

Plan, Deploy and Manage Windows 2000 and Active Directory

Do It Right the First Time



SOLUTIONS FOR MICROSOFT

- **Windows**
 - Plan, Deploy & Manage
 - Windows NT4, Windows 2000, Active Directory
- **Exchange**
 - Plan, Deploy & Manage
 - Exchange 5.5, Exchange 2000, Mobile Information Server
- **SQL Server**
 - Manage performance and availability
 - SQL Server 6.5, 7.0, 2000

DEPLOYMENT & ADMINISTRATION

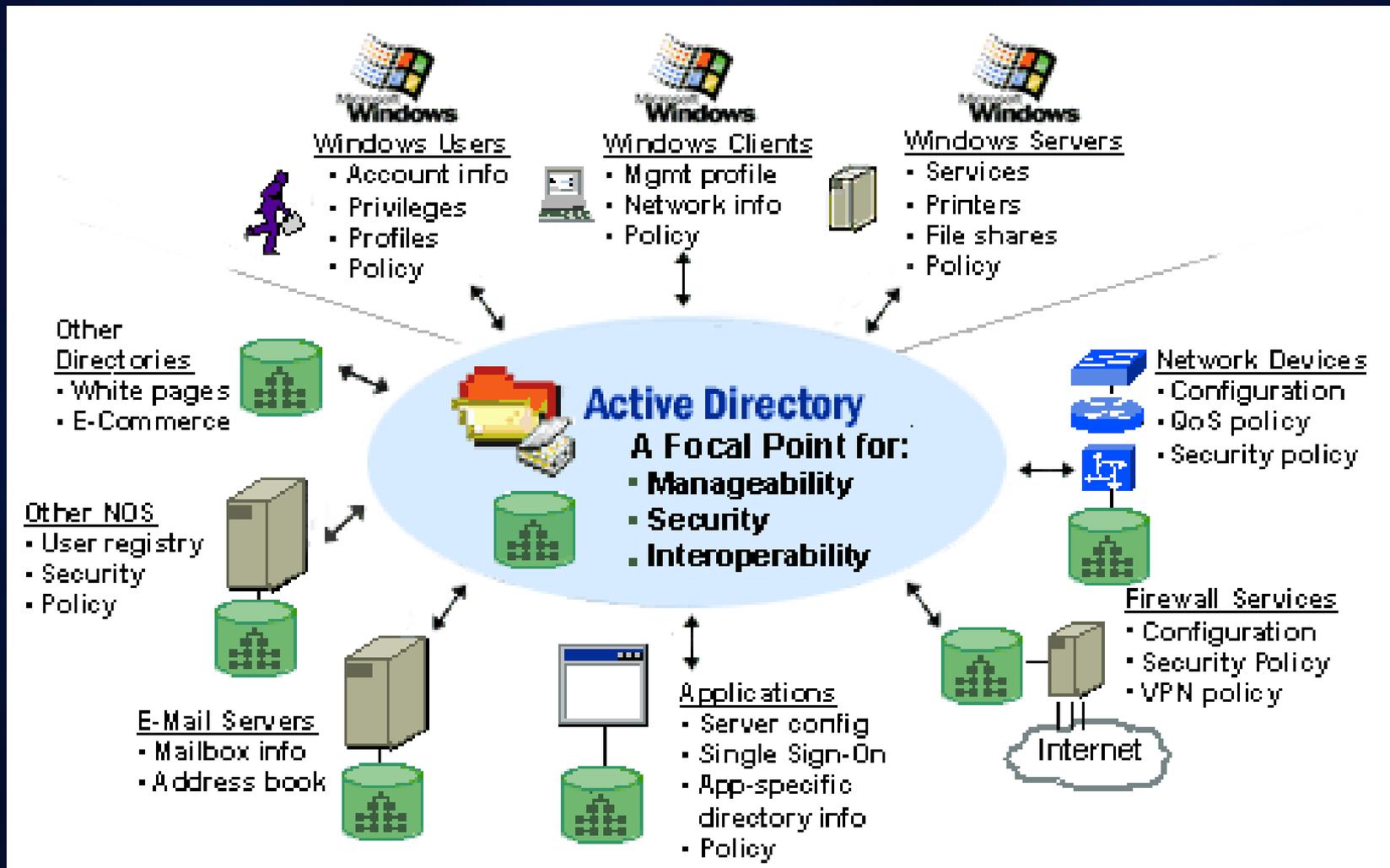
- Facilitates the management of your Microsoft infrastructures
 - Reduce the cost & effort of Windows 2000 and Exchange 2000 migrations
 - Simplify and automate management of Active Directory
 - Satisfies need for complete methodology

PLAN, DEPLOY & MANAGE

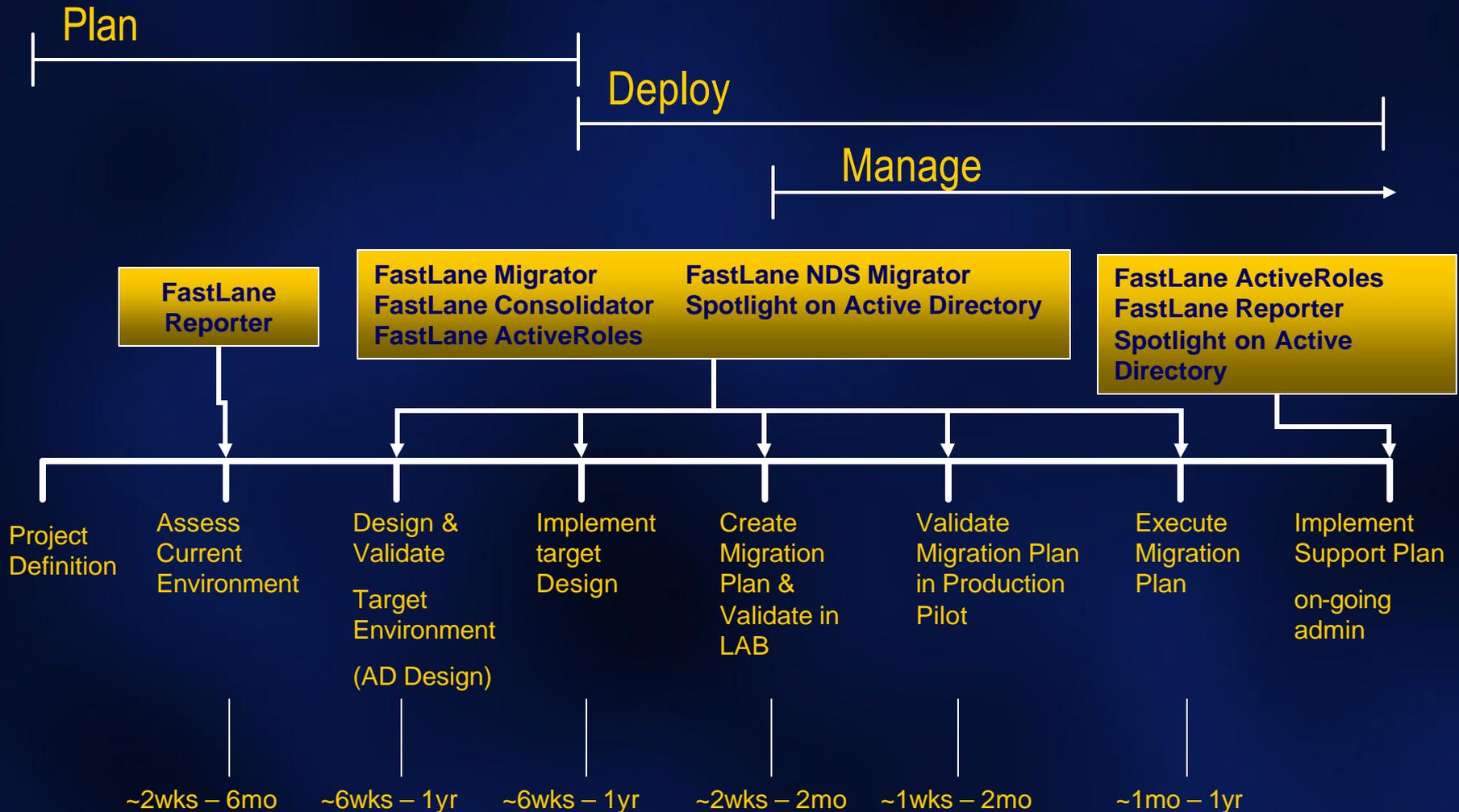
Active Directory → ROI

- Proper and thorough deployment of Active Directory enables you to reap the maximum benefits of Windows 2000 and Exchange 2000 and the highest ROI

