



Airport WiFi

Stress Index

Holafly

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A HOLAFLY RESEARCH REPORT

Airport WiFi Stress Index

Which airports are failing airline crew , and what it costs when the connection drops.

Scoring 8 major international airports on speed, login friction, stability, security risk, and time-to-connect

8**airports scored**

JFK · YYZ · ICN · SIN ·
LAX · DXB · FRA · LHR

5**scoring dimensions**

Speed · Friction ·
Stability · Security · TTC

13x**speed gap: best vs worst**

JFK 151 Mbps → Heathrow
12 Mbps

Contents: 1. Why Airport WiFi Fails Crew · 2. Methodology · 3. Master Ranking · 4. Airport Profiles · 5. Cross-Cutting Themes · 6. Holafly Comparison

SECTION 1

Why Airport WiFi Fails Airline Crew

For airline crew, an airport is not a departure lounge. It is a workspace , a place to receive scheduling updates, coordinate with crew management, access airline operations apps, manage personal logistics, and communicate with family. Reliable, fast, and secure WiFi is not a passenger amenity. It is an operational requirement.

Yet airport WiFi is built, budgeted, and managed for passengers , the majority of whom need it for 45 minutes before a flight. Crew face a fundamentally different challenge: they transit dozens of airports per year, rely on connectivity throughout layovers that can last 4 to 20+ hours, and carry professional obligations that don't pause when the hotel's WiFi drops.

This report applies a rigorous, five-dimension scoring model to eight of the world's most important crew layover airports, producing a single Stress Score for each. The lower the score, the less operational burden the airport's WiFi places on crew. The findings reveal not just which airports are failing crew , but why, and what the pattern means globally.

Three findings that define the state of airport WiFi for crew

1. London Heathrow scores more than twice the Stress Score of best-in-class JFK , at just 10–15 Mbps median speed, it is functionally inadequate for modern crew work.2. Dubai's 60-minute free WiFi time limit turns the world's busiest international airport into a connectivity trap for crew on extended layovers.3. Across all eight airports, not one offers an encrypted public WiFi network. Every airport in this study exposes crew devices to evil twin attacks, man-in-the-middle interception, and captive portal credential harvesting.

SECTION 2

Methodology: The Stress Score Model

The Airport WiFi Stress Index is a composite scoring model built from five independently weighted dimensions. Each dimension is scored on a 0–10 scale (10 = best performance). A weighted composite is then calculated and inverted to produce a **Stress Score on a 0–100 scale**. A higher Stress Score means greater operational burden on airline crew.

DIMENSION	WHAT IT MEASURES	WEIGHT	WHY IT MATTERS FOR CREW
Speed (Mbps)	Median download vs FCC 100 Mbps benchmark	25%	Crew rely on scheduling apps, video calls and real-time ops comms
Login Friction	Portal complexity, time limits, forced re-auth	25%	A crew member with 20 min between connections cannot afford a 5-step portal
Stability	Peak-hour degradation, terminal coverage consistency	20%	Inconsistent WiFi creates uncertainty , worse than simply slow WiFi
Security	Encryption, spoofing risk, evil-twin vulnerability	20%	Crew access airline ops systems and personal accounts , data exposure is real
Time-to-Connect	From landing to browsing , total setup time	10%	For crew with tight turnarounds, even a 2-minute portal is a friction point

Stress Score Formula

Stress Score = $100 - [(Speed \times 0.25 + Friction \times 0.25 + Stability \times 0.20 + Security \times 0.20 + TTC \times 0.10) \times 10]$ ·
Score range: 0–100 · 0 = No stress (perfect WiFi) · 100 = Maximum stress (unusable)

Airport selection

The eight airports were selected to represent the major aviation hubs relevant to international airline crew layover patterns, covering North America, Europe, the Middle East, Southeast Asia, and Northeast Asia.

