

# CaffeineStacks

Technical Overview

# Contents

- Who This Is For ..... 3
- Infrastructure Overview ..... 4
  - Three Datacenters, One Platform ..... 4
  - Private Backbone ..... 4
  - High Availability Options ..... 5
  - Backup Strategy ..... 5
- Security Stack ..... 6
  - Defense in Depth ..... 6
  - SSL/TLS ..... 6
  - Hardening Baseline ..... 7
  - Patching Policy ..... 7
- Monitoring & Operations ..... 8
  - 24/7 Visibility ..... 8
  - Monitored Metrics ..... 8
  - Alert Response ..... 8
  - Service Level ..... 9
  - External Monitoring ..... 9
- Your Documentation ..... 10
  - No Black Box ..... 10
  - What's Included ..... 10
  - Format ..... 10
  - Why This Matters ..... 10
- Deployment & Workflow ..... 11
  - You Deploy, We Operate ..... 11
  - Access Model ..... 11
  - Deployment Options ..... 11
  - Responsibility Split ..... 12
  - Getting Started ..... 12
- Pricing ..... 12
  - Blends ..... 12
  - Stack Discount ..... 13
  - Example Stacks ..... 13
  - What's Included ..... 13

# Who This Is For

CaffeineStacks is a good fit if:

- ✓ You run Java/JVM or containerised workloads
- ✓ You want infrastructure you can understand and audit
- ✓ You value predictable costs over hyperscale features

Not a good fit if:

- ✗ You need managed application support (we manage infrastructure, not your code)
- ✗ You prefer fully automated self-service without human involvement
- ✗ You want “infinite scale” at €50/month

## Looking for something else?

Since you might already be working with containers, our [Pods](#) could be a better fit. Your app runs on our managed Kubernetes cluster instead of a dedicated VM, starting at €100/month (Cortado). No OS updates or server maintenance to worry about. You deploy with kubectl and YAML, we handle the cluster. Benefits like self-healing, scaling, and rolling updates come standard.

# Infrastructure Overview

## Three Datacenters, One Platform

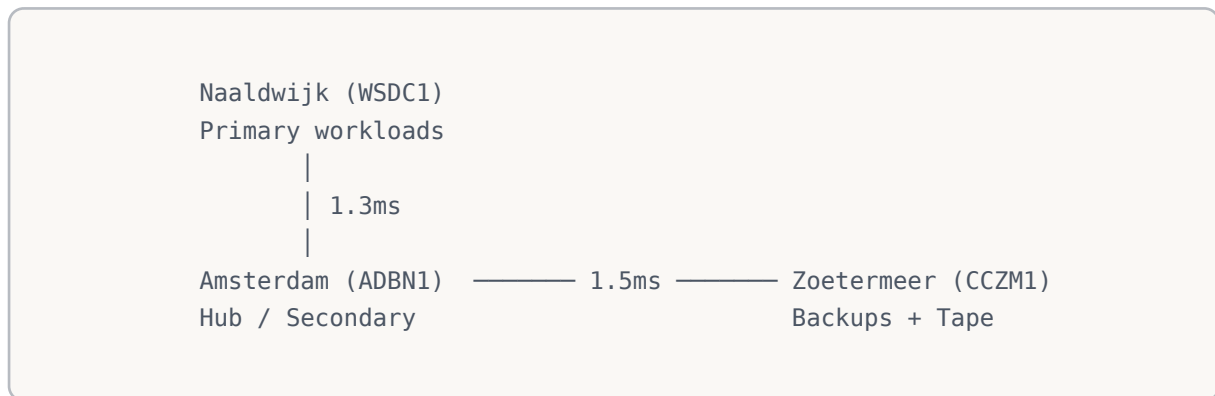
CaffeineStacks runs on CoffeeSprout's private infrastructure across three Dutch datacenters. All facilities are ISO 27001 certified.

