

# Lotus knows.

Smarter software for a Smarter Planet.

BP106

## The Top 11 Tips for Keeping Servers Healthy

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## Kim Greene - Introduction

- Owner of Kim Greene Consulting, Inc.
- Extensive iSeries background
- Services offered include:
  - System and application tuning
  - Migrations
  - Enterprise integration
  - Administration
  - Troubleshooting
- Technical writer for Systems Magazine, System i Edition
- Member of Penumbra Group
  - [www.penumbra.org](http://www.penumbra.org)
- My blog
  - [www.bleedyellow.com/blogs/dominodiva](http://www.bleedyellow.com/blogs/dominodiva)

## Agenda

- Pay attention to console errors!!
- Are you using default settings?
- Are your servers too open?
- Know your schedules
- Keep your servers clean
- Clustered server tips

## Agenda

- ID management
- New features not implemented
- Policies – are you using them?
- Maintenance tasks
- Get to the new ODS

# **PAY ATTENTION TO CONSOLE ERRORS !!**

## Check Console Errors

- Pay attention to these!!!
  - admin4.nsf has not replicated (PULL) with ANY server since MM/DD/YYYY HH:MM:SS (1681 hours ago)
  - admin4.nsf has not replicated (PUSH) with ANY server since MM/DD/YYYY HH:MM:SS (1681 hours ago)
  - This is 70 days 1 hour !!!

## Check Console Errors

- Unable to update entry in catalog (for Subdir/ AppName.nsf): Special database object cannot be located
- Directory Cataloger finished processing DirectoryCatalog.nsf: File does not exist
- Agent Manager: Full text operations on database 'mail/myfile.nsf' which is not full text indexed. This is extremely inefficient.

## Check Console Errors

- Error validating execution rights for agent 'Notify' in database 'subdir/dbname.nsf'. Agent signer 'XXX01/YYYY', effective user 'XXX01/YYYY'. Agent signer.
- RnRMgr: The design of Rooms.nsf is not one supportable by RnRMgr. Autoprocessing is being disabled for this DB.



## Check Console Errors

- Database events4.nsf in view (\$StatFindByName) is missing 13 documents as defined in events4.ntf
- Schema: Form name '\$LotusFaxPhoneTranslation' in the names.nsf design is not a valid LDAP ObjectClass name because it includes illegal character(s).
- SSL Error: Keyring File access error

# ARE YOU USING DEFAULT SETTINGS?

## Number of Mail.box Files

- Default is 1
  - Not appropriate on any sized server
- Check mail statistics
  - Mail.Waiting
    - Indicator of ROUTER performance
    - Number of mail items waiting to be delivered in all MAIL.BOX files
      - May indicate need additional files



