UNIVERSITI TEKNOLOGI MARA

CRITICAL SUCCESS FACTOR THAT CONTRIBUTES TOWARDS SUCCESSFUL MIGRATION TO GRID COMPUTING

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ABSTRACT

Grid Computing have been developed and deployed many years in the past and still continuous research been made to improve knowledge and its' result. Many are looking at Grid Computing as a potential solution to large network environment. This research focused on three (3) potential critical success factors for an organization towards migrating to Grid Computing; business factors, technical factors and organizational factors. The main adopted research method in this study has been quantitative research and evaluation based on case study at a higher institution education. The conclusion and recommendation also been discussed in the last chapter.

Key word: Grid Computing, critical success factors, migrating, network

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CHAPTER 1

INTRODUCTION

The introduction part describes the research in general; the idea of what the research is all about. It contains the background research, problem statement that gives a clear description of the issue and target of the research or research aim. Furthermore, this chapter also contains the research objective and scope. The significance of the research is also covered in this chapter.

1.1 Research Background

Grid Computing has been able to change the landscape of the network infrastructure especially for large scale organization. The idea of accessing computing data and services on demand come from Len Kleinrock, in 1969 where he argues that "We will probably see the spread of 'computer utilities', which, like the present electric and telephone utilities, will service individual homes and offices across the country." (Foster, 2002). His idea provides a clear vision for an organization on how to maximize the computer usage while minimizing the cost of operation. Commodity hardware, idle computing power, scavenging, Semantic Grid and The global Grid are the potential industries that gain benefit from the use of the grid (McKee, 2005). The Grid is defined as coordination of resource sharing among virtual organizations enabled users to solve problems dynamically (Foster, Kesselman & Tuecke, 2001). The term then was revised as the technology change when, Clement Onime (2008, as cited in Kesselmen & Foster,1998) defined grid computing as " a hardware and software infrastructure that