Location	Code	Role	Certification
Naaldwijk	WSDC1	Primary workloads	ISO 27001
Amsterdam	ADBN1	Secondary workloads / hub	ISO 27001
Zoetermeer	CCZM1	Offsite backups + tape archive	ISO 27001

Customers can choose their primary datacenter, or we recommend based on latency and availability requirements.

## Private Backbone

All sites connect via a dedicated 10 Gbps Inter-IX backbone. No public internet between locations.



Amsterdam serves as the central hub connecting all locations. WireGuard tunnels provide automatic failover if a link degrades.

## High Availability Options

For workloads requiring higher availability, we design a solution together. Examples include:

- ✓ **Active/standby:** VM replicated to second datacenter, manual or automated failover
- ✓ **Active/active** (where applicable): Load balanced across both sites with carefully selected shared or replicated storage
- ✓ **Custom configurations:** Designed to your specific RTO/RPO requirements

### Example: Java API with PostgreSQL

Primary application VM in Naaldwijk runs your Spring Boot API. A PostgreSQL database VM in the same location handles persistence. Backups replicate to Zoetermeer on tape. Total monthly cost: €300 (Espresso + Cortado).

### Looking for more?

If HA requirements are driving you toward complex multi-VM setups, it might be time to consider our [Managed Clusters](#) from €1500/month. Available as VM-based clusters with dedicated support, or full Kubernetes with dual-cluster setup (staging + production), auto-scaling, and disaster recovery. We handle cluster operations, you focus on your apps.

## Backup Strategy

Setting	Value
Frequency	Twice daily (configurable)
Encryption	AES-256 at source
Replication	Offsite to Zoetermeer over private link
Long-term	Tape archive available

### Recovery options:

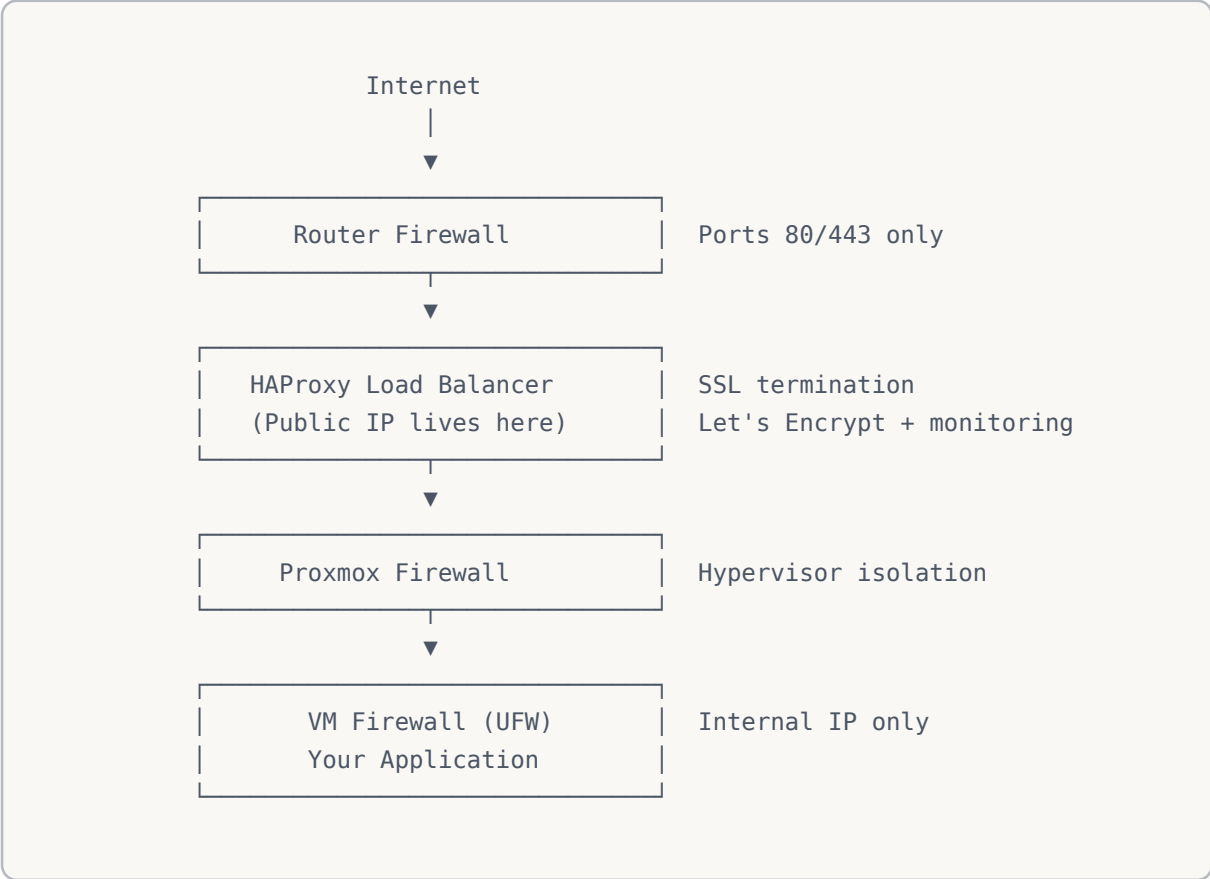
- ✓ **In-place restore:** Roll back to any snapshot
- ✓ **Side-by-side:** Spin up backup as separate VM to test changes
- ✓ **Promote to production:** Validate upgrades on backup copy, then swap

