

Building a Security Ecosystem

Robert Fly
VP, Product Security
salesforce.com



Salesforce.com Customers

92,300+
Paying Customers



Intro to AppExchange



AppExchange

1100+ Applications
Composite, Native, Client
780,000+ Installs
Security Reviews
Listing Fee

Security Review

~12 month review cycle
Automated & Manual Assessments
OWASP/WASC checks
Requirements for what to fix and
how quickly



Agenda

What we did and why?



Force.com Secure Cloud Development

Vision Build an ecosystem and community of developers who hold trust as their top value.



Why?

75% | 86% | ????

Gartner.



force.com™
platform as a service



Developer Security Savvy?

25%

40%

60%

75%



Fail Rates

85%

composite

75%

native



Leader in this space

- “Salesforce gets a gold star” – Alex Stamos
(Founder iSEC)



Secure Building Blocks

Auth, Session Handling, Filtering, SSL,
Infrastructure, Patching, Auditing &
Logging

Default Protections

XSS, CSRF
Separate Domains
PAC



Where did we focus...

Easy - Free - Transparent

Partnered With...

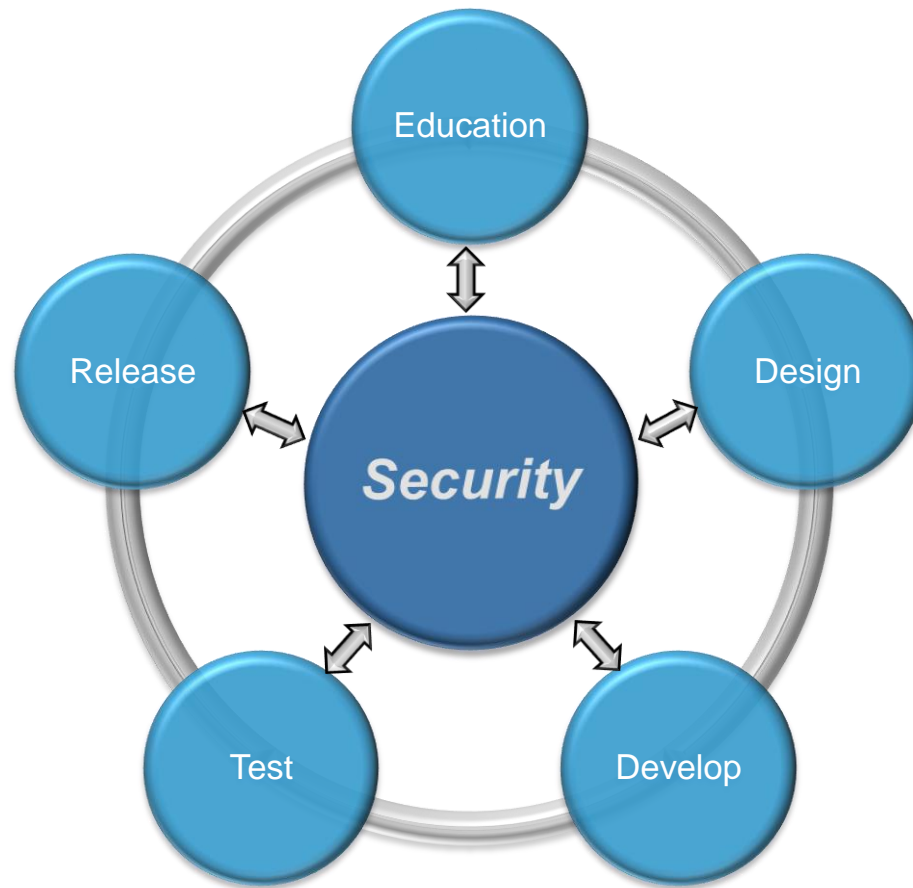
Product Management and R&D
Alliances
Developer Evangelists
AppExchange Team
Training and Certification

Developer Experience

Integrated into Force.com (not OWASP)
Focus 100% on 80%
Usable
Align incentives
No cost



