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VERAE TIME × ZAPIER

Dedicated hardware

<site/packages/verae-ops/95-dedicated-hardware.md>

5. Dedicated hardware

NS1-style: a box that already runs NATS on **127.0.0.1:4222** (never a public bind), plus optional extra hosts for SSH workers.

This host (control + edges)

1. Node 22+, git (SSH port **2223** to Forgejo).
2. `nats-server -js` listening **127.0.0.1:4222** only (cluster later on a private NIC).
3. Clone `zappier-edge`, `verae-middleware`, `verae-fleet`.
4. systemd units (below) or `verae-fleet serve` which keepFloor-spawns workers.
5. Caddy/nginx for public HTTPS to `:3000` / `:3100`.
6. Operator console: `127.0.0.1:3850` — SSH tunnel if you are off-box:

```
ssh -L 3850:127.0.0.1:3850 -L 4222:127.0.0.1:4222 user@ns1
```

systemd (middleware)

```
[Unit]
Description=verae-middleware
After=network.target nats.service

[Service]
WorkingDirectory=/opt/verae/verae-middleware
Environment=PORT=3100
Environment=NATS_ENABLED=true
Environment=NATS_URL=nats://127.0.0.1:4222
Environment=VERAE_API_BASE_URL=https://api.veraetime.net
ExecStart=/usr/bin/node src/index.js
Restart=on-failure
User=verae

[Install]
WantedBy=multi-user.target
```

zappier-edge similar with `PORT=3000` and `WorkingDirectory` of that clone.

Extra machines

Add to fleet `machines.json`:

```
{
  "id": "ns1",
  "kind": "ssh",
  "user": "marchon",
  "host": "70.88.205.138",
  "port": 22,
  "identityFile": "~/.ssh/id_ed25519",
  "capacity": 8,
  "roles": ["tree-node", "archive-worm"]
}
```

Never commit private key bytes. Optional `machines.secrets.json` is gitignored.

NATS 3-server cluster on metal

Three boxes, private IPs, same `cluster_name`, routes to each other, `listen` on the private IP only. Clients (`NATS_URL`) list all three URLs. Target architecture: <https://zapier.georgelambert.org/overview/o3-nats-cluster.pdf>