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Cognizant Autonomous IT Ops Toolkit for machine-first, self-healing IT operations

Full-stack agentic AI that autonomously detects, orchestrates and remediates IT issues. Built for enterprise scale with deep integrations and model-agnostic flexibility.

Executive summary

Enterprise IT operations remain fragmented across disconnected point tools and manual, human-centric processes. Incident intake, monitoring, service requests, knowledge management and root-cause analysis can be inconsistent and slow, driving longer resolution times, dependence on support engineers and alert fatigue, resulting in recurring incidents and challenges meeting SLAs. As operational environments expand across infrastructure, cloud, DevOps, ITSM, enterprise applications and digital workplaces, organizations need an integrated way to turn live signals into governed action.

Agentic AI now enables organizations to progress from assisted operations to augmentation and autonomy while retaining control. By unifying detection, reasoning, orchestration and closed-loop remediation, the Cognizant Autonomous IT Ops Toolkit (ATK) helps create self-healing, continuously improving operations with policy guardrails, human oversight and auditability. Organizations can expect more than 30% faster mean time to resolution (MTTR), up to 50% of routine work agent-driven, over 20% less development effort and up to 25% less alert fatigue—freeing skilled teams for higher-value work while improving SLA performance and reducing recurring incidents.



One autonomous toolkit for the whole IT estate

LLM-agnostic	MCP-powered	Human-in-loop	Enterprise-ready

The Autonomous IT Ops Toolkit (ATK) is Cognizant's full-stack enterprise, agentic AI accelerator that transforms human-centric IT operations into machine-first and self-healing operations.

Instead of relying on disconnected point tools, our toolkit deploys coordinated autonomous agents that continuously monitor live signals, reason within the enterprise context, make intelligent decisions and decide the best course of action. Also, it autonomously drives end-to-end, closed-loop remediation across operational towers.

The toolkit is built on a flexible, composable architecture and it unifies detection, triage, reasoning, inference and orchestration into a single intelligence layer. By continuously ingesting telemetry, events and tickets from existing estate, the Cognizant Autonomous IT Ops Toolkit (ATK) applies retrieval-augmented reasoning against curated runbooks and SOPs to determine optimal response. In addition, the toolkit coordinates governed execution across ITSM, cloud, infrastructure, applications and digital-workplace systems. Meanwhile, human-in-the-loop governance, policy-driven controls and comprehensive auditability ensure autonomous operations remain secure, explainable and accountable.

100+
agents

100+
enterprise customers

4000+
use cases

Cognizant Autonomous IT Ops Toolkit (ATK): Covers across infra, cloud, DevOps, ITSM/process, applications/enterprise, digital workplace and non-IT, with cross-cutting observability powered by 100+ agentic bots.

Seven enterprise capability areas with cross-cutting observability

The Cognizant Autonomous IT Ops Toolkit (ATK) is a unified AI-native set of accelerators designed to manage the entire operational landscape. It consists of seven specialized capability areas that address domain-specific needs, underpinned by a cross-enterprise observability layer that transforms telemetry from existing tools into actionable intelligence, deterministic root cause analysis and governed remediation.

Each capability area follows a common maturity journey from assist to augment to autonomous, enabling organizations to incrementally advance toward autonomous operations while preserving governance, compliance and operational control. As agent-driven automation increases, so does the business value delivered across the enterprise.

Key capabilities area



Infrastructure

Autonomous IT infrastructure operations that deliver measurable outcomes and not just insights.

Coverage: Unix/Linux, Wintel, database, middleware, storage, backup and network



DevOps

AI-powered automation of DevOps activities, including Terraform, IaC, provisioning and deployment workflows.

Coverage: CI/CD, IaC, Test, DevSecOps and Multicloud



Digital workplace

WorkNEXT agentic self-service for end users and real-time triage for operations—multilingual chat, voice and predictive operations.

Coverage: Chat AI, voice AI, engage AI, co-resolve and predictive ops



Non-IT

Extends the Autonomous IT Ops Toolkit's agentic model beyond IT into business functions, automating requests, approvals and policy workflows.

Coverage: HR, finance, travel and expense, procurement and GRC



Cloud

Unifies the full cloud lifecycle, collapsing migration and operations programs into weeks.

Coverage: Assessment, migration, IaC, Codegen and CloudOps



Process

AI-native automation of every ITSM practice, from incident triage to knowledge curation.

Coverage: Incident, change, problem, knowledge and ticket/call audit



Enterprise

Multiagent accelerator automating the full enterprise-application and CRM lifecycle—greenfield and migration.

