Chapter 12
Workload Migration to Cloud

Choong Thio
IBM Corporation, USA

Jim Cook
IBM Corporation, USA

ABSTRACT
Workload migration to cloud is a critical area in increasing the adoption of cloud. In order to fully leverage the power of cloud computing, clients need to determine what workloads and applications are good candidates in the cloud and migrate them quickly and in an efficient manner into the cloud. The main goal of this chapter is to explore and study how workloads can be migrated into cloud. In addition, this chapter will also describe the overall end-to-end process for cloud migration and its resulting benefits.

INTRODUCTION
Many applications in the cloud are new green field applications developed specifically for the cloud. What about the existing application landscape? How can these existing application workloads take advantage of the cloud-computing environment? How can these existing applications be migrated seamlessly into the cloud environment? How can these existing applications continue to function and connect back to their Systems of Record in traditional computing environments? These are typical questions facing many clients today about their existing application portfolio. One common approach is to reinstall their application in the cloud environment and customize it to ensure it operates correctly in the cloud environment. This can be a time consuming and painstaking event as numerous changes and customization to the Operating System and application environments may be required for the application to function correctly in the cloud environment.

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BACKGROUND

One particular model for cloud migration provides a modular approach of migrating cloud-enabled workloads to cloud more quickly and cost effectively. It is an end-to-end migration consisting of multiple phases, including data collection, analysis, wave planning, migration planning, project governance, cloud environment setup, actual migration, application testing, etc. These phases can be utilized in a modular fashion, allowing organizations to opt for just the migration component of the end-to-end process. The creation of an overall business case is also critical to clearly show the financial benefits, both hard and soft benefits, of a cloud migration. This model of a cloud migration comes with a very flexible delivery model as these modules can be delivered using the appropriate resources.

MIGRATION MODEL

The migration model transformation and migration process of existing customer workloads into cloud consist of four steps.

Steps 1 and 2 are part of the ‘due diligence’ phase. Step 1 is about “data discovery and assessment.” To be able to define the best migration path, it is important to gather key data on the existing customer server and workload environment. Some of the key data to be collected are as follows:

Number of Servers

It is critical to discover all of the servers that are in scope for the migration up front so that the baseline for the migration can be established clearly. This baseline information is necessary to facilitate discussions with the stakeholders on what servers should be included in the scope of migration and what servers should be excluded from the scope of migration. It will also drive the scope and benefits of the business case for migration to cloud.

Figure 1. The migration model