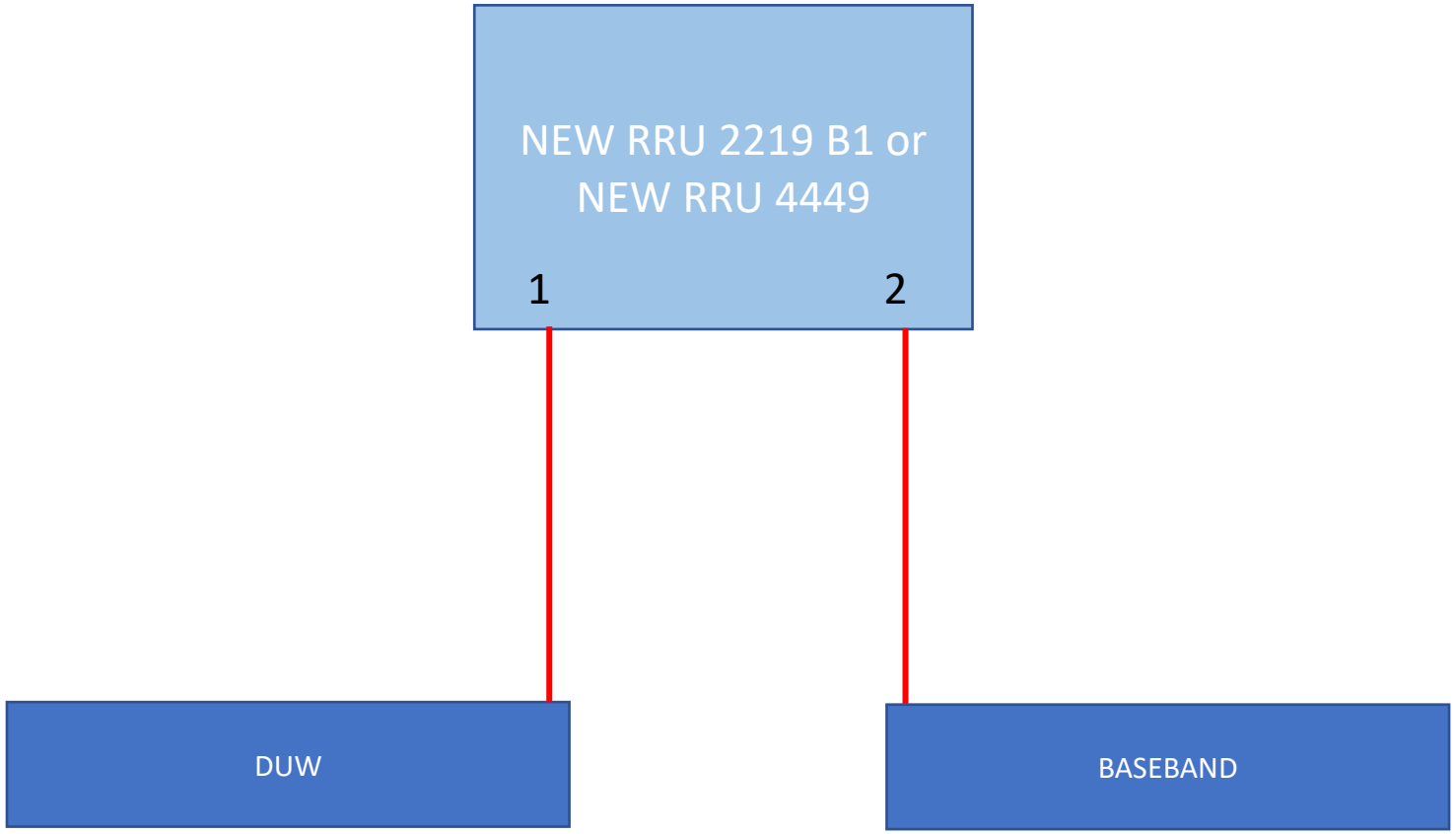
MIXMODE RRU INSTALLATION DIAGRAM



IF UR MUSLIM , PLS START YOUR WORK WITH AL-FATIHAH

SURAH AL-FATIHAH

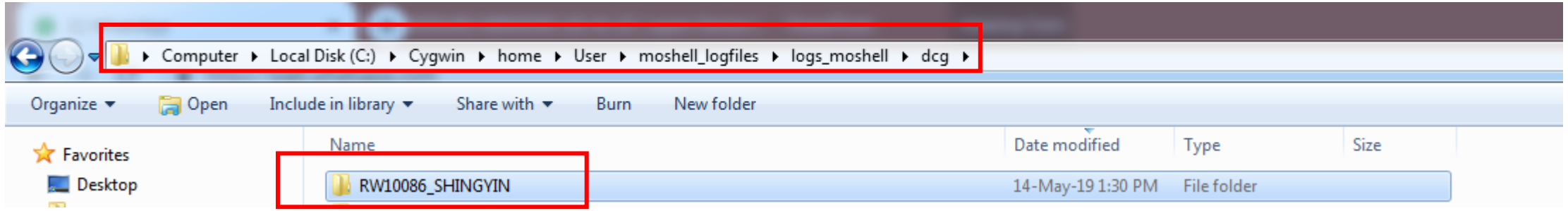
بِسْمِ اللهِ الرَّحْمنِ الرَّحِيمِ ﴿١﴾
الْحَمْدُ للّهِ رَبِّ الْعَالَمِينَ ﴿٢﴾ الرَّحْمنِ الرَّحِيمِ ﴿٣﴾
مَالِكِ يَوْمِ الدِّينِ ﴿٤﴾ إِيَّاكَ نَعْبُدُ وإِيَّاكَ نَسْتَعِينُ ﴿٥﴾
اهدِنَـا الصِّرَاطَ المُستَقِيمَ ﴿٦﴾ صِرَاطَ الَّذِينَ أَنعَمتَ
عَلَيهِمْ غَيرِ المَغضُوبِ عَلَيهِمْ وَلاَ الضَّالِّينَ ﴿٧﴾

Bismillahirrahmanirrahim﴿1﴾
Alhamdulillahi rabbil alamin﴿2﴾Arrahmaanirrahiim﴿3﴾
Maaliki yaumiddiin﴿4﴾Iyyaka na'budu waiyyaaka nastaiin﴿5﴾
Ihdinasirratal mustaqim﴿6﴾Siratalladzina an'amta
alaihim ghairil maghduubi alaihim waladhaalin﴿7﴾

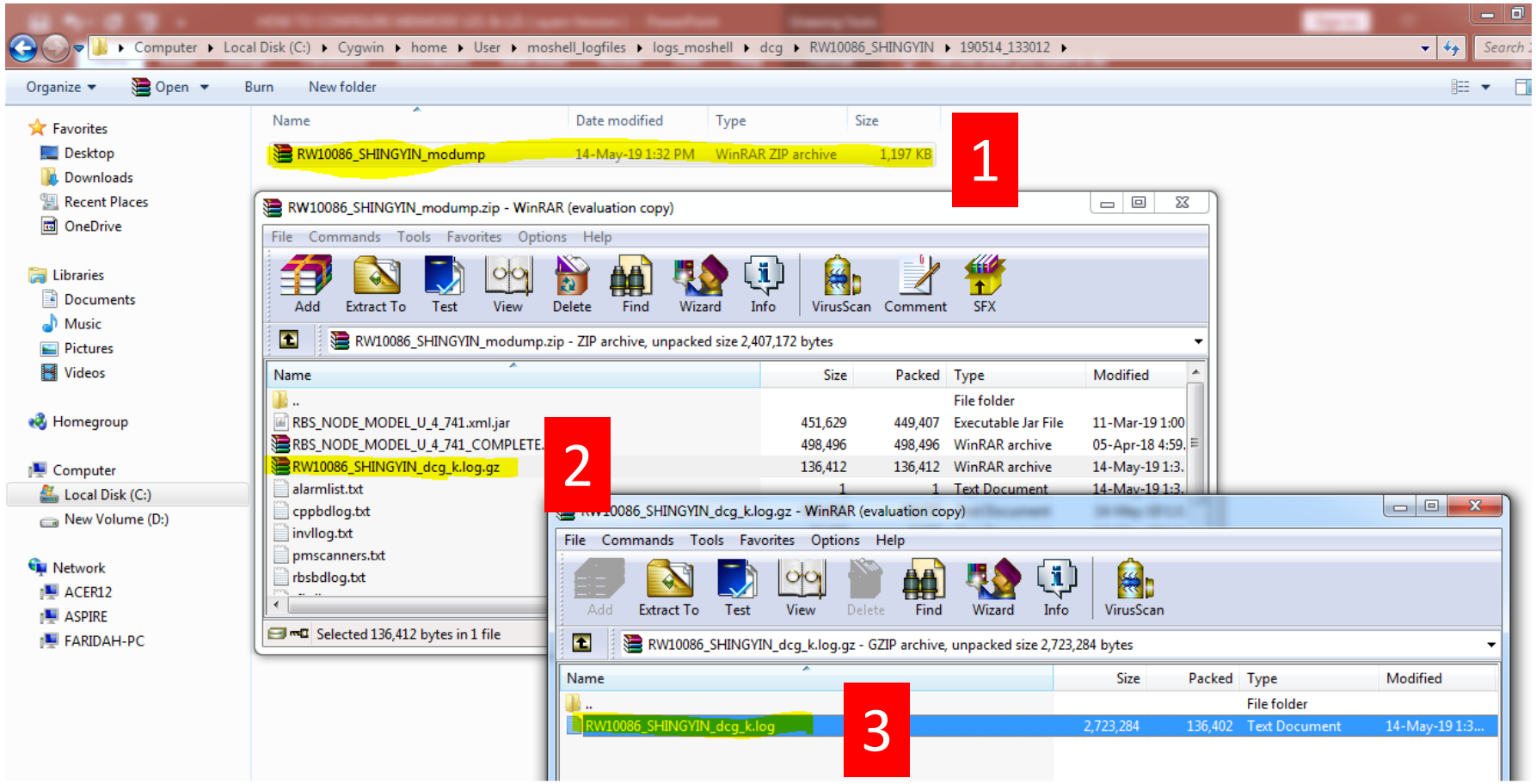
Dengan nama Allah, Yang Maha Pemurah, lagi Maha Mengasihani[1]
Pujian bagi Allah, Tuhan yang memelihara dan mentadbirkan sekalian alam[2]
Yang Maha Pemurah, lagi Maha Mengasihani[3]
Yang Menguasai pemerintahan hari Pembalasan (hari Akhirat)[4]
Engkaulah sahaja (Ya Allah) Yang Kami sembah,
dan kepada Engkaulah sahaja kami memohon pertolongan[5]
Tunjukilah kami jalan yang lurus[6]
Iaitu jalan orang-orang yang Engkau telah kurniakan nikmat kepada mereka,
bukan (jalan) orang-orang yang dimurkai ke atas mereka,
dan bukan pula (jalan) orang-orang yang sesat[7]

CHAPTER 1 DUW PART

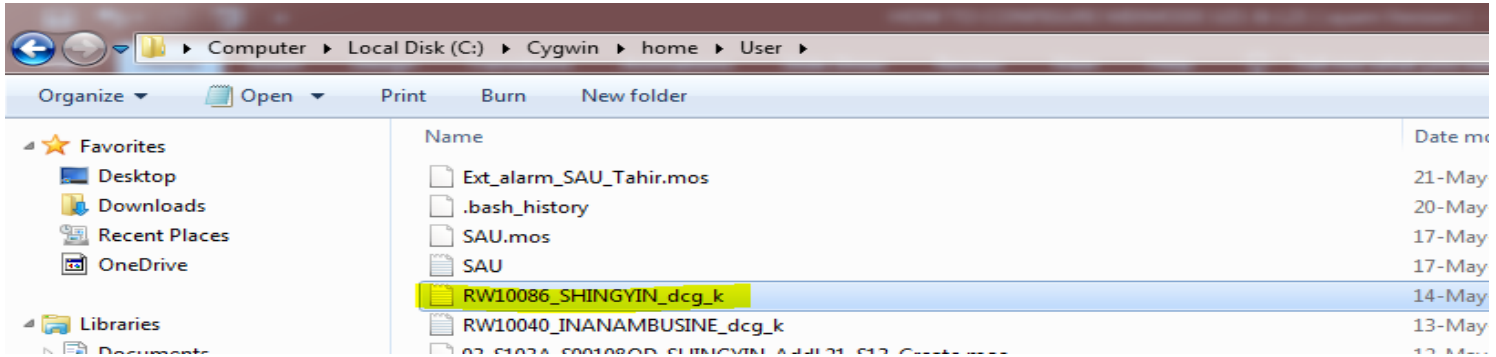
1. Login moshell on DUW
2. Take pre log (GSC)
3. Take prelog (check alarm & etc)
4. Check cv (type " cvls ")
5. Create new cv (type " cvms before_mixmode_L21U21_14052019 User Before_mixmode "
6. Take kget (type " dcgk ") wait until complete , kget will save on C:\Cygwin\home\User\moshell_logfiles\logs_moshell\dcg



