noisypeak

THE APEX OF VIDEO OVER IP SOLUTIONS

MONITORING AND FAILOVER · PRODUCT BROCHURE

Noisypeak Control

Monitoring console and NP-RFS redundancy software that moves transcoding to standby units when a primary fails.

Noisypeak Control is the monitoring console and NP-RFS failover software for Noisypeak transcoding fleets. 1+1, n+1 and n+m clusters of up to 100 devices, up to 50 encoders per web console, with Zabbix, Prometheus/Grafana and SNMP integration.



50
ENCODERS IN ONE WEB INTERFACE

100
DEVICES PER CLUSTER

20
CLUSTERS PER NP-RFS INSTANCE

30 s
DEFAULT FAILOVER THRESHOLD (CELL IMC)

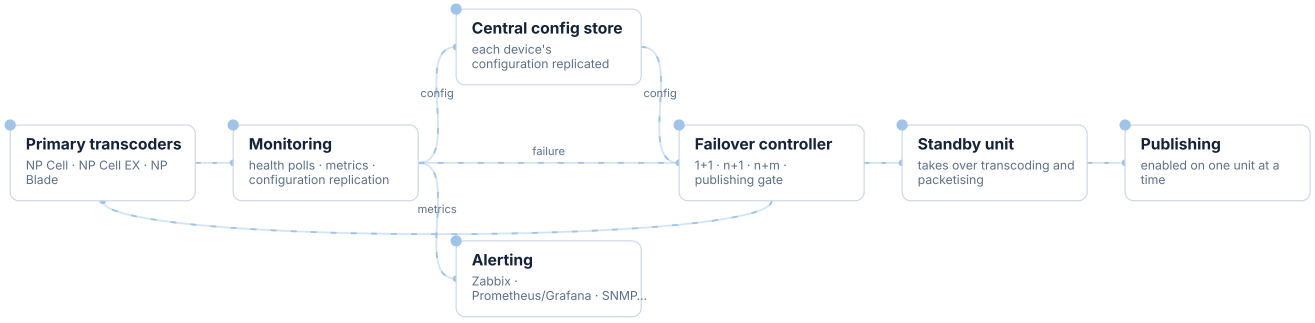
NOISYPEAK SÀRL · EPFL INNOVATION PARK · LAUSANNE · SWITZERLAND · 2026

NOISYPEAK CONTROL — MONITORING AND FAILOVER

Noisypeak Control combines the encoder management console with NP-RFS, the Noisypeak Redundancy and Failover Software. It is built for operators running transcoding fleets for TV platforms: up to 50 encoders are managed in one uniform web interface, and NP-RFS groups transcoders into clusters of 2 to 100 devices, up to 20 clusters per software instance.

NP-RFS supports 1+1, n+1 and n+m configurations. It constantly monitors primary units, replicates each device's configuration into centralised storage and, on failure, redirects traffic, transcoding and packetising to a standby unit. Recovery to the primary is automatic or manual. It works with standard NP rackmount platforms — NP Cell, NP Cell EX, NP Blade — with no firmware or hardware modification.

How Noisypeak Control watches a fleet and fails it over



On primary failure NP-RFS selects an available backup and switches transcoding to it; publishing is gated so primary and backup never publish at once.

REDUNDANCY SCHEMES

NP-RFS operates with clusters: groups of transcoders in which each unit is added with a Primary (master) or Backup (slave) role. Three modes cover projects of any size. 1+1 pairs two transcoders in master and slave mode. n+1 dedicates one backup to a cluster of three or more, with 2+1 as the reasonable minimum; on failure all channels of the failed unit move to the backup. n+m dedicates two or more backups, with 4+2 as the reasonable minimum, so up to m primaries can be replaced automatically.

- Clusters of 2 to 100 devices
- Up to 20 clusters per software instance
- Primary and Backup roles per transcoder
- Switch-over can be initiated manually for hardware maintenance
- Stay on Slave controls behaviour when the primary returns

WHAT HAPPENS ON FAILURE

NP-RFS constantly monitors primary units and replicates the configuration of each device into centralised storage. When a primary fails, NP-RFS selects an available backup and performs the switch-over of the transcoding function to it, redirecting traffic, transcoding and packetising. To prevent collision between primary and backup running simultaneously, NP-RFS controls enabling of publishing. Recovery to the primary unit when it returns is automatic or manual.

Control reaches the transcoders through their standard credentials and API, so no firmware or hardware modification is required on NP Cell, NP Cell EX or NP Blade.

