

Cisco实验-VTP基本使用

原创

小gu 于 2019-01-31 16:08:01 发布 6088 收藏 40

分类专栏: [网络 cisco实验](#) 文章标签: [Cisco实验 VTP基本使用](#)

版权声明: 本文为博主原创文章, 遵循 [CC 4.0 BY-SA](#) 版权协议, 转载请附上原文出处链接和本声明。

本文链接: <https://blog.csdn.net/zhazhagu/article/details/86716141>

版权



网络 同时被 2 个专栏收录

5 篇文章 0 订阅

订阅专栏



cisco实验

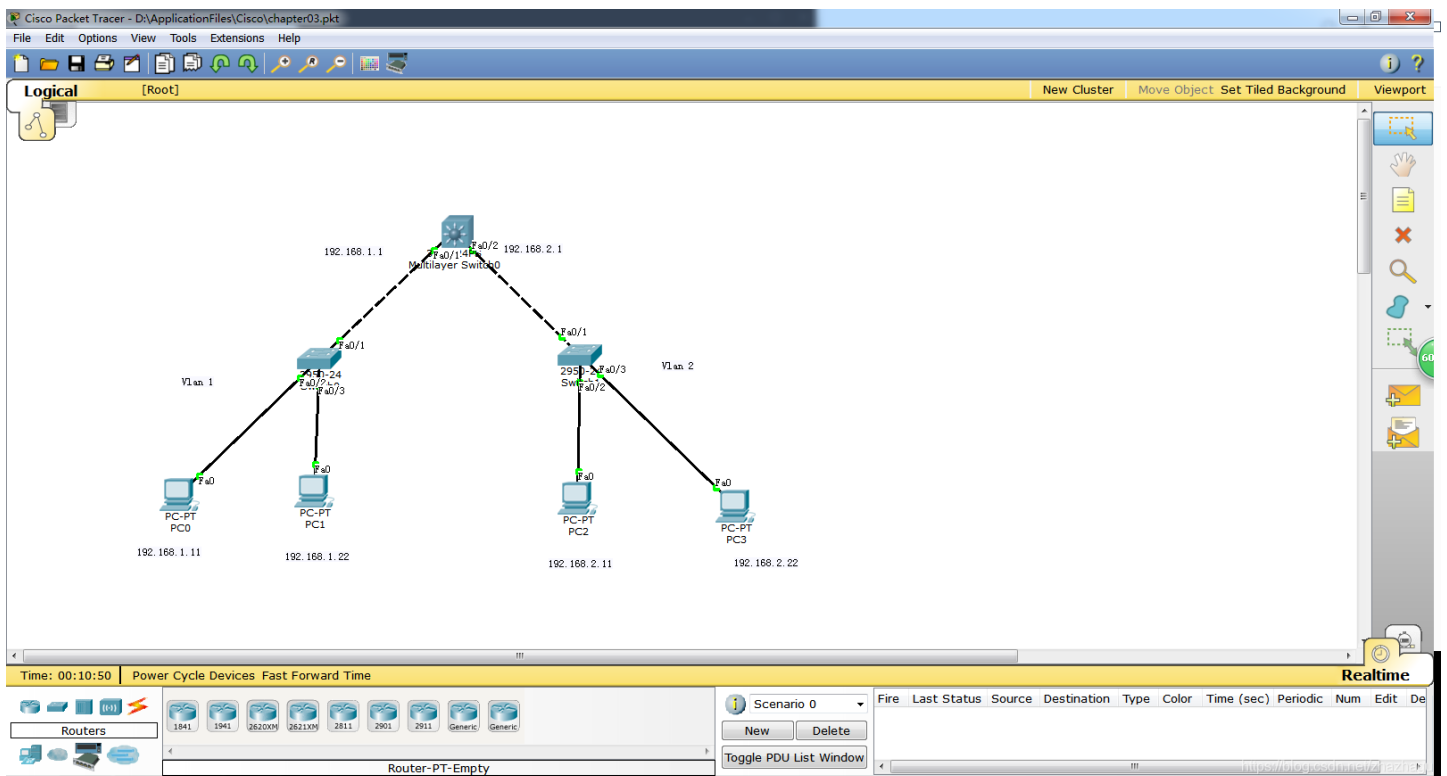
3 篇文章 0 订阅

订阅专栏

VTP基本使用

VTP (Vlan Trunk Protocol) 即VLAN中继协议。VTP通过网络 (ISL帧或者cisco私有的DTP帧) 保证VLAN配置的统一性。VTP在系统级管理增加、删除, 跳转VLAN, 自动地将信息向网络中其他的交换机广播。此外, VTP减小了那些可能导致安全问题的配置。便于管理, 只要在vtp server做相应的设置, vtp client会自动学习vtp server上的vlan信息。

