Lotus. Symposium 2003

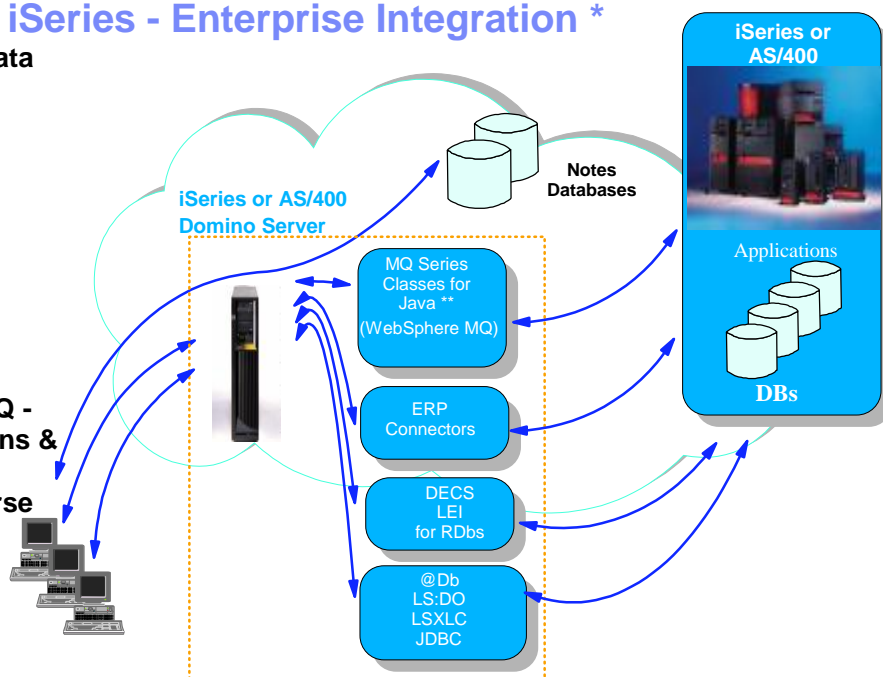---

Lotus. Symposium 2003

Lotus software | IBM Software Group

Domino Partition on iSeries

D06

e business software

Domino for iSeries
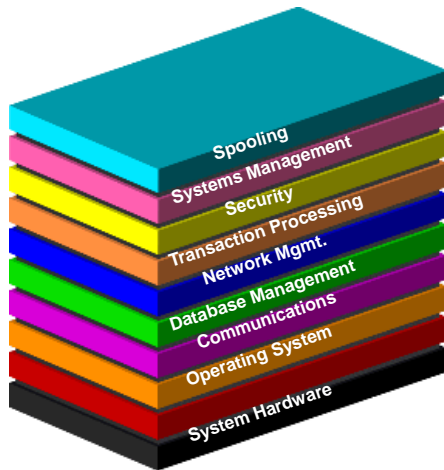### An incredibly successful product...

- **Second most-popular Domino server platform**
- **Over 25% installed by customers new to iSeries**
- **Delighted customers**
  - **www.iseries.ibm.com/domino**
    (Select Case Studies)

- **Thousands of trained, talented Business Partners**
- **Many, many applications**
  - **www.iseries.ibm.com/domino**
    (Select Solutions)

Domino and iSeries - Enterprise Integration *

- **Access DB2 data using**
  - DECS,
  - LEI
  - LS:DO
  - LSXLC
  - Java
  - @db, etc.
- **Access ERP applications**
- **WebSphere MQ - integrate appl'ns & transport data between diverse systems**
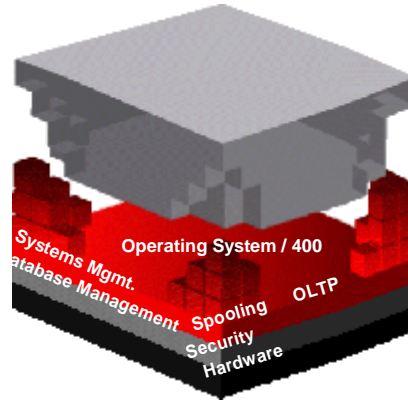

iSeries or AS/400

iSeries or AS/400 Domino Server

Notes Databases

MQ Series Classes for Java ** (WebSphere MQ)

