Q: How To Enable Frequency Selection and Forbid RB

odi Commands:

odi -n duapp0 enable-ulrb-forbidden 0

Disable frequency selection switch

odi -n duapp0 enable-ulrb-forbidden 1

Enable frequency selection switch

odi -n duapp0 enable-ulrb-forbidden

Query frequency selection switch Status

odi -n duapp0 show-forbidden-map

Query how many RBs forbidden

Example:

Enable Frequency selection and forbid RBs Starts 0 to 60 at TTI 18：

odi -n duapp0 set-forbidden-map 18 0 60 1

18：Stands for TTI，Range (-1~19)，-1 indicates all TTIs of Uplink configuration

0：Indicates start RBs of forbidden, range (0~272)

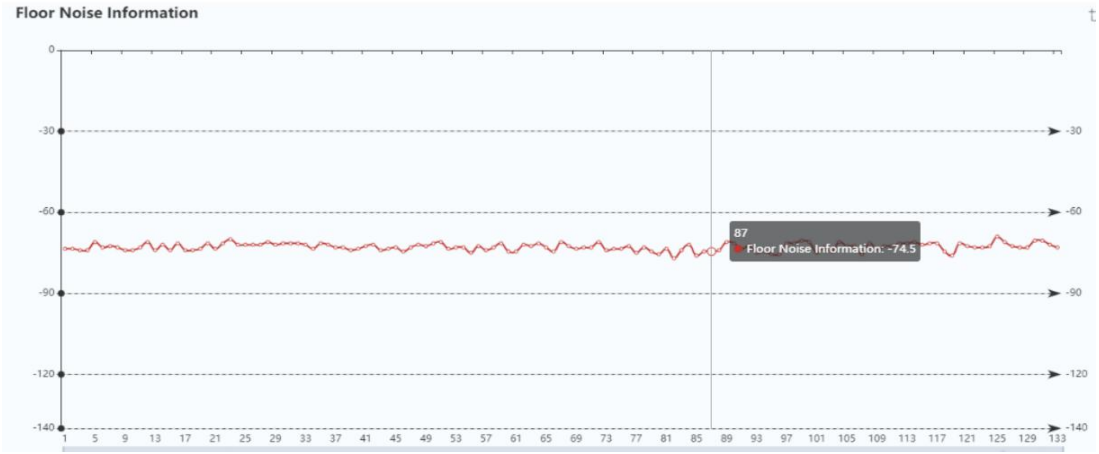
60：Indicates end RBs of forbidden, range (0~272)

1：Indicates TTI and forbidden RBs effective or not, range（1：positive，0：negative）

Case 1: Add Interference for front 10M bandwidth

Step 1: Target Node A: Used frequency range 3625Mhz~3675Mhz, 7D2U.

Floor Noise and UL throughput without interference of target node A:

