



ID 113 - Maximize the Power of AdminP in Lotus Domino

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Agenda

- What is AdminP?
- How does it work?
- Requirements for AdminP
- The Administration Process Database
- Managing AdminP
- Monitoring AdminP
- Tuning AdminP
- Troubleshooting AdminP
- Best Practices
- Resources

What is AdminP ?

- Started out as a way to automate dreary tasks
 - Now a workhorse of Domino
- Automates dreary tasks
 - Name changes, mail file moves, recertifications
- Workhorse
 - Delegates mail files, sets end-user agents to run
 - Manages CA administration and roaming users
 - Creates and renames rooms and resources
 - Finds users, manages policies
 - Changes HTTP password
 - And much more.....

What is AdminP? (cont'd.)

- Best suited for changes which do not need to be done immediately
 - Uses replication to distribute processing requests within the enterprise
 - Quickest requests process within 1 minute
 - Some requests may only process weekly, depending on configuration

How does it work ?

- Something starts the process
 - Can be an administrator
 - Name change, deletion
 - Can be a user
 - Delegate mail access, set OOO agent
 - Can be other things
 - Setting up a new server
- Completed requests usually create other requests
 - And continue until all steps are complete

How does it work ?

- Only requests which are determined to be 'new' will be processed on a server
 - On startup of adminp task requests with no response document (log) or entry in hidden ID table will be flagged as requiring processing
 - When adminp is already running, new entries (based on time date stamp) to the admin4 database will be flagged
- Requests sometimes require administrator approval
 - Mail file deletions
 - Resource deletions
 - Because the directory is affected
 - And in 6.5.4 and beyond
 - Name change reversions

Requirements for AdminP

- AdminP server task running
- Administration Requests database on each server
 - Appropriate access to this database
 - Well maintained and replicating
 - More on this later
- Administration server set for Domino directory
- Certlog.nsf on your administration server
- Administration servers set on databases

The Administration Process Database

- Database is created automatically when a server is created
 - System database – replica ID is generated based on directory Replica ID
 - So it will replicate properly
- Contains processing action requests
 - AdminP requests
- Contains processing action results
 - AdminP response (log)
- Administration approval requests
 - Confirm database deletion
 - Certification requests for change hierarchy

The Administration Process Database

- Real world scenario!
 - Customer had replication problems with Administration Requests db and lots of errors with NAB updates
 - Checked replication histories, etc.
 - Issue was caused by improper replica ID
 - Customer had used a third-party tool to forcibly change the Admin Requests db's replica ID
 - Caused replication to get out of synch, and possibly contributed to admin4.nsf corruption

The Administration Process Database

- Designed to be managed
 - Workflow requires attention/approval
 - Will grow in size if ignored
- Sufficient access is needed
 - Default is Author with Create for users
 - Can be No Access in ND6 (R5 required Author)
 - Can use wildcard if Default needs to be No Access
 - Administrators need Author minimum
- Proper replication is required
 - Should replicate as often as Directory
 - Size can grow unacceptably

The Administration Process Database

- Replication retention should be standardized
 - Default is seven (7) days
 - Ten (10) is acceptable, as is 14 or 21
 - Anything longer is unnecessary
 - And dangerous*
 - Improper replication causes old requests to 'come back'
 - Causes server slowdowns
 - Number one cause of AdminP meltdowns
 - Easily controllable

Managing AdminP

- Process is designed to be managed
 - Levels of approval allow delegated administration
 - Deletions must be approved
 - Changes to Directory must be approved
 - Mail-In database deletions
- Failure to manage causes problems
 - Requests requiring attention/approval will stay
 - You must do something to them
 - Affects database size

Monitoring AdminP

- Views offer you information
 - Administrative Attention Required
 - Informational, has a button to remove from view
- Views require your action
 - Individual Approval Required
 - Pending by Age/Server
- Documents requiring approval remain in the database
 - Until you do something
 - Approve/Reject/Delete
 - Affects database size

Monitoring AdminP

- In Domino 7, use DDM
 - Default Server Probe is “Administration”
 - Monitors 11 different types of AdminP requests
 - Any error will create a notification in DDM

- Change [] [] Password in Domino Directory
- Change User Password in Domino Directory
- Initiate Rename in Domino Directory
- Initiate Web User Rename in Domino Directory
- Identify Certificate Authority in Domino Directory
- Recertify Cross Certificate in Domino Directory
- Rename in Person Documents
- Rename Person in Calendar Entries and Profiles in Mail File
- Rename Person in Domino Directory
- Rename Web User in Access Control List
- Set Password Information

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Demo

Monitoring AdminP and
enabling/disabling user
notification

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Managing AdminP

- Process can be configured to your needs
 - Processing time controlled by the server document
 - You can change days, times, intervals
- Databases can be skipped
- Commands can be issued manually

Managing AdminP

- AdminP settings

- Interval – Default is 60 minutes (blank in server doc)
 - Can reduce as needed
 - 15 minutes on administrative server is acceptable
- Store Admin Process log entries when status of no change is recorded
 - Change from “Yes” to “No”
 - May affect troubleshooting
 - WILL reduce database size
 - By as much as 20%

