


Domino Performance Best Practices on the IBM i

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Agenda Key: 45AD
Session #: 460031


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Kim Greene - Introduction

- Owner of Kim Greene Consulting, Inc.
- Extensive iSeries background
- Services offered include:
 - System and application performance optimization
 - Administration
 - Upgrades
 - Troubleshooting
 - Health, performance, security, etc. checks
 - Migrations
 - Custom development
 - Enterprise integration
- Technical writer for Systems Magazine, IBM i Edition
- Blog: www.bleedyellow.com/blogs/dominodiva
- Twitter: @iSeriesDomino

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Agenda

- Cache performance tuning
- Search and indexing performance
- HTTP tuning
- Mail performance tuning
- Domino 8.x Performance on IBM i
- More on Domino 8.x performance enhancements
- Application performance
- References

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Cache Performance Tuning

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Group Cache

- Used to lookup members of groups

Default Size	Maximum Size	To View Statistics
4 MB	15 MB	Sh stat net

- Key statistics
 - NET.GroupCache.Hits = 155
 - NET.GroupCache.Misses = 10
 - NET.GroupCache.NumEntries = 9
 - NET.GroupCache.Size = 15,360
 - NET.GroupCache.Used = 2,716
- Group_Cache_Size=
 - Set in bytes

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NLCache

- Used for name lookups

Default Size	Maximum Size	To View Statistics
16 MB prior to 8.5.2 64 MB in 8.5.2	4 GB	Sh stat nlcache

- Key statistics
 - Database.NAMELookupCacheCacheSize = 16,447,205
 - Database.NAMELookupCacheLookups = 1,879,903
 - Database.NAMELookupCacheMaxSize = 16,777,216
 - Database.NAMELookupCacheMisses = 1,362,746
- NL_Cache_Size=
 - Set in bytes

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Unified Buffer Manager

- Also referred to as the NSF buffer pool
- Buffers data between the NIF and disk

```

graph LR
    NIF[NIF] <--> NSB[NSF Buffer Pool]
    NSB <--> Disk[(Disk)]
  
```

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Unified Buffer Manager

Default Size	Maximum Size	To View Statistics
300 MB	1.5 GB prior to release 8 1.0 GB 8.x onward	Sh stat database

- Key statistics
 - Database.Database.BufferPool.Maximum.Megabytes = 170
 - Database.Database.BufferPool.Peak.Megabytes = 168
 - Database.Database.BufferPool.PercentReadsInBuffer = 95.44
- NSB_BUFFER_POOL_SIZE_MB=

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Database Cache

- Determines the number of databases a server can hold in its cache

Default Size	Maximum Size	To View Statistics
3x NSF buffer pool	10,000	Sh stat database

- Key statistics
 - Database.DbCache.CurrentEntries = 510
 - Database.DbCache.HighWaterMark = 714
 - Database.DbCache.MaxEntries = 510
 - Database.DbCache.OvercrowdingRejections = 8385
- NSF_DbCache_Maxentries=

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NSF Monitor Pool

- Caches event monitors such as server and user mail rules

Default Size	Maximum Size	To View Statistics
40 MB	256 MB	Sh stat database

- Key statistics
 - Database.MonitorPool.Event.Used = 52309
 - Database.MonitorPool.Monitors.Used = 1184
 - Database.MonitorPool.Size = 41943040
- NSF_MONITOR_POOL_SIZE_MB=

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Search and Indexing Performance

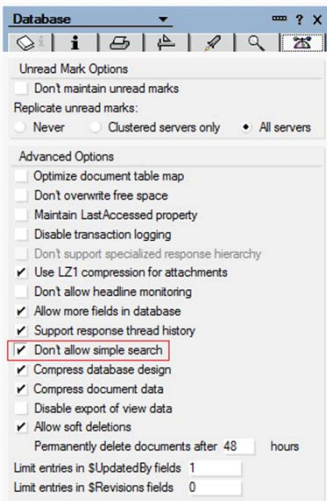
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Better Control of Search

- Don't allow simple search
 - Prevents users from searching a database that is not full-text enabled
 - Doesn't prevent searches on whole server!!



The screenshot shows the 'Database' configuration window with the following options:

- Unread Mark Options
 - Don't maintain unread marks
- Replicate unread marks:
 - Never
 - Clustered servers only
 - All servers
- Advanced Options
 - Optimize document table map
 - Don't overwrite free space
 - Maintain LastAccessed property
 - Disable transaction logging
 - Don't support specialized response hierarchy
 - Use LZ1 compression for attachments
 - Don't allow headline monitoring
 - Allow more fields in database
 - Support response thread history
 - Don't allow simple search
 - Compress database design
 - Compress document data
 - Disable export of view data
 - Allow soft deletions
- Permanently delete documents after 48 hours
- Limit entries in \$UpdatedBy fields 1
- Limit entries in \$Revisions fields 0

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Full Text Index Tuning

- Spawn full-text indexing off to own thread
 - Update_Fulltext_Thread=1
- Prevents long full text indexing operations from delaying view updates
- By default, view updates and full text indexing are driven by the same thread

FT.Index.Count	FT.Index.Search	FT.Search.Total.Results
56,150	27,652	1,002,317

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Customer Tuning Example

- Semaphore timeouts

Semaphore Timeout	# of times occurring	Description
3A05	793	SEM_HTTP_AGENT
0266	20	NSF per-database full-text semaphore
0244	15	NSF per-database semaphore
0931	8	Task sync semaphore
03A8	2	DBCNT page zero semaphore

