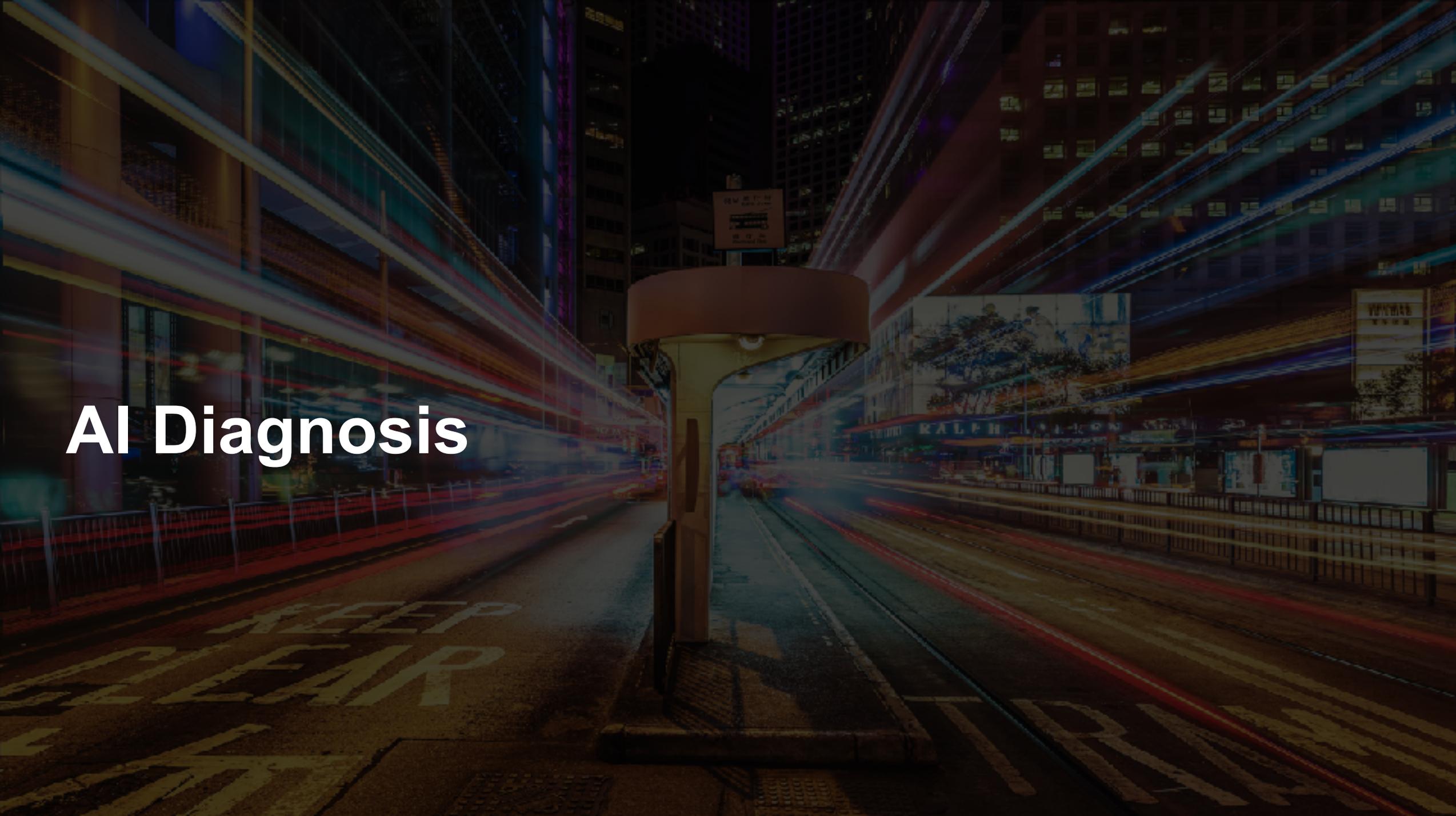
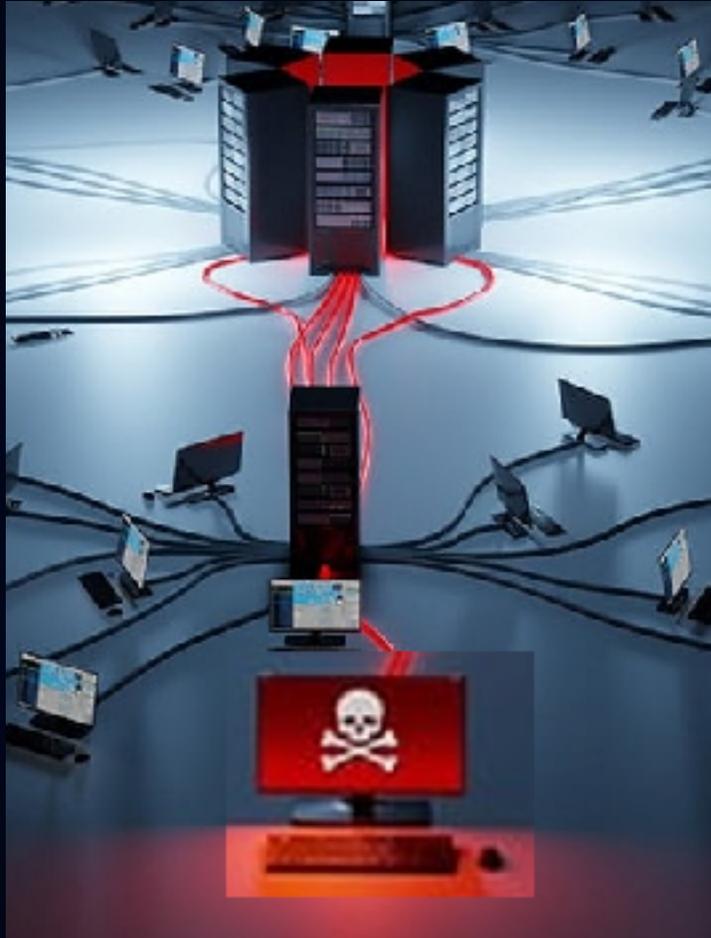


