HP e3000 Migration Planning

*Managing your Migration Process
for Success*

HP e3000 Migration Planning

- Five Keys to Migration Success
  - Environment Baseline
  - Proposal of Migration Alternatives
  - Significant Event Management
  - Code and Data Conversion
  - Capacity Plan – Final Hardware Configuration

Performance and Migration

Performance is an integrated and integral part of all aspects of the migration process.

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Environment Baseline
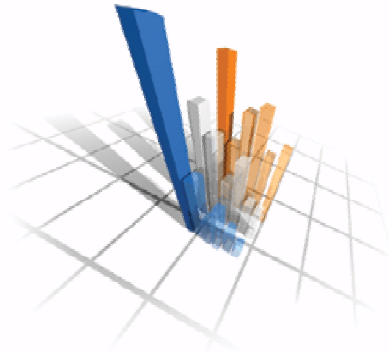
Setting the baseline of processing activity on your system.

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Environment Baseline

- Establish where you are today.

- How long the existing system will last?

- What are the options for the interim?

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Environment Baseline – Analysis Options

- System Review

- PASS Program

- Second Opinion

- Second Opinion Plus

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Environment Baseline – Foresight

Minimize unnecessary expenditures for MPE system prior to migration.

Make a significant effort to optimize your performance and applications through labor instead of unnecessary hardware or software.

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Environment Baseline – Voicing Concern

- Wouldn't you like assurance that your system will last until your change?

- *Don't panic!* Now is not the time to be guessing!

- Make wise, well-planned purchases and expenditures.

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Environment Baseline – Know Your Environment

- Know what five applications *must* complete at the sacrifice of all others.

- Know in what languages the code is written.

- Identify your auxiliary programs whether third party or home grown.

- Document your data / process flow.

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Environment Baseline – Documentation

Document the flow of data and processes in your environment because it may change in the new environment

– Spooling
– Archiving
– Backup
– Screen Handlers
– Schedulers

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Environment Baseline – Solutions

Evaluate and weigh viable solution options.

Never let the *hardware* of the operating system drive your solution choice.

Always let your solution drive your choice.

Environment Baseline – Business Requirements

Take your business requirements (user needs, functionality etc) ...

Find the best software to meet those requirements ...

Pick the best platform for that software ...

Select the hardware on the chosen platform.

Migration Alternatives

Assessing migration alternatives and formulating a draft migration action plan.

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Migration Alternatives – Asking the Tough Questions

Is it acceptable to have an expectation
that you will be able to shut-down and
reboot into a fully functioning, newly
migrated environment without a strong
plan for migration and testing?

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Migration Alternatives – Asking the Tough Questions

Is it feasible to spend a majority of your
funds upgrading to an N-Class box that
contains a free UX conversion kit,
without budgeting in a transition
machine with UX for the testing of
converted data?

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Migration Alternatives – Asking the Tough Questions

Does it sound beneficial to assess your current MPE environment, spend minimal money in MPE maintenance and spend little to moderate amounts of money on a refurbished UX box to complete a test run of production data *WITHOUT* interfering with production?

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Migration Alternatives – Asking the Tough Questions

What if your cost was minimal to keep the MPE running and you invested your funds on a transition machine?

You could evaluate, develop and test your migration.

Your results could assist you in determining what type of hardware you should implement for your migration of production activity.

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Migration Alternatives – Quantifying the Environment

How many lines of code?

What percentage is third party
What percentage is home grown

Identify all third party software issues.

Which modules?
How often are they used?
What languages are your third party packages written in?
What are your security, scheduling etc. considerations?
Is a replacement needed in your new environment?

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Migration Alternatives – Quantifying the Environment

In Flow / Out Flow for data and
processes in your environment.

