Cloudwise

IT Service Management
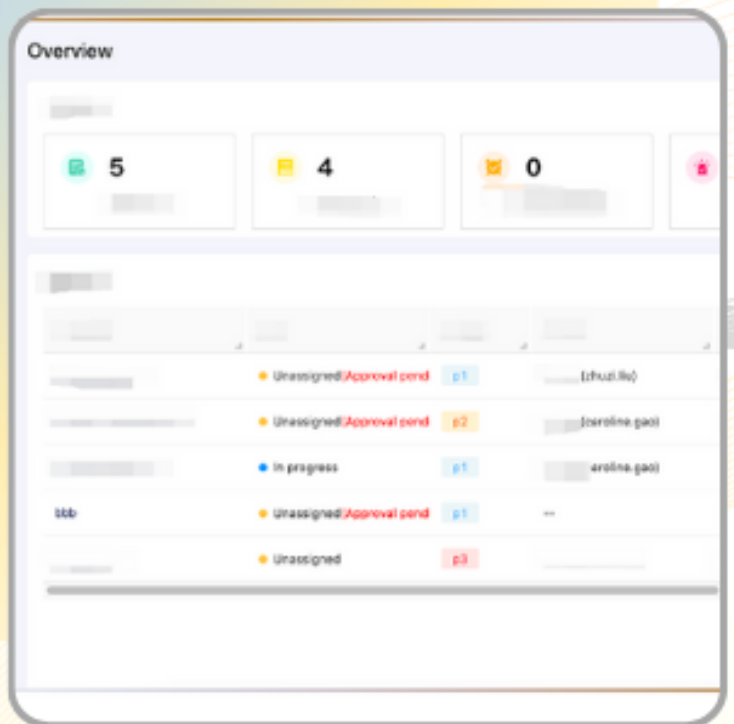
White paper

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Pain points of company IT operations under the wave of digitalization

At present, China's digital economy is showing a trend of sustained and rapid growth, and digital transformation has become the new normal for the development of Chinese companies. Based on White Paper on the Development of China's Digital Economy (2021) released by CAICT, the scale of China's digital economy will reach 39.2 trillion yuan in 2020, accounting for 38.6% of GDP, and the growth rate of the digital economy will reach more than three times that of GDP. In April 2021, the Cyberspace Administration of China released Digital China Development Report (2020). The report shows that during the "13th Five-Year Plan" period, China's total digital economy ranks second in the world. In 2020, the added value of China's digital economy core industries will account for 7.8% of GDP. Based on China's current overall digital development environment, IDC predicts that under the catalysis of multiple policy dividends, China's digital economy will set off a new round of construction upsurge. It is expected that by 2024, the proportion of China's IT budget for digital transformation will exceed 70%.

Under the new normal of digital transformation, new technologies, market environment, and other factors have had a significant impact on company IT service management. The traditional IT service management model and tools can no longer meet the needs of company development, resulting in the following pain points:

■ Common users: No one can solve the problem after it occurs. Problem response is slow and the solution is not timely. The problem handling process is not transparent, and the service quality cannot be guaranteed.

■ IT service personnel: There is a lack of records in the processing process so the workload and work value are difficult to reflect, and a lack of process specifications, unclear division of labor, and mutual blame for problems. Work is inefficient and a lot of time is spent in solving repetitive and simple problems.

■ IT managers: Customer satisfaction is low, and the value of the IT department is unclear. Operations knowledge cannot be accumulated and shared, and is greatly affected by personnel changes. There is a lack of basis for team performance appraisal

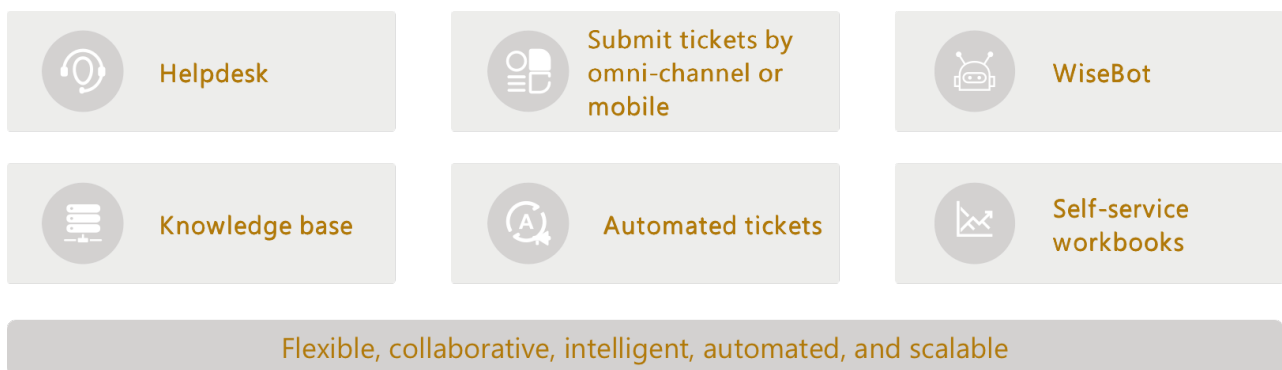and complicated management. Continuous improvement of the IT department results in a lack of data support

Changes in multiple factors make the development direction of the company must change from the previous export-oriented business innovation to the technology-driven management innovation. At the same time, the management method must also change from rough operation to refined management. Driven by the new management model, companies must improve the efficiency of IT to ensure the long-term development of the business.

In order to match the speed of company development and meet the needs of all personnel, companies need to use the new generation of ITSM tools to update the IT service management model.

Introduction

A new generation of service management product-ITSM

Cloudwise digital operations service management product-ITSM is based on ITIL4 and ITSS, supported by big data and artificial intelligence technology, and provides standard and high-quality IT services for companies. ITSM can adapt to and support the new business development requirements and new IT architecture in the digital transformation of companies, establish a good IT operations environment for companies, help companies improve IT efficiency, improve user satisfaction, and ultimately realize the value co-creation of IT service providers and users.

Helpdesk	Submit tickets by omni-channel or mobile	WiseBot
Knowledge base	Automated tickets	Self-service workbooks

Flexible, collaborative, intelligent, automated, and scalable

Architecture

Internal staff	Manager	IT service staff

Channels: Lark | DingTalk | WeCom | Wechat | APP Company IM | Service portal | WiseBot | Email | Call center | QR code | Online helpdesk | Mobile

Application layer

Overview	Tickets	WiseBot	Helpdesk	Knowledge Base	Data Insight	Change calendar	Service catalog

Configuration layer

Workflows		Service Level Agreement		Knowledge		WiseBot		Helpdesks	
Workflow design	Form design	SLA	OLA	Articles	Review	Training	Settings	Monitoring	Settings
Dynamic form	Automation	Service time	Upgrade rule	Article bases		Terms	Statistics	Conversation records	

Data Insight		User Administration		Integration		Other configurations			
Data sets	Charts	Departments	Users	SMS	Email	On-call schedules	Data dictionaries	Workflow roles	Notifications
Workbooks	Dashboards	Roles	Groups	Company IM	API	Routines	Service catalogs	Delegations	Announcementx

Capability layer

Workflow engine	Form engine	Message engine	Workbook engine	NLP	Full-text search engine	Task scheduling engine	SLA real-time computing

Values

■ **Multiple service channels, which makes IT services available everywhere:** Provide a variety of access channels and diversified service mechanisms, lower service thresholds, solve problems in a timely manner, and improve user satisfaction

	VS	
• Single channel such as service portal • Untimely problem response • Non-transparent workflow • Low user satisfaction		• Cover multiple services • 24/7 fast response • Trace and query service progress at any time • Ultimate user experience

■ **Flexibly configure service workflows and use multiple methods to enhance service efficiency:** Standardize IT service workflows, and provide functions such as change calendar, ticket automation, and knowledge base to assist IT service personnel, improve problem solving efficiency, and reduce operations costs.

