



## South Africa - 2021 Forecast Highlights

### IP Traffic

- In South Africa, IP traffic will grow 3-fold from 2016 to 2021, a compound annual growth rate of 24%.
- In South Africa, IP traffic will reach 1.1 Exabytes per month in 2021, up from 355 Petabytes per month in 2016.
- South Africa's IP networks will carry 35 Petabytes per day in 2021, up from 12 Petabytes per day in 2016.
- In South Africa, IP traffic will reach an annual run rate of 12.7 Exabytes in 2021, up from an annual run rate of 4.3 Exabytes in 2016.
- In South Africa, IP traffic will reach 19 Gigabytes per capita in 2021, up from 6 Gigabytes per capita in 2016.
- In South Africa, average IP traffic will reach 3 Tbps in 2021, and busy hour traffic will reach 17 Tbps.
- In 2021, the gigabyte equivalent of all movies ever made will cross South Africa's IP networks every 6 hours.

### Internet Traffic

- In South Africa, Internet traffic will grow 3.1-fold from 2016 to 2021, a compound annual growth rate of 26%.
- In South Africa, busy hour Internet traffic will grow 4.4-fold from 2016 to 2021, a compound annual growth rate of 35%.
- In South Africa, Internet traffic will reach 942 Petabytes per month in 2021, up from 302 Petabytes per month in 2016.
- South Africa's Internet traffic will be 31 Petabytes per day in 2021, up from 10 Petabytes per day in 2016.
- South Africa's Internet traffic in 2021 will be equivalent to 3 billion DVDs per year, 235 million DVDs per month, or 322,549 DVDs per hour.

- In 2021, the gigabyte equivalent of all movies ever made will cross the Internet every 6 hours.
- South African Internet traffic in 2021 will be equivalent to 172x the volume of the entire South African Internet in 2005.
- In South Africa, Internet traffic will reach 17 Gigabytes per capita in 2021, up from 5 Gigabytes per capita in 2016.
- In South Africa, average Internet traffic will increase 3.1-fold by 2021 and will reach 3 Tbps.
- In South Africa, busy hour Internet traffic will increase 4.4-fold by 2021 and will reach 15 Tbps.

### Wired Wi-Fi and Mobile Growth

- South Africa's Fixed/Wi-Fi was 56% of total IP traffic in 2016, and will be 49% of total IP traffic in 2021.
- South Africa's Fixed/Wired was 36% of total IP traffic in 2016, and will be 25% of total IP traffic in 2021.
- South Africa's Mobile was 8% of total IP traffic in 2016, and will be 25% of total IP traffic in 2021.
- South Africa's Fixed/Wi-Fi was 60.1% of total Internet traffic in 2016, and will be 53.0% of total Internet traffic in 2021.
- South Africa's Fixed/Wired was 31% of total Internet traffic in 2016, and will be 18% of total Internet traffic in 2021.
- South Africa's Mobile was 9.3% of total Internet traffic in 2016, and will be 28.5% of total Internet traffic in 2021.
- In South Africa, mobile data traffic will grow 10-fold from 2016 to 2021, a compound annual growth rate of 57%.
- In South Africa, mobile data traffic will reach 269 Petabytes per month in 2021, up from 28 Petabytes per month in 2016.
- South African mobile data traffic will grow 3 times faster than South African fixed IP traffic from 2016 to 2021.
- South Africa's Mobile was 8% of total IP traffic in 2016, and will be 25% of total IP traffic in 2021.
- In South Africa, mobile data traffic in 2021 will be equivalent to 44x the volume of the entire South African Internet in 2005.

### IP Video

- In South Africa, IP video traffic will grow 4-fold from 2016 to 2021, a compound annual growth rate of 30%.
- In South Africa, IP video traffic will reach 838 Petabytes per month in 2021, up from 227 Petabytes per month in 2016.
- In South Africa, IP video will be 79% of all IP traffic in 2021, up from 64% in 2016.
- In South Africa, Ultra HD will be 4.4% of IP Video traffic in 2021, up from 0.1% in 2016 (192.3% CAGR).
- In South Africa, HD will be 40.5% of IP Video traffic in 2021, up from 14.2% in 2016 (60.1% CAGR).
- In South Africa, SD will be 55.1% of IP Video traffic in 2021, compared to 85.7% in 2016 (18.8% CAGR).
- In South Africa, consumer IP video traffic will be 82% of consumer IP traffic in 2021, up from 73% in 2016.
- In South Africa, business IP video traffic will be 68% of business IP traffic in 2021, up from 50% in 2016.