AI Diagnosis

A long-exposure photograph of a city street at night. The image is characterized by vibrant, multi-colored light trails from moving vehicles, creating a sense of motion and energy. Tall buildings line the street, their windows and facades illuminated with various colors, including blue, purple, and yellow. In the center of the frame, a white, cylindrical structure, possibly a bus stop or a utility kiosk, stands prominently. The overall atmosphere is futuristic and dynamic. The text "AI Diagnosis" is overlaid in a clean, white, sans-serif font on the left side of the image.

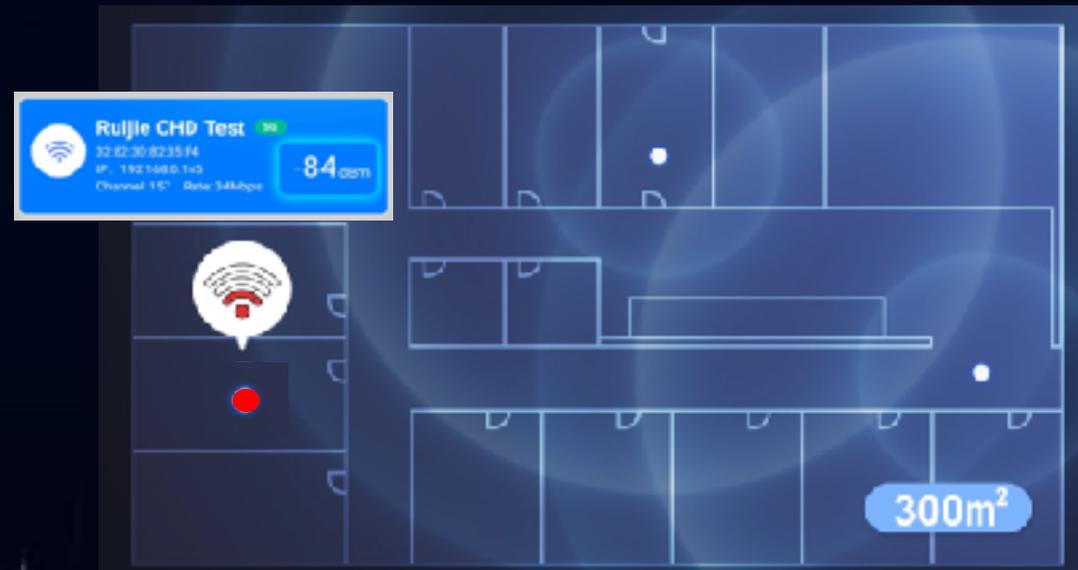
Difficult to find out Network Problems



End Device Infected
Virus



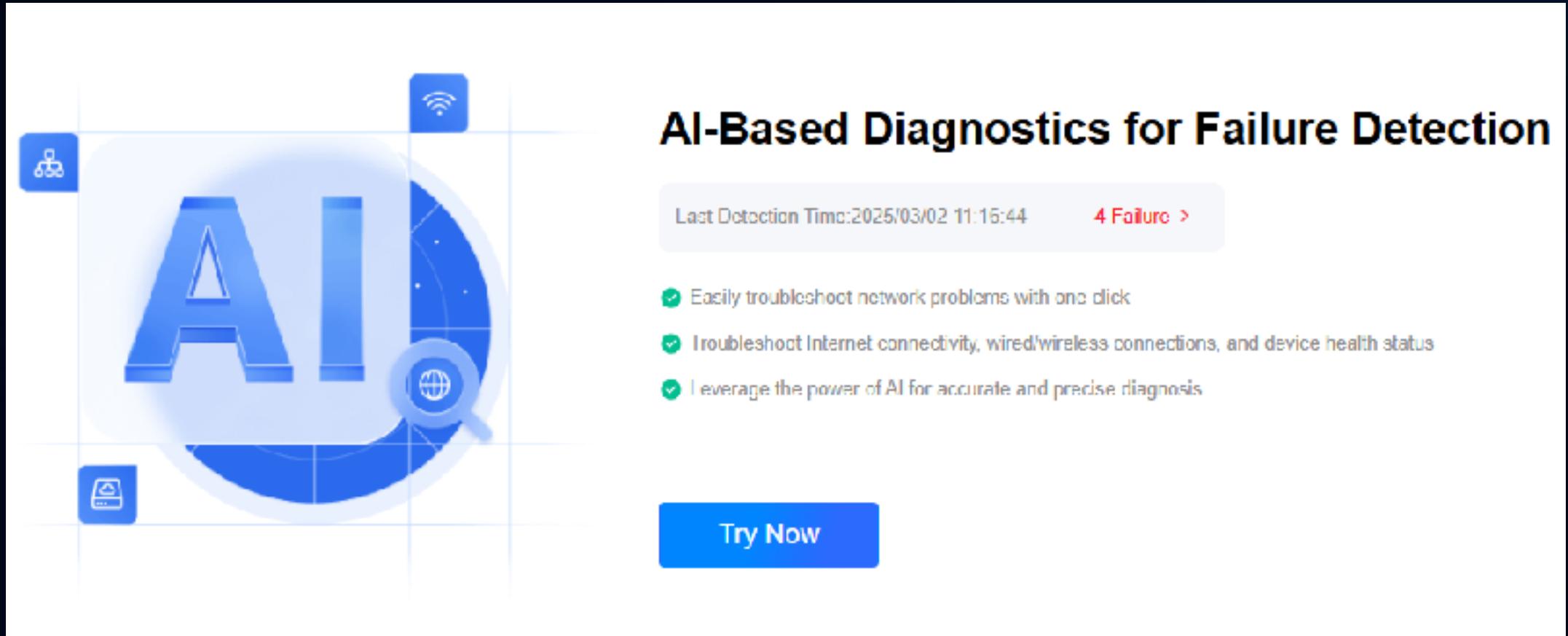
Bad User
Experience



Access Point
Performance Drop



AI Identify Network Issue by Just One-kick



The image shows a user interface for an AI-based network diagnostic tool. On the left, there is a large blue circular graphic with the letters 'AI' in the center, surrounded by icons for a network, a Wi-Fi signal, a globe, and a server. To the right of this graphic, the text 'AI-Based Diagnostics for Failure Detection' is displayed in a bold, black font. Below this title, a light gray box contains the text 'Last Detection Time: 2025/03/02 11:16:44' and '4 Failure >'. Underneath, there are three bullet points, each with a green checkmark icon, describing the tool's capabilities: 'Easily troubleshoot network problems with one click', 'Troubleshoot Internet connectivity, wired/wireless connections, and device health status', and 'Leverage the power of AI for accurate and precise diagnosis'. At the bottom of the interface is a prominent blue button with the text 'Try Now'.

