

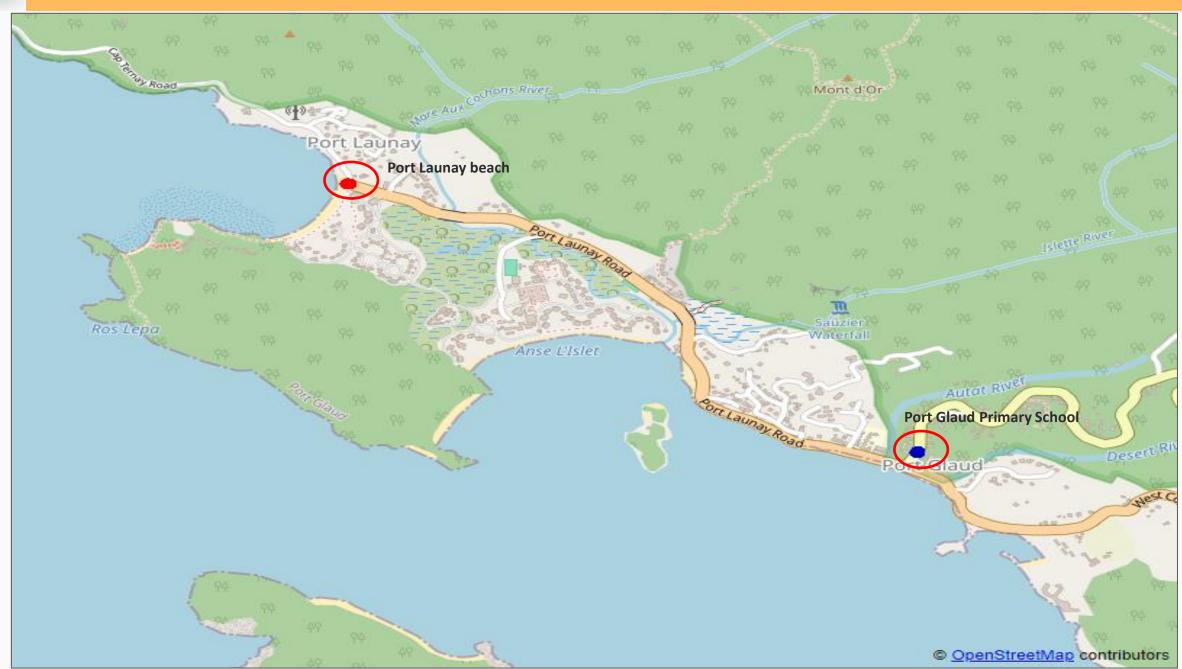


## **VOICE TEST METHODOLOGY**

DATA	Test Type and Timeout	Technology 3G Preferred	Technology 4G Preferred
	POP always o	n. ICMP PAYLOAD PING 800 BYTES	
1	FILE TRANSFER DOWNLOAD	FTP DL (3MB)	FTP DL (5MB)
	135s	wait 10s	wait 10s
2	FILE TRANSFER UPLOAD	FTP UL (1MB)	FTP UL (3MB)
	135s	wait 10s	wait 10s
3	FILE TRANSFER DOWNLOAD	HTTP Get (3MB)	HTTP Get (5MB)
	135s	wait 10s	wait 10s
4	FILE TRANSFER UPLOAD	HTTP Put (1MB)	HTTP Put (3MB)
	135s	wait 10s	wait 10s
5	ICMP PING 32 BYTES	Ping (32 bytes) *5	Ping (32 bytes) *5
		wait 10s	wait 10s
6	YOUTUBE STREAMING	Video: YouTube 60sec	Video: YouTube 60sec
	95 seconds	wait 10s	wait 10s
7	KEPLER WEB BROWSING	HTTPS Browsing: Kepler	HTTPS Browsing: Kepler
	45s	wait 10s	wait 10s
8	LIVE WEB BROWSING	www.shein.com, www.nbs.gov.sc, www.sbc.sc	www.shein.com, www.nbs.gov.sc, www.sbc.sc
	45s	wait 10s	wait 10s
9	KEPLER MOBILE WEB BROWSING	HTTPS Browsing: Kepler Mobile	HTTPS Browsing: Kepler Mobile
	45s	wait 10s	wait 10s
10	ICMP PING 32 BYTES	Ping (32 bytes) 5 www.google.com	Ping (32 bytes) 5 www.google.com
		wait 10s	wait 10s
11	FILE TRANSFER-CAPACITY DOWNLOAD	HTTP Get (500MB) Multiple files	HTTP Get (500MB) Multiple files
	10s fixed duration	wait 10s	wait 10s
12	FILE TRANSFER-CAPACITY UPLOAD	HTTP Put (500MB)-Multiple Files	HTTP Put (500MB)-Multiple Files
	10s fixed duration	wait 10s	wait 10s



### **Static Points Location – Cluster PortGlaud**





## **Static Point Location 1 - Port Glaud Primary School**





#### **4G PREFERRED DATA TEST – EXECUTIVE SUMMARY**

#### **4G Preferred Data Findings:**

- All SFTP UL & HTTP UL tests are failing specifically with the 4G connection through the CWS operator.
- Airtel SFTP DL is (16.20 Mbps), while SFTP UL is (9.37 Mbps), CWS SFTP DL is (6.82 Mbps), while SFTP UL is (0.00 Mbps)
- Airtel HTTP DL is (27.06 Mbps), HTTP Capacity DL is (171.14 Mbps), HTTP UL is (16.49 Mbps), and HTTP Capacity UL is (41.82 Mbps).
- CWS HTTP DL is (10.14 Mbps), HTTP Capacity DL is (35.09 Mbps), HTTP UL is (0.00 Mbps), and HTTP Capacity UL is (6.30 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (6.51s), <u>www.nbs.gov.sc</u> took (16.62s), and <u>www.sbc.sc</u> took (15.96s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (6.13s), <u>www.nbs.gov.sc</u> took (14.66s), and <u>www.sbc.sc</u> took (15.69s) on CWS.
- On static browsing, Kepler Webpage took (3.95s), and Kepler Mobile took (1.74s) on Airtel.
- On static browsing, Kepler Webpage took (7.48s), and Kepler Mobile took (4.19s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.
- Airtel scored 42.86% in Carrier Aggregation (CA).
- CWS scored 100.00% in Carrier Aggregation (CA).



#### **3G PREFERRED DATA TEST - EXECUTIVE SUMMARY**

#### **3G Preferred Data Test Findings:**

- All HTTP UL tests are failing specifically with the 3G connection through the CWS operator.
- Airtel SFTP DL is (5.89 Mbps), while SFTP UL is (2.05 Mbps), CWS SFTP DL is (3.49 Mbps), while SFTP UL is (0.07 Mbps)
- Airtel HTTP DL is (5.74 Mbps), HTTP Capacity DL is (7.32 Mbps), HTTP UL is (2.96 Mbps), and HTTP Capacity UL is (4.34 Mbps).
- CWS HTTP DL is (3.17 Mbps), HTTP Capacity DL is (7.74 Mbps), HTTP UL is (0.00 Mbps), and HTTP Capacity UL is (2.88 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (17.06s), <u>www.nbs.gov.sc</u> took (19.51s), and <u>www.sbc.sc</u> took (22.16s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (7.88s), <u>www.nbs.gov.sc</u> took (7.83s), and <u>www.sbc.sc</u> took (9.48s) on CWS.
- On static browsing, Kepler Webpage took (4.81s), and Kepler Mobile took (5.15s) on Airtel.
- On static browsing, Kepler Webpage took (6.98s), and Kepler Mobile took (3.38s) on CWS.
- YouTube average resolution in Airtel is (1044.37) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.



## **DRIVE TEST KPI STATISTICS**

		3G Preferred			4G Preferred				
	DATA Scenario		CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	5.89	3.49	1	2	16.20	6.82	1	2
8	SFTP UL(Mbps)	2.05	0.07	1	2	9.37	0.00	1	2
FILE TRANSFER	HTTP DL(Mbps)	5.74	3.17	1	2	27.06	10.14	1	2
E TR	HTTP UL(Mbps)	2.96	0.00	1	2	16.49	0.00	1	2
臣	HTTP Capacity DL(Mbps)	7.32	7.74	2	1	171.14	35.09	1	2
	HTTP Capacity UL(Mbps)	4.34	2.88	1	2	41.82	6.30	1	2
	Overall Browser DL Time (s)	14.45	7.11	2	1	9.03	9.62	1	2
	Kepler Webpage DL Time (s)	4.81	6.98	1	2	3.95	7.48	1	2
VSER	Mobile Kepler Webpage DL Time (s)	5.15	3.38	2	1	1.74	4.19	1	2
BROWSER	www.shein.com Webpage DL Time (s)	17.06	7.88	2	1	6.51	6.13	2	1
	www.nbs.gov.sc Webpage DL Time (s)	19.51	7.83	2	1	16.62	14.66	2	1
	www.sbc.sc Webpage DL Time (s)	22.16	9.48	2	1	15.96	15.69	2	1
NCY	Avg Latency (ms)	312.83	184.65	2	1	285.05	189.84	2	1
LATENCY	Median Latency (ms)	399	194	2	1	320	197	2	1
36	YouTube Access Time (s)	3.60	2.10	2	1	5.15	1.46	2	1
YOUTUBE	YouTube Average Resolution (pixels)	1044.37	1080.00	2	1	1080.00	1080.00	1	1
Q V	YouTube Success Ratio [%]	100.00	100.00	1	1	100.00	100.00	1	1



## **4G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
CETTO	Success	13	8	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
SFTP UL	Success	13	0	100.00	0.00
SFIP OL	Failure	0	8	0.00	100.00
HTTP DL	Success	13	7	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	13	0	100.00	0.00
HITPOL	Failure	0	7	0.00	100.00
HTTP Capacity DL	Success	11	7	100.00	100.00
HITE Capacity DL	Failure	0	0	0.00	0.00
HTTD Canacity III	Success	12	4	100.00	57.14
HTTP Capacity UL	Failure	0	3	0.00	42.86

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	16.20	6.82	1	2
	SFTP UL(Mbps)	9.37	0.00	1	2
FILE TRANSFER	HTTP DL(Mbps)	27.06	10.14	1	2
FILE TR	HTTP UL(Mbps)	16.49	0.00	1	2
	HTTP Capacity DL(Mbps)	171.14	35.09	1	2
	HTTP Capacity UL(Mbps)	41.82	6.30	1	2



### **4G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Wanda	Success	12	7	92.31	100.00
Kepler	Failure	1	0	7.69	0.00
Mahila Kanlar	Success	13	7	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
www.shein.com	Success	13	7	100.00	100.00
www.snein.com	Failure	0	0	0.00	0.00
	Success	13	7	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	13	7	100.00	100.00
	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	Overall Browser DL Time (s)	9.03	9.62	1	2
	Kepler Webpage DL Time (s)	3.95	7.48	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.74	4.19	1	2
	www.shein.com Webpage DL Time (s)	6.51	6.13	2	1
	www.nbs.gov.sc Webpage DL Time (s)	16.62	14.66	2	1
	www.sbc.sc Webpage DL Time (s)	15.96	15.69	2	1



#### **4G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 4G	CWS 4G
	Sample Count [32 bytes]  Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]  Packet Loss<1%  Average Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]  Packet Loss<1%  Average Latency [ms]  Median Latency [ms]  Median Latency [ms]  Median Latency [ms]  Ping session status: Successful	26	14
		268.77	192.14
	Median Latency [ms]	319	198
Overall Latency	Ping session status: Successful	26	14
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	404.46	181.00
	Sample Count [32 bytes]  Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Packet Loss<1%  Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Packet Loss<1%  Average Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]  Packet Loss<1%  Average Latency [ms]  Average Latency [ms]  Ping session status: Failed [Protocol error timeout]  Packet Loss<1%  Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]  Ping session status: Failed [Protocol error timeout]	402	164
	Ping session status: Successful	13	7
www.google.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	133.08	203.29
	Median Latency [ms]	124	203
102 122 176 104	Ping session status: Successful	13	7
102.133.176.104	Ping session status: Failed [Socket error]	0	0
	Latency KPIs  Sample Count [32 bytes]  Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]  Packet Loss<1%  Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]  Packet Loss<1%  O.  Average Latency [ms]  Ping session status: Failed [Protocol error timeout]  Packet Loss<1%  Average Latency [ms]  Median Latency [ms]  129  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]  Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00

LTE YOUTUBE Success Ratio							
KPIs	Airtel 4G	CWS 4G					
Attempt(Count)	13	7					
Success(Count)	13	7					
Failure(Count)	0	0					
YouTube Access Time (s)	5.15	1.46					
YouTube Average Resolution (pixels)	1080.00	1080.00					
YouTube Success Ratio [%]	100.00	100.00					



## **3G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
CETD DI	Success	5	8	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
CETDIN	Success	5	4	100.00	50.00
SFTP UL	Failure	0	4	0.00	50.00
HTTP DL	Success	5	8	100.00	100.00
HITPUL	Failure	0	0	0.00	0.00
HTTDIH	Success	5	0	55.56	0.00
HTTP UL	Failure	4	8	44.44	100.00
HTTD Compaigns DI	Success	9	7	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
	Success	7	3	87.50	42.86
HTTP Capacity UL	Failure	1	4	12.50	57.14

DATA Scenario		Airtel 3G CWS 3G		Airtel 3G (Rank)	CWS 3G (Rank)
	SFTP DL (Mbps)	5.89	3.49	1	2
FILE TRANSFER	SFTP UL(Mbps)	2.05	0.07	1	2
	HTTP DL(Mbps)	5.74	3.17	1	2
	HTTP UL(Mbps)	2.96	0.00	1	2
	HTTP Capacity DL(Mbps)	7.32	7.74	2	1
	HTTP Capacity UL(Mbps)	4.34	2.88	1	2



### **3G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Kowley	Success	5	7	55.56	100.00
Kepler	Failure	4	0	44.44	0.00
Mobile Kepler	Success	8	7	100.00	100.00
	Failure	0	0	0.00	0.00
www.shein.com	Success	9	7	100.00	100.00
www.snein.com	Failure	0	0	0.00	0.00
	Success	9	7	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
aha as	Success	7	7	87.50	100.00
www.sbc.sc	Failure	1	0	12.50	0.00

	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	Overall Browser DL Time (s)	14.45	7.11	2	1
/SER	Kepler Webpage DL Time (s)	4.81	6.98	1	2
	Mobile Kepler Webpage DL Time (s)	5.15	3.38	2	1
BROWSER	www.shein.com Webpage DL Time (s)	17.06	7.88	2	1
	www.nbs.gov.sc Webpage DL Time (s)	19.51	7.83	2	1
	www.sbc.sc Webpage DL Time (s)	22.16	9.48	2	1



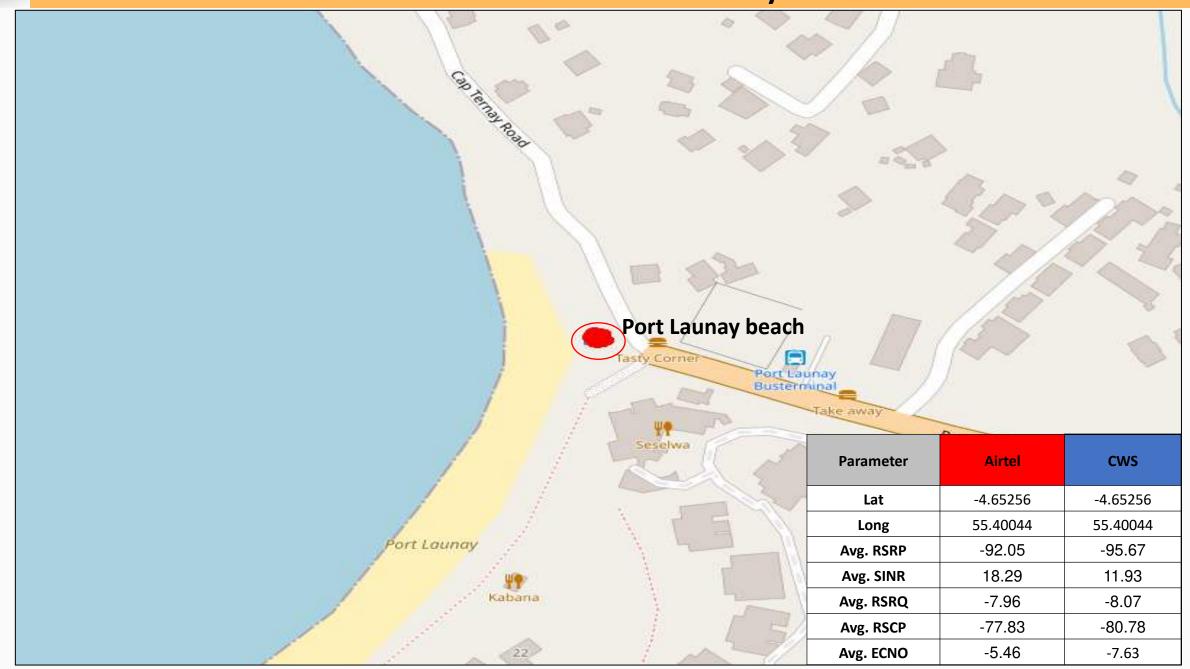
#### **3G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 3G	CWS 3G
	Sample Count [32 bytes]	15	14
	Average Latency [ms]	369.60	183.50
	Median Latency [ms]	400	168
Overall Latency	Ping session status: Successful	15	14
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	3	1
	Packet Loss<1%	16.67	6.67
	Average Latency [ms]	451.78	137.71
	Median Latency [ms]	454	138
www.google.com	Ping session status: Successful	9	7
www.google.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	246.33	229.29
	Median Latency [ms]	258	215
102.133.176.104	Ping session status: Successful	6	7
102.133.176.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	3	1
	Packet Loss<1%	33.33	12.50

UMTS YOUTUBE Success Ratio						
KPIs	Airtel 3G	CWS 3G				
Attempt(Count)	9	8				
Success(Count)	9	8				
Failure(Count)	0	0				
YouTube Access Time (s)	3.60	2.10				
YouTube Average Resolution (pixels)	1044.37	1080.00				
YouTube Success Ratio [%]	100.00	100.00				



## **Static Point Location 2 - Port Launay beach**





#### **4G PREFERRED DATA TEST – EXECUTIVE SUMMARY**

#### **4G Preferred Data Findings:**

- Airtel SFTP DL is (16.57 Mbps), while SFTP UL is (8.69 Mbps), CWS SFTP DL is (7.98 Mbps), while SFTP UL is (4.27 Mbps)
- Airtel HTTP DL is (24.63 Mbps), HTTP Capacity DL is (101.19 Mbps), HTTP UL is (14.72 Mbps), and HTTP Capacity UL is (29.65 Mbps).
- CWS HTTP DL is (11.93 Mbps), HTTP Capacity DL is (34.12 Mbps), HTTP UL is (7.23 Mbps), and HTTP Capacity UL is (12.19 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (6.29s), <u>www.nbs.gov.sc</u> took (17.01s), and <u>www.sbc.sc</u> took (16.25s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (5.72s), <u>www.nbs.gov.sc</u> took (14.48s), and <u>www.sbc.sc</u> took (12.54s) on CWS.
- On static browsing, Kepler Webpage took (3.85s), and Kepler Mobile took (1,65s) on Airtel.
- On static browsing, Kepler Webpage took (4.57s), and Kepler Mobile took (2.89s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.
- Airtel scored 38.46% in Carrier Aggregation (CA).
- CWS scored 100.00% in Carrier Aggregation (CA).



#### **3G PREFERRED DATA TEST - EXECUTIVE SUMMARY**

#### **3G Preferred Data Test Findings:**

- Airtel SFTP DL is (5.83 Mbps), while SFTP UL is (2.34 Mbps), CWS SFTP DL is (3.78 Mbps), while SFTP UL is (1.24 Mbps)
- Airtel HTTP DL is (5.92 Mbps), HTTP Capacity DL is (10.70 Mbps), HTTP UL is (3.63 Mbps), and HTTP Capacity UL is (6.63 Mbps).
- CWS HTTP DL is (3.55 Mbps), HTTP Capacity DL is (6.53 Mbps), HTTP UL is (2.68 Mbps), and HTTP Capacity UL is (5.02 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (8.40s), <u>www.nbs.gov.sc</u> took (10.94s), and <u>www.sbc.sc</u> took (10.61s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (7.93s), <u>www.nbs.gov.sc</u> took (7.97s), and <u>www.sbc.sc</u> took (10.93s) on CWS.
- On static browsing, Kepler Webpage took (3.34s), and Kepler Mobile took (1.52s) on Airtel.
- On static browsing, Kepler Webpage took (5.45s), and Kepler Mobile took (2.94s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.



### **DRIVE TEST KPI STATISTICS**

		3G Preferred					4G Pre	eferred	
	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	5.83	3.78	1	2	16.57	7.98	1	2
<b>~</b>	SFTP UL(Mbps)	2.34	1.24	1	2	8.69	4.27	1	2
ANSFI	HTTP DL(Mbps)	5.92	3.55	1	2	24.63	11.93	1	2
FILE TRANSFER	HTTP UL(Mbps)	3.63	2.68	1	2	14.72	7.23	1	2
분	HTTP Capacity DL(Mbps)	10.70	6.53	1	2	101.19	34.12	1	2
	HTTP Capacity UL(Mbps)	6.63	5.02	1	2	29.65	12.19	1	2
	Overall Browser DL Time (s)	6.96	7.04	1	2	9.00	8.03	2	1
	Kepler Webpage DL Time (s)	3.34	5.45	1	2	3.85	4.57	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.52	2.94	1	2	1.65	2.89	1	2
BROV	www.shein.com Webpage DL Time (s)	8.40	7.93	2	1	6.29	5.72	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.94	7.97	2	1	17.01	14.48	2	1
	www.sbc.sc Webpage DL Time (s)	10.61	10.93	1	2	16.25	12.54	2	1
NCY	Avg Latency (ms)	278.45	198.40	2	1	260.72	195.88	2	1
LATENCY	Median Latency (ms)	393	174	2	1	261	200	2	1
36	YouTube Access Time (s)	3.21	2.03	2	1	5.14	1.62	2	1
YOUTUBE	YouTube Average Resolution (pixels)	1080.00	1080.00	1	1	1080.00	1080.00	1	1
γO	YouTube Success Ratio [%]	100.00	100.00	1	1	100.00	100.00	1	1



## **4G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
CETP DI	Success	13	11	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
CETTLIN	Success	13	9	100.00	81.82
SFTP UL	Failure	0	2	0.00	18.18
HTTP DL	Success	13	11	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	13	9	100.00	81.82
HITPUL	Failure	0	2	0.00	18.18
HTTD Conneity DI	Success	13	10	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
UTTD Compains III	Success	12	10	100.00	100.00
HTTP Capacity UL	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	16.57	7.98	1	2
	SFTP UL(Mbps)	8.69	4.27	1	2
ANSFER	HTTP DL(Mbps)	24.63	11.93	1	2
FILE TRANSFER	HTTP UL(Mbps)	14.72	7.23	1	2
_	HTTP Capacity DL(Mbps)	101.19	34.12	1	2
	HTTP Capacity UL(Mbps)	29.65	12.19	1	2



#### **4G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Wandan.	Success	13	10	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mahila Kanlar	Success	13	10	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	13	10	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	13	10	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	13	10	100.00	100.00
	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	Overall Browser DL Time (s)	9.00	8.03	2	1
	Kepler Webpage DL Time (s)	3.85	4.57	1	2
	Mobile Kepler Webpage DL Time (s)	1.65	2.89	1	2
	www.shein.com Webpage DL Time (s)	6.29	5.72	2	1
	www.nbs.gov.sc Webpage DL Time (s)	17.01	14.48	2	1
	www.sbc.sc Webpage DL Time (s)	16.25	12.54	2	1



#### **4G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 4G	CWS 4G
	Sample Count [32 bytes]	26	21
	Average Latency [ms]	255.46	202.48
	Median Latency [ms]	260	202
Overall Latency	Ping session status: Successful	26	21
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	391.62	182.90
	Median Latency [ms]	391	169
	Ping session status: Successful	13	10
www.google.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	119.31	220.27
	Median Latency [ms]	118	219
102.133.176.104	Ping session status: Successful	13	11
102.133.176.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00

Latency 250ms

LTE YOUTUBE Success Ratio					
KPIs	Airtel 4G	CWS 4G			
Attempt(Count)	13	11			
Success(Count)	13	11			
Failure(Count)	0	0			
YouTube Access Time (s)	5.14	1.62			
YouTube Average Resolution (pixels)	1080.00	1080.00			
YouTube Success Ratio [%]	100.00	100.00			



### **3G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	11	10	100.00	100.00
SFIP DL	Failure	0	0	0.00	0.00
CETDIU	Success	11	9	100.00	90.00
SFTP UL	Failure	0	1	0.00	10.00
HTTP DL	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00
	Success	11	8	100.00	80.00
HTTP UL	Failure	0	2	0.00	20.00
LITTE Compaits DI	Success	11	10	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
LITTE Comparity Lit	Success	10	9	100.00	100.00
HTTP Capacity UL	Failure	0	0	0.00	0.00

DATA Scenario		Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	SFTP DL (Mbps)	5.83	3.78	1	2
	SFTP UL(Mbps)	2.34	1.24	1	2
FILE TRANSFER	HTTP DL(Mbps)	5.92	3.55	1	2
	HTTP UL(Mbps)	3.63	2.68	1	2
	HTTP Capacity DL(Mbps)	10.70	6.53	1	2
	HTTP Capacity UL(Mbps)	6.63	5.02	1	2



### **3G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Konlor	Success	11	10	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mobile Kepler	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00
	Success	11	10	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	11	10	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00

DATA Scenario		Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
BROWSER	Overall Browser DL Time (s)	6.96	7.04	1	2
	Kepler Webpage DL Time (s)	3.34	5.45	1	2
	Mobile Kepler Webpage DL Time (s)	1.52	2.94	1	2
	www.shein.com Webpage DL Time (s)	8.40	7.93	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.94	7.97	2	1
	www.sbc.sc Webpage DL Time (s)	10.61	10.93	1	2



#### **3G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 3G	CWS 3G
	Sample Count [32 bytes]	12	20
	Average Latency [ms]	395.00	194.25
	Median Latency [ms]	409	168
Overall Latency	Ping session status: Successful	12	20
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	10	0
	Packet Loss<1%	45.45	0.00
	Average Latency [ms]	410.64	139.20
	Median Latency [ms]	410	139
www.google.com	Ping session status: Successful	11	10
www.googie.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	223.00	249.30
	Median Latency [ms]	223	198
102.133.176.104	Ping session status: Successful	1	10
102.133.170.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	10	0
	Packet Loss<1%	90.91	0.00

UMTS YOUTUBE Success Ratio						
KPIs	Airtel 3G	CWS 3G				
Attempt(Count)	11	10				
Success(Count)	11	10				
Failure(Count)	0	0				
YouTube Access Time (s)	3.21	2.03				
YouTube Average Resolution (pixels)	1080.00	1080.00				
YouTube Success Ratio [%]	100.00	100.00				



# **THANKS**