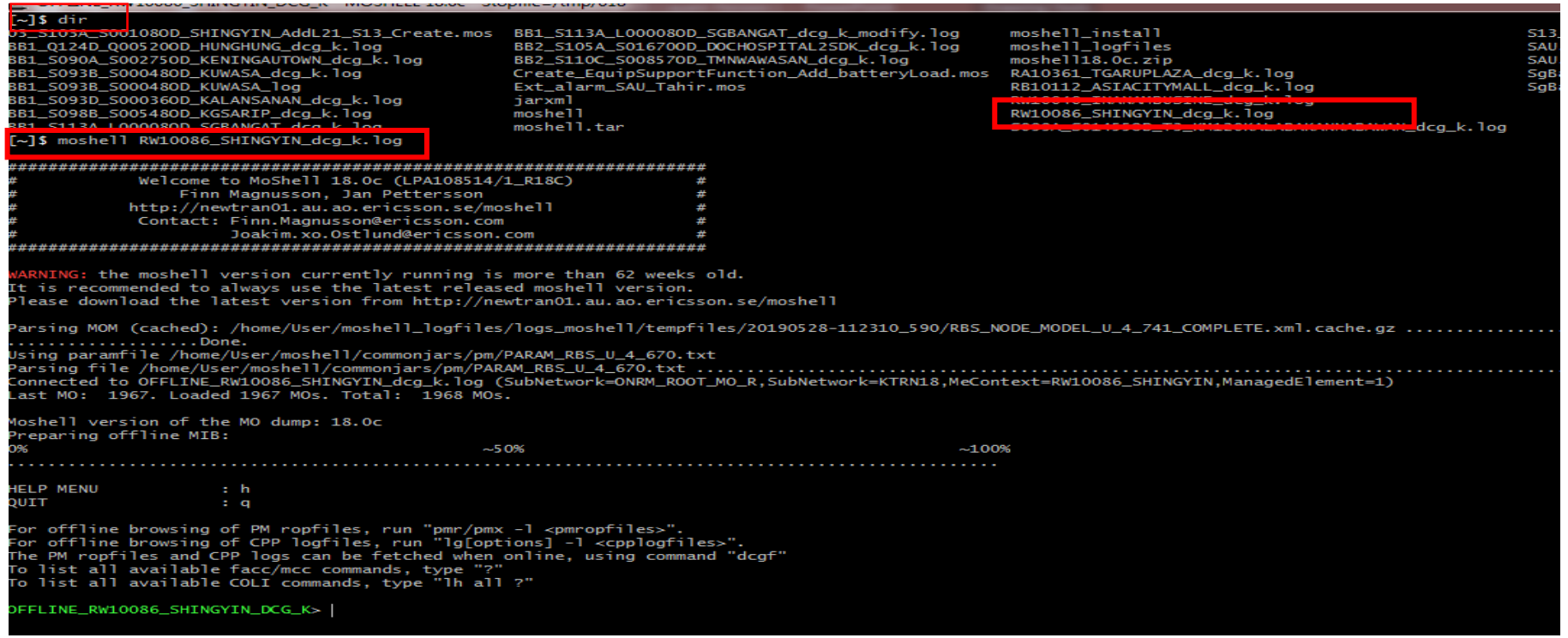
7. Open kget file , & copy to moshell



8. Copy file to C:\Cygwin\home\User



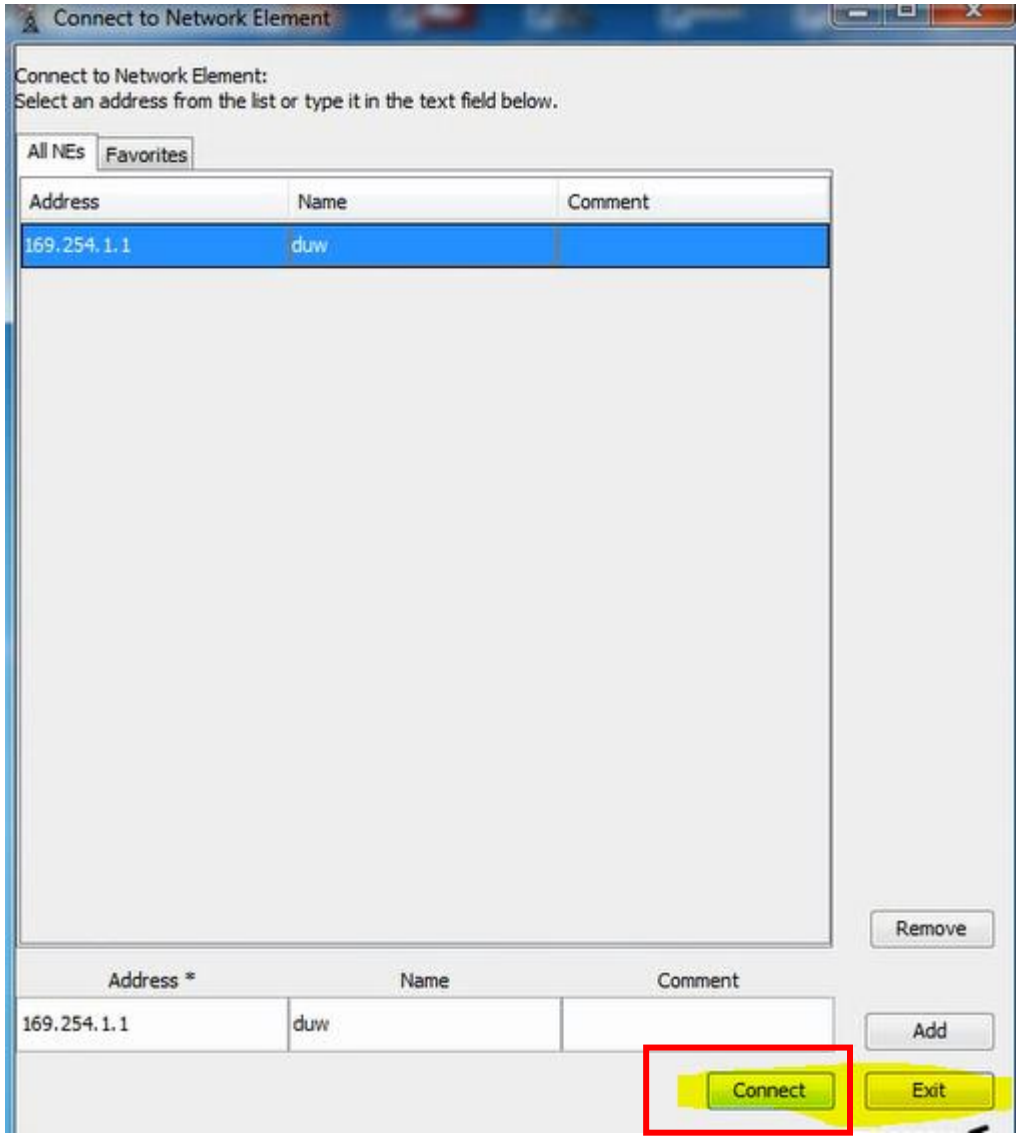
9. Open moshell , to open kget off line

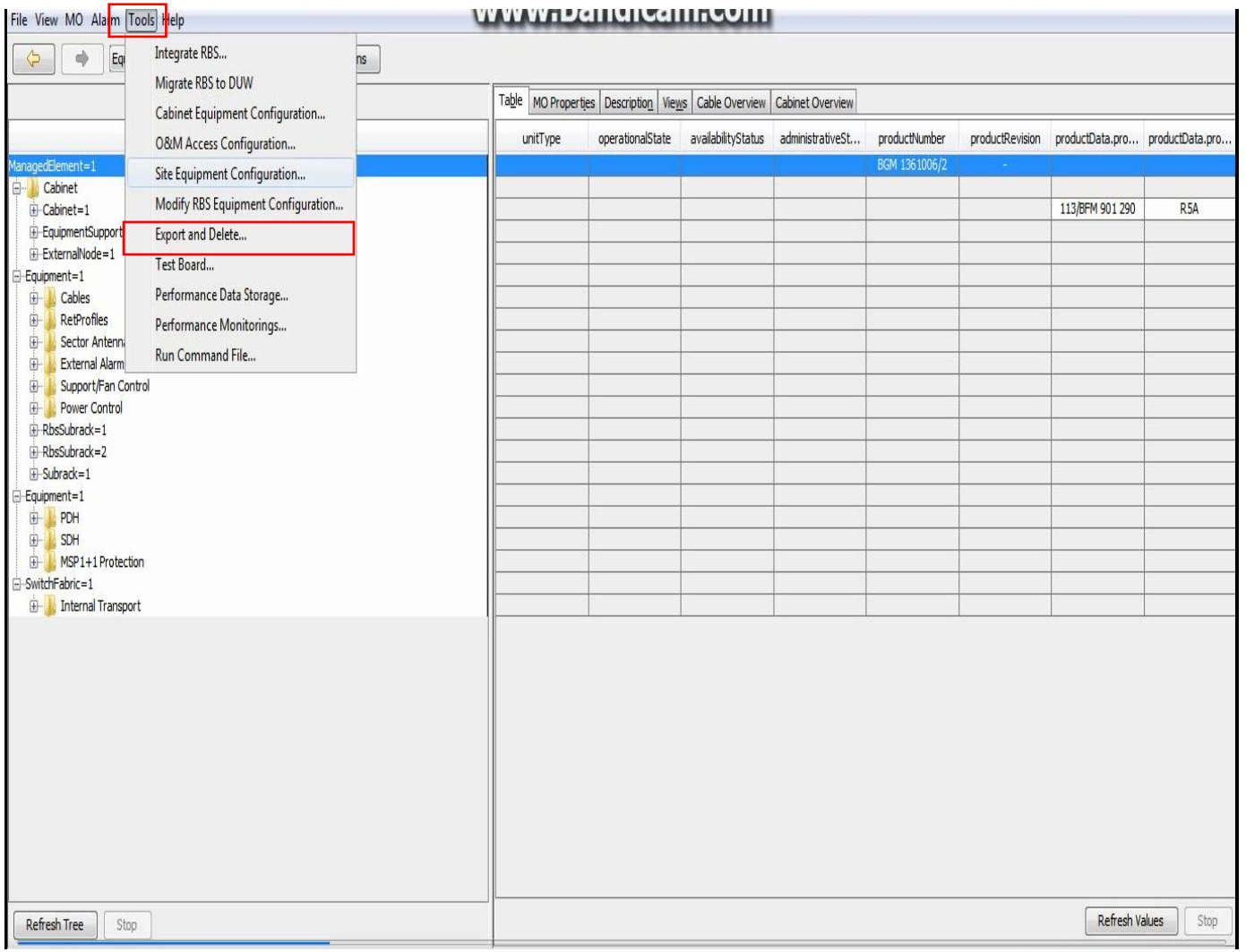


10. Login moshell on line , on DUW
11. lock Rus , Type
    - st ruw
    - bl ruw
    - y
    - st ruw (check back if locked)

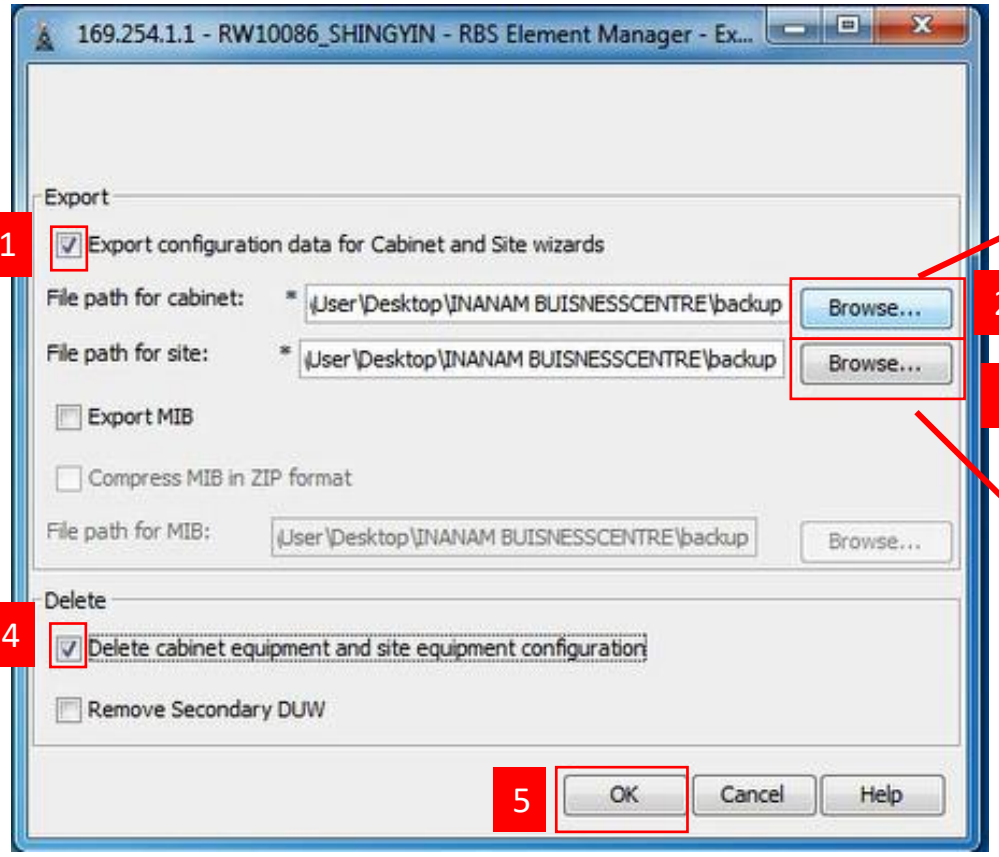
```
190528-11:30:45 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/618
================================================================================
Proxy  Adm State     Op. State     MO
================================================================================
  420  0 (LOCKED)    1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=11,AuxPlugInUnit=RUW-1
  421                1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=11,AuxPlugInUnit=RUW-1,DeviceGroup=RUW
  465  0 (LOCKED)    1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=13,AuxPlugInUnit=RUW-2
  466                1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=13,AuxPlugInUnit=RUW-2,DeviceGroup=RUW
  512  0 (LOCKED)    1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RUW-1
  513                1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RUW-1,DeviceGroup=RUW
  557  0 (LOCKED)    1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RUW-2
  558                1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RUW-2,DeviceGroup=RUW
  602  0 (LOCKED)    1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=7,AuxPlugInUnit=RUW-1
  603                1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=7,AuxPlugInUnit=RUW-1,DeviceGroup=RUW
  647  0 (LOCKED)    1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=9,AuxPlugInUnit=RUW-2
  648                1 (ENABLED)   Equipment=1,RbsSubrack=1,RbsSlot=9,AuxPlugInUnit=RUW-2,DeviceGroup=RUW
================================================================================
Total: 12 MOs
```

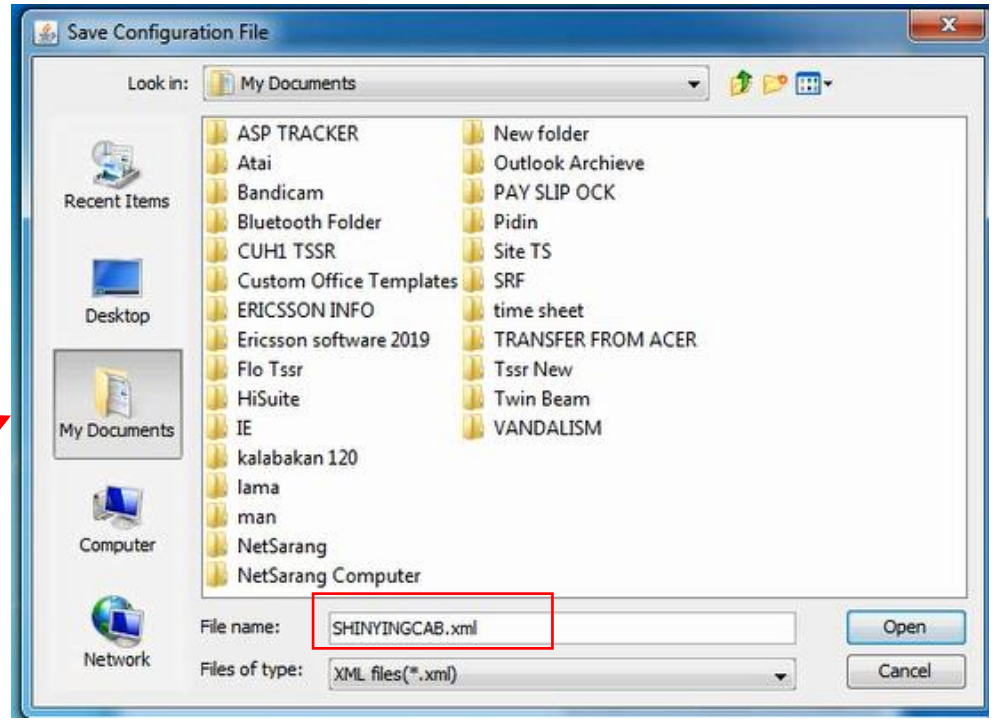
12. Login duw via emas , element manager
13. Go to tools , export & delete

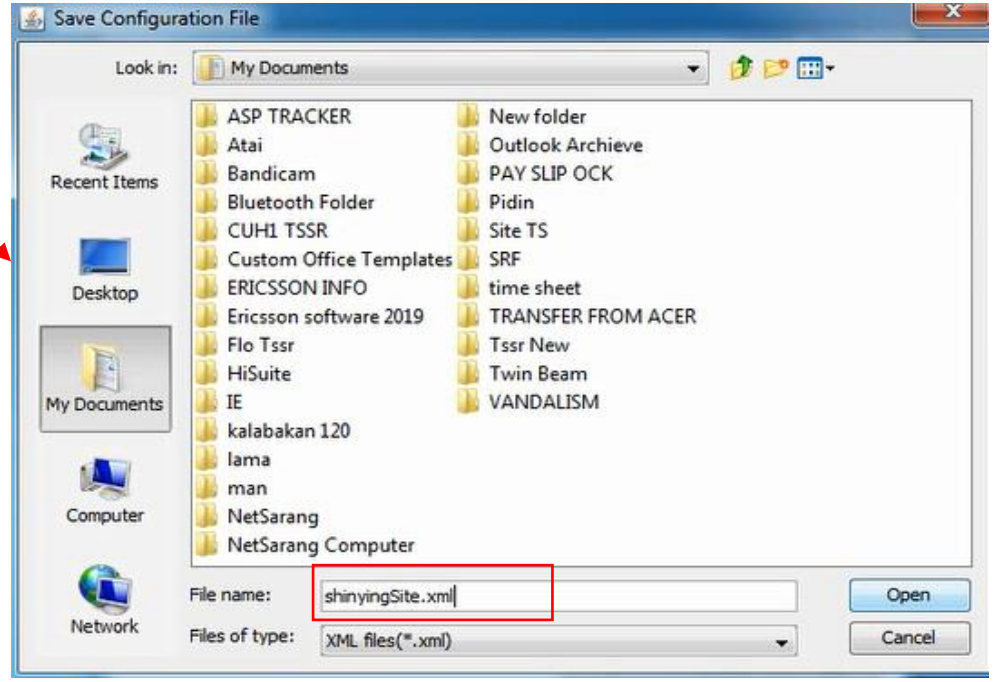




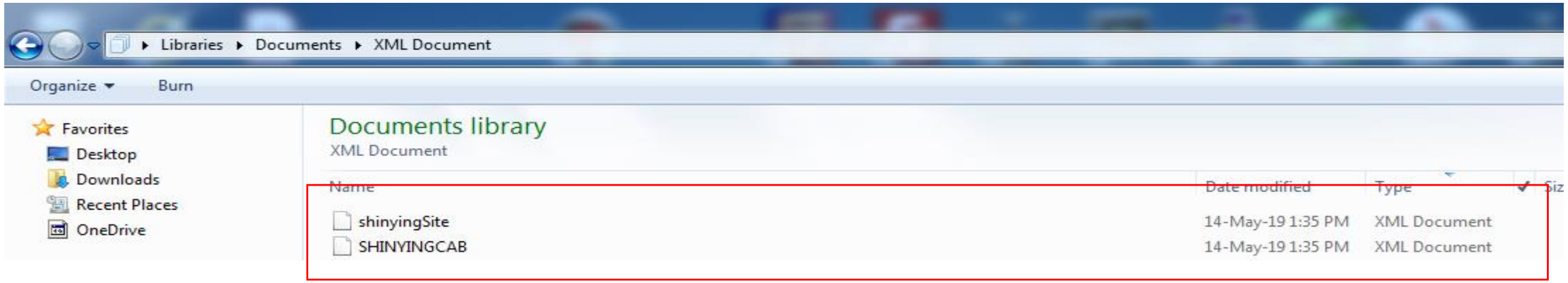
14. Save file cabinet & site , must <name> .xml



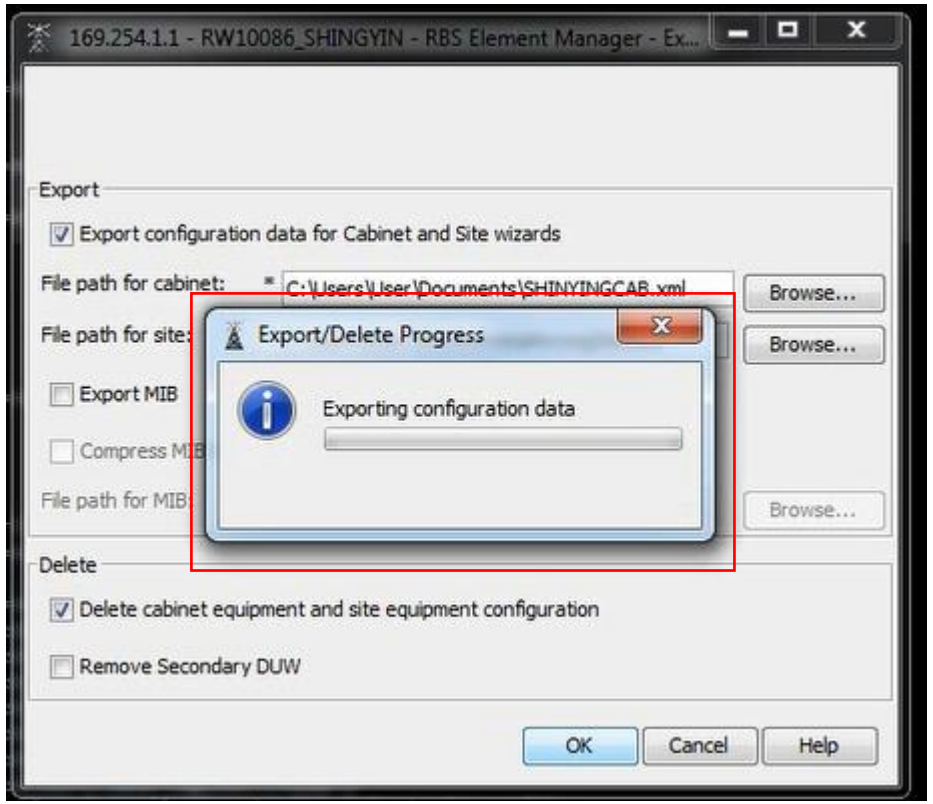




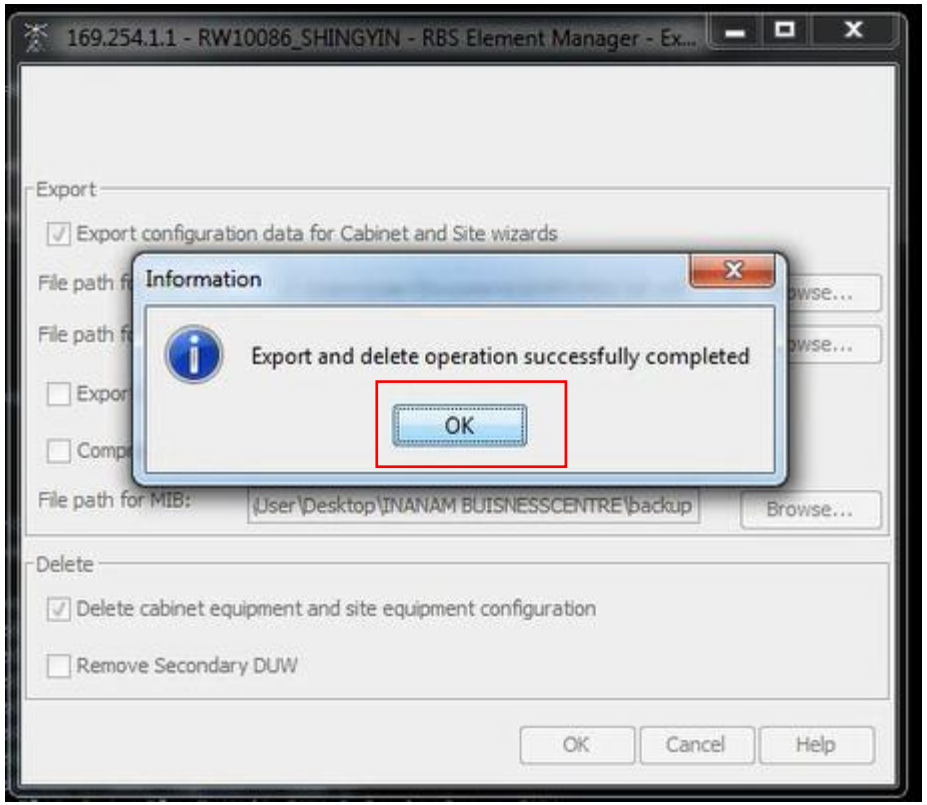
15. Check if file already save on your folder



