Automation Domination

Application Security with Continuous Integration (CI)

Hosted by OWASP & the NYC Chapter

- **Lead Application Security Engineer** *for Morningstar formerly with CME Group*

Over 8 years of leading and participating in all aspects of the Security Development Lifecycle (SDL), including developing, deploying, supporting enterprise static (SAST) and dynamic scanners (DAST).

CME Group

MORNINGSTAR®

Agenda

- *Why bother*
- *Zero-sum game for application security*
- *Where to start?*
- *Tipping the scales in our direction*
- *Making it work for you!*
- *Demo*

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Should I pay attention?

- Are you a current, future, or past Dynamic and/or Static Scanner users?
- Are you looking to implement a Security Development Lifecycle (SDL) or Software Development Lifecycle (SDLC) ?
- Interested in saving time and money to deliver software?
- Is management bugging you about metrics?

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Mission

Develop an application security automation program to assist software development teams with iterative application security testing.

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Are we outnumbered?

- Hundreds to thousands of developers
- Too many applications with systemic issues

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Capability Maturity Model

Initial - 1	Repeatable - 2	Defined - 3	Managed - 4	Optimizing - 5

1. Unpredictable
2. Reactive
3. Development Methodology
4. Measured & Controlled
5. Focus is on improvement

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Software development maturity

- *Development*
  - Architecture/Design Documents
  - Build Process & Deployment
  - Bug-Tracking
- *Architecture/Design*
  - Data-flow diagrams (DFDs)
  - Charters and/or Project Plans

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Normalize your scans & findings

- *Findings*
  - Taxonomy of Findings/Vulnerabilities (CWE)
  - Risk Scoring (CVSS)
  - Anatomy of Findings/Vulnerabilities (Issue Type)
- *Scanning*
  - Scope your DAST & SAST findings to Development
  - Define a process from finding-to-fix

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OWASP has the technology!

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OWASP Secure Coding Practices
Quick Reference Guide

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Topics for Requirements

- Authentication
- Session Management
- Authorization
- Input Validation
- Output Encoding
- Client Side Security
- Sensitive Data Handling
- Data Protection (Data in Transit & Rest)
- Supplemental Specifications for Testing

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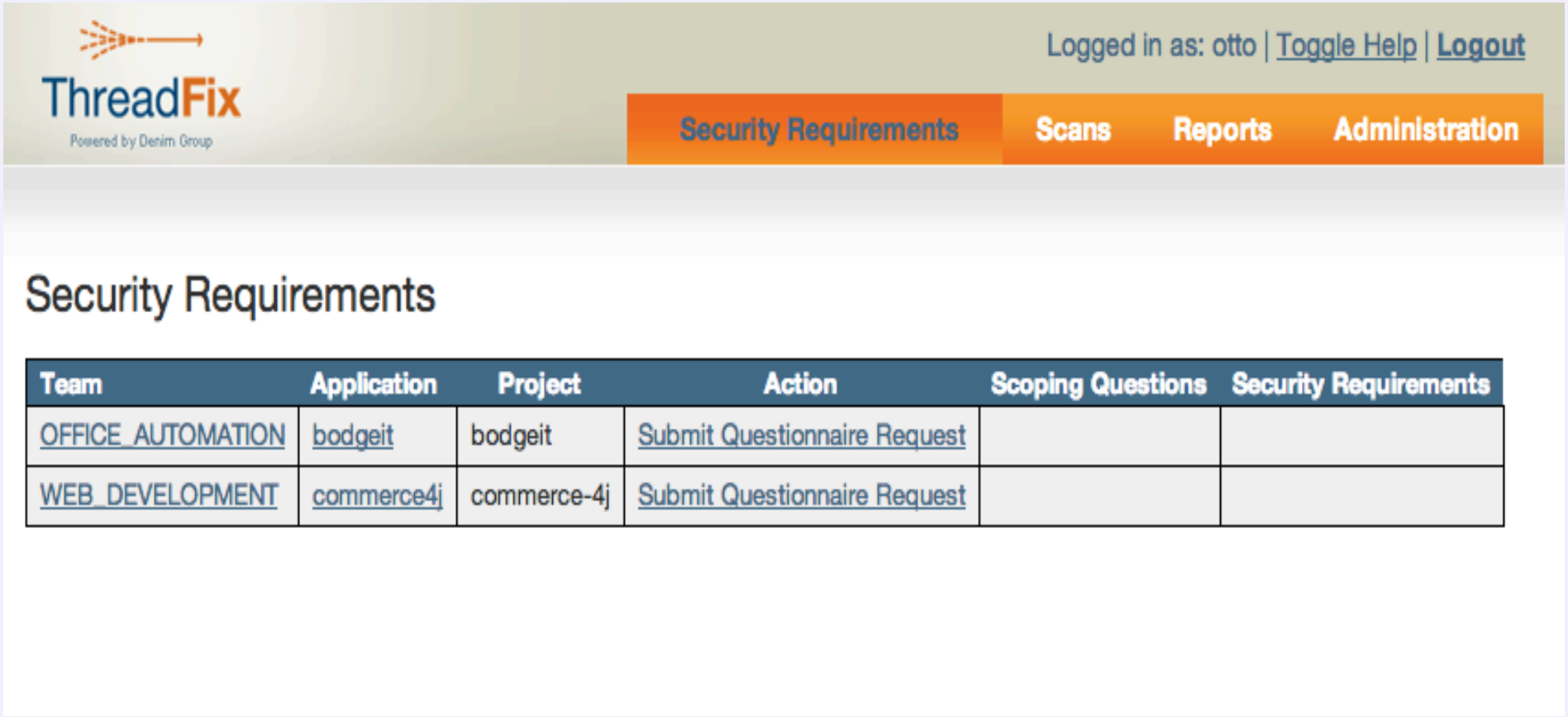
ThreadFix (Security Requirements)