Airport	Code	Region	Crew Relevance
JFK International	JFK	USA , New York	Crew rely on scheduling apps, video calls and real-time ops comms
Toronto Pearson	YYZ	Canada , Toronto	A crew member with 20 min between connections cannot afford a 5-step portal
Seoul Incheon	ICN	South Korea , Seoul	Inconsistent WiFi creates uncertainty , worse than simply slow WiFi
Singapore Changi	SIN	Singapore	Crew access airline ops systems and personal accounts , data exposure is real
Los Angeles Intl.	LAX	USA , Los Angeles	For crew with tight turnarounds, even a 2-minute portal is a friction point
Dubai International	DXB	UAE , Dubai	For crew with tight turnarounds, even a 2-minute portal is a friction point
Frankfurt Airport	FRA	Germany , Frankfurt	For crew with tight turnarounds, even a 2-minute portal is a friction point
London Heathrow	LHR	UK , London	For crew with tight turnarounds, even a 2-minute portal is a friction point

SECTION 3

Master Ranking: All 8 Airports

Airports ranked from lowest (best) to highest (worst) Stress Score. The WiFi Stress Score reflects the cumulative connectivity burden on an airline crew member during a typical layover. **A score below 35 indicates WiFi adequate for crew work. A score above 60 indicates WiFi that is functionally inadequate for modern crew operations.**

Stress Score Formula

Stress Score = $100 - [(Speed \times 0.25 + Friction \times 0.25 + Stability \times 0.20 + Security \times 0.20 + TTC \times 0.10) \times 10]$ ·
 Score range: 0–100 · 0 = No stress (perfect WiFi) · 100 = Maximum stress (unusable)

#	AIRPORT	SPEED Mbps	FRICTION	STABILITY	SECURITY	TTC	STRESS SCORE
1	 JFK , New York, USA	151.6	7.5/10	7.5/10	4.0/10	8.0/10	27.8
2	 YYZ , Toronto, Canada	107.0	7.0/10	8.0/10	5.0/10	7.5/10	31.5
3	 ICN , Seoul, South Korea	65.0	8.5/10	8.5/10	5.0/10	8.5/10	32.0
4	 SIN , Singapore	72.0	5.0/10	7.5/10	5.5/10	5.0/10	44.0
5	 LAX , Los Angeles, USA	76.0	5.5/10	5.5/10	4.0/10	5.5/10	48.0
6	 DXB , Dubai, UAE	55.0	2.5/10	7.5/10	4.0/10	7.0/10	53.8
7	 FRA , Frankfurt, Germany	48.0	4.5/10	6.0/10	4.5/10	4.5/10	54.5
8	 LHR , London, UK	12.0	6.5/10	3.0/10	3.5/10	4.5/10	62.5

 Low Stress (<35)

WiFi adequate for
crew work

 Moderate (35–49)

WiFi adequate for
crew work

 High Stress (50–59)

WiFi adequate for
crew work

 Critical (60+)

WiFi adequate
for crew work

SECTION 4

Airport-by-Airport Profiles

Detailed connectivity assessments for each of the eight airports, covering provider details, access conditions, and per-dimension scoring with supporting evidence sourced from Ookla, airport official documentation, and independent cybersecurity research.

#1  **JFK International , New York, USA**

STRESS SCORE

27.8_{/100}PROVIDER
Boingo WirelessFREE ACCESS · TIME
LIMIT · ENCRYPTION
Yes · None · Open
(WPA2 – unencrypted
broadcast)

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	9/10	151.6 Mbps , 3rd fastest globally (Ookla Q1 2024)
Login Friction	7.5/10	Email-only portal, no time limit, auto-reconnects
Stability	7.5/10	Strong across most terminals; slight peak-hour degradation
Security	4/10	Open WPA2 , vulnerable to evil twin attacks & packet sniffing
Time-to-Connect	8/10	~1–2 min. Quick email entry, portal resolves fast

#2  Toronto Pearson , Toronto, Canada

STRESS SCORE

31.5_{/100}PROVIDER
YYZ Airport AuthorityFREE ACCESS · TIME
LIMIT · ENCRYPTION
Yes · None · Open
public network

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	7/10	107 Mbps , meets FCC 100/20 Mbps benchmark (Ookla Q1 2025)
Login Friction	7/10	Name & email only; no time limit, no ads
Stability	8/10	Consistent across Terminals 1 and 3; well-provisioned
Security	5/10	Open network with clear SSID, reducing some spoofing risk
Time-to-Connect	7.5/10	~1–2 min, clean and fast-loading portal

#3  Seoul Incheon , Seoul, South Korea

STRESS SCORE

32_{/100}PROVIDER
Korea Airports Corp / KT CorpFREE ACCESS · TIME
LIMIT · ENCRYPTION
Yes · None · Open
broadcast

