

ZYVORAI LABS · CUSTOMER DOCUMENTATION

GuestKit

Page-by-Page Product Manual

2026-08-29

Page-by-page guides

Each guide follows: Purpose → When to use it → How to get there → What you can do → Related pages.

Every route is also listed in the [complete page index](#).

Assurance

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Migration Plan	Migration Plan — Assurance surface.
Migration Assurance	Migration Assurance — Assurance surface.
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Troubleshooting	Troubleshooting — Support surface.

29 guides. Regenerate: `node scripts/customer-docs/generate-guide-index.mjs` .

Doctor

Purpose

Doctor — Assurance surface.

When to use it

- Operate **Doctor** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `doctor`
- Nav: **Assurance** → **Doctor**
- Primary interface: `guestkit doctor IMAGE` · TUI Assurance `d` · web Passport

Operate from CLI / TUI (UX)

1. `guestkit doctor IMAGE` · TUI Assurance `d` · web Passport.
2. `guestkit doctor vm.qcow2 --target kvm|proxmox|kubevirt|aws...` .
3. `--explain` for root-cause.
4. `-o json --fail-below 80` for CI.
5. TUI: Assurance or `:` `doctor` .
6. Fix blockers → re-run doctor.
7. **Empty / fail**: Low score + blockers until repaired; mount failures abort.
8. **Success**: Score 0–100; exit 0 if above `--fail-below` .

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Migration Plan](#)
 - [Repair](#)
 - [Migration Assurance](#)
 - [Getting Started](#)
 - [Page index](#)
-

Migration Plan

Purpose

Migration Plan — Assurance surface.

When to use it

- Operate **Migration Plan** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `migrate-plan`
- Nav: **Assurance** → **Migration Plan**
- Primary interface: `guestkit migrate-plan IMAGE --target ...` · TUI `e`

Operate from CLI / TUI (UX)

1. `guestkit migrate-plan IMAGE --target ...` · TUI `e` .
2. `guestkit migrate-plan IMAGE --target proxmox` .
3. `--explain` / `-o json` .
4. `--export plan.yaml` for FixPlan.
5. Optional `--inject-agent` .
6. Follow with `migrate-assess` / `migrate-repair`; TUI: `t / p / e` .
7. **Empty / fail:** Missing `--target` ; Windows VirtIO gaps need `GUESTKIT_VIRTIO_WIN` .
8. **Success:** Migration score + checklist; YAML plan if exported.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Doctor](#)
 - [Fix Plans](#)
 - [VM Migration Guide](#)
 - [Migration Assurance](#)
 - [Getting Started](#)
 - [Page index](#)
-

Migration Assurance

Purpose

Migration Assurance — Assurance surface.

When to use it

- Operate **Migration Assurance** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `migration-assurance`
- Nav: **Assurance** → **Migration Assurance**
- Primary interface: doctor → plan → policy → passport → fleet

Operate from CLI / TUI (UX)

1. doctor → plan → policy → passport → fleet.
2. `doctor --explain` .
3. `migrate-plan --export` .
4. `inspect --profile windows-migration` if Windows.
5. `policy check` .
6. `passport emit ... -o passport.json` then `passport verify --fail-below 80` .
7. Fleet: `fleet analyze` / `wave-plan` .
8. **Empty / fail:** Verify fails below threshold → repair then re-emit; BitLocker hard-block.
9. **Success:** Passport verify exit 0; doctor score acceptable for target.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Doctor](#)
 - [Migration Plan](#)
 - [Policy Gate](#)
 - [Fleet](#)
 - [VM Migration Guide](#)
 - [Getting Started](#)
 - [Page index](#)
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Policy Gate

Purpose

Policy Gate — Assurance surface.

When to use it

- Operate **Policy Gate** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `policy`
- Nav: **Assurance** → **Policy Gate**
- Primary interface: `guestkit policy check IMAGE`

Operate from CLI / TUI (UX)

1. `guestkit policy check IMAGE` .
2. `policy check IMAGE --example-policy` .
3. `policy check IMAGE --policy FILE.yaml` .
4. Or `--benchmark cis` .
5. `-f json -o report.json` .
6. Gate pipelines on non-zero / `--strict` ; pair with passport verify.
7. **Empty / fail:** Missing policy file; expressions fail if evidence fields absent.
8. **Success:** Pass/fail per rule; JSON report written.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Doctor](#)
 - [Migration Assurance](#)
 - [Fleet](#)
 - [Getting Started](#)
 - [Page index](#)
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Export Formats

Purpose

Export Formats — Export surface.