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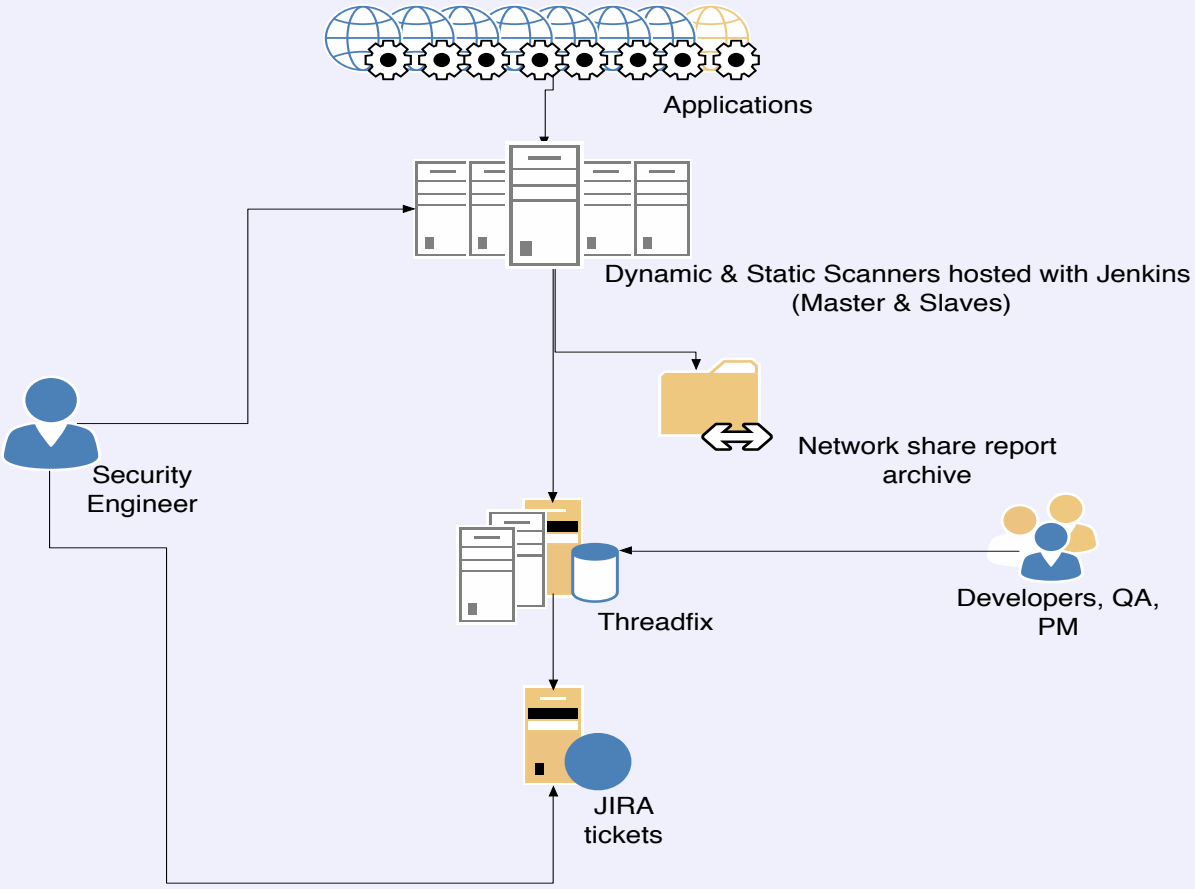
Network Topology



