

Agentic AI-powered NetOps solution

In partnership with Cisco

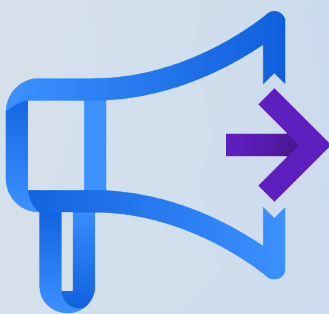


Overview

HCLTech's Agentic AI-powered NetOps solution, developed in collaboration with Cisco, meets the increasing demand for AI-enhanced network operations. This innovative solution harnesses enterprise LLMs alongside Cisco's powerful platforms to automate critical tasks, strengthen security measures and optimize network performance. It encompasses a wide range of practical use cases, such as vulnerability management, capacity planning and intelligent root cause analysis. Doing so enables organizations to achieve higher operational efficiency and ensure greater network reliability, ultimately supporting their digital transformation efforts. Agent-to-Agent communication is leveraged using the HCLTech AI Force platform to detect and resolve networking incidents related to Layer 2 and 3.



Market trends



80% productivity gains

across classes of knowledge workers and creative tasks with GenAI implementation

70% of enterprises

will identify the sustainable and ethical use of AI among their top concerns

38% banking and finance sector

leads in GenAI adoption, followed by high-tech at 26%

200+ GenAI use cases supported by

HCLTech, with faster time-to-market through cloud native GenAI labs, IPs and frameworks

\$40.1 Bn worldwide

GenAI Core IT infrastructure/platform spending projected by 2027

\$3-4 Tn forecasted economic benefits

GenAI will have on the global economy

Client challenges

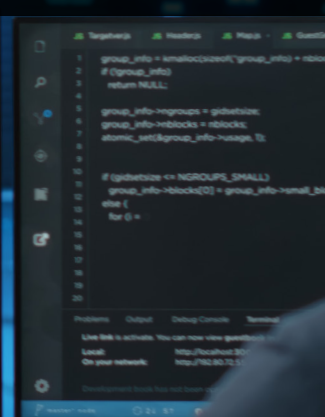


- Complexity of integration: Integrating Agentic AI into existing network operations can be complex, especially in environments with established processes and legacy systems. Many organizations struggle with the technical challenges of integrating AI tools with their existing network infrastructure.
- Data privacy and security: AI models, especially those handling sensitive data, can raise concerns about privacy and security. Network operations often involve handling sensitive information and the use of AI can create additional attack surfaces or vulnerabilities if not properly managed.
- Scalability: As AI applications in network operations grow in complexity, scalability becomes a key challenge. Organizations need to ensure that their AI solutions can scale effectively without compromising performance or reliability.
- Operational disruption: The introduction of AI-driven automation in network operations can disrupt established workflows, require staff retraining and potentially cause resistance to change within the organization.
- High cost of implementation: Deploying AI solutions in network operations can be expensive, requiring significant investments in AI infrastructure, software and expertise. The total cost of ownership can be a barrier for smaller organizations.



Use cases

HCLTech GenAI and Agentic AI solutions for network operations offer significant potential for enhancing operations by automating tasks, predicting network issues, optimizing performance and assisting with security measures.



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Below are the operational use cases pre-trained and tested for enterprise network environments.



Network vulnerability management:

HCLTech AI Force Agent will analyze all critical vulnerability recommendations and take action based on criticality using Cisco management platforms, enterprise LLM



Network capacity planning:

Enterprise LLM forecasts future capacity needs, ensuring efficient resource allocation and cost savings



Network documentation automation:

Enterprise LLM generates up-to-date network documentation, reducing manual documentation tasks and facilitating knowledge transfer



Automated network configuration:

GenAI generates and applies network configurations based on real-time data and business requirements, reducing human error and deployment times



Intelligent root cause analysis:

HCLTech AI Force NetOps Agent analyzes logs and performance data to pinpoint network issues, reducing mean time to resolution and improving network stability

