A Tutorial on Network and Data Analysis Framework for Industrial Internet of Things

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***Abstract*—The paper presents a hands-on tutorial to develop a robust near real-time high volume sensor data acquisition and analysis framework. The hardware used in this tutorial are based on open-source platforms like Arduino and Raspberry-Pi Single Board Computer. The framework has been developed at RBCCPS, IISc Bangalore and uses open-source software tools to accomplish the necessary functionalities. The framework consists of 1) a model network architecture, 2) micro-services used to provide the minimum quality of service and services like data storage, aggregation, and stream processing, 3) hardware systems on which the software components run. The framework is currently being used at RBCCPS to acquire data remotely from an Surface Mount Technology (SMT) Printed Circuit Board (PCB) assembly line which is situated about 150Km from our research facility. The volume of data collected daily varies from 5GB to 15GB.**

***Index Terms*—Internet of Things, Industry 4.0, Wireless Sensor Networks, Micro-services, Middleware, Signal Processing, Data Analysis**

I. Introduction

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August 26, 2015

A. Subsection Heading Here

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II. Conclusion

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Appendix A
Proof of the First Zonklar Equation

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Appendix B

Appendix two text goes here.

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References

[1] H. Kopka and P. W. Daly, *A Guide to LaTeX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.

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Michael Shell Biography text here.

John Doe Biography text here.

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