



User Guide

1. User Guide. Introduction	12
2. Description of the Software Package	13
2.1 Basic principles of building a security system based on the Axxon Next software package	13
2.2 Axxon Next features: reference information	13
2.3 Functions of the Distributed Security System	16
2.4 Specifications of the Axxon Next Software Package	16
2.5 Implementation Requirements for the Axxon Next Software Package	17
2.5.1 Limitations of the Axxon Next Software Package	17
2.5.2 Operating system requirements	18
2.5.3 TCP/IP Network Bandwidth Requirements	19
2.5.4 Requirements for Personnel Quantity and Qualifications	19
2.5.5 BIOS configuration requirements	20
2.5.6 Running Axxon Next VMS in Virtual Machines	20
2.6 Interface of the Axxon Next Software Package	20
3. Installing the Axxon Next Software Package	21
3.1 Installing equipment	21
3.1.1 Types of Devices Used	21
3.1.2 Connecting IP Devices	22
3.1.3 Configuring IP Devices in Windows	22
3.1.4 Particulars of Configuration of Devices	23
3.1.5 Video capture cards pins	25
3.1.5.1 WS-216 video capture card pins	25
3.1.5.2 VRC6004 video capture card pins	26
3.1.5.3 VRC6008 video capture card pins	27
3.1.5.4 VRC6416 video capture card pins	27
3.1.5.5 VRC6404 HD video capture card pins	28
3.1.5.6 VRC7008L video capture card pins	28
3.2 Installation the Axxon Next Software Package	29
3.2.1 Installation	29
3.2.2 Repairing Installation	37
3.2.3 Removal	39
3.2.4 Update	40
3.2.5 Silent install (Quite Mode)	41
3.2.6 Updating Drivers Pack	43
4. Licensing of the software product	43
4.1 Axxon Next license types	43
4.2 Licensing methods	45
4.3 Product Activation Utility	45
4.4 License Activation	47
5. Launching and Closing the Axxon Next Software Package	47
5.1 Startup	47
5.1.1 Starting a Server	47
5.1.2 Starting an Axxon Next Client	47
5.1.3 Running multiple Axxon Next Clients	50
5.1.4 Axxon Next in demo mode	50
5.1.5 Automatic Start of the Client	51
5.2 Shutdown	51
5.2.1 Shutting down an Axxon Next Client	51
5.2.2 Shutting down a Server	52
5.3 Automatic Server restart	52
5.4 Switching Users Quickly	52
5.5 Cross-System Client	53
5.6 Connecting LDAP users	54
5.7 Connecting to Another Server Quickly	54
6. Configuration of the Axxon Next Software Package	54
6.1 General information on system configuration	54
6.1.1 System configuration: stages	54
6.1.2 Applying and resetting settings	55

6.1.3 Display of parameters in interface	55
6.1.4 System objects	56
6.1.5 Object search	56
6.2 Hardware configuration	57
6.2.1 Configuring Axxon domains	57
6.2.1.1 Axxon-domain object	58
6.2.1.2 Axxon Domain operations	58
6.2.1.2.1 Creating a new domain	58
6.2.1.2.2 Adding a Server to an existing Axxon Domain	59
6.2.1.2.3 Removing a Server from an Axxon Domain	60
6.2.1.3 Cases of Axxon Domain configuration	61
6.2.2 Adding and removing IP devices	62
6.2.3 Configuring System Objects for Devices	65
6.2.3.1 The Server Object	65
6.2.3.1.1 Configuring the web server	66
6.2.3.1.2 Configuring an RTSP Server	66
6.2.3.2 The Video Camera Object	67
6.2.3.2.1 Restoring default camera settings	70
6.2.3.2.2 Mass configuration	70
6.2.3.2.3 Configuring an Adaptive Video Stream	71
6.2.3.2.4 Configuring fisheye cameras	72
6.2.3.2.5 Connecting and configuring cameras over standard protocols	73
6.2.3.2.6 Configuring connection of video cameras with dynamic IP addresses	77
6.2.3.2.7 Configuring virtual video cameras	77
6.2.3.3 The IP Server Object	77
6.2.3.3.1 Configuring Virtual IP Servers	78
6.2.3.4 The Microphone Object	79
6.2.3.5 The Telemetry Object	80
6.2.3.5.1 Configure HTTP-CGI commands to control Wash&Wiper	81
6.2.3.6 The Channel object	82
6.2.3.6.1 The Sensor Object	82
6.2.3.6.2 The Relay Object	84
6.2.3.7 The Speaker Object	85
6.2.3.7.1 Creating an Object	86
6.2.3.7.2 Configuring a Speaker Object	86
6.2.3.7.3 Checking Audio Notification	87
6.2.3.8 The Embedded Storage object	87
6.2.4 Configuring object tracking	88
6.2.4.1 Configuring Tag & Track Lite	88
6.2.4.2 Configuring Tag & Track Pro	88
6.2.4.2.1 Camera requirements for Tag & Track Pro	88
6.2.4.2.2 Configuring Smooth Motion for PTZ cameras	88
6.2.4.2.3 Linking panoramic cameras to a PTZ camera	89
6.2.4.2.4 Mapping PTZ positions to panoramic field of view (calibration)	89
6.2.4.2.5 Setting telemetry mode for Tag & Track Pro	90
6.2.5 Receiving Events from External Systems	91
6.2.5.1 Event Source Object	91
6.2.5.2 Configuring POS devices	91
6.2.5.2.1 Connecting POS devices	91
6.2.5.2.2 Configuring titles view	92
6.2.5.2.3 Configuring receipt beginning / end	93
6.2.5.2.4 Configuring keywords	94
6.2.5.2.5 Importing parcels	95
6.2.5.3 Receiving Intellect Events	95
6.2.6 Configuring video camera groups	96
6.2.6.1 Procedure for configuring video camera groups	97
6.2.6.2 Creating a Group object	97
6.2.6.3 Adding video cameras created in the system to Group objects	98

6.2.6.4 Creating a system of groups and subgroups	99
6.2.6.5 Managing Group and Video camera objects	99
6.2.7 Autocopy data from local to centralized servers	101
6.3 Configuring Archives	102
6.3.1 General information of configuring archives	102
6.3.2 Creating archives	103
6.3.2.1 Creating a local archive	103
6.3.2.2 Creating a network archive	105
6.3.2.3 Creating an archive based on existing archive volumes	106
6.3.3 Binding a camera to an archive	107
6.3.4 Setting the default archive	108
6.3.5 Configuring data replication	109
6.3.6 Configuring access restrictions to older footage	110
6.3.7 Editing archives	110
6.3.8 Deleting and formatting archive volumes	110
6.3.9 Deleting archives	111
6.3.10 View information about the size of archives and Server disk space.	112
6.4 Configuring detection tools	112
6.4.1 General Information on Configuring Detection	112
6.4.2 Requirements for the cameras	113
6.4.2.1 Video suitability for detection tools	113
6.4.2.2 Installing cameras for proper ANPR	113
6.4.2.3 Installing cameras for proper detection of faces	114
6.4.2.4 Video requirements for abandoned object detection tool operation	114
6.4.3 Create Detection Tools	114
6.4.4 Situation Analysis Detection Tools	116
6.4.4.1 Types of Situation Analysis Detection Tools	116
6.4.4.2 Object Tracker	117
6.4.4.3 Setting General Parameters	117
6.4.4.3.1 Setting General Zones for Scene Analytics	118
6.4.4.3.2 Set the Minimum and Maximum Object Size for Detection	119
6.4.4.3.3 Configure Perspective	121
6.4.4.3.4 Recommendations on configuring Object Tracker	122
6.4.4.4 Configuring the Detection Zone	123
6.4.4.5 Configuring Detected Object Color	123
6.4.4.6 Settings Specific to Cross Line Detection	124
6.4.4.7 Settings specific to Abandoned Object detection	125
6.4.4.8 Settings Specific to Loitering Detection	125
6.4.5 Facial Recognition	126
6.4.5.1 Face Detection Tools	126
6.4.5.2 Configure Facial Recognition	126
6.4.6 Automatic Number Plate Recognition (ANPR)	127
6.4.6.1 IntelliVision Automatic Number Plate Recognition (ANPR)	129
6.4.7 Configure Core Video Detection Tools	131
6.4.7.1 Types of Video Detection	131
6.4.7.2 Setting General Parameters of Video Motion Detection	131
6.4.7.3 Settings Specific to Video Motion Detection	131
6.4.7.4 Configuring smoke and fire detection	132
6.4.8 Configure Core Audio Detection Tools	133
6.4.8.1 Types of Audio Detection	133
6.4.8.2 Set Parameters of Audio Detection	133
6.4.9 Configuring Built-In Detectors	133
6.4.9.1 AxonSoft tracking in Axis devices	134
6.4.10 Sensors	136
6.4.11 Mass Configure Detection Tools	136
6.4.12 Checking the Triggering of a Detection Tool	137
6.4.13 Automatic Rules	138
6.5 Configuring Macros	139
6.5.1 General information about the macros	139

6.5.2 Create Macros	140
6.5.3 Configuring filters for event-driven macros	141
6.5.4 Settings specific to actions	143
6.5.4.1 Wait for event	143
6.5.4.2 Wait for timeout	144
6.5.4.3 Wait till previous action finishes	145
6.5.4.4 Record to archive	146
6.5.4.5 Trigger an alarm	147
6.5.4.6 Toggle a relay	147
6.5.4.7 Arm /disarm a camera	148
6.5.4.8 Switch to a PTZ camera preset	148
6.5.4.9 Show camera	148
6.5.4.10 Opening layout	149
6.5.4.11 Starting export	149
6.5.4.12 Start replication	150
6.5.4.13 Audio notification	151
6.5.4.14 E-mail notification	152
6.5.4.14.1 The E-mail Object	153
6.5.4.15 SMS notification	154
6.5.4.15.1 The SMS Object	155
6.5.4.16 Start an external program on clients	156
6.5.4.17 Starting an external program on Servers	157
6.5.4.18 Start / stop slideshows of layouts.	157
6.5.4.19 Enable / Disable detection	158
6.5.5 Cyclical macros	158
6.6 Configuring user permissions	159
6.6.1 Creating and configuring roles	159
6.6.2 Connecting to an LDAP catalog	162
6.6.3 Working with users	163
6.6.3.1 Creating local users	163
6.6.3.2 Creating LDAP connections	164
6.6.3.3 Synchronize LDAP users	165
6.6.3.4 Deleting users	166
6.7 Configuring Layouts	166
6.7.1 Creating and deleting layouts	166
6.7.2 Rename Layouts	167
6.7.3 Reorder Layouts	167
6.7.4 Layout copying	167
6.7.5 Editing layouts	168
6.7.5.1 Switching to layout editing mode	168
6.7.5.2 Selecting a layout for editing	169
6.7.5.3 Configuring layout cells	169
6.7.5.3.1 Adding new cells to a layout	169
6.7.5.3.2 Resizing cells	171
6.7.5.3.3 Moving cells	172
6.7.5.3.4 Adding cameras to cells	172
6.7.5.3.5 Adding information boards to cells	173
6.7.5.3.6 Linking cells	173
6.7.5.3.7 Clearing cells	174
6.7.5.4 Configuring viewing tiles	174
6.7.5.4.1 Selecting default functions for viewing tiles	174
6.7.5.4.2 Selecting the default video mode for a camera	174
6.7.5.4.3 Moving sensor and relay icons in a viewing tile	174
6.7.5.4.4 Configuring default zoom levels (the Fit screen function)	174
6.7.5.4.5 Configuring pan/tilt angle for video cameras with Immervision lenses in 180o Panorama display format	175
6.7.5.5 Configuring information boards	176
6.7.5.5.1 Configuring information board templates	176
6.7.5.5.2 Configuring Events Boards	176

6.7.5.5.3 Configuring a Health Board	177
6.7.5.5.4 Configuring a Statistics Board	178
6.7.5.5.5 Configure the Web Board	179
6.7.5.5.6 Configure the Dialog Board	180
6.7.5.6 Configuring alerts on special layouts	182
6.7.5.7 Exiting layout editing mode	182
6.7.6 Share Layouts	183
6.8 Configuring the Interactive Map	183
6.8.1 Creating a new map	184
6.8.2 Adding system objects to the map	185
6.8.2.1 Adding video cameras	185
6.8.2.2 Adding sensors and relays	186
6.8.2.3 Adding switches to another map	187
6.8.3 Configuring cameras on the map	187
6.8.3.1 Configuring a camera in standard map viewing mode	187
6.8.3.2 Configuring cameras in immersion mode	188
6.8.4 Attaching a map to a layout	189
6.8.5 Removing objects from the map	189
6.8.6 Changing map type and display	190
6.8.7 Renaming the map	190
6.8.8 Sorting of map lists	190
6.8.9 Deleting a map	190
6.9 System preferences	191
6.9.1 Configuring Forensic Search MomentQuest in Archive	191
6.9.2 Analyzing video from external systems (Offline Analytics)	192
6.9.2.1 Importing video to Axxon Next	192
6.9.2.2 Indexing video from external sources	193
6.9.3 Configuring Hardware-Accelerated Video Decoding (Intel Quick Sync Video)	195
6.9.4 Configuring the user interface	196
6.9.4.1 Selecting the interface language	196
6.9.4.2 Selecting the calendar type	196
6.9.4.3 Configuring Slideshow parameters	197
6.9.4.4 Hiding tooltips	197
6.9.4.5 Configuring animation	198
6.9.4.6 Configuring Display of Video Statistics	198
6.9.4.7 Configuring previews of alarm events	199
6.9.4.8 Configuring map autozoom	199
6.9.4.9 Configuring the Client screen mode (full screen or window)	200
6.9.4.10 Configuring the Appearance of the Viewing Tile	200
6.9.4.11 Configure Time Display	201
6.9.4.12 Configuring the display of the camera ID	202
6.9.4.13 Prune Video to Window Resolution	203
6.9.4.14 Configuring tiles on the layout	204
6.9.4.15 Configuring video display on the map	206
6.9.5 Configuring how Axxon Next starts	207
6.9.5.1 Configuring Axxon Next instead of the standard Windows OS shell	207
6.9.5.2 Configuring Cross-System Client and autologon	207
6.9.5.3 Configuring automatic quit of the Client	209
6.9.6 Configuring storage of the system log and metadata	210
6.9.7 Configuring Alarm Management Mode	210
6.9.8 Configuring export	211
6.9.8.1 Configuring export options	211
6.9.8.2 Configuring an Export Agent	214
6.9.9 Configuring PTZ control	215
6.9.10 Configuring schedules	216
6.9.10.1 Creating schedules	216
6.9.10.2 Deleting a schedule	217
6.9.11 Configuring audio on the Client	217

6.9.12	Configuring hot keys	218
6.9.12.1	Introduction to hot keys in Axxon Next	218
6.9.12.2	Assigning hot keys	218
6.9.12.3	Exporting and importing hot keys	219
6.9.12.4	Notes regarding hot key actions	219
6.9.12.5	Joystick Configuration	220
6.9.13	Configuring video capturing on operator monitor	222
6.9.14	Changes to the port range used by the Server after installation	225
6.10	Configuring Failover VMS	226
6.10.1	General information about a failover system	226
6.10.2	Supervisor Web Interface	226
6.10.3	Creating a Cluster	227
6.10.4	Configuring a Failover Database	228
6.10.5	Creating and configuring nodes	231
6.10.6	Configuring archives in the failover system	234
6.10.7	Set up access to a supervisor	235
6.10.8	Configuration backup and restore for failover VMS	236
6.10.9	Cluster Monitoring	237
6.10.10	Connecting to a Node and Configuring of an Axxon domain	238
6.10.11	Configuring automatic connections to nodes	239
7.	Working with the Axxon Next Software Package	239
7.1	Main Elements of the User Interface	239
7.1.1	Viewing Tile	239
7.1.1.1	Color Coding of Frames	240
7.1.1.2	Viewing Tile Context Menu	241
7.1.1.3	Time Display	241
7.1.1.4	Display of Video Statistics	242
7.1.1.5	Video Surveillance Mode Selection Tabs	243
7.1.1.6	Advanced archive navigation panel	243
7.1.2	Information boards	244
7.1.3	The Archive Navigation Panel	245
7.1.3.1	Show and Hide the Archive Navigation Panel	245
7.1.3.2	The Structure and Function of the Archive Navigation Panel	245
7.1.3.3	Events Filter	247
7.1.3.4	The Timeline	247
7.1.3.5	Events List	250
7.1.3.6	The Playback Panel	251
7.1.4	The Layouts panel	252
7.1.5	Interactive Map	252
7.1.6	Camera Search Panel	253
7.1.7	Alarms Panel	254
7.1.8	Objects Panel	255
7.1.9	Search panel	256
7.1.10	Video wall management panel	256
7.1.11	The PTZ Control Panel	257
7.1.11.1	The Enter number Panel	258
7.1.11.2	The Presets List	259
7.2	Video Surveillance	261
7.2.1	Video Surveillance Modes	261
7.2.2	Functions Available in All Video Surveillance Modes	262
7.2.2.1	Scaling the Viewing Tile	262
7.2.2.2	Digitally Zooming Video Images	264
7.2.2.2.1	Enlarging a video image using the digital zoom scale	264
7.2.2.2.2	Enlarging a video image through area selection	265
7.2.2.2.3	Enlarging a video image using the mouse scroll wheel	266
7.2.2.3	Video image processing	266
7.2.2.3.1	Changing the Contrast Level	267
7.2.2.3.2	Setting the Sharpness Level	268
7.2.2.3.3	Using Deinterlacing	269

7.2.2.4 Rotate Video Image	270
7.2.2.5 Tracking objects	272
7.2.2.6 Operator comments	273
7.2.2.6.1 Adding comments in different surveillance modes	273
7.2.2.6.2 Adding a comment	274
7.2.2.7 Viewing titles from POS terminals	275
7.2.2.8 Partial decoding of video	276
7.2.3 Real-time video surveillance	277
7.2.3.1 Switching to Live Video Mode	277
7.2.3.2 Video Surveillance Functions Available in Live Video Mode	277
7.2.3.3 Arming and Disarming a Video Camera	278
7.2.3.4 Controlling a PTZ Camera	278
7.2.3.4.1 Control Using the Presets List	279
7.2.3.4.2 Control Using the Enter number Panel	279
7.2.3.4.3 Control using step buttons and virtual joystick	280
7.2.3.4.4 Patrolling	281
7.2.3.4.5 Controlling Focus, Iris and Optical Zoom	281
7.2.3.4.6 Controlling a PTZ Video Camera in the OnScreen PTZ Mode	282
7.2.3.4.7 Control using Point&Click	282
7.2.3.4.8 Control using Areazoom	283
7.2.3.5 Functions for tracking of moving objects	284
7.2.3.5.1 Tag & Track Pro	284
7.2.3.5.2 Tag & Track Lite	285
7.2.3.5.3 Simultaneously using Tag & Track Pro and Tag & Track Lite	286
7.2.3.6 Managing Relays	286
7.2.3.7 Displaying the sensor status	287
7.2.3.8 Selecting video stream quality in a viewing tile (GreenStream)	288
7.2.3.9 Autozoom	289
7.2.3.10 Autoreplace Offline Cameras on Layouts	290
7.2.3.11 Snapshot	290
7.2.4 Video surveillance in archive mode	290
7.2.4.1 Switching to Archive Mode	291
7.2.4.2 Video Surveillance Functions Available in Archive Mode	291
7.2.4.3 Selecting an Archive	292
7.2.4.4 Synchronized playback of archives	292
7.2.4.5 Compressed playback of archives (TimeCompressor)	293
7.2.4.5.1 Switching to TimeCompressor mode	293
7.2.4.5.2 Playback control	295
7.2.4.5.3 Switching back to the original recording of an object	295
7.2.4.6 Viewing recorded video with operator comments	296
7.2.4.7 Viewing External Archives	298
7.2.4.8 Navigating in the Archive	298
7.2.4.8.1 Navigating Using the Timeline	298
7.2.4.8.2 Navigation using the advanced panel	299
7.2.4.8.3 Navigating Using the Events list	300
7.2.4.8.4 Navigating Using the Playback Panel	301
7.2.4.8.5 Navigation via the time indicator	302
7.2.4.8.6 Keyboard navigation	302
7.2.4.9 Displaying the causes of triggered situation analysis detection units	302
7.2.4.10 Viewing the results of a saved search query	303
7.2.4.11 Manual Archive Replication	305
7.2.5 Video surveillance in Alarm Management mode	305
7.2.5.1 Video surveillance functions available in Alarm Management mode	305
7.2.5.2 Switch to Alarm Management mode	305
7.2.5.3 Initiating an Alarm	306
7.2.5.3.1 Manual Initiation	306
7.2.5.3.2 Automatic Initiation	307
7.2.5.4 Working with Alarms Panel	307
7.2.5.4.1 Viewing Alarms in Event Preview	307

7.2.5.4.2 Outlining Objects that Triggered Detection	308
7.2.5.4.3 Selecting Events for Alarm Management	308
7.2.5.5 Working with the Alarm Management window	308
7.2.5.5.1 Alarm Handling Tile Interface Elements	308
7.2.5.5.2 Alarm Playback	309
7.2.5.5.3 Processing an Alarm	310
7.2.5.6 Limitations when working with alarm events in case of multi-user processing	311
7.2.6 Video surveillance in Archive Search mode	312
7.2.6.1 Switching to Archive Search mode	312
7.2.6.2 Archive Search mode interface	313
7.2.6.3 Video surveillance functions available in Archive Search mode	314
7.2.6.4 Search in an archive of a single video camera	314
7.2.6.4.1 Selecting the search type	314
7.2.6.4.2 Setting a search interval	315
7.2.6.4.3 Events search	316
7.2.6.4.4 Time search for video fragments (TimeSlice)	316
7.2.6.4.5 Searching comments	317
7.2.6.4.6 Forensic Search for Fragments (MomentQuest)	318
7.2.6.4.7 Titles search	327
7.2.6.4.8 LPR search	327
7.2.6.4.9 Face search	328
7.2.6.4.10 Saving search queries	329
7.2.6.4.11 Switching between search results	330
7.2.6.4.12 Working with search results	330
7.2.6.5 Simultaneous search in an archive of several video cameras	334
7.2.6.5.1 Search by recognized number plates in an archive of several video cameras	335
7.2.6.5.2 Face search in an archive of several video cameras	335
7.2.6.5.3 Exporting all event videos	335
7.2.7 Working with fisheye cameras	336
7.2.7.1 Viewing modes for video from fisheye cameras	336
7.2.7.1.1 360 degree Panorama and Regional view (virtual telemetry)	336
7.2.7.1.2 180 degree Panorama	337
7.2.7.2 Fisheye cameras on an interactive map	338
7.2.7.2.1 Viewing video and controlling a fisheye camera from the map	338
7.2.7.2.2 Fisheye cameras in immersive mode	338
7.3 Working with information boards	339
7.3.1 Resizing information boards	339
7.3.2 Hiding information boards	339
7.3.3 Automatically switching to layouts with information boards	340
7.3.4 Working with Events Boards	340
7.3.4.1 Options for displaying information on Events Boards	340
7.3.4.2 Switching a camera linked to an Events Board to the archives	342
7.3.5 Working with Health Boards	342
7.3.5.1 Viewing server status	343
7.3.5.2 Viewing camera status	346
7.3.6 Working with Statistics Boards	348
7.3.7 Working with Web Boards	350
7.3.8 Working with Dialog Board	350
7.4 Layouts Management	351
7.4.1 Selection and Slideshow of Layouts	351
7.4.2 Special layouts	352
7.5 Managing video walls	354
7.5.1 Managing video walls of a local Client	354
7.5.2 Managing video walls of remote Clients on an Axxon-domain	356
7.6 Audio Monitoring	357
7.6.1 General Information	357
7.6.2 Listening on the Client to sound from a camera microphone	357

7.6.3	Playing back sound from Client microphone on camera speakers	358
7.7	Working with the Interactive Map	359
7.7.1	Opening and closing the map	359
7.7.2	Changing the map tilt	360
7.7.3	Scaling and focusing of map	361
7.7.4	Adjusting transparency of map video	362
7.7.5	Immersive mode	362
7.7.6	Switching between maps	363
7.7.7	Controlling devices from the map	365
7.7.8	Displaying device status	366
7.8	Exporting Frames and Video Recordings	367
7.8.1	Frame export	367
7.8.2	Exporting Video Recordings	368
7.8.2.1	Standard video export	368
7.8.2.2	Instant video export	369
7.8.2.3	Simultaneous export of video from multiple cameras	370
7.8.3	Configuring export area and masks	370
7.8.4	Viewing export progress	372
7.9	Macros control	373
7.10	Automatic license/number plate recognition (ANPR)	373
7.11	Event Control	374
7.11.1	Control in Live Video Mode	374
7.11.2	The System Log	374
7.11.2.1	Setting Event Search Filters	375
7.11.2.2	Event search procedure	375
7.11.2.3	Refreshing Event Search Results	376
7.11.2.4	Viewing Event Search Results	376
7.11.2.5	Exporting Event Search Results	377
7.11.2.6	Switching to archive video of specific events	378
7.12	AxxonCloud Setup and Operation	378
7.12.1	AxxonCloud Overview	378
7.12.2	Registration and Authorization in AxxonCloud	379
7.12.3	Connecting Axxon Domain to AxxonCloud	380
7.12.4	Configuring secure connection to a web server via AxxonCloud	381
7.12.5	Configuring users and roles in AxxonCloud	381
7.12.6	Viewing exported data in AxxonCloud	383
7.12.7	Storing licenses in AxxonCloud	383
7.13	Working with Axxon Next Through the Web Client	384
7.13.1	Starting the web client	384
7.13.2	Searching for video cameras in the web client	385
7.13.3	Real-time video surveillance via the web client	386
7.13.4	Viewing video archives through the web client	387
7.13.5	Archive position selection panel for the web client	388
7.13.6	Selecting video stream and playback format	389
7.13.7	Digital video zoom in the web client	390
7.13.8	Controlling PTZ cameras through the web client	390
7.13.8.1	Controlling a PTZ camera through the web client by using presets	391
7.13.8.2	Changing the optical zoom of a PTZ camera in the web client	391
7.13.8.3	Changing the positioning speed of a PTZ camera in the web client	392
7.13.8.4	Changing the tilt of a PTZ camera in the web client	392
7.13.9	Export in Web Client	392
7.14	Working with Axxon Next Through the Mobile Clients	393
8.	Description of utilities	393
8.1	Axxon Next Tray Tool	393
8.2	Activation Utility	394
8.3	Axxon Support Tool	395
8.3.1	Purpose of the Support.exe Utility	395
8.3.2	Launching and Closing the Utility	395
8.3.3	Description of the Support.exe utility interface	396

8.3.4 The Processes Service	397
8.3.5 Collecting Data on the Configuration of Servers and Clients Using the Support 398	
8.4 Log Management Utility	400
8.4.1 Starting and closing the utility	401
8.4.2 Configuring a Log Archive	401
8.4.3 Configuring Logging Levels	402
8.4.4 Set the size and maximum number of logs	403
8.4.5 Configuring Client RAM usage logging	404
8.5 Digital Signature Verification Utility	405
8.6 Backup and Restore Utility	406
8.6.1 Purpose of BackupTool.exe	406
8.6.2 Starting and quitting BackupTool.exe	406
8.6.3 Rolling back a configuration to a restore point	408
8.6.4 Backing up a configuration	410
8.6.5 Restoring a configuration	412
8.6.6 Changing the Server Name	414
8.7 POS-terminal log collection utility	416
9. Appendices	417
9.1 Appendix 1. Glossary	417
9.2 Appendix 2. Known issues in the Axxon Next Software Package	420
9.2.1 Possible Errors During Installation	420
9.2.2 Possible Errors During Start-Up	420
9.2.3 Possible Errors During Operation	421
9.3 Appendix 3. Assigning of the domain takes place when the Axxon Next server is installed	422
9.4 Appendix 4. Using Axxon Next with anti-virus software	422
9.5 Appendix 5. Using CH VM-Desktop USB multifunction controllers with Axxon Next 423	
9.6 Appendix 6. Hotkeys in Axxon Next	425

User Guide. Introduction

Rus

On page:

- [General Information](#)
- [Purpose of the Document](#)
- [Purpose and functionality of Axxon Next](#)

General Information

No part of this document may be reproduced or transmitted in any form or by any means without the prior written permission of *AxxonSoft*.

The *Axxon Next* trademark is the property of *AxxonSoft*. All other trademarks included in this document are the property of their respective owners.

All information contained in this document is current as of the publication date. *AxxonSoft* reserves the right to change or update this document without the prior notification of or to any third party.

Purpose of the Document

This document, titled [User guide](#) contains the information necessary for building, implementing, and operating a security system based on *Axxon Next*.

The structure of this document enables the user to get acquainted with the software package and then, depending on the user's level of training, choose sections of interest for more detailed study. The chapters in this guide, whether they are informative or serve as a reference, have their own internal structure.

The chapters [Introduction](#) and [Description of the Software Package](#) are intended to generally acquaint the user with the technical features and functionality of the Axxon Next software package, as well as with the key stages of building a security system based on the software package.

Recommendations to the user/administrator for installing the software and configuring equipment are presented in detail in the chapter [Installing the Axxon Next Software Package](#). The chapter [Licensing of the software product](#) contains instructions on how to register a license to use the Axxon Next software package..

Startup and shutdown of the software package are described in the chapter [Launching and Closing the Axxon Next Software Package](#).

The chapter [Configuration of the Axxon Next Software Package](#) presents step-by-step instructions on configuring user-specific settings and activating the required functionality. This information is useful for system administrators as well as for operators with permissions to manage system settings.

Recommendations on configuring the user interface, working in various video surveillance modes, and utilizing the functional capabilities of the Axxon Next software package are presented in chapter [Working with the Axxon Next Software Package](#).

Chapter [Description of utilities](#) contains a description of additional software utilities employed when working with the software package.

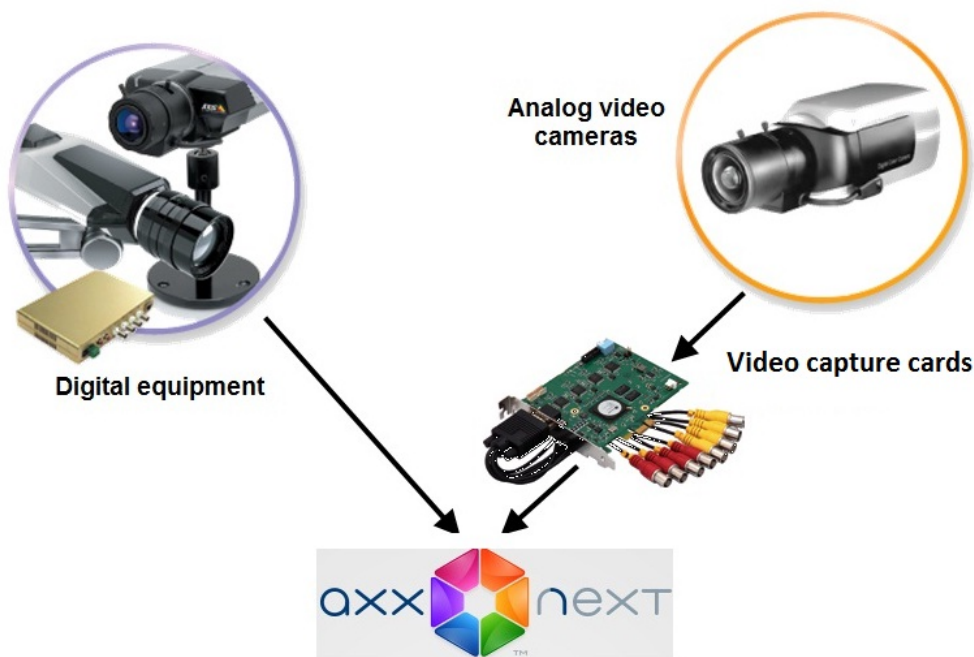
The [Appendices](#) contains a glossary of the product's basic terms and definitions. It also lists all known issues that you may encounter while using Axxon Next.

Purpose and functionality of Axxon Next

The Axxon Next software package is a next-generation open-platform video management software (VMS). Security systems based on Axxon Next range from home security systems (for an apartment or house) to professional large-scale distributed security systems for small and mid-size businesses (hotels, automotive service centers, shops, parking structures, etc.).

Video and audio surveillance of guarded locations, video analysis, and rapid response to suspicious situations without operator involvement, and storage and export of obtained data are just a few of Axxon Next's many functions.

The Axxon Next software package enables the user to accomplish a wide spectrum of tasks, as it works both with digital equipment and with analog video cameras (through video capture cards), and also makes it possible to create a hybrid security system containing both kinds of equipment.



The modern and constantly expanding feature set of Axxon Next allows implementing new video surveillance functionality that increases the convenience and precision of protection at end-user sites.

Description of the Software Package

Basic principles of building a security system based on the Axxon Next software package

Rus

Building a security system based on the Axxon Next software package includes the following recommended stages:

1. Selecting a configuration for the security system (with the help of professionals)
2. Building a separate local area network with restricted access
3. Calculating the sufficient bandwidth required for each segment of the local area network
4. Selecting and configuring the software and hardware platform on which the selected security system configuration will be implemented (selecting and configuring personal computers to act as servers and clients in accordance with the requirements, as referenced in the section titled [Implementation Requirements for the Axxon Next Software Package, Operating system requirements](#))
5. Selecting and connecting reliable equipment that is optimally suited for a specific security system (with the help of professionals)
6. Training personnel to work with the Axxon Next software package in accordance with the requirements (see the section titled [Requirements for Personnel Quantity and Qualifications](#)).

Axxon Next features: reference information

Rus

On page:
• Micromodule architecture • Support for IP cameras • Support for analog cameras in Axxon Next • Video and Audio Detection Tools • Video archive • Interactive 3D Map • User Interface • Face Recognition • NumberPlate Recognition • Receiving Events from External Systems

The advanced features available in Axxon Next are continuously updated and extended.

Axxon Next offers virtually unlimited opportunities for system scaling, task-based customization, and reallocation of resources (based on changes in the number or quality of video and audio monitoring tasks) at end-user sites.

Video surveillance systems based on Axxon Next can scale infinitely: there are no restrictions on the number of video servers, workstations or video cameras.

Support for over 1500 models of IP cameras is included, as well as remote access from mobile devices and a web interface. The Axxon Next software package supports touchscreens.

Micromodule architecture

The micromodule architecture of Axxon Next video management software allows implementing different video management system functions as different operating system processes. Each function is the responsibility of a different micromodule; a dispatcher module monitors the functioning of the micromodules. If a function encounters an error and a process is quit unexpectedly, the dispatcher module automatically relaunches the corresponding micromodule. This does not affect the performance of other processes or the functioning of the VMS overall.

Support for IP cameras

Drivers Pack

IP camera support in Axxon Next is provided through the **Driver's Pack** Module specially developed by AxxonSoft and regularly updated to support new IP devices.

Driver's Pack allows adding support for new IP devices without having to wait for the release of new versions of Axxon Next and without reinstalling the entire system.

Multistreaming

Many of today's IP cameras can transmit two video streams with different video parameters and compressed in different codecs. Axxon Next supports Multistreaming i.e. receiving two streams from a camera simultaneously: high-quality and low-quality, which allows taking advantage of this feature of IP equipment to optimize the CPU load on the video server and the client workstation. .

GreenStream

The GreenStream feature saves bandwidth and client CPU resources. It automatically chooses a video stream from a camera to the server, and then to the client, depending on the resolution at which the video is currently displayed on the client.

Embedded video camera analytics

Axxon Next supports on-board detection embedded in video cameras. This means that when on-board detection tools are triggered, Axxon Next is notified and can use these events to drive system reactions. On-board detection does not burden the CPU of the video server and makes use of uncompressed video (completely bypassing the compressing/decompression process), and therefore provide extra stability in difficult conditions such as poor visibility.

360 degree camera support

360 degree camera support allows dewarping video from a fisheye camera or camera with an ImmerVision panomorphic lens to obtain several "normal" flat images with different frame aspect ratios for display on the client screen. One of the resulting virtual cameras can be a virtual PTZ unit.

ONVIF

AxxonSoft is a member of [ONVIF](#) (the Open Network Video Interface Forum), which work toward the development and promotion of international standards for network security and video surveillance system interfaces. ONVIF is supported in all versions of Drivers Pack starting with version 3.1.3.

RTSP support

Many IP cameras support multimedia streaming via RTSP. Axxon Next supports receiving such streams without requiring integration of the relevant camera via Drivers Pack.

Support for analog cameras in Axxon Next

Alongside IP cameras, Axxon Next allows you to use analog cameras in your video surveillance system. Analog cameras are more affordable and are well-suited for many installations without high video resolution requirements. In addition, Axxon Next allows creating hybrid systems that combine both analog and IP cameras.

Video and Audio Detection Tools

Axxon Next video management software incorporates a powerful system for analysis of video images. It includes the following video detection tools:

1. motion detection;
2. background change detection;
3. detection for loss of video quality;
4. abandoned objects detection;
5. detection of crossing a line in a given direction;
6. motion start detection;
7. motion stop detection;

8. loitering detection;
9. object appearance detection;
10. object disappearance detection

In addition to the video detection tools, Axxon Next has two audio detectors:

1. noise detection - is triggered by exceeding a certain threshold volume level;
2. silence detection - is triggered when the microphone signal disappears completely

Macros can be set to automatically run when a detection tool is triggered (on a per-detector basis). Multiple detection tools can be combined into complex conditional rules.

Video archive

SolidStore

SolidStore is a new file system for reliable video storage developed by AxxonSoft especially for storing video archives. By optimizing the reading/writing process we managed to achieve three important advantages:

- Enable high read/write speeds, approaching the physical access speed limit of the hard disk.
- Increase the service life of the hard disk.
- Solve the problem of data fragmentation.

TimeCompressor

Time Compressor allows the user to set a time range for video footage and get a short video clip of all moving objects in the scene. Objects and events captured at different times are displayed simultaneously in a condensed "video synopsis". Time Compressor is especially convenient for viewing large archives that feature a relatively small number of active objects.

Forensic Search in Archive

The Axxon Next video management software (VMS) utilizes VMDA – a database developed by AxxonSoft for indexing and storing descriptions of observed scenes. Along with video recording, this database allows archiving characteristics of all moving objects in the scene, and then uses these characteristics to perform quick searches of the video recordings (MomentQuest2 technology).

Interactive 3D Map

Interactive 3D Map superimposes camera locations on a site map and displays camera views in the same window. Cameras in the current layout are color-coded by current status. Operators can instantly pinpoint where a selected camera is located on the map and identify the corresponding location of interest.

Immersion Mode

When enabled, this mode overlays a translucent video viewing tile on the map; fixed objects in the field of view (furniture, doors, etc.) are combined with their depictions on the map. This allows easily seeing where a person or car is located and where it is going.

OpenStreetMap

OpenStreetMap support is available in Axxon Next. The site map is downloaded from the Internet and the user selects the necessary area and scale. Additional map data is downloaded in real time, if needed, when zooming in/out or scrolling.



Note

To work with OpenStreetMap maps in *Axxon Next*, you need to purchase an [OpenStreetMap](#) license.

Virtual PTZ cameras on the map

The Virtual PTZ Camera function becomes available when the map contains at least one fisheye camera. This function allows viewing video from a fisheye camera directly on the map. Click anywhere in the fisheye video shown in a layout cell to dewarp the source video, with digital zoom and click-to-focus.

User Interface

Editable camera layouts

Axxon Next allows you to create custom camera layouts. Layouts can be configured in any way the user wants and the aspect ratios of viewing tiles can be fine-tuned. Editable layouts efficiently fit different cameras with different aspect ratios on the same screen, as well as support display of dewarped fisheye camera footage.

Autozoom

Autozoom helps to monitor moving objects by automatically adjusting the level of digital zoom. Autozoom shows close-in video for parts of the frame that contain a moving object or objects and follows them as they move, just as a movie camera does when taking a close-up shot.

Face Recognition

Axxon Next includes an algorithm for recognizing human faces in a video frame and subsequent search for them in a video archive of several cameras. You can search by an uploaded photo or by an image of a person's face selected in a video archive frame. The system will return the video fragments from the archive where the searched person is present as search results.

NumberPlate Recognition

Axxon Next also includes an algorithm for recognizing vehicle number plates. The recognized number plates are saved to a database and matched with a video archive of several cameras. If a number plate contains similar characters, the system generates several hypotheses during the recognition. This increases the probability of a successful search for a particular number in a generated database.

Receiving Events from External Systems

Axxon Next includes a new feature set that is capable of receiving events from various external devices and systems — POS terminals, access control units, external software, etc.

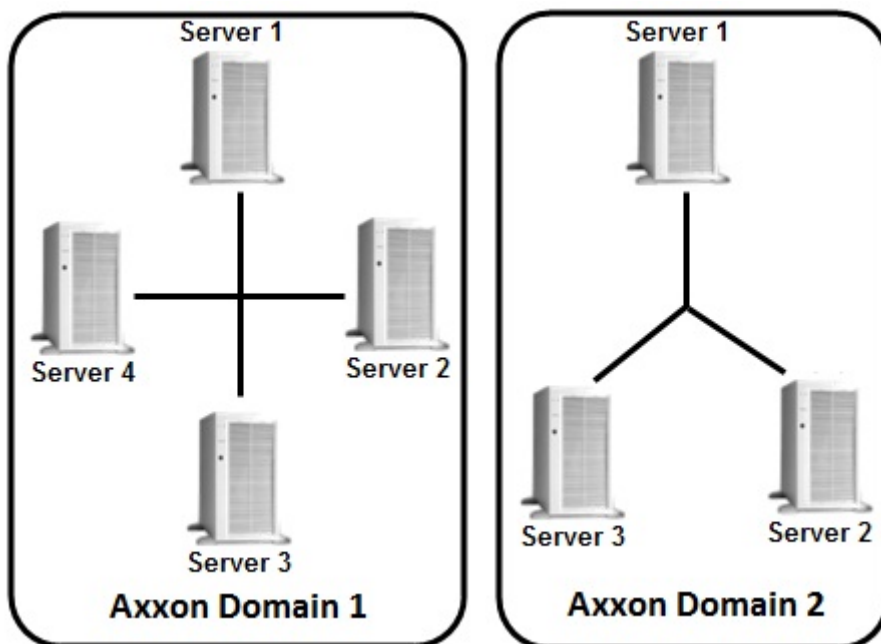
Functions of the Distributed Security System

Rus

You can create a distributed system within an Axxon Domain on Axxon Next.

Axxon Domain – a selected group of computers on which the server configuration of the *Axxon Next* software package is installed. Linking the servers in a group makes it possible to set up interaction between them, thus organizing a distributed system.

Only servers which belong to the same Axxon Domain can interact.



A distributed security system based on the Axxon Next software package offers the user the following functional capabilities:

1. Viewing and manual processing of video and audio data from several servers on one client
2. Controlling video cameras connected to various servers from one client
3. Configuring all servers of the distributed system on one client
4. Execution of automatic responses when detection tools are triggered (audio notification, triggering of relays, SMS and e-mail notification, etc.) within the distributed system.



Note

If a Server is not accessible by NetBiosName or some TCP and UDP ports are closed, it is possible to build a distributed security system on a virtual private network (VPN). For example, with the help of [OpenVPN](#). Detailed information on OpenVPN and examples of virtual private network configuration are given in the [official documentation](#).

Suppose, the Server relies on a defined port range (see [Installation](#)), and you want to set up a surveillance system based on several networks. You do not have to use VPN in that case. Use port forwarding instead.

Axxon Domain configuration is described in detail in the section titled [Configuring Axxon domains](#).

Specifications of the Axxon Next Software Package

Rus

Security systems based on the Axxon Next software package have the following primary characteristics.

Characteristics	Value
Number of servers in the distributed system	Unlimited
Number of clients which support simultaneous connection to the server	Unlimited
Number of servers which simultaneously transmit video images to a client	Unlimited
Number of video capture channels for "live video" processing on one Server	Unlimited
Number of simultaneously processed signals coming from microphones	Unlimited
Number of audio output channels (to speakers, headphones, etc.)	depends on the sound card used for playback
Number of PTZ devices used	Unlimited
Number of event sources (POS devices)	Unlimited
Number of objects simultaneously tracked by the Object tracker	up to 25
Number of license plate recognition channels	Unlimited
Number of face recognition channels	Is determined by the license; there is no upper limit
Analog video camera support	yes (through video capture cards)
IP device support	IP cameras and IP video servers This list is continuously expanding: support for new hardware is added through updates to Axxon Driver Pack
CPU support	32-bit (x86), 64-bit (x64)
Number of archives in the system	Unlimited
Video compression algorithms	MJPEG, MPEG-2, MPEG-4, MxPEG, H.264, H.265, Motion Wavelet, Hik264 (only for x86)
Available video image resolutions	resolutions supported by video cameras
Support for embedded video camera analytics	yes
Support for touchscreens	yes

Implementation Requirements for the Axxon Next Software Package

Limitations of the Axxon Next Software Package

Rus

When working with Axxon Next, the user must keep in mind the limitations that the developer has imposed on the system in order to ensure its operability.

No.	Limitation
-----	------------

1	To work with Axxon Next software the following requirements for OpenGL are to be fulfilled: 1. version 2.0 and higher; 2. Availability the ARB_vertex_program, GL_EXT_blend_func_separate, GL_ARB_framebuffer_object extensions. Extensions availability can be checked using the OpenGL Extension Viewer program (download). This program also contains a large database of data on OpenGL support in video cards of various vendors.
2	Axxon Next Client cannot be started if the scale of all items on the screen (DPI) is over 100%. You may have issues with Axxon Next VMS if the screen resolution is set at 1024*768 pixels or lower.
3	The Server and Client must be of the same version. If not, Axxon Next VMS may have issues.
4	Maximum video frame rate in the Client is 50 fps.
5	To install Axxon Next, you must log in to Windows as an administrator.
6	For proper installation of Axxon Next, there should be no spaces at the beginning of the name of the folder which contains the installer
7	For all features of Axxon Next to work properly, the system must not have any restrictions on network activity. If certain ports are specified during installation of Axxon Next, TCP and UDP access to these ports should be enabled. Otherwise, access to all ports should be allowed in the system
8	Time must be synchronized among all computers in the system (to be configured by the user).
9	If you have edge storage enabled in the system, synchronization between the server and the IP device is necessary (see The Embedded Storage object). Lack of synchronization may lead to bad DB entries of events detected on the edge device.
10	Before installing Axxon Next, make sure the video card drivers on the computer are fully up to date
11	The NetBiosName of the computer may contain up to 15 characters.
12	The Client cannot be started on a remote desktop through the Remote Desktop Connection utility built into Windows
13	If a computer is linked to an Active Directory domain, one of the following conditions must be met to enable disk access: 1. Access control lists must contain only local or built-in groups and users. 2. Create an AxxonFileBrowser user in the domain and add it to the Users group (see Installation step 8). This behavior is typical only of file systems that have access permissions (for example, NTFS).

Operating system requirements

Rus

Axxon Next software package is compatible with 32-bit and 64-bit licensed versions of Microsoft Windows operating system.

Windows version	Supported edition	Note	
Windows Vista SP2 (x86, x64)	Home Basic	Restrictions, imposed by OS edition (1 physical processor, 5 SMB connections) – see http://www.microsoft.com	
	Home Premium	Restrictions, imposed by OS edition (1 physical processor) – see http://www.microsoft.com	
	Business	OS edition, enabling to use all realized product features	
	Enterprise	OS edition, enabling to use all realized product features	
	Ultimate	OS edition, enabling to use all realized product features	
Windows Server 2008 SP2 (x86, x64)	Enterprise	OS edition, enabling to use all realized product features.	Full Installation type is supported. Server Core Installation type is not supported
	Datacenter	OS edition, enabling to use all realized product features.	
	Standard	OS edition, enabling to use all realized product features.	
	Web	OS edition, enabling to use all realized product features.	

	HPC	OS edition, enabling to use all realized product features.	
Windows Server 2008 R2 SP1 (x64)	Enterprise	OS edition, enabling to use all realized product features.	Full Installation type is supported. Server Core Installation type is not supported
	Datacenter	OS edition, enabling to use all realized product features.	
	Standard	OS edition, enabling to use all realized product features.	
	Web	OS edition, enabling to use all realized product features.	
	HPC	OS edition, enabling to use all realized product features.	
	Foundation	OS edition, enabling to use all realized product features.	
Windows 7 SP1 (x86, x64)	Starter (x86)	Restrictions, posed by OS edition (2GB of main memory, 1 physical processor, 1 monitor) - see http://www.microsoft.com	Stretch cards are supported in 32-bit version only
	Home Basic	Restrictions, posed by OS edition (1 physical processor) - see http://www.microsoft.com	
	Home Premium	Restrictions, posed by OS edition (1 physical processor) - see http://www.microsoft.com	
	Professional	OS edition, enabling to use all realized product features.	
	Enterprise	OS edition, enabling to use all realized product features.	
	Ultimate	OS edition, enabling to use all realized product features.	
Windows 8 (x86, x64)	Core	OS edition, enabling to use all realized product features.	
	Pro	OS edition, enabling to use all realized product features.	
	Enterprise	OS edition, enabling to use all realized product features.	
Windows Server 2012 (x64)	Foundation	Restrictions, posed by OS edition (1 physical processor)	Full Installation type is supported. Server Core Installation type is not supported
	Essentials	Restrictions, posed by OS edition (2 physical processors)	
	Standard	OS edition, enabling to use all realized product features.	
	Datacenter	OS edition, enabling to use all realized product features.	
Windows Server 2012 R2 (x64)	Essentials	Restrictions, posed by OS edition (2 physical processors)	Full Installation type is supported. Server Core Installation type is not supported
	Standard	OS edition, enabling to use all realized product features.	
	Datacenter	OS edition, enabling to use all realized product features.	
Windows 10 (x86, x64)	Pro	OS edition, enabling to use all realized product features.	
	Enterprise	OS edition, enabling to use all realized product features.	
	Education	OS edition, enabling to use all realized product features.	
	Home Edition	OS edition, enabling to use all realized product features.	

TCP/IP Network Bandwidth Requirements

Rus

Network bandwidth is a limiting factor in distributed system performance. The bulk of the information streamed over the network is video data. For example, the data flow (video stream) from remote cameras, such as used to monitor ATMs, is sent via communication channels.



Attention!

The minimum bit rate through the communication channel (network bandwidth consumption / goodput) for the Axxon Next VMS, should be at least **2 Mbit/s**.

To determine the required TCP/IP network bandwidth for video transmission from IP devices and some video capture cards, we recommend you to use [Axxon Platform Calculator](#) (check the **Total bitrate from ip devices (Mbit/s)** parameter).

Requirements for Personnel Quantity and Qualifications

Rus

The following roles have been defined for operating the Axxon Next software package:

1. Security system administrator
2. Security system operator

In special cases, one person can perform the functions of both the administrator and the operator.

The main duties of the administrator are to:

1. Update, configure, and monitor the operability of the security system's hardware
2. Install, update, configure, and monitor the operability of basic and system software
3. Install, configure, and monitor software applications
4. Manage user accounts (this duty can be carried out by a user entrusted with system administrator permissions).

The administrator must have the skills necessary for network configuration, including routing and firewall, as well as NetBIOS, DNS, and NTP network services.

Besides, the administrator must have high qualifications and practical experience installing, configuring, and administering the software and hardware employed in the software package.

The software package is structured so that all accessible functionality can be managed by one administrator or administration responsibilities can be divided among several users.

The main duties of an operator are to:

1. Work with the software's GUI (graphical user interface)
2. Optimize the performance of the personal computer to carry out tasks using the functionality provided in the software package
3. Create roles and users in the system (if the user has been granted the appropriate permissions)

The system operator must have experience with, and be a qualified user of, PCs running Microsoft Windows and must be able to easily perform basic operations.

BIOS configuration requirements

Rus

Axxon Next suite performance (namely, video decoding) is sensitive to CPU frequency. The higher the frequency, the better will be *Axxon Next* performance on this platform.

Modern computers have the power saving mode enabled in BIOS by default. Using this mode in multiprocessor systems results in incomplete CPU core utilization and decreases the performance of an input/output subsystem.

To increase *Axxon Next* suite performance, configure the computer BIOS as follows:

1. Disable all Enhanced Intel SpeedStep (EIST) technologies.
2. Disable power saving modes: select options providing maximum performance.
3. Disable green technologies such as Energy Saving, Turbo Boost, SmartThrottling.



Attention!

Different motherboard manufacturers use different names for these technologies. Therefore, for every particular motherboard model you must find the technology name in the documentation for this model.

Running Axxon Next VMS in Virtual Machines

Rus

The *Axxon Next VMS* can be run in the following virtual machines:

- VirtualBox
- VMWare
- Exsti
- HyperV



Attention!

To run the Client, 3D acceleration must be enabled.



Note

The operating system in a virtual machine must meet the general requirements.

If you use VirtualBox on Windows 7 SP1, you won't be able to access a Guardant USB key from the guest system.

Interface of the Axxon Next Software Package

Rus

Axxon Next Client has 2 basic interfaces: Layouts  and Settings .

To switch the two, click the tabs at the top of the screen.

Note

If there are no cameras in VMS, the  tab is not available.

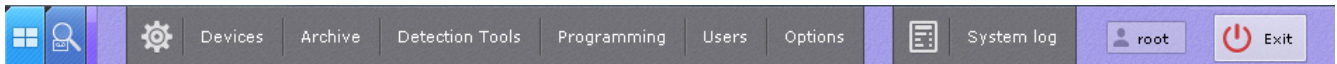
Note

If VMS has an ANPR license, it shows the  search tab as well.

Attention!

You can configure access to any given tab and buttons in the top panel individually for each user role (see [Configuring user permissions](#)).

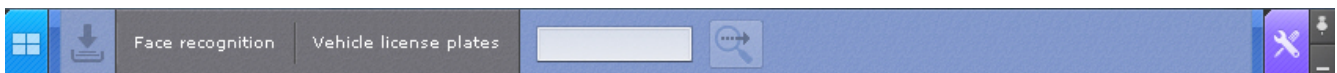
When you are configuring VMS, the top panel shows tabs with different groups of settings, the button for switching to the system log, current user name and the Quit button.



In the Layouts interface, you have the following interfaces: [Camera Search Panel](#), [Video Walls Management Panel](#), [Layouts Panel](#).



The several video cameraarchive search interface allows to choose the search type and parameters, as well as buttons for launching the search and exporting the selected video footage (see [Search panel](#)).



In the Layouts and Search interface, you can hide the top panel. To do this, click the  button in the top right corner. To show the top panel, hover over it with the pointer.

Note

To pin the top panel, click the  button.

In Full Screen (see [Configuring the Client screen mode \(full screen or window\)](#)), to collapse the client window, click the  button.

Installing the Axxon Next Software Package

Installing equipment

Types of Devices Used

Rus

An IP device is the source of the video signal (video data) for the Axxon Next software.

Note

You can connect analog video cameras to Axxon Next via video capture cards, which the software defines as IP devices

The following types of equipment are IP video and audio surveillance devices:

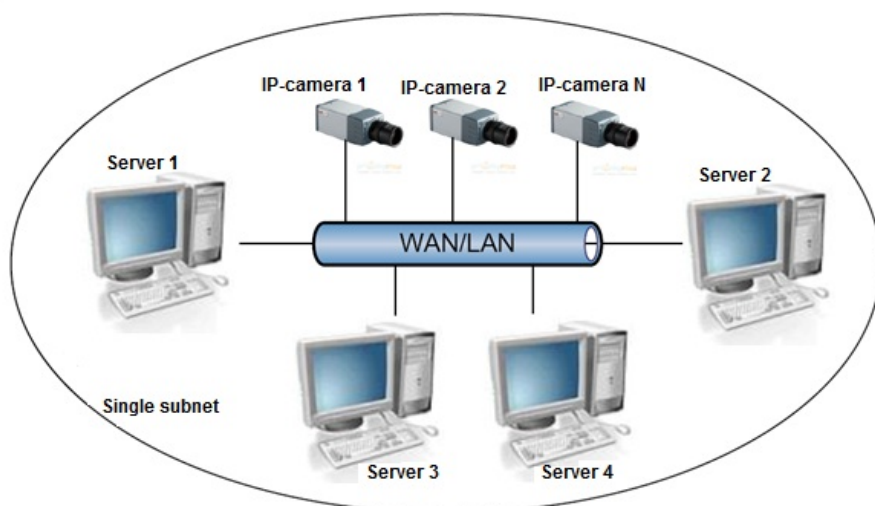
1. IP video cameras
2. Various types of IP video servers

IP video servers which use analog video cameras directly connected to them, digitize the analog video signal, and transmit it to users via TCP/IP. When working with analog video cameras connected to IP video servers, users can utilize the same video image viewing and transmission functions as with IP video cameras.

Connecting IP Devices

Rus

To work with IP devices, you need to connect the Axxon Next server to the local network where the required IP devices are enabled.



To ensure support for IP devices on an external network:

- The IP devices must have an external static IP address.
- The necessary ports on the network equipment must be opened.



Attention!

If these requirements are met, IP devices should be properly handled. However, correct functioning is not guaranteed

Based on the video signal coming in from the IP device, an assessment is made of the guarded location and the system responds to events registered for that location. The content and quality of the obtained video information depends on how the IP device is installed and configured. There are a number of rules that must be followed to obtain a high-quality video signal. In particular, high-quality peripheral equipment (hubs/routers) must be used; we advise against use of Home and Office-class devices, which are not intended for use in such security systems.



Note

IP devices connected to such equipment will transmit a video stream with an unacceptably long delay (from 1.5 to 3 seconds per frame)

Detailed information about creating a local network and connecting IP equipment to it is presented in the corresponding reference documents.

Configuring IP Devices in Windows

Rus

IP devices can be configured in Windows by using the following software:

1. Software included with the IP device This software is used to accomplish the following tasks:
 - a. Searching for network devices connected to the local network
 - b. Preliminary IP address assignment (without account of routing)



Attention!

Without assigning preliminary IP addresses to the devices, it is not possible to access their Web interface

2. Web interface of the IP device. This interface is used to accomplish the following tasks:
 - a. Configuring the IP devices with consideration for routing

- b. Configuring modes for the IP devices to work with video and audio signals
- c. Viewing video images coming in from IP devices in standard Web browser mode

Configuration of IP devices in Windows is described in detail in the official reference documentation for the respective devices.

Particulars of Configuration of Devices

Rus

On page:

- [Axis IP Devices](#)
- [Stretch video capture cards](#)
- [WS-216 video capture cards](#)
- [Sony IP Devices](#)
- [Joysticks](#)
- [CH VM-Desktop USB multifunction controller](#)
- [Configuring Vivotek Panoramic PTZ](#)

Axis IP Devices

For Axis IP devices on which the Bonjour function is supported and enabled, changing the default value of the **Friendly name** parameter is strongly discouraged. If an arbitrary **Friendly name** value is set for an Axis IP device, a search for connected equipment in the Axxon Next software package will give incorrect results for this IP device.



Note

The Friendly name parameter is configured through the Web interface of the IP device: Setup -> System options -> Network -> Bonjour



Note

The default value of the Friendly name parameter is as follows: AXIS <model name> - <mac address>, where <model name> is the model of the Axis IP device and <mac address> is its MAC address (for example, AXIS 214 - 00408C7D2610

Axxon Next can access the following video streams from Axis IP devices:

1. H.264/MJPEG video
 - 2-5. Streams matching the Quality, Balanced, Bandwidth, and Mobile profiles. These profiles are configured via the camera's web interface.
- In Axxon Next, the Quality profile corresponds to stream **1. Auto**, Balanced is stream **2. Auto**, Bandwidth is stream **3. Auto**, and Mobile is stream **4. Auto** (see [The Video Camera Object](#)).

4. Camera settings	
High-quality video stream	0. H.264/MJPEG
Bitrate	0. H.264/MJPEG
Compression Mode	1. Auto
Compression Priority	2. Auto
Compression Rate	3. Auto
Frames per second (fps)	4. Auto

Stretch video capture cards

If a Stretch VRC6004, VRC6008, VRC6404HD, VRC6416, VRC7008L, or VRC7016LX video card is installed, the choice of incoming video signal (PAL or NTSC) is made automatically, based on the video cameras connected to the card. Changes to this setting do not affect operation of the card.



Attention!

For video cameras connected through Stretch cards, it is impossible to display object tracking from embedded detection units in the viewing tile in Axxon Next

WS-216 video capture cards

In *Axxon Next*, each WS-216 video capture card corresponds to two devices: manufacturer **ITV**, model **TW5864 PCI** (driver **Yuan**, **2**) and manufacturer **CaptureDevice**, model **CaptureDevice** (driver **DShow**, **1**).

IP address	Port	Vendor	
dshow8.m-seregin	0	CaptureDevice	
MAC address		Model	Firmware
not defined		CaptureDevice	auto
1			
IP address	Port	Vendor	
dshow9.m-seregin	0	CaptureDevice	
MAC address		Model	Firmware
not defined		CaptureDevice	auto
2			
IP address	Port	Vendor	
yuan0.m-seregin	0	ITV	
MAC address		Model	Firmware
not defined		TW5864 PCI	auto
2			
IP address	Port	Vendor	
yuan1.m-seregin	0	ITV	
MAC address		Model	Firmware
not defined		TW5864 PCI	auto



Note

If you have a WS-216 card added through the Yuan driver, in Windows Server OS you should activate: [Desktop Experience Feature](#)

Cameras connected to Axxon Next through the WS-216 card require the following configuration: add **ITV tw5864 PCI** device configuration (**2**) and select the checkbox **Send settings to device** (see [The Video Camera Object](#)).



Note

Axxon Next does not support receiving uncompressed video from WS-216 video capture cards.

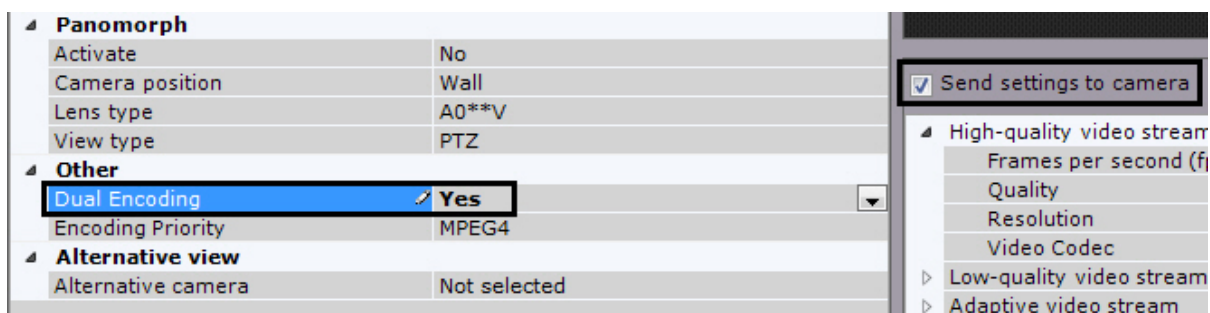
For video cameras that are connected through WS-216 video capture cards, you can choose one of the two codecs for a video stream:

1. H.264 (configurable)
2. H.264 (minimum resolution, non-configurable)

Sony IP Devices

Some Sony models support encoding of the video signal in two formats simultaneously. To use this option you must perform the following steps:

1. Select the **Send settings to camera** checkbox.
2. From the **Dual Encoding** list, select the codec which will take priority when dual encoding.



Joysticks

Only joysticks that are detected in Windows as gaming input devices can be used in Axxon Next for controlling PTZ cameras.

Information on how to view the status for a connected joystick is available in official Microsoft [documentation](#).



Note

We recommend that you calibrate the joystick before you start working with *Axxon Next*.

CH VM-Desktop USB multifunction controller

For the controller to work properly in Axxon Next, the controller must be connected before the Axxon Next client is started.



Note

To learn about connecting the device, consult the manufacturer's official documentation.

Controller keys cannot be remapped.

Use of the CH VM-Desktop USB multifunction controller in Axxon Next is described in the corresponding [section](#).

Configuring Vivotek Panoramic PTZ

Vivotek Panoramic PTZ is a technology for linking a fisheye camera to a PTZ camera.

This Vivotek technology allows simultaneously maintaining full situational awareness in the field of view of a fisheye camera, while maintaining the ability to carefully monitor a specific area in depth by using a PTZ unit.

Vivotek Panoramic PTZ is supported by the fisheye cameras Vivotek SF8172 and Vivotek SF 8172V and by the PTZ camera Vivotek SD8362E.

To use this technology in Axxon Next:

1. Install and configure the cameras in accordance with the [official Vivotek documentation](#).
2. Add the cameras to an Axxon Next configuration.

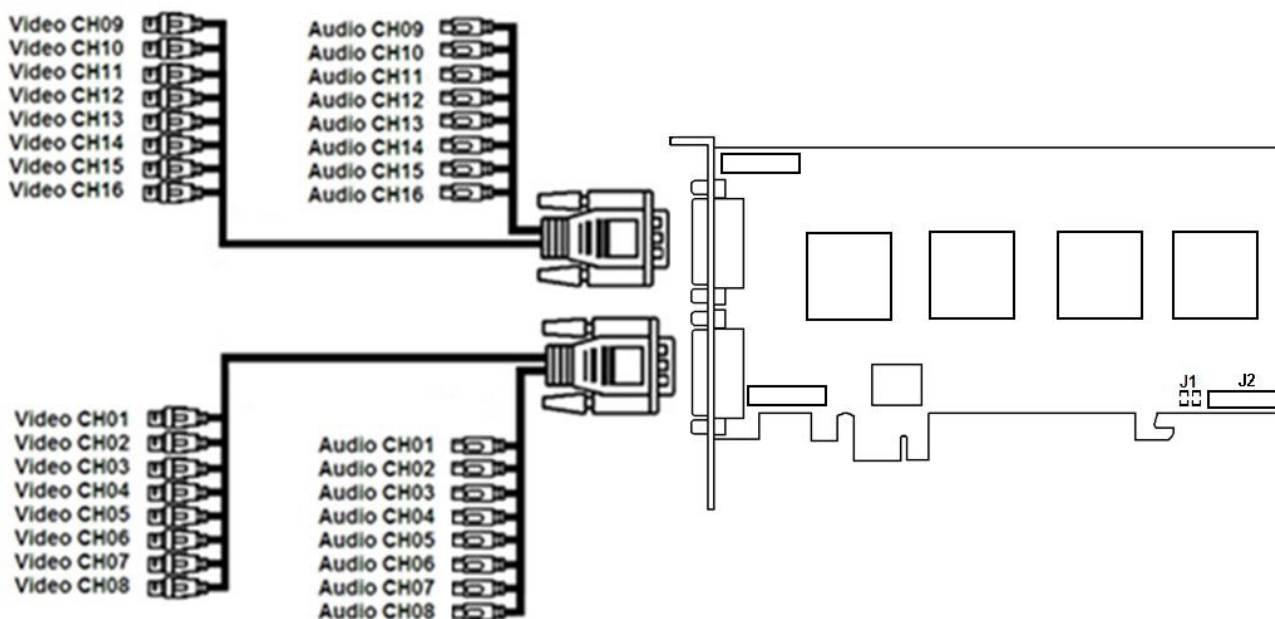
Vivotek Panoramic PTZ support in Axxon Next is implemented via the Areazoom (see [Control using Areazoom](#)) and Point&Click functions (see [Control using Point&Click](#)).

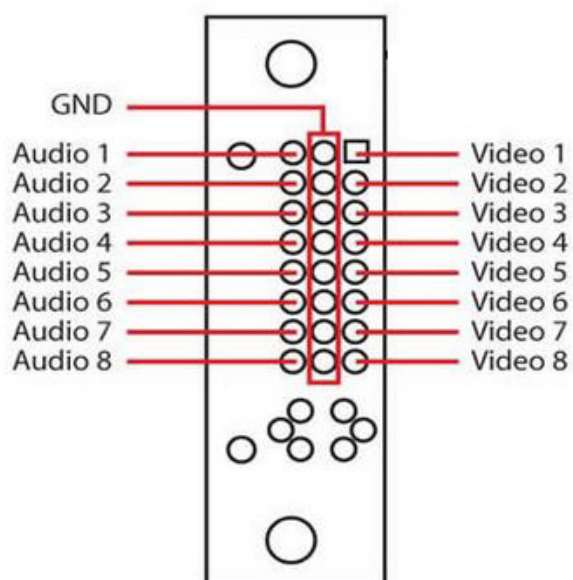
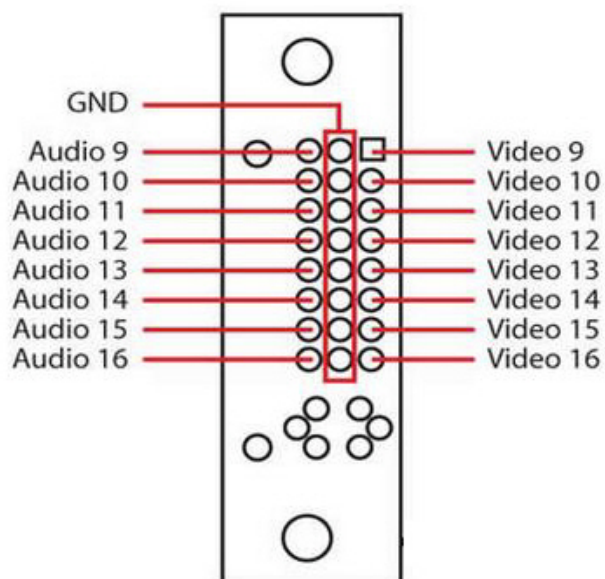
Video capture cards pins

WS-216 video capture card pins

Rus

WS-216 video capture card has two external DVI-I pins. Video and audio connection is performed with the help of DVI-I/BNC and DVI-I/RCA stubs correspondingly. Simultaneous connection of up to 8 cameras and up to 8 sound sources to one external pin of WS-216 video capture card is possible. The Watchdog cable is connected to the J1 pin. DI/DO card is connected to the J2 pin.

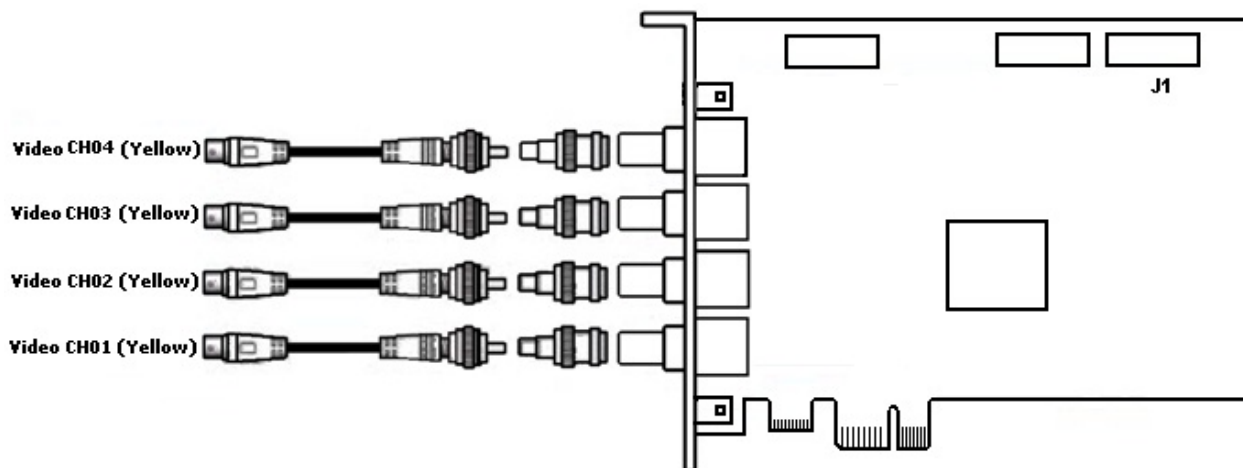




VRC6004 video capture card pins

Rus

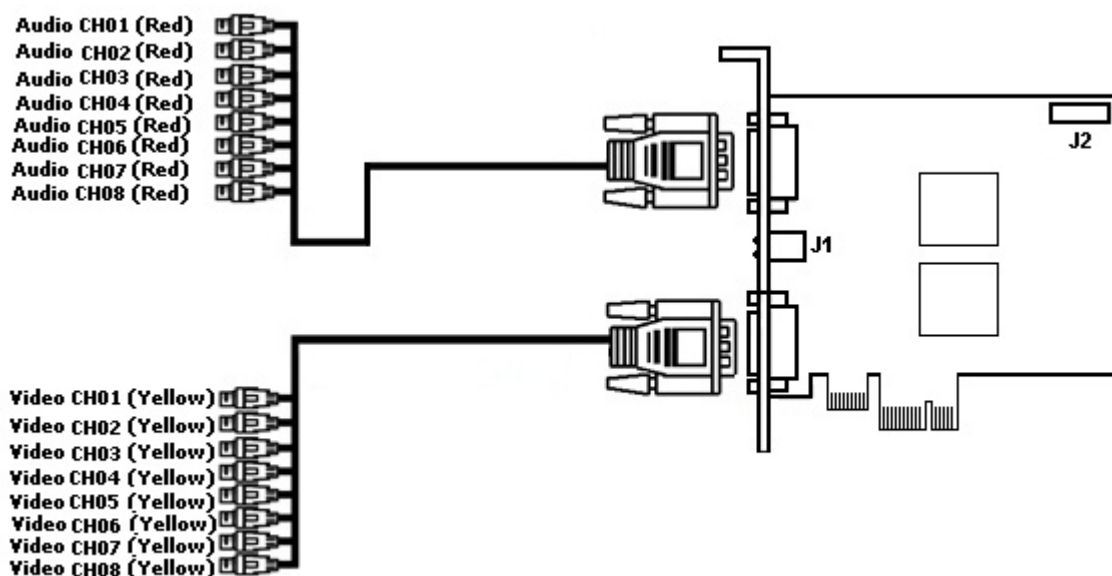
VRC6004 video capture card has four external BNC pins. Cameras are connected with the help of BNC pin. Simultaneous connection of up to 4 cameras is possible. DI/DO card is connected to the J1 pin.



VRC6008 video capture card pins

Rus

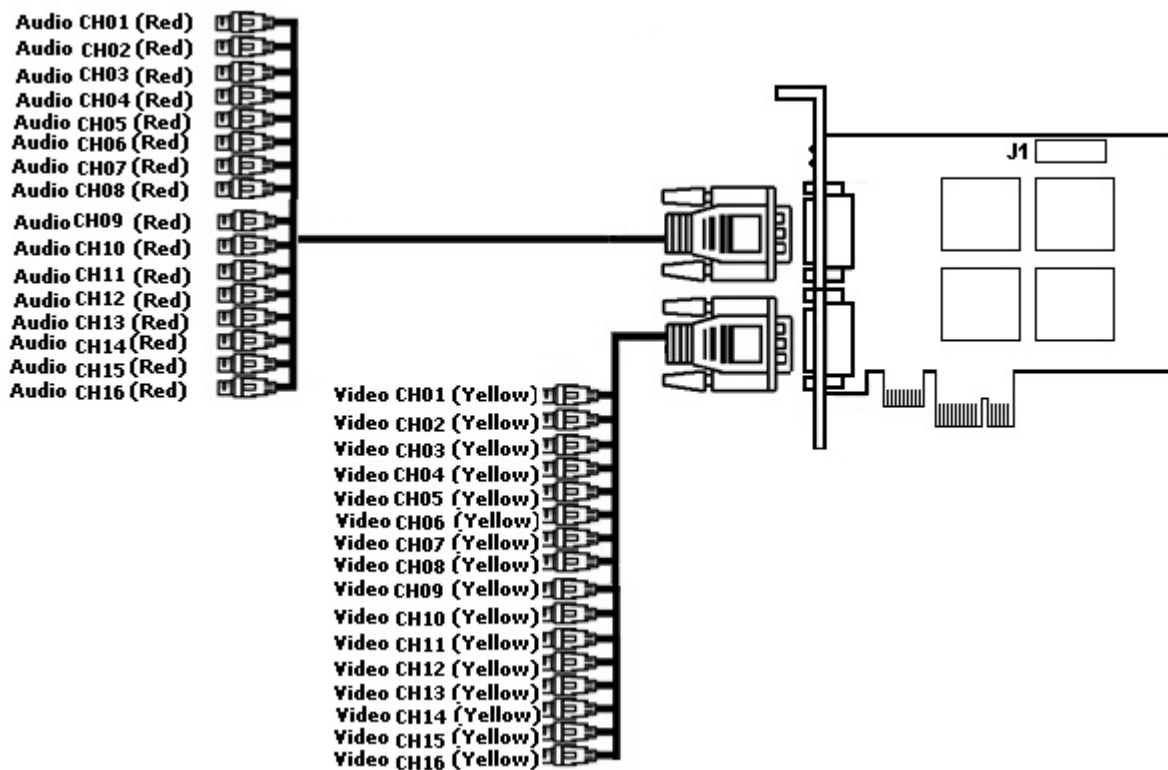
VRC6008 video capture card has two external D-SUB-15 pins. D-SUB-15/BNC interface cable is used for simultaneous connection of up to 8 cameras and 8 audio channels to the external D-SUB-15 pin of VRC6008 video capture card. DI/DO card is connected to the J2 pin. Pin J1 corresponds to analog video out.



VRC6416 video capture card pins

Rus

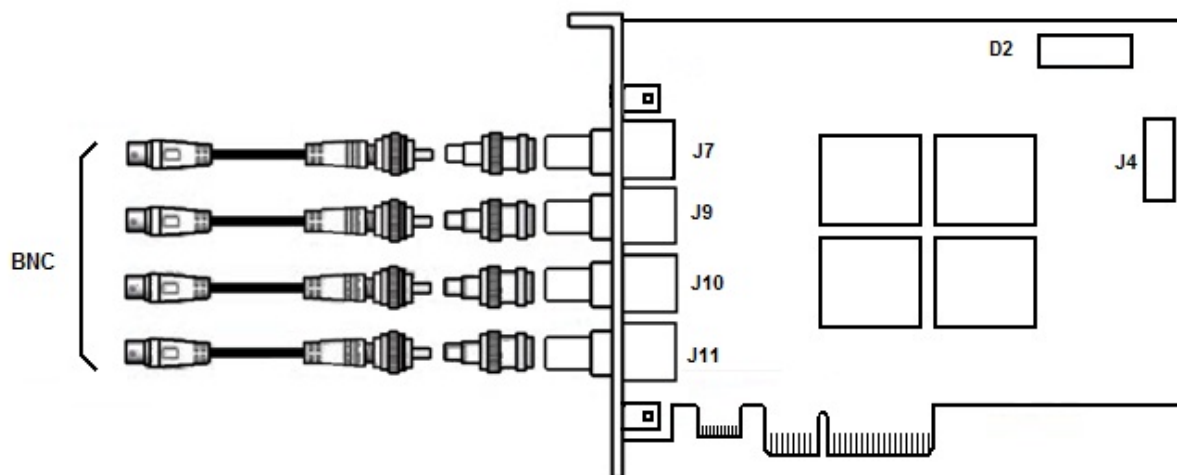
VRC6416 video capture card has two external DVI pins. DVI /BNC interface cable is used for simultaneous connection of up to 16 cameras and 16 sound sources to external DVI pins of VRC6416 video capture card. DI/DO card is connected to the J1 pin.



VRC6404 HD video capture card pins

Rus

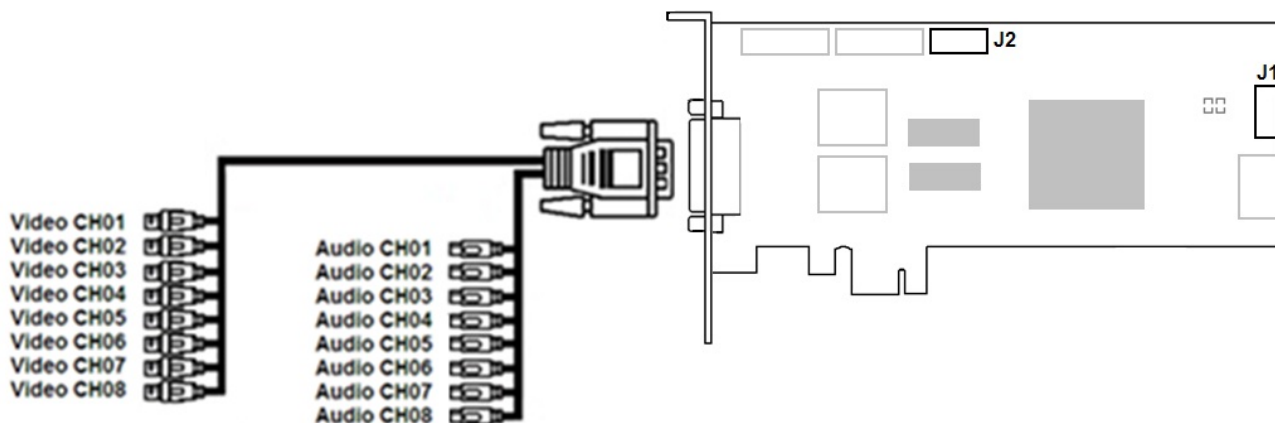
VRC6404 HD video capture card has BNC pins through which cameras are connected. Up to 4 cameras can be connected. There is the 15-pin SATA (J4) power socket. D2 pin is used to connect DI/DO card.



VRC7008L video capture card pins

Rus

VRC7008L video capture card has a DVI pin. DVI /BNC interface cable is used for simultaneous connection of up to 8 cameras and 8 sound sources to external DVI pin of VRC7008L video capture card. DI/DO card is connected to the J1 pin. J2 pin corresponds to analog video out.



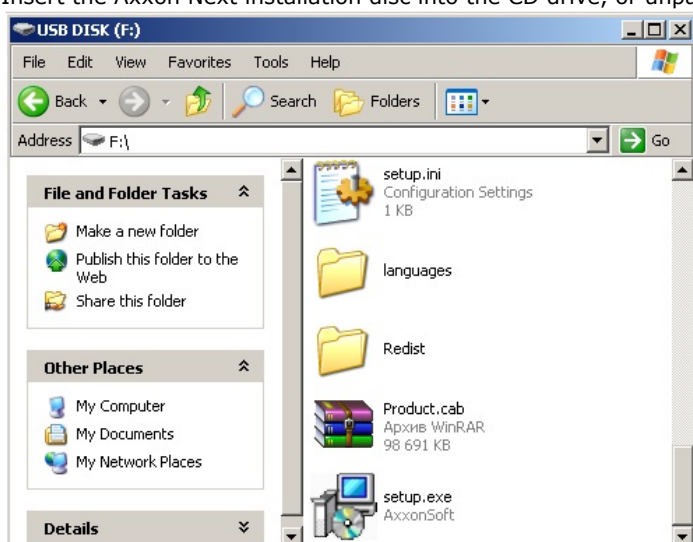
Installation the Axxon Next Software Package

Installation

Rus

To install Axxon Next, regardless of the type of installation, you must perform the following steps:

1. Insert the Axxon Next installation disc into the CD drive, or unpack the archive with installer package.



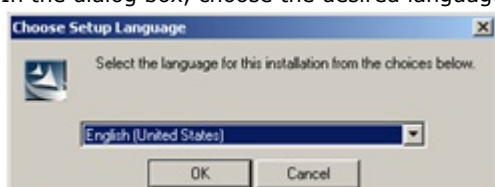
2. Run the Setup.exe file.



Note

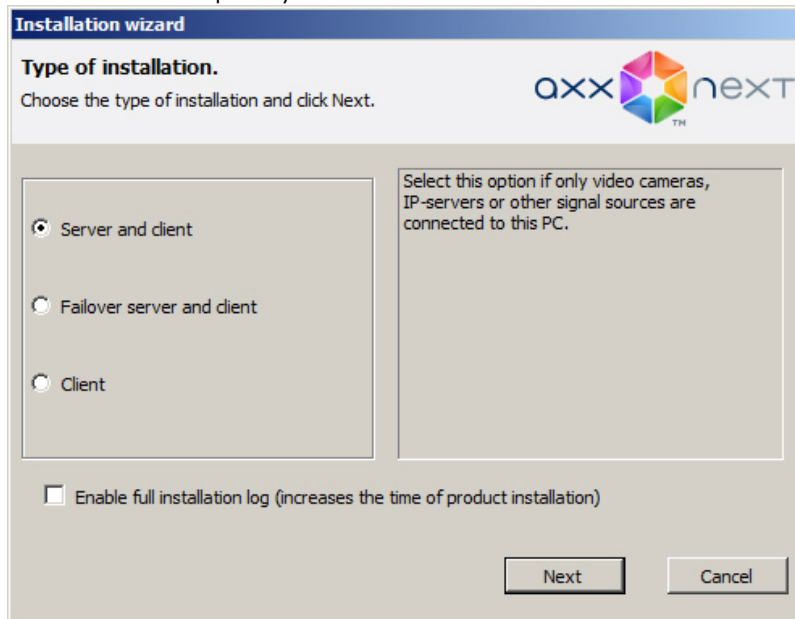
If you cannot run the installation files downloaded from Internet, do as follows : allow running programs and unsafe files in Windows OS.

3. In the dialog box, choose the desired language from the list and click **OK**



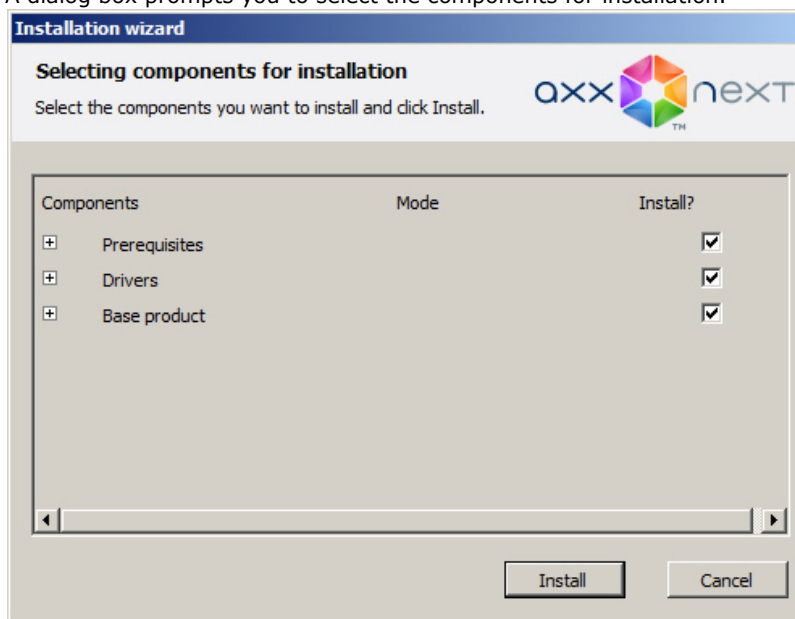
4. Select the Axxon Next software installation type in the dialog box by clicking the appropriate option button:
 - a. **Client** – This type of installation is used for installing the software's user interfaces, which enable any user to connect to any server within a single security system and to perform administration/management/monitoring of a guarded location based on the permissions granted by the administrator.
 - b. **Server and Client** — installs Client and Server services. *Axxon Next Server*:
 - i. interacts with devices (cameras, microphones, sensors, relays, etc.) that constitute a security system;
 - ii. writes video footage to archives on system disks; interacts with archives on NAS;

- iii. hosts VMDA database;
 - iv. employs detection tools to analyze live video;
 - v. keeps configurations of the security system, user settings, custom layouts, macros, etc.
- c. **Failover Server and Client**— installs Client and Server services enhanced with the Failover capability. In emergency (power outage, network problems), the Failover technology restores the server configuration on another server. Please refer to the section titled [Configuring Failover VMS](#) for details on how to install VMS with the Failover capability.

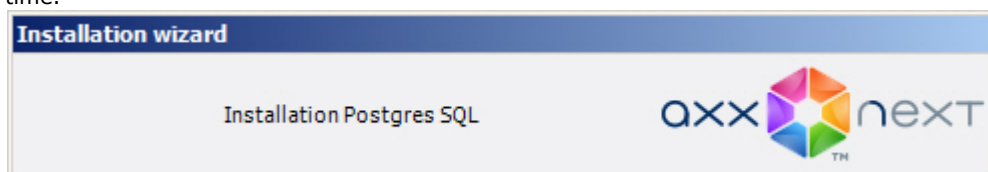


5. To record all installation-related events to a log file, select the **Enable full installation log** check box.
6. Click the **Next** button.

A dialog box prompts you to select the components for installation.



7. Select check boxes for the components that you want to install. We recommend installing all components.
8. Click the **Install** button. All selected components will be installed. The installation process may take considerable time.



Note

The following required software is installed, if necessary:

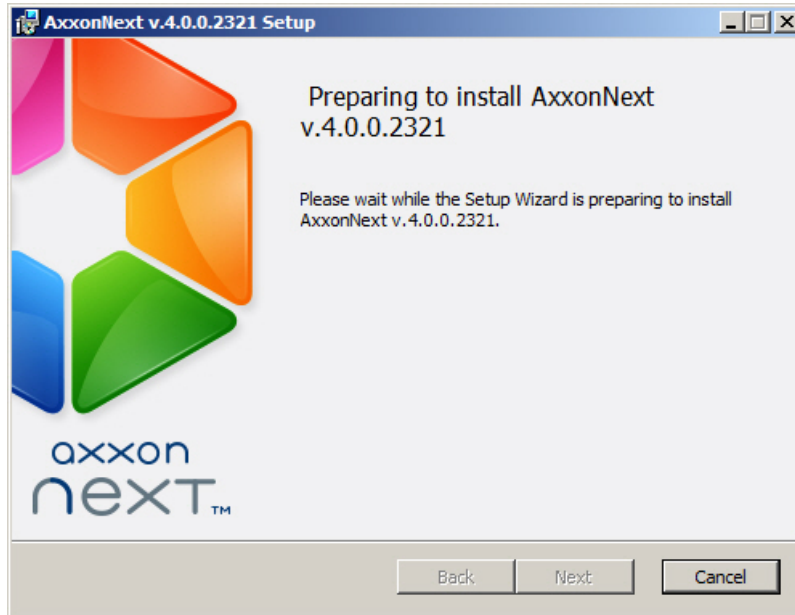
- 1) PostgreSQL 9.2.2 server database If an older version of PostgreSQL is installed, it is updated to version 9.2.2. A new log database is automatically created (name: ngp, user name: ngp, password: ngp).

2) .NET Framework 2.0, .NET Framework 3.5 SP1 and .NET Framework 4.0

3) Acrobat Reader, which is necessary for exporting in PDF format and printing freeze frames (see [Frame export](#)).

4) VLC Player The VideoLan folder, in the Axxon Next installation folder, contains the file VLC.exe, which is a version of the VLC Player that can be run from any connected disk without installation. This file can be used to view exported archive video.

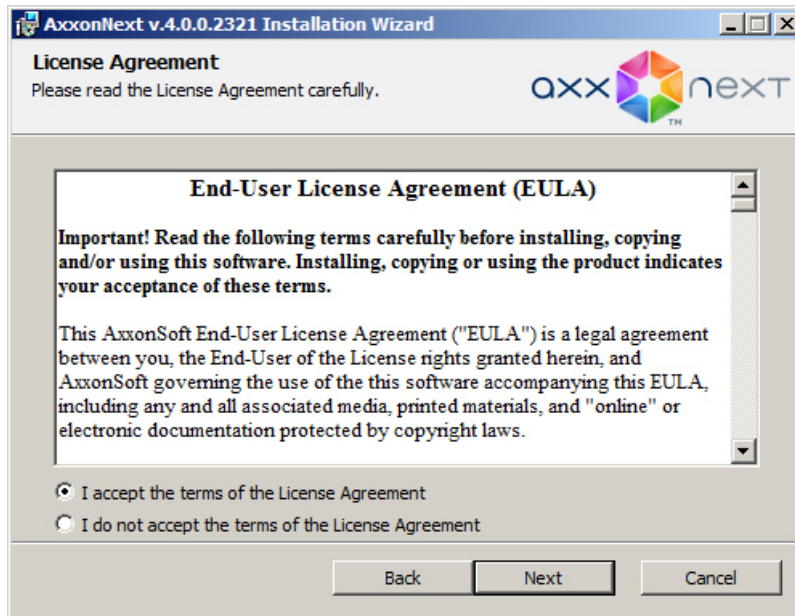
9. After installation of the required software and drivers, preparation begins for Axxon Next installation.



10. Click **Next** on the setup wizard's welcome screen.



11. To proceed with installation, accept the terms of the license agreement by selecting the radio button next to **I accept the terms of the License Agreement** and click **Next**.



12. Indicate the destination folders for installation of Axxon Next components and click **Next**.



Attention!

The installation path for Axxon Next and its databases must contain only Latin letters and numbers.



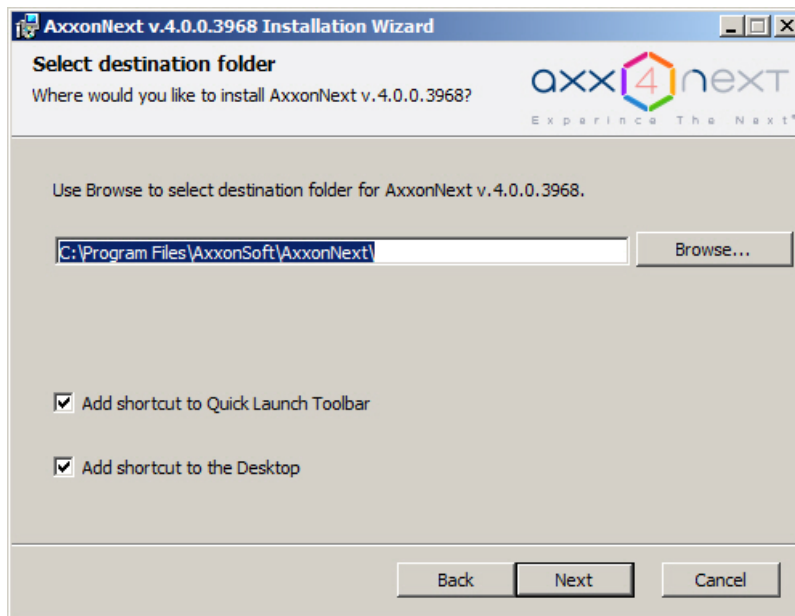
Note

By default, the software will be installed to the directory C:\Program Files\AxxonSoft\AxxonNext\



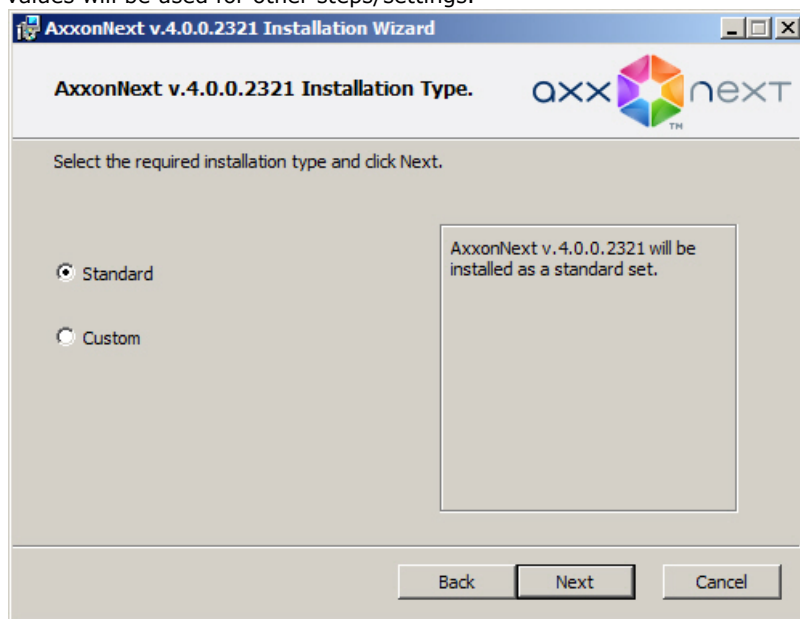
Note

To add quick launch shortcuts or desktop shortcuts, select the corresponding check boxes



13. In the window that opens, select an installation method and click the **Next** button.
If the **Custom** installation method is selected, you can perform advanced configuration of the installation of Axxon Next.

If the **Standard** installation method is selected, you are prompted to select an Axxon domain (Step 20). Default values will be used for other steps/settings.



14. Select a user account in the file browser:



Note

The file browser helps to navigate through the Server's file system (such as when choosing disks for log volumes). The user account for the Windows file browser will be created with administrator privileges.



Attention!

After installation of Axxon Next, make sure that a file browser account has been created in Windows and belongs to the Administrators group.

- Create a new account; the default name selected will be AxxonFileBrowser.
- Select the LocalSystem account.
- Specify username and password for new or already existing user.

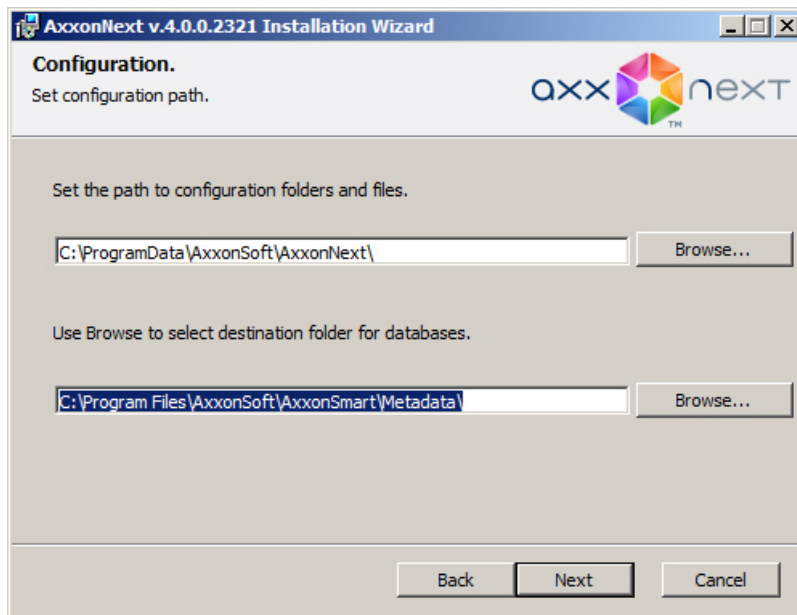


15. Select a folder for storing the files and folders of the Axxon Next configuration.



Note

By default, the files and folders of the configuration are stored at the following path:
C:\ProgramData\AxxonSoft\AxxonNext\



16. Select a folder for storing Axxon Next databases: the log database and object trajectory database.



Attention!

The installation path for Axxon Next and its databases must contain only Latin letters and numbers.



Attention!

You are advised to place the log database and object trajectory database on a disk that has sufficient space. If you will be using only a log database, the disk capacity must be at least 5% larger than the archive size. If you will also be using a trajectory database, the disk must be at least 15% larger than the archive.

The following formulas can help to determine the required disk size for the trajectory database:

Size of object trajectory database = $N \times T \times (0,5 \text{ Gb} / \text{day})$ – sufficient disk size;

Size of object trajectory database = $N \times T \times (1 \text{ Gb} / \text{day})$ – sufficient disk size plus reserve space;

Size of object trajectory database = $N \times T \times (5 \text{ Gb} / \text{day})$ – sufficient disk size plus a large reserve.

N equals the number of video cameras in the system actively recording metadata; **T** equals the period of time (number of days) that metadata will be stored. By default, $T = 30$ days.

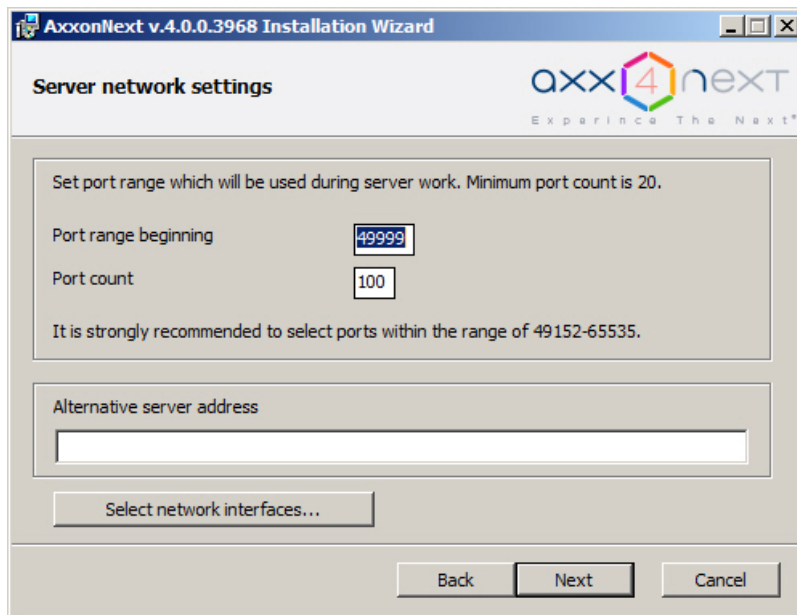
If you have less than 5 Gb of free disk space, the Object Tracking DB is overwritten - new data records over the oldest data records.



Note

By default, the log database and object trajectory database are located in the folder C:\Program Files\AxxonSoft\Axxon Smart\Metadata\ (in the pg_tablespace and vmda_db subfolders, respectively).

17. Click the **Next** button.
18. Specify the range of ports to be used for the Server. To do so, specify the lower end of the range, as well as the number of ports. This feature guarantees that any server process will use only ports from the allowed range for its needs. The minimum possible number of ports is 20.



Note

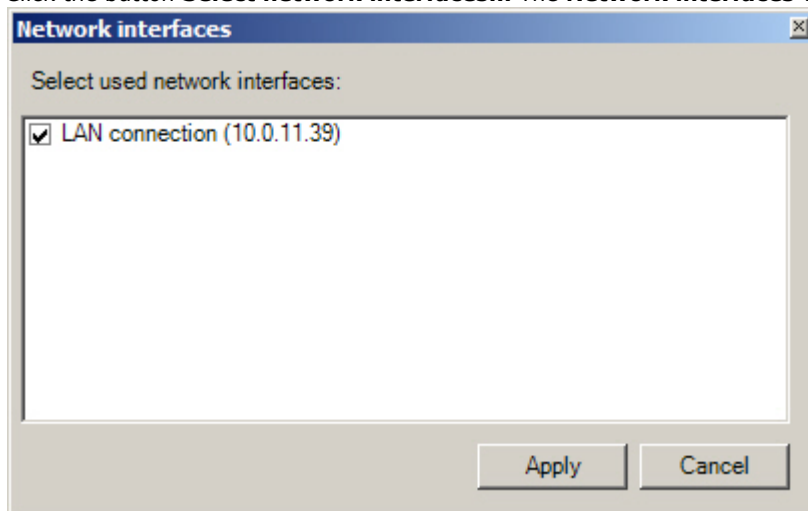
The number of ports that you select affects the scalability of the system. Keep the following in mind when specifying the number of ports:

- Axxon Next always needs a bare minimum of at least **8 ports**.
- Each **32 cameras** require **6 ports** (for cameras with two streams).
- Each **archive** requires **1 port**.
- **Forensic Search** requires an additional **port**.

19. Set the outside local address for a Server behind the [NAT](#).

20. To restrict visibility of Servers on particular networks in the list of Servers during Axxon Next setup:

- a. Click the button **Select network interfaces...** The **Network interfaces** window opens.



- b. By default, use of all available network interfaces on the Server is allowed, meaning that Servers on the relevant networks will be visible in the list. If you do not want for the Servers on the networks of certain network interfaces to be visible in the list, clear the relevant check boxes.



Note

Depending on the network topology, it will still be possible to reach the Servers manually (if broadcasting is allowed between the network segments).

- c. Click the **Apply** button.

21. Click the **Next** button.

22. Create a new Axxon Domain with the name **Default** (for the definition of an Axxon Domain see [Appendix 1. Glossary](#)). If you want to add the computer to an Axxon Domain at a later time, select **Server will be manually added to already existing Axxon-domain later**. Click the **Next** button



Note

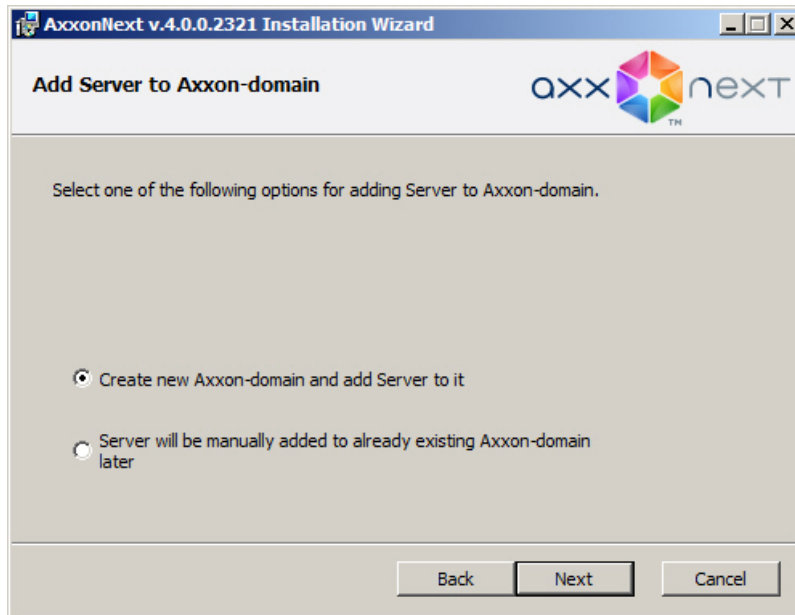
When reinstalling *Axxon Next*, you have the option of using the previous Axxon Domain (select **Use**

existing configuration)



Note

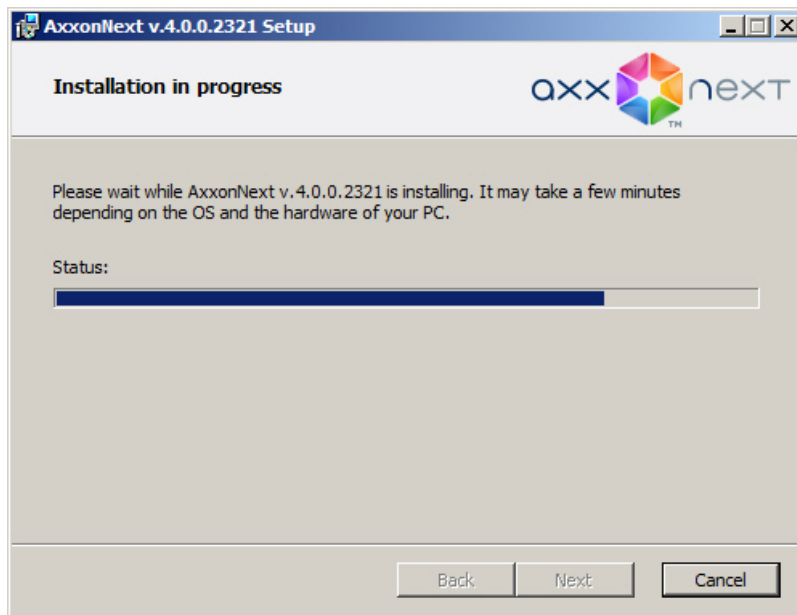
Using the same Axxon Domain name does not guarantee that the Servers will be in the same Axxon Domain. To place all Servers into one Axxon Domain, you must use the Axxon Next interface to add each Server to the necessary Axxon Domain. Axxon Domain configuration is described in detail in the section titled [Configuring Axxon domains](#).



23. A dialog box then appears, showing the installation parameters corresponding to the selected type of installation.



24. Verify your installation settings and click **Next** to begin installation of Axxon Next.
25. Installation of Axxon Next is then performed.



A message indicating the completion of Axxon Next installation will appear in a new dialog box.



26. Click **Finish** to confirm completion of the installation.

Installation of Axxon Next is now complete.

Repairing Installation

Rus

A repair installation is used to re-install all components of the Axxon Next software package.

To start a repair installation, launch the Axxon Next software installer from the installation CD without removing the previous version of the program.



Note

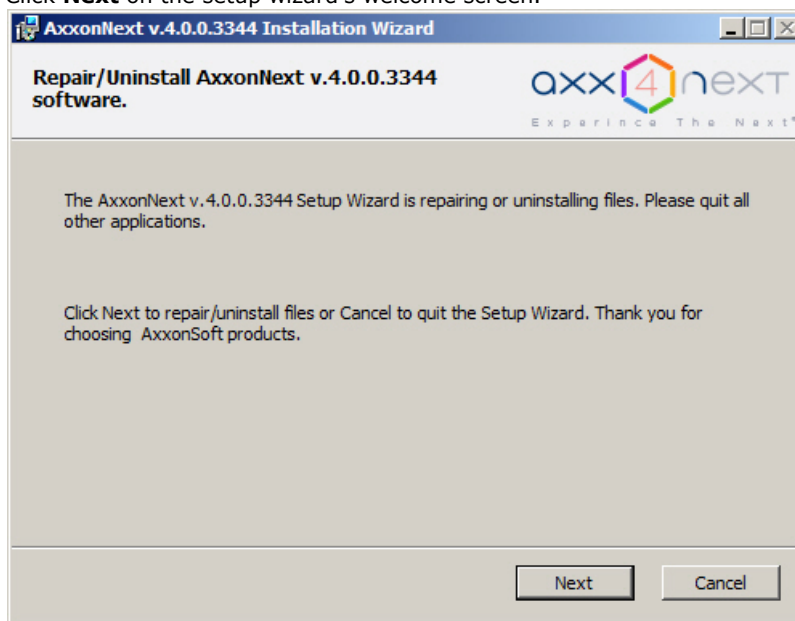
To ensure that Axxon Next is re-installed correctly, all related applications should be closed before starting the repair installation

To run a repair installation of the Axxon Next software, you must perform the following steps:

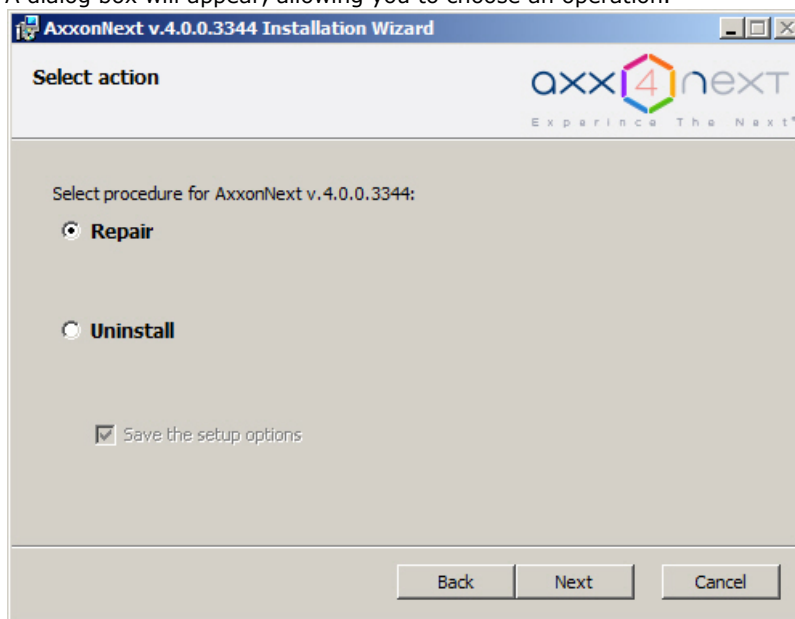
1. Insert the Axxon Next installation CD into the CD-ROM drive. A dialog box will display the disk contents.



2. Run the Setup.exe file.
3. Click **Next** on the setup wizard's welcome screen.

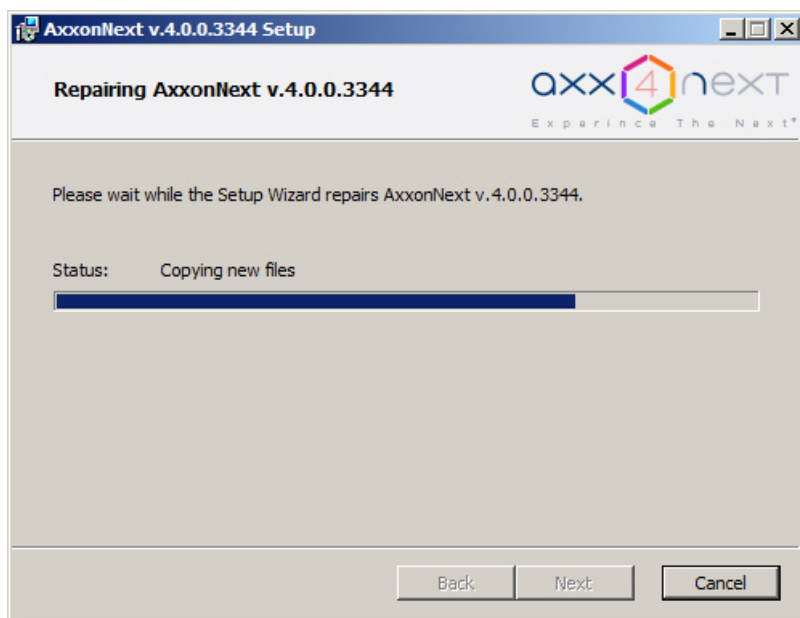


4. A dialog box will appear, allowing you to choose an operation.



5. Select the **Repair** option and click **Next**.

A dialog box will appear, showing the Axxon Next repair process.



A dialog box will appear, indicating the completion of the repair process. Click **Finish**. Repair of Axxon Next is now complete.

Removal

Rus

The Axxon Next installation program can also remove the software. Use this option when you need to remove all components of Axxon Next from your computer.



Note

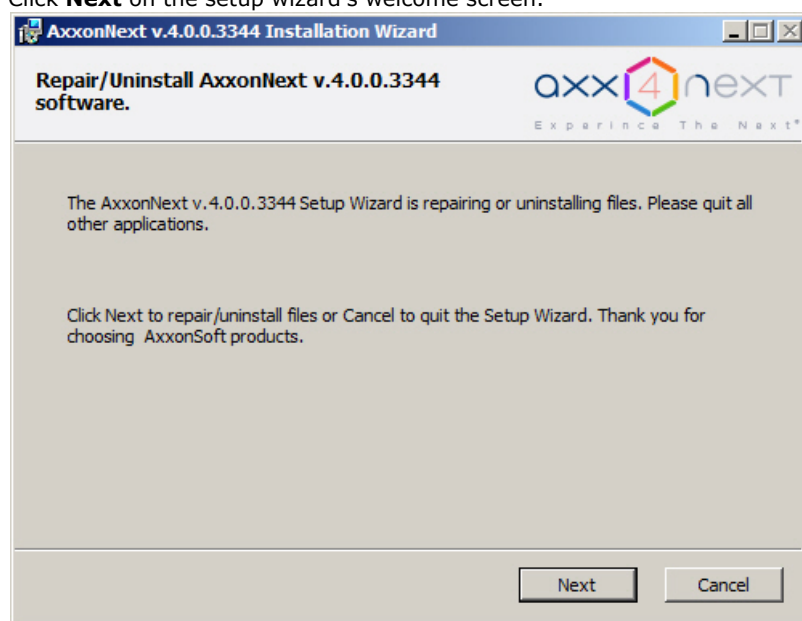
All related applications should be closed before beginning removal of the Axxon Next software

You can run the Axxon Next uninstaller via one of the following methods:

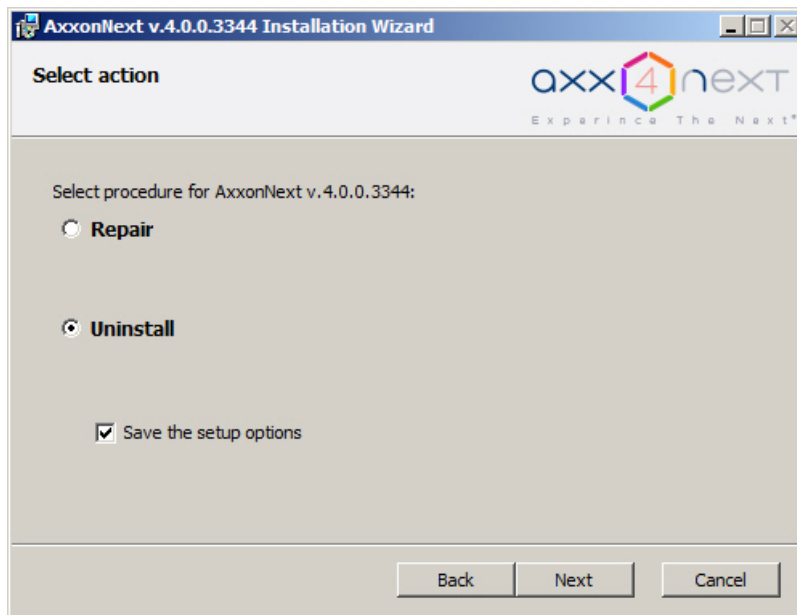
1. from the **Start** menu
2. using **Add or Remove Programs** in the Windows control panel
3. By starting the executable file named setup.exe, which is included with the installed version of the product.

When you do this, the setup wizard's welcome screen appears. To remove Axxon Next, you must observe the following procedure:

1. Click **Next** on the setup wizard's welcome screen.



A dialog box will appear, allowing you to choose an operation.

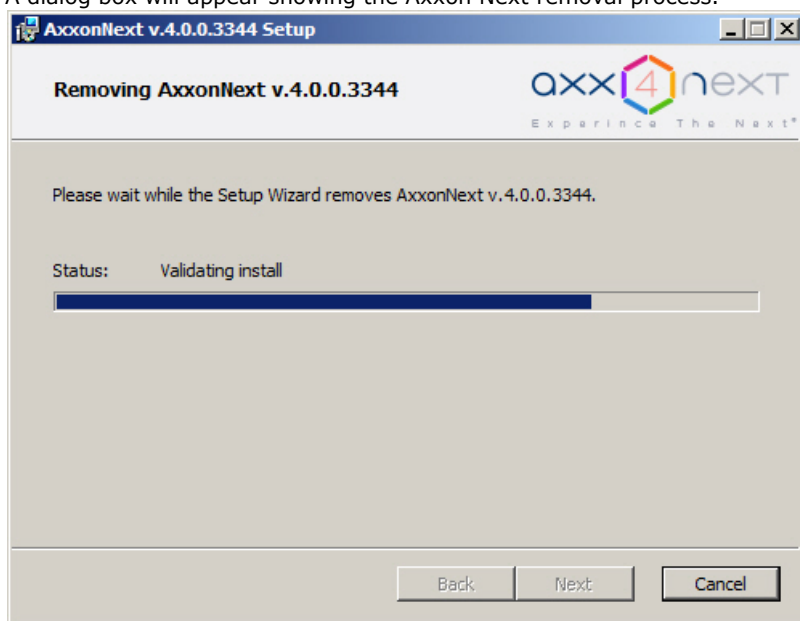


2. Select **Remove**.
3. To save your Axxon Next settings in a database, select the **Save configuration** check box. This option may be useful when updating the product.

Note
If the Client is running *Axxon Next*, the installer shows a warning message. Close the Client and uninstall VMS.

4. Click **Next**.

A dialog box will appear showing the Axxon Next removal process.



A dialog box will appear, indicating the completion of the removal process. Click **Finish**. Removal of Axxon Next is now complete.

Note
To completely remove Axxon Next, use the Windows Control Panel to remove the following software:

1. PostgreSQL.
2. AxxonSoft Situation detectors.ItvDetectorPack.
3. Axxon Driver Pack.

Update

Rus



**Attention!**

You cannot update to Axxon Next 4.0 from earlier versions now. This will be fixed in version 4.1.

To upgrade from version 3.6 to 4.0, do as follows:

1. Remove the old version (see [Removal](#)).
2. Install a new version (see [Installation](#)).
3. Reconfigure the system.

If you need to install a new build within version 4.0, do as follows:

1. Run the new build installer.

**Note**

You do not need to remove the previous build.

2. Install the build using an existing configuration. The procedure is the same as for a new installation (see [Installation](#)).

**Attention!**

When you update the software, keep DBs in the same folder. If you set a different location for DBs, the metadata and events from it will not be available.

Silent install (Quite Mode)

Rus

You can run Axxon Next installation in quiet mode (unattended setup with no user intervention).

**Note**

During installation you may have to reboot the system. After rebooting the installation will continue automatically.

When Redist.exe process ends and not listed in Windows Task Manager, the installation is complete.

This mode of installation can be configured by adding command-line options to setup.exe. See the command-line options in the table.

Command-line option	Description
/? or /help	Open the Help window
/x or /uninstall	Remove Axxon Next and save the configuration
/x/removeall	Remove Axxon Next and delete the configuration
/r or /repair	Repair Axxon Next
/qn or /quiet	Silent install
/norestart	Disable automatic reboot of the system during installation
/debug	Log installation
/noOSCheck	Skip OS compatibility check
/LANG="ru"	Select installation language ru - Russian en - English
/INSTALLTYPE="ServerClient"	Installation options: ServerClient - Server and Client (default) Client
/ADD="[]"	Here is the list of components to install or remove (if you remove/uninstall software) See the possible values in the table below.
/REMOVE="[]"	Here is the list of components NOT to install or remove (if you remove/uninstall software) See the possible values in the table below.

/dpcmd="INSTALL_BOSCH_VIDEOSDK="\no\""	Bosch VideoSDK driver Installation (see notes) no - do not install yes - install
/CMD="[commands]"	Basic installation options and values. Commands are [option] = \ "[value]" or [option] = [value] '. See available installation options in the table below.



Attention!

Occasionally, when installing the **Bosch VideoSDK** driver, the CLI window opens. To continue with installation, close this window.

/ADD и /REMOVE values:

x86	x64
BaseProduct	BaseProduct
IPDriverPack_x86	IPDriverPack_x86
Guardant_x86	Guardant_amd64
Postgres	Postgres
dotnetfx35_x86	dotnetfx35_x86
Redis2005_x86	Redis2005_x86
Redis2010_x86	Redis2010_x86
DetectorPack	DetectorPack

Installation options:

Installation options	Description
QUICKLAUNCH_SHORTCUT='1'	Create shortcut: 1 - Yes (default) 0- No
DESKTOP_SHORTCUT='1'	Copy shortcut to desktop: 1 - Yes (default) 0- No
INSTALLDIR='[%ProgramFiles%\AxxonSoft\AxxonSmart]'	Axxon Next installation folder
NGP_IFACE_WHITELIST="0.0.0.0/0"	Network interfaces The default value is "0.0.0.0/0" (all available network interfaces) Format of network interfaces: "IP-address1 / number of unit bits in the mask, IP-address2 /number of unit bits in the mask"
NGP_ALT_ADDR="0.0.0.0"	Setting the outside local address for a Server behind the NAT). Format of network interfaces: "IP Address1 or DNS-name1, IP address2 or DNS Name2"
PORT_RANGE_START="49999"	The initial value of the port range for Server. 49999 - default.
PORT_RANGE_COUNT="100"	Number of ports in use. The minimum number is 20. 100 - default.
<u>Options for Server and Client installation</u>	
PATH_TO_DATABASE='[INSTALLDIR]Metadata'	Path to object tracking DB.

FBUSER_TYPE='DEFAULT'	User account for file explorer: DEFAULT - Create a new account; the default name selected will be AxxonFileBrowser. SYSTEM - Select an account from the Local System. SPECIFY - Create a new account; choose the user name and password.
FBUSER_NAME='[AxxonFileBrowser]'	Setting a user name and password for an account in file explorer.
FBUSER_PSW='[Axxon2.0.0]'	When you choose SPECIFY of the FBUSER_TYPE parameter
CONFIG_PATH='[CommonAppDataDirectory]'	Path to configurations files and folders
DOMAIN_NAME_TYPE = '[NewDomain]'	Select Axxon-domain: NewDomain - create new Axxon Domain (default); WithoutDomain - do NOT add Server to Axxon Domain TheSameDomain - use existing Axxon-domain
WHATDBUSE = '[EXIST]'	EXIST - Use existing log DB (default) NEWDB - Create new DB
WHATVMDADBUSE = '[EXIST]'	EXIST - Use existing object tracking DB (default) NEWDB - Create new DB

The command for silent installation of Axxon Next may look like:

```
setup.exe /quiet /norestart /debug /INSTALLTYPE="ServerClient" /REMOVE="Guardant_x86"
/CMD="CREATE_QUICKLAUNCH_SHORTCUT=\"0\" PORT_RANGE_COUNT=\"50\"
DOMAIN_NAME_TYPE=\"WithoutDomain\""
```

This will launch installation with the following options:

1. quite mode (/quiet);
2. no reboot (/norestart);
3. log installation to file (/ debug);
4. **Server and Client** (/ INSTALLTYPE = "ServerClient");
5. No *Guardant drivers* (/ REMOVE = "Guardant_x86");
6. And with the following properties (/ CMD =):
 - a. no shortcut (= "CREATE_QUICKLAUNCH_SHORTCUT=\"0\"");
 - b. 50 ports for Server (PORT_RANGE_COUNT="50");
 - c. Server NOT added to Axxon-domain (DOMAIN_NAME_TYPE = '[WithoutDomain]').

Updating Drivers Pack

Rus

To install the latest version of Drivers Pack, do as follows:

1. Run the IPDriverPack.msi file.
2. After the installation is complete, restart the Server (see [Shutting down a Server, Starting a Server](#)).



Note

Please note that, if Drivers Pack 3.2.0 or an earlier version is installed, you should first uninstall the earlier version.

Licensing of the software product

Axxon Next license types

Rus

There are 5 types of *Axxon Next* license: **Demo**, **Free**, **Start**, **Professional**, and **Universe**. Upon installation, the software will be launched in demo mode.

You should activate Axxon Next VMS to utilize the full feature set of the security software package. You can activate the software by distributing an activation key on the system.

Data on all the types of Axxon Next licenses is presented below.

Functionality	Type of license	Axxon Next Demo (8:00-18:00)*	Axxon Next Free	Axxon Next Start	Axxon Next Professional	Axxon Next Universe
Maximum number of Servers in Axxon domain		Unlimited	1	Unlimited	Unlimited	Unlimited
Maximum number of channels		Unlimited	4	64	Unlimited	Unlimited
Support for SD cards (edge storage)		Yes	No	Yes	Yes	Yes
Macros		Yes	No	Yes	Yes	Yes
Situation analysis detection tools (excluding line crossing)		Yes	No	Yes	Yes	Yes
Line crossing		No	No	Yes	Yes	Yes
Events from external systems (POS terminals, ACFA)		Yes	No	Optional	Optional	Optional
Scene synopsis (TimeCompressor)		Yes	No	No	Yes	Yes
Smoke and fire detection		Yes	No	No	Optional	Yes
Tag&Track Pro and advanced archive search: • MomentQuest • Face search • LPR search**		Yes	No	No	Optional	Yes
IntelliVision Automatic Number Plate Recognition		No	No	No	No	Optional
Searching for LPR numbers on video from multiple cameras		Yes	No	No	No	Yes
Data replication		No	No	No	No	Yes
Cross-System Client		No	No	No	Yes	Yes
Failover		***	***	***	***	***
Video walls management		Yes	No	No	No	Yes
LDAP authentication supported		Yes	No	No	No	Yes
Offline analytics		No	No	No	No	TBA
System features available for all licenses						
Server Support for ONVIF (profiles G,S), RTSP, GB/T28181 H.265 support MotionWavelet recompression Metadata from IP devices Configuration backup and restore Mass configuration of cameras Multicasting Hotkeys		Yes	Yes	Yes	Yes	Yes
Recorded Video / Investigation Local and network archives Events search TimeSlice Operator comments		Yes	Yes	Yes	Yes	Yes

Live Monitoring Basic audio and video analytics Interactive 3D map GreenStream Tag& Track Lite OnScreen PTZ mode Support for fisheye cameras and ImmerVision lenses Export of snapshots and video episodes to multiple formats Information boards	Yes	Yes	Yes	Yes	Yes
Remote clients Web client iOS app (including Apple TV) Android app Windows mobile app	Yes	Yes	Yes	Yes	Yes

Information about the type of license you are using is displayed in the server properties in the **Product Type** field.

*The system will operate in demo mode from 8:00 AM to 6:00 PM.

**Please contact our sales team to confirm if LPR country is supported and find out more about licensing policy

***Failover feature will be available in Axxon Next 4.1



Note

You (**admins** users) get a reminder to renew license 30 days before it expires.

Licensing methods

Rus

There are two licensing methods for Axxon Next:

1. License file only

The license file contains data on basic hardware configuration (motherboard, processor, hard disk, video adapter, RAM, and network card) of all Servers. If you change any 2 of the basic hardware components, your license will be invalid. For example, this is the case when you change both CPU and motherboard. However, changing a graphics card or upgrading RAM will not affect the license.

This is why when working with Axxon Next you should bear in mind the following:

- The activation request should be sent from the computer that will host the Axxon Next Server.
- You can upgrade your license only if you retain the initial basic hardware configuration of all the Servers.
- It is not possible to transfer a license from one computer to another.

2. License file + Guardant dongle.

this method allows replacing server hardware and transferring the license to another computer. To activate Axxon Next via this method, contact AxxonSoft to receive a license file and Guardant dongle.

If you already have a Guardant dongle, you can perform activation yourself. To do so, connect the Guardant dongle to the computer that you wish to activate and perform the standard activation steps.



Note

If you install virtualization products such as VirtualBox, VmWare etc. , this may affect the license. Should you encounter this problem, you are advised to uninstall all virtualization products or apply for a new license file

Product Activation Utility

Rus

License activation for the Axxon Next software package is carried out through the product activation utility.

You can launch the product activation utility from the Windows **Start** menu: **Start -> All Programs -> Axxon Next -> Utilities -> Program Activation.**

**Note**

The product activation utility program file LicenseTool.exe is located in the folder <Directory where Axxon Next is installed>\AxxonSoft\AxxonSmart\bin\

Then you must select the name of one of the Axxon Domain servers to which the license file will be applied (the file is applied to all Axxon Domain servers launched at the moment of activation) and connect to the system, under an administrator's user name and password, to continue the activation process.

Activation utility

User authentication

Choose Server to connect and enter administrator's username and password

Server name or IP address: V-BELYAKOV

Username: root

Password: ****

Next >>

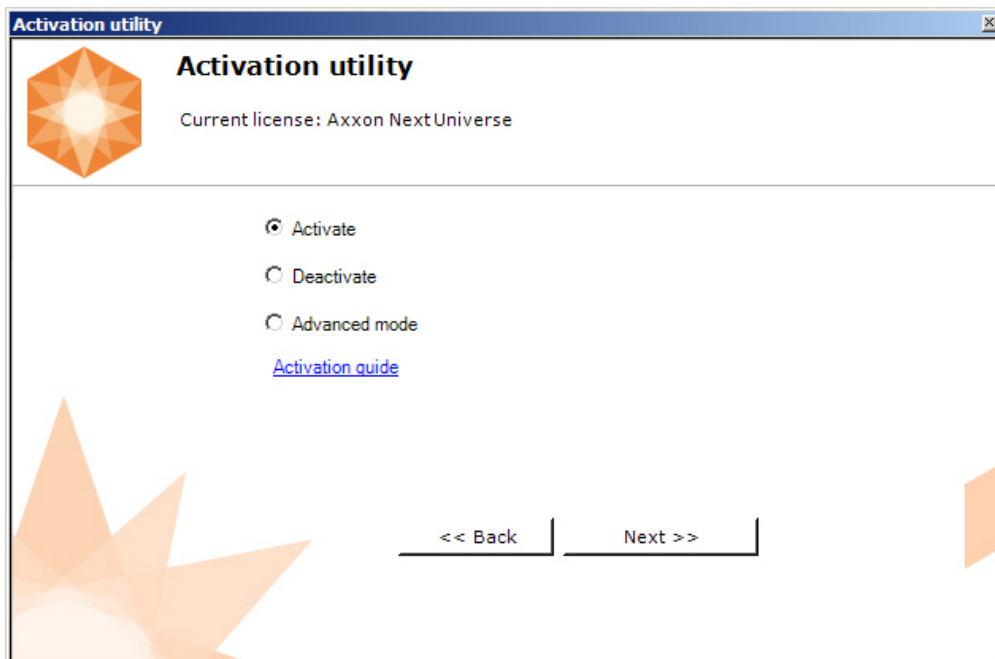
When the utility has loaded, its main will be displayed.

Activation utility

User authentication

Choose Server to connect and enter administrator's username and password

Connecting to Server...



License Activation

Rus

To activate Axxon Next, please refer to the document titled [Activation Guide](#), which presents step-by-step instructions on activating, updating and upgrading Axxon Next.

It is also recommended that you use the prompts displayed in the product activation utility's dialog boxes.

Launching and Closing the Axxon Next Software Package

Startup

Starting a Server

Rus

The *Axxon Next* Server is started automatically when the operating system starts.

If a Server's operation was stopped, you must complete one of the following actions to restart the Server:

1. Restart the system
2. Select **Start** -> **All Programs** -> **Axxon Next** -> **Start Server**



Note

Run the command with administrator permissions.

3. Start NGP Host Service

Starting an Axxon Next Client

Rus

The Axxon Next client can be started manually using the **Start** menu, which is intended for launching user programs in Windows. To start working with the software, perform the following steps:

1. Select **Start** -> **All Programs** -> **Axxon Next** -> **Axxon Next**



Note

The Axxon Next software package program file AxxonNext.exe is located in the folder <Axxon Next installation folder>\Axxon Next\bin\



Note

To start the client in Safe mode with OpenGL software emulation, select: **Start-> Programs-> Axxon Next-AxxonNext (Safe mode)**.

The Axxon Next client will then launch and an authorization window will appear

axxonnext v.4.1.0.5920
Experience The Next®

1 Server name or IP address: S-ROZIN 49999 >>

Username: root

2 Password: ●●●●

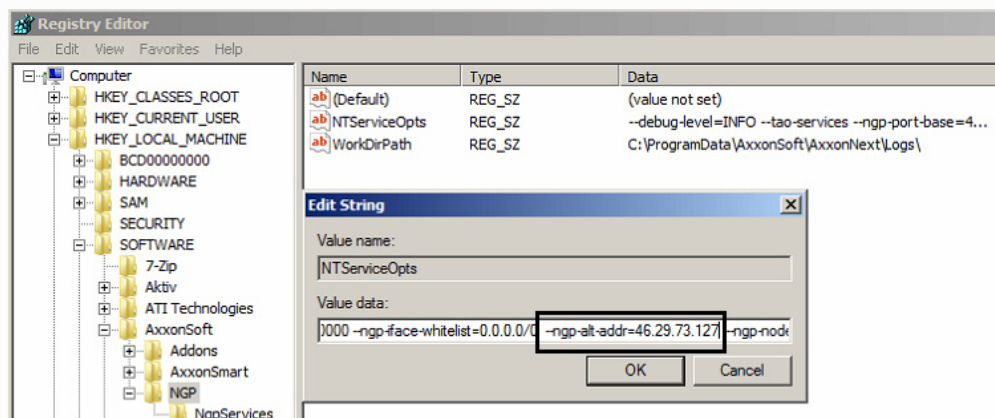
Connect Close

2. Select the Server (1).

Note
If the software is accessed by a remote user, the NetBIOS name or IP address of the computer with which the connection is established should be indicated in the **Computer** field

Note
To connect to a Server, which is behind the NAT enter the outside local address in the registry:

1. Go to HKEY_LOCAL_MACHINE \ SOFTWARE \ AxxonSoft \ NGP and then **NTServiceOpts**.
2. Enter the IP address in the **--ngp-alt-addr** value of this parameter as shown in the figure.



3. Open the ports on the switch (the default ports are 49999-50099), that you specified on the server during installation. If necessary, you can change the number of ports used in **--ngp-port-span** (see p.18 Installation).
4. Save changes.

Attention!
When a client connects from an external network, only those servers that have access to the external network will be available in the Axxon domain configuration.

3. Enter the user name and password (2) and click **Connect**.

**Note**

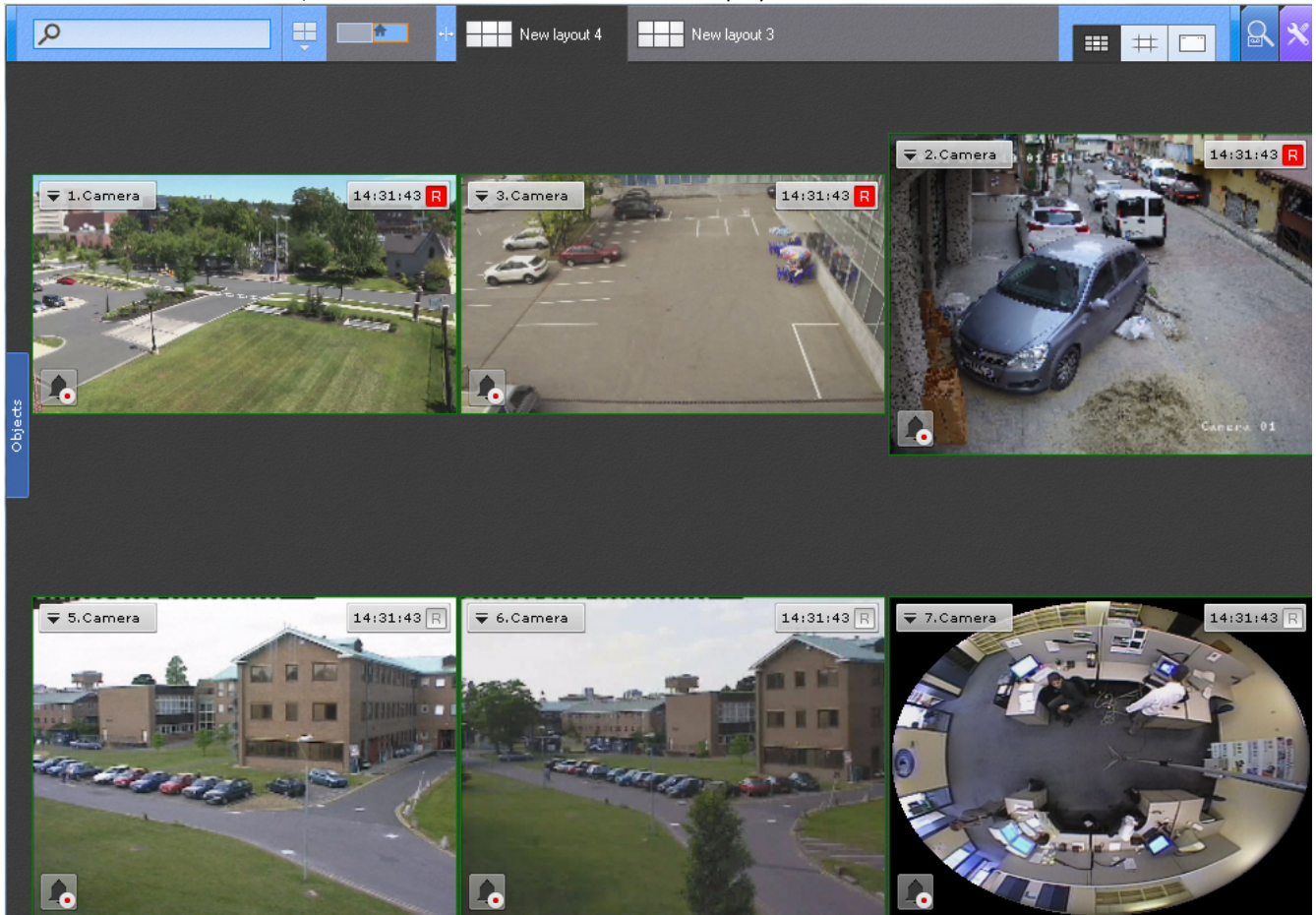
The first login to the system is done with the user root, which has administrator permissions. Enter root in the **User Name** and **Password** fields. The administrator then needs to configure the system for multi-user access described in detail in the section titled [Configuring user permissions](#))

**Attention!**

The version of the Server and the version of the user's Client must be the same. The installed versions of the Drivers Pack must be the same as well. If the versions are different, a warning will be displayed. It is strongly recommended not to connect if the product versions do not match.

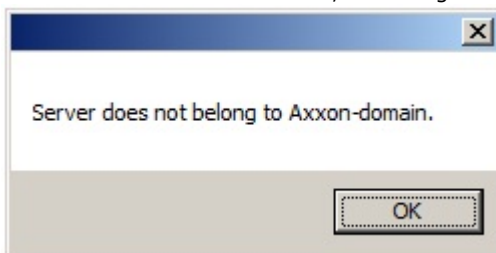
**Connecting LDAP users**

If authorization is successful, a video surveillance monitor will be displayed on the screen.

**Note**

If Axxon Next is launched in demo mode, then after you enter the authorization parameters, a message to this effect will appear (see the section [Axxon Next in demo mode](#))

If the Server to which Axxon Next is connecting does not belong to any Axxon Domain, after the **Connect** button in the authorization window is clicked, a message is displayed.



To connect to the Server, you must either create a new Axxon Domain based on the server or add the Server to an existing Axxon Domain.

If you choose the first option, click **OK** in the message and follow the instructions given in the section [Creating a new](#)

domain. For the second option, click the  button and follow the instructions given in the section [Adding a Server to an existing Axxon Domain](#).

Running multiple Axxon Next Clients

Rus

You can run multiple Axxon Next Clients simultaneously on a single computer in order to connect to different Servers.

In this case, you must start Clients with the additional parameter **-monitor N**, where N is the number of the monitor on which the Client is to be started.

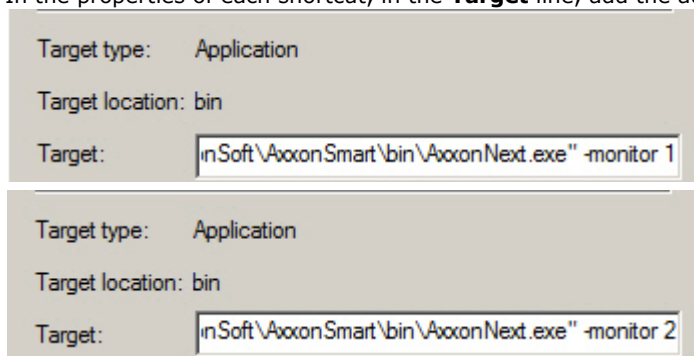


Attention!

The maximum number of running Clients is limited to the number of connected monitors that support the minimum required resolution (see [Limitations of the Axxon Next Software Package](#))

To run multiple Clients:

1. On your desktop, create a number of Client shortcuts equal to the number of connected monitors.
2. In the properties of each shortcut, in the **Target** line, add the additional parameter **-monitor N**.



3. Start the Clients by using the shortcuts.



Note

If a Client is started in window mode (see [Configuring the Client screen mode \(full screen or window\)](#)) and moved to another monitor, the situation changes: Clients will be started on the specified monitors even if a Client is already running on one or more of them.

Axxon Next in demo mode

Rus

If activation has not been completed, *Axxon Next Free Versions* works in demo mode.

The system will operate in demo mode from 8:00 AM to 6:00 PM. There are limitations to functionality (see [Axxon Next license types](#)).

The different types of demo modes are presented in Table.

Type of demo mode	Conditions	Axxon Next operation
Active	Axxon Next can be started between the hours of 8:00 AM and 6:00 PM	Using <i>Axxon Next</i> in demo mode
Inactive	Axxon Next started outside the hours of 8:00 AM and 6:00 PM	The Axxon Next server is not available, only the system configuration can be viewed

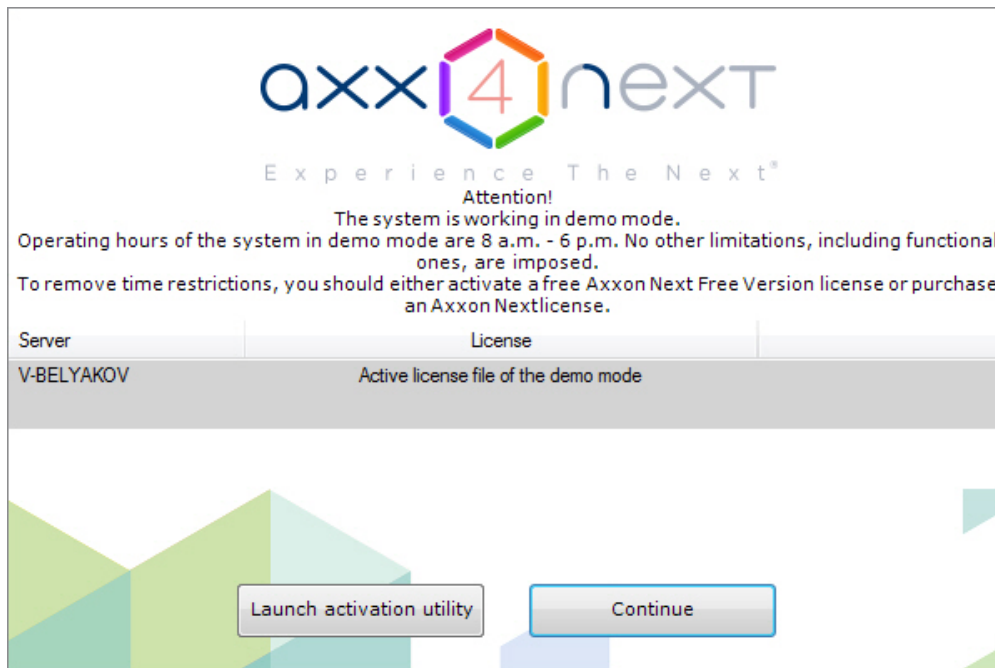
If a Client is connected to an Axxon Domain in which there is at least one Server running in demo mode, an appropriate message is displayed, along with a list of Servers in the Axxon Domain and their types of licenses.