## 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
Mail.MailBox.MaxConcurrentAccesses	6	5
Server.MailBoxes	2	4

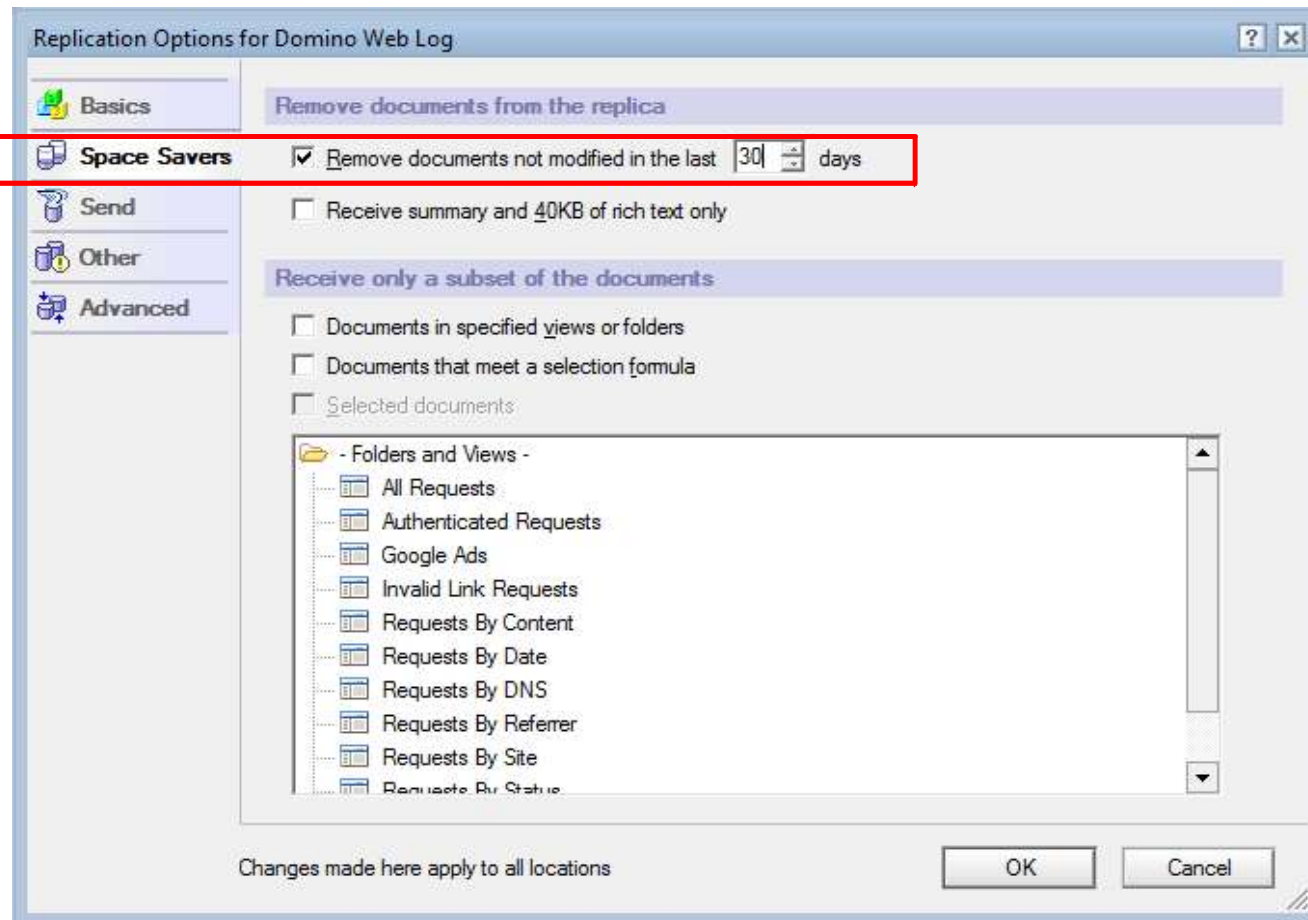
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## Delivery and Transfer Threads

- Set based on amount of memory available when server starts
  - May need to increase manually
  - Statistics to watch:
    - Mail.DeliveryThreads.Active
    - Mail.DeliveryThreads.Max
    - Mail.DeliveryThreads.Total
    - Mail.TransferThreads.Active
    - Mail.TransferThreads.Concurrent.Highest
    - Mail.TransferThreads.Concurrent.Max
    - Mail.TransferThreads.Max
    - Mail.TransferThreads.Total

## Controlling Log File Size

- How large is log.nsf or domlog.nsf?
  - Select to replicate out documents over x days old



# ARE YOUR SERVERS TOO OPEN?

## Disable Ports Not Using

- Some examples

- Ports -> Internet Ports -> Web
  - Disable port HTTP (80)
- Ports -> Internet Ports -> Mail
  - Disable ports IMAP (143) and POP3 (110)
- Ports -> Internet Ports -> IIOP
  - Disable port Remote Java/Domino IIOP (63148)



