

Como evitar Loop atrás das ONUs

DESCRIÇÃO

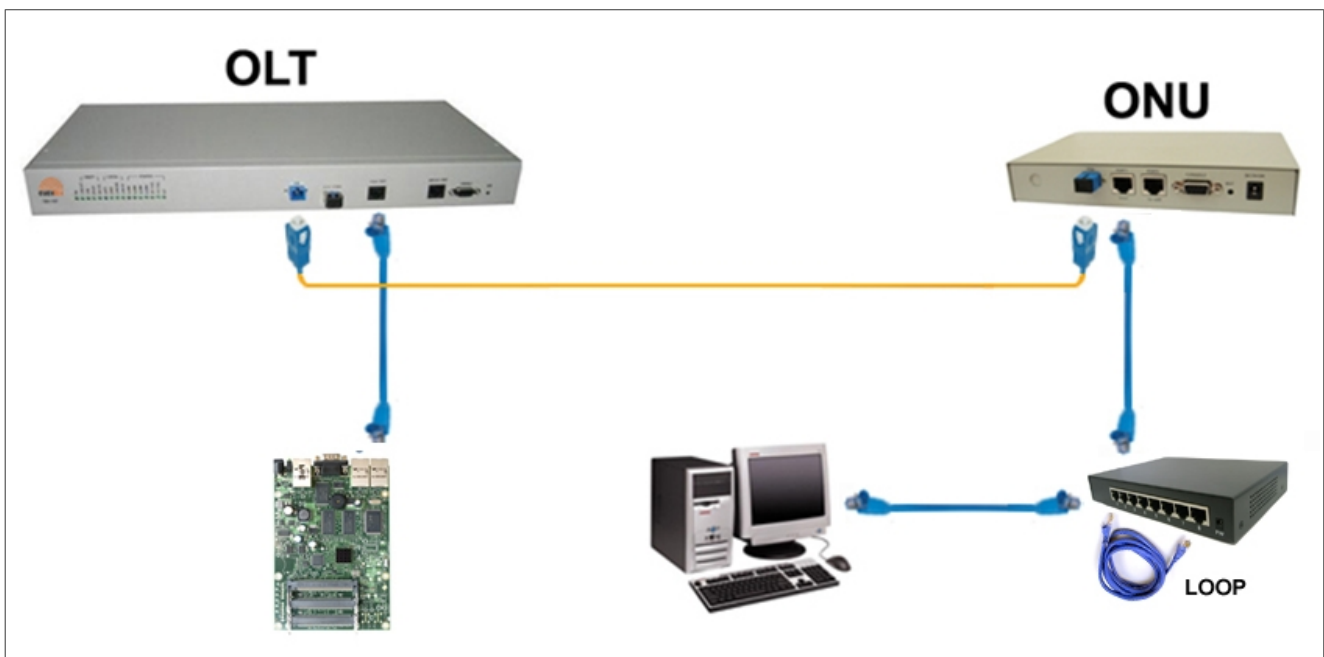
Quando se trata de equipamentos instalados no domínio do cliente, é importante tomar toda e qualquer precaução para evitar problemas na rede.

Um problema muito comum são os loops, derrubando toda a rede.

Para evitar esse problema, é necessário habilitar o protocolo RSTP na ONU, que irá bloquear a porta onde chega o loop, não permitindo que o mesmo se propague por toda rede, derrubando os serviços.

CENÁRIO

Este cenário demonstra a forma que os testes foram realizados. A simulação envolve um cliente ter um switch na sua residência e o mesmo coloca este switch em loop.



SOLUÇÃO

Para resolver esse problema, é necessário habilitar o protocolo RSTP nas ONUs.

PASSOS

1 – Através do software proprietário, acessar as configurações da ONU e selecionar a guia RSTP:

The screenshot displays the EPON System software interface. The main window is titled "ONU MAC-E21005270580" and has several tabs: "Active Alarms", "Ports", "Rate Ctrl", "Edit Fields", "Rules", "Q Cfg.", "IGMP/VLAN", "RSTP", "Low Level", and "Lpbk Test". The "RSTP" tab is selected and circled in red. Below the tabs, there are two sub-tabs: "RSTP Control" and "RSTP Status". The "RSTP Status" sub-tab is active, showing a table of RSTP parameters and their current status. Two rows, "Port 0 State" and "Port 1 State", are highlighted with red boxes and show a status of "Disabled".

