UNIVERSITY OF AMSTERDAM

MSc System and Network Engineering

Penetration testing auditability

Alexandros Tsiridis & Stamatios Maritsas

What is the purpose of penetration testing auditability?

Research questions

- What are the sources of penetration testing auditability data?
- What methods can be used to effectively audit these sources?
- What methods can be used to store these data efficiently and practically?
- How can penetration testing auditability enhance collaboration during penetration testing?

Penetration testing is characterised as an Art.

- It is not a standardised procedure meaning it cannot be fully automated.
- Penetration testing auditability can not be automated.
- Auditability though can be improved using a more structured methodology.

Identifying the sources of auditability data.

- Manual Actions:
  - □ Command Line
  - □ Other Actions
- Automated Actions:
  - □ Command Line tools
  - □ GUI tools

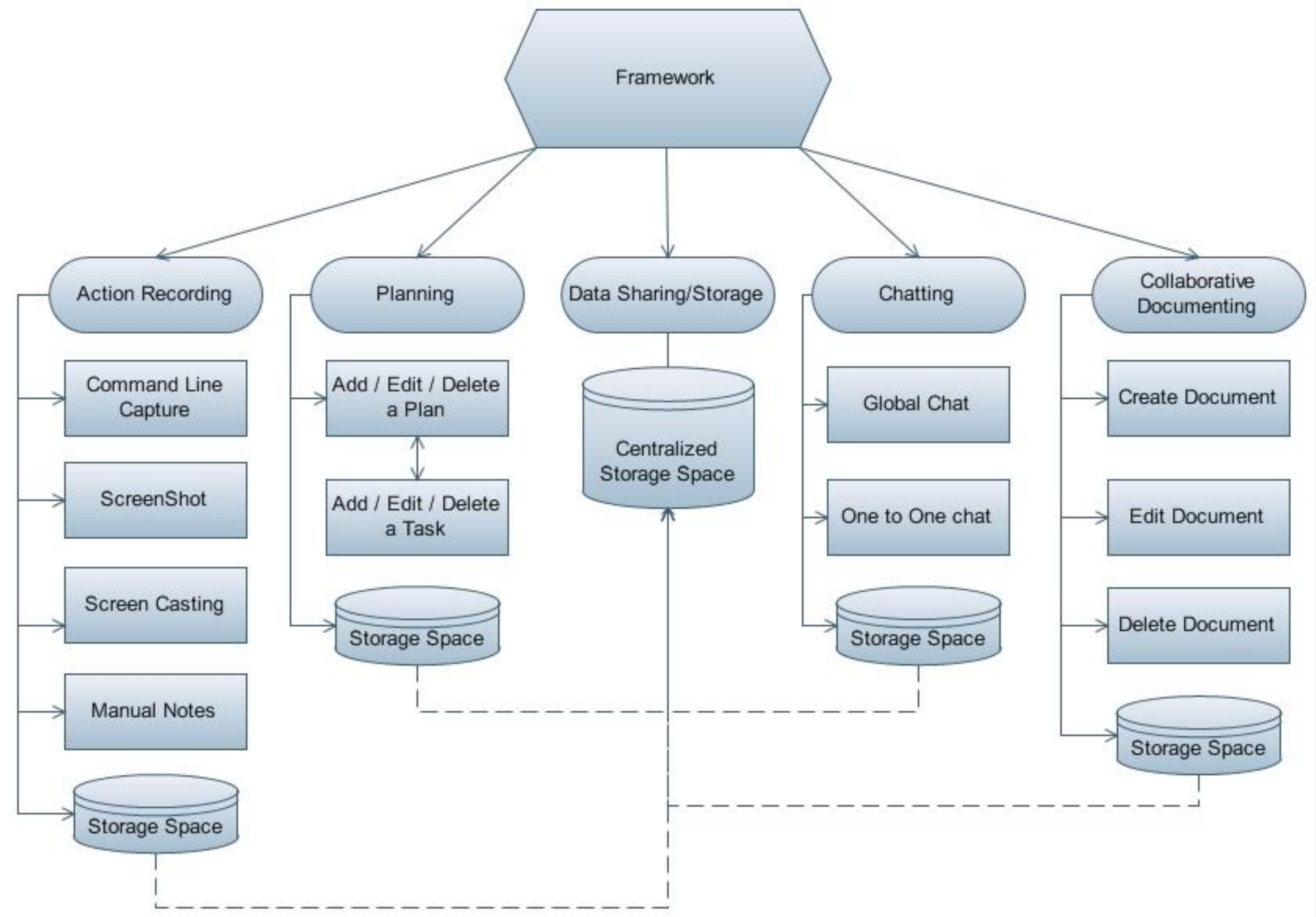
Identifying the methods that can be used to effectively audit and store these sources.

