

Panduan Deployment Lengkap untuk Pemula

Panduan ini akan membantu Anda men-deploy aplikasi NFT Raffle dari awal sampai akhir, bahkan jika Anda tidak familiar dengan programming.

Checklist Persiapan

Sebelum mulai, pastikan Anda sudah:

- Install Node.js dari <https://nodejs.org> (versi 20 atau lebih baru)
 - Install Git dari <https://git-scm.com>
 - Punya wallet MetaMask (install dari <https://metamask.io>)
 - Punya Base Sepolia ETH (gratis dari faucet)
 - Punya text editor (VSCode recommended: <https://code.visualstudio.com>)
-

LANGKAH 1: Setup Awal

1.1 Download & Extract Project

```
bash

# Buka Terminal/Command Prompt
# Di Windows: tekan Win+R, ketik "cmd", enter
# Di Mac: tekan Cmd+Space, ketik "terminal", enter

# Navigasi ke folder project
cd path/to/nft-raffle-app

# List files untuk confirm
ls
```

1.2 Install Dependencies

```
bash
```

```
# Install dependencies untuk smart contract
cd contracts
npm install

# Tunggu sampai selesai (bisa 2-5 menit)
# Kalau ada warning, ignore saja (yang penting no errors)

# Install dependencies untuk frontend
cd ../frontend
npm install

# Tunggu sampai selesai
```

🔑 LANGKAH 2: Setup Wallet & Get Testnet Funds

2.1 Export Private Key dari MetaMask

⚠ PENTING: JANGAN SHARE PRIVATE KEY KE SIAPAPUN!

1. Buka MetaMask
2. Klik icon 3 titik (:) di pojok kanan atas
3. Klik "Account details"
4. Klik "Show private key"
5. Masukkan password MetaMask Anda
6. Klik "Confirm"
7. **Copy private key** (simpan di tempat aman)

2.2 Get Base Sepolia ETH (Gratis)

1. Kunjungi: <https://faucet.quicknode.com/base/sepolia>
2. Connect wallet MetaMask Anda
3. Klik "Get Base Sepolia ETH"
4. Tunggu 1-2 menit
5. Check balance di MetaMask (pastikan ada ETH)

2.3 Get LINK Tokens (Gratis)

1. Kunjungi: <https://faucets.chain.link/base-sepolia>

2. Connect wallet MetaMask Anda
 3. Klik "Request 10 LINK"
 4. Tunggu 1-2 menit
 5. Check balance (pastikan dapat LINK)
-

⌚ LANGKAH 3: Setup Chainlink VRF

3.1 Create VRF Subscription

1. Kunjungi: <https://vrf.chain.link/>
2. Klik "Connect Wallet" → Connect MetaMask
3. Switch network ke "Base Sepolia"
4. Klik "Create Subscription"
5. Approve transaksi di MetaMask
6. Tunggu konfirmasi (~10 detik)

3.2 Fund Subscription

1. Setelah subscription created, klik "Fund Subscription"
 2. Masukkan amount: **2 LINK** (minimum)
 3. Klik "Fund Subscription"
 4. Approve transaksi di MetaMask
 5. **Copy Subscription ID** (contoh: 1234) - SIMPAN INI!
-

⌚ LANGKAH 4: Setup Environment Variables

4.1 Create .env File

```
bash
```

```
# Kembali ke root folder project
```

```
cd ..
```

```
# Copy .env.example ke .env
```

```
cp .env.example .env
```

```
# Buka .env dengan text editor
```

```
# Di Windows: notepad .env
```

```
# Di Mac: nano .env
```

4.2 Fill in .env File

Edit file `.env` dan isi dengan data Anda:

```
env
```

```
# Paste private key yang Anda copy dari MetaMask
```

```
PRIVATE_KEY=0x1234567890abcdef...
```

```
# Basescan API Key (optional untuk verify)
```

```
# Dapatkan gratis di: https://basescan.org/myapikey
```

```
BASESCAN_API_KEY=ABC123...
```

```
# VRF Subscription ID yang Anda copy tadi
```

```
VRF_SUBSCRIPTION_ID=1234
```

```
# Frontend config (akan diisi setelah deploy contract)
```

```
VITE_CONTRACT_ADDRESS=
```

```
VITE_CHAIN_ID=84532
```

```
VITE_WALLETCONNECT_PROJECT_ID=
```

4.3 Get WalletConnect Project ID (Gratis)

1. Kunjungi: <https://cloud.walletconnect.com>
2. Sign up / Login
3. Klik "Create New Project"
4. Beri nama: "NFT Raffle"
5. Copy Project ID
6. Paste ke `.env` di field `VITE_WALLETCONNECT_PROJECT_ID`

Save file .env!

LANGKAH 5: Deploy Smart Contract

5.1 Compile Contract

```
bash  
  
cd contracts  
  
# Compile smart contract  
npm run compile  
  
# Output harus success, no errors
```

5.2 Deploy to Base Sepolia

```
bash  
  
# Deploy contract  
npm run deploy:base-sepolia  
  
# Tunggu proses deploy (30-60 detik)  
# Output akan menampilkan contract address  
# Contoh: NFTRaffle deployed to: 0x1234567890...  
  
# COPY CONTRACT ADDRESS - SIMPAN INI!
```

5.3 Add Consumer to VRF Subscription

SANGAT PENTING! Tanpa langkah ini, raffle tidak bisa draw winner!