When to use it

- Operate **Export Formats** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `export-formats`
- Nav: **Export** → **Export Formats**
- Primary interface: `--output` vs `--export` on inspect; plan export; passport JSON

Operate from CLI / TUI (UX)

1. `--output` vs `--export` on inspect; plan export; passport JSON.
2. Data: `inspect -o json|yaml|csv` .
3. Docs: `--export html|markdown|pdf --export-output PATH` .
4. Plans: `plan export plan.yaml -f bash -o fix.sh` .
5. Assurance: `migrate-plan --export` , `passport emit -o` .
6. TUI view export / web Passport download.
7. **Empty / fail:** Missing `--export-output` ; PDF may need Chrome/wkhtmltopdf.
8. **Success:** File opens (HTML) or validates (JSON/YAML).

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Inspect](#)
 - [Profiles](#)
 - [Fix Plans](#)
 - [Migration Assurance](#)
 - [Getting Started](#)
 - [Page index](#)
-

Fix Plans

Purpose

Fix Plans — Fix Plans surface.

When to use it

- Operate **Fix Plans** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `fix-plans`
- Nav: **Fix Plans** → **Fix Plans**
- Primary interface: `guestkit plan ...` · export from migrate-plan/repair

Operate from CLI / TUI (UX)

1. `guestkit plan ...` · export from migrate-plan/repair.
2. `plan generate IMAGE -p linux-ssh|windows-rdp|... -o plan.yaml` .
3. `plan preview plan.yaml ( --diff )`.
4. `plan validate plan.yaml --vm IMAGE` .
5. `plan apply plan.yaml --vm IMAGE --yes` .
6. `plan export` to bash/ansible; `plan rollback` if needed.
7. **Empty / fail:** Apply refused without backup unless `--skip-backup` .
8. **Success:** Preview lists ops; apply reports success; doctor improves.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Repair](#)
 - [Migration Plan](#)
 - [Profiles](#)
 - [Getting Started](#)
 - [Page index](#)
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Repair

Purpose

Repair — Fix Plans surface.

When to use it

- Operate **Repair** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `repair`
- Nav: **Fix Plans** → **Repair**
- Primary interface: `guestkit repair` · `rescue` · `migrate-repair`

Operate from CLI / TUI (UX)

1. `guestkit repair` · `rescue` · `migrate-repair` .
2. `repair IMAGE --fix boot --dry-run` .
3. `repair IMAGE --fix boot` (apply + re-doctor).
4. Day-0: `rescue IMAGE -o enable-ssh|fix-grub|reset-password...` .
5. Migration: `migrate-repair IMAGE --target kvm [--apply --yes]` .
6. Prefer dry-run → backup → apply.
7. **Empty / fail:** Dry-run only = no disk change; NTFS dirty → ntfsfix first.
8. **Success:** Doctor score rises; rescue op applied.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Doctor](#)
 - [Fix Plans](#)
 - [Guest Agent](#)
 - [Getting Started](#)
 - [Page index](#)
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Fleet

Purpose

Fleet — Fleet surface.

When to use it

- Operate **Fleet** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `fleet`
- Nav: **Fleet** → **Fleet**
- Primary interface: `guestkit fleet analyze|wave-plan|watch DIR` · TUI `--fleet DIR`

Operate from CLI / TUI (UX)

1. `guestkit fleet analyze|wave-plan|watch DIR` · TUI `--fleet DIR` .
2. `fleet analyze ./vms/ [--recursive -j 4]` .
3. `fleet wave-plan ./vms/ -o json` .
4. `fleet watch ./vms/` (first run = baseline).
5. Later: `watch --fail-on-drift` in cron.
6. TUI: `guestctl tui one.qcow2 --fleet ./vms/` .
7. **Empty / fail:** Empty dir / no disk formats.
8. **Success:** Clusters/snowflakes/blockers; waves; watch reports drift or clean.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Doctor](#)
 - [Forensic Diff](#)
 - [Migration Assurance](#)
 - [Getting Started](#)
 - [Page index](#)
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Forensic Diff

Purpose

Forensic Diff — Forensics surface.