## Router and SMTP Controls

- Is your server an open relay??
- Check these fields

Inbound Relay Controls
Allow messages to be sent only to the following external internet domains:
Deny messages to be sent to the following external internet domains: (*) (* means all)
Allow messages only from the following internet hosts to be sent to external internet domains:
Deny messages from the following internet hosts to be sent to external internet domains: (* means all)

—NOTE: These are the default settings

— See KB article **1092370** for details

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# KNOW YOUR SCHEDULES

## Schedules

- When are tasks running?
  - ServerTasksAt1=Catalog,Design
  - ServerTasksAt2=UpdAll
  - ServerTasksAt3=Object Info -Full (*only needed if using shared mail*)
  - ServerTasksAt5=Statlog
- Are critical tasks running?

## Schedules

- Server tasks can be alternately scheduled via program documents
  - **Show Schedule** will show the schedule for all program documents
- What is your Backup schedule?

## Schedules

### ● Common Problems

- Backup ends the server while updall, compact, or fixup are running
- Fixup, updall or compact trying to run on the same database at the same time
- Heavy duty agents running while maintenance tasks are running
- Inbox maintenance agent runs at same time as compact

# KEEP YOUR SERVERS CLEAN

## Mail Templates

- How many are on your servers?
- A customer example:
  - MailR6 – SCT! – RFVA
  - MailR6 – SCT! – RING
  - MailR6 – SCT! – UJPT
  - Mailr7bank
  - Privatebankingmail1\_0
  - RRXmail5
  - StdR6mail
  - StdR7mail

## Unnecessary Server Tasks

- Do you really need these tasks?
  - DECS
  - CalConn
  - Collect
  - MTC
  - Etc.



# Agent Maximum Execution Time

- Server Tasks -> Agent Manager
  - Field 'Max LotusScript/Java execution time'
    - Have seen set to 1440
      - That is 24 hours!!

## Disable Debug When Not Needed

- Collecting debug data consumes resources
- Customer example:
  - Debug\_threadid=1
  - DEBUG\_CAPTURE\_TIMEOUT=1
  - DEBUG\_SHOW\_TIMEOUT=1
  - Log\_AgentManager=1
  - Debug\_sem\_timeout=10000
  - log\_update=2
  - NSF\_DocCache\_Thread=1
  - debug\_nif=0
  - debug\_nig\_update=1
  - FT\_LIMIT\_HIGHLIGHT\_FILTER=1

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# CLUSTERED SERVERS

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## Look for Differences

- Check SSL enablement
- Customer example

	Mail Server	Mail1 Server
SSL key file name	selfcert.kyr	keyfile.kyr
TCP/IP port status for port 80	Redirect to SSL	Enabled

## Look for Differences

- Check the time on the systems hosting the clustered servers
  - Can cause replication issues
  - Customer example
    - One server was 3 minutes ahead of other server