- Enabling Update_Fulltext_Thread=1 eliminated semaphore timeouts

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Full Text Indexing

- Take full text indexing out of Domino memory pool
 - Uses memory from OS pool
 - Frees up Domino memory
 - Notes.ini setting
 - `ftg_use_sys_memory=1`

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HTTP Tuning


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HTTP Tuning

- Threading model is important!!
 - High contention applications benefit from R5 threading model
 - HTTPQueueMethod=2
 - Most optimal for:
 - URLs that run application code
 - Large uploads/downloads
 - Threads work off a queue

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HTTP Tuning

- Customer example

	Default HTTP threading model	R5 threading model
# users	400	400
# errors	37 (4.6%)	0 (0%)
Max response time	103 seconds	77 seconds

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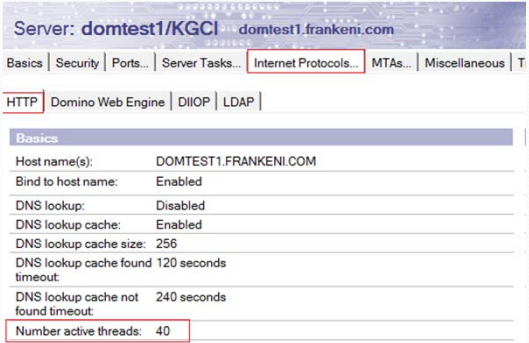
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HTTP Server Threads

- Number of threads to handle web server requests

Default Size	Maximum Size	To View Statistics
40	512	Sh stat database

- Key statistic
 - Http.Workers



Server: **domtest1/KGCI** domtest1.franken.com

Basics | Security | Ports... | Server Tasks... | **Internet Protocols...** | MTAs... | Miscellaneous | T...

HTTP | Domino Web Engine | DIIOP | LDAP |

Basics

Host name(s): DOMTEST1.FRANKENI.COM

Bind to host name: Enabled

DNS lookup: Disabled

DNS lookup cache: Enabled

DNS lookup cache size: 256

DNS lookup cache found 120 seconds timeout

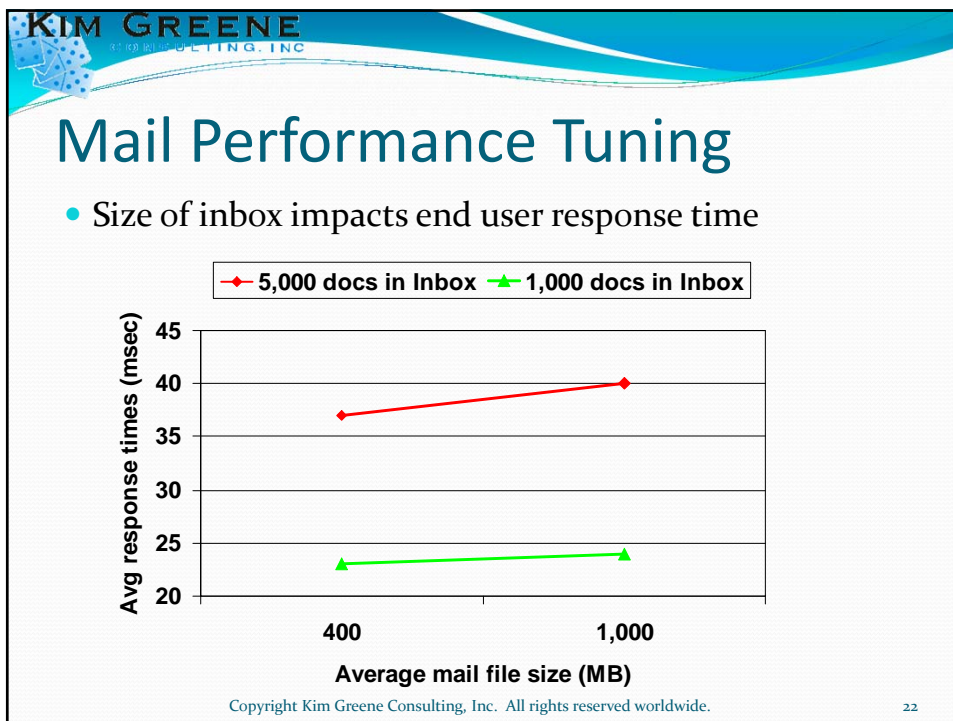
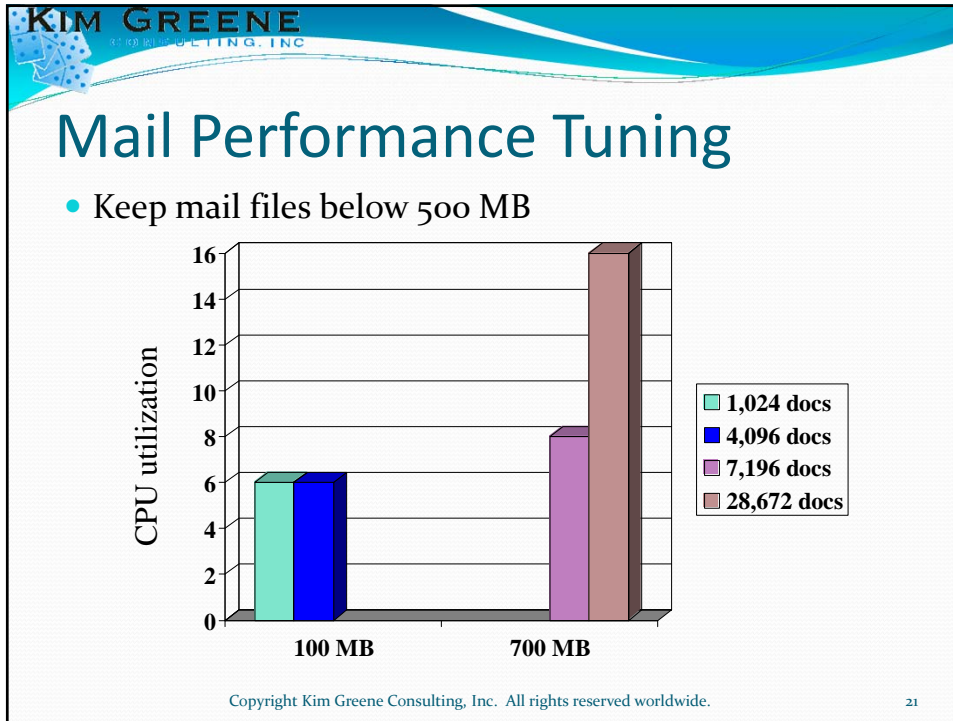
DNS lookup cache not found timeout: 240 seconds

