# RAVI CHANDRAN GANESH

## Observability & Monitoring Specialist

Website | LinkedIn | GitHub

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## **PROFESSIONAL SUMMARY**

- **Observability Engineer** with hands-on experience designing, documenting and implementing **monitoring architectures** for IT infrastructure and applications.
- Participated in **ELK architecture design** discussions—defining **logging pipelines**, **scaling strategies**, and **high-availability** patterns for **Elasticsearch clusters**.
- Provided technical leadership on observability and monitoring tool selection, offering end-to-end ELK
   Stack guidance (indexing, RBAC security, and dashboard strategy) to cross-functional teams.
- Led **client workshops** and team meetings to gather requirements, drive progress updates and resolve challenges.
- Automated workflows using Python scripting and Al-assisted documentation tools.
- Deployed and managed multi-node ELK Docker clusters with Kafka ingestion, Elasticsearch querying and Kibana visualizations.
- Skilled in using **Elastic Beats** (**Filebeat**, **Metricbeat**, **Packetbeat**) for efficient data collection and ingestion pipelines.
- Deep expertise with IBM Tivoli Monitoring, APM, Netcool probe rules and centralized log management.
- Leveraged Docker containerization and introductory Kubernetes orchestration for scalable observability deployments.
- Strong **troubleshooting** ability and proven track record integrating diverse tools and applications into cohesive **observability solutions**.

#### **WORK EXPERIENCE**

#### Sr. Principal Engineer

DarkBlue DevOps | H3O Labs | Hyderabad, India *March 2024 – May 2024* 

#### Senior Advisor, IT Architect

Wissen Infotech | Dell IT | Hyderabad, India June 2023 – March 2024

### Sr. Software Engineer

Information Dynamics | Saudi Payments, Dynatrace (POC) | Riyadh, Saudi Arabia April 2021 – January 2023

#### • Sr. Software Engineer

Jihat Al-Alamiah | Saudi Customs, Saudi Payments | Riyadh, Saudi Arabia October 2019 – March 2021

#### Sr. Software Engineer

Tech Mahindra | Volvo Cars | Göteborg, Sweden and Pune, India January 2016 – June 2019

#### Netcool Developer

MasterCom Technologies | Etisalat | Pune, India November 2014 – December 2015

#### Software Engineer

Persistent Systems | IBM SmartCloud Enterprise | Pune, India March 2013 – October 2014

#### System Engineer

i3 Software | 1800flowers.com, APDRP, Erricsson, Nokia Siemens Networks | Hyderabad, India May 2010 – February 2013

## **EDUCATION**

- Master of Computer Application (2007-2010) from Presidency School of Management & Computer Sciences, Hyderabad (affiliated to Osmania University) with an aggregate of 72%
- **Bachelor of Science** (2002-2005) in Mathematics, Statistics & Computer Science from Pragati Maha Vidhyalaya, Hyderabad (affiliated to Osmania University) with an aggregate of 58%

## **TECHNICAL SKILLS**

- Monitoring & Observability
  - Prometheus
  - The Elastic Stack
  - IBM Netcool Suite & Monitoring
  - Dynatrace
- Containerization & Orchestration
  - Docker
  - Kubernetes
- Infrastructure as Code (IaC)
  - Terraform
- Data Collection & Agents
  - Elastic Beats
  - IBM Agents and Probes
  - Prometheus Exporters
- Centralized Logging & Processing
  - Logstash
  - Splunk (Basic)
- Dashboards & Visualization

- IBM Dash
- Grafana
- Kibana
- Scripting
  - Shell
  - Python
- Cloud Platform
  - AWS
  - Oracle
- Operating Systems
  - Windows
  - Unix / Linux
- Integration Points
  - IBM MO
  - Datapower
  - ServiceNow
  - Dell Storage
  - Kafka
  - Network Devices using SNMP

## **PERSONAL PROJECTS**

#### Static Portfolio Website

I designed and deployed a fully custom HTML/CSS portfolio site on an **AWS EC2** instance. Using **Terraform** for IaC, I leveraged the **EC2 'user\_data' script** to clone the website code directly from my **GitHub repository** at **launch**, **streamlining provision-to-deploy** in a single step.

**GitHub:** https://github.com/TechSavvyRC/aws-static-site-deploy; https://github.com/TechSavvyRC/techsavvyrc-webapp

## **Real-Time Banking Transaction Monitor**

I built a **high-throughput data pipeline** in **Docker** using **Kafka** for **ingestion** and the **ELK Stack** for **real-time analysis** and visualization of banking transactions. I then extended this to a **Kubernetes** (**Minikube**) environment to demonstrate **scalable container orchestration** and **service resilience**.

**GitHub:** https://github.com/TechSavvyRC/elk\_docker

## **OpenTelemetry Observability Demo (In progress)**

I'm developing an **end-to-end observability proof-of-concept** integrating **OpenTelemetry** with **Prometheus** and **Elastic Observability**. This showcases **distributed tracing** and **metrics collection**, **central aggregation**, and **dashboarding** to give full visibility into **microservice** performance.

