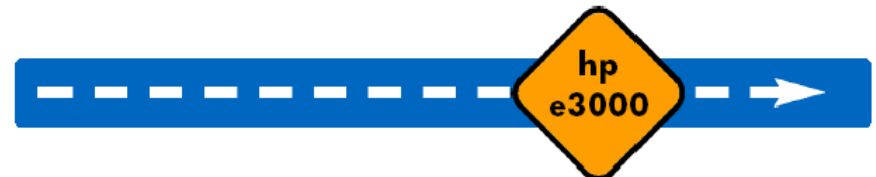




HPWorld 2003 Summit Migration Process

Dick Drollinger
Sr. Dir. Migrations
Summit Information Systems

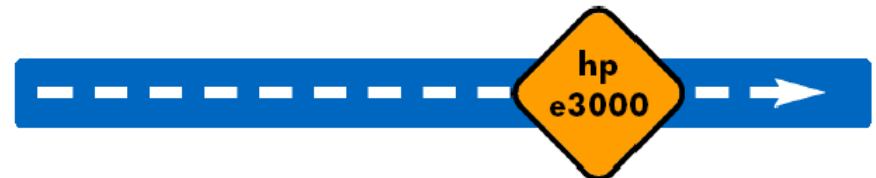


HPUX Migration Update

hp e3000 transition solutions



- Topics include:
 - Who is Summit
 - SPECTRUM Environment
 - 3rd Party Product Information
 - Migration Process

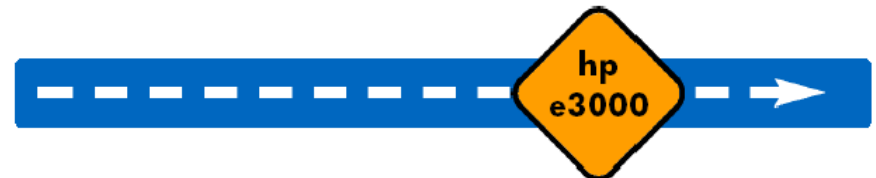


Who is Summit

hp e3000 transition solutions



- Summit Information Systems, a Fiserv Company
- 30 Years old with 400 employees
- Serving the Credit Union industry exclusively
- HP 3000 host based for 25 years
- Client Sizes
 - 918 through N4000 550MHZ 4 way
 - 10 million to 4.5 billion
 - 20 to 900 employees



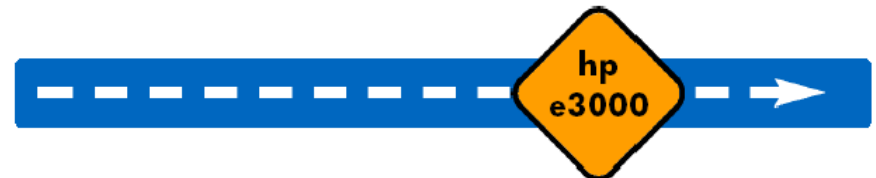
SPECTRUM Environment

HP3000 Host Based Infrastructure

hp e3000 transition solutions



- Turbo Image
- Fortran 77, Speedware, Quad, Query
- Bradmark DBGeneral
- TurboStore, RoadRunner
- Maestro job scheduler
- MPEX, Security 3000
- Job Rescue
- Nightwatch, By Request
- Mirrored disk, private volumes
- Jetform Merge
- Minisoft ODBC drivers



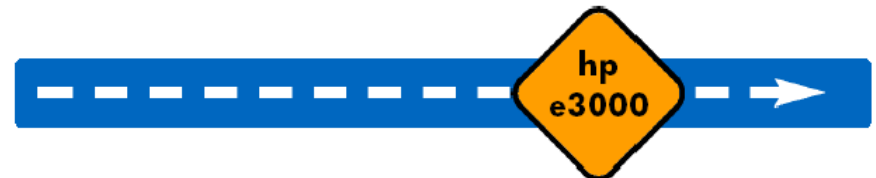
SPECTRUM Environment

HP9000 Decentralized Infrastructure

hp e3000 transition solutions



- Eloquence with ODBC drivers
- C++, VitalSoft or Crystal Reports
- Robelle Suprtool and Qedit
- Veritas
- UC4 Job Scheduler
- Power Broker
- Nightwatch, By Request
- Mirrored disk, disk striping
- Adobe Central

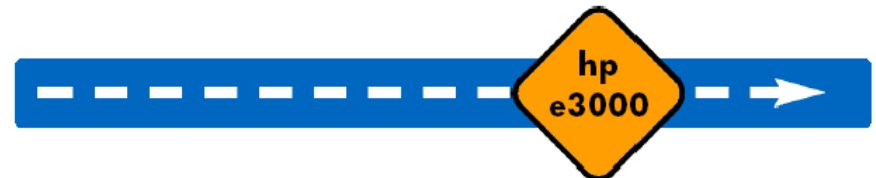


SPECTRUM Migration

hp e3000 transition solutions



- Started in 1999
- Chose HPUX for Open Environment
- Chose Eloquence for Turbo Image call capability
- Robelle and UC4 based on features and MPE and UX capability
- Used Fortran to C++ conversion tool from Denkart
- No HPUX enhancements from Jan 02 to Jun 03

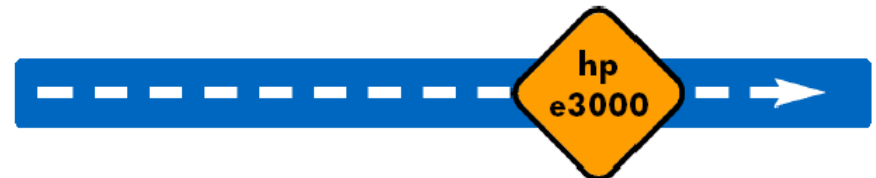


SPECTRUM Environment

hp e3000 transition solutions



- Eloquence Database:
 - Performance is very solid and fast
 - ODBC product is included
 - Automated dataset capacity management
 - Data Migration from Turbo Image is a non-event
 - D/R recovery processes have been tested and verified by Summit and Clients

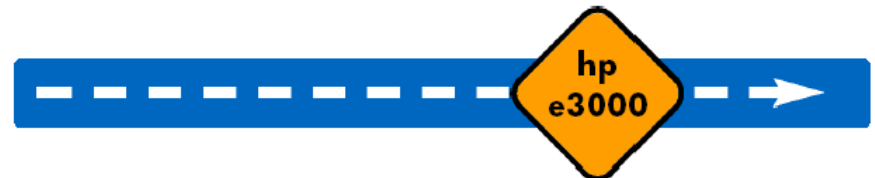


SPECTRUM Environment

hp e3000 transition solutions



- Adobe Central (Jetform merge replacement)
 - Fully tested
 - A Recompile of the Eforms on HPUX is all that is required
- Standard Reactor programs replaced with C++ programs

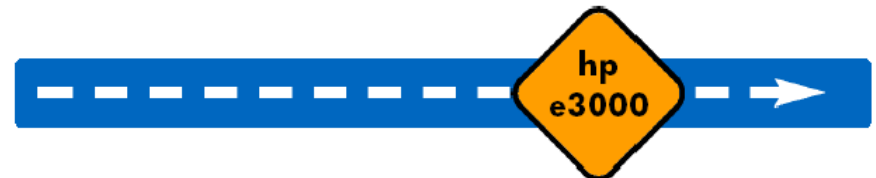


SPECTRUM Environment

hp e3000 transition solutions



- Serial Device Connectivity
 - Cash Dispensers
 - Same method of interface as on MPE (e.g. serial to LAN, direct serial)
 - Future direction will be TCP/IP on SPECTRUM
 - Credit Bureau Modem
 - Serial port connection via Mux port
 - Future direction will focus on TCP/IP
 - Telamon
 - Will transfer to UNIX box and use serial port (DTCs)
 - Reel to Reel tape drives
 - Will go off support by June
 - Most third parties can be accessed with a transmission or FTP server otherwise, use DAT

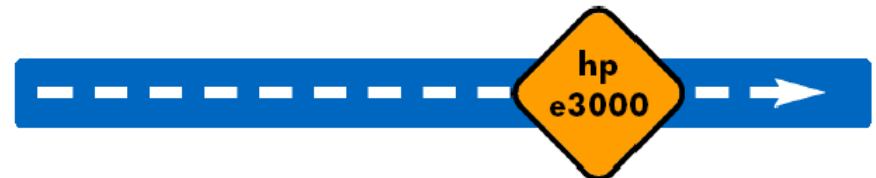


3rd Party Products

hp e3000 transition solutions



- UC4 Scheduler
 - Architecture
 - Server based application, components include:
 - SQL database
 - Host based executor
 - Dialog client access
 - API
 - GUI front end
 - Accommodates design, implementation, modification, execution and monitoring
 - Maestro to UC4 conversion Utility works well

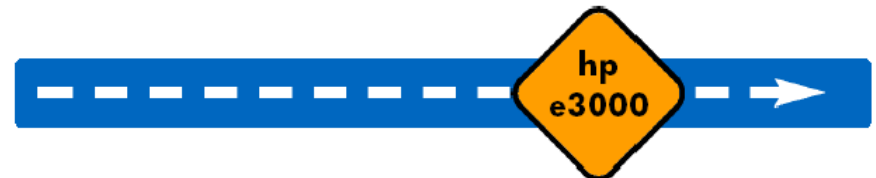


3rd Party Products

hp e3000 transition solutions



- UC4 Scheduler
 - Key Considerations
 - Production JCL resides on UC4 server
 - Modified thru UC4 editor
 - Backup and Recovery
 - Separate from Host Backup
 - Mission Critical System
 - Redundancy recommended

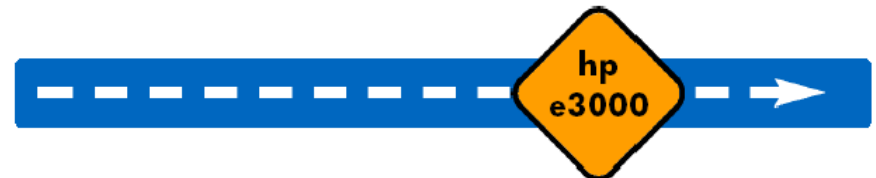


3rd Party Products

hp e3000 transition solutions



- Veritas
 - Support for single system
 - Option for enterprise solution
 - with backup server and shadow LAN
 - Works with Oracle, SQL, and Eloquence databases

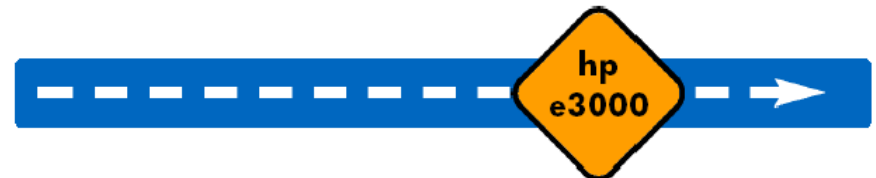


3rd Party Products

hp e3000 transition solutions



- Veritas
 - Planning Considerations
 - Design Strategically
 - Consider the enterprise in planning and configuration
 - Implement gradually
 - UC4, True Image, are good “trigger” systems for implementing Veritas

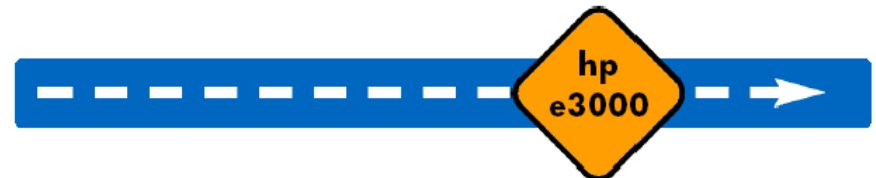


3rd Party Products

hp e3000 transition solutions



- Suprtool from Robelle
 - Sophisticated tool with greater capabilities than Query
 - Supports non-database and KSAM file manipulation
 - Exports data in multiple formats:
 - XML for Crystal Reports & other report writers
 - HTML for immediate browser display
 - Comma delimited for Microsoft Access, Excel and similar products

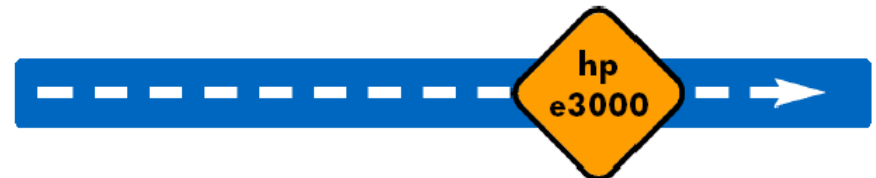


3rd Party Products

hp e3000 transition solutions



- Qedit for HP-UX server
 - Replacement for QUAD
 - Qedit for Windows from Robelle
 - Accesses files from multiple systems
 - Powerful edit capabilities
 - Robust scripting language
- Suprtool and Qedit can be moved from MPE to HP-UX

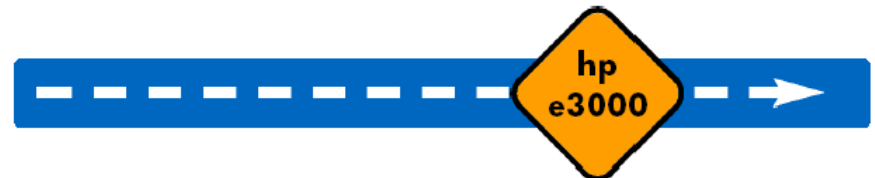


3rd Party Tools (Recommended)

hp e3000 transition solutions



- AskPlus/Visimage from Vitalsoft
 - Robust report writer functionality
 - Conversion programs for Query (available) and Reactor (in testing)
 - Converted reports can execute on MPE or HPUX with only a run statement modification
 - Reports written on MPE can be executed directly on HPUX
- Crystal Reports
 - Robust report writer functionality
 - Works with data obtained from multiple sources, i.e. Suprtool, ODBC, etc.