HCLTech solution

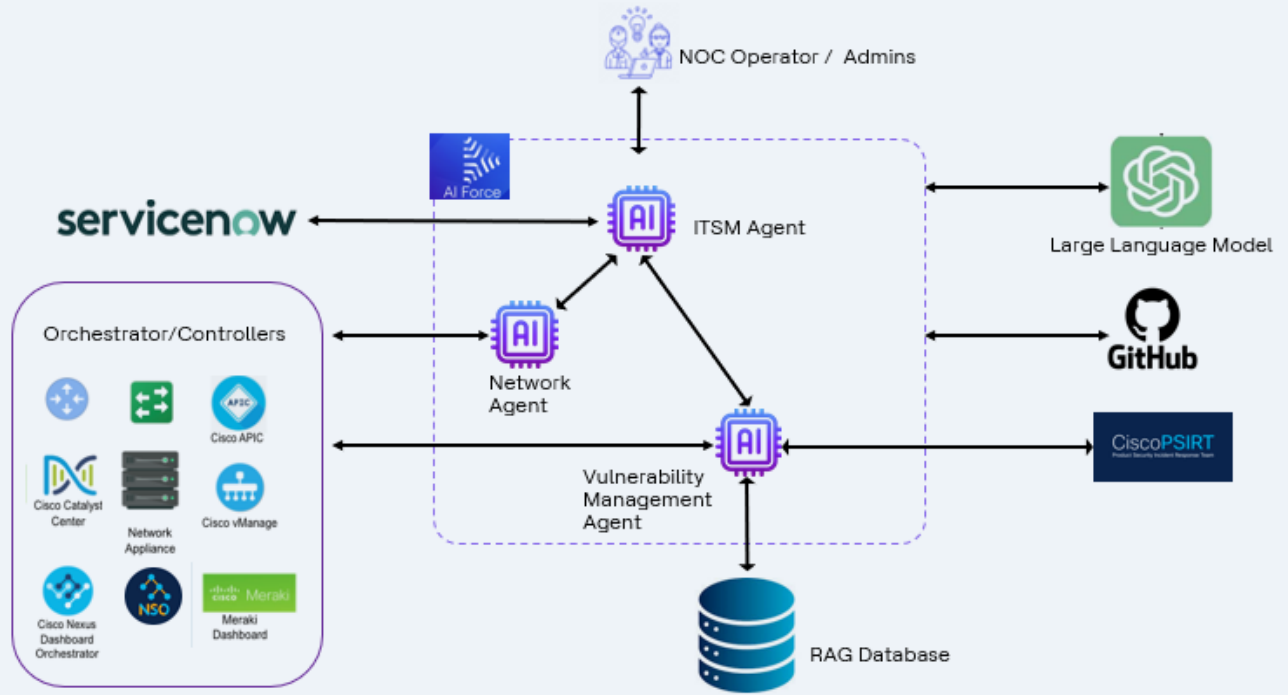
The solution will utilize Cisco's advanced network management platforms, such as Nexus dashboard, Cisco Catalyst Center, Cisco networking cloud and pre-trained enterprise large language models (LLMs), along with custom prompt engineering to improve network stability and reduce time to identify and resolve problems.

The solution assists enterprises in streamlining operations and boosting network reliability. It significantly improves operations by using Agentic AI to automate tasks, predict and fix network issues, optimize performance and enhance security. Tested in enterprise settings, it covers key areas such as vulnerability management, capacity planning, documentation automation, configuration and root cause analysis, ensuring efficient resource allocation and cost savings.



Architecture diagram

Agentic AI-powered NetOps solution



Benefits of Agentic AI for network operations



Improved network performance and reliability:

AI can automate routine tasks such as network monitoring, anomaly detection and fault diagnosis, leading to more reliable network operations. It can also predict potential issues before they occur, allowing for proactive maintenance.



Enhanced security:

It can enhance network security by continuously monitoring network traffic and detecting potential threats in real-time. AI algorithms can analyze patterns and detect anomalies that may indicate security breaches.



Data-driven decision making:

It provides network operators with actionable insights based on data analysis. AI can identify patterns and trends in network performance, enabling more informed decision-making and better resource allocation.



