**Trường Đại Học Bách Khoa Hà Nội**

**Viện Công nghệ Thông Tin và Truyền Thông**

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Báo cáo bài thực hành số 3

Môn: Thiết kế và triển khai mạng IP

Họ và tên sinh viên : Phan Thành Đạt

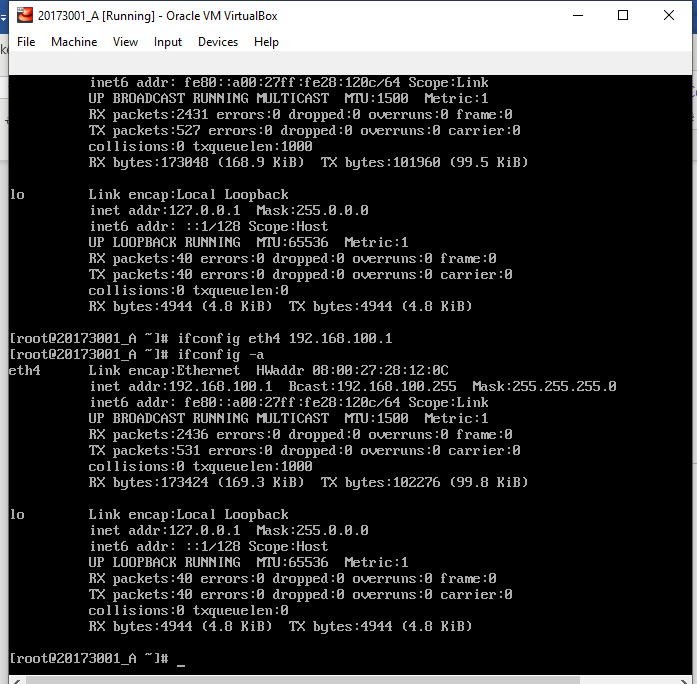
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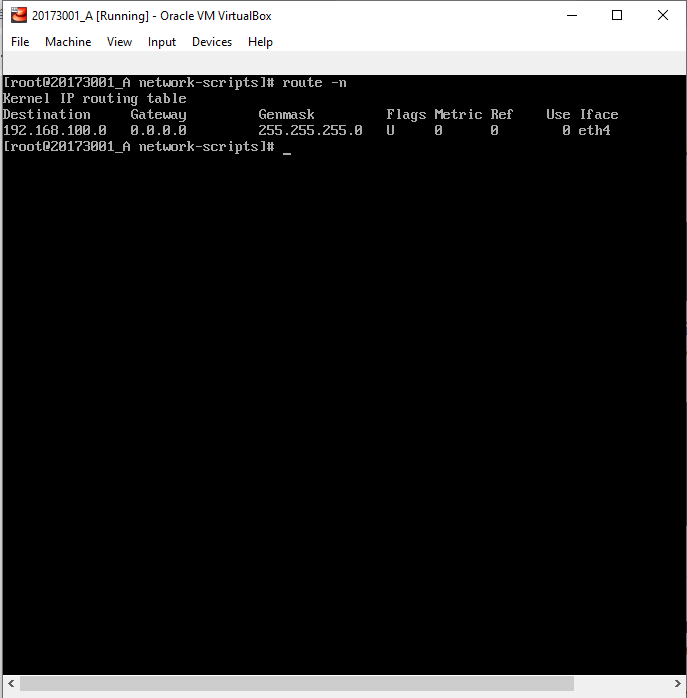
Lớp : CNTT08  
Khóa : 62

# Bài số 1: Thiết lập mạng Intranet nội bộ

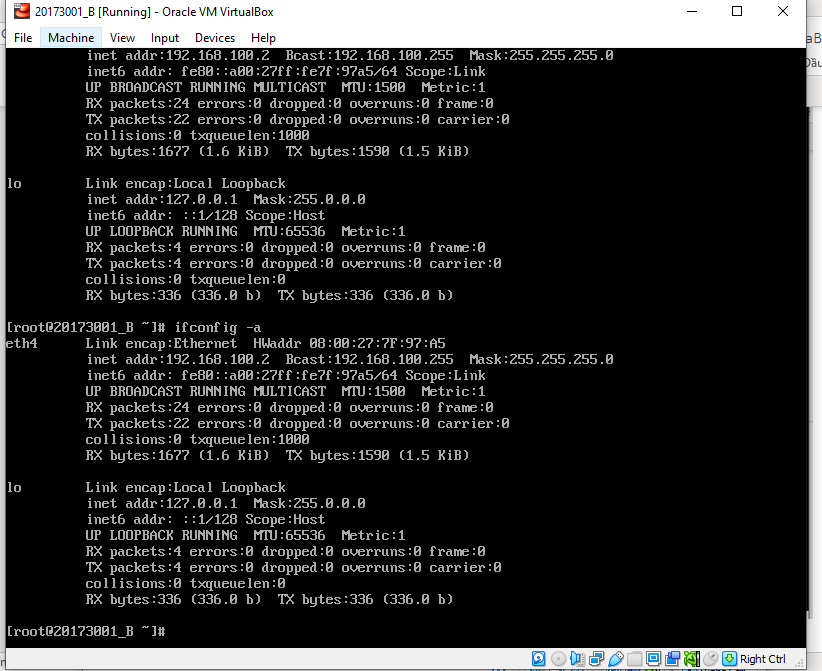
## Cấu hình mạng cho các trạm kết nối vào cùng một mạng LAN