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	4.5/10	65 Mbps , estimated from user benchmarks
Login Friction	8.5/10	No captive portal in many zones , auto-connects on most devices
Stability	8.5/10	Consistently rated among world's top airports for connectivity
Security	5/10	Open broadcast; Incheon has invested in network segmentation
Time-to-Connect	8.5/10	Often near-instant , many devices connect without any portal step

#4 Singapore Changi , Singapore

STRESS SCORE

44_{/100}PROVIDER
Changi Airport Group / SingtelFREE ACCESS · TIME
LIMIT · ENCRYPTION
Yes · None · Open
(portal-gated)

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	5/10	72 Mbps , does not meet FCC 100 Mbps benchmark
Login Friction	5/10	Requires iChangi app download OR passport scan at kiosk
Stability	7.5/10	Reliable and well-maintained; class-leading IT infrastructure
Security	5.5/10	Marginally better posture; some network segmentation reported
Time-to-Connect	5/10	3–5 min due to app or passport scan requirement

#5 🇺🇸 Los Angeles International, LA, USA

STRESS SCORE

48/100

PROVIDER
Boingo WirelessFREE ACCESS · TIME
LIMIT · ENCRYPTION
Yes · None · Open
(WPA2 – unencrypted)

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	5.5/10	76 Mbps , speeds grew 540% since 2016 (Ookla 2024)
Login Friction	5.5/10	Email portal; ad injection reported; inconsistent across 9 terminals
Stability	5.5/10	Significant speed variation across terminals and peak periods
Security	4/10	Open unencrypted Boingo network; same evil-twin risk as other US airports
Time-to-Connect	5.5/10	~2–3 min; ad loading slows portal on some devices

Crew Verdict

LAX has improved significantly in speed but multi-terminal inconsistency remains a pain point. Crew moving between international and domestic terminals can experience very different WiFi quality on the same layover.

#6 Dubai International , Dubai, UAE

STRESS SCORE

53.8/100

PROVIDER
du (Emirates Telecom) / BoingoFREE ACCESS · TIME
LIMIT · ENCRYPTION
60 min only · 60 min
free, then AED 19.95/hr
(~\$5.40 USD) · Open
public network

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	4/10	55 Mbps , ~45–76 Mbps; DXB publishes no official speed data
Login Friction	2.5/10	60-min free cap, then paid. Re-login required every hour , disruptive for long layovers
Stability	7.5/10	Network quality is good; friction is the time limit, not the network itself
Security	4/10	Open network; UAE digital surveillance context adds a layer of privacy concern
Time-to-Connect	7/10	~2 min initially; mandatory re-login cycle compounds over a long layover

#7 Frankfurt Airport , Frankfurt, Germany

STRESS SCORE

54.5 /100

PROVIDER
Fraport AG / T-SystemsFREE ACCESS · TIME
LIMIT · ENCRYPTION
30 min free · 30 min
free, then paid · Open
(GDPR-compliant data
logging)

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	3.5/10	48 Mbps , no European airports met FCC benchmark (Ookla Q1 2025)
Login Friction	4.5/10	Portal requires flight number; some ads; 30 min free then paid tier
Stability	6/10	Reasonable for large European hub; degrades at peak transit windows
Security	4.5/10	Open network; GDPR context means enhanced data-handling practices
Time-to-Connect	4.5/10	~3–4 min due to flight-number entry; paid tier requires credit card

#8



London Heathrow , London, UK

STRESS SCORE

62.5/100

PROVIDER
Boingo Wireless / BTFREE ACCESS · TIME
LIMIT · ENCRYPTION
Yes · 4 hours (then
reconnect) · Open
(WPA – unencrypted)

DIMENSION	SCORE	EVIDENCE & NOTES
Speed	1.5/10	12 Mbps , 10–15 Mbps confirmed across multiple reports 2024–2025
Login Friction	6.5/10	Free, email-only login; session expires after 4 hours requiring reconnection
Stability	3/10	Drops to 5–8 Mbps during morning rush. Infrastructure has not kept pace with volume
Security	3.5/10	Open unencrypted. Sept 2025 cyberattack underscores poor digital security posture
Time-to-Connect	4.5/10	~4–5 min; slow portal load due to congested network

SECTION 5

Three Systemic Failures Across All 8 Airports

The airport-by-airport findings reveal patterns that transcend any single airport's infrastructure choices. Three failures recur universally, and each carries specific implications for airline crew that go beyond the experience of a typical passenger.

