



## Japan - 2020 Forecast Highlights

### IP Traffic

- In Japan, IP traffic will grow 3-fold from 2015 to 2020, a compound annual growth rate of 22%.
- In Japan, IP traffic will reach 9.5 Exabytes per month in 2020, up from 3.5 Exabytes per month in 2015.
- Japan's IP networks will carry 311 Petabytes per day in 2020, up from 114 Petabytes per day in 2015.
- In Japan, IP traffic will reach an annual run rate of 113.5 Exabytes in 2020, up from an annual run rate of 41.5 Exabytes in 2015.
- In Japan, IP traffic will reach 76 Gigabytes per capita in 2020, up from 27 Gigabytes per capita in 2015.
- In Japan, average IP traffic will reach 29 Tbps in 2020, and busy hour traffic will reach 155 Tbps.
- In 2020, the gigabyte equivalent of all movies ever made will cross Japan's IP networks every 37 minutes.

### Internet Traffic

- In Japan, Internet traffic will grow 3.2-fold from 2015 to 2020, a compound annual growth rate of 26%.
- In Japan, busy hour Internet traffic will grow 4.8-fold from 2015 to 2020, a compound annual growth rate of 37%.
- In Japan, Internet traffic will reach 8.1 Exabytes per month in 2020, up from 2.5 Exabytes per month in 2015.
- Japan's Internet traffic will be 267 Petabytes per day in 2020, up from 80 Petabytes per day in 2015.
- Japan's Internet traffic in 2020 will be equivalent to 24 billion DVDs per year, 2 billion DVDs per month, or 3 million DVDs per hour.
- In 2020, the gigabyte equivalent of all movies ever made will cross the Internet every 43 minutes.

- Japanese Internet traffic in 2020 will be equivalent to 64x the volume of the entire Japanese Internet in 2005.
- In Japan, Internet traffic will reach 65 Gigabytes per capita in 2020, up from 20 Gigabytes per capita in 2015.
- In Japan, average Internet traffic will increase 3.2-fold by 2020 and will reach 25 Tbps.
- In Japan, busy hour Internet traffic will increase 4.8-fold by 2020 and will reach 133 Tbps.

### Wired Wi-Fi and Mobile Growth

- Japan's Fixed/Wi-Fi was 47% of total IP traffic in 2015, and will be 57% of total IP traffic in 2020.
- Japan's Fixed/Wired was 43% of total IP traffic in 2015, and will be 28% of total IP traffic in 2020.
- Japan's Mobile was 10% of total IP traffic in 2015, and will be 16% of total IP traffic in 2020.
- Japan's Fixed/Wi-Fi was 58.7% of total Internet traffic in 2015, and will be 63.6% of total Internet traffic in 2020.
- Japan's Fixed/Wired was 27% of total Internet traffic in 2015, and will be 18% of total Internet traffic in 2020.
- Japan's Mobile was 14.0% of total Internet traffic in 2015, and will be 18.1% of total Internet traffic in 2020.

### IP Video

- In Japan, IP video traffic will grow 3-fold from 2015 to 2020, a compound annual growth rate of 26%.
- In Japan, IP video traffic will reach 7.6 Exabytes per month in 2020, up from 2.4 Exabytes per month in 2015.
- In Japan, IP video will be 81% of all IP traffic in 2020, up from 69% in 2015.
- In Japan, Ultra HD will be 18.9% of IP Video traffic in 2020, up from 2.8% in 2015 (84.5% CAGR).
- In Japan, HD will be 68.2% of IP Video traffic in 2020, up from 55.3% in 2015 (31.5% CAGR).
- In Japan, SD will be 12.9% of IP Video traffic in 2020, compared to 41.8% in 2015 (-0.3% CAGR).
- In Japan, consumer IP video traffic will be 85% of consumer IP traffic in 2020, up from 78% in 2015.
- In Japan, business IP video traffic will be 65% of business IP traffic in 2020, up from 43% in 2015.

