

Drone challenge 2018

The drone challenge 2018 will cover the basics of taking control over drones. In this challenge, participants will gain experience with Denial of Service attacks, protocol analysis, traffic analysis and more!

The drone challenge will consist of two challenges; the virtual drone, a simulated Parrot Bebop drone and the physical drone, a miniature aerial photography drone. There is a very limited number of physical drones but both drone attacks will involve similar concepts, meaning no one loses out!

To see which challenge is suitable for you, check out more details down below!

Physical drone requirements

The following hardware will be required for the challenge

1. A wireless network adapter with the monitor Mode.
 - Use the command `iw list | grep -A20 "Supported interface modes"` to check if your network adapter can run in monitor Mode
 - If *monitor* is not listed, a USB network adapter with monitor functionality will suffice

A Linux operating system will be necessary as there is no equivalent of AirmoN-ng available for Windows due to the different ways these operating systems work.

We recommend updating all the software in your Ubuntu machine at the first opportunity to ensure minimal risk of technical issues.

If your computer does not meet any of the aforementioned requirements, it will be impossible to complete the challenge. As such, please do not attempt the physical drone challenge and instead opt to complete the virtual drone challenge.

Virtual drone requirements

The following software will be required for the challenge. Instructions to acquire these components will be provided below.

1. VirtualBox - Downloadable from <https://www.virtualbox.org/wiki/Downloads>

2. VirtualBox image from

<https://drive.google.com/open?id=17dsM0cSRhUBye8ZODFJXR9UsGUAJNFY>

To run the virtual machine sufficiently, we recommend 8GB of RAM and around 50GB of disk space. The virtual machine is allocated 4GB of RAM.

Scoring system

Each challenge is weighted equally at 150 points. If multiple people finish with the same score, the next scoring factor will be the time taken to finish the challenge. Only the first attempted challenge will be taken into account for your score. However, after finishing a challenge, you may return your drone to attempt the virtual drone challenge or collect a drone to attempt the physical drone challenge.

Drone collection procedure

At registration, declare that you have tested your hardware and that it meets the requirements for the physical drone challenge. Based on availability, you may receive a drone to participate in the physical drone challenge. Please arrive early to register to ensure the best chances of receiving a drone.