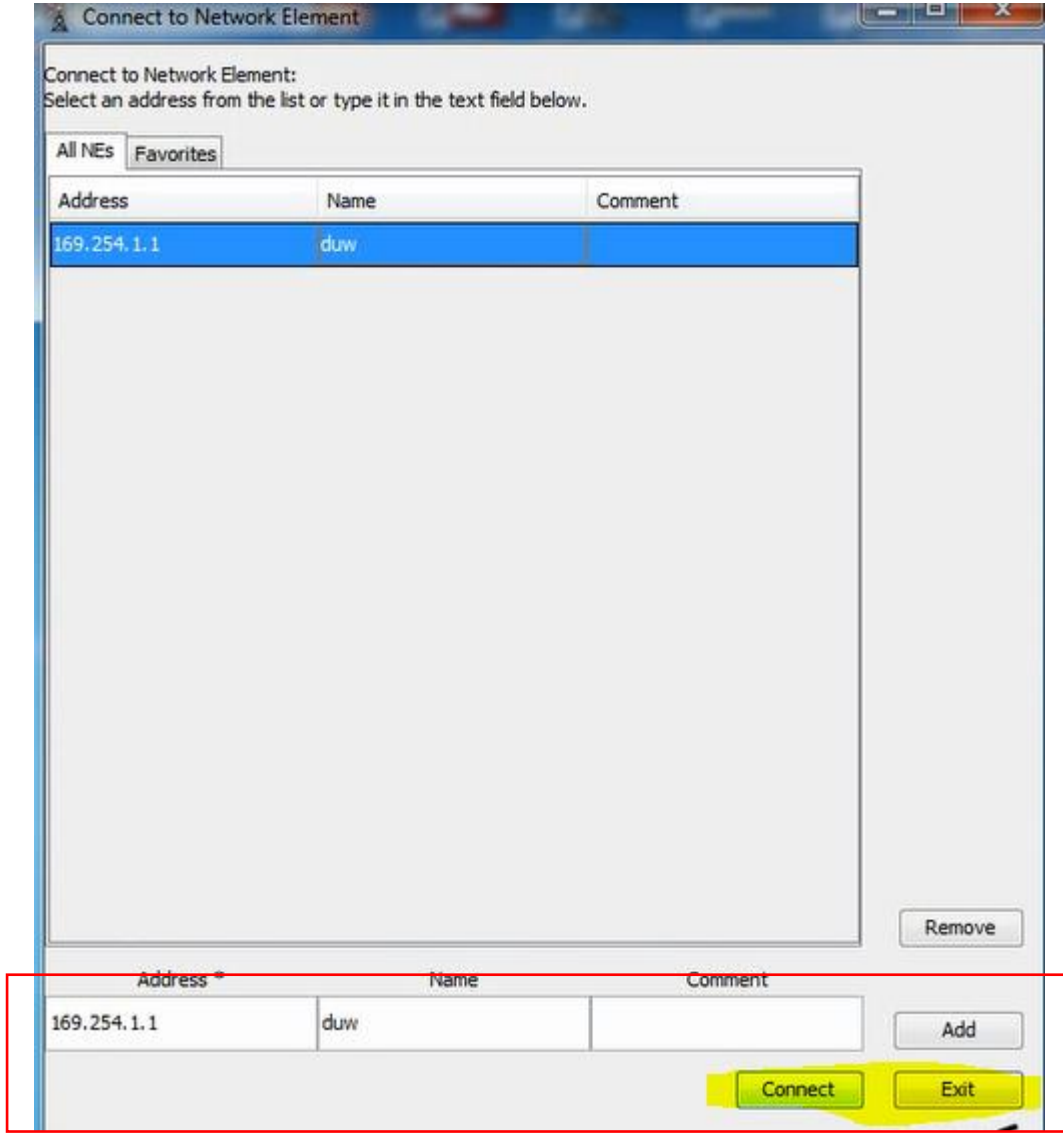
16. Got to element manager , & start export n delete , press OK



16. Wait until finish

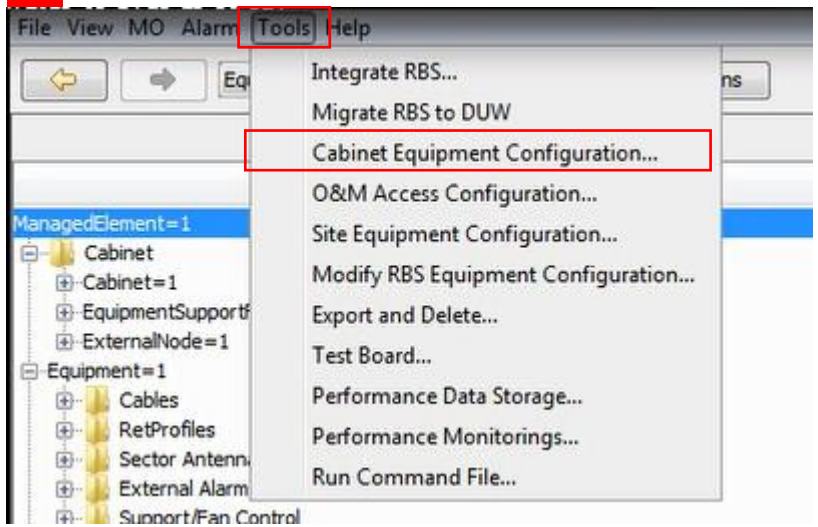


17. Duw will restart , aft 5 min , login again duw via element manager

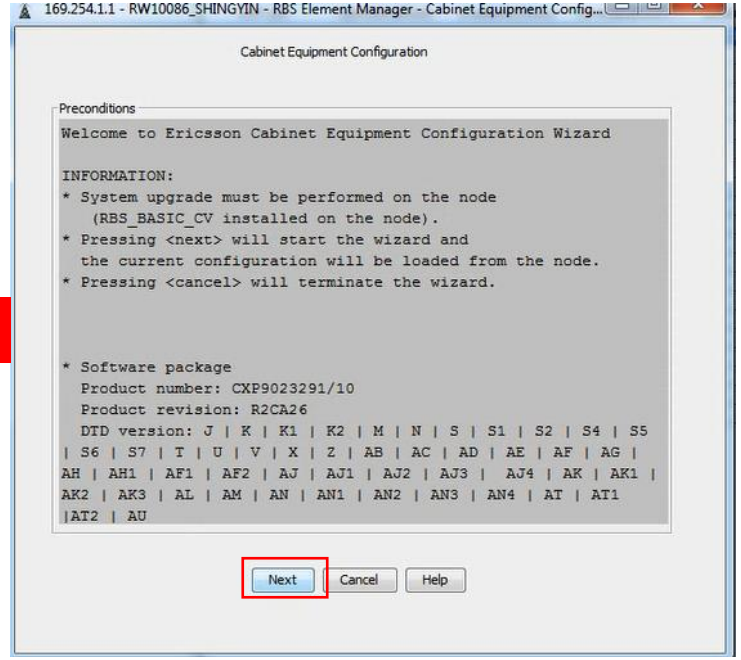


18. Upload new cabinet , go to tools - cabinet

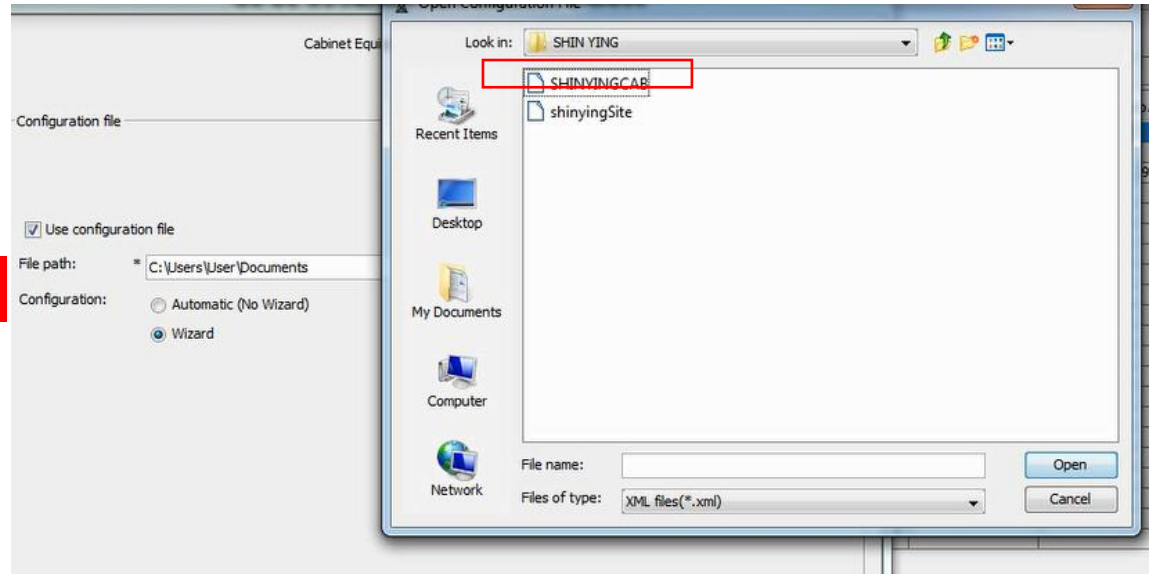
1



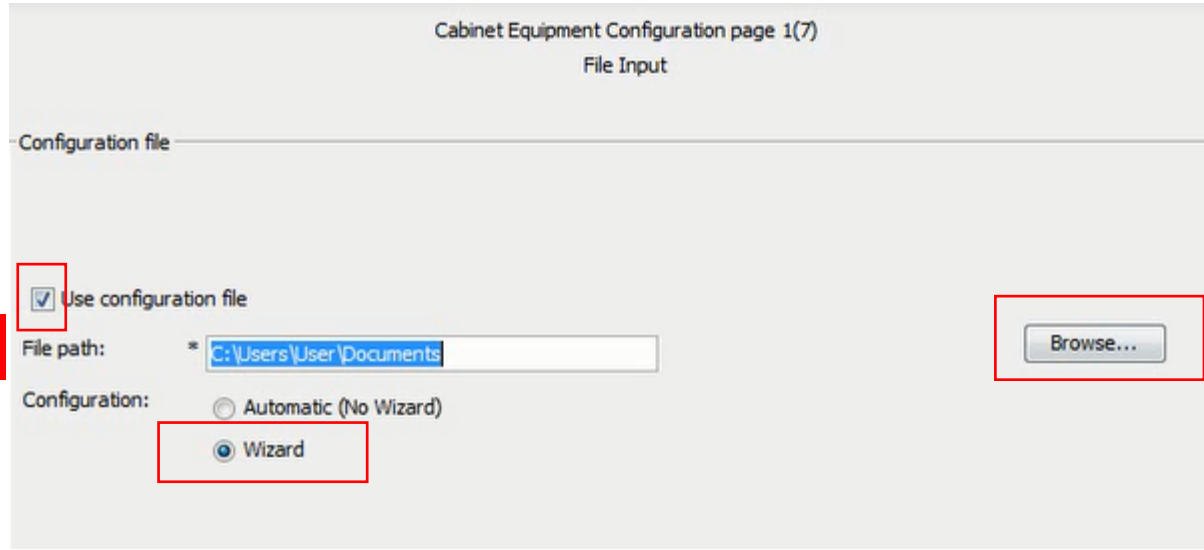
2



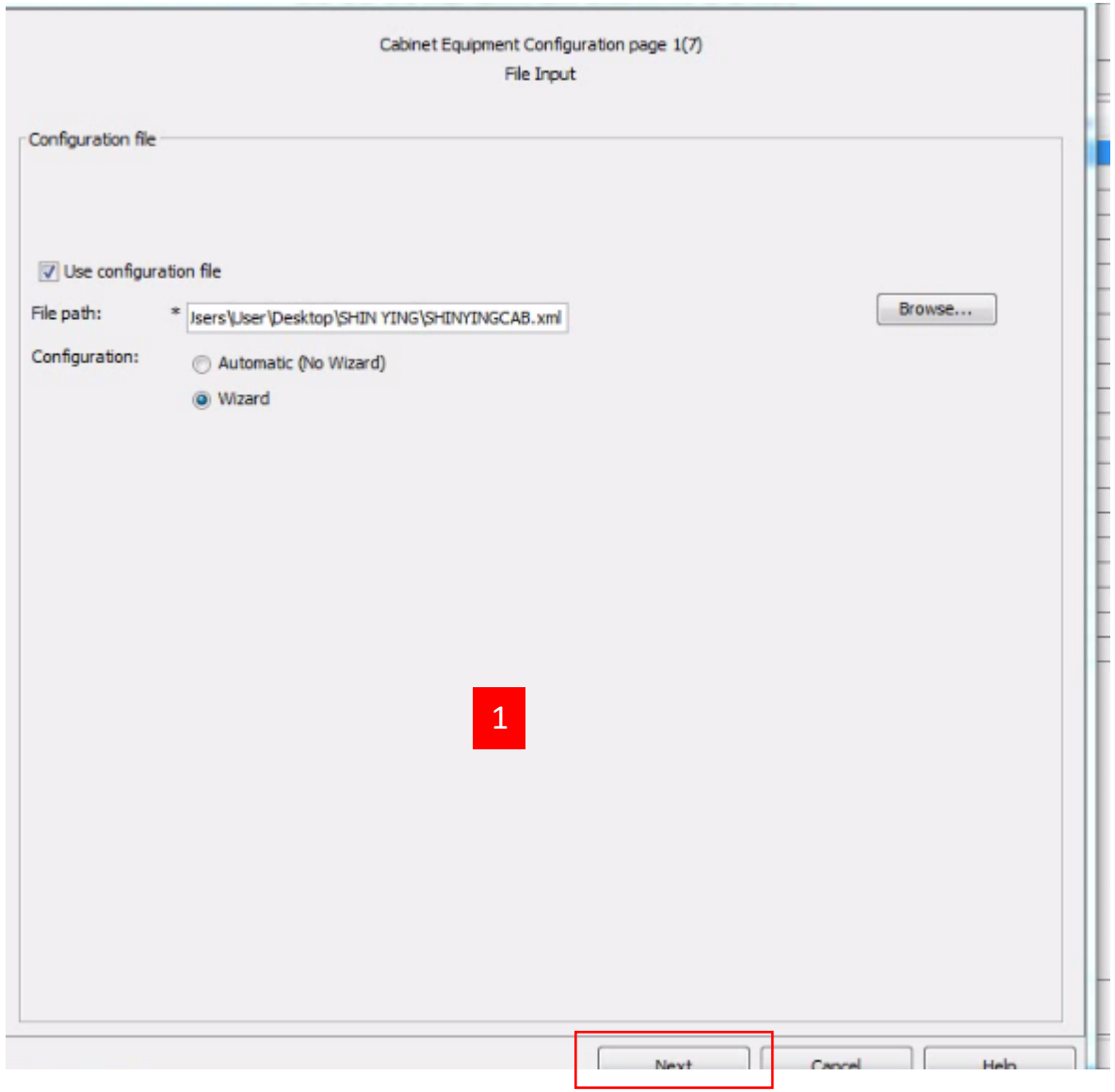
4

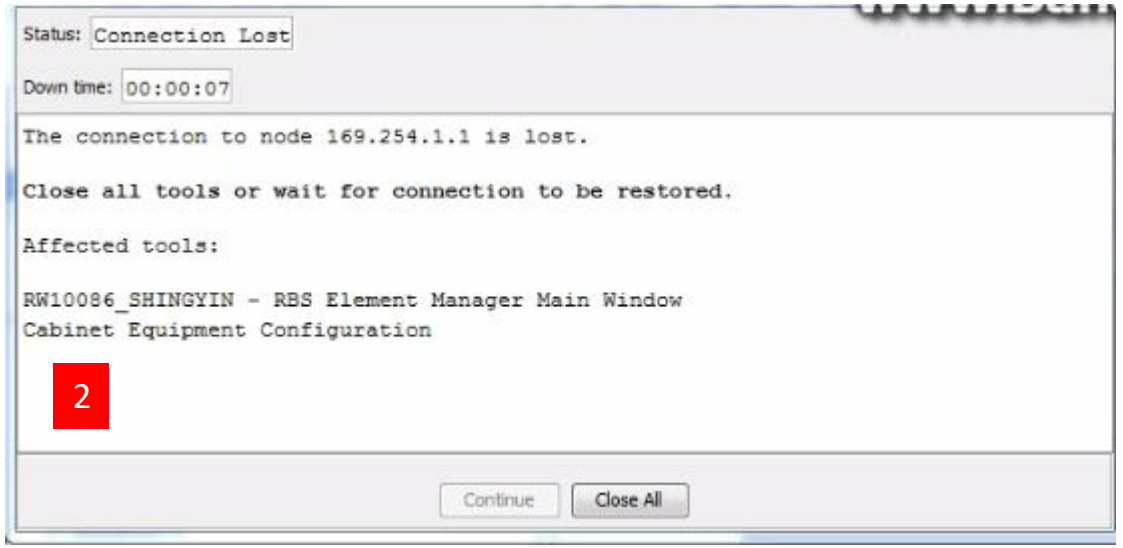


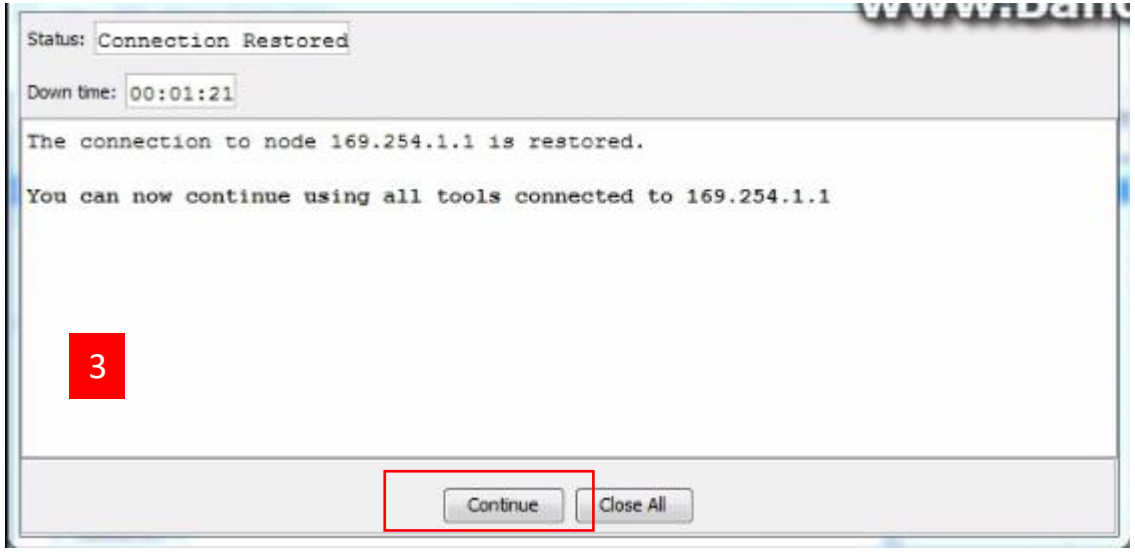
3



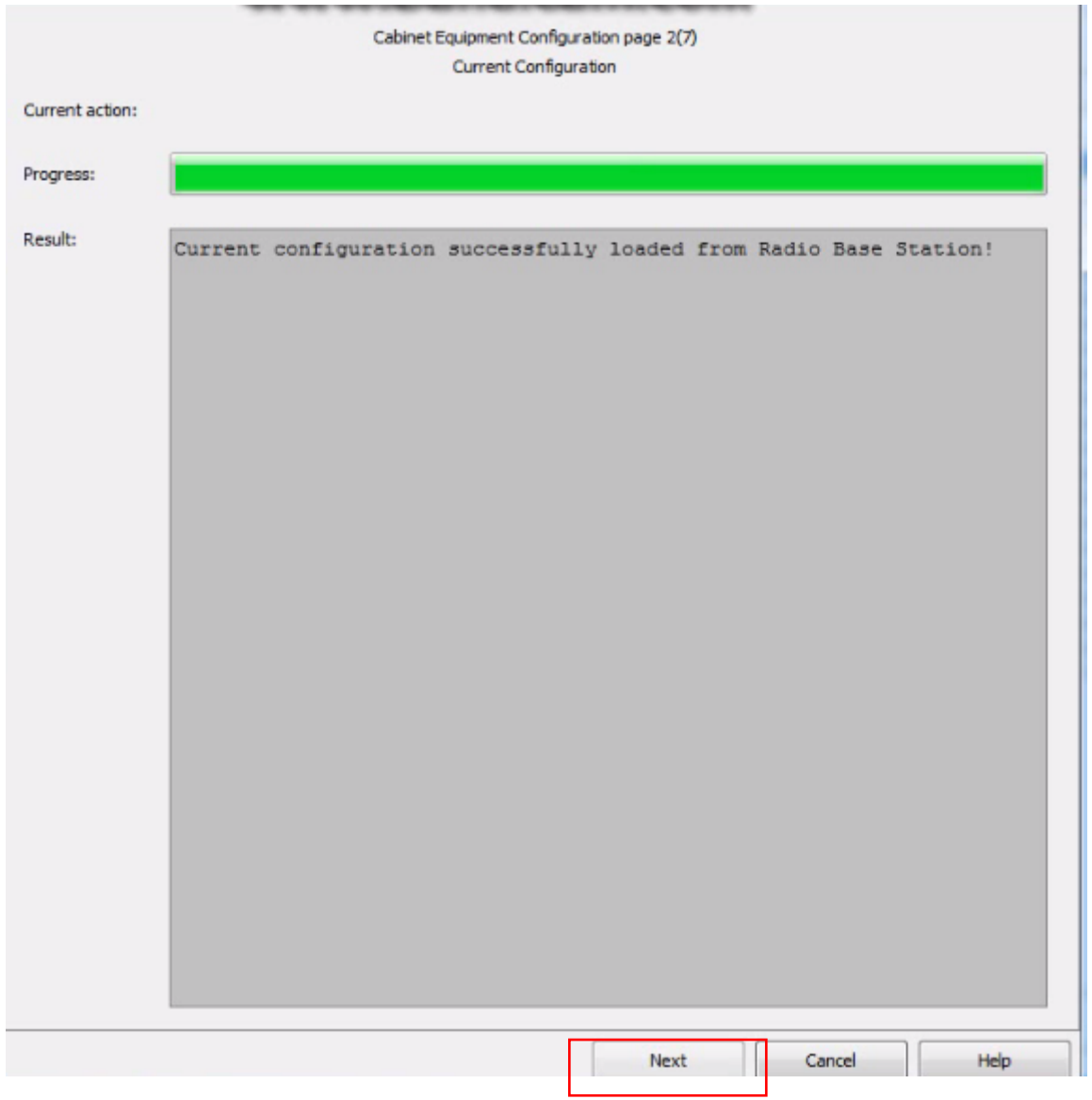
19. Klik Next , duw will disconnect – continiue - loading

