






THE WI-FI PERFORMANCE COMPANY

The Future of Work From Home & How to Support the Remote Digital Experience

ABOUT 7SIGNAL

1 Billion
DATA POINTS ANALYZED
DAILY

  200 Customers	 30+ Partners
--	--

12 PATENTS

5 Million Devices
Monitored Daily

Certified in **40** Countries + **GDPR** Compliant

10 of the **FORTUNE 500**





THE WI-FI PERFORMANCE COMPANY

POLL #1

Unplanned Downtime, User Productivity Impact

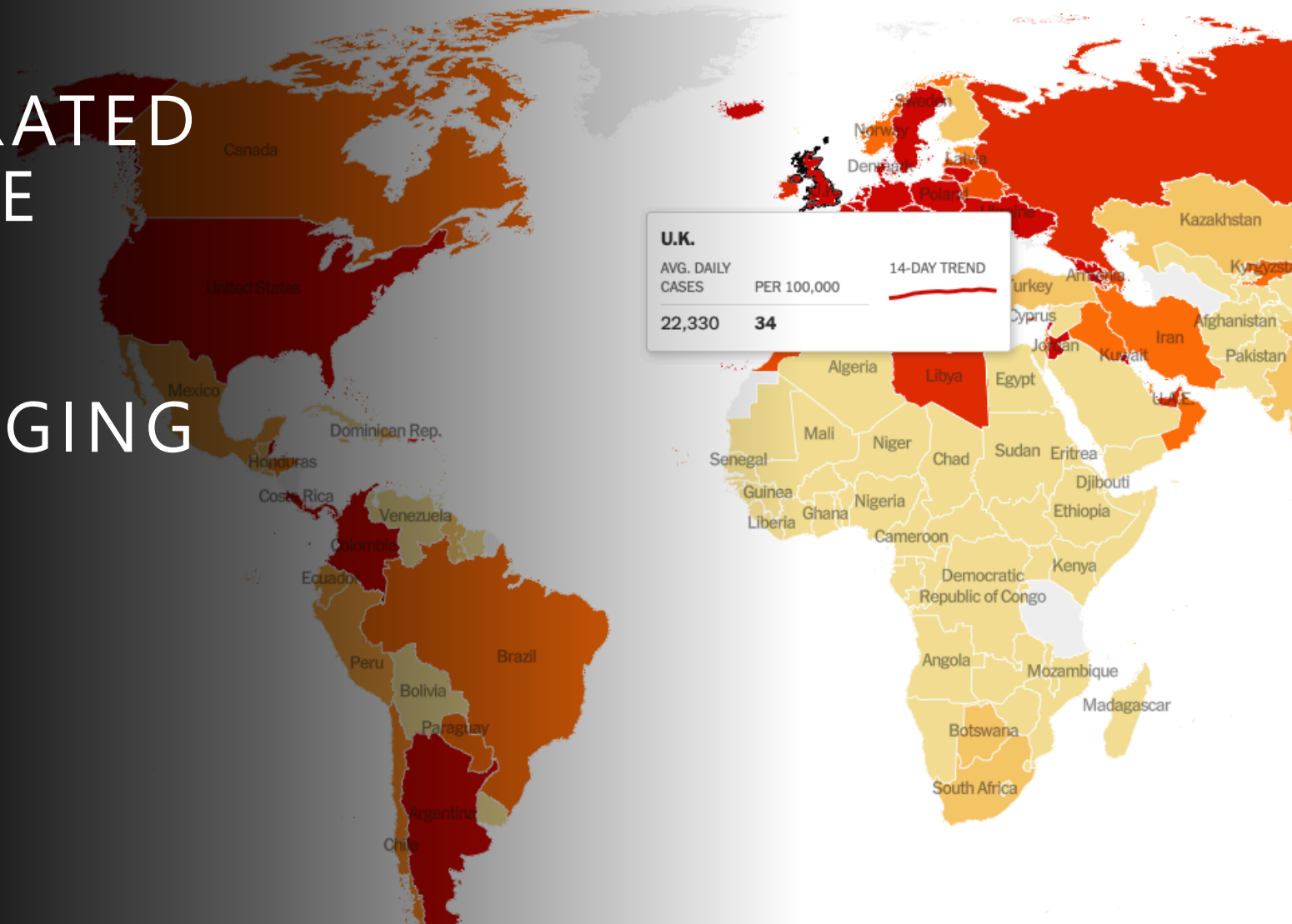
Organizations are seeing reduced downtime related to their network which helps their users retain access to critical applications and workloads