Field	Status
Root Port Number	2
Maximum Age (Currently Used Value)	0 ms
Hello Time (Currently Used Value)	2000 ms
Forward Delay	0 ms
Hold Count	6 messages
Number of Ports	2
Port 0 State	Disabled
Port 0 Designated Root ID	0x0000000000000000
Port 0 Designated Cost	0
Port 0 Designated Bridge ID	0x0000000000000000
Port 0 Designated Port	0
Port 0 Forward Transitions	0
Port 1 State	Disabled
Port 1 Designated Root ID	0x0000000000000000
Port 1 Designated Cost	0
Port 1 Designated Bridge ID	0x0000000000000000
Port 1 Designated Port	0

At the bottom of the interface, there is a command prompt area showing the following text:

```
TK3721> Replied: Type 196 [GetOnuRstpStatus] Tag 54 -- OK
TK3721> Raw bytes received:
00 C4 00 36 00 53 00 00
E2 10 05 27 05 80 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 80 06
00 02 00 00 00 C8 00 00
00 06 02 01 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 01 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00
```

The status bar at the bottom right indicates "Connected".

2 – Em seguida, habilitar o protocolo RSTP:

The screenshot shows the EPON System interface with the RSTP configuration window open for ONU MAC-E21005270580. The configuration includes:

- Bridge Priority: 32768
- Bridge Mode: Secure
- Root Controls:
 - Maximum Age: 2000 x 10ms
 - Hello Time: 200 x 10ms
 - Forward Delay: 1500 x 10ms
- Ports:
 - Port 1: Priority 128, Path Cost 0
 - Port 2: (empty)

The console window shows the following output:

```
02 00 07 D0 00 C8 05 DC
02 00 80 00 00 00 00 00
80 00 00 00 00
GetRstpControl(tag=46, mac=E21005270580)
Raw bytes sent:
00 C2 00 2E 00 06 E2 10
05 27 05 80
TK3721> Replied: Type 194 [GetOnuRstpControl] Tag 46 -- OK
TK3721> Raw bytes received:
00 C2 00 2E 00 1F 00 00
E2 10 05 27 05 80 80 00
02 00 07 D0 00 C8 05 DC
02 00 80 00 00 00 00 00
80 00 00 00 00
```

3 – A imagem abaixo demonstra o resultado após gerar o loop conforme o cenário proposto.

The screenshot shows the EPON System interface with the RSTP Status window open for ONU MAC-E21005270580. The status is as follows:

Field	Status
Forward Delay	15000 ms
Hold Count	6 messages
Number of Ports	2
Port 0 State	Blocking
Port 0 Designated Root ID	0x8000E21005270580
Port 0 Designated Cost	32768
Port 0 Designated Bridge ID	0x8000E21005270580
Port 0 Designated Port	32769
Port 0 Forward Transitions	0
Port 1 State	Forwarding
Port 1 Designated Root ID	0x8000E21005270580
Port 1 Designated Cost	32768
Port 1 Designated Bridge ID	0x8000E21005270580
Port 1 Designated Port	32770
Port 1 Forward Transitions	0

The console window shows the following output:

```
TK3721> Replied: Type 196 [GetOnuRstpStatus] Tag 33 -- OK
TK3721> Raw bytes received:
00 C4 00 21 00 53 00 00
E2 10 05 27 05 80 00 00
00 00 00 00 00 00 80 00
E2 10 05 27 05 80 00 06
00 02 07 D0 00 C8 05 DC
00 06 02 05 80 00 E2 10
05 27 05 80 80 00 80 00
E2 10 05 27 05 80 00 01
00 00 02 80 00 E2 10 05
27 05 80 80 00 80 00 E2
10 05 27 05 80 00 02 00
00
```