MICROSOFT: ACTIVE DIRECTORY VISION



W2K MIGRATION METHODOLOGY



PLAN

- More political than technical
 - Agree on domain & OU structure
- Determine connectivity requirements
 - Very different than NT 4.0
- Network inventory is key
- DNS integration
 - UNIX & MS people have different views
- Replication testing

DEPLOY

- First, set up helpdesk and administration
 - Make sure you are ready to manage large numbers of users
 - Delegate administration properly
 - Lockdown the environment with GPO from the outset
- Migrate users, groups and computers into AD

MANAGE WHILE YOU MIGRATE

During Deployment

- Helpdesk must be operational
- Desktops & servers must be locked down with GPO
- Service Levels must be met
- Migration must not hamper the business

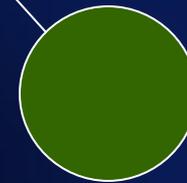
Highlighted Issues

- Helpdesk experience during deployment
- GPO lockdown and RSoP analysis
- Web-based administration for the helpdesk

MANAGE WHILE YOU MIGRATE

1. Deploy Domains & OUs
2. Migrate helpdesk
3. Deploy native AD delegation and Group Policy settings with FastLane® Active Directory
4. Migrate end users and computers

Results: Users are properly managed by Helpdesk as they arrive in AD; Computers are locked down as soon as they arrive in AD



AD MANAGEMENT CHALLENGES

- Active Directory administration is too complex
- Group Policy administration is too complex
- Data integrity enforcement is not provided in Microsoft's Active Directory

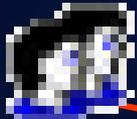
SOLUTION: FASTLANE ACTIVEROLES

- “Role-based” administration to drastically simplify management of AD
- **ActiveRSoP** and **ActivePolicies** ease deployment and management costs of Group Policy
- **Business Rules** enforce data integrity within AD



ROLE-BASED ADMINISTRATION

ActiveRoles



Central Help Desk Group



East Coast Help Desk Group



West Coast HR Manager



California HR Administrators Group



Computer Vendor Installation Technician

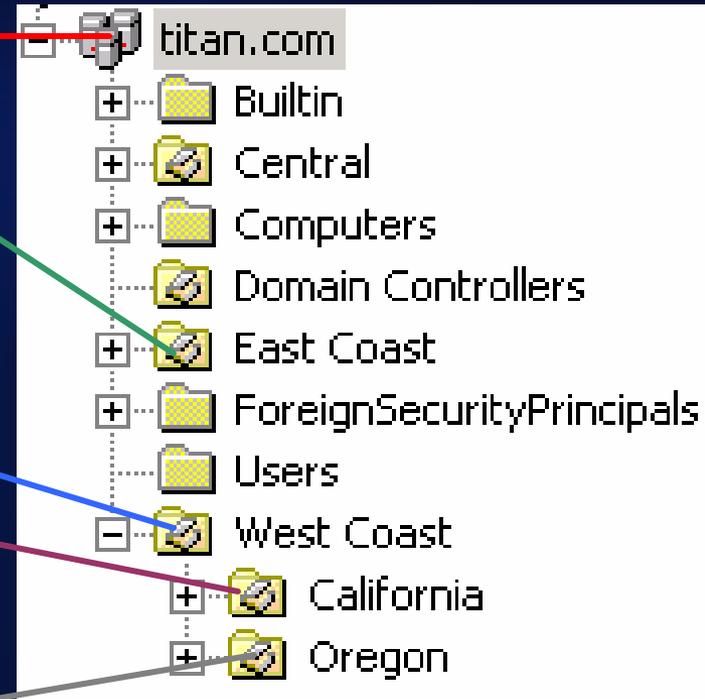
Group Membership & User Password Management Role



