



## United Kingdom - 2021 Forecast Highlights

### IP Traffic

- In the United Kingdom, IP traffic will grow 3-fold from 2016 to 2021, a compound annual growth rate of 22%.
- In the United Kingdom, IP traffic will reach 10.6 Exabytes per month in 2021, up from 3.9 Exabytes per month in 2016.
- The United Kingdom's IP networks will carry 348 Petabytes per day in 2021, up from 129 Petabytes per day in 2016.
- In the United Kingdom, IP traffic will reach an annual run rate of 127.0 Exabytes in 2021, up from an annual run rate of 47.1 Exabytes in 2016.
- In the United Kingdom, IP traffic will reach 158 Gigabytes per capita in 2021, up from 60 Gigabytes per capita in 2016.
- In the United Kingdom, average IP traffic will reach 32 Tbps in 2021, and busy hour traffic will reach 216 Tbps.
- In 2021, the gigabyte equivalent of all movies ever made will cross The United Kingdom's IP networks every 33 minutes.

### Internet Traffic

- In the United Kingdom, Internet traffic will grow 2.9-fold from 2016 to 2021, a compound annual growth rate of 23%.
- In the United Kingdom, busy hour Internet traffic will grow 4.5-fold from 2016 to 2021, a compound annual growth rate of 35%.
- In the United Kingdom, Internet traffic will reach 9.3 Exabytes per month in 2021, up from 3.2 Exabytes per month in 2016.

- The United Kingdom's Internet traffic will be 305 Petabytes per day in 2021, up from 110 Petabytes per day in 2016.
- The United Kingdom's Internet traffic in 2021 will be equivalent to 28 billion DVDs per year, 2 billion DVDs per month, or 3 million DVDs per hour.
- In 2021, the gigabyte equivalent of all movies ever made will cross the Internet every 38 minutes.
- U.K. Internet traffic in 2021 will be equivalent to 125x the volume of the entire U.K. Internet in 2005.
- In the United Kingdom, Internet traffic will reach 138 Gigabytes per capita in 2021, up from 50 Gigabytes per capita in 2016.
- In the United Kingdom, average Internet traffic will increase 2.9-fold by 2021 and will reach 28 Tbps.
- In the United Kingdom, busy hour Internet traffic will increase 4.5-fold by 2021 and will reach 189 Tbps.

### Wired Wi-Fi and Mobile Growth

- The United Kingdom's Fixed/Wi-Fi was 49% of total IP traffic in 2016, and will be 48% of total IP traffic in 2021.
- The United Kingdom's Fixed/Wired was 48% of total IP traffic in 2016, and will be 47% of total IP traffic in 2021.
- The United Kingdom's Mobile was 3% of total IP traffic in 2016, and will be 5% of total IP traffic in 2021.
- The United Kingdom's Fixed/Wi-Fi was 57.6% of total Internet traffic in 2016, and will be 53.5% of total Internet traffic in 2021.
- The United Kingdom's Fixed/Wired was 39% of total Internet traffic in 2016, and will be 40% of total Internet traffic in 2021.
- The United Kingdom's Mobile was 3.5% of total Internet traffic in 2016, and will be 6.2% of total Internet traffic in 2021.
- In the United Kingdom, mobile data traffic will grow 5-fold from 2016 to 2021, a compound annual growth rate of 38%.
- In the United Kingdom, mobile data traffic will reach 580 Petabytes per month in 2021, up from 114 Petabytes per month in 2016.
- U.K. mobile data traffic will grow 2 times faster than U.K. fixed IP traffic from 2016 to 2021.
- The United Kingdom's Mobile was 3% of total IP traffic in 2016, and will be 5% of total IP traffic in 2021.
- In the United Kingdom, mobile data traffic in 2021 will be equivalent to 7x the volume of the entire U.K. Internet in 2005.

### IP Video

- In the United Kingdom, IP video traffic will grow 3-fold from 2016 to 2021, a compound annual growth rate of 24%.
- In the United Kingdom, IP video traffic will reach 8.4 Exabytes per month in 2021, up from 2.8 Exabytes per month in 2016.
- In the United Kingdom, IP video will be 79% of all IP traffic in 2021, up from 71% in 2016.
- In the United Kingdom, Ultra HD will be 21.1% of IP Video traffic in 2021, up from 1.4% in 2016 (113.1% CAGR).
- In the United Kingdom, HD will be 61.3% of IP Video traffic in 2021, up from 49.3% in 2016 (30.0% CAGR).