## **TECHNICAL EXPERIENCE**

## **ELK Stack | 8 years**

- **Deployment and Management:** Deployed and managed multi-node ELK (Elasticsearch, Logstash, Kibana) clusters using Docker for centralized logging and real-time data analysis.
- **Data Ingestion**: Configured Logstash for seamless data ingestion from various sources, including Kafka, into Elasticsearch for real-time search and analytics.
- **Dashboard Creation**: Built interactive dashboards in **Kibana** to visualize and monitor system performance, enhancing operational insights and issue detection.
- **Elasticsearch Optimization**: Optimized **Elasticsearch** indices for efficient storage and retrieval, improving data query performance and minimizing storage overhead.
- **Automation**: Developed Python scripts to automate data ingestion, replication of Elasticsearch indices, and the generation of data templates for streamlined operations.
- **Centralized Logging:** Deployed centralized logging solutions using the ELK Stack for monitoring system and application logs, improving log management and analysis.
- **Docker Implementation**: Set up and managed ELK clusters using **Docker containers**, ensuring scalability and efficient resource utilization.
- Training and Documentation: Provided training on the use of ELK Stack tools and created detailed technical documentation covering deployment and configuration processes for stakeholders and team members.
- Monitoring with ELK: Configured Kibana dashboards for real-time data visualization and monitoring, enabling timely detection of system anomalies and performance issues.
- Alerting and Visualization: Integrated Kibana with other tools for alerting and data visualization to improve real-time monitoring capabilities.
- Logging Collaboration & Best Practices: Collaborated with development and operations teams to
  enhance logging capabilities, influencing engineering groups to adopt standardized ELK best
  practices.
- Stack Integration & Configuration: Implemented and configured Filebeat, Metricbeat, Logstash and Kibana, ensuring seamless end-to-end integration for centralized log collection.
- Cluster Administration & Optimization: Designed and managed on-premises Elasticsearch clusters—tuning configuration parameters, optimizing indexing/search performance, and administering RBAC security governance.
- **Data Ingestion & Enrichment:** Orchestrated pipelines from diverse sources (REST APIs with JSON/YAML/XML), validating data flows in **Postman** to ensure reliable ingestion and enrichment.
- Dashboard Modeling & Deployment: Developed and deployed advanced Kibana dashboards and visualizations, delivering actionable insights for real-time system health and performance monitoring.

#### Grafana | 8 years

- **Dashboard Creation**: Developed custom **Grafana** dashboards to visualize system performance, application metrics, and infrastructure health, enabling real-time monitoring and decision-making.
- Integration with Monitoring Tools: Integrated Grafana with monitoring tools such as Prometheus, Elasticsearch, IBM APM, and Dynatrace, providing comprehensive and interactive visual representations of key performance indicators (KPIs).
- Data Visualization: Created visually intuitive Grafana dashboards for monitoring critical metrics, such as application response times, system health, and resource usage, improving operational visibility.
- **Alert Configuration**: Set up **alerting rules** within Grafana to notify teams of anomalies and performance issues based on predefined thresholds, improving proactive incident management.

- Monitoring with ELK and Prometheus: Configured Grafana to visualize data from ELK Stack and Prometheus, providing real-time insights into system performance and resource utilization.
- **Email Notification Automation**: Automated the generation and distribution of performance graphs and alerts via email using **Grafana**, enabling faster response times to potential issues.
- Training and Support: Provided training to clients and teams on how to effectively use Grafana dashboards for monitoring and analyzing system performance, ensuring optimal utilization of the tool.
- **Dashboard Management**: Imported and exported **Grafana** dashboards across environments, streamlining the setup and deployment of monitoring solutions.
- Multi-source Monitoring: Configured Grafana to monitor and visualize data from multiple data sources, including Elasticsearch and IBM APM, ensuring comprehensive observability across diverse systems.

## Dynatrace | 1 year

- **Deployment and Configuration**: Led the complete implementation of **Dynatrace APM** (Application Performance Monitoring), deploying **OneAgent** and **ActiveGate** for real-time system monitoring and data collection.
- **Synthetic Monitoring**: Configured **synthetic HTTP monitors** to track URL availability and response times, improving system reliability and proactive issue detection.
- Advanced Dashboard Creation: Developed and customized real-time monitoring dashboards in Dynatrace, providing visibility into application performance, infrastructure monitoring, and digital experience.
- Custom Plugin Integration: Integrated extended plugins for tools like IBM Datapower and IBM MQ, enhancing the scope of monitoring and improving performance analysis.
- **Performance Optimization**: Leveraged **Dynatrace** for monitoring application performance, infrastructure health, and digital experience management, ensuring optimal system performance.
- Proof of Concept (PoC) Execution: Led a Dynatrace PoC (Proof of Concept) to evaluate its
  effectiveness in enhancing system observability and performance monitoring for critical
  infrastructure.

