

Cloud Migration Research: concept

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Abstract - Cloud computing has newly been the focus of consideration in computing both as theoretical research and in business initiatives.

Most IT Company's and newly opened companies see cloud computing as a resourceful business strategy to stay reasonable and to meet business objectives.

Bigger enterprises are trying to explore the paybacks of these stages by taking business stability strategies into account.

For the previous category, the magnetism comes from the costing flexibility favoring pay-per-use models.

Keywords:- Cloud Computing, Cloud Migration Process, and methods for architecture

I. INTRODUCTION

Cloud computing have made it smart for user to transfer their acts to the cloud situation.

However, in crowded market of cloud, application and the vendors look the problem of clients how to use and pick suitable service vendors for transfer their application to cloud.

This has become an expected part of learning over the last certain years.

While the term Cloud Computing is based on a collection of old and few new concepts in some research fields like Service-Oriented Architectures, distributed and grid computing as well as virtualization.

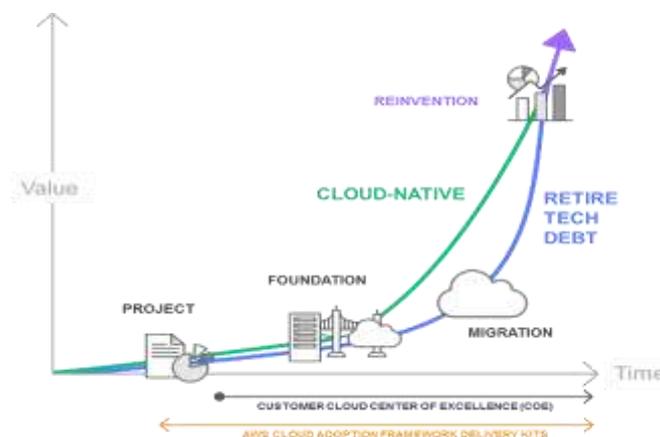


FIGURE 1

A user's ride to the cloud usually involves these 4 stages:

PROJECT

In is stage, you runs your projects to get responsive and experience profit from the cloud.

FOUNDATION

After gaining the revenue of cloud, then you plan this foundation to measure cloud adoption.

MIGRATION

In this stage, you transfer your present data centers to cloud.

REINVENTION

Now that your entire data in cloud, you can reinvent by winning value of flexibility and abilities to transform your business.

II. BACKGROUND FOR CLOUD MIGRATION

In this section, we will study about process of migration, cloud migration decision framework, Five Options for transferring Applications to the Cloud migration process.

There can be some cases where you suppose to have huge heritage transformation in separation; but, we are searching that transfers are usually part of a larger enterprise transformation effort.

A. Migration Process:

The plans we have realised about moving to cloud usually follow a 5-phase approach:

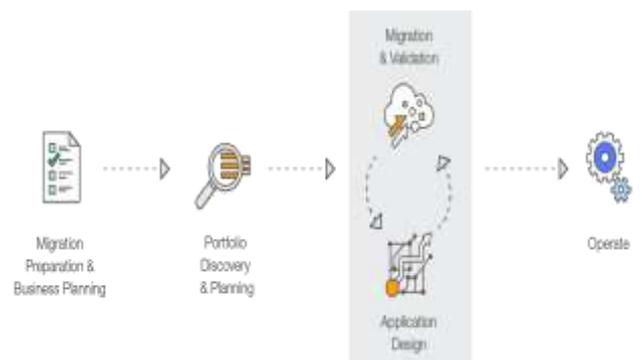


FIGURE 2

Phase 1: Migration Preparation & Business Planning

Here you arrange the right purposes and create to get knowledge of the kinds of incomes you will see. Planning related to business, projects, migration planning of system setup for server.

Phase 2: Portfolio Discovery & Planning

The requirements between applications, and originate to consider what kinds of migration strategies you will want to service to meet your business commitments.

Phase 3 & Phase 4: Designing, Migrating & Validating Application

Here the attention changes from the portfolio level to the individual application level and you design, migrate, and validate each application. Each application is processed according to one of the six strategies

1. Rehost
2. Replatform
3. Repurchase
4. Retire
5. Retain

Phase 5: Operate

As data are moved, you repeat on your new foundation, turn off current systems, and constantly repeat toward a recent operating model. Your operating model becomes an evergreen.

