

Ethical Hacking Basics

A beginner-first route into web testing using permission-based labs and free learning tools.

WHAT YOU WILL LEARN

- Write and respect a testing scope
- Recognize requests, responses, and status codes
- Start a supervised exercise in PortSwigger Web Security Academy

4 lessons | 60-90 minutes | Free | Beginner

Course links and printable PDF: <https://blackcloudsecurity.org/learn/>

Important: conduct security tests only on your own systems or systems where you have explicit authorization. Use official training labs for guided practice.

Set a testing scope before using tools

Ethical security testing is technical work with explicit permission. Scope defines which assets you may test, what is allowed, and which actions are off-limits.

STEP-BY-STEP PRACTICE

1. Create a text note titled Authorized Security Lab.
2. Write the target as an approved training lab, such as your own local demo or a lab launched from PortSwigger Web Security Academy.
3. Record allowed activity (view pages, inspect requests, follow lab instructions) and avoid actions outside lab boundaries.
4. Write down the test date and one learning goal. Keep results in a private notebook.

KEY TAKEAWAY

Owning a domain name does not mean every service or third-party component behind it is in your testing scope.

CHECK YOUR KNOWLEDGE

If a company site is publicly reachable, is it automatically okay to scan it?

Answer: No. Public access alone is not authorization for intrusive security testing.

Your notes: _____

Understand the HTTP conversation

A browser asks a web server for a resource using an HTTP request. The server replies with a status code, headers, and often a page or data.

STEP-BY-STEP PRACTICE

1. Open a browser and visit <https://example.com>, a harmless example domain.
2. On a desktop browser, open Developer Tools and find the Network tab. Reload the page. (On Android, you can read the concepts now and practice later on a computer.)
3. Click the document request and identify the URL, request method (usually GET), and response status code.
4. In your notes, write what 200, 301/302, 403, and 404 generally indicate.

KEY TAKEAWAY

GET commonly fetches data; POST commonly submits data. A status code is an important clue, not a complete security verdict.

CHECK YOUR KNOWLEDGE

What does HTTP status 404 usually mean?

Answer: The requested resource was not found at that URL.

Your notes: _____

LESSON 3 OF 4

Get comfortable with Burp Suite

Burp Suite Community Edition is a useful free desktop proxy for studying web requests. Practice only with your own demo or a purpose-built lab.

STEP-BY-STEP PRACTICE

1. Install Burp Suite Community Edition from the official PortSwigger website on a computer.
2. Launch Burp and open its built-in browser from the Proxy tools.
3. Visit an approved training lab or example.com in that built-in browser.
4. Review the HTTP history and identify one request URL, one method, and its response status. Use Intercept Off if the browser appears stuck.

KEY TAKEAWAY

You can learn a lot from observing traffic before changing any request.

CHECK YOUR KNOWLEDGE

Why might a webpage appear frozen when Burp Intercept is on?

Answer: Burp may be holding a request until you forward it or turn Intercept off.

Your notes: _____

Try your first guided security lab

PortSwigger Academy provides free exercises designed for learning. Use a lab account if you want to track progress; some exercises require a desktop environment.

STEP-BY-STEP PRACTICE

1. Visit <https://portswigger.net/web-security/getting-started> and read the beginner introduction.
2. Pick a beginner-friendly topic and launch an Academy lab using its official instructions.
3. Before making a change, note the lab goal, a page URL, the current HTTP method, and the status code.
4. Follow only the lab instructions to finish the exercise. Write a short report: observation, issue, impact inside the lab, and recommended defense.

KEY TAKEAWAY

Focus on explaining the cause and the mitigation, not just reaching the lab success screen.

CHECK YOUR KNOWLEDGE

What should a useful finding include besides a vulnerability name?

Answer: Reproducible observation, effect or impact, scope, and a practical recommended fix.

Your notes: _____

PRACTICE CHECKLIST

- [] Lesson 1: Set a testing scope before using tools
- [] Lesson 2: Understand the HTTP conversation
- [] Lesson 3: Get comfortable with Burp Suite
- [] Lesson 4: Try your first guided security lab

TRUSTED FURTHER READING

PortSwigger: Getting started

<https://portswigger.net/web-security/getting-started>

PortSwigger: Web Security Academy

<https://portswigger.net/web-security>

OWASP Top 10:2025

<https://top10.owasp.org/2025/>

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