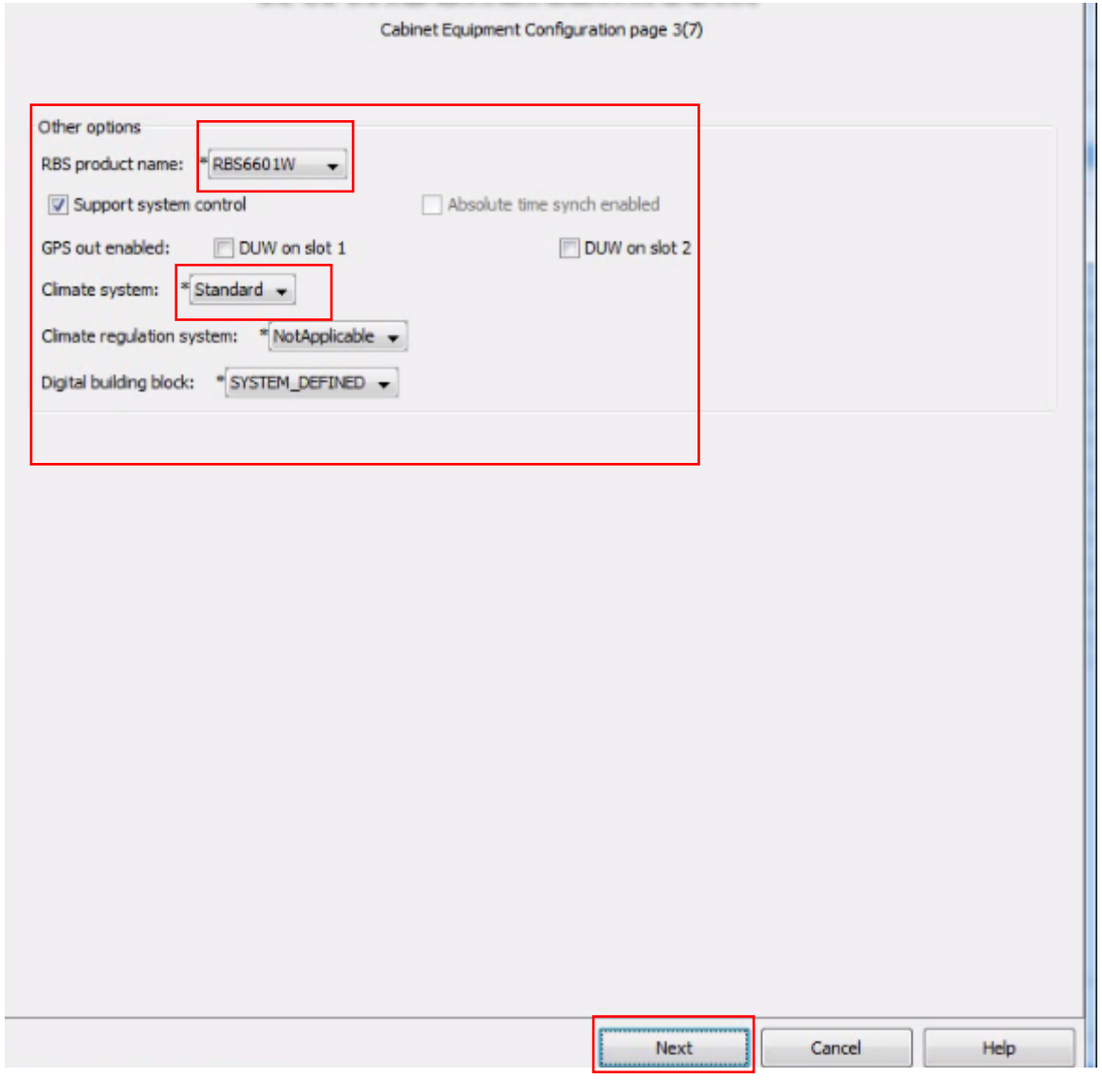




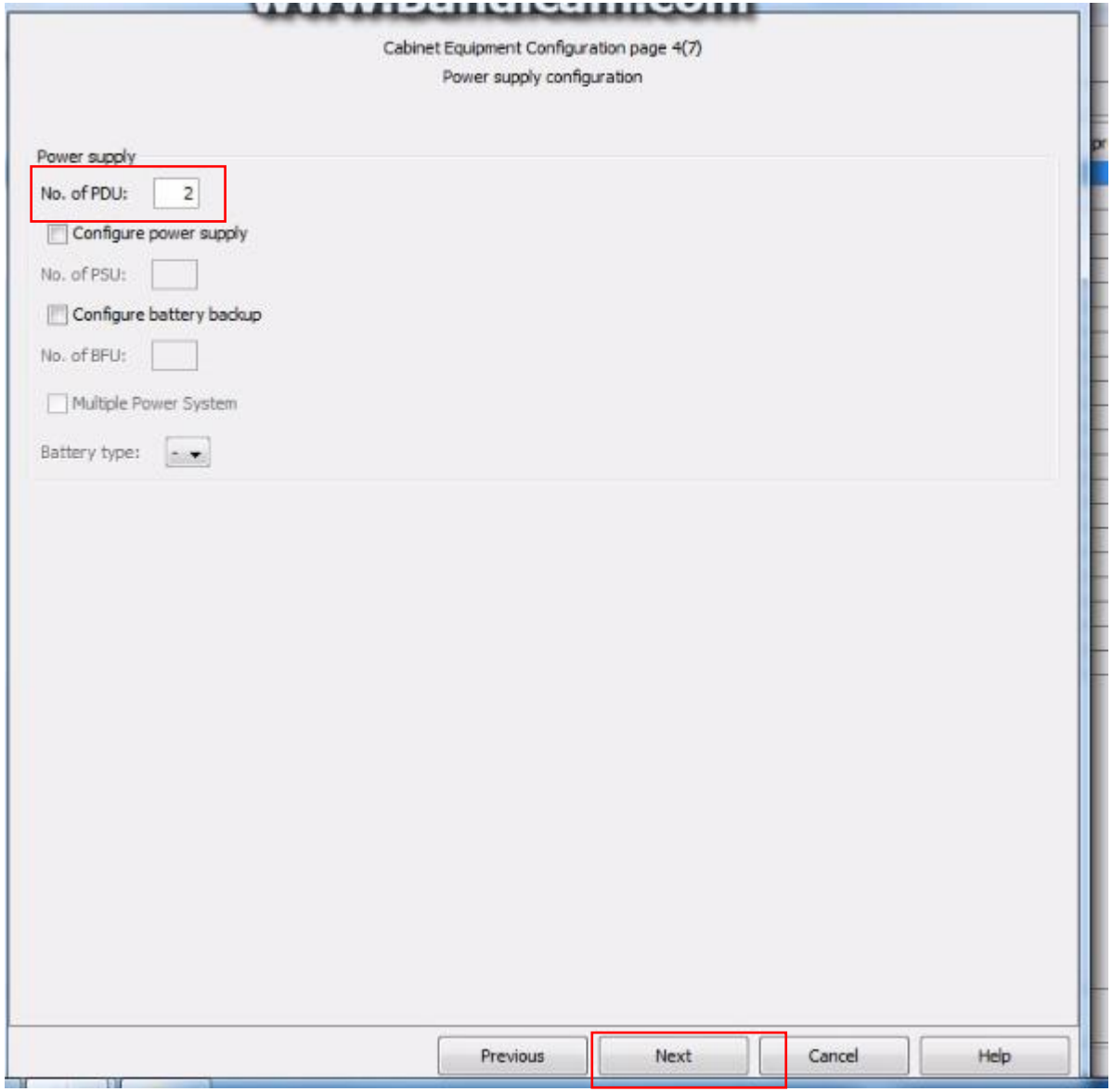


19. Klik Next , fill follow photo -

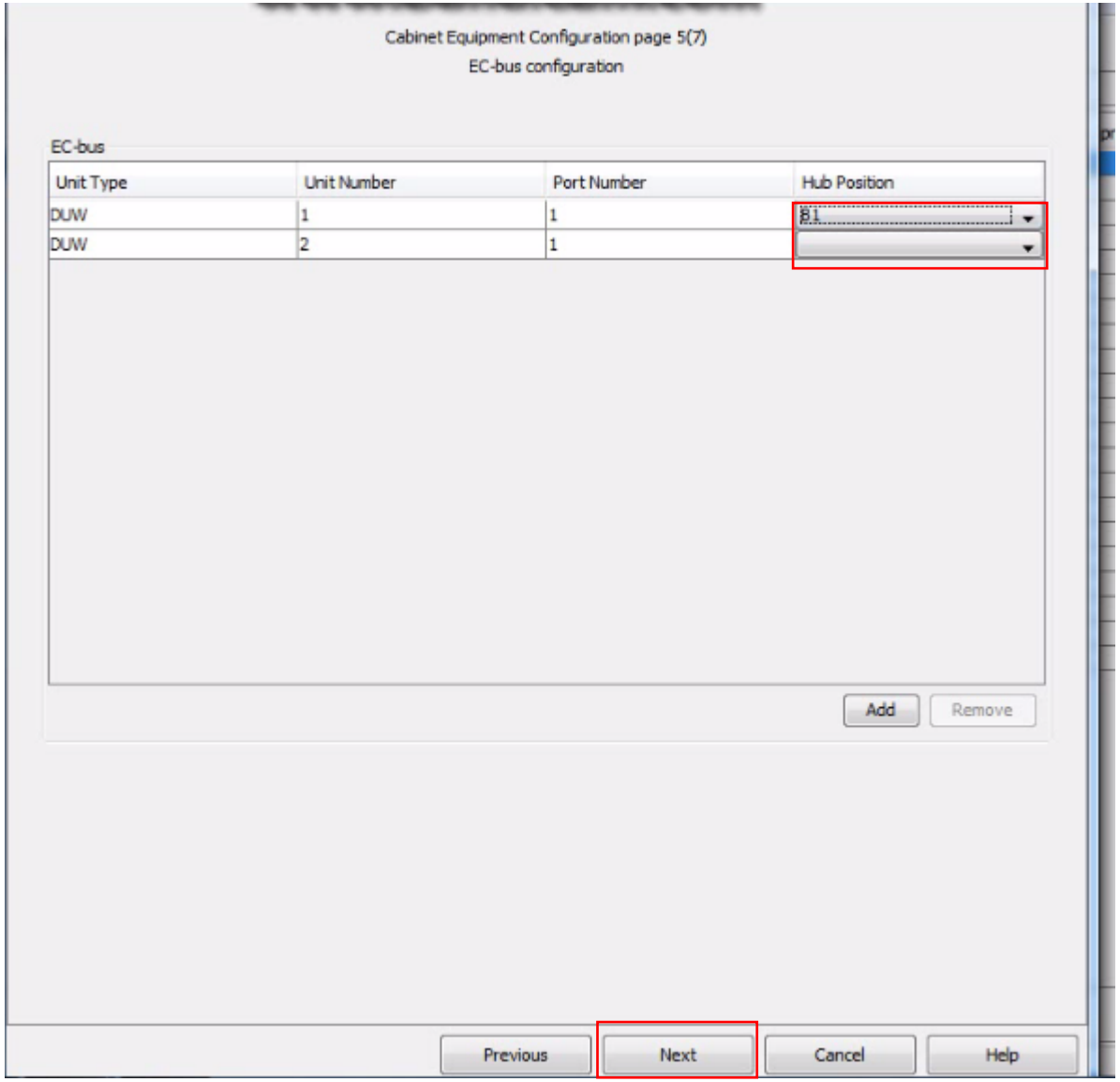




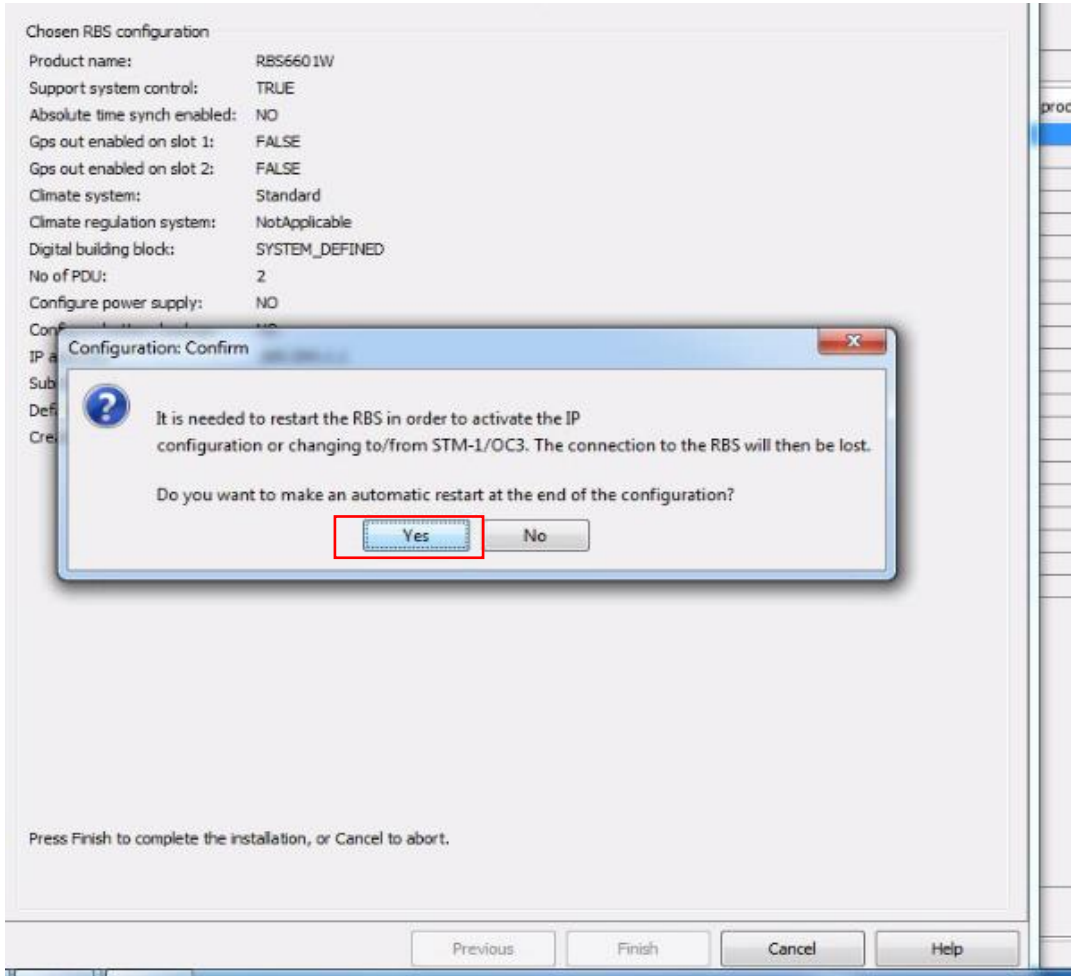
20. Check how many PDU on site if 2 , set to 2 - next



