

Confluence Knowledge Base Integration Guide

Complete guide for setting up, populating, and maintaining Confluence as the central knowledge repository for AI-powered support.

⚠ Important: This integration uses **HTTP Request nodes** with the Confluence REST API, not dedicated Confluence nodes. All examples use Basic Auth with Atlassian email + API token.

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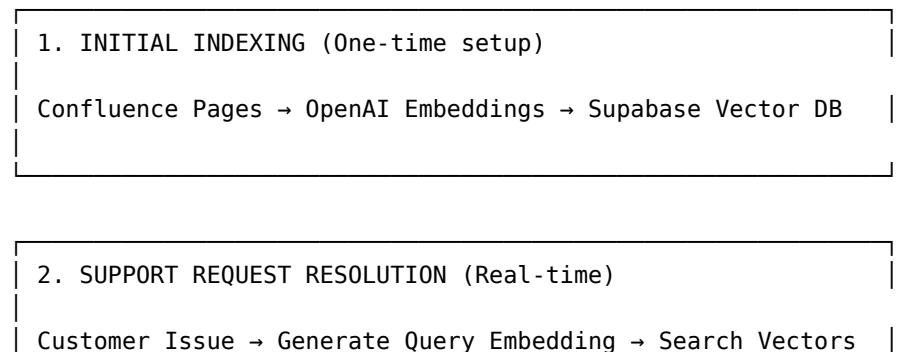
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Overview

Confluence serves as the central knowledge repository for the AI support system. The system uses a hybrid approach:

1. **Confluence** - Stores human-readable documentation, runbooks, and solutions
2. **Vector Embeddings** - Enables semantic search across all Confluence content
3. **AI Synthesis** - Claude reads relevant pages and generates custom solutions

How It Works



```
↓  
Top 5 Confluence Page IDs → Fetch Full Content → AI Reads  
↓  
AI Synthesizes Solution → Send to Customer
```

```
3. CONTINUOUS LEARNING (Daily)  
Analyze Resolutions → Identify Gaps → Create New Pages  
↓  
Update Existing Pages → Re-index → Improve Future Searches
```

Prerequisites

Before setting up Confluence integration:

- Confluence Cloud or Data Center account
- Admin access to create spaces and manage permissions
- API token or OAuth credentials for n8n
- Supabase account with pgvector enabled
- OpenAI API key for embeddings
- n8n instance with Confluence integration installed

Initial Setup

Step 1: Create Confluence API Credentials

For Confluence Cloud:

1. Go to <https://id.atlassian.com/manage-profile/security/api-tokens>
2. Click **Create API token**
3. Name it: **n8n Support System**
4. Copy the token (you won't see it again)

For Confluence Data Center:

1. Go to Settings → Personal Access Tokens
2. Create new token with scopes:
 - READ - confluence
 - WRITE - confluence
3. Copy the token

Step 2: Configure n8n Credentials

1. Open n8n UI
2. Go to **Settings → Credentials**
3. Click **Add Credential → HTTP Basic Auth**
4. Enter:
 - **Name:** Confluence API (Basic Auth)
 - **User:** Your Atlassian account email
 - **Password:** Paste the API token from Step 1
5. Click **Save**

Note: The Confluence integration uses HTTP Request nodes with the REST API. You'll configure the base URL (<https://your-company.atlassian.net/wiki/rest/api/content>) directly in each workflow node.

