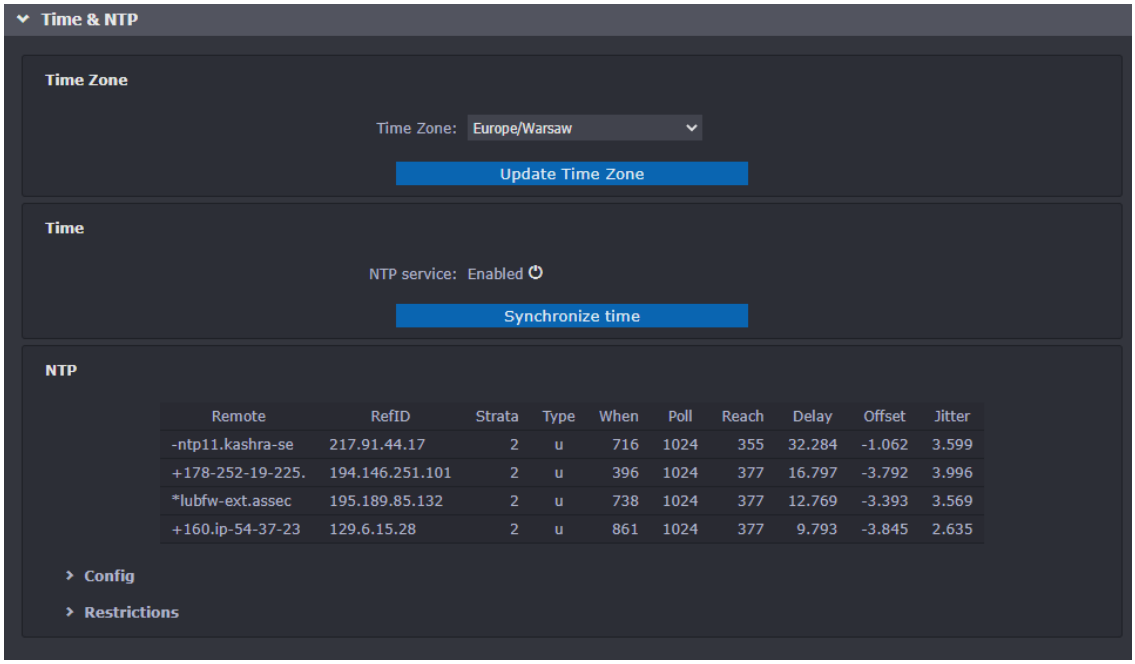
FastServe | Ingest utilizes the Linux “active-backup” bonding policy. The following parameters are used:

```
BONDING_OPTS="resend_igmp=1 use_carrier=0 miimon=100 fail_over_mac=1
primary_reselect=2 downdelay=0 mode=1”
```

After configuring the FastServe | Ingest network adapters in a redundancy mode, check if the network switches (to which these network adapters are connected) are correctly set up.

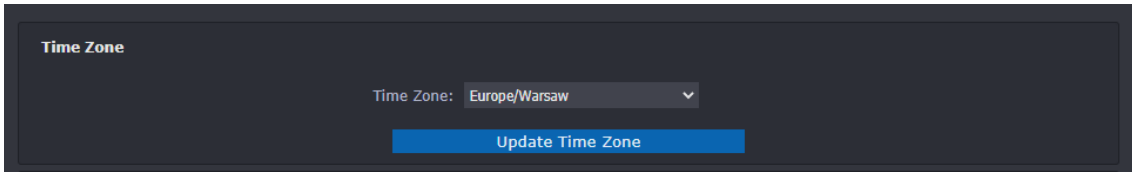
The Time & NTP Settings

This section provides the options to select the time zone in which the system clock will operate, manually set the date & time, and enable the Network Time Protocol service.



Time Zone

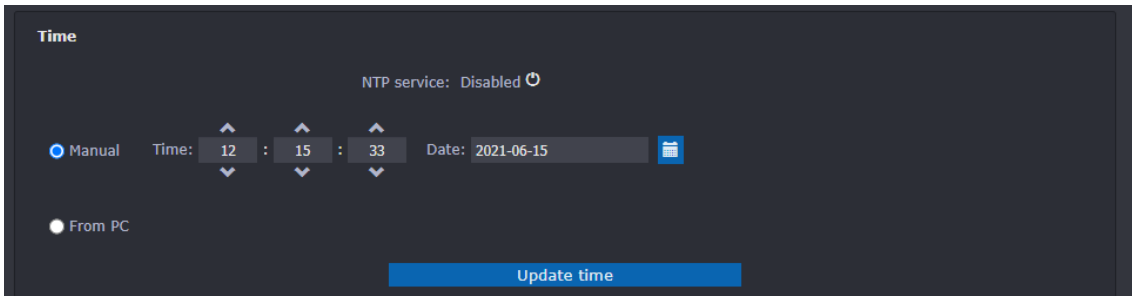
In the Time Zone section, you can select the required time zone for the system clock to operate. Afterwards, press the **Update Time Zone** button to apply the change.



Time

The Time section allows to enable or disable NTP. When NTP is disabled, you can change the system time in two different ways:

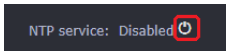
- set the date & time using the dedicated controls,
- or, synchronize the date & time settings with the PC where the Web Configurator is opened.

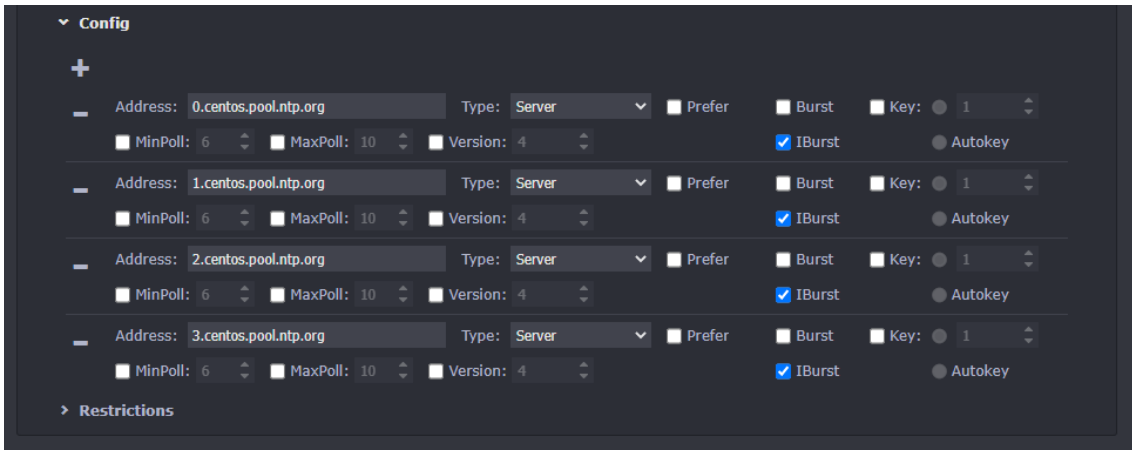


Click on **Update time** to apply the changes.

NTP

Enable the **NTP service** in the Time section by clicking on the **Change state** button, to view further configuration options in the NTP section.



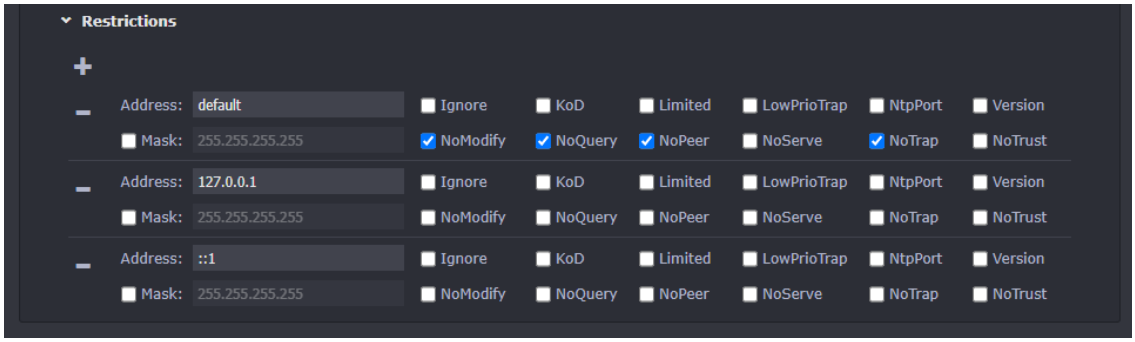


When a specific NTP provider is required, login to the Web Configurator using an account with administrative privileges.

The **Config** section contains a few predefined servers which can be removed or amended according to your requirements.

The parameters used in the default servers are common for NTP communication. Refer to the NTP documentation to find the most optimal configuration for your infrastructure.

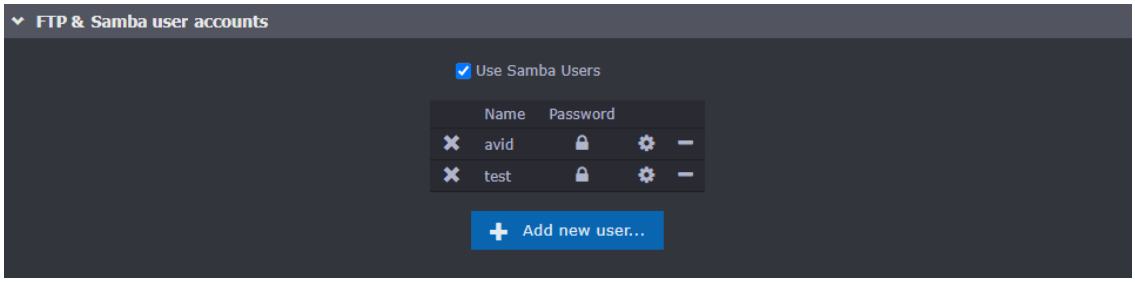
The **Restrictions** section allows to apply certain conditions to the defined servers.



FTP & Samba User Accounts

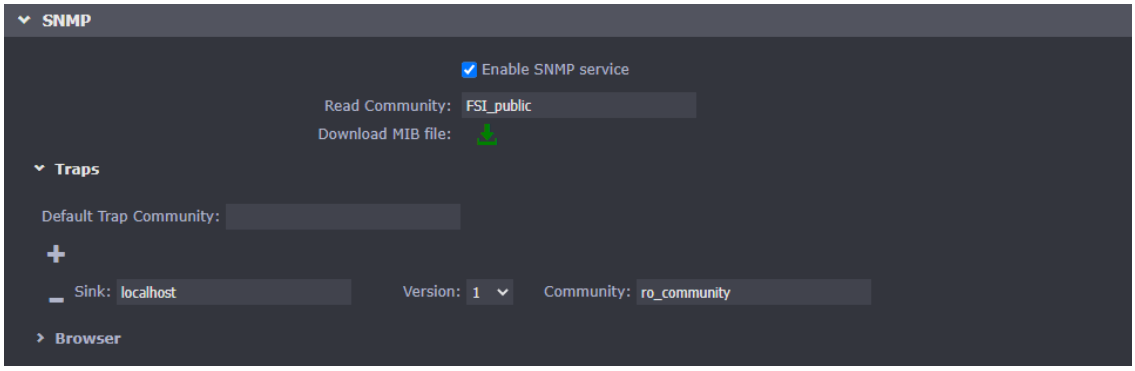
It is possible to access the FastServe | Ingest `/data/public` location via FTP or through a server with Samba installed. In the "FTP & Samba user accounts" section, you can secure that access by creating login credentials which will be required when to trying to access the server. Enable the **Use Samba Users** check box to protect access via Samba by asking for login details, which are created by clicking on the Add new user button. The same credentials will be used for FTP access.

FastServe | Ingest does not support file ingest over FTP.



SNMP Settings

SNMP (Simple Network Management Protocol) is a standard way of monitoring hardware and software. The SNMP section allows to define trap Sinks which will receive the system status information. You can also download a MIB file for external SNMP browsers.



Enable the SNMP service and set an SNMP Community String, which is sent along each SNMP Get-Request to get access to the device information. The default value is "public". For security reasons, it is recommended to change the value.

The Community string can contain the following characters: alphanumeric (a-zA-Z0-9) and these special characters: (./-:_?=@,&%$^!).*

Length of the Read Community string is limited to 31 characters and should contain at least 1 special character. The same rules are applied for formulating Traps Community strings, except that this field is not required and can be left empty.

FastServe | Ingest's default Trap Community is **ro_community** in **Version 1**. The SNMP Community and the Version number are the parameters used for SNMP authentication and permissions. To change access rights and permissions, a system administrator needs to modify the snmpd.conf file located in /usr/share/snmp.

For more information on SNMP authentication, refer to the net-snmp documentation.

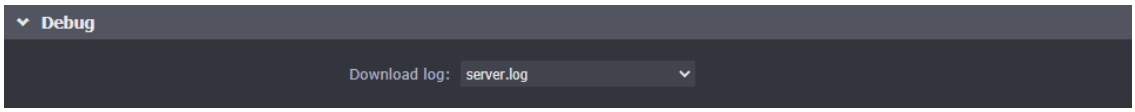
In the **Sink** fields, provide an IP address of the target system which is receiving the SNMP traps. Select the Version number and enter the Community.

We have also provided a basic **Browser** to view the status of the configured components.

You can restart the SNMP monitoring with the following commands: `service snmpd stop` and `service snmpd start`.

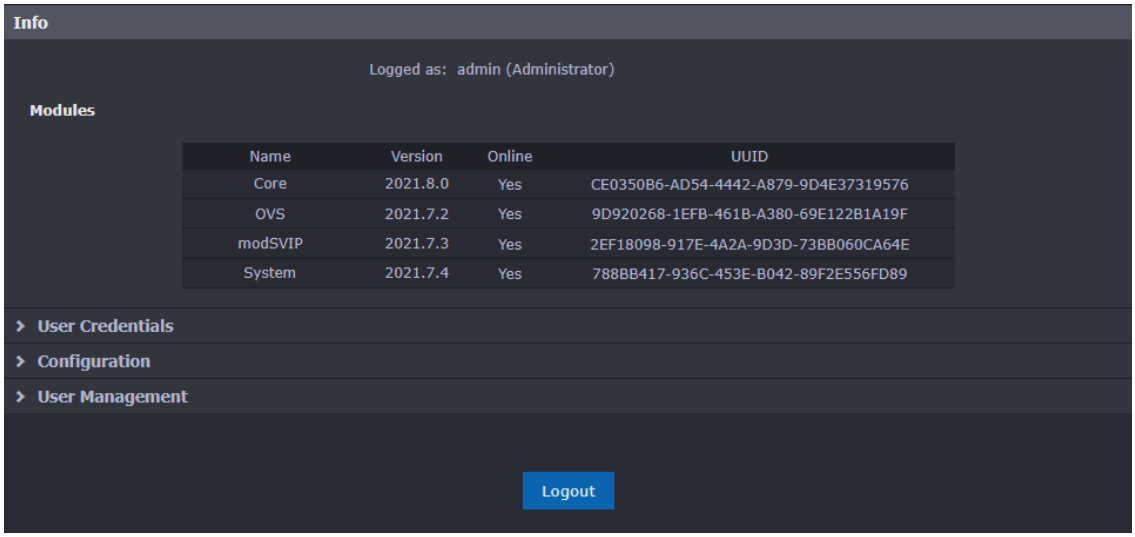
The Debug Settings

The Debug section provides the option to download the system log file.



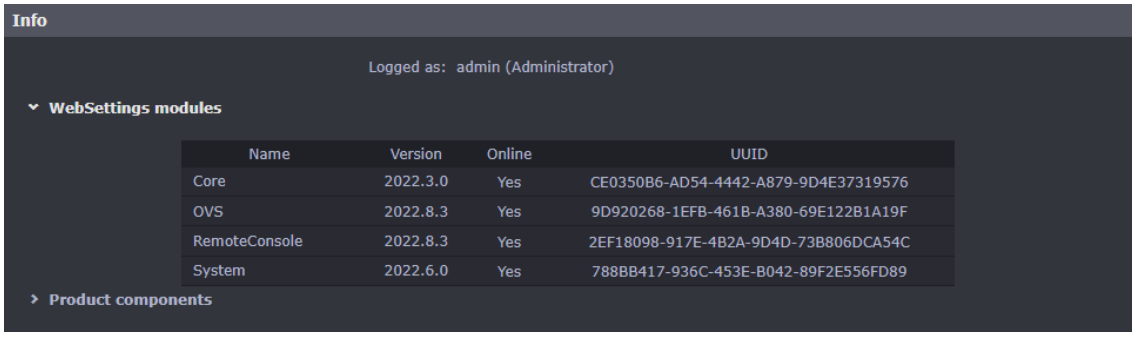
The Admin Page

The Admin page is used for configuring user access for FastServe | Ingest Web Configurator. In the **User Authorization** section, you can add a new user.



The Info Settings

The Info section displays the version numbers and the UUID's of the installed Web Configurator modules. You can also check if all components are currently online.

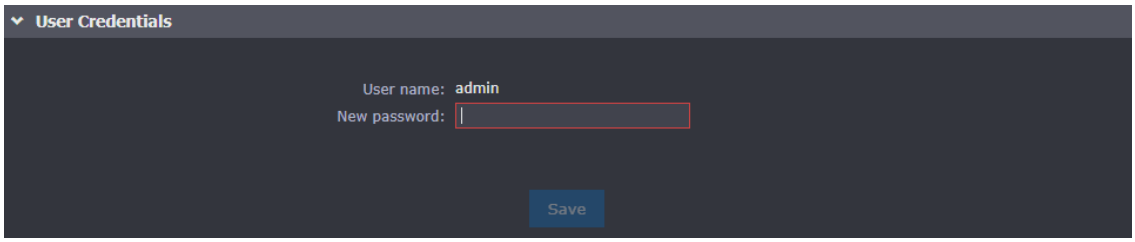


Name	Version	Online	UUID
Core	2022.3.0	Yes	CE0350B6-AD54-4442-A879-9D4E37319576
OVS	2022.8.3	Yes	9D920268-1EFB-461B-A380-69E122B1A19F
RemoteConsole	2022.8.3	Yes	2EF18098-917E-4B2A-9D4D-73B806DCA54C
System	2022.6.0	Yes	788BB417-936C-453E-B042-89F2E556FD89

The Product components section contains a list of all FastServe | Ingest components installed by the OVS-FULL installer. If a product was installed separately, the component version visible here may not be updated.

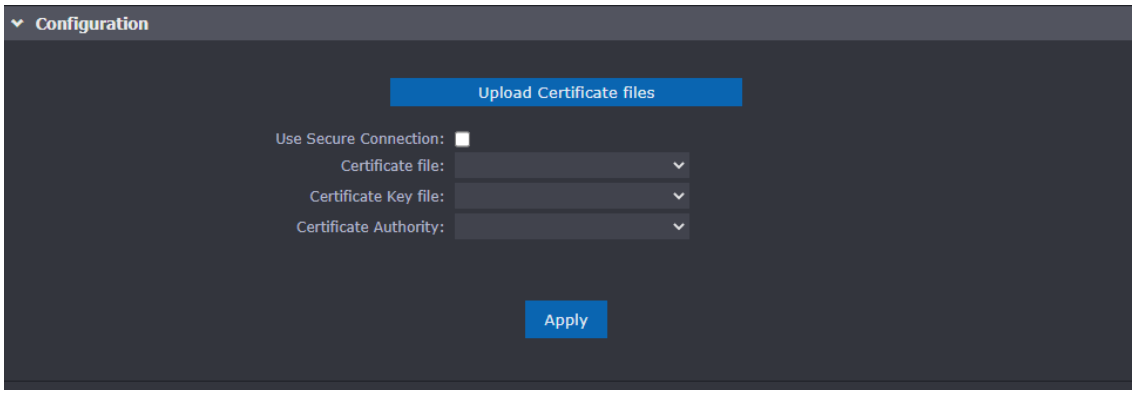
The User Credentials Settings

In the User Credentials section you can change the password of the currently logged in user.



The Configuration Settings

In the Configuration section, an administrator can enable or disable HTTPS access and upload proper certificate files.

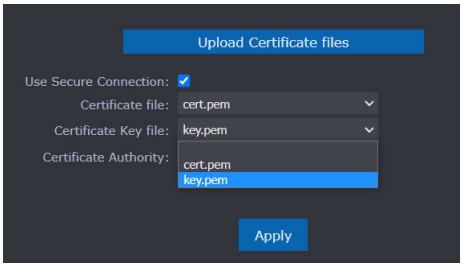


To upload a certificate file:

1. Press the **Upload certificate files** button, and in the following window, select at least two files: a *.pem certificate file and a private key file.

   An authority certificate file might also be required (not needed in case of self signed certificates). The files will be uploaded immediately.

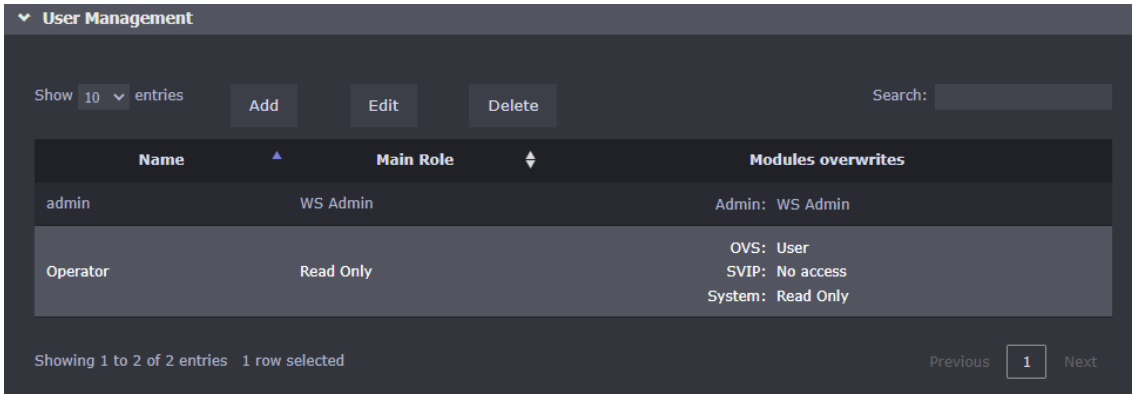
2. After the files are successfully uploaded, select the required options from the drop-down menus and click on the **Apply** button.



3. You will be prompted to restart the FastServe | Ingest Web Configurator. Click on Yes to perform the restart and log back into the Web Configurator afterwards.
4. The FastServe | Ingest Web Configurator can now be accessed via an HTTPS connection.

The User Management Settings

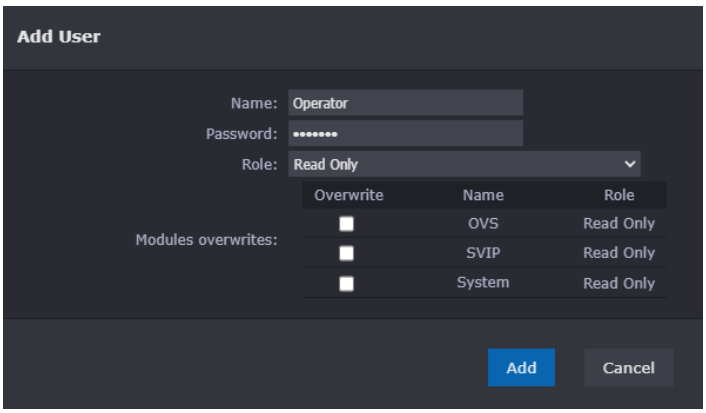
In the User Management section you can view and edit access levels for all existing users of the FastServe | Ingest system, create new users or remove them.



To add a new user:

1. In the User Management section, click on the **Add** button.

   The **Add User** dialog box opens.



2. Enter a **Name** of the new user and create a **Password** for the account.
3. Select a **Role** and access rights in the **Module overwrites** section to grant necessary access levels to the Web Configurator modules.
4. Click on **Add** to create the new user.

To edit an existing user:

- Select a user from the list and click on **Edit**.

  You can now change the password of the selected user or update the access rights.

To remove a user from the system:

- Select the user to be removed from the list and click on Delete.

  In the confirmation dialog window, click on **Yes** to complete the removal.

To search for a user:

- Enter the name of the user in the Search box. The view will adjust automatically as you type.

To sort the results list:

1. Click on a column header to reorder the results list.

   An up arrow ▲ appears to the right of the column name to indicate that this column is used to sort the results in ascending order.
2. (optional) When you click on a column header, the column is sorted in ascending order. If you need to sort the list in descending order, simply click on the column header again to reverse the order of the list.

   A down arrow ▼ appears to the right of the column name to indicate that this column is used to sort the results in descending order.

The SVIP Page

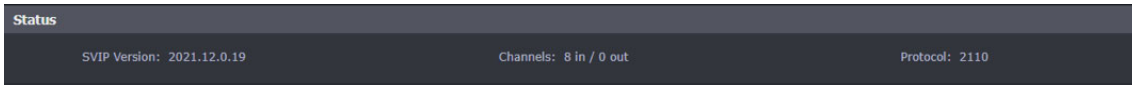
The video over IP functionality is available only for the first generation of FastServe | Ingest UHDS servers.

FastServe | Ingest UHD machines can be equipped with IP PHY boards, instead of SDI physical interfaces, and allow for video transmission over IP. A detailed description on how to prepare your FastServe | Ingest server for SVIP is provided in the *Avid FastServe | Ingest Setup Guide*.

To configure video over IP, an additional module called modSVIP needs to be installed. After the installation, a new **SVIP** page appears in the FastServe | Ingest Web Configurator.

The Status Section

The Status section displays the elementary information related to the SVIP configuration.

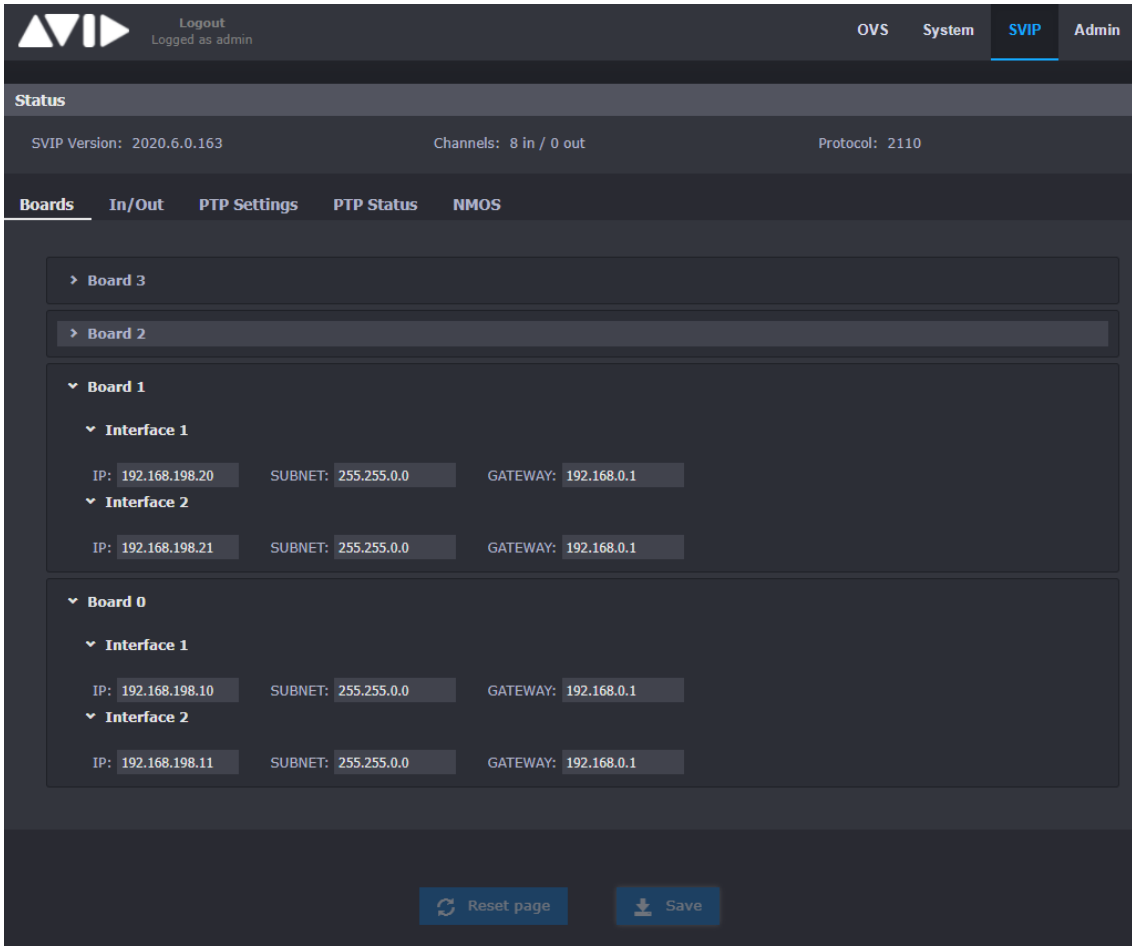


- version of the modSVIP module;
- channel Input/Output configuration (list of supported configurations is available in the ReadMe);
- SMPTE protocol used in this configuration.

