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Migrating 4GL Applications

Speaker name

Title
Hewlett-Packard

Agenda

- Common migration issues for 4GLs

- Speedware migrations

- Powerhouse migrations

- Transact migrations

- Conclusion

Common migration issues for 4GLs

Overall assessment

- Speedware is highly portable to other platforms including HP-UX and Windows

- PowerHouse is highly portable to other platforms including HP-UX and Windows

- A solution for Transact is available from Speedware

Common migration issues for 4GLs

- Supported databases

- Interfacing with 3GLs

- Interface with external technologies

- Interacting with utilities

- What replaces Omnidex/Superdex/TPI

- Interfacing with packaged applications

Speedware migrations

Migrating Speedware applications

- Every Speedware development toolset offers cross-platform and database portability as one of its core features.

- Most applications built with Speedware V7 technology can be easily ported to any other supported platform without modifying the code at all.

- Operating System Switches permit developers to write OS-specific code in applications designed for multiple platform deployment facilitating gradual migrations.

Database migrations

- Databases can be easily ported through the Speedware development environments.
  - Database layers are abstracted away from the code permitting application to be database portable
  - Speedware's development tools are able to reconstruct identical database structure in other database types

- The database porting process is relatively simple

Migrating Speedware applications

- ## Platform/database grid
  - ### HP e3000 MPE/iX
    - Image, Image with Omnidex or Superdex, Allbase, Oracle (V7), KSAM, KSAM-XL, Flat (and others)
  - ### HP 9000 HP-UX
    - Oracle, Sybase, Informix, Allbase, Eloquence, DISAM (for indexed files) flat, Netbase (Image, KSAM etc.)
  - ### IBM RS6000 AIX
    - Oracle, Sybase, Informix, DB2, DISAM (for indexed files) flat, Netbase (Image, KSAM etc.)

Migrating Speedware applications

- Platform/database grid
  - Windows XP/2000/NT/ME/98
    - SQL Server, Oracle, Sybase, Informix, Eloquence, DB2, DISAM (for indexed files) Flat, Netbase (Image, KSAM, etc.) ODBC (for all other choices)
  - Sun Solaris
    - Oracle, Sybase, Informix, DISAM (for indexed files), flat, Netbase (Image, KSAM, etc.)

Migrating Speedware applications

- Product portability grid
  - Speedware Autobahn
    - HP e3000, HP 9000 HP-UX, Windows XP, 2000, NT, ME, 9x, Sun Solaris (CGI only), Linux (CGI only)
  - Visual Speedware
    - HP e3000, HP 9000 HP-UX, Windows XP, 2000, NT, ME, 9x

Speedware migration process

- Design
  - Binary FTP to target system
  - Open with Designer
  - Change file locations (paths) and database location

- Database
  - Using Speedware development tools
  - DBmotion
  - OpenTURBO (Imaxsoft)
  - Bridgeware (Quest/Taurus)

- Applications
  - Generate applications from Designer

Speedware migration issues

- Batch sections and command statements

- Calls to 3GL applications
  - Migration of 3GL XLs to shared library routines

- Database porting
  - Differences
  - Database porting (gradual, incremental, mirroring)
  - Omnidex / Superdex
  - Optimization (Data views)

Enhancing the user interface

- Speedware Autobahn can be used to build new dynamic web applications

- Existing Speedware/4GL applications can be quickly migrated to Visual Speedware, instantly giving them a Visual Basic front-end

SpeedWeb

- Web-enablement for Classic Speedware applications
  - Java/Web
  - Instant Web-enablement
  - Add additional graphical controls to existing applications with ease

PowerHouse migrations

PowerHouse migration options

- Port PowerHouse applications
  - Using Axiant
  - To PowerHouse on target platform
  - To PowerHouse Web

- Platform options
  - UNIX, OpenVMS, Windows NT/2000/XP

- New database option
  - Eloquence

Migrating PowerHouse applications

- Platform/database grid
  - HP e3000
    - Image (with Omnidex or Superdex), Allbase, KSAM or KSAM-XL, MPE
  - HP 9000 HP-UX
    - Oracle, DB2, Sybase, Allbase, CISAM, Eloquence
  - IBM RS6000 AIX
    - Oracle, DB2, Sybase, CISAM

Migrating PowerHouse applications

- Platform/database grid
  - Windows NT/2000/XP
    - SQL Server, Oracle, DB2, Sybase, DISAM, Eloquence, ODBC (for all others)
  - Sun Solaris
    - Oracle, DB2, Sybase, CISAM
  - Tru-64 UNIX
    - Oracle, Sybase, CISAM

Migrating PowerHouse applications

- Platform/database grid
  - Open VMS Alpha
    - Oracle RDB, Oracle, RMS
  - IBM OS/400
    - DDS, OS/400 DB2

Migrating PowerHouse applications

- Product portability grid
  - PowerHouse
    - HP e3000, HP 9000, IBM RS6000 AIX, Sun Solaris, Tru64 UNIX, Windows NT/2000/XP, Open VMS Alpha
  - Axiant Development
    - Windows 98/ME/NT/2000/XP
  - Axiant Deployment
    - HP e3000, HP 9000, IBM RS6000- IX, Sun Solaris, Tru64 UNIX, Windows NT/2000/XP, OpenVMS Alpha

Migrating PowerHouse applications

- Product Portability Grid
  - PowerHouse Web
    - HP e3000, HP 9000, IBM RS6000 AIX, Sun Solaris, Tru64UNIX, Windows NT/2000/XP, OpenVMS Alpha

PowerHouse migration tools

- Axiant 4GL
  - Helps you migrate your applications
  - GUI Development environment
  - Multi-environment deployment
    - Fat Client (Database on the LAN)
    - Mobile (Everything on the PC)
    - Web
    - Terminal
    - Thin Client
  - Imports From
    - PowerHouse dictionary
    - Relational metadata
    - QUIZ, QTP, and QUICK source code

PowerHouse migration process

- On MPE
  - Collect source files (PDL, QK, QZ, QTP) to move
  - Save the data in portable subfiles, using QTP
  - Transfer the source code to Windows
  - Transfer the subfiles to the target machine

- Use Axiant's migration tools to:
  - Create a migration profile:
    - for example MPE/Image to Oracle/UNIX
  - Import the PDL and generate the database
  - Import the programs, converting to PH UNIX/relational

PowerHouse migration process

To bring your application from Axiant to UNIX:

- Generate the target PDL and SQL

- Compile the programs on the desktop

- Use FTP to transfer the PDL, SQL and source files to UNIX

PowerHouse migration process

To assemble the application on UNIX:

- Create database from SQL

- Create dictionary from PDL source file

- Create indexed and sequential files

- Load subfiles into database and files

- Modify to match the data changes, then test

- Make the application relational

- Translate any MPE command scripts and test

PowerHouse migration issues

- Eloquence requires no code changes

- Relational Databases differences

- KSAM to CISAM

- Relative to Direct, Sequential or Indexed

- UDCs need to be converted to scripts

- Batch Sections and Command Statements

- Calls to 3GL Applications

- Database porting

PowerHouse Web

- Build dynamic data driven Web applications.

- Eliminate traditional client/server overhead using Web browsers.

- Extends the reach of your enterprise
  - provide improved customer service,
  - additional sales channels,
  - alternate communication channels to customers and suppliers.

Transact migrations

Transact situation

- Transact (RAPID 3000)
  - 4GL created by HP for the HP e3000 platform only

- 400 supported customers worldwide (HP estimates)
  - Estimated total of 1000 customers

- Significant number looking for future path

- Transact does not exist on other platforms

Transact migrations to Speedware V7

- Outsourced-type solution

- Benefits of Speedware's migration solution
  - Similar language and concepts
  - Platform and Database Portability
  - User interface enhancement options
  - Continued development
  - Can be guaranteed at a fixed bid

Transact migration process

- Send the Transact environment to Speedware

- Speedware converts Transact to Speedware V7 using its automated tools and professional services

- Test the application and address any migration issues

- Once fully tested on MPE, Speedware follows its Migration Process to migrate off the HP e3000 platform

Transact migrations to COBOL

- Consists of combination of T2C solution (Screenjet Ltd) and AMXW (Speedware)

- T2C
  - Converts Transact to HP COBOL using Richter software
  - Runtime uses T2C libraries to resolve the intrinsics

- AMXW platform migration solution
  - Migrates the HP COBOL application to another platform

- Currently being developed by Screenjet Ltd. and tested by Speedware with AMXW

Conclusion

Conclusion

- Speedware and Cognos 4GLs are well supported with many porting options

- Speedware offers a path for TRANSACT to Speedware V7 or COBOL

- PROTOS and CBAS have harder paths

- Because of their high level nature, 4GLs migrate more easily to new platforms; because they are built on a layer above the OS/and 3GLs

- Database and data issues will loom the largest in 4GL ports

Thank you

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