



Rest of Middle East and Africa - 2021 Forecast Highlights

IP Traffic

- In the rest of Middle East and Africa, IP traffic will grow 6-fold from 2016 to 2021, a compound annual growth rate of 44%.
- In the rest of Middle East and Africa, IP traffic will reach 14.4 Exabytes per month in 2021, up from 2.3 Exabytes per month in 2016.
- The rest of Middle East and Africa's IP networks will carry 474 Petabytes per day in 2021, up from 76 Petabytes per day in 2016.
- In the rest of Middle East and Africa, IP traffic will reach an annual run rate of 173.1 Exabytes in 2021, up from an annual run rate of 27.9 Exabytes in 2016.
- In the rest of Middle East and Africa, IP traffic will reach 9 Gigabytes per capita in 2021, up from 2 Gigabytes per capita in 2016.
- In the rest of Middle East and Africa, average IP traffic will reach 44 Tbps in 2021, and busy hour traffic will reach 212 Tbps.
- In 2021, the gigabyte equivalent of all movies ever made will cross The rest of Middle East and Africa's IP networks every 24 minutes.

Internet Traffic

- In the rest of Middle East and Africa, Internet traffic will grow 6.6-fold from 2016 to 2021, a compound annual growth rate of 46%.
- In the rest of Middle East and Africa, busy hour Internet traffic will grow 9.5-fold from 2016 to 2021, a compound annual growth rate of 57%.

- In the rest of Middle East and Africa, Internet traffic will reach 14.1 Exabytes per month in 2021, up from 2.1 Exabytes per month in 2016.
- The rest of Middle East and Africa's Internet traffic will be 463 Petabytes per day in 2021, up from 70 Petabytes per day in 2016.
- The rest of Middle East and Africa's Internet traffic in 2021 will be equivalent to 42 billion DVDs per year, 4 billion DVDs per month, or 5 million DVDs per hour.
- In 2021, the gigabyte equivalent of all movies ever made will cross the Internet every 25 minutes.
- the rest of Middle Eastern and African Internet traffic in 2021 will be equivalent to 998x the volume of the entire the rest of Middle Eastern and African Internet in 2005.
- In the rest of Middle East and Africa, Internet traffic will reach 9 Gigabytes per capita in 2021, up from 1 Gigabytes per capita in 2016.
- In the rest of Middle East and Africa, average Internet traffic will increase 6.6-fold by 2021 and will reach 43 Tbps.
- In the rest of Middle East and Africa, busy hour Internet traffic will increase 9.5-fold by 2021 and will reach 207 Tbps.

Wired Wi-Fi and Mobile Growth

- The rest of Middle East and Africa's Fixed/Wi-Fi was 53% of total IP traffic in 2016, and will be 44% of total IP traffic in 2021.
- The rest of Middle East and Africa's Fixed/Wired was 22% of total IP traffic in 2016, and will be 7% of total IP traffic in 2021.
- The rest of Middle East and Africa's Mobile was 25% of total IP traffic in 2016, and will be 50% of total IP traffic in 2021.
- The rest of Middle East and Africa's Fixed/Wi-Fi was 54.9% of total Internet traffic in 2016, and will be 44.3% of total Internet traffic in 2021.
- The rest of Middle East and Africa's Fixed/Wired was 18% of total Internet traffic in 2016, and will be 5% of total Internet traffic in 2021.
- The rest of Middle East and Africa's Mobile was 27.4% of total Internet traffic in 2016, and will be 50.9% of total Internet traffic in 2021.
- In the rest of Middle East and Africa, mobile data traffic will grow 12-fold from 2016 to 2021, a compound annual growth rate of 65%.
- In the rest of Middle East and Africa, mobile data traffic will reach 7.2 Exabytes per month in 2021, up from 584 Petabytes per month in 2016.
- the rest of Middle Eastern and African mobile data traffic will grow 2 times faster than the rest of Middle Eastern and African fixed IP traffic from 2016 to 2021.
- The rest of Middle East and Africa's Mobile was 25% of total IP traffic in 2016, and will be 50% of total IP traffic in 2021.
- In the rest of Middle East and Africa, mobile data traffic in 2021 will be equivalent to 495x the volume of the entire the rest of Middle Eastern and African Internet in 2005.

