SAP Services We Offer

Last update: 03-25-2010 by MK

SAP : Sizing

Last update: 03-25-2010 by MK

Services we offer: SAP solution sizing

Responsible for Sizing Guidelines

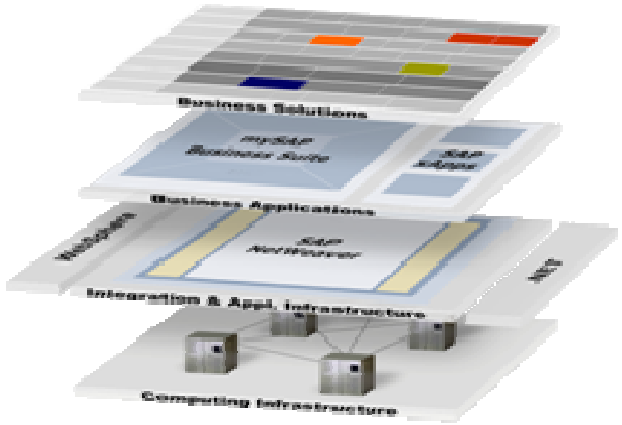
Covering the growing complexity of SAP solution landscapes

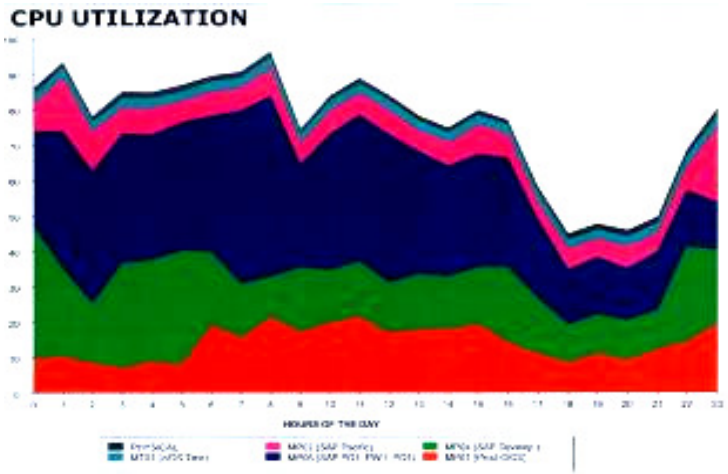
Conceptual guidance ensuring fullfillment of customer requirements

