

zapier.georgelambert.org · Markdown indexes

VERAE TIME × ZAPIER

What the system is (plain language)

[site/packages/overview/README.md](https://zapier.georgelambert.org/packages/overview/README.md)

Verae Time × Zapier — system overview

High-level description of the whole system: what it is, which **independent git repositories** implement it, how it stays up, how it behaves when the local network fails, and how it talks to the **central Verae NATS.IO 3-server cluster**. New work is added by **new address routing**, not by teaching Zapier about NATS.

This repo: <https://git.georgelambert.org/marchon/overview>

Bring online: <https://zapier.georgelambert.org/packages/verae-ops/GETTING-STARTED.pdf>

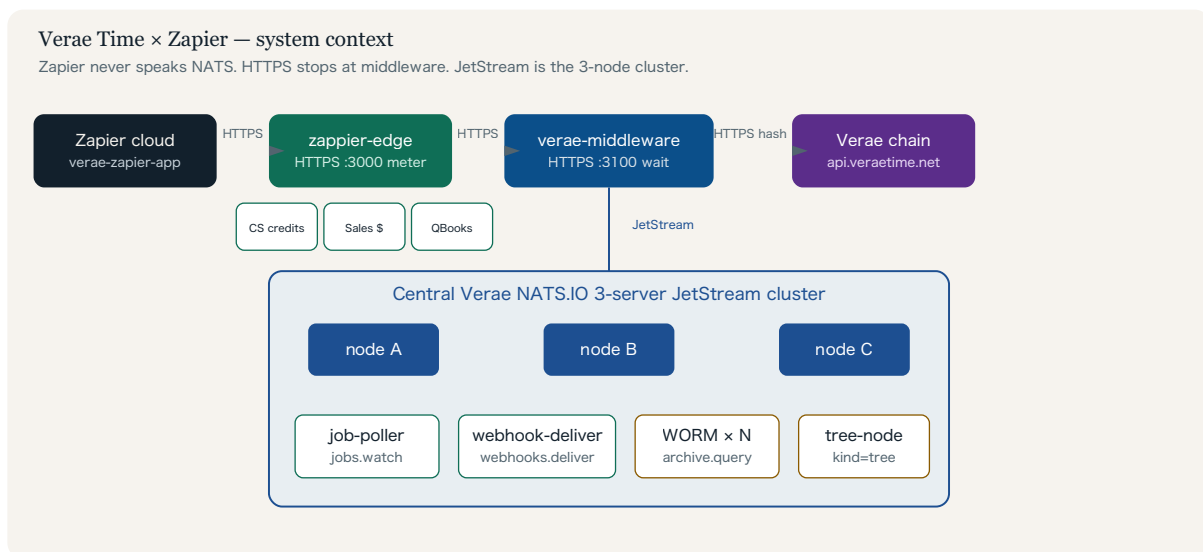
Live catalog (PDF by default): <https://zapier.georgelambert.org/> · [Markdown indexes](#)

Clone: <ssh://git@git.georgelambert.org:2223/marchon/overview.git>

Table of contents

1. [System](#) — what runs where; Zapier never speaks NATS
2. [Modules and repositories](#) — every independent Forgejo repo
3. [NATS.IO 3-server cluster](#) — JetStream, subjects, who may connect
4. [Uptime](#) — replica floors, restart, SSH spread
5. [Local network failures](#) — reconnect, silence, pending, failover
6. [Address routing](#) — how to add unplanned functions
7. [External resources](#) — searches, storage, chain
8. [Architectural diagrams](#) — SVG + mermaid
9. [Expansion template](#) — [verae-nats-process](#)
10. [Documentation index](#) — pointer into all other docs

One-screen picture



System context

Zapier → HTTPS `zappier-edge` → HTTPS `vera-time-middleware` → **NATS cluster** → workers, WORM archives, tree nodes. Chain HTTPS is `api.vera-time.net` (or MOCK). Fleet keeps minimum copies, including tree nodes.