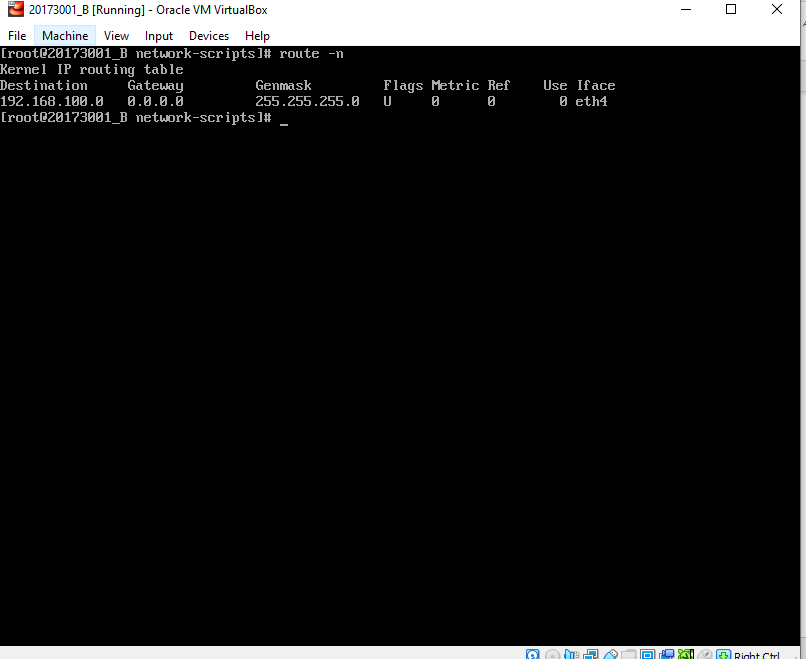
### Máy a



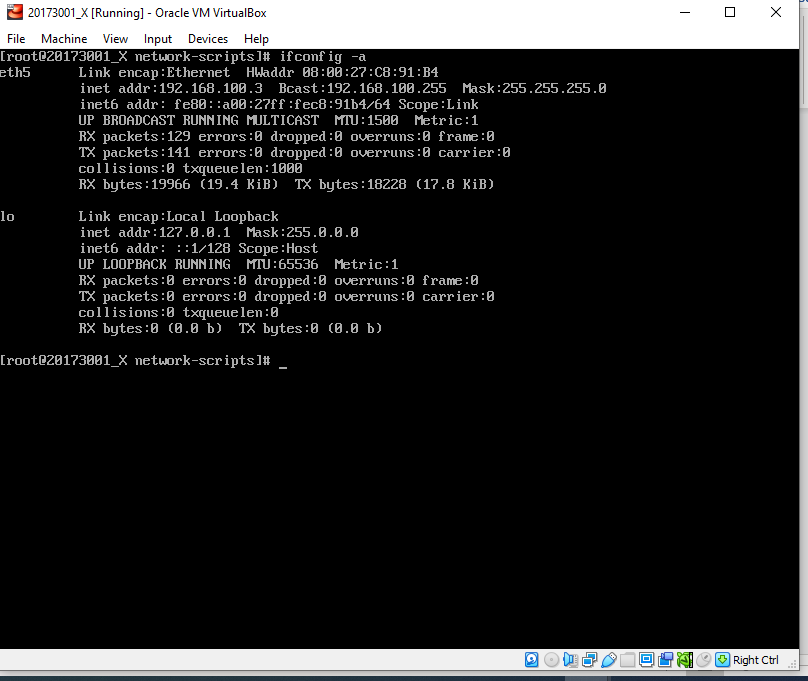


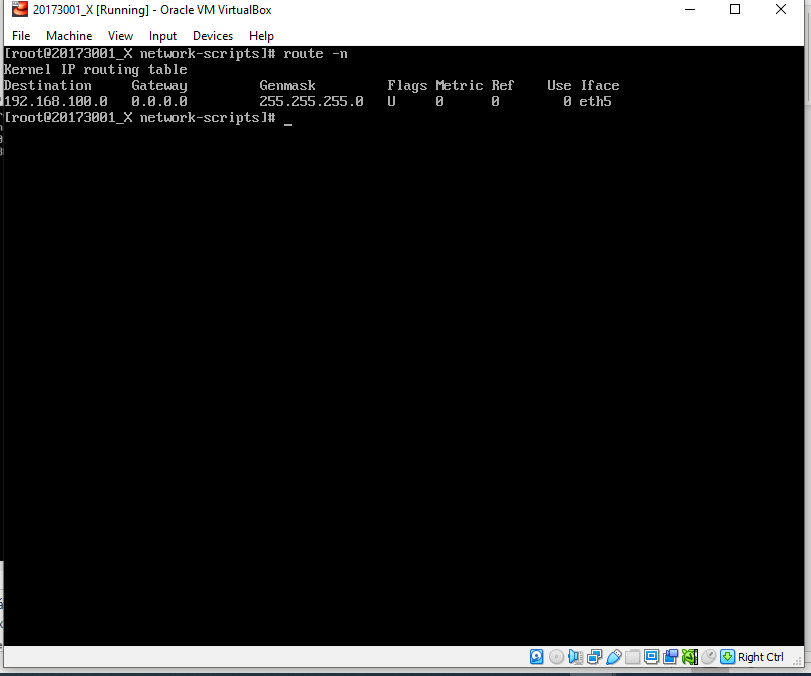
### Máy b



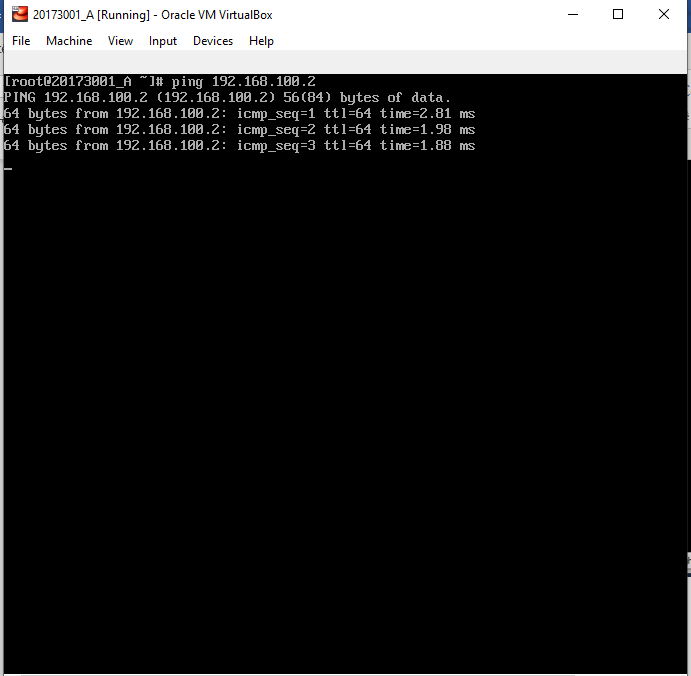


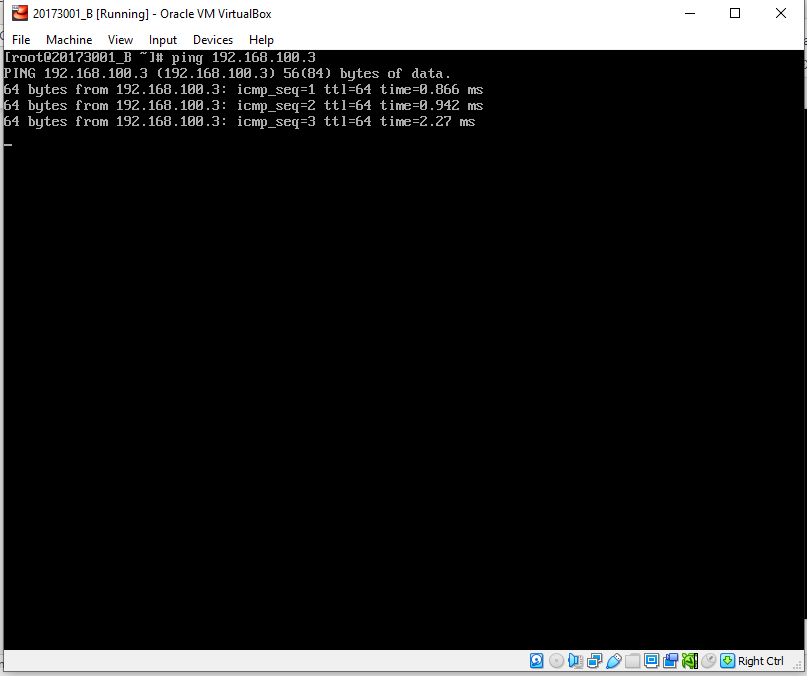
### Máy X

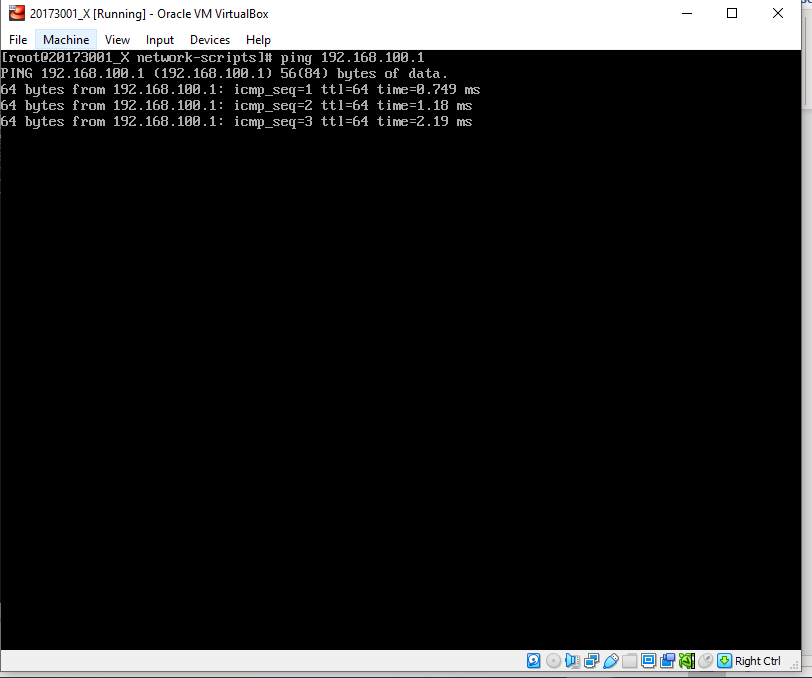




#### Ping

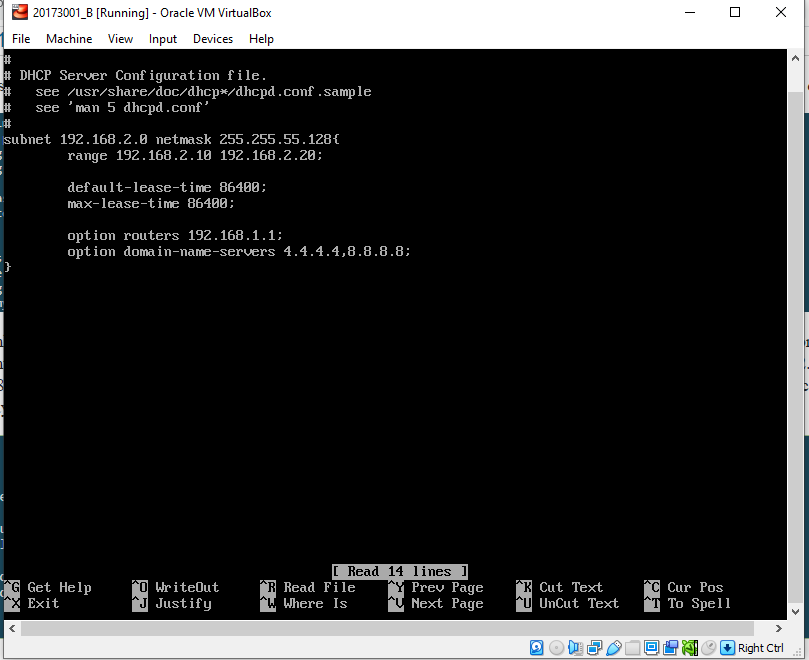




