Deployment Report - Audio Control Center Fixes

Date: October 22, 2025
Repository: Sports-Bar-TV-Controller
Remote Server: 24.123.87.42:3001

Summary

Successfully identified and fixed two critical bugs preventing the Audio Control Center from functioning. Deployed fixes to production server. However, a React hydration error (Error #31) still persists and requires additional investigation.

Completed Tasks ✅

1. Merged PR #224: Circular Reference Logging Fix

- **Issue:** Circular reference error in Drizzle ORM logging was causing crashes
- **Fix:** Updated `db-helpers.ts` to use safer JSON serialization
- **Status:** ✅ Merged and deployed successfully

2. Fixed Port Variable Reference Error

- **File:** `src/lib/atlas-http-client.ts` (Line 321)
- **Issue:** `ReferenceError: port is not defined`
- **Root Cause:** AtlasTCPClient was being instantiated with `port: 5321` instead of `tcpPort: 5321`
- **Fix:** Changed parameter from `port` to `tcpPort`
- **Impact:** Resolved fatal error in zones-status API during hardware queries
- **Status:** ✅ Fixed in PR #225

3. Fixed SQLite Timestamp Binding Error

- **File:** `src/app/api/audio-processor/test-connection/route.ts`
- **Issue:** `SQLite3 can only bind numbers, strings, bigints, buffers, and null`
- **Root Cause:** Passing ISO date strings to timestamp fields instead of Date objects
- **Fix:** Changed `lastSeen: new Date().toISOString()` to `lastSeen: new Date()`
- **Impact:** Resolved database binding errors when updating processor status
- **Status:** ✅ Fixed in PR #225

4. Deployed to Production

- Successfully pulled latest code from main branch
- Rebuilt application with `npm run build`
- Restarted PM2 process (`sports-bar-tv-controller`)
- Atlas processor queries are now executing without fatal errors
- **Status:** ✅ Deployed

Current Issues ⚠️

React Hydration Error #31

- **Error:** `Minified React error #31` - Hydration mismatch
- **Impact:** Page renders initially but then crashes with "Something went wrong!" error
- **Symptoms:**
- Console shows: "Error: Minified React error #31"
- Hardware queries execute successfully (logs show zone data being retrieved)
- Page initially loads zones but then fails with React error boundary

- **Root Cause Analysis:**
  This is a React hydration mismatch error where the server-rendered HTML doesn't match what the client expects. Common causes:
  1. Data changes between server and client render
  2. Using timestamps or random values during render
  3. Boolean conditions that differ between server and client
  4. Empty/null data handling differences

- **What's Working:**

- ✅ Atlas TCP connection established
- ✅ Zone configuration queries executing
- ✅ Hardware data being retrieved successfully
- ✅ No more "port is not defined" errors
- ✅ No more SQLite binding errors

- **What's Not Working:**

- ❌ Audio Control Center page crashes after initial render
- ❌ React hydration mismatch causing component failure

- **Next Steps Required:**
  1. Review Audio Control Center components for hydration issues
  2. Check for conditional rendering that differs between server/client
  3. Ensure all async data loading has proper loading states
  4. Add error boundaries with better error messages
  5. Consider disabling SSR for this page if hydration can't be resolved

Atlas Processor Status

Connection Details

- **IP Address:** 192.168.5.101
- **TCP Port:** 5321 (control)
- **HTTP Port:** 80 (configuration)
- **Model:** AZMP8
- **Credentials:** admin / 6809233DjD$$$

Connection Status

- **TCP Connection:** ⚠️ Intermittent timeouts
- **Hardware Queries:** ✅ Executing successfully when connected
- **Zone Data:** ✅ Being retrieved from actual hardware
- **Configuration Discovery:** ✅ Working

Recent Log Output

```
[Atlas Query] Zone 6: [object Object] (Source: [object Object], Volume: [object Ob-
ject]%, Muted: false)
[2025-10-22T02:34:55.105Z] [ERROR] [CONNECTION] Failed to connect to Atlas processor
"error": "Connection timeout"
```

Note: Connection timeouts may be due to network latency or Atlas processor being temporarily busy.

Files Modified

PR #224 (Merged)

- `src/lib/db-helpers.ts` - Fixed circular reference in logging

PR #225 (Merged)

- `src/lib/atlas-http-client.ts` - Fixed port parameter name
- `src/app/api/audio-processor/test-connection/route.ts` - Fixed timestamp binding

Testing Recommendations

Before Next Deploy:

1. **Test Audio Control Center locally** with dev server (`npm run dev`)
2. **Check browser console** for hydration warnings
3. **Test with actual Atlas processor** on local network
4. **Verify zone controls** work without errors
5. **Test input gain adjustments**

For React Hydration Fix:

1. Add `suppressHydrationWarning` to suspected components temporarily
2. Use React DevTools to identify component causing hydration mismatch
3. Check for `useEffect` hooks that modify state during initial render
4. Ensure loading states are properly handled
5. Consider using `"use client"` directive if server rendering isn't needed

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GitHub PRs

- **PR #218:** Drizzle ORM migration + AtlasIED integration ✅ Merged

- **PR #224:** Circular reference logging fix ✅ Merged
- **PR #225:** Port and SQLite binding fixes ✅ Merged

Deployment Commands

```
# On remote server (24.123.87.42:224)
cd /home/ubuntu/Sports-Bar-TV-Controller
git pull origin main
npm install
npm run build
pm2 restart sports-bar-tv-controller
pm2 logs sports-bar-tv-controller --lines 50
```

Conclusion

Progress: 🟡 Partial Success

We've successfully fixed the critical backend errors that were preventing the Audio Control Center from even attempting to load. The Atlas processor integration is working, hardware queries are executing, and data is being retrieved successfully.

However, a React hydration error remains that causes the page to crash after initial render. This is a client-side rendering issue that doesn't affect the backend functionality but prevents users from using the Audio Control Center UI.

Recommendation: Investigate and fix the React hydration error in the Audio Control Center components before considering this deployment complete. The hydration issue is likely in one of the zone control components or in how the initial data is being handled.

Contact Information

Repository: https://github.com/dfultonthebar/Sports-Bar-TV-Controller
Production URL: http://24.123.87.42:3001/audio-control
Atlas Processor: 192.168.5.101:5321