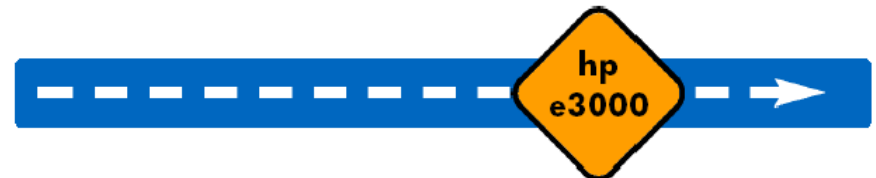


Implementation Process

hp e3000 transition solutions



- Schedule
 - 2003: 2 betas, 6-8 additional clients
 - 1st Large client scheduled for 1Q '04
 - 2004: 60 migrations
 - 2005: 60 migrations
 - 2006: remainder

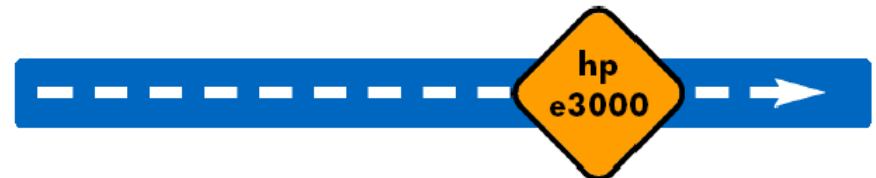


Implementation Process

hp e3000 transition solutions



- Process Phases
 - Assessment & Analysis
 - Planning
 - Preparation
 - Migration

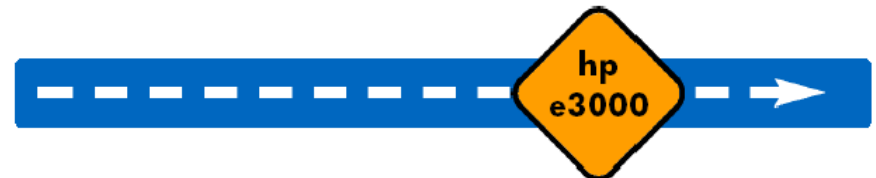


Implementation Process

hp e3000 transition solutions



- Assessment & Analysis
 - Complete the assessment guide!
 - Comprehensive scope
 - Infrastructure & Systems
 - Applications
 - Custom/Special Software
 - Staff

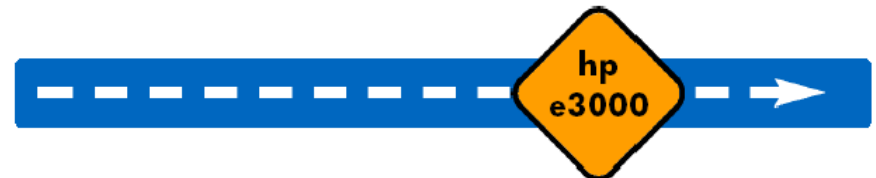


Implementation Process

hp e3000 transition solutions



- Planning
 - A high level project plan and technology road map will be produced from the information provided in the assessment
 - Develop tactical migration-related plan based upon road map
 - Timelines, resources, budget, etc

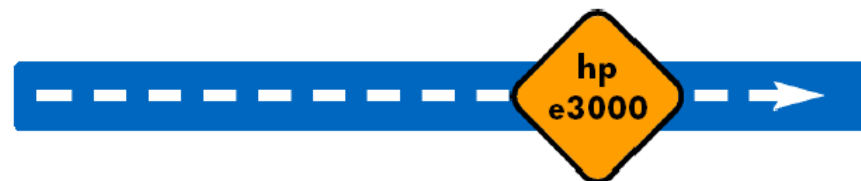


Implementation Process

hp e3000 transition solutions



- Preparation (Back Office)
 - Focus on your Back Office and IT infrastructure
 - Any LAN or Network modifications
 - Sufficient environment for 2 systems
 - Get Familiar with the New Tool Set
 - SuprTool & Qedit
 - UC4 Job Scheduler
 - Veritas Backup Software
 - Replace all non-standard jobs/reports

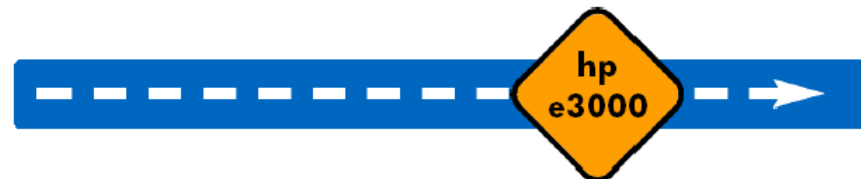


Implementation Process

hp e3000 transition solutions



- Preparation (Back Office)
 - Migrate to LAN based connectivity where possible
 - LAN connected Credit bureau
 - LAN connected OL ATM Networks
 - Acquire basic UNIX expertise
 - Internet course, HP school, etc.
 - Identify and eliminate obsolete jobs, terminal entries, etc
 - Develop Back Office test scripts and plans

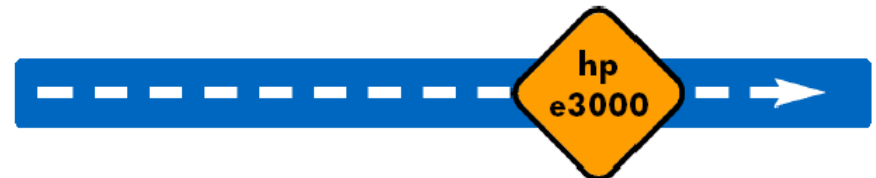


Implementation Process

hp e3000 transition solutions

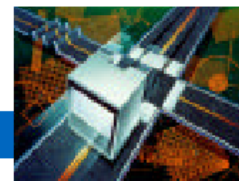


- Preparation (Front Office)
 - Focus on Your Front Office
 - Install Teller, Lender and GUI Spectrum
 - Develop Front Office test scripts and plans

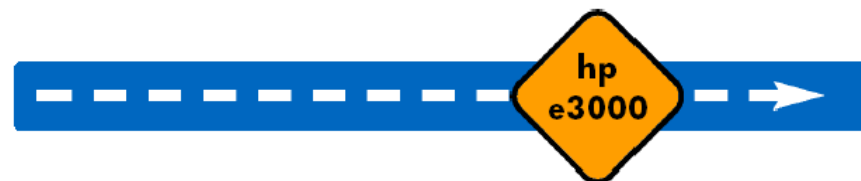


Implementation Process

hp e3000 transition solutions



- Migration: Basic Elements
 - Hardware/Software config/procurement
 - Corvallis training (Basic Spectrum on HPUX)
 - HPUX System Installation
 - OS/Application Installation/Configuration
 - Data and JCL migration
 - Creation of operational Spectrum on HPUX environment

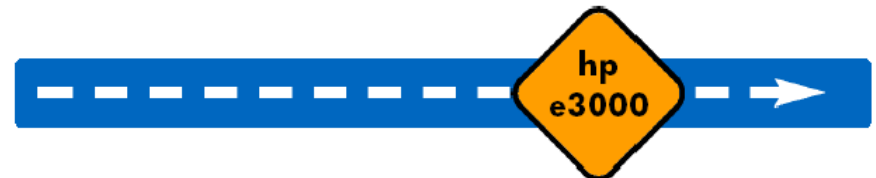


Implementation Process

hp e3000 transition solutions



- Migration: Basic Elements
 - Third Party Product Training
 - Process testing and refinement
 - Integration testing
 - Live migration
 - Post live support

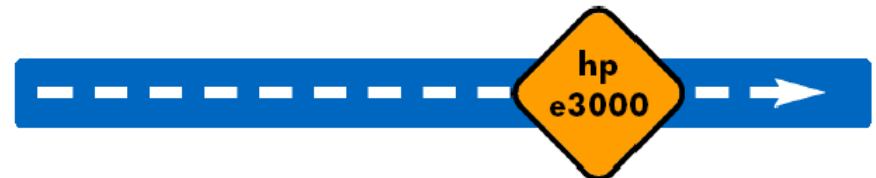


Resources

hp e3000 transition solutions



- HP-UX on Summit Portal
 - Migration assessment guide
 - Beta status reports
 - Training schedules and syllabus
 - FAQ and other documents
 - Presentations
- HP Web site – www.hp.com/go/hpe3000
 - Webinars
 - MPE/iX to HP-UX comparisons
 - Free HP-UX Training Coupon





Fiserv, Inc. (NASDAQ:FISV):\$33.90 | April 21, 2003 at 3:59PM ET

[HP-UX MIGRATION](#) [PRODUCTS](#) [ECS](#) [SUMMIT UNIVERSITY](#) [MEETINGS & EVENTS](#) [DOWNLOADS](#)**SUMMIT** *Clients Only Information*[SUMMIT ADVISOR](#)[CONTACT US](#)[HELP DESK](#)■ [Guide](#)**HP-UX Migration****Training Programs**

- [Overview](#)
- [Syllabus \(.pdf\)](#)
- [Schedule](#)
- [Free HP Unix Training \(.pdf\)](#)

Follow the Betas

- [Status Update Apr. 5, 2003](#)
- [Status Update Mar. 28, 2003](#)
- [Status Update Mar. 21, 2003](#)
- [Status Update Mar. 14, 2003](#)
- [Status Update Mar. 1, 2003](#)
- [Status Update Feb. 21, 2003](#)
- [Status Update Feb. 14, 2003](#)
- [Status Update Feb. 7, 2003](#)
- [Status Update Feb. 2, 2003](#)
- [Status Update Jan. 27, 2003](#)
- [Status Update Jan. 20, 2003](#)
- [Status Update Jan. 13, 2003](#)
- [Status Update Jan. 6, 2003](#)
- [Status Updates for 2002](#)

Product Updates

- [Enabled Modules at HP-UX Beta Sites](#)
- [MPE to HP-UX Hardware Matrix](#)
- [Migration Partners](#)
- [Acquisition of Eloquence](#)
- [FAQs \(.pdf\)](#)
- [Third Party Tools & Utilities Matrix \(.pdf\)](#)
- [Migration Timeline](#)
- [LAN Controllers](#)
- [Beta Schedule \(.pdf\)](#)
- [Client Communication July 2002](#)
- [Client Communication May 2002](#)
- [Client Communication November 2001](#)
- [Controllers On HP-UX](#)

Transition Planning

- [Assessment Guide \(.doc\)](#)
- [Assessment Jobs](#)
- [Assessment Job](#)
- [Cross Reference Tool](#)
- [Migration Considerations](#)
- [Power Point Presentation](#)
- [Education Mailer](#)

Data Center Environment

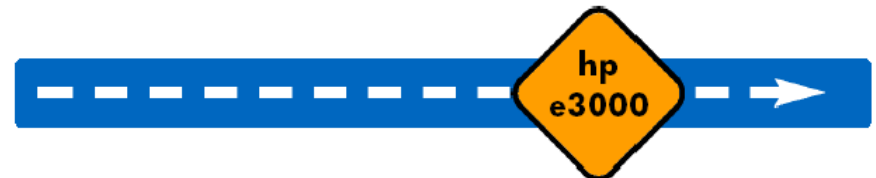
- [3K Overview History](#)
- [Conversion Kit](#)
- [End of Support Life](#)
- [HP UX Commitment](#)
- [Migration Considerations](#)
- [RP2400](#)
- [RP7400](#)
- [RP7410](#)
- [UX Complete Training](#)
- [HP News](#)
- [Beyond 2003](#)
- [November 2001 Announcement](#)
- [Performance Benchmarks](#)

Visit this site frequently for the latest information about the next generation SPECTRUM product! If you have a specific question about SPECTRUM on HP-UX, simply click the Ask Harvey! graphic. You will receive a prompt response.