ERP Connectors

DECS LEI for RDbs

@Db LS:DO LSXLC JDBC

Applications

DBs

iSeries - Integration

- Built-in relational database
- Built-in security
- Built-in communications

Spooling
Systems Management
Security
Transaction Processing
Network Mgmt.
Database Management
Communications
Operating System
System Hardware

Traditional Design

Systems Mgmt.
Database Management
Operating System / 400
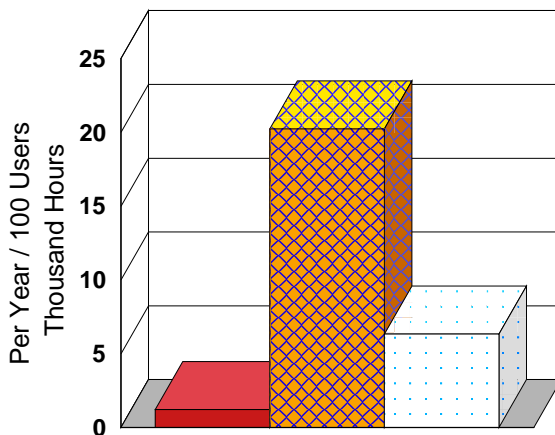Spooling
Security
OLTP
Hardware

OS/400 Advanced Design

Benefits:
- Reduced Complexity
- Increased Performance/ Productivity
- Reduced Cost

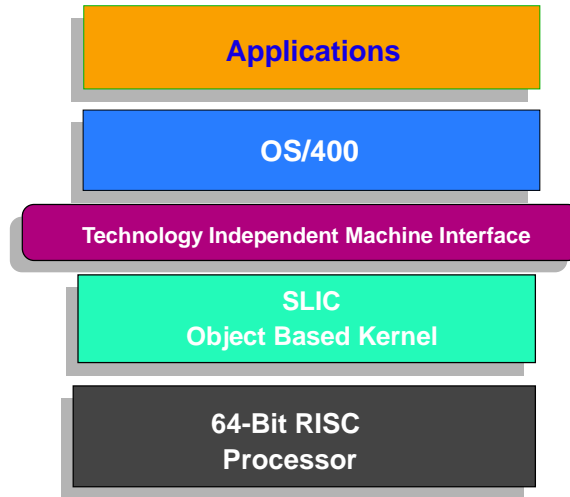## Reliability - Availability

Unplanned User Downtime *

Availability
- **iSeries solution 99.98%**
- **Standard Intel solution (SIAS) 99.67%**
- **Unix solution 99.90%**

Per Year / 100 Users Thousand Hours

Legend:
- iSeries-AS/400
- Standard Intel
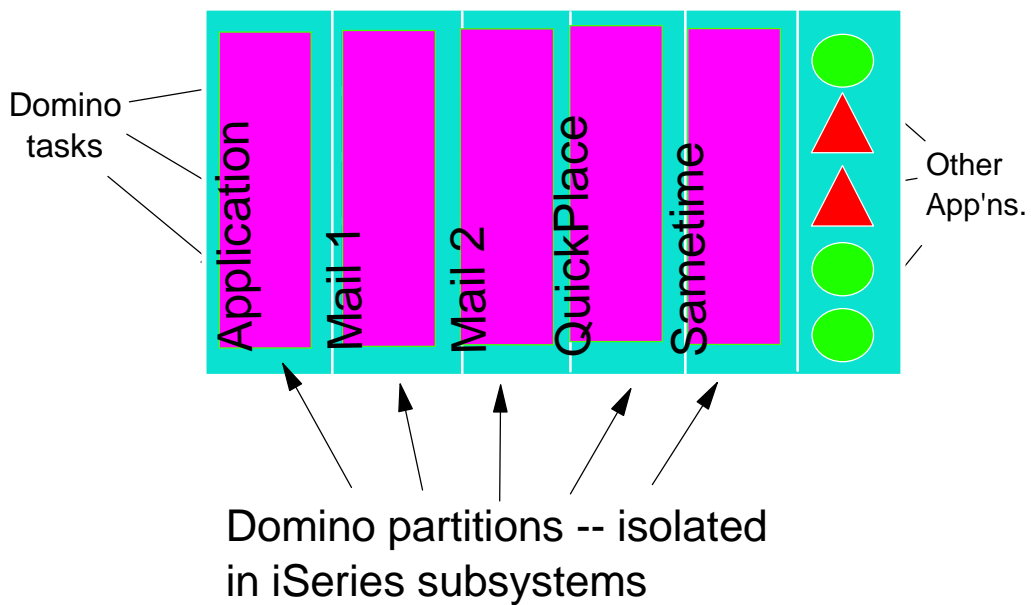- Unix