- Unclear scope and quality of service
- Solidified workflows and forms
- Process tickets manually
- Spend a lot of time solving repetitive and simple problems

VS

- Clear scope and quality of service
- Powerful workflow and form
- customization capabilities
- Various automation methods
- WiseBot, knowledge accumulation, and recommendation

■ **Scientific assessment and refined management to enhance the value of IT department:** Use data to quantify the work situation and work effect of IT service personnel, and provide multi-dimensional data analysis functions to provide effective basis for continuous improvement and continuous improvement of service personnel assessment and work processes, realize refined management, and enhance the value of IT departments.

- Team performance is difficult to be evaluated
- Service quality is difficult to improve
- IT department value is not fully reflected

VS

- Scientifically manage team performance

Continuously improve service quality

Powerful data analysis engine

# Value 1: Multiple service channels, which makes IT services available everywhere

Unified access to multiple channels to meet customers' requirements of submitting tickets in an all-round way

In order to improve the user experience, the product has built-in rich system integration interfaces to connect the service with various channels to meet the needs of users for submitting tickets and fast processing.

WiseBot can solve common user problems

WiseBot uses natural language recognition technology to help users solve common problems, respond quickly to users, and greatly reduce the workload of operations engineers.
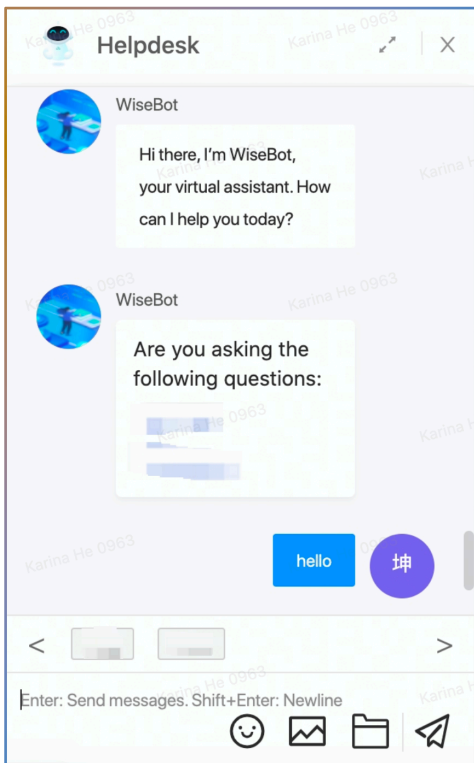
■ **Response at any time**

Provide 24/7 self-service Q&A service. Users do not need to wait.

■ **Natural conversation**

WiseBot uses natural language recognition technology, and users can use natural language to carry out conversations.

■ **Multiple rounds of conversations**

Conversation workflow configurations are supported. WiseBot can interact with users for multiple rounds of complex questions, and can meet complex task-based Q&A scenarios.
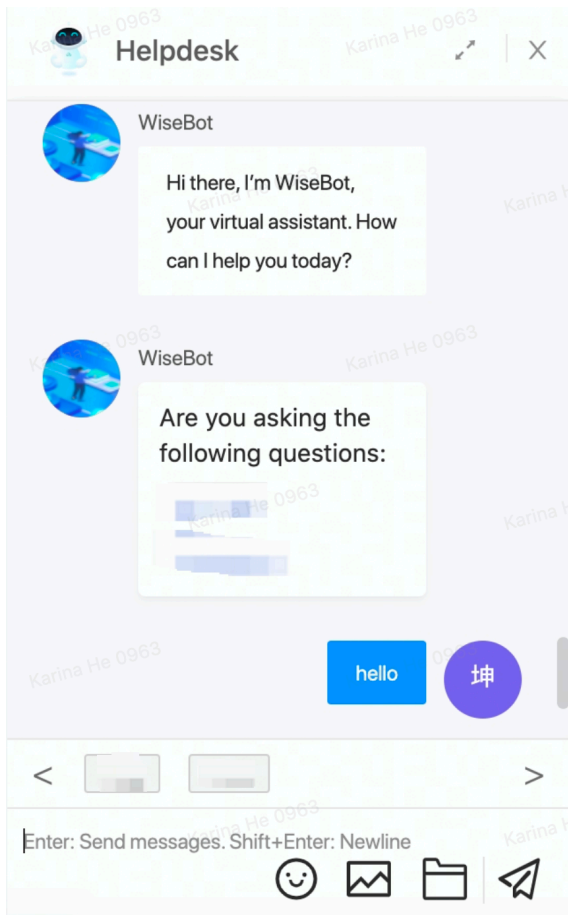
■ Knowledge Base

The granularity of knowledge is fine, it can reach more fine-grained problems, and the conversation efficiency is higher.

Online helpdesk can serve users quickly and accurately

Through IM, it can receive user demands and establish an effective communication bridge between users and IT service personnel, which greatly improves user experience and service efficiency.
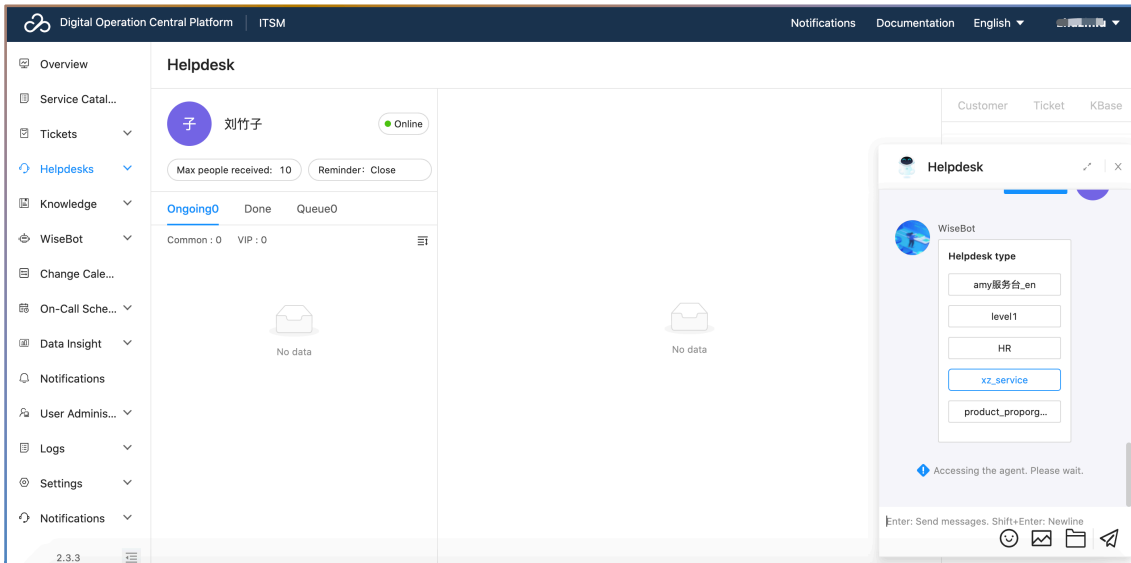
- **Multi-level helpdesk:** You can definite multi-level helpdesks, and can push helpdesks for users based on the channels or departments to which users belong to improve service satisfaction.

