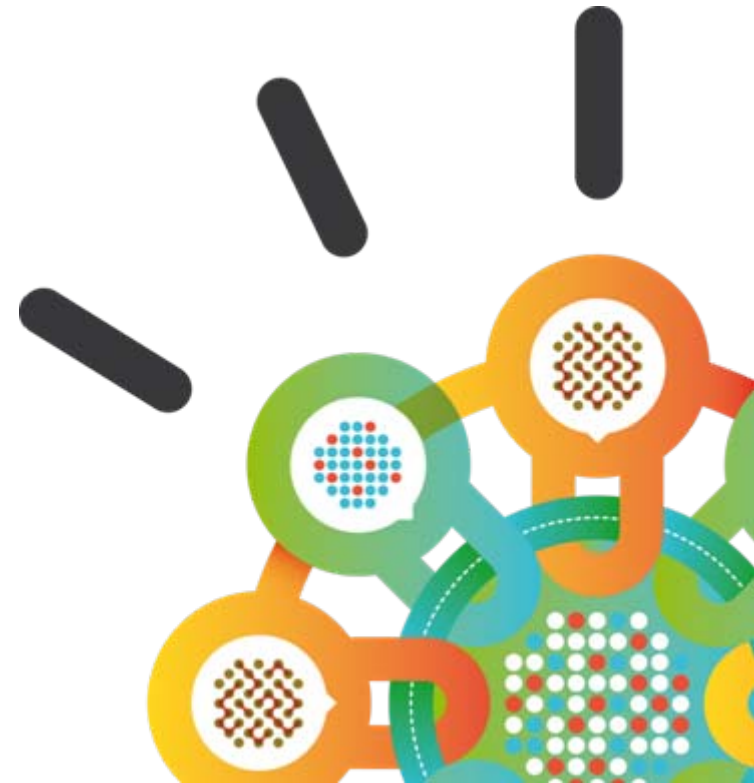


Security Intelligence.  
Think Integrated.

# Application Security from IBM

Karl Snider, Market Segment Manager

March 2012





# Helping Solve Customer Challenges

## *Application Security*



### Finding Application Vulnerabilities

*“GlassBox scanning allowed us to improve results accuracy as well as test for new class of vulnerabilities undetected by conventional web application security scanning technologies”*

*Boris Gorin, Amdocs*



### Reducing the Cost of Being Secure

*“AppScan not only helps us to avoid costs related to hacking attacks, but also reduces the manual effort needed for analysis and the costs for testing”*

*Michael Neumaier, Senior Quality Specialist, SAP AG*



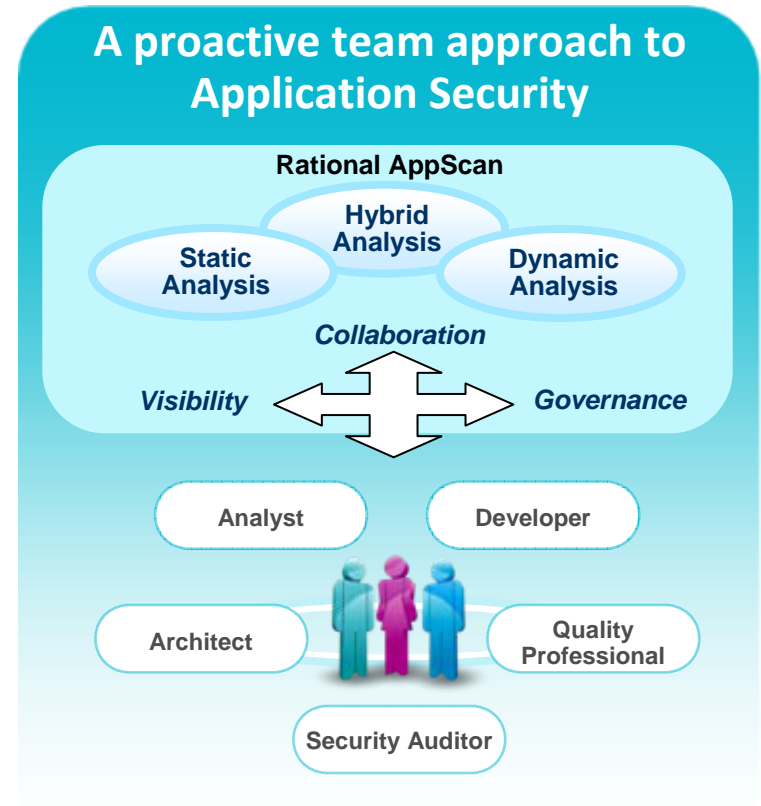
### Providing Oversight and Governance

*“We were able to increase the participation of the IT community in web application scanning”*

*Alex Jalso, Assistant Director, Office of Information Security, WVU*

## Organizations need to take a *proactive approach* to Application Security

- **Embed security testing early** in the development lifecycle to support agile delivery demands
- Bridge the gap between “Security” and “Development” through **joint collaboration and visibility**, enabling regulatory compliance
- Integrate security testing **into the development lifecycle**, through interfaces to development tools





## One specific AppScan feature: Javascript Analyzer

In AppScan Standard 8.0, we shipped JSA – a unique hybrid scan engine to auto-detect client-side issues such as:

DOM-based XSS

HTML5 Notification API Poisoning

HTML5 Client-side Stored XSS

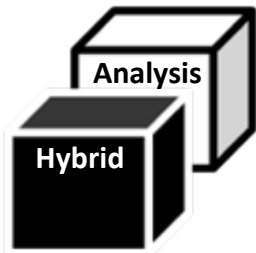
Phishing through Open Redirect

HTML5 Web Storage API Poisoning

HTML5 Web Worker URL Manipulation

HTML5 Client-side SQL Injection

Email Attribute Spoofing



# STRING

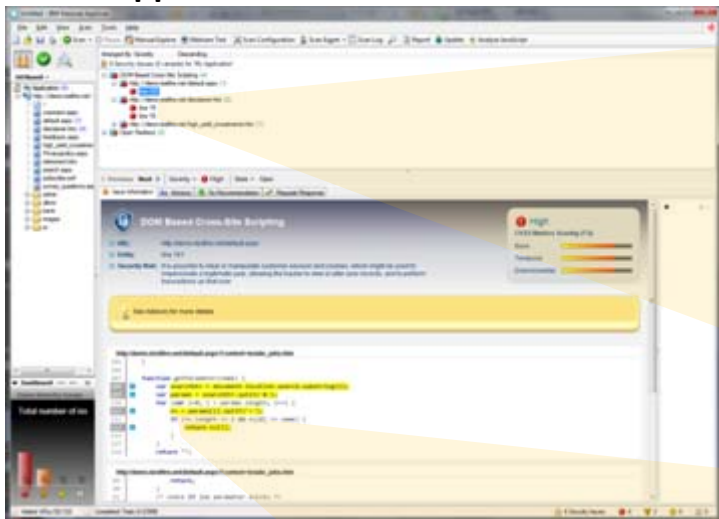
`/* analysis */`



# HTML5

# Viewing JSA Results in AppScan

## AppScan Standard – Scan Results



## Vulnerable URL and line of code

Sorted By: Severity    Descending

6 Security Issues (6 variants) for 'My Application'

- DOM Based Cross-Site Scripting (4)
  - http://demo.testfire.net/default.aspx (1)
    - line 101
  - http://demo.testfire.net/disclaimer.htm (2)
    - line 19
    - line 16
  - http://demo.testfire.net/high\_yield\_investments.htm (1)
- Open Redirect (2)

## Tainted data flow information

```

http://demo.testfire.net/default.aspx?content=inside_jobs.htm
}

function getParameter(name) {
    var searchStr = document.location.search.substring(1);
    var params = searchStr.split('&');
    for (var i=0; i < params.length; i++) {
        var nv = params[i].split('=');
        if (nv.length == 2 && nv[0] == name) {
            return nv[1];
        }
    }
    return "";
}

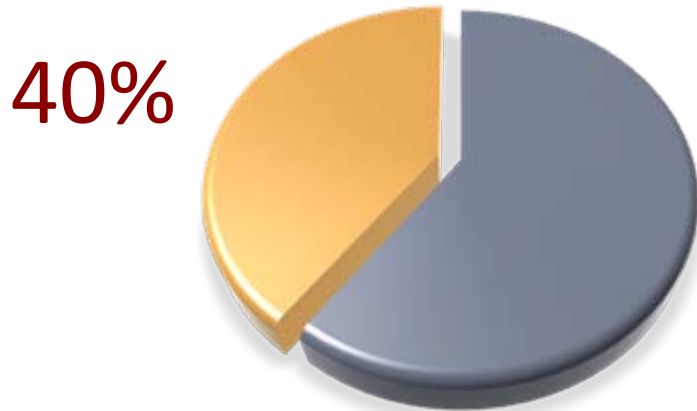
http://demo.testfire.net/default.aspx?content=inside_jobs.htm
return;
/* check if job parameter exists */
var job = getParameter("job");
if (job && job.length > 0) {
    var sp = job.split('=');
    if (sp.length == 2 && jobs[sp[1]] && jobs[sp[1]] != "") {
        /* check if job exists */
        if (jobs[sp[1]][sp[0]] && jobs[sp[1]][sp[0]] != "") {
            document.location.href = "default.aspx?content="+jobs[sp[1]][sp[0]];
        } else {
            /* tell the user the job isn't open anymore */
            document.write("<h2 style='color:#ff0000'>We're sorry, but it appears the position for '" + sp[0] + "' is group
[1] + "' is not open anymore.</h2>");
        }
    }
}
    
```



## JSA Analysis Algorithms Enhanced

- Our original JSA research whitepaper, showed that out of the Fortune500 + 178 most popular internet sites, 14.5% were found to be riddled with client-side JavaScript vulnerabilities
- We spent some time improving our analysis algorithms....

Apps vulnerable To Client-side JavaScript vulnerabilities



Applications with issues in 3<sup>rd</sup> Party JavaScript code





## Why IBM Security: Breadth, deep expertise, integration

### Leadership

- “After doing our research, we determined that IBM was a leader in the field of dynamic application scanning.”  
*Alex Jalso, Assistant Director, Office of Information Security, WVU*
- Identified as a Leader in Gartner SAST Magic Quadrant, December 2010
- Identified as a Leader in Gartner DAST Magic Quadrant, December 2011
- Pioneer of new hybrid analysis techniques, including Correlation, JavaScript Analyzer and GlassBox
- Pioneer of developer-friendly solutions

### Integration

- Integration with IBM AppScan and SiteProtector to enhance web application security through IPS policy modification from application vulnerability data
- Integrates with IBM Rational development lifecycle solutions to enable collaboration between security and development teams

### Expertise

- “We turned to IBM because they offered both the technology leadership and the deep security expertise...”  
*Marek Hlávka, Chief Security Officer, Skoda Auto*

**Think Integrated.**



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