Monitoring Setup Guide

Overview

This guide covers setting up monitoring for Spotify Genre Sorter using BetterStack (formerly BetterUptime) or similar services.

Quick Start

1. BetterStack Setup

1. Sign up at betterstack.com
2. Create a new monitor:
   - **URL**: `https://swedify.houstons.tech/health`
   - **Check interval**: 1 minute
   - **Timeout**: 10 seconds
   - **Alert after**: 3 consecutive failures

2. Status Page

1. Create a status page in BetterStack
2. Add your monitor to the page
3. Get the status page URL (e.g., `https://status.houstons.tech`)

Health Endpoints

Basic Health Check

```
GET /health
```

Response:

```
{
  "status": "ok",
  "version": "1.2.1"
}
```

Use this for uptime monitoring. Fast response, no external dependencies checked.

Detailed Health Check

```
GET /health?detailed=true
```

Response:

```
{
  "status": "ok",
  "version": "1.2.1",
  "components": {
    "kv": {
```

```
      "status": "ok",
      "latency": 12
    },
    "secrets": {
      "status": "ok"
    }
  },
  "timestamp": "2025-12-01T10:30:00.000Z"
}
```

Component statuses:

- `ok` - Component healthy
- `error` - Component failing
- `missing` - Configuration missing
- `degraded` - Partial functionality

Monitoring Strategy

What to Monitor

Metric	Endpoint	Threshold	Alert
Uptime	`/health`	200 OK	3 failures
Response time	`/health`	>2 seconds	Warning
SSL certificate	Any HTTPS	<30 days expiry	Warning
API availability	`/api/genres`	401/500	5 failures

Alert Channels

Configure alerts via:

- Email (primary)
- Slack (team notifications)
- PagerDuty (on-call escalation)
- SMS (critical only)

Alert Severity Levels

Level	Condition	Response Time
Critical	Service down >5 min	Immediate
Warning	Response time >2s	1 hour
Info	Deployment completed	N/A

Cloudflare Analytics

Cloudflare Workers provides built-in analytics:

1. Go to **Workers & Pages** → Your worker → **Analytics**

2. View:
   - Request count
   - CPU time
   - Duration percentiles
   - Error rates
   - Geographic distribution

Useful Cloudflare Metrics

Metric	Where to Find
Requests/day	Workers Analytics dashboard
P99 latency	Workers Analytics → Duration
Error rate	Workers Analytics → Status codes
CPU time	Workers Analytics → CPU time
Bandwidth	Zone Analytics

Custom Metrics (Future)

For custom metrics, consider:

Analytics Engine (Cloudflare)

```
// Write custom metrics
c.env.ANALYTICS.writeDataPoint({
  blobs: ['playlist_created'],
  doubles: [1],
  indexes: [session.spotifyUserId]
});
```

External Monitoring (e.g., Grafana Cloud)

Send metrics via HTTP:

```
// POST to Grafana Cloud
await fetch('https://graphite.grafana.net/metrics', {
  method: 'POST',
  body: JSON.stringify({
    name: 'spotify_genre_sorter.playlists_created',
    value: 1,
    time: Date.now()
  })
});
```

Incident Response Integration

BetterStack Incident Management

1. Monitor triggers alert
2. Incident created automatically
3. On-call person notified
4. Track resolution in timeline
5. Post-mortem in incident history

Webhook Integration

Add webhook to deployment pipeline:

```yaml
# In deploy.yml
- name: Notify BetterStack
  if: success()
  run: |
    curl -X POST "https://betterstack.com/webhooks/..." \
      -d '{"event":"deployment","version":"${{ env.APP_VERSION }}"}'
```

Status Badge Integration

Shields.io Badge

Static badge (current implementation):

```
[![Status](https://img.shields.io/badge/Status-Live-brightgreen)]
(https://status.houstons.tech)
```

BetterStack Dynamic Badge

If BetterStack provides a status badge URL:

```
[![Uptime](https://betterstack.com/badge/xxx.svg)](https://status.houstons.tech)
```

Monitoring Checklist

Initial Setup

- ☐ Create BetterStack account
- ☐ Add `/health` monitor (1 min interval)
- ☐ Configure alert channels (email, Slack)
- ☐ Create status page
- ☐ Add badge to README

Ongoing

- ☐ Review alerts weekly
- ☐ Check response times monthly
- ☐ Update thresholds as needed
- ☐ Document incidents

Recommended Services

Service	Use Case	Free Tier
BetterStack	Uptime, incidents	5 monitors
Cloudflare Analytics	Workers metrics	Included
Sentry	Error tracking	5K errors/month
Grafana Cloud	Custom metrics	10K series

Example BetterStack Configuration

```yaml
# betterstack.yml (conceptual)
monitors:
  - name: Spotify Genre Sorter - Production
    url: https://swedify.houstons.tech/health
    check_interval: 60
    expected_status_codes: [200]
    timeout: 10
    regions:
      - us-east
      - eu-west
      - ap-southeast
    alert_policy:
      threshold: 3
      channels:
        - email
        - slack

  - name: Spotify Genre Sorter - API
    url: https://swedify.houstons.tech/api/changelog
    check_interval: 300
    expected_status_codes: [200]

status_page:
  name: Spotify Genre Sorter Status
  subdomain: status
  components:
    - name: Web Application
      monitor: Spotify Genre Sorter - Production
    - name: API
      monitor: Spotify Genre Sorter - API
```

Troubleshooting

Monitor Shows Down But Site Works

1. Check monitor region vs Cloudflare edge location

2. Verify no geo-blocking on Cloudflare

3. Check if maintenance window active

4. Verify URL is correct (https, correct path)

High Latency Alerts

1. Check Cloudflare Analytics for CPU time

2. Review recent deployments

3. Check Spotify API status

4. Verify KV namespace health

False Positives

Configure alert dampening:

- Require 3 consecutive failures before alerting
- Add delay before first alert (30 seconds)
- Use multiple monitoring regions

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