

BVMS - SNMP documentation

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1 Version history

Date	Description
2026-03-11	Draft release, valid for BVMS 13.1 version.

1.1 Introduction

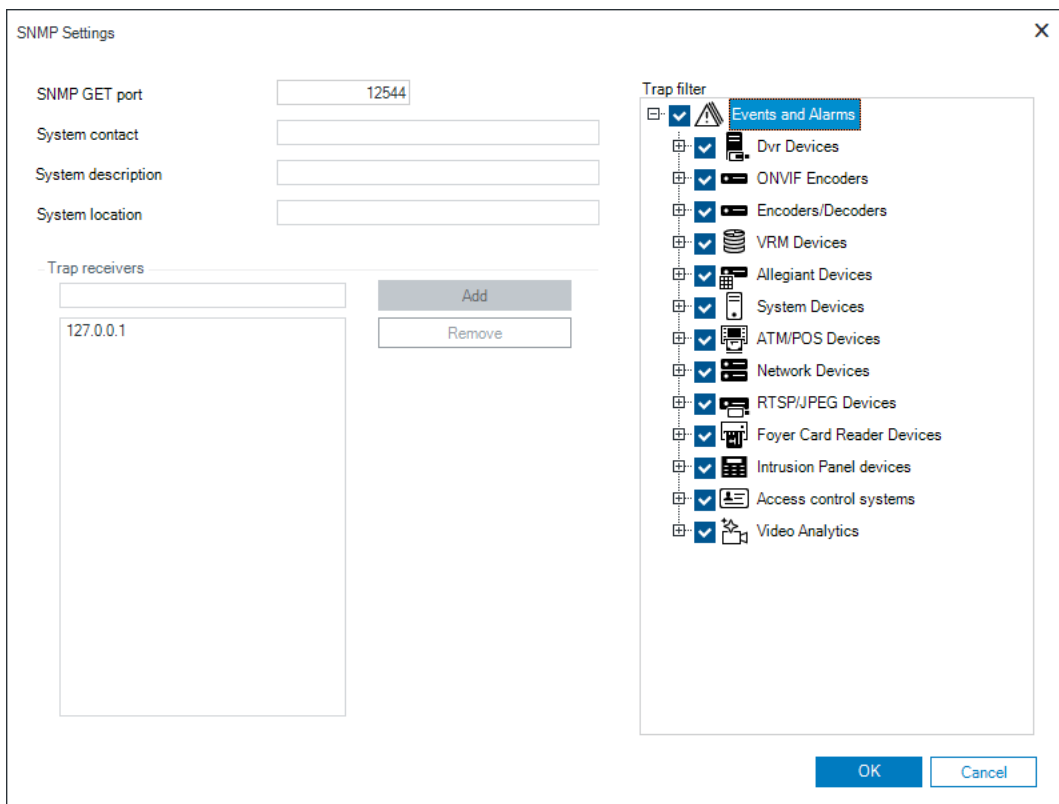
BVMS supports Simple Network Management Protocol (SNMP) to:

- allow monitoring of third-party equipment (e.g. hardware status) and trigger corresponding events/alarms in BVMS
- forward events/status information to the higher level monitoring system (e.g. PSIM)

This document is explaining how BVMS can be integrated as SNMP Agent and which SNMP Traps can be used to integrate BVMS with higher level monitoring/management system.

1.2 Configuration

BVMS allows configuring which SNMP Traps will be sent for corresponding system events. This configuration is available via **Settings** → **SNMP Settings** menu in the BVMS Configuration Client:



Corresponding SNMP Traps will be sent out for all the events selected in the **Trap filter** section.

1.3 BVMS SNMP Trap list

i The list of SNMP Traps below might not be complete and is focused on the most important and widely used traps.

