Київський національний університет імені Тараса Шевченка
факультет радіофізики, електроніки та комп'ютерних систем

лабораторна робота № 3
Тема: «STP»

Роботу виконав
студент 3 курсу
КІ-МА
Турченко Євгеній
Олександрович

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Хід виконання роботи

1. Налаштувати STP і перевірити його налаштування

Увімкнути STP на SW1 і SW2 та встановити SW1 як root

```
[SW1]stp mode stp
Info: This operation may take a few seconds. Please wait for a moment...done.
```

```
[SW1]display stp brief
 MSTID   Port                        Role   STP State     Protection
   0     Ethernet0/0/8               DESI   FORWARDING    NONE
   0     Ethernet0/0/10              DESI   FORWARDING    NONE
```

```
[SW2]stp mode stp
Info: This operation may take a few seconds. Please wait for a moment...done.
```

```
[SW2]display stp brief
 MSTID   Port                        Role   STP State     Protection
   0     Ethernet0/0/8               ROOT   FORWARDING    NONE
   0     Ethernet0/0/10              ALTE   DISCARDING    NONE
```

Виконати команду `display stp interface` щоб переглянути STP статус порту

SW1:

```
[SW1]display stp interface Ethernet 0/0/10
-------[CIST Global Info][Mode STP]-------
CIST Bridge          :0    .4c1f-cc98-149f
Config Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC       :0    .4c1f-cc98-149f / 0
CIST RegRoot/IRPC    :0    .4c1f-cc98-149f / 0
CIST RootPortId      :0.0
BPDU-Protection      :Disabled
CIST Root Type       :Primary root
TC or TCN received   :4
TC count per hello   :0
STP Converge Mode    :Normal
Time since last TC   :0 days 0h:10m:49s
Number of TC         :6
Last TC occurred     :Ethernet0/0/8
----[Port10(Ethernet0/0/10)] [FORWARDING]----
 Port Protocol       :Enabled
 Port Role           :Designated Port
 Port Priority       :128
 Port Cost(Dot1T )   :Config=auto / Active=200000
 Designated Bridge/Port   :0.4c1f-cc98-149f / 128.10
 Port Edged          :Config=default / Active=disabled
 Point-to-point      :Config=auto / Active=true
 Transit Limit       :147 packets/hello-time
 Protection Type     :None
 Port STP Mode        :STP
 Port Protocol Type  :Config=auto / Active=dot1s
 BPDU Encapsulation  :Config=stp / Active=stp
 PortTimes           :Hello 2s MaxAge 20s FwDly 15s RemHop 20
 TC or TCN send      :17
 TC or TCN received  :0
 BPDU Sent           :332
        TCN: 0, Config: 332, RST: 0, MST: 0
 BPDU Received       :2
        TCN: 0, Config: 2, RST: 0, MST: 0
[SW1]
```

SW2:

```
[SW2]display stp interface Ethernet 0/0/10
-------[CIST Global Info][Mode STP]-------
CIST Bridge          :4096 .4clf-ccfl-6145
Config Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC       :0    .4clf-cc98-149f / 200000
CIST RegRoot/IRPC    :4096 .4clf-ccfl-6145 / 0
CIST RootPortId      :128.8
BPDU-Protection      :Disabled
CIST Root Type       :Secondary root
TC or TCN received   :40
TC count per hello   :0
STP Converge Mode    :Normal
Time since last TC   :0 days 0h:12m:42s
Number of TC         :5
Last TC occurred     :Ethernet0/0/8
----[Port10(Ethernet0/0/10)][DISCARDING]----
 Port Protocol       :Enabled
 Port Role           :Alternate Port
 Port Priority       :128
 Port Cost(Dot1T )   :Config=auto / Active=200000
 Designated Bridge/Port   :0.4clf-cc98-149f / 128.10
 Port Edged          :Config=default / Active=disabled
 Point-to-point      :Config=auto / Active=true
 Transit Limit       :147 packets/hello-time
 Protection Type     :None
 Port STP Mode       :STP
 Port Protocol Type  :Config=auto / Active=dot1s
 BPDU Encapsulation  :Config=stp / Active=stp
 PortTimes           :Hello 2s MaxAge 20s FwDly 15s RemHop 0
 TC or TCN send      :0
 TC or TCN received  :17
 BPDU Sent           :2
         TCN: 0, Config: 2, RST: 0, MST: 0
 BPDU Received       :368
         TCN: 0, Config: 368, RST: 0, MST: 0
[SW2]
```