AI-Based Diagnostics for Failure Detection

Last Detection Time: 2025/03/02 11:16:44 4 Failure >

- ✓ Easily troubleshoot network problems with one click
- ✓ Troubleshoot Internet connectivity, wired/wireless connections, and device health status
- ✓ Leverage the power of AI for accurate and precise diagnosis

[Try Now](#)



**Discover Network
Fault**



**Discover Bad
User Experience**



AI Identify Network Issue by Just One-kick

Diagnosing
Time left: 0:10

Category	Issue	Status
Egress	Session limit exceeded	Internet freezes
	WAN Link Abnormally	✓
	DNS Name Resolution	✓
	Egress Rate Limit Exceeded	✓
	Improper IP Session Limit	✓
Wired	Switch link	Internet freezes
	Minimal phone configuration	✓
	Optical link abnormality	✓
	DHCP Address Pool Not Assigned to VLAN	✓
	DHCP Address Pool Running Out	✓
	VLAN Not Configured on Switch	✓
	DHCP Snooping Trusted Port Mismatch	✓
	Low IP rate links	✓
	Switching loop	✓
	IP address conflict	✓
Multiple DHCP servers	✓	
Wireless	Capacity and Interference	Internet freezes
	AP Mesh offline	↕
	Port naming experience	✓
	Insufficient Coverage	✓
	Association failure	✓
Device Health	Low Power	Internet freezes
	Optical terminal offline	✓
	Excessive Client Load	✓
	Frequent Reboot/Offline	✓



End-to-end
Network Scan



Around 1 Minute
Required



Solution of the
Issue Provided



AI Identify Network Issue by Just One-kick - Discover Network Fault

Internet Link
Abnormal

Optical Link
Abnormality

DHCP Address
Pool Running Out

Frequent
Reboot/Offline

AP Mesh
Offline

Switch Link
Abnormal

Low Power

More...