- **Chat and communicate online:** It can auto bring out user information and historical conversation informatio. You can send text, expressions, charts, files, and common languages, retrieve knowledge in Knowledge Base and push the knowledge to users, and transfer unprocessed conversations to other agents.

- **Auto create tickets:** The helpdesk can auto create a ticket when a conversation comes in. Conversation records between agents and users will be auto synchronized to the ticket details for the processor's reference.

Users can initiate requests anytime and anywhere by mobile

You can flexibly interconnect with company IM of Lark, WeCom, and DingTalk and customers' own IM and access WiseBot, online helpdesk, ticket system and Data Insight through mobile terminal.

- You can access the helpdesk anytime and anywhere, submit tickets by yourself, and check the processing status of tickets
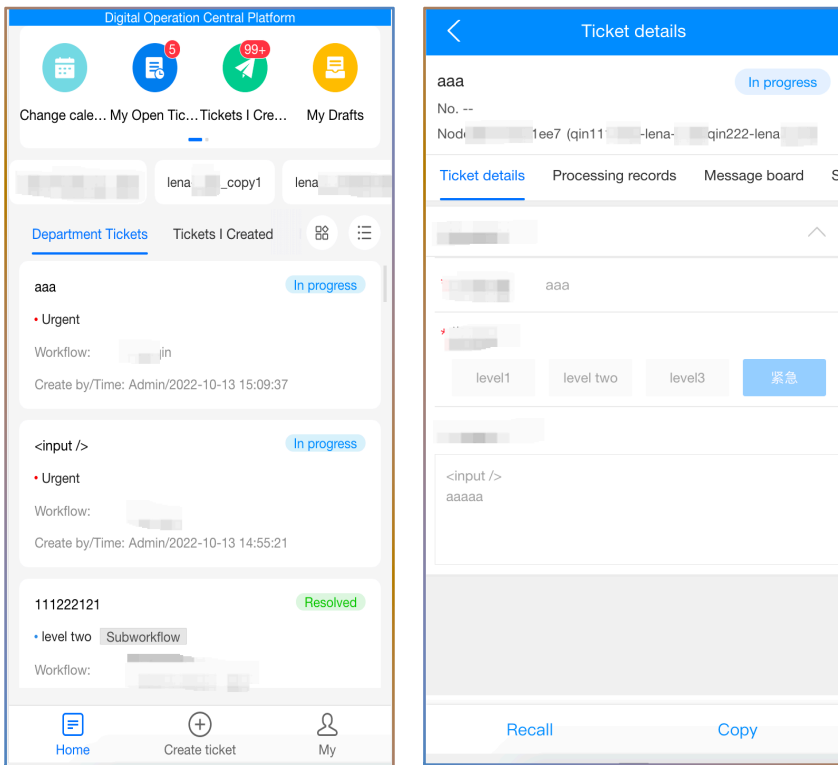
- Agents can chat with users on the mobile of the agent, view user information, and generate related tickets to ensure the efficiency of conversation processing.

- Operations personnel can view and process tickets on the mobile, and quickly respond to users' needs of submitting tickets.

- Managers can approve on the mobile and view statistical reports to understand the service quality and efficiency of the team.

Value 2: Flexibly configure service workflows and use multiple methods to enhance service efficiency

Service catalogue clarifies scope and level of IT services

The definition and unified management of service catalog provides a unified, consistent, and accurate information source for company services, which provides support for other service management activities.

- Define multi-level service catalog to meet the needs of hierarchical division of services.
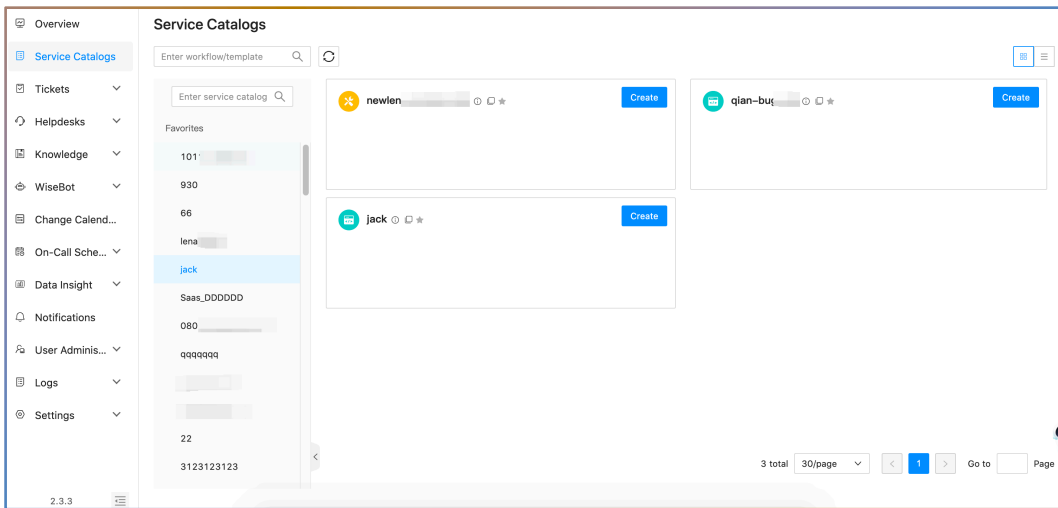
■ Manage the rights of the service catalog to provide different services for users of different roles and departments.
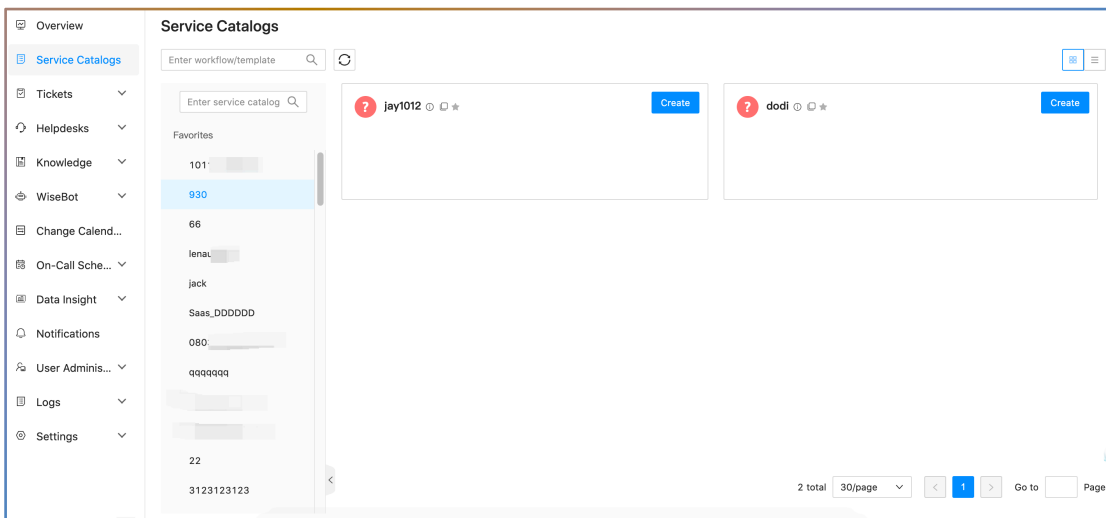
Flexible workflows and forms to meet customers' complex IT service management needs

