Plan, Deploy and Manage Windows 2000 and Active Directory

Do It Right the First Time
SOLUTIONS FOR MICROSOFT

- **Windows**
  - Plan, Deploy & Manage

- **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
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

Active Directory
A Focal Point for:
- Manageability
- Security
- Interoperability

Windows Users
- Account info
- Privileges
- Profiles
- Policy

Windows Clients
- Mgmt profile
- Network info
- Policy

Windows Servers
- Services
- Printers
- File shares
- Policy

Other Directories
- White pages
- E-Commerce

Other NOS
- User registry
- Security
- Policy

E-Mail Servers
- Mailbox info
- Address book

Applications
- Server config
- Single Sign-On
- App-specific directory info
- Policy

Firewall Services
- Configuration
- Security Policy
- VPN policy

Network Devices
- Configuration
- QoS policy
- Security policy

Internet

Microsoft GOLD CERTIFIED Partner

QUEST SOFTWARE
W2K MIGRATION METHODOLOGY

Plan

- Assess Current Environment
  - Project Definition
  - ~2wks – 6mo

- Design & Validate Target Environment (AD Design)
  - ~6wks – 1yr

- Implement Target Design
  - ~6wks – 1yr

Deploy

- Create Migration Plan & Validate in LAB
  - ~2wks – 2mo

- Validate Migration Plan in Production Pilot
  - ~1wks – 2mo

- Execute Migration Plan
  - ~1mo – 1yr

Manage

- Implement Support Plan on-going admin

- FastLane Migrator
- FastLane Consolidator
- FastLane ActiveRoles

- FastLane NDS Migrator
- Spotlight on Active Directory

- FastLane Reporter
- FastLane Migrator
- FastLane NDS Migrator
- FastLane ActiveRoles

- FastLane Reporter
- Spotlight on Active Directory
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
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
1. Deploy Domains & OUs
2. Migrate helpdesk
3. Deploy native AD delegation and Group Policy settings with FastLane® ActiveRoles
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
“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

Microsoft GOLD CERTIFIED Partner
DIRECTORY-ENABLED MANAGEMENT

Architects, Advanced Admins

ActiveRoles & Business Rules

FastLane ActiveRoles MMC Snap-In

Business Views

General Admins, Help Desk

“Users & Computers” MMC Snap-In and/or ActiveRoles Web Client

Active Directory
BUSINESS VIEWS

West Coast OU  Central OU  East Coast OU

Application Manager

Business View: Application Access

Business View: Marketing
users

Marketing Assistant

Microsoft GOLD CERTIFIED Partner

QUEST SOFTWARE
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

Microsoft GOLD CERTIFIED Partner
BUSINESS RULES: ONGOING

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

Joe logs into Computer X

Resultant Set of Policy (RSoP)
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
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

Northern

Central

Southern

Europe.Corp.com

Microsoft GOLD CERTIFIED Partner

QUEST SOFTWARE
LET’S DIG A LITTLE DEEPER

- In-Place Upgrade
- Incremental Upgrade
- Hybrid Upgrade
CONSOLIDATING DOMAINS

Source Domains

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

Target Windows 2000 Domain Structure

Microsoft GOLD CERTIFIED Partner

QUEST SOFTWARE
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.)
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
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
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

- Exchange 5.5 Organization
- Mailboxes
- Distribution Lists
- Custom Recipients

New Exchange 2000 Organization
Public Folder Migration

- Public Folder Migration
  - Filtering
    - Reorder/Rename
    - Date
    - Attachments
    - Subject Contents
    - Re Permission
  - Multiple Source Exchange 5.5 Orgs/Servers
  - Multiple Target Exchange 2000 Servers in New Org
FASTLANE MIGRATOR
ARCHITECTURE

Your Network

Drag & Drop Migration

NT 4.0 Domains
Users, Groups, Computers

Migration Manager

Migration & Resource Updating Repository

Distributed Resource Updating

Your Network

Active Directory

Project-Based Migration

Exchange & NDS

Other Data

ADC & NDS Migrator

MMT

Administrators Consoles

Microsoft GOLD CERTIFIED Partner
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
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
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
Enables administrators and security officers to secure and standardize Microsoft environments

**Mandate**
- Corporate IT and security policy

**Audit**
- Collect information, track changes, highlight exceptions

**Take Action**
- 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
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
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
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
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
“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

- 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
Microsoft Performance Management
- Monitor
- Diagnose
- Resolve

Microsoft Deployment & Administration
- Plan
- Deploy
- Manage
- Server Consolidations
- Security Auditing

The Application Infrastructure
- Development & Test
- End Users

Production Applications and Services
- Oracle Applications
- SAP
- PeopleSoft
- Siebel
- Custom
- Web
- Other
- Exchange
- Print/FServers
- Active Directory
- NOS

Production Databases
- High Availability & Reporting Databases
- Business Intelligence Databases

 Quest Software
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
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
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