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**Industrial Cloud Service - Resource Configuration
Requirements**

工业云服务 资源配置要求

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Industrial Cloud Service - Resource Configuration Requirements

1 Scope

This document specifies the resource configuration requirements in industrial cloud service.

This document is applicable to the resource configuration management activities or scenarios of industrial cloud service.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in this text. 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 37724-2019 Information Technology - Industrial Cloud Service - Capabilities General Requirements

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 industrial cloud

Industrial cloud refers to an industry-oriented pattern that supplies and manages flexible, sharable resources and business capabilities through the network in an on-demand self-service mode.

NOTE 1: the resources include computing resources, network resources, storage resources, human resources, equipment resources, material resources, knowledge resources, environmental resources and data resources.

NOTE 2: physical entities are beyond the scope of this document.

NOTE 3: business capabilities mainly include R&D and design capabilities, procurement capability, production and manufacturing capabilities, testing capability, logistics capability, marketing capability and after-sales capability.

[source: GB/T 37700-2019, 3.1.4]

3.2 industrial cloud service provider

Industrial cloud service provider refers to an individual or organization that provides industrial cloud services to customers.

NOTE: this role (and all its sub-roles) includes providing industrial cloud services, ensuring industrial cloud service delivery, maintaining industrial cloud services, and handling business relationships with industrial cloud service customers.

3.3 business capability

Business capability refers to the capability of industrial cloud service provider in providing industrial cloud services throughout the entire product life cycle, including a variety of production activities.

NOTE: business capabilities mainly include R&D and design capabilities, procurement capability, production and manufacturing capabilities, testing capability, logistics capability, marketing capability and after-sales capability.

[source: GB/T 37724-2019, 3.1]

4 General Rules

4.1 Content

The content of industrial cloud service resource configuration shall include the configuration of resource access function component, resource abstraction and control function component, so that the industrial cloud production elements can form industrial cloud service capabilities. The industrial cloud service capabilities shall comply with the requirements of Chapter 5 in GB/T 37724-2019.

4.2 Main Body

The main body of resource configuration is the industrial cloud service provider, and the main sub-roles are the industrial cloud service deployment manager and the industrial cloud service manager.

5 Requirements for Resource Configuration

5.1 Overview

The basic process of industrial cloud service resource configuration is shown in Figure 1.

5.3 Execution

5.3.1 Overview

The industrial cloud service resource configuration can be performed in two modes: direct configuration and migration configuration. Direct configuration is to directly configure newly added resources to the platform, while migration configuration is to migrate resources on other platforms to the platform.

5.3.2 Direct configuration

When carrying out direct resource configuration, the industrial cloud service provider shall:

- a) Provide various services or interfaces for resource configuration required in the industrial cloud service environment;
- b) Be equipped with functional modules, such as: installing operating system, configuring cloud service components, configuring available domains, configuring resource specifications and configuring billing policies, etc.;
- c) Provide resource-removing interfaces or tools and a cache clearing mechanism to ensure that no cache remains after resource removal. With the user's consent, the industrial cloud service platform shall retain and handle the legacy data of resource configuration.

5.3.3 Migration configuration

When carrying out resource migration configuration, the industrial cloud service provider shall:

- a) Provide services or interfaces for resource configuration migration;
- b) Support dynamic resource scaling policy to satisfy the demand for dynamic resource migration;
- c) Support overall and partial migration of resources;
- d) Provide a cache clearing mechanism to ensure that no cache remains on the original platform after the migration; if resource migration is unsuccessful, a rollback mechanism shall be provided, including resource recovery on the original platform and resource clearing on the immigrated platform.

5.4 Testing

When carrying out resource testing, the industrial cloud service provider shall:

- a) In combination with application demands, carry out testing of resource performance, reliability and ease-of-use;
- b) Carry out verification of resource security, availability and compatibility;

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