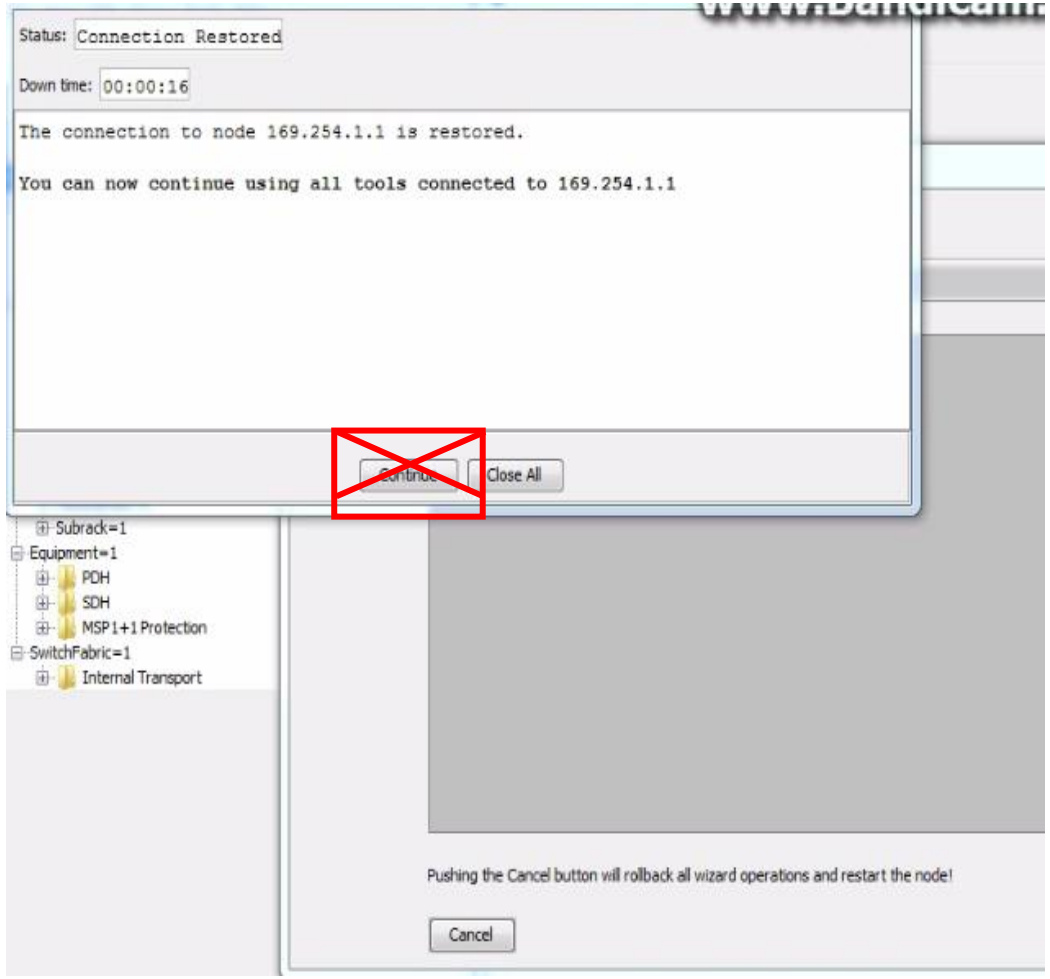
21. Set hub position to B1 - next



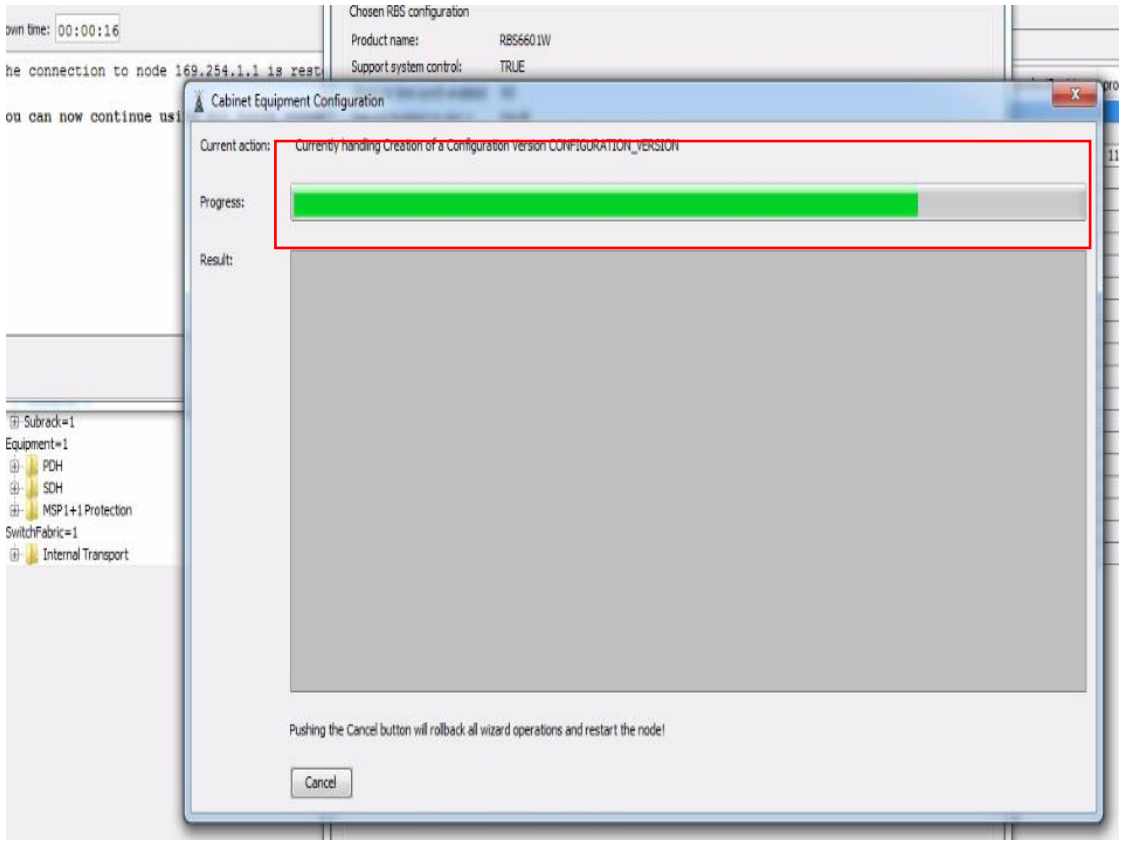
22. yes



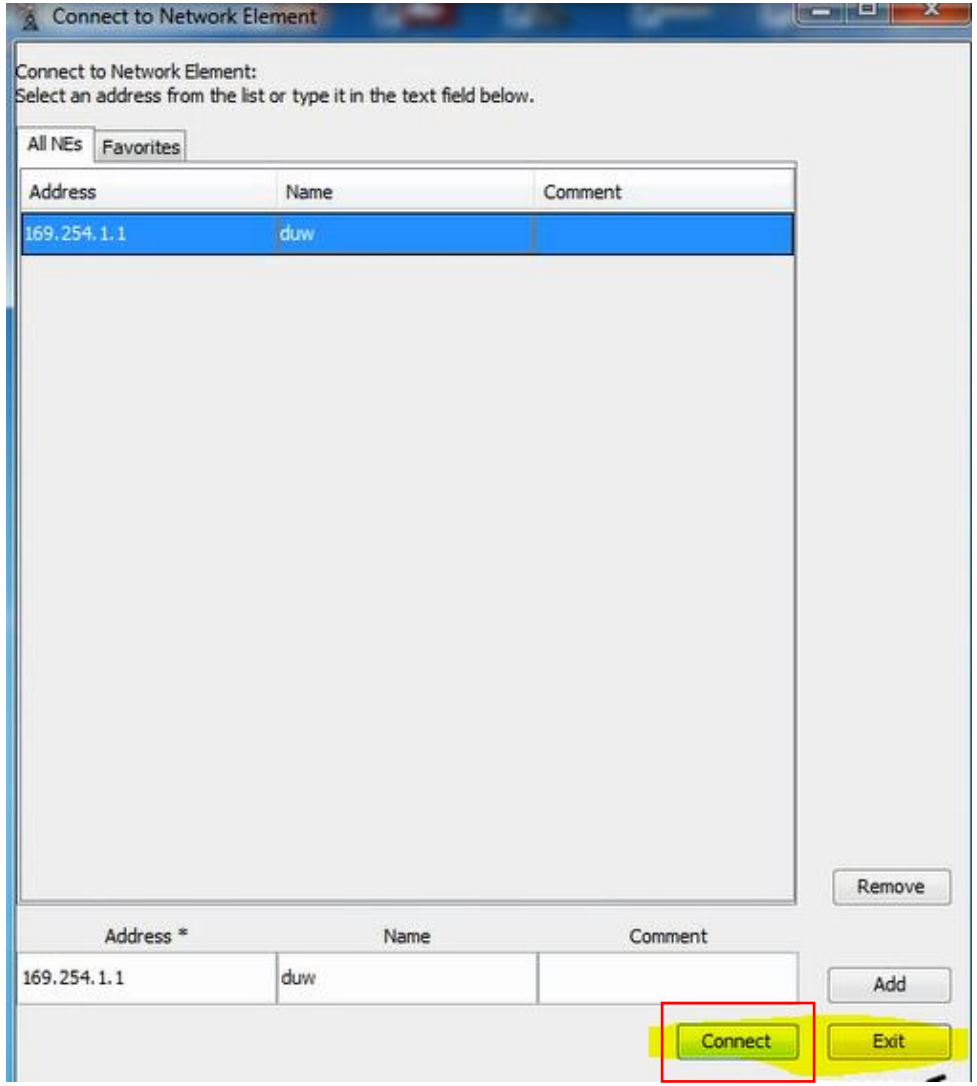
22. Don’t press continiue , just wait ..



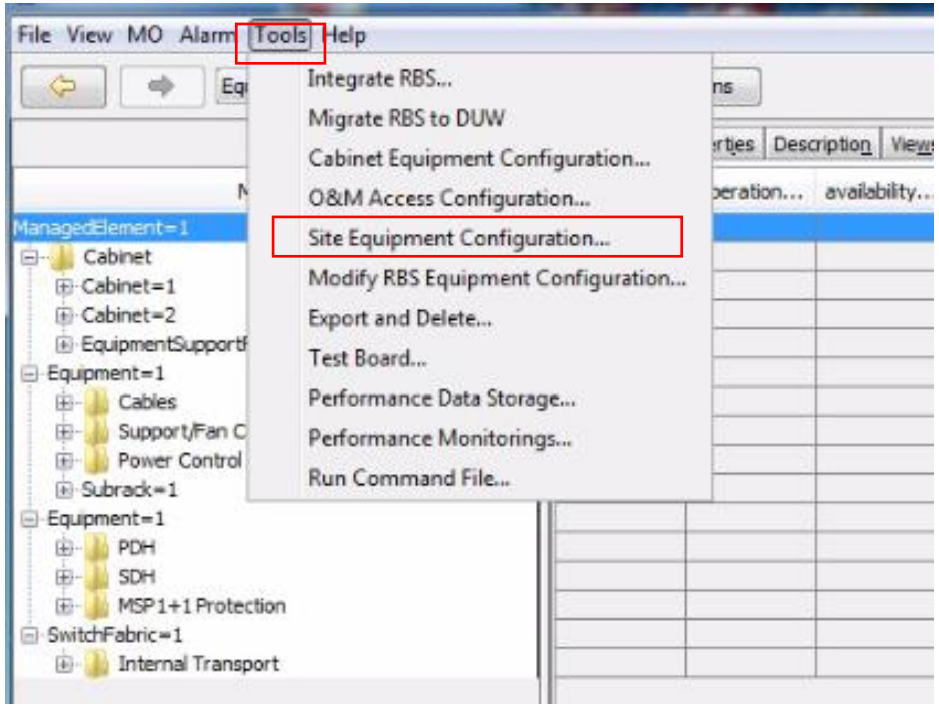
24. Wait until Finish , element manager will Disconnect



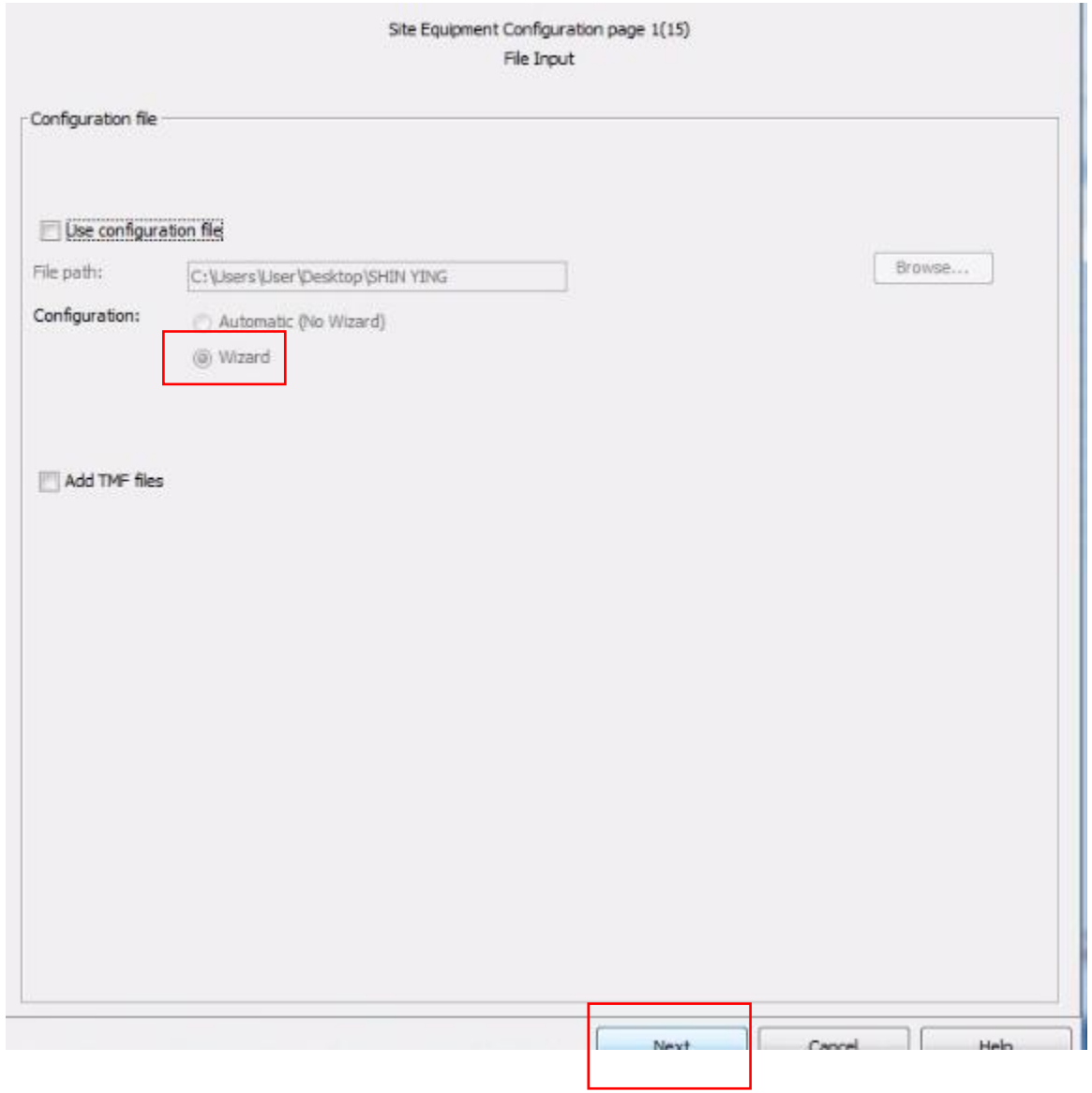
25. Wait 5 minute & Open again element manager



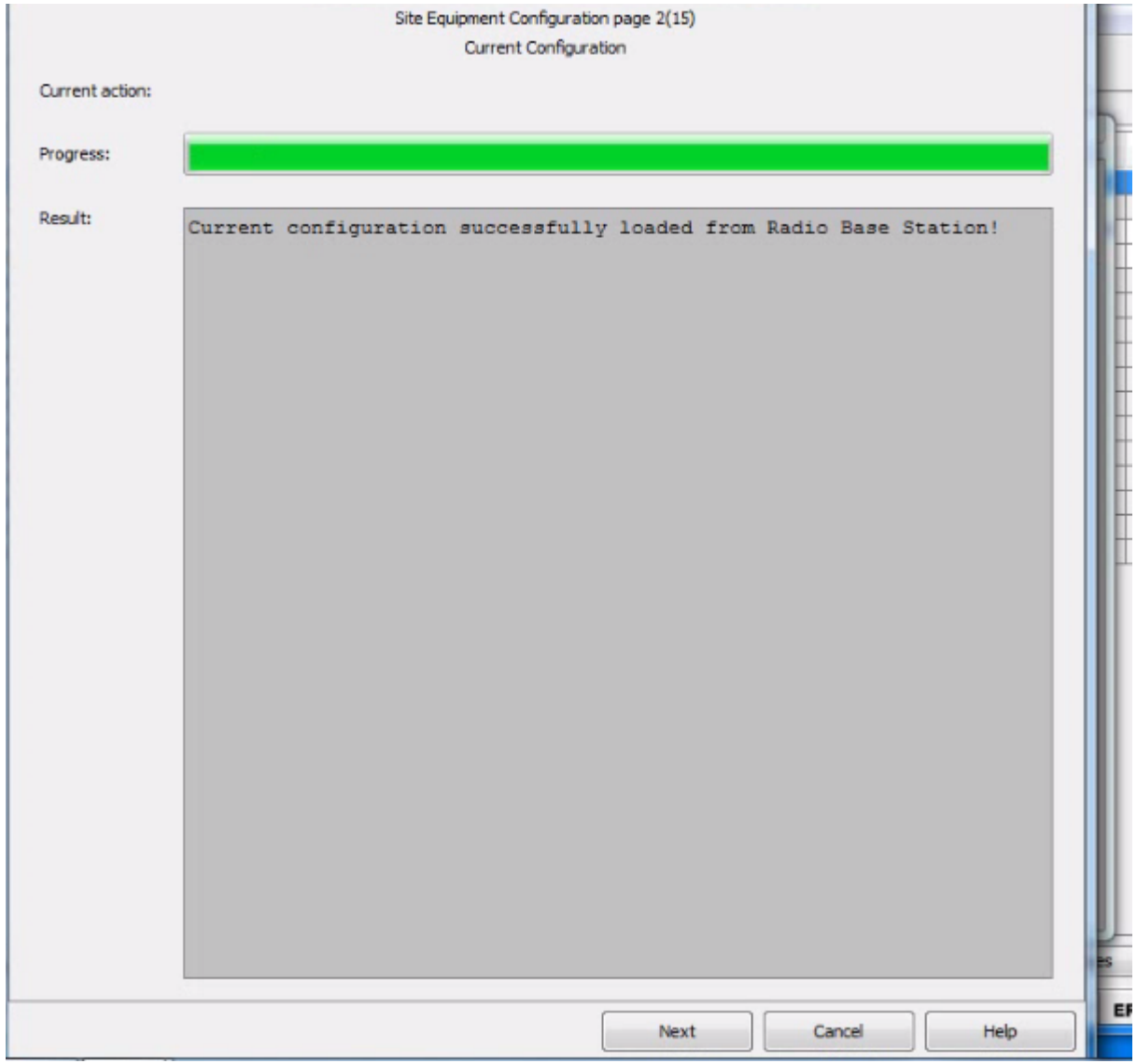
26. Go to tools – site equipment configuration

