

Cloud Deployment Options

Cloud Deployment Options for Drop

“ **Rebrand note (2026-02-14):** Originally titled "FontelePay". Product rebranded to **Drop**. See [Drop CLAUDE.md](#).

Date: 2026-02-05 **Purpose:** Evaluate cloud deployment options for European mobile banking MVP

Requirements Summary

Requirement	Priority
Next.js support (static + SSR/API routes)	Must-have
EU data residency (GDPR)	Must-have
Financial compliance ready (PCI-DSS, SOC2)	Must-have
Cost-effective for MVP	High
Easy CI/CD integration	High
Scalability for production	Medium

Provider Comparison

Overview Table

Feature	Vercel	AWS (Amplify/Lambda)	Google Cloud Run
Next.js Support	Native (created by Vercel)	Full SSR support (v15)	Via container deployment

Feature	Vercel	AWS (Amplify/Lambda)	Google Cloud Run
EU Regions	Edge caching only	Frankfurt, Ireland, Paris, Stockholm + ESC	Frankfurt, Belgium, Netherlands, Zurich
Data Residency	US-based storage*	Full EU residency available	Full EU residency available
PCI-DSS	v4.0 (SAQ-D AOC)	v4.0.1 certified	v4.0.1 certified
SOC 2	Type 2 certified	Type 2 certified	Type 2 certified
ISO 27001	Certified	Certified	Certified
GDPR	EU-US DPF certified	Compliant	Compliant
Ease of Use	Excellent	Moderate	Moderate
Vendor Lock-in	Medium	Low	Low

*Vercel: Static assets and function responses cached in EU, but primary storage remains US-based.

Detailed Analysis

1. Vercel

Strengths:

- Native Next.js support (Vercel created Next.js)
- Zero-config deployment from Git
- Excellent DX (Developer Experience)
- Edge Functions for low latency
- Preview deployments per PR
- PCI-DSS v4.0 compliant
- SOC 2 Type 2, ISO 27001 certified

Weaknesses:

- **No true EU data residency** - data primarily stored in US
- Per-seat pricing scales poorly for teams
- Limited backend flexibility
- Enterprise tier required for some compliance features

Pricing:

Tier	Cost	Includes
Hobby	Free	100GB bandwidth, limited features

Tier	Cost	Includes
Pro	\$20/user/month	1TB bandwidth, \$20 credits, viewer seats free
Enterprise	Custom	SAML SSO, SLAs, dedicated support

GDPR Concern: Vercel is certified under EU-US Data Privacy Framework, but for banking applications requiring strict EU data residency, this may not be sufficient. Functions can run in EU regions, but metadata and logs may still traverse US infrastructure.

2. AWS (Amplify + Lambda)

Strengths:

- **True EU data residency** with European Sovereign Cloud (ESC)
- Full Next.js 15 SSR support via Amplify
- 140+ security certifications including PCI-DSS v4.0.1
- Frankfurt region well-established for EU fintech
- Pay-per-use with generous free tier
- No per-seat pricing
- Full infrastructure control

Weaknesses:

- Steeper learning curve
- Complex billing (multiple services)
- Requires AWS expertise
- CI/CD via external tools (GitHub Actions, GitLab)

Pricing (AWS Amplify):

Resource	Free Tier	Paid
Build minutes	1,000/month	\$0.01/min
Data served	15 GB/month	\$0.15/GB
Data stored	5 GB/month	\$0.023/GB
SSR requests	Varies	~\$0.20/1M

Estimated MVP Cost: \$5-25/month for low-moderate traffic

European Sovereign Cloud (ESC): Launched January 2026, provides EU-resident personnel and hardware-enforced access restrictions. Ideal for regulated financial services.

3. Google Cloud Run

Strengths:

- Containerized deployment (flexible)
- Full EU data residency (Frankfurt, Belgium, Netherlands, Zurich)
- PCI-DSS v4.0.1 and SOC 2 certified
- Generous free tier
- Auto-scaling to zero
- Pay only for actual compute time

Weaknesses:

- Requires containerization (Dockerfile)
- No native Next.js integration
- More DevOps overhead
- Less seamless than Vercel for frontend

Pricing (Tier 1 - EU regions):

Resource	Free Tier	Paid
CPU	180,000 vCPU-seconds/month	\$0.000024/vCPU-second
Memory	360,000 GiB-seconds/month	\$0.0000025/GiB-second
Requests	2 million/month	\$0.40/million

Estimated MVP Cost: \$0-15/month for low-moderate traffic (often within free tier)

Compliance Matrix for Fintech

Certification	Vercel	AWS	GCP	Required for Drop
PCI-DSS v4.0+	Yes	Yes	Yes	Yes (payment processing)
SOC 2 Type 2	Yes	Yes	Yes	Yes (enterprise clients)
ISO 27001	Yes	Yes	Yes	Recommended
GDPR	DPF	Full	Full	Yes (EU operations)
EU Data Residency	Partial	Full	Full	Critical

Recommendation

MVP Phase (0-6 months)

Primary: AWS Amplify (Frankfurt region)

Rationale:

1. **True EU data residency** - critical for banking MVP regulatory approval
2. **Full Next.js support** - SSR, API routes, ISR all work
3. **Cost-effective** - likely \$10-30/month for MVP traffic
4. **Compliance-ready** - PCI-DSS, SOC 2, ISO 27001 from day one
5. **No per-seat pricing** - scales with team growth
6. **Path to production** - same platform, just scale up

Setup recommendation:

- Region: eu-central-1 (Frankfurt)
- CI/CD: GitHub Actions
- Database: Aurora Serverless or PlanetScale (EU region)
- Auth: Cognito or Auth0 (EU tenant)

Production Phase (6+ months)

Stay with AWS but consider:

- AWS European Sovereign Cloud (ESC) for maximum compliance
- ECS/EKS for more control if needed
- Multi-region deployment (Frankfurt + Ireland) for redundancy

Why Not Vercel?

Despite excellent DX, Vercel's **partial EU data residency** is a significant concern for a banking application. While Vercel is PCI-DSS compliant, regulators may question data flows through US infrastructure. For an MVP seeking banking licenses or partnerships, demonstrating full EU data residency is simpler with AWS or GCP.

Why Not GCP Cloud Run?

GCP is technically excellent but:

- Requires containerization overhead

- Less native Next.js support
 - Smaller fintech ecosystem in EU compared to AWS
 - AWS has more established EU banking relationships
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Cost Projection (12 months)

Scenario	Vercel Pro	AWS Amplify	GCP Cloud Run
MVP (2 devs, 10k users)	\$480/year	\$120-300/year	\$0-180/year
Growth (5 devs, 50k users)	\$1,200/year	\$300-600/year	\$200-400/year
Scale (10 devs, 200k users)	\$2,400/year	\$600-1,500/year	\$500-1,200/year

AWS and GCP costs vary based on usage patterns; Vercel costs fixed per-seat

Action Items

- ☐ Set up AWS account with Frankfurt region default
 - ☐ Configure Amplify for Next.js deployment
 - ☐ Implement GitHub Actions CI/CD pipeline
 - ☐ Document compliance controls for future audits
 - ☐ Evaluate AWS ESC when banking license process begins
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Sources

- [Vercel Pricing](#)
 - [Vercel Security & Compliance](#)
 - [Vercel PCI Compliance Guide](#)
 - [AWS Amplify Pricing](#)
 - [AWS European Sovereign Cloud](#)
 - [AWS PCI DSS Compliance](#)
 - [Google Cloud Run Pricing](#)
 - [GCP PCI DSS Compliance](#)
 - [GCP SOC 2 Compliance](#)
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