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# ID MANAGEMENT

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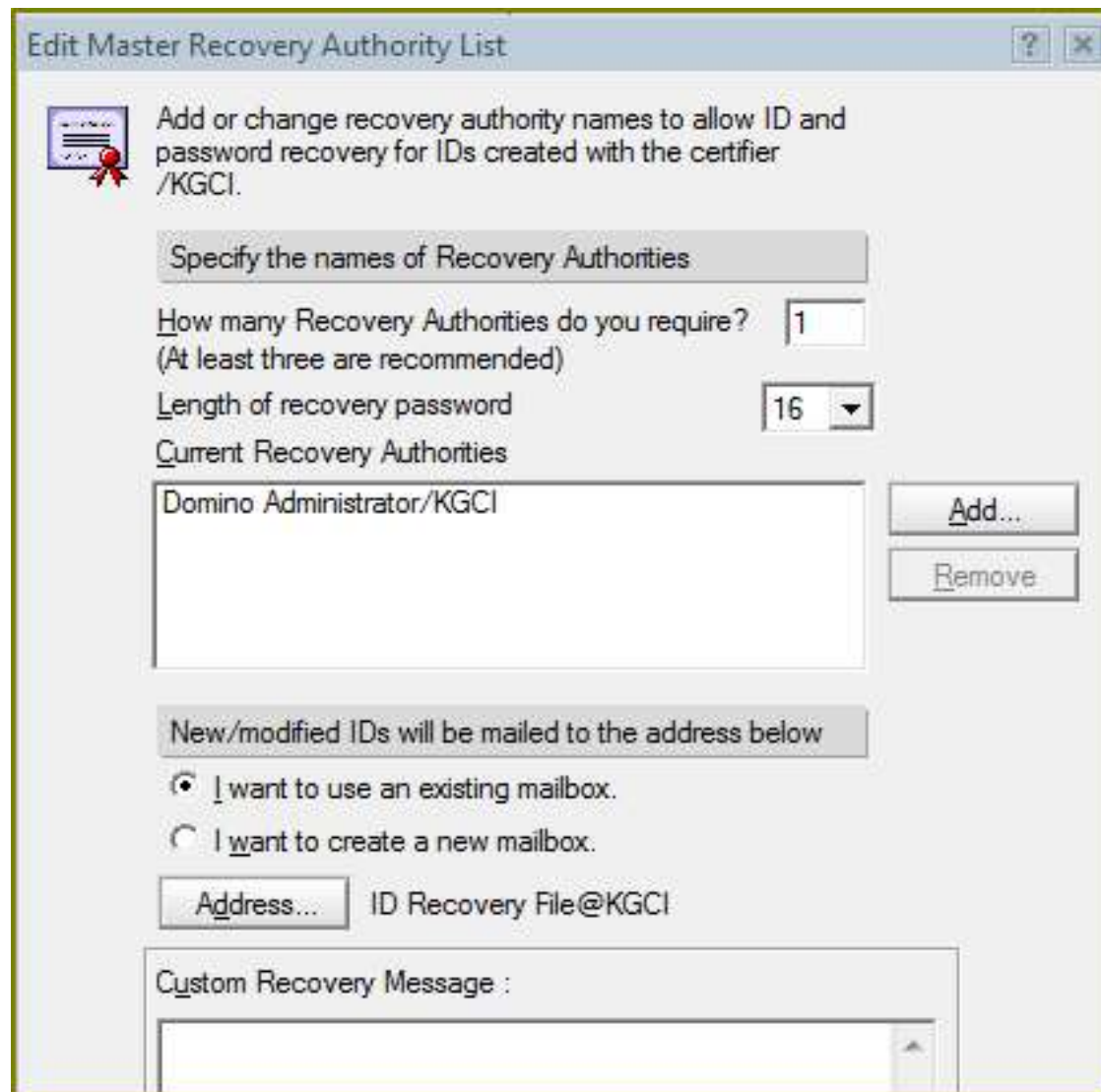
Lotusphere 2010



## ID Recovery

- Captures safe ID for each user
  - Initial authentication
  - As passwords are changed
  - When certificates are renewed
- Allows passwords to be recovered
- Mail-in database created automatically in release 8

