Faculty Build-a-Thon (in-person)

Resource persons:

1. Mr.K.Mosha
2. Mr.Mohammad Shanawaz Anwar
3. Mr.Ch.Mahidhar Reddy
4. Mr.Ch.sai Siddharth Kumar
5. Mr.P.manoj Kumar
6. Mr.B.mahesh saga

Date of the Programme : 23-8-2023 to 27-8-2023 (Wednesday to Sunday)
Timings : 9:30Am to 5:00PM
Venue :R& D Building _R607,R609 and R610

Three Faculty development program was organized from 23rd to 27th Aug, 2023 at KL University. The Faculty Development program was based on three different Technology tracks

  i)   Cloud App Development with Red Hat Open Shift,
  ii)   Data Analytics with Cognos,
  iii)   Cyber Security & SIEM (powered by QRadar).

These Three Faculty Development programs sponsored by the IBM. FDP program will help faculties in understanding in-demand job roles in the market, gaining hands-on training on the technology, Project-Based Learning and Acquire skill badges, etc.

The FDPs was started on 23rd Aug, 2023 with Inauguration session followed by speech of IBM Chief guest Dr Mani Madhukar.The dignitaries were welcomed by the Prof. Hari Kiran Vege, Dean Academics (Addl), Principal Dr I. Govardhani, School of Academic College, Dr. A. Senthil, HoD-CSE and Dr Nilu Singh, FDPs Co-ordinator, Dept of CSE. The FDPs sessions was very beneficial and provided an insight on the various challenges associated which a teacher educator has to overcome in different technology domains.

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KL CSE   <FOCUS/>

INAUGURATION SESSION
OF
ONE WEEK FACULTY DEVELOPMENT PROGRAMS
ON

COGNOS   IBM Cloud   IBM QRadar

Technology Track 1: Data Analytics with Cognos,
Technology Track 2: Cloud Application Developer
with RedHat OpenShift,
Technology Track 3: Cyber Security with SIEM
(Powered by QRadar)

Sponsored by: IBM
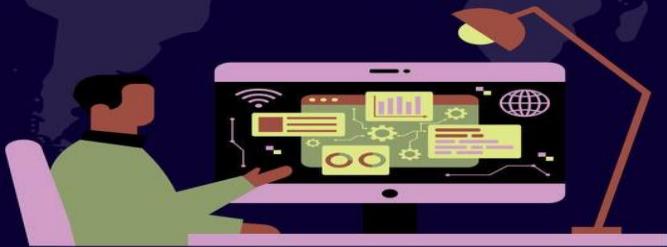
23.08.2023 | 10:00 AM
Venue: Peacock Hall, KL University, Vijayawada

The proposed Three FDPs are is organized in FN and AN session. For Data analytics with Cognos the Guest speakers was Mr. Kammarikatha Mosha and Mr. Mohammad Shanawaz Anwar, both teach about the Data Analytics with cognos. Cloud Application Development sessions were conducted by Mr. Ch. Mahidhar Reddy and Mr. Chitrala Sai Siddrath Kumar. And Cyber security& SIEM sessions was explained by Mr. Manoj Kumar Polaki and Mr. Mahesh Sagar Budhuru.

In total 217 participants registered from diferent Institute and Universities. FDPs session was well planned and excuted more on hands on in the said technologies. Feedback of each session were collected and tests/quizzes were conducted at the end of each session. The registered participants were engaged in more practical oriented skills. The Certificates of the program have been successfully distributed to all registered participants who succefully completed and submitted the assements and project. Valedictory session was address by Dr. A Senthil, Dr. AV Praveen Krishna, Prof. G. Suryakanth and Dr. Nilu Singh followed by honor to the FDPs Guest speakers by prsenting them mementos and shawl.

Cloud App Development with Red Hat OpenShift

Cloud application development has become a cornerstone of modern software engineering, enabling organizations to build, deploy, and scale applications with agility and efficiency. Red Hat OpenShift is a popular container platform that provides tools and services for

developing and managing cloud-native applications. This guide provides an overview of cloud app development with Red Hat OpenShift.

1. Understanding Red Hat OpenShift:

Red Hat OpenShift is a Kubernetes-based container platform that facilitates container orchestration, automates application scaling, and simplifies deployment management. It provides a set of developer-friendly tools and services to streamline cloud application development.

2. Key Features of Red Hat OpenShift:

Container Orchestration: Red Hat OpenShift leverages Kubernetes to manage containerized applications, making it easy to deploy, scale, and manage containers.