Number active threads: 40

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Mail Performance Tuning

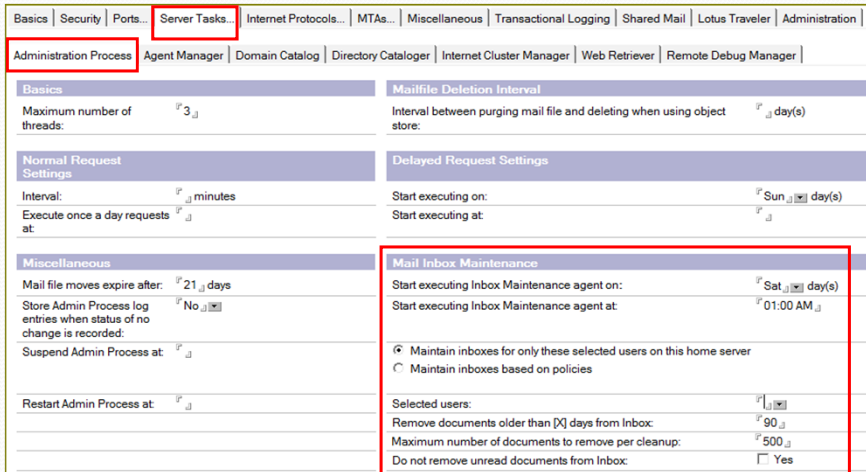
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Mail Performance Tuning

- Use Inbox maintenance agent



Basics | Security | Ports... | **Server Tasks...** | Internet Protocols... | MTAs... | Miscellaneous | Transactional Logging | Shared Mail | Lotus Traveler | Administration |

Administration Process | **Agent Manager** | Domain Catalog | Directory Cataloger | Internet Cluster Manager | Web Retriever | Remote Debug Manager |

Basics

Maximum number of threads: 3

Mailfile Deletion Interval

Interval between purging mail file and deleting when using object store: day(s)

Normal Request Settings

Interval: minutes

Execute once a day requests at:

Delayed Request Settings

Start executing on: Sun, day(s)

Start executing at:

Miscellaneous

Mail file moves expire after: 21 days

Store Admin Process log entries when status of no change is recorded: No

Suspend Admin Process at:

Restart Admin Process at:

Mail Inbox Maintenance

Start executing Inbox Maintenance agent on: Sat, day(s)

Start executing Inbox Maintenance agent at: 01:00 AM

Maintain inboxes for only these selected users on this home server
 Maintain inboxes based on policies

Selected users:

Remove documents older than [X] days from Inbox: 90

Maximum number of documents to remove per cleanup: 500

Do not remove unread documents from Inbox: Yes

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Number of Mail.Box Files

- Mail.Mailbox.Accesses
- Mail.Mailbox.AccessConflicts
 - Want a lower percentage of conflicts (2% or less)
 - $\text{Mail.Mailbox.AccessConflicts} / \text{Mail.Mailbox.Accesses} = < 0.02$

Mail Delivery Statistic	Original	After Tuning
Mail.Mailbox.AccessConflicts	1151	8
Mail.Mailbox.Accesses	3877	3023
Server.MailBoxes	2	4

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DAOS on Mail.Box

- Mail.box not DAOS enabled
 - On mail submission
 1. Deposited in mail.box

mail.box joe.nsf

DAOS mary.nsf

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DAOS on Mail.Box

- Mail.box not DAOS enabled
 - On mail submission
 1. Deposited in mail.box
 - On delivery to Joe
 2. Read from mail.box
 3. Written to DAOS & saved
 4. Ticket written to joe.nsf

mail.box joe.nsf

DAOS mary.nsf

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DAOS on Mail.Box

- Mail.box not DAOS enabled
 - On mail submission
 1. Deposited in mail.box
 - On delivery to Joe
 2. Read from mail.box
 3. Written to DAOS & saved
 4. Ticket written to joe.nsf
 - On delivery to Mary
 5. Read from mail.box
 6. Written to DAOS & discarded
 7. Ticket written to mary.nsf

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DAOS on Mail.Box

- Mail.box DAOS enabled
 - On mail submission
 1. Written to DAOS and saved
 2. Ticket written to mail.box

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DAOS on Mail.Box

- Mail.box DAOS enabled
 - On mail submission
 1. Written to DAOS and saved
 2. Ticket written to mail.box
 - On delivery to Joe
 2. Ticket written to joe.nsf

The diagram illustrates the process of a ticket being written to mail.box and then delivered to Joe's mailbox (joe.nsf) via DAOS. It shows four components: mail.box (top left), joe.nsf (top right), DAOS (bottom left, represented as a folder), and mary.nsf (bottom right). A dashed blue arrow points from mail.box to joe.nsf, and a solid blue arrow points from the DAOS folder to joe.nsf.