IP Video

- In the rest of Middle East and Africa, IP video traffic will grow 8-fold from 2016 to 2021, a compound annual growth rate of 52%.
- In the rest of Middle East and Africa, IP video traffic will reach 11.7 Exabytes per month in 2021, up from 1.4 Exabytes per month in 2016.
- In the rest of Middle East and Africa, IP video will be 81% of all IP traffic in 2021, up from 62% in 2016.
- In the rest of Middle East and Africa, Ultra HD will be 2.8% of IP Video traffic in 2021, up from 0.1% in 2016 (188.9% CAGR).
- In the rest of Middle East and Africa, HD will be 31.8% of IP Video traffic in 2021, up from 12.2% in 2016 (84.1% CAGR).
- In the rest of Middle East and Africa, SD will be 65.4% of IP Video traffic in 2021, compared to 87.6% in 2016 (43.4% CAGR).
- In the rest of Middle East and Africa, consumer IP video traffic will be 83% of consumer IP traffic in 2021, up from 67% in 2016.
- In the rest of Middle East and Africa, business IP video traffic will be 72% of business IP traffic in 2021, up from 50% in 2016.

Internet Video

- In the rest of Middle East and Africa, Internet video traffic will grow 9-fold from 2016 to 2021, a compound annual growth rate of 54%.
- In the rest of Middle East and Africa, Internet video traffic will reach 11.5 Exabytes per month in 2021, up from 1.3 Exabytes per month in 2016.
- In the rest of Middle East and Africa, total Internet video traffic (business and consumer, combined) will be 81% of all Internet traffic in 2021, up from 62% in 2016.
- In the rest of Middle East and Africa, Ultra HD will be 2.7% of Internet video traffic in 2021, up from 0.1% in 2016 (187.1% CAGR).
- In the rest of Middle East and Africa, HD will be 31.2% of Internet video traffic in 2021, up from 10.2% in 2016 (92.8% CAGR).
- In the rest of Middle East and Africa, SD will be 66.1% of Internet video traffic in 2021, compared to 89.7% in 2016 (44.9% CAGR).
- In the rest of Middle East and Africa, consumer Internet video traffic will be 82% of consumer Internet traffic in 2021, up from 66% in 2016.
- In the rest of Middle East and Africa, business Internet video traffic will be 73% of business Internet traffic in 2021, up from 52% in 2016.
- In the rest of Middle East and Africa, Internet-Video-to-TV traffic will be 7% of fixed consumer Internet video traffic in 2021, up from 11% in 2016.
- In the rest of Middle East and Africa, Internet-Video-to-TV traffic will increase 5-fold between 2016 and 2021 (36.0% CAGR).
- In the rest of Middle East and Africa, 130 billion minutes (247,176 years) of video content will cross the Internet each month in 2021. That's 49,435 minutes of video streamed or downloaded every second.

- In the rest of Middle East and Africa, 37% of all Internet video traffic will cross content delivery networks in 2021, up from 26% in 2016.
- In the rest of Middle East and Africa, 53.5% of all Internet video traffic will be long-form video (including live) in 2021, up from 54.9% in 2016.

IP VOD

- In the rest of Middle East and Africa, Ultra HD will be 10.1% of IP VOD traffic in 2021, up from 0.1% in 2016 (231.9% CAGR).
- In the rest of Middle East and Africa, HD will be 81.0% of IP VOD traffic in 2021, up from 58.9% in 2016 (30.5% CAGR).
- In the rest of Middle East and Africa, SD will be 8.9% of IP VOD traffic in 2021, compared to 41.0% in 2016 (-9.9% CAGR).

Gaming

- In the rest of Middle East and Africa, gaming traffic will grow 5-fold from 2016 to 2021, a compound annual growth rate of 36%.
- In the rest of Middle East and Africa, gaming traffic will reach 115 Petabytes per month in 2021, up from 25 Petabytes per month in 2016.
- In the rest of Middle East and Africa, gaming traffic will be 1% of consumer Internet traffic in 2021, up from 2% in 2016.

Devices

- In the rest of Middle East and Africa, there will be 2.3 billion networked devices in 2021, up from 1.5 billion in 2016.
- In the rest of Middle East and Africa, there will be 1.4 networked devices per capita in 2021, up from 1.1 per capita in 2016.
- In the rest of Middle East and Africa, 76% of all networked devices will be mobile-connected in 2021.
- In the rest of Middle East and Africa, M2M modules will account for 27% (616.3 million) of all networked devices in 2021, compared to 16% (240.8 million) in 2016, (20.7% CAGR).
- In the rest of Middle East and Africa, PCs will account for 2% (52.0 million) of all networked devices in 2021, compared to 4% (63.4 million) in 2016, (-3.9% CAGR).
- In the rest of Middle East and Africa, Tablets will account for 3% (66.1 million) of all networked devices in 2021, compared to 2% (26.3 million) in 2016, (20.3% CAGR).
- In the rest of Middle East and Africa, Smartphones will account for 47% (1.1 billion) of all networked devices in 2021, compared to 24% (376.1 million) in 2016, (23% CAGR).
- In the rest of Middle East and Africa, Connected TVs will account for 3% (68.8 million) of all networked devices in 2021, compared to 2% (32.0 million) in 2016, (16.5% CAGR).
- In the rest of Middle East and Africa, Non-Smartphones will account for 17.0% (382.6 million) of all networked devices in 2021, compared to 52% (797.5 million) in 2016, (-13.7% CAGR).
- In the rest of Middle East and Africa, Other Portables will account for % (9.4 million) of all networked devices in 2021, compared to % (4.9 million) in 2016, (13.9% CAGR).
- In the rest of Middle East and Africa, 4K TVs will account for 53% (23.2 million) of all flat panel TVs in 2021, compared to 11.1% (1.6 million) in 2016, (71.3% CAGR).