Виконати команду display stp щоб переглянути інформацію про root bridge

SW1:

```
[SW1]dis stp
-------[CIST Global Info][Mode STP]-------
CIST Bridge          :0    .4clf-cc98-149f
Config Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC       :0    .4clf-cc98-149f / 0
CIST RegRoot/IRPC    :0    .4clf-cc98-149f / 0
CIST RootPortId      :0.0
BPDU-Protection      :Disabled
CIST Root Type       :Primary root
TC or TCN received   :4
TC count per hello   :0
STP Converge Mode    :Normal
Time since last TC   :0 days 0h:28m:2s
Number of TC         :6
Last TC occurred     :Ethernet0/0/8
```

SW2:

```
[SW2]dis stp
-------[CIST Global Info][Mode STP]-------
CIST Bridge            :4096 .4clf-ccfl-6145
Config Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC         :0     .4clf-cc98-149f / 200000
CIST RegRoot/IRPC      :4096 .4clf-ccfl-6145 / 0
CIST RootPortId        :128.8
BPDU-Protection        :Disabled
CIST Root Type         :Secondary root
TC or TCN received     :40
TC count per hello     :0
STP Converge Mode      :Normal
Time since last TC     :0 days 0h:29m:35s
Number of TC           :5
Last TC occurred       :Ethernet0/0/8
```

2. Встановити root'ом SW2 використовуючи пріоритети

```
[SW1]undo stp root
[SW1]
```

```
[SW1]stp priority 8192
```

```
[SW2]undo stp root
[SW2]stp prio
[SW2]stp priority 4096
```

```
[SW1]dis stp
-------[CIST Global Info][Mode STP]-------
CIST Bridge            :8192 .4clf-cc98-149f
Config Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC         :4096 .4clf-ccfl-6145 / 200000
CIST RegRoot/IRPC      :8192 .4clf-cc98-149f / 0
CIST RootPortId        :128.8
BPDU-Protection        :Disabled
TC or TCN received     :40
TC count per hello     :2
STP Converge Mode      :Normal
Time since last TC     :0 days 0h:0m:1s
Number of TC           :8
Last TC occurred       :Ethernet0/0/8
```

```
[SW2]dis stp
-------[CIST Global Info][Mode STP]-------
CIST Bridge            :4096 .4clf-ccfl-6145
Config Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC         :4096 .4clf-ccfl-6145 / 0
CIST RegRoot/IRPC      :4096 .4clf-ccfl-6145 / 0
CIST RootPortId        :0.0
BPDU-Protection        :Disabled
TC or TCN received     :40
TC count per hello     :0
STP Converge Mode      :Normal
Time since last TC     :0 days 0h:0m:39s
Number of TC           :7
Last TC occurred       :Ethernet0/0/10
```

Ізолювати SW2 від SW1 та перевірити стан stp на комутаторах

```
[SW2]interface Ethernet0/0/8
[SW2-Ethernet0/0/8]shu
[SW2-Ethernet0/0/8]shutdown
[SW2-Ethernet0/0/8]
 Oct 22 2020 14:43:53-08:00 SW2 %%01PHY/1/PHY(1)[0]:    Ethernet0/0/8: change sta
tus to downq
[SW2]
 Oct 22 2020 14:43:54-08:00 SW2 %%01PHY/1/PHY(1)[1]:    Ethernet0/0/8: change sta
tus to down
[SW2]
 Oct 22 2020 14:43:56-08:00 SW2 DS/4/DATASYNC_CFGCHANGE:OID 1.3.6.1.4.1.2011.5.25
.191.3.1 configurations have been changed. The current change number is 9, the c
hange loop count is 0, and the maximum number of records is 4095.
[SW2]interface Ethernet0/0/10
[SW2-Ethernet0/0/10]shu
[SW2-Ethernet0/0/10]shutdown
[SW2-Ethernet0/0/10]q
```

```
[SW1]dis stp
-------[CIST Global Info][Mode STP]-------
CIST Bridge         :8192 .4c1f-cc98-149f
Config Times        :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times        :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC      :8192 .4c1f-cc98-149f / 0
CIST RegRoot/IRPC   :8192 .4c1f-cc98-149f / 0
CIST RootPortId     :0.0
BPDU-Protection     :Disabled
TC or TCN received  :0
TC count per hello  :0
STP Converge Mode   :Normal
Time since last TC  :0 days 0h:0m:0s
Number of TC        :0
```

