#### Demo Dashboard **Prometheus QPS [rate-5** 1.5 1.0 20:35 20:40 20:45 20:50 20:55 — / — /alerts — /api/metrics — /api/query — /api/query range — /consoles/ — /graph — /heap — /stati HTTP latency [s] 20 20:35 20:40 20:45 20:50 20:55 — 0.9 /alerts — 0.99 /alerts — 0.9 /api/metrics — 0.99 /api/metrics — 0.9 /api/query — 0.9 /heap — 0.99 /heap — 0.9 /static/ — 0.99 /static/ — 0.99 /graph Memory series count 125.08 K 800 125.06 K 125.04 K 125.02 K 125.00 K 124.98 K 20:50 21:10 21:20 20:30 21:00 localhost:9090 prometheus

# Driving Success with DevOps Monitoring

How Monitoring Empowers Teams and Delivers Business Value

Presented by Illia Striltsiv

## What is DevOps Monitoring?

#### Definition

Continuous observation of system performance, availability, and functionality.

- System health: CPU, memory, disk
- Application: response times & error rates
- User experience: uptime and latency
- Logs and events for diagnosis

#### Quote

"If you can't measure it, you can't improve it." – Peter Drucker

## Why Monitoring Matters

#### **Technical Benefits**

- Fast incident detection
- Root cause analysis
- Performance optimization
- CI/CD pipeline visibility

#### **Business Benefits**

- Higher service availability
- Better customer satisfaction
- Reduced downtime costs
- Improved stakeholder confidence

**Example:** Early alerts on memory leaks prevent outages and customer churn.

Power BI Environment sensors

 $\equiv$ 

## **Environment sensors** Temperature (Celsius) 5:59:40 PM 5:59:50 PM 6:00:00 PM Humidity (%) OVER TIME 5:59:40 PM 5:59:50 PM 6:00:00 PM Radiation Level (Sv) OVER TIME 5:59:40 PM 5:59:50 PM 6:00:00 PM Brightness (Lumens/m^2) OVER TIME 5:59:40 PM 5:59:50 PM 6:00:00 PM

# How It Works: Monitoring Setup

- 1 Instrumentation
  Install agents or use tools like Prometheus, AWS CloudWatch.
- 2 Metrics Collection

  Gather data from servers, apps, and services continuously.
- Dashboards & Alerts

  Visualize data using Grafana, Datadog, New Relic, with alerts.
- Incident Response

  Integrate alerts with Slack, PagerDuty for quick actions.



## **Business Impact: E-commerce Case**

#### Challenge

Outages during Black Friday from traffic spikes caused revenue loss.

### Before Monitoring

Delayed reactions to issues, leading to firefighting and costly downtimes.

### After Monitoring

- Real-time latency and load alerts
- Auto-scaling triggered by traffic
- 99.98% uptime during key sales
- \$250K revenue increase

Shifted from reactive to proactive performance management.

# **ROI** of Monitoring

## Tangible Returns

- Fewer outages, less revenue loss
- Faster incident responses
- Smarter business decisions with metrics

"Monitoring isn't a cost — it's an investment in stability and growth."

### Intangible Gains

- Team peace of mind
- Stronger brand reliability
- Higher customer trust

13,932

Disk Used Percent

47.05

46.93

39.43M

53.923

4.65

Memory Used Percent

#### **Cluster Health Metrics**

No data available.
Try adjusting the dashboard time range

CPUUtilization

Disk Read/Write Ops



General Troubleshooting Resources

#### Head Node Logs

#### ParallelCluster's logs

#	:@timestamp	: @message
<b>)</b> 1	2023-04-06T21:23:26.186Z	2023-04-06 21:23:26,186 - [slurm_plugin.clustermgtd:_terminate_orphaned_instances] - INFO - Checking for
▶ 2	2023-04-06T21:23:26.185Z	2023-04-06 21:23:26,185 - [slurm_plugin.clustermgtd:_maintain_nodes] - INFO - Following nodes are current
▶ 3	2023-04-06T21:23:26.184Z	2023-04-06 21:23:26,184 - [slurm_plugin.clustermgtd:_maintain_nodes] - INFO - Performing node maintenance
<b>&gt;</b> 4	2023-04-06T21:23:26.183Z	2023-04-06 21:23:26,183 - [slurm_plugin.clustermgtd:_perform_health_check_actions] - INFO - Performing in
▶ 5	2023-04-06T21:23:26.087Z	2023-04-06 21:23:26,087 - [slurm_plugin.clustermgtd:_get_ec2_instances] - INFO - Retrieving list of EC2 in
▶ 6	2023-04-06T21:23:20.998Z	2023-04-06 21:23:20,998 - [slurm_plugin.clustermgtd:manage_cluster] - INFO - Retrieving nodes info from t
▶ 7	2023-04-06T21:23:20.997Z	2023-04-06 21:23:20,997 - [slurm_plugin.clustermgtd:manage_cluster] - INFO - Current compute fleet status
▶ 8	2023-04-06T21:23:20.709Z	2023-04-06 21:23:20,709 - [slurm_plugin.clustermgtd:manage_cluster] - INFO - Managing cluster
▶ 9	2023-04-06T21:23:20.707Z	2023-04-06 21:23:20,707 - [slurm_plugin.clustermgtd:_get_config] - INFO - Reading /etc/parallelcluster/sl

#### udShell Feedback Langu

# **Key Takeaways**

Technical Stability

Monitoring ensures reliable system health and performance.

**Business Continuity** 

Proactive monitoring minimizes downtime and drives growth.

Aligned Goals

IT visibility supports business objectives and stakeholder trust.

Closing Thought: DevOps without monitoring is like driving with your eyes closed.