Visual ticket workflow definition panels, rich visual controls, and powerful form designers support advanced functions such as form templates, dynamic forms, and VIP management, which can meet the requirements of ticket workflow configurations in complex scenarios.
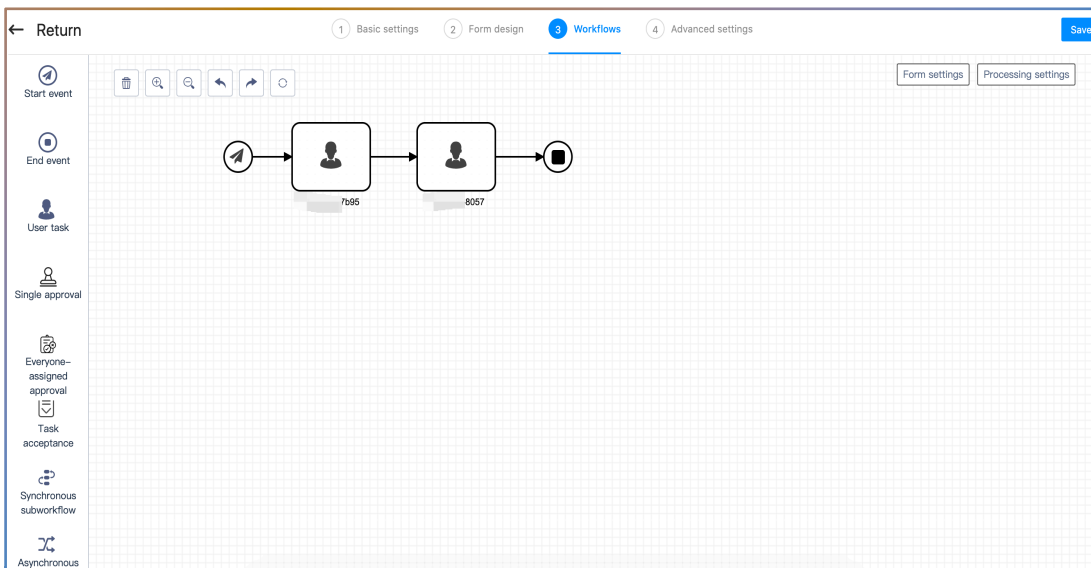
■ **Flexible workflow configuration**

✓ Workflows of branch, parallel, and subworkflow are supported and single and everyone-assigned approval are provided

✓ You can process the node by a single person, by multiple people, in turn, and by any person

✓ A variety of ticket distribution methods such as accept by myself, fixed processor, auto assign, and use ticket field are supported

■ **Low code form design**

✓ Multiple form fields are built in and dozens of form field types are provided

✓ Field grouping and ticket attribute tab configuration are supported, and data in custom data tables can be referenced in tickets

✓ Dynamic forms

✓ Form templates can be configured for workflows to save users' time in entering forms

■ **Refined permission control**

✓ Define the workflow creation rights by member, role, group, or department

✓ In order to standardize the processing workflow of tickets, field level permissions are constrained for workflow node forms

Manage the whole workflow of tickets to ensure that tickets are processed in time

View and process tickets in a unified way, covering types of tickets including change, icnident, and publish, to ensure that tickets can be processed in a timely manner.

■ **Create a ticket:** Create tickets based on previous tickets and ticket template to rapidly create tickets.

■ **Follow up ticket progress:** Graphically show the progress of the ticket, and see the historical path and current node at a glance.

■ **Communicate a ticket:** Provide a flat task collaboration method, speed up the transmission of information, and improve the efficiency of problem communication.

■ **Process a ticket:** You can approve/roll back/reassign/submit/put on hold/buzz/recall/close/update/reassign withdrawal to fully meet the needs of ticket transfer.

■ **Associate a ticket:** Auto associate subworkflow tickets and manually associate other tickets. You can set field inheritance and backfill during association.

■ **Ticket SLA/OLA:** Monitor the ticket SLA and OLA throughout the process, visually show the upcoming overdue and overdue time, and ensure the ticket service quality.

■ **Search a ticket:** Multi-condition query combination of tickets are supported. You can search tickets based on keywords or historical records.

■ **Ticket knowledge precipitation:** The content of the ticket fields can be updated to Knowledge Base when the ticket is processed.

- **Search/quote/recommend knowledge:** Knowledge can be queried when processing a ticket, and knowledge content or links can be referenced in the ticket. Knowledge can be recommended based on ticket title.

Ticket automation can improve processing efficiency

ITSM can auto create, execute, assign, and delegate tickets, which realize timely processing of tickets while standardizing daily work.

- **Auto creation:** Tickets are auto created based on scheduled daily, weekly, and monthly routine work to reduce repeated work.

- **Auto execution:** By executing automated actions, you can flexibly support various business scenarios such as auto confirmation and auto entering of tickets.
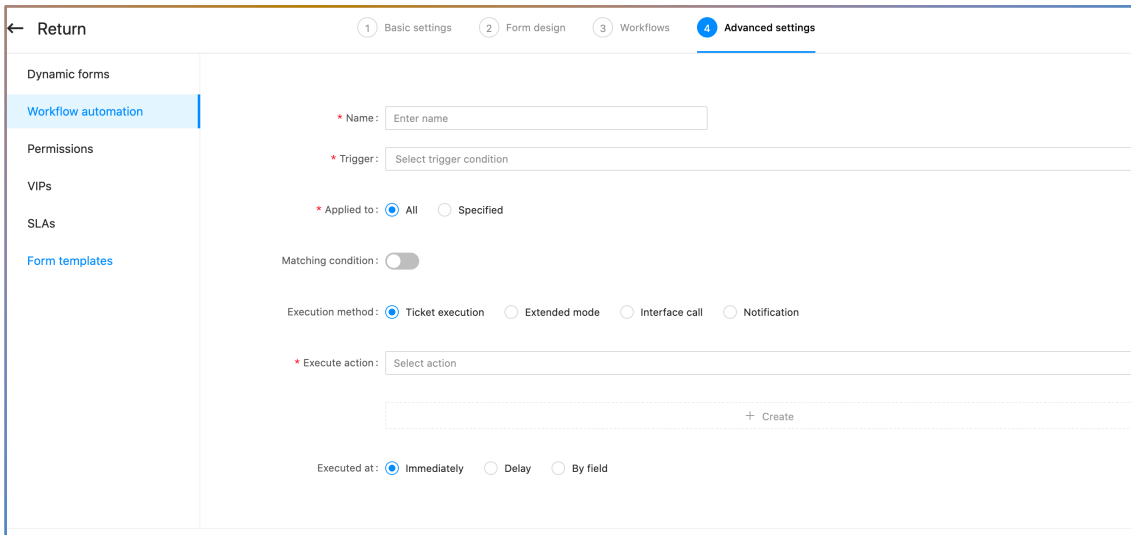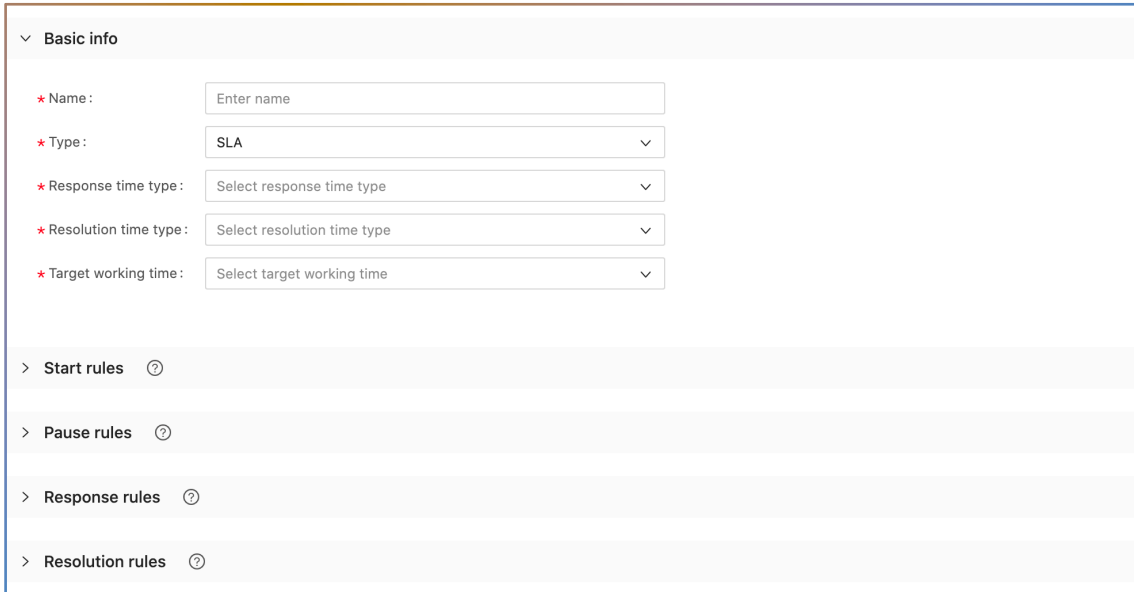
- ■ **Auto assignment:** Two assignment modes: load balancing and cycle within the processing range can balance the load of personnel, and ensure the timeliness of ticket processing.

