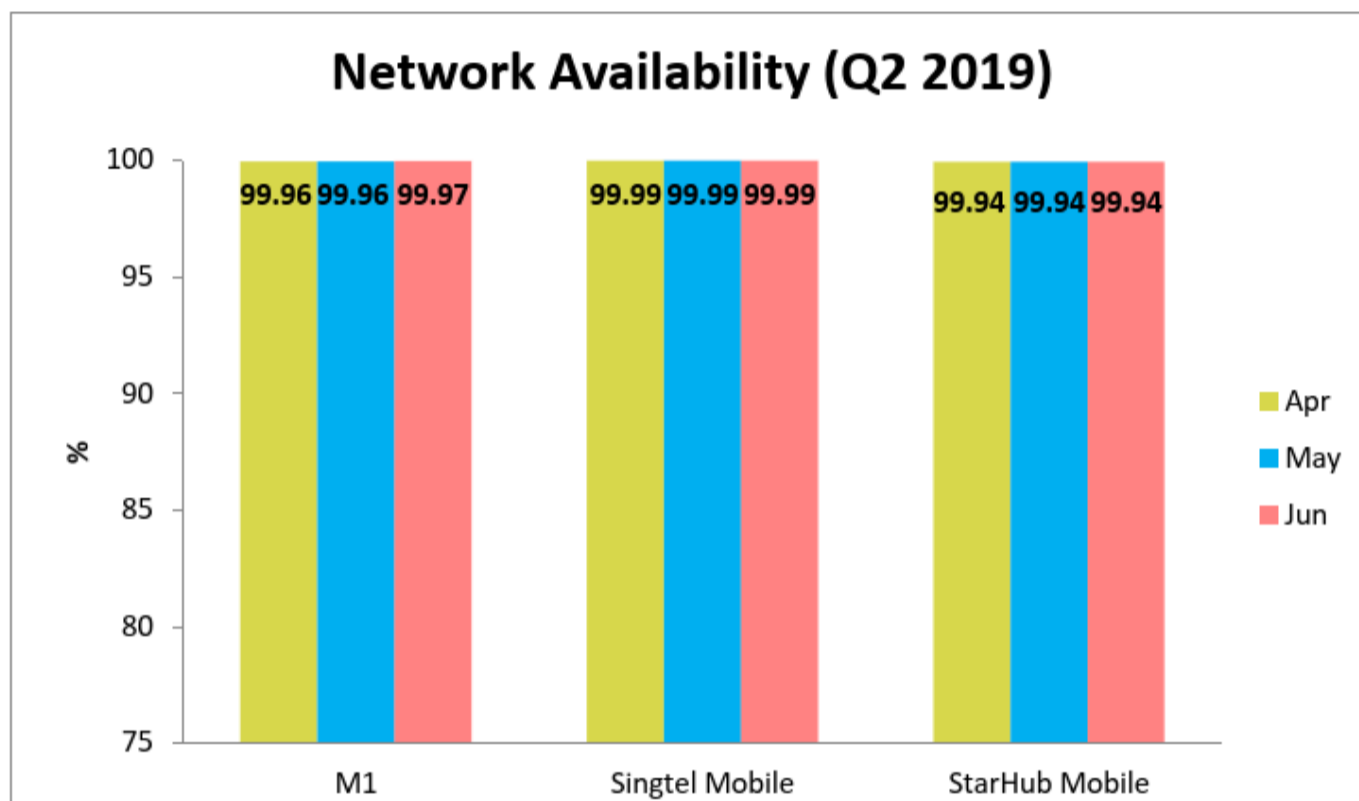# Mobile Broadband Services QoS Performance for Q2 2019

Quality of Service (QoS) Monitoring Performance for Mobile Broadband Services for Apr – Jun 19 Quarter

1. Network Availability

Network Availability is the measure of the degree to which the network is operable and not in a state of failure or outage at any point of time. It measures the total downtime of the network, including the but not limited to the antennas, base stations, elements in the packet switched core network, multiplexers, routers and connection to an Internet Exchange and Internet backbone over a month. All scheduled downtime for the purposes of maintenance and upgrading of the network system will be excluded from the calculation. The reported downtime should include any non-scheduled downtime caused by upstream service provides.