	Before 7SIGNAL Mobile Eye	With 7SIGNAL Mobile Eye	Difference	% Benefit
Number of outages per year	7.7	6.0	1.7	22%
MTTR (hours)	6.8	5.0	1.4	38%
FTEs, lost productive time per organization per year	7.8	4.5	3.3	43%
Hours per user of lost productive time per year	24.4	14.0	10.4	43%
Value of lost productive time per organization per year (based on FTEs)	\$548.0K	\$315.0K	\$233.0K	43%

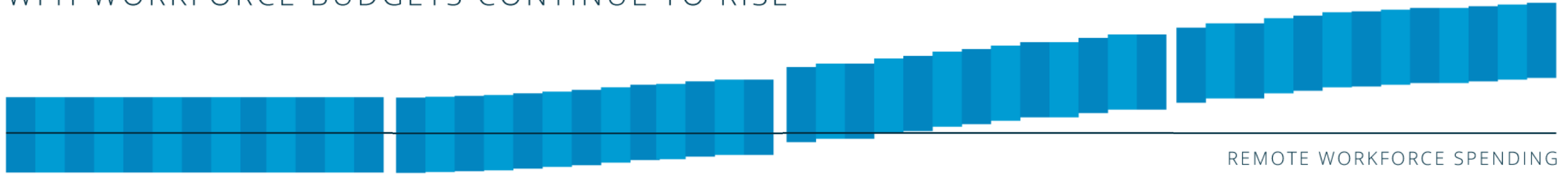


LOCKDOWNS ARE LEADING TO FRUSTRATED USERS AND REVENUE LOSSES

BUDGETS ARE CHANGING



WFH WORKFORCE BUDGETS CONTINUE TO RISE



REMOTE WORKFORCE SPENDING

Q1 2020
BUSINESS AS USUAL



Budget from C-Level was only attributed within the enterprise ecosystem. All business costs & assets held within physical footprints.

Q2 2020
NEW CHALLENGES




Companies are forced to learn how to operate remotely. They begin to support some WFH costs for the near-term (desks, chairs, etc.).

Q3 2020
NEW OPPORTUNITIES



Companies work to support a higher capacity of employees working remotely. Efficiencies are identified and re-allocated toward the WFH workforce.

Q4 2020
A NEW REALITY



Executives are fully supportive of the WFH workforce and begin. Employee business are fully covered by the Enterprise.

Q1 2021 & BEYOND HERE FOR GOOD

**100+ companies have codified significant work-from-home policies —
with some extending into 2021 or indefinitely**

Lifeshack.io, June 2020



FACEBOOK

Gartner

The New York Times



asurion

VIACOMCBS



**Twitter's leadership announced that
anyone who wants to telecommute
can now do so, forever.**

The New York Times, June 2020



**Nationwide Insurance sent nearly its entire
staff home in mid-March and found the move
so productive that it is closing six offices; 32
percent of its personnel will work remotely.**

The New York Times, June 2020



**Mark Zuckerberg has said he expects
50 percent of his work force to be
doing their jobs remotely in as little
as five years.**

The New York Times, June 2020

WORK-FROM-HOME IS HERE TO STAY

A way of life during the pandemic, a lasting effect on the way we work

42%

of U.S. labor force is now working from home full-time

Stanford University, June 2020

72%

of office workers want to work from home at least two days per week

PwC, June 2020

100+

companies have codified significant work-from-home policies as a result of COVID — with some extending into 2021 or indefinitely

Lifeshack.io, June 2020



Twitter's leadership announced that anyone who wants to telecommute can now do so, forever.