You can revert the SVIP module to the last saved configuration with the **Reset page** button or save your changes by pressing on **Save**.

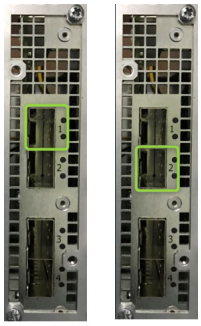
The Boards Settings

The Boards tab allows to configure the boards available on your machine.



All boards available in the SVIP configuration are listed here. You can also see the number of SVIP interfaces on each board and their configurations (IP address, subnet and gateway addresses).

Physically, each IP I/O has 4 modules but only 2 of them are listed in the configuration. The top module and the second one from the top are in use.



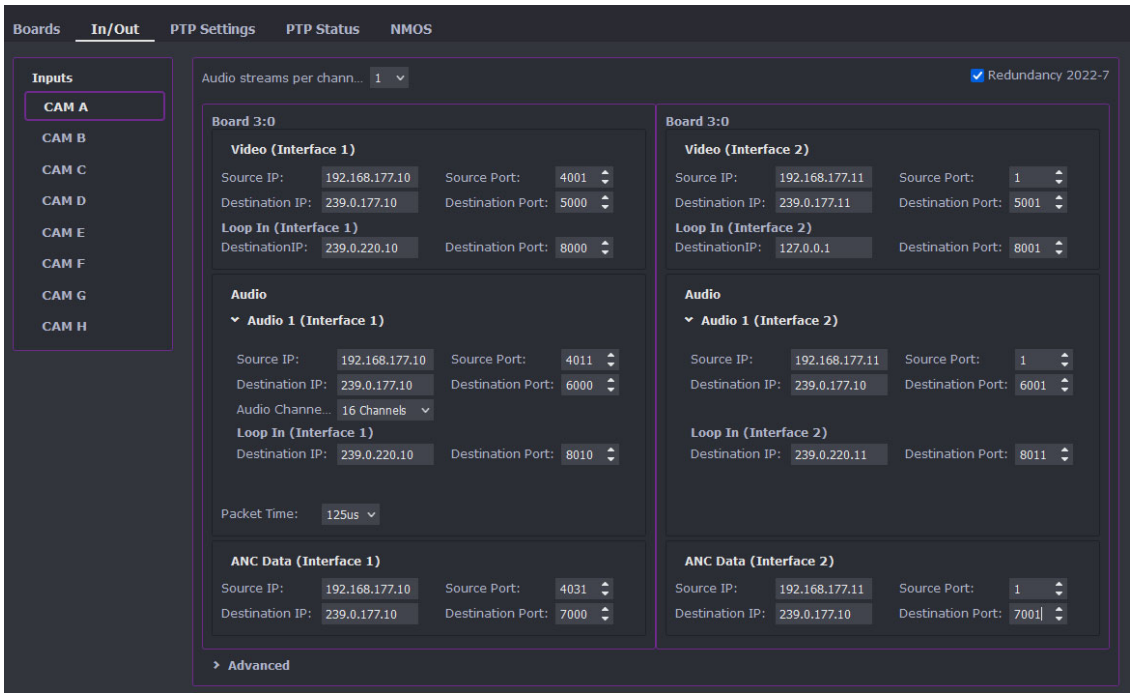
The network addresses (IP, subnet, gateway) should be pre-configured during the production or during the installation of the SVIP infrastructure.

To prevent networking issues, each interface should have a unique IP address within a private range (10.x.x.x, 192.168.x.x, 172.16.0.0 - 172.31.255.255).

Modyfing any of the options in the Boards tab requires a restart of the main application to implement the changes. Save your new configuration by pressing on Save and then go to the VideoEngine tab and press on the Restart button.

The In/Out Settings

In the **In/Out** tab, you can specify unique multicast Destination IP addresses and Destination Ports for each individual output channel (including *Out Clean*, *Out Dirty*, *Audio* and *ANC Data*) within the SMPTE 2110 standard.



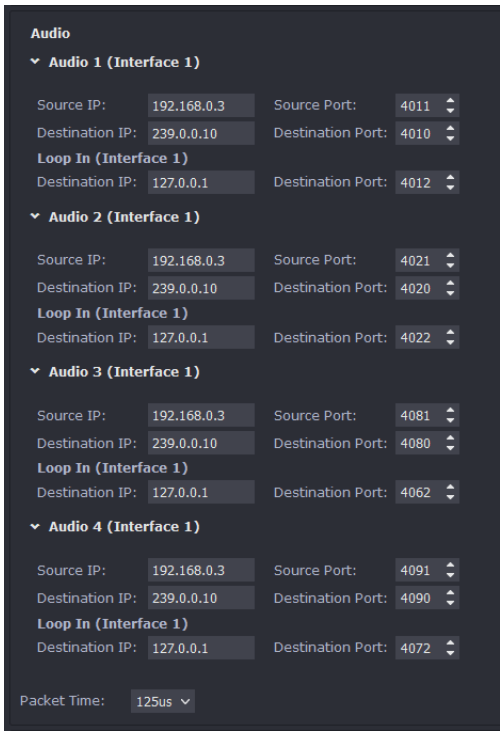
Make sure to use <u>unique</u> **Destination IP** addresses and **Destination Ports** in the entire SVIP environment.

Avoid using the same destination IP address across multiple sources. IGMP functionality of the switch works on the IP level and will not filter out streams based on the Destination Port.

Even though FastServe | Ingest can filter out streams based on the Destination Port, this is done outside the Switch. Using the same Destination IP across multiple source may cause switch interface overload. Especially for 1080p workflows, it is recommended to use individual Destination IP addresses for individual senders, such as Video, Audio, Dirty Loop, ANC.

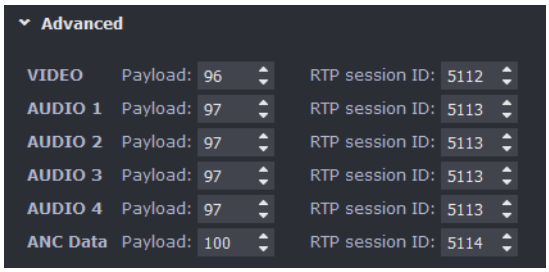
Select the required number of **Audio streams per channel**. You can choose between 1 group of 16 tracks, or 4 groups of 4 audio tracks. When 4 groups are selected, the Audio section is expanded to allow for address mapping. After saving changes, appropriate NMOS Tx senders (Audio Dirty Loops) and Rx Receivers will be advertised via the NMOS node service.

Based on SMPTE standard, the Source ports for Video, Audio and ANC streams are ignored.



The **Audio Packet Time** is set to **125us** by default, as it is most suitable for 1-16 audio channels. When Packet time is set to 1ms, only 8 audio channels in total are supported.

In the **Advanced** section, you can specify the **Payloads** and **RTP session IDs** appropriate to your entire SVIP environment configuration.



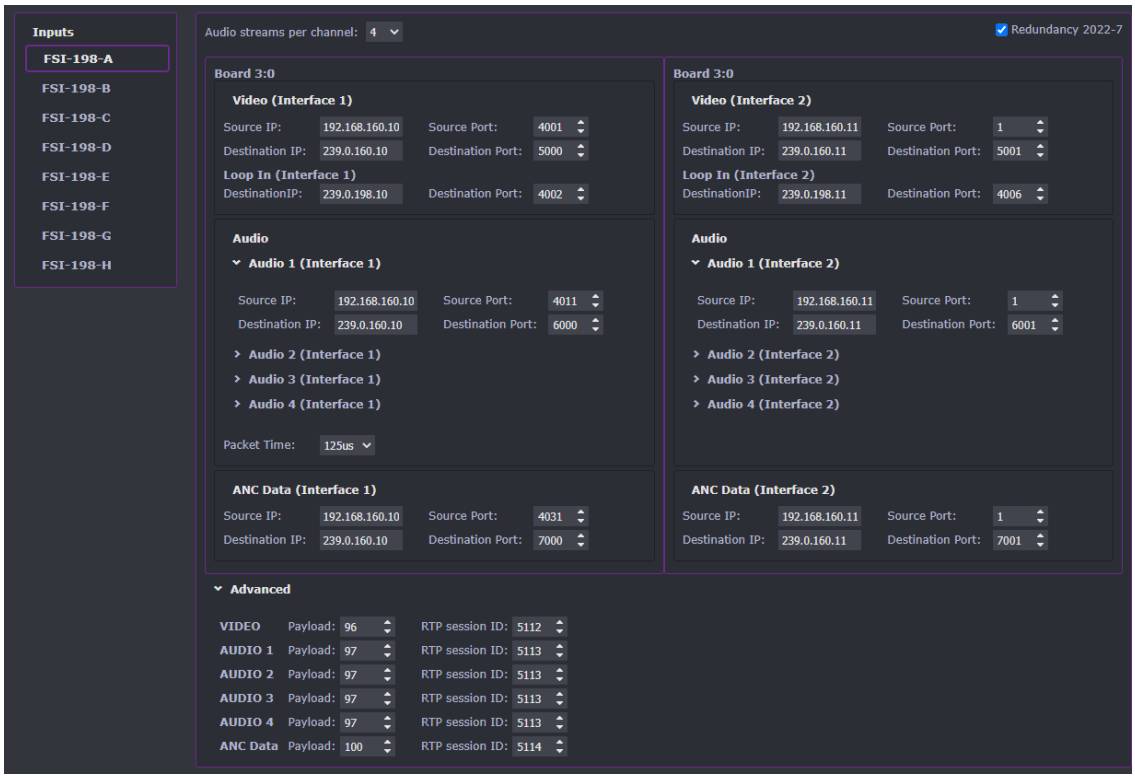
Ensure that the Payload value is always set between 96 and 127 and the RTP session IDs are different for each medium.

More information about the SMPTE 2110 standard is available on the official www.smpte.org website.

Redundancy 2022-7

Starting with version 2021.7 of FastServe | Ingest, you can take advantage of the SMPTE 2022-7 standard, which allows for seamless protection switching. SMPTE 2022-7 generates two streams with the same data using different routes to the destination and specifies the reconstruction of the original stream in case packets are lost in any of the paths. Switching from one path to the other occurs without impact on the content of the stream.

To enable seamless protection switching, select the **Redundancy 2022-7** check box.

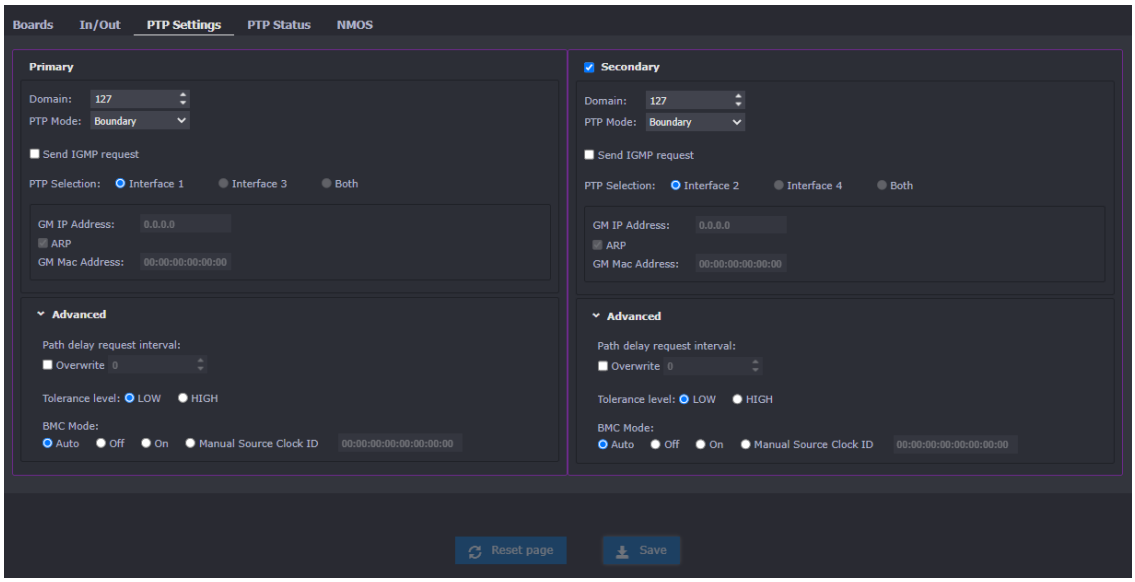


Specify the details of the second (redundant) path in the additional board section, which appeared after enabling the redundancy.

For more information on how to configure your FastServe | Ingest server to work with SMPTE 2022-7, see the ***Configuring Redundancy 2022-7*** topic in Appendix A of the *Avid FastServe | Ingest Setup Guide*.

The PTP Settings

Precision Time Protocol (PTP) is a protocol that defines a method to distribute time around a network. In the **PTP Settings** tab, you can enable and configure your **Primary** / **Secondary** PTP sources.



To configure PTP settings:

1. Specify the PTP **Domain** number.
2. Select the required **PTP Mode** from the drop-down list:
   - **Boundary** - enable boundary clock mode for this device.
   - **Transparent E2E** - with an end-to-end transparent clock, only the residence time is included in the timestamp in the packet.
   - **Transparent Hybrid** - in this mode, a physical frequency source is used to provide frequency synchronization, while PTP is used to provide ToD (Time-of-Day) synchronization. When this option is selected, provide the **GM (Grandmaster) IP Address** in the box below. If your network supports **ARP** (Address Resolution Protocol), the GM Mac Address will be fetched automatically. Otherwise, enter the Mac address manually.
3. (Optional) Select the **Send IGMP request** option when connecting to non-PTP aware network switches (when working in Transparent PTP modes).
4. Depending on the selected video format and the available IP PHY wiring/connection, you can choose which network **Interface** should act as a PTP link. When the server is operating in 1080i formats, only two interfaces are available for PTP. Interface 1 is used for the primary connection, while Interface 2 for the Redundancy (2022-7) one.
5. In the **Advanced** section, configure the remaining PTP options:
   - **Path delay request interval** - enable the Overwrite option to set the path delay interval manually. Path delay requests are sent by using unicast. Values are in logarithmic mean scale of 2 in range from -7 to 4.

     Example:

Value Entered	Logarithmic Calculation	Value in Seconds
-7	2^{-7}	0.0078125
-6	2^{-6}	0.015625
-5	2^{-5}	0.03125
-4	2^{-4}	0.0625
-3	2^{-3}	0.125
-2	2^{-2}	0.25
-1	2^{-1}	0.5
0	2^{0}	1
1	2^{1}	2
2	2^{2}	4
3	2^{3}	8
4	2^{4}	16

- Select the error detection **Tolerance level** (LOW +/-64ns or HIGH +/-8192ns) for path delay fluctuation.
- Specify the **BMC** (Best Master Clock) selection algorithm options when working in the Boundary mode. The BMC is designed to help choose which clock to use as the source of timing on your network.

  - **Auto** - the hardware decides whether BMC should be enabled. It is recommended to use the Auto option.

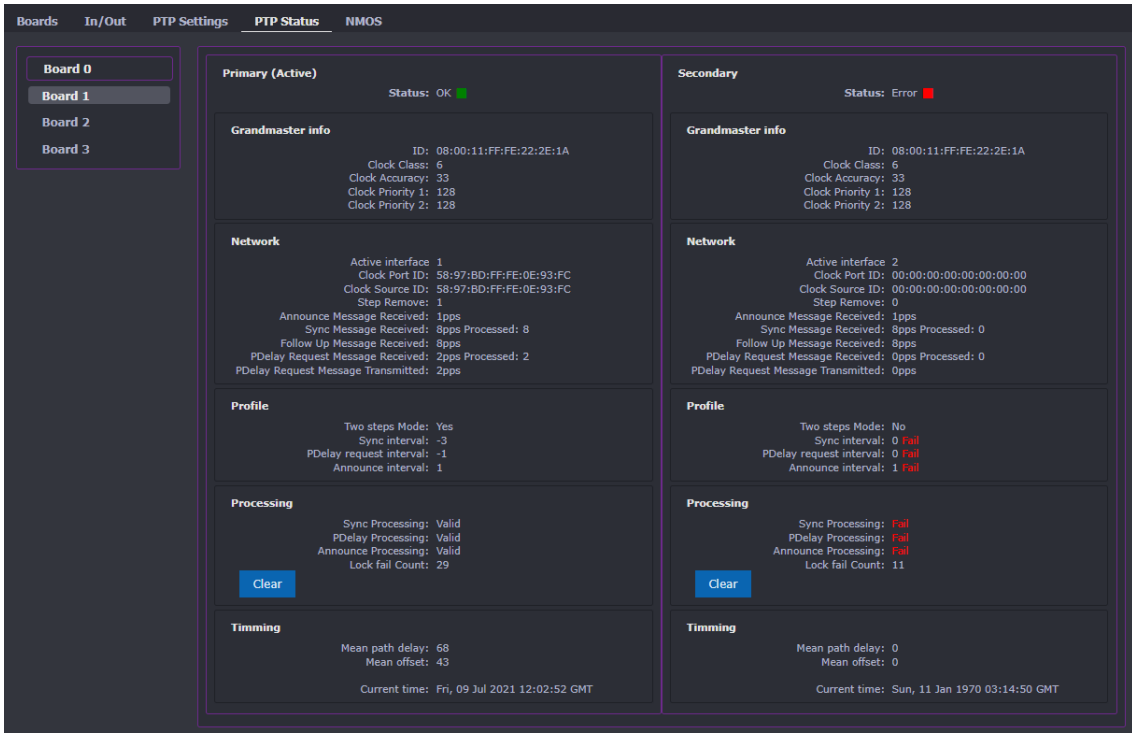
  - **On** - enable the BMC algorithm. The BMCA decides which of at least two clocks should act as the master.

  - **Off** - disable the BMC algorithm. BMC should be disabled when working with transparent modes.

  - **Manual Source Clock Id** - manually override the BMC algorithm by providing the address of the master clock.

The PTP Status

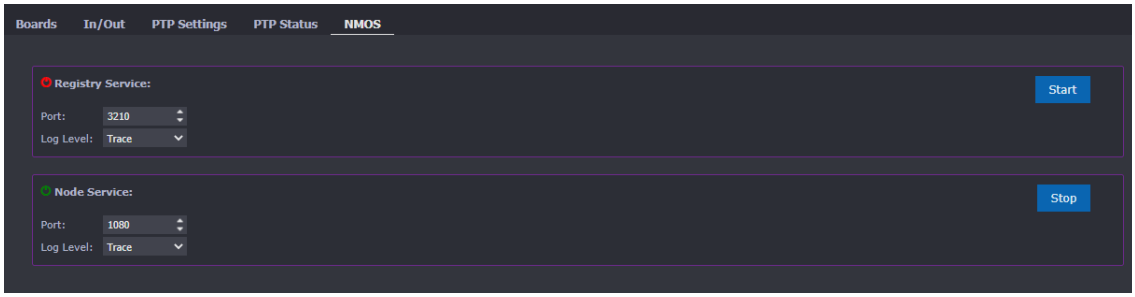
The **PTP Status** tab allows to view PTP related information of all boards. The **Clear** button resets the **Lock Fail Count** parameter to zero (this process takes circa 10 seconds to complete).



The NMOS Settings

The **NMOS** tab contains Networked Media Open Specification (NMOS) information and configuration options.

It is recommended to run only one Registry Service within the entire SVIP environment. For example, within the entire NMOS setup only one FastServe | Ingest server or any other third party device should have the Registry Service running.



Two NMOS services are available: **Registry Service** and **Node Service**.

The green or red icon next to the service name indicates if the service is currently running or not. You can start or stop each service with the Start / Stop buttons. Running the **Node Service** is required to control media streams routing with NMOS explorer applications.

3 Working with the FastServe | Ingest Remote Console

The Remote Console is an additional FastServe | Ingest Web Configurator module that allows you to control the ingest channels and provides basic inventory management options.

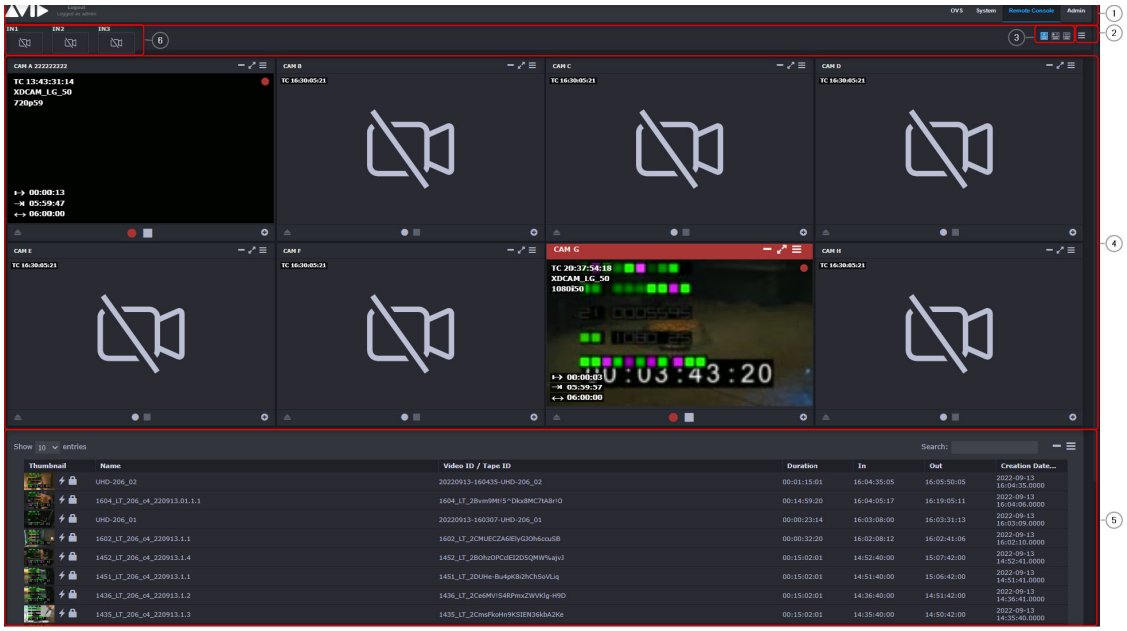
*When working with the **FastServe | I/O configuration**, the Remote Console also provides basic playout preview windows. The playout windows do not offer a live preview. Instead, a thumbnail is displayed when a clip is loaded to the preview window.*

The following main topics describe how to use the FastServe | Ingest Remote Console:

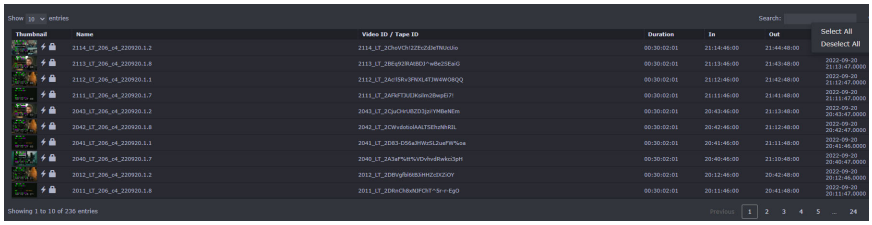
- About the Remote Console
- The Channel Preview Window
- The Inventory Panel

About the Remote Console

The Remote Console is installed by default together with the FastServe | Ingest Web Configurator and automatically detects the available channel configuration.



	Area	Description
1	Top Bar	The top bar of the FastServe	Ingest Web Configurator window displays the tabs available for the currently logged-in user.

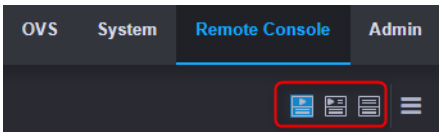
	Area	Description
2	Configuration Menu	The Configuration Menu button provides options to set up your Remote Console: • In the **Edit Ingest Templates** window you can configure the required media recording options, such as the video format and layout, the path to your Avid NEXIS storage and enable check-in to MediaCentral | Production Management. For more information, see "Configuring Ingest Templates" on page 73. • Open the **Crash Record Settings** to assign defined ingest templates to individual input channel preview windows. For more information, see "Configuring Crash Recording" on page 77. • The **Import Templates** and **Export Templates** windows give you the option to export or import the ingest settings. For more information, see "Exporting Templates" on page 76. • Click on **View Errors** to open the list of current errors.
3	Channels View Mode	The Remote Console channels view can be configured in one of four (4) modes: • the **Normal** view allows you to fully monitor and control all channels. • the **Compact** view allows to view a reduced channels preview and inventory together by decreasing the size of the preview windows. • the **Small** mode reduces the size of the preview windows even more. For more information, see the Configuring Channel Settings topic.
4	Playout/Ingest Channels Preview	The channel preview windows allow to view and control the individual channels. For more information, see the The Channel Preview Window topic.
5	Inventory	The Remote Console also provides basic clip inventory management options. You can display up to a 100 items at once, together with a thumbnail.  For more information, see The Inventory Panel.
6	Minimized Channels	You can minimize the preview windows to save space in the main channels view. Click on the "Minimize" button: Click on a minimized channel to maximize it again.

Configuring Channel Settings

Using the Preview Mode buttons and the Channels Settings window, you can select the appearance of the channels view.