### Internet Video

- In Japan, Internet video traffic will grow 4-fold from 2015 to 2020, a compound annual growth rate of 32%.
- In Japan, Internet video traffic will reach 6.4 Exabytes per month in 2020, up from 1.6 Exabytes per month in 2015.
- In Japan, total Internet video traffic (business and consumer, combined) will be 79% of all Internet traffic in 2020, up from 64% in 2015.
- In Japan, Ultra HD will be 17.5% of Internet video traffic in 2020, up from 3.7% in 2015 (80.0% CAGR).
- In Japan, HD will be 71.4% of Internet video traffic in 2020, up from 55.2% in 2015 (38.9% CAGR).
- In Japan, SD will be 11.1% of Internet video traffic in 2020, compared to 41.0% in 2015 (1.5% CAGR).
- In Japan, consumer Internet video traffic will be 82% of consumer Internet traffic in 2020, up from 70% in 2015.
- In Japan, business Internet video traffic will be 68% of business Internet traffic in 2020, up from 47% in 2015.
- In Japan, Internet-Video-to-TV traffic will be 26% of fixed consumer Internet video traffic in 2020, up from 27% in 2015.

- In Japan, Internet-Video-to-TV traffic will increase 4-fold between 2015 and 2020 (29.9% CAGR).
- In Japan, 372 billion minutes (707,503 years) of video content will cross the Internet each month in 2020. That's 141,501 minutes of video streamed or downloaded every second.
- In Japan, 95% of all Internet video traffic will cross content delivery networks in 2020, up from 74% in 2015.
- In Japan, 79% of all Internet traffic will cross content delivery networks in 2020, up from 51% in 2015.

## IP VOD

- In Japan, Ultra HD will be 29.8% of IP VOD traffic in 2020, up from 1.1% in 2015 (110.1% CAGR).
- In Japan, HD will be 58.4% of IP VOD traffic in 2020, up from 62.3% in 2015 (7.2% CAGR).
- In Japan, SD will be 11.8% of IP VOD traffic in 2020, compared to 36.6% in 2015 (-13.4% CAGR).

## Gaming

- In Japan, Internet gaming traffic will grow 8-fold from 2015 to 2020, a compound annual growth rate of 51%.
- In Japan, Internet gaming traffic will reach 6.4 Exabytes per month in 2020, up from 1.6 Exabytes per month in 2015.
- In Japan, Internet gaming traffic will be 4% of consumer Internet traffic in 2020, up from 2% in 2015.

## Mobile

- In Japan, mobile data traffic will grow 4-fold from 2015 to 2020, a compound annual growth rate of 33%.
- In Japan, mobile data traffic will reach 1.5 Exabytes per month in 2020, up from 350 Petabytes per month in 2015.
- Japanese mobile data traffic will grow 2 times faster than Japanese fixed IP traffic from 2015 to 2020.
- Japan's Mobile was 10% of total IP traffic in 2015, and will be 16% of total IP traffic in 2020.
- In Japan, mobile data traffic in 2020 will be equivalent to 10x the volume of the entire Japanese Internet in 2005.

## Devices

- In Japan, there will be 1.5 billion networked devices in 2020, up from 820.4 million in 2015.
- In Japan, there will be 11.9 networked devices per capita in 2020, up from 6.5 per capita in 2015.
- In Japan, 26% of all networked devices will be mobile-connected in 2020.
- In Japan, M2M modules will account for 72% (1.1 billion) of all networked devices in 2020, compared to 54% (446.7 million) in 2015, (19.1% CAGR).
- In Japan, PCs will account for 4% (62.3 million) of all networked devices in 2020, compared to 9% (74.6 million) in 2015, (-3.5% CAGR).
- In Japan, Tablets will account for 2% (25.8 million) of all networked devices in 2020, compared to 2% (17.0 million) in 2015, (8.7% CAGR).
- In Japan, Smartphones will account for 10% (153.4 million) of all networked devices in 2020, compared to 12% (96.0 million) in 2015, (9.8% CAGR).
- In Japan, Connected TVs will account for 8% (114.0 million) of all networked devices in 2020, compared to 12% (102.3 million) in 2015, (2.2% CAGR).