(Chart values: 25, 20, 15, 10, 5, 0)

- **5x less** user downtime for iSeries than comparable Unix ERM solutions
- **16x less** user downtime for iSeries than comparable SIAS ERM solutions

* Source "Server Cost of Ownership in ERM Customer Sites: A Total Cost of Ownership (TCO) Study" IDC September 2001
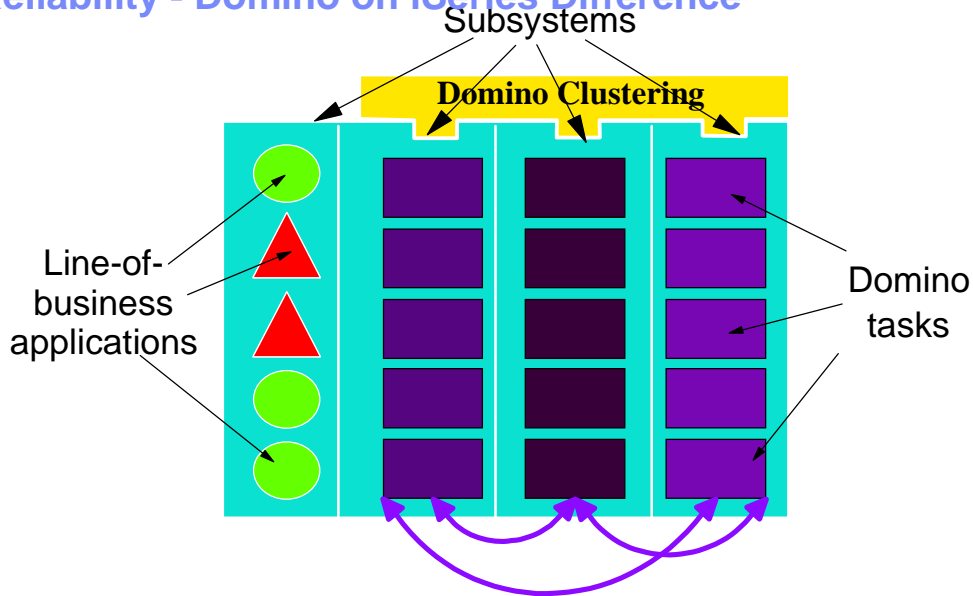Available online at http://www-1.ibm.com/servers/eserver/iseries/conslt/

iSeries - the "Machine Interface"

Applications

OS/400

Technology Independent Machine Interface

SLIC
Object Based Kernel

64-Bit RISC
Processor

---

iSeries Architecture - Work Management - Subsystems

Domino tasks

Application

Mail 1

Mail 2

QuickPlace

Sametime

Other App'ns.

Domino partitions -- isolated
in iSeries subsystems

Reliability - Domino on iSeries Difference

Subsystems

Domino Clustering
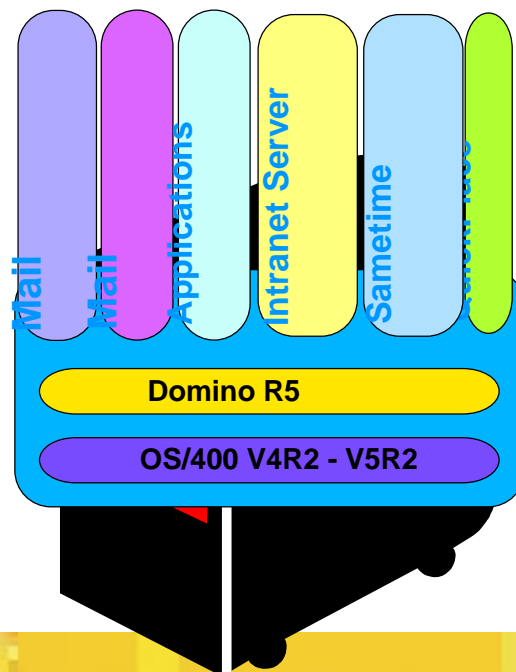
Line-of-business applications

Domino tasks

'Network' traffic between Domino partitions never leaves the system!

