



# A beginner's roadmap for playing CTFs: 10 practical tips for beginners

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Capture The Flag (CTF) challenges are fun to play, form a powerful training ground and help drastically develop your hacking skills. CTF competitions come in many forms, from malware analysis to web vulnerability challenges. Some [CTF events also provide the winners with cash rewards \(bounties\)](#), exclusive and limited-edition prizes (such as swag), and even job offers!

However, they can be quite challenging, especially for beginners. If you're a beginner, this article is your comprehensive guide with 10 practical tips and strategies to help play your next CTF event.

Before we dive into this article...

Did you know Intigriti is launching its 3rd edition of the annual 1337UP Live CTF event? Registrations are still open! So make sure to check it out on time to participate and win exclusive rewards!

<https://ctf.intigriti.io/>



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Registration for the annual [@intigriti #CTF](#) is now open!

Suitable for beginners through to expert hackers, explore full event details including cash prizes below

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## What are CTFs?

Capture The Flag (CTF) challenges are gamefied competitions where the objective is to solve (a series of) tasks to obtain (or capture) the flag which is often a unique string value located somewhere in a file or component that's part of the challenge. This flag also proves your completion of the challenge when obtained.

CTF challenges are often derived from realistic scenarios and attack vectors, some of them may have introduced added complexity to match the challenge's difficulty level.

A CTF challenge can come in many forms, there for example web challenges where you're tasked to discover and exploit web security vulnerabilities to elevate your privileges and gain access to the vulnerable machine. However other challenges focus on:

- **Reverse Engineering:** These challenges require the participants to analyze compiled binaries and extract the relevant information from them.
- **Forensics:** This requires participants to analyze data objects located on file systems to retrieve the data that they are tasked to look for.
- **Cryptography:** In this challenge, you're required to break the encryption on a certain data object to retrieve your flag. You will have to take advantage of several cryptographic weaknesses that are tied to the used algorithm.
- **OSINT:** Open-Source Intelligence (OSINT) challenges will require participants to look for relevant data on the web. This is often done using various search engines.
- **Hardware:** Hardware challenges require you to enumerate and exploit vulnerabilities in hardware systems.

Some complex CTF competitions incorporate all these types into one single CTF challenge, these are also referred to as Jeopardy-style CTF events.

## Practical Tips

CTFs are fun to play but they can be quite intimidating to beginners and people who've not had the chance to solve their first challenge on their own yet. If that's you, don't worry, you're not the only one, and the start is always more complex as you are confronted with a steep learning curve.

On the other side, once you start understanding the basics and start solving your first few challenges, you will pick up several new skill sets that you can apply in the real world, including in [the bug bounty world](#).

Below are 10 of the most helpful tips we can give to newcomers who are looking to get started in playing CTFs!

### 1) Build your fundamentals

If you're just starting in penetration testing, we always recommend building your fundamentals first. Your fundamentals are the most important factor when you're just starting. Grab the basics of networking and if you're only interested in web application pentesting, learn the OWASP Top 10.

Try to always master the basics of each subject you're interested in pursuing! This will help you tremendously down the line!

### 2) Start with easy challenges first

Start with the most basic and easy challenges first, build up as you go. If you are already experienced, try to select a challenge with a matching difficulty level to your experience level.

If you decide to start with a complex challenge first, you might get stuck relatively quickly and this can slow you down and take you more time than you would have otherwise anticipated.

### 3) Read and learn from write-ups

One of the best ways to learn is to learn from others. We highly recommend you read and learn from write-ups published by other participants. Some participants like to post their walkthroughs on YouTube, make sure you check them out as well!

### 4) Always document your steps

Always try to document your steps. Whether it's a web challenge or an OSINT task, it's always a good idea to document your steps for future reference.

We recommend you to use a simple note-taking app and write down your notes, this can help you tremendously when you get stuck at a certain task or step of the challenge!

### 5) Avoid common rabbit holes

As you're just starting, you'll come across lots of false signs that you might think will lead you somewhere. Sometimes, these are intentionally added to add difficulty to the CTF challenge. If you're stuck somewhere, take a break and return to it later to avoid common rabbit holes.

Another tip we can give is to always read the description of the challenge, it can often contain several vital tips that can help you avoid these rabbit holes.

### 6) Use smart tools

Depending on challenge rules, some tools are allowed to be used. Use smart tools to your advantage to save time and avoid unnecessary and repetitive work.

For example, tools like Hashcat can help recover passwords and other encrypted or hashed data, and CyberChef can be deployed to help decode and even decrypt values.

### 7) Seek teammates

CTFs are fun with teammates! Seek teammates to learn from each other, collaborate on certain tasks and most importantly have fun while solving CTFs!

### 8) Join communities

Communities are the perfect way to find collaborators and build up your team. Intigrity has its own dedicated [CTF channel on Discord](#) to find teammates for the [upcoming 1337UP 2024 Live CTF Challenge](#) ([make sure you participate](#))! Make sure you join them!

### 9) Practice continuously

Practice continuously to keep improving your skills and learn more. By continuously practicing, you'll keep refining your work and build up your strategies and methodology.

## 10) Participate in live CTF events

The final last advice we want to share with you is to participate in live CTF events! They are fun, they often offer exclusive rewards and they'll certainly help you improve your skills!

Intrigiti has its annual 1337UP Live CTF Challenge coming up with over €5000 in rewards for the top 10 teams, make sure you register early on to participate!

<https://ctf.intigriti.io/>

## Conclusion

CTFs are a powerful training ground and can help beginners to test and improve their skills in safe and sand-boxed environments. Most importantly, they are also a fun and an engaging way to learn.

Some CTF events even offer rewards for the top teams and participants! All-in-all, we always recommend you participate in as many CTF challenges as you can, document your steps and move on to more complex challenges as your skill set evolves. Furthermore, we also recommend you to go out and seek teammates, and participate in live (and local) CTF events!

If you're interested in joining (your first) live CTF event, check out our annual 1337UP Live CTF event! Whether you're a beginner or an experienced player, we've got challenges for everyone! Register below!



Head over to [ctf.intigriti.io](https://ctf.intigriti.io/) to register!

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