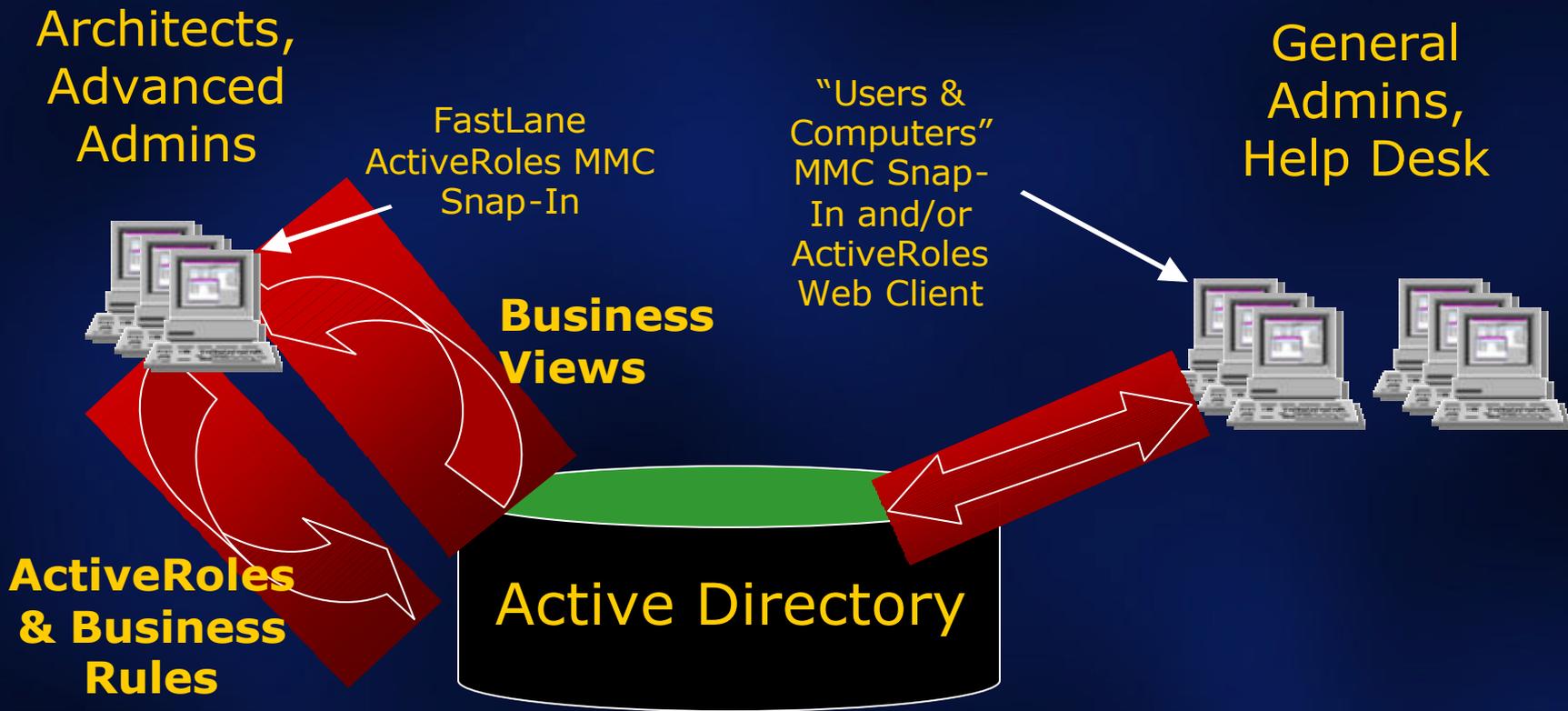
Human Resources User Management Role



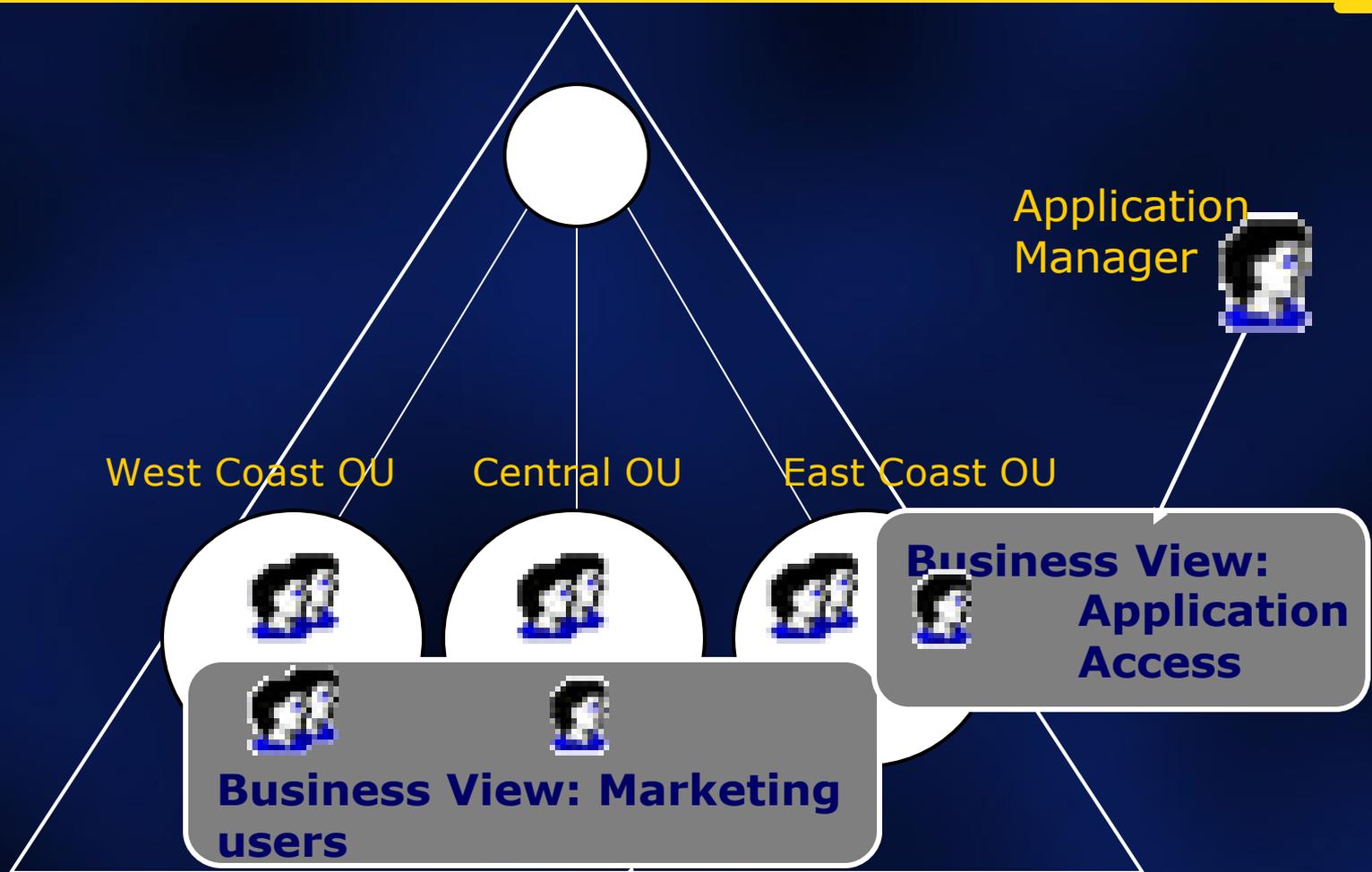
Computer Account Creation Role



DIRECTORY-ENABLED MANAGEMENT



BUSINESS VIEWS



BUSINESS RULES: CREATION TEMPLATES

Pre-defined Object Templates



Sales User Template



London User Template



Distribution Group
Template

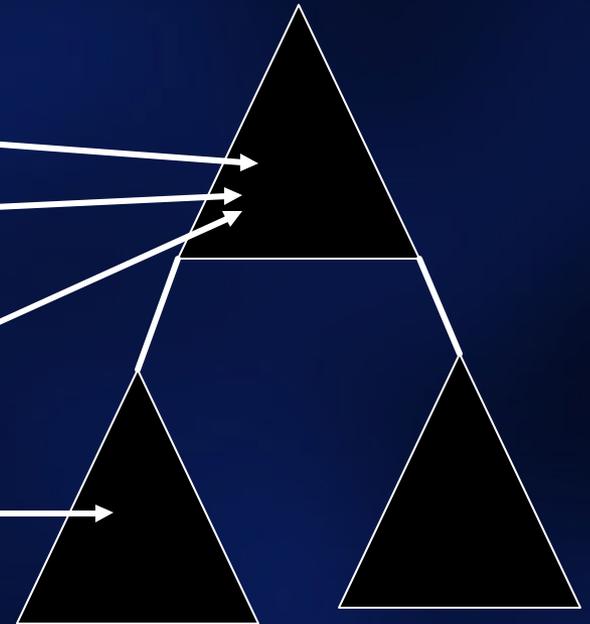


Production Line Workstation
Template

Help Desk



Active Directory



BUSINESS RULES: ONGOING

Bernhard Hadley Properties [?] [X]

Member Of | Dial-in | Environment | Sessions

Remote control | Terminal Services Profile

General | Address | Account | Profile | Telephones | Organization

 Bernhard Hadley

First name: Initials:

Last name:

Display name:

Description:

Office:

Telephone number:

E-mail:

Web page:

OK Cancel Apply

First letter of first name +
last name@titan.com

Cannot be blank

Must contain 1-###-
###-####

www.titan.com/news/

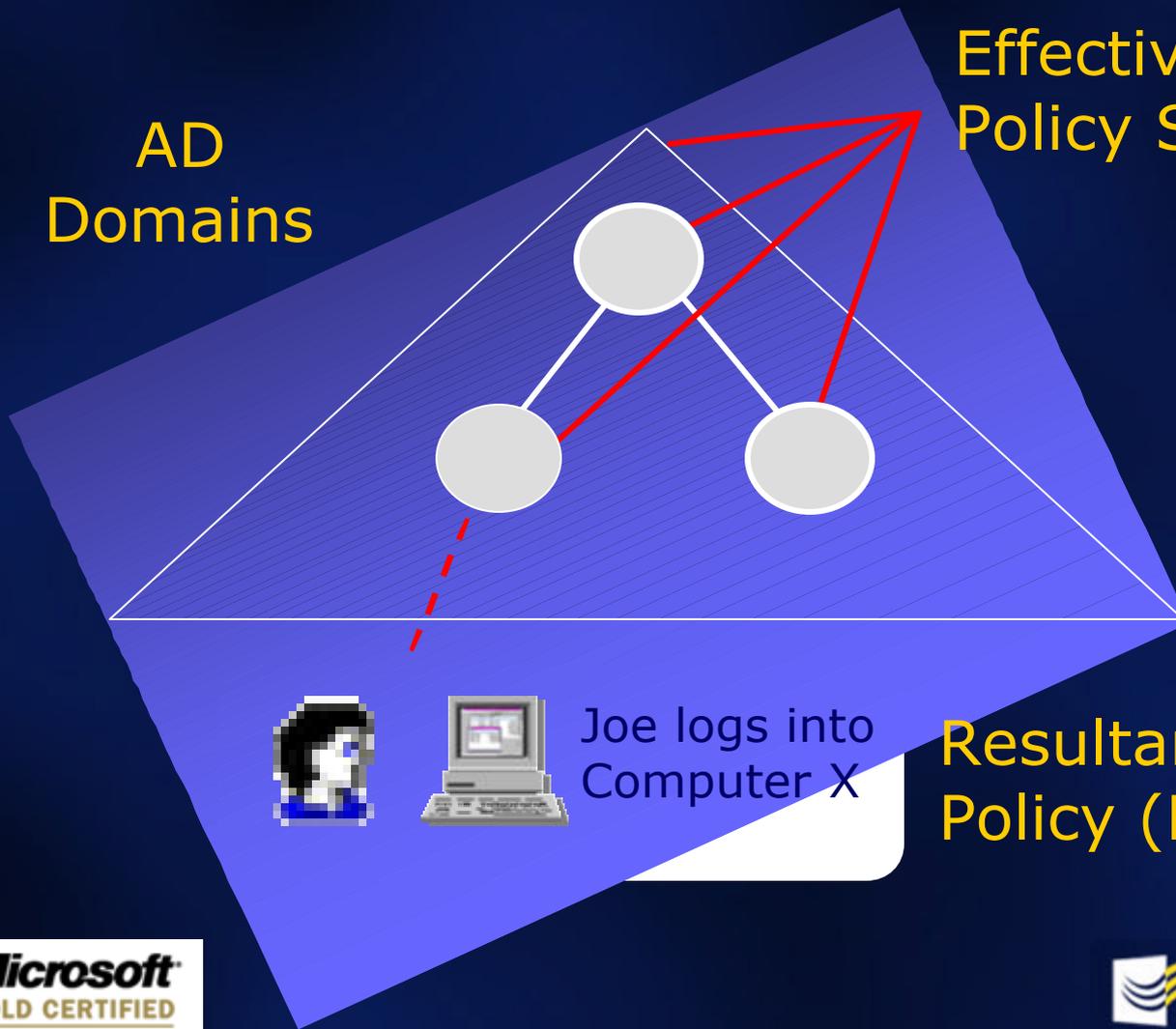
GPO CHALLENGES

- RSoP information
 - Must calculate effective and resultant set of policy to truly understand effects of GPO deployments and GPO modifications
- Mirroring GPOs across domains
 - Applying similar Group Policy settings across multiple AD Domains requires time consuming checking and setting of individual GPO components
 - Linking GPOs across AD domains is not recommended