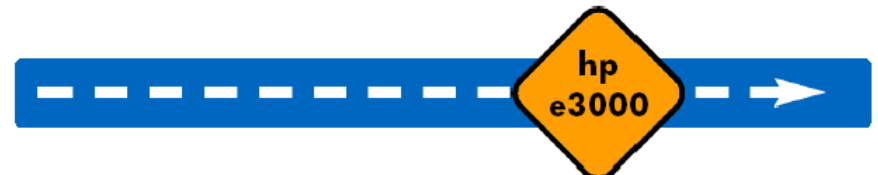


Thank You





Ecometry Migration Planning

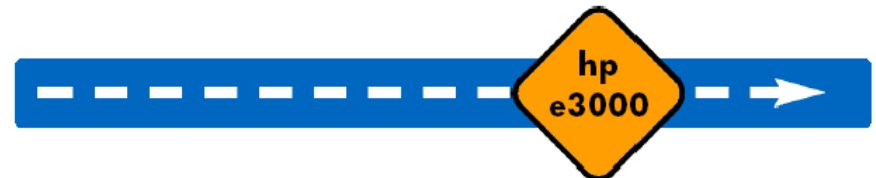


Agenda

hp e3000 transition solutions



- Ecometry Open Systems
 - How we got from the e3000 to Open Systems
- Design Architecture Change
 - Are there advantages to Migrating?
- FVF (e3000 v. Open Systems)
- Web Services Architecture
 - Post Migration Features
- Basic Ecometry Configurations
- Migration
 - Plans, Tools, and Costs

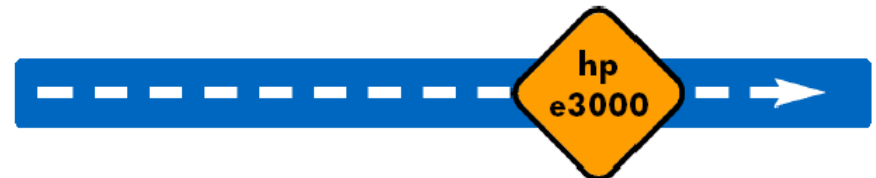


Migration Status

hp e3000 transition solutions

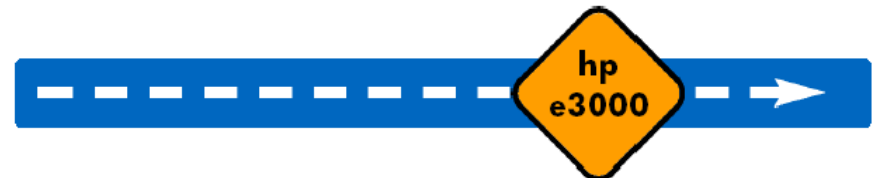


- Ecometry Application Is Complete
 - Ecometry Running on HP/UX and Win2K
- Tools To Move Your Data Are Complete
 - Data Migration From Image to Oracle or SQL2K
- Ecometry Resources Are Available
- Partner Resources Are Available
 - Surround Code
 - Project Staffing
- Migrations Have Been Scheduled



Migration Architecture

hp e3000 transition solutions



Multi Platform Ecometry

hp e3000 transition solutions



**Win2K
SQL 2000**



**Win2K
Oracle**

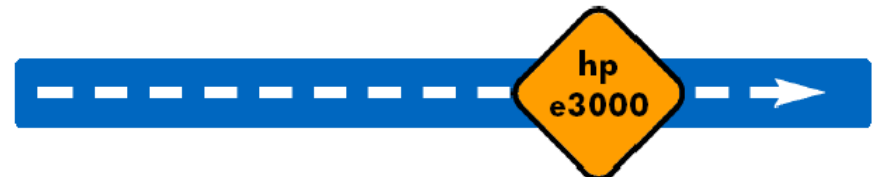


**HP UX Server
Unix/Oracle**

- Scalability for Extensive Growth (50 – 400,000 Orders/day)
- Built for OLTP Applications
- Maximum Price Performance
- ODBC Capabilities

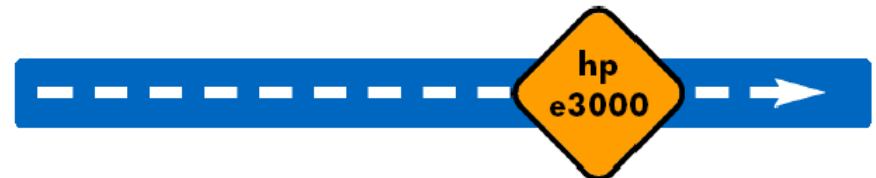


Overview



Original MACS on the HP3000

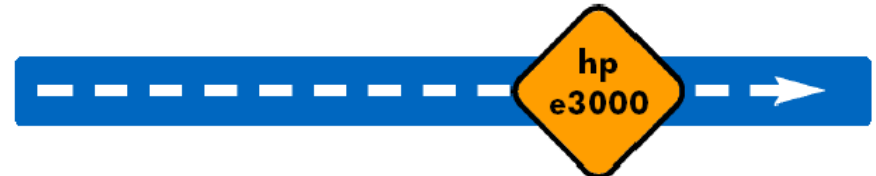
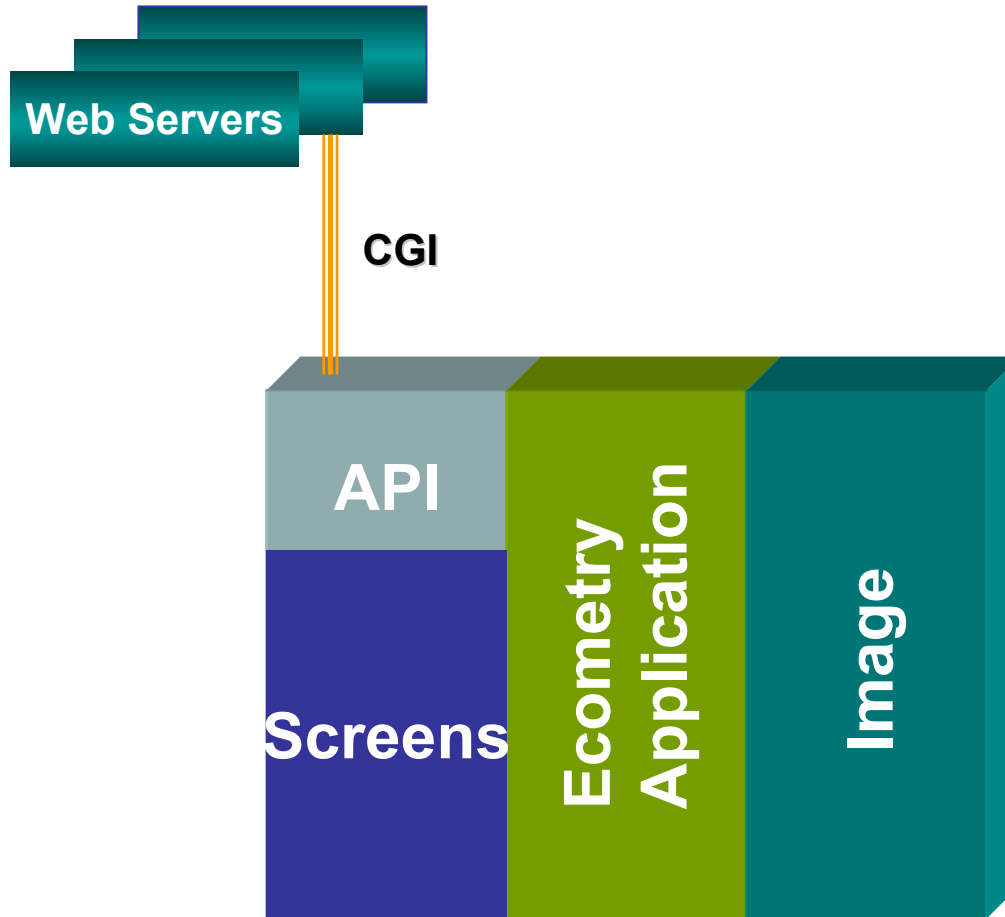
hp e3000 transition solutions



Technology

MACS with WebOrder

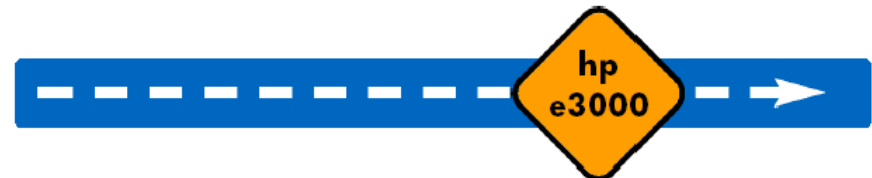
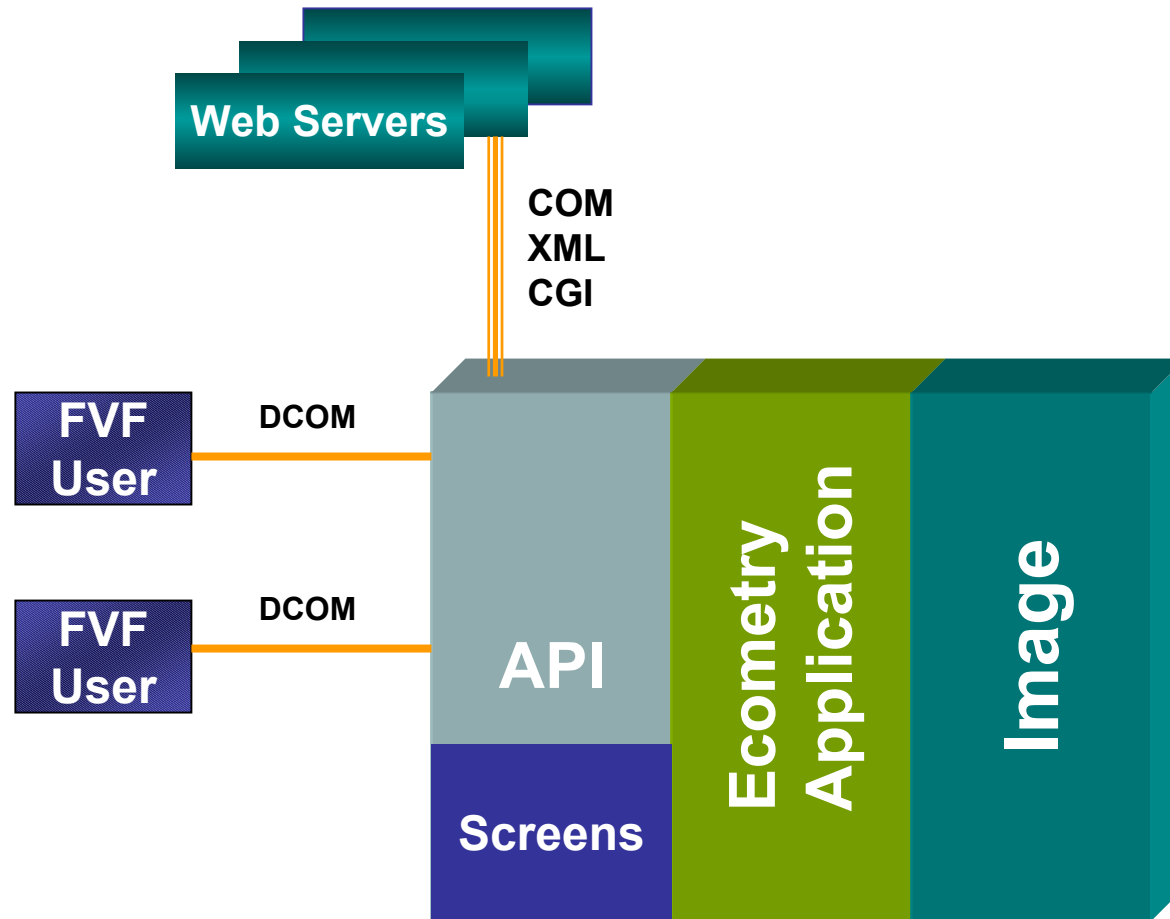
hp e3000 transition solutions



