Using "ipconfig" To Determine If a Device Is On the Right Subnet

**Note:** If available, we highly recommend consulting an IT or networking professional when dealing with network issues.

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**Objective**

Use Ipconfig to check if a device is on the correct subnet.

Knowing what subnet a device is located in can help with network troubleshooting (especially when a device is not drawing service), as well as determining an available range when setting a static IP. It will also ensure you are able to use a computer on the network to access a device’s web interface (GUI).

**Applies To**

- Networking
- Subnets

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**Procedure**

**Obtain IP Address and Subnet Mask**

1. Use the phone GUI to navigate to **Status > TCIP/IP parameters**.
2. Note the **IP address** and **subnet mask**.
3. From a computer on the intended network, open a command/terminal prompt.
   - Windows: In the **Run or Search bar**, type `cmd` and click **Enter**. Then type `ipconfig` and click **Enter**.
   - Mac: Press **Command+Space** and type `terminal`, then click **Enter**. In the terminal, type `ifconfig` and click **Enter**.

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https://support.8x8.com/us/equipment-devices/network-devices/using_%22ipconfig%22_to_determine_if_a_device_is_on_the...
4. Note the **subnet mask**.

The subnet mask of the computer should match the phone. Rearrange devices to ensure both the and computer are on the network the phones are intended to reside on.

**Compare IP Addresses to Determine if Devices Are on the Same Subnet**

1. **Calculate network block.**
   1. In the example above (Step 3), we have a subnet mask of 255.255.255.0. **This is the size of the network block.**
   2. In each of the 4 sections, if the value is 255, we will substitute that with a 0.
   3. If there is any other number in the section, we then **subtract that number from 256**.
   4. In the example above, we would get 0.0.0.256 (256 - 0 = 256). This is a block of **256 numbers**.

2. **Compare both IP address/subnet combinations as the addresses must match for any section where the subnet value is 255.**

The key is to match up the subnet and the IP address.

<table>
<thead>
<tr>
<th>IP Address</th>
<th>Subnet Mask</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.192.0.93</td>
<td>255.255.255.0</td>
<td>10.192.0.175</td>
<td>These two IP addresses are in the same subnet.</td>
</tr>
<tr>
<td>10.192.1.93</td>
<td>255.255.255.0</td>
<td>10.192.1.175</td>
<td>These two IP addresses don’t match in the 3rd position and are in different subnets.</td>
</tr>
<tr>
<td>10.192.0.93</td>
<td>255.255.255.0</td>
<td>10.192.1.175</td>
<td>These two IP addresses only have to match in the first 2 sections, and are in the same subnet.</td>
</tr>
<tr>
<td>10.192.175</td>
<td>255.255.252.0</td>
<td>10.192.175</td>
<td>These IP addresses are in the same subnet. As noted above, 252 in the 3rd section of the subnet mask gives 4 blocks of 256 addresses. The blocks are sequential: 0-3, 4-7, 8-11, etc. Since the 3rd position of each address is in the range of 0-3, they are in the same subnet. If the 2nd address was 10.192.175, it would be in a different subnet (a range of 4-7).</td>
</tr>
</tbody>
</table>

The most common subnet you will see is **255.255.255.0**. So if two addresses match in the first 3 sections (reading left to right), and the subnet is 255.255.255.0 for both addresses, they are in the same subnet.