NetWare Migration and Server Consolidation Utility

a technical overview

Doug Clower
Global Solutions Architect – Linux Solutions
Solutions Creation & Marketing
Novell, Inc.
dclower@novell.com

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Agenda
what we are going to cover

When to use what

Consideration & Tips

The Future

Questions

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Disclaimer

your mileage may vary

So, fasten your seatbelt.

Disclaimers

- Mention of any particular tools or approaches, whether third-party or Novell, does not imply they are the best for your particular situation (and in the case of third-party tools, does not imply an endorsement by Novell).

Hopefully, with the information in this session, you will be able to fully use what tools and information are available.

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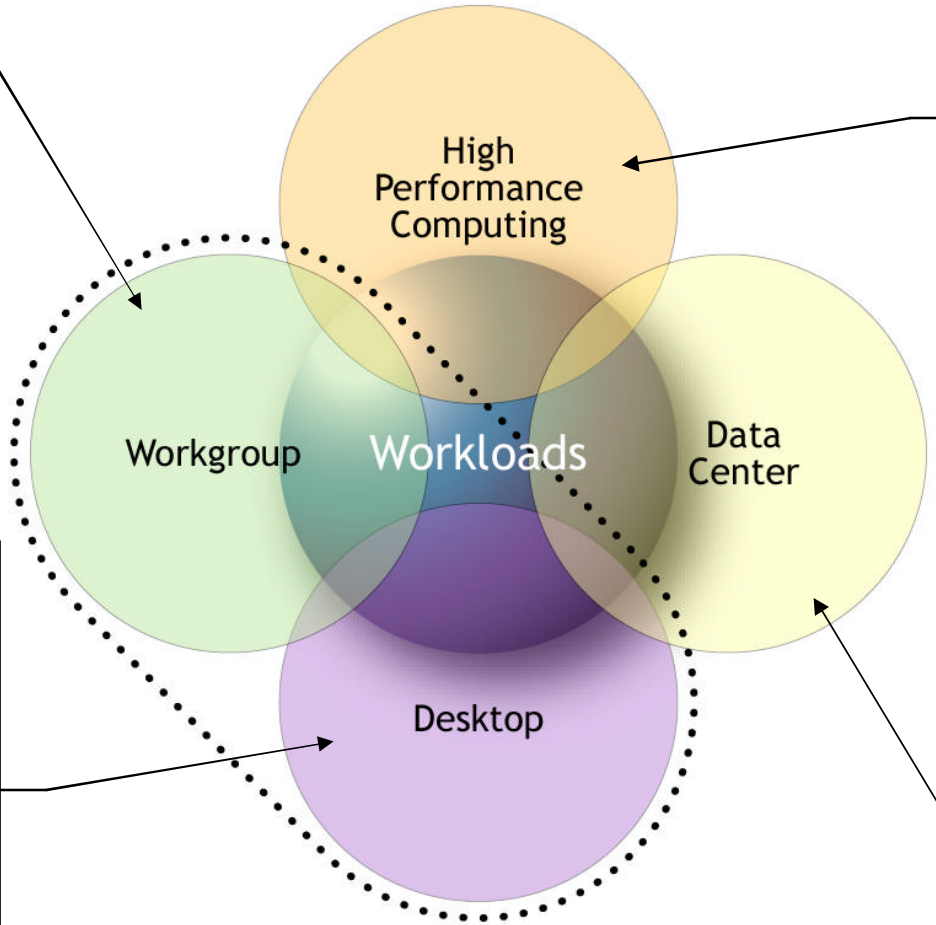
When Do I Use What?

Workloads
introduction to our focus area

Linux – Netware
File & Print Services
Group/Team, VO
CIFS – iFolder
NSS, NCP
Consolidation
Active Migration



Linux Cluster + Interconnect
Policy Driven Scheduling
Grid Resource Management
Web Protocols

Wireless, Rendezvous, Firewire Disk, SyncML, New Devices, Office App, SSO
Search/Indexing, Grid
Dashboard, Organic Teams

Desktop is Framework for:
Oracle Forms,
Portlets/Gadgets, RAD
Components, Web Services

Linux, Oracle, ERP, DSS, CRM
RAC – UNIX/Oracle
SuSE Linux, CFS
SAN & Blades
JBOSS, Web

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Decisions, decisions?
what to use

Which to use?

