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**Information Technology - Cloud Computing - Guide for
Application and Data Migration between Cloud
Platforms**

信息技术 云计算 云平台间应用和数据迁移指南

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Information Technology - Cloud Computing - Guide for Application and Data Migration between Cloud Platforms

1 Scope

This Standard stipulates the specific content of migration preparation, migration design, migration implementation and migration delivery during the application and data migration process between different cloud platforms.

This Standard is applicable to the guidance of migration implementer and migration proposer to carry out application and data migration activities.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 31168-2014 *Information Security Technology - Security Capability Requirements of Cloud Computing Services*

GB/T 32399-2015 *Information Technology - Cloud Computing - Reference Architecture*

GB/T 32400-2015 *Information Technology - Cloud Computing - Overview and Vocabulary*

3 Terms and Definitions

What is defined in GB/T 31168-2014, GB/T 32399-2015 and GB/T 32400-2015, and the following terms and definitions are applicable to this document.

3.1 Migration

Migration refers to the process of migrating application and data from the source cloud platform to the target cloud platform.

3.2 Migration Proposer

Migration proposer refers to the user side, which migrates application and data to the target cloud platform.

5 Migration Preparation

5.1 Demand Research and Analysis

The migration implementer shall conduct research and analysis on the status of the applications and data to be migrated in accordance with the migration requirements proposed by the migration proposer.

Demand research and analysis includes, but is not limited to:

- a) Application and data description, such as application name and version No., data storage form and scale, etc.;
- b) Operating environment, such as server model and configuration, operating system type and version, middleware type and version, etc.;
- c) Continuity of application and data, such as: interruptible moments and duration;
- d) Backup of existing applications and data, such as the adopted backup technology and modes, etc.;
- e) Personal privacy data restrictions for existing applications and data, for example, geographic restrictions on physical storage and processing, etc.;
- f) Compliance requirements for existing data, and necessary measures to meet the compliance requirements during the migration process;
- g) Backup personnel and contact information for existing applications and data.

5.2 Determination of Migration Target

The migration implementer shall, based on demand research and analysis, work together with the migration proposer to determine migration target and implementation result, and form a research and analysis report.

6 Migration Design

6.1 Migration Evaluation

6.1.1 Overview

The migration implementer shall, based on the determination of migration target, evaluate the existing operation system architecture and resource utilization status; reach an evaluation conclusion; form a migration evaluation report; provide reference to the migration scheme.

6.2 Migration checklist

The migration implementer shall, based on migration evaluation report, formulate a migration checklist; determine applications, data and supporting resources that need to be migrated.

The content of the checklist includes, but is not limited to:

- a) A list of applications, data and supporting resources to be migrated;
- b) Migration starting and finishing time for various applications and data;
- c) Personnel in charge of various applications and data.

6.3 Migration Scheme

The migration implementer shall, based on migration evaluation report and migration checklist, form a migration scheme.

The migration scheme includes, but is not limited to:

- a) Personnel arrangement: all the personnel responsibilities and division of work involved in the migration process;
- b) Migration target: mutually agreed migration target and implementation result with the migration proposer;
- c) Migration tools: tools that the migration implementer utilizes during the migration process, including software, hardware and utilization forms, etc.;
- d) Migration method: the process and method, through which, the migration implementer utilizes migration tools to implement migration target;
- e) Migration scheme: the steps and plans that the migration implementer adopts to carry out migration method, including scheme verification, resource preparation, system backup, migration execution and migration test, etc.;
- f) Standards and stipulations: standards and stipulations that application and data migration need to adopt or comply with;
- g) Contingency plan: on the premise of not affecting the service of operations, recovery strategies and plans formulated for migration failures.

7 Migration Implementation

7.1 Scheme Verification

Before the execution of migration, the migration implementer shall verify the availability,

data exchange throughout, etc.;

- c) Security test: conduct security test on operation applications after the migration;
- d) Recovery test: test the rollback mechanism of the operation system after the migration.

8 Migration Delivery

8.1 Trial Operation

Trial operation includes trial operation process after the migration test, and organization and archiving of various relevant documents.

The time of trial operation should be not less than 30 d. After the trial operation ends, the migration implementer shall form a trial operation report; in accordance with the result of the trial operation, retain, modify or re-formulate migration schemes.

The content of the trial operation report includes, but is not limited to:

- a) Environment of trial operation: after the migration, the hardware environment, software environment and network environment of system operation;
- b) Preparation work of trial operation: before trial operation, the arrangement of personnel, time and supporting resources, etc.;
- c) User scale of trial operation: after the migration, the user scale during the trial operation period;
- d) Data scale of trial operation: after the migration, the data scale during the trial operation period;
- e) Questions and countermeasures of trial operation period: questions that emerge during the trial operation of the operation system, and their solutions;
- f) Conclusion of trial operation: reach a conclusion on the availability, continuity and security of migration operation during the trial operation period.

8.2 Delivery Execution

After the trial operation, the migration implementer shall deliver the operation system to the migration proposer. After the delivery is completed, the migration ends.

The process of delivery execution includes, but is not limited to:

- a) Suspension of the previous system: suspend the operation system on the source cloud platform; stop data access and maintain the integrity of data;

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