- ■ **Auto delegation:** Tickets can be delegated to others to avoid ticket processing delay due to objective reasons.
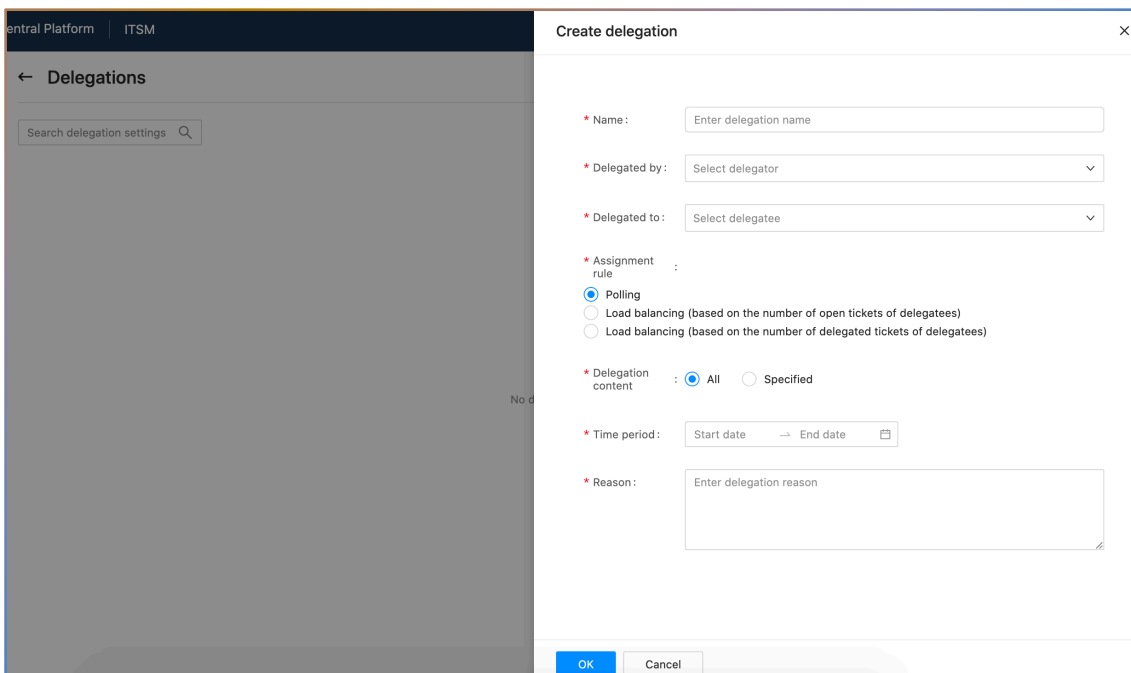
Custom SLA and OLA can ensure the service level

In response to the pain point of untimely processing of problems, ITSM provides SLA and OLA level agreement management functions to help companies define SLA and OLA for

tickets on demand, to ensure that the definition of service level agreements meets the requirements of companies, and to help companies improve IT service management.

- Personalized agreement evaluation standard: Use natural time or working time as the evaluation standard to ensure the reasonableness of the evaluation.

- Flexible configurations: Flexibly define start, pause, response, and resolution rules based on ticket information such as priority and processing team, so that SLA calculation can be adapted to various complex business scenarios.

- Overdue reminder: Define SLA/OLA overdue message reminders to ensure the timeliness of ticket response and processing.

- SLA/OLA upgrade: Define SLA/OLA overdue reassignment tickets to ensure tickets are completed on time.

Custom overview can create a personalized work area

ITSM provide users with personalized work areas, help operations personnel to intuitively grasp the work progress, quickly handle work content, improve the response speed of individuals and teams to deal with problems/tasks, and improve work efficiency.
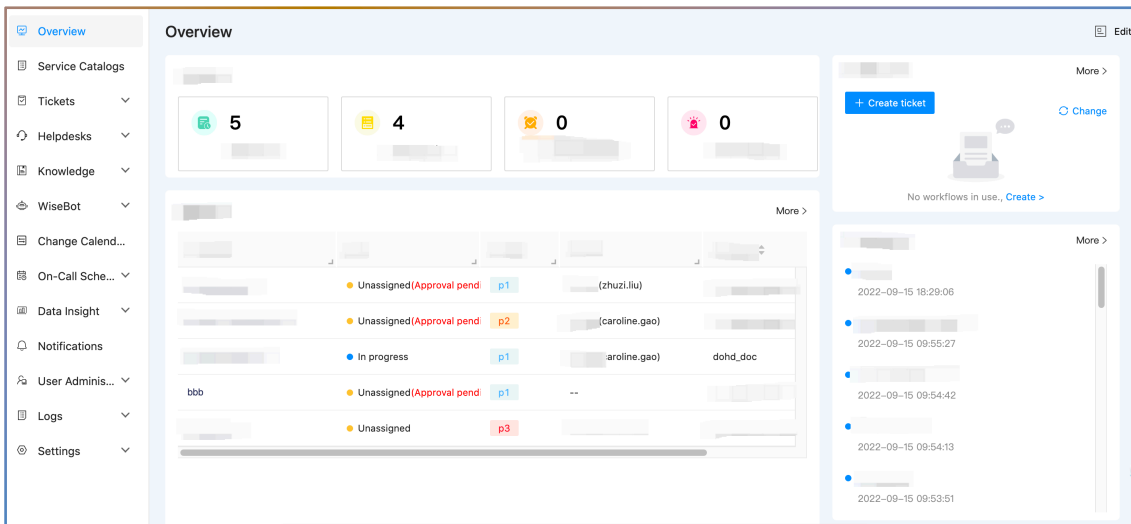
■ Component library

Built-in components, and the components created in the component library can be referenced by multiple overview views.

