



IPTV BENCHMARK GERMANY 2024

Timeframe: 2024/04/01 - 2024/04/29 - Last updated: 2024/05/11 12:02:55 - Last calculated 2024/05/02 18:06:00

Voice

Test Case	KPI	Unit	1&1	Deutsche Glasfaser	NetCologne	Telefonica	Telekom	vodafone
Voice pure	Observations		6990	1120	1104	6213	6700	6681
	Connect Setup Duration (Median)	s	0.24	0.34	0.39	0.57	0.32	0.41
	Connect Setup Duration (P90)	s	0.35	0.39	0.49	0.64	0.35	0.53
	MOS-LQO (Median)	#	4.46	4.47	4.46	4.47	4.47	4.47
	MOS-LQO (P10)	#	4.17	4.2	4.18	4.28	4.44	4.22
	Speech Delay (Median)	ms	78	82	72	88	29	81
	Speech Delay (P90)	ms	93	93	87	100	33	93
	Call Failure Ratio	%	0.01	1.07	0.45	0.79	0	1.41
Voice with Dataload and one IPTV Stream	Observations		6523	2706	3299	5526	6636	6216
	Connect Setup Duration (Median)	s	0.25	0.33	0.37	0.6	0.32	1.19
	Connect Setup Duration (P90)	s	0.35	0.38	0.49	0.71	0.36	1.57
	MOS-LQO (Median)	#	4.46	4.46	4.46	3.75	4.47	4.46
	MOS-LQO (P10)	#	4.24	4.14	4.17	2.95	4.44	4.13
	Speech Delay (Median)	ms	78	79	72	118	30	86
	Speech Delay (P90)	ms	91	90	86	134	35	98
	Call Failure Ratio	%	0.02	0	0.18	0.94	0	1.43
Voice with Dataload and two IPTV Streams	Observations		6214	2702	3290	5383	6365	5983
	Connect Setup Duration (Median)	s	0.25	0.33	0.38	0.6	0.32	1.18
	Connect Setup Duration (P90)	s	0.35	0.39	0.48	0.72	0.35	1.58
	MOS-LQO (Median)	#	4.47	4.47	4.46	3.7	4.47	4.46
	MOS-LQO (P10)	#	4.29	4.15	4.22	2.97	4.44	4.14
	Speech Delay (Median)	ms	78	79	71	117	30	86
	Speech Delay (P90)	ms	89	89	83	134	35	98
	Call Failure Ratio	%	0	0	0.06	0.98	0	1.47

Highspeed Internet

Test Case	KPI	Unit	1&1	Deutsche Glasfaser	NetCologne	Telefonica	Telekom	vodafone
Download pure	Observations		2237	1120	1116	2167	2240	2235
	HTTP Download Throughput < 90 % of Bandwidth	%	0	0	0	6.2	0	0.04
	HTTP Download Failure Ratio	%	0	0	0	0.28	0	0.09
Download with parallel Upload, Voice and one IPTV Stream	Observations		2211	902	1106	2029	2230	2157
	HTTP Download Throughput < 80 % of Bandwidth	%	0	0	0	4.74	0	0
	HTTP Download Failure Ratio	%	0	0.22	0.18	0.2	0	0.14
Download with parallel Upload, Voice and two IPTV Streams	Observations		2107	900	1110	1876	2130	2066
	HTTP Download Throughput < 75 % of Bandwidth	%	0	0	0	5.44	0	0.05
	HTTP Download Failure Ratio	%	0	0	0.09	0	0	0.24

IPTV

Test Case	KPI	Unit	1&1	Deutsche Glasfaser	NetCologne	Telefonica	Telekom	vodafone
IPTV pure	Observations		8778	3547	4445	7637	8882	8284
	Observations (startup)		2207	902	1117	1947	2224	2150
	Observations (zapping)		8820	3593	4470	7752	8916	8608
	Startup Duration (Median)	s	1.21	0.59	1.18	0.84	0.56	1.85
	Startup Duration (P90)	s	1.47	0.65	1.92	0.96	0.84	9.32
	Startup Failure Ratio	%	0.23	1.33	0	1.34	0	10.56
	Zapping Duration (Median)	s	0.99	0.5	0.93	0.84	0.6	1.52
	Zapping Duration (P90)	s	1.1	0.62	0.98	1.09	0.78	2.04
	Zapping Failure Ratio	%	0.5	1.5	0.63	1.57	0	2.67
	MOS (Median)	#	4.46	4.47	4.46	4.46	4.47	4.48
	MOS (P10)	#	4.44	4.47	4.44	4.37	4.45	4.46
	IPTV Quality Failure Ratio	%	0.02	0	0	0.01	0	1.81
One IPTV Stream with Dataload (Voice, Download and Upload)	Observations		8779	3521	4389	7578	8891	8325
	Observations (startup)		2207	902	1110	1948	2225	2154
	Observations (zapping)		8835	3593	4456	7761	8920	8623
	Startup Duration (Median)	s	1.29	0.52	1.36	1.64	0.83	5.31
	Startup Duration (P90)	s	1.84	1.26	2.54	2.04	0.93	19.36
	Startup Failure Ratio	%	0.18	4.66	0.09	4.47	0	12.81
	Zapping Duration (Median)	s	1.09	0.79	1.18	1.4	0.82	3.5
	Zapping Duration (P90)	s	1.26	1.2	1.58	2.26	1.03	5.44
	Zapping Failure Ratio	%	0.43	4.09	0.83	4.48	0	2.32
	MOS (Median)	#	4.45	4.46	4.44	4.43	4.46	4.43
	MOS (P10)	#	4.43	4.44	4.4	4.3	4.44	4.36
	IPTV Quality Failure Ratio	%	0.01	0	0.09	0.2	0.03	2.8
Two IPTV Streams with Dataload (Voice, Download and Upload)	Observations		8312	3508	4392	7218	8490	7944
	Observations (startup)		2102	902	1110	1870	2125	2058
	Observations (zapping)		8400	3597	4450	7451	8520	8248
	Startup Duration (Median)	s	1.3	0.65	1.38	1.29	0.85	5.21
	Startup Duration (P90)	s	1.82	0.96	2.34	1.69	0.94	20.62
	Startup Failure Ratio	%	0.38	7.43	0.18	3.29	0	9.77
	Zapping Duration (Median)	s	1.09	0.83	1.14	1.4	0.83	3.45
	Zapping Duration (P90)	s	1.28	1.16	1.48	2.18	1.04	5.45
	Zapping Failure Ratio	%	1.33	5.81	0.83	7.52	0	2.4
	MOS (Median)	#	4.45	4.46	4.44	4.44	4.46	4.43
	MOS (P10)	#	4.43	4.45	4.41	4.3	4.44	4.37
	IPTV Quality Failure Ratio	%	0.05	0	0.23	0.12	0.01	2.34
EPG-Zapping	Observations (zapping)		2208	902	1116	1951	2230	2158
	EPG-Zapping Duration (Median)	s	0.23	1.1	0.4	1.46	0.72	1.7
	EPG-Zapping Duration (P90)	s	1.77	1.15	0.53	1.7	0.98	2.27
	EPG-Zapping Failure Ratio	%	0.68	6.87	0.9	8.82	0	0.56