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PROOF POSITIVE

SHARE 98 Session 8641
Domino 6 Administrator's Overview

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IBM

Agenda

- System Configuration
- Server Monitoring
- Directory Enhancements
- User Management

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System Administration

- Cross-Platform Server Setup
- Administrator Access
- Clustering
- Fault Recovery
- Shared Mail
- Web Site Management
- Console Enhancements
- Web Administration

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- ▶ Many of the familiar configuration steps have changed -- for the better: consistent server setup cross-platform; simplified web server management; browser-based management tools equal to those in the Notes client, and much more.

Cross-Platform Server Setup



- ▶ In R5, the Domino server setup on Windows uses the Notes client to register the initial certifier, server, and administrator, while other platforms rely on an HTTP-based setup. In Rnext, server setup and configuration converge for all platforms in a single Java application called 'serversetup'

Administrator Access

- Many administrative duties
- Distributed/shared responsibility
- Domino 6 server ACL
 - separates Full, DB, Console, System permissions

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- ▶ Rnext redefines administrator privileges, allowing more granular delegation of responsibility. In addition to the 'Administrator' designation left from R5, Rnext adds a 'Full Administrator' designation, which grants the user de facto manager access to every database on a server, allowing the user to repair broken ACLs from Web Admin or from the Notes client. Other admin levels include

*Database Administrator: can perform any DB operation

*Full Remote Console Administrator: can use the remote console and issue any command

*View-only Remote Console Administrator: can use "Show" remote console commands, but not "Tell"

*System Administrator: primarily for users of the Java server console; allows users to issue OS commands from the JSC.

*Restricted System Administrator: allows users to issue a subset of OS commands from JSC.

Clustering Enhancements

- Overriding quotas
- Disabling cluster replicator
- Cluster-aware replica creation

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Cluster Awareness

Create Replica

Use this tool to create database replicas on multiple servers automatically in the background via the Administration Process.

Selected: Tunbridge/Acmelldspug.nsf, 5,242,880 bytes

Create replicas on these servers

- Amesbury/Acme
- Sarum/Acme
- Tunbridge/Acme

Add Remove

Destination database and server

Destination server	Destination file
Amesbury/Acme	dspug.nsf
Sarum/Acme	dspug.nsf

Destination file path

Show me only cluster members for cluster: JDR

Copy Access Control List

Create full text index for searching

OK Cancel

Mail Replica Creation Options

Select options for creation of mail database replica(s)

Create mail database replica(s)

- Amesbury/Acme
- Sarum/Acme

Add Server(s) Remove Server(s)

Create mail replica(s) in background

OK Cancel

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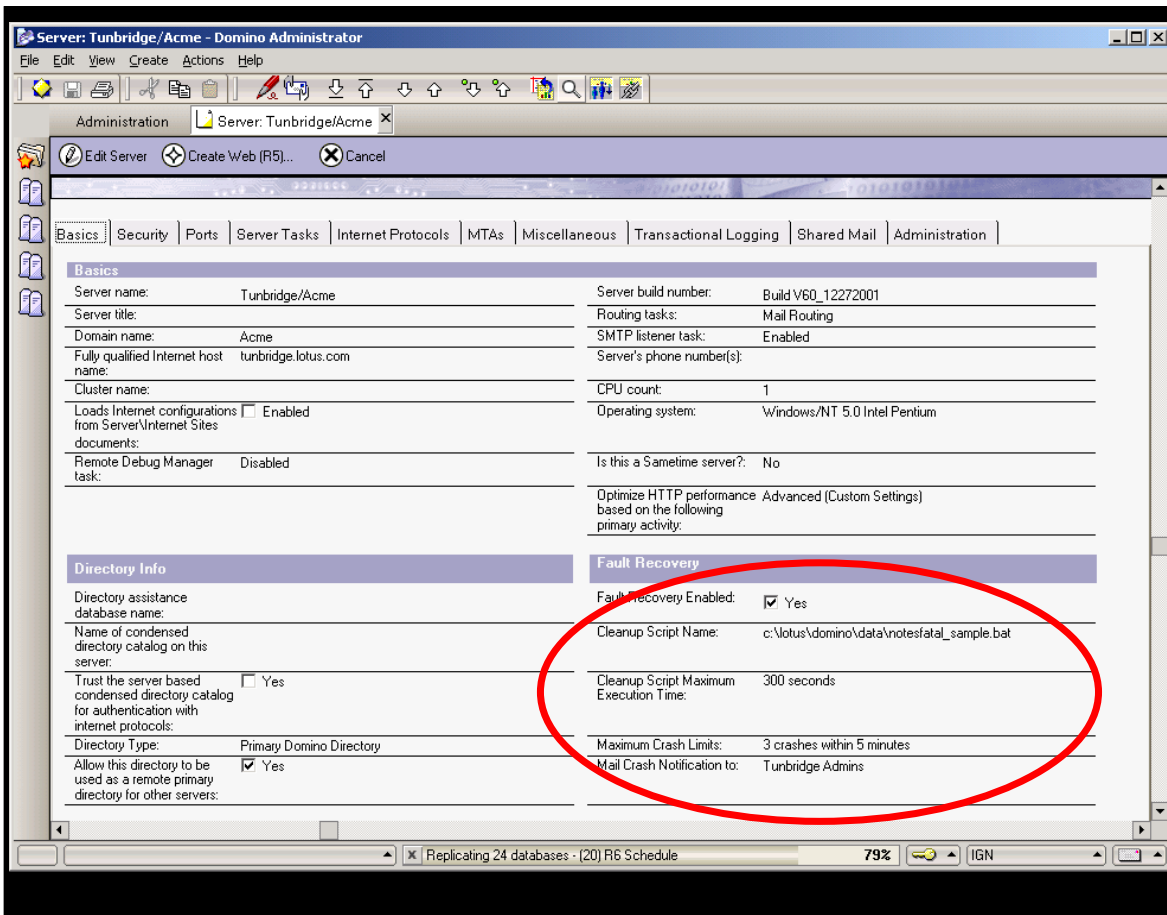
Fault Recovery

- Automatic server cleanup and restart
 - managed through Server doc
- System commands through Java controller

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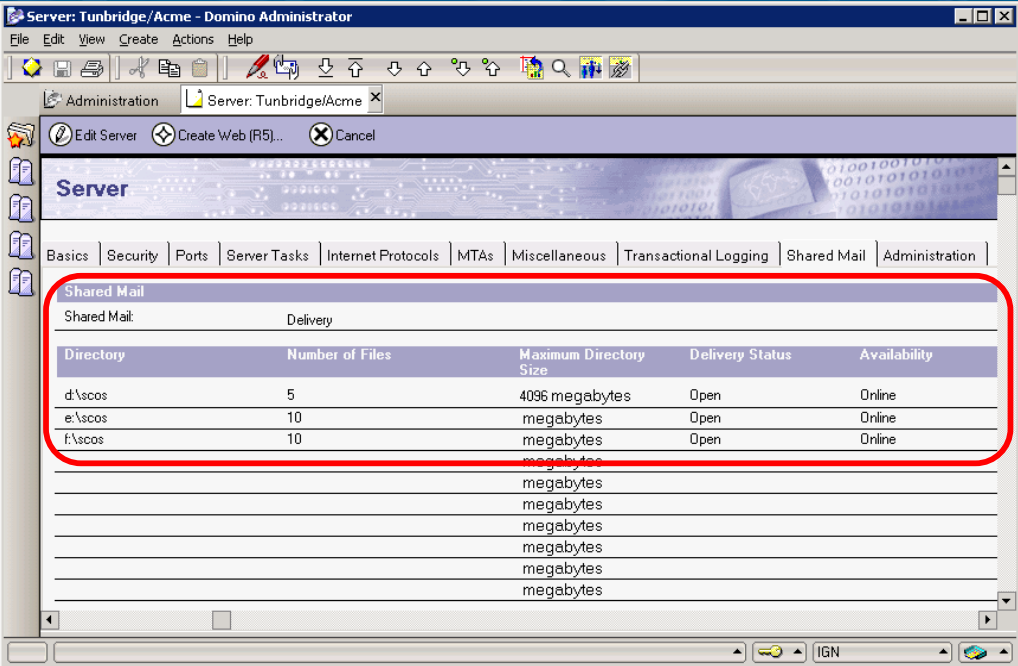
- ▶ Domino Rnext offers automated crash recovery on all platforms. This has been around for a while on UNIX, but configuration was managed through the server's notes.ini, which made it somewhat complicated to centralize (it could be done through the NOTES.INI section of a server configuration document). In Rnext, automated fault recovery is configured centrally in the Domino Directory, and provides additional options not available in R5:
- ▶ Fault Recovery Enabled: Y/N
- ▶ Cleanup Script Name: refers to a batch file or shell script in the server's data directory that typically calls nsd to take a system snapshot, remove any leftover processes and shared memory segments, and restart the server
- ▶ Cleanup Script Maximum Execution time - mostly self-explanatory. If script execution runs too long, WHAT DO WE DO?
- ▶ Maximum crash limits - keeps a server from getting stuck in crash loops. When the limit is reached (e.g. 3 in 5 minutes), the server stays down.
- ▶ Mail Crash Notification - let admins know that we've restarted after crash
- ▶ Additionally, if the Java Controller is running on the server, an administrator listed with System Administrator or Full Administrator rights in the server doc can send shell commands to the downed server's host OS through the Domino Console (TCP port 2050), allowing him or her to clean up from the crash manually when it's not possible to reach Domino on port 1352.