Technology

Ecometry on HP3000 Today

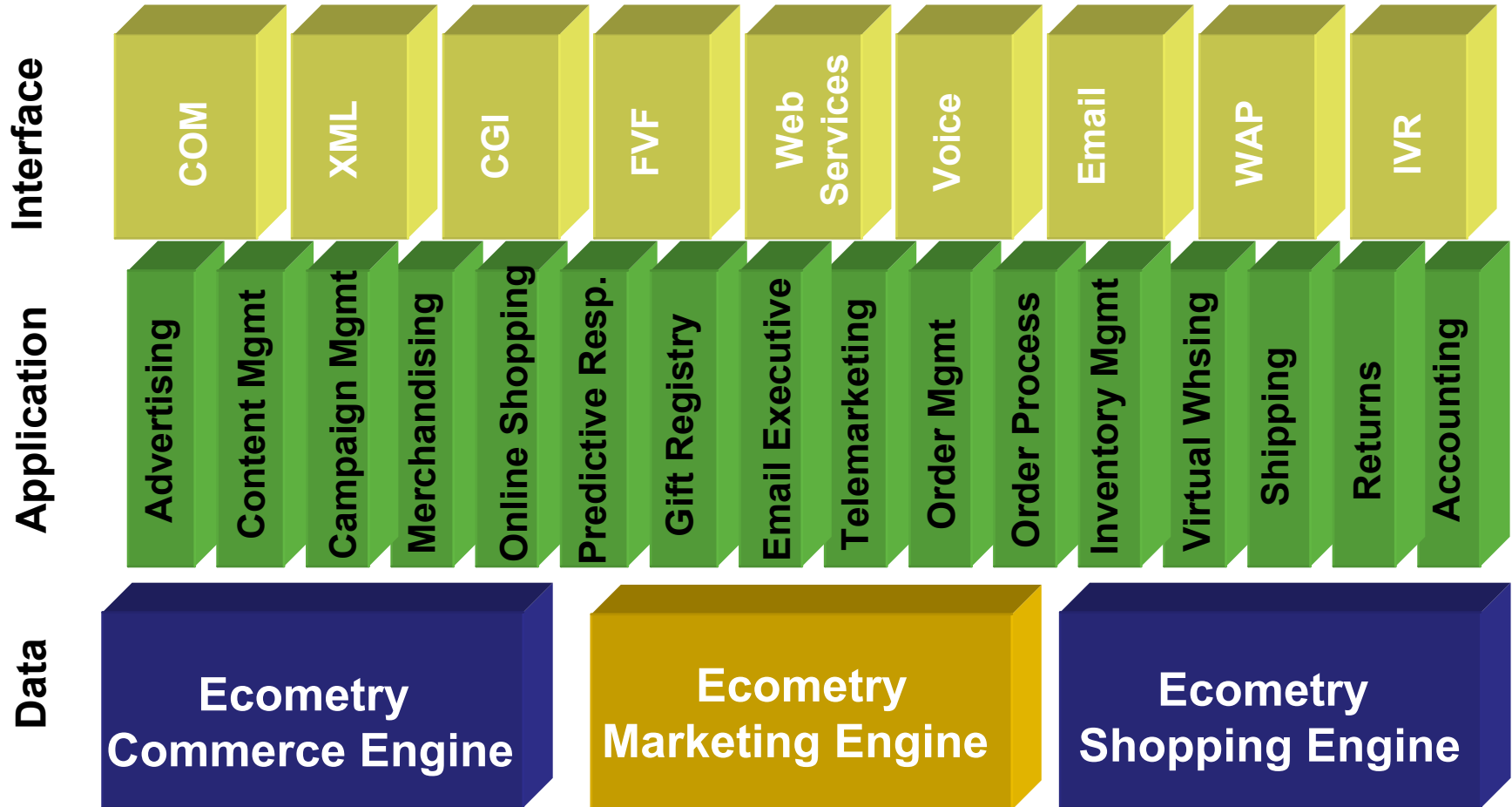
hp e3000 transition solutions



Technology

Design Architecture Change

hp e3000 transition solutions

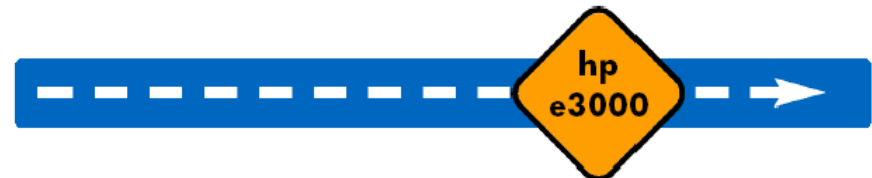
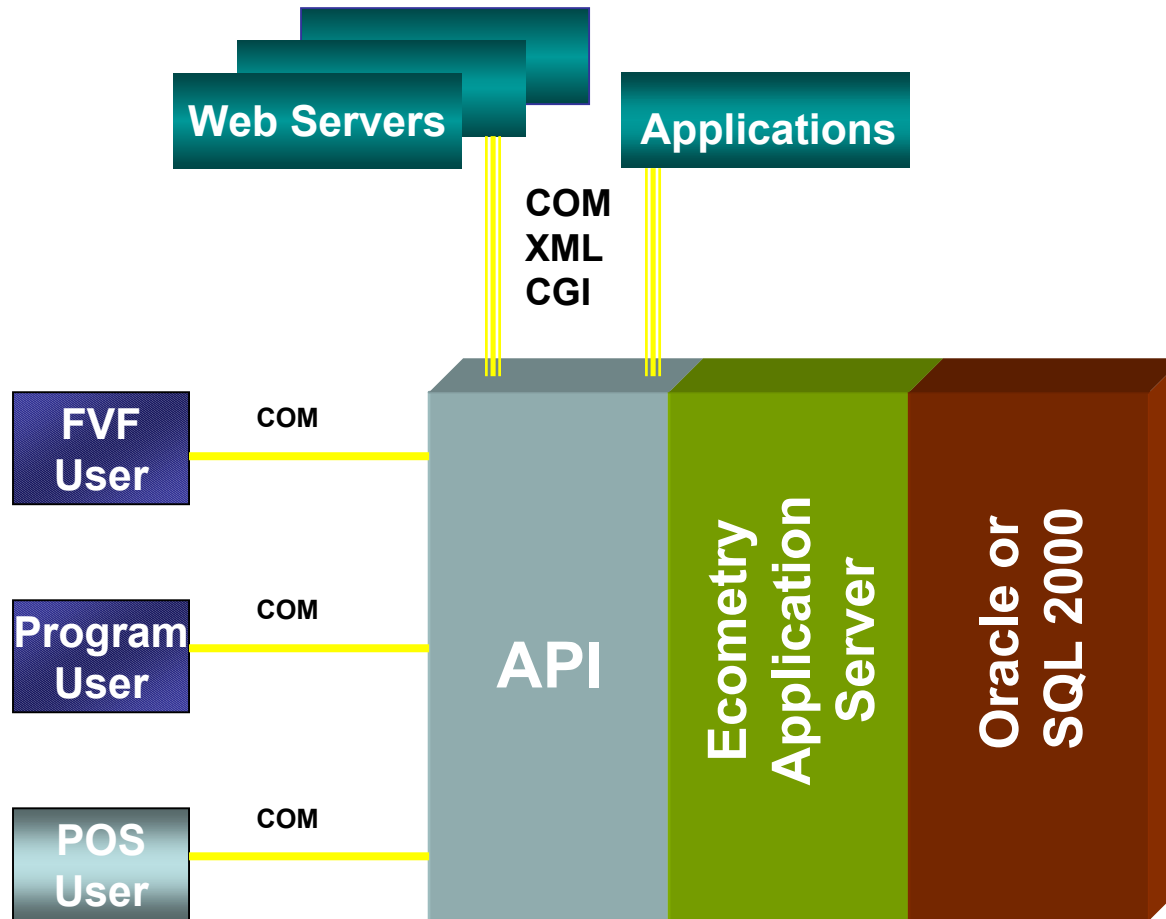


Technology



Ecometry on HP/UX or Win2K

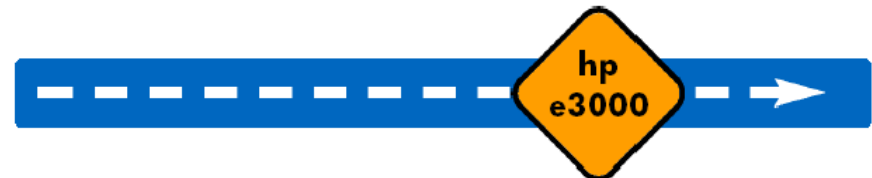
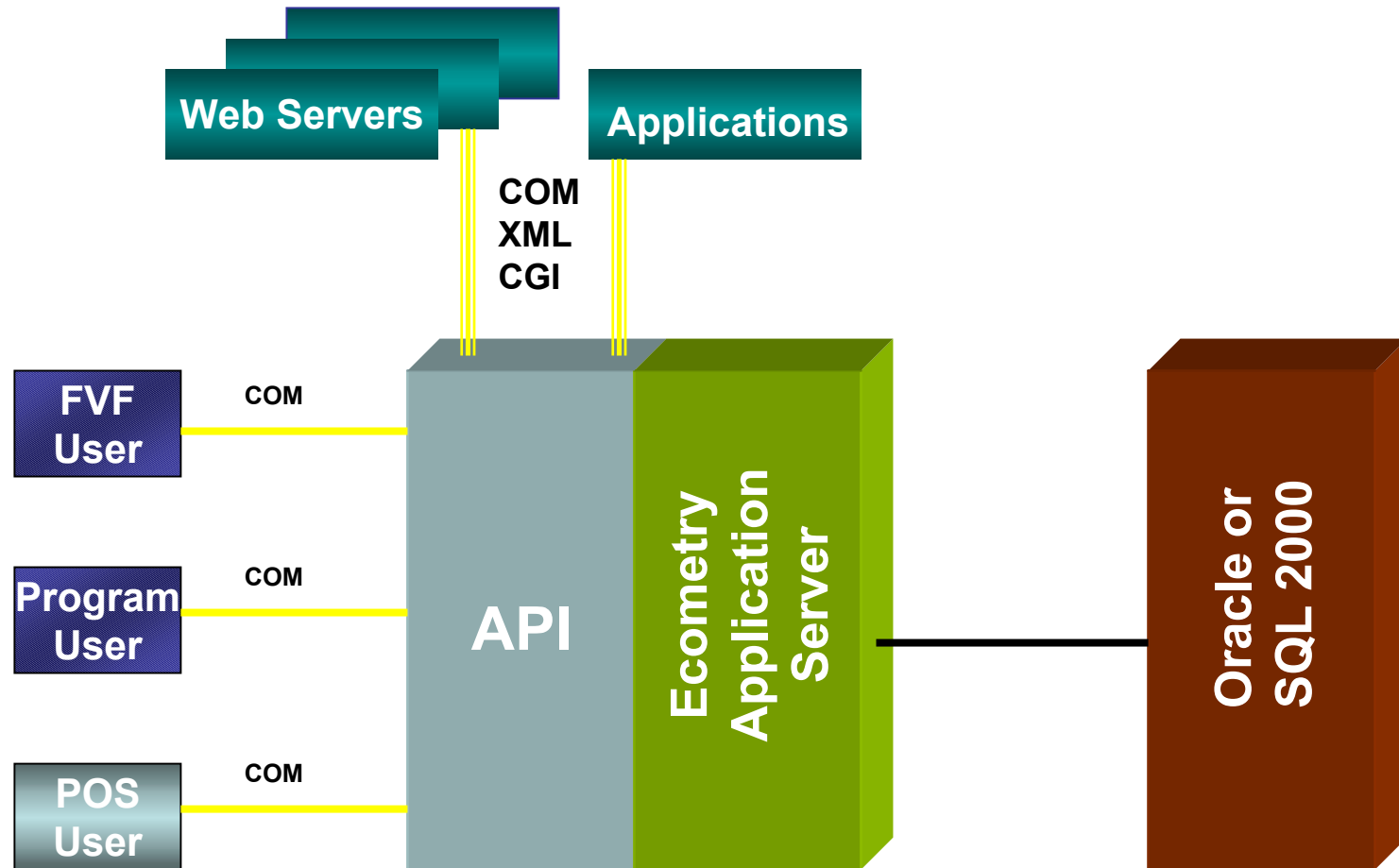
hp e3000 transition solutions



Technology

Ecometry Unix or Win2K

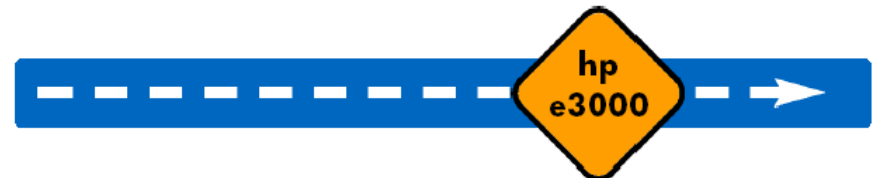
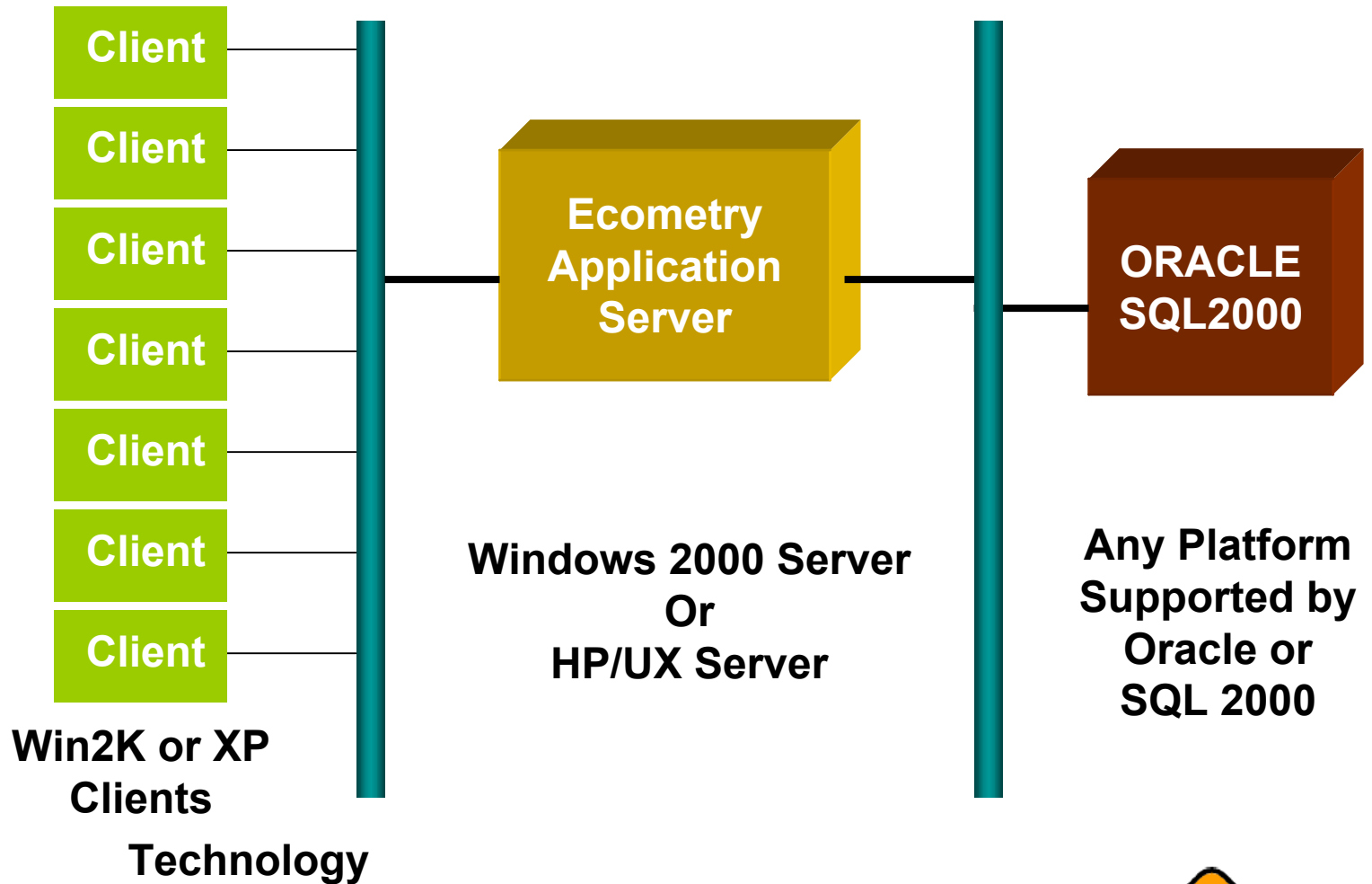
hp e3000 transition solutions



