HyperSDK

Upload & Deploy VM Workflow

Move VM disk images between environments effortlessly. Upload from your browser, deploy with a single API call, and have VMs running in minutes.

Drag & Drop Upload — Auto-Deploy — 50 GB Support

The Problem

Moving VM disk images between environments is painful, slow, and error-prone.

Manual SCP / Rsync

Teams rely on command-line file transfers that offer no progress visibility, no format validation, and no resumability on failure.

Format Mismatches

Uploading a VMDK to a KVM host or a VHD to a vSphere cluster causes silent failures. No upfront validation means wasted hours.

Multi-Step Deployment

After the disk arrives, operators must manually configure CPU, memory, network, and storage before the VM can boot.

No Audit Trail

Who uploaded what, when, and where it was deployed is tracked nowhere. Compliance teams are left in the dark.

45 min
Average manual transfer time

30%
Failure rate from format issues

12
Manual steps to deploy a VM

Upload Feature

Browser-based disk image upload with enterprise-grade reliability.

📂

Drag & Drop from Browser

Simply drag a disk image into the dashboard. No CLI required, no SSH keys to manage. Works from any modern browser.

💾

50 GB Support

Chunked multipart upload handles disk images up to 50 GB with automatic retry on network interruptions.

✅

Format Validation

Validates qcow2, vmdk, vhd, vhdx, and raw formats before upload begins. Catches header corruption and unsupported versions.

📈

Progress Tracking

Real-time progress bar with speed, ETA, and bytes transferred. WebSocket updates keep the UI responsive during long uploads.

> *"Upload a 20 GB qcow2 from the browser and watch it land on the hypervisor with full integrity verification — no terminal needed."*

Deploy Feature

One-click VM deployment from uploaded disk images using virt-install.

virt-install Integration

Deploys VMs directly via virt-install, leveraging the battle-tested libvirt stack. No custom hypervisor agents needed.

Auto-Config CPU & Memory

Reads guest OS metadata from the disk image and recommends optimal vCPU count and memory allocation automatically.

Network Auto-Config

Detects available libvirt networks (NAT, bridged, macvtap) and assigns the appropriate interface to the new VM.

Storage Placement

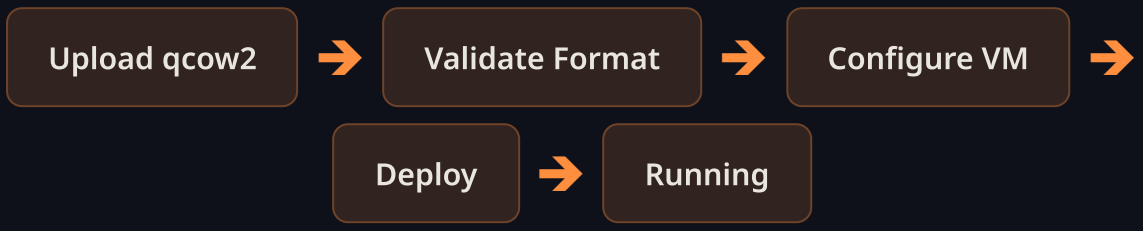
Selects the target storage pool based on available capacity, ensuring the VM lands on the right disk with enough free space.

Generated virt-install Command

```
virt-install --name web-server-01 --ram 4096 --vcpus 2 \
  --disk path=/var/lib/libvirt/images/web-server.qcow2 \
  --network network=default --os-variant ubuntu22.04 \
  --import --noautoconsole
```

End-to-End Flow

From disk image to running VM in minutes, not hours.



1. **Upload Disk Image**

   Drag qcow2/vmdk/vhd into the browser. Chunked upload with progress tracking handles files up to 50 GB.

2. **Format Validation & Inspection**

   HyperSDK validates the image header, checks format compatibility, and extracts guest OS metadata.

3. **Configure VM Parameters**

   Set VM name, vCPUs, memory, and network — or accept the auto-detected recommendations.

4. **Deploy via virt-install**

   HyperSDK generates and executes the virt-install command. The VM boots from the uploaded disk.

5. **VM Running**

   The VM is live and accessible. Console, monitoring, and management are available immediately from the dashboard.

3 min	0	100%
Upload to running (10 GB image)	CLI commands required	Audit trail coverage

API Reference

Two endpoints power the entire upload and deploy workflow.

POST /api/v1/upload/disk

Parameter	Type	Description
file	multipart	Disk image file (qcow2, vmdk, vhd, vhdx, raw)
name	string	Optional display name for the uploaded image
pool	string	Target storage pool (default: "default")
validate	boolean	Run format validation before storing (default: true)

POST /api/v1/deploy/vm

Parameter	Type	Description
disk	string	Path or ID of uploaded disk image
name	string	VM name (must be unique on the host)
vcpus	integer	Number of virtual CPUs (default: auto-detect)
memory	integer	Memory in MB (default: auto-detect)
network	string	Libvirt network name (default: "default")
os_variant	string	OS variant for virt-install optimization

Start Deploying in Minutes

Upload a disk image from your browser, configure the VM, and deploy — all through the HyperSDK dashboard or REST API.

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