Chapter 7
Governance and Risk Management in the Cloud with Cloud Controls Matrix V3 and ISO/IEC 38500:2008

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ABSTRACT

Cloud based services are gaining popularity across the globe and there is a growing interest to adopt the cloud for operational efficiency, green computing initiatives and service agility. However, concerns of security and risks in the Cloud are important constraints to reaping the benefits of Cloud Computing. Controlling the threats and vulnerabilities of Cloud based IT Services are prime necessities with proper policies and guidance from the Business Leadership or Board. While Business is concentrating on cost reduction as a primary enabler for adopting Cloud based Services, there is a growing need for exercising effective Governance and Risk Management to mitigate security risks and to exercise control over data in the Cloud. This chapter discusses how Governance and Risk Management domain (GRM) of Cloud Controls Matrix (CSA CCM) V3 Framework from Cloud Security Alliance (CSA) and the ISO/IEC 38500:2008 standard for IT Governance can be utilized together for an effective Governance and Risk Management of Cloud Services.

INTRODUCTION

Cloud Computing is gradually gaining significance as an effective IT Service Delivery methodology with every passing year and there is growing interest among the Business Owners and IT Service Providers to embrace the Cloud. According to Gartner Inc.’s Hype Cycle for Cloud Computing (2013), Cloud Computing is gradually moving towards the Slope of Enlightenment, as shown in Figure 1, with its growing popularity and two key technology concepts related to the Cloud – Virtualization and Software as a Service (SaaS) are approaching the Plateau of Productivity. However, Cloud based IT Services are not free from security threats and vulnerability issues. In

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fact, if an organization overlooks the risks from security threats while moving to the Cloud and if it does not have proper governance mechanism to mitigate the risks then the Return on Investment in Cloud can have a negative impact that can reduce the tangible benefits and might even lead to a catastrophe.

**MAIN FOCUS OF THE CHAPTER**

We start with a brief description of the essential characteristics of Cloud Computing, basic Cloud Computing Service Models and the Cloud Computing Deployment Models to understand the characteristics of these models. Then we discuss about the critical areas of focus for a secured cloud environment and the inherent risks. We also cover the security risks of Virtualization considering the current trends of popularity of this technology as an enabler for Cloud adoption. The GRM domain of CSA CCM V3 framework and ISO/IEC 38500:2008 standard are discussed in brief with focus on Governance and Risk Management in the Cloud.

We also discuss the issues of data ownership in the Cloud, the issues related to data copying, deleting and movement of data across geographical boundaries to understand the role of the Business Owner/Board of Directors in defining an effective Cloud Governance mechanism. A ‘Cloud Governance Matrix’ compliant with GRM domain of CSA CCM V3 framework and ISO/IEC 38500:2008 is provided in this chapter with proper explanation for effective governance and risk management of Cloud based IT services.

*Figure 1. Hype Cycle for Cloud Computing (Gartner, 2013)*
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