## ID Recovery

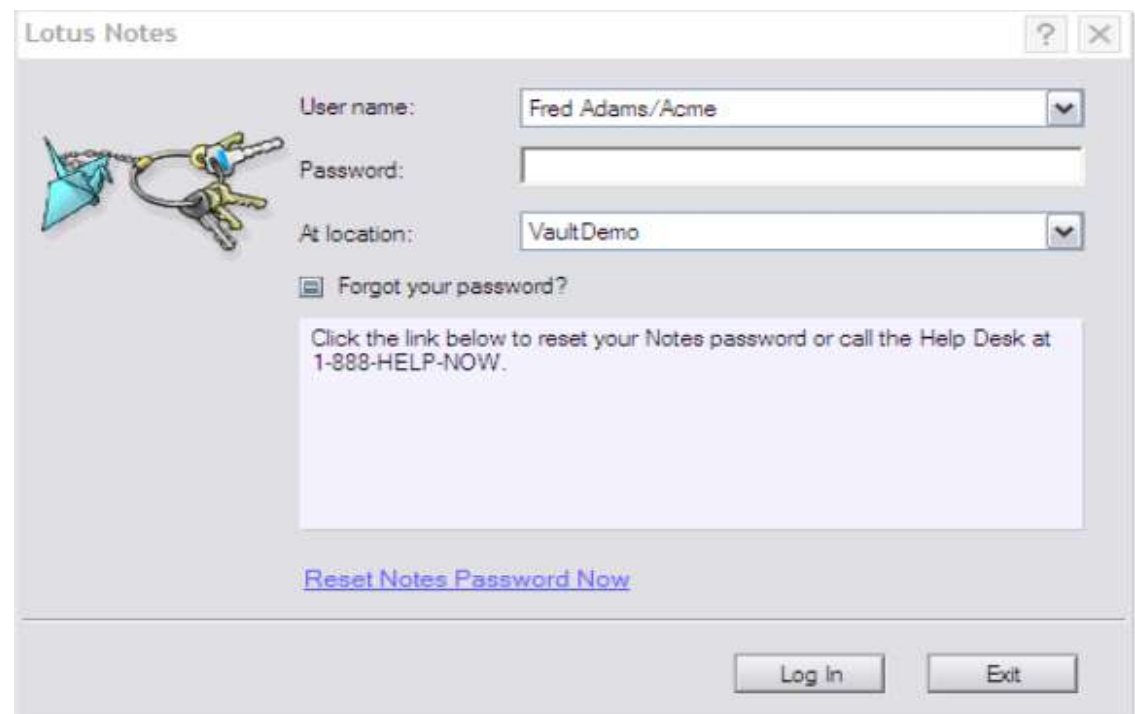




## ID Vault

8.5

- Server based application for storing and managing protected copies of Notes ID files
- Reset forgotten passwords
- Synchronize ID files across multiple computers
- Auditor function to gain access to encrypted data



The screenshot shows the 'Lotus Notes' login window. On the left is an icon of a keychain with a blue envelope and a yellow key. To the right of the icon are the following fields and options:

- User name:** A dropdown menu showing 'Fred Adams/Acme'.
- Password:** A text input field.
- At location:** A dropdown menu showing 'VaultDemo'.
- Forgot your password?** A checkbox.
- A text box containing: 'Click the link below to reset your Notes password or call the Help Desk at 1-888-HELP-NOW.'
- A blue underlined link: [Reset Notes Password Now](#)

At the bottom right are two buttons: 'Log In' and 'Exit'.

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## ID Vault

### ● Requirements

- Lotus Notes 8.5 Client
- Notes ID Vault (Application/Database on Domino 8.5 server)
- Enabled via Policies
- Reset password via Administration client

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## NEW FEATURES NOT IMPLEMENTED

## Internet Password Lockout

- Set a threshold for Internet password authentication failures for iNotes users

The screenshot shows a 'Configuration Settings' dialog box for 'domtest1/KGCI'. The 'Security' tab is selected and highlighted with a red box. The 'Internet Lockout' section is expanded, showing the following settings:

Internet Lockout	
Enforce Internet Password Lockout:	<input type="radio"/> Yes <input type="radio"/> No
Log Settings:	<input checked="" type="checkbox"/> Lockouts <input checked="" type="checkbox"/> Failures
Default Maximum Tries Allowed:	<input type="text" value="5"/>
Default Lockout Expiration:	<input type="text" value="0"/> <input type="text" value="Minutes"/>
Default Maximum Tries Interval:	<input type="text" value="1"/> <input type="text" value="Days"/>

## Fault Tolerance Settings



- Introduced in R7
  - Automatic reporting and analysis of server crashes
  - Automatic cleanup of server crash files
  - Diagnostics tab of configuration document

