

NDS2AD Migration-Lessons Learnt

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Overview

- Project orientation
- AD vs NDS what's the difference? What are the issues?
- What worked?
- 100% rear vision
- What we didn't need to do?

Griffith Novell Usage

- Deployed 1996
- Pre-centralisation of IT services
- Structure had many artefacts of the development of Griffith and NDS
- 12 TB i.e. 10TB Staff- 2TB Student NSS 25% of total available storage
- IDM flat provisioning
- 5,000 workstations 2500 staff all types & student 2,500 XPSP2

Information Services

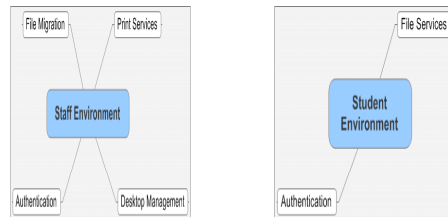
3

Tree	# of user a/c's	No. of servers	EDir Version	Netware Version	No. of OUs	No of NDPS queues
GU	10,700	68	8.7.3.8	6.5 Service Pack 5-6	561	731
GUCUSE	45,000	14	8.7.3.8	6.5 Service Pack 5-6	58	119

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4

What? So what was in scope!



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5

So what was out of scope

- Student cost recovery print services based on iPrint
- Migration of existing AD trees
- Lab desktop management
- Auth-Tree LDAP migration

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6

Service / Function	NDS	AD
Directory Type	Multi Master partitionable replication, extensible, object-oriented, self describing schema, X500 compliant	Multi Master replication, extensible, object-oriented, self describing schema, non-X500 compliant
Container	Tree, Organisation, OU	Forest, Tree, Domain, OU
Object uniqueness	per container	per domain
Service Location	Service Location Protocol SLP	Dynamic DNS DDNS
Workstation Aggregation	Workgroup	Domain
Group Account	Single type	Local, Global, Universal & Domain Local
Computer accounts	Server only	All computers
Login Scripts	multiple per User	single per User
File Permissions	NDS based - stored in Directory	NTFS based -stored in file system
File Sharing	NDS Volumes	Distributed File System (DFS)
Security Inheritance	Dynamic	Static
Security Equivalents	OU, Role, User or Groups	Groups, User & Computers

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7

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Overview of process

The overview of the migration process is:

Deploy a development environment representative of the proposed production environment and

- Develop and test a new SCCM based Staff SOE
- Develop and test a desktop migration process for existing ZEN managed staff desktops
- Develop and test the migration from NDS to AD of the NDS User objects and their associated files to AD using the QUEST Migrator.
- Audit the existing NDS production environment and complete any tasks, such as,
 - Removal of duplicate accounts
 - Resolution of non-'S' UUIDs
 - Identifications of OU acting as security equivalences
- Develop and test the IDM driver to:
 - Provision User objects, default h:\ drive and quota to the staff and student AD environments
 - Synchronise password changes from the meta-directory to the staff and student AD environments
 - Populate the staff AD environment with all available enterprise groups
- Based on success in completing project Test Plans proceed
- In parallel with the above tasks employ a Change Manager to:
 - Communicate with representatives of all University elements listed at <http://www.griffith.edu.au/elements/> to establish:
- Deploy to Production

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8

Issues/challenges:

1. **Data Migration**
 1. Collaborative cross-shares and Visibility Lists NTFS emulation
2. **UIDs unique & uniform, current IDM provisioning, management by security group & list management**
3. **Staff Desktop Migration**
 1. Shared drive migration i.e. G:\ drive
 2. OLE, macros etc. & hard coded drive path shortcuts etc.
 3. Multiple use workstations
 4. Custom drive mappings, cross shares & multiple nested login scripts
4. **Non-equivalent services**
 1. Student iPrint & NetStorage
5. **Support of non-Wintel desktops**

What worked?

Process

- PRINCE2 & Change Management
- Dedicated Change Manager
- Phased deployment
- 'Like for Like' design principle
- Focus on cash receipt machines, kiosk machines

Scripts

- Login Script Analysis Tool-LSAT
- <http://www.forensit.com/domain-migration.html>
- Hotfix <http://support.microsoft.com/kb/906866>
- <http://www.likewise.com/> OSX-Linux & AD
- Printer deployment -NDPS2dIP
- ROBOCopy, Xcalcs & ABE Visibility Lists

What worked?

General

- ABE drive consolidation
- List Management
- Use of NetStorage for ad-hoc student migration
- IDM and duplicate users
- Develop your storage maps for business value
- Didata responsible for data migration
- MSI migration- start early or put it in the agreement⁵¹⁵⁴
- Communicate, communicate, communicate, communicate & communicate etc.

100% rear vision or what I'd change if I had to do it again.

- QUEST NDS Reporter
- Storage HSM
- UID scrub
- OLE & Macros
- QUEST Migrator
 - 256 char file path
 - 8GB per hour average
 - Bungie Jump
- MoonWalker see <http://www.moonwalkinc.com/>
- OSX & DFS AdmitMAC see <http://www.thursby.com/products/admitmac.html>
- Dev = Prod

Storage

TOTAL STAFF					
Size < 6months		Size 6m2y		Size 2y greater	
830 GB		3,836 GB		3,743 GB	
% Total Used		% Total Used		% Total Used	
9.87%		45.62%		44.51%	

TOTAL STUDENT					
Size < 6months		Size 6m2y		Size 2y greater	
367 GB		1,104 GB		821 GB	
% Total Used		% Total Used		% Total Used	
16.01%		48.17%		35.82%	

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13

Groups

	# of Groups
Staff NDS	1893
Student NDS	424
Lotus ¹	3084

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14

What we didn't need to do.

- NetStorage-FileWay
- Printing queue vs direct-ip
- OSX & DFS

Questions????