Увімкнути інтерфейси, вимкнені в попередньому пункті та перевіпити стан stp на комутаторах

```
[SW2]interface Ethernet 0/0/8
[SW2-Ethernet0/0/8]undo shu
[SW2-Ethernet0/0/8]undo shutdown
[SW2-Ethernet0/0/8]q
[SW2]
 Oct 22 2020 14:55:34-08:00 SW2 %%01PHY/1/PHY(1)[5]:    Ethernet0/0/8: change sta
tus to up
 Oct 22 2020 14:55:34-08:00 SW2 %%01IFNET/4/IF_STATE(1)[6]:Interface Vlanif1 has
turned into UP state.
[SW2]
 Oct 22 2020 14:55:36-08:00 SW2 DS/4/DATASYNC_CFGCHANGE:OID 1.3.6.1.4.1.2011.5.25
.191.3.1 configurations have been changed. The current change number is 11, the
change loop count is 0, and the maximum number of records is 4095.
[SW2]inter
[SW2]interface eth
[SW2]interface Ethernet 0/0/10
[SW2-Ethernet0/0/10]undo shutdown
[SW2-Ethernet0/0/10]
[SW2-Ethernet0/0/10]q
```

SW1:

```
[SW1]dis stp
-------[CIST Global Info][Mode STP]-------
CIST Bridge          :8192 .4c1f-cc98-149f
Config Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC       :4096 .4c1f-ccf1-6145 / 200000
CIST RegRoot/IRPC    :8192 .4c1f-cc98-149f / 0
CIST RootPortId      :128.8
BPDU-Protection      :Disabled
TC or TCN received   :35
TC count per hello   :0
STP Converge Mode    :Normal
Time since last TC   :0 days 0h:2m:55s
Number of TC         :4
Last TC occurred     :Ethernet0/0/8
```

SW2:

```
[SW2]dis stp
-------[CIST Global Info][Mode STP]-------
CIST Bridge          :4096 .4c1f-ccf1-6145
Config Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC       :4096 .4c1f-ccf1-6145 / 0
CIST RegRoot/IRPC    :4096 .4c1f-ccf1-6145 / 0
CIST RootPortId      :0.0
BPDU-Protection      :Disabled
TC or TCN received   :42
TC count per hello   :0
STP Converge Mode    :Normal
Time since last TC   :0 days 0h:3m:13s
Number of TC         :11
Last TC occurred     :Ethernet0/0/10
```