Note

The notification is displayed after successful authorization

If an Axxon Domain includes at least one Server running in active demo mode, you will be given the option to continue working **(2)** or start the activation utility **(1)**.



Automatic Start of the Client

Rus

You can use [Windows Task Scheduler](#) to configure the *Axxon Next* client to start automatically at the system start-up. It is recommended that you specify a Server start-up delay.



Note

You can also configure automatic authorization for the Client upon start-up (see [Configuring Cross-System Client and autologon](#)).

Shutdown

Shutting down an Axxon Next Client

Rus

Before closing Axxon Next, you need to exit the user interfaces. To do this, perform one of the following:

1. Click the  button located in the top-right corner of the Axxon Next dialog box.

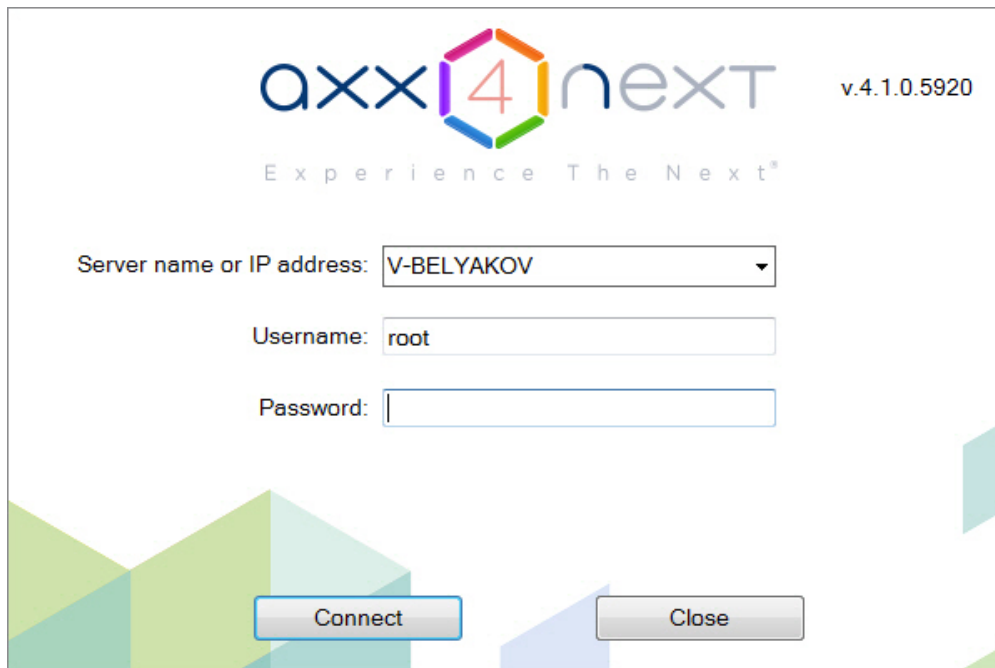


Note

If the client is opened in full-screen mode (enabled by default), the!1.jpg! is not displayed. In this case you can exit the user interfaces using actions 2 and 3

2. In the **Settings** tab, click the  button.
3. In the Windows taskbar notification area, in the context menu of the Axxon Next icon, select **Close window**.

When you perform one of these actions, the authorization window will appear. To close Axxon Next (completely exit the client), click the **Close** button.



axxonnext v.4.1.0.5920

Experience The Next®

Server name or IP address: V-BELYAKOV

Username: root

Password:

Connect Close

Shutting down a Server

Rus

To shut down an *Axxon Next* Server, complete one of the following actions:

1. Select **Start** -> **All Programs** -> **Axxon Next** -> **Shut down Server**



Note

Run the command with administrator permissions.

2. Stop the NGP Host Service.

Automatic Server restart

Rus

If you change the following network settings in the operating system, the *Axxon Next* Server is automatically rebooted:

- IP address;
- creating a new network connection;



Attention!

While the Server restarts, the connection to cameras is temporarily lost and recording stops

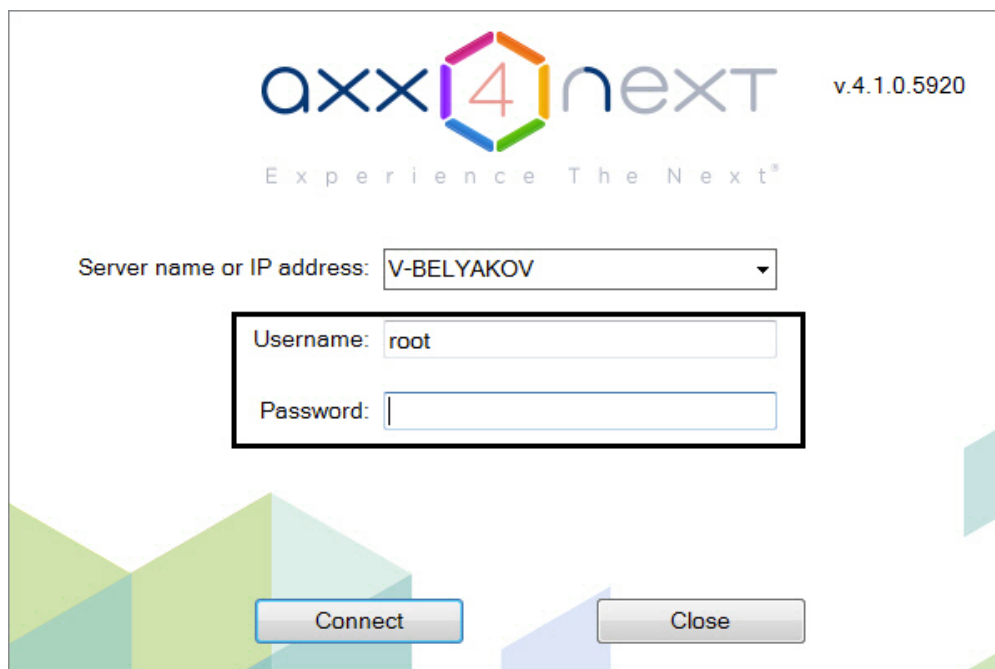
Switching Users Quickly

Rus

You can switch Axxon Next users quickly without fully exiting the client.

To do this, follow the steps below:

1. Exit the Axxon Next user interface (see the section [Shutdown](#)).



2. When the authorization window appears, enter the user name under which you need to log in and the corresponding password and click **Connect**.

Switching users is now complete.

Cross-System Client

Rus

Cross-System Client empowers users to connect to multiple servers on various domains and in different systems from a single client workstation. All settings and cameras associated with these servers are consolidated in a single convenient view. That way you can access multiple independent surveillance systems simultaneously, even if the customer cannot or does not want to combine these systems.

This may happen for various reasons, such as:

1. your facilities are geographically dispersed, or
2. you want to mass configure multiple cameras from different systems.

A typical scenario may involve police plugging Cross-System Client in security systems at different retail chains / stores.

Cross-System Client automatically connects to specified Axxon domains when you start it (see [Configuring Cross-System Client and autologon](#)). The client first connects to the primary Axxon domain; connection to the other Axxon domains is established in the background after the client starts.



Note

You can also configure the Client connections to Axxon domains in the sign-up in the authorization dialog box. To do this, enter comma-separated values for Servers as follows: <Server 1 Name or IP address>:<Connection port>, <Server 2 Name or IP address>:<Connection port>. Server 1 is the primary connection

Connecting LDAP users

Rus

LDAP users are connected to the system in two steps:

1. The user logs in on the LDAP server.
2. The user then authenticates on the Axxon Next server.



Attention!

Each Client to which LDAP users are connecting must have access to the LDAP catalog.



Note

When an LDAP user connects, the user's login and password in the LDAP as configured in the Server settings are used (see [Creating LDAP connections](#)). The login and password in the LDAP directory are not used when connecting to the Server.

Connecting to Another Server Quickly

Rus

You can connect to another server without fully exiting the client.

To do this, follow the steps below:

1. Exit the Axxon Next user interface (see the section [Shutdown](#)).
2. When the authorization window appears, select the server to which you need to connect the client from the **Computer** list.
3. Enter the user name under which you need to log in and the corresponding password and click **Connect**.

Connection to another server is now complete.

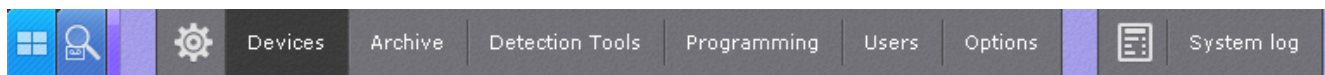
Configuration of the Axxon Next Software Package

General information on system configuration

System configuration: stages

Rus

Most system configuration is performed via the **Settings** expanding menu, which contains six tabs for configuring certain parts of the system.



The main stages of system configuration are:

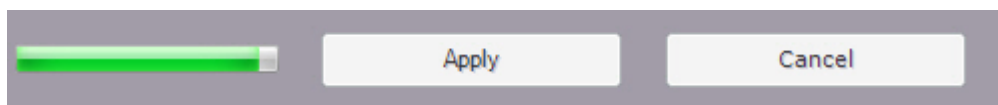
1. Configuring an Axxon domain.
2. Connecting and configuring hardware.
3. Configuring archives.
4. Configuring layouts and the interactive map.
5. Configuring users and roles.

Applying and resetting settings

Rus

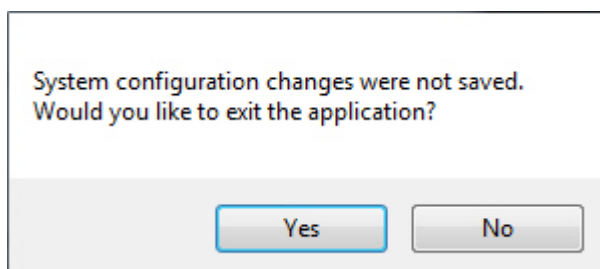
For a change in the system settings to take effect, you must click the **Apply** button.

After you click the button, a progress bar indicates that the settings are being applied. You can resume working with the system after the process completes.



If you want to discard changes and have not clicked the **Apply** button, click **Cancel**.

If an attempt is made to close the Client but not all changes have been saved yet, a dialog box asks whether to confirm closing or to cancel closing and save changes.



Display of parameters in interface

Rus

Most system parameters and hardware parameters are displayed in the Axxon Next interface.

The description of a parameter is usually displayed in a special area when the relevant parameter is selected.

Sharpness	3
Synchronize Day/Night with Sensor Input	Sensor 1
Visibility Enhancement	Medium level
WDR Level	Medium level
White Balance	ATW
Wide Dynamic Range	Yes
▲ Panomorph	
Activate	No
Camera position	Wall
Lens type	A0**V
View type	PTZ
▲ Alternative view	
Alternative camera	Not selected
Synchronize Day/Night with Sensor Input Select sensor on closing which Day/Night mode will switch.	

If the description of a parameter is truncated, you can stretch this area above the upper border.

Synchronize Day/Night with Sensor Input Select sensor on closing which Day/Night mode will switch.
--

System objects

Rus

Axxon Next VMS has the following types of system objects:

1. Axxon domain objects (see [Configuring Axxon domains](#)).
2. Hardware objects: Server, IP Server, Camera, Microphone, PTZ Camera, Sensor, Relay, Embedded Storage (see [Configuring System Objects for Devices](#)).
3. **Event Source** objects are used to integrate Axxon Next with external systems (see [Receiving Events from External Systems](#)).
4. **SMS and e-mail** objects used in macros and automatic rules for SMS and e-mail notifications (see [The SMS Object](#), [The E-mail Object](#)).
5. **Export Agent** objects used in macros and automatic rules for exporting video recordings and snapshots (see [Configuring export](#)).
6. Archive objects (see [Configuring Archives](#)).
7. Detection tool objects (see [Configuring detection tools](#)).
8. Role and user objects (see [Configuring user permissions](#)).
9. Macro objects (see [Configuring Macros](#)).

Some objects are created automatically, while others are created manually or are pre-created in the system.

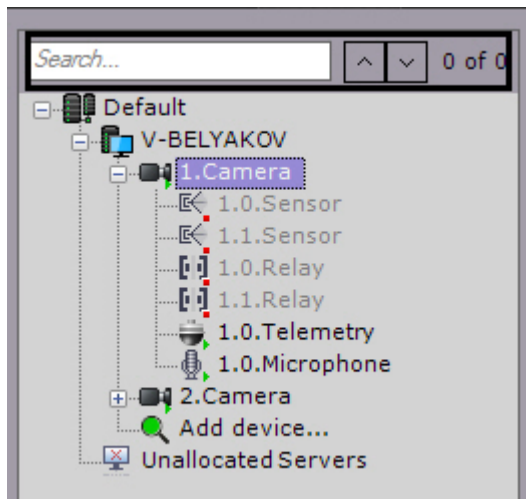
Object search

Rus

Axxon Next allows you to search for objects in the objects tree using only part of their name or the IP address. An object search can be performed on all tabs under **Devices**.

To search for objects, complete the following steps:

1. Select the tab containing the object tree that you need to search



2. Enter the IP address, the full or partial name of the object in the **Search** field.



Note

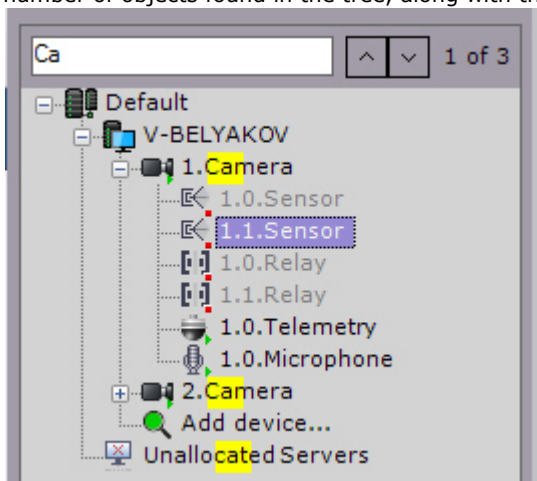
Search is not case-sensitive



Note

A search can also be run based on object ID

The search starts automatically once you enter something in the box. When the search is complete, you will see the number of objects found in the tree, along with the currently displayed search results highlighted in beige.



The parts of names corresponding to the characters you entered will be highlighted in yellow on the found objects.



Note

If you search by an IP address, the found object will be fully highlighted.



Note

If a found object is located in a collapsed branch of objects, the branch will be highlighted in yellow

You can use the  buttons or press ENTER to navigate through the search results.

The search results rotate in a loop; moving from the last object takes you back to the first object.



Note

If you move to an object located in a collapsed branch, the branch will automatically expand

Hardware configuration

Configuring Axxon domains

Rus

A distributed system based on the Axxon Next software package is created within an Axxon Domain, i.e., a selected group of Axxon Next Servers.

When configuring Axxon Domains, the following operations are used in the necessary combinations:

1. Creating a new domain
2. Adding a Server to an existing Axxon Domain
3. Excluding a Server from the current Axxon Domain

To configure Axxon Domains, you must have the appropriate permissions (see the section [Configuring user permissions](#)).

This section gives step-by-step instructions for each operation used in configuring Axxon Domains, and then describes typical instances of their use.

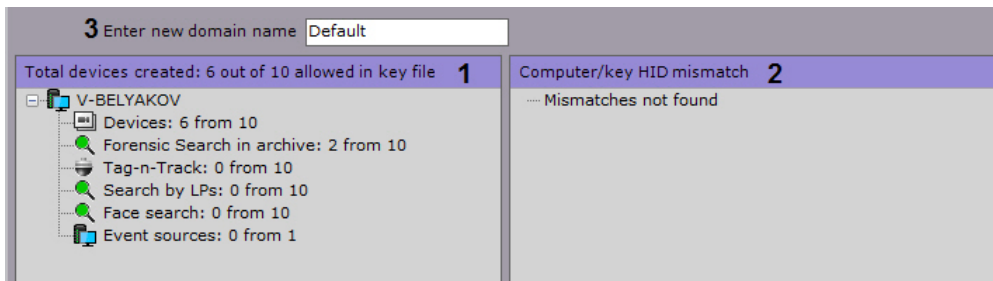
Axxon-domain object

Rus

The **Axxon-domain** system object is at the base of the system.

The **Axxon-domain** object is the parent of the **Server** objects, which correspond to the servers that are in the Axxon-domain.

When you select the **Axxon domain** object in the **Total devices created** group, the software displays information about the Axxon domain and the current license: Servers and their number, IP devices and various used functions.



In the **Computer/Key HID mismatch** (2) group, the license information / error is displayed.

You can also rename the Axxon-domain. To do so, enter the new name in the corresponding field (3) and click the **Apply** button.

Axxon Domain operations

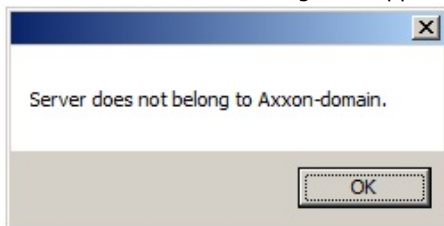
Creating a new domain

Rus

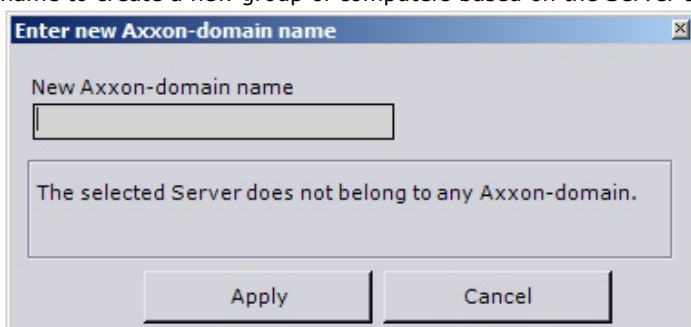
A new Axxon Domain can be created in one of two ways:

1. During installation of the Axxon Next software package with the Server and Client configuration type (see step 8 of the instructions in the section [Installation](#))
2. When attempting to connect to a Server which does not belong to a domain

In the second case a message will appear, in which you should click **OK** (see also the section [Startup](#)).



The **Name new Axxon Domain** window will appear. In the **New Axxon Domain name** field, enter the Axxon Domain name to create a new group of computers based on the Server and click **Apply**.



**Attention!**

It is not possible to use the above steps to add a Server to an existing Axxon Domain. Assigning the same Axxon Domain name to several Servers does not guarantee that those Servers will be in the same Axxon Domain. Different Axxon Domains can have identical names

This will create a new Axxon Domain based on the Server. The Axxon Next software package will then be launched with the entered authorization parameters (see the section [Startup](#)).

Adding a Server to an existing Axxon Domain

Rus

A Server can be added to an existing Axxon Domain from any Server within that Axxon Domain.

**Attention!**

Before configuring a distributed system, be sure to combine your Servers into an Axxon-domain

**Attention!**

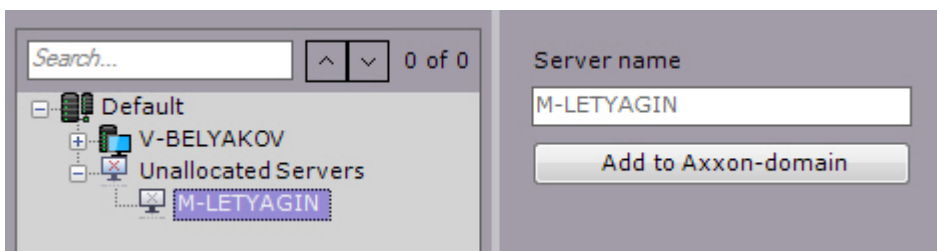
It is not recommend to use Servers with different versions of Axxon Next on the same Axxon-domain.

**Note**

Only unallocated Servers, i.e., Servers which do not already belong to any Axxon Domain, can be added

There are two ways to add a Server to an Axxon Domain, depending on whether or not it is present in the search results (in the **Unallocated Servers** group).

If one of these Servers is present in the search results, select it and click the **Add to Axxon-domain** button.



The Server will then be added to the Axxon Domain from the **Unallocated Servers** group.

Since the search for unallocated Servers is conducted using broadcast packets, the results may not include Servers located in a different subnetwork (for example, beyond a router which blocks broadcast packets).

In this case the option of manually adding a Server to an Axxon Domain can be useful; this option can be used with all unallocated Servers, including those present in the **Unallocated Servers** group.

A Server can be manually added to an Axxon Domain as follows:

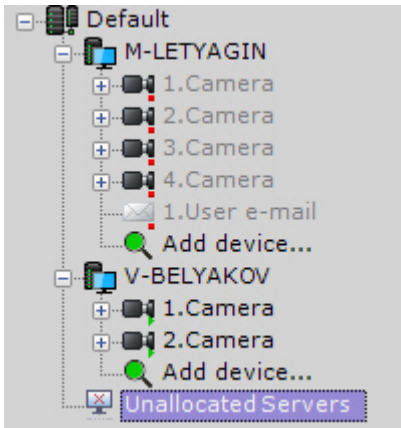
1. Select the **Unallocated Servers** group (1).



2. In the **Server Name** field, enter the NetBIOS name of the Server to be added to the Axxon Domain (2).
3. Enter the Server IP address and port number (3).
4. Click the **Add to Axxon-domain** button (4).

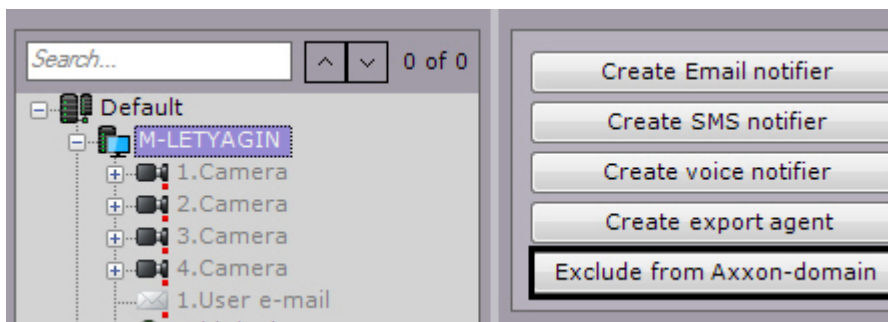
The Server will then be manually added to the Axxon Domain.

After a Server is added to an Axxon Domain using any of the methods described, it will appear in the object tree.



If a Server is not currently accessible when it is added to an Axxon Domain, it will be displayed in the object tree with the  icon.

To undo addition of a Server to the Axxon-domain, select the Server and click the **Exclude from Axxon-domain** button.



Removing a Server from an Axxon Domain

Rus

Any Server on an Axxon Domain can be used to remove a Server from an Axxon Domain.

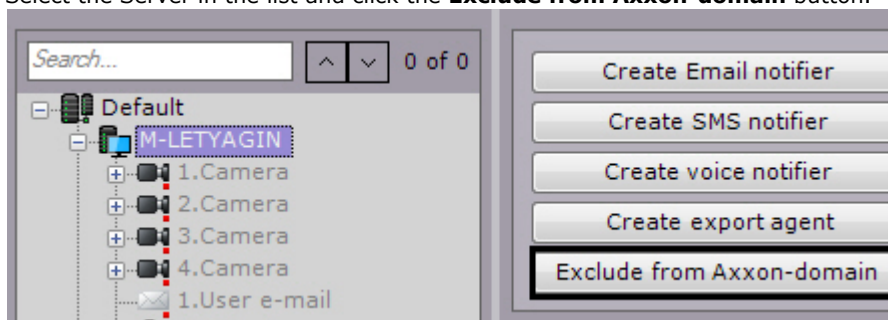


Attention!

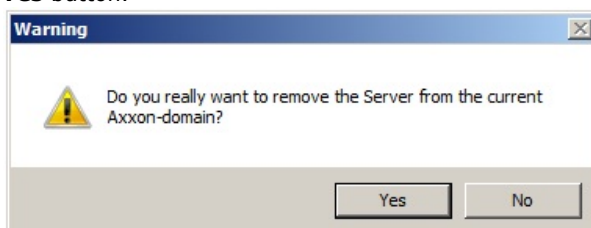
By excluding a Server, you also delete the layouts, maps, object groups, roles, and users that have been created on the Server

To remove a Server from an Axxon Domain, you must perform the following steps:

1. Select the Server in the list and click the **Exclude from Axxon-domain** button.



2. In the window which appears, confirm that you want to remove the Server from the Axxon Domain by clicking the **Yes** button.



The Server will then be removed from the Axxon Domain. If the current Client was connected to the excluded Server, the

user interfaces will be unloaded and the user will be prompted to repeat the authorization procedure for Axxon Next (see the section [Startup](#)).



Note

You can also exclude a Server from an Axxon domain using the activation utility (see [Excluding the Current Server from an Axxon Domain](#)).

Cases of Axxon Domain configuration

Rus

All possible cases of Axxon Domain configuration are, to some degree, a combination of two typical cases.

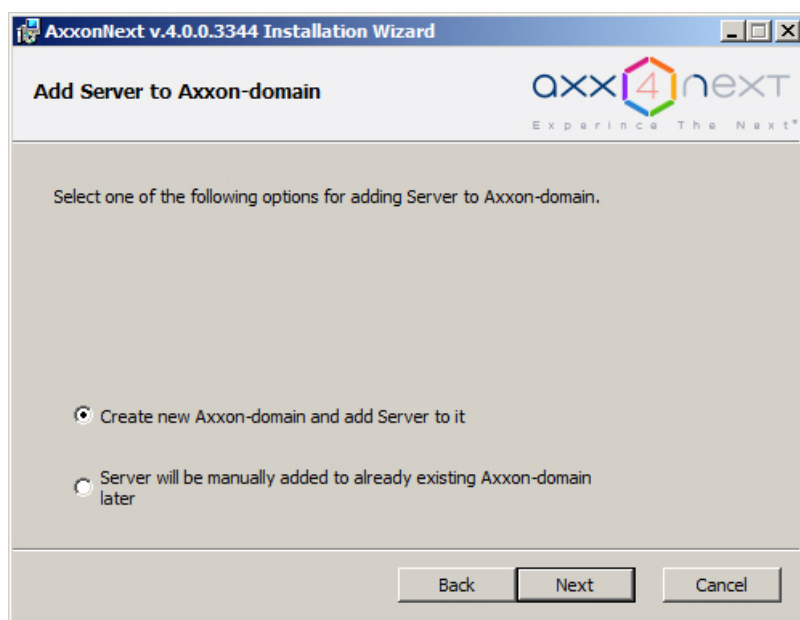
In the first typical case, the Servers for the future Axxon Domain are selected before Axxon Next installation. This case involves the following steps:

1. Selecting a Server on the basis of which the new Axxon Domain will be created. Installing the Axxon Next software package with the Server and Client configuration type, indicating the name of the new Axxon Domain (see also step 8 of the instructions in the section [Installation](#)).

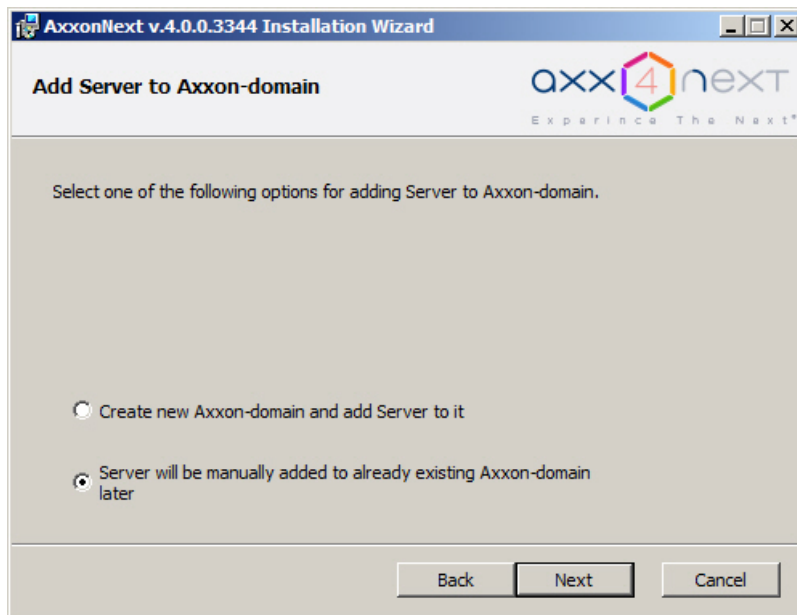


Note

Any Server in the future Axxon Domain can be selected as the primary Server



2. Installing the Axxon Next software package with the **Server and Client** configuration type on the other servers of the future Axxon Domain, without adding them to the Axxon Domain (see also step 8 of the instructions in the section [Installation](#)).



3. Connecting to the primary server.
4. Adding the remaining Servers to the Axxon Domain from the primary Server according to the instructions in the section [Adding a Server to an existing Axxon Domain](#).

In the second typical case it is necessary to add servers which are part of another Axxon Domain to a new Axxon Domain. This case involves the following steps:

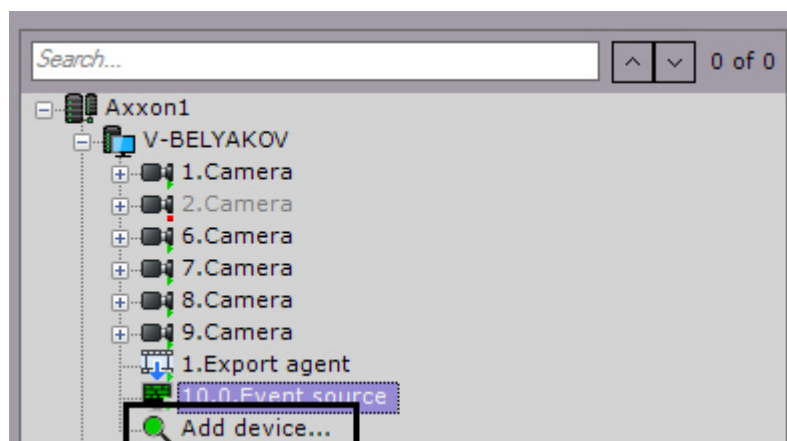
1. Excluding all the Servers which are to be added to the new Axxon Domain from their current Axxon Domains, according to the instructions in the section [Removing a Server from an Axxon Domain](#).
2. Naming the new Axxon Domain according to the instructions in the section [Creating a new domain](#), when attempting to connect to one of the Servers excluded in step 1.
3. Adding the remaining Servers to the Axxon Domain from the primary Server according to the instructions in the section [Adding a Server to an existing Axxon Domain](#).

Adding and removing IP devices

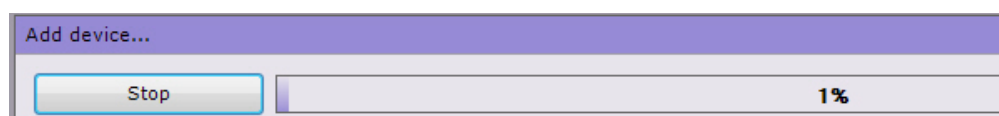
Rus

You can add video cameras and IP servers to the system by using the IP Device Discovery Wizard.

To open the IP Device Discovery Wizard, click the **Add device** link at the end of the Server device list.



When the Wizard is opened for the first time after the Client is started, automatic search for new devices will begin. During subsequent sessions, to launch the Wizard you must click the corresponding button. A progress bar indicates search progress.



To stop devices search at any time, click the **Stop** button.

Note

Since multicast packets are used for device search, the search results may not contain the Servers and devices from other subnets

The search results are color-coded based on the status of the device.

Color of video camera icon	Description
	Fully supported device
	Manual configuration required
	Axxon Next compatibility not guaranteed

IP address 10.0.36.48	Port 80	Vendor Dahua	Username Auto	Bind to the archive	ID Auto	
MAC address not defined		Model General	Password ****	Recording	Name Auto	
IP address 192.168.0.155	Port 80	Vendor Samsung TW	Username Auto	Bind to the archive	ID Auto	
MAC address 00:09:18:72:BC:D2		Model SND-5010	Password ****	Recording	Name Auto	
IP address 192.168.117.1	Port 80	Vendor Bosch	Username Auto	Bind to the archive	ID Auto	
MAC address not defined		Model AUTODOME 7000 IP	Password ****	Recording	Name Auto	



Note

If you click the IP address, you will jump to the device web interface.

Search results can be filtered in two ways:

1. By status. To hide devices with a certain status, deselect the relevant checkbox.

Found devices (2):

-  ☒ Full supported devices
-  ☒ Manual supported devices
-  ☐ Unsupported devices

2. By manufacturer, model or IP address. To do this, use the **Filter** field. For example, this filters the **LG** devices, the name of which contains the **LW** model and whose IP address contains **192**.

Add device...

Search

☒ Unsupported devices

☒ Manually supported devices

☒ Fully supported devices

Devices found (3): Filter:

IP address	Port	Vendor
192.168.5.37	80	LG
MAC address		Model
not defined		LW9228I
IP address	Port	Vendor
192.168.5.58	80	LG
MAC address		Model
not defined		LW332
IP address	Port	Vendor
192.168.5.61	80	LG
MAC address		Model
not defined		LW6324

When adding a device, you can immediately set several configuration options, such as:

- manufacturer and model,

Note
You can search by manufacturer and model of the device.

Vendor
Hikvision

Model
ds2012

DS-2CD2012F-I
DS-2CD2012F-IW
DS-2CD2012-I

- login and password,
- ID and object name,

Note
An object identifier must contain: numbers, English characters and the "_" sign.

- Select an archive and set the recording parameters (see [Binding a camera to an archive](#)).

Attention!
The default recording mode is **Motion**. In this mode, a VMD tool (see [Settings Specific to Video Motion Detection](#)) and an automatic rule for writing to the specified archive are created for the camera you are adding (see [Automatic Rules](#)). By default, recording stops when an event detection is finished.

In addition, three modes are available for adding a device to a configuration. These are described in the following table.

☒ Start with default setting and configure later

☐ Configure by Web

☐ Template

Device addition mode	Description
----------------------	-------------

1	Add device with default settings	The IP device is added to the configuration with the default settings (the default settings are determined by Axxon Next itself). Adding a device in this mode will change the current settings of the device.
2	Add device with current settings	The IP device is added to the configuration with the current settings, as specified in the web interface.
3	Add device with template settings	The IP device is added to the configuration with the settings that have been previously specified for a device of the same model in the configuration. Select a device of the same model (the "template device") in the list. Only devices of the same model are shown in the list of search results for choosing the template device. The following settings will be copied from the template device to the new, similar device: firmware, video stream settings, buffering settings, Other settings (see The Video Camera Object), and Other settings for Microphone and Speaker objects, if these are configured for the template device. This mode is best when multiple cameras of the same model are in use at a site. If this is the case, we advise to: Add and configure one device. Add the remaining devices, copying settings from the "template device" as described previously.

To add an IP device to a configuration:

- Set device settings, if necessary.
- Select a mode for adding the device to the configuration.
- The device is then added to the configuration.

During a single configuration change, you can add a single device or all devices listed in the search results (other than

devices for which compatibility is not guaranteed). To add one device, click the  button. To add all devices, click the **Add all** button.

Note

To remove a device from the search results, click the  button.

Note

Remember that if you add all IP devices at the same time, the same mode and settings will be applied to all of them.

If an IP device is not shown in the search results (because it is located on another subnet or contact has been temporarily lost), you can add it manually. To do so, in the neutral-colored area above the search results, select the type of IP device that you are adding (with or without edge storage), specify an IP address and port, and select the manufacturer and model.

IP 0.0.0.0	Port 80	Vendor iZett
Device Type VideoDeviceInfoCategory	Model HR-FD2030C	Firmware VC1.0.18...

Then add the device to the configuration by following the steps described previously.

To remove IP devices, select them in the device list (by left-clicking one or more devices, holding down the CTRL key to select multiple devices) and click the **Delete** button.

If you click the IP address, you will jump to the device web interface.

Configuring System Objects for Devices

The Server Object

Rus

The **Server** object corresponds to a computer a) on which Axxon Next is installed in the **Server and Client** configuration

and b) is on the Axxon-domain.

The name of the **Server** object is the same as the computer's network name.

The **Server** object is the parent of the **Camera** and **IP server** objects, which correspond to the hardware connected to the Server.

Click the **Server** object to view the following information:

1. buttons for creating a system speaker or SMS and email notifications; button for excluding the Server from the Axxon-domain, and button for launching the Configuration management utility (1).

2. Information on the installed version of Axxon Next and active license (2).
3. Protocol used for Client connections to the Server (3).
4. Web server configuration options (4, see [Configuring the web server](#)).
5. List of cameras connected to the Servers, including main settings (5).

The list of cameras is shown as a table with the following columns: **Name**, **IP address**, **Manufacturer**, **Model**, **Quality**, **Video codec**, **Frame rate** and **Resolution**.

The table can be sorted by any of the columns.



Note

If no cameras have been created on a Server, you are prompted to search for IP devices on the network (the IP Device Discovery Wizard is launched, see [Adding and removing IP devices](#)).

If a camera supports multistreaming, the information in the **Quality**, **Video codec**, **Frame rate** and **Resolution** columns will be displayed as follows> value for the lowest-quality stream/value for the highest-quality stream.

Devices connected: 2							
Name	IP address	Vendor	Model	Quality	Video codec	Frame rate	Resolution
2.Camera	10.0.11.207	Sony	SNC-ER580	High	jpegWithBandwidthControl	20	640x480
1.Camera	10.0.11.201	Sony	SNC-VB630	Low/High	H264_6generation_maxBitrate_8kbps/H264_6generation	30/30	640x480/1920x1080

Configuring the web server

Rus

The web server allows accessing Axxon Next remotely over the Internet (see [Working with Axxon Next Through the Mobile Clients](#), [Working with Axxon Next Through the Web Client](#)).



Attention

The web server recodes the video that it receives, by using the MJPEG compression algorithm. This codec can cause the bitrate (Mb/s) to become very large.

To configure the web server in the *Axxon Next* software package:

1. Select a **Server** object.

2. If you want to disable the web server, set the value of **Enable** to **No** (1).
3. In the **Port** field, enter the port number on which the web server will be located (2).
4. In the **URL path** field, enter the prefix that is added to the server address (3).
5. Click the **Apply** button.

The web server is now configured and available over the Internet at the following address: `http://<IP address of Axxon Next Server>:<Port>/<Prefix>`. For example, if the server's IP address is **10.0.11.1**, the port is **8000**, and the prefix is **/asip-api**, then the web server can be accessed at the following address: `http://10.0.11.1:8000/asip-api`.

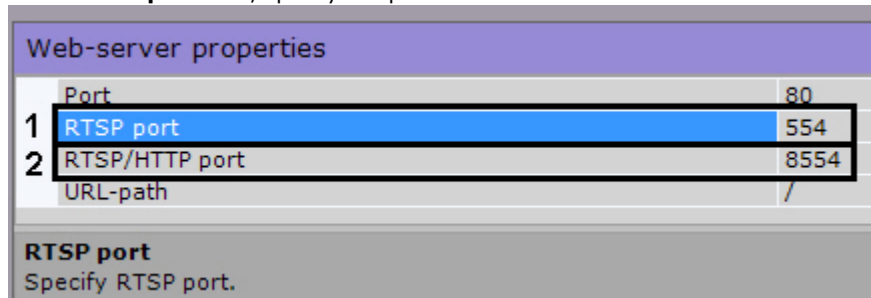
Configuring an RTSP Server

Rus

Axxon Next supports RTSP streaming from cameras (see [Get camera live stream](#) and [Get archive stream](#)).

To configure an RTSP Server:

1. Select a **Server** object.
2. In the **RTSP port** field, specify the port number that will be used for RTSP data transfer (**1**).



Web-server properties	
Port	80
1 RTSP port	554
2 RTSP/HTTP port	8554
URL-path	/

RTSP port
Specify RTSP port.

3. In the **RTSP/HTTP port** field, specify the port number for transfer of RTSP data via HTTP tunnel (**2**).
4. Click the **Apply** button.

Configuration of the RTSP Server is now complete.

The Video Camera Object

Rus

Creation and configuration of the **Video camera** object is done in the **Hardware** tab. The object tree of a video camera is generated automatically according to its functions which are integrated into the Axxon Next software package (the presence of alarm inputs, relay outputs, PTZ unit, etc.).

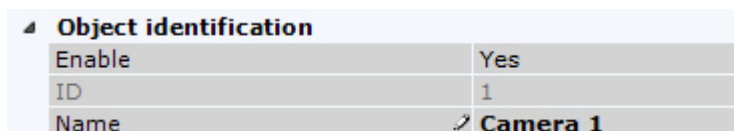


Note

You can configure recording options for a camera in the corresponding tab (see [Configuring Archives](#)).

When you have added a camera via the IP Device Discovery Wizard (see [Adding and removing IP devices](#)), you can edit the camera's parameters. The camera parameters are grouped as follows.

In the **Object ID** group, you can enter the camera's name and see its ID, which is automatically assigned.



Object identification	
Enable	Yes
ID	1
Name	Camera 1

Also, you can disable the camera by selecting **No** in the **Enable** field.



Attention!

In terms of licensing, every camera enabled is one channel. Disabled cameras are not subject to licensing (see [Licensing of the software product](#)). If you run out of camera licenses, disable offline / unused cameras.

In the **Object Properties** group you can see the following camera properties:

1. The IP address (assigned automatically and can be changed if necessary).



Note

The port used to transmit data between the camera and the Axxon Next VMS (this value is set to 80 by default but can be changed if necessary).

2. At first the port number is set through the camera's Web interface.
3. The MAC address.
4. Manufacturer, model, firmware.
5. The number of the video channel (for an IP Server).

Object features	
Address	10.0.11.204
Port	80
MAC address	
Manufacturer	Hikvision
Model	DS-2CD754FWD-E
Driver version	3.0.0
Current firmware	V5.1.0
Video channel No.	0

In the **Authentication** group, you can set the username and password to connect to the camera.

Authentication	
Default	No
Login	admin
Password	•••••

If the username and/or password for connecting to the camera are different from the factory settings, select **No** in the **Use by default** field and enter the current credentials.



Attention!

If the camera supports the Digest HTTP-authorization, add the symbol " : " to the last character of the password.

To enable video buffering on Clients, set the buffer length in milliseconds in the **Video buffering** group.

Video buffering	
Buffer size	0

This value should be between 50 and 1000 milliseconds. If the value **0** is selected, video buffering is disabled.

In the **Camera settings** group you can see video image parameters (contrast, brightness, color saturation, etc.). When configuring these, you can look up short parameters' descriptions in Axxon Next GUI. For more detailed information, please refer to the camera manual.

Video stream settings	
Brightness	50
Color Saturation	50
Contrast	50
Day/Night Autoswitch Time	50
Exposure Mode	Auto
Flicker-free	50
Image Flip	None
IR Cut Filter Sensitivity	Medium level
IR Cut Filter	Auto
Sharpness	50
Shutter Speed	1/50
WDR Level	0
White Balance	AWB1
Wide Dynamic Range	None



Note

If you set up a camera via its web page, you cannot edit the parameters in the VMS (see [Adding and removing IP devices](#)). To configure the camera in the VMS, select the **Enable device settings** checkbox.

You can configure fisheye cameras in the **Panoramic view** group.

Panomorph	
Activate	No
Camera position	Wall
Lens type	A0**V
View type	PTZ

Select a standby / substitute camera from the current Axxon domain in the **Alternative camera** list. The sub camera shows in the layout when the main camera is offline.

Alternative view	
Alternative camera	4.Camera

You can configure video streams under the viewing tile. If a camera supports multistreaming, you can configure two video streams separately: high quality and low quality. To configure video streams, you should make sure that the **Enable device settings** checkbox is selected.

An adaptive video stream can be configured if necessary (see [Configuring an Adaptive Video Stream](#)).



Note

In most cases, the following parameters are set for video streams: bit rate, compression rate, frame rate, and resolution. Detailed information on configurable parameters can be found in the official reference documentation for the video camera

High-quality video stream	0. H.264/MPEG4
Audio	Yes
Bitrate	8192
Compression Mode	Variable bitrate
Frames per second (fps)	12
Keyframes Interval	25
Quality	Medium level
Resolution	1280 x 720
Transport Protocol	TCP
Video Codec	H.264
Low-quality video stream	1. H.264/MJPEG/MPEG4
Audio	Yes
Bitrate	4096
Compression Mode	Variable bitrate
Frames per second (fps)	12
Keyframes Interval	25
Quality	Medium level
Resolution	352 x 288
Transport Protocol	TCP
Video Codec	H.264



Note

To configure video streams, use the settings available in the Axxon Next interface, not the web interface of the camera itself.



Important

You can any select any stream for live view or recording (see [Selecting video stream quality in a viewing tile](#), [Binding a camera to an archive](#)).

If a camera does not support multistreaming, the parameters of the video streams are identical. In this case only the parameters of the high-quality video stream are editable (the parameters of the low-quality video stream are adjusted automatically).



Note

When some video stream parameters are changed, the video camera may automatically restart, in which case it will become unavailable for some time (depending on the video camera)

Image from the camera will be displayed in the preview window.

4.Camera

Object identification

Enable	Yes
ID	4
Name	

Object features

Address	10.0.11.207
Port	80
MAC address	
Manufacturer	AxxonSoft
Model	Virtual several streams
Driver version	3.0.0
Current firmware	auto
Video channel No.	0

Authentication

Default	Yes
Login	
Password	****

Video buffering

Buffer size	0
-------------	---

Panomorph

Activate	No
Camera position	Wall
Lens type	
View type	PTZ

Alternative view

Alternative camera	Not selected
--------------------	--------------

High-quality video stream

Low-quality video stream

Note
The indicator in the upper right corner displays the current time and recording status (see [Time Display](#)).

To switch between streams in the preview window, click the **High-quality stream** and **Low-quality stream** tabs.

Note
When a stream is selected in the preview window, the settings for the relevant stream are displayed; settings for the other stream are hidden.

Restoring default camera settings

Rus

You can restore the default Axxon Next settings for a camera.

Current camera settings will be discarded and replaced with the defaults.

To restore default camera settings, select a camera in the device list. Click the **Reset** button and then the **Apply** button.

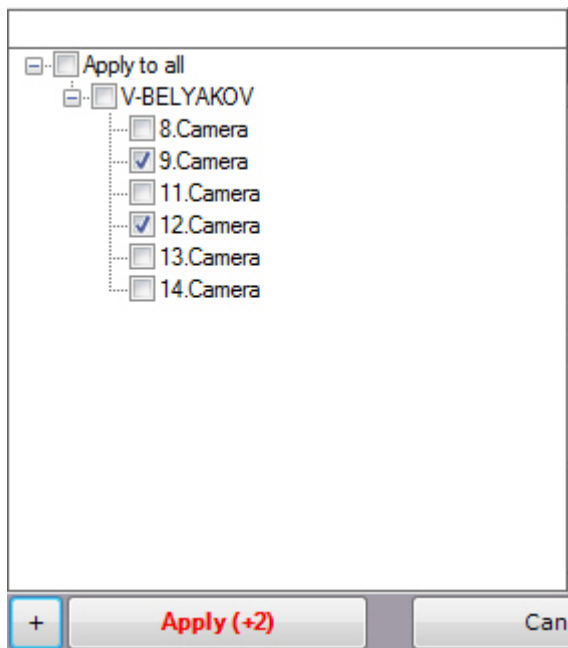


Mass configuration

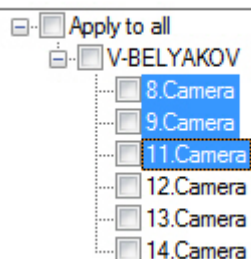
Rus

You may bulk configure cameras of the same model and firmware. Do the following:

1. Configure any camera.
2. Click the  button and select cameras the same settings should be applied to.



A list of cameras of the same model and firmware opens. To quickly select multiple cameras, hold down the Shift key, select the first and last cameras the settings should be applied to. Selecting any camera from highlighted ones will result in selecting them all.



3. Click the **Apply** button.



Note

The number in brackets refers to the number of configured cameras.

Configuring an Adaptive Video Stream

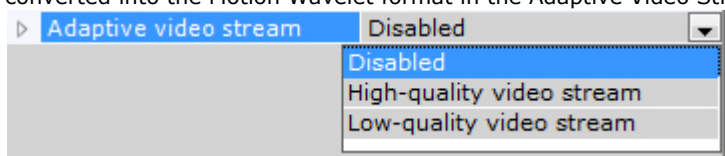
Rus

It is possible to convert the original video stream into the Motion Wavelet format with adaptive parameters.

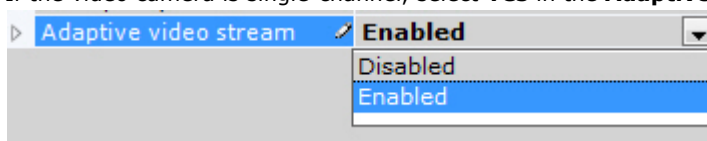
Bitrate and fps of such a video stream will vary depending on the current situation: Server load, channel bandwidth and requested video stream resolution.

To configure an adaptive video stream, perform the following steps:

1. If the video camera supports simultaneous transmission of several video streams, select the video stream to be converted into the Motion Wavelet format in the Adaptive Video Stream list.



If the video camera is single-channel, select **Yes** in the **Adaptive Video Stream** list.



2. Set the required resolution of an adaptive video stream, if necessary.

Adaptive video stream	Enabled
Horizontal resolution	640
Vertical resolution	360

If you specify resolution on only one side, then a scaling step that does not exceed the specified number is selected.

If you enter resolution values for both dimensions, the compressed frame will be displayed in the designated rectangle with the constrained proportions.



Note

Axxon Next server scales the adaptive video stream to 2, 4, 8, and so on.

For example, if you select the horizontal resolution **680** for a **1280x720** stream, the adapted video be **640x360**.

If the dimensions are not set (**0** value), then the adaptive video stream will have the same resolution as the original video stream.

- Click **Apply** to save the changes.

Configuring an adaptive video stream is complete.

Configuring fisheye cameras

Rus

If you are using a fisheye camera or video camera with a panomorph lens, configure the following settings of the **Video camera** object, in the **Panomorph** settings group:

- To activate panoramic view, in the **Activate** list **(1)**, select **Yes**.

Panomorph	
1 Activate	Yes
2 Camera position	Wall
3 Lens type	Common fisheye-lens
4 View type	PTZ
5 Fit to frame	Yes

- In the **Video camera position** list **(2)**, select the mount of the video camera.



Important!

Some system features and functions depend on the chosen position of the video camera: digital zoom, display of video in the surveillance sector on the map, and immersive mode

- If it is a fisheye camera, select the **Standard fisheye lens** lens type **(3)**. If it is a video camera with a panomorph lens, select the corresponding type **(3)**.



Note

The types of device lenses certified by ImmerVision are listed in the [document](#).

- If it is a video camera with an Immervision lens, select the appropriate display mode **(4)**: 360° panorama with virtual telemetry (**PTZ**) or 180° panorama (**Perimeter**).
- A typical fisheye lens with standard settings produces a skewed image in the upper part of the screen. If this is the case, enable the **Fit to frame** option **(5)**.



Important!

If you have multiple streams from a camera, you need to calibrate each stream. To do this, before applying the settings, switch to the required stream tab in the viewing tile (see [The Video Camera Object](#)).

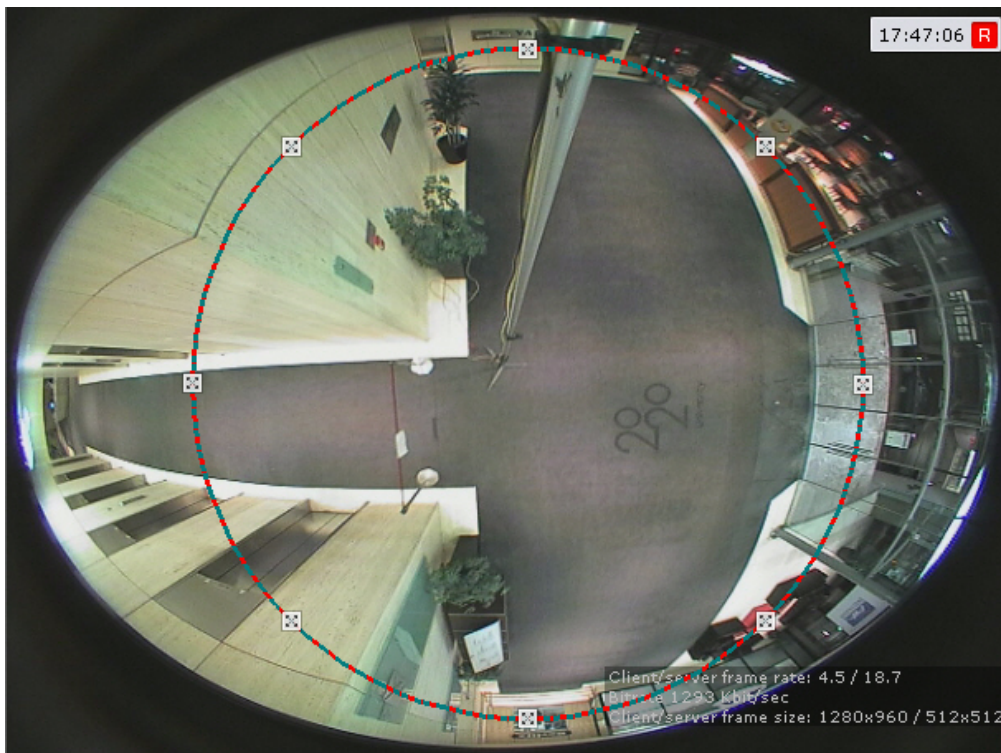


Important!

Video is calibrated every time you change any parameters in the **Panomorph** group.

Manual calibration is also available. To do this:

- Disable **Fit to frame**, select **No** in the **Enable** list and click the **Apply** button.
- Select **Yes** in the **Enable** list.
- Configure the video area (circle). Left-click any point inside the circle and move the mouse pointer. To change the diameter of the circle, do as follows: click an anchor point  and move the mouse pointer.



d. Click the **Apply** button.

After applying the settings, the area outside the circle will be cut.

Configuration of the fisheye camera is complete.

Connecting and configuring cameras over standard protocols

Notes on configuring video cameras connected via ONVIF

Rus

By default, all ONVIF devices in the system are added as multistreaming (the **ONVIF 2.0** driver, see [Adding and removing IP devices](#)).

If the cameras doesn't support multistreaming, then it will the low quality video stream disabled.



Note

In some cases (for example, if you do not have video from a camera), you may need to synchronize the time between the server and the camera when you connect them via ONVIF.



Attention!

If you connect cameras via ONVIF, auto focus (AF) and auto aperture are not available

Resolution

Axxon Next offers three resolutions for video from cameras connected via ONVIF: maximum, medium, and minimum.

Resolution	Maximum level
Video Codec	Maximum level
Low-quality video stream	Medium level
Frames per second (fps)	Minimum level

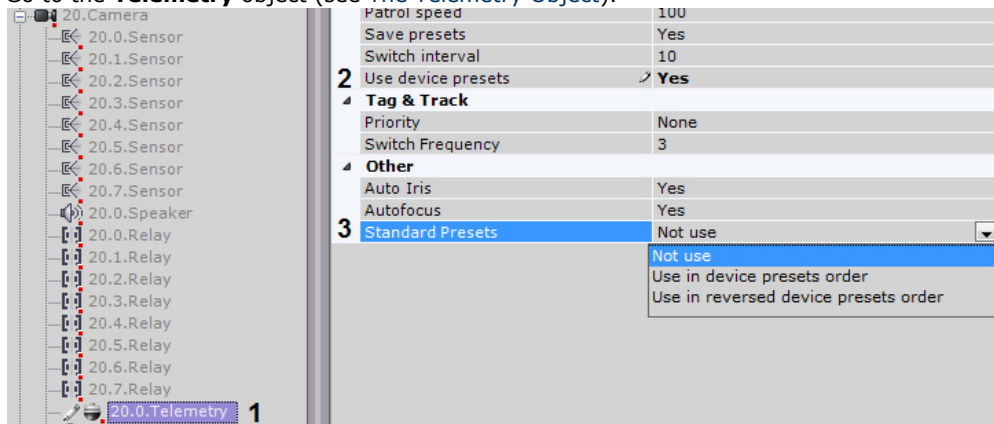
A description of the resolution levels is given in the table.

Camera type / Resolution	Maximum	Medium	Minimum
Non-megapixel	Maximum camera resolution	Average camera resolution	Minimum camera resolution
Megapixel	Maximum camera resolution	Camera resolution closest to 1024x768	Camera resolution closest to 640x480

Using standard presets

To use standard presets of your IP device for ONVIF connections, do as follows:

1. Go to the **Telemetry** object (see [The Telemetry Object](#)).

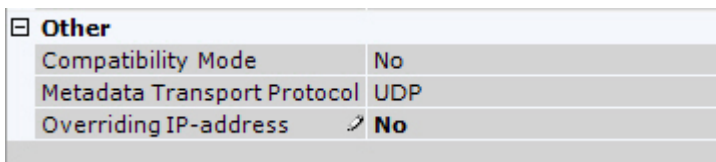


2. Select **Yes** in the **Use device presets** option (2).
3. For **Standard presets** (3), select one of two values:
 - a. **Use in device presets order** - Axxon Next uses the direct order of presets on your device.
 - b. **Use in reversed device presets order** - Axxon Next uses the reversed order of presets on your device.
4. Save changes.
5. Create the required number of presets (see [The Presets List](#))

IP devices on other subnets (behind a NAT)

By default, **NAT-friendly mode** is enabled for cameras connected via the ONVIF driver.

To disable NAT-friendly mode, in the settings of a camera, select the **No** value for **Overriding IP address**.



IP devices which partially support the ONVIF protocol

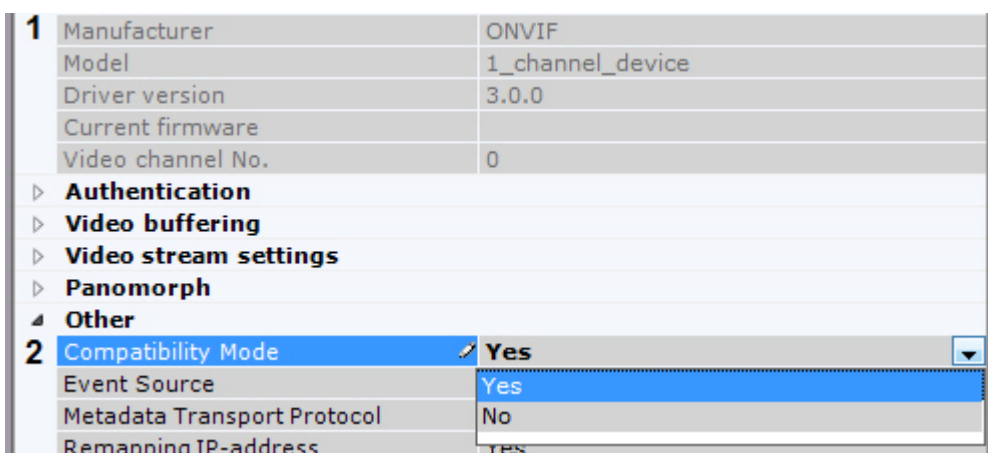
To connect IP devices which only partially support ONVIF functions to the Axxon Next software package, you must use an ONVIF driver (1) with compatibility mode enabled.

Note

Such video cameras include Hikvision models and early versions of firmware from Sony, Samsung, and others.

Compatibility mode makes it possible to receive a video image from video cameras; however, some capabilities of the Axxon Next software package will be unavailable.

Enabling compatibility mode for a video camera (2) connected using the ONVIF protocol (1) is recommended if the connection settings are correct, but there is no video image.



Configuring connection of video cameras via RTSP

Rus

In IP Device Discovery Wizard, add a camera via RTSP with the following parameters:

1. In the list of manufacturers, select **RTSP** (1).

IP address 2	Port	Vendor
rtsp://root:root@10.0	80	RTSP 1
Device type	Model	Firmware
IP device	RTSP Device	auto

2. URL of the RTSP feed (**2**). In general form, the address is as follows: **rtsp://<IP address of RTSP server>:<Port on RTSP server>/<Path>**.

Up to three simultaneous video streams are supported from RTSP-connected cameras. To access multiple streams, enter the relevant RTSP addresses, placing a semi-colon (;) after each address: **rtsp://<IP address of RTSP server1>:<Port on RTSP server1>/<Path>; rtsp://<IP address of RTSP server2>:<Port on RTSP server2>/<Path>; rtsp://<IP address of RTSP server3>:<Port on RTSP server3>/<Path>**.



Important!

Generally, RTSP server parameters (port and path) are set through the web interface of the video camera. To do so, refer to the manufacturer's documentation for the video camera



Note

In some cases, the address format may be different. For example, a user name and password may be added to the address for connecting to the video camera.

2. Object features	
Address	rtsp://root:root@10.0.11.121:
Driver version	3.0.0

You are advised to refer to the manufacturer's documentation for the video camera.

The **Video camera** object is created. If the address of the RTSP server is correctly specified, the video feed from the camera is shown in a preview tile.



Note

Port, **Login** and **Password** can not be edited. These settings are specified in the URL of the feed.

If video is unavailable, examine the log file *APP_HOST.lpint*, which is located in the folder <Axxon Next installation folder>\AxxonNext\Logs.



Important!

If APP_HOST.lpint is empty, in the log management utility, check the detail level of logging for the Axxon Next Server (see [Configuring Logging Levels](#)), The recommended detail level is **Debug**.



Important!

To get good video from some cameras, you should select **No** for the **SSRC filter** in the video settings

High-quality video stream	0. Auto
Expected frames per second (fps)	30
Resolution	Auto
SSRC Filter	No

Connecting cameras via the GB/T28181 protocol

Rus

Axxon Next supports connecting devices via the Chinese standard GB/T28181. As of when this document was written, Axxon Next supports H.264 video and telemetry. For the most up-to-date information on this standard and the features supported in Axxon Next, see the [Documentation Drivers Pack](#).



Note

Configuration of IP devices connected via GB/T28181 is performed through the web interface of the devices. Settings are not sent from Axxon Next to the device.

Before connecting a camera via this protocol to Axxon Next, perform the following steps to configure the device:

1. Set the Server IP to equal the Server's IP address.
2. Set the Server port to 5060.
3. Set the Device ID. The ID should be set on all cameras connected via the GB/T28181 protocol and must be unique.
4. For the device to perform autodiscovery of the Server more quickly, reduce the default value of RefreshRegTime.

The name of this setting may vary on some cameras.



Note

For telemetry to work correctly, set RefreshRegTime to more than 600.



Attention!

For a camera to work correctly via GB/T28181, it must be on the same LAN as the Server.



Note

Addition of cameras via GB/T28181 to Axxon Next must be performed manually.

After configuring the device as described earlier, add it to Axxon Next as follows:

1. Run the IP discovery wizard (see [Adding and removing IP devices](#)).
2. In the form for manually adding an IP device, in the **Manufacturer** list, select **GBT28181 (1)**.

Add device manually: 2		1		3	
IP address	Port	Vendor		Username	
905769	5060	GBT28181		Auto	
Device type		Model	Firmware	Password	
IP device		1_channel_device	auto	****	

3. In the **IP** field, enter the Device ID used for configuring the IP device (**2**).
4. In the **Port** field, enter **5060 (2)**.
5. Enter the user name and password for connecting to the device (**3**).

6. Click the  button.

Connection of the camera via GB/T28181 is now complete.

Generic Drivers (General device, generic)

Rus

General Device is a generic driver that supports nearly all devices from a particular camera vendor.

There are 2 types of generic drivers:

1. **General device.** Most configuration of General Device-connected cameras is performed via the web interface of the device. A detailed list of supported features is given on the [Documentation Drivers Pack](#) page.
2. **generic.** When connected via a generic driver, the configuration of the device is read and transferred to *Axxon Next*. After that, you can configure the device from within *Axxon Next*.

Connection via generic drivers is available for the following devices:

	Axis	Bosch	Panasonic	Samsung	Sony	ONVIF
General Device	+	+	+	+	+	
generic	+	+	-	-	-	+

Devices connected via General Device drivers are findable via the IP device discovery wizard. The method for adding them to the system is the same as for ordinary devices (see [Adding and removing IP devices](#)).

IP address	Port	Vendor	
192.168.5.51	0	Bosch	
MAC address		Model	Firmware
00:07:5F:84:91:6F		General Device(1 channel)	auto



Note

Axis devices are affected by a special restriction: if the user name and password for device access do not equal the default values, the number of channels for the device is not discoverable. Therefore, all non-integrated devices whose user name and password for device access do not equal the default values will be shown in search results as 1-channel General Devices.

You should always select a generic driver manually.

If a IP device is not displayed in search results, you can add it manually:

1. In the form for manually adding an IP device, select the device manufacturer from the list (**1**).

Add device manually: 3		4	
IP address 192.168.0.15	Port 80	Vendor Bosch 1	Username Auto
Device type IP device	Model General Device(4 channel) 2	Firmware auto	Password ****

- In the **Model** field, select **General Device** or **generic** (2). For Axis and Bosch General devices, select the number of channels on the device.
- Enter the IP address and port for the device connection (3).
- Enter the user name and password for connecting to the device (4).



- Click the button.

Addition of the device is now complete.



Attention!

If a device, connected via a generic driver, is temporarily not available or it has incorrect connection settings, then it is not added to the configuration.

Configuring connection of video cameras with dynamic IP addresses

Rus

Axxon Next needs a permanent hostname, such as provided by DynDNS or similar dynamic DNS services to work with IP cameras that use DHCP.

Use your permanent DynDNS hostname to access an IP camera with a dynamic IP address.

Configuring virtual video cameras

Rus

The Axxon Next software package enables you to work with virtual video cameras.

This requires running Axxon Next in test mode and consists of imitating a stream of video data by playing an available video clip (recording). You can play video recordings using video compression algorithms supported by Axxon Next (MJPEG, MPEG-2, MPEG-4, MxPEG, H.264, and Motion Wavelet).

To create and configure a virtual video camera, complete the following steps:

- Run IP Device Discovery Wizard (see [Adding and removing IP devices](#)).
- In the form for manually adding an IP device, select **AxxonSoft** in the **Vendor** drop-down list (1).

IP address 0.0.0.0	Port 80	Vendor AxxonSoft 1
Device type IP device	Model Virtual 2	Firmware 1.0.0

- Select **Virtual** from the models list to emulate a single-stream video camera. Select **Virtual several streams** to emulate a video camera supporting multiple streams (2).



- Click the button
- In the **Folder** field, specify the storage location of the video clip that will be used to imitate a video signal.

High-quality video stream	0. RAW
Compression Rate	1
Frames per second (fps)	25
Resolution	100 x 100
Video Codec	RAW
vstream-virtual/folder	E:/Video
Low-quality video stream	0. RAW
Adaptive video stream	Disabled



Note

The name of the video file and its file path must consist only of Latin characters

- Click the **Apply** button.

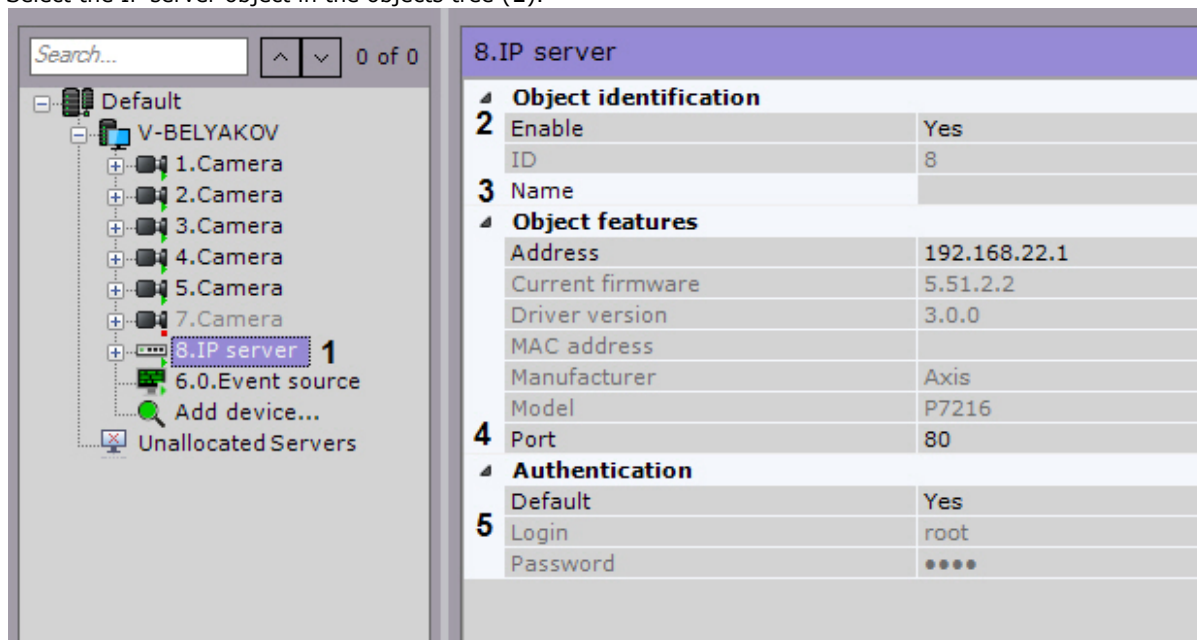
The video file in the selected folder will then be played back in a repeating cycle. If the folder contains several files, they will all be played in a random order.

The IP Server Object

Every channel between an analog video camera and an IP server corresponds to a child **Camera** of the **IP server** object. Configuration of these objects represents the configuration of the IP server's channels.

To configure the IP server parent object, perform the following:

1. Select the IP server object in the objects tree (1).



2. Select **Yes** from the list in the **Enable** field to enable the object (2).
3. Enter the name of the IP server in the Name field (3).
4. Specify the number of the network port (4). The default value is **80**.


Note

The port number is initially set through the IP server's web interface

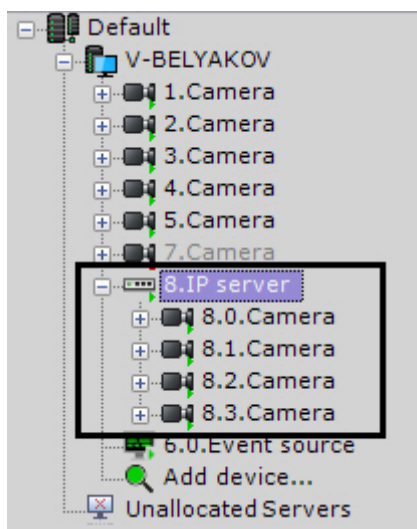
5. Set the authentication mode (5)


Note

The login and password for connecting to the IP server are set through its Web interface

6. Click the **Apply** button.

The IP server and its video cameras will then be enabled, and the icon indicators for the IP server and video cameras in the objects tree will turn green.



Configuration of IP server channels must be performed separately for each channel (with the help of child objects of **Video camera**).

Configuring Virtual IP Servers

Rus

Axxon Next supports working with a virtual IP server.

To create and configure a virtual IP server, perform the following steps:

1. Run IP Device Discovery Wizard (see [Adding and removing IP devices](#)).
2. In the form for manually adding an IP device, select **AxxonSoft** in the **Vendor** drop-down list (1).

IP address	Port	Vendor
0.0.0.0	80	AxxonSoft 1
Device type	Model	Firmware
IP device	Virtual IP server 2	1.0.0

3. Select **Virtual** from the models list to emulate a single-stream video camera. Select **Virtual several streams** to emulate a video camera supporting multiple streams (2).



4. Click the button

An **IP server** object will be added. It will be used for creating 4 virtual video cameras; location of a video file to be used for signal emulation needs to be specified for each camera (see [Configuring virtual video cameras](#)).

The Microphone Object

Rus

If a microphone is part of an IP server, then you must specify the video camera to which it will be linked in the settings of the given microphone. When you do this, the **Microphone** object will become a child of the specified **Camera** object.



Attention

When a microphone is reassigned from one camera to another, all previously recorded audio is also transferred; when recorded video on the new camera is played, the transferred audio is played back



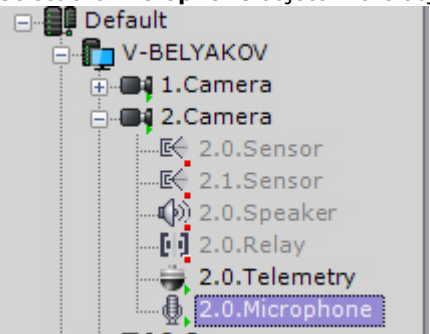
Note

This setting is used during synchronized video and audio monitoring of a situation as well as during synchronized video and video recording to the archive (see the section [Audio Monitoring](#))

In all other cases the **Microphone** object will automatically be displayed in the objects tree as a child of the video camera itself.

To configure the **Microphone** object, perform the following:

1. Select the **Microphone** object in the objects tree.



2. Enable the microphone by selecting **Yes** in the **Enable** field (1).

Object identification	
Enable	Yes
ID	Yes
Name	No

3. Enter the name of the microphone in the **Name** field (2).
4. Configure additional microphone parameters (audio codec, bit rate, etc.) in the **Other** group using their descriptions in the interface of the Axxon Next software package or, for more detail, in the official reference documentation of the parent video camera.

2.0.Microphone	
Object identification	
Enable	Yes
ID	2.0
Name	
Object features	
Audio input ID	0
Other	
Audio Codec	G.711
Bitrate	64000
Compression Algorithm	μ-law
Volume	0

- Click the **Apply** button.

The microphone will then be switched to its assigned work mode.

To check the microphone's operation, you must perform the following steps:

- Select the **Sound on/off** check box in the **Summary** group.

Summary	
☐ Sound on/off	

- Provide an audio signal to the microphone.
- If the microphone is configured correctly, the audio signal will be transmitted to the server's speakers. The strength of the incoming audio signal will be displayed on the indicator to the right of the **Sound on/off** check box.

Checking microphone operation is now complete.

If a microphone is part of an IP server, the microphone settings allow choosing the video camera of the IP server it will be matched to. When you do this, the microphone object will appear as the child object of the specified camera in the object tree.

The Telemetry Object

Rus

The **Telemetry** object is displayed in the device list as the child object of its respective PTZ camera.

To configure a camera's PTZ controls, the following must be true:

- Select the **Telemetry** object in the objects tree (1)

19.0.Telemetry	
Object identification	
2 Enable	Yes
3 ID	19.0
Object features	
4 Address	0
5 Multiple control	Yes
6 Patrol	No
7 Patrol speed	100
8 Save presets	Yes
9 Switch interval	10
10 Use device presets	No
Tag & Track	
11 Priority	None
12 Switch Frequency	3
Other	
13 Auto Iris	Yes
14 Autofocus	Yes

- Enable the PTZ device by selecting **Yes** in the **Enable** field (2).
- Enter the name of the PTZ device (3).
- To simultaneously control a PTZ camera by multiple users with the same priority, select **Yes** in the **Multiple control** List (4). Otherwise, only one user at a time will have a control (see [Controlling a PTZ Camera](#)).
- Configuring patrol (5):
 - Enable patrol mode. When patrolling is enabled, the video camera automatically changes its position along a

route defined in its presets list.



Note

Patrolling is enabled through the **Patrolling** button in the PTZ camera control panel (see the section titled [Patrolling](#)).

- b. Set the interval of time (in seconds) at which the PTZ device will switch between presets while in Patrol mode.
 - c. Set the transition speed from one preset to another in arbitrary units from 0 to 100.
6. By default, presets are stored on IP cameras. If you want to store presets on Server, select **No** in **Save presets (6)**.



Note

This option is available only for devices that support Absolute Positioning.

7. To be able to use in *Axxon Next* the already created presets from the device, you should:
- a. Select **Yes** in the Use **device presets option (7)**.
 - b. Create in *Axxon Next* presets with the same ID.



Attention!

If you have not enabled the Use device presets option, the existing presets can be lost if the following conditions are in place:

1. In *Axxon Next*, the recording presets to the device option enabled (see. P.5).
2. In *Axxon Next*, a preset with the same ID is created



Note

When connecting the device via ONVIF, using standard presets may require additional configuration (see [Notes on configuring video cameras connected via ONVIF](#))

8. If necessary, configure Tag & Track (**8**, see [Configuring object tracking](#)).
9. Depending on camera, you may find other options in the **More** group (**9**). To configure them, please refer to the interface help section and tooltips or official documentation.
10. Click the **Apply** button.

The PTZ device will then be switched to its assigned work mode.

To check the functioning of the PTZ device, click the **Test** button. If the PTZ device is configured correctly, it will turn one step and return to its original position.

2.0.Telemetry	
Object identification	
Enable	Yes
ID	2.0
Name	
Object features	
Address	0
Patrol	No
Switch interval	10
Tag & Track	
Priority	None
Switch Frequency	3
Other	
Point-and-click Function	Yes
Switch interval Period of time in seconds needed for the PTZ device before it switches to the next preset in the patrol mode. Value should be in range [0, 600000]	
Test	

Configure HTTP-CGI commands to control Wash&Wiper

Rus

With *Axxon Next*, you can control the Wash&Wiper feature in some Axis IP devices (M7016, P7216, Q7404, Q7436) using HTTP-CGI commands.

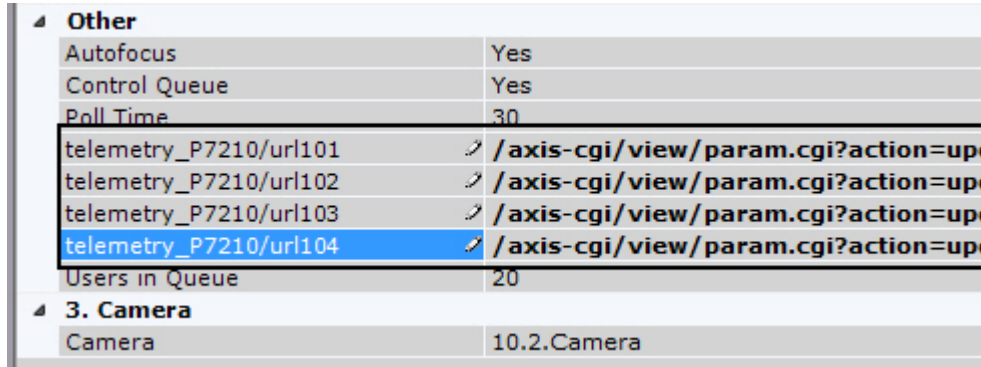
To set HTTP-CGI commands, do as follows:

1. Create presets for the camera, numbered as follows: 101, 102, 103 and 104 (see [The Presets List](#)).
2. Go to the **Telemetry** object and specify commands in the appropriate fields.



Note

The corresponding **Camera** object should have the **Send settings to camera** option enabled (see [The Video Camera Object](#)).



3. Click the **Apply** button.

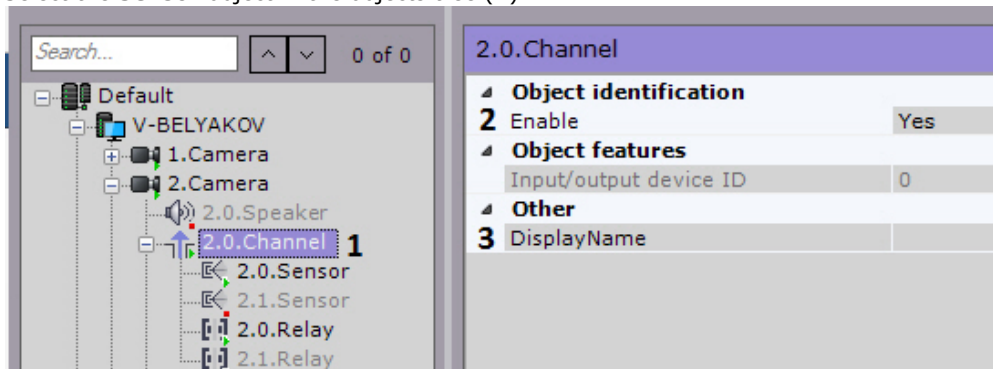
When the camera goes to the presets 101-104, this triggers a pre-configured command.

The Channel object

If the camera has a built-in or pluggable digital input or output, the **Channel** object is displayed as a child of Camera in the object tree.

To configure the **Channel** object, do as follows:

1. Select the **Sensor** object in the objects tree (1).



2. Enable the object (2).
3. Enter the name of the channel (3).
4. Click **Apply**.

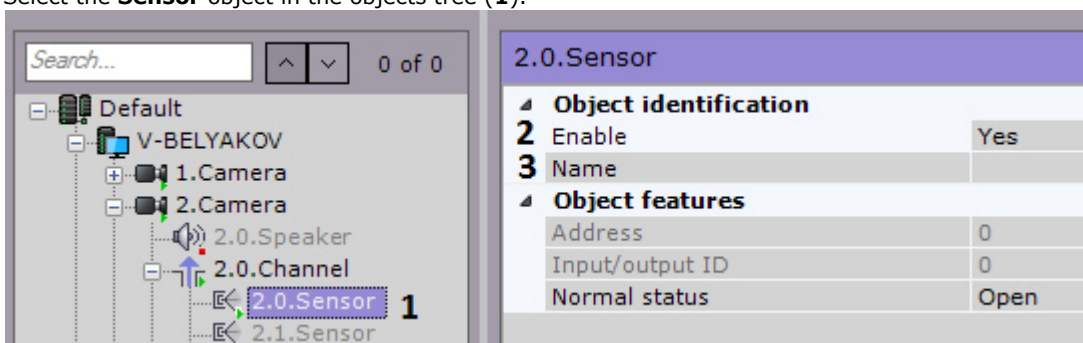
The Sensor Object

Rus

If the camera has a built-in or pluggable digital input, the **Sensor** is displayed as a child of the **Channel** in the object tree. The number of **Sensor** objects for a video camera is equal to the number of discrete inputs for the camera.

To configure a **Sensor** object, perform the following:

1. Select the **Sensor** object in the objects tree (1).



2. Enable the device (2).



Attention!

The parent **Channel** object must also be enabled.

3. Enter the name of the sensor (3).
4. Set the status to which the sensor will be set when no alarm is present.

Normal status	Open
	Open
	Closed

5. Click the **Apply** button.

The sensor will then be switched to its assigned work mode.

The current status of the sensor is displayed in the **Sensor information** group.

Sensor information
Sensor state: unknown.

If a sensor is part of an IP server, the sensor settings allow choosing the video camera of the IP server it will be matched to. When you do this, the sensor object will appear as the child object of the specified camera in the object tree.

8.0.Sensor	
Object identification	
Enable	No
ID	8.0
Name	
Object features	
Address	0
Input/output ID	0
Normal status	Open
3. Camera	
Camera	8.0.Camera

Configure Virtual Sensors

Rus



Switch between virtual IP-device states (HttpListener)

The Axxon Next software package enables you to work with virtual sensors. This involves triggering a virtual sensor and producing a virtual sensor event / alarm in the VMS. When triggered, the virtual sensor status switches - **Closed / Open**.

To create and configure a virtual sensor, complete the following steps:

1. Run IP Device Discovery Wizard (see [Adding and removing IP devices](#)).
2. In the form for manually adding an IP device, select **AxxonSoft** in the **Vendor** drop-down list (1).

IP address	Port	Vendor
0.0.0.0	80	AxxonSoft 1
Device type	3	Model
IP device		HttpListener 2
		Firmware
		auto

3. In the **Model** field, select **HttpListener** (2).
4. In the **Port** field, specify the port number that will be used sensor status queries (3).



5. Click the button

The **IP Server** object is automatically created to host 4 virtual sensors.



Attention!

For a virtual sensor to work correctly, please do as follows: use the **Open** circuit.

7.0.Sensor	
Object identification	
Enable	Yes
Name	
Object features	
Address	0
Input/output ID	0
Normal status	Open

You can configure virtual sensors in the same way as real ones. Also you can specify the time-out when virtual sensors reset their status in the **Alarm ExpirationTime** field of the **IP Server** object.

Other	
Alarm Expiration Time	2

Note
It ranges from 0 to 100.

Note
This setting is applied only after you disable and enable the sensor again.

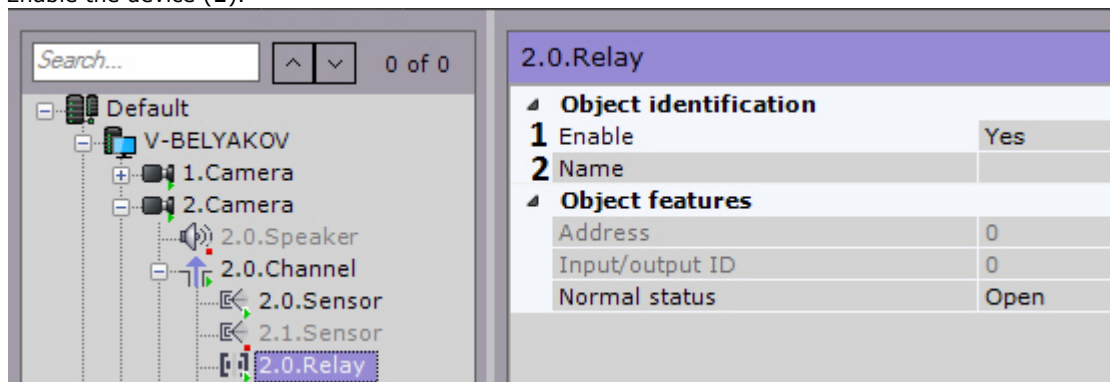
The Relay Object

Rus

If the camera has a built-in or pluggable digital output, the **Relay** object is automatically displayed as a child of **Channel** in the object tree. The number of **Relay** objects for a video camera is equal to the number of discrete outputs for the camera.

To configure a **Relay** object, perform the following:

1. Select a **Relay** object in the objects tree.
2. Enable the device (1).



Attention!
The parent **Channel** object must also be enabled.

3. Enter the name of the relay (2).
4. Set the status to which the relay will be set when no alarm is present.

Normal status	Open
	Open
	Closed

5. Click the **Apply** button.

The relay will then be switched to its assigned work mode.

To check the functioning of the relay, click the **Test** button. If the relay is configured correctly, its status will briefly change.

2.0.Relay

Object identification

Enable	Yes
ID	2.0
Name	

Object features

Address	0
Input/output ID	0
Normal status	Open

Normal status

Relay status without alarm

Test

If a relay is part of an IP server, the sensor settings allow choosing the video camera of the IP server it will be matched to. When you do this, the relay object will appear as the child object of the specified camera in the object tree.

8.0.Relay

Object identification

Enable	No
ID	8.0
Name	

Object features

Address	0
Input/output ID	0
Normal status	Open

3. Camera

Camera	8.0.Camera
--------	------------

The Speaker Object

Rus

The **Speaker** object is used for configuration of the sound alert triggered by a macros.



Attention!

Audio notifications cannot be played back via the system speakers on a remote Client. In this case, you are advised to run an external program on Clients.

In Axxon Next you can create the following types of **Speaker** objects:

1. **IP speaker device**. Created automatically if there is an audio outlet on an IP device.



Note

One audio outlet on an IP device corresponds to one child **Speaker** of the **Camera** object

2. **System speaker**. Created manually. Sound on the system speaker is played back using the server's sound card.

A **Speaker** object can play audio notification files with the extensions:

1. .wav
2. .mp3
3. .mkv
4. .avi

The following audio notification file encoding formats are supported:

1. G.711
2. G.726
3. PCM

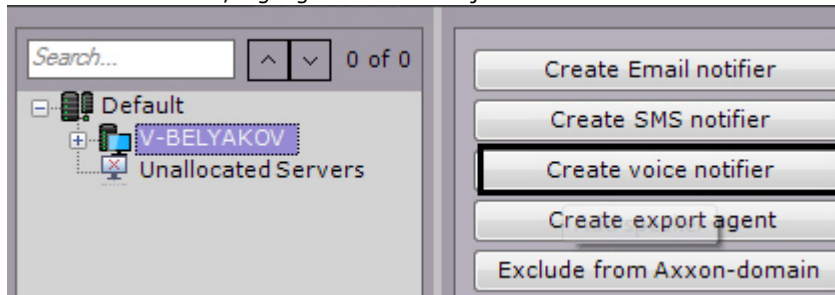
The audio notification file should be stored on the computer corresponding to the **Server** object on the basis of which the **Speaker** object is registered.

Creating an Object

Rus

To create a **Speaker** system object, you must perform the following steps:

1. In the list of devices, highlight a **Server** object and click the **Create voice notifier** button (1).



2. Click the **Apply** button.
3. When you do this, the **Speaker** object appears in the list of devices (3).

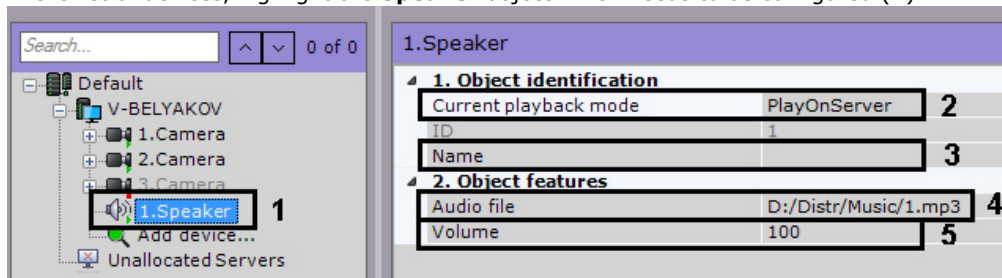
Creation of the **Speaker** object is complete.

Configuring a Speaker Object

Rus

To configure a **Speaker** object, you must perform the following steps:

1. In the list of devices, highlight the **Speaker** object which needs to be configured (1).



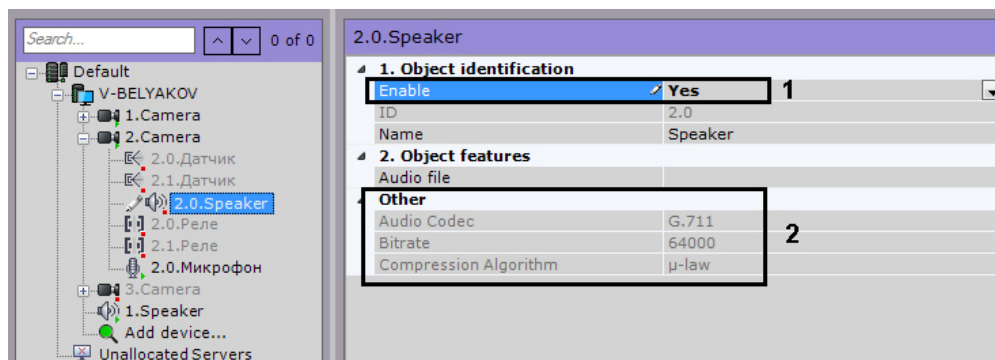
2. Select the speaker mode: disabled, play back on Server, play back on Clients (2).
3. In the **Name** field (3), enter the desired name of the **Speaker** object.
4. In the **Audio file** field (4), enter the full path to the audio notification file.
5. In the **Volume** field (5), enter the desired speaker volume level.



Note

By default, IP device speakers are disabled. To enable, for the **Enable** value (1), select **Yes**. When

configuring the speaker of an IP device, you can set other parameters as well, such as the compression algorithm for the audio signal sent to the speaker for playback (2). Which speaker parameters you can configure is determined by the protocol for integration of the IP device and the Axxon Next software package



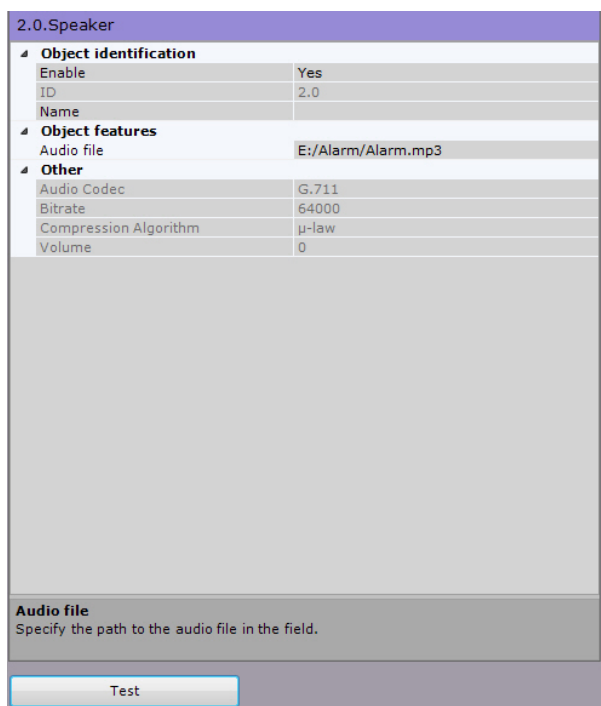
6. Click the **Apply** button.

Configuration of the **Speaker** object is now complete.

Checking Audio Notification

Rus

To check audio notification from a **Speaker** object, click the **Test** button.



When you do this, the audio notification file whose path you indicated in the corresponding field plays back (see the section [Configuring a Speaker Object](#)).

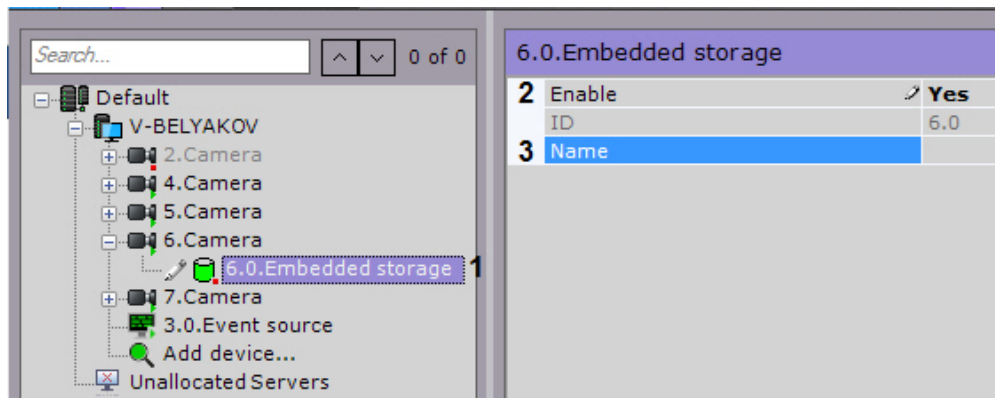
The Embedded Storage object

Rus

If a camera has on-board storage (SD card), the system will automatically create the corresponding object.

To configure on-board storage, do as follows:

1. Select the required object in the devices list (1).



2. Select **Yes** in the **Enable** field to activate the object (2).
3. You can add the name of the object (3).
4. Click the **Apply** button.

You have configured on-board storage. You can view video from on-board storage (if enabled) and copy it to the archive (see [Configuring data replication](#)).

Configuring object tracking

Rus

Axxon Next includes several features for tracking moving objects.

With Tag & Track Pro, an object can be tracked by a PTZ camera under the guidance of panoramic cameras.



Attention!

To use Tag & Track, make sure you have a PTZ camera in Axxon Next that supports Absolute Positioning. The devices that support Tag & Track Pro are listed in the [Drivers Pack documentation](#). If a PTZ camera does not meet the requirement, you should add it to the VMS via Onvif.

With Tag & Track Lite, the operator is alerted to the camera in front of which the moving object is most likely to appear next. The camera is predicted based on object trajectory and mapping of cameras to map locations.

For these features to work, you must enable [Object Tracker](#) on all relevant cameras.

Configuring Tag & Track Lite

Rus

Configuration of Tag & Track Lite consists of linking video cameras with a site map (see [Configuring cameras in immersion mode](#)).

Configuring Tag & Track Pro

Rus

To configure Tag & Track Pro:

1. Link panoramic cameras to a PTZ camera.
2. Calibrate cameras.
3. Set the telemetry mode.

Camera requirements for Tag & Track Pro

Rus

To follow objects with Tag & Track Pro, mount the cameras at the top of the scene, so that you can track motion on the plane (floor, ground) from above.

In addition, panoramic cameras should meet the following requirements: [Video suitability for detection tools](#)

Configuring Smooth Motion for PTZ cameras

Rus

To smooth panning of a PTZ camera while using Tag & Track Pro, you can configure:

1. The degree of prediction (1). This value should be in the range from 1 to 3000. The higher the value, the smoother is the panning of the camera.

Tag & Track		
1	Prediction time	500
	Priority	None
2	PTZ command sending timeout	1000
	Switch Frequency	3

- The rate at which coordinates are sent in milliseconds (2). This value should be in the range from 100 to 3000.

Linking panoramic cameras to a PTZ camera

Rus

To link panoramic cameras to a PTZ camera:

- Go to the **Telemetry** object of the relevant PTZ camera.
- In the **Tag & Track** group, in the list (1), select the camera that you want to link to the PTZ camera. Click the **Add button** (2).

Tag and track overview cameras

1.Camera

1

Add

2

Camera name	Domain	Ip

- Repeat this action for all cameras that you want to link to the PTZ.



Note

To remove a camera from the list of panoramic cameras, click the



- Click the **Apply** button.

Linking of panoramic cameras to the PTZ camera is now complete.

Mapping PTZ positions to panoramic field of view (calibration)

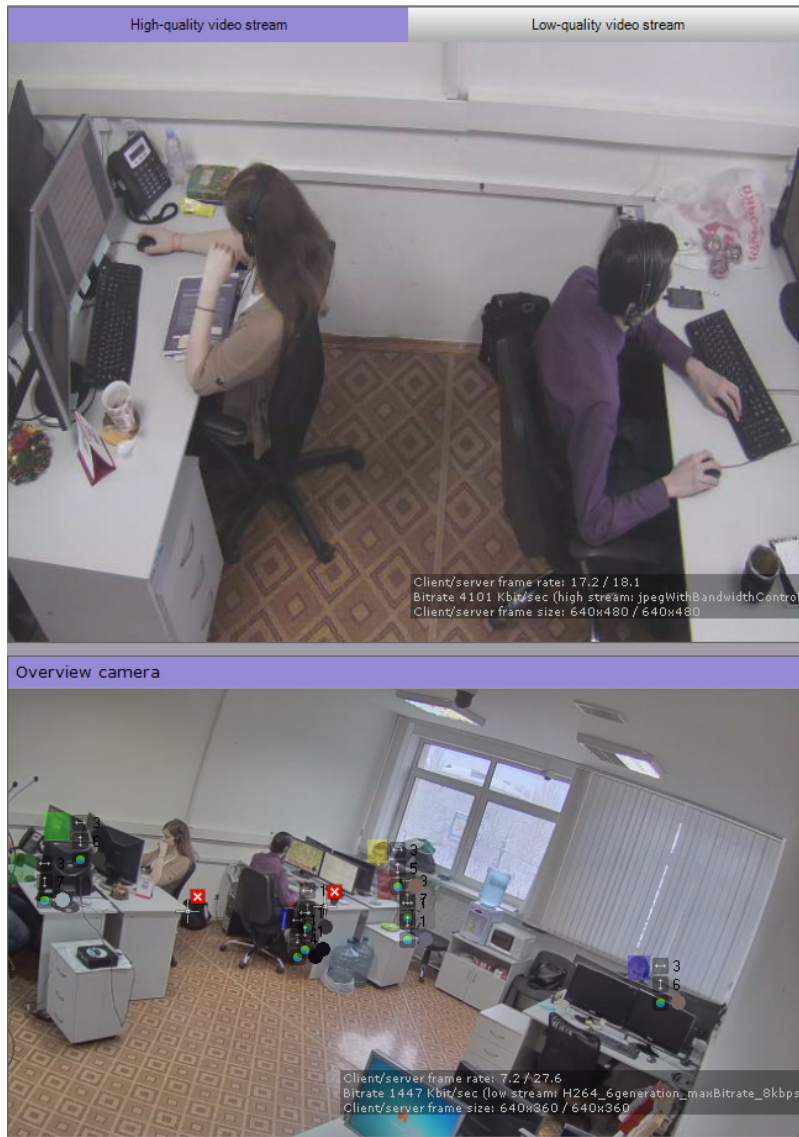
Rus

For precise tracking of moving objects, you must calibrate PTZ cameras by mapping at least six PTZ positions to points in the field of view of each panoramic camera.

The more positions you map, the more precisely the PTZ camera is able to follow moving objects. It is recommended to map eight or more points.

The calibration procedure is as follows:

- Focus the PTZ camera on any point.
To change the lens orientation, left-click the frame and, while holding the mouse button, drag the pointer in the relevant direction.
- Left-click to add a point in the frame of the panoramic camera toward which the PTZ camera is currently oriented.



Attention!

Set calibration points on the same plane (floor, ground). Do not set the points on different planes (for example, when some are on the ground while others are on a tree, etc.).



Attention!

The entirety of the moving object must be inside the field of view of the PTZ camera.

3. Repeat this process for at least six points.
4. Repeat the process for all panoramic cameras (click to select a panoramic camera in the list).
5. To save the calibration points, click the **Apply** button.

After setup is complete, we recommend that you perform a calibration check. To do this:



1. Click the  button to the right of the preview for that PTZ camera.
2. Click different points in the camera's field of view. If the PTZ camera is positioned correctly, it needs no calibration.



Note

To delete calibration points, click the  button.

Setting telemetry mode for Tag & Track Pro

Rus

Tag & Track Pro can be used in three telemetry modes:

1. **Manual** – in this mode, a PTZ camera starts tracking an object only after the user selects the object in the viewing tile.
2. **Automatic** – in this mode, a PTZ camera automatically initiates tracking of all active objects. The PTZ camera focus on each object in sequence based on the specified dwell interval.
3. **User priority** – in this mode, automatic mode is used unless the user manually selects an object for tracking. As soon as the user selects an object for tracking, manual mode is activated. When an object is no longer selected or disappears from the PTZ field of view, automatic mode is reactivated.
4. **Manual PTZ control** - in this mode, the operator can take control of the PTZ cameras at any time. If the operator does not operate the rotary device, then the **Automatic** mode is used.

Select a mode in the **Priority** list (1). The dwell time is specified in seconds in the corresponding field (2).

Tag & Track	
1 Frequency	3
2 Priority	None

To save changes, click the **Apply** button.

Receiving Events from External Systems

Rus

Axxon Next synchronizes the information from cash registers with the video from cameras pointed at the register area allowing you to monitor the process. In addition, *Axxon Next* operators can receive events from any *Intellect* objects in real time and correlate the received information with the video. The event sources can be e.g.:

- Access control systems
- Security and fire alarm systems
- Perimeter security system

In *Axxon Next*, information from external sources is superimposed on video from a selected camera.

Event Source Object

Rus

Axxon Next uses the **Event Source** object to get external events. To create the object, make sure that:

1. Run IP Device Discovery Wizard (see [Adding and removing IP devices](#)).
2. In the form for manually adding an IP device, select **Event source** in the **Device type** drop-down list.

IP address	Port	Vendor
0.0.0.0	80	POSLegacy
Device type	Model	Firmware
Event source	POSLegacy Device	auto

3. Click the  button

The **Event Source** object is added to the system.



Note

Once created, the **Event Source** object is enabled by default. To disable, select **No** in the **Enable** field.

Configuring POS devices

Rus

Axxon Next can obtain data from POS devices and offers the following capabilities:

1. Show titles in live and recorded video.
2. Search titles in recorded video.

Connecting POS devices

Rus

To configure a POS device, do as follows:

1. Select the **Event Source** object.
2. Select a connection type of the POS device (1).

Other	
1	Transport Protocol TCP
2	Port 2555
	Connection speed 9600
3	Parity Control None
4	Terminal type XML PROTOCOL
	Font Microsoft Sans Serif; 12
	Color ☐ White
	Ignore Case Yes
	Repeats Processing None
5	DOS to WIN Conversion No
6	Initial UTF-8 Format No
7	Retalix POS-terminal No
	Sample duration 0
	Template file C:/Users/vadim.belyakov/Des

3. Specify the Server connection port (2).
4. To connect via RS-232, select a port, connection speed and parity check (3).
5. Select the type of your POS device (4).
6. Select **Yes** in the **Convert DOS to WIN** field if the data from the POS device is DOS-encoded (5).
7. If the data is UTF-8 encoded, select **Yes** in the **Original UTF-8 format** to enable correct display of captions (6).
8. If a Retalix terminal is used, select **Yes** in the corresponding field (7).
9. Click the **Apply** button.

You have successfully connected your POS device.

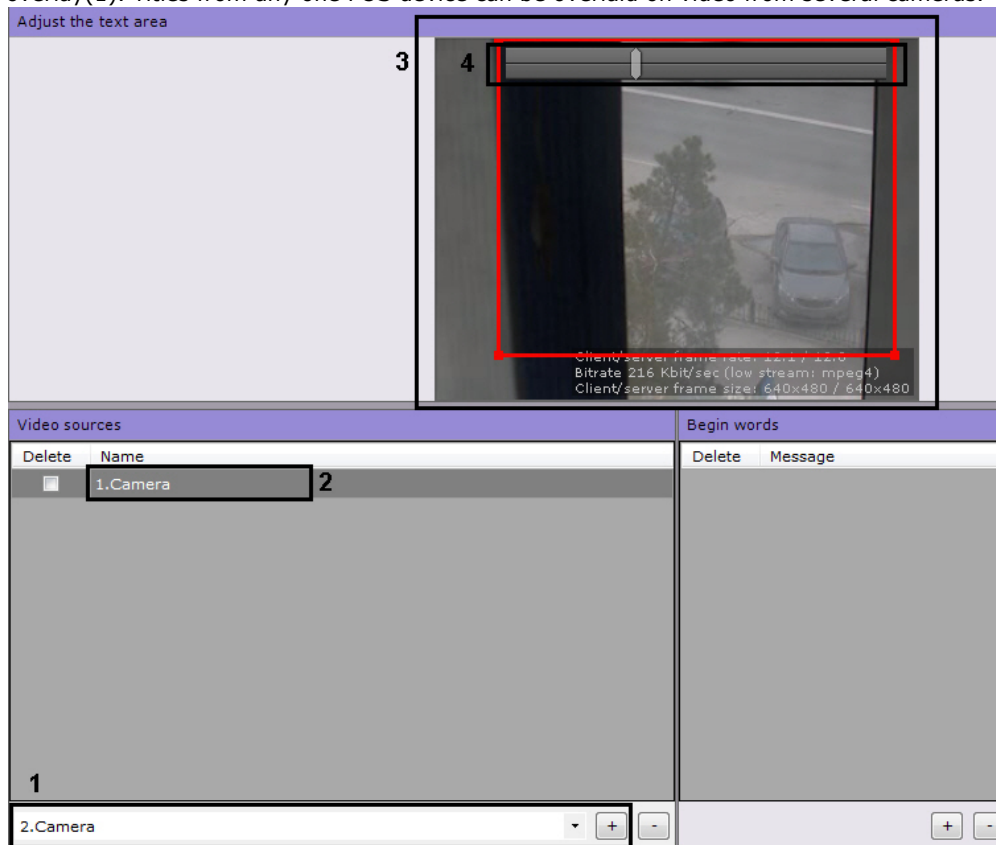
Configuring titles view

Rus

You can configure the font and where you want the titles displayed on screen. The titles are displayed in a rectangular area superimposed on video.

To configure the titles view, do as follows:

1. In the **Video sources** group, select a camera from the list and click the **+** button to add the camera for titles overlay(1). Titles from any one POS device can be overlaid on video from several cameras.



**Note**

To disable titles overlay for a camera, select the **Delete** checkbox and click the - button.

2. Select a camera in the **Video sources** group (2). The **Adjust the text area** group shows video from the selected camera and the adjustable titles area (3).
3. You can configure the titles area: Resize it by moving the anchor points. Move it with [Drag-and-drop](#).
4. Change transparency with the slider (4). Slide left for more transparency, slide right for less.
5. In the **Font** filed, click the button and specify font settings in a standard Windows box (1).

Other	
Transport Protocol	TCP
Port	2555
Connection speed	9600
Parity Control	None
Terminal type	XML PROTOCOL
1 Font	Courier New; 12
2 Color	☐ White
Ignore Case	Yes
Repeats Processing	None
DOS to WIN Conversion	No
Initial UTF-8 Format	No
Retalix POS-terminal	No
3 Display duration	0

6. Select font color (2).
7. In the **Duration** field, set the time in seconds for accumulated text rows on the screen (3). If you set **0**, captions will stay on the screen. New events replace old ones on a continuous basis.

**Note**

For shops where the checkout is never crowded, we recommend the captions display duration under 10 seconds.

8. Click the **Apply** button.

You have configured the titles view.

Configuring receipt beginning / end

Rus

The database stores only a full receipt. A receipt starts and ends with the configured phrases. If not configured, receipts contain 2000 lines.

**Attention!**

It is strongly recommended that you configure this setting for shops with low-intensity events at the checkout. Otherwise, the accumulation of 2000 lines can take a long time.

To configure the beginning and the end of a receipt, do as follows:

1. Populate the **Begin words** (1) group. To add words, click the + button. To remove words, select their **Delete** checkboxes and click the - button.

Begin words		End words	
Delete	Message	Delete	Message
☐	New word	☐	New word
☐	New word (1)	☐	New word (1)
☐	New word (2)	☐	New word (2)
☐	New word (3)	☐	New word (3)
☐	New word (4)	☐	New word (4)
☐	New word (5)	☐	New word (5)

1

2

+

-

2. Populate the **End words** (2) group in the same manner.



Note

You can add any number of delimiting words. Double click a word to edit it.

3. Delimiting words are case-sensitive by default. To ignore case, select **Yes** in the corresponding field (1).

1	tes/ignoreCase	Yes
2	Repeats Processing	None
	tes/dosToWin	None
	tes/isUtf	Ignore repeats
	Retalix POS-terminal	no

4. Select how to treat repetitions (2).
 - a. Select **Ignore repeats** to skip repeating beginning words before the end words show up. When the end words show up, the next receipt starts with the beginning words.
 - b. Select **None** to skip the end words and delimit receipts by the beginning words only.
5. Click the **Apply** button.

You have configured how receipts are delimited.

Configuring keywords

Rus

Keywords can be highlighted in the titles.

To configure keywords, do as follows:

1. Select any number of keywords in the **Word highlighting** group with the **+** button. Double click a keyword to edit it.

Word highlighting		1	2	3
Delete	Message	Color	Case sensitive	Whole
☐	New color word	Red	☒	☐
☐	New color word (1)	Lime	☐	☒
☐	New color word (2)	Yellow	☒	☐



Note

To remove words, select their **Delete** check boxes and click the **-** button.

2. You can also configure these parameters:
 - a. Highlighting color (1). In the appropriate column, click the button and choose a color.
 - b. Select the **Case sensitive** check if you want (2).
 - c. To highlight the whole line, select the **Whole** checkbox (3).
3. Click the **Apply** button.

You have configured highlighting for keywords.

Importing parcers

Rus

A special parsing algorithm processes the receipts and adds data to the receipts database. This is an option for advanced settings.

The choice of parcers depends on POS data structure:

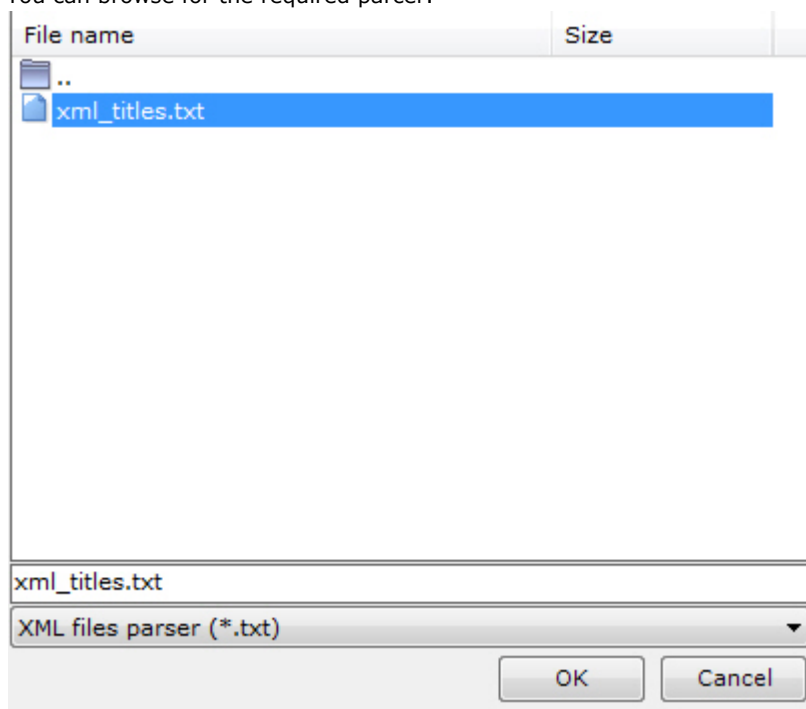
1. XML parser for .txt files
2. POS parser for .prl files

The XML parser specifies the rules for adding data to the receipts database if you have XML data from a POS terminal. The XML parser also validates the XML data against a schema.

The POS parser specifies the rules for adding data to the receipts database if the data is from a POS terminal is other than XML. The parser depends on the POS terminal data structure.

To import a parser, do as follows:

1. In the **templateFileName** field, click the  button.
You can browse for the required parser.



2. Select the type of the parser and the file.
3. Click the **Apply** button.

You have imported the parser.

Receiving Intellect Events

Rus

To be able to receive *Intellect* events, do as follows:

1. On the *Intellect* machine, configure a data transfer module (see [ACFA Intellect - Axxon Next Bridge Settings Guide](#)).
2. In *Axxon Next*, select the **Event Source** object.

Other		
1	Transport Protocol	TCP
2	Port	2555
	Connection speed	9600
	Parity Control	None
3	Terminal type	XML PROTOCOL
	Font	Microsoft Sans Serif; 12
	Color	☐ White
	Ignore Case	Yes
	Repeats Processing	None
	DOS to WIN Conversion	No
	Initial UTF-8 Format	No
	Retalix POS-terminal	No
	Sample duration	0
4	Template file	C:/Users/vadim.belyakov/Des

3. Select **TCP** in the Transport protocol field (**1**).
4. Specify the connection port to *Intellect* (**2**).
5. Select **XML PROTOCOL** in the Terminal type field (**3**).
6. Select a preconfigured parser (**4**, see [Configuring parser](#)).
7. Configure the data output similar to that of the POS device (see [Configuring titles view](#)).
8. Configure keywords, if necessary (see [Configuring keywords](#)).
9. Click the **Apply** button.

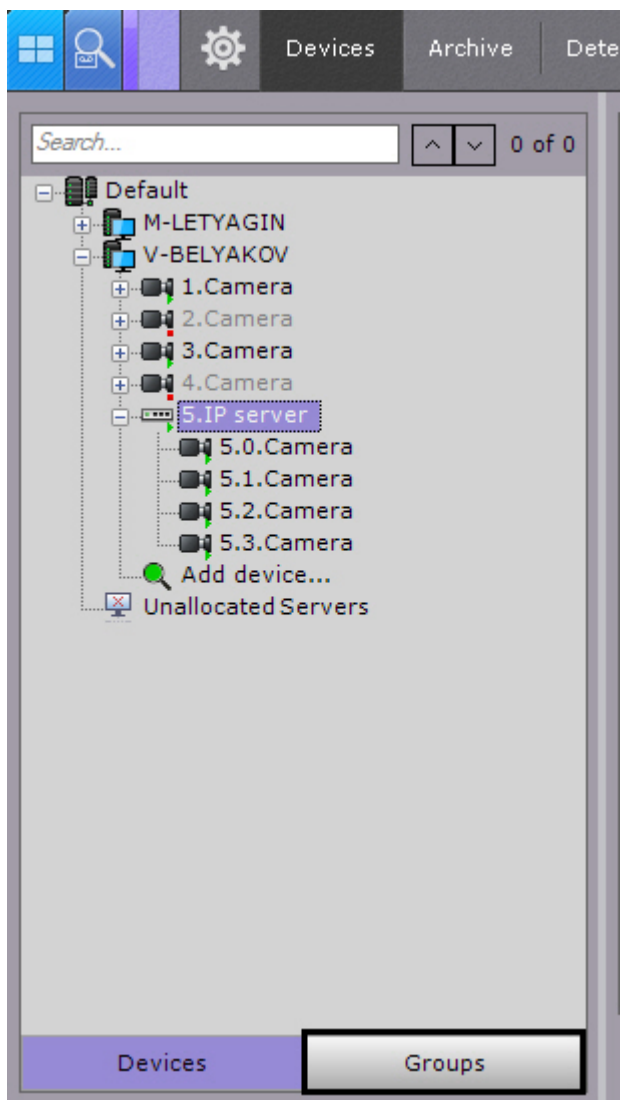
If the setup procedure was done correctly, the events from specified objects will be displayed in the viewing tile on *Intellect* in the same way as POS device captions do (see [Viewing titles from POS terminals](#)).

Configuring video camera groups

Rus

You can manually group video cameras to enable quicker selection of a specific video camera for display.

Video camera groups are configured through the interface using the **Devices** tab (under **Settings**). To configure device groups, you must have the appropriate permissions to configure devices.



Procedure for configuring video camera groups

Rus

To configure video camera groups, complete the following steps:

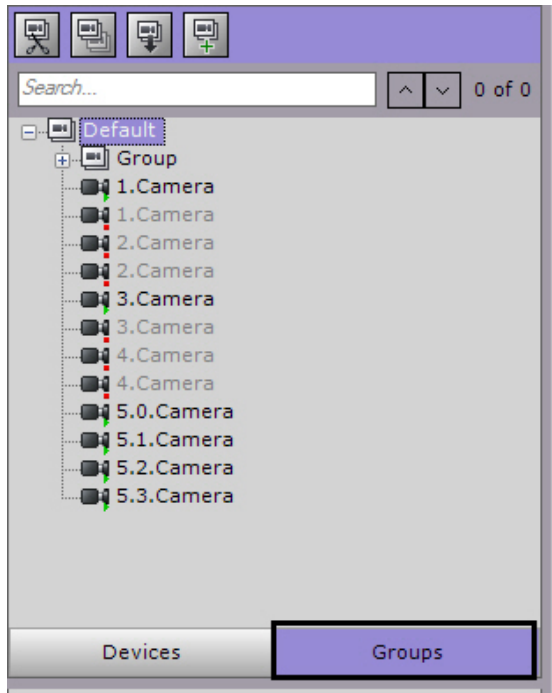
1. Create **Group** objects.
2. Add video cameras created in the system to **Group** objects.
3. Create a system of groups and subgroups.

Creating a Group object

Rus

To create a **Group** object, complete the following steps:

1. Go to the **Groups** tab.



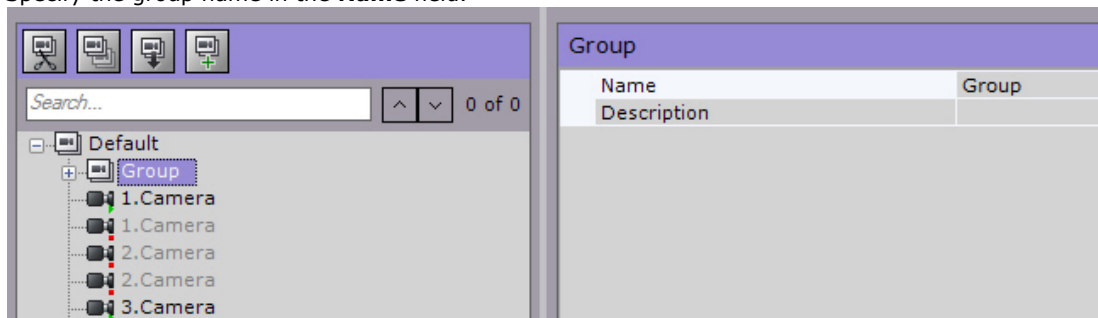
2. To create a **Group** object, click the button or select **Add group** in the context menu of the main group.



Note

By default, an object (whose name is the same as the Axxon-domain) is available, including all cameras that have been created in the system. This object is referred to here and elsewhere in the document as the "main group". This object cannot be deleted. Cameras in this group cannot be deleted.

3. Specify the group name in the **Name** field.



4. Enter a description of the group in the appropriate field.
5. Click the **Apply** button.

The **Group** object has now been created.

Adding video cameras created in the system to Group objects

Rus

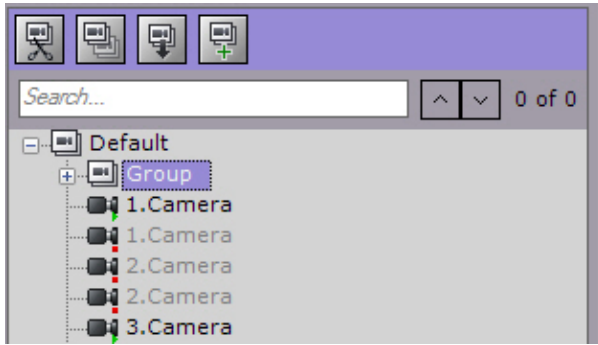
To add video cameras to groups, complete the following steps:



Note

Video cameras are added to groups via management operations (see the section titled [Managing Group and Video camera objects](#)). The standard method for adding video cameras to groups is presented below

1. In the main group, select a video camera to add to the selected group.



2. Click the  button or select **Copy** from the context menu of the selected video camera.
3. Select the **Group** object to which you need to add the video camera.
4. Click the  button or select **Paste** from the context menu of the selected group.
5. Fill the groups with the necessary video cameras (see steps 1-4).

Note
One video camera can be assigned to multiple groups

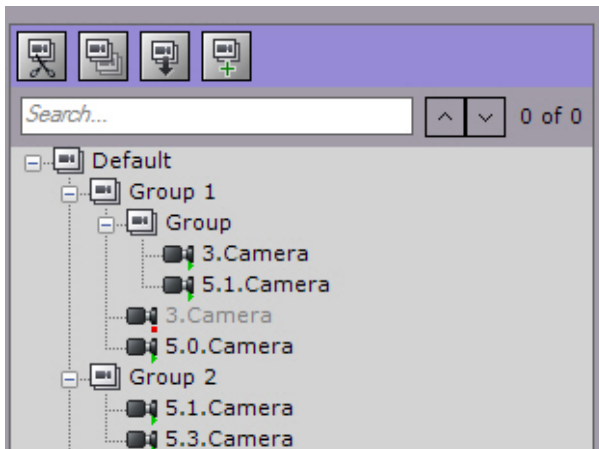
6. Click the **Apply** button.

Adding video cameras to groups is now complete.

Creating a system of groups and subgroups

Rus

Groups can be included within other groups, forming a system of groups and subgroups.



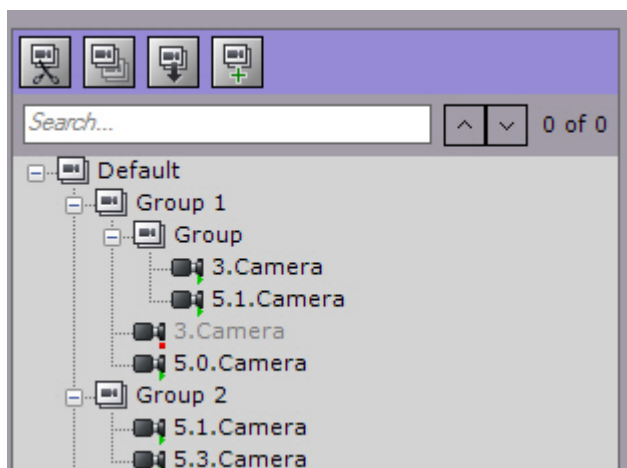
A system of groups and subgroups can be created via group management operations and video camera management operations (see the section titled [Managing Group and Video camera objects](#)).

Group objects can be moved or copied to other **Group** objects or to the main group.

Managing Group and Video camera objects

Rus

The main operations used to manage groups and video cameras are presented in table.



Action	Execution
Cut/Paste Note You can cut a Video camera object only from a Group object. You cannot cut a Camera object from the main group. It is also impossible to cut the main group.	Using your mouse: 1. Left-click and hold the Video camera/Group object. 2. Drag the object to the Group object (or to the main group if you are dragging a Group object). 3. Release the left mouse button. Using the toolbar: 1. Left-click the Video camera/Group object that you want to move. 2. On the toolbar, click . 3. Left-click the Group object (or the main group, if one of the Group objects is being moved) to which you want to move the Video camera/Group object.. 4. On the toolbar, click . Using the keyboard: 1. Left-click the Video camera/Group object that you want to move. 2. Press the key combination Ctrl+X. 3. Left-click the Group object (or the main group, if one of the Group objects is being moved) to which you want to move the Video camera/Group object.. 4. Press the key combination Ctrl+V.
Copy/Paste	Using your mouse: 1. Left-click and hold the Video camera/Group object while simultaneously holding down the Ctrl key. 2. Drag the selected object to the Group object (or to the main group, if the Group object is being copied). 3. Release the left mouse button. Using the toolbar: 1. Left-click the Video camera/Group object that you want to copy. 2. On the toolbar, click . 3. Left-click the Group object (or the main group, if one of the Group objects is being copied) to which you want to copy the Video camera/Group object.. 4. On the toolbar, click .

	Using the keyboard: 1. Left-click the Video camera/Group object that you want to copy. 2. Press the key combination Ctrl+C. 3. Left-click the Group object (or the main group, if one of the Group objects is being copied) to which you want to copy the Video camera/Group object.. 4. Press the key combination Ctrl+V.
Deletion <i>Note</i> You can delete a Video camera object only from a Group object. You cannot delete a Camera object from the main group.	1. Left-click the Video camera/Group object that you want to delete. . 2. Press the Delete key.

Autocopy data from local to centralized servers

Rus

Axxon Next VMS supports automatic copying of the archive (video and audio) and camera events from local servers that are not in the same Axxon domain with the centralized server.

- Note***
 This is useful, for example, in the following case:

 - The video from a bus on the route network is written to a temporary archive on the local server specific for each bus;
 - When the bus arrives at the depot, the archive and camera events are automatically transferred to the centralized server.

To use this option, configure the centralized server as follows:

1. Manually add the IP device to the configuration by selecting **Interop** in the **Vendor** field (see [Adding and removing IP devices](#)).

IP address	Port	Vendor
0.0.0.0	3600	Interop
Device type	Model	
IP device	Interop Device	

2. Enable [The Embedded Storage object](#).
3. Specify the address of the device in the following format (1): <IP-address of local server>:<name of local server in Axxon domain>:<ID of camera on server>.

8.Camera	
Object identification	
Enable	Yes
Name	Camera
Object features	
1 Address	10.0.11.64:P-SIRIUSOVA:16
2 Port	90
MAC address	
Manufacturer	Interop
Model	Interop Device
Driver version	3.0.0
Current firmware	
Synchronous correction of time stamp	No
Video channel No.	0
Authentication	
Default	No
3 Login	root
Password	••••
Video buffering	
Buffer size	0
Video stream settings	
4 Live video mode	Yes
Panomorph	
Activate	No
Camera position	Wall
Lens type	A0**V
View type	PTZ
Fit to frame	No
Other	
5 Maximal speed	x32

4. Specify the port of the local web-server (**2**, see [Configuring the web server](#)).
5. Specify the user name and password (**3**). The user must have permissions to access the local server.
6. If you want to display live video from the local server when it is available, select Yes in the appropriate field (**4**).
7. Specify the maximum playback speed (**5**).
8. Click the **Apply** button.
9. Repeat the above steps for all the required cameras from all local servers.
10. Configure automatic replication from the embedded storages of the added devices to the centralized server archive (see [Configuring data replication](#)).

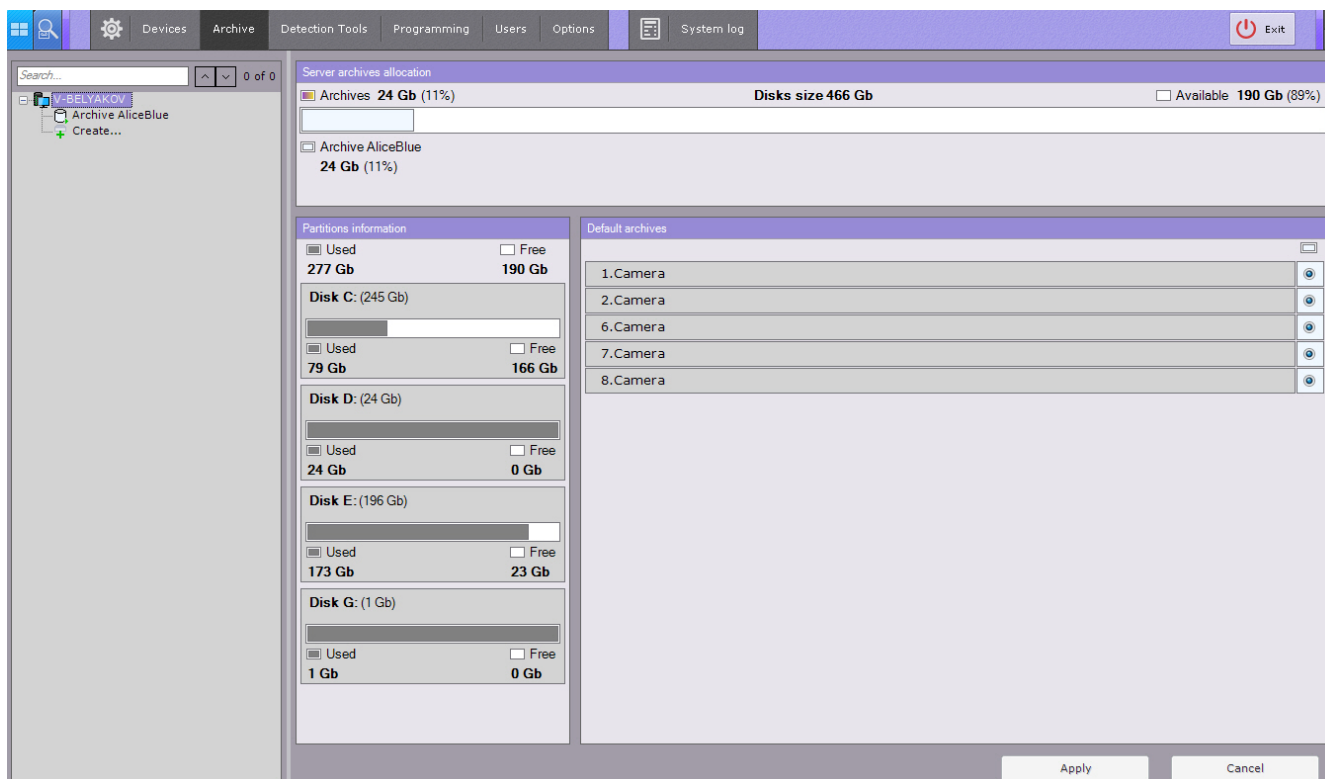
You have successfully set up automatic data copying from the local servers to the centralized server.

Configuring Archives

General information of configuring archives

Rus

You can configure archives using the interface in the **Archive** tab (under **Settings**). To create archives you must have the appropriate permissions.



On the base of one server you can create an unlimited number of archives.

An archive can be placed on local disks or on network disks.

To compare these types of archives, review the following table.

Local archive	Network archive
An archive can be distributed on several volumes of the server	Archive can be stored on multiple network storage devices.
On one logical disk for one archive you can create only one volume, which occupies either a file of a set size or the entire partition (logical disk).	Archive can be stored only as a file of a specified size.
An archive can contain multiple volumes, which may be in the form of a file or a partition.	

Data can be copied between archives.

You can configure archives as follows:

1. Create archives.
2. Configure recording of the video stream from video cameras to the archives.
3. Configure data replication, if necessary.

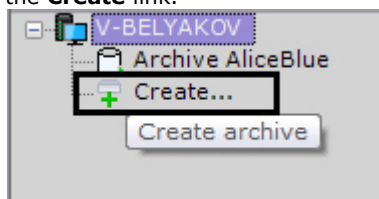
Creating archives

Creating a local archive

Rus

To create a local archive:

1. In the branch of the **Server** object corresponding to the computer on which you need to organize an archive, click the **Create** link.

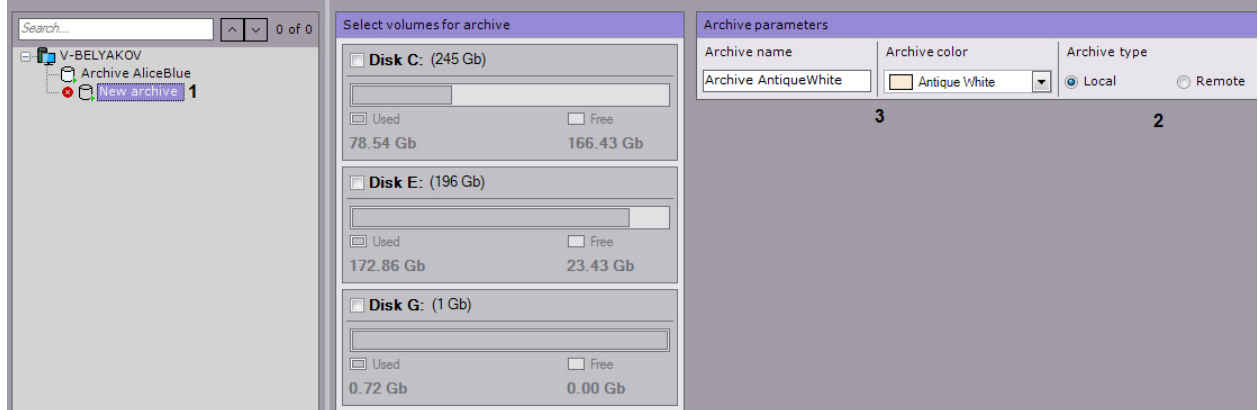


Note

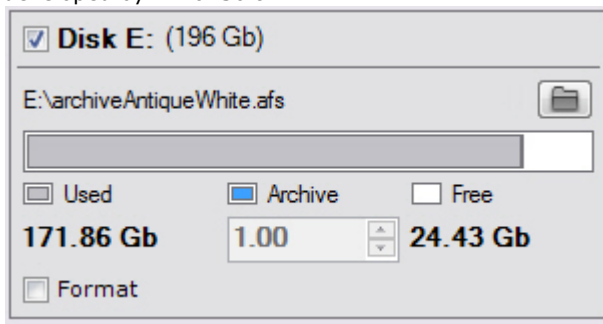
You can also create an archive by selecting the matching command in the context menu of the **Server** obj

ect (the menu can be brought up by right-clicking the name of the Server)

2. Highlight the **New archive** link which appears (1).



3. Set the archive type to **Local**.
4. Specify the name and color of the archive.
5. Configure archive volumes.
 - a. For the disks that you want to include in the archive, select the corresponding check boxes.
 - b. If a disk does not have a file system, the disk can contain an archive volume in the form of a partition. In this case, select the **Formatting** check box. This will format the disk using the **SolidStore** file system developed by AxxonSoft.



Note

The file system on the disk can be erased by using the standard Disk Management utility in Windows. Instructions for starting and using the utility are given on the [Microsoft website](#).

Deleting the file system on the disk in the disk management utility consists of the following:

- i. Delete the volume.
- ii. Create a new volume in the resulting unformatted area.
- iii. Assign a letter to the volume, but do not format it.

The system disk cannot be completely allocated for an archive



Important!

When selecting the disk on which to place the archive volume, take its size into account. If the archive is completely filled, the oldest data will be overwritten with new data.



Note

Note that you cannot create an archive volume as a partition on a removable disk, since its partition cannot be erased through the Disk Management utility

- c. On disks that have a file system, you can store an archive volume in the form of a file.



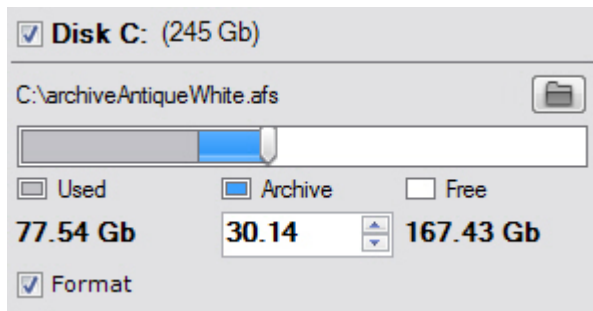
Important!

Creating an archive volume as a file on a fragmented partition can increase the CPU burden.

It is recommended to place the archive on an entire logical disk.

Storing an archive volume as a file can be useful for tutorial purposes, but is not recommended for production environments.

For this archive volume, you must enter a file size (in gigabytes) or set it by moving the slider. The size of the archive file must be more than 1 GB.



Important!

If the archive is completely filled, the oldest data will be overwritten with new data.

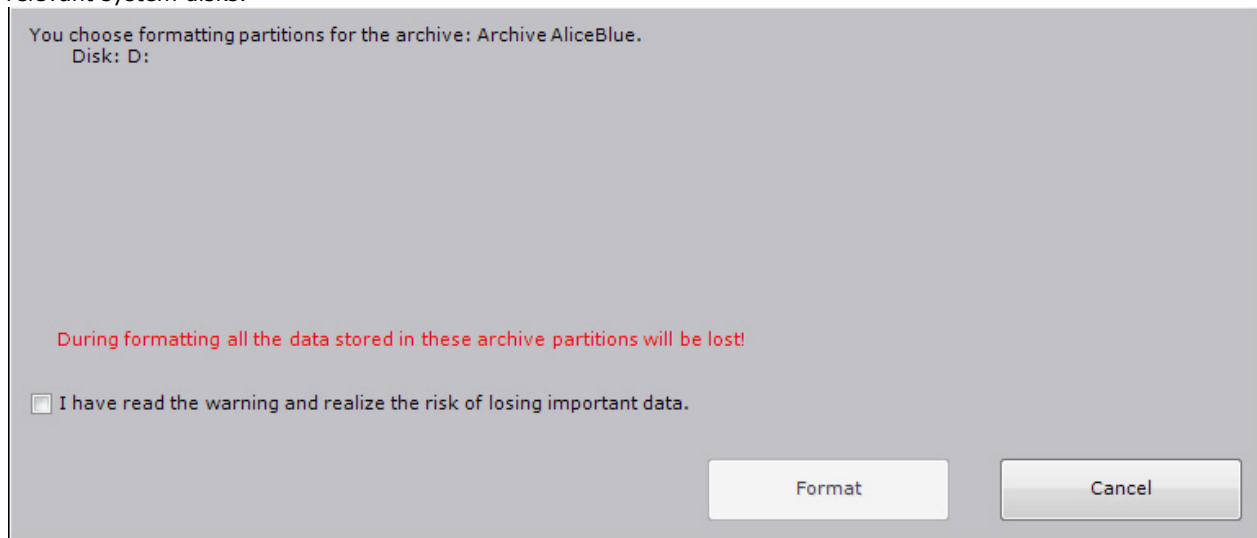


Note

By default, the file name will be the same as the name of the archive, and the file will be located at the root directory of the disk. To change the name and/or location of the file, click the  button

- Click the **Apply** button.

If volumes are configured in the form of partitions, a dialog box is displayed, warning about formatting of the relevant system disks.



- Read through the list of partitions that will be formatted. If the list is correct, select **I have read the warning and realize the risk of losing important data**, then click **Format**. Otherwise, click **Cancel** to return to the archive settings.

Creation of the local archive is now complete.

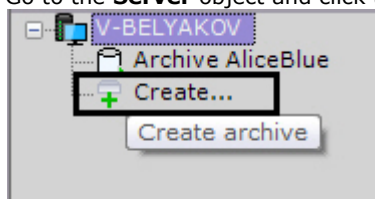
Creating a network archive

Rus

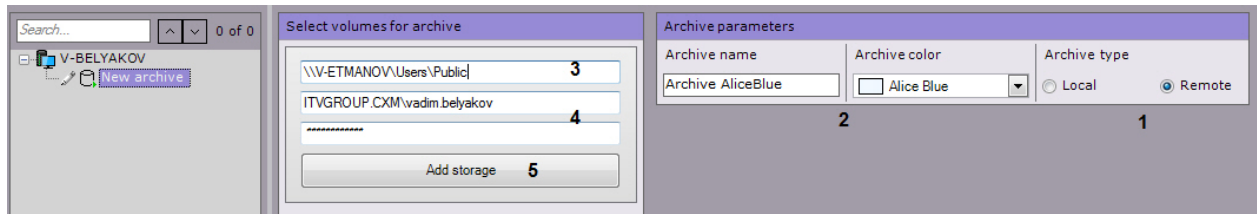
Network archives are files on NAS (network attached storage).

To create a network archive, do as follows:

- Go to the **Server** object and click the **Create** button.



- Set the archive type to **Remote (1)**.



3. Specify the name and color of the archive (2).
4. Enter a path to the archive network destination (3).
5. Enter the user name and password (4). The user must have permissions to access the NAS.



Attention!

The login should be specified with a prefix of the domain (domainname\username) or name of the computer (computername\username) where this account is located.

6. Click the **Add storage** button (5).
This will connect you to the NAS. When you are connected, you can see a dialog box for setting up your archive.

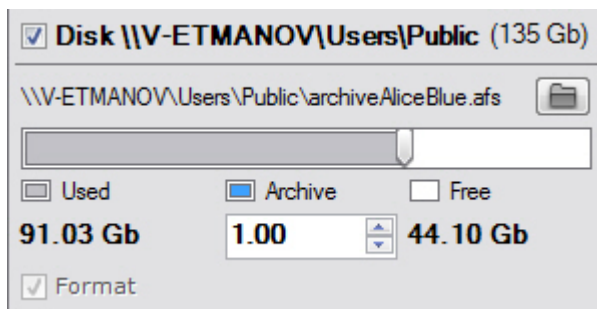


Attention!

Only one network user can connect to NAS at a time. This is a limitation of OS *Windows*.

If this error occurs, disconnect the previous user in one of the following ways:

1. Run the command `net use /delete`.
2. Use **PsExec** to open the command prompt as the LocalSystem user (`psexec.exe -i -s cmd.exe`) and execute the same command.



7. For this archive volume, you must enter a file size (in gigabytes) or set it by moving the slider. The size of the archive file must be more than 1 GB.

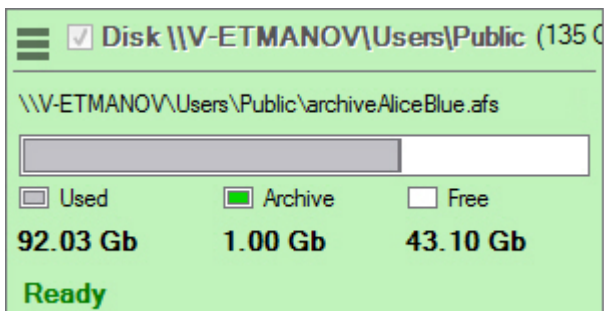


Note

To change the archive folder, click the  button and browse to a desired location

8. If you want, you can add other NAS for your archive and set them up.
9. Click the **Apply** button.

You have created your network archive. After creating the archive, the NAS status is displayed.



Creating an archive based on existing archive volumes

Rus

If an archive is created from an existing volume, it will be possible to extract saved video from the file only if the following

conditions are met:

- The name of the computer on which the recording was written to the existing archive volume is the same as the name of the current computer.
- The IDs of the video cameras from which the recordings were written to the existing archive volume are the same as the IDs of the current video cameras.

To create an archive based on an existing volume:

1. Create an archive (see [Creating a local archive](#)).
2. Select disks or network archives that contain existing volumes (by selecting check boxes, **1**).

The screenshot shows a software interface for creating an archive. It features two main sections for disk selection. The first section, labeled 'Disk E: (196 Gb) 1', has a checked checkbox and shows a file path 'E:\archive\AntiqueWhite.afs 2' with a folder icon. Below this is a progress bar and three radio buttons: 'Used' (unchecked), 'Archive' (checked), and 'Free' (unchecked). The 'Used' value is 171.86 Gb, the 'Archive' value is 1.00, and the 'Free' value is 24.43 Gb. There is also a 'Format 3' checkbox. The second section, labeled 'Disk D: (24 Gb)', also has a checked checkbox and shows a 'Partition' bar. It has the same three radio buttons, with 'Used' at 0.00 Gb, 'Archive' at 24.41 Gb, and 'Free' at 24.41 Gb. A 'Format' checkbox is also present.



Note

A new archive can contain volumes that previously belonged to different archives

3. If the volume is in file form, select the archive file to which recording was performed (**2**).
4. Clear the **Formatting** check box (**3**).



Note

If the **Formatting** check box is selected, the archive entries that are currently stored on the volume will be erased.

5. If necessary, create new archive volumes on free partitions.
6. Click the **Apply** button.

The archive is created and, if all requirements are met, the archive recordings are available.

Binding a camera to an archive

Rus

Binding a camera to an archive determines the archive to which a video stream will be recorded and how.

You can bind a single camera to an archive or bind a group of cameras by using the same settings.

To bind a camera to an archive:

1. Select the new archive.
2. Select the check box that corresponds to the camera for which you want to configure archive recording (**1**).