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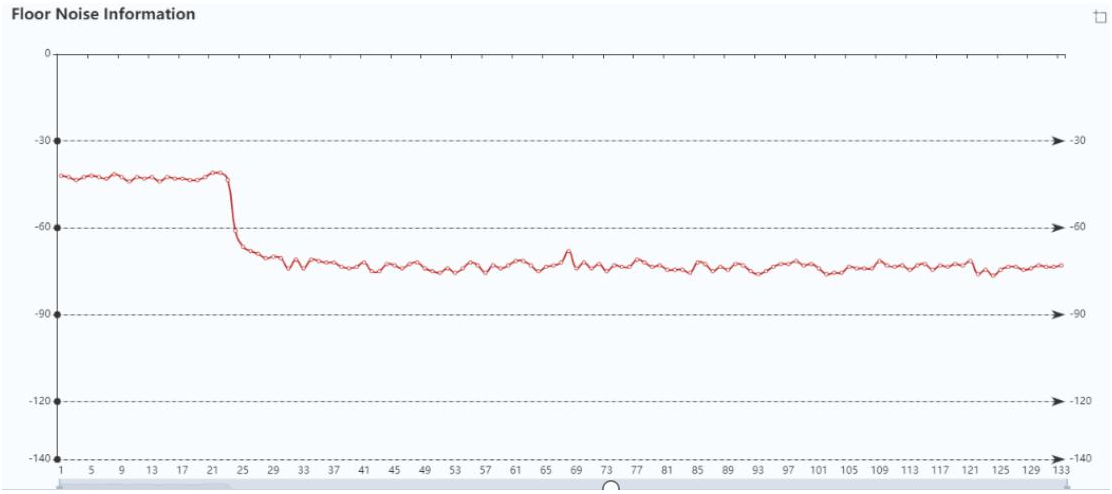
Displaying MAC throughput from the oldest second to last full second
Histogram size is: 301
last s:  DL tput (Mbps[MAC/RLC]: RBs(sliceO~3)/Times: Ratio: AvgMcs: AvgLayers: UdpSdu/AllSdu)   UL tput (Mbps[MAC/RLC/PADDING]: RBs(sliceO~3)/Times:
ers)
20:      4.4147/0.4687 (1680(1680/0/0/0)/443: 0.7895% :26.3595: 4.0000: 0/1137)  76.8736/76.5177/0.0000 (48524(48524/0/0/0)/401: 28.0000: 2.0000)
19:      4.4672/0.3974 (1764(1764/0/0/0)/462: 0.8289% :26.3424: 4.0000: 0/990)   76.6768/76.3230/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
18:      4.7062/0.4215 (1796(1796/0/0/0)/455: 0.8440% :26.1158: 4.0000: 0/1035)  77.2672/76.7015/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
17:      4.7732/0.4040 (1812(1812/0/0/0)/458: 0.8515% :26.0000: 4.0000: 0/995)   76.8736/76.7175/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
16:      4.3858/0.3794 (1660(1660/0/0/0)/436: 0.7801% :26.0000: 4.0000: 0/966)   77.0540/76.5187/0.0000 (48524(48524/0/0/0)/401: 28.0000: 2.0000)
15:      4.1580/0.3563 (1584(1584/0/0/0)/430: 0.7444% :26.3838: 4.0000: 0/909)   76.8736/76.4872/0.0001 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
14:      4.6535/0.3614 (1808(1808/0/0/0)/471: 0.8496% :26.1128: 4.0000: 0/922)   77.0704/76.7167/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
13:      4.6184/0.3919 (1804(1804/0/0/0)/471: 0.8477% :26.1574: 4.0000: 0/975)   76.8736/76.5101/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
12:      4.4129/0.3822 (1668(1668/0/0/0)/437: 0.7838% :26.4005: 4.0000: 0/975)   76.6768/76.3153/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
11:      4.4437/0.3733 (1688(1688/0/0/0)/443: 0.7932% :26.2749: 4.0000: 0/947)   76.8736/76.5207/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
10:      4.7262/0.3889 (1816(1816/0/0/0)/465: 0.8534% :26.1079: 4.0000: 0/987)   76.8736/76.5107/0.0000 (48524(48524/0/0/0)/401: 28.0000: 2.0000)
9:       4.3690/0.3803 (1640(1640/0/0/0)/438: 0.7707% :26.6098: 4.0000: 0/965)   77.0704/76.7109/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
8:       4.8123/0.3791 (1804(1804/0/0/0)/454: 0.8477% :26.0000: 4.0000: 0/962)   77.2672/76.7011/0.0001 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
7:       4.5785/0.3809 (1780(1780/0/0/0)/455: 0.8365% :26.1146: 4.0000: 0/962)   77.0704/76.7494/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
6:       4.6118/0.3775 (1756(1756/0/0/0)/453: 0.8252% :26.0000: 4.0000: 0/963)   76.8736/76.6705/0.0000 (48512(48512/0/0/0)/401: 28.0000: 2.0000)
5:       4.5518/0.3763 (1740(1740/0/0/0)/456: 0.8177% :26.1264: 4.0000: 0/960)   76.8736/76.5109/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
4:       4.5745/0.3946 (1780(1780/0/0/0)/459: 0.8365% :26.5640: 4.0000: 0/1005)  76.6768/76.3257/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
3:       4.4611/0.3983 (1700(1700/0/0/0)/435: 0.7989% :26.0000: 4.0000: 0/1016)  76.4965/75.9614/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
2:       4.7410/0.3948 (1756(1756/0/0/0)/456: 0.8252% :26.9157: 4.0000: 0/1002)  76.8736/76.5083/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
1:       4.6020/0.4107 (1788(1788/0/0/0)/457: 0.8402% :26.2237: 4.0000: 0/1026)  76.8736/76.5178/0.0000 (48400(48400/0/0/0)/400: 28.0000: 2.0000)
Start Idx: 280   end Idx: 280
```

Step 2: Add Interference Source Node B: Used frequency 3585~3635Mhz, 3D1U, Frame Offset: 3ms

Floor Noise and UL throughput with interference of target node A:




```
Displaying MAC throughput from the oldest second to last full second
Histogram size is: 301
last s:  DL tput (Mbps[MAC/RLC]: RBs(slice0~3)/Times: Ratio: AvgMcs: AvgLayers: UdpSdu/AllSdu)   UL tput (Mbps[MAC/RLC/PADDING]: RBs(slice0~3)/Times: AvgMcs: A
ers)
20:     3.2174/0.2017 (1268(1268/0/0/0)/395: 0.5959% :27.2555: 4.0000: 0/511)   23.6239/23.5369/0.0000 (48312(47707/0/0/0)/400: 12.2668: 1.9875)
19:     2.9999/0.1988 (1104(1104/0/0/0)/365: 0.5188% :27.0761: 4.0000: 0/504)   24.0369/23.9022/0.0000 (48282(47481/0/0/0)/400: 12.5106: 1.9834)
18:     3.2983/0.1799 (1220(1220/0/0/0)/387: 0.5733% :27.3344: 4.0000: 0/459)   22.8988/22.7772/0.0000 (48292(47619/0/0/0)/400: 12.0535: 1.9861)
17:     3.3649/0.2069 (1188(1188/0/0/0)/377: 0.5583% :27.5421: 4.0000: 0/523)   23.4038/23.2727/0.0000 (48312(47698/0/0/0)/400: 12.0528: 1.9873)
16:     3.1758/0.1904 (1112(1112/0/0/0)/369: 0.5226% :28.0000: 4.0000: 0/482)   24.8831/24.7466/0.0000 (48263(47434/0/0/0)/400: 12.7680: 1.9828)
15:     3.4507/0.1980 (1252(1252/0/0/0)/401: 0.5883% :28.0000: 4.0000: 0/505)   23.0306/22.8475/0.0000 (48399(47582/0/0/0)/401: 11.8362: 1.9831)
14:     3.2410/0.1928 (1140(1140/0/0/0)/368: 0.5357% :28.0000: 4.0000: 0/487)   23.3625/23.2245/0.0000 (48291(47613/0/0/0)/400: 12.2411: 1.9860)
13:     3.3856/0.1819 (1192(1192/0/0/0)/389: 0.5602% :28.0000: 4.0000: 0/464)   22.8681/22.6818/0.0000 (48275(47425/0/0/0)/400: 11.9596: 1.9824)
12:     3.3429/0.1975 (1212(1212/0/0/0)/394: 0.5695% :27.5479: 4.0000: 0/497)   23.4550/23.3542/0.0000 (48265(47471/0/0/0)/400: 12.0259: 1.9835)
11:     3.2230/0.1838 (1176(1176/0/0/0)/379: 0.5526% :27.3435: 4.0000: 0/469)   23.4462/23.3431/0.0000 (48405(47675/0/0/0)/401: 12.1993: 1.9849)
10:     3.1296/0.2129 (1128(1128/0/0/0)/372: 0.5301% :27.0000: 4.0000: 0/538)   23.2192/23.0983/0.0000 (48278(47455/0/0/0)/400: 12.1488: 1.9830)
9:      3.2500/0.1839 (1164(1164/0/0/0)/379: 0.5470% :27.3540: 4.0000: 0/468)   22.8819/22.6894/0.0000 (48260(47507/0/0/0)/400: 11.8566: 1.9844)