The New York Times, June 2020



Mark Zuckerberg has said he expects 50 percent of his work force to be doing their jobs remotely in as little as five years.

The New York Times, June 2020



Nationwide Insurance sent nearly its entire staff home in mid-March and found the move so productive that it is closing six offices; 32 percent of its personnel will work remotely.

The New York Times, June 2020

Google

box



FACEBOOK

Gartner

The New York Times



Nationwide

asurion

VIACOMCBS



REMOTE WORKERS NEED TECH AND SYSTEMS TO HELP STAY CONNECTED

76%

of remote workers use video conferencing as part of their daily work

Metova, July 2020

68%

of remote workers have other remote workers in the same household

Metova, July 2020



REMOTE LEARNING REQUIRES CONNECTION

Challenges exist for Higher Education and K-12 as a result of COVID-19

42%

of U.S. colleges and universities will be conducting fall 2020 courses primarily or fully online

The Chronicle of Higher Education, August 2020

14%

will be conducting fall 2020 courses in a hybrid online / in-person format

The Chronicle of Higher Education, August 2020

71%

of parents are concerned that their children are falling behind school because of the pandemic

Yahoo, July 2020



87% of learners agree that colleges and universities need to adapt faster to the needs of today's students

Globally, more than 3 in 4 people believe that education will fundamentally change as a result of the pandemic. Online learning will be a key part of experiences for learners of all ages, and economic uncertainty will drive more people to upskill and reskill for job security

Pearson Global Learner's Survey, August 2020



Microsoft

1 IN 4 AMERICAN TEENS HAVE BROADBAND CONNECTIONS THAT ARE UNRELIABLE

4-H & Microsoft Digital Impact Survey, March 2020

NEARLY HALF OF TEENS REPORT STRUGGLING TO COMPLETE HOMEWORK DUE TO SLOW INTERNET CONNECTIONS

4-H & Microsoft Digital Impact Survey, March 2020

7SIGNAL ALLOWS EDUCATORS AND STUDENTS TO STAY CONNECTED AND CONTINUE LEARNING

LEARN MORE AT [7SIGNAL.COM](https://7signal.com)



SOLVING CONNECTIVITY ISSUES FOR YOUR REMOTE WORKFORCE

7 SIGNAL | MOBILE EYE

When employees and teams work remotely, your networking infrastructure and performance tools cannot help you address their connectivity issues.

All the disparate Wi-Fi networks and devices can result in remote application crashes, skyrocketing help desk requests, team member frustration and plummeting productivity.



TOPLINE METRICS

670%

3-year ROI

32%

More efficient networking teams

3 months

To payback

NETWORK-RELATED EFFICIENCIES

33%

More efficient network troubleshooting teams

59%

Reduced time to troubleshoot network issues

36%

More efficient network management teams

BUSINESS AND OPERATIONS BENEFITS

43%

Reduction in network-related unplanned downtime

22%

Faster ability to receive new location/end users reports

3,000+

End user productivity hours gained back per year

A GUIDE FOR SUPPORTING THE DIGITAL EXPERIENCE OF YOUR “WORK FROM HOME” USERS.

INCLUDES 20 AGENTS FOR 20 DAYS!

[GO.7SIGNAL.COM/DESIGNDAY](https://go.7signal.com/designday)