Network Availability = [(Total operational minutes - Total minutes of service downtime) / Total operational minutes] x 100%

Results are rounded off to two decimal places. Therefore, a result of "100%" does not necessarily reflect that there was no service downtime in that month.

2. Data Success Rate

Data Success Rate (Q2 2019)
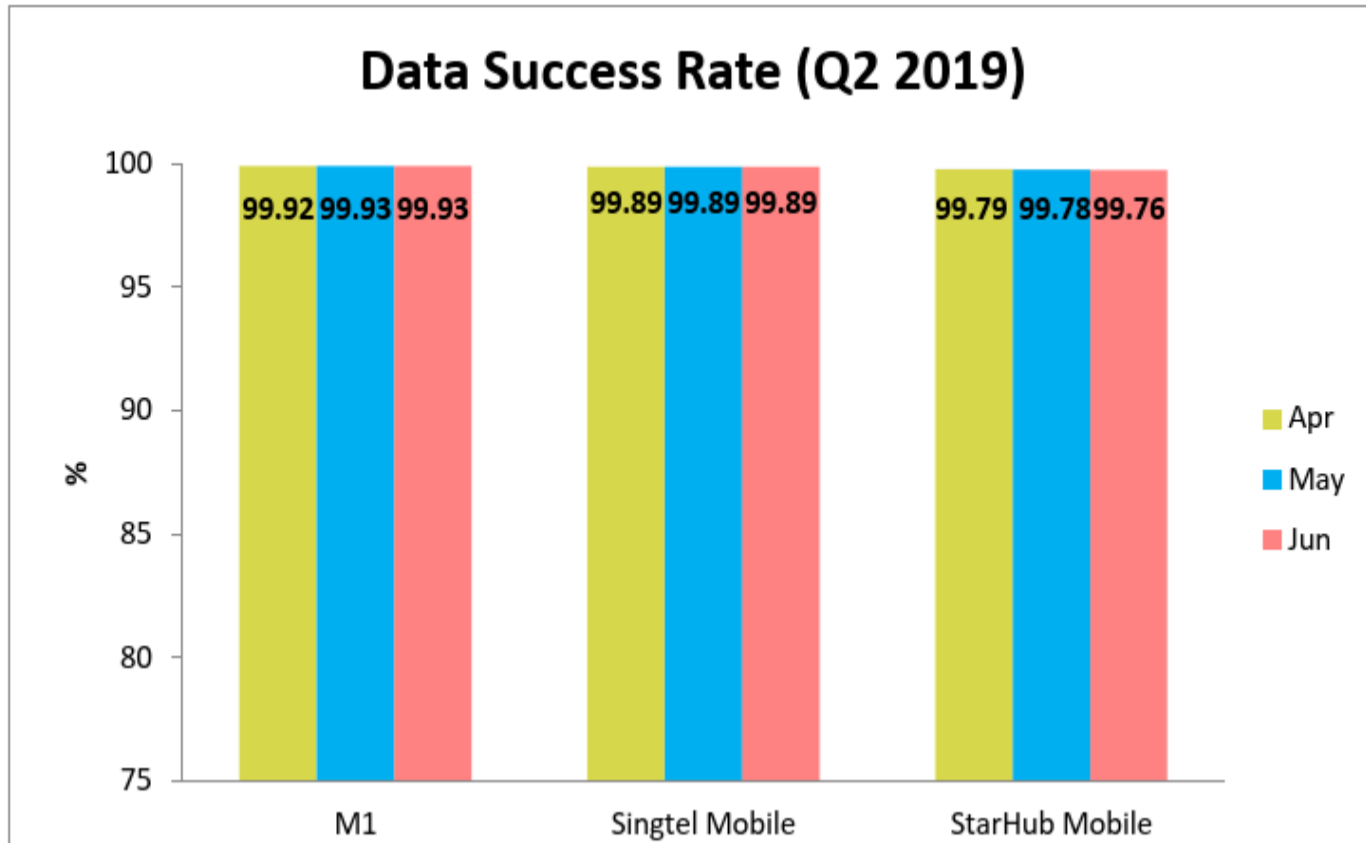
Data success rate measures the percentage of successful data attempts.

Average monthly data success rate across the entire month = [Total number of successful 4G data sessions established on the radio network for the entire month / Total number of 4G data session establishment attempts for the entire month] x 100%

Results are rounded off to two decimal places. Therefore, a result of "100%" does not necessarily reflect that all data attempts were successful in that month.

