

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Andhra Pradesh	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	99.00		99.74		99.30	100	100.00	
				2G		98.00						
				3G		98.00						
	2	Successful data transmission download attempts	>80%	All Generations						100		
				2G (GSM)	100.00	98.76	100.00				100.00	
				3G	100.00	99.01	100.00					
				4G	100.00		100.00		100.00			
	3	Successful data transmission upload attempts	>75%	All Generations							100	
				2G (GSM)	100.00	95.92	100.00				100.00	
				3G	100.00	99.95	100.00					
				4G	100.00		100.00		100.00			
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	143.00	29.09	148.00			88	170.17
					3G	2202.00	755.18	3773.00				
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	181.00	137.63	163.00			114	235.80
					3G	3086.00	2860.51	5971.00				
	6	Latency	Data <250ms	All Generations							117.8	
				2G (GSM)	105.00	174.33	114.00				137.17	
				3G	70.00	58.00	42.00					
				4G	48.00		35.00		58.24			
	7	PDP Context Activation Success Rate	≥95%	All Generations							100	
				2G (GSM)	99.82	98.29	99.90				99.83	
				3G	99.66	99.97	97.96					
				4G	99.40		99.53		99.70			
	8	Drop rate :	≤5%	All Generations							1.7	
2G (GSM)				2.53	0.65	3.22				3.31		
3G				0.32	0.65	0.36						
4G				0.84		0.76		0.45				

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

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Assam	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	100.00		100.00		98.30		100.00	
				2G		100.00						
				3G		100.00						
	2	Successful data transmission download attempts	>80%	All Generations								
				2G (GSM)	100.00	98.00	100.00				99.80	
				3G	100.00	97.60					100.00	
				4G	100.00		100.00	100.00		99.70		
	3	Successful data transmission upload attempts	>75%	All Generations								
				2G (GSM)	100.00	98.60	100.00				100.00	
				3G	100.00	97.60					100.00	
				4G	100.00		100.00	100.00		100.00		
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	128.00	84.70	135.00				125.70
					Plan 2							
				3G	Plan 1	2491.00	1254.70					2432.00
					Plan 2							
	Plan 3											
	4G	Plans	12178.00		8369.00		4562.89		5566.70			
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	184.00	147.00	170.00				173.60
					Plan 2							
					Plan 3							
				3G	Plans	3520.00	2886.70					3655.70
	4G	Plans	24417.00		14156.00		21258.28		6440.00			
	6	Latency	Data <250ms	All Generations								
				2G (GSM)	212.00	252.30	210.00				216.70	
				3G	146.00	162.50					216.70	
				CDMA								
				4G	57.00		93.00	49.89		42.00		
7	PDP Context Activation Success Rate	≥95%	All Generations									
			2G (GSM)	99.90	98.70	99.62				99.40		
			3G	98.93	98.20					96.40		
			CDMA									
			4G	99.01		98.95	99.80		99.90			
8	Drop rate :	≤5%	All Generations									
			2G (GSM)	2.53		0.18				3.50		
			3G	1.55	1.40					0.50		
			4G	0.90		0.86	0.40		0.20			

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Bihar and Jharkhand	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	99.00		100.00		99.40	100	100.00		
				2G		100.00							
				3G		100.00							
	2	Successful data transmission download attempts	>80%	All Generations						100			
				2G (GSM)	99.67	100.00	100.00						
				3G	100.00	100.00	100.00						
				4G	100.00		100.00		100.00				
	3	Successful data transmission upload attempts	>75%	All Generations							100		
				2G (GSM)	99.66	100.00	100.00						
				3G	99.33	100.00	100.00						
				4G	100.00		100.00		100.00				
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1								
					Plan 2								
					Plan 3								
				2G	Plan 1	44.00	56.40	92.00			46	127.00	
					Plan 2		56.40						
				3G	Plan 1	1750.00	753.00	2020.00					
					Plan 2		753.00						
					Plan 3								
				4G	Plans	7462.00		2706.00			5858.74		
				5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1					
	Plan 2												
	Plan 3												
	2G	Plan 1	138.00				112.40	224.00			78	161.00	
		Plan 2					112.40						
	3G	Plan 1	3296.00				1858.90	3139.00					
		Plan 2					1858.90						
		Plan 3											
	4G	Plans	10635.00					5994.00			20608.11		
	6	Latency	Data <250ms				All Generations						
				2G (GSM)	147.00	205.60	227.00					162.00	
				3G	116.00	101.10	91.00						
4G				47.00		77.00		54.63					
7	PDP Context Activation Success Rate	≥95%	All Generations							100			
			2G (GSM)	99.89	97.10	99.44					99.89		
			3G	100.00	97.00	95.17							
			4G	97.59		96.68		99.80					
8	Drop rate :	≤5%	All Generations							1.78			
			2G (GSM)	3.44		2.00					2.60		
			3G	0.49	0.90	2.96							
			4G	0.26		0.33		0.56					

