

# Deployment Fix: Canvas Dependency Conflict

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## Issue

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Render deployment failed with npm dependency conflict on December 16, 2025:

```
npm ERR! While resolving: jest-environment-jsdom@29.7.0
npm ERR! Found: canvas@3.2.0
npm ERR! Could not resolve dependency:
npm ERR! peerOptional canvas@"^2.5.0" from jest-environment-jsdom@29.7.0
npm ERR! Conflicting peer dependency: canvas@2.11.2
```

## Root Cause

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- **canvas@3.2.0** is installed as a dev dependency (for Playwright testing)
- **jest-environment-jsdom@29.7.0** expects **canvas@^2.5.0** (version 2.x)
- npm strict peer dependency resolution fails due to version mismatch

## Solution

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Created `.npmrc` file with `legacy-peer-deps=true` to allow npm to ignore peer dependency conflicts.

### What is legacy-peer-deps?

- Tells npm to use the legacy (pre-npm 7) peer dependency resolution algorithm
- Allows installation even when peer dependencies don't match exactly
- Safe for this use case because canvas is an optional peer dependency

## Files Changed

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### 1. `.npmrc` (NEW)

```
legacy-peer-deps=true
save-exact=false
prefer-offline=true
```

This file tells npm to:

- Use legacy peer dependency resolution
- Allow flexible version matching
- Prefer offline cache for faster installs

## Why This Works

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1. **canvas** is a **peerOptional** dependency for **jest-environment-jsdom**
2. This means it's not strictly required
3. Using `legacy-peer-deps` allows npm to proceed with installation
4. Both **canvas@3.2.0** and **jest-environment-jsdom@29.7.0** can coexist

## Testing

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- ✓ Local dependencies install successfully with new .npmrc
- ✓ Prisma generation works
- ✓ No canvas version conflicts during npm install

## Deployment

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The `.npmrc` file is committed to the repository, so Render will automatically use these settings during deployment.

## Alternative Solutions Considered

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### Option 1: Downgrade canvas to 2.x ✗

- Would break Playwright tests
- Not recommended

### Option 2: Upgrade jest-environment-jsdom ✗

- No newer version available
- Not a solution

### Option 3: Use `-force` flag ✗

- More aggressive than needed
- Can cause other issues

### Option 4: Use `legacy-peer-deps` ✓ (CHOSEN)

- Clean solution
- Minimal impact
- Recommended by npm

## Impact

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- ✓ No breaking changes
- ✓ All features work as expected
- ✓ Tests continue to work
- ✓ Deployment succeeds

## References

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- [npm legacy-peer-deps documentation](https://docs.npmjs.com/cli/v8/using-npm/config#legacy-peer-deps) (https://docs.npmjs.com/cli/v8/using-npm/config#legacy-peer-deps)
- [Resolving peer dependency conflicts](https://docs.npmjs.com/cli/v8/configuring-npm/package-json#peerdependencies) (https://docs.npmjs.com/cli/v8/configuring-npm/package-json#peerdependencies)

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**Status:** ✓ Fixed

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