Operational efficiency:

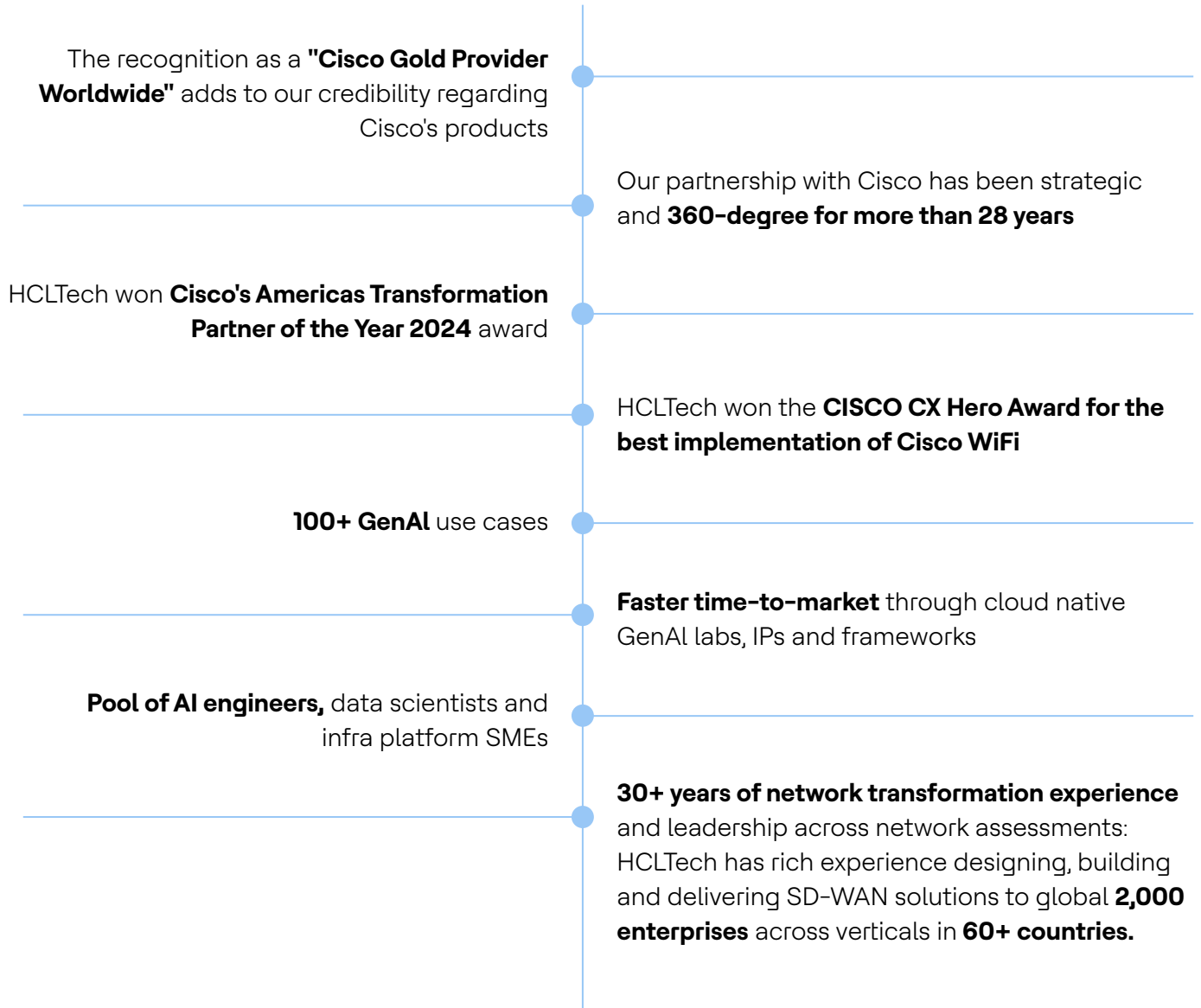
Automating repetitive and time-consuming tasks frees up network operators to focus on more strategic activities. AI-driven automation reduces the need for manual intervention in routine tasks such as configuration management and monitoring.



Scalability and flexibility:

The solution can scale with the network, allowing businesses to expand their operations without compromising performance. As AI models are trained and optimized, they can handle larger amounts of data and more complex network environments.

Why HCLTech



Sources:

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