Managing AdminP

- AdminP settings
 - Delayed Request Settings
 - Default is Sunday
 - Consider running more often
 - This is Reader/Author name change
 - Delayed requests generate messages in server log
 - Set `converter_log_level=10` in server ini file to shut off messages
 - Maximum number of threads
 - Multiple threads are supported
 - Default is 3, maximum is 10
 - One thread to dispatch requests
 - Three threads to process the requests
 - Threads are only activated when required to process request
 - Test incrementally if you increase

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Server Document Settings

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Administration Process – Immediate Requests

- Immediate Requests will be performed within a minute posting to admin4 database
- No option exists to change the immediate request interval
- Typically these requests should be processed quickly
 - Examples
 - Create Replica
 - Change User Password in Domino Directory
 - Update Client Information in Person Record
 - Change HTTP password in Domino Directory
- Immediate requests are denoted in admin4 with a ‘bolt’ icon

Examples of Immediate Requests

Add Server to Cluster

Remove Server from Cluster

Request Mail File Deletion

Add Resource

Delete Resource

Change User Password in Domino Directory

Add Internet Certificate to Person Record

Create Mail-In Database

Domain Catalog Configuration

Change HTTP Password in Domino Directory

Enable Server's SSL Ports in Domino Directory

Create Replica

Move Replica

Create Mailfile

Administration Process – Batched Requests

- Introduced in 6.0 timeframe
- Performs certain database modification for a number of user's at a time.
- Batching attempts to bundle certain requests so that for a single database access a number of modifications to that database can be made
- Currently 18 requests are batched.
- Benefit of batching is only observed if multiple requests are batched
 - Interval times should be long enough to accumulate multiple batch types.

Administration Process – Batched Requests

Rename in Access Control List

Delete in Person Documents

Delete in Access Control List

Delete in Reader/Author fields

Rename in Person Documents

Rename in Reader/Author fields

Rename Group in ACL

Rename Group in Reader/Author fields

Rename Person in Unread List

Rename Web User in ACL

Rename Web User in Person Documents

Rename Web User in Reader/Author fields

Rename Web User in Unread List

Delete Person In Unread List

Rename in Design Elements

Delete in Design Elements

Rename Web User in Design Elements

Rename Group in Design Elements

Tuning AdminP

- Extended Administration Server
 - Use this to delegate work to other servers
 - Great for multi-continent systems
 - Database will be larger
 - Log messages flow more
 - Every server in domain replicates more information
 - Need Enforce Consistent ACL and Extended Access enabled
 - See Admin Help for step by step instructions

Tuning AdminP

- Server Console Commands
- When troubleshooting, you may need these
 - Use with caution
- Tell AdminP Process New
 - Process all new requests
 - Use to 'Jump Start' a process
- Tell AdminP Process People
 - Process Person document changes
- Tell AdminP Process Time
 - Used for shared mail systems only

Tuning AdminP

- Server Console Commands
- Tell AdminP Process All
 - Processes all new and modified, immediate, interval, delayed and daily requests
 - Use with extreme caution
 - Never in production hours
- Tell AdminP Process Daily
 - Processes all new and modified daily requests to Person Documents
 - And "Rename Person in Unread Lists"
 - Can use this to make name changes more friendly

Tuning AdminP

- Server Console Commands
- Tell AdminP Process Delayed
 - Processes all new and modified delayed requests
 - Based on start executing on/at
 - This is the Sunday morning process
 - Processor intensive
- Tell AdminP Process Interval
 - Processes all immediate and interval requests

Tuning AdminP

- Server Console Commands
- Tell AdminP Show Databases
 - Lists databases with and without designated Admin Server
 - See your server log for the list
- Tell AdminP Process MA
 - Validates whether mail policies were updated
 - Not a new request type, new adminp thread (7 only)
- Tell AdminP Quit
 - Stops AdminP task
- Load AdminP
 - Starts AdminP task

Tuning AdminP

- Speed up replication
 - Especially if you reduce interval timing
- Skipping Databases
 - Reader/Author name renames take a long time
 - Resource intensive
 - Skip databases using \$Adminp hidden view
 - Use selection formula to show only documents with Reader/Author fields
 - All others are skipped
 - If view is blank, entire database is skipped
 - Sample in pernames.ntf

Tuning AdminP

- Real world scenario!
 - Customer set Delayed requests to process daily
 - To help manage 300+ renames a day
 - Delayed requests running at 6PM daily
 - Users' mail files were 3-5GB, with tens of thousands of documents each
 - Reader/author update took a long time, was running at the same time as other nightly tasks and causing performance slowdowns
 - Workaround
 - Hidden \$AdminP view

Troubleshooting AdminP

- Most problems are caused by negligence
 - Yes, even the “21-Day rename” issue
 - Replication get out of synch
 - Documents are not processed in a timely manner
 - Old or test servers get revived
 - User renames are not monitored
 - Error views get ignored

