

OVERVIEW

PROBLEM

RESEARCH
QUESTIONS

RESEARCH

PROCESS



Rolling Studies at Nvidia

My experience leading weekly usability & concept testing studies for monitoring techniques used by the Kubernetes Cloud software development teams at Nvidia.



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Project Duration: 4 months

Responsibilities: Dashboard Development;
Usability & Concept Testing; Surveys; Interviews

View My Project Team: [Nvidia Kubernetes
Development](#)

View My Paper: [Monitoring Methods Analysis
for Cloud Native Technology](#)

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PROBLEM

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With increasing number of AI powered applications and the broad availability of GPUs in public cloud, there is a need for Kubernetes, the highest-velocity open-source project in history, to be GPU-aware.



SOLUTION

Throughout the Kubernetes development process, monitoring solutions are required to track VM/GPU integration success and to access system and Kubernetes cluster health.



IMPACT

The addition of a monitoring dashboard can connect 1000+ developers working on Kubernetes projects. The solution aims to save 2 hours of weekly system metrics pulling for each developer.

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CONCEPT TESTING



Is there a need for this product?



Have there been past situations at work where this product would have made the user's life easier?



Do participants already use a product that offers similar features?



What would make users decide to use the dashboard?





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USABILITY TESTING



What makes sense or causes confusion to users?



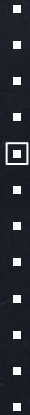
Does the product match users' expectations?



How easy or difficult is it to do certain tasks?



What risks need to be resolved before shipping the product?



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INTERVIEW RESULTS

| | Cloud DevOps | Cloud Engineer | Cloud Architect |
|---------------------------|--|---|---|
| Focus Areas | Deployment | Development | Architecture |
| Task Assumptions | Monitoring networks and handling issues in the cloud space | Building cloud environment and integrating 3rd party software | Designing cloud architecture and entire environment |
| Daily Monitoring Required | ✓ | ✓ | |
| Likes | Easy to set policies, and to detect incidents | Easy to troubleshoot, and to fix issues | Easy to see entire environment like maintenance and billing |
| Dislikes | Time consuming to check filters for incident handling | Difficult to test deployment success | Complex architecture |
| Pain Point | Need alerts of the risks | Reluctant to adopt a new product | Everything is tied to documentation |
| SOLUTION | Design a dashboard | Value & instruction explanations on the dashboard | |

EXAMPLES OF PRODUCT FEATURES I DEVELOPED

- Prometheus Logs Exploration
- Grafana Metrics Visualization
- Alert Settings
- Built-in Collaboration Page

***Final product is not displayed due to NDA(Non-Disclosure Agreement).

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CONTACT

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