



# Optimizing Enterprise SharePoint 2007 Systems

Kenneth Lo, PMP

June 9, 2010

Capital Area . **N** **E** **T**

SharePoint Special Interest Group



# Short Bios

- Kenneth Lo
- Senior Technical Manager
- PMP, MCTS, MCSD
- SharePoint, Project Server, Social Media
- <http://klopmp.com>
- Twitter: @klopmp



# Agenda

- Why Keep SharePoint 2007
- Architecture & Topology
- Hardware & Software Configurations
- Monitoring
- Best Practices
- Demo



# Scope

- Enterprise SharePoint System
- SharePoint Rollout “Imminent”
- Action Items
  - Low/Medium Risks
  - Low/Medium Level of Effort
  - High/Medium Rewards
  - Minimum Service Outage
  - Maintain or Enhance Security Posture



# Agenda

- *Why Keep SharePoint 2007*
- Architecture & Topology
- Hardware & Software Configurations
- Monitoring
- Best Practices
- Demo



# Why Keep SharePoint 2007

- Resources Availability
- Security Requirements
- Enterprise Adoption
- Training & Documentations



- Sustain & Optimize Existing Infrastructure



# Agenda

- Why Keep SharePoint 2007
- Architecture & Topology
- Hardware & Software Configurations
- Monitoring
- Best Practices
- Demo



# Architecture & Topology

- Web Front End Servers
  - Load Balancing
- Application Servers
  - Central Admin
  - Query, Index Services
  - Profiles
  - Excel Services, PerformancePoint, Project Server
- Database Servers
  - Clustering Failover



# Agenda

- Why Keep SharePoint 2007
- Architecture & Topology
- Hardware & Software Configurations
- Monitoring
- Best Practices
- Demo



# Hardware

- 64-bit vs 32-bit
- Blade vs Rack Servers
- RAM
- SANs/Disk Configurations
- Network Cards
  - Update Firmware and Drivers
  - Override Auto-Switch to 1 Gigabyte
  - Inbound & Outbound Traffic



# Software - OS

- Services Packs and Patches
- Page Memory
- Timer Jobs
  - Defrag
  - Anti-Virus Scan
  - Backup
- Kerberos Authentication



# Software - SQL Server

- Clustering
  - Active/Passive vs Active/Active
- Resources Utilization
  - CPU
  - RAM
  - Hard Disk - Data vs Log Files
- Management Maintenance Plans
  - Truncate Log Files
- Reporting & Analytical Services



# Software - IIS

- Disk Configurations
  - Web Site Files on Separate Drives
- Application Pool
  - # of App Pools
  - Overlapped Recycling
- IIS Compression
  - Static
  - Dynamic

**Advanced Settings** [?] [X]

Shutdown Time Limit (seconds)	90
Startup Time Limit (seconds)	90
<b>Process Orphaning</b>	
Enabled	False
Executable	
Executable Parameters	
<b>Rapid-Fail Protection</b>	
"Service Unavailable" Response Type	HttpLevel
Enabled	True
Failure Interval (minutes)	5
Maximum Failures	5
Shutdown Executable	
Shutdown Executable Parameters	
<b>Recycling</b>	
Disable Overlapped Recycle	False
Disable Recycling for Configuration Changes	False
Generate Recycle Event Log Entry	
Private Memory Limit (KB)	0
Regular Time Interval (minutes)	0
Request Limit	0
Specific Times	<b>TimeSpan[] Array</b>
Virtual Memory Limit (KB)	0

**Disable Recycling for Configuration Changes**  
[disallowRotationOnConfigChange] If true, the application pool will not recycle when its configuration is changed.

OK Cancel



# Software - SharePoint

- Site Quota
- Enable Services as Needed
- Crawling Schedule
- Profile Synchronization
- AD vs SharePoint Security Groups



# Software – SharePoint (cont)

- Disk Based Cache (aka BlogCache)
  - web.config
- Output Cache
  - Site Collection
  - Site
  - Page Layout
- Object Cache
  - Data in Cross-Listed Queries



# Software – SharePoint (cont)

- Page Optimization
  - Closed vs Deleted Web Parts
  - core.js (~250KB Uncompressed)
  - core.css, init.js, ie55up.js (~250KB Uncompressed)
- Large Lists



# Agenda

- Why Keep SharePoint 2007
- Architecture & Topology
- Hardware & Software Configurations
- Monitoring
- Best Practices
- Demo



# Monitoring

- Perfmon
- SharePoint Administration Toolkit
- System Center Operations Manager (SCOM)
- BMC ProActiveNet
- AvePoint DocAve
- Axceler ControlPoint
- Quest Site Administrator



# Agenda

- Why Keep SharePoint 2007
- Architecture & Topology
- Hardware & Software Configurations
- Monitoring
- Best Practices
- Demo



# Best Practices

Object	Scope	Guidelines for optimum performance
Site collections	Database	50,000
Web sites	Web site	2,000
Web sites	Site collection	250,000
Documents	Folder	2,000
Documents	Library	2 million
Security principals	Web site	2,000
Users	Web site	2 million
Items	List	2,000
Web Parts	Page	100
Web Part personalization	Page	10,000
Lists	Web site	2,000
Document size	File	50 MB



# Agenda

- Why Keep SharePoint 2007
- Architecture & Topology
- Hardware & Software Configurations
- Monitoring
- Best Practices
- Demo

# Demo



- SPDiag
  - Read-Only
  - IIS Logs
  - ULS Logs
  - Event Logs
  - Performance Counter
  - Seven (7) Consecutive Days

SPDiag - SharePoint Diagnostics

File Data Tools Help

Snapshot Trends

Services	Status
Windows SharePoint Services Administration	Online
Windows SharePoint Services Web Application	Online
Windows SharePoint Services Timer	Online
Windows SharePoint Services Incoming E-Mail	Online
Windows SharePoint Services Database	Online
Excel Calculation Services	Disabled
Office SharePoint Usage Analytics Service	Disabled
Business Data Catalog	Disabled
Shared Services Timer	Online
Session State	Disabled
Document Conversions Launcher Service	Disabled
Document Conversions Load Balancer Service	Disabled
Office SharePoint Server Search Admin Web Service	Online
Office SharePoint Server Search	Disabled
Single Sign-on Service	Online
Windows SharePoint Services Help Search	Online
Windows SharePoint Services Search	Disabled
Information Management Policy Configuration Service	Online
SSP Job Control Service	Online
Central Administration	Online
Portal Service	Online
Office SharePoint Server Search	Online



# Resources

- Kenneth Lo's Bookmarks
  - <http://delicious.com/kennethlo/caparea+optimization>
- Joel Oleson on **SharePoint Performance Optimization In 10 Steps**
  - <http://www.slideshare.net/joeloleson/sharepoint-performance-optimization-in-10-steps-for-the-it-professional>
- **Planning & Architecture for SharePoint 2007**
  - <http://go.microsoft.com/fwlink/?LinkID=85548>
- **SharePoint Administration Toolkit**
  - [http://technet.microsoft.com/en-us/library/cc508851\(office.12\).aspx](http://technet.microsoft.com/en-us/library/cc508851(office.12).aspx)
- **SharePoint Caching**
  - <http://technet.microsoft.com/en-us/library/cc770229.aspx>
- **Best Practices for Publishing Portals**
  - [http://technet.microsoft.com/en-us/library/cc850698\(office.12\).aspx](http://technet.microsoft.com/en-us/library/cc850698(office.12).aspx)



# Contact

- <http://klopmp.com>
- <http://klopmp.com/twitter>
- <http://klopmp.com/linkedin>