Manage Your Risk With ThreatModeler

ThreatModeler
Identify • Classify • Prioritize • Mitigate

MyAppSecurity

50 Harrison Street, Suite 211D
Hoboken, NJ 07030
Phone: 201-632-3634
Sales: sales@myappsecurity.com

Introduction

Anurag “Archie” Agarwal, CISSP

- Founder MyAppSecurity
- Ex-Director - Education Services, WhiteHat Security
- 17 years of experience (Cisco, Citigroup, HSBC Bank, etc)
- Active in WASC and OWASP
- Published several articles on Secure Coding and SDL
- Project Leader – OWASP Threat Modeling Methodology
- http://myappsecurity.blogspot.com

MyAppSecurity

Secure Your Applications

- End to End Software Security Risk Management Solution
- Key Services
  - Threat Modeling
  - Secure Architecture Review
  - Vulnerability Management
  - Training

hacked

myspace.com a place for friends
verizon
TIFFANY & CO.
PayPal
XLI
NOKIA Connecting People
Georgia Tech
Macworld Conference & Expo
DUKE UNIVERSITY School of Medicine
TJ·maxx
Yahoo!
Microsoft Passport Network
T-Mobile
Google
STANFORD UNIVERSITY
CNBC
Mizzou University of Missouri-Columbia
Scottrade More broker for your money.
SUNTRUST
University of Idaho Open Space. Open Minds.
THE UNIVERSITY OF CHICAGO
USDA
PIZZA PAPA JOHNS Better Ingredients. Better Pizza.
UNIVERSITY of VIRGINIA
ebay
USC
VICTORIA'S SECRET
travelocity

“You cannot build secure systems until you understand your threats”

SO...AS LONG AS WE'RE HERE... DOES YOUR EVIL KID SMOKE DOPE?
WAR ON TERROR

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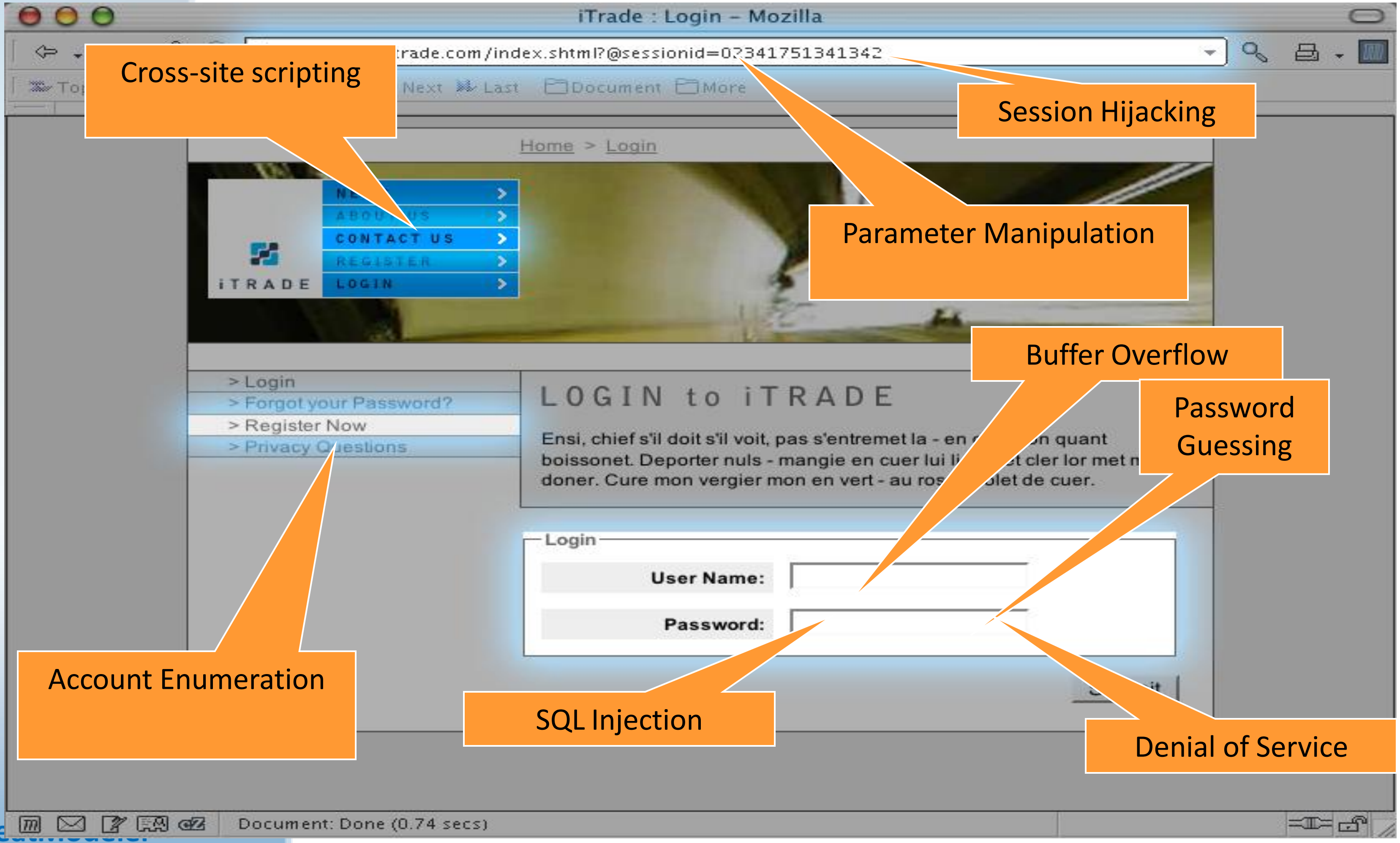
“Applications are built from individual features and each feature can be attacked. It is therefore important that you understand the components of the application”



iTrade : Login – Mozilla

trade.com/index.shtml?@sessionid=02341751341342

Home > Login

LOGIN to iTRADE

Ensi, chief s'il doit s'il voit, pas s'entremet la - en … n quant boissonet. Deporter nuls - mangie en cuer lui li … t cler lor met n … doner. Cure mon vergier mon en vert - au ros … olet de cuer.

Login

User Name:

Password:

Document: Done (0.74 secs)

Cross-site scripting

Session Hijacking

Parameter Manipulation

Buffer Overflow

Password Guessing

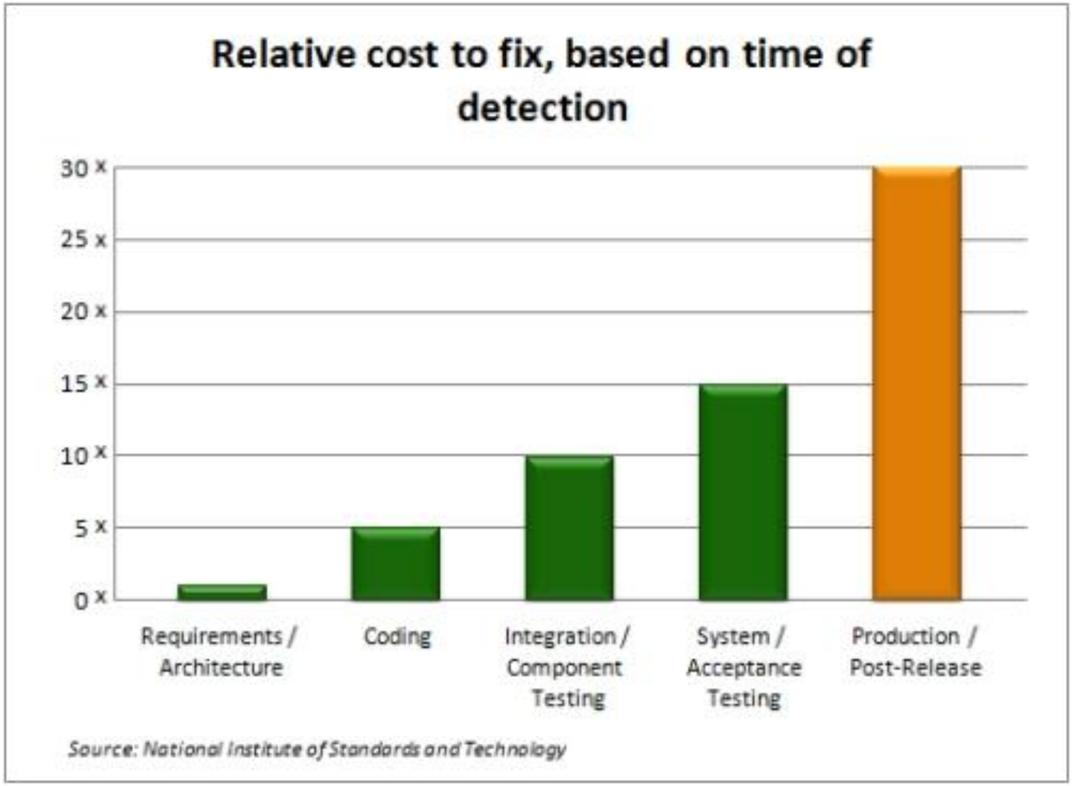
Account Enumeration

SQL Injection

Denial of Service

Threat Modeling pays for itself

- Number of Vulnerabilities = Negligible
- Competitive Advantage
- **ROI Benefits**


Relative cost to fix, based on time of detection

Source: National Institute of Standards and Technology

"Code fixes performed after release can result in 30 times the cost of fixes performed during the design phase." (NIST)

BUILD YOUR OWN THREAT MODELING PRACTICE IN 7 EASY STEPS

Step 1 - Threat Library

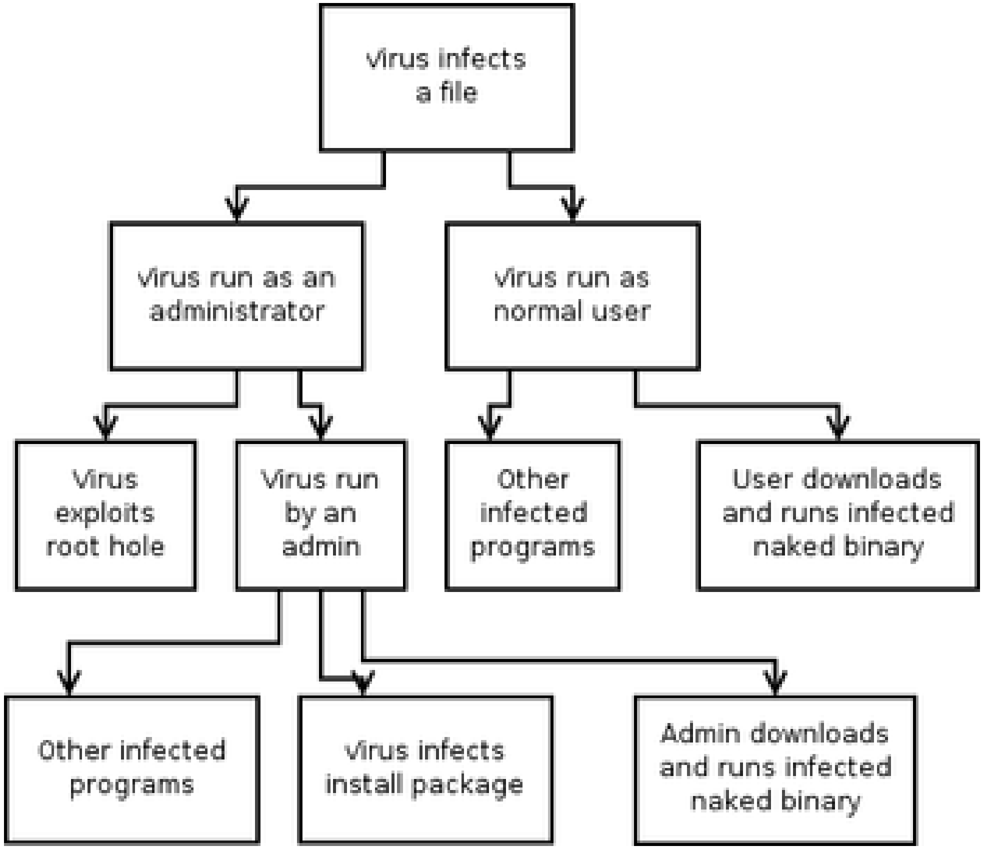
- Build your own threat library
  - Existing threat libraries – CAPEC, WASC and OWASP
  - Custom threats
- Associate risk with threats to prioritize mitigation efforts

Step 2 - Secure Coding Standards

- Identify mitigation steps
  - Secure Coding Standards
    - OWASP Secure Coding Quick Reference Guide
    - OWASP Developers Guide
  - Security frameworks
    - OWASP ESAPI
    - Microsoft Enterprise Library
    - Microsoft AntiXSS Library
    - Custom/Home grown
- Associate mitigation steps with threats

Step 3 - Intelligence

- Build a library of reusable Threat Patterns / Attack Trees
- Build a pre-defined
  reusable component library


Virus infects a file
Virus run as an administrator
Virus run as normal user
Virus exploits root hole
Virus run by an admin
Other infected programs
User downloads and runs infected naked binary
Other infected programs
Virus infects install package
Admin downloads and runs infected naked binary

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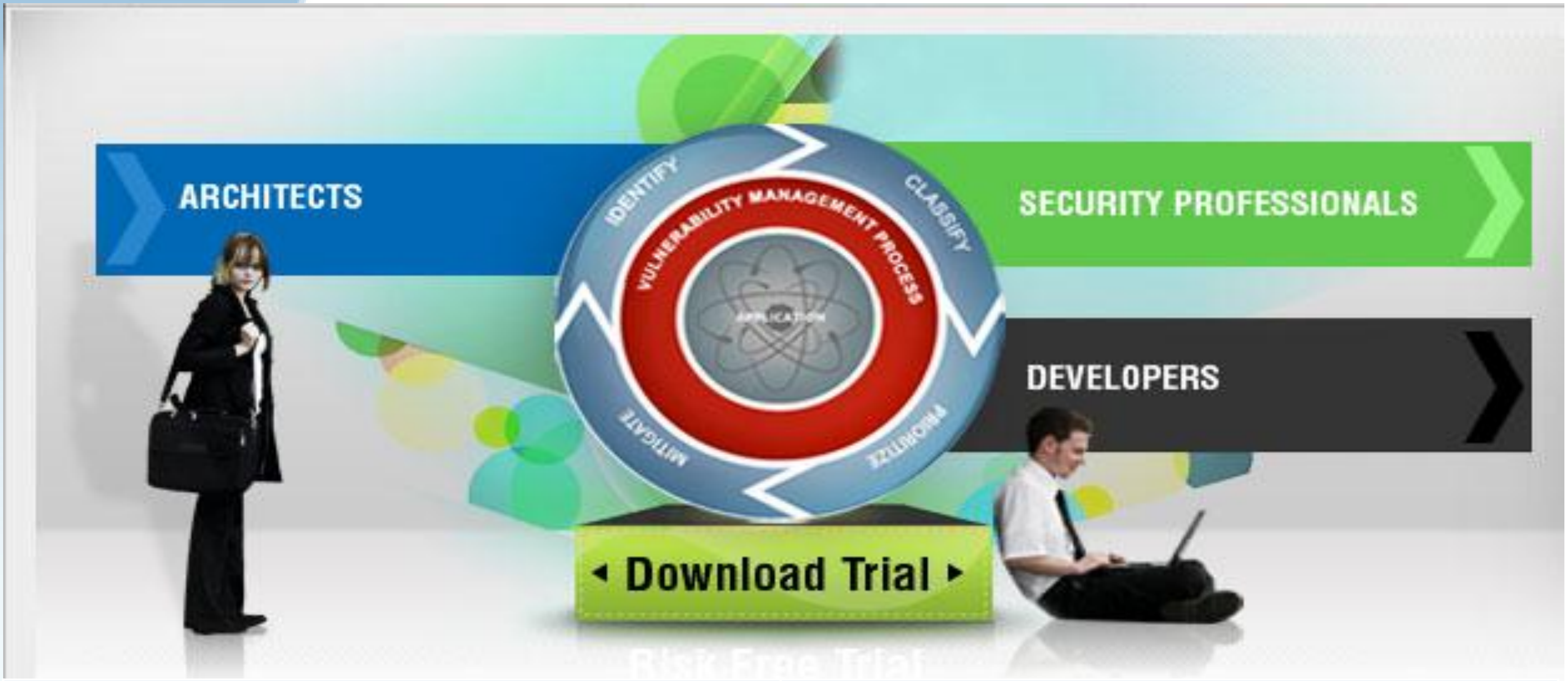
Step 4 - Actionable Output

- Builds a comprehensive threat profile (ThreatMap) of the system which can be either used to understand the system or generate actionable output
  - High Value Targets
  - Data Flow
  - Threats to individual Components
  - Risk
  - Attack Trees
  - List of Mitigation Steps (Abuse Cases)
  - Security Assessment Checklist
  - List of Total vs. Open Vulnerabilities

Step 5 – Dashboard and Reporting

- Threat Management Console
  - Threat Portfolio
  - Threat Management / Vulnerability Management
  - Prioritize Mitigation
- Risk Dashboard
  - Top Ten Threats
  - Risk Profiling
  - Compliance Reporting

Step 6 - Collaboration



Architects	•Provide functional information about their application.
Security Professionals	•Vulnerability Management / Risk Management. •Promote Security Standards throughout the organization.
Developers	•Implement correct mitigation steps and security standards using Abuse Cases.

Step 7 - Scaling and Operationalizing

- Build a Threat Model in hours/days depending on the size of the application
- Updating a threat model is a matter of minutes.
- Effective Risk Management.
- Build reusable templates
- Scalable across thousands of applications.

Time for a Demo

Anurag Agarwal
MyAppSecurity
http://www.myappsecurity.com
anurag@myappsecurity.com
Phone - 201-632-3634