Fine tuning and tailoring

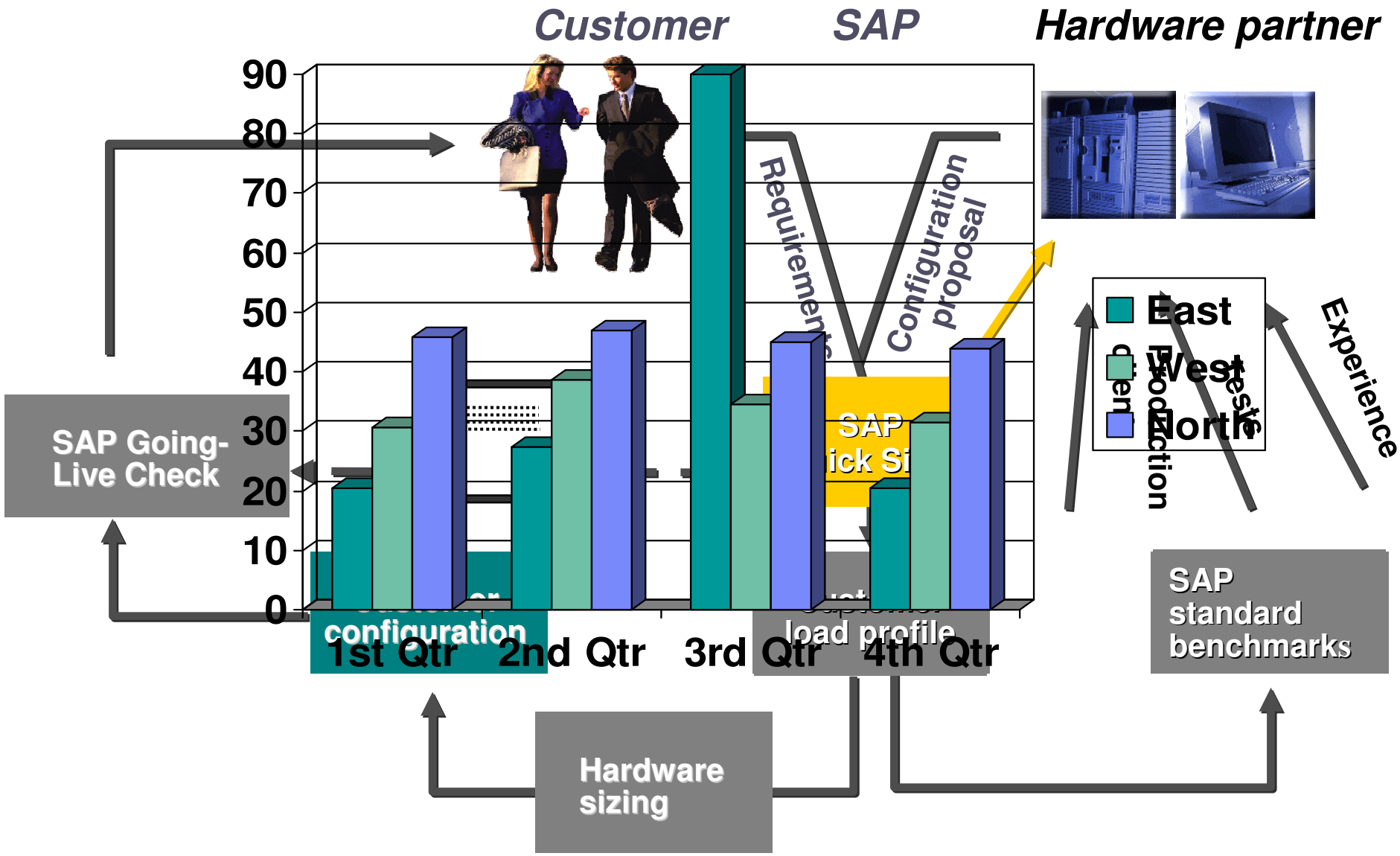
Teach the Teacher sizing classes

3rd level sizing and configuration support for the field and Business Partners





From SAP application to infrastructure – SAP Sizing



SAP : Insight Tool

Last update: 03-25-2010 by MK

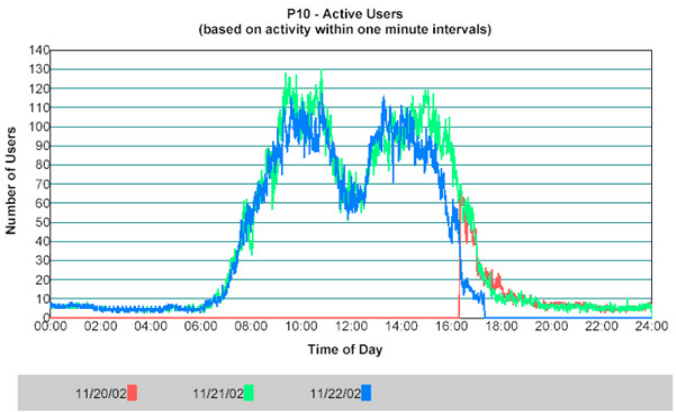
IBM Insight for SAP – analyze your SAP system

- **Conveniently installed and run**
- **Provides the customer with complete production topology view of overall Systems**
  - ☒Infrastructure Critical performance Data
  - ☒Systems applications level usage data
- **Runs independently of Production topology**
  - ☒Installs on a spare Windows box connected to the network
  - ☒Negligible impact to running production systems
- **Provides cross check to Early Watch Analysis**
- **Platform Independent.**
  - ☒IBM, Sun, HP, Compaq, etc
  - ☒SAP Landscapes
- **IT'S FREE!**