- Capture the command line streams
- Screen shots
- Screen casting
- Log files and reports of automated tools
- Manual notes
- Centralized storage space

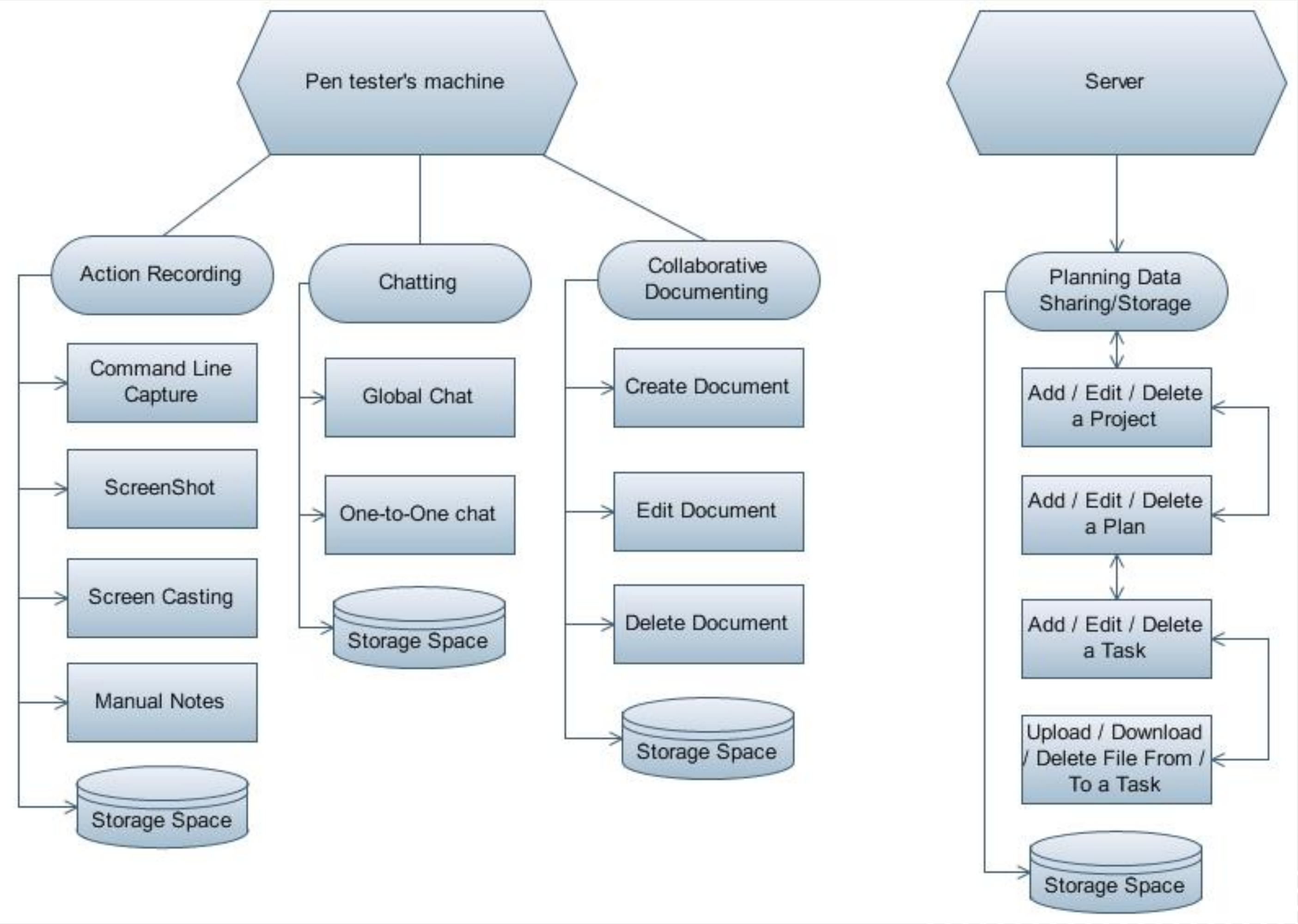
Penetration testing auditability can enhance collaboration during penetration testing.