3. Контролювання вибору root порта

Змінити пріоритет інтерфейсів на SW2 так, щоб на SW1 Eth0/0/10 змінив стан на forwarding

```
[SW1]dis stp brief
MSTID    Port                    Role    STP State    Protection
  0      Ethernet0/0/8           ROOT    FORWARDING   NONE
  0      Ethernet0/0/10          ALTE    DISCARDING   NONE
[SW1]
```

```
[SW2]display stp interface Ethernet 0/0/8
-------[CIST Global Info][Mode STP]-------
CIST Bridge            :4096 .4clf-ccf1-6145
Config Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC         :4096 .4clf-ccf1-6145 / 0
CIST RegRoot/IRPC      :4096 .4clf-ccf1-6145 / 0
CIST RootPortId        :0.0
BPDU-Protection        :Disabled
TC or TCN received     :42
TC count per hello     :0
STP Converge Mode      :Normal
Time since last TC     :0 days 0h:10m:23s
Number of TC           :11
Last TC occurred       :Ethernet0/0/10
----[Port8(Ethernet0/0/8)][FORWARDING]----
 Port Protocol         :Enabled
 Port Role             :Designated Port
 Port Priority         :32
 Port Cost(Dot1T )     :Config=auto / Active=200000
```

```
[SW2]display stp interface Ethernet 0/0/10
-------[CIST Global Info][Mode STP]-------
CIST Bridge            :4096 .4clf-ccf1-6145
Config Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC         :4096 .4clf-ccf1-6145 / 0
CIST RegRoot/IRPC      :4096 .4clf-ccf1-6145 / 0
CIST RootPortId        :0.0
BPDU-Protection        :Disabled
TC or TCN received     :43
TC count per hello     :0
STP Converge Mode      :Normal
Time since last TC     :0 days 0h:1m:11s
Number of TC           :12
Last TC occurred       :Ethernet0/0/10
----[Port10(Ethernet0/0/10)][FORWARDING]----
 Port Protocol         :Enabled
 Port Role             :Designated Port
 Port Priority         :16
 Port Cost(Dot1T )     :Config=auto / Active=200000
```

Результат:

```
[SW1]dis stp brief
 MSTID  Port                          Role  STP State    Protection
   0    Ethernet0/0/8                 ALTE  DISCARDING   NONE
   0    Ethernet0/0/10                ROOT  FORWARDING   NONE
```

Вимкнути Eth0/0/10 на SW1 та переглянути статус портів

```
[SW1]dis stp brief
 MSTID  Port                          Role  STP State    Protection
   0    Ethernet0/0/8                 ROOT  FORWARDING   NONE
```

Увімкнути Eth0/0/10 на SW1 та скинути налаштування пріоритетів на SW2

```
[SW2]int eth0/0/8
[SW2-Ethernet0/0/8]undo stp port priority
[SW2-Ethernet0/0/8]q
[SW2]int eth0/0/10
[SW2-Ethernet0/0/10]undo stp port priority
[SW2-Ethernet0/0/10]q
[SW2]
```

Переглянути ролі інтерфейсів на SW1

```
[SW1]dis stp brief
 MSTID   Port                        Role   STP State    Protection
    0    Ethernet0/0/8               ROOT   FORWARDING   NONE
    0    Ethernet0/0/10              ALTE   DISCARDING   NONE
```

```
Last TC occurred    :Ethernet0/0/8
----[Port8(Ethernet0/0/8)][FORWARDING]----
 Port Protocol         :Enabled
 Port Role             :Root Port
 Port Priority         :128
 Port Cost(Dot1T )     :Config=auto / Active=200000
 Designated Bridge/Port  :4096.4c1f-ccf1-6145 / 128.8
```

```
----[Port10(Ethernet0/0/10)][DISCARDING]----
 Port Protocol         :Enabled
 Port Role             :Alternate Port
 Port Priority         :128
 Port Cost(Dot1T )     :Config=auto / Active=200000
 Designated Bridge/Port  :4096.4c1f-ccf1-6145 / 128.10
 Port Edged            :Config=default / Active=disabled
```

Із виводу видно, що стандартна вартість для інтерфейсів Eth0/0/8 і Eth0/0/10 на SW1 рівна 200000

Змінити вартість до 2000000 для Eth0/0/8 на SW1

```
[SW1]int eth0/0/8
[SW1-Ethernet0/0/8]stp cost 2000000
[SW1-Ethernet0/0/8]q
```

