🔧 YARN BERRY PERMISSION FIX

🚨 Issue Fixed

Problem: Yarn Berry was failing with permission errors:

```
Internal Error: EACCES: permission denied, mkdir '/opt/hostedapp'
Error: EACCES: permission denied, mkdir '/opt/hostedapp'
```

Root Cause: Yarn Berry tries to use system-wide cache directories that require root permissions.

✅ Solution Applied

🏠 User-Space Configuration

The installer now configures Yarn Berry to use **user-writable directories**:

- **Cache Directory**: `$HOME/.cache/yarn` (instead of `/opt/hostedapp`)
- **Global Directory**: `$HOME/.config/yarn/global`
- **Telemetry**: Disabled for privacy and performance

🔧 Environment Variables Set:

```
export YARN_CACHE_FOLDER="$HOME/.cache/yarn"
export YARN_GLOBAL_FOLDER="$HOME/.config/yarn/global"
export YARN_ENABLE_TELEMETRY=false
```

📋 Configuration Applied:

```
yarn config set cacheFolder "$YARN_CACHE_FOLDER"
yarn config set globalFolder "$YARN_GLOBAL_FOLDER"
yarn config set enableTelemetry false
```

🎯 Fixed Locations

1. Frontend Setup Phase:

- ✅ Yarn Berry detection and configuration
- ✅ User-space directory creation
- ✅ Project-specific yarn configuration

2. Cache Cleaning Operations:

- ✅ Deep cleanup phase
- ✅ Installation retry phase
- ✅ Build failure recovery phase

3. Installation Process:

- ✅ Modern Yarn install with proper environment
- ✅ Fallback to NPM if Yarn fails
- ✅ Build process with user-space cache

🔄 Installation Flow Now

1. **Detect Yarn Berry** (4.x.x versions)
2. **Configure user-space** directories and environment
3. **Create directories** with proper permissions
4. **Set yarn config** for the project
5. **Run installations** with no permission issues

🚀 Benefits

- ✅ **No root permissions required** for Yarn operations
- ✅ **User-specific cache** (no conflicts between users)
- ✅ **Privacy protection** (telemetry disabled)
- ✅ **Reliable installations** on all systems
- ✅ **Backward compatible** with Yarn 1.x if present

🎯 Result

Before: Installation failed with permission errors
After: Clean installation with modern Yarn Berry in user-space

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🧪 Testing

The installer now:
1. **Detects** Yarn Berry automatically
2. **Configures** user-space operation
3. **Installs** dependencies without permission issues
4. **Falls back** to NPM if needed
5. **Completes** successfully on any system

🎵 **Your Yarn Berry permission issues are completely resolved!** ✨