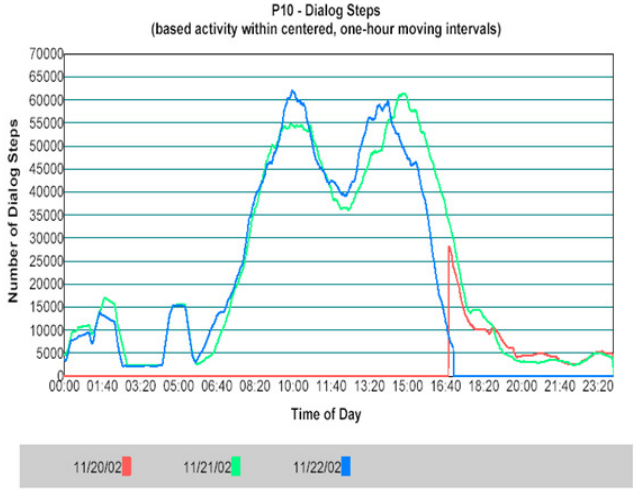
  http://www.ibm.com/erp/sap/insight

IBM Insight for SAP – Charts

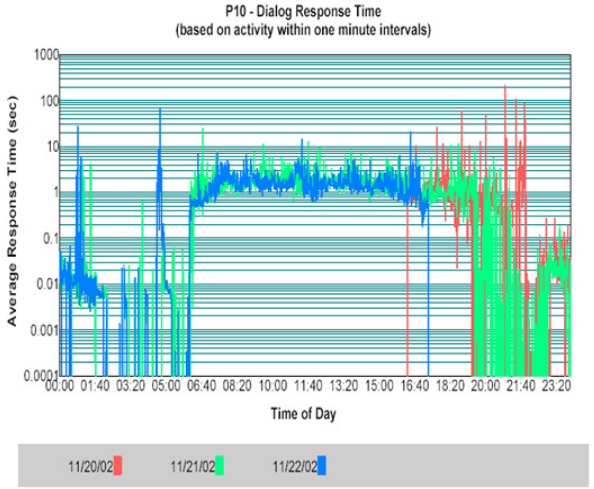
Active Users



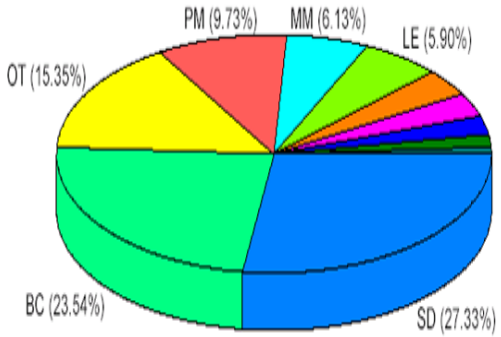
Dialog Steps



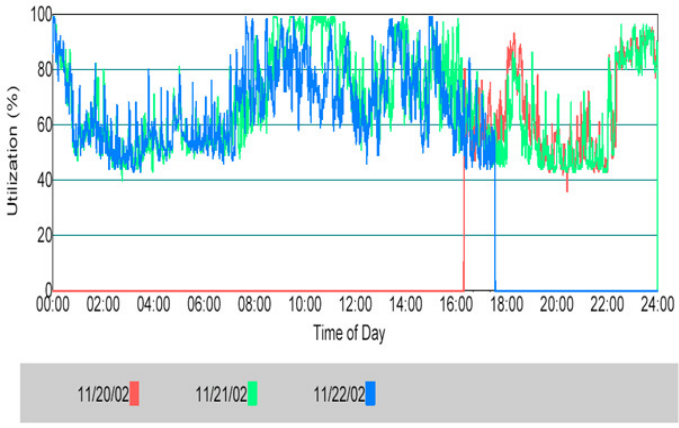
Response Time



CPU Time by module



CPU Utilization



Top Users – CPU Time

Time (s)	%	Steps	Avg (s)	User ID
404046759	84.7	15572	25947.0	ALEREMOTE
15380849	3.2	274749	56.0	SAPSYS
13604567	2.9	4899	2777.0	KETTERRM
2635219	0.6	1166	2260.1	HITTINB
2309460	0.5	5048	457.5	BWBASIS
2298800	0.5	2882	797.6	GB3755
1996749	0.4	3796	526.0	ONGAP
1983340	0.4	50417	39.3	JC1234
1703639	0.4	3094	550.6	DDIC
1661590	0.3	2321	715.9	CAP594
1578730	0.3	295	5351.6	KR6853

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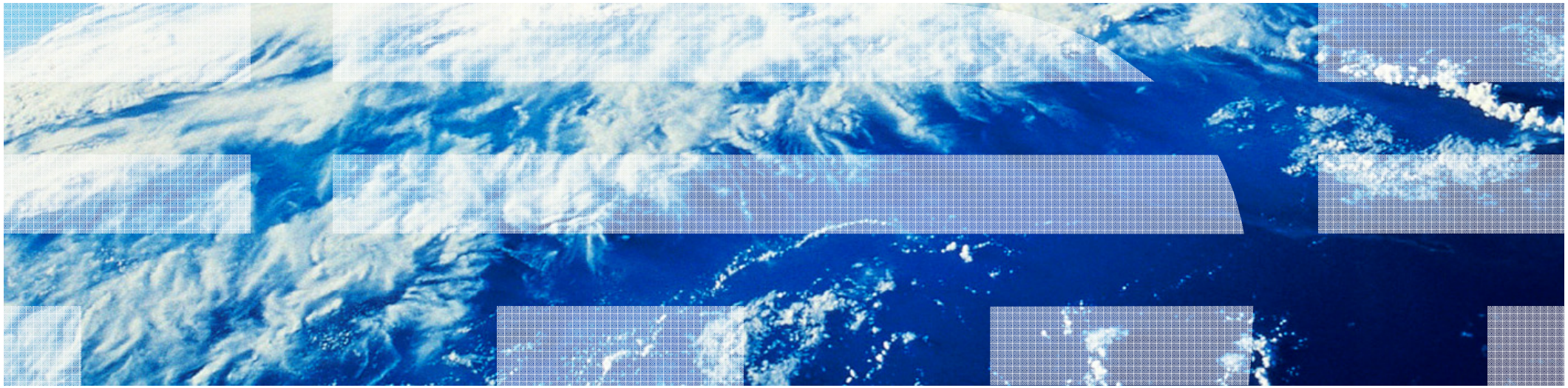
SAP platform migrations



Last update: 03-25-2010 by MK

Content

- Definition of SAP migrations
- Migration project phases
- Migration methods
- Unicode migration

Migrations are the entry ticket for a modernized SAP IT infrastructure

- Migrations will
  - generate additional costs
  - need downtime for productive systems
  - need internal resources for testing
  - be an additional risk

- but Migrations will be necessary
  - to use the benefits of a virtualized server platform
  - to lower the database maintenance costs
  - to improve application availability
  - to move away from unsupported platforms

SAP Terminology (1)

- **System Copy**
  - Duplication of an SAP system
  - Certain SAP parameters may change when a system is copied
  - All the instances are newly installed
  - Database set up using a copy of source system database
  - **Homogeneous System Copy**
    - Both operating system & database system stay the same
  - **Heterogeneous System Copy**
    - Migration is a synonym for heterogeneous system copy