Перевірити статус портів

```
[SW1]display stp brief
 MSTID   Port                        Role   STP State    Protection
    0    Ethernet0/0/8               ALTE   DISCARDING   NONE
    0    Ethernet0/0/10              ROOT   FORWARDING   NONE
[SW1]
```

```
[SW1]display stp interface Ethernet 0/0/8
-------[CIST Global Info][Mode STP]-------
CIST Bridge            :8192 .4c1f-cc98-149f
Config Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC         :4096 .4c1f-ccf1-6145 / 200000
CIST RegRoot/IRPC      :8192 .4c1f-cc98-149f / 0
CIST RootPortId        :128.10
BPDU-Protection        :Disabled
TC or TCN received     :200
TC count per hello     :0
STP Converge Mode      :Normal
Time since last TC     :0 days 0h:1m:42s
Number of TC           :17
Last TC occurred       :Ethernet0/0/10
----[Port8(Ethernet0/0/8)][DISCARDING]----
 Port Protocol          :Enabled
 Port Role             :Alternate Port
 Port Priority         :128
 Port Cost(Dot1T )     :Config=2000000 / Active=2000000
 Designated Bridge/Port :4096.4c1f-ccf1-6145 / 128.8
```

```
[SW1]display stp interface Ethernet 0/0/10
-------[CIST Global Info][Mode STP]-------
CIST Bridge            :8192 .4c1f-cc98-149f
Config Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times           :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC         :4096 .4c1f-ccf1-6145 / 200000
CIST RegRoot/IRPC      :8192 .4c1f-cc98-149f / 0
CIST RootPortId        :128.10
BPDU-Protection        :Disabled
TC or TCN received     :200
TC count per hello     :0
STP Converge Mode      :Normal
Time since last TC     :0 days 0h:2m:15s
Number of TC           :17
Last TC occurred       :Ethernet0/0/10
----[Port10(Ethernet0/0/10)][FORWARDING]----
 Port Protocol          :Enabled
 Port Role             :Root Port
 Port Priority         :128
 Port Cost(Dot1T )     :Config=auto / Active=200000
 Designated Bridge/Port :4096.4c1f-ccf1-6145 / 128.10
```

Фінальна конфігурація:

```
[SW1]dis current-configuration
#
sysname SW1
#
stp mode stp
stp instance 0 priority 8192
#
cluster enable
ntdp enable
ndp enable
#
drop illegal-mac alarm
#
diffserv domain default
#
drop-profile default
#
aaa
 authentication-scheme default
 authorization-scheme default
 accounting-scheme default
 domain default
 domain default_admin
 local-user admin password simple admin
 local-user admin service-type http
#
```

```
interface Ethernet0/0/8
 stp instance 0 cost 2000000
#
interface Ethernet0/0/9
#
interface Ethernet0/0/10
#
```

```
[SW2]dis current-configuration
#
sysname SW2
#
stp mode stp
stp instance 0 priority 4096
#
cluster enable
ntdp enable
ndp enable
#
drop illegal-mac alarm
#
diffserv domain default
#
drop-profile default
#
aaa
 authentication-scheme default
 authorization-scheme default
 accounting-scheme default
 domain default
 domain default_admin
 local-user admin password simple admin
 local-user admin service-type http
#
```

```
interface Ethernet0/0/8
#
interface Ethernet0/0/9
#
interface Ethernet0/0/10
#
```

4. Налаштування RSTP

Змінити режим stp на rstp

```
[SW1]stp mode rstp
Info: This operation may take a few seconds. Please wait for a moment...done.
```

```
[SW2]stp mode rstp
Info: This operation may take a few seconds. Please wait for a moment...done.
```

5. Виконати команду display stp щоб переглянути інформіцію про rstp

```
[SW1]display stp
-------[CIST Global Info][Mode RSTP]-------
CIST Bridge          :32768.4clf-cc98-149f
Config Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC       :32768.4clf-cc98-149f / 0
CIST RegRoot/IRPC    :32768.4clf-cc98-149f / 0
CIST RootPortId      :0.0
BPDU-Protection      :Disabled
TC or TCN received   :200
TC count per hello   :0
STP Converge Mode    :Normal
Time since last TC   :0 days 0h:1m:58s
Number of TC         :19
Last TC occurred     :Ethernet0/0/10
```

```
[SW2]dis stp
-------[CIST Global Info][Mode RSTP]-------
CIST Bridge          :32768.4clf-ccf1-6145
Config Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
Active Times         :Hello 2s MaxAge 20s FwDly 15s MaxHop 20
CIST Root/ERPC       :32768.4clf-cc98-149f / 200000
CIST RegRoot/IRPC    :32768.4clf-ccf1-6145 / 0
CIST RootPortId      :128.8
BPDU-Protection      :Disabled
TC or TCN received   :59
TC count per hello   :0
STP Converge Mode    :Normal
Time since last TC   :0 days 0h:2m:24s
Number of TC         :22
Last TC occurred     :Ethernet0/0/8
```