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Chennai	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations		100.00						
				3G								
	2	Successful data transmission download attempts	>80%	All Generations								
				2G (GSM)		96.70						
				3G		97.32						
				CDMA								
				4G								
	3	Successful data transmission upload attempts	>75%	All Generations								
				2G (GSM)		97.45						
				3G		97.92						
				CDMA								
				4G								
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1		61.00					
				3G	Plan 1		484.00					
					Plan 2							
					Plan 3							
				4G	Plans							
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1		128.00					
				3G	Plan 1		2954.00					
					Plan 2							
					Plan 3							
				4G	Plans							
	6	Latency	Data <250ms	All Generations								
				2G (GSM)			225.00					
				3G			94.00					
				CDMA								
				4G								
	7	PDP Context Activation Success Rate	≥95%	All Generations								
				2G (GSM)			98.09					
				3G			97.56					
				CDMA								
				4G								
	8	Drop rate :	≤5%	All Generations								
				2G (GSM)			1.77					
			3G			1.90						
			CDMA									
			4G									

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Delhi	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00		99.83	98.00	99.40	100	99.90	
				3G								
	2	Successful data transmission download attempts	>80%	All Generations						100		
				2G (GSM)	99.81		100.00	95.48			99.70	
				3G	100.00		100.00	98.85			100.00	
				CDMA								
				4G	100.00				100.00		99.60	
	3	Successful data transmission upload attempts	>75%	All Generations						100		
				2G (GSM)	99.63		100.00	91.04			99.63	
				3G	99.94		100.00	98.21			99.80	
				CDMA								
				4G	100.00				100.00		99.40	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1						16	
					Plan 2							
					Plan 3							
				2G	Plan 1	63.00		59.00	62.49			64.70
				3G	Plan 1	1365.00		1672.00	466.80			2831.00
			Plan 2									
			Plan 3									
				4G	Plans	8639.00				6118.92		4705.70
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1						69	
					Plan 2							
					Plan 3							
				2G	Plan 1	94.00		229.00	134.05			137.80
				3G	Plan 1	1557.00		6109.00	3766.00			7759.00
					Plan 2							
					Plan 3							
				4G	Plans	23126.00				22602.88		14702.00
	6	Latency	Data <250ms	All Generations					155.00		153.45	
				2G (GSM)		226.00		138.00				162.00
				3G		84.00		60.00				99.00
				CDMA								
				4G		113.00				34.13		40.00
	7	PDP Context Activation Success Rate	≥95%	All Generations					98.80		97.33	
				2G (GSM)		99.65		99.53				99.60
				3G		100.00		99.17				98.50
				CDMA								
				4G		97.27				99.80		99.80
	8	Drop rate :	≤5%	All Generations					1.86		0.25	
				2G (GSM)		2.81		0.19				1.60
			3G		0.56		0.65				0.60	
			CDMA									
			4G		0.93				0.44		0.30	

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Gujarat	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00	98.00	99.92		99.30	100	99.98	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations		99.00				100		
				2G (GSM)	100.00		100.00				98.68	
				3G	100.00		100.00				99.91	
				CDMA								
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations		98.00					100	
				2G (GSM)	100.00		100.00					98.61
				3G	100.00		100.00					100.00
				CDMA								
				4G	100.00		100.00		100.00			100.00
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1						70	
					Plan 2							
					Plan 3							
				2G	Plan 1	128.00		128.00			69	75.14
				3G	Plan 1	4149.00	1473.00	2130.00				1919.82
			Plan 2							2033		
			Plan 3							3147		
				4G	Plans	9616.00		6903.00		10929.62		5385.75
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1						82	
					Plan 2							
					Plan 3		2550.00					
				2G	Plan 1	168.00		185.00			128	166.90
				3G	Plan 1	5283.00		5281.00				6454.49
					Plan 2					3160		
					Plan 3					5241		
				4G	Plans	18647.00		13668.00		29303.56		11489.13
	6	Latency	Data <250ms	All Generations			87.00				71.3	
				2G (GSM)		235.00		109.00				105.00
				3G		53.00		44.00				67.00
				CDMA								
				4G		66.00		42.00		41.12		32.00
	7	PDP Context Activation Success Rate	≥95%	All Generations			99.40				99.1	
				2G (GSM)		99.99		99.97				99.72
				3G		99.76		99.96				99.47
			CDMA									
			4G		99.75		99.67		99.80		99.73	
8	Drop rate :	≤5%	All Generations			1.00				2.9		
			2G (GSM)		4.92		0.34				4.32	
			3G		0.07		0.51				0.45	
			CDMA									
			4G		0.22		0.40		0.43		0.24	

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Himachal Pradesh	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	100.00	100.00	99.98		99.20	100	100.00		
				2G (GSM)									
				3G									
				CDMA									
	2	Successful data transmission download attempts	>80%	All Generations		93.00				100			
				2G (GSM)	100.00		100.00					100.00	
				3G	100.00		100.00						
				4G	100.00		100.00		100.00				
	3	Successful data transmission upload attempts	>75%	All Generations		90.00					100		
				2G (GSM)	100.00		100.00					100.00	
				3G	100.00		100.00						
				4G	100.00		100.00		100.00				
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1								
					Plan 2								
				2G	Plan 1	79.00	65.00	76.00			40	119.42	
					3G	Plan 1	1191.00	890.00	2075.00				
						Plan 2			2322.00				
				4G	Plans	3665.00				6037.11			
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1								
					Plan 2								
				2G	Plan 1	110.00	99.00	175.00			78	171.61	
					3G	Plan 1	3174.00	1762.00	4152.00				
						Plan 2							
				4G	Plans	8313.00		6781.00		24466.45			
	6	Latency	Data <250ms	All Generations		95.00					105.79		
				2G (GSM)	239.00		217.00					105.17	
				3G	172.00		173.00						
				4G	100.00		122.00		46.02				
7	PDP Context Activation Success Rate	≥95%	All Generations		98.80					100			
			2G (GSM)	97.02		100.00					99.87		
			3G	100.00		100.00							
			4G	98.48		100.00		99.80					
8	Drop rate :	≤5%	All Generations		1.30					0			
			2G (GSM)	1.55		0.67					2.67		
			3G	0.61		0.78							
			4G	0.44		0.74		0.40					

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Haryana	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00	97.66	99.86		99.30	100	99.90	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations		86.33				100		
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00				100.00	
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations		85.20					100	
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00				100.00	
				4G	100.00		99.99		100.00		100.00	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	162.00	83.33	103.00			42.13	124.05
				3G	Plan 1	1167.00	988.00	1353.00			420.1	2590.91
					Plan 2						1087.8	
					Plan 3						1216.45	
				4G	Plans	1741.00		3809.00		13430.11		6057.52
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	172.00	124.50	172.00			75.13	156.00
				3G	Plan 1	2365.00	1685.50	4001.00			1184.14	5821.67
					Plan 2						1782.75	
					Plan 3						2257.78	
				4G	Plans	17307.00		10372.00		37853.08		9374.01
	6	Latency	Data <250ms	All Generations			117.50				89.1	
				2G (GSM)		234.00		156.00				71.88
				3G		134.00		62.00				16.77
				4G		84.00		75.00		45.44		14.07
	7	PDP Context Activation Success Rate	≥95%	All Generations			95.86				100	
				2G (GSM)		97.87		99.83				99.67
				3G		100.00		99.01				99.17
			4G		98.07		97.35		99.80		99.67	
8	Drop rate :	≤5%	All Generations			4.16				1.5		
			2G (GSM)		0.95		2.71				4.41	
			3G		0.07		1.65				0.99	
			4G		0.03		0.47		0.41		54.00	

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Jammu and Kashmir	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00	98.00	99.96		89.30		100.00	
				3G								
	2	Successful data transmission download attempts	>80%	All Generations		95.00						
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00					
				4G	100.00		100.00		100.00			
	3	Successful data transmission upload attempts	>75%	All Generations		88.00						
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00					
				4G	100.00		100.00		100.00			
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
				2G	Plan 1	177.00	39.00	115.00				131.50
				3G	Plan 1	2765.00	1224.00	2123.00				
				4G	Plans	30037.00		3625.00		5047.11		
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
				2G	Plan 1	212.00	68.00	148.00				174.50
				3G	Plan 1	3789.00	1886.00	4394.00				
				4G	Plans	35499.00		5262.00		20204.58		
	6	Latency	Data <250ms	All Generations			177.00					
				2G (GSM)		207.00		207.00				131.60
				3G		94.00		164.00				
				4G		44.00		101.00		44.72		
	7	PDP Context Activation Success Rate	≥95%	All Generations			97.00					
				2G (GSM)		100.00		100.00				100.00
				3G		99.33		100.00				
				4G		100.00		100.00		99.90		
	8	Drop rate :	≤5%	All Generations			1.60					
				2G (GSM)		2.04		0.29				2.00
			3G		0.65		0.88					
			4G		0.51		0.58		0.38			