THE WI-FI PERFORMANCE COMPANY

MOBILE EYE FOR REMOTE EMPLOYEES

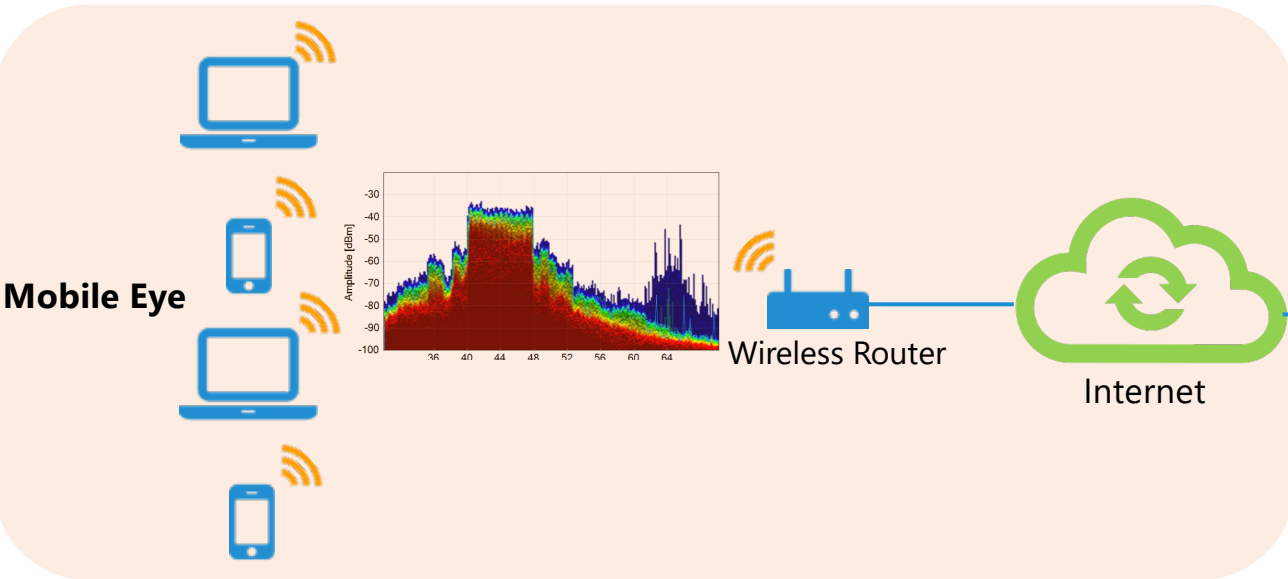


THE WI-FI PERFORMANCE COMPANY

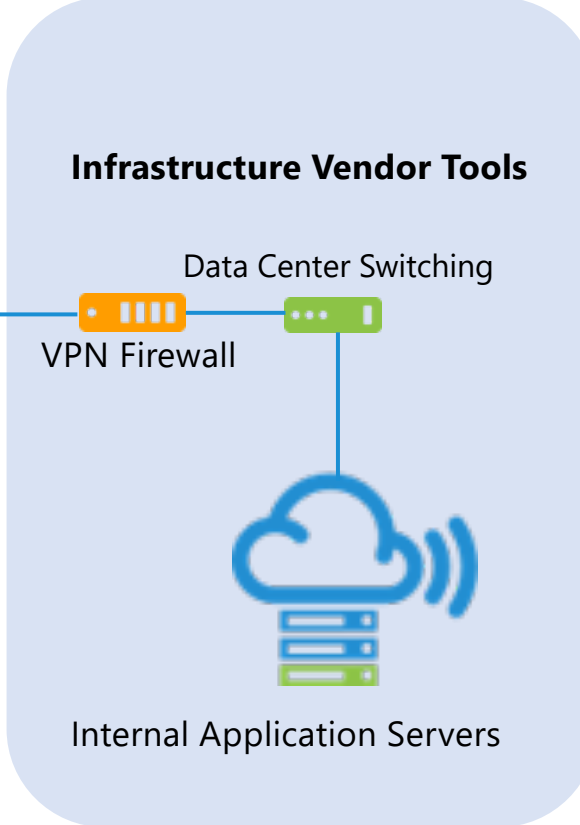
POLL #2

EXTERNAL NETWORK VISIBILITY

Wi-Fi Clients, External WLAN, RF, Internet



Enterprise LAN Infrastructure



TOP HOME WI-FI PROBLEMS OUR CUSTOMERS ARE FIXING

THE END USER

1. "My Wi-Fi is slow"
2. "I can't connect"
3. "My call audio is choppy"
4. "I keep getting dropped while on Zoom."
5. "I have to turn off the video on Teams"



