# LabraNet
## *External Access guide*

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## INTRODUCTION

Connections from LabraNet networks to Internet are generally restricted to standard TCP/UDP port numbers used by corresponding applications. This means that if you are running for example a web server somewhere on the Internet that listens to some non-standard HTTP port number (eg. 5000), the connection will be denied.

LabraNet currently has the following port numbers open for any type of application: **8000**, **8080** and **8443**. If you for some reason can't use the applications standard port number, you can use one of the previously mentioned.

Some common options for changing the listening port number of an application are listed below.

## Change the port that the application listens

Most applications allow user to change the port that the application listens for incoming connections. Refer to your applications manual for instructions.

## Create Iptables rule

If you for some reason can't change the port that your application is listening, you can create Iptables rule in Linux systems to forward the incoming traffic to your applications port. Example of such rule is presented below:

iptables -t nat -A PREROUTING -p <protocol> --dport <srcPortNumber> -j REDIRECT --to-port <dstPortNumber>

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Specify the protocol your application is using for the –p flag (tcp or udp).
Replace the srcPortNuber with applications standard port (eg. port 80 for
HTTP) or with one of the previously mentioned custom ports. Replace
dstPortNumber with the port your application is listening on.

## Install reverse proxy

Reverse proxy can listen for traffic on specified port and forward the traffic
to port that your application is using. Nginx is a commonly used reverse
proxy that can be found on most Linux distributions package repositories.
Below is a simple example configuration:

```
server {
    listen 80 default;
    location / {
        proxy_set_header   X-Real-IP       $remote_addr;
        proxy_set_header   X-Forwarded-For
$proxy_add_x_forwarded_for;
        proxy_set_header   Host            $host;

        proxy_pass http://127.0.0.1:5000/;

    }
}
```

This configuration forwards traffic received on port 80 (HTTP) to port
5010 (your applications port).