User Management API 500 Error Fix

Issue Summary

The User Management API (`/api/admin/users`) was returning **500 Internal Server Error**, preventing the admin panel from displaying user data.

Root Cause

The issue was caused by **incorrect import syntax** for `authOptions` across multiple API route files:

```
// ❌ INCORRECT (Default import)
import authOptions from '@/lib/auth';

// ✅ CORRECT (Named import)
import { authOptions } from '@/lib/auth';
```

Why This Caused the Error

In `/src/lib/auth.ts` , `authOptions` is exported as a **named export**:

```
export const authOptions: NextAuthOptions = { ... }
```

When imported as a default export, the `authOptions` variable was `undefined` , causing `getServerSession(authOptions)` to fail silently and return `null` , which triggered authentication failures and 500 errors.

Files Fixed

Fixed the import statement in **13 API route files**:

1. ✅ `src/app/api/admin/users/route.ts`
2. ✅ `src/app/api/admin/users/[id]/route.ts`
3. ✅ `src/app/api/admin/listings/route.ts`
4. ✅ `src/app/api/marketplace/caregiver-favorites/route.ts`
5. ✅ `src/app/api/marketplace/caregivers/route.ts`
6. ✅ `src/app/api/marketplace/applications/invite/route.ts`
7. ✅ `src/app/api/marketplace/applications/[id]/route.ts`
8. ✅ `src/app/api/marketplace/applications/route.ts`
9. ✅ `src/app/api/marketplace/favorites/route.ts`
10. ✅ `src/app/api/marketplace/provider-favorites/route.ts`
11. ✅ `src/app/api/marketplace/listings/[id]/route.ts`
12. ✅ `src/app/api/marketplace/listings/route.ts`
13. ✅ `src/app/api/dev/whoami/route.ts`

Solution Applied

1. Identified the Bug

- Examined `src/app/api/admin/users/route.ts`
- Compared with `src/lib/auth.ts` export pattern
- Found import/export mismatch

2. Fixed All Affected Files

```
# Changed in all 13 files:
import authOptions from '@/lib/auth';
# to:
import { authOptions } from '@/lib/auth';
```

3. Verified the Fix

- ✅ Build successful: `npm run build`
- ✅ No TypeScript errors
- ✅ All imports now use correct syntax

Verification Steps

Before Deployment

```
cd /home/ubuntu/carelinkai-project
npm run build  # Should compile successfully
```

After Deployment

1. Navigate to Admin Panel → User Management
2. Verify user list loads without errors
3. Check browser console for any errors
4. Test user search/filtering functionality

Expected Behavior After Fix

- ✅ User Management page displays user list
- ✅ No 500 errors in API responses
- ✅ Session authentication works correctly
- ✅ Audit logs show successful user queries

Technical Details

Authentication Flow

1. Frontend calls `/api/admin/users`
2. Backend executes `getServerSession(authOptions)`
3. Session is validated using correct `authOptions`
4. User role is checked (must be ADMIN)
5. Database query executes

6. Results returned to frontend

Error Logging

The route now includes comprehensive logging:

```
console.log('[Admin Users API] Session:', session?.user);
console.log('[Admin Users API] Query params:', { page, limit, search, role, status });
console.log('[Admin Users API] Found', totalCount, 'users total');
```

Deployment

- **Commit:** `dd2c82d`
- **Branch:** `main`
- **Status:** ✅ Pushed to GitHub
- **Next Step:** Auto-deploy to Render.com

Rollback Plan

If issues occur, revert with:

```
git revert dd2c82d
git push origin main
```

Related Issues

This fix also resolves potential authentication issues in:
- Marketplace APIs (caregiver-favorites, listings, applications)
- Admin APIs (listings, user management)
- Developer APIs (whoami endpoint)

Prevention

To prevent similar issues in the future:
1. Use ESLint rule: `import/no-default-export` for named exports
2. Add TypeScript strict mode checks
3. Create unit tests for authentication flows
4. Document export patterns in `CONTRIBUTING.md`

Fixed by: DeepAgent
Date: 2026-01-07
Build Status: ✅ Successful
Deployment Status: ⏳ Pending Render deployment