When to use it

- Operate **Forensic Diff** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `forensic-diff`
- Nav: **Forensics** → **Forensic Diff**
- Primary interface: `guestkit forensic-diff OLD NEW · diff / compare`

Operate from CLI / TUI (UX)

1. `guestkit forensic-diff OLD NEW · diff / compare`.
2. Snapshot before/after.
3. `forensic-diff before.qcow2 after.qcow2`.
4. `-o json` for drift score.
5. Lighter: `guestkit diff a b`.
6. Fleet continuous: `fleet watch`.
7. **Empty / fail:** Identical images → low drift; mount fail on either side.
8. **Success:** Drift findings / security indicators JSON.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Fleet](#)
 - [Inspect](#)
 - [Profiles](#)
 - [Getting Started](#)
 - [Page index](#)
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Guest Agent

Purpose

Guest Agent — Guest Agent surface.

When to use it

- Operate **Guest Agent** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `guest-agent`
- Nav: **Guest Agent** → **Guest Agent**
- Primary interface: Build `--features agent` ; inject offline; proxy on host

Operate from CLI / TUI (UX)

1. Build `--features agent` ; inject offline; proxy on host.
2. `cargo build --release --features agent --target x86_64-unknown-linux-musl` .
3. `guestkit agent-inject IMAGE --agent-binary ...` .
4. Boot guest; `guestkit agent-proxy --socket ... --listen 127.0.0.1:8765` .
5. `curl /ping` `/doctor` `/evidence` .
6. Or `guestkit agent-call --socket ... --method guestkit.getEvidence` .
7. **Empty / fail:** No channel → missing virtio-serial/QGA; Windows needs virtio-serial driver.
8. **Success:** `/ping` OK; RPC returns doctor JSON.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Guest Control Fabric](#)
 - [KubeVirt Integration](#)
 - [Repair](#)
 - [Getting Started](#)
 - [Page index](#)
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Guest Files

Purpose

Guest Files — Guest Files surface.

When to use it

- Operate **Guest Files** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `files`
- Nav: **Guest Files** → **Guest Files**
- Primary interface: `list|ls` , `cat` , `extract|get` , `search|find` , `explore`

Operate from CLI / TUI (UX)

1. `list|ls` , `cat` , `extract|get` , `search|find` , `explore` .
2. `guestkit ls disk.qcow2 /etc` .
3. `guestkit cat disk.qcow2 /etc/fstab` .
4. `guestkit extract disk.qcow2 /etc/hostname ./hostname.txt` .
5. `guestkit find disk.qcow2 '*.conf'` .
6. Multi-step: `interactive` or `explore` ; backup: `guestkit backup IMAGE -o out.tar.gz` .
7. **Empty / fail:** Path missing → wrong mount/root; permission → sudo/NBD.
8. **Success:** Listing/content/extracted file on host.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Interactive Mode](#)
 - [TUI \(guestctl\)](#)
 - [Filesystems](#)
 - [Getting Started](#)
 - [Page index](#)
-

Guest Control Fabric

Purpose

Guest Control Fabric — Guest Files surface.

When to use it

- Operate **Guest Control Fabric** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `guest-control-fabric`
- Nav: **Guest Files** → **Guest Control Fabric**
- Primary interface: Web/API via zyvor-api KubeVirt guest routes

Operate from CLI / TUI (UX)

1. Web/API via zyvor-api KubeVirt guest routes.
2. Deploy API+UI (compose/Helm).
3. `GET .../guest/status` → control state.
4. `GET .../guest/capabilities` → transport.
5. Live: `POST .../guest/doctor` or agent-proxy.
6. Airgap: `POST .../guest/install-agent` ; halted VM: `POST .../guest/repair-plan` .
7. **Empty / fail:** `console_only` / `blind_vm` → install QGA/agent or stop VM for offline path.
8. **Success:** Envelope with transport, controlState, ok:true.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Guest Agent](#)
 - [KubeVirt Integration](#)
 - [Zeus VM Tools](#)
 - [Getting Started](#)
 - [Page index](#)
-

VM Migration Guide

Purpose

VM Migration Guide — Guides surface.