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DAOS on Mail.Box

- Mail.box DAOS enabled
 - On mail submission
 1. Written to DAOS and saved
 2. Ticket written to mail.box
 - On delivery to Joe
 3. Ticket written to joe.nsf
 - On delivery to Mary
 4. Ticket written to mary.nsf

The diagram illustrates the process of a ticket being written to mail.box, then delivered to Joe's mailbox (joe.nsf) via DAOS, and finally delivered to Mary's mailbox (mary.nsf). It shows four components: mail.box (top left), joe.nsf (top right), DAOS (bottom left, represented as a folder), and mary.nsf (bottom right). A solid blue arrow points from mail.box to DAOS, a dashed blue arrow points from DAOS to joe.nsf, and a solid blue arrow points from DAOS to mary.nsf.

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Clustered Server Tuning

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Cluster/Replicator Queue Depth

- Impact of increasing Cluster Replicators from 1 to 3

The figure consists of two line graphs. The top graph shows the 'Replicator Queue Depth' for 1 replicator (red line) and 3 replicators (green line). The red line shows several peaks, with the highest reaching approximately 120. The green line shows much lower peaks, generally below 50. The bottom graph shows the 'Replicator Queue Depth' for 1 replicator (red line) and 3 replicators (green line) on a smaller scale. The red line shows several peaks, with the highest reaching approximately 13. The green line shows much lower peaks, generally below 4.

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Server Availability Index (SAI)

- Equal to the percentage of the total server capacity that is still available
- Use SERVER_TRANSINFO_RANGE to improve your SAI
 - Use SH AI to determine the right value
 - Use sh ai when servers are experiencing a heavy load
 - It is like you need to tell Domino how fast your server/hardware is.
- Very useful when looking to control Load Balancing in Clustered environments
 - Server_Availability_Threshold will indicate when to send the request to the other server in the cluster
- It can also be used on non-clustered servers to understand health of the server

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Memory Tuning

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Memory Tuning


- Goals:
 - Non-database faults/second ≤ 100 per processor
 - PercentReadsInBuffer $\geq 95\%$

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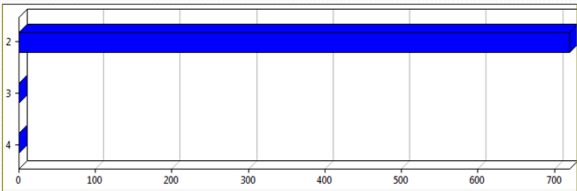
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Memory Tuning

- Very high faulting rates on the System i server



- Details revealed

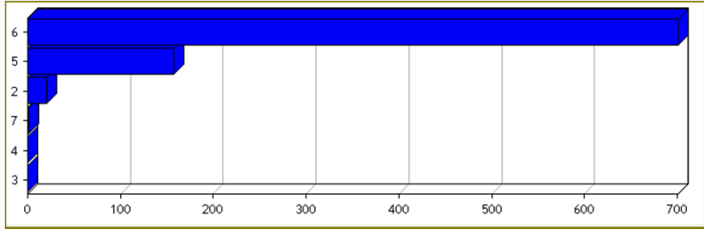


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Memory Tuning

- With each Domino server in its own memory pool
 - Isolates memory demands of individual servers



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Faulting Query

- Which jobs are causing all the faulting?
 - Query Detailed in KB article: 1237473
 - 1) Select file 'QAPMJOBL'
 - 2) Select and sequence field display values

Assign value of	To field	Field description
10	INTNUM	Interval number
20	DTETIM	Interval date and time
30	JBNAME	Job name
40	JBTFLT	Job total page faults
50	JBXRFR	Job stream file reads
60	JBXRFW	Job stream file writes

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Faulting Query

3) Select sort fields

Select Sort Fields

Type sort priority (0-999) and A (Ascending) or D (Descending) for the names of up to 32 fields, press Enter.

Sort Prty	A/D	Field	Text	Len	Dec
		INTNUM	Interval number	5	0
		DTETIM	Interval date and time	12	
		JBNAME	Job name	16	
10	D	JBTFLT	Total page faults	11	0
		JBXRFR	Stream file reads	11	0
		JBXRFW	Stream file writes	11	0

Bottom

F3=Exit F5=Report F11=Display names only F12=Cancel
 F13=Layout F18=Files F20=Renumber F24=More keys

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Faulting Query

- Sample results

Job Name	Subsystem	Total Page Faults	Stream File Reads	Stream File Writes
Update	APP02	215,443	437,451	2,436,236
Update	APP02	74,805	66,354	84,944
Update	APP02	72,679	57,312	289,068
Update	APP02	62,649	54,805	47,094
Update	APP01	45,332	54,588	61,472
Update	APP02	43,929	68,659	70,067
Update	APP01	43,100	66,639	66,875

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Are you Wasting Memory?

- Pool size minimums and maximums are used by automatic performance adjustor (QPFRADJ)
 - Adjusting minimums allows memory to be better utilized
- Check minimum size of memory pools
 - *INTERACT
 - Uses 5% by default
 - *SPOOL
 - Uses 1% by default

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WRKSHRPOOL

Work with Shared Pools System: KIMDEMO

Main storage size (M) . . : 2057.40

Type changes (if allowed), press Enter.

