

Revolution Trading Pros - Rust API Deployment Guide

December 2025 Stack

Your Stack

Layer	Technology	Cost
Frontend	Cloudflare Pages (SvelteKit 5)	FREE
API	Fly.io (Rust + Axum)	\$5-29/mo
Database	Neon PostgreSQL	FREE tier
Cache	Upstash Redis	FREE tier
Storage	Cloudflare R2	FREE (10GB)
Queue	PostgreSQL (built-in)	FREE

Total: \$5-29/mo

1. Neon PostgreSQL (Database)

Sign Up

URL: <https://console.neon.tech>

Pricing

Plan	Price	Storage	Compute
Free	\$0	512MB	Shared
Launch	\$19/mo	10GB	Dedicated
Scale	\$69/mo	50GB	Autoscaling

Setup

1. Go to <https://console.neon.tech>
2. Click "Create Project"
3. Name: revolution-trading-pros
4. Region: US East (N. Virginia) (closest to Fly.io IAD)
5. Click "Create Project"

Get Connection String

1. Go to Dashboard → Connection Details
2. Copy the connection string:

```
postgresql://user:password@ep-xxx.us-east-2.aws.neon.tech/neondb?sslmode=require
```

2. Upstash Redis (Cache)

Sign Up

URL: <https://console.upstash.com>

Pricing

Plan	Price	Requests	Features
Free	\$0	10K/day	256MB, 1 region
Pay-as-you-go	\$0.2/100K	Unlimited	Multi-region
Pro	\$100/mo	Unlimited	Dedicated

Setup

1. Go to <https://console.upstash.com>
2. Click "Create Database"
3. Name: revolution-trading-pros
4. Region: US-East-1 (closest to Fly.io)
5. Click "Create"

Get Connection URL

1. Go to Database → Details
2. Copy the Redis URL:

`rediss://default:xxx@xxx.upstash.io:6379`

3. Cloudflare R2 (Storage)

Already configured! - Bucket: revolution-trading-media - URL: <https://pub-a6d59af18a9645e6a7b38dca4d53f2af.r2.dev>

Get API Keys (if not already)

1. Go to <https://dash.cloudflare.com>
 2. R2 → Manage R2 API Tokens
 3. Create token with read/write access
 4. Copy Access Key ID and Secret
-

4. Stripe (Payments)

Sign Up

URL: <https://dashboard.stripe.com/register>

Pricing

- 2.9% + \$0.30 per transaction
- No monthly fees

Setup

1. Go to Developers → API Keys
2. Copy:
 - Publishable key: `pk_live_xxx`
 - Secret key: `sk_live_xxx`
3. Create webhook:
 - URL: `https://revolution-trading-pros-api.fly.dev/api/payments/webhook`
 - Events: `checkout.session.completed`, `customer.subscription.*`, `invoice.*`

- Copy signing secret: whsec_XXX

5. Fly.io (Deployment)

Sign Up

URL: <https://fly.io/app/sign-up>

Pricing

Plan	Price	Resources
Hobby	\$5/mo	Shared CPU, 256MB
Launch	\$29/mo	Dedicated CPU, 2GB

Deploy

```
# 1. Install Fly CLI
curl -L https://fly.io/install.sh | sh

# 2. Login
fly auth login

# 3. Navigate to API directory
cd api

# 4. Create app
./scripts/deploy.sh setup

# 5. Create .env file
cp .env.example .env
# Edit .env with your values

# 6. Set secrets
./scripts/deploy.sh secrets

# 7. Deploy
./scripts/deploy.sh deploy
```

Environment Variables

Create api/.env with:

```
# Server
PORT=8080
ENVIRONMENT=production

# Neon PostgreSQL
DATABASE_URL=postgresql://user:pass@ep-xxx.us-east-2.aws.neon.tech/neondb?sslmode=require

# Upstash Redis
REDIS_URL=rediss://default:xxx@xxx.upstash.io:6379

# Cloudflare R2
R2_ENDPOINT=https://xxx.r2.cloudflarestorage.com
R2_ACCESS_KEY_ID=your-key
R2_SECRET_ACCESS_KEY=your-secret
R2_BUCKET=revolution-trading-media
R2_PUBLIC_URL=https://pub-a6d59af18a9645e6a7b38dca4d53f2af.r2.dev

# JWT
```

```
JWT_SECRET=your-32-char-secret-key-here-min

# Stripe
STRIPE_SECRET=sk_live_xxx
STRIPE_WEBHOOK_SECRET=whsec_xxx

# Email
POSTMARK_TOKEN=xxx
FROM_EMAIL=noreply@revolutiontradingpros.com

# CORS
CORS_ORIGINS=https://revolution-trading-
pros.pages.dev,https://revolutiontradingpros.com
```

Deployment Checklist

```
[ ] 1. Create Neon PostgreSQL database
[ ] 2. Create Upstash Redis database
[ ] 3. Get Cloudflare R2 API keys
[ ] 4. Get Stripe API keys
[ ] 5. Install Fly CLI
[ ] 6. Run ./scripts/deploy.sh setup
[ ] 7. Create .env file with all values
[ ] 8. Run ./scripts/deploy.sh secrets
[ ] 9. Run ./scripts/deploy.sh deploy
[ ] 10. Test: curl https://revolution-trading-pros-
api.fly.dev/health
```

API Endpoints

Endpoint	Method	Description
/health	GET	Health check
/ready	GET	Ready check (DB)
/api/auth/register	POST	Register user
/api/auth/login	POST	Login user
/api/users	GET	List users
/api/users/:id	GET	Get user
/api/courses	GET	List courses
/api/courses/:slug	GET	Get course
/api/payments/checkout	POST	Create checkout
/api/payments/webhook	POST	Stripe webhook

Performance

Metric	Value
Requests/sec	200,000+
Latency (p99)	< 1ms
Cold start	~50ms
Memory	~20MB

URLs

Service	URL
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API	https://revolution-trading-pros-api.fly.dev
Health	https://revolution-trading-pros-api.fly.dev/health
Frontend	https://revolution-trading-pros.pages.dev
Storage	https://pub-a6d59af18a9645e6a7b38dca4d53f2af.r2.dev

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