Independent repositories (Forgejo)

Repo	Role
overview	This document
verae-ops	Docker, Proxmox, VMs, dedicated hardware
verae-nats-process	Model for a new addressed process
master-zapier-plan-draft	Monorepo snapshot
zapier-edge	Metered public HTTPS
verae-middleware	Zapier HTTP + NATS workers
verae-zapier-app	Zapier Platform app
verae-activate	Activate-now app
verae-request-splitter	Hash vs attachments
verae-archive-worm	Bloom WORM node
verae-archive-aggregator	Archive reply merge
verae-tree-node	Merkle leaf proofs
verae-fleet	Replica floor + SSH hosts
verae-zapier-simulator	Trace console
zapier-user-docs	Signup → lookup
zapier-docs-master	Per-module SUMMARY + NATS

Clone any of them: `git clone ssh://git@git.georgelambert.org:2223/marchon/<name>.git` (SSH port **2223**).

Operator console (loopback)

Fleet, message **Trace**, and **Docs** share one shell at `http://127.0.0.1:3850/` (`verae-fleet`). Not public. See [CONSOLE.pdf](#).

OPERATOR LAN - BINDS 0.0.0.0:3850

Veræ operator console

Fleet, Trace, Docs

probe 2026-09-11T21:58:12.858Z - NATS nats://127.0.0.1:4222 - HTTP 0.0.0.0:3850

MACHINES

ns1-b

70.88.205.138

ssh

marchon

22

~/ssh/id_ed25519

8

roles

tree-node

archive-worm

archive-aggregator

job-poller

webhook-deliver

nats

edge

Add machine

local OPERATIONAL

Control plane (this host)

127.0.0.1

local - 12/32 running - 12 avail

RTT ms 0 / 0 / 0 / 0 n=200

disable

ns1 OPERATIONAL

NS1.GEORGE LAMBERT.ORG

marchon@70.88.205.138

ssh - 8/24 running - 8 avail

TREE-NODE ARCHIVE-WORM ARCHIVE-AGGREGATOR JOB-POLLER WEBHOOK-DELIVER

RTT ms 0 / 0.1 / 0.1 / 0.1 n=1600

disable ssh-check

lan-134 DEGRADED

70.88.205.134

marchon@70.88.205.134

ssh - 0/12 running - 0 avail

TREE-NODE ARCHIVE-WORM

disable ssh-check

SERVICES

SERVICE	HEALTH	FLOOR	RTT	INSTANCES	POWER
access-api	OPERATIONAL	1 / min 1		UP access-api-0 @local :3022 ...	ON ...
access-authz	OPERATIONAL	1 / min 1		UP access-authz-0 @local :3020 ...	ON ...
access-leaf	OPERATIONAL	1 / min 1		UP access-leaf-0 @local :3023 ...	ON ...
access-web	OPERATIONAL	1 / min 1		UP access-web-0 @local :3021 ...	ON ...
access-zapier	OPERATIONAL	1 / min 1		UP access-zapier-0 @local :3024 ...	ON ...
account-balance	OPERATIONAL	1 / min 1		UP account-balance-0 @local :3010 ...	ON ...
accounting-export	OPERATIONAL	1 / min 1		UP accounting-export-0 @local :3013 ...	ON ...
archive-aggregator	OPERATIONAL	1 / min 1	RTT ms 0 / 0.1 / 0.1 / 0.1 n=200	UP archive-aggregator-0 @ns1 :13400 ...	ON ...
archive-worm	OPERATIONAL	3 / min 3	RTT ms 0 / 0.1 / 0.1 / 0.1 n=600	UP archive-worm-0 @ns1 :13500 ... UP archive-worm-1 @ns1 :13501 ... UP archive-worm-2 @ns1 :13502 ...	ON ...
customer-service	OPERATIONAL	1 / min 1		UP customer-service-0 @local :3011 ...	ON ...
job-poller	OPERATIONAL	1 / min 1	RTT ms 0 / 0.1 / 0.1 / 0.1 n=200	UP job-poller-0 @ns1 :13200 ...	ON ...
middleware-http	OPERATIONAL	1 / min 1		UP middleware-http-0 @local :3100 ...	ON ...
nats	NOT OPERATIONAL	0 / min 1		none	OFF ...
sales-pricing	OPERATIONAL	1 / min 1		UP sales-pricing-0 @local :3012 ...	ON ...
tree-node	OPERATIONAL	3 / min 3	RTT ms 0 / 0.1 / 0.1 / 0.1 n=600	UP tree-node-0 @ns1 :13600 ... UP tree-node-1 @ns1 :13601 ... UP tree-node-2 @ns1 :13602 ...	ON ...
webhook-deliver	OPERATIONAL	1 / min 1	RTT ms 0 / 0 / 0 / 0 n=200	UP webhook-deliver-0 @local :13300 ...	ON ...
zapier-simulator	OPERATIONAL	0 / min 0		none	OFF ...
zapier-edge	OPERATIONAL	1 / min 1		UP zapier-edge-0 @local :3000 ...	ON ...

