

Monthly Operating Support System (OSS) Report of Mobile Services



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Royal Government of Bhutan

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1. Background

The Authority collects the monthly system generated Mobile Operating Support System (OSS) report from the Telecom Operators and does reviews on the average Mobile Quality of Service (QoS). Based on the system generated Mobile OSS reports, the Authority decides the locations of physical verification or a drive test and carries out the Mobile QoS drive test to monitor and report the QoS regularly. The Mobile OSS report contains the mobile QoS for both voice and data services which are based on and measured through the various parameters of key performance indicators (KPI) of Mobile services of the 20 dzongkhags.

These OSS reports contain both operator's averaged Operation Support system (OSS) reports for the month of October 2021.

2. Findings

The results and findings of OSS system generated reports submitted by both the telecom operators are presented below:

(i) B-Mobile OSS

BTL monthly OSS report for October 2021									
Sl. No.	Location of Core Areas	CS drop rate(%)	PS drop rate(%)		CS success rate(%)	PS success rate(%)		DL user throughput(Mbps)	
		3G	3G	4G	3G	3G	4G	3G	4G
1	Thimphu	0.15	0.77	0.55	99.83	98.52	99.95	2.40	9.13
2	Paro	0.09	0.67	0.41	99.90	98.72	99.96	1.88	11.01
3	Haa	0.13	1.58	0.48	99.71	98.13	99.90	1.91	21.53
4	Wangdi	0.31	1.21	0.77	99.86	98.53	99.94	1.79	9.43
5	Gasa	0.07	1.82	0.55	99.94	98.84	99.94	2.11	30.99
6	Punakha	0.11	1.03	0.47	99.87	98.88	99.96	1.56	7.84
7	Chukha	0.20	0.85	0.74	99.82	98.53	99.93	2.79	17.71
8	Samtse	0.17	1.31	1.15	99.86	98.50	99.86	1.63	14.68
9	Sarpang	0.14	1.04	0.75	99.68	97.89	99.93	1.88	9.55

10	Dagana	0.07	1.66	0.84	99.91	97.21	99.89	1.70	20.24
11	Zhemgang	0.12	1.87	0.53	99.89	98.07	99.94	1.58	24.34
12	Tsirang	0.22	1.48	0.68	99.77	98.74	99.94	2.11	14.37
13	Trongsa	0.95	1.53	0.74	99.73	98.34	99.91	1.66	16.26
14	Bumthang	0.21	0.95	0.39	99.74	98.90	99.95	1.79	18.64
15	Sjongkhar	0.15	0.98	0.76	99.86	98.25	99.91	1.94	11.84
16	Pgytsel	0.11	0.89	0.60	99.89	98.41	99.95	1.64	13.13
17	Trashigang	0.35	1.58	0.63	99.51	97.95	99.93	1.79	17.88
18	Tyangtse	0.12	0.74	0.73	99.76	98.43	99.92	2.58	12.92
19	Mongar	0.09	1.15	0.67	99.92	98.13	99.92	2.15	13.47
20	Lhuntse	0.10	1.05	0.59	99.88	97.98	99.94	1.61	19.46

(ii) Tashi Cell OSS

TICL monthly OSS report for October 2021									
SI. No.	Region	CS drop rate(%)	PS drop rate(%)		CS RAB success rate(%)	PS RAB success rate(%)		DL user throughput(Mbps)	
		3G	3G	4G	3G	3G	4G	3G	4G
1	Bumthang	0.53	0.75	0.46	99.13	99.03	99.82	2.00	17.30
2	Chukha	0.15	0.64	0.36	99.46	99.00	99.79	1.99	14.38
3	Dagana	0.27	0.84	0.41	99.41	99.22	99.77	1.85	14.28
4	Gasa	0.35	1.15	0.29	99.51	99.09	99.77	1.59	12.49
5	Haa	0.43	0.93	0.27	99.20	98.94	99.86	1.74	20.27
6	Lhuntse	0.54	1.41	0.29	99.20	99.08	99.49	1.46	18.32
7	Mongar	0.45	1.18	0.43	99.21	99.00	99.68	1.62	15.34
8	Paro	0.42	0.61	0.25	99.42	99.17	99.86	1.86	15.03
9	Pemagatshel	0.56	1.07	0.39	99.25	99.07	99.61	1.51	14.31
10	Punakha	0.29	0.78	0.40	99.43	99.09	99.82	1.78	14.50
11	Samtse	0.25	0.99	0.49	99.26	98.66	99.76	1.52	11.90
12	Sarpang	0.32	1.12	0.24	99.16	98.44	99.69	1.53	12.89
13	SJongkhar	0.40	1.00	0.60	99.23	99.04	99.65	1.93	15.59
14	Thimphu	0.25	0.41	0.25	99.45	99.17	99.88	2.19	14.17
15	Trashigang	0.32	1.02	0.47	99.27	98.88	99.78	1.89	19.03

16	Trongsa	0.34	0.86	0.20	99.39	99.22	99.70	1.71	17.43
18	Trashi yangtse	0.31	0.97	0.21	99.14	99.17	99.60	1.79	18.97
17	Tsirang	0.50	1.30	0.27	99.20	97.91	99.73	1.60	12.86
19	Wangdi	0.35	0.97	0.30	99.34	99.07	99.83	1.78	17.69
20	Zhemgang	0.42	1.07	0.48	99.32	99.15	99.56	1.56	17.75

3. Analysis

- a. For both the operators, there were no issues of circuit switch (CS) drop rate as well as for packet switch (PS) drop rate for all dzongkhags.
- b. The average download data throughputs (3G and 4G) of both the operators are meeting the standards for all the 20 dzongkhags.
- c. Meanwhile, wherever the 3G sites are co-located with the 4G sites, the QoS issues of 3G are taken care of by the presence of 4G services.

4. Recommendation/Follow up

Both the operators have maintained the QoS standards for this month. However, the physical verification (drive test) tour reports of core areas in Zhemgang, Lhuentse, Pema Gatsel and Bumthang which was carried out in September and October 2021 showed that:

- a. There were no issues of 4G downlink throughputs of both the operators in the core areas of Zhemgang, Tingtibi, Auetsho, Lhuentse, Pemagatshel and Bumthang.
- b. There were no issues of 2G/3G voice QoS service for both the operators in the core areas of Zhemgang, Tingtibi, Auetsho, Lhuentse, Pemagatshel and Bumthang

It is also recommended to check the individual BTS OSS reports of Lhuentse and Zhemgang to study individual BTS's performance.