



## Rest of Central and Eastern Europe - 2020 Forecast Highlights

### IP Traffic

- In the rest of Central and Eastern Europe, IP traffic will grow 4-fold from 2015 to 2020, a compound annual growth rate of 29%.
- In the rest of Central and Eastern Europe, IP traffic will reach 8.0 Exabytes per month in 2020, up from 2.2 Exabytes per month in 2015.
- The rest of Central and Eastern Europe's IP networks will carry 262 Petabytes per day in 2020, up from 73 Petabytes per day in 2015.
- In the rest of Central and Eastern Europe, IP traffic will reach an annual run rate of 95.6 Exabytes in 2020, up from an annual run rate of 26.6 Exabytes in 2015.
- In the rest of Central and Eastern Europe, IP traffic will reach 26 Gigabytes per capita in 2020, up from 7 Gigabytes per capita in 2015.
- In the rest of Central and Eastern Europe, average IP traffic will reach 24 Tbps in 2020, and busy hour traffic will reach 109 Tbps.
- In 2020, the gigabyte equivalent of all movies ever made will cross The rest of Central and Eastern Europe's IP networks every 44 minutes.

### Internet Traffic

- In the rest of Central and Eastern Europe, Internet traffic will grow 3.7-fold from 2015 to 2020, a compound annual growth rate of 30%.
- In the rest of Central and Eastern Europe, busy hour Internet traffic will grow 6.1-fold from 2015 to 2020, a compound annual growth rate of 44%.

- In the rest of Central and Eastern Europe, Internet traffic will reach 7.6 Exabytes per month in 2020, up from 2.0 Exabytes per month in 2015.
- The rest of Central and Eastern Europe's Internet traffic will be 250 Petabytes per day in 2020, up from 70 Petabytes per day in 2015.
- The rest of Central and Eastern Europe's Internet traffic in 2020 will be equivalent to 23 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 46 minutes.
- the rest of Central and Eastern European Internet traffic in 2020 will be equivalent to 173x the volume of the entire the rest of Central and Eastern European Internet in 2005.
- In the rest of Central and Eastern Europe, Internet traffic will reach 25 Gigabytes per capita in 2020, up from 7 Gigabytes per capita in 2015.
- In the rest of Central and Eastern Europe, average Internet traffic will increase 3.7-fold by 2020 and will reach 23 Tbps.
- In the rest of Central and Eastern Europe, busy hour Internet traffic will increase 6.1-fold by 2020 and will reach 104 Tbps.

### Wired Wi-Fi and Mobile Growth

- The rest of Central and Eastern Europe's Fixed/Wi-Fi was 59% of total IP traffic in 2015, and will be 62% of total IP traffic in 2020.
- The rest of Central and Eastern Europe's Fixed/Wired was 30% of total IP traffic in 2015, and will be 12% of total IP traffic in 2020.
- The rest of Central and Eastern Europe's Mobile was 11% of total IP traffic in 2015, and will be 26% of total IP traffic in 2020.
- The rest of Central and Eastern Europe's Fixed/Wi-Fi was 62.4% of total Internet traffic in 2015, and will be 64.2% of total Internet traffic in 2020.
- The rest of Central and Eastern Europe's Fixed/Wired was 26% of total Internet traffic in 2015, and will be 8% of total Internet traffic in 2020.
- The rest of Central and Eastern Europe's Mobile was 11.8% of total Internet traffic in 2015, and will be 27.5% of total Internet traffic in 2020.

### IP Video

- In the rest of Central and Eastern Europe, IP video traffic will grow 5-fold from 2015 to 2020, a compound annual growth rate of 40%.
- In the rest of Central and Eastern Europe, IP video traffic will reach 5.9 Exabytes per month in 2020, up from 1.1 Exabytes per month in 2015.
- In the rest of Central and Eastern Europe, IP video will be 74% of all IP traffic in 2020, up from 49% in 2015.
- In the rest of Central and Eastern Europe, Ultra HD will be 8.8% of IP Video traffic in 2020, up from 0.5% in 2015 (145.2% CAGR).
- In the rest of Central and Eastern Europe, HD will be 69.6% of IP Video traffic in 2020, up from 45.5% in 2015 (52.5% CAGR).

- In the rest of Central and Eastern Europe, SD will be 21.6% of IP Video traffic in 2020, compared to 53.9% in 2015 (16.7% CAGR).
- In the rest of Central and Eastern Europe, consumer IP video traffic will be 78% of consumer IP traffic in 2020, up from 56% in 2015.
- In the rest of Central and Eastern Europe, business IP video traffic will be 57% of business IP traffic in 2020, up from 32% in 2015.