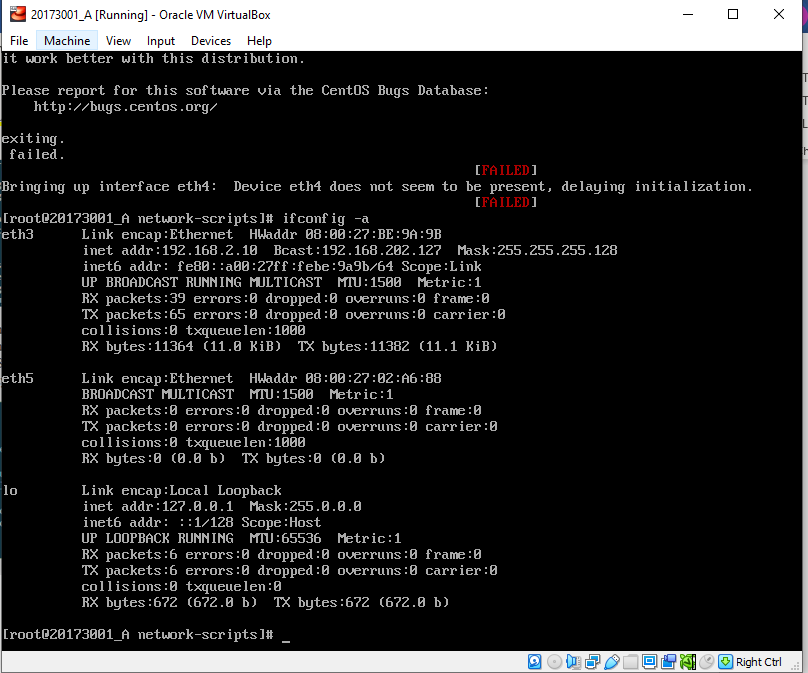


# Làm việc với DHCP

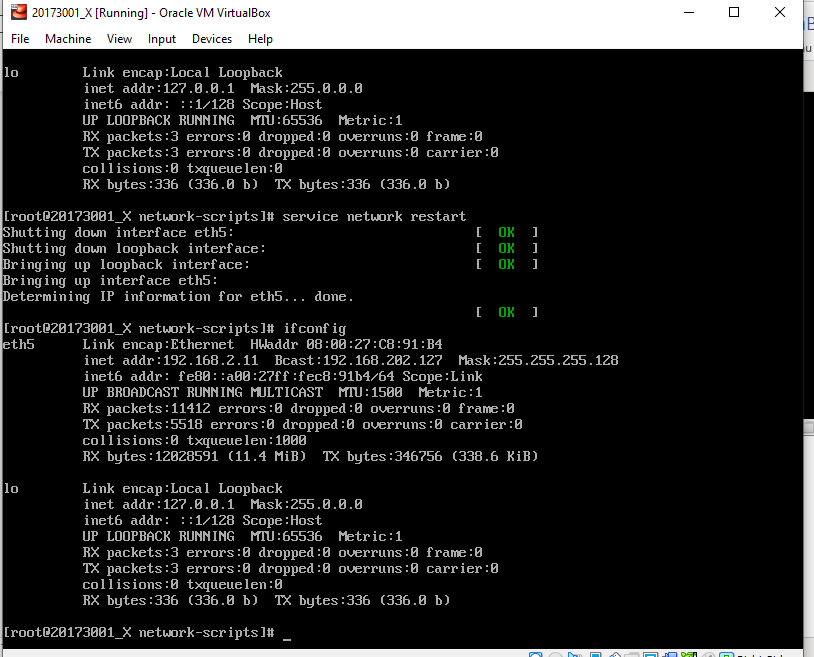
## Máy server là máy B



## Máy A

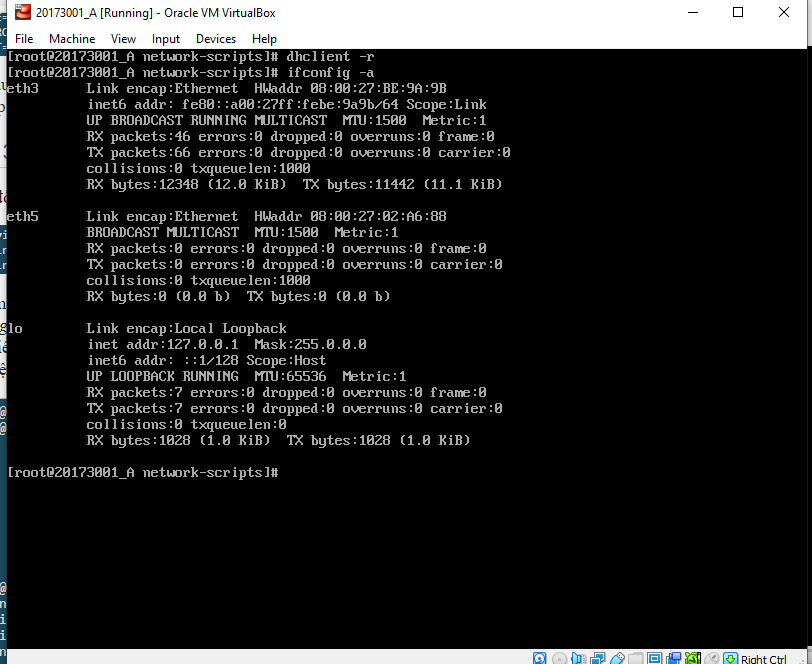


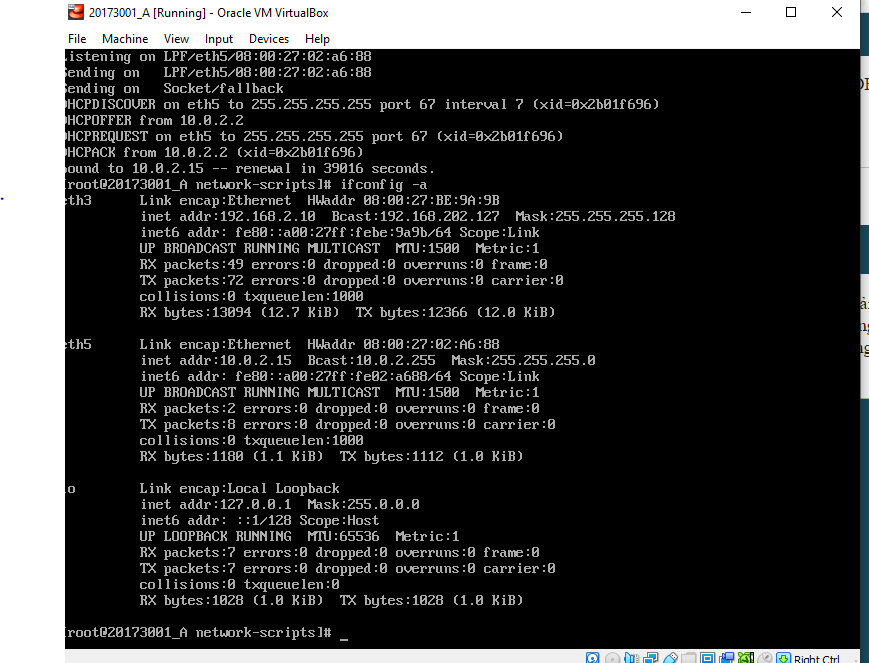
## Máy X

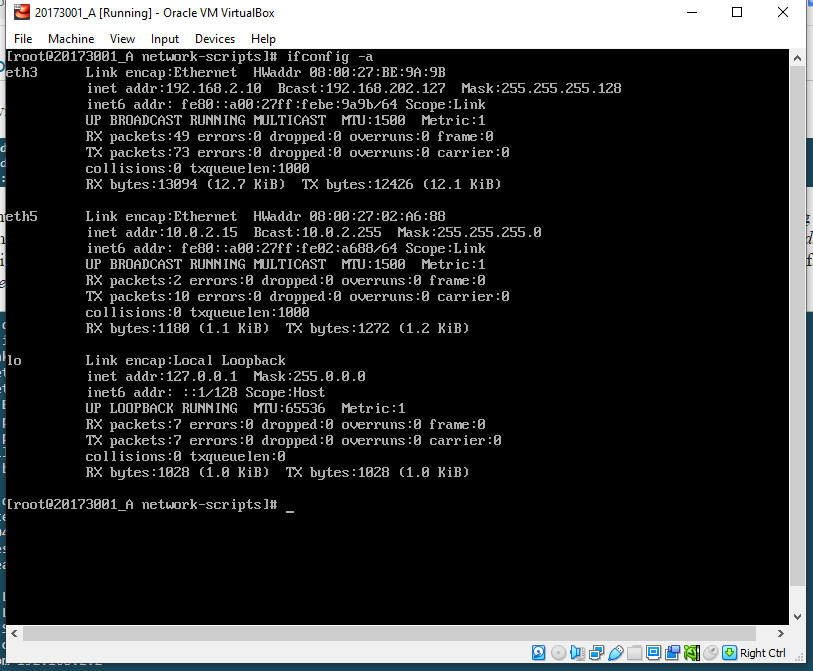


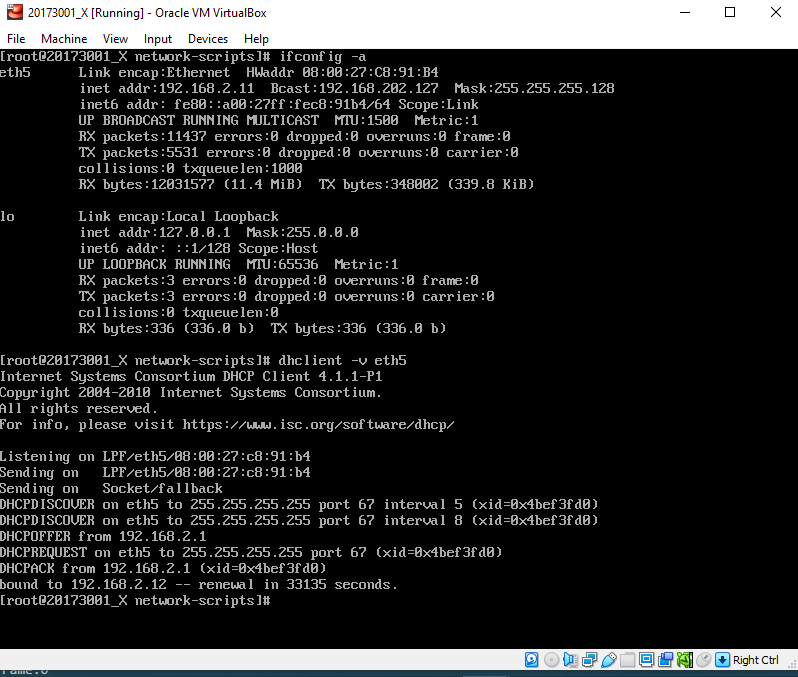