Domino Partitioning - Domino on iSeries Difference

- One server
- One copy of OS/400
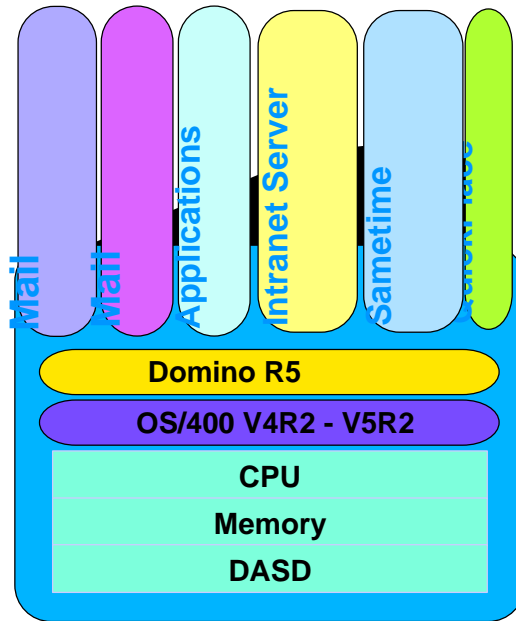- One copy/**release** of Domino
- One backup
- One tape drive

Different from LPAR (Logical Partitioning)

Mail Mail Applications Intranet Server Sametime

Domino R5

OS/400 V4R2 - V5R2

Domino Partitioning - Domino on iSeries Difference
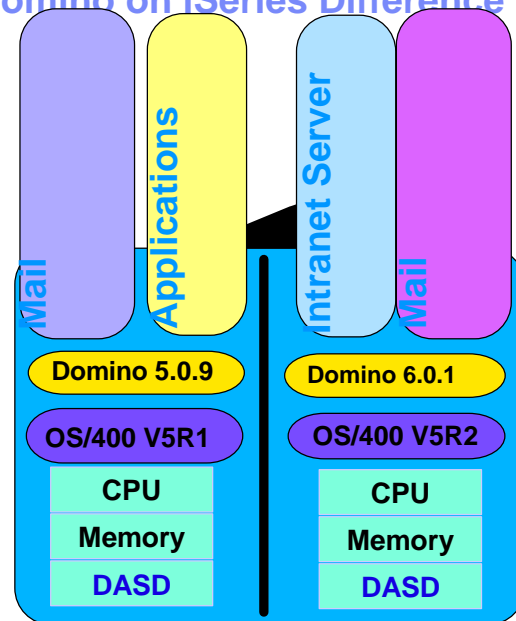### Maximizes resource usage