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Kolkata	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	100.00		99.96		99.50	100	100.00	
				3G								
	2	Successful data transmission download attempts	>80%	All Generations		95.30				100		
				2G (GSM)	100.00		99.04				100.00	
				3G	100.00		99.32				100.00	
				CDMA								
				4G	100.00				100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations		95.00					100	
				2G (GSM)	100.00		98.11					100.00
				3G	100.00		98.92					100.00
				CDMA								
				4G	100.00				100.00			100.00
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	168.00	44.00	113.00			66	163.33
					Plan 2							
				3G	Plan 1	3431.00	645.00	2368.00				3314.67
					Plan 2							
					Plan 3							
				4G	Plans	15743.00				6724.31		9489.67
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	172.00	82.00	140.00			162	204.66
				3G	Plan 1	5927.00	1771.60	4446.00				9433.75
					Plan 2							
					Plan 3							
				4G	Plans	30997.00				28686.89		19628.28
	6	Latency	Data <250ms	All Generations			106.00				153.67	
				2G (GSM)		101.00		247.00				137.00
				3G		56.00		121.00				38.67
				CDMA								
				4G		31.00				64.05		33.33
	7	PDP Context Activation Success Rate	≥95%	All Generations							99.93	
				2G (GSM)		100.00	99.89	95.44				99.79
				3G		99.94	99.91	98.74				98.33
				CDMA								
				4G		99.46				99.80		99.98
	8	Drop rate :	≤5%	All Generations							1	
				2G (GSM)		2.08		0.76				4.19
				GSM (OSS)								
				3G		0.03		0.06				0.59
				3G (OSS)								
				CDMA								
				4G		0.12				0.29		0.18

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Kerala	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	100.00		99.95		99.30	100	100.00	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations		97.58				100		
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00				100.00	
				CDMA								
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations		97.13					100	
				2G (GSM)	100.00		100.00					100.00
				3G	100.00		100.00					100.00
				CDMA								
				4G	100.00		100.00		100.00			100.00
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	86.00	49.00	177.00			61	164.94
				3G	Plan 1	7899.00	858.00	1199.00				3708.16
					Plan 2					1400		
					Plan 3					2501		
				4G	Plans	13037.00	3574.56	3417.00		5261.71		10397.91
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	213.00	86.58	246.00			98	183.80
				3G	Plan 1	11861.00	1729.92	6025.00				7228.82
					Plan 2					2721		
					Plan 3					3647		
				4G	Plans	23430.00	8650.00	16873.00		21365.04		15164.01
	6	Latency	Data <250ms	All Generations			120.68				148.9	
				2G (GSM)		233.00		84.00				62.00
				3G		78.00		40.00				25.00
				CDMA								
				4G		65.00		33.00		47.24		23.00
	7	PDP Context Activation Success Rate	≥95%	All Generations			98.77				100	
				2G (GSM)		99.61		96.88				99.68
				3G		99.86		97.78				85.30
				CDMA								
				4G		98.81		98.57		99.80		98.10
	8	Drop rate :	≤5%	All Generations			0.36				2.6	
				2G (GSM)		2.35		1.85				3.80
			3G		0.04		1.10				0.93	
			CDMA									
			4G		0.37		0.66		0.47		0.17	

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Karnataka	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00	100.00	99.98		99.30	100	100.00	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations						100		
				2G (GSM)	100.00	100.00	100.00				100.00	
				3G	100.00	100.00					100.00	
				CDMA								
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations							100	
				2G (GSM)	100.00	99.45	100.00					100.00
				3G	100.00	100.00						100.00
				CDMA								
				4G	100.00		100.00		100.00			100.00
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	108.00	98.40	152.00			87.73	255.50
				3G	Plan 1	1694.00	1212.55					5462.80
			Plan 2							1505		
			Plan 3							2472		
				4G	Plans	5715.00		7344.00		4882.74		18344.70
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	179.00	128.90	166.00			127.13	258.60
				3G	Plan 1	3647.00	2136.00					7293.80
			Plan 2							3247		
			Plan 3							3520		
				4G	Plans	15765.00		12883.00		24898.29		22478.80
	6	Latency	Data <250ms	All Generations			85.67				120.1	
				2G (GSM)		105.00		138.00				119.70
				3G		71.00						37.30
				CDMA								
				4G		23.00		9.00		48.49		30.30
	7	PDP Context Activation Success Rate	≥95%	All Generations			90.63				99.8	
				2G (GSM)		99.38		99.65				99.30
				3G		99.71						85.00
				CDMA								
				4G		99.60		99.64		99.60		98.60
	8	Drop rate :	≤5%	All Generations			0.56				2.5	
				2G (GSM)		3.78		0.49				2.30
			3G		0.30						0.30	
			CDMA									
			4G		0.23		0.08		0.57		0.20	

