Dear Team,

In RJIL project there are different-different Hardware are installed at site for the Integration.

Here are some basic tips mentioned below so that the field team will make comfortable to integrate the Site.

A. 901 Router

1. First check you have NDD/NIP.

2. 901 router IOS in PEN Drive

=== How to install IOS ===

Router# dir usbflash0: (then Enter)

Router# check the file in your PEN Drive

Router# copy usbflash0:asr901-universalk9-mz.154-1.S1.bin flash0: (then Enter)

After copied the IOS check the flash0:

Router#Sh flash0: (Copied IOS should be displaced)

Note: Once new IOS will be displayed you removed the older IOS (152-2.s1)

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3. Copy the nip file in nvram

Method: you just copy the NIP file in PEN drive and rename the file i.e. 123.txt (because NIP file name is too long)

Run the command

Router#copy usbflash0:123.txtrunning-Config(then Enter)

Router#wr(then Enter)

Check the boot system file in running config

New Hostname#sh run | inc boot

Below command will be displayed

boot system flash bootflash:asr901-universalk9-mz.154-1.S1.bin

After then reload the router (confirm with L2 before reload)

4. Check the respective site which will be connected to the interface

New Hostname#shint des

After that insert the SFP & connect the patch cord (Fiber/Microwave)

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5. Check the VLAN interface of respective interface where link will be terminated

New Hostname#shipint brief

6. Call for support

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B.920 Router

1. First check you have NDD/NIP.

2. Copy the NIP as per 901 router method &no need to reload router as IOS already installed in router

3. Check the License(Hostname#shlicencse)

4. Intex 8 would be shown some value (Three four Lines)

if not found then type the below command

Hostname#shlicencseudi (then provide the S.No.and PID value team will provide you new license)

How to install licence in router

#conf t

(Config)#no license smart enable

(Config)#exit

#copy usb0:………file name……….. flash: (copy the license file in your USB then copy it in to flash:)

#install license flash:

#sh license

5. Check the respective site which will be connected to the interface

New Hostname#shint des

After that insert the SFP & connect the patch cord (Fiber/Microwave)

6. Check the BDI interface of respective interface where link will be terminated

New Hostname#shipint brief

7.Call for support

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C. 903 Router

1. First check you have NDD/NIP.

2. 903 router IOS in PEN Drive (asr903rsp1-universalk9\_npe.03.11.00.S.154-1.S-std.bin)

=== How to install IOS ===

Router# dir usbflash0: (then Enter)

Router# check the file in your PEN Drive

Router# copy usbflash0:asr903rsp1-universalk9\_npe.03.11.00.S.154-1.S-std.bin flash0: (then Enter)

Router# copy usbflash0:asr903rsp1-universalk9\_npe.03.11.00.S.154-1.S-std.bin stby-bootflash: (then Enter)

After copied the IOS check the flash0:

Router#Sh flash0: (Copy IOS should be displaced)

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3. Copy the nip file in nvram

Method: you just copy the NIP file in PEN drive and rename the file i.e. 123.txt (because NIP file name is too long)

run the command

Router#copy usbflash0:123.txt running-config(then Enter)

Router#wr(then Enter)

Check the boot system file in running config

New Hostname#sh run | inc boot

Below command will be displayed

boot system bootflash:asr903rsp1-universalk9\_npe.03.11.00.S.154-1.S-std.bin

boot system stby-bootflash:asr903rsp1-universalk9\_npe.03.11.00.S.154-1.S-std.bin

After then reload the router (confirm with L2 before reload)

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4. Check the respective site which will be connected to the interface

New Hostname#shint des

After that insert the SFP , connect the patch cord (Fiber/Microwave)

5. Check the BDI interface of respective interface where link will be terminated

New Hostname#shipint brief

6. Call for support

Please feel free to contact me if any doubt or suggestion.

|  |  |  |  |
| --- | --- | --- | --- |
| Vlan/BDI | Port 901/920 | Port 903 | BDI |
| 351 | Gi0/4 or Gi0/0/4 | Gi0/4/0 | 357 |
| 352 | Gi0/6 or Gi0/0/6 | Gi0/4/1 | EnodB |
| 353 | Gi0/7 or Gi0/0/7 | Gi0/4/2 | 356 |
|  |  | Gi0/4/3 | 355 |
|  |  | Gi0/4/4 | 354 |
|  |  | Gi0/4/5 | 353 |
|  |  | Gi0/4/6 | 352 |
|  |  | Gi0/4/7 | 351 |
|  |  |  |  |

Dear Team,

On the field we will come across scenarios where link connecting between 901 & 920i on TenGig interfaces will not come up.

