



PlatformNexus: Revolutionizing IT Operations with AI

An LLM-Powered Platform for Intelligent IT Management



Meet the Team

The Troubleshooters

- ❖ Ajay Naik
- ❖ Hemant Nagpure
- ❖ Indumathy Thiagarajan
- ❖ Lakshmi Gopinathan
- ❖ Prince Vijan (Captain of the Team)



The Challenge: Navigating the Chaos

- Overwhelming volume of alerts and incidents.
- Siloed information across different tools.
- Time-consuming manual troubleshooting and diagnostics.
- Difficulty in quickly identifying root causes.
- Need for faster and more efficient change management.
- Lack of easy access to application dependency information.



PlatformNexus.getInstance()



Our Solution: PlatformNexus - Intelligent IT Operations at Your Fingertips

An innovative platform that leverages LLMs and specialized AI agents to transform IT management.

- **Natural Language Interface:** Ask questions in plain English.
- **LLM Backend:** Connects to various powerful LLMs and leveraging MCP.
- **Real-time Incident Monitoring:** Stay updated on critical issues.
- **Intelligent AI Agents:** Dedicated tools for specific tasks.



NLP: Ask Anything about your systems!

- Engineers can submit queries using simple, natural language.
- No need to remember complex commands or navigate multiple interfaces.
- Example Queries:
 - "What is causing this issue in this incident?"
 - "Is the PaymentGateway application healthy?"
 - "Did any CR cause this incident?"
 - "What are the dependencies for the MortgageLending Application?"



Meet Your AI Agents - Automation at Your Service

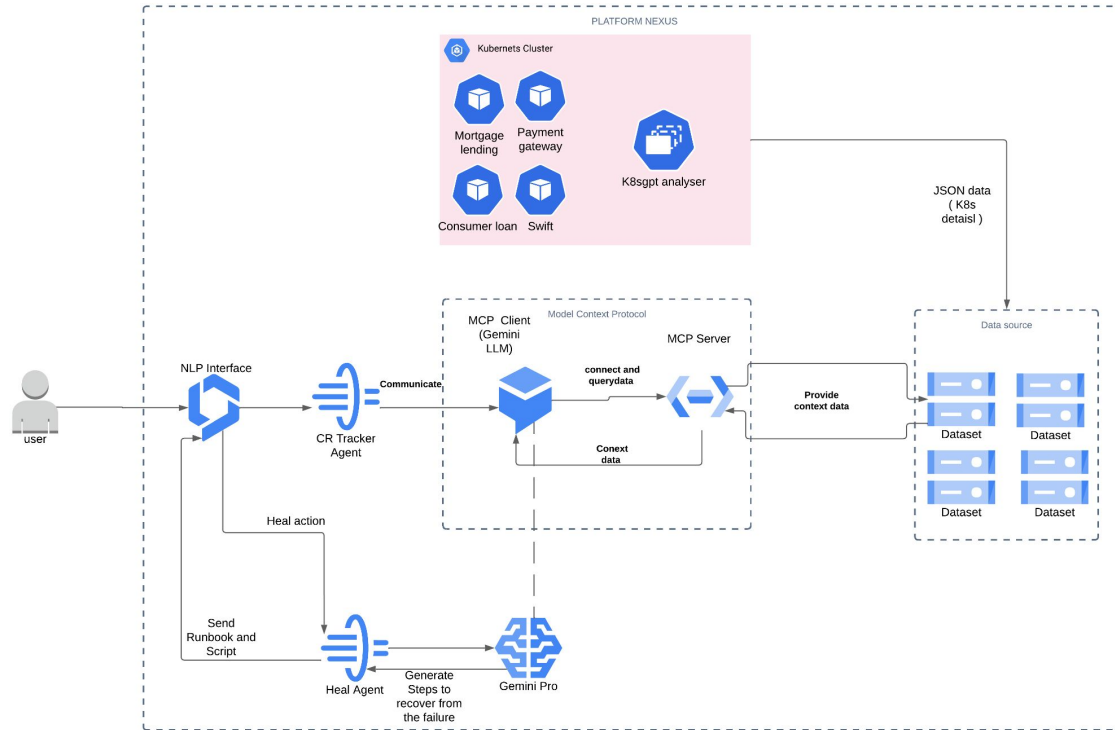
- Heal Agent.
- Change Request Tracker Agent.
- Application Dependency Eval Agent.



```
class DeepDive { ... }
```