## Tương tác DHCP client-server

### Máy A

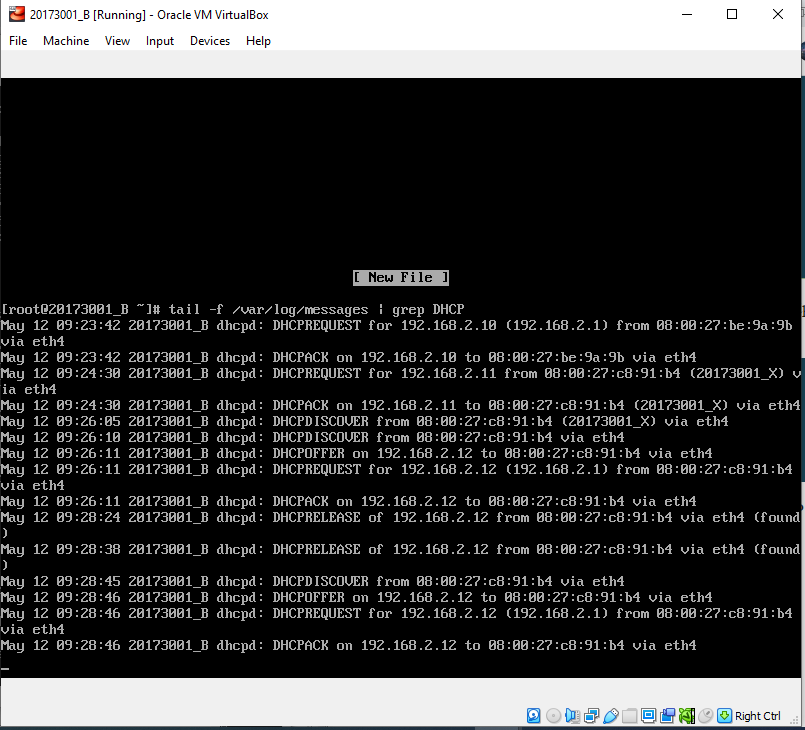




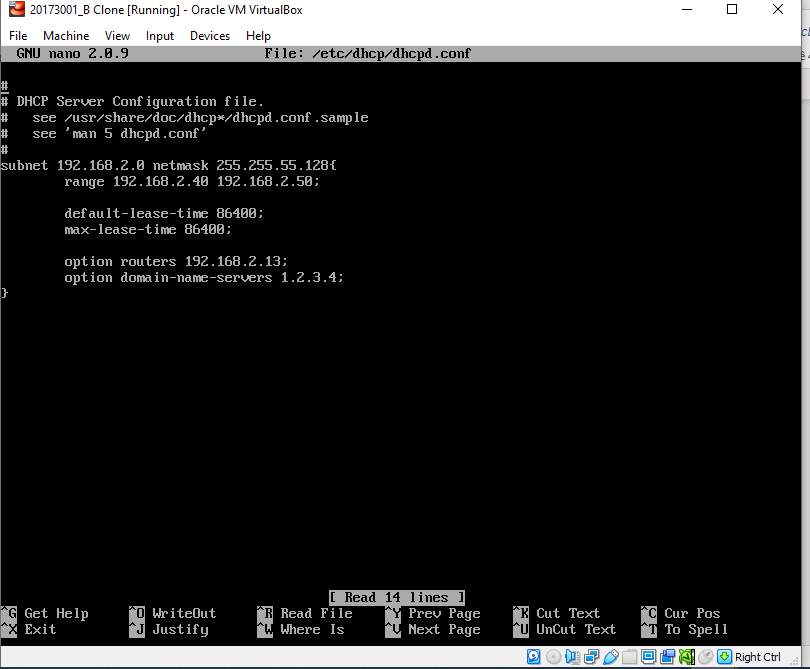


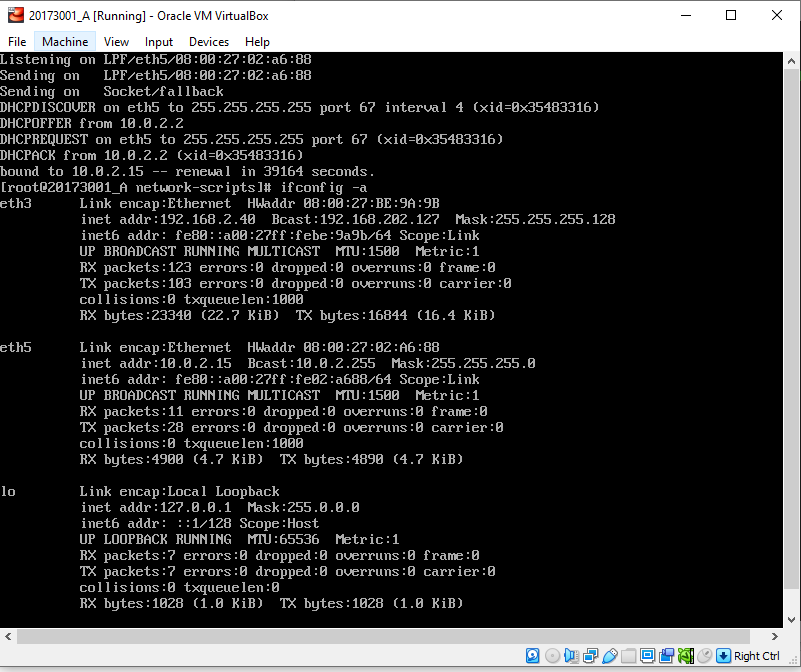


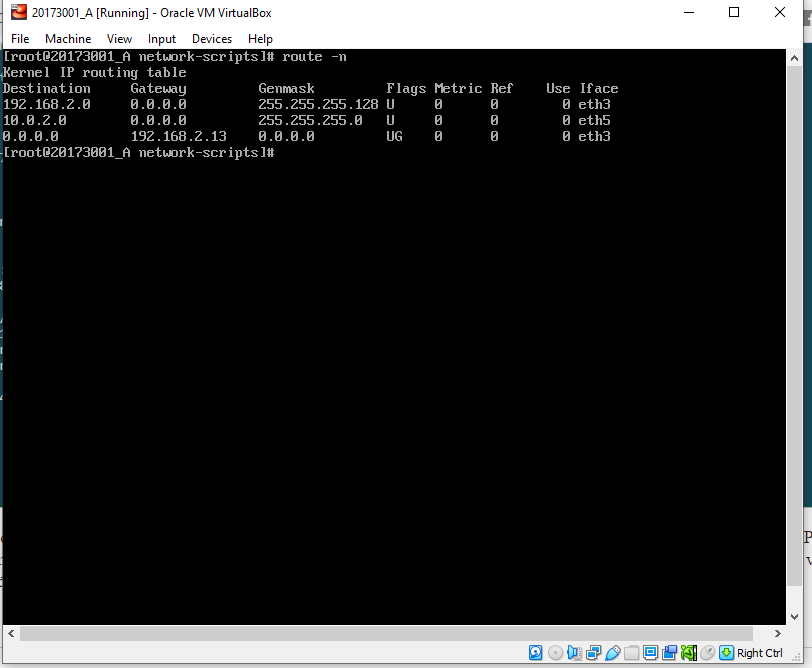
### Thực hiện chạy DHCP server và tiến hành giải phóng địa chỉ IP (dhclient -r) rồi cấp lại IP (dhclient -v) ở máy client