## Fault Tolerance Settings




- Enable diagnostic collection

- Configuration document

- Diagnostics tab

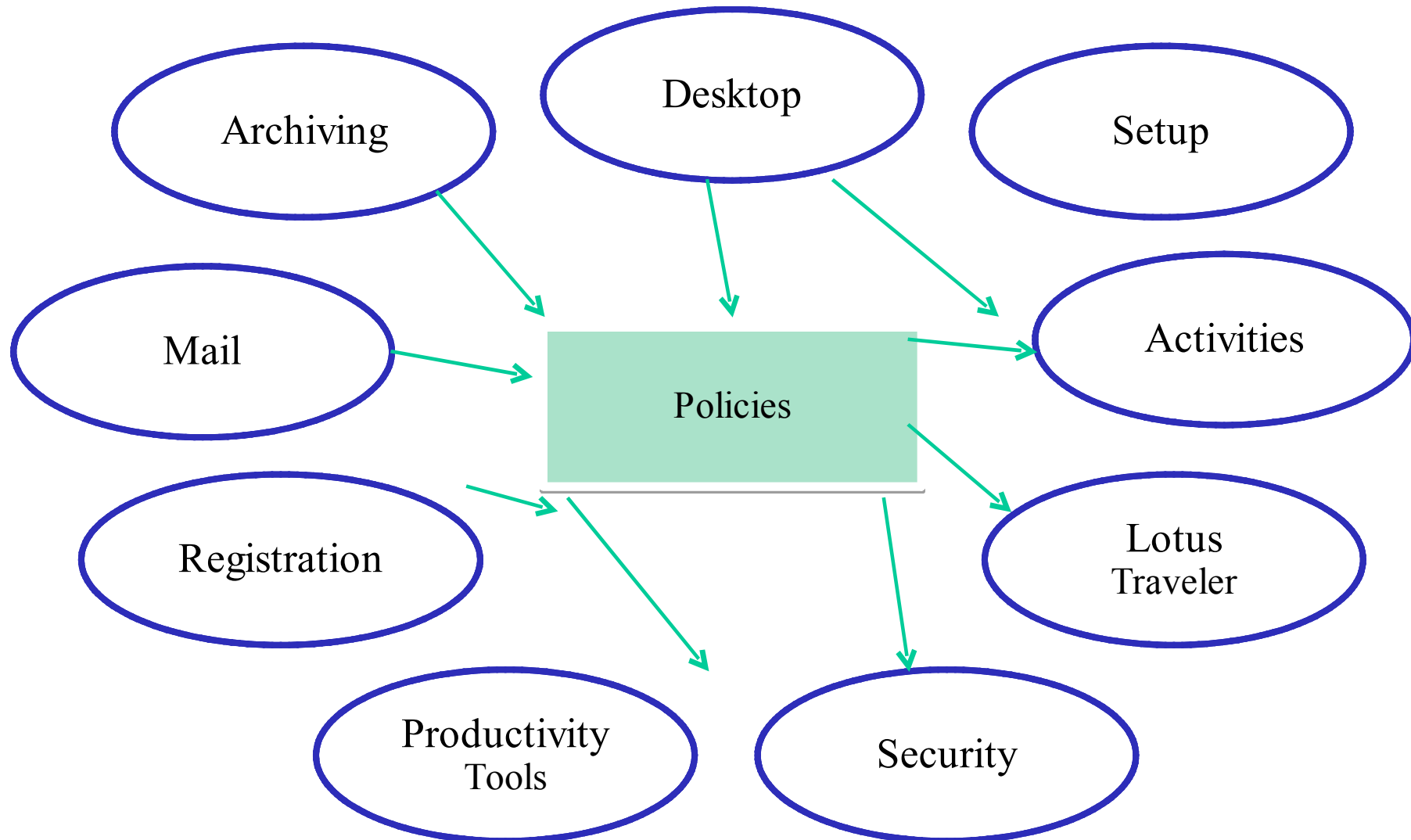
Diagnostic Collection Options	
Mail-in Database for diagnostic reports:	<input type="text" value="Lotus Notes/Domino Fault Reports"/> 
Maximum size of diagnostic message including attachments (in MB):	<input type="text" value="20"/>
Maximum size of NSD output to attach (in MB):	<input type="text" value="10"/>
Maximum amount of console output file to attach (in KB):	<input type="text" value="10240"/>
Diagnostic file patterns:	<input type="text" value=""/>
Remove diagnostic files after a specified number of days:	<input type="text" value="Yes"/> 
Number of days to keep diagnostic files:	<input type="text" value="365"/>

