



Secure Infrastructure

Five Trends Driving Networks in 2024 and Beyond



The Shift to Software Defined Networking (SD-WAN)

Gartner projects that the SD-WAN market will experience a compound annual growth rate (CAGR) of 14.6% in end-user spending from 2022 through 2027

Many legacy networks are challenged by the demands created by the shift to a hybrid IT environment. With the blend of cloud, SaaS, and on-premise technologies overlaid with real-time bandwidth and automation demands, some networks need help keeping pace with requirements. SD-WAN can offer a solution to these challenges.

SD-WAN (Software-Defined Wide Area Network) offers several benefits over legacy WAN architecture. Here are some key advantages:

- Enhanced Connectivity and Reliability
- Increased bandwidth and Efficiency
- Enhanced Network Security and Protection
- Improved Quality of User Experience
- Cost Savings and Return on Investment
- Simplified Network Management
- Adapt and Scale with Demand
- Improved Agility and Flexibility
- Improved Application and Network Performance
- Reduced Outages and Increased Uptime

SD-WAN offers benefits compared to legacy WAN architecture. These advantages make it a compelling choice for organisations looking to optimise their network infrastructure.



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Edge Computing

With the increasing reliance on cloud services, there is a need for faster processing and reduced latency.

Edge computing brings computational power and storage closer to the devices and users, enabling real-time data processing and improved application performance. Edge networks are designed to handle the increasing data traffic IoT devices generate.

Edge computing offers several benefits. Here are some key advantages:

- Reduced Latency
- Improved Performance
- Enhanced Privacy and Security
- Cost Optimisation
- Reliability and Resilience

Gartner predicts that by 2025, **75%** of enterprise-generated data will be created and processed **at the edge** – outside a traditional centralized data centre or cloud.



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The Internet of Things (IoT) Driving Change

The proliferation of IoT devices has created a demand for networks capable of supporting massive device connections and handling vast amounts of data. IoT networks require low latency, high bandwidth, and secure connectivity to enable seamless communication between devices, sensors, and applications.

Legacy networks face several challenges when integrating with the Internet of Things (IoT). Legacy networks were designed before the widespread adoption of IoT devices and may not have built-in support for the technologies and protocols used in IoT. This can make it challenging to connect and communicate with IoT devices effectively.

Often, legacy networks have limited bandwidth capacity, which can pose challenges when dealing with the large volumes of data generated by IoT devices, leading to slower data transfer speeds and reduced performance.

Legacy networks may not also have the necessary security features and protocols to protect against the increasing cybersecurity risks associated with IoT adequately.

In addition, legacy systems and protocols may not be compatible with the communication standards and protocols used in IoT. This can hinder the seamless integration and interoperability between IoT devices and existing legacy infrastructure.

In 2022, global IoT spending was predicted to hit \$1 trillion. And in 2023, predicted spending rose to \$1.1 trillion,



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Next Generation Wi-Fi

The Wi-Fi 6 market is expected to reach \$46.56 billion in 2026 at a compound annual growth rate (CAGR) of 38.03%

Launched in late 2019, Wi-Fi 6 is revolutionising networks by providing higher capacity, faster speeds, extended range, improved power efficiency, enhanced security, and better support for IoT devices. Its advancements enable networks to handle the increasing demands of today's connected world, providing users with a superior wireless experience.

Wi-Fi 6 can help solve the challenges organisations face when a large number of devices are demanding on the same network.

- It makes it easier for a router to communicate with multiple devices.
- It allows routers to send data to multiple devices at once.
- Faster speeds up to 9.6Gbps up from Wi-Fi 5
- Supports Wi-Fi protected Access 3 (WPA3)
- 8x8 spatial streams for concurrent usage
- 25% increase on throughput speeds
- Increasing access point capacity for support of IoT and Mobile devices
- Facilitates and improves Wi-Fi device set-up times to check in with the router.



Artificial Intelligence (AI) and Machine Learning (ML)

AI and ML technologies are being integrated into networks to improve network monitoring, analytics, and security.

These technologies can autonomously detect and mitigate network anomalies, optimise network performance, and identify security threats in real-time. AI and ML enable proactive network management, improving user experiences and increasing network reliability.

These trends are shaping the future of IT networks, empowering organisations to build more agile, scalable, and secure network infrastructures that meet the digital age's demands.

Benefits of AI

- Better Decisions
- Efficiency and Productivity Gains
- Improved Speed of Business
- New Capabilities and Business Expansion
- Improved Monitoring and Services
- Better Quality and Reduced Human Error
- Increased Profitability
- Drives Innovation

83% of companies claim that AI is a top priority in their business plans.

How FourNet Can Help You

FourNet a highly certified Cisco, Fortinet and Extreme Networks partner and work with some of the UK's most critical and commercially driven organisations.

We offer a partnership you can depend on and trust and have the expertise to ensure you have the right solution to achieve the best outcomes.

If you want to understand how FourNet can ensure your network is future-proofed, please talk to our team to discuss your requirements or take advantage of a free network workshop to build the right roadmap to ensure your network is ready for whatever the future brings.



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