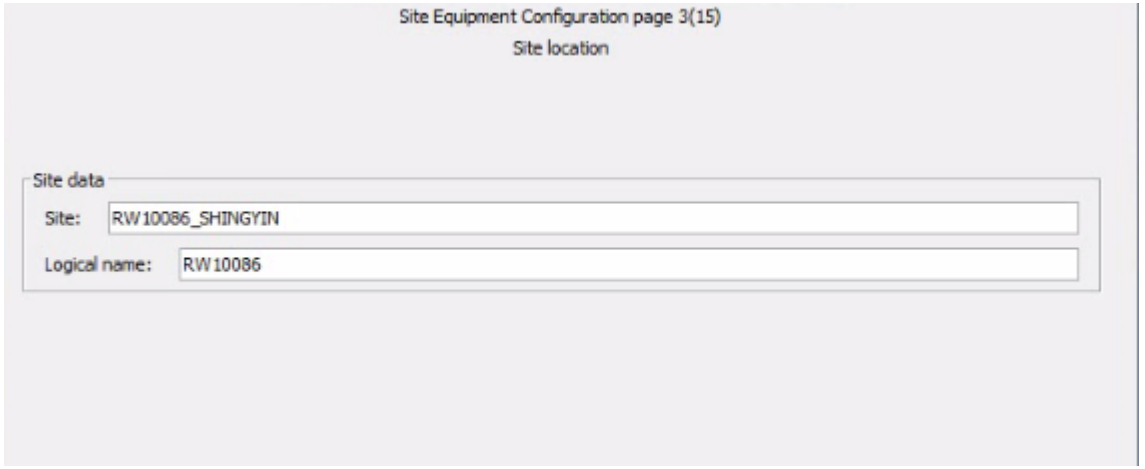


27. Tick wizard & Just next

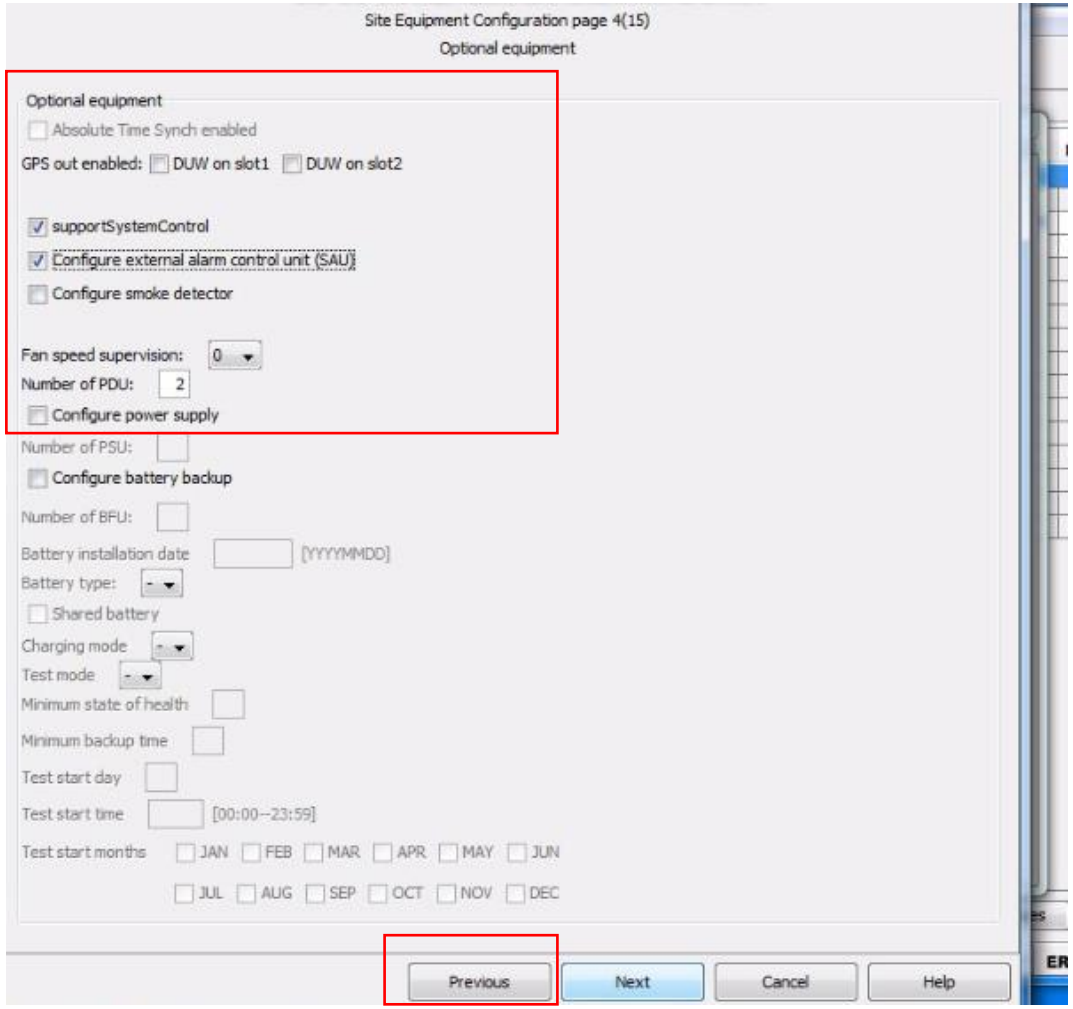


28. Next – NEXT - NEXT

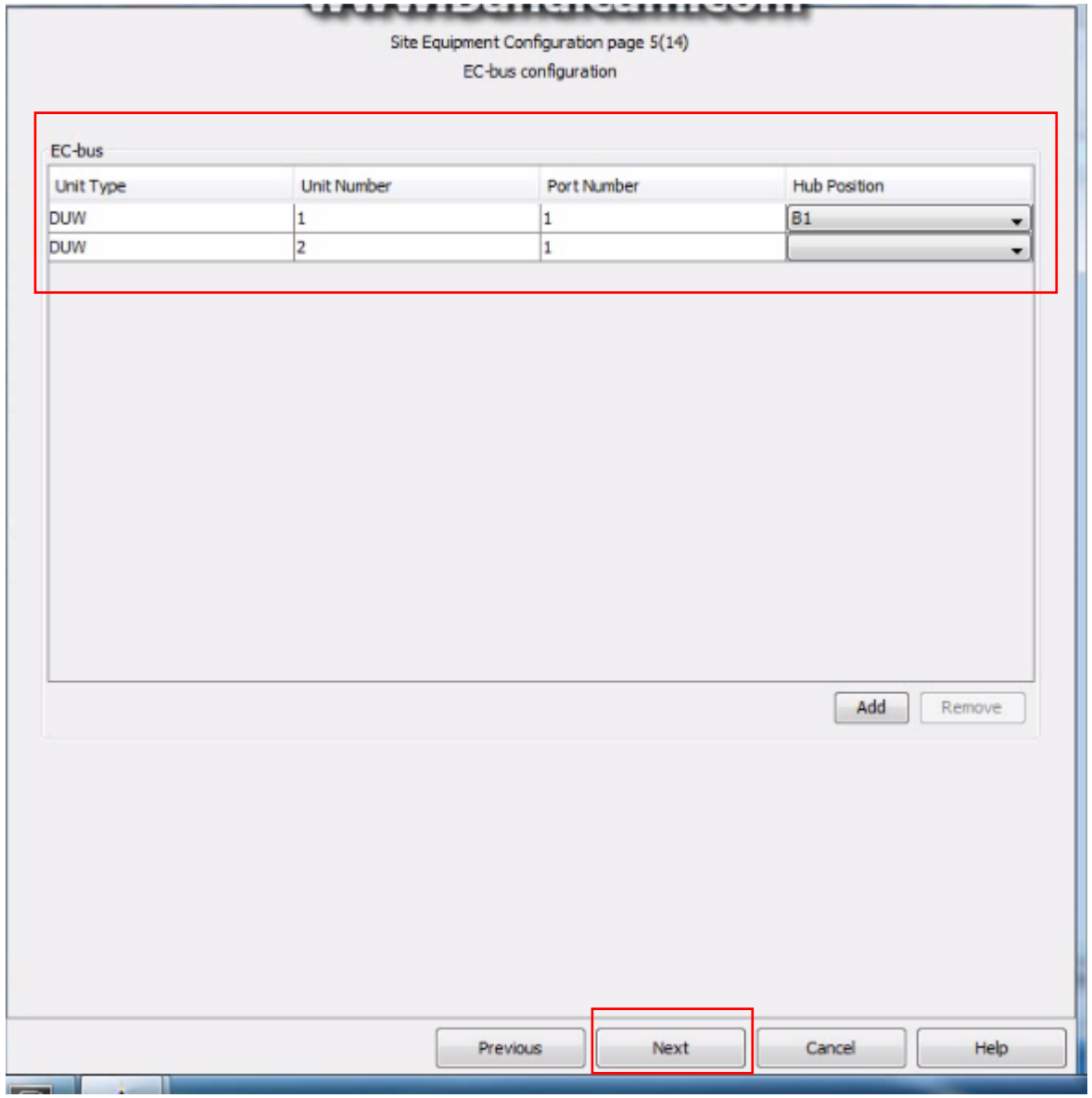




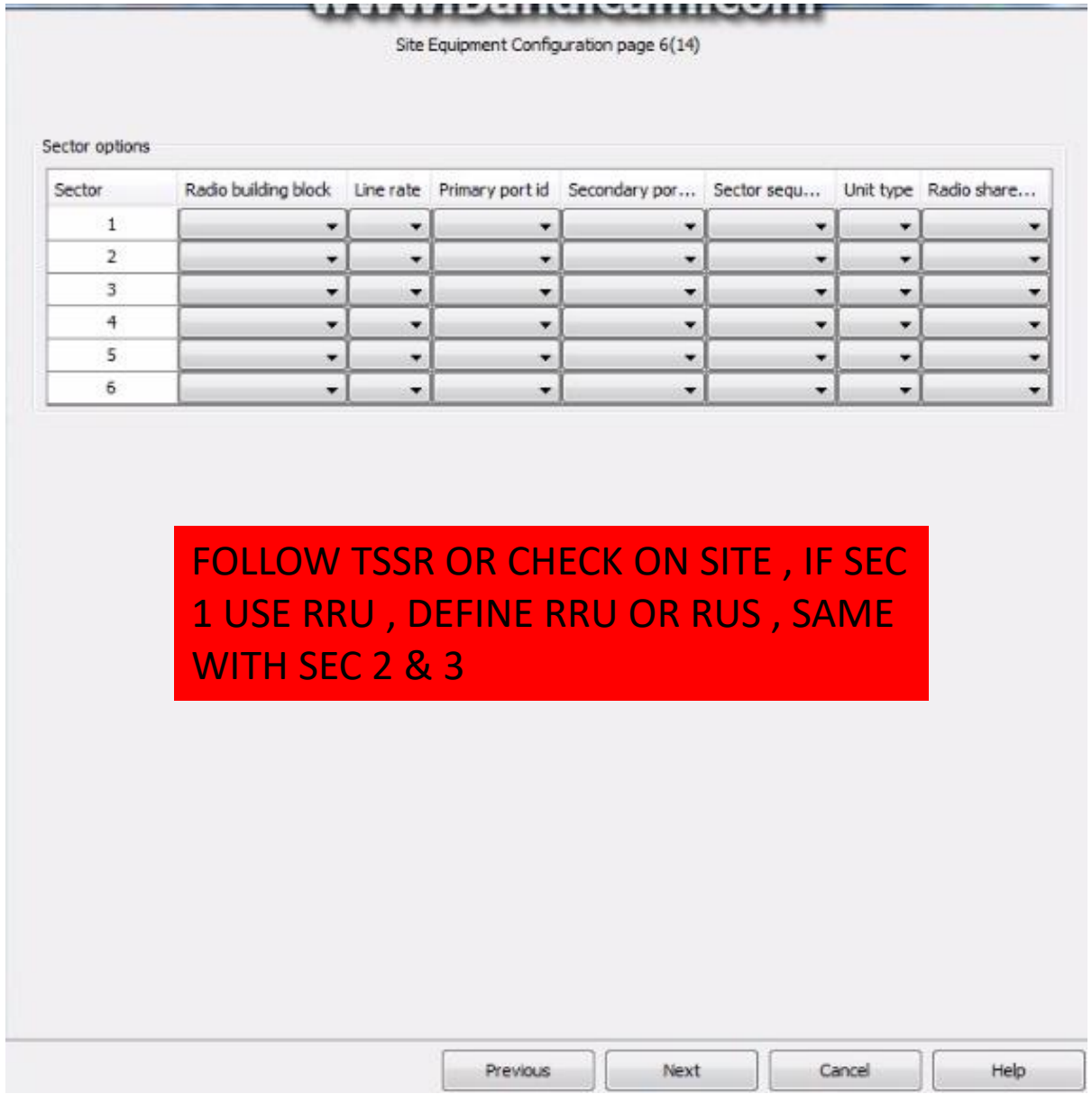
29. Fill follow photo ,next



30. Fill follow photo ,next



31. Set the RRU



32. Pls set follow existing new radio , example , if u install new rru sec 1 , means sec 2 & 3 is existing (existing sec 2 & 3 , must follow old kget config)

If sec 1 is new RRU , pls set ,
If NEW rru 4449 = RBB22_1G
If New rru is 2219 = RBB22_1A

Site Equipment Configuration page 6(14)

Sector options

Sector	Radio building block	Line rate	Primary port id	Secondary port id	Sector sequence	Unit type	Radio shared by
1	(RBB22_1G)	X2	BU1_A		1	RRUWRRUS	
2	RBB22_1A	X2	BU1_B		1	RUWRUS	
3	RBB22_1A	X2	BU1_C		1	RUWRUS	
4							
5							
6							

```
OFFLINE_RW10015_WISMAMUIS_DCG_K> get . radiobuildingblock

210317-10:38:35 OFFLINE_RW10015_WISMAMUIS_dcg_k 20.0p RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/1403
================================================================================================================
MO                                                          Attribute          Value
================================================================================================================
Sector=1                                                    radioBuildingBlock 2 (RBB22_1A)
Sector=2                                                    radioBuildingBlock 2 (RBB22_1A)
Sector=3                                                    radioBuildingBlock 2 (RBB22_1A)
----------------------------------------------------------------------------------------------------------------
Total: 3 MOs
```

Go to offline KGET , type get . Radio . buildingblock

Previous | Next | Cancel | Help

33. Open kget offline (refer page no. 3)

34 . Insert lattidue , longitude , mixmode configuration , follow kget

- Mixmode RRU must true
- Next

If sec 1 is new RRU , pls set ,
If NEW rru 4449 = RBB22_1G
If New rru is 2219 = RBB22_1A

```
OFFLINE_RW10086_SHINGYIN_DCG_K> get . latitude

190528-13:44:02 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/618
================================================================================
MO                                              Attribute       Value
================================================================================
Sector=1                                        latitude        550721
Sector=2                                        latitude        550721
Sector=3                                        latitude        550721
================================================================================
Total: 3 MOs


OFFLINE_RW10086_SHINGYIN_DCG_K> get . longitude

190528-13:44:11 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/618
================================================================================
MO                                              Attribute       Value
================================================================================
Sector=1                                        longitude       5408219
Sector=2                                        longitude       5408219
Sector=3                                        longitude       5408219
================================================================================
Total: 3 MOs


OFFLINE_RW10086_SHINGYIN_DCG_K> get . height

190528-13:49:14 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/618
================================================================================
MO                                              Attribute       Value
================================================================================
Sector=1                                        height          2600
Sector=2                                        height          2600
Sector=3                                        height          2600
================================================================================
Total: 3 MOs
```

Site Equipment Configuration page 7(14)

Sector data configuration

Sector Data Configuration

	Sector=1	Sector=2	Sector=3
Latitude:	550721	550721	550721
Lat hemisphere:	NORTH	NORTH	NORTH
Longitude:	5408219	5408219	5408219
Geo datum:	WGS84	WGS84	WGS84
Height	2600	2600	2600
Noise figure	-1	-1	-1
Sector group	-1	-1	-1
Mixed Mode configuration	T	FF	T

	Sector 3
RRUW-1	TRUE

If sec 1 rru is mixmode , set to true (same with other sector if mixmode

35. Set cell carrier
36. sector Use RRU mixmode only set 1 carrier
37. sector use RUS set 2 or 3 carrier follow existing (cek on kget offline)
38. follow SSr

	LOCAL CELL ID NO		
Sector	1st carrier	2nd carrier	3rd carrier
Sec 1	1	4	7
Sec 2	2	5	8
Sec 3	3	6	9

```
NEW RRU MIXMODE
NO of TX Branches = 2
NO of RX Branches = 2

EXISTING RUS MIXMODE
NO of TX Branches = 1
NO of RX Branches = 2
```

```
OFFLINE_RW10086_SHINGYIN_DCG_K> st carr

190613-13:29:40 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/1078
================================================================================
Proxy  Adm State     Op. State     MO
================================================================================
 1815              1 (ENABLED)   NodeBFunction=1,Sector=1,Carrier=1
 1833              1 (ENABLED)   NodeBFunction=1,Sector=1,Carrier=2
 1852              1 (ENABLED)   NodeBFunction=1,Sector=2,Carrier=1
 1870              1 (ENABLED)   NodeBFunction=1,Sector=2,Carrier=2
 1888              1 (ENABLED)   NodeBFunction=1,Sector=2,Carrier=3
 1907              1 (ENABLED)   NodeBFunction=1,Sector=3,Carrier=1
 1925              1 (ENABLED)   NodeBFunction=1,Sector=3,Carrier=2
 1943              1 (ENABLED)   NodeBFunction=1,Sector=3,Carrier=3
================================================================================
Total: 8 MOs

OFFLINE_RW10086_SHINGYIN_DCG_K>
```

Site Equipment Configuration page 8(14)

RBS Local cell configuration

Carrier Allocation Mode: * Advanced

Sector 1

	Cell=1	Cell=2	Cell=3	Cell=4
Create cell:	☑	☐	☐	☐
Local cell ID:	1	-	-	-
Number of TX branches:	2	-	-	-
Number of RX branches:	2	-	-	-
Cell range (m):	35000	-	-	-
OperatingBand:	1	-	-	-

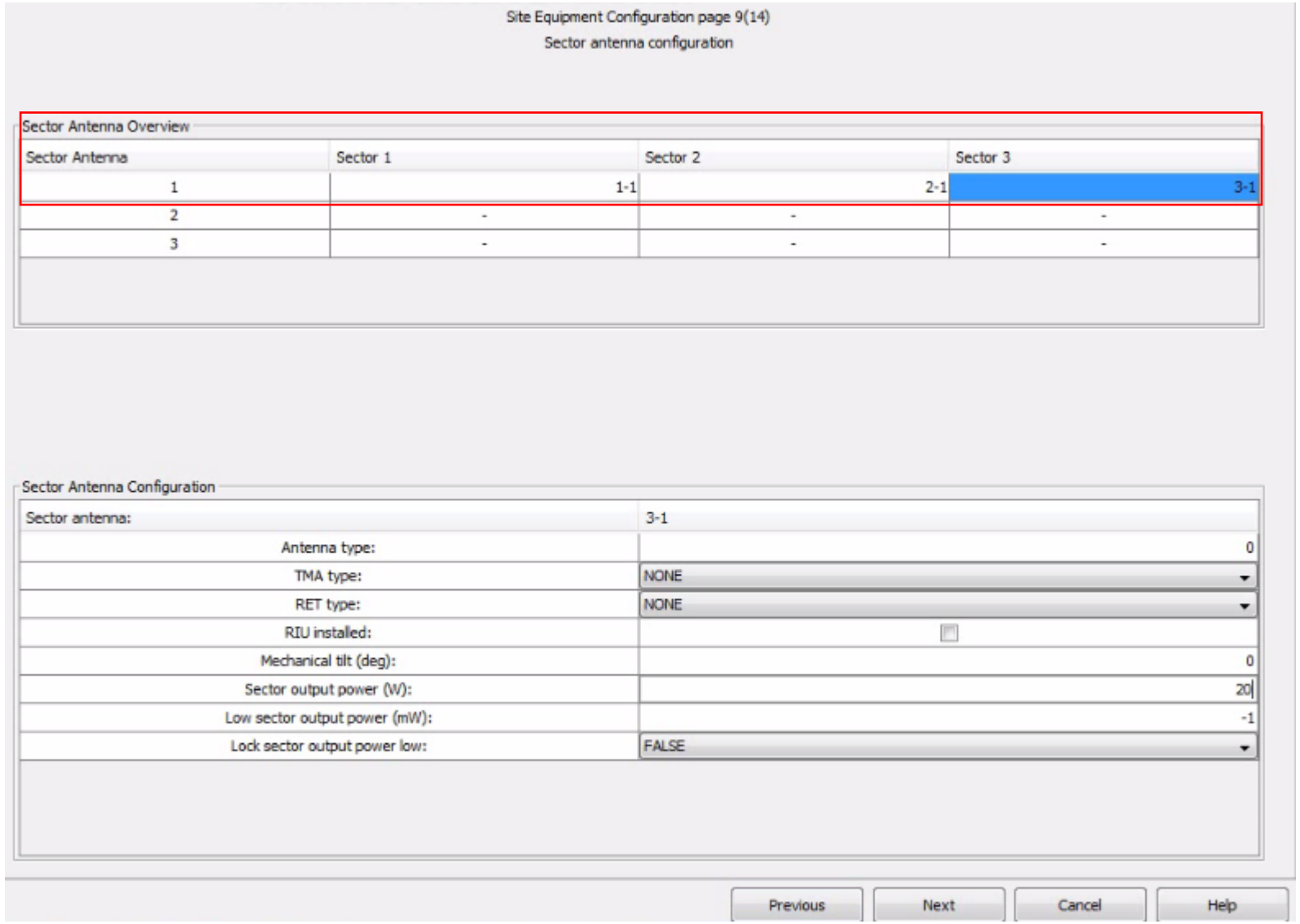
Sector 2

	Cell=1	Cell=2	Cell=3	Cell=4
Create cell:	☑	☑	☑	☐
Local cell ID:	2	5	8	-
Number of TX branches:	1	1	1	-
Number of RX branches:	2	2	2	-
Cell range (m):	35000	35000	35000	-
OperatingBand:	1	1	1	-

Sector 3

	Cell=1	Cell=2	Cell=3	Cell=4
Create cell:	☑	☐	☐	☐
Local cell ID:	3	-	-	-
er of TX branches:	2	-	-	-
er of RX branches:	2	-	-	-
ell range (m):	35000	-	-	-
perating Band:	1	-	-	-