Coverage: Dynamics 365, SAP and Workday



Full-stack observabiity

Cross-vendor observability that turns data from existing tools into deterministic root cause and defensible remediation across technology domains.

Coverage: Dynatrace, Splunk, Zenoss, SolarWinds, Prometheus, OpenTelemetry and Zabbix

Our value proposition: Progressive autonomy, compounding business outcomes

Cognizant Autonomous IT Ops Toolkit (ATK) doesn't simply support IT teams; it orchestrates enterprise operations end to end. Autonomous agents continuously detect, reason, decide and remediate across the entire technology estate, enabling IT operations to evolve from a manual cost center into an autonomous, self-optimizing capability that is continuously improving.

>50%
MTTR reduction

Up to 50%
Work agentified

Up to 25%
Less alert fatigue

Four areas of impact with every engagement

Faster resolution
Autonomous detection, RAG-grounded root-cause reasoning and closed-loop remediation cut mean-time-to-resolution by more than 30%.

Greater efficiency
Up to half of routine work is agentified and development effort drops more than 20%, freeing skilled engineers from L1/L2 toil for higher-value work.

Trusted actions
Policy guardrails, approval gates, human-in-the-loop escalation and per-action audit trails governed to ISO/IEC 42001 responsible-AI standards.

Enhanced control
No model lock-in. Cognizant Autonomous IT Ops Toolkit (ATK) runs on any LLM and any agentic framework, integrating through open standards such as MCP and agent-to-agent (A2A) messaging.

Six unmatched differentiators that define our edge

Our approach is different. Here are six factors that define it.

Full-stack agentic capabilities
Autonomous agents span every enterprise tower as one end-to-end solution and not as disconnected point tools bolted onto a single domain.

Agnostic intelligence layer
A unified detection, reasoning, orchestration and inference engine that runs on any LLM, including, Claude, GPT or Gemini with zero model lock-in.

Deep enterprise integration
Native, bidirectional, audited connectors integrated into ITSM, monitoring, cloud, CMDB and DWP systems, enabling true closed-loop remediation.

OEM MCP + build-our-own
Combined OEM-provided MCP servers with proprietary Cognizant MCP connectors—the best buy and built for every tool in the estate.

Hybrid agentic model
Blends ITSM-native agents with Cognizant hyperscaler-based agents for maximum flexibility and faster time-to-value.

Explainable and governed autonomy
Confidence-scored action plans, RAG over runbooks and root-cause chain-of-thought make every autonomous decision defensible and auditable.closed-loop remediation.

The architecture is deliberately three-layered. Enterprise towers stream signals into the Cognizant Autonomous IT Ops Toolkit (ATK) intelligence engine, which decomposes work across multi-agent workflows and dispatches remediation through a secure MCP integration gateway that executes directly on impacted configuration items. Humans supervise rather than operate, defining policy, guardrails and strategy while agents handle diagnosis, sequencing and resolution.

Cognizant Autonomous IT Ops Toolkit (ATK): An autonomous loop that senses, reasons and acts

Sense
Enterprise towers
Observes signals, events and telemetry across the entire IT estate.

7 towers + observability

Reason
Cognizant Autonomous IT Ops Toolkit (ATK) intelligence engine
Finds root cause and plans the fix; LLM-agnostic, human-in-loop.

Detect, reason and orchestrate

Act
MCP resolution gateway
Remediates directly on impacted systems via MCP; secure and fully audited.

ServiceNow, cloud, network, endpoints

Closed-loop · Always-on · Autonomous
Every resolution feeds back into sensing, so Autonomous IT Ops Toolkit keeps improving.

Delivered outcomes

The Cognizant Autonomous IT Ops Toolkit (ATK) is live across regulated, high-volume enterprises. While the following engagements are anonymized for public release, named references are available under client consent.



Case study 1: AI-powered service desk transformation
Click to know more



Case study 2: Agentic AI support for service desk
Click to know more



Case study 3: Autonomous problem management
Click to know more

Case study 1: AI-powered service desk transformation

A global insurance leader improved service quality, productivity and user experience

Context and challenge

A leading global insurance and asset management company sought to modernize its 24/7 level 1 support operations across platform services.

Manual incident intake, monitoring, service request handling and knowledge management processes resulted in increased resolution times, dependency on support engineers and challenges in maintaining consistent SLA performance.



