Chapter 13

Establishing Governance for Hybrid Cloud and the Internet of Things

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ABSTRACT

This chapter is focused on the current and future state of operating a Hybrid Cloud or Internet of Things (IoT) environment. This includes tools, data, and processes which allow an organization to use these assets to serve business goals. Examining governance in this context shows how it works today and how it should change, using some real-world examples to show the impacts and advantages of these changes. It is a high level overview of those important topics with prescriptive detail left for a future and follow-on analysis. Finally, all of the lessons learned, when combined together form a governance fabric, resulting in a set of techniques and actions which tie together into a supporting framework and set of processes. The important questions include: Why does governance matter in the deployment and operation of Hybrid Cloud and IoT? If governance already exists how must it change? What are the important and salient characteristics of governance which need special focus? Thus, this analysis gives a context of how today’s governance approach should change when moving to a Hybrid Cloud or IoT model.

INTRODUCTION

The focus of this chapter is a review on the unique perspective of governance when deploying, operating or using a Hybrid Cloud or Internet of Things (IoT) technical infrastructure. This type of governance has many unique considerations, but understanding the similarities with traditional ITIL-style governance ensures the most important foundations are not ignored. It is the combination of new and existing techniques which are key to the success of governance in this rapidly changing style of technology deployment. It is these similarities and differences which are key guiding principles in how to establish a governance process when working with different service providers, in different locations, all with different approaches to security, deployment and operations. The need for technical integration, for the

DOI: 10.4018/978-1-5225-0759-8.ch013
sharing of data and resources, is the typical and seemingly obvious entry being the first thing considered for change or update. The more important and vital need is to establish a set of processes where it is well understood how services interact, how they are chosen, how they are secured, how they are deployed, how they are updated and how they are operated.

Throughout this chapter, the various stages of governance as it applies to Hybrid Cloud or the IoT will be covered. It is important to understand how governance may change and is applied when deploying an infrastructure versus when it is being operated or updated. In addition, in this chapter the terms infrastructure or environment are used interchangeably throughout the text. The broader relationship between the key governance stages is shown in Figure 1.

Many organizations and companies, small and large, are using services from various providers, and they are doing it now, either with the blessing of their Information Technology (IT) staff and just as often without IT knowing that it is happening, a common phenomenon called Shadow IT (Raden, 2005). For those companies which are relatively new, say less than 5 years old and around 100-1000 employees, this is likely how they are currently operating. Their base assumption is focused on the idea that IT infrastructure is not something they need to own, but just use as needed, much like power and water. Everything treated as a utility. For existing organizations, who have legacy assets with stricter data and compliance protocols, there is a mix of these existing assets (data, servers, policies, and processes) and the need and desire to use new capabilities, often provided by outside vendors and in fact managed by those vendors. They want to use and experiment in an agile fashion, with new business models while keeping the cost of this experimentation as low as possible. While it always depends on the size and type

*Figure 1. The important stages of hybrid governance*