Pool	Priority	----Size %----		----Faults/Second----		
		Minimum	Maximum	Minimum	Thread	Maximum
*MACHINE	1	6.55	100	10.00	.00	10.00
*BASE	1	5.18	100	5.00	.50	200
*INTERACT	2	5.00	100	10.00	2.00	100
*SPOOL	2	1.00	100	5.00	1.00	100
*SHRPOOL1	2	1.00	100	10.00	2.00	100
*SHRPOOL2	2	1.00	100	10.00	2.00	100
*SHRPOOL3	2	1.00	100	10.00	2.00	100
*SHRPOOL4	2	1.00	100	10.00	2.00	100
*SHRPOOL5	2	1.00	100	10.00	2.00	100
*SHRPOOL6	2	1.00	100	10.00	2.00	100

More...

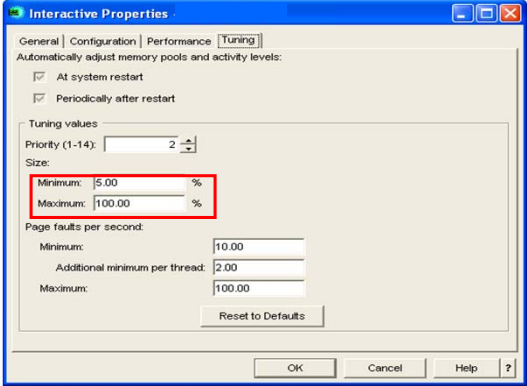
Command
====>
F3=Exit F4=Prompt F5=Refresh F9=Retrieve F11=Display text
F12=Cancel

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iSeries Navigator

- Work Management -> Memory Pools -> Active pools
- Right click pool -> select 'Properties'
- Tuning tab

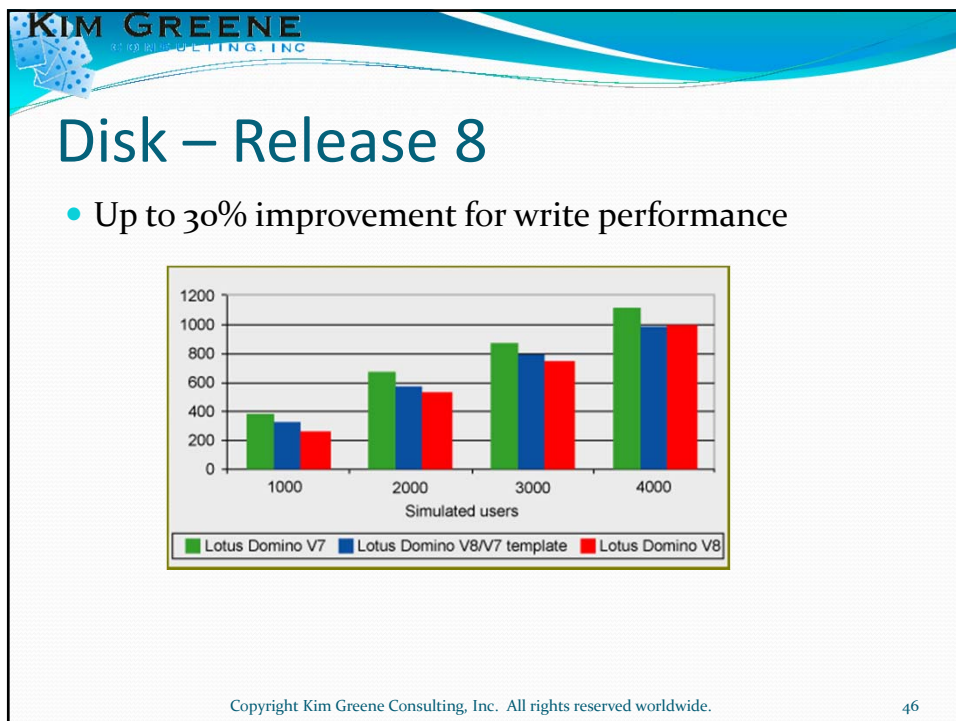
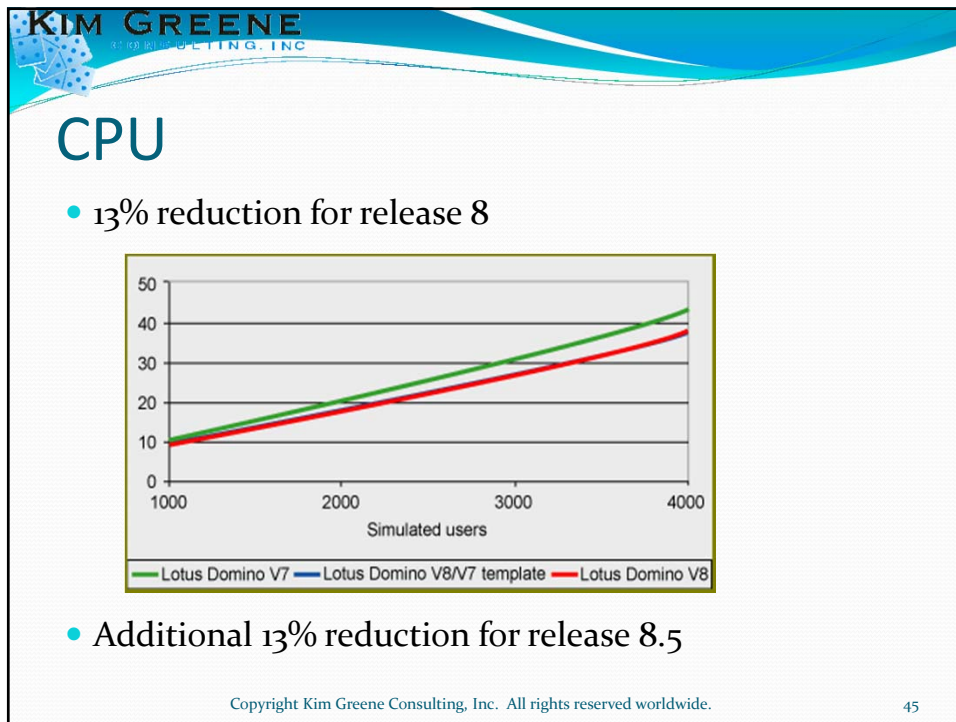