- "In-place upgrade"
  (now has new, multiple names)
- Migration Wizard
- Server Consolidation

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Upgrade/Migration
what tools are available?

Local Upgrade (In-Place Upgrade)
The Local Upgrade updates the NOS on a single machine, the same piece of hardware gets a new OS.

Migration Wizard
The Migration Wizard takes the identity, DS and all data and moves it to a new piece of hardware. It is an across the wire hardware "swap" utility.

Server Consolidation Utility
The Server Consolidation Utility moved user data, along with all associated meta-data. It can now move files across trees. Copies are non-destructive (source data remains in tact).

Remote Upgrade
The Remote upgrade will allow administrators to upgrade any server in their environment, regardless of location from a centralize location.

Deployment Manager
The Deployment Manager is a tool that prepares your network for the introduction of a new server.

Down Server Upgrade
The ability to restore a non-responding server from a down state by using the Install CD and restoring basic operating system files…also allows you to upgrade at that time.

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Upgrade/Migration
matrix

Source	NW 4.2	NW 5.1	NW 6.0	NW 6.5
NW 3.2	Local Upgrade	Local Upgrade MigWiz 6.0	MigWiz 6.0	MigWiz 6.5
NT 4.0 Domains	N/A	MigWiz 6.0 SCU 2.0	MigWiz 6.0 SCU 2.0	SCU 2.5
NW 4.10	Local Upgrade	SCU 2.0	SCU 2.0	SCU 2.5
NW 4.11	Local Upgrade	Local Upgrade SCU 2.0	SCU 2.0	SCU 2.5
NW 4.2	N/A	Local Upgrade MigWiz 6.0 SCU 2.0	Local Upgrade MigWiz 6.0 SCU 2.0	MigWiz 6.5 SCU 2.5 Down Server Upgrade
NW 5.0	N/A	Local Upgrade MigWiz 6.0 SCU 2.0	Local Upgrade MigWiz 6.0 SCU 2.0	In-Place Upg MigWiz 6.5 SCU 2.5 Down Server upgrade
NW 5.1	N/A	MigWiz 6.0 SCU 2.0	In-Place Upg MigWiz 6.0 SCU 2.0	Remote Upg MigWiz 6.5 SCU 2.5 Down Server upgrade
NW 6.0	N/A	N/A	MigWiz 6.0 SCU 2.0	MigWiz 7.1 Remote Upg SCU 2.5 Down Server upgrade

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Considerations and Tips

Migrations
what should I think about?

- Considerations
  - DS (purge_nw.nlm?)
  - Volumes
  - Prior NOS version
  - Legacy/NSS conversions
- Straight upgrades
  - In place
  - Across the wire
- Consolidations
- Cluster upgrades
- Remote sites

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Upgrade/Migration
common pitfalls

- IP Infrastructure not in place
- Failure to allow DS to synchronize
- Not cleaning up eDirectory problems first
- Not enough free space on SYS volume
- Running RCONSOLE from the server you are upgrading
- Having applications that hold eDirectory open
- Failure to communicate plan to team members
- Have a human onsite at remote locations
- uh…do you have a backup?

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Upgrade/Migration
do this first!

If you are going to do any of these items, do them before you upgrade the server:

- Change server names
- Change server context in eDirectory
- Change server IP addresses

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Upgrade/Migration
clusters

Web based deployment manager

- Launch cluster install and upgrade tools
  - Requires Novell client on desktop

Upgrade from NW5.1 to NW6.5

- Same procedure as NW5.1 to NW6

Upgrade from NW6 to NW6.5

- Rolling server upgrade is supported
  - Upgrade each server in turn
- Cluster operational during upgrade

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Upgrade/Migration
servers

- Downed server upgrade
  - Careful….
  - Follow the TID # 10090315
  - If you don't follow the instructions
    - You will install it as new
      - Not a good thing.