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.4.4.1.1	encoder			
1.3.6.1.4.1.5318.2505.1.1.4.4.1.1.1		encoderIndex	Encoder index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.4.4.1.1.2		encoderName	Encoder name	string
1.3.6.1.4.1.5318.2505.1.1.4.4.1.1.3		encoderNetworkAddress	Encoder network address	string (IP address)
1.3.6.1.4.1.5318.2505.1.1.4.4.1.1.10		encoderConnectionState	Connection status	0 = unknown 1 = connected 2 = disconnected 3 = not authenticated
1.3.6.1.4.1.5318.2505.1.1.4.5.1	encoderInput			
1.3.6.1.4.1.5318.2505.1.1.4.5.1.1.1		encoderInputIndex	Encoder input index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.4.5.1.1.2		encoderInputName	Encoder input name	string

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.4.5.1.1.3		encoderInputNetworkAddress	Encoder input network address	string (IP address)
1.3.6.1.4.1.5318.2505.1.1.4.5.1.1.10		encoderInputConnectionState	Connection status	0 = unknown 1 = connected 2 = disconnected 3 = not authenticated
1.3.6.1.4.1.5318.2505.1.1.4.5.1.1.11		encoderInputInputState		
1.3.6.1.4.1.5318.2505.1.1.4.6.1.1	encoderRelay			
1.3.6.1.4.1.5318.2505.1.1.4.6.1.1.1		encoderRelayIndex	Encoder relay index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.4.6.1.1.2		encoderRelayName	Encoder relay name	string
1.3.6.1.4.1.5318.2505.1.1.4.6.1.1.3		encoderRelayNetworkAddress	Encoder relay network address	string (IP address)
1.3.6.1.4.1.5318.2505.1.1.4.6.1.1.10		encoderRelayConnectionState	Connection status	0 = unknown 1 = connected 2 = disconnected 3 = not authenticated
1.3.6.1.4.1.5318.2505.1.1.4.6.1.1.11		encoderRelayRelayState		
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1	camera			
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.1		cameraIndex	Camera index no.	1, 2, ...

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.2		cameraName	Camera name	string
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.3		cameraNetworkAddress	Camera network address	string (IP address)
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.10		cameraReferenceImageCheck	Reference image check status	0 = deadjusted 1 = adjusted
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.11		cameraConnectionState	Connection status	0 = unknown 1 = connected 2 = disconnected 3 = not authenticated
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.12		cameraMotionDetection	Motion detection status	0 = motion detected 1 = no motion
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.13		cameraRecordingMode	Active recording mode	0 = alarm recording 1 = continuous recording 2 = motion recording 3 = not recording 4 = manual recording 5 = pre-alarm recording 6 = pre-motion recording
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.14		cameraVideoLoss	Video signal status	0 = video signal lost 1 = video signal OK 2 = video signal state unknown
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.15		cameraVideoSignalTooBright	Video signal too bright status	0 = video signal OK 1 = video signal too bright

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.16		cameraVideoSignalTooDark	Video signal too dark status	0 = video signal OK 1 = video signal too dark
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.17		cameraVideoSignalTooNoisy	Video signal too noisy status	0 = video signal OK 1 = video signal too noisy
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.18		cameraVideoAnalysis01	VCA task 1 status	0 = alarm active 1 = no alarm
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.19		cameraVideoAnalysis02	VCA task 2 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.20		cameraVideoAnalysis03	VCA task 3 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.21		cameraVideoAnalysis04	VCA task 4 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.22		cameraVideoAnalysis05	VCA task 5 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.23		cameraVideoAnalysis06	VCA task 6 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.24		cameraVideoAnalysis07	VCA task 7 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.25		cameraVideoAnalysis08	VCA task 8 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.26		cameraVideoAnalysis09	VCA task 9 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.27		cameraVideoAnalysis10	VCA task 10 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.28		cameraVideoAnalysis11	VCA task 11 status	

