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**NATIONAL STANDARD OF THE
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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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Table of Contents

Foreword	3
1 Scope	4
2 Normative References	4
3 Terms and Definitions	4
4 General Rules	5
4.1 Content	5
4.2 Main Body	5
5 Requirements for Resource Configuration	5
5.1 Overview	5
5.2 Planning	6
5.3 Execution	7
5.4 Testing	7
5.5 Optimization	8
Bibliography	9

Foreword

This document was issued on 17 March 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 October 2023.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 42408-2023 covers resource configuration in an industrial cloud service: what has to be configured, who does it, and the steps the work goes through. The general rules clause fixes the content of a configuration - among other things the resource access function component and the resource abstraction and control function component - and names the party responsible for carrying it out. The requirements clause then follows the configuration process from end to end, with an overview of the basic process and separate requirements for planning, execution, testing and optimisation. Naming those four steps separately is the point of the document, because in practice they collapse into one. Capacity is handed out on request, nobody checks afterwards whether the allocation actually suits the workload, and nothing is reclaimed when the workload ends; the platform then reports itself full while much of it sits idle, and the plant that depends on it finds no capacity left when a production

run needs it. Making testing and optimisation named stages is what turns configuration into something a customer or an assessor can check. It is used by industrial cloud platform operators, manufacturers contracting or evaluating cloud capacity, system integrators building industrial cloud offerings, and assessors auditing a platform against a stated process.

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