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Upgrade/Migration
cool tools to use

- Toolbox (support.novell.com)
- NoRM (included with NetWare 6.5)
- vnc (www.realvnc.org)
- JCMD.NLM (www.jrbsoftware.com)
- MOUNTDOS.NLM (www.midnighttech.com)
- CPQFM (www.novellshareware.com)
- UltraEdit (www.ultraedit.com)

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Administration
day to day activities

Web Management tips

- Firewall considerations
- Console operator considerations

ConsoleOne tips

iManager Tips

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Server Consolidation Utility
features

Server Consolidation Features

- Many to one
- One to many
- Same eDir tree
- Different eDir trees
- Copies all data
  - Trustees/ownerships/namespace information

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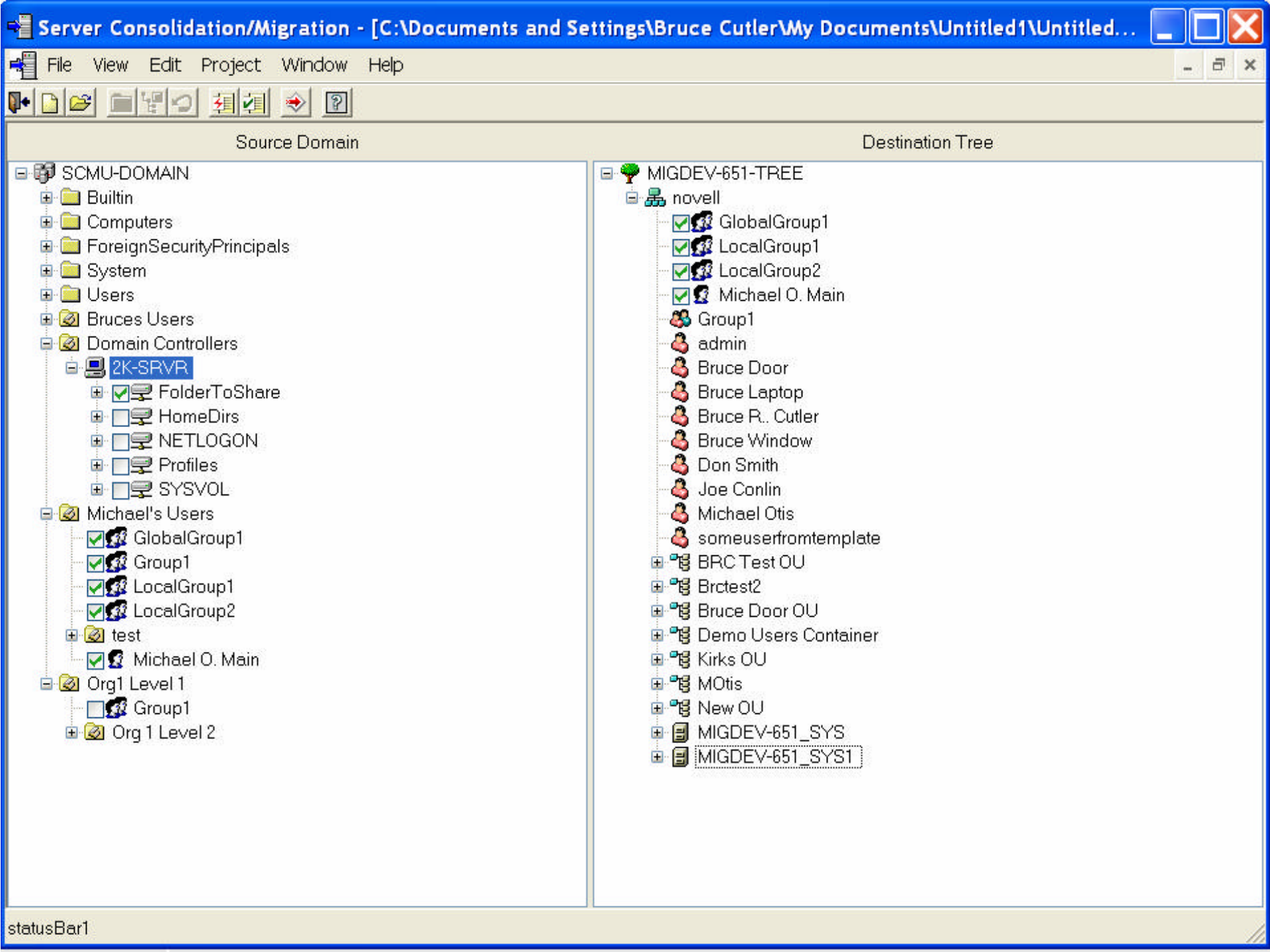
Server Consolidation/Migration - [C:\Documents and Settings\Bruce Cutler\My Documents\Untitled1\Untitled...
File View Edit Project Window Help
Source Domain
Destination Tree
SCMU-DOMAIN
Builtin
Computers
ForeignSecurityPrincipals
System
Users
Bruces Users
Domain Controllers
2K-SRVR
FolderToShare
HomeDirs
NETLOGON
Profiles
SYSVOL
Michael's Users
GlobalGroup1
Group1
LocalGroup1
LocalGroup2
test
Michael O. Main
Org1 Level 1
Group1
Org 1 Level 2
MIGDEV-651-TREE
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GlobalGroup1
LocalGroup1
LocalGroup2
Michael O. Main
Group1
admin
Bruce Door
Bruce Laptop
Bruce R.. Cutler
Bruce Window
Don Smith
Joe Conlin
Michael Otis
someuserfromtemplate
BRC Test OU
Brctest2
Bruce Door OU
Demo Users Container
Kirks OU
MOtis
New OU
MIGDEV-651_SYS
MIGDEV-651_SYS1
statusBar1