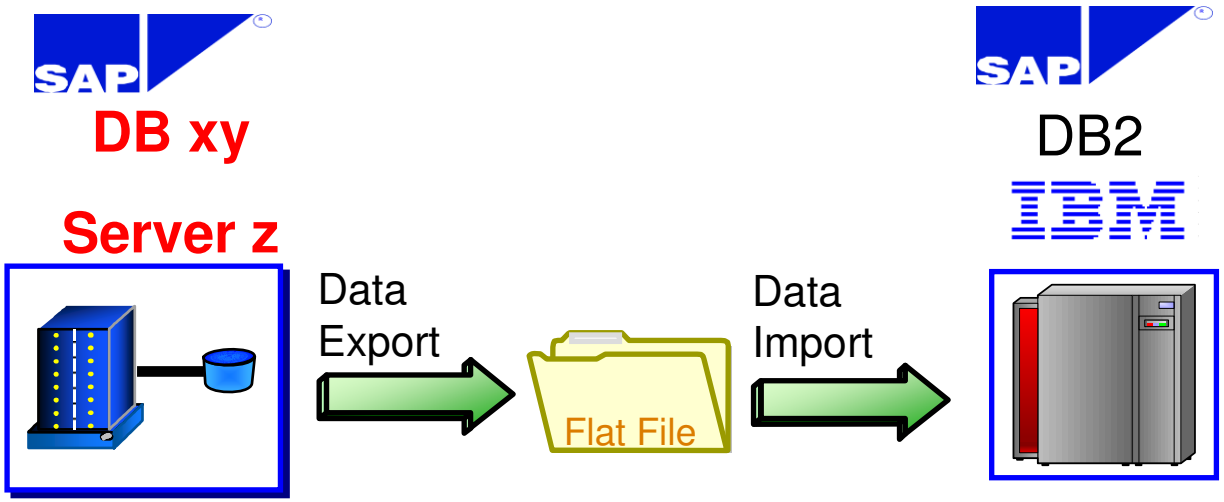
- **Unicode Conversion / Migration**
  - SAP system is converted from non-Unicode to Unicode character representation
  - Can be performed as part of a homogeneous or heterogeneous system copy
  - Offers a good window of opportunity for DB Migrations

SAP Terminology (2)

- **Database Reorganization**
  - Should be a regular administrative task
  - Streamline DB layout and structures
    - Reduce fragmentation
    - Improve access times
    - Reduce volume
  - Process
    - Tablespace must be unloaded completely
    - Old tablespace must be dropped
    - New tablespace must be created
    - All tables must be created by import

SAP Migration categories

- Platform Migration
  - exchange of underlying server infrastructure…
  - …and/or operating systems **(not version upgrade)**
  - Example: from SUN Fire E15k + Solaris ➔ IBM Power Systems + AIX
- Database Migration
  - exchange of database, hardware stays as is
  - Example: from Oracle to DB2



