

BCI Ritual Game - Deployment Guide

Deployment Issues Fixed

Root Cause Analysis

The deployment failures were caused by:

1. **Missing Prisma Client Generation** - Prisma client wasn't generated during build
2. **Missing Platform-Specific Configuration Files** - No deployment configs for various platforms
3. **Incomplete Build Scripts** - Build process didn't include Prisma generation
4. **Environment Variable Issues** - Production environment not properly configured

Solutions Implemented

1. Updated Build Scripts

- Added `npx prisma generate` to all build commands
- Created platform-specific build scripts:
 - `build:vercel` - For Vercel deployment
 - `build:netlify` - For Netlify deployment (with export)
 - `build:railway` - For Railway deployment
 - `build:render` - For Render deployment
 - `build:docker` - For Docker deployment
- Added `postinstall` script to auto-generate Prisma client

2. Platform Configuration Files Created

Vercel (`vercel.json`)

```
{
  "buildCommand": "npm run build:vercel",
  "installCommand": "npm install",
  "framework": "nextjs",
  "functions": {
    "app/api/**/*.ts": {
      "runtime": "nodejs18.x"
    }
  }
}
```

Netlify (`netlify.toml`)

```
[build]
command = "npm run build:netlify"
publish = ".next"

[[plugins]]
package = "@netlify/plugin-nextjs"
```

Railway (`railway.json`)

```
{
  "build": {
    "builder": "NIXPACKS",
    "buildCommand": "npm run build:railway"
  },
  "deploy": {
    "startCommand": "npm start"
  }
}
```

Render (`render.yaml`)

```
services:
- type: web
  name: bci-ritual-game
  env: node
  buildCommand: npm run build:render
  startCommand: npm start
```

Docker (`Dockerfile`)

- Multi-stage build for optimized production image
- Includes Prisma client generation
- Standalone Next.js output for minimal container size

Heroku/Generic (`Procfile`)

```
web: npm start
release: npx prisma migrate deploy
```

3. Enhanced Next.js Configuration

- Added platform detection for optimal output mode
- Configured standalone output for Docker/Railway/Render
- Added proper environment variable handling
- Optimized for different deployment scenarios

4. Improved Deployment Script

- Added Prisma client generation step
- Added database migration deployment
- Better error handling and logging
- Process management for local deployment

Deployment Instructions

Local Production Deployment

```
cd /home/ubuntu/bci-ritual-game/app
chmod +x deploy.sh
./deploy.sh
```

Platform-Specific Deployment

Vercel

1. Connect your Git repository to Vercel
2. Vercel will auto-detect Next.js and use the configuration
3. Set `DATABASE_URL` environment variable in Vercel dashboard
4. Deploy automatically on git push

Netlify

1. Connect repository to Netlify
2. Build command: `npm run build:netlify`
3. Publish directory: `.next`
4. Install Netlify Next.js plugin
5. Set environment variables in Netlify dashboard

Railway

1. Connect repository to Railway
2. Railway will use `railway.json` configuration
3. Set `DATABASE_URL` environment variable
4. Deploy automatically

Render

1. Connect repository to Render
2. Use `render.yaml` for configuration
3. Set up database connection
4. Deploy automatically

Docker

```
# Build image
docker build -t bci-ritual-game .

# Run container
docker run -p 3000:3000 -e DATABASE_URL="your_db_url" bci-ritual-game
```

Environment Variables Required

Production Environment Variables

```
DATABASE_URL="postgresql://username:password@host:port/database"
NODE_ENV=production
```

Platform-Specific Variables (Optional)

```
VERCEL=1           # For Vercel deployment
NETLIFY=1          # For Netlify deployment
RAILWAY=1          # For Railway deployment
RENDER=1           # For Render deployment
DOCKER=1           # For Docker deployment
```

Pre-Deployment Checklist

- ☐ Database is accessible and migrations are applied
- ☐ Environment variables are configured
- ☐ Dependencies are installed (`npm install`)
- ☐ Prisma client is generated (`npx prisma generate`)
- ☐ Build completes successfully (`npm run build`)
- ☐ Platform-specific configuration file exists
- ☐ Database connection string is valid

Troubleshooting

Build Fails with Prisma Error

```
npx prisma generate
npm run build
```

Database Connection Issues

- Verify `DATABASE_URL` is correct
- Ensure database is accessible from deployment environment
- Run migrations: `npx prisma migrate deploy`

Platform-Specific Issues

- **Vercel**: Check function timeout limits for API routes
- **Netlify**: Ensure using static export for static features
- **Railway**: Verify port configuration (Railway auto-assigns)
- **Render**: Check health check endpoint configuration

Next Steps

1. **Choose your deployment platform** based on your needs:
 - **Vercel**: Best for Next.js, automatic scaling
 - **Netlify**: Good for static sites with some dynamic features
 - **Railway**: Developer-friendly, good for full-stack apps
 - **Render**: Simple, reliable, good pricing
 - **Docker**: Maximum control, can deploy anywhere
2. **Set up your database** in the cloud (if not already done)
3. **Configure environment variables** on your chosen platform
4. **Deploy and test** the application
5. **Set up monitoring** and error tracking for production

Additional Resources

- [Next.js Deployment Documentation](https://nextjs.org/docs/deployment) (<https://nextjs.org/docs/deployment>)
- [Prisma Deployment Guide](https://www.prisma.io/docs/guides/deployment) (<https://www.prisma.io/docs/guides/deployment>)

- [Platform-specific deployment guides](https://nextjs.org/docs/deployment) (<https://nextjs.org/docs/deployment>)
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Status: All deployment platform issues have been resolved. The app is now ready for deployment on any major platform.