The reason is that

On **920i**, when a 1G SFP is inserted on the TenGig port, AutoNegotiationis**Enabled** by default. There is no command available to reverse it.

On **901**, when a 1G SFP is inserted on the TenGig port, AutoNegotiationis**Disabled** by default. There is no command available to reverse it.

The solution is to apply a Script on the **901** so that AutoNego can be enabled via internal shell on the router.

There are 3 possible scenarios:

1)      901 TenGig 0/0 & TenGig0/1 both are connected to 920i routers.

2)      901 TenGig 0/0 only is connected to 920i.

3)      901 TenGig 0/1 only is connected to 920i.

The Script to be run for each scenario is shown below. The SFP on the 901 may need to be removed & reinserted to trigger the script.

Configure “Terminal monitor”.

Once the transceiver (SFP) is removed & inserted, the Log message “AUTO NEGOTIATION SCRIPT STARTED ON 10G” should appear indicating that the script is triggered,

and after a few seconds “AUTO NEGOTIATION RUNNING ON 10G” will be shown indicating that the script has completed.

**Caution:** If wrong port selection and script execution will result in an existing link going down and reachability will be lost.

On-site engineer will be required. Please follow the options meticulously.

1)      901 TenGig 0/0 & TenGig0/1 both are connected to 920i routers:

event manager session cli username "rjil"

event manager applet AutoNegotiation10G

event syslog pattern "%SYS-5-RESTART|.\*transceiver module inserted in TenGigabitEthernet.\*|.\*Cisco\*|.\*Line protocol on Interface TenGigabitEthernet\*" maxrun 50

action 1.0 syslog msg "AUTO NEGOTIATION SCRIPT STARTED ON 10G"

action 1.1 cli command "enable"

action 1.2 cli command "test platform bcm shell" pattern "BCM>"

action 1.3 cli command "port xe0 an=on" pattern "BCM>"

action 1.4 cli command "port xe1 an=on" pattern "BCM>"

action 1.5 cli command "quit" pattern "#"

action 1.6 syslog msg "AUTO NEGOTIATION RUNNING ON 10G "

2)      901 TenGig0/0 only is connected to 920i.

event manager session cli username "rjil"

event manager applet AutoNegotiation10G

event syslog pattern "%SYS-5-RESTART|.\*transceiver module inserted in TenGigabitEthernet.\*|.\*Cisco\*|.\*Line protocol on Interface TenGigabitEthernet0/0\*" maxrun 50

action 1.0 syslog msg "AUTO NEGOTIATION SCRIPT STARTED ON 10G"

action 1.1 cli command "enable"

action 1.2 cli command "test platform bcm shell" pattern "BCM>"

action 1.3 cli command "port xe0 an=on" pattern "BCM>"

action 1.4 cli command "quit" pattern "#"

action 1.5 syslog msg "AUTO NEGOTIATION RUNNING ON 10G "

3)      901 TenGig0/1 only is connected to 920i.

event manager session cli username "rjil"

event manager applet AutoNegotiation10G

event syslog pattern "%SYS-5-RESTART|.\*transceiver module inserted in TenGigabitEthernet.\*|.\*Cisco\*|.\*Line protocol on Interface TenGigabitEthernet0/1\*" maxrun 50

action 1.0 syslog msg "AUTO NEGOTIATION SCRIPT STARTED ON 10G"

action 1.1 cli command "enable"

action 1.2 cli command "test platform bcm shell" pattern "BCM>"

action 1.3 cli command "port xe1 an=on" pattern "BCM>"

action 1.4 cli command "quit" pattern "#"

action 1.5 syslog msg "AUTO NEGOTIATION RUNNING ON 10G "

**NOTE:**

-          ASR920i to ASR920i does not have any problem in coming UP since AutoNego is enabled on both sides.

-          ASR920i to ASR903 does not have any problem, since ASR903 Gig0/4/X interfaces have the command to enable “negotiation auto”

Thanks & Regards,

Ramesh Panchal

Network Enginner.

: (91) 9967591287 | : [rameshp.in@sraoss.com](mailto:rameshp.in@sraoss.com) / [ramesh.p.panchal@ril.com](mailto:ramesh.p.panchal@ril.com)

Thanks & Regards,

Satish Kumar Rai

09910064213