

**STIN2104 EXPERT SYSTEM & KNOWLEDGE ENGINEERING**

**Semester I Session 2022/2023 (A221)**

**LATEST RULES FOR UUM WIFI TROUBLESHOOTING**

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**1.0 LATEST RULES**

R1:

IF device far from router

OR other devices has bluetooth connection

THEN wifi speed is affected

R2:

IF device > 2

AND other devices has bluetooth connection

OR access point reach the limit

THEN wifi speed is slow

R3:

IF furniture material = metal

AND devices inside the room

THEN wifi signal will be bounded

R4:

IF Disconnect frequency > 3

AND electricity is not stable

OR wifi speed is slow

OR access point reach the limit

OR wifi speed is affected

OR wifi signal will be bounded

THEN hard to connect Wifi

R5:

IF Router have many devices connected

AND devices used in same time

OR wifi speed is not stable

OR access point > 1 in a place

THEN access point reach the limit

R6:

IF WIfi signal will be bounded

THEN change furniture → wood

R7:

IF access point reach the limit

AND wifi speed is slow

THEN change access point

R8:

IF hard to connect Wifi

THEN check IP address

R9:

IF device is old

THEN network card not functioning well

R10:

IF NOT network card not functioning well

OR change furniture → wood

OR change access point

OR check IP address

THEN case closed

R11:

IF network card not functioning well

AND NOT change furniture → wood

OR NOT change access point

OR NOT check IP address

OR check wifi card inside device

THEN contact vendor

**EXTRA INFORMATION: ROUTE OF THE RULES**

MAIN PAGE:

IF user clicks MORE ABOUT US → INTRODUCTION PAGE

IF user clicks YES → R1Q1

IF user clicks NO → R11 (CONCLUSION)

INTRODUCTION:

IF user clicks YES → R1Q1

IF user clicks NO → R11 (CONCLUSION)

R1Q1: device far from router

IF user clicks YES → R1Q2

IF user clicks NO → RESULT → PRESS NEXT → R4Q1

IF user clicks WHY

→ Because the radio wave can’t reachable

R1Q2: other devices has Bluetooth connection

IF user clicks YES → RESULT → PRESS NEXT → R2Q1

IF user clicks NO → R9

IF user clicks WHY

→ Because the radio wave will be interrupted by bluetooth’s radio wave

R2Q1: device is more than 2

IF user clicks YES → R2Q2

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ Because the access point can’t afford the total devices that the user owns

R2Q2: other devices has Bluetooth connection

IF user clicks YES → RESULT → PRESS NEXT → R3Q1

IF user clicks NO → R2Q3

IF user clicks WHY

→ Because the radio wave will be interrupted by bluetooth’s radio wave

R2Q3: access point reach the limit

IF user clicks YES → RESULT → PRESS NEXT → R7Q1

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ Because the access point can’t afford the total devices that the user owns

R3Q1: device the room

IF user clicks YES → R3Q2

IF user clicks NO → R5Q1

IF user clicks WHY

→ Because the wall will disturb the radio wave

R3Q2: furniture is made by metal

IF user clicks YES → RESULT → PRESS NEXT → R6

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ The radio wave could unreachable

R4Q1: disconnect frequency more than 3

IF user clicks YES → R4Q2

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ Because the higher the disconnect frequency, the higher the problem occurs.

R4Q2: electricity is not stable

IF user clicks YES → RESULT → PRESS NEXT R8

IF user clicks NO → R4Q3

IF user clicks WHY

→ The electricity will cause the access point to stay unstable.

R4Q3: wifi speed is affected

IF user clicks YES → RESULT → PRESS NEXT R8

IF user clicks NO → R4Q4

IF user clicks WHY

→ Maybe will hardware problem/radio wave problem

R4Q4: wifi speed is slow

IF user clicks YES → RESULT → PRESS NEXT R8

IF user clicks NO → R4Q5

IF user clicks WHY

→ Maybe will hardware problem/radio wave problem

R4Q5: access point reach the limit

IF user clicks YES → RESULT → PRESS NEXT R8

IF user clicks NO → R4Q6

IF user clicks WHY

→ Unable to get the connection from the access point as the quota was full.

R4Q6: wifi signal will be bounded

IF user clicks YES → RESULT → PRESS NEXT R8

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ The radio wave could be unreachable.

R5Q1: router have many device connected

IF user clicks YES → R5Q2

IF user clicks NO → R5Q3

IF user clicks WHY

→ Because the access point can’t afford the total devices that the user owns

R5Q2: access point more than 1

IF user clicks YES → RESULT → PRESS NEXT → R7Q1

IF user clicks NO → R5Q3

IF user clicks WHY

→ The device will be connect to another access point (that as fully connected)

R5Q3: device used in same time

IF user clicks YES → RESULT → PRESS NEXT → R7Q1

IF user clicks NO → R5Q4

IF user clicks WHY

→ Unable to get the connection from the access point as the quota had full

R5Q4: wifi speed is not stable

IF user clicks YES → RESULT → PRESS NEXT → R7Q1

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ Limited slot of access point will affect the download/upload speed

R6: wifi speed has been bounded

IF user clicks YES → PRESS NEXT → R10

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ Because the radio wave will be interrupted by bluetooth’s radio wave

IF user clicks HOW

→ As the device is inside the room and the furniture is made of metal, it will cause the Wifi signal to be bounded. Thus the solution that we provide is to replace the furniture with wood.\n\n"

R7Q1: access point has reached the limit

IF user clicks YES → R7Q2

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→Unable to get the connection from the access point as the quota had full

R7Q2: wifi speed is slow

IF user clicks YES → RESULT → PRESS NEXT → R10

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ Limited slot of access point will affect the download/upload speed

IF user clicks HOW

→ We can conclude the result from the questions that we asked previously, which are: --Access Point reach the limit, and

--Wifi Speed is slow,

thus we come out with a solution which you may change the access point

R8: wifi is hard to connect

IF user clicks YES → RESULT → PRESS NEXT → R10

IF user clicks NO → R11 (CONCLUSION)

IF user clicks WHY

→ Download/upload speed had been affected by the situation that had been asked by the questions

IF user clicks HOW

→ We can conclude the result from the questions that we asked previously, which is: <<Hard to connect Wifi>>, thus we come out with a solution which you may change the IP address by:

--1. Open command Prompt

--2. Type --> ipconfig/renew

--3. Done

R9: device is old

IF user clicks YES → RESULT → PRESS NEXT → R10

IF user clicks NO → R11 (CONCLUSION)

IF user clicks HOW

→ Since your device is old, then the hardware may not be compatible with the current wifi technology, therefore we suggest you change to a new device. Press <<NEXT>> to continue

IF user clicks WHY

→ Device old will hard get the connection as the hardware hard to process the performance

R10: Case closed

IF user clicks YES → EXIT

IF user clicks NO → R11 (CONCLUSION)

R11: contact Vendor

IF user clicks EXIT → EXIT

IF user clicks HOW

→ As our expert system can't help you out, therefore please get the assistance from a human expert, Press <<EXIT>> to end the session. Thank you for using our system.