Chapter

Extremely Large WAF Installations

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Overview

• How big is ‘extremely large’?
• Architecture
• Deployment
• Management
How big is ‘extremely large’?

- **Scenario 1:**
  - 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 1 + 2
Architecture

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

- Hardware vs. Software
- Hardware: Fault Tolerance? Scalability?
- Software: Deployment? Upgrades?
- Across data centers
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Deployment

- 10s of web servers?
- Let's write a script!
- 10,000s of web servers?
  - No Problem let's write a script!
  - NOOOO!!!!!!
- Better, let's 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