Developer-Friendly Tools: OpenShift offers a developer-friendly experience with integrated development tools, pipelines, and templates.

Security and Compliance: The platform includes built-in security features, including role-based access control (RBAC), image scanning, and encryption, to ensure the safety of applications and data.

Scalability: OpenShift automatically scales applications based on demand, ensuring optimal performance without manual intervention.

Multi-Cloud Compatibility: It supports deployment on various cloud providers and on-premises environments, offering flexibility and portability.

3. Cloud App Development with Red Hat OpenShift:

Containerization: Developers package applications and their dependencies into containers using technologies like Docker. Containers ensure consistency across different environments.

Container Orchestration: OpenShift uses Kubernetes to orchestrate containers. Developers define application resources and dependencies in YAML files, making it easy to manage complex applications.

Continuous Integration/Continuous Deployment (CI/CD): OpenShift integrates with CI/CD tools like Jenkins, enabling automated testing, building, and deployment of applications.

Developer Tools: Red Hat CodeReady Workspaces provides an integrated development environment (IDE) for developing, testing, and debugging applications within OpenShift.

Service Mesh: Istio, a service mesh tool, can be integrated with OpenShift to manage communication between services, enhancing application resilience and security.

Monitoring and Logging: OpenShift includes monitoring and logging capabilities to track application performance and troubleshoot issues.

Database and Storage: Developers can provision databases and storage resources directly from OpenShift to support application data requirements.
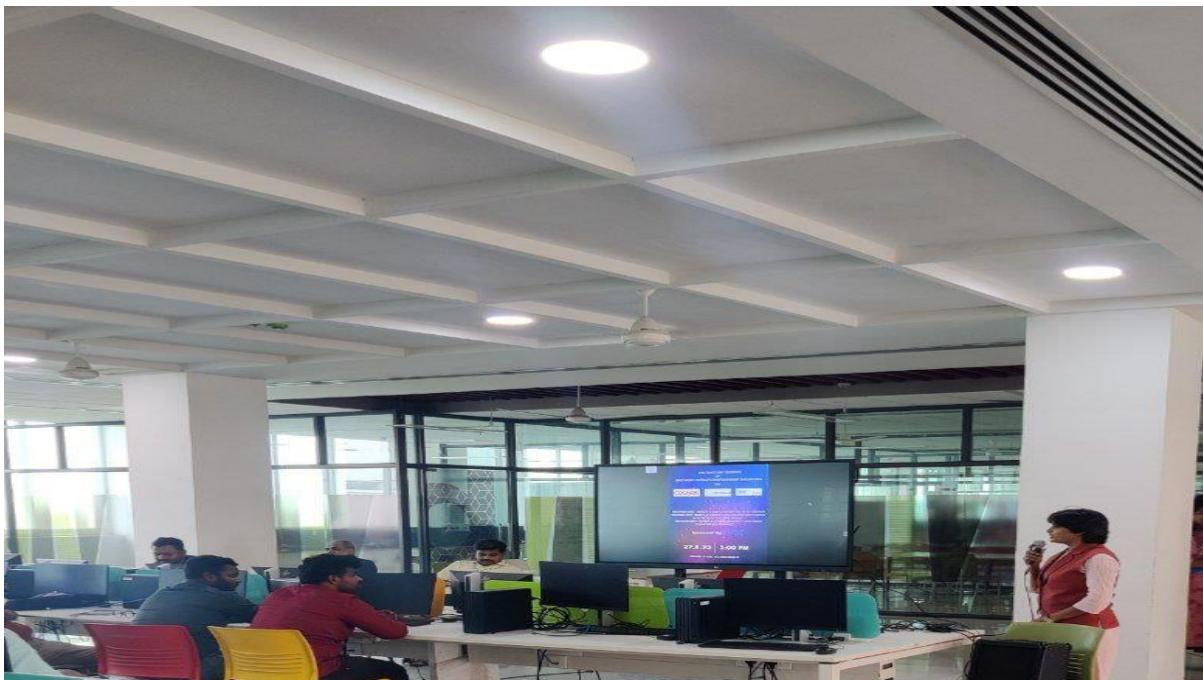
ii). Data Analytics with Cognos,

IBM Cognos is a powerful suite of business intelligence and data analytics tools designed to help organizations make data-driven decisions. It provides a range of features for data visualization, reporting, and data exploration. This guide provides an overview of data analytics with Cognos.

1. Understanding IBM Cognos:IBM Cognos is a business intelligence platform that allows organizations to access, analyze, and visualize data from various sources. It offers a comprehensive set of tools and capabilities for data analytics, including:

Reporting: Create interactive, customizable reports that present data in a format suitable for decision-making.