Fault Analyzer	
Run FaultAnalyzer on Fault DBs on this server:	<input type="text" value="Yes"/> 
Run Fault Analyzer on:	<input type="text" value="Specific mail-in databases"/> 
Databases to run fault analyzer against:	<input type="text" value="Indtf.nsf"/>
Remove attachments from duplicate faults:	<input type="text" value="No"/> 

# POLICIES – ARE YOU USING THEM?

## Policies – Are You Using Them??



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## Why would I want to use policies?

- Set an internet address format for all users
- Set archive standards for mail files
- Set execution control lists (ECLs) across the organization
- Standardized registration settings for all new users
- Set the expiration date for all employees to expire in X number of years
- Implement a standard desktop for all employees
- Control mail settings (Domino 7 and beyond)
- Define password management options
- Upgrade clients automatically

## Policy Enhancements

- Prior to Release 8.5
  - Explicit Policies
    - Assigned directly in User's Person Record
    - Difficult to Manage
  - Organizational Policies
    - Assigned by Hierarchy
    - Easier to manage but too broad for some organizations
- Added in Release 8.5
  - Dynamic Policies
    - New form of Explicit Policy
    - User(s) and Group(s) assigned to Policy
    - Very easy to manage

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## Policy Enhancement

- Assigning dynamic policies

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**Policy : /Renovations Marketing Policy**

Basics | Policy Assignment | Policy Precedence | Comments | Administration

**Users and Groups**

Renovations Marketing Team
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# MAINTENANCE TASKS

## Maintenance Tasks

- Run Fixup and Compact on a regular basis
  - Compact -> daily to weekly
  - Fixup -> weekly

