# WEB BASED SYSTEM FOR MICROSOFT ACTIVE DIRECTORY REPORTING AND EVENT CORRELATION USING DATA MINING

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This dissertation was submitted in requirements for the Master of Engineering degree Master of Science in computer science

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December 2008

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#### **Abstract**

Microsoft Active Directory is very popular in large and medium scale organizations as a system for centralized management of users, desktops, servers, printers and mail boxes etc. This provides a centralized console for managing and viewing the objects very easily. The Active Directory data repository could be used to generate many management reports that would be useful for taking future management decisions and analyzing the health of the organization's security. Many events are generated as a result of user activities and status changes of the objects. These events are reflected on the active directories and event logs. The correlation and outlier analysis of the events is important to filter out thousands of non critical events and be pro-active on important critical events.

This thesis discusses generating management reports, by querying the Active Directory database and providing real time alerts to system administrators on critical events, with the use of data mining techniques such as event correlation and outlier analysis.

The scope of the event analysis is limited to data generated in the Microsoft Active Directory.

Keywords: Microsoft Active Directory, MS AD, Event Correlation, AD Reports, Outlier Analysis, Event Log Clustering.

## **Declaration**

The work included in this report was done by me, and only by me, and the work has not been submitted for any other academic qualification at any institution.

M. S. P. Percra 22<sup>nd</sup> December 2008

I certify that the declaration above by the candidate is true to the best of my knowledge.

# **UOM Verified Signature**

Dr. Amal Shehan Perera 22<sup>nd</sup> December 2008 University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

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## Acknowledgement

First of all, I would like to thank my supervisor Dr. Amal Shehan Perera for being the supervisor for my M.Sc. project. I am also thankful to Dr. Shehan for his patience, friendliness, advice and guidance.

I would like to extend my gratitude to Dr. Gihan Dias for encouraging me to complete my M.Sc. project within the allocated period. Without his encouragement and support I wouldn't have completed the M.Sc. Project.

I would like to thank our project coordinator Dr. Sanath Jayasena too, for the proper guidance and effort taken in encouraging all students to complete the final thesis in time.

Finally I thank Sri Lanka Telecom, my employer for providing me the infrastructure and valuable time allocation for my research and study.

