



NEWS RELEASE

# New Cisco Annual Internet Report Forecasts 5G to Support More Than 10% of Global Mobile Connections by 2023

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## News Summary:

### By 2023:

- *5G Speeds will be 13 times higher than the Average Mobile Connection*
- *66% of the global population will have Internet access – that's a WW Internet community of 5.3 billion people*
- *There will be nearly 30 billion devices/connections by 2023 – 45% of those will be mobile*
- *Average broadband speeds will rise from 46 Mbps to 110 Mbps*
- *Wi-Fi6 hotspots will grow 13-fold from 2020-2023 and will make up 11% of all public Wi-Fi hotspots*

According to the new Cisco Annual Internet Report, 5G will support more than 10% of the world's mobile connections by 2023. The average 5G speed will be 575 megabits per second, or 13 times faster than the average mobile connection. With advanced performance capabilities, 5G will deliver more dynamic mobile infrastructures for AI and emerging IoT applications including autonomous cars, smart cities, connected health, immersive video and more.

For the past 50 years, each decade introduced a new mobile technology with cutting-edge innovations. Mobile bandwidth requirements have evolved from voice calls and texting to ultra-high-definition (UHD) video and a variety of augmented reality/virtual reality (AR/VR) applications. Consumers and business users worldwide continue to create new demands and expectations for mobile networking. This ongoing trend is clearly highlighted by the adoption and use of mobile applications. Social networking, video streaming and downloads, business productivity, e-commerce and gaming will drive the continued growth of mobile applications with nearly 300 billion downloaded by 2023.

"What we are seeing from our research is a continuous rise in internet users, devices, connections, and more demand on the network than we could have imagined," said Roland Acra, Senior Vice President and Chief Technology Officer at Cisco. "The insights and knowledge gained by our Annual Internet Report are helping global businesses, governments and service providers prepare and secure networks for the ongoing growth in connections and applications. Strategic planning and partnerships will be essential for all organizations to capitalize on their technology innovations and investments."

## **Cisco Annual Internet Report Highlights (2018 – 2023)**

The Cisco Annual Internet Report covers mobile, Wi-Fi and fixed broadband networking with quantitative projections on the growth of users, devices and connections as well as network performance and relevant trends over a five-year forecast period (2018 – 2023).

### **1. Global mobile and internet user projections by 2023**

- More than 70 percent of the global population (5.7 billion people) will have mobile connectivity (2G, 3G, 4G or 5G).
- 66 percent of the global population (5.3 billion people) will be internet users.

### **2. Global devices and connections projections by 2023**

- There will be 3.6 networked devices/connections per person and nearly 10 devices and connections per household.
- Nearly half (47%) of all devices and connections will be video capable.
- Machine-to-machine (M2M) connections that support a broad range of IoT applications will represent about 50% (14.7 billion) of total global devices and connections.

### **3. Global mobile projections by 2023**

- 45% of all networked devices will be mobile-connected (3G and below, 4G, 5G or Low Power Wide Area [LPWA]) and 55% will be wired or connected over Wi-Fi.
- Global 5G connections will be 10.6% of total mobile connections, compared to 0.0% in 2018.
- By 2023, global LPWA connections will be 14.4% of total mobile connections, compared to 2.5% in 2018.

### **4. Global Wi-Fi projections by 2023**

- Global Wi-Fi hotspots will grow four-fold from 2018 to 2023. There will be nearly 628 million global public Wi-Fi hotspots, up from 169 million in 2018.
- Global Wi-Fi6 hotspots will grow 13-fold from 2020 to 2023 and will be 11% of all public Wi-Fi hotspots.

### **5. Global network performance projections (mobile, Wi-Fi, and fixed broadband) by 2023**

- Average global mobile connection speeds will more than triple from 13 Mbps (2018) to 44 Mbps (2023).
- Average global Wi-Fi connection speeds will more than triple from 30 Mbps (2018) to 92 Mbps (2023).
- Average global fixed broadband speeds will more than double from 46 Mbps (2018) to 110 Mbps (2023).

### **6. Global cybersecurity trends from 2018 to 2019**

- Globally, the frequency of DDoS attacks increased by 39%.
- Globally, the peak attack size increased 63%.
- The average DDoS attack size is 1 Gbps (23% of attacks are greater than 1 Gbps); there has been 776% growth in attacks between 100 Gbps and 400 Gbps.

### **Cisco Annual Internet Report Forecast**

The Cisco Annual Internet Report is a global, regional and country level forecast/analysis that assesses digital transformation and is developed by the same analyst team that created the Cisco Visual Networking Index (VNI) Forecast. The report covers fixed broadband, Wi-Fi, and mobile (3G and below, 4G, 5G) networking. Quantitative projections are provided on the growth of internet users, devices and connections as well as network performance and new application requirements. Qualitative analyses and assessments are also provided in four strategic areas: applications, security, infrastructure transformation, and empowering employees and teams.

### **Cisco Annual Internet Report Methodology**

The Cisco Annual Internet Report™ for 2018 to 2023 relies upon independent analyst forecasts and Cisco's own intellectual property. A detailed methodology description is included in the complete report. The Cisco® Annual Internet Report aims to provide credible industry metrics for internet growth to businesses national governments, network regulators, academic researchers, telecommunications companies, technology experts and industry/business press and analysts around the globe.

### **Supporting Resources**

- [Cisco Annual Internet Report site](#)
- [Cisco Annual Internet Report White Paper](#)
- [Cisco Annual Internet Report FAQ](#)
- Global, regional and country-level data and projections: [Cisco Annual Internet Report Highlights Tool](#)
- Regional and country-level [Cisco Internet Readiness Tool](#)
- [Global and Regional Infographics](#)
- [Video: Cisco SVP/CTO Roland Acra](#) discusses report's strategic relevance

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