## Internet Video

- In the rest of Central and Eastern Europe, Internet video traffic will grow 6-fold from 2015 to 2020, a compound annual growth rate of 42%.
- In the rest of Central and Eastern Europe, Internet video traffic will reach 5.6 Exabytes per month in 2020, up from 984 Petabytes per month in 2015.
- In the rest of Central and Eastern Europe, total Internet video traffic (business and consumer, combined) will be 74% of all Internet traffic in 2020, up from 48% in 2015.
- In the rest of Central and Eastern Europe, Ultra HD will be 9.0% of Internet video traffic in 2020, up from 0.6% in 2015 (144.4% CAGR).
- In the rest of Central and Eastern Europe, HD will be 70.3% of Internet video traffic in 2020, up from 46.6% in 2015 (53.9% CAGR).
- In the rest of Central and Eastern Europe, SD will be 20.8% of Internet video traffic in 2020, compared to 52.8% in 2015 (17.6% CAGR).
- In the rest of Central and Eastern Europe, consumer Internet video traffic will be 77% of consumer Internet traffic in 2020, up from 54% in 2015.
- In the rest of Central and Eastern Europe, business Internet video traffic will be 59% of business Internet traffic in 2020, up from 33% in 2015.
- In the rest of Central and Eastern Europe, Internet-Video-to-TV traffic will be 7% of fixed consumer Internet video traffic in 2020, up from 8% in 2015.
- In the rest of Central and Eastern Europe, Internet-Video-to-TV traffic will increase 5-fold between 2015 and 2020 (35.4% CAGR).
- In the rest of Central and Eastern Europe, 49 billion minutes (93,605 years) of video content will cross the Internet each month in 2020. That's 18,721 minutes of video streamed or downloaded every second.
- In the rest of Central and Eastern Europe, 66% of all Internet video traffic will cross content delivery networks in 2020, up from 45% in 2015.
- In the rest of Central and Eastern Europe, 54% of all Internet traffic will cross content delivery networks in 2020, up from 26% in 2015.

## IP VOD

- In the rest of Central and Eastern Europe, Ultra HD will be 7.3% of IP VOD traffic in 2020, up from 0.1% in 2015 (173.7% CAGR).
- In the rest of Central and Eastern Europe, HD will be 64.9% of IP VOD traffic in 2020, up from 46.2% in 2015 (32.3% CAGR).
- In the rest of Central and Eastern Europe, SD will be 27.8% of IP VOD traffic in 2020, compared to 53.7% in 2015 (8.4% CAGR).

## Gaming

- In the rest of Central and Eastern Europe, Internet gaming traffic will grow 5-fold from 2015 to 2020, a compound annual growth rate of 40%.
- In the rest of Central and Eastern Europe, Internet gaming traffic will reach 5.6 Exabytes per month in 2020, up from 984 Petabytes per month in 2015.
- In the rest of Central and Eastern Europe, Internet gaming traffic will be 2% of consumer Internet traffic in 2020, up from 2% in 2015.

## Mobile

- In the rest of Central and Eastern Europe, mobile data traffic will grow 9-fold from 2015 to 2020, a compound annual growth rate of 54%.
- In the rest of Central and Eastern Europe, mobile data traffic will reach 2.1 Exabytes per month in 2020, up from 241 Petabytes per month in 2015.
- the rest of Central and Eastern European mobile data traffic will grow 2 times faster than the rest of Central and Eastern European fixed IP traffic from 2015 to 2020.
- The rest of Central and Eastern Europe's Mobile was 11% of total IP traffic in 2015, and will be 26% of total IP traffic in 2020.
- In the rest of Central and Eastern Europe, mobile data traffic in 2020 will be equivalent to 45x the volume of the entire the rest of Central and Eastern European Internet in 2005.

## Devices

- In the rest of Central and Eastern Europe, there will be 893.6 million networked devices in 2020, up from 574.0 million in 2015.
- In the rest of Central and Eastern Europe, there will be 2.9 networked devices per capita in 2020, up from 1.9 per capita in 2015.
- In the rest of Central and Eastern Europe, 50% of all networked devices will be mobile-connected in 2020.
- In the rest of Central and Eastern Europe, M2M modules will account for 43% (380.2 million) of all networked devices in 2020, compared to 26% (147.9 million) in 2015, (20.8% CAGR).
- In the rest of Central and Eastern Europe, PCs will account for 6% (51.7 million) of all networked devices in 2020, compared to 11% (60.7 million) in 2015, (-3.2% CAGR).
- In the rest of Central and Eastern Europe, Tablets will account for 5% (43.3 million) of all networked devices in 2020, compared to 4% (22.9 million) in 2015, (13.6% CAGR).
- In the rest of Central and Eastern Europe, Smartphones will account for 24% (217.5 million) of all networked devices in 2020, compared to 21% (121.4 million) in 2015, (12.4% CAGR).
- In the rest of Central and Eastern Europe, Connected TVs will account for 10% (87.5 million) of all networked devices in 2020, compared to 7% (37.8 million) in 2015, (18.3% CAGR).
- In the rest of Central and Eastern Europe, Non-Smartphones will account for 7.2% (64.7 million) of all networked devices in 2020, compared to 27% (152.9 million) in 2015, (-15.8% CAGR).
- In the rest of Central and Eastern Europe, Other Portables will account for 5% (48.7 million) of all networked devices in 2020, compared to 5% (30.3 million) in 2015, (9.9% CAGR).