■ Custom overview

Admin can configure different views for different roles. Newly created components can also be deposited into the component library when defining the overview.

■ Flexible layout

Common users with overview permissions can adjust the layout of the overview based on their preferences in their personal accounts.

Change calendars can make ticket changes visible at a glance

Provides a calendar view of change tickets to help operations personnel quickly understand the ticket changes over a period of time, coordinate change plans, and avoid change collisions.
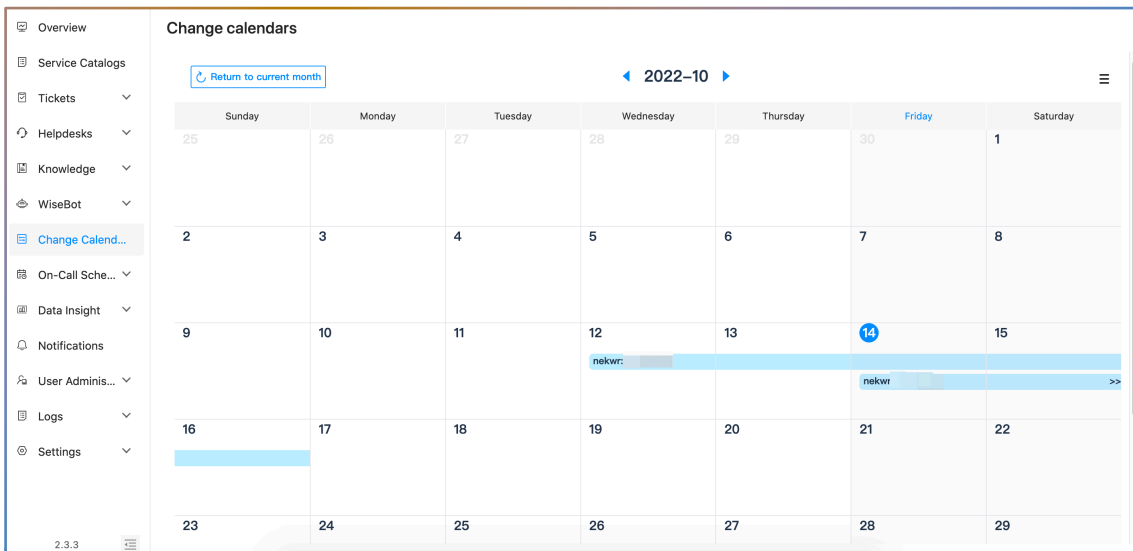
- ■ Filter changes view by ticket status

- ■ Mark ticket status by different colors

- ■ Mark ticket status by different colors

Knowledge Base can effectively reduce operations costs

A large amount of built-in operations knowledge provides functions such as knowledge creation, storage, query, and management to help companies manage operations knowledge, realize the creation, storage, sharing, application, and precipitation of knowledge, and can meet a variety of knowledge consumption scenarios and improve problem solving efficiency and reduce reliance on professionals.
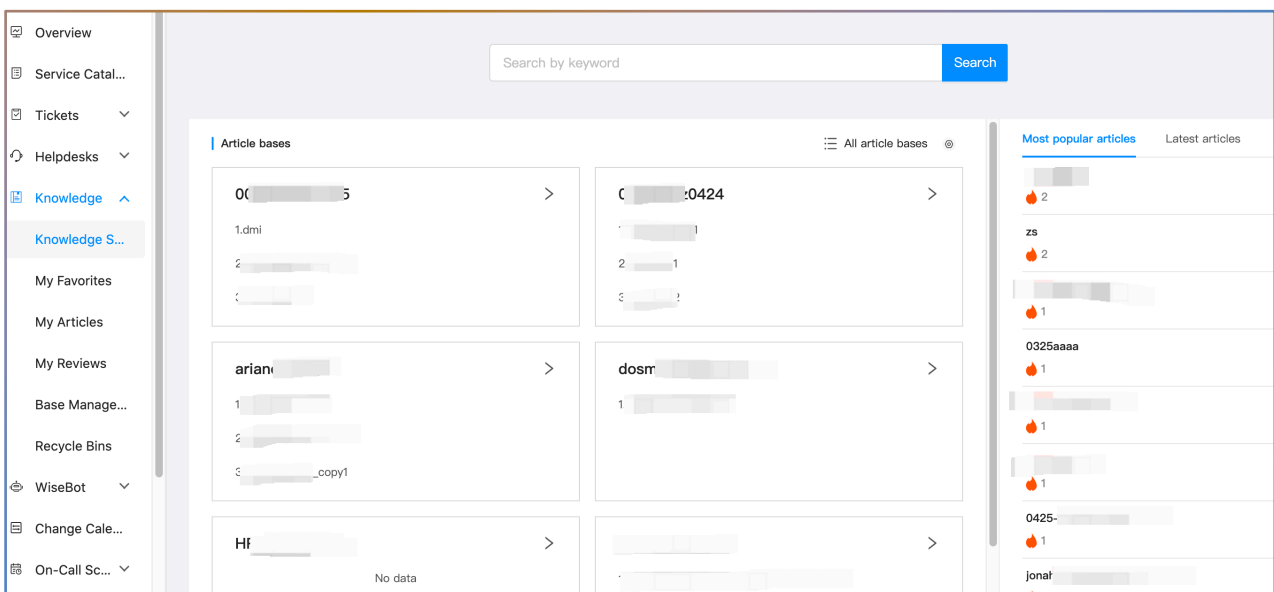
- **Classify knowledge:** Realize orderly and multi-dimensional management of knowledge.

- **Build a knowledge base：** You can create, store, query, view, comment, share, and collect knowledge to help companies build a internal knowledge base.

- **Recommend knowledge：** Recommend knowledge based on the ticket title to improve the processing efficiency of the ticket.

- **Accumulate and reference knowledge:** Knowledge content or hyperlinks can be referenced in the ticket. Ticket content can be precipitated as knowledge or updated to existing knowledge.

Knowledge can be applied to a variety of knowledge consumption scenarios to improve operations efficiency:

- **User active search:** After accessing ITSM, users can view the most popular knowledge and the most recently updated knowledge, and can also retrieve related knowledge based on keywords.

- **WiseBot uses knowledge for training:** Synchronize operations knowledge to the Q&A knowledge base to help WiseBot train and improve the accuracy of Q&A in the field of operations.

- **Agents search and recommend knowledge:** Agents can search for knowledge to quickly respond to users during conversations with users, and can push knowledge to users to help users solve problems and liberate back-end productivity.

- **IT service personnel maintain and accumulate knowledge:** Manage and maintain the knowledge base to ensure the continuous update of knowledge and the efficiency of problem solving. When processing tickets, the content of tickets can be precipitated into knowledge to avoid knowledge loss.