EFFECTIVE & RESULTANT SETS OF POLICY

AD
Domains

Effective
Policy Settings



Resultant Set of
Policy (RSoP)

ACTIVERSOP

- ActiveRSOP automates calculations of Effective and Resultant Set of Policy over any object in AD

What if....

- This user logs into this computer?
- Any user logs into this computer?
- This user or computer get added to this group/OU?
- The user authenticates against a DC in another site?

ACTIVEPOLICIES

- ActivePolicies creates templates that can be defined once and applied dynamically to GPOs in multiple domains
 - Eases initial deployment of GPOs
 - Automates updates to GPOs in multiple domains
 - Logically segments the areas of GPO management

FASTLANE ACTIVEROLES SUMMARY

- “Role-based” administration
- GPO management
- Business Rules

- Drastically simplifies access control management
- Makes Group Policy manageable
- Eliminates directory pollution

DEPLOY

- First, set up helpdesk and administration
- Migrate users, groups and computers into AD
 - Rationalize the exchange org/server structure

THREE MIGRATION SCENARIOS

- In-place Upgrade
 - Upgrade your current domains
- Incremental Upgrade
 - Move NT 4.0 data over to a new Windows 2000 Forest as slowly, as required
- Hybrid Upgrade
 - Upgrade existing NT domains to Windows 2000, consolidate these into a new Windows 2000 Forest

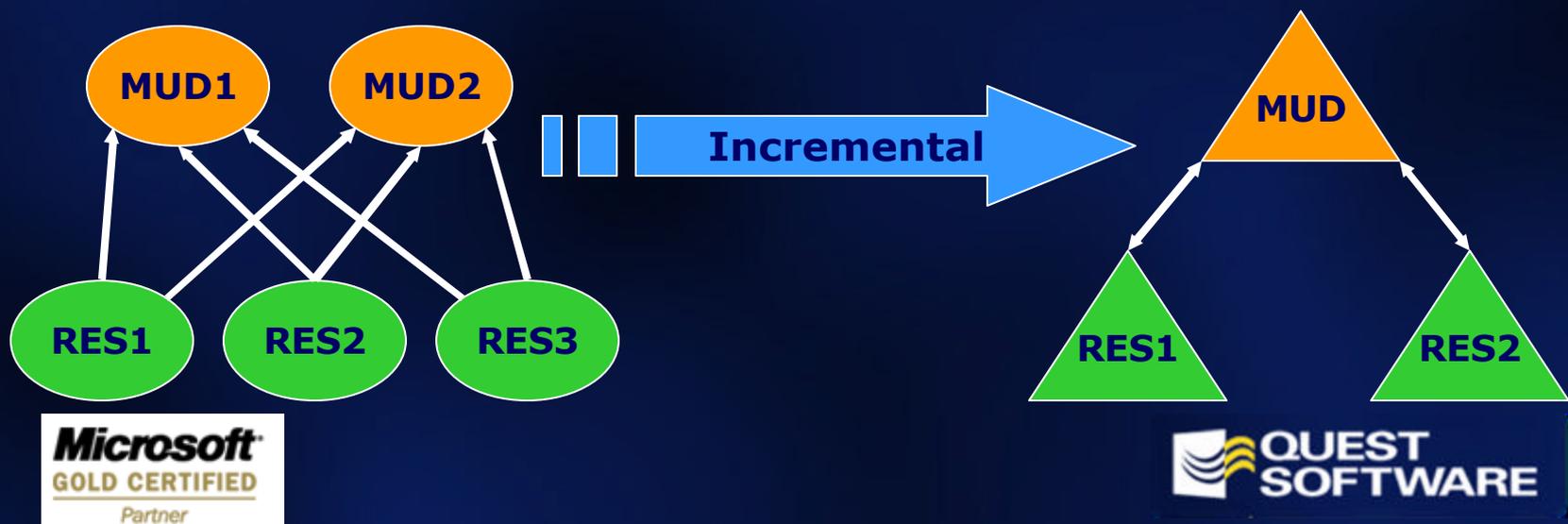
IN-PLACE UPGRADE

- Original upgrade scenario proposed by Microsoft
- Easiest method to upgrade
- Requires an existing NT domain structure that maps directly to AD



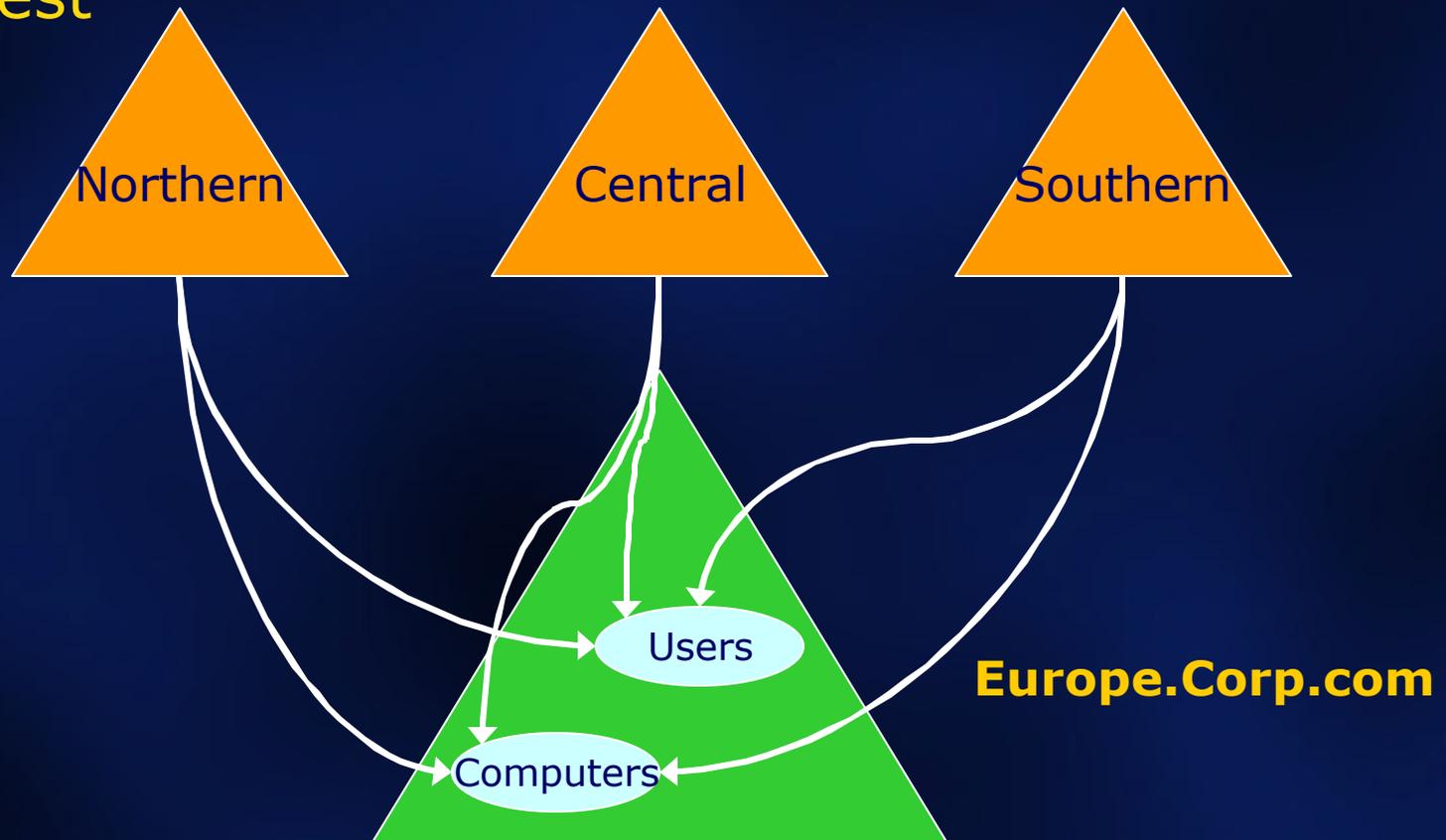
INCREMENTAL UPGRADE

- Requested by large RDP/JDPs
- Restructuring scenario
- Gradually move users, groups and computers between domains
- Provides a complete fall-back NT 4.0 structure
- Design an ideal 'pristine' forest