CLUSTER CONTROLLER FOR NOISYPEAK CELL FLEETS

For X series fleets the Cell IMC controller adds policy-driven failover over the same API that configures channels. A cell is confirmed offline after two consecutive failed health polls. After failover_after_seconds (default 30, no upper bound) its channels move, with their outputs, to another active, licensed cell with free capacity; failover_autostart (default on) starts them there, and auto_recover moves them back when the cell returns. A cell in maintenance is skipped by auto-recovery and placement.

Channel and output priority 1–10 acts as the failover rank. Per-cell capacity ceilings (1–1000 channels, 1–1000 outputs) bound what a cell may hold; they are set manually or measured by a built-in capacity test that ramps probe channels until the cell saturates. Settings take effect immediately and survive a restart.

- Health per cell: reachability, fail streak, auth state, version, uptime, licence
- Expired or missing licence bars a cell from receiving channels
- GPU-aware placement over the last 30 monitoring samples
- Configuration writes stored first, parked for an offline cell, then applied
- Cluster-wide and per-cell backup and restore

MONITORING AND INTEGRATIONS

The management console shows real-time monitoring and statistics for up to 50 encoders in one web interface. Metrics and alarms feed Zabbix, Prometheus/Grafana and SNMP, and the same state is reachable through the API: per-cell health, cluster counters for stopped, starting and disconnected channels, per-channel input and output bitrate, uptime and task progress, an event ring with severity filter, and syslog.

FEATURES

1+1, n+1, n+m

Master/slave pairs, one dedicated backup, or m backups for n primaries. Reasonable minimums: 2+1 and 4+2.

Clusters at scale

2 to 100 devices per cluster, up to 20 clusters per NP-RFS instance.

Configuration replication

Each primary's configuration is replicated into centralised storage, ready for the backup that takes over.

Publishing gate

NP-RFS controls enabling of publishing so primary and backup never publish the same output at once.

Manual or automatic recovery

Switch-over can be triggered manually for maintenance; return to the primary is automatic or manual, with Stay on Slave.

Policy-driven failover for Cell fleets

failover_after_seconds, auto_recover and failover_autostart per cluster; priority 1–10 per channel and output.

Capacity awareness

Per-cell channel and output ceilings, set manually or measured by a capacity test; occupancy reported per cell.

Open monitoring

Zabbix, Prometheus/Grafana, SNMP and API management from one console for up to 50 encoders.

SPECIFICATIONS

CONSOLE

Capacity	Management of up to 50 encoders in one uniform web interface
Views	Real-time monitoring and statistics · video templates
Integrations	Zabbix · Prometheus/Grafana · SNMP · API management

NP-RFS REDUNDANCY

Modes	1+1 (2 transcoders, master/slave) · n+1 (3 or more, 2+1 minimum) · n+m (3 or more, 4+2 minimum)
Cluster size	2 to 100 devices
Clusters	Up to 20 per software instance
Roles	Primary (master) or Backup (slave) per transcoder
Platforms	NP Cell · NP Cell EX · NP Blade · no firmware or hardware modification
Switch-over	Automatic on primary failure · manual for maintenance · publishing enable controlled by NP-RFS
Recovery	Automatic or manual return to primary · Stay on Slave option
Control path	Transcoder standard credentials, API-based control

CELL IMC CONTROLLER

API	/api/10/ · cluster-settings · capacity · capacity-test · cells/health · cells/best
Offline detection	Confirmed offline at 2 consecutive failed polls
Failover policy	failover_after_seconds default 30 · auto_recover default off · failover_autostart default on
Failover rank	Priority 1–10 per channel and per output
Capacity ceilings	1–1000 channels and 1–1000 outputs per cell · default, manual or measured
Capacity test	One test cluster-wide · capped at 90 minutes · writes a measured override
Licence gating	expired or missing bars a cell from failover target, placement and move-back
Backup	Cluster-wide and per-cell backup and restore

ENCODER-LEVEL REDUNDANCY

Input	Input source redundancy in the standard image · primary and backup source per channel
Output	Publishing server redundancy · HLS secondary destination point

WHERE IT IS USED

Redundant head-end for TV platforms

n+1 or n+m clusters of NP Cell transcoders with automatic switch-over and gated publishing.

Planned maintenance without outage

Trigger switch-over manually, service the primary, then recover automatically or by hand.

Large multi-site fleets

Up to 20 clusters of up to 100 devices per NP-RFS instance, monitored through Zabbix, Prometheus or SNMP.

GPU fleet operations

Place, fail over and re-home channels across Noisypeak Cell nodes by capacity and GPU load through the Cell IMC API.

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