

## 5.1.10 Configure QoS

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### Your Performance

Your Score: 8 of 8 (100%)

Elapsed Time: 11 minutes 45 seconds

Pass Status: **Pass**

Required Score: 100%

### Task Summary

#### Required Actions & Questions

- ✓ Create an alias [Show Details](#)
- ✓ Use the Traffic Shaper wizard for dedicated links using one WAN connection
- ✓ Configure the Traffic Shaper [Show Details](#)
- ✓ Prioritize voice over IP traffic [Show Details](#)
- ✓ Enable and configure a penalty box [Show Details](#)
- ✓ Raise and lower the applicable application's priority [Show Details](#)
- ✓ Q1: How many firewall rules were created?
- ✓ Change the port number used for the MSRDP outbound rule

### Explanation

Complete this lab as follows:

1. Sign into the pfSense management console.
  - a. In the Username field, enter **admin**.
  - b. In the Password field, enter **P@ssw0rd** (zero).
  - c. Select **SIGN IN** or press **Enter**.
2. Create a high bandwidth usage alias.
  - a. From the pfSense menu bar, select **Firewall > Aliases**.
  - b. Select **Add**.
  - c. Configure the Properties as follows:
    - Name: **HighBW**
    - Description: **High bandwidth users**
    - Type: **Host(s)**
  - d. Add the IP addresses of the offending computers to the host(s) configuration:
    - Under Host(s), in the IP or FQDN field, enter **172.14.1.25**
    - Select **Add Host**.
    - In the new IP or FQDN field, enter **172.14.1.100**
  - e. Select **Save**.
  - f. Select **Apply Changes**.
3. Start the Traffic Shaper wizard for dedicated links.
  - a. From the pfSense menu bar, select **Firewall > Traffic Shaper**.
  - b. Under the Firewall bread crumb, select **Wizards**.
  - c. Select **traffic\_shaper\_wizard\_dedicated.xml**.
  - d. Under Traffic shaper Wizard, in the *Enter number of WAN type connections* field, enter **1** and then select **Next**.
4. Configure the Traffic Shaper.
  - a. Make sure you are on Step 1 of 8.

- b. Using the drop-down menu for the upper Local interface, select **GuestWi-Fi**.
  - c. Using the drop-down menu for lower Local interface, make sure **PRIQ** is selected.
  - d. For the upper *Upload* field, enter **5**.
  - e. Using the drop-down menu for the lower *Upload* field, select **Mbit/s**.
  - f. For the top Download field, enter **45**.
  - g. Using the drop-down menu for the lower Download field, select **Mbit/s**.
  - h. Select **Next**.
5. Prioritize voice over IP traffic.
  - a. Make sure you are on Step 2 of 8.
  - b. Under Voice over IP, select **Enable** to prioritize the voice over IP traffic.
  - c. Under Connection #1 parameters, in the Upload rate field, enter **15**.
  - d. Using the drop-down menu for the top Units, select **Mbit/s**.
  - e. For the Download rate, enter **20**.
  - f. Using the drop-down menu for the bottom Units, select **Mbit/s**.
  - g. Select **Next**.
6. Enable and configure a penalty box.
  - a. Make sure you are on Step 3 of 8.
  - b. Under Penalty Box, select **Enable** to enable the penalize IP or alias option.
  - c. In the Address field, enter **HighBW**. This is the alias created earlier.
  - d. For Bandwidth, enter **2**.
  - e. Select **Next**.
7. Skip steps 4 and 5.
  - a. For Step 4 of 8, scroll to the bottom and select **Next**.
  - b. For Step 5 of 8, scroll to the bottom and select **Next**.
8. Raise and lower the applicable application's priority.
  - a. Make sure you are on Step 6 of 8.
  - b. Under *Raise or lower other Applications*, select **Enable** to enable other networking protocols.
  - c. Under *Remote Service / Terminal emulation*, use the:
    - MSRDP drop-down menu to select **Higher priority**.
    - VNC drop-down menu to select **Higher priority**.
  - d. Under VPN:
    - Use the PPTP drop-down menu to select **Higher priority**
    - Use the IPSEC drop-down menu to select **Higher priority**
  - e. Scroll to the bottom and select **Next**.
  - f. For step 7 of 8, select **Finish**.

Wait for the reload status to indicate that the rules have been created (look for Done).
9. View the floating rules created for the firewall.
  - a. Select **Firewall > Rules**.
  - b. Under the Firewall breadcrumb, select **Floating**.
  - c. In the top right, select **Answer Questions**.
  - d. Answer the question and then minimize the question dialog.
10. Change the port number used for the MSRDP outbound rule.
  - a. For the *m\_Other MSRDP outbound* rule, select the **edit** icon (pencil).
  - b. Under Edit Firewall Rule, in the *Interface* field, select **GuestWi-Fi**.
  - c. Under Destination, use the Destination Port Range drop-down menu to select **Other**.
  - d. In both Custom fields, enter **3391**.
  - e. Select **Save**.
  - f. Select **Apply Changes**.
  - g. In the top right, select **Answer Questions**.
  - h. Select **Score Lab**.

