



Russia - 2020 Forecast Highlights

IP Traffic

- In Russia, IP traffic will grow 3-fold from 2015 to 2020, a compound annual growth rate of 25%.
- In Russia, IP traffic will reach 6.9 Exabytes per month in 2020, up from 2.3 Exabytes per month in 2015.
- Russia's IP networks will carry 226 Petabytes per day in 2020, up from 75 Petabytes per day in 2015.
- In Russia, IP traffic will reach an annual run rate of 82.5 Exabytes in 2020, up from an annual run rate of 27.3 Exabytes in 2015.
- In Russia, IP traffic will reach 48 Gigabytes per capita in 2020, up from 16 Gigabytes per capita in 2015.
- In Russia, average IP traffic will reach 21 Tbps in 2020, and busy hour traffic will reach 95 Tbps.
- In 2020, the gigabyte equivalent of all movies ever made will cross Russia's IP networks every 51 minutes.

Internet Traffic

- In Russia, Internet traffic will grow 3.2-fold from 2015 to 2020, a compound annual growth rate of 26%.
- In Russia, busy hour Internet traffic will grow 4.9-fold from 2015 to 2020, a compound annual growth rate of 38%.
- In Russia, Internet traffic will reach 6.3 Exabytes per month in 2020, up from 2.0 Exabytes per month in 2015.
- Russia's Internet traffic will be 207 Petabytes per day in 2020, up from 60 Petabytes per day in 2015.
- Russia's Internet traffic in 2020 will be equivalent to 19 billion DVDs per year, 2 billion DVDs per month, or 2 million DVDs per hour.
- In 2020, the gigabyte equivalent of all movies ever made will cross the Internet every 56 minutes.

- Russian Internet traffic in 2020 will be equivalent to 281x the volume of the entire Russian Internet in 2005.
- In Russia, Internet traffic will reach 44 Gigabytes per capita in 2020, up from 14 Gigabytes per capita in 2015.
- In Russia, average Internet traffic will increase 3.2-fold by 2020 and will reach 19 Tbps.
- In Russia, busy hour Internet traffic will increase 4.9-fold by 2020 and will reach 87 Tbps.

Wired Wi-Fi and Mobile Growth

- Russia's Fixed/Wi-Fi was 60% of total IP traffic in 2015, and will be 58% of total IP traffic in 2020.
- Russia's Fixed/Wired was 30% of total IP traffic in 2015, and will be 14% of total IP traffic in 2020.
- Russia's Mobile was 10% of total IP traffic in 2015, and will be 27% of total IP traffic in 2020.
- Russia's Fixed/Wi-Fi was 65.7% of total Internet traffic in 2015, and will be 62.8% of total Internet traffic in 2020.
- Russia's Fixed/Wired was 23% of total Internet traffic in 2015, and will be 7% of total Internet traffic in 2020.
- Russia's Mobile was 11.4% of total Internet traffic in 2015, and will be 29.8% of total Internet traffic in 2020.

IP Video

- In Russia, IP video traffic will grow 4-fold from 2015 to 2020, a compound annual growth rate of 32%.
- In Russia, IP video traffic will reach 5.3 Exabytes per month in 2020, up from 1.3 Exabytes per month in 2015.
- In Russia, IP video will be 77% of all IP traffic in 2020, up from 58% in 2015.
- In Russia, Ultra HD will be 11.6% of IP Video traffic in 2020, up from 0.7% in 2015 (128.5% CAGR).
- In Russia, HD will be 74.5% of IP Video traffic in 2020, up from 53.6% in 2015 (40.8% CAGR).
- In Russia, SD will be 13.9% of IP Video traffic in 2020, compared to 45.7% in 2015 (3.9% CAGR).
- In Russia, consumer IP video traffic will be 80% of consumer IP traffic in 2020, up from 66% in 2015.
- In Russia, business IP video traffic will be 65% of business IP traffic in 2020, up from 41% in 2015.