Value 3: Scientific assessment and refined management to enhance the value of IT department

The service process is under control, and the service situation can be tracked

- **Helpdesk monitoring:** Monitor conversation records, agents, and queuing of helpdesks, which makes the management process more transparent and ensures service quality.

- **Department/group ticket monitoring:** Track and manage the entire lifecycle of tickets in departments and groups, understand the status of tickets, and ensure that tickets are executed on time.

- **Visual dashboard:** Visually show the company's real-time ticket dashboard, helps management or operation personnel to understand the overall situation of the company's tickets in real time, and find problems in time.

On-call schedules can standardize on-call shift and scheduling

Provide shift scheduling, shift, on-call approval, on-call statistics, and my on-call schedules to help companies to clarify the on-call system, standardize on-call procedures, effectively restrain the responsibilities of IT service personnel, and provide reference data for the assessment of IT service personnel.

- ■ **Shift and scheduling:** Admin defines on-call shifts and manages the scheduling of each department, creates a on-call schedule, and adds on-call information.

- **Leave/shift change:** Provide leave and shift to make on-call management more flexible and user-friendly.

- **On-call schedules:** Check the on-call status, so that managers can see the team's shift, shift change, and leave status at a glance.

- **Change and take over shifts:** Members enter the on-call log when they are on call to provide a reference for the staff on call in the next shift. At the same time, it supports auto shift takeover and manual shift change by team leader.

- **Auto assign tickets:** Based on the on-call situation, the ticket is auto assigned to the current on-call members.

Self-service data analysis can enhance IT value

Analyze the data from multiple dimensions to help managers analyze various problems: assess team performance, improve or improve the quality of IT services, and also help IT departments present value and achieve a true shift from "cost center" to "value center".

■ **Multiple analysis models**

Provide 3 modeling methods: primary modeling, visual modeling, and SQL modeling. Models can be created directly based on workflow data or can be created by data tables.

■ **Rich chart library**

13 common chart types such as table, bar, stacked bar, and line are supported. Managers can flexibly select metrics and dimensions based on analysis needs.

■ **Flexible dashboards**

Flexibly define charts in the dashboard based on business concerns and personal preferences. You can flexibly drag and drop layout and adjust the size.

■ **Subscription and sharing**

Managers can select subscribed dashboard content as needed, and periodically obtain dashboard data via email.

Other functions

Dock with CMDB to realize data linkage

ITSM and CMDB form data linkage. When you process tickets, not only CI information can be obtained from CMDB, but also CIs in CMDB can be (batch) added, modified, or deleted. The data obtained from CMDB can be applied to major management workflows such as resource location, fault root cause analysis, and change impact analysis. ITSM's flexible workflow configuration and refined permission control can make CMDB data changes streamlined and CI information more accurate.
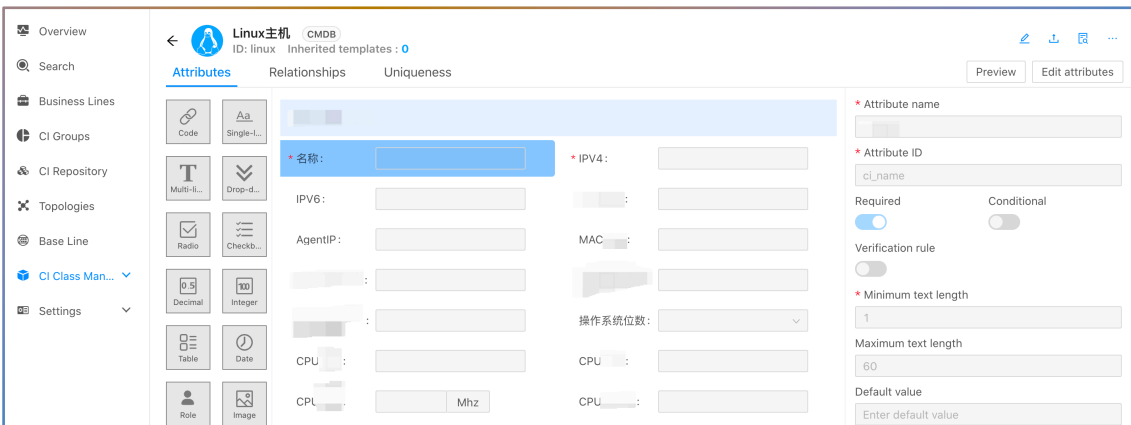

Dock with Event Management

ITSM is docked to Event Management, and can auto and manually create tickets based on incidents, which makes the processing work more streamlined and standardized. ITSM can auto generate details and auto associate CIs when you create an ticket, which greatly improves the efficiency of fault root cause analysis and fault processing.
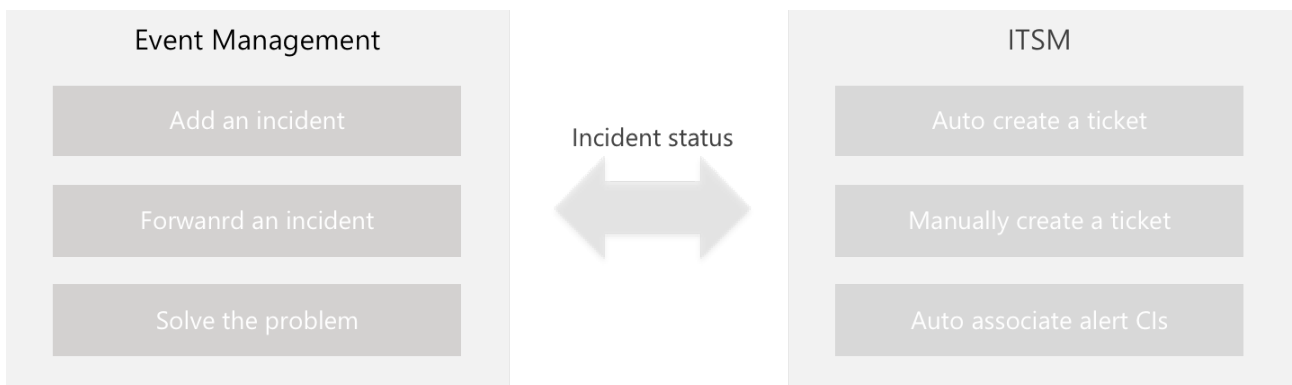
Solutions and services

Perfect solution and service system

Cloudwise provides a complete set of solutions and a service system focusing on the three key elements of ITSM implementation(ITSM management consulting, ITSM tools, and implementation delivery). Through consulting services and software R&D, Cloudwise cooperates with customers to generate a new-generation ITSM tool.
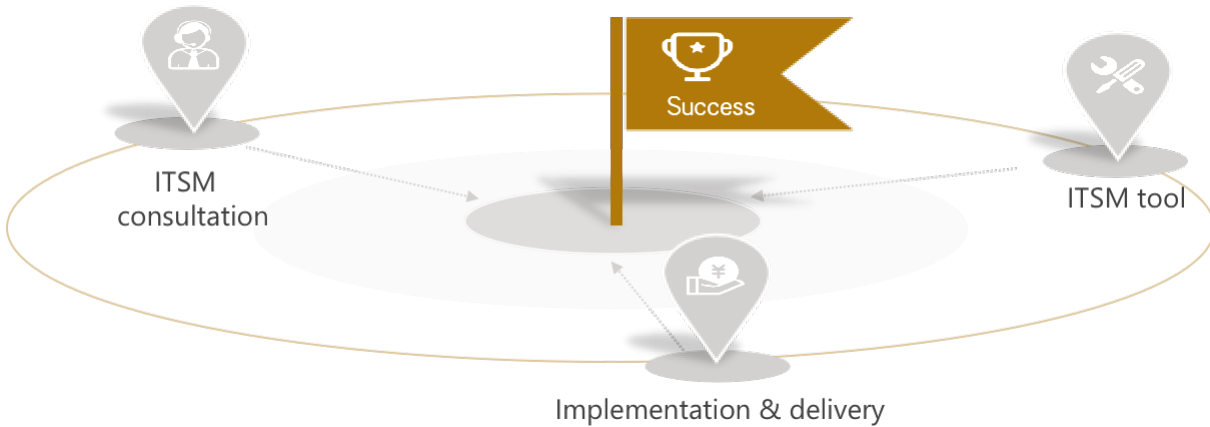
Professional consulting team in the field of operations