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.29		cameraVideoAnalysis12	VCA task 12 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.30		cameraVideoAnalysis13	VCA task 13 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.31		cameraVideoAnalysis14	VCA task 14 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.32		cameraVideoAnalysis15	VCA task 15 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.33		cameraVideoAnalysis16	VCA task 16 status	
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.34		cameraStorageState	Storage state	0 = storage state unknown 1 = storage state OK 2 = storage state failure
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.35		cameraBufferStorageState	Buffer storage state	0 = storage state unknown 1 = storage state OK 2 = critical buffer fill level 3 = storage state failure
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.36		cameraSecondaryRecordingMode	Active secondary recording mode	0 = alarm recording 1 = continuous recording 2 = motion recording 3 = not recording 4 = manual recording 5 = pre-alarm recording 6 = pre-motion recording
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.37		cameraSecondaryStorageState	Secondary storage state	0 = storage state unknown 1 = storage state OK 2 = storage state failure

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.38		cameraFireOrSmokeState	Fire or smoke detection status	0 = fire or smoke state unknown 1 = fire or smoke not detected 2 = fire or smoke detected
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.39		cameraVisibility	Camera visibility (live view opened by any client) status	0 = not visible 1 = visible
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.40		cameraVideoSignalTooBlurry	Video signal too blurry status	0 = video signal OK 1 = video signal too blurry
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.41		cameraGlobalSceneChange	Global scene change status	0 = not detected 1 = detected
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.43		cameraRecordingMonitorState	Recording monitor status	0 = recording monitor state unknown 1 = recording monitor state OK 2 = recording monitor state recording loss
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.44		cameraSecondaryRecordingMonitor State	Secondary recording monitor status	0 = recording monitor state unknown 1 = recording monitor state OK 2 = recording monitor state recording loss
1.3.6.1.4.1.5318.2505.1.1.4.7.1.1.45		cameraVideoAnalysis	Video analysis alarms active	0 = VCA alarming active 1 = VCA alarming deactivated

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1	vrmDevices			
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1.1		vrmServerIndex	VRM index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1.2		vrmServerName	VRM name	string
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1.3		vrmServerNetworkAddress	VRM network address	string (IP address)
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1.10		vrmServerConnectionState	VRM connection status	0 = unknown 1 = connected 2 = disconnected 3 = not authenticated
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1.11		vrmServerFailoverState	VRM failover state	0 = unknown 1 = passive 2 = active
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1.12		vrmServerLicenseState	VRM license status	0 = unknown 1 = invalid 2 = valid
1.3.6.1.4.1.5318.2505.1.1.5.1.1.1.13		vrmServerVrmType	VRM server type	0 = unknown 1 = OK 2 = wrong type
1.3.6.1.4.1.5318.2505.1.1.5.2.1.1	lun			
1.3.6.1.4.1.5318.2505.1.1.5.2.1.1.1		lunIndex	LUN index no.	1, 2, ...

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.5.2.1.1.2		lunName	LUN name	string
1.3.6.1.4.1.5318.2505.1.1.5.2.1.1.10		lunFormattingState	LUN formatting state	0 = unknown 1 = formatted 2 = not formatted
1.3.6.1.4.1.5318.2505.1.1.5.3.1.1	iscsiDevice			
1.3.6.1.4.1.5318.2505.1.1.5.3.1.1.1		iscsiDeviceIndex	iSCSI target index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.5.3.1.1.2		iscsiDeviceName	iSCSI target name	string
1.3.6.1.4.1.5318.2505.1.1.5.3.1.1.3		iscsiDeviceNetworkAddress	iSCSI target network address	string (IP address)
1.3.6.1.4.1.5318.2505.1.1.5.3.1.1.10		iscsiDeviceConnectionState	iSCSI target connection status	0 = unknown 1 = connected 2 = disconnected 3 = not authenticated
1.3.6.1.4.1.5318.2505.1.1.5.4.1.1	streamingGatewayDevice			
1.3.6.1.4.1.5318.2505.1.1.5.4.1.1.1		streamingGatewayDeviceIndex	VSG index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.5.4.1.1.2		streamingGatewayDeviceName	VSG target name	string
1.3.6.1.4.1.5318.2505.1.1.5.4.1.1.3		streamingGatewayDeviceNetworkAddress	VSG target network address	string (IP address)