3. Data Drop Rate

Data Drop Rate (Q2 2019)
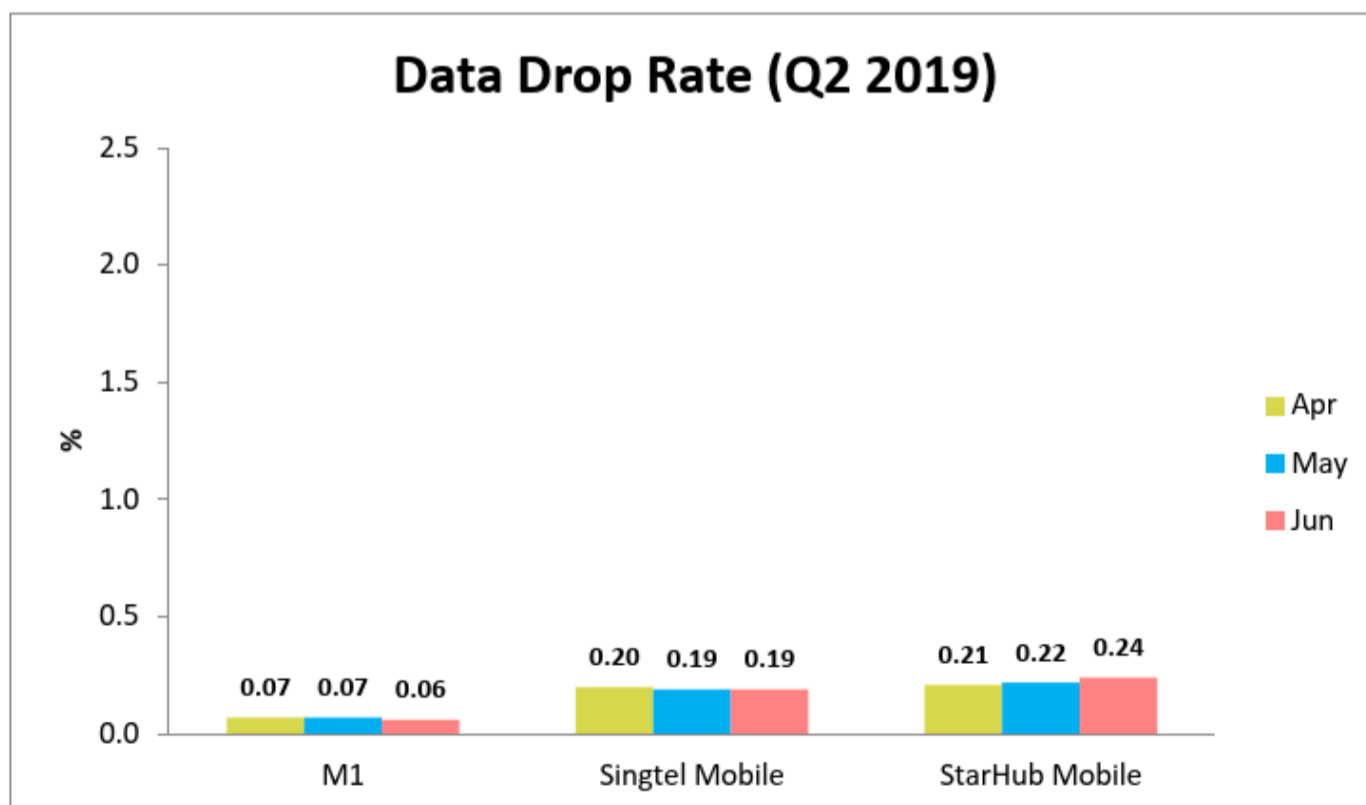
Data drop rate measures the inability of the 4G network to maintain a connection. It may happen because of radio link failures, uplink or downlink interference, bad coverage, unsuccessful handovers or any other reason.

Average monthly data drop rate across the entire month = [Total number of abnormal 4G data session disconnections registered by the radio network for the month / Total number of successful 4G data session connections for the entire month] x 100%

Results are rounded off to two decimal places. Therefore, a result of "0%" does not necessarily reflect that there was no abnormal 4G data session disconnections registered by the radio network in that month.