Note 1:In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Maharashtra	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00	99.17	99.94		99.00	100	99.99	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations		96.44				100		
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		99.81				100.00	
				4G	100.00		92.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations		96.38					100	
				2G (GSM)	100.00		99.81				100.00	
				3G	100.00		100.00				100.00	
				4G	100.00		98.67		100.00		100.00	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	82.00	100.00	100.00				135.12
				3G	Plan 1	1740.00	3352.00	3635.00				2378.27
					Plan 2					796		
					Plan 3							
				4G	Plans	10367.00		6745.00		8039.30		5235.72
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	134.00	117.00	178.00				212.85
					Plan 2							
					Plan 3							
				3G	Plan 1	3175.00	3117.00	6453.00				5440.58
					Plan 2					4082.32		
					Plan 3							
				4G	Plans	20664.00		11135.00		26334.30		13244.44
	6	Latency	Data <250ms	All Generations			120.00				38.6	
				2G (GSM)		227.00		145.00				220.67
				3G		56.00		172.00				73.67
				4G		83.00		29.00		64.15		50.67
	7	PDP Context Activation Success Rate	≥95%	All Generations			97.14				100	
			2G (GSM)		100.00		99.76				99.68	
			3G		100.00		99.94				99.08	
			4G		100.00		98.49		99.80		99.97	
8	Drop rate :	≤5%	All Generations			2.12				0.9		
			2G (GSM)		0.00		2.10				4.89	
			3G		0.00		1.05				0.72	
			4G		0.00		0.62		0.56		0.24	

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Madhya Pradesh	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	100.00		99.95		99.10	100	99.99	
				2G		97.25						
				3G		97.31						
	2	Successful data transmission download attempts	>80%	All Generations						100		
				2G (GSM)	98.98	100.00	100.00					100.00
				3G	99.24	100.00	99.78					
				4G	99.15		99.72		100.00			
	3	Successful data transmission upload attempts	>75%	All Generations							100	
				2G (GSM)	98.69	100.00	100.00					99.80
				3G	99.07	100.00	100.00					
				4G	98.93		100.00		100.00			
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1						29	
					Plan 2							
				2G	Plan 1	85.00		76.00			73	97.79
					Plan 2							
				3G	Plan 1	1021.00	1379.00	1703.00				
					Plan 2						1275	
	4G	Plans	4964.00		3326.00			7929.10				
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1						78	
					Plan 2							
				2G	Plan 1	184.00		112.00			105	183.16
					Plan 2							
				3G	Plan 1	2201.00	2630.00	3399.00				
	4G	Plans	8329.00		7186.00			30597.76				
	6	Latency	Data <250ms	All Generations							95	
				2G (GSM)		114.00	202.10	95.00				117.72
				3G		44.00	111.10	52.00				
				4G		38.00		39.00		61.79		
	7	PDP Context Activation Success Rate	≥95%	All Generations							99.1	
				2G (GSM)		99.95	96.80	99.40				98.76
				3G		99.43	98.30	98.92				
				4G		99.79		98.21		99.80		
8	Drop rate :	≤5%	All Generations							1.4		
			2G (GSM)		4.48		0.54				3.01	
			3G		0.05	0.90	0.78					
			4G		0.28		0.36		0.49			

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Mumbai	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	98.00		99.91	96.97	99.30	100	99.90	
				3G								
	2	Successful data transmission download attempts	>80%	All Generations						100		
				2G (GSM)	100.00		100.00	100.00			100.00	
				3G	100.00			99.96			100.00	
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations							100	
				2G (GSM)	100.00		100.00	99.97				
				3G	100.00			99.50				
				4G	100.00		100.00		100.00		100.00	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1						33	
					Plan 2							
				2G	Plan 1	186.00		98.00	52.69			151.25
				3G	Plan 1	3844.00			536.10			4849.92
				4G	Plans	9395.00		5484.00		5456.21		12806.46
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1						69	
					Plan 2							
				2G	Plan 1	241.00		183.00	75.77			179.44
				3G	Plan 1	5907.00			865.48			7808.43
				4G	Plans	14965.00		10820.00		23003.75		21697.70
	6	Latency	Data <250ms	All Generations							138.24	
				2G (GSM)	98.00		119.00					84.65
				3G	30.00			201.32				13.97
				4G	20.00		17.00		32.25			16.88
	7	PDP Context Activation Success Rate	≥95%	All Generations					99.81		97.33	
				2G (GSM)	100.00		99.88					99.88
				3G	99.99							97.88
				4G	99.92		98.94		99.60			99.66
	8	Drop rate :	≤5%	All Generations					1.76		0.46	
				2G (GSM)	3.74		0.33					4.62
				3G	0.15							0.99
				4G	0.28		0.69			0.41		0.28