The screenshot shows a configuration window for '1.Camera 1'. It includes a small video preview window on the left. To the right of the preview are several settings: a checked checkbox, a 'Constant recording' dropdown menu set to 'No 2', a 'Prerecord, sec' input field set to '0 3', a 'Specified fps rec' dropdown menu set to 'No 4', and a 'Camera stream' dropdown menu set to 'High-quality video stream 5'.

3. Configure settings for archive recording.
 - a. In the **Constant recording** list, select the archive recording mode (**2**).

If **No** is selected, the video stream will be recorded to the archive only when when an operator manually initiates an alarm or an automatic rule is initiated.

If **Always** is selected, video will be recorded to the archive non-stop.

If a time schedule is selected (see [Configuring schedules](#)), video will be recorded non-stop to the archive during the selected time period. Recording to the archive can also be initiated by the operator or an automatic rule.

- b. In the **Pre-alarm recording time** field (3), enter the buffering time of the video stream from the camera in seconds. This value should be in the range [0, 120].



Note

Pre-alarm recording is the period of pre-event recording that will be added to the beginning of an alarm event recording

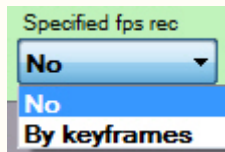
- c. To reduce the frame rate of the video that is written to the archive, select the maximum frame rate from the **Maximum fps** list or manually enter a value in the field. Otherwise, set this value to **No** (4). If the frame rate of the video stream coming in from a video camera is less than the indicated value, the recording will be made at the original and not the maximum rate.



Attention!

If you prune / downsample MPEG4 or H.264 video (interframe compression codes), only the keyframes are retained. This leads to a significant drop of fps (down to 2-3).

In such cases, we recommended that you use MJPEG or Motion Wavelet codes.



- d. Select a stream for archive recording (5).



Note

This setting is relevant for cameras that support multistreaming.

4. Click the **Apply** button.

Binding of the camera to the archive is now complete.

To bind multiple cameras:

1. Select the check boxes next to the cameras for which you want to configure archive recording. To select all cameras, select the **Select all** check box.

☒ Select all	Constant recording	Prerecord, sec	Specified fps rec	Camera stream
	Always	0	No	High-quality stream

2. Configure archive recording settings for the group of cameras (marked with yellow). The indicated settings for archive recording are applied to the selected cameras.
3. Perform custom configuration of camera recording settings, if necessary.
4. Click the **Apply** button.

The camera is now bound to the archive.

Setting the default archive

Rus

The default archive of a video camera is the archive to which images from a given video camera are recorded during user-initiated alarms. For each video camera one and only one default archive must be set. The first archive to which recording of a video stream from a video camera was configured automatically becomes the default archive (see [Binding a camera to an archive](#)).

To switch the default archive for a camera:

1. Select a **Server** object.
The **Default archives** form displays a list of cameras and archives, which are marked with the corresponding

colors. If archive recording to at least one archive is enabled for a particular camera, the camera is visually marked as related to its default archive.

Default archives		
1.Camera		
2.Camera		
6.Camera		
7.Camera		
8.Camera		

- To change the default archive for a camera, move the designator to the relevant archive.
- Click the **Apply** button.

Configuration of the default camera archive is now complete.

Configuring data replication

Rus

Replication of archives refers to constant, block-by-block copying of fixed-size information (video, audio, metadata) from one archive to another archive on the same Axxon-domain.



Attention!

Replication is performed only to the end of the archive. It is not possible to overwrite existing data in the archive.

To transfer the old data from **Archive 1** to **Archive 2** and continue writing new data to Archive 2, do as follows:

- Replicate the data from **Archive 1** to **Archive 2**, while **Archive 2** cannot be written to.
- Configure the camera to write to **Archive 2**.



Note

The primary purpose of data replication is to ensure long-term storage and access to multimedia recordings on remote storage devices.

Any archive can be the source or recipient of replication. Moreover, every archive can simultaneously be both the sender and recipient of data.



Note

Events indicating the start and successful completion of data replication are generated in the system (see [Event Control](#)). These events can be used as macro triggers

To configure data replication:

- In the list of archives on the Axxon-domain, select the archive to which you want to copy data from other archives.
- Select one or more archives from which you want to copy data (**1**). You can also replicate video from on-board camera storage (**4**, see [The Embedded Storage object](#))



1 ☒ **Archiv AliceBlue (V-BELYAKOV)**

Replication period
On demand 3

Cameras for replication 2
☒ 1.Camera ☒ 3.Camera
☒ 2.Camera



4 ☒ **4.0.Embedded storage (4.Camera) (V-BELYAKOV)**

Replication period
Always

Cameras for replication
☐ 4.Camera



Note

Currently, *Axxon Next* supports only continuous replication (the **Replication period** field).

- For each archive, select the cameras from which data will be copied to the source archive (**2**).

**Note**

Data for a particular camera can be copied to the source archive only from one archive. When you select a camera for replication from an archive, the camera becomes unavailable for replication from any other archive.

**Note**

You cannot select cameras if they are already being recorded to the source archive.

4. Select replication period (**3**):
 - a. **Always** - replication is performed continuously.
 - b. **On demand** - replication is performed manually.

**Attention!**

You can use macros to replicate on schedule (see [Start replication](#)).

5. Click the **Apply** button.

You have now configured data replication. If you have chosen the **Always** replication period, data replication starts immediately after changes are applied.

Configuring access restrictions to older footage

Rus

You can make only newest recordings in your available for the VMS users.

To do this, select the history (in days) in the appropriate field (**1**) and click **Apply**.

Archive parameters		1	2
Archive name	Archive size	Depth limit, days	Filled archive volume
Archive ForestGreen	24.41 Gb	2	0% : 0.09 Gb : 0 hour(s)

**Note**

If the history value is set at **0**, all recorded video is available for playback.

You can view video recordings that are not older than the history setting. Recordings that exceed the specified archive capacity will only be hidden; they will not be deleted.

**Note**

In the **Used archive volume in percent** you can see used space in percent (**2**).

Editing archives

Rus

You can edit the archives that have been created in the system. You can perform the following actions on them:

1. Rename an archive (see [Creating archives](#)).
2. Add new volumes. Addition of a new volume also occurs during archive creation (see [Creating archives](#)).
3. [Deleting and formatting archive volumes](#).
4. Change settings for archive recording (see [Binding a camera to an archive](#)).
5. Change replication settings (see [Configuring data replication](#)).

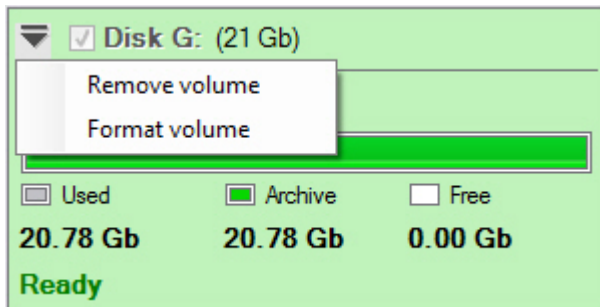
Deleting and formatting archive volumes

Rus

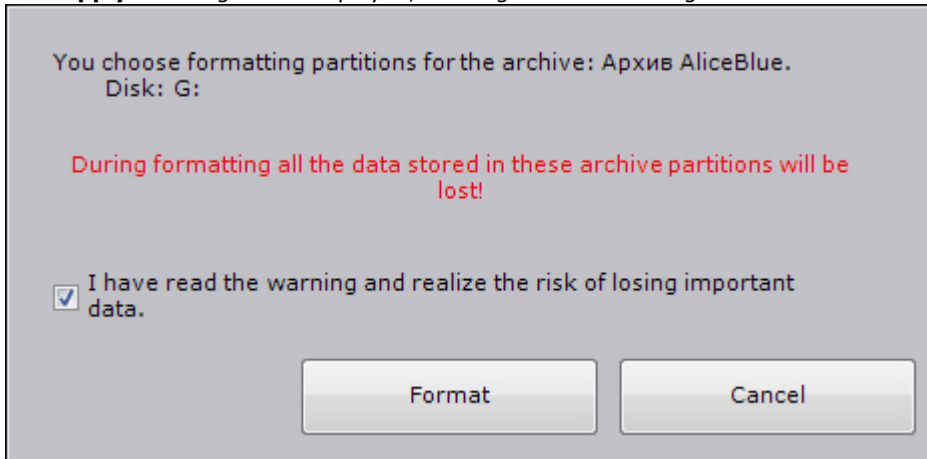
You can delete and format archive volumes.

To format the archive volume, do as follows:

1. Click the  button.
2. Select **Format volume**.



3. Click **Apply**. A dialog box is displayed, warning about formatting of the selected volumes.



4. select the checkbox and click **Format**.

The volume formatting is complete.

To delete a volume, do as follows:

1. Click the  button.
2. Select **Delete volume**.



Note

If there is only one volume in the archive, you cannot delete it

3. Click **Apply**.

Deleting archives

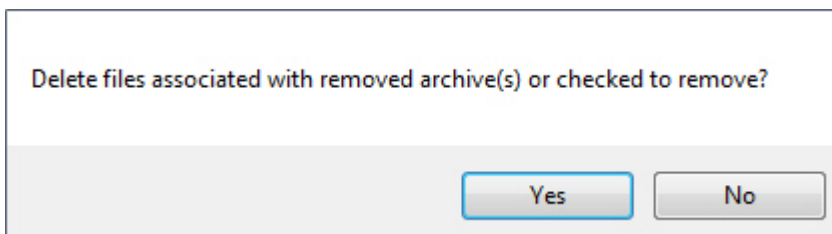
Rus

You can delete an archive from the system.

To delete an archive from the system, you must perform the following steps:

1. Select the archive to be deleted in the archive list.
2. Click the **Remove** button.
3. Click the **Apply** button.

During deletion of an archive that was stored at least partially as a file, you will be asked if you want to delete files that are related to the archive.



Attention!

If you delete the archive files, all archive recordings in the files will be lost.

If you do not delete the archive files, you can use them to re-create the archive (see [Creating an archive based on existing archive volumes](#)). You can also use a partition to re-create an archive

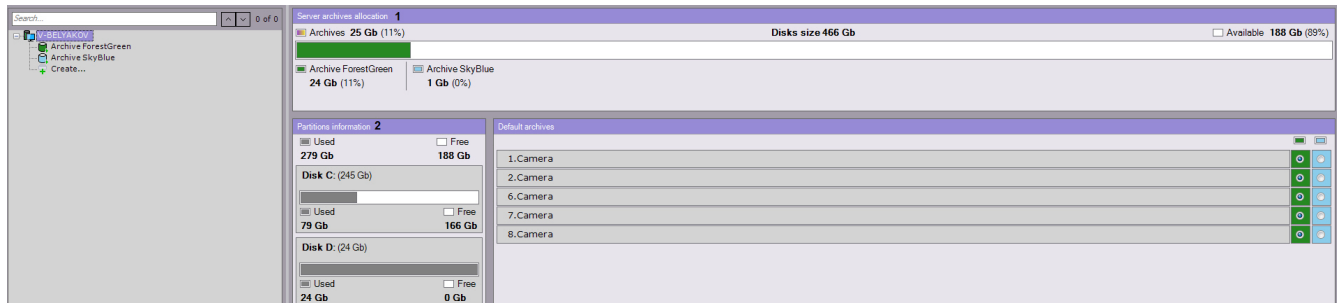
Deleting an archive from the system is now complete.

View information about the size of archives and Server disk space.

Rus

Selecting a **Server** object displays statistical information about the available Server disks and created archives.

Figure 1 shows the overall balance of free disk space between the Server archives.



In addition, a list of disks is displayed, containing information about the total disk size, space used, and total free space (2).

Configuring detection tools

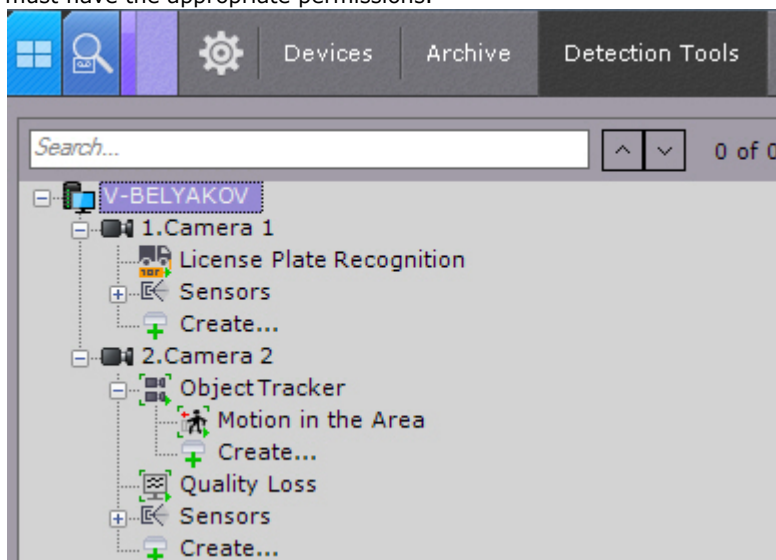
General Information on Configuring Detection

Rus

In the Axxon Next software package, several types of detection tools process incoming data:

1. situation analysis detection tools;
2. facial recognition tools;
3. automatic number plate recognition tool;
4. basic detection tools:
 - a. Video analytics;
 - b. Audio analytics;
5. Detection tools embedded in a video camera.

Detection setup takes place using the interface in the **Detection Tools tab** (under **Settings**). For detection setup you must have the appropriate permissions.



Attention!

For a video camera and its corresponding branch to appear in the Detection Tools list, the camera must be enabled in Axxon Next

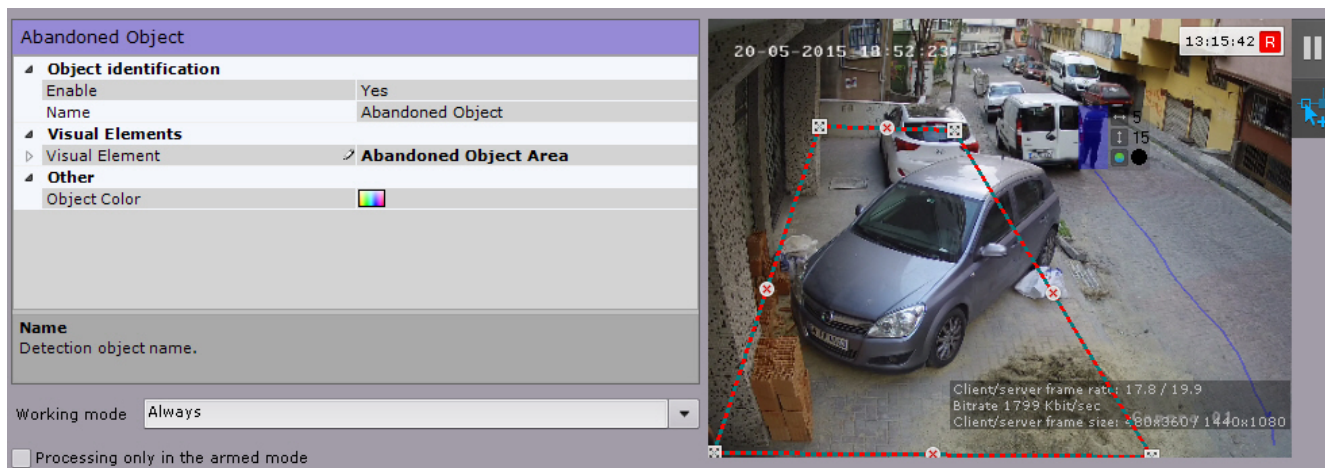


Note

By default, camera sensors that can be activated through an automatic rule are displayed on the list of detection

tools.

In the viewing tile, on the right side of the detection configuration window, you can set visual parameters.



Note

The indicator in the upper right corner displays the current time and recording status (see [Time Display](#)).

The default system setting to a detection event is not to trigger any response actions. To set system response, create an automatic rule or a macro (see [Configuring Macros](#), [Automatic Rules](#)).

Requirements for the cameras

Video suitability for detection tools

Rus

For video analytics to work correctly, the following requirements must be met:

1. Camera requirements:
 - a. Resolution:
 - i. Min. 640x480 pixels for [Scene Analytics](#);
 - ii. Min. 320x240 pixels for other detection tools
 - b. Frames per second:
 - i. Min. 6 fps for [Scene Analytics](#);
 - ii. Min. 1 fps for other detection tools.
 - c. Color: video analytics work with both black-and-white and color images.
 - d. Camera shaking must not cause image shifting of more than 1% of the frame size.
2. Lighting requirements:
 - a. Moderate lighting. Lighting that is too little (night) or too much (bright sunlight) may impact the quality of video analytics.
 - b. No major fluctuations in lighting levels.
3. Scene and camera angle requirements:
 - a. Moving objects must be visually separable from each other in the video.
 - b. The background must be primarily static and not undergo sudden changes.
 - c. Minimal obscuration of moving objects by static objects (columns, trees, etc.).
 - d. Reflective surfaces and harsh shadows from moving objects can affect the quality of analytics.
 - e. Long single-color objects may not be tracked properly.
4. Object requirements:
 - a. There is no noise on the video image and there are no artifacts caused by the compression algorithm.
 - b. The width and height of the objects in the image must be not less than 1% of the frame size (if resolution is over 1920 pixels) or 15 pixels for lower resolution.
 - c. The width and height of the objects in the image must not exceed 75% of the frame size.
 - d. The speed of objects in the frame must be at least 1 pixel per second.
 - e. In order to detect the object it is to be visible at not less than 8 frames.
 - f. Within two adjacent frames the object cannot move in the movement direction for the distance that is longer than its size. This condition is essential for correct calculation of the object's trajectory (track).

Installing cameras for proper ANPR

Rus

ANPR works properly if the following camera installation requirements are met (for a list of supported countries, visit [the web-site](#) of the recognition module's manufacturer):

- character height is at least 15px, stroke width is at least 2px;
- minimum allowable contrast for uniformly contaminated license plates should be at least 10% (contrasting visibility

- of characters relative to the background is 25 on a 256-point scale);
- maximum allowable non-uniform contamination is no more than 12% (the ratio of the contaminated area to the total area of the license plate);
- the geometric proportions of the image shall not deviate by more than 10% from the real geometric proportions of the license plate.

The camera setup is described in detail in the recognition module [manufacturer's documentation](#).



Attention!

the maximum speed of the vehicle shall not exceed 120 km/h.



Note

When using the detector with Intellivision technology, take into account the requirements from the [manufacturer's specification](#).

A list of supported countries is also provided in this document.

Installing cameras for proper detection of faces

Rus

Face detection works properly if cameras are installed and set up as follows:

1. The maximum angle of incidence should not exceed +/- 15 ° off the ground level.
2. Distance between pupils on the received photos of face must be not less than 50 pixels.
3. Position the camera to minimize the chances of overlapping faces in FoV.
4. The faces in FoV must be evenly lit. No directed side illumination.
5. Face shots from cameras should be clear. No image blur caused by human motion.
6. Contrast range of a human face on camera shots must be at least 64 shades of gray. No insufficient or excessive lighting.



Note

You should be able to adjust the distance between the camera and the person's face by selecting lenses with a different focal length.

Video requirements for abandoned object detection tool operation

Rus

Make sure the following requirements for abandoned object detection are met:

1. Camera requirements:
 - a. Resolution must be not less than 640x480 pixels.
 - b. Color: analytics works both with color and monochromatic images.
 - c. It is not allowed to the image shift be more than 1% from the frame size due to camera shake.
2. Lighting requirements:
 - a. Moderate lighting. The quality of analytics performance can be lower in case of low lighting (night) or over lighting (overexposure).
 - b. There must be no dramatic changes in lighting.
3. Scene and camera angle requirements:
 - a. Background is mostly static and is not changed.
 - b. Incorrect analytics performance can be caused by reflective surfaces.
 - c. Abandoned objects are hidden by moving objects not longer than 10% of the time.
4. Object images requirements:
 - a. An abandoned object must be visible on the image.
 - b. The digital noise and compression-related artifacts are minimal.
 - c. The width and height of the objects in the image must be not less than 1% of the frame size (if resolution is over 1920 pixels) or 15 pixels for lower resolution.
 - d. The width and height of the objects in the image must not exceed 25% of the frame size.

If these conditions are in place, the Abandoned Object detection tool is guaranteed to:

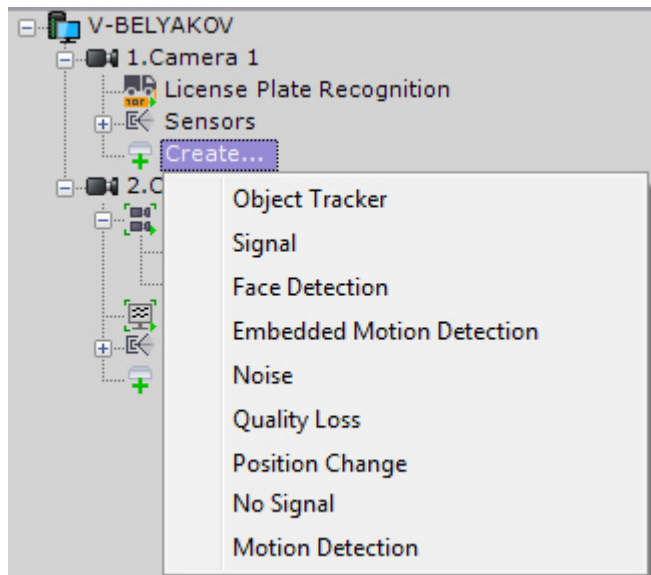
- Detect 92 items out of 100
- Keep false positives to 20 out of 100.

Create Detection Tools

Rus

To create a new detection tool for a camera:

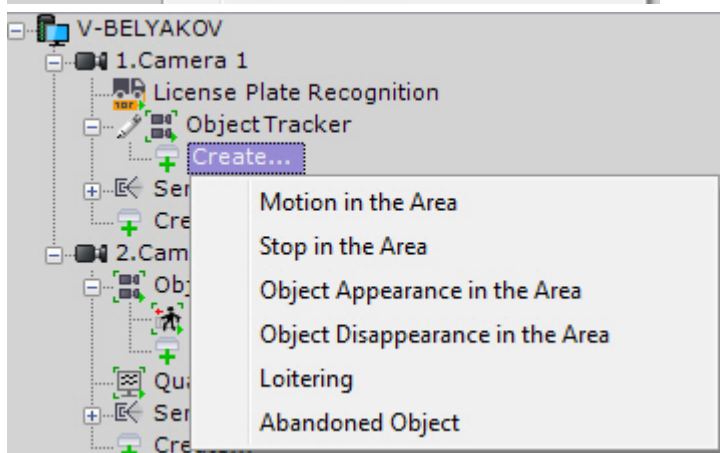
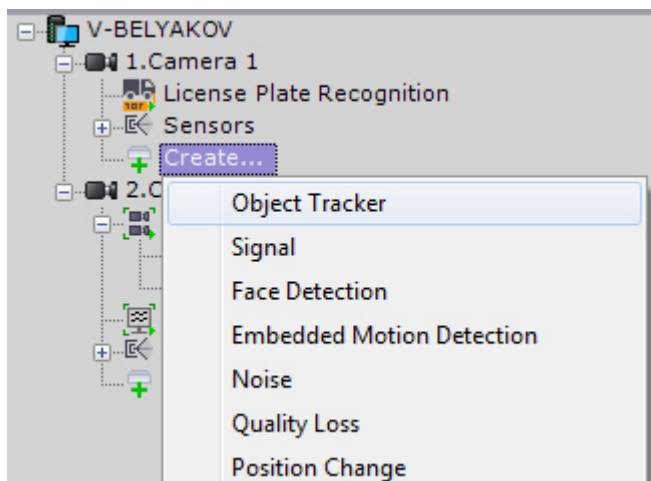
1. Click **Create** link in the camera object tree.
All detection tools available are shown.



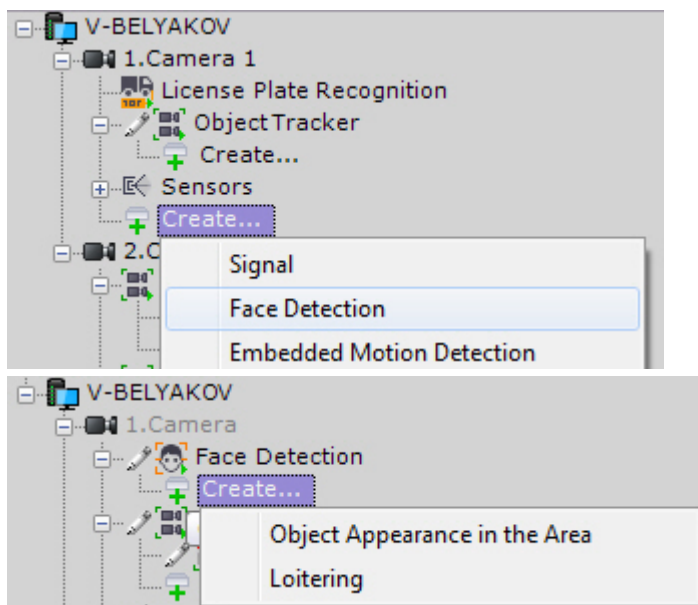
2. Select the one you need.
3. Click the **Apply** button.

Creation of the detection tool is now complete.

To create a detection tool for situation analysis, you must first create the corresponding object. It will be used as a basis for all situation analysis tools.

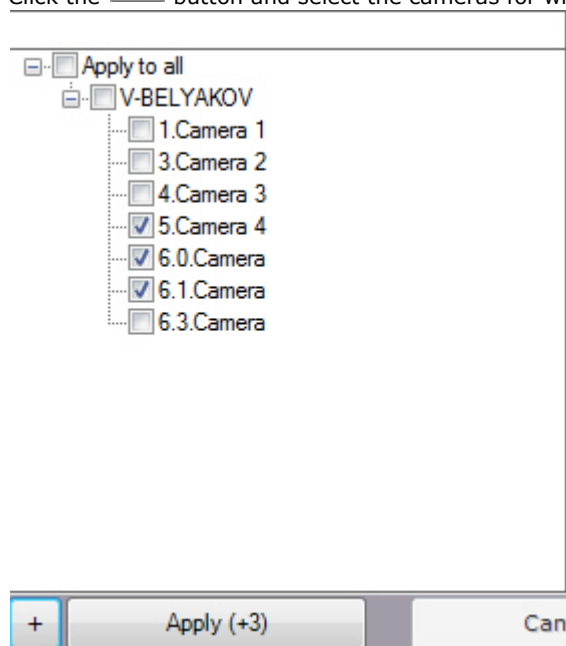


Facial recognition tools are created in the same fashion: the basic **Facial Recognition** object and its derivative detection tools.



You can create a detection tool of the same type for a number of cameras. To do this:

1. Create the required tool on any video camera.
2. Click **Apply**.
3. Click the  button and select the cameras for which you want to create the same detection tool.



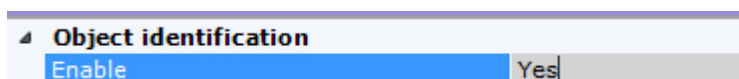
4. Click **Apply**.

To remove a detection tool, select the parent object and click **Remove**. To disable, select **No** in the **Enable** field.



Attention!

When you delete a detection tool all its metadata is also deleted. If you have deleted a detection tool, you cannot search its video with the forensic MomentQuest search.



Situation Analysis Detection Tools

Types of Situation Analysis Detection Tools

Rus

The following detection tools enable analysis of the situation in a video camera's field of view.

Name of a Detection Tool object	Detection description
Motion in the area	a detection tool triggered by the start of motion in an area of a video camera's field of view
Loitering	a detection tool triggered by the lengthy presence of an object in an area of a video camera's field of view
Object disappearance in the area	a detection tool triggered by the disappearance of an object in an area of a video camera's field of view
Abandoned object	a detection tool triggered by the appearance of an abandoned object in an area of a video camera's field of view
Line crossing	a detection tool triggered by the trajectory of an object crossing a virtual line
Object appearance in the area	a detection tool triggered by the appearance of an object in an area of a video camera's field of view
Stop in the area	a detection tool triggered by the cessation of motion in an area of a video camera's field of view

Object Tracker

Rus

After creation, the Object Tracker object is enabled by default. You can bulk configure all detection tools in this object (see [Setting General Parameters](#)).

The viewing tile will display the properties (width and height as percentages of the width and height of the frame and color) of tracked objects.



Note

Up to 25 objects can be tracked at the same time.

Object Tracker

- Object identification**
 - Enable: Yes
 - Name: Object Tracker
- Object features**
 - Record objects tracking: Yes
- Other**
 - Abandoned Object Detection Sensitivity: 9
 - Alarm on Object's Max. Idle Time in the: 60
 - Antishaker: No
 - Auto Sensitivity: Yes
 - Leveling Rod Height: 20
 - Long-time Unattended Objects Detection: No
 - Max. Object Height: 100
 - Max. Object Width: 100
 - Min. Object Height: 2
 - Min. Object Width: 2
 - Motion Detection Sensitivity: 25
 - Object Calibration: No
 - Time of Object in DB: 3
 - Unattended Objects Detection: Yes

if you disable the **Object Tracker** object, all situation analysis tools will be disabled and so such features as:

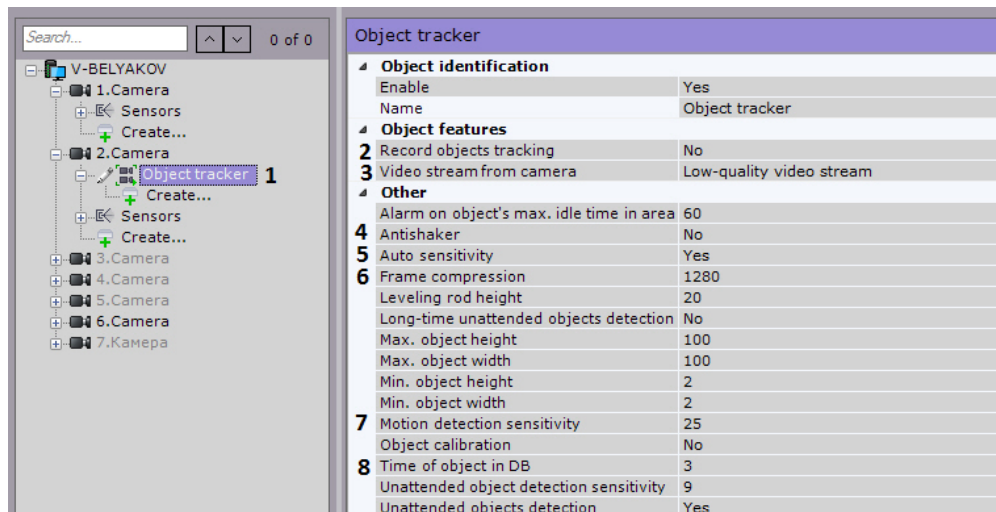
1. Object tracking.
2. Tag&Track.
3. Forensic Search.
4. TimeCompressor.

Setting General Parameters

Rus

Some parameters can be bulk configured for Situation Analysis detection tools. To configure them, do as follows:

1. Select the **Object Tracker** object (1).



2. If you need to enable recording of video stream metadata, select **Yes** from the **Record object tracking** list (2).



Attention!

Video decompression and analysis are used to obtain metadata, which causes high Server load and limits the number of video cameras that can be used on it.

3. If a video camera supports multistreaming, select the stream for which detection is needed (3). Selecting a low-quality video stream allows reducing the load on the Server.
4. To correct for camera shake, set **Antishaker** to **Yes** (4). This setting is recommended only for cameras that show clear signs of shaking-related image degradation.
5. If you require automatic adjustment of the sensitivity of scene analytic detection tools, in the **Auto Sensitivity** list, select **Yes** (5).



Note

Enabling this option is recommended if the lighting fluctuates significantly in the course of the video camera's operation (for example, in outdoor conditions)

7. By default, the frame is compressed to 1920 pixels on the longer side. To avoid detection errors on streams with a higher resolution, it is recommended that compression be reduced (6).
8. In the **Motion detection sensitivity** field (7), set the sensitivity for motion detection tools, on a scale of 1 to 80.
9. Enter the time interval in seconds, during which object's properties will be stored in the **Time of Object in DB** field (8). If the object leaves and enters the FoV within the specified time, it will be identified as one and the same object (same ID).
10. Click the **Apply** button.

The general parameters of the situation analysis detection tools are now set.

Setting General Zones for Scene Analytics

Rus

By default, the entire FoV is a scene analytics zone. If you need to exclude parts of the scene prone to false alarms from detection (leaves, water, etc.), you should set privacy masks - zone with scene analytics and metadata generation disabled

To do so, follow the steps:



1. Select the **Object Tracker** object and click the  button.
2. In the FoV, set the nodes of the closed area, in order, inside of which you want no detection.



Note
When the area is being constructed, the nodes are connected by a two-color dotted line which outlines the area's borders.

Note

For your convenience, you can click the  button and configure the mask on a still frame / snapshot. To undo, click this button again.

Action	Result
Click in the viewing tile	Creates a new area node
Right-click on a created node	Deletes the area node
Position the cursor on a node and hold down the left mouse button while you move the mouse	Moves the area node
Click the  button.	Deletes the area

Once the area is closed, you will see the  buttons on the borderlines. If you click them, a new node is added. This allows you to be more flexible with zoning.

- Set the required masking areas.
- Click the **Apply** button.

You have successfully created the detection zone.

Note
These settings will apply for all situation analysis detection tools on the selected camera.

Set the Minimum and Maximum Object Size for Detection

Rus

You can set the minimum and maximum object size for detection by specifying numerical values or reference areas on screen. Objects of all sizes beyond the set values will not trigger detection.

To specify the size, do as follows:

- Select the **Object Tracker** object.
- In the **Maximum height** and **Maximum width** fields (1), enter the maximum height and width of a detectable

object as a percent of the FoV height. The values should be in the range [0,05; 100].

1	Max. Object Height	100
	Max. Object Width	100
2	Min. Object Height	2
	Min. Object Width	2

3. In the **Minimum height** and **Minimum width** fields (2), enter the minimum height and width of a detectable object as a percent of the FoV height. The values should be in the range [0,05; 100].
4. Click the **Apply** button.

To set the reference area on screen, do as follows:

1. Select the **Object Tracker** object.



2. Click the **Min** button and set the minimum size of a detectable object. You can do so by dragging and dropping the nodes of the reference area.



Note

For your convenience, you can click the  button and configure the mask on a still frame / snapshot. To undo, click this button again.

3. Click the **Max**  button and set the maximum size of a detectable object.



Note
By default, the maximum size is the whole size of FoV, so the nodes are located in the corners.

4. Click the **Apply** button.

You have successfully set the minimum and maximum object size for detection.

Note
These settings will apply for all situation analysis detection tools on the selected camera.

Configure Perspective

Rus

The Perspective enhances detection tools performance and helps evaluate real sizes of objects based on simplified calibration system.

To configure the perspective, do the following:

1. Select the **Object Tracker** object and click the  button.
2. Set the size of the same object in different areas of the field of view. To create a calibration length, left-click within the video image in the viewing tile and add two anchor points. Set at least three calibration lengths. You can resize the length by stretching its anchor points . You can move it on screen by [dragging and dropping](#).



Note

For your convenience, you can click the  button and configure the mask on a still frame / snapshot. To undo, click this button again.

Note

To delete it, click the  button.

3. Select **Yes** in the **Object Calibration** option (1).

Leveling Rod Height	20	2
Max. Object Height	100	
Max. Object Width	100	
Min. Object Height	2	
Min. Object Width	2	
Object Calibration	Yes	1

4. Enter the height in decimeters of the object you want to find in the **Leveling Rod Height** field (2).



Attention!

Objects smaller than the specified value will not be detected.

5. Click the **Apply** button.

Perspective is now configured.



Note

These settings will apply for all situation analysis detection tools on the selected camera.

Recommendations on configuring Object Tracker

Rus

Consider the following recommendations to exclude false alarms of Situation Analysis Detection Tools:

1. Configure the **Tracker object** object iteratively and check operation quality in each iteration.
2. The parameters that affect operation quality most are: **Minimum size**, **Maximum size** (see [Set the Minimum and Maximum Object Size for Detection](#)), and **Sensitivity** (see [Setting General Parameters](#)).
3. It is recommended to use **Auto sensitivity** mode to ensure quality of the Tracker operation in changing lighting conditions.
4. If lighting is stable, it could be reasonable to adjust the **Sensitivity** value manually. Set **Sensitivity** value about 35 to detect objects with low contrast or about 15 to detect contrast object.

5. Minimum size is to be selected so that it is a little less than typical object size on the image.
6. Maximum size is to be selected so that it is a little greater than typical object size on the image, considering that the object can be joined with its shadow.
7. Lowering the **Time of Object in DB** allows excluding triggering of false static objects, while setting it to a higher value could allow not breaking off alarms for overlapping or temporarily disappearing objects in some cases.

Configuring the Detection Zone

Rus

For each type of situation analysis detection tool you can set a detection zone.

After creating a detection tool, its rectangular detection zone is displayed in a bright color. If you have set privacy masks, they are grayed out (see [Setting General Zones for Scene Analytics](#)).



Configuration of the detection zone is carried out in the same way as for general zones for scene analysis (see [Setting General Zones for Scene Analytics](#)).

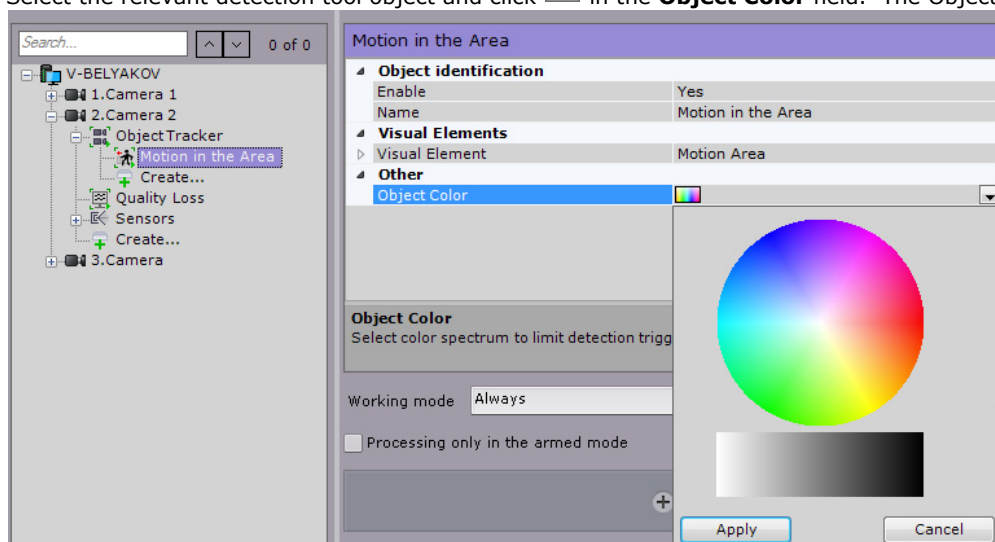
Configuring Detected Object Color

Rus

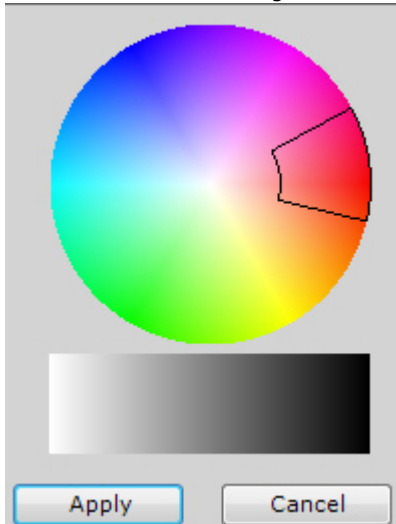
Any situation analysis tool can be configured to detect objects of a certain color (or color group).

To do so, follow the steps:

1. Select the relevant detection tool object and click  in the **Object Color** field. The Object Color dialog opens.



2. You can set the color range with Drag&Drop on the RGB / black-and-white color palette.



Attention!

Any click on the palette is interpreted as the beginning of a new range; the previous range will disappear.

3. Click the **Apply** button.

Setting the color of a detectable object is now complete.



Attention!

If no colors are set, the detection tool triggers on objects of any color.

Settings Specific to Cross Line Detection

Rus

After you create and select a line crossing detection tool, you can see a virtual "tripwire" line in the FoV.

To configure the line, do as follows:

1. Set the end points of the line .



Note

When the line is being constructed, the end points are connected by a two-color dotted line. The direction

of the object's motion across the line is indicated by dotted arrows.

Action	Result
Position the cursor on an end point and, holding down the left mouse button, move the mouse	Moves the line end point
Position the cursor on the line, holding down the left mouse button, move the mouse	Moving the line

- By default, Line Crossing detection monitors object motion across the line in both directions. To suspend detection of motion in one direction, click the button  to that direction.



Attention!

At least one direction must be selected for detection



Note

An unmonitored direction of object motion is indicated by a dimmed arrow

- Click the **Apply** button.

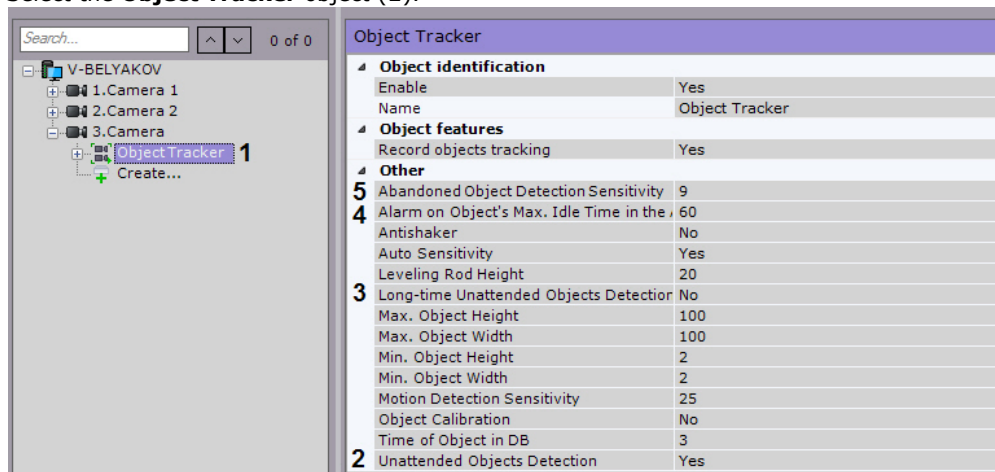
You have configured the virtual line.

Settings specific to Abandoned Object detection

Rus

To configure Abandoned Object detection, do as follows:

- Select the **Object Tracker** object (1).



- In the **Enable Abandoned Object Detection** (2), select **Yes**.
- If you require using the abandoned objects detection tool for longer time intervals, select **Yes** for the corresponding parameter.
- In the **Alarm on Object's Max. Idle Time in the Area** field (4), enter the maximum rest time of an object in seconds, after which the object is no longer detected. This value should be in the range [10, 1800].



Note

This parameter is used only for tracking "lost items", i.e objects abandoned for longer time intervals



Note

It is recommended to start by setting the value of this parameter at 10

- In the **Sensitivity: abandoned object** field (5), set the sensitivity for situational analytic tools for abandoned objects, on a scale of 5 to 30.



Note

This parameter depend on the lighting conditions and should be chosen empirically. It is recommended to start by setting the sensitivity at 20

- Under the **Scene Analytics** object, create the **Abandoned Object Detection** object (see [Create Detection Tools](#)).
- Click the **Apply** button.

Abandoned object detection is now configured.

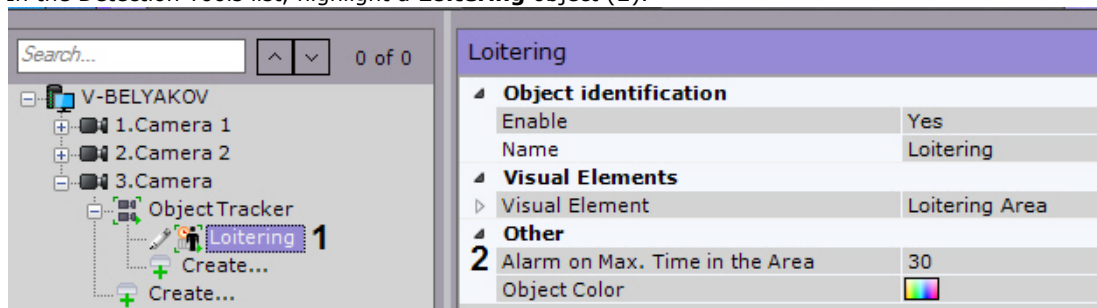
Settings Specific to Loitering Detection

Rus

When configuring the Loitering detection tool, you must set the maximum time an object can be in the analyzed area: when the maximum time is exceeded, the detection tool is triggered.

To set a maximum time, you must perform the following steps:

1. In the Detection Tools list, highlight a **Loitering** object (1).



2. In the **Maximum loitering time** field (2), enter the maximum object loitering time in seconds. This value should be in the range [0, 3600].
3. Click the **Apply** button.

The maximum loitering time is now set.

Facial Recognition

Face Detection Tools

Rus

Two types of Face Detection tools are available in Axxon Next:

1. Object appearance detection – a detection tool is triggered by the appearance of an object and subsequent face capture in FoV.
2. Loitering Detection – a detection tool triggered by the lengthy presence of an object and its face capture in FoV.

Configure Facial Recognition

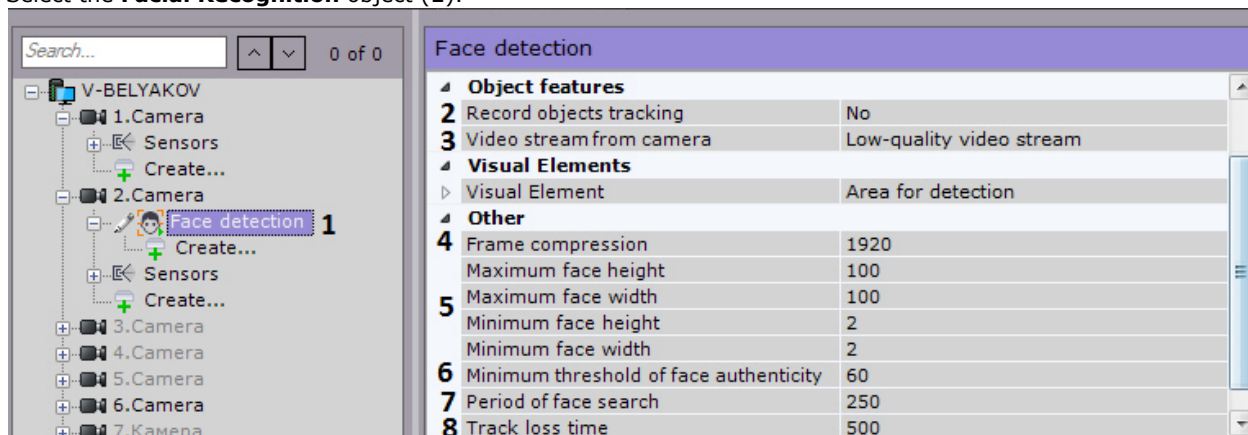
Rus

To configure face detection tools, do as follows:

1. Set the general Facial Recognition parameters.
2. Configure a particular detection tool.

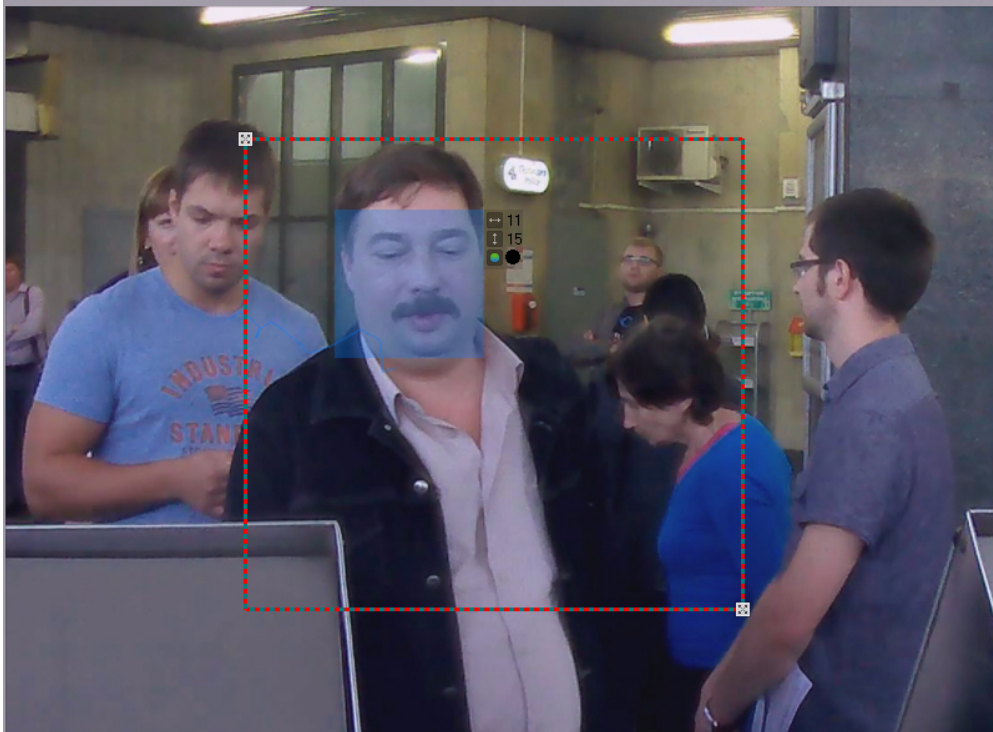
To configure shared Facial Recognition parameters, do as follows:

1. Select the **Facial Recognition** object (1).



2. If a camera supports multistreaming, select the stream for which detection is needed (2). Selecting a low-quality video stream allows reducing the load on the Server.
3. If you need to enable recording of metadata, select **Yes** from the **Metadata Recording** list (3).
4. By default, the frame is compressed to 1920 pixels on the longer side. To avoid detection errors on streams with a higher resolution, it is recommended that compression be reduced (4).
5. Specify the minimum and maximum sizes of detectable faces in % of the frame size (5).
6. Set the face authenticity threshold required to activate the detector (6). The value is specified empirically in the

- range of [1, 100]. The higher this value, the fewer faces will be recognized, but the detection quality will be higher.
- Set the time (in milliseconds) between face search operations in a video frame in the **Face search period** field (7). Acceptable values range: [1, 10000]. Increasing this value decreases the Server load, but can result in some faces being missed.
 - Enter the time in milliseconds after which the face track is considered to be lost in the **Track loss time** field (8). Acceptable values range: [1, 10000]. This parameter applies when a face moves in a frame and gets obscured by an obstacle for some time. If this time is less than the set value, the face will be recognized as the same.
 - Select a rectangular area to be searched for faces in the preview window. To select the area, move the intersection points .

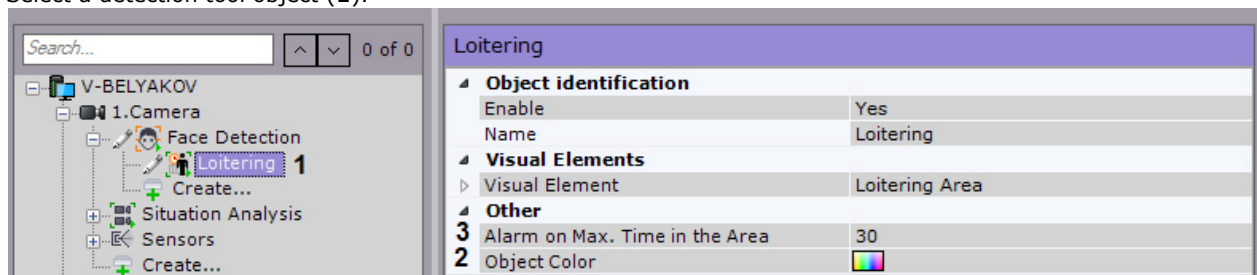


- Click the **Apply** button.

Configuration of general parameters for Facial Recognition is now complete.

To configure detection, you should set the following parameters:

- Select a detection tool object (1).



- Set a color or color group for object detection (2). This is similar to the situation analysis configuration (see [Configuring Detected Object Color](#)).
- When configuring the **Loitering** detection tool, you should set the maximum time an object can stay in the zone. When the maximum time is exceeded, the detection tool is triggered (3). This value should be in the range [0, 3600].
- Set an area inside FoV for detection. This is similar to the situation analysis configuration (see [Configuring the Detection Zone](#)).
- Click the **Apply** button.

You have configured Facial Recognition now.

Automatic Number Plate Recognition (ANPR)

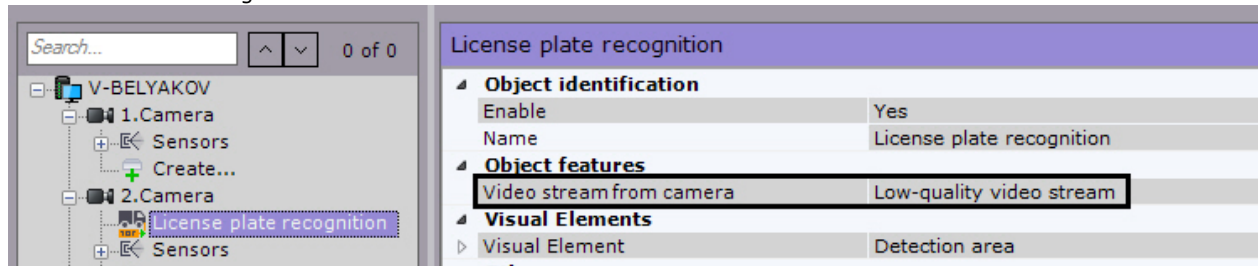
Rus

ANPR is a detection tool that reads license / number plates of vehicles in FoV.

To configure ANPR, do as follows:

- Select the **License plate recognition** object.
- If a camera supports multistreaming, select the stream for which detection is needed. Selecting a low-quality video

stream allows reducing the load on the Server.



3. In the appropriate fields, select one or more countries for ANPR (1).

Other	
1 Country 1 name	Russian Federation
2 Tracker timeout, sec	3
3 Advanced image analysis	No
4 Algorithm of recognition of distorted LP image	No
Country 2 name	Not used
1 Country 3 name	Not used
Country 4 name	Not used
Country 5 name	Not used
5 Decode key frames	No
6 Frame compression	1920
7 Maximum LP width	10
Minimum LP width	1
8 Period	0



Important

The more countries you select, the slower the recognition and the greater the likelihood of the recognition error.

4. In the **Tracker timeout** field, enter a time period in seconds. This is the time before detection starts again after a number plate is recognized (2).
5. If necessary, enable advanced image analysis (3). If **Yes**, the quality of recognition is increased in poor visibility conditions (for example, if camera characteristics/settings do not fully meet the requirements or if the weather is bad). Frame processing time is increased by 20-30% depending on its size. Under normal conditions, this setting does not affect the quality of recognition.
6. To recognize the numbers at sharp angles with respect to the camera, select **Yes** in the **Algorithm of recognition of distorted PL image** field (4).
7. If you want to process frames every 500 milliseconds or less often, select **Yes** in the **Decode key frames** (5) list.



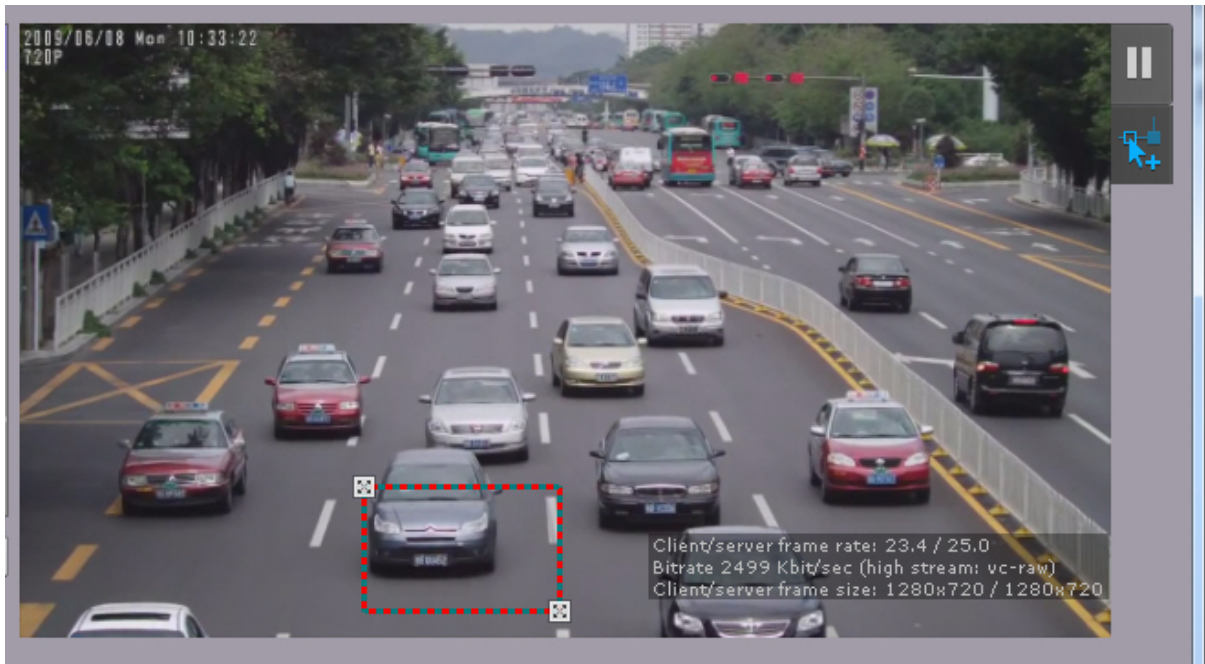
Important

This setting applies to all codecs. If a codec has keyframes and p-frames, the keyframe is decoded no more often than every 500 milliseconds. For the MJPEG codec, each frame is considered to be I frame.

This feature reduces the Server load but, as can be expected, negatively impacts the quality of detection.

This setting should be activated on "blind" Servers (Servers that do not display video) on which it is necessary to perform detection.

8. By default, the frame is compressed to 1920 pixels on the longer side. To avoid detection errors on streams with a higher resolution, it is recommended that compression be reduced (6).
9. Set the maximum and minimum width of the vehicle number plate as a percentage of the FoV height (7).
10. In the **Period** field (8) enter the time in milliseconds. This is the time before the next video frame is processed. This value should be in the range [0, 65535]. If the value is 0, each frame is processed.
11. You can configure an ANPR zone in FoV. The zone is resized by moving the anchor points .



Note

For your convenience, you can click the  button and configure the mask on a still frame / snapshot. To undo, click this button again.

Note

Detection zone is displayed by default. You can click the  button to hide the zone. To undo, click this button again.

- Click the **Apply** button.

Configuration of ANPR is now complete.

IntelliVision Automatic Number Plate Recognition (ANPR)

Rus

Attention!

The Intellivision ANPR is not included in the basic *Axxon Next* VMS distribution.

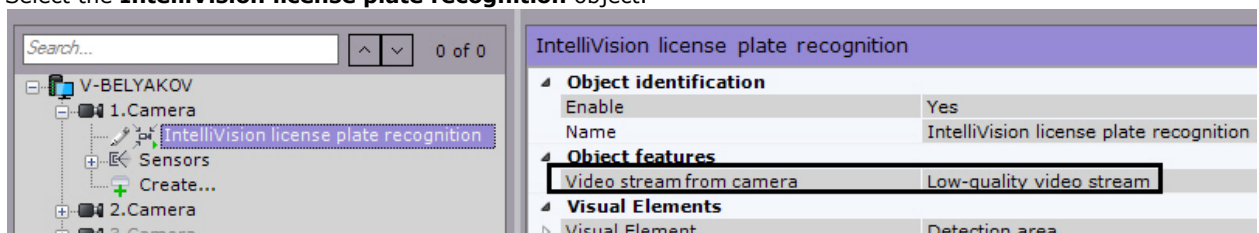
To configure IntelliVision ANPR:

- Request the distribution from the [Technical Support](#) and install it.

Attention!

Only a 64-bit version is available.

- Copy an IntelliVision license into C:\Program Files\Common Files\AxxonSoft\DetectorPack\IntelliVisionLPRlicense.txt.
- Select the **IntelliVision license plate recognition** object.



- If the camera supports multistreaming, select the stream for which detection is needed. Selecting a low-quality video stream allows reducing the load on the Server.
- Select the country from the list (1).

IntelliVision license plate recognition	
Visual Element	Detection area
Other	
1 Country name	None
2 Maximal number of characters in LP	10
3 Maximal number of cores	0
4 Maximum LP width	10
5 Maximum recognition quality, in %	100
6 Minimal number of characters in LP	5
7 Minimal time interval between recognized	0
8 Minimum LP width	1
9 Minimum recognition quality, in %	50
10 Recognition accuracy level	High accuracy
11 Tracker timeout, sec	3



Note

The list of supported countries is given in the [manufacturer's specifications](#).

6. Specify the maximum and minimum number of digits in the number (**2, 6**).
7. Specify the maximum number of processor cores available for the detector. '0' means all cores (**3**).
8. Set the maximum and minimum width of the vehicle number plate as a percentage of the FoV width (**4, 8**).
9. Set minimum and maximum quality of ANPR (**5, 9**). The higher the minimum recognition quality, the less false detections will occur.
10. Specify the minimum number of milliseconds between frames during recognition (**7**).
11. Select recognition accuracy (**10**). The higher the accuracy, the higher the CPU load.
12. In the **Tracker timeout** field, enter a time period in seconds. This is the time before detection starts again after a number plate is recognized (**11**).
13. You can configure an ANPR zone in FoV. The zone is resized by moving the anchor points .



Note

For your convenience, you can click the  button and configure the mask on a still frame / snapshot. To undo, click this button again.



Note

Detection zone is displayed by default. You can click the  button to hide the zone. To undo, click this button again.

14. Click the **Apply** button.

Configuration of IntelliVision ANPR is now complete.

Configure Core Video Detection Tools

Types of Video Detection

Rus

The following detection tools enable analysis of the video image from a camera.

Name of a Detection Tool object	Detection description
Loss of quality	A detection tool which is triggered when the video image received from a video camera loses quality
Motion detection	A detection tool triggered by motion in a video camera's field of view
Position change	A detection tool triggered by a change in the video image background indicating a change in the video camera's position in space.
Image Noise Detection	New improved version of Quality Loss detection
Blurred Image Detection	Detects blurred shapes and indistinct borders
Compression Artifacts Detection	Detects compression artifacts
Smoke detection	A detection tool triggered by smoke in FoV.
Fire detection	A detection tool triggered by fire in FoV.

Setting General Parameters of Video Motion Detection

Rus

All basic detection tools have a number of common settings.

If a camera supports multistreaming, select the stream for which detection is needed (**1**). Selecting a low-quality video stream allows reducing the load on the Server.

Compression artifacts detection

Object identification

EnableYes

NameCompression artifacts detection

Object features

1 Video stream from cameraLow-quality video stream

Other

CompressedDegradation/DegradationTin20

3 Decode key framesYes

2 Period50

4 Sensitivity50

In the **Period** field (**2**) enter the time in milliseconds. This the time before the next video frame is processed. This value should be in the range [0, 65535]. If the value is **0**, each frame is processed.

The default setting for all detection tools is Decode key frames (**3**). In this case, the frames are processed every 500 milliseconds or less often. To disable Decode key frames, select **No** in the appropriate field.



Important

This setting applies to all codecs. If a codec has keyframes and p-frames, the keyframe is decoded no more often than every 500 milliseconds. For the MJPEG codec, each frame is considered to be I frame.

This feature reduces the Server load but, as can be expected, negatively impacts the quality of detection.

This setting should be activated on "blind" Servers (Servers that do not display video) on which it is necessary to perform detection.

To configure detection of noise, blurred image and compression artifacts, do as follows: Specify sensitivity in standard units from 0 to 100 (**4**).

To save settings, click the **Apply** button.

Settings Specific to Video Motion Detection

Rus

By default, VMD (video motion detection) covers the entire FoV. In the FoV, you can set privacy masks - closed areas, inside of which you want no detection.

Privacy masks are created similar to scene analysis configuration (see [Setting General Zones for Scene Analytics](#)).

Video motion detection (VMD) recognizes a change in the video signal in relation to a reference image of static background (a specific location , video scene or part of a video scene).

For VMD, pixel brightness is averaged with Median Filtering to get a block of 80x60 cells from the raw image. If the brightness levels of same cells in the current frame and the background / reference image change and exceed the threshold value defined by the **Sensitivity: Contrast** (for example, if the sensitivity threshold value is at **16** and 29 if sensitivity is **0**). Motion is detected if the number of brighter / darker pixels exceeds the threshold value defined **Sensitivity: Size** (for example, 3 cells from the 80x60 block at a sensitivity value of **10** and 53 at **0**).

For you convenience with VMD configuration, in the preview window, you can see the motion mask.



If there is motion, but it does not exceed the threshold value (because of the detection sensitivity), the mask cells are colored green. If motion triggers VMD, the cells turn red.

Configuring smoke and fire detection

Rus

To configure smoke (fire) detection:

- 1. Set the interval between the analyzed frames in seconds (**1**).

9.Smoke detection		
▲ Object identification		
Enable	Yes	
Name	Smoke detection	
▲ Object features		
Video stream from camera	Low-quality video stream	
▲ Other		
Interval between processed frames	10	1
Mode	CPU	2
Number of frames for analysis and output	5	3
Sensitivity	33	4

- 2. Select detection tool working mode (**2**):
 - a. **CPU** - detection will be processed by means of CPU.
 - b. **Auto** - the Server automatically determines how detection will be processed, either by means of CPU or GPU.

**Attention!**

For stable operation of the detector, a last generation video card is required:

- at least 2 GB of memory,
- support for CUDA 7.0 (minimum).

3. Set the minimum number of frames with smoke (fire) for triggering the tool (**1**). This value should be in the range [5;20].

**Note**

The default values (5 frames and 10 seconds) indicate that the tool will analyze one frame every 10 seconds. When smoke (fire) is detected in 5 frames, the tool will trigger.

4. You can experiment with the sensitivity of the tool (**4**).

Configure Core Audio Detection Tools

Types of Audio Detection

Rus

The following detection tools enable analysis of the audio signal from a microphone.

Name of a Detection Tool object	Detection description
No signal	A detection tool which is triggered by the absence of an audio signal from an audio device
Signal	A detection tool which is triggered by the reception of an audio signal from an audio device
Noise	A detection tool which is triggered by the appearance of noise

**Attention!**

No Signal audio detection may operate incorrectly with video cameras emitting a background signal with a non-zero volume, even if the integrated microphone is physically disabled

Set Parameters of Audio Detection

Rus

All core detection tools have a common parameter - **Period**.

In the **Period** field enter the time in milliseconds. This the time before the next section of the audio stream is processed by the audio detection tool. This value should be in the range [0, 65535]. If the value is **0**, each section of the audio stream is processed.

For noise and signal detection tools you should also specify **Level**:

1. When configuring the Audio Signal Detection tool, enter the minimum threshold level of audio signal in standard units. You should select a value empirically in the range [0, 1000].
2. When configuring the Noise Detection tool, enter the noise level in standard units. You should select a value empirically in the range [0, 1000].

To save settings, click the **Apply** button.

Configuring Built-In Detectors

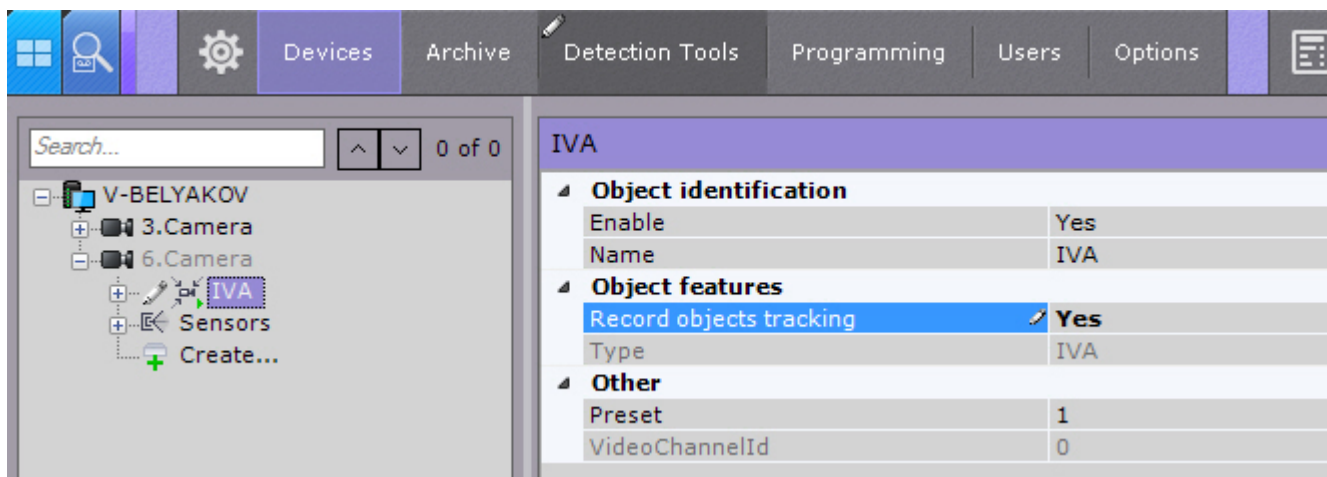
Rus

By the date the documentation is created, the *Axxon Next* software package includes integrated analytics for multiple video cameras (see [Drivers Pack release notes](#)).

If *Axxon Next* supports built-in analytics for a device, then detectors can be created (see [Create Detection Tools](#)).

Axxon Next is also able to obtain metadata directly from certain video cameras. For example, metadata can be received from a Bosch IVA system.

To receive metadata from a Bosch IVA, you need to create an **IVA** object and select **Yes** in the **Record objects tracking** list.



Generally, when configuring the embedded analytics you must follow official documentation for the corresponding video camera or parameter description in the *Axxon Next* interface.

If the camera supports Motion Mask, then when you configure VMD, it will be displayed in the preview window.



If there is motion, but it does not exceed the threshold value (because of the detection sensitivity), the mask cells are colored green. If motion triggers VMD, the cells turn red.

AxxonSoft tracking in Axis devices

Rus

You can use analytics from AxxonSoft ([Situation Analysis Detection Tools](#)) on Axis devices.



Note

This option is available for all devices based on Axis ARTPEC-4 processors and ARTPEC-5

All CPU heavy analytics and metadata generation tasks are delegated to the camera in this case.

To do this:

1. Go to the device's web interface.
2. Select the **Setup** menu (1) -> **Applications** (2).



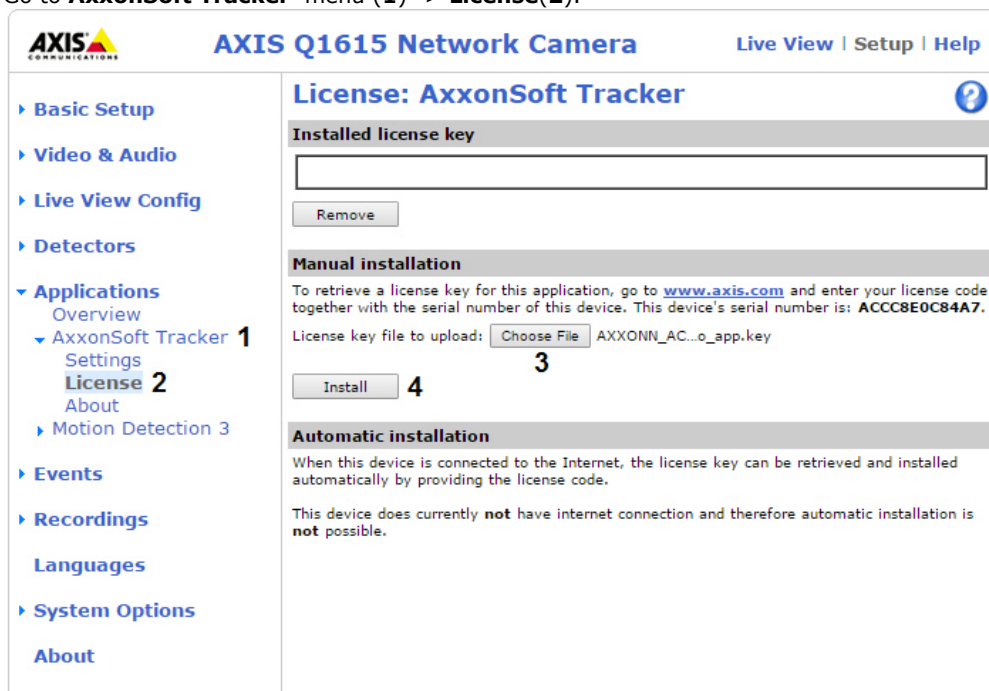
3. Select the **ACAP** application (3) and click **Upload the Package** (4).



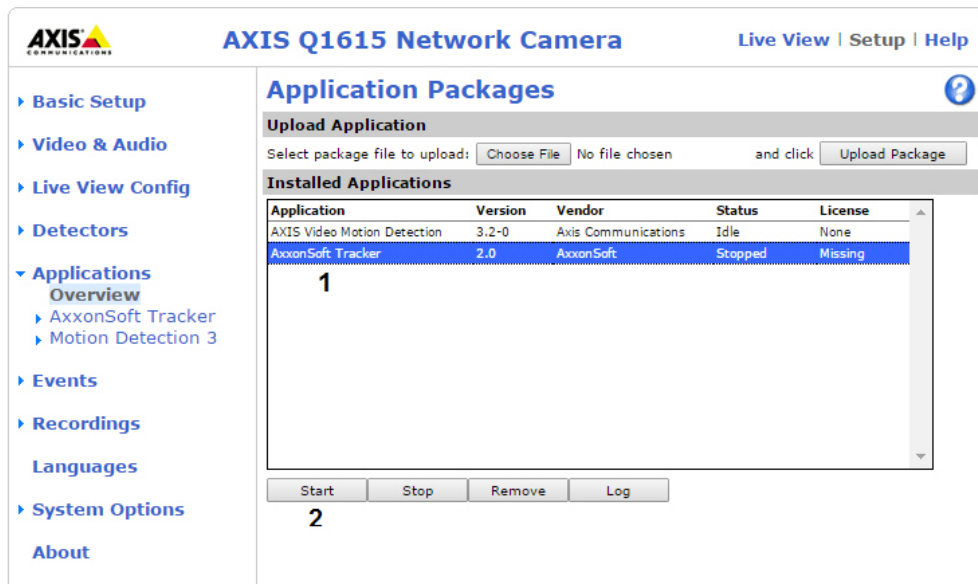
Important!

For application, contact [AxxonSoft help-desk](#). You will be given a license code that is to be registered along with camera's MAC address on [Axis website](#) in order to get the license file.

4. Go to **AxxonSoft Tracker** menu (1) -> **License**(2).

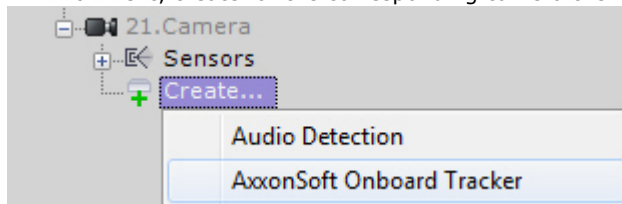


5. Select the license file (3).
6. Click **Install** (4).
7. Go to **Applications**, select the installed application (1).



8. Click **Start (2)**.

9. In *Axxon Next*, create for the corresponding camera the **AxxonSoft tracker** object.



10. Configure the tracker and create the required detection tools.



Note

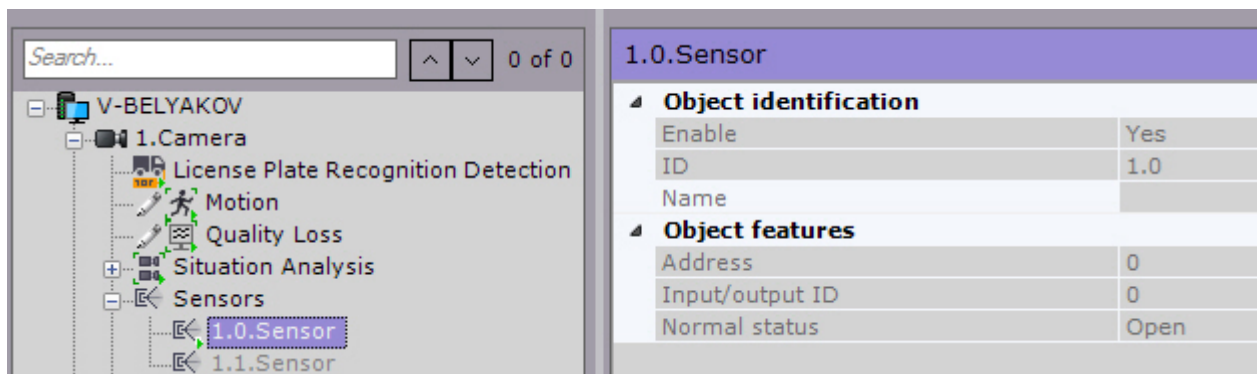
You can configure the **AxxonSoft tracker** object similar to the [Object Tracker](#).
You cannot configure perspective for solution based on Axis devices.

Sensors

Rus

After becoming enabled on the **Devices** tab, the **Sensor** object appears on the **Detection Tools** tab (see the section [The Sensor Object](#)).

Check the functioning of the sensor in the **Devices** tab (see the section [The Sensor Object](#)). The **detection properties** field in the **Detection Tools** tab duplicates the settings entered in the **Devices** tab under **Settings** and is not editable.



Perform the follow actions for the **Sensor detection tool**, on the **Detection Tools** tab:

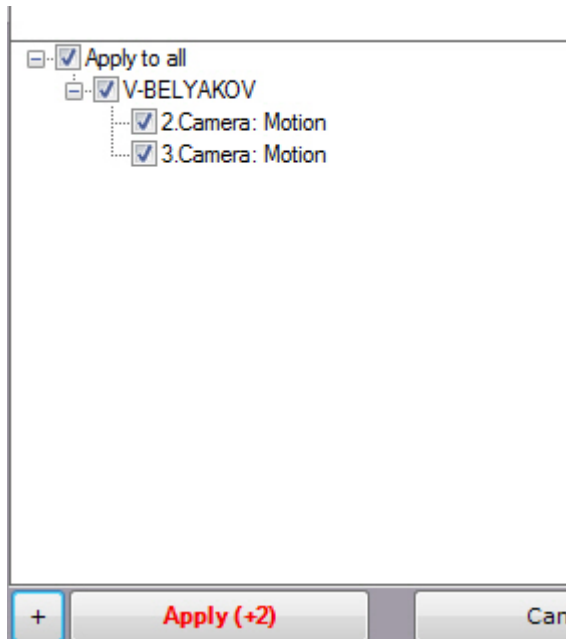
1. Check triggering of the detection tool with the help of the Triggers ribbon (optional) (see the section [Checking the Triggering of a Detection Tool](#)).
2. Set the rules to be automatically executed when the detection tool is triggered (see the section titled [Automatic Rules](#)).

Mass Configure Detection Tools

Rus

You can mass configure detection tools as follows:

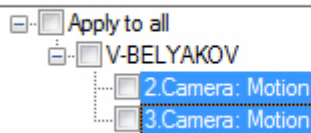
1. Configure one detection tool.
2. Click the button  and select detections tools the same settings should be applied to.



Attention!

Detection zones cannot be changed by bulk configuration

The list of detection tools of the same type in the current Axon domain opens. To select multiple detection tools, hold down the Shift key, select the first and last one the settings should be applied to. Selecting any tool from highlighted ones will result in selecting them all.



3. Click the **Apply** button.



Note

The number in brackets refers to the number of configured detection tools

Checking the Triggering of a Detection Tool

Rus

You can check the triggering of detection tools in the **Detection Tools tab**.

To use this option you must perform the following steps:

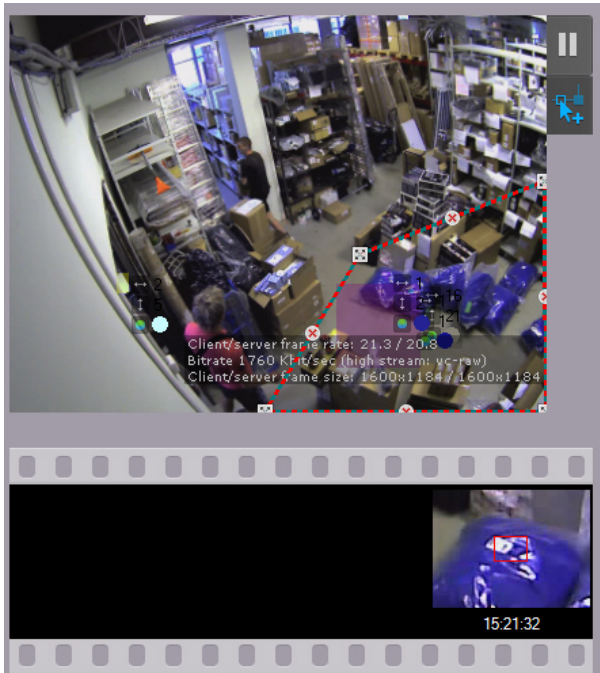
1. In the Detection Tools list, highlight the detection tool object whose triggering you need to check.



Attention!

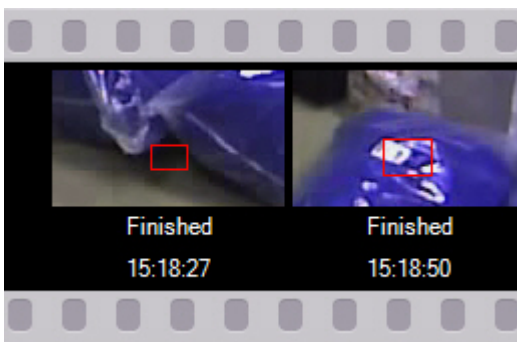
The Detection Tool object should be enabled and configured

2. Produce an event whose occurrence should trigger the detection tool: motion in the frame, turning the video camera, providing sound to an audio device, etc.
3. If the detection tool is configured correctly, video image frames from the video camera corresponding to the detection tool will be displayed on the trigger ribbon with the time they were received indicated.



VMS checks the on / off status of detection tools when they triggered and stopped. Not applicable to detection of: quality loss, position change, disappearance of an object, motion stop and ANPR.

After the end of triggering, you get the **Completed** message.



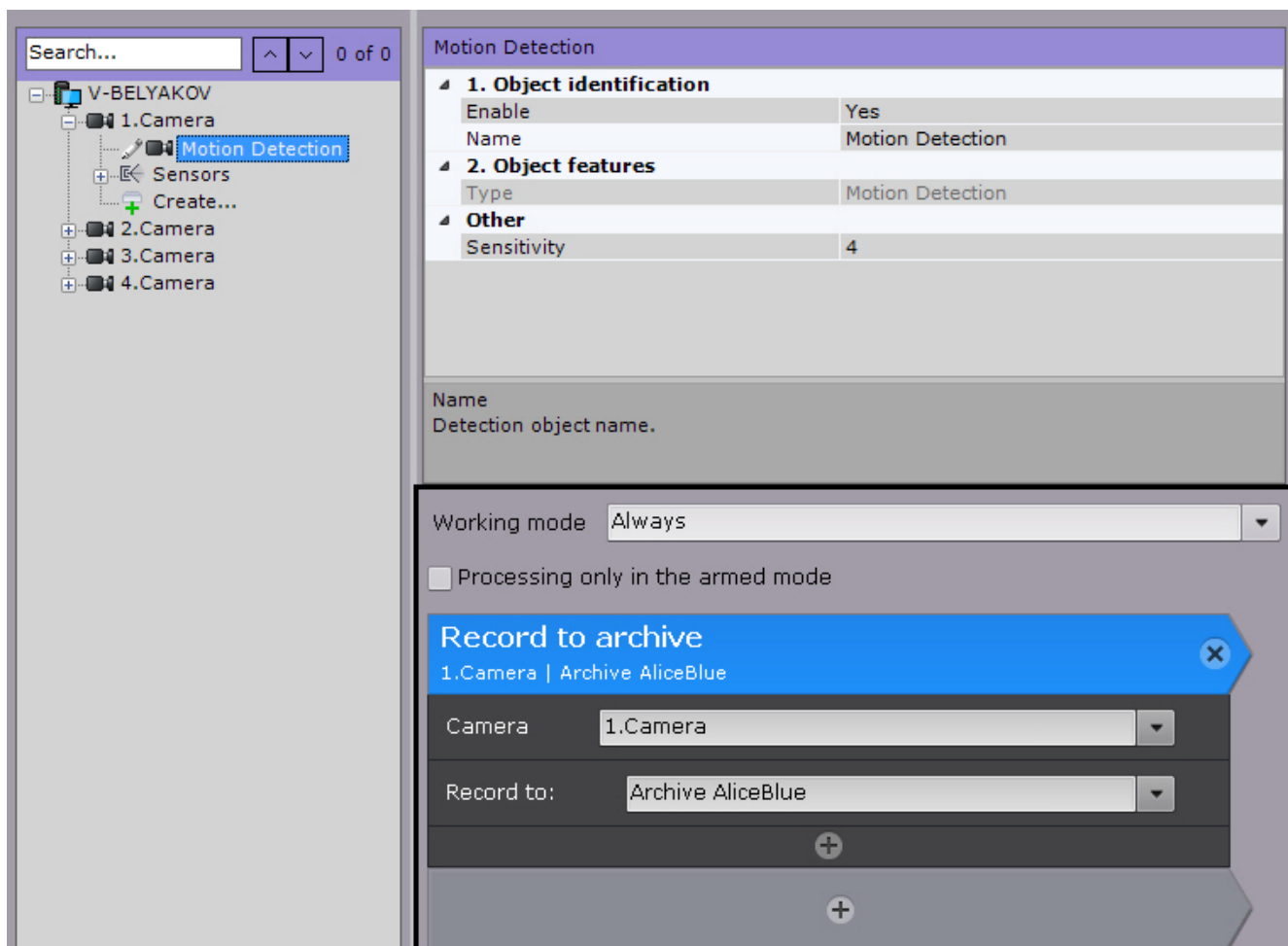
Checking the triggering of a detection tool is now complete.

Automatic Rules

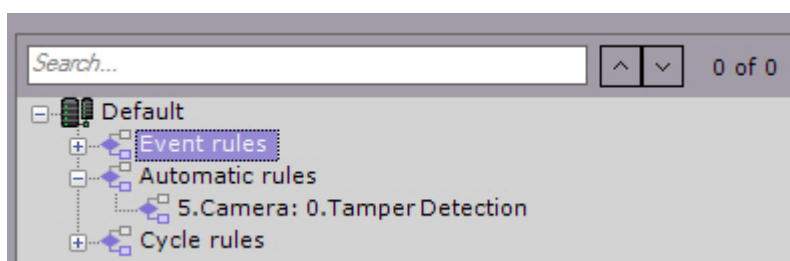
Rus

Automatic rules are basic macros: particular actions that are performed when a detection tool is triggered (see [Configuring Macros](#)). One or multiple automatic rules can be set for each detection tool.

The interface window for configuring automatic rules is shown when any detection tool is selected.



Configuring automatic rules and their mode of operation is the same as configuring macros (see [Configuring Macros](#)). Created automatic rules are displayed in the corresponding list under the **Programming** tab.



Note

When you create the [Record to archive](#) automatic rule, the recording stops when VMD (see [Situation Analysis Detection Tools](#)) triggering stops

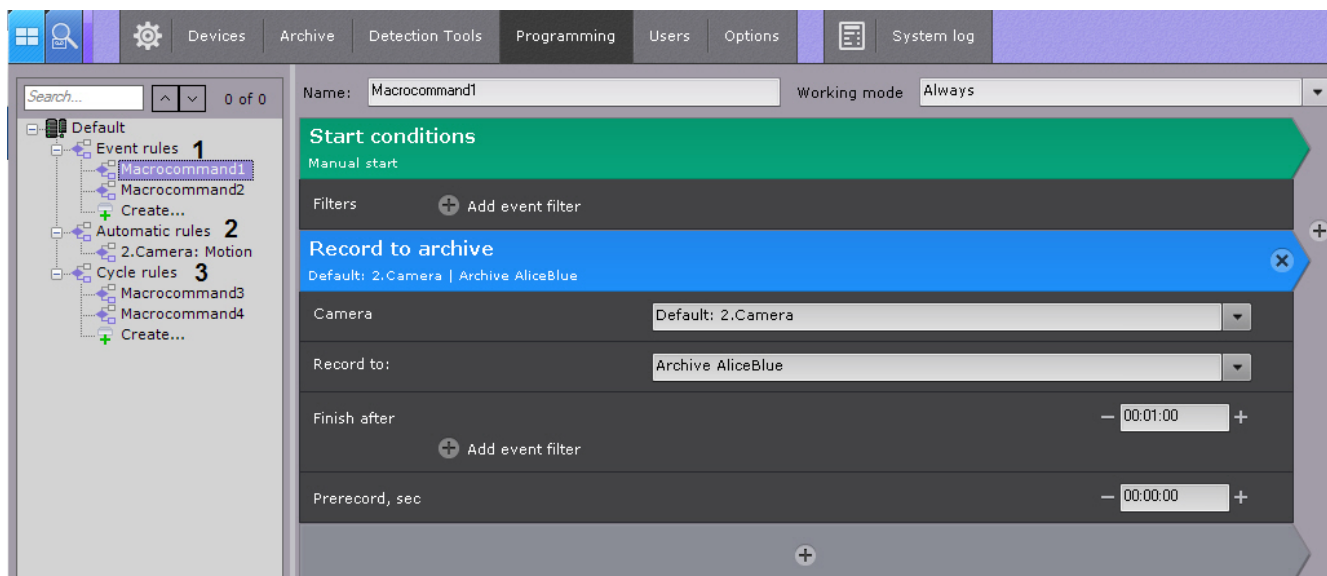
Configuring Macros

General information about the macros

Rus

Macro is a tool intended for configuring system responses to events. System response may involve one or several different actions.

You can create and edit macros in the **Programming** tab.



Macros can be of 3 types:

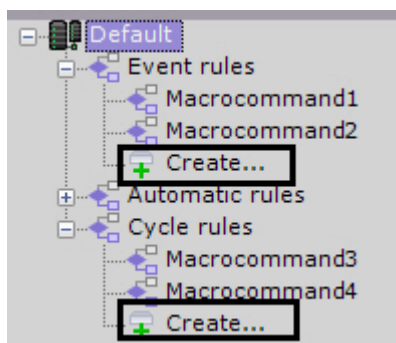
1. Event-driven (1). These macros can be run automatically on detection / event or initiated by the user. When triggered, the commands in the macro are executed once.
2. Automatic Rules (2).
3. Cyclic (3). Cyclic macros are executed immediately after you save them unless they have been created outside the time schedule for commands (see [Create Macros](#)). After completing all the commands, the macro is automatically restarted. Cyclic macros cannot be started by the user.

Unless the macro has standby commands (see [Wait for event](#), [Wait for timeout](#), [Wait till previous action finishes](#)), all commands are performed simultaneously.

Create Macros

Rus

To create a macro, click the **Create** button in the list.



Then do as follows:

1. Enter the name of the macro (1).

2. Select the operation mode (2):

Mode	Event-driven	Cyclic
Newer	Initiated by the user (see Working with Dialog Board).	Disabled
Always	Always on	Always on
Time time schedule	Runs within the selected time schedule (see Creating schedules). Initiated by the user at any time.	Runs within the selected time schedule.

3. To configure event-driven macros, click  and select one or more trigger events (see [Configuring filters for event-driven macros](#)).

Note

To delete an event from the filter, click the  button.

4. Add one or more actions into the macro (4). Click the  button to do this. When the macro starts, all actions are performed simultaneously.

Note

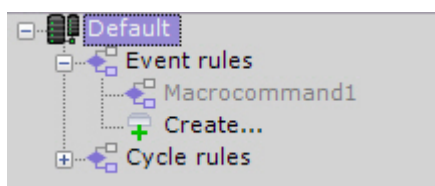
To delete an action, click the  button.

Note

To hide the start conditions and action for the macro, click the action name.

5. To save the macro, click the **Apply** button.

Macros configuration is complete. Created macro are listed. If the macro is disabled (**Never** mode), it is grayed out.



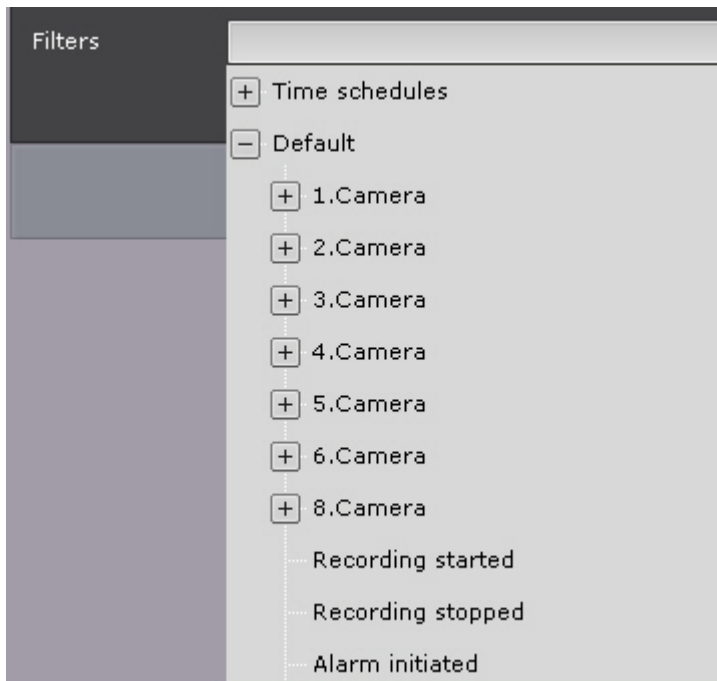
To remove a macro, select it in the list and click **Remove**.

Configuring filters for event-driven macros

Rus

When you create event-driven macros, you can select one or more trigger events.

You can also filter events:



The following events are available for selection:

Object	Event	Image
Server	Server disconnected	
	Server connected	
Camera	Recording started	
	Recording stopped	
	Alarm initiated	
	Alarm being processed by user	
	Alarm skipped	
	Alarm processed	
	Alarm processed - Critical alarm	
	Alarm processed - Non-critical alarm	
	Alarm processed - False alarm	
	Connected	
	Disconnected	
	Signal lost	
	Signal restored	
Detector and Sensor	Triggering start	
	Triggering end	
	Triggering (for detection tools, which do not have the start and end of the triggering, see Checking the Triggering of a Detection Tool)	

Archive	Archive partition error	[-] Archive partition error Archive AliceBlue [-] Archive partition restored Archive AliceBlue
	Archive partition restored	
Time Schedule	Beginning	[-] Time schedules 1. Beginning 1. End
	End	
Event source	Description for the Event Source object, you must specify the trigger word or phrase. When it comes up in the captions, the macro starts. For example, this filter triggers the macro when the word "Beer" appears in the captions	Filters 7.0.Event source: Specify text event Beer

Settings specific to actions

Wait for event

Rus

This is the IF condition for running a command (only after the specified events occur).

You can enter the following parameters in the **Awaiting** command:

1. The time-out format is HH:MM:SS.

Awaiting

30 seconds

Timeout

1 - 00:00:30

+

Filters

+ Add event filter

2

Execute if event occurred

3

+

Execute if event did not occur

4

+

2. Break command - here you enter one or more events that override the Wait command. If you do not specify events, the time-out applies.
3. If necessary, select and configure the action to perform when an event from Break Command occurs. A new **Awaiting** instance is also an option.
4. If necessary, select and configure the action to perform if none of the events that were set in Break Command occurred during time-out. A new **Awaiting** instance is also an option.

For example, this macro is conditioned by the **Motion detected event** on **Camera 1 (1)**.

Awaiting
1.Camera: Motion: Triggering start|4 minutes

Timeout 3 — 00:04:00 +

Filters 1 1.Camera: Motion: Triggering start —

+ Add event filter

Execute if event occurred 2

Record to archive
Default: 1.Camera | Archive AliceBlue

Camera Default: 1.Camera

Record to: Archive AliceBlue

Finish after — 00:00:00 +

+ Add event filter

Prerecord, sec — 00:00:00 +

+ Add event filter

Execute if event did not occur 4

Voice notification
V-BELYAKOV/1.Speaker

Speaker: V-BELYAKOV/1.Speaker

During: — 00:00:00 +

+ Add event filter

When it occurs, the macro continues. This also starts recording (2). Further macro actions are executed, if any.
If this event does not occur, the time-out is 4 minutes (3). After this time, a sound notification (4) plays.



Attention!

The **Awaiting** command does not affect the commands below (outside of) it.

Wait for timeout

Rus

This command delays launch for downstream commands.

The time-out format is HH:MM:SS.

Awaiting
5 seconds

Timeout — 00:00:05 +

For example, when performing that macro, an alarm will be initiated in the system (1), and then after 10 seconds (2) - an audio alert (3).

Alarm initiation

Initiate if no active | Default: 1.Camera | Archive AliceBlue

1

Alarm:

Initiate if no active

Camera

Default: 1.Camera

Record to:

Archive AliceBlue

+

Awaiting

10 seconds

2

Timeout

00:00:10

Voice notification

V-BELYAKOV/1.Speaker

3

Speaker:

V-BELYAKOV/1.Speaker

During:

00:00:10

Wait till previous action finishes

Rus

This is the IF condition for running a command (only if the previous steps are completed / not completed in the specified time).

To configure, set up the following parameters:

1. Set waiting period in HH:MM:SS format for previous action to be performed (1). If 00:00:00 is set, then waiting will last forever.

Wait till previous action finishes

5 seconds

Timeout

1 00:00:05

Do if previous action completes before timeout

2

Do after timeout if previous action fails to complete before that time

3

2. Specify the action to perform if the previous command was completed within the specified timeout (2).
3. Specify the action to perform if the previous action was **not** completed within the specified timeout (3). If the timeout is **00:00:00**, this setting is not applicable.



Attention!

This command does not affect the commands below (outside of) it.

Example: In this macro, replication (1) and the program on the client (5) start at the same time. If replication is completed within 10 minutes (2), an Email message (3) is sent. Otherwise, a voice alert (4) is played.

Camera: Start replication

1

1.Camera | Archive AntiqueWhite | During: 00:00:00

Camera

1.Camera

Archive

Archive AntiqueWhite

☒ Whole period
 ☐ Time schedule

During:

00:00:00

☐ Finish after

+

 Add event filter

Wait till previous action finishes

5 seconds

Timeout

2

00:10:00

Do if previous action completes before timeout

Send E-mail

3

Email message:

V-BELYAKOV/1.User e-mail

To:

mail@server.com

Subject:

Notification: Attention, automatic rule is triggered.

Message:

Replication complete

Do after timeout if previous action fails to complete before that time

Voice notification

4

V-BELYAKOV/6.Speaker

Speaker:

V-BELYAKOV/6.Speaker

Finish after

00:00:05

+

 Add event filter

Launch external program on client

5

Path to file:

"C:\Windows\System32\cmd.exe"

Record to archive

Rus

To configure **Record to archive**: Selecting a camera or group of cameras for recording.

1. Selecting a camera or group of cameras for recording (1).

2. Select an archive to write to (2).
3. Configuring conditions that end recording. Recording may be stopped:
 - In a given time (3, no IF events are specified)
 - when the specified IF events occur (4, no time is specified)
 - In a given time (3) after any of the selected IF events occur (4).
4. Set the pre-alarm recording time (5). The maximum pre-alarm recording time is 30 seconds.

Trigger an alarm

Rus

This starts recording and an alarm.

Most of the parameters are from the **Record to archive** command settings (see [Record to archive](#)). Other than that, there are following settings:

1. **Alarm** - Alarm mode selection (always or only when there are no other active alarms for the camera).

2. In the **Alarm flag position** field, enter the number of seconds by which the alarm flag will be shifted back from the event time that started the macro.



Note

If the alarm flag position is set, the event footage plays from the moment corresponding to the flag's position, and not from the alarm start.

Toggle a relay

Rus

This toggles the relay on/off.

The standard setting is to select a relay that switches when a macro starts (1). Any enabled relay in the system can be used, including one linked with another server.

Relays switch back after On-time (**2**), or after Check-in Event-time (**3**) for any specified events.

Arm /disarm a camera

Rus

To configure these actions, select a camera or group of cameras that you want to arm or disarm.

Switch to a PTZ camera preset

Rus

To configure the action, set up the parameters:

1. **PTZ (1)** - select a PTZ unit. Any pan/tilt positioners / PTZ cameras can be used, including those from other Servers (if they are on).

2. **Preset (2)** - select the camera preset to go to, when the macro starts.

Show camera

Rus

This opens the relevant layout and map with the camera marked on it.

To configure the command, do as follows:

1. Select a camera (**1**).

Show layout with camera
Automatically open layout with camera: Default: 3.Camera

Camera	Default: 3.Camera	1
Display mode	Select camera	2
Role	admin	3

**Note**

In this software version, you cannot select a group of cameras for this action.

2. Select the display mode (2).

Display mode	Description
Select camera	The camera tile is highlighted on the layout
Zoom in camera	The camera tile is highlighted on the layout, the viewing tiles take up 98% of the screen
Zoom in and show map	The camera tile is highlighted on the layout, the viewing tiles take up 50% of the screen, the map under the tiles shows the camera.
Switch to immersion mode	Immersive mode, the viewing tiles take up 50% of the screen

3. Select the user roles, this command applies to (3)

This command uses the following algorithm:

1. The system searches for layouts that contain the specified video camera and are accessible to the user.
2. The system chooses the layout with the minimum number of cells to display the selected video camera.
3. If the required layout does not yet exist, the system creates a new layout with a single video camera.
4. The system switches to the selected layout.
5. The specified process is running.

Opening layout

Rus

You can open any layout you created (the **Open layout**) or restore the previous one (the **Restore layout**).

Open layout
Alarmed cameras

Layout	1	Alarmed cameras
Specify monitor number	2	1
Role	3	admin

Restore previous layout
General: Restore layout

To configure the **Open layout** command, do the following:

1. Select a layout (1).
2. Specify the ID of the monitor where you want to open this layout (2).
3. Select the user roles, this command applies to (3).

Starting export

Rus

This exports a snapshot or video.

To configure, set up the following parameters:

1. **Export agent (1)** - Select Server (aka **Export agent** object) to send recording to (see [Configuring an Export Agent](#)).

2. **Camera (2)** - select a camera for export.
3. **Archive (3)** - select an archive for export.
4. Sets the export interval (**4**).

Option	Description
Image export	Exports a snapshot with the time stamp identical to the start time of action. Important! The image cannot be exported if the video camera does not have an archive.
Time schedule	You need to select a time schedule. Exports images from within time schedule. Video recording interval - [Beginning of the specified time slot; the end of the specified time slot]
During	You should set the export duration in HH: MM: SS. The starting point of the exported video is the command start. End point is defined on the basis of the specified duration - (Interval [command start; command start + duration]).
Finish after	Select one or more events that will trigger export stop. The starting point of the exported video will be the command start, the end point - the moment of receiving any these events.

5. You can click the  button to add additional parameters:
 - a. File name (**6**).
 - b. Comments superimposed as captions over the exported video (**7**).
 - c. **Offset (8)**. It is the time period before the starting time of the exported video. In the case, the length of the exported video is [start action - (duration + pre-recording time); start action - pre-recording time].

Start replication

Rus

This command starts the replication process.

To configure the command, perform the following:

1. Configure on-demand replication if replication is performed from the archive (see [Configuring data replication](#)). To replicate from the on-board storage (SD card or other storage embedded in the video camera), enable the corresponding object ([The Embedded Storage object](#)).
2. Select a video camera or a group of cameras to replicate (**1**).

3. Select an archive file to which video recordings will be replicated (2).
4. Select the replication period (3).

Option	Description
Entire period	All missing video recordings made prior to the command start time will be copied.
Time schedule	Select a time schedule (see Creating schedules). All recordings made according to the time schedule settings for the last 24 hours prior to the command start time will be copied.
Duration	Set the replication duration in HH:MM:SS. Video recordings from the period [start action, start action + duration] will be copied. An additional Buffer parameter can be specified as needed (see 5).
Finish after	Select one or more end events. All video recordings between the start point (when the action starts) and the end point (when the event is received) will be copied. Important! Replication will not start until the end event is received.

5. Specify **Offset**(4), if you specified **Duration** for replication. Video recordings from the period [start action - offset, start action + duration - offset] will be copied.

To run replication on schedule (corresponding to **Time schedule 1**), configure the macro as follows:

Audio notification

Rus

Depending on configuration of the **Speaker** object, the sound alert can be triggered on the Server or on all connected Clients (see [The Speaker Object](#)).

To configure the action, set up the parameters:

1. Select the speaker for audio alerts (1).

2. Configure a condition that will cancel the alert. Recording may be stopped:
 - a. after a given time (2),
 - b. after any of the selected IF events occur (3).

E-mail notification

Rus

This sends emails to the pre-set addresses. Exported videos or snapshots can be attached.



Attention!

Connection to AxxonCloud is required to receive alerts by email (see [AxxonCloud Setup and Operation](#)).

To configure e-mail notification:

1. **E-mail (1)** - select the system object for email notifications when a macro starts.

2. Enter e-mail addresses of anyone who should be notified (2).



Note

Several email addresses can be specified. Separate them with semicolon (;)



Note

Notifications will be sent at the address you specified when configuring the **E-mail Message** object (see [The E-mail Object](#)).

3. **E-mail subject (3)** - select the the subject field for email notification .
4. **E-mail text (4)** - enter the text for email notification.
5. If necessary, you can attach exported videos or snapshots to your message. Click to add and configure additional parameters. Configuration of these parameters is identical to configuration of export (see [Starting export](#)).



**Note**

If the **Period** is not specified, the snapshot is sent. You can set the format of video / snapshot export in the Export agent settings (see [Configuring an Export Agent](#)).

The E-mail Object

Rus

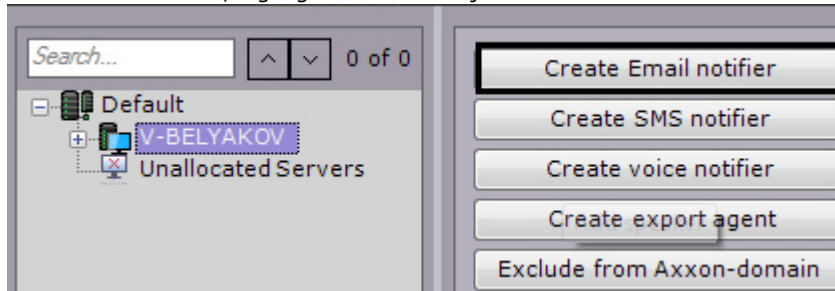
The **E-mail** object is used to configure electronic messages which can then be sent to a user as an automatic response when a detection tool is triggered.

Creating the E-mail Object

Rus

To create an **E-mail** object, you must perform the following steps:

1. In the list of devices, highlight a **Server** object and click the **Email notifier** button.



2. Click the **Apply** button.
3. When you do this, an **E-mail** object appears in the list of devices.

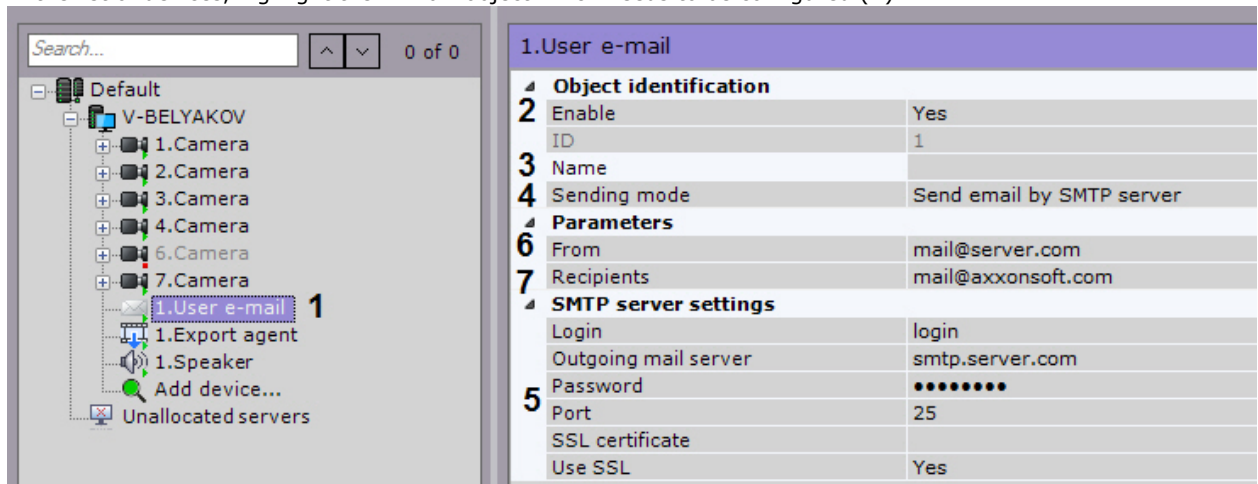
Creation of the **E-mail** object is now complete.

Configuring the E-mail Object

Rus

To configure an **E-mail** object, you must perform the following steps:

1. In the list of devices, highlight the **E-mail** object which needs to be configured (1).



2. Activate the **E-mail** object (2) by selecting **Yes** in the **Enable** list.
3. In the **Name** field (3) enter the desired name of the **E-mail** object.
4. Select the mode for sending e-mail alerts: through AxxonCloud or through the specified SMTP server (4).

**Attention!**

To send alerts via AxxonCloud, you should connect to it (see [AxxonCloud Setup and Operation](#)).

AxxonCloud has a limit of 10 messages a day.

5. Configure the SMTP server, if this mode has been selected (5):
 - a. In the **SSL certificate** field, specify the path to the SSL certificate file, if you use this protocol.
 - b. If you need to use an SSL-encrypted connection when connecting to the outgoing mail server, select **Yes** from the **Use SSL** list.
 - c. In the **Name** field, enter the name of the user account used to send messages on the outgoing mail server.
 - d. In the **Password** field, enter the password for the user account on the outgoing mail server.
 - e. In the **Port** field, enter the number of the port used by the outgoing mail server.

- f. In the **Outgoing mail server** field, enter the name of the outgoing SMTP mail server.
- g. In the **From** field, enter the e-mail address from which the messages will be sent (**6**).
6. Enter e-mail addresses of anyone who should be notified (**7**).



Note

Several email addresses can be specified. Separate them with semicolon (;)

7. Click the **Apply** button.

Configuration of the **E-mail** object is now complete.

Checking E-mail Notification

Rus

To check e-mail notification from an **E-mail** object, send a test message by clicking the **Test** button.

1.User e-mail

Object identification

Enable	Yes
ID	1
Name	

Parameters

Recipients	mail@server.com
------------	-----------------

Name

Email notifications object name.

Test

When you do this, the following message is sent to the e-mail address indicated in the **To** field (see the section [Configuring the E-mail Object](#)): "Test message"



Note

If the recipient does not receive the message, make sure that the settings of the **E-mail** object have been properly configured

SMS notification

Rus

To configure the action, set up the parameters:

1. **Modem (1)** - select the **SMS** object for SMS notifications when a macro starts.

Send SMS

Modem: **1**

Message text: **2**

Phone number: **3**

2. **SMS text (2)** - enter the SMS text for SMS notifications.
3. Enter the phone numbers of anyone who should be notified (**3**).

Note
Several phone numbers can be specified. Separate them with semicolon (;).

Note
Notifications / alerts will also be sent at the phone numbers you specified when configuring [The SMS Object](#)

The SMS Object

Rus

The **SMS** object is used to configure SMS messages which can then be sent to users as an automatic response when a detection tool is triggered.

Note
If a USB modem is used to send SMS messages, use the modem utility from the modem software bundle. It will unlock the modem for correct operation

Procedure of configuring SMS notifications

Rus

To configure SMS notifications:

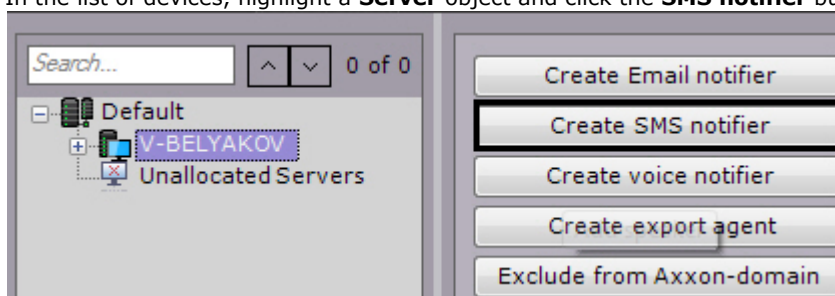
1. Stop the Server.
2. Connect a modem and, in the utility supplied with the modem, wait for the signal level to be determined.
3. Make sure that the number of the SMS center is shown. Do not connect to the Internet.
4. Start the Server and Client. Create and configure an **SMS** object.

Creating the SMS Object

Rus

To create an **SMS** object, you must perform the following steps:

1. In the list of devices, highlight a **Server** object and click the **SMS notifier** button.



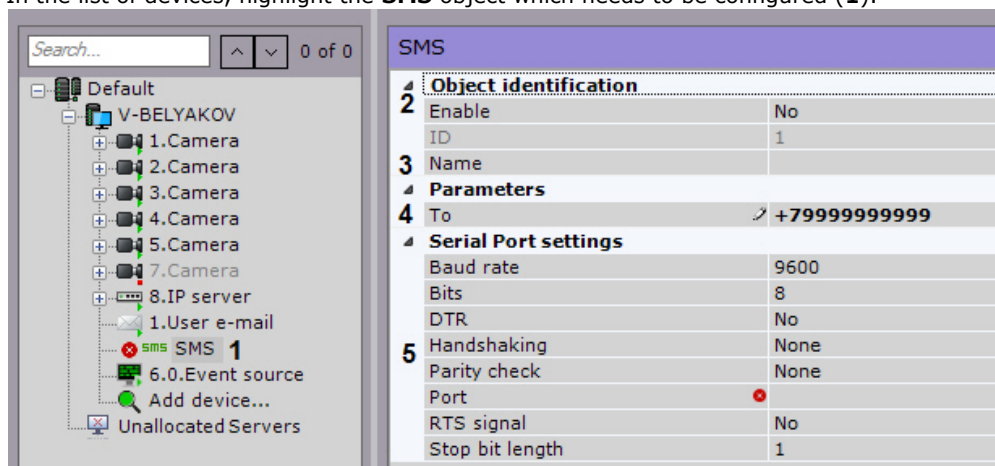
2. Click the **Apply** button.
3. When you do this, the **SMS** object appears in the list of devices.

Creation of the **SMS** object is now complete.

Configuring the SMS Object

To configure an **SMS** object, you must perform the following steps:

1. In the list of devices, highlight the **SMS** object which needs to be configured (1).



2. Activate the **SMS** object (2) by selecting **Yes** in the **Enable** list.
3. In the **Name** field (3) enter the desired name of the **SMS** object.
4. In the **To** field (4), enter the cellular telephone number, in international format (+<country code>xxxxxxxxx), to which messages will be sent.
5. In the **Serial Port settings** group (5), indicate the port settings used to connect to the GSM modem by which SMS messages will be sent:
 - a. If you need to use a DTR control signal, select **Yes** from the **DTR** list.
 - b. In the **Bits** field, enter the number of bits in the byte of a data packet.
 - c. In the **Stop bits length** field, enter the number of bits in the stop bit of a data packet.
 - d. If you need to use a parity check when transmitting data, select the desired method of parity check from the Parity list.
 - e. From the **Port** list, select the serial port used to connect to the GSM modem.
 - f. If hardware control of the serial port data protocol is enabled (see step 5.8) and you need to use an RTS signal, select **Yes** from the **RTS signal** list.
 - g. Select the speed for data transmission via the GSM modem from the **Baud rate** list.
 - h. If you need to control the serial port data protocol, select the desired method of control from the **Handshaking** list: hardware (RTS/STS), software (XOn/XOff), or alternating.
6. Click the **Apply** button.

Configuration of the **SMS** object is now complete.

Checking SMS notifications

To check SMS notifications from an SMS message object, send a test message by clicking the **Test message** button.

When you do this, the following message is sent to the mobile number indicated in the **To** field: "This is a test message to check Axxon Next SMS notification."



Note

If the recipient does not receive the message, make sure that the settings of the SMS object have been properly configured

Start an external program on clients

This starts an external program on your Axxon Next client.

The external program is started on all Clients that are connected to the domain.



Attention!

The external program is not started on a computer that is an Axxon Next Server, if the Client is not running on the computer when a macro is triggered.

To configure, do the following:

1. On all Clients, enter the path to the program's executable / run file (1). You can specify a network path. You can also add command-line options.

2. Select the user roles, this command applies to (2).



Attention!

To run the program, you need administrator permissions. You have to disable UAC (in OS *Windows Server 2012* versions, 8, 8.1 and you need to edit [the registry](#)), or start *Axxon Next* with administrator rights

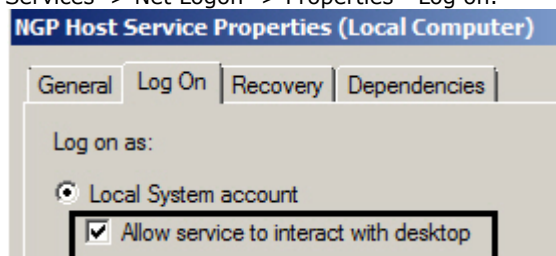
Starting an external program on Servers

Rus

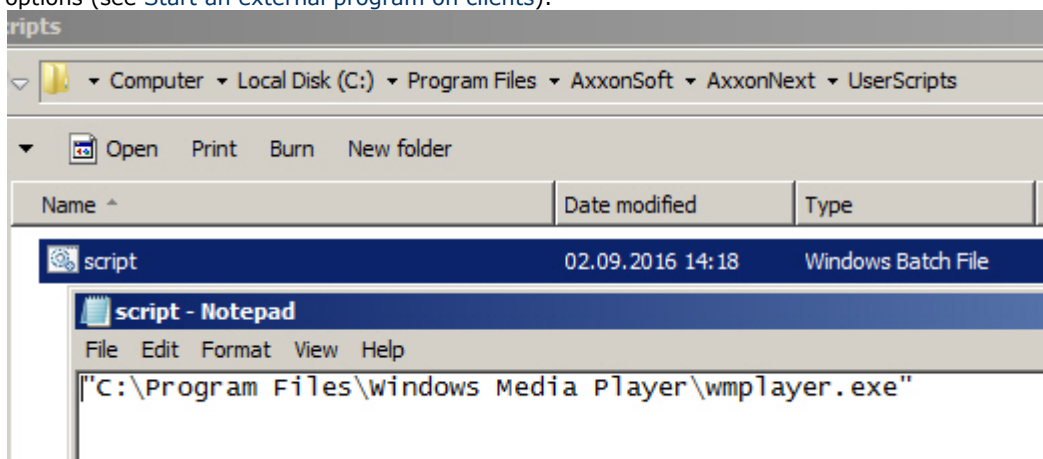
This starts an external program on your Axxon domain.

To configure, do the following:

1. Allow interaction of the server **NGP Host service** with the desktop: Start > Control Panel > Administrative Tools > Services > Net Logon -> Properties - Log on.



2. Add to folder <Directory where Axxon Next is installed>\UserScripts\ one or more .bat files with the application startup command.
The command should include a path to the executable file. You can specify a network path and command-line options (see [Start an external program on clients](#)).



3. Select the server where you want to run the program (1).

4. Select a bat. file with the run command (2).

Start / stop slideshows of layouts.

Rus

These actions start and stop the slideshow of the layouts on the operator's monitor (see [Selection and Slideshow of Layouts](#)).

Start slideshow Monitor: Start slideshow
Stop slideshow Monitor: Stop slideshow

Enable / Disable detection

Rus

This enables or disables the selected detection tool in the system.

To configure this action, do as follows:

1. Select the created detection tool (1).

Start or stop detector		
28.Motion detection		
Detector	1	28.Motion detection
Start or stop	2	Disable

2. Select the desired command (2).

Cyclical macros

Rus



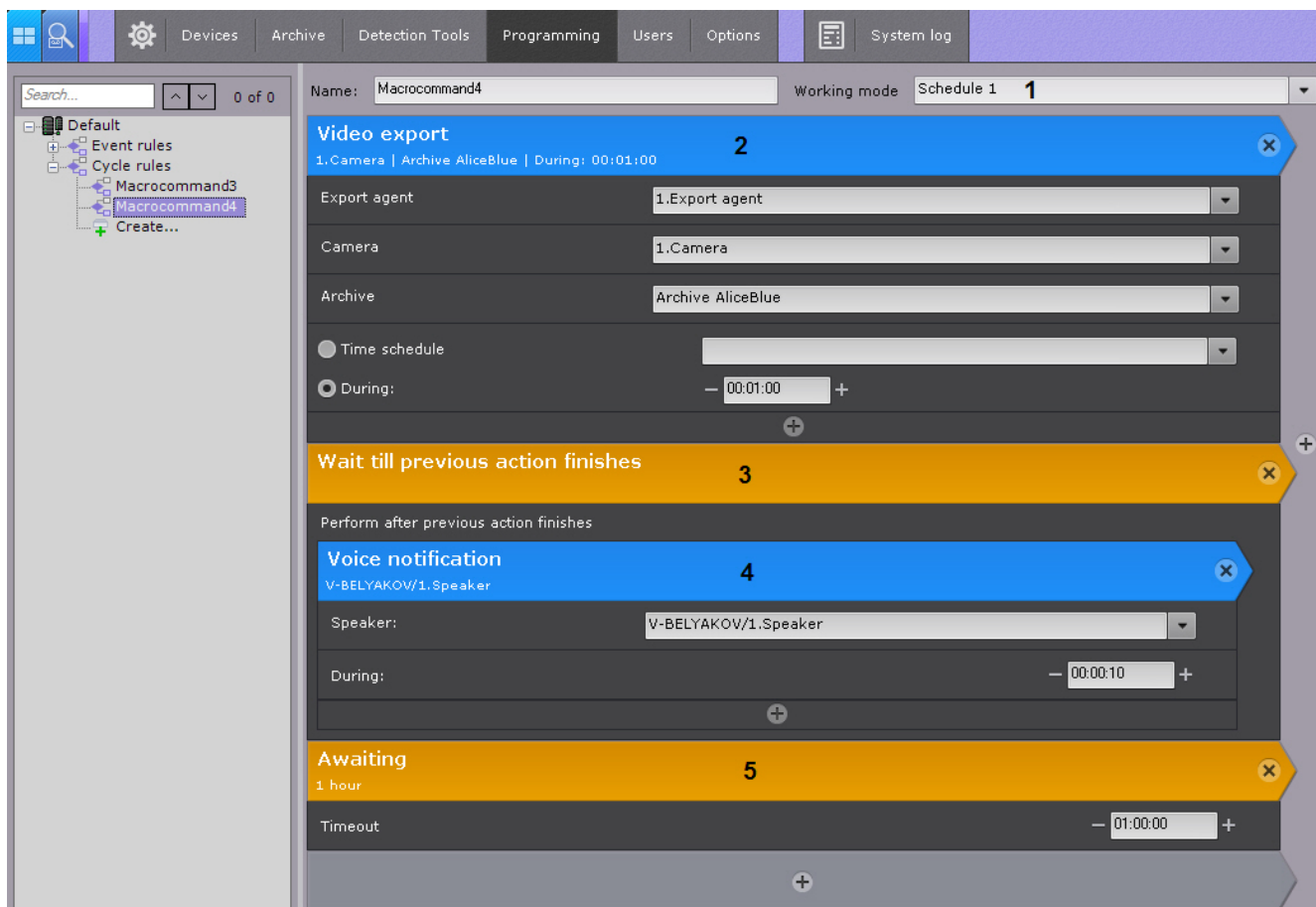
Attention!

If you do not have the **Wait** command in a cyclic macro, the time-out between cycles is 1 second.

Example 1. This macro runs continuously (1), starting from the moment that you saved it.

The cycle consists of alternating layouts with marked cameras (2) and layouts with alarmed cameras (4). Interval - 1 minute (3 , 5).

Example 2. This macro runs continuously within the time schedule 1 (1).



Every hour (5) video from camera 1 is exported (2). After the export is completed (3), an audio alert is sounded (4).



Wait for timeout

Wait till previous action finishes

Configuring user permissions

Rus

In Axxon Next, every user has permissions based on their role.

By default, there is one role (**admin**) and one user (**root**). The **root** user belongs to the **admin** role and has rights to configure all components of the video surveillance system. To add a user with individual permissions, create a new role with the necessary permissions and then create a new user account.



Note

Only **admin** users can create other admin role users.

Roles and users can be added and configured in **Settings**, on the **Permissions** tab.

There are two types of users: local (stored in the Server database) and **LDAP** (see [Connecting LDAP users](#)).

To enable LDAP users, you must configure access to LDAP catalogs.

The actions of all system users are recorded in the system log (see [The System Log](#)).



Note

The following user actions are logged:

- Client started/quit
- Settings for hardware, archive, or detection tool are deleted/added or changed
- Macros are created, deleted, or changed
- User permissions are added, deleted, or changed
- Camera alarm is initiated
- Camera is armed/disarmed
- Snapshot or video is exported

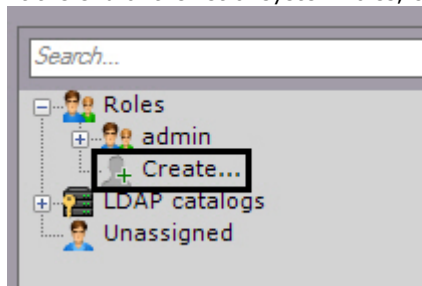
Creating and configuring roles

Rus

A role is intended for assigning a group of users individual rights and permissions for administration, management and/or monitoring of individual components of Axxon Next.

To register a new role, perform the following:

1. At the end of the list of system roles, click the **Create** link.



The new role is added in the system, with its properties displayed on the right side.

2. Enter a name for the role in the corresponding field (1).

Role		
1	Name	Role
2	Control priority	Minimum level
3	Map management	View only
4	Access to Functions	
	Access to Search in archive mode	No
	Adding camera to layout in monitoring mode	No
	Adding/editing presets	No
	Alarms processing	No access
	Allow comments in archive	No
	Export	No
4	Layouts editing	No
	Minimize to taskbar	No
	Operating domain	No
	Permission to access via WebUI	No
	Show captions	No
	System log	No
	Unlock camera menu button	No
5	Access to Settings	
	Archive settings	No
	Detection settings	No
	Device settings	No
5	Options settings	No
	Programming setup	No
	Show error messages	No
	User Permission settings	No
6	Access to Tabs	
6	Layouts tab	No
7	Time schedule management	
7	Time schedule	
8	Video walls management	
8	V-BELAYKOV	No

V-BELAYKOV	
1.Camera 1	No access
3.Camera 2 (-)	No access
4.Camera 3 (-)	No access
5.Camera 4	No access
6.0.Camera	No access
6.1.Camera	No access
6.2.Camera	No access
6.3.Camera	No access
Архив AliceBlue	No access

3. Select priority of PTZ cameras control for users with the current role (2).
4. Select priority of map access for users with the current role (3).

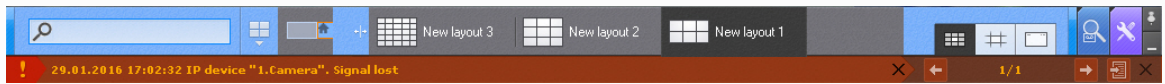
Access level	Description
View only	You can only view maps
View/move/scale	You can move and scale maps
Full access	All options available

5. Set access permissions for Axxon Next features (4). Access can be restricted to such features as:
 - a. Adding a camera to a layout in live video mode.
 - b. Adding and editing presets for PTZ cameras.
 - c. Context menu of a video camera in a viewing tile.
 - d. Editing layouts.
 - e. Archive search.
 - f. Access to the Web server.
 - g. Alarms Management.
 - h. User comments for recorded video.
 - i. Minimizing the Client to the system tray.
 - j. Viewing the system log.
 - k. Managing an Axxon domain.
 - l. Exporting snapshots and video recordings.
 - m. Displaying captions.
6. Configure access rights to the **Settings** tabs and to system error messages (5).



Note

Error messages are displayed in real time in the **Layouts** interface



7. Set access permissions for **Layouts** in Axxon Next (6).
8. If you need to grant the users in this role permissions only for a certain period of time, select a Time schedule (7) from the list. These users will not be able to use their permissions outside of the selected time schedule.
9. Configure access to video wall management by setting permissions for each Server on an Axxon domain (8). A user who has management permissions for the video walls of a particular Server can manage the video walls of any Client connected to that Server.
10. Set permissions for access to hardware and archives on an Axxon domain (9).

Device	Access permissions	Description
Video camera	No access	You cannot access the device.
	Live in Armed mode	You can view video from the camera only when the camera is armed.
	Live	You can live video from the camera. Other functions and device configuration are not available.
	Live/Archive	You can view live and recorded video from the camera. You cannot arm/disarm/configure the camera.
	Live/Archive/Control	All functions available. You cannot configure the device.
	Live/Archive/Control/Configure	All functions and settings available.
Microphone	No access	The user is unable to listen to live sound from the video camera. The user is unable to listen to sound recordings from the archive.
	Live Audio	The user is able to listen to live sound from the video camera (the microphone must be turned on). The user is unable to listen to sound recordings from the archive.
	Live Audio and Archive	All functions are accessible
Telemetry	No access	The user cannot control pan/tilt/zoom
	Control	The user can control pan/tilt/zoom
Archive	No access	Access is not provided to this archive
	Full access	Archive is available for all functions

You can configure group rights for accessing devices and archives of a particular Server. To do so, select an access level for the **Server** object. Depending on the level that is chosen, particular access levels are automatically configured for the devices and archives of the relevant Server (see table).

Server access level	Device/archive	Device/archive access level
Custom	-	Access levels for devices and archives are set manually
No access	-	No access to devices and archives
Live in Armed Mode	Video camera	You can view armed cameras
	Microphone	Live Audio
	Telemetry	Control
	Archive	Full access
Live	Video camera	You can view live video
	Microphone	Live Audio
	Telemetry	Control
	Archive	Full access
Live/Archive	Video camera	You can view live and recorded video
	Microphone	Live Audio and Archive
	Telemetry	Control

	Archive	Full access
Live/Archive/Control	Video camera	All functions. Settings not available.
	Microphone	Live Audio and Archive
	Telemetry	Control
	Archive	Full access
Live/Archive/Control/Configure	Video camera	All functions + settings available.
	Microphone	Live Audio and Archive
	Telemetry	Control
	Archive	Full access

11. Click the **Apply** button to save the role.

The new role has now been created.

To delete a role, perform the following:

1. Select the role to delete.
2. Click **Delete**.



Note

You cannot delete a role if the user through which you logged into the system belongs to that role.

3. Click the **Apply** button.

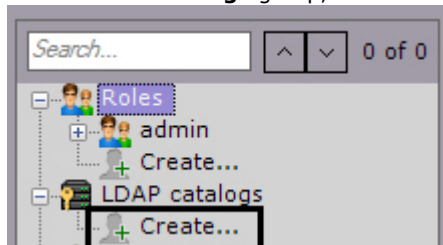
The role has now been deleted. All users under this role will also be deleted.

Connecting to an LDAP catalog

Rus

To connect to an LDAP catalog:

1. In the **LDAP Catalogs** group, click **Create**.



An **LDAP** object is added in the system. On the right, a panel displays configuration settings for the **LDAP** catalog.

2. Enter a name for the catalog in the appropriate field (1).

LDAP settings

1 Name: LDAP 1

2 Server name or IP address: 192.168.33.77 Port: 389 3

4 Base DN: dc=example,dc=com

5 User: cn=admin,dc=example,dc=com

Password: *****

6 ☐ Use secure connection (SSL)

7 Search filter: (objectClass=person)

10 LDAP templates: [Microsoft Active Directory](#) [OpenLDAP](#)

8 Login attribute: cn 9 DN attribute: entrydn

3. Enter the address of the LDAP catalog server (2) and port (3).

4. In the **Base DN** field, enter the Distinguished Name of the branch from which to start search (4).
5. Enter the name of a user who has write access to the base DN, in LDAP format (RDN + DN) with password (5).
6. If encryption (SSL) is required for connecting to the LDAP server, select the corresponding check box (6).
7. In the **Search filter** field, enter a string for filtering catalog entries (7).
8. In the **Login attribute** field, enter the field from which the user's login is obtained (8).



Note

To search users by attribute **sAMAccountName**, enter their names in small letters - **samaccountname**

9. In the **DN attribute** field, enter the field from which the user's DN is obtained (9).



Note

To set a login and DN attribute, you can use Microsoft Active Directory and OpenLDAP LDAP templates. To use a template, click the relevant link (10).

10. Click the **Apply** button.

The LDAP catalog is now added to the system.

To test the connection, click the **Test connection** button. If connection is successful, the form on the lower part of the screen displays information about the catalog users. Otherwise, an error message appears.

cn	entrydn
alexey dyndalev	cn=alexey dyndalev,ou=qa,ou=Groups,dc=example,dc=com
andrey vasiliev	cn=andrey vasiliev,ou=dev,ou=Groups,dc=example,dc=com
danil serov	cn=danil serov,ou=dev,ou=Groups,dc=example,dc=com
ilya smirnov	cn=ilya smirnov,ou=it,ou=common,ou=Groups,dc=example,dc=com
name1 surname1	cn=name1 surname1,ou=load,ou=Groups,dc=example,dc=com
name2 surname2	cn=name2 surname2,ou=load,ou=Groups,dc=example,dc=com
name3 surname3	cn=name3 surname3,ou=load,ou=Groups,dc=example,dc=com

Working with users

Rus

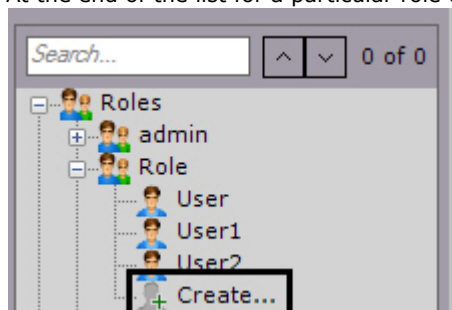
In Axxon Next, multiple users can be assigned to the same role. A user will be granted the permissions for administration, management and/or monitoring that are indicated in the settings of the user's role. When adding a new user, the name and password necessary for that user to log in to the system are specified.

Creating local users

Rus

To add a new local user:

1. At the end of the list for a particular role click the **Create** link.



The new user is then added to the system, and the permissions configuration panel for that user opens on the right.

User	
Basic	
1 Name	User
Additional	
Comment	
Basic	
2 Date of creation	5/10/2017 4:25 PM
Role	admin
User e-mail	
LDAP	
Catalog	
Security	
3 Password	
Simultaneous connections limitation	
4 Maximum number of mobile app connections	
Maximum number of web app connections	

2. Enter a user name (1).
3. Select the role for the user (2).
4. Enter the password in the **Security** configuration group (3).
 - a. Click . The **Change password** window opens.

Change password

New password:

Confirmation:

OK Cancel

- b. Enter the user's assigned password in the **New password** field.
 - c. Retype the assigned password in the **Confirmation** field.
 - d. Click **OK** to save the settings.
5. If you want to limit the number of connections for a user through Web or mobile clients, do as follows: specify a maximum number of connections (5).



Attention!

The limit on the number of connections will take effect after the server is restarted (see [Launching and Closing the Axxon Next Software Package](#)).

6. If necessary, enter an e-mail address and additional information about the user in the **E-mail** and **Comment** fields.

User3	
Basic	
Name	User3
Additional	
Comment	
Basic	
Date of creation	03.02.2016 11:33
Role	Role
User e-mail	
LDAP	
Catalog	
Security	
Password	

7. Click the **Apply** button to save the settings.

The user has now been added and assigned a role.

Creating LDAP connections

Rus

When adding an LDAP user, the user's login is selected from the specified LDAP catalog. No password is required.

To add an LDAP user:

1. Add the user to the system (see [Creating local users](#)).
2. Select the LDAP catalog that contains the user (**1**, see [Connecting to an LDAP catalog](#)).

User3

Basic	
Name	User3
Additional	
Comment	
Basic	
Date of creation	03.02.2016 11:33
Role	Role
User e-mail	
LDAP	
1 Catalog	LDAP 1
2 Login	alexey dyndalev

3. In the **Login** field, click the  button (**2**).
A window with all users of the LDAP catalog opens.

Setting LDAP login

alexey dyndalev **1**

cn 2	entrydn
alexey dyndalev	cn=alexey dyndalev,ou=qa,ou=Groups,d...

3

OK Cancel

4. Find a user via search (**1**) or manually select a user from the list (**2**). Click **OK** (**3**).
5. Specify the other user settings (see [Creating local users](#)).
6. Click the **Apply** button to save the settings.

The user has now been added and assigned a role.

When an LDAP user connects, the user's login and password as entered in the respective fields are used. The login and password in the LDAP directory are not used when connecting to the Server.

Synchronize LDAP users

Rus

To add users from an LDAP directory to a specific role, do as follows:

1. Right-click the role to which you want to add users.

Search... ^ v 0 of 0

Roles

- admin
- LDAP catalogs

Synchronize with LDAP

LDAP 1
LDAP 2

2. Choose **Synchronize with LDAP** and then the required LDAP directory (see [Connecting to an LDAP catalog](#)).

All users in the selected directory will be added to this role. By default, the user name will match the login in the LDAP directory.

Deleting users

Rus

To delete a user from the tree:

1. Select the user to delete.
2. Click **Delete**.



Note

You cannot delete the user through which you logged into the system.

3. Click the **Apply** button to save the settings.

The user has now been deleted from the tree.

Configuring Layouts

Rus

Axxon Next allows users to configure custom layouts.

Separate layouts are configured for each user of the system. To configure layouts, log into the Server under the appropriate user name and configure the layouts for that user.



Note

Creation, editing, copying, and deletion of layouts are available to users that belong to roles with the **Changing custom layouts** component activated (see [Configuring user permissions](#)).

After you configure a user's layouts, you may want to limit that user's privileges.

Creating and deleting layouts

Rus

Layouts are created based on standard layout types. To create a new layout, click the  button in the context menu and select one of the standard layouts.



This takes you to layout editing mode (see [Switching to layout editing mode](#)).



Note

A new layout is also created when you select a video camera that is not displayed in any previously created layout (see [Objects Panel](#), [Camera Search Panel](#)).

If you do this, layout editing mode does not start and the layout will not be saved.

The newly created layout will be named automatically. You can rename it later.

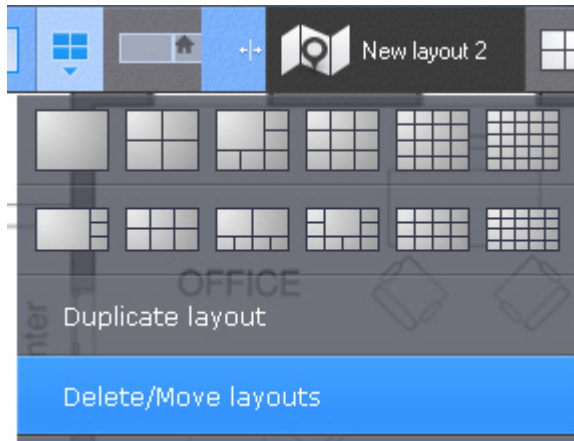
To save the layout, exit layout editing mode and save changes (see [Exiting layout editing mode](#)).

The layout will then be placed at the beginning of the list in the layout panel.

If you do not save changes and exit, the layout will not be saved.

To delete layouts:

1. Select **Manage Layouts** mode in the context menu.



Note
You can not access it in the Layout Editing mode though.

2. Click the  button to delete layouts.
3. Click **Save**.

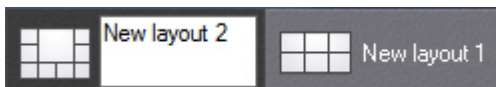
You will exit **Manage Layouts** mode and save changes.

The layouts have now been deleted.

Rename Layouts

Rus

To rename a layout, double left-click and enter a new name.



You can rename layouts in Manage Layouts mode either.

Reorder Layouts

Rus

To reorder layouts in the ribbon:

1. Go to Manage Layouts mode (see [Creating and deleting layouts](#)).
2. Drag & drop layouts
3. Click **Save**.

You have now reordered layouts.

Layout copying

Rus

You can copy existing layouts.

Select the layout that you want to copy. Click the  button to open the context menu and select **Duplicate layout**.



An identical layout is then created.

Note
Layouts cannot be copied while in editing mode

Editing layouts

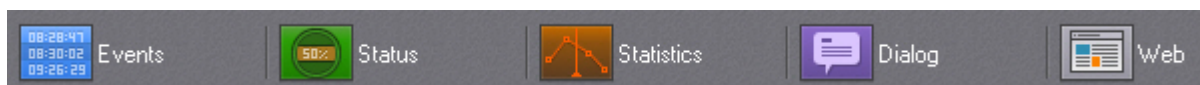
Rus

Every layout consists of cells, which are viewing portals that can hold either video cameras or information boards.

Axxon Next offers 5 types of information boards that can be added to layouts:

1. Events Board.
2. Health Board (for servers and cameras).
3. Statistics Board.
4. Dialog Board.
5. Web Board

Information boards are available on the layouts ribbon in editing mode.



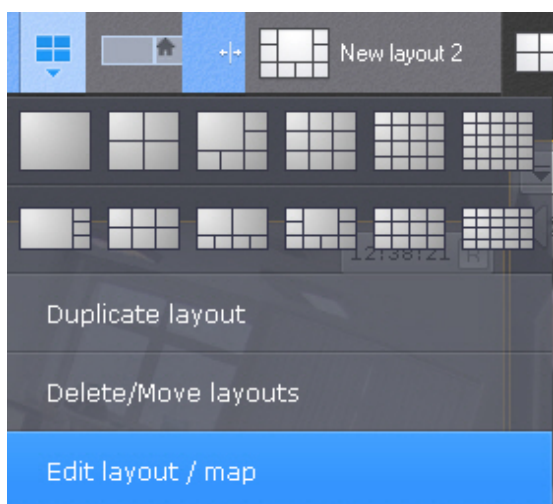
When a camera is added to a cell, a viewing tile appears.

Switching to layout editing mode

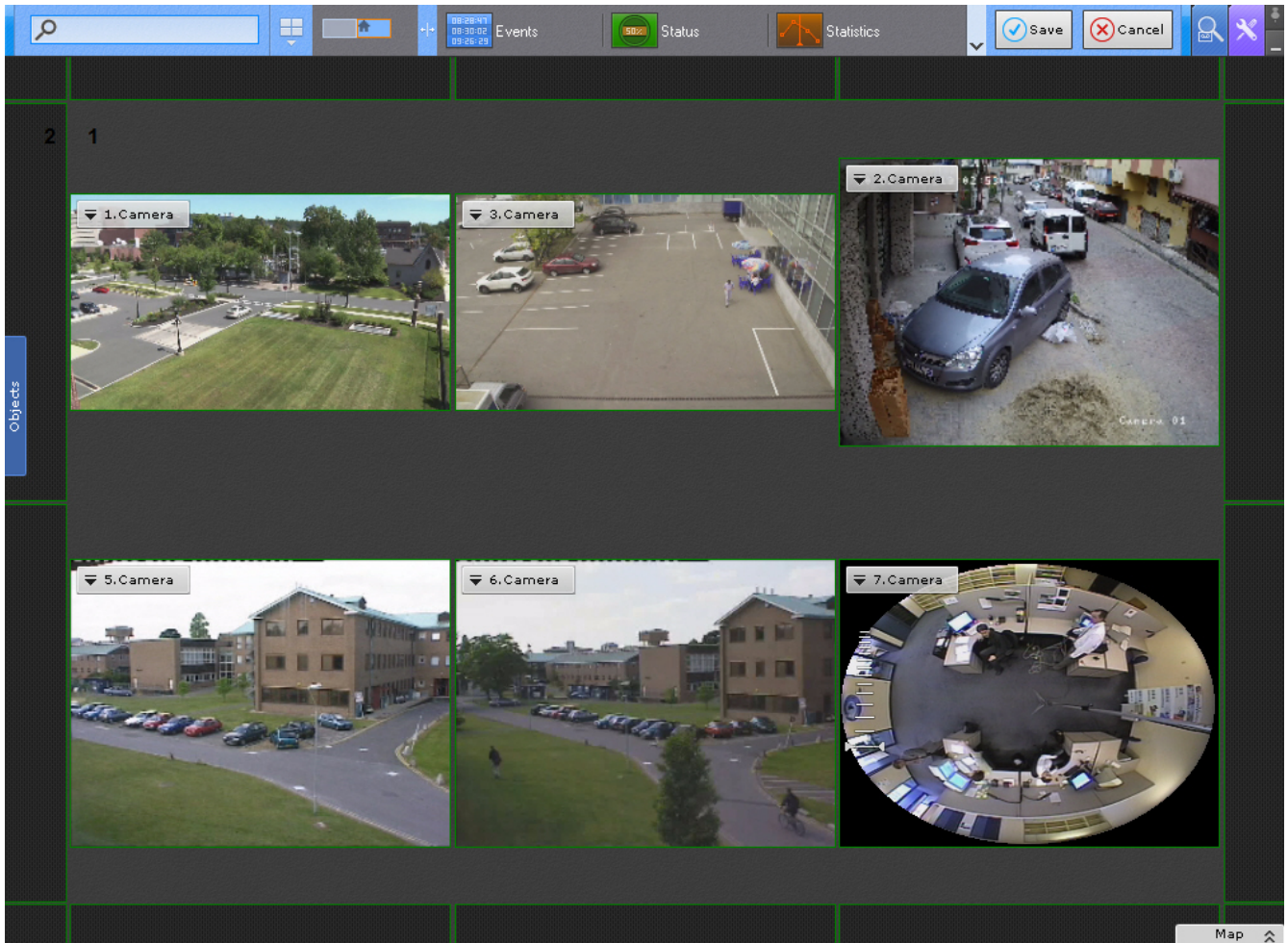
Rus

When you create a layout, you are automatically taken to the layout editing mode. Alternately, you can click the  button on  and select **Edit layout** in the context menu of the layouts ribbon.