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.5.4.1.1.10		streamingGatewayDeviceConnectionState	VSG target connection status	0 = unknown 1 = connected 2 = disconnected 3 = not authenticated
1.3.6.1.4.1.5318.2505.1.1.7.1.1.1	compoundEvents			
1.3.6.1.4.1.5318.2505.1.1.7.1.1.1.1		compoundEventsIndex	Compound event index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.7.1.1.1.2		compoundEventsName	Compound event name	string
1.3.6.1.4.1.5318.2505.1.1.7.1.1.1.10		compoundEventsCompoundEventState	Compound event state	0 = true 1 = false 2 = not yet initialized
1.3.6.1.4.1.5318.2505.1.1.7.3.1.1	virtualInputs			
1.3.6.1.4.1.5318.2505.1.1.7.3.1.1.1		virtualInputsIndex	Virtual input index no.	1, 2, ...
1.3.6.1.4.1.5318.2505.1.1.7.3.1.1.2		virtualInputsName	Virtual input name	string
1.3.6.1.4.1.5318.2505.1.1.7.3.1.1.10		virtualInputsInputState	Virtual input state	0 = opened 1 = closed 2 = error 3 = unknown
1.3.6.1.4.1.5318.2505.1.1.7.5.1.1	alarmState			

OID	Trap level	Trap	Description	Values
1.3.6.1.4.1.5318.2505.1.1.7.5.1.1.1		alarmStateIndex	Alarm state index no.	1
1.3.6.1.4.1.5318.2505.1.1.7.5.1.1.2		alarmStateName	Alarm state name	Alarm
1.3.6.1.4.1.5318.2505.1.1.7.10.1.1	systemEvents			
1.3.6.1.4.1.5318.2505.1.1.7.10.1.1.1		systemEventsIndex	System events index no.	1
1.3.6.1.4.1.5318.2505.1.1.7.10.1.1.2		systemEventsName	System events name (see chapter below)	System (list of system events and warnings in the chapter below)

1.4 System info, system errors and system warnings

BVMS provides various events that will result in sending **systemEvents** SNMP trap. List below provides an overview of such events.

Event type	Description
Configuration Activated	Config activated - Version: ..., Label:, User: ...
System Info	Logbook database not configured.
	Logbook Start
	Logbook Stop

Event type	Description
System Error	The server-side scriptlet(s) cannot be compiled.
	The server-side scriptlet ... could not be executed. Either it could not be compiled or the maximum number of simultaneously running scripts has been reached.
	Alarm action error, failed to send email notification.
	Server alarm queue capacity reached!
	Access to <i>SQL</i> configuration failed.
	Logbook <i>SQL</i> is not well-formed.
	Logbook database does not exist in DBMS.
	Incorrect Logbook schema version.
	Load Logbook configuration failed, Logbook will be disabled.
	The Logbook is in a critical state. No further events are logged. Please contact your administrator.
	Unable to log items: ...
	Logbook is full
	Error while handling overflow in logbook
Access to Logbook failed. Maximum queue length exceeded.	

Event type	Description
	<p>Malfunction relay in error state.</p> <p>The BVMS Management Server could not start its SNMP agent. Possible reason: The port ... is occupied by a different process. Proposed action: Check the SNMP settings in the configuration.</p> <p>Device ... could not be reached. Possible reasons: 1. Wrong password, 2. Network problems.</p> <p>Device ... could not be examined. Possible reasons: 1. Wrong device-type, 2. Invalid firmware version.</p>
System Warning	<p>One or more reader devices of the access system ... no longer exist.</p> <p>The server alarm queue is almost full.</p> <p>Initialization of the Allegiant device has failed. Please verify that the Allegiant components are properly installed at the BVMS Management Server.</p> <p>Logbook is nearly full</p> <p>Logbook: Queue nearly full</p> <p>Logbook: Queue nearly full</p> <p>VSG ... line ... - camera ...: Time is out of sync.</p> <p>VSG ... line ... - camera ...: GOP length is not supported.</p> <p>The Streaming Gateway ... has a software version earlier than 7.0. This is not supported by BVMS 10 or later. Please upgrade to a supported version.</p>

Event type	Description
	Your Software Maintenance Agreement (SMA) expires on
	Your Software Maintenance Agreement(SMA) expired on
	Please check the Windows time service settings.
	Recording mode of encoder ... is incorrect.
	Export to ... is rejected as the target directory is not allowed for exports.