MOBILE EYE PROBLEM IDENTIFICATION

1. Coverage
2. Interference
3. Congestion
4. Roaming
5. Internet Speed

COVERAGE

Wi-Fi Problems Timeline ⓘ

Roaming

✓ 100% ⚠ 0% ✗ 0% of 38 tests



October 31st, 8:00 PM

Coverage

✓ 0% ⚠ 0% ✗ 100% of 38 tests



▲ October 31st, 8:00 PM

Congestion

✓ 100% ⚠ 0% ✗ 0% of 38 tests



October 31st, 8:00 PM

Interference

✓ 100% ⚠ 0% ✗ 0% of 38 tests



October 31st, 8:00 PM

Signal ⓘ

-73 dBm



October 31st, 8:46 PM

Best Neighboring Signal Strength ⓘ

-78 dBm



October 31st, 8:46 PM

CONGESTION

Wi-Fi Problems Timeline i

Roaming

✓ 100% ⚠ 0% ✗ 0% of 718 tests



Coverage

✓ 100% ⚠ 0% ✗ 0% of 718 tests



Congestion

✓ 91% ⚠ 9% ✗ 0% of 718 tests



Interference

✓ 100% ⚠ 0% ✗ 0% of 718 tests



Channel Utilization i



September 17th, 10:53 AM

INTERFERENCE

Wi-Fi Problems Timeline ⓘ

Roaming

✓ 100% ⚠ 0% ✗ 0% of 38 tests



November 1st, 8:00 AM

Coverage

✓ 100% ⚠ 0% ✗ 0% of 38 tests



November 1st, 8:00 AM

Congestion

✓ 100% ⚠ 0% ✗ 0% of 38 tests



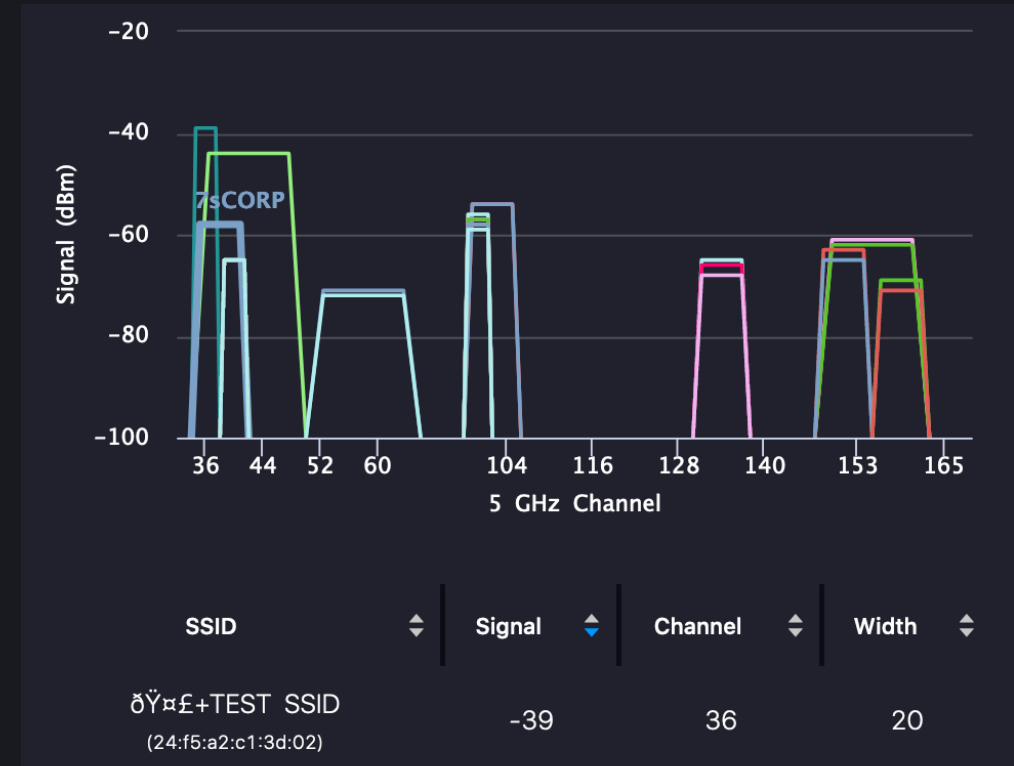
November 1st, 8:00 AM

Interference

✓ 0% ⚠ 0% ✗ 100% of 38 tests



November 1st, 8:00 AM



Channel Utilization ⓘ



ROAMING

Wi-Fi Problems Timeline ⓘ

Roaming

✔ 44% ⚠ 36% ✖ 20% of 3233 tests



Coverage

✔ 63% ⚠ 0% ✖ 37% of 3233 tests



Congestion

✔ 100% ⚠ 0% ✖ 0% of 3233 tests