Force.com Secure Cloud Development

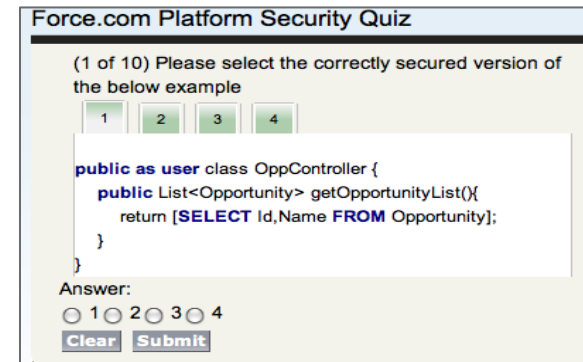


Seamless integration of security into your existing SDLC



(Secure) Education

- **Overview of Force.com Security**
 - Learn about the sharing model and various security controls available to org administrators
- **Writing Secure Apps (online)**
 - Get educated on writing secure code on Force.com
- **Developer Quiz**
 - Assess your security awareness and learn to identify vulnerabilities within Force.com code
- **Security Blog and Twitter**
 - Consistent updates on our latest security research, contests and more.



(Secure) Design

- **Security Resources**
 - Generic Force.com articles and resources. Topics include SAML, sharing, etc.
- **Security Self-Assessment**
 - Receive a customized report with links to security articles and resources specific to your application architecture
- **Office Hours**
 - Receive free consultation from a member of the salesforce.com security team
- **Security Discussion Board**
 - Community based forum for answering security questions

Recent Security Resources

- 📁 Making Authenticated Web Service Callouts Using Two-Way SSL
- 📁 Single Sign-On with SAML on Force.com
- 📁 Securing Your Data and Applications
- 📁 Security in the Cloud: Protecting Your Business with the Cloud
- 📁 An Overview of Force.com User Management and Sign-on
- 📁 Tech Talk: Introduction to Force.com Security
- 📁 Adding CAPTCHA to Force.com Sites
- 📁 Authenticating Users on Force.com Sites
- 📁 Using Apex Managed Sharing to Create Custom Record Sharing Logic

AppExchange Security Focus Areas

Client Application Security

Client

Composite

Native

Buffer Overflow

Buffer overflows occur when an application (typically written in C/C++) attempts to place more data into a buffer than it can hold. This causes data to be written outside of a block of allocated memory and can lead to instability such as crashes or worse, malicious code execution.

http://www.oracle.com/technetwork/java/javase/overview_411461.html

http://www.oracle.com/technetwork/java/javase/overview_411461.html

http://www.oracle.com/technetwork/java/javase/overview_411461.html

Mar 16 Mar 18 Mar 23 Mar 25

10-11 AM (PDT) 10-11 AM (PDT) 10-11 AM (PDT) 10-11 AM (PDT)

3-4 PM (PDT) 3-4 PM (PDT) 3-4 PM (PDT) 3-4 PM (PDT)



(Secure) Development

- **Secure Coding Guidelines**

- Obtain platform-specific (Force.com, Java, .Net, etc.) recommendations on mitigating security vulnerabilities such as XSS, Injection, Session Management, etc.



- **Secure Coding Library**

- Open source library for implementing additional security features (CRUD/FLS, input validation, output encoding, etc.)
- Part of OWASP Enterprise Security API



(Secure) Release

- **Salesforce.com Security Review**

- Periodic security review of AppExchange and OEM applications
- Details published at:
http://wiki.developerforce.com/index.php/Security_Review



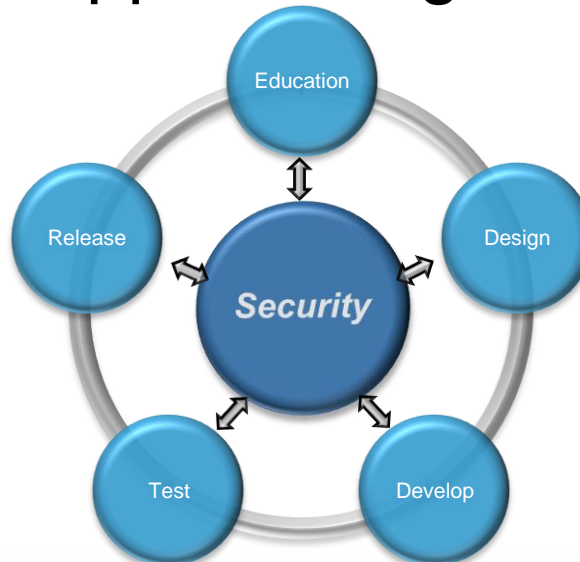
- **Incident Response (Coming Soon)**

- Guidance on engaging with customers and salesforce.com in case of a security incident