- Processor, Memory and DASD shared between Domino partitions

- CPU, Memory resources may be allocated through subsystems

- Domino partitions may be prioritized, isolated through subsystems

- Resources required for peak usage in one Domino partition are available for productive use by others during off-peak hours
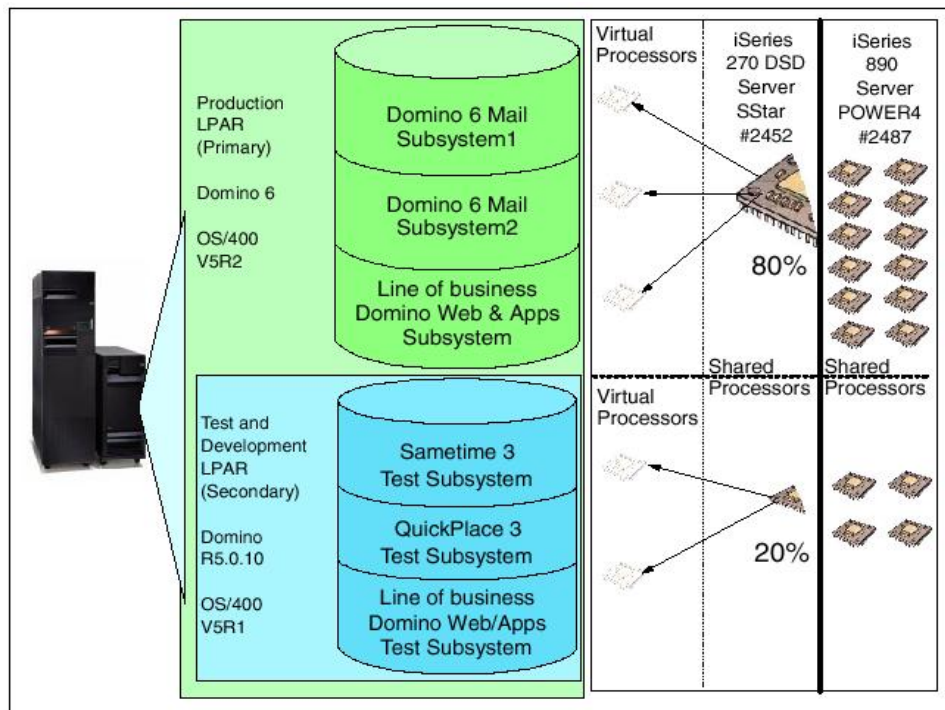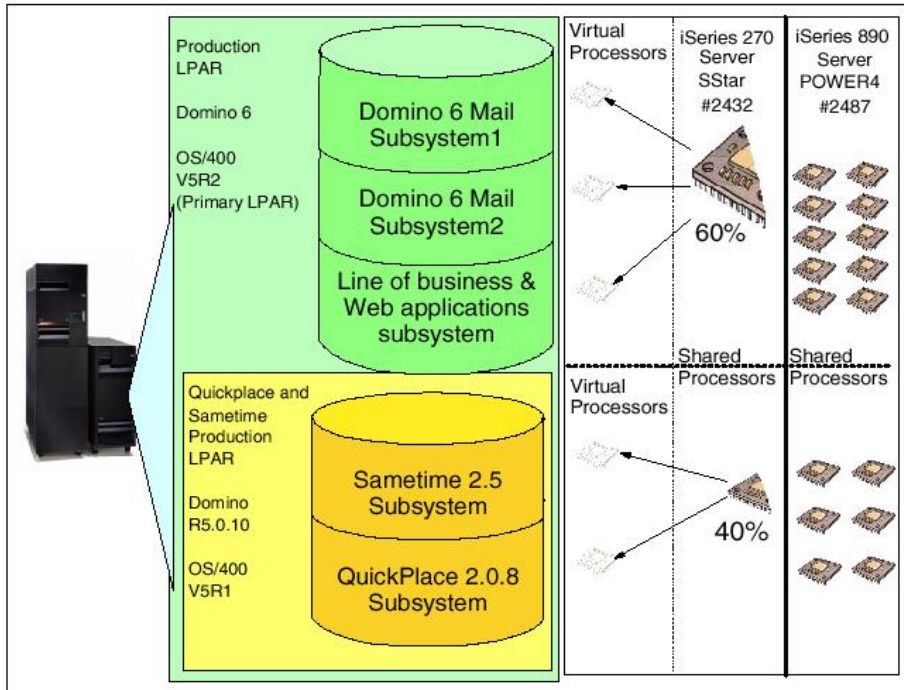
Mail | **Mail** | **Applications** | **Intranet Server** | **Sametime** |