Step 3: Set Up Supabase Vector Store

1. Sign up at supabase.com
2. Create a new project
3. Go to **SQL Editor** and run:

```
-- Enable vector extension
CREATE EXTENSION IF NOT EXISTS vector;

-- Create knowledge base table
CREATE TABLE confluence_kb (
    id BIGSERIAL PRIMARY KEY,
    page_id TEXT UNIQUE NOT NULL,
    space_key TEXT NOT NULL,
    title TEXT NOT NULL,
    content TEXT NOT NULL,
    url TEXT NOT NULL,
    embedding VECTOR(1536), -- OpenAI text-embedding-3-small dimension
    metadata JSONB,
    created_at TIMESTAMPTZ DEFAULT NOW(),
    updated_at TIMESTAMPTZ DEFAULT NOW(),
    last_indexed_at TIMESTAMPTZ DEFAULT NOW()
);

-- Create index for vector similarity search
CREATE INDEX ON confluence_kb USING ivfflat (embedding vector_cosine_ops)
WITH (lists = 100);

-- Create index for page_id lookups
CREATE INDEX idx_confluence_page_id ON confluence_kb(page_id);

-- Create index for space filtering
CREATE INDEX idx_confluence_space_key ON confluence_kb(space_key);
```

```

-- Function to search similar documents
CREATE OR REPLACE FUNCTION match_confluence_pages(
    query_embedding VECTOR(1536),
    match_threshold FLOAT DEFAULT 0.7,
    match_count INT DEFAULT 5
)
RETURNS TABLE (
    page_id TEXT,
    title TEXT,
    content TEXT,
    url TEXT,
    similarity FLOAT
)
LANGUAGE SQL STABLE
AS $$

SELECT
    page_id,
    title,
    content,
    url,
    1 - (embedding <=> query_embedding) AS similarity
FROM confluence_kb
WHERE 1 - (embedding <=> query_embedding) > match_threshold
ORDER BY embedding <=> query_embedding
LIMIT match_count;

$$;

```

4. Go to **Settings → API** and copy:

- Project URL
- anon public key
- service_role secret key

5. Configure in n8n:

- Add **Supabase** credential
 - Enter URL and service role key
-

Confluence Space Structure

Recommended Organization

Create a dedicated Confluence space for support knowledge:

Space Key: PKB (Projects Knowledge Base) **Space Name:** Projects Knowledge Base

Note: The CX-Catalyst system uses the PKB space for AI-generated KB articles. Ensure this space exists before running Workflow 5.

Support Knowledge Base

|

Getting Started	About This Knowledge Base
Authentication & Access	Password Reset Guide SSO Configuration MFA Setup Instructions API Key Management
Billing & Subscriptions	Payment Method Update Invoice Access Subscription Changes Refund Process
Product Configuration	Initial Setup Guide Integration Configuration Webhook Setup Advanced Settings
Troubleshooting	Common Error Codes Performance Issues Connection Problems Data Sync Issues
Known Issues & Bugs	Current Incidents Planned Maintenance Resolved Issues Archive
Internal Runbooks	Escalation Procedures Emergency Response System Architecture

Page Templates

Create Confluence templates for consistency:

Template 1: Solution Article

Problem Statement

[Clear description of the issue customers face]

Affected Users

- Product: [Which product/plan]
- Environment: [Production/Staging/All]
- Frequency: [Common/Occasional/Rare]

```

## Solution

#### Quick Fix
[Immediate workaround if available]

#### Step-by-Step Resolution
1. [First step with clear instructions]
2. [Second step]
3. [Verification step]

#### Expected Outcome
[What customer should see after completing steps]

## Prerequisites
- [Required access levels]
- [Required tools or permissions]
- [Any dependencies]

## Related Articles
- [Link to related Confluence page]
- [Link to product documentation]

## Metadata
- **Category**: [Authentication/Billing/Configuration/etc.]
- **Priority**: [Critical/High/Medium/Low]
- **Last Updated**: [Date]
- **Verified By**: [Name]

---
*AI-Searchable: Yes*
*Public: [Yes/No/Internal Only]*

```

Template 2: Runbook

```

## Overview
[Brief description of when to use this runbook]
```

```

## Scope
- **Severity**: [Critical/High/Medium/Low]
- **Response Time**: [Immediate/1 hour/4 hours/24 hours]
- **Escalation Path**: [Team/Individual to notify]
```

```

## Pre-Checks
- [ ] Verify issue exists
- [ ] Check system status page
- [ ] Review recent changes
```

```

## Investigation Steps
1. [Check logs]
```

