**[How to connect to a docker container from outside the host (same network) [Windows]](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo)**

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| up vote 15 down vote [favorite](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo)  **8** | I've created my first docker container, it's running a server using Go but I can't access it from outside the host computer. I've just started with docker so I'm a little lost here.  So I have a very simple Go code that starts a server, I have built the docker image which installs Go and builds the code in a Linux base image. I'm running the server on port 8080 so I expose that port to the host running the container like this:  docker run -p 8080:8080 dockertest  That works and **I get to access the server through docker's machine IP** (the one that appears on the *Docker Quickstart Terminal* when initiated), the problem is I **can't access the website I'm hosting from outside the host,** so if I try to open the same IP address on my phone it just gives me an error: This webpage is not available (ERR\_CONNECTION\_TIMED\_OUT).  I've also tried specifying the IP like this:  docker run -p 192.168.0.157:8080:8080 dockertest  But when I do that I can't access the website through neither the docker machine's IP nor the specified IP on the command line above. I'm also not sure which IP I'm suppose to write in that command I used my computer's IP, I've also tried 127.0.0.1 (localhost) but that gave me the same result: couldn't access the website through any IP whatsoever.  I've googled this problem and found many stackoverflow questions but neither helped me solve my issue, most of them were oriented to Linux or Mac so the solution didn't apply to my situation.  Also, I can run the Go code on my computer and access the website from another device in the same network through my computer's IP. I don't understand why I can't access it when I'm running it in the docker machine, it occurred to me that it may have something to do with IP forwarding or something but I'm a complete noob in networking, I'm mostly a web developer and have almost no experience in native.  [windows](http://stackoverflow.com/questions/tagged/windows) [docker](http://stackoverflow.com/questions/tagged/docker) [virtualbox](http://stackoverflow.com/questions/tagged/virtualbox)   |  |  |  | | --- | --- | --- | | [share](http://stackoverflow.com/q/33814696/5934338)[edit](http://stackoverflow.com/posts/33814696/edit) | [edited May 25 at 13:11](http://stackoverflow.com/posts/33814696/revisions)  [[https://www.gravatar.com/avatar/a68c90bff1898254c557c82a0c70493e?s=32&d=identicon&r=PG](http://stackoverflow.com/users/134898/juan-calero)](http://stackoverflow.com/users/134898/juan-calero)  [Juan Calero](http://stackoverflow.com/users/134898/juan-calero)  1,89721434 | asked Nov 19 '15 at 21:28  [[https://lh3.googleusercontent.com/-C9Feof_ezik/AAAAAAAAAAI/AAAAAAAATQo/-PlxZxs79hY/photo.jpg?sz=32](http://stackoverflow.com/users/5180802/raulsntos)](http://stackoverflow.com/users/5180802/raulsntos)  [raulsntos](http://stackoverflow.com/users/5180802/raulsntos)  102111 | |
|  | |  |  |  |  | | --- | --- | --- | --- | | |  |  | | --- | --- | |  |  | | did you use EXPOSE 8080 in your Dockerfile in conjunction with the -p option? Also, check to see that port 8080 on the box there your container is running isn't blocked by your security rules. – [keda](http://stackoverflow.com/users/1009606/keda" \o "447 reputation) [Nov 19 '15 at 21:40](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo#comment55395351_33814696) | | |  |  | | --- | --- | |  |  | | @keda Yes, the Dockerfile does contain EXPOSE 8080. I'm running the container locally on my computer through Docker's Quickstart Terminal, I also tried disabling Windows firewall but that didn't work neither, I don't know if there's some setting I'm missing – [raulsntos](http://stackoverflow.com/users/5180802/raulsntos" \o "102 reputation) [Nov 20 '15 at 3:20](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo#comment55402598_33814696) |   add a comment |

**2 Answers**

[active](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo?answertab=active#tab-top) [oldest](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo?answertab=oldest#tab-top) [votes](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo?answertab=votes#tab-top)

