

Configuring Port Forwarding with iptables

LPIC-2: Linux Engineer (202-450)

Objectives:

At the end of this episode, I will be able to:

1. Describe network address translation (NAT)
2. Configure *iptables* to forward a port to another host using NAT

Additional resources used during the episode can be obtained using the download link on the overview episode.

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- Configuring Port Forwarding with *iptables*
 - Forwarding ports
 - Performing source and destination NAT
 - Configuration Steps
 1. Enable connection tracking for the port
 2. Configure Destination NAT
 3. Configure Source NAT
 - Connection Tracking
 - Allow connections to establish
 - Keep a record of the connection to help identify follow-up packets
 - `sudo iptables -A FORWARD -i enp0s6 -o enp0s5 -p tcp --syn --dport 3306 -m conntrack --ctstate NEW -j ACCEPT`
 - Allow subsequent packets in the connection
 - `iptables -A FORWARD -i enp0s6 -o enp0s5 -m conntrack --ctstate ESTABLISHED,RELATED -j ACCEPT`
 - Network Address Translation (NAT)
 - Destination NAT (DNAT)
 - `sudo iptables -t nat -A PREROUTING -i enp0s6 -p tcp --dport 3306 -j DNAT --to-destination 10.222.0.50`
 - Source NAT (SNAT)
 - Individual source NAT (if global NAT is off)
 - `sudo iptables -t nat -A POSTROUTING -o enp0s5 -p tcp --dport 3306 -d 10.222.0.50 -j SNAT --to-source 10.222.0.51`
 - Save configuration
 - `sudo iptables-save | sudo tee /etc/iptables/rules.v4`