2. [Review metrics]
3. [Verify configuration]

Resolution Procedure

1. [Step with rollback plan]
2. [Step with validation]
3. [Final verification]

Post-Resolution

- [] Notify affected customers
- [] Update status page
- [] Document in incident log
- [] Create postmortem (if critical)

Rollback Plan

[How to revert changes if resolution fails]

Contacts

- ****Primary**:** [Name/Slack handle]
 - ****Secondary**:** [Name/Slack handle]
 - ****Management**:** [Name/Slack handle]
-

Creating Knowledge Base Content

Initial Content Population

1. Audit Existing Knowledge

Gather from: - Previous support tickets with solutions - Internal documentation -
Product documentation - Team wiki pages - Email threads with common solutions -
Slack conversations with resolutions

2. Prioritize by Frequency

Create pages for: 1. **Top 20 most common issues** (80% of volume) 2. **Critical/emergency procedures** 3. **Product-specific configurations** 4. **Known bugs and workarounds** 5. **New feature documentation**

3. Content Guidelines

Write for AI and Humans: - Clear, descriptive titles - Structured with headers - Step-by-step instructions - Include error messages verbatim - Add screenshots and diagrams -
Use consistent terminology - Avoid vague language - Don't use "click here" without context
- Avoid assuming prior knowledge

SEO/Search Optimization: - Include common search terms - Add alternative phrasings - List related error codes - Include product/feature names

4. Labeling Strategy

Use Confluence labels consistently:

Product Labels: - product:web-portal - product:mobile-app - product:api - product:enterprise

Category Labels: - category:authentication - category:billing - category:configuration - category:bug - category:feature

Priority Labels: - priority:critical - priority:high - priority:medium - priority:low

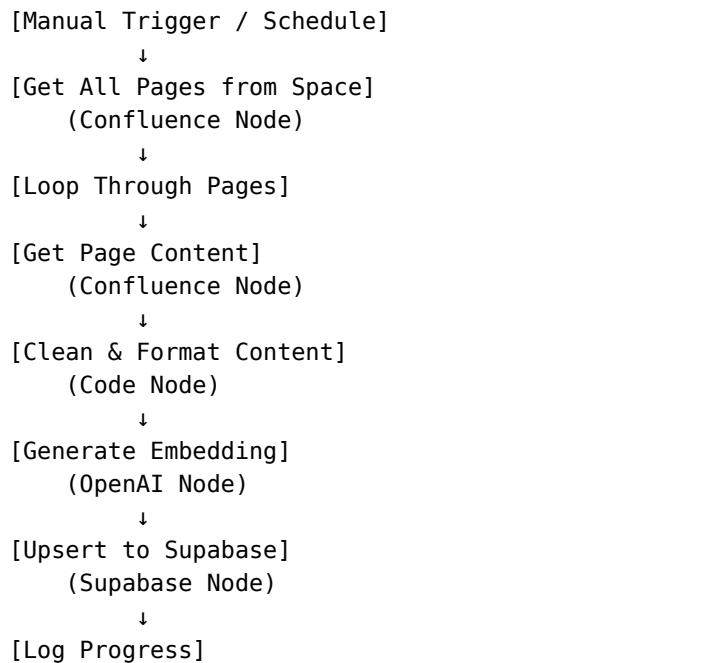
Status Labels: - status:current - status:archived - status:under-review

Indexing Confluence Pages

Create Indexing Workflow in n8n

Create a new workflow: **Confluence KB Indexer**

Workflow Structure:



Node Configuration:

1. Confluence: Get Pages

```
{
  "space": "PKB",
  "limit": 100,
  "expand": "body.storage,version,metadata.labels"
}
```