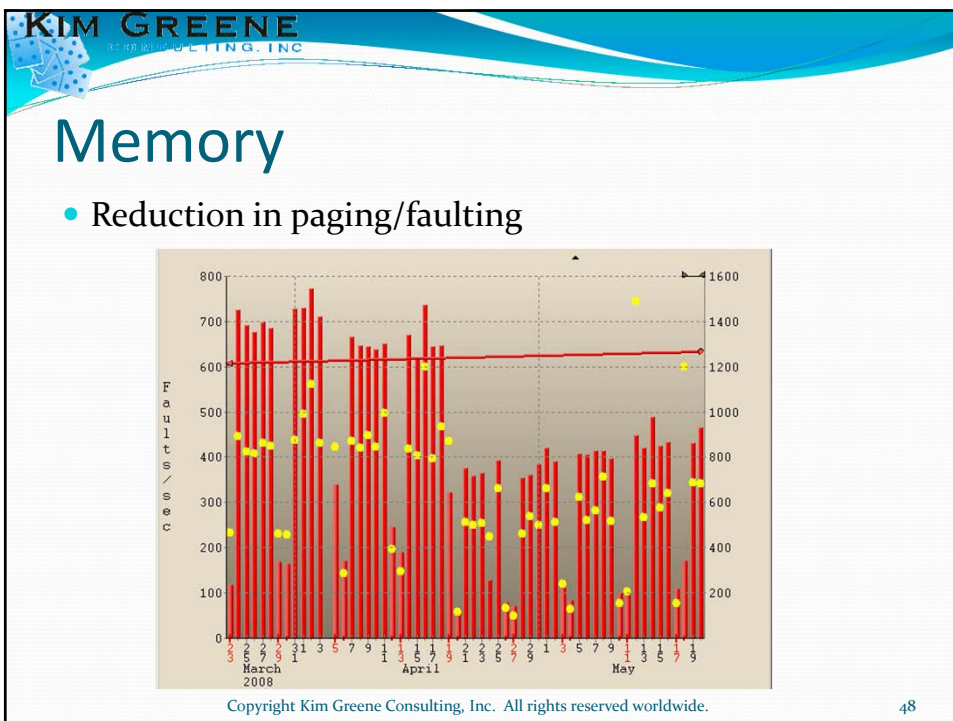
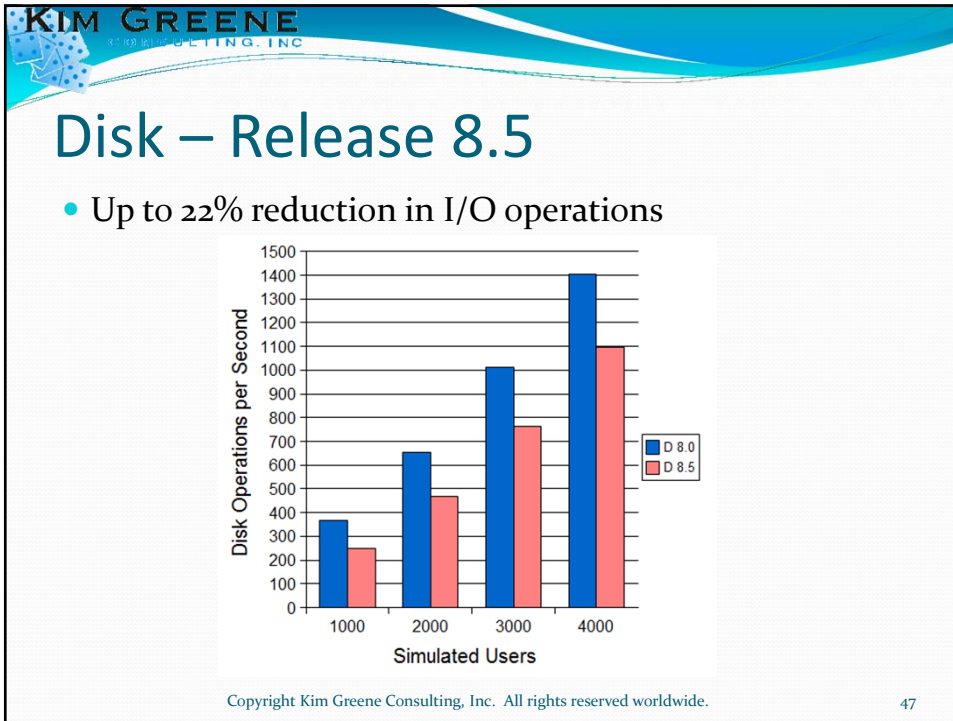
The screenshot shows the 'Interactive Properties' dialog box with the 'Tuning' tab selected. The 'Automatically adjust memory pools and activity levels' section has two checked options: 'At system restart' and 'Periodically after restart'. Under 'Tuning values', the 'Priority (1-14)' is set to 2. The 'Size' section has 'Minimum' set to 5.00% and 'Maximum' set to 100.00%, both highlighted with a red box. The 'Page faults per second' section has 'Minimum' at 10.00, 'Additional minimum per thread' at 2.00, and 'Maximum' at 100.00. A 'Reset to Defaults' button is at the bottom.