When to use it

- Operate **VM Migration Guide** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `vm-migration`
- Nav: **Guides** → **VM Migration Guide**
- Primary interface: CLI assurance-first workflow (+ hyper2kvm convert)

Operate from CLI / TUI (UX)

1. CLI assurance-first workflow (+ hyper2kvm convert).
2. Convert if needed: `guestkit convert` / `qemu-img` .
3. `doctor --target ... --explain` .
4. `migrate-plan --export` .
5. `repair --fix boot` / `migrate-repair --apply` .
6. Windows VirtIO via `GUESTKIT_VIRTIO_WIN` .
7. `passport emit/verify` then convert/boot on target.
8. **Empty / fail:** Boot fail post-cutover → fstab/GRUB/VirtIO; never write while guest running.
9. **Success:** Doctor high enough; passport verifies; first boot on target.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Migration Assurance](#)
 - [Doctor](#)
 - [Migration Plan](#)
 - [Repair](#)
 - [Getting Started](#)
 - [Page index](#)
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Filesystems

Purpose

Filesystems — Inspection surface.

When to use it

- Operate **Filesystems** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `filesystems`
- Nav: **Inspection** → **Filesystems**
- Primary interface: `guestkit filesystems|fs IMAGE` · REPL · TUI Storage

Operate from CLI / TUI (UX)

1. `guestkit filesystems|fs IMAGE` · REPL · TUI Storage.
2. `guestkit filesystems disk.qcow2` .
3. `--detailed` for types/labels.
4. Cross-check `guestkit usage|df` and `check|fsck` .
5. In REPL: `mount` root then `ls /` .
6. LVM clues via `inspect --profile migration` .
7. **Empty / fail:** Empty partition list → wrong image / need NBD; LUKS needs cryptsetup.
8. **Success:** Partition/FS list (ext4/xfs + swap).

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Inspect](#)
 - [Guest Files](#)
 - [Repair](#)
 - [Getting Started](#)
 - [Page index](#)
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Inspect

Purpose

Inspect — Inspection surface.

When to use it

- Operate **Inspect** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `inspect`
- Nav: **Inspection** → **Inspect**
- Primary interface: `guestkit inspect IMAGE` · TUI Overview · web Image Vault

Operate from CLI / TUI (UX)

1. `guestkit inspect IMAGE` · TUI Overview · web Image Vault.
2. `guestkit inspect disk.qcow2` .
3. Add `-o json` or `--summary` .
4. Depth: `--depth quick|standard|deep` .
5. Flags: `--include-packages|--include-services|--include-network` .
6. Profile: `--profile security|migration|performance|windows-migration` .
7. Batch: `inspect-batch *.qcow2 -p 4` .
8. **Empty / fail:** No OS → encrypted/corrupt/empty disk; use filesystems + interactive mount.
9. **Success:** OS type/distro/hostname + sections (or JSON).

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Filesystems](#)
 - [Packages](#)
 - [Profiles](#)
 - [Export Formats](#)
 - [Getting Started](#)
 - [Page index](#)
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Network Inspect

Purpose

Network Inspect — Inspection surface.

When to use it

- Operate **Network Inspect** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `network`
- Nav: **Inspection** → **Network Inspect**
- Primary interface: `guestkit network IMAGE` · REPL · TUI Network

Operate from CLI / TUI (UX)

1. `guestkit network IMAGE` · REPL · TUI Network.
2. `guestkit network disk.qcow2` .
3. `--show-interfaces` / `--show-dns` / `--show-routes` .
4. `--export-json` .
5. Or `inspect --include-network` .
6. Live: agent-proxy `/evidence` or KubeVirt guest/network.
7. **Empty / fail:** No ifaces → cloud-init-only / netplan not parsed.
8. **Success:** Interfaces + IP/MAC/DHCP + DNS.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Inspect](#)
 - [Migration Plan](#)
 - [Guest Agent](#)
 - [Getting Started](#)
 - [Page index](#)
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Packages

Purpose

Packages — Inspection surface.