Fleet tab

4 / 8

OPERATOR LAN - BINDS 0.0.0.0:3850

Verae operator console

Fleet, message trace, and docs in one shell. HTTP listens on all interfaces; NATS stays private. Pause does not count toward replica floors. SSH keys stay on disk.

Fleet

Trace

Docs

ZAPIER STEP (SIMULATOR)

Action

Create Timestamp and Wait

Data / batch lines

invoice-1001
invoice-1002
invoice-1003

SHA256

fa14b9f107d4ab25725090bebc80c7dd04956

Public metadata JSON

{ "source": "zap" }

☐ includeAttached ☐ includeTree

FAULTS

Orange is inject-only — not the product brand.

☐ 402 ☐ drop events ☐ recover

Run step

Reset world

Batch Merkle

Lookup leaf

Lookup tree

RESPONSE

```
{
  "jobId": "86a3267f-2831-44b3-97df-3cd4d536f57a",
  "status": "completed",
  "sha256": "fa14b9f107d4ab25725090bebc80c7dd049568056c40061d21fbaa0b6e3b9550",
  "existing": true,
  "receipts": [
    {
      "kind": "seal",
      "timestamp": "2026-09-11T21:55:47.287Z",
      "certificate": "mock-cert-86a3267f",
      "blockIndex": 1,
      "jobId": "86a3267f-2831-44b3-97df-3cd4d536f57a",
      "sha256": "fa14b9f107d4ab25725090bebc80c7dd049568056c40061d21fbaa0b6e3b9550"
    }
  ],
  "files": [],
  "archivesQueried": false,
  "archiveReplies": 0
}
```

