Quality of Serivce (QoS) Results for QTel and Vodafone Qatar - Published by ictQATAR in Feb 2013

Part 1: Fixed Services

Service Provider		#	QoS Parameter		Target		2012 Apr	May	Jun	Jul	Aug	Sep
QTel (Fixed)	Fixed Voice	1	Supply time for initial telephone line connection (%)	within 5 working days	>=	95%	96.84%	96.35%	96.60%	96.1%	95.85%	95.53%
		2		within 4 days after	>=	99%	99.09%	99.08%	99.11%	99.2%	99.02%	99.15%
		3	Faults rate (%)		<=	0.5%	0.23%	0.22%	0.24%	0.25%	0.23%	0.21%
		4	Fault repair time	within 24 hours (%)	>=	90%	91.14%	91.94%	90.83%	90.3%	91.86%	90.31%
		5		within72 hours (%)	>=	99%	99.04%	99.37%	99.11%	99.1%	99.24%	99.45%
		6	Successful call ratio	National (%)	>=	99%	99.73%	99.78%	99.82%	99.80%	99.79%	99.82%
		7		International (%)	>=	95%	95.60%	95.88%	95.92%	95.81%	95.99%	96.29%
		8	Call set-up time	National (seconds)		TBM	1.00	1.00	1.00	1.00	1.00	1.00
		9		International (seconds)		TBM	4.87	4.77	4.59	4.79	4.63	4.62
		10	Bill correctness complaints (%)		<=	1%	0.02%	0.02%	0.01%	0.02%	0.01%	0.02%
		11	Time to resolve billing complaints (days)	within 20 business days (%)	>=	95%	100%	100%	100%	100%	97%	98%
		12		within 30 business days (%)	>=	99%	100%	100%	100%	100%	100%	98%
		13	Availability of telephone exchange equipment (%)		>=	99.99%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
		14	Availability of access network		>=	99.8%	99.998%	99.994%	99.998%	99.998%	99.997%	99.999%
	Broadband	15	Supply time for initial broadband line connection	within 10 working days (%)	>=	95%	95.82%	97.95%	96.89%	96.2%	96.81%	96.96%
		16		within 5 days after (%)	>=	99%	99.02%	99.03%	99.11%	99.1%	99.17%	99.12%
		17	End-to-end network availability (%)		>=	99.8%	99.990%	99.993%	99.994%	99.993%	99.995%	99.996%
		18	Minimum access throughput (kbps)		>=	256kbps	>256 kbps	>256 kbps	>256 kbps	>256 kbps	>256 kbps	>256 kbps
		19	Faults rate (%)		<=	0.5%	0.65%	0.64%	0.64%	0.65%	0.65%	0.65%
		20	Fault repair time	within 24 hours (%)	>=	90%	90.57%	91.55%	90.14%	90.27%	90.84%	91.54%
		21		within 72 hours (%)	>=	99%	99.10%	99.21%	99.27%	99.11%	99.07%	99.38%
		22	Customer service support (Complaints Received per 100 Subscribers)		<=	1%	0.37%	0.32%	0.27%	0.28%	0.25%	0.24%
		23	Bill correctness complaints (%)		<=	1%	0.08%	0.08%	0.07%	0.05%	0.04%	0.06%
		24	Time to resolve billing complaints	within 20 business days (%)	>=	95%	100%	100%	100%	100%	100%	100%
		25		within 30 business days (%)	>=	99%	100%	100%	100%	100%	100%	100%
		26	Network Latency	National (milliseconds)	<=	85 ms	7.27	7.32	7.22	7.72	7.03	7.71
		27		International (milliseconds)		TBM	228.0	220.0	210.0	195.4	186.3	192.0
		28	Bandwidth utilization (%)		<=	90%	78.70%	73.40%	66.60%	51.83%	65.40%	58.00%
	Leased Lines	29	Availability	National (%)	>=	99.7%	99.9970%	99.9940%	99.9990%	99.9990%	99.9994%	99.9995%
		30		International (%)		TBM	99.99%	99.936%	99.95%	99.44%	99.97%	99.97%
		31	Provisioning time	National (%)	>=	95%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
		32		International (%)		TBM	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
		33	Mean time to repair	National (hours)	<=	4.00	3.40	3.60	3.90	3.70	3.50	3.90
		34		International (hours)		TBM	3.10	3.70	3.30	3.80	1.23	1.60

Summary of QTel (Fixed)	Apr	May	Jun	Jul	Aug	Sep
Total number of QoS parameters	34	34	34	34	34	34
Number of parameters fulfilled	27	27	27	27	27	26
Number of parameters **not** fulfilled	1	1	1	1	1	2
Number of parameters TBM	6	6	6	6	6	6
Percentage of parameters fulfilled	96%	96%	96%	96%	96%	93%

QTel's Notes:
- *Qtel is investing in a modern fibre network that will replace old copper lines and this measure should significantly improve performance against the 'faults rate' QoS requirement.*

Service Provider			QoS Parameter		Target		2012					
							Apr	May	Jun	Jul	Aug	Sep
Vodafone (Fixed)	Fixed Voice	1	Supply time for initial telephone	within 5 working days	>=	95%	100.00%	25.00%	0.00%	80.00%	80.00%	72.22%
		2	line connection (%)	within 4 days after	>=	99%	100.00%	25.00%	0.00%	80.00%	80.00%	83.33%
		3	Faults rate (%)		<=	0.5%	4.00%	1.85%	1.75%	0.00%	2.99%	1.18%
		4	Fault repair time	within 24 hours (%)	>=	90%	50.00%	0.00%	100.00%	n/a	100.00%	0.00%
		5		within72 hours (%)	>=	99%	100.00%	100.00%	100.00%	n/a	100.00%	100.00%
		6	Successful call ratio	National (%)	>=	99%	99.90%	99.90%	99.90%	99.90%	99.90%	99.90%
		7		International (%)	>=	95%	99.90%	99.90%	99.90%	99.90%	99.90%	99.90%
		8	Call set-up time	National (seconds)		TBM	4.00	4.00	4.00	4.00	4.00	4.00
		9		International (seconds)		TBM	6.00	6.00	6.00	6.00	6.00	6.00
		10	Bill correctness complaints (%)		<=	1%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%
		11	Time to resolve billing complaints	within 20 business days (%)	>=	98%	No billing complaint Received					95.00%
		12	(days)	within 30 business days (%)	>=	99%						99.00%
		13	Availability of telephone exchange equipment (%)		>=	99.99%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
		14	Availability of access network		>=	99.8%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	Broadband	15	Supply time for initial broadband	within 10 working days (%)	>=	95%	97.74%	96.85%	97.32%	99.22%	100.00%	99.33%
		16	line connection	within 5 days after (%)	>=	99%	98.50%	100.00%	98.21%	100.00%	100.00%	100.00%
		17	End-to-end network availability (%)		>=	99.8%	100.00%	100.00%	100.00%	99.55%	100.00%	100.00%
		18	Minimum access throughput (kbps)		>=	256kbps	3.18 Mbps	3.15 Mbps	3.50 Mbps	3.41 Mbps	3.65 Mbps	3.85 Mbps
		19	Faults rate (%)		<=	0.5%	0.55%	0.30%	0.29%	0.35%	0.10%	0.30%
		20	Fault repair time	within 24 hours (%)	>=	90%	92.86%	100.00%	100.00%	90.00%	100.00%	88.89%
		21		within 72 hours (%)	>=	99%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
		22	Customer service support (Complaints Received per 100 Subscribers)		<=	1%	n/p	1.56%	1.88%	1.99%	1.76%	2.23%
		23	Bill correctness complaints (%)		<=	1%	n/p	0.04%	0.04%	0.04%	0.04%	0.12%
		24	Time to resolve billing complaints	within 20 business days (%)	>=	98%	n/p	100.00%	100.00%	100.00%	100.00%	100.00%
		25		within 30 business days (%)	>=	99%	n/p	100.00%	100.00%	100.00%	100.00%	100.00%
		26	Network Latency	National (milliseconds)	<=	60 ms	n/p	n/p	n/p	n/p	n/p	n/p
		27		International (milliseconds)		TBM	n/p	n/p	n/p	n/p	n/p	n/p
		28	Bandwidth utilization (%)		<=	80%	n/p	n/p	n/p	n/p	n/p	n/p
	Leased Lines	29	Availability	National (%)	>=	99.7%	n/a	n/a	n/a	n/a	n/a	n/a
		30		International (%)		TBM	n/a	n/a	n/a	n/a	n/a	n/a
		31	Provisioning time	National (%)	>=	95%	n/a	n/a	n/a	n/a	n/a	n/a
		32		International (%)		TBM	n/a	n/a	n/a	n/a	n/a	n/a
		33	Mean time to repair	National (hours)	<=	4.00	n/a	n/a	n/a	n/a	n/a	n/a
		34		International (hours)		TBM	n/a	n/a	n/a	n/a	n/a	n/a

Summary of Vodafone (Fixed)				
		Apr	May	Jun	Jul	Aug	Sep
Total number of QoS parameters		34	34	34	34	34	34
Number of parameters fulfilled		15	18	18	19	19	16
Number of parameters **not** fulfilled		4	5	5	4	4	7
Number of parameters **not** provided "n/p"		7	3	3	3	3	3
Number of paramters 'n/a'		6	6	6	6	6	6
Number of parameters TBM		6	6	6	6	6	6
Percentage of parameters fulfilled		58%	69%	69%	73%	73%	62%

Vodafone's Notes:

-Data on billing complaints for the month of April 2012 is not available because of transition to a new complaint tracking system.