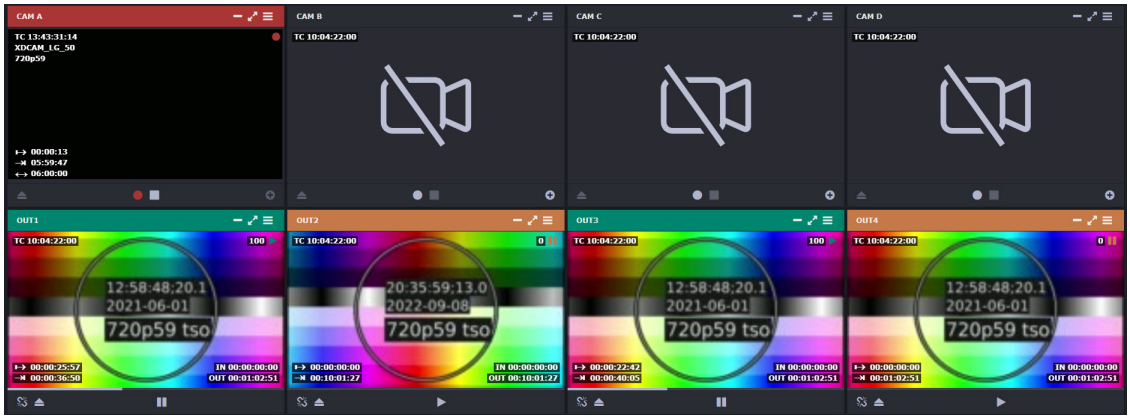
To change the layout of the preview windows:

- Click on the button representing the preferred layout:

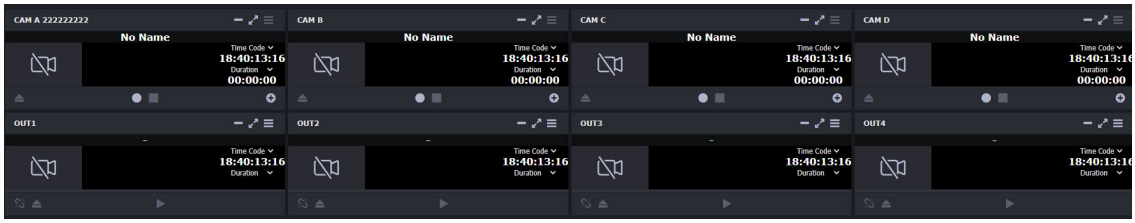


The following options are available:

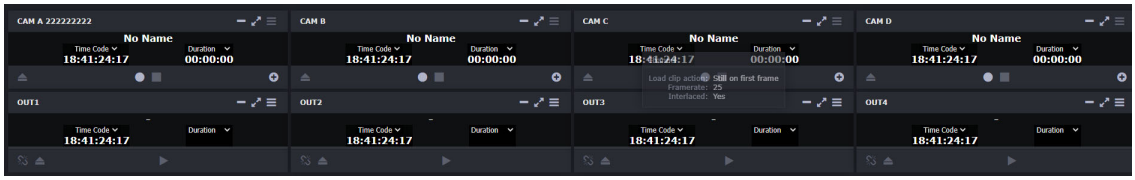
Normal View



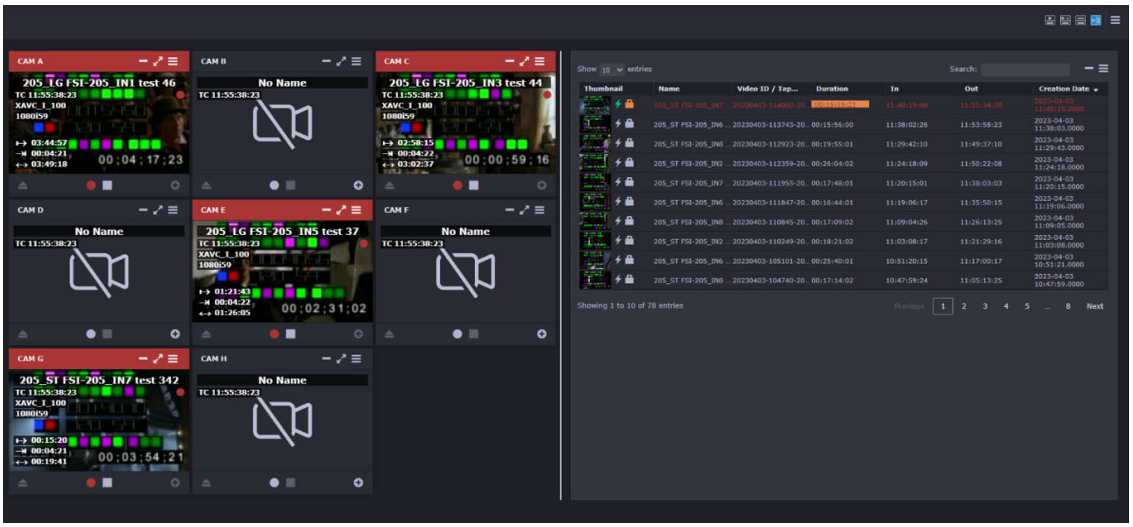
Compact View



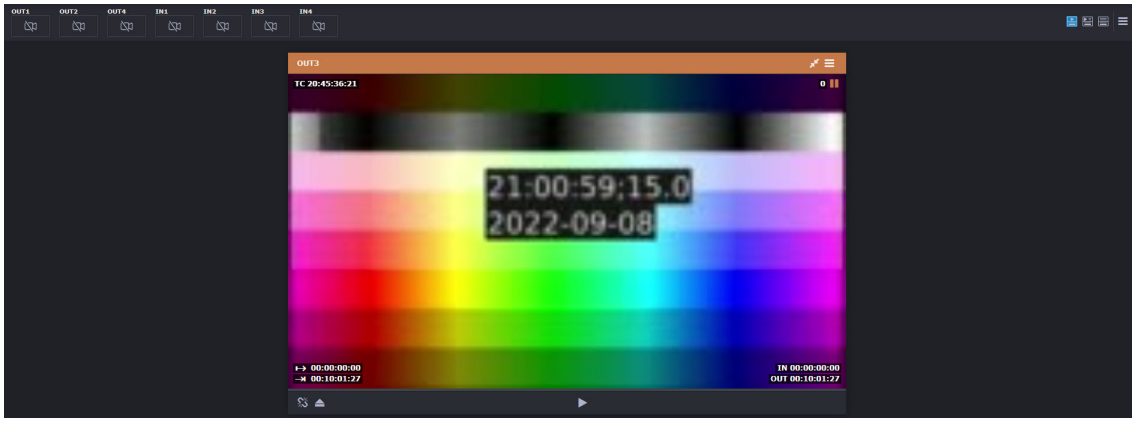
Small View



Columns View



- You can also maximize a single preview window by clicking on the button.



Configuring Ingest Templates

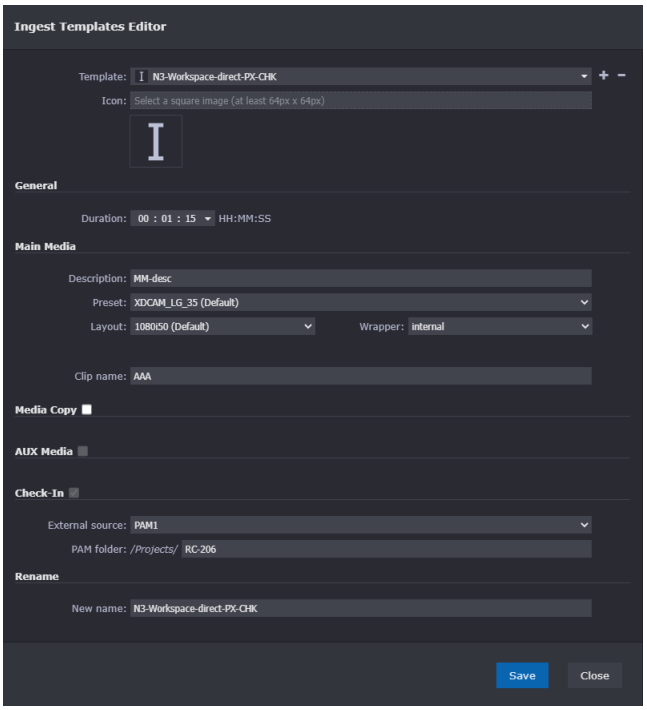
Ingest templates provide the options to configure your media recordings. You can select the default duration of your clips, the video codec and layout as well specify to which NEXIS storage your recordings should be saved. You can also enable MediaCentral | Production check-in here to make your recordings available across the entire MediaCentral environment. You can edit the incoming streams in Cloud UX or Media Composer as they are being ingested—without waiting for the recordings to finish.

The following procedure provides more details for these steps.

To create an ingest template:

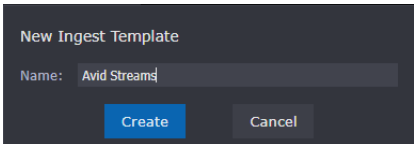
1. Click on the button to access the Remote Console **Configuration Menu** and click on the Edit Ingest Templates option.

   The **Ingest Templates Editor** dialog box opens.



2. Click on the + button to create a new template.

   Enter a name for the new template and click on Create.



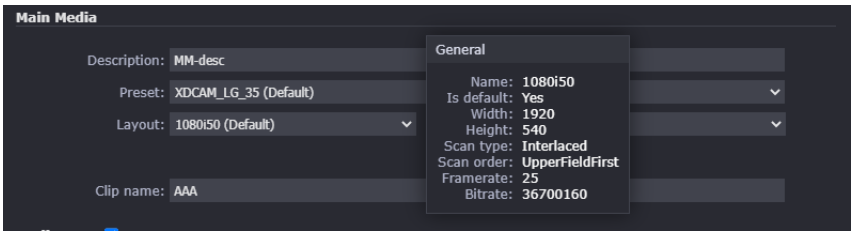
3. (Optional) You can upload an image from the hard drive and use it as a unique thumbnail for the new ingest template, which can help identify it on a long list of templates. Click on the Icon button and browse for an image, then click **Open**.
4. (Optional) Specify the **duration** of your recording. You can select one of the predefined values from the drop-down menu or enter it manually. Leaving this option blank (or setting 00:00:00) allows for creating an "unlimited" recording, which will have to be stopped manually before the 6 hours duration is reached.

The duration of an "unlimited" recording strongly depends on the chosen format. In case of OPAtom and check-in to PAM, a maximum of 6 hours per clip limitation is imposed by the MediaCentral | Production system.

5. In the **Main Media** section, set and view all options for the high resolution recording.
   - (Optional) In the **Description** text box, enter relevant metadata.

The Description metadata is currently not supported.

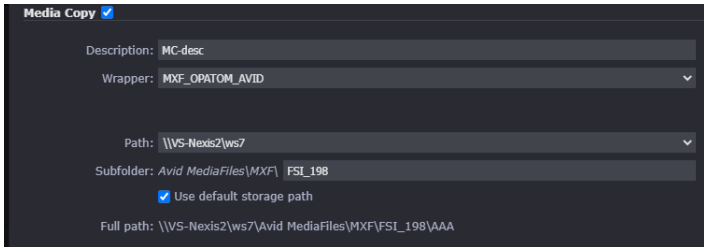
   - The video format and the layout of your recording are already selected, as set in the **OVS** tab. Hover your cursor over the Preset or Layout fields to view more configuration details of the selected value.



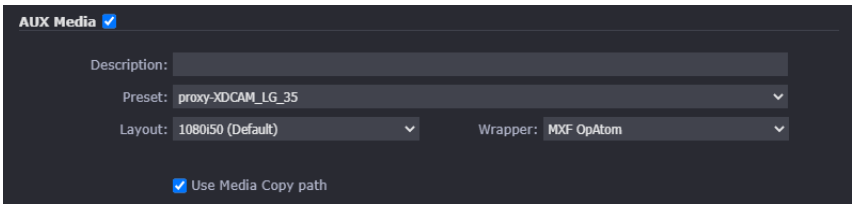
See the latest Avid FastServe | Ingest ReadMe for a list of currently supported formats.

- If required, enter a Clip name which will be used for the recording in the inventory.

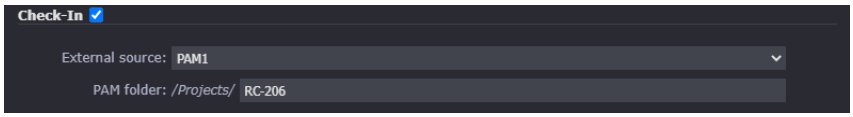
6. In the **Media copy** section, configure NetStream options. The external stream is wrapped and transferred in real time to external storage, making it instantly available for post-production work.



7. In the **AUX Media** section, specify the configuration details of auxiliary media generated in parallel to high resolution clips.



8. In the **Check-In** section, you can enable the option to ingest your recordings directly into MediaCentral | Production Management.



Enable additional options required for your PAM workflow. Enter the name of the folder in MediaCentral | Production Management to register the ingested files.

*The main MediaCentral | Production Management parameters are set in the **OVS > Import/Export > Interplay Settings** section of the Web Configurator.*

The /Projects/ prefix is added automatically.

9. Save your new ingest template by clicking on the **Save** button.
10. Close the Ingest Templates Editor window.

To rename an ingest template:

1. Click on the button to access the Remote Console **Configuration Menu** and click on the Edit Ingest Templates option.

   The **Ingest Templates Editor** dialog box opens.

2. Select the required ingest template from the drop-down list and in the **Rename** section at the bottom of the window, enter the new name of the template.
3. Click **Save** to apply the change and **Close** to exit the Ingest Templates Editor.

To remove an ingest template:

1. Click on the button to access the Remote Console **Configuration Menu** and click on the Edit Ingest Templates option.

   The **Ingest Templates Editor** dialog box opens.

2. Select the required ingest template from the drop-down list and click on the "Delete current template" button.
3. Click **Save** to apply the change and **Close** to exit the Ingest Templates Editor.

Exporting Templates

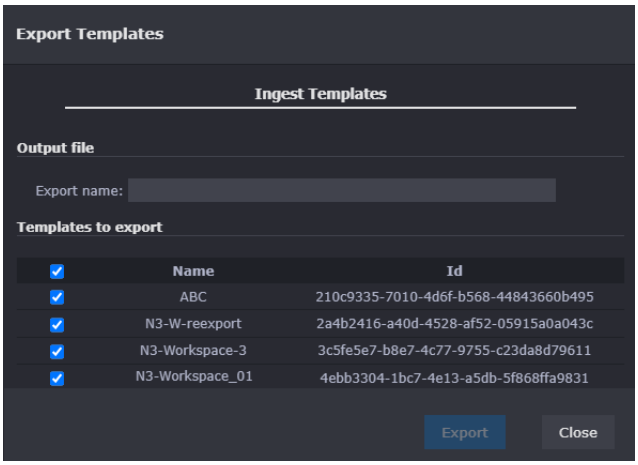
Importing templates is not yet supported in the current version of the FastServe | Ingest Remote Console. This feature will be made available in the following releases.

The **Export Templates** window lets you export the list of currently configured Ingest templates. You can download selected templates to a .json file.

To export Ingest templates:

1. Click on the button to access the Remote Console **Configuration Menu** and click on the Export Templates option.

   The **Export Templates** dialog box opens.



2. Enter a **Name** for the JSON file which will contain the selected **Templates to export**.
3. Click on **Export**.

   The file is automatically saved to the default download location set in your Web Browser settings.

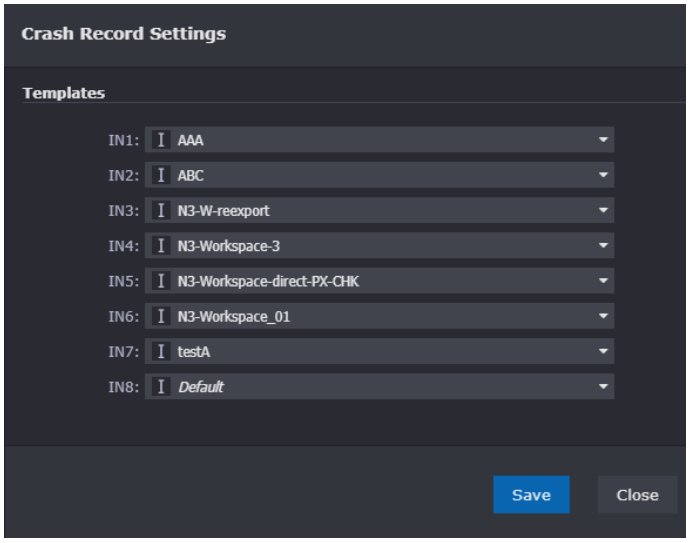
Configuring Crash Recording

The **Crash Recording** functionality allows to quickly start recording of your media using defined templates. The following procedure describes how to assign existing Ingest Templates to available input channel preview windows.

To configure crash recording settings:

1. Click on the button to access the Remote Console **Configuration Menu** and click on the Crash Recording Settings option.

   The **Crash Recording Settings** dialog box opens.



2. For each input channel preview, select an ingest template from the drop-down box. If no selection is made, a Default ingest template will be applied to your recording.
3. Click on **Save** and close the dialog box.

The Channel Preview Window

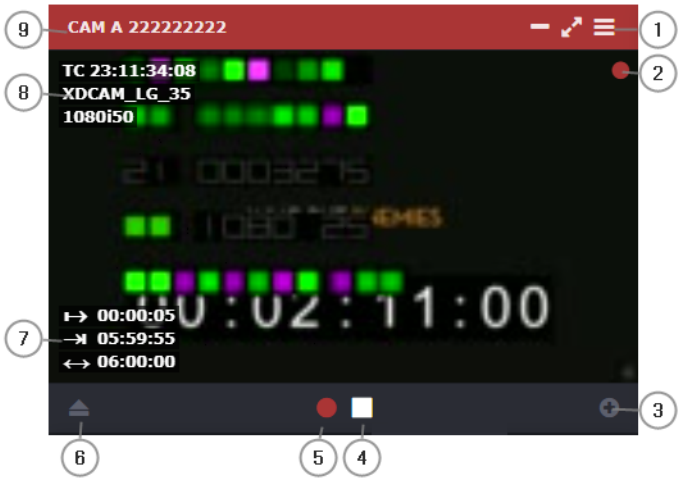
The FastServe | Ingest Remote Console automatically detects the available configuration of channels. In standard FastServe | Ingest workflows, eight (8) ingest channels are displayed. The channel preview does not generate a live preview, but displays a thumbnail of the triggered clip.

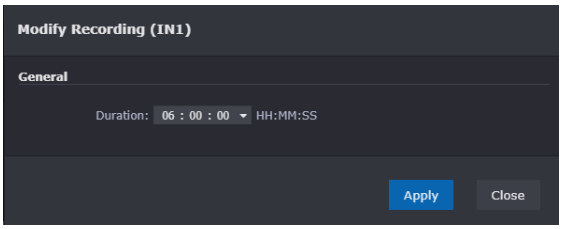
- For ingest channels - the thumbnail is captured soon after starting the recording.
- For playout channels - the thumbnail is taken from the database.

In FastServe | I/O scenarios, the Remote Console automatically detects and displays four ingest channels and four playout channels.

Ingest Channel Preview

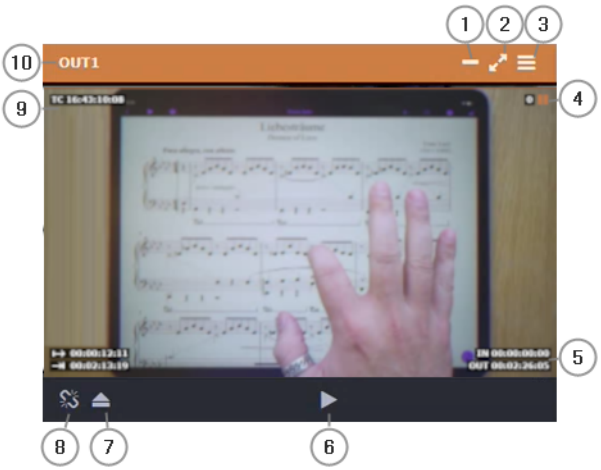
Each ingest channel preview window has the following menu options and buttons:



	Option	Description
1	Configuration Menu	The Configuration Menu has the following options: • Modify Recording, which allows to change the duration of the recording after it was started.  • The OSD Settings, which are only available in the Normal view.
2	Recording Icon	The Recording Icon indicates that this input channel is currently being recorded.
3	New Recording	Click on this button to create a new recording.
4	Stop Recording	Use this button to stop an ongoing recording.
5	Start Recording	Start recording using the Crash Record settings. For more information, see Configuring Crash Recording.
6	Abort	The Abort option is used only for the playout mode.
7	Duration	This indicator displays the current duration of the recording. You can select what type of duration timecode to display in the The OSD Settings.
8	OSD Indicators	You can select which indicators to display in the input channel preview in the The OSD Settings.
9	Input Channel Number	The top bar displays the input channel number and if the channel is currently recording, the color of the bar changes to red.

Playout Channel Preview

In FastServe | I/O configurations, each playout channel preview window has the following menu options and buttons:



	Option	Description
1	Minimize Window	Use this button to minimize the playout channel window.
2	Maximize Window	Use this button to maximize the playout channel window.
3	Configuration Menu	The Configuration Menu has the following options: • The Playout Settings, • The OSD Settings.
4	Playback Status Icon	This icon indicates whether the clip loaded to the playout channel is currently being played or paused, as well as the speed of the playout. You can disable this indicator in The OSD Settings window.
5	IN and OUT Information	This indicator displays the IN and OUT settings of the clip. You can disable this indicator in The OSD Settings window.
6	Play / Pause Button	Play or Pause the clip currently loaded into the playout channel.
7	Abort	Stop the ongoing playback and remove the current clip from the playout channel.
8	Break Loop	Use this button to break a loop playback. To play a clip in a loop, drag it from the inventory into a playout channel preview window while holding the **left CTRL key** on your keyboard. This will create an infinite loop for the selected clip. You can see whether a clip is looped in the Tooltip window which appears when hovering over the playout channel.
9	Timecode OSD Indicators	You can select which timecode indicators to display in the playout channel preview in The OSD Settings.
10	Playout Channel Number	The top bar displays the playout channel number. When the channel is playing a clip, the color of the bar changes to green. When a clip is paused, the color changes to orange.

The Playout Settings

The Playout Settings let you specify what action should be taken when a clip is loaded to the playout preview window. The following options are available:

- **Still on first frame** - select this option to load the first frame of the clip and keep the clip paused until the Play button is pressed.
- **Play immediately** - select this option to immediately start the playing the clip after loading it into the playout channel.
- **Cue and play next** - select this option if you need playlist-like capabilities on a playout channel. You can then drag two clips into a playout channel and play them one after another. The information about the number of cued clips is displayed in the tooltip window.

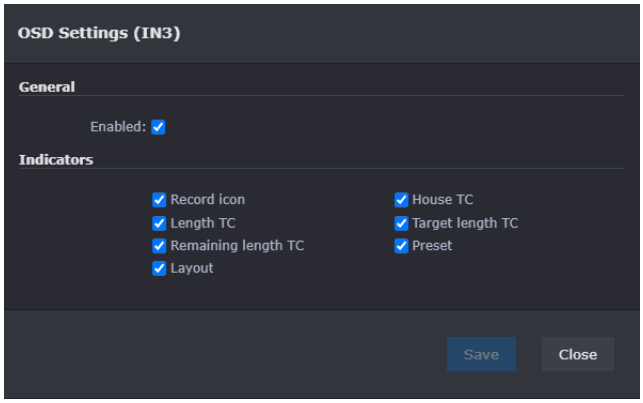
The "Cue and play next" feature is still in beta testing and should not be used for on-air playout.

The OSD Settings

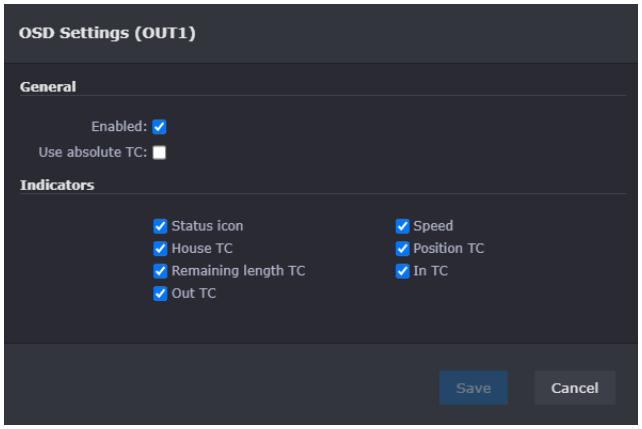
You can specify which elements to display on each channel preview window. Open the Configuration Menu of the chosen preview channel and select **OSD Settings** from the list of options.

Select the required OSD indicators and click on **Save**.

Input Channel Preview OSD Settings



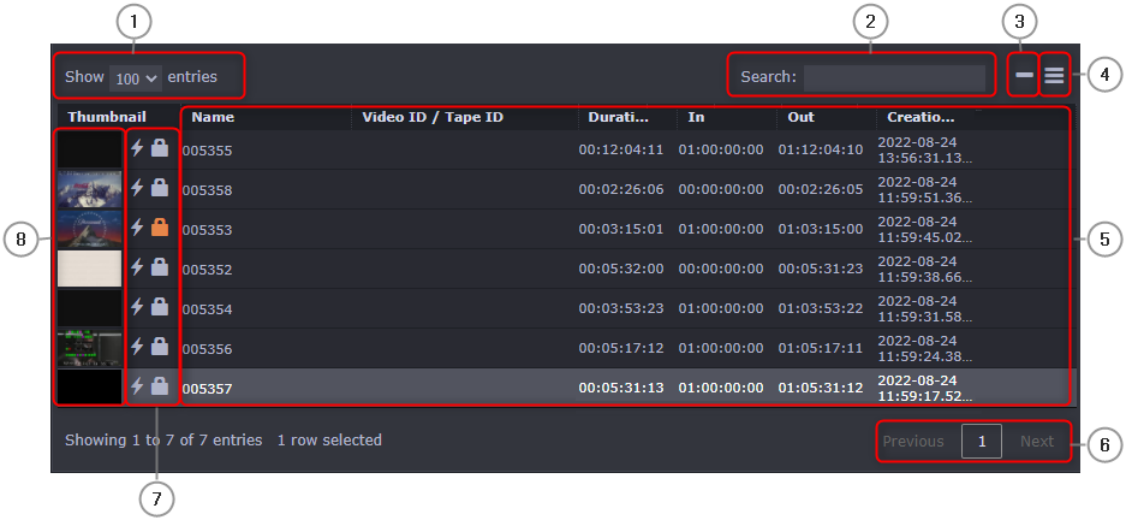
Playout Channel Preview OSD Settings

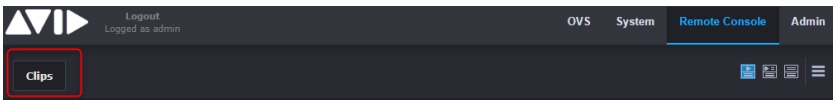


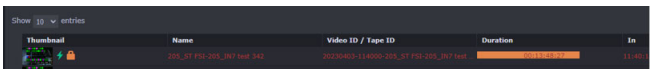
You can hide OSD data from the channel preview by clearing the “Enabled” option and pressing **Save**.

The Inventory Panel

The Inventory panel shows a list of items, a search bar, and the configuration menu button.



	Option	Description
1	Show Entries	Select the number of entries to be displayed on a single page: 10, 25, 50, 100.
2	Search Bar	You can search for inventory entries using the Name and Video ID properties.
3	Minimize	You can minimize the Remote Console inventory to a dedicated panel.  Click on the **Clips** button to maximize the inventory window.
4	Configuration Menu	The Configuration Menu contains the following entries: • **Select All / Deselect All** - use this option to select or deselect all inventory entries. *The following options appear when at least one item is selected.* • **Lock Selected / Unlock Selected** - use this option to lock or unlock selected items. • **Erase Selected**- remove the selected item(s) from the inventory and the physical clip from the storage. • **Export Selected** - export the selected item(s) to a selected NEXIS workspace. You will be asked to provide the workspace details in the following window.