The screenshot displays the 'AI Diagnostics Results' for 'Ethernet cable errors'. It shows a summary of the detected issues and a detailed view of the specific problem.

AI Diagnostics Results

The system detected **2** Ethernet cable errors issues on this network.

The system detected that in the last 16 days, there were **2** Ethernet cable errors, resulting in slow or freezing Internet connection.

Issue Detected

The cable connection between Switch and Switch may be abnormal, which may lead to freezing Internet connection, or failure to reach

Device Info

Diagram showing two Ruijie switches connected via Port 1 and Gi2/22.

Ruijie (SN: NAEKD455H0007) — Port 1 — Gi2/22 — Ruijie (SN: NAEKD455H0002)

Name	Ruijie
Type	Switch
Model	ES210GS-P
MAC	00:D3:F8:04:55:72

Phenomenon **Port 1** The port rate is 10 Mbps, which is lower than the maximum speed 1000 Mbps. As a result, the maximum measured speed is 10 Mbps.

Issue Location

Solutions

Properly connect the Ethernet cable or use a new RJ45 connector. Replace the Ethernet cable if it is physically damaged.

Solution Provided

Sample of Ethernet Cable Errors Detected by AI Diagnostics

AI Identify Network Issue by Just One-kick - Discover Bad User Experience

Egress Rate
Limit Exceeded

Low IP rate
limits

Capacity and
Interference

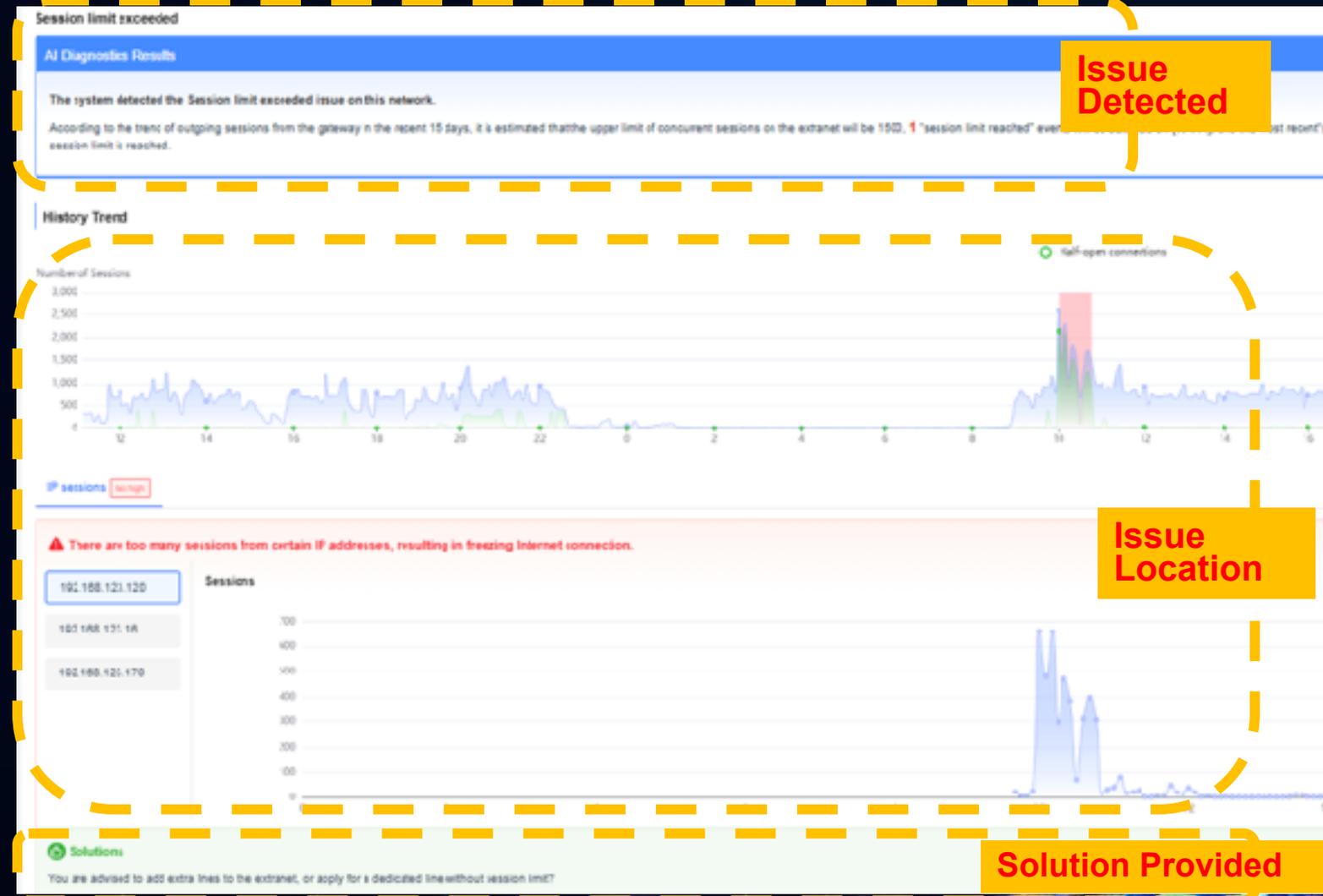
Poor roaming
experience

Insufficient
Coverage

Association
Failure

Excessive Client
Load

More...



Sample of Session Limit Exceeded Detected by AI Diagnostics



AI Powered Network HawkEye

Pain Points when Diagnosing Wireless Problems

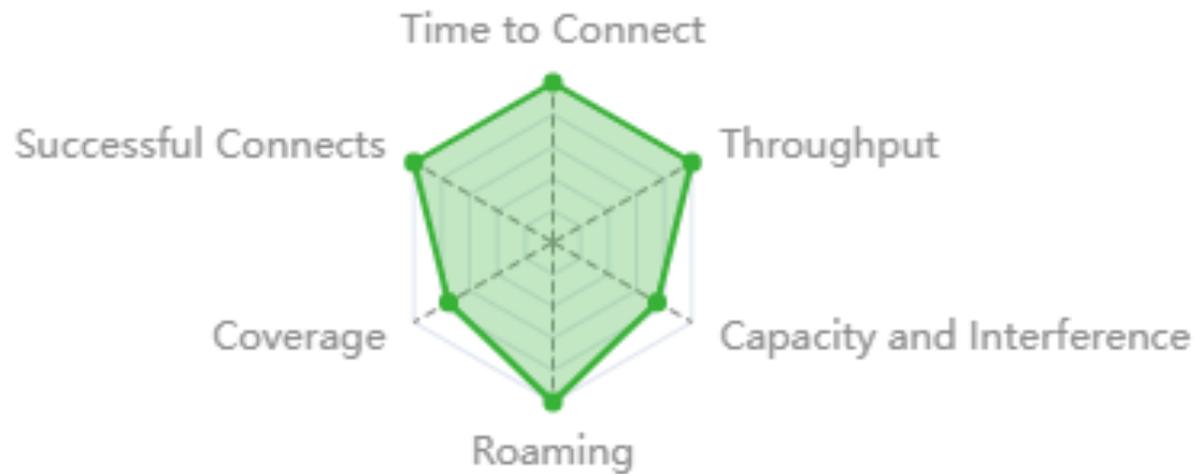
- Have difficulties locating specific wireless problems
- Difficult to trace historical data in network maintenance
- Cannot identify the root cause of Wireless issue even hundred tests has been made



AI Powered Network HawkEye is the Solution



Network HawkEye Provide Insight in Six Dimensions - Overview



- Time to Connect 100%
- Successful Connects 100%
- Coverage 75%
- Roaming 100%
- Capacity and Interference 75%
- Throughput 100%