Note
To use layout editing mode, you must have required permissions.



In layout editing mode, space is divided by a grid of equal-sized squares for holding viewing tiles (1).



On the edge of the layout there are grid square fragments (2), which are parts of ordinary empty cells and allow adding new cells to the layout (see [Adding new cells to a layout](#)).

Selecting a layout for editing

Rus

To edit a layout, do as follows:

1. Go to the layout you want to change (see [The Layouts panel](#))
2. Switch to the Layout Editing mode (see [Switching to layout editing mode](#))

Otherwise, select a layout for editing in the layouts ribbon. You can also use layout editing mode to create a new layout (see [Creating and deleting layouts](#)) for editing.

Configuring layout cells

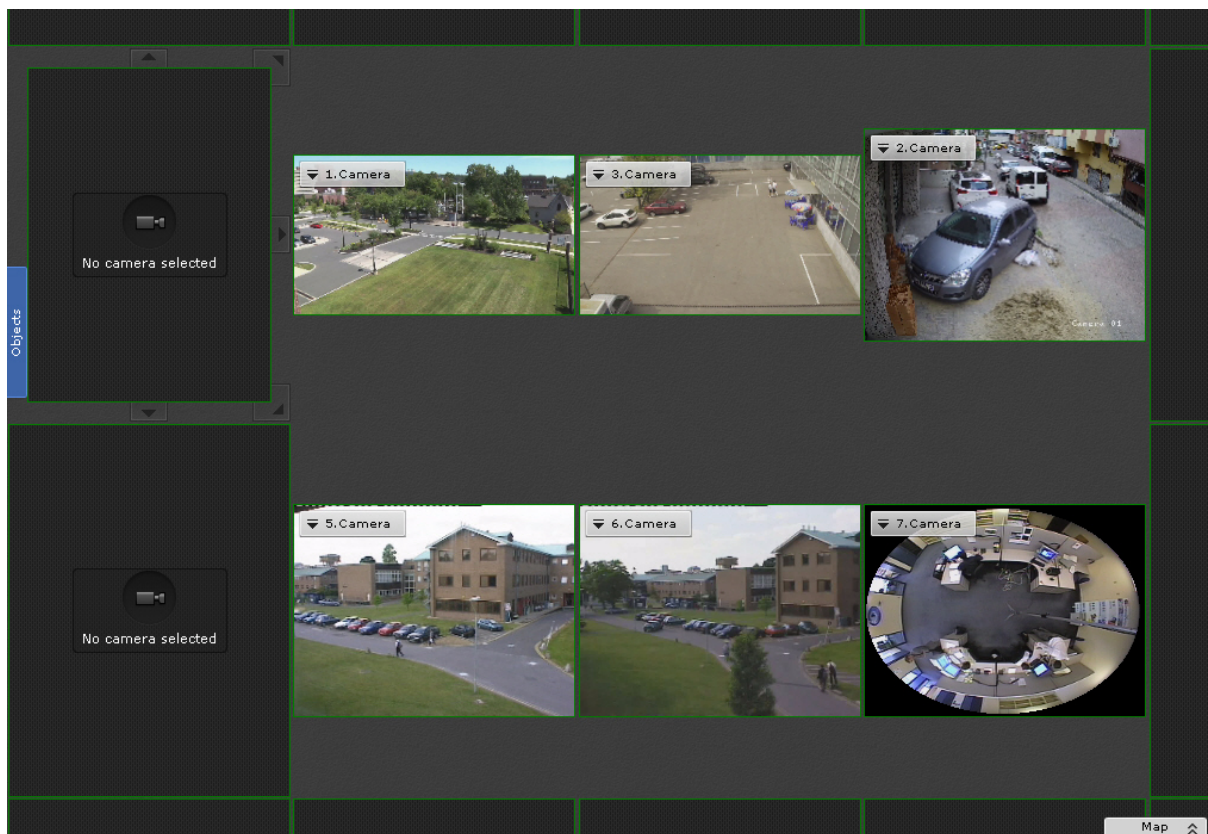
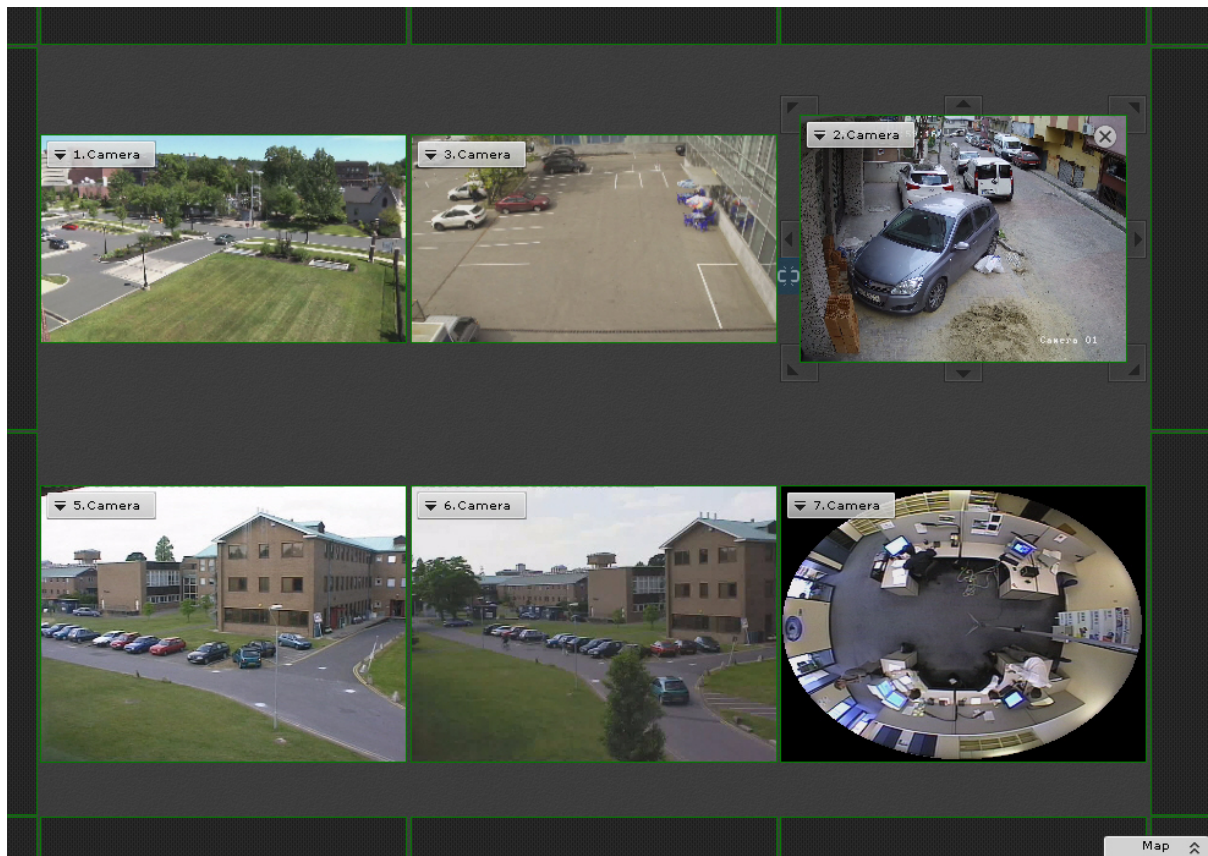
Adding new cells to a layout

Rus

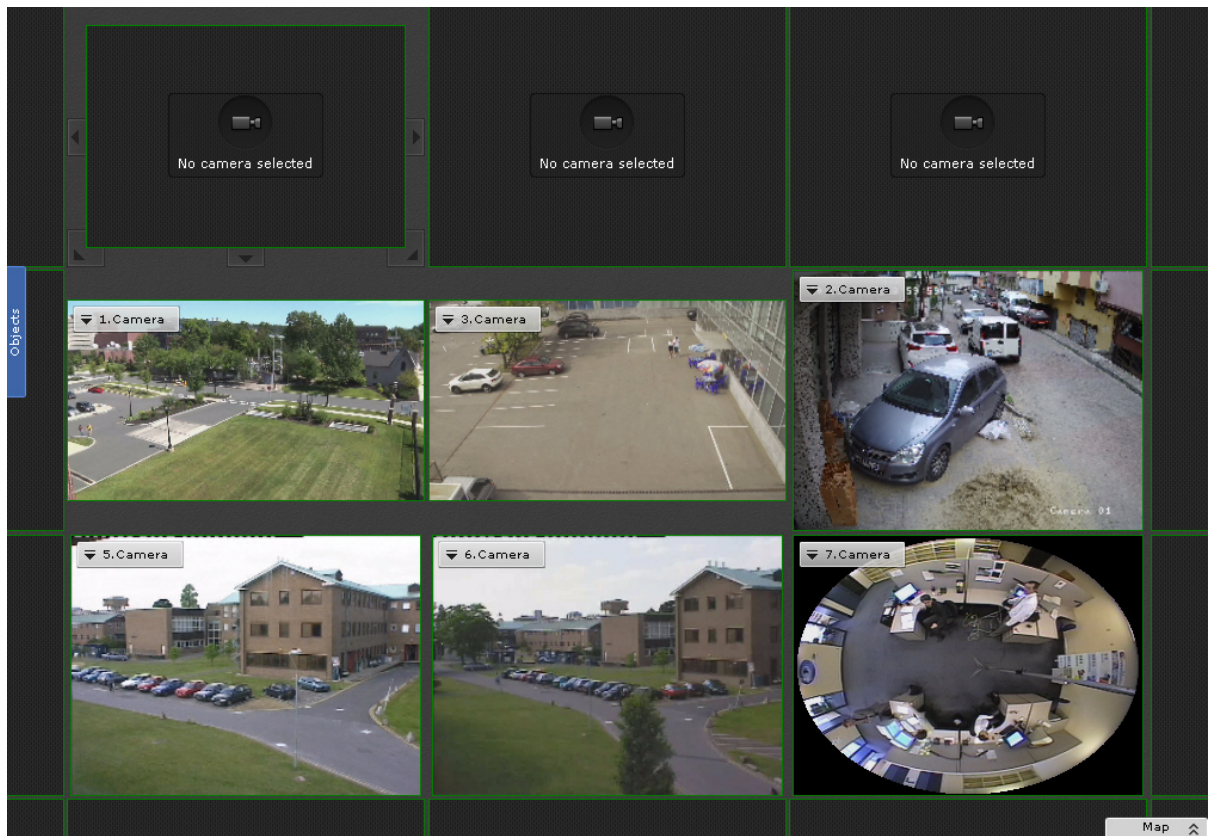
You can add new cells to a layout in one of three ways:

1. Drag a non-empty cell onto a grid square fragment (see [Moving cells](#)).
2. Left-click a grid square fragment and resize it (see [Resizing cells](#)).
3. Left-click a grid square fragment and select a video camera or information board in it (see [Adding cameras to cells](#)).

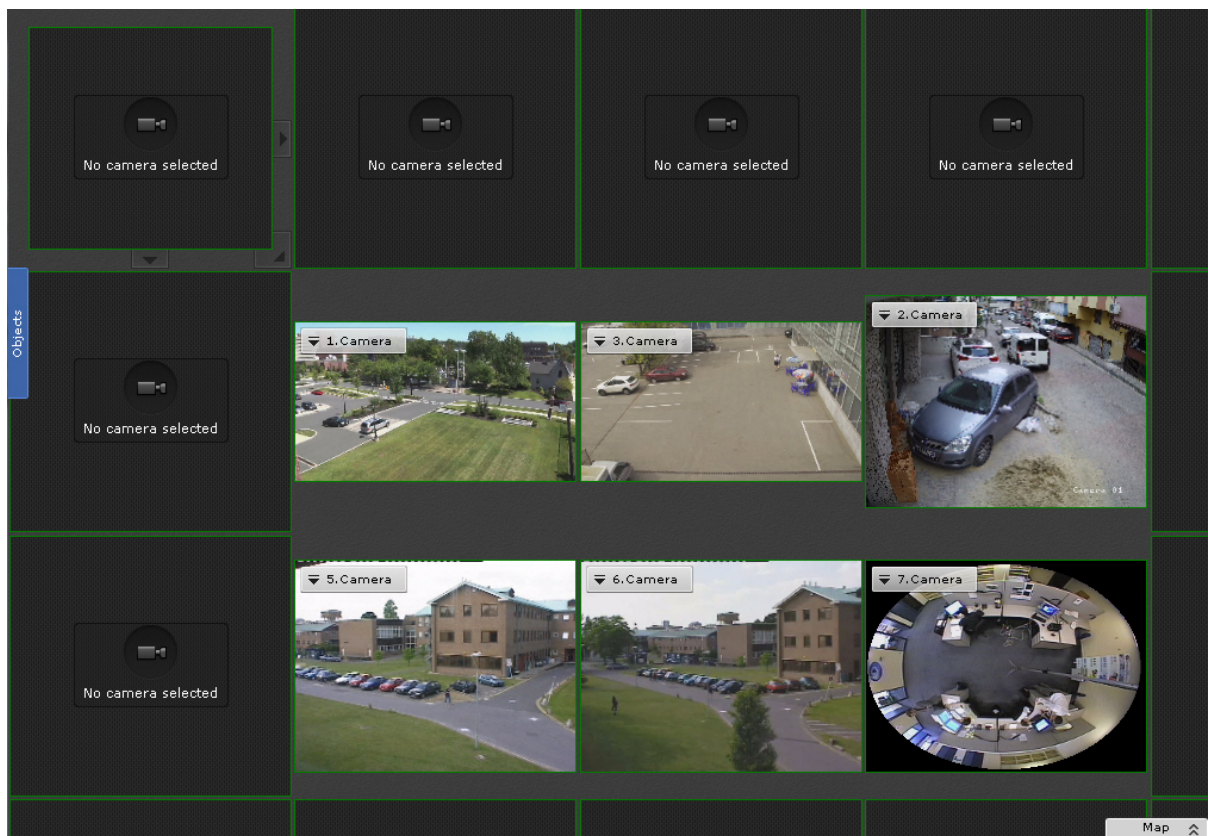
Cells are added in rows. For example, when editing a six-square (3*2) layout, a column of two grid squares is added when a fragment is chosen on the left or right side of the screen.



A row of three squares is added when you select a fragment from the upper or lower part of the screen.



When you select a corner fragment, both a row and column are added.



Resizing cells

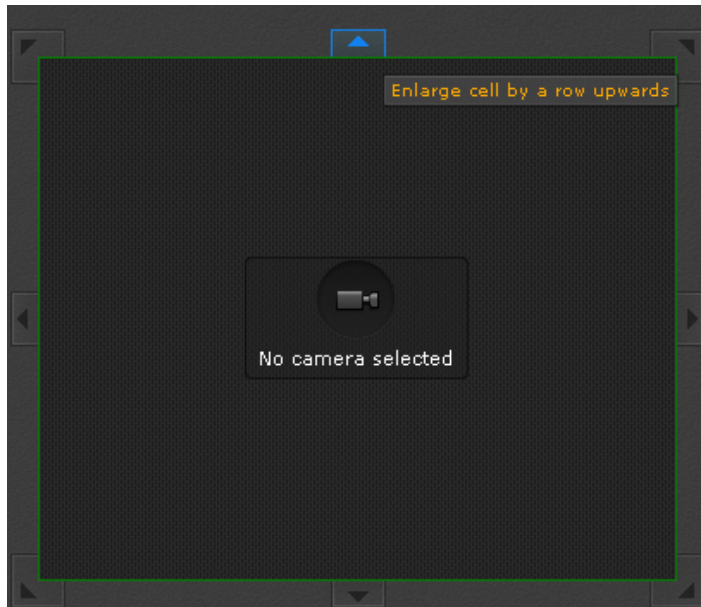
Rus

To resize a cell, use the buttons on its edges.

Button	Action	Button	Action

	Increases the cell by a column to the left and row above		Increases the cell by a column to the right and row below
	Increases the cell by a column to the left		Increases the cell by a column to the right
	Increases the cell by a column to the left and row below		Increases the cell by a column to the right and row above
	Increases the cell by a row below		Increases the cell by a row above

When you point the cursor at any button, a darkened area that shows the size of the cell after resizing is displayed.



You can also select and resize any tile. To resize, click the button on the cell border and expand / contract the cell as you wish. You can resize the cell only in one direction. You cannot resize the cell in two directions with the corner buttons.

If you expand a tile, the neighboring tiles contract and vice versa.



Note

If the cell is in the outermost top / bottom row or left | right column, you cannot resize it by clicking and dragging the borders. You should add an extra cell to the current row or column first



Attention!

If you expand the cell over the next one or several cells, they are deleted.

Moving cells

Rus

To move a cell, left-click the frame of the grid square fragment and drag it to the necessary position.

The cells are then switched: the contents of the previously occupied cell are moved to the location of the cell being moved.

If a cell is moved to a grid square fragment, new cells are added to the layout (see [Adding new cells to a layout](#)).

Adding cameras to cells

Rus

There are two ways to add a video camera to a cell:

1. Using the Objects Panel;
2. Using the Camera Search Panel.

A video camera can be added to an empty cell or to a cell containing an information panel or another video camera.



Note

Cameras from any Axxon-domain can be added to the layout.

Adding a Video Camera Using the Objects Panel

To add a video camera using the Objects Panel, perform the following steps:

1. Switch the cell to the active mode (with a mouse click).
2. Click a video camera in the Objects Panel (see [Objects Panel](#)).

Adding a Video Camera Using the Camera Search Panel

To add a video camera to a cell, perform the following steps:

1. Switch the cell to the active mode (with a mouse click) and select a video camera from the list in the Camera Search Panel (see [Camera Search Panel](#)).
2. Select a video camera from the list in the Camera Search Panel with the mouse pointer and, holding down the mouse button, move the pointer into a cell. Then release the button.

Adding information boards to cells

Rus

You can add information boards to cells in two ways:

1. Activate the cell (by clicking it) and select the information board that you want to add to the cell.
2. Click an information board to select it. Drag the information board to the layout cell and then release the mouse.

You can add an information board to an empty cell or to a cell that contains a camera or other information board.



Note

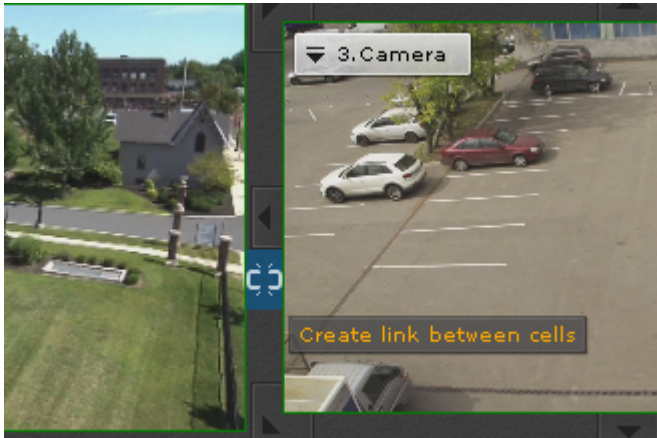
After you add an information board to the cell, you should configure it (see [Configuring information boards](#)).

Linking cells

Rus

You can link cells.

To create a link, select a cell and click the  button on the border. To delete the link, click .



You can create the following links:

1. A viewing tile to a viewing tile. You can link cells from the same row only. This way you can hide cell borders in live view and have a virtually merged FoV from several cameras.



2. An information board to viewing tile. This way you can link adjacent cells, up / down and across. A single

information board can be linked with multiple cameras. If the viewing tile is linked to Event Board, you can click an event and switch to the Archive mode (see [Switching a camera linked to an Events Board to the archives](#)).

All linked cells have a different scaling logic (see [Scaling the Viewing Tile](#)).

Clearing cells

Rus

To remove an information board or camera from a cell, in the upper-right corner, click the  button.

If clearing cells in a row or column removes content from all of these cells, the entire row and/or column is removed from the layout.

Configuring viewing tiles

Selecting default functions for viewing tiles

Rus

Default values for video stream quality, object tracking, autozoom, and video display (contrast, focus, deinterlacing and flip) functions can be set for viewing tiles.

After the user switches to a layout, these functions are activated automatically.

To set a function as a default one, activate it during layout editing mode (see [Selecting video stream quality in a viewing tile](#), [Tracking objects](#), [Autozoom](#), [Video image processing](#)) and save changes before exiting the mode.

Selecting the default video mode for a camera

Rus

By default, when you switch to a layout, all video cameras are in real-time / live viewing mode.

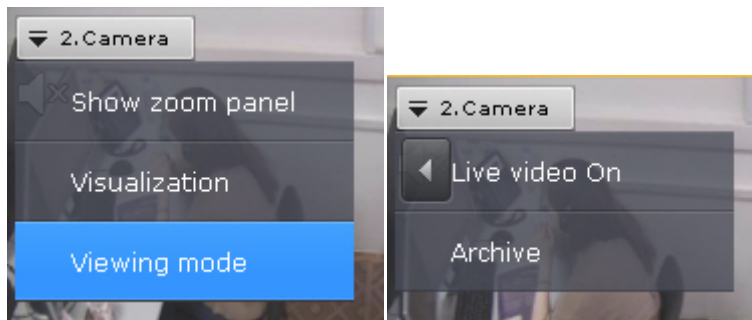
You can select a default video mode for each camera: real-time mode or archive mode.



Note

This function is not available if the camera is not attached to an archive.

To select a default video mode, in the context menu of the viewing tile, select **Viewing mode** and select the necessary mode.



If archive mode is selected, when you switch to the layout, the camera is immediately in archive mode.

Moving sensor and relay icons in a viewing tile

Rus

You can move sensor and relay icons in a viewing tile.

To do so, left-click the sensor or relay icon and drag it to the place in the viewing tile where you want to put the icon.

Configuring default zoom levels (the Fit screen function)

Rus

The Fit screen function allows displaying a viewing tile by default so that it occupies all of the available space on the screen (full screen). The default zoom level for full screen display is calculated automatically as a minimum zoom value that allows filling the available screen space with the viewing tile contents.

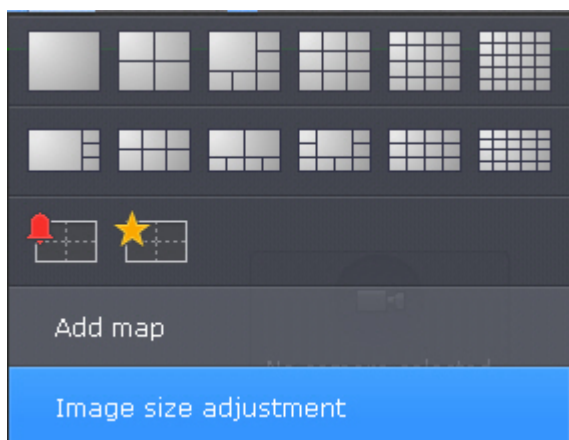
To enable the Fit screen function for a specific video tile, display the digital zoom controller (see [Digitally Zooming Video](#)

[Images](#)), click the  button on it, and save changes when exiting editing mode.

Note

To disable the Fit screen function, click the  button again.

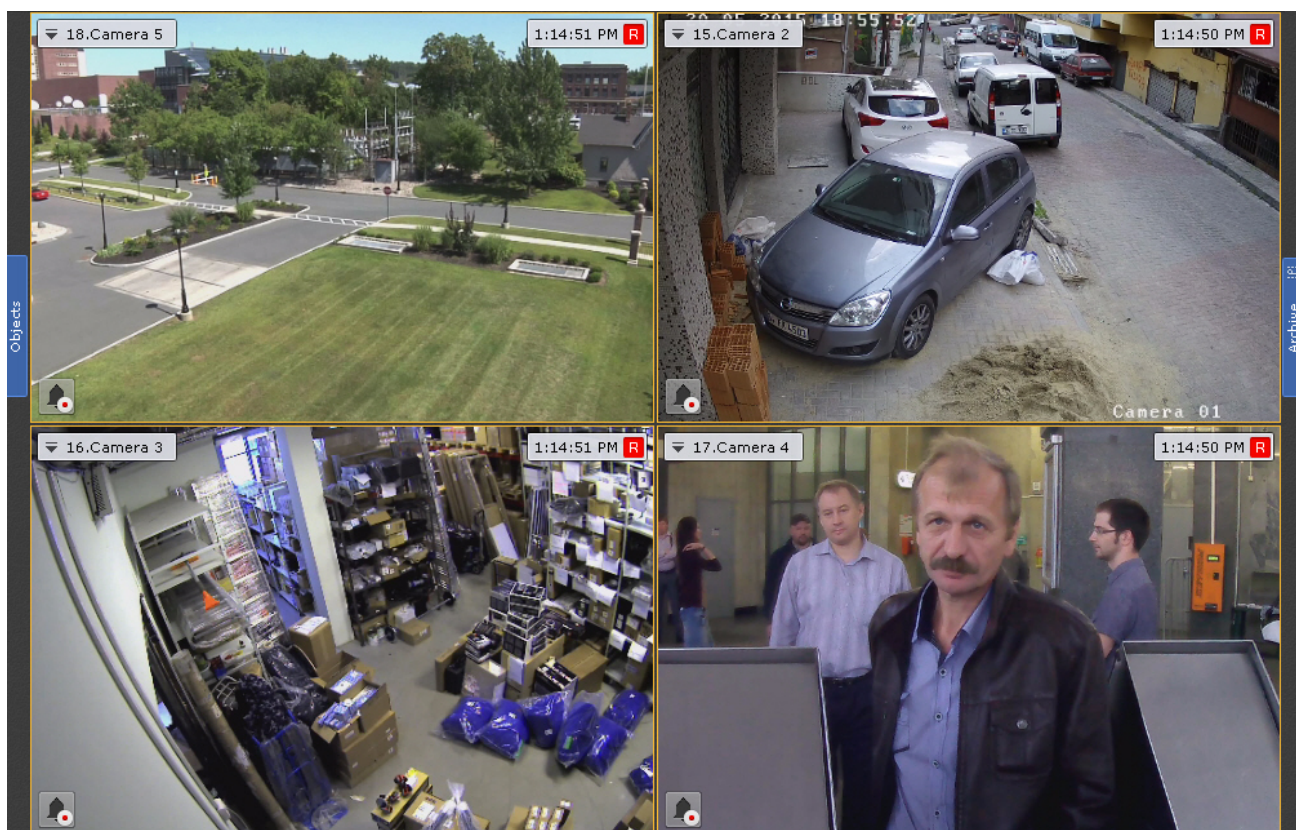
To enable the Fit screen function for all video tiles on the layout open the context menu and select **Image size adjustment**.



Note

To disable Fit screen across all layouts reselect **Image size adjustment**.

Now when a user switches to this layout, the video in the viewing tile is displayed at the calculated minimum necessary level of digital zoom and the viewing tile occupies all available space.

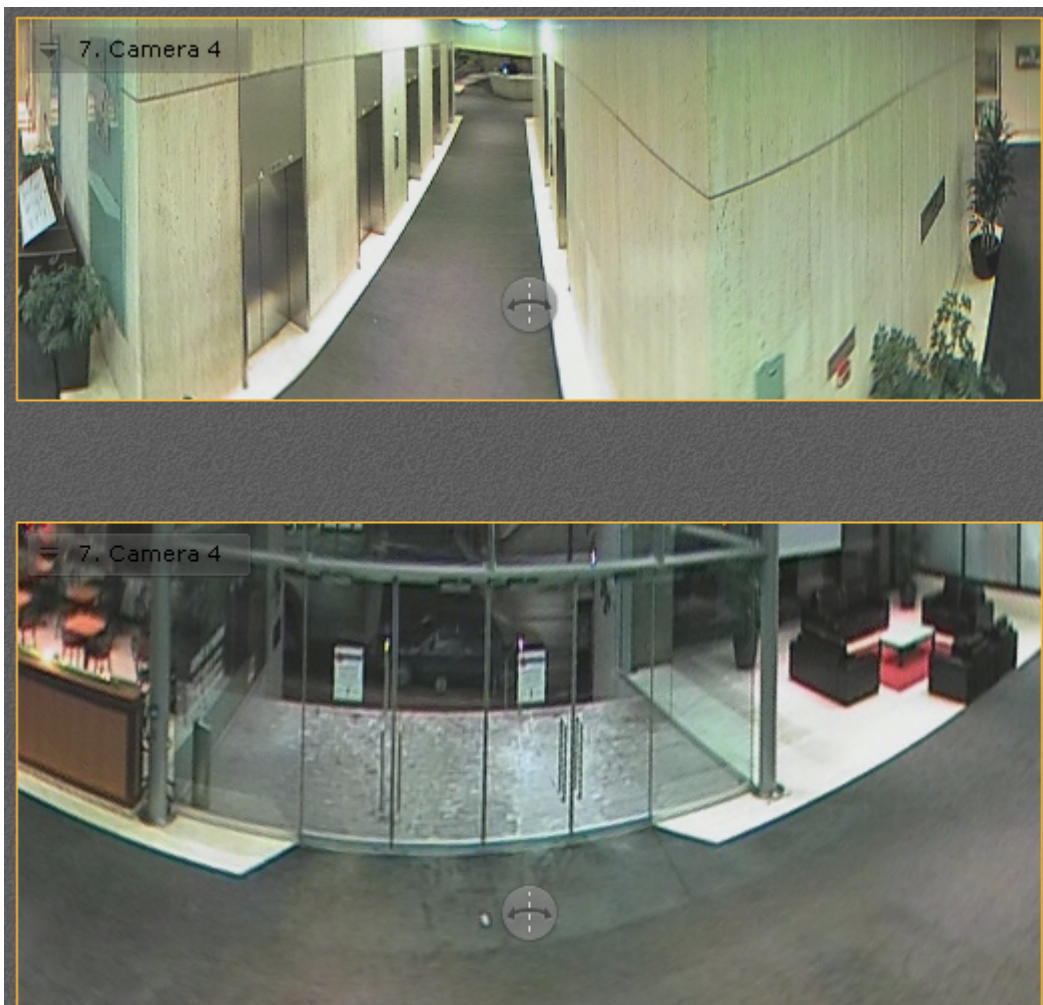


Configuring pan/tilt angle for video cameras with Immervision lenses in 180° Panorama display format

Rus

You can set the pan/tilt angle for fisheye cameras in 180° Panorama display format when switching to a layout.

This is useful when needing to display the entire viewable area in the layout (two areas of 180° each). In this case, the video camera is added twice but with different viewing angles.



To set the viewing angle, click and hold the  button (see [180 degree Panorama](#)).

Configuring information boards

Configuring information board templates

Rus

To save information board parameters as a template, specify a name when configuring an information board.

Name:

If a name is not specified for the information board (it is not necessary to specify one), no template with the information board parameters is saved or made available when creating new information boards.

When configuring a new information board, you can use previous templates for the type of information board in question by selecting one from the **Name** list.

Name:
 
 Name 2 
 Name 1 
 Name 3 

If you save the new information board with the same name, the template parameters are updated and all information boards based on the template are updated as well.

To delete a template, in the **Name** list, click the  button across from the template. The parameters of information boards based on the deleted template are saved, but their names are discarded.

Configuring Events Boards

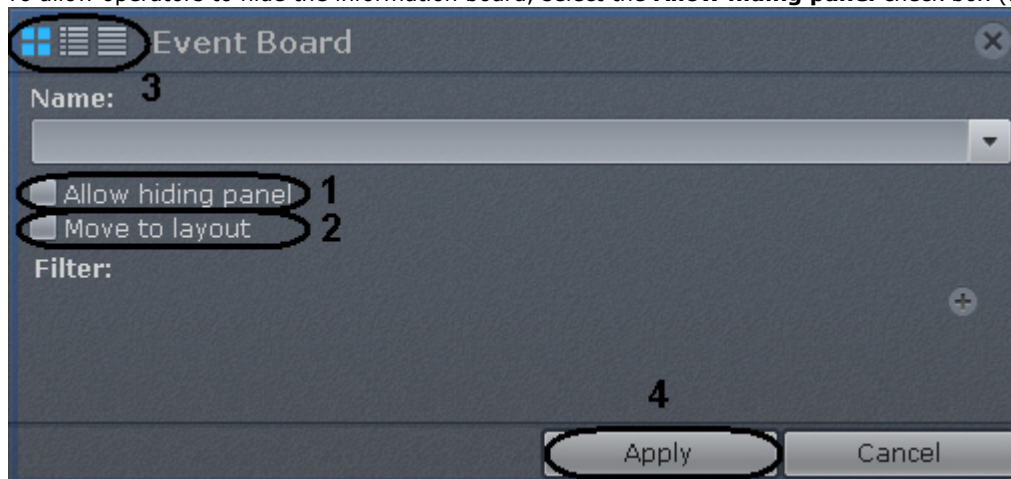
Rus

Configuring Events Boards

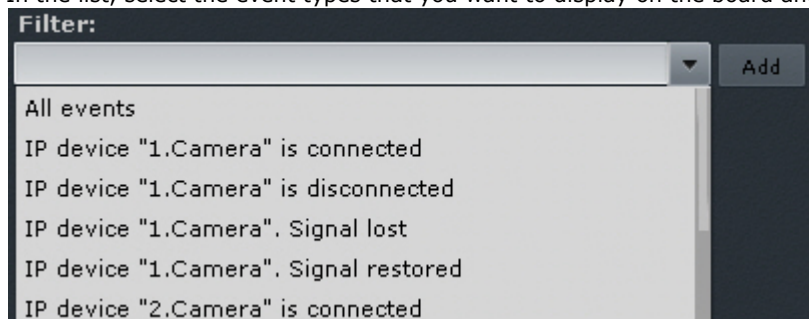
Events Boards display some or all system events.

To configure an Events Board:

1. Add an information board to the layout (see [Adding information boards to cells](#)).
2. In the upper-right corner, click the  button.
3. To allow operators to hide the information board, select the **Allow hiding panel** check box (1).



4. To automatically open the layout with this information board when an event matching the filter occurs, select the **Switch to layout** check box (2) (see paragraph 5).
If other layouts contain information boards with the same parameters, the layout with the smallest number of cells is opened. If there are multiple layouts with identical numbers of cells, the layout that comes first in the alphabet is chosen. If a layout containing this information board is open when an event is received, no switch to another layout is performed.
5. In the list, select the event types that you want to display on the board and click **Add**.



To add events of the same type from different devices, enter the name of the event in the **Filter** field. This will list only the events of the chosen type. To list all events, clear the filter field.



Note

To remove an added event type, click the  button

If no event type is selected, all system events are displayed on the information board.



Note

You can also add any text to the filter. For example, if you add **Signal lost** filter, Event Board will display event data from all devices in the system.

6. Select the default view for information on the Events Board (see [Options for displaying information on Events Boards](#)): the first frame of the event and time, first frame and text, or text only (3).
7. Click the **Apply** button to save changes (4).

Configuration of the Events Board is complete.

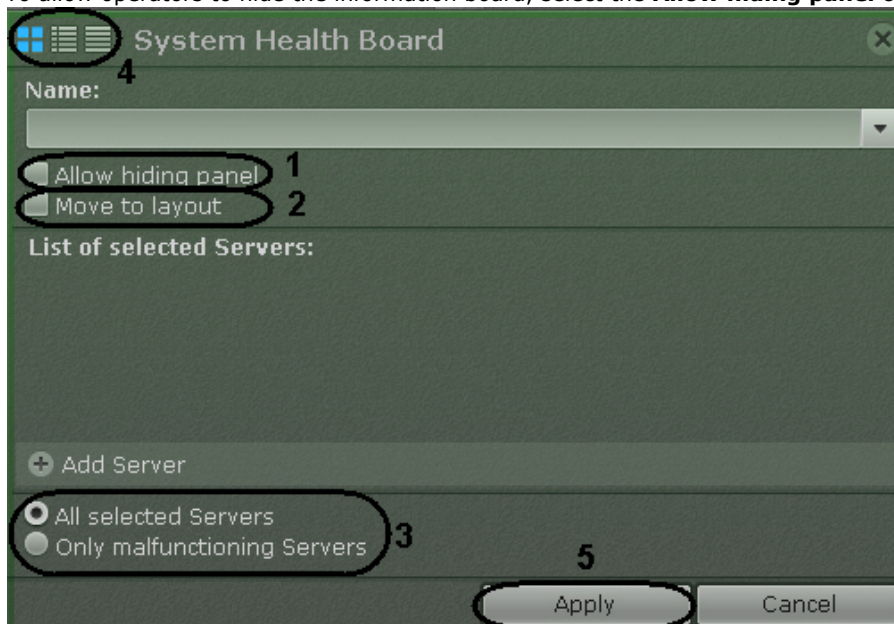
Configuring a Health Board

Rus

Health Boards display the status of selected system servers and connected cameras.

To configure a Health Board:

1. Add an information board to the layout (see [Adding information boards to cells](#)).
2. In the upper-right corner, click the  button.
3. To allow operators to hide the information board, select the **Allow hiding panel** check box (1).



4. To automatically open the layout with this information board when the status of a monitored server or camera changes, select the **Switch to layout** check box (2) (see paragraphs 5 and 6). If other layouts contain information boards with the same parameters, the layout with the smallest number of cells is opened. If there are multiple layouts with identical numbers of cells, the layout that comes first in the alphabet is chosen. If a layout containing this information board is open when an event is received, no switch to another layout is performed.
5. Select the Servers you want to monitor. To do so, select one server or all servers from the Axon domain (click **All Servers**) and click the **Add** button (3).



Note

To remove the selected server, click the  button

6. To display the status of only distressed servers out of those selected, select **Distressed Servers only** (3). A server is classified as distressed if any of the following are true:
 - a. Any component (CPU, hard disk, or network connection) is in critical condition.
 - b. There is no connection to the Server.
 - c. Any video cameras of the Server are in critical condition.



Note

Information about the status of Servers and cameras is given in the section [Working with Health Boards](#).

7. Select the default view for display of information on the Health Board (see [Working with Health Boards](#)): diagram, diagram with text, or table (4).
8. Click the **Apply** button to save changes (5).

Configuration of the Health Board is complete.

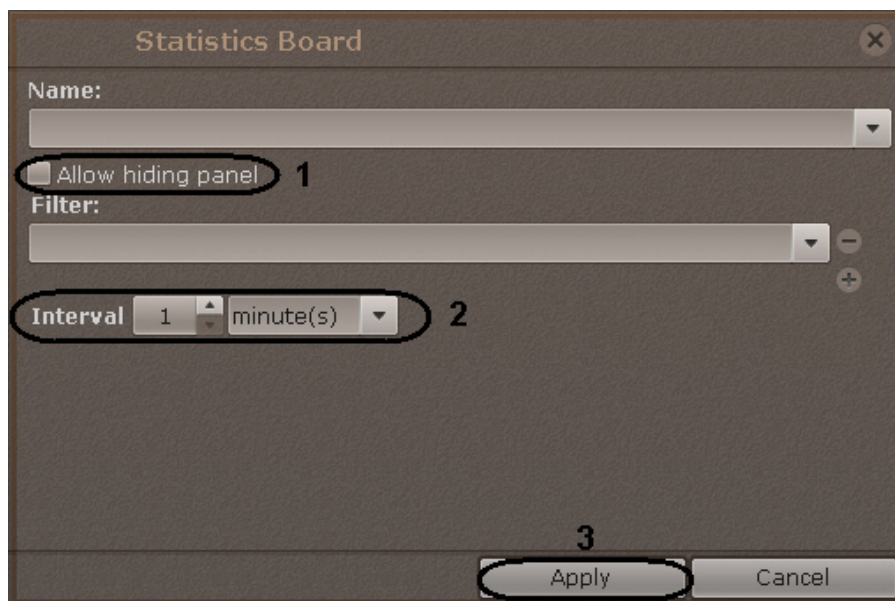
Configuring a Statistics Board

Rus

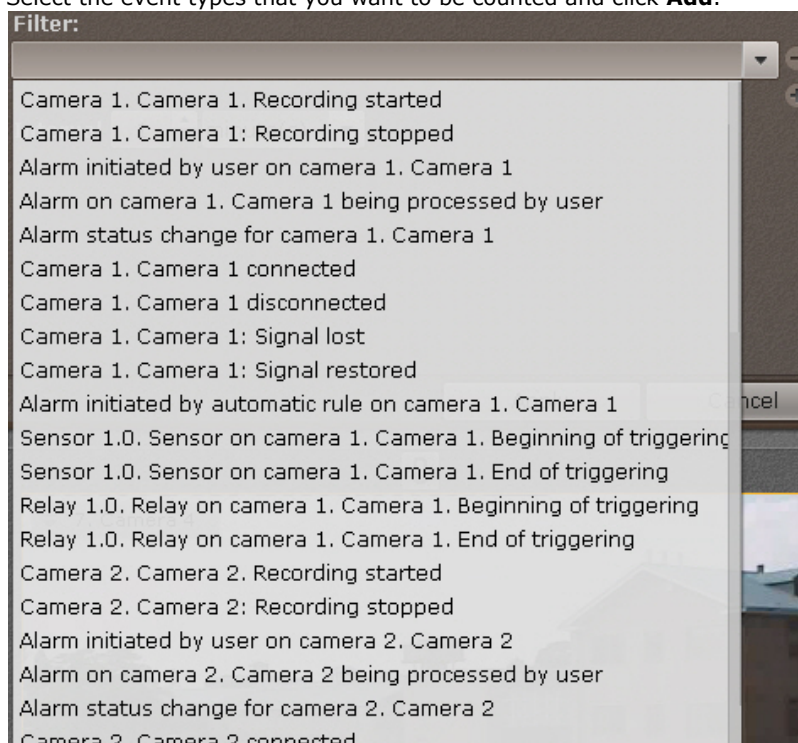
Statistics Boards display information on the number of events of the selected type or types, as a number and graph.

To configure a Statistics Board:

1. Add an information board to the layout (see [Adding information boards to cells](#)).
2. In the upper-right corner, click the  button.
3. To allow operators to hide the information board from a layout, select the **Allow hiding panel** check box (1).



4. Select the event types that you want to be counted and click **Add**.



To add events of the same type from different devices, enter the name of the event in the **Filter** field. This will list only the events of the chosen type. To list all events, clear the filter field.



Note

To remove an added event type, click the  button.

If no event type is selected, all system events are counted.

5. Select the time period for display of statistics on the graph (2).
6. Click **Apply** to save the changes (3).

Configuration of the Statistics Board is complete.

Configure the Web Board

Rus

Web Board allows users to view a selected web page in the tile.

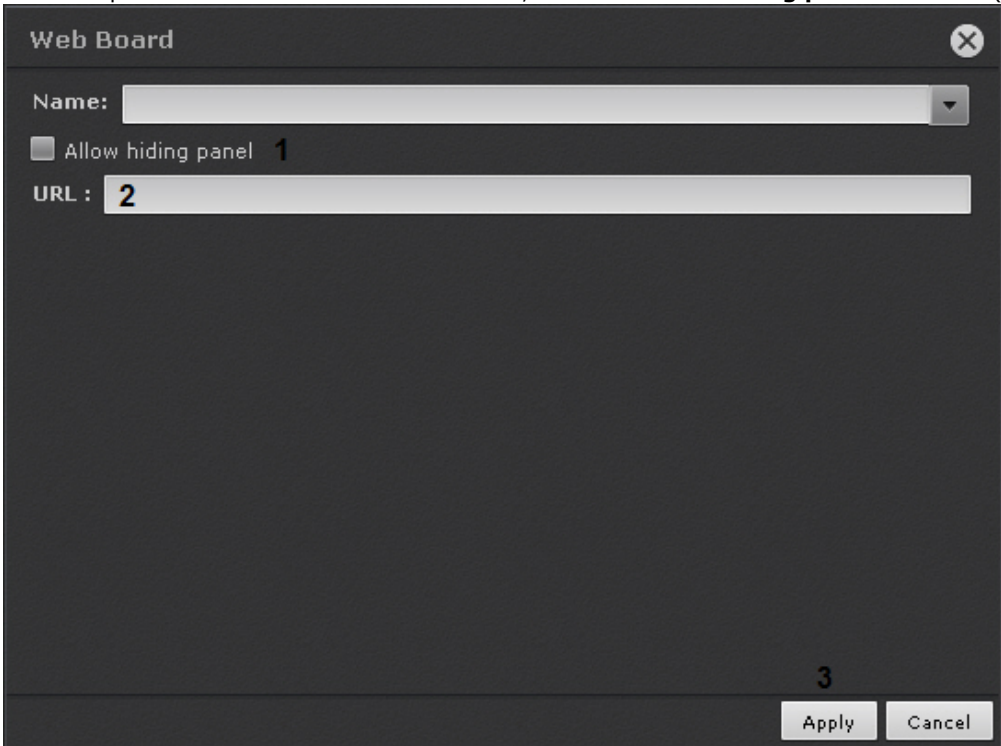


Note

Axxon Next VMS shows web pages in Internet Explorer.

To configure **Web Board**:

1. Add an information board to the layout (see [Adding information boards to cells](#)).
2. In the upper-right corner, click the  button.
3. To allow operators to hide the information board, select the **Allow hiding panel** check box (1).



The image shows a 'Web Board' configuration dialog box. It has a title bar with a close button. Inside, there is a 'Name:' label followed by a text field. Below that is a checkbox labeled 'Allow hiding panel' with a '1' next to it. Underneath is a 'URL:' label followed by a text field containing the number '2'. At the bottom right, there are 'Apply' and 'Cancel' buttons. A '3' is placed above the 'Apply' button.

4. Enter the address in the **URL** field (2).

Note
The **URL** field supports addresses in the following formats:

- http://www.site.com
- http://site.com
- https://www.site.com
- https://site.com
- www.site.com
- site.com
- [IP-address]
- [IP-address]:[Port]
- http://[IP-address]
- http://[IP-address]:[Port]

5. Click the **Apply** button to save changes (4).

Configuration of the **Web Board** is complete.

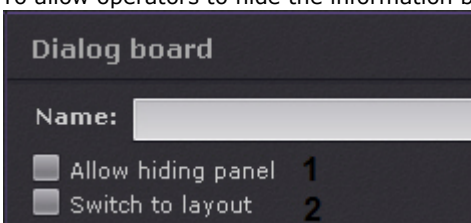
Configure the Dialog Board

Rus

Dialog Board allows users to view info about alerts / detection events and quickly start macros to respond. You can also add a selected camera view to the board.

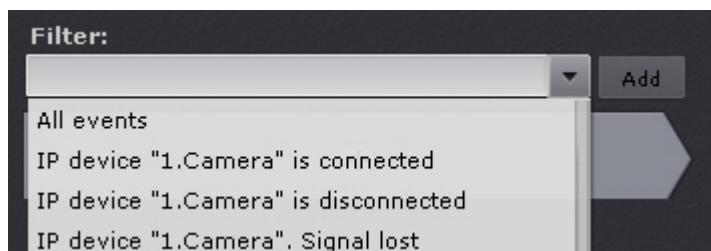
You can configure Dialog Board as follows:

1. Add an information board to the layout (see [Adding information boards to cells](#)).
2. In the upper-right corner, click the  button.
3. To allow operators to hide the information board, select the **Allow hiding panel** check box (1).



The image shows a 'Dialog board' configuration dialog box. It has a title bar. Inside, there is a 'Name:' label followed by a text field. Below that are two checkboxes: 'Allow hiding panel' with a '1' next to it, and 'Switch to layout' with a '2' next to it.

4. Select the **Switch to layout** check box (2) (see paragraph 5) to automatically open the layout with this information board when an event matching the filter occurs.
If other layouts contain information boards with the same parameters, the layout with the smallest number of cells is opened. If there are multiple layouts with identical numbers of cells, the layout that comes first in the alphabet is chosen. If a layout containing this information board is open when an event is received, no switch to another layout is performed.
5. Select the event types that you want to display on the board and click **Add**.



To add events of the same type from different devices, enter the name of the event in the **Filter** field. This will list only the events of the chosen type. To list all events, clear the filter field.



Note

To remove an added event type, click the  button.

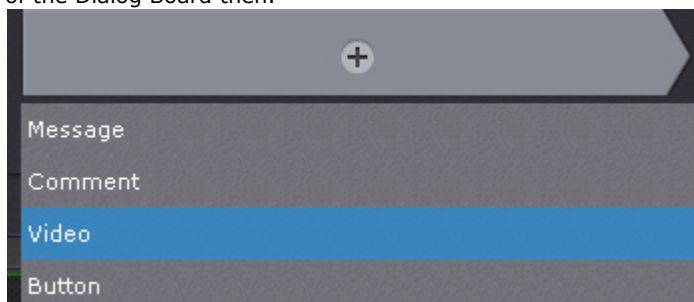


Note

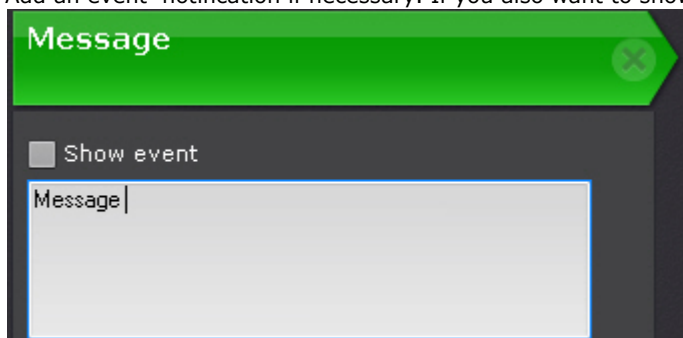
If the board has video, the event filter is not required.

If no event type is selected, all system events are displayed on the information board.

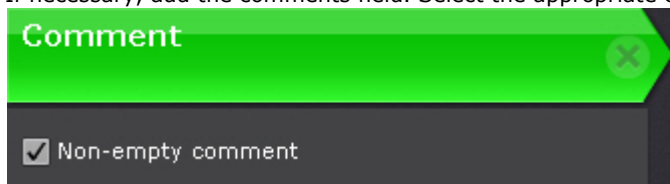
6. Configure the information board:
 - a. If you want video on the board, then click the  button and select **Video**. You can not add other elements of the Dialog Board then.



- b. Add an event notification if necessary. If you also want to show the event name, select the check box.



- c. If necessary, add the comments field. Select the appropriate check box to make comments mandatory.



- d. Add one or more Response Buttons.

To configure Response Buttons, you should set the mandatory and optional parameters (by clicking ):

- Enter the name of the button (1).

- Select a macro that will start when you click the button (2).
- If you want to hide the board after pressing the response button, select the checkbox (3).
- Select location for the button: On the left, in the center, on the right (4).
- Select a color (5).

7. Click **Apply** to save the changes

Configuration of the Dialog Board is complete.

Configuring alerts on special layouts

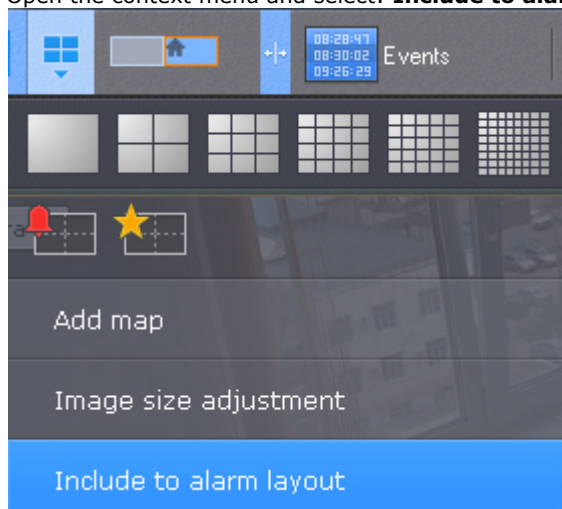
Rus

By default, special layouts (see [Special layouts](#)) display all alerted cameras.

You can limit this: alerts only from the selected layouts.

To do this:

1. Select the layout (see [Selecting a layout for editing](#)).
2. Open the context menu and select: **Include to alarm layout**.



3. Save changes (see [Exiting layout editing mode](#)).



Note

To undo, select: **Exclude from alarm layout**.

Exiting layout editing mode

Rus

To exit layout editing mode and save changes, click **Save** in the upper panel.



To exit editing mode without saving changes, click **Cancel**.

Share Layouts

Rus

You can share custom layouts with other users. The user can share only his/her custom layouts.

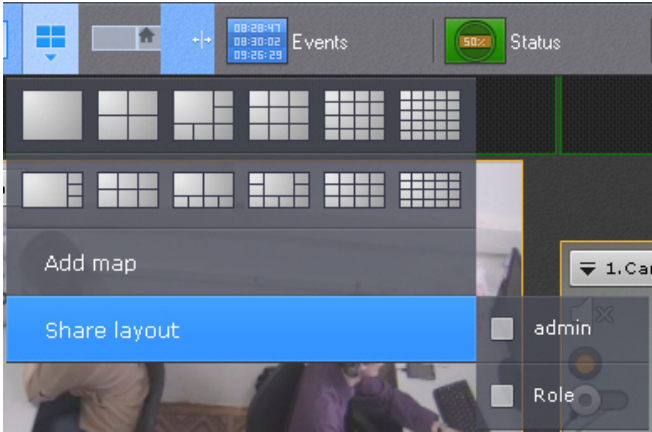


Note
This feature comes in handy, when it is only the administrator's job to create and edit layouts. After configuring, the administrator can assign the layouts to users/roles.

To share a layout, complete the following steps:

1. Select a layout (see [Selecting a layout for editing](#)) and go to Layout Editing mode (see [Switching to layout editing mode](#)).

2. Click the  button and open the context menu. Select one or several roles in **Share layout**.



Note
You can select the roles of the selected Axxon domain. Axxon domain can be selected on the [Camera Search Panel](#).

3. Exit layout editing mode (see [Exiting layout editing mode](#)).

This layout is shared with other users.

These users can not edit and share this layout. They can:

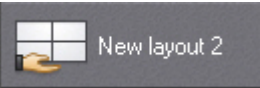
1. Work with layout (see [The Layouts panel](#)).
2. Delete it from their list (see [Creating and deleting layouts](#)).



Note
Only the owner can remove the layout from VMS.

3. Copy the layout (see [Layout copying](#)). If you copy the layout, you are the owner of your copy. You can edit it.

Shared layouts are sealed with the following sign:



Configuring the Interactive Map

Configuration of the interactive map is performed in layout editing mode (see the sections [Interactive Map](#), [Switching to layout editing mode](#)).



Note

Creation, editing, and deletion of interactive maps are available to users with roles for which the **Change maps** component is activated (see the section [Configuring user permissions](#)).

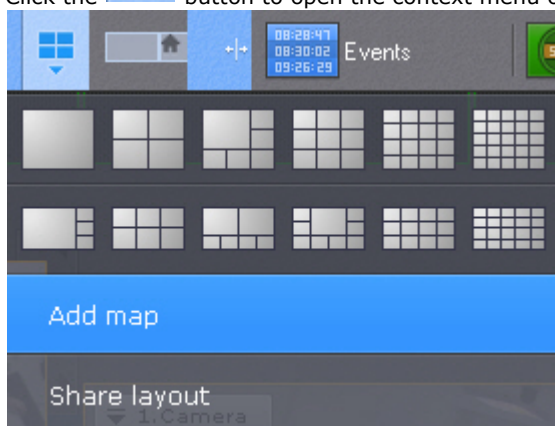
Creating a new map

To create a new map , complete the following steps:

1. Do one of the following four actions:

- a. In the lower-left part of the screen, click the  button (after displaying the map, see [Opening and closing the map](#)).

- b. Click the  button to open the context menu of the layouts ribbon and select **Add map**.



- c. In the map context menu (right-click the empty background), select **Add new map**



- d. Select a video camera from the list on the video camera panel by clicking it and, while holding down the mouse button, move the cursor to the empty map background and then release the mouse button.



Note

Actions **c** and **d** are available if no maps have been created in the system

2. Enter the map's name (**1**).

3. Select what will be used as a map: an image or geodata from OpenStreetMap (**2**).



Attention!

Creation of a map based on OpenStreetMap geodata provider is limited by default. To create OpenStreetMap maps, you should:

1. Purchase an OpenStreetMap license.
2. Quit Client (see [Shutting down an Axson Next Client](#)).

3. Open a configuration file, *AxxonNext.exe.config* , in a word processor. The file is located in the <Installation Directory of Axxon Next> \ bin.
4. Find the OpenStreetMap parameters group.

```

</provider>
<provider name="OpenStreetMap">
  <param name="Id" value="32AAE9D2-CB9D-4B45-8BB8-CE180629600D"/>
  <param name="Copyright" value="© MapBox, © OpenStreetMap"/>
  <param name="MinZoom" value="3"/>
  <param name="MaxZoom" value="17"/>
  <param name="DefaultZoom" value="9"/>
  <param name="Enabled" value="true"/>
  <param name="ApiKey"
value="pk.eyJ1Ijoicm9tYW5rYW5rYm91IiwiaSI6ImNpcjF5bytryuzNjAwN3podm5uc2ZuaxVtC
DMifQ.buKBmLRztczKqy0WswvsZg"/>
</provider>
</mapProviders>

```

5. Set the **true** for the **Enabled** parameter.
6. For the **ApiKey** parameter, enter the received key.
7. Save the changes to the file.
8. Run the Client (see [Starting an Axxon Next Client](#)).



Note

The maximum image size is 4 million pixels (the number of pixels at 2000x2000 resolution). If a larger image is selected, no map is created

4. In the corresponding field (3), select the image that will be used as the graphical blueprint of the site (if the **Raster image** map type is selected) or find the site in OpenStreetMap by address, postal code, or geographical coordinates (enter the information in the **Address** field; detailed information about search is given on the [provider's website](#)). Scale can be adjusted by the scaler control or mouse wheel. You can navigate around the map using standard methods.

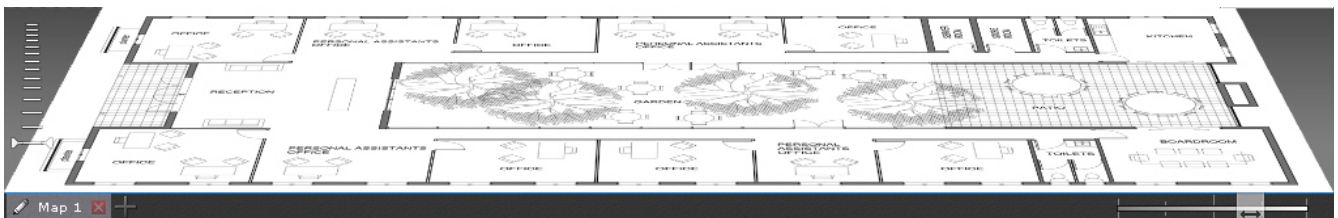


Note

If the **Raster image** map type is selected, it is not necessary to select an image. In this case, a map with a white background is created.

5. Click **Apply** (3).

You have created a new map.



Adding system objects to the map

Rus

On maps you can add three types of system objects (video camera, relay, and sensor) as well as objects for switching to another map.

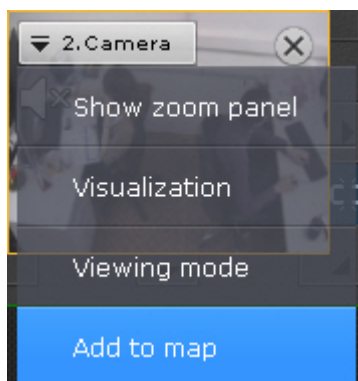
Adding video cameras

Rus

You can add cameras to the map in one of three ways:

1. By using the viewing tile context menu.
2. By using the map context menu.
3. By dragging a video camera icon from the video camera panel to the map.

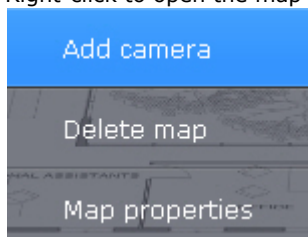
To add a camera to the map, in the context menu of the viewing tile, select **Add to map**.



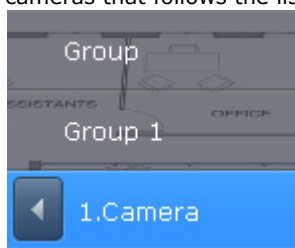
The camera is added to the map.

To add a video camera by using the map context menu:

1. Right-click to open the map context menu and select **Add video camera**.



2. Select the necessary video camera in the displayed list by using one of the following methods:
 - a. If the necessary video camera is included in a group, you must first select the group (the group may also contain subgroups), then select the video camera.
 - b. If the necessary video camera is not included in one of the groups, you must select the list of all video cameras that follows the list of groups.



The camera is added to the map.

You can also, in the video camera panel, left-click a video camera's icon. Drag it to the map.

Adding sensors and relays

Rus

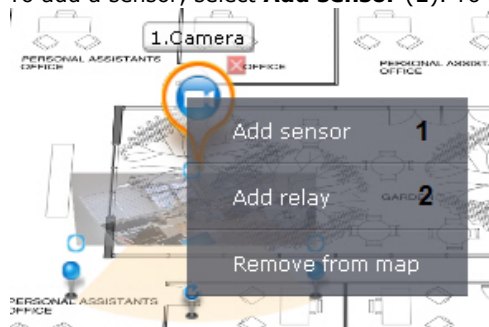
To add sensors and relays to the map:



Note

Only **Sensor** and **Relay** objects that have been activated can be added to the map.

1. Right-click the icon of the video camera on the map. A context menu appears.
2. To add a sensor, select **Add sensor (1)**. To add a relay, select **Add relay (2)**.



3. In the list, select a **Sensor** or **Relay** object.



Sensors and relays have now been added.

By default, the icons of the sensor and relay are attached to the video camera's icon. If you move the video camera icon, the icons of all of the video camera's devices are moved as well.

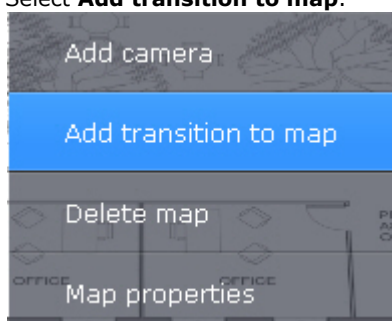
However, you can detach the sensor and relay icons from the icon of the video camera. To do so, move them. Then the sensor and relay icons are moved independently.

Adding switches to another map

Rus

You can add a "switch" to another map in one of two ways:

1. Select the tab of the map to which you want the switch to point and, without releasing the mouse button, drag it to the map and release the mouse button.
2. By using the map context menu.
 - a. Select **Add transition to map**.



- b. Select the map in the system to which the new switch will point.



Addition of the switch is now complete



Then drag the switch icon to the necessary place on the map.

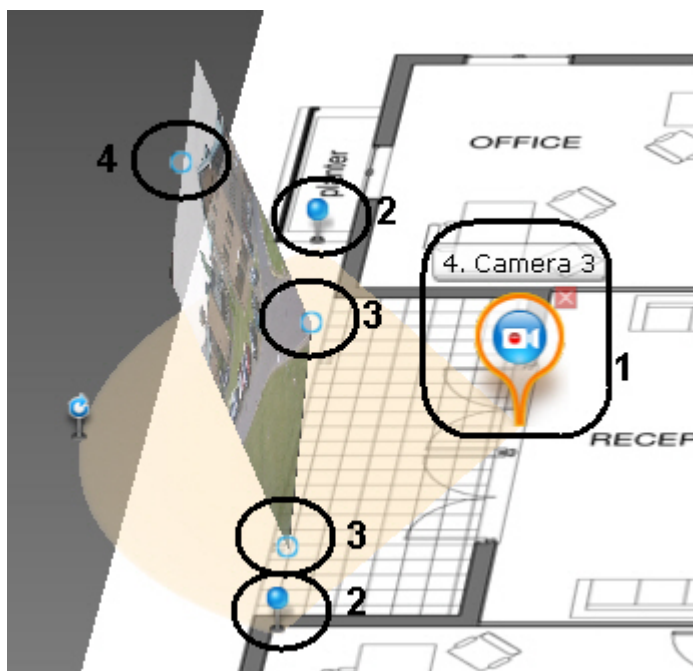
Configuring cameras on the map

Configuring a camera in standard map viewing mode

Rus

After adding a camera to the map, perform the following actions:

1. Drag the video camera's icon to the place on the map that represents the camera's actual location at the site (**1**).



2. On the map, use the corner nodes to adjust the video camera's field of view to match the actual situation at the site (2).



Important!

For ceiling-mounted fisheye cameras (see [Configuring fisheye cameras](#)), you are advised to set a 360° field of view. If you do so, the video from the camera will be directly available in the specified area:



To enable this feature on cameras with ImmerVision lenses, **PTZ** display mode must be chosen (see [Configuring fisheye cameras](#))

3. Configure the area for video display:



Important!

The video display area is not available for ceiling-mounted fisheye cameras

- using the points at the base (3), set the size of the area (left-click and drag the cursor)
- using a third point (4) to change the tilt of the area
- using the slider in the lower-right corner to set the default transparency of the area



Configuration of the camera in standard map viewing mode is complete.

Configuring cameras in immersion mode

Rus

You can link video to the objects shown on a map. This allows making video surveillance more visual and informative.

The feature is available through immersion mode (see [Immersive mode](#)).

To link video to a map, use the four attachment points. Objects in the video need to be linked to their depiction on the site map.

To link objects with symbols on the map:

1. Click an object in the video. A point is added.
2. Click on the depiction of the object on the map. A second point is added, connected by a line to the first point.



Important!

When a fourth link is made, it is possible that the second point cannot be placed in some areas. This occurs when the system cannot find a valid angle for displaying the video and map for the given links. Most likely, the links have been set incorrectly.



After a fourth link is added, an angle is chosen so that the surveillance objects in the video and on the map coincide.

To remove a link, place the cursor above the first point in the link and click the  button. After all links are added, it is possible to change the location of previously set points by dragging them while holding the left mouse button.

To save links between video and the map, exit layout editing mode and save changes. The links you make are discarded if any of the following occur before you exit and save changes:

- The position of the video camera icon on the map is changed.
- The angle of display of the video display area for the camera on the map is changed.
- The field of view of the camera on the map is changed in any way.

Attaching a map to a layout

Rus

You can attach a map to a layout. This means that when you switch to the layout, the attached map opens automatically.

To attach a map to a layout:

1. Select the layout with which you want to associate the map in the layouts ribbon or create a new layout (see [Creating and deleting layouts](#) and [Selecting a layout for editing](#)).
2. Go to map editing mode (see the section [Opening and closing the map](#)).
3. Go to an existing map with which you want to associate the layout or create a new map (see the sections [Switching between maps](#) and [Creating a new map](#)).
4. Save changes and exit layout editing mode (see [Exiting layout editing mode](#)).

After you save the layout, its icon resembles that shown in picture below.



If a map is open in 2D mode when you save a layout, when you switch to that layout, the map will always open in 2D mode. The layout icon resembles that shown in picture below.

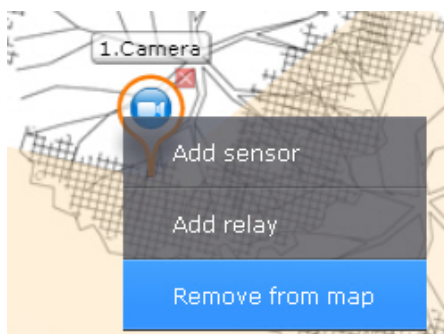


The map is now attached to the layout.

Removing objects from the map

Rus

To remove an object from the map, click the  button that is next to the object icon, or in the context menu, select **Remove from map**.



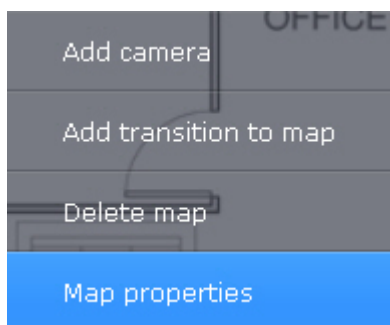
Note

To delete a map switch, you must click the  button.

Changing map type and display

Rus

You can change the type and display of a map that has been created previously. To do so, open the map context menu and select **Map properties**.



A map properties configuration window opens, which is similar to the map creation window (see [Creating a new map](#)).

Renaming the map

Rus

To rename the map, in the lower-left corner of the screen, left-click a tab and specify a new name.



Sorting of map lists

Rus

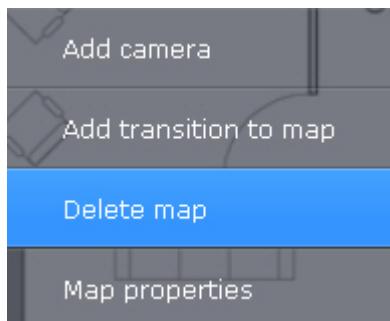
You can change the order of tabs for previously created maps. By default, tabs with maps are ordered by creation date.

To change the order, drag and drop tabs as necessary. Left-click a tab and drag it to the desired location.



Deleting a map

To delete a map, in the lower-left corner of the screen, select the  button on the corresponding tab. Alternatively, in the context menu, you can select **Delete map**.



System preferences

Configuring Forensic Search MomentQuest in Archive

On the page:

- [Video suitability for Forensic Search of recorded video \(requirements\)](#)
- [Turning on the video stream metadata recording](#)
- [Configuring user permissions for Forensic Search in archive](#)

To make it possible to perform Forensic Search MomentQuest of the archives of a video camera, the following conditions must be met:

1. Video meets the requirements.
2. There are video stream recordings from the desired video camera in the archive (see [Binding a camera to an archive](#)).
3. There are metadata recordings from this video stream in the object trajectory database. Metadata can be generated by Axxon Next (see [Object Tracker](#), [Facial Recognition](#)) or received from a video camera (see [Configuring Built-In Detectors](#)).
4. The user has the appropriate permissions.

This section contains information on how to configure the Axxon Next software package to satisfy these conditions.

Video suitability for Forensic Search of recorded video (requirements)

For Forensic Search of recorded video to be possible, video must meet the same requirements as those applied to video for detection tools (see [Requirements for the cameras](#)).

In addition, the minimum and maximum detectable object speeds in video are related to the camera's frame rate.

1. The maximum detectable speed depends on the size of the object. The following table shows the relationship between the maximum detectable speed and the frame rate for typical objects (people and cars):

Frame rate	Maximum detectable speed for people	Maximum detectable speed for cars
6 fps	5 km/hr	40 km/hr
12 fps	10 km/hr	85 km/hr
25 fps	20 km/hr	170 km/hr

So if it is necessary, for example, to detect people moving at speeds of up to 10 km/hr, it is sufficient to record at 12 fps.

2. The minimum object speed should be such that the object moves at a rate of at least 1 pixel per frame.

Turning on the video stream metadata recording

Select **Yes** in the **Record object trajectories** list to enable recording metadata in the database for the corresponding detector (Object Tracker, face detector, built-in detector).

Object Tracker	
Object identification	
Enable	Yes
Name	Object Tracker
Object features	
Record objects tracking	Yes



Note

Information on configuring storage of metadata is provided in the section titled [Configuring storage of the archive, system log, and metadata](#)

Configuring user permissions for Forensic Search in archive

You need **Live/Archive**, **Live/Archive/Control** or **Live/Archive/Control/Configure** permissions for a video camera to perform a smart search (see [Configuring user permissions](#)).

V-BELYAKOV	No access
3.Camera	No access
7.Camera	No access
Archive SkyBlue	Live in armed mode
	Live
	Live/Archive
	Live/Archive/Control
	Live/Archive/Control/Configure

Analyzing video from external systems (Offline Analytics)

Rus

You can run *Axxon Next* analytics on any video file.

To do this, you need to [import](#) the video file and [index](#) it.



Note

The following codecs are supported: MJPEG, MPEG-2, MPEG-4, MxPEG, H.264, Motion Wavelet

After that, you will have the following options available:

1. [Forensic Search for Fragments \(MomentQuest\)](#).
2. [Face search](#).
3. [LPR search](#).
4. [Compressed playback of archives \(TimeCompressor\)](#).

Select a mirror archive (see [Selecting an Archive](#)) to run video analytics on and **Offline analytics** for metadata source (see [Forensic Search for Fragments \(MomentQuest\)](#)).

Importing video to Axxon Next

Rus

To import external video data, do as follows:

1. Create an archive. It must be equal to or larger than the total size of all files in it (see [Creating archives](#)).
2. Run IP Device Discovery Wizard (see [Adding and removing IP devices](#)):
 - a. In the form for manually adding an IP device, select **AxxonSoft** in the **Vendor** drop-down list (1).

IP address 0.0.0.0	Port 3600	Vendor AxxonSoft 1	Username Auto	Bind to the archive Archive AliceBlue 3
Device type IP device		Model ExternalArchive 2	Password ****	Recording No

- b. Select **ExternalArchive** from the models list (2).
- c. Select the archive file to which video recordings will be added (3).

d. Click the  button



Attention!

When you add a camera:

- 1) continuous replication from the on-board storage to the selected archive file (see [Configuring data replication](#));
- 2) the **Scene Analytics** object will be created (see [Create Detection Tools](#)) and metadata enabled (see [Setting General Parameters](#)).

3. In the **Folder** field, specify the storage location of the video footage that will be used as External Archive.

High-quality video stream	0. RAW
Compression Rate	1
Frames per second (fps)	25
Resolution	100 x 100
Video Codec	RAW
vstream-virtual/folder	E:/Video
Low-quality video stream	0. RAW
Adaptive video stream	Disabled

4. Imported folders with video footage or video files must be ISO 8601 timestamped: YYYYMMDDHHMMSS.
 - a. If the timestamp is in the folder name, all the videos starting from the specified date and time will be imported without exception. The video recordings are ordered according to the file name as follows:



Note

For example, if the **20160719T100000_camera1** folder contains 3 files (1.avi, 2.avi, 3.avi), they will come into the archive as follows:

- 1.avi: [19 July 2016, 10:00:00; 19 July 2016, 10:00:00 + the duration of 1.avi].
- 2.avi: [19 July 2016, 10:00:00 + the duration of 1.avi; 19 July 2016, 10:00:00 + the duration of 1.avi and 2.avi].
- 3.avi: [19 July 2016, 10:00:00 + the duration of 1.avi and 2.avi; 19 July 2016, 10:00:00 + the duration of 1.avi and 2.avi and 3.avi].

- b. If the folder name does not have the timestamp, all the video files will be imported in accordance with their timestamps. If the file name is incorrect, the start of the recording on the timeline will correspond to the creation date of the file.



Attention!

Axxon Next operation may be incorrect if video recordings in the folder overlap. No error messages are displayed in this case.

The date in the folder name or file name (or their creation dates) may not precede the metadata storage period as defined in the system (see [Configuring storage of the system log and metadata](#)).

If you add a **Z** character to the end of the timestamp, the time zones for the videos will be GMT +0, otherwise – the time zone of the Server.

For example, 20150701T165130Z.avi. In the Archive mode, this video recording will fit into the timeline from 1 July 2015, 16:51:30 GMT +0 to July 1, 2015, 16:51:30 + recording time GMT +0.

5. Click the **Apply** button.

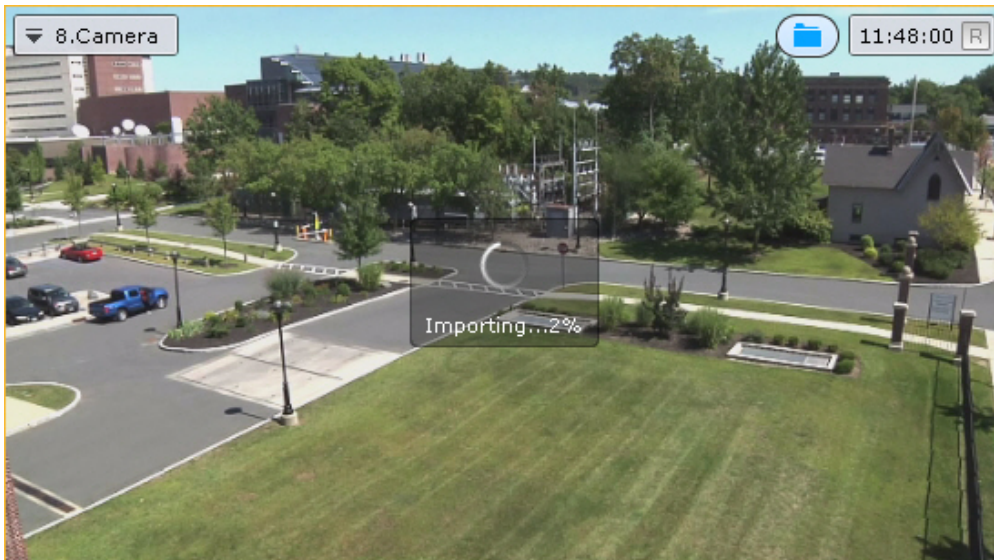
Indexing video from external sources

Rus

By default, indexing starts automatically after specifying video files (see [Importing video to Axxon Next](#)).

This may take a while and increase the CPU usage. Similar to the export process, the status of the indexing process is displayed at the top of the screen (see [Viewing export progress](#)) and in the viewing tile.





Indexing will also compress video. The aspect ratio remains unchanged if you have 800 pixels across. For example, 1600x1200 video will be compressed to 800x600.



Note

This may lower detection quality.

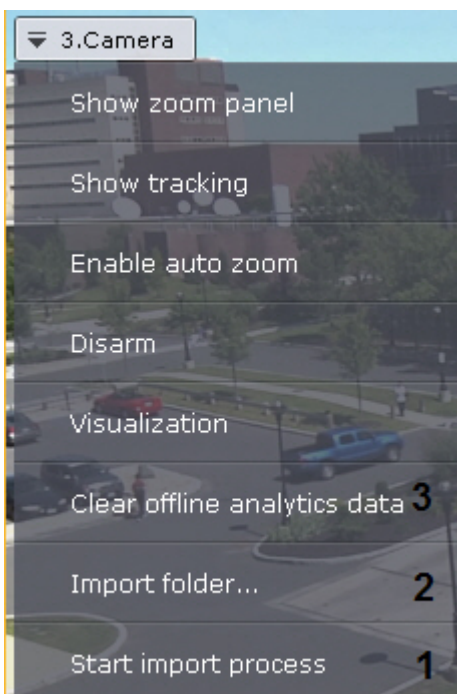


Attention!

You should not view the replicated archive during indexing.

Also, do not run multiple simultaneous indexing procedures.

If you set the **On demand** replication period (see [Configuring data replication](#)), then to start the indexing procedure select **Start import process (1)** from the context menu of the viewing tile.



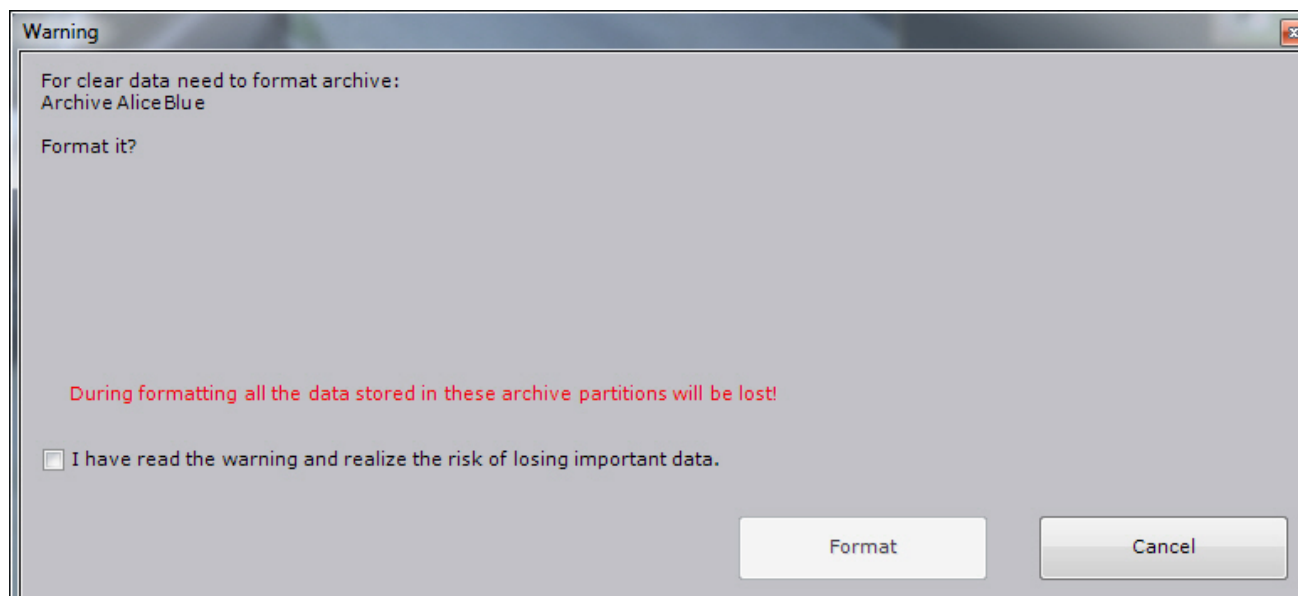
If you want to index the video from another folder, click **Import folder (2)**, or click  in the viewing tile.



Attention!

If you change the folder, all files in Mirror Archive and metadata will be lost.

To remove metadata and video from an archive, select **Clear offline analytics data (3)** and confirm file formatting.



If you want to index the video from another folder, [click](#) [A1] **Import folder (2)**, or [click](#) [A2] X in the viewing tile.

[A1]Пропущено слово в оригинале «Если необходимо проиндексировать видеоданные из другой папки - пункт **Имп** **орт папки** (2) или кнопку X в окне видеонаблюдения

[A2]2

Configuring Hardware-Accelerated Video Decoding (Intel Quick Sync Video)

Rus

Intel Quick Sync Video (QSV) is a technology available on some Intel processors, that provides hardware acceleration for video encoding/decoding. QSV offloads video encoding/decoding to a dedicated hardware CPU core, providing faster results and reducing the video footprint on server CPU performance.



Attention!

Axxon Next applies Intel QSV for decoding:

1. Remote clients.
2. Only for H.264 video.
3. Live, Archive modes (forward playback only) and [TimeCompressor](#).

To use Intel Quick Sync Video, make sure your system meets the following requirements:

1. Since QSV is incorporated into the graphics processor, your CPU must have one (iGPU).



Note

You can check if the CPU supports QSV [here](#).

2. The mainboard supports iGPU (includes [Flexible Display Interface](#)).
3. The Graphics driver supports QSV. We recommend using the latest version of [the Intel HD Graphics Driver](#).



Note

You can also update the driver automatically using the [Intel Driver Update Utility](#) utility.

To activate the Intel QSV in *Axxon Next* you need to:

1. Enable using the integrated graphics option in the BIOS settings.

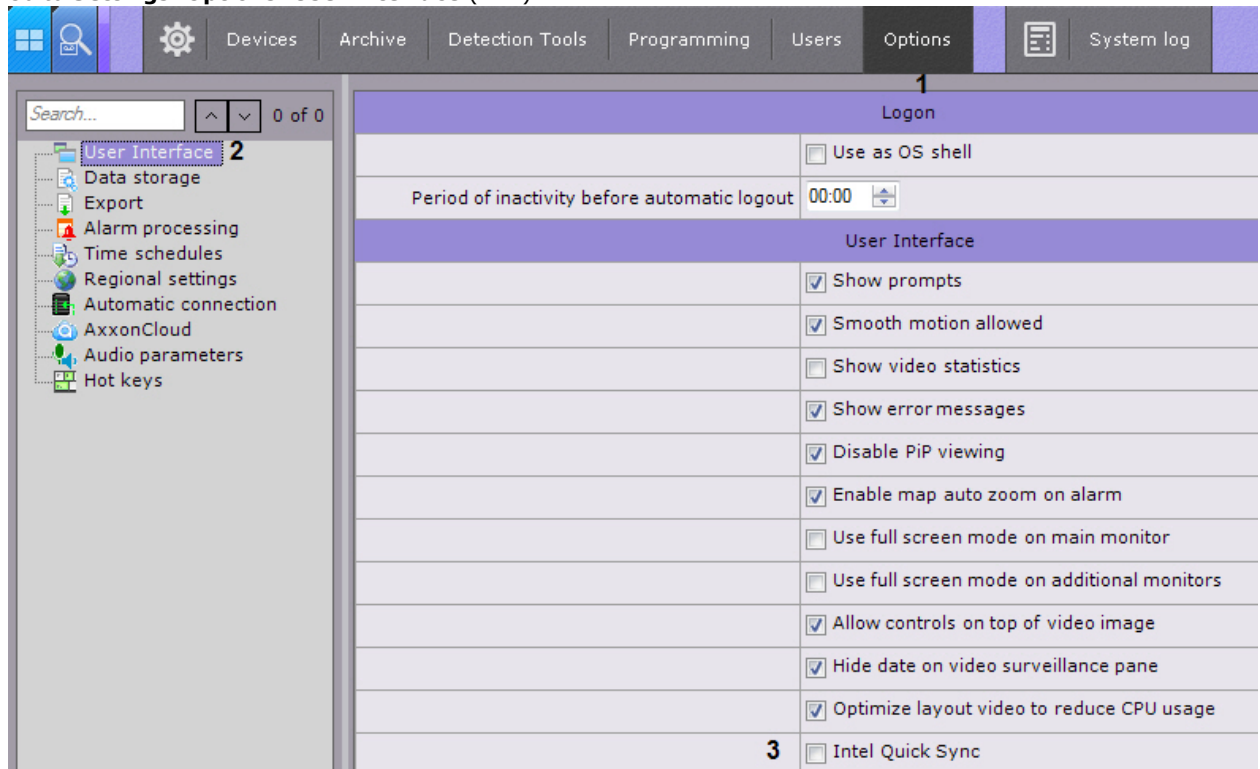


Note

Depending on the BIOS version, it may be named differently (**iGPU** , **Internal Graphics** , **Integrated Graphics Adapter - PEG**).

2. In general, the simultaneous use of the integrated graphics unit (iGPU) and external GPU has to be avoided. In this case, to use Intel QSV, do as follows:

- a. Enable **Multi-Monitor** in the BIOS settings.
 - b. Connect a "Fake/Virtual" Monitor/Display on Windows and then connect it to your iGPU and select Extend desktop to this display in the Multiple displays list.
3. Go to **Settings Options User interface (1-2)**.



4. Select the **Intel Quick Sync** check box (3).
5. Click **Apply** to save the changes.

Configuring the user interface

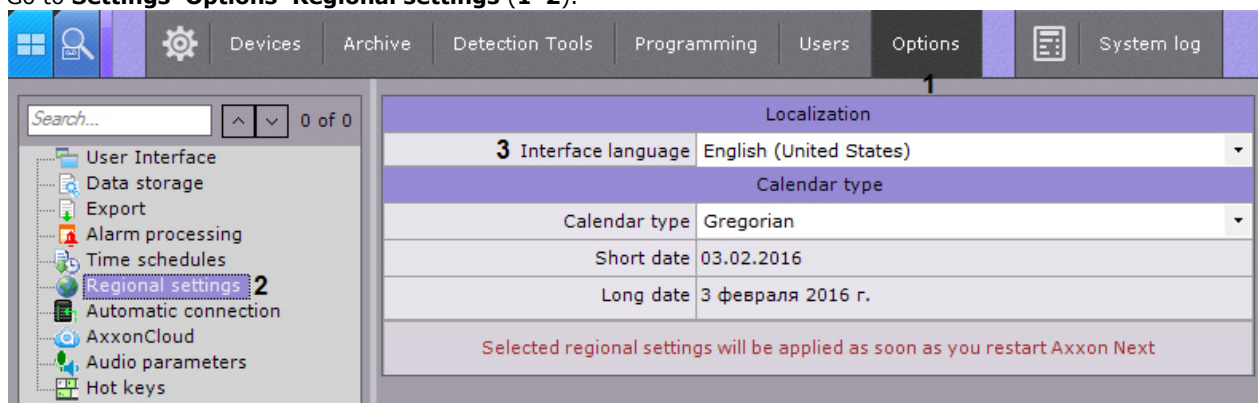
Selecting the interface language

Rus

When working with *Axxon Next*, the user can choose the interface language.

To select the interface language, complete the following steps:

1. Go to **Settings Options Regional settings (1-2)**.



2. Select an interface language from the interface language drop-down list (3).
3. Click **Apply** to save the changes.
4. Restart *Axxon Next*.

The newly selected interface language will be applied once *Axxon Next* is restarted.

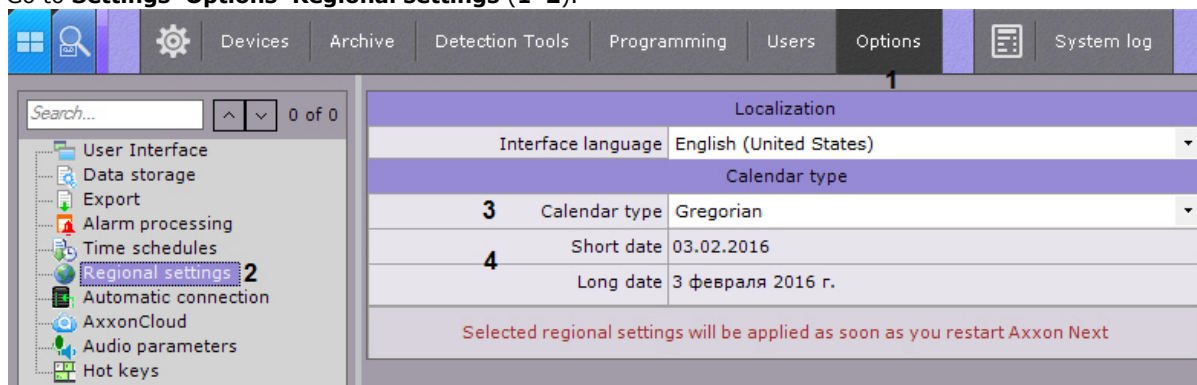
Selecting the calendar type

Rus

When working with *Axxon Next*, the user can choose the type of calendar used (Gregorian or Persian).

To select the interface language, complete the following steps:

1. Go to **Settings Options Regional settings (1-2)**.



2. Select the calendar type that is used in Axxon Next from the calendar drop-down list **(3)**. The short and long forms of dates are also displayed in their respective fields **(4)**.
3. Click **Apply** to save the changes.
4. Restart *Axxon Next*.

The newly selected calendar type will be applied once *Axxon Next* is restarted.

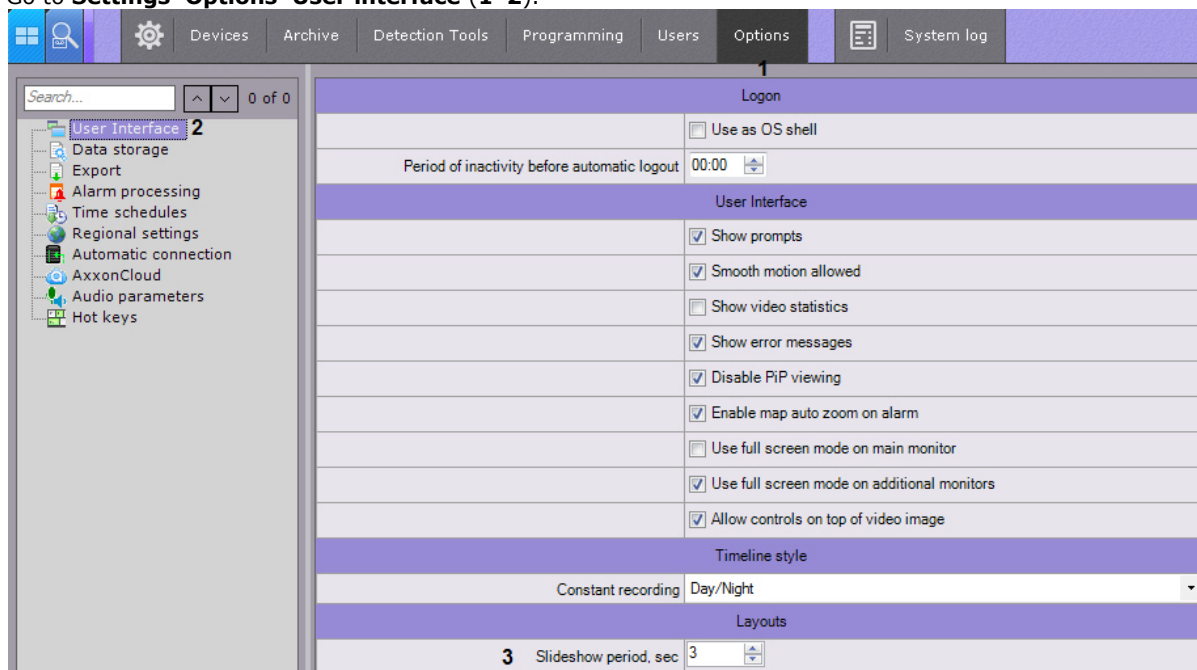
Configuring Slideshow parameters

Rus

Slideshow mode is a cyclical switching of layouts according to an assigned frequency (dwell-time). Slideshow is launched using the context menu of the layouts ribbon.

To configure the slideshow dwell-time, perform the following:

1. Go to **Settings Options User interface (1-2)**.



2. Set the slideshow dwell-time, in seconds, in the corresponding field **(3)**.
3. Click **Apply** to save the changes.

The slideshow dwell-time is now set.



Note

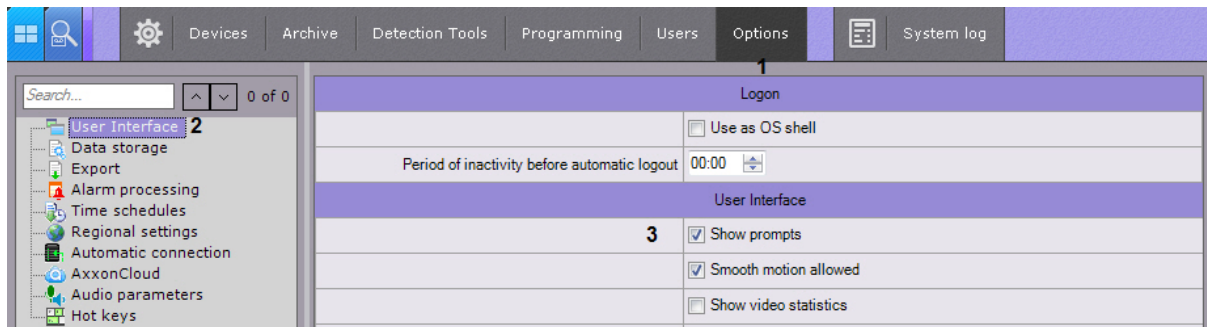
Switching layout modes is allowed only for users with **Layout configuration** permissions

Hiding tooltips

Rus

In Axxon Next, tool tips are displayed when the cursor is moved over a control element. Tooltips are enabled by default. To turn off tooltips, perform the following:

1. Go to **Settings Options User interface (1-2)**.



2. Clear the **Show prompts** check box (3).
3. Click **Apply** to save the changes.

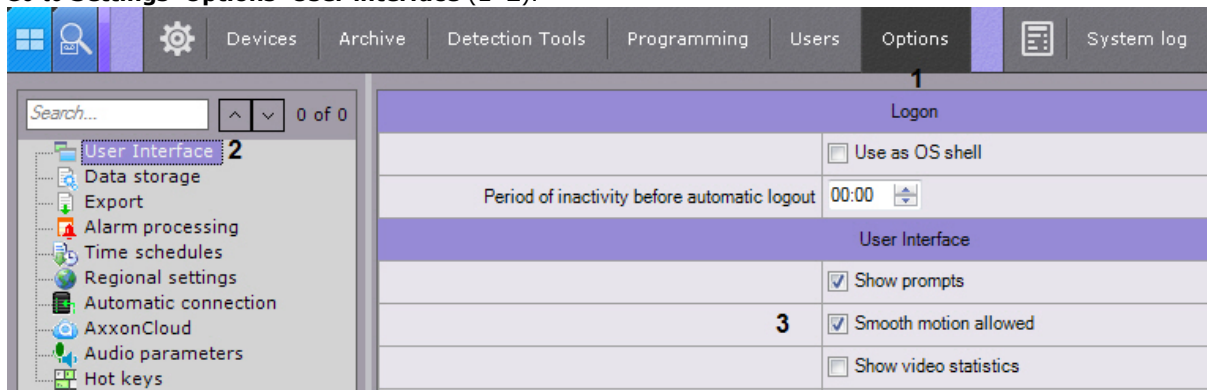
Tooltips are now disabled. Tooltips can be re-enabled by simply selecting the **Show hints** check box.

Configuring animation

Rus

Smooth motion is needed to smoothly change the position of viewing tiles, as well as for smooth switching between tabs. Animation for viewing tiles is enabled by default. To disable this option, perform the following:

1. Go to **Settings Options User interface (1-2)**.



2. Clear the **Smooth motion allowed** check box (3).
3. Click **Apply** to save the changes.

Animation for viewing tiles will now be disabled.

Configuring Display of Video Statistics

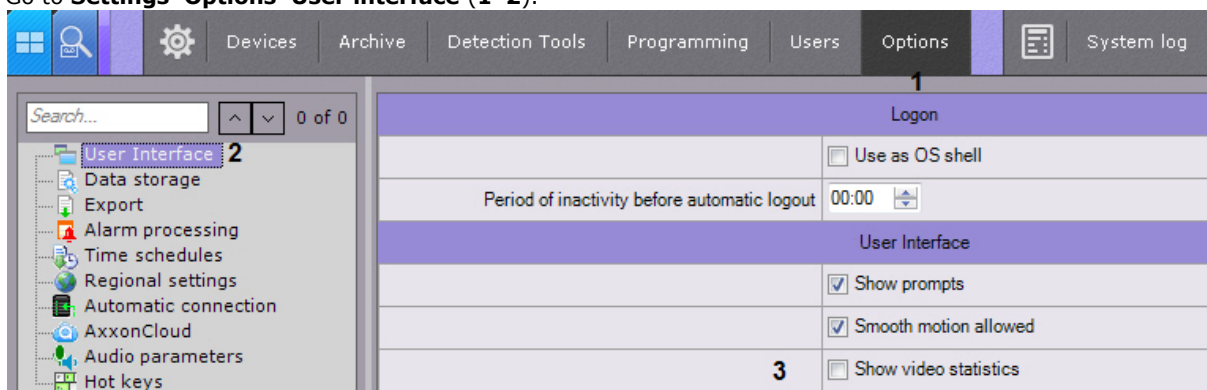
Rus

You can display the following video statistics in the viewing tile:

1. Frame rate of the displayed video stream
2. Frame rate of the video stream received from a video camera or an archive
3. Bit rate of a compressed video stream
4. Resolution of the displayed video stream

To use this option you must perform the following steps:

1. Go to **Settings Options User interface (1-2)**.



2. Select the **Show video statistics** check box (3).
3. Click **Apply** to save the changes.

The video statistics will now be displayed in the viewing tile for all modes (Live Video, Archive, Alarm, and Archive Search).



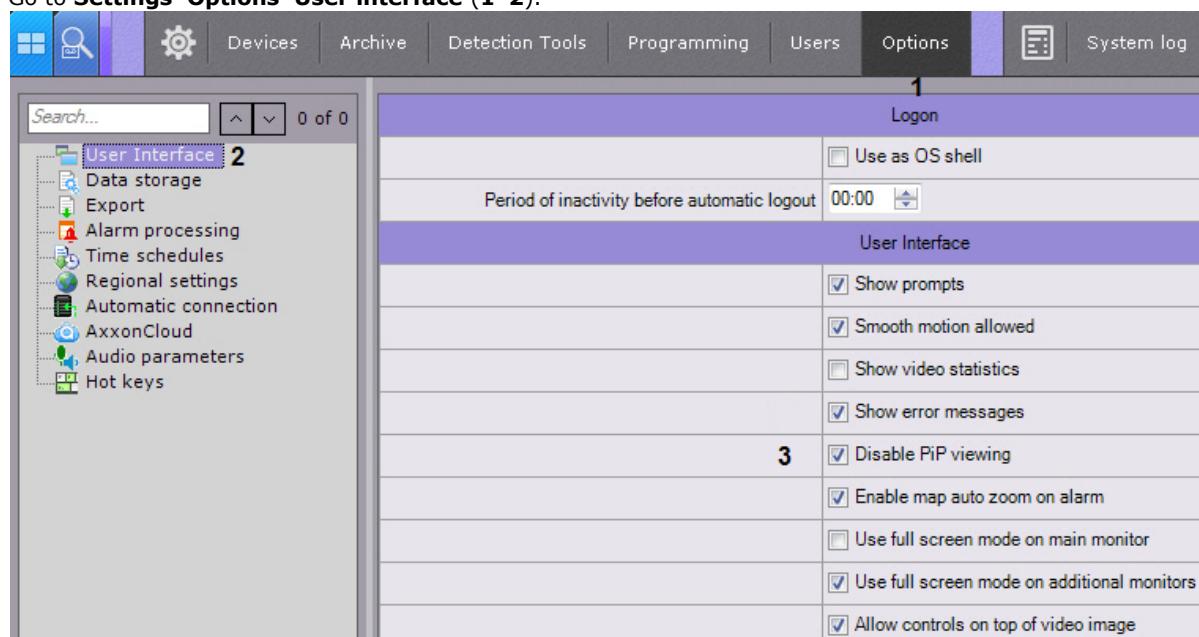
Configuring previews of alarm events

Rus

You can disable previews of alarm events in the viewing tile.

To do this, follow the steps below:

1. Go to **Settings Options User interface (1-2)**.



2. Select the **Disable PiP viewing** check box (3).
3. Click **Apply** to save the changes.

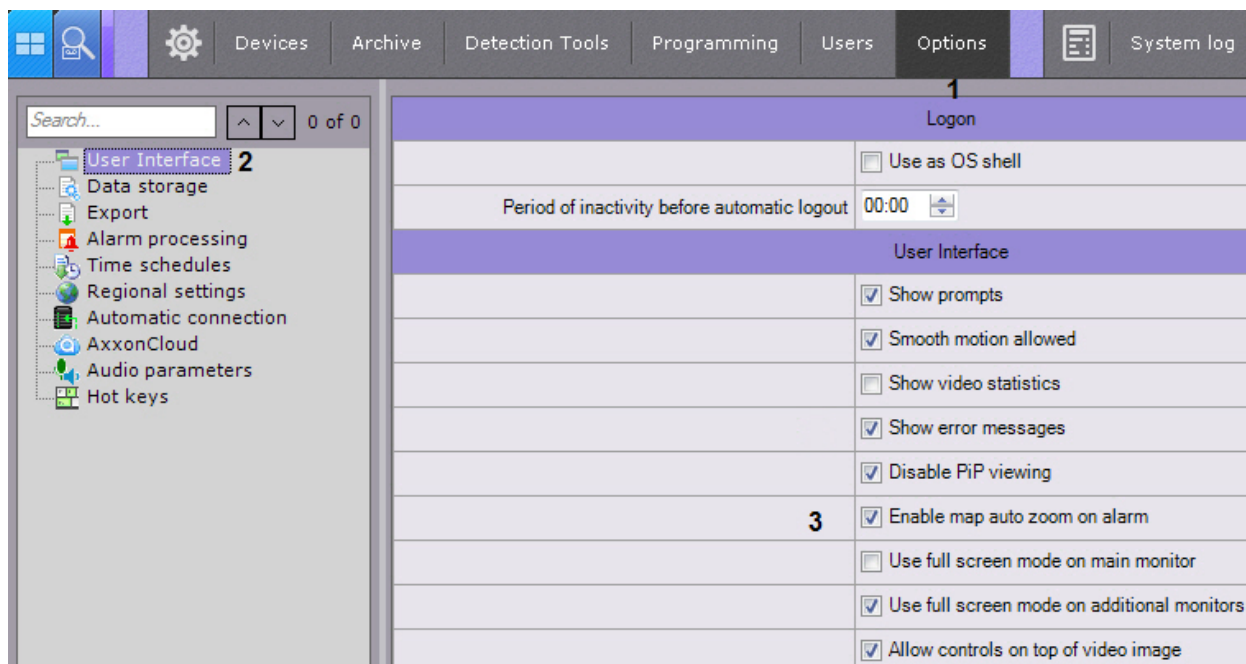
After you complete these actions, previews of alarm events will be disabled.

Configuring map autozoom

Rus

When an alarm occurs, the map can be automatically resized and refocused so as to place the icon of the alarm camera at the center of the map. To enable this option:

1. Go to **Settings ->Options ->User interface (1-2)**.



2. Select the **Enable map auto zoom on alarm (3)** check box.
3. Click the **Apply** button to save changes.

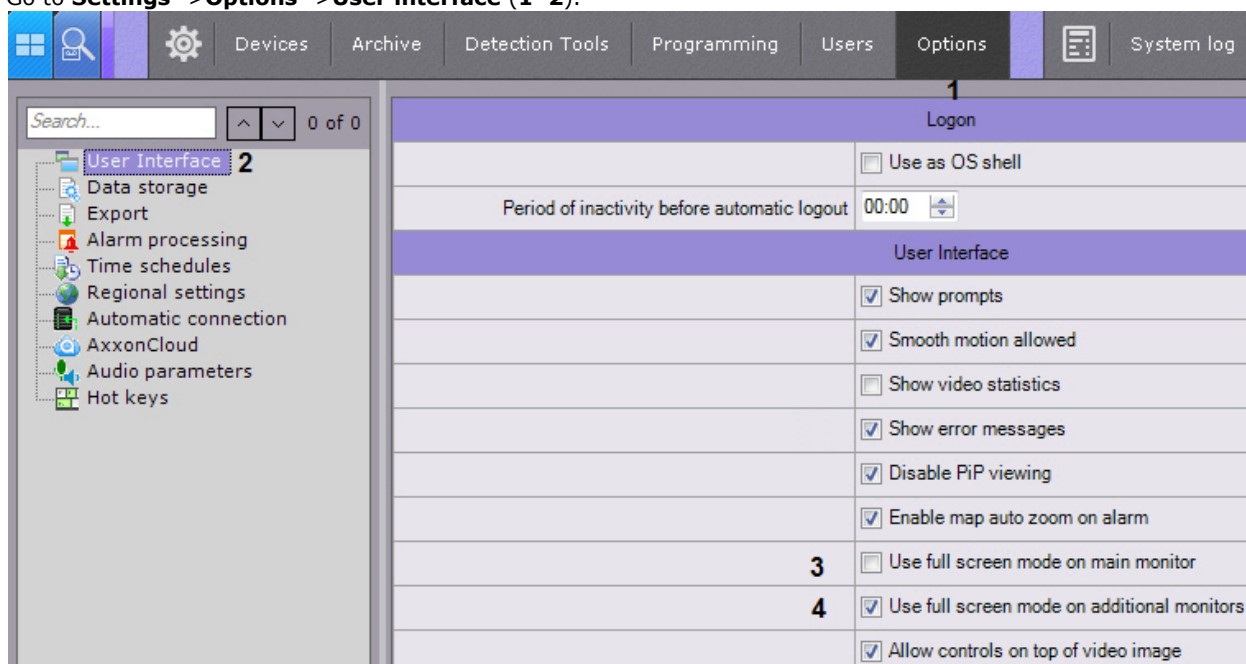
Configuring the Client screen mode (full screen or window)

Rus

By default, the Client (main monitor and all additional monitors) is displayed in full-screen mode.

It is possible to use window mode both on the main monitor and on additional monitors. Do the following:

1. Go to **Settings ->Options ->User interface (1-2)**.



2. To use window mode on the main monitor, clear the **Use full screen on main monitor** check box (3).
3. To use window mode on additional monitors, clear the **Use full screen on additional monitor** check box (4).
4. Click the **Apply** button to save changes.

For changes to take effect, quit the Client and start it again.

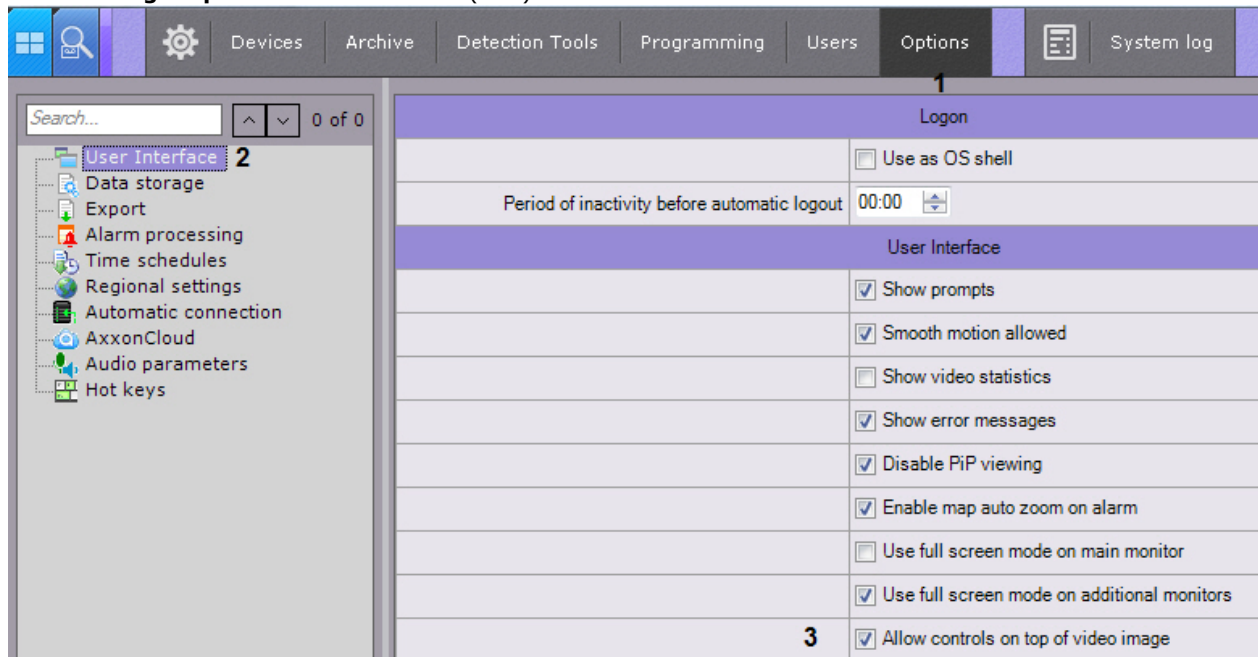
Configuring the Appearance of the Viewing Tile

Rus

By default, the Viewing Tile elements (context menus, export buttons, PTZ mode select buttons, etc.) are displayed over the video.

To move the controls outside the video area, perform the following steps:

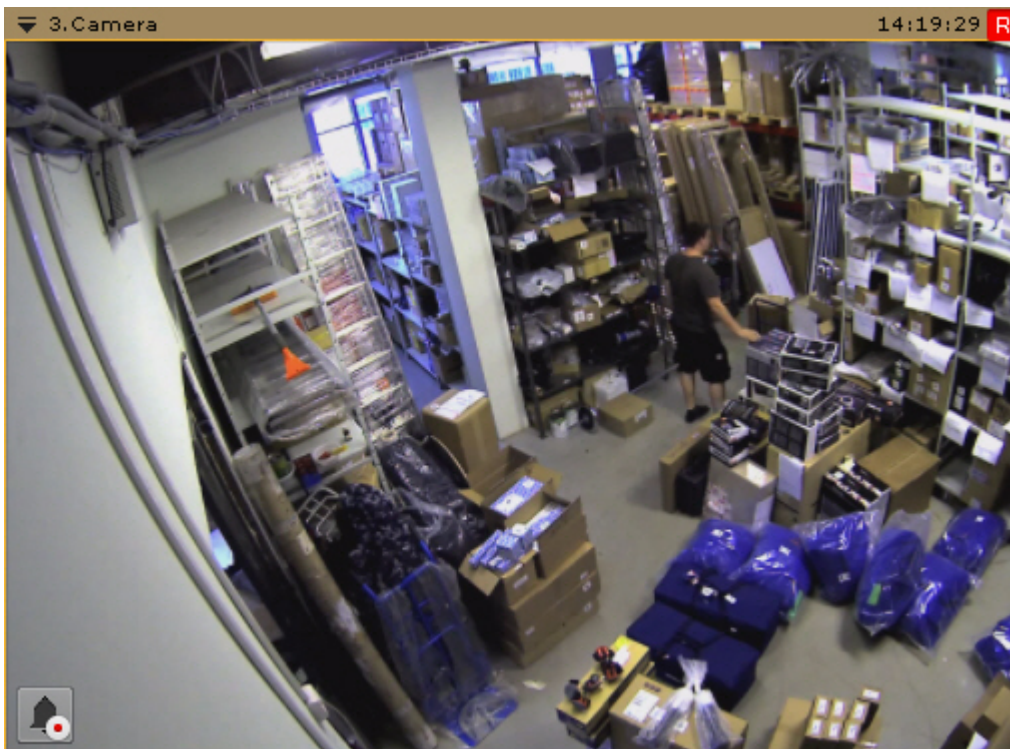
1. Go to **Settings Options User interface (1-2)**.



2. Uncheck the **Allow controls on top of video image** checkbox (3).
3. Click **Apply** to save the changes.

Reopen the Layout or create a new one.

As a result, the Viewing Tile will look like this:



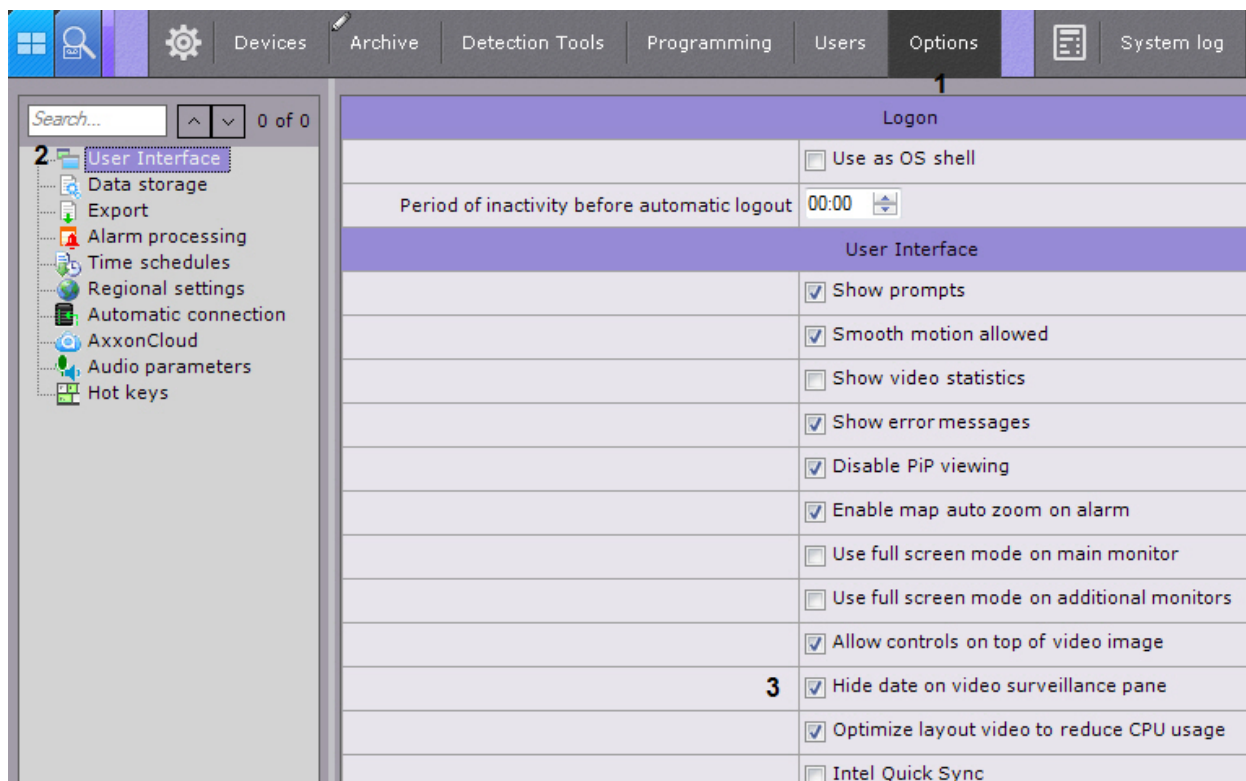
Configure Time Display

Rus

By default, the time indicator (see [Time Display](#)) in the viewing tile does not display the date.

To display the date, do as follows:

1. Go to **Settings Options User interface (1-2)**.



2. Uncheck the **Allow controls on top of video image** checkbox (3).
3. Click **Apply** to save the changes.
4. Reopen the Layout or create a new one (see [Layouts Management](#)).

Configuring the display of the camera ID

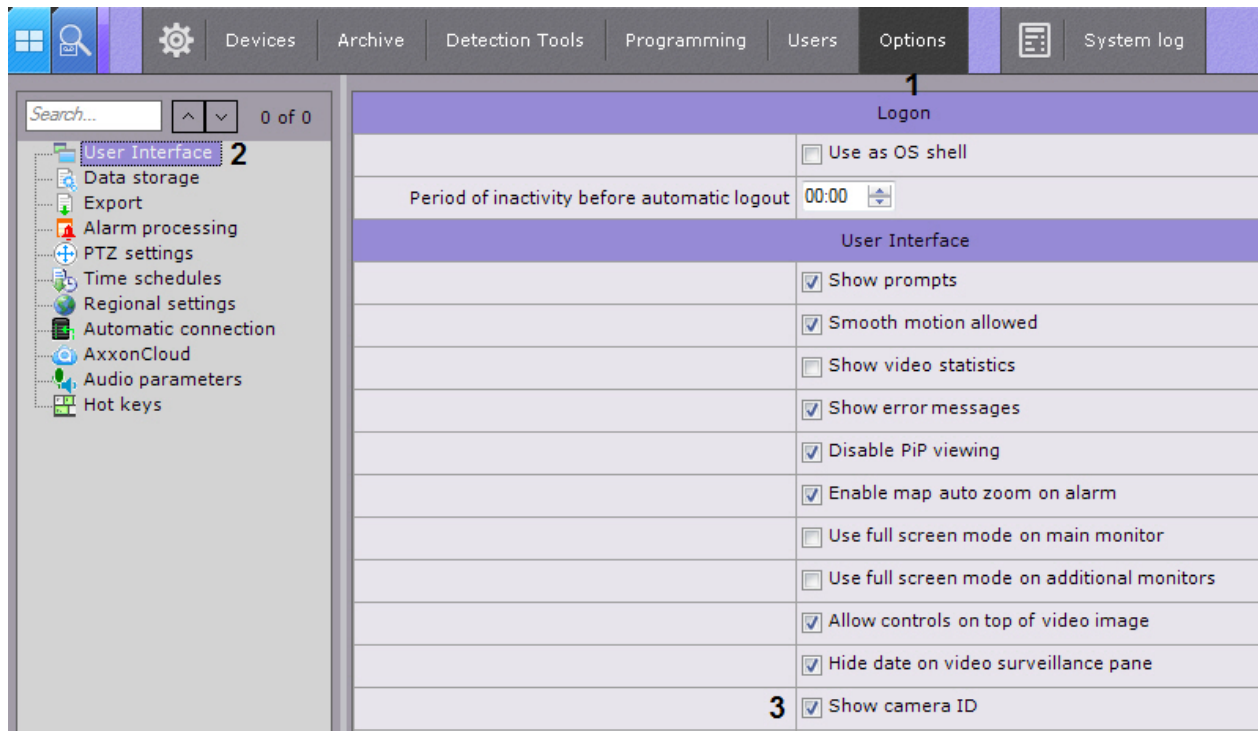
Rus

By default, camera ID is displayed in the viewing tile.



To disable displaying the ID, do as follows:

1. Go to **Settings Options User interface (1-2)**.



2. Uncheck the **Show camera ID** checkbox (3).
3. Click **Apply** to save the changes.
4. Reopen the Layout (see [Layouts Management](#)).

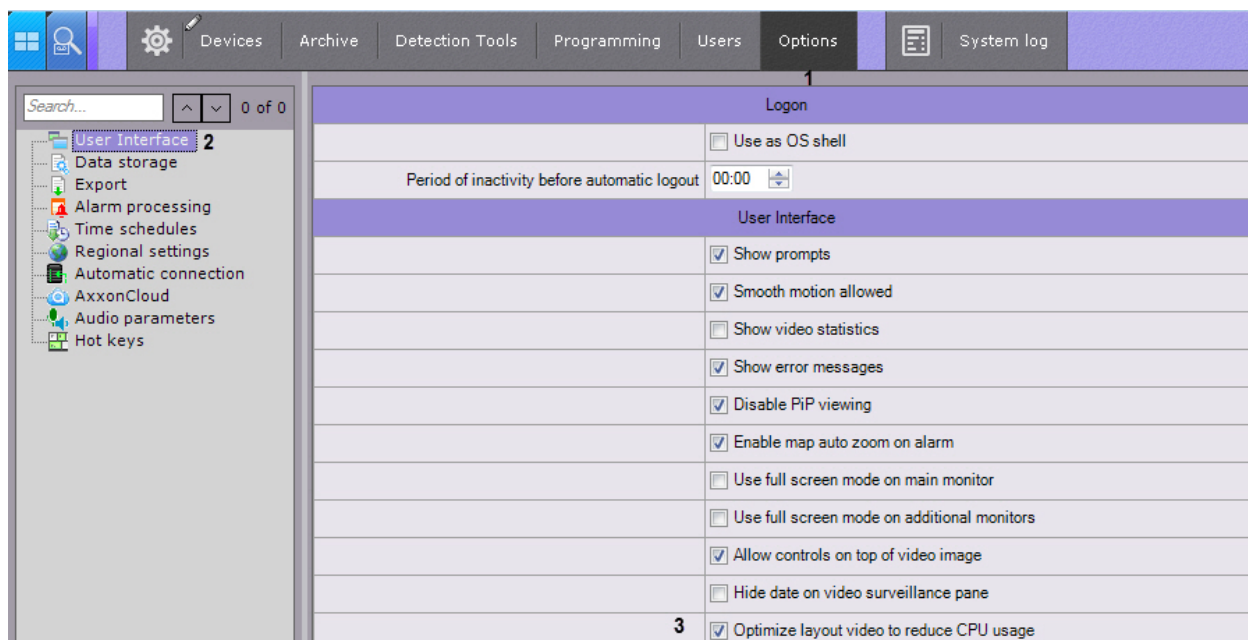


Prune Video to Window Resolution

Rus

You can cut (prune) video resolution to fit the resolution of the viewing tile. This makes sense when the camera window (i.e. viewing tile) resolution is smaller than that of the video feed. This allows conserving CPU and bandwidth. Video optimization is enabled by default. To disable, do as follows:

1. Go to **Settings Options User interface (1-2)**.



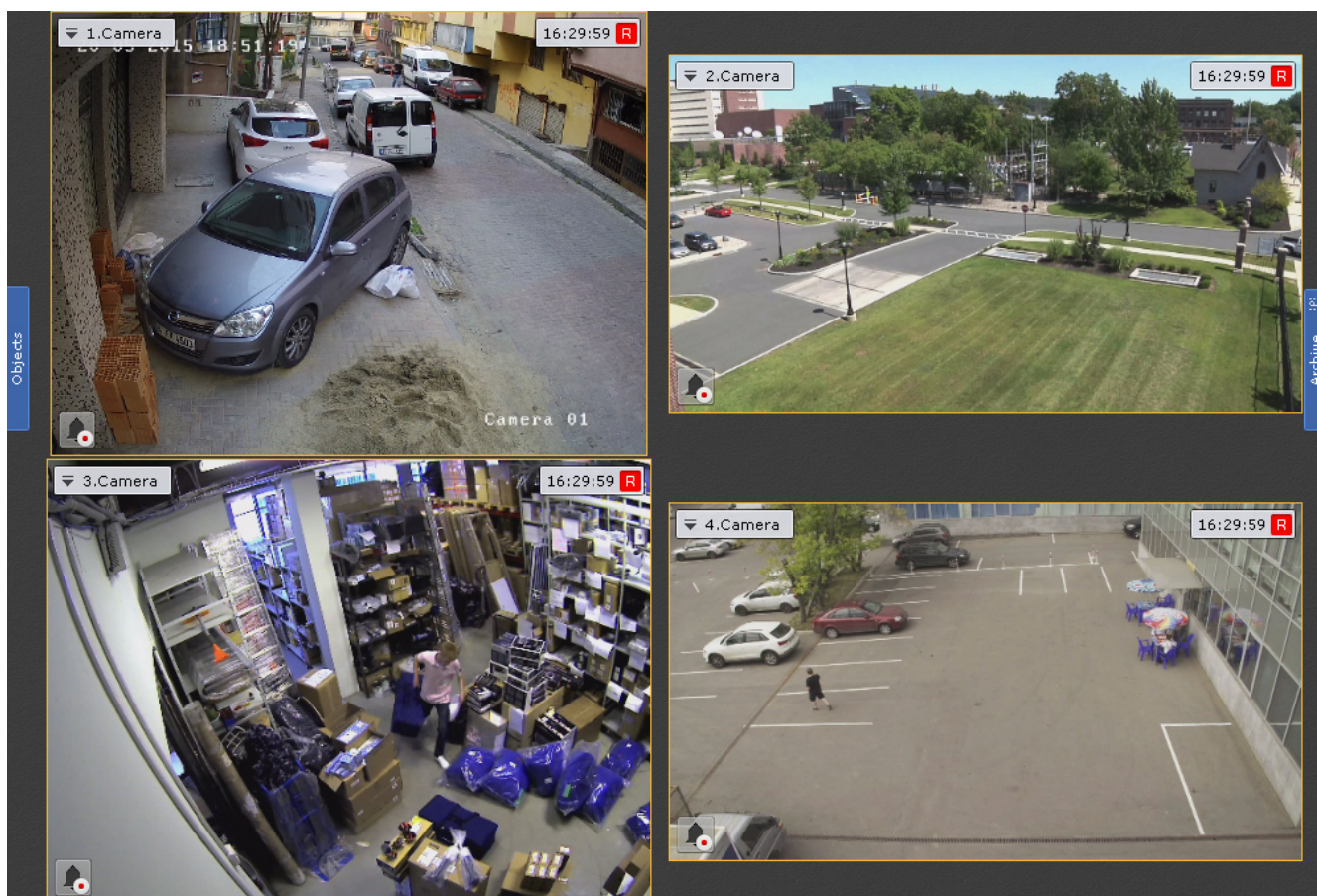
2. Uncheck the **Optimize layout video to reduce CPU usage** check box (3).
3. Click **Apply** to save the changes.

Note
When you enable the option, you may notice image quality drop.

Configuring tiles on the layout

Rus

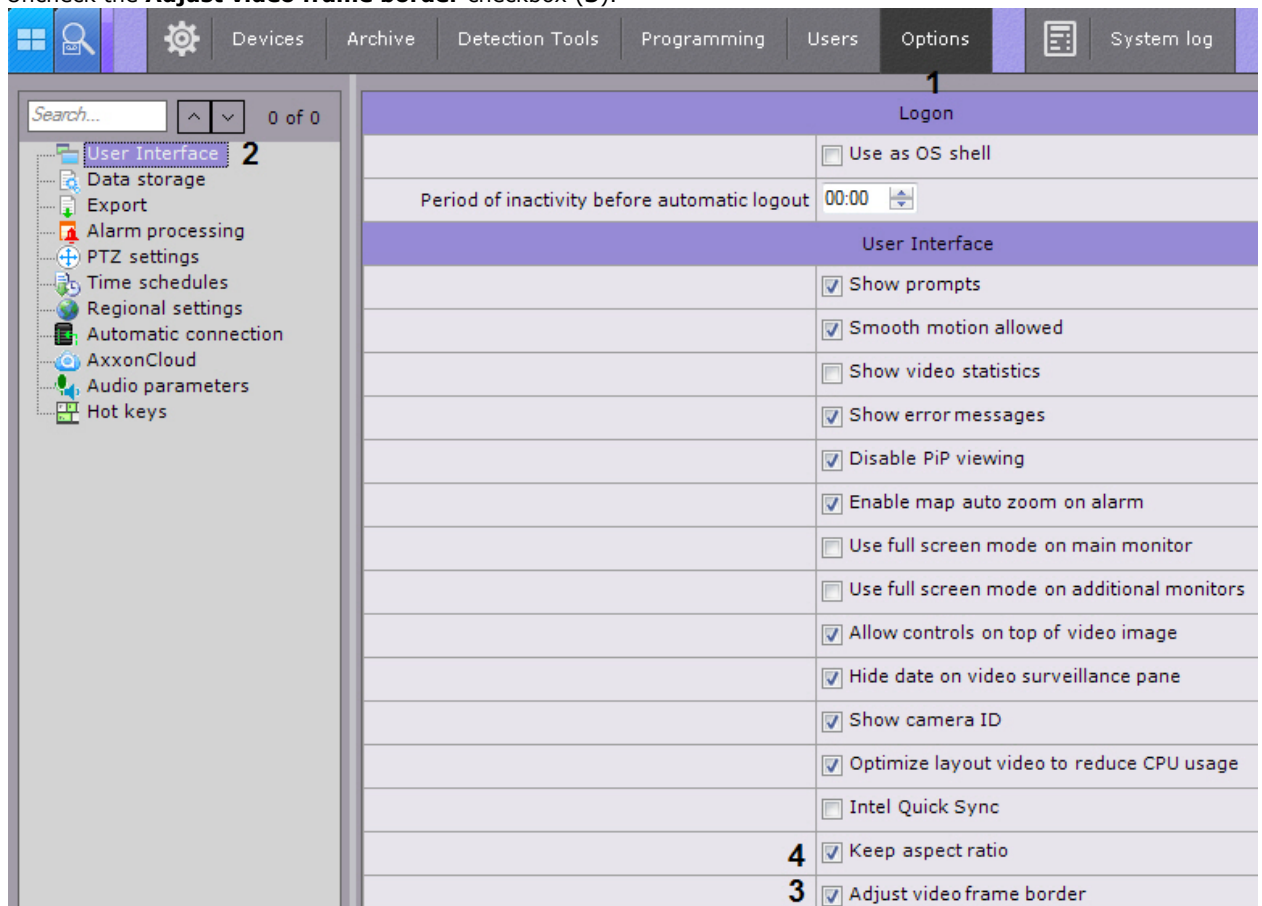
By default, the size of tiles is proportional to the video resolution.



To fix the size and expand tiles to all free space on the layout area, do as follows:

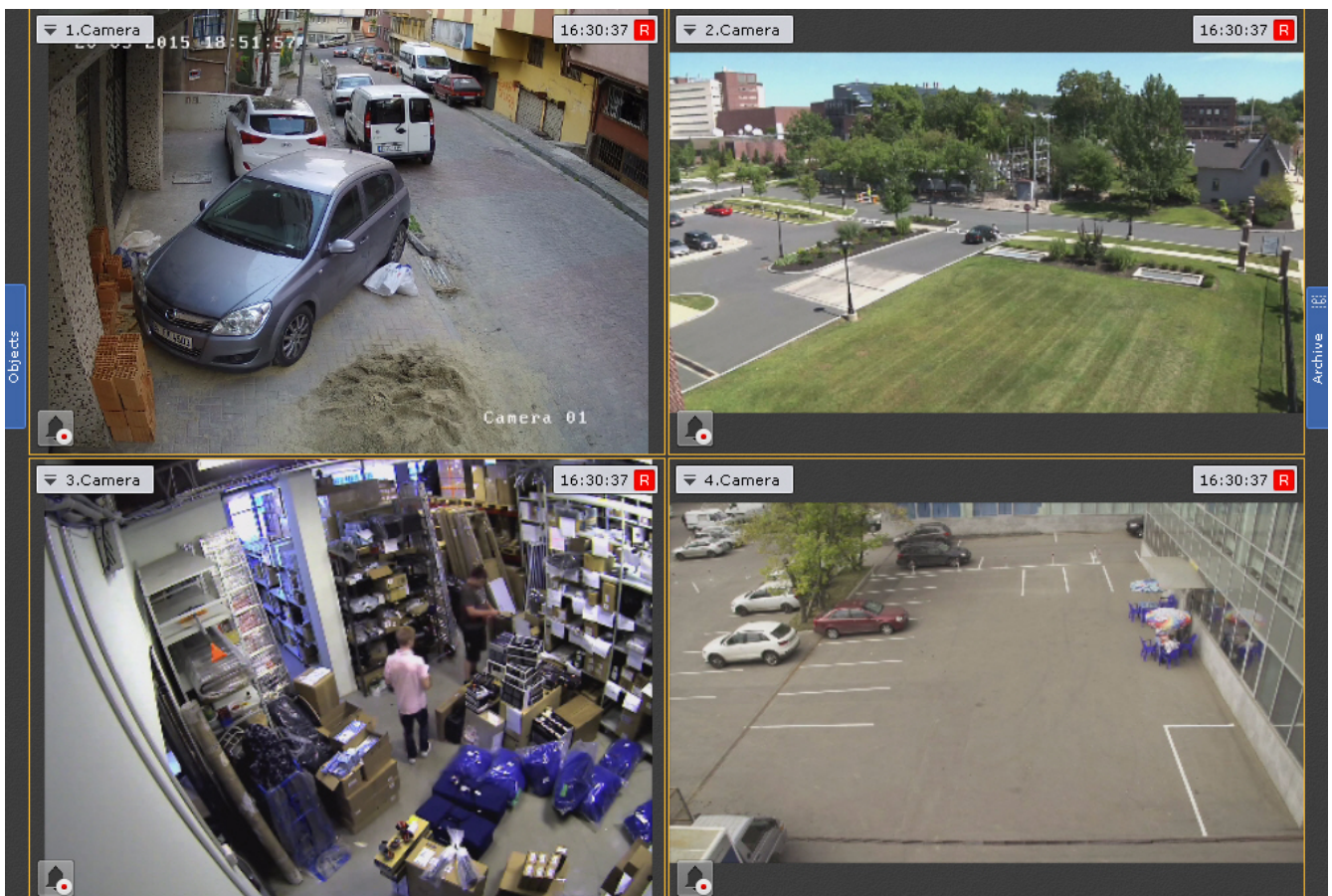
1. Go to **Settings Options User interface (1-2)**.

2. Uncheck the **Adjust video frame border** checkbox (3).



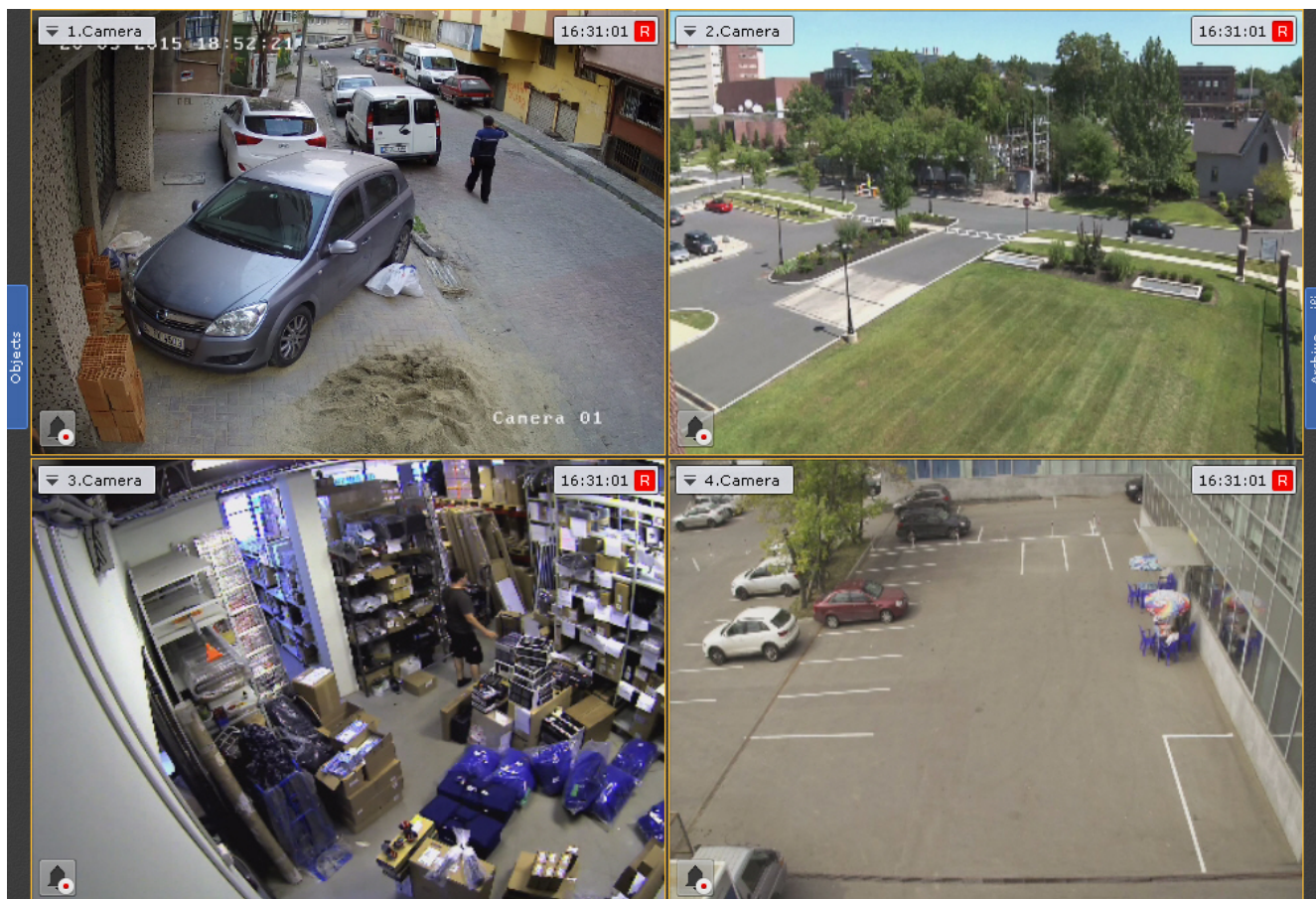
3. Click **Apply** to save the changes.
4. Reopen the Layout (see [Layouts Management](#)).

The video will retain its aspect ratio.



To expand video to all window, do as follows:

1. Uncheck the **Keep aspect ratio** checkbox (**3**).
2. Click **Apply** to save the changes.
3. Reopen the Layout (see [Layouts Management](#)).



Configuring Layouts

Configuring viewing tiles

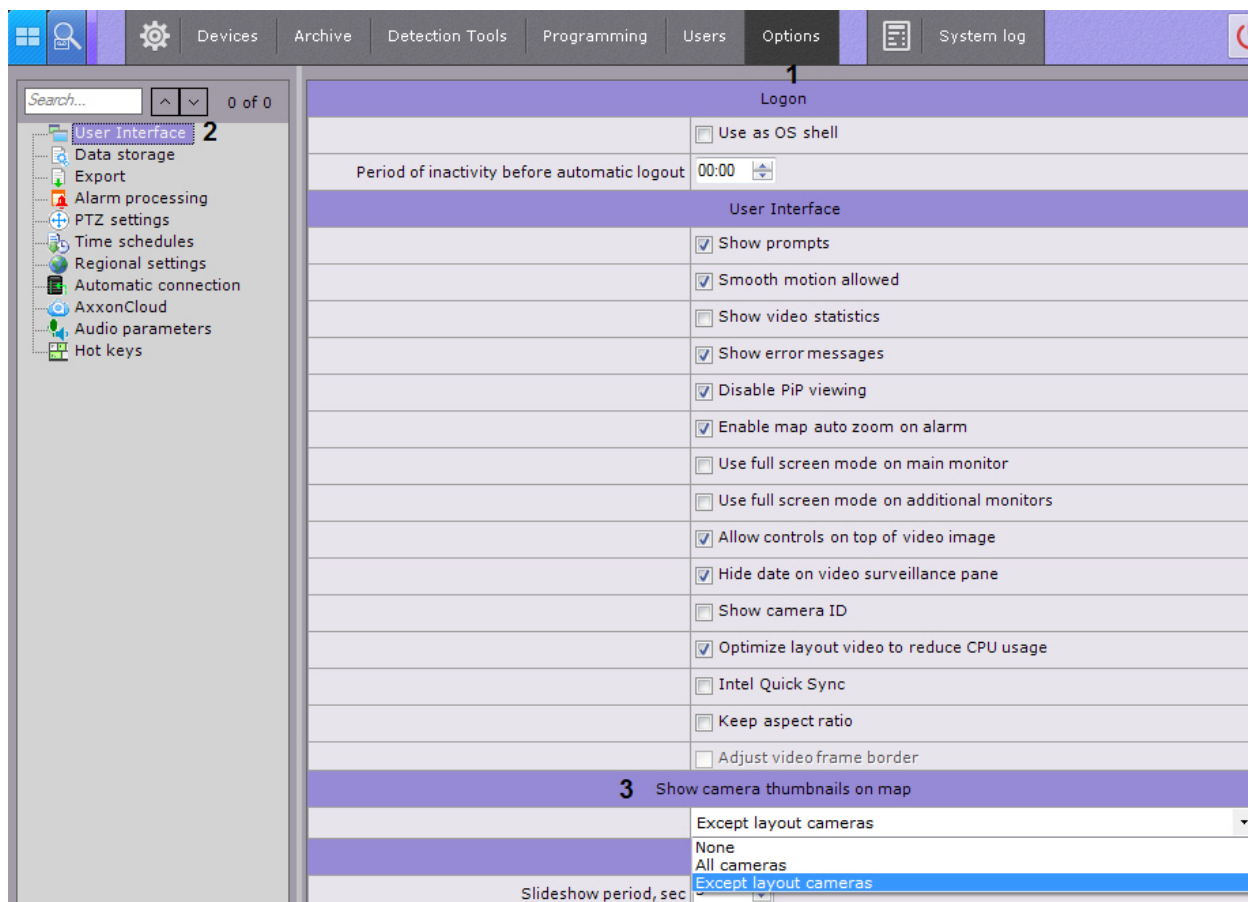
Configuring video display on the map

Rus

By default, the map shows video (see [Configuring a camera in standard map viewing mode](#)) only from cameras that are not on the current layout.

You can enable or disable video from all cameras on the map:

1. Go to **Settings Options User interface (1-2)**.



2. Choose video display mode on the map (3).
3. Click **Apply** to save the changes.
4. Reopen the Layout (see [Layouts Management](#)).

Configuring how Axxon Next starts

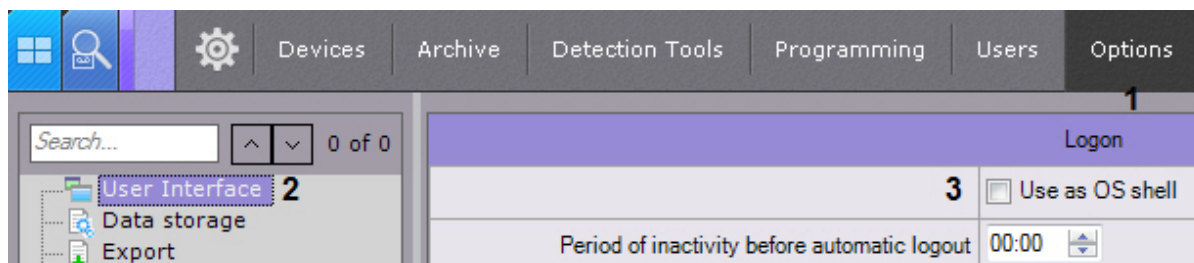
Configuring Axxon Next instead of the standard Windows OS shell

Rus

Autorun of Axxon Next, instead of the standard Windows OS shell, is used in cases where you need to restrict access to computers running the digital video surveillance system, including preventing the launch of various applications, file copying and deletion, various Windows operations, and other non-standard use of the computers.

If you configure *Axxon Next* to autorun instead of the standard Windows shell, *Axxon Next* will launch instead of Windows *E xplorer* immediately after Windows loads. This makes it impossible for the user to launch certain applications installed on the computer or to work with certain program dialog boxes.

To activate autorun of the Axxon Next software package instead of the standard Windows shell, select the **Use as OS shell** check box in **Settings Options User interface** and click **Apply**.



Axxon Next will now launch instead of the standard Windows shell the next time you start Windows.



Note

If User Accounts Control is enabled in the Windows OS, Axxon Next VMS cannot automatically start in place of OS shell (the appropriate check box is grayed out). Disable UAC. In Windows OS 8, 8.1 and 10 you also need to make changes to the [registry](#) and reboot your PC.