2. Code: Clean Content

```

// Remove HTML tags and format for embedding
const content = $input.item.json.body.storage.value;
const title = $input.item.json.title;
const pageId = $input.item.json.id;
const spaceKey = $input.item.json.space.key;
const url = `https://your-company.atlassian.net/wiki/spaces/${spaceKey}/pages/
${pageId}`;

// Strip HTML
const cleanContent = content
  .replace(/<[^>]*>/g, ' ')
  .replace(/\s+/g, ' ')
  .trim();

// Create searchable text: title + content
const searchText = `${title}\n\n${cleanContent}`;

// Truncate if too long (max 8000 tokens ≈ 32000 chars)
const truncated = searchText.substring(0, 32000);

return {
  page_id: pageId,
  space_key: spaceKey,
  title: title,
  content: truncated,
  url: url,
  metadata: {
    labels: $input.item.json.metadata.labels,
    version: $input.item.json.version.number,
    lastModified: $input.item.json.version.when
  }
};

```

3. OpenAI: Generate Embedding

```
{
  "model": "text-embedding-3-small",
  "input": "={ $json.content }"
}
```

4. Supabase: Upsert

```
INSERT INTO confluence_kb (
  page_id,
  space_key,
  title,
  content,
  url,
  embedding,
  metadata,
  last_indexed_at
```

```

)
VALUES (
    '{{ $json.page_id }}',
    '{{ $json.space_key }}',
    '{{ $json.title }}',
    '{{ $json.content }}',
    '{{ $json.url }}',
    '{{ $json.embedding }}',
    '{{ $json.metadata }}'::jsonb,
    NOW()
)
ON CONFLICT (page_id)
DO UPDATE SET
    title = EXCLUDED.title,
    content = EXCLUDED.content,
    url = EXCLUDED.url,
    embedding = EXCLUDED.embedding,
    metadata = EXCLUDED.metadata,
    updated_at = NOW(),
    last_indexed_at = NOW();

```

Run Initial Index

1. Activate the Confluence KB Indexer workflow
2. Click **Execute Workflow**
3. Monitor execution (may take 5-10 minutes for 100+ pages)
4. Verify in Supabase:

```

SELECT COUNT(*) FROM confluence_kb;
SELECT page_id, title FROM confluence_kb LIMIT 10;

```

Schedule Regular Re-indexing

Set the workflow to run: - **Daily at 2 AM** - Full re-index to catch updates - **Hourly (optional)** - For frequently updated pages

Workflow Integration

Modify Workflow 2: Self-Service Resolution

Update the workflow to query Confluence:

Add Vector Search Node

Position: After “Classify Issue” and before “Generate Solution”

Node: HTTP Request to Supabase

```
{
  "method": "POST",
  "url": "{{ $env.SUPABASE_URL }}/rest/v1/rpc/match_confluence_pages",
```

```

"authentication": "predefinedCredentialType",
"nodeCredentialType": "supabaseApi",
"headers": {
  "apikey": "={{ $credentials.supabaseApi.serviceRole }}",
  "Content-Type": "application/json"
},
"body": {
  "query_embedding": "={{ $json.issue_embedding }}",
  "match_threshold": 0.7,
  "match_count": 5
}
}

```

Update AI Agent Node

Add retrieved Confluence content to the prompt:

You are a customer support AI assistant.

Customer Issue:
{{ \$json.description }}

Classification:
- Category: {{ \$json.category }}
- Priority: {{ \$json.priority }}
- Product: {{ \$json.product }}

Relevant Knowledge Base Articles:
{{ \$json.confluence_results.map(r => `
Title: \${r.title}
URL: \${r.url}
Similarity: \${r.similarity.toFixed(2)}
Content: \${r.content.substring(0, 1000)}...
`).join('\n---\n') }}

Based on the customer's issue and the relevant KB articles above, provide:

1. A clear, personalized solution
2. Step-by-step instructions
3. Links to the most relevant KB articles
4. Any prerequisites or warnings

Keep the response concise and actionable.