6. Налаштувати edge-порт

```
[SW1]int eth0/0/1
[SW1-Ethernet0/0/1]stp edg
[SW1-Ethernet0/0/1]stp edged-port ena
[SW1-Ethernet0/0/1]stp edged-port enable
[SW1-Ethernet0/0/1]
```

```
[SW2]interface Eth0/0/1
[SW2-Ethernet0/0/1]stp ed
[SW2-Ethernet0/0/1]stp edged-port en
[SW2-Ethernet0/0/1]stp edged-port enable
[SW2-Ethernet0/0/1]
```

7. Налаштувати bpdu protection

```
[SW1]stp bpdu-protection

[SW1]display stp brief
 MSTID   Port                       Role   STP State     Protection
   0       Ethernet0/0/1             DESI   FORWARDING     BPDU
   0       Ethernet0/0/8             DESI   FORWARDING     NONE
   0       Ethernet0/0/10            DESI   FORWARDING     NONE

[SW2]stp bpdu-protection
[SW2]

[SW2]display stp brief
 MSTID   Port                       Role   STP State     Protection
   0       Ethernet0/0/1             DESI   FORWARDING     BPDU
   0       Ethernet0/0/8             ROOT   FORWARDING     NONE
   0       Ethernet0/0/10            ALTE   DISCARDING     NONE
```

8. Налаштувати Loop protection

```
[SW2]interface Ethernet0/0/8
[SW2-Ethernet0/0/8]stp loop-protection
[SW2-Ethernet0/0/8]q
[SW2]interface Ethernet0/0/10
[SW2-Ethernet0/0/10]q
Oct 22 2020 15:54:58-08:00 SW2 DS/4/DATASYNC_CFGCHANGE:OID 1.3.6.1.4.1.2011.5.25
.191.3.1 configurations have been changed. The current change number is 21, the
change loop count is 0, and the maximum number of records is 4095sistp loop-prot
ection
[SW2-Ethernet0/0/10]q
```

```
[SW2]display stp brief
 MSTID   Port                       Role   STP State     Protection
   0       Ethernet0/0/1             DESI   FORWARDING     BPDU
   0       Ethernet0/0/8             ROOT   FORWARDING     LOOP
   0       Ethernet0/0/10            ALTE   DISCARDING     LOOP
[SW2]
```

Фінальна конфігурація:

```
[SW1]display current-configuration
#
sysname SW1
#
stp mode rstp
stp bpdu-protection
#
cluster enable
ntdp enable
ndp enable
#
drop illegal-mac alarm
#
diffserv domain default
#
drop-profile default
#
aaa
 authentication-scheme default
 authorization-scheme default
 accounting-scheme default
 domain default
 domain default_admin
 local-user admin password simple admin
 local-user admin service-type http
#
interface Vlanif1
#
interface MEth0/0/1
#
interface Ethernet0/0/1
 stp edged-port enable
#
```

```
[SW2]display current-configuration
#
sysname SW2
#
stp mode rstp
stp bpdu-protection
#
cluster enable
ntdp enable
ndp enable
#
drop illegal-mac alarm
#
diffserv domain default
#
drop-profile default
#
aaa
 authentication-scheme default
 authorization-scheme default
 accounting-scheme default
 domain default
 domain default_admin
 local-user admin password simple admin
 local-user admin service-type http
#
interface Vlanif1
#
interface MEth0/0/1
#
interface Ethernet0/0/1
 stp edged-port enable
#
```

```
#
interface Ethernet0/0/8
 stp loop-protection
#
interface Ethernet0/0/9
#
interface Ethernet0/0/10
 stp loop-protection
#
```

Висновок

Під час виконання ЛР був опрацьований спосіб налаштування протоколу STP та принцип роботи протоколу