Configuring Cross-System Client and autologon

Rus

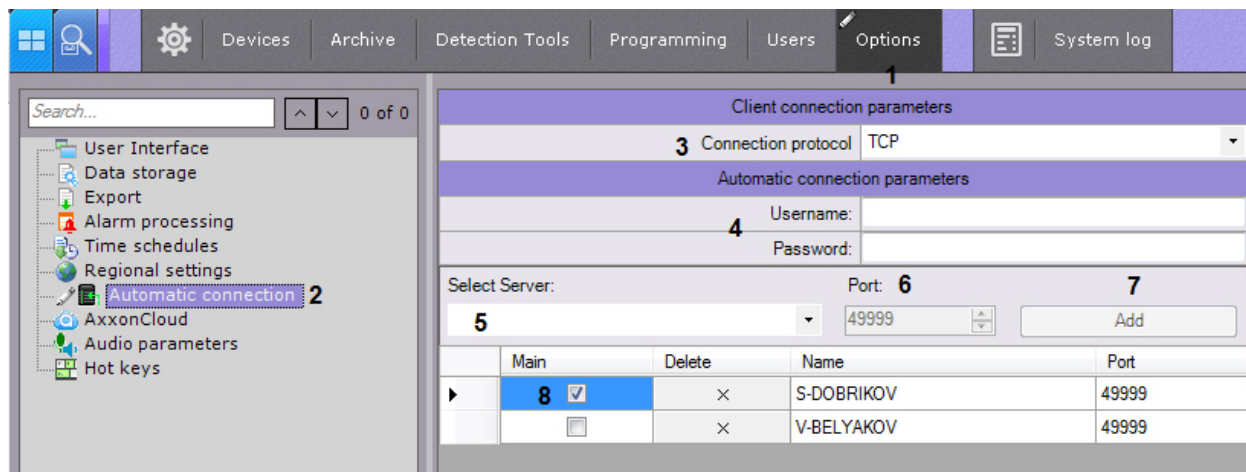
It is possible for the Client to automatically connect to Servers on different Axxon domains - [Cross-System Client](#).

For this to take place, the following conditions must be true:

- A paid license has been activated on each Server to which the Client is connected.
- Connection to all Servers made via with the same user name/password combination on each Axxon domain.

Configuration of automatic connection to Servers on different Axxon domains is performed as follows:

1. Go to **Settings Options Automatic connection (1-2)**.



2. Configuring the protocol used by Clients to connect to the Server allows prioritizing reliability or speed of data transmission (3). The connection protocol is set individually for each Server in an Axxon-domain. All Clients connected to the Server will receive video streams over the selected protocol.

Descriptions and recommendations for selecting a protocol are given in the table.

Protocol	Description
Auto	The Server automatically determines the most appropriate protocol based on the situation (number of connected cameras and clients, as well as available network bandwidth).
TCP	This protocol is more reliable but bandwidth-intensive. Recommended for Servers with small numbers of cameras.
UDP unicast	UDP is typically faster but less reliable for data transmission. Unicast involves data transmission to a single recipient.
UDP multicast	This protocol is best for Servers with many cameras connected to a single Client. Multicast refers to data transmission to a group of recipients. This protocol is designed for Servers with many cameras connected to multiple Clients.

3. Type the user name and password needed for logging in to each Axxon domain (4).
4. Indicate the Servers to connect to. For each Server, perform the following steps:
 - a. Select the Server in the list (5).
 - b. Indicate the port for connecting to the Server (6).



Note

If the **Port** field is left blank, the standard port (49999) will be used for connecting

- c. Click the **Add** button (7).



Note

It is possible to connect to only one Server on an Axxon domain. So when a Server is added to the list, all other Servers on the Axxon domain become unavailable for selection



Note

To remove a Server from the list, click the  button

5. After all Servers have been added to the list, select the main Axxon domain.
When connecting, the Client will use the parameters (maps, layouts, user rights) of the main Axxon domain. To select a main Axxon domain, select the check box in the relevant column of a Server that is on the Axxon

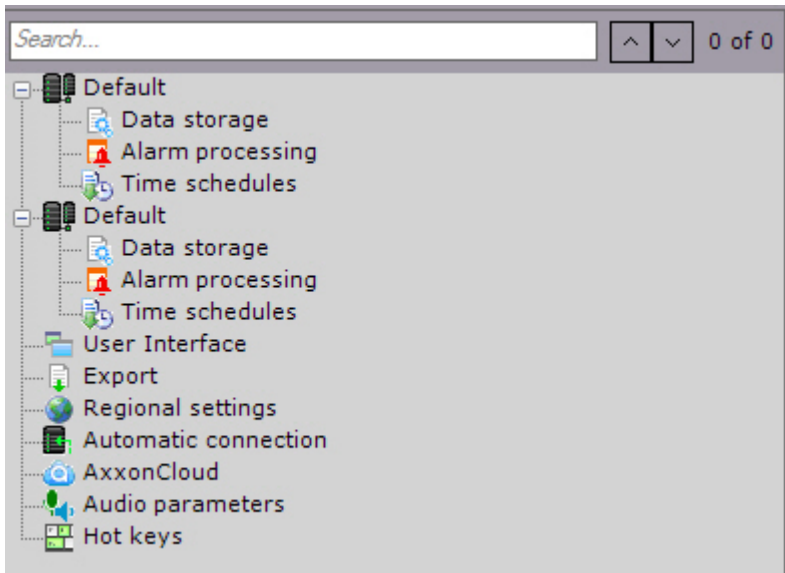
domain (7).

6. Click the **Apply** button.

Autoconnection to Servers on different Axxon domains is now complete.

The next time Axxon Next is started, connection to the selected Servers with the specified user credentials will occur automatically.

If a Client is connected to multiple Axxon domains, some of the settings on the **Options** tab (user interface, data storage, export, alarm management, and schedules) are duplicated for each Axxon domain; some are configured only for the main Axxon domain.



Click **Save (1)** to save the automatic server connection configuration.

Client connection parameters					
Connection protocol		TCP			
Automatic connection parameters					
Username:		root			
Password:		••••			
☐ Discover cluster					
Select server:		Port:			
Y-REZNIKOV		49999		Add	
	Delete	Main	Discover cluster	Name	Port
▶	×	☒	☐	A-KARPUKOV	49999
	×	☐	☐	V-BELIAKOV	49999
	×	☐	☐	Y-REZNIKOV	49999
				2	1
				Load	Save

When connecting the client to other Axxon domain servers, you can load a saved configuration by clicking **Load (2)**.



Note

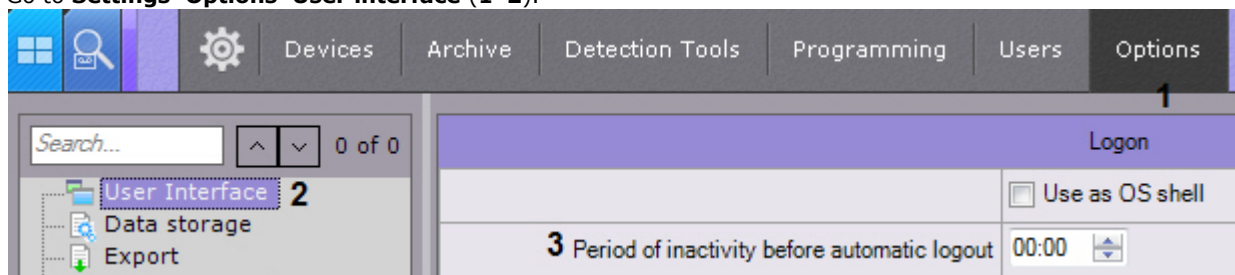
You can also load a saved configuration after restoring the system using the appropriate utility (see [Backup and Restore Utility](#)).

Configuring automatic quit of the Client

The Client can be configured to automatically quit in case of user inactivity for a specified length of time, if no signal is received from an input device (keyboard, mouse, joystick).

To do so:

1. Go to **Settings Options User interface (1-2)**.



2. In the **Time until automatic quit** field, enter the duration of user inactivity after which the Client should be quit (3).
If the field is blank or equals 00:00, the Client will not be quit.
3. Click the **Apply** button.

Configuration of automatic quit of the Client is now complete.

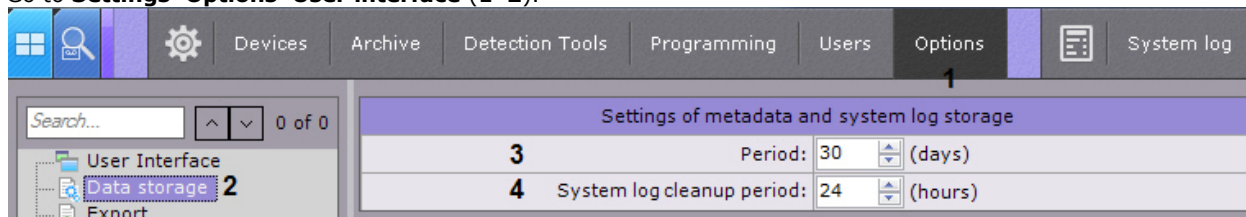
Configuring storage of the system log and metadata

The system log is a log containing system information on events, including system error entries.

The system log is stored in a local database for each server. You can set access to the system log for a user group in the **Permissions** tab under **Settings** (see the section titled [Configuring user permissions](#)).

To configure storage of the system log and metadata:

1. Go to **Settings Options User interface (1-2)**.



2. In the **Period** field, enter the amount of days to store the system log in the Server's database and to store metadata in the object trajectory database (3). 0 corresponds to no limits. The maximum time is 1000 days.



Attention!

If you have less than 5 Gb of free disk space, the Object Tracking DB is overwritten - new data records over the oldest data records.

3. In the appropriate field, enter the amount of hours after which outdated events will be purged from the system log (4).

Outdated events are events that have been stored in the system log for a period greater than that indicated in step 2.



Note

The object trajectory database is purged of video recordings that have been stored for more than the specified storage period:

1. Every 12 hours after *Axxon Next* is started.
2. Every time you start the MomentQuest forensic search tool (see [Forensic Search for Fragments \(MomentQuest\)](#)).

If the camera is not recording when DB is cleaned up, then its recordings are preserved irrespective of their timestamp.

4. Click the **Apply** button.

Configuration of the system log is now complete.

Configuring Alarm Management Mode

You can set the following parameters for alarm handling:

1. The maximum allowed reaction time to an alarm is the length of time from the moment the operator who accepted an alarm for processing exits alarm mode, after which the alarm returns to **New** status, and the count for the allowed time for ignoring an alarm begins again.



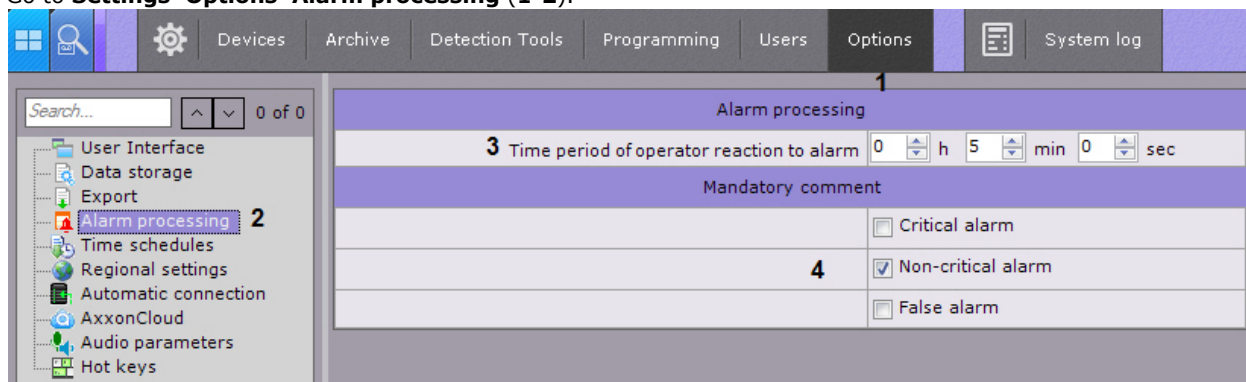
Note

For example, an operator can exit alarm mode to view the video archive related to the alarm

2. Requirement for comments when classifying alarms in Alarm Management mode.

To configure alarm handling in the system, you must perform the following steps:

1. Go to **Settings Options Alarm processing (1-2)**.



2. In the **Time period of operator reaction to alarm** field, enter the time during which an operator who accepted an alarm for processing and exited alarm mode without evaluating it must return to alarm mode (**3**).
3. Select the alarm classifications for which you want to require comments (**4**).
4. Click the **Apply** button.

Configuration of alarm handling is now complete.

Configuring export

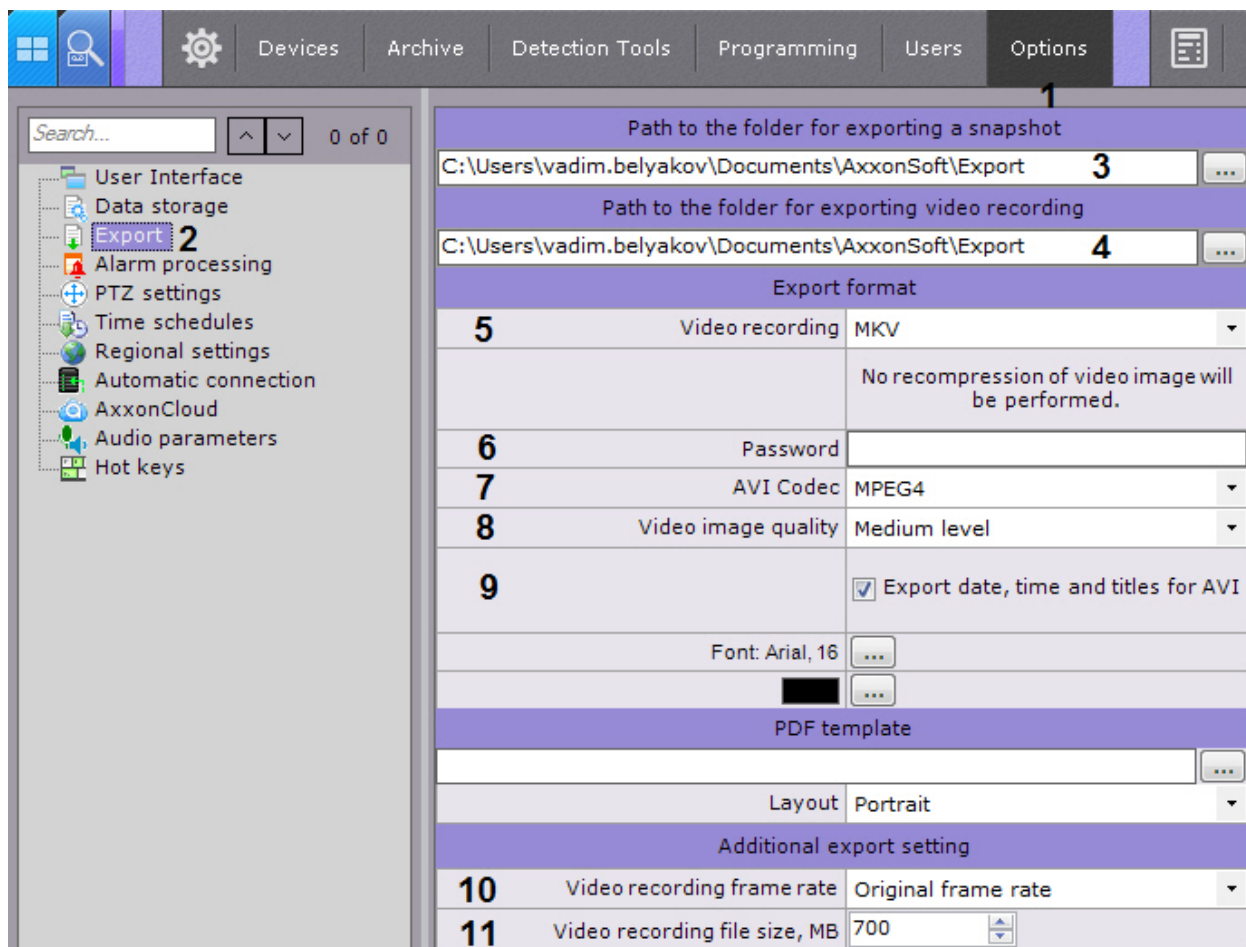
Configuring export options

Configuring export includes:

- Setting the default destination folders for exported files.
- Setting the default formats for export of video and snapshots.
- Configuring export of video in AVI format.
- Configuring the template for export of snapshots in PDF format.
- Other export settings.

Configure export as follows:

1. Go to **System settings Options Export (1-2)**.



2. In the **Path for snapshot export (3)** and **Path for video export fields (4)**, enter the full path to the folders where exported files are to be saved. To do this, click the button .

Note
During export you can specify any path.

Note
By default, on Windows XP, exported files are stored in C:\Documents and Settings\User\My Documents\AxxonSoft\Export\. On Windows 7 and Windows Vista, they are stored in C:\Users\User\Documents\AxxonSoft\Export\.

Attention!
These fields also allow you to specify the name template for the exported files, as follows:



{0}-Camera ID.
{1}-Camera name
{2}-Date.
{3} Time.
{4}-Recording duration (for video export only).

3. Select the default formats for export of video and snapshots (**5**). You can select any available format during export. Snapshots can be exported in two formats: JPG and PDF. Video can be exported in three formats: MKV, EXE, and AVI.

**Note**

Video is exported in MKV format without recompression.

Video is exported in AVI format with recompression in the selected codec (see point 4).

When video is exported in EXE format, a self-contained executable file is generated, containing video, playback tools, and necessary codecs.

4. If you want to export to an encrypted zip archive, set a password (**6**). If you are exporting an .exe file, you will need to enter a password when you open the file.
5. Specify settings for video export in AVI format: Select a codec (**7**) and compression quality (**8**).
6. If you need to embed titles in AVI videos, select the **Export Date, Time and AVI Titles** checkbox (**9**).
7. Select a frame rate for the exported video: if **Do not change** is selected, the original frame rate is kept; if **1/2** is selected, the exported frame rate will be two times smaller than the original one; if **1/4** is selected, four times smaller, and if **1/8** is selected, eight times smaller (**10**).

**Note**

The minimum frame rate of exported video is 1 fps.

8. Specify a maximum file size for the exported video, in megabytes (**11**). When the limit is reached, a new file is created. If the field is left empty, export will always be performed to a single file.

**Note**

The minimum value is 5 megabytes.

9. Configure a template for export of snapshots in PDF format:
 - a. Select the font and font color (**1**).
 - b. If necessary, select the PNG image to use as the background of the PDF document (**2**).

The screenshot shows a configuration window for PDF templates. It has three main sections:

- Section 1:** Font settings. It displays 'Font: Arial, 16' and a black color swatch with a selection button (three dots).
- Section 2:** PDF template selection. It is highlighted with a blue background and shows 'PDF template' with a selection button (three dots).
- Section 3:** Layout settings. It shows 'Layout Portrait' with a dropdown arrow.

- c. Select the document orientation (**3**).
Exported PDFs consist of three sections: comment entered during export; date and time of the snapshot; and snapshot image.
- d. Configure the size of the sections and their position on the page.

The screenshot shows a configuration window with three distinct sections, each with a light gray background and a thin border. The top section is labeled "Comment". The middle section is labeled "Exported image" and is significantly larger than the others. The bottom section is labeled "Date/time".

**Note**

Section sizes and positions can be changed like [standard windows](#).

10. Click the **Apply** button.

Export configuration is now complete.

Configuring an Export Agent

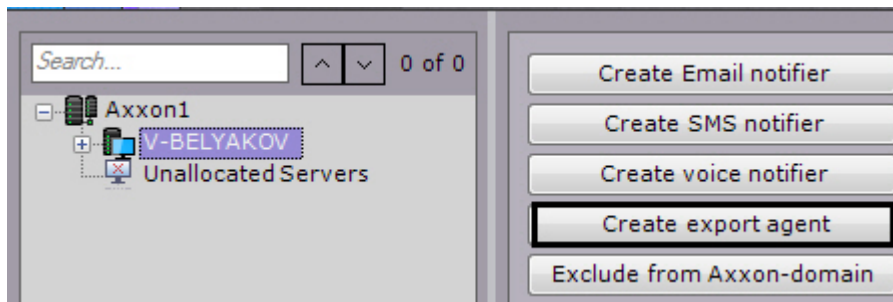
Rus

Export Agent is a service that allows automatically exporting snapshots and video to a particular Server when a defined system event occurs.

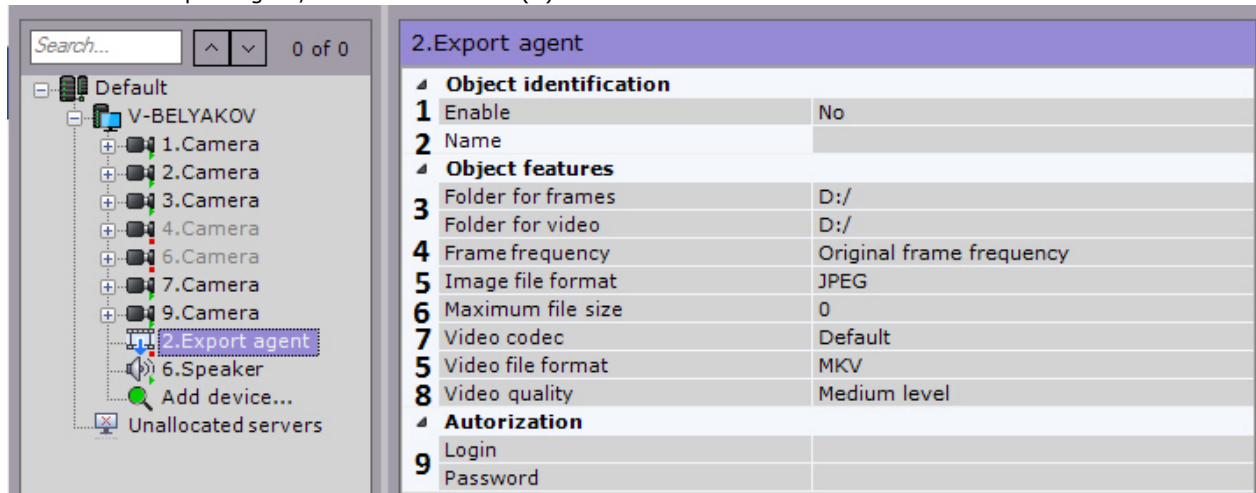
Automatic export of snapshots and videos will start when the relevant macro is run.

To create and configure an Export Agent:

1. In the device tree, select a server and click the **Create Export Agent** button.



2. To enable the Export Agent, set **Enable** to **Yes** (1).



3. In the relevant field, set the object name (2).
4. Specify full paths to the folders that will store the exported snapshots and video (3). To do so, click the button in the relevant field.
5. Select a frame rate for the exported video: if **1/2** is selected, the exported frame rate will be two times smaller than the original one; if **1/4** is selected, four times smaller, and if **1/8** is selected, eight times smaller (4).
6. Select the file formats for video and frame export (5).
7. Set the maximum size for exported video files, in megabytes (6). If the exported video exceeds the specified size, multiple export files will be created. If the field is empty, video will always be exported as a single file.
8. If you want to export video to an AVI file (see item 6), select the codec (7) and the required quality (8).
9. For network folders, enter the user name and password (9). The user must have permissions to access the NAS.
10. Click the **Apply** button.

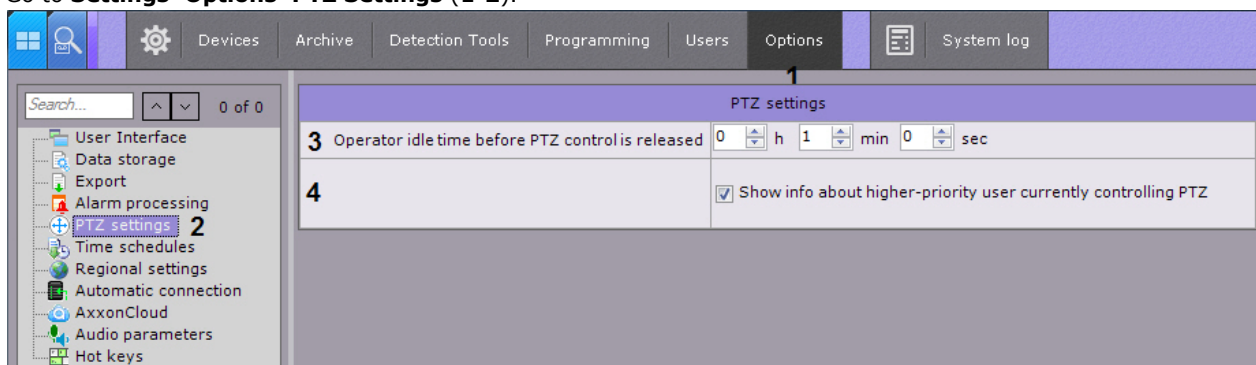
Creation and configuration of the Export Agent are now complete.

Configuring PTZ control

Rus

To configure PTZ control, do as follows:

1. Go to **Settings Options PTZ Settings** (1-2).



2. Set the operator idle time in hours, minutes and seconds (3). When the time runs out, PTZ control is unlocked automatically if the operator did not carry out any action.
3. By default, if the user with a higher priority controls the PTZ camera, then the PTZ control panel displays the name of the user. To disable displaying this information, deselect the corresponding checkbox (4).
4. Click the **Apply** button.

You have configured PTZ control.

Configuring schedules

Rus

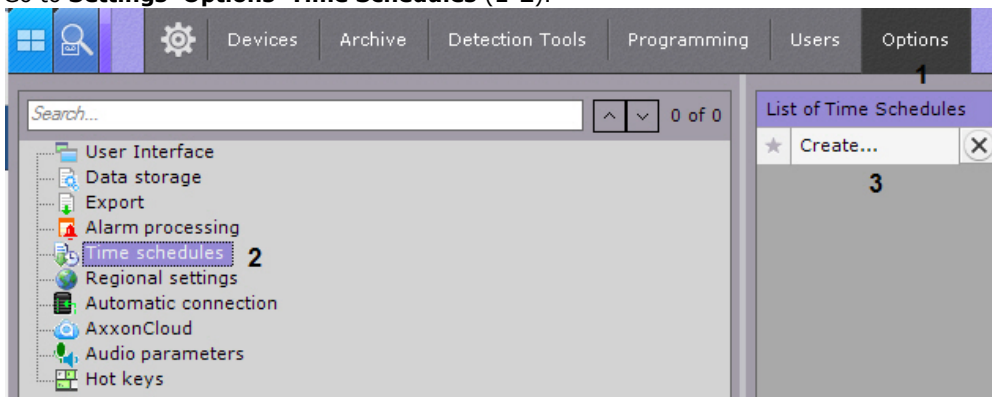
A schedule consists of all the time intervals for which video streams from video cameras will be recorded to archive.

Creating schedules

Rus

To create a schedule, complete the following steps:

1. Go to **Settings Options Time Schedules (1-2)**.



2. Under **List of schedules**, click the **Create...** field and enter the name of the schedule (**3**)
3. Set the time intervals for the schedule:
 - a. Enter the interval's start time in the **From** column with the help of the buttons accessible by left-clicking the appropriate cell twice (**1**).

Time schedule intervals											
	1 From	2 To	Mon	Tu	Wed	Thurs	Fr	Sat	Sun	All	
	00:00	08:00	☐	☐	☐	☐	☐	☒	☒	☐	X
	08:00	18:00	☒	☒	☒	☒	☒	☐	☐	☐	X
★	00:00	00:00	☐	☐	☐	☐	☐	☐	☐	☐	X

Button	Action
	Shift the interval start back by 1 hour
	Shift the interval start back by 5 minutes
	Shift the interval start ahead by 5 minutes
	Shift the interval start ahead by 1 hour

- b. Enter the interval's end time in the **To** column with the help of the buttons accessible by left-clicking the appropriate cell twice (**2**).
- c. Select the days of the week to be included in the interval by selecting the appropriate check boxes (**3**).
- d. Create the necessary number of intervals to be included in the schedule

Note

To delete a time interval, click  in the corresponding row

A visual display of time intervals for each day of the week is provided on the time chart.

List of Time Schedules		Time schedule intervals											
	Timezone 1		From	To	Mon	Tu	Wed	Thurs	Fr	Sat	Sun	All	
★	Create...		00:00	08:00	☐	☐	☐	☐	☐	☒	☒	☐	
			08:00	18:00	☒	☒	☒	☒	☒	☐	☐	☐	
★			00:00	00:00	☐	☐	☐	☐	☐	☐	☐	☐	

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Monday																								
Tuesday																								
Wednesday																								
Thursday																								
Friday																								
Saturday																								
Sunday																								

4. Click the **Apply** button.

Creation of a schedule is now complete.



Binding a camera to an archive

[Create Macros](#)

Deleting a schedule

Rus

To delete a schedule, complete the following steps:

1. Go to the list of schedules (under **Settings Options Time Schedules**).

List of Time Schedules	
Timezone 1	
Timezone 2	
★ Create...	

2. Click beside the schedule that you want to delete.
3. Click the **Apply** button.

Deletion of a schedule is now complete.

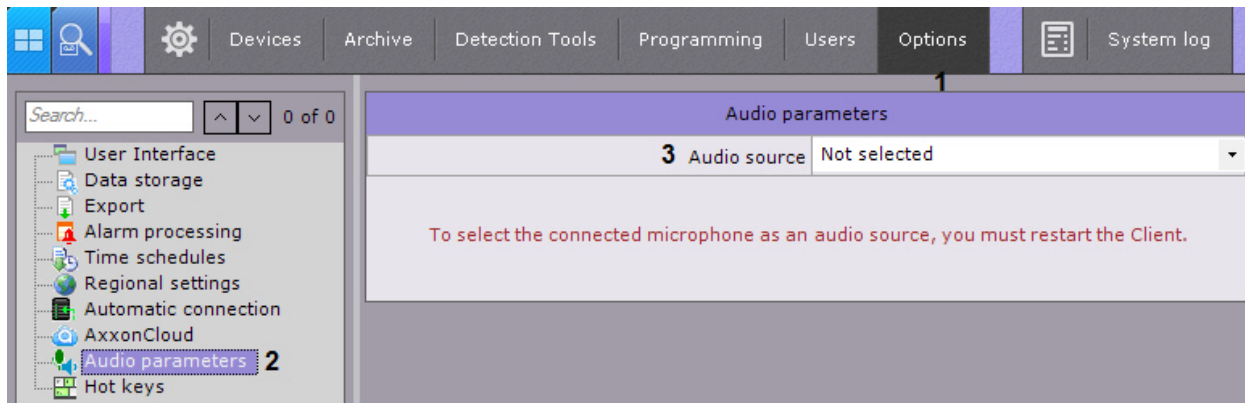
Configuring audio on the Client

Rus

To broadcast audio from the Client microphone on a camera speaker, you must configure audio on the Client.

Do the following:

1. Go to **Settings -> Options -> Audio parameters (1-2)**.



2. In the **Audio source** field, select the system device that will be used as the audio source for playback on the camera speaker (3).



Note

The default device is shown in the list in bold.

3. Click the **Apply** button.

Configuration of audio on the Client is now complete.

Configuring hot keys

Introduction to hot keys in Axxon Next

Rus

In Axxon Next, hot keys for standard keyboards and joysticks can be set to perform certain actions.

The operator's work with hotkeys is divided into 6 modes:

1. Global mode, in which a hot key is always available.
2. Live Video mode.
3. Archive viewing and search in archive mode.
4. TimeCompressor mode.
5. Alarm Processing mode.
6. Programming - running macros.

When setting hot keys, keep the following rules in mind:

- The same shortcut can be used for different actions in different modes.
- A shortcut in any particular mode can be associated with only one action.
- Shortcuts set in Global mode cannot be redefined in other modes.
- Hot keys are available only when the Client is active.
- On standard keyboards, alphanumeric keys must be preceded by modifier keys (CTRL, ALT, SHIFT).
- During system configuration (when the Settings tab is open), only one action with hot keys is available: go to layouts (the Activate panel of configuration command).



Note

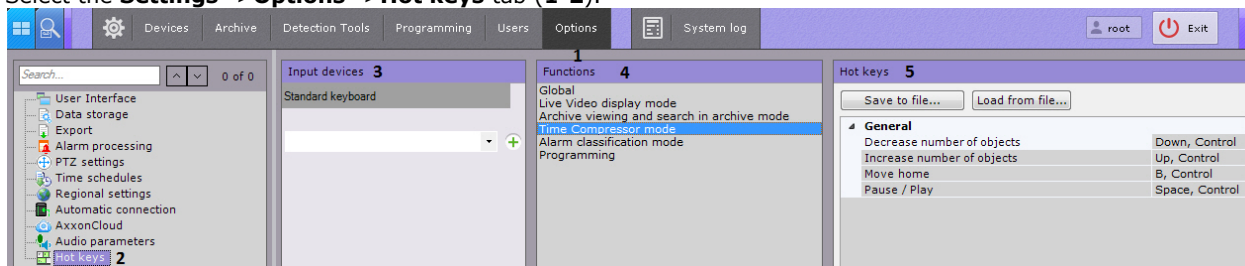
Please refer to the list of hotkeys in [Appendix 6](#) to this guide.

Assigning hot keys

Rus

To assign hot keys:

1. Select the **Settings ->Options ->Hot keys** tab (1-2).



2. In the list, select the device for which you want to configure hot keys (3).
3. Select the mode for which you want to configure hot keys (4, see [Introduction to hot keys in Axxon Next](#)).

4. To assign a shortcut to a specific action:
 - a. Double-click the current shortcut assigned to the action (**5**). The field is now cleared.



Note

For some actions in Global mode, you cannot change the default hot keys.

- b. Press the key/key combination/joystick button to assign to the action.



Note

If the field is left empty, no hot key will be assigned to the action.

5. Assign hot keys for all actions of interest.
6. Click the **Apply** button.

Assignment of hot keys is now complete.

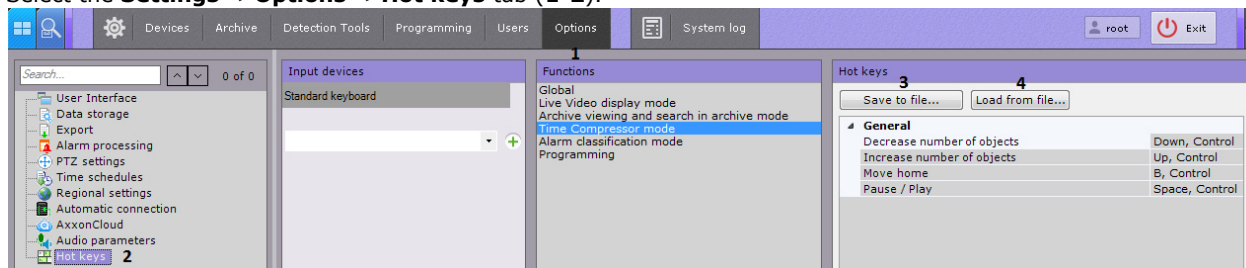
Exporting and importing hot keys

Rus

You can export and import hot key configuration files from and to the Client. Export and import of hot keys is performed via files in XML format.

To export hot keys:

1. Select the **Settings ->Options ->Hot keys** tab (**1-2**).



2. Click the **Save to file** button (**3**).
3. Select where to save the file and give it a name.

Export of hot keys is now complete.

To import hot keys:

1. Select the **Settings ->Options ->Hot keys** tab (**1-2**).
2. Click the **Load from file** button.
3. Select a file that contains a hot key configuration. Click the **Open** button.
The hot key combinations are imported into the Client, so long as a valid file is selected.
4. Click the **Apply** button.

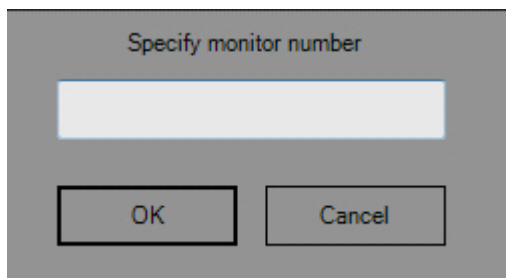
Import of hot keys is now complete.

Notes regarding hot key actions

Rus

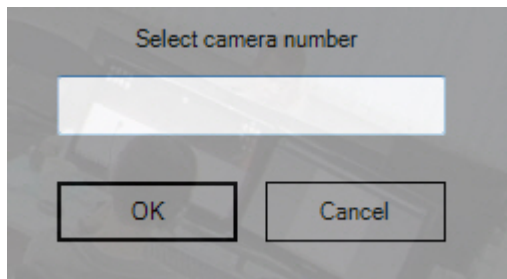
To select an active monitor in a multi-monitor configuration (see [Managing video walls of a local Client](#)), click **Select Monitor by number** (Global mode).

When you click the button or press the hotkeys, a window opens, where you can enter the monitor ID.



Enter the monitor ID and click **OK**. This monitor becomes active.

When a key or key combination assigned to the **Camera selection in current layout** action (Global mode) is pressed, the go to camera by ID window opens.



Enter the ID of the camera that you want to select and click **OK**.

If the current layout contains a camera with the specified ID, the relevant viewing tile becomes active. If the current layout does not contain a camera with the specified ID, a minimum layout containing the camera is opened.

In all other cases, no system actions occur.

Descriptions of other non-trivial actions performed via hot keys are given in the table.

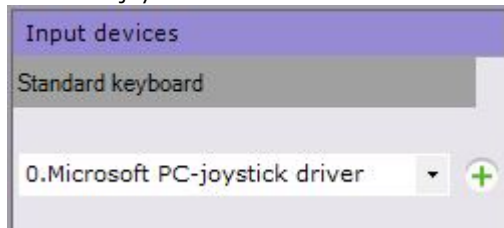
Mode	Action	Description
Global (general)	Navigation (up, left, down, right)	Navigate or move within the selected interface element. These keys are active only when a navigable menu or panel/ribbon is open.
	Activate layout ribbon	When this key is pressed, the layout ribbon expands, allowing to navigate between and select layouts. When the ribbon is minimized or a layout is selected, the relevant viewing tile becomes active.
	Activate panel of video walls	When this key is pressed, the panel of video walls expands, allowing to navigate between available monitors. When the panel is minimized, the viewing tile becomes active.
	Activate camera panel	When this key is pressed, the camera panel expands, allowing to navigate between and select cameras. When the panel is minimized or a camera is selected, a viewing tile becomes active.
	Activate panel of configuration	Pressing this key a second time opens the tools panel, on the Layouts ribbon.
	Open alarm panel	Pressing this key again minimizes the panel.
	Open panel with hardware list (left)	Pressing this key again minimizes the panel.
Global (map)	Switch to 3D mode	If the map is in 2D mode, clicking this button switches to 3D mode. If the map is in 3D mode, clicking this button hides the map.
Live Video mode	Open the menu of the selected camera and select a menu item.	Pressing this key again closes the menu.
	Switch to Archive mode	If a viewing tile in a layout is active, the archive is opened only for that particular camera. Pressing this key again switches to Live Video mode. If there are no active viewing tiles in the layout, the archive is opened for all cameras in the layout.
Archive viewing and search in archive mode	Go to Search in Archive mode.	Pressing this key again switches to Archive mode.
	Go to the next/previous frame	Holding this key moves forward/backward frame by frame until the key is released.
	Go to the next/previous video clip	Holding this key moves forward/backward between video clips until the key is released
	Go to TimeCompressor mode	Pressing this key again switches to standard archive mode.
	Open list of timeline events	Pressing this key again closes the list.

Joystick Configuration

Rus

To configure the joystick, do as follows:

1. Connect the joystick to a computer.
2. Select the joystick from the list and click the button .



3. Set keyboard shortcuts, and click **Apply**.
4. Configure the sensitivity for PTZ controls:
 - a. Start a text processor (i.e. Notepad) and open the file `<Joystick_Name>.xml`, which is located in `C:\Users\<User_Name>\AppData\Local\AxxonSoft\AxxonNext\HotKeysXmlConfigurationFiles`.
 - b. Set the sensitivity for commands in **`<Sensitivity>0.2</Sensitivity>`**.

```
<HotKeysSchemaDeviceCommands>
<CommandName>DiscreteZoomOut</CommandName>
<HotKey>A2-</HotKey>
<Sensitivity>0.2</Sensitivity>
</HotKeysSchemaDeviceCommands>
```

The sensitivity values range from 0.0 (low sensitivity) to 1.0 (high sensitivity). Please see the commands that have sensitivity settings in the table.

Command	Command description
DiscreteMoveXAxisRight	Pan right (Move right)
DiscreteMoveXAxisLeft	Pan left (Move left)
DiscreteMoveYAxisUp	Tilt up (Move up)
DiscreteMoveYAxisDown	Tilt down (Move down)
DiscreteZoomIn	Zoom in
DiscreteZoomOut	Zoom out
DiscreteFocusNear	Reduce the focal length
DiscreteFocusFar	Increase the focal length
DiscreteIrisOpen	Open the iris
DiscreteIrisClose	Close the iris



Attention!

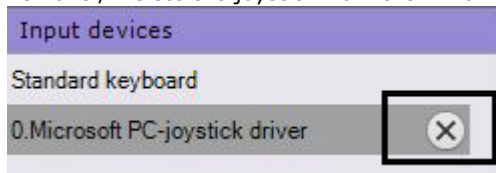
Do not set values outside the range and edit other parameters in the file.

- c. Save the changes to the file.

Joystick configuration is now complete.

If the joystick is already configured the specified file does not have the **Sensitivity** parameter, do as follows:

1. Remove / Delete the joystick from the *Axxon Next VMS*.



2. Click the **Apply** button.

3. Add and configure the joystick again.

Configuring video capturing on operator monitor

Rus

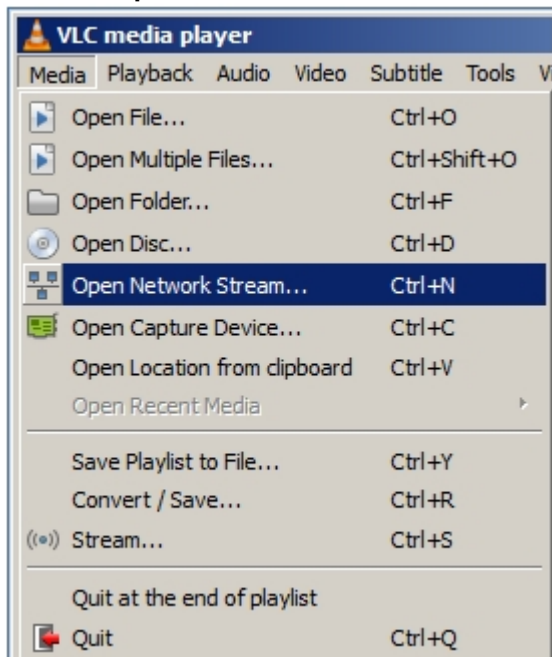
Record of video from computer monitor is performed to control operator actions. Video from computer monitor can be transmitted to the Axxon Next software package by general protocols using external programs, for example:

1. By RTSP protocol using the VLC Media Player included into the software package.
2. By ONVIF protocol using the ScreenOnvif program which can be got in the <http://screenonvif.com/en> web-site.

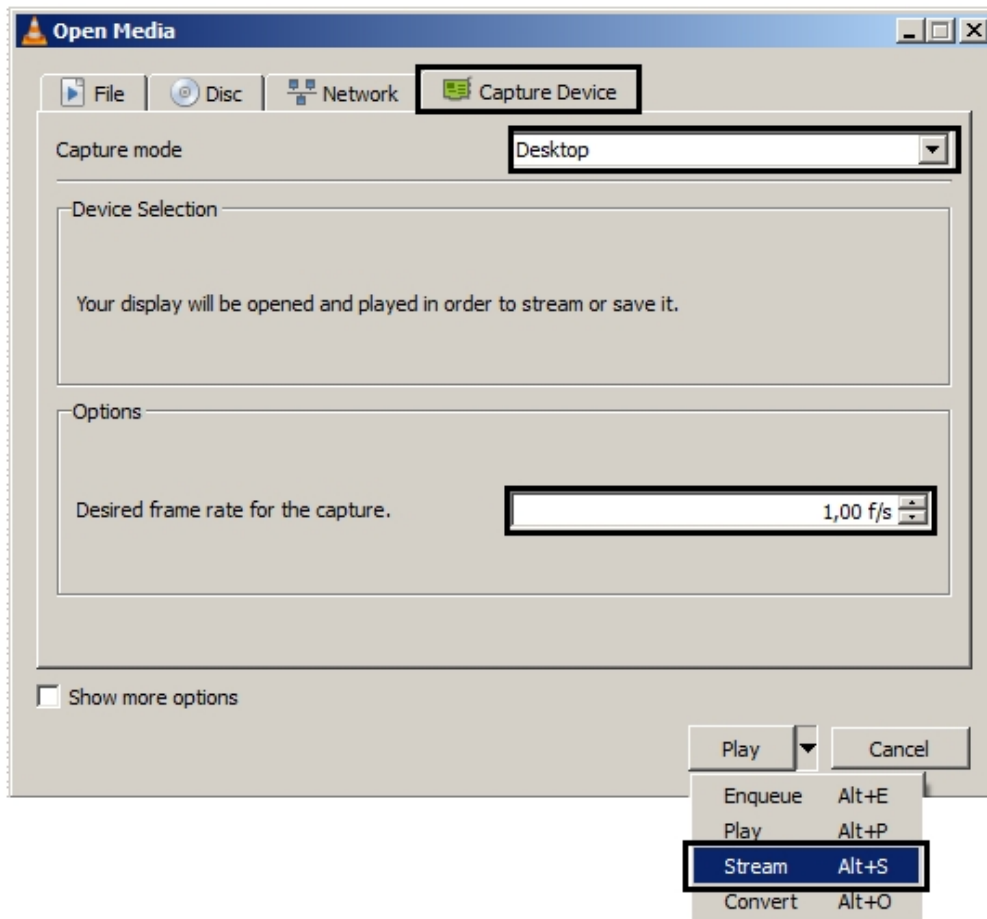
Example of the VLC Media Player configuring for transmitting video from computer monitor to the *Axxon Next* by the RTSP protocol is presented in this section. Configuring of the Axxon Next software package to receive and record this video stream is performed by standard means as described in the [Configuring an RTSP Server](#) and [Binding a camera to an archive](#) sections.

Configuring the VLC Media Player for transmitting video from computer monitor to the Axxon Next software package by the RTSP protocol is performed the following way:

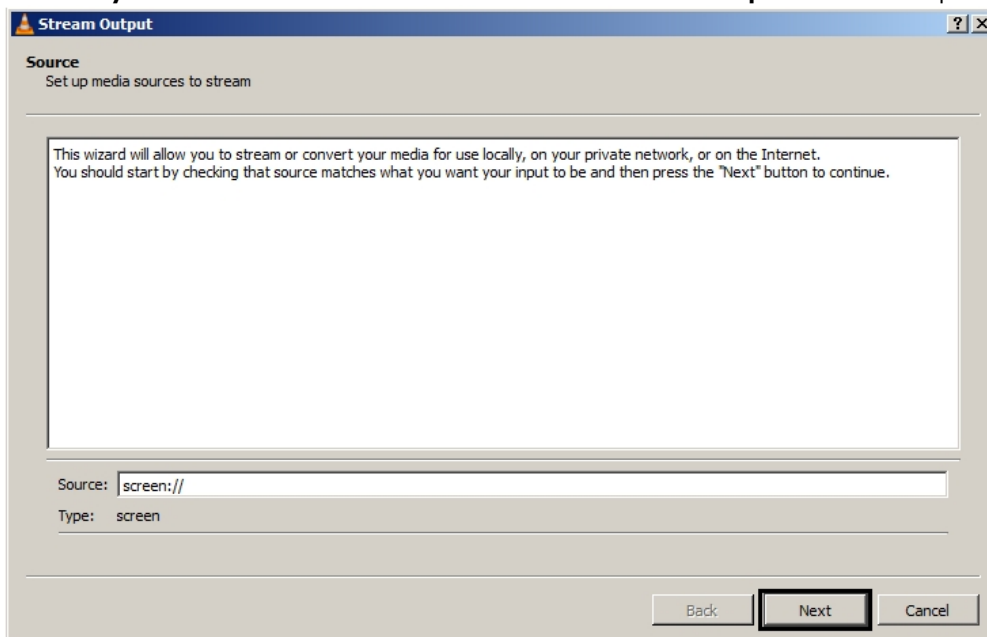
1. Run the VLC Media Player.
2. Select the **Open Network Stream item...** in the **Media** menu.



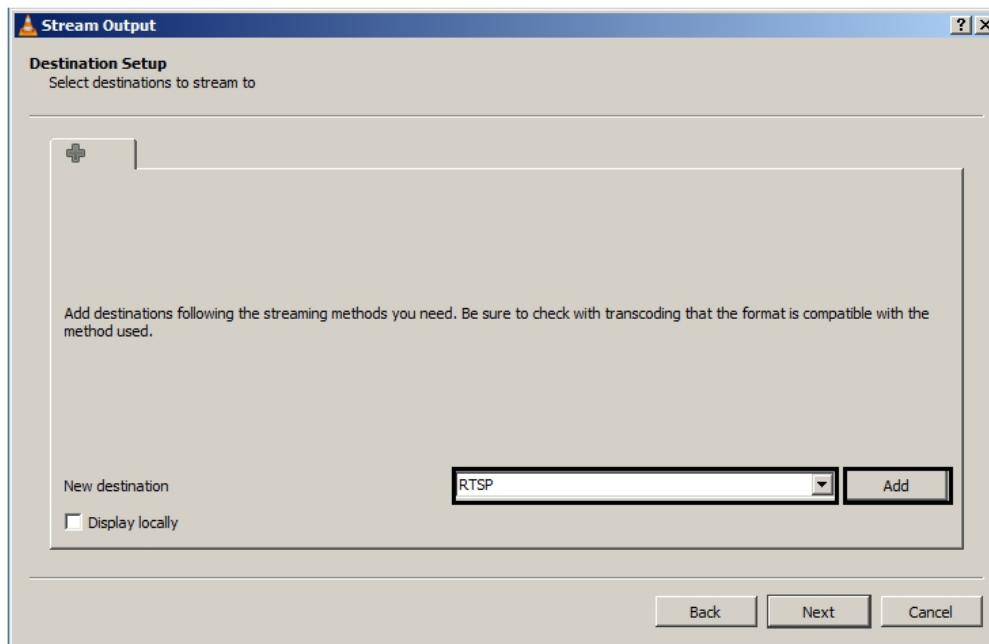
3. In the opened window go to the **Capture Device** tab.



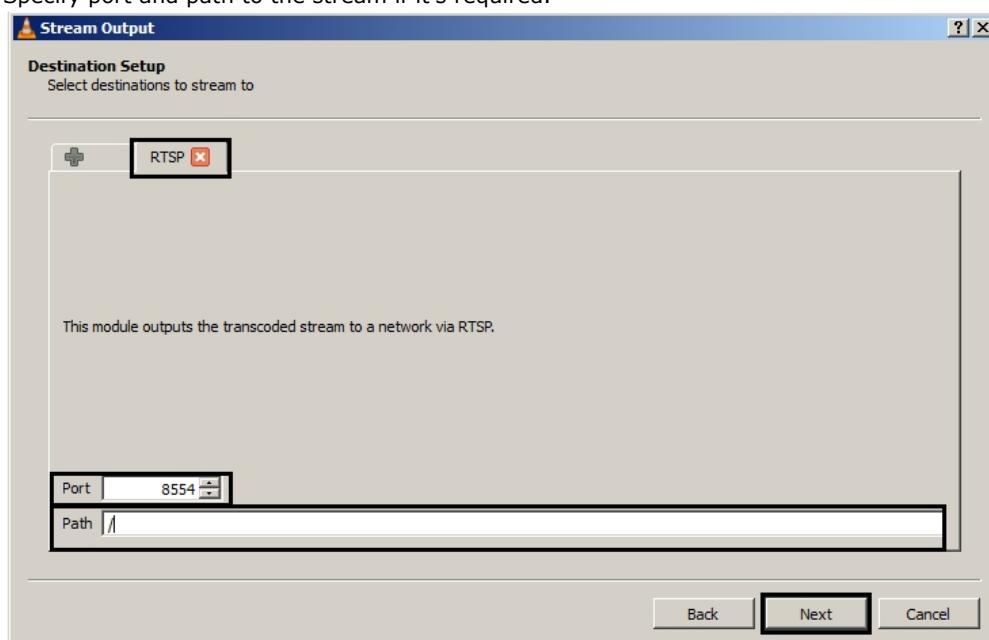
4. In the **Capture mode** drop-down list select the **Desktop** value.
5. Set the desired frame rate for the capture in the corresponding field.
6. In the **Play** list select the **Stream** value. As a result the **Stream Output** window will open.



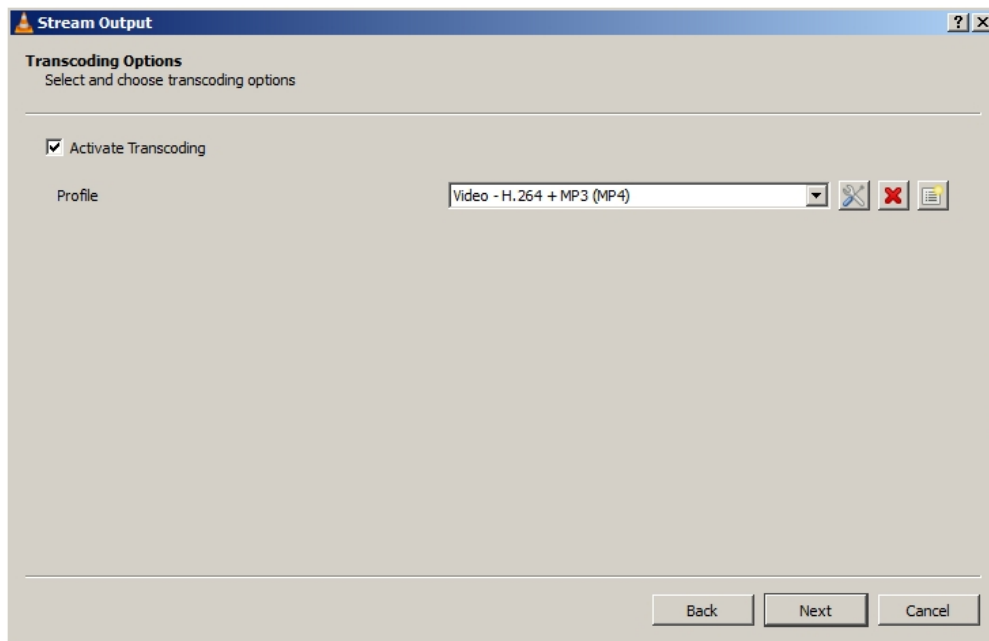
7. Click the **Next** button.
8. In the opened window select the **RTSP** value in the **New destination** drop-down list and click **Add** button.



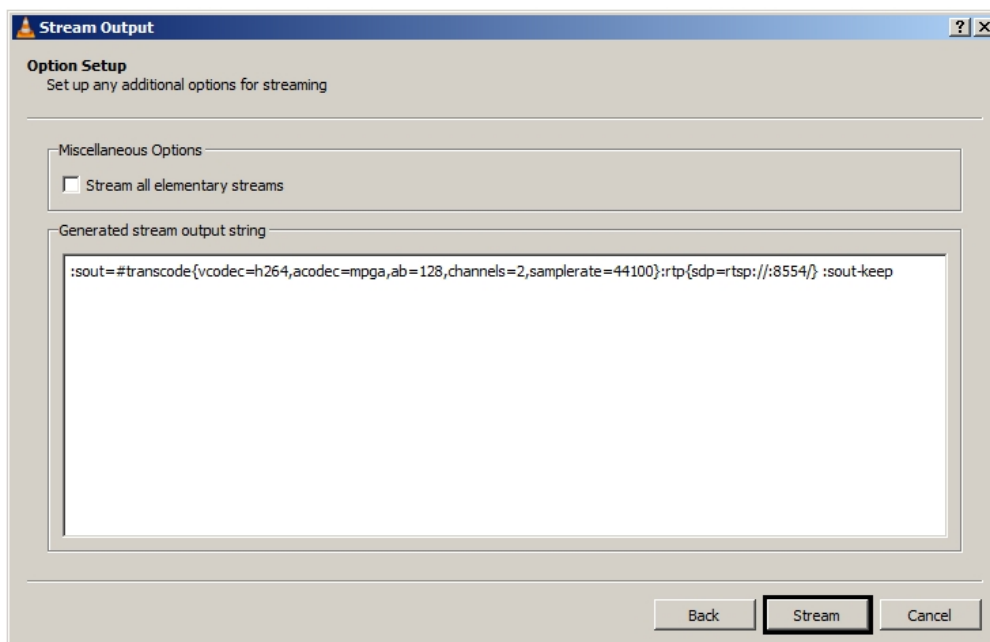
9. Go to the **RTSP** tab.
10. Specify port and path to the stream if it's required.



11. Click **Next** button.
12. Specify parameters of video transcoding and click **Next** button.



13. Click **Stream** button in the opened window.



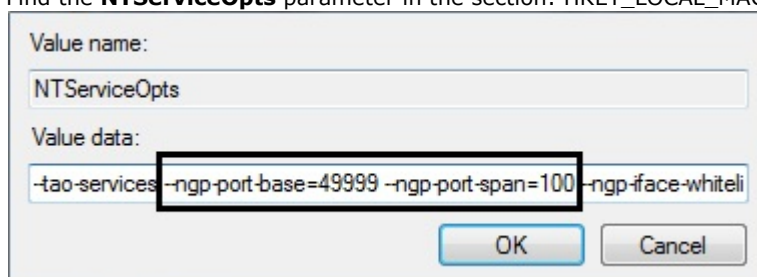
After that configure receiving of the RTSP stream and its record to the archive in the Axxon Next software package – see [Configuring connection of video cameras via RTSP](#) and [Binding a camera to an archive](#) sections.

Configuring of the VLC Media Player for transmitting video from computer monitor by the RTSP protocol to the Axxon Next software package is completed.

Changes to the port range used by the Server after installation

To change the used port range after installing Axxon Next, do as follows:

1. Find the **NTServiceOpts** parameter in the section: HKEY_LOCAL_MACHINE\SOFTWARE\AxxonSoft\NGP.



2. Under this parameter, find and change the values:
 - a. **--ngp-port-base** (the beginning of the port range) and

- b. **--ngp-port-span** (number of ports).
3. Restart Server (see [Shutting down a Server, Starting a Server](#)).

Configuring Failover VMS

General information about a failover system

Rus

A failover system automatically prevents data loss when one of the servers in the system fails.

In a failover system, the servers are combined into a logical structure - the cluster. The Axxon Next server services (nodes) are controlled by supervisors and can run on any of the cluster computers. Node migration is automatic and takes no more than one minute.

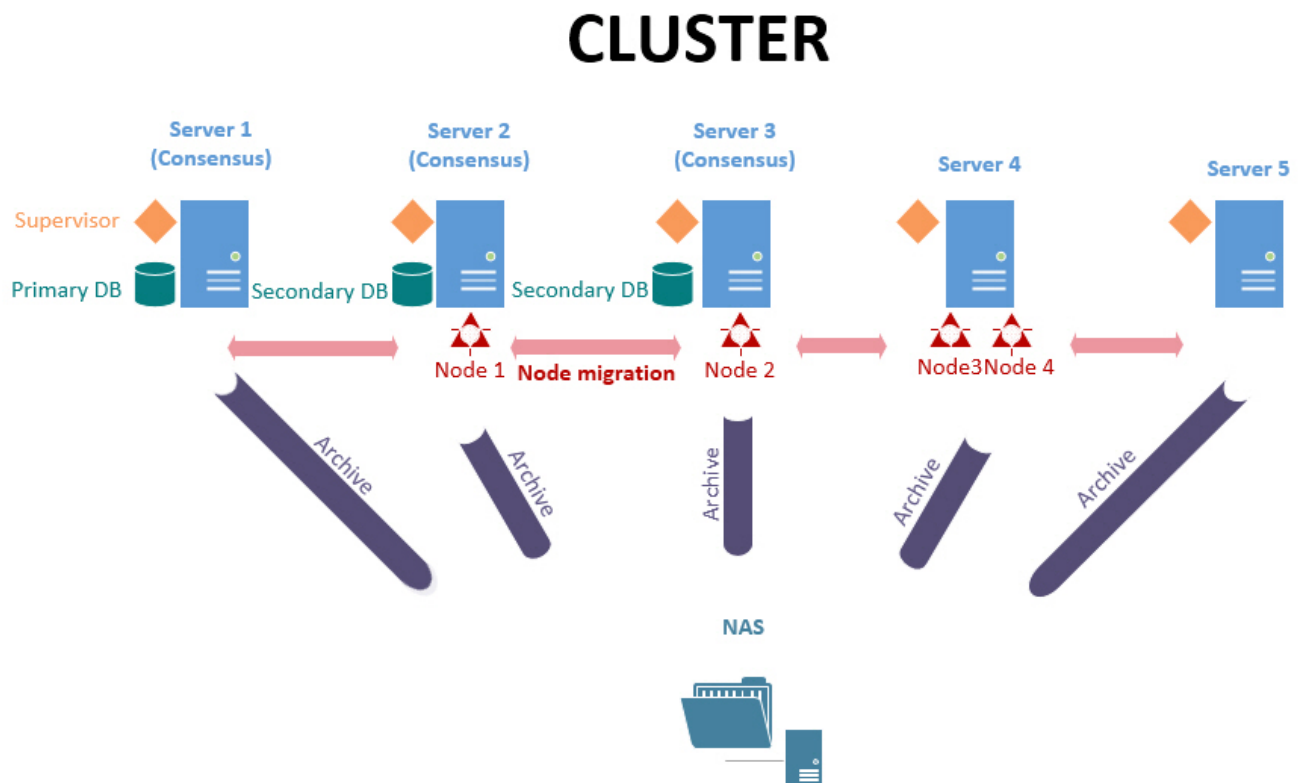
This section contains the following terms:

- **Server** - a computer with **Failover Server and Client** configuration of Axxon Next installed.
- **Node** - an instance of the Server services. A Server can have multiple nodes running.
- **Cluster** - logical grouping of Servers that allows migration of clusters between them. A cluster may encompass nodes from different Axxon domains.
- **Supervisor** - the service that monitors the status of nodes and their migration.

To implement Failover in your system, we strongly recommend that:

- The system administrator should have full control over all communication channels and hardware that provides fault tolerance at all times.
- You should build a cluster from servers in the same LAN.
- Use only the network archives, that are available from all servers in the cluster (see [Configuring archives in the failover system](#)).

Example:



Supervisor Web Interface

Rus

You can configure a failover system in the Supervisor Web interface at <http://localhost:4000>.



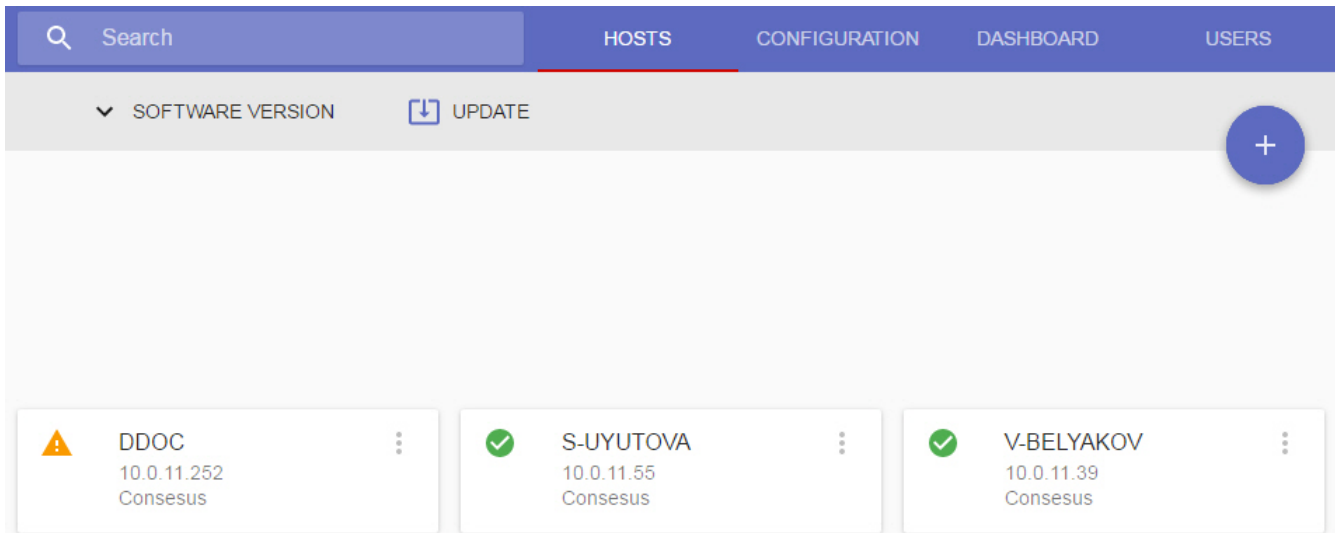
Note

After installation, a shortcut is added to your desktop.

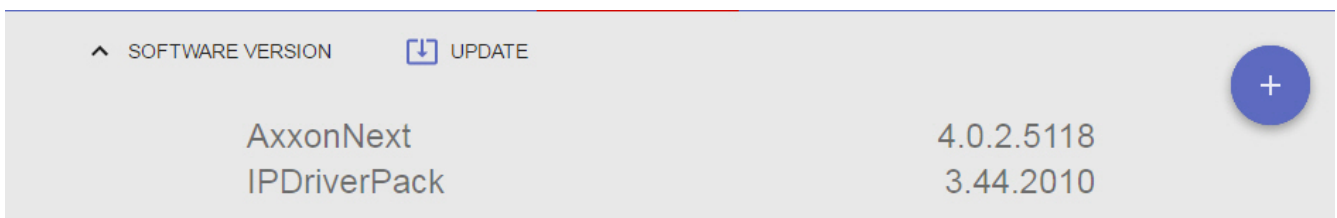


The Supervisor Web interface has 4 tabs:

1. **Hosts** - Creating a Cluster.
2. **Configuration** - Configuring a Failover Database, Creating and configuring nodes.
3. **Dashboard** - Cluster Monitoring.
4. **Users** - Set up access to a supervisor.



To find out your version of *Axxon Next* and *Driverpack*, click **Software version**.



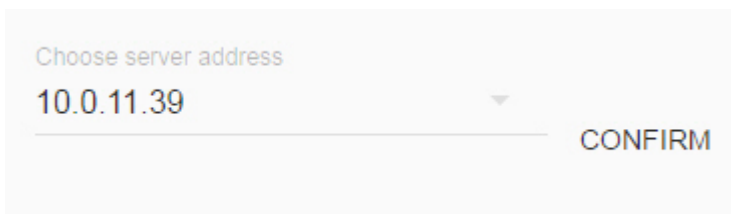
To search hosts and servers, enter their names in the search bar in the **Host** tab or **Dashboard** tabs at the top of the window.



Creating a Cluster

Rus

The first time you run Supervisor, you must initialize a Cluster. To do this, select the IP address of the server from the list and click **Confirm**.



This will initialize the cluster based on the selected server. To add servers to the cluster, do as follows:

1. On the **Hosts** tab, click .
2. Enter the IP address of the server (**1**).

1 IP address
10.0.11.55

2 ☒ Consesus

3 **ADD HOST**

3. If the server you are adding is key, select the **Consensus** checkbox (2).



Attention!

Key servers in the cluster have control and, in particular, decide where to move a cluster.

You can have 3, 5 or 7 key servers in the cluster.

4. Click **Add Host** (3).
5. Add all required Servers.

DDOC 10.0.11.252 Consesus	S-UYUTOVA 10.0.11.55 Consesus	V-BELYAKOV 10.0.11.39 Consesus
--	--	---



Note

To remove a server from the cluster, click and then Remove.

V-BELYAKOV
10.0.11.39
Consesus

Remove



Attention!

To change the IP addresses of the server in the cluster, do as follows:

1. Remove the server from the cluster.
2. Change the IP address of the server.
3. Add the server with a new IP address.

Configuring a Failover Database

Rus

An unlimited number of databases can be created in the same cluster. To create a database:

Go to the **Configuration** tab.



1. Click the button.
2. Name the database (1).

Close (X)

Name
1 Postgres NaN

Files path
2 c:/pgdata

Port
3 49998

4 INIT DATABASE CANCEL

3. Specify a folder for your database (2).
4. By default, port **49998** (3) is used for the database operation.
5. Click the **Init database** button (4).

This will create a new database.

Postgres NaN Database

Parameters

Port 49998

Files path c:/pgdata

Database Agents

Primary agent is required

AxxonNext

No nodes are created

You must host the database on multiple servers. The first server you added will be the main server (**Primary**), the rest are backup servers (**Standby**). The first time the primary server starts, it initiates the database. Standby servers make a verbatim copy of the DB on the primary server.

To add a database server:

1. Click the  button.
2. Select Server (1).



Attention!

The database server must be hosted on computers with the same architecture (x 86, x 64).

If the computers in the cluster have different architectures, pick for the DB servers the computers with the most common architecture in the cluster.

3. If the primary Server is not available within a specified time frame (field **Takeover time**, **3**), then by default (setting **Auto takeover**, **2**) one of the standby Servers (the first have a chance to) becomes automatically the primary server. In this case the former primary Server assumes a standby role. Disable the setting **Auto takeover** (**2**) to be able to designate this Server as a primary server entirely manually.
4. Click the **Engage** button (**4**).

The DB server has been added.

Click  to control the DB server. The following operations are allowed:

1. Server Stop/Start (**1**).
2. Designate as a primary server (**2**).



Attention!

This operation is available only for servers with the disabled **Auto takeover** setting. After this operation the Server will be designated as a primary server with all other servers getting the **Retired** status, so that they cannot be started. A server in this status can either be deleted and re-created again, or designated as a primary server.

3. Delete Server (**3**).



Note

The primary server cannot be deleted.

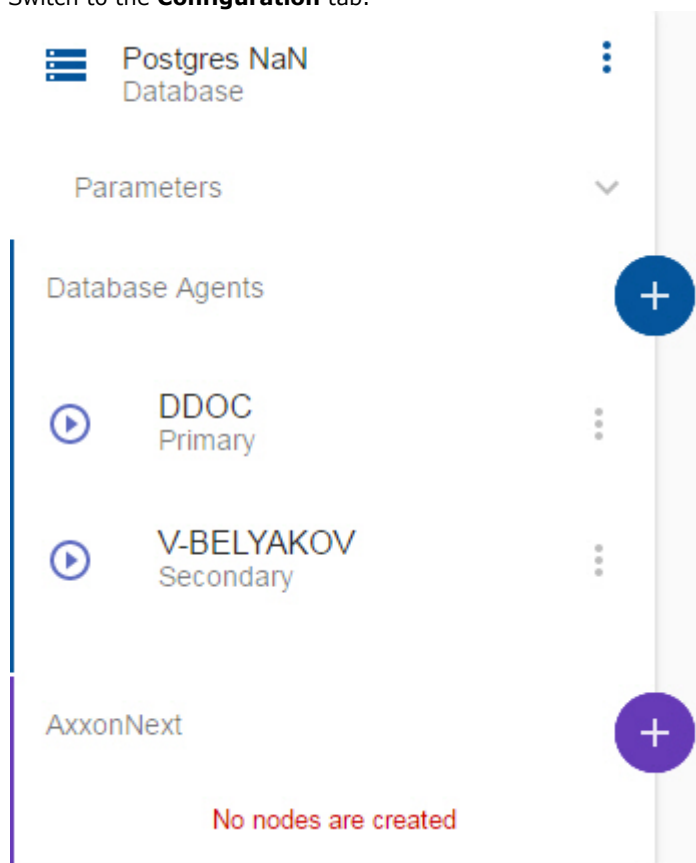
Press  and select **Remove** to delete the DB.

Creating and configuring nodes

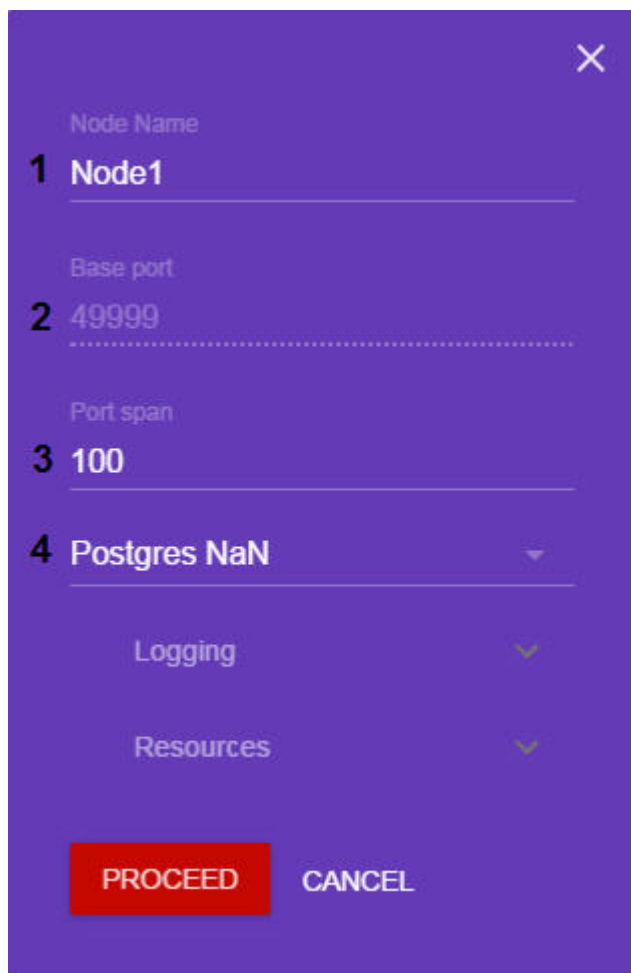
Rus

To create a node, do as follows:

1. Switch to the **Configuration** tab.



2. Click the  button.
3. Enter the name of the node (**1**).



Node Name

1 Node1

Base port

2 49999

Port span

3 100

4 Postgres NaN

Logging

Resources

PROCEED CANCEL

4. By default, the first node will use a port range of [49999; 49999 + **Port span**] (2.3). The next node will use the range [49999 + **Port span**; 49999 + **Port span** + **Port span2**], and so on.



Attention!

The minimum number of ports required at each node is 20.

The maximum working configuration of the node depends on the number of the selected ports. Keep the following in mind when specifying the number of ports:

- 8 ports are always required for a node to work.
- Every 32 (multistreaming) cameras requires 6 ports.
- Each archive requires 1 port.
- Using the forensic search requires another 1 port.

5. Select a DB for the node (4).
6. Click **Logging** and set logging options:
- a. Select Logging Level (1, see [Configuring Logging Levels](#)).

Logging

Logging level

Info

1

Size limit (MBytes)

500

2

How long to record (hours)

24

3

How long to keep (days)

7

4

- b. Set the settings for the archive of logs (**2-4**, see [Configuring a Log Archive](#)).
7. Click **Resources** and set the maximum resources used by the node.

Resources

CPU (MHz)

9303

RAM (MB)

2969

Network Bandwidth (Mbits)

750



Note

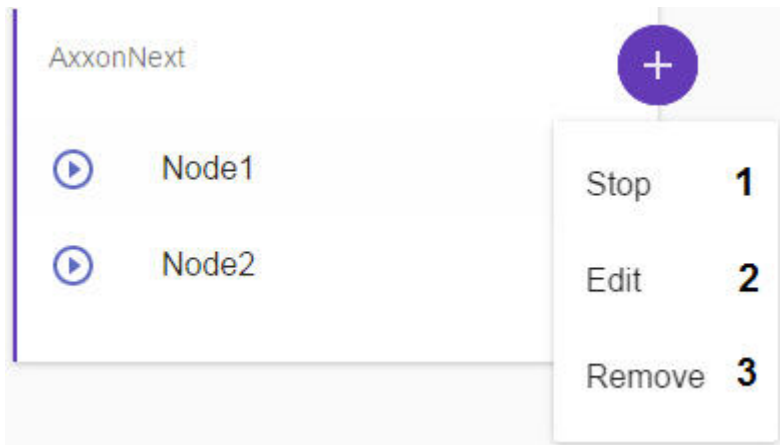
The minimum threshold of resources is set at 50% of the weakest cluster server

8. Click the **Proceed** button.

The node is created and it will be automatically started.

Click  to control the node. The following operations are allowed:

1. Start/Stop node (**1**).



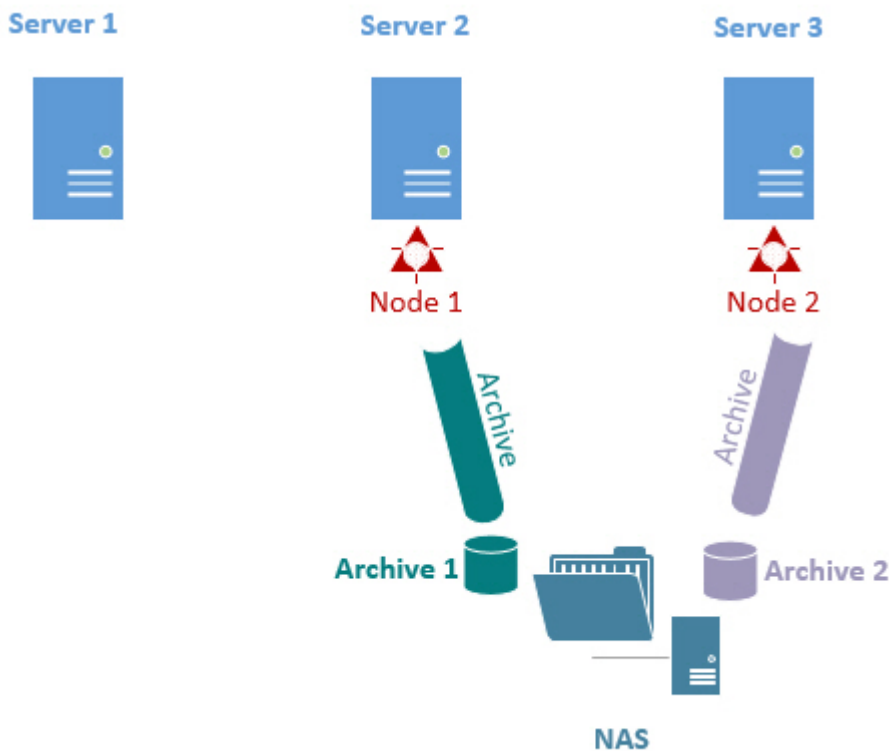
2. Edit node (2). Logging and allocated resource settings can be changed.
3. Delete node (3).

Configuring archives in the failover system

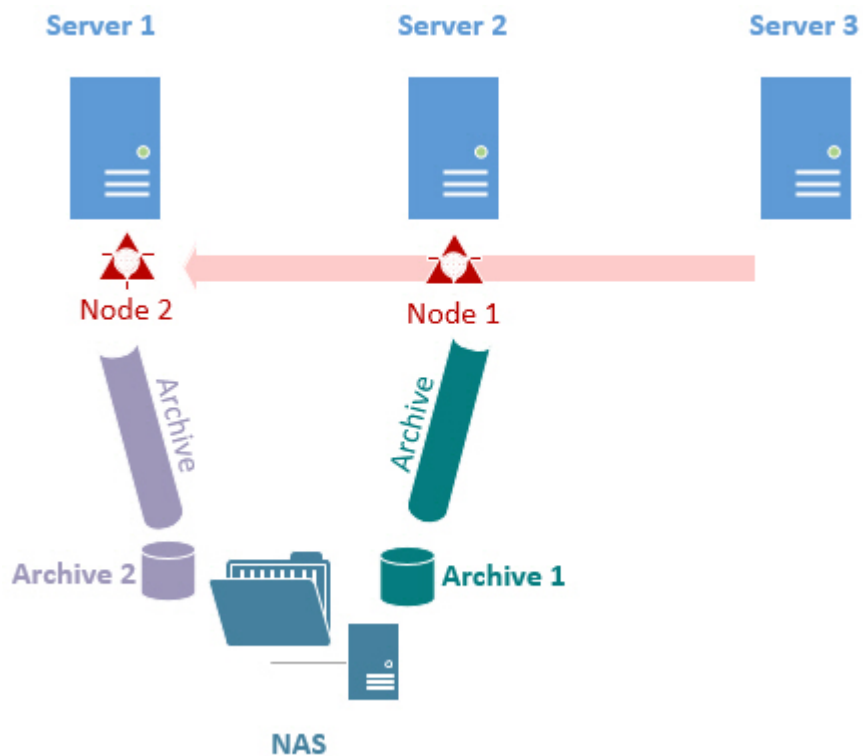
Rus

It is recommended that you place a failover system archive on a separate NAS storage that all servers in the cluster have access to.

For each node, create a separate archive in the NAS (see [Creating a network archive](#)).



If the node is moved to a different server, it will continue to write to the specified archive.



Set up access to a supervisor

Rus

The Supervisor web interface is launched the first time without authentication.

In the future, you can create users with two roles: **Administrators** and **Operators**. Administrators have full access to the cluster configuration, and operators can only view the configuration and monitor the state of the system.

Users can be created in the **Users** tab. To create a user:

1. Click the  button.
2. Enter the user's login (**1**).

The screenshot shows the Supervisor web interface for creating a new user. The form is titled "ADD USER" and has a close button (X) in the top right corner. The form contains the following fields and controls:

- Login**: A text input field with a red "1" next to it, indicating where to enter the user's login.
- Password**: A text input field with a red "2" next to it, indicating where to enter the user's password.
- Role**: A dropdown menu with "Administrator" selected and a red "3" next to it, indicating where to select the user's role.
- ADD USER**: A button with a red "4" next to it, indicating where to click to add the user.

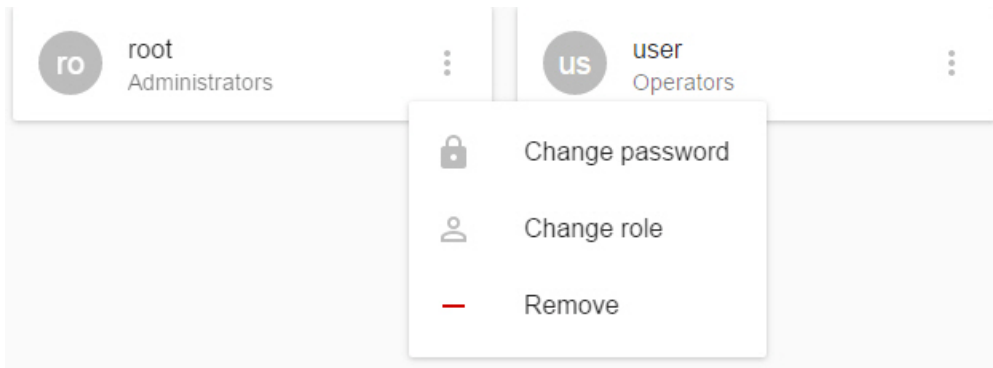
3. Enter the user's password (**2**).
4. Select the role to which the user will be added (**3**).

 **Note**

The first user you create will be automatically added to the **Administrators** role

- Click the **Add User** button (4).

User creation is complete. Click  to edit the user.



The following operations are allowed:

- Change password.
- Change role.
- Delete user.

If at least one user was created, then the authentication is required when connecting to the Supervisor web interface.

Authentication

Login

Password

AUTHENTICATE

Configuration backup and restore for failover VMS

Rus

You can back up your cluster, DBs, and nodes configuration and restore it.

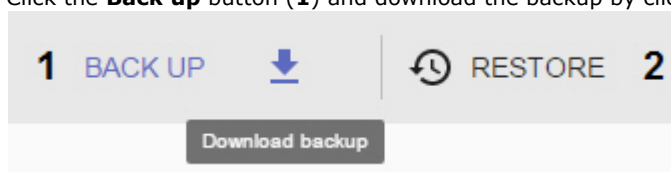


Attention!

The object trajectory DB cannot be backed up. In the event of server hardware failure, all metadata stored in the database will be lost irretrievably.

To create a backup:

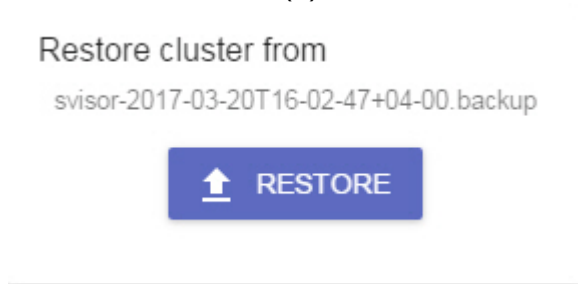
- Go to the **Configuration** tab.
- Click the **Back up** button (1) and download the backup by clicking the  button.



To restore a configuration from a backup:

Create a cluster first.

1. Go to the **Configuration** tab.
2. Click the **Restore** button (2) and select the file with the configuration backup.

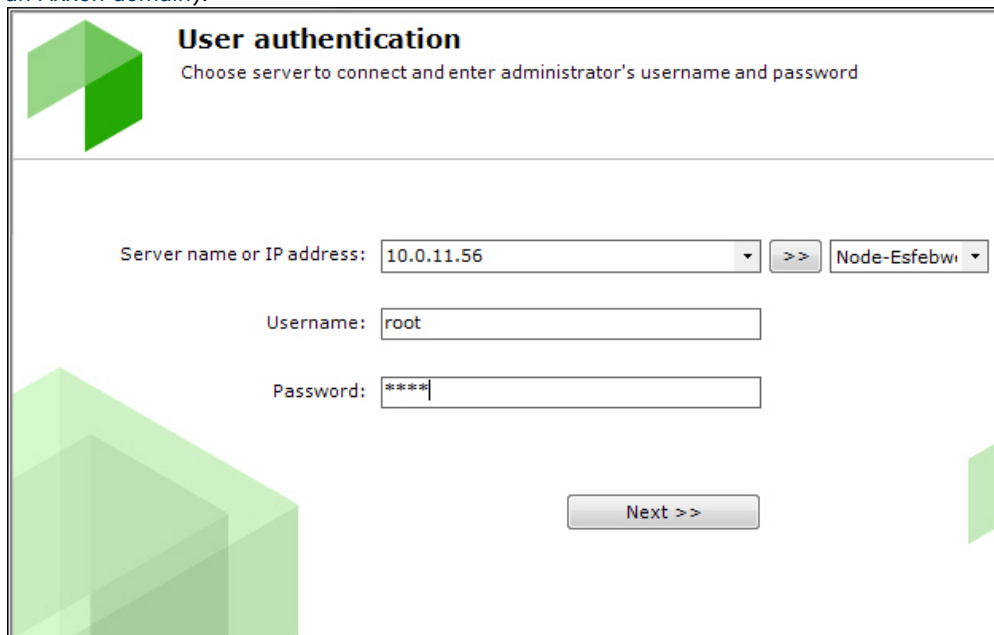


3. Click the **Restore** button.

Configuration restore completed.

To transfer the configuration from a common security server to a failover system:

1. Create a copy of the configuration on the server (see [Backing up a configuration](#)).
2. Connect to the configuration backup and restore utility on the node (see [Connecting to a Node and Configuring of an Axxon domain](#)).

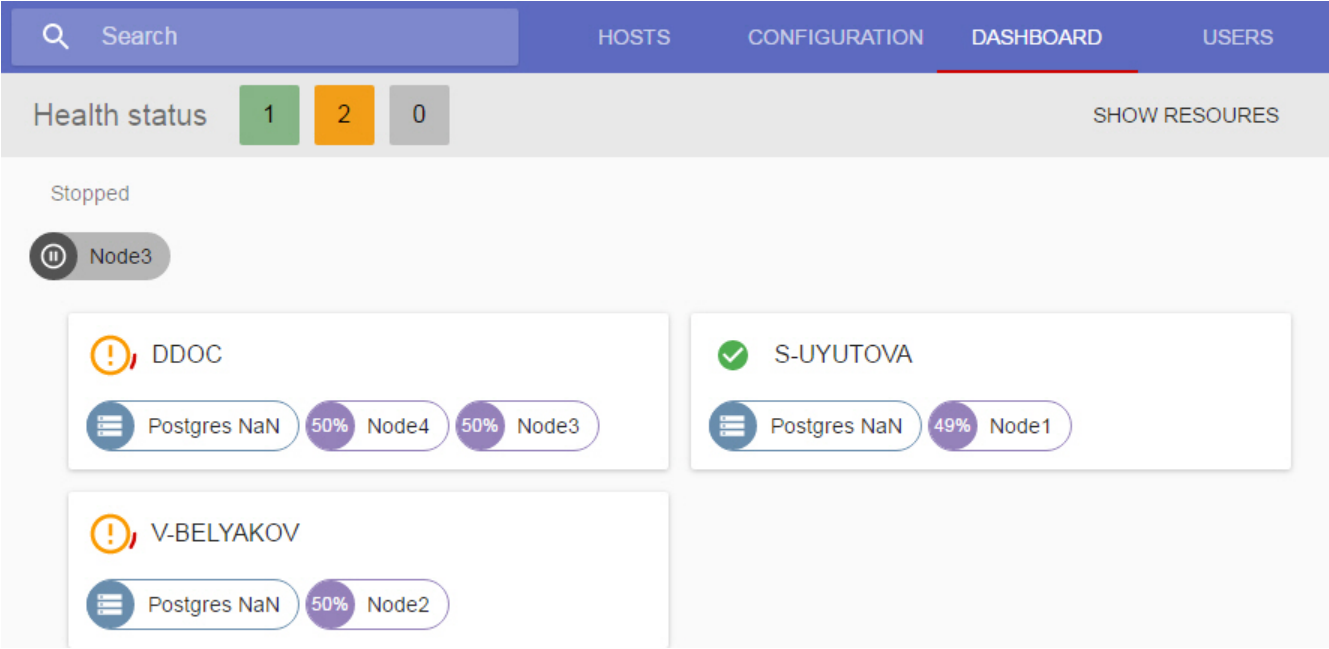


3. Restore the saved configuration (see [Restoring a configuration](#)).

Cluster Monitoring

Rus

You can monitor clusters in the **Dashboard** tab.

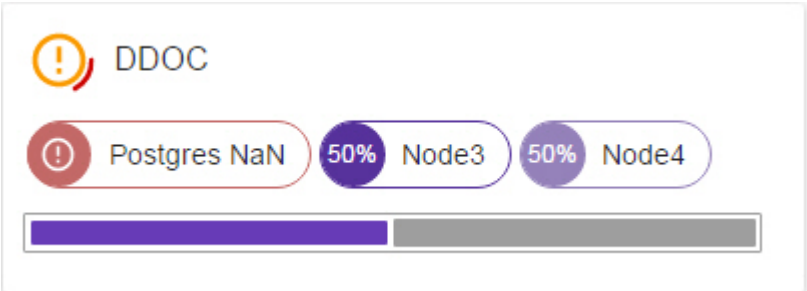


The following information is available:

1. The status of all cluster servers. All cluster servers are cross-checked against a number of criteria. The status info of a server reflects the cross-check results.
2. Running nodes and their server CPU utilization (in percent).
3. Running DB servers.

Status	Description
	The server successfully passed all checks.
	The server did not pass some checks. The red stripe around the icon reflects the percentage of failed checks.

To open the CPU server load diagram, click **Show Resource**.



You can filter servers by status using the **Health status** panel.

Status	Description
	Servers that passed all checks.
	Servers that did not pass some of the checks.
	Servers that failed all checks.

The icon indicates the number of cluster servers in this status

Connecting to a Node and Configuring of an Axxon domain

When the cluster is configured, connect the client to the node. Do the following:

1. Start the Client (see [Starting an Axxon Next Client](#)).

2. Enter the IP address of any cluster server (1) and click the << button.
3. Select from the list the node you want to connect to (2).
4. Enter the user name and password (3) and click **Connect** (4).

During the first connection to the node, you will be prompted to create an Axxon domain (see [Creating a new domain](#)).

You can then merge nodes into a unified logical structure following standard procedures of Axxon domain configuration (see [Configuring Axxon domains](#)).

Configuring automatic connections to nodes

Configuring automatic connections to a failover system is similar to setting up an automatic connection to a common security server (see [Configuring Cross-System Client and autologon](#)), with a few minor changes. To add a node to autostart, do as follows:

1. Select the **Discover cluster** check box (1).

2. Enter the IP address of any cluster server (2) and click the button (3).
3. Select from the list the node you want to add to autostart (4).
4. Click the **Add** button (5).

Working with the Axxon Next Software Package

Main Elements of the User Interface

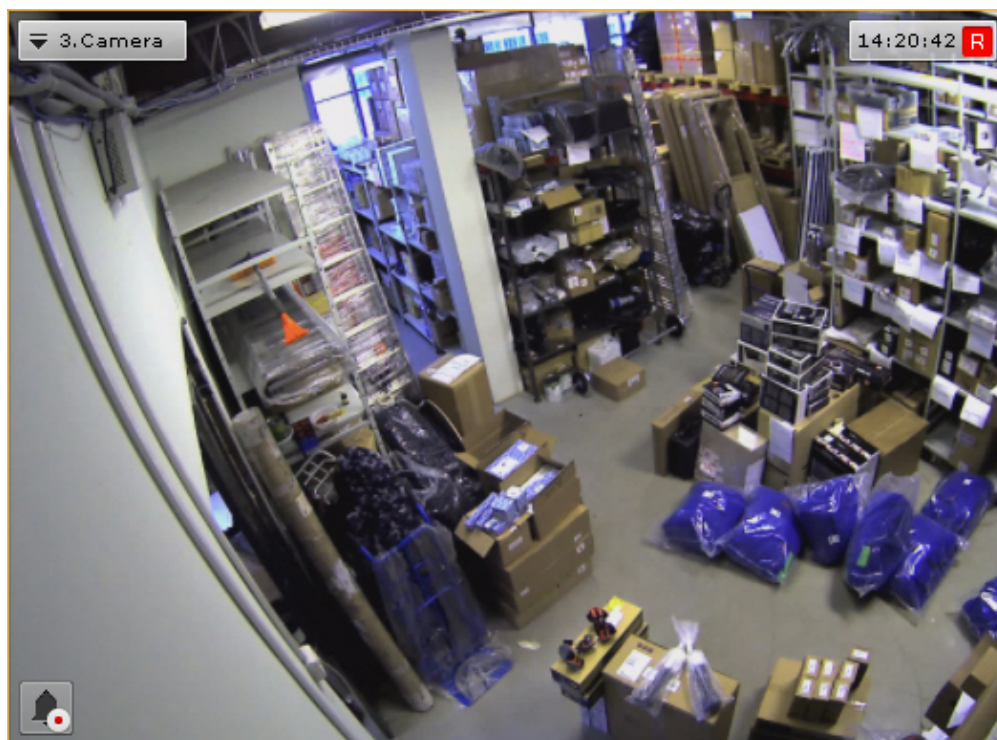
Viewing Tile

Rus

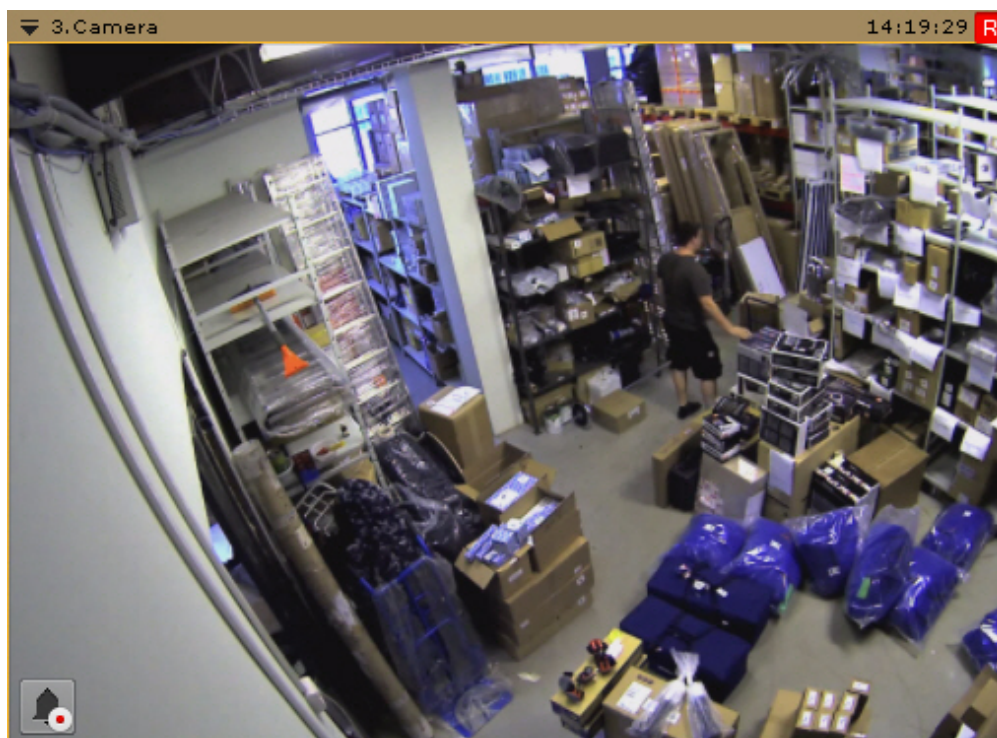
A viewing tile is used to display video stream on the monitor of a computer with specific parameters for the purpose of video surveillance, archive viewing, and forensic search in archives. The viewing tile also has a function which allows the generation and evaluation of alarm events in the process of video monitoring of a guarded location.

The Viewing Tile supports two display types (see [Configuring the Appearance of the Viewing Tile](#)):

With controls over the video.



With controls outside the video.



A more detailed description of the functions of the viewing tile can be found in the section titled [Video Surveillance](#).

Color Coding of Frames

Rus

Color coding of the frame of a viewing tile is used to indicate the status of the video camera.

Color of viewing tile frame	Camera status
Red	Active alarm
<u>No active camera alarms</u>	
Green	Camera disarmed
Yellow	Camera armed
Gray	Archive mode

Viewing Tile Context Menu

Rus

The viewing tile context menu is used to access the following functions (depending on the enabled surveillance mode):

1. Video surveillance
2. Audio monitoring
3. Exporting frames and recordings
4. Object tracking

To bring up the viewing tile context menu (1), left-click the video camera icon in the upper left-hand corner of the tile (2).



Time Display

Rus

The time display appears in the upper right-hand corner of the viewing tile.



Note

Depending on the settings (see [Configure Time Display](#)), the indicator may show the date

7/18/2016 3:44:49 PM R

In real-time mode, the time display shows the current time:

15:03:32 R

In archive, alarm, and video frame search modes, it shows the time of the fragment being viewed and the playback mode:

1. Forward playback

▶ 9:02:35 R

2. Reverse playback

◀ 9:02:38 R

3. Pause

⏸ 9:02:31 R

If recording of video from a video camera is currently underway, a red R is displayed to the right of the clock.

15:03:54 R

. Otherwise, a gray letter "R" will be displayed.

12:45:28 RET

Display of Video Statistics

Rus

You can display video statistics in the viewing tile (see the section titled [Configuring Display of Video Statistics](#)). In real-time mode the video display statistics are shown. In Alarm, Archive, and Clip Search modes, it shows the time of the fragment being viewed and the playback mode:



Video statistic	Parameter description
Client-side FPS	Frame rate of the displayed video stream.
Server-side FPS	Frame rate of the video stream received from a video camera or an archive.
Bitrate	Bitrate of a compressed video stream.

Frame size	Resolution of the displayed video stream.
------------	---

Video Surveillance Mode Selection Tabs

Rus

To select the video surveillance mode, use the tabs in the lower right-hand part of the viewing tile:

1. Live Video mode 
2. Archive mode: 
3. Archive Search mode: 



Alarm Management mode is activated when an alarm is triggered (see [Initiating an Alarm](#)).

Advanced archive navigation panel

Rus

The advanced archive navigation panel is displayed in the lower portion of the screen in **Archive** or **Archive Search** modes.



When you click a live camera tile, the advanced navigation panel shows only the timeline and the archive selection button.



Note

If the camera is not linked to a video archive, the panel will be unavailable

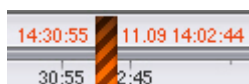
In Live Video mode, if you click the timeline, you go to Archive mode.

The advanced archive navigation panel includes the following components:

1. Timeline;
2. Playback control buttons;
3. Archive selection button;
4. Tabs for compressed and standard archive playback modes.

The advanced archive navigation panel is used to position the archive at a specific time, control playback, and switch to compressed archive playback mode.

The timeline on the advanced archive navigation panel features archive tags . This tag stands for a lack of archive in a compressed format. The time period for which there is no archive is indicated near the tag.



The advanced archive navigation panel works completely in sync with the playback panel and the timeline:

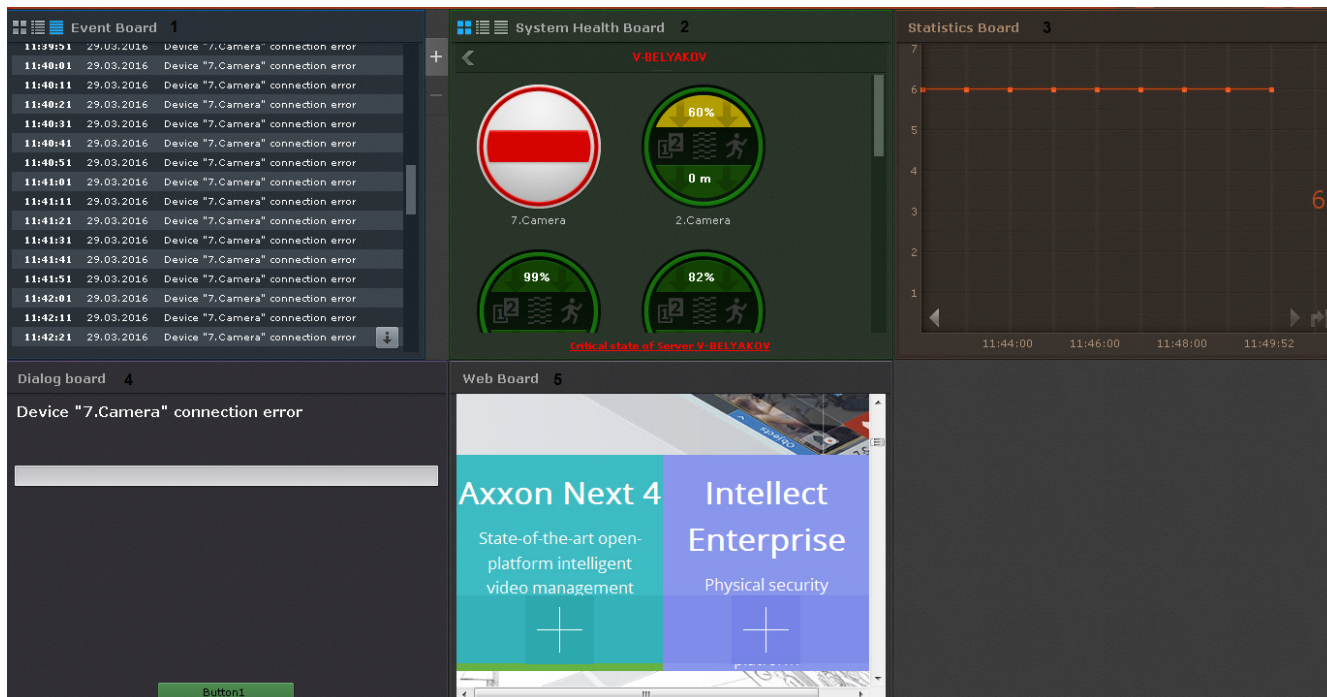
1. The playback mode selected on the advanced navigation panel is displayed on the playback panel.
2. The playback speed that is set on the playback panel will be used as the playback speed when playback is restarted on the advanced navigation panel, and vice versa.
3. The playback control buttons on the advanced navigation panel are the same as the buttons on the playback panel.
4. Any movement through the main timeline is duplicated onto the timeline of the advanced navigation panel.

Information boards

Rus

Information boards offer a quick view of system status and events. There are three kinds of information boards, each displaying a specific type of information:

1. Events Board **(1)**.
2. Health Board **(2)**.
3. Statistics Board **(3)**.
4. Message board **(4)**.
5. Web board **(5)**.



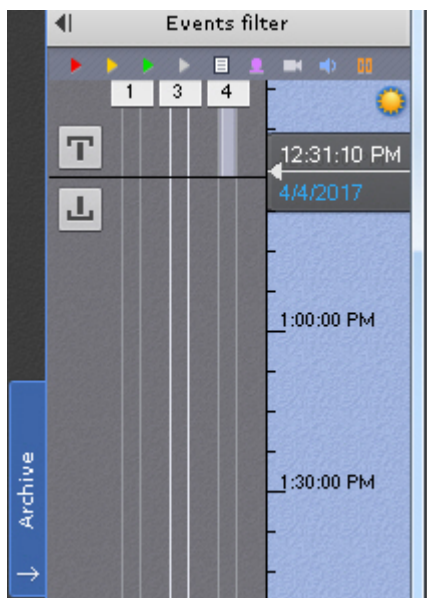
To learn about information boards, consult the relevant [section](#).

The Archive Navigation Panel

Show and Hide the Archive Navigation Panel

Rus

The Archive Navigation Panel is located on the right side of the screen and is automatically displayed when you switch to archive mode (see [Switching to Archive Mode](#)).

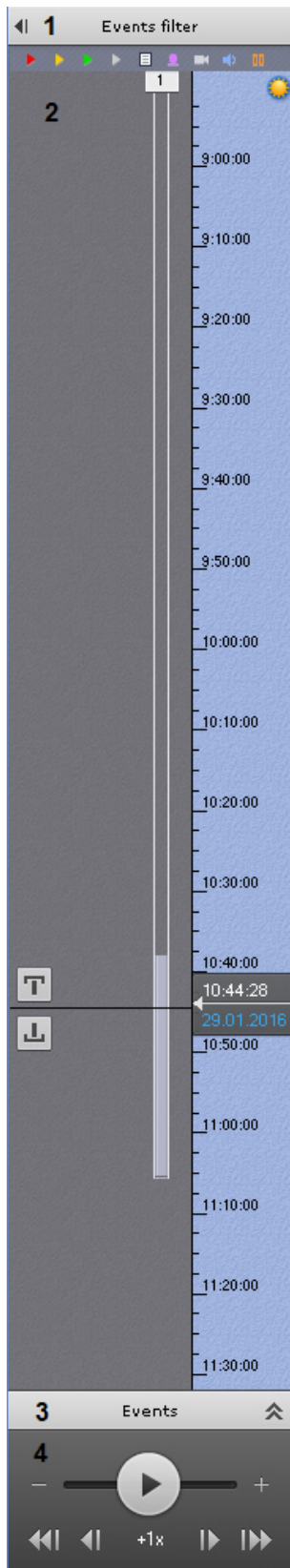


To hide the panel, click the  button.

The Structure and Function of the Archive Navigation Panel

Rus

The archive navigation panel is automatically displayed in the right-hand part of the screen when you switch the viewing tile to Archive or Search for Clip by Frame mode.



The archive navigation panel includes the following components:

1. The alarm events filter (**1**).
2. Timeline (**2**).
3. Events List (**3**).
4. Playback panel (**4**).

The archive navigation panel is used for the following functions:

1. Navigating through the archive.
2. Playing back recordings.
3. Selecting playback mode: forward or backward.
4. Setting playback speed.

5. Selecting events for display on the timeline and in the events list.
6. Viewing the list of events of the selected type.

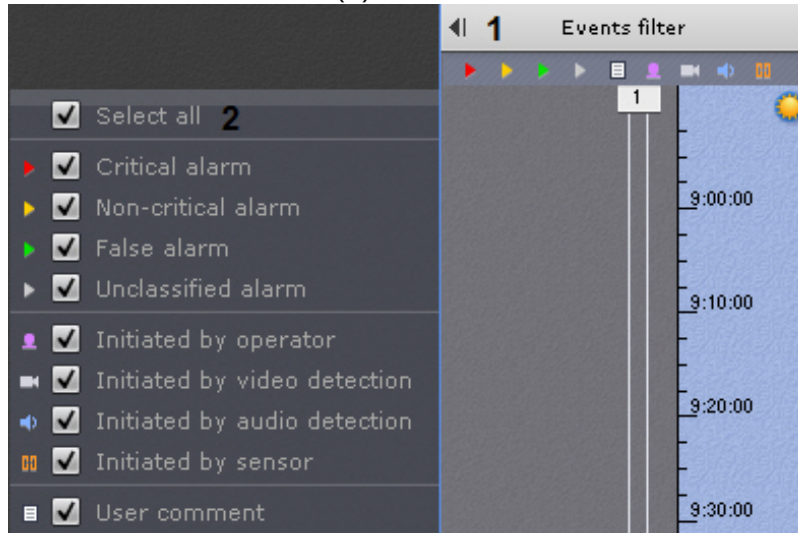
Events Filter

Rus

The **Events Filter** component allows selecting the type of events that are displayed on the archive navigation panel.

To select an event type:

1. Click the **Events filter** button (1). The **Events filter** window will then be displayed (2).



2. Select the check boxes for the types of alarms which should be displayed on the archive navigation panel, according to their status:
 - a. Critical alarm
 - b. Non-critical alarm
 - c. False alarm
 - d. Unclassified alarm



Note.

If you clear the check box for a certain type of alarm, this type of alarm and the corresponding track are no longer displayed on the timeline

3. Select the check boxes for the types of alarms which should be displayed on the archive navigation panel, according to the cause of their initiation:
 - a. Initiated by operator
 - b. Initiated by video detection tool (basic, situation analysis, or embedded)
 - c. Initiated by audio detection tool (basic, situation analysis, or embedded)
 - d. Initiated by sensor



Note.

By default, all check boxes are already selected.



Attention

To display alarms on the timeline, select at least one type of alarm event and one initiator

4. Select the check box to display operator comments.
5. Click the **Apply** button.



Note.

To close Events Filter, click to same button again.

Selection of events is now complete.

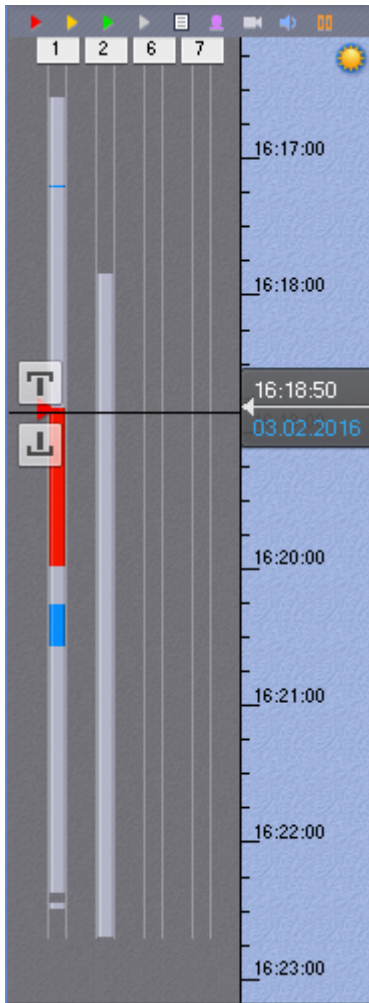
Events of the selected type are now displayed on the timeline (see the section titled [The Timeline](#)) and in the events list (see the section titled [Events List](#)).

The Timeline

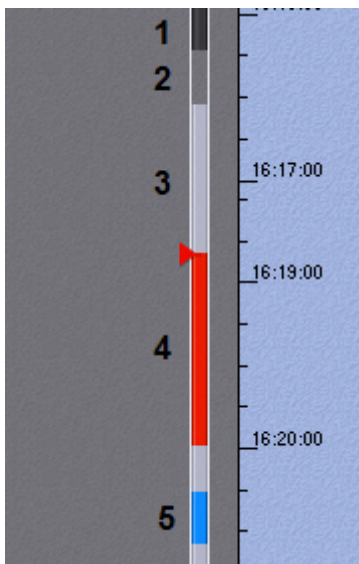
Rus

The timeline is a graphical representation of the time axis of the archive and is located in the middle part of the navigation

panel.



The timeline contains indicators of the presence of recordings, or tracks.



Tracks are marked in different colors depending on the alarm status or detection tool activation:

Condition	Track color
Archive absent (1)	Dark Gray
No signal from the video camera (2)	Gray
Archive (3)	White

Archive present, alarm active (4)	Red
Archive present, detection tool activated (no alarm) (5)	Blue



Note

Pre-alarm recordings are white on the timeline, post-alarm footage is blue.

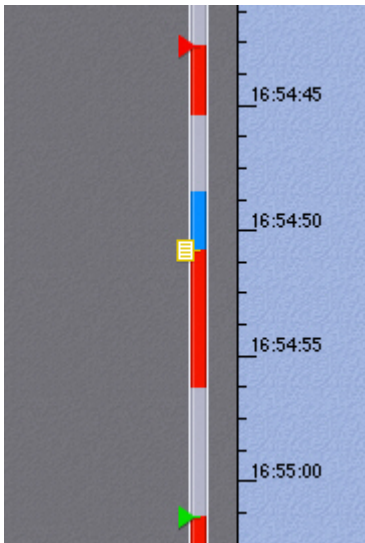


Note

If video recordings overlap or coincide in time, the available footage is prioritized as follows:

1. If there is recorded video, then red colored recordings have the highest priority and white ones have the least priority.
2. Grey footage takes priority over dark grey.

At the moment when an alarm is assigned a status (critical, non-critical, false, or unclassified), a flag is added to the track. A flag is added to the point on the timeline when the alarm began.



The flag is colored according to the alarm status:

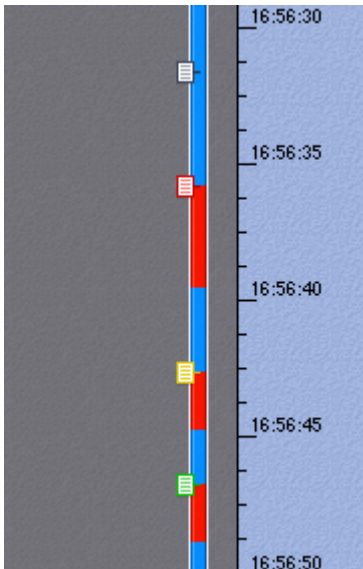
1. Green – false alarm
2. Yellow – non-critical alarm
3. Red – critical alarm
4. Gray – unclassified alarm



Note

Display of any particular alarm event in the list is determined by filter settings (see the section titled [Events Filter](#)).

Operator comments are displayed with the corresponding icons on the track. An icon is placed on the timeline at the point corresponding to the commented frame (or to the first frame of the interval, if the comment is for an interval).



If comments were left during alarm classification, the icons are displayed in the appropriate colors.

You can scroll and zoom the timeline using the mouse.

To scroll the timeline, move the cursor on its background vertically while holding down the left mouse button. To change the scale of the timeline, right-click the timeline's background and, while holding down the right mouse button, move the cursor down to zoom out or up to zoom in.

The timeline lets you select at which moment to start playback of a recording in the viewing tile. To choose at which moment to begin playback, you can either left-click the indicator and hold it down while dragging it to the desired position, or just left-click the left portion of the timeline.

If there is no recording in the selected position, the indicator will automatically move to the position corresponding to the nearest recording.



Note

You can also set a timeline indicator in the desired position by indicating the exact date and time (see the section titled [Navigating Using the Timeline](#)).

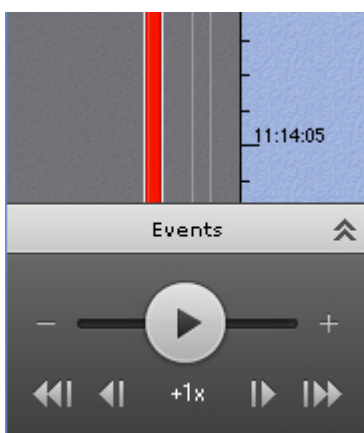
You can also position the timeline indicator with the help of the events list (see the section [Events List](#)).

Events List

Rus

The Events List displays alarms and operator comments.

To display the events list, click the **Events** button.



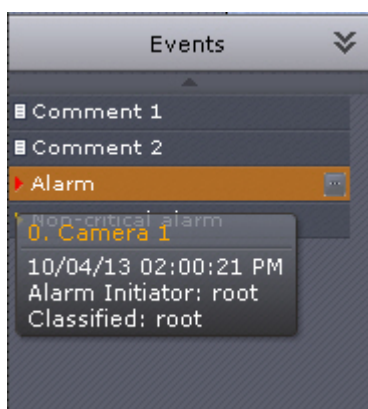
The events list is now displayed.



Note
Whether or not a particular event is displayed in the list depends on the filter settings (see the section [Events Filter](#)).

Note
The list displays only the alarm events that are currently in the visible portion of the timeline

To hide the events list, click the **Events** button again.
When you place the cursor over an event in the list, detailed event information appears.

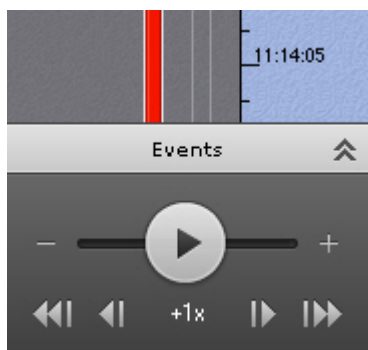


Note
Navigation through the archive by using the events list is described in the section [Navigating Using the Events list](#)

The Playback Panel

Rus

The playback panel is located in the lower part of the navigation panel.



The playback panel contains the following buttons:

1.  Go to preceding frame.
2.  Go to next frame.
3.  Switches to the preceding recording.
4.  Switches to the next recording.
5.  Play/Pause.

The  button also acts as a slider which sets the speed and mode (forward/backward) of playback.



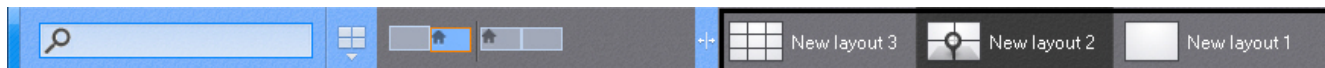
Note

Use of the playback panel is described in detail in the section [Navigating Using the Playback Panel](#).

The Layouts panel

Rus

The Layouts panel is automatically displayed at the top of the screen.



The panel shows layouts available in the system.



Note

If the client is connected to multiple Axxon domains, only layouts from the main Axxon domain are available.



Layouts Management

Interactive Map

Rus

The 3D interactive map is used to visualize the secured facility, control cameras and identify cameras' location.

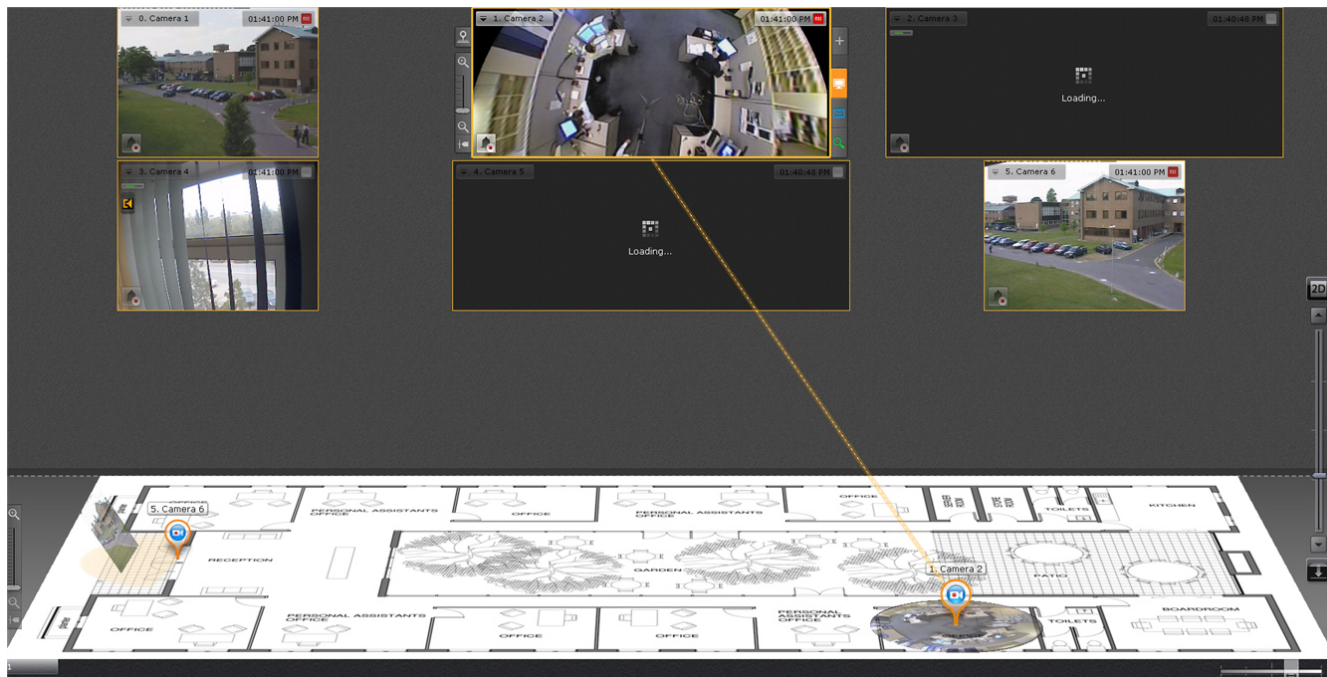
Interactive maps in Axxon Next can obtain image data from graphics of the site or geospatial data from OpenStreetMap.



Note

To work with OpenStreetMap maps in *Axxon Next*, you need to purchase an [OpenStreetMap](#) license.

The map can contain icons for cameras, relays, and sensors. The area in which live video is displayed and field of view are indicated for each camera.



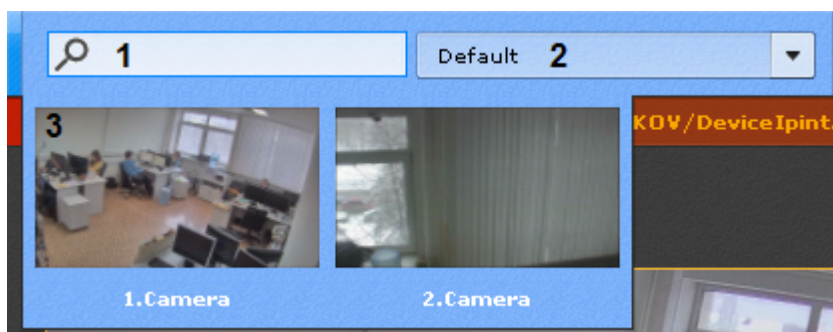
Please refer to the section titled [Working with the Interactive Map](#) for further details on how to work with the 3D map.

Camera Search Panel

Rus

The **Camera Search Panel** lists all video cameras connected to Axxon Next VMS. It also allows the user to find online cameras.

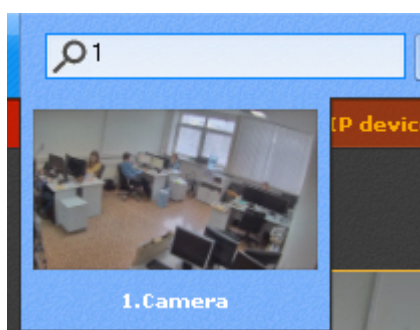
If you click the search bar (1), a dropdown (2) opens that lists all cameras within your Axxon domain.



Note

If the client is connected to multiple Axxon domains, cameras from the main Axxon domain are listed by default. To find cameras from another Axxon domain, select the domain from the dropdown list (3).

To search for a specific camera, enter its full name or part of it into the search bar.



If you click a camera, a layout opens with the minimum number of cells for displaying the selected camera views.



Note

If the current layout contains the selected camera, the relevant viewing tile becomes active.

If there is no layout with the selected video camera, a new layout with a single cell is created.

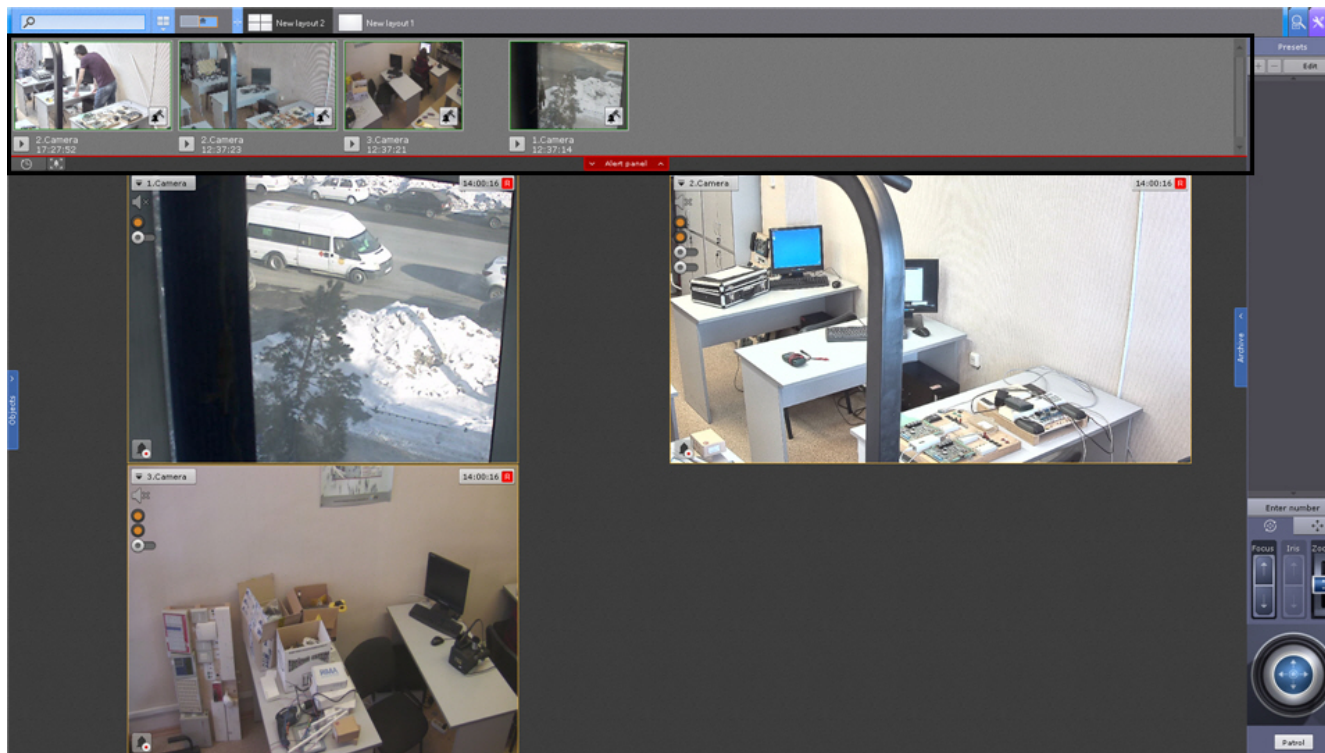
Alarms Panel

Rus

Alarms Panel allows users to view and manage alerts / detection events.

Alarms Panel displays video footage for all alerts / detection events in individual Event Preview tiles.

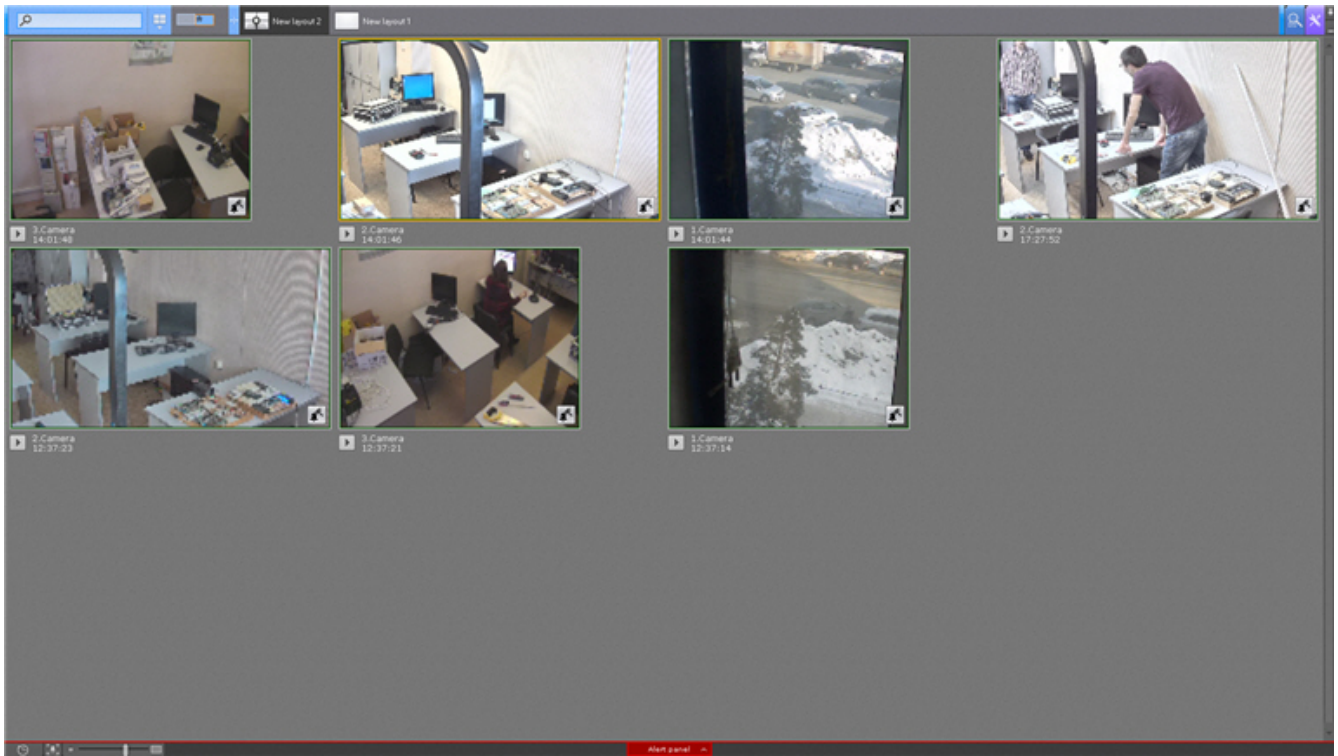
Alarms Panel is at the top of the screen. The default setting is Auto Hide. To open Alarms Panel, click the **Alert panel** button.



The panel opens downwards, occupying a vertical strip on the screen. You can stretch or shrink it from 10% to 50% of the screen height.

To resize the panel, left-click the Alarms button and hold and drag the pointer up or down.

You can also expand the panel to full screen. This will hide the camera views (layout). To do so, click the  button.



You can resize thumbnails of video fragments displayed on the panel.

You can do this when the size of the panel is exceeds the minimum size (10% of the screen height).

To resize Event Previews, use the slider in the bottom left corner of the panel - .

To hide the panel, click the  button.

Objects Panel

Rus

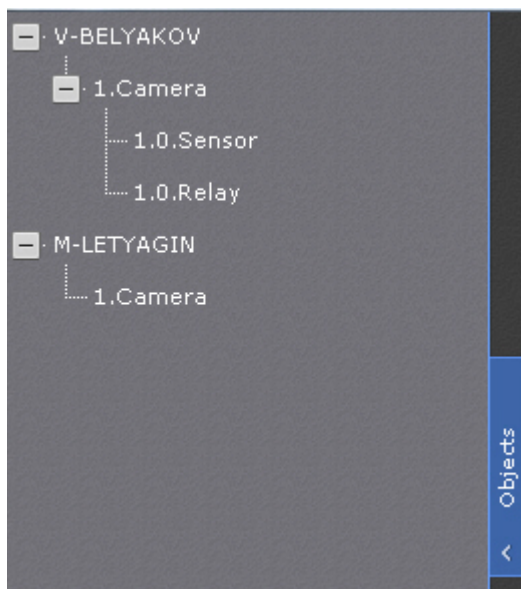
If you have permissions, Objects Panel displays cameras from all servers in the Axxon domain.



Note

If the Client is connected to multiple Axxon domains, you can see cameras from all Axxon domains according to your permissions.

Objects Panel is on left-hand side of the screen (sidebar). The default setting is Auto Hide. To open **Objects Panel**, click the **Objects** button.



You can change the width of the panel. To resize the panel, left-click the **Objects** button and hold and drag the pointer to the left or right. The maximum width of the panel is 50% of the total screen area.

If you select a camera on the panel, a layout opens with the minimum number of cells for displaying the selected camera views (see [Camera Search Panel](#)).



Note

If the search bar has a camera name in it, the panel displays cameras that match the name (see [Camera Search Panel](#)).

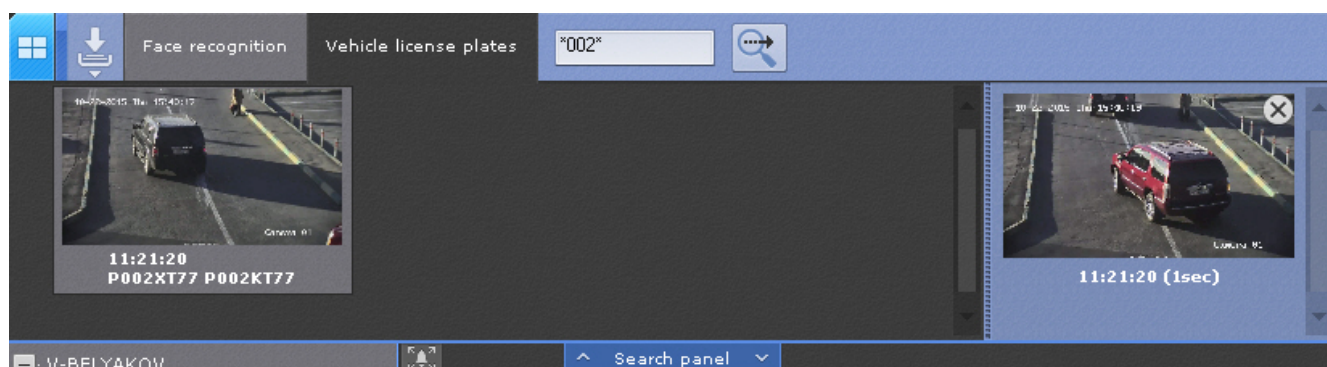
To close the panel, click the **Objects** button again or click the  button.

Search panel

Rus

The search panel is used to search in an archive of several video cameras and to export the matching video footage. If you

click the **Search** tab , the panel is at the top of the screen.



The search panel has two parts. On the left there thumbnails (thumbnail preview) of target video episodes. On the right, you have thumbnails of the episodes selected for export.



Note

You can resize the panel parts by moving the border line.

You can stretch or shrink the panel from 10% to 70% of the screen height. The rest of the screen will show the most recent layout opened.

To resize the panel, left-click the **Search Panel** button and hold and drag the pointer up or down.

To maximize the panel, click the  button.

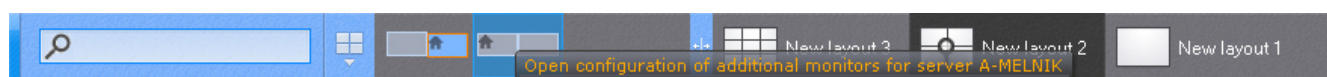
To close the panel, click the  button. To open the panel, click the  button or the **Search Panel** button again.

Video wall management panel

Rus

A video wall is a separate window of the *Axxon Next* Client, displaying a layout on an additional monitor.

The video wall management panel is displayed automatically near the top of the screen.



The panel shows the arrangement of monitors of Clients that are currently connected to the Axxon-domain Servers for which the current user has video wall management rights.



Note.

The arrangement of monitors of the local Client is always shown on the far left.

Hover the mouse above an image to view information about which Server the relevant Client is connected to.



You can horizontally expand the video wall management panel. To do so, click the border of the  panel and drag.

The size of the layout ribbon automatically adjusts to the new size of the video wall management panel.

The PTZ Control Panel

Rus

The PTZ control panel is displayed automatically in the right-hand part of the screen when the viewing tile of a PTZ camera is activated in Live Video mode.



Note

The PTZ control panel is displayed only if the **Telemetry** object for the particular video camera is enabled (see the section titled [The Telemetry Object](#)).



The PTZ control panel is used for the following functions:

1. Controlling PTZ video cameras.
2. Setting and switching to camera presets.
3. Launching/stopping patrolling.

The PTZ control panel includes the following interface elements:

1. Presets list
2. Dialer
3. PTZ controls for iris, focus, and optical zoom

Note
If a camera does not support a function, the controls for this function cannot be accessed

4. Virtual 3D joystick

Note
The type of virtual 3D joystick and adjustment scale depend on the type of PTZ cameras: discrete or continuous control of Pan, Tilt, Zoom, Focus, and Iris.



5. Patrol button

Note
Use of the dialer, PTZ controls, joystick, and patrol button is described in the section [Controlling a PTZ Camera](#).

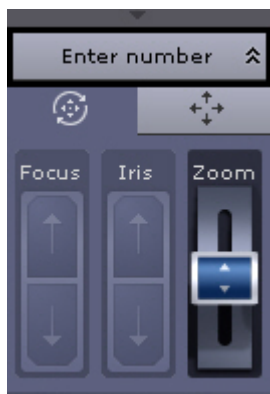
The Enter number Panel

Rus

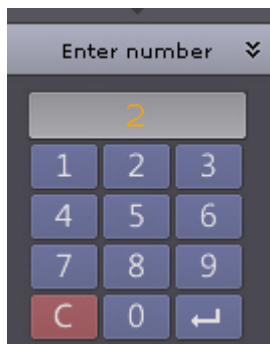
The Enter number panel is used to switch to a PTZ preset.

To display the Enter number panel, click the **Enter number** button. The Enter number panel will then be displayed on the PTZ control panel.

The Enter number button:



The Enter number panel:



To hide the Enter number panel, click the **Enter number** button again.

Switching to a PTZ preset using the Enter number panel is described in detail in the section titled [Control Using the Enter](#)

The Presets List

Rus

The presets list created for a selected video camera is displayed in the upper part of the PTZ control panel.



For each preset in the list, the following parameters are displayed:

1. The identification number
2. A descriptive name

The presets list is used for the following functions:

1. Creating presets.
2. Editing the identification number and name of an existing preset.
3. Deleting presets.
4. Switching to a preset.

You can create up to 100 presets with numbers from 0 to 99. To create a preset, you must perform the following steps:

1. Place the PTZ camera in the position which is to be saved as a preset.
2. Click . Fields for entering an identification number and a descriptive name for the preset will then appear.



3. Fill in these fields as desired.



Attention!

If a preset with the identification number entered already exists, its parameters, as well as the corresponding PTZ camera position, will be overwritten.

4. Left-click anywhere in the presets list and press Enter to save changes.

Creation of a preset is now complete.

To edit the number and name of an existing preset, you must perform the following steps:

1. Highlight the desired preset in the list.
2. Click . The identification number and descriptive name fields will then become accessible for editing.
3. Modify the preset number and/or name as desired.
4. Left-click anywhere in the presets list to save changes.

Editing of the preset is now complete.

To delete an existing preset, you must perform the following steps:

1. Highlight the desired preset in the list.
2. Click .

The preset has now been deleted.

To switch to a preset, left-click the corresponding line in the presets list. The camera will then be switched to the desired position.



Note

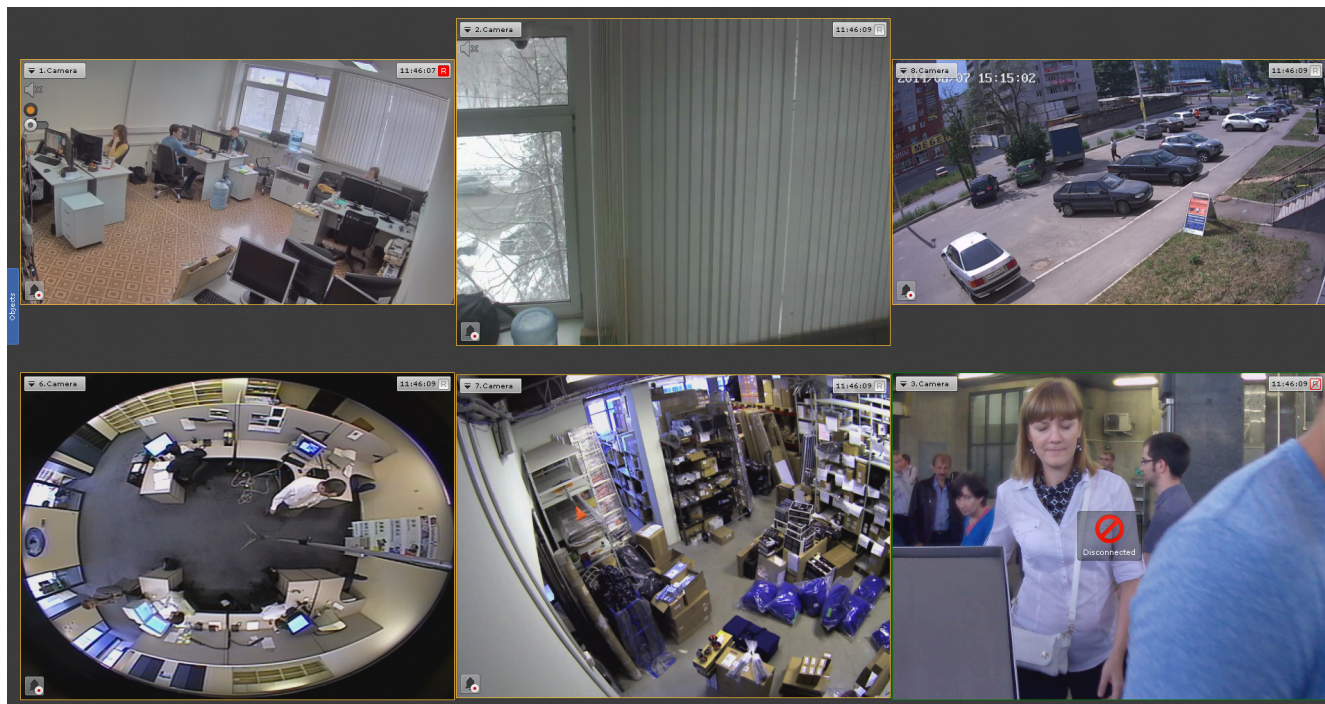
See the section [Control Using the Presets List](#).

Video Surveillance

Video Surveillance Modes

Rus

The video image from a video camera is displayed on the computer monitor through the Client's interface objects, namely the video surveillance monitor and the viewing tile.



There are four modes for working with a viewing tile:

1. Live Video mode
2. Alarm Management mode
3. Archive mode
4. Archive Search mode



Note

Alarm Management mode is available if an alarm has been initiated in the system.

Functions Available in All Video Surveillance Modes

Rus

The following video surveillance functions are available in all video surveillance modes:

1. Selecting a video camera.
2. Scaling the viewing tile.
3. Digitally zooming video images.
4. Processing video images.
5. Rotating video Images.
6. Tracking objects.
7. Operator comments.
8. Viewing titles from POS terminals.
9. Partial decoding of video.

Scaling the Viewing Tile

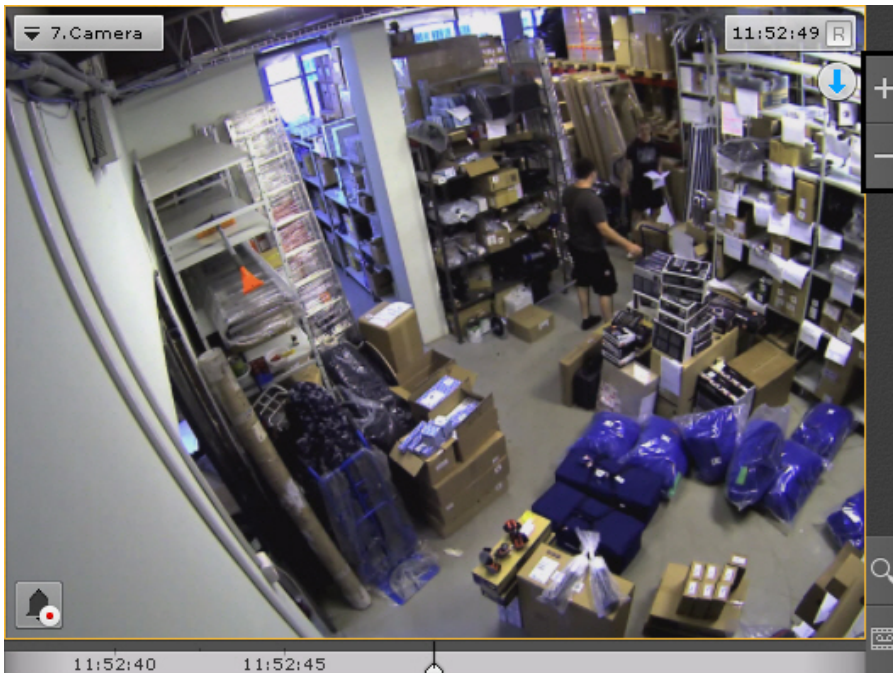
Rus

The scale of the viewing tile can be adjusted.

This can be done in one of three ways:

1. Using the buttons in the upper right-hand part of the active viewing tile.
2. Using the buttons in the top panel.
3. Using the mouse.