INFLOW

DATA
PROCESSING *

OUTFLOW
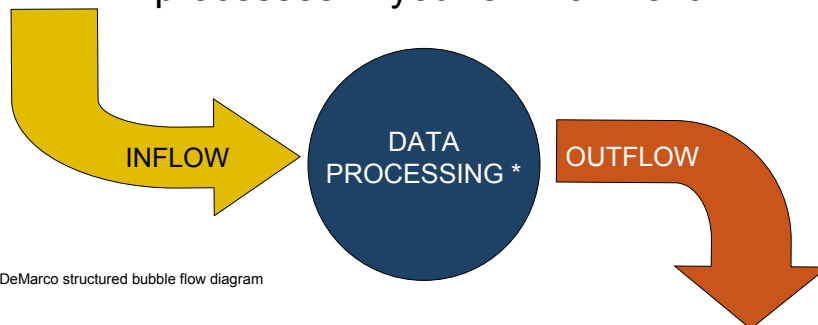
* DeMarco structured bubble flow diagram

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Migration Alternatives – Software Solution Options

- Re-write of everything or even just a subset of all code

- 'Out of the box' – shutting down and bringing up in the new environment, third party software migration solution, still includes some re-write

- Emulation – data extractions to generate new code
  - native mode functionality
  - libraries requiring maintenance fee

- 80 / 20 Rule
  - Twenty percent of the application is used 80% of the time

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Migration Alternatives – Software Solution Considerations

Software helps to drive the hardware solution
  - Reliability
  - Support
  - Knowledge base
  - Training on the new platform: technical and methodology

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Migration Alternatives – Possible Timeline

A) Archive prior to setting up test box

B) Archive prior to actual migration

C) Archive prior to load test

D) Load testing of hardware and software

E) Begin migration; run in parallel

F) Load test/capacity plan to right-size target box

G) Go! 12 months remain for trouble-shooting

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Migration Alternatives – Significant Events

What are your archival methods?
- Will your current methods work for retrieval in the new environment?
- Does it matter?

What is your retention schedule?
- What is corporate policy for keeping archives?
- Does a specialized migration retention schedule need to be written?

Migration Alternatives – Significant Events

Significant Event Management
– Meeting management
– Documentation
– Communication points
– Test plan

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Migration Alternatives – Your Plan

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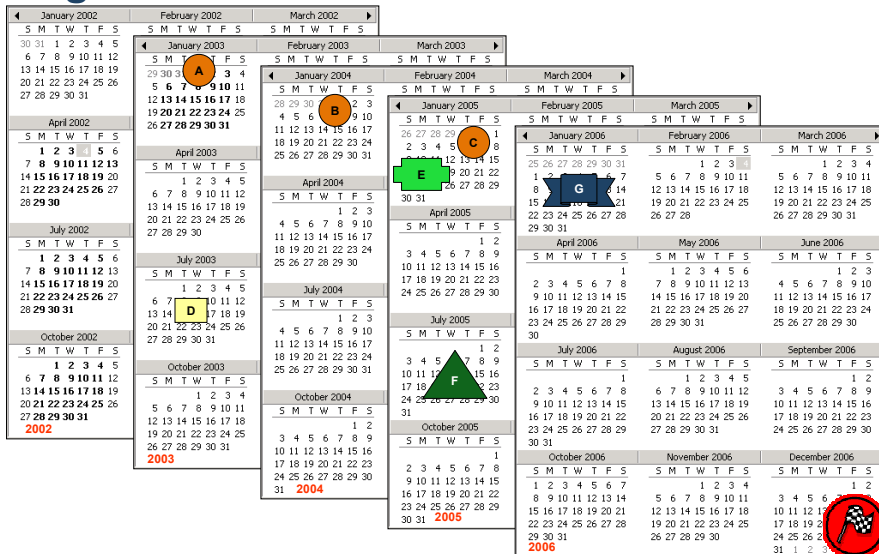
Migration Alternatives – Possible Timeline

Performance Baseline starts the timeline:

- Second Opinion
  - How long will my current box last?
  - Will is survive the migration change control window?
- PASS (Performance Analysis Support Services)
  - Continually asking, "Am I still on track?"
  - Are there performance tuning strategies that I can use to ensure that I will remain on track?

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Significant Event Management

Managing all of the aspects of every significant event in the migration process.