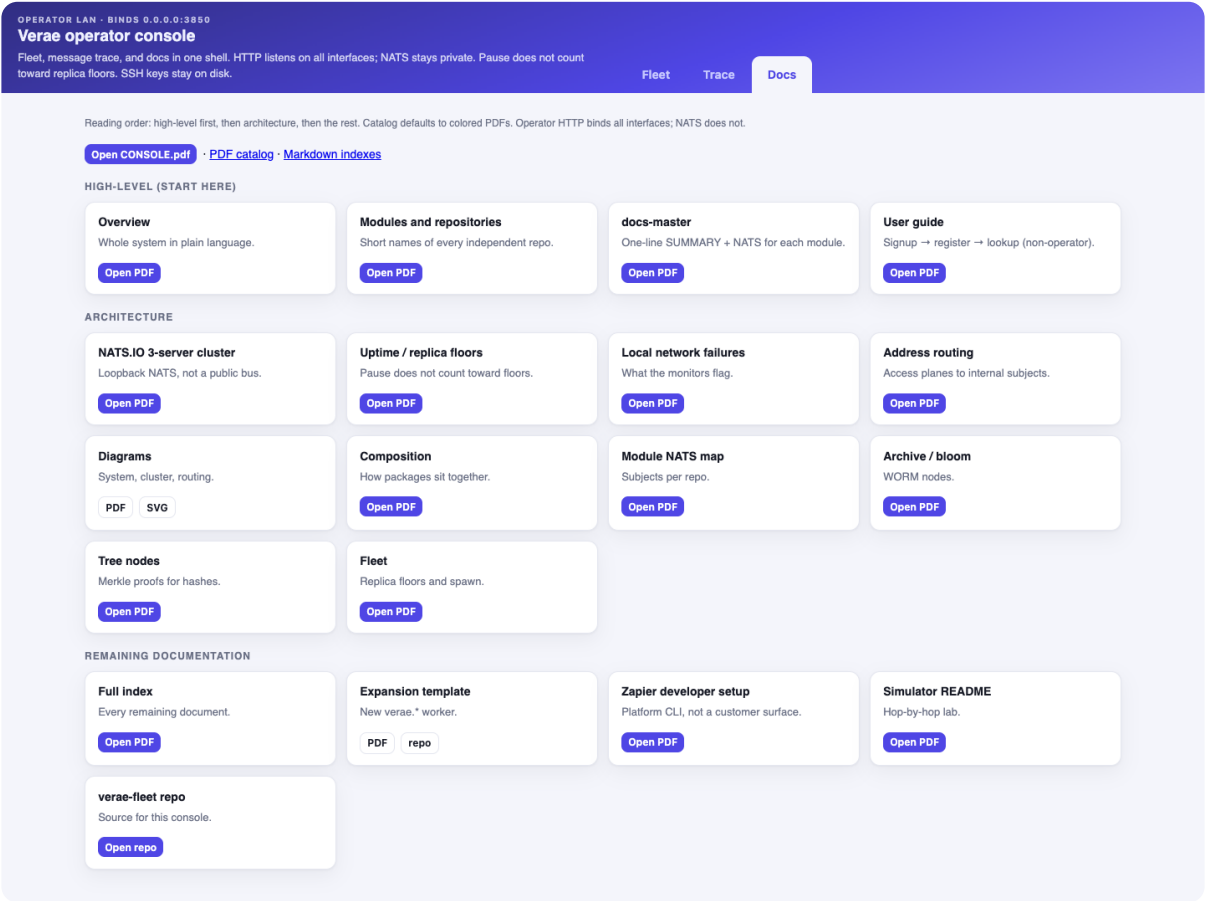
HOP TRACE

```
0ms → zapier-platform-app perform zapier://action/timestamp_and_wait - Zapier cloud perform(z, bundle).
                                HTTPS only.
0ms → zapier-edge auth HTTPS x-api-key
0ms → zapier-edge meter HTTPS → middleware - Rate card × tier - monthly credit
0ms → middleware-http POST /zapier/v1/timestamp/wait HTTPS /zapier/v1/timestamp/wait
0ms → verae-request-splitter splitRequest in-process - Chain gets hash only. Files/meta → archive.put
0ms → verae-chain-client lookup HTTPS api.verae.net (MOCK) - Already sealed - original receipt, no
                                second write
0ms → middleware-http publish verae.zapier.jobs.watch
0ms → job-poller consume verae.zapier.jobs.watch
0ms → job-poller GET status HTTPS api.verae.net/status
0ms → job-poller publish verae.zapier.jobs.events
0ms → middleware-http wait verae.zapier.jobs.events
0ms → middleware-http response HTTPS 200
0ms → zapier-platform-app output zapier://action/timestamp_and_wait - Returned to Zap step / task history
```

MONITORS

OPERATIONAL 13 hops · 0 errors

Trace tab



Docs tab

Where to read next

Start at the top. Architecture is second. Everything else is reference.

1. High-level (non-technical)

Document	What it is
This overview	Whole system in one place
Modules and repositories	Short names of every independent repo
zapier-docs-master	One-line SUMMARY + NATS per module
zapier-user-docs	Signup → register a hash → lookup

2. Architecture

Document	What it is
NATS 3-server cluster	Who may connect; private URLs
Uptime	Replica floors, restart, SSH hosts
Local network failures	Reconnect, bloom silence, failover
Address routing	Unplanned functions as new subjects
External resources	Chain, WORM, tree-node search
Diagrams	SVG + mermaid
Fleet	Operator replica control
Module NATS map	Address table
Archive / bloom	Multipart and multi-receipt
Tree nodes	Bulk Merkle leaves
Composition	zappier + middleware HTTPS

3. Remaining documentation

Document	What it is
Documentation index	A–Z and catalog URLs
Expansion template / verae-nats-process	Copy this to add an address
Operator console	Screenshots of Fleet / Trace / Docs
Simulator	Standalone trace (also inside the console)
Zapier developer setup	CLI / login / push
Live catalog	https://zapier.georgelambert.org/ (PDF) · Markdown indexes

Credits

Design: **Scott Lindsey**, **George Lambert**, **NATS.IO**, and **Grok-Code** by [Grok.com](#).