Server Consolidation Utility
copy file data

File system

- All stream data
- All meta-data
  - Trustees
  - Ownerships
  - User space restrictions
  - Name space information (Macintosh)

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Server Consolidation Utility

copy directory data

Match-up objects

Must be trustees

Can create

- Users
- Groups

Trick

- One dummy group for users or groups not assigned as trustees

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Server Consolidation Utility
bells & whistles

File synchronization

- Delete on destination if deleted on source

File comparison

- Compare meta-data
  - Trustees/ownerships/date/time/size
- Compare all file information
  - Byte-by-byte comparison
  - First difference stops compare

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Server Consolidation Utility
more bells & whistles

Date ranges

- Last accessed/modified/created dates

Wildcard list

- Exlusion list
  - *.mp3
  - *.bak
  - Specific.file

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Server Consolidation Utility
command line options

Scheduled tasks

- Program/Accessories/System Tools/Scheduled Tasks
- Add scheduled task
- Follow wizard
  - Enter project name
  - The letter Y, to automatically run the selected Server Consolidation project.
  - The password for the admin on the source server.
  - The password for the admin on the destination server

See:

http://www.novell.com/documentation/lg/servercon26/index.html

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Server Consolidation Utility
other features

Microsoft Active Directory to NetWare

Similar to NT to NetWare

- Users
- Groups
- File system including permissions
- Containers (users and groups only)

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Novell Tools
for your reference/use

Web Resources – to get the latest versions:

http://download.novell.com

- Select "NetWare Migration Wizard" (or)
- Select "Novell NetWare Server Consolidation"
- Docs for both of these are at http://support.novell.com/documentation

Cool Solutions tools by tool name:
http://www.novell.com/coolsolutions/tools/

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Novell Support
for your reference

More resources:

Novell Support Forums:

http://support.novell.com/forums

Latest Downloads:

http://download.novell.com

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Novell TIDs
for your reference/review

TIDs (enter number in support.novell.com search field)

- DS Maint procedure – see TID 10010933
- DS Health Check – see TID 10060600
- NW6 licensing explained – TID 10065536
- Trustee NLM - see TID 2967610
- Toolbox NLM - see TID 2958910
- TBACKUP.EXE - see TID 2937757

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Third Party Tools
for your reference

