





Open Source Software

“A deep dive into
Security”

Why do people prefer using Open Source Software?





Security



SECURITY



 Questions	IS OSS Secure?
 Advantages	Usability!
 Disadvantages	Where it falls behind?
 Misconception	Myth Busters!

IS OSS Secure?



- “It's simply unrealistic to depend on secrecy for security in computer software”.

- No! Open Source Software certainly does have the potential to be more secure than its closed source counterpart.

- But make no mistake, simply being open source is no guarantee of security.



Advantages

01

Transparency Aspect

- Need to know exactly what kinds of data are moving where, or what kinds of changes have happened in the code? Open source allows you to check and track that for yourself, without having to rely on vendor promises.

02

Tested Code

- Open source code outlives its original authors because it is constantly updated through active open source communities. Open standards and peer review ensure that open source code is tested appropriately and often.

03

More Flexibility for Users

- You can use open source code to address problems that are unique to your business or community. You aren't locked in to using the code in any one specific way, and you can rely on community help and peer review when you implement new solutions.

04

Peer review

- Because the source code is freely accessible and the open source community is very active, open source code is actively checked and improved upon by peer programmers. Think of it as living code.

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Misconception



1

- Too little control over what code goes into a project.
- “If anyone can contribute, how can we trust the result?”

2

- Open Source Is Less Secure Than Proprietary Software

Challenges & Solution

1. **Challenge: Lack of Qualified Reviewers, Security problems are subtle and often missed even by expert programmers.**



- **Solution: Finding, Training, and Incentivizing Bug Hunters.**
- **Training, Reviewers to spot problems.**
- **Netscape Bug Bounty Program.**

Challenges & Solution

2. Challenge:
Automating & Systematizing Security Review,
Repeated mistakes, no feedback to developers



- **Solution: Tight Feedback Loops.**
- **Integrate security scanners into build feedback.**
- **Review past problems and integrate findings into future security evaluations.**

Challenges & Solution

3. Challenge:
Responsible Disclosure. Early disclosure can lead to increased attacks. Companies conceal vulnerabilities and are slow to provide fixes. But some “security researchers” disclose vulnerabilities for personal publicity.



- **Solution: Limited Initial Disclosure(A Compromise)**
- **Limit technical description of vulnerabilities to a group of experts and stakeholders until bug is fixed.**
- **Low barrier to entry in the group.**
- **Reporter, group members keep things honest.**
- **Full disclosure after fix is distributed**

THANK YOU

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