Shared Mail

- Simplified configuration
- Multiple active shared mail DBs and directories
 - distributed I/O
- Transaction logging support
- Intelligent sharing
- Quotas

Managing Shared Mail



The screenshot shows the Domino Administrator interface for a server named 'Server: Tunbridge/Acme'. The 'Shared Mail' tab is selected, displaying a table of shared mail configurations. A red rectangle highlights the table content.

Directory	Number of Files	Maximum Directory Size	Delivery Status	Availability
d:\scos	5	4096 megabytes	Open	Online
e:\scos	10	megabytes	Open	Online
f:\scos	10	megabytes	Open	Online
		megabytes		
		megabytes		
		megabytes		
		megabytes		
		megabytes		
		megabytes		

Web Site Administration

- Simplifies virtual server configuration
- Unlimited Web site scaling
- See 10/01 Iris Today article on Web Site rules

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- ▶ Rnext introduces a new way to organize Domino Web servers -- by site. The Web Site configuration document lets administrators determine not only the sites Domino will serve (conceptually identical to R5 virtual servers, but easier to set up) but also the Domino servers that will serve each site, making it an organizational snap to scale a web site to any size by adding content servers behind a load-balancing solution like WebSphere Edge Server

Java Server Console

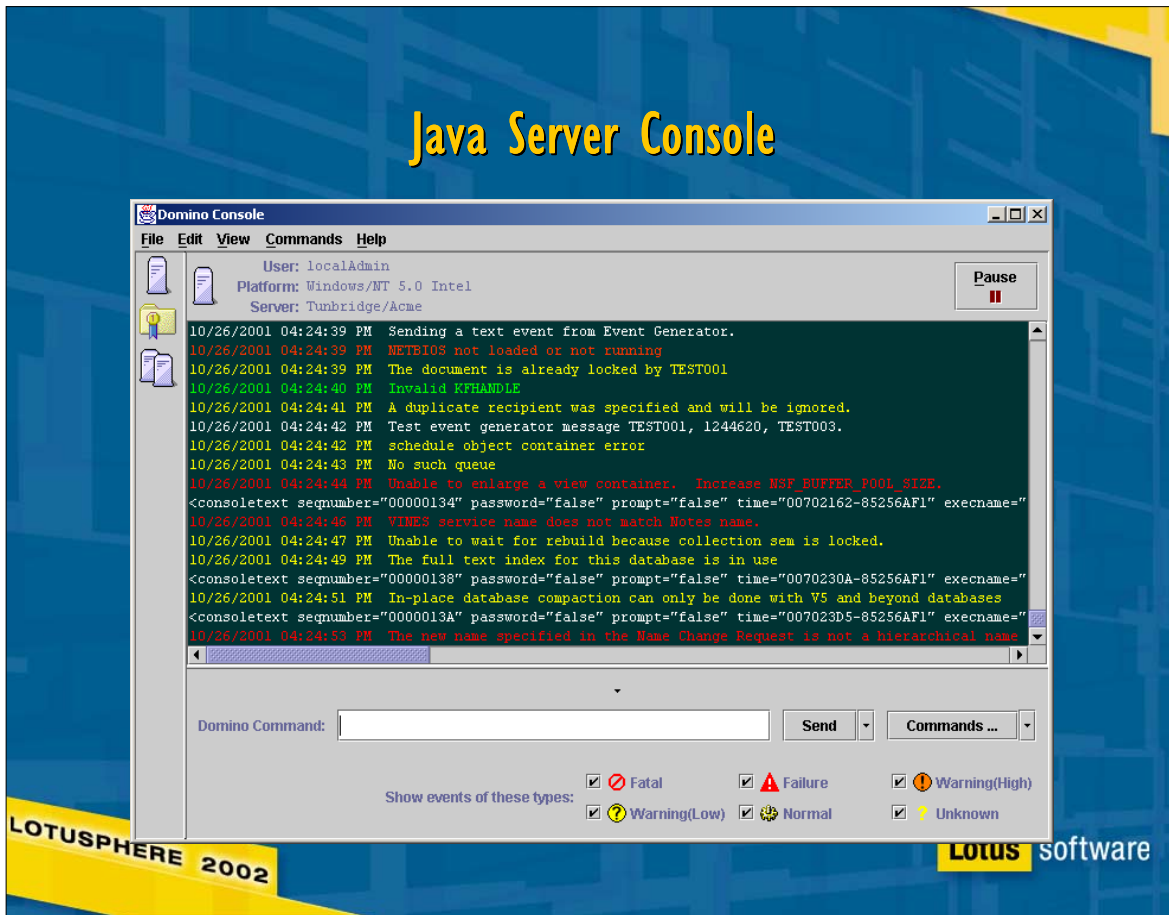
- Client-Server console facility
 - Java controller task
- Full console control over Domino on any platform, from any machine
- Multiple active connections
- OS commands
- Message filtering capabilities
- Color-coded event display

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- ▶ The java server console provides full Domino console function and access on any machine with Java installed.
- ▶ In addition to Domino itself, there are two independent pieces to the JSC: the controller, which listens for connect requests on TCP port 2050, and provides standard input and output for Domino; and the console itself, which communicates with the controller.
- ▶ It's possible to run each of the pieces independently of the other two: running Domino without the controller or console is like running an R5 server, with the familiar text window for all input and output. Running the controller alone on the server machine allows an administrator to start and stop Domino, and issue both Domino console commands and operating system commands to the controller from a java server console on another system.
- ▶ To use JSC as a replacement for the text-based console, load '[n]server -jc'; to load the controller and Domino without opening a console session locally, run '[n]server -jc -c'; to start the controller and console without starting Domino, use '[n]server -jc -s'; finally, to load only the controller, use '[n]server -jc -s -c'

Java Server Console



- ▶ This is the Domino Console window. Note that it provides many of the features found in the remote console with the Administrator client: event messages color-coded by severity; filtering of events by severity; font control; a fixed field in the console window to keep commands visible while server output scrolls by. Additionally, the Domino console allows an administrator with the proper permissions in the server document to send OS commands to the server by preceding them with the keyword "shell".

