

HyperSDK

Executive Summary

The unified multi-cloud VM export and migration platform — 10 providers, 150+ API endpoints, carbon-aware scheduling, and a modern web dashboard. All open source.

Apache 2.0 Open Source — Production-Ready — Enterprise-Grade

Platform Overview

One platform to manage VMs across every major cloud and hypervisor.

HyperSDK is an open-source Go platform that provides unified discovery, export, and migration of virtual machines across 10 cloud providers — including VMware vSphere, AWS, Azure, GCP, Hyper-V, OCI, OpenStack, Alibaba Cloud, Proxmox, and KubeVirt. Built on a hexagonal architecture with 70+ domain types and 13+ port interfaces, it offers 150+ REST API endpoints, a React web dashboard, carbon-aware batch scheduling, and enterprise security (PAM, RBAC, audit logging). HyperSDK eliminates the need for provider-specific tooling, reducing multi-cloud complexity to a single binary and a single API.

10

Cloud Providers

150+

API Endpoints

70+

Domain Types

7

Disk Formats



Universal Discovery

Single ListVMs() call discovers VMs across any connected provider. Normalized VMInfo with consistent fields.



Unified Export

ExportVM() handles provider-native export with format conversion, progress tracking, and manifest generation.



Carbon-Aware

Schedule batch migrations during low-carbon grid windows. 30-50% CO2 reduction. ESG compliance built-in.

Business Impact

Measurable ROI across cost, time, and sustainability.



Cost Reduction

- 70%+ TCO reduction vs VMware licensing
- \$0 platform license cost (Apache 2.0)
- Eliminates need for 10 separate migration tools
- Built-in cost estimation for migration planning
- 10x ROI on migration investment over 3 years



Time Savings

- 95% faster exports with CBT incremental
- 5-30 minutes per VM (typical migration)
- Zero manual steps for standard guests
- Batch scheduling with dependency chains
- One API to learn instead of 10 provider CLIs



Carbon Savings

- 30-50% CO2 reduction via carbon-aware scheduling
- Real-time grid carbon intensity tracking
- Audit-ready ESG compliance reports
- Cost co-optimization (low carbon = low cost)



Risk Reduction

- Eliminate vendor lock-in across all providers
- Enterprise security: PAM, RBAC, audit logging
- SSRF protection and rate limiting built-in
- Hexagonal architecture ensures maintainability

- Industry-first capability in VM migration

- Open source — full code auditability

70%

TCO Reduction

95%

Faster with CBT

**30-
50%**

CO2 Reduction

10x

Migration ROI

Getting Started

From installation to first VM export in minutes.

Quick Install

```
# Build and install all components
make install

# Start the daemon
sudo systemctl enable --now hypervisord

# Open the web dashboard
open http://localhost:8080
```

Key URLs

| Resource | URL | Description |
|---------------|---|--|
| Web Dashboard | http://localhost:8080 | React dashboard with VM browser, job tracker, provider manager |
| REST API | http://localhost:8080/api/v1/ | 150+ endpoints for automation and integration |
| Source Code | github.com/ssahani/hypersdk | Full source, documentation, and examples |

First Migration

```
# Add a vSphere provider
hyperctl provider add vsphere \
  --endpoint vcenter.example.com \
  --user administrator@vsphere.local

# Discover VMs
hyperctl vm list --provider vsphere

# Export a VM to qcow2
hyperctl export --provider vsphere \
```

```
--vm production-web-01 \  
--format qcow2 \  
--output ./exports/
```

Ready to Unify Your Multi-Cloud VM Operations?

HyperSDK is open source, production-ready, and backed by a hexagonal architecture designed for long-term maintainability. 10 providers. 150+ endpoints. Zero license cost. One platform.

github.com/ssahani/hypersdk

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Apache 2.0 Open Source | Go 1.24 | github.com/ssahani/hypersdk