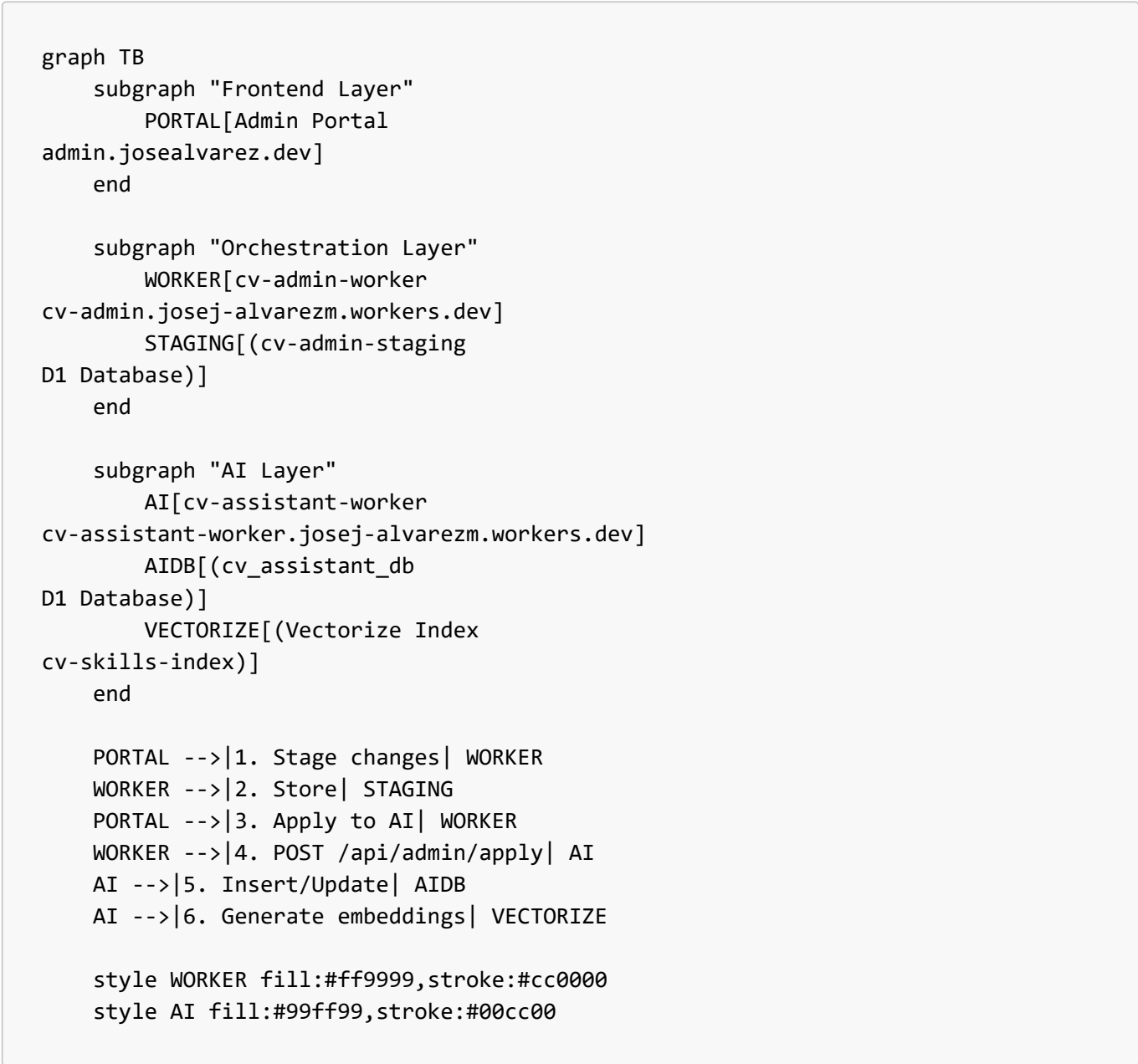


AI Sync Flow - Troubleshooting Guide

Problem Statement

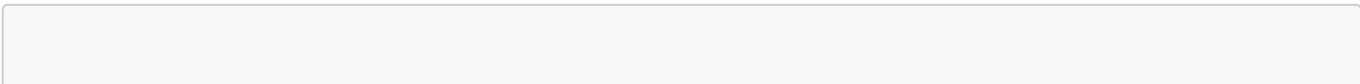
The Admin Portal's "Apply to AI" functionality was failing to sync technology data to the AI Agent's semantic search index. Changes staged in the Admin Portal were not being reflected in the chatbot's knowledge base.