	Option	Description
5	Inventory entries	You can click on a column header to sort the contents of the inventory. The Name property is selected by default. You can also resize the column width to suit your needs. *Clip recording progress can be monitored in the Duration column.* 
6	Next Page	Navigate to the next or previous page of inventory entries.
7	STP and Lock indicators	When a clip listed in the inventory is growing, then the icon becomes green. In FastServe | I/O scenarios, when a clip is loaded into a playout channel, it gets locked automatically. The icon then becomes orange. When a clip is locked by the user (using the Configuration Menu or by right-clicking on an item and selecting Lock from the pop up menu) or is recorded, the color of the Lock icon changes to red.
8	Thumbnail	The thumbnail is automatically generated as configured in the FastServe | Ingest configuration files.

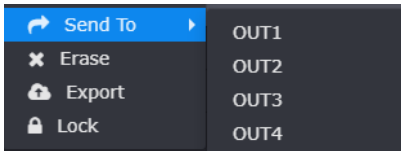
Context Menu Options

The Remote Console inventory also allows to perform certain operations on its items.

To open the context menu:

- In the inventory panel, right-click on an item.

  A pop up menu appears.



- The following options are available:

Option	Description
Send to	Send the selected item(s) to a playout channel.
Erase	Remove the selected item(s) from the inventory.
Export	Export the selected item(s) to a selected NEXIS workspace. You will be asked to provide the workspace details in the following window.
Lock	Lock the selected item(s) to prevent accidental deletion.

4 Workflows

The following chapters contain information on how to configure your FastServe | Ingest server to work with Avid NEXIS storage, MediaCentral | Production Management, MediaCentral | Capture, and Media Composer.

- Integration with Avid NEXIS Storage
- Integration with Interplay and MediaCentral Environments
- Working with Proxy Recording

Integration with Avid NEXIS Storage

FastServe | Ingest allows for exporting and NetStream-ing directly to the Avid NEXIS storage. To integrate with NEXIS, the mount has to be properly configured in the WebSettings.

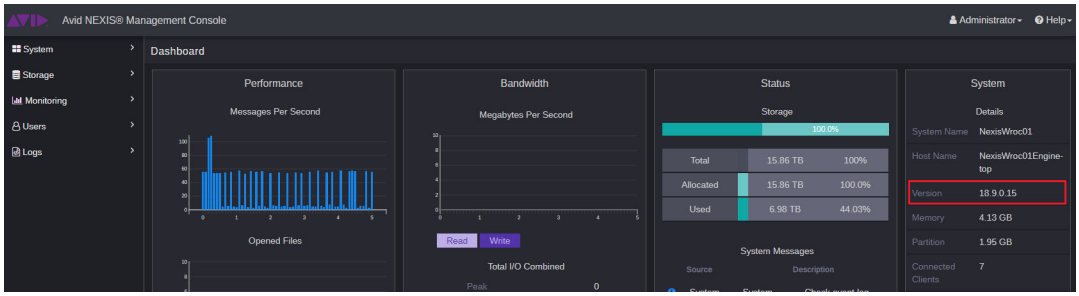
Make sure that the NEXIS Client driver installed on the FastServe | Ingest server is compatible with your NEXIS storage version.

Update of the NEXIS Client Driver on Linux

This procedure contains information on how check the version of the currently installed NEXIS driver.

To check the version of the NEXIS storage:

1. Navigate the web browser to the NEXIS Management Console and locate the version number:

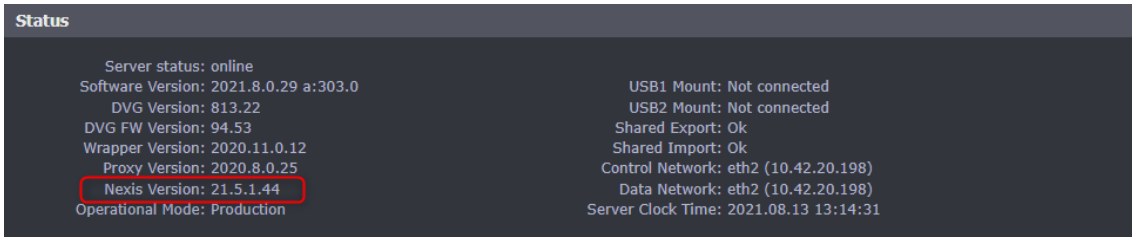


You can also check the NEXIS Client version from the command line window:

```
[root@CentOS7 public]# rpm -qa | grep NEXIS
AvidNEXISBenchmarkAgent-7.9.0-9.el7.centos.x86_64
AvidNEXISClient-7.9.0-9.el7.centos.x86_64
```

To upgrade AvidNEXISClient on FastServe | Ingest:

1. Download the appropriate NEXIS Client version from the Avid Download Center or use the one from the NEXIS storage system.
2. In the FastServe | Ingest WebSettings, first check the currently installed version of the NEXIS Client in the Status section:



3. If an upgrade is required, go to the **Mount Settings** and open the **Client Management** section. Perform an upgrade as described in the The Mounts Settings topic.
4. To confirm that the NEXIS Client driver is up and running, type the following command in the console:

   ```
   systemctl status avidfos
   ```

   When the installation is successful, the shares will be mounted automatically.

Without a working export to NEXIS, a check-in to Interplay is impossible.

Integration with Interplay and MediaCentral Environments

FastServe | Ingest can be used in workflows with Avid NEXIS which allow for automatic check-in to Interplay | Access. Interplay | Access is an Interplay client application that provides access to an asset management database (such as MediaCentral | Production Management), as well as interaction with streaming media that is available in certain Interplay configurations.

Interplay | Access is designed to run on any standard Windows or Mac OS X computer connected to the asset management system.

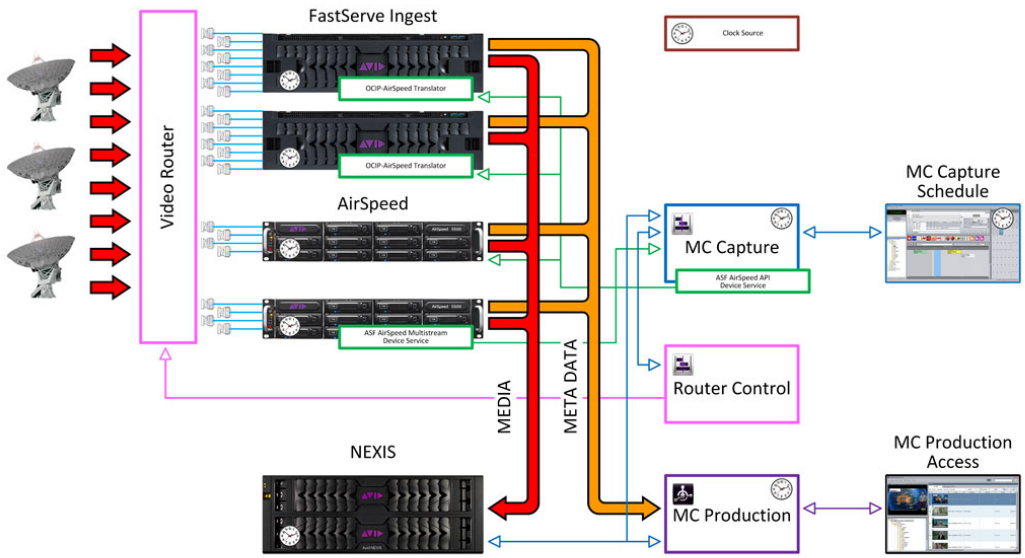
Integration with Avid MediaCentral | Capture

MediaCentral | Capture is a newsroom ingest tool that enables automated recordings. It contains individual applications, which allow you to schedule and monitor recordings. MediaCentral | Capture stores its schedule and other metadata in the Interplay database, which allows for easy access to the captured material within the Interplay work environment.

It is important to always check whether your version of the Interplay or MediaCentral | Capture software is compatible with your FastServe | Ingest server. For an up-to-date compatibility list, check the newest FastServe | Ingest ReadMe file on the Avid website.

Architecture and Workflow

The Interplay Capture broadcast news workflow starts with the ability to control the capture of ingest feeds from any source. MediaCentral | Capture also provides user rights management for ingest. The Capture system includes channel pools and dynamic channel allocation, which helps automate some resource management tasks, and adds another layer of fault tolerance.



Configuring FastServe | Ingest for MediaCentral | Capture Workflows

This topic discusses how to set up the integration between the FastServe | Ingest server and the MediaCentral | Capture application.

To enable the integration between FastServe | Ingest and MediaCentral | Capture, make sure to select the Enable check-in option in the Interplay Settings section of the FastServe | Ingest WebSettings. For more information, see “” on page 32.

To configure FastServe | Ingest for MediaCentral | Capture integration:

1. Login to your FastServe | Ingest machine using a Telnet client, such as PuTTy.
2. Stop the OVS engine and all of its components:

```
/data/VS/bin/set_run -s all
```

3. Open the `/data/VS/bin/vsPreferences.cfg` file and enable the black filler functionality. It will allow you to start continuous recording even when there is no signal from the configured channel.

   When you plan to export more than 1 NetStream at the same time, change the following values:

   - change TASKS_MAX_HP_EXPORT=1 to TASKS_MAX_HP_EXPORT=8 in the [TASKS] line #607
   - change RECORD_USE_BLACK_FILLER=0 to RECORD_USE_BLACK_FILLER=1 under [RECORD_EX] line #1361

For the Capture integration to work properly, the Black Filler must be enabled.

4. Also in the `vsPreferences.cfg` file, set the following options:
   - change `CYCLIC_MODE_ENABLED=1` to `CYCLIC_MODE_ENABLED`=0 under [RECORDING] line #185
   - change `SYNCED_RECORDERS_ENABLED=1` to `SYNCED_RECORDERS_ENABLED=0` under [RECORDING] line #192 -> Independent Recording
   - change `INTERPLAY_CHECKIN_ENABLED=0` to `INTERPLAY_CHECKIN_ENABLED=1` under [TRANSFER] line #445
   - enter the `INTERPLAY_USERNAME=` under [TRANSFER] line #439
   - enter the `INTERPLAY_PASSWORD=` under [TRANSFER] line #440
   - enter the `INTERPLAY_URI_PATH=` under [TRANSFER] line #441
   - enter the `INTERPLAY_SERVICE_URL=` under [TRANSFER] line #442

You can also set all of the above options from Step 4 using the FastServe | Ingest WebSettings. .

Independent recording and Interplay Check- in are vital requirements for the MediaCentral | Capture integration.

5. Save and exit the `vsPreferences.cfg` file.
6. Start the OVS engine with the following command:

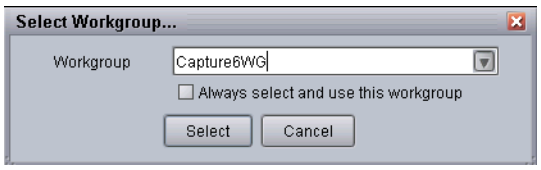
   ```
   /data/VS/bin/set_run -a all
   ```

Setting Up Avid Service Configuration

This topic discusses how to set up the integration between MediaCentral | Capture and the FastServe | Ingest server in the Avid Service Configuration application.

To establish a connection between FastServe | Ingest and MediaCentral | Capture:

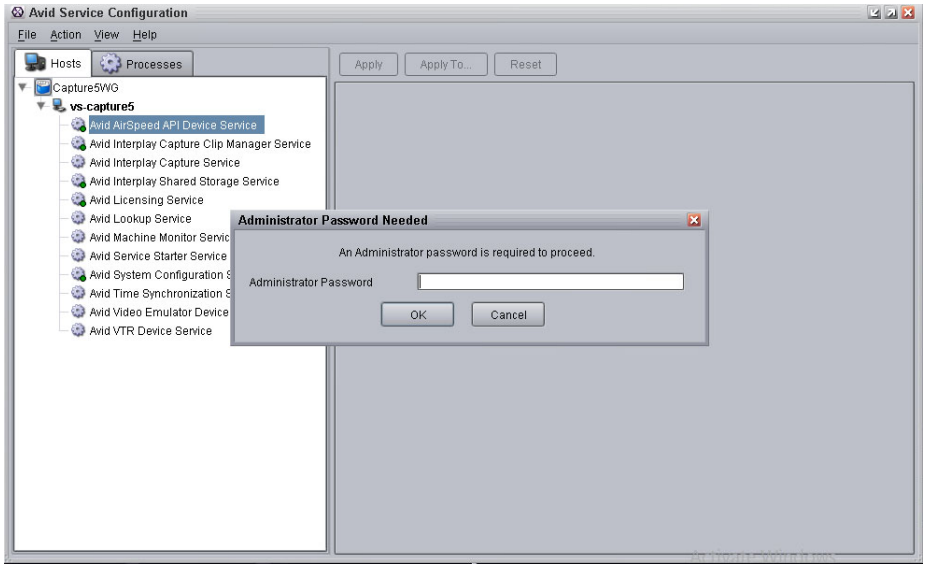
1. Open the **Avid Service Configuration** application.
2. Choose the required Workgroup from the list and click **Select**.



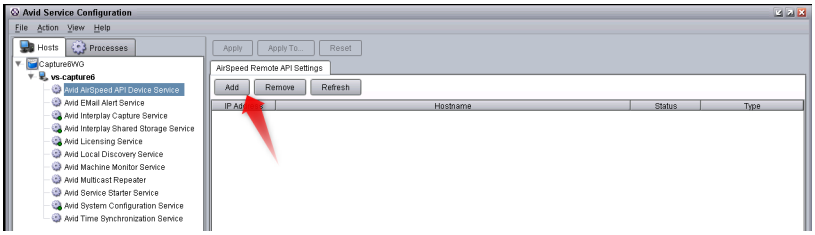
3. In the main Service Configuration window, expand the list of services of the selected workgroup.

Select the **Avid AirSpeed API Device Service**.

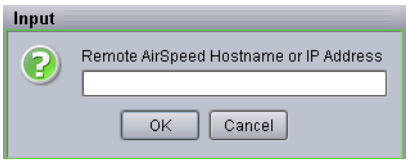
Default configuration of this service does not have a password. Leave the Administrator password field blank and click OK.



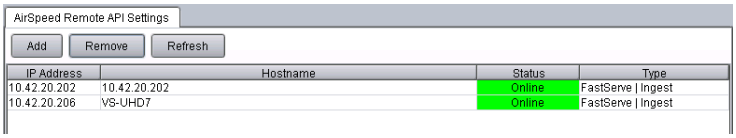
4. In the "AirSpeed Remote API Settings" window, click on **Add**.



5. In the following window, enter the IP address of your FastServe | Ingest server and click OK.

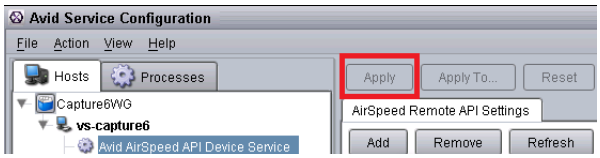


6. Your FastServe server appears in the Avid AirSpeed API Device Service window and if the connection has been established, the Status of the machine is **Online**.



*If instead of seeing the FastServe | Ingest host name (as set in **OVS > Maintenance > Network Settings > NET > Server name**) an IP address appears, contact your Local Network Administrator.*

7. Press the **Apply** button.



8. Configure the **Avid Interplay Capture Service** settings. This service contains the schedule and record control subsystems. It controls recordings according to the schedule and user's directions. It is the source of the Capture system configuration settings and status information for the Capture applications.

   In the Configuration pane, on the Ingest Settings tab, enter the following information:

   a. Enter a Capture system name. This is an alias name that can be used to identify this Capture system. The system name is displayed on the client login screen.

   b. Enter the hostname of the Interplay Server (Production Management Engine, not the WebServices credentials used for FastServe | Ingest). It is the same server name you have used to connect to Interplay | Access.

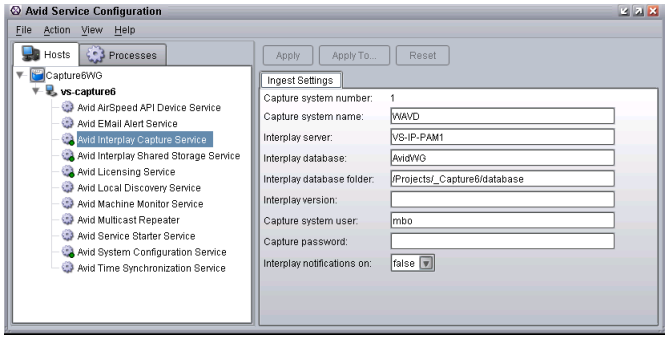
   c. Enter the name of the Interplay database. The name is always AvidWG.

   d. Enter the Interplay database folder path beginning with the forward slash (/) character. This is the path to the folder in interplay in which Capture stores its database.

   e. The Interplay version is optional and not needed by Capture.

   f. Enter the Capture system user. This is the Interplay user account Capture uses to log into Interplay and create master clips.

   g. Enter a Capture password. This is the Interplay password used with the Capture system user account, which is used to log into Interplay and create master clips.



   Click the Apply button.

   For more information on how to configure MediaCentral | Capture, see the Capture Installation and Administration Guide.

Configuring Avid Interplay Administrator

Most of the common Capture administration settings are done from a Capture Settings plug-in located in the Avid Interplay Administrator.

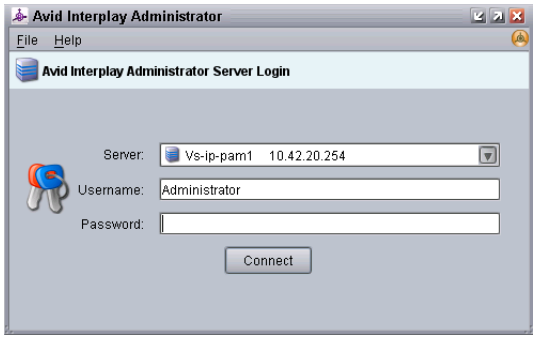
Once installed, the Capture Settings plug-in is found in the Avid Interplay Administrator in the Capture Settings section and is used to administer various types of capture settings.

To configure MediaCentral | Capture in Interplay Administrator:

1. From the Start menu select **All Programs > Avid > Avid Interplay Access Utilities > Avid Interplay Administrator**.

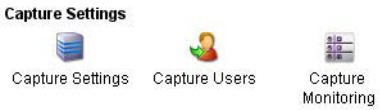
   The Avid Interplay Administrator Server Login screen appears.

2. Click the arrow for the server list and select the server name from the list.
3. Enter the Username.
4. Enter the Password and click the Connect button.



   The Avid Interplay Administrator window opens.

5. Navigate through the menu options to find the Capture Settings section and the Capture Settings icon.



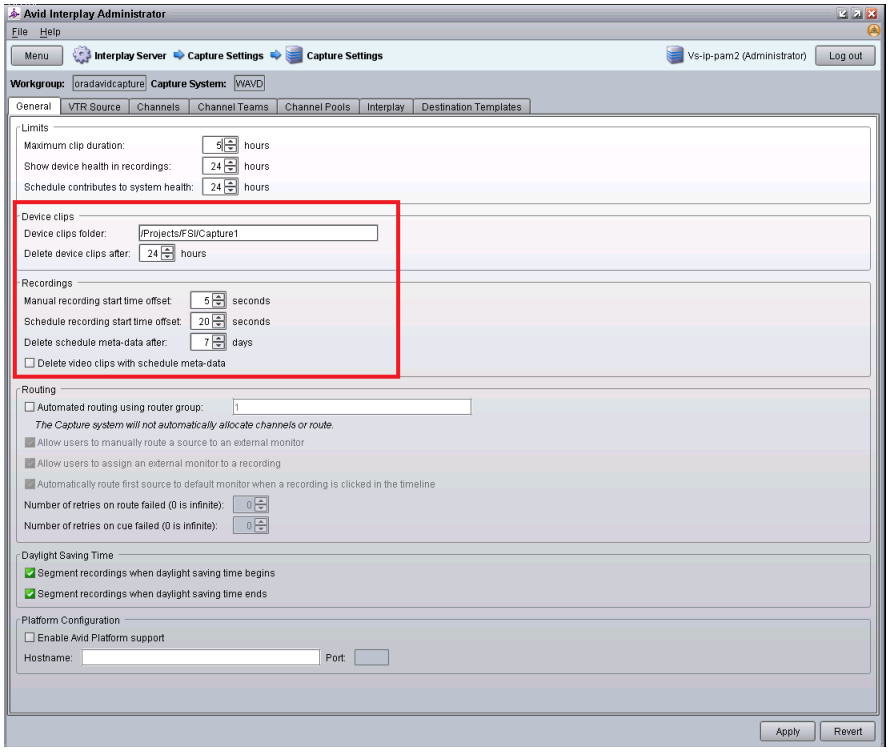
   The Capture Settings plug-in is comprised of six tabs with which to administer various settings:

   - General
   - VTR Source
   - Channels
   - Channel Teams
   - Channel Pools
   - Interplay

6. In the **General** tab, set the **Device Clips Folder** and **Recordings** options:

The Maximum clip duration cannot exceed 5 hours for FastServe | Ingest.

By default, device clips will be deleted after 24 hours. Make sure to change this option if you do not wish to remove the device clips from NEXIS storage.

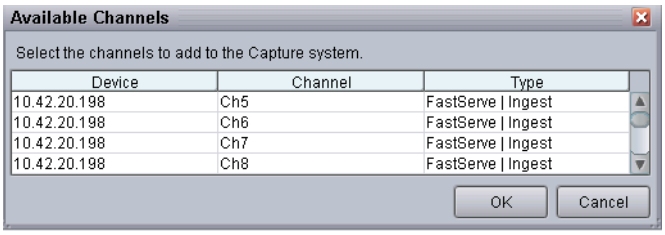


Use the **Manual recording start time offset** setting to offset the start time of the recording until the start of the master clip check-in. This offset is measured in a small number of seconds by default. The manual start time is used as the start time and the scheduled end time is used for the end time.

The **Scheduled recording start time offset** option is used to prevent Capture from losing media during recordings. Capture cues the recording the set number of seconds early (20 seconds is recommended for FastServe | Ingest and Proxy workflows) and also tells FastServe | Ingest what time to start recording

7. In the **Channels** tab you can add FastServe device channels to the Capture system.

   a. Click the Search button located at the bottom of the tab to Search the workgroup for all available channels which Capture can use. Select the required channels (select multiple channels with the SHIFT button).



   Unlike Avid AirSpeed, FastServe | Ingest does not allow to switch between record and playback modes on their channels while it is running. Channels, which status has been changed from ingest to playout, will appear offline in the channels pools list. Channels, where the mode has been changed from playout to ingest will need to be manually added to the channels list, since Capture cannot automatically discover them.

It is recommended to remove FastServe playback channels from both, the Channels list and Channel pool, then save the new configuration and reboot Capture and FastServe | Ingest.

b. After the Channels are added, most fields to the right of the Channels table populate with data about that channel.

Click Apply to move to the next tab.

8. In the **Channels Pools** tab you can administer the channel pool settings for the Capture system.

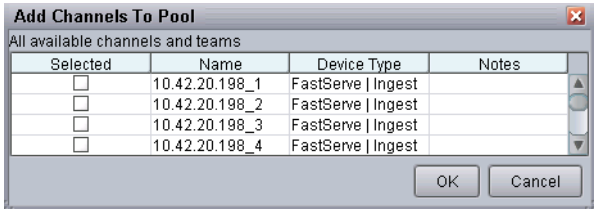
   a. To create a new channel pool, click the Add button located at the bottom of the tab.

   b. Enter the following information:

      - In the Name text box, enter the name for this new channel pool. This is the name users see displayed in the Capture UI.
      - In the Notes text box, enter any notes about this channel pool that you want to display in the Capture UI.
      - In the Default Workspace text box, enter the workspace assigned to a recording when this channel pool is selected. This is the default workspace, but this workspace can be changed on a per recording basis.

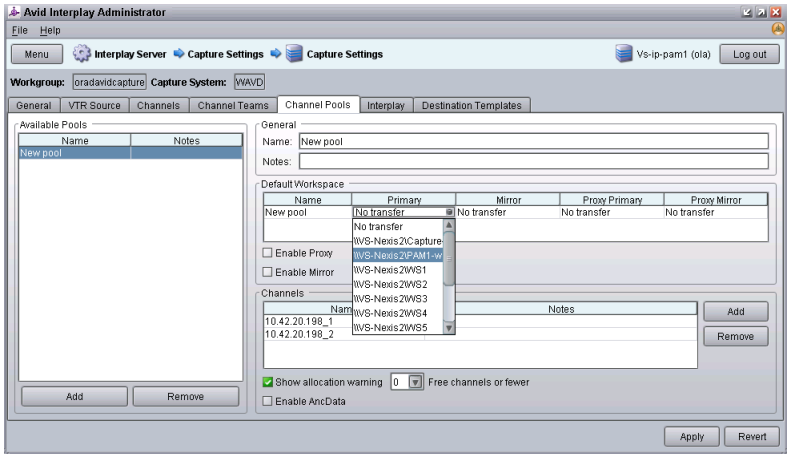
   c. Click the Add button located on the right side of the Channel Pool tab.

      The Add Channels To Pool dialog box appears containing all the channels configured for the Capture system. This includes the channels listed on the Channels tab.



   d. Select the channels to include in the channel pool, and click the OK button.

   e. In the **Default Workspace** section, select the Primary workspace from the drop-down list.



9. Click Apply and close Avid Interplay Administrator.

Scheduling Recordings in the MediaCentral | Capture Client

This topic describes how to schedule recordings with the Interplay Capture Schedule application.

In case of proxy recording (multi-resolution recording), see *"Working with Proxy Recording" on page 108.*

To schedule recordings:

1. Click the Start button and select: Start > All Programs > Avid > Avid Interplay Capture > Avid Interplay Capture Schedule.

   The Interplay Capture login dialog box opens.

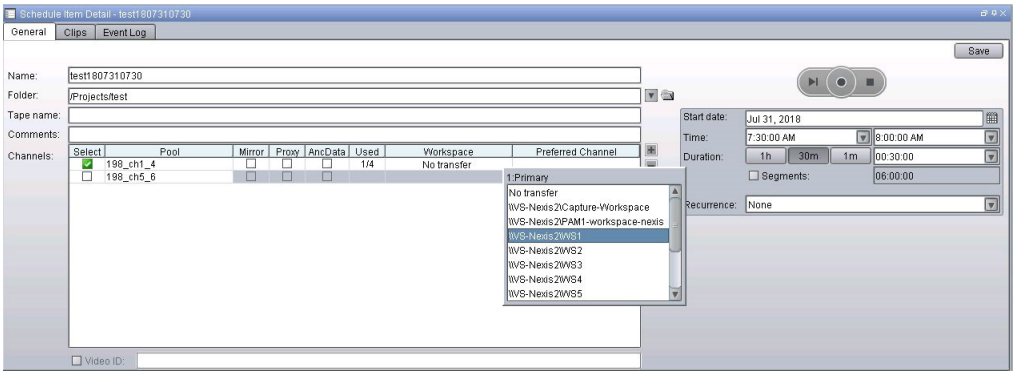
2. Enter the required information.
   - Select your Interplay workgroup from the drop-down list.
   - Select a Capture system from the drop-down list. The Capture Servers running in your workgroup automatically appear in the list.
   - Enter your User name.
   - Enter your Password.

3. Click the Login button.

   The MediaCentral | Capture application opens.

4. Do one of the following:
   - Press Ctrl+N to schedule a new recording.
   - Press Ctrl+Shift+N, to skip the Choose Template dialog box.
   - Double-click anywhere on the Schedule panel and later, in the Schedule Item Details panel, you can add the date and time you want the recording to occur.