Under the Hood - System Architecture



Your Window into PlatformNexus

The screenshot displays the PlatformNexus SRE Query Interface. On the left, a sidebar titled 'Incidents' lists several incidents: INC-1 (Deployment default/replicas pending), INC-4 (3d4 nodes are available, 2 insufficient memory, 3 insufficient cpu, 4 insufficient memory), INC-2 (Deployment default/replicas pending), and INC-5 (Back off pulling image 'al-centos1'). Below the list is a 'Pick an Agent' section with buttons for 'Heat Incident', 'Or Tracker', and 'App Affected'. The main panel shows details for 'INC-4'. It includes an 'SRE Query Interface' with a search bar and a 'Response' section. The response text states: 'my issue with outages/pending. Yes, mongogalending is experiencing two issues: INC-1 (P1): incorrect replica count (2 available, 1 expected). INC-4 (P1): insufficient resources (CPU and memory) preventing pod scheduling.' Below this, it shows 'App Affected Analysis For Incident: INC-4' and 'Upstream/Downstream Applications affected by Incident ID: INC-4'. The 'Upstream Applications' section indicates 'No upstream applications are impacted.' and the 'Downstream Applications' section is empty. A 'Generate Runbook' button is at the bottom right. The top of the interface shows 'WELLS FARGO' and 'Platform Nexus'.

Incidents

- INC-1
Deployment default/replicas pending has 1 replicas out of 2 are available
- INC-4
3d4 nodes are available, 2 insufficient memory, 3 insufficient cpu, 4 insufficient memory
provision: 3d4 nodes are available, 4 insufficient memory
provision: 3d4 nodes are available, 4 insufficient memory
- INC-2
Deployment default/replicas pending has 1 replicas out of 2 are available
- INC-5
Back off pulling image 'al-centos1', cluster: playground, namespace: default, deployment: al-centos1, version: 1.0.0, container: al-centos1, error: Error: failed to pull and unpack image 'al-centos1'

Pick an Agent

- Heat Incident
- Or Tracker
- App Affected

INC-4

SRE Query Interface

Type your query here (e.g., check memory, check cpu, find applications)

Response

my issue with outages/pending

Yes, mongogalending is experiencing two issues:

- INC-1 (P1): incorrect replica count (2 available, 1 expected).
- INC-4 (P1): insufficient resources (CPU and memory) preventing pod scheduling.

App Affected Analysis For Incident: INC-4

Upstream/Downstream Applications affected by Incident ID: INC-4

Upstream Applications:

- No upstream applications are impacted.

Downstream Applications:

Generate Runbook

Action History



Impact and Benefits - Transforming IT Operations

- **Increased Efficiency:** Faster troubleshooting and resolution times.
- **Improved Productivity:** Engineers can focus on more strategic tasks.
- **Reduced Downtime:** Proactive incident management and quicker remediation.
- **Enhanced Collaboration:** Shared platform for information and actions.
- **Better Decision-Making:** Data-driven insights from AI agents.
- **Simplified IT Operations:** Intuitive NLP interface and unified UI.



Future Roadmap: Expanding the Ecosystem

■ Short-term Enhancements:

- Generation of Application Dependency Graph
- Using Heuristic search for CRs and Incidents

■ Long-term Vision:

- Autonomous incident resolution
- Predictive incident prevention
- Deploying in a scalable platform that can be predictively autoscaled.
- More AI agents for other IT operations tasks.



```
System.out.println("Thank You!");  
exit(EXIT_SUCCESS);
```