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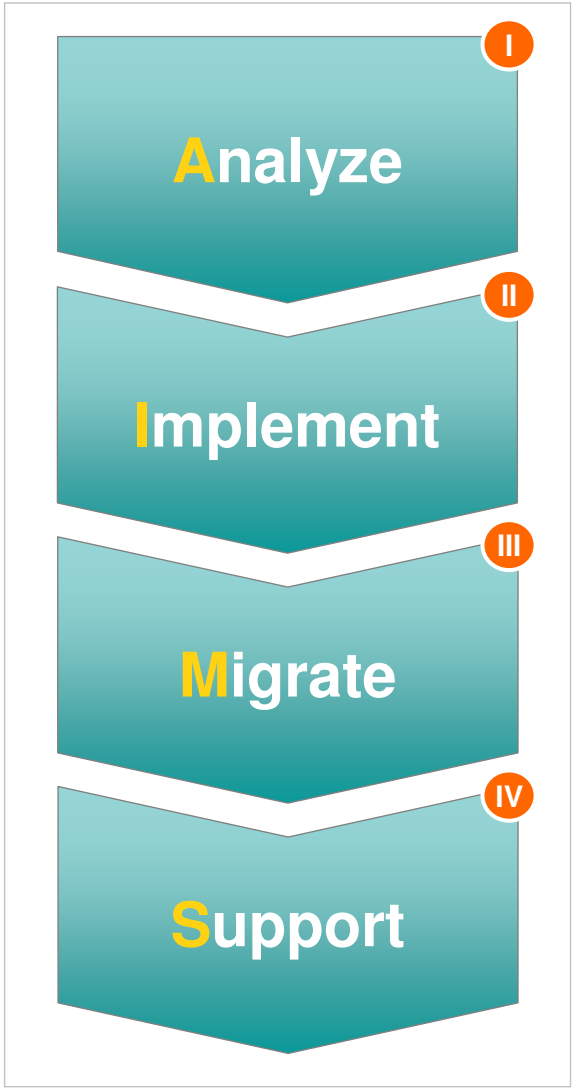
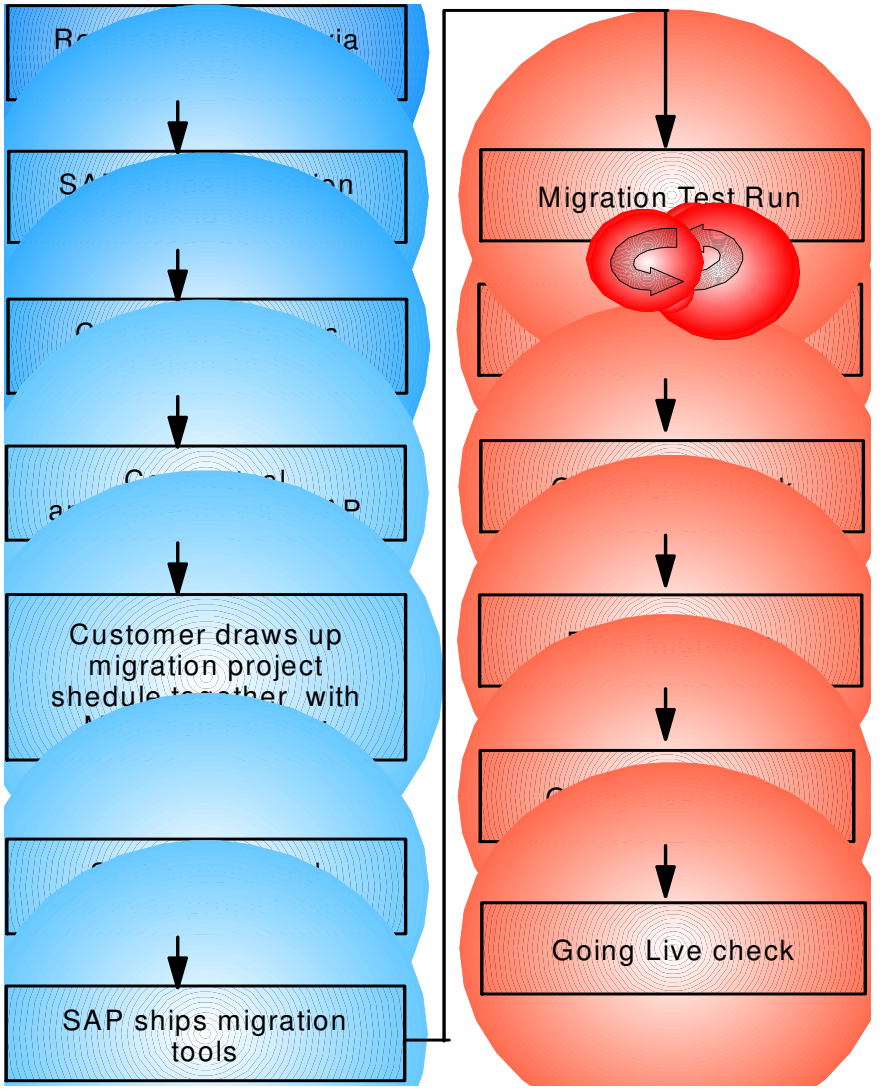
Focus on improvements: *AIMS*