- In the United Kingdom, SD will be 17.6% of IP Video traffic in 2021, compared to 49.3% in 2016 (1.3% CAGR).
- In the United Kingdom, consumer IP video traffic will be 81% of consumer IP traffic in 2021, up from 76% in 2016.
- In the United Kingdom, business IP video traffic will be 67% of business IP traffic in 2021, up from 47% in 2016.

### Internet Video

- In the United Kingdom, Internet video traffic will grow 3-fold from 2016 to 2021, a compound annual growth rate of 27%.
- In the United Kingdom, Internet video traffic will reach 7.1 Exabytes per month in 2021, up from 2.2 Exabytes per month in 2016.
- In the United Kingdom, total Internet video traffic (business and consumer, combined) will be 77% of all Internet traffic in 2021, up from 68% in 2016.
- In the United Kingdom, Ultra HD will be 19.8% of Internet video traffic in 2021, up from 1.7% in 2016 (107.5% CAGR).
- In the United Kingdom, HD will be 61.4% of Internet video traffic in 2021, up from 42.0% in 2016 (36.7% CAGR).
- In the United Kingdom, SD will be 18.7% of Internet video traffic in 2021, compared to 56.4% in 2016 (1.6% CAGR).
- In the United Kingdom, consumer Internet video traffic will be 78% of consumer Internet traffic in 2021, up from 71% in 2016.
- In the United Kingdom, business Internet video traffic will be 69% of business Internet traffic in 2021, up from 49% in 2016.
- In the United Kingdom, Internet-Video-to-TV traffic will be 48% of fixed consumer Internet video traffic in 2021, up from 35% in 2016.
- In the United Kingdom, Internet-Video-to-TV traffic will increase 4-fold between 2016 and 2021 (33.0% CAGR).
- In the United Kingdom, 125 billion minutes (238,659 years) of video content will cross the Internet each month in 2021. That's 47,732 minutes of video streamed or downloaded every second.
- In the United Kingdom, 98% of all Internet video traffic will cross content delivery networks in 2021, up from 85% in 2016.
- In the United Kingdom, 79.7% of all Internet video traffic will be long-form video (including live) in 2021, up from 60.3% in 2016.

### IP VOD

- In the United Kingdom, Ultra HD will be 31.4% of IP VOD traffic in 2021, up from 0.6% in 2016 (153.0% CAGR).
- In the United Kingdom, HD will be 65.8% of IP VOD traffic in 2021, up from 81.3% in 2016 (9.6% CAGR).
- In the United Kingdom, SD will be 2.8% of IP VOD traffic in 2021, compared to 18.1% in 2016 (-21.6% CAGR).

## Gaming

- In the United Kingdom, gaming traffic will grow 12-fold from 2016 to 2021, a compound annual growth rate of 66%.
- In the United Kingdom, gaming traffic will reach 824 Petabytes per month in 2021, up from 66 Petabytes per month in 2016.
- In the United Kingdom, gaming traffic will be 10% of consumer Internet traffic in 2021, up from 2% in 2016.