8:      3.3565/0.2046 (1208(1208/0/0/0)/393: 0.5677% :27.6490: 4.0000: 0/522)   24.5492/24.4184/0.0000 (48273(47417/0/0/0)/400: 12.5031: 1.9823)
7:      3.1632/0.1913 (1148(1148/0/0/0)/368: 0.5395% :27.3206: 4.0000: 0/488)   25.0742/24.9306/0.0000 (48311(47696/0/0/0)/400: 12.8652: 1.9873)
6:      3.3020/0.1936 (1180(1180/0/0/0)/381: 0.5545% :27.0271: 4.0000: 0/494)   23.8382/23.7112/0.0000 (48296(47580/0/0/0)/400: 12.1540: 1.9852)
5:      3.3880/0.2296 (1244(1244/0/0/0)/395: 0.5846% :27.3248: 4.0000: 0/564)   25.9600/25.8171/0.0000 (48420(47714/0/0/0)/401: 12.8482: 1.9854)
4:      3.2033/0.2494 (1156(1156/0/0/0)/377: 0.5432% :27.6540: 4.0000: 0/523)   24.9942/24.8506/0.0000 (48269(47477/0/0/0)/400: 12.9118: 1.9836)
3:      3.4538/0.3438 (1268(1268/0/0/0)/407: 0.5959% :27.6782: 4.0000: 0/603)   23.6801/23.4972/0.0000 (48267(47436/0/0/0)/400: 12.1614: 1.9828)
2:      3.3936/0.4348 (1246(1246/0/0/0)/401: 0.5855% :27.3258: 4.0000: 0/782)   24.8604/24.7744/0.0000 (48273(47472/0/0/0)/400: 12.5129: 1.9834)
1:      3.1718/0.2957 (1164(1164/0/0/0)/381: 0.5470% :27.3436: 4.0000: 0/575)   24.7779/24.5955/0.0000 (48391(47574/0/0/0)/401: 12.7604: 1.9831)
Start Idx: 125   end Idx: 125
```

Step 3 :Enable Frequency selection and forbid RBs of front 10M bandwidth for target node A

odi -n duapp0 enable-ulrb-forbidden 1

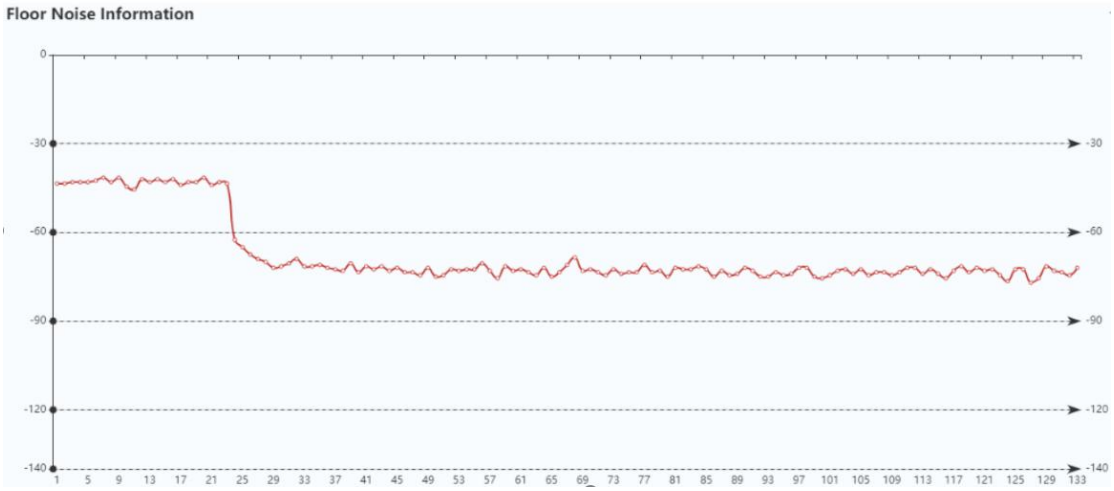
odi -n duapp0 set-forbidden-map 18 0 26 1

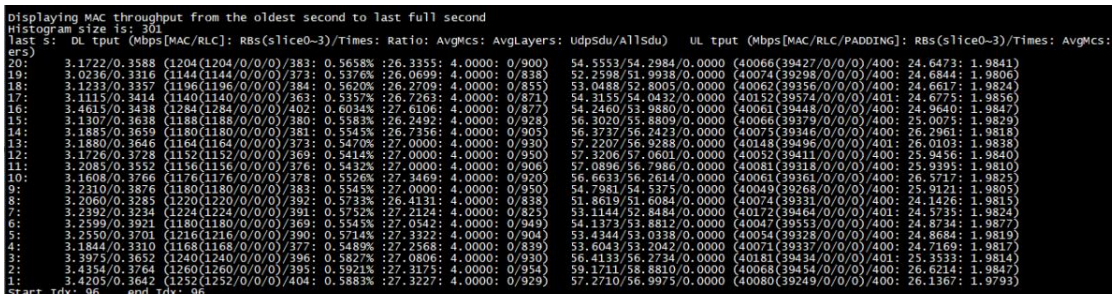
odi -n duapp0 set-forbidden-map 19 0 26 1

odi -n duapp0 set-forbidden-map 8 0 26 1

odi -n duapp0 set-forbidden-map 9 0 26 1

Floor noise and UL throughput for target node A:





Compare: NO interference, interference for front 10M,interference for front 10M(Enable frequency selection and forbid RBs)

	No Interference	Add interference for front 10M	Add interference for front 10M （Enable UL Frequency Selection and Forbid RBs）
Floor Noise	-70	-43	-43
MCS	28	12	25
RB Grant	400	400	400
RSRP	-65	-65	-65
SINR	36	13	12
UL Throughput (Mbps)	76	23	54