What is deployed

- AI-powered Cognizant Autonomous IT Ops Toolkit (ATK) solution integrated with ServiceNow to automate incident management, knowledge delivery, training assistance and meeting intelligence
- Incident AI, knowledge AI, training AI and meeting AI modules deployed in the ServiceNow development environment
- Real-time AI-assisted diagnostics, knowledge recommendations and support guidance for L1 engineers to improve triage and resolution effectiveness

Outcomes delivered:

35%

incidents resolved with AI-assisted diagnostics, accelerating incident resolution

98%

knowledge base availability maintained on resolved tickets through automated knowledge generation

100%

target-user adoption achieved for incident AI across the support organization

17%

reduction in knowledge management effort through automated meeting transcription, summarization and article creation

Improved MTTR and SLA adherence through standardized support processes and AI-driven operational insights

Scalable AI operating model established for expansion across new business lines

Case study 2: Agentic AI support for service desk

A global biopharma enhanced resolution efficiency with agentic AI

Context and challenge

A global biopharmaceutical leader replaced a legacy chatbot with an agentic AI assistant (front-ended by Microsoft Copilot Studio) for L1/L1.5 IT support.

Manual ticket handling, limited personalization and weak multilingual coverage slowed resolution and inflated helpdesk volume.



What is deployed

- Persona-aware ticket creation, triage, routing and closure with contextual knowledge delivery
- Multilingual support across teams (web, mobile and desktop) with in-chat approvals and real-time nudges

Outcomes delivered:

63%

machine-first resolution, up from 36%; a 50% improvement in six months

660/1,500

500 tickets triaged autonomously by AI

3

FTE service-desk associate effort saved; lower call volume to the help desk

20

use cases live in phase 1, with an 80:20 agentic model on the roadmap

Case study 3: Autonomous problem management

A US property and casualty insurer automated RCA at scale, accelerating ticket closure

Context and challenge

A US property and casualty insurer runs end-to-end managed IT operations across ~8,000 configuration items, spanning infrastructure and mainframe.

The root-cause analyses were inconsistent. The insurer struggled with limited 5-Whys rigor, missing contributing factors and implementing inadequate corrective/preventive actions, which led to recurring incidents.



What is deployed

- Problem Assist auto-drafting RCAs in a standard template using inputs from the major incident management process
- Constructing the 5-Whys chain from current and historical incidents, surfacing contributing factors and drafting detailed corrective and preventive actions

Outcomes delivered:

~2 hrs

manual effort saved per incident on RCA drafting and submission

Fewer RCA rejections

reduced rework, accelerating ticket closure

Higher SLA compliance

and first-contact resolution through AI-curated content

Fewer recurring incidents

via structured, defensible root-cause identification

Build your autonomous IT operations

The Cognizant Autonomous IT Ops Toolkit (ATK) brings detection, reasoning, orchestration and remediation together in one governed, closed loop. Its full-stack, model-agnostic architecture helps enterprises progress from assisted operations to augmentation and autonomy across the IT estate. By automating routine work, accelerating resolution and reducing recurring incidents, it enables skilled teams to focus on higher-value priorities. With human oversight, policy guardrails and auditability built in, organizations can advance toward machine-first, self-healing operations with control. Wherever you are on your AI maturity journey, the Cognizant Autonomous IT Ops Toolkit (ATK) enables a structured progression from assist to augment to autonomous curve and scales across all seven capability areas.

Explore a tailored demo and value assessment for your estate.
To learn more, contact: CISAgenticAIToolkit@cognizant.com

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Cognizant (Nasdaq: CTSH) is an AI Builder and technology services provider, bridging the gap between AI investment and enterprise value by building full-stack AI solutions for our clients. Our deep industry, process and engineering expertise enables us to build an organization's unique context into technology systems that amplify human potential, drive tangible outcomes and keep global enterprises ahead in a fast-changing world. See how at cognizant.ai or @cognizant.

World Headquarters

300 Frank W. Burr Blvd.
Suite 36, 6th Floor
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233

European Headquarters

280 Bishopsgate
London
EC2M 4AG
England
Tel: +44 (01) 020 7297 7600

India Corporate Office

Siruseri-Software Technology Park of India (STPI)
SDB Block—Ground Floor North Wing
Plot No H4, SIPCOT IT Park
Chengalpattu District
Chennai 603103, Tamil Nadu
Tel: 1800 208 6999

APAC Headquarters

1 Fusionopolis Link,
Level 5 NEXUS@One-North,
North Tower Singapore 138542
Phone: + 65 6812 4000

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