3.1 实例拓扑图



3.2 配置VTP

核心交换机Cisco 3650配置为VTP Server，VTP domain为senya。

```
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#vtp domain senya
Changing VTP domain name from NULL to senya
Switch(vlan)#vtp server
Device mode already VTP SERVER.
```

```
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#vtp domain senya
Changing VTP domain name from NULL to senya
Switch(vlan)#vtp server
Device mode already VTP SERVER.
```

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode trunk
Command rejected: An interface whose trunk encapsulation is "Auto" can not be configured to "trunk" mode.
```

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode trunk
Command rejected: An interface whose trunk encapsulation is "Auto" can not be configured to "trunk" mode.
```

报错了，我的天，含义是，命令被拒绝：接口的中继封装是“自动”不能被配置为“主干”模式
那就先封装一下吧

```
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport mode trunk
```

```
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
```

```
Switch(config)#int fa 0/2
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
```

```
Switch(config)#int fa 0/2
Switch(config-if)#switchport trunk encapsulation dot1q
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state t
o down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state t
o up
```

图3-2-2 配置trunk链路，允许带vlan标记的以太网帧通过该链路

```
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#vtp domain senya
Domain name already set to senya.
Switch(vlan)#vtp client
Setting device to VTP CLIENT mode.
```

```
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#vtp domain senya
Domain name already set to senya.
Switch(vlan)#vtp client
Setting device to VTP CLIENT mode.
Switch(vlan)#
```

```
Switch>en
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#vtp domain senya
Domain name already set to senya.
Switch(vlan)#vtp client
Setting device to VTP CLIENT mode.
```

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode trunk
```

```
Switch#
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode trunk
```

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode trunk
```

3.3 创建Vlan及端口划分

```
Switch>en
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#vlan 2
VLAN 2 added:
Name: VLAN0002
Switch(vlan)#vlan 3
VLAN 3 added:
Name: VLAN0003
```

```
Switch#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Switch(vlan)#vlan 1
VLAN 1 modified:
Switch(vlan)#vlan 2
VLAN 2 added:
Name: VLAN0002
Switch(vlan)#vlan 3
VLAN 3 added:
Name: VLAN0003
```

<https://blog.csdn.net/zhazhagu>

```
Switch#show vlan
```

```
Switch#show vlan
```

| VLAN Name | Status | Ports |
|-------------------------|-----------|---|
| 1 default | active | Fa0/3, Fa0/4, Fa0/5, Fa0/6, Fa0/7, Fa0/8, Fa0/9, Fa0/10, Fa0/11, Fa0/12, Fa0/13, Fa0/14, Fa0/15, Fa0/16, Fa0/17, Fa0/18, Fa0/19, Fa0/20, Fa0/21, Fa0/22, Fa0/23, Fa0/24, Gig0/1, Gig0/2 |
| 2 VLAN0002 | active | |
| 3 VLAN0003 | active | |
| 1002 fddi-default | act/unsup | |
| 1003 token-ring-default | act/unsup | |
| 1004 fddinet-default | act/unsup | |
| 1005 trnet-default | act/unsup | |