High Level Idea of Whole WiFi Network Performance

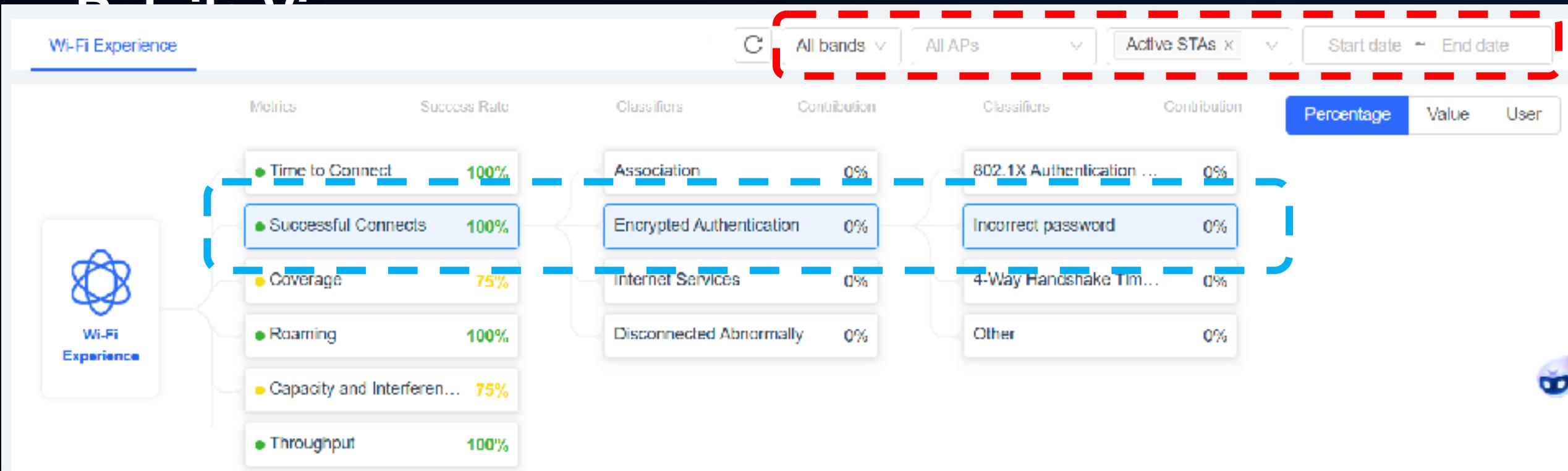


Easy to Understand



Network HawkEye Provide Insight in Six Dimensions –

Root Cause Analysis



Layer by Layer
Analysis the Root
Cause of Bad Wi-Fi
Network Performance



By Specific End
Device Analysis



By Specific Access
Point Analysis



By Frequency
Analysis



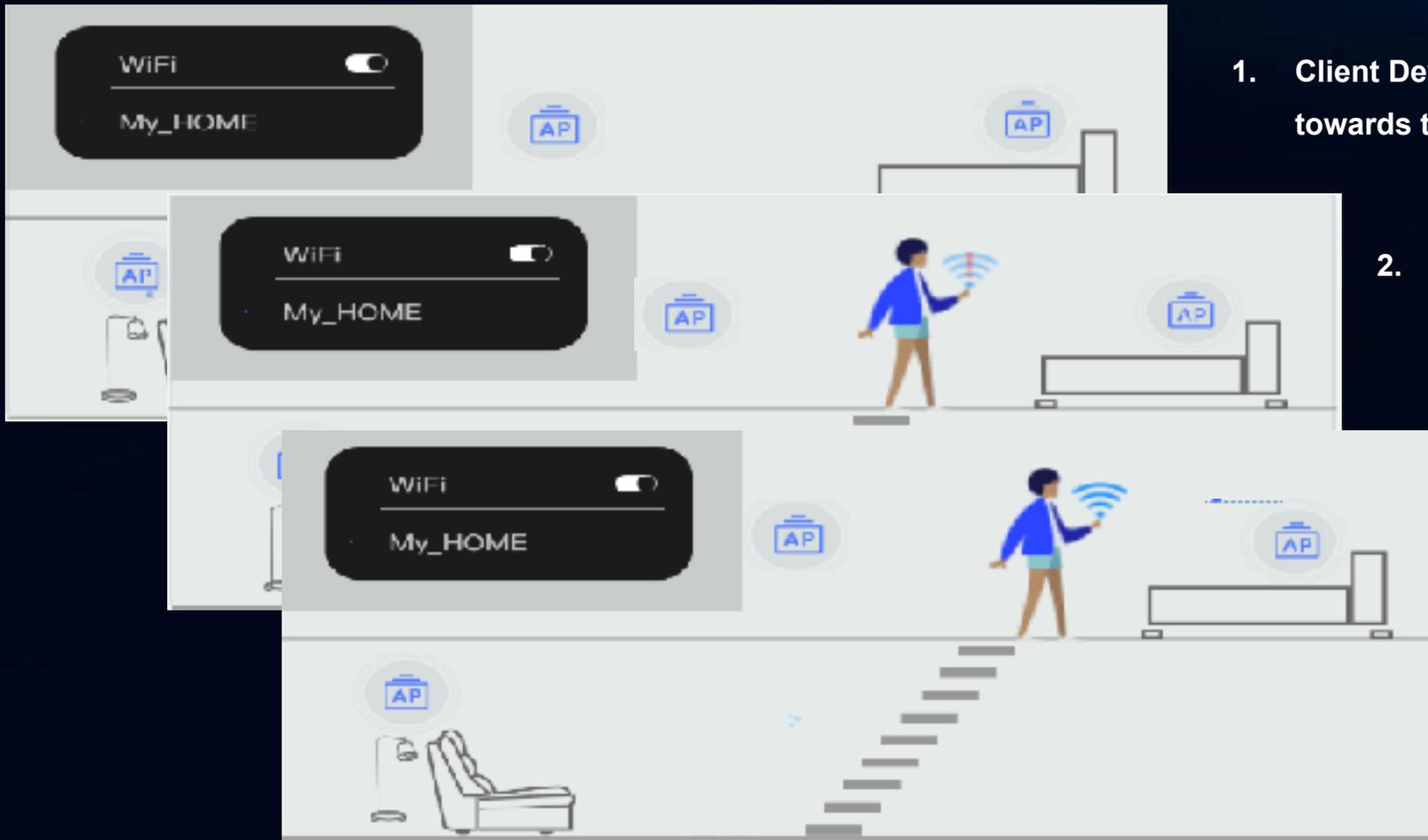
By Range of
Date Analysis



AI Roaming

A long-exposure photograph of a city street at night. The image is characterized by vibrant, multi-colored light trails from moving vehicles, creating a sense of motion and energy. Tall buildings line both sides of the street, their windows and facades illuminated with various colors, including blue, purple, and yellow. In the center foreground, a utility pole with a circular top stands prominently. The ground is dark, with some white markings and a large 'KEEP CLEAR' sign painted on the pavement. The overall atmosphere is futuristic and dynamic.

Traffic Unstable During Roaming



1. Client Device Connect to the AP and move towards to other AP

2. Client Device search nearby AP to explore if it is suitable for roaming. This process need time for Client Device and AP handshake

3. After Client Device and AP handshake, Client Device connect to the AP. Roaming completed

Due to above Process 2, Roaming will involve delay!



Same Roaming Settings for Different Terminals is not a Best Practice



Different brand and different model of Wireless terminal has different Roaming Policy

Same Roaming Settings from different Access Points cannot 100% match different Wireless Terminal's needs and Roaming Performance cannot become the best



Different Roaming Strategy for Different Terminals by AI

Seamless Roaming with AI: No More Delays