Domino R5

OS/400 V4R2 - V5R2

CPU

Memory

DASD

LPAR (Logical Partitioning) - Domino on iSeries Difference
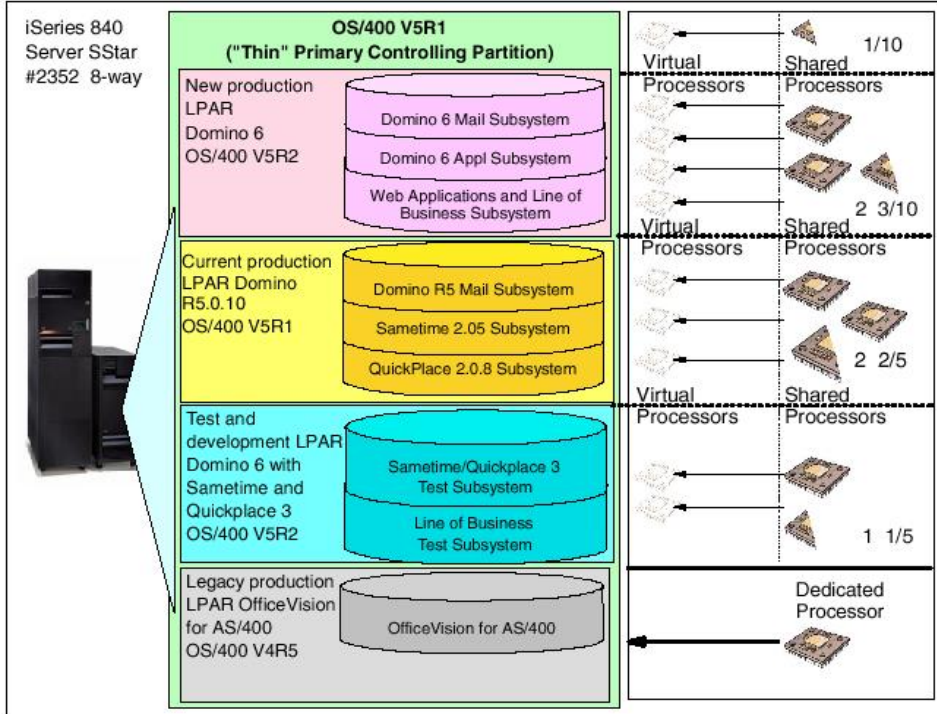### On SMP server, with LPAR you can:

- Run multiple Domino versions

- Run multiple OS/400 versions

- Run test environments
  - Test new applications, versions, PTFs, etc.

- Run multiple languages*, time zones on one server

- Dedicate CPU, Memory, IOP resources to different Domino environments

- Easily move resources between LPARs

Mail | **Applications** | **Intranet Server** | **Mail**

Domino 5.0.9	**Domino 6.0.1**
OS/400 V5R1	**OS/400 V5R2**
CPU	**CPU**
Memory	**Memory**
DASD	**DASD**

* Domino 6 now allows for more than one language on a Domino server without LPAR.

Scalability - Domino for iSeries Difference

NotesBench Benchmark Official Audit

- Latest record-making benchmark - **150,000** active R5Mail *benchmark* users on 32-way iSeries 890!

- 24-way iSeries 840 - first server to break **100,000** active R5Mail *benchmark* users
  - Lowest average response time ever at 67 ms

Rank	Vendor	Server	# of CPUs	R5 Mail Users	Resp time (sec)
1	IBM	**iSeries 890**	**32**	**150,000**	**0.272**
2	IBM	pSeries 680	24	108,000	0.584
3	IBM	**iSeries 840**	**24**	**100,500**	**0.067**
4	IBM	**AS/400e 840**	**24**	**75,000**	**0.276**
5	IBM	**iSeries 840**	**24**	**75,000**	**0.276**
6	IBM	RS/6000 S80	24	57,600	2.144
7	IBM	RS/6000 M80	8	28,032	1.424

Source: http://www.notesbench.org

Domino and OS/400 Release Compatability

	OS/400 V4R5	OS/400 V5R1	OS/400 V5R2
Domino 5.0	X	not supported	not supported
Domino 5.0.1	X	not supported	not supported
Domino 5.0.2	X	not supported	not supported
Domino 5.0.3	X	not supported	not supported
Domino 5.0.4	X	not supported	not supported
Domino 5.0.5	X	(5.0.5.02)	not supported
Domino 5.0.6a	X	(5.0.6a.01)	not supported
Domino 5.0.7	X	X	not supported
Domino 5.0.8	X	X	See Note*
Domino 5.0.9	X	X	X
Domino 5.0.9a	X	X	X
Domino 5.0.10	X	X	X
Domino 5.0.11	X	X	X
Domino 6	not supported	X	X

This table available online at http://www-1.ibm.com/servers/eserver/iseries/domino/support/qmr.htm

* Note: V5R2 supports Domino 5.0.8 but the minimum level for the new i890 hardware is V5R2 and Domino 5.0.9.

