



ANNA UNIVERSITY REGIONAL CAMPUS COIMBATORE-641046

SERVERLESS IoT DATA PROCESSING

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Project overview

- **The project's primary objectives are to design and implement a highly efficient system for processing IoT data in the cloud using serverless computing.**
- **Emphasize the importance of real-time data processing and analytics in enhancing decision-making in IoT applications.**

Problem statement

Challenges:

- 1.Data Volume:** The sheer volume of IoT data generated daily is staggering, overwhelming traditional processing systems.
- 2.Velocity:** IoT data arrives in real-time, demanding rapid processing and immediate insights to support timely decision-making.
- 3.Variety:** IoT data is diverse, encompassing structured and unstructured data from various sources, including sensors, devices, and applications.

Proposed solution

Architectural Overview:

- Present a high-level view of the proposed system architecture, emphasizing modularity and scalability.
- Outline the key components:
 - 1) data ingestion,
 - 2) real-time processing,
 - 3) storage, and
 - 4) analytics.

Technologies:

- Specify the serverless technologies and cloud services to be leveraged in the implementation,
e.g., AWS Lambda, Amazon Kinesis, Amazon S3, etc.

IMPLEMENTATION PLAN

1.Planning and Architecture Design

- Define project goals and objectives.
- Identify stakeholders and their roles.

2: Development and Testing

- Develop serverless functions for data processing logic.
- Set up data ingestion pipelines.

3: Deployment and Monitoring

- Deploy serverless functions and data processing components.
- Implement real-time monitoring, alerting, and performance optimization.

4: Testing and Optimization

- Perform load and stress testing to ensure scalability.
- Optimize serverless functions and workflows for efficiency.
- Prepare for user acceptance testing (UAT).

BENEFITS AND IMPACT

- **Potential Benefits:**

- Scalability to handle varying IoT data volumes.
- Cost savings through serverless computing.
- Real-time insights for better decision-making.

- **Impact :**

- Alignment with business goals and long-term strategies.

CONCLUSION

In summary, our implementation plan for "Serverless IoT Data Processing in Cloud Computing" offers a structured and efficient approach to address the complexities of IoT data processing. With a clear timeline and a focus on quality assurance, we are well-prepared to deliver a scalable and cost-effective solution that empowers real-time insights from IoT data streams.

THANK YOU