When to use it

- Operate **Packages** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `packages`
- Nav: **Inspection** → **Packages**
- Primary interface: `guestkit packages|pkg IMAGE` · REPL · TUI Packages

Operate from CLI / TUI (UX)

1. `guestkit packages|pkg IMAGE` · REPL · TUI Packages.
2. `guestkit packages disk.qcow2` .
3. `--filter nginx` / `--limit 50` .
4. `--json` for automation.
5. Or `inspect --include-packages` .
6. Offline install staging: `GUESTKIT_PACKAGE_CACHE` + `plan apply` .
7. **Empty / fail:** Empty = no package DB / Windows guest / mount failed.
8. **Success:** Manager + package rows.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Inspect](#)
 - [Fix Plans](#)
 - [Profiles](#)
 - [Getting Started](#)
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Services & Users

Purpose

Services & Users — Inspection surface.

When to use it

- Operate **Services & Users** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `services-users`
- Nav: **Inspection** → **Services & Users**
- Primary interface: `guestkit systemd-services IMAGE` ; users via REPL/inspect; TUI

Operate from CLI / TUI (UX)

1. `guestkit systemd-services IMAGE` ; users via REPL/inspect; TUI.
2. `guestkit systemd-services disk.qcow2 ( --failed , --service UNIT )`.
3. `guestkit systemd-journal` / `systemd-boot` as needed.
4. Users: interactive → `users` , or inspect User Accounts.
5. TUI → Services / Users tabs.
6. `inspect --include-services` .
7. **Empty / fail:** Non-systemd OS → sparse services; Windows users via registry inspect.
8. **Success:** Enabled units listed; users show uid/shell.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Inspect](#)
 - [Interactive Mode](#)
 - [Doctor](#)
 - [Guest Agent](#)
 - [Getting Started](#)
 - [Page index](#)
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KubeVirt Integration

Purpose

KubeVirt Integration — Integration surface.

When to use it

- Operate **KubeVirt Integration** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `kubevirt-integration`
- Nav: **Integration** → **KubeVirt Integration**
- Primary interface: zyvor-api HTTP + CLI offline on PVC path

Operate from CLI / TUI (UX)

1. zyvor-api HTTP + CLI offline on PVC path.
2. Deploy API with KubeVirt RBAC.
3. Stopped VM: `GET/POST /api/v1/kubevirt/vms/{ns}/{name}/boot-inspect` .
4. Or CLI: `doctor PVC_PATH --target kubevirt` .
5. Live: guest/status, guest/doctor, guest/evidence.
6. Install agent via guest/install-agent or vmtools.
7. **Empty / fail:** Running VM → offline inspect skipped; missing PVC path.
8. **Success:** available:true, source:guestkit, boot fields populated.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Guest Control Fabric](#)
 - [Guest Agent](#)
 - [Zeus VM Tools](#)
 - [Doctor](#)
 - [Getting Started](#)
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Zeus VM Tools

Purpose

Zeus VM Tools — Integration surface.

When to use it

- Operate **Zeus VM Tools** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `zeus-vm-tools`
- Nav: **Integration** → **Zeus VM Tools**
- Primary interface: Package `zyvor-vm-tools` / `zyvor-guest-agent`; API `/api/v1/vmtools/*`

Operate from CLI / TUI (UX)

1. Package `zyvor-vm-tools` / `zyvor-guest-agent`; API `/api/v1/vmtools/*` .
2. Build packages.
3. `POST .../vmtools/install?method=auto|cloud-init|qga|iso` .
4. Check `GET /api/v1/vmtools/coverage` .
5. Quiesce: `.../vmtools/quiesce` / `unquiesce`.
6. Exec: `.../vmtools/exec` ; offline: `agent-inject` .
7. **Empty / fail:** Coverage 0 → QGA down / no network → use qga file bootstrap.
8. **Success:** Agent connected; coverage chip; freeze/thaw works.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Guest Agent](#)
 - [KubeVirt Integration](#)
 - [Guest Control Fabric](#)
 - [Getting Started](#)
 - [Page index](#)
-

Python Bindings

Purpose

Python Bindings — Interfaces surface.