Force.com Secure Cloud Development

- Free, ready to “consume” resources
- More secure Force.com ecosystem
- Reduced development costs
- Streamlined AppExchange security process

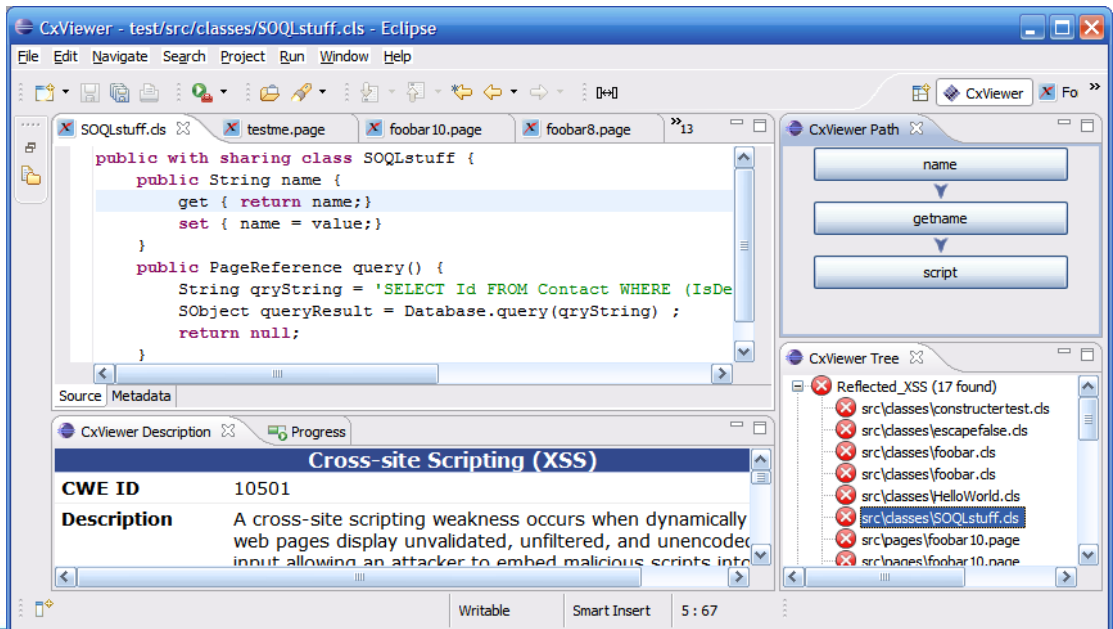


One More Thing...



Force.com Eclipse Code Scanner

- Direct visibility into security and quality issues
 - Eclipse Plugin
 - Line by line click-through
- Offered by Checkmarx



Are we any better?



Stats

- 10000+ code bases scanned
- 183 Million Lines of Code Scanned
- 280,000+ issues identified by the scanner
 - ~80% accuracy rate
 - 55/45 split between security and quality, respectively



Positives

- I *heart* the security scanner. Use it with every project.
- Have u run the #Salesforce Security Scanner today? It's like Old Spice for your apps. Be fresh, secure and confident!
- Don't forget to run the free code scanner. It's soooo helpful for writing secure #salesforce code
- Using Eclipse/Force.com Ide ... #loveTheScanner
- Awesome to see @salesforce respond to customer needs via twitter. Security Review team has been fantastic. Great work @benioff and team.



Positives

79%

native

50%

composite

273

24 hours

437

over 3 months



Positives

83%

improvement

45%

quiz



Where To Focus Next

- Require issues to be addressed & auditing
- Better integration into product
- Improve composite app first time pass rate
- Other platforms
- Continued laser focus on quality



Key Take Aways

- <http://developer.force.com/security>



Question & Answer

salesforce.com **Robert Fly**

