Security testing C and C++ applications

Category: Networking & Security | **Vendor:** Various

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Your application written in C and C++ is tested functionally, so you are done, right? But did you consider feeding in incorrect values? 16Gbs of data? A null? An apostrophe? Negative numbers, or specifically -1 or -2^31? Because that’s what the bad guys will do – and the list is far from complete.

Testing for security needs a remarkable software security expertise and a healthy level of paranoia, and this is what this course provides: a strong emotional engagement by lots of hands-on labs and stories from real life.

A special focus is given to finding all discussed issues during testing, and an overview is provided on security testing methodology, techniques and tools.

So that you are prepared for the forces of the dark side.

So that nothing unexpected happens.

Nothing.

About This Course

Your application written in C and C++ is tested functionally, so you are done, right? But did you consider feeding in incorrect values? 16Gbs of data? A null? An apostrophe? Negative numbers, or specifically -1 or -2^31? Because that’s what the bad guys will do – and the list is far from complete.

Testing for security needs a remarkable software security expertise and a healthy level of paranoia, and this is what this course provides: a strong emotional engagement by lots of hands-on labs and stories from real life.

A special focus is given to finding all discussed issues during testing, and an overview is provided on security testing methodology, techniques and tools.

So that you are prepared for the forces of the dark side.

So that nothing unexpected happens.

Nothing.

Who Should Attend

C/C++ developers and testers.

Prerequisites & Entry Requirements

General Prerequisites:

General C/C++ development, testing and QA.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Getting familiar with essential cyber security concepts
- Understanding security testing methodology and approaches
- Identify vulnerabilities and their consequences
- Learn the security best practices in C and C++
- Input validation approaches and principles
- Getting familiar with security testing techniques and tools

Detailed Course Outline

Day 1

- Cyber security basics
- What is security?
- Threat and risk
- Cyber security threat types – the CIA triad
- Cyber security threat types – the STRIDE model
- Consequences of insecure software
- Memory management vulnerabilities
- Assembly basics and calling conventions
- Buffer overflow
- Best practices and some typical mistakes

Day 2

- Memory management hardening
- Runtime protections
- Security testing

- Security testing methodology
- Common software security weaknesses
- Security features
- Authentication
- Password management

Day 3

- Common software security weaknesses
- Input validation
- Input validation principles
- What to validate – the attack surface
- Where to validate – defense in depth
- When to validate – validation vs transformations
- Validation with regex
- Injection
- Integer handling problems
- Files and streams
- Security testing
- Security testing techniques and tools
- Code analysis
- Dynamic analysis
- Wrap up
- Secure coding principles
- And now what?

Skills You Will Learn:

- Getting familiar with essential cyber security concepts
- Understanding security testing methodology and approaches
- Identify vulnerabilities and their consequences
- Learn the security best practices in C and C++
- Input validation approaches and principles
- Getting familiar with security testing techniques and tools

Frequently Asked Questions

Q: What delivery options are available for Security testing C and C++ applications?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Security testing C and C++ applications course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Security testing C and C++ applications training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Security testing C and C++ applications?

Yes, we provide corporate training, dedicated training, and closed classes for Security testing C and C++ applications. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Security testing C and C++ applications, Security Testing, SECT-CCA

Q: Why choose Nexus Human for Security testing C and C++ applications?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Security testing C and C++ applications training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

Professional Training & Development

Email: info@nexushuman.com

Website: www.nexushuman.com

Phone: +353 1 889 8700 (Ireland) | +44 20 8142 8961 (UK)

© 2026 Nexus Human. All rights reserved. This brochure was generated on 14/11/2026.