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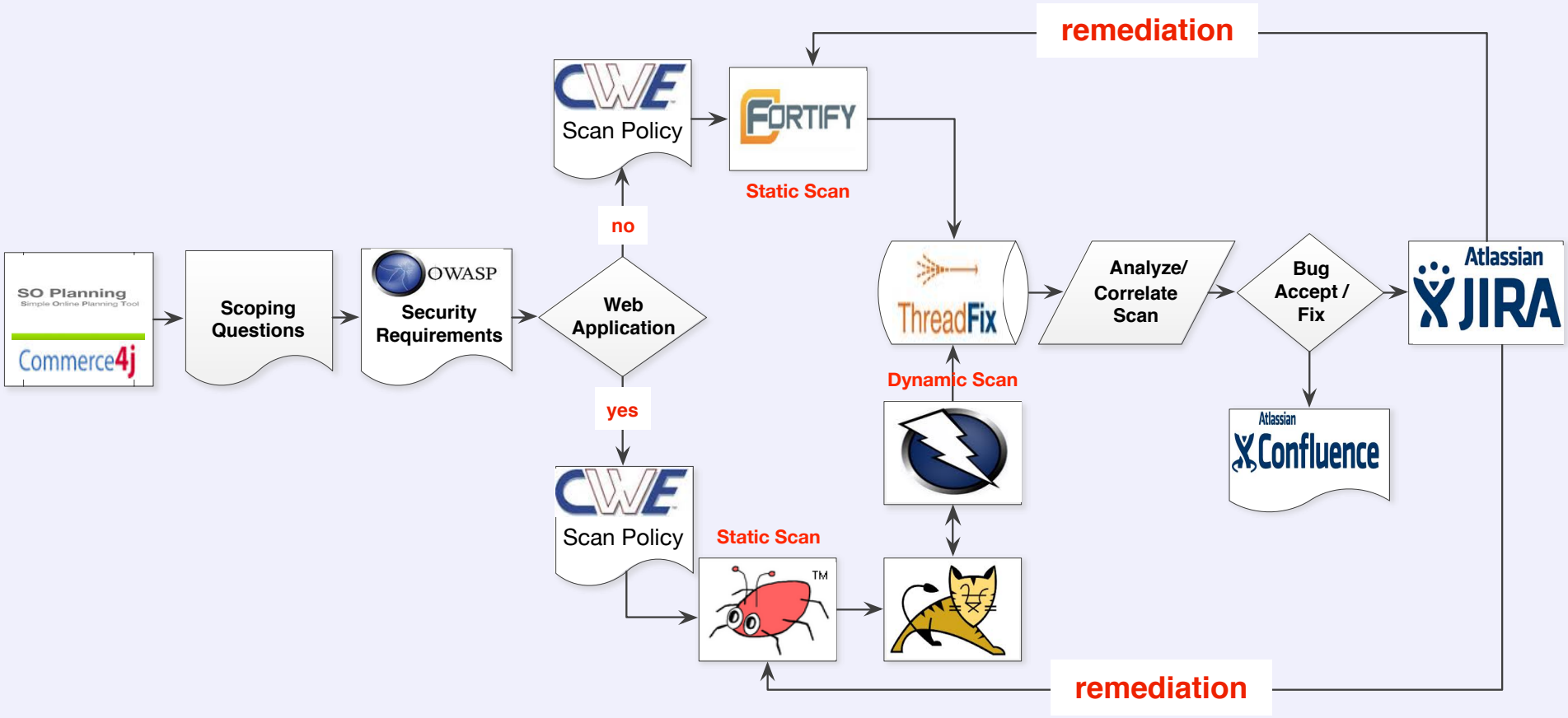
Working the flow



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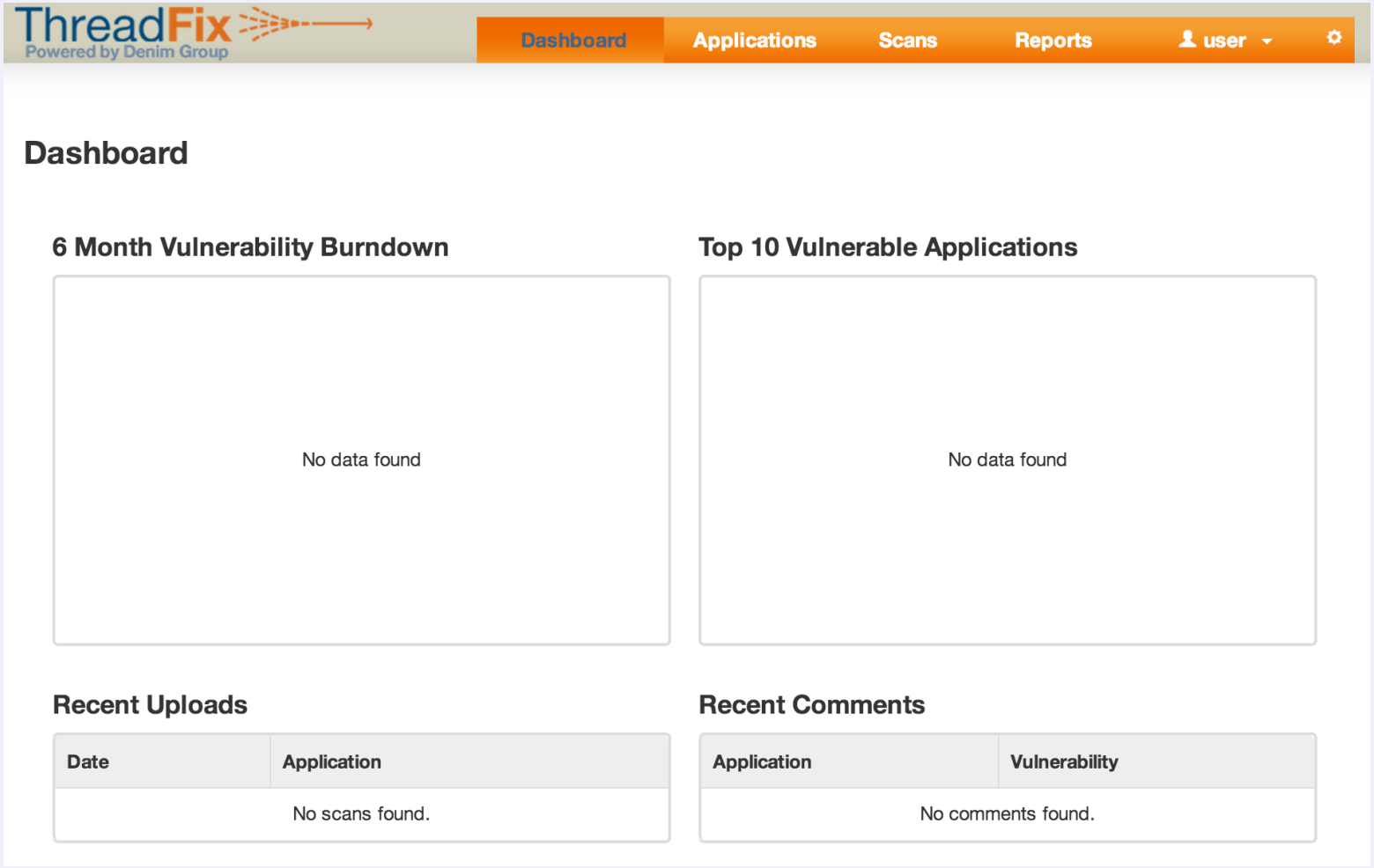
ThreadFix Configuration



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Automated Static Analysis

All | **applications** | fortify | owasp | +

S	W	Name ↓	Last Success	Last Failure	Last Duration	
		bodgeit-fortify	7 min 44 sec - #2	N/A	1 min 33 sec	
		commerce4j-fortify	2 days 16 hr - #8	7 days 15 hr - #6	5 min 3 sec	
		soplanning-fortify	10 days - #9	15 days - #6	15 min	

Icon: S M L

Legend RSS for all RSS for failures RSS for just latest builds

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Bug Submission

JIRA Dashboards Projects Issues Agile Create issue Quick Search

soplanning / SOPLAN-3

CWE-79: Improper Neutralization of Input During Web Page Generation ('Cross-site Scripting')