## Kịch bản tương tranh nhiều DHCP server

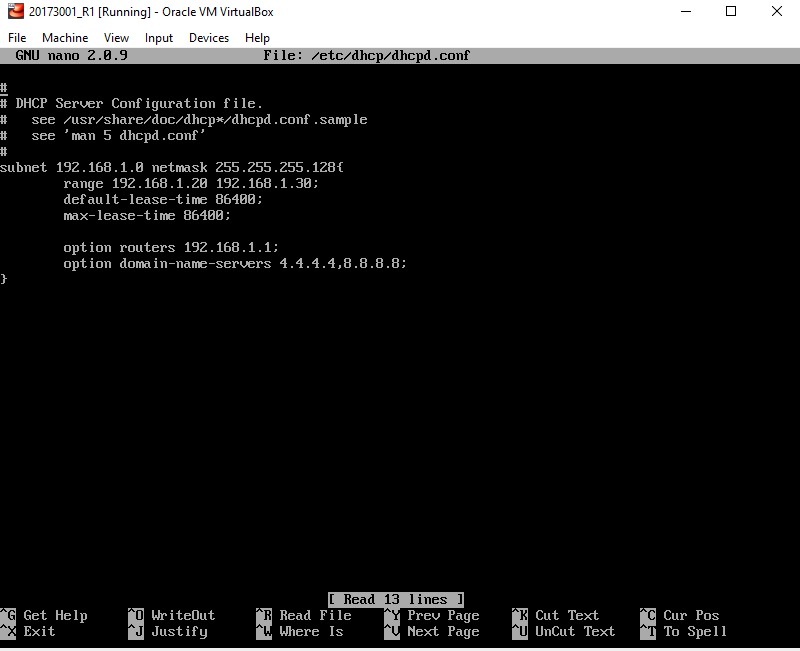


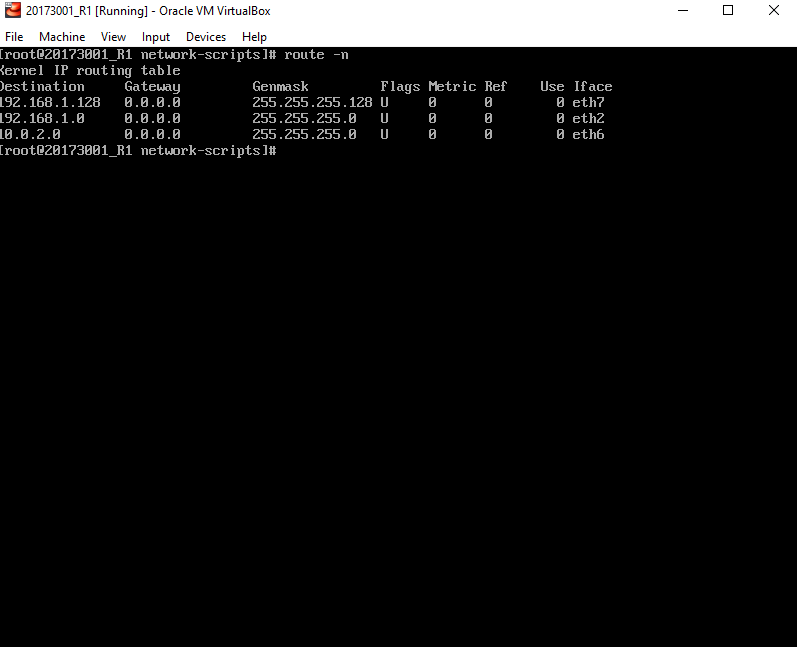




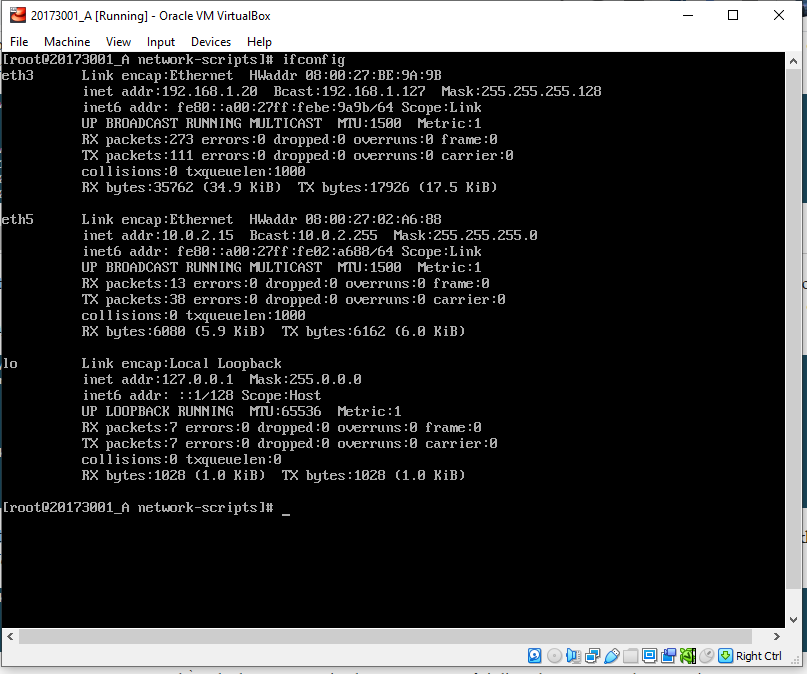
# Qui hoạch Gateway cho mạng Intranet

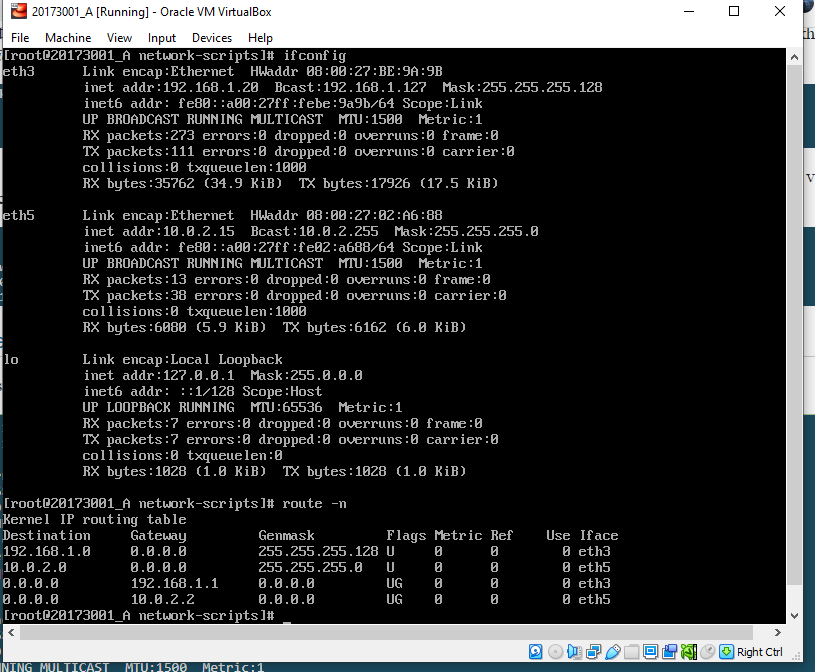
## Cấu hình router R1





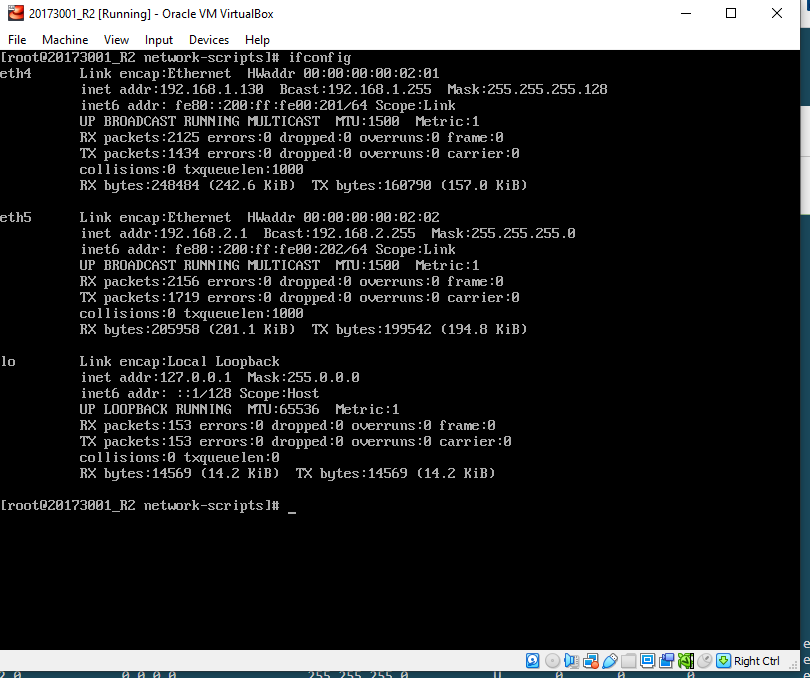