This workflow lets us test major upgrades (OS, database, application) on real data without risking production.

# Security Stack

## Defense in Depth

Traffic passes through multiple security layers before reaching your application:



Your VM has an internal IP address only. No direct internet exposure. All inbound traffic routes through our hardened load balancer with automatic SSL certificate provisioning and renewal.

## SSL/TLS

- ✓ **Let's Encrypt** certificates provisioned automatically
- ✓ **Certificate monitoring** alerts before expiration
- ✓ **Health checks** verify backend availability before proxying traffic

## Hardening Baseline

Every CaffeineStacks VM ships with:

Control	Implementation
SSH	Key-only authentication, root login disabled
Audit logging	CIS-benchmarked rules, immutable mode
Outbound SMTP	Blocked by default (prevents abuse if compromised)
Firewall	Default deny inbound, explicit allow rules only

## Patching Policy

Security patches are critical, but so is stability. We offer flexible options:

- ✓ **Automatic** (default): Security updates applied automatically, service-impacting updates coordinated
- ✓ **Scheduled**: Updates applied during agreed maintenance windows
- ✓ **Custom exclusions**: Specific packages (e.g., Docker, database) excluded from auto-updates
- ✓ **Coordinated releases**: Patch timing aligned with your deployment schedule

Your patching preferences are documented during onboarding and can be adjusted anytime.

# Monitoring & Operations

## 24/7 Visibility

Every VM is monitored via Zabbix with alerts routed to our operations team around the clock.

## Monitored Metrics

Category	What We Track
System	CPU, memory, disk usage, load average, swap
Network	Connectivity, latency, bandwidth utilization
Docker	Container health, restart count, resource consumption
Certificates	SSL expiration, renewal status
Backups	Job completion, storage utilization

## Alert Response

Severity	Response
Warning	Investigated during business hours
Critical	Immediate response, 24/7

### Our response process:

1. Automated alert triggers investigation
2. Infrastructure issues resolved without involving you
3. Application-level issues: we notify you with context (logs, metrics, timeline)

## Service Level

Metric	Guarantee
Uptime SLA	99.9%
Historically observed	99.99%

## External Monitoring

Optional HTTP/TCP checks from outside our network verify end-to-end availability. We can integrate with your existing monitoring or provide dashboards showing public endpoint status.