## Internet Video

- In South Africa, Internet video traffic will grow 4-fold from 2016 to 2021, a compound annual growth rate of 31%.
- In South Africa, Internet video traffic will reach 734 Petabytes per month in 2021, up from 192 Petabytes per month in 2016.
- In South Africa, total Internet video traffic (business and consumer, combined) will be 78% of all Internet traffic in 2021, up from 64% in 2016.
- In South Africa, Ultra HD will be 3.6% of Internet video traffic in 2021, up from 0.1% in 2016 (177.8% CAGR).
- In South Africa, HD will be 37.8% of Internet video traffic in 2021, up from 9.9% in 2016 (71.0% CAGR).
- In South Africa, SD will be 58.7% of Internet video traffic in 2021, compared to 90.0% in 2016 (20.0% CAGR).
- In South Africa, consumer Internet video traffic will be 80% of consumer Internet traffic in 2021, up from 70% in 2016.
- In South Africa, business Internet video traffic will be 69% of business Internet traffic in 2021, up from 52% in 2016.
- In South Africa, Internet-Video-to-TV traffic will be 19% of fixed consumer Internet video traffic in 2021, up from 16% in 2016.
- In South Africa, Internet-Video-to-TV traffic will increase 4-fold between 2016 and 2021 (32.4% CAGR).
- In South Africa, 48 billion minutes (91,215 years) of video content will cross the Internet each month in 2021. That's 18,243 minutes of video streamed or downloaded every second.
- In South Africa, 46% of all Internet video traffic will cross content delivery networks in 2021, up from 21% in 2016.
- In South Africa, 65.2% of all Internet video traffic will be long-form video (including live) in 2021, up from 56.9% in 2016.

## IP VOD

- In South Africa, Ultra HD will be 13.8% of IP VOD traffic in 2021, up from 0.1% in 2016 (273.4% CAGR).
- In South Africa, HD will be 79.8% of IP VOD traffic in 2021, up from 61.6% in 2016 (36.2% CAGR).
- In South Africa, SD will be 6.4% of IP VOD traffic in 2021, compared to 38.3% in 2016 (-9.7% CAGR).

## Gaming

- In South Africa, gaming traffic will grow 5-fold from 2016 to 2021, a compound annual growth rate of 39%.
- In South Africa, gaming traffic will reach 30 Petabytes per month in 2021, up from 6 Petabytes per month in 2016.
- In South Africa, gaming traffic will be 4% of consumer Internet traffic in 2021, up from 3% in 2016.

## Devices

- In South Africa, there will be 164.8 million networked devices in 2021, up from 119.2 million in 2016.
- In South Africa, there will be 2.9 networked devices per capita in 2021, up from 2.2 per capita in 2016.
- In South Africa, 68% of all networked devices will be mobile-connected in 2021.
- In South Africa, M2M modules will account for 28% (46.1 million) of all networked devices in 2021, compared to 14% (16.9 million) in 2016, (22.3% CAGR).