## Cấu hình máy trạm cho LAN1

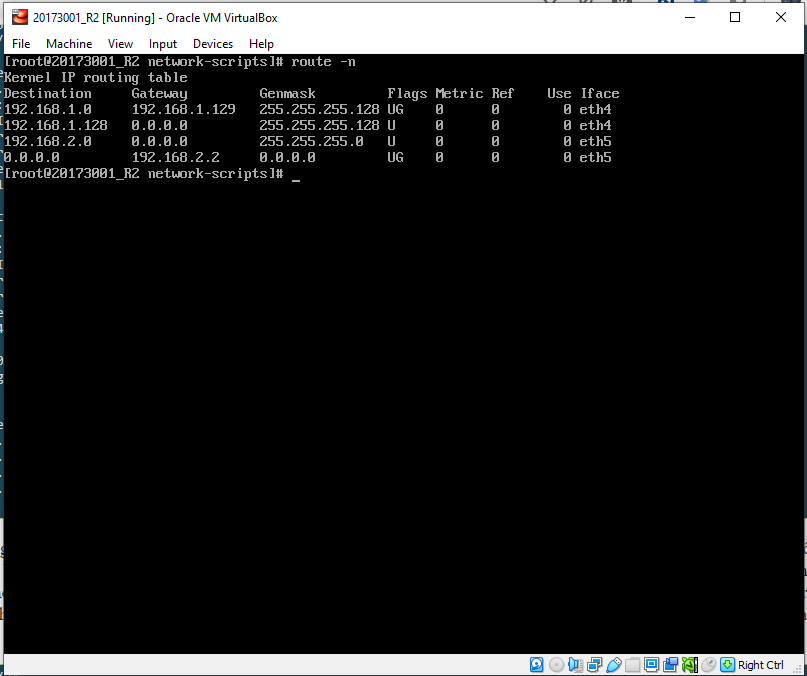




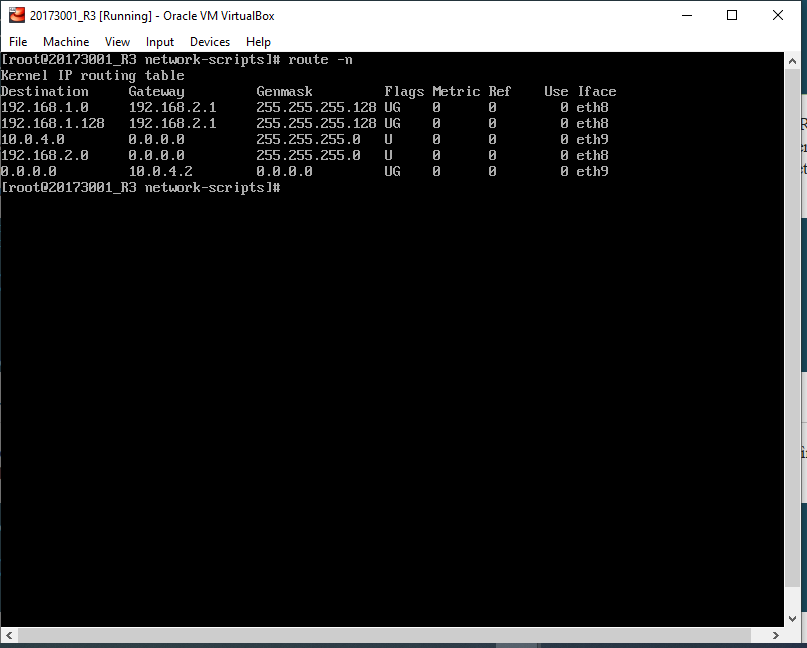
## Cấu hình router R2 và R3

### R2

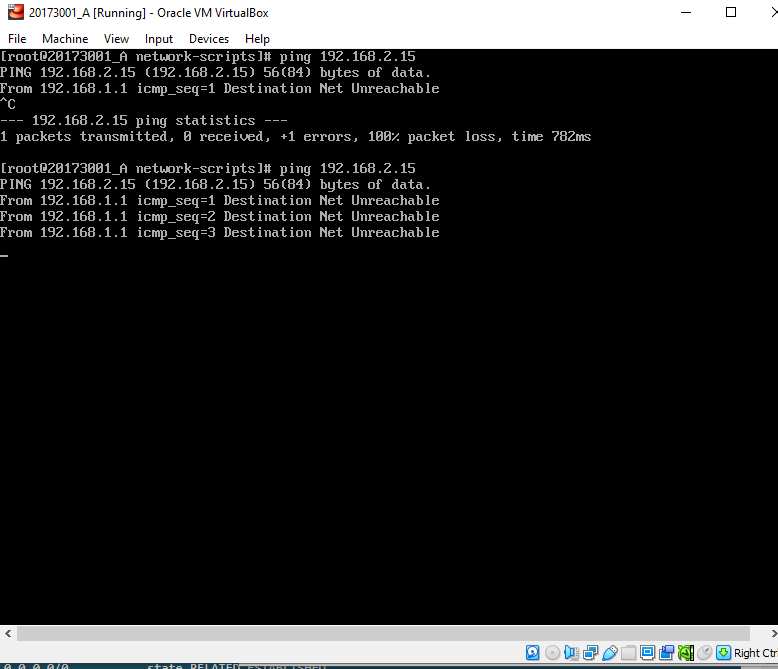


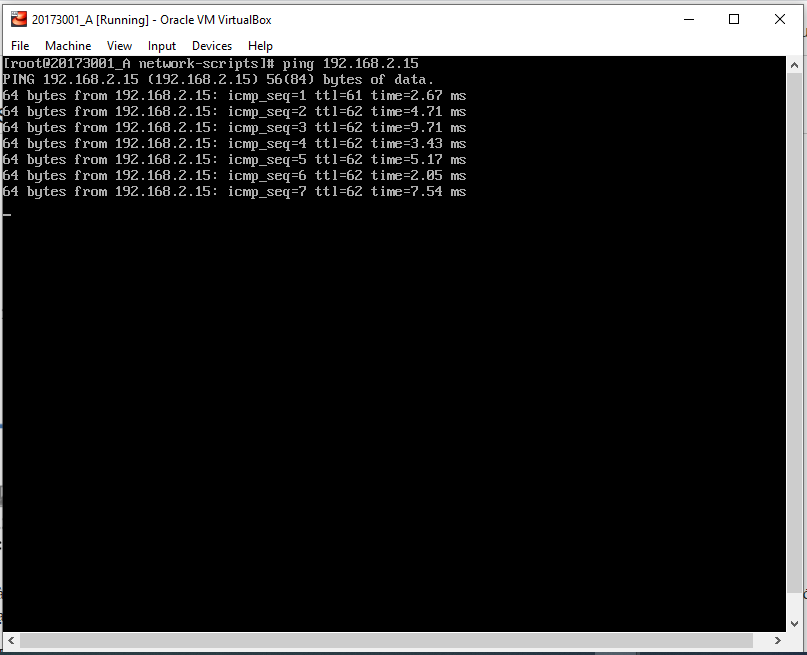


## R3

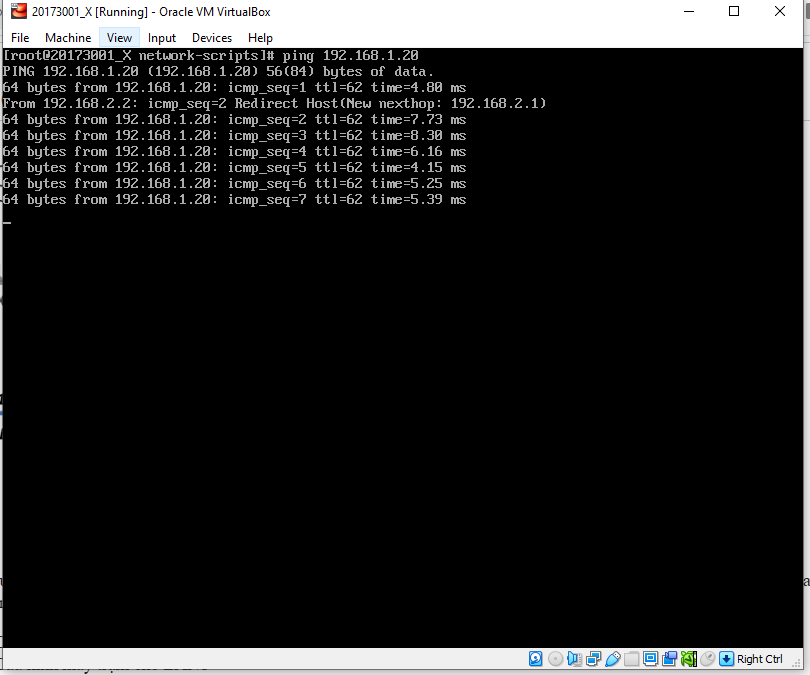


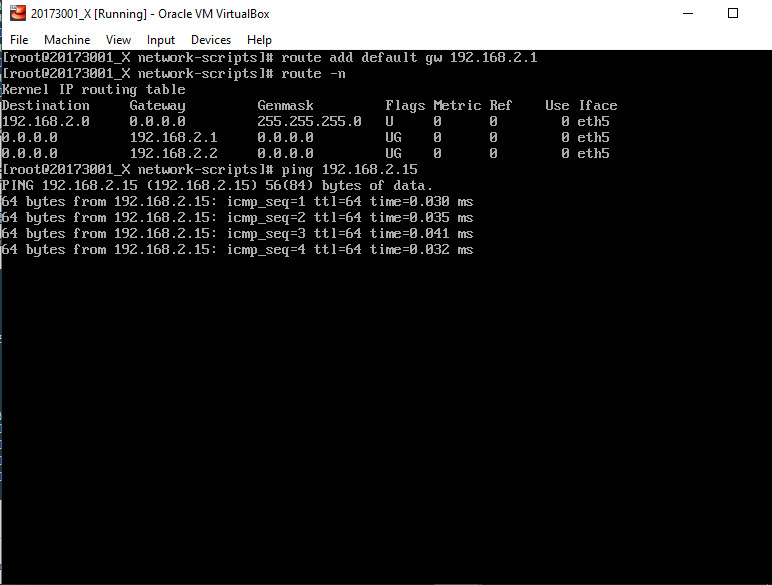