Technology

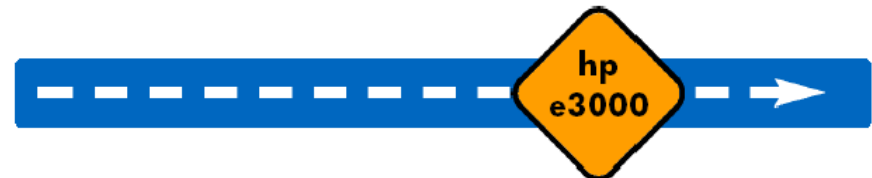
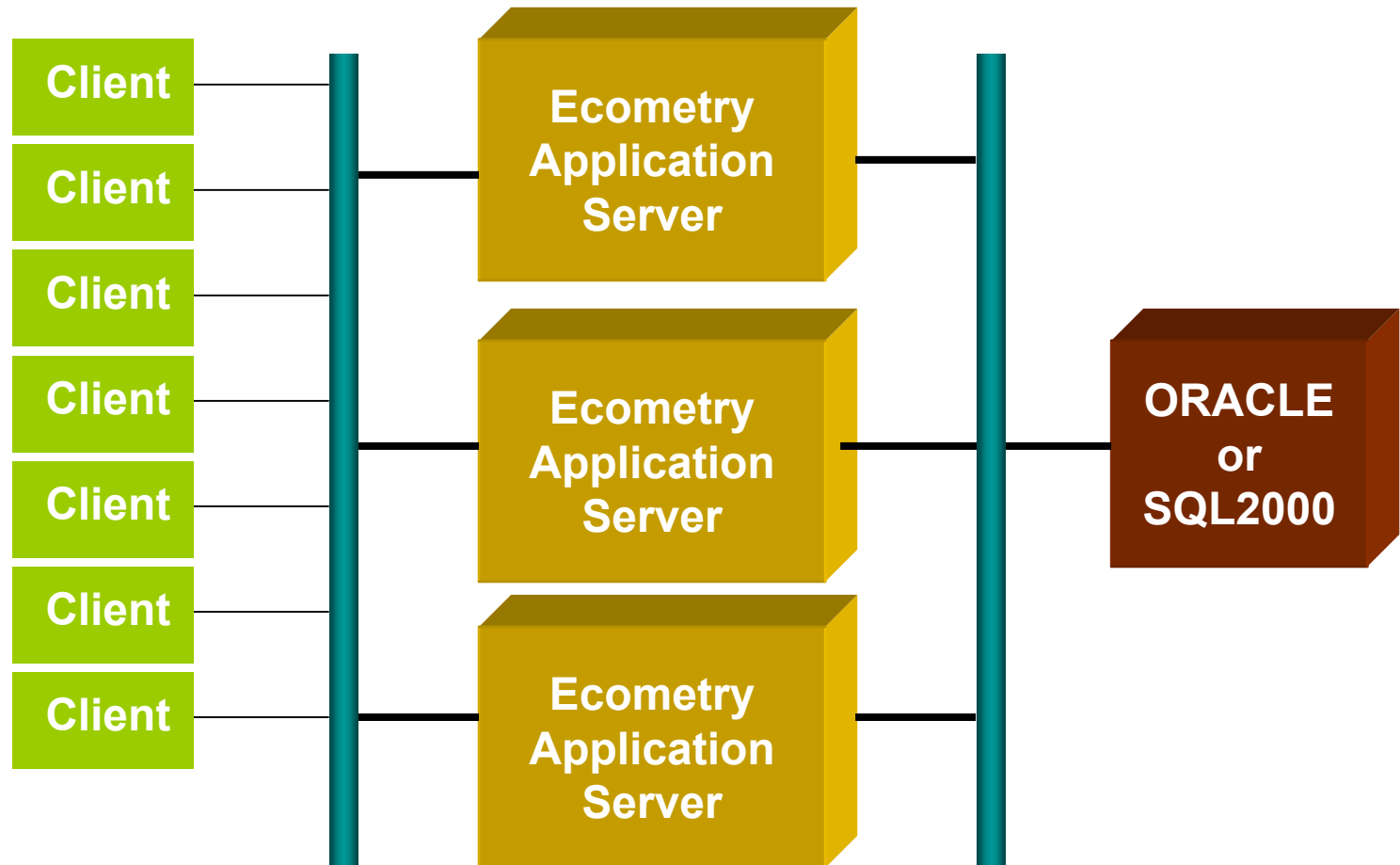
Ecometry Configuration

hp e3000 transition solutions



Scalable Architecture

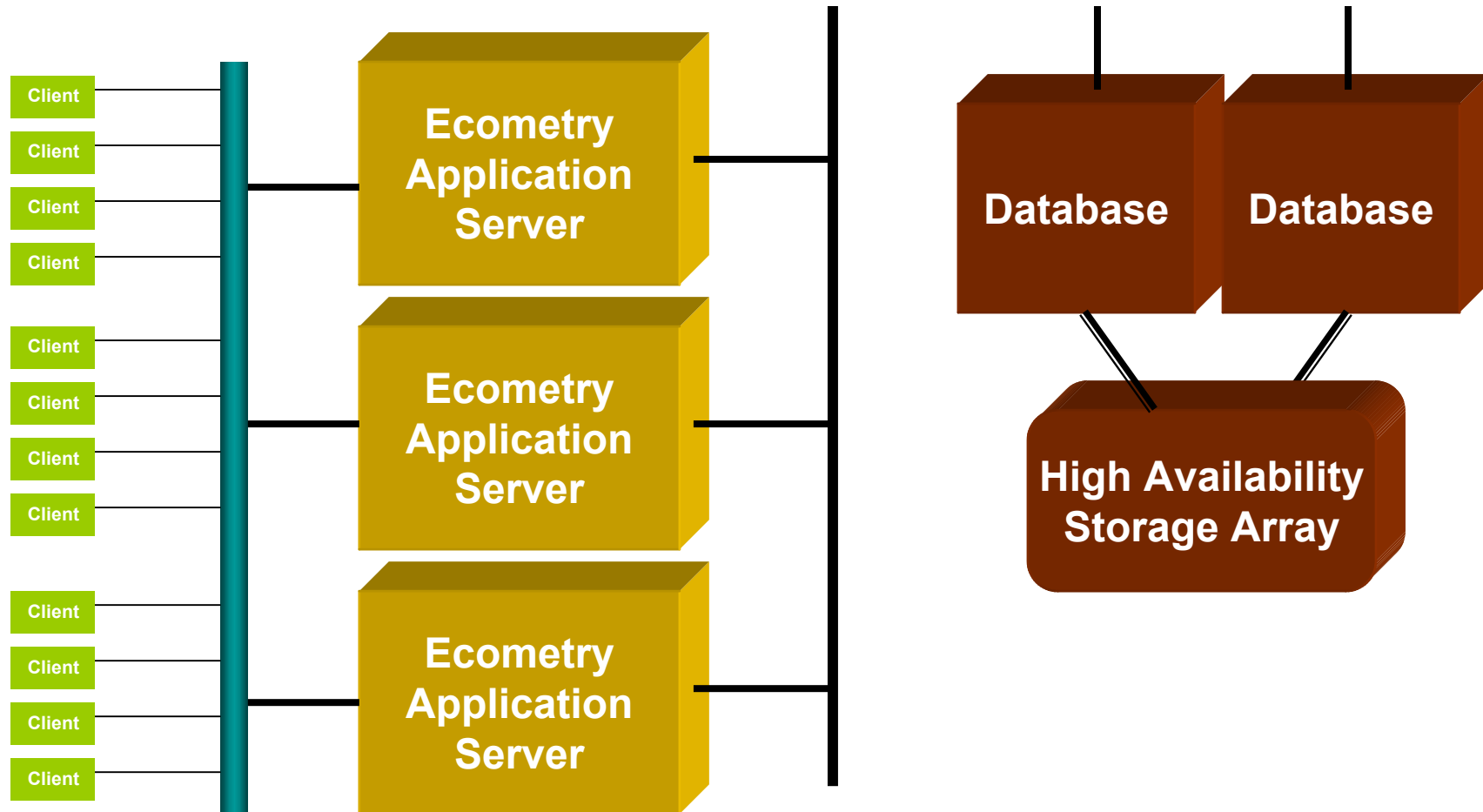
hp e3000 transition solutions



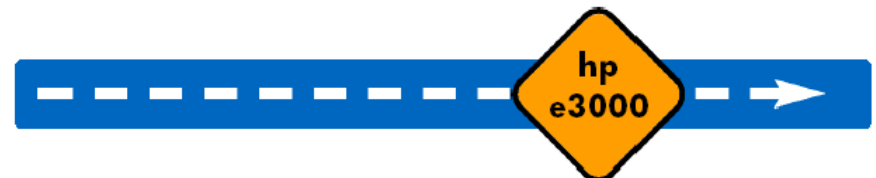
Technology

High Availability Ecometry

hp e3000 transition solutions



Technology

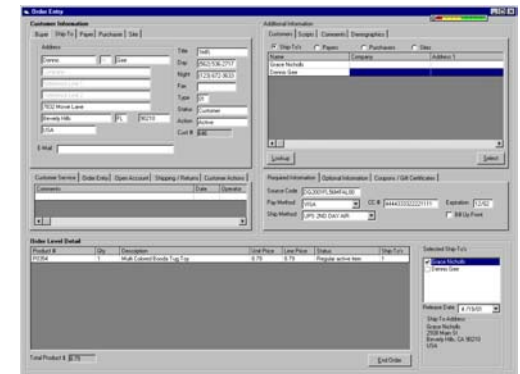
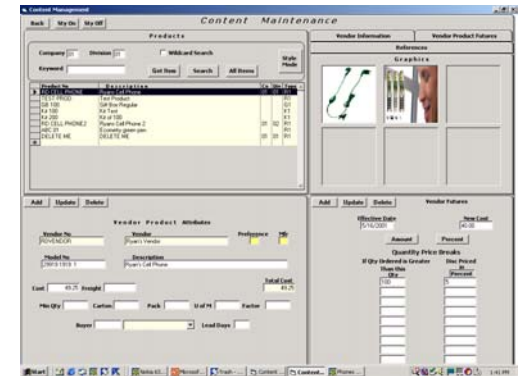


FVF – More than a pretty new face

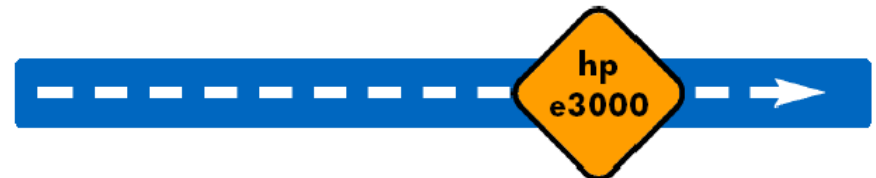
hp e3000 transition solutions



- Full View Functionality
- Increased Productivity
- Removes UI code from order engine
- Allows for an expanded enterprise architecture
- Simplifies Ecometry user licensing
- Simplifies many future modifications



Technology

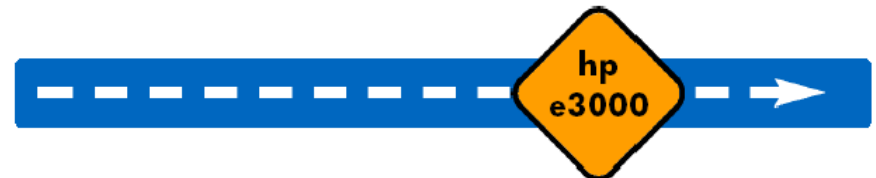


Migration Decisions

hp e3000 transition solutions



- What Platforms Are Available?
- Which One Is Best For Me?
- What Are The Costs?
- When Should I Migrate?
- Who Can Help Me?
- Has Ecometry 'Changed'?