Remote Console

- Stop Triggers
- Color-coded highlights
- Selective event message display
- More event information
- Font control
- Smoother scrolling
- Output easily copied to clipboard

Remote Console

The screenshot shows the 'Administration - Domino Administrator' window. The interface includes a menu bar (File, Edit, Administration, Live Console, Help), a toolbar, and a navigation pane with tabs for Administration, People & Groups, Files, Server..., Messaging..., Replication, and Configuration. Below these are tabs for Status, Analysis, Monitoring, Statistics, and Performance. The main area displays server information for 'Tunbridge/Acme' (Windows NT 5.0) and a 'Live' button. The 'Events' pane shows a list of log entries:

- 10/29/2001 11:44:53 AM The time after which this request can be processed has not been read
- 10/29/2001 11:44:56 AM AMGr: Unable to send mail to <name>, no match found in Name & Address Book
- 10/29/2001 11:44:58 AM Unable to update entry in Cluster Database Directory (for <Cluster Directory Name>)
- 10/29/2001 11:44:59 AM The date after which this request is no longer valid has passed.
- 10/29/2001 11:45:00 AM Test event generator message TEST001, 1244620, TEST003.
- 10/29/2001 11:45:05 AM Sending a text event from Event Generator.
- 10/29/2001 11:45:05 AM NETBIOS not loaded or not running

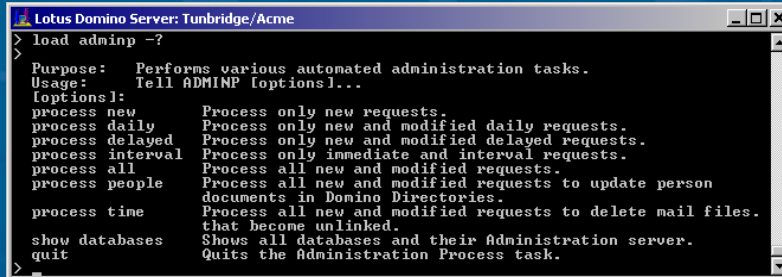
At the bottom, there is a 'Domino Command:' field with a 'Send' button and a 'Commands...' dropdown. A filter section allows selecting event types: Fatal, Failure, Warning(High), Warning(Low), Normal, and Unknown.

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Server Task Command Help

- Console help for supported 'Tell' commands
- Use 'Load <Task> -?' or 'Tell <Task> -?'
- Example:



```
Lotus Domino Server: Tunbridge/Acme
> load adminp -?
>
Purpose:   Performs various automated administration tasks.
Usage:    Tell ADMINP [options]...
Options:
process new          Process only new requests.
process daily       Process only new and modified daily requests.
process delayed     Process only new and modified delayed requests.
process interval    Process only immediate and interval requests.
process all         Process all new and modified requests.
process people      Process all new and modified requests to update person
                   documents in Domino Directories.
process time        Process all new and modified requests to delete mail files.
                   that become unlinked.
show databases      Shows all databases and their Administration server.
quit                Quits the Administration Process task.
```

Domino Web Administrator

- Full Admin function from a browser
 - ACL Repair
 - User Registration
 - Database Tools
- Role-based UI Control

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Tunbridge/Acme Web Administration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address http://tunbridge.lotus.com/webadmin.nsf?OpenDatabase

IBM Search Blue Pages HR IBM Help Desk Expenses Americas Marketing IBM Stock Watch Alerts

People & Groups Files Server... Messaging... Replication Configuration Sign Out Preferences Help

Status Analysis Statistics

Server: Tunbridge/Acme Host: tunbridge.lotus.com Refresh Tools

Last updated: 05:40:37 PM

Server Users Database Users All Server Tasks Quick Console HTTP Statistics Schedules Operating System

HTTP all request statistics:			
Type:	Total (#):	Time (secs):	Avg (req/sec):
CGI	0	0	0
DSAPI	0	0	0
Files	1	0	0
HTTP	0	0	0
Notes	139	50	3
Total:	140	50	3

HTTP connection statistics:				
Current:	Max:	Accepted:	Denied:	Refused:
2	2000	38	0	0

HTTP poll statistics:		
Type:	Polls:	Timeouts:
Accept:	17639	17600
Input:		
Output:		

Traffic:			
Total (KB):	Avg (KB/sec):		
Input: 58	1		
Output: 470	9		

HTTP Notes request statistics:			
Last:	Total (#):	Peak (#):	Peak time:
1 min:	88	113	01/23/2002 17:40:20 EST
5 mins:	141	141	01/23/2002 17:40:35 EST
1 hour:	141	141	01/23/2002 17:40:35 EST
1 day:	63	63	01/23/2002 17:39:55 EST
Total:	141		

HTTP Notes command statistics:	
Commands:	Total:
OpenAgent	8
OpenDatabase	2
OpenForm	3
OpenImageResource	77
OpenJavaScriptLib	26
ReadForm	15
Total (incl. unlisted commands)	141

Securely sign out of this application

Internet

Agenda

- System Configuration
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- Directory Enhancements
- User Management

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Server Monitoring

- Event and Activity Logging
- Tivoli integration
- Managing Events
- Statistic Charting

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Domino 6 Event Logging

- Each log entry a row in a table
 - message text, parameters, event code, type & severity are distinct fields
- Fast, easy searches

Event Log Analysis

Log Analysis

Date

Time Search

Start Date: 10/28/2001 16

End Date: 10/29/2001 16

Start Time: 12:00 AM

End Time: 10:50 AM

Use above time range in any time zone.

Convert time range to server's time zone.

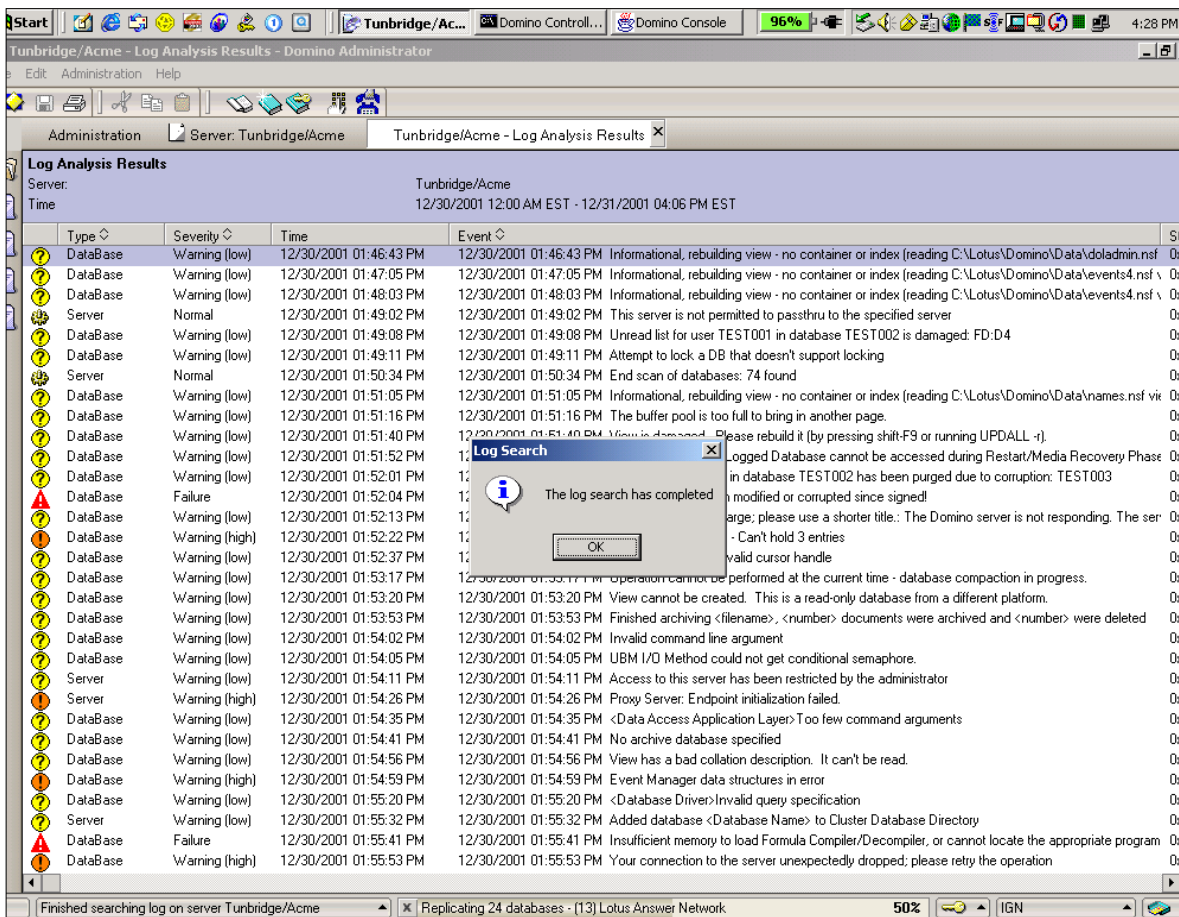
Any Time

OK Cancel

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- ▶ What do you want to know? This slide and the six that follow it show the rich log search options available for Rnext, allowing administrators to search the log in any conceivable way, retrieving exactly the information they're looking for.