- Planning
- Task sharing
- File sharing
- Relation of files with tasks

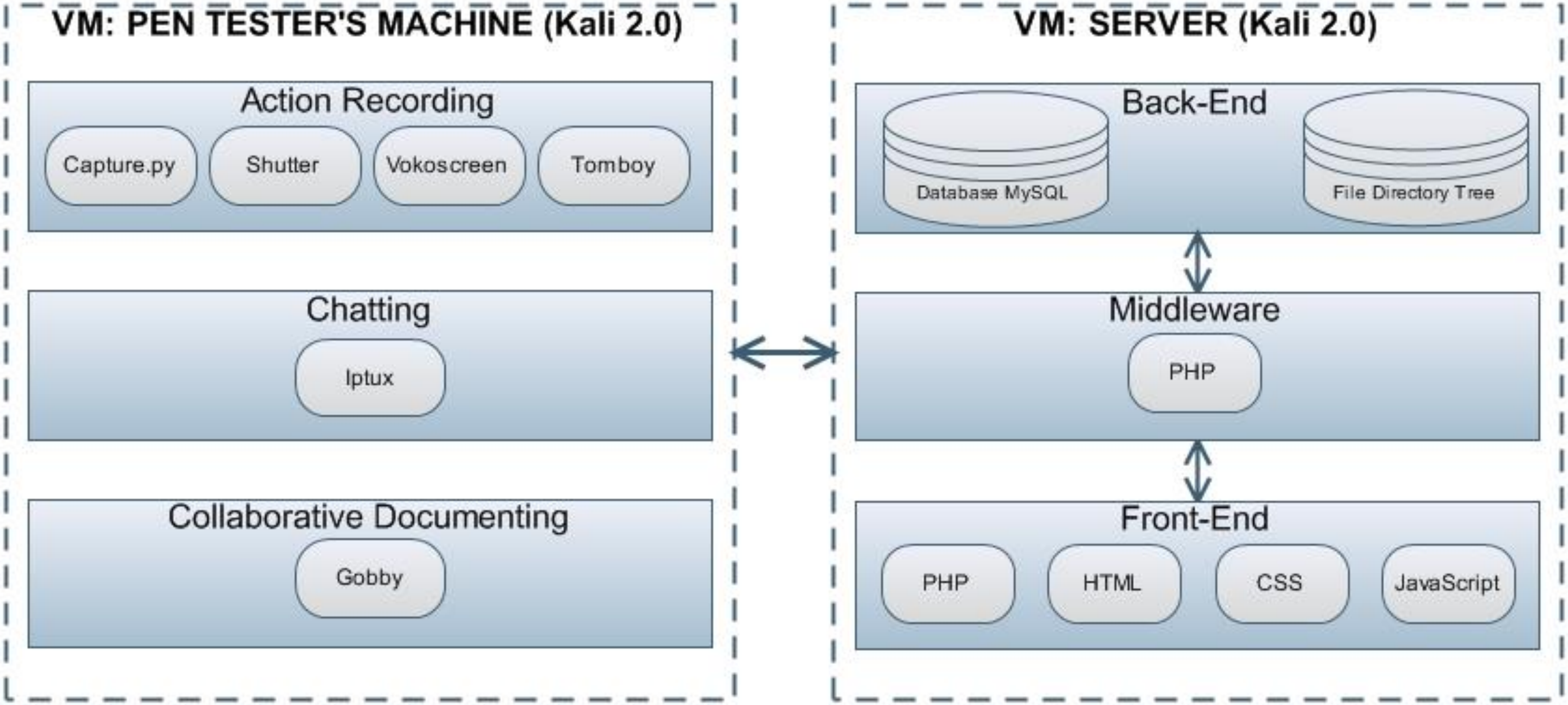
Proposed Methodology / Framework



Prototype Architecture



Prototype Implementation



End
Demo
ift

Results & Conclusion

Please rate how this system would improve the performance of pen testing auditability.