- In Japan, Non-Smartphones will account for 0.5% (8.0 million) of all networked devices in 2020, compared to 6% (49.2 million) in 2015, (-30.4% CAGR).
- In Japan, Other Portables will account for 3% (52.0 million) of all networked devices in 2020, compared to 4% (34.6 million) in 2015, (8.5% CAGR).
- In Japan, 4K TVs will account for 28% (12.5 million) of all flat panel TVs in 2020, compared to 2.7% (883,032) in 2015, (69.9% CAGR).
- Japan's IP traffic from non-PC devices was 58% of total IP traffic in 2015, and will be 76% of total IP traffic in 2020.
- In Japan, PCs accounted for 42% of IP traffic in 2015, and will be 24% of IP traffic in 2020.
- In Japan, TVs accounted for 28% of IP traffic in 2015, and will be 22% of IP traffic in 2020.
- In Japan, Smartphones accounted for 19% of IP traffic in 2015, and will be 35% of IP traffic in 2020.
- In Japan, Tablets accounted for 6% of IP traffic in 2015, and will be 12% of IP traffic in 2020.
- In Japan, M2M modules accounted for 4.0% of IP traffic in 2015, and will be 6.8% of IP traffic in 2020.
- In Japan, PCs accounted for 42% of consumer Internet traffic in 2015, and will be 23% of consumer Internet traffic in 2020.
- In Japan, TVs accounted for 15% of consumer Internet traffic in 2015, and will be 16% of consumer Internet traffic in 2020.
- In Japan, TVs accounted for 11% of total Internet traffic in 2015, and will be 12% of total Internet traffic in 2020.

### Speed Evolution

- In Japan, the average fixed broadband speed will grow 1.7-fold from 2015 to 2020, from 56.4 Mbps to 96.8 Mbps.
- In Japan, 99% of fixed broadband connections will be faster than 5 Mbps in 2020, up from 78% today.
- In Japan, 94% of fixed broadband connections will be faster than 10 Mbps in 2020, up from 74% today.
- In Japan, 78.1% of fixed broadband connections will be faster than 25 Mbps in 2020, up from 57.7% today.
- In Japan, 68.4% of fixed broadband connections will be faster than 50 Mbps in 2020, up from 36.3% today.
- In Japan, the average Wi-Fi speeds from mobile devices will grow 1.7-fold from 2015 to 2020, from 24.7 Mbps to 41 Mbps.
- In Japan, the average mobile connection speed will grow 2-fold from 2015 to 2020, reaching 18 Mbps in 2020.

### Traffic per User and Household

- In Japan, the average Internet user will generate 55.6 gigabytes of Internet traffic per month in 2020, up 221% from 17.3 gigabytes per month in 2015, a CAGR of 26%.
- In Japan, the average Internet household will generate 129.0 gigabytes of Internet traffic per month in 2020, up 223% from 40.0 gigabytes per month in 2015, a CAGR of 26%.
- In Japan, the average FTTx Internet household will generate 142.7 gigabytes of Internet traffic per month in 2020, 97.1% more than other broadband households.
- In Japan, the average FTTx Internet household generated 47.3 gigabytes of Internet traffic per month in 2015, 99.1% more than other broadband households.

- In Japan, there will be 9 million Internet households (22.0% of all Internet households) generating more than 250 gigabytes per month in 2020.
- In Japan, there will be 2 million households (5.0% of all Internet households) generating more than 500 gigabytes per month in 2020.
- In Japan, there will be 403,920 households (1.0% of all Internet households) generating more than a terabyte per month in 2020.
- In Japan, the average mobile connection will generate 7,398 megabytes of mobile data traffic per month in 2020, up from 2,173 megabytes in 2015.