Cloudwise has a large-scale consulting team in the field of intelligent operations. There are currently 23 full-time consultants, with an average working experience of more than 13 years in the IT industry. Professional certification covers IT management and governance fields such as ITIL v3 Expert, ITIL4、ITSS, COBIT 5, DevOps, and TOGAF, providing one-stop IT service management consulting, training, software, and other services for customers and IT service personnel in central enterprises, finance, manufacturing, real estate, telecommunications, government, service providers and other industries to help customers achieve excellent IT operations.

Two delivery modes, customers can select based on their needs

SaaS mode

Subscription system, based on the cloud, gets rid of complicated software deployment and maintenance work, which is out of the box.

Private deployment mode

Buyout system, provides personalized solutions for customers in different industries.

Typical cases

Help a well-known terminal product company to build an IT service management system

Customer introduction

This customer is a technology company that focuses on end products, software, and internet services, with over 400,000 sales locations in more than 40 countries, which serves over 300 million users. The customer has 6 research institutes and 4 R&D centers worldwide, with over 40,000 employees and over 10 billion in R&D investment.

Problems of the customer

As the business scale of customer continues to grow, the information system becomes more and more complex. The business relies more and more closely on the information system. Any fluctuation of the information system directly affects the normal operation of the business.

8000+ hosts	140+ SQL servers	500+ MySQL	Promethues	Supervision system	Ucenter
120+ oralces	50+ MongoDB	60+ PGsql	Zabbix	CloudSino	

Alibaba Cloud	Large capacity and size, mixed system, disorganized management, and few personnel	Company private cloud
AWS		

4000+ network devices		Firewall	200+ business systems	SMT	TT
DDI	AC	F5	VPN	WMS	QMS	ASY
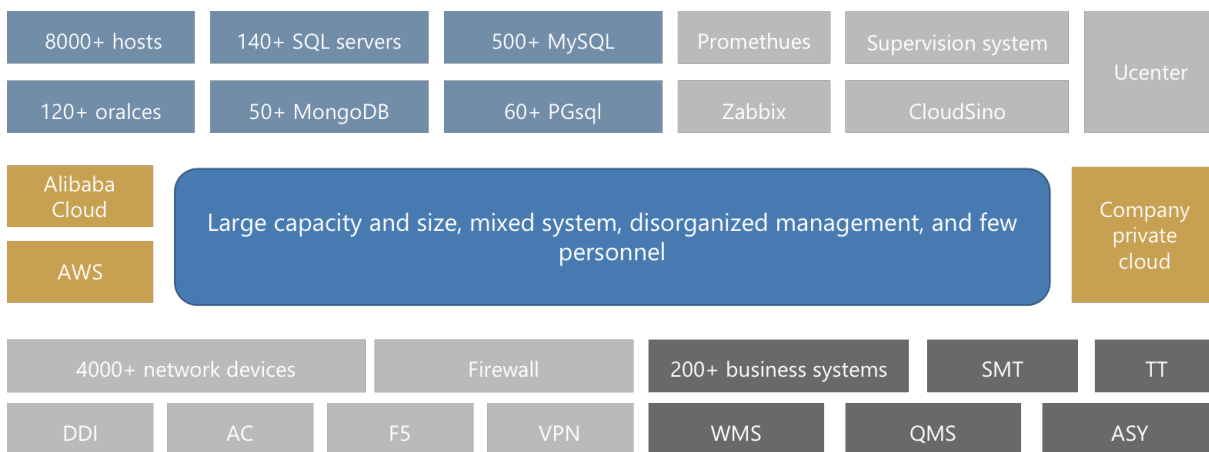
With research and communication, Cloudwise has sorted out the following problems with the current IT operations service management of the customer:

- Without a standardized operations process, the development of the operations work mainly depends on the experience and subjective ability of the operations personnel, which affects the speed and quality of the response.

- The lack of an IT service management system makes it impossible to track the processing progress and results of IT operations, making it difficult to ensure the quality of operations.

- Lack assessment data on the quantity and quality of daily work of operations personnel, making it difficult to assess personnel performance.

- Companies have less precipitation of IT operations knowledge, and many tacit knowledge are concentrated in the brains of operations personnel. When operations personnel change, knowledge will be lost.

- The responsibilities of the operations personnel are not clear, and there are many departments and roles involved. In the event of an emergency, it is difficult to coordinate and reasonably mobilize human resources, and there is no reasonable process, which affects the speed and quality of the response.

- User satisfaction information cannot be collected and analyzed, making it difficult to timely formulate improvement plans and adjust work directions based on this information.

Project challenges

■ **Unsystematic operations service:** The operations services are not systematic, and it is necessary to sort out and output the results in a relatively short period of time.

■ **Tight time:** Launch the platform within 2 months, including the new Helpdesks module.

■ **Multiple business systems:** New requirements need to be built and rolled out across more than 30 business departments.

■ **Multiple integrated systems:** Email, company IM, Xiao-i/HIO knowledge base, employee center, WiseBot, coordination office, CMDB, defect management platform, monitoring platform and other channels need to be integrated.

■ **High performance requirements:** 60,000 employees visit, and 2,000 people are online at the same time. There are more than 3,000 tickets per day, and the platform must support active-active and high availability.

Solutions

For the actual situation and pain points of customers, Cloudwise helps customers build the IT service management system from the following aspects:

■ Build a standardized service management system and strengthen organizational collaboration. The contents of the system include: user service response, application operations, and infrastructure operations.

■ Expand accessed services, cover service requests and fault reporting, and realize the standardization of basic data.

■ Give full play to the consumption capacity of CMDB, identify operations objects, and provide operations support from monitoring alerts to fault closed-loop.

■ Auxiliary services and operations improve user satisfaction and achieve performance data collection.

The project built an ITSM service platform. The construction results of the platform are as follows:

■ Daily users: Total: 60,000+ Active users: 5,000+

■ Departments of users: 30+ departments, including administration, HR, IT operations, finance, in-app purchase, physical examination, oppo cloud, etc.

■ Locations of users: Domestic and overseas

■ Running workflows: 70+

■ Daily tickets: Daily tickets: 3000+   Daily ticket peak: 4500+

■ Operation analysis metrics: Helpdesk online response timeliness rate, user satisfaction, first-line resolution rate, response timeliness rate, helpdesk request timeliness resolution rate, incident timeliness resolution rate

■ Platform deployment architecture: High availability

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