# Overview & concepts

## What is an HAProxy pool?

An HAProxy pool is a ServerCTL deployment preset for the edge tier: public DNS, one or more enrolled Linux VMs running HAProxy, and optional automatic promotion when the active host fails.

ServerCTL is the control plane. It does not terminate customer traffic itself. It:

- Enrols VMs via the ServersCTL agent
- Publishes a managed A record through Cloudflare or cPanel/WHM
- Tracks heartbeats (~1s check-ins) and systemd HAProxy health
- Queues remote jobs (install, reload, backup, drain) that run on the next heartbeat

Status: HAProxy pools are well tested and in public beta.

## Core terminology

| Term | Meaning |
|---|---|
| Pool | One site/deployment in the dashboard |
| Member | One enrolled VM (node) with hostname, allowed egress IP, and enrollment secret |
| Active member | The host whose IPv4 the managed DNS A record points at |
| Standby | Enrolled member not currently receiving DNS traffic |
| Failover hostname | Public FQDN clients use (e.g. `lb.example.com`) |
| Member template | Role at enroll time — for HAProxy pools use HAProxy balancer |

## Architecture (high level)

Clients → DNS (Cloudflare / cPanel) → A record → Active HAProxy VM
↑
ServerCTL Worker updates DNS
↑
Standby HAProxy VMs ← agent heartbeats + jobs

Health for failover: A member is unhealthy when:

1. No heartbeat within the failover delay window (10–120 seconds), or
2. HAProxy is monitored, and systemd reports HAProxy inactive

> Important: Clients must use the failover hostname, not a member’s raw IP. ServerCTL moves the A record; your apps keep the same DNS name.

# What HAProxy pools include vs other presets

HAProxy pools uniquely enable:

- Remote HAProxy jobs (install, reload, backup)
- HAProxy systemd probe on member cards
- Disaster Recovery tab (cross-member restore, 2+ members)
- Traffic-flow diagram on Overview
- HAProxy Status tab

Generic Linux pools hide HAProxy-specific jobs unless the agent detects HAProxy on the host.

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