Portlock Storage Manager

http://www.portlock.com

PowerQuest ServerMagic 6 for NetWare

http://www.powerquest.com

VMWare workstation 4.0

http://www.vmware.com

JRB Utilities

http://www.jrbsoftware.com

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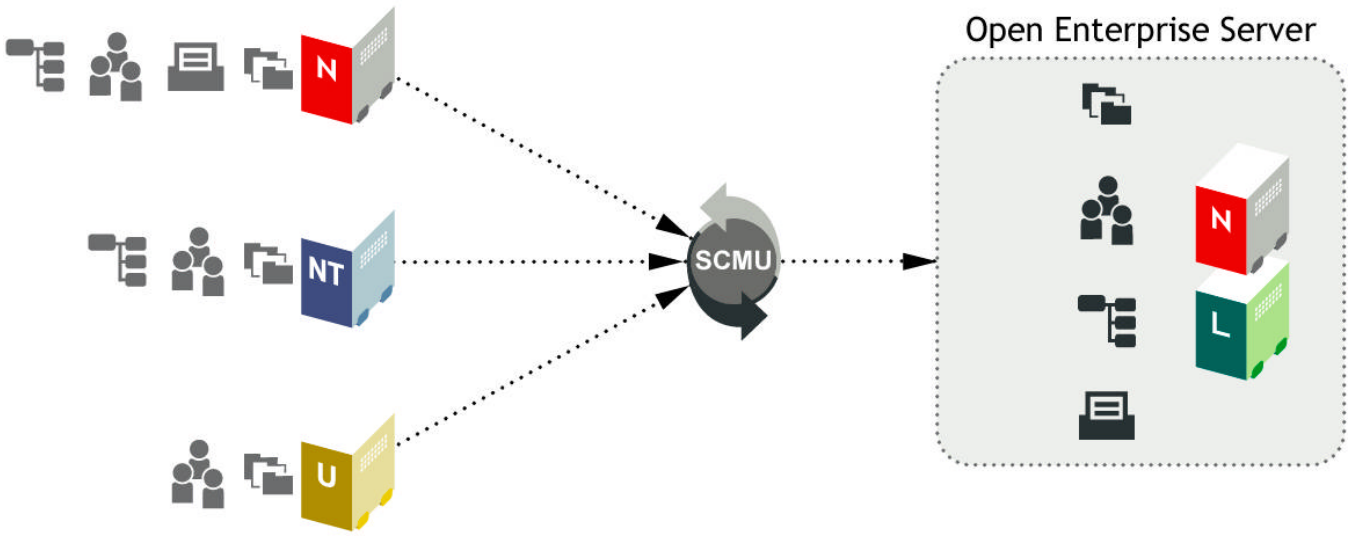
Futures

Server Consolidation Utility
what it does



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Server Tools
futures

NetWare Install/Upgrades

- NIS - Continued support
- RPMs – future support

NetWare Migration Wizard

- NetWare to NetWare - Continued support
- Hardware/OS upgrades

Services Consolidation / Migration Utility (SCMU)

- Multiple sources/destinations
  - AD to OES
  - *nix to OES
  - NetWare to OES
- Non-destructive
- Co-existence

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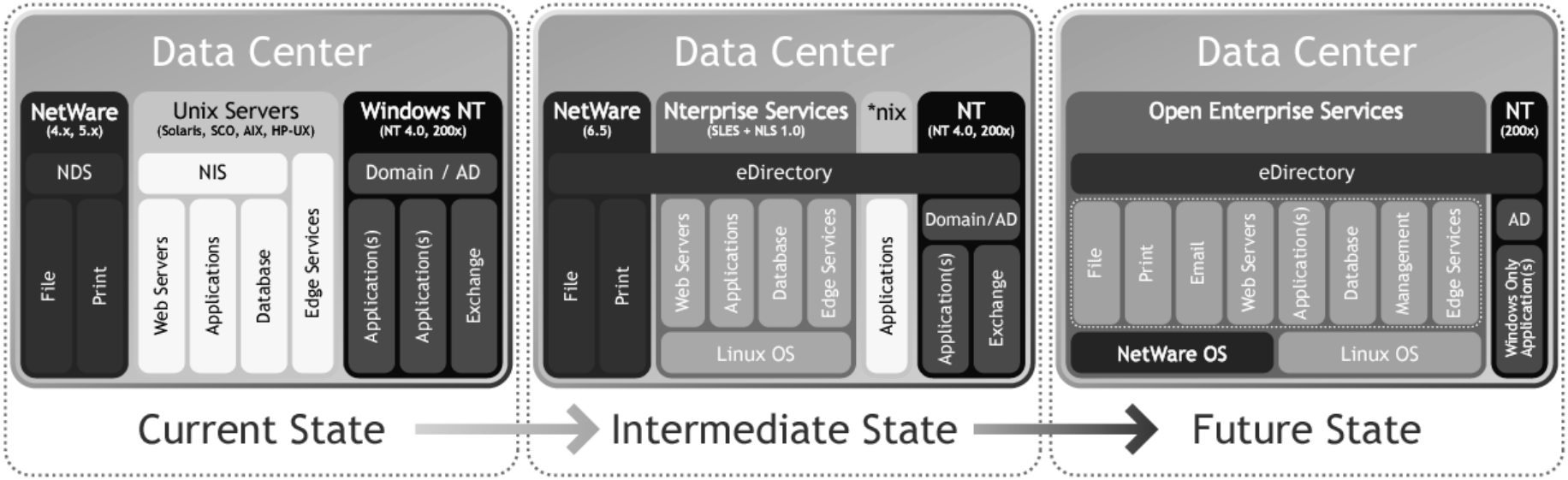
Migration Strategy

one approach - transitional



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