## Kiểm tra hệ thống





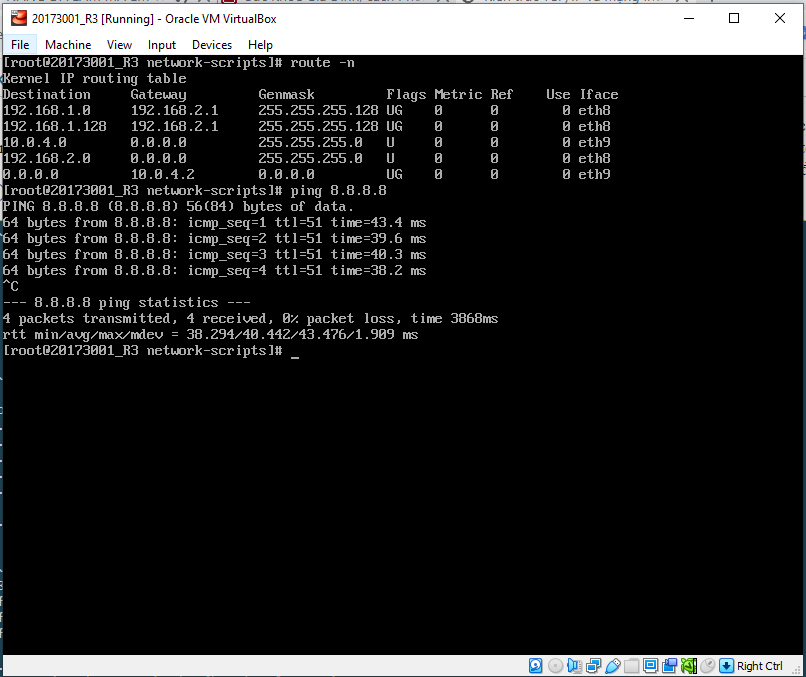
### Xử lý tình huống Redirect Host



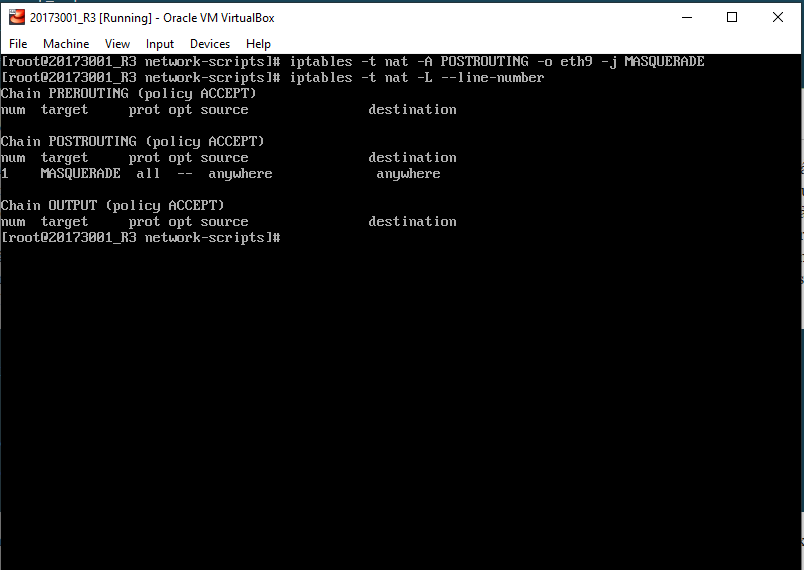


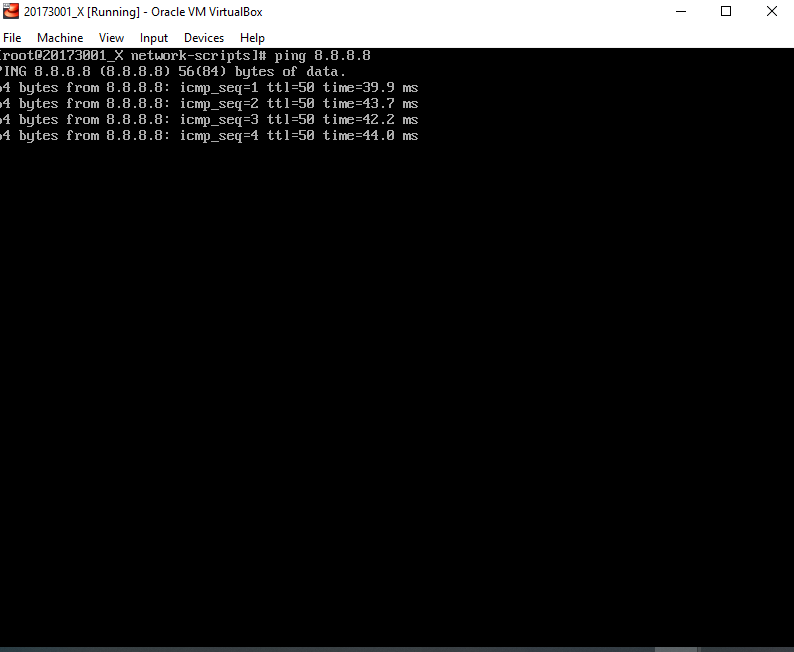
# Thiết lập NAT cho Gateway

## Kiểm tra kết nối Internet từ R3



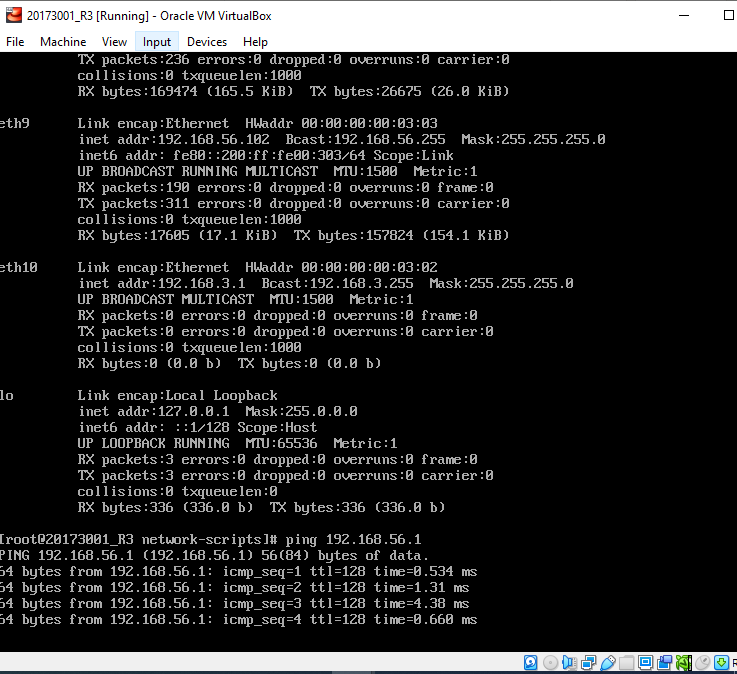
## Thiết lập NAT trên R3 với iptables

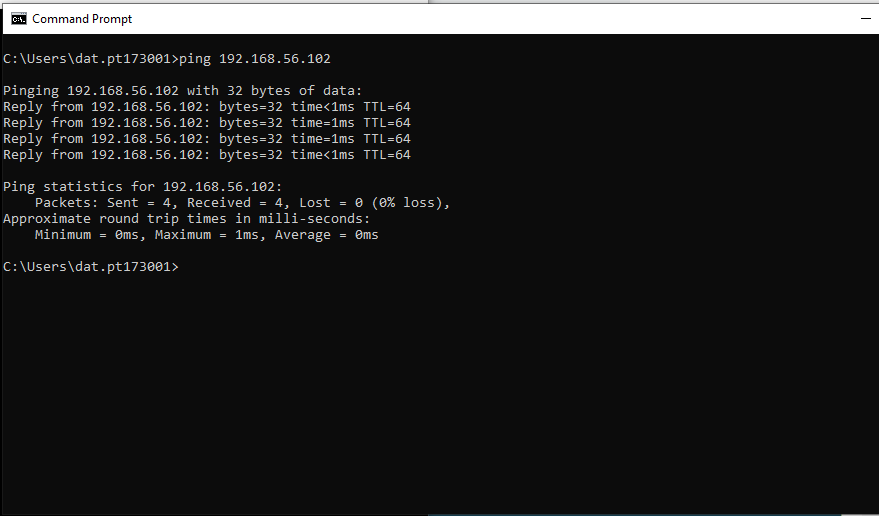