Modify Workflow 5: Continuous Learning

Add Confluence update capabilities:

Check for Knowledge Gaps

```
// Analyze cases without KB matches
const casesWithoutKB = $items.filter(item =>
  item.json.kb_match_score < 0.7 &&
```

```

    item.json.resolution_successful === true
);

// Group by category
const gaps = casesWithoutKB.reduce((acc, item) => {
  const category = item.json.category;
  if (!acc[category]) acc[category] = [];
  acc[category].push({
    description: item.json.description,
    solution: item.json.resolution,
    frequency: 1
  });
  return acc;
}, {});

return Object.entries(gaps).map(([category, issues]) => ({
  category,
  issue_count: issues.length,
  sample_issues: issues.slice(0, 5)
}));
```

Create New Confluence Pages

Node: AI Agent - Draft KB Article

Based on these resolved support cases that have no KB article:

Category: {{ \$json.category }}
Number of cases: {{ \$json.issue_count }}

Sample issues:
{{ \$json.sample_issues.map(i => ` - \${i.description}\n Solution: \${i.solution}`).join('\n') }}

Create a KB article using this template:

```
## Problem Statement
[Describe the issue]

## Solution
[Step-by-step instructions]

## Related Information
[Any additional context]
```

Format the output as Confluence storage format (HTML).

Node: HTTP Request - Create Confluence Page

Important: Use HTTP Request node with Basic Auth, not the dedicated Confluence node.
Pre-escape content in a Code node first.

Code Node: Prepare Confluence Content

```
// Pre-escape content for JSON embedding
const jsonSafeContent = content
    .replace(/\\\/g, '\\\\\\')
    .replace(/"/g, '\\\"')
    .replace(/\n/g, '\\\\n')
    .replace(/\r/g, '\\\\r')
    .replace(/\t/g, '\\\\t');

return {
  json: {
    article_content_escaped: jsonSafeContent,
    article_title_escaped: title.replace(/\"/g, '\\\"')
  }
};
```

HTTP Request Node Configuration: - Method: POST - URL: <https://your-company.atlassian.net/wiki/rest/api/content> - Authentication: HTTP Basic Auth (email + API token)
- Body (JSON - without = prefix):

```
{
  "type": "page",
  "title": "{{ $json.article_title_escaped }}",
  "space": {
    "key": "PKB"
  },
  "body": {
    "storage": {
      "value": "{{ $json.article_content_escaped }}",
      "representation": "storage"
    }
  },
  "status": "current"
}
```

Add Labels Node (HTTP Request): - Method: POST - URL: [https://your-company.atlassian.net/wiki/rest/api/content/{{ \\$json.id }}/label](https://your-company.atlassian.net/wiki/rest/api/content/{{ $json.id }}/label) - Body:

```
[
  {"prefix": "global", "name": "ai-generated"},
  {"prefix": "global", "name": "kb-article"},
  {"prefix": "global", "name": "needs-review"}
]
```

Re-index New Pages

After creating pages, trigger the Confluence KB Indexer workflow:

Node: HTTP Request

```
{  
  "method": "POST",  
  "url": "{{ $env.N8N_WEBHOOK_BASE_URL }}/webhook/confluence/reindex",  
  "body": {  
    "page_ids": "= {{ $json.created_pages.map(p => p.id) }}"  
  }  
}
```

Automatic Updates

Update Existing Pages

When Workflow 5 identifies improvements:

1. Fetch existing page
2. AI suggests edits
3. Update page content
4. Re-index

Node: Confluence - Get Page

```
{  
  "pageId": "{{ $json.confluence_page_id }}",  
  "expand": "body.storage,version"  
}
```

Node: AI Agent - Suggest Updates

Current KB article:
Title: {{ \$json.title }}
Content: {{ \$json.body.storage.value }}

Recent support cases suggest this article is missing:
{{ \$json.missing_info }}

Suggest updates to the article. Provide the complete updated content in Confluence storage format.