1. No airport offers an encrypted public WiFi network

Every airport in this study broadcasts its free WiFi on an open, unencrypted network. This is not a minor technical detail. It means any device connected to airport WiFi is potentially visible to every other user on the same network. For crew accessing airline scheduling systems, crew management apps, and personal banking during layovers, the risk is concrete and well-documented.

Evil twin attacks

Hackers broadcast an SSID identical to the legitimate airport network. A crew device connects automatically and all traffic routes through the attacker's hardware, invisible to the user.

Packet sniffing

On unencrypted networks, tools available for under \$500 can capture and read unencrypted traffic, including login credentials for apps that do not use HTTPS. Airline scheduling apps vary in their HTTPS implementation.

Captive portal spoofing

Fake login pages mimic the airport portal to harvest email addresses and passwords. In 2024, an Australian case saw dozens of travellers' credentials stolen mid-flight and at the airport, using precisely this method.

2. The speed gap between best and worst is 13×

JFK delivers 151.6 Mbps. Heathrow delivers 12 Mbps. Both airports serve millions of international passengers annually and are major crew layover hubs. The gap is not incidental, it reflects a systemic difference in WiFi infrastructure investment. The FCC's 100 Mbps benchmark for high-speed internet is met by only three airports in this study: JFK, Toronto Pearson, and Seoul Incheon (borderline). The majority of major European and Middle Eastern airports fail this threshold on public WiFi.

For crew, the consequences are operational, not merely inconvenient. At 12 Mbps, loading a roster sync, running WhatsApp voice, and keeping a mapping app active simultaneously creates real contention. At 151 Mbps, the same stack runs without friction.

3. Time limits are a crew-specific problem

Standard passenger WiFi time limits, 60 minutes at DXB, 4 hours at LHR, 30 minutes free at FRA, are calibrated for leisure travelers on short transits. They are fundamentally incompatible with crew layover patterns. **Crew layovers regularly run from 4 to 20+ hours.** Re-authentication mid-layover is not an inconvenience; it is a workflow disruption that can cause missed notifications, failed roster syncs, and dropped coordination threads.

In Dubai's case, the AED 19.95/hour paid tier creates a direct financial cost for crew requiring connectivity throughout a long layover, a recurring expense that compounds across a full roster of international duties.

SECTION 6

Public Airport WiFi vs. Holafly eSIM Plans

Airport WiFi was designed for passengers, not for people whose job requires reliable, secure, always-on connectivity across dozens of airports annually. The comparison below maps the real-world gap between what airport WiFi delivers and what crew connectivity actually requires.

FACTOR	AIRPORT PUBLIC WIFI	HOLAFLY eSIM PLANS
Speed Consistency	Highly variable , 12 to 151 Mbps across airports in this study	Consistent 4G/5G on local networks; independent of airport infrastructure
Login Friction	Captive portals, time limits, re-authentication, every airport, every layover	Zero portal , connected before landing, no setup required
Security	Open, unencrypted public networks on every airport in this study, zero exceptions	Encrypted cellular connection; no shared network exposure
Time-to-Connect	1–5 minutes per airport; process resets at each new destination	Already connected on landing; no action required
Availability	Inside the terminal only; gaps at remote gates and stands	Continuous coverage in 160+ countries, in terminal and beyond
Data for Work Apps	At risk of throttling, portal timeout, and peak-hour congestion	Dedicated mobile data , not shared with thousands of other passengers
Privacy Risk	Evil twin attacks, packet sniffing, captive portal data harvesting	Cellular , not exposed to airport network threats

The case in one sentence

Airport WiFi is optimised for a traveler who needs 45 minutes of connectivity before a flight. Crew need it for 20 hours, at 3 AM, without re-authentication, without security risk, and without gaps between the terminal and the hotel two miles away.

DATA SOURCES

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About this report

The Airport WiFi Stress Index was produced by Holafly's research team. All data is sourced from publicly available benchmarks and independent research , no airport data was self-reported.
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