Internet Video

- In Russia, Internet video traffic will grow 4-fold from 2015 to 2020, a compound annual growth rate of 33%.
- In Russia, Internet video traffic will reach 4.7 Exabytes per month in 2020, up from 1.1 Exabytes per month in 2015.
- In Russia, total Internet video traffic (business and consumer, combined) will be 75% of all Internet traffic in 2020, up from 57% in 2015.
- In Russia, Ultra HD will be 11.3% of Internet video traffic in 2020, up from 0.8% in 2015 (124.8% CAGR).
- In Russia, HD will be 77.1% of Internet video traffic in 2020, up from 57.1% in 2015 (41.6% CAGR).
- In Russia, SD will be 11.7% of Internet video traffic in 2020, compared to 42.1% in 2015 (3.1% CAGR).
- In Russia, consumer Internet video traffic will be 78% of consumer Internet traffic in 2020, up from 62% in 2015.
- In Russia, business Internet video traffic will be 65% of business Internet traffic in 2020, up from 43% in 2015.
- In Russia, Internet-Video-to-TV traffic will be 9% of fixed consumer Internet video traffic in 2020, up from 7% in 2015.

- In Russia, Internet-Video-to-TV traffic will increase 5-fold between 2015 and 2020 (36.5% CAGR).
- In Russia, 159 billion minutes (302,952 years) of video content will cross the Internet each month in 2020. That's 60,590 minutes of video streamed or downloaded every second.
- In Russia, 46% of all Internet video traffic will cross content delivery networks in 2020, up from 32% in 2015.
- In Russia, 39% of all Internet traffic will cross content delivery networks in 2020, up from 20% in 2015.

IP VOD

- In Russia, Ultra HD will be 17.1% of IP VOD traffic in 2020, up from 0.4% in 2015 (169.7% CAGR).
- In Russia, HD will be 60.5% of IP VOD traffic in 2020, up from 48.4% in 2015 (32.4% CAGR).
- In Russia, SD will be 22.3% of IP VOD traffic in 2020, compared to 51.2% in 2015 (7.3% CAGR).

Gaming

- In Russia, Internet gaming traffic will grow 3-fold from 2015 to 2020, a compound annual growth rate of 25%.
- In Russia, Internet gaming traffic will reach 4.7 Exabytes per month in 2020, up from 1.1 Exabytes per month in 2015.
- In Russia, Internet gaming traffic will be 2% of consumer Internet traffic in 2020, up from 2% in 2015.

Mobile

- In Russia, mobile data traffic will grow 8-fold from 2015 to 2020, a compound annual growth rate of 53%.
- In Russia, mobile data traffic will reach 1.9 Exabytes per month in 2020, up from 225 Petabytes per month in 2015.
- Russian mobile data traffic will grow 3 times faster than Russian fixed IP traffic from 2015 to 2020.
- Russia's Mobile was 10% of total IP traffic in 2015, and will be 27% of total IP traffic in 2020.
- In Russia, mobile data traffic in 2020 will be equivalent to 77x the volume of the entire Russian Internet in 2005.

Devices

- In Russia, there will be 841.2 million networked devices in 2020, up from 510.4 million in 2015.
- In Russia, there will be 5.9 networked devices per capita in 2020, up from 3.6 per capita in 2015.
- In Russia, 44% of all networked devices will be mobile-connected in 2020.
- In Russia, M2M modules will account for 52% (440.8 million) of all networked devices in 2020, compared to 33% (168.1 million) in 2015, (21.3% CAGR).
- In Russia, PCs will account for 4% (29.8 million) of all networked devices in 2020, compared to 10% (50.8 million) in 2015, (-10.1% CAGR).
- In Russia, Tablets will account for 4% (34.8 million) of all networked devices in 2020, compared to 4% (21.4 million) in 2015, (10.2% CAGR).
- In Russia, Smartphones will account for 22% (186.2 million) of all networked devices in 2020, compared to 23% (116.2 million) in 2015, (9.9% CAGR).
- In Russia, Connected TVs will account for 11% (95.4 million) of all networked devices in 2020, compared to 7% (35.8 million) in 2015, (21.7% CAGR).

