Postgres and Chill Cloud Dashboard

* **Please design a dashboard for the following requirement:**
* **We run a productive Java application in the cloud**
* **We are responsible for it’s availability**
* **Our application’s persistency is running on 2 Postgres instances.**
* **Our application is also consuming several different services which are critical for it:**
* **Notification service**
* **Log service**
* **Audit log service**

**Notes**

* **This is not real so feel free to make assumptions.**
* **It can be prepared on any computer app like Power Point, Word, or anything that will be convenient for you to use.**

# 1. Application Availability Overview

• Uptime  
  
Visual Representation:  
• Green/Red/ Yellow Indicator for current status (Up/Down/Degraded)  
• Uptime Percentage and Trend Graph (Daily, Weekly)

# 2. Database Health (Postgres Instances)

• Primary Postgres: Status, Connection Pool Usage, CPU/Memory, Query Performance  
• Replica Postgres: Replication Status, Failover Readiness (making assumptions here)  
  
Visual Representation:  
• Bar charts for Connection Pool Usage  
• Line graphs for CPU/Memory  
• Status Indicators (Green/Red/Yellow) for status  
• Line graph for query performance

# 3. Service Monitoring (Critical Services)

• Notification Service: Latency, Status, Error Rate  
• Log Service: Latency, Log Ingestion Rate, Status  
• Audit Log Service: Latency, Pending Queue Size, Status  
  
Visual Representation:  
• Service Health Status Indicators (Green/Red/Yellow)  
• Latency and Error Rate Graphs  
• Pending Queue Size for Audit Logs (Bar Graph)

# 4. Performance Metrics (Java Application)

• JVM Memory Usage: Heap/Non-Heap Memory  
• Thread Count: Active Threads, Blocked/Waiting Threads  
• Error Rates: Exceptions per minute, Error Logs  
  
Visual Representation:  
• Memory Usage (Line Graphs)  
• Thread Counts (Line Chart)  
• Error Rates (Bar Chart)

# 5. Alerting System

• Alert Levels: Critical (Immediate), Warning (Non-Immediate)  
• Alert Source: Application, Postgres, Services  
  
Visual Representation:  
• List of Active Alerts (Critical/Warning)  
• Alerts Ordered by Time of Occurrence

# 6. Historical Trends and Logs

• Historical Uptime and Performance Trends (Last 7/30 days)  
• Log Data: Filter by Service, Time Window  
  
Visual Representation:  
• Line Graphs for Trends  
• Log Table with Filters