

四川大學

《计算机网络》实验报告（2）



eNSP 快速入门实验

专业 软件工程

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成绩分数_____

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eNSP 快速入门实验

一、实验目的

1. 掌握设备系统参数的配置方法，包括查看系统信息，帮助命令，设备名称、系统时间。
2. 配置设备的管理 IP 地址，掌握保存的方法

二、实验要求

将实验的拓扑、实验结果及验证写入实验报告

三、实验过程

(一) 新建拓扑，实验组网

按照实验手册要求组织如下网络

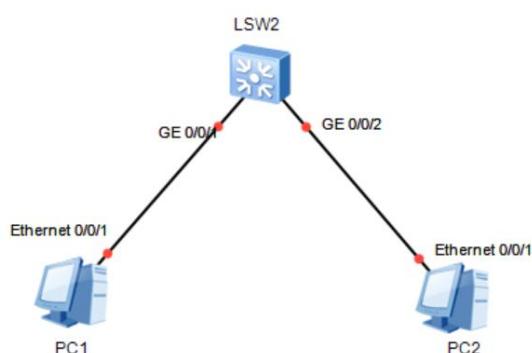


图 1 组织出的网络的拓扑结构

(二) 系统常用配置实验结果及验证

- (1) 在任一命令视图下，键入“?” 获取命令视图下所有的命令及其简单描述

```
LSW2
The device is running!
<Huawei>
<Huawei>?
User view commands:
  cd          Change current directory
  check       Check information
  clear       Clear information
  clock       Specify the system clock
  cluster     Run cluster command
  cluster-ftp FTP command of cluster
  compare     Compare function
  configuration Configuration interlock
  copy        Copy from one file to another
  debugging   Enable system debugging functions
  delete      Delete a file
  dir         List files on a file system
  display    Display current system information
  fixdisk    Recover lost chains in storage device
  format     Format the device
  ftp         Establish an FTP connection
  hwtacacs-user
  kill        Release a user terminal interface
  language-mode Specify the language environment
  lldp       Link Layer Discovery Protocol
  local-user  Add/Delete/Set user(s)
```

The screenshot shows a terminal window titled "LSW2" with a black background and white text. It displays a list of commands available in "User view". The commands are listed in pairs, where the first word is the command name and the second word is its description. For example, "cd" is described as "Change current directory". The list includes commands like "check", "clear", "clock", "cluster", "cluster-ftp", "compare", "configuration", "copy", "debugging", "delete", "dir", "display", "fixdisk", "format", "ftp", "hwtacacs-user", "kill", "language-mode", "lldp", and "local-user".

图 2 在线帮助命令

(2) 键入一条命令的部分关键字, 后接以空格分隔的“?”，如果该位置为关键字，则列出全部关键字 及其简单描述。

```
<Huawei>system-view
Enter system view, return user view with Ctrl+Z.
[Huawei]user-interface vty 0 4
[Huawei-ui-vty0-4] authentication-mode ?
    aaa      AAA authentication
    none     Login without checking
    password Authentication through the password of a user terminal interface

[Huawei-ui-vty0-4] authentication-mode
```

图 3 authentication-mode 关键字的简单描述

其中“aaa”和“password”是关键字，“AAA authentication” 和 “Authentication through the password of a user terminal interface”是对关键字的描述。

(3) 键入一条命令, 后接一字符串紧接“?”, 列出命令以该字符串开头的所有关键字。

```
<Huawei>
<Huawei>display b?
    bfd                                bgp
    bootrom                            bpdu
    bpdu-tunnel                         bridge
    buffer                             bulk-stat
```

图 4 展示出 b 开头的关键字

(4) 查看系统信息, 执行 display version 命令, 查看设备的软件版本与硬件信息。验证显示的版本信息是否符合预期。

```
<Huawei>display version
Huawei Versatile Routing Platform Software
VRP (R) software, Version 5.110 (S5700 V200R001C00)
Copyright (c) 2000-2011 HUAWEI TECH CO., LTD

Quidway S5700-28C-HI Routing Switch uptime is 0 week, 0 day, 0 hour, 5 minutes
<Huawei>
```