If you click a viewing tile, you can see size control buttons on the right-hand side.



1.  — increases the size of the viewing tile by one step;

Note
If you expand the camera window to the maximum, the top panel (see [Interface of the Axxon Next Software Package](#)) and the map (see [Working with the Interactive Map](#)) will hide.

2.  — resets the size of the viewing tile.

When a viewing tile is enlarged, the scale of the entire layout is increased. Some of the cells are moved off the screen.

Viewing tiles are enlarged as follows:

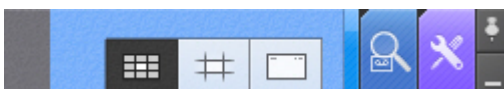
1. If a viewing tile occupies 100% of any of the sides of the layout (maximum viewing tile size), it cannot be enlarged.
2. If a viewing tile occupies 50% or more (but not 100%) of any of the sides of the layout, it is enlarged as much as possible.
3. If a viewing tile occupies less than 50% on both sides of the layout, it is enlarged in two steps: the first step enlarges the viewing tile to 50% on the corresponding side of the layout and the second step enlarges the viewing tile to the maximum size.

Note
The third case applies to layouts that contain nine or more cells

If a viewing tile is linked to another one or an information board, at the first enlargement step (to 50%), the viewing tile and the other tile / information board are displayed together and occupy all of the screen on one side.

Note
In this case, the first step takes into account the total size of the related cells: the related cells must be less than 50% of both sides of the layout

Also, if you click a viewing tile, you can control its size with the buttons on the top panel:



1.  - Resets the size of the viewing tile.
2.  - Resizes the tile up to 50% on one side of the layout.
3.  - Maximizes the size of the viewing tile.

You can also use the mouse to scale the viewing tile. If the viewing tile is maximized to fill the entire screen, a double left-click of your mouse within the tile area will minimize the tile. Otherwise a double left-click will maximize the viewing tile to fill the entire screen.

Digitally Zooming Video Images

Rus

Digital zooming in a video image enables a gradual increase in the magnification of a video image without changing the dimensions of the viewing tile.

The video image can be enlarged using the following tools:

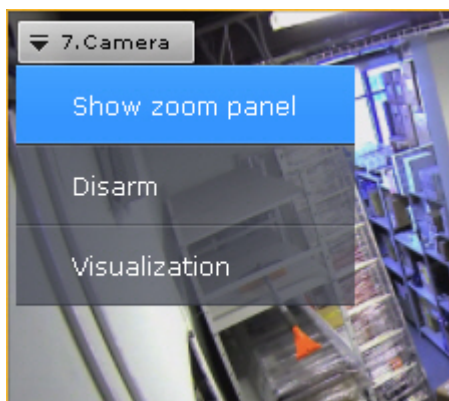
1. Digital zoom scale
2. Area selection
3. Mouse scroll wheel

Enlarging a video image using the digital zoom scale

Rus

To display the digital zoom scale on the viewing tile screen, select **Show digital zoom** in the context menu of the viewing tile.

Displaying the zoom control:

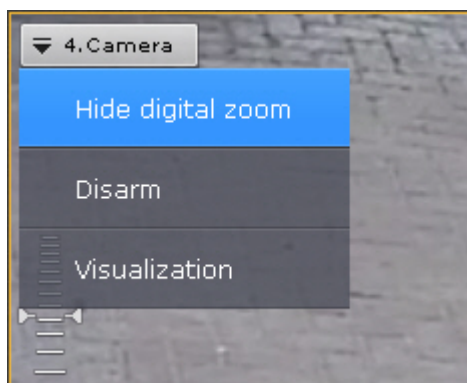


Digital zoom scale:



To enlarge a video image, left-click the slider and hold and drag the digital zoom scale up to the desired value. The maximum zoom is 16x. To return back to the original image, move the slider back to its original position.

To hide the digital zoom scale, select **Hide digital zoom** in the context menu of the viewing tile. Also, 3 seconds after you scale down the video image to the minimum, the zoom scale will automatically hide.

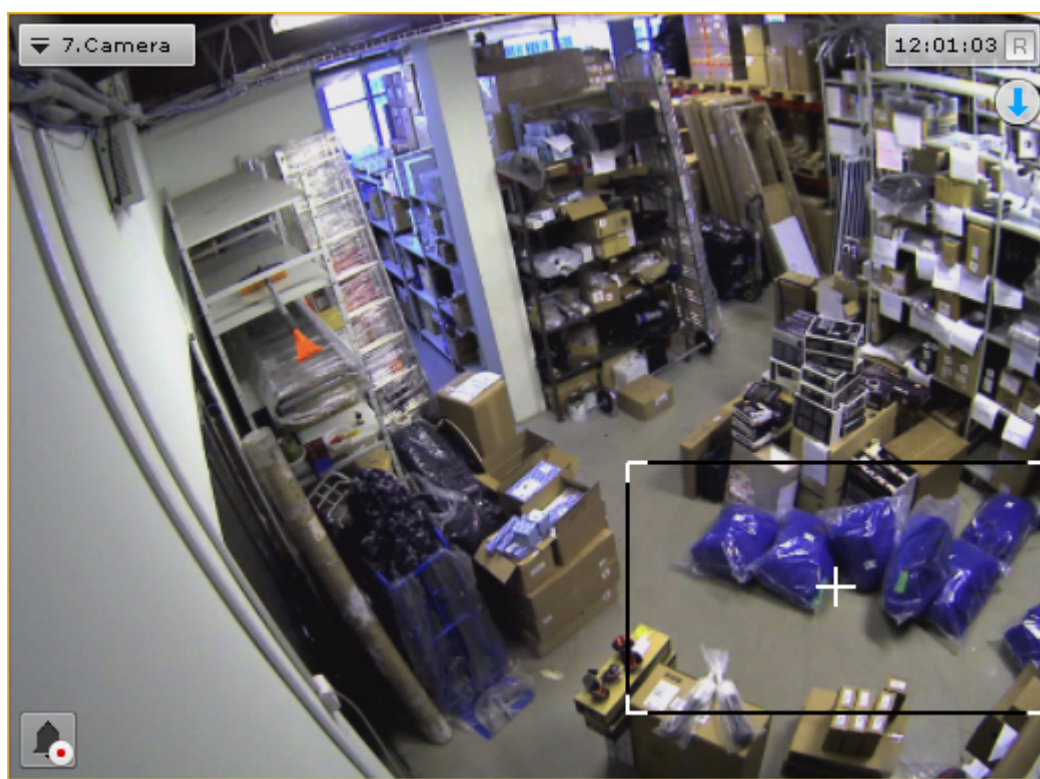


After hiding the digital zoom scale, the selected zoom level of the image will be preserved when switching between image viewing modes.

Enlarging a video image through area selection

Rus

To enlarge a video image, select the area of the image that you would like to enlarge.



You can select an area by doing the following:

1. Click and hold down the left mouse button inside the viewing tile.
2. Move the mouse cursor to the desired position.
3. Release the left mouse button.

Once you have completed the above actions, the selected area will be displayed across the entire viewing tile.



Note

If you select an area that requires a zoom of more than 16x to display, it will be marked with a red frame. The video image will not be enlarged.



Enlarging a video image using the mouse scroll wheel

Rus

When using the mouse scroll wheel, the video image is enlarged relative to the mouse cursor. A description of this process is provided in the table below.

Action	Executed function
Mouse wheel is scrolled forward by one level	The video image is enlarged by 2x
Mouse wheel is scrolled backward by one level	The video image is reduced by 2x

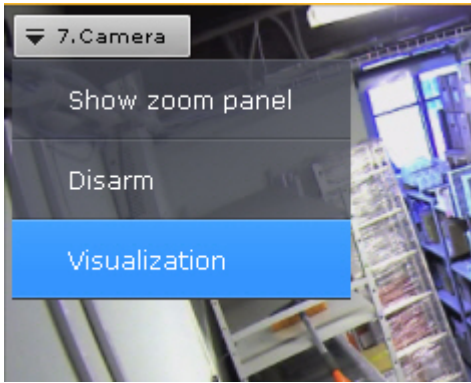
Video image processing

Rus

In *Axxon Next*, the video image processing functions implemented in the viewing tile enhance the performance and convenience of using the video surveillance system.

The following video image processing functions are available from the viewing tile:

1. Contrast
2. Sharpness
3. Deinterlacing



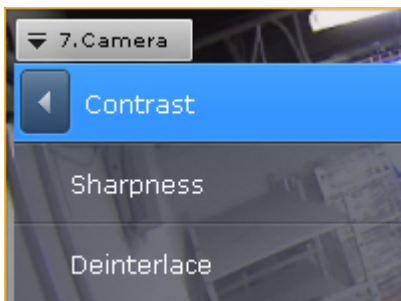
To enable video image processing functions, use the **Visualization** option in the context menu of the viewing tile. Only one image processing function can be enabled at a time.

Changing the Contrast Level

Rus

An *Axxon Next* operator is granted access to adjust the contrast of a video image.

To adjust the contrast, select the **Contrast** option in the **Visualization** context menu.



An example of the **Contrast** function is given in the following image.





To return to the original image, reselect the **Contrast** option in the **Visualization** context menu.

Setting the Sharpness Level

Rus

An Axxon Next operator is granted access to adjust the sharpness of a video image.

To adjust the sharpness, select the **Sharpness** option in the **Visualization** context menu.



The image in the following picture shows an example of use of the **Sharpness** tool.





To return to the original image, use the **Sharpness** function again.

Using Deinterlacing

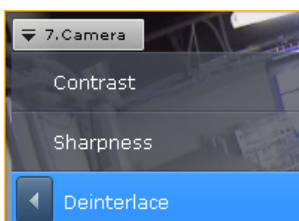
Rus

The **Deinterlacing** tool is used to correct tooth-type distortions (also called "combing artifacts"), which appear on the borders of video image fragments when objects move quickly relative to the background.

An example of a combing artifact is shown in the picture below.



To utilize this tool, select the **Deinterlacing** option in the **Visualization** context menu.



The image in the viewing tile will then be corrected.



To disable **Deinterlacing**, reselect the **Deinterlacing** option.

Rotate Video Image

Rus

You can rotate a video 90 °, 180 ° or 270 ° degrees.



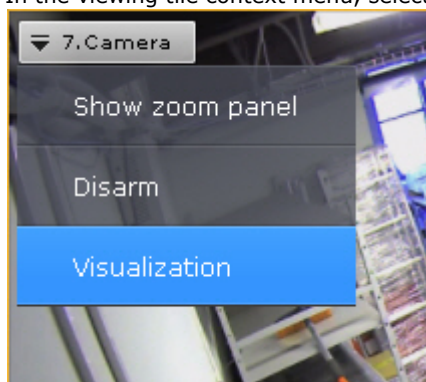
Note

If you enable video rotation, only video in Live Video and Archive modes is rotated:

- NA (not applicable) for video display on the map and on the alarms.
- NA to recording for archives.
- NA for export.
- NA for analytics (metadata).

To rotate video, complete the following steps:

1. In the viewing tile context menu, select **Visualization**.



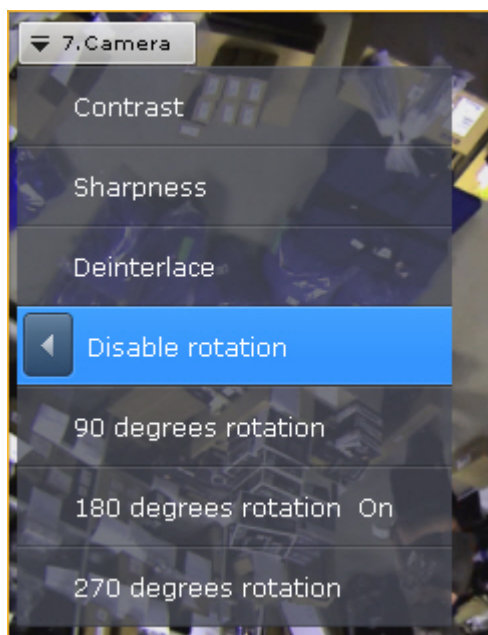
2. Select the angle of rotation (clockwise).



Video rotation is now complete.



To disable video rotation, select **Visualization-> Disable rotation** in the viewing tile context menu.



Tracking objects

Rus

Object tracking allows a user to visually track the movement of objects in a camera's field of view or in a video recording in an archive.



Attention!

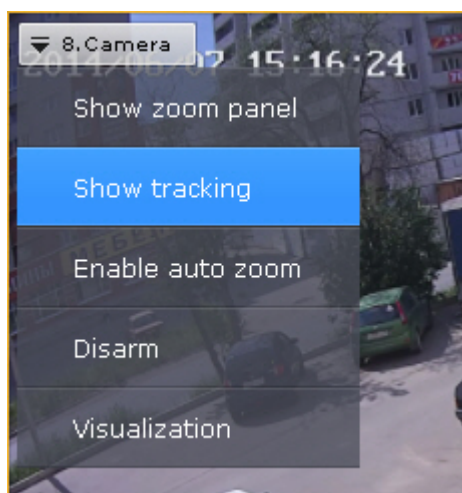
Object tracking is possible only if a situation analysis detection unit and/or an embedded detection unit is active (see the sections [Object Tracker](#) and [Configuring Built-In Detectors](#)).

Object tracking performs the following functions:

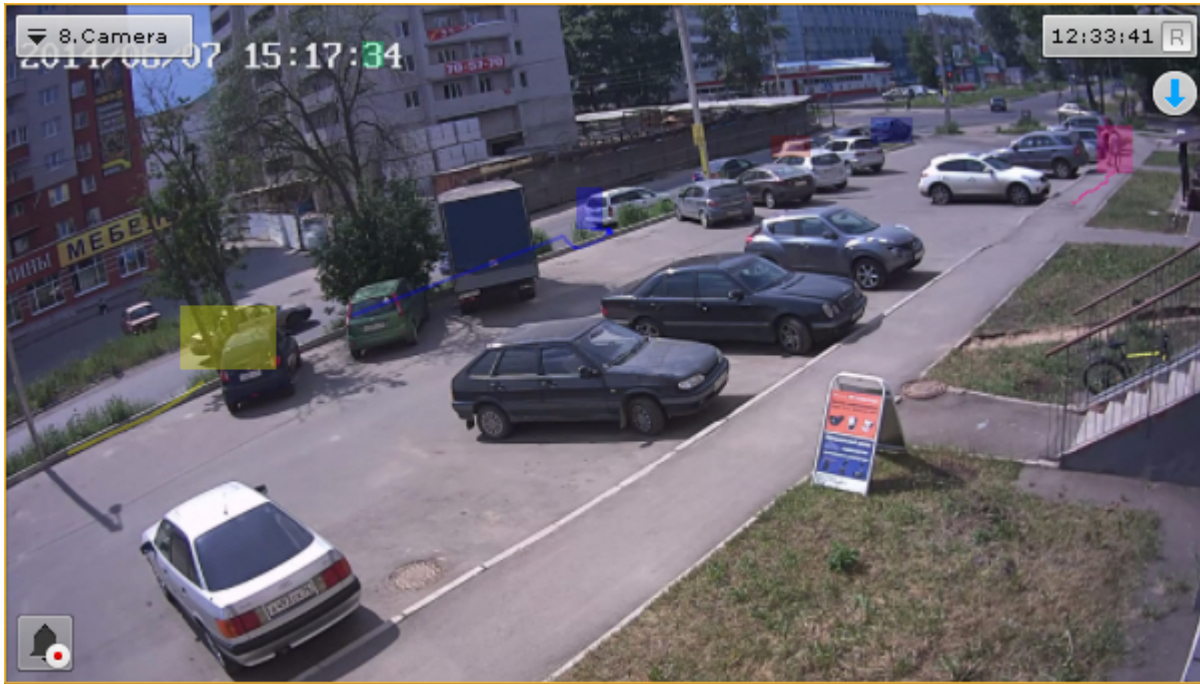
1. Recognizes the presence of a moving object and dynamically marks it with a transparent rectangle on the video image.
2. Displays the trajectory of the object's movement.

Motion is detected based on the time gradient of the video image's difference between frames.

To enable object tracking, select **Show tracking** in the viewing tile context menu.

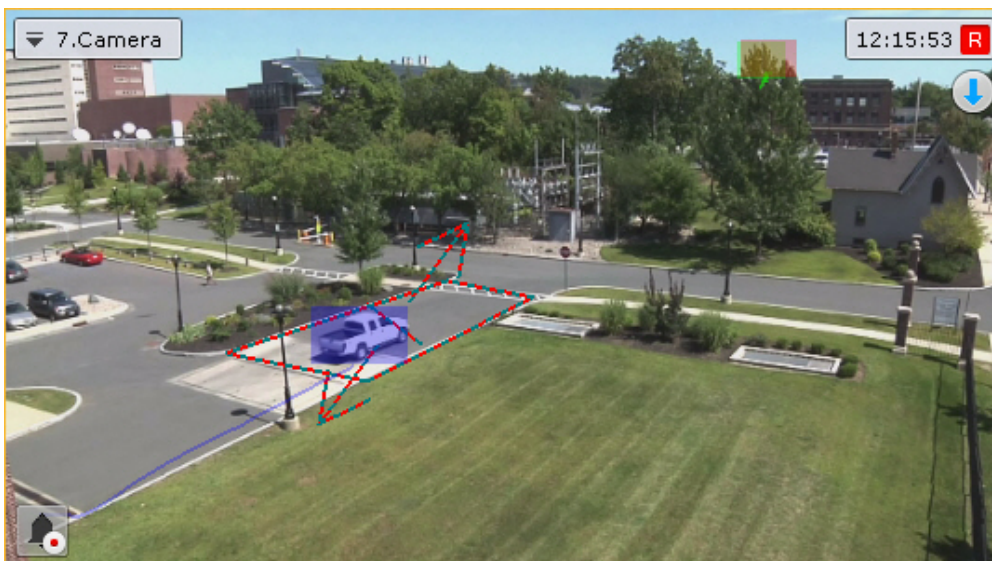


Object tracking functions will now be activated.



To disable object tracking, click **Hide tracking** in the viewing tile context menu..

If you have created a situation analysis tool for this video camera (see [Types of Situation Analysis Detection Tools](#)), then you can see the detection parameters (areas, lines) in Live Video mode along with object tracking in the camera window.



Operator comments

Rus

Operator comments on past or ongoing events allow a more complete understanding about the situation at the site.

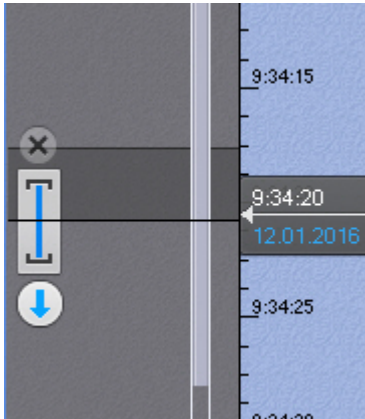
Comments are displayed during playback (see [Viewing recorded video with operator comments](#)) and are marked with tags on the timeline (see [The Timeline](#)). Comments can also be searched (see [Searching comments](#)).

Adding comments in different surveillance modes

Rus

In Archive and Archive Analysis modes, comments can be added both for specific frames and for intervals of time.

To add a comment for an interval, select an interval on the timeline, place the timeline indicator either inside the interval or at one border of it, and click the  button.



Note

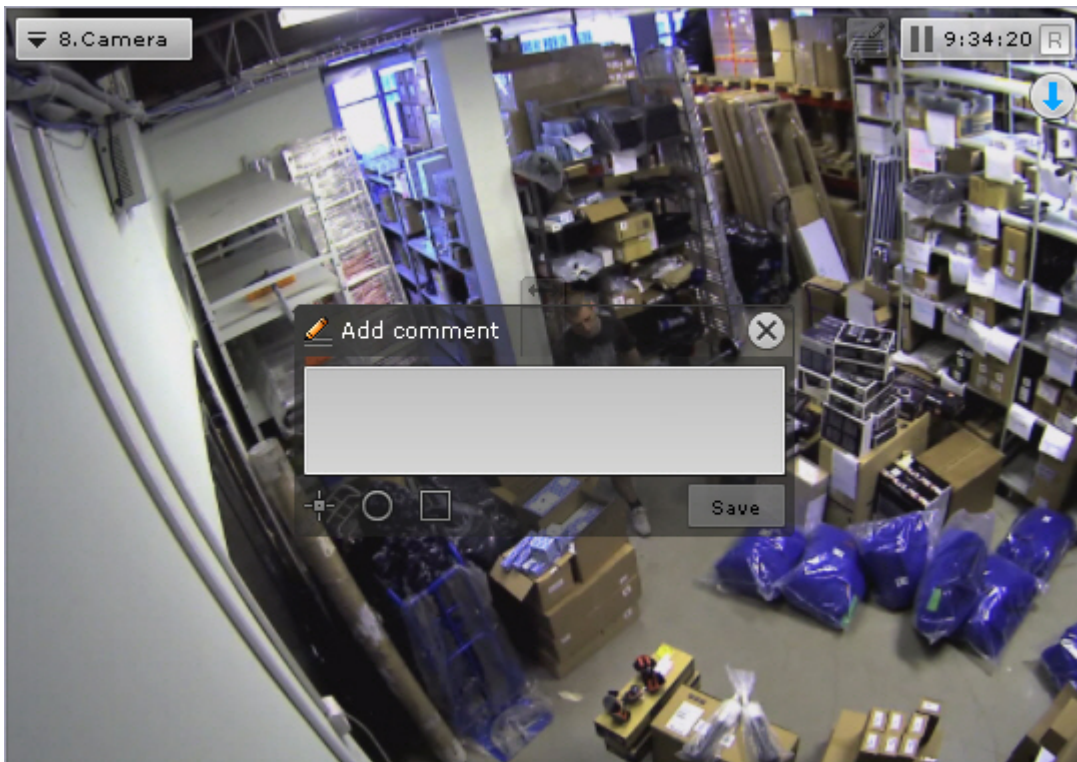
If comments are added during playback in Archive or Archive Analysis mode, playback is paused after the  button is clicked.

In Alarm Management mode, operators can be required to give comments after classifying an event (see [Configuring Alarm Management Mode](#)) or comments can be left in free form, before event classification, by clicking the  button. The comment applies to the entire duration of the alarm.

Adding a comment

Rus

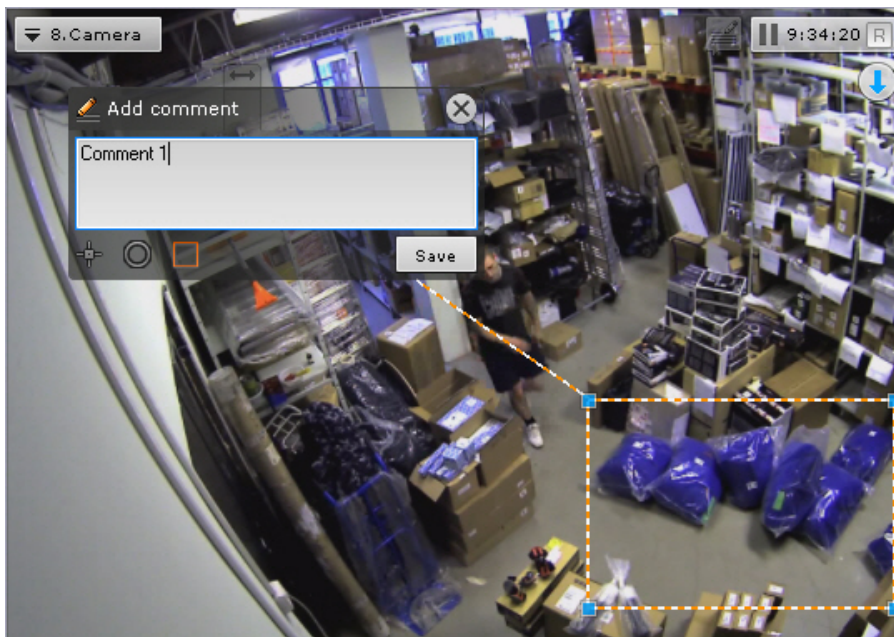
To add a comment, click the  button. A dialog box opens for entering a comment.



The number of characters in the comment is limited.

The following parameters can be configured:

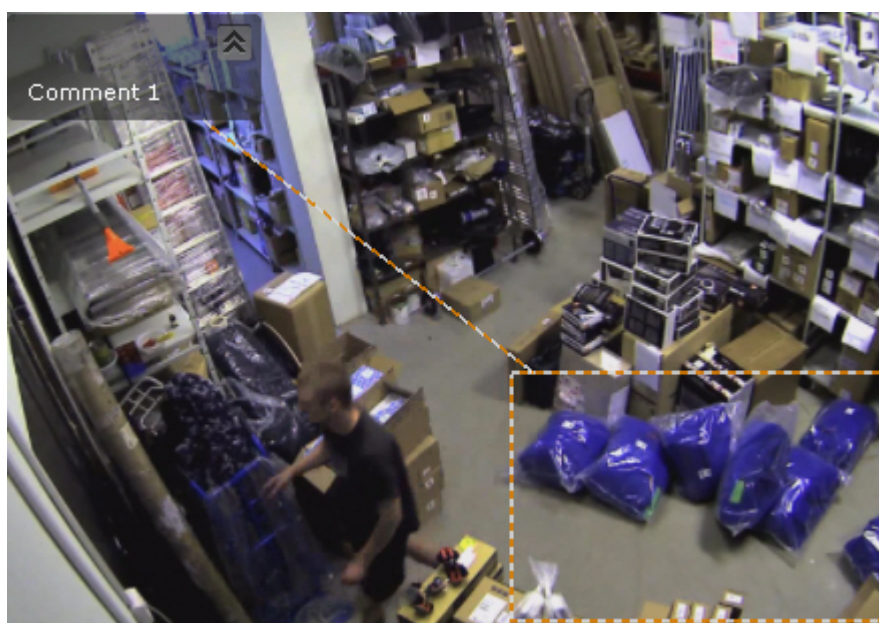
1. Position of comment in the frame (the window with the comment is movable by dragging the window title).
2. Transparency of comment window, by adjusting the  slider from left to right (from opaque to maximum transparency).
3. Marking the area of interest in the frame, with a dot () , semicircle () , or rectangle (). To do so:
 - a. Click the relevant button and then click anywhere in the frame. The selected element is displayed.



- b. Drag the element to the necessary place in the frame. To do so, left-click and drag the edge of the area (or for a dot, click and drag the dot).
- c. Set the size by dragging the corner points.

To save the comment, click the **Save** button. Otherwise, click  to cancel.

After being saved, a comment is displayed in the frame as specified. To delete the comment, before you perform any other command in the system, click the  button..

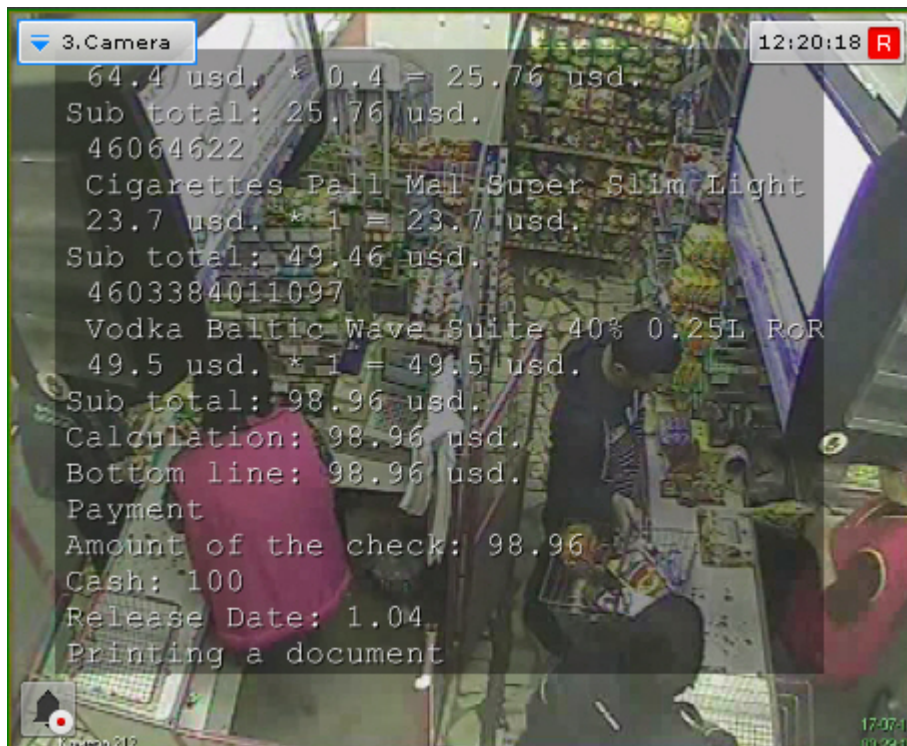


Viewing titles from POS terminals

Rus

If you have configured the titles overlay, the video tiles show titles superimposed on video (see [Configuring titles view](#)).

You can have titles from several POS terminals in the same camera window.



Note

Keywords or lines can be highlighted according to the settings (see [Configuring keywords](#)).

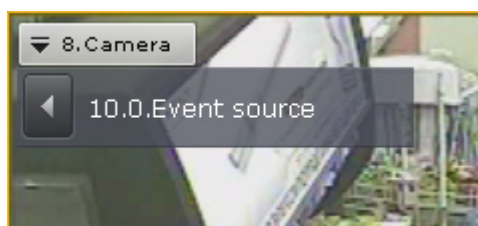
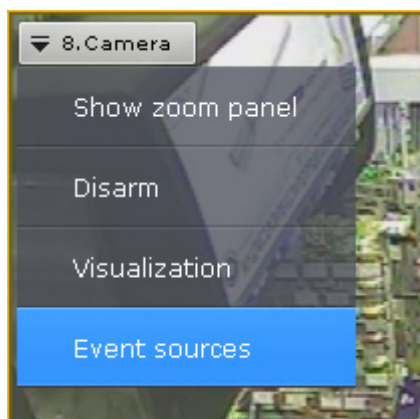
If you view recorded video, titles are synced by time.



Note

With certain captions' output settings (the **Duration** parameter = 0, see [Configuring titles view](#)) and low-intensity events at the checkout, you may have a time lag between the captions displayed and the video time stamp.

To disable titles overlay, select **Text Event Source** in the context menu of the viewing tile and a POS terminal that you want to hide.



Partial decoding of video

Rus

Video encoding / compression is a digital video processing technique aimed at reducing the bit rate of streamed video and

bandwidth consumption. Video is compressed according to a specific software algorithm - codec.

MotionWavelet is a purpose-built codec used in Axxon Next VMS to compress video from video capture cards. This codec allows to reduce video stream size by tens of times (5 to 30, subject to video signal characteristics and compression ratio). To compress video signals from IP-devices, standard codecs such as MPEG-4 or vendors' proprietary codecs are used.

Before displaying the compressed video signal on screen, it is automatically decompressed.

If the resolution of a viewing tile is lower than that of compressed video, only part of the video stream is decoded. This reduces CPU load on Axxon Next clients. Partial decoding does not affect bandwidth requirements. Partial decoding works with MPEG-2, MJPEG and MxPEG.

Real-time video surveillance

Switching to Live Video Mode

Rus



To switch the viewing tile from a different surveillance mode to archive analysis mode, switch to the tab in the lower-right corner of the tile.



The viewing tile will then appear in Live Video mode.



Video Surveillance Functions Available in Live Video Mode

Rus

In Live Video mode, the following video surveillance functions are accessible:

1. Selecting video stream quality in a viewing tile.
2. Autozoom.
3. Functions for tracking of moving objects.
4. Arming/disarming a video camera.
5. Controlling a PTZ Camera.
6. Controlling relays.
7. Displaying the sensor status.
8. Autoreplace offline cameras on layouts.
9. Snapshot.
10. [Functions Available in All Video Surveillance Modes.](#)

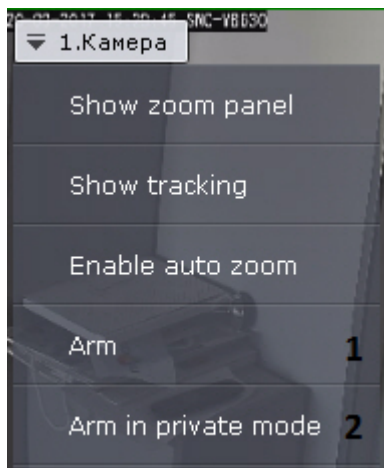
Arming and Disarming a Video Camera

Rus

In *Axxon Next*, a video camera is armed via all the detection tools registered for that video camera.

To arm a camera, select one of the following two parameters in the context menu of the viewing tile:

1. **Arm (1)**. In this case, the camera will be available to all users who have access to it.
2. **Arm in private (2)**. In this case, the camera will not be available to the users with the **Live in Armed mode**.



To disarm a camera, select **Disarm** in the context menu of the viewing tile. The video camera will then be disarmed.

Controlling a PTZ Camera

Rus

PTZ video camera can be controlled with the PTZ Control Panel or directly in the Viewing Tile (see [Controlling a PTZ Video Camera in the OnScreen PTZ Mode](#), [Control using Areazoom](#), [Control using Point&Click](#)).

The user gains access to this panel when the viewing tile of a video camera in Live Video mode that supports a PTZ control interface is selected.



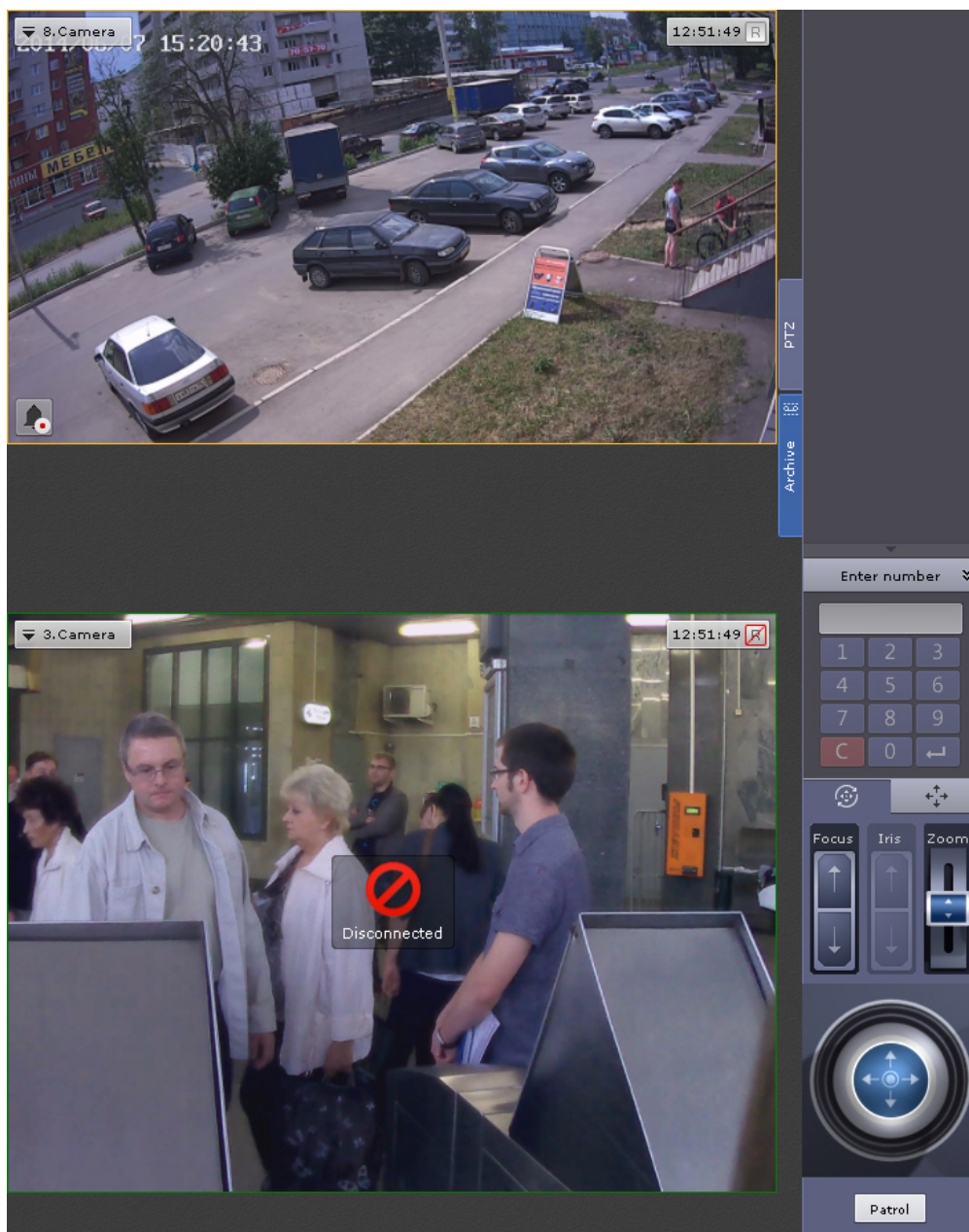
Attention!

PTZ camera is controlled in accordance with the priority settings (see [Creating and configuring roles](#)). If multiple users have the same control priority, they can control a PTZ camera simultaneously.

If the user with higher priority controls the PTZ camera with the the PTZ control panel (as long as the camera is selected) users with a lower priority can not control it. If the user with higher priority controls the PTZ camera, the relevant information is displayed on the panel.

If you disabled the option to simultaneously control a PTZ camera by multiple users, users with the same priority take over the control on a first-come, first-served basis.

If the user that controls the PTZ camera is idle a certain time (see [Configuring PTZ control](#)), it is automatically unlocked and the control becomes available to all users.



The following actions can be performed using the PTZ device control panel:

1. Use presets.
2. Modify the parameters of the iris, focus, and optical zoom.
3. Modify the horizontal and vertical tilt angle of the video camera.
4. Starting/stopping patrol mode.



Note

Setting presets is described in detail in the section [The PTZ Control Panel](#).

Control Using the Presets List

Rus

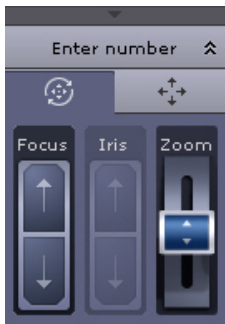
To switch a PTZ camera to a preset, you can use the presets list. To do this, left-click the corresponding line in the given presets list.



Control Using the Enter number Panel

Rus

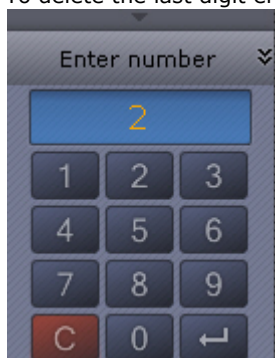
To switch a PTZ camera to a preset, you can use the Enter number panel. To display the Enter number panel, click the **Enter number** button.



To switch to a preset using the Enter number panel, you must perform the following steps:

1. Using the numeric buttons (0-9), enter the number of the preset to which you want to switch. The entered number is displayed in a special field.

To delete the last digit entered, click the  button.



2. Click the  button to switch to the preset with the number entered. The camera will then be switched to the desired position.

Switching to a preset using the Enter number panel is now complete.



Note

Examples of entering a number:

5,  – Switch to preset number 5;

0, 5,  – Switch to preset number 5.

5, 7,  – Switch to preset number 57.

Control using step buttons and virtual joystick

Rus

To control a PTZ camera, you can use both step buttons (discrete telemetry mode) and the virtual joystick (the camera must support continuous telemetry), if the camera supports both modes.



To select, click the  and  buttons. Otherwise, only one of the modes may be used.

Set the sensitivity level of telemetry step buttons by selecting a value from 1 to 10.



Virtual joysticks are controlled as follows:

1. Click and hold down the left mouse button in the central (blue) portion of the joystick.
2. Drag the joystick in the necessary direction.



Note

You can also move the joystick by clicking and holding the left mouse button outside of the joystick border.
The turn speed depends on the tilt of the joystick: the greater the tilt, the higher the speed.



Note

If you rotate a camera view / viewing tile 180 ° , you will have PTZ controls inverted.

Patrolling

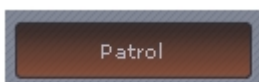
Rus

Patrolling is an automatic change in the position of a camera along a route defined in the camera's presets list. Patrolling is enabled through the **Patrol** button in the PTZ camera control panel.



Note

You can use a cycle macro to set up patrolling (PTZ camera tour, see [Switch to a PTZ camera preset](#), [Wait for timeout](#), [Cyclical macros](#)).



To stop patrolling, click the **Patrol** button again.



Attention!

Manual control takes priority over automatic control. Any interference in the patrolling process cancels it.



Note

Any user (regardless of priority, see [Creating and configuring roles](#)) can stop patrolling

Controlling Focus, Iris and Optical Zoom

Rus

To control focus, iris and optical zoom, use the corresponding sliders.



To control focus, iris, and optical zoom, move the corresponding slider up or down.

If the camera has AF (auto focus), you can see the corresponding  button under the slider.



Controlling a PTZ Video Camera in the OnScreen PTZ Mode

Rus

The **OnScreen PTZ** mode enables controlling a PTZ video camera by mouse manipulations in the Viewing Tile.

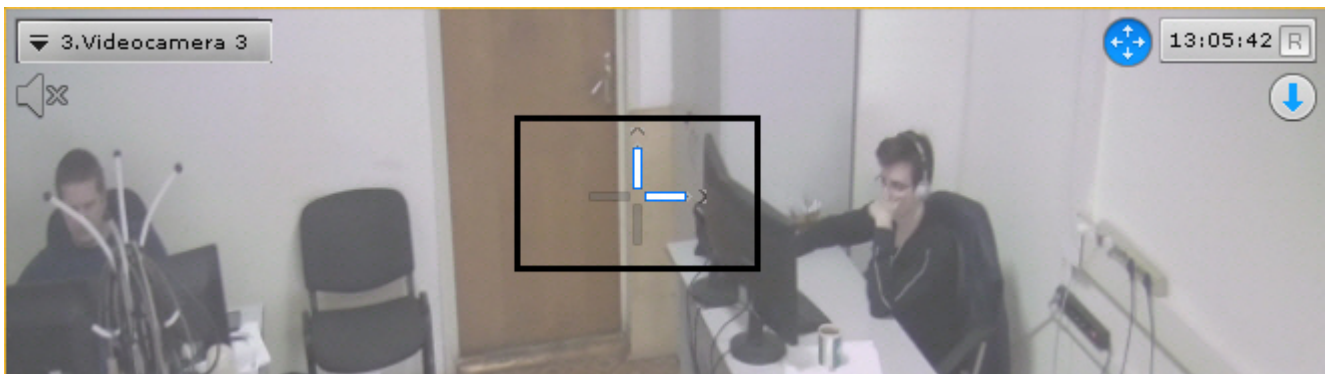
Click  to enable this mode



Note

Point&Click (see [Control using Point&Click](#)) and Areazoom (see [Control using Areazoom](#)) functions are unavailable in the **OnScreen PTZ** mode

To change the viewing angle, click on a video image with the left mouse button and move the mouse pointer in the required direction. During this action the software displays a visual element on the image showing the camera lens movement direction and speed.



The faster you move the mouse, the faster the camera rotation will be.

Click  again to disable the **OnScreen PTZ** mode.

Control using Point&Click

Rus

To change the focus of the camera lens, left-click anywhere within the video image in the viewing tile.

Once you have done that, the focus of the camera lens will automatically change to the selected area. The focus is changed using *Axxon Next* algorithms.



**Note**

Point&Click function is unavailable if the **OnScreen PTZ** mode is enabled (see [Controlling a PTZ Video Camera in the OnScreen PTZ Mode](#))

**Note**

This function is available for only some CCTV cameras.

For more information, contact AxxonSoft.

Control using Areazoom

Rus

You can focus on a particular area in a video frame.

**Note**

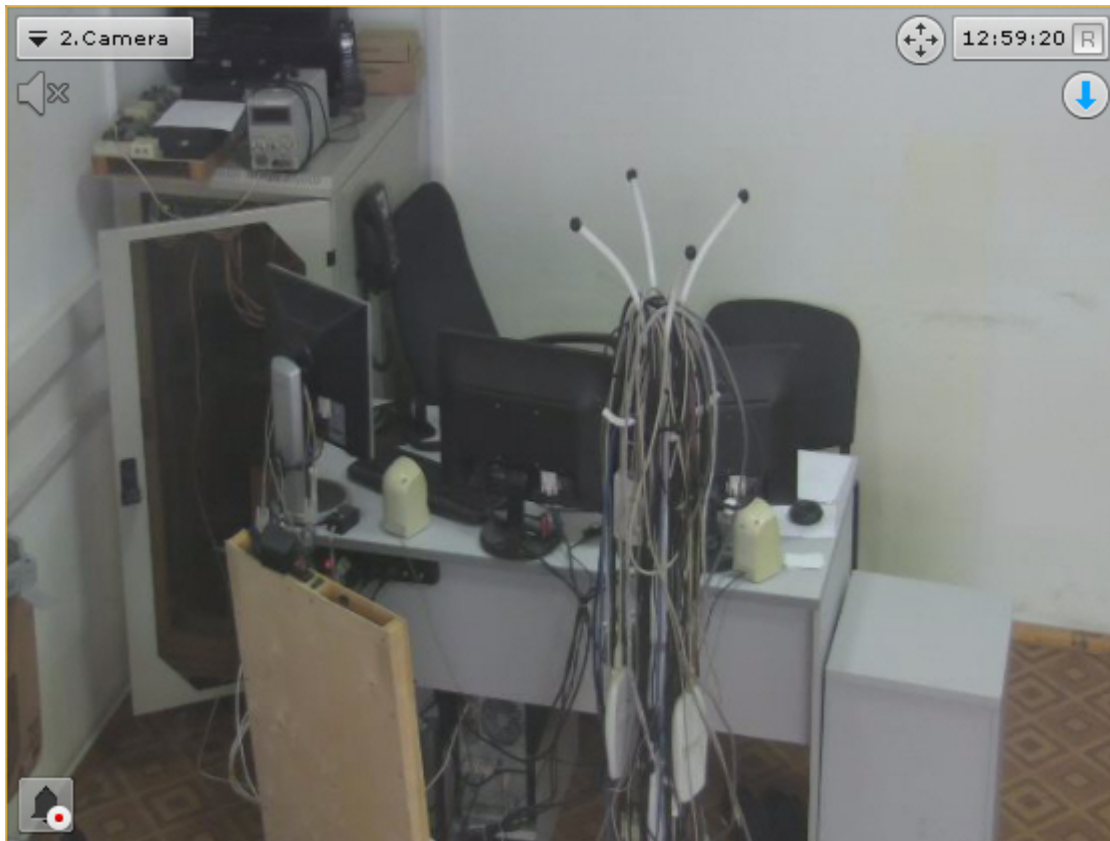
Areazoom function is unavailable if the **OnScreen PTZ** mode is enabled (see [Controlling a PTZ Video Camera in the OnScreen PTZ Mode](#)).

To do so:

1. Click a point to focus on it.



2. Holding down the mouse button, moving outward from the center of the focus area, the user sets the size of the area. Releasing the mouse button finalizes the selection.



The lens is reoriented and the image is enlarged so that the selected area now fills the entire viewing tile.



Note

This function is available for only some CCTV cameras.

For more information, contact AxxonSoft.

Functions for tracking of moving objects

Rus

Axxon Next includes several features for tracking moving objects.

With Tag & Track, an object can be tracked by a PTZ camera under the guidance of panoramic cameras.

With Tag & Track Lite, the operator is alerted to the camera in front of which the moving object is most likely to appear next. The camera is predicted based on object trajectory and mapping of cameras to map locations.

Tag & Track Pro

Rus

Tag & Track functionality depends on the telemetry mode that is specified in the settings.



Attention!

To use Tag & Track Pro, make sure you have a PTZ camera in *Axxon Next* that supports Absolute Positioning. The devices that support Tag & Track are listed in the [Drivers Pack documentation](#). If a PTZ camera does not meet the requirement, you should add it to the VMS via Onvif.



Attention!

If manual or control priority mode is selected, for Tag & Track Pro you must activate object tracking in the viewing tile of the overview camera (see the [Tracking objects](#) section).

- If automatic mode is selected, the PTZ camera will track all active objects. In this case the PTZ camera switches focus between each object with the specified dwell time.
- In manual mode, the PTZ camera tracks an object only after the object is manually selected in the viewing tile (left-click to track).



- If control priority mode is selected, the PTZ camera automatically tracks an object until another object is manually selected for tracking in the viewing tile. If an object is deselected (by clicking again) or if it leaves the field of view of the PTZ camera, automatic mode is re-activated.



Note

Tag & Trac Pro cannot be used with the OnScreen PTZ mode simultaneously (see [Controlling a PTZ Video Camera in the OnScreen PTZ Mode](#)).

Tag & Track Lite

Rus



Attention!

For Tag & Track Lite to work, you must activate object tracking in the viewing tile (see the [Tracking objects](#) section).

Tag & Track Lite works as follows:

1. The operator left-clicks an object to start tracking it (the object is outlined with a white frame).



2. After the selected object leaves the field of view of the camera, the video camera's location on the map and trajectory of the object are used to predict the camera in front of which the object is **likely to appear**.
3. The viewing tile of that camera is activated. If the current layout does not contain that camera, a minimal layout with the camera is shown.



Note.

If the viewing tile for that camera is currently in archive mode, the tile is switched to Live Video mode and made active.



Note.

If video in the viewing tile of the original camera is magnified and the predicted camera is not in the layout, the viewing tile with the camera is made active and the same degree of digital zoom is applied.



Attention!

Tag & Track Lite merely predicts, and therefore cannot guarantee, that the object will appear in front of a given camera.

Simultaneously using Tag & Track Pro and Tag & Track Lite

Rus

In some cases, it may be useful for Tag & Track Pro and Tag & Track Lite features to be active at the same time.

For example:

- In Tag & Track Pro, manual or control priority mode is selected for the telemetry mode.
- In Tag & Track Lite, an object is selected in the field of view of the camera that is designated as the overview camera for Tag & Track Pro.

In this case, both features are active: the object will be tracked by the PTZ camera and its trajectory will be used to predict the camera in front of which it will appear next.

Managing Relays

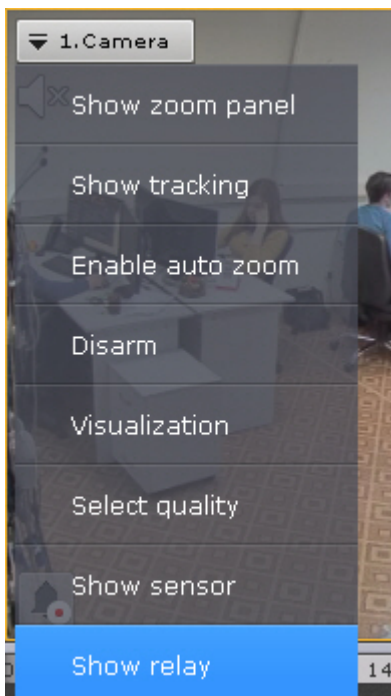
Rus

To control a relay, select **Show relay** in the context menu of the viewing title.

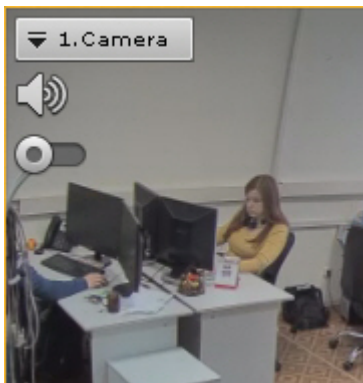


Note

You must first activate an object before you can control its relay.



This opens **Relay Switch**.



Note

To hide **Relay Switch**, select **Hide relay** in the context menu of the viewing tile.

You can toggle the relay state by clicking the radio button.



Note

If a relay is controlled by several operators simultaneously, the relay will remain activated as long as at least one operator requires it.

Relay Switch	Relay status
	Normal
	Activated

Displaying the sensor status

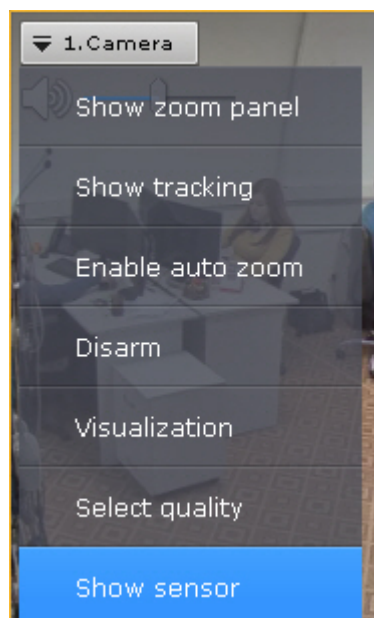
Rus

To display the status of a video camera's sensor, select **Show sensor** in the context menu of the viewing tile.



Note

You must first activate an object to display the status of its sensor.

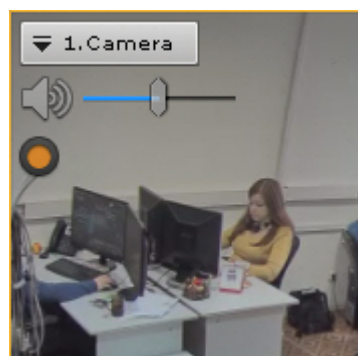


The status of the sensor will now appear in the viewing tile.



Note

To hide the sensor status, select **Hide sensor** in the context menu of the viewing tile.



There are four possible statuses of a sensor.

Sensor status	Description
	Video camera is armed, sensor is in normal status
	Video camera is armed, sensor is in alarm status
	Video camera is disarmed, sensor is in normal status
	Video camera is disarmed, sensor is in alarm status

Selecting video stream quality in a viewing tile (GreenStream)

Rus

If a video camera supports multistreaming, you can select the quality of the video stream that you want for display in viewing tiles.

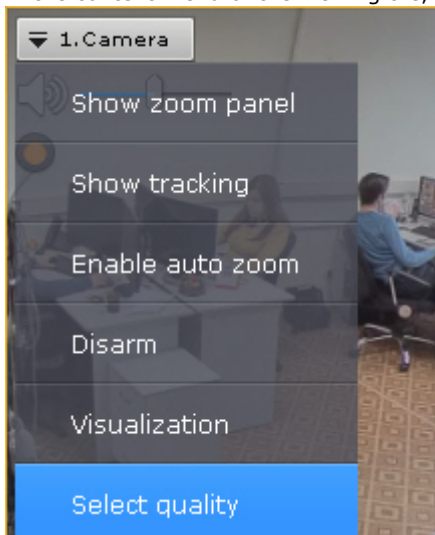


Note

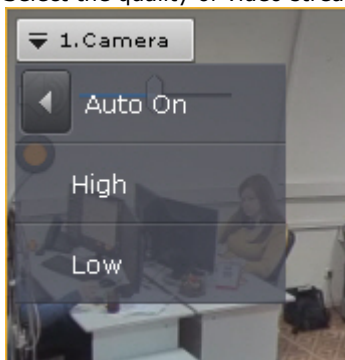
If the video camera is not configured for multiple video streams, this action is not available (see [The Video Camera Object](#)).

To select video stream quality:

1. In the context menu of the viewing tile, select **Select quality**.



2. Select the quality of video stream that you want for display in the viewing tile.



Item	Description
Auto (GreenStream)	A video stream will be chosen automatically depending on the size of the viewing tile (with account of digital image zoom). If the size of the viewing tile (in pixels) is larger than the resolution of the low-resolution video stream, the viewing tile switches to the high-resolution video stream
High	A high-quality video stream is used for display in the viewing tile (see The Video Camera Object).

Low (default)	A low-quality video stream is used for display in the viewing tile (see The Video Camera Object). The low-resolution video stream will be displayed in an inactive viewing tile in the same layout. When the user selects a viewing tile, the video stream of the necessary resolution is automatically requested from the camera.
Adaptive	Viewing Tile shows an adaptive video stream (see Configuring an Adaptive Video Stream).



Note

Automatic video stream selection (enabled by the **Auto** option) is unavailable if automatic resolution selection has been set for any stream (see [The Video Camera Object](#)).

3. Click between between the tiles.

Selection of video stream quality in the viewing tile is now complete.

Autozoom

Rus

The **Autozoom** function performs automatic control of digital zoom.

If a viewing tile is inactive and autozoom is enabled, the following actions occur:

1. The smallest rectangular area that contains all tracked objects (even if object tracking is disabled) is chosen.
2. Maximum digital zoom is performed for the selected area.

If autozoom is enabled but there are no moving objects in the video frame, the contents of the viewing tile are shown at their original size.



Note

If the Fit screen function is activated for a viewing tile, the default digital zoom level is used.

Autozoom stops when a viewing tile is selected and resumes when the viewing tile is no longer active.

Autozoom can be enabled both for a single camera and for all video cameras in a layout.

To enable autozoom for a specific camera, in the viewing tile context menu, select **Enable autozoom**.



Important

Autozoom is available if situational analysis is enabled on the camera in question (see [Object Tracker](#)) or if one of the embedded detection tools is enabled (see [Configuring Built-In Detectors](#))

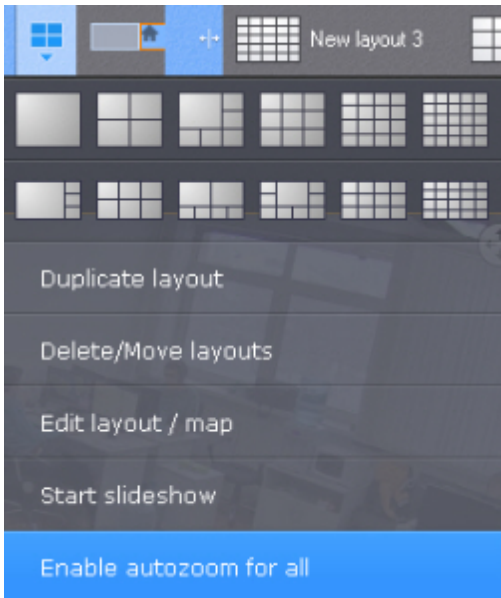


Note

Autozoom resizing takes into account objects from all tracking sources that are activated for a particular video camera

To disable autozoom, select the corresponding command in the viewing tile context menu.

To enable autozoom for all cameras in a layout, select **Enable autozoom for all**.



To disable autozoom for all cameras in a layout, select **Disable autozoom for all**.



Note

If autozoom is activated for one or more cameras in a layout, by default the menu displays the **Disable autozoom for all** option.

Autoreplace Offline Cameras on Layouts

Rus

If the main camera goes offline and a sub camera is defined in the settings (see [The Video Camera Object](#)), they are automatically replaced: the sub camera shows in the tile in place of the main one.

Cameras are swapped across all layouts in the system.

When connection restores, changes are automatically undone.

Snapshot

Rus

In Live Video mode, you can "freeze" video. To do so, click the time display (scrubber) in a viewing tile.

This will cause the viewing tile to be highlighted with a blue border. A snowflake icon will appear in the time field.



To return to live video, click the display again.

Video surveillance in archive mode

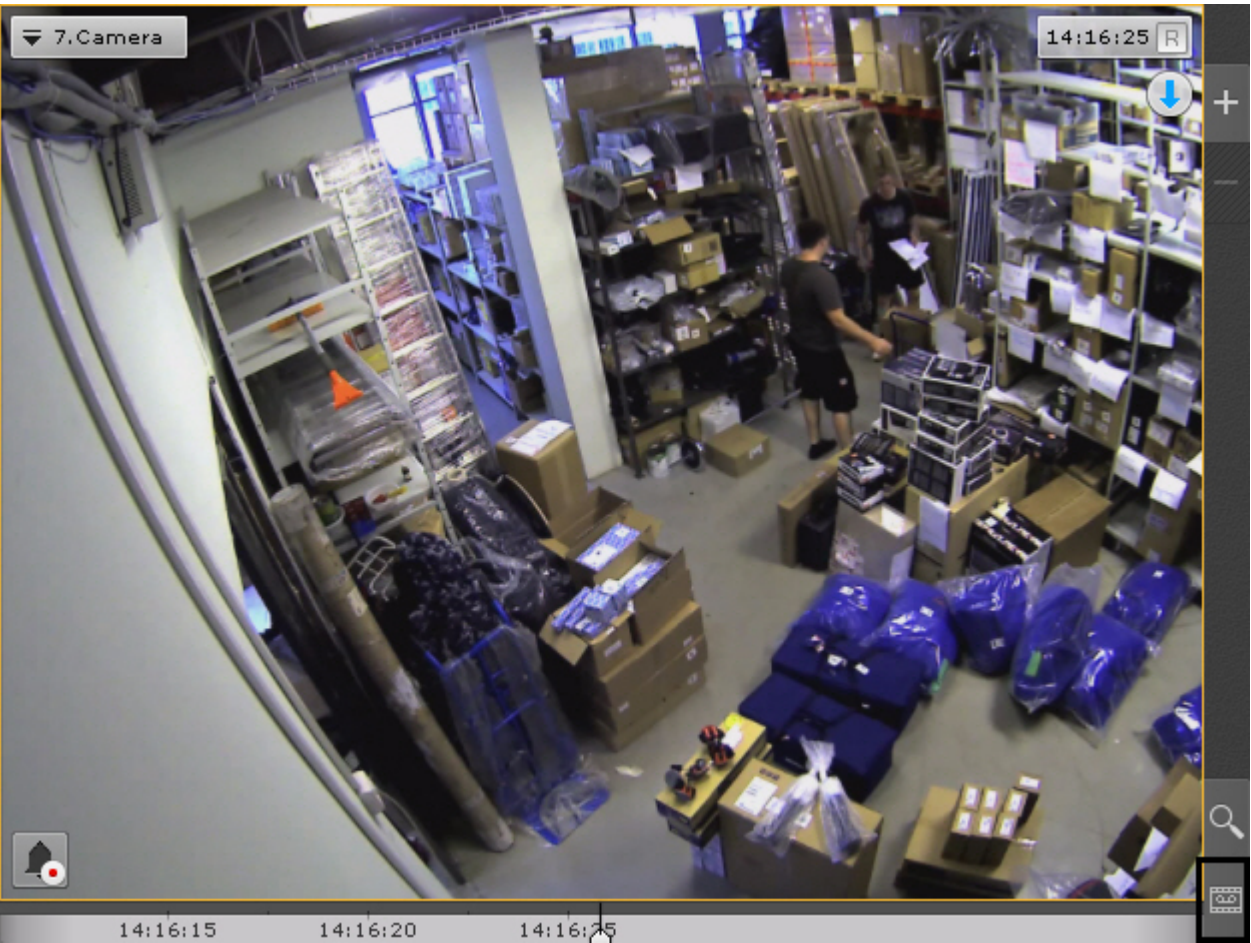
Switching to Archive Mode

Rus



To switch the viewing tile from a different surveillance mode to archive analysis mode, switch to the  tab in the lower-right corner of the tile.

Note
If a camera is not linked to a video archive and has no on-board storage, this tab will be not available.



You can also switch from Live Video mode to Archive mode if you select a position on the advanced archive navigation panel (see [Advanced archive navigation panel](#)).

Note
In Live Video mode, if the viewing tile is not active, the tabs for switching to other modes and the advanced archive navigation panel are not displayed. To activate, click the viewing tile

Please note, that if at least one camera in the layout is not in Archive mode, then if you click **Archive** on the right side of the screen, all cameras will be transferred to Archive mode (see [Show and Hide the Archive Navigation Panel](#)).

To return to Live Video mode, click **Archive** again.

Note
If archive mode is selected as the default video mode for a camera in a layout, when you switch to that layout, the camera is immediately in archive mode (see [Selecting the default video mode for a camera](#)).

Video Surveillance Functions Available in Archive Mode

In archive mode the following video surveillance functions are accessible:

1. Autozoom.



Note

Refer to section [Real-time video surveillance](#) for a description of switching to the results of a saved search query and the **Autozoom** function.

2. Selecting an archive for viewing of recordings.
3. Synchronized playback of archives.
4. Compressed playback of archives.
5. Viewing recorded video with operator comments.
6. Viewing external archives.
7. Navigating through the archive.
8. Displaying why situation analysis detection units have been triggered.
9. Viewing the results of a saved search query.
10. Manual archive replication.
11. [Functions Available in All Video Surveillance Modes](#).

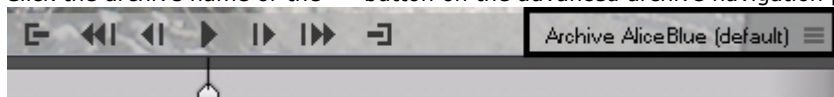
Selecting an Archive

You can select video footage to view only if the camera is recording to several archives.

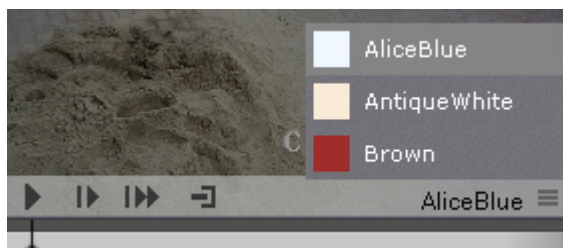
If you do not select an archive, the default archive is played back (see [Binding a camera to an archive](#)).

To select another archive for playback:

1. Click the archive name or the button on the advanced archive navigation panel.

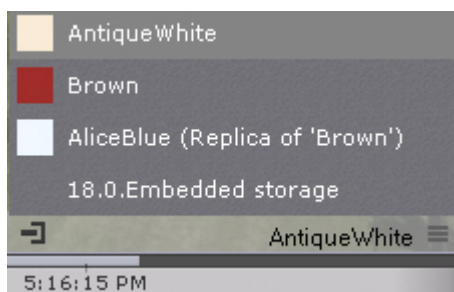


2. Select the required archive from the list.



Note

You can select all available Mirror Archives (if any, see [Configuring data replication](#)) and on-board storage (if enabled, see [The Embedded Storage object](#))



You can now view video footage from the selected archive in the viewing tile.



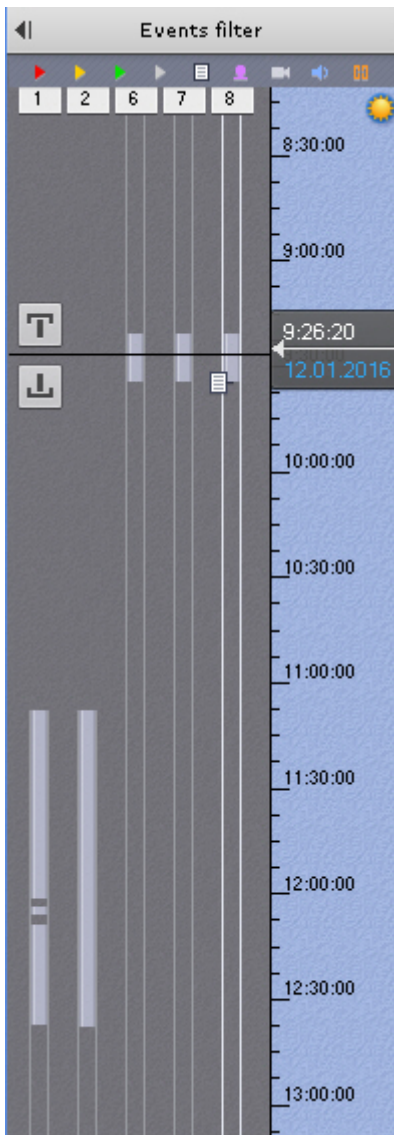
Note

If there is no recording in the selected archive, a message to that effect will appear in the viewing tile.

Synchronized playback of archives

Synchronized playback of archives lets you play back archives from several different video cameras simultaneously.

To enable synchronized playback, switch a few video cameras into archive mode. The timeline will then display time axes for the corresponding archives.



Synchronized archive playback is controlled through the playback panel in the same way as playback for a single archive.

Compressed playback of archives (TimeCompressor)

Rus

During compressed playback (TimeCompressor), the viewing tile simultaneously displays tracked objects from different moments in time within the selected portion of the archive. This lets you quickly look through the archive to find important events and investigate them in more detail.

For condensed playback of archived video from a camera, the following conditions must be true:

1. Camera is bound to an archive (see [Binding a camera to an archive](#)).
2. Analytics for the camera are enabled (see [Object Tracker](#)).



Note

Time Compressor is most useful when there are not a large number of objects constantly moving in the video camera's field of view.



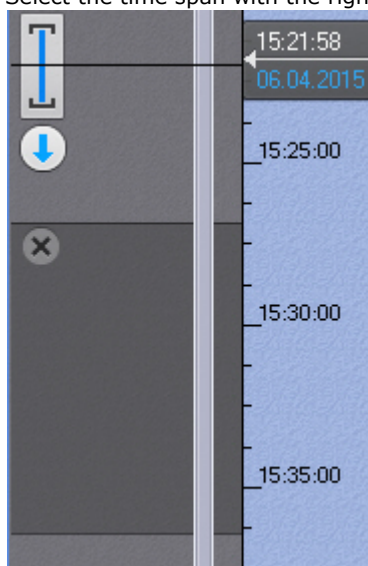
Attention!

For proper viewing of recorded video in TimeCompressor, make sure to detect a high-quality stream (see [Setting General Parameters](#)). We recommend using the maximum video resolution for the high-quality stream (see [The Video Camera Object](#)).

Switching to TimeCompressor mode

To use TimeCompressor, complete the following steps:

1. You can set the time span for viewing video in TimeCompressor on the timeline in one of the following ways:
 - a. Set the pointer to the start position. In that case you view the whole archive to the end of it (see the section titled [Navigating Using the Timeline](#)).
 - b. Select the time span with the right-click.



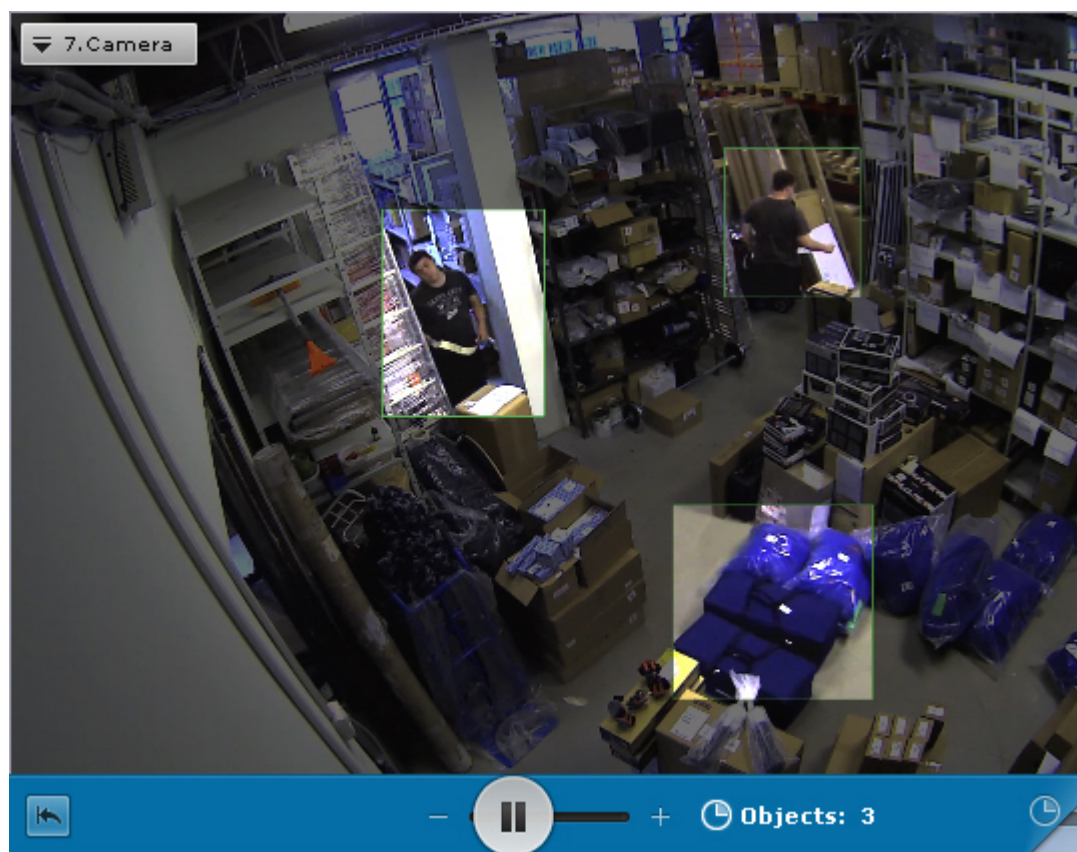
Note

The TimeCompressor mode allows you to view the results of a specific archive search (see [Viewing Search Results In TimeCompressor](#)).



2. Click the button on the Advanced Archive Navigation Panel

The archive will now start playing in compressed mode.



**Note**

Only one video camera can run TimeCompressor at one time. If synchronized playback is started and a video camera is switched to TimeCompressor mode, playback of all other video cameras will be automatically paused.

**Note**

To switch back to the standard archive browsing mode, click the displayed area of the Advanced Archive

Navigation Panel

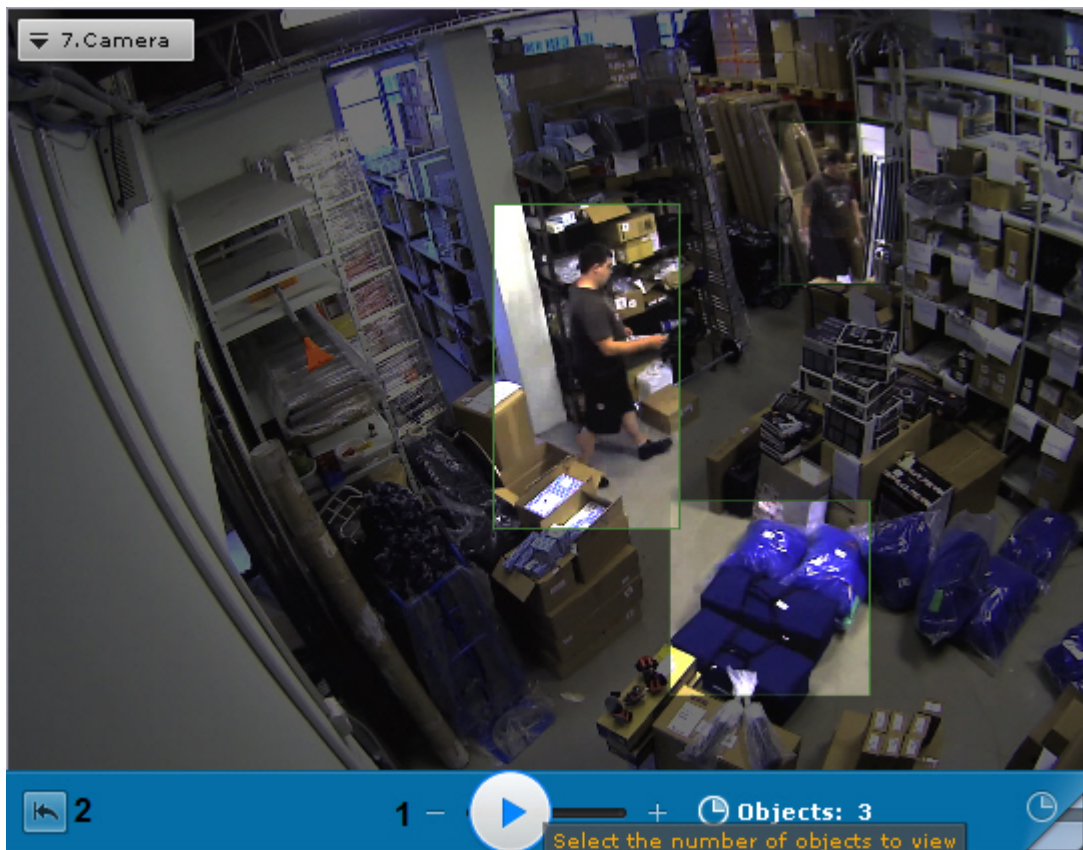


Playback control

Rus

Playback control in TimeCompressor mode is managed using the advanced navigation panel and the playback panel.

To set the desired number of tracked objects to be simultaneously displayed, set the slider in the appropriate position (**1**). The extreme left position of the slider corresponds to two objects, the extreme right - sixteen.

**Note**

Once you have configured this setting, playback begins at the beginning of the selected interval.

**Note**

However, according to the logic of the algorithm, the number of displayed objects may be greater.



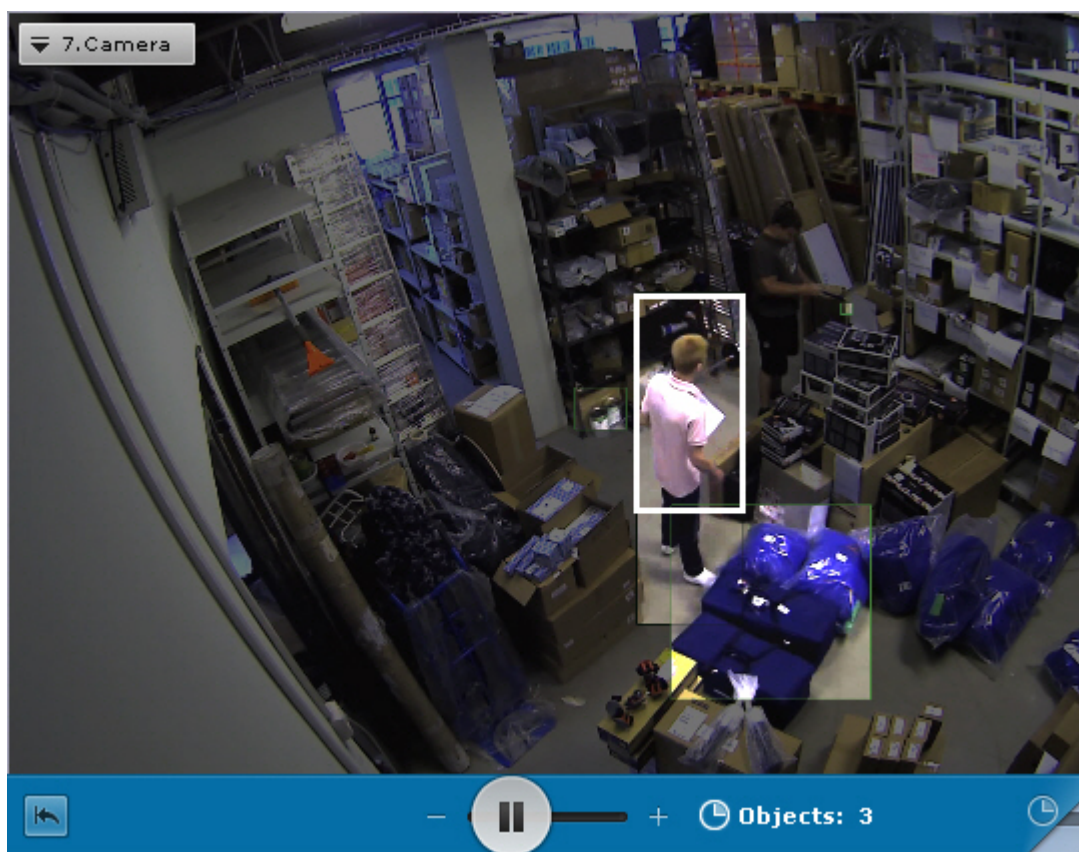
To stop or start playback, use the  and  buttons on the playback panel or the identical buttons on the advanced navigation panel.

To start archive playback in TimeCompressor mode starting at the beginning of the selected interval, click the  button (**2**).

Switching back to the original recording of an object

Rus

To leave TimeCompressor mode to go back to the original recording of an object, left-click the object.



The system will now automatically switch back to the original recording of the object in standard archive playback mode. Playback of the recording will be paused, and the beginning of the recording will correspond to the moment at which the object was selected.

The period during which the objects remains in the camera's field of view is displayed in the viewing tile.



Note

Once you have switched back to the original recording of the object, you can return to TimeCompressor mode to

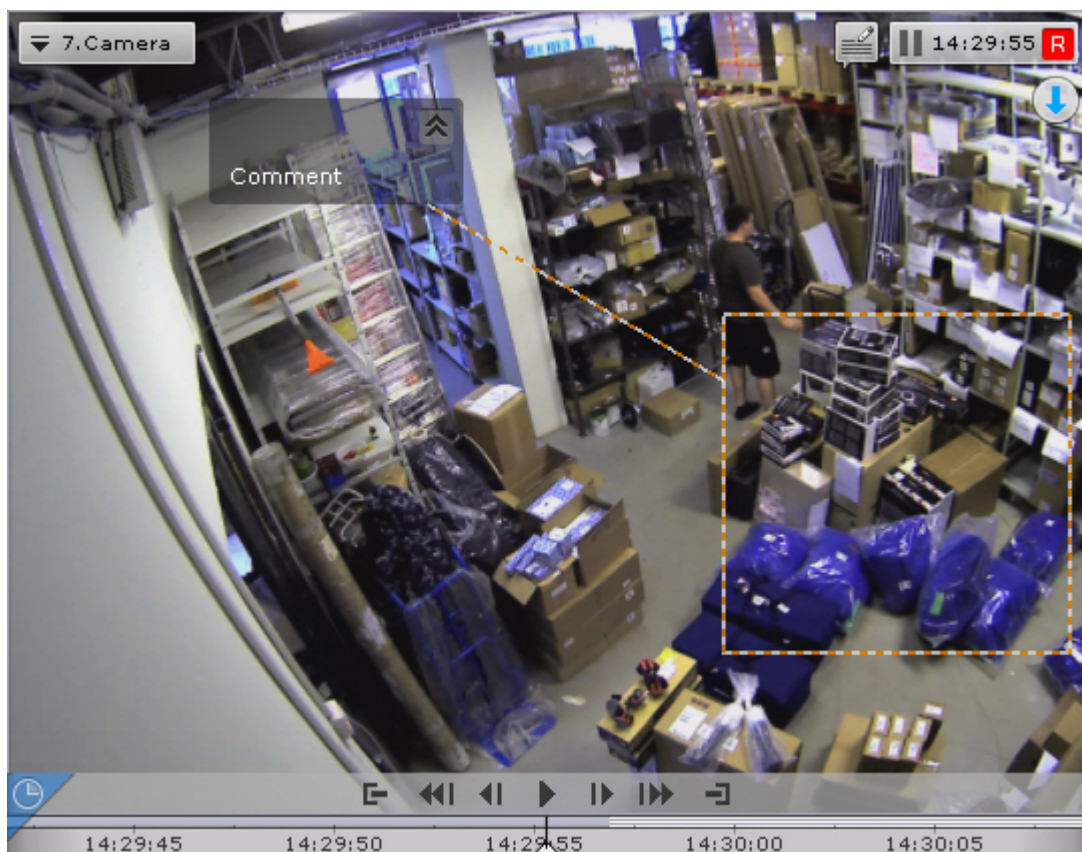
the place where the switch was made. To do this, click the  tab. In this case, playback in TimeCompressor mode will be paused.



Viewing recorded video with operator comments

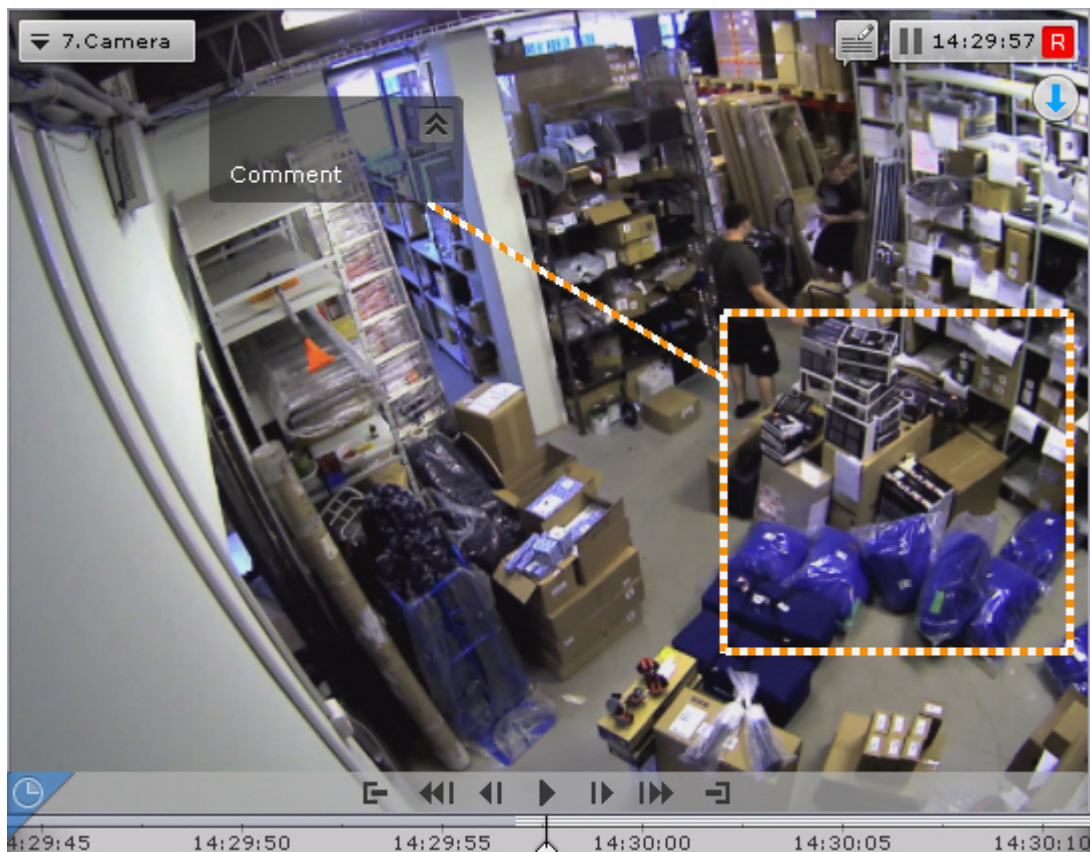
Rus

Operator comments are displayed when recorded video is played back in a viewing tile.



Comment text begins display five seconds before the frame for which the comment was added (before the first frame, if the comment was set for an interval), with gradual outlining of the area (or point) that was specified when adding the comment.

When the commented frame is shown or during the commented interval, the area (or point) is also highlighted,



Five seconds after the commented frame (after the end of the interval, if the comment was for an interval), the comment is hidden.

To minimize comments and the displayed area, if any was specified, click the  button.



To return to the full comment, click the  button.

Viewing External Archives

Rus

External Archive is time-referenced video footage (see [Importing video to Axxon Next](#)).

If you go to Archive mode, the timeline shows available video recordings. If there is no time overlapping for video recordings, the space between them is blank.

If video recordings overlap, they are displayed as one track that spans from the beginning of the first video clip to the end of the second.

If you want to watch this track, both video clips are played sequentially and in full.

Navigating in the Archive

Rus

You can navigate in the archive using the following interface elements:

1. Timeline
2. Advanced navigation panel
3. Events list
4. Playback panel
5. Time indicator

You can also navigate through the archive by easily flipping through recordings.

Navigating Using the Timeline

Rus



Note

Use of the timeline is described in detail in the section [The Timeline](#).

You can select recordings in the archive for playback in a viewing tile by using the timeline, in one of two ways:

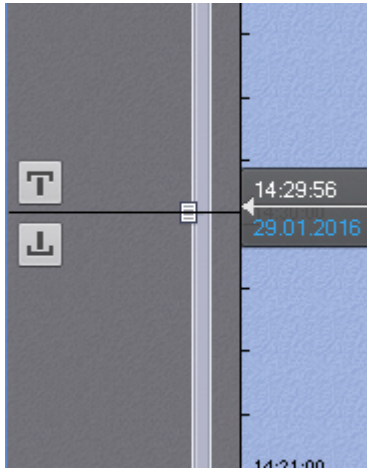
1. Left-click the indicator **(1)** and drag it to the corresponding position on the timeline. Alternatively, you can left-click the left portion of the timeline.



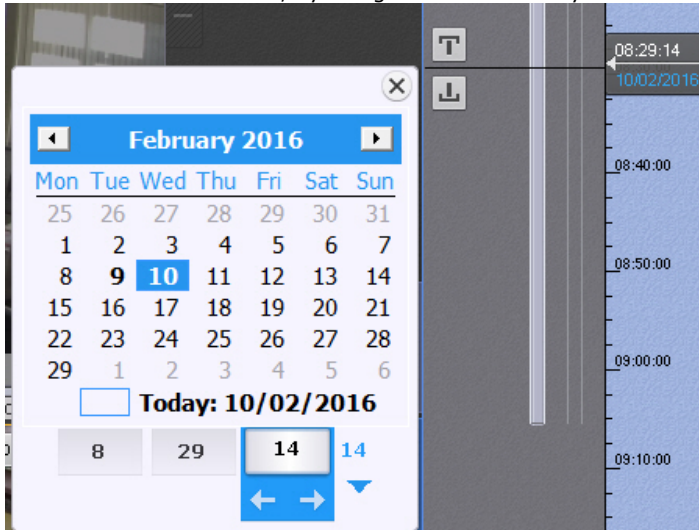
Note

The position on the timeline is a graphical representation of a specific moment in time.

The frame corresponding to the selected position (moment in time) will then be displayed in the viewing tile **(2)**.



2. Click the indicator. The calendar opens. Select the date to which you want to jump in the archive and specify the time in HH:MM:SS format, by using the arrows or keyboard number keys.



You are then taken to the specified point in the archive.

If one video camera is in archive mode and you move the indicator to a point for which there is no video, the indicator will automatically go to the video for the closest point in time. If two or more video cameras are in archive mode, you will not be taken to the video for the closest point in time; the message **No archive** will be shown on screen.

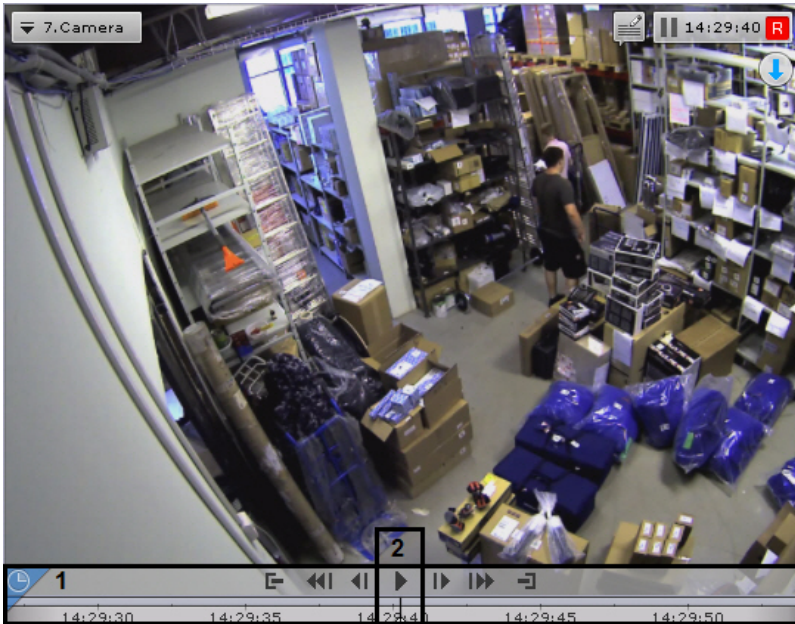
To play back the selected recording, use the playback panel (see the section titled [Navigating Using the Playback Panel](#)).

Navigation using the advanced panel

Rus

You can use the advanced navigation panel to select recordings in the archive for playback in the viewing tile. To do this, complete one of the following two actions:

1. Left-click the timeline (1) and hold down the button while dragging the scale to the desired position.
2. Left-click the desired moment in time on the timeline.
3. Left-click and hold the desired moment in time on the timeline.



When you left-click and hold left the mouse button and the timeline is moved, you can view the corresponding recording in fast forward. The further left you click, the faster is the playback speed.

Note

The current moment in time is determined by the cursor located in the center of the timeline (2). The position of the cursor relative to the timeline never changes.

Once the selected moment is reached, playback stops. The speed of playback depends on the speed of the timeline's movement.



To start archive playback click in the middle of the timeline. To pause playback, click the button or left-click the timeline.



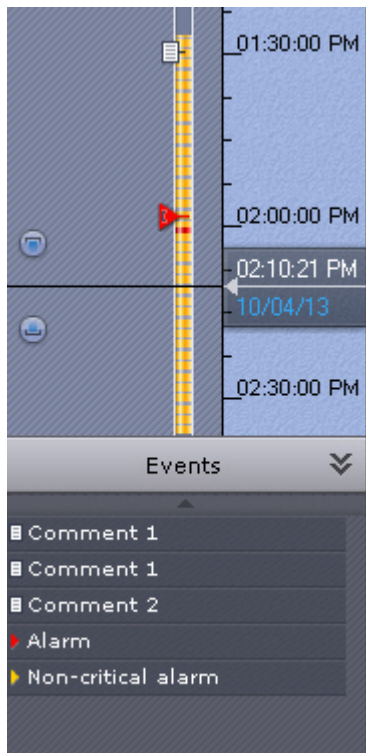
To control playback, use the playback panel (see the section titled [Navigating Using the Playback Panel](#)) or the advanced navigation panel.

Playback		Pause	
Item	Description	Item	Description
	Decreases playback speed by one level		Go to the preceding frame
	Increases playback speed by one level		Go to the next frame
	Go to the previous recording		Go to the previous recording
	Go to the next recording		Go to the next recording

Navigating Using the Events list

Rus

The Events List and the timeline are dynamically linked: when you select an event in the list, the timeline indicator automatically jumps to the selected position.



For details, see the section titled [Events List](#).

Navigating Using the Playback Panel

Rus

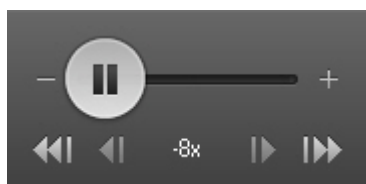
To navigate in the archive using the playback panel, you must first select a recording for playback.

Once a recording is selected, the following operations are accessible:

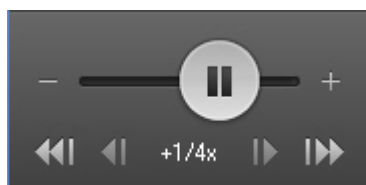
1. Play recording: 
2. Pause/Stop playback: 
3. Go to the preceding frame .
4. Go to the next frame .
5. Go to the previous recording .
6. Go to the next recording .

You can fast-forward / fast-rewind and change playback direction (forward / back).

Fast-rewind playback.



Slow playback.



For reverse playback of a recording, move the slider to the left of the position corresponding to zero playback speed (the center of the slider); for forward playback, move it to the right. The current playback speed is displayed under the slider. During forward playback of a recording, a **+** sign appears before the speed; during reverse playback, a **-** sign appears. The value **0X** corresponds to zero speed, i.e., no playback; the value **1X** corresponds to the frame rate of recording.

To speed up playback by one step, click **+**. To slow down by one step, click **-**. To temporarily change the playback speed, move the slider in the desired direction.

To slow playback N-fold, do as follows:

1. Accelerate playback N-fold:
2. Click the value of the current playback speed below the slider.

This slows the playback N-fold. To return to the fast playback, click the current speed again.



Note

Forward playback speed can be increased up to 32x, reverse playback speed — up to 8x.

Navigation via the time indicator

Rus

The time indicator in a viewing tile can be used to set the time of the current day on the timeline to which you want to navigate in the archive.

To do so, left-click the indicator and specify the time in HH:MM:SS format, by using the arrows or keyboard number keys.



You are then taken to the specified point in the archive.

If one video camera is in archive mode and you try to navigate to a point for which there is no video, you will be automatically taken to the video for the closest point in time. If two or more video cameras are in archive mode, you will not be taken to the video for the closest point in time; the message **No archive** will be shown on screen.

Keyboard navigation

Rus

You can use keyboard shortcuts to navigate through an archive and control video playback.

Key or key combination	Resultant action during pause	Resultant action during play
Spacebar	Begins playback	Pauses playback
Ctrl+Spacebar	Uses the current position to set the export interval	Uses the current position to set the export interval
Up-Arrow	Increases playback speed by one level	Increases playback speed by one level
Down-Arrow	Decreases playback speed by one level	Decreases playback speed by one level
Left-Arrow	Moves back to the preceding key frame	-
Right-Arrow	Moves forward to the next key frame	-
Page up	Switches to the preceding recording	Switches to the preceding recording
Page down	Switches to the next recording	Switches to the next recording

Displaying the causes of triggered situation analysis detection units

Rus

When positioning the archive in the range [-1 sec.; +1 sec.] from when the situation analysis detection unit was triggered, the objects that triggered the detection unit will be marked on the video frame.



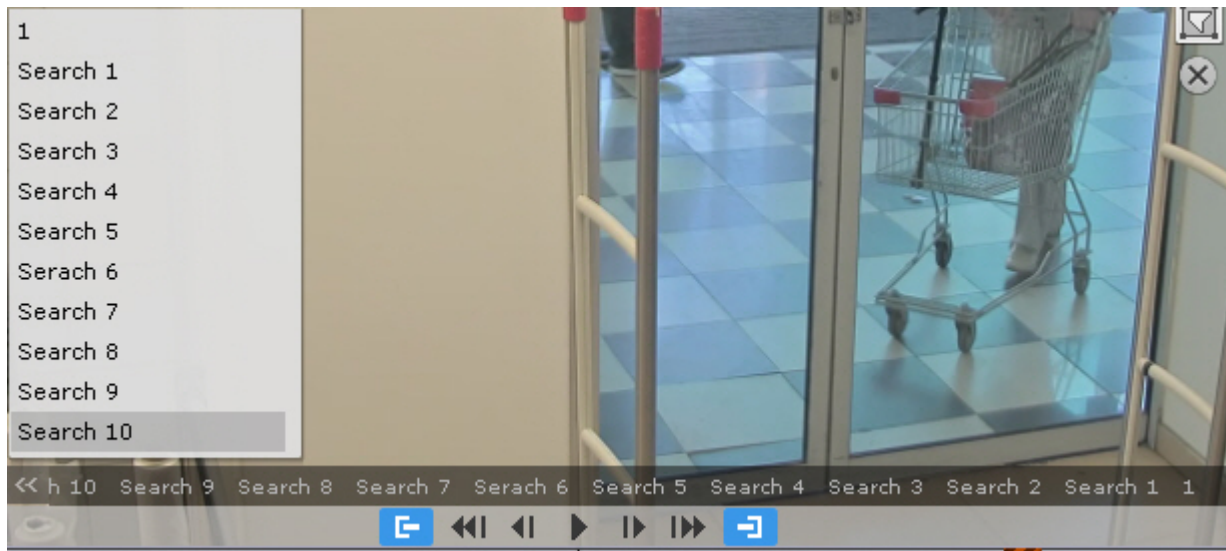
Viewing the results of a saved search query

Rus

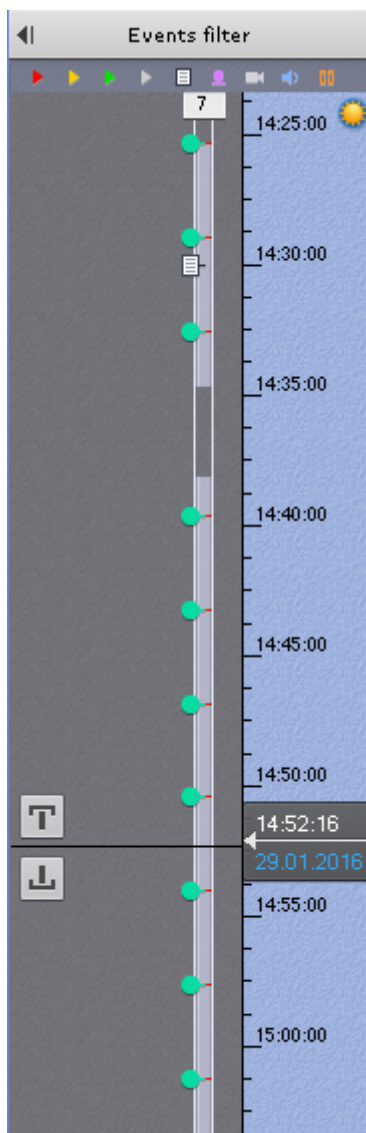
If the system has saved Forensic Search queries for a video camera, tabs for these queries are displayed in the lower-right corner of the corresponding viewing tile.



If not all tabs fit in the viewing tile, a full list of saved Forensic Search queries is available by clicking the  button.



Clicking a tab switches to Archive mode, displaying the results of the relevant search on the timeline (the process is similar to viewing search results in Archive Analysis mode).



The standard Archive mode controls are used for navigating between search results (see [Navigating in the Archive](#)).



Note

To search in standard archive mode without displaying search results, click the corresponding tab in the viewing tile.

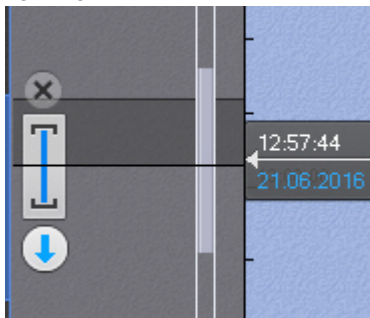
The parameters for the search are displayed when switching from search results to Archive Analysis mode.

Manual Archive Replication

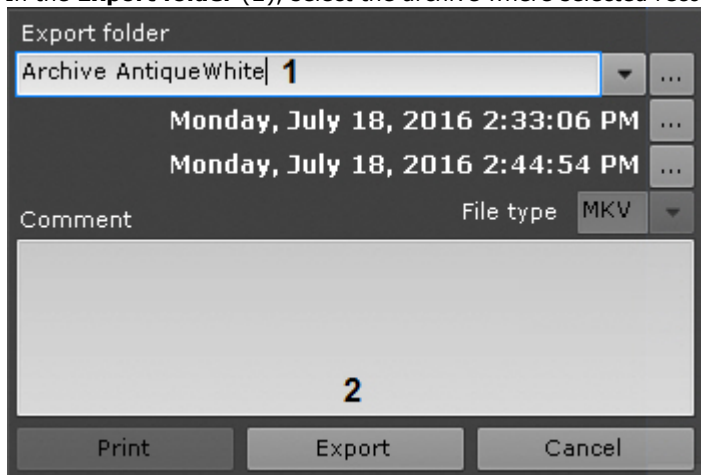
Rus

You can protect selected video recordings from being overwritten. To do this:

1. Create a new archive (see [Creating Archive](#)) and configure on-demand replication for it (see [Configuring data replication](#)).
2. Switch to Archive Mode (see [Switching to Archive Mode](#)).
3. Set the time interval on the timeline (see [Standard video export](#)). Recordings from this range will be copied to the new file.



4. Click the button .
5. In the **Export folder** (1), select the archive where selected recordings will be copied.



Attention!

You can replicate recorded video only to the "right" end (later point in time) of the archive. It is not possible to overwrite existing data in the archive.

If the selected replication range starts and ends earlier than the starting time of the mirror archive (e.g. you want to copy a hour of video footage from 9 a.m. to 10 a.m., but the mirror archive starts at 11.a.m.), replication will not be possible (the **Export** button is not available).

6. Click the **Export** button (2).

Selected recordings have now been copied to the specified file.

Video surveillance in Alarm Management mode

Video surveillance functions available in Alarm Management mode

Rus

The following video surveillance functions are available in Alarm Management mode:

1. Forwarding and reversing playback of an alarm at various speeds.
2. Evaluating alarms (assigning a status).
3. [Functions Available in All Video Surveillance Modes.](#)

Switch to Alarm Management mode

Rus

When an alarm is initiated, the system switches to alarm mode automatically at the moment the event is accepted for processing. Operator can escape the Alarm management mode. To return a viewing tile from a different surveillance mode

to Alarm Management mode, in the lower-left corner of the tile, click the  button.



The viewing tile will then appear in **Alarm Management** mode.

If there are multiple alarms for a camera, Alarm Management mode will open to the most recent alarm.

Initiating an Alarm

Rus

A system alarm can be initiated in one of two ways:

1. Manually (by an operator)
2. Automatically (when a detection tool is triggered is triggered)



Note

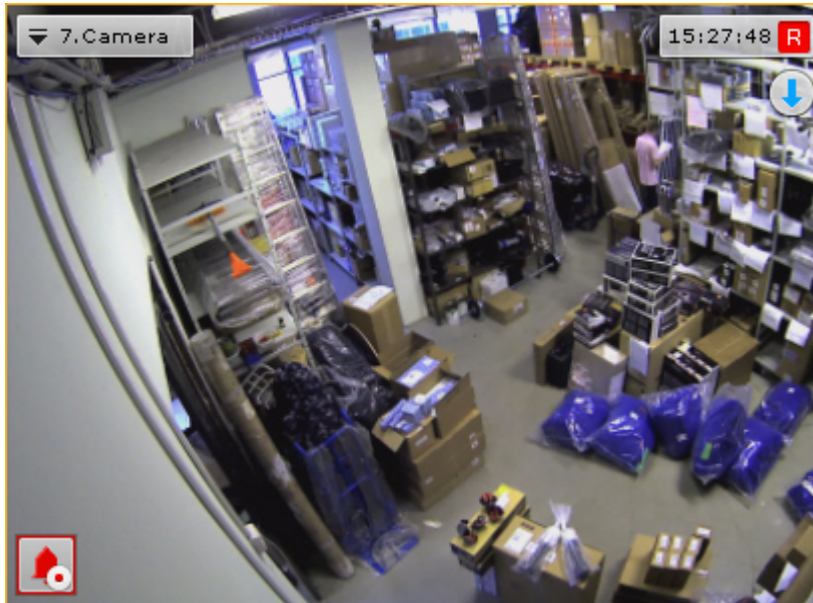
You can initiate an alarm only if the specific video camera is linked to the archive.

Manual Initiation

Rus

To initiate an alarm manually, you must perform the following steps:

1. In the lower-left corner of the viewing tile, click the  button.



- The operation will trigger an alarm that appears on Alarms Panel (see [Alarms Panel](#)). To classify an alarm, click the

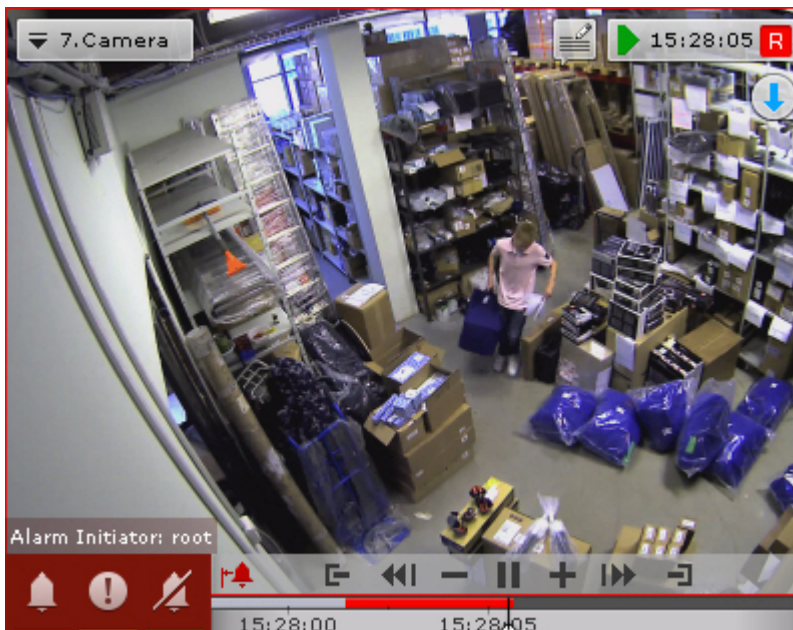


button again.



Note

When in Alarm Management mode, the user that initiated the alarm will be indicated at the bottom of the viewing tile.



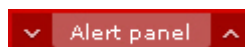
Manual initiation of an alarm is now complete.

Automatic Initiation

Rus

Automatic rules or macros can be configured to initiate an alarm (see the section titled [Trigger an alarm](#)).

If an alarm is initiated automatically, the **Alarms Panel** tab is color-coded



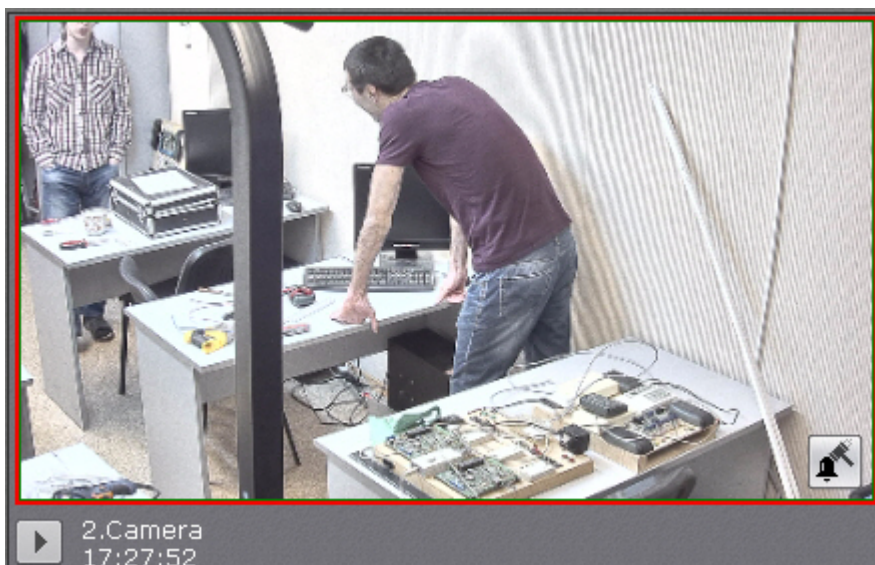
To evaluate the situation, click the Alarms Panel tab, select the event and classify it in Alarms Management (see the section titled [Selecting Events for Alarm Management](#)).

Working with Alarms Panel

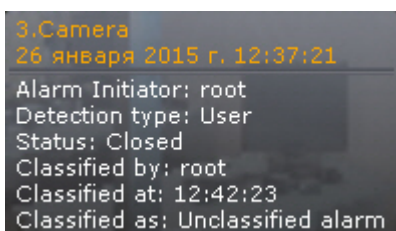
Viewing Alarms in Event Preview

Rus

Each alert / alarm event is displayed on Alarms Panel as follows: Each Event Preview tile shows a thumbnail with the first frame of video footage for the relevant event; an icon that reflects the cause / trigger of detection; the playback button; time stamp of the event and camera ID.



When you hover over the Event Preview tile, all information about the alarm pops up.



If you click the  button, the event footage / alarm recording will then be played back in Event Preview in a repeating cycle. To stop playback, click the  button.

Outlining Objects that Triggered Detection

Rus

In the Event Preview tile, you can outline objects that triggered detection / an alarm. To do so, click the  button. The object is outlined only if the alarm was initiated by detection tools.

To undo object outlining, click the  button again.

Selecting Events for Alarm Management

Rus

When you click the Event Preview tile, a layout opens that has the relevant camera's view. The layout is selected automatically with the following algorithm:

1. The system searches for layouts that contain the alarmed camera. The user must have permissions to view it.
2. The system chooses the layout with the minimum number of cells to display the selected video camera.
3. If the required layout does not yet exist, the system creates a new layout with a single video camera.
4. The system switches to the selected layout.
5. The video camera becomes active in the selected layout. The viewing tile is expanded by one level. It switches to the Alarm Management mode. (if you have selected an active alarm) or to the Archive mode. (if you have selected a processed / classified alarm or missed / unclassified).

Working with the Alarm Management window

Alarm Handling Tile Interface Elements

Rus

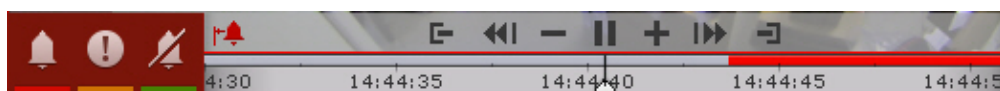
The alarm handling tile is a viewing tile which, besides the standard interface elements (context menu, time indicator, etc.), also contains elements for alarm playback and evaluation:

1. Playback panel
2. Timeline
3. A button for quick positioning of the timeline indicator in the position corresponding to the beginning of the alarm.

Alarm Playback

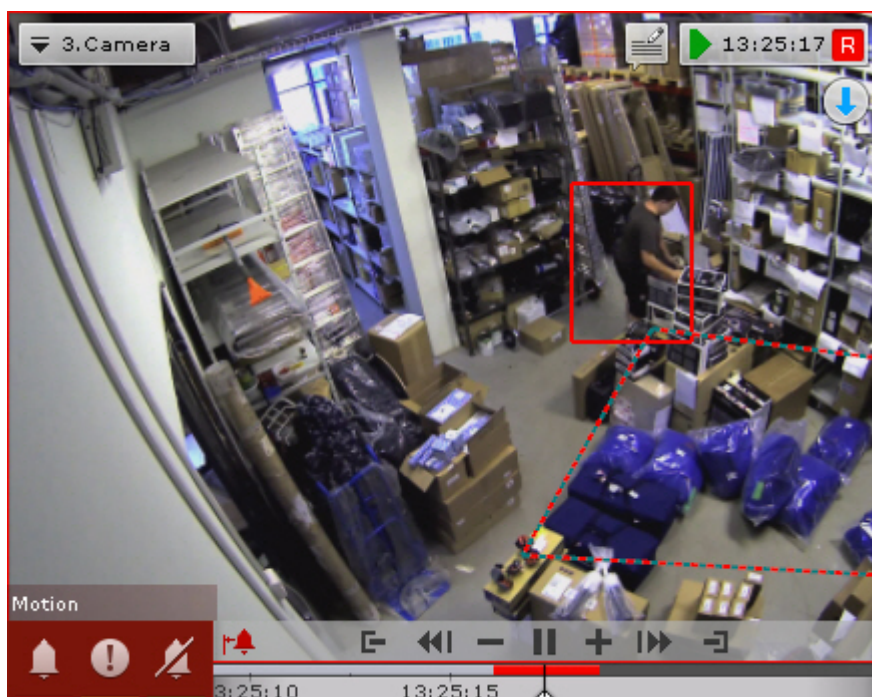
Rus

As soon as an alarm is accepted for evaluation, the alarm recording is played back automatically one time, at 1X speed. Playback is launched either from the moment of the beginning of the alarm, or from the moment corresponding to the position of the alarm flag (only when the alarm is initiated automatically; see the section [Trigger an alarm](#)).



If the alarm was initiated automatically, the visual element set for the detection tool which initiated the alarm will be displayed in the viewing tile: or a detection area or virtual tripwire, which triggers the detection tool when it is crossed. The object which caused the trigger will be outlined with a red frame.

Display of an Area visual element:



Display of a Line visual element:



The name of the detection unit that initiated the alarm is displayed in the lower portion of the viewing tile.

To navigate the fragment of an alarm event, use the Advanced Archive Navigation Panel (see [Navigation using the advanced panel](#)) or the Playback Panel (see [Navigating Using the Playback Panel](#)).

To switch to a required fragment of an alarm event in order to play it again, hold the timeline pointer with the left mouse button and drag it to the required position.

To go to the beginning of the alarm event, click .

Processing an Alarm

Rus

To process an alarm, use the group of colored buttons in the lower left-hand corner of the Alarm Management tile. After processing of the alarm, the viewing tile on the given client automatically switches to Live Video mode. The alarm is no longer in the **Alarms** tab.



Attention!

In the case of multi-user event processing, only the first operator to switch to alarm mode may process the alarm (if he or she has the appropriate permissions). For the rest of the operators, the Alarm Management buttons are not displayed.



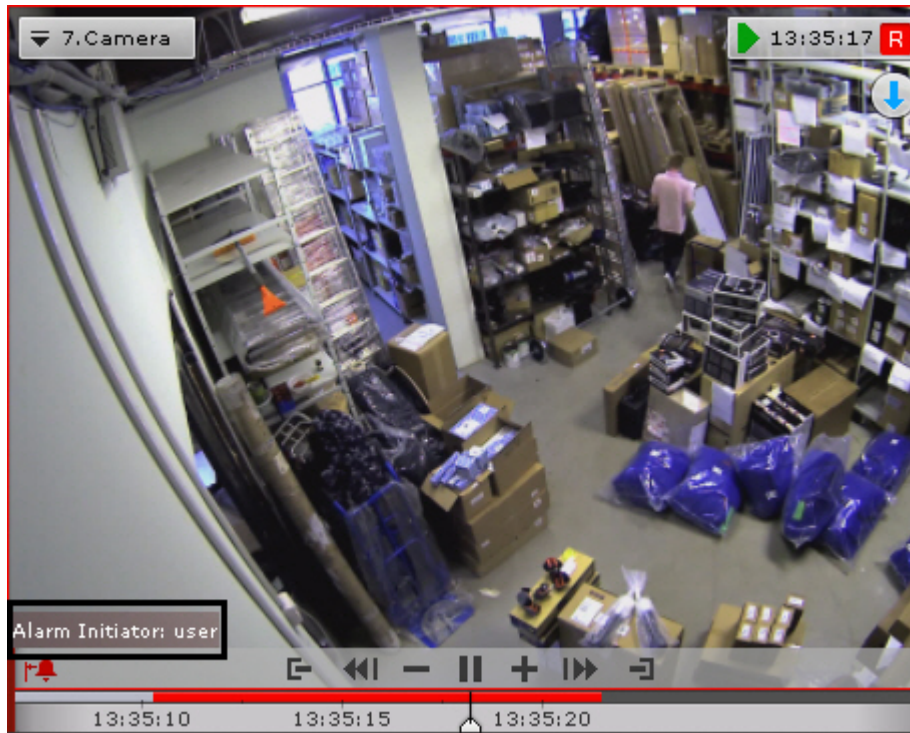
Button	Executed function
	Confirmed alarm
	Suspicious alarm
	False alarm

Limitations when working with alarm events in case of multi-user processing

Rus

In the case of multi-user processing, only one operator may accept an alarm for processing. Other operators may switch to alarm mode with limited functions for the purpose of playing back the alarm. This can be done in one of two ways:

1. Click the  button (see the section [Video surveillance in Alarm Management mode](#)).
2. Switch to the **Alarms** tab and select the alarm from the alarms list.



In Alarm Management mode with limited functions, the Alarm Management buttons are not displayed. Instead, the name of the operator who is currently processing the alarm is displayed. The other functions of the alarm handling tile remain unchanged.

After processing of the alarm on another client, on the given client the status assigned to the alarm is displayed in place of the name of the operator.

If a user has accepted an alarm for processing and leaves Alarm Management mode (going to Live Video mode, Archive or Archive Search mode, the viewing tile for another camera, etc.), after an amount of time equal to the operator's idle time after leaving, other users will also have the opportunity to accept the alarm for processing.

If more than one alarm appears for one camera, any operator may access all alarms not yet accepted for processing.

Video surveillance in Archive Search mode

Switching to Archive Search mode

Rus

To switch the viewing tile from a different surveillance mode to archive analysis mode, switch to the  tab in the lower-right corner of the tile.



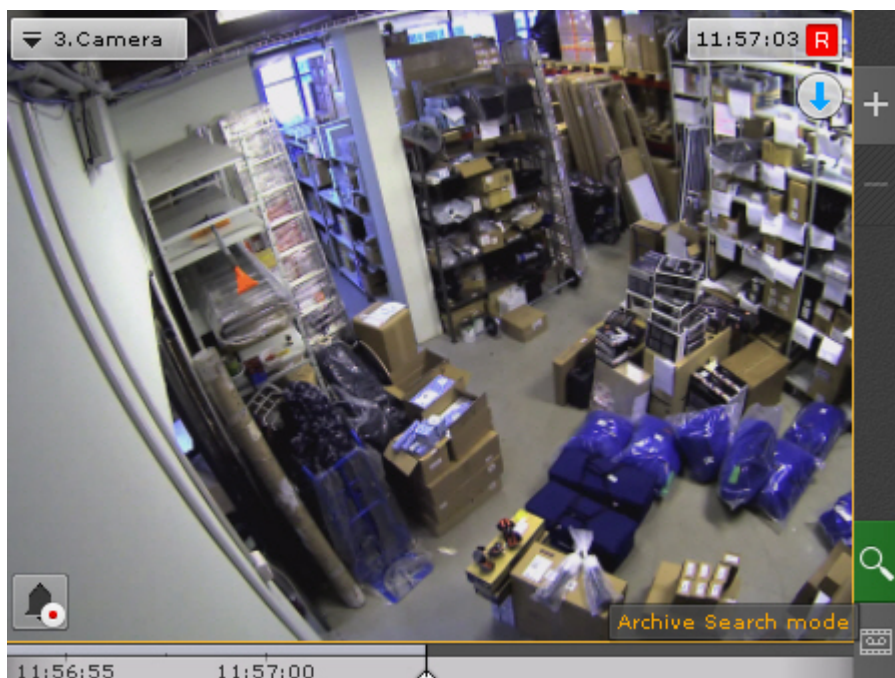
Note

If the video camera is not linked to a video archive, this tab will be unavailable.

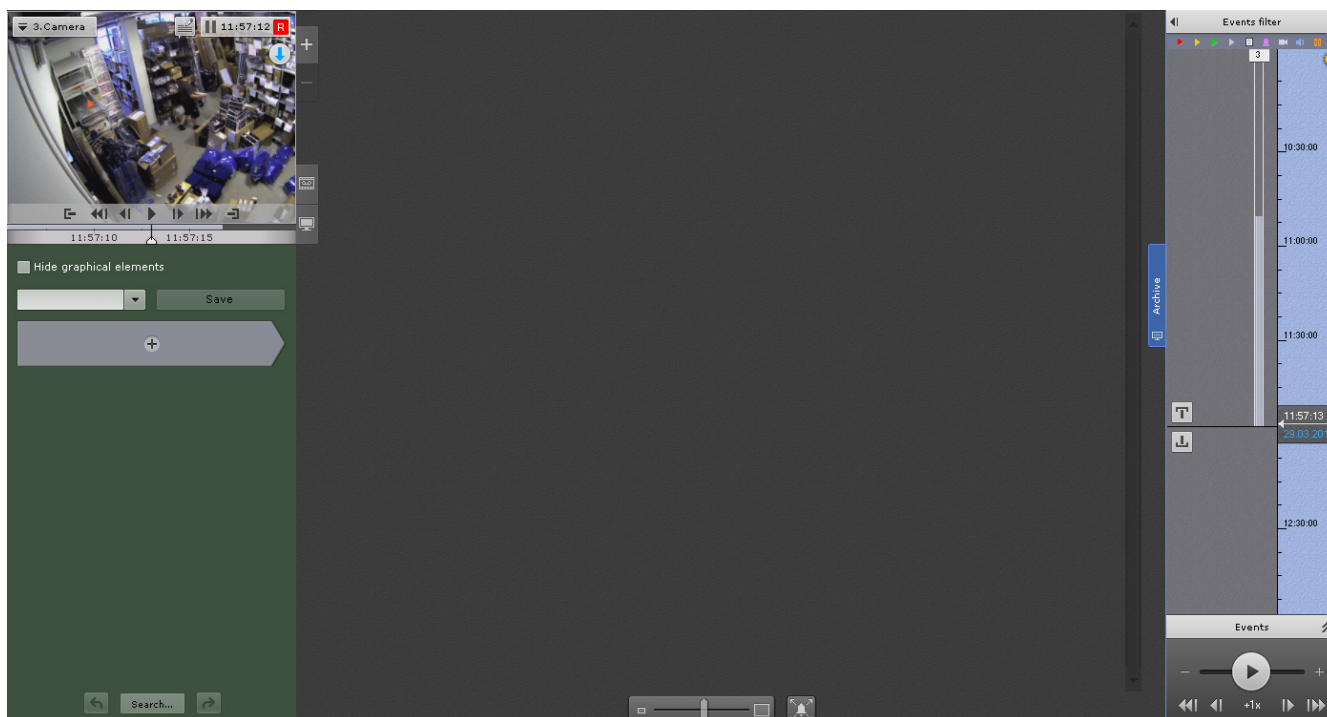


Note

In Live Video mode, if the viewing tile is not active, the tabs for switching to other modes are not displayed. To display the tabs, click the viewing tile by using either button of the mouse.



The archive analysis interface will then appear.

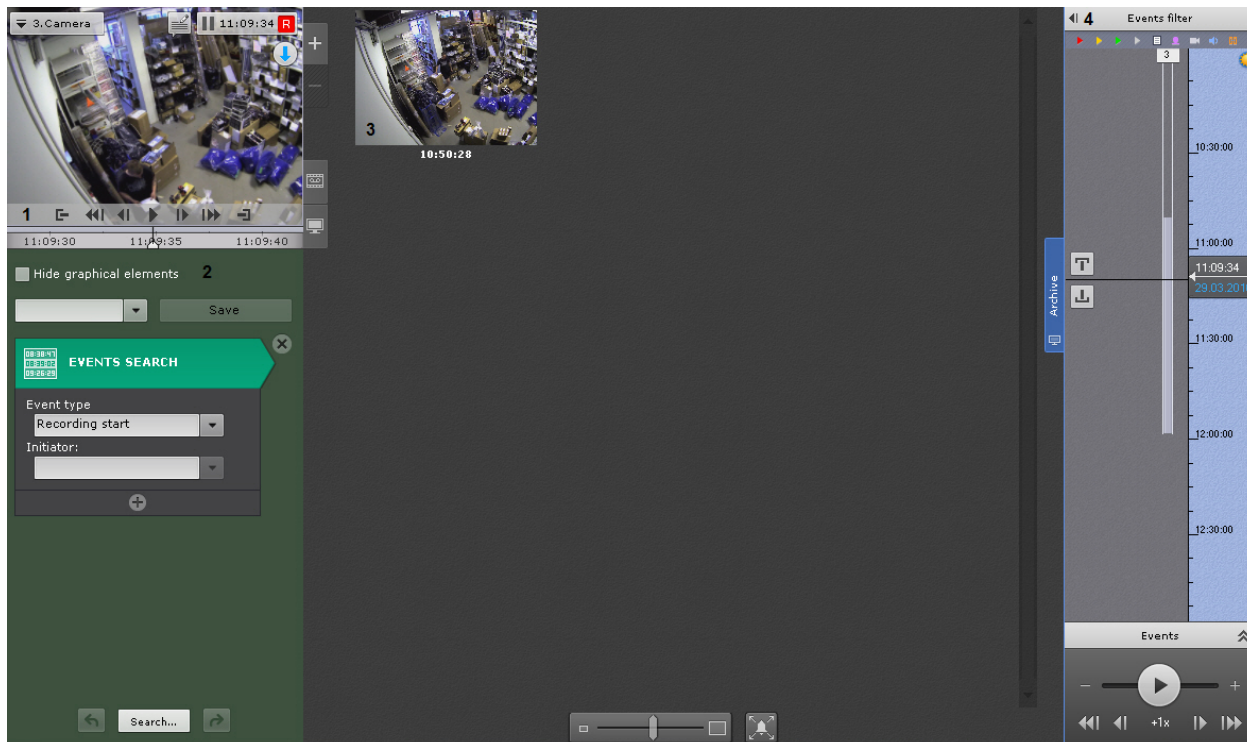


Archive Search mode interface

Rus

The visual layout of Archive Search mode is divided into the following 4 components:

1. Viewing tile (**1**, see [Viewing Tile](#))



2. Search control panel (2, see [Search in an archive of a single video camera](#))
3. Search results panel (3, see [Viewing search results](#))
4. archive navigation panel (4, see [The Archive Navigation Panel](#))

Video surveillance functions available in Archive Search mode

Rus

In Archive Search mode, the following video surveillance functions are available:

1. Selecting an archive for video recording analysis.
2. Autozoom.
3. Navigating through the archive.
4. Display of the causes of triggered situation analysis detection units.
5. Viewing recorded video with operator comments.
6. Events search.
7. Forensic search.
8. Time search.
9. Searching comments.
10. Switching between search results.
11. Playing back fragments retrieved by searches of specific moments in time.
12. Zooming in on objects that trigger detection tools.
13. [Functions Available in All Video Surveillance Modes.](#)



Note

The functions for navigating through an archive, displaying the causes of situation analysis detection unit triggering, and **Archive Selection** were inherited from archive mode; their descriptions are [Video surveillance in archive mode](#). The Autozoom function is described in the [Real-time video surveillance](#) section.

Search in an archive of a single video camera

Selecting the search type

Rus

To start a search, click  and choose the search type.

Events Search	
Line crossing	Metadata search
Motion in area	Metadata search
Loitering	Metadata search
Multiple objects	Metadata search
Move from area to area	Metadata search
Thumbnail Search	
Comments Search	
Search by titles	
Search by LPs	
Face Search	

Note

The current *Axxon Next* suite release supports only search of a single type at one time.

Setting a search interval

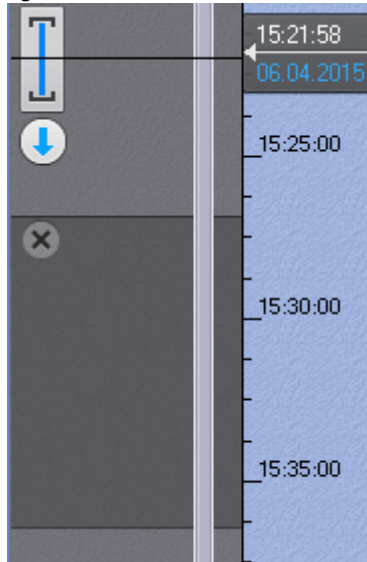
Rus

Setting a search interval follows the same procedure for all types of archive search.

By default, the search spans across video footage / archive tracks currently displayed on the timeline (see [Navigating Using the Timeline](#)).

You can specify the search span in one of the following 2 methods:

1. right click and select on the timeline,



Note

To delete the search span, click the  button.

2. enter the time on the search control panel.

Hide graphical elements

Save

Search range: 02.09.2016 15:27 ...

☒ Whole arch... 02.09.2016 18:27 ...

To search the entire video archive, do as follows: select the **Whole archive** checkbox.

Events search

Rus

This type of search lets you select events in the archive based on the type of event.

To do this, complete the following steps:

1. Choose the type of events to search for moments (1).

08:38:47
08:39:02
08:26:29

EVENTS SEARCH

Event type
Recording start **1**

Initiator:
2

+

Event	Description
All alarms	The search finds moments in the archive containing all types of alarms
Non-critical alarm	The search finds moments in the archive containing non-critical alarms
Critical alarm	The search finds moments in the archive containing critical alarms
Unclassified alarm	The search finds moments in the archive containing unclassified alarms
False alarm	The search finds moments in the archive containing false alarms
Triggering	The search finds moments when detection units were triggered
Recording start	The search finds the beginning and end of recordings from the specified video camera regardless of the initiator

2. Select an event initiator from a list with the same name (2).



Note

An event initiator could be an operator, a video camera sensor, or any detection unit that is activated in the system. The search results will show the moments in time containing the events that were triggered by the initiator.

3. If necessary, click **+** and add more similar search conditions.
4. Set the search interval (see [Setting a search interval](#)).
5. Click the **Search** button.

This starts a search in the archive based on the defined criteria. Search results are available on the search results panel.



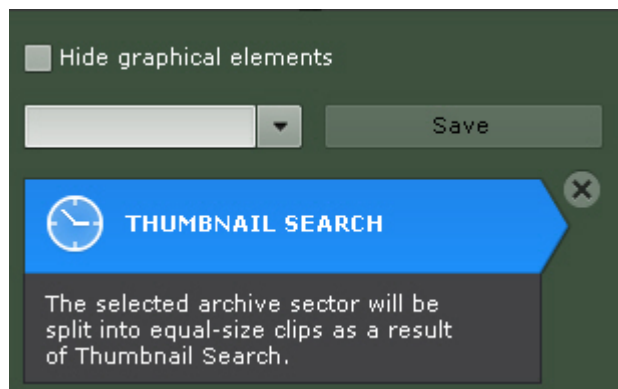
Note

To zoom objects that caused an alarm or triggered a detection unit, select the **Expand alarm object** check box in the lower portion of the search results panel.

Time search for video fragments (TimeSlice)

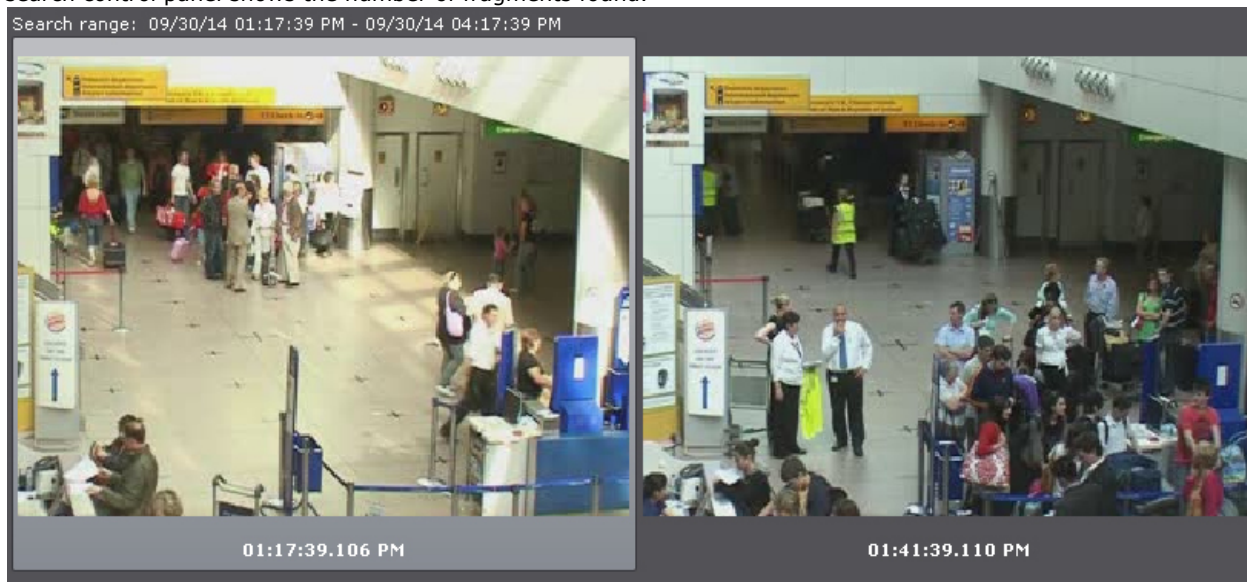
Rus

The search of fragments by time is meant for quick search of moment of interest by dividing a selected time period into equally sized fragments.



Search by time is performed using the following algorithm:

1. [Setting a search interval](#).
2. Start the first search iteration (click the **Search** button).
The search results panel displays frames that match moments in time that are equally spaced from each other; the search control panel shows the number of fragments found.



3. If the specific moment is not found, then start the second search iteration: double-clicking on the found moment triggers the search in the time interval from this moment to the next one.
4. Keep searching until the specific moment is found.



Note

Information on playback of video fragments is provided in the section titled [Playback of video fragments](#)

Searching comments

Rus

Comments search allows filtering for comments that contain certain text.

To search comments:

1. Set the search interval (see [Setting a search interval](#)).
2. Enter the text that you want to find in comments.



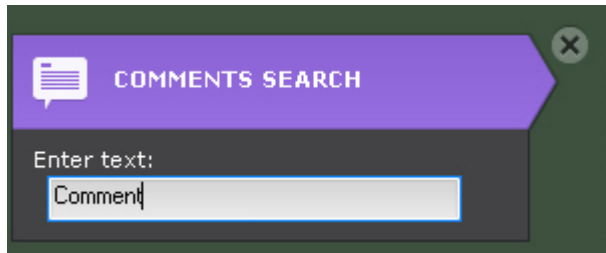
Attention

Search is performed for the entire string of entered text, not for separate words.



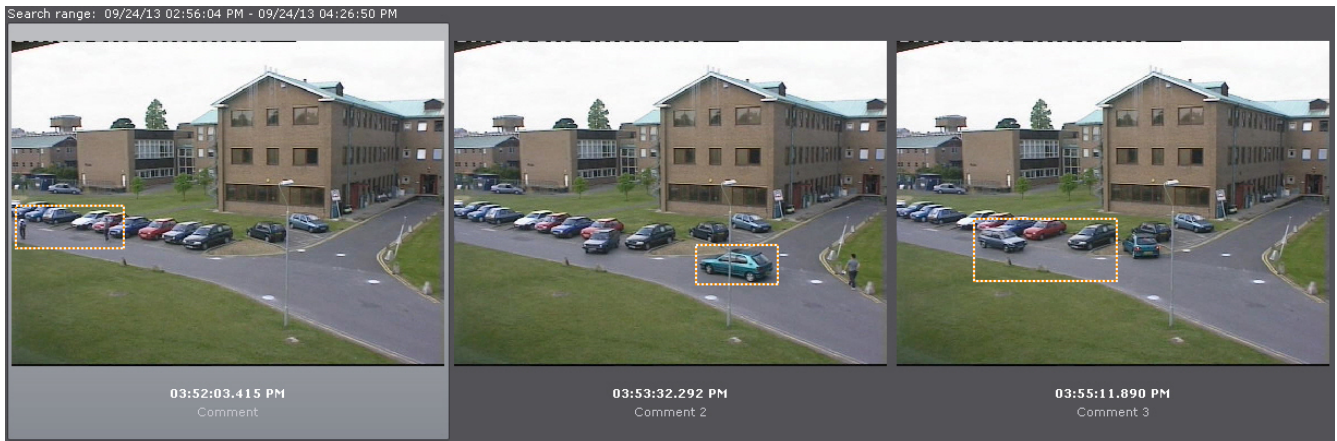
Note

If no text is specified, all comments for the selected interval are found.



3. Click the **Search** button.

This starts a search for video fragments based on the defined criteria. The search results pane displays frames for which there are comments containing the search text. The relevant comment is displayed under each frame.



Note

If the comment was left for an interval, the first frame of the interval is displayed.

Forensic Search for Fragments (MomentQuest)

Rus

Forensic Search lets you search for moments in the archive using the following criteria:

1. Motion in Area.
2. Loitering of an object in a specific area.
3. Simultaneous presence of a large number of objects in a specific area.
4. Crossing of a virtual line by an object's trajectory.
5. Motion from one area to another.

Motion in Area

Rus

To perform forensic search for motion in area:

1. In the Viewing Tile, define the area to be analyzed during search in accordance with the selected condition.

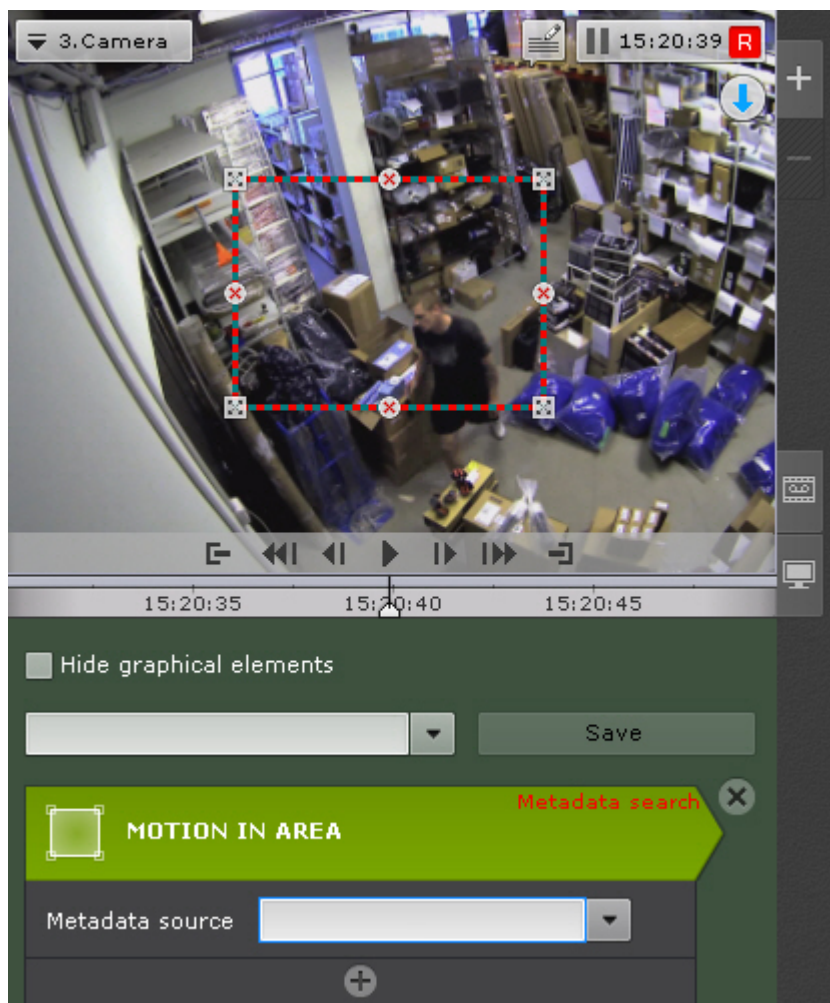
The nodes of an area are connected by a two-colored dotted line.

By default, an area is defined by 4 nodes with the coordinates (30%, 30%), (70%, 30%), (70%, 70%) and (30%, 70%) as percentages of the width and height of the frame, respectively.



Note

You can collapse the graphical elements if they block the visual elements and prevent editing them. To hide them, select the **Hide graphical elements** check box.



To edit an area, use the following actions.

Action	Result
Right-click on a line	Creates a new area node
Right-click on a created node	Deletes the area node
Position the cursor on a node and hold down the left mouse button while you move the mouse	Moves the area node

2. Select the metadata source if there are several for this video camera. This parameter will not be displayed if there is only one source.
3. Specify any number of additional parameters by clicking , if necessary (see [Configure the search parameters](#)).
4. Set the search interval (see [Setting a search interval](#)).
5. Click the **Search** button.

The found moments will be displayed in the search results panel.

Loitering of an object in a specific area

Rus

To search for moments of an object loitering in an area:

1. In the Viewing Tile, define the area to be analyzed during search in accordance with the selected condition (see [Motion in Area](#)).
2. Select the metadata source if there are several for this video camera (**1**). This parameter will not be displayed if there is only one source.

3. Set the minimum duration of stay in the area (**2**, in seconds and minutes). Search results contain recorded video in which the object is present in the area for longer than the indicated time.
4. Specify any number of additional parameters by clicking , if necessary (see [Configure the search parameters](#)).
5. Set the search interval (see [Setting a search interval](#)).
6. Click the **Search** button.

The found moments will be displayed in the search results panel.

Simultaneous presence of a large number of objects in a specific area

Rus

To search for moments when objects gather in an area:

1. In the Viewing Tile, define the area to be analyzed during search in accordance with the selected condition (see [Motion in Area](#)).
2. Select the metadata source if there are several for this video camera (**1**). This parameter will not be displayed if there is only one source.

3. Specify the number of objects allowed in the area (**2**). Search results contain recorded video in which the number of objects in the area exceeds the specified number.
4. Specify any number of additional parameters by clicking , if necessary (see [Configure the search parameters](#)).
5. Set the search interval (see [Setting a search interval](#)).
6. Click the **Search** button.

The found moments will be displayed in the search results panel.

Motion from one area to another

Rus

To search for moments when the object moves from one area to another:

1. Set two areas in the Viewing Tile: the area the object moves from and the one it moves to.

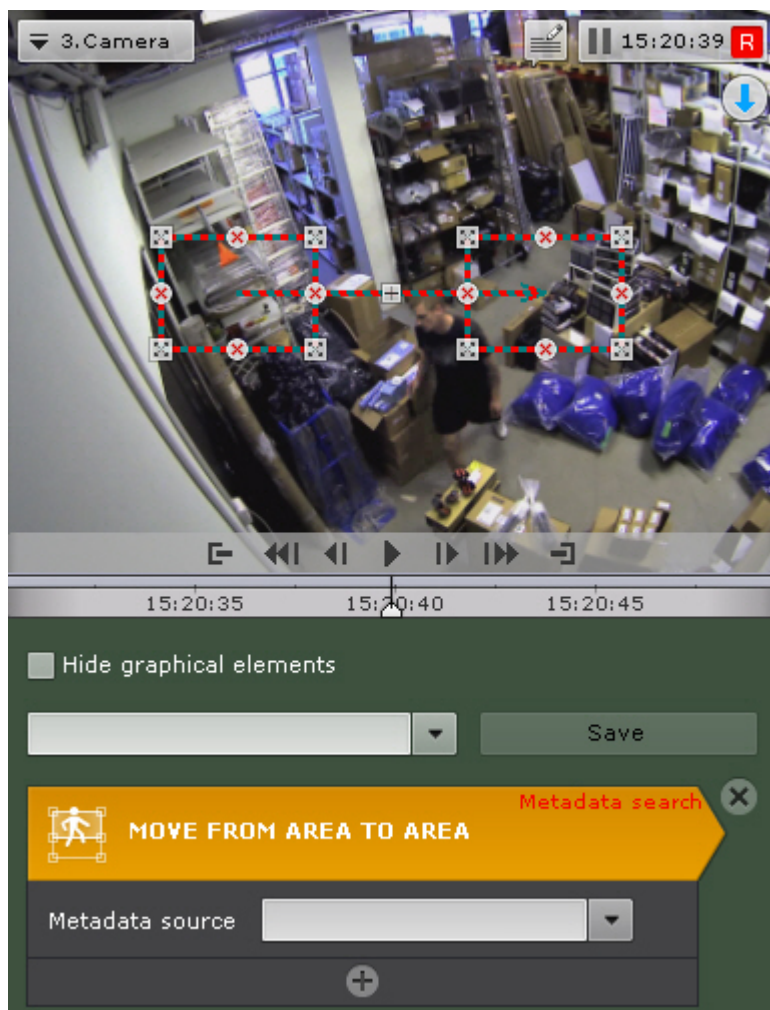
The nodes of each area are connected by a two-colored dotted line. The direction of motion between the areas is indicated by a dotted arrow.