- In Russia, Non-Smartphones will account for 2.6% (22.2 million) of all networked devices in 2020, compared to 19% (94.9 million) in 2015, (-25.2% CAGR).
- In Russia, Other Portables will account for 4% (32.0 million) of all networked devices in 2020, compared to 5% (23.3 million) in 2015, (6.6% CAGR).
- In Russia, 4K TVs will account for 25% (15.1 million) of all flat panel TVs in 2020, compared to 3.3% (620,374) in 2015, (89.4% CAGR).
- Russia's IP traffic from non-PC devices was 34% of total IP traffic in 2015, and will be 84% of total IP traffic in 2020.
- In Russia, PCs accounted for 66% of IP traffic in 2015, and will be 16% of IP traffic in 2020.
- In Russia, TVs accounted for 8% of IP traffic in 2015, and will be 10% of IP traffic in 2020.
- In Russia, Smartphones accounted for 17% of IP traffic in 2015, and will be 59% of IP traffic in 2020.
- In Russia, Tablets accounted for 7% of IP traffic in 2015, and will be 12% of IP traffic in 2020.
- In Russia, M2M modules accounted for 1.7% of IP traffic in 2015, and will be 3.6% of IP traffic in 2020.
- In Russia, PCs accounted for 63% of consumer Internet traffic in 2015, and will be 13% of consumer Internet traffic in 2020.
- In Russia, TVs accounted for 3% of consumer Internet traffic in 2015, and will be 4% of consumer Internet traffic in 2020.
- In Russia, TVs accounted for 2% of total Internet traffic in 2015, and will be 3% of total Internet traffic in 2020.

Speed Evolution

- In Russia, the average fixed broadband speed will grow 1.8-fold from 2015 to 2020, from 28.3 Mbps to 50.4 Mbps.
- In Russia, 93% of fixed broadband connections will be faster than 5 Mbps in 2020, up from 79% today.
- In Russia, 82% of fixed broadband connections will be faster than 10 Mbps in 2020, up from 67% today.
- In Russia, 63.2% of fixed broadband connections will be faster than 25 Mbps in 2020, up from 47.5% today.
- In Russia, 32.2% of fixed broadband connections will be faster than 50 Mbps in 2020, up from 23.4% today.
- In Russia, the average Wi-Fi speeds from mobile devices will grow 1.9-fold from 2015 to 2020, from 13.7 Mbps to 25 Mbps.
- In Russia, the average mobile connection speed will grow 3-fold from 2015 to 2020, reaching 9 Mbps in 2020.

Traffic per User and Household

- In Russia, the average Internet user will generate 48.6 gigabytes of Internet traffic per month in 2020, up 136% from 20.6 gigabytes per month in 2015, a CAGR of 19%.
- In Russia, the average Internet household will generate 111.2 gigabytes of Internet traffic per month in 2020, up 138% from 46.7 gigabytes per month in 2015, a CAGR of 19%.
- In Russia, the average FTTx Internet household will generate 131.8 gigabytes of Internet traffic per month in 2020, 94.4% more than other broadband households.
- In Russia, the average FTTx Internet household generated 63.9 gigabytes of Internet traffic per month in 2015, 108.3% more than other broadband households.
- In Russia, there will be 5 million Internet households (16.0% of all Internet households) generating more than 250 gigabytes per month in 2020.

- In Russia, there will be 1 million households (4.0% of all Internet households) generating more than 500 gigabytes per month in 2020.
- In Russia, there will be 308,825 households (1.0% of all Internet households) generating more than a terabyte per month in 2020.
- In Russia, the average mobile connection will generate 7,274 megabytes of mobile data traffic per month in 2020, up from 947 megabytes in 2015.