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Network Bandwidth

- 8-10% improvement in release 8
 - Design change to cache more documents
 - Release 7 = 42 entries
 - Release 8 = 50 entries
 - Better user experience during page scrolling

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Network Bandwidth

- Release 8.5

Configuration	Network Bandwidth (KBytes/second)
Notes Client	2346
Notes Client - Network Compression	1642
iNotes Full	1362
iNotes Lite	1176

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More on Domino 8 Performance Enhancements

Database and View Enhancements

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Database Performance Improvements

- Compress database design
 - Compresses design objects in a database
 - Mail files now start at 8 MB, not 18 MB
- Compress document data
 - Reduces size of all documents in a database
 - Real-life example:
 - www.bleedyellow.com/blogs/jonesy/entry/domino_8_0_1_compression
 - 533 mail files

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Database Performance Improvements

- Compress document data

Category	Value (GB)
GB Before	~205
GB After	~145

Category	Value (MB)
MB Before	~380
MB After	~275

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Database Performance Improvements

- Enabling *'compress database design'* and *'compress document data'*

- Create_R85_Databases=1
- Enable database property
- Copy style compact (-C)

Database

Unread Mark Options

Don't maintain unread marks

Replicate unread marks:

Never Clustered servers only All servers

Advanced Options

Optimize document table map

Don't overwrite free space

Maintain Last Accessed property

Disable transaction logging

Don't support specialized response hierarchy

Use LZ1 compression for attachments

Don't allow headline monitoring

Allow more fields in database

Support response thread history

Don't allow simple search

Compress database design

Compress document data

Disable export of view data

Allow soft deletions

Permanently delete documents after 48 hours

Limit entries in \$UpdatedBy fields 1

Limit entries in \$Revisions fields 0

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Database Performance Improvements

- DAOS saves on disk space and I/O


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View Performance Option

- On-demand column collations
 - Reduces overhead associated with indexes
 - Indexes built on-demand
 - Built over column first time user sorts on column

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Transaction Logging

- Transaction logging improvements
 - Required for DAOS
 - Up to 50% CPU reduction in 8.5

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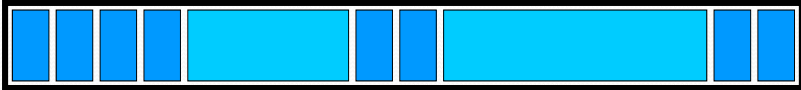
Application Performance

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Mixing Applications and Mail

- Where do you deploy applications?
 - Mail server
 - Application server
- Understand impact of updates
 - Update task works off queue
 - FIFO
 - Can get erratic performance



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Lotus Enterprise Integrator (LEI)

- Think data types aren't important?
 - Think again!!
- Customer example
 - *Replication Conflict* Action: Update at Connector B; Mismatch in field 'QTYSHP'; Record Key values: WHRLW3="G956105388117"

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Lotus Enterprise Integrator (LEI)

- What happens during replication?

DB2	Notes	
70.000	70	➔ Replication conflict
3.600	3.6	➔ Replication conflict
1.000	1	➔ Replication conflict
1142.756	1142.756	➔ OK, skipped
94.050	78.8	➔ Replication conflict

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Lotus Enterprise Integrator (LEI)

- How do we fix this?
 - Change the field types to match
 - Original field types
 - DB2
 - Packed
 - Field length 11,3
 - Notes
 - Type = Number
 - Number format = Decimal
 - Decimal places = **varying**
 - New field types
 - DB2
 - Packed
 - Field length 11,3
 - Notes
 - Type = Number
 - Number format = Decimal
 - Decimal places = **3 fixed**

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Lotus Enterprise Integrator (LEI)

- Now what do the data types look like?

DB2	Notes	
70.000	70.000	➡ OK, skipped
3.600	3.600	➡ OK, skipped
1.000	1.000	➡ OK, skipped
1142.756	1142.756	➡ OK, skipped
94.050	78.800	➡ Replication conflict