When to use it

- Operate **Python Bindings** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `python-bindings`
- Nav: **Interfaces** → **Python Bindings**
- Primary interface: `pip install hypersdk-guestkit` or `maturin develop --features python-bindings`

Operate from CLI / TUI (UX)

1. `pip install hypersdk-guestkit` or `maturin develop --features python-bindings` .
2. `from guestkit import Guestfs` .
3. `add_drive_ro` → `launch` → `inspect_os` .
4. Mount via `inspect_get_mountpoints` + `mount_ro` .
5. `cat` / `ls` as needed.
6. `umount_all` + `shutdown` ; see `examples/python/` .
7. **Empty / fail:** Import error → wrong package/feature; launch fail → NBD/sudo.
8. **Success:** Distro/hostname printed; clean shutdown.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Inspect](#)
 - [CLI Guide](#)
 - [Guest Files](#)
 - [Getting Started](#)
 - [Page index](#)
-

TUI (guestctl)

Purpose

TUI (guestctl) — Interfaces surface.

When to use it

- Operate **TUI (guestctl)** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `tui`
- Nav: **Interfaces** → **TUI (guestctl)**
- Primary interface: `guestctl tui IMAGE` · `guestkit tui|ui IMAGE`

Operate from CLI / TUI (UX)

1. `guestctl tui IMAGE` · `guestkit tui|ui IMAGE` .
2. Open TUI (optional `--fleet DIR` , `--compare OTHER`).
3. `{ / }` groups; Tab views; Ctrl+P jump; `:` palette.
4. Assurance: `d` doctor, `t` target, `p` preview, `e` export.
5. Browse Packages/Services/Users/Network.
6. Config `~/.config/guestkit/tui.toml` ; `h / ?` help.
7. **Empty / fail:** Blank panes → inspect failed (permissions/format); check footer.
8. **Success:** Dashboard populated; doctor score on Assurance.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Doctor](#)
 - [Migration Plan](#)
 - [Interactive Mode](#)
 - [Inspect](#)
 - [Getting Started](#)
 - [Page index](#)
-

CLI Guide

Purpose

CLI Guide — Onboarding surface.

When to use it

- Operate **CLI Guide** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `cli-guide`
- Nav: **Onboarding** → **CLI Guide**
- Primary interface: `guestkit --help` ; `guestkit commands`

Operate from CLI / TUI (UX)

1. `guestkit --help` ; `guestkit commands` .
2. `guestkit commands` for catalog.
3. Inspect group: inspect, filesystems, packages, network.
4. Assurance: doctor, migrate-plan, passport, policy, fleet.
5. Plans: `plan generate|preview|apply|rollback` .
6. Rescue: `rescue -o ...` ; prefer `-o json` / `--fail-below` for CI.
7. **Empty / fail:** Unknown subcommand → `guestkit commands` ; feature-gated cmds need `--features agent|ai|mcp` .
8. **Success:** Help lists groups; sample inspect returns text/JSON.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Quick Reference](#)
 - [Interactive Mode](#)
 - [Export Formats](#)
 - [Getting Started](#)
 - [Page index](#)
-

Getting Started

Purpose

Getting Started — Onboarding surface.

When to use it

- Operate **Getting Started** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `getting-started`
- Nav: **Onboarding** → **Getting Started**
- Primary interface: CLI first-hour; optional web `:8088`

Operate from CLI / TUI (UX)

1. CLI first-hour; optional web `:8088` .
2. Install: `cargo install guestkit` or release binary.
3. Confirm deps: `qemu-img --version` .
4. `guestkit doctor vm.qcow2 --target kvm --explain` .
5. `guestkit migrate-plan vm.vmdk --target kvm --export plan.yaml` .
6. Optional: `guestctl tui vm.qcow2` or GHCR compose → `:8088` .
7. **Empty / fail:** Missing qemu-img/NBD → install qemu-utils; permission denied → sudo or `modprobe nbd` .
8. **Success:** Doctor prints 0–100 score + blockers; `guestkit version` works.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Quick Reference](#)
 - [CLI Guide](#)
 - [Doctor](#)
 - [TUI \(guestctl\)](#)
 - [Getting Started](#)
 - [Page index](#)
-

Interactive Mode

Purpose

Interactive Mode — Onboarding surface.