Edit | Comment | Assign | More | Start Progress | Done | Workflow | Admin | Export

Details

Type:	Bug	Status:	To Do (View Workflow)
Priority:	Critical	Resolution:	Unresolved
Labels:	None		

People

Assignee:	Otto Domino
Reporter:	Otto Domino
Votes:	0
Watchers:	1 Stop watching this issue

Dates

Created:	4 minutes ago
Updated:	4 minutes ago

Description

General information
The software does not neutralize or incorrectly neutralizes user-controllable input before it is placed in output that is used as a web page that is served to other users.

/html2pdf/examples/exemple09.php

Vulnerability[0]:
Improper Neutralization of Input During Web Page Generation ('Cross-site Scripting')
CWE-ID: 79
http://cwe.mitre.org/data/definitions/79.html
Vulnerability attack surface location:
URL: http://localhosthtml2pdf/examples/exemple09.php
Parameter: null
Fortify 360 ID: C0BC5AEF50D46A5CA9DAA41DECBB5A49

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Now for a change of pace!

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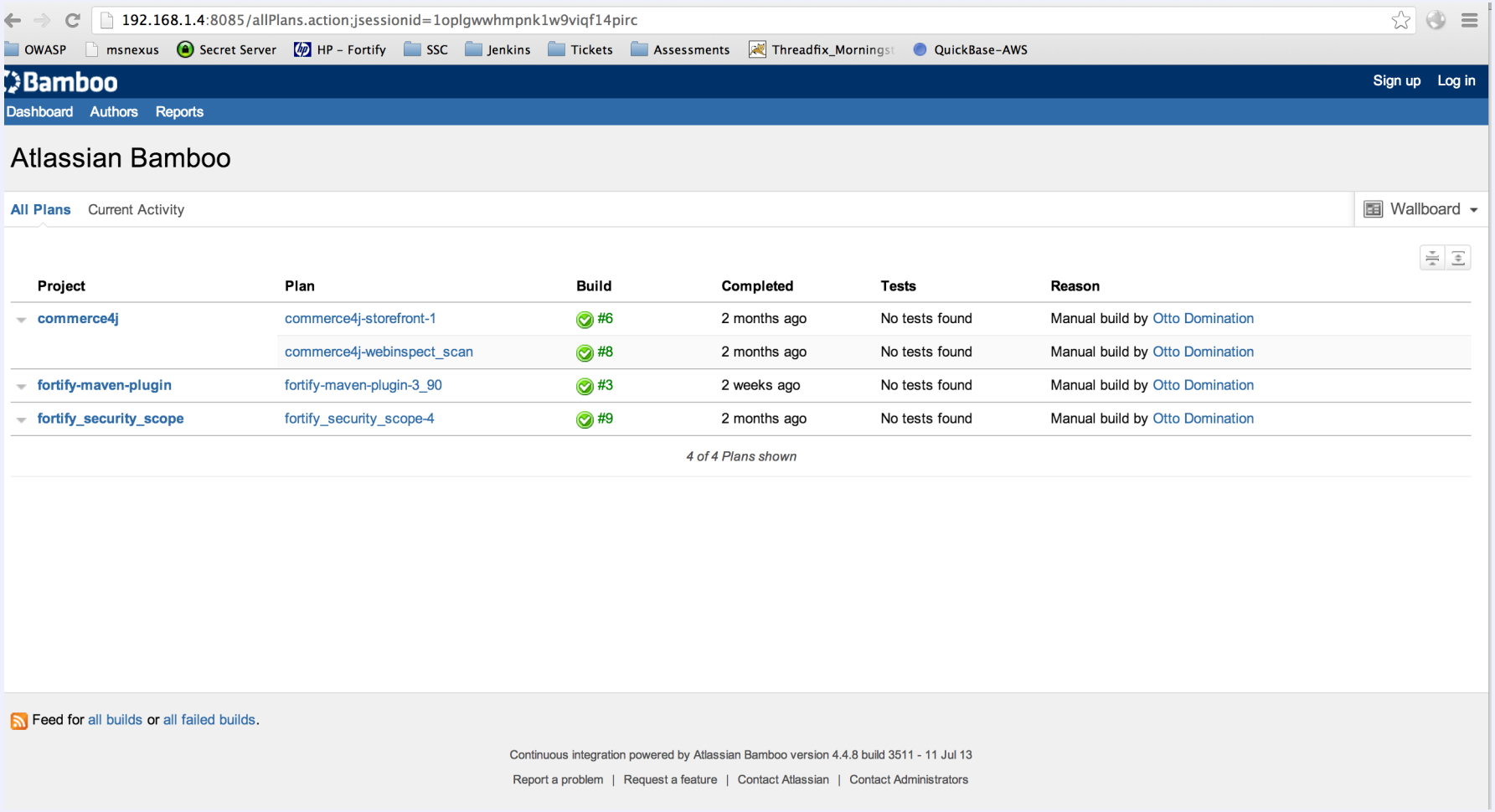
Static & Dynamic Scanning w/ Bamboo