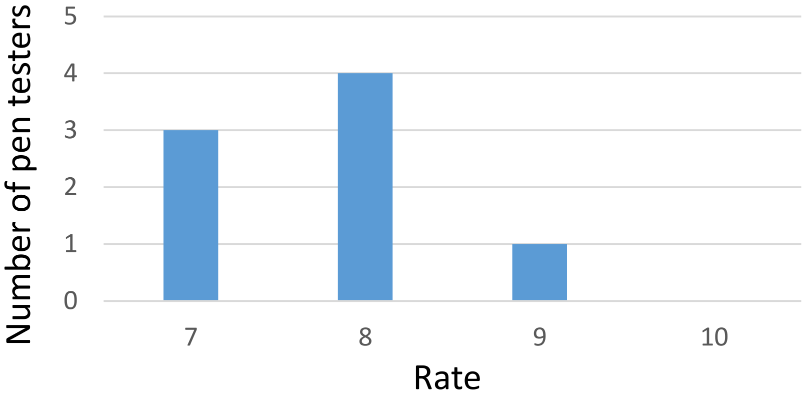
Mean: 7.75
Median: 8

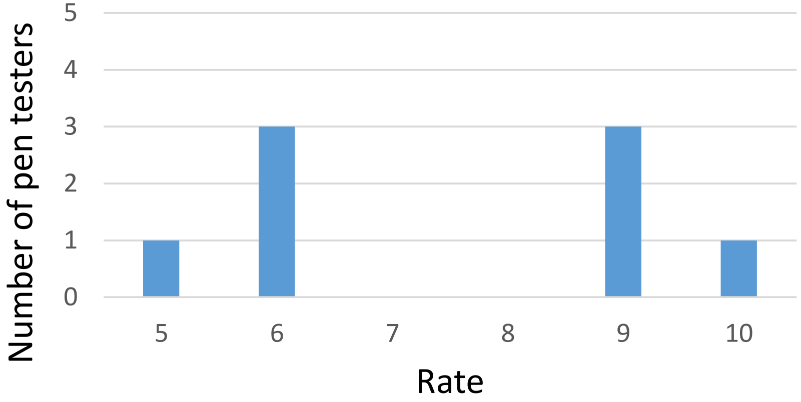
Please rate how this system would improve the collaboration of pen testers.

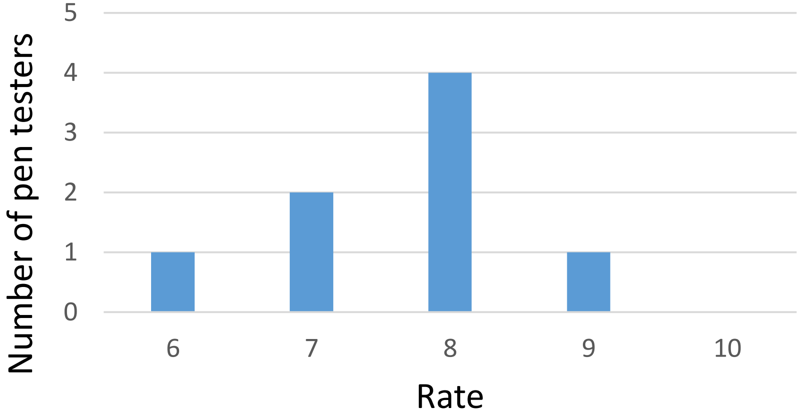
Mean: 7.5
Median: 7.5

Please rate how this system would improve the quality and the quantity of pen testing auditability data gathered.

Mean: 7.625
Median: 8







Questions?

References

- http://img10.deviantart.net/3ed0/i/2006/091/e/1/matrix_mona_lisa_by_ninjakiller.jpg
- Daniel Geer and John Harthorne. Penetration testing: A duet. In Computer Security Applications Conference, 2002. Proceedings. 18th Annual, pages 185-195. IEEE, 2002.
- http://3vwuw21t7hbk3efr8u2h6dji.wpengine.netdna-cdn.com/wp-content/uploads/2013/03/software-security.jpg
- http://www.dokeos.com/wp-content/uploads/2014/06/29-questions-test-Dokeos-FR.jpg
- http://www.webops.com/wp-content/uploads/requst-a-demo.jpg