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| up vote 17 down vote accepted | **TL;DR** Check the network mode of your VirtualBox host - it should be bridged if you want the virtual machine (and the Docker container it's hosting) accessible on your local network.  It sounds like your confusion lies in which host to connect to in order to access your application via HTTP. You haven't really spelled out what your configuration is - I'm going to make some guesses, based on the fact that you've got "Windows" and "VirtualBox" in your tags.  I'm guessing that you have Docker running on some flavour of Linux running in VirtualBox on a Windows host. I'm going to label the IP addresses as follows:  D = the IP address of the Docker container  L = the IP address of the Linux host running in VirtualBox  W = the IP address of the Windows host  When you run your Go application on your Windows host, you can connect to it with http://W:8080/ from anywhere on your local network. This works because the Go application binds the port 8080 on the Windows machine and anybody who tries to access port 8080 at the IP address W will get connected.  And here's where it becomes more complicated:  VirtualBox, when it sets up a virtual machine (VM), can configure the network in one of several different modes. I don't remember what all the different options are, but the one you want is bridged. In this mode, VirtualBox connects the virtual machine to your local network as if it were a stand-alone machine on the network, just like any other machine that was plugged in to your network. In bridged mode, the virtual machine appears on your network like any other machine. Other modes set things up differently and the machine will not be visible on your network.  So, assuming you set up networking correctly for the Linux host (bridged), the Linux host will have an IP address on your local network (something like 192.168.0.x) and you will be able to access your Docker container at http://L:8080/.  If the Linux host is set to some mode other than bridged, you *might* be able to access from the Windows host, but this is going to depend on exactly what mode it's in.  **EDIT** - based on the comments below, it sounds very much like the situation I've described above is correct.  Let's back up a little: here's how Docker works on my computer (Ubuntu Linux).  Imagine I run the same command you have: docker run -p 8080:8080 dockertest. What this does is start a new container based on the dockertest image and forward (connect) port 8080 on the Linux host (my PC) to port 8080 on the container. Docker sets up it's own internal networking (with its own set of IP addresses) to allow the Docker daemon to communicate and to allow containers to communicate with one another. So basically what you're doing with that -p 8080:8080 is connecting Docker's internal networking with the "external" network - ie. the host's network adapter - on a particular port.  With me so far? OK, now let's take a step back and look at your system. Your machine is running Windows - Docker does not (currently) run on Windows, so the tool you're using has set up a Linux host in a VirtualBox virtual machine. When you do the docker run in your environment, exactly the same thing is happening - port 8080 on the Linux host is connected to port 8080 on the container. The big difference here is that your Windows host is not the Linux host on which the container is running, so there's another layer here and it's communication across this layer where you are running into problems.  What you need is one of two things:   1. to connect port 8080 on the VirtualBox VM to port 8080 on the Windows host, just like you connect the Docker container to the host port. 2. to connect the VirtualBox VM directly to your local network with the bridged network mode I described above.   If you go for the first option, you will be able to access the container at http://W:8080 where W is the IP address or hostname of the Windows host. If you opt for the second, you will be able to access the container at http://L:8080 where L is the IP address or hostname of the Linux VM.  So that's all the higher-level explanation - now you need to figure out how to change the configuration of the VirtualBox VM. And here's where I can't really help you - I don't know what tool you're using to do all this on your Windows machine and I'm not at all familiar with using Docker on Windows.  If you can get to the VirtualBox configuration window, you can make the changes described below. There is also a command line client that will modify VMs, but I'm not familiar with that.  For bridged mode (and this really is the simplest choice), shut down your VM, click the "Settings" button at the top, and change the network mode to bridged, then restart the VM and you're good to go. The VM should pick up an IP address on your local network via DHCP and should be visible to other computers on the network at that IP address.   |  |  |  | | --- | --- | --- | | [share](http://stackoverflow.com/a/33814957/5934338)[edit](http://stackoverflow.com/posts/33814957/edit) | [edited Nov 20 '15 at 14:42](http://stackoverflow.com/posts/33814957/revisions) | answered Nov 19 '15 at 21:46  [[https://i.stack.imgur.com/nclbw.jpg?s=32&g=1](http://stackoverflow.com/users/2008384/kryten)](http://stackoverflow.com/users/2008384/kryten)  [Kryten](http://stackoverflow.com/users/2008384/kryten)  4,77311031 | |
|  | |  |  |  |  | | --- | --- | --- | --- | | |  |  | | --- | --- | |  |  | | I can only find 2 IPs, the one that Docker shows when I open the Quickstart Terminal (192.168.99.100) and the one my computer has (192.168.0.157), using docker run -p 8080:8080 dockertest I can access my website using http://192.168.99.100:8080 but only from my Windows computer (the host) and not from my phone. If I use docker run -p 192.168.0.157:8080:8080 dockertest I can't access the website with any IP from anywhere. I'm not sure how to set up networking, I tried using --net=bridge but that didn't work neither. Am I suppose to open VirtualBox? Can't I do it using Docker's terminal? – [raulsntos](http://stackoverflow.com/users/5180802/raulsntos" \o "102 reputation) [Nov 20 '15 at 3:13](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo#comment55402509_33814957) | | |  |  | | --- | --- | |  |  | | The problem is not with Docker, so no, Docker can't help you. I'm going to add some edits to illustrate what I think is going on. – [Kryten](http://stackoverflow.com/users/2008384/kryten" \o "4,773 reputation) [Nov 20 '15 at 14:19](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo#comment55422648_33814957) | | |  |  | | --- | --- | |  |  | | Ok, thank you! Now I understand, I was getting confused by the whole Linux virtual machine part. I was under the impression Docker was using Virtual Box for internal stuff that I was not suppose to touch. It was actually very easy, I just had to change to bridged in Virtual Box and now it works wonders, thank you very much. – [raulsntos](http://stackoverflow.com/users/5180802/raulsntos" \o "102 reputation) [Nov 20 '15 at 18:21](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo#comment55432063_33814957) | | |  |  | | --- | --- | |  |  | | Isn't there any way to have windows and docker containers in the same network, so we could access containers directly without port forwarding? – [Vituel](http://stackoverflow.com/users/2004857/vituel" \o "1,329 reputation) [Feb 23 at 15:59](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo#comment58851120_33814957) | | |  |  | | --- | --- | |  |  | | Stumbled upon this when search for running Jupyter server in docker and try to access it via LAN. Is there anyway I can find out what L is after switch the mode to bridged? – [PaulDong](http://stackoverflow.com/users/3588314/pauldong" \o "75 reputation) [Jul 6 at 1:34](http://stackoverflow.com/questions/33814696/how-to-connect-to-a-docker-container-from-outside-the-host-same-network-windo#comment63853867_33814957) | |