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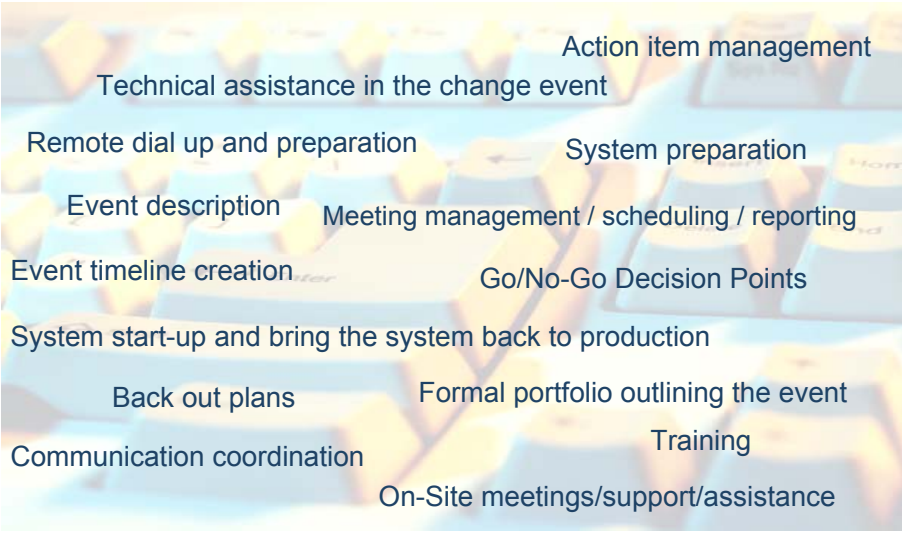
Significant Event Management

- Manage complete migration process
- Provide bandwidth, as an extension of your staff
- Assist in implementation of thorough, well-thought out processes
- Help set up new and test systems
- Comprehensive documentation of the entire migration process

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Significant Event Management – **Migration Deliverable**

Project Management

Event Coordination

Communication Coordination

All documentation (SEM)

Significant Event Management – Scope

Action item management

Technical assistance in the change event

Remote dial up and preparation

System preparation

Event description

Meeting management / scheduling / reporting

Event timeline creation

Go/No-Go Decision Points

System start-up and bring the system back to production

Back out plans

Formal portfolio outlining the event

Training

Communication coordination

On-Site meetings/support/assistance

Significant Event Management

Accountability

Methodical Planning

Effectively Communicated

"What If" Scenarios

Preparedness

Test … Test … Test …

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Significant Event Management

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Significant Event Management

Plan the work

so that you can

work the plan

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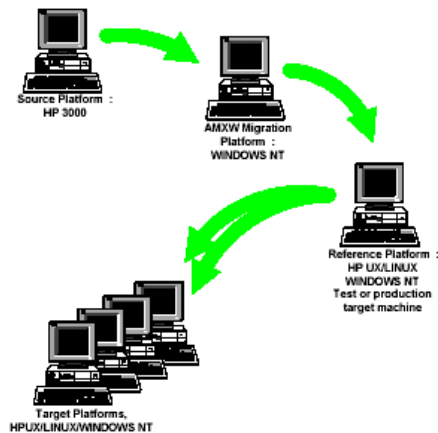
Code and Data Conversion

Addressing your software migration through target environment emulation.

Code & Data Conversion – Made Easy

Migration made easy through our partner Neartek and AMXW

Source Platform : HP 3000

AMXW Migration Platform : WINDOWS NT

Reference Platform : HP UX/LINUX WINDOWS NT Test or production target machine

Target Platforms, HPUX/LINUX/WINDOWS NT

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Migration made easier

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Code & Data Conversion – Migration Deliverable

Code Conversion
Application Conversion
Communication Coordination
Run Time Product after Conversion

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Code & Data Conversion – Emulation Benefits

$ High performance and efficiency during the transitory migration phase

$ Stable operation in the new environment

$ A less expensive migration project (contrasted to producing new environment from scratch)

$ Can use same look and feel in new environment as used in current environment – saves expensive training costs for production and end user staffs

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Code & Data Conversion – Emulation Benefits

$ Provides a supported environment from an obsolete environment

$ AMXW is a quick and simple tool

$ Its' range of parameters gives it exceptional flexibility of use

$ Migrated applications are dynamic (execution speed increases
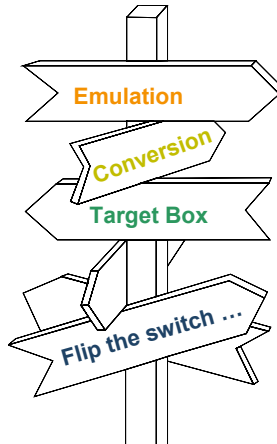with relational database management systems)

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Code & Data Conversion – Benefits

Original Code Conserved
Application Maintenance
Applications Open to Improvement
Compatibility