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
North East-I	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	100.00		99.98		98.70		100.00	
				2G		100.00						
				3G		100.00						
	2	Successful data transmission download attempts	>80%	All Generations								
				2G (GSM)	100.00	100.00	100.00				99.70	
				3G	100.00	100.00				100.00	100.00	
	3	Successful data transmission upload attempts	>75%	All Generations								
				2G (GSM)	100.00	100.00	100.00				100.00	
				3G	100.00	100.00				100.00	100.00	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
				2G	Plan 1	136.00	74.96	124.00				169.84
				3G	Plan 1	2618.00	1789.50					3304.21
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI		Plan 2							
					Plan 3							
				4G	Plans	9243.00		4120.00		5644.41		6063.74
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
				2G	Plan 1	194.00	80.67	166.00				196.78
				3G	Plan 1	4829.00	1819.60					3585.10
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.		Plan 2							
					Plan 3							
				4G	Plans	25308.00		6792.00		25569.46		6895.88
	6	Latency	Data <250ms	All Generations								
				2G (GSM)	211.00	227.33	225.00				233.67	
				3G	150.00	154.33					205.00	
	6	Latency	Data <250ms	4G		61.00		80.00		72.64		49.67
				All Generations								
				2G (GSM)	99.96	95.63	99.07				99.36	
	7	PDP Context Activation Success Rate	≥95%	3G		99.98	99.25					96.43
				4G		98.71		98.95		99.70		99.95
				All Generations								
	8	Drop rate :	≤5%	2G (GSM)		2.57		0.20				4.82
				3G		1.06	0.48				0.97	
4G					0.72		0.95		0.55		0.24	

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone
North East-II	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations		100.00					
				3G							
	2	Successful data transmission download attempts	>80%	All Generations		98.00					
				2G (GSM)							
				3G							
				4G							
	3	Successful data transmission upload attempts	>75%	All Generations		96.00					
				2G (GSM)							
				3G							
				4G							
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1						
				2G	Plan 1						
				3G	Plan 1		377.00				
					Plan 2						
					Plan 3						
				4G	Plans						
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1						
				2G	Plan 1						
				3G	Plan 1		971.00				
					Plan 2						
					Plan 3						
				4G	Plans						
	6	Latency	Data <250ms	All Generations			114.00				
				2G (GSM)							
				3G							
				4G							
	7	PDP Context Activation Success Rate	≥95%	All Generations			98.00				
				2G (GSM)							
			3G								
			4G								
8	Drop rate :	≤5%	All Generations			0.61					
			2G (GSM)								
			3G								
			4G								

Note 1:In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

Report for quarter ending: Dec 2018

	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone		
Orissa	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	99.00		99.61		99.40	100	100.00		
				2G		100.00							
				3G		100.00							
	2	Successful data transmission download attempts	>80%	All Generations						100			
				2G (GSM)	100.00	100.00	100.00					100.00	
				3G	100.00	100.00						100.00	
				4G	100.00		100.00		100.00			100.00	
	3	Successful data transmission upload attempts	>75%	All Generations							100		
				2G (GSM)	100.00	100.00	100.00					100.00	
				3G	100.00	100.00						100.00	
				4G	100.00		100.00		100.00			100.00	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1								
					Plan 2								
				2G	Plan 1	91.00	108.00	61.00			134	175.67	
				3G	Plan 1	1917.00	1531.00					6668.67	
					Plan 2								
					Plan 3								
				4G	Plans	10217.00		1857.00		7313.49		10610.67	
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1								
					Plan 2								
				2G	Plan 1	155.00	177.00	165.00			148	193.67	
					3G	Plan 1	3403.00	5761.73					9208.33
						Plan 2							
					Plan 3								
				4G	Plans	11550.00		8021.00		26570.41		14034.00	
	6	Latency	Data <250ms	All Generations							89.11		
				2G (GSM)		163.00	266.17	132.00				127.33	
				3G		58.00	75.22					56.00	
				4G		45.00		67.00		53.77		47.00	
	7	PDP Context Activation Success Rate	≥95%	All Generations							100		
				2G (GSM)		99.76	98.98	98.80				99.63	
				3G		99.76	99.13					98.53	
			4G		99.77		99.85		99.70		99.98		
8	Drop rate :	≤5%	All Generations							0.6			
			2G (GSM)		3.96		2.40				2.97		
			3G		0.31	1.32					0.70		
			4G		0.40		0.56		0.45		0.11		

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

Quarterly Performance Monitoring Report (PMR) on Quality of Service of Wireless Data Services

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Punjab	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	100.00	100.00	99.97		99.30	100	100.00	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations		96.11				100		
				2G (GSM)	100.00		100.00					100.00
				3G	100.00		100.00					100.00
				4G	100.00		100.00		100.00			100.00
	3	Successful data transmission upload attempts	>75%	All Generations		93.93					100	
				2G (GSM)	100.00		100.00					100.00
				3G	100.00		100.00					100.00
				4G	100.00		100.00		100.00			100.00
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	87.00		89.00			34.71	125.30
				3G	Plan 1	699.00	1548.92	1490.00			621.33	4850.70
					Plan 2						962.12	
					Plan 3							
				4G	Plans	4592.00		2569.00		9550.64		4707.00
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	132.00		181.00			73.42	179.10
				3G	Plan 1	1263.00	2012.54	5199.00			1554.4	6732.90
					Plan 2						2192.38	
					Plan 3							
				4G	Plans	14408.00		11123.00		34770.52		7857.50
	6	Latency	Data <250ms	All Generations							75	
				2G (GSM)		205.00		132.00				90.80
				3G		177.00	130.60	63.00				16.80
				4G		91.00		65.00		36.47		18.00
	7	PDP Context Activation Success Rate	≥95%	All Generations			97.74				100	
				2G (GSM)		98.32		100.00				99.90
			3G		100.00		100.00				98.80	
			4G		99.33		100.00		99.80		100.00	
8	Drop rate :	≤5%	All Generations			1.57				2.7		
			2G (GSM)		0.30		3.30				4.00	
			3G		0.03		0.37				0.60	
			4G		0.46		0.22		0.26		0.40	