Troubleshooting AdminP

- Avoiding common mistakes
 - Maintain replication of admin4.nsf
 - Monitor as closely – or closer than names.nsf
 - Use the same replication interval
 - Monitor number of documents in admin4.nsf
 - Should be nearly the same
 - Delete corrupt copies
 - New one will replicate
 - Work the database
 - Assign responsibility for Error, Administrative Attention and Individual Approval views
 - Documents will live in your database until you process them

Troubleshooting AdminP

- Avoiding common mistakes
 - Old or test servers
 - Admin4.nsf exists on all servers
 - When they are turned back on, databases replicate
 - In addition to ruining names.nsf, you ruin admin4
 - Never restart a server that has been out of service for more than the purge interval of admin4
 - Old documents replicate back in
 - Old requests are read
 - Servers send error messages
 - Customers have clogged their systems this way
 - Never run test servers in your production domain
 - They too have a copy of admin4.nsf

Troubleshooting AdminP

- Real world scenario!
 - Customer found old test server, needed to repurpose
 - All files in data directory were restored to another server for the team to wade through
 - Test server had been down for 2 years
 - !!!!!!!
 - Old documents from Admin4 and the Domino directory replicated back in
 - Domino directory, Admin4 were ruined, administrators had heart attacks

Troubleshooting AdminP

- User renames
 - Since ND6, users are no longer required to accept name changes
 - You asked for this feature
 - If a user doesn't authenticate within 21 days, the name reverts
 - This must be approved in Domino 7
 - Unless user changes settings in user security
 - If the request gets stalled for any reason, the name change will generate a request to fail back in 21 days
 - Most instances we've investigated are caused by replication problems
 - Most, but not all

Troubleshooting AdminP

- User renames
 - Expired user ID will cause a stalled request
 - Gives no useful information in admin4.nsf
 - ID must contain a valid certificate to be renamed
 - Recertify, then rename

Troubleshooting AdminP

- User renames
 - Will fail if public keys do not match
 - Error will be noted in a dialog box
 - Details will be in certlog.nsf
 - Remember, it's required on the administration server
- Other reasons to maintain admin4.nsf
 - Roaming users
 - CA process
 - Renaming rooms and resources
 - All require AdminP to be healthy

Troubleshooting AdminP

- Real world scenario!
 - Customer was experiencing inconsistent behavior with user renames
 - Requests stalled
 - Rename reversions even with 7 server
 - Problem: mixed design
 - Administration Requests database had design elements from 7, 6.5, and 5 (!)
 - Caused behavior inconsistent with current version
 - Resolution: replace design template
 - Obtained clean 7 template from CD, replaced template on all replicas of Administration Requests db

Leveraging AdminP

- Renaming rooms and resources
 - In ND6.5, renames are possible
 - Clients, servers and templates should be 6.5
 - Multi-step process
 - AdminP does all the work
- Find Users or Groups
 - Use to locate in ACLs
 - Results posted in admin4.nsf
 - Use the Admin client
 - People& Groups tab

Leveraging AdminP

- User renames
 - Change the internet name and short name
 - Short name must be typed manually
 - Watch for duplicates in your system
 - Generated automatically during registration
- Drop user access to Editor
 - Out of Office and delegation are handled by AdminP
 - Fewer accidental mail file deletions

Leveraging AdminP

- Find People and Groups
- Using the Admin Client, open the People and Groups Tab
 - Highlight the name you want
 - Select the name you want
 - Choose Find User(s) or Find Group(s)
 - AdminP runs on each server
 - Returns a link to each ACL
 - Each document in the Directory with that name
 - Results in AdminP database
 - If you choose an administrator's name, expect a lot of hits
 - Use to determine if a group is used in ACLs
 - Check for individual ACL listings

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Demo

Find Users/Groups

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Best Practices

- Maintain your administration process databases
 - Can be a challenge in a large environment
 - Only difficult to get it cleaned up the first time
- Get rid of those test servers
 - Use this as the reason if you couldn't before now
 - Test servers belong in a test domain
- Use those “Tell” commands with care
 - Tell adminp process all can cause a CPU hit
 - Do not use during heavy usage times

Additional Information and Resources

- Technotes
 - 1212760 – FAQ – The Administration Process
 - 1213224 – Knowledge Collection - AdminP
- Developer Works Articles
 - All about AdminP Part 1
 - All about AdminP Part 2
 - LotusScript: The NotesAdministrationProcess Class in Notes/Domino 6
 - Creating a custom Administration Process Request Handler

Additional Information and Resources

- Sessions
 - **MTG607 AdminP in IBM Lotus Domino - Meet the Geeks**
 - ID106 Extending IBM Lotus Domino Administration
 - **MTG602 IBM Lotus Domino Administration - Meet the Geeks**
 - ID110 Getting the Most Out of Domino Domain Monitoring Probes
 - ID112 Using IBM Lotus Domino Domain Monitoring in the Real World
- Kathleen's blog – www.kmnow.com
- Susan's blog – www.notesgoddess.net

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Q&A

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