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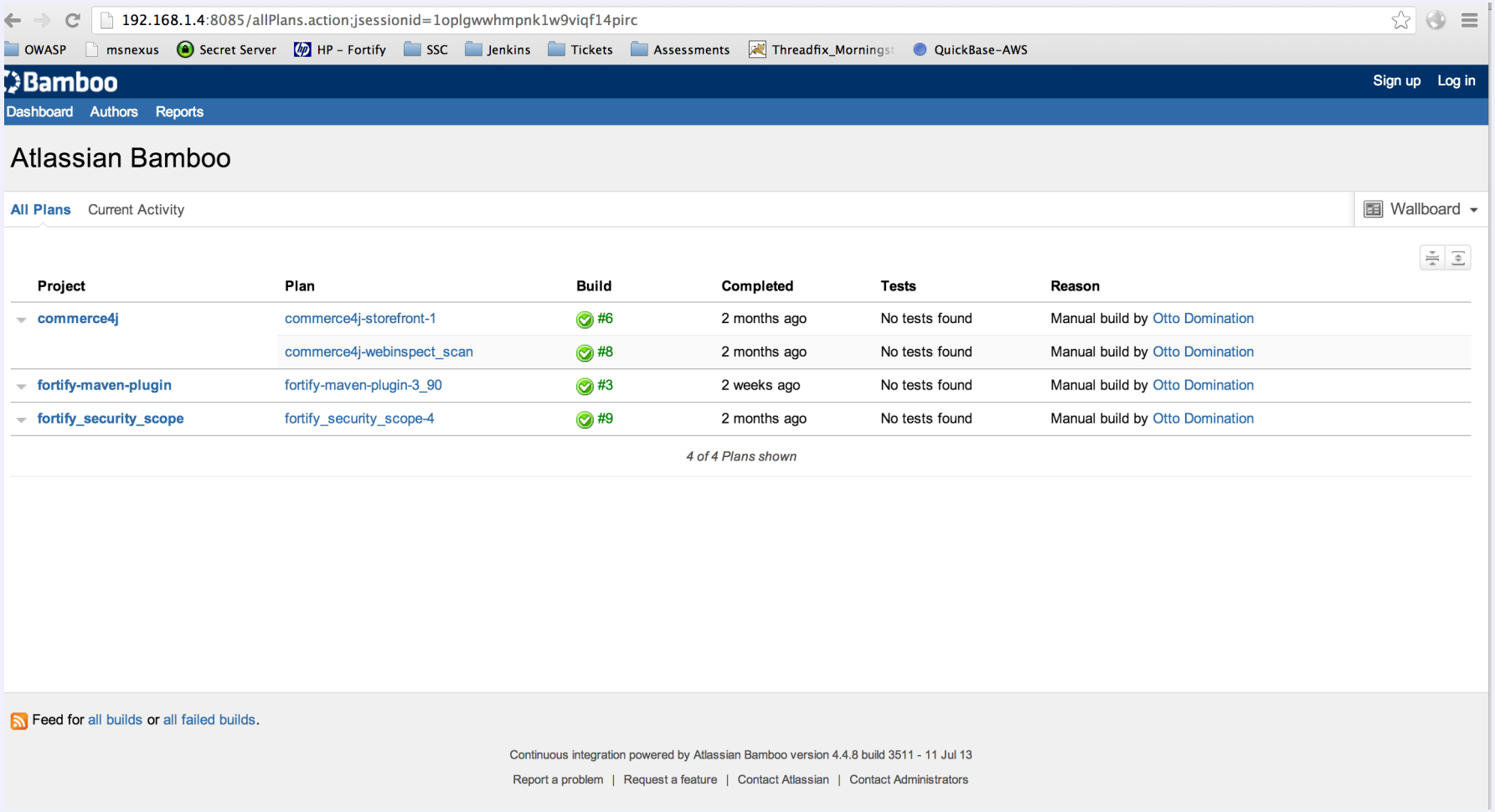
Static & Dynamic Scanning w/ Bamboo