Interference

✔ 100% ⚠ 0% ✖ 0% of 3233 tests



Signal ⓘ

-81 dBm



October 29th, 2:00 AM

Best Neighboring Signal Strength ⓘ

-62 dBm



October 29th, 2:00 AM

Adapter: Microsoft - Intel(R) Dual Band Wireless-AC 7260

Driver: 17.15.0.5

Last seen: Wed, Nov 4th, 11:20 PM EST.

INTERNET SPEED

End-to-End Problems Timeline ⓘ

Ping

3 Endpoints with problems

✓ 83% ⚠ 11% ✗ 6% of 257 tests



Throughput

1 Endpoint with problems

✓ 2% ⚠ 35% ✗ 63% of 257 tests



Web Download

1 Endpoint with problems

✓ 19% ⚠ 0% ✗ 81% of 257 tests



Download Throughput ⓘ

1.15 Mbit/s



November 2nd, 9:14 AM

Upload Throughput ⓘ

0.86 Mbit/s



November 2nd, 9:14 AM



THE WI-FI PERFORMANCE COMPANY

What's New

NEW HELP DESK TROUBLESHOOTING GUIDE

Devices

JimV-MBP.local

Oct

Show All Clients

8h

Client performance for JimV-MBP.local

[Device Details/Driver History](#)

Wi-Fi Problems Timeline

Roaming

100% 0% 0% of 657 tests

Coverage

100% 0% 0% of 657 tests

Congestion

100% 0% 0% of 657 tests

Interference

100% 0% 0% of 657 tests

End-to-End Problems Timeline

Ping

100% 0% 0% of 293 tests

Throughput

2 Endpoints with problems
84% 0% 16% of 294 tests

Web Download

2 Endpoints with problems
64% 1% 35% of 297 tests

Analysis

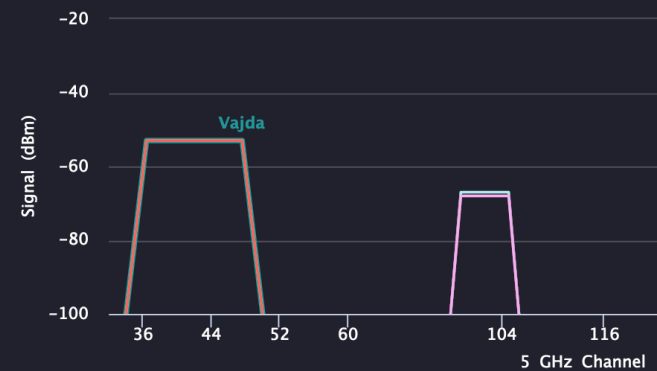
Wi-Fi

Ping

Throughput

Channels

5GHz



SSID

Vajda

(FrontRoom)