Dashboards: Build interactive dashboards with real-time data visualizations, such as charts, graphs, and maps.

Data Exploration: Explore and discover insights within your data through ad-hoc queries and data exploration tools.

Data Integration: Connect to and integrate data from various sources, including databases, spreadsheets, and cloud services.

Predictive Analytics: Apply predictive modeling and machine learning algorithms to forecast trends and make data-driven predictions.

2. Key Features of IBM Cognos:

User-Friendly Interface: Cognos offers an intuitive, drag-and-drop interface that enables business users to create reports and dashboards without extensive technical knowledge.

Scalability: It can handle large volumes of data and is scalable to accommodate the needs of both small and large enterprises.

Security: Cognos provides robust security features to control access to data and reports, ensuring data confidentiality.

Integration: It seamlessly integrates with other IBM products, databases, and third-party applications.

Mobile Accessibility: Users can access reports and dashboards on mobile devices, allowing for on-the-go data analysis.

3. Data Analytics Process with Cognos:

Data Collection: Cognos connects to various data sources, including databases, data warehouses, and flat files, to gather data.

Data Transformation: Data is cleaned, transformed, and prepared for analysis using data modeling and ETL (Extract, Transform, Load) processes.

Analysis and Visualization: Users can create reports, dashboards, and visualizations to analyze data and gain insights.

Sharing and Collaboration: Reports and dashboards can be shared with colleagues and stakeholders for collaboration and decision-making.

Monitoring and Optimization: Performance monitoring and optimization ensure that the analytics environment operates efficiently.

4. Benefits of Using Cognos for Data Analytics:

Data-Driven Decisions: Cognos empowers organizations to make informed decisions based on data-driven insights.

Time Savings: It streamlines the data preparation and reporting process, saving time and reducing manual effort.

Scalability: Cognos can scale to accommodate the growing data needs of an organization.

Visualization: Interactive visualizations help users understand data quickly and intuitively.

Mobile Accessibility: Access to data and reports on mobile devices facilitates flexibility and accessibility.

5. Challenges and Considerations:

Learning Curve: Users may require training to make the most of Cognos' capabilities.

Data Quality: Ensuring data quality and accuracy is crucial for meaningful analytics results.

Cost: Licensing and infrastructure costs can be significant, especially for large deployments.

IBM Cognos is a versatile platform for data analytics, reporting, and visualization that enables organizations to harness the power of their data for better decision-making. When implemented effectively and used by skilled analysts, Cognos can be a valuable asset for any organization seeking to leverage its data for competitive advantage.
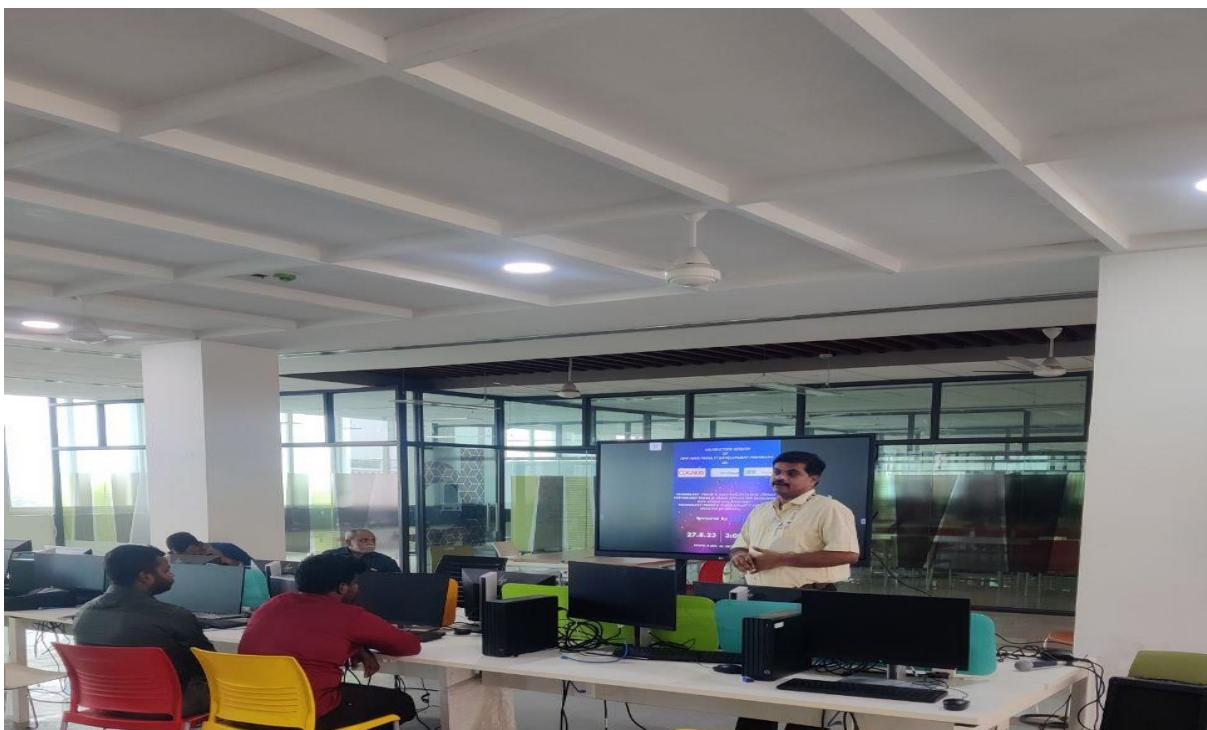
Cyber Security & SIEM (Security Information and Event Management) Powered by QRadar:

Cybersecurity is a critical concern for organizations worldwide, as cyber threats continue to evolve in complexity and scale. Security Information and Event Management (SIEM) solutions, such as IBM QRadar, play a crucial role in helping organizations protect their digital assets, detect security incidents, and respond effectively. This guide provides an overview of cybersecurity and SIEM, with a focus on QRadar.

1. Understanding Cybersecurity:Cybersecurity is the practice of protecting computer systems, networks, and data from theft, damage, or unauthorized access. It encompasses a wide range of technologies, processes, and practices designed to safeguard digital assets from cyber threats, including:

Malware: Software designed to compromise computer systems and steal data.

Phishing: Deceptive emails or messages used to trick individuals into revealing sensitive information.

Ransomware: Malicious software that encrypts data, demanding a ransom for decryption.

Distributed Denial of Service (DDoS): Attacks that overwhelm a target system with traffic, causing it to become unavailable.

Insider Threats: Malicious actions or negligence by individuals within an organization.

2. The Role of SIEM in Cybersecurity:

Security Information and Event Management (SIEM) solutions like IBM QRadar are designed to help organizations proactively monitor, detect, and respond to security events and incidents. Key functions of SIEM include:

Log Collection: Collecting and aggregating data from various sources, such as network devices, servers, and applications.

Event Correlation: Analyzing data to identify patterns and potential security incidents.

Alerting: Generating alerts and notifications when suspicious or anomalous activity is detected.

Incident Response: Enabling organizations to respond swiftly to security incidents, with automated or manual actions.

Compliance Reporting: Assisting organizations in meeting regulatory compliance requirements by generating reports.

3. IBM QRadar:

IBM QRadar is a leading SIEM solution that offers robust capabilities for cybersecurity. Key features of QRadar include:

Real-Time Monitoring: QRadar provides real-time visibility into an organization's security posture, allowing for immediate threat detection.

Advanced Analytics: The platform uses machine learning and behavioral analytics to detect and prioritize threats.

Threat Intelligence: QRadar integrates threat intelligence feeds to stay updated on the latest threats and attack vectors.

Log Management: It collects and stores log data from a wide range of sources, enabling forensic analysis.

Incident Response: QRadar supports automated incident response actions and workflows to mitigate threats.

4. Benefits of QRadar in Cybersecurity:

Threat Detection: QRadar's advanced analytics and correlation capabilities enable organizations to detect threats quickly.

Reduced Response Time: By automating incident response actions, QRadar helps reduce the time it takes to mitigate security incidents.

Compliance: The platform assists organizations in meeting compliance requirements by providing detailed reporting.

Centralized Visibility: QRadar offers a centralized view of an organization's security posture, making it easier to manage and respond to threats.

5. Challenges and Considerations:

Complexity: SIEM solutions can be complex to implement and manage, requiring skilled personnel.

Alert Fatigue: SIEMs generate numerous alerts, leading to alert fatigue if not managed effectively.

Integration: Ensuring seamless integration with an organization's existing security infrastructure is essential.

6. Conclusion:

Cybersecurity is a critical concern for organizations, and SIEM solutions like IBM QRadar are essential tools in defending against evolving cyber threats. By implementing robust cybersecurity practices and leveraging SIEM technology, organizations can significantly enhance their ability to protect digital assets, detect threats, and respond effectively to security incidents.

Dr.I.Govardhani

Principal Academic Staff College