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Rajasthan	1	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	All Generations	99.00	98.00	99.99		99.60	100	99.90	
				3G								
	2	Successful data transmission download attempts	>80%	All Generations		100.00				100		
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00				100.00	
				CDMA							100.00	
				4G	100.00		100.00		100.00			
	3	Successful data transmission upload attempts	>75%	All Generations		100.00					100	
				2G (GSM)	100.00		100.00					100.00
				3G	100.00		100.00					100.00
				CDMA								100.00
				4G	100.00		100.00		100.00			
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1						31	
					Plan 2							
				2G	Plan 1	147.00	1718.50	127.00			103	121.00
				3G	Plan 1	2959.00	1354.70	2377.00				4151.30
				4G	Plans	20381.00		7018.00		13303.98		6169.90
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1						71	
					Plan 2							
				2G	Plan 1	158.00	2252.90	192.00			112	180.20
				3G	Plan 1	4300.00	1971.20	3695.00				8148.10
				4G	Plans	22702.00		15333.00		36968.37		12534.60
	6	Latency	Data <250ms	All Generations							158.6	
				2G (GSM)		169.00		123.00				118.20
				3G		66.00	92.00	43.00				97.60
				CDMA								
				4G		69.00		36.00		50.33		45.00
	7	PDP Context Activation Success Rate	≥95%	All Generations							98.7	
				2G (GSM)		99.97		99.38				99.40
				3G		100.00	100.00	98.57				98.20
				CDMA								
				4G		99.44		99.40		99.90		99.50
8	Drop rate :	≤5%	All Generations							4.80		
			2G (GSM)		1.81		0.11				4.80	
			3G		0.42	0.98	0.16				0.80	
			CDMA									
			4G		0.39		0.09		0.39		0.30	

Note 1: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Tamilnadu	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00	100.00	99.94		99.20	100	100.00	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations						100		
				2G (GSM)	100.00	98.91	100.00				100.00	
				3G	100.00	99.61					100.00	
				CDMA								
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations							100	
				2G (GSM)	100.00	97.98	100.00				100.00	
				3G	100.00	99.55					100.00	
				CDMA								
				4G	100.00		100.00		100.00		100.00	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1						16	
					Plan 2							
				2G	Plan 1	117.00	66.47	107.00			21	105.37
				3G	Plan 1	4692.00	1230.44					2967.29
				4G	Plans	5256.00		5166.00		6630.22		7085.03
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1						28	
					Plan 2							
				2G	Plan 1	236.00	120.06	153.00			62	152.26
				3G	Plan 1	9052.00	2273.55					6202.50
				4G	Plans	11683.00		7996.00		27631.95		14105.06
	6	Latency	Data <250ms	All Generations							207.67	
				2G (GSM)		172.00	355.01	110.00				134.00
				3G		53.00	131.62					31.00
				CDMA								
				4G		42.00		31.00		55.83		13.00
	7	PDP Context Activation Success Rate	≥95%	All Generations							98.02	
				2G (GSM)		99.99	99.60	99.58				99.83
				3G		99.85	99.73					99.23
				CDMA								
				4G		99.58		98.42		99.80		99.85
8	Drop rate :	≤5%	All Generations							0.97		
			2G (GSM)		1.58	0.40	2.20				4.71	
			3G		0.34	0.13					0.72	
			CDMA									
			4G		0.10		0.30		0.43		0.14	

Note 1:In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Uttar Pradesh (East)	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	100.00	98.06	99.94		99.40	100	100.00	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations		86.33				100		
				2G (GSM)	100.00		100.00				99.60	
				3G	100.00		100.00				100.00	
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations		81.84					100	
				2G (GSM)	100.00		100.00				99.80	
				3G	100.00		100.00				99.90	
				4G	100.00		100.00		100.00		99.90	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	88.00	88.00	186.00			111.05	131.90
				3G	Plan 1	1146.00	2050.00	5711.00				6562.30
				4G	Plans	2961.00		7412.00		7125.49		15260.70
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	260.00	150.00	235.00			125.33	191.80
				3G	Plan 1	3209.00	2298.00	7584.00				11664.40
				4G	Plans	19246.00		9672.00		30157.65		24898.00
	6	Latency	Data <250ms	All Generations			220.66				109.82	
				2G (GSM)		231.00		191.00				140.80
				3G		217.00		107.00				43.60
				4G		103.00		88.00		48.83		75.10
	7	PDP Context Activation Success Rate	≥95%	All Generations			99.43				100	
				2G (GSM)		98.36		99.25				99.70
				3G		99.99		98.52				99.19
				4G		98.01		98.02		99.80		99.98
	8	Drop rate :	≤5%	All Generations			2.83				0.77	
				2G (GSM)		2.73		2.13				2.25
			3G		0.28		0.96				0.52	
			4G		0.28		0.49		0.47		0.40	

