Abstract

Defects in production software can incur heavy damage to a business operation; yet most current approaches to software security assessment focus primarily on new code development. The paper aims at introducing a strategic approach for reducing the operational security risk. The familiar top-down structured development process used by internal development groups is totally inappropriate for risk analysis of production software systems. And generally the cost of finding and fixing a bug in a production system is regarded as too high. So there is an imperative necessity to focus on approaches tailored specifically for production software systems which is the one attempted here.

Reference
A Strategic Approach for Risk Analysis of Production Software Systems

- 2005 Breach Analysis, April 2006
  http://www.software.co.il/downloads/breachAnalysis2005.xls
- Privacy Rights Clearinghouse, http://www.privacyrights.org/
- Developing Secure Software, Noopur Davis,
  http://www.softwaretechnews.com/stn8-2/noopur.html
- Top-down Security”, Alan Paller,
  http://infosecuritymag.techtarget.com/articles/1999/paller.shtml
- In production, it's often 100 times more expensive than finding and fixing the bug during requirements and design phase”. Barry Boehm, Victor R. Basili, IEE Computer, 34(1): 135-137, 2001
- CVSS (Common Vulnerability Scoring System) is a standard way to convey vulnerability severity and help determine urgency and priority of response, http://www.first.org/cvss/intro/
  Vendors such as Cisco, Symantec and Skype use CVSS to score their own application vulnerabilities.
- CLASP (Comprehensive, Lightweight Application Security Process),
  http://www.owasp.org/index.php/CLASP

Index Terms

Computer Science  Software Engineering

Key words

Risk  Production Software System  Security Risk

Vulnerability

Software Components