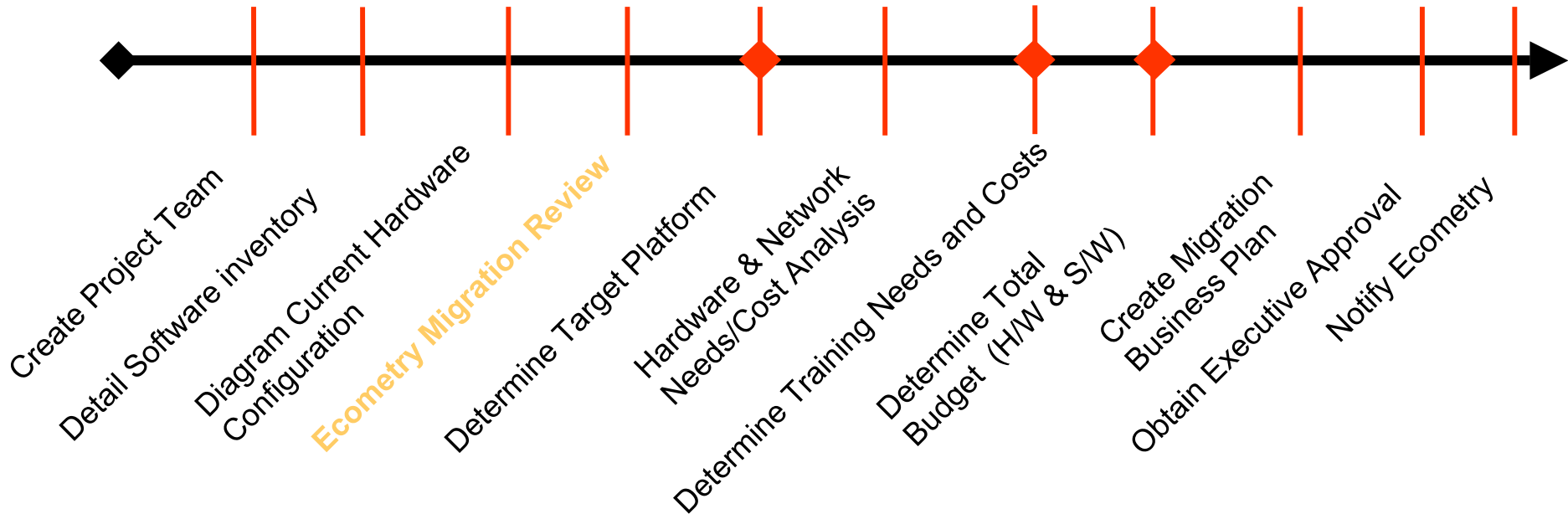


Ecometry Migration Planning



PHASE I - SCOPE ANALYSIS

hp e3000 transition solutions

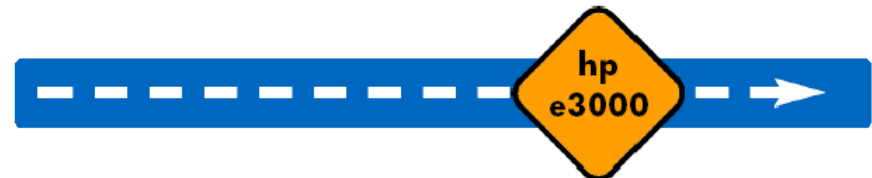


MIGRATION MILESTONES

■ CLIENT

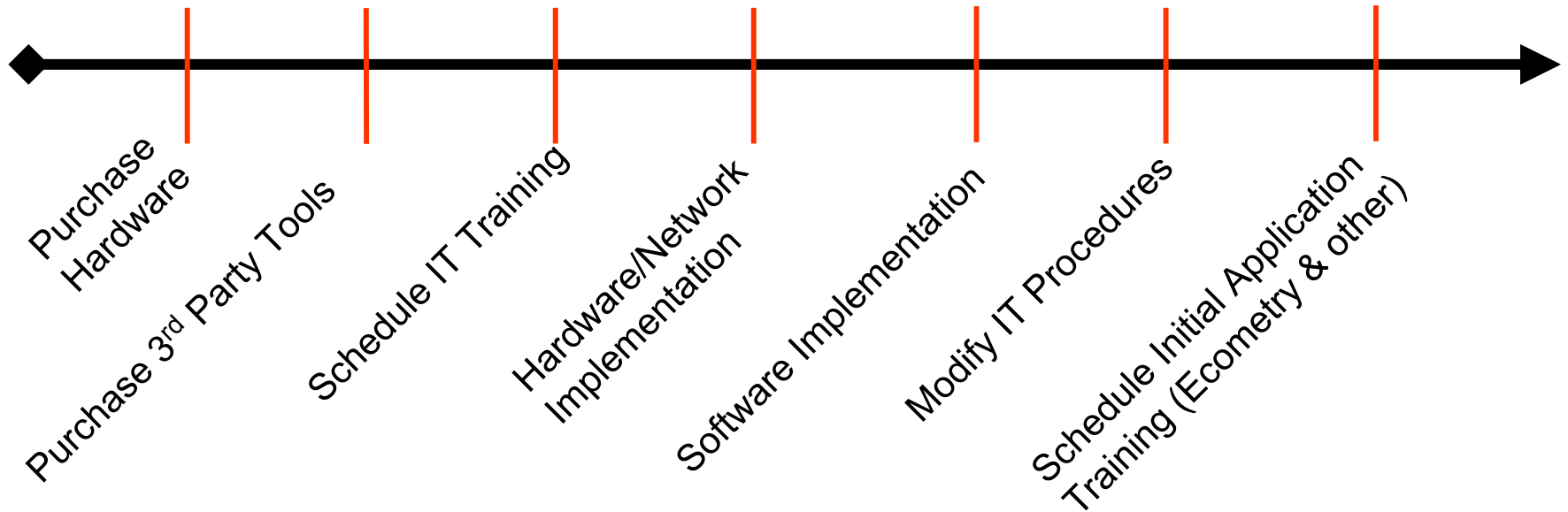
■ ECOMETRY

◆ DECISIONS



PHASE II - H/W & S/W Implementation

hp e3000 transition solutions

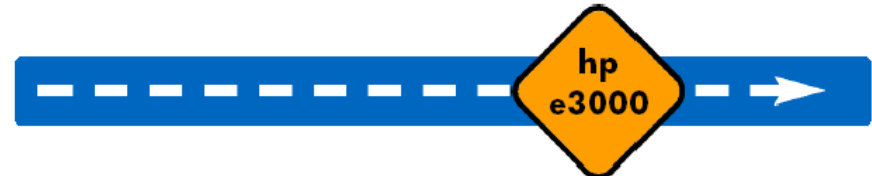


MIGRATION MILESTONES

CLIENT

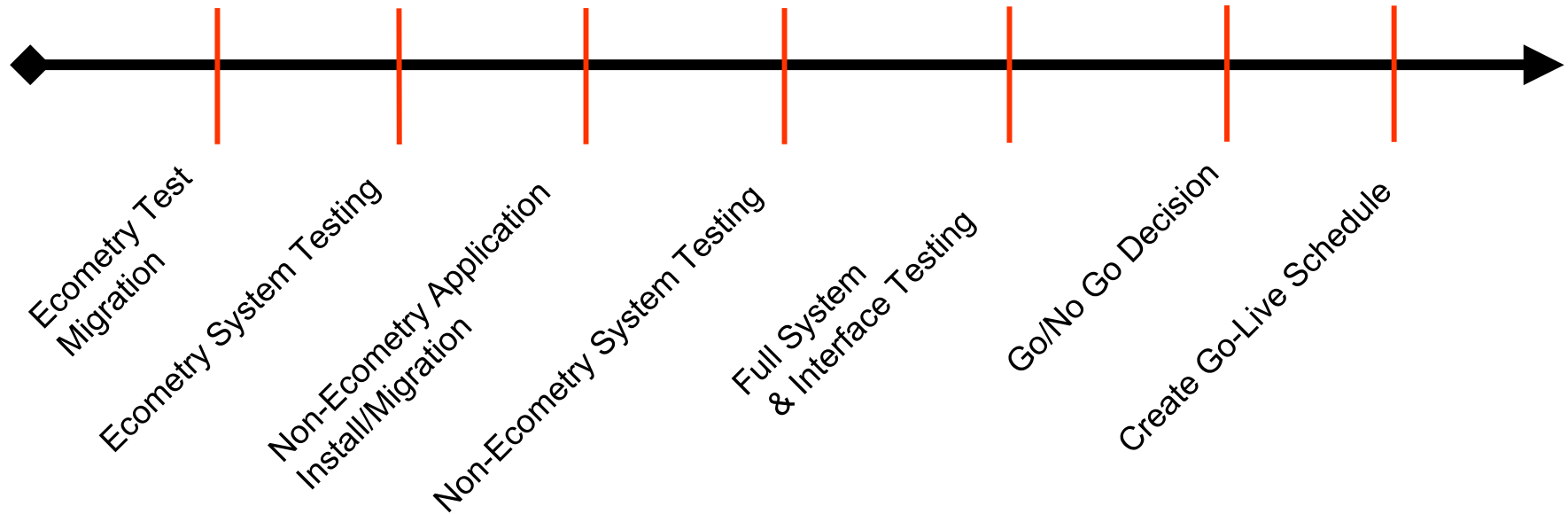
ECOMETRY

DECISIONS



PHASE III - Test Migration & System Testing

hp e3000 transition solutions

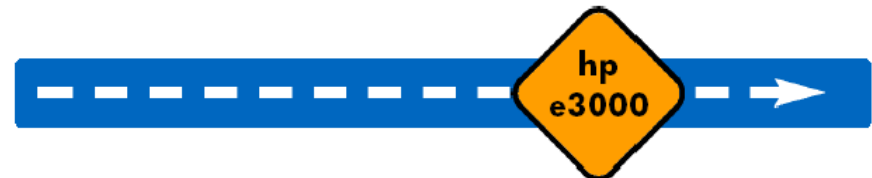


MIGRATION MILESTONES

■ CLIENT

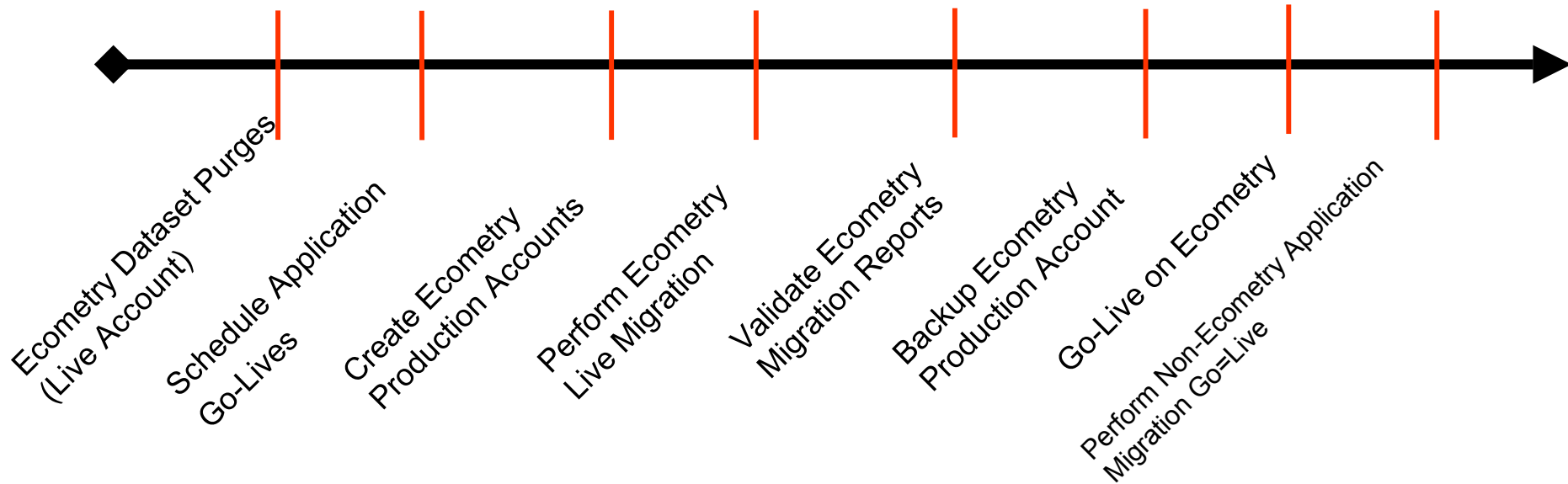
■ ECOMETRY

◆ DECISIONS



PHASE IV - Go-Live

hp e3000 transition solutions

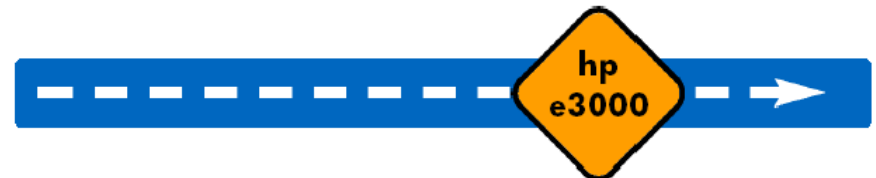


MIGRATION MILESTONES

■ CLIENT

■ ECOMETRY

◆ DECISIONS





Ecometry Migration Tools & Services



Ecometry Migration Options

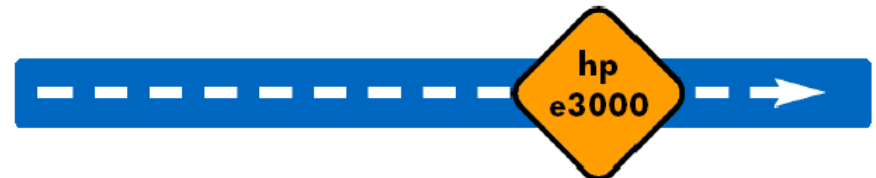
hp e3000 transition solutions



- Option1
 - Learn and Test
- Option 2
 - Learn, Test and Go-Live
 - Data Migrated at Ecometry
- Option 3
 - Learn, Test and Go-Live
 - Data Migrated at Your Site