With AI guidance, clients can roam seamlessly in advance for uninterrupted connectivity.

Number of Optimized Roams

80

Number of AI Profiles

265

View AI Profiles Today 100

Number of AirRoaming Clients

26

RSSI Before Roaming

Improving 6 dBm

-70dBm → -64dBm



AI Roaming Logs >

2025-03-01 14:47:39 Mi-10 was guided by AI to roam in advance, at 3 dBm above the RSSI threshold.

2025-03-01 14:47:28 Mi-10 was guided by AI to roam in advance, at 5 dBm above the RSSI threshold.

2025-03-01 14:31:33 PHONE 14 PRO MAX was guided by AI to roam in advance, at 4 dBm above the RSSI threshold.

AI-Tailored Roaming Optimization for Your Devices

The AI roaming feature utilizes AI reinforcement learning algorithms to dynamically identify access point (AP) placement locations, client brands, and operating systems, and generates personalized AI profiles to ensure seamless client roaming.

AP Ranking

View all APs >

AP	Number of Roams	Number of AI Profiles	Roaming RSSI
11F-2 Station	186	30	Improving 6 dBm
11F-2 Observation Room	181	28	Improving 5 dBm
11F Lab	169	25	Improving 7 dBm
11F-10 Station	145	25	Improving 7 dBm

Client Ranking

View all clients >

Vendor	Number of Clients	Number of Roams	Number of AI Profiles	Roaming Experience
1 HONOR	8	04	46	86% Good
2 Xiaomi	12	179	42	62% Fair
3 Intel	41	540	42	59% Fair
4 HUAWEI	15	239	39	67% Fair

Different Roaming Strategy based on different End Device

Profile which is gathered from Machine Learning



AI Wi-Fi Optimization

A long-exposure photograph of a city street at night. The image shows light trails from traffic, including a train or tram on the left and cars on the right. Buildings are illuminated with various lights, and a bus stop shelter is visible in the foreground. The text "AI Wi-Fi Optimization" is overlaid on the left side of the image.