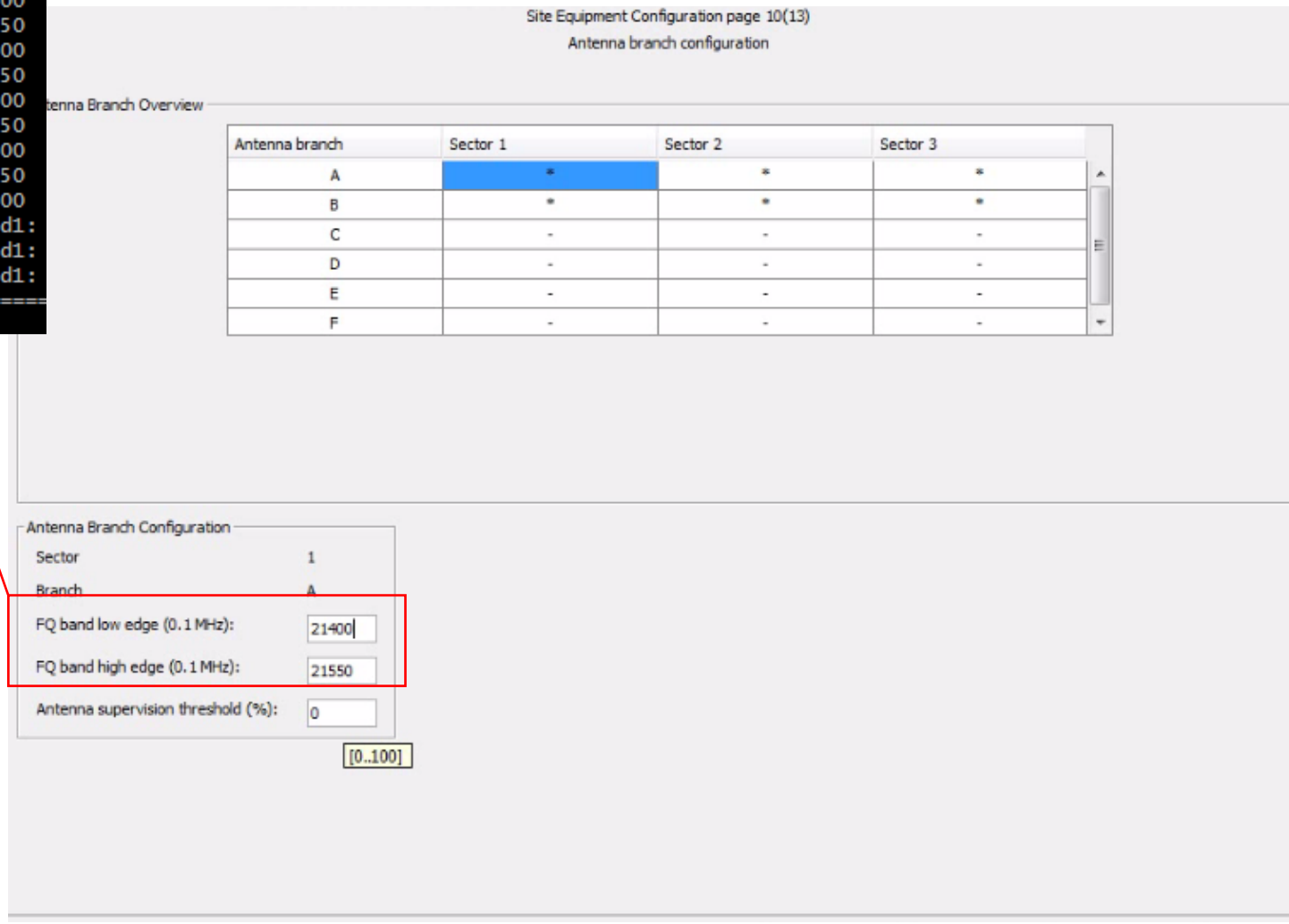
39. set sector anatenna & next



```
OFFLINE_RW10086_SHINGYIN_DCG_K> get . fqband

190529-11:31:35 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPL
================================================================================
MO                                                  Attribute         Value
================================================================================
SectorAntenna=3-1,AntennaBranch=A                   fqBandHighEdge    21550
SectorAntenna=3-1,AntennaBranch=A                   fqBandLowEdge     21400
SectorAntenna=3-1,AntennaBranch=B                   fqBandHighEdge    21550
SectorAntenna=3-1,AntennaBranch=B                   fqBandLowEdge     21400
SectorAntenna=1-1,AntennaBranch=A                   fqBandHighEdge    21550
SectorAntenna=1-1,AntennaBranch=A                   fqBandLowEdge     21400
SectorAntenna=1-1,AntennaBranch=B                   fqBandHighEdge    21550
SectorAntenna=1-1,AntennaBranch=B                   fqBandLowEdge     21400
SectorAntenna=2-1,AntennaBranch=A                   fqBandHighEdge    21550
SectorAntenna=2-1,AntennaBranch=A                   fqBandLowEdge     21400
SectorAntenna=2-1,AntennaBranch=B                   fqBandHighEdge    21550
SectorAntenna=2-1,AntennaBranch=B                   fqBandLowEdge     21400
Sector=1                                            fqBands           Band1:
Sector=2                                            fqBands           Band1:
Sector=3                                            fqBands           Band1:
================================================================================
Total: 9 MOs
```

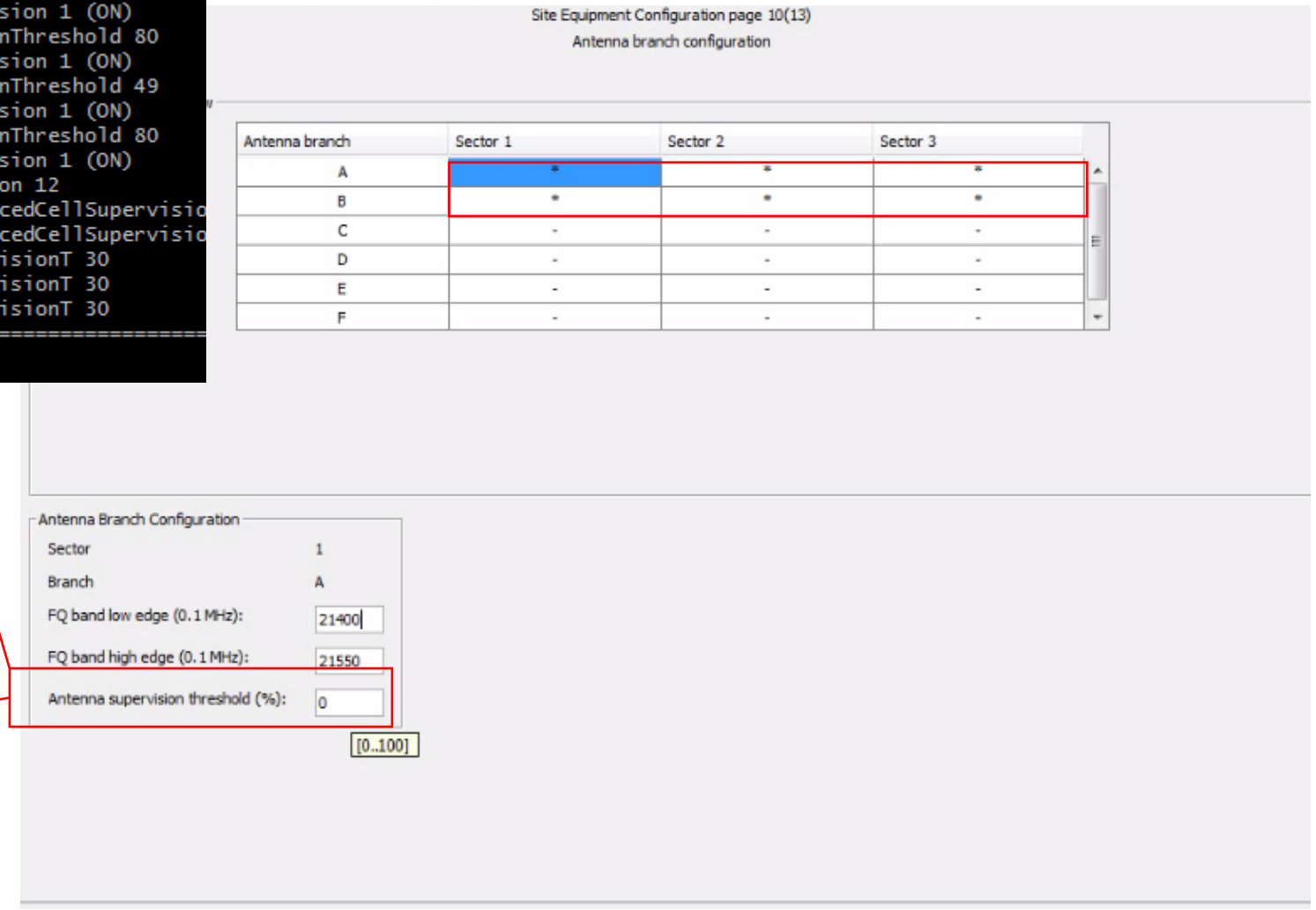
40. Set antenna branch all sector follow exiting kget



41. Set antenna supervision threshold all sector branch A & Branch B

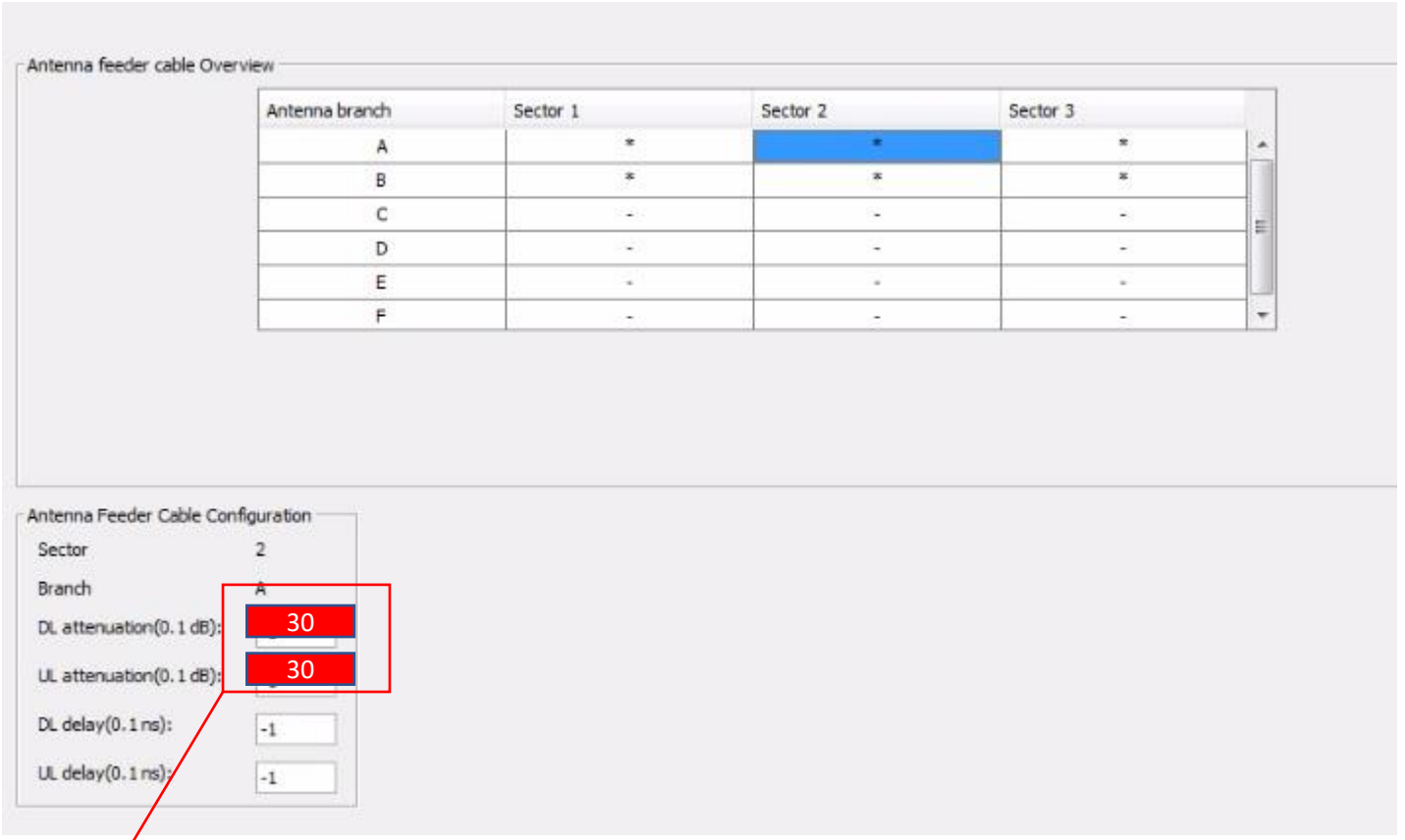
```
OFFLINE_RW10086_SHINGYIN_DCG_K> get . super

190529-11:35:41 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopf
================================================================================
MO                                                  Attribute          Value
================================================================================
SectorAntenna=3-1,AntennaBranch=A                   antennaSupervisionThreshold 49
SectorAntenna=3-1,AntennaBranch=A                   lowCurrentSupervision 1 (ON)
SectorAntenna=3-1,AntennaBranch=B                   antennaSupervisionThreshold 80
SectorAntenna=3-1,AntennaBranch=B                   lowCurrentSupervision 1 (ON)
SectorAntenna=1-1,AntennaBranch=A                   antennaSupervisionThreshold 49
SectorAntenna=1-1,AntennaBranch=A                   lowCurrentSupervision 1 (ON)
SectorAntenna=1-1,AntennaBranch=B                   antennaSupervisionThreshold 80
SectorAntenna=1-1,AntennaBranch=B                   lowCurrentSupervision 1 (ON)
SectorAntenna=2-1,AntennaBranch=A                   antennaSupervisionThreshold 49
SectorAntenna=2-1,AntennaBranch=A                   lowCurrentSupervision 1 (ON)
SectorAntenna=2-1,AntennaBranch=B                   antennaSupervisionThreshold 80
SectorAntenna=2-1,AntennaBranch=B                   lowCurrentSupervision 1 (ON)
Climate=1                                           fanSpeedSupervision 12
NodeBFunction=1                                     featureStateAdvancedCellSupervisio
NodeBFunction=1                                     licenseStateAdvancedCellSupervisio
Iub=RW10086,NbapCommon=1                            l2EstablishSupervisionT 30
Iub=RW10086,NbapCommon=1                            l3EstablishSupervisionT 30
Iub=RW10086,NbapDedicated=1                         l2EstablishSupervisionT 30
================================================================================
Total: 10 MOs
```




```
AntennaBranch=A | antennaSupervisionThreshold = 49
AntennaBranch=B | antennaSupervisionThreshold = 80
```

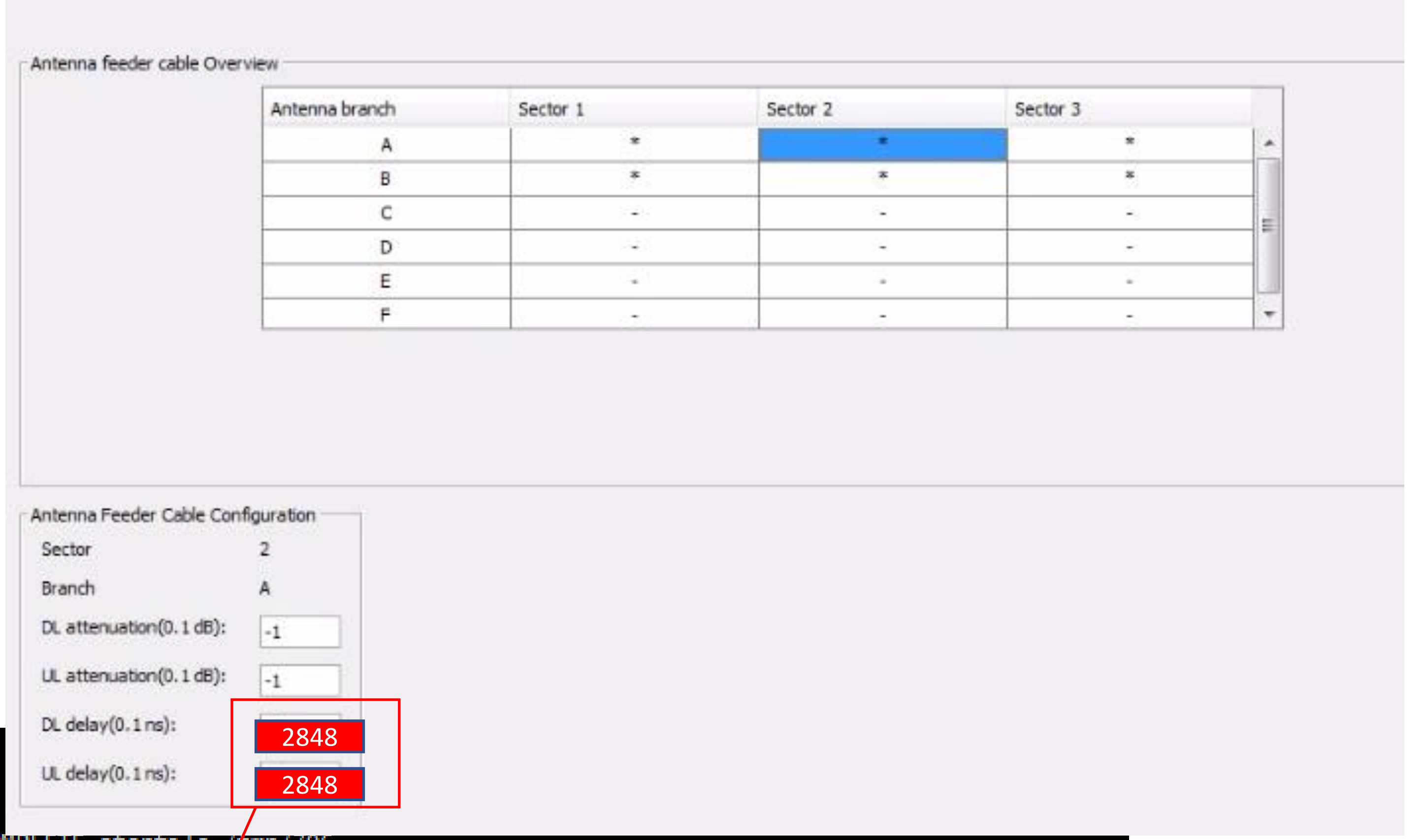
42. Set attenuation (only sector use feeder , & existing sector & antenna branch A & B , follow existing on kget




```
OFFLINE_RW10086_SHINGYIN_DCG_K> get . attenuation

190617-22:36:44 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/266
================================================================================================================
MO                                                  Attribute              Value
================================================================================================================
RfCable=1_5_RXA_IO                                  dlAttenuation          -1
RfCable=1_5_RXA_IO                                  ulAttenuation          2
RfCable=1_11_RXA_IO                                 dlAttenuation          -1
RfCable=1_11_RXA_IO                                 ulAttenuation          2
RfCable=1_7_RXA_IO                                  dlAttenuation          -1
RfCable=1_7_RXA_IO                                  ulAttenuation          2
AntFeederCable=1A                                   dlAttenuation          i[15] = 30 30 30 30 30 30 30 30 30 30 30 30 -1 -1 -1
AntFeederCable=1A                                   dlAttenuationPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=1A                                   ulAttenuation          i[15] = 30 30 30 30 30 30 30 30 30 30 30 30 -1 -1 -1
AntFeederCable=1A                                   ulAttenuationPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=1B                                   dlAttenuation          i[15] = 30 30 30 30 30 30 30 30 30 30 30 30 -1 -1 -1
AntFeederCable=1B                                   dlAttenuationPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=1B                                   ulAttenuation          i[15] = 30 30 30 30 30 30 30 30 30 30 30 30 -1 -1 -1
AntFeederCable=1B                                   ulAttenuationPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=2A                                   dlAttenuation          i[15] = 30 30 30 30 30 30 30 30 30 30 30 30 -1 -1 -1
AntFeederCable=2A                                   dlAttenuationPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=2A                                   ulAttenuation          i[15] = 30 30 30 30 30 30 30 30 30 30 30 30 -1 -1 -1
AntFeederCable=2A                                   ulAttenuationPerFqRange i[4] = -1 -1 -1 -1
```