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
Uttar Pradesh (West)	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	100.00	97.60	99.98		99.30	100	99.98	
				2G (GSM)								
	2	Successful data transmission download attempts	>80%	All Generations		94.40				100		
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00				100.00	
				CDMA								
				4G	100.00		100.00		100.00		100.00	
	3	Successful data transmission upload attempts	>75%	All Generations		91.60					100	
				2G (GSM)	100.00		100.00				100.00	
				3G	100.00		100.00				100.00	
				CDMA								
				4G	100.00		100.00		100.00		100.00	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	89.00	96.30	132.00			96	115.30
				3G	Plan 1	1336.00	1991.00	3004.00				1405.32
			Plan 2							2442		
			Plan 3									
				4G	Plans	1890.00		6366.00		9183.73		1820.24
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
					Plan 3							
				2G	Plan 1	186.00	129.70	209.00			125	250.43
				3G	Plan 1	2284.00	3064.70	5081.00				4781.61
			Plan 2							3860		
			Plan 3									
				4G	Plans	5408.00		9820.00		30923.74		8817.06
	6	Latency	Data <250ms	All Generations			225.30				66	
				2G (GSM)		171.00		148.00				190.33
				3G		92.00		53.00				93.00
				CDMA								
				4G		46.00		45.00		48.13		63.67
	7	PDP Context Activation Success Rate	≥95%	All Generations			97.70				100	
				2G (GSM)		96.99		97.22				99.49
				3G		100.00		97.07				98.95
				CDMA								
				4G		96.83		96.44		99.80		99.88
8	Drop rate :	≤5%	All Generations			2.40				2.5		
			2G (GSM)		0.31		2.01				5.07	
			3G		0.17		1.47				0.97	
			CDMA									
			4G		0.46		0.73		0.38		0.43	

Note 1:In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

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	Sl. No.	Parameters	Benchmarks	Generations	Airtel	BSNL	VIL-Brand Idea	MTNL	Reliance JIO	TATA	VIL-Brand Vodafone	
West Bengal	1	Service Activation /Provisioning	Within 4 hrs with 95% success	All Generations	99.00	95.67	99.90		99.40	100	100.00	
				3G								
	2	Successful data transmission download attempts	>80%	All Generations		98.63				100		
				2G (GSM)	100.00		99.57				98.77	
				3G	100.00						99.58	
				CDMA								
				4G	100.00		98.38		100.00		99.90.	
	3	Successful data transmission upload attempts	>75%	All Generations		98.13					100	
				2G (GSM)	100.00		96.29				98.62	
				3G	100.00						99.45	
				CDMA								
				4G	100.00		99.17		100.00		99.61	
	4	Minimum download speed (Kbps)	To be measured for each Plan and Reported to TRAI	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	93.00	111.30	98.00			78	84.72
				3G	Plan 1	1263.00	2651.31					2282.50
					Plan 2							
				4G	Plans	6793.00		2779.00		6712.42		3736.31
	5	Average Throughput for Packet data (Kbps)	>75% of the subscribed speed.	CDMA	Plan 1							
					Plan 2							
				2G	Plan 1	129.00	153.00	152.00			157	128.84
				3G	Plan 1	2209.00	4428.12					4867.19
					Plan 2							
					Plan 3							
				4G	Plans	8088.00		15735.00		26329.18		7020.71
	6	Latency	Data <250ms	All Generations			58.00				143.33	
				2G (GSM)		240.00		238.00				181.05
				3G		51.00						30.43
				CDMA								
				4G		41.00		107.00		64.12		36.64
	7	PDP Context Activation Success Rate	≥95%	All Generations			95.53				99.88	
				2G (GSM)		99.99		99.50				99.83
				3G		99.83						98.22
				CDMA								
				4G		99.75		99.58		99.80		99.98
	8	Drop rate :	≤5%	All Generations							3.67	
			2G (GSM)		2.68		0.57				4.87	
			3G		0.73						0.75	
			3G(OSS)									
			CDMA									
			4G		0.67		0.19		0.55		0.23	

Note 1: The text in the bracket (like RNC_PayG, Mblaze etc) are the plan names of the respective service provider.

Note 2: In case of all operators except CDMA operators provider is not offering different plans based on the data throughput.

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