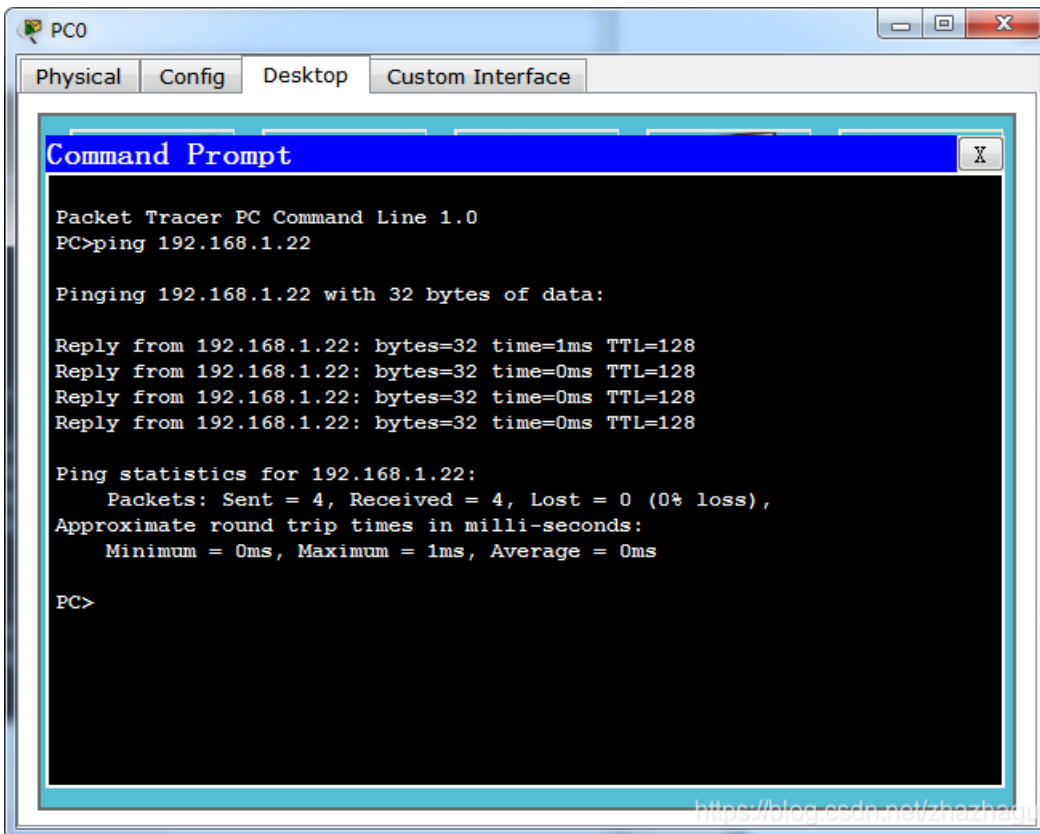
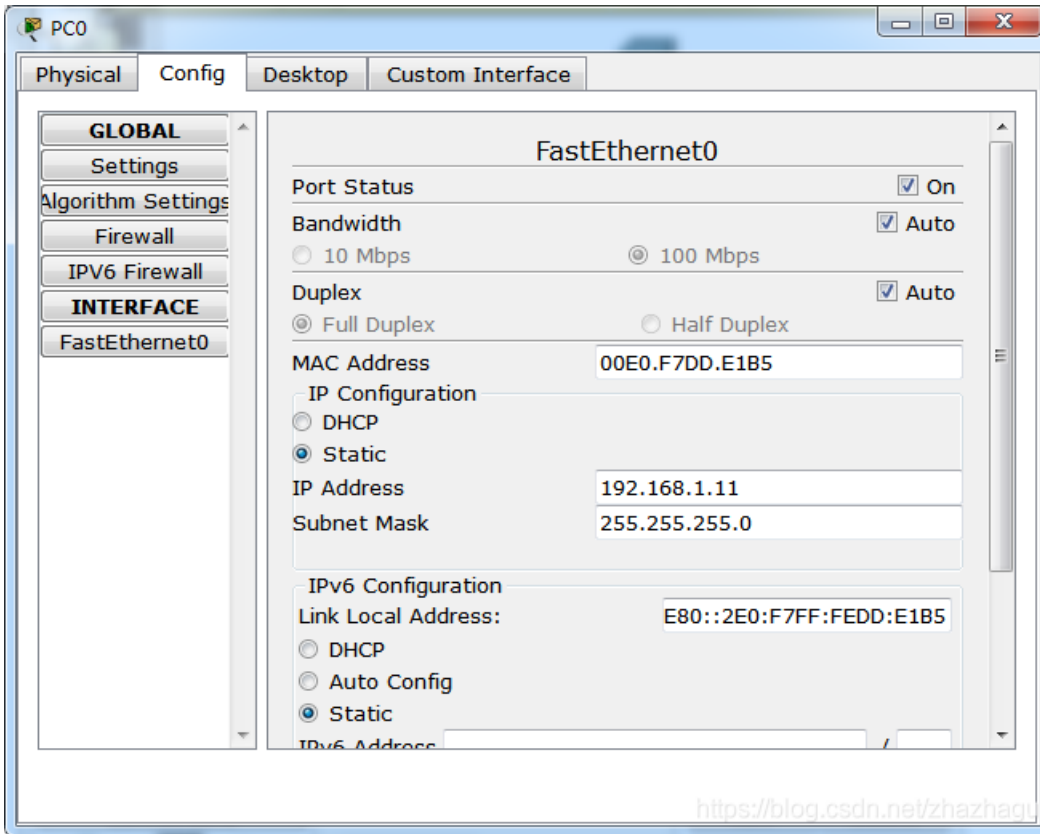
| VLAN | Type | SAID | MTU | Parent | RingNo | BridgeNo | Stp | BrdgMode | Transl | Tp |
|------|------|--------|------|--------|--------|----------|-----|----------|--------|----|
| 1 | enet | 100001 | 1500 | - | - | - | - | - | 0 | 0 |
| 2 | enet | 100002 | 1500 | - | - | - | - | - | 0 | 0 |
| 3 | enet | 100003 | 1500 | - | - | - | - | - | 0 | 0 |
| 1002 | fddi | 101002 | 1500 | - | - | - | - | - | 0 | 0 |
| 1003 | tr | 101003 | 1500 | - | - | - | - | - | 0 | 0 |

