

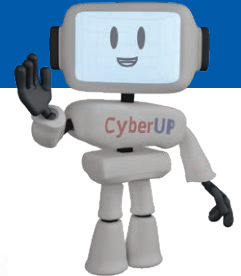


UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

# Information Technology Services

## Information and Cybersecurity Awareness

Email [ithelp@up.ac.za](mailto:ithelp@up.ac.za) | [www.up.ac.za/itsecurity](http://www.up.ac.za/itsecurity)



## Port forwarding

*'Make your home a haven for online safety'*

Make your computer accessible from the Internet. Host your own website. Be your own hosting provider. Sounds great? It is, but be careful of unintended consequences.

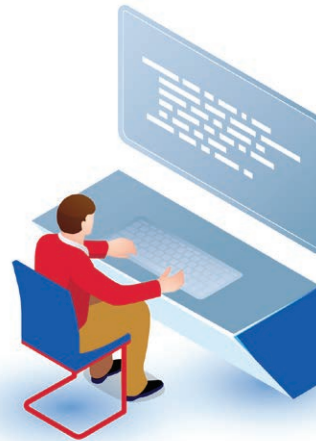
### Introduction

Perhaps you want to make a game server accessible to your friends, host a small website or access your CCTV cameras from your office or holiday destination. Port forwarding is an easy and useful way to enable such remote access to your home devices.

### What is a port and what is port forwarding?

In simple terms, a port is a virtual point in a network where communications start and end. A port is associated with a specific process or service and has a standardised number. For example, port 443 is the designated port for HTTPS web traffic.

For a home network, port forwarding is done by mapping a port on the Wi-Fi router, which is exposed to the Internet, to a port on a particular computer on the network, which is hidden from the Internet. Traffic from the outside world destined for this port is then directed to this computer.



Port forwarding can be useful to address all kinds of challenges, but it can also be dangerous.

### Is it safe to use port forwarding?

Port forwarding gives people outside your network access to your computer. If the target machine is not secured, your whole network could be at risk!

### Can you get hacked through port forwarding?

Yes! However, having the necessary security precautions in place can dramatically reduce the likelihood of being hacked.

### How to protect yourself

Port forwarding should be used responsibly with the required thought and diligence. These general safety precautions will assist you in staying safe.

- **Passwords:** Always use strong passwords. Weak passwords are equal to not having a password. Hackers can brute-force attack your exposed service, trying multiple passwords per second.
- **Updates:** Updates are critical in keeping your target machine secure. New vulnerabilities are discovered constantly, and these are fixed in updates. If you don't update regularly, these vulnerabilities can be used to exploit your machine.
- **Think before you forward:** Only expose the service you need. Don't be tempted to expose unnecessary services to the Internet. The more services you have exposed, the greater the chances of a successful cyber-attack.

#### SEE MORE

[Watch a short video on port forwarding](#)

#### READ MORE

[Port forwarding – beginners guide](#)

#### DO MORE

Follow the guidelines.  
Be careful what service you expose.