5. In the "Schedule Item Detail" window, set the required parameters of your recording:
   a. Enter a name for this recording. You can also right-click and use the text field helper to add information in this field.
   b. Pick a master clip folder location, from the Interplay directory tree, where Capture checks the clip into Interplay. You can access a list of recently used folders by clicking the down arrow next to the folder field. You can enter the folder information manually.
   c. Add one or more channel pools to this recording.
   d. Specify the start date, time, duration, segments time, and recurrence information that applies to this recording using the schedule tool on the right-hand side of the General tab.



e. Enable the Proxy check button, if proxy is required.

To configure the destination of proxy files, use the Primary proxy section in the Web Settings. For more information, see Primary Proxy.

To enable recording of ANC data, make sure the ANC data option is activated in the FastServe | Ingest Web Settings. For more information, see "Export Settings" on page 32.

f. Click Save to save the recording.

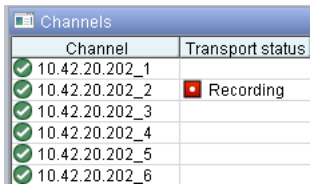
6. After creating a new recording, the recording is displayed on the timeline in the Schedule panel. A scheduled recording has a white box.

Status, Health, and Transport Indicators for Recordings

Recordings show up on the timeline in colored boxes with the colors indicating the status of the recording. For instance, a white box indicates a scheduled recording. A recording currently in progress is red in color while a green box depicts a successful recording in the past. A black color indicates missing media.

Transport Type	Recording	Description
Idle	dt 12:25:00 PM - 12:29:00 PM source 001→1080i	No icon is displayed in the upper left-hand corner of the recording box on the schedule timeline. The background color for the recording box is white.
Cued	910091225 12:25:00 PM - 12:29:00 PM source 004→NTSC	A cued icon is displayed in the upper left-hand corner of the recording box on the schedule timeline. The background color for the recording box is light yellow.
Recording	910091225 12:25:00 PM - 12:29:00 PM source 004→NTSC	A record icon is displayed in the upper left-hand corner of the recording box on the schedule timeline. The background color for the recording box is light red.
Done - Success	910091157 11:57:00 AM - 12:02:00 PM source 002→1080i	A green square icon is displayed in the upper left-hand corner of the recording box on the schedule timeline. The background color for the recording box is green.
Done - Error	910091225 12:25:00 PM - 12:29:00 PM sat4→NTSC	A red X icon is displayed in the upper left-hand corner of the recording box on the schedule timeline. The background color for the recording box is black. An example of what night cause this would be if a high-resolution channel stopped recording or never started to record.
Done - Warning	910091230 12:30:00 PM - 12:33:00 PM sat3→1080i,mpeg2	A yellow triangle icon is displayed in the upper left-hand corner of the recording box on the schedule timeline. The background color for the recording box is gray. An example of what night cause this would be if a low-resolution channel stopped recording or never started to record.Mirrored channels that fail would also cause this type of transport state.

You can confirm the status of each channel in the **Channels** tab.



For more information on the Capture Schedule application, see the Capture User Guide.

Status of FastServe | Ingest Recordings in MediaCentral | Capture

Starting with 2019.12 version of FastServe | Ingest, it is possible to monitor the status of FastServe | Ingest recordings triggered from Capture. The following statuses are currently displayed.

Transfer Status Icons

Transfer status icons appear with a recording on the timeline so the user can tell at a glance the transfer status of recordings. The following table shows the transfer status icons available for FastServe | Ingest recordings:

Transfer Status Icon	Description
	Retransfer has been requested.
	Transferring.
	Transferring but not yet checked in to Interplay.
	Done transferring.
	Done but not yet checked in to Interplay.
	Unknown transfer status.
	Failed Transfer.

Event Logs

The MediaCentral | Capture Schedule Event Log tab allows you to view a list of event logs for a recording. The following table shows the event log messages available for FastServe | Ingest recordings:

Event Logs	Description
Begin scheduled recording	A scheduled recording is starting.
Cued	An ingest channel for the recording has been cued.
Recording	An ingest channel for the recording has started recording.
Stop	A scheduled recording is stopping.
Eject	An ingest channel for the recording ejected the recording channel.

Event Logs	Description
Transfer started	Transfer Manager on the ingesting device indicated that the transfer has started.
Transfer complete	Transfer Manager on the ingesting device indicated that the transfer has finished successfully.
Master Clip created	The Interplay Capture Clip Manager service has indicated that device clips have been found and a master clip has been created.
Retransfer succeeded	Transfer manager on the ingesting device indicated that the retransfer has finished successfully.
Health: Channel health was restored to NORMAL	
TRANSITION_TIMEOUT_ON_STOP_RECORD	Interplay Capture was unable to stop the recording because Interplay Capture timed out waiting for the ingest channel to return a stopped status.
TRANSITION_TIMEOUT_ON_EJECT	Interplay Capture was unable to eject the recording because Interplay Capture timed out waiting for the ingest channel to return a ejected status

Removing a FastServe | Ingest Machine from a Capture Environment

This topic describes how to remove a FastServe | Ingest server machine from a MediaCentral | Capture environment.

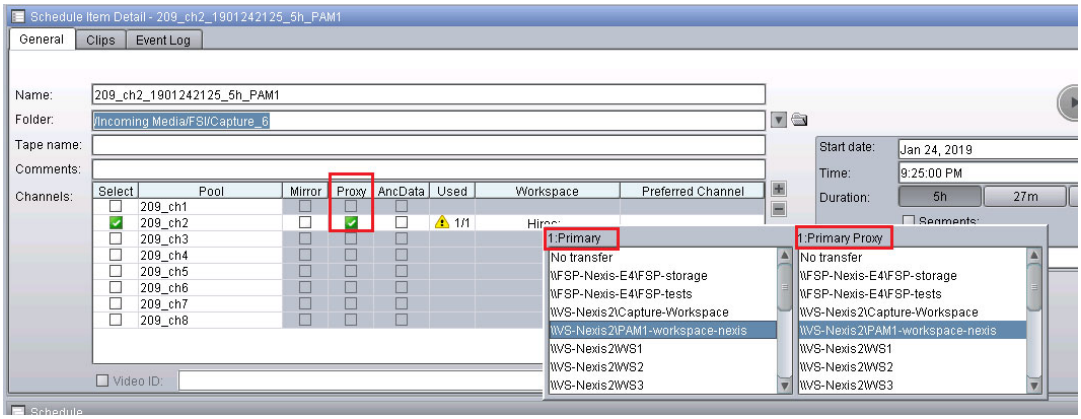
To remove a FastServe | Ingest server from Capture environment:

1. Delete all channel pools and all channels within these pools.
   a. Go to the Channel Pools tab: **Avid Interplay Administrator > Capture Settings > Channel Pools**.
   b. Delete all channels from the pool and press Apply.
   c. Delete the channel pool and press Apply.
   d. Repeat the steps above for all channel pools.
2. Delete all channels connected to the machine.
   a. Go to the Channels tab: **Avid Interplay Administrator > Capture Settings > Channels**.
   b. Delete all channels and press Apply.
3. Remove your FastServe | Ingest machine from the system.
   a. Go to Avid Service Configuration.
   b. Select the FastServe | Ingest machine to be deleted and click on the Remove button.
   c. Press Apply and exit the Avid Service Configuration.

The selected FastServe | Ingest machine has now been removed from the MediaCentral | Capture environment.

FastServe | Ingest Proxy Workflow with MediaCentral | Capture

To create a Proxy export for a channel pool in Capture, select the **Proxy** check box and pick the **Primary** and **Primary Proxy** workspaces.



Make sure that both workspaces, Primary and Primary Proxy, are mounted in the FastServe | Ingest WebSettings > System> Mounts. All mounts in the OVS > Share points section should be disabled.

Each Proxy recording generates 2 check-ins. One is a device clip created by FastServe, and the second one is a master clip created by Capture. Both, the device and master clips, can be dragged to Media Composer and for edit-while-capture.

The location of the device clip is configured in **Interplay Administrator > Capture Settings > General > Device Clips > Device clips folder**. Only one location can be defined for all recordings created by the Capture system.

The location of the master clips is configured directly in the Capture Scheduler, separately for each recording.

The device and master clip contain the high resolution, proxy and re-transferred files (if a re-transfer was requested).

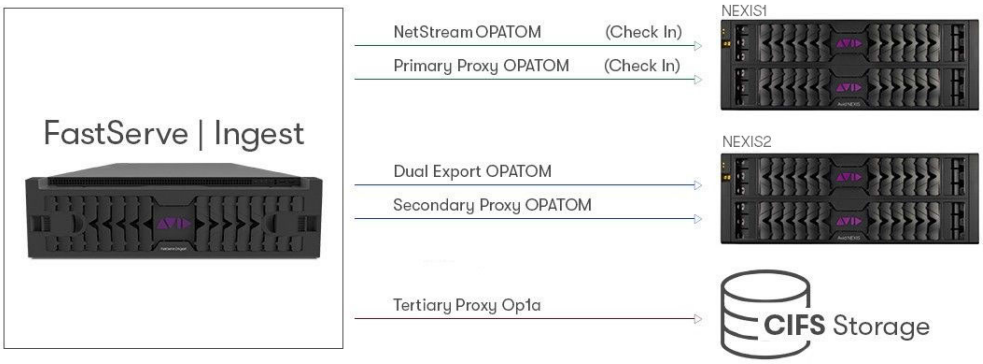
Updating of master clip content may take significantly longer, and thus it is recommended to use device clips for edit-while-capture.

Starting with version 2022.9, only one check-in is created, which contains the high-resolution clip, the proxy clip and the re-transfered clip (if one was created).

For more information on master and device clips, see "Device Clips vs Master Clips" on page 103.

Triple Proxy Workflow with MediaCentral | Capture

In the FastServe | Ingest triple proxy workflow, each ingest channel simultaneously generates 2 packages of HiRes files + proxy in HQ OpAtom proxy to 2 different NEXIS workspaces + OP1A proxy to a 3rd party storage.

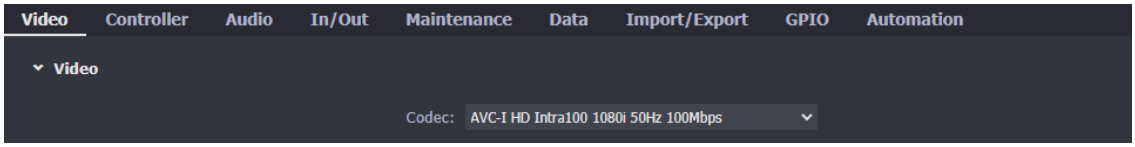


<u>Prerequisites:</u>

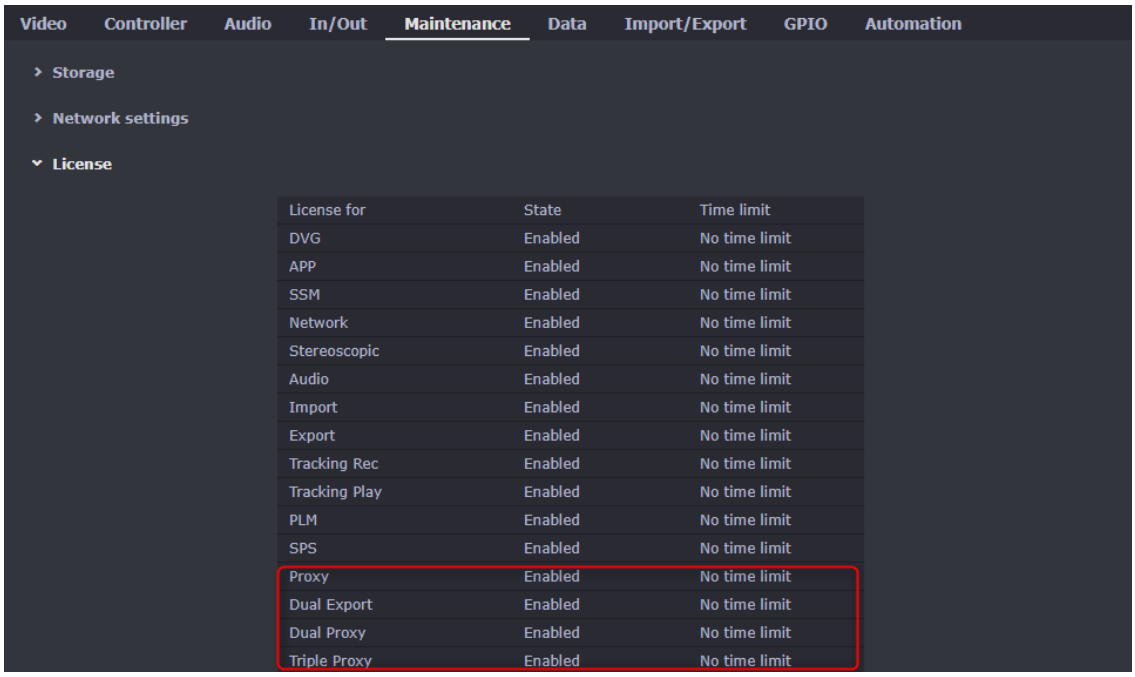
- AVC-I codec,
- NEXIS Client,
- Separate licenses for Secondary and Tertiary proxy as well as Dual Export.

To configure FastServe | Ingest Triple proxy with MediaCentral | Capture:

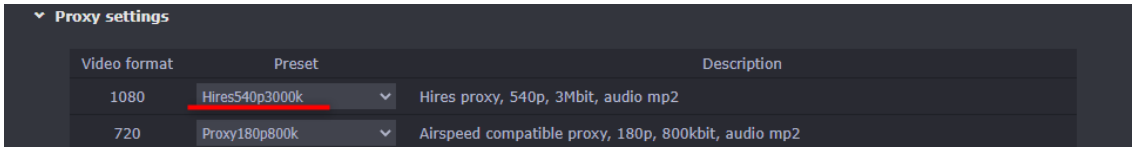
1. Set the AVC-I codec in the The Video Settings section.



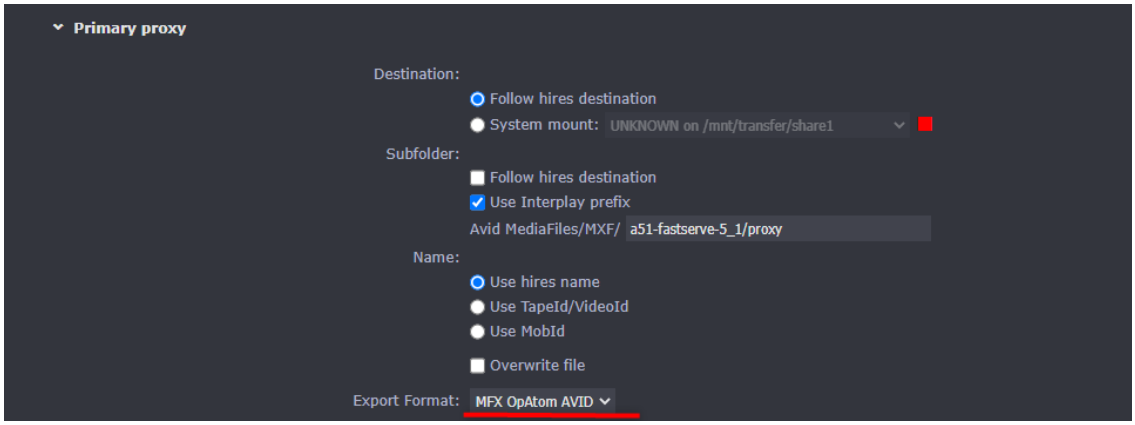
2. Check that all necessary licenses are enabled.



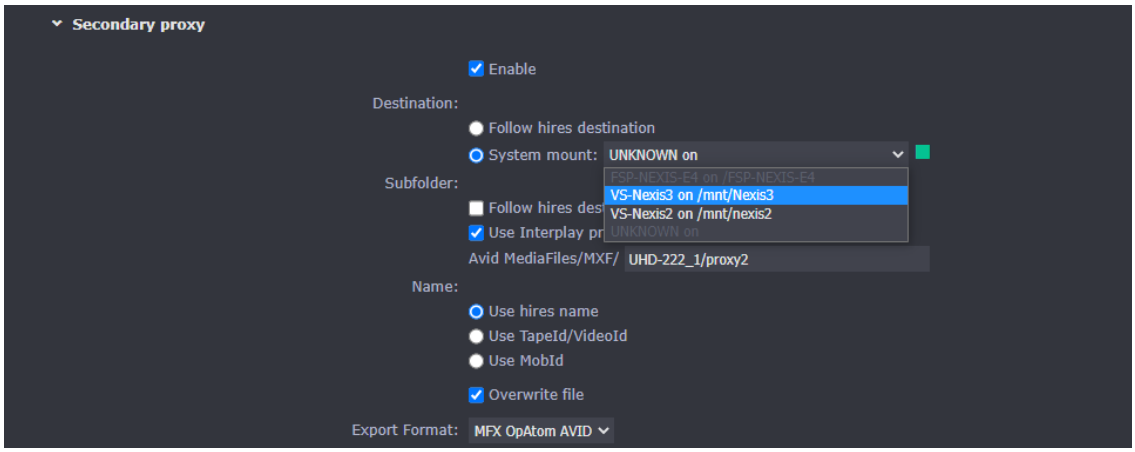
3. Go to **OVS > Import/Export > Proxy settings** and select the **Hires540p3000k** for the 1080 format.



4. Select **MFX OpAtom AVID** export format for the **Primary Proxy**. Enter the required **Subfolder** path. Configure the remaining settings as described in the Primary Proxy topic.



5. Configure the **Secondary Proxy**.
   a. Make sure the **Enable** check box is activated.
   b. Select a **NEXIS** storage from the drop-down list. Only mounts from the System tab are available.



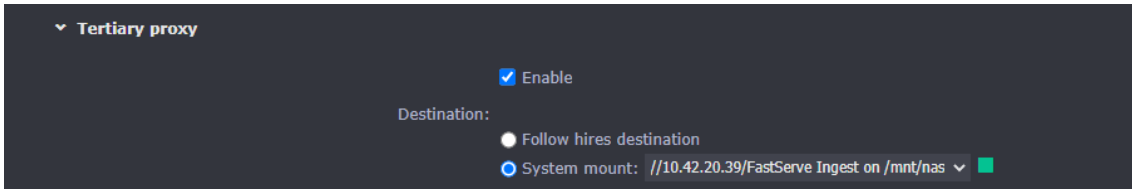
c. Select the required **Workspace** from the selected NEXIS mount.

d. Use **MXF OpAtom** as the export format.

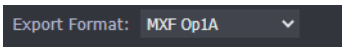
6. Set up the **Tertiary Proxy**.

a. Make sure the **Enable** check box is activated.

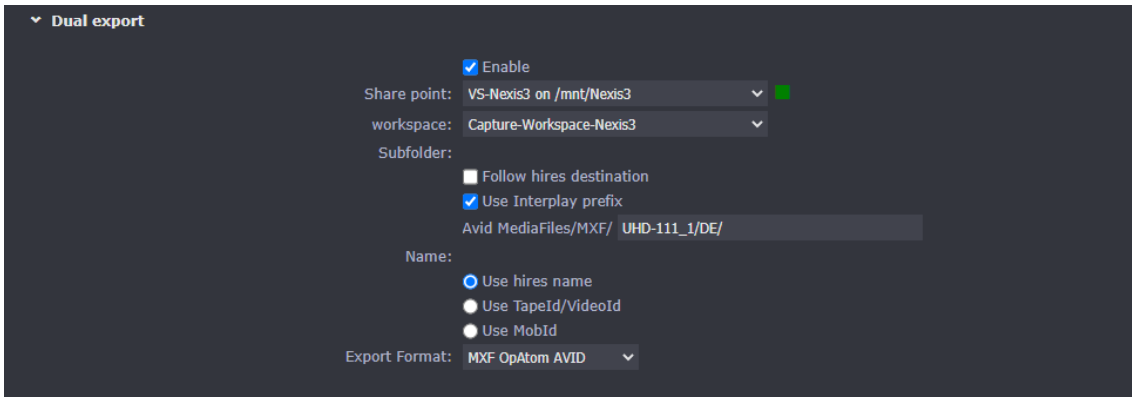
b. Select a **CIFS** storage from the drop-down list.



c. Set **MXF Op1A AVID** as the export format.



7. Activate **Dual Export** for the second high resolution files.

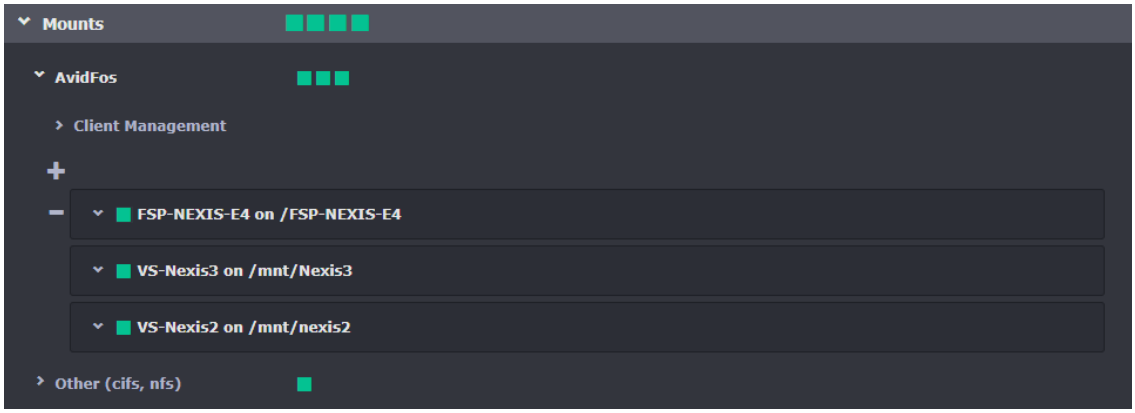


a. Make sure the **Enable** check box is activated.

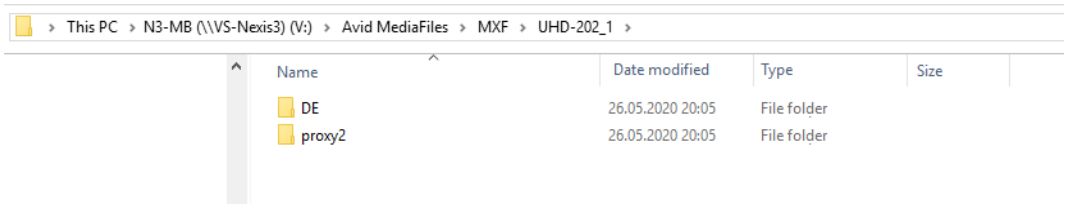
b. Configure all settings as described in the The Dual Export Settings topic.

c. Set **MXF OpAtom AVID** as the export format.

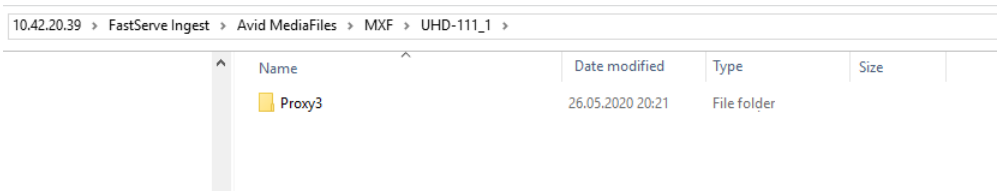
8. Before initializing the recording, go to the **System** tab and ensure that all mounts are connected.



9. Schedule HiRes + proxy recording as described in the FastServe | Ingest Proxy Workflow with MediaCentral | Capture topic.
10. Secondary HiRes (Dual Export) and secondary proxy OPAtom files will be created automatically as configured in the WebSettings.



11. The tertiary proxy OP1a file will be exported to the configured CIFS storage.



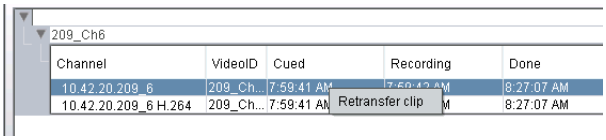
Re-transferring Clips from MediaCentral | Capture

Using MediaCentral | Capture you can initiate a retransfer of clips to FastServe | Ingest.

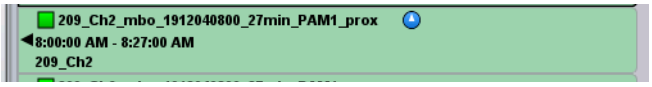
To re-export clips from MediaCentral | Capture:

1. Open MediaCentral | Capture Schedule and go to the **Clips** tab.
2. Right-click on the NetStream clip to be re-transferred and select **Retransfer clip**.

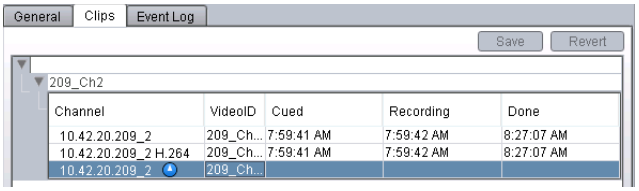
Re-transfer of proxy clips is not supported.



3. After initializing the re-export of the clip, a blue icon appears next to the recording name.



4. When the re-transfer is complete, a new item is added to the Clips tab in MediaCentral | Capture Schedule. You can re-transfer the same clip multiple times.



FastServe | Ingest and MediaCentral | Capture Integration - Best Practices

This chapter outlines how to configure and work with your FastServe | Ingest and MediaCentral | Capture environment to avoid integration errors.

Controlling FastServe | Ingest Channels

Make sure that a FastServe | Ingest is controlled by one operator. It is not allowed to use various controllers to operate the same channel. You can control FastServe | Ingest using the Remote Console, MediaCentral | Capture, or MediaCentral | Command. The FastServe | Ingest Remote Console allows to preview the current status of a channel controlled by Capture or Command.

Mount Your Workspace in the FastServe | Ingest WebSettings

Make sure to always mount your workspace using the FastServe | Ingest WebSettings. Only then, it can be accessed from MediaCentral | Capture. To find out how to mount your workspace, see "The Mounts Settings" on page 47.

Capture Scheduler shows only which workspaces have been mounted and are available at the Capture machine. Thus, it is possible to see different bundle of workspaces in the Capture Scheduler than on your FastServe | Ingest.

Do not use mounts/shares configured in the "Share points" section of Import/Export tab in WebSettings for the Capture workflow. All Share points should be disabled there.