1. Kembali ke: <https://vrf.chain.link/>
2. Klik subscription Anda
3. Klik "Add Consumer"
4. Paste contract address yang baru Anda deploy
5. Klik "Add Consumer"
6. Approve transaksi di MetaMask
7. Tunggu konfirmasi

 Done! Contract sudah ready!

LANGKAH 6: Setup & Run Frontend

6.1 Update Frontend .env

```
bash

cd ../frontend

# Edit .env file
# Di Windows: notepad .env
# Di Mac: nano .env
```

Update dengan contract address Anda:

```
env

VITE_CONTRACT_ADDRESS=0x1234567890abcdef... # paste contract address Anda
VITE_CHAIN_ID=84532
VITE_WALLETCONNECT_PROJECT_ID=your_project_id # dari step 4.3
```

6.2 Run Development Server

```
bash

# Start development server
npm run dev

# Output:
# → Local: http://localhost:3000/
# → Network: http://192.168.x.x:3000/
```

6.3 Test Aplikasi

1. Buka browser
2. Kunjungi: <http://localhost:3000>
3. Klik "Connect Wallet"
4. Approve connection di MetaMask
5. Test claim free ticket
6. Test buy tickets

 **Aplikasi sudah berjalan lokal!**

LANGKAH 7: Deploy to Production (Vercel)

7.1 Push Code ke GitHub

```
bash

# Initialize git (kalau belum)
git init

# Add all files
git add .

# Commit
git commit -m "Initial commit"

# Create repo di GitHub
# 1. Kunjungi: https://github.com/new
# 2. Beri nama: nft-raffle-app
# 3. Klik "Create repository"
# 4. Copy URL repo (contoh: https://github.com/yourusername/nft-raffle-app.git)

# Add remote
git remote add origin https://github.com/yourusername/nft-raffle-app.git

# Push
git push -u origin main
```

7.2 Deploy ke Vercel

1. Kunjungi: <https://vercel.com>
2. Sign up / Login dengan GitHub
3. Klik "Add New Project"
4. Import repository "nft-raffle-app"
5. Configure project:
 - Framework: Vite
 - Root Directory: `frontend`
 - Build Command: `npm run build`
 - Output Directory: `dist`
6. Add Environment Variables:
 - `VITE_CONTRACT_ADDRESS`: `your_contract_address`

- `VITE_CHAIN_ID`: 84532
- `VITE_WALLETCONNECT_PROJECT_ID`: your_project_id

7. Klik "Deploy"
8. Tunggu 2-3 menit

Aplikasi live di internet!

URL akan seperti: <https://nft-raffle-app.vercel.app>

LANGKAH 8: Test Production App

1. Buka URL Vercel Anda
2. Connect wallet
3. Pastikan network Base Sepolia
4. Test semua fitur:
 -  Connect wallet
 -  Claim free ticket
 -  Buy tickets
 -  View raffles
 -  View profile
 -  View leaderboard

LANGKAH 9: Deploy ke Base Mainnet (Production)

 Hanya lakukan ini jika Anda sudah test semuanya di testnet!

9.1 Get Base Mainnet ETH

1. Bridge ETH dari Ethereum mainnet ke Base
2. Kunjungi: <https://bridge.base.org>
3. Bridge minimal 0.1 ETH

9.2 Get LINK on Base Mainnet

1. Bridge LINK atau buy di DEX
2. Need minimal 5 LINK

9.3 Create VRF Subscription (Mainnet)

1. Kunjungi: <https://vrf.chain.link/>
2. Switch to Base Mainnet
3. Create subscription
4. Fund dengan 5 LINK

9.4 Deploy Contract (Mainnet)

```
bash

cd contracts

# Update .env
# Change VITE_CHAIN_ID to 8453

# Deploy
npm run deploy:base

# Copy contract address
# Add as VRF consumer
```

9.5 Update Frontend & Redeploy

1. Update `.env` dengan contract address mainnet
 2. Change `VITE_CHAIN_ID` to `8453`
 3. Push to GitHub
 4. Vercel akan auto-deploy
-



Aplikasi Anda sekarang:

- Live di internet
 - Berjalan di Base Network
 - Terhubung dengan Chainlink VRF
 - Ready untuk users
-

Tips Tambahan

Monetization

- 5% fee dari setiap ticket = passive income
- Estimasi: 1000 tickets/day = \$7.50 profit/day
- Monthly: ~\$225

Marketing

- Share di Twitter/X dengan hashtag #Base #NFT
- Post di Reddit r/BaseNetwork
- Join Base Discord dan promote
- Partner dengan NFT projects

Maintenance

- Monitor VRF LINK balance (top up jika < 2 LINK)
 - Check contract balance untuk withdraw fees
 - Update frontend kalau ada bug
 - Add new features
-

Troubleshooting Common Issues

"Insufficient funds" Error

→ **Solution:** Get more ETH dari faucet atau bridge

"Transaction failed"

→ **Solution:** Increase gas limit atau try again

"VRF fulfillment failed"

→ **Solution:** Check VRF subscription has LINK

"Cannot connect wallet"

→ **Solution:** Check MetaMask installed dan unlocked

"Wrong network"

→ **Solution:** Switch to Base Sepolia in MetaMask

📞 Butuh Bantuan?

Kalau stuck di step manapun:

1. Read error message carefully
2. Google the error
3. Check documentation lagi
4. Ask in Base Discord: <https://discord.gg/base>
5. Open GitHub issue

Semangat! Anda pasti bisa! 

Last updated: 2025