When to use it

- Operate **Interactive Mode** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `interactive-mode`
- Nav: **Onboarding** → **Interactive Mode**
- Primary interface: `guestkit interactive|repl|shell IMAGE`

Operate from CLI / TUI (UX)

1. `guestkit interactive|repl|shell IMAGE` .
2. Launch REPL (one mount).
3. `info` → `filesystems` → `mount /dev/... /` .
4. `ls` / `cat` / `find` / `download` .
5. `packages` / `services` / `users` / `network` .
6. Optional `explore` ; then `exit` .
7. **Empty / fail:** `ls /etc` empty usually means unmounted — run `mount` ; launch fail → NBD/loop/permissions.
8. **Success:** Welcome shows detected OS; packages/users return lists.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Guest Files](#)
 - [TUI \(guestctl\)](#)
 - [Inspect](#)
 - [Packages](#)
 - [Getting Started](#)
 - [Page index](#)
-

Quick Reference

Purpose

Quick Reference — Onboarding surface.

When to use it

- Operate **Quick Reference** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `quick-reference`
- Nav: **Onboarding** → **Quick Reference**
- Primary interface: Cheat sheet — CLI / TUI keys

Operate from CLI / TUI (UX)

1. Cheat sheet — CLI / TUI keys.
2. `guestkit inspect disk.qcow2` .
3. `guestkit doctor IMAGE --target kvm` .
4. `guestkit migrate-plan IMAGE --target proxmox --export plan.yaml` .
5. `guestkit rescue IMAGE -o enable-ssh / fix-grub` .
6. `guestctl tui IMAGE` → `d / t / p / e` .
7. **Empty / fail:** No OS found → check filesystems; wrong format → detect/info.
8. **Success:** Inspect shows OS/hostname; doctor score present.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [CLI Guide](#)
 - [Inspect](#)
 - [Doctor](#)
 - [TUI \(guestctl\)](#)
 - [Getting Started](#)
 - [Page index](#)
-

Profiles

Purpose

Profiles — Profiles surface.

When to use it

- Operate **Profiles** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `profiles`
- Nav: **Profiles** → **Profiles**
- Primary interface: `guestkit inspect IMAGE --profile NAME` · `plan generate -p ...`

Operate from CLI / TUI (UX)

1. `guestkit inspect IMAGE --profile NAME` · `plan generate -p ...`.
2. Inspect profiles: security, migration, performance, compliance, hardening, windows-migration.
3. `-o json` / `--export html|markdown`.
4. Day-0: `plan generate` with windows-rdp / linux-ssh.
5. Automate over fleet with shell loop.
6. `--cache-refresh` when needed.
7. **Empty / fail:** Unknown profile name.
8. **Success:** Profile sections + risk_level / inventory.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Inspect](#)
 - [Fix Plans](#)
 - [Export Formats](#)
 - [Getting Started](#)
 - [Page index](#)
-

FAQ

Purpose

FAQ — Support surface.

When to use it

- Operate **FAQ** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `faq`
- Nav: **Support** → **FAQ**
- Primary interface: Reference answers; commands embedded

Operate from CLI / TUI (UX)

1. Reference answers; commands embedded.
2. Install: `cargo install guestkit` .
3. Not libguestfs — use GuestKit stack.
4. Passport vs virt-v2v: certify then convert.
5. Extract/list/rescue examples as in FAQ.
6. Cache under `~/.cache/guestkit/` ; escalate with version + repro.
7. **Empty / fail:** N/A (doc); point to troubleshooting for runtime.
8. **Success:** Reader can run cited command successfully.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [Troubleshooting](#)
 - [Getting Started](#)
 - [VM Migration Guide](#)
 - [Getting Started](#)
 - [Page index](#)
-

Troubleshooting

Purpose

Troubleshooting — Support surface.

When to use it

- Operate **Troubleshooting** when your job matches this surface
- Prefer dry-run / doctor before mutating repairs on disks
- Shut down the guest before write operations

How to get there

- Doc id: `troubleshooting`
- Nav: **Support** → **Troubleshooting**
- Primary interface: Ops runbook — CLI diagnostics

Operate from CLI / TUI (UX)

1. Ops runbook — CLI diagnostics.
2. `guestkit -v inspect ... / RUST_LOG=debug` .
3. NBD: `modprobe nbd ; qemu-nbd --disconnect` .
4. Loop: `losetup -D` .
5. `qemu-img check IMAGE` .
6. Container: privileged + `/dev/nbd*` ; gather version + uname + lsmod.
7. **Empty / fail:** Persistent device busy → disconnect all nbd / reboot.
8. **Success:** Same failing command succeeds after fix.