Migration

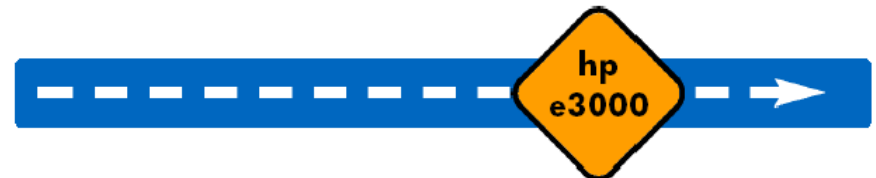


Migration Option 1

hp e3000 transition solutions



- Includes:
- Migration Toolkit and Support
- One Week of On-Site Install/Support
 - Install BridgeWare Software
 - Create New Environment
 - Copy Production to Test on HP3000
 - Run Migration and Validate Data
 - Benchmark to provide time estimates
 - Identify Potential Data Issues
 - Run Ecometry reports to validate data
 - Train You so that You can perform Your Go-Live



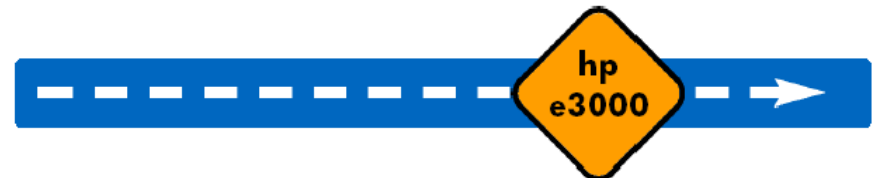
Migration

Migration Option 2

hp e3000 transition solutions



- Migration Toolkit and Support & 3 weeks on-site
- First Two Weeks Includes:
 - Install BridgeWare & Quest logging
 - Create new Ecometry Environment on Target
 - Backup Production Data and send to Ecometry
 - Data returned for test account
 - Enable logging on MPE/ix system
 - Run initial migration to new platform
 - Run Migration and Validate Data
 - Run Ecometry reports to validate data
 - Run incremental migration & validate data
- Third Week: Installer With You for Go-Live



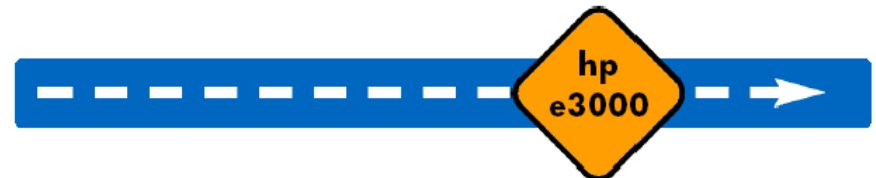
Migration

Migration Option 3

hp e3000 transition solutions



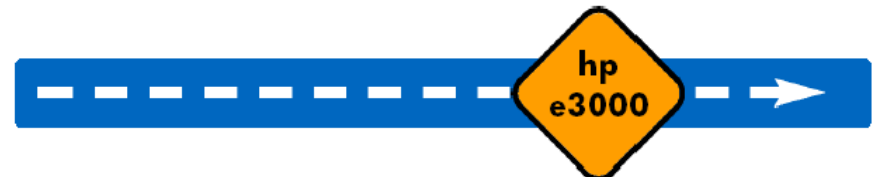
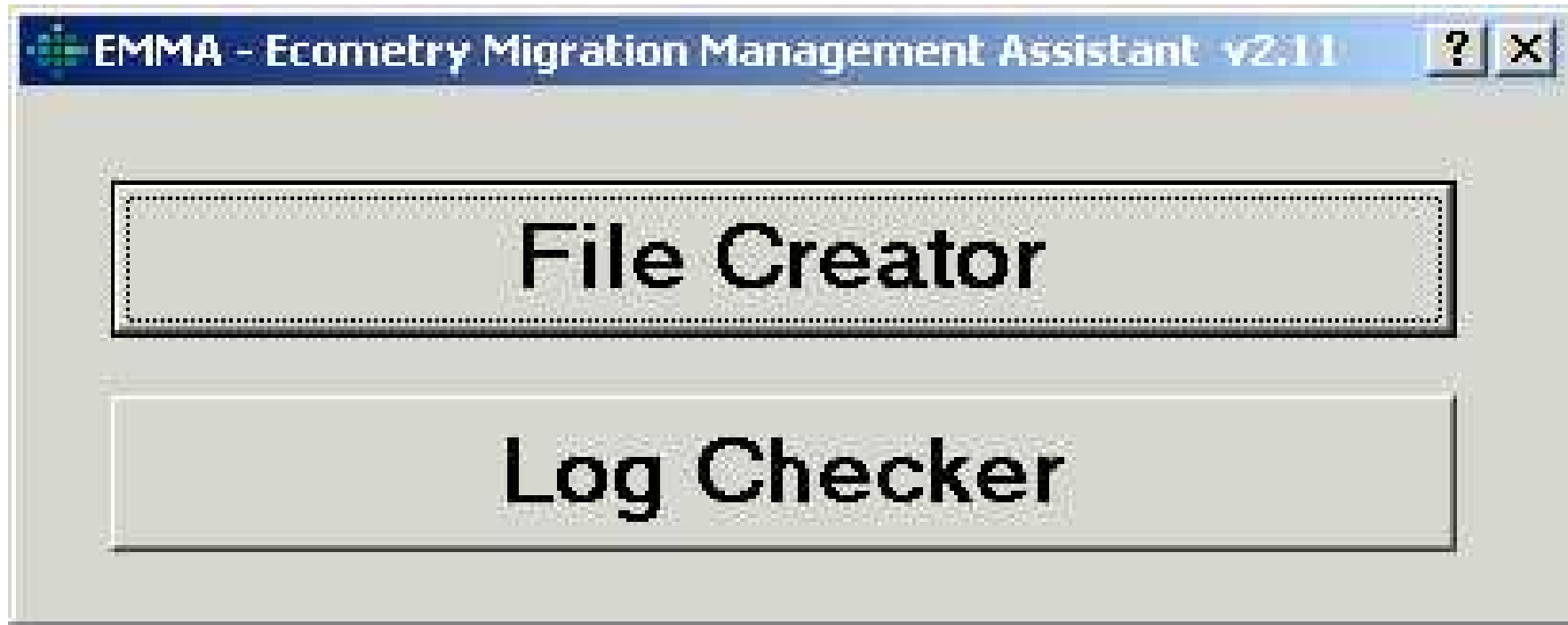
- Migration Toolkit and Support & 3 weeks on-site
- First Two Weeks Includes:
 - Install BridgeWare & Quest logging
 - Create new Ecometry Environment on Target
 - Copy Production to Test on your system
 - Enable logging on MPE/ix system
 - Run initial migration to new platform
 - Run Migration and Validate Data
 - Run Ecometry reports to validate data
 - Run incremental migration & validate data
- Third Week: Installer With You for Go-Live



Migration

Migration Assistant

hp e3000 transition solutions



Migration Assistant

hp e3000 transition solutions



EMMA File Creator

Program

Select A Procedure
☐ Initial ☐ Incremental

Select A Version
☐ 5.3 ☐ 5.4

Select A Target Platform
☐ Unix ☐ Windows

Select A Database Platform
☐ Oracle ☐ SQL Server

MPE hostname or IP address:

MPE account name:

MGR Password

Account Password

Target hostname or IP address:

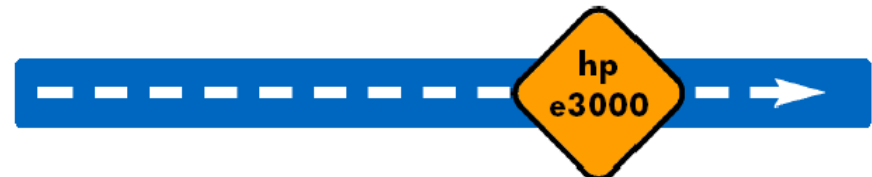
Target account name:

Choose a migration name:

Oracle Home:

Taurus Install Path:

Create Files



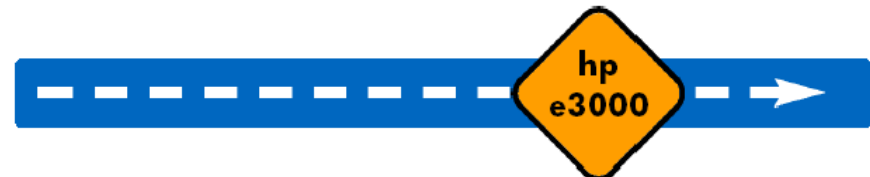
Migration Assistant

hp e3000 transition solutions



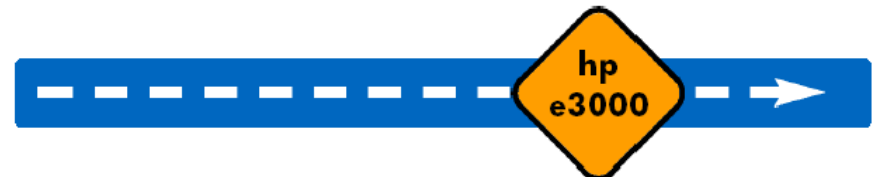
Condor_Test to Switch_Live 20030224

MPE Database	MPE Dataset	MPE Capacity	Reads	Writes	Updates	Deletes	Errors	Time(hr:mm)
MACMAN.MACSDATA.Test	ORDER-MSTR	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	FEDEX-MAST	1	1	1	0	0	0	0:00
MACMAN.MACSDATA.Test	MANIFEST-MAST	3,704	3,704	3,704	0	0	0	0:00
MACMAN.MACSDATA.Test	MANIFEST-ENTRIES	1,001,260	1,001,260	1,001,260	0	0	0	0:21
MACMAN.MACSDATA.Test	FEDEX-ENTRIES	4	4	4	0	0	0	0:00
MACMAN.MACSDATA.Test	FX-ROUTING-MSTR	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	AIRBORNE-MAST	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	AIRBORNE-ENTRIES	4	4	4	0	0	0	0:00
MACMAN.MACSDATA.Test	AB-ROUTING-MSTR	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	AB-ROUTING-DETL	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	FX-ROUT-DETAIL	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	WAREHOUSE-MASTER	14	14	14	0	0	0	0:00
MACMAN.MACSDATA.Test	SHIPPER-DATA	301	301	301	0	0	0	0:00
MACMAN.MACSDATA.Test	SHIP-METHODS	102	102	102	0	0	0	0:00
MACMAN.MACSDATA.Test	UPS-ROUT-DETAIL	24,499	24,499	24,499	0	0	0	0:01
MACMAN.MACSDATA.Test	CALENDAR	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	DUTIES	0	0	0	0	0	0	0:00
MACMAN.MACSDATA.Test	UPSURC	42,044	42,044	42,044	0	0	0	0:00
MACMAN.MACSDATA.Test	USPSDDU	0	0	0	0	0	0	0:00
Totals:			1,071,933	1,071,933	0	0	0	0:22
MACORD.MACSDATA.Test	CUSTOMERS	815,087	815,087	815,087	0	0	0	0:14
MACORD.MACSDATA.Test	OH-ADDITIONS	19,357	19,357	19,357	0	0	0	0:00
MACORD.MACSDATA.Test	PICK-LOT-HEADER	295,574	295,574	295,574	0	0	0	0:05
MACORD.MACSDATA.Test	STANDING-HEADER	0	0	0	0	0	0	0:00
MACORD.MACSDATA.Test	ORDER-BATCH	0	0	0	0	0	0	0:00
MACORD.MACSDATA.Test	CUSTOMER-ADDL	217,336	217,336	217,336	0	0	0	0:03
MACORD.MACSDATA.Test	CUSTOMER-PHONE	639,059	639,059	639,059	0	0	0	0:09
MACORD.MACSDATA.Test	CUSTOMER-COMP	864,017	864,017	864,017	0	0	0	0:14
MACORD.MACSDATA.Test	CUSTOMER-DEMO	358,463	358,463	358,463	0	0	0	0:05
MACORD.MACSDATA.Test	CUSTOMER-PROMO	0	0	0	0	0	0	0:00
MACORD.MACSDATA.Test	CUST-XREF	707,784	707,784	707,784	0	0	0	0:09
MACORD.MACSDATA.Test	ORDER-HEADER	737,797	737,797	737,797	0	0	0	0:14
MACORD.MACSDATA.Test	ORDER-SUB-HEAD	1,624,437	1,624,437	1,624,437	0	0	0	0:30
MACORD.MACSDATA.Test	ORDER-COMMENTS	259,840	259,840	259,840	0	0	0	0:03
MACORD.MACSDATA.Test	FINANCIAL-ORDER	3,292,583	3,292,583	3,292,583	0	0	0	0:54
MACORD.MACSDATA.Test	ACCT-COMMENTS	61,156	61,156	61,156	0	0	0	0:01
MACORD.MACSDATA.Test	CUSTOMIZATION	266,087	266,087	266,087	0	0	0	0:03
MACORD.MACSDATA.Test	BO-FILE	1,874	1,874	1,874	0	0	0	0:00
MACORD.MACSDATA.Test	ACTIONS	324,960	324,960	324,960	0	0	0	0:05
MACORD.MACSDATA.Test	CREDIT-APPROVAL	76,334	76,334	76,334	0	0	0	0:01