Signal

-53

Cha

Troubleshooting

Roaming

- > Client(s) stuck to a distant network access point

Coverage

- > Client(s) too far away from its access point

Congestion

- > Client(s) Wi-Fi network is over-utilized

Interference

- > Interference is disrupting client(s) Wi-Fi

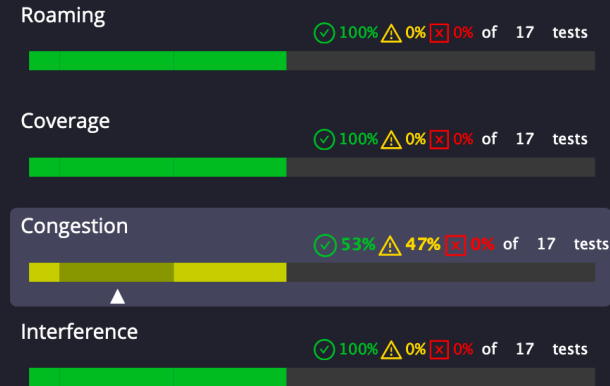
NEW PROBLEM DRILLDOWN

Client performance for JimV-MBP.local

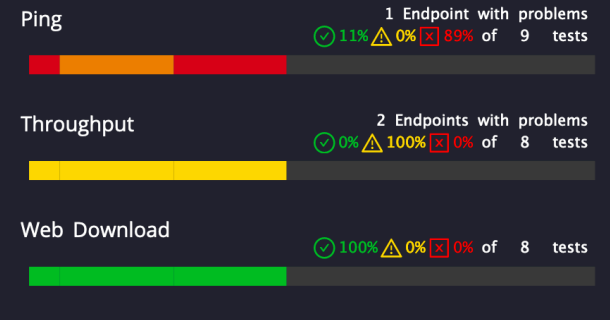
🔦 Troubleshooting Guide

Device [Details/Driver History](#)

📶 Wi-Fi Problems Timeline ⓘ



📡 End-to-End Problems Timeline ⓘ



📄 Details ⓘ

Host Name: JimV-MBP.local
Platform: macOS

📉 Congestion Analysis

📅 October 28th, 3:00 PM - October 28th, 4:00 PM ⓘ



Status	Timestamp
Warning	October 28th 3:40 PM EST

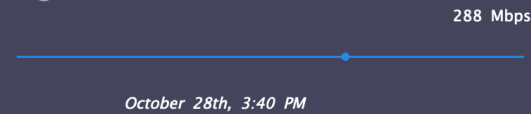
< 1 2 3 4 5 6 7 >

Congestion Evaluation Thresholds >

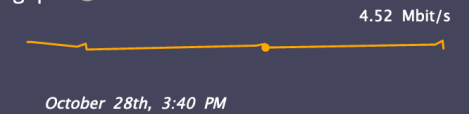
📶 Signal ⓘ



📡 Data Rate ⓘ



📡 Download Throughput ⓘ



📶 Channel Utilization ⓘ



👤 Client Count ⓘ



NEW LINUX SUPPORT

Details

Host Name: joe-ubuntu-test

Platform: linux

Address: 48:51:b7:18:ed:77 (192.168.1.143)

External IP Address: 173.90.200.159 [Provider/Whois](#)

Make: Dell Inc.

Model: 01

OS: linux (Ubuntu 20.04.1 LTS/5.4.0-48-generic)

Agent Version: v1.7.0

Adapter: Linux

Driver: iwlwifi

Last seen: Fri, Oct 9th, 1:08 PM EDT ●

[Configuration Change History](#)

- Thin Clients
 - HP ThinPro OS
 - IGEL OS
- Linux
 - Ubuntu
 - Debian
 - Red Hat

7SIGNAL EMPOWERS PRODUCTIVITY THROUGH CONNECTIVITY.

Recognized by Gartner for Digital Experience Monitoring.

Gartner

2020 MARKET GUIDE FOR DIGITAL EXPERIENCE MONITORING

[Learn More](#)

7SIGNAL | MOBILE EYE

“THE POST-PANDEMIC WORKFORCE WILL REMAIN MORE DISTRIBUTED AND REMOTE, LIMITING I&O LEADERS’ VISIBILITY INTO ENDPOINT, CONNECTIVITY AND APPLICATION PERFORMANCE FROM EVERYWHERE”

-2020 MARKET GUIDE FOR DIGITAL EXPERIENCE MONITORING

- Gain business-level context by using DEM technologies to monitor the performance of applications from the end user perspective
- Monitor and improve end user experience proactively by enabling DEM to track the most critical transactions and customer journeys
- Understand how DEM technologies complement and intersect with application performance monitoring (APM) and network performance monitoring and diagnostics (NPMD)

[GO.7SIGNAL.COM/DESIGNDAY](https://go.7signal.com/designday)



THE WI-FI PERFORMANCE COMPANY

POLL #3



THE WI-FI PERFORMANCE COMPANY

QUESTIONS?