

HyperSDK

VM Console & Real-time Monitoring

Access VM consoles via VNC in the browser, stream real-time logs, monitor job progress with ETAs, and receive instant notifications — all powered by WebSocket.

VNC Console — Live Logs — Job Progress — WebSocket Updates

Live VM Console

Full VNC console access from the browser with screenshot previews and OS detection.



VNC Viewer

noVNC-based console embedded in the dashboard. Full keyboard and mouse support, clipboard sharing, and resolution scaling.



Screenshot Thumbnails

Live screenshot previews in the VM browser view. See at a glance which VMs are at login prompt, desktop, or BIOS screen.



OS Icons

Automatic OS detection badges (Ubuntu, CentOS, Windows, etc.) based on libvirt metadata. Visual identification at a glance.



Secure Access

VNC connections are proxied through the daemon with PAM authentication. No direct VNC port exposure required.

0

VNC ports exposed

< 1s

Console connect time

30 fps

Console refresh rate

Real-time Log Viewer

Terminal-style log streaming with auto-scroll, search, and syntax coloring.



Terminal Style

Dark terminal aesthetic with monospace font. Feels native to operators who live in the CLI but accessible from the browser.



Auto-Scroll

New log lines appear at the bottom with smooth auto-scroll. Scroll up to pause, scroll down to resume. Never miss a line.



Search & Filter

Regex search across log lines. Filter by log level (INFO, WARN, ERROR). Highlight matches in context.



Syntax Coloring

Color-coded log levels: green for INFO, yellow for WARN, red for ERROR. Timestamps, job IDs, and VM names highlighted.

"Watch migration progress in real-time: every qemu-img conversion step, every network transfer chunk, every verification pass — all streaming to your browser."

Job Monitoring

Progress bars, ETAs, status badges, and cancel buttons for every operation.



Progress Bars

Visual progress bars for every export, upload, conversion, and deployment job. Percentage complete with bytes transferred.



ETA Calculation

Dynamic ETA based on current throughput. Adjusts in real-time as network speed or disk IO changes during the operation.



Status Badges

Color-coded badges: blue (running), green (completed), red (failed), yellow (queued), gray (cancelled). Instant visual status.



Cancel Jobs

Cancel any running job with a single click. Graceful cancellation cleans up partial files and releases resources.

Job	VM	Progress	Speed	ETA	Status
Export OVA	web-prod-01	67%	245 MB/s	1m 32s	Running
Convert vmdk	db-master	100%	--	--	Completed
Upload qcow2	app-server	23%	48 MB/s	8m 15s	Running

Deploy VM

staging-02

0%

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Queued

Notification Center

In-app alerts, job status updates, and system notifications in one inbox.



Alert Notifications

When alert rules fire (CPU > 90% for 5 min), notifications appear instantly with severity badge and timestamp.



Job Completions

Every completed, failed, or cancelled job generates a notification with summary details and link to the full job log.



System Events

VM state changes (started, stopped, crashed), storage warnings (pool 90% full), and connectivity issues surface automatically.



Notification Management

Mark individual or all notifications as read. Filter by type (alert, job, system). Bulk dismiss old notifications.

Real-time

Delivery via WebSocket

3

Notification types

Badge

Unread count in navbar

WebSocket **Real-time** Updates

Every dashboard view stays live without polling — powered by persistent WebSocket connections.



Persistent Connection

A single WebSocket connection multiplexes all real-time data: job progress, system metrics, notifications, and log streams.



Auto-Reconnect

Automatic reconnection with exponential backoff on network disruptions. Missed events are replayed upon reconnection.



Sub-Second Latency

Dashboard updates reach the browser in under 100ms. No 5-second polling intervals — changes appear as they happen.



Efficient Protocol

JSON messages with event types and payload. Only changed data is sent — no full-state dumps on every update cycle.

Daemon Event



WebSocket Broadcast



React State Update



UI Renders

See It Happen Live

From VM console access to job progress to alert notifications — everything in the HyperSDK dashboard updates in real-time. No

refresh needed, ever.

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