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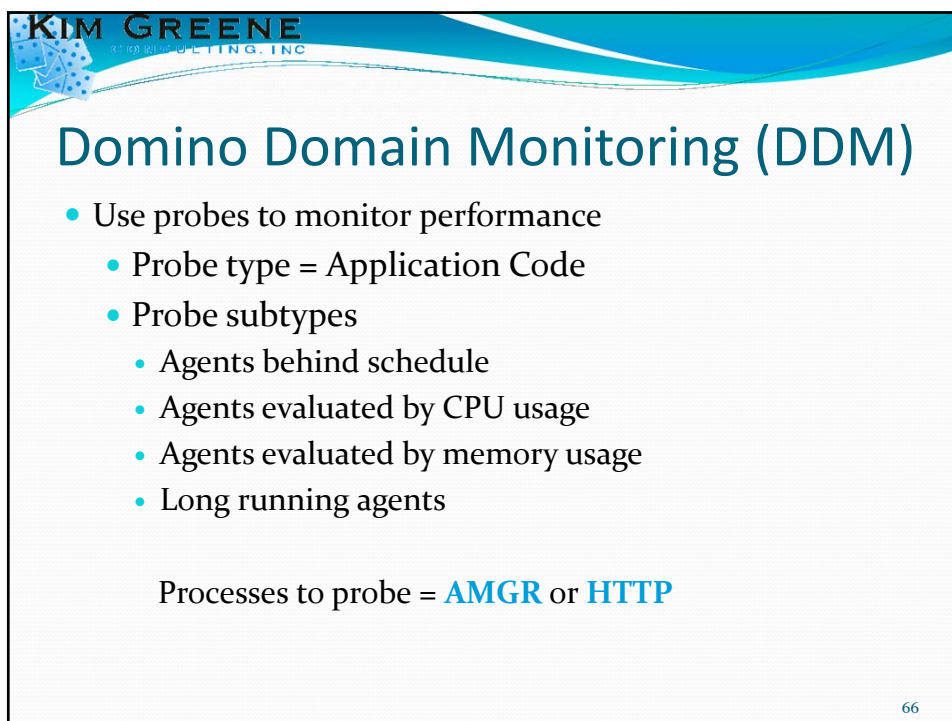
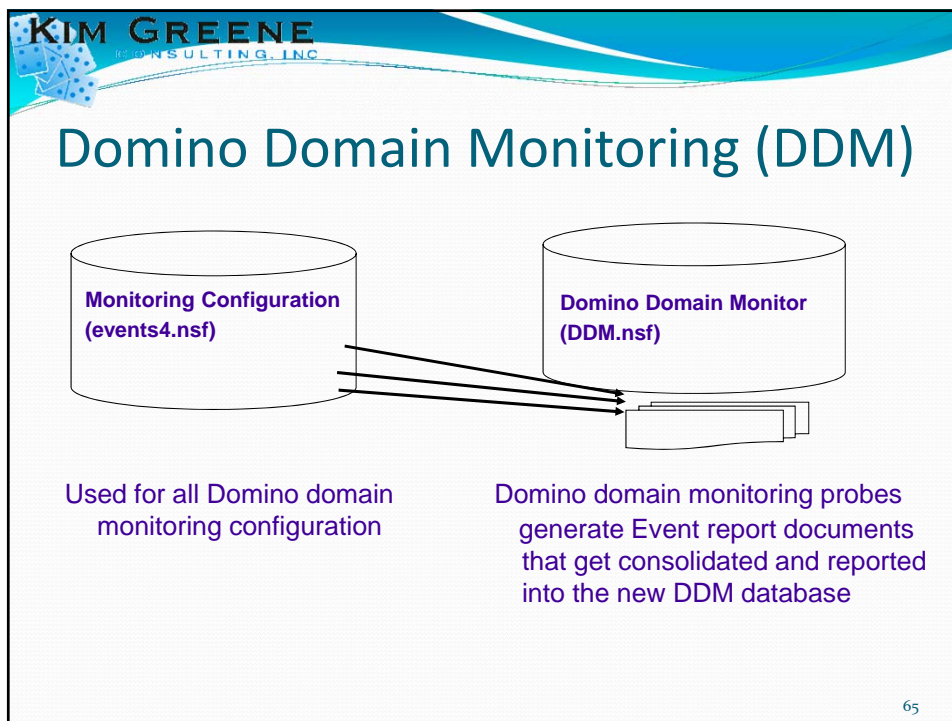
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Lotus Enterprise Integrator (LEI)

- End result?
 - Original replication time
 - 1.5 hours
 - New replication time
 - 12 minutes

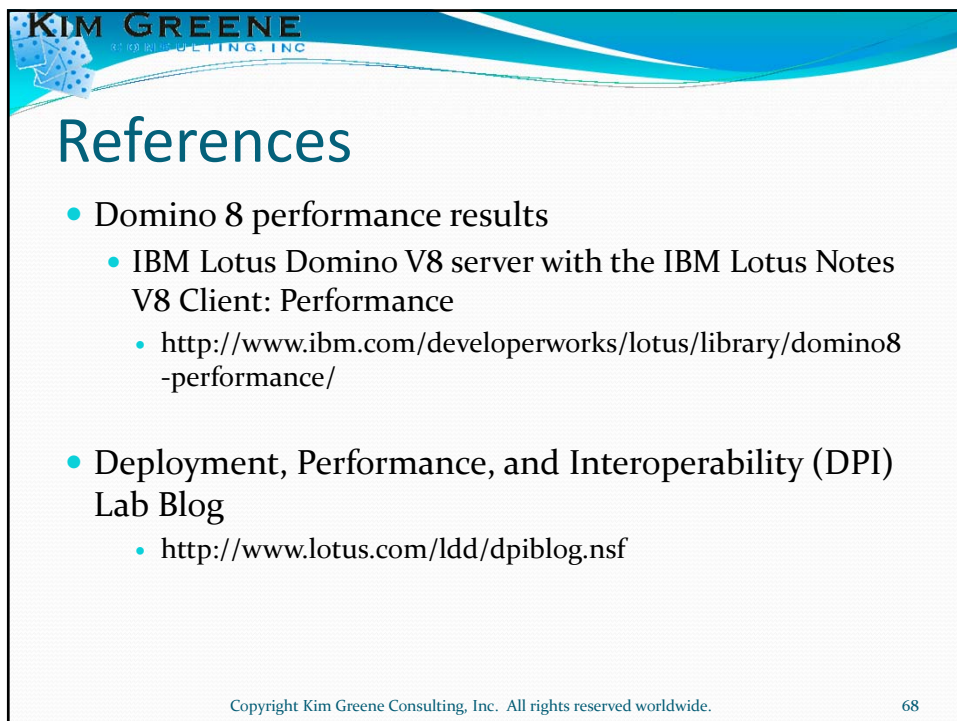
* Number of records replicated = ~200,000

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References



References

- Domino 8 performance results
 - IBM Lotus Domino V8 server with the IBM Lotus Notes V8 Client: Performance
 - <http://www.ibm.com/developerworks/lotus/library/domino8-performance/>
- Deployment, Performance, and Interoperability (DPI) Lab Blog
 - <http://www.lotus.com/idd/dpiblog.nsf>

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References

- Domino 6 for iSeries Best Practices Guide, SG24-6937
 - <http://www.redbooks.ibm.com/redpieces/pdfs/sg246937.pdf>
- Best Practices for Large Lotus Notes Mail Files
 - <http://www.ibm.com/developerworks/lotus/library/notes-mail-files/>

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Questions



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