HYBRID UPGRADE

- Upgraded NT 4 Domains Migrated to Single AD Forest



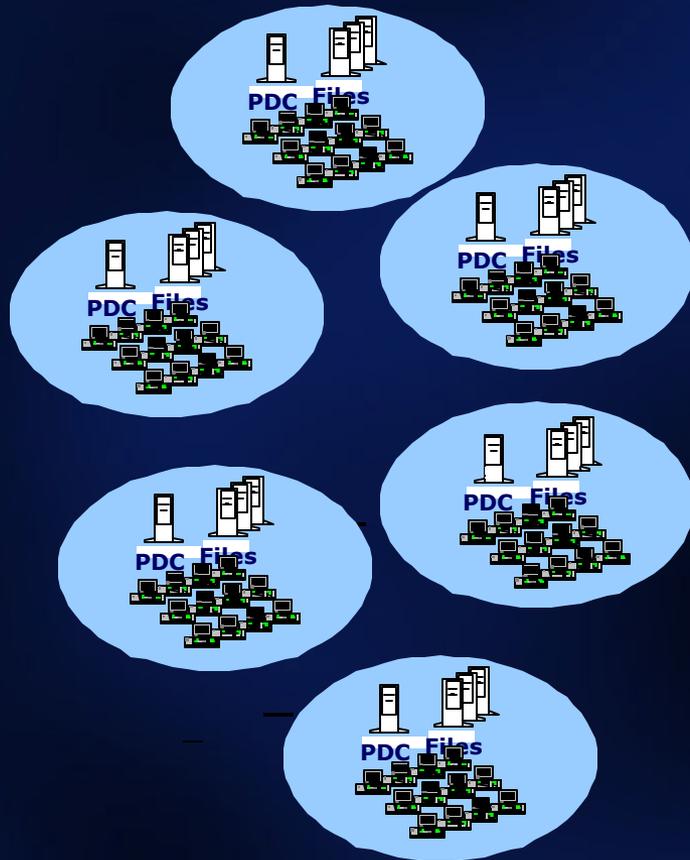
LET'S DIG A LITTLE DEEPER

- In-Place Upgrade
- Incremental Upgrade
- Hybrid Upgrade

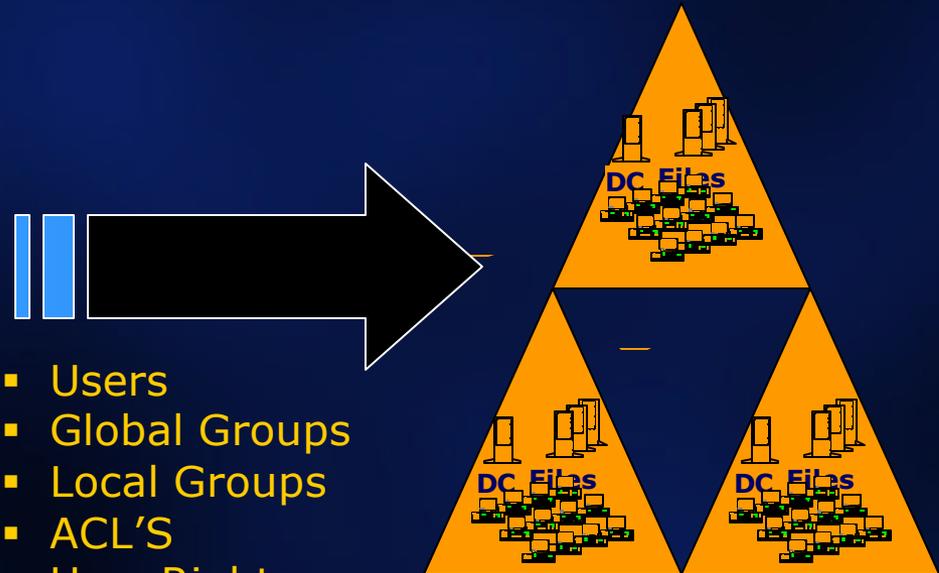


CONSOLIDATING DOMAINS

Source Domains



Target Windows 2000 Domain Structure



- Users
- Global Groups
- Local Groups
- ACL'S
- User Rights
- Users Profiles
- Exchange
- PDC-BDC
- Move Computer

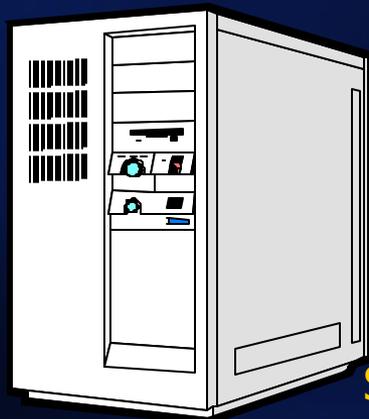
TO UPDATE OR NOT TO UPDATE

- New Windows 2000 accounts → new SIDs
- Need to maintain access to resources
- Before Windows 2000, this meant updating SIDs contained in resource permissions
- For some organizations, SID updating is not practical
 - Too time consuming
 - No administrative access to resources

WHAT IS A SID HISTORY

In Windows NT 4.0

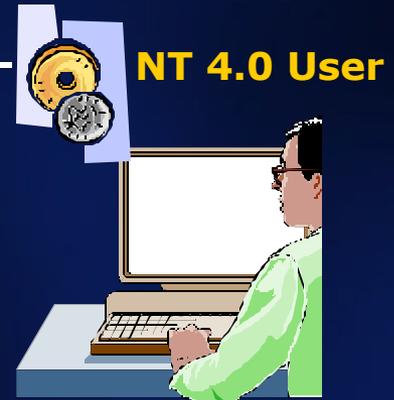
- User is given a token during login
- Username + Password = Token
- Resources reference tokens for access (files, group memberships, etc.)