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Slide 43

Code & Data Conversion – Decision-making

Emulation

Conversion

Target Box

Flip the switch …

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Code & Data Conversion

Neartek - Software Editor

Head Office	Neartek Inc. (Lakeville, USA)
Europe Office	Villebon-sur Yvette, France
Employees	150

Main activities
- ❑ Virtual storage product-line (VSEngine) 8 years
- ❑ Migration product-line (AMXW) 10 years
- ❑ Professional services 5 years

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Neartek R&D locations France

Fontenay le Fleury

VSEngine, Serverless backup

Villebon-sur Yvette

AMXW product-line

Neartek Installations

Over 180 VSEngines worldwide

Over 150 machines running AMXW worldwide

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Code & Data Conversion

Neartek allows virtual storage solutions with:

HP, COMPAQ, IBM, UNISYS, AMDAHL,
STORAGETEK, ADIC, ATL, EXABYTE
CROSSROADS

Successful Neartek HP e3000 migrations

HP, ORDAT, OPENSEAS, DENKART, UNILOG, ARES, CIRIL,
DATASTREAM, TJSYSTEMS, PITNEY BOWES

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Code & Data Conversion

HP e3000 Applications

Databases	IMAGE/TURBOIMAGE, ALLBASE
Files	SEQUENTIALS, MESSAGE, KSAM, SPOOL
Programs	COBOL, FORTRAN*
Screens	VPLUS
System calls	Intrinsics
JCL	COMMANDS, UDC
Utilities	SORT/MERGE, FCOPY

*HP-UX

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Code & Data Conversion

Target Environments

UNIX
- HP-UX
- Linux RedHat
- AIX

SOLARIS   x86
Sco, Siemens-Nixdorf, Tandem, Unisys

WINDOWS   NT4

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Code & Data Conversion

Multiple Target Relational Databases
ALLBASE *
ORACLE

* HP-UX

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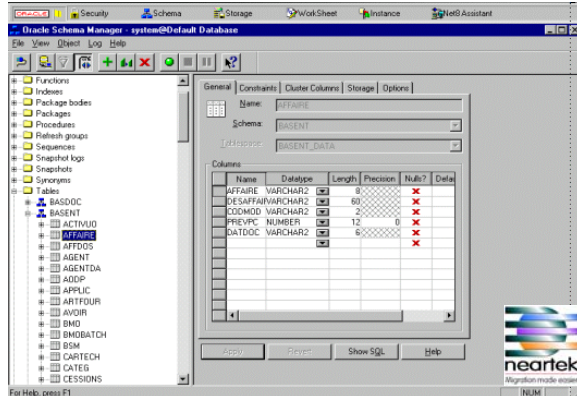
Code & Data Conversion

Microsoft SQL Server

Microsoft
SQL Server.
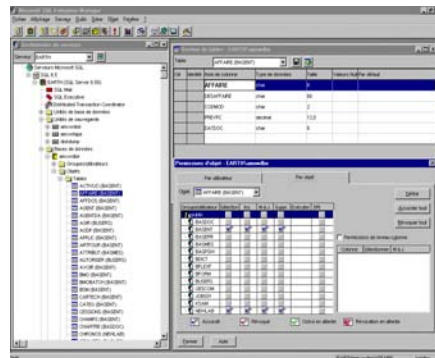
INFORMIX, INGRES SYBASE

Automated generation of relational database schemas
- ❑ Possibility of transparent normalization against programs
- ❑ Source data unload/reload
- ❑ Possiblility of changing Ksam (indexed) fileds to database tables
- ❑ Just relink and modify a variable environment to change from a relational Database to another

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Code & Data Conversion

Well-known Neartek and Lund partners

Cheops

Openseas

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Code & Data Conversion – References

ISVs (software editors)

ARES, CIRIL, DATASTREAM, EDS-GFI, IMPULSION, ORDAT, RCS,
TJ-   SYSTEMS, UNILOG

Companies that migrated their own sources

PITNEY BOWLES, TEFAL

AMXW Customers

ALEXANDER BINZEL GMBH, AUTOPRATIC, BROSE, BUZIL, BVA,
CGEP, CHAPELLE DARBLAY, COHLINE, DALIM, DETIA, DHW,
DOLE, DUNLOP, EHLEBRACHT, EMIG GMBH & Co, GTI, HAL,
HELLA, HETTICH, HUTTENES ALBERTUS GmbH, ICI,
IMSS, IMV, INOTECH, INOPLAST, KRUPP AUTOMOTIVE
SYSTEMS GMBH, LUXOPLAST, NASCO, OTOR, PAD,
PIAZZA, RADSYSTEM GMBH, SACRED, SAS