## Devices

- In the United Kingdom, there will be 628.6 million networked devices in 2021, up from 371.2 million in 2016.
- In the United Kingdom, there will be 9.4 networked devices per capita in 2021, up from 5.7 per capita in 2016.
- In the United Kingdom, 32% of all networked devices will be mobile-connected in 2021.
- In the United Kingdom, M2M modules will account for 58% (366.3 million) of all networked devices in 2021, compared to 38% (141.4 million) in 2016, (21% CAGR).
- In the United Kingdom, PCs will account for 7% (41.7 million) of all networked devices in 2021, compared to 13% (47.0 million) in 2016, (-2.4% CAGR).
- In the United Kingdom, Tablets will account for 4% (26.3 million) of all networked devices in 2021, compared to 8% (28.4 million) in 2016, (-1.5% CAGR).
- In the United Kingdom, Smartphones will account for 12% (72.9 million) of all networked devices in 2021, compared to 15% (56.6 million) in 2016, (5.2% CAGR).
- In the United Kingdom, Connected TVs will account for 16% (100.8 million) of all networked devices in 2021, compared to 18% (66.2 million) in 2016, (8.8% CAGR).
- In the United Kingdom, Non-Smartphones will account for 1.1% (6.6 million) of all networked devices in 2021, compared to 6% (20.4 million) in 2016, (-20.1% CAGR).
- In the United Kingdom, Other Portables will account for 2% (13.9 million) of all networked devices in 2021, compared to 3% (11.1 million) in 2016, (4.6% CAGR).
- In the United Kingdom, 4K TVs will account for 63% (21.1 million) of all flat panel TVs in 2021, compared to 17.6% (3.0 million) in 2016, (47.3% CAGR).
- The United Kingdom's IP traffic from non-PC devices was 48% of total IP traffic in 2016, and will be 69% of total IP traffic in 2021.
- In the United Kingdom, PCs accounted for 52% of IP traffic in 2016, and will be 31% of IP traffic in 2021.
- In the United Kingdom, TVs accounted for 31% of IP traffic in 2016, and will be 41% of IP traffic in 2021.
- In the United Kingdom, Smartphones accounted for 6% of IP traffic in 2016, and will be 13% of IP traffic in 2021.
- In the United Kingdom, Tablets accounted for 10% of IP traffic in 2016, and will be 11% of IP traffic in 2021.
- In the United Kingdom, M2M modules accounted for 1.6% of IP traffic in 2016, and will be 4.1% of IP traffic in 2021.
- In the United Kingdom, PCs accounted for 57% of consumer Internet traffic in 2016, and will be 31% of consumer Internet traffic in 2021.
- In the United Kingdom, TVs accounted for 23% of consumer Internet traffic in 2016, and will be 40% of consumer Internet traffic in 2021.
- In the United Kingdom, TVs accounted for 20% of total Internet traffic in 2016, and will be 35% of total Internet traffic in 2021.

## Speed Evolution

- In the United Kingdom, the average fixed broadband speed will grow 2.0-fold from 2016 to 2021, from 29.8 Mbps to 60.2 Mbps.
- In the United Kingdom, 96% of fixed broadband connections will be faster than 5 Mbps in 2021, up from 83% today.
- In the United Kingdom, 85% of fixed broadband connections will be faster than 10 Mbps in 2021, up from 69% today.
- In the United Kingdom, 54.3% of fixed broadband connections will be faster than 25 Mbps in 2021, up from 40.0% today.
- In the United Kingdom, 39.8% of fixed broadband connections will be faster than 50 Mbps in 2021, up from 20.7% today.
- In the United Kingdom, the average Wi-Fi speeds from mobile devices will grow 1.6-fold from 2016 to 2021, from 23.8 Mbps to 37 Mbps.
- In the United Kingdom, the average mobile connection speed will grow 3-fold from 2016 to 2021, reaching 34 Mbps in 2021.

## Traffic per User and Household

- In the United Kingdom, the average Internet user will generate 140.0 Gigabytes of Internet traffic per month in 2021, up 159% from 54.0 Gigabytes per month in 2016, a CAGR of 21%.
- In the United Kingdom, the average Internet household will generate 302.0 Gigabytes of Internet traffic per month in 2021, up 163% from 114.9 Gigabytes per month in 2016, a CAGR of 21%.
- In the United Kingdom, the average FTTx Internet household will generate 871.8 Gigabytes of Internet traffic per month in 2021, 191.4% more than other broadband households.
- In the United Kingdom, the average FTTx Internet household generated 449.0 Gigabytes of Internet traffic per month in 2016, 282.1% more than other broadband households.
- In the United Kingdom, there will be 7 million Internet households (30.8% of all Internet households) generating more than 250 Gigabytes per month in 2021.
- In the United Kingdom, there will be 5 million households (21.8% of all Internet households) generating more than 500 Gigabytes per month in 2021.
- In the United Kingdom, there will be 2 million households (6.9% of all Internet households) generating more than a terabyte per month in 2021.
- In the United Kingdom, the average mobile connection will generate 5,243 Megabytes of mobile data traffic per month in 2021, up from 1,252 Megabytes in 2016.

## Traffic Topology and Traffic Patterns

- In the United Kingdom, 90% of all Internet traffic will cross content delivery networks in 2021, up from 70% in 2016.
- In the United Kingdom, peak Internet traffic will grow at a compound annual growth rate of 35% from 2016 to 2021, compared to 23% for average Internet traffic.