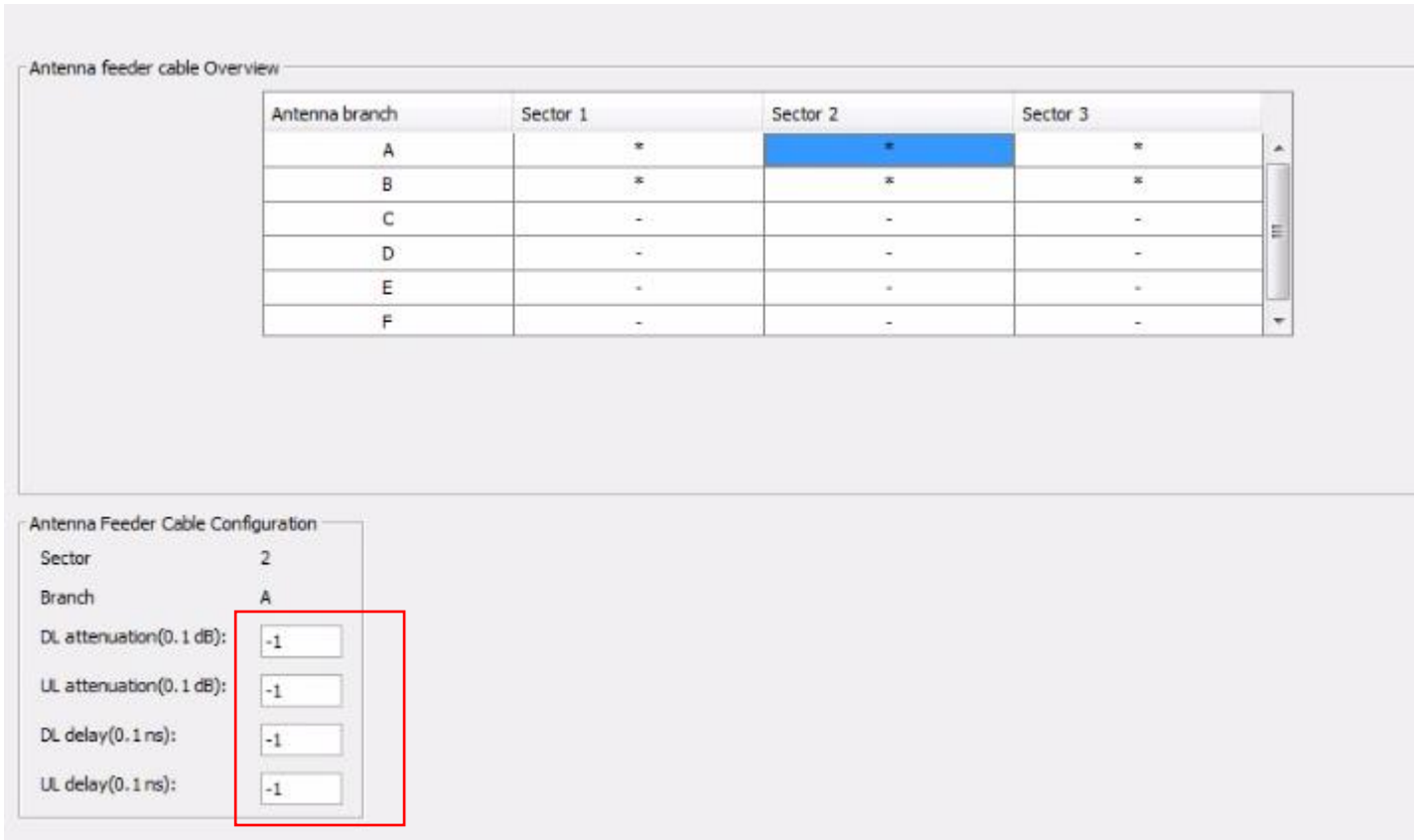
43. Set delay (only sector use feeder , & existing sector & antenna branch A & B , follow existing on kget



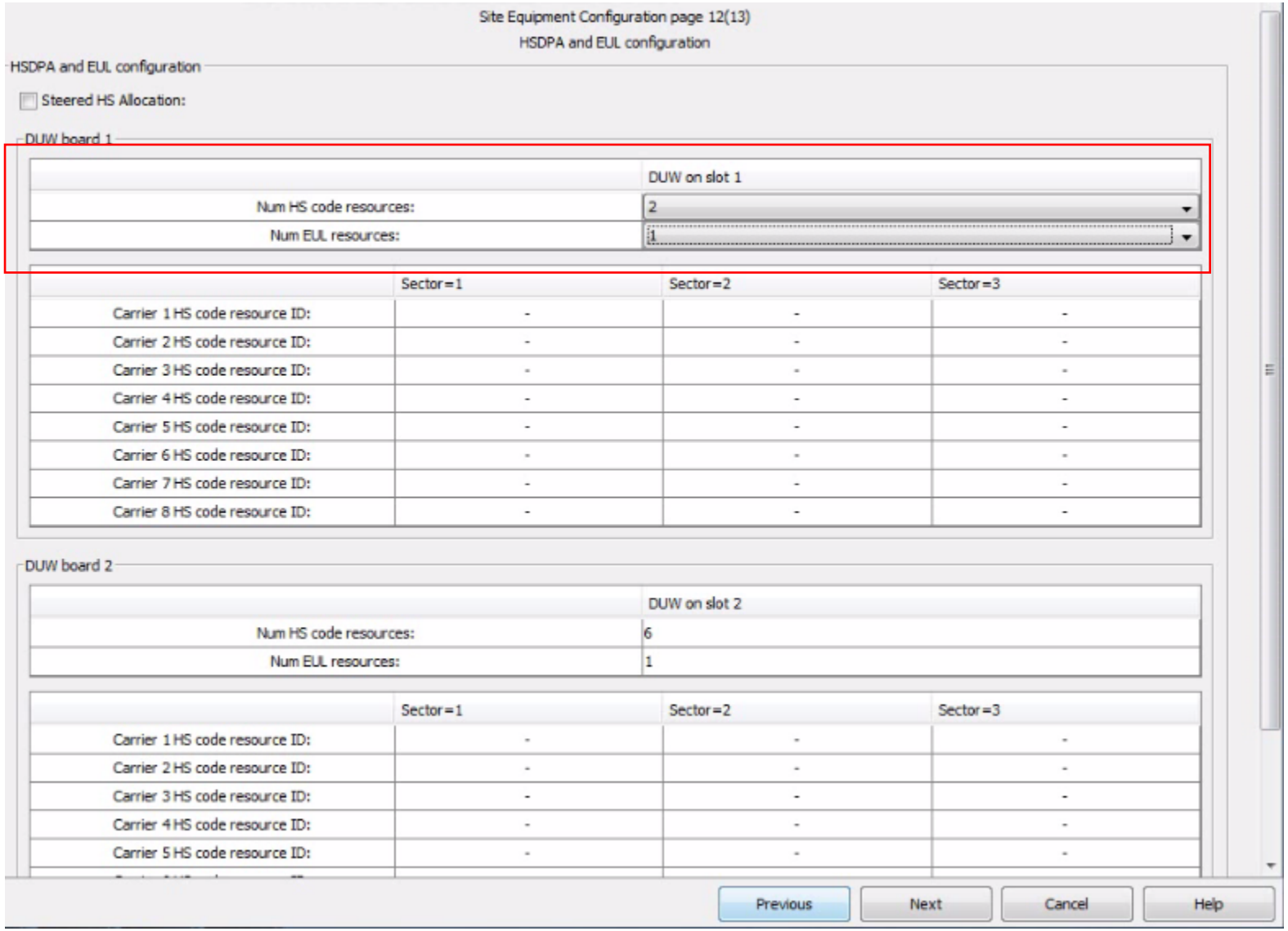

```
OFFLINE_RW10086_SHINGYIN_DCG_K> get . delay

190529-11:39:43 OFFLINE_RW10086_SHINGYIN_dcg_k 18.0c RBS_NODE_MODEL_U_4_741_COMPLETE stopfile=/tmp/706
=====================================================================================================
MO                                                        Attribute          Value
=====================================================================================================
RfCable=1_5_RXA_IO                                        electricalDlDelay -1
RfCable=1_5_RXA_IO                                        electricalUlDelay 6
Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalIp=1,GigaBitEthernet=1 statePropagationDelay 25
DigitalCable=1_11_DATA_2                                  electricalDelay   -1
RfCable=1_11_RXA_IO                                       electricalDlDelay -1
RfCable=1_11_RXA_IO                                       electricalUlDelay 6
RfCable=1_7_RXA_IO                                        electricalDlDelay -1
RfCable=1_7_RXA_IO                                        electricalUlDelay 6
DigitalCable=1_7_DATA_2                                   electricalDelay   -1
AntFeederCable=1A                                         electricalDlDelay i[15] = 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 -1 -1 -1
AntFeederCable=1A                                         electricalDlDelayPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=1A                                         electricalUlDelay i[15] = 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 -1 -1 -1
AntFeederCable=1A                                         electricalUlDelayPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=1B                                         electricalDlDelay i[15] = 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 -1 -1 -1
AntFeederCable=1B                                         electricalDlDelayPerFqRange i[4] = -1 -1 -1 -1
AntFeederCable=1B                                         electricalUlDelay i[15] = 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 2848 -1 -1 -1
```

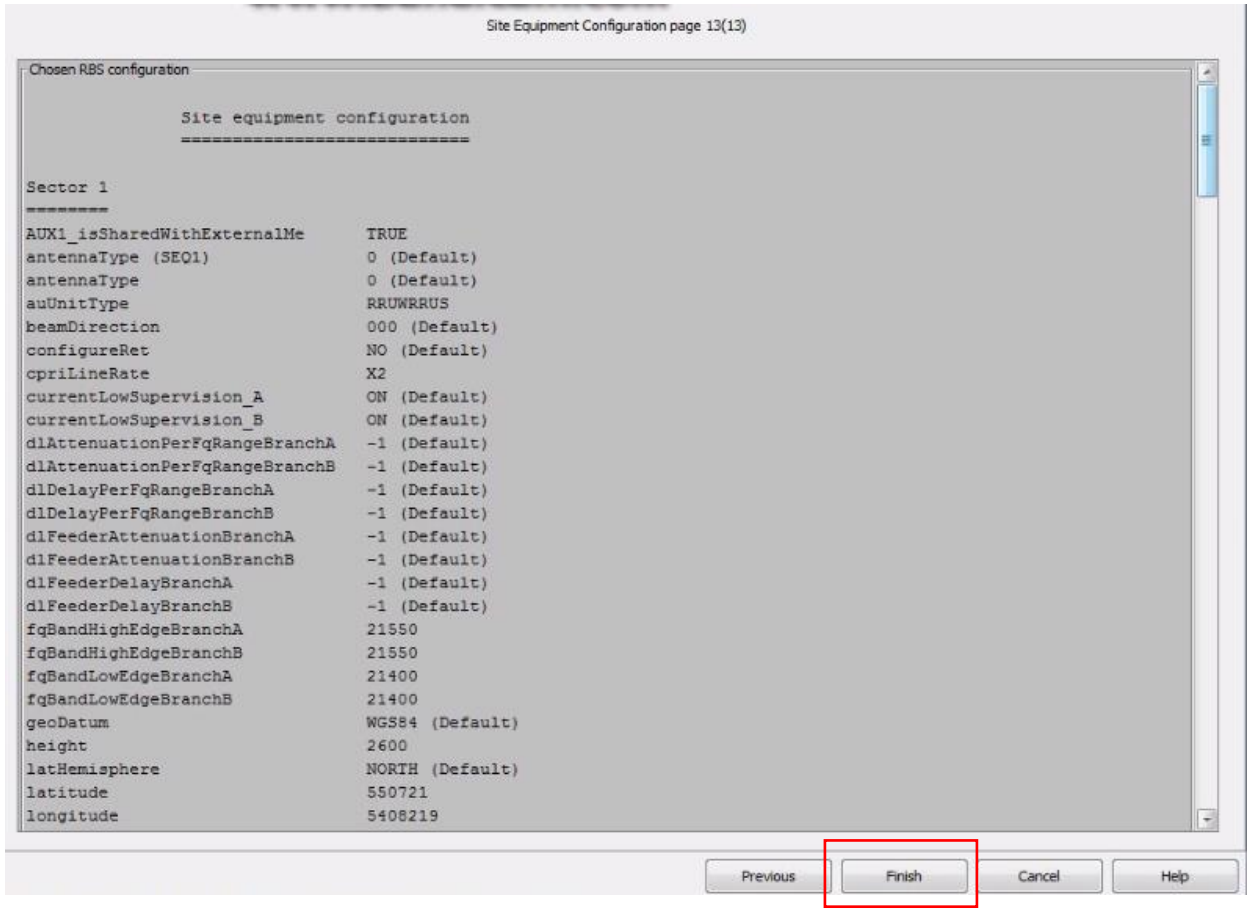
43. For sector use RRU (no feeder) just leave it value -1

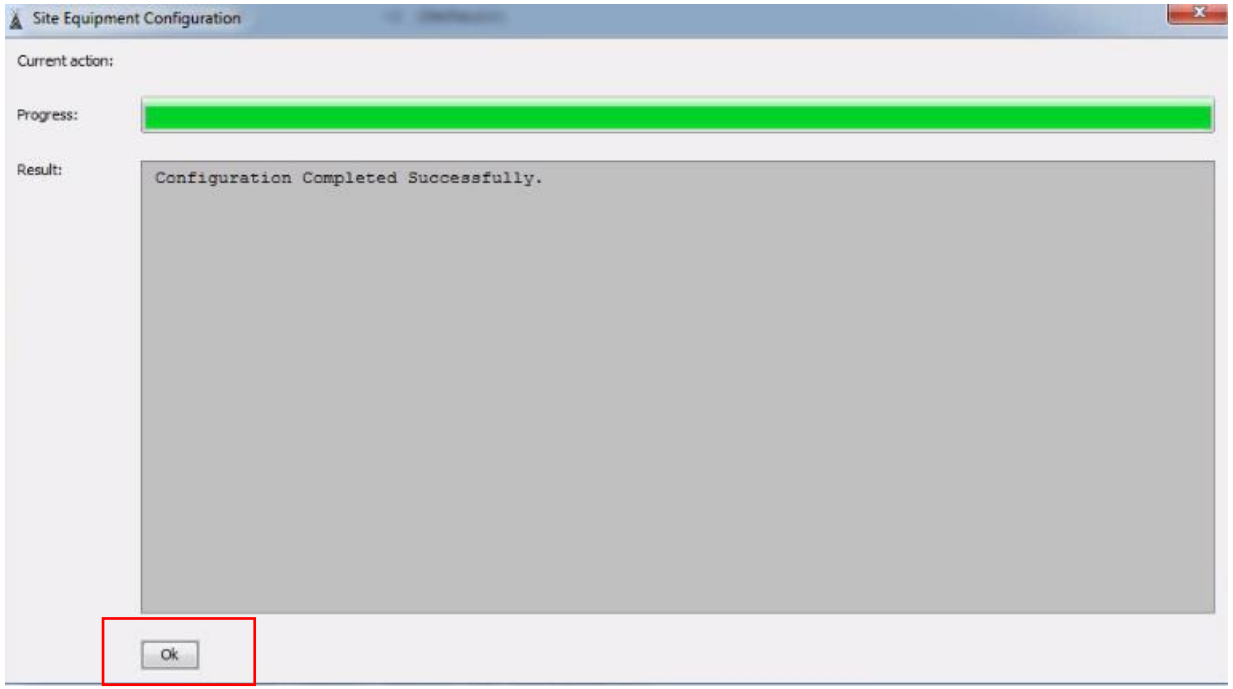


44. Set follow photo



44. FINISH



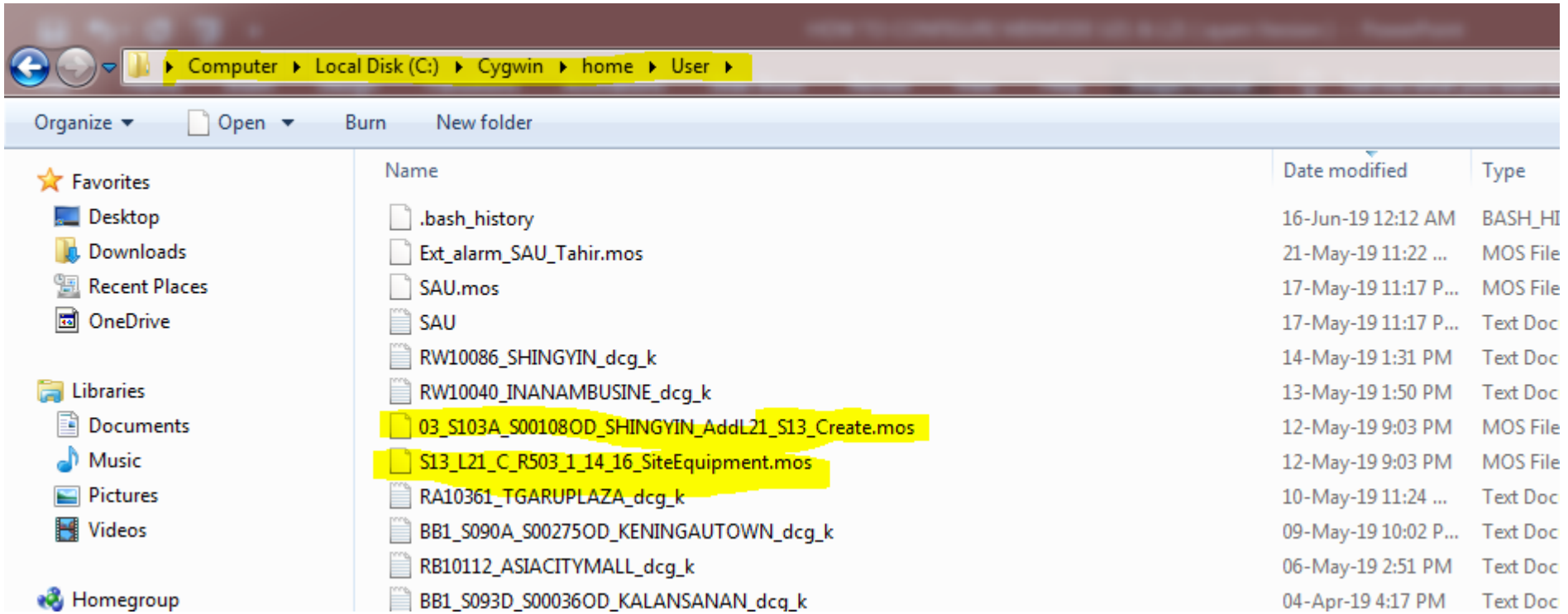


45. After finish pls ask Gsc

- Set NGS (BB1 = 1 , DUW = 3)
- Set Basebandpool
- Set RUs power (Follow existing Prelog)

CHAPTER 2 BB PART

1. Copy BB script to C:\Cygwin\home\User



2 . Login BB (online moshell)
3 . Make a new CV backup (cvms backup_before_new_L21)
4 . Type
- !ls
- Run < scriptname.mos >
- Run 03_S103A_S00108OD_SHINGYIN_AddL21_S13_Create.mos
- S13_L21_C_R503_1_14_16_SiteEquipment.mos

```
BB1_S103A_S00108OD_SHINGYIN> !ls

03_S103A_S00108OD_SHINGYIN_AddL21_S13_Create.mos  BB1_S098B_S00548OD_KGSARIP_dcg_k.log
BB1_Q124D_Q00520OD_HUNGHUNG_dcg_k.log             BB1_S113A_L00008OD_SGBANGAT_dcg_k.log
BB1_S090A_S00275OD_KENINGAUTOWN_dcg_k.log         BB1_S113A_L00008OD_SGBANGAT_dcg_k_modify.lo
BB1_S093B_S00048OD_KUWASA_dcg_k.log               BB2_S105A_S01670OD_DOCHOSPITAL2SDK_dcg_k.lo
BB1_S093B_S00048OD_KUWASA_log                     BB2_S110C_S00857OD_TMNWAWASAN_dcg_k.log
BB1_S093D_S00036OD_KALANSANAN_dcg_k.log           Create_EquipSupportFunction_Add_batteryLoad

BB1_S103A_S00108OD_SHINGYIN> run 03_S103A_S00108OD_SHINGYIN_AddL21_S13_Create.mos
```

```
B1_S103A_S00108OD_SHINGYIN> !ls

3_S103A_S00108OD_SHINGYIN_AddL21_S13_Create.mos  BB1_S098B_S00548OD_KGSARIP_dcg_k.log            RA10361_TGARUPLAZA_dcg_k.log
B1_Q124D_Q00520OD_HUNGHUNG_dcg_k.log             BB1_S113A_L00008OD_SGBANGAT_dcg_k.log           RB10112_ASIACITYMALL_dcg_k.log
B1_S090A_S00275OD_KENINGAUTOWN_dcg_k.log         BB1_S113A_L00008OD_SGBANGAT_dcg_k_modify.log    RW10040_INANAMBUSINE_dcg_k.log
B1_S093B_S00048OD_KUWASA_dcg_k.log               BB2_S105A_S01670OD_DOCHOSPITAL2SDK_dcg_k.log    RW10086_SHINGYIN_dcg_k.log
B1_S093B_S00048OD_KUWASA_log                     BB2_S110C_S00857OD_TMNWAWASAN_dcg_k.log         S099A_S01455OD_T3_KM120KALABAKANNABAWAN_dcg_k.l
B1_S093D_S00036OD_KALANSANAN_dcg_k.log           Create_EquipSupportFunction_Add_batteryLoad.mos S13_L21_C_R503_1_14_16_SiteEquipment.mos

B1_S103A_S00108OD_SHINGYIN> run S13_L21_C_R503_1_14_16_SiteEquipment.mos
```

5. All done pls ask Gsc to proceed