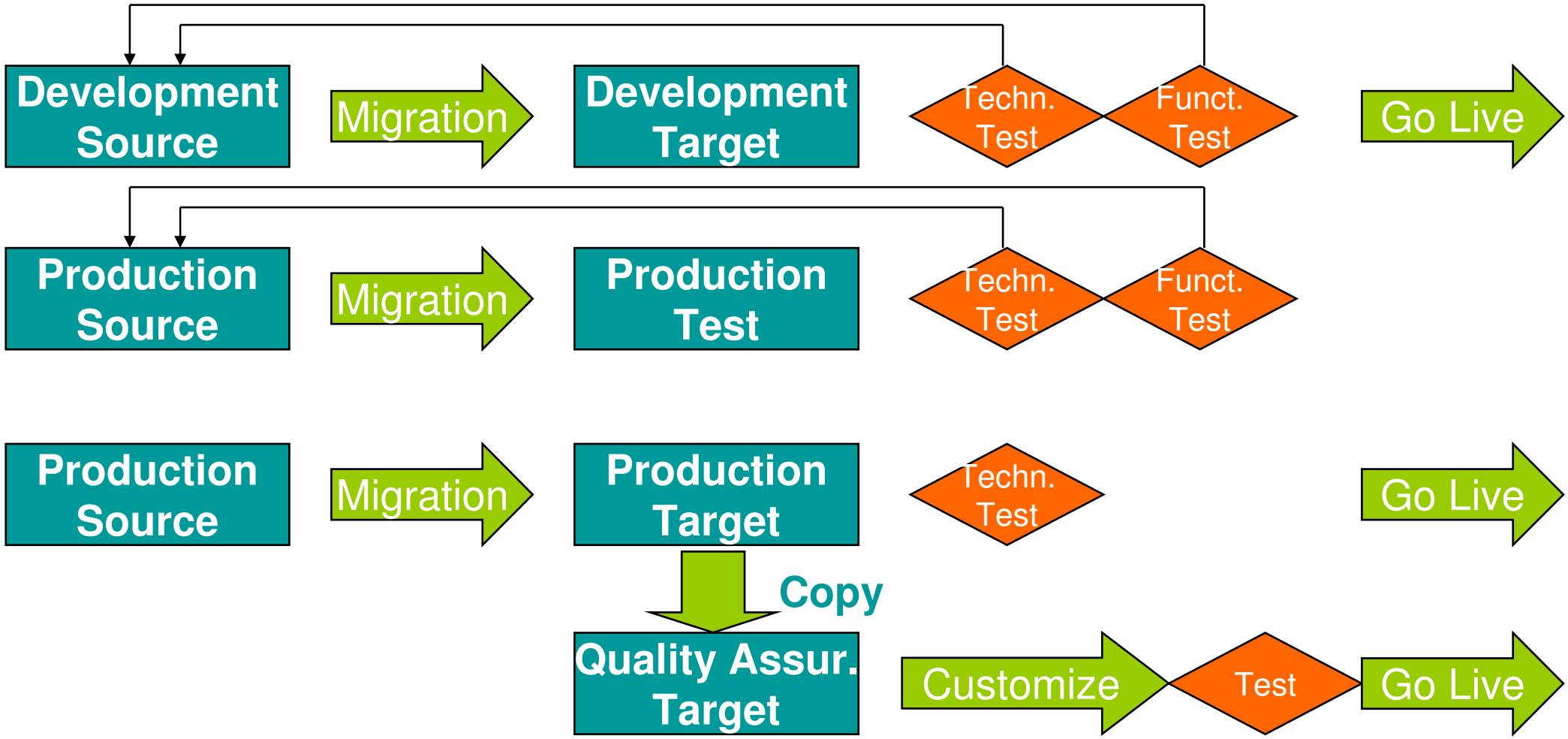
- In order to meet customers' business expectations we have to avoid implementation of the as-is status:
  - Analyze the current workload instead of taking given SAPS requirements
  - Implement the IT infrastructure with focus on virtualization and dynamics
  - Reduce risks with proven methodologies and experienced SAP migration experts
  - Make sure that the operational knowledge is transferred to client architects and administrators

OS/DB migration check by SAP

- Mandatory for production systems
- Consists of three service sessions:
  - Remote Project Audit (half-day)
  - Analysis (one day)
  - Verification (one day)
- Delivered by certified consultants through a remote connection
  - Key phases in migration project



Typical migration flow for one SAP landscape



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Migration method overview

SAP „tool based“ methods

- SAP Standard Migration
- Optimized SAP Migration
  - Socket Loader
  - Fast Load
  - Unsorted
- (SAP Minimized Downtime Services aka IMIG)
- …

