



Ciena Global Study Finds 60% of CSPs Believe AI Will Improve Network Operational Efficiency By 40% or More

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Study of Telecom and IT Engineers Explores AI's Impact on the Network

HANOVER, Md.--(BUSINESS WIRE)--May 22, 2024-- A global study commissioned by [Ciena](#) (NYSE: CIEN) sheds light on communications service providers' (CSPs) growing optimism toward Artificial Intelligence (AI). More than half of telecom and IT engineers surveyed believe the use of AI will improve network operational efficiency by 40% or more¹. In addition, an overwhelming 85%² of respondents express confidence in CSPs' ability to monetize AI traffic across networks.

The research was conducted by Ciena in collaboration with Censuswide, surveying more than 1,500 telecom and IT engineers and managers at CSPs in 17 countries across the globe.

[Jürgen Hatheier](#), Ciena's International Chief Technology Officer, said: "Understanding emerging technologies like AI is an essential step toward staying competitive in today's constantly changing digital landscape. The survey highlights the optimistic long-term outlook of CSPs regarding AI's ability to enhance the network as well as the need for strategic planning and investments in infrastructure and expertise to fully realize the benefits."

AI network benefits

A key theme from the study is the opinion that AI will enhance network performance. To achieve this, participants believe new solutions across fiber network infrastructure and operations will be required. According to the study, the most popular strategies believed to improve performance include upgrading networks with new traffic and network analysis software (selected by 49% of respondents), along with upgrades in switches and routers (43%), and investment in 800G technology (40%), underscoring the multi-faceted approach operators are adopting to bolster network capabilities. In fact, almost all (99%)³ respondents⁴ believe they will need to upgrade fiber-optic networks to support more AI traffic.

AI-driven revenue opportunities

Globally, CSPs believe the sectors that will generate the most AI traffic, and therefore revenue opportunities, are financial services (46%), followed by media and entertainment (43%), and manufacturing (38%).

Respondents also see multiple avenues to generate revenue from AI. Specifically, 40% believe it will be from opening their networks to third-party integrations; 37% believe revenue will come from security and privacy services; the same number (37%) believe it will come from new product offerings; 35% believe it will be from the creation of tailored subscription packages; and 34% believe revenue will be from differentiation on quality of service for connectivity.

Private vs. public cloud

The research highlights the critical role of cloud in supporting and utilizing AI across networks. 43% of CSPs favor private cloud deployment for AI services, while 37% lean toward public cloud providers' data centers. Meanwhile, only 21% of respondents plan to adopt a hybrid cloud model.

Job creation

According to the study, 67%⁵ of CSPs anticipate AI to be a force for job creation and identified key areas of expertise necessary for developing and launching AI services, including cybersecurity (31%), followed by machine learning (30%), and programming/coding (30%).

Global differences

The survey yielded interesting results by country, showing how CSPs' confidence in monetizing AI can vary significantly. Of note, CSPs in India are among the most confident (95%) while the U.S. is among the least confident (55%). There were similar differences in the optimism around AI's impact on creating or reducing jobs amongst CSPs, with a 50% difference between Mexico seeing the most job creation, and Japan seeing the least (90% vs 40%)⁵. The survey also revealed the breadth of sectors that different countries see as driving the growth in AI traffic, with financial services, entertainment, manufacturing, healthcare, and education all coming out on top in at least one market.

The research was conducted by Censuswide, among a sample of 1517 18+ full time employees in IT or Telecoms industry – engineer/technician /analyst, manager, VP/director, C-Level across the USA, Brazil, Mexico, UK, Germany, Norway, Sweden, Middle East (UAE, KSA and Egypt), Australia, Japan, India, Philippines, Indonesia, Korea and Singapore. The data was collected between 03. 18. 2024 -03. 28. 2024. Censuswide abides by and employs members of the Market Research Society and follows the MRS code of conduct and ESOMAR principles. Censuswide is also a member of the British Polling Council.

About Ciena

Ciena (NYSE: CIEN) is a global leader in networking systems, services, and software. We build the most adaptive networks in the industry, enabling customers to anticipate and meet ever-increasing digital demands. For three-plus decades, Ciena has brought our humanity to our relentless pursuit of innovation. Prioritizing collaborative relationships with our customers, partners, and communities, we create flexible, open, and sustainable networks that better serve all users—today and into the future. For updates on Ciena, follow us on [LinkedIn](#), [Twitter](#), the [Ciena Insights blog](#), or visit www.ciena.com.

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¹ '41-60%', '61-80%' and '81-100%' answers combined (58%)

² 'Very confident' and 'Somewhat confident' answers combined

³ This % was calculated using the inverse of 'Not sure' and 'No particular way'

⁴ Respondents who expect a percentage increase in traffic between data centers and the network edge to be carried, as a result of AI usage

⁵ 'Significantly increase new roles' and 'Moderately increase new roles' answers combined

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