

ICS 35.240.01  
CCS L67



**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 42568-2023**

---

**Industrial internet platform - Microservices reference framework**

工业互联网平台 微服务参考框架

**Issued on: May 23, 2023**

**Implemented on: December 1, 2023**

---

**Issued by: State Administration for Market Regulation;  
Standardization Administration of the PRC**

## Table of Contents

|                                                                                                                    |     |
|--------------------------------------------------------------------------------------------------------------------|-----|
| Foreword .....                                                                                                     | III |
| 1 Scope .....                                                                                                      | 1   |
| 2 Normative references .....                                                                                       | 1   |
| 3 Terms, Definitions and Abbreviations .....                                                                       | 1   |
| 3:1 Terms and Definitions .....                                                                                    | 1   |
| 3:2 Abbreviations .....                                                                                            | 1   |
| 4 Reference frame .....                                                                                            | 2   |
| 4:1 General .....                                                                                                  | 2   |
| 4:2 User View .....                                                                                                | 2   |
| 4:3 Function View .....                                                                                            | 4   |
| 4:4 Relationship between user view and function view .....                                                         | 4   |
| 5 User View .....                                                                                                  | 5   |
| 5:1 Overview .....                                                                                                 | 5   |
| 5:2 Industrial Microservice Clients .....                                                                          | 6   |
| 5:3 Industrial Microservice Providers .....                                                                        | 9   |
| 5:4 Industrial Microservice Collaborators .....                                                                    | 14  |
| 5:5 Common concerns .....                                                                                          | 17  |
| 6 Function View .....                                                                                              | 21  |
| 6:1 Layered framework .....                                                                                        | 21  |
| 6:2 Functional components .....                                                                                    | 23  |
| Appendix A (informative) Industrial microservices provide reference cases in the form<br>of "service access" ..... | 34  |
| Reference .....                                                                                                    | 37  |

### Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" drafting:

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

This document is proposed and managed by the National Information Technology Standardization Technical Committee (SAC/TC28):

This document is drafted by: China Electronics Standardization Institute, Tencent Cloud Computing (Beijing) Co., Ltd., Shenzhen Saixi Information Technology Co., Ltd:

Technology Co., Ltd., Yunhong Information Technology Co., Ltd., Jiangsu Saixi Technology Development Co., Ltd., Guangzhou Pingao Software Co., Ltd.,

China Electronics Hongxin Information Technology Co., Ltd., Neusoft Group Co., Ltd., Kaos Industrial Intelligence Research Institute (Qingdao) Co., Ltd., China Aviation Industry Corporation

Air Manufacturing Technology Research Institute, Huawei Technologies Co., Ltd., Huayun Data Holding Group Co., Ltd., Institute of Automation, Chinese Academy of Sciences, Beijing Bai

Duwangxun Technology Co., Ltd., International Business Machines (China) Co., Ltd., Sangfor Technology Co., Ltd., Beijing Crown Group Information Technology Co., Ltd:

Co., Ltd., National Application Software Product Quality Inspection and Testing Center:

The main drafters of this document: Yang Liyun, Wang Zesheng, Yang Peng, Wang Yongxia, Zhang Linfeng, Liu Qiao, Li Tingting, Li Qiang, Zhong Hongyan, Wen Li,

Xie Haiqin, Shen Hongcai, Zhao Hua, Wu Tao, Chen Shichao, Li Shuo, Cheng Haixu, Liu Chen, Chen Xing, Wang Chuan, Liu Guanjin, Shao Kaijie, Jiao Dian, Li Jiangtao,

Zhao He, Ren Taolin, Yang Wei, Xiong Gang, Chang Cheng, Li Zhiqi, Meng Xiangzhen:

Industrial Internet Platform Microservice Reference Framework

## 1 Scope

This document establishes the reference framework for microservices in the industrial Internet platform, including deployment view, user view, function view, and access logic

View, specifies the relevant statement clauses of each view:

This document applies to the design, implementation, deployment, and use of industrial microservices:

## 2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

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

### 3 Terms, Definitions and Abbreviations

#### 3:1 Terms and Definitions

The following terms and definitions defined in GB/T 32400-2015 apply to this document:

cloud computing cloudcomputing

A model for provisioning and managing scalable, elastic pools of shared physical and virtual resources over a network in an on-demand, self-service manner:

Note: Resources include servers, operating systems, networks, software, applications and storage devices, etc:

[Source: GB/T 32400-2015, 3:2:5] 3:1:2

cloud service cloudservice

One or more capabilities provided by cloud computing through defined interfaces:

[Source: GB/T 32400-2015, 3:2:8] 3:1:3

microservices microservices

A product that can be deployed independently and provides services that can implement specific functions in an application:

[Source: ISO 23167:2020, 3:15, with modifications] 3:1:4

It can realize micro-services for industrial Internet platform service models in industrial scenarios:

The following abbreviations apply to this document: