Measuring Broadband Australia Program

Report 33 Appendix, June 2026

Report 33 is based on data measurements taken from 1 to 31 March 2026.

NBN fixed-line services tables

NBN video streaming tables

The following tables show information on the proportion of NBN services on the main NBN fixed-line plans which would be able to reliably stream (with a low chance of stopping and starting) a varying number of videos from Netflix simultaneously during busy hours. Data from underperforming and impaired services is included.

A Full High Definition stream from Netflix takes up around 5 Mbps data rate on average. For consumers with premium Ultra High Definition (4K) video stream, an Ultra High Definition stream from Netflix takes up 15 Mbps data rate on average. The actual data rate will vary during video streaming: for example Netflix would use a higher data rate during a fast-paced action scene. The actual data rate will also depend on how many other users are using Netflix.

The Whitebox measures the total downstream data rate available from Netflix's servers. Therefore, by using multiples of 5 Mbps (for Full High Definition) and 15 Mbps (for Ultra High Definition) it allows us to infer whether a NBN fixed-line service would be able to support different numbers of simultaneous streams. This assumes no other use of the connection at the time, i.e. that Netflix is the only application running.

By plan download speed

Download plan	1 FHD (5 Mbps)	2 FHD (10 Mbps)	3 FHD (15 Mbps)	4 FHD (20 Mbps)	5 FHD (25 Mbps)	Panel size
NBN25	100%	100%	100%	99%	69%	78
NBN50	100%	100%	100%	100%	100%	201
NBN100	100%	100%	100%	100%	100%	88
NBN500	100%	100%	100%	100%	100%	624

Download plan	1 UHD (15 Mbps)	2 UHD (30 Mbps)	3 UHD (45 Mbps)	4 UHD (60 Mbps)	5 UHD (75 Mbps)	Panel size
NBN25	100%	0%	0%	0%	0%	78
NBN50	100%	98%	85%	0%	0%	201
NBN100	100%	100%	95%	89%	76%	88
NBN500	100%	100%	100%	99%	98%	624

By RSP[1]

RSP	Download plan	1 UHD	2 UHD	3 UHD	4 UHD	Panel size
Aussie Broadband	500	100%	100%	100%	97%	69
Dodo & iPrimus	500	100%	100%	100%	100%	53
Exetel	500	100%	100%	100%	100%	92
Leaptel	500	98%	98%	98%	98%	48
Telstra	500	100%	99%	99%	99%	72
Superloop	500	100%	100%	100%	100%	51

[1] These tables only show data for RSPs having at least 40 units on the respective download speed tier reporting measurements.

NBN RSP tables

The following tables show statistical information on download speeds, upload speeds, and outages for each RSP across all NBN plans, and for individual NBN plans in instances where at least 40 Whiteboxes reported successfully during the test period.

- The overall speed is the average speed (download or upload) for the RSP, measured as a percentage of plan speed.
- Standard deviation is a measure of how widely or narrowly test speeds are distributed in the data set.
- The 95% confidence interval is a range in which the 'true' average value is estimated to lie and is a function of the sample size (i.e. number of Whiteboxes online) and standard deviation.

If the standard deviation is larger, the confidence interval will be wider, reflecting greater variability in the underlying data. If the sample size is larger then the confidence interval will be narrower, reflecting more certainty in the underlying data.

For example: during testing, we measured an average download performance of 102.5% of plan speed for Leaptel across all NBN plans with a 95% confidence interval of ±3.8%. If we were to repeat our sampling 100 times, we expect that this average would fall between 98.7% and 106.4% in at least 95 cases.

Period	RSP	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Aussie Broadband	95.7%	21.2%	92.1% - 99.4%	131	28,098
All hours	Dodo & iPrimus	102.8%	11.3%	100.7% - 104.9%	112	24,449
All hours	Exetel	102.0%	18.7%	98.7% - 105.3%	125	28,448
All hours	iiNet	100.1%	14.8%	96.8% - 103.4%	77	17,917
All hours	Leaptel	102.5%	16.0%	98.7% - 106.4%	67	14,956
All hours	Optus	101.6%	18.1%	97.8% - 105.5%	85	17,733
All hours	Telstra	100.1%	21.1%	96.5% - 103.7%	133	30,674
All hours	TPG	102.6%	8.1%	101.0% - 104.1%	103	22,827
All hours	Superloop	101.5%	16.6%	98.2% - 104.8%	96	19,694

Period	RSP	Download average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Aussie Broadband	95.2%	21.2%	91.5% - 98.8%	131	8,304
Busy hours	Dodo & iPrimus	102.3%	11.5%	100.1% - 104.4%	112	7,098
Busy hours	Exetel	101.6%	18.7%	98.3% - 104.9%	125	8,313
Busy hours	iiNet	99.5%	15.0%	96.2% - 102.9%	77	5,299
Busy hours	Leaptel	102.3%	15.8%	98.5% - 106.1%	67	4,329
Busy hours	Optus	101.0%	18.2%	97.2% - 104.9%	85	5,350
Busy hours	Telstra	99.5%	21.2%	95.9% - 103.1%	133	9,305
Busy hours	TPG	101.9%	8.2%	100.4% - 103.5%	103	6,690
Busy hours	Superloop	101.0%	16.4%	97.7% - 104.2%	96	5,810

Period	RSP	Upload average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Aussie Broadband	89.9%	13.0%	87.7% - 92.1%	131	19,371
All hours	Dodo & iPrimus	91.8%	9.6%	90.0% - 93.5%	112	16,612
All hours	Exetel	92.1%	9.9%	90.3% - 93.8%	125	19,562
All hours	iiNet	88.6%	14.3%	85.4% - 91.8%	77	12,125
All hours	Leaptel	92.2%	9.3%	90.0% - 94.5%	67	10,142
All hours	Optus	89.6%	13.2%	86.8% - 92.4%	85	12,250
All hours	Telstra	92.1%	10.7%	90.3% - 93.9%	133	20,817
All hours	TPG	88.0%	14.6%	85.1% - 90.8%	103	15,499
All hours	Superloop	91.2%	12.7%	88.7% - 93.8%	96	13,456

Period	RSP	Upload average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Aussie Broadband	89.7%	13.1%	87.5% - 92.0%	131	4,079
Busy hours	Dodo & iPrimus	91.6%	9.7%	89.8% - 93.4%	112	3,460
Busy hours	Exetel	91.9%	10.0%	90.1% - 93.6%	125	4,122
Busy hours	iiNet	88.3%	14.9%	85.0% - 91.6%	77	2,637
Busy hours	Leaptel	92.1%	9.4%	89.9% - 94.4%	67	2,198
Busy hours	Optus	89.5%	13.2%	86.7% - 92.3%	85	2,642
Busy hours	Telstra	92.0%	10.7%	90.2% - 93.8%	133	4,626
Busy hours	TPG	87.9%	14.6%	85.1% - 90.7%	103	3,240
Busy hours	Superloop	91.0%	12.8%	88.5% - 93.6%	96	2,888

Period	RSP	Download plan	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Aussie Broadband	500	95.4%	24.0%	89.8% - 100.9%	72	15,561
All hours	Dodo & iPrimus	500	106.3%	7.6%	104.3% - 108.4%	53	10,667
All hours	Exetel	500	102.4%	19.8%	98.3% - 106.4%	93	21,069
All hours	Leaptel	500	103.8%	17.1%	99.0% - 108.6%	49	10,842
All hours	Telstra	500	99.3%	25.2%	93.5% - 105.1%	73	16,779
All hours	Superloop	500	102.9%	17.1%	98.3% - 107.5%	53	11,336

Period	RSP	Download plan	Download average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Aussie Broadband	500	95.0%	23.9%	89.5% - 100.5%	72	4,616
Busy hours	Dodo & iPrimus	500	105.9%	8.1%	103.8% - 108.1%	53	2,987
Busy hours	Exetel	500	102.1%	19.8%	98.1% - 106.1%	93	6,162
Busy hours	Leaptel	500	103.7%	16.9%	99.0% - 108.4%	49	3,062
Busy hours	Telstra	500	98.7%	25.4%	92.8% - 104.5%	73	5,085
Busy hours	Superloop	500	102.4%	17.0%	97.9% - 107.0%	53	3,334

Period	RSP	Upload plan	Upload average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Aussie Broadband	50	91.8%	9.7%	89.7% - 94.0%	78	11,661
All hours	Dodo & iPrimus	50	93.8%	1.6%	93.4% - 94.2%	66	9,176
All hours	Exetel	50	92.7%	8.0%	91.2% - 94.3%	105	16,352
All hours	Leaptel	50	93.1%	5.5%	91.7% - 94.6%	55	8,341
All hours	Optus	50	93.1%	5.2%	91.5% - 94.6%	42	5,810
All hours	Telstra	50	94.0%	2.0%	93.6% - 94.4%	90	14,021
All hours	TPG	50	90.6%	11.4%	87.5% - 93.8%	51	7,454
All hours	Superloop	50	93.3%	7.3%	91.4% - 95.1%	62	8,850

Period	RSP	Upload plan	Upload average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Aussie Broadband	50	91.7%	9.7%	89.5% - 93.8%	78	2,471
Busy hours	Dodo & iPrimus	50	93.6%	2.1%	93.1% - 94.1%	66	1,861
Busy hours	Exetel	50	92.5%	8.0%	91.0% - 94.1%	105	3,462
Busy hours	Leaptel	50	93.0%	5.6%	91.5% - 94.5%	55	1,788
Busy hours	Optus	50	93.1%	4.9%	91.6% - 94.5%	42	1,274
Busy hours	Telstra	50	93.8%	2.3%	93.4% - 94.3%	90	3,119
Busy hours	TPG	50	90.6%	11.4%	87.5% - 93.7%	51	1,509
Busy hours	Superloop	50	93.2%	7.4%	91.3% - 95.0%	62	1,903

RSP	Percentage of units having no outages	Percentage of units having outages at most every other day	Percentage of units having outages on most days	Percentage of units having outages at least once a day
Aussie Broadband	38.2%	54.2%	2.3%	5.3%
Dodo & iPrimus	33.0%	58.9%	3.6%	4.5%
Exetel	40.8%	55.2%	2.4%	1.6%
iiNet	49.4%	48.1%	1.3%	1.3%
Leaptel	64.2%	31.3%	1.5%	3.0%
Optus	61.2%	34.1%	3.5%	1.2%
Superloop	42.7%	47.9%	2.1%	7.3%
Telstra	59.4%	37.6%	0.0%	3.0%
TPG	37.9%	53.4%	4.9%	3.9%

RSP	Percentage of outages lasting 30-60 sec	Percentage of outages lasting 1-3 min	Percentage of outages lasting 3-10 min	Percentage of outages lasting 10 min or more
Aussie Broadband	38.6%	33.3%	15.8%	12.3%
Dodo & iPrimus	18.7%	46.9%	10.4%	24.0%
Exetel	25.6%	23.1%	21.8%	29.5%
iiNet	22.0%	40.1%	25.4%	12.4%
Leaptel	18.6%	33.1%	35.2%	13.1%
Optus	33.3%	36.5%	16.0%	14.2%
Superloop	23.7%	24.1%	21.5%	30.8%
Telstra	47.8%	32.7%	8.8%	10.7%
TPG	17.7%	38.0%	15.5%	28.8%

NBN plan tables

The following tables show statistical information on download and upload speeds for each NBN plan, including all tested RSPs.

Period	Download plan	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	25	104.6%	4.1%	103.7% - 105.5%	82	19,092
All hours	50	101.4%	11.5%	99.8% - 102.9%	201	46,255
All hours	100	93.0%	17.5%	89.4% - 96.6%	90	19,018
All hours	500	100.5%	20.1%	99.0% - 102.1%	637	138,681
All hours	750	96.3%	17.8%	93.0% - 99.6%	111	24,300
Period	Download plan	Download average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	25	103.6%	4.7%	102.6% - 104.6%	82	5,664
Busy hours	50	100.5%	11.5%	98.9% - 102.1%	201	13,881
Busy hours	100	92.2%	17.4%	88.6% - 95.8%	90	5,678
Busy hours	500	100.1%	20.1%	98.5% - 101.6%	636	40,934
Busy hours	750	96.0%	17.8%	92.7% - 99.3%	111	7,200

Period	Upload plan	Upload average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	10	89.1%	14.2%	84.9% - 93.4%	43	7,147
All hours	20	86.0%	18.0%	83.8% - 88.2%	256	39,348
All hours	50	92.5%	7.8%	92.0% - 93.1%	748	111,406
Period	Upload plan	Upload average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	10	89.0%	14.1%	84.7% - 93.2%	43	1,524
Busy hours	20	85.8%	18.1%	83.6% - 88.0%	256	8,533
Busy hours	50	92.4%	7.9%	91.8% - 93.0%	747	23,772

NBN technology tables

The following tables show statistical information on download speeds, upload speeds, and outages on a per-technology basis.

Period	Technology	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Fibre to the premises - FTTP	101.2%	17.4%	99.9% - 102.6%	622	137,294
All hours	Hybrid fibre-coaxial - HFC	99.7%	20.1%	97.4% - 101.9%	304	65,456
All hours	Fibre to the node - FTTN	95.6%	15.5%	93.4% - 97.8%	196	44,012
Period	Technology	Download average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Fibre to the premises - FTTP	100.8%	17.4%	99.4% - 102.1%	621	40,324
Busy hours	Hybrid fibre-coaxial - HFC	99.2%	20.1%	96.9% - 101.4%	304	19,656
Busy hours	Fibre to the node - FTTN	94.7%	15.5%	92.6% - 96.9%	196	13,152
Period	Technology	Upload average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Fibre to the premises - FTTP	92.9%	6.7%	92.4% - 93.4%	622	93,746
All hours	Hybrid fibre-coaxial - HFC	91.2%	10.9%	90.0% - 92.4%	304	44,869
All hours	Fibre to the node - FTTN	82.3%	20.6%	79.5% - 85.2%	196	29,992

Period	Technology	Upload average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Fibre to the premises - FTTP	92.8%	6.8%	92.2% - 93.3%	622	19,959
Busy hours	Hybrid fibre-coaxial - HFC	91.0%	10.9%	89.7% - 92.2%	303	9,663
Busy hours	Fibre to the node - FTTN	82.1%	20.7%	79.2% - 85.0%	196	6,487

Technology	Percentage of units having no outages	Percentage of units having outages at most every other day	Percentage of units having outages on most days	Percentage of units having outages at least once a day
Fibre to the node - FTTN	46.9%	45.9%	2.6%	4.6%
Fibre to the premises - FTTP	51.6%	42.6%	3.2%	2.6%
Hybrid fibre-coaxial - HFC	32.6%	58.6%	3.9%	4.9%

Technology	Percentage of outages lasting 30-60 sec	Percentage of outages lasting 1-3 min	Percentage of outages lasting 3-10 min	Percentage of outages lasting 10 min or more
Fibre to the node - FTTN	23.0%	26.1%	27.1%	23.9%
Fibre to the premises - FTTP	43.6%	31.5%	17.6%	7.3%
Hybrid fibre-coaxial - HFC	30.3%	37.8%	15.0%	16.9%

NBN state tables

This table shows statistical information on download speeds on a per-state basis. In this report, we have been able to draw upon all of the test results from a range of locations.

Period	State or Territory	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	NSW	99.9%	18.9%	98.0% - 101.8%	383	86,457
All hours	ACT	99.2%	17.7%	93.8% - 104.6%	41	8,546
All hours	VIC	100.7%	17.6%	98.8% - 102.7%	314	68,086
All hours	QLD	100.6%	15.9%	98.4% - 102.8%	195	42,177
All hours	WA	99.2%	17.9%	95.8% - 102.5%	107	23,194
All hours	TAS	99.2%	16.5%	94.2% - 104.1%	42	9,672
All hours	NT + SA	97.3%	17.6%	93.3% - 101.3%	74	16,274
Period	State or Territory	Download average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	NSW	99.4%	19.0%	97.5% - 101.3%	382	26,055
Busy hours	ACT	98.8%	17.6%	93.4% - 104.2%	41	2,587
Busy hours	VIC	100.2%	17.7%	98.2% - 102.1%	314	20,580
Busy hours	QLD	100.1%	16.0%	97.8% - 102.3%	195	12,791
Busy hours	WA	98.4%	17.9%	95.0% - 101.8%	107	5,509
Busy hours	TAS	98.6%	16.4%	93.7% - 103.6%	42	2,992
Busy hours	NT + SA	96.4%	17.2%	92.5% - 100.3%	74	4,893

NBN Whiteboxes connected to underperforming services

The following table shows the number of Whiteboxes on NBN services for each RSP, alongside the number of Whiteboxes connected to underperforming services.

RSP	NBN Whiteboxes	NBN Whiteboxes on underperforming services	% NBN Whiteboxes on underperforming services
Aussie Broadband	131	10	7.6%
Dodo & iPrimus	112	5	4.5%
Exetel	125	7	5.6%
iiNet	77	3	3.9%
Leaptel	67	3	4.5%
Optus	85	4	4.7%
Other RSPs	227	18	7.9%
Superloop	96	4	4.2%
Telstra	133	10	7.5%
TPG	103	1	1.0%
Total	1,156	65	5.6%

Services with FTTN connections have accounted for most of the underperforming services in previous reports. However, there is now a greater incidence of underperforming services with FTTP and HFC connections in our sample after NBN Co introduced higher speed plans for these technologies in September 2025.

The following table shows the total number of Whiteboxes alongside the number and proportion of underperforming services for each fixed-line access technology.

Technology	NBN Whiteboxes	NBN Whiteboxes on underperforming services	% NBN Whiteboxes on underperforming services
Fibre to the curb - FTTC	34	0	0.0%
Fibre to the node - FTTN	196	21	10.7%
Fibre to the premises - FTTP	622	27	4.3%
Hybrid fibre-coaxial - HFC	304	17	5.6%
Total	1,156	65	5.6%

The following table specifies the same metrics for different plan download speeds for FTTN, FTTP and HFC connections.

Technology	Plan	NBN Whiteboxes	NBN Whiteboxes on underperforming services	% NBN Whiteboxes on underperforming services
Fibre to the node - FTTN	25	39	0	0.0%
Fibre to the node - FTTN	50	88	9	10.2%
Fibre to the node - FTTN	100	69	12	17.4%
Fibre to the premises - FTTP	Below 500	106	1	0.9%
Fibre to the premises - FTTP	500	431	18	4.2%
Fibre to the premises - FTTP	750	85	8	9.4%
Hybrid fibre-coaxial - HFC	Below 500	72	2	2.8%
Hybrid fibre-coaxial - HFC	500	206	14	6.8%
Hybrid fibre-coaxial - HFC	750	26	1	3.8%

NBN very high speed services tables

The figures in the following table are based on very high speed services, where the underlying wholesale product sold by NBN Co has a download/upload speed of 1000/100 Mbps.

Period	Plan	Download average Mbps (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Very High Speed	869.5 Mbps	162.6 Mbps	850.4 Mbps - 888.5 Mbps	280	59,100
Period	Plan	Download average Mbps (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Very High Speed	864.6 Mbps	163.7 Mbps	845.4 Mbps - 883.7 Mbps	280	17,688
Period	Plan	Upload average Mbps (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	Very High Speed	90 Mbps	13.2 Mbps	88.5 Mbps - 91.6 Mbps	280	40,578
Period	Plan	Upload average Mbps (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	Very High Speed	89.8 Mbps	13.2 Mbps	88.3 Mbps - 91.4 Mbps	280	8,789

Technology	Percentage of units having no outages	Percentage of units having outages at most every other day	Percentage of units having outages on most days	Percentage of units having outages at least once a day
Very High Speed	45.4%	48.6%	2.9%	3.2%

Plan	Percentage of outages lasting 30-60 sec	Percentage of outages lasting 1-3 min	Percentage of outages lasting 3-10 min	Percentage of outages lasting 10 min or more
Very High Speed	21.8%	28.0%	18.4%	31.8%

NBN fixed wireless services tables

The figures in the following table are based on NBN fixed wireless services using the 12/1 Mbps, 25/5 Mbps, the Fixed Wireless Plus, the Fixed Wireless Home Fast and the Fixed Wireless Superfast plans.

Period	Technology	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	NBN fixed wireless	89.7%	35.3%	84.1% - 95.3%	153	32,748
Period	Technology	Download average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	NBN fixed wireless	83.8%	37.1%	77.9% - 89.7%	153	9,631
Period	Technology	Upload average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	NBN fixed wireless	70.1%	31.7%	65.0% - 75.1%	153	22,798
Period	Technology	Upload average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	NBN fixed wireless	63.7%	32.3%	58.6% - 68.8%	153	4,809

Technology	Percentage of units having no outages	Percentage of units having outages at most every other day	Percentage of units having outages on most days	Percentage of units having outages at least once a day
NBN fixed wireless	34.0%	59.5%	4.6%	2.0%
Technology	Percentage of outages lasting 30-60 sec	Percentage of outages lasting 1-3 min	Percentage of outages lasting 3-10 min	Percentage of outages lasting 10 min or more
NBN fixed wireless	25.2%	37.5%	16.2%	21.1%

Other superfast access networks

The figures in the following table show results for services on other superfast access networks (all plans).

Period	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	99%	23%	92% - 106%	41	9,160
Period	Download average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	98%	23%	91% - 106%	41	2,719
Period	Upload average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	93%	6%	91% - 95%	41	6,227
Period	Upload average % of plan speed (busy hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
Busy hours	93%	6%	91% - 95%	41	1,324

Technology	Percentage of units having no outages	Percentage of units having outages at most every other day	Percentage of units having outages on most days	Percentage of units having outages at least once a day
Other superfast access networks	56.1%	43.9%	0.0%	0.0%

Technology	Percentage of outages lasting 30-60 sec	Percentage of outages lasting 1-3 min	Percentage of outages lasting 3-10 min	Percentage of outages lasting 10 min or more
Other superfast access networks	29.6%	22.2%	16.7%	31.5%

NBN Sky Muster

The figures in the following table show results for services on NBN Sky Muster for the 25/5 Mbps, 50/10 Mbps and 100/10 Mbps plans.

Period	Download average % of plan speed (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	89.0%	14.1%	84.9% - 93.1%	46	10,011
Period	**Download average % of plan speed (busy hours)**	**Standard deviation**	**95% confidence interval of the mean**	**Panel size**	**Number of tests**
Busy hours	78.5%	18.9%	73.0% - 83.9%	46	2,483
Period	**Upload average % of plan speed (all hours)**	**Standard deviation**	**95% confidence interval of the mean**	**Panel size**	**Number of tests**
All hours	119.1%	33.5%	109.4% - 128.8%	46	5,434
Period	**Upload average % of plan speed (busy hours)**	**Standard deviation**	**95% confidence interval of the mean**	**Panel size**	**Number of tests**
Busy hours	111.7%	34.3%	101.8% - 121.6%	46	1,004

Technology	Percentage of units having no outages	Percentage of units having outages at most every other day	Percentage of units having outages on most days	Percentage of units having outages at least once a day
NBN Sky Muster	0.0%	65.2%	15.2%	19.6%
Technology	**Percentage of outages lasting 30-60 sec**	**Percentage of outages lasting 1-3 min**	**Percentage of outages lasting 3-10 min**	**Percentage of outages lasting 10 min or more**
NBN Sky Muster	25.8%	38.2%	26.8%	9.2%

Starlink

The figures in the following table show results for services on Starlink's LEO satellite network. In this sample, there were 48 units on the Residential Max plan and 3 units on the Residential 100 Mbps plan. The download and upload speed results that follow only include services on the Residential Max plan. The outage results include units on both plans.

Period	Download speed average (all hours)	Standard deviation	95% confidence interval of the mean	Panel size	Number of tests
All hours	230.4 Mbps	52.5 Mbps	215.5 - 245.3 Mbps	48	10,919
Period	**Download speed average (busy hours)**	**Standard deviation**	**95% confidence interval of the mean**	**Panel size**	**Number of tests**
Busy hours	199.1 Mbps	60.1 Mbps	182.1 - 216.1 Mbps	48	3,240
Period	**Upload speed average (all hours)**	**Standard deviation**	**95% confidence interval of the mean**	**Panel size**	**Number of tests**
All hours	47.5 Mbps	8.6 Mbps	45.1 - 49.9 Mbps	48	7,637
Period	**Upload speed average (busy hours)**	**Standard deviation**	**95% confidence interval of the mean**	**Panel size**	**Number of tests**
Busy hours	45.5 Mbps	9.7 Mbps	42.8 - 48.2 Mbps	48	1,658

Technology	Percentage of units having no outages	Percentage of units having outages at most every other day	Percentage of units having outages on most days	Percentage of units having outages at least once a day
Starlink	35.3%	62.7%	0.0%	2.0%
Technology	**Percentage of outages lasting 30-60 sec**	**Percentage of outages lasting 1-3 min**	**Percentage of outages lasting 3-10 min**	**Percentage of outages lasting 10 min or more**
Starlink	71.7%	19.3%	7.0%	2.0%

Test Definitions & Glossary

Test definitions

Test	Definition
Download	The speed at which data can be transferred from the SamKnows test server to your computer, measured in megabits per second (Mbps).
Upload	The speed at which information is transferred from your computer to the SamKnows test server, measured in megabits per second (Mbps).
Latency	How long it takes a data packet to go from your device to our test server and back to your device, measured in milliseconds (ms). The shorter the latency, the better.
Jitter	The variation in the delay of received packets, measured in milliseconds (ms). Essentially it is a measure of the stability of latency.
Packet loss	Packet loss counts packets that are sent over a network and don't make it to their destination, measured as a percentage of packets lost out of all packets sent.
Webpage loading time	The time it takes for a specific webpage to fully load. This is a combination test that includes download, latency and DNS in one test that accurately mimics real-world usage.
Outages	The outages metric tracks how many times per day your broadband connection goes offline for at least 30 seconds. Outages between 12am and 5am are excluded from this metric as this is when network maintenance typically occurs.
Video streaming	Measures the highest bitrate (in Mbps), and therefore quality level, you can reliably stream from real content servers.

Glossary

Term	Definition
Advertised speed	The speed claim made by an RSP for a given plan during a Measuring Broadband Australia reporting period. May be the same as or lower than plan speed.
All hours	Refers to tests conducted at any time of the day.
Busiest hour	Fifth lowest hourly average speed out of all busy hours in the month (including weekends cf. 'busy hours').
Busy hours	Refers to tests conducted between 19:00:00 and 22:59:59, Monday to Friday. For calculating the busiest hour and for determining the % of busy hours where the speed claim was attained, "busy hours" include 19:00:00 and 22:59:59, Monday to Sunday
Customer-premises equipment (CPE)	Network equipment provided by an RSP (generally including a home router/gateway).
Download and upload speed	Download speed is the speed at which data can be transferred from the SamKnows test server to the consumer's computer, measured in megabits per second (Mbps). Upload speed is the speed at which information is transferred from the consumer's computer to the SamKnows test server, measured in Mbps. The download and upload speeds associated with each retail plan are used by consumers to select a plan. Upload speed is especially relevant for applications where a user sends significant amounts of data to the internet, for example uploading files to cloud storage or running multiple simultaneous video conferencing sessions.
Download performance	Measured download speed expressed as a percentage of plan speed. e.g. for an NBN50 service, 100% download performance would be 50 Mbps. Prior to overprovisioning this was capped at 100%. Since NBN has begun overprovisioning services, results above 100% are common.
FTTN / Fibre to the node	Measuring Broadband Australia treats the FTTN / Fibre to the Node and FTTB / Fibre to the Building access technologies as identical for reporting.
Fixed-Line	For reporting, fixed-line encompasses the FTTP (Fibre to the Premises), FTTB (Fibre to the Building), HFC (Hybrid Fibre-Coaxial), FTTC (Fibre to the Curb), and FTTN (Fibre to the Node) access technologies.
Geosynchronous Equatorial Orbit (GEO)	GEO satellites remain in a fixed position relative to the Earth's surface, providing consistent coverage over a specific area. NBN Sky Muster is an example of a service that uses geosynchronous satellites to provide internet connectivity, particularly to remote and rural areas in Australia where terrestrial infrastructure is impractical or too costly to deploy.
Impaired service	FTTN / Fibre to the Node services where the maximum attainable line speed measured by NBN Co is below plan speed.
Low Earth Orbit (LEO)	Low Earth Orbit satellites operate at altitudes ranging from approximately 550 to 1,200 kilometres above the Earth's surface. These satellites move rapidly relative to the Earth's surface, requiring a constellation of satellites to provide continuous and global coverage. Starlink, developed by SpaceX, is an example of a service that uses a constellation of LEO satellites to deliver high speed internet access worldwide, including remote and underserved areas.
NBN service	A proxy for a single household which accesses the internet through the NBN.

Term	Definition
Plan and plan speed	Plan refers to the retail broadband product. Each plan has an associated download and upload speed. For example, a 100/20 Mbps plan includes a 100 Mbps download plan speed and a 20 Mbps upload plan speed. The term "NBN100" refers to a download plan speed of 100 Mbps, but the upload plan speed may vary.
SamKnows	The independent testing provider appointed to conduct testing for Measuring Broadband Australia. https://samknows.com/
Testing infrastructure	SamKnows-maintained test servers hosted within Australia.
Underperforming service	Services which reach above 75% of plan speed in no more than 5% of download tests. These are services which rarely or never attain plan speed.
Very high speed service	Services where the underlying wholesale product sold by NBN Co has a download/upload speed of 1000/100 Mbps (referred to by NBN Co as 'Home Ultrafast').
Whitebox	A purpose-built hardware measurement agent manufactured by SamKnows, installed in volunteers' homes.