- The rest of Middle East and Africa's IP traffic from non-PC devices was 51% of total IP traffic in 2016, and will be 89% of total IP traffic in 2021.
- In the rest of Middle East and Africa, PCs accounted for 49% of IP traffic in 2016, and will be 11% of IP traffic in 2021.
- In the rest of Middle East and Africa, TVs accounted for 6% of IP traffic in 2016, and will be 3% of IP traffic in 2021.
- In the rest of Middle East and Africa, Smartphones accounted for 34% of IP traffic in 2016, and will be 74% of IP traffic in 2021.
- In the rest of Middle East and Africa, Tablets accounted for 7% of IP traffic in 2016, and will be 8% of IP traffic in 2021.
- In the rest of Middle East and Africa, M2M modules accounted for 2.5% of IP traffic in 2016, and will be 3.2% of IP traffic in 2021.
- In the rest of Middle East and Africa, PCs accounted for 37% of consumer Internet traffic in 2016, and will be 7% of consumer Internet traffic in 2021.
- In the rest of Middle East and Africa, TVs accounted for 4% of consumer Internet traffic in 2016, and will be 2% of consumer Internet traffic in 2021.
- In the rest of Middle East and Africa, TVs accounted for 3% of total Internet traffic in 2016, and will be 2% of total Internet traffic in 2021.

Speed Evolution

- In the rest of Middle East and Africa, the average fixed broadband speed will grow 1.7-fold from 2016 to 2021, from 6.3 Mbps to 10.9 Mbps.
- In the rest of Middle East and Africa, 45% of fixed broadband connections will be faster than 5 Mbps in 2021, up from 31% today.
- In the rest of Middle East and Africa, 18% of fixed broadband connections will be faster than 10 Mbps in 2021, up from 13% today.
- In the rest of Middle East and Africa, 7.5% of fixed broadband connections will be faster than 25 Mbps in 2021, up from 6.8% today.
- In the rest of Middle East and Africa, 5.6% of fixed broadband connections will be faster than 50 Mbps in 2021, up from 3.5% today.
- In the rest of Middle East and Africa, the average Wi-Fi speeds from mobile devices will grow 1.7-fold from 2016 to 2021, from 4.6 Mbps to 8 Mbps.
- In the rest of Middle East and Africa, the average mobile connection speed will grow 8-fold from 2016 to 2021, reaching 11 Mbps in 2021.

Traffic per User and Household

- In the rest of Middle East and Africa, the average Internet user will generate 32.9 Gigabytes of Internet traffic per month in 2021, up 343% from 7.4 Gigabytes per month in 2016, a CAGR of 35%.
- In the rest of Middle East and Africa, the average Internet household will generate 133.0 Gigabytes of Internet traffic per month in 2021, up 387% from 27.3 Gigabytes per month in 2016, a CAGR of 37%.

- In the rest of Middle East and Africa, the average FTTx Internet household will generate 273.6 Gigabytes of Internet traffic per month in 2021, 118.4% more than other broadband households.
- In the rest of Middle East and Africa, the average FTTx Internet household generated 55.3 Gigabytes of Internet traffic per month in 2016, 126.1% more than other broadband households.
- In the rest of Middle East and Africa, there will be 8 million Internet households (20.3% of all Internet households) generating more than 250 Gigabytes per month in 2021.
- In the rest of Middle East and Africa, there will be 3 million households (6.7% of all Internet households) generating more than 500 Gigabytes per month in 2021.
- In the rest of Middle East and Africa, there will be 766,256 households (1.8% of all Internet households) generating more than a terabyte per month in 2021.
- In the rest of Middle East and Africa, the average mobile connection will generate 4,769 Megabytes of mobile data traffic per month in 2021, up from 517 Megabytes in 2016.

Traffic Topology and Traffic Patterns

- In the rest of Middle East and Africa, 33% of all Internet traffic will cross content delivery networks in 2021, up from 18% in 2016.
- In the rest of Middle East and Africa, peak Internet traffic will grow at a compound annual growth rate of 57% from 2016 to 2021, compared to 46% for average Internet traffic.