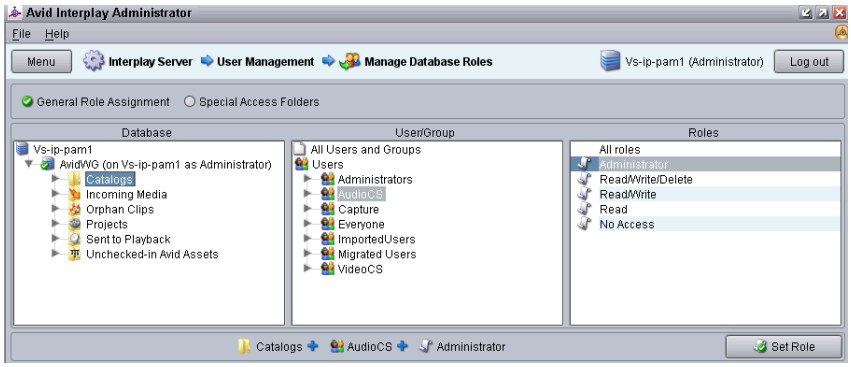
Check Your Interplay Configuration Details

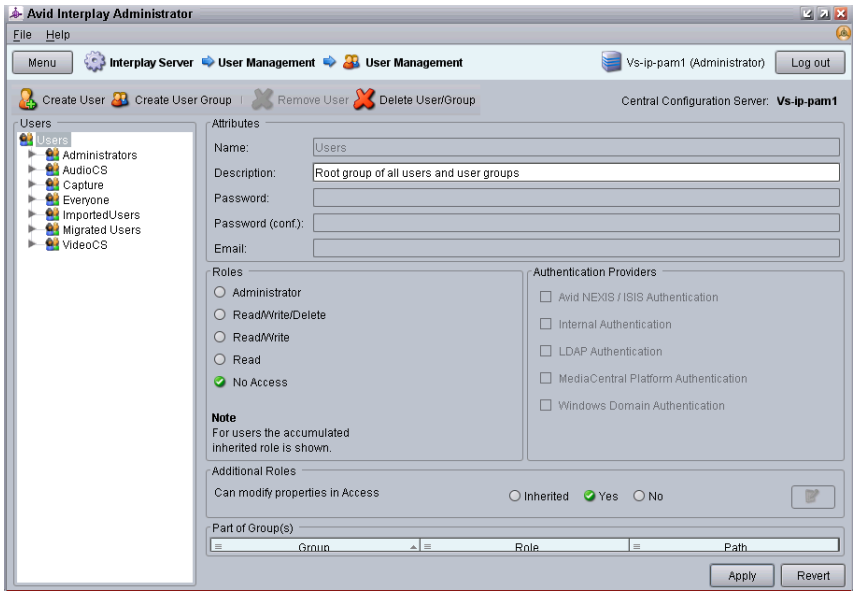
When you encounter problems with Interplay check-in, first make sure that correct login credentials and configuration details have been entered in the Interplay settings section () in the FastServe | Ingest WebSettings. These details need to match your configuration in Interplay Access.

*Make sure that the folder entered in the **URI path** field exists before adding it to your Interplay Settings. FastServe | Ingest will not create such folder in case it does not exist.*

Problems with Checking-in to Specific Folders

If you have problems with checking-in to specific Interplay folders, check if you have appropriate user permissions. Go to **Avid Interplay Administrator > User Management > Manage Database Roles** and **User Management**.





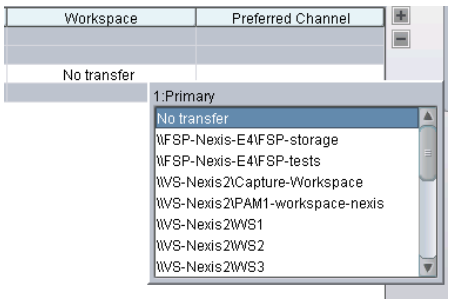
For more information on how to configure MediaCentral | Capture, see the Capture Installation and Administration Guide.

Where to Look for Recorded Files

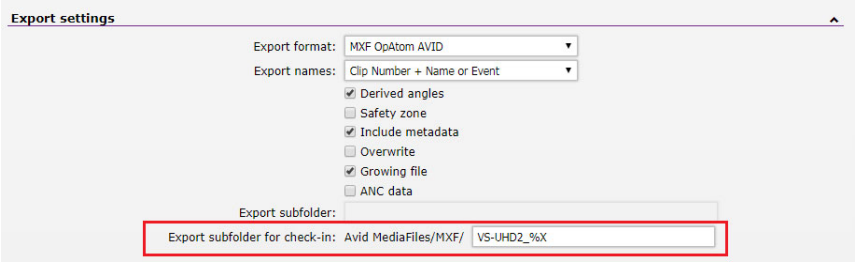
If the integration is set up correctly, the recorded files should be visible in Interplay Access, in the File Locations tab.

You can also construct your file location path by following the steps below:

- First, check the workspace name in Capture Scheduler.

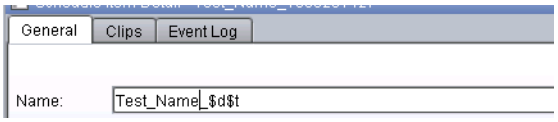


- Then, look for the path of the check-in subfolder in the FastServe | Ingest WebSettings.



The "Export subfolder for check-in" option becomes available after enabling the "Enable check-in" parameter in the Interplay Settings section (" " on page 32).

- Finally, in the Capture Scheduler check the name template for your recordings. You can enter the beginning of the file name and a suffix will be added automatically (date, time and other information).



A complete path has the following format:

\\Workspace_Name\Avid mediafiles\MXF\Folder_Name%X\Test_Name_dt%

The Proxy files will be created according to the Primary Proxy settings in the Web Settings Import/Export tab. To keep the high resolution and proxy files in the same location, use the Destination = "Follow hires destination" and Subfolder = "Follow hires destination" options.

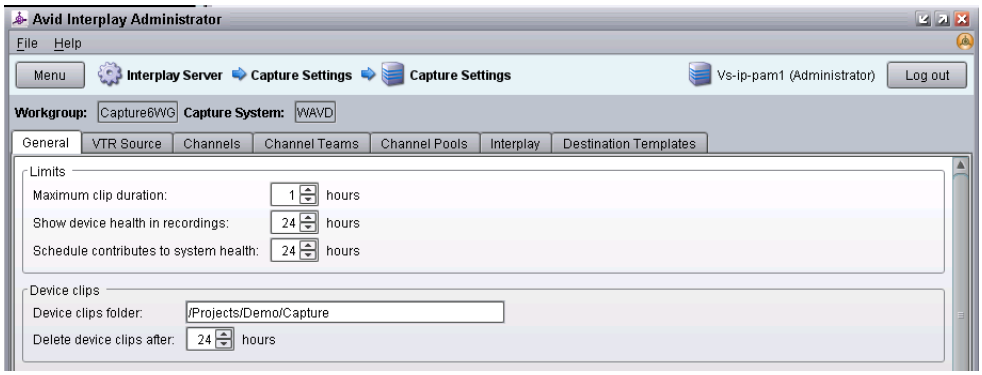
Device Clips vs Master Clips

Device clips are checked-in on the FastServe | Ingest level. Master clips however are checked-in by MediaCentral | Capture. Both types refer to the same actual file, but their lengths are different.

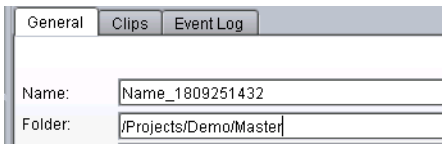
Master clip check-in consists only of the time scheduled in Scheduler. Device clip check-in contains the entire scheduled recorded material and start/stop safety margins.

You can adjust the safety margin in the Capture settings.

The folder for device check-in is set in the Interplay Administrator application. Go to **Avid Interplay Administrator > Capture Settings > General > Device Clips** and in the **Device clips folder** set the required path.



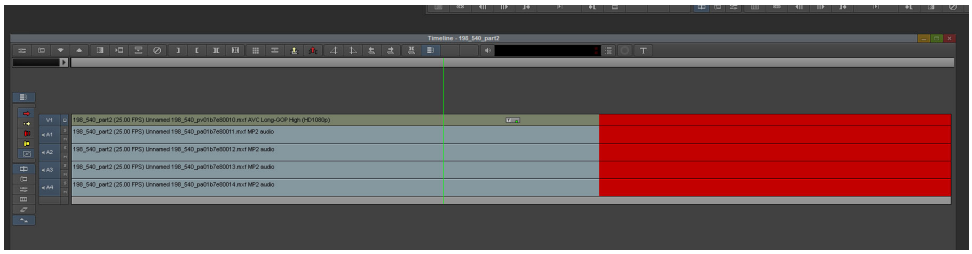
Location for master clips is configured directly in Capture Scheduler, separately for each recording.



Check Time Synchronization between FastServe | Ingest and Capture

Make sure that the time set at your FastServe | Ingest and MediaCentral | Capture machines is identical. If there are timecode differences, the device and master clips may not match.

If the time difference is bigger than the configured safety tale, a part of your master clip will be unavailable in Media Composer.

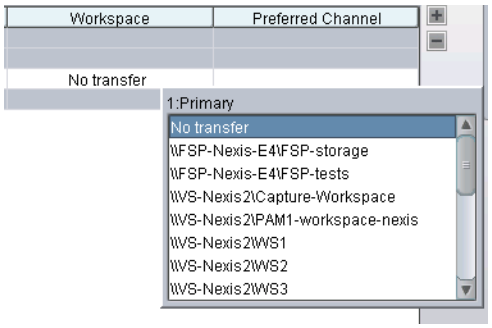


To configure the date & time of your FastServe | Ingest machine, it is recommended to use the WebSettings (The Time & NTP Settings). When setting the time directly in Linux manually, be aware that it will be overwritten after rebooting or restarting.

Exporting to Multiple Workspaces at Various NEXIS Machines

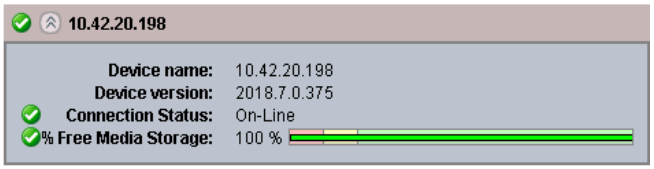
It is possible to set up exports to multiple workspaces, configured on different NEXIS machines. The main requirement is that all of the NEXIS machines have the same version of the software. Also, make sure that MediaCentral | Capture and FastServe | Ingest use the same NEXIS Client versions.

To switch between workspaces in MediaCentral | Capture, simply select one from the list.



Checking the FastServe | Ingest Storage in MediaCentral | Capture

To check the available FastServe | Ingest media storage in MediaCentral | Capture, open the **Avid Health Monitor** application. Go to **Hosts** and **Avid AirSpeed API Device**.



Make sure that there is enough space at both machines (NEXIS and Capture) to avoid problems with FastServe | Ingest recording.

Number of Ingest Channels

When switching from Avid AirSpeed to the Avid FastServe | Ingest server, take note that FastServe | Ingest supports up to 8 ingest channels, while Avid AirSpeed allowed for up to 4 ingest channels.

Proxy Destination Folder

The proxy destinations set in the WebSettings, take priority over those defined in Capture.

Input / Output Channels Format

FastServe | Ingest does not support setting different formats for the output and input channels. You need to set one preset for all channels.

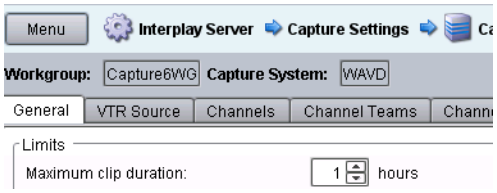
FastServe | Ingest Requires Genlock

For the FastServe | Ingest server to work properly, a valid Genlock connection is required. Make sure that your FastServe | Ingest server receives a valid Genlock signal. For more information, see the *FastServe | Ingest Setup Guide.*

Maximum NetStream Size

Although in FastServe | Ingest, the maximum size of a single NetStream is 6 hours, it is recommended not set recordings longer than 5 hours.

In the Capture environment, you can set the size of maximum clip duration. Go to **Interplay Administrator > Capture Settings > General > Limits**. In the **Maximum clip duration** field, set the number of hours.

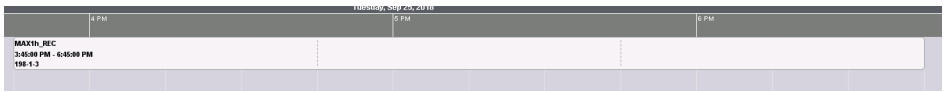


<u>Example:</u>

If the maximum clip duration is shorter than the scheduled recording.

Maximum clip duration = 1h

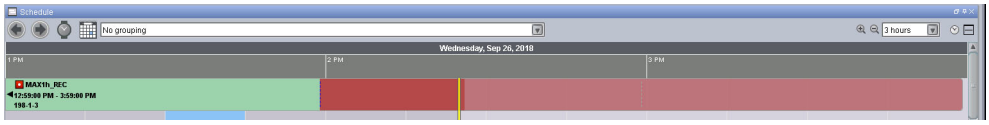
Scheduled recording = 3h



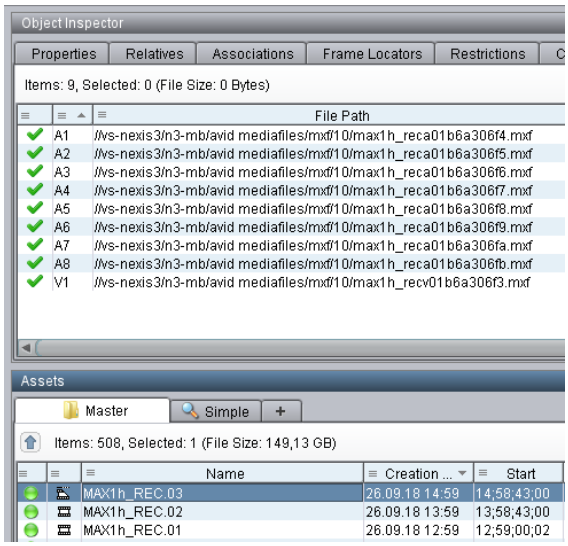
Capture will initialize a recording split into 3 pieces.

Just before cut, Capture initializes recording at a second channel. Safety margins will be saved.

View in MediaCentral | Capture

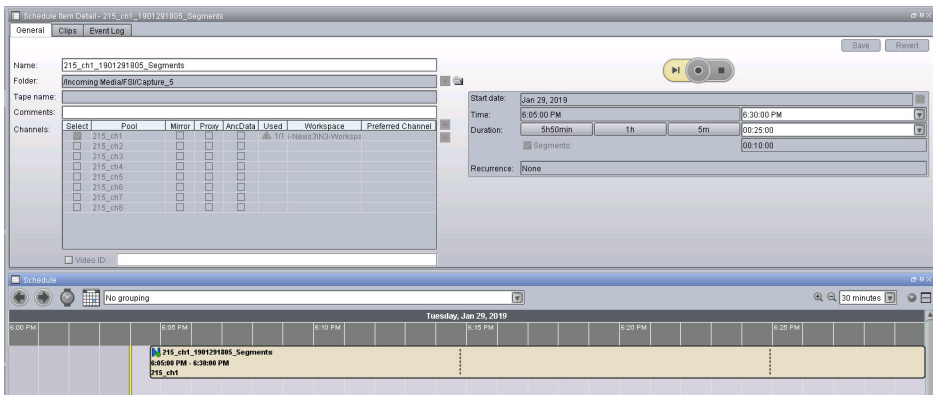


As a result, 3 separate check-ins appear in Interplay Access



Segments Support

When the segmentation option is enabled, Capture attempts to segment the recording at the requested interval based on availability of healthy channels for each channel pool selected in a recording.

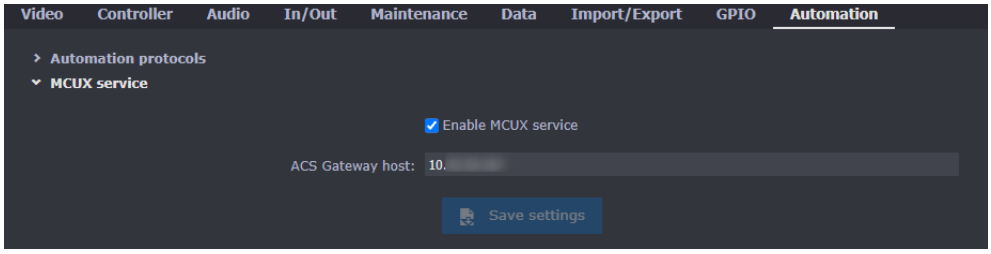


Integration with MediaCentral | Acquire

FastServe | Ingest (also in the FastServe | I/O configuration) can be controlled by MediaCentral | Acquire, which is Avid's new ingest scheduling application that lets you preview, control, and schedule media ingest remotely from anywhere. It is available as an app in MediaCentral | Cloud UX.

To enable the integration with MediaCentral | Acquire:

1. Log into the FastServe | Ingest Web Configurator, and go to **OVS > Automation > MCUX service**.



2. Select the check box next to Enable MCUX service, and provide the address of the MediaCentral | Cloud UX host.

When MediaCentral | Acquire is used to control FastServe | Ingest, the check-in is performed by the Acquire app. Make sure the Check In option in the Remote Console is disabled.Please refer to the Avid MediaCentral | Acquire documentation for all configuration details.

Tips and Tricks

MediaCentral | Acquire obtains the list of available workspaces for FastServe | Ingest only when it first connects to the ingest server. Sometimes, this list can change - e.g. some workspaces become unavailable or are added by the user - but the user will not be notified of such change. To refresh the list of workspaces, restart the MCUX service in the OVS tab of the FastServe | Ingest Web configurator (disable and re-enable the service).

This action may affect the control of ingest on the given server by Acquire. Make sure that FastServe | Ingest server is not recording when performing the restart of the MCUX service!

Working with Proxy Recording

FastServe | Ingest now allows for ingest eight channels of XDCAM material while simultaneously generating eight proxy streams, providing a smooth transition from high-res to proxy and vice-versa. And it offers dual ingest of high-res and proxy media directly to Avid NEXIS, with immediate Edit While Capture functionality available for journalists and craft editors.

Multi-resolution recordings can be enabled for proxy editing workflows. This results in two clips of different resolutions associated with the same master clip in Interplay. FastServe | Ingest can work with proxy recordings from two different sources:

- Avid MediaCentral | Capture. For more details on how to enable Proxy recordings in Capture, see "FastServe | Ingest Proxy Workflow with MediaCentral | Capture" on page 96.
- The FastServe | Ingest Remote Console. For more details, see the Configuring Ingest Templates topic.

Starting with version 2022.9, the high-resolution and proxy clips are checked-in together as one item to MediaCentral | Production Management.

5 FastServe | I/O Configuration

The following chapters contain information on how to configure the FastServe | Ingest server in the I/O mode (a configuration referred to as FastServe | I/O). FastServe | I/O is a dedicated FastServe | Ingest configuration which provides the user with a flexible ingest & playout solution.

FastServe | I/O configurations are not yet certified for FastServe | Ingest UHDS2 Gen 2 machines.

- Setting up FastServe | Ingest in the IO mode
- Configuring Send-to-Playback
- Working with MediaCentral | Command
- Converting FastServe | I/O to Standard Configuration

Setting up FastServe | Ingest in the IO mode

FastServe | I/O is based on the standard FastServe | Ingest engine in a **4 IN** & **4 OUT** configuration in XDCAM format. Media ingest is driven by MediaCentral | Capture (as described in the Configuring FastServe | Ingest for MediaCentral | Capture Workflows), while the playout is controlled by MediaCentral | Command. FastServe | I/O also supports the Send-to-Playback mechanism to allow for a more seamless integration with editing systems and to provide a fast turnaround.

FastServe | I/O is treated by Command as a third party plugin ("Other video") and thus certain limitations apply to this integration. Before configuring Command to integrate with FastServe | I/O, please verify the following:

- check the versions compatibility;
- make sure that **FastServe | Ingest Plugin for Command** is installed on the Command system.

Please refer to the latest MediaCentral | Command documentation for most up-to-date compatibility information and limitations.

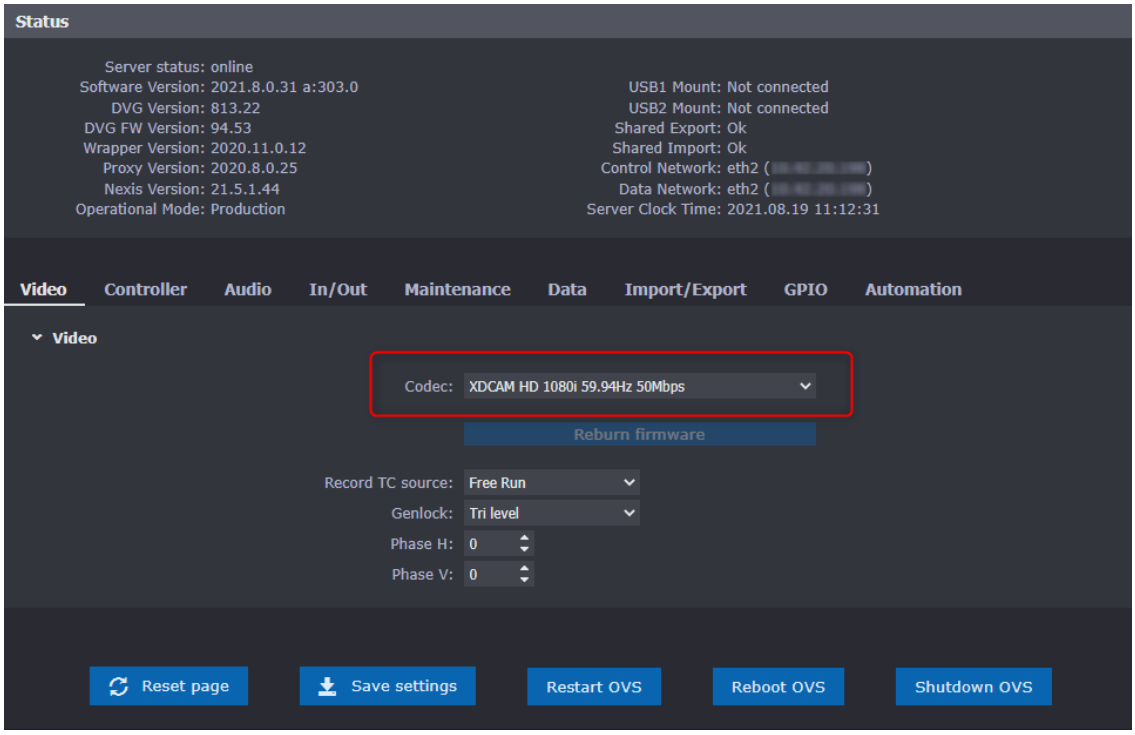
Currently, integration between FastServe | I/O and Command allows for the following workflows:

- single channel playout,
- multi-channel playout,
- shotbox in Command,
- FastServe | Ingest in mirror configuration (certified only FSI as a mirror),
- Command redundancy (check the Command limitations in the latest *MediaCentral | Command ReadMe*).

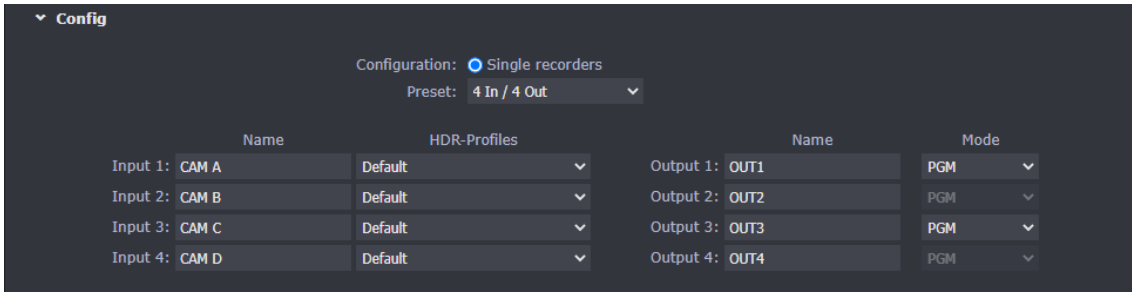
The following procedure describes how to configure your FastServe | Ingest server in the IO mode.

To set up FastServe | Ingest in the IO mode:

1. Open the FastServe | Ingest Web Settings and sign in, as described in the Logging In topic.
2. Go to **OVS > Video > Video** and make sure the **Codec** is set to XDCAM.



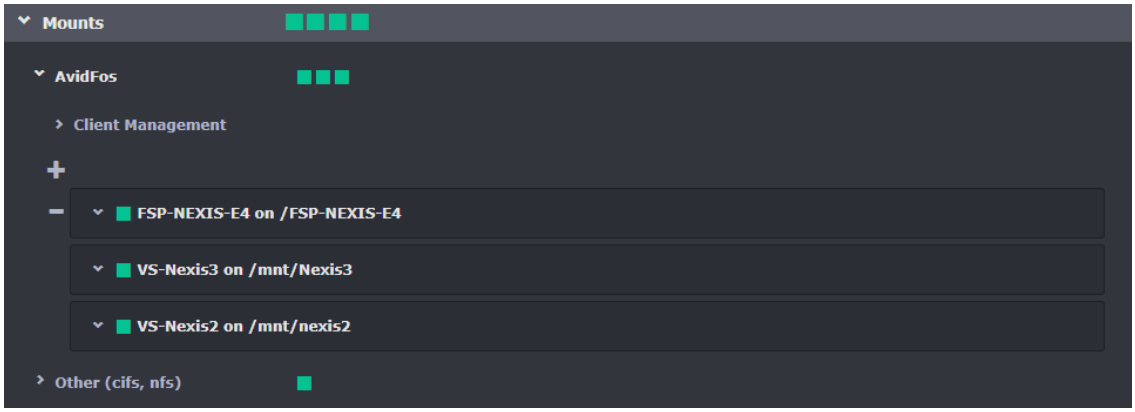
3. Open the **In/Out** tab and select the **4 In / 4 Out** configuration.



4. Navigate to the **Import/Export** tab, and expand the **Netstream** section:

Select the first **4** inputs only and set the Max streams option to **4**.

5. (Optional) If you are planning to use Send-to-Playback, configure it as described in the Configuring Send-to-Playback topic.
6. FastServe | I/O works only with Avid NEXIS mounts. Make sure all mounts in the **OVS > Import/Export** tab are disabled. Then, open the **System** tab and check your Avid NEXIS **Mounts** are working properly.



7. The E2E mode, used widely across FastServe | Ingest workflows, needs to be disabled in the FastServe | I/O configuration. Instead, the black frame on output needs to be configured as described below, so that whenever clips are ejected from playout channels, the outputs will be black.
   a. Stop all FastServe components:

      ```
      cd /data/VS/bin
      /set_run -s all
      ```

   b. Open the **vsPreferences.cfg** (`vim vsPreferences.cfg`) file and edit the following parameters:

      - **#115 EJECT_MODE:** Play channel eject mode ([0]:E2E, **1:Fill frame**, 2:Bypass), 8 integer values # List of comma separated integer values

      EJECT_MODE=1,1,1,1,1,1,1,1

      - **#116 FILL_FRAME:** Play channel default fill frame and on eject ([0]:Color bars, **1:Black**, 2:User1, 3:User2, 4:Freeze), 8 integer values # List of comma separated integer values

      FILL_FRAME=1,1,1,1,1,1,1,1

These values must be changed back to 0,0,0,0,0,0,0,0 when the system is set back to a standard FastServe | Ingest configuration.

   c. Save and close the vsPreferences.cfg file (`:wq!`) and restart the FastServe components:

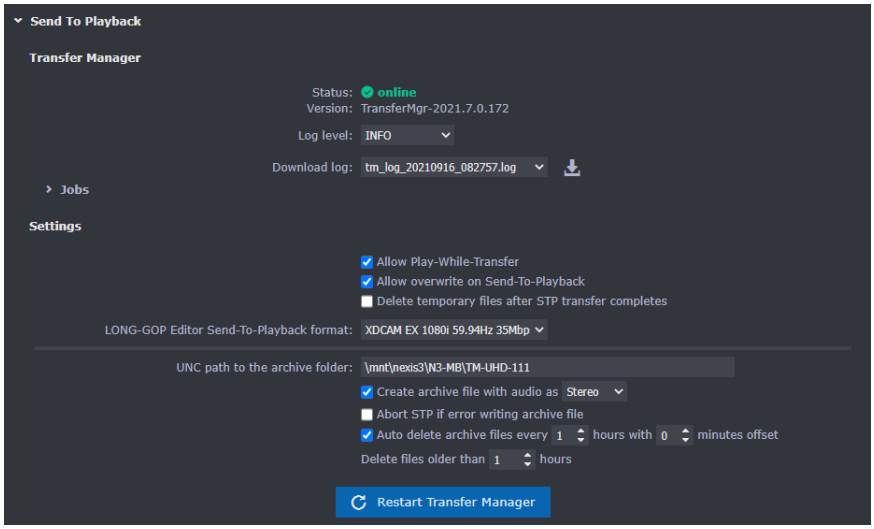
      ```
      ./set_run -a all
      ```

Configuring Send-to-Playback

The STP (Send to Playback) engine enables playout while the media is being transferred from Avid Media Composer to the FastServe server.