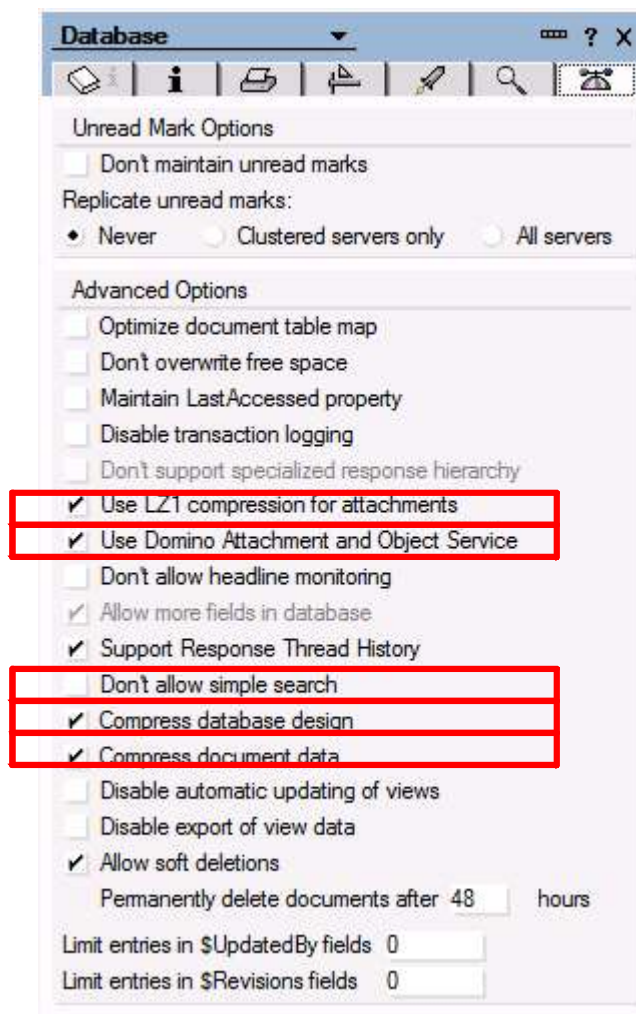
Program: **compact**

Basics | Administration

Basics	Schedule
Program name: compact	Enabled/disabled: Enabled
Command line: -S 10	Run at times: 04:00 AM each day
Server to run on: domtest1/KGCI	Repeat interval of: 0 minutes
Comments:	Days of week: Sun, Mon, Tue, Wed, Thu, Fri, Sat

## GET TO THE NEW ODS

## Features of the New ODS



## Getting to the New ODS

- In release 8.x need:
  - Create\_R8\_Databases=1
- In release 8.5.x need:
  - Create\_R85\_Databases=1
- Copy style compact
  - -C switch

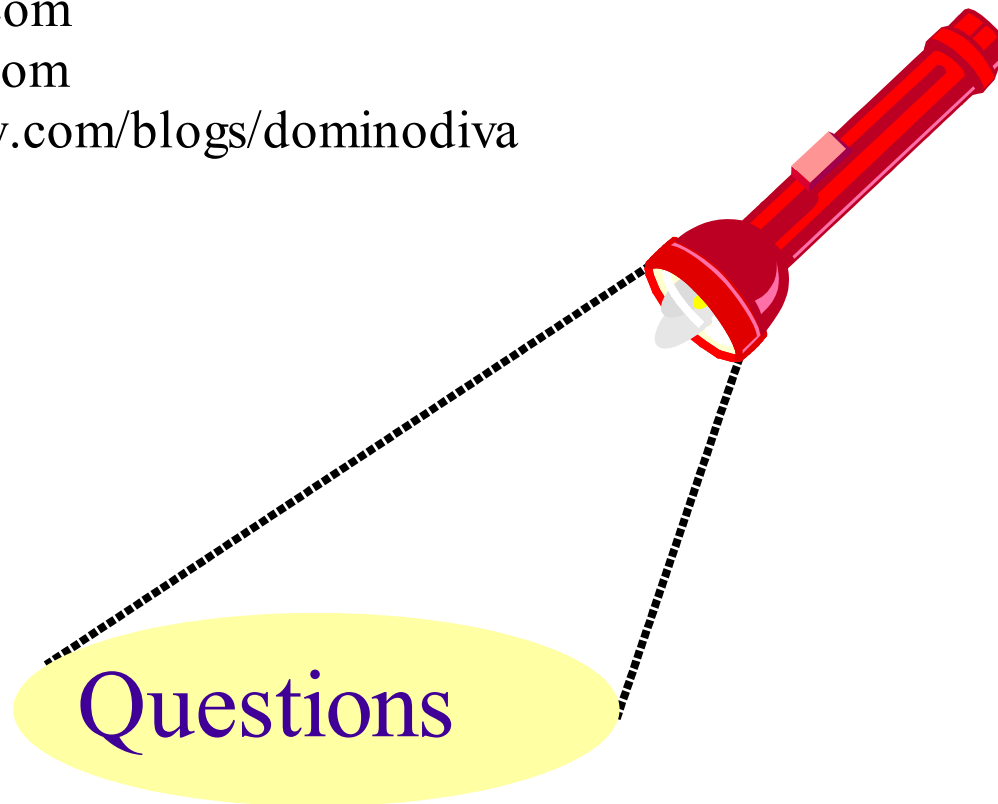


## Questions???

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