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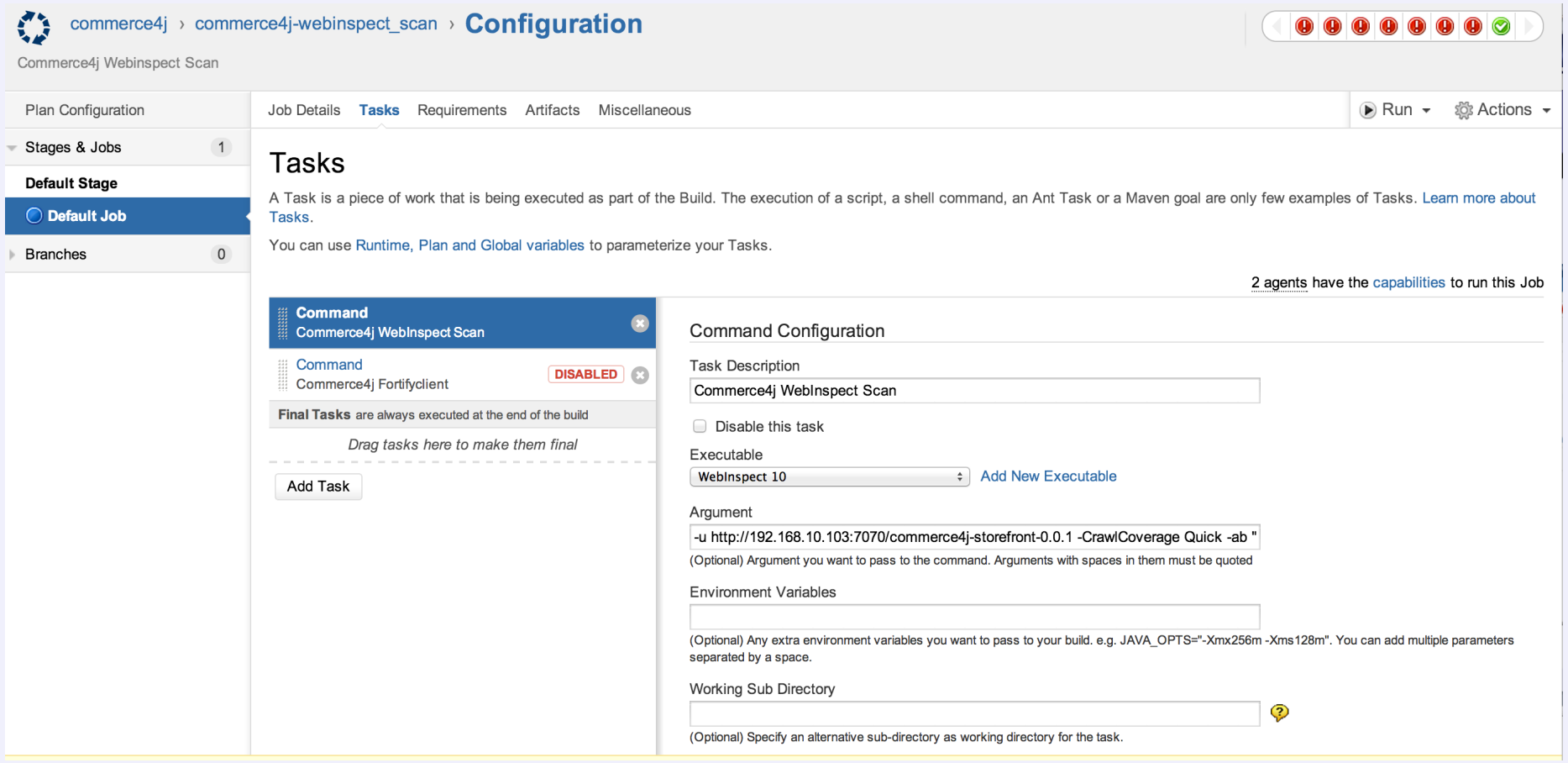
Dynamic Scan in CI with Agent



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Thank you!

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