- In the rest of Central and Eastern Europe, 4K TVs will account for 47% (21.8 million) of all flat panel TVs in 2020, compared to 7.0% (854,734) in 2015, (91.2% CAGR).
- The rest of Central and Eastern Europe's IP traffic from non-PC devices was 35% of total IP traffic in 2015, and will be 78% of total IP traffic in 2020.
- In the rest of Central and Eastern Europe, PCs accounted for 65% of IP traffic in 2015, and will be 22% of IP traffic in 2020.
- In the rest of Central and Eastern Europe, TVs accounted for 6% of IP traffic in 2015, and will be 5% of IP traffic in 2020.
- In the rest of Central and Eastern Europe, Smartphones accounted for 16% of IP traffic in 2015, and will be 51% of IP traffic in 2020.
- In the rest of Central and Eastern Europe, Tablets accounted for 12% of IP traffic in 2015, and will be 19% of IP traffic in 2020.
- In the rest of Central and Eastern Europe, M2M modules accounted for 1.1% of IP traffic in 2015, and will be 2.3% of IP traffic in 2020.
- In the rest of Central and Eastern Europe, PCs accounted for 60% of consumer Internet traffic in 2015, and will be 19% of consumer Internet traffic in 2020.
- In the rest of Central and Eastern Europe, TVs accounted for 3% of consumer Internet traffic in 2015, and will be 3% of consumer Internet traffic in 2020.
- In the rest of Central and Eastern Europe, TVs accounted for 2% of total Internet traffic in 2015, and will be 2% of total Internet traffic in 2020.

### Speed Evolution

- In the rest of Central and Eastern Europe, the average fixed broadband speed will grow 1.9-fold from 2015 to 2020, from 21.6 Mbps to 40.2 Mbps.
- In the rest of Central and Eastern Europe, 95% of fixed broadband connections will be faster than 5 Mbps in 2020, up from 67% today.
- In the rest of Central and Eastern Europe, 75% of fixed broadband connections will be faster than 10 Mbps in 2020, up from 50% today.
- In the rest of Central and Eastern Europe, 44.1% of fixed broadband connections will be faster than 25 Mbps in 2020, up from 28.7% today.
- In the rest of Central and Eastern Europe, 34.0% of fixed broadband connections will be faster than 50 Mbps in 2020, up from 16.2% today.
- In the rest of Central and Eastern Europe, the average Wi-Fi speeds from mobile devices will grow 1.8-fold from 2015 to 2020, from 13.3 Mbps to 24 Mbps.
- In the rest of Central and Eastern Europe, the average mobile connection speed will grow 3-fold from 2015 to 2020, reaching 8 Mbps in 2020.

### Traffic per User and Household

- In the rest of Central and Eastern Europe, the average Internet user will generate 28.7 gigabytes of Internet traffic per month in 2020, up 193% from 9.8 gigabytes per month in 2015, a CAGR of 24%.
- In the rest of Central and Eastern Europe, the average Internet household will generate 82.7 gigabytes of Internet traffic per month in 2020, up 194% from 28.1 gigabytes per month in 2015, a CAGR of 24%.

- In the rest of Central and Eastern Europe, the average FTTx Internet household will generate 117.3 gigabytes of Internet traffic per month in 2020, 98.8% more than other broadband households.
- In the rest of Central and Eastern Europe, the average FTTx Internet household generated 46.5 gigabytes of Internet traffic per month in 2015, 107.5% more than other broadband households.
- In the rest of Central and Eastern Europe, there will be 5 million Internet households (9.0% of all Internet households) generating more than 250 gigabytes per month in 2020.
- In the rest of Central and Eastern Europe, there will be 1 million households (2.0% of all Internet households) generating more than 500 gigabytes per month in 2020.
- In the rest of Central and Eastern Europe, there will be 530,372 households (1.0% of all Internet households) generating more than a terabyte per month in 2020.
- In the rest of Central and Eastern Europe, the average mobile connection will generate 6,295 megabytes of mobile data traffic per month in 2020, up from 807 megabytes in 2015.