图 5 display version 命令

(5) 理解属性视图概念。进入 system 视图。修改设备名称

```
[Huawei]
<Huawei>system-view
Enter system view, return user view with Ctrl+Z.
[Huawei]sysname 123456
[123456]
Apr 15 2025 11:51:54-08:00 123456 DS/4/DATASYNC CFGCHANGE:OID 1.3.6.1.4.1.2011
.25.191.3.1 configurations have been changed. The current change number is 4,
e change loop count is 0, and the maximum number of records is 4095.
[123456]
<123456>


The device is running!

<123456>system-view
Enter system view, return user view with Ctrl+Z.
[123456]sysname 2023141461076
[2023141461076]
<2023141461076>
```

图 6 system 系统中修改设备名称

验证可知，我的设备名称变成了我的学号，该部分成功。

(6) save 命令用来保存当前配置信息到系统默认的存储路径中，display current-configuration 命令用来查看当前设备内存中生效的配置，display startup 命令用来查看设备启动时使用哪个配置文件

```
<2023141461076>save
The current configuration will be written to the device.
Are you sure to continue?[Y/N]y
Now saving the current configuration to the slot 0.
Apr 15 2025 18:53:50-08:00 2023141461076 %%01CFM/4/SAVE(1)[1]:The user chose to
then deciding whether to save the configuration to the device.
Save the configuration successfully.
<2023141461076>display current-configuration
#
sysname 2023141461076
#
cluster enable
ntdp enable
ndp enable
#
drop illegal-mac alarm
#
diffserv domain default
#
drop-profile default

<2023141461076>display startup
MainBoard:
Configured startup system software:           NULL
Startup system software:                      NULL
Next startup system software:                 NULL
Startup saved-configuration file:            flash:/vrpcfg.zip
Next startup saved-configuration file:        flash:/vrpcfg.zip
Startup paf file:                            NULL
Next startup paf file:                       NULL
Startup license file:                        NULL
Next startup license file:                   NULL
Startup patch package:                       NULL
Next startup patch package:                  NULL
<2023141461076>
```

图 7 保存配置文件。

(7) 查看配置文件是否被保存成功。

```
<2023141461076>dir
Directory of flash:/

  Idx Attr      Size(Byte) Date          Time          FileName
    0 drw-              - Aug 06 2015 21:26:42  src
    1 drw-              - Apr 15 2025 11:45:16  compatible
    2 -rw-             459 Apr 15 2025 18:51:00  vrpcfg.zip

32,004 KB total (31,968 KB free)

<2023141461076>
```

图 8 验证文件成功保存

(三) 主机通信实验

参考 eNSP 帮助——快速入门实验，按照“数据实验”的步骤实现两个主机的通信。

启动设备，图标变色

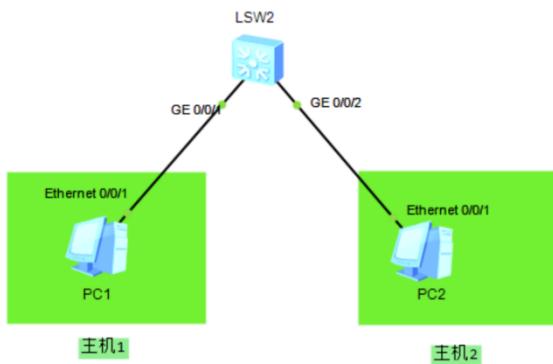


图 9 启动全部设备

在“配置”界面，IP 地址配置为“192.168.1.2”，子网掩码配置为“255.255.255.0”。
配置另一台 PC 的 IP 地址和子网掩码分别为“192.168.1.3”和“255.255.255.0”。



图 10 配置主机信息

执行 Ping 命令，发送报文

```

PC>ping 192.168.1.3

Ping 192.168.1.3: 32 data bytes, Press Ctrl_C to break
From 192.168.1.3: bytes=32 seq=1 ttl=128 time=47 ms
From 192.168.1.3: bytes=32 seq=2 ttl=128 time=47 ms
From 192.168.1.3: bytes=32 seq=3 ttl=128 time=47 ms
From 192.168.1.3: bytes=32 seq=4 ttl=128 time=63 ms
From 192.168.1.3: bytes=32 seq=5 ttl=128 time=62 ms

--- 192.168.1.3 ping statistics ---
5 packet(s) transmitted
5 packet(s) received
0.00% packet loss
round-trip min/avg/max = 47/53/63 ms

PC>
  
```

图 11 执行 Ping 命令

发现 ping 命令执行成功。

实验到此完成。