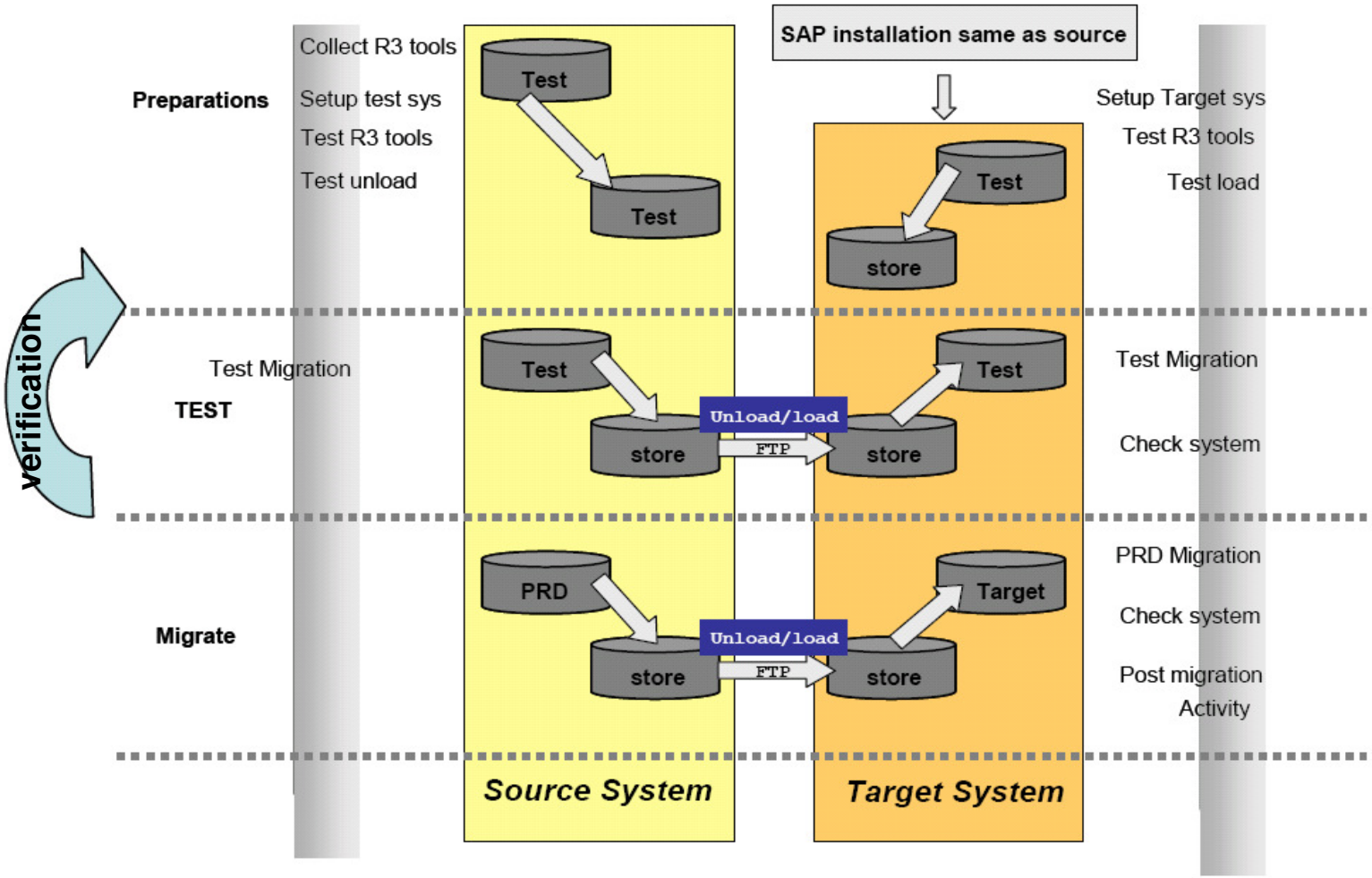
Additional methods

- Backup/Restore
- Oracle 10g Transp. TSpaces
  - Oracle DB Tools (O2O)
- XenoBridge Tool
- IBM Hybrid Migration Method
- IBM InfoSphere CDC
- …

- **What is best choice?**
  - **DB Size (today in Terabyte range)**
  - **Offline time window (weekend, 2…3 days max)**