Node: Confluence - Update Page

```
{  
  "pageId": "{{ $json.page_id }}",  
  "version": {  
    "number": "= {{ $json.current_version + 1 }}"  
  },  
  "title": "= {{ $json.title }}",  
  "body": {  
    "storage": {  
      "value": "= {{ $json.updated_content }}",  
      "representation": "storage"  
    }  
  }  
}
```

```
        }
    }
}
```

Maintenance

Weekly Tasks

Monday: Review KB Performance

```
-- Pages with most search hits
SELECT
    page_id,
    title,
    COUNT(*) as search_hits
FROM kb_search_log
WHERE searched_at > NOW() - INTERVAL '7 days'
GROUP BY page_id, title
ORDER BY search_hits DESC
LIMIT 20;

-- Pages never retrieved
SELECT page_id, title, url
FROM confluence_kb
WHERE page_id NOT IN (
    SELECT DISTINCT page_id
    FROM kb_search_log
)
AND created_at < NOW() - INTERVAL '30 days';
```

Wednesday: Content Freshness Check

```
-- Pages not updated in 90 days
SELECT
    page_id,
    title,
    url,
    updated_at,
    AGE(NOW(), updated_at) as age
FROM confluence_kb
WHERE updated_at < NOW() - INTERVAL '90 days'
ORDER BY updated_at ASC;
```

Friday: Gap Analysis Run Workflow 5 manually to identify:

- Missing KB articles
- Low-performing articles (searched but low satisfaction)
- Duplicate or conflicting articles

Monthly Tasks

Review and Archive - Archive outdated pages (add `status:archived` label) - Remove deprecated product features - Consolidate similar articles - Update screenshots and examples

Quality Audit - Check top 50 pages for accuracy - Verify all links work - Ensure consistent formatting - Review AI-generated content

Performance Optimization

```
-- Rebuild vector index if needed
REINDEX INDEX confluence_kb_embedding_idx;

-- Update statistics
ANALYZE confluence_kb;

-- Check index usage
SELECT
    schemaname,
    tablename,
    indexname,
    idx_scan,
    idx_tup_read,
    idx_tup_fetch
FROM pg_stat_user_indexes
WHERE tablename = 'confluence_kb';
```

Best Practices

Content Writing

1. Be Specific with Titles

- “How to Reset Password for SSO Users in Production”
- “Password Reset”

2. Include Variations

- Add a “Also Known As” section with alternative terms
- Include common misspellings
- List related error codes

3. Use Real Examples

- Show actual error messages
- Include sample API requests/responses
- Provide concrete values, not placeholders

4. Link Generously

- Link to related Confluence pages
- Link to product documentation
- Link to external resources

5. Maintain Metadata

- Keep labels current
- Update “Last Reviewed” dates
- Mark deprecated content

Search Optimization

1. Front-Load Important Terms

- Put key terms in the title and first paragraph
- Use descriptive headers

2. Avoid Jargon in Titles

- Titles should be customer-facing language
- Explain acronyms in content

3. Include Context

- Mention product names
- Specify which versions are affected
- Note environment (production, staging)

AI Interaction

1. Structure for Parsing

- Use consistent header levels
- Put solutions in clear sections
- Use numbered lists for steps

2. Provide Complete Information

- Include prerequisites
- List assumptions
- Mention edge cases

3. Update Based on Feedback

- Monitor which pages AI retrieves
 - Check resolution success rates
 - Refine content based on patterns
-

Troubleshooting

Issue: Vector Search Returns No Results

Symptoms: - AI generates generic solutions - No Confluence pages in context - kb_match_score: 0 in logs

Diagnosis:

```
-- Check if pages are indexed
SELECT COUNT(*) FROM confluence_kb;

-- Check if embeddings exist
SELECT COUNT(*) FROM confluence_kb WHERE embedding IS NOT NULL;

-- Test manual search
SELECT * FROM match_confluence_pages(
    (SELECT embedding FROM confluence_kb LIMIT 1),
    0.5,
```

5
);