- ▶ This screen shot shows the display of a single log page from the "View Log Document" tool in the Domino Administrator's Server Analysis tab. Individual entries in the event log are displayed like lines in a view, and columns are sortable.
- ▶ Note too, that the log search takes place in the background, allowing you to keep working at other tasks. When the search completes, the admin client pops up a dialog box to let you know.

Event Filtering

- Limit event display by type and severity
- Individual settings for console and log DB

Activity Logging

- What's *really* happening on your server?
- Tracks server usage by DB/User/Protocol/Activity
 - activity data centralized in server log
- Activity logging information accessible via activity analysis tool
- Tivoli integration

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- ▶ R5 Billing: Storage format is either nsf or non-canonical binary file; Record format not extensible
- ▶ Rnext Activity logging: canonical, compact, extensible storage format using NSF; no extra flat files to manage.
- ▶ Information relating to utilization only. Parsing not necessary.
- ▶ Crash proof - checkpointed records prevent data loss if the server shuts down unexpectedly
- ▶ Enabled through the server configuration doc; off by default
- ▶ Accessible via the Rnext C API and by activity log analysis
- ▶
- ▶ Tivoli integration teaser

Activity Analysis

Server Activity Analysis [?] [X]

Analyze activity log file of server:
Tunbridge/Acme [OK] [Cancel]

Select server activity types to search for

<ul style="list-style-type: none">Domino<ul style="list-style-type: none">AGENTHTTPLDAPMAILNOTESREPLICA	[Add->] [Add All] [Remove] [Remove All]	<ul style="list-style-type: none">Domino<ul style="list-style-type: none">AGENTHTTPLDAPMAILNOTESREPLICA
--	---	--

Start Date: 10/28/2001 [16] Start Time: 12:00 AM [C]

End Date: 11/2/2001 [16] End Time: 11:26 AM [C]

[Results Database...] Log Analysis on Local

Overwrite this database

Append to this database

Tivoli Integration

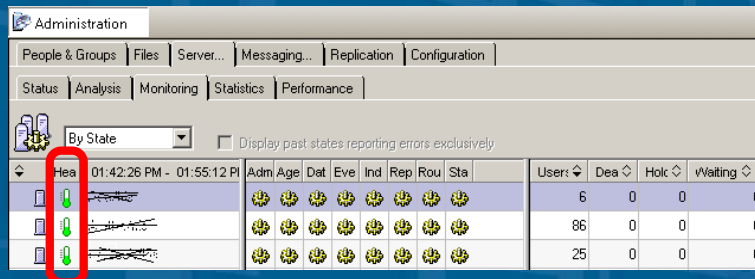
- Groundbreaking Domino 6 management tools from Tivoli Software
- Integrated into Domino 6 Admin Client

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- ▶ Vision is a product developed jointly by Iris/Lotus, IBM Research, and Tivoli. Its two main features are server health monitoring and predictive performance analysis, both integrated into the *Rnext* Domino Administrator client. Vision will not run with an R5 client.

Server Health Monitoring from Tivoli



The screenshot shows the Administration console interface with a table of server health data. The table has columns for 'Hea', 'Adm', 'Age', 'Dat', 'Eve', 'Ind', 'Rep', 'Rou', 'Sta', 'User', 'Dea', 'Hol', and 'Waiting'. The first column 'Hea' contains green status indicators, with the top one circled in red. The table data is as follows:

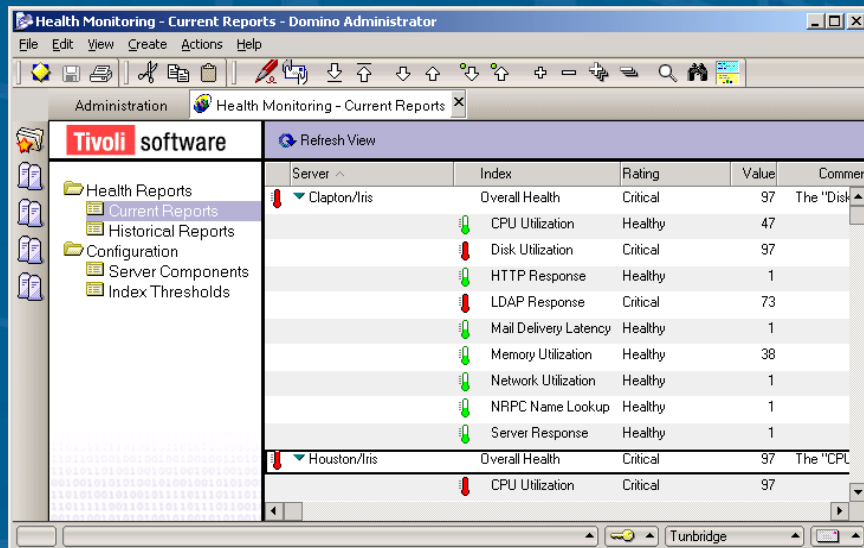
Hea	Adm	Age	Dat	Eve	Ind	Rep	Rou	Sta	User	Dea	Hol	Waiting
01:42:26 PM - 01:55:12 PM	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	6	0	0	6
	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	86	0	0	0
	🟡	🟡	🟡	🟡	🟡	🟡	🟡	🟡	25	0	0	0

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- ▶ Server Health Monitoring monitors related server statistics to calculate an overall health index, as well as individual values for critical subsystems:
- ▶ Fundamental Components: CPU Utilization, Memory Utilization, Server Response, Disk Utilization, and Network utilization
- ▶ Mail-related Components: Mail Delivery Latency and NRPC Name Lookup
- ▶ Task-Related Components: HTTP, IMAP, and LDAP server response

Server Health Monitoring from Tivoli



Server	Index	Rating	Value	Comment
▼ Clapton/Iris	Overall Health	Critical	97	The "Disk
	CPU Utilization	Healthy	47	
	Disk Utilization	Critical	97	
	HTTP Response	Healthy	1	
	LDAP Response	Critical	73	
	Mail Delivery Latency	Healthy	1	
	Memory Utilization	Healthy	38	
	Network Utilization	Healthy	1	
	NRPC Name Lookup	Healthy	1	
	Server Response	Healthy	1	
▼ Houston/Iris	Overall Health	Critical	97	The "CPL
	CPU Utilization	Critical	97	

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Predictive Analysis from Tivoli

- The long look
 - turns activity logging data into knowledge
- Workload balancing
 - long-term stability
 - low daily fluctuations
 - predictability

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- ▶ Activity logging data is the raw input; Trends analyzes it to provide Administrators with detailed use analysis for each server, measuring total workload by disk space and transactions, and workload distribution by user, by database, and by protocol.
- ▶ With this information, Trends lets administrators plan for long-term server capacity, and predict the life cycle of a server based on current use and growth patterns.
- ▶ In the short term, Trends identifies the databases and users generating the greatest amount of activity on a server, and recommends a plan to redistribute databases to balance workload between servers.

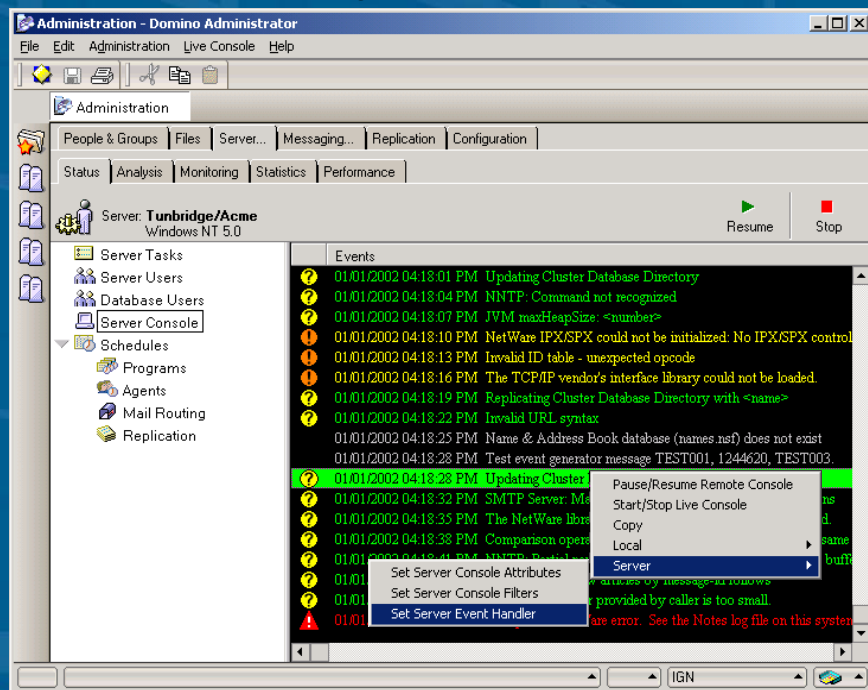
Managing Events

- **Event Generators**
 - turn measurements into events
 - ▶ statistic thresholds
 - ▶ file activity
 - ▶ replication
 - most log messages are already events