Code & Data Conversion
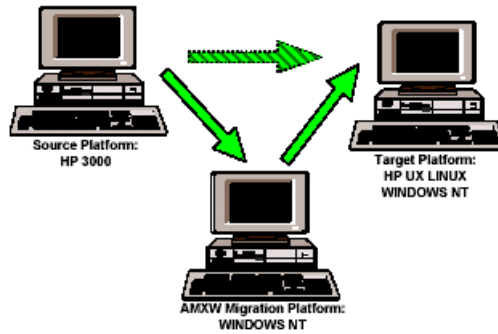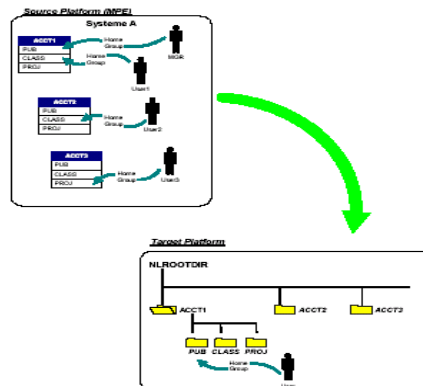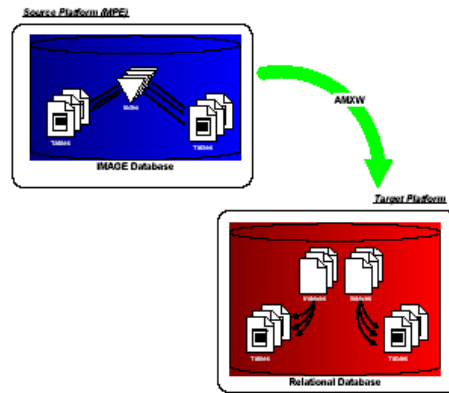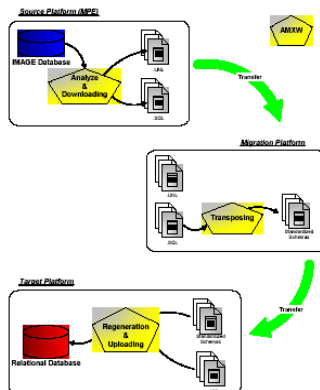
Code & Data Conversion

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Code & Data Conversion

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Code & Data Conversion
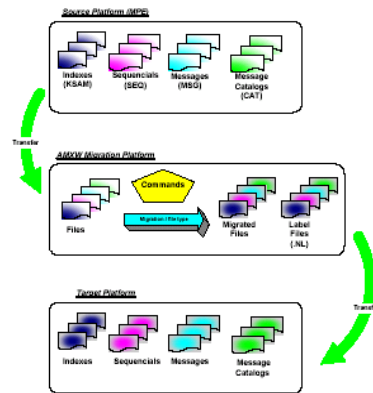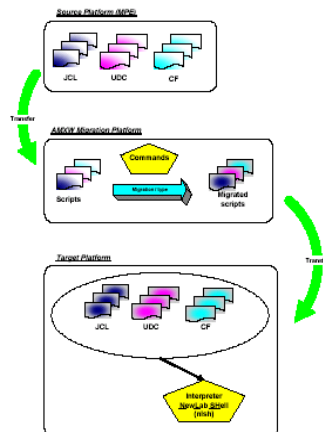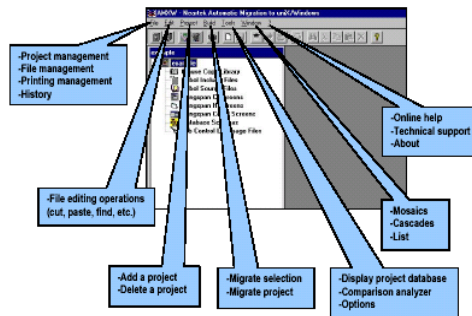
Code & Data Conversion