Host needs Linux + `qemu-img` / `losetup` / `qemu-nbd`; mount/repair often need root. GuestKit does not invent disk contents.

Related pages

- [FAQ](#)
 - [Getting Started](#)
 - [Filesystems](#)
 - [Getting Started](#)
 - [Page index](#)
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GuestKit — Complete page index

Every primary navigable dashboard route.

Generated: 2026-08-29 · 29 routes

Regenerate: `node scripts/customer-docs/generate-page-index.mjs`

Onboarding

Page	Route	Purpose	Guide
Getting Started	<code>getting-started</code>	Getting Started — Onboarding surface.	Open
Quick Reference	<code>quick-reference</code>	Quick Reference — Onboarding surface.	Open
CLI Guide	<code>cli-guide</code>	CLI Guide — Onboarding surface.	Open
Interactive Mode	<code>interactive-mode</code>	Interactive Mode — Onboarding surface.	Open

Inspection

Page	Route	Purpose	Guide
Inspect	<code>inspect</code>	Inspect — Inspection surface.	Open
Filesystems	<code>filesystems</code>	Filesystems — Inspection surface.	Open
Packages	<code>packages</code>	Packages — Inspection surface.	Open
Services & Users	<code>services-users</code>	Services & Users — Inspection surface.	Open
Network Inspect	<code>network</code>	Network Inspect — Inspection surface.	Open

Guest Files

Page	Route	Purpose	Guide
Guest Files	<code>files</code>	Guest Files — Guest Files surface.	Open
Guest Control Fabric	<code>guest-control-fabric</code>	Guest Control Fabric — Guest Files surface.	Open

Guest Agent

Page	Route	Purpose	Guide
Guest Agent	<code>guest-agent</code>	Guest Agent — Guest Agent surface.	Open

Assurance

Page	Route	Purpose	Guide
Doctor	<code>doctor</code>	Doctor — Assurance surface.	Open
Migration Plan	<code>migrate-plan</code>	Migration Plan — Assurance surface.	Open
Migration Assurance	<code>migration-assurance</code>	Migration Assurance — Assurance surface.	Open
Policy Gate	<code>policy</code>	Policy Gate — Assurance surface.	Open

Fix Plans

Page	Route	Purpose	Guide
Fix Plans	<code>fix-plans</code>	Fix Plans — Fix Plans surface.	Open
Repair	<code>repair</code>	Repair — Fix Plans surface.	Open

Fleet

Page	Route	Purpose	Guide
Fleet	<code>fleet</code>	Fleet — Fleet surface.	Open

Forensics

Page	Route	Purpose	Guide
Forensic Diff	<code>forensic-diff</code>	Forensic Diff — Forensics surface.	Open

Profiles

Page	Route	Purpose	Guide
Profiles	<code>profiles</code>	Profiles — Profiles surface.	Open

Export

Page	Route	Purpose	Guide
Export Formats	<code>export-formats</code>	Export Formats — Export surface.	Open

Integration

Page	Route	Purpose	Guide
KubeVirt Integration	<code>kubevirt-integration</code>	KubeVirt Integration — Integration surface.	Open
Zeus VM Tools	<code>zeus-vm-tools</code>	Zeus VM Tools — Integration surface.	Open

Interfaces

Page	Route	Purpose	Guide
TUI (guestctl)	<code>tui</code>	TUI (guestctl) — Interfaces surface.	Open
Python Bindings	<code>python-bindings</code>	Python Bindings — Interfaces surface.	Open

Guides

Page	Route	Purpose	Guide
VM Migration Guide	<code>vm-migration</code>	VM Migration Guide — Guides surface.	Open

Support

Page	Route	Purpose	Guide
Troubleshooting	<code>troubleshooting</code>	Troubleshooting — Support surface.	Open
FAQ	<code>faq</code>	FAQ — Support surface.	Open

Related

- [Customer docs home](#)
- [Page-by-page guides](#)