Managing Events, *continued*

- Event Handlers
 - alert administrators to events of user-defined interest
 - notification via pager, SNMP, system log, mail, etc.
 - created where it makes sense
 - ▶ remote console
 - ▶ files page

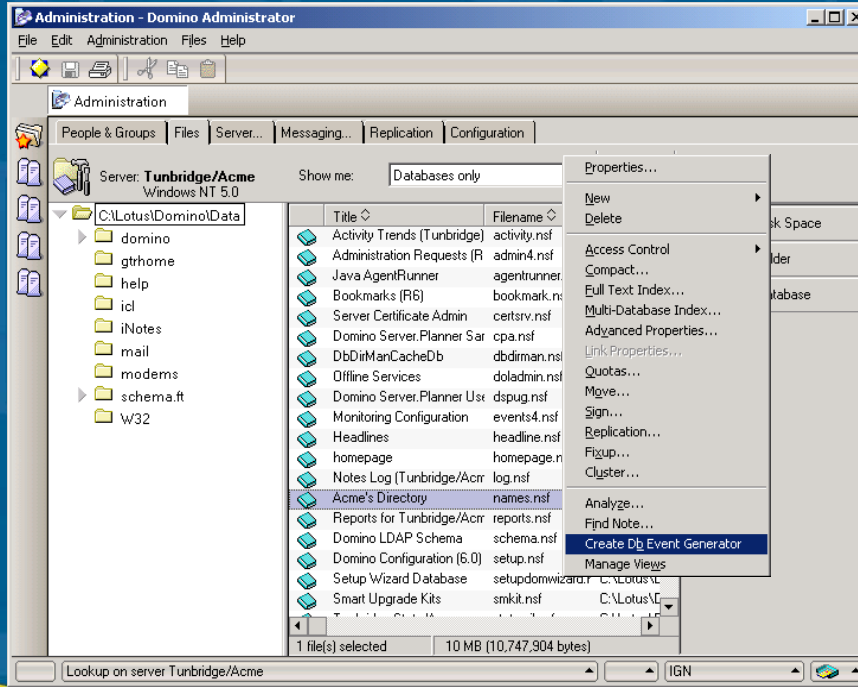
Creating Event Handlers



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Monitoring Databases



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Statistic Charting

- Realtime charting from current server activity
- Historical charting from statrep.nsf
- Includes Tivoli Server Health statistics

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- ▶ Tip: The server health statistics must be generated by the Tivoli addin before they can be charted: historical Health measurements require a local statrep on the admin client, and realtime stats require that the local statistic collector

Administration - Domino Administrator

Edit Administration Performance Monitor Help

Administration

People & Groups Files Server... Messaging... Replication Configuration

Status Analysis Monitoring Statistics Performance

Statistic counters: + Add - Remove Autoscale Saved statistics groups: <Untitled> Profiles Stop

Color	Scale	Statistic Name	Server Name	Domain Name
Red	1	Platform.LogicalDisk.TotalCurQueueLen	Clapton/Iris	Iris (Unable to find path to server)
Green	1	Platform.LogicalDisk.TotalCurQueueLen	Coltrane/Iris	Iris (Unable to find path to server)
Yellow	1	Platform.LogicalDisk.TotalCurQueueLen	Chicks/Iris	Iris (Unable to find path to server)
Black	4	Platform.System.PotCombinedCpuUtil	Tunbridge/Acme	
Red	1	Mail.Waiting	Clapton/Iris	
Green	1	Mail.TotalRouted	Local	
Blue	1	Agent.Daily.TriggeredRuns	Local	

Last: 0 Average: 0.00 Minimum: 0 M

Get Statistic Info
 Add Statistic Event Generator (Server)
 Add Statistic Event Generator (Local)
 Add Statistic...
 Remove Statistic
 Display Health Reports

250
200
150
100
50
0

16:48:30 16:50:23 16:52:35 16:54:26 16:56:06 16:58:13 16:59:54 17:01:34 17:03:14

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Agenda

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Directory Enhancements

- xSP Support
- Centralized Directory
- LDAP Improvements
- Active Directory Integration

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xSP Support

- Host multiple organizations on a single instance of Domino
- More efficient than partitioned servers
- Virtualized directory maintains security
- xACL - Extended ACL refines permissions

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xACL

The screenshot displays two overlapping dialog boxes in the Lotus Notes xACL interface. The background is a blue and yellow pattern with the text 'LOTUSPHERE 2002' in the bottom left corner.

Extended Access at: /ANV/Acme

- Target Entry:** A tree view showing a hierarchy of containers. Under the root, there are folders for BE, DE, JP, US, ZA, and Acme. Under Acme, there are folders for ANV, Lotus, and VeriSign Trust Network.
- Access List:** A list containing one entry: 'Wile E. Coyote'.
- Attributes:** A field for 'Scope' set to 'This container and all descendants' and an 'Access' field set to 'Allow'.
- Buttons:** 'Log' and 'Show only containers in view' (checked).

Form and Field access at: /ANV/Acme

- People, Servers, Groups:** 'Wile E. Coyote'.
- Scope:** 'This container and all descendants'.
- Schema:** 'Domino'.
- Forms:** A list of forms including: .Default, AllLanguagePersonalInfo, Certifier, Database, DirectorySite, FileProtection, GlobalWeb, Group, IIOPSite, IMAPSite, Mapping, Person, PolicyArchive, PolicyArchiveCriteria.
- Fields:** A list of fields including: .Default, AllFullNameLanguage, AllFullNameSort, Assistant, audio, AvailableForDirSync, BkmsFile, businessCategory, CalendarDomain, carLicense, ccMailLocation, ccMailUserName, CellPhoneNumber, Certificate.
- Access:** A table for setting permissions for the selected forms and fields.

	Access:	Allow	Deny
Browse	<input type="checkbox"/>	<input type="checkbox"/>	
Create	<input type="checkbox"/>	<input type="checkbox"/>	
Delete	<input type="checkbox"/>	<input type="checkbox"/>	
Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Write	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Text: You can further modify the access privileges of current subject for this container. Select the forms and fields above and choose the access. To increase the access base privileges for the subject you are modifying, return to the Access Control dialog.

Buttons: 'OK' and 'Cancel'.

Centralized Directory Option

- Reduced Domino Directory footprint
 - keep user & group information on a few directory servers
 - other servers replicate domain configuration only
- Minimizes directory replication time and indexing load
- User directory lives on the network

LDAP Improvements

- Client authentication against LDAP for all Internet services
- Schema database simplifies schema extension
- Schema daemon maintains consistency domain-wide

Extending the LDAP Schema

The screenshot shows the Domino Administrator interface for configuring an LDAP Schema Object Class. The window title is "(Untitled) - Domino Administrator". The menu bar includes File, Edit, View, Create, Actions, Text, and Help. The toolbar contains various icons for file operations and editing. The main window has a title bar with "Save & Close" and "Cancel" buttons. Below the title bar is a header for "LDAP SCHEMA - Object Class:". The interface is divided into two tabs: "Basic" and "Advanced". The "Basic" tab is active and contains the following fields:

Names		Object Classes	
LDAP name:	<input type="text" value="extension"/>	Object Class Type:	<input type="text" value="Structural Object Class"/>
OID:	<input type="text" value=""/>	Superior Object Class:	person
Notes mapping:	<input type="text" value=""/>	Auxiliary Object Classes:	
Schema:	Other; User Defined	Description:	<input type="text" value=""/>
Attribute Types			
Mandatory Attribute Types:	cn, objectClass, sn	Optional Attribute Types:	description, seeAlso, telephoneNumber, userPassword

At the bottom of the window, there is a text field with the placeholder text "A name that uniquely identifies the object class". The status bar at the bottom right shows "IGN".