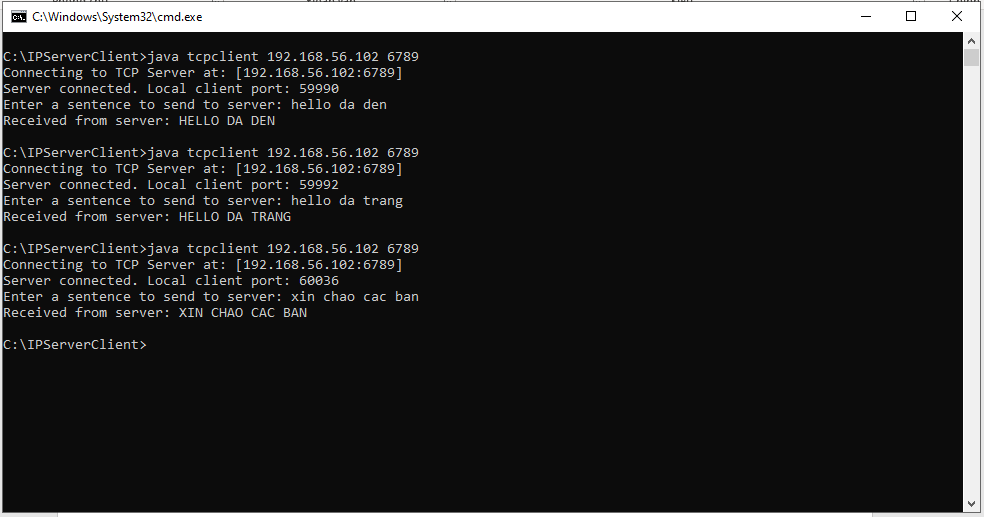
# Thiết lập Port forwarding cho NAT Gateway

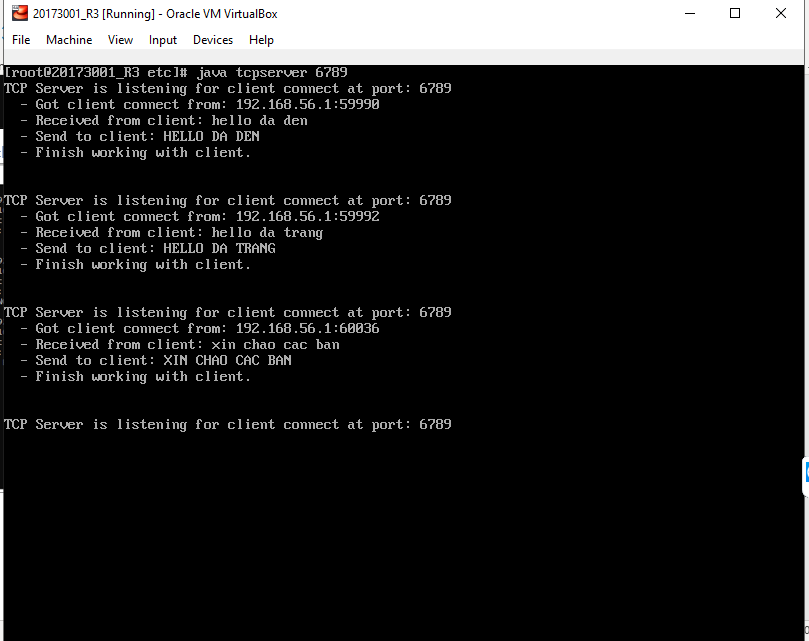
## Kiểm tra kết nối ngược từ Internet vào R3





## Kết nối ứng dụng client-server từ máy host VirtualBox vào R3





## Thiết lập Port forwarding trên R3 bằng iptables