1.5 VRM SNMP Trap list

OID	Trap level	Trap	Description
1.3.6.1.4.1.3967.3.1	system		
1.3.6.1.4.1.3967.3.1.1		vrmsstatus	"Status of VRM" (1 = starting, 0 = stopping)
1.3.6.1.4.1.3967.3.1.2		license_days_remaining	"Remaining days of the demo license."
1.3.6.1.4.1.3967.3.1.3		backup_connection_status	"Status of the connection to the backup VRM" (1 = connected, 0 = disconnected, 2 = backup VRM has wrong version)

OID	Trap level	Trap	Description
1.3.6.1.4.1.3967.3.1.5		diskspace_left	"Percent of free disk space on the device where VRM is installed."
1.3.6.1.4.1.3967.3.2	storage		
1.3.6.1.4.1.3967.3.2.1		target_available	"Target is available again."
1.3.6.1.4.1.3967.3.2.2		target_unavailable	"Target is unavailable."
1.3.6.1.4.1.3967.3.2.3		target_inaccessible_for_VRM	"Target could not be accessed by VRM."
1.3.6.1.4.1.3967.3.2.4		target_inaccessible_for_device	"Target could not be accessed by a device."
1.3.6.1.4.1.3967.3.2.5		initial_discovery_left	"Number of LUNs that must be discovered until initial discovery is finished."
1.3.6.1.4.1.3967.3.2.6		initial_discovery_finished	"Initial discovery finished."
1.3.6.1.4.1.3967.3.2.7		available_spans	"Number of totally available blocks."
1.3.6.1.4.1.3967.3.2.8		low_disk_space	"Free space on iSCSI drives less than 10 percent."

OID	Trap level	Trap	Description
1.3.6.1.4.1.3967.3.2.9		no_disk_space	"No space left on iSCSI drives."
1.3.6.1.4.1.3967.3.2.10		low_disk_space_on_target	"Free space on iSCSI drive less than 10 percent."
1.3.6.1.4.1.3967.3.2.11		no_disk_space_on_target	"No space left on iSCSI drive."
1.3.6.1.4.1.3967.3.2.12		one_percent_disk_space_left	"One percent space left on iSCSI drives."
1.3.6.1.4.1.3967.3.2.13		maximum_five_percent_disk_space_left	"Maximum five percent space left on iSCSI drives."
1.3.6.1.4.1.3967.3.2.14		one_percent_disk_space_left_on_target	"One percent space left on iSCSI drive."
1.3.6.1.4.1.3967.3.2.15		maximum_five_percent_disk_space_left_on_target	"Maximum five percent space left on iSCSI drive."
1.3.6.1.4.1.3967.3.2.16		out_of_resources	"The iSCSI drive is out of resources (maximum number of sessions reached)."
1.3.6.1.4.1.3967.3.2.17		low_disk_space_in_pool	"Free space in pool is less than 10 percent."
1.3.6.1.4.1.3967.3.2.18		no_disk_space_in_pool	"No space in pool left."

OID	Trap level	Trap	Description
1.3.6.1.4.1.3967.3.2.19		one_percent_disk_space_left_in_pool	"One percent space left in pool."
1.3.6.1.4.1.3967.3.2.20		maximum_five_percent_disk_space_left_in_pool	"Maximum five percent space left in pool."
1.3.6.1.4.1.3967.3.3	device		
1.3.6.1.4.1.3967.3.3.1		online	"Connection established to device."
1.3.6.1.4.1.3967.3.3.2		offline	"Connection lost to device."
1.3.6.1.4.1.3967.3.3.3		could_not_establish_connection	"VRM could not establish connection to device."
1.3.6.1.4.1.3967.3.3.4		spanlist_warning	"Device has less than 8 spans for recording. This could interrupt the recording."
1.3.6.1.4.1.3967.3.3.5		time_warning	"Local time of device differs too much from VRM time."
1.3.6.1.4.1.3967.3.3.6		mapping_primary_failed	"Device could not be mapped to primary target, device will stop recording."
1.3.6.1.4.1.3967.3.3.7		mapping_secondary_failed	"Device could not be mapped device to secondary target, device will stop recording if primary target is not available."