Code & Data Conversion

Code & Data Conversion

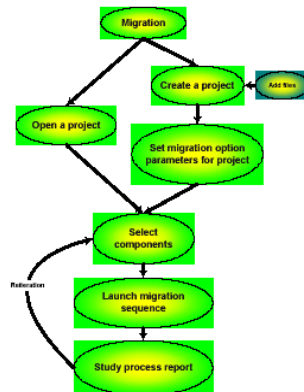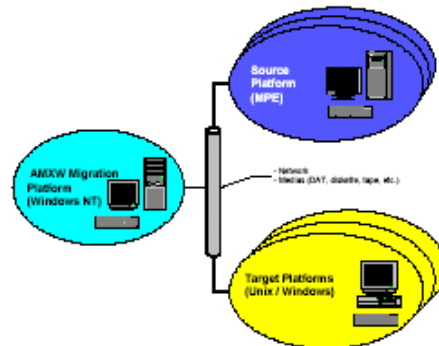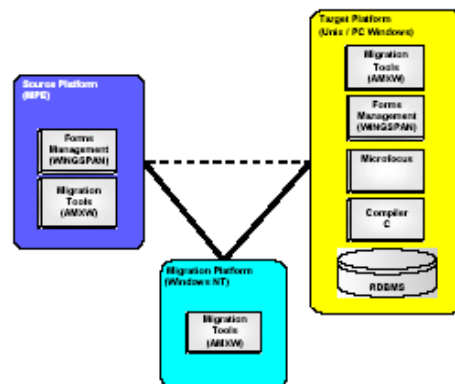# Code & Data Conversion

Code & Data Conversion

Code & Data Conversion

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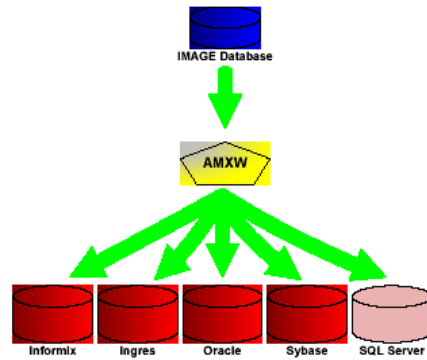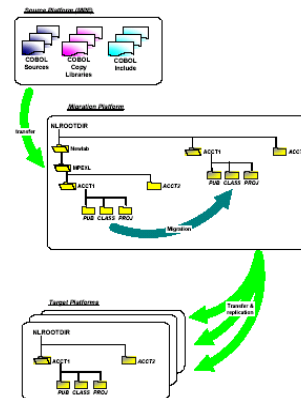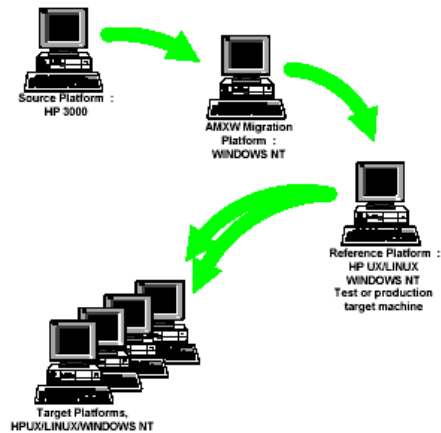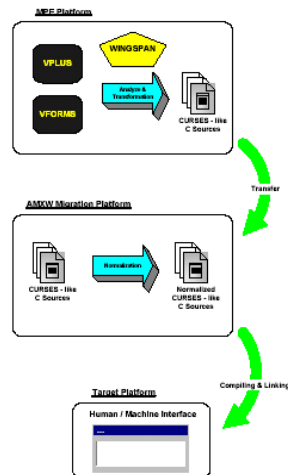
Code & Data Conversion

1,000,000 lines per day

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Capacity Planning

Load-testing and
right-sizing your
target system

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Capacity Plan – Voicing Concern

- Will our target box accommodate regular production activity?

- Will our target box accommodate growth?

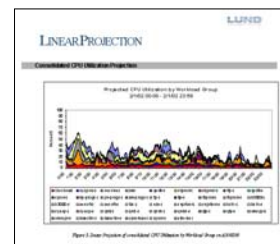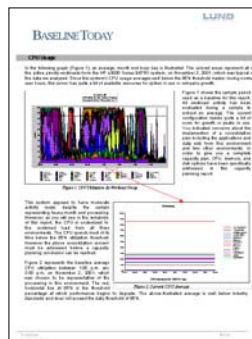- Determine acceptable configuration.