Solutions: 1. Re-run Confluence KB Indexer workflow 2. Check OpenAI API quota 3. Verify Supabase connection 4. Lower `match_threshold` to 0.6 or 0.5

Issue: Outdated Content Retrieved

Symptoms: - Solutions reference old features - Deprecated instructions provided - Customers report incorrect information

Solutions: 1. Add “Last Verified” date to pages 2. Filter by `updated_at` in search: `sql WHERE updated_at > NOW() - INTERVAL '180 days'` 3. Archive old pages instead of deleting 4. Use version labels (v1-deprecated, v2-current)

Issue: Duplicate Articles

Symptoms: - Multiple pages for same issue - Conflicting instructions - AI retrieves wrong page

Solutions: 1. Search for duplicates: `sql SELECT title, COUNT(*) FROM confluence_kb GROUP BY title HAVING COUNT(*) > 1`; 2. Merge pages and redirect 3. Use canonical links 4. Update to reference single source of truth

Issue: Poor AI Synthesis

Symptoms: - AI ignores retrieved KB content - Solutions don't match context - Generic responses despite good matches

Solutions: 1. Increase context in prompt 2. Show full page content (not truncated) 3. Explicitly instruct AI to prioritize KB 4. Add examples of good synthesis

Issue: Slow Indexing

Symptoms: - Indexer workflow times out - Takes hours to index 100 pages - High OpenAI API costs

Solutions: 1. Batch API calls (10-20 at a time) 2. Use `text-embedding-3-small` (cheaper, faster) 3. Cache embeddings (only re-index if content changed) 4. Index only modified pages: `sql WHERE updated_at > last_indexed_at`

Metrics to Track

Monitor these in your dashboard:

Coverage Metrics

- Total Confluence pages indexed
- Pages created by AI this month
- Percentage of issues with KB match

Quality Metrics

- Average similarity score for retrieved pages
- Resolution success rate (with KB vs without)

- Customer satisfaction by KB article

Usage Metrics

- Top 20 most-retrieved pages
- Pages never retrieved (candidates for archive)
- Search queries with no results

Performance Metrics

- Average vector search latency
 - Embedding generation time
 - Index size and growth rate
-

KB Coverage by Customer Tier

The knowledge base currently contains **100+ articles** organized by customer tier:

Customer Tier	Article Count	Key Categories
Enterprise	50	API & Integration (15), Security & Compliance (10), SSO/Auth (8), Performance & Scaling (7), Admin & Config (10)
SMB	30	Account Management (8), Billing & Subscriptions (6), Integrations (8), Product Features (8)
Small Business	20	Order Management (5), Shipping & Returns (4), Account Help (3), Product FAQs (3), Getting Started (5)

Articles are stored in the Confluence PKB space and indexed into the `confluence_kb` Supabase table with vector embeddings for semantic search.

To expand coverage, see the Best Practices Guide for article structure, tagging, and content freshness guidelines.

Next Steps

1. **Complete Initial Setup** (Today)
 - ? Create Confluence space
 - ? Set up API credentials
 - ? Configure Supabase
2. **Populate Knowledge Base** (Week 1)

- Create 50-100 core articles across customer tiers (see KB Coverage below)
- Apply templates and labels
- Review and edit for consistency

3. Index and Test (Week 1)

- Run initial indexing workflow
- Test vector search
- Verify AI can retrieve pages

4. Integrate Workflows (Week 2)

- Update Workflow 2 with KB search
- Test end-to-end resolution
- Monitor resolution quality

5. Enable Automatic Updates (Week 3)

- Configure Workflow 5 to create pages
- Set up scheduled re-indexing
- Implement feedback loop

6. Ongoing Optimization (Monthly)

- Review KB performance
 - Archive outdated content
 - Expand coverage based on gaps
-

Questions? - Workflow issues: Check n8n execution logs - Confluence problems: Check API connection - Vector search issues: Review Supabase logs - AI synthesis problems: Review agent prompts

Confluence Integration Guide v2.0 - January 2026