By default, each area is defined by 4 nodes. The nodes of the first area have the coordinates (20%, 40%), (40%, 40%), (40%, 60%), (20%, 60%), and those of the second have the coordinates (60%, 40%), (80%, 40%), (80%, 60%), (60%, 60%) as percentages of the width and height of the frame, respectively.



Note

You can collapse the graphical elements if they block the visual elements and prevent editing them. To hide them, select the **Hide graphical elements** check box.



Area editing operations are described in the [Motion in Area](#) section.

To change the direction of motion between the areas, click the  button on the direction arrow.

2. Select the metadata source if there are several for this video camera. This parameter will not be displayed if there is only one source.
3. Specify any number of additional parameters by clicking , if necessary (see [Configure the search parameters](#)).
4. Set the search interval (see [Setting a search interval](#)).
5. Click the **Search** button.

The found moments will be displayed in the search results panel.

Crossing of a virtual line by an object's trajectory

Rus

To search for moments when the object crosses a virtual line:

1. Set the virtual line to be crossed in the Viewing Tile.

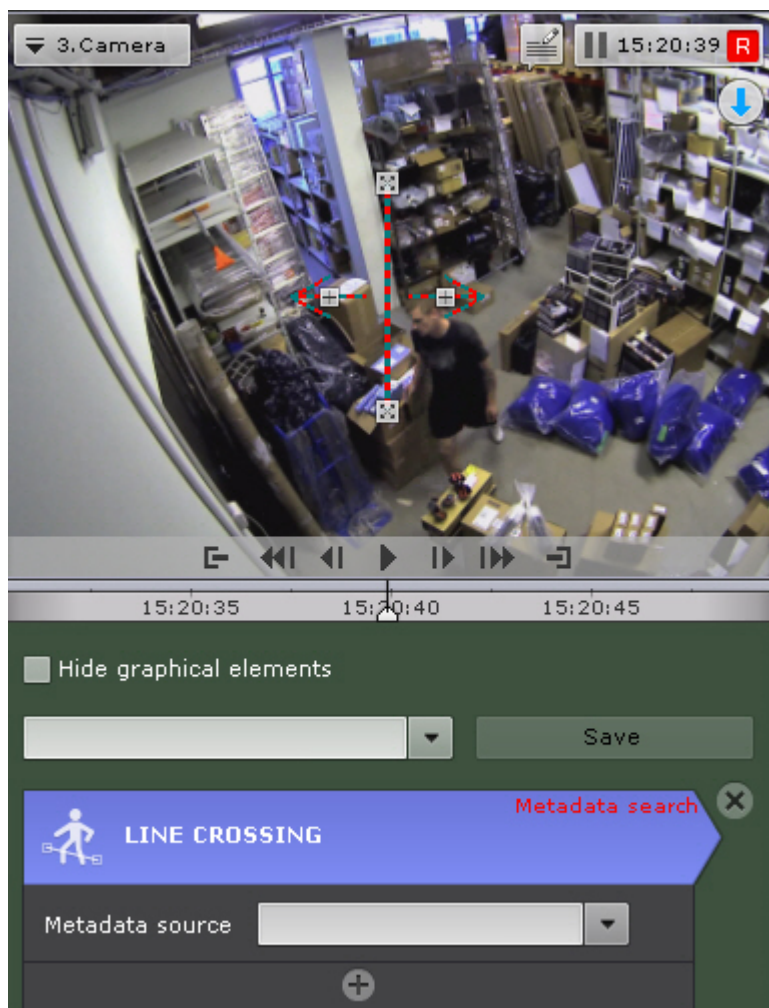
The end points of the line are connected by a two-colored dotted line. The direction of the object's motion across the line is indicated by dotted arrows.

By default, the end points of the line have the coordinates (50%, 30%) and (50%, 70%) as percentages of the width and height of the frame, respectively.



Note

You can collapse the graphical elements if they block the visual elements and prevent editing them. To hide them, select the **Hide graphical elements** check box.



To move the end point of a line, position the cursor on the end point and hold down the left mouse button as you move the mouse.

By default, both directions of motion across the virtual line are taken into account when searching the archive. If you do not need to search in a specific direction, click the button corresponding to that direction.



Attention!

At least one direction must be selected for the search.



Note

A disregarded direction of object motion is indicated by a dimmed arrow.

2. Select the metadata source if there are several for this video camera. This parameter will not be displayed if there is only one source.
3. Specify any number of additional parameters by clicking , if necessary (see [Configure the search parameters](#)).
4. Set the search interval (see [Setting a search interval](#)).
5. Click the **Search** button.

Configure the search parameters

Rus

It is not required to specify parameters, but for more precise results, it is possible to set one or more parameters for each criterion:

The search criteria	Possible parameters
---------------------	---------------------

Motion in Area	Direction of movement Maximum and minimum object size Maximum and minimum object speed Object color Object type Entry/exit from area
Loitering in area	Maximum and minimum object size Object color Object type
Many objects in area	Maximum and minimum object size Object color Object type
Object trajectory crossing a virtual line Motion from area to area	Maximum and minimum object size Maximum and minimum object speed Object color Object type

Configuring minimum and maximum object size

Rus

The procedures for setting the minimum and maximum size of a moving object are identical.

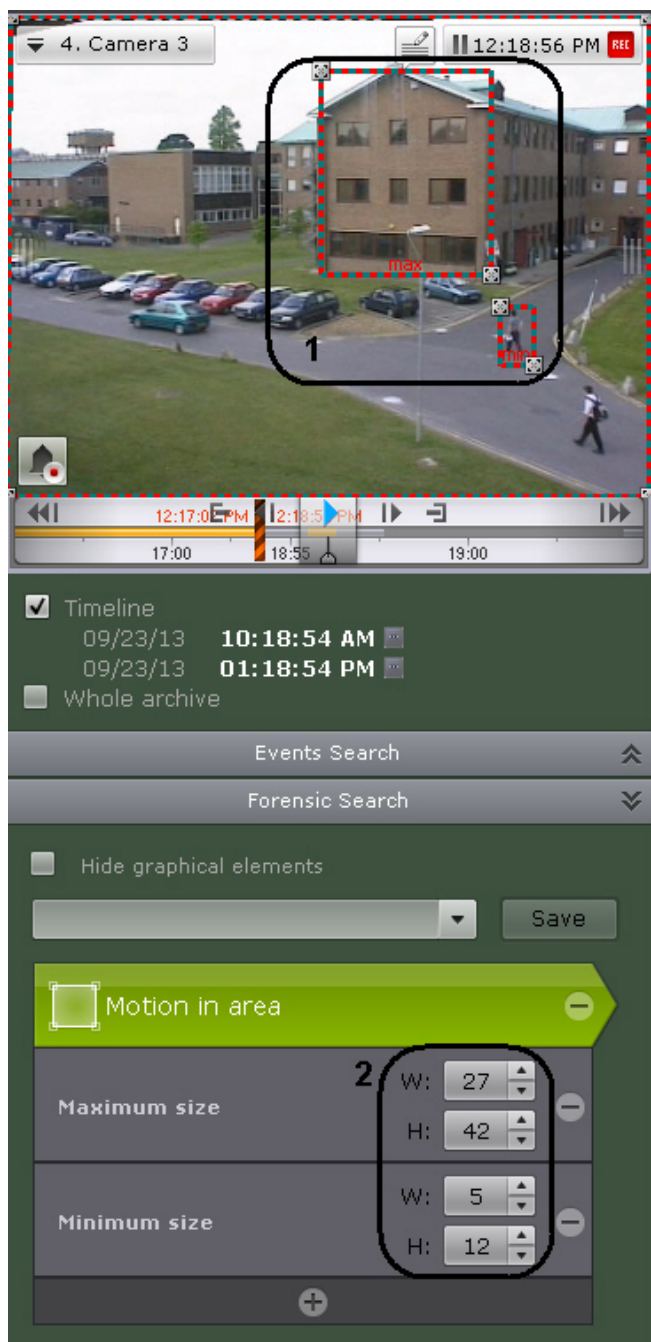
The minimum (or maximum) size of a moving object can be set using any of the following methods:



Note

The first method lets you roughly configure the size, and the second method allows you to set the size precisely.

1. Position the cursor on a visual element node and hold down the left mouse button while moving the mouse (**1**).



2. Set the width and height of an object of the minimum (maximum) size using the arrows in the upper and lower margins, respectively. The dimensions of a visual element in the viewing tile can be changed in a similar manner (2).

The minimum (maximum) size of an object is now set.

Configuring minimum and maximum object speed

Rus

The procedures for setting the minimum and maximum speed of a moving object are identical.

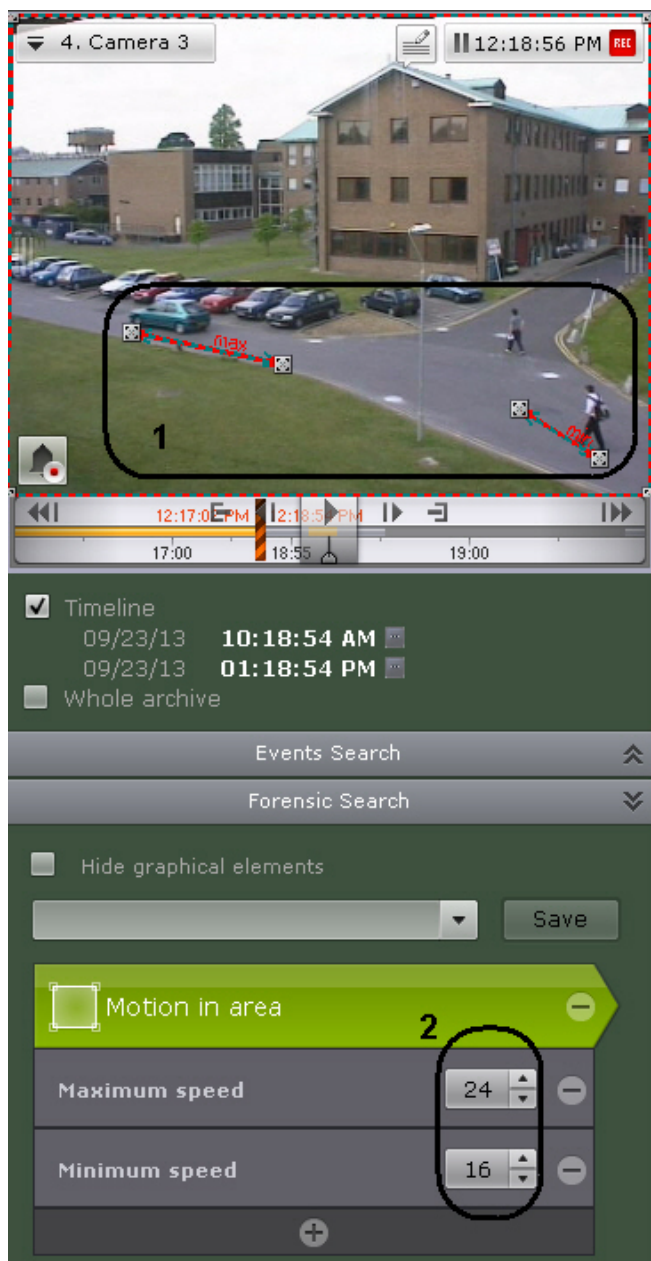
The minimum (or maximum) speed of a moving object can be set using any of the following methods:



Note

The first method lets you roughly configure the speed, and the second method allows you to set the speed precisely.

1. Position the cursor on an end point of the arrow and hold down either mouse button while you move the mouse. The length of the arrow will correspond to the minimum (maximum) displacement of the object per second (1).



2. Use the arrows to set the minimum (maximum) speed of the object as percentages of the frame per second. The dimensions of the arrow in the viewing tile can be changed in a similar manner (2).

The minimum (maximum) speed of a moving object is now set.

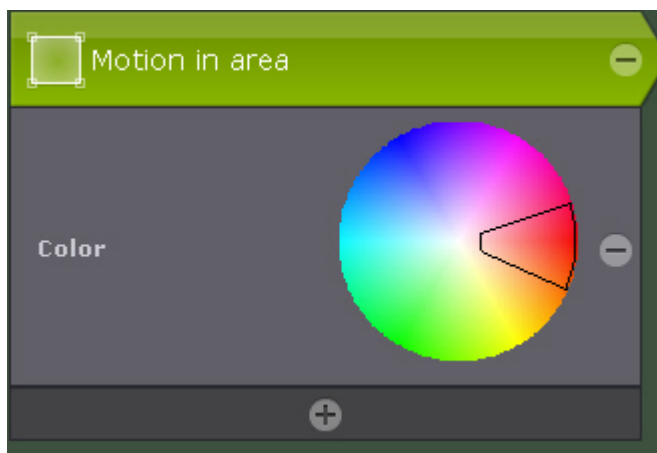
The following objects will be included in the search results:

- If you set only the maximum speed - the objects that move slower, than the maximum speed.
- If only the minimum speed is specified - the objects that move faster than the minimum speed.
- If both the maximum and the minimum speed are specified - the objects whose speed does not exceed the maximum, but is more than the minimum speed.

Configuring object color

Rus

The color range is selected using drag and drop on the color palette (click and hold either mouse button, move the mouse, then release the button).



Attention!

Any click on the palette is interpreted as the beginning of a new range; the previous range will disappear.

Configuring direction of object movement

Rus

By default, when searching the archive, the system searches for motion in all directions. It is possible to prevent searching for motion in one or several specific directions.

Click with either mouse button to designate a direction in which you do not want to perform movement search (privacy mask). The sector corresponding to the direction is then colored gray. If necessary, repeat this action for other directions. To reactivate searches for a masked (gray) direction, click it again with either mouse button.



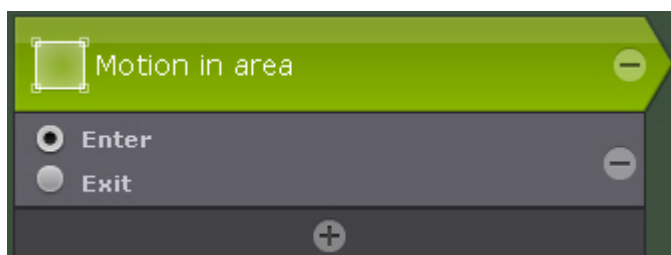
The required directions of an object's movement are now set.

Configuring object entry/exit from area

Rus

"Entry" occurs when an object enters the field of view and crosses its boundaries; "exit" occurs when an object disappears from the field of view and crosses its boundaries.

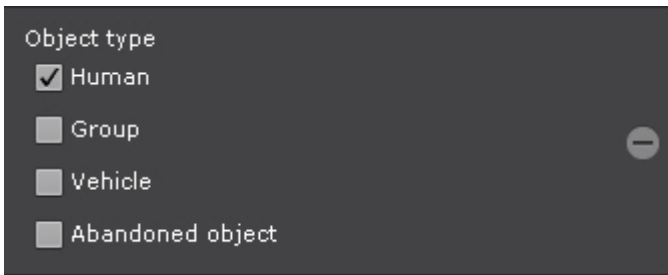
To find moments when an object enters an area, select **Enter**, or for moments when an object exits an area, select **Exit**.



Choosing the object type

Rus

You can search for moving objects of one or several types: a person, a group of people, a vehicle, or an item left behind. To do this, check the corresponding boxes.



Note

The object type is determined by analyzing its appearance. An item that does not move for some time is considered to be abandoned, e.g. a parked car.

Titles search

Rus

You can search for keywords in the titles DB.

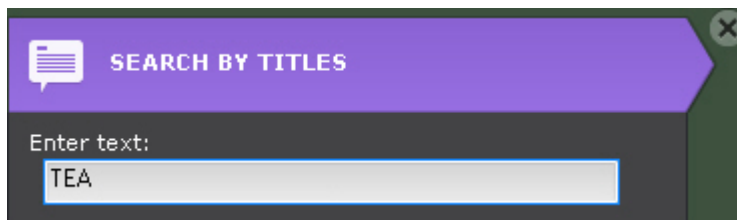
To search the titles DB, do as follows:

1. Set a time interval for your search (see [Setting a search interval](#)).
2. Enter the text that you want to find in the titles. You can search the whole word or part of it.



Attention!

Search is performed for the entire string of entered text, not for separate words.



3. Click the **Search** button.

This starts a search for video fragments based on the defined criteria. The search results pane displays frames for which there are titles containing the keywords.



Attention!

When you search for events, the event time corresponds to the start time of the receipt, rather than the time of occurrence of the search text.

LPR search

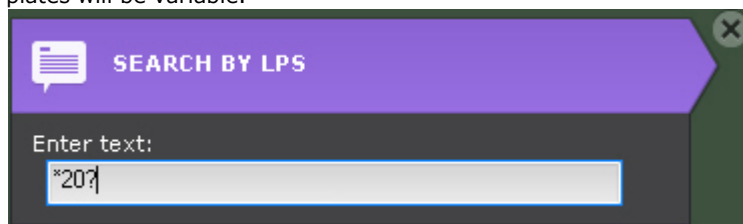
Rus

With LPR search you can find video footage for the recognized number plates.

To search recorded video for LPR results:

1. Set a time interval for your search (see [Setting a search interval](#)).
2. Enter the number plate. Fuzzy search supported if you enter the number with the ? mask for any one character, and the * mask for any number of characters) For example, a search query ?20* will show all vehicles with license

plate containing 2 and 0 in the second and third position respectively. The total number of characters in number plates will be variable.



3. Click the Search button.

This starts a search for video fragments based on the defined criteria. The search results pane displays frames for which there are number plates containing the search text.

A recognized number plate will be highlighted by a red frame in the Viewing Tile.



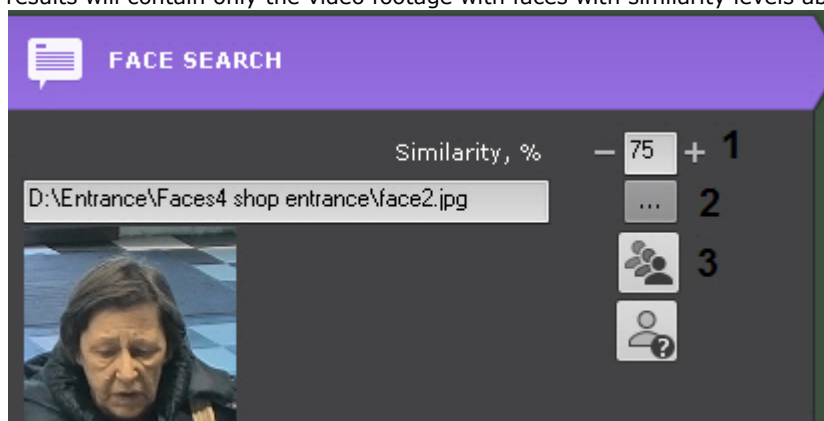
Face search

Rus

Face search allows to find faces similar to a given photo in an archive.

To perform face search:

1. Set the search interval (see [Setting a search interval](#)).
2. Set the minimum similarity level (in %) between the face in the photo and faces from the archive (1). The search results will contain only the video footage with faces with similarity levels above the set value.

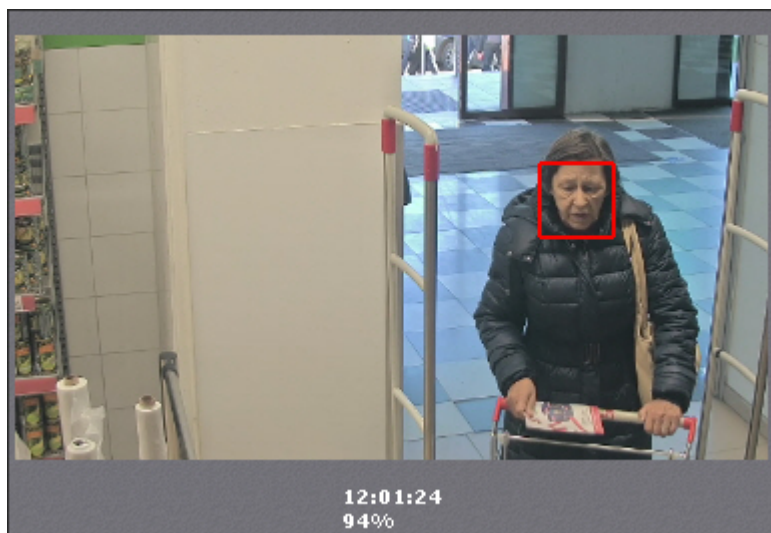


3. Select a photo with the face to be searched for in the archive (2). Supported formats: **png, jpg, jpeg, jpe**. Clicking on a face will select this face as a search parameter. If you do not select a photograph, the search will include all faces.

4. Select, how to sort search results:  - by the face match;  - by time (3).
5. Click the **Search** button.

This starts a search in the archive based on the defined criteria.

The video frames with faces satisfying search conditions will be displayed in the search results panel. A recognized face will be highlighted with a red frame, and the face similarity level(in %) will be shown below.

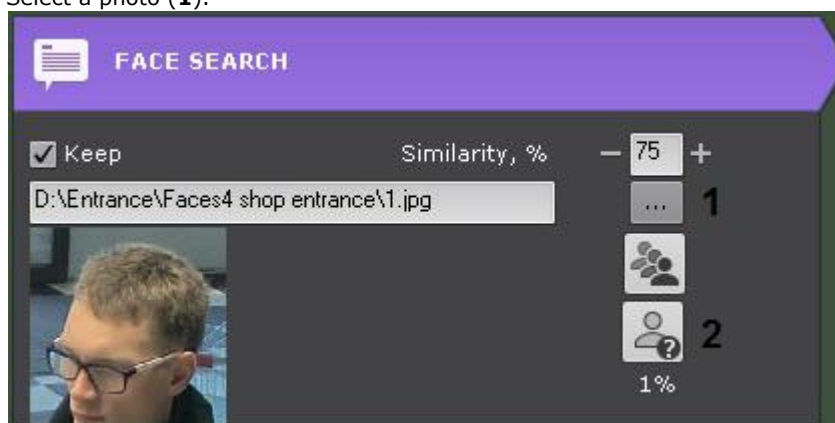


Tell "friend" from "foe" by a picture

Eng

To determine the "friend"-"foe" status, do as follows:

1. Select a photo (1).



2. Click the  button.

The Search bar (2) will display the probability that the person is a "stranger".

The algorithm is as follows:

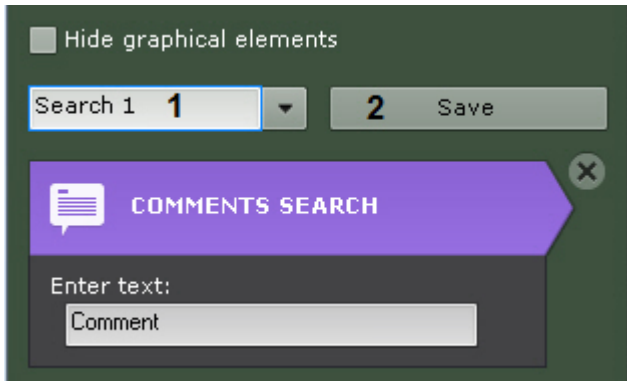
1. The person is compared to all the recognized persons in the last 30 days.
2. The number of days (N) in which the person was captured by camera and recognized is calculated.
3. The probability is calculated according to the formula $(1 - N/30) * 100$.

Saving search queries

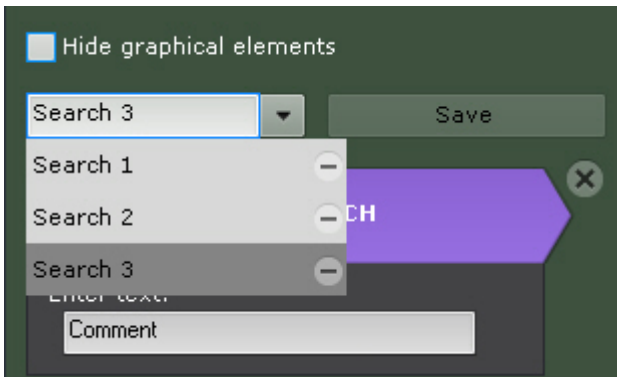
Rus

Saving a search query allows quickly switching to the results in Archive mode.

To save a search query, specify a name (1) and click the **Save** button (2). After this, the tab for the search query becomes available in the lower-right corner of the viewing tile in Archive mode (see [Viewing the results of a saved search query](#)).



To edit a search query, view the list and select the relevant query.



Changes are not saved until the **Save** button is clicked. If the query name is changed, the query is saved under the new name and the old, unchanged query remains available.

To delete a search query, click the  button.

Switching between search results

Rus

If a search was run more than once and the user did not exit Archive Search mode during that time, it is possible to switch between search results.



Note

The number of stored results is limited only by the amount of RAM in the server.

Click  on the search control panel to switch to the previous search result, and click  to switch to the next result.

Each time you switch between results, the search results panel displays the moments corresponding to the previous/next result.

Working with search results

Viewing search results

Rus

The Search Control Panel shows how many episodes are found when the search is complete.



The search results panel displays the precise moments in an archive that correspond to the defined search criteria. The precise time of each moment is displayed underneath (1).



A scroll bar is located on the right side of the search results panel (2). Beneath is a time scale adjuster (3).

If you choose a spot on the the timeline, the search results are automatically sorted. The closest episode will be highlighted in search results.

You can filter the search results and keep only the important episodes. To do this:

1. Double-click the episode, that you want to keep. Its thumbnail is tagged with a star .

 Note

To remove the tag, click the star again .

2. Tag all the episodes you want to keep.
3. Click **Clear** to delete untagged episodes from the search results.



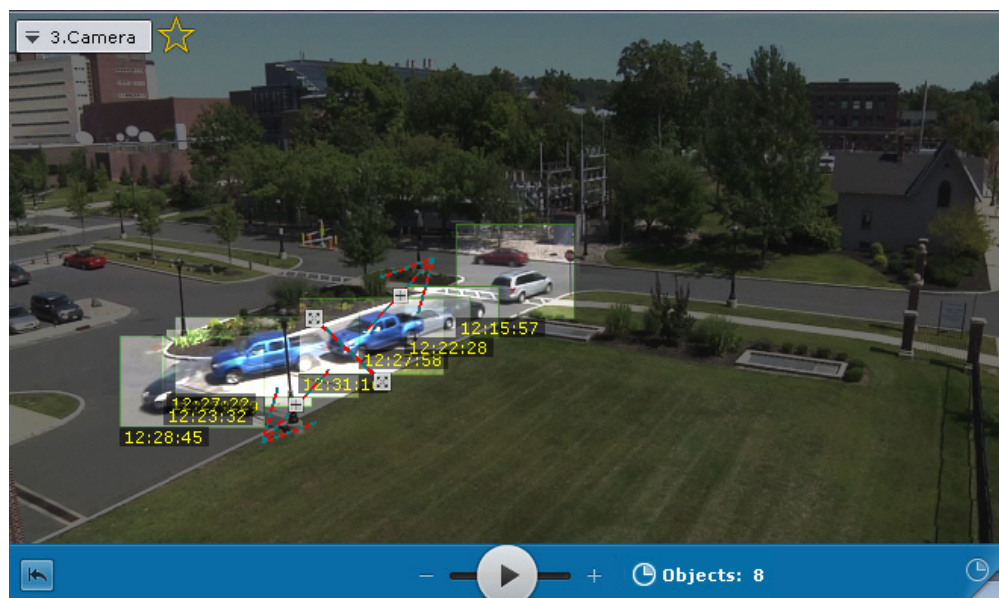
Viewing Search Results In TimeCompressor

Rus

When you search recorded video for motion events by metadata (LPR search, Face search, Forensic Search for Fragments (MomentQuest)), you can view results in the TimeCompressor mode.



To do this, click the button on the timeline in the camera window.

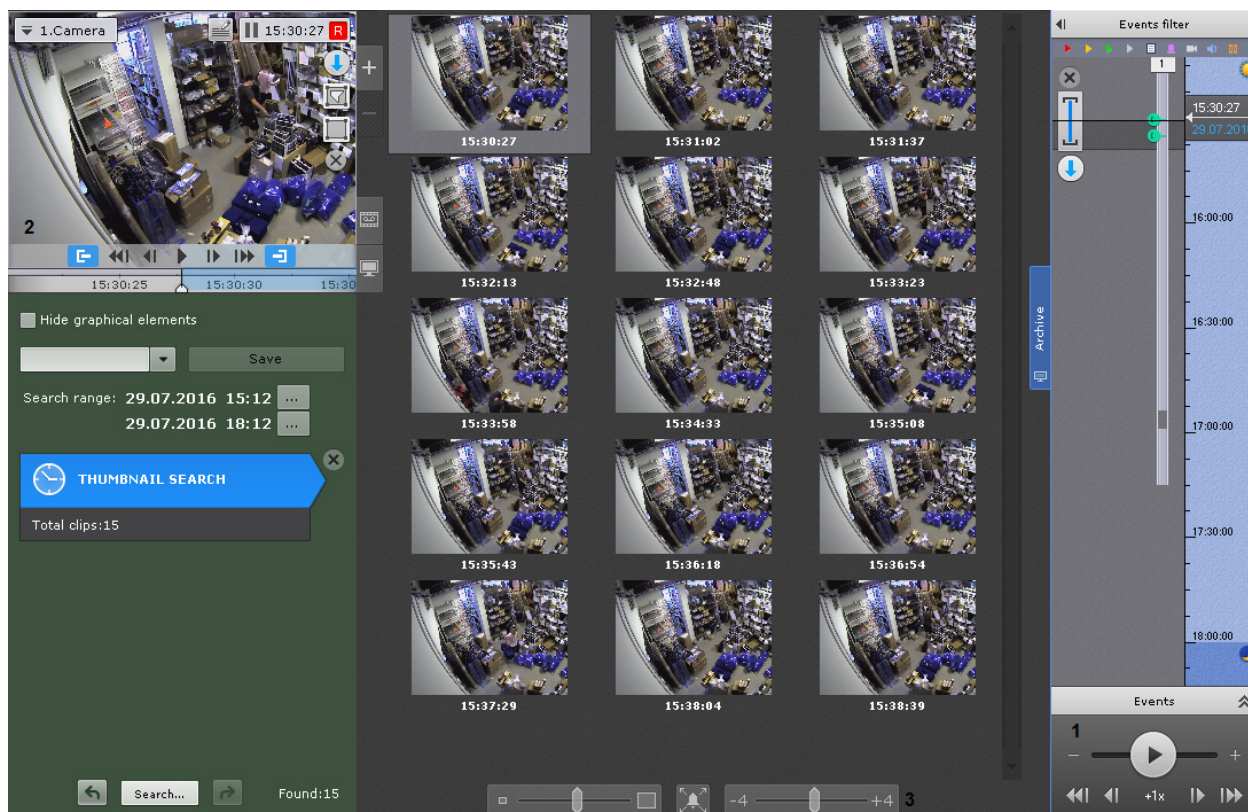


Playback of video fragments

Rus

To view the video fragment corresponding to a found moment in the archive, complete the following steps:

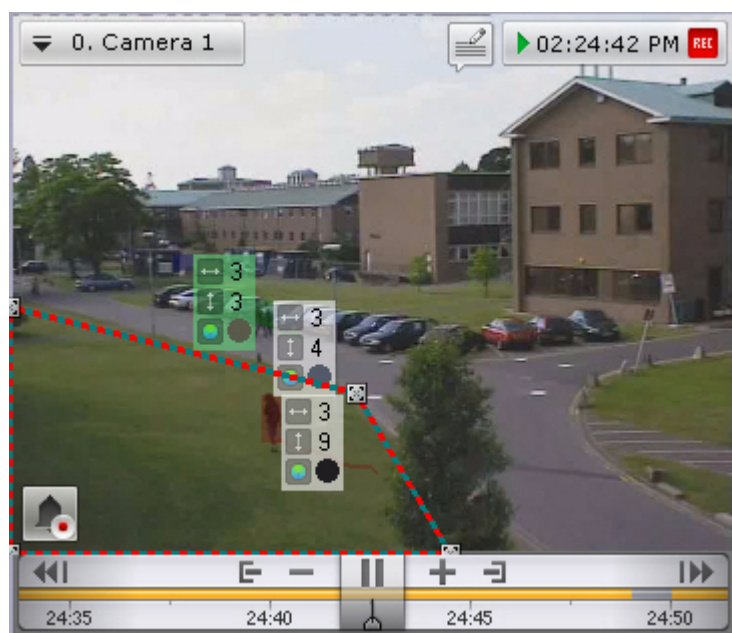
1. Left-click the found moment on the search results panel.
2. Using the playback panel (1), start playback of the fragment in the viewing tile (2).



By default, the playback starts with the time specified under the thumbnail. You can use the control **(3)** to change the start time. If the control is in the leftmost position, playback starts 4 seconds earlier then the start time. If the control is in the far right position, playback starts 4 seconds later.

Note

If object tracking is activated in the viewing tile, then the properties of tracked objects (width and height as a percentage of the width or height of the frame) are displayed when viewing video fragments found through forensic search.



Note

To switch between video fragments, use the corresponding buttons on the playback panel or on the advanced navigation panel (see the sections titled [Navigation using the advanced panel](#) and [Navigating Using the Playback Panel](#)).

Enlargement of found moments

Rus

When you find moments in archive video, you can enlarge the following:

- Object that triggered the detection tool (during event search).
- Track (during forensic search).
- Commented area of the frame (during comment search).

To do so, above the search results, click the  button.



Attention!

Enlargement occurs only in the following cases:

1. If the height and width of the visual item specified in the forensic search settings is less than 1/3 of the frame dimensions.
2. If the tracking object occupies less than 1/3 of the frame (for detection tool search)
3. If the object marked by the comment occupies less than 1/3 of the frame (for comments search)

In all other cases, the found moments are displayed in their entirety.



To close zoom, click the  button again.

Exporting the video fragments and repeated search

Rus

To export the video fragment corresponding to a found moment in the archive:

1. Double-click the found moment on the search results panel. The interval for export will be set apart from this moment until the next found moment.



Important

Double-clicking the found moment will also cause a repeated search within the selected time interval for export.

2. Export the video (see [Exporting Video Recordings](#)).

Simultaneous search in an archive of several video cameras

Rus

To perform a simultaneous search in an archive of several video cameras, use the search panel (see [Search panel](#)) with the archive analysis mode turned off.

To perform a search in an archive of several video cameras:

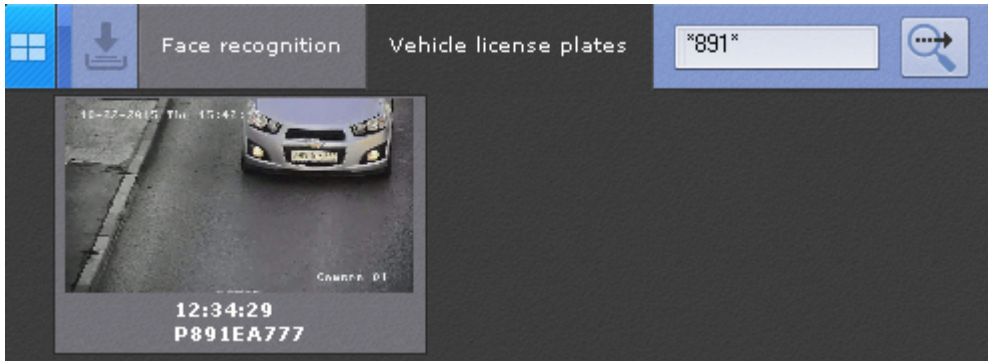
1. Select a layout containing the video cameras corresponding to the archive to be searched (see [The Layouts panel](#)).

2. Switch one or more video cameras corresponding to the archive to be searched into the archive mode (see [Switching to Archive Mode](#)).



3. Go to the **Search** tab.
4. Set the search type and parameters.
5. Specify the search interval on the timeline (see [Setting a search interval](#)).
6. Press .

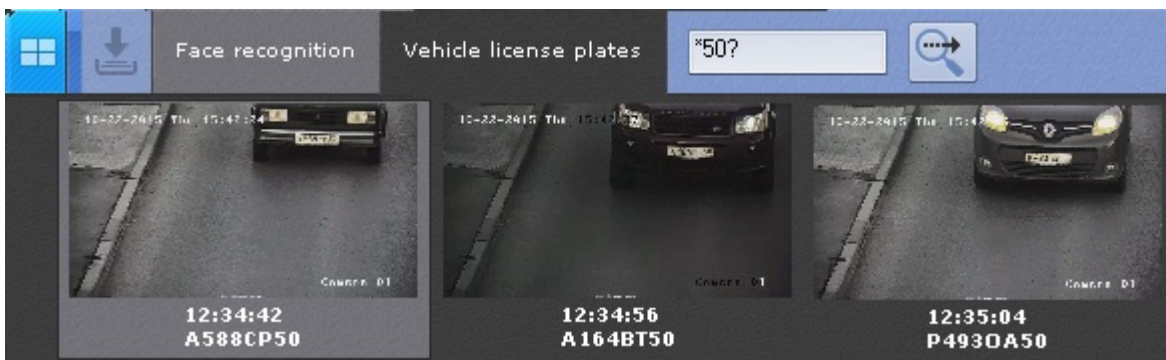
The search panel will show previews of the found fragments meeting the search criteria. Click a preview to move to the corresponding fragment to the Viewing Tile.



Search by recognized number plates in an archive of several video cameras

Rus

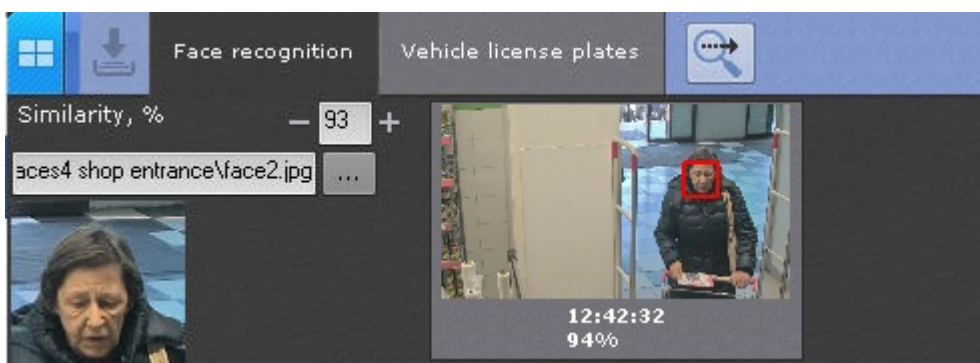
To perform a search, enter the license plate number to search for. Fuzzy search supported if you enter the number with the ? mask for any one character, and the * mask for any number of characters). For example, a search query **?50*** will show all vehicles with license plate containing 2 and 0 in the second and third position respectively. The total number of characters in number plates will be variable.



Face search in an archive of several video cameras

Rus

To perform a face search, select a photo and enter the minimal similarity level to the faces from the archive (see [Face search](#)).



Exporting all event videos

Rus

If you group all videos of an event from different cameras on the right, you can export them with one click.

Do the following:

1. Click on the thumbnail of interest.
2. Set the time interval for export (see [Standard video export](#)).
This will add the thumbnail to the right side of the search panel.



3. Click the + button in the middle of the thumbnail. The video clip will be added for export.



Note

To remove it from the group, click the  button.

4. Repeat these steps for all videos of interest.



5. Click the button to export all selected clips.

This opens the Export window. Follow the same steps as with the standard export procedure (see [Standard video export](#)).

Working with fisheye cameras

Viewing modes for video from fisheye cameras

Rus

Axxon Next allows viewing the video stream and video archive from fisheye cameras, dewarping the video image into one of the following formats:

1. 360° panorama.
2. Regional view.
3. 180° panorama (for video camera with an Immervision lens).

360 degree Panorama and Regional view (virtual telemetry)

Rus

By default, video from fisheye cameras is displayed in viewing tiles as a 360° panorama.



When digital zoom is applied to video (see [Digitally Zooming Video Images](#)) by one notch or more, regional viewing begins.

The following actions are available when viewing video in this format:

1. Point & Click functionality (see [Control using Point&Click](#)).
2. Change the angle of view of the fisheye camera, by left-clicking in the viewing tile.



In both viewing modes, all standard video surveillance functions are available for the fisheye camera.

180 degree Panorama

Rus

This display type is available only for video cameras that have Immervision lenses.

Video is unfolded (dewarped) into a 180° panorama, with a configurable viewing angle.



Note

If the video camera is wall-mounted, the angle of view cannot be configured (see [Configuring fisheye cameras](#)).



To set the viewing angle, click and hold the button while moving the cursor to the left or right.

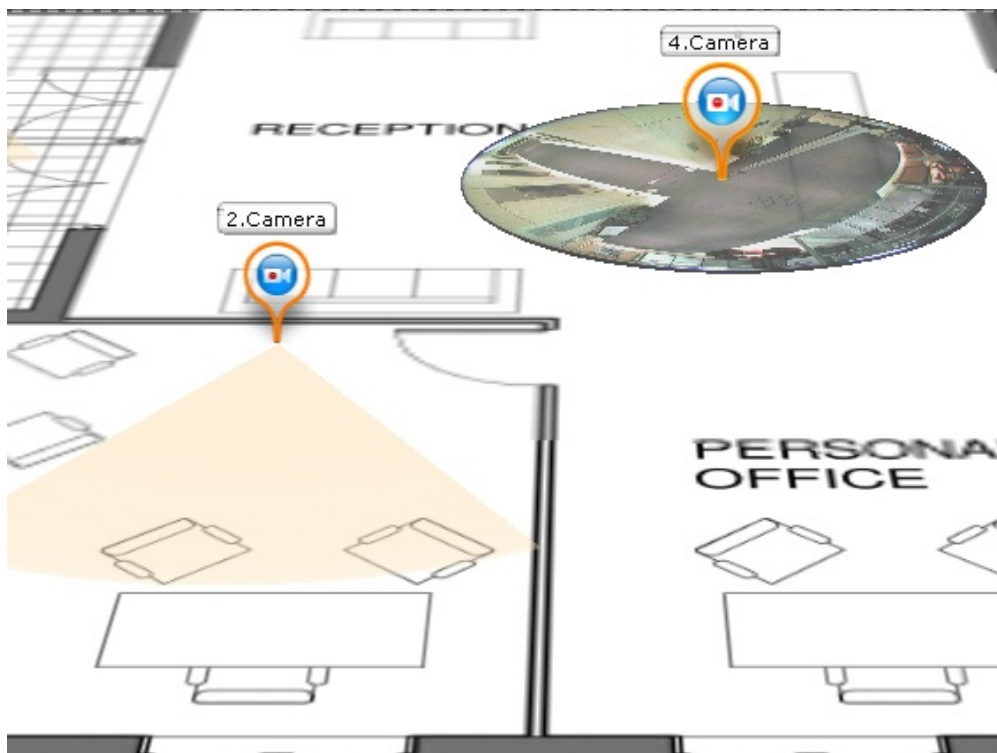
Point&Click (see [Control using Point&Click](#)) and all standard video viewing functions are available when viewing video in this format.

Fisheye cameras on an interactive map

Viewing video and controlling a fisheye camera from the map

Rus

If a fisheye camera is ceiling-mounted (this position is selected in the video camera settings, see [Configuring fisheye cameras](#)) and a 360° field of view is specified for it on the map, the video from the camera is displayed on the map in real time.



To refocus the angle of view of a fisheye camera so that a chosen point in the viewing tile becomes the center of the frame, left-click that point (this is the Point & Click function, see [Changing the camera lens focus \(Point&Click\)](#)).



Note

If the viewing tile for the fisheye camera is inactive when it is clicked, the first click on the video on the map activates the viewing tile. The second click activates the Point & Click function

Fisheye cameras in immersive mode

Rus

In immersive mode (see [Immersive mode](#)), the video from a fisheye camera is displayed on the entirety of the video surveillance screen, above the map display, as virtual telemetry (see [Viewing modes for video from fisheye cameras](#)).



In immersive mode, only the following video surveillance functions are available for fisheye cameras.

1. Digital zoom via mouse scrolling (see [Enlarging a video image using the mouse scroll wheel](#)).
2. Point & Click functionality (see [Changing the camera lens focus \(Point&Click\)](#)).
3. To change the angle of view of a fisheye camera, move the mouse around the video image while holding down the left mouse button.

To exit immersive mode, click the  button.

Working with information boards

Resizing information boards

Rus

You can resize information boards in the same way as viewing tiles (see [Scaling the Viewing Tile](#)).



Note

When the Counter Board is enlarged, the graph is enlarged as well, displaying data for a broader range of time. When the size of the Counter Board is reduced, the opposite occurs.

In both cases, the right-hand border of the graph is constant.

If an information board tile is linked to a viewing tile, at the first enlargement step (to 50%), the viewing tile and information board tile are displayed together and occupy all of the screen on one side.



Note

In this case, the first step takes into account the total size of the related cells: the related cells must be less than 50% of both sides of the layout

Hiding information boards

Rus

Operators can hide information boards in a layout, if this is allowed in the settings.

To hide an information board, in its upper-right corner, click the  button.



Note

If configured, Message Board hides after you click a **Response Button** (see [Configure the Dialog Board](#)).

If all cells in the layout have the same size, the space freed up after hiding an information board is allocated to the neighboring cells. Horizontal neighbors have priority over vertical ones.

If free space cannot be distributed horizontally, it is distributed between the vertical neighbors.

In more complicated cases (when cell sizes are different), an attempt is made to distribute the free space between horizontal neighboring cells. If this is not possible, free space is distributed between vertical neighboring cells. If even this second attempt is unsuccessful due to the layout configuration, the space remains empty.

Hidden information boards are displayed in two cases:

1. After switching to another layout and back to the original one
2. When an event occurs that requires the operator's attention A description of such events for each type of information board is given in the following table.

Types of information boards	Events that trigger board display
Message and Events	An event matching the board filtering settings occurs
Health	Server condition worsens
Counter	New events occur

Automatically switching to layouts with information boards

Rus

Automatic switching to a layout with an information board is possible for Events Board, Health Board and Message Board (if it is set up to Automated Responses to Events). This option is available when configuring boards of these types.

Automatic switching to a layout with Events Board or Message Board occurs when all of the following conditions are met:

1. The current layout does not contain Event/ Message Board.
2. An event matching the board filtering settings has occurred in the system.

Automatic switching to a layout with a Health Board occurs when the following conditions are met:

1. The current layout does not contain a Health Board.
2. The status of a monitored server or camera worsens.

The layout with the smallest number of cells is chosen for display. If there are multiple layouts with identical numbers of cells, the layout that comes first in the alphabet is chosen.

Working with Events Boards

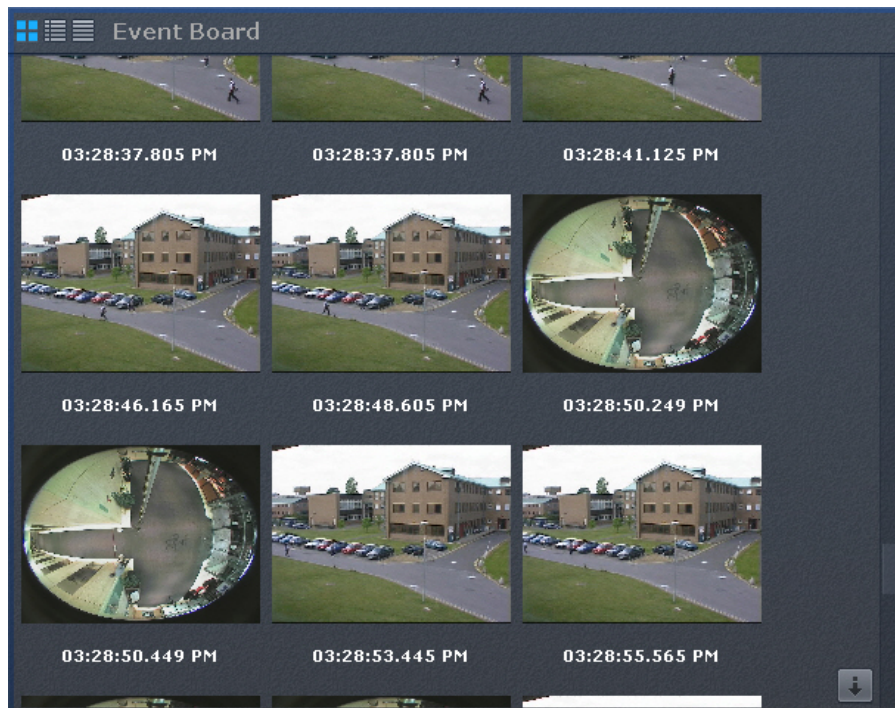
Options for displaying information on Events Boards

Rus

Events Boards display information about selected system events. Configuration of the events to display is performed in the corresponding [section](#).

Events on the board can be displayed in three ways, chosen via the buttons in the upper-left corner of the board:

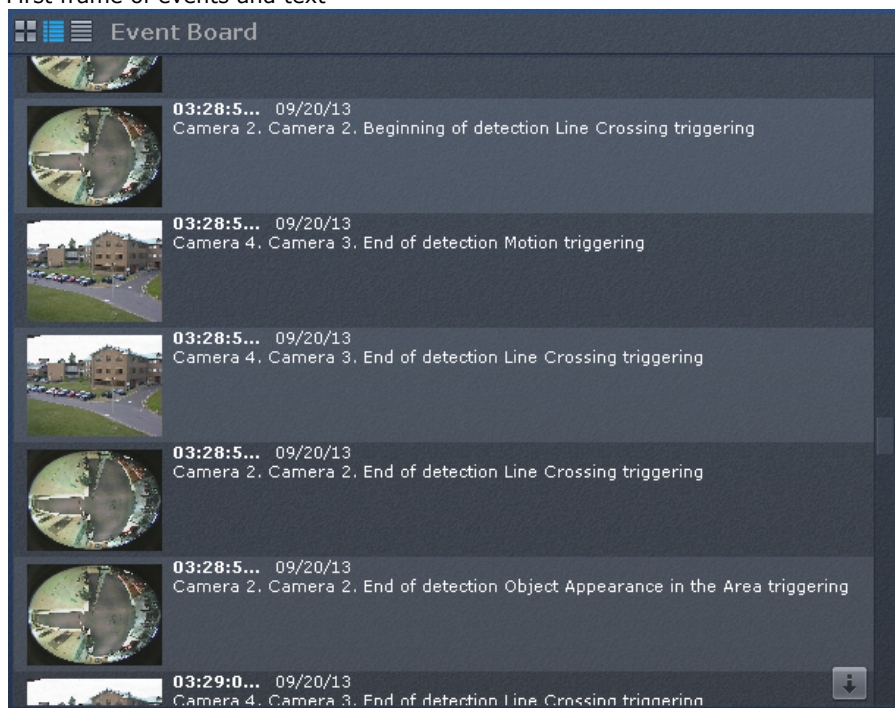
1. First frame of events and their time



Note

The frame is not displayed when there is no recording in the archive.

2. First frame of events and text



3. Text only

Event Board		
03:30:2...	09/20/13	Camera 4. Camera 3. End of detection Line Crossing triggering
03:30:2...	09/20/13	Camera 4. Camera 3. End of detection Line Crossing triggering
03:30:3...	09/20/13	Camera 4. Camera 3. End of detection Line Crossing triggering
03:30:3...	09/20/13	Camera 2. Camera 2. Beginning of detection Object Appearance in the Ar...
03:30:3...	09/20/13	Camera 4. Camera 3. Beginning of detection Line Crossing triggering
03:30:3...	09/20/13	Camera 4. Camera 3. Beginning of detection Line Crossing triggering
03:30:3...	09/20/13	Camera 2. Camera 2. End of detection Object Appearance in the Area trig...
03:30:4...	09/20/13	Camera 4. Camera 3. End of detection Motion triggering
03:30:4...	09/20/13	Camera 4. Camera 3. Beginning of detection Motion triggering
03:30:4...	09/20/13	Camera 4. Camera 3. End of detection Motion triggering
03:30:4...	09/20/13	Camera 4. Camera 3. Beginning of detection Motion triggering
03:30:4...	09/20/13	Camera 4. Camera 3. End of detection Motion triggering
03:30:4...	09/20/13	Camera 4. Camera 3. End of detection Line Crossing triggering
03:30:5...	09/20/13	Camera 4. Camera 3. End of detection Line Crossing triggering
03:31:0...	09/20/13	Camera 4. Camera 3. Beginning of detection Motion triggering
03:31:0...	09/20/13	Camera 4. Camera 3. End of detection Motion triggering
03:31:1...	09/20/13	Camera 2. Camera 2. Beginning of detection Object Appearance in the Ar...
03:31:1...	09/20/13	Camera 2. Camera 2. End of detection Object Appearance in the Area trig...
03:31:1...	09/20/13	Camera 4. Camera 3. Beginning of detection Motion triggering
03:31:1...	09/20/13	Camera 2. Camera 2. Beginning of detection Object Appearance in the Ar...
03:31:1...	09/20/13	Camera 2. Camera 2. Beginning of detection Line Crossing triggering
03:31:2...	09/20/13	Camera 4. Camera 3. End of detection Motion triggering

When a layout is switched to, by default the Events Board is displayed as configured in the settings.

At the top of the list are the latest events. To jump to the end of the event list, use the  button in the lower-right corner of the panel. New events are highlighted in the panel for 3 seconds.

Switching a camera linked to an Events Board to the archives

Rus

If an Events Board is linked with a camera, clicking an event will switch the camera to Archive mode at the point in time corresponding to the event.



Note

If there is no archive for a camera when an alarm occurs, the archive is positioned at the closest recorded archive entry.



Note

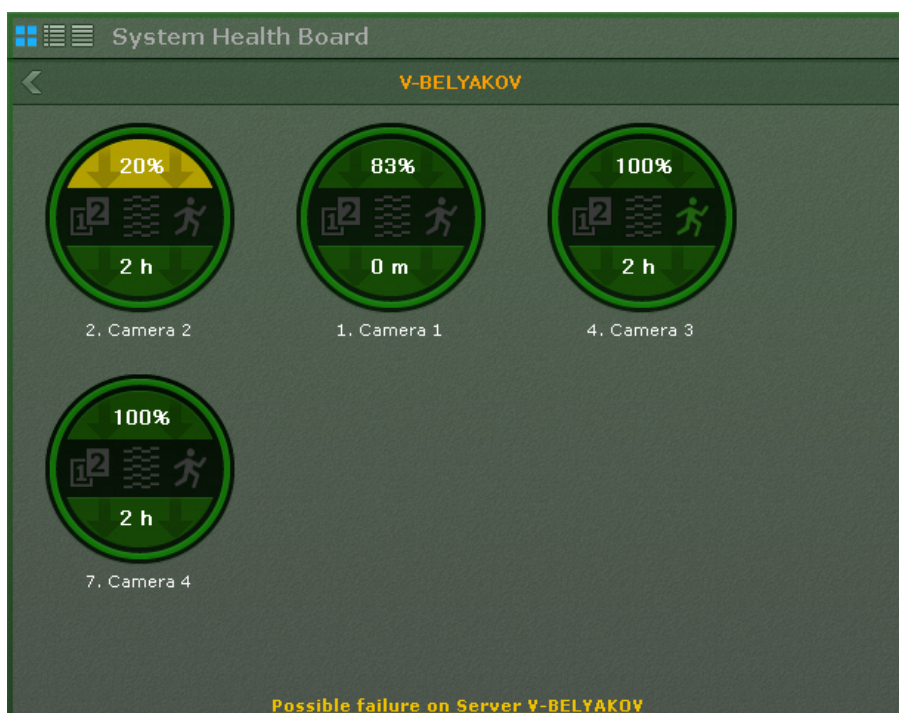
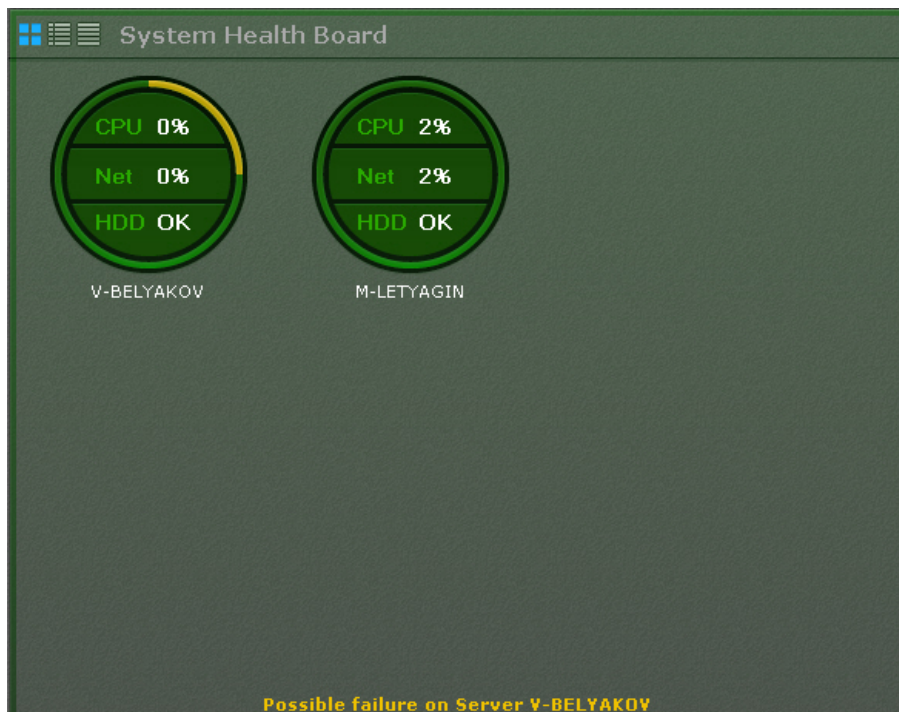
If an Events Board is linked to several cameras, all cameras transition to Archive mode.

Working with Health Boards

Health Boards display the status of selected system servers and connected cameras.

If more than one server is monitored, by default the Health Status displays the status of servers when the user switches to the layout.

If only one server is monitored, by default the Health Status displays the status of the server when the user switches to the layout.



To switch to viewing the status of cameras, click the diagram for the relevant server.



Note

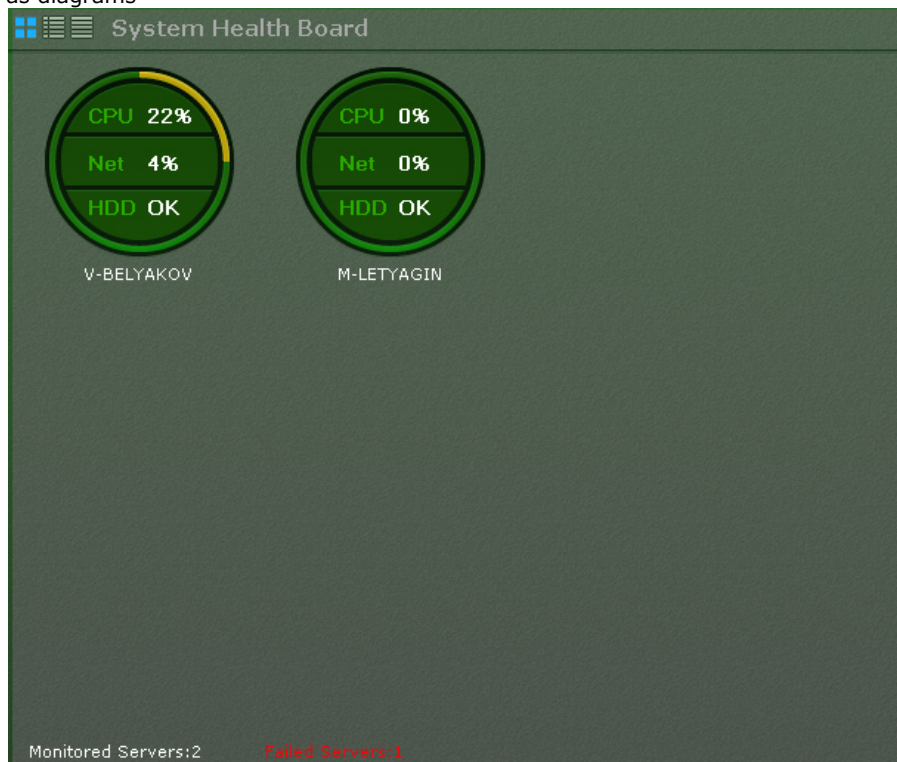
In table mode, you can view server status by clicking the relevant line in the table.

To switch to a view of server status, click the  button.

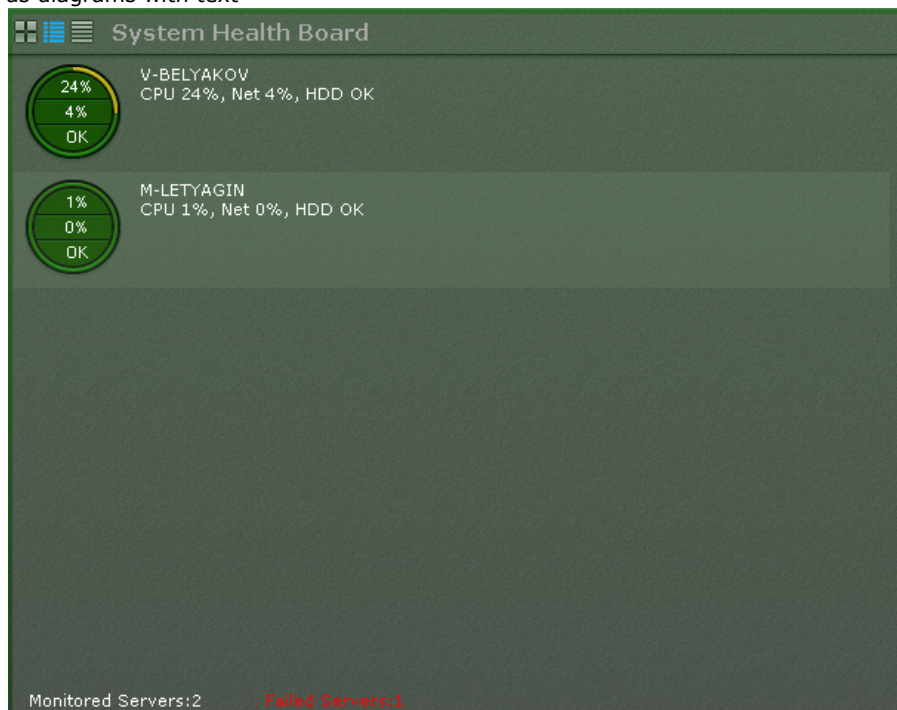
Viewing server status

Information about the status of servers can be displayed in three ways, chosen via the buttons in the upper-left corner of the board:

1. as diagrams



2. as diagrams with text



3. as a table



Note

Disconnected Servers are displayed at the end of the list with dimmed brightness.

Tables can be sorted by any column in any direction.

On each server the following metrics are monitored: CPU, Network usage, Disk subsystem status, Power status.

Areas of the diagram change color based on the respective status.

	CPU	Network	HDD
Red	Load >95%	Connection failure	Critical load on the disk subsystem, data loss when recording to archive over 10%
Yellow	Load from 85% to 94%	At 70% to 100% of capacity	Elevated load on the disk subsystem, data loss when recording to archive under 10%
Green	Load <85%	At less than 70% of capacity	Normal functioning of the disk subsystem (proper operation)



When you switch the server to reserve power, an  icon is added to the chart. The icon disappears when you restore the main power.

The edge of the diagram changes color based on the status of the connected cameras (see [Viewing camera status](#)).

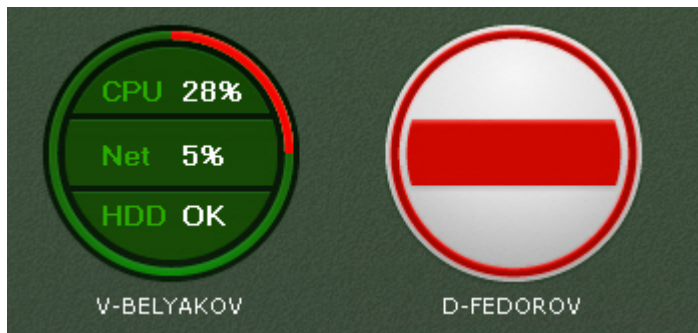
If the entire edge is green, all cameras are in normal condition. If part of the edge is yellow or red, some cameras have borderline or critical status.

Overall server status is determined from the above parameters as follows:

1. Normal – all components and cameras are normal.
2. Borderline – possible problems with the status of at least one component or camera.
3. Critical – at least one component or camera is in critical condition.

Server information is updated every ten seconds.

If the connection to a server is lost, a corresponding icon is used to depict it.



If all servers are in normal condition, the bottom of the board displays a status bar with information about the number of monitored and distressed servers.

Monitored Servers:2 Failed Servers:1

If the status of any server worsens, the status bar is replaced by a message. When the message is clicked, the server status is displayed (if the board is currently displaying camera status).

Critical state of Server V-BELIAKOV

The message then closes and the status bar again appears.



Note

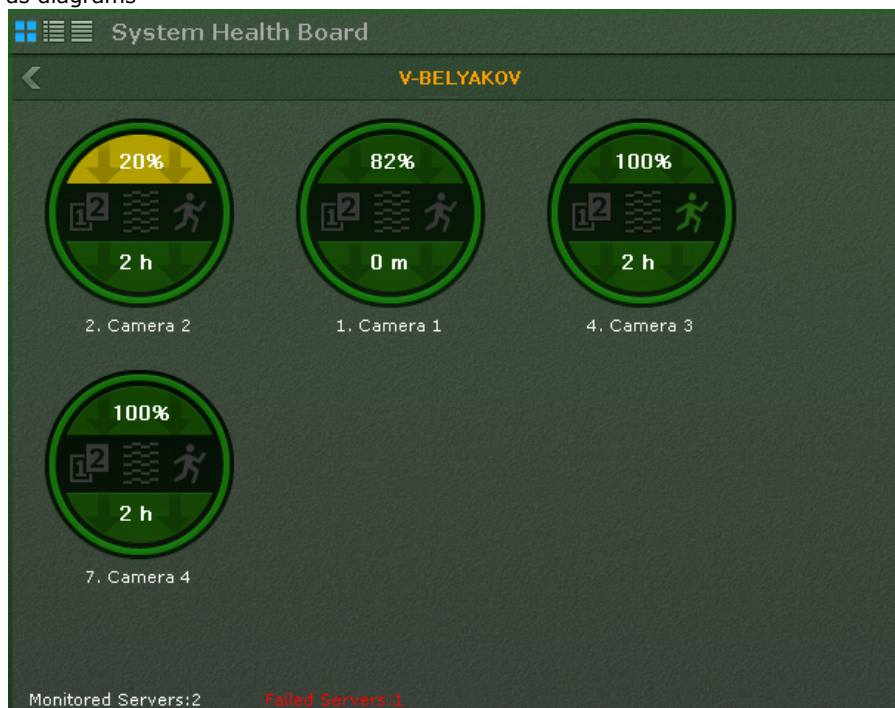
If the status of several servers worsens, a message is shown for the last one.

Viewing camera status

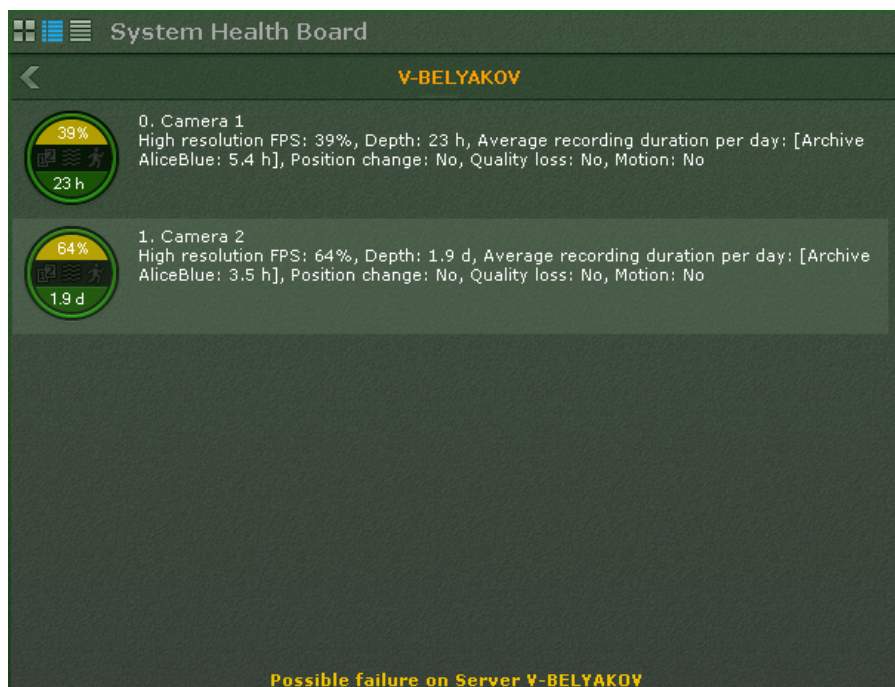
Rus

Information about the status of cameras can be displayed in three ways, chosen via the buttons in the upper-left corner of the board:

1. as diagrams



2. as diagrams with text



3. as a table

System Health Board

V-BELYAKOV

Camera	High re...	Depth	Averag...	Quality ...	Motion	Position cha...
0. Camer...	40%	23 h	5.3 h	No	No	No
1. Camer...	63%	1.9 d	3.5 h	No	No	No

Monitored Servers:1 Distressed Servers:1



Note

Disconnected cameras are displayed at the end of the list with dimmed brightness.

Tables can be sorted by any column in any direction.

The following information is displayed for each camera:

1. The frame rate (fps) set for the high-quality stream of the camera divided by the fps for the video actually received, as a percentage (frame rate % to max)
2. Status of detection tools (loss of quality, position change, motion)
3. **Depth** refers to the number of hours or days from the start of the earliest video stored in any archive to the end of the most recent video (if archive recording is not configured for the camera, this section is colored gray on the diagram).
4. Average recording time, in hours per day, is the ratio of the total archive recording time (continuous) to the archive video age (time from the earliest stored video to now).

The camera status is measured based on the signal from the camera and stream rate:

1. Normal – camera signal present, frame rate & to max from 70% to 100% The camera is colored green on the

diagram and in the table.

2. Borderline – camera signal present, frame rate & to max from 20% to 70% The camera is colored yellow on the diagram and in the table.
3. Critical – no camera signal or frame rate & to max is less than 20% The camera is colored red on the diagram and in the table.

Information is updated every ten seconds.

If there is no signal from a camera, the appearance of the diagram changes accordingly.



Information about detection tools is received in real time. Depending on the status of detection tools, the corresponding icons change color:

- Green – detection tool status is normal
- Red – detection tool activated
- Gray – detection tool disabled

Working with Statistics Boards

Rus

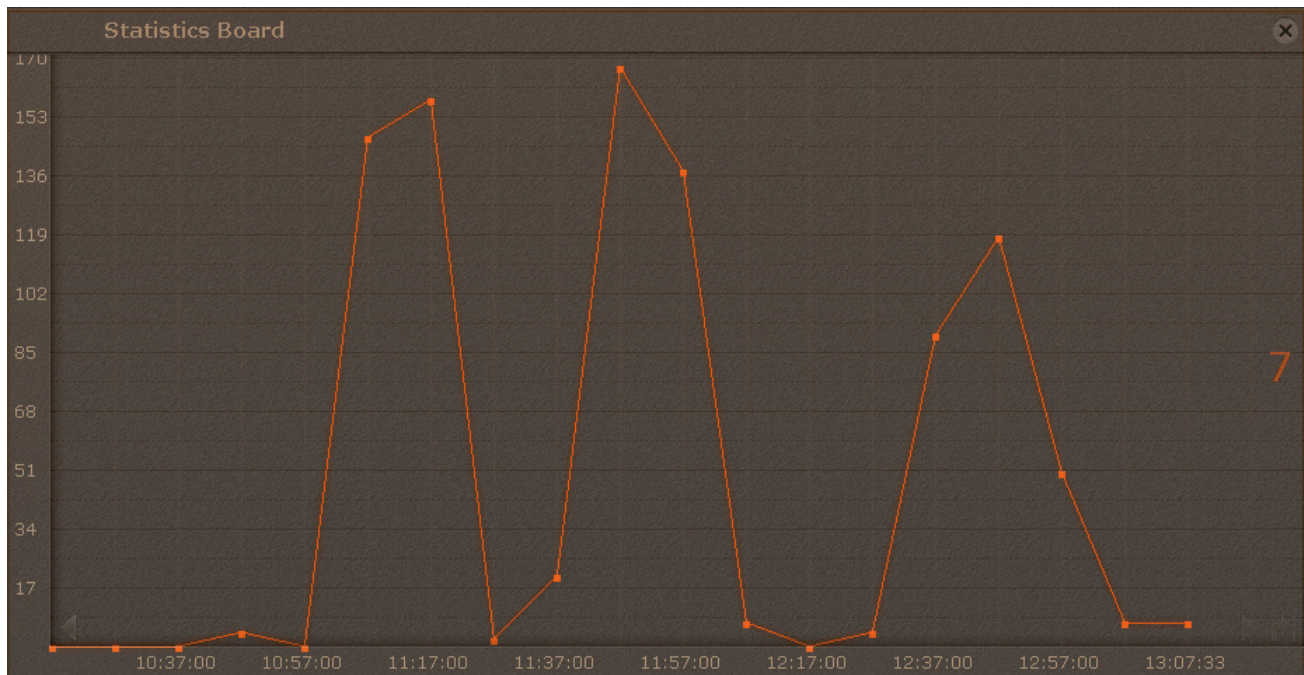
The Statistics Board is a graph of the number of events of a certain type for a specified timeframe. The type of events and amount of time between the points of the graph are configured in the board settings (see [Configuring a Statistics Board](#)).

The points of the graph change over time and depend on the current time and interval specified in the settings.

The points are calculated every minute/hour/day/etc. based on the selected unit of measurement (if the interval is specified in minutes, then every minute; if specified in hours, then every hour, and so forth) and is performed as follows:

1. The current time (last point on the graph) is rounded to the nearest whole unit of time (if the interval in the settings is specified in minutes, then the nearest whole minute; if specified in hours, then the nearest whole hour, and so forth).
2. This rounded time is used as the next-to-last point.
3. The formula for the other points is as follows: the adjacent point to the right, minus the interval of time specified in the settings.

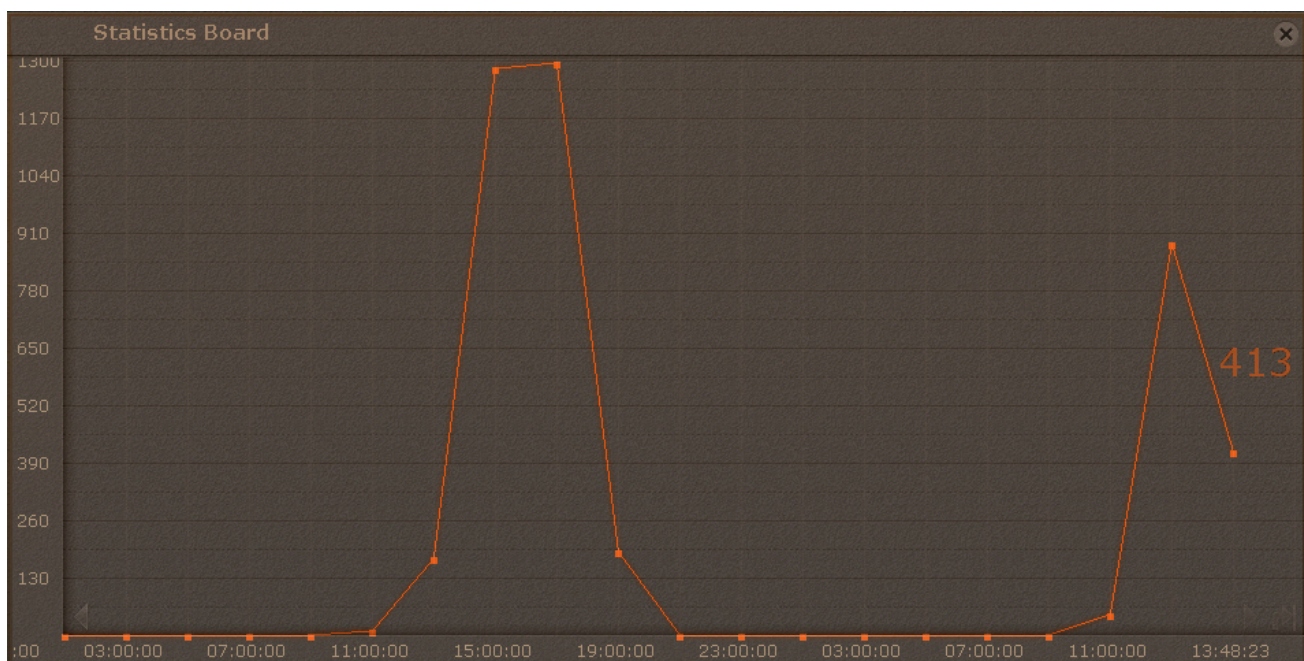
For example, the interval is set to **10** minutes on this sample graph here. The current time (**1:07:33 p.m.**) is the last point on the graph, so after rounding this to the next whole minute we get the value for the next-to-last point: **1:07:00 p.m.** Correspondingly, the points before it are **12:57:00 p.m.**, **12:47:00 p.m.**, etc.



When the current time becomes **1:08:00 p.m.**, the points will be updated to **12:58:00 p.m.**, **12:48:00 p.m.**, etc.

The graph displays the current number of events. The number of events is recalculated every minute and does not depend on the interval chosen.

For example, for this graph with a time interval of **2 hours** and a current time of **1:48:23 p.m.**, the current number of events equals **413**, for the period from **11:48:00 a.m.** to **1:48:00 p.m.**



To scroll through the graph, use the arrows  on the graph edges. To jump to the last point on the graph, click the  button.

Clicking anywhere on the graph jumps to the nearest point and the relevant value is indicated.



Working with Web Boards

Rus

Web Board allows users to view a selected web page in the camera window.

In Web Board, you can view web sites in Internet Explorer.

If the web page does not fit the board, vertical and horizontal scroll bars are displayed. In this case, the upper-left corner of the web page is displayed.



Note

If there is no network connection, no access to the requested page or if there are other problems, Web Board displays standard *Internet Explorer* browser error messages.

Working with Dialog Board

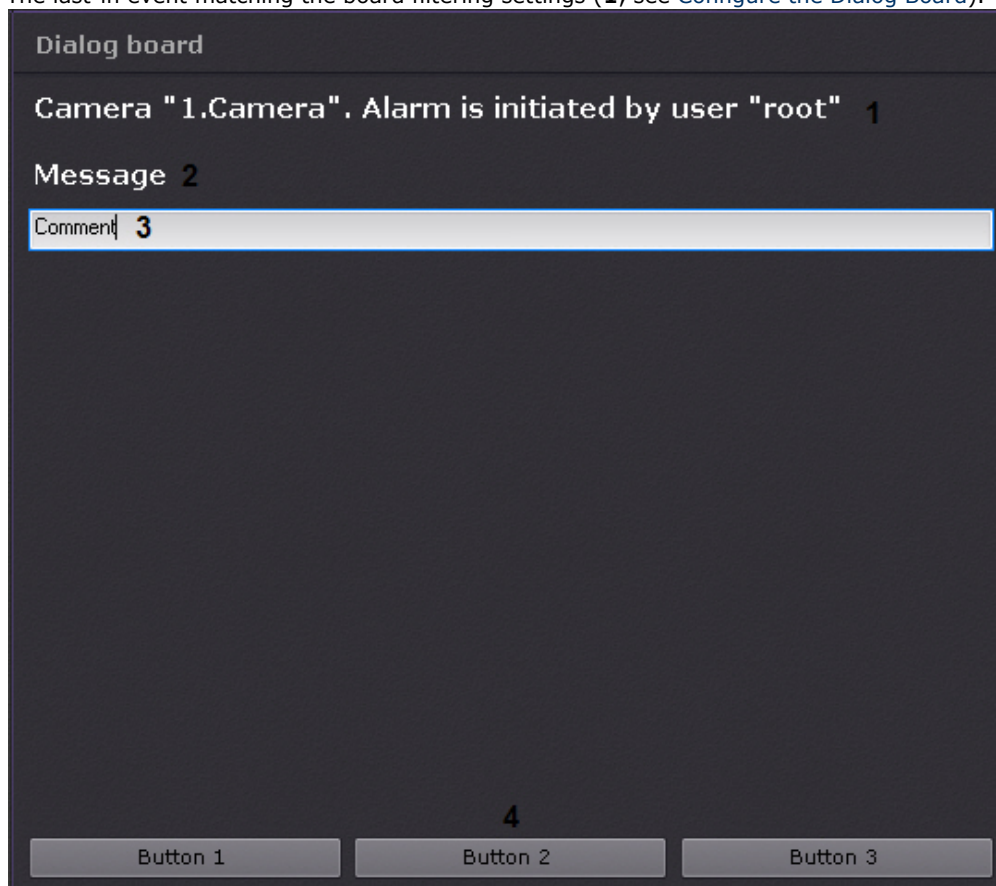
Rus

Dialog Board works in two modes:

1. Automated Responses to Events.
2. Show Selected Camera.

In Automated Responses to Events, the board shows:

1. The last-in event matching the board filtering settings (**1**, see [Configure the Dialog Board](#)).



Note

All of the above mentioned elements of the board are optional. You configure the board to show them.

2. Text message as configured (**2**).
3. Comments filed (**3**). Comments input can be optional or mandatory (as configured). Comments are logged to [System Log](#), when you click a response button.
4. Response Buttons (**4**). If you click a response button, the macro starts, and the board auto-hides (if configured, see [Hiding information boards](#)).

If you enabled Show Selected Camera, then the board has this camera's view. You can select a camera if you click on its tile on a layout, in the Objects panel (see [Objects Panel](#)) or on the map (see [Working with the Interactive Map](#)).

Layouts Management

Rus

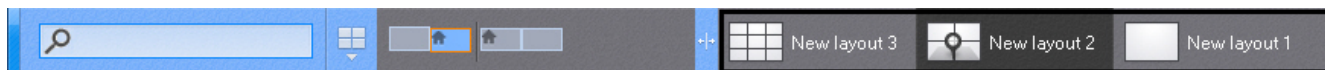
The Axxon Next user can run the following commands here:

1. Select a layout for display on screen.
2. Start and stop slideshows of layouts. Slideshow is rotation through all available layouts according to an assigned frequency (dwell-time).
3. Create temporary layouts.

You can work with layouts done on the Layouts ribbon (see [The Layouts panel](#)).

Selection and Slideshow of Layouts

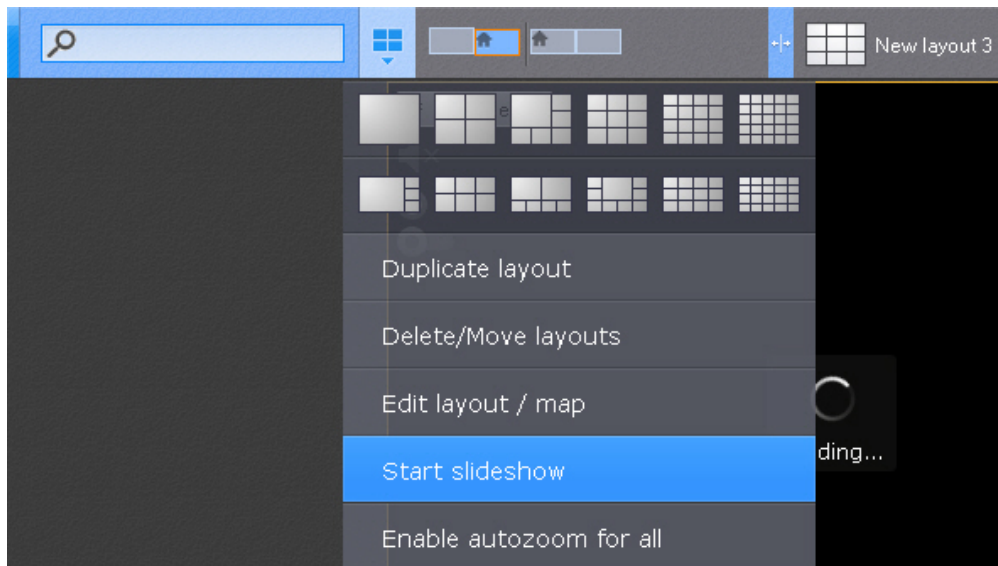
To display a layout, click it with the left mouse button.



If the client is connected to multiple Axxon domains, layouts for the main Axxon domain are listed by default. To view the layouts of other Axxon domains, select the desired domain on the [camera search panel](#).



To launch a slideshow, click the  button, and select **Start slideshow** in the context menu of the layout panel.



Note

If you have only one layout in VMS, you do not have **StartSlideshow** in the context menu.

This will launch a carousel of all available layouts according to the assigned dwell-time (see [Configuring Slideshow parameters](#)).

To turn off slideshow mode, select **Stop slideshow** in the context menu of the layouts panel or left-click any viewing tile.

Special layouts

There are two special layouts available in the *Axxon Next*:

1. A layout that displays all the cameras with active alarms .



Attention!

Camera windows are not saved on the layout. After restarting the client or server, you should add them again.



Note

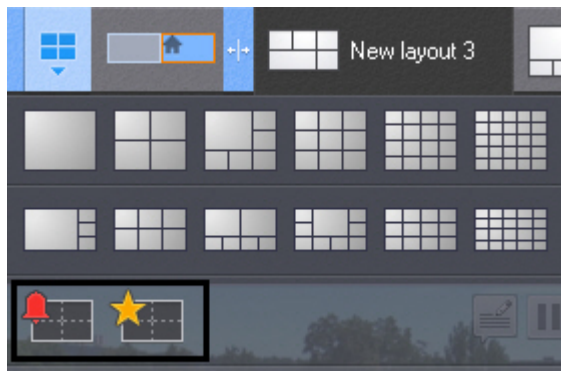
You can use [Duplicate layout](#) to create a copy of the current special layout.

2. A layout that displays all selected video cameras .

To create a special layout, do as follows:



1. Click  to open the context menu of the Layout ribbon.
2. Select the temporary layout you want.



The layout has now been created and added to the panel.



You can manage the number of cameras on special layouts with the layout format - 1, 4, 9, 16, 25, 64 (select in the menu).



Note

By default, the Selected Cameras layout is 3 * 3, and the Alarmed Cameras layout changes automatically depending on the number of alarms.



Note

To return to automatic change of the Alarmed Cameras layout, click the format that you selected again.

Alarmed Cameras layout

By default, special layouts display alerts from all cameras. You can limit this: alerts only from the selected layouts (see).

The first 10 seconds after the alert appears in the special layout, it is highlighted.



Cameras disappear from the Alarmed Cameras layout in 2 cases:

1. After the alert is classified and the next camera is on (see [Processing an Alarm](#)).
2. After the timeout expires (see [Configuring Alarm Management Mode](#)).

New alerted cameras will populate the layout as follows:

1. If there are any free cells on the layouts after you have classified or missed the alert, the first free cell is taken.
2. If there are no free cells on the layout, the new alerted cameras takes the next free cell. If there are no free cells, the alerted camera is added to the waiting list

Selected Cameras layout

To add a tag to a camera, click the star  in the upper left corner of the viewing tile.




Attention!
 You can add tags to cameras on any video wall (see [Managing video walls of a local Client](#))

If you exceed the maximum number of cameras allowed, only the cameras most recently selected remain on the layout.


Note
 To remove the tag, click the star again .

You can move cameras around on layouts by drag-and-drop.

Managing video walls

Managing video walls of a local Client

Rus

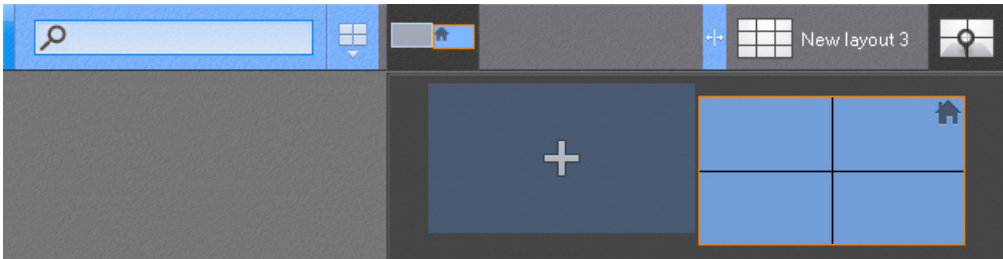
You can create a video wall on each connected physical monitor.

To create a video wall on the current computer (local Client):

1. Click the monitor arrangement of the Client on the video wall configuration panel (see the [Video wall management panel](#) section).

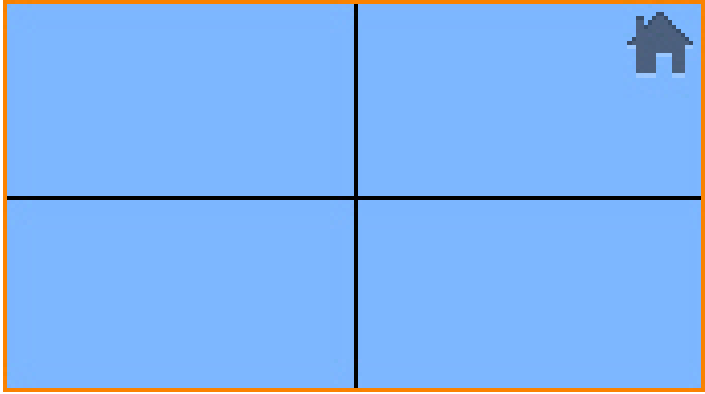
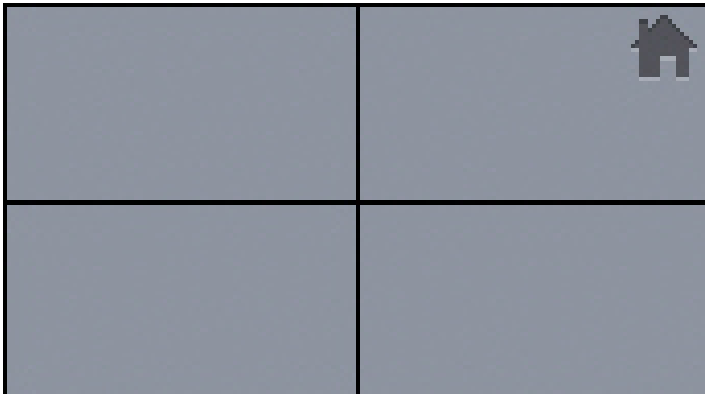
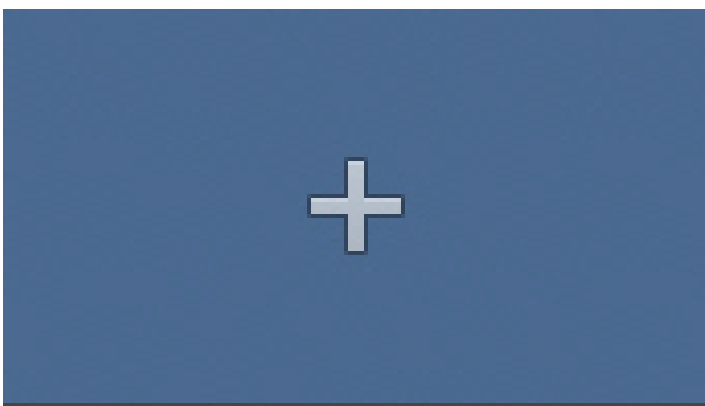

Note.
 Managing Client video walls requires sufficient user rights (see the [Creating and configuring roles](#) section).

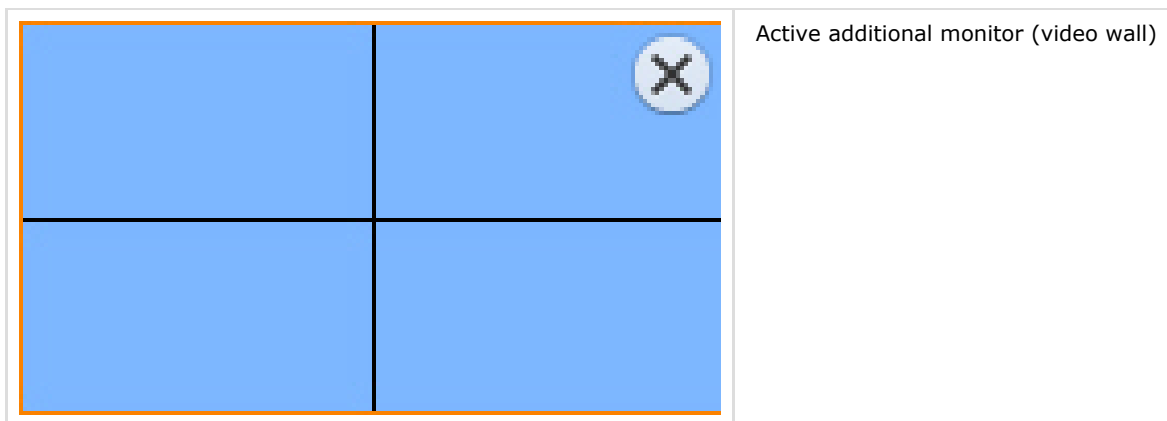
Enlarged monitor images are displayed.



The thumbnails may appear differently, depending on the status of the monitors in Axxon Next.

Thumbnail	Monitor status

	Active main monitor
	Inactive main monitor
	Unassigned additional monitor
	Inactive additional monitor (video wall)



Note.

The image of the monitors shows the currently open layout.

2. To create video walls on an unassigned additional monitor, click it. The additional monitor becomes active and the layout of the main monitor is duplicated to it.
3. Configure the layout of the additional monitor (see the [Configuring layouts](#) section). You can configure the layout of the additional monitor through the main monitor (the additional monitor must be active). Changes affect only the additional monitor; the layout of the main monitor is not changed.
4. Click the thumbnail of the main monitor. The additional monitor becomes inactive and the original layout is displayed on the main monitor. If the additional monitor becomes inactive, editing of the layout does not affect it.

Creation of the video wall is complete.

To make additional changes to a video wall:

1. Activate the additional monitor (by clicking its thumbnail).
2. Edit the layout.
3. Make the additional monitor inactive.

The main monitor and video walls can be minimized independently of each other. To close a video wall in Axxon Next, click the  button on the video wall image.

Managing video walls of remote Clients on an Axxon-domain

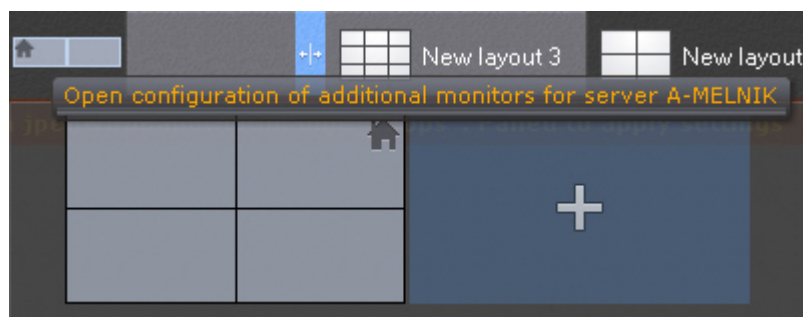
Rus

Users who have the necessary rights can remotely manage video walls on Clients that are connected to any Server on an Axxon-domain (see the [Creating and configuring roles](#) section).

The following operations are available:

1. Create a video wall on the remote Client.
2. Change layout on the video wall.
3. Delete video wall.

To create a video wall on a remote Client, click the monitor arrangement for the Client on the management panel (see the [Video wall management panel](#) section) and select an unassigned monitor.



The selected monitor will display a video wall with the layout that is currently displayed on the local Client.

To change the layout on a video wall of a remote Client:

1. On the local Client, select a layout (see the [Layouts](#) section).
2. Click the monitor arrangement of the remote Client and then the image of the video wall.

The layout is now displayed on the video wall of the remote Client.

**Note.**

The layout on the main monitor of a remote Client is changed in the same way.

To delete a video wall on a remote Client, click the  button on the image of the video wall.

Audio Monitoring

General Information

Rus

Audio monitoring of a situation is carried out using the microphones that correspond to a video camera surveying the situation.

In different viewing tile modes, different audio monitoring functions are accessible:

1. Live playback mode – listening to sound from a microphone in real time; playing back sound from Client microphone on camera speakers.
2. Archive mode, Alarm Management mode, Archive Search mode– playback of sound recorded from a microphone.

**Note**

In Archive mode and Archive Search mode, an audio recording can be played back only from the microphone corresponding to the currently selected video camera, and only in forward playback mode at a speed of 1x.

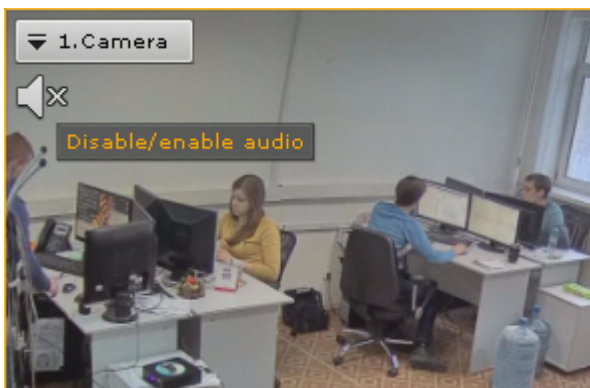
Listening on the Client to sound from a camera microphone

Rus

**Attention!**

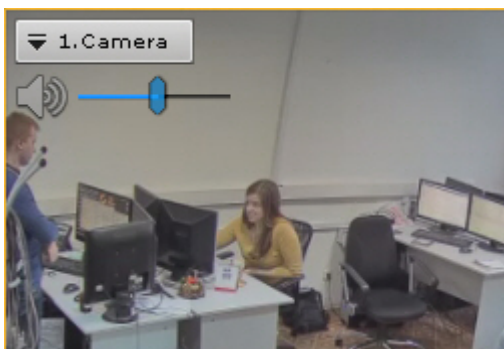
The **Microphone** object must be enabled (see the section titled [The Microphone Object](#)).

To listen on the Client to sound from the microphone of a camera, left-click to activate the speaker icon in the viewing tile.

**Note**

Audio from only one camera can be played back at a time

The speaker icon now becomes active and a volume slider appears.



Volume is controlled using the volume adjuster.

The far left position of the adjuster represents the minimum volume, and the far right position represents the maximum volume.

To turn off audio playback, click the speaker icon again.

Playing back sound from Client microphone on camera speakers

Rus

Sound from the Client microphone can be broadcast both on a single camera and on all cameras in a layout.



Attention!

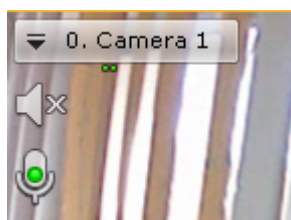
To use this option:

1. Configuration of audio on the Client is now completed (see [Configuring audio on the Client](#)).
2. **Speaker** objects are activated for the corresponding cameras (see [The Speaker Object](#)).

To broadcast sound on the speaker of a single camera, left-click the microphone icon in the viewing tile.

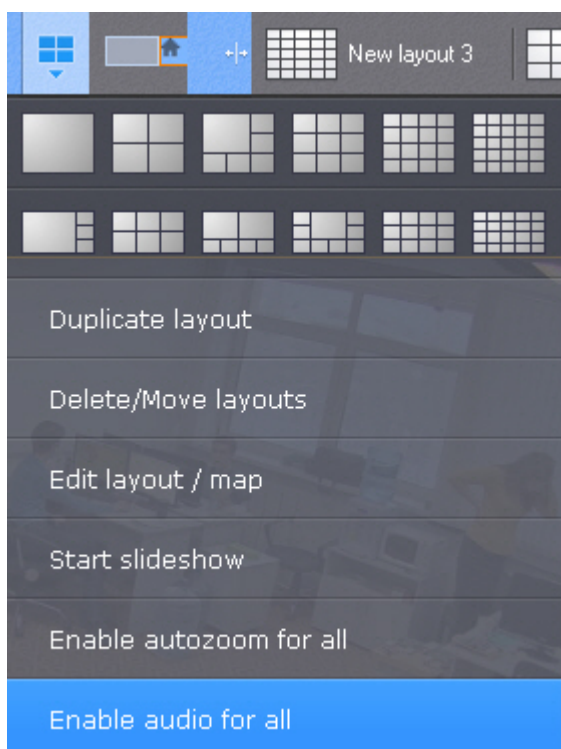


The microphone icon now becomes active.



To turn off broadcasting of sound on a camera speaker, click the microphone icon again.

To broadcast sound on speakers on all cameras in a layout, in the context menu of the layouts ribbon, select **Enable total audio**.



The microphone icon is then activated for all cameras that have an activated **Speaker** object.

To turn off sound broadcasting on all cameras, select **Disable total audio**.

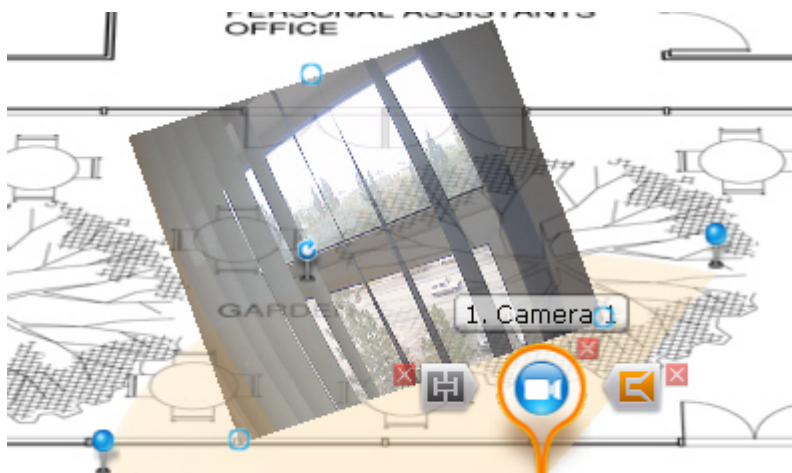
Working with the Interactive Map

Rus

You can use the interactive map in three modes;

1. 3D mode, in which both the map and layout are available
2. 2D mode, in which only the map is available
3. immersion mode, in which video is overlaid on the map

The map can contain icons for cameras, relays, and sensors. The area in which live video is displayed and field of view are indicated for each camera.



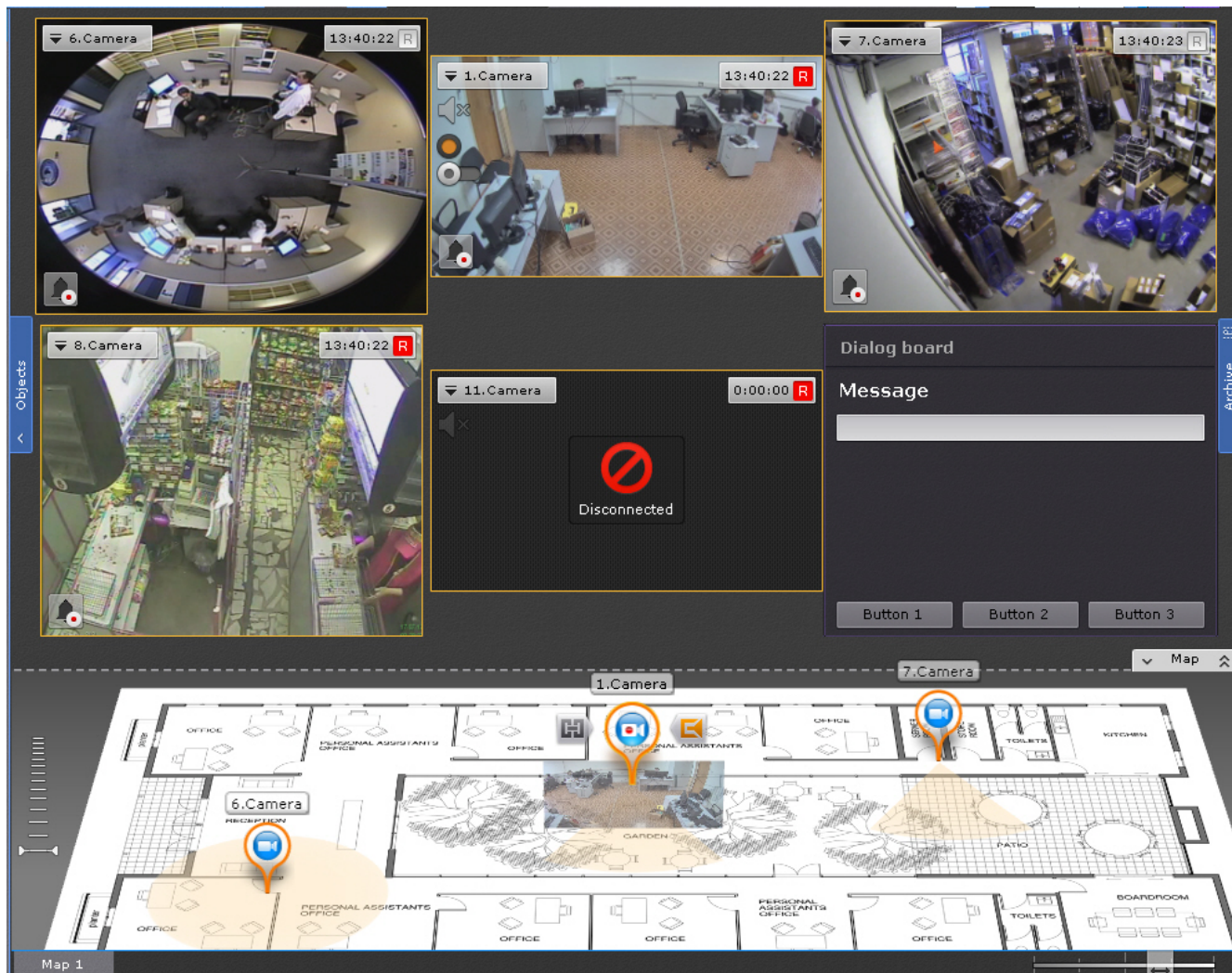
Opening and closing the map

Rus

You can switch to Map View from all modes of operation except for Archive Search.

To go Map View, click the **Map** button in the bottom right corner .

The Map will open in a 3 D view while the current layout contracts to fit the screen area over the map.



To switch to 2D map view and close the layout, click the  button to the left of the **Map** button.

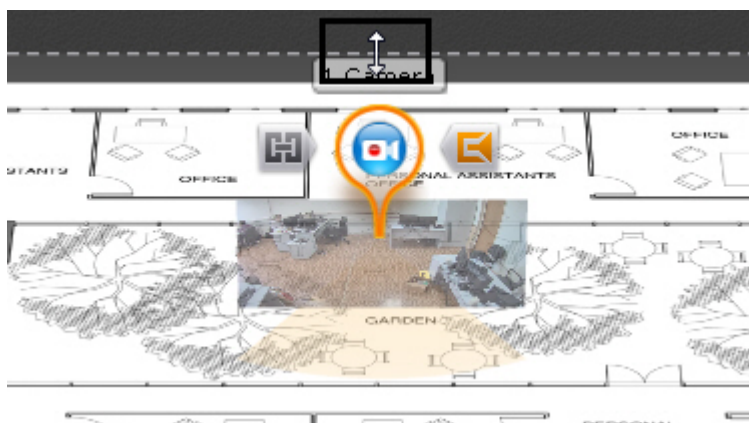
If you expand a tile to full screen, the map auto-hides (see [Scaling the Viewing Tile](#)).

Note
When you minimize the tile, the map appears again.

Changing the map tilt

Rus

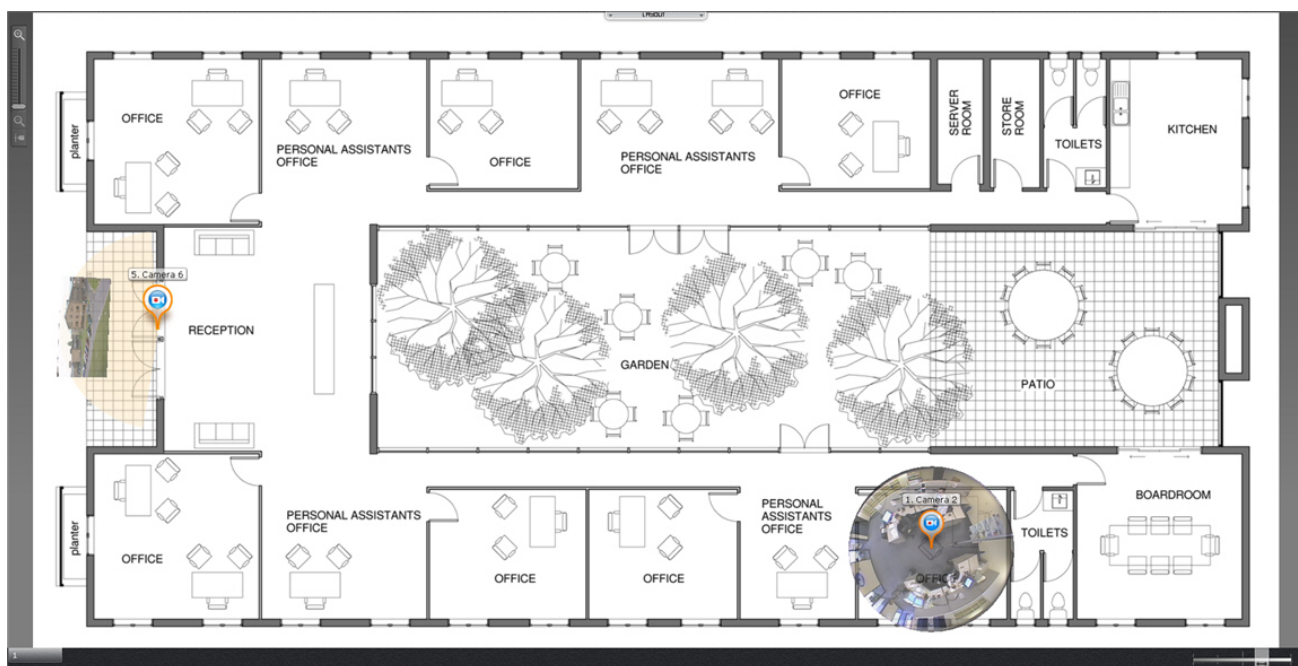
You can change the tilt of the map by adjusting the border between the map and the layout areas.



To switch to 2D map view and close the layout, click the  button to the left of the **Map** button.

**Note**

You can also switch to 2D when the map is hidden.



To return to 3D, click the **Map** button. To close the map, click the  button.

Scaling and focusing of map

Rus

Map scale and focus can be changed both manually and automatically.

**Note**

The map is automatically resized and refocused if this function is activated in the settings (see [Configuring map autozoom](#)).

Automatic adjustment of map scale and focus occurs when a video camera alarm occurs, if no video camera icon is selected on the map.

In this case, the map is scaled and refocused to center the icon for the alarm camera on the map.

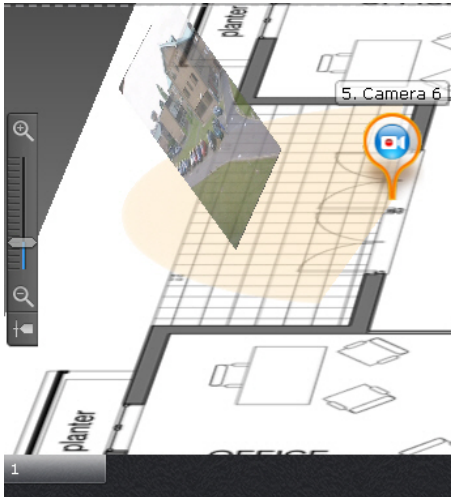
If alarms occur for several video cameras simultaneously, the map scale and position are adjusted to show all icons for the relevant video cameras.

After a video camera alarm ends and there are no alarms for other video cameras, the map scale and position return to their initial status.

Automatic scaling and focusing of the map stops during the following actions:

When the user clicks to select the icon of a video camera on the map or viewing tile

To manually adjust the map scale, use the mouse scroll wheel (the cursor must be above the map) or use the map scale slider.



After increasing the scale, you can refocus the map with the mouse (by clicking and holding the left mouse button) in the direction of your choice.

Adjusting transparency of map video

Rus

To change the transparency of video on the map, use the slider in the lower-right corner.



If the slider is in the far left position, the video is not displayed on the map. If the slider is in the far right position, the video is opaque.

Immersive mode

Rus

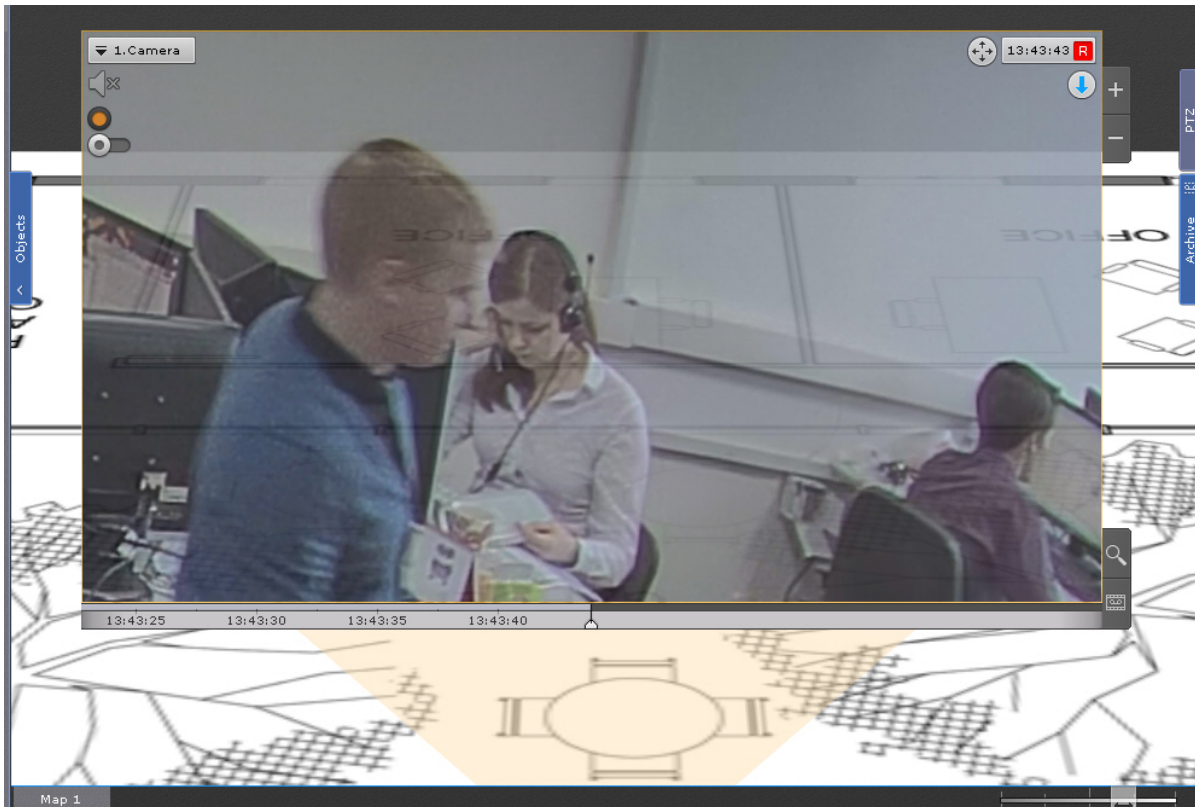
In immersion mode, video from a selected camera is overlaid on the map display.

If links have been created between video and the map (see [Configuring cameras in immersion mode](#)), an angle will be chosen so that objects in the video match the objects as depicted on the map.

If links have not been created, the map is shown so that the video is located in the field of view specified for the camera on the map. The field of view is oriented upwards.



To switch to immersion mode, click the  button on the left border of the viewing tile or, on the map, left-click a video icon, field of view, or video display area.



In immersive mode you can view video from only one video camera at a time.

To select another video camera, do one of the following:

1. Click the video camera icon or its field of view on the map, if possible.
2. Exit immersive mode and select the necessary video camera on the map.

To exit immersive mode, do one of the following:

1. Click the  button.
2. Minimize the viewing tile by clicking the  button.
3. Click a part of the map that does not contain the camera field of view.



Note

Actions 2 and 3 do not apply if a fisheye camera is in immersive mode (see [Fisheye cameras in immersive mode](#))

Switching between maps

Rus

In any mode, you can switch between the maps that have been created in the system.

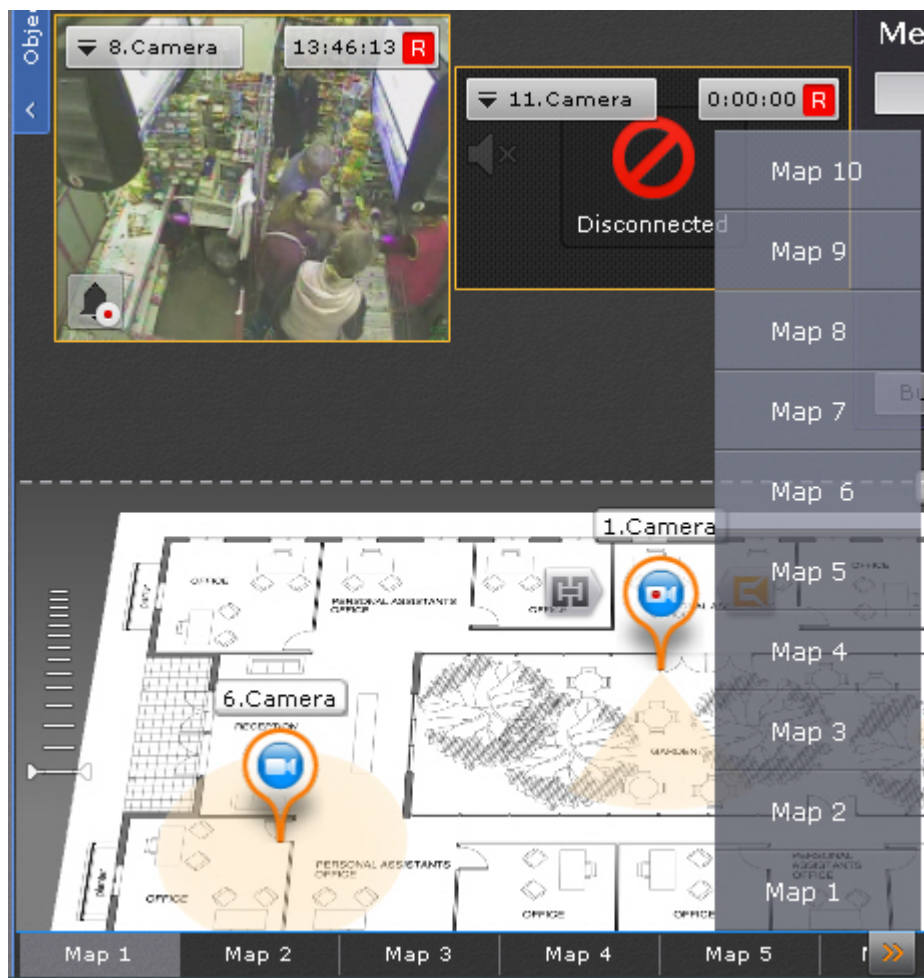
You can switch between maps in two ways:

1. In the lower-left corner of the screen, select the corresponding tab



Note

If many maps have been created, some tabs may not fit on the screen. If this happens, click the  button. In the drop-down menu that opens, select a map.



2. By left-clicking a map icon for switching, if it has been created (see [Adding switches to another map](#)). The icon header shows the name of the destination map.



Controlling devices from the map

Rus

You can manage devices on the map (video cameras, relays) by using the context menus of the corresponding icons. You can control devices in all modes.

Commands for controlling video cameras are given in the table below.

Command (context menu item)	Condition	Icon status after the command is performed
Arm	The camera is disarmed	
Private Arm Arming and Disarming a Video Camera	The camera is disarmed	
Disarm	Camera armed	

Commands for controlling relays are given in the table below.

Command (context menu item)	Condition	Icon status after the command is performed
Turns the relay on	Relay in normal status	
Disable relay	Relay is activated	



Note

From within the map, you cannot switch the status of the relay if there are macros with the corresponding action running in the system

Displaying device status

Rus

The icons on the map indicate the current status of the corresponding devices.

The table below possible status states of the video camera icon are described in the following list.

Map icon	Camera status
	Camera disarmed, no archive recording
	Camera disarmed, archive recording active
	Camera armed, no archive recording
	Camera armed, archive recording active
	Camera alarm, archive recording active

The table below possible status states of the relay icon are described in the following list.

Map icon	Relay status
	Relay is activated
	Relay in normal status



Note

When a macro changes the relay status, the relay icon on the map does not change.

The table below possible status states of the sensor icon are described in the following list.

Map icon	Sensor status
	Video camera is armed, sensor is in normal status

	Video camera is armed, sensor is in alarm status
	Video camera is disarmed, sensor is in normal status
	Video camera is disarmed, sensor is in alarm status

Exporting Frames and Video Recordings

Rus

Users with the corresponding rights can export snapshots and video. If a Client is connected to multiple Axxon-domains, export of snapshots and video is available only for cameras on the Axxon-domains on which the user has the corresponding rights.

Snapshots can be exported to JPG or PDF. Video can be exported to AVI, MKV, or EXE.

The name of the exported file contains the following information: name of camera, export date, and export duration.



Note.

The date and time of the event in the file name are given based on the Windows locale settings.

When exporting a snapshot to PDF, you can also print the document immediately.

A digital watermark is added to exported snapshots and video. Watermark authentication is available in the corresponding bundled utility (see the [Digital Signature Verification Utility](#) section).

Titles containing a date and time stamp will be superimposed on exported video.



Note.

Captions are stored in a separate video track and, if necessary, are disabled in the player through software.

Frame export

Rus

You can export snapshots at any time when working with a camera in Axxon Next.

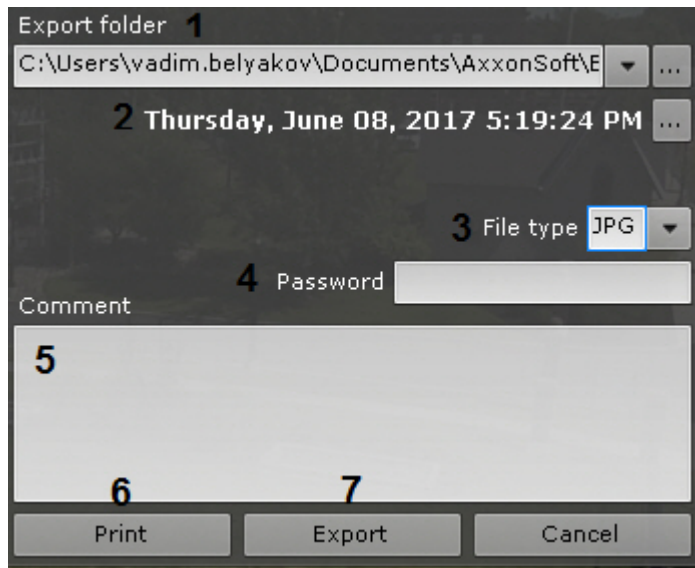
To export a snapshot:

1. If exporting from archive mode or archive analysis mode, specify an export area and mask if necessary (see the [Configuring export area and masks](#) section).
2. In the viewing tile, in the upper-right corner, click the  button.
If the user is viewing live video or playing back archived video, the exported snapshot will be what was visible on the screen when the button was clicked.
3. Specify the folder to which you want to export the snapshot (**1**).



Note.

By default, snapshots are exported to the folder specified in the export settings (see the [Configuring export](#) section).



4. Select the date and time for a snapshot (2). The default setting is the frame currently displayed in the viewing tile. If you are watching recorded video, then the snapshot with the frame displayed at the time when you hit the button



Note.

If you are watching live video, then the snapshot with the frame displayed at the time when you hit the button. Date and time fields are not displayed.

5. Select the snapshot format: PDF or JPG (3).
6. If you want to export a snapshot to an encrypted zip archive, set a password (4).
7. If exporting a snapshot to PDF format, you can add comments (5).
8. If exporting to PDF, you can immediately send the file to print (6). In this case, the snapshot is not saved to disk.
9. To export the snapshot, click the corresponding button (7).

Export begins. Progress is shown in the export panel (see the [Viewing export progress](#) section).

Export of the frame is now complete. The frame exported to JPG will also be placed on the Clipboard.

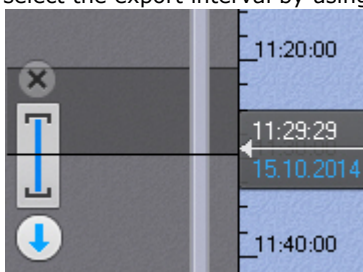
Exporting Video Recordings

Standard video export

Rus

Standard export of video takes place as follows:

1. An export range (timeframe) is set.
Set the export interval on the primary or secondary timeline. You can do it later by entering the date and time (see item 3c below):
 - a. on the main timeline, move the bar to the beginning of the range that you want to export. Click the button. Move the bar to the end of the range that you want to export. Click the button. You can also select the export interval by using the right mouse button. To clear the interval, click the button;
 - b. you can specify the range on the additional navigation panel in the same way, by clicking the buttons. You cannot use the mouse to set the export range on the additional navigation panel.
2. Setting export area and masks (see the [Configuring export area and masks](#)).
3. Setting an export format, specifying where to save exported files, and adding comments.
 - a. On the timeline or in a viewing tile, click the button. The export window opens.



- b. If necessary, change the export path (1). By default, the file is exported to the folder specified in the settings (see the [Configuring export](#) section).
- c. You can set the start and end time of the exported episode in the calendar (2).

- d. If necessary, specify a different file format for exporting the video (3). Three video formats are available when exporting: MKV, EXE, and AVI.



Note.

Video is exported in MKV format without recompression.

Video is exported in AVI format with recompression in the selected codec (see point 4).

When video is exported in EXE format, a self-contained executable file is generated, containing video, playback tools, and necessary codecs.

- e. If you want to export to an encrypted zip archive, set a password (4). If you are exporting an .exe file, you will need to enter a password when you open the file.
- f. If necessary, add comments for the export. The comments will be shown as captions when the exported video is played (5).
- g. Click the **Export** button (6).

The export process begins. Progress is shown on the export panel (see the [Viewing export progress](#) section).



Note.

You can stop export at any time by clicking the **Stop** button.



Note.

The duration of the exported file can be longer than the specified one, because the keyframe is not always at the beginning of the export interval.

Instant video export

Rus

You can instantly export video without needing to specify an export range. To do so, click the  button in a viewing tile at any time.



Note.

Then specify export settings, as described in the [Standard video export](#) section.

If export is performed from Live Video mode, the first frame of the exported video will be the moment when the  button was clicked. Export will continue for 10 minutes or until the **Stop** button on the export panel is clicked (see the [Viewing export progress](#) section).

If export is performed from archive mode or archive analysis mode, the first frame of the exported video will be the position of the bar on the timeline when the  button was clicked. Export will continue for 10 minutes or until the **Stop** button on the export panel is clicked (see the [Viewing export progress](#) section).

The length of the exported video clip will depend on the time of export and resources of the Server.



Note.

If export is performed from archive mode or archive analysis mode, you can pre-configure an export area and masks (see the [Configuring export area and masks](#) section).

Simultaneous export of video from multiple cameras

Rus

If multiple cameras in a layout have been switched to archive mode, you can simultaneously export video from all of them.

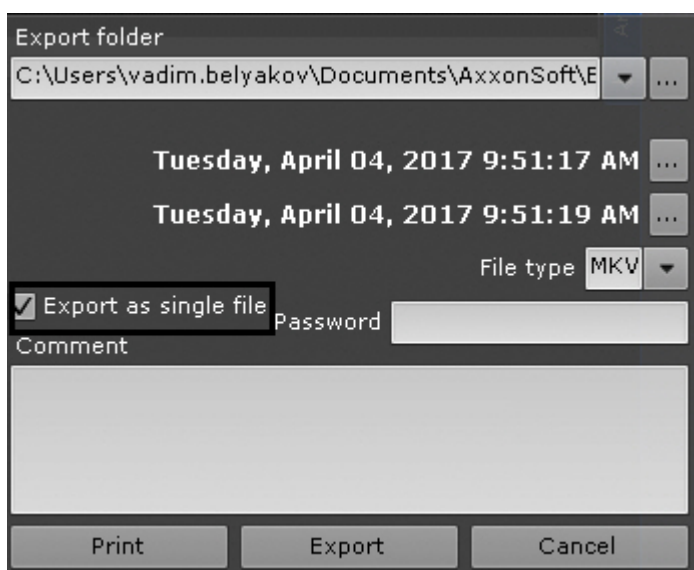
To do this, select the export interval on the primary timeline or in the calendar and start exporting (see the [Standard video export](#) section).

By default, the video is exported to a single file. To export video from different video cameras to separate files, deselect the **Export as single file** check box in the export window.



Note.

When you export to one file, the streams are written in parallel. To view exported video, use a player that allows playing multiple instances and different streams in each (for example, VLC).



Video from each camera is exported to a separate file. Comments made during export are added to each exported video.



Note.

For each video you can pre-set an export area and masks (see the [Configuring export area and masks](#) section).

Configuring export area and masks

Rus

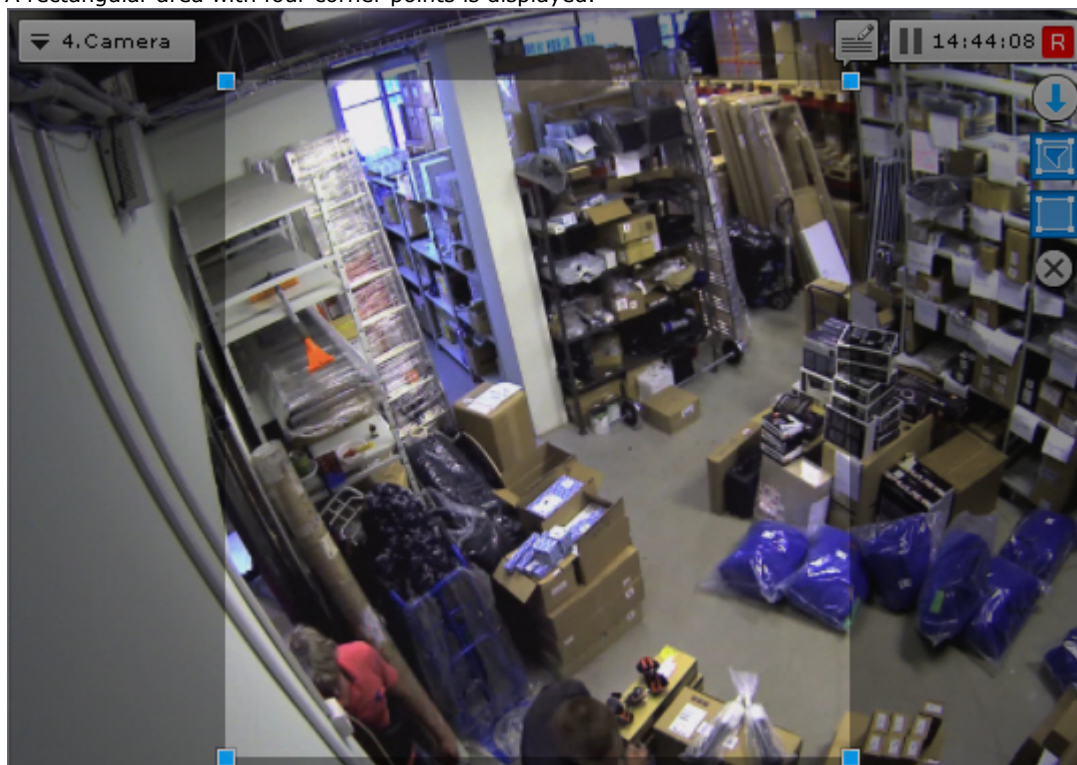
If you are exporting a snapshot or video from archive mode or archive analysis mode, you can specify an export area and masks.

You can specify an export area and masks at the same time.

By specifying an export area, you export only the portion of the frame that is of interest, while omitting the remainder.

To specify an export area:

1. In a viewing tile, click the  button.
A rectangular area with four corner points is displayed.



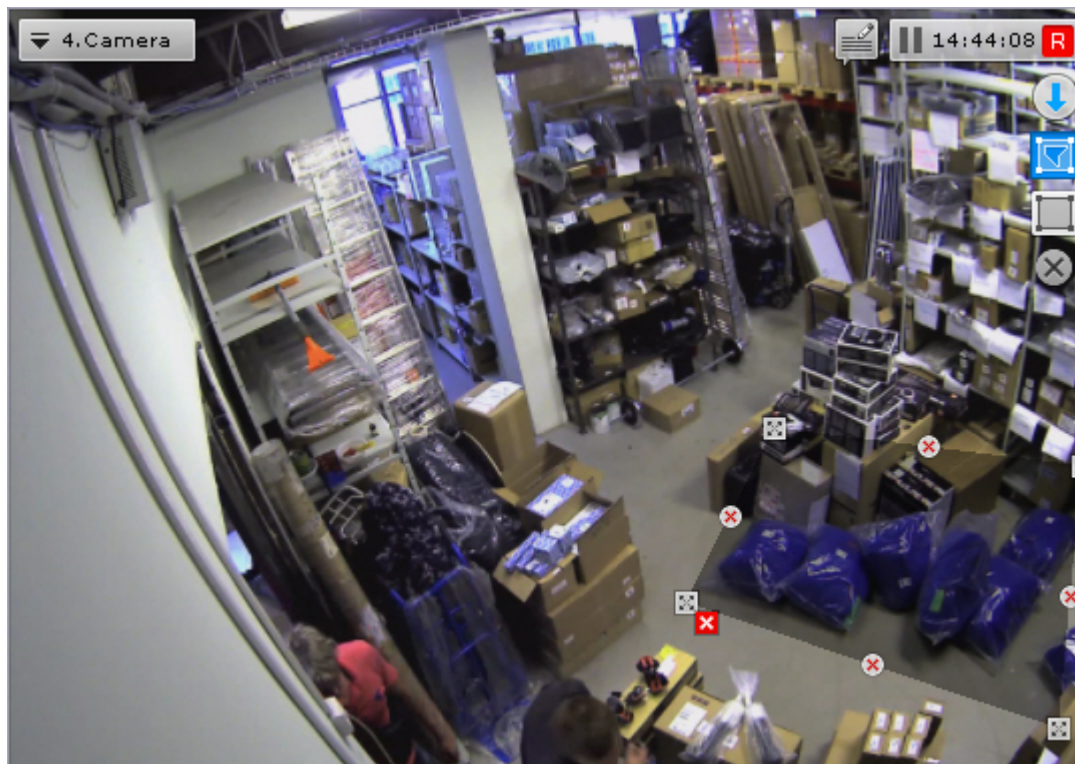
2. Reposition the corner points to specify the area that you want to export. To reposition the corner points, left-click a corner point and drag it.

Configuration of the export area is now complete.

Masking allows you to hide complex or irrelevant areas of the frame so that they do not appear in an exported file. You can set an unlimited number of masks.

To specify a mask:

1. In a viewing tile, click the  button.
2. Use the corner points to enclose the area that you want to mask. To add a corner point, left-click the video. You can add an unlimited number of corner points.



After you add a mask, you can perform the following actions:

- Move corner points (left-click a corner point and drag it).
- Delete corner points (right-click a corner point).
- Delete a mask (click the  button).
- Add a new mask.

Mask creation is now complete.

In the exported snapshot or video, the masked area is filled in with black.



Viewing export progress

Rus

After export is started, the export progress is displayed on the export panel. The export panel is displayed near the top of the monitor after the export process is started, and is hidden after all messages are closed.



To stop the export process, click the **Stop** button. In this case the file will be saved. The length of the exported fragment will depend on the export time and resources of the Server.

To cancel export, click the **Cancel** button. In this case, the file is not saved.

If several export processes are active, you can switch between them by clicking the   buttons. The following information is displayed between them: number of the current export operation / total number of export operations (export progress for all operations).

To close the export progress message, click the  button.

 **Note.**
If export is active, you cannot close the message.

Macros control

Rus

If the system has cyclic macro (see [General information about the macros](#)), then the upper pane shows the  control menu.



Those macros that are currently active (enabled as **Always** or within a time schedule, see [Create Macros](#)), are marked as (**On**).

To enable or disable macros you need to select them in the list. When you disable a macro, the mode is changed to **Never**.

 **Note**
If you disable a macro, which is active within the time schedule, then this mode will be restored after reactivation.

Event-driven macros can be triggered by using the corresponding buttons on the Dialog board (see [Working with Dialog Board](#)) or by using hotkeys.

Automatic license/number plate recognition (ANPR)

Rus

VMS logs every ANPR number (see [The System Log](#)).

All relevant events can be displayed on the Events Board (see [Working with Events Boards](#)) or Message Board (see [Working with Dialog Board](#)).



Event Control

Rus

Event control in the Axon Next software package can be conducted in three ways:

1. In Live Video mode
2. Using the system log
3. By logging events in external logs



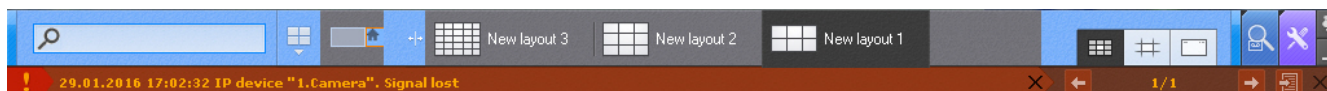
Note

Configuration of logging to external files is carried out through the log management utility (see the section [Log Management Utility](#)).

Control in Live Video Mode

Rus

Messages about system errors which have occurred are displayed in real time on a dynamic error panel. When there are no unaccepted errors, this panel is not displayed; when there are such errors, it is displayed in Axon Next's **Layouts** and **Alarms** tabs.



Note

This feature is configured on the **Permissions** tab (see the section [Creating and configuring roles](#)).

To accept an error and delete it from the error panel, click the cross.

To accept all errors and close the error panel, click the cross on the right-hand side of the panel.

To switch between error messages, click the   buttons.

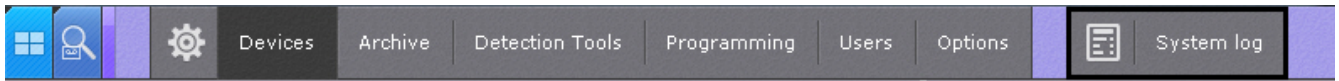
To jump to System Log (see [The System Log](#)), and open error messages, click the  button.

The System Log

Rus

Information about events which have occurred in the system is stored in the system log.

To access the system log, select **Settings -> System log** .



When you do this, a window appears which can be used to search, view, and export system log events.

Setting Event Search Filters

Rus

To view and/or export system log events, first you need to perform a search for them.

To search for system log events, you need to set one or more filters:

1. Time period during which the events were recorded.
2. Event type:
 - a. Information;
 - b. Alarm;
 - c. Error;
 - d. Debug;
 - e. Audit - user actions log.
3. A key phrase contained in the system event descriptions.



Note

The time period is a mandatory filter, while the event type and key phrase are optional.

Search filters can be set as follows:

1. In the **To** and **From** fields (1) you can enter the date and time of the beginning and end of the period during which the events you are searching for were recorded.

The screenshot shows a 'Filter parameters' window. It has several sections: 'From' and 'To' date/time pickers (labeled 1), an 'Event type' list (labeled 2) with checkboxes for Debug info, Info, Alarm, Error, and Audit, 'Available Axxon-domains' (labeled 3) with a dropdown set to 'All Axxon-domains', a 'User' dropdown (labeled 4), and a 'Search' text field (labeled 5) with a 'Search' button. There are also 'Back', 'Next', and 'Add new events to results of the search' buttons at the bottom.

Note

The date format is DD-MM-YYYY and the time format is HH:MM:SS.XXX.



Note

By default, the event search period is defined as the past 24 hours.

2. Selecting event types for search (2).
3. Select the Axxon domain where you need to search for events (3).
4. If user actions search was selected (the **Audit** type), choose a particular system user (4). If no user is selected, the search function will return actions of all system users.
5. Enter the text that matches the events you want to find in the **Search Text** field (5). To find license plate numbers, enter the full or partial number. Use **?** (any one character) and ***** (any number of any characters). For example, a search query **?20*** shows all vehicles with a license plate containing **2** and **0** in the second and third position respectively. The total number of characters in number plates can be arbitrary.



Attention!

You can use the logical OR when searching data in the system log. The text must be separated by either a space or a colon (:).

The event search filters have been set.

Next you must start the event search (see the section titled [Event search procedure](#)).

Event search procedure

Rus

To start a search for system log events which satisfy the filters which have been set (see the section [Setting Event Search](#)

Filters), click the **Search** button (1).

Filter parameters

From

29.01.2016 0:00:00

To

29.01.2016 23:59:59

Event type

☒ Debug info

☒ Info

☒ Alarm

☒ Error

☒ Audit

Available Axxon-domains

All Axxon-domains

Search

Search

Back

Next

☐ Add new events to results of the search

Export

Clear

3

Date & time	Event type	Description
29.01.2016 17:01:53	Audit	Export on device "8.Camera" of Server "V-BELYAKOV" from archive "". Full path "C:\Users\vadim.belyakov\...
29.01.2016 17:01:48	Audit	Export on device "2.Camera" of Server "V-BELYAKOV" from archive "Archive AliceBlue". Full path "C:\Users\...
29.01.2016 16:39:05	Audit	Parameter "Enable" of speaker "2.0.Speaker" of device "2.Camera" set to "Yes"
29.01.2016 16:36:21	Audit	Login to Server "V-BELYAKOV", user "root"
29.01.2016 16:34:53	Audit	Logout from Server "V-BELYAKOV", user "root"
29.01.2016 16:34:20	Audit	Parameter "Enable" of microphone "1.0.Microphone" of device "1.Camera" set to "Yes"
29.01.2016 16:18:00	Audit	Device "7.Camera" of Server "V-BELYAKOV": Alarm classified as critical
29.01.2016 16:17:59	Audit	Alarm classified on device "7.Camera" of Server "V-BELYAKOV"

When you do that, a search results table appears (2).

To accept all errors and close the error panel, click the **Clear** button (3).

Refreshing Event Search Results

Rus

You can automatically refresh the event search results table, i.e., add events to it which happened after the search was started (see the section [Event search procedure](#)). To do this, select the **Add new events to the results of the search** check box.

Filter parameters

From

29.01.2016 0:00:00

To

29.01.2016 23:59:59

Search

Search

Back

Next

☐ Add new events to results of the search



Note

Select this check box to update events automatically with no need to search again.

Viewing Event Search Results

Rus

System log event search results are displayed in a table (1).



Note

Events in the table are sorted by the date they were registered, beginning with the most recent one.

Filter parameters

From: 29.01.2016 0:00:00 To: 29.01.2016 23:59:59

Event type: ☒ Debug info, ☒ Info, ☒ Alarm, ☒ Error, ☒ Audit

Available Axxon-domains: All Axxon-domains

User:

Search:

☐ Add new events to results of the search

Date & time	Event type	Description
29.01.2016 14:16:24	Audit	Armed state on device "7.Camera" of Server "V-BELYAKOV"
29.01.2016 12:50:36	Audit	Disarmed state on device "7.Camera" of Server "V-BELYAKOV"
29.01.2016 12:32:26	Audit	Added detection "Situation Analysis" of device "8.Camera" on Server "V-BELYAKOV"
29.01.2016 11:41:36	Audit	Added device "8.Camera" on Server "V-BELYAKOV"
29.01.2016 11:41:31	Audit	Added device "7.Camera" on Server "V-BELYAKOV"
29.01.2016 11:41:26	Audit	Added device "6.Camera" on Server "V-BELYAKOV"
29.01.2016 11:14:07	Audit	Device "1.Camera" of Server "V-BELYAKOV": Alarm classified as critical

Table column	Contents of column
	Switching to archive video of specific events
Date & time	Date and time the event was recorded in the system in the format DD.MM.YYYY HH:MM:SS
Event type	Event type (information, alarm, debug, error)
Description	System description of the event

The search results table may be more than one page. To navigate through a table which is more than one page, use the following buttons (2):

1. **Back** Goes back to the previous page of the table.
2. **Next** Goes to the next page of the table.



Note

Once the *Axxon Next* VMS is installed, the log may show a **Table end violation** error. This is part of the installation routine and not a bug.

Once the *Axxon Next* VMS is installed, the log may show a **Table end violation** error. This is part of the installation routine and not a bug.

Exporting Event Search Results

Rus

To export the system log event search results, click the **Export** button.

Event type: ☒ Debug info, ☒ Info, ☒ Alarm, ☒ Error, ☒ Audit

Available Axxon-domains: All Axxon-domains

User:

When you do this, the standard Windows "Save as" dialog box appears, using which you can save the search results as a file with a .txt (text) extension or .csv (comma-separated).