System Architecture Overview



The Sync Flow in Detail

Step-by-Step Process



```
sequenceDiagram
    participant User as Admin User
    participant Portal as Admin Portal
    participant Worker as cv-admin-worker
    participant Staging as cv-admin-staging DB
    participant AI as cv-assistant-worker
    participant D1 as cv_assistant_db
    participant Vec as Vectorize

    Note over User,Vec: STAGING PHASE
    User->>Portal: Edit technology (e.g., update TypeScript description)
    Portal->>Worker: POST /stage {entity: "technology", data: {...}}
    Worker->>Staging: INSERT into staged_ai_changes
    Worker-->>Portal: {success: true, id: 123}
    Portal-->>User: "Change staged for AI sync"

    Note over User,Vec: APPLY PHASE
    User->>Portal: Click "Apply to AI"
    Portal->>Worker: POST /api/apply/ai
    Worker->>Staging: SELECT * FROM staged_ai_changes WHERE status='pending'
    Staging-->>Worker: [{id: 123, operation: 'UPDATE', data: {...}}]

    rect rgb(255, 200, 200)
        Note over Worker,AI: THIS IS WHERE THE ISSUE WAS
        Worker->>AI: POST /api/admin/apply
        {operations: [...]}
    end

    AI->>D1: INSERT/UPDATE technology record
    AI->>AI: Generate BGE-base embedding (768 dimensions)
    AI->>Vec: Upsert vector with metadata
    AI-->>Worker: {success: true, inserted: 1}
    Worker->>Staging: UPDATE status='applied' WHERE id=123
    Worker-->>Portal: {success: true, applied: 1}
    Portal-->>User: "1 change applied to AI"
```

The Issue

Root Cause

The `AI_AGENT_API_URL` secret in cv-admin-worker was configured with an **incorrect URL**:

Configuration	Value	Status
Configured URL	<code>https://cv-ai-agent.josej-alvarezm.workers.dev</code>	✗ Does not exist
Correct URL	<code>https://cv-assistant-worker.josej-alvarezm.workers.dev</code>	☑ Working

What Was Happening

```
flowchart LR
    subgraph "Expected Flow"
        A1[cv-admin-worker] -->|POST /api/admin/apply| B1[cv-assistant-worker]
        B1 -->|Success| C1[Changes applied]
    end

    subgraph "Actual Flow (Broken)"
        A2[cv-admin-worker] -->|POST /api/admin/apply| B2[cv-ai-agent
        X DNS_NOT_FOUND]
        B2 -->|Network Error| C2[Changes marked 'failed']
    end

    style B2 fill:#ff6666,stroke:#cc0000
    style C2 fill:#ffcccc
    style B1 fill:#66ff66,stroke:#00cc00
    style C1 fill:#ccffcc
```

Symptoms

1. **In Admin Portal:** "Apply to AI" button would fail or timeout
2. **In Staging DB:** Changes stuck in **pending** or marked as **failed**
3. **In Chatbot:** New or updated skills not appearing in search results
4. **In Logs:** Network errors like **ENOTFOUND** or **DNS resolution failed**

The Fix

What Was Done

1. **Updated the secret** in cv-admin-worker:

```
npx wrangler secret put AI_AGENT_API_URL
# Entered: https://cv-assistant-worker.josej-alvarezm.workers.dev
```

2. **Updated documentation** in **SECRETS.md** with correct URLs
3. **Created architecture documentation** to prevent future confusion

Expected Outcome After Fix

```
flowchart TD
    subgraph "After Fix"
        A[Admin Portal] -->|1. Apply to AI| B[cv-admin-worker]
        B -->|2. Fetch pending changes| C[(cv-admin-staging)]
        C -->|3. Return operations| B
        B -->|4. POST to correct URL| D[cv-assistant-worker]
    end
    WORKING[WORKING]
```

```

    D -->|5. Insert to D1| E[(cv_assistant_db)]
    D -->|6. Generate embedding| F[Workers AI]
    F -->|7. 768-dim vector| D
    D -->|8. Upsert| G[(Vectorize
cv-skills-index)]
    D -->|9. Success response| B
    B -->|10. Mark applied| C
    B -->|11. Return result| A
end

style D fill:#66ff66,stroke:#00cc00
style G fill:#66ffff,stroke:#0099cc

```

Verification Checklist

Pre-Verification (Already Confirmed ☒)

Check	Status	Details
AI Agent health	<input checked="" type="checkbox"/>	<code>/health</code> returns <code>{status: "healthy", db: "connected"}</code>
Database connectivity	<input checked="" type="checkbox"/>	<code>cv_assistant_db</code> connected
AI quota available	<input checked="" type="checkbox"/>	9490/9500 neurons remaining
Secret updated	<input checked="" type="checkbox"/>	<code>wrangler secret put</code> succeeded

End-to-End Verification (Pending)

Step	How to Verify
1. Stage a change	Open Admin Portal → Edit a technology → Save
2. Check staging	Portal should show 1 pending AI change
3. Apply to AI	Click "Apply to AI" button
4. Verify success	Should show "1 change applied"
5. Test search	Query chatbot for the updated technology
6. Confirm in Vectorize	<code>/api/debug/vectors</code> should show updated timestamp

Related Files

File	Purpose
<code>cv-admin-worker/src/index.ts</code>	Contains <code>applyAiHandler</code> that calls AI Agent
<code>cv-admin-worker/SECRETS.md</code>	Documents all required secrets
<code>cv-admin-worker/docs/ARCHITECTURE.md</code>	Full system architecture diagrams

File	Purpose
cv-ai-agent/src/index.ts	AI Agent's /api/admin/apply handler

Naming Confusion (Historical Context)

The project has two similar worker names which caused confusion:

Worker Name	Purpose	Status
cv-assistant-worker	The actual AI Agent (semantic search)	<input checked="" type="checkbox"/> Active, correct URL
cv-ai-agent	Conceptual name used in documentation	<input type="checkbox"/> No worker with this exact name exists
cv-assistant-worker-production	Production environment of same code	<input checked="" type="checkbox"/> Active, same database

Recommendation: Consolidate to single worker name to avoid future confusion.