Server

User shows token
to resources for
access

NT 4.0 SID

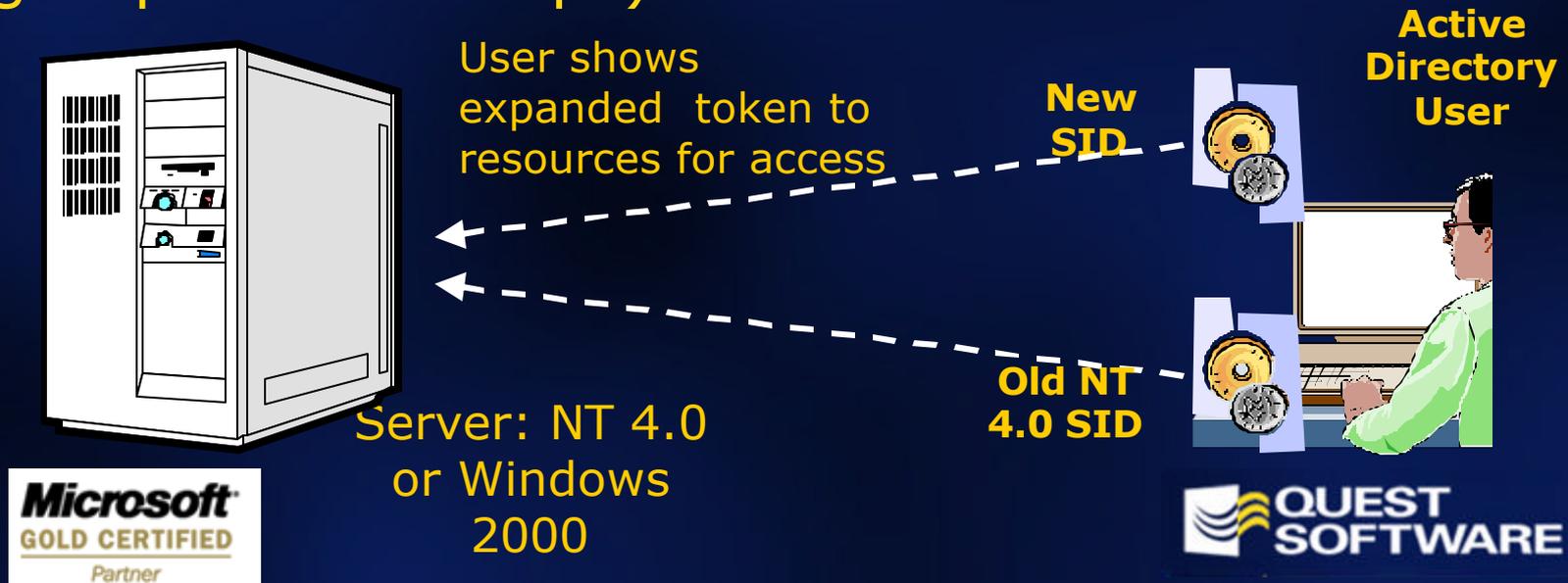


NT 4.0 User

WHAT IS A SID HISTORY

In Windows 2000

- User can maintain his/her NT 4.0 identity in Active Directory account token
- Users can use NT 4.0 or AD identity for access
- Resources reference token(s) for access (files, group memberships)



WHEN CAN YOU USE SID HISTORY

- Target domain is an Active Directory domain
- Target domain is running in native mode
- Source and target domains are in different Forests (NT 4.0 to AD will work)
- All server settings are configured properly
 - Ex. Auditing is enabled

WHAT ABOUT EXCHANGE 2000

- Exchange 2000: first extensive application to make use of Active Directory
- Requires a properly configured and managed AD Forest before being deployed
- Allows for integrated email/account management

MIGRATION CHALLENGES

- Enterprise customers want to automate migration task
- Project management is a must
- Must include Exchange 2000 capabilities
- Organizations need to move from many standalone NT 4.0 domains to a unified, hierarchical Active Directory

SOLUTION: FASTLANE MIGRATOR

- Fully automates migration to Active Directory
- Provides best project tracking solution
- Supports the most migration scenarios



FASTLANE MIGRATOR

KEY FEATURES

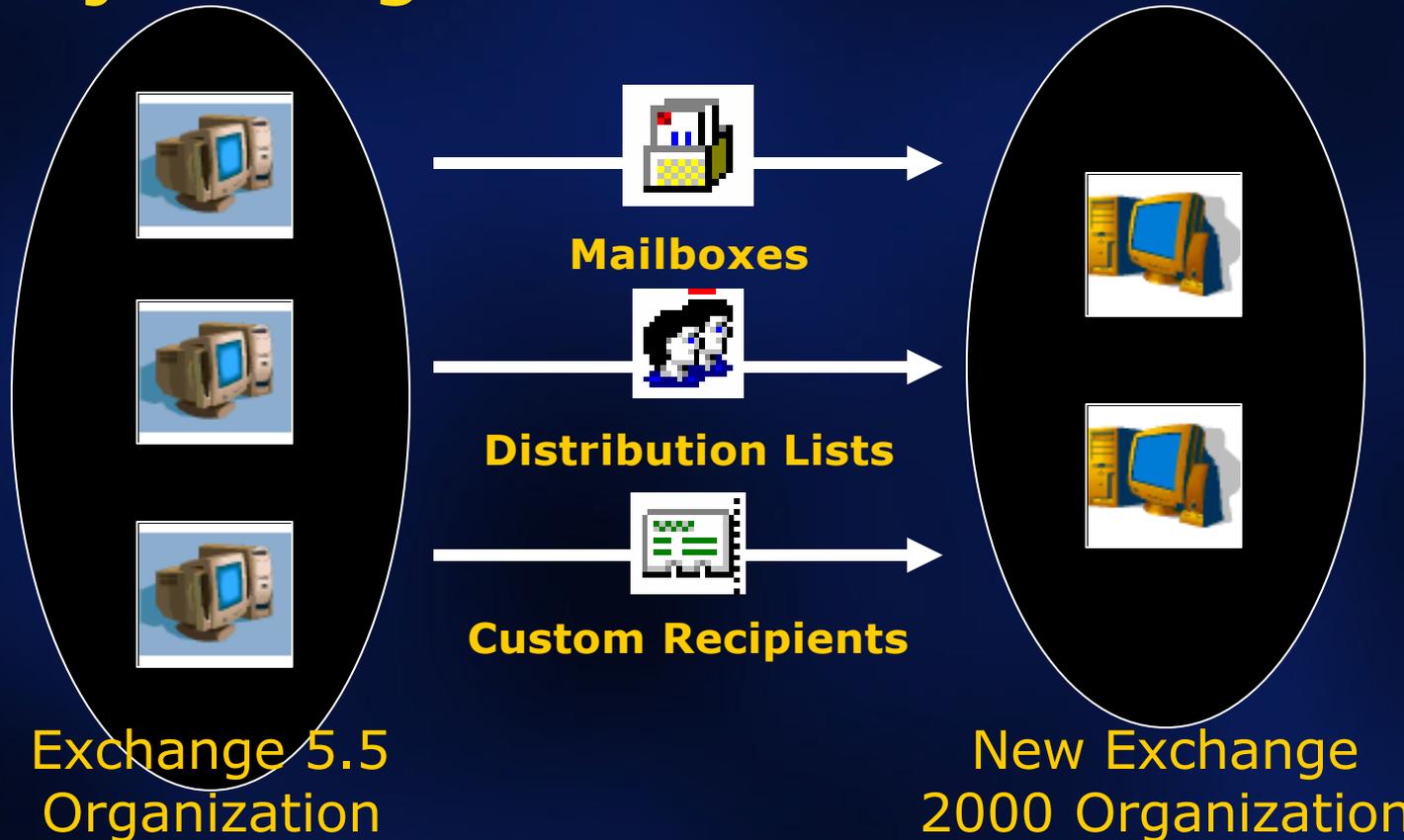
- Distributed project management
- Dual Mode accounts migrations
 - Project-based
 - Drag-and-drop
- Supports multiple Exchange 2000 scenarios
- Exchange mailbox migration
- Gathering data from multiple data sources

EXCHANGE 2000 MIGRATIONS

- Comprehensive features for migrations to new Exchange 2000 Organizations
 - Object Migration
 - Distribution Lists/Custom Recipients/Mailboxes
 - Public Folder Migration
 - Message Migration through integration with Microsoft's Exchange 5.5 Migration Wizard (E2K SP1)
 - Automated Auto-forwarding
 - Flexibility for resetting permissions, filtering and project approach
 - Undo failed projects
 - Command Line interfaces

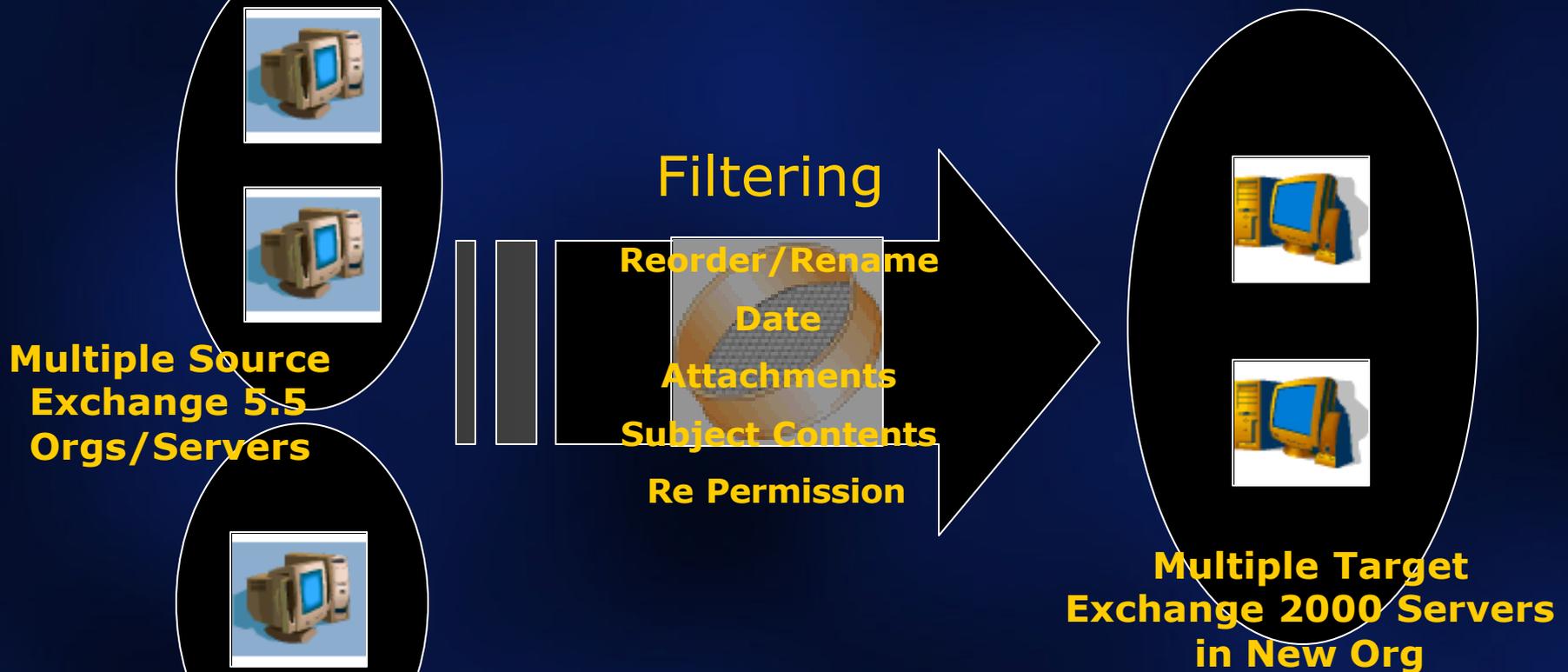
OBJECT MIGRATION SOLUTIONS

- Object Migration

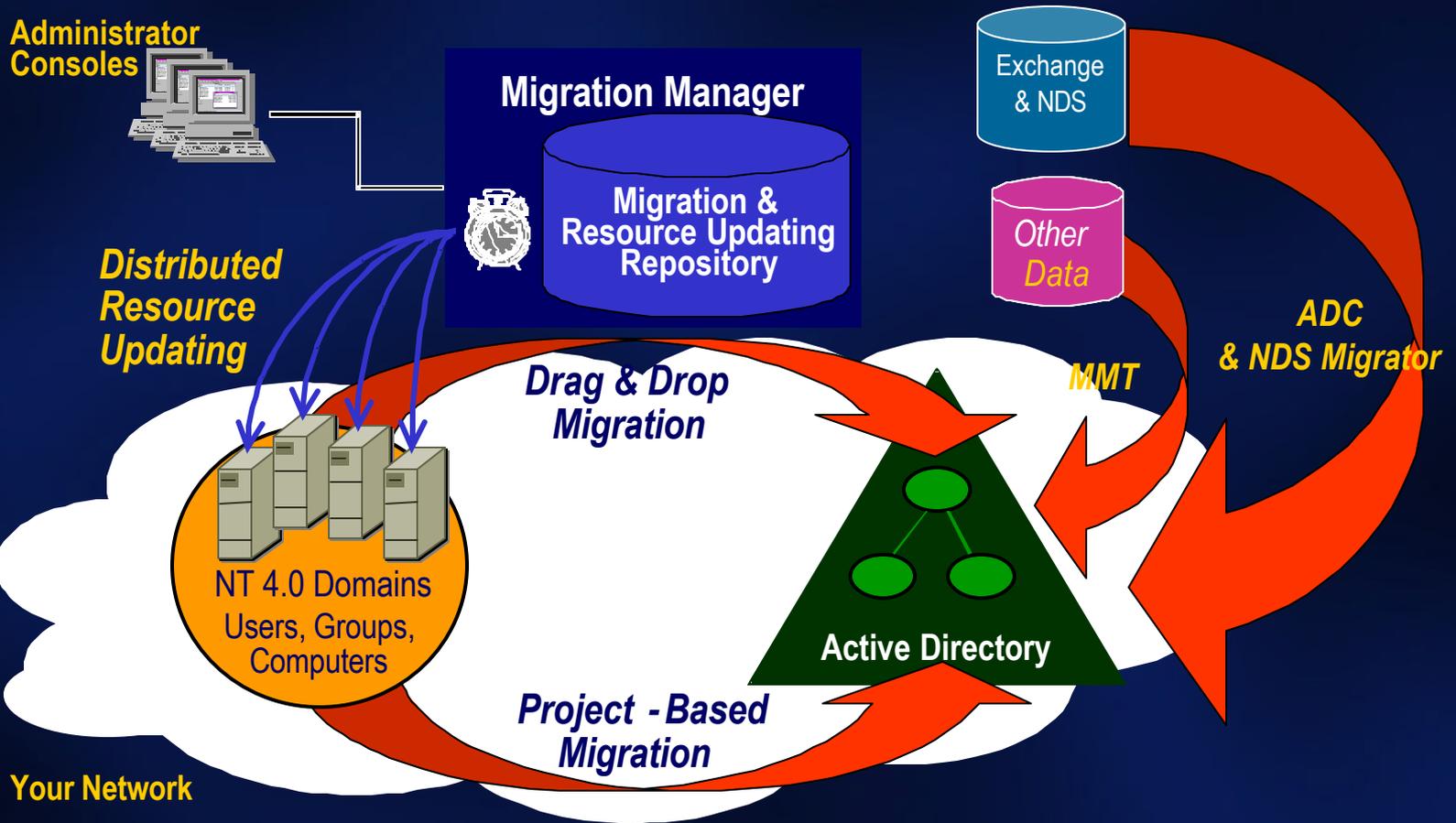


PUBLIC FOLDER MIGRATION SOLUTION

Public Folder Migration

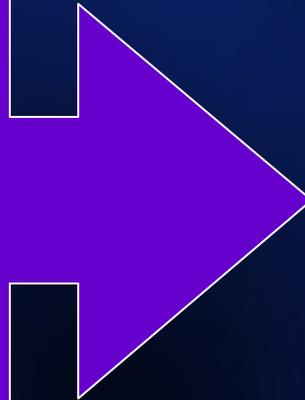


FASTLANE MIGRATOR ARCHITECTURE



FASTLANE MIGRATOR SUMMARY

- Project tracking
- Dual Mode Migrations
 - Project-based
 - Drag-and-drop
- Exchange 2000 migrations
- Gathers data from multiple data sources



- Reduces cost of migration effort
- Flexible to match project needs
- Covers all account and mailbox migration needs

MANAGE

- Manage AD security & enforce policy on AD objects
 - FastLane® ActiveRoles



Diagnose root cause and resolve AD problems

- Automate security auditing

ACTIVE DIRECTORY CHALLENGES

- True multi-master directory with complex interactions
- Replication problems are hard to detect and diagnose root cause
- Unattended monitors can notify you of a problem, but there are no tools to help diagnose and resolve problems

SOLUTION: SPOTLIGHT™ ON ACTIVE DIRECTORY

- A graphical interface to expose the real-time key operations of AD Domain Controllers
- Full instrumentation of all replication operations with detailed drill-downs
- Designed to diagnose, provide 'next step' info and enable resolution of problems

SPOTLIGHT™ ON ACTIVE DIRECTORY

ddavis1

Network

Connected Users: **2**

LDAP Client Sessions: **32**

Last LDAP Bind:

Theoretical Bandwidth Limit: 0.61 MBit / sec

DNS Entries: **DNS Not Registered**

Ping Time:

NTLM Auths:

Kerberos Auths:

LDAP Queries:

GC Response Time:

Inbound: Bytes

Outbound: Bytes

LSASS

CPU Usage: **0 %**

Physical RAM: **Total: 511 MB, Used: 36 MB**

Cache Hits:

Bytes Read:

Bytes Written:

NFSRS

CPU Usage: **0 %**

Physical RAM: **Total: 511 MB, Used: 2 MB**

Cache Hits:

Bytes Read:

Bytes Written:

Replication Queue:

AD Store

Database Size: **28 MB**

Database Drive Space: **Free: 2,905 MB, Total: 16,002 MB**

Objects Applied: **0**

Remaining Objects:

Operating System

CPU Usage: **8 %**

Physical RAM: **Total: 511 MB, Used: 287 MB**

Processes: **49**

Processor Queue Length:

Event Log

Event Log

Active Directory

Active Replication Links: **2**

FSMO Roles: **P R I D S**

MANAGE

- Manage AD security & enforce policy on AD objects
 - FastLane[®] ActiveRoles
- Diagnose root cause and resolve AD problems
 - Spotlight[™] on Active Directory

Automate security auditing

SECURITY CHALLENGES

- Administrators and security officers need to secure and standardize their Microsoft environments
 - Fully interrogate security of critical network components and sensitive data

SECURITY CHALLENGES

- Find user accounts that...
 - Have null passwords
 - Haven't been used in 3 months
 - Are disabled/locked out
- Know who has elevated administrative rights
- Check sensitive group memberships

SOLUTION: FASTLANE REPORTER

Enables administrators and security officers to secure and standardize Microsoft environments



Mandate

Audit

Take Action

Corporate IT
and security
policy

Collect information,
track changes,
highlight exceptions

Specialty tools,
native tools



SPECIFIC SECURITY REPORTS

- Find which users have null passwords
- Find which users have admin rights on servers
- Find which users have access to key mailboxes
- Find contract employees' accounts without expiration dates
- Find shares where "Everyone" has full control

ADMP

Active Directory Migration & Management Program

- You need a solid Active Directory design that will maximize your Windows 2000 migration investment
- Register online at www.quest.com/admp to receive corresponding perpetual licenses of FastLane® Migrator for FREE with the purchase of:
 - award winning FastLane ActiveRoles
 - FastLane Consolidator
 - FastLane Reporter
 - or Spotlight™ on Active Directory

DEPLOYMENT & ADMIN. BENEFITS

- Automate time-consuming tasks
 - Simplify management
 - Tighten security

Server Consolidation

REASONS FOR CONSOLIDATION

- Consolidating servers to save money
 - Less servers = less cost
- Moving to a SAN or NAS storage solution
- Rolling out Windows 2000
 - Current file servers can not handle Windows 2000
 - Must rationalize file & print servers

DATA MIGRATION CHALLENGES

- **Maintaining security**
 - File and directory permissions
 - Local group access
 - Shares and share permissions
- **Maintaining user access to data**
 - Network resource downtime is bad
 - Reduces organization's productivity
 - Generates floods of help desk calls

SOLUTION: FASTLANE CONSOLIDATOR

Dedicated storage consolidation solution:

- Migrate files all security parameters
 - Completely automated
- Keep the data on-line during migration
 - *"We move it while you use it"*
- Minimize migration impact on network performance
- Minimize manual effort

BOEING

- Customer reason/need to consolidate servers:
 - Migrating to Compaq's StorageWorks Storage Area Network
 - Upgrade storage
 - Lower TCO
- Number of servers to consolidate: from 240 servers to 5 servers
- Quest Applications deployed:
 - FastLane Consolidator
- Outcome:
 - Moving 150 shares/server
 - Created 14 virtual servers/cluster each with 130GB
 - Nodes are 60-70% fill rate

GARTNER ON SERVER CONSOLIDATION

“Our TCO model shows that increasing the average number of users per server from 75 to 300 can **reduce server TCO by 44 percent and LAN TCO by 15 percent.**”

Gartner Group: “Lowering TCO with NT”
Mike Silver, March 1999

MIGRATION FLEXIBILITY

NT/W2K
Sources



Network
Appliance
FILER



NT/W2K
Targets



Network
Appliance
FILER



- Any source to any target
- Prune and graft **parts** of files systems -
- Consolidator picks up where many traditional methods (tape back-up and ghosting) break down

FASTLANE CONSOLIDATOR SUMMARY

- Automatically maintains security and permission
- Keeps the data online during migration
- Minimize migration effect on network performance
- Minimize manual effort

- Reduce the cost of migrating data to SAN/NAS devices
- Reduce the number of servers in your environment
- Rationalize your file & print servers as you move to W2K



Performance Management Solutions

The Application Infrastructure

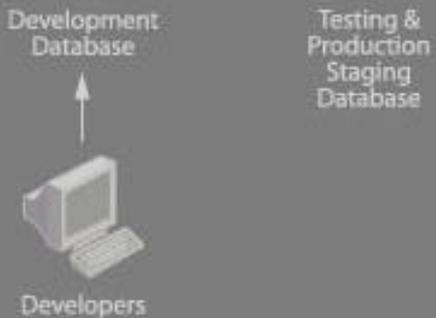
Development & Test

Production

End Users

Microsoft Performance Management

- Monitor
- Diagnose
- Resolve



Production Applications and Services



Production Databases



High Availability & Reporting Databases

Business Intelligence Databases

Microsoft Deployment & Administration

- Plan
- Deploy
- Manage
- Server Consolidations
- Security Auditing



EXCHANGE MANAGEMENT

- Administer and secure – FastLane® ActiveRoles
 - AD-enabled role-based administration of Exchange 2000, Mobile Information Server including group policy
 - Lock down who can do what to whom
 - Data integrity enforcement
- Monitor – 2MA™
 - 24x7 unattended monitoring of Exchange 5.5 and 2000
- Diagnose & resolve – Spotlight™ on Exchange
 - Visual root-cause diagnostics for Exchange 5.5 and 2000

EXCHANGE MANAGEMENT

- Analyze usage – MessageStats™
 - Learn mail usage patterns, ability to meet Service Level Agreements (SLA), enable better capacity planning
- Manage large Exchange environments – InLook™
 - Manage configuration settings across many servers for consistency
- Test – Benchmark Factory®
 - Load test Exchange servers

EXCHANGE DIFFERENTIATORS

- Web-based, self-service analysis reports
- Agent-less monitoring
- Expert Help diagnostics
- Directory-enabled management
 - No server layer required

SQL SERVER MANAGEMENT

Who needs to know about these products?

- SQL Server database administrators (DBAs)
- SQL Server developers

SQL SERVER MANAGEMENT

- Diagnose — Spotlight™ on SQL Server
 - Visual root cause diagnostics to identify and resolve performance issues in SQL Server
- Monitor – I/Watch™
 - 24x7 unattended monitoring of SQL Server
- Test — Benchmark Factory®, DataFactory™
 - Load test SQL Server and applications in pre-production or production
 - Test applications with large amounts of meaningful data

SQL SERVER MANAGEMENT

- Design and analyze – QDesigner™
 - Design new databases
 - Analyze existing databases
- Get expert technical reference online – Knowledge Xpert™
 - Tuning
 - Instant expert help

SQL SERVER DIFFERENTIATORS

- Technical depth of monitoring
 - Built for DBAs
 - Automated corrective action
- Technical depth of diagnostics
 - Built for DBAs
- Speed and robustness of testing

Microsoft & Quest Working Together



OUR CUSTOMERS

▪ Financial/ Accounting

- Charles Schwab
- CIT Group
- Bank of New York
- ANZ Bank
- John Hancock

▪ Education

- University of Texas
- Fairfax School Board

▪ Technology/ Communications

- AT&T
- Ericsson
- Kodak
- Motorola
- Lucent Technologies
- PeopleSoft
- Reuters
- San Francisco Chronicle

- Microsoft
- Intuit
- Symantec
- IKON
- Agere Systems
- DreamWorks
- Houston Chronicle

▪ Manufacturing

- Chevron
- Daimler-Chrysler
- Northrop Grumman
- Nissan
- Clariant Corporation
- BP Amoco
- Pennzoil
- Rockwell Automation
- Black & Decker
- Shell
- Boeing
- Kraft
- 3M
- Starbucks

▪ Health & Pharmaceutical

- PacifiCare Health Services
- Pfizer Inc.
- AstraZeneca
- WellPoint
- Unity HealthCare
- Medtronic

▪ U.S. Government

- U.S. Navy
- USDA
- U.S. Army
- FDIC
- California Franchise Tax Board

▪ Utility

- Pacific Gas & Electric
- Consolidated Edison
- Sempra Energy

MICROSOFT USES QUEST

- Microsoft Information Technology Group (ITG)
 - Uses FastLane Consolidator for Windows 2000 deployment
 - Uses FastLane Migrator for Windows 2000 migration
- Microsoft certifies ActiveRoles and Migrator for Windows 2000 Server
- Microsoft licenses Consolidator technology for Windows 2000
 - Component of services for Novell NetWare 5.0