Lotus software   IBM Software Group   © 2003 IBM Corporation

New

New iSeries for Domino Models
iSeries for Domino™

- Ideal for Domino server consolidation
- Extend Domino with additional Lotus software, WebSphere, Linux applications, and DB2 integration, all on a single server footprint
- Highly flexible performance management

Lotus. software

i825   i810

Note: popular iSeries Dedicated Server for Domino ("DSD") models also available

Lotus software   IBM Software Group   © 2003 IBM Corporation

Documentation ...

Installing and Managing Domino for iSeries **

> Ships with the product CD and softcopy also on product CD (as400hlp.nsf)

Domino for iSeries (AS/400) Release Notes **

> Softcopy on product CD (readme.nsf)
> check web site below for most recent version

Lotus Domino for iSeries:

   Installation, Customization and Administration

> ITSO Redbook: Lotus Domino for AS/400 R5: Implementation, SG24-5592-01*
> ITSO Redbook: Domino 6 for iSeries Implementation, SG24-6592*

   Integration with Enterprise Applications

> ITSO Redbook SG24-5345 *
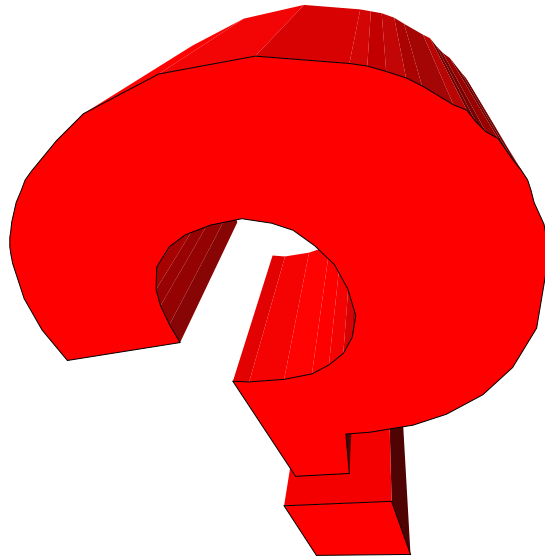> ITSO Redbook SG24-6203-00*

   Performance Tuning

> ITSO Redbook, SG24-5162-01*

online at http://www.redbooks.ibm.com
*** online at http://www.lotus.com/ldd*

Helpful Web Sites ...

- iSeries and Domino Information
  - **http://www.ibm.com/servers/eserver/iseries/domino**
  - http://www.ibm.com/servers/eserver/iseries/conslt
  - http://www.redbooks.ibm.com
- iSeries PartnerWorld for Developers
  - http://www.iseries.ibm.com/developer/domino/
- Lotus Domino and Notes Technical Resources (Domino Developer Domain)
  - http://www.lotus.com/ldd   (was http://www.notes.net)
- Support related web sites
  - http://www.ibm.com/servers/eserver/iseries/support
  - http://www.ibm.com/eserver/iseries/domino/support/qmr.htm
  - http://www-3.ibm.com/software/ts/mqseries/support/summary/400.htm
  - http://www.lotus.com/support
- Lotus Domino web sites
  - http://www.lotus.com/domino
  - http://www.lotus.com/domino6
- Enterprise Integration
  - http://www-1.ibm.com/servers/eserver/iseries/domino/libtopic.htm
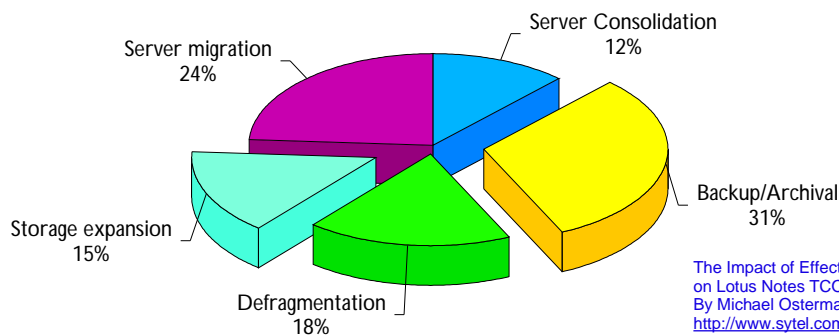 - http://www.lotus.com/home.nsf/welcome/ei