#### Python and Shell Scripting | 10+ years

- Developed **Python** scripts for **data ingestion**, **transformation** and enrichment from sources (Kafka, APIs) into **Elasticsearch**, boosting operational efficiency.
- Automated end-to-end **workflows** (post-replication, index management, URL generation) with Python, minimizing manual effort and errors.
- Created Python integrations between Elasticsearch and ServiceNow for automated incident management and faster response.
- Authored **Shell** and Python scripts for **monitoring** infrastructure and applications, enabling real-time performance tracking.
- Engineered custom Python API clients to pull data into monitoring systems (Elasticsearch, IBM APM) and Shell scripts to process logs via **Logstash**.
- Automated infrastructure provisioning on AWS EC2 and managed resources across Linux/Unix using Shell scripts.
- Extended **Netcool Probes** with Shell scripts for advanced event handling, reducing noise and improving correlation.
- Built Python routines for **backup** and **replication** of Elasticsearch indices, ensuring data redundancy and availability.
- Authored clear **Markdown**-based documentation and delivered training on scripting best practices and automation workflows.

## **IBM Netcool Suite & Monitoring | 10+ years**

## Netcool Omnibus Deployment:

- Designed, deployed and maintained high-availability IBM Tivoli Netcool Omnibus and the Tivoli Monitoring/APM stack for centralized event and performance management.
- Architected multi-tier dashboards in IBM Dash (Jazz), consolidating data from APM, Netcool and external tools for real-time KPI visualization.

### Custom Probe, Policy & Workflow Development

- Built and extended Netcool Probe rules (SNMP, CORBA, SYSLOG, EIF, PING) and Tivoli agents to ingest and correlate events from network devices, middleware and applications.
- Developed advanced Impact policies for event enrichment, deduplication and automated incident response—triggering email notifications and ServiceNow/Remedy ticket creation.
- Wrote custom APM monitoring rules and dashboards to surface performance bottlenecks and SLA metrics.

## Integration & Automation

- Integrated Netcool/APM/Dash with Grafana and third-party systems (ServiceNow, Remedy, DataPower) to ensure seamless flow of events and alerts.
- Automated end-to-end incident workflows using Netcool Impact policies, reducing mean time to resolution.

#### Training, Documentation & Support

- Authored comprehensive runbooks, configuration guides and training curricula for Netcool Omnibus, APM agents and IBM Dash dashboards.
- Led workshops and hands-on sessions for clients and internal teams—enabling self-sufficiency in event management, performance tuning and dashboard customization.

### **Documentation and Training | 14+ years**

- Created detailed technical documentation (in Markdown) for deployment, configuration and management of observability tools (ELK Stack, IBM APM, Dynatrace, Netcool Suite), ensuring clear, standardized operational guides.
- Authored user manuals, implementation guides and workflow documentation leveraging
   Al-assisted tools to capture best practices and streamline knowledge sharing.
- Conducted training sessions and hands-on workshops for clients and cross-functional teams on monitoring solutions (Grafana, Kibana, Dynatrace, Netcool, IBM APM), including incident management and automation using Python/Shell scripts.
- Delivered stakeholder presentations, progress reports and performance reviews to showcase architecture benefits, drive adoption and align on system enhancements.
- Provided comprehensive post-implementation support, documenting custom scripts and processes to enable ongoing maintenance, scalability and continuous improvement.

## **TRAINING & SELF-STUDY**

#### **AWS Cloud**

- Managed IAM policies, users, groups and roles for secure access control
- Configured AWS CLI on Windows/Linux for streamlined management
- Created and managed AMIs, Elastic IPs, EBS volumes and understood S3 object storage

## Terraform (IaC)

• Applied Infrastructure as Code principles with Terraform, handling state files, configuration files and providers

Leveraged modules to simplify complex resource definitions

### **Prometheus**

- · Installed and secured Prometheus, managed scrape configurations and dynamic target discovery
- Deployed exporters to gather metrics from custom services
- Wrote PromQL queries, configured AlertManager rules and built Grafana dashboards

#### **ELK Stack with Docker**

- Orchestrated a multi-node **ELK** cluster using **Docker Compose** (coordination, master, data nodes)
- Integrated Logstash with Kafka for real-time ingestion into Elasticsearch
- Designed interactive **Kibana** dashboards for search and visualization

#### **Kubernetes**

- Explored Kubernetes architecture (Pods, Deployments, Services, ConfigMaps, Secrets, Ingress) via
   Minikube on RHEL
- Managed resources with kubectl, implemented namespace-based deployments and secured traffic using Ingress controllers
- Deployed Kafka, ELK, Prometheus and Grafana in-cluster for logging and monitoring

## **REFERENCE**

#### DarkBlue DevOps

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