- In South Africa, PCs will account for 6% (10.3 million) of all networked devices in 2021, compared to 11% (12.9 million) in 2016, (-4.5% CAGR).
- In South Africa, Tablets will account for 4% (6.8 million) of all networked devices in 2021, compared to 4% (4.6 million) in 2016, (8.3% CAGR).
- In South Africa, Smartphones will account for 45% (73.8 million) of all networked devices in 2021, compared to 27% (32.7 million) in 2016, (17.6% CAGR).
- In South Africa, Connected TVs will account for 8% (13.5 million) of all networked devices in 2021, compared to 6% (6.8 million) in 2016, (14.9% CAGR).
- In South Africa, Non-Smartphones will account for 7.8% (12.8 million) of all networked devices in 2021, compared to 37% (44.6 million) in 2016, (-22% CAGR).
- In South Africa, Other Portables will account for 1% (1.4 million) of all networked devices in 2021, compared to 1% (732145) in 2016, (14.1% CAGR).
- In South Africa, 4K TVs will account for 65% (3.3 million) of all flat panel TVs in 2021, compared to 14.5% (287,263) in 2016, (63% CAGR).
- South Africa's IP traffic from non-PC devices was 25% of total IP traffic in 2016, and will be 61% of total IP traffic in 2021.
- In South Africa, PCs accounted for 75% of IP traffic in 2016, and will be 39% of IP traffic in 2021.
- In South Africa, TVs accounted for 11% of IP traffic in 2016, and will be 14% of IP traffic in 2021.
- In South Africa, Smartphones accounted for 10% of IP traffic in 2016, and will be 38% of IP traffic in 2021.
- In South Africa, Tablets accounted for 3% of IP traffic in 2016, and will be 5% of IP traffic in 2021.
- In South Africa, M2M modules accounted for 1.1% of IP traffic in 2016, and will be 2.9% of IP traffic in 2021.
- In South Africa, PCs accounted for 69% of consumer Internet traffic in 2016, and will be 31% of consumer Internet traffic in 2021.
- In South Africa, TVs accounted for 9% of consumer Internet traffic in 2016, and will be 10% of consumer Internet traffic in 2021.
- In South Africa, TVs accounted for 6% of total Internet traffic in 2016, and will be 8% of total Internet traffic in 2021.

### Speed Evolution

- In South Africa, the average fixed broadband speed will grow 2.8-fold from 2016 to 2021, from 6.3 Mbps to 17.9 Mbps.
- In South Africa, 61% of fixed broadband connections will be faster than 5 Mbps in 2021, up from 37% today.
- In South Africa, 29% of fixed broadband connections will be faster than 10 Mbps in 2021, up from 16% today.
- In South Africa, 8.5% of fixed broadband connections will be faster than 25 Mbps in 2021, up from 3.8% today.
- In South Africa, 3.3% of fixed broadband connections will be faster than 50 Mbps in 2021, up from 1.7% today.
- In South Africa, the average Wi-Fi speeds from mobile devices will grow 2.0-fold from 2016 to 2021, from 5.7 Mbps to 12 Mbps.
- In South Africa, the average mobile connection speed will grow 5-fold from 2016 to 2021, reaching 16 Mbps in 2021.

### Traffic per User and Household

- In South Africa, the average Internet user will generate 16.1 Gigabytes of Internet traffic per month in 2021, up 165% from 6.1 Gigabytes per month in 2016, a CAGR of 21%.
- In South Africa, the average Internet household will generate 41.0 Gigabytes of Internet traffic per month in 2021, up 168% from 15.3 Gigabytes per month in 2016, a CAGR of 22%.
- In South Africa, the average FTTx Internet household will generate 232.8 Gigabytes of Internet traffic per month in 2021, 135.4% more than other broadband households.
- In South Africa, the average FTTx Internet household generated 195.1 Gigabytes of Internet traffic per month in 2016, 188.6% more than other broadband households.
- In South Africa, there will be 818,076 Internet households (7.0% of all Internet households) generating more than 250 Gigabytes per month in 2021.
- In South Africa, there will be 194,780 households (1.7% of all Internet households) generating more than 500 Gigabytes per month in 2021.
- In South Africa, there will be 38,956 households (0.3% of all Internet households) generating more than a terabyte per month in 2021.
- In South Africa, the average mobile connection will generate 2,338 Megabytes of mobile data traffic per month in 2021, up from 314 Megabytes in 2016.

### Traffic Topology and Traffic Patterns

- In South Africa, 41% of all Internet traffic will cross content delivery networks in 2021, up from 16% in 2016.
- In South Africa, peak Internet traffic will grow at a compound annual growth rate of 35% from 2016 to 2021, compared to 26% for average Internet traffic.