Not Only Avoid Interference but Better Wireless Resource Assignment Powered by AI



Other than traditional scheduled channel re-arrangement, AI Wi-Fi Optimization can support:

1. **Dynamic Optimization** – Automatically trigger optimization when required during non-peak hour
2. **Critical AP Auto-Identification** and better resource assigned to them



AI Wi-Fi Optimization – Dynamic Optimization

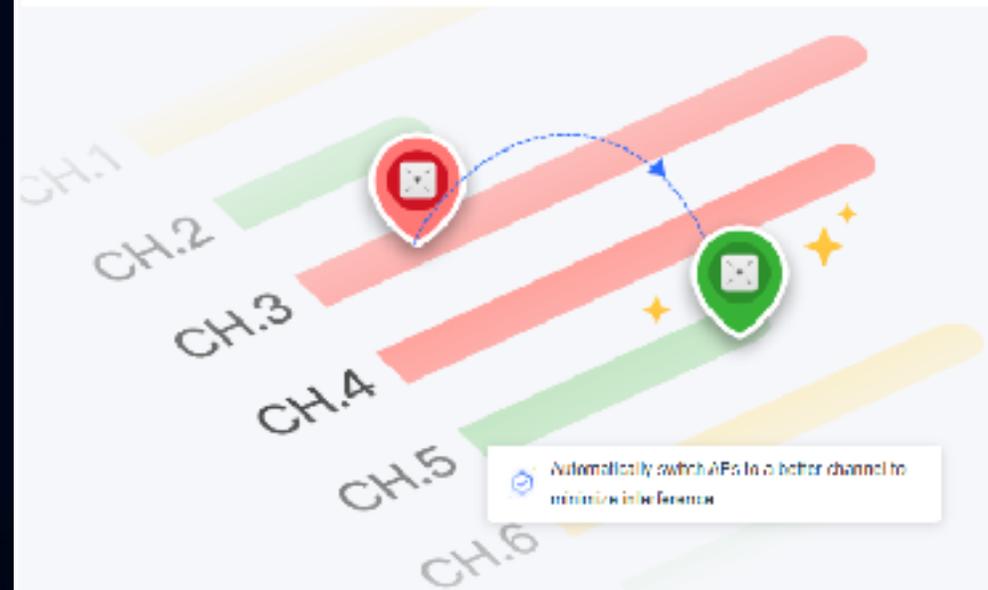
Dynamic Roaming Optimization

- **Intelligent Identification** : Intelligently identify issues such as sticky clients, ping-pong roaming, and coverage holes based on historical data.
- **AI powered Optimization** : Achieve a balance between roaming and coverage through machine learning to ensure an optimal user experience.
- **Configuration Delivery** : Deliver optimization configurations during off peak hours to minimize potential disruptions.



Dynamic Channel Optimization

- **Intelligent Identification** : Periodically detect issues like channel congestion and significant external interference based on historical data.
- **AI powered Optimization** : Switch APs to a better channel in the event of severe incidents and gradually optimize the network through machine learning.
- **Configuration Delivery** : Deliver optimization configurations during off peak hours to minimize potential disruptions.



AI Wi-Fi Optimization – AP Priority Auto-Identification

Drag and drop the APs with priority changes into the corresponding category.

The interface displays three priority categories for APs:

- High Priority:** High priority APs will receive the best wireless resources to minimize interference. APs are listed with their name (e.g., Guest_RM1), SN, and capacity/load. A callout box states: "The AP has a high number of associated users in the past 7 days." and "The AP has high traffic or high channel utilization in the past 7 days."
- Medium Priority:** Medium priority APs will receive the default wireless resources. APs are listed with their name (e.g., AP4), SN, and load. A callout box states: "The AP has a low number of associated users in the past 7 days."
- Low Priority:** Wireless resources for low priority APs will be adjusted to meet the needs of high priority and medium priority APs. APs are listed with their name (e.g., AP2), SN, and capacity/load. Callout boxes state: "The AP has low traffic or low channel utilization in the past 7 days." and "The AP has a low number of associated users in the past 7 days."

Each category includes a search bar at the top and a "Drag and drop APs here" instruction at the bottom.



Auto Identify the Priority of AP based on pass 7 days data



Customer can based on their own decision to re-define the AP priority by simple drag and drop



The Higher the Critical Level, the More the Wireless Resource (e.g. Channel Width) will be assigned





Supplementary to AI

Human Being Supplement AI Limitation

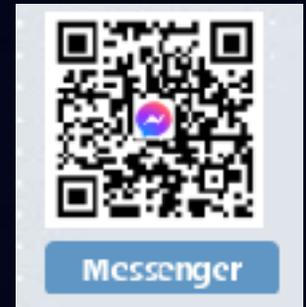


Ruijie - AI HKPC

There are tremendous functions on Ruijie Cloud. It may be difficult to identify which functions should be used. Especially, for the time when there is fault issue, there is no enough time for IT Team to Study Ruijie Cloud



No worry! Ruijie Intelligent Technical Assistant (RITA) is the supporting tool for all of the people (even it is not yet Ruijie customer) to seek technical advice. Based on customer agreement, RITA can support remote checking and config on your network.



More Than 400 Hong Kong School Are Using Ruijie Solution



Too Much and Cannot Include all here!!!