<https://blog.csdn.net/zhazhagu>

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 2
```

```
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 2
```

3.4 配置pc测试vlan



```

Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int vlan 2
Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan2, changed state to up

Switch(config-if)#ip address 192.168.1.1 255.255.255.0
Switch(config-if)#no shutdown
Switch(config-if)#int vlan 3
Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan3, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan3, changed state to up

Switch(config-if)#ip address 192.168.2.1 255.255.255.0
Switch(config-if)#no shutdown

```

```

Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int vlan 2
Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan2, changed state to up

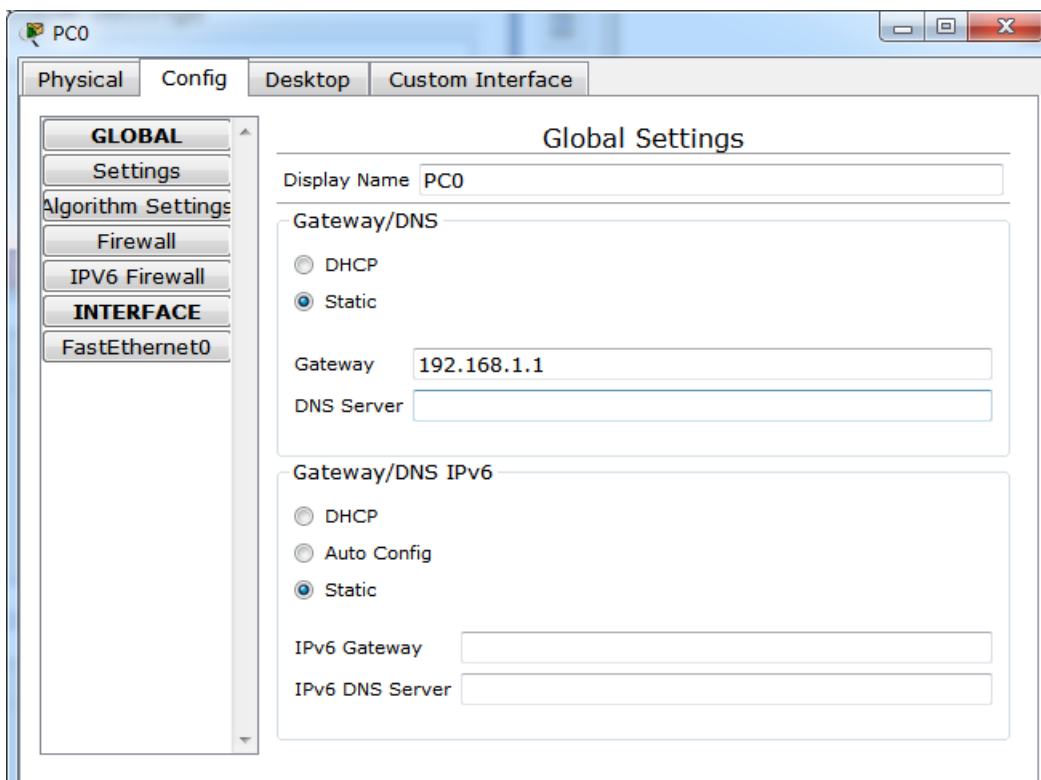
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan2, changed state to up