OID	Trap level	Trap	Description
1.3.6.1.4.1.3967.3.3.8		limited_span_allocation	"This device has an abnormal high storage consumption. To protect other recordings, storage allocation is reduced. This may result in recording gaps for this device."
1.3.6.1.4.1.3967.3.4	camera		
1.3.6.1.4.1.3967.3.4.3		vdp_allocation_failed	"Camera could not write its data packets to an iSCSI drive."
1.3.6.1.4.1.3967.3.4.4		recording_error	"Camera has a recording error."
1.3.6.1.4.1.3967.3.4.5		video_alarm_on	"Camera receives no video signal."
1.3.6.1.4.1.3967.3.4.6		video_alarm_off	"Camera receives video signal."
1.3.6.1.4.1.3967.3.5	jobmanagement		
1.3.6.1.4.1.3967.3.6	divarip		
1.3.6.1.4.1.3967.3.6.1		diskspace_critical	"The storage capacity on the system partition is not sufficient."
1.3.6.1.4.1.3967.3.6.2		diskspace_undefined	"The storage capacity on the system partition could not be determined."
1.3.6.1.4.1.3967.3.6.4		diskspace_low_on_target	"The disk space on the system is not sufficient with the current recording settings."

OID	Trap level	Trap	Description
1.3.6.1.4.1.3967.3.6.5		device_offline	"At least one device is offline."
1.3.6.1.4.1.3967.3.6.6		videoloss_alarm_on	"At least one camera does not send a video signal."
1.3.6.1.4.1.3967.3.6.7		camera_recording_error	"At least one camera cannot record like configured."
1.3.6.1.4.1.3967.3.6.8		bad_smart_parameters	"At least one storage disk has bad S.M.A.R.T parameters."
1.3.6.1.4.1.3967.3.6.9		watchdog_offline	"The Watchdog service is not working correctly."
1.3.6.1.4.1.3967.3.6.10		diskmgmt_offline	"The Disk Management service is offline."
1.3.6.1.4.1.3967.3.6.11		update_available	"A new DIVAR IP system version is available. Log in to your DIVAR IP system to start the update."
1.3.6.1.4.1.3967.3.6.12		disk_missing_or_broken	"At least one disk is defect or missing."
1.3.6.1.4.1.3967.3.6.13		critical_fan_speed	"The fan is not working as expected. Check if it is blocked or defect."
1.3.6.1.4.1.3967.3.7	multipathing		

OID	Trap level	Trap	Description
1.3.6.1.4.1.3967.3.7.1		target_offline	"All paths of a storage seem to be offline for the VRM."
1.3.6.1.4.1.3967.3.7.2		target_connecting	"The VRM is connecting to an iSCSI drive. This might happen on startup or if we loose connection to a path."
1.3.6.1.4.1.3967.3.7.3		target_preferred	"The VRM is connected to the main path of the iSCSI drive."
1.3.6.1.4.1.3967.3.7.4		target_optimized	"The VRM is connected to an optimized path of the iSCSI drive."
1.3.6.1.4.1.3967.3.7.5		target_undefined	"The VRM is connected to an alternate path of the iSCSI drive which is not declared as being optimized or non-optimized."
1.3.6.1.4.1.3967.3.7.6		target_non-optimized	"The VRM is connected to a non-optimized path of the iSCSI drive."
1.3.6.1.4.1.3967.3.7.7		target_redundancy_unavailable	"At least one of the alternative paths is not available."