Prerequisites

An additional component, the **Transfer Manager**, is required for STP to work. It is installed by default and you can check its status in the **OVS > Import/Export > Send To Playback** settings.



If Transfer Manager is not installed, follow the instructions below to install and configure it.

To install Transfer Manager:

1. The Transfer Manager installer can be found in the `data/VS_INSTALLS/VS_FULL_CS7-<version>` folder. Navigate to this location and execute the TM installer:

   ```
   rpm -ivh TransferMgrFSI-centos-7-x86_64-*.rpm
   ```

2. Enable the Transfer Manager service:

   ```
   systemctl enable tmr
   ```

3. Start the Transfer Manager service:

   ```
   systemctl start tmr
   ```

4. If Transfer Manager should be included in the list of components restarted by the "Restart OVS" button in the FastServe Web Configurator, add the "**tmr**" keyword at the end of the **allApps.cfg** configuration file:

   ```
   /data/VS/bin/allApps.cfg
   ```

   ```
   rdt ext ovs cmd vsc ast wf proxy tmr
   ```

   Save and close the file.

To configure OVS for STP workflows:

1. Navigate to `/data/VS/bin` and open the **vsPreferences.cfg** file.
2. Find the following section:

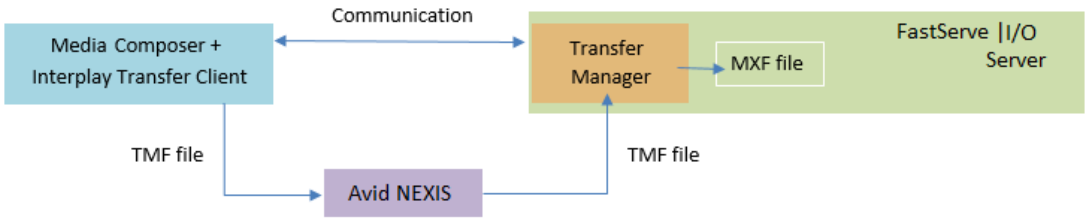
   #609 TASKS_MAX_HP_TM: Maximum number of Transfer Manager import high priority concurrent active tasks.

   and set the value of **TASKS_MAX_HP_TM** to **5** (TASKS_MAX_HP_TM=5).

When the FastServe | I/O system is configured to a standard setup, the value of TASKS_MAX_HP_TM must be set back to 0.

STP Workflow Description

The Long GOP workflow and architecture is based on the creation of a temporary media file (TMF file) inside the Avid NEXIS/Temp storage.



This file can be either deleted after the STP process completes or it can be kept for future actions. When Send-to-Playback is executed from Media Composer, the TMF file (Temporary Media File) is created (mixed down, rendered, transcoded) by Media Composer to the Avid Shared Storage (NEXIS).

Transfer Manager (internal FastServe application) grabs the TMF file (which is still being transferred by Media Composer) and triggers internal FastServe import feature to unwrap the file into a compatible essence.

As soon as the clip appears in the internal FastServe | Ingest storage, it is registered in the FastServe database. Transfer Manager regularly updates the video's duration in the database to make it available for the controlling application. Consequently, the video can be played on-air by an appropriate controller.

Compatible Formats

Media Composer and MediaCentral | Cloud UX allow to perform Send-to-Playback to FastServe | Ingest in the following formats:

Format	1080i50	1080i59	720p59
XDCAM HD 50	☑	☑	☑
XDCAM HD 35	☑	☑	☑

Invalid Characters In STP Asset Names

The naming convention for asset names used for STP must comply with Avid Interplay environment standards. The following table lists the valid and invalid characters (also known as special characters) for Interplay.

	Allowed	Not Allowed
Avid asset names		Characters: / \ |

	Allowed	Not Allowed
File asset names and Interplay database folder names	All characters allowed for files in Windows	Characters: * ? : / \ " < > | Names ending with a dot Names used as DOS devices (LPT1, com1, .., .,, for example)
Property names (metadata field names)		Characters: / \ |
Video ID (Tape ID) metadata field		The only characters allowed are letters, numbers, underscores, and hyphens. *The Video ID metadata property in Interplay Access is editable and accepts any character. However, valid characters are enforced in Send to Playback operations.*
Users and user groups		Characters: / \ |" '

Although the following characters are valid for users and user groups in Interplay, they are not supported when naming projects, bins, and users on Avid editing systems:

: * ? < >

Do not use these characters in Interplay user names or group names.

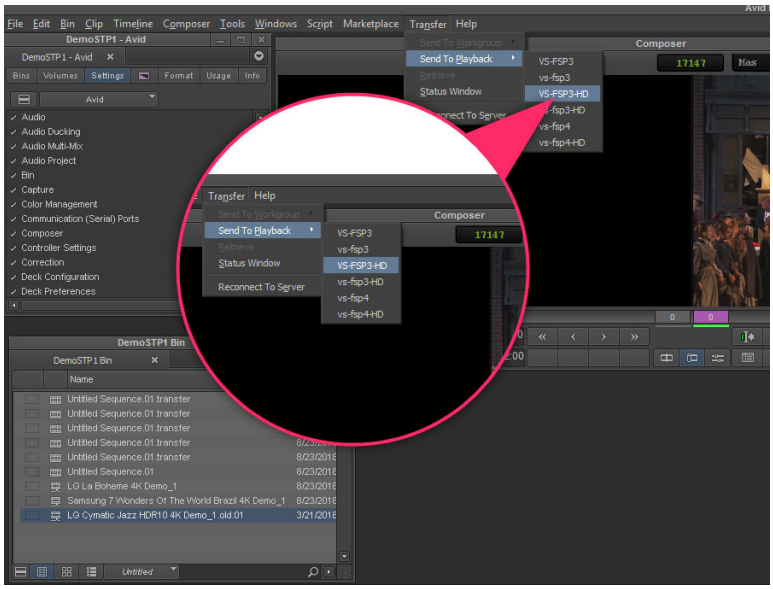
For information on International Character Support (ICS), see the Interplay Help.

When you name a macOS computer, use single-byte ASCII characters without spaces.

Configuring Send-to-Playback

Avid Interplay Transfer lets you send finished sequences to a configured playback device. When there is an Interplay Transfer Client configured, a **Transfer** menu appears in Media Composer.

Select **Transfer > Send to Playback**, and select the profile for the server to which you want to send the sequence.



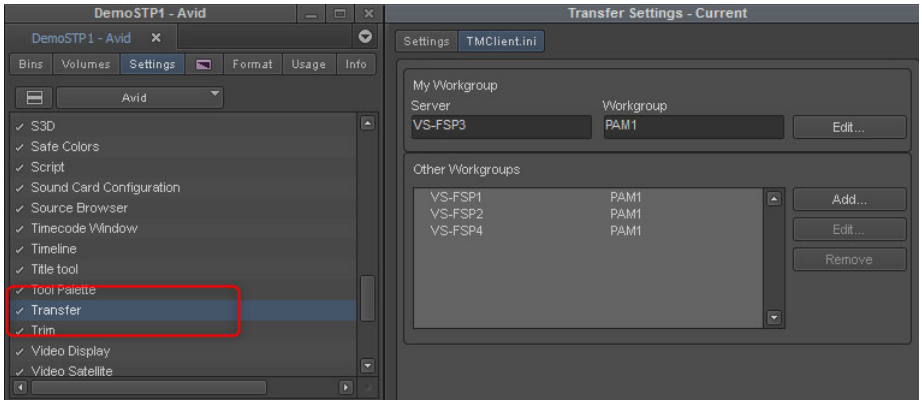
To configure STP from Media Composer to FastServe | I/O:

1. To configure the servers receiving the STP sequences in Media Composer, click the Settings tab and go to the Transfer option.

The Transfer Settings dialog box appears only if your system is part of an Avid Interplay environment and you have configured Avid Interplay Transfer.

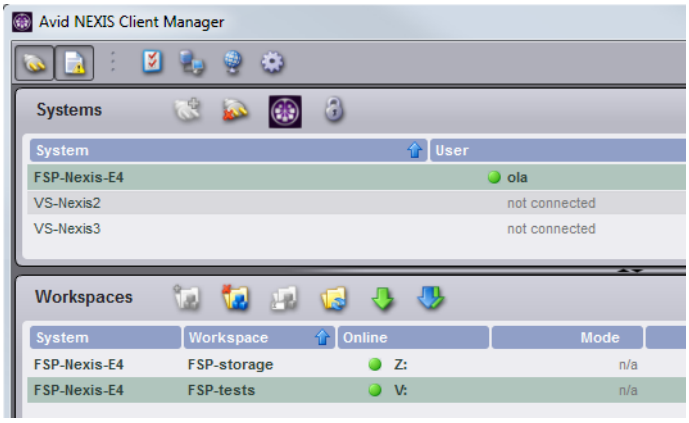
2. Go to the **TMClient.ini** tab. In the Other Workgroups area, click Add and specify the server details.

   Click OK to close the Transfer Settings dialog box.

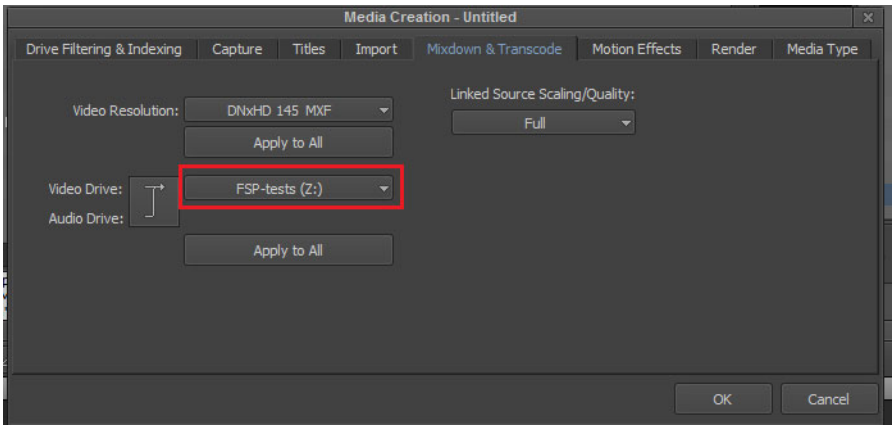


   Once the servers are properly configured, they appear in the **Transfer > Send to Playback** menu.

3. Ensure that the Media Composer workstation has a valid connection to Avid NEXIS and an active workspace.



To select a shared storage workspace in Media Composer, go to **Settings > Media Creation > Mixdown & Transcode**.



4. The same workspace needs to be mapped in the The Mounts Settings of the FastServe Web Configurator.

Executing Send-to-Playback

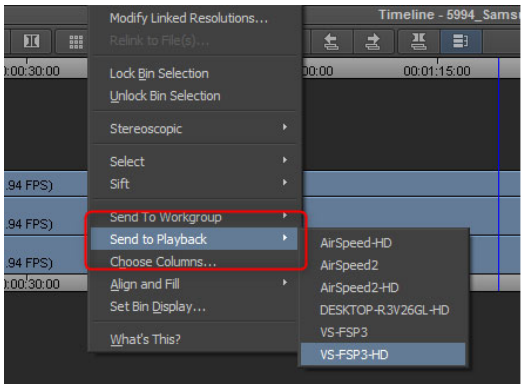
When all your edits and cuts are complete and the final sequence (or its components) are already transcoded to the desired codec, framerate and resolution, then the STP process can be started in one of two ways, as described below.

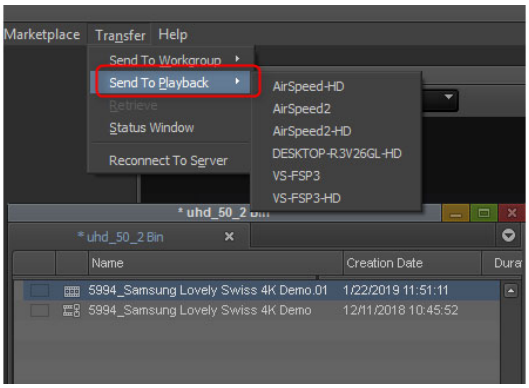
To execute Send-to-Playback:

1. In Media Composer's bin, right-click on a sequence, select the **Send To Playback** option and choose the server to which the sequence should be sent.

   - or -

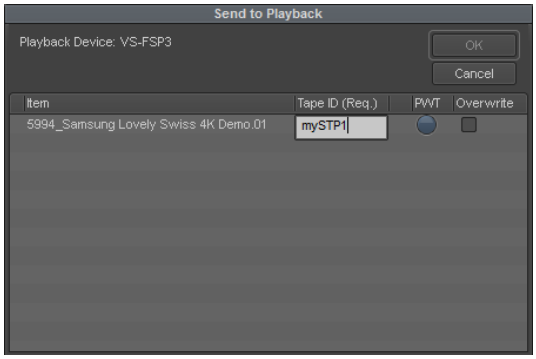
   In Media Composer's Clip Bin, highlight the sequence, then go to **Transfer > Send To Playback** and choose the server to which the selected sequence should be sent.





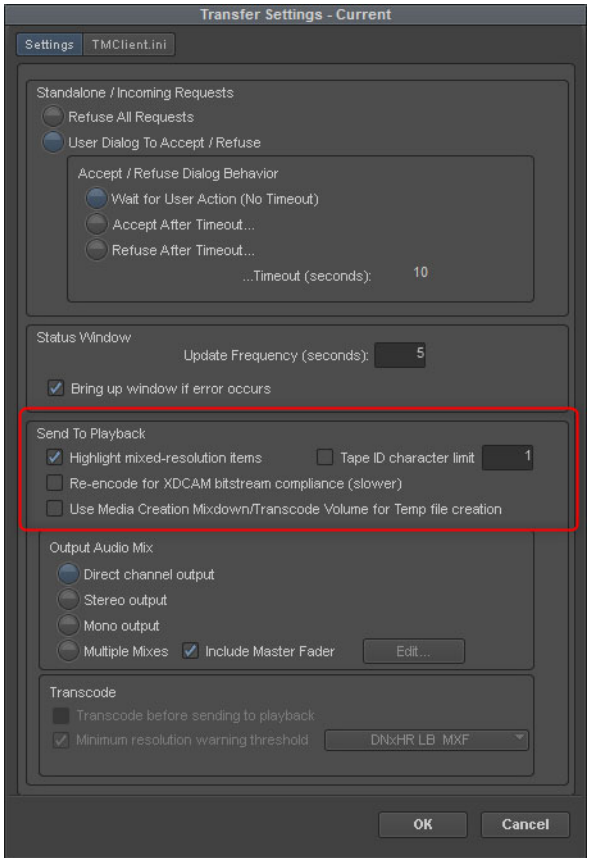
Because FastServe | I/O only supports Send-to-Playback in Long-GOP format , servers with the -HD suffix have to be selected.

2. After selecting the profile for the server to which you want to send the sequence, the Send to Playback dialog box opens.



3. In the Send to Playback dialog box, do the following:
   - Type a tape ID name, which will be used as the final clip name in your playout device.
   - (Option) Select PWT (Play While Transferring), if you want to play this clip while it is still growing.
   - (Option) Select Overwrite, to overwrite the tape ID name in Interplay Transfer if the same name exists.

   Press OK to confirm. The system immediately starts the send to playback operation.
4. Sometimes, there will be a mixdown of audio done before the transfer starts. Check the **Media Creation > Mixdown & Transcode** settings in your Media Composer, as well as the **Transfer Settings** and the **Send to Playback** section:



Working with MediaCentral | Command

FastServe | I/O integrates with MediaCentral | Command for news rundown control. The topics below describe how to configure your FastServe system to fully integrate with MediaCentral | Command.

For FastServe | I/O the following ports can be used for Command connection: **10011** or **10004**.

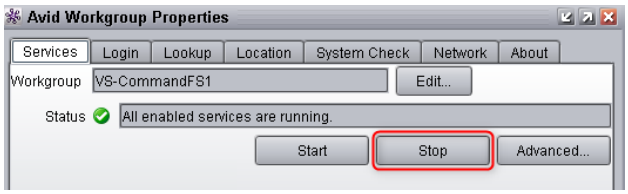
Maximum two (2) MediaCentral | Command systems can be connected to one FastServe | I/O server (including Commands in a redundancy setup).

Configuring FastServe | I/O for Command

Avid MediaCentral | Command requires a prior installation of the **FastServe Playout Plugin for Command**. Download the appropriate version from the Avid Download Center or contact your system administrator.

*To find out about any changes to the FastServe Playout Plugin for Command, please refer to the **Avid FastServe | Playout Plugin for Command ReadMe** document.*

The FastServe Playout Plugin needs to be installed on the same machine as MediaCentral | Command. Before the installation, launch the Avid Workgroup Properties and stop all services:



Then, double-click the FastServe Playout Plugin installer and complete the installation. After the installation, launch the Avid Workgroup Properties and restart all services.

To verify the version of the FastServe Playout Plugin:

1. To verify if the correct version of the plugin is installed, navigate to the following folder:

   `C:\Program Files (x86)\Avid\iNEWS Command\device\avidvideodeviceservice\lib`

2. Right-click on **VideoTestPlugin.dll**, select "**Properties**" and in the "**Details**" tab confirm the version number.

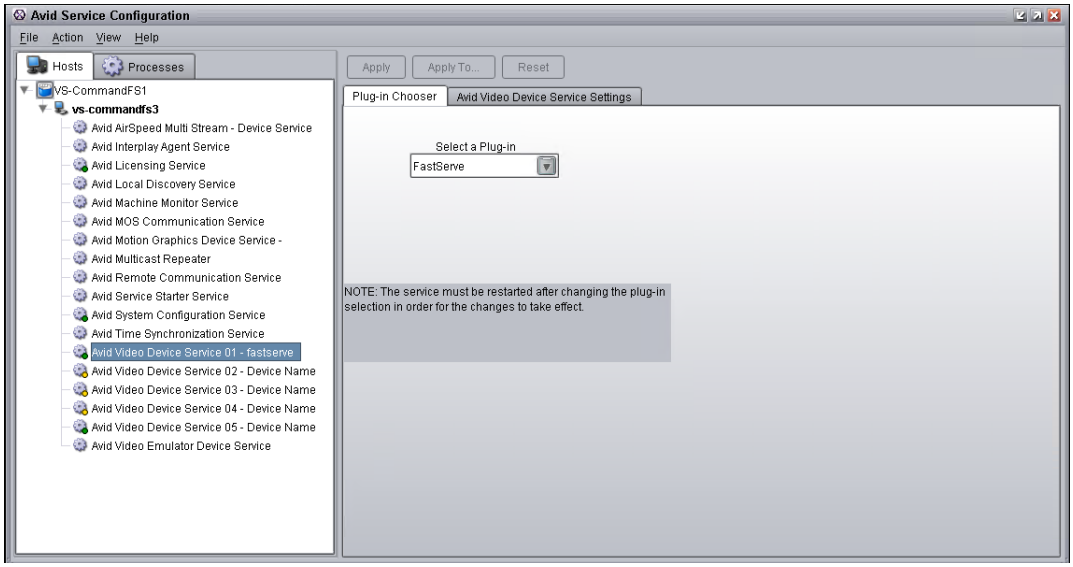
All logs for the plugin are stored in the following location:

C:\ProgramData\Avid\iNEWS Command\FastServePlugin\Logs

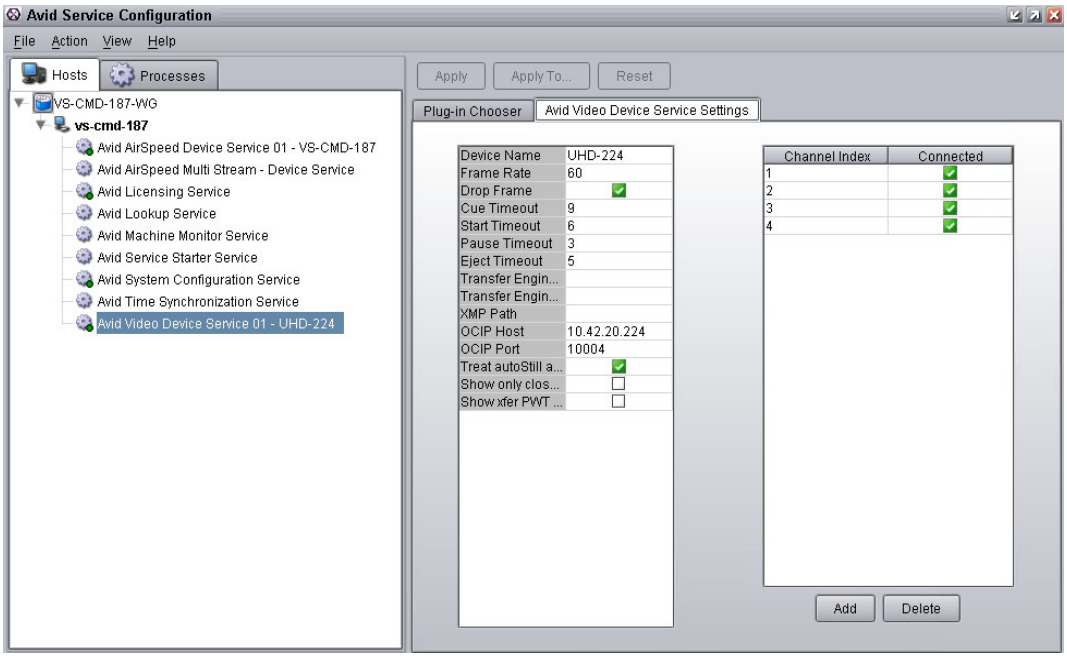
The next step is the configuration of MediaCentral | Command to work with the specific FastServe server.

To configure FastServe Playout Plugin for Command:

1. Open the **Avid Service Configuration** tool, expand the tree of available services and choose **Avid Video Device**:



2. If prompted for password, press **OK**.
3. In the **Plug-in Chooser** tab, select **FastServe** from the drop-down list and press **OK**. All services will be restarted.
4. When all services are back online, go to the **Avid Video Device Service Settings** tab:



5. Configure the necessary fields:

Field	Description
Device Name	Enter the name of the device, which must match the name used for the device channel in the Command system settings.
Frame rate	Set the required frame rate and make sure the **Drop Frame** option is selected.
Timeout	Set the required Cue/Start/Pause/Eject timeout values. The default values (in seconds) are: • Cue Timeout: 6-10 • Start Timeout: 6-10 • Pause Timeout: 3-10 • Eject Timeout: 5-10
OCIP Host	Enter the IP address of the FastServe | Ingest server.
OCIP Port	Set the OCIP port. **If there are 2 plugins in a redundant setup using the same OCIP port, then the system will not function properly.**
Treat autoStill as Cue	This option allows to display (play with speed = 0) the first frame of the video after sending Cue. **This option is obligatory for FastServe | I/O workflows!**
Show only closed files	When enabled, only transfer-complete files will be visible in the Command inventory. All clips that are “in progress”, or are “still transferring” will not appear in the inventory. This option can be used to prevent the playout of growing, unfinished content on air.

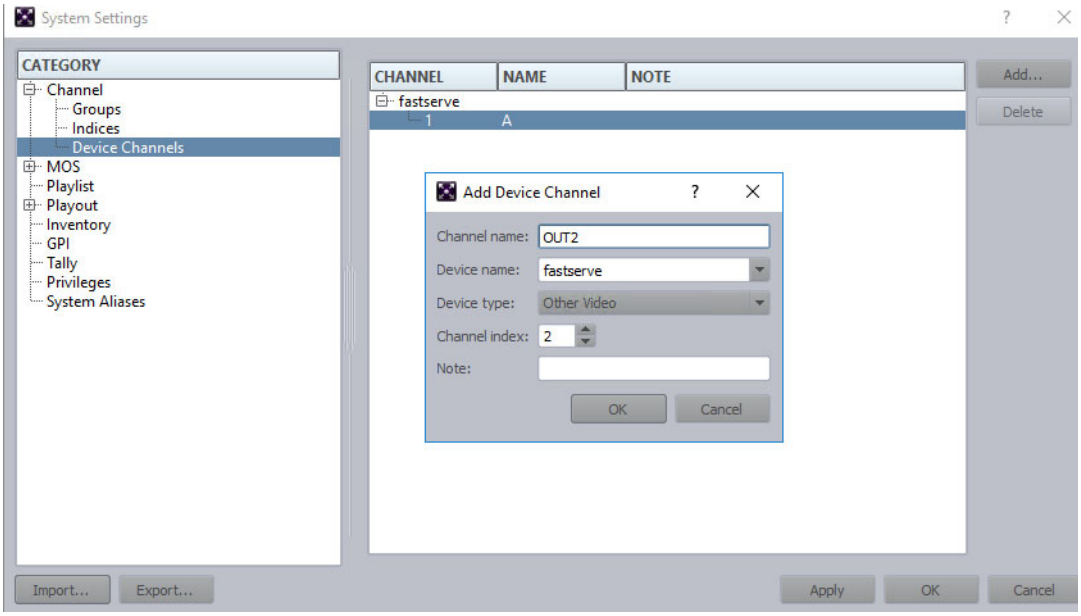
Field	Description
Show xfer PWT only	Enabling this option results in showing transfer-complete clips in the inventory, as well as growing clips, but only the ones with the “Allow PWT” option enabled in Media Composer. The clips without the PWT flag in Media Composer, will appear in the inventory only after the transfer is complete.

6. Click Apply and then click Yes when asked to restart the device service. You can then close the Avid Service Configuration application.
7. The plugin is now configured.

   After the FastServePlugin is setup, the following step is to configure the MediaCentral | Command application.

To configure MediaCentral | Command:

1. Launch the MediaCentral | Command application and navigate to **Tools > System Settings**.
2. From the tree, expand **Channel** and choose **Device Channels**. Then, press the **Add** button to add channels in your MediaCentral | Command application.

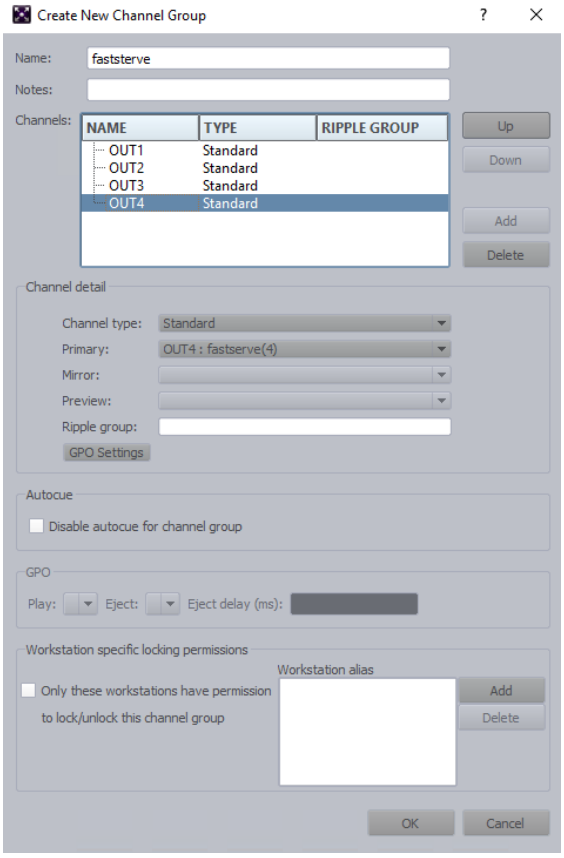


3. Enter the required information:

Field	Description
Channel name	Set the name of the channel, e.g. OUT2.
Device name	Choose **fastserve** from the drop-down list.
Device type	Select **Other video** from the list.