# Your Documentation

## No Black Box

Every CaffeineStacks customer receives complete documentation of their environment. The same documentation our engineers use.

## What's Included

Section	Contents
System Overview	Specifications, IP addresses, datacenter location
Firewall	Active rules, default policies, change request process
Users	Account list, permissions, SSH key management
Backups	Schedule, retention policy, restore procedures
Monitoring	Metrics collected, alert thresholds, dashboard access
Docker	Deployment workflow, logging configuration, maintenance
Updates	Patching policy, excluded packages, manual procedures

## Format

- ✓ **PDF:** Formatted for printing and sharing with auditors
- ✓ **Markdown:** Machine-readable, version controlled
- ✓ **Auto-generated:** Documentation regenerates when configuration changes

## Why This Matters

- ✓ **Onboarding:** Your team can get up to speed without calling us
- ✓ **Compliance:** Auditors get what they need without back-and-forth
- ✓ **Portability:** If you ever leave, you know exactly what you have

### Data Portability

In compliance with the EU Data Act, we provide full exports of your VM data on request. No proprietary formats, no lock-in. Your data is always yours.

# Deployment & Workflow

## You Deploy, We Operate

Your team gets full access to deploy and manage your application. We handle the infrastructure underneath.

## Access Model

Account Type	Purpose
Named users (your team)	Admin tasks, debugging, deployments
Service accounts	Running applications (no interactive login)

Every action is logged with audit trails tied to individual users. Important for compliance and incident investigation.

## Deployment Options

### Docker Compose (Recommended)

```
ssh yourname@your-vm
cd ~/deployments
docker compose pull
docker compose up -d
```

### CI/CD Integration

We help integrate with your existing pipeline:

- ✓ **Platforms:** GitHub Actions, GitLab CI, Jenkins, others
- ✓ **Access:** Deployment keys with minimal permissions
- ✓ **Triggers:** Webhook-based or SSH-based deploys
- ✓ **Secrets:** Secure handling of credentials and tokens

Tell us what you use; we'll help you connect it.

## Responsibility Split

We Handle	You Handle
OS and security updates	Application code
Backup verification	Container builds
Monitoring and alerting	Application configuration
SSL certificate renewal	Deployment decisions
Docker daemon maintenance	
Hardware and network	

## Getting Started

1. **Discovery call:** We discuss your application, requirements, and timeline
2. **Provisioning:** VM deployed and hardened (typically same day)
3. **Onboarding:** You receive documentation and access credentials
4. **Deployment:** Your team deploys; we verify everything works
5. **Ongoing:** We monitor and maintain; you ship features

## Pricing

CaffeineStacks use a simple, predictable pricing model. No surprise invoices for bandwidth, support calls, or monitoring add-ons.

## Blends

Blend	RAM	vCPU	Storage	Price/month
Espresso	8 GB	4	150 GB	€250
Lungo	16 GB	6	200 GB	€300
Latte	32 GB	8	300 GB	€400

## Stack Discount

Second VM in the same stack: **50% discount**. Want high availability or a separate database VM? The second one costs half.

Add-on	Price/month
<b>Cortado</b> (4 GB database)	€50
<b>Espresso</b> (second VM)	€125
<b>Lungo</b> (second VM)	€150
<b>Latte</b> (second VM)	€200

## Example Stacks

Setup	What's running	Price/month
Single Espresso	1× Espresso behind load balancer	€250
Starter stack	1× Espresso (app) + 1× Cortado (PostgreSQL)	€300
HA setup	2× Espresso for zero-downtime deploys	€375
Full stack	2× Espresso (app) + 1× Cortado (database)	€425
Production + staging	2× Lungo (production) + 1× Espresso (staging)	€575

## What's Included

Operations, monitoring, and support are included in the monthly price. No per-incident charges or hidden costs.

Questions? Contact us at [support@coffeesprout.com](mailto:support@coffeesprout.com) or visit [coffeesprout.nl](https://coffeesprout.nl)