Date & time	Event type	Description
23/09/2010 16:49:53	Alert	Camera Camera.
Change in the alert status: alert processed by user root with resolution False alert		
23/09/2010 16:35:45	Alert	Camera Camera.
Alert initiated by user root		
23/09/2010 16:35:43	Alert	Camera Camera.
Change in the alert status: alert processed by user root with resolution False alert		
23/09/2010 16:32:50	Alert	Camera Camera.
Alert initiated by user root		
23/09/2010 16:32:49	Alert	Camera Camera.
Change in the alert status: alert processed by user root with resolution False alert		
23/09/2010 16:28:05	Alert	Camera Camera.
Alert initiated by user root		
23/09/2010 16:28:03	Alert	Camera Camera.
Change in the alert status: alert processed by user root with resolution False alert		
23/09/2010 16:26:11	Alert	Camera Camera.
Alert initiated by user root		
23/09/2010 16:23:41	Alert	Camera Camera.
Change in the alert status: alert processed by user root with resolution False alert		
23/09/2010 16:22:33	Alert	Camera Camera.
Alert initiated by user root		

Switching to archive video of specific events

Rus

To switch to archive video of specific events, click the  icon next to the event or double-click the relevant row.

	Date & time	Event type	Description
	29.01.2016 16:18:00	Alarm	!!! MUST LOCALIZE: SystemMessage_AlertState3, Alern
	29.01.2016 16:17:55	Alarm	Camera {ObjectFriendlyName}: Alarm pending
	29.01.2016 16:17:55	Alarm	Camera "7.Camera": Alarm initiated by macro
	29.01.2016 16:17:50	Alarm	!!! MUST LOCALIZE: SystemMessage_AlertState3, Alern
	29.01.2016 16:17:47	Alarm	Camera {ObjectFriendlyName}: Alarm pending
	29.01.2016 16:17:47	Alarm	Camera "7.Camera". Alarm is initiated by user "root"
	29.01.2016 16:14:53	Alarm	!!! MUST LOCALIZE: SystemMessage_AlertState3, Alern
	29.01.2016 16:14:51	Alarm	Camera {ObjectFriendlyName}: Alarm pending
	29.01.2016 16:14:51	Alarm	Camera "7.Camera". Alarm is initiated by user "root"

The system will now switch to archive mode and fetch the video of the selected event.

AxxonCloud Setup and Operation

AxxonCloud Overview

Rus

AxxonCloud is a cloud service by ITV|AxxonSoft enabling you to:

- securely connect to the Server,
- store licenses,
- send macro notification e-mails letting you know when you can view exported frames and videos,
- send push messages to mobile clients.
- Connection to Axxon-domain is required for AxxonCloud to work correctly.

**AxxonCloud**

Remote video surveillance and notification about important events

AxxonCloud connects to your Axxon Next server via Internet. It is safe - your traffic is protected with SSL encoding.



Remote viewing of live video and recordings from your video surveillance cameras.



Email notifications about events of saving and viewing video recordings.



Push notifications in Axxon Next mobile app for iOS and Android.

Email

Password

Log in

Log in with social network account



[Forgot password?](#) [Register](#)

Registration and Authorization in AxxonCloud

Rus

To register with AxxonCloud, do as follows:

1. On the AxxonCloud home page, click **Register**.
2. Fill in the **Email**, **Password** and **Confirm Password** fields.

Email

Password

Confirm password

☐ Show password

Register

3. Click **Register**.
A confirmation email will be sent to the specified e-mail address.
4. Confirm registration.

To log into AxxonCloud, enter your registration data and click **Log in**. You can also log in with your Vk, Google or Facebook account.

Email

Password

Log in

Log in with social network account



[Forgot password?](#) [Register](#)

Connecting Axxon Domain to AxxonCloud

Rus

To connect an Axxon domain to AxxonCloud, do as follows:

1. When logged in AxxonCloud, go to the **Dashboard** page and click **Assign domain**.

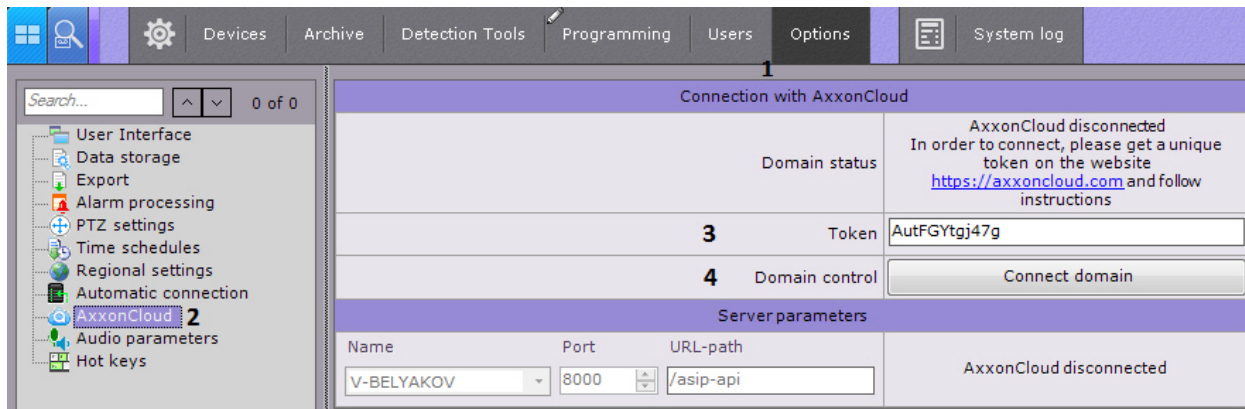
Password to assign to AxxonCloud

RAaNly2aJO

! For final device assignment, paste the password into the appropriate Axxon Next field and click the "Connect domain" button.

✂ COPY

2. Copy the security key.
3. In *Axxon Next VMS*, select **Settings** -> **Options** -> **AxxonCloud (1-2)**.



4. Paste the copied key into the **Token** field (3).
5. Click **Connect domain** (5).
If the connection is successful, the status in the *Axxon Next VMS* will change to **AxxonCloud connected**.

To disconnect AxxonCloud from the Axxon domain, do as follows:

- click **Disconnect Axxon-domain**;
- In AxxonCloud, on the **Dashboard** page, click next to the required Axxon domain and select **Delete**.



Configuring secure connection to a web server via AxxonCloud

Rus

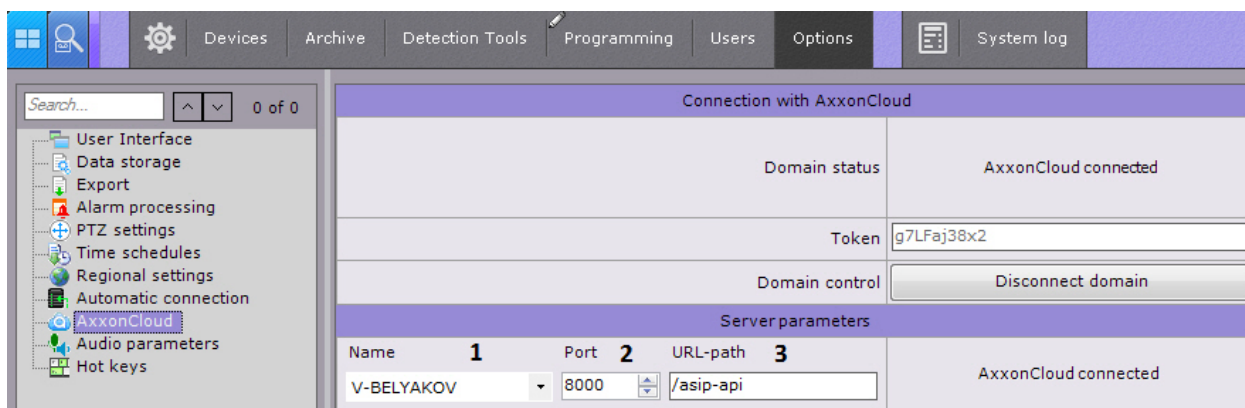
To establish a secure connection to the Web server via AxxonCloud, do as follows:

1. Select a Server of the Axxon domain that you want to connect to through an external port (1).



Attention!

The Web server must be running (see [Configuring the web server](#)).



2. Specify the connection port for the web server (2).
3. Specify the URL for AxxonCloud to connect to the Web server (3).
4. Click the **Apply** button.

If properly configured, the Web server will be online at t1.axxoncloud.com.

Configuring users and roles in AxxonCloud

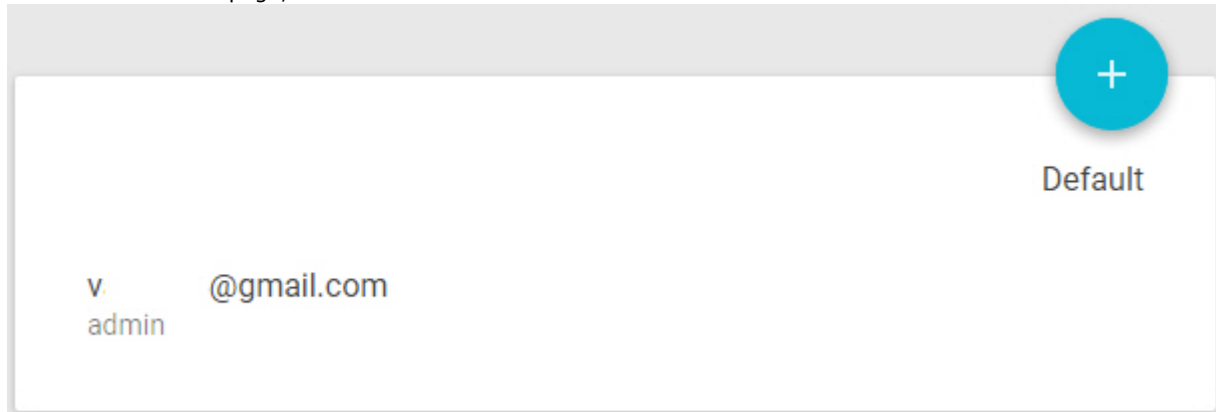
Rus

AxxonCloud users and roles are synchronized with *Axxon Next* (see [Configuring user permissions](#)). The user who connected the Axxon domain is added to the **admin** role and will be available in *Axxon Next*.

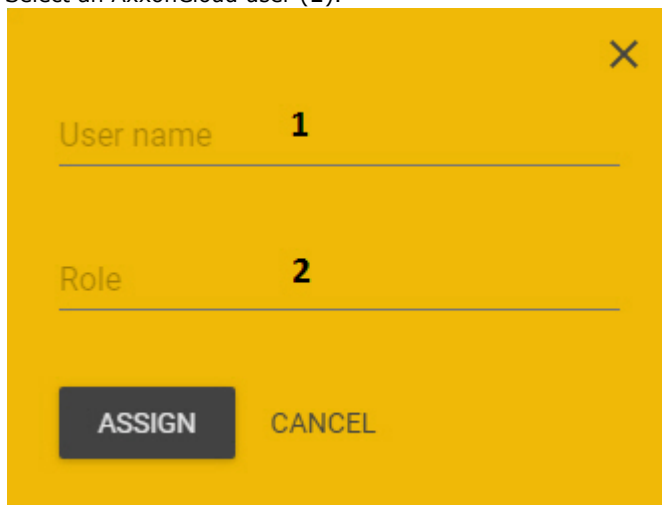
Users with the **admin** role in AxxonCloud can perform any actions with the Axxon-domain. All other users will have view-only rights.

To allow a user to work with the Axxon domain via AxxonCloud, do as follows:

1. On the **Dashboard** page, click the  icon in the Axxon domain.



2. Click the  button.
3. Select an AxxonCloud user (**1**).



4. Select the role you want to add the user to (**2**) from the list. To create a new role, enter the new role name in the field.

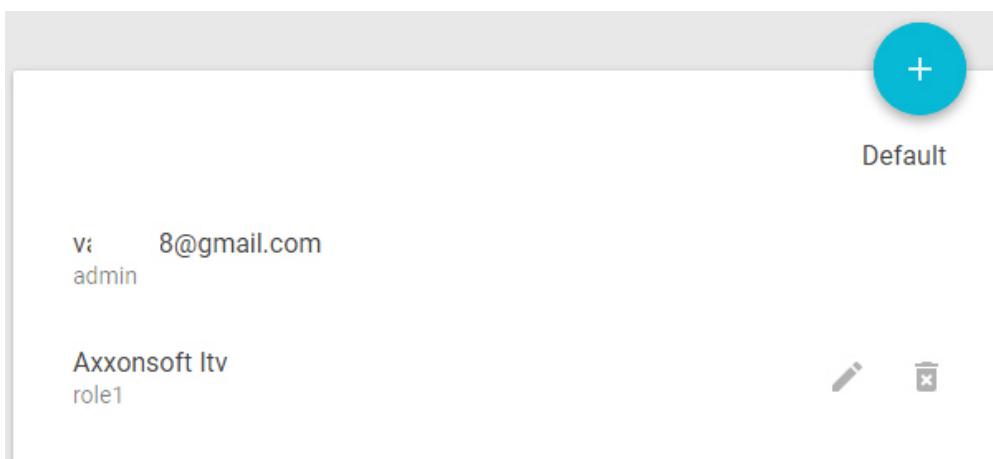


Note

The role will be automatically created in *Axxon Next* and will have minimal access rights.

5. Click the **Assign** button.

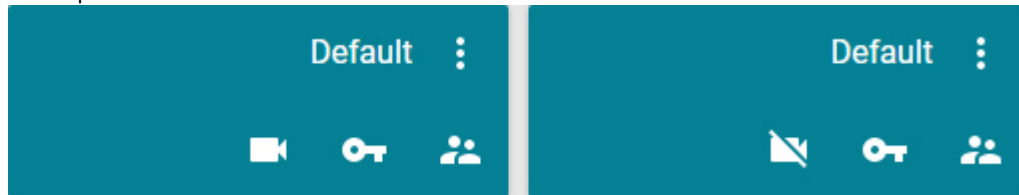
To change the user role, click the  button and select a new role. To delete the user, click .



To enable the user to edit multiple Axxon domains, do as follows:

1. On the **Dashboard** page, press and hold the CTRL key (on Windows and Linux, press CMD on Mac OS) and click on

the required Axxon domains.



2. Click  in the upper-right corner.
3. Then follow the procedure for adding a user for one domain. The list of roles will contain the roles of all selected Axxon domains.

Viewing exported data in AxxonCloud

Rus

If email notifications were configured via AxxonCloud (see [E-mail notification](#)) and contain a link to a frame or video, clicking the link will open the AxxonCloud interface where you can view that frame or video.

Note

To view the files, you must have access to the corresponding Axxon domain (see [Configuring users and roles in AxxonCloud](#)).



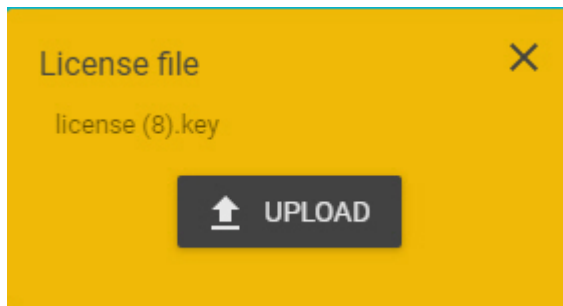
To open the video in full screen, click the  button. To download the video, click .

Storing licenses in AxxonCloud

Rus

You can store license files in AxxonCloud. To do this:

1. On the **Dashboard** page, click the  icon in the Axxon domain.
2. Click the  button.
3. Click the **Choose** button and select a license file.



- Click the **Upload** button.
The file will be uploaded and displayed in the table.

	Name	Distributed	Product	From	To
☐	license (7).key	No		1/1/1, 3:41:12 AM	1/1/1, 3:41:12 AM
☐	license (8).key	No		1/1/1, 3:41:12 AM	1/1/1, 3:41:12 AM

To delete a license file, select it and click the  button in the upper-right corner of the screen.

Working with Axxon Next Through the Web Client

Starting the web client

Rus

Use of Axxon Next through a web client takes place remotely, through a web browser and the TCP/IP protocol. Remote video surveillance via a web browser does not require installation of Axxon Next.

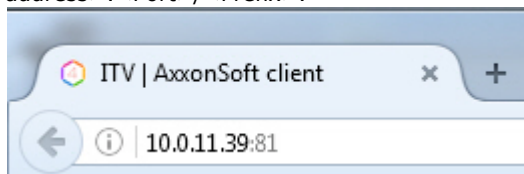


Important

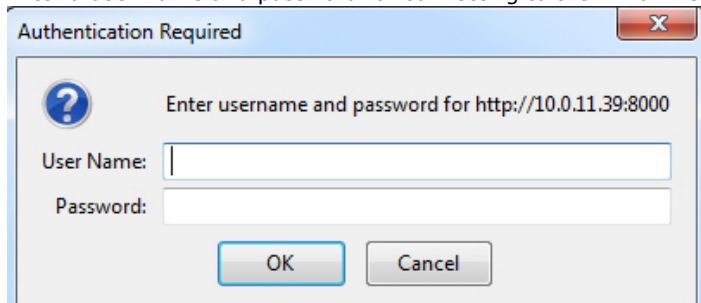
Opera browser supports Web-client starting from version 15.
In the Windows OS, the Web-client for Safari browser is not supported.

To start the web client:

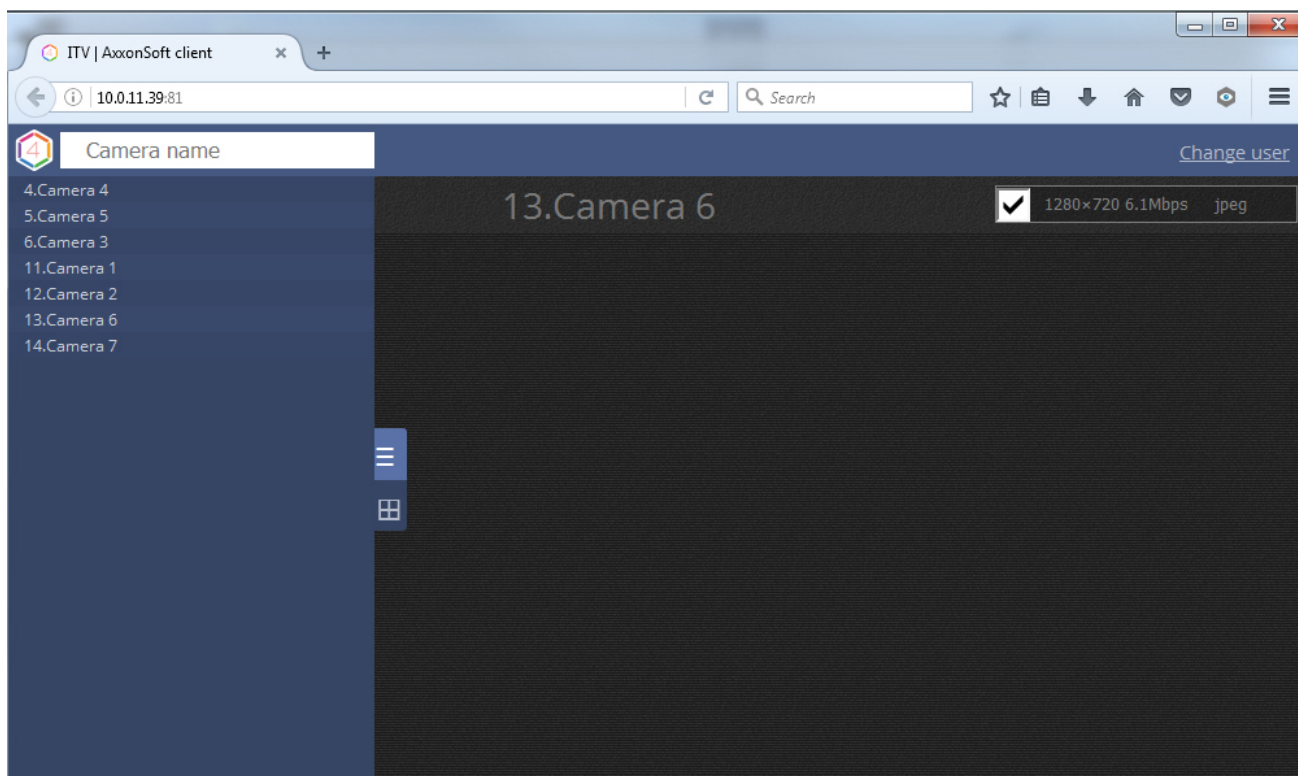
- Start a web browser.
- In the address bar, type the address of the Axxon Next server in the following format: <web server IP address>:<Port>/<Prefix>.



- Enter a user name and password for connecting to the Axxon Next web server.



The web client interface is then displayed.



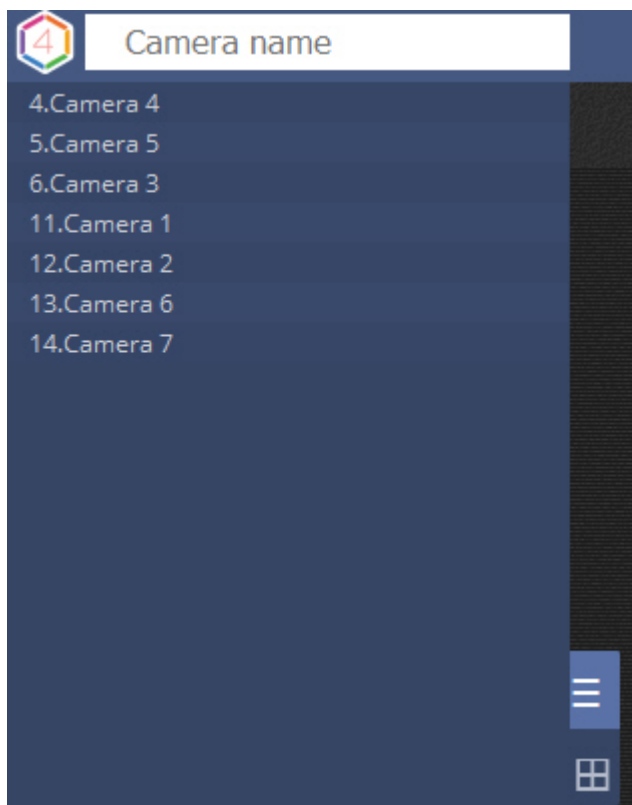
To change a user in the Web client, do as follows:

1. in the upper-right corner, click the **Change user** link and
2. log in again.

Searching for video cameras in the web client

Rus

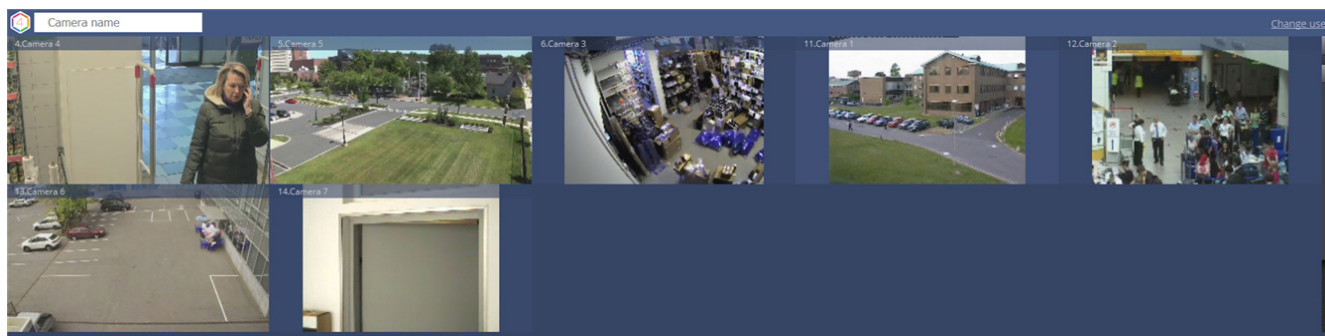
When you start the Web client, the cameras panel opens on the left. It shows a list of all connected devices.



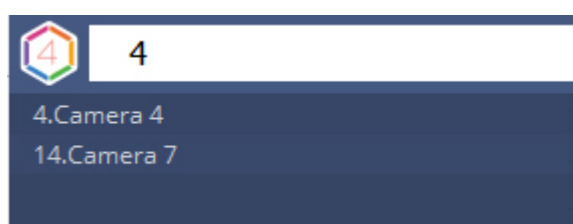
The Cameras panel shows cameras as:

- A list .

- Thumbnails .



To search for a camera, enter the full or partial device name in the **Camera name** box. Cameras that meet the search criteria will show on the Cameras panel.



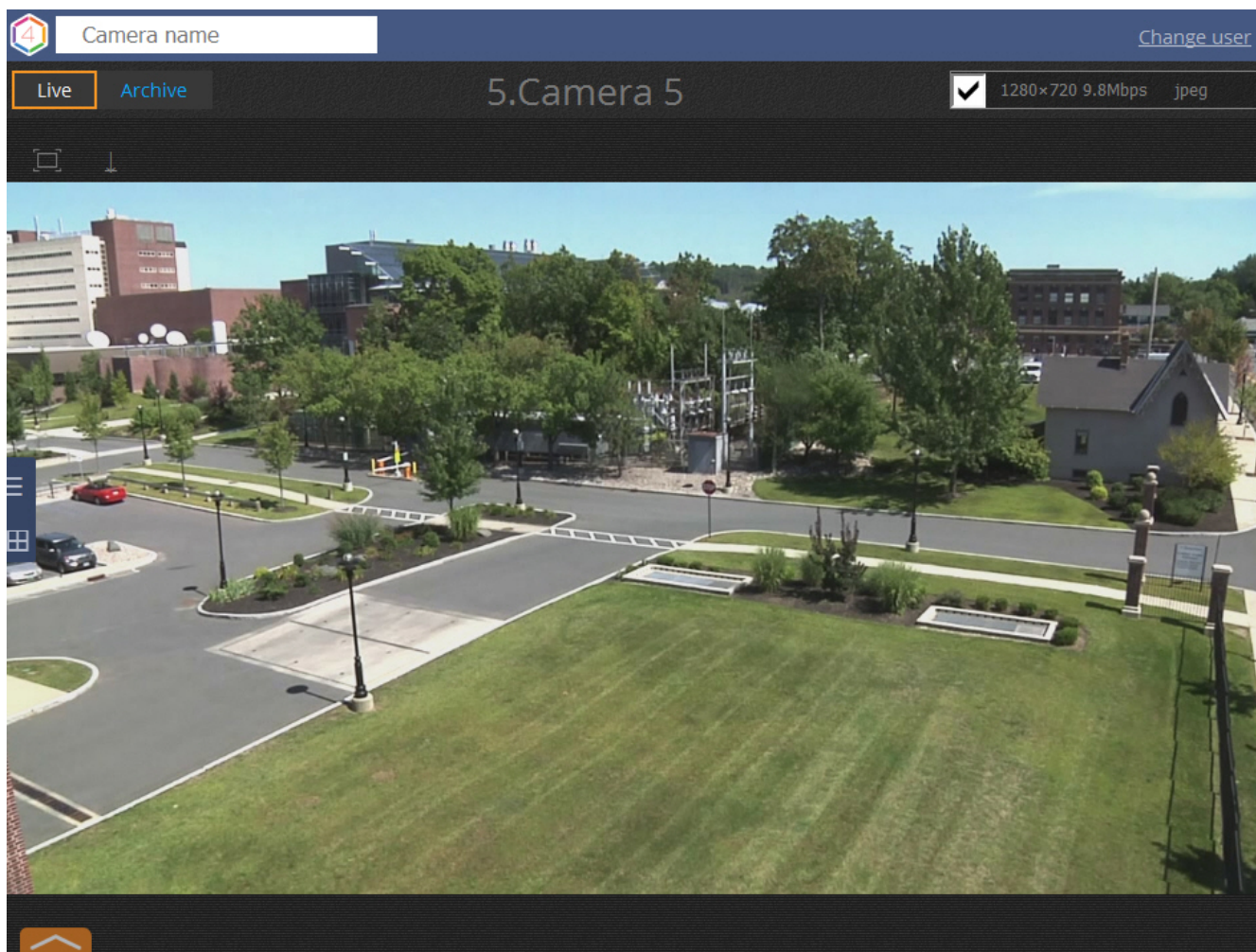
Note

When you add new cameras to your server configuration, they automatically appear in the Web client (no page reloading needed).

Real-time video surveillance via the web client

Rus

When you select a camera, the camera window appears on the panel (see [Searching for video cameras in the web client](#)).



To open the window in full screen, click the  button. To exit full screen, click the  button again or press **Esc**.

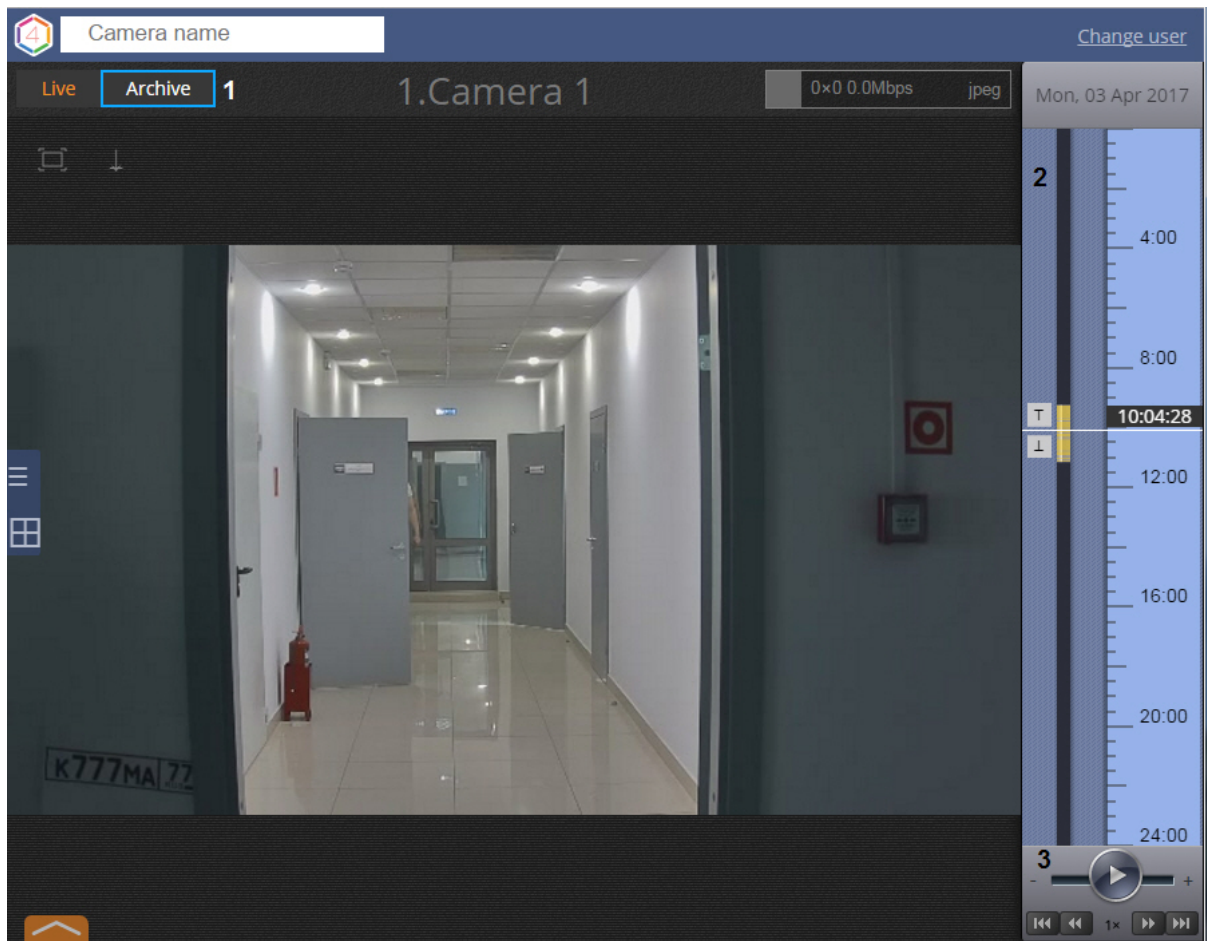
Sound from microphone on camera is disabled by default. To enable sound click the  button.

Viewing video archives through the web client

Rus

To view archived video for a video camera:

1. Select the relevant video camera.



2. Click the **Archive** button (1).
3. The archive navigation panel is then displayed, with the following interface features:
 - a. Timeline (2). Archive navigation via the timeline in the web client is the same as when working in the Axon Next client (see [Navigating Using the Timeline](#)).
 - b. Playback control panel (3). Archive navigation via the playback panel in the web client is the same as when working in the Axon Next client (see [Navigating Using the Playback Panel](#)).
 - c. Archive position selection panel. The archive position selection panel is opened by left-clicking the date above the timeline.

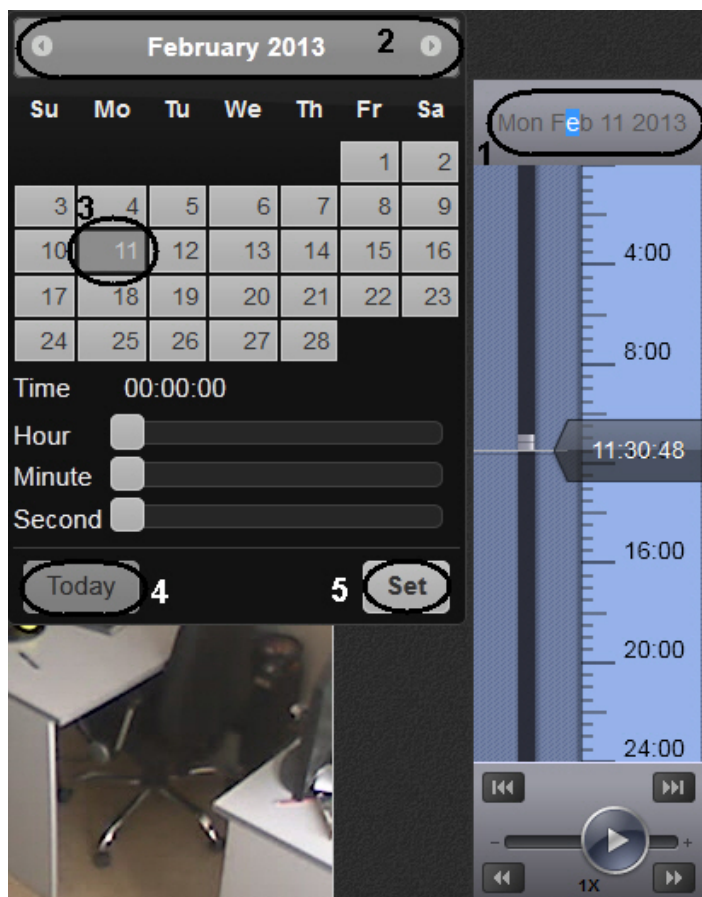
Sound from microphone on camera is disabled by default. To enable sound click the  button.

Archive position selection panel for the web client

Rus

To choose a time position in the archive by using the archive position selection panel:

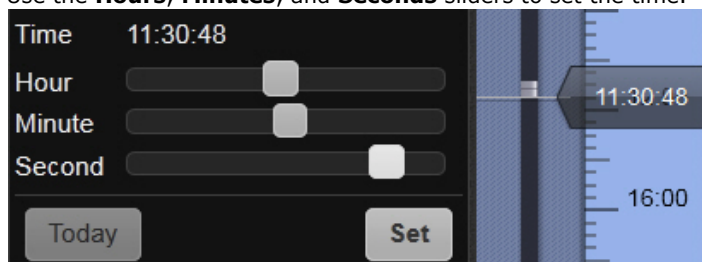
1. Click the date above the timeline to open the position selection panel (1).



2. To set the playback position to the current time and date, click the **Today** button and go to step 6 (4).
3. Use the and buttons to select a month (2).
4. Click the necessary date on the calendar to select a day (3).

Note
The days, for which there is video footage are in light shade.

5. Use the **Hours**, **Minutes**, and **Seconds** sliders to set the time.



6. To set the playback position, click the **Set** button (5).

The time position in the archive is now chosen.

Selecting video stream and playback format

Rus

The web client supports the MJPEG and H.264 formats. Video in other formats is encoded to MJPEG on the server.

You can play video in the web client using one of the 3 players: JPG, MP4, Locomote.

Player	Supported formats	Supported browsers	Requirements	Audio playback	Notes
JPEG	MJPEG	Chrome, Firefox, Safari, Opera	-	-	Used to play the MJPEG received via HTTP. Can be used in all supported browsers.

mp4	H.264	Internet Explorer, Edge, Chrome, Firefox, Opera	Support for HTML5 MediaSourceExtensions	-	A player that uses the browser's built-in video capabilities. Used to play H.264 via HTTP. Can be used in any browser if available. ⚠ For reverse or fast forward playback, the web-client switches to the JPEG player.
Locomote	MJPEG, H.264	Internet Explorer, Edge, Chrome, Firefox, Opera	Support for and enabled Flash in the browser	Via RTSP	A generic player for playing MJPEG and H.264 video. Used to play H.264 with sound when RTSP tunneling over HTTP is active, and to play the MJPEG via HTTP in Internet Explorer and Edge. ⚠ When H.264 playback causes problems, the web client switches to the JPEG player.

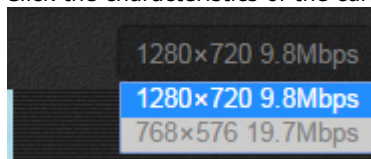
The default player is defined in the web client, depending on various factors.

Web video format by default	Source video stream		
	H. 264	MJPEG	Any other
Internet Explorer, Flash Player embedded	mp4	locomote	locomote
Internet Explorer, no Flash Player	mp4	Does not work	Does not work
Any with Flash Player	mp4	jpeg	jpeg
Any without Flash Player	mp4	jpeg	jpeg

By default, for multistreaming cameras the stream with the lowest resolution is displayed.

To select a stream in the web client (see [The Video Camera Object](#)), do as follows:

1. Click the characteristics of the current stream (low quality stream by default).



2. Select a stream to display.

Digital video zoom in the web client

Rus

Digital zoom of video occurs in a viewing tile during viewing of live video as well as when viewing archive video. To increase the zoom level, use the mouse scroll wheel.

The image cannot be made smaller than the source size. The maximum video zoom is 16x.

To select the viewed portion of the frame at a changed scale, drag the mouse outside of the video viewing area.



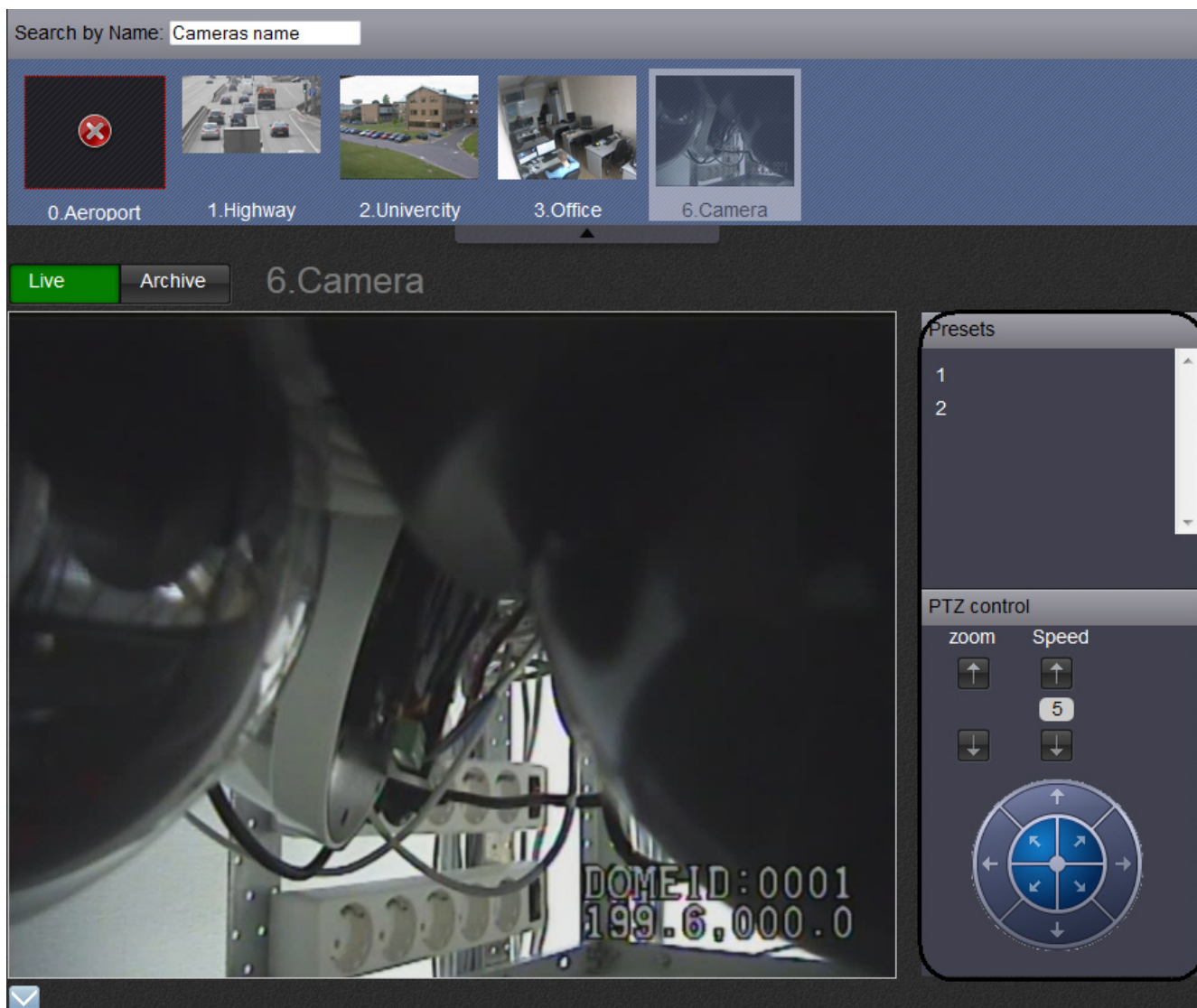
Note

For PTZ units, you can zoom in by using the buttons in the **zoom** group

Controlling PTZ cameras through the web client

Rus

A PTZ video camera is controlled through the PTZ device control panel.



The following actions can be performed using the PTZ device control panel:

1. Use presets.
2. Adjust optical zoom and positioning speed of the video camera.
3. Modify the horizontal and vertical tilt angle of the video camera.

Controlling a PTZ camera through the web client by using presets

Rus

To go to a preset, select the relevant line in the list of presets.



Changing the optical zoom of a PTZ camera in the web client

Rus

To change the optical zoom of a PTZ unit, use the buttons in the **zoom** group.



– increase image



– reduce image



– field for displaying speed at which the camera changes the zoom scale

Changing the positioning speed of a PTZ camera in the web client

Rus

To change the positioning speed of a PTZ camera, use the buttons in the **Speed** group.



– increase positioning speed



– reduce positioning speed



– field displaying the current positioning speed

Changing the tilt of a PTZ camera in the web client

Rus

To change the tilt of a PTZ camera, use the arrows in the **PTZ Control** group.



The arrow direction indicates the direction in which the camera lens will be moved when the arrow is clicked.

Export in Web Client

Eng



To export a snapshot / frame, click the button while viewing video. A JPG file will be exported to a folder specified in the Server settings.

To export video, do as follows:

1. Switch to Archive mode (see [Viewing video archives through the web client](#)).

- On the timeline, set the timeline indicator to the location that matches the beginning of the export interval. Click the  button. Set the indicator to the location that matches the end of the export interval. Click the  button.
- Click the  button.

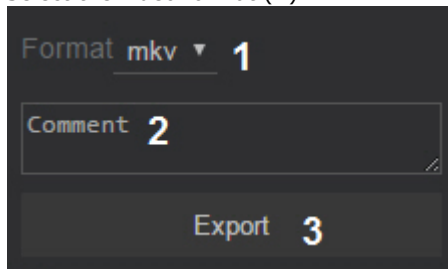


Note

To delete the export interval click the  button.



- Select the video format (1).



- If necessary, add comments for the export (2). The comments will be shown as captions when the exported video is played.
- Click the **Export** button (3).

The progress bar is displayed on the drop-down panel as in the Client (see [Viewing export progress](#)).



Video files are saved to the folder specified in the settings of the Server (see [Configuring export](#)).



Attention!

The exported video is deleted in 12 hours after the export is completed.

Working with Axxon Next Through the Mobile Clients

Rus

On page:

Axxon Next clients are available on the iOS, Android and Windows Mobile operating systems.

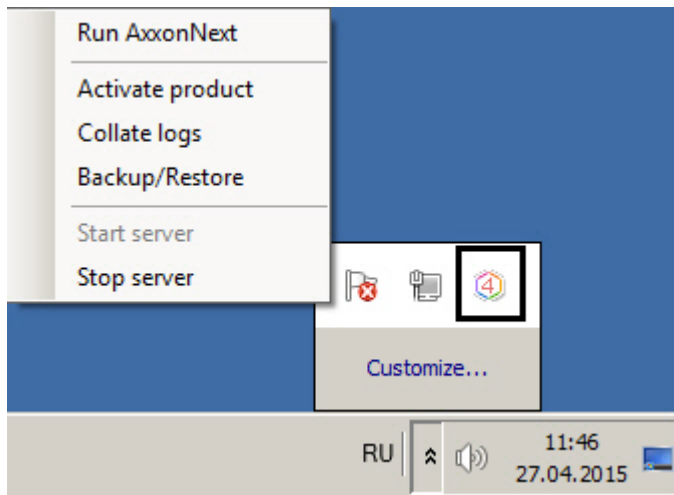
For more information on configuring and using the mobile client apps, refer to the [corresponding documentation](#).

Description of utilities

Axxon Next Tray Tool

Rus

The *Axxon Next Tray Tool* launches automatically during system startup and displays an icon in the Microsoft Windows taskbar notification area.



Note.
The executable TrayTool.exe is located at <Axxon Next installation folder>\AxxonNext\bin.

The *Axxon Next Tray Tool* provides quick access to the *Axxon Next Client* application, activation utilities, and options for collecting system information, performing backups, restoring configurations, and restarting the Server.

Activation Utility

Rus

License activation for the Axxon Next software package is carried out through the product activation utility.

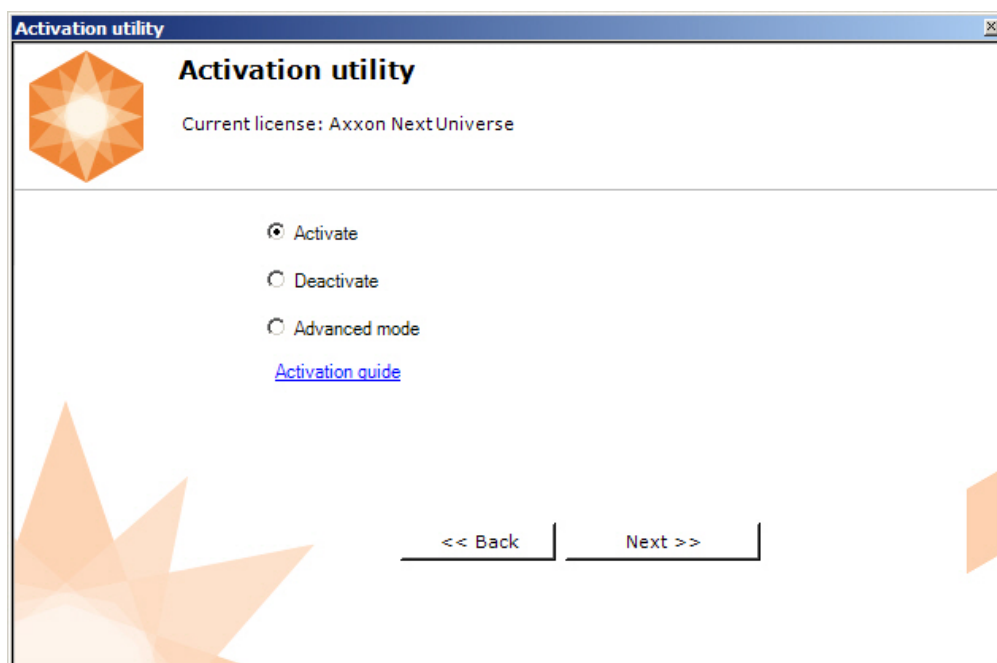
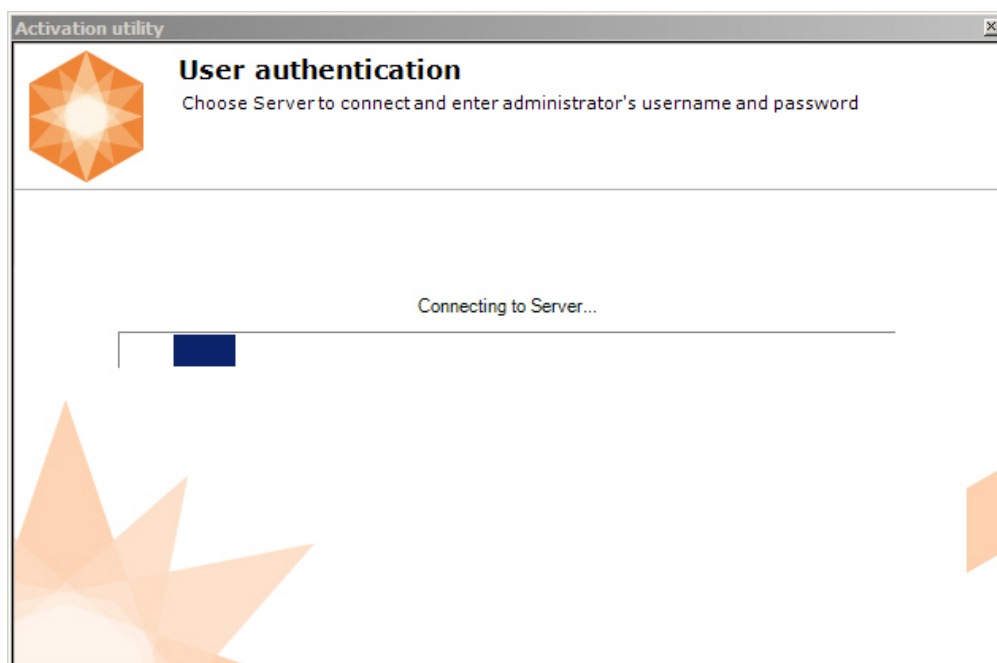
The activation utility is accessible at **Start -> All Programs -> Axxon Next -> Utilities -> Program Activation**, or from the tray menu (see the *Axxon Next Tray Tool* section).

Note
The product activation utility program file LicenseTool.exe is located in the folder <Directory where Axxon Next is installed>\AxxonSoft\AxxonSmart\bin\

Then you must select the name of one of the Axxon Domain servers to which the license file will be applied (the file is applied to all Axxon Domain servers launched at the moment of activation) and connect to the system, under an administrator's user name and password, to continue the activation process.

When the utility has loaded, its main will be displayed.

Note
To activate Axxon Next, connect to a Server in the Axxon domain. Otherwise, an error message appears.



To activate Axxon Next, please refer to the document titled [Activation Guide](#), which presents step-by-step instructions on activating, updating and upgrading Axxon Next .

It is also recommended that you use the prompts displayed in the product activation utility's dialog boxes.

Axxon Support Tool

Purpose of the Support.exe Utility

Rus

The Support.exe utility is designed to collect information about the configuration and operating status of hardware, the Windows operating system, and the Axxon Next software. The utility generates an archive that can be used by the company's technical support department. In case of malfunctions or errors in the Axxon Next software package, please visit our technical support server at <https://support.axxonsoft.com/> and compose a message containing a description of the problem and attach the archive that was generated by the Support.exe utility.

Launching and Closing the Utility

Rus

The Support.exe utility is launched using the **Start** menu, which is intended for launching user programs in Windows. Go to



Note

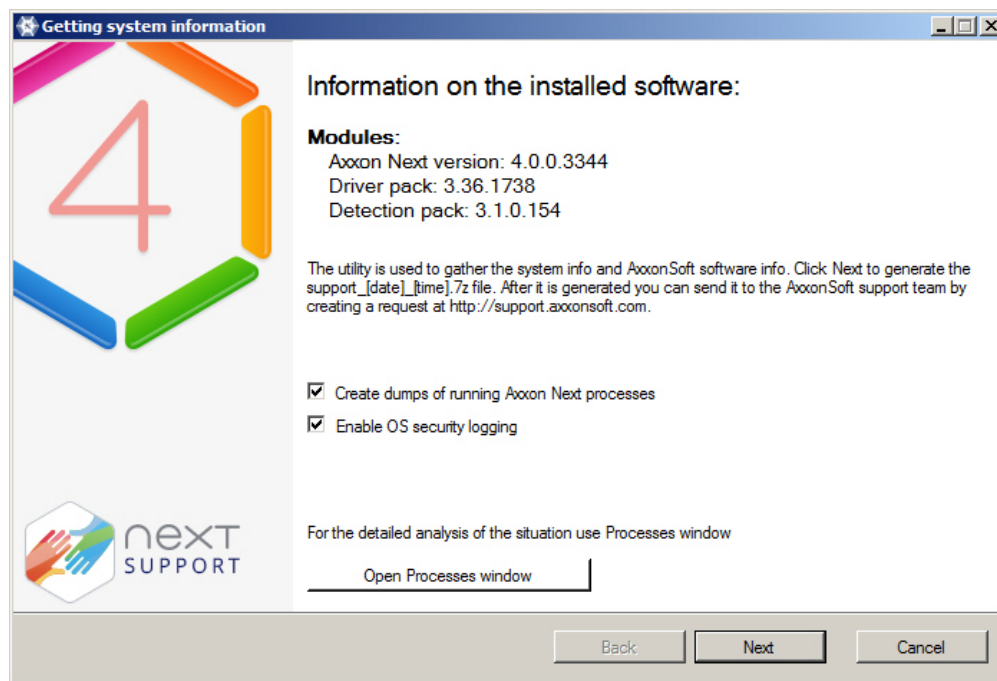
The Support.exe utility is located in the folder <Axxon Next installation directory>\AxxonNext\Support



Note

The Support.exe utility requires administrator rights to run.

The Support.exe utility dialog box will then be displayed.



To close the Support.exe utility, click the **Cancel** button or .

Description of the Support.exe utility interface

Rus

The Support.exe user interface includes the following elements:

1. Summary of installed software **(1)**.
2. Short instructions on how to use the Support.exe utility **(2)**.
3. Check boxes for configuring data collection **(3)**.
4. A button for launching the **Processes** service, which offers an in-depth situation analysis **(4)**.
5. A button for starting the information gathering process **(5)**.

AXXON.Notification	Process for managing events in the system and creating a database of these events
AXXON.AxxonNext	GUI process
AXXON.Bootstrap	Main process responsible for configuration, licensing, storing settings, and starting other processes
AXXON.FileBrowser	Process that provides access to the file system and information about server files
AXXON.NVR	Logic module responsible for alarms and automatic rules
AXXON.InfraServer	Process responsible for interaction between Axxon Next modules
AXXON.Decoder	Process that performs decoding of multimedia streams
AXXON.Detector	Process that performs detection
AXXON.Proxy	Process that performs buffering and grooming of multimedia streams
AXXON.NVR_Archive	Process that writes multimedia data to the archive
AXXON.Ipint	Process that interfaces with the Drivers Pack
AXXON.MiscMMSS	Process that plays back audio on the server audio card



Note

Selecting the **Display information about all system processes** check box enables viewing of all processes running on the computer.

PID	Process name	CPU us...	Memory	Workin...	Read	Process...	V.mem.	Written
1036	svchost.exe	7.93%	16 MB		55884 KB	NT AU...	107 MB	6328 MB
1092	SearchFilterHost.exe		3 MB		15 KB	NT AU...	23 MB	0 MB
1100	iusched.exe		2 MB		6 KB	ITVGR...	86 MB	0 MB
1148	firefox.exe		225 MB		4059079 ...	ITVGR...	609 MB	852113 ...
1196	svchost.exe		14 MB		8 KB	NT AU...	94 MB	5 MB
1248	AXXON.MiscMMSS		18 MB		424 KB	NT AU...	93 MB	0 MB
1280	LogRotate.exe		6 MB		715 KB	NT AU...	132 MB	113 MB
1324	svchost.exe		7 MB		1930 KB	NT AU...	70 MB	661 MB
1344	ndsvc.exe		0 MB		0 KB	NT AU...	45 MB	1 MB
1400	Snagit32.exe		24 MB		201 KB	ITVGR...	253 MB	0 MB
1464	svchost.exe		8 MB		1 KB	NT AU...	81 MB	0 MB
1484	NvXDSync.exe		7 MB		0 KB	NT AU...	85 MB	0 MB
1496	nvsvs.exe		4 MB		0 KB	NT AU...	84 MB	0 MB
1580	spoolsv.exe		5 MB		1 KB	NT AU...	76 MB	0 MB
1608	svchost.exe		8 MB		96148 KB	NT AU...	54 MB	373 MB
1624	AAM Updates Notif...		1 MB		332 KB	ITVGR...	98 MB	206 MB
1748	sqlservr.exe		6 MB		6318 KB	NT AU...	1564 MB	3452 MB
1756	dwengine.exe		68 MB		2470494 ...	NT AU...	341 MB	165274...
1788	svchost.exe		1 MB		493 KB	NT AU...	33 MB	0 MB
1808	BCUService.exe		1 MB		0 KB	NT AU...	36 MB	0 MB
1944	openvpnsvr.exe		0 MB		4 KB	NT AU...	11 MB	0 MB
1992	svchost.exe		1 MB		287 KB	NT AU...	32 MB	0 MB
208	taskmgr.exe		9 MB		47 KB	ITVGR...	66 MB	0 MB
2212	conhost.exe		0 MB		17 KB	NT AU...	20 MB	0 MB
2224	conhost.exe		0 MB		17 KB	NT AU...	20 MB	0 MB

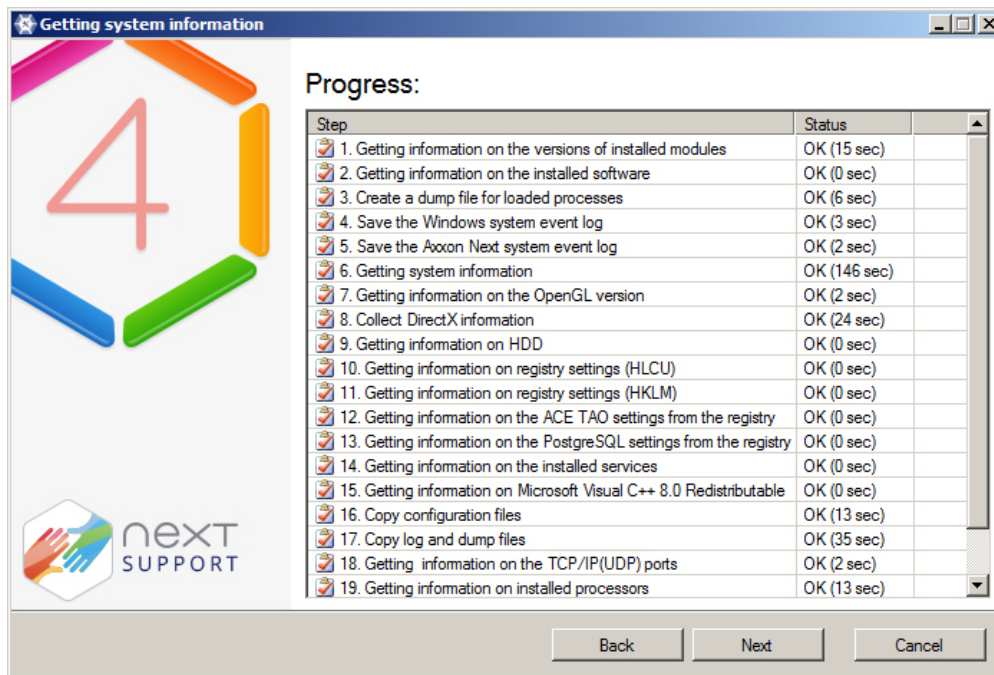
Click the button to close the **Processes** window.

Collecting Data on the Configuration of Servers and Clients Using the Support

Rus

To collect data using the Support.exe utility, perform the following:

1. Launch the Support.exe utility (see the section [Launching and Closing the Utility](#)).
2. Select check boxes as necessary to collect information about the system (**1**).

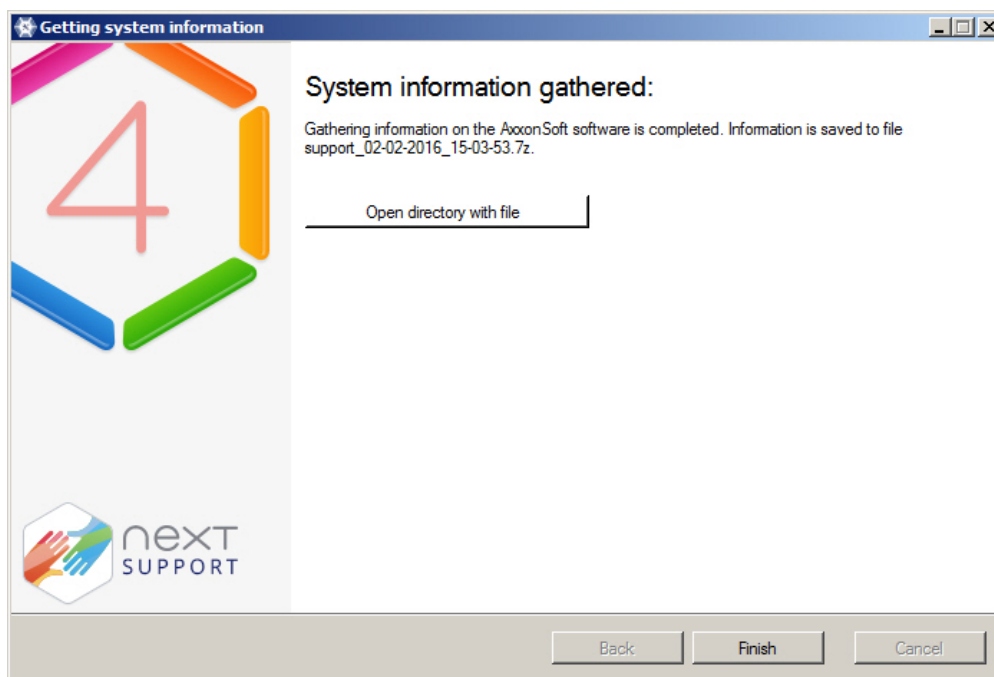


5. A window containing information about the generated archive **support_[date]_[time].7z** will then appear. You can access the folder containing this archive by clicking the **Open directory with file** button.



Note

The archive is located in the folder <System disk>:\Documents and Settings\<Current User>\My Documents if you're using Windows XP, or in the folder <System disk>:\Users\<Current User>\Documents if you're using Windows Vista



6. Send an email with the attached **support_[date]_[time].7z** archive to the ITV technical support department.

Log Management Utility

Rus

By default, information about all system events is recorded in the Axxon Next system log, which is stored in a local database of the server. It is possible to record information about desired events in external logs, which are log files stored in local directories of a server. Log data is archived at set intervals and moved to the log archive. Configuration of these capabilities is carried out through the log management utility.

Axxon Next component	Log storage directory
----------------------	-----------------------

Server	<Axxon Next installation folder <i>Axxon Next</i> >\logs
Client	<Letter of system disk>:\Users\<User>\Appdata\Local\AxxonSoft\AxxonNext\logs (for Windows 7 and Windows Vista) <Letter of system disk>:\<Letter of system disk>:\Documents and Settings\User\Local Settings\Application Data\AxxonSoft\AxxonNext\Logs (for Windows XP)

The log management utility is used to configure the following parameters:

1. Parameters for the archive of external logs containing information about system events.
2. Logging levels for the Axxon Next client and server.

Starting and closing the utility

Rus

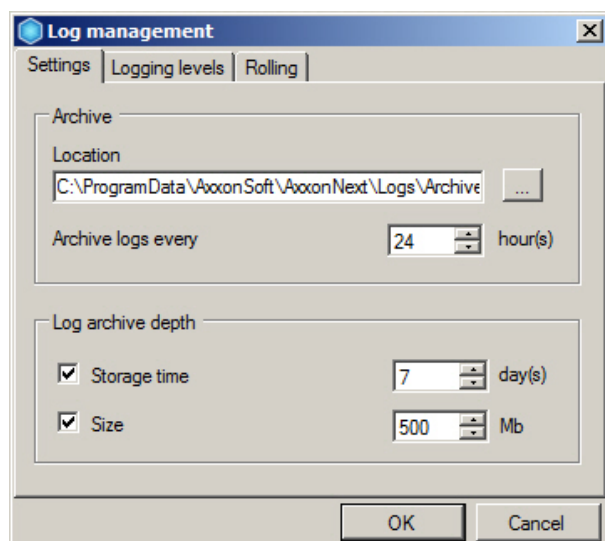
The log management utility can be launched using the **Start** menu, which is intended for launching user programs in Windows. **Start All Programs Axxon Next Utilities Logs Archiving**



Note

The log management utility is located in the folder <System disk>:\Program Files\Common Files\AxxonSoft\LogRotate

The log management utility dialog box will then appear.



To close the log management utility, click the **Cancel** button or (accessible in both tabs of the utility).

Configuring a Log Archive

Rus

Configuring a log archive is carried out in the Settings tab of the log management utility.

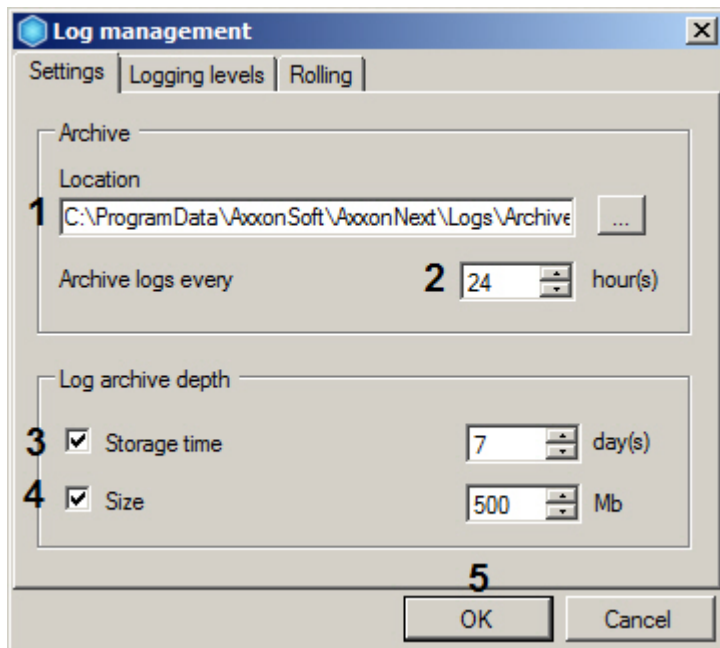
To configure a log archive, you must perform the following steps:

1. In the **Archive location** field (1), enter the complete path to the directory to which the event logs should be moved after archiving.



Note

To set the path using standard Windows methods, click



2. In the **Archive logs every...hours** field (2), enter the interval for event log archiving, in hours.
3. In the **Log restrictions** group, set the following parameters:
 - a. In the **Retention period** field (3), indicate the maximum retention time in days of a log in the archive, after which the log is deleted.
 - b. In the **Size** field (4), indicate the maximum size of the archive, above which the oldest logs are deleted from the archive.



Note

Archive disk space restrictions take priority over log retention time restrictions. For example, the oldest logs will be automatically deleted even if their retention time has not expired, if the archive size has exceeded the maximum value



Note

If it is not necessary to impose any limitations on log retention period and/or size, clear the corresponding check boxes in the **Log restrictions** (3-4)

4. Click **OK** (5) to save changes.

Configuration of the log archive is now complete.

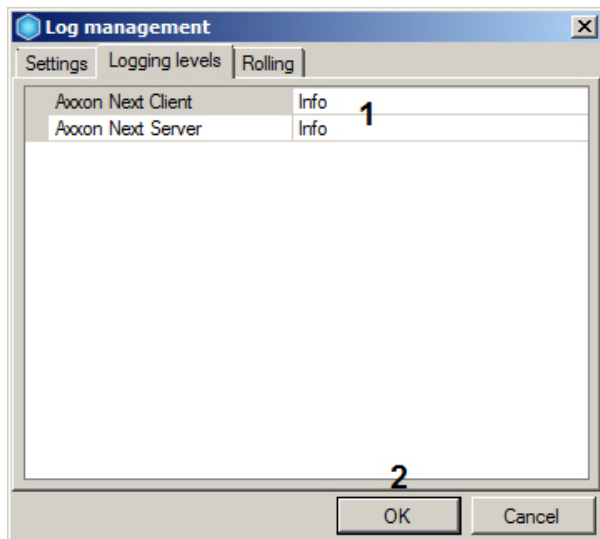
Configuring Logging Levels

Rus

logging levels differ in the list of events to be recorded in external logs, as well as the level of event specification (low, medium, high). Configuration of levels is carried out in the **logging levels** tab of the log management utility.

To configure the logging level, you must perform the following steps:

1. Select the desired logging level of the client (Axxon Next Client) and the server (Axxon Next Server) (1).



Note

If you change the logging level of a Server, the server will be restarted

logging level	logging level description
None	Event logging disabled
Error	Low specification level – only system errors are logged
Warning	Low level of detail - only system warnings and system errors are logged
Info	Low level of detail - logs informational messages, system warnings, and system errors
Debug	Medium level of detail - logs debugging events, informational messages, system warnings, and system errors
Trace	High specification level – all system events are logged

2. Click **OK** (2) to save changes.

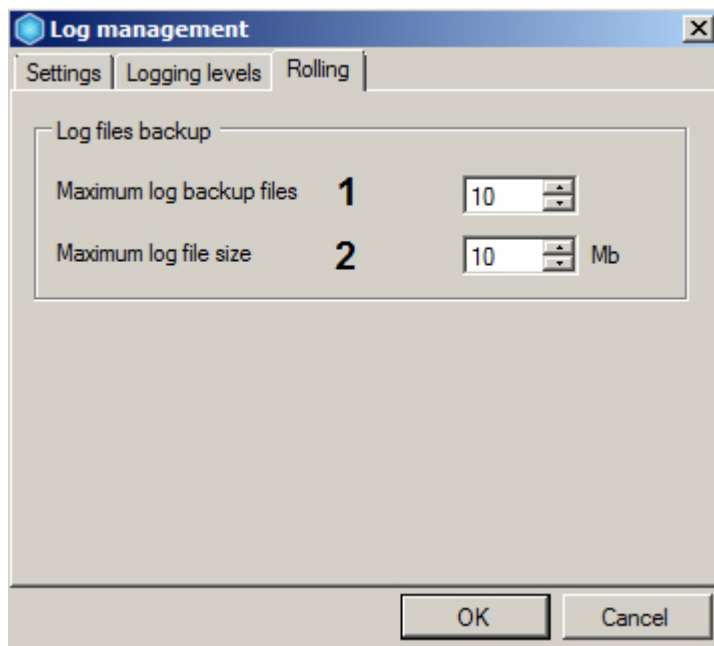
Configuration of logging levels is complete.

Set the size and maximum number of logs

Rus

To adjust the size and maximum number of logs:

1. Switch to the **Rolling** tab.



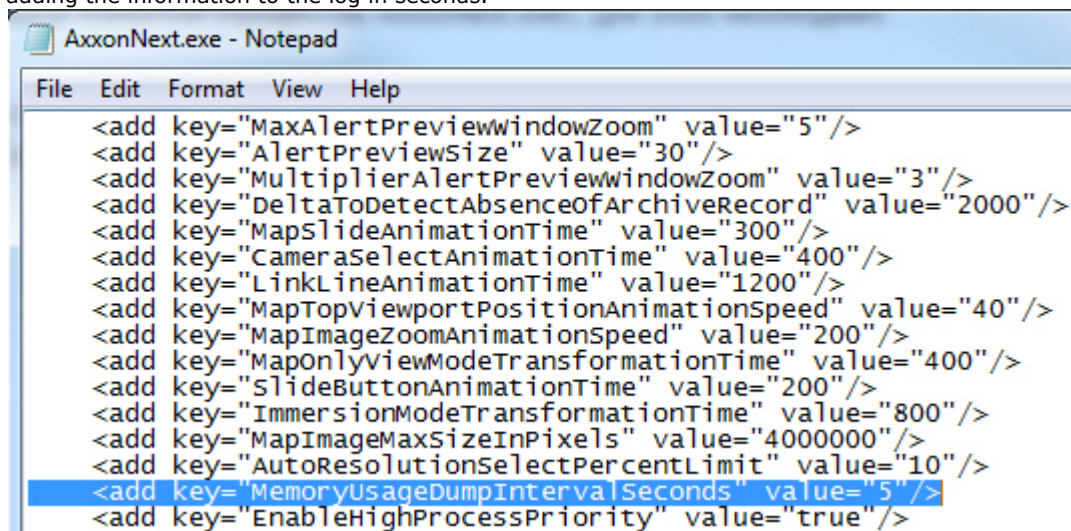
2. Set the maximum size of the log in megabytes (**1**). When the specified size is reached, a new log is created.
3. Set the maximum number of logs (**2**).
4. Click **OK** to save changes.

Configuring Client RAM usage logging

Rus

You can log Client RAM usage at specified intervals (AxxonNext.exe process). To do this:

1. Quit Client (see [Shutting down an Axxon Next Client](#)).
2. Open the *AxxonNext.exe.config* configuration file, located in the <Installation Directory PC Axxon Next> \ bin., in a text editor.
3. Find the **MemoryUsageDumpIntervalSeconds** option and set a value for it, corresponding to the period of adding the information to the log in seconds.



Note

Value **0** - no information is logged.

4. Save the changes to the file.
5. Run client (see [Starting an Axxon Next Client](#)).

Here is an example of the client RAM usage information in the log:

```
*** Memory usage: ***
Private size 425 MB
Working set 404 MB
```


Private size - the amount of reserved memory.

Working set - memory footprint.

Digital Signature Verification Utility

Rus

This utility verifies the digital signature that is added during export of video and snapshots from Axxon Next.

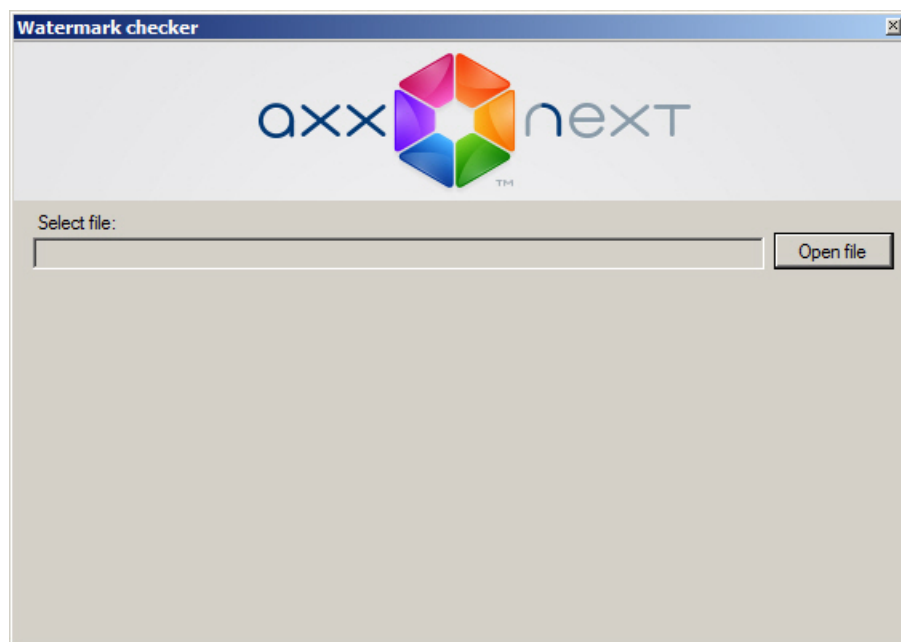
To start the utility, open the standard **Start** menu in Windows: **Start > Programs > Axxon Next > Utilities > Watermark checker**.



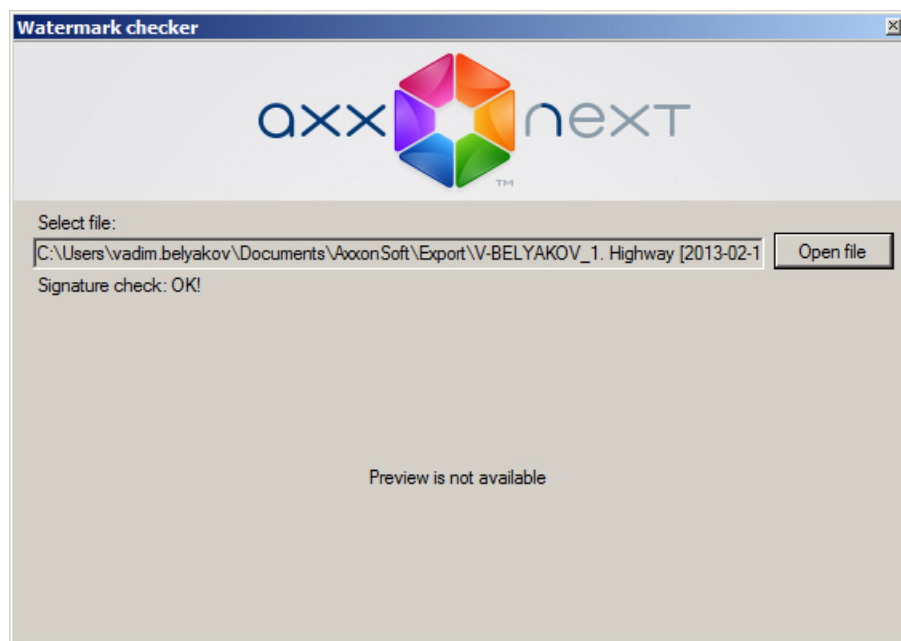
Note

The utility executable file WatermarkCheck.exe is also located in the folder <Directory where Axxon Next is installed>\Axxon Next\bin\.

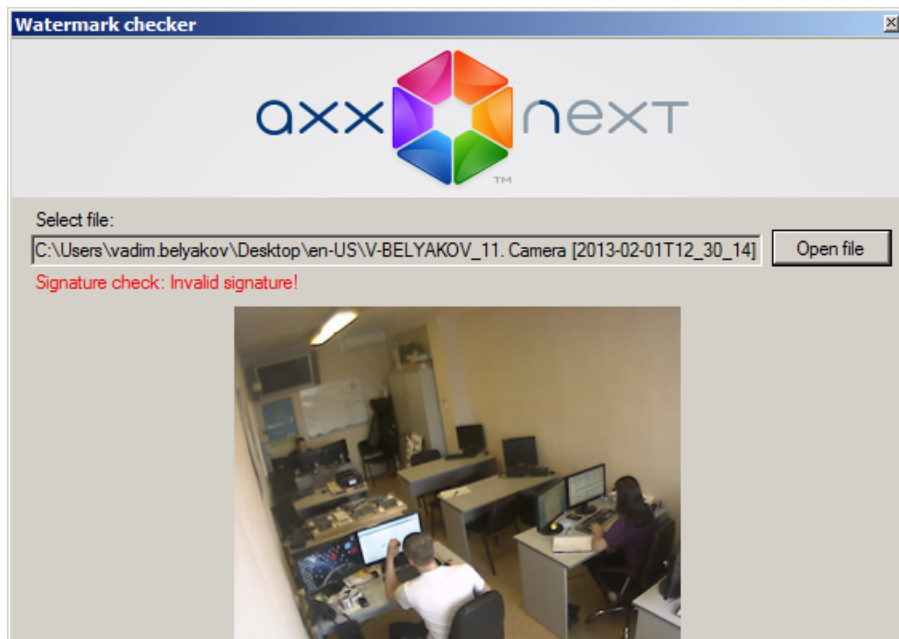
To check a digital signature, click the **Open file** button and select the file of the exported snapshot or video.



If the digital signature is valid, the utility will show the message: **Signature check: OK!**



If it is not valid, the utility will show the message: **Signature check: Invalid signature!**



Note

During verification of a digital signature, the thumbnail of a snapshot is shown in the utility window. Videos cannot be previewed during the verification process

Digital signature verification is now complete.

To quit the utility, click the  button.

Backup and Restore Utility

Purpose of BackupTool.exe

Rus

BackupTool.exe allows system users to save a copy of the system configuration, roll back the configuration to a previous version, and restore the system configuration from a previously created copy.



Attention!

The backup and restore utility works only with a local configuration (cameras, archives, detectors, event sources, logging levels). You cannot roll back and restore a license, created macros, roles, users, or other system settings

This utility can also be used to change the name of the local Server.

Starting and quitting BackupTool.exe

Rus

Start BackupTool.exe from **Start -> All Programs -> Axxon Next -> Utilities -> Backup and Restore**, or from the tray menu (see the [Axxon Next Tray Tool](#) section).



Note.

The BackupTool.exe executable is located at <Axxon Next installation folder>\AxxonNext\bin\.

After you perform this action, BackupTool.exe displays a dialog box.

Then select the name of an Axxon-domain Server whose configuration you want to use and log in to it, using the name and password of an Axxon Next administrator.

Backup and restore configuration tool

User authentication

Choose Server to connect and enter administrator's username and password

Server name or IP address: V-BELYAKOV

Username: root

Password: ****

Next >>

A progress indicator is displayed.

Backup and restore configuration tool

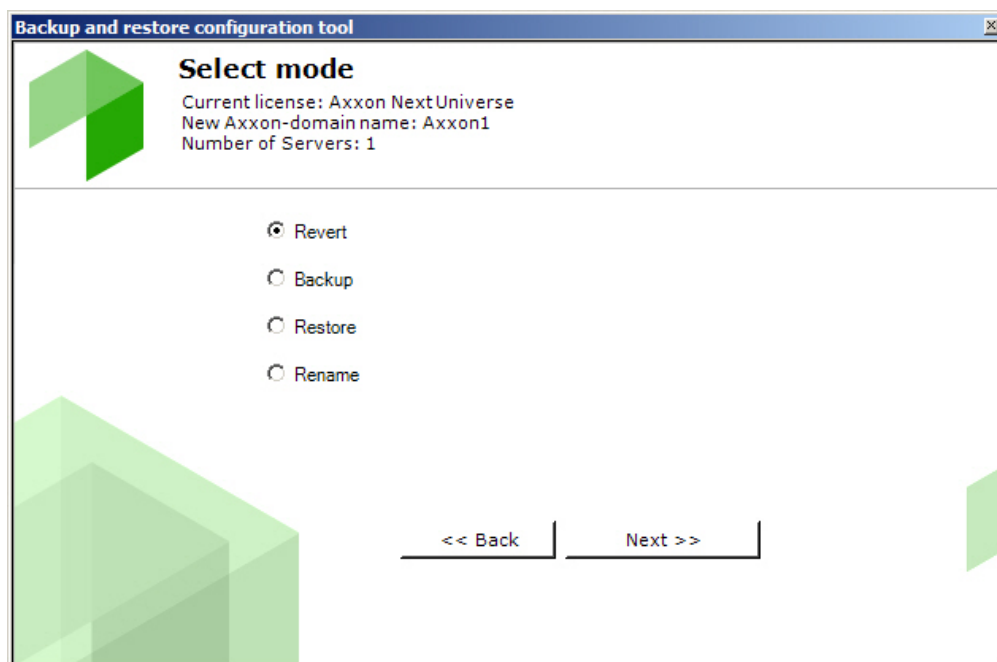
User authentication

Choose Server to connect and enter administrator's username and password

Connecting to Server...

Progress bar: [A small blue bar is shown on a horizontal line, indicating progress.]

After loading is complete, the main page of the Backup and Restore Utility is shown.

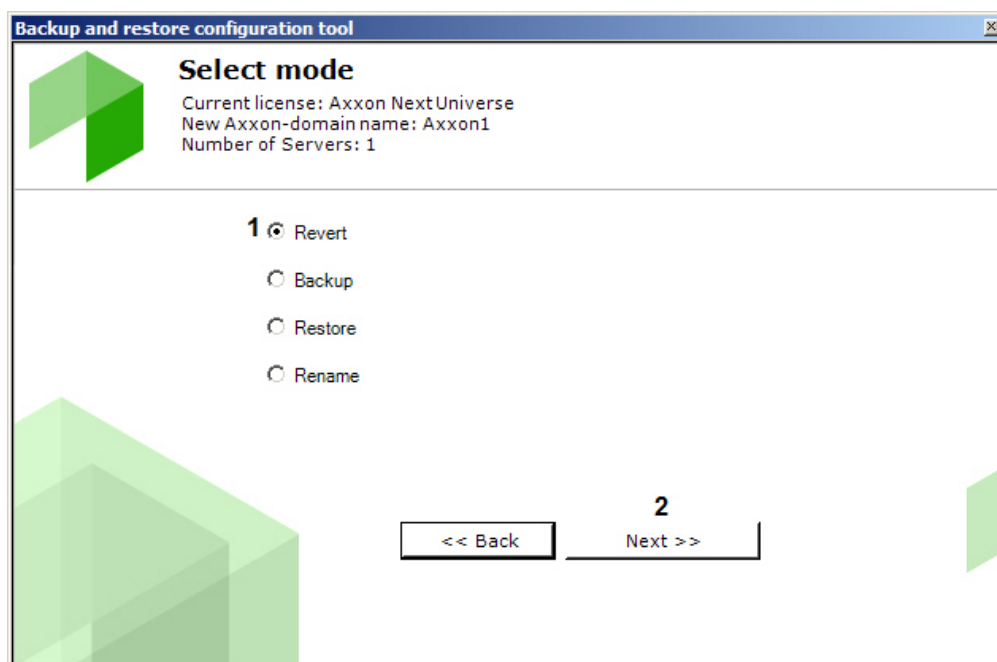


To quit BackupTool.exe, click the  button.

Rolling back a configuration to a restore point

Rus

When any change is made to a system configuration (creation/deletion of objects, change in camera attachment to archives, change in settings of any object) a restore point is created. You can revert the configuration to any of these restore points. To roll back, on the main page of the Backup and Restore Utility, set the switch to the **Revert** position (1). To continue, click the **Next >>** button (2).



A window then opens, displaying a list of available restore points and their respective creation times, with a description of what was changed.



Note.

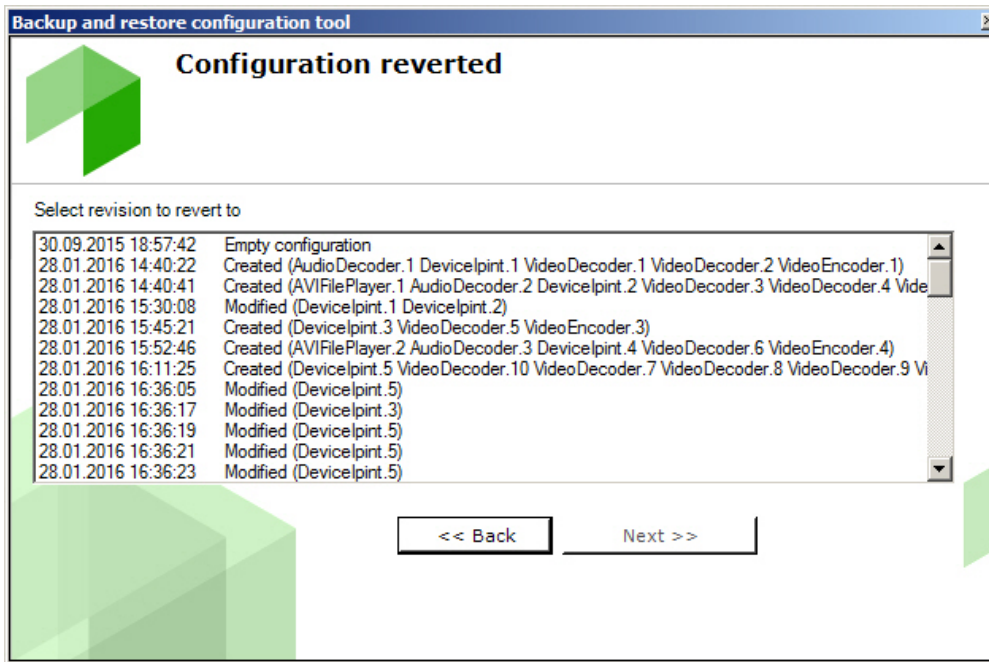
If multiple changes were made in a configuration but the **Apply** button was clicked only once, only one restore point is created in the list.

In the list, select the restore point to which you want to roll back. To continue, click the **Next** button (2).

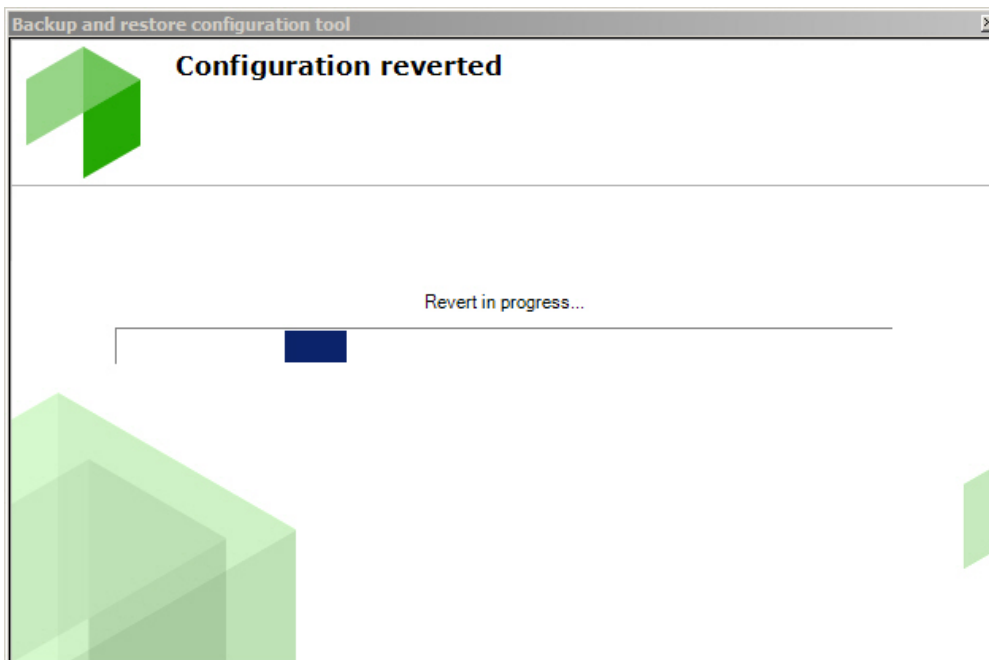


Note.

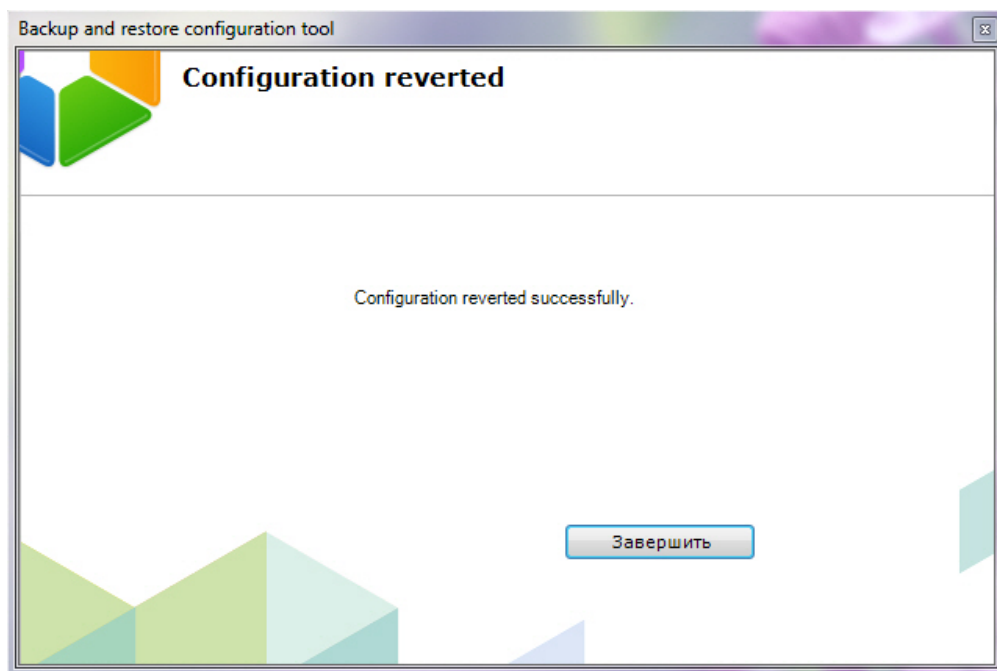
Empty configuration corresponds to when the system was first created.



Rollback of the configuration now begins.



After the operation is completed, a message is shown to notify of successful rollback.



To close the window, click the **Close** button.

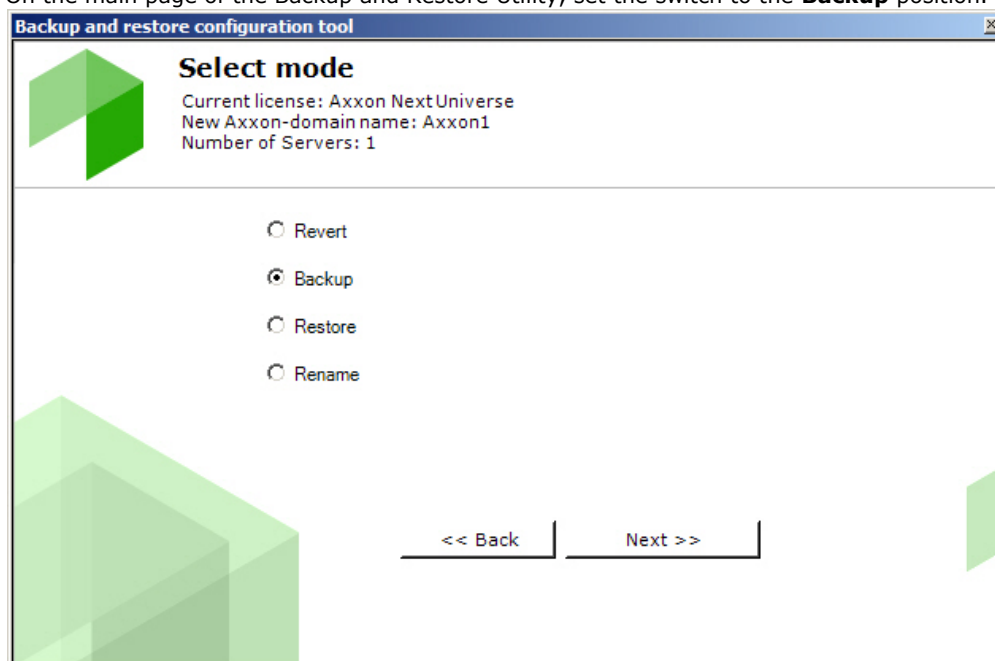
Backing up a configuration

Rus

Backing up a configuration involves creating and saving copies of the license key, domain structure, all created objects along with their parameters and relationships with history of changes, as well as database containing users, groups, passwords, and layouts.

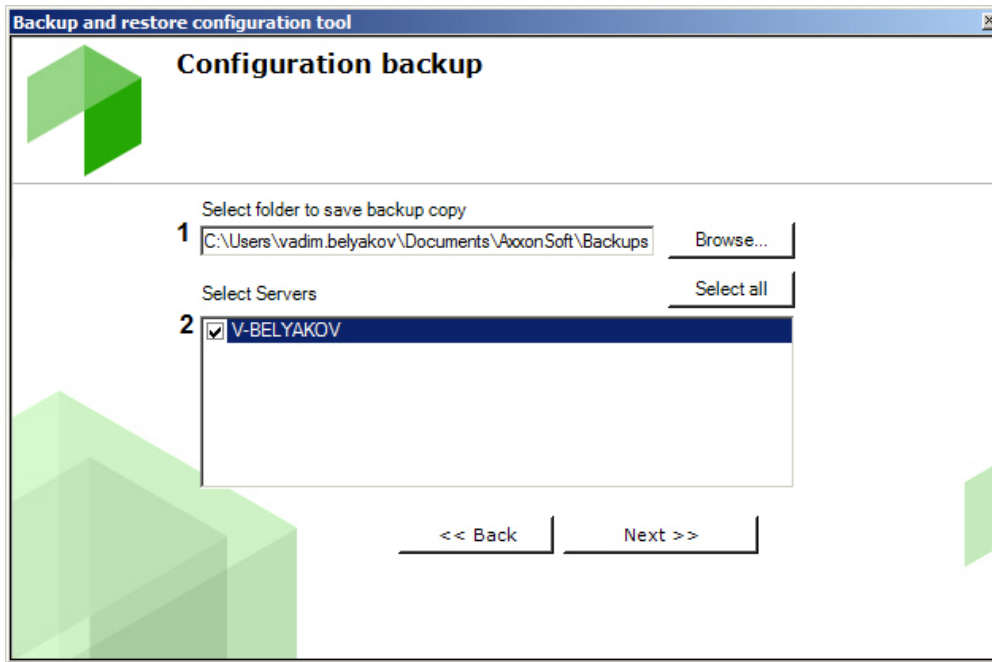
To create a backup of the system configuration:

1. On the main page of the Backup and Restore Utility, set the switch to the **Backup** position.



A window then opens for configuring backup options.

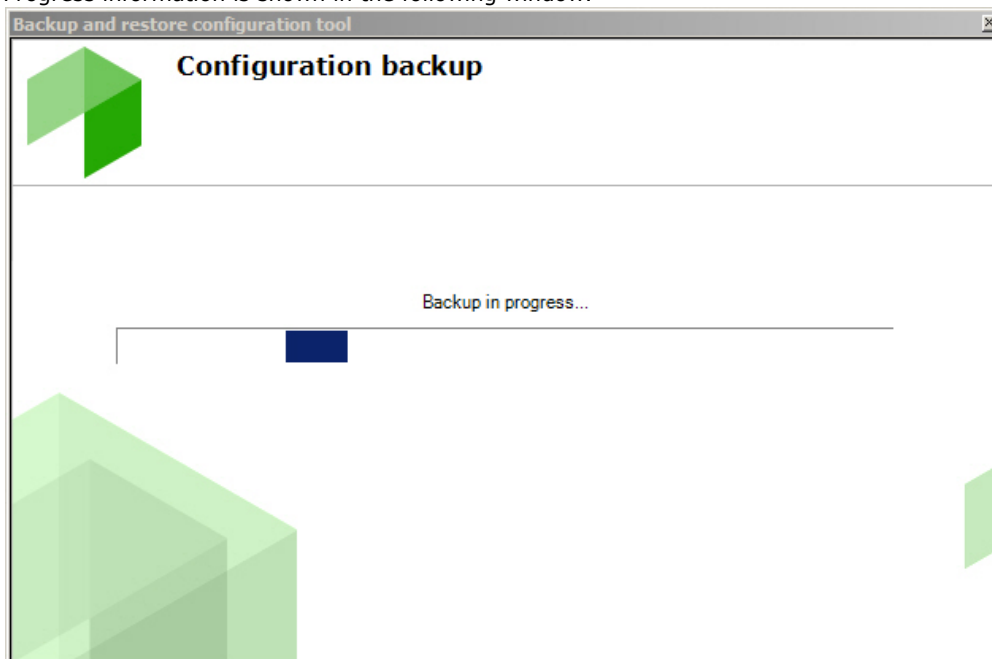
2. In the field (1), specify a folder for saving the backup. The default folder is C:\users\username\documents\axxonsoft\backups\. To switch to a different folder, click **Browse** and select a folder in the dialog box.



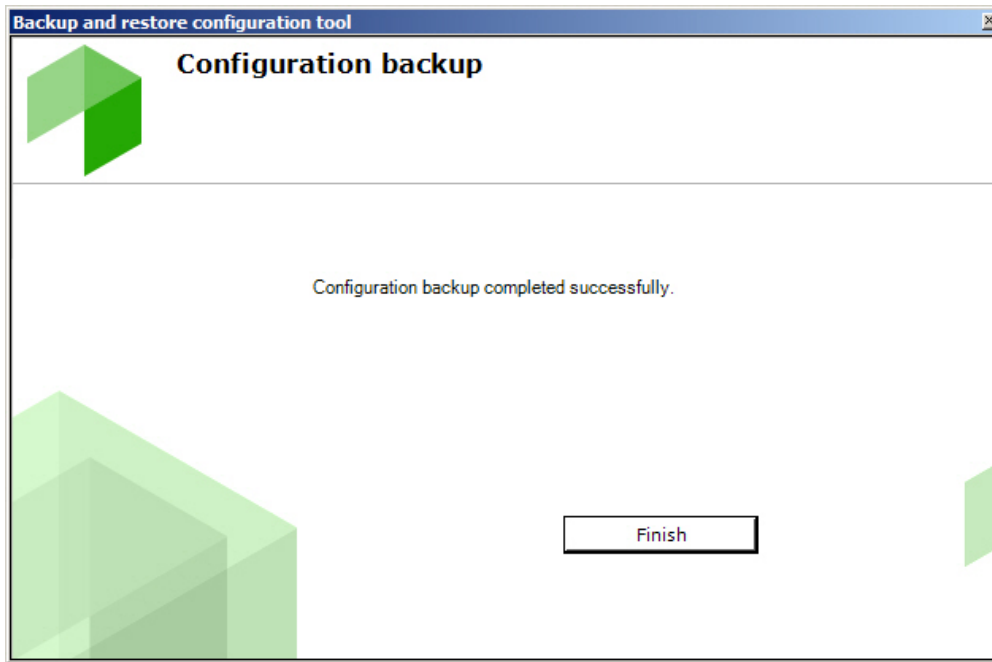
Note

For each copy of the backup configuration, a separate folder is created. The folder name contains the date and time of the backup copy and has the following format: YYYYMMDDHHMMSS. The default time zone is UTC + 0

3. In the other field (2), select servers for creating the backup. You can select multiple servers. To select all servers, click the **Select all** button. Start the backup process by clicking the **Next** button. Progress information is shown in the following window.



4. When the backup is complete, a window notifies of successful copying.



5. To close the window, click the **Close** button.

A backup of the configuration has now been created.

Restoring a configuration

Rus



Attention!

Configuration recovery is not guaranteed if the backup was created on a different version (including the build number).

The information about the product version on which the backup was created can be found in a JSON file in the configuration folder.



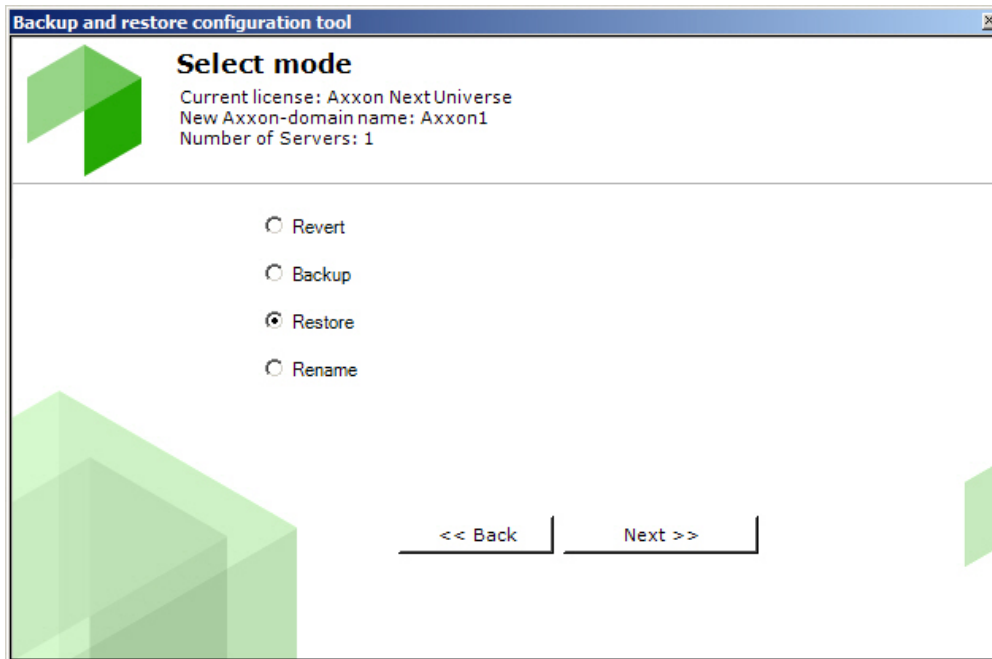
Attention!

In order to restore a configuration, one of the following must be true:

- The Server whose configuration you want to restore is on the same Axxon-domain as it was when the backup of its configuration was made.
- The Server whose configuration you want to restore is not on any Axxon-domain.

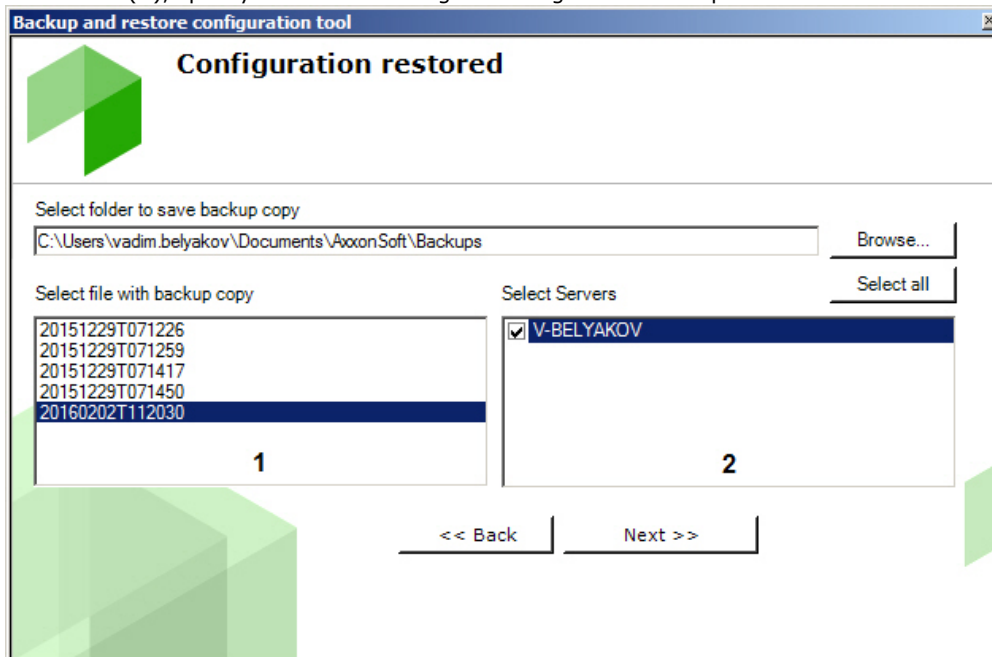
To restore a configuration:

1. On the main page of the Backup and Restore Utility, set the switch to the **Restore** position.



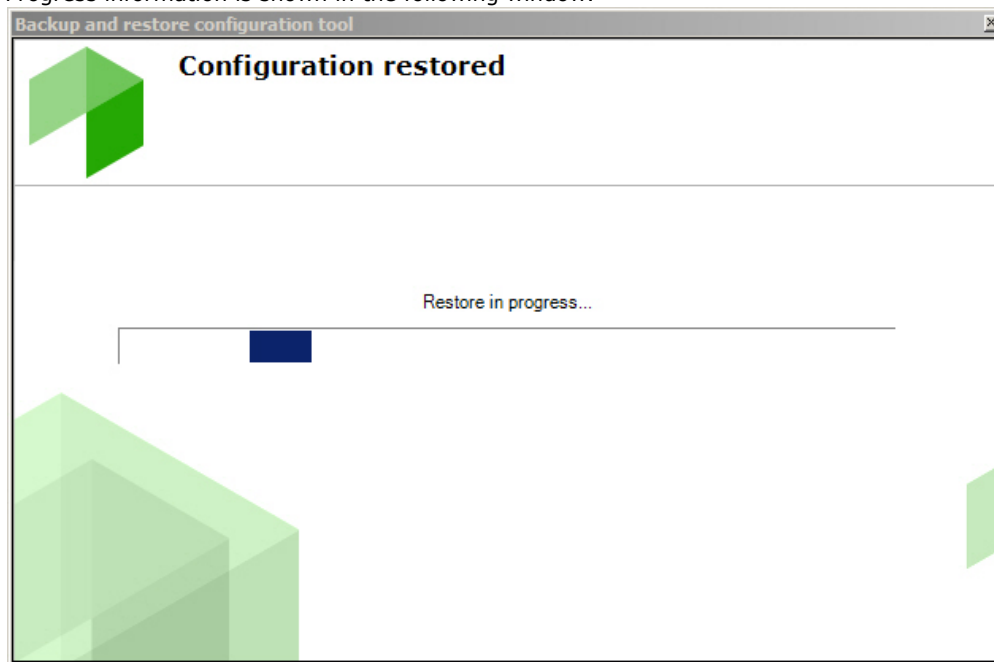
A window then opens for configuring restoration of the configuration.

2. In the field (1), specify the file containing the configuration backup.

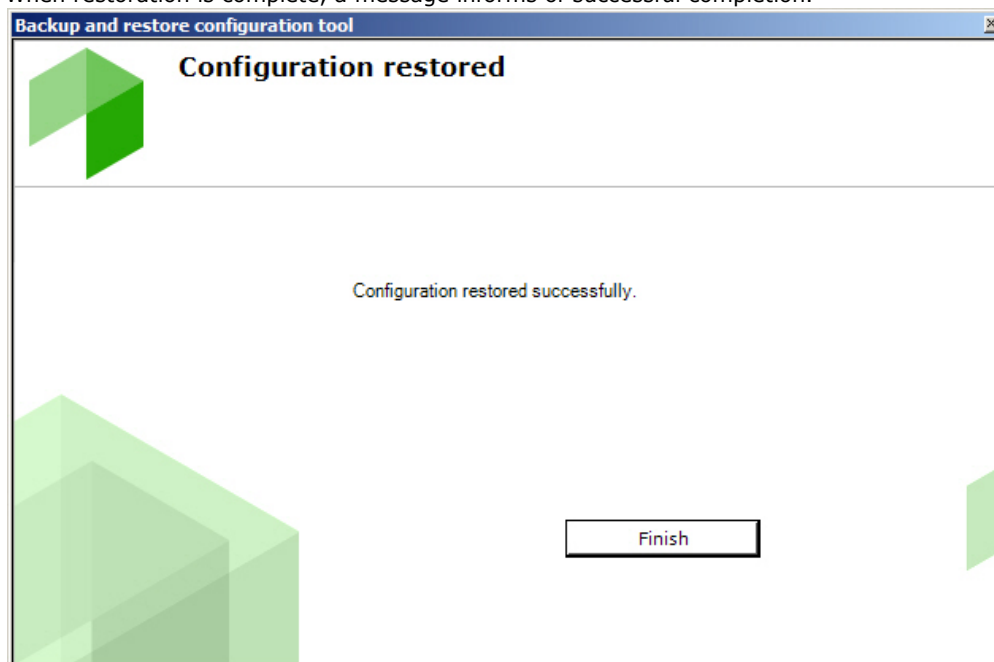


3. After the file is opened, the servers on the current domain are displayed in the other field (2). You can select a server in the list only if it is on the domain and the open file contains the corresponding backup. To start

restoration, click the **Next** button.
Progress information is shown in the following window.



4. When restoration is complete, a message informs of successful completion.



5. To close the window, click the **Close** button.

Restoration of the configuration is now complete.

Changing the Server Name

Rus

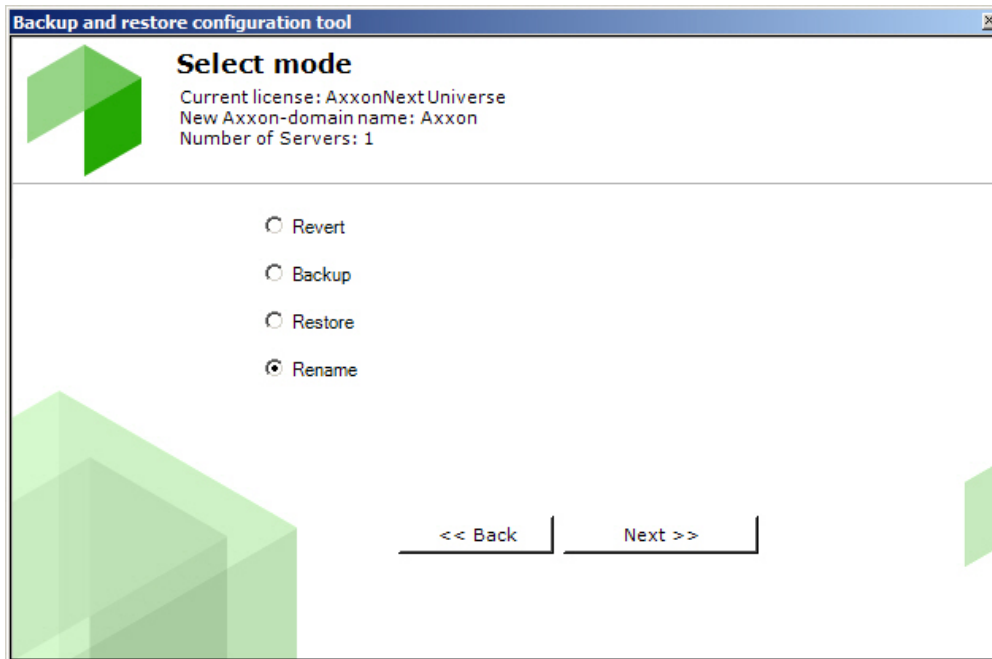
To change the local Server name using the Backup and Restore Utility, perform the following steps:



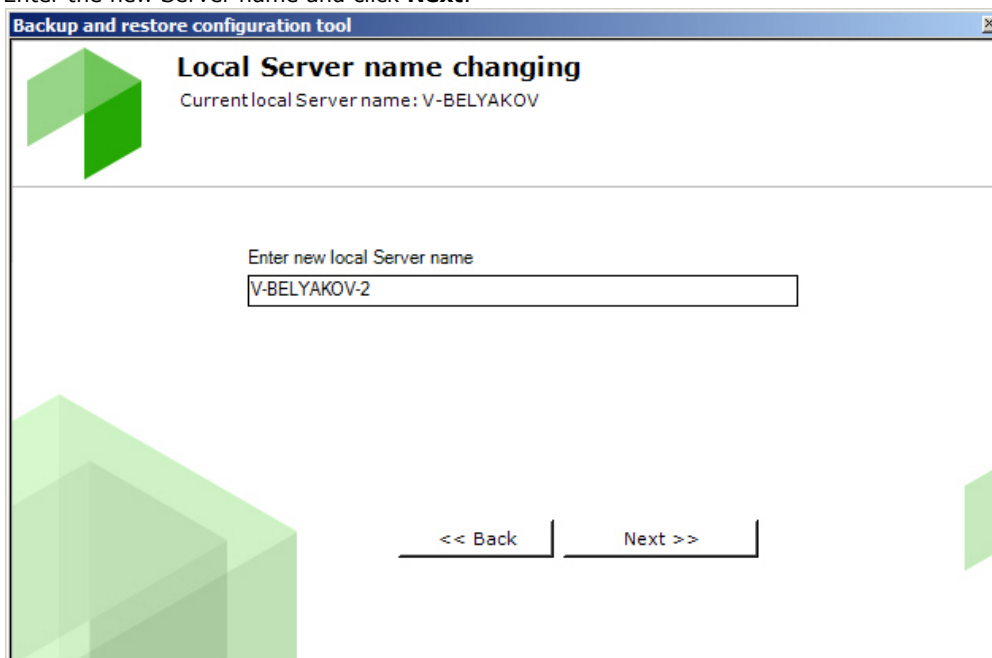
Attention!

After this command is completed, the server is excluded from Axxon domain. You cannot access recorded video (Archive). All custom layouts, maps, automatic rules and macros are deleted.

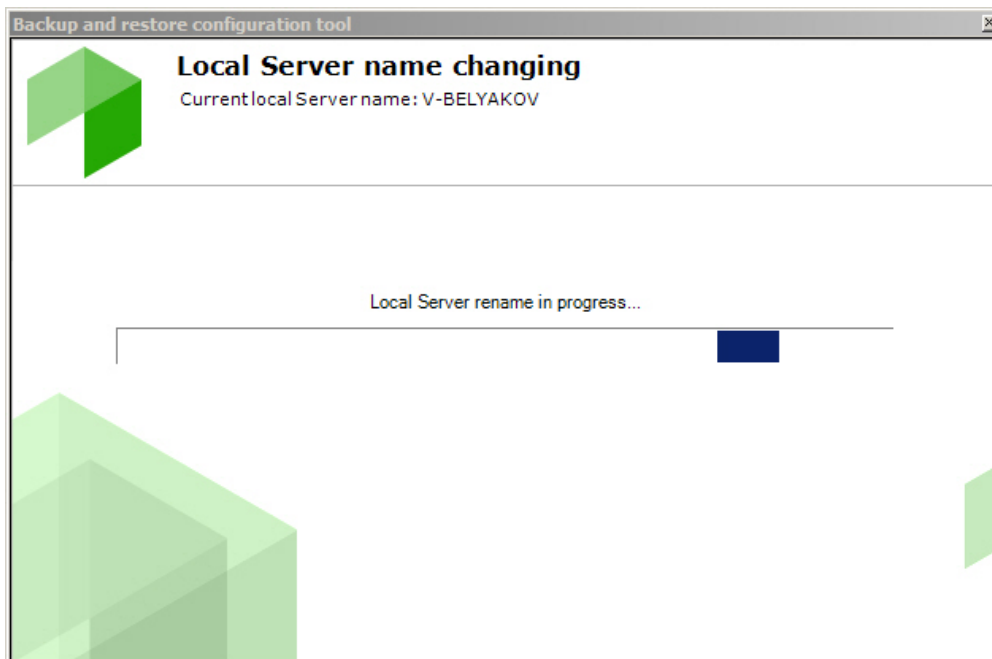
1. Connect to the Server that requires a name change (see [Starting and quitting BackupTool.exe](#)).
2. Select **Rename** and click **Next** on the utility main page.



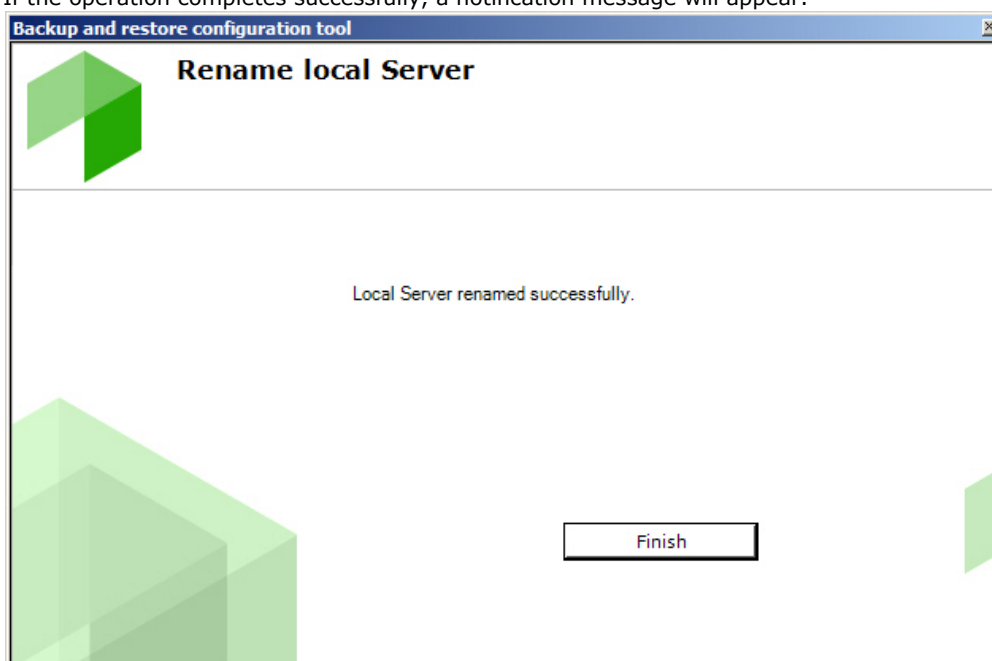
3. Enter the new Server name and click **Next**.



The Server name change process will start.



If the operation completes successfully, a notification message will appear.



Server name change is complete.

POS-terminal log collection utility

Rus

Follow these steps to gather required information about POS terminal using a special utility:

1. If the POS-terminal supports data transmission over Ethernet or via the COM port, download the POS Terminal Data Collection Utility at the [AxxonSoft web-site](#).
2. Extract downloaded archive into any folder.
3. Connect the POS terminal to the computer.
4. Run the ProtocolLicenser.exe executable file. The **Read protocol from service** window opens.

Read protocol from service.

Log file name: F:\POS\Utility\ProtocolListener\pos_log.txt

COM | UDP | TCP

COM: COM1

Baud rate: 9600

Char size: 8

Parity: none

Stop bits: one

Status:

Start

5. In the **Log file name** field specify a full path to the folder where the file with gathered info is to be saved. By default, the file is stored in the folder to which the archive with the utility is unpacked.
 6. If the POS-terminal is connected to the computer via COM-port, specify connection parameters in the **COM** tab.
 7. If the POS-terminal is connected to the computer via Ethernet, specify connection parameters for TCP or UDP protocol in the corresponding tab.
 8. Click **Start** to run log collection.
 9. Start using the POS-terminal, i.e. issuing receipts. It is highly recommended to do all the operations including Cancel, Return, etc.
- Process of gathering info is displayed via the **Status** progress bar.

Read protocol from service.

Log file name: F:\POS\Utility\ProtocolListener\pos_log.txt

COM | UDP | TCP

Address: 127.0.0.1

Port: 8001

Status:

Stop...

To finish log collection click **Stop**.

After doing all the operations on the POS-terminal, send the log file with copies of receipts to AxxonSoft.



Important!

If the log file of POS-terminal is to be processed in software, then provide AxxonSoft with protocol description. POS-terminal manufacturer can give this information.

Appendices

Appendix 1. Glossary

Rus

Active viewing tile - viewing tile currently in use by the user.

AWS (automated workstation) – security system user workstation, a minimally equipped personal computer with Axxon Next software installed.

Archive – all audio/video files stored on a hard disk that can be played and exported to supported formats.

Default archive of a video camera – the archive to which images from a given video camera are recorded during user-initiated alarms.

Audio detection tool – a detection tool is triggered used to analyze the audio signal from a microphone.

Audio recording – 1. the process of recording a digitized audio signal on a hard disk.
2. audio data stored in a specific format on a hard disk.

The audio subsystem encompasses all the tools that provide for the collection of audio data, its processing, and its storage on media.

Video detection tool – a detection tool is triggered used to analyze the video image from a video camera.

Video recording – 1. the process of recording a digitized video signal on a hard disk.
2. video information stored in a specific format on a hard disk.

Video camera – 1. source of a video signal.
2. a system object displaying the properties of an installed video camera and controlling its operation.

The video subsystem encompasses all the tools that provide for the acquisition of video data, its processing, and its storage on media.

Timeline – an interface object used to search for video recordings and navigate an archive.

Sensor – 1. a physical device intended for receiving information on the status of an object.
2. a system object that displays the properties of an installed sensor.

Situation analysis detection – a detection tool is triggered used to analyze the situation in a camera's field of view according to set criteria.

Audio signal detection– a detection tool is triggered which is triggered by an increase in the signal/noise ratio above a set level.

Loss of quality detection– a detection tool is triggered which is triggered by a loss of quality in the video image from a camera.

Position change detection– a detection tool is triggered by a substantial change in the background of a video image indicating a change in the position of the camera in space.

Object disappearance detection– a detection tool is triggered by the disappearance of an object in a set area of a video camera's field of view.

Abandoned object detection– a detection tool is triggered when an object remains motionless in a detection zone for a prolonged period.

No Signal detection– a detection tool is triggered that is triggered by the absence of an audio signal from an audio device.

Line Crossing detection– a detection tool is triggered which is triggered when the trajectory of an object crosses a virtual line in a video camera's field of view.

Object appearance detection– a detection tool is triggered by the appearance of an object in a set area of a video camera's field of view.

Stopping detection– a detection tool is triggered by the cessation of motion in a set area of a video camera's field of view.

Noise detection– a detection tool which is triggered by an decrease in the signal/noise ratio below a set level.

Axxon Domain – a selected group of computers on which the server configuration of the *Axxon Next* software package is installed. Linking the servers in a group makes it possible to set up interaction between them, thus organizing a distributed system.

Detection zone – the area of a video image processed by a detection tool is triggered.

Interface cable - cable used to connect two or more devices together for data transfer.

Interface object - a system object used for interaction between the user and software (data input/output).

Client - designation for a personal computer on which Axxon Next software is installed (or will be installed) as a **Client**. Designation for the graphical shell of the *Axxon Next* software package.

Slideshow – automatic switching of user layouts, or of viewing tiles in a single layout if working with standard layouts.

Licensing - regulating and setting the terms for usage of AxxonSoft software modules.

Detection zone – 1. the area of a video image processed by a detection tool is triggered.

2. a tool which allows the user to mark out an area of the video image which is not to be processed by a detection tool is triggered.

Microphone – 1. a source of audio signals.

2. a system object used to manage the parameters of audio signal reception.

Video surveillance monitor – an interface object used to manage the user interfaces of the Axxon Next software, e.g., layouts, viewing tiles, various panels and context menus, etc.

Viewing tile - interface object displaying the video stream coming from a certain video camera and enabling control of that video camera.

Dial panel – panel (part of the PTZ control panel) used to dial a preset.

Archive navigation panel – all interface objects used to work with an archive, e.g., timeline, list of alarm events, etc.

Control panel – panel made up of tabs accessible to the user, used to navigate from one group of interface objects to another.

Playback control panel – panel containing buttons to control playback of video recordings: Play, Pause, Go to next video recording, etc.

PTZ control panel – all interface objects used to control a certain PTZ device.

Layout control ribbon – panel containing tools to create, edit, and manage layouts.

PTZ device – a system object displaying the properties of an installed PTZ camera device.



Note

Also used to designate a physical device

The PTZ subsystem encompasses all the tools that provide for remote control of a PTZ device and the lens of a video camera.

The analytics subsystem encompasses all the tools that provide for automatic analysis of incoming video and audio data.

The Forensic Search in archive subsystem is a set of tools for searching video recordings in the archive by using video image metadata.

The relay subsystem encompasses all the tools that provide for the triggering of an execution device connected to the embedded relay port of a video camera or IP server when a detection tool is triggered (including one which processes the embedded sensor of a video camera or IP server) is triggered.

The notification subsystem encompasses all the tools that provide for notification of the user about events which have occurred in the system.

Event registration subsystem – all the tools that provide for the collection of data about system events, processing, and its storage on media.

Pre-alarm recording is the period of pre-event recording that will be added to the beginning of an alarm event recording.

Preset – preprogrammed positioning of a PTZ device.

Software package – all software and hardware tools used together to build a security system.

Software module – a program or functionally complete component of a program used to perform a specific functional task (perform a user function).

Layout – preserved positioning of viewing tiles relative to each other.

Distributed system – a group consisting of several interacting Axxon Next servers (up to four) and clients (unlimited number). Axxon Next servers are linked within an Axxon Domain.

Relay – 1 a physical device/electromechanical switch.

2. a system object that displays the properties of an installed relay.

Server – designation for a personal computer on which the **Server** configuration of Axxon Next software is installed (or will be installed).

Security system – a set of devices used for video surveillance, audio surveillance, and object recognition, all controlled by the Axxon Next software system.

The system log is a log containing system information on events, including system error entries.

Object tracking – a function which allows an operator to visually track the movement of objects in a camera's field of view.

Alarm flag – the flag symbol designating either the moment an alarm event began or a certain moment before the beginning of an alarm event.

Color coding - software-based graphical notification to a security system operator about the current status or operating mode of system objects (equipment, software modules).

Appendix 2. Known issues in the Axxon Next Software Package

Possible Errors During Installation

Rus

On page:

- [Error starting NGP Host Service](#)
- [Errors Connecting to the Postgres Database](#)
- [Error installing DetectorPack](#)
- [An error occurred while installing on Windows with the language pack Norsk \(bokmål\)](#)
- [Error uninstalling Axxon Next on systems with Videoinspector installed](#)

Error starting NGP Host Service

If port 49999 is busy during installation of Axxon Next (for example, because of nethost.exe processes that have not been unloaded since removal of the previous version), an error message regarding the launch of NGP Host Service appears.

To continue installation, free up port **49999** and try again.

Errors Connecting to the Postgres Database

After installation of the Postgres database, the Axxon Next installer may quit prematurely. This situation may be associated with the inability of the installer to connect to the Postgres database, if the firewall is enabled. To prevent this, disable your firewall during installation.



Note

Disabling the firewall during installation can cause another problem: see [No signal from video cameras and failure to connect to other servers](#).

Error installing DetectorPack

In some cases, you may encounter V2C Error while installing Detectorpack: HASP LM is not running Status Code: 37 0 4832 33.

To resolve it, do as follows:

Start the command line (Run as administrator).

1. Run the following sequence of commands: 1) **bcdedit -set LOADOPTIONS DISABLE_INTEGRITY_CHECKS** 2) **bcdedit -set TESTSIGNING ON**.
2. Reboot and make sure that the **hasplms** service is running.
3. Reinstall the driver [Sentinel HASP LDK - Windows GUI Run-time Installer](#).
4. Reinstall *Axxon Next*.

An error occurred while installing on Windows with the language pack Norsk (bokmål)

Installing the Axxon Next server on Windows with the language pack Norsk (bokmål) is not possible due to incompatibility with PostgreSQL.

You must install Norsk Language Pack (Nynorsk).

Error uninstalling Axxon Next on systems with Videoinspector installed

In some cases, uninstalling Axxon Next may be impossible if Videoinspector is used.

For Axxon Next to work correctly, you are advised to first uninstall Videoinspector.

Possible Errors During Start-Up

Rus

Launching the Axxon Next software program with client logging enabled can take a long time when the *ESET NOD32 Antivirus 4 Real-time file system protection* mode is on.

To solve this problem, add the Axxon Next installation folder and the folder with the client logs (<Letter of system

disk>:\Users\<User>\Appdata\Local\AxxonSoft\AxxonNext\logs) to the list of exceptions in ESET NOD32 Antivirus 4.

Possible Errors During Operation

Rus

On page:

- All video cameras or archives stop working once the license maximum is reached
- No signal from video cameras and failure to connect to other servers
- Incorrect display of Client interface elements
- Server error on Windows Server 2012
- Emergency shutdown of the Client on Windows 8.1
- Error creating new archives even when license restriction on total size is observed
- High CPU load during OpenGL software emulation
 - Performance of Axxon Next when working with NetLimiter 2

All video cameras or archives stop working once the license maximum is reached

If the activation key allows the use of a smaller number of video cameras than the amount used at the moment on the system, all of the video cameras will cease to function with the system. To resume operation, remove the objects corresponding to the excess number of video cameras and restart the server.



Note

Restart the Server through the Start menu as follows:

1. All Programs -> Axxon Next -> Shut Down Server
2. All Programs -> Axxon Next -> Start Server

Similarly, if an activation key allows using archives with a total size of an amount less than the current one, you are advised to correct the archive size to the required amount and then restart the server.

No signal from video cameras and failure to connect to other servers

If the Windows Firewall (or firewall of other manufacturers) was disabled during installation of Axxon Next, Axxon Next services and applications will not be automatically added to the list of firewall exceptions.

If the firewall is later turned on, this can interrupt the signal from video cameras and make it impossible to connect to other servers.

To solve this problem, add the following applications to the firewall exceptions: Apphost.exe, NetHost.exe, AxxonNext.exe, and LicenceTool.exe.



Note

If ESET NOD32 Smart Security 6 anti-virus software is used, disable Personal firewall

Incorrect display of Client interface elements

Client interface elements may be distorted on systems with some versions of GeForce drivers (such as 327.23, 337.88) installed.

In some cases this problem is solved by disabling stream optimization for the axxonnext.exe process:

1. Run **Control panel** -> **NVIDIA control panel**-> **3D parameters**-> **Software settings**.
2. Click the **Add** button and select the axxonnext.exe file (<Axxon Next installation directory >/bin).
3. Set the **Off** parameter for the **Threaded optimisation** function.
4. Click the **Apply** button.

If this solution does not eliminate the problem, then install an older driver for the graphics card.

Server error on Windows Server 2012

You may experience errors when running the server on Windows Server 2012. To fix the errors:

1. Open the registry path HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Session Manager\SubSystems\.
2. Find the **Windows** parameter and change its value as follows: in the string "SharedSection = 1024,20480, **768**", replace **768** with **4096**.
3. Save the changes and restart the computer.

Emergency shutdown of the Client on Windows 8.1

You may see the Client shutting down on Windows 8.1 with an error: " The name of the failed module: KERNELBASE.dll Exception code: 0xe0434352 ".

In this case, please contact Microsoft support.

Error creating new archives even when license restriction on total size is observed

If the user creates archives at the same time (in other words, without applying changes) while deleting some existing archives, creation of archives may be forbidden even if the total archive size does not exceed the amount of the license restriction.



Note

This happens because when verifying the license restrictions, the size of created archives is calculated based on the total size the last time when changes were applied

To regain the ability to create new archives in such situations, the user must first delete unnecessary archives and apply changes.

High CPU load during OpenGL software emulation

If your computer's graphics card does not meet OpenGL requirements (see [Limitations of the Axxon Next Software Package](#)), OpenGL can be emulated in software.

But this may place a high load on the CPU.

Performance of Axxon Next when working with NetLimiter 2

If *NetLimiter 2* is installed in the system, there may be a significantly increased load on the processor when working with *Axxon Next*.

This problem is resolved by removing *NetLimiter 2*.

Appendix 3. Assigning of the domain takes place when the Axxon Next server is installed

Rus

The Windows OS will create two accounts when the Axxon Next software package is installed using a **Client and Server** type of configuration.

1. An account with administrator rights which is used by the Axxon Next file browser. The name of this account is set during installation of Axxon Next (see [Installation](#)).
For Axxon Next to function correctly, this account must have Windows administrator rights. If the account is a domain user account, you must also add the account to the **Users** and **Power Users** groups.



Note

The file browser helps to navigate through the Server's file system (such as when choosing disks for log volumes)

The account can also be used for configuring access rights to the hard disk.

2. Axxonpostgres – an account under which the log data database service is started.



Note

A log database (Postgres) is used for storing system events

Appendix 4. Using Axxon Next with anti-virus software

Rus

On page:

- [NOD32](#)
- [ESET Smart Security](#)
- [AVG](#)
- [DrWeb](#)
- [McAfee SAAS](#)

Depending on the anti-virus software that you use, when you install, start, and use Axxon Next, your anti-virus software may ask for permission for the software components to perform Internet access.

It is recommended that you allow these components to do so for proper functioning of the application.

Recommendations for specific anti-virus programs are given below.

NOD32

When using NOD32 Antivirus, it is strongly recommended to either disable the Web Access Protection service or to add the IP addresses of IP cameras to the list of exceptions for anti-virus scanning.

See also section [Possible Errors During Start-Up](#).

ESET Smart Security

If you use ESET Smart Security, select automatic mode with Firewall exceptions and add the remote servers to the exceptions by creating network rules (for help with creating these rules, refer to the official user guide for the anti-virus software).

AVG

When using AVG on a configuration with many video cameras, it is strongly recommended to add the IP addresses of IP cameras to the list of exceptions. Otherwise, the avgsa.exe process may severely slow down the CPU. This action can be performed only in the paid version of AVG.

When installing Axxon Next, allow the NetHost.exe and ngpsh.exe processes to run.

DrWeb

If you use DrWeb anti-virus software, perform the following actions before installing Axxon Next:

1. Disable automatic start of the DrWeb firewall.
2. In the proactive protection settings, select the option to use custom settings and enable the following options:
 - a. Allow low-level disk access
 - b. Allow system services
 - c. Allow loading drivers
 - d. Allow user drivers
 - e. Allow Winlogon shell parameters
3. In the SpiDer Gate settings, add the apphost.exe and AxxonNext.exe processes to the list of exceptions for scanning of incoming traffic. If possible, it is recommended to disable scanning of incoming and outgoing traffic.

McAfee SAAS

For correct functioning of Axxon Next distributed configurations and remote clients, you must disable the Firewall Protection component in McAfee SAAS.



Note

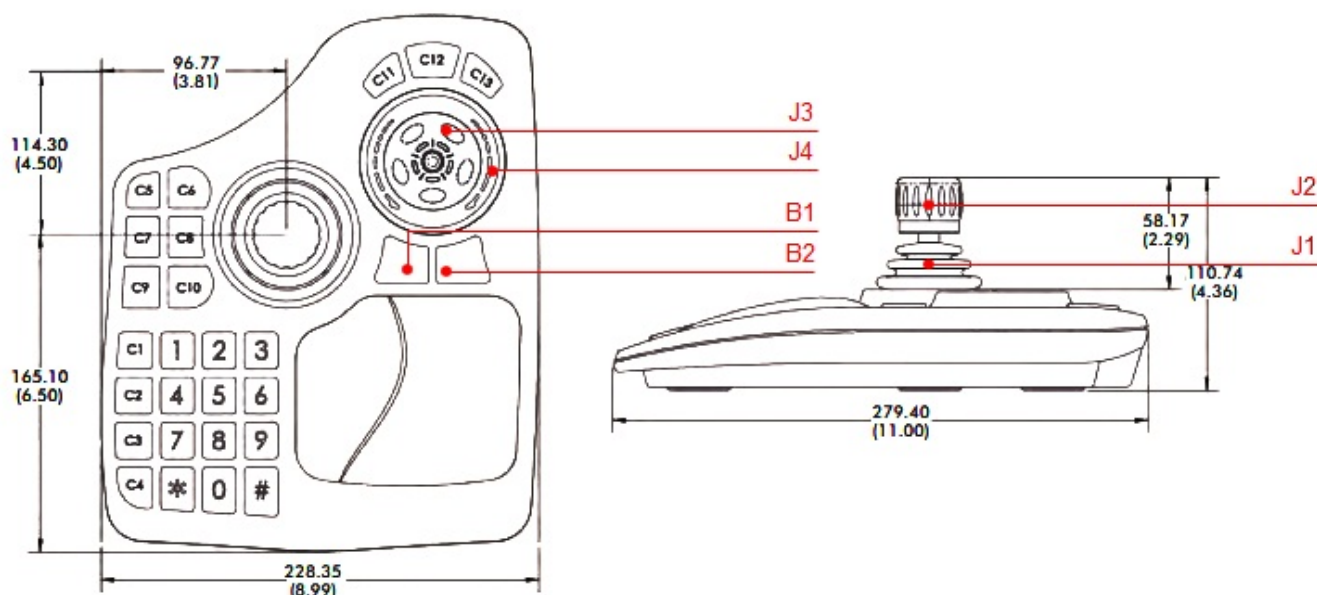
It is not necessary to disable this component if your configuration contains a single server and a local client.

Appendix 5. Using CH VM-Desktop USB multifunction controllers with Axxon Next

Rus

CH VM-Desktop USB multifunction controllers offer a range of input controls:

- Three-axis joystick for PTZ and digital zoom control (**J1** and **J2**)
- Jog/shuttle dial (**J3** and **J4**)
- 27 keys
 - 10 number keys
 - * key
 - # key
 - Programmable keys **C1** to **C13** (keys cannot be remapped in Axxon Next)
 - Two additional keys (**B1** and **B2**)



The multifunction controller can be used to operate Axxon Next on the active monitor.



Note

The active monitor is either the main one (if all additional monitors are inactive or not connected) or an additional one, if the additional monitor is active (see [Configuring Interfaces on a Multi-Monitor Computer](#)).

The active monitor can be selected only by using the mouse. If no mouse is present, the multifunction controller will work on the main monitor only.

A description of key functions is given in the table.

Key	When available	Function
J1	Always	PTZ control for the selected camera. If the selected camera does not support PTZ control, the action is ignored.
J2	Always	Optical zoom control for the selected camera. If the selected camera does not support PTZ control, the action is ignored.
J3 (rotate counterclockwise)	Archive mode	Go to previous frame. If playback is active, the action is ignored.
J3 (rotate clockwise)	Archive mode	Go to next frame. If playback is active, the action is ignored.
J4 (rotate counterclockwise)	Archive mode	Go to previous video fragment.
J4 (rotate clockwise)	Archive mode	Go to next video fragment.
J4	Live Video mode	Iris control for the selected camera.
1	Live Video mode	Start/stop patrol mode.
2.3	Live Video mode	Focus control for the selected camera.
* n #	Always	Select a camera in a layout. n is the number of the camera to be activated via the number keys. If the camera with the relevant number is not in the current layout, a search is performed for the minimum layout containing the camera; the minimum layout is then displayed. If no such layout exists, a layout with one camera is created.

# n #	Always	Go to layout. n is the layout to be activated via the number keys; the number corresponds to the order in which the layout appears in the list.
C10	Always	Clear number. If the operator did not finish typing the number of a camera or layout (the # key was not pressed), pressing the C10 key clears the previously entered number.
C1	Alarm Management mode	Accept alarm with False Alarm resolution.
C2	Alarm Management mode	Accept alarm with Non-Critical Alarm resolution.
C3	Alarm Management mode	Accept alarm with Critical Alarm resolution.
C4	Always	Manually initiate an alarm and go to Alarm Management mode. Go to Alarm Management mode if an alarm has been previously initiated.
C5	Always	Increase size of layout cell
C6	Always	Reduce size of layout cell
C7	Always	Go to previous layout in the list
C8	Always	Go to next layout in the list
C11	Archive mode	Slow down playback
C12	Archive mode	Start/pause video playback
C13	Archive mode	Speed up playback
B2	Archive mode, Alarm Management mode	Go to Live Video mode (without alarm classification)
B2	Live Video mode	Go to Archive Mode
C9	Archive mode	Open/hide calendar
B1, B2	Open calendar	Cycle through calendar elements (equivalent to pressing the tab key) days of month - hours - minutes - seconds - am/pm (B2 key) and in reverse (by pressing the B1 key)
J3	Open calendar	Navigate by days and set hours, minutes, seconds, and AM/PM
J4	Open calendar	Navigate by months

Appendix 6. Hotkeys in Axxon Next

Rus

Axxon Next comes with the following default hotkeys:

Function	Hot key
Global <u>General</u>	
Activate panel of cameras	F4
Activate panel of configuration	F5
Activate panel of layouts	F2
Activate panel of video walls	F3
Select item of menu and panels, click Save, Apply, OK	Enter
Navigation. Down	Up

Navigation. Left	Left
Navigation. Right	Down
Navigation. Up	Right
Open menu of current layout	F1
Open panel with list of devices	F7
Open alarm panel	F6
Hide menu/panel, click Cancel	Esc
Remove current value	Delete
DIGIT 1	D1
Digit 9	D9
<u>Layouts</u>	
Camera selection in current layout	Ctrl + N
Select monitor by number	Shift + N
Select layout by number	Alt + N
Navigation the cameras, upward shift	Alt + Up
Navigation the cameras, left shift	Alt + Left
Navigation the cameras, downward shift	Alt + Down
Navigation the cameras, right shift	Alt + Right
Move to the previous layout	Shift + Left
Move to the next layout	Shift + Right
Increase layout cell	Ctrl + Add (+)
Decrease layout cell	Ctrl + Subtract (-)
Live Video display mode	
<u>Videocamera</u>	
Open menu of selected camera and select item	F9
Switch to archive mode	Ctrl + Tab
Switch to alarm classification mode	Ctrl + R
Switch to search in archive mode	Ctrl + F
Arm	Ctrl + A
Disarm	Ctrl + D
<u>PTZ</u>	
Move up	NumPad8
Move left	NumPad4
Move down	NumPad2
Move right	NumPad6
Close iris	Next
Focus far	End
Open iris	PageUp
Patrolling	Multiply (*)
Focus near	Home

Zoom in	NumPad9
Zoom out	NumPad3
Archive	
Open menu of selected camera and select item	Ctrl + E
Pause / Play	Ctrl + Space
Switch to Time Compressor mode	Ctrl + T
Go to the previous video clip	Ctrl + Shift + Left
Go to the previous frame	Ctrl + Left
Go to the next video clip	Ctrl + Shift + Right
Go to the next frame	Ctrl + Right
Show calendar	F8
Increase playback speed	Ctrl + Up
Reduce playback speed	Ctrl + Down
TimeCompressor	
Pause / Play	Ctrl + Space
Move home	Ctrl + B
Increase number of objects	Ctrl + Up
Decrease number of objects	Ctrl + Down
Alarms	
Go to the previous frame	Ctrl + Left
Go to the next frame	Ctrl + Right
Resolution False alarm	Ctrl + D3
Resolution Non-critical alarm	Ctrl + D2
Resolution Critical alarm	Ctrl + D1
Increase playback speed	Ctrl + Up
Reduce playback speed	Ctrl + Down