B. Cloud Migration Decision Framework

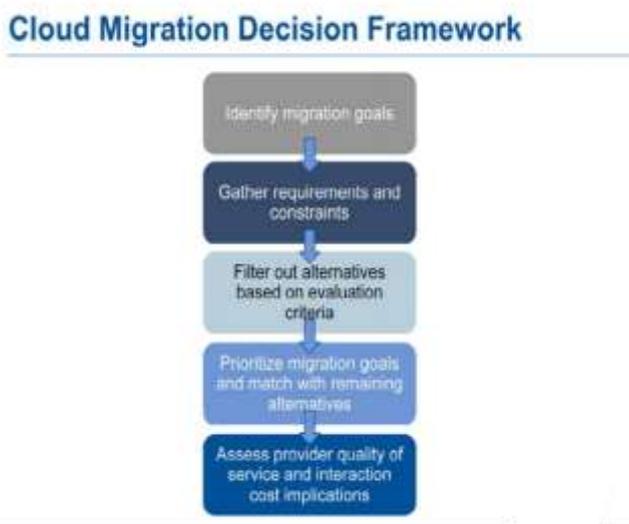


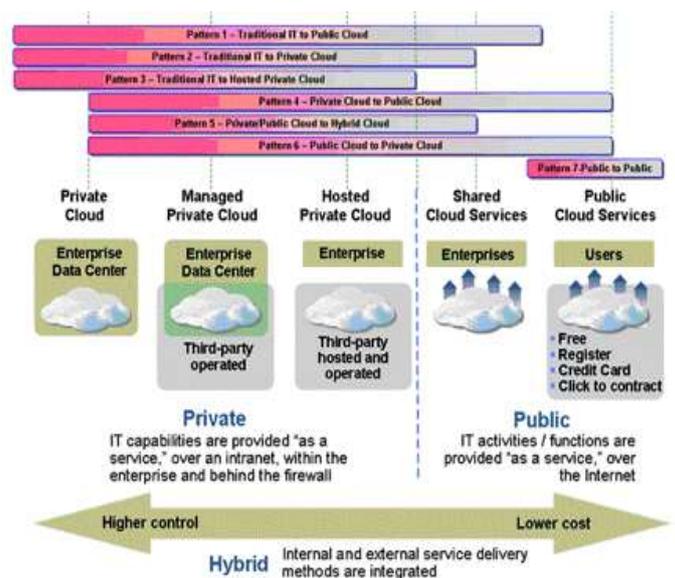
FIGURE 3

These phases show how we are going to make this cloud migration decision in a systematic way, phase's show how we are going to make this cloud migration decision in a systematic way. First, identify migration goals. Second, gather requirements and constraints. Third, filter out alternatives based on evaluation criteria. Forth, prioritize migration goals and match with remaining alternatives. And last, step is to assess provider quality of service and interaction cost implications.

III. Architecture for cloud migration

It is fateful to get which hardware or software devices are the finest aspirants for the jobs and applications you are pointing for the cloud environment.

The *gadgets* of relocation are only one piece of checking a job will efficiently track in the cloud. Moving a job actually consists of many pieces containing: finding of a system's architecture, understanding of the technical and process integration points performing the actual migration of the jobs, testing the migration once landed, and ensuring *long term co-existence* with both current and new systems.



Common Cloud Migration Patterns

FIGURE 4

This view combines **two** key ideas:

1. Mature Organization -

These are businesses and originalities which have a present asset in skill and the backup tackles and procedures.

2. New –

Businesses which have a new group, incomplete or no asset in ability and are not fully-grown in their domination processes are typically fully devoted to the cloud model both in commercial and IT capabilities.

IV. Research Methods

Cloud migration practice should take an all-inclusive view of all the pieces occupied in gathering the business and technical goals of an organization.

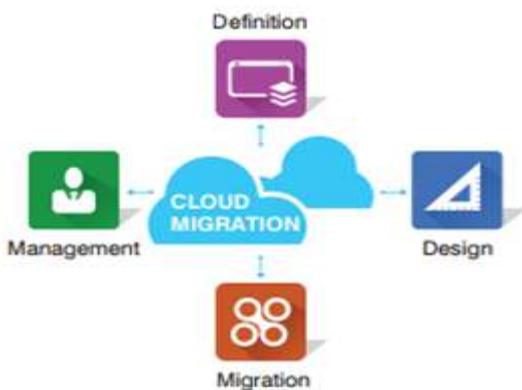


FIGURE 5

4 Major phases involved in cloud migration:

Definition

This stage is most serious phase as maximum conclusions are taken in this stage, which sets the way for the remaining stages.

Design

This step is given by the Plan phases where the cloud policy and renovation blueprint are put in to action.

Migration

Because of this phase could happen in an iterative way.

Manage

These stage attentions on set up the manageability pieces of the cloud environment.

V. Conclusion

To motive of this research was to combine old research on software transfer to the cloud regarding the requested profit and the delivered confirmation of transformation. The leading purpose of this research is classifying framework for cloud migration and comparison of thoroughly selected researches by the framework to point out old research gaps. I recognized unknown part by creating collected data, reproducing on part of upcoming research.

The results of classification and comparison are presented as structure tables and visual diagrams—as a means to transfer knowledge among cloud computing researchers and practitioners about a collective impact of existing research.

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