Domino for iSeries: Technical Leadership

- Match between Domino architecture and OS/400 architecture
  - Subsystem - Domino partitions
    - Provides <u>Domino</u> availability and administrative ease without requiring LPAR
    - LPAR adds Domino flexibility (multiple releases, languages, time zones)
  - Full exploitation of SMP architecture to get maximum Domino scalability
    - OS/400 is the only operating system in the industry to allow Domino to fully utilize all available CPUs

- iSeries unique Auto-restart
  - About 90% "auto-restart" rate in Rochester without operator intervention
  - Reduced admin cost plus improved user perception of availability

- Non-disruptive growth
  - Configure a new Domino server in minutes
  - Single-level store virtually eliminates burdensome disk management
  - "On the fly" reallocation of resources

- Integration with iSeries systems management tools
  - iSeries Navigator
  - BRMS

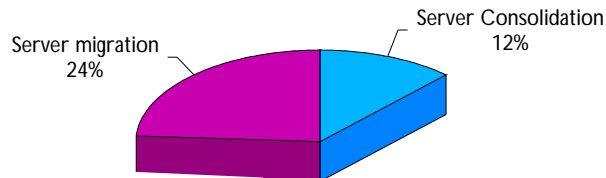# TCO Breakdown...Availability

Reasons for Scheduled, Planned Downtime

Server migration 24%
Server Consolidation 12%
Backup/Archival 31%
Storage expansion 15%
Defragmentation 18%

The Impact of Effective Storage Technology on Lotus Notes TCO
By Michael Osterman February 2001
http://www.sytel.com

- **Backup/Archival**
  - iSeries Domino On-line backup w/BRMS doesn't require scheduled downtime
- **Defragmentation**
  - iSeries IFS (Integrated File System) does not have to have to be 'defragged' for maintenance
- **Storage Expansion**
  - You can dynamically add disk to your iSeries server while your Domino servers are running

TCO Breakdown...

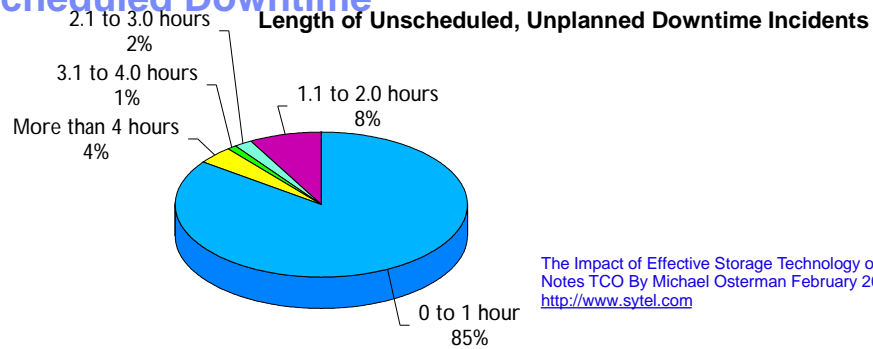### Reasons for Scheduled, Planned Downtime

Server migration
24%

Server Consolidation
12%

The Impact of Effective Storage Technology
on Lotus Notes TCO
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64% could be reduced by iSeries Architecture

- **Backup/Archival**
  - Domino On-line backup w/BRMS doesn't require scheduled downtime
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TCO: Unscheduled Downtime

Length of Unscheduled, Unplanned Downtime Incidents

2.1 to 3.0 hours
2%

3.1 to 4.0 hours
1%

More than 4 hours
4%

1.1 to 2.0 hours
8%

0 to 1 hour
85%

The Impact of Effective Storage Technology on Lotus
Notes TCO By Michael Osterman February 2001
http://www.sytel.com

IBM Rochester Length of Unscheduled, Unplanned Downtime Incidents (1/01 -7/01)

15 minutes to 1 hour

Greater than 1 hour

3%

7%

0 to 15 minutes
90%

Met or surpassed SLA of 99.95% availability since 2H99