Ecometry Migration Costs

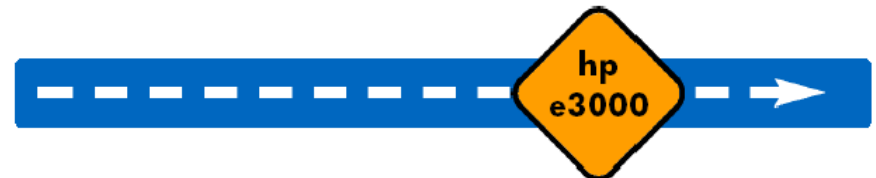


Migration Toolkit Costs

hp e3000 transition solutions



- Source MPE/iX System determines pricing tier
- **Micro** — 917LX, 918, 928, 937LX/RX/SX, 957LX/RX/SX, 967RX/SX
A400-100-110-150
- **Workgroup** — 929KS/020, 929KS/030, 939KS, 939KS/020, 968, 977SX, 978,
980/100, A500-100-140, A500-200-200
- **Midrange** — 969KS/100, 969/120, 969KS/200, 979KS/100/200/300,
980/100/200/300/400, 987/150/200 RX/SX, 988, 989KS/100, 997/300/400, N4000-100-
220, N4000-100-380
- **Enterprise** — 969KS/420, 979KS/400, 989KS/150/200/250/350/450/650,
997/300/400/800, N4000-100-440, N4000-200-440



Migration Toolkit Cost (Micro)

hp e3000 transition solutions



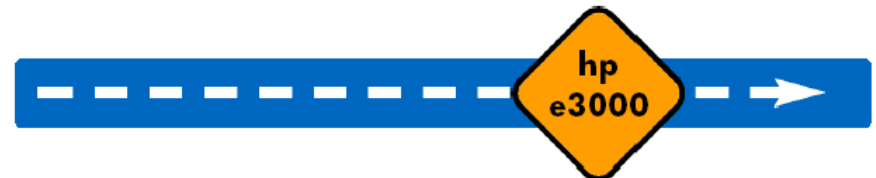
3 months

6 months

9 months

Option 1	\$19,320	\$24,504	\$28,824
Option 2	\$44,536	\$49,850	\$54,728
Option 3	\$34,536	\$39,855	\$44,278

- T & E cost not included
- Additional months \$2,663 plus T&E



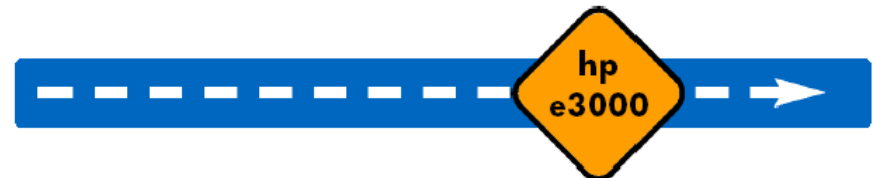
Migration Toolkit Cost (Workgroup)

hp e3000 transition solutions



	3 months	6 months	9 months
Option 1	\$26,520	\$36,024	\$43,944
Option 2	\$52,096	\$61,946	\$70,154
Option 3	\$42,096	\$51,951	\$60,154

- T & E cost not included
- Additional months \$5,435 plus T&E



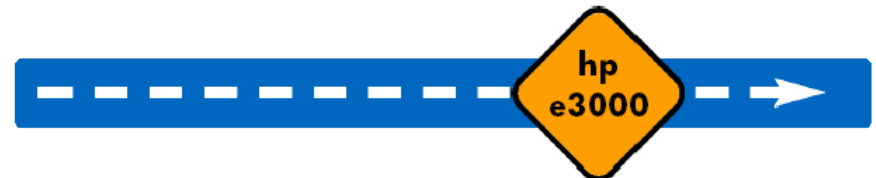
Migration Toolkit Cost (Midrange)

hp e3000 transition solutions



	3 months	6 months	9 months
Option 1	\$30,000	\$53,304	\$66,624
Option 2	\$56,575	\$80,090	\$93,968
Option 3	\$46,575	\$70,095	\$83,968

- T & E cost not included
- Additional months \$9,593 plus T&E



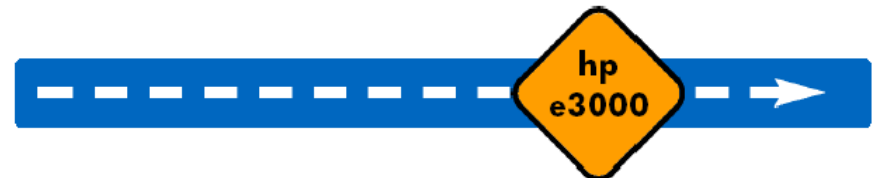
Migration Toolkit Cost (Enterprise)

hp e3000 transition solutions



	3 months	6 months	9 months
Option 1	\$35,000	\$64,824	\$81,744
Option 2	\$61,000	\$92,186	\$109,844
Option 3	\$51,000	\$82,191	\$99,844

- T & E cost not included
- Additional months \$12,365 plus T&E

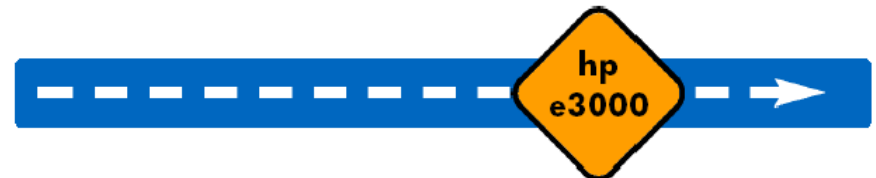


Migration Status

hp e3000 transition solutions



- Ecometry Application Is Complete
 - Ecometry Running on HP/UX and Win2K
- Tools To Move Your Data Are Complete
 - Data Migration From Image to Oracle or SQL2K
- Ecometry Resources Are Available
- Partner Resources Are Available
 - Surround Code
 - Project Staffing
- Migrations Have Been Scheduled





Lessons Learned Languages

HPe3000 Transition Study Case Study

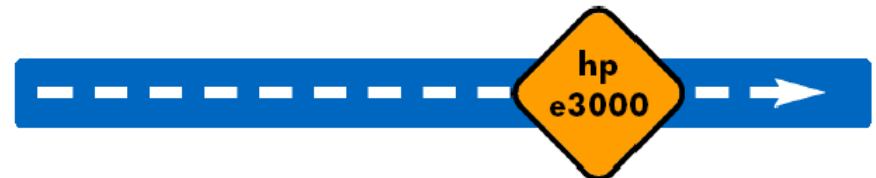


A process for deciding language choices

hp e3000 transition solutions



- What applications
- Languages (and version) of each
- Number of lines of code
- Current maintainability of the code
- Inventory skill sets
 - Staff
 - Extended team
 - Understand recruit/retain strategy

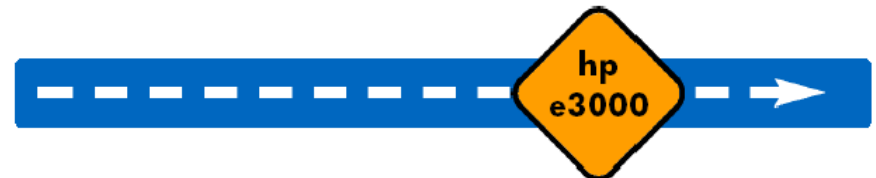


Challenges

hp e3000 transition solutions



- Does the current application meet the future needs
- What does the application have for interfaces
 - Inputs
 - Outputs
 - Extracts from the application database/files
 - Are there parameters passed?
- How much documentation do you have
- Any test environment/methodology?
- All at once or application at a time

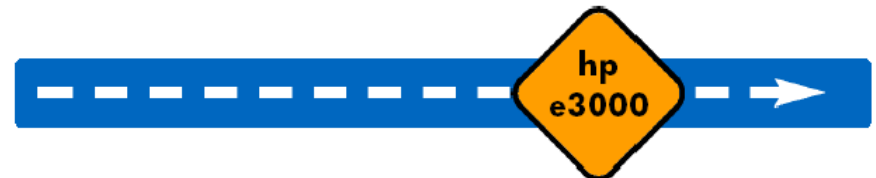


Scenario 1

hp e3000 transition solutions



- Inventory done
 - Cobol - ~250,000 LOC
 - Some Speedware (version 7.5) for screens 90K LOC
 - IIS, VB, Visual Studio, Delphi, Powerbuilder, Interbase, DOS-Clipper with DBF formats
- No Source control
- No HP9000 experience
- Thinking C# or Java
- 22 Staff members
 - Limited project availability
 - Need HR to be involved in recruit/retain scenario

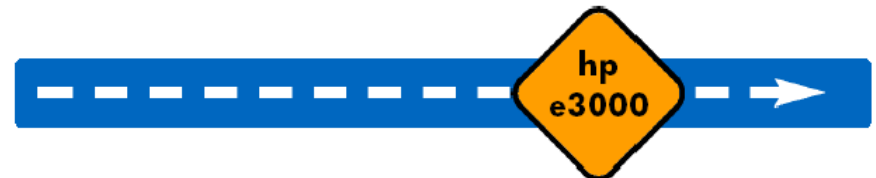


Short term solution 1

hp e3000 transition solutions



- Using OS & DB emulation for low impact migration
- Focus on moving what they have
 - Cobol to MF Cobol
 - Speedware to Speedware
- Rationalize the other languages and schedule for replacement
- Lots of training of HP9000/Oracle + MF Cobol
 - Train early
- Adding DBA resources
 - Considering contract (have 1 person now at Jr level)
 - Will evaluate Oracle tools

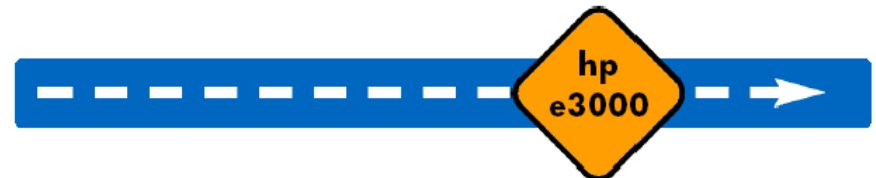


Long term solution 1

hp e3000 transition solutions



- Move to native interfaces
- Move to Java or C#
- Risks
- Changing languages

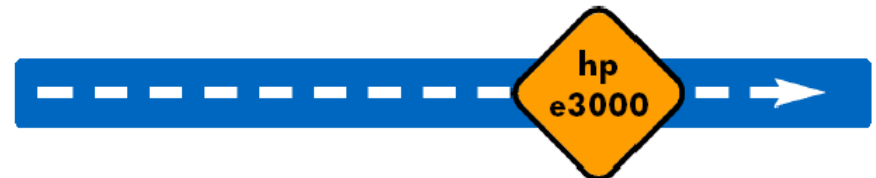


Scenario 2

hp e3000 transition solutions



- Inventory done
 - Old Cobol packaged app
 - Does not meet needs going forward
 - Difficult to maintain
- No Source control - Customization
- No Windows development experience
 - Go with VB or try out .NET with C#
- Looking at package plus customization
- Current code not well documented
 - Original Author not there
 - No diagrams for workflow

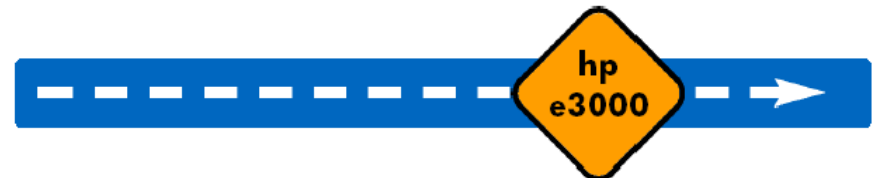


Solution 2

hp e3000 transition solutions



- Will hire new staff for development
- Current staff will maintain old system for next 2 years
 - Training plan for programmers
 - Training plan for operators
- Will need to get programming team leader
 - Experienced in C# or Visual Studio/SQLServer
 - Need SQLServer literate person
- Significant change in budget compared to maintenance mode
- Trying to sell to management by change in cost curve

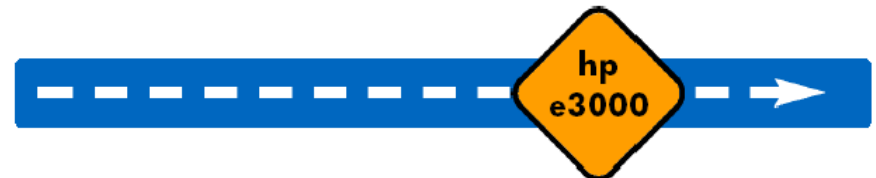


Summary slide

hp e3000 transition solutions



- Languages are essential to programming
 - Skills inventory are required
 - Condition of Code & Documentation
 - Test environment/methods





i n v e n t