

**TOWARDS DATA CENTER OPERATIONAL RESILIENCY BY
EVALUATING EXISTING OPERATION AND MAINTENANCE PROGRAM
BASED ON EPI-DCOS**

By
Saiful Aziz
21951022

MASTER'S DEGREE
in
MASTER OF INFORMATION TECHNOLOGY
FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

SWISS GERMAN UNIVERSITY



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The Prominence Tower
Jalan Jalur Sutera Barat No. 15, Alam Sutera
Tangerang, Banten 15143 - Indonesia

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

Saiful Aziz

Student

Date

Approved by:

Dr. Ir. Moh. A. Amin Soetomo, M.Sc

Thesis Advisor

Date

SWISS GERMAN UNIVERSITY

Dr. Charles Lim, BSc., MSc.

Thesis Co-Advisor

Date

Maulahikmah Galium, S.Kom, M.Sc, PhD

Dean of Faculty of Engineering and
Information Technology

Date

ABSTRACT

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Dr. Ir. Moh. A. Amin Soetomo, M.Sc , Advisor

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The data center storage capacity from 2015 to 2020 are increased 10 times in the last five years. To meet these rapid growth and customer demand, billions of dollars have been invested on highly redundant data center facility and infrastructure. Up to now, organizations who providing data center services have focused on developing highly resilient facilities with varying levels of redundancy in compliance with standards such as ANSI/TIA-942, ANSI/BICSI-002, UTI-TST and others. Many organizations, however, have realized that without proper operation processes and maintenance plans, availability levels would be severely impacted, eroding the data center facility's investment. Therefore, regardless of how well the data center facility and infrastructure are planned and built, it can't withstand the interruption of an insufficient operation and maintenance program. The aim of this thesis is to provide a guideline on how to improve data center operation resiliency by evaluating and analyzing the existing data center operation and maintenance program, perform self-assessment, gap analysis and propose the future recommendation.

Keywords: Data Center Operation Self-Assessment, Analysis and Evaluation of Data Center Operation, Data Center Operation Standardization



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DEDICATION

I would like to dedicate this research project to my God, my family, my beloved country Indonesia. Hopefully this thesis research can contribute to the advancement of science and technology in Indonesia, especially related with data center research and development.



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I would like to thank all of my direct supervisor, my team at work and my friends especially Batch 25 MIT SGU for their companionship, and to the countless number of people who have helped me throughout this research project, either directly or indirectly.



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