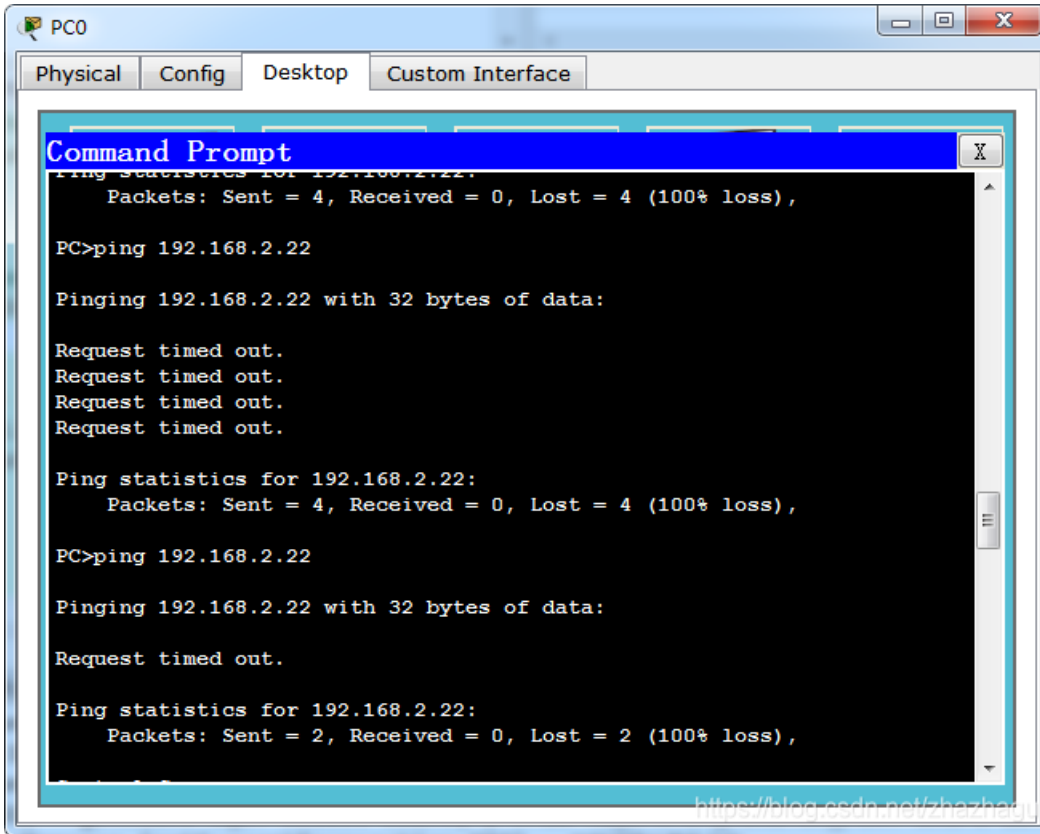
Switch(config-if)#ip address 192.168.1.1 255.255.255.0
Switch(config-if)#no shutdown
Switch(config-if)#int vlan 3
Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan3, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan3, changed state to up

Switch(config-if)#ip address
% Incomplete command.
Switch(config-if)#ip address 192.168.2.1 255.255.255.0
Switch(config-if)#no shutdown

```





结果不同网段一直不能ping通，到另外VLAN的网关也不同，后来百度找到需要顶层启用路由功能

```
Switch(config)#ip routing
```

```
Switch(config)#ip routing
```

验证:

```
PC>ping 192.168.2.22

Pinging 192.168.2.22 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.22: bytes=32 time=0ms TTL=127
Reply from 192.168.2.22: bytes=32 time=0ms TTL=127
Reply from 192.168.2.22: bytes=32 time=0ms TTL=127

Ping statistics for 192.168.2.22:
  Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
  Minimum = 0ms, Maximum = 0ms, Average = 0ms
```