

SPHINX

An All-In-One Cryptography Platform

OUR PRODUCT

- **Cryptographic Visualizations:** Gamified simulations of RSA, SHA256
- **Attack Simulation Labs:** Simulation of attacks like MITM
- **Vulnerability Scanner:** Analyses known configuration and generates comprehensive risk assessment.
- **Best Practice Checker:** Generates solutions to vulnerability based on NIST standards.
- **CTF Challenges:** Gamified CTF challenges to enhance learning process.





OUR VISION

We understand the pain of the lack of resources in the cybersecurity domain. To address this challenge we developed Sphinx that heavily simplifies cryptography with its gamified interface and fun simulations.

For seasoned pros this can also help as a quick check into the NIST database for

OUR MISSION

- Hence we present you, Sphinx our very own cryptographic learning and implementation tool which can help us propagate our knowledge.



VISUALISATION

Dynamic demonstrations of fundamental algorithms like RSA, and SHA-256. This component makes abstract concepts concrete by showing real-time transformations from plaintext to ciphertext.

This visual approach helps build intuitive understanding of cryptographic principles.

ATTACK LABS

The Attack Simulation Laboratory offers a controlled environment where users can safely explore common cryptographic vulnerabilities.

Through hands-on simulations of man-in-the-middle attacks users gain practical experience in identifying and mitigating security threats. .

BEST PRACTICES

The Best Practices Checker ensures that learning stays aligned with current security standards. By evaluating configurations against established guidelines from NIST and OWASP, it helps users understand and implement modern cryptographic best practices. The tool provides actionable recommendations for improving security, making it valuable for both learning and real-world application.

VULNERABILITY SCANNER

The Vulnerability Scanner component provides immediate, practical security insights. It analyzes cryptographic configurations in real-time, identifying potential weaknesses such as insufficient key lengths or deprecated algorithms.

This creates a direct connection between theoretical knowledge and real-world security implications.

CAPTURE THE FLAG

Finally, the platform incorporates gamification through CTF-style challenges, making learning engaging and memorable. Progressive difficulty levels ensure that both beginners and advanced users can benefit from the platform, while the competitive element motivates continued learning and exploration.

The technical implementation leverages industry-standard libraries and follows established security guidelines, ensuring that the learning experience reflects real-world cryptographic practices. This creates a robust educational tool that serves as a bridge between theoretical cryptography and practical cybersecurity application.

THANK YOU!