

Enabling UNI 4.0 Support



In order to have UNI Signaling Version 4.0 enabled you need to load two new image files and make a change in the mpm.cmd. I also need to mention, that UNI 4.0 (as of today) may be released in Microcode Version 4.1.3 and for OmniSwitch only.

Following Output will show the default signaling, which is UNI 3.0.

```
/Interface/ATM % vap
```

(I have deleted some lines to have affected signaling visible only)

ATM Port Table

Slot	Port	ATM Port Description	Conn Type	Tran Type	Media Type	UNI Typ	Max VCC	VCI bits
3	1	ATM PORT	SVC	--	--	Pri	1023	10

Slot	Port	ATM Network Prefix	End System Identifier	Sig Ver	Sig VCI	ILMI Enable	ILMI VCI	ILMI Poll
3	1	3903488001bc90000101dbc2c0	0020dab043a0	3.0	5	True	16	Off

CSM Port Table

Slot	Port	CSM Port Description	Tran Type	Media Type	Intrf Type	Uni Ver	#VPI	#VCI
3	1	CSM PORT	STS12c	Multi	PrUNI	3.0	2	10
7	1	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10
7	2	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10
7	3	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10
7	4	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10
7	5	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10
7	6	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10
7	7	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10
7	8	CSM PORT	STS3c	Multi	PrUNI	3.0	2	10

Using UI command "map slot/port" you could configure Signaling Version also for 3.1 not for 4.0 without some modifications I describe later on.

```
/% map 7/1
```

Slot 7 Port 1 Configuration

- 1) Description (30 chars max) : CSM PORT
- 2) ESI (12 hex-chars) : 0020da000180
NetPrefix(3903488001bc90000101dbc2c0)
- 3) Max VPI bits (1..11) : 2
- 4) Max VCI bits (1..11) : 10
- 5) I/F Type {Pub UNI(1), Pri UNI(2),
PNNI(3), IISP netw(4),
IISP user(5)} : Private
- 6) Phy Protocol {SONET(1), SDH(2)} : SONET
- 7) Signaling Ver {3.0(1), 3.1(2)} : 3.0 <----- 4.0 option is not available
with default settings
- 8) ILMI Enable {False(1), True(2)} : Enable
in mpm.cmd and not loaded mpg-files
- 80) CSM Port Auto Cfg
{Enable(1), Disable(2)} : Disable
- 81) ILMI Polling {Off(1),On(2)} : On
- 9) Timing Mode {Local(1), Loop(2)} : Local
- 90) Local {Osc(1), Bus(2)} : Osc

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```
14) Signaling Status ( Disable (1)
      Enable (2)      : Enable
15) Phy Loopback {none(0), diag(1),
      line(2)}       : None
```

```
Enter (option=value/save/cancel) : cancel
Exiting menu - csm port not modified..
```

Enabling 4.0 Support

To get UNI 4.0 working you have to upload `asm_mpg.img` (additional) and `cell_mpg.img` (additional) onto the switch and add following command "`atm_load_mpg=1`" into the `mpm.cmd`.

Here are 2 examples of used `mpm.cmd`

Before enabling UNI 4.0

```
cmDoDump=1
wait=!cmIfMaster()
taskDelay(600*wait)
cmInit
```

After enabling UNI 4.0

```
cmDoDump=1
wait=!cmIfMaster()
taskDelay(600*wait)
atm_load_mpg=1    <---- This is the new entry
cmInit
```

PREPARATION

Having `asm_mpg.img` and `cell_mpg.img` on the switch available, having `mpm.cmd` with the entry `atm_load_mpg=1` extended please reboot the switch to make new additions working. After reboot you now have an additional parameter at "Modify ATM port - map" available, which lets you configure the ATM port to support 4.0

```
/ % map 7/1
```

```
Slot 7 Port 1 Configuration

1) Description (30 chars max)      : CSM PORT
2) ESI (12 hex-chars)             : 0020da000180
   NetPrefix(3903488001bc90000101dbc2c0)
3) Max VPI bits (1..11)           : 2
4) Max VCI bits (1..11)           : 10
5) I/F Type {Pub UNI(1), Pri UNI(2),
   PNNI(3), IISP netw(4),
   IISP user(5)}                  : Private
6) Phy Protocol {SONET(1), SDH(2)} : SONET
7) Signaling Ver
   {3.0(1), 3.1(2), 4.0(3)}       : 3.0    <----- 4.0 option is now available
8) ILMI Enable {False(1), True(2)} : Enable
   80) CSM Port Auto Cfg
      {Enable(1), Disable(2)}     : Disable
   81) ILMI Polling {Off(1),On(2)} : On

9) Timing Mode {Local(1), Loop(2)} : Local
   90) Local {Osc(1), Bus(2)}     : Osc
```

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```

14) Signaling Status ( Disable (1)
                        Enable (2) : Enable
15) Phy Loopback {none(0), diag(1),
                  line(2)} : None
    
```

Enter (option=value/save/cancel) : **7=3**

Slot 7 Port 1 Configuration

```

1) Description (30 chars max) : CSM PORT
2) ESI (12 hex-chars) : 0020da000180
   NetPrefix(3903488001bc90000101dbc2c0)
3) Max VPI bits (1..11) : 2
4) Max VCI bits (1..11) : 10
5) I/F Type {Pub UNI(1), Pri UNI(2),
             PNNI(3), IISP netw(4),
             IISP user(5)} : Private
6) Phy Protocol {SONET(1), SDH(2)} : SONET
7) Signaling Ver
   {3.0(1), 3.1(2), 4.0(3)} : 4.0
8) ILMI Enable {False(1), True(2)} : Enable
80) CSM Port Auto Cfg
   {Enable(1), Disable(2)} : Disable
81) ILMI Polling {Off(1),On(2)} : On

9) Timing Mode {Local(1), Loop(2)} : Local
90) Local {Osc(1), Bus(2)} : Osc

14) Signaling Status ( Disable (1)
                        Enable (2) : Enable
15) Phy Loopback {none(0), diag(1),
                  line(2)} : None
    
```

Enter (option=value/save/cancel) : **save**

Reset all connections on slot 7 port 1 (n)? : **y**
 Resetting port, please wait...

Using same output as above you now see the change at UNI version.

/ % vap

(I have deleted some lines to have affected signaling visible only)

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Slot	Port	ATM Port Description	Conn Type	Tran Type	Media Type	UNI Typ	Max VCC	VCI bits
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Slot	Port	ATM Network Prefix	End System Identifier	Sig Ver	Sig VCI	ILMI Enable	ILMI VCI	ILMI Poll
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CSM Port Table

Slot	Port	CSM Port Description	Tran Type	Media Type	Intrf Type	Uni Ver	#Bits VPI	VCI
3	1	ATM PORT	SVC	--	--	Pri	1023	10

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```
3 1 CSM PORT STS12c Multi PrUNI 3.0 2 10
7 1 CSM PORT STS3c Multi PrUNI 4.0 2 10 <----- changed with map command
7 2 CSM PORT STS3c Multi PrUNI 3.1 2 10 <----- changed with map command
7 3 CSM PORT STS3c Multi PrUNI 3.0 2 10 <----- default value
7 4 CSM PORT STS3c Multi PrUNI 3.0 2 10
7 5 CSM PORT STS3c Multi PrUNI 3.0 2 10
7 6 CSM PORT STS3c Multi PrUNI 3.0 2 10
7 7 CSM PORT STS3c Multi PrUNI 3.0 2 10
7 8 CSM PORT STS3c Multi PrUNI 3.0 2 10
```

Hope this helps