-The systems required to measure Network Latency and Bandwidth utilization will be available from Oct 2012 onwards.

ictQATAR's Notes:

- These QoS results have been supplied by QTel and Vodafone in accordance with their QoS Compliance Report (QCR) obligations under Annexure E
  of their Fixed licenses.The data is published as received from the operators and has not been independently verified by ictQATAR.
- Green text is used to highlight the results that comply with the target values and red text is used to highlight the results that do not comply with the target values.
- TBM: To be Monitored means that no target value has been set for this parameter.
- n/p: Data not provided by the Licensee.
- n/a: Not Applicable. All the parameters for Vodafone "Leased Lines" are "n/a" as no leased lines services are provided by Vodafone.
- Availability of Access Network: Measures the availability of the distribution circuits from the exchange to the distribution point, including the fibre,
  copper, access multiplexers, and any other access equipment where applicable.
- End-to-End Network Availability: The measure of the degree to which end-to-end broadband network is operable and not in a state of faliure
  or outage at any point in time.
- Minimum Access Throughput: Minimum access speed available to a customer within 4km of a local exchange.
- Network Latency: Round-trip delay (in milliseconds) in the relevant segment of the broadband network.
- Bandwidth Utilization: Level of bandwidth utilized in a specific segment divided by the total available bandwidth of that particular network segment.
- Detailed description of all the QoS parameters can be found in the licenses of the operators.

Part 2: Mobile Services

Service Provider	QoS Parameter			Target		2012 Apr	May	Jun	Jul	Aug	Sep
QTel (Mobile)	Mobile	1	Network Call set-up success rate (%)	>=	98%	99.89%	99.96%	99.97%	99.96%	99.82%	99.87%
		2	Network dropped call rate (%)	<=	1.5%	0.40%	0.42%	0.35%	0.36%	0.34%	0.40%
		3	Network quality (%)	>=	95%	95.12%	94.18%	95.08%	95.13%	95.10%	93.56%
		4	Billing correctness complaints	<=	1%	0.02%	0.03%	0.03%	0.02%	0.01%	0.03%
		5	Time to resolve billing complaints within15 business days (%)	>=	95%	100.00%	99.50%	99.40%	99.80%	100.00%	98.20%
		6	within 25 business days (%)	>=	99%	100%	100%	100%	100%	100%	100%
		7	Network availability (%)	>=	99.95%	99.95%	99.95%	99.96%	99.95%	99.96%	99.95%

Summary of QTel (Mobile)								
	Total number of QoS parameters	7	7	7	7	7	7
	Number of parameters fulfilled	7	6	7	7	7	6
	Number of parameters **not** fulfilled	0	1	0	0	0	1
	Percentage of parameters fulfilled	100%	86%	100%	100%	100%	86%

QTel's Notes:

- Network quality parameter was affected during the months of May and Sep on account of frequent fluctuations of microwave links due to certain weather conditions. QTel's initiatives to replace these microwave links with latest modern links has shown significant improvement in network quality.

Service Provider	QoS Parameter			Target		2012 Apr	May	Jun	Jul	Aug	Sep
Vodafone (Mobile)	Mobile	1	Network Call set-up success rate (%)	>=	98%	99.82%	99.84%	99.81%	99.84%	99.75%	99.70%
		2	Network dropped call rate (%)	<=	1.5%	0.38%	0.51%	0.31%	0.29%	0.34%	0.27%
		3	Network quality (%)	>=	95%	90.96%	86.53%	89.72%	88.35%	89.61%	90.19%
		4	Billing correctness complaints	<=	1%	0.15%	0.09%	0.07%	0.06%	0.06%	0.02%
		5	Time to resolve billing complaints within15 business days (%)	>=	95%	99.54%	99.76%	99.84%	99.31%	99.58%	99.91%
		6	within 25 business days (%)	>=	99%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
		7	Network availability (%)	>=	99.95%	99.77%	99.73%	99.84%	99.93%	99.82%	99.81%

Summary of Vodafone (Mobile)								
	Total number of QoS parameters	7	7	7	7	7	7
	Number of parameters fulfilled	5	5	5	5	5	5
	Number of parameters **not** fulfilled	2	2	2	2	2	2
	Percentage of parameters fulfilled	71%	71%	71%	71%	71%	71%

ictQATAR's Notes:

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- Detailed description of all QoS parameters can be found in the licenses issued the operators which can be found on ictQATAR's website www.ictqatar.qa