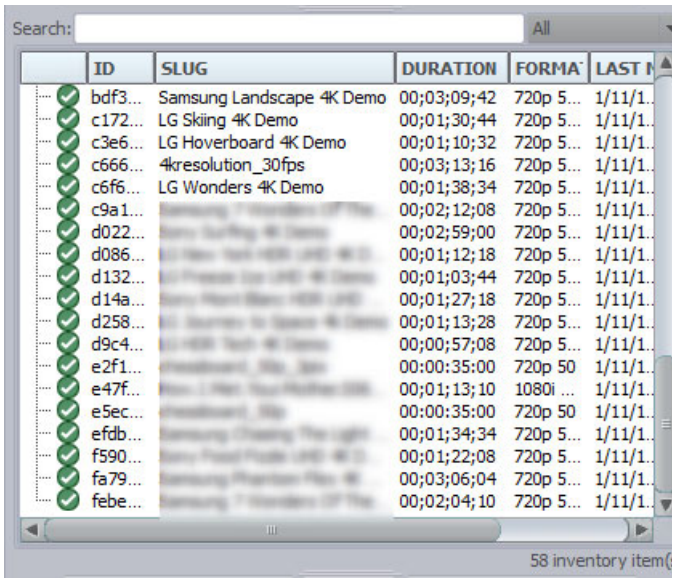
Field	Description
Channel index	Set the channel index. The number needs to be higher than 0 (e.g. select 1 for channel nameOUT1). *Leaving the default value "0" prevents the channel from working.*
Note	Add a note about the device.

4. Click **Apply.**
5. Then, go to **Channel > Groups** and click on **Add** to create a new group to which all configured channels are to be added:



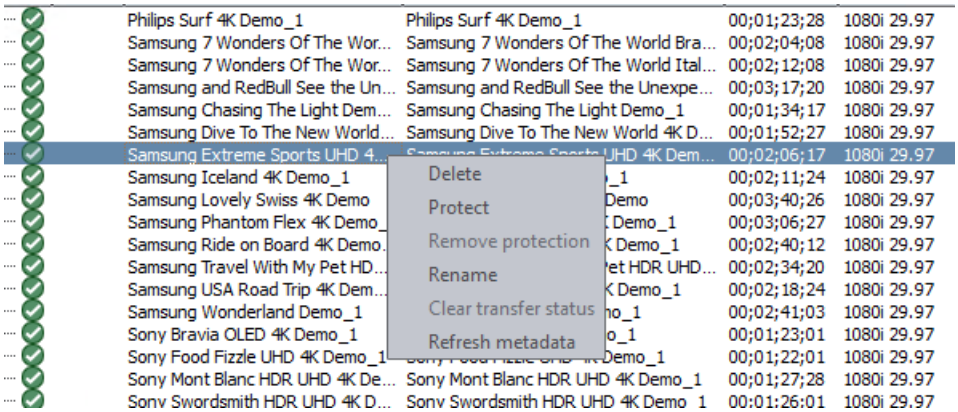
6. Set a **Name** for the channel and select **Standard** in the **Channel type** section.
7. Click **Apply**.

   The inventory is now visible in the MediaCentral | Command application:



Managing FastServe Inventory with MediaCentral | Command

Open the MediaCentral | Command inventory window, and right-click on an item to view further options:



- **Delete** - removes the clip from inventory, and physically from the internal FastServe | Ingest storage.
- **Protect** - locks the clip and prevents it from being deleted directly from the Command interface.
- **Remove protection** - removes the lock option and enables the Delete field back in the menu.
- **Rename** - renames the selected clip (ID and Slug). Prohibited symbols for clip's ID are:

  \ / : * ? " < > |,

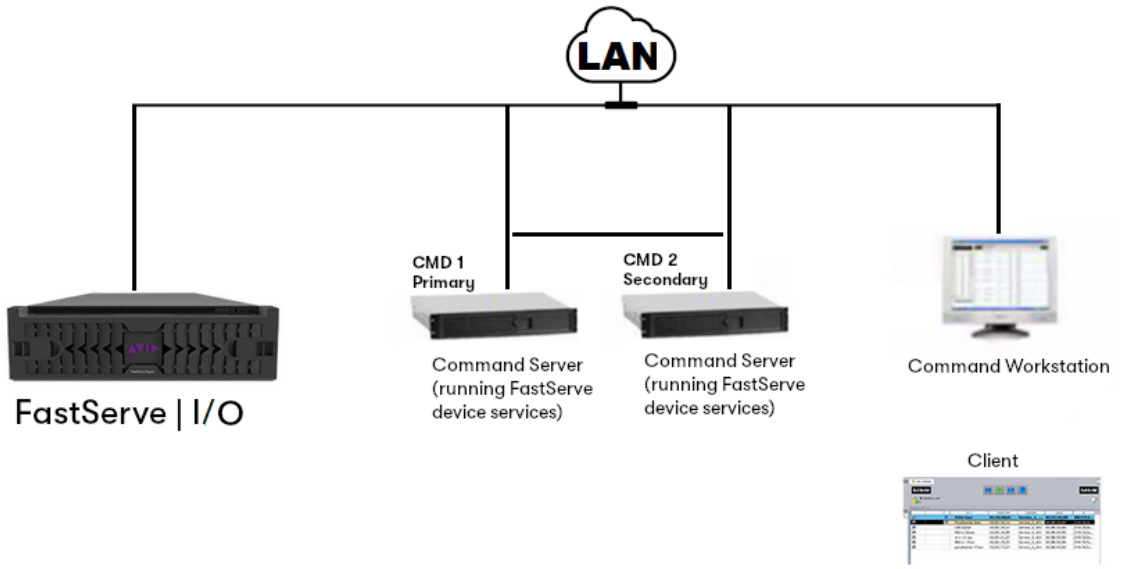
MediaCentral | Command Redundancy Configuration

MediaCentral | Command services operate on a primary/backup basis. It is best to have a dedicated computer be a Command Server and, for additional system integrity, use multiple Command Servers—one running all of the primary services while the backup services run on other backup servers.

Command determines primary and backup based on the length of time the service has been running.The server that has been running longer is the primary. Therefore, to get all primary services on one server, it is necessary to start the primary server first; when all services have started, start the backup servers. This is the only way to ensure all services on the primary server take on the primary role, which allows for more consistent behavior during times when redundancy is needed, and it helps simplify any necessary troubleshooting efforts.

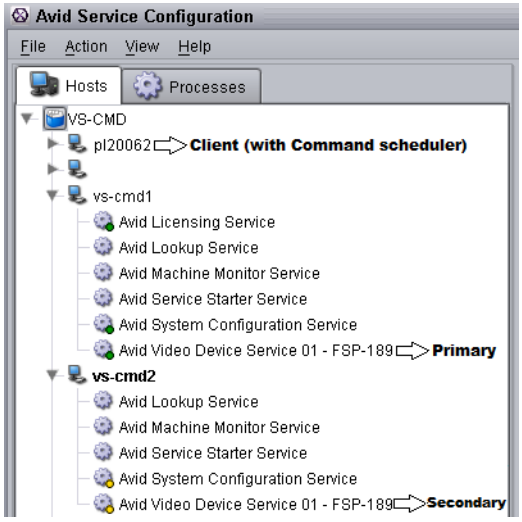
You can find detailed guidelines for MediaCentral | Command redundancy/failover configurations in the MediaCentral | Command Administration Guide.

The graphic below illustrates a workflow with one (1) FastServe | I/O server, two (2) Command Servers and one (1) Command Client.

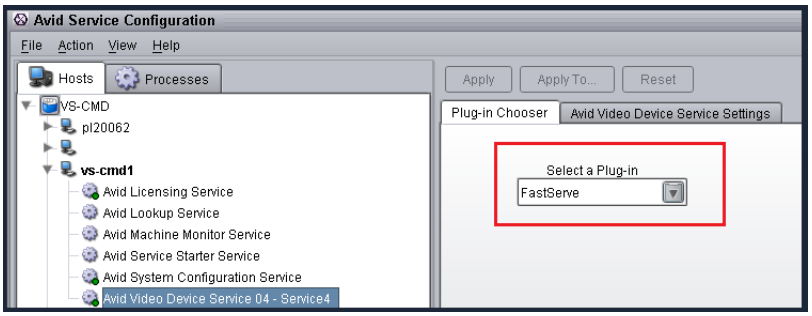


To set up Command in redundancy configuration:

1. Check if all systems are online and working. Make sure to use different ports on both Command servers, such as: 10004 and 10011.
2. Open the Avid Service Configuration and check if all parts of the ecosystem are in the same Workgroup (VS-CMD in our example).

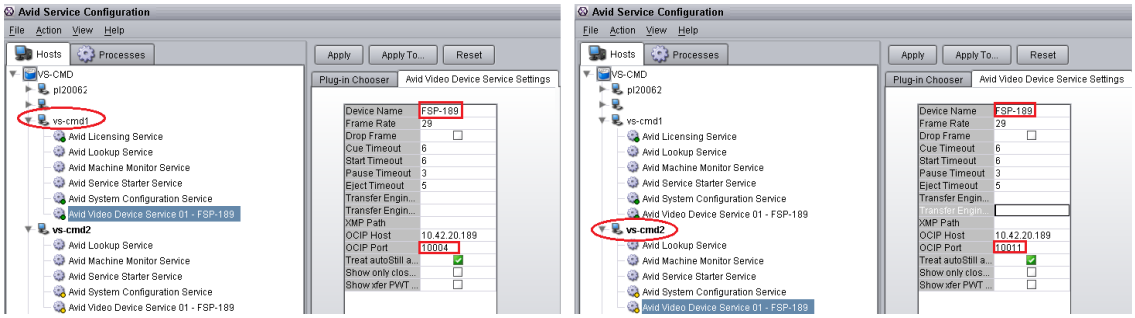


3. Select **Avid Video Device Service** of the primary Command server. In the Plug-in Chooser tab, select **FastServe** from the drop-down list and click on **Apply** (this service will be restarted).



4. Once all services are back online, select the **Avid Video Device Service** for the primary server. Open the Avid Video Device Service Settings tab and configure your FastServe server, as described in Step 5 of the Configuring FastServe | I/O for Command topic.

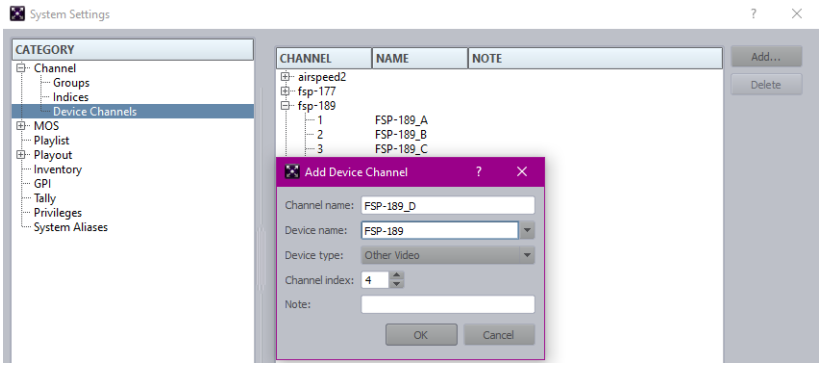
   Repeat the same configuration steps for the secondary Command server.



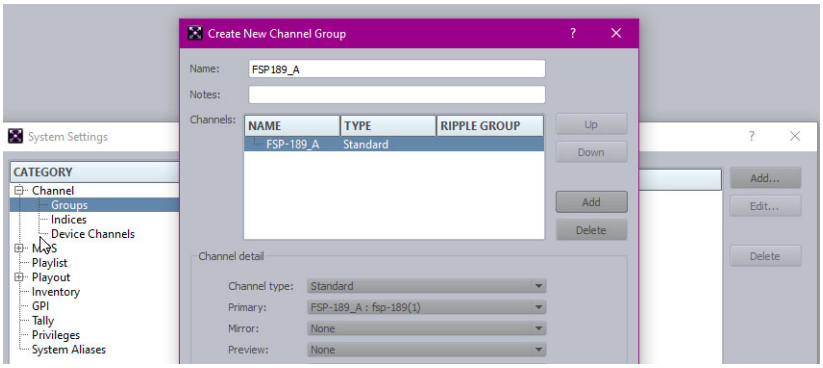
*Make sure to use the same FastServe **Device Name** for both (primary and secondary) Command servers, and enter different **OCIP Port** numbers, such as 10004 & 10011 (remember that port 10001 is used by AirSpeed Translator and thus it is not recommended in Command workflows).*

5. Click on **Apply** to save the configuration.

6. Launch the MediaCentral | Command application and navigate to **Tools > System Settings**. From the tree, expand **Channel** and choose **Device Channels**. Then, press the **Add** button to add channels.



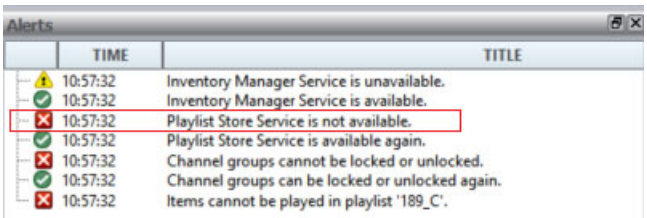
7. Create a new **Channel Group** where all configured channels will be added.



For more details, see the To configure MediaCentral | Command: procedure.

To maintain Command redundancy configuration:

1. Whenever the primary Command server goes down, an appropriate warning appears in the **Alerts** tab of the MediaCentral | Command client application.



When a primary service goes down, Command conducts an election, and changes the backup (secondary) service to primary. The new primary service will remain primary until it is stopped. When the old primary service comes back up, it becomes the backup service. If the primary Command Server were to go down, all of the services on the backup server would become primary.

The failover process can take up to two (2) minutes.

2. When a failover happens, here is what you will see:

- The playout buttons will show a red X over them.

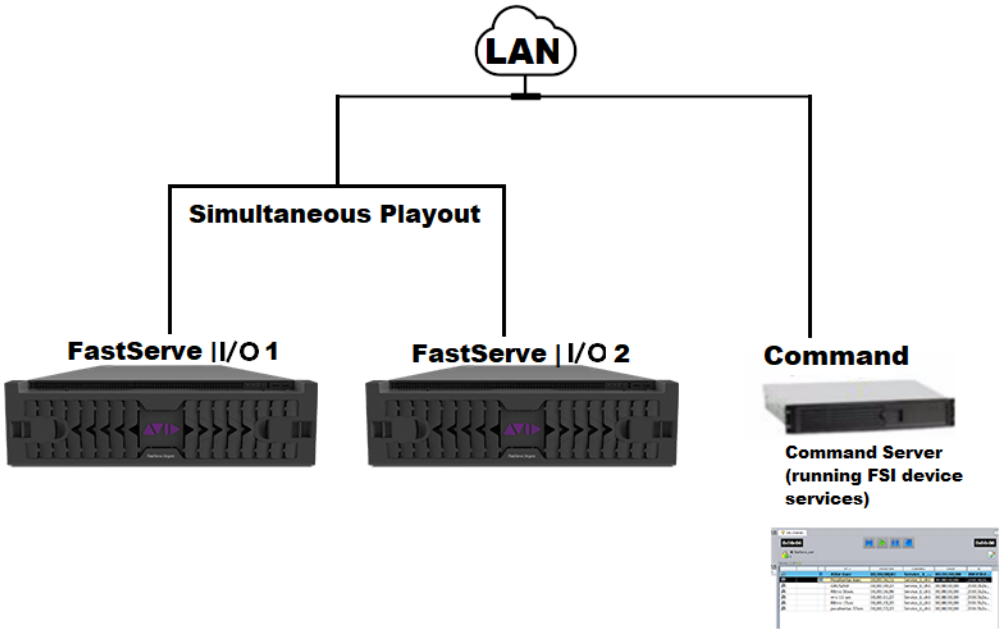
- Several alerts will appear, stating that the workstation is unable to connect to various services.
- Items will continue in their existing state, and a playing item will continue playing on FastServe. But the Command's clock will be stopped and will resume the count from zero (0) for the second playing item.
- During the failover process, Command is not aware of the current status of the external video device (FastServe).
- After reconnecting, Command requires a manual triggering of Cue and Play. Misleading information about the 2nd and 3rd items will be visible in the interface until the playlist is locked and unlocked again.

3. If you have an on-air failover on the primary Command Server due to a loss of network connectivity, you need to stop the services on the primary server. Otherwise, these services will once again become primary when the connection is restored, which will interrupt on-air playability. After the connection is restored, and at a non-crucial time, you should start these services again.

Mirrored Playout Configuration

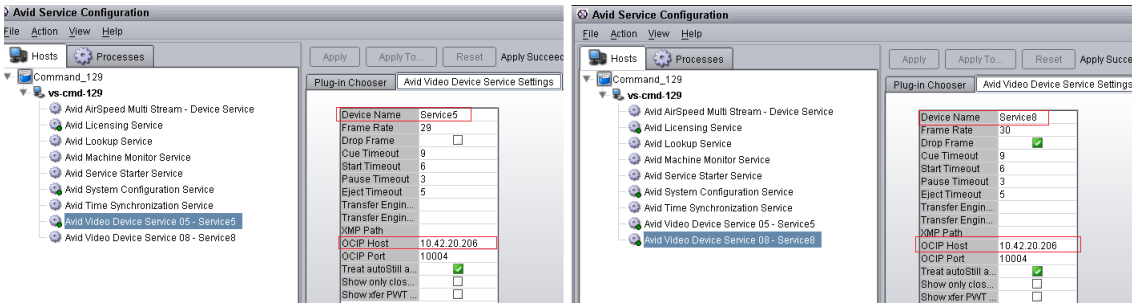
Mirrored playback allows a single Play command to initiate playback on two channels simultaneously for seamless failover. All Command services are redundant.

The graphic below illustrates a workflow with two (2) FastServe | I/O servers, and one (1) Command Server.

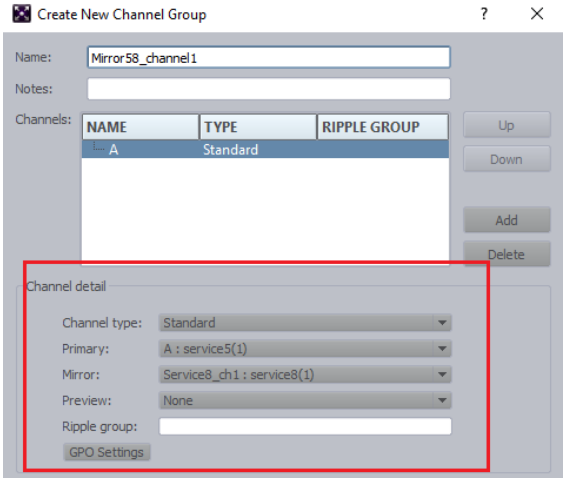


To set up FastServe | I/O mirrored playout:

1. Check if all systems are online and working.
2. Select **Avid Video Device Service** of the Command server. In the Plug-in Chooser tab, select **FastServe** from the drop-down list and click on **Apply** (this service will be restarted). Open the Avid Video Device Service Settings tab and configure your FastServe server, as described in Step 5 of the Configuring FastServe | I/O for Command topic.
3. Click on **Apply** to save the configuration.
4. Click on **Avid Video Device Service** again and in the Plug-in Chooser tab, select **FastServe** from the drop-down list. Open the Avid Video Device Service Settings tab and configure your second FastServe server.



5. Click on **Apply** to save the configuration.
6. Launch the MediaCentral | Command application and navigate to **Tools > System Settings**. From the tree, expand **Channel** and choose **Groups**. Then, press the **Add** button to add a new mirrored group.



7. Click OK. This will close the Add New Channel Group to Playlist dialog box. The new channel group will appear in the System Settings dialog box.
8. Both FastServe | I/O servers should have the same files for the mirrored playout to work. The Command user interface reflects playability status of inventory assets.

Playability Status Icons	
	Primary Only
	Backup Only
	Unplayable
	Unknown
	Mismatch
	Timecode graphic playout impacted by change to video ID version

Media captured by MediaCentral | Capture in a mirrored recording workflow is not available for mirrored playout as these files will have different VideoIDs and most likely a different length.

9. When a file is missing from the mirrored FastServe server, the following occurs when this item is selected:

		013_i59_1min	Service8_ch1	00;01;01;15
		a206	Service8_ch1	00;21;10;00
		015_i59_3min35sec	Service8_ch1	00;03;36;04

   - the playlist will continue playing at FastServe | I/O **1**;
   - the last frame of the item played on FastServe |IO **1** will be visible at FastServe | I/O **2**.

10. The same mechanism is applied when a file is missing from the primary FastServe server, but a different status is displayed.

			TITLE	
			MEDIA NOT FOUND ON PRIMARY dolby-core-universe-uhd-(ww...	190_

Converting FastServe | I/O to Standard Configuration

This topic describes how to convert your FastServe | I/O system back to a standard 8 ingest channels FastServe configuration.

To revert FastServe | I/O to a standard 8 channels setup:

1. Open the FastServe | Ingest WebSettings and go to **OVS > IN/ Out**. Change the setup to **8** ingest channels.
2. Go to **OVS > Import/ Export > NetStream** and change the **Max Streams** parameter to **8**.
3. Connect to your FastServe machine using PuTTY or other SSH client and apply the following changes:
   a. Open the **allApps.cfg** (`/data/VS/bin`) file and remove the **tmr** entry.
   b. Save and close the **allApps.cfg** file.
   c. Disable the tmr service:

```
systemctl disable tmr
```

d. Stop the tmr service:

```
systemctl stop tmr
```

e. Stop all FastServe components:

```
/data/VS/bin/set_run -s all
```

f. Set the following options in the **vsPreferences.cfg** file:

```
TASKS_MAX_HP_TM=0
EJECT_MODE=0,0,0,0,0,0,0,0
FILL_FRAME=0,0,0,0,0,0,0,0
```

g. Start all FastServe components:

```
/data/VS/bin/set_run -a all
```

4. Reboot the FastServe machine.

A FastServe | Ingest Supported Configurations

This topic describes all workflows and configurations supported by FastServe | Ingest. Together with the latest version of the FastServe | Ingest ReadMe document, which lists various limitations found in a particular release, this section provides an overview of the supported workflows.

The 2023.3 release of the new generation FastServe | Ingest only supports HD configurations. FastServe | I/O, Video-over-IP (SVIP) and UHD formats will be certified at later stages.

FastServe | Ingest is mostly a recording server, which means that in standard scenarios only ingest channels are required. Playout channels are not supported in primary FastServe | Ingest workflows.

The FastServe | I/O configuration is an exception to this rule as it offers ingest and playout capabilities in one box. For more information, see *"FastServe | I/O Configuration" on page 109.*

The following controlling applications are certified: Capture, RemoteConsole, Command (in FSIO mode), VDCP.

- MediaCentral | Capture
- FastServe | Ingest Remote Console
- MediaCentral | Command (in FastServe | I/O workflows)
- VDCP.

The PIVOT application is a legacy product and cannot be used with the newest releases of FastServe | Ingest.

Available SDI Configurations

The following table list available SDI HD configurations.

The XAVC-I and AVC-I formats require an additional Matrox card. For more information, see the ***Avid FastServe | Ingest Setup Guide****.*

	XDCAM 50	XDCAM 35	DNxHD	XAVC-I (interlaced)	XAVC-I (progressive)	AVC-I
Maximum number of parallel recording channels	8	8	8	8	6	8
Maximum number of parallel recording channels with proxy[a]	8	N/A	N/A	8	6	8

	XDCAM 50	XDCAM 35	DNxHD	XAVC-I (interlaced)	XAVC-I (progressive)	AVC-I
Supported resolutions & FPS	1080i50, 1080i59, 720p59	1080i50, 1080i59, 720p59	1080i50 HQX or SQ 1080i59 HQX or SQ 720p59 HQX or SQ 1080p50 HQX or SQ 1080p59 HQX or SQ	1080i50, 1080i59	1080p50, 1080p59	1080i50, 1080i59, 720p59 (no proxy)
Proxy	0.8 Mbps, 1.5 Mbps	NO	NO	1.5 Mbps	3 Mbps	1.5 Mbps
Audio channels	up to 8	up to 8	up to 16	up to 16	up to 16	up to 16
ANC data ingest	YES	YES	YES	YES	YES	YES

a. In case of parallel recording with proxy, you cannot start the recording process on all of them at the same time. There must be a shift, of approx. 1 minute between recordings (e.g. channels 1-4 triggered together, then a minute later channels 5-8).

The table below presents available UHD configurations:

UHD configurations are not yet certified for FastServe | Ingest UHDS2 Gen 2 machines.

	UHD-50 HQx	UHD-59 HQx	UHD-25 SQ
Maximum number of parallel recording channels	3	3	4
Available formats	4x3G signal (four cables per channel), Level A 12G signal (single cable per channel)	4x3G signal (four cables per channel), Level A 12G signal (single cable per channel)	6G signal (single cable per channel)
Proxy	NO	NO	NO
Audio channels	up to 8	up to 8	up to 16
ANC data ingest	NO	NO	NO

Available SVIP Configurations

The following table list available studio video-over-IP HD configurations.

*The XAVC-I and AVC-I formats in SVIP require an additional SVIP Phy card and a Matrox card. For more information, see the **Avid FastServe | Ingest Setup Guide**.*

SVIP configurations are not yet certified for FastServe | Ingest UHDS2 Gen 2 machines.

	XAVC-I (interlaced)	XAVC-I (progressive)	AVC-I	XDCAM 50
Maximum number of parallel recording channels	8	6	8	8
Maximum number of parallel recording channels with proxy[a]	8	6	8	8
Supported resolutions & FPS	1080i50, 1080i59	1080p50, 1080p59	1080i50, 1080i59, 720p59 (no proxy)	1080i50, 1080i59
Proxy	1.5 Mbps	3 Mbps	1.5 Mbps	1.5Mbps
Audio channels	up to 16	up to 16	up to 16	8
ANC data ingest	YES	YES	YES	YES

a. In case of parallel recording with proxy, you cannot start the recording process on all of them at the same time. There must be a shift, of approx. 1 minute between recordings (e.g. channels 1-4 triggered together, then a minute later channels 5-8).

Available FastServe | I/O Configurations

FastServe | I/O can be used in the following SDI formats:

FastServe | I/O configurations are not yet certified for FastServe | Ingest UHDS2 Gen 2 machines.

	XDCAM 50	XDCAM 35
Maximum number of ingest channels	4	4
Maximum number of playout channels	4	4
Max. number of STP	4	4
Supported resolutions and FPS	1080i50, 1080i59, 720p59	1080i50, 1080i59, 720p59
Proxy	0.8 Mbps, 1.5 Mbps	N/A
Audio channels	up to 8	up to 8
ANC data ingest	YES	YES
	Media for playout comes from Send-to-Playback or from internal ingest.	*Media for playout comes from Send-to-Playback or from internal ingest.*