MMC/AD Support

- ADSync snapin to Win2K management tools
- Control two user directories from one console
 - Push from AD
- Cross-directory field and container mapping

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- ▶ Domino Rnext will be able to authenticate standards-based clients (HTTP, IMAP, POP, etc) against an external directory via LDAP using Directory Assistance, but will still require a Domino Directory for Notes clients. In environments whose primary corporate directory is MS Active Directory, this means performing all user and group management functions twice, once in each directory.
- ▶ ADSync addresses this problem by providing a single combined point of user and group administration for AD and Domino from the MMC Active Directory Users and Computers tool.
- ▶ ADSync will typically be run from a Windows 2000 Professional workstation with the Windows 2000 Administrative tools installed. These tools are not included with Windows 2000 Professional; they must be installed by running adminpak.msi from the Windows 2000 Server CD (in i386\). The MS license permits domain administrators to install this package on their workstations.
- ▶ ADSync is an installation option (W2000 Directory Sync) with the Domino Administrator client. ADSync comprises two files: nadsync.dll (the code) and adsync.chm (the help file). Once installed, ADSync must also be registered from a Windows 2000 command prompt by entering 'regsvr32 nadsync.dll' at the Notes program directory. It may take up to a minute for the confirmation dialog to appear.
- ▶ Once registration is complete, Lotus Domino Options will appear as a new object in Active Directory Users and Computers.
- ▶ NUME is supported for legacy NT domains, included in install as well. use ADSync for AD only

Active Directory Integration

The screenshot shows the 'Active Directory Users and Computers' console window. The left pane shows a tree view of the directory structure, including 'ibm.com', 'BulkIn', 'Computers', 'Domain Controllers', 'ForeignSecurityPrincipals', 'Users', and 'Lotus Domino Options'. The right pane displays a list of 20 objects with columns for Name, Type, and Description. The 'Users' folder is expanded, showing various built-in and domain users and groups.

Name	Type	Description
Administrator	User	Built-in account for administr...
Cert Publishers	Security Group ...	Enterprise certification an...
DnsAdmins	Security Group ...	DNS Administrators Group
DnsUpdatePr...	Security Group ...	DNS clients who are permi...
Domain Admins	Security Group ...	Designated administrators...
Domain Comp...	Security Group ...	All workstations and serve...
Domain Contr...	Security Group ...	All domain controllers in th...
Domain Guests	Security Group ...	All domain guests
Domain Users	Security Group ...	All dom...
Enterprise Ad...	Security Group ...	Design...
Group Policy ...	Security Group ...	Membe...
Guest	User	Built-in
IUSR_PENDR...	User	Built-in
IWAM_PEND...	User	Built-in
krbtgt	User	Key Di...

Overlaid on the console is a dialog box titled 'Choose Registration Options for Windows Users and Groups'. The dialog contains the following text and options:

You have 1 user(s) and 2 group(s) pending Notes registration.

- Prompt for the name and password of each user, and for name and members of each group
- Register users and groups at once without additional prompts; use defaults (Generated Notes passwords will be saved to ntsync45.nsf)
- If error happens during registration of some users and/or groups, try to register them later
- If registration is cancelled for some users and/or groups, try to register them later

Buttons at the bottom: Register now, Register later, Do not register, Help.

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Cross-Directory Attribute Mapping

The screenshot shows the Lotus DADS Options dialog box with the 'Field Mappings' tab selected. The 'Field mappings for object class' is set to 'User' and 'Field mappings in domain' is 'ibm.com'. The dialog is split into two panes: 'In Active Directory' and 'In Domino Directory'. The 'In Active Directory' pane lists various attributes, and the 'In Domino Directory' pane shows 'PhoneNumber_6' with a dropdown menu open, displaying 'Title' as the selected option. A 'Help' button is located next to the object class dropdown. At the bottom, there are 'OK', 'Cancel', and 'Apply' buttons. A note at the bottom of the dialog reads: 'To map an AD attribute to Notes field, click on second column next to that attribute. You can type a new name for Notes field.'

Active Directory Users and Computers

Lotus Domino Options

Lotus DADS Options

Notes Synchronization Options | Notes Settings | **Field Mappings** | Container Mappings

Field mappings for object class: User Help

Field mappings in domain: ibm.com

In Active Directory	In Domino Directory
otherPager	
otherTelephone	
otherWellKnownObjects	
ou	
pager	PhoneNumber_6
partialAttributeDeletionList	
partialAttributeSet	
personalTitle	Title
physicalDeliveryOfficeName	Title
possibleInferiors	UserCertificate
postalAddress	UserCertificateDisplay
postalCode	userPKCS12
postOfficeBox	postOfficeBox
preferredDeliveryMethod	preferredDeliveryMethod
preferredOU	
primaryGroupID	
primaryInternationalSDNNNumber	
primaryTelephoneNumber	

To map an AD attribute to Notes field, click on second column next to that attribute. You can type a new name for Notes field.

OK Cancel Apply

Lotus software

Agenda

- System Configuration
- Server Monitoring
- Directory Enhancements
- User Management

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User Management

- Installation
- Roaming User/Multi-user
- Smart Upgrade
- License Tracking
- Mail Management
- AdminP
- Certificate Authority
- Policy-based Management

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Installation

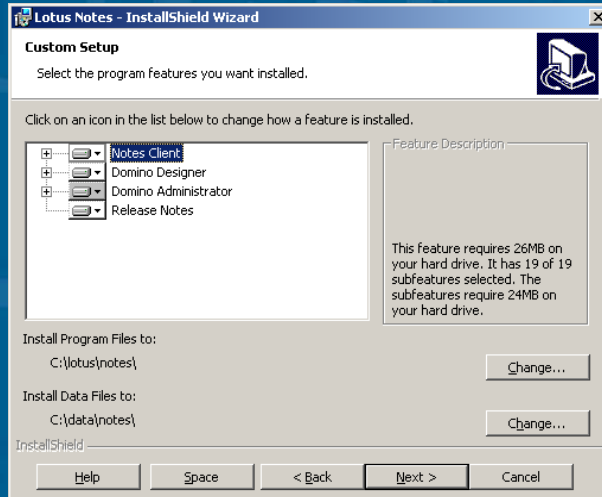
- Built for Windows Installer
 - Transacted installation
 - Managed application deployment
 - Product, feature, & component registration

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Lotus software

- ▶ Will we requires 'Power User' to install on Win2K?

Rnext W32 Client Installation



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Lotus software

Roaming User Support

- Managed through Domino Directory
- Roaming users store Notes "identity" on Domino
 - Address book, ID file, bookmarks, etc.
- Replication keeps workstation and server information current
- Cleanup options

Multi-User Installation

- Separate but complementary to Roaming
- Notes client only
- Centralized templates
- OS Security

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Lotus software

Scripted Client Setup

- Response file
- User supplies only name and password

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Lotus software

- ▶ Lotus Notes 6 recognizes the new notes.ini option CONFIGFILE, which points to a response file used to supply the defaults used during first-time client setup, allowing administrators to preconfigure the Lotus Notes client, allowing users to bypass the usual dialog boxes, specifying only a username and password.

IBM Lotus Notes Smart Upgrade

- Built-in update distribution mechanism for Rnext clients & beyond
- Controlled via desktop policies
- Client automatically downloads, updates and restarts

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Lotus software

- ▶ To configure Smart Update, the Administrator creates the download DB based on the Smart Update Kit template (smupdate.ntf) included with the Rnext server, then pastes a link to that new DB in the global server configuration document.
- ▶ To use it, the Admin downloads the QMR/QMU/FR update kits from notes.net and creates a kit document for each one in the download DB. The kit document specifies the source version, the target version, the client OS, localization, kit type (full or lite), the location of the update kit (can be attached, or referenced on a network share), and any message the admin wants clients to see when they're prompted to upgrade.
- ▶ Finally, to allow clients to use smart update, the admin creates or edits an existing Desktop policy to specify 1) the target version and 2) the grace period, which is the date by which users must upgrade. Beta 4 builds include a Notes Smart Update menu option under File\Tools
- ▶ Smart Update can apply multiple updates in sequence to upgrade a client from (for example) 6.0 to 6.03b by applying the 6.01, 6.02, 6.03, 6.03a, and 6.03b kits in order. Note that this scenario will require a lot of free disk space!
- ▶ Because the Rnext client uses the domain catalog to locate the nearest replica of the download DB, it's not necessary to replicate it to every server in the domain.

Lotus Notes Smart Upgrade

Lotus Notes **Software Update Available** Read Me First

A new version of Lotus Notes and Domino is available. You should upgrade as soon as possible.

Current version:	Lotus Notes	Build M12_01212002 Beta 5
Update version:	Lotus Notes	Build M12_0122002 Beta 5

Disk space required:	0.1 MB on drive C:
Disk space available:	2.1 GB on drive C:
Estimated download time:	2 minutes

There is a new version of Notes available for you. You have 10000 days before automatic upgrade.

Remind me again in

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Lotus software

Client License Tracking

- "How many licenses are we using?"
- Tracks authenticated users on all protocols
- Option in Server Configuration Record

License Tracking

The screenshot displays the Domino User License Tracking (6) - Licenses - Domino Administrator interface. The main window shows a tree view on the left with 'Licenses' expanded, and a table on the right. The table has columns for 'Notes Users', 'iNotes Users', and 'Total Users'. A row labeled 'This Domain has:' shows 1 Note user and 1 iNotes user, totaling 2 users. The 'Recalculate Licenses' checkbox is checked.

	Notes Users	iNotes Users	Total Users
This Domain has:	1	1	2

User Mail Management

- Editor Access
 - Delegation
 - Out-of-Office
- Improved quota support

LOTUSPHERE 2002

Lotus software

- ▶ When converted to the Rnext mail template, Notes clients with Editor access to their mail files will have the same function that required Manager access in R4. The R5 client used AdminP to delegate mail file access, but still required Designer access to enable O.O.O. Rnext lets designers delegate per-agent activation to users

Quota Management

- Alternative quota methods
 - size, usage
- Router-based notification and enforcement
 - threshold and over-quota warning options
 - "Ransom note" feature
 - hold and notify for users over quota

Router-based Quota Management

Configuration Settings

Basics | LDAP | Router/SMTP | MIME | NOTES.INI Settings | iNotesWeb Access | IMA

Basics | Restrictions and Controls | Message Tracking | Advanced

Restrictions | SMTP Inbound Controls | SMTP Outbound Controls | Delivery Controls

Delivery Controls

Maximum delivery threads: []
Encrypt all delivered mail: Disabled
Pre-delivery agents: Enabled
Pre-delivery agent timeout: 30 seconds
User rules mail forwarding: Enabled

Quota Controls

Over warning threshold notifications: **Per time interval**

Warning interval: 2 [Hour(s)]

Over quota notification: **Per time interval**

Error interval: 30 [Minute(s)]

Over quota enforcement: **Hold mail and retry**

Attempt delivery of each message: Disabled
Maximum number of messages to hold per user: 25
Maximum message size to hold: KB

Select Keywords

Keywords

- None
- Per message
- Per time interval

OK Cancel

Select Keywords

Keywords

- Deliver anyway (don't obey quotas)
- Non deliver to originator
- Hold mail and retry

OK Cancel

LOTU

Domino 6 Quota Warning

Delete

A message from your Administrator:
Over Quota Report

Delivery of the following message caused your mail file to exceed the quota size limit specified by your Administrator. Please refer to the "What you should do?" section of this report to understand why you have received this notification and what can be done to remedy the situation.

Header information for original message

From: Steve Pelham/IBM
To: Ted Niblett/IBM@IBM
cc:
Subject: Fw: stuff2
Message size: 1099886 Bytes
Disposition of message: Retry pending

Mail file and quota information

Current usage: 11264 Kilobytes
Quota Warning threshold: 10240 Kilobytes
Quota Size limit: 11264 Kilobytes

What should you do?

Your mail file exceeds or would exceed the quota size limit specified by the Administrator. The message indicated above is currently in a retry state. You should free up space in your mail file immediately by deleting or archiving messages. Once there is enough room in your mail file for the message size indicated, the message will be delivered at the next retry interval. Note that all subsequent messages intended for this mail file are now pending delivery. No further messages will be delivered until the over quota situation is remedied.

Reporting Server:
Sarum/IBM

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AdminP Enhancements

- Name Changes
- Infrastructure Support
- Programmability
- Usability

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- ▶ Convenience
 - ▶ Automatic name change acceptance from the Notes Client
 - ▶ Approve (multiples) from view
 - ▶ Fast replica creation
- ▶ New features
 - ▶ Rename HTTP, IMAP, POP3 User
 - ▶ HTTP Password Management
 - ▶ Find name in domain
 - ▶ Retract Database
 - ▶ New controls for replica management operations
 - ▶ Copy source ACL
 - ▶ Create Full Text Index
 - ▶ Roaming User Support
 - ▶ Mail File Move
 - ▶ Move archive
 - ▶ Cluster support
 - ▶ Move onto cluster members
 - ▶ Move off of cluster members
 - ▶ Link to SCOS
 - ▶ From files panel
- ▶ Infrastructure Support
 - ▶ Name management in secondary directories
 - ▶ xAdministration Servers
- ▶ Programmability
 - ▶ The Lotusscript Adminp Class

Certificate Authority Process

- Separates cert.id ownership from certificate creation
- No access to cert id required
- Registration policies can specify CA
 - Web Admin
 - Domino AD Synchronization

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- ▶ A bit of history: the term Certificate Authority was popularly applied to Domino in 4.6x and R5, where it referred to the database application used to generate X.509 keyrings and certificates for browsers and standards-based mail clients. The R4/R5 CA was never used to generate Notes certificates.
- ▶ In Rnext, CA is its own server task, capable of managing and processing certificate requests both for Notes clients and browsers. This automated process allows Registrars (designated by the CA Administrator) to create new users without access to the cert.id by submitting certificate requests to the CA process, which issues the certificates on the registrar's behalf.
- ▶ The coolest part of this? You'll be able to register Notes users from Web Admin!
- ▶ Other details:
- ▶ Some of the benefits of the new CA:
 - *compliant with security industry standards (e.g. X.509)
 - *provides a unified mechanism for issuing Notes and Internet certificates
 - *does not require access to the certifier ID and ID password
 - *supports the PKIX registration authority (RA) role, which allows administrators to delegate the certificate approval/denial process.
 - *simplifies the certificate request process through a Web-based certificate request management database
 - *maintain certificate revocation lists (CRLs). The administrator of a CA can easily revoke a certificate if the subject of certificate leaves the organization, or if the certificate has been compromised.
- ▶ To allow the CA task to manage a cert.id, the owner of the cert.id must migrate it from the Configuration tab of the Domino administrator. During the migration process, the administrator specifies the certifier to use, the ICL (Issued Certificate List)

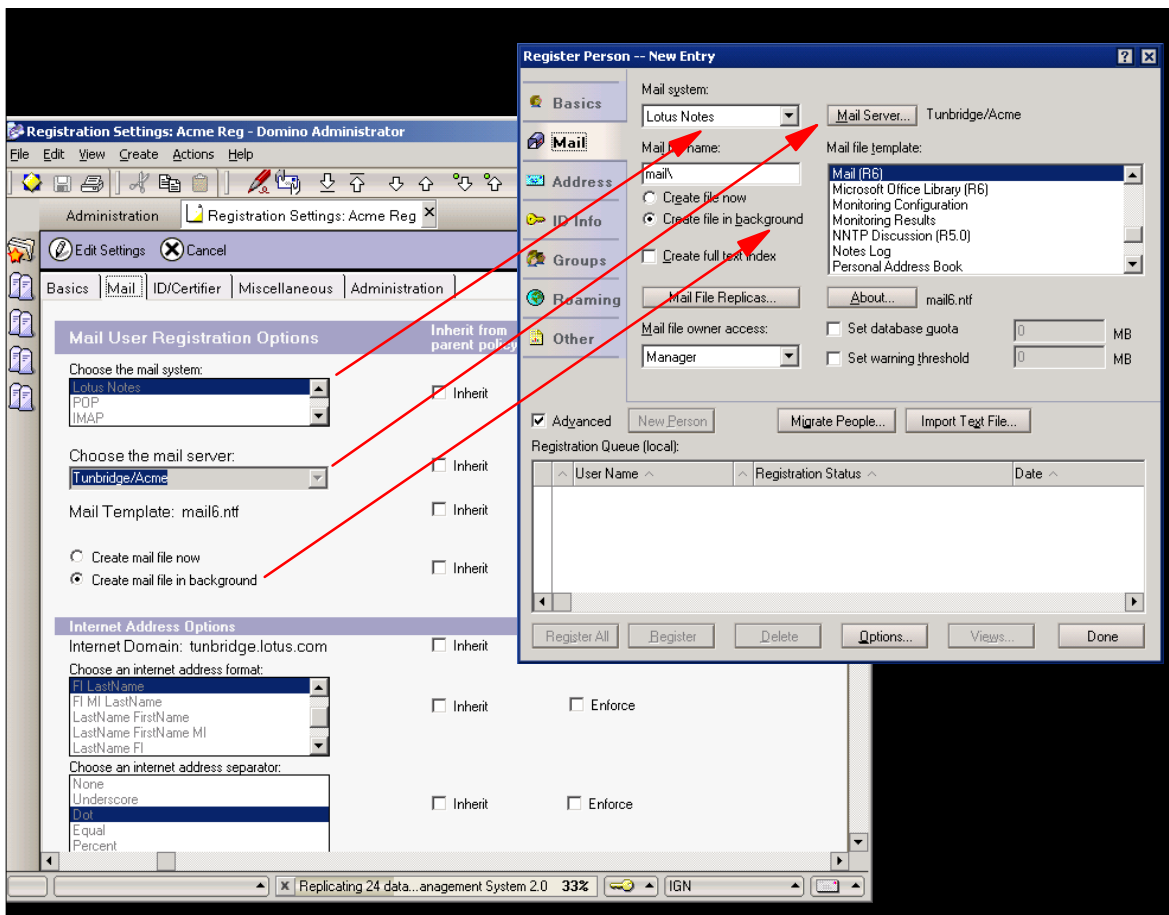
Policy-based User Management

- Central control of user settings:
 - Registration
 - Setup/Desktop
 - Security
 - Archive
- Flexible assignment
- Dynamic application

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- ▶ Administrators grumble a little about configuring servers, but managing client configuration can be the most time-consuming part of their jobs. Policies give administrators a clean, simple way to define client options centrally, so they're applied to all affected users at authentication using dynamic configuration.
 - ▶ Policies have two components: functional settings and policy (structure) documents:
 - ▶ Settings are grouped by functional category, and include Registration, Archive, Setup, Desktop, Security. Three of these, Archive, Desktop, and Security, are dynamic: when an administrator changes a setting (such as the corporate welcome page) in an active settings document, affected users will receive the update via dynamic configuration the next time they authenticate with their home server (or another server in their home cluster, if their home server is unavailable).
- The remaining settings, Setup and Registration, are applied only once: as the name suggests, registration settings control initial password strength, mail server & template, group membership, and other related settings only during user registration; dynamic configuration ignores them.
- Setup options are also applied only once, during first-time client setup, and before the user's bookmarks are created. Other than timing, that's the biggest difference between setup and desktop policies: desktop policies are executed after bookmarks have been created, so they can modify everything setup policies do, plus customize bookmark folders and welcome pages in bookmark.nsf
- ▶ Policy documents complete the picture by specifying 1) which combinations of settings will be applied, and 2) how they will be applied. Let's consider these in reverse order.



- ▶ Registration settings let you store tailored options for individual servers, certifiers, and groups, then apply them as a group during user registration.

Policy Structure

- **Organizational & Explicit hierarchies**
 - Parental inheritance and enforcement
- **Efficient**
 - one change can update every user in an organization

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- ▶ There are two types of policies: Organizational and Explicit. Organizational policies are automatically associated with a particular branch of the naming hierarchy. It's OK to leave gaps in the policy hierarchy, for example, to create an organizational policy for */IBM, and another for */Italy/Contr/IBM, without defining a policy for */Contr/IBM in between. Explicit policies are also hierarchical, but as their name suggests, they're assigned explicitly via the person document. The policy field in the person document is a single-value field, so a user can be assigned only one explicit policy, but it can be something like /Finance/Accounting/Operations, allowing the user to inherit settings from multiple policies in a hierarchy.
- ▶ A word about naming conventions: organizational policies always begin with '*/'; explicit policies always begin with '/'.
- ▶ As noted above, policies are hierarchical, with a parent-child structure: a parent can have multiple children, and a child can have many ancestors, but only one parent. Hierarchical policies are applied in a layered fashion, from parent to child. A user's effective policy is the union of all the explicit and organizational policies that apply to the user. It sounds complicated, but it's not: settings are usually applied from the most general in the hierarchy (e.g. */IBM) to the most specific (e.g. */OU4/OU3/OU2/OU1/IBM), and the last one applied wins.
- ▶ Usually. But there are times when Administrators will want to turn this model on its head in one of several ways. Rnext policies provide mechanisms to make this possible:
 - 1) Inheritance lets a child policy use (pull) a setting from its parent. There's a catch: the parent/child relationship is defined in Policy documents, but inheritance is controlled separately for each option in Settings documents. Defining a policy hierarchy takes planning!
 - 2) Enforcement lets a policy near the top of the hierarchy (like */IBM) control (push) a setting (such as password strength or initial mail quota) for the entire organization. Like inheritance, parental enforcement is enabled for individual settings, not for entire policies.
 - 3) Exception policies are used to define certain settings or even entire effective policies explicitly for some users, regardless of their position in other policy hierarchies. A popular example is the use of an exception policy to exempt executives from initial mail file quotas. The exception option is enabled at the policy level, so it explicitly defines all the settings governed by the policy.
- ▶ Policies provide substantial leverage, allowing administrators to customize a framework of user settings for an entire domain from a central location.

Policy Management Tools

- Assignment
- Viewer
- Synopsis

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- ▶ Rnext includes several tools to make the transition to policies easier:
 - ▶ First, because policies are new in Rnext, the Domino Administrator includes assignment tools in the People & Groups tab to assign explicit policies to individual users and group member lists. The latter is an important point: assigning a policy to a group does not create a permanent link between the group and the policy; it's simply a convenient way to assign the policy to everyone who's currently a member of the group. Subsequently moving users in or out of the group will not affect their policy assignments.
 - ▶ Next, the viewer tools (accessible from the "Policies" outline entries on the Configuration tab of the Domino Administrator) allow admins to view users' effective policies, and view settings by policy and policies by setting.
 - ▶ Finally, the synopsis tool (under Policies on the Configuration tab) lets an administrator generate a text description of a user's effective policy, either in summary form (a list of the policies which influence a user's effective policy), or in detail, listing the policy and settings document responsible for every value in the user's effective policy.

Archiving

- Policies centralize control
- Server-to-server archiving
- Extension Manager hooks for third-party solutions
- Client-based scheduled/background archiving

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- ▶ In R5, archive settings were set separately for each database; we provided no built-in way for an administrator to manage the entire organization's archive strategy, and users could easily change whatever defaults an administrator set.
- ▶ A lot of things are changing:
- ▶ Rnext uses policies to centralize archive controls. At the administrator's option, users may still be able to modify the archive settings for their mail files, but that choice is now under administrative control.
- ▶ Archive settings have been expanded for Rnext allowing separate archive settings for individual folders, and multiple archive settings (each optionally specifying a separate destination) for a single database. This combination allows an administrator to age folders at different rates, such as purging Drafts after 10 days, the Inbox after 30, and All Documents after 180.
- ▶ To support multiple archive settings, Archiving (usually compact -a) works in three passes: first, it selects all the documents selected by any archive criteria; then, it copies the appropriate groups of documents to the specified destination; finally, after all documents have been copied, archiving deletes those documents which policy indicates should be deleted. Because all documents are copied before any are deleted, there's no risk of losing a document that should be archived.
- ▶ Rnext includes Extension Manager hooks to allow third-party products to archive Domino data to external storage.

Summary

- Increase your control
- Reduce your effort
- Make informed decisions

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Questions

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