

## Chapter

Extremely Large WAF Installations

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### Overview

- How big is 'extremely large'?
- Architecture
- Deployment
- Management

# How big is 'extremely large'?

- Scenario I:
  - One Application 100, 1.000 or 1.000.000 of web servers
- Scenario 2:
  - Many different applications
  - All outsourced
  - Many different architectures and a lot different Web Server setup's
- Scenario 'NIGHTMARE':
  - Scenario I + 2

#### Architecture

- Hardware vs. Software
  - Hardware: Fault Tolerance? Scalability?
  - Software: Deployment? Upgrades?
- Across data centers
- One big company, lots of outsourced Systems

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## Deployment

- 10s of web servers?
  - Lets write a script!
- 10.000s of web servers?
  - No Problem lets write a script!
    - NOOOO!!!!!!
  - Better, lets use a deployment system
- Everything outsourced to different providers?
  - Let them do the job!

## Management

- Multi-Tiered Management
  - Distributed Cluster or Application Instances
    - Local Policy and Rule Management governed by central system Policies and Rules
    - Local Monitoring and Statistics
  - Global Policy and Rule settings
  - Global Monitoring and Statistics

## Where are the problems?

- Policy roll-out speed
- Think before logging!!!
- Connection between 'Application Defense Center' and Web Servers (Clusters) is not always 'online'
- Deal with failing communication paths
- Client Server Model for communication between systems NOT an option

## Questions?

- Questions
- Discussion