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Capacity Plan – Solution Analysis

Assistance in stress and load-testing
Capacity Plan – Major Resource Projections

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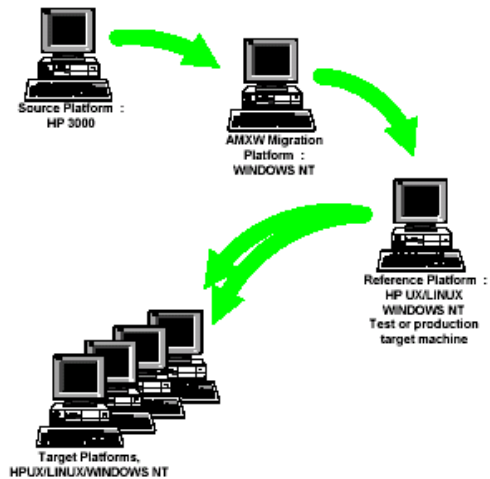
WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Capacity Plan – Proactive Migration Management

Take the utilization of your production
environment on a new operating system
and plan for optimal configuration.

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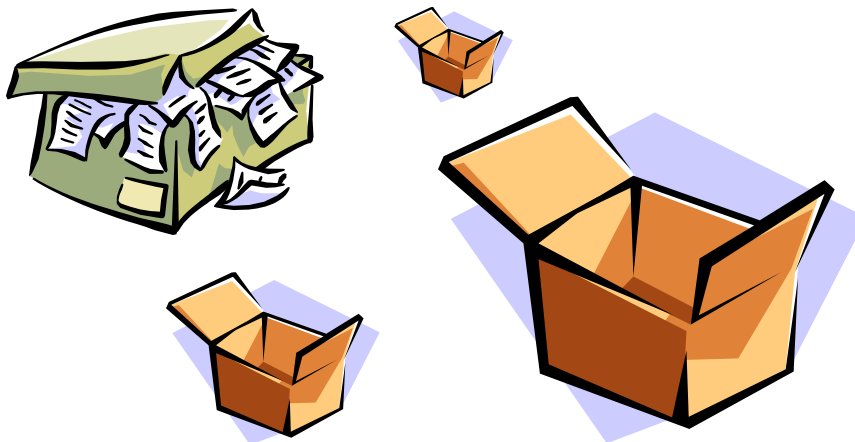
Capacity Plan – Proactive Migration Management

Ensure the configuration of your system
is more than adequate for the day your
production workload goes live on the
new system.

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Capacity Plan – Proactive Migration Management

WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Capacity Plan – Right-Sizing

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Capacity Plan – Drop in the Bucket Insurance

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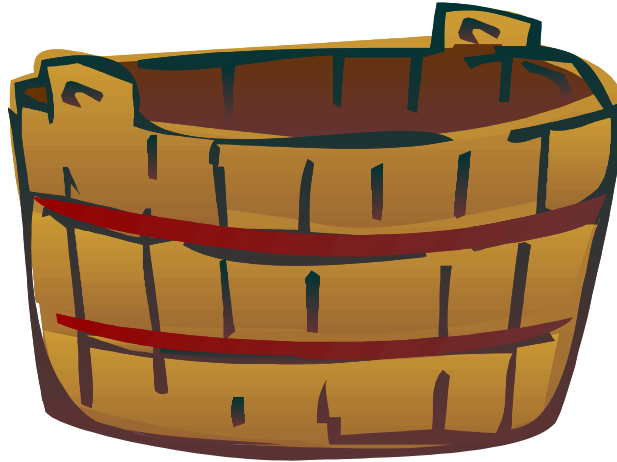
Additional Considerations – Speaking to Management

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Additional Considerations –

Third Party Software

- Emulation

- Learn from the Emulation

- Writing the next version in Native Mode

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WHAT YOU NEED TO KNOW, **WHEN** YOU NEED TO KNOW IT.

Review of Migration Methodology

- ## Five Keys to Migration Success
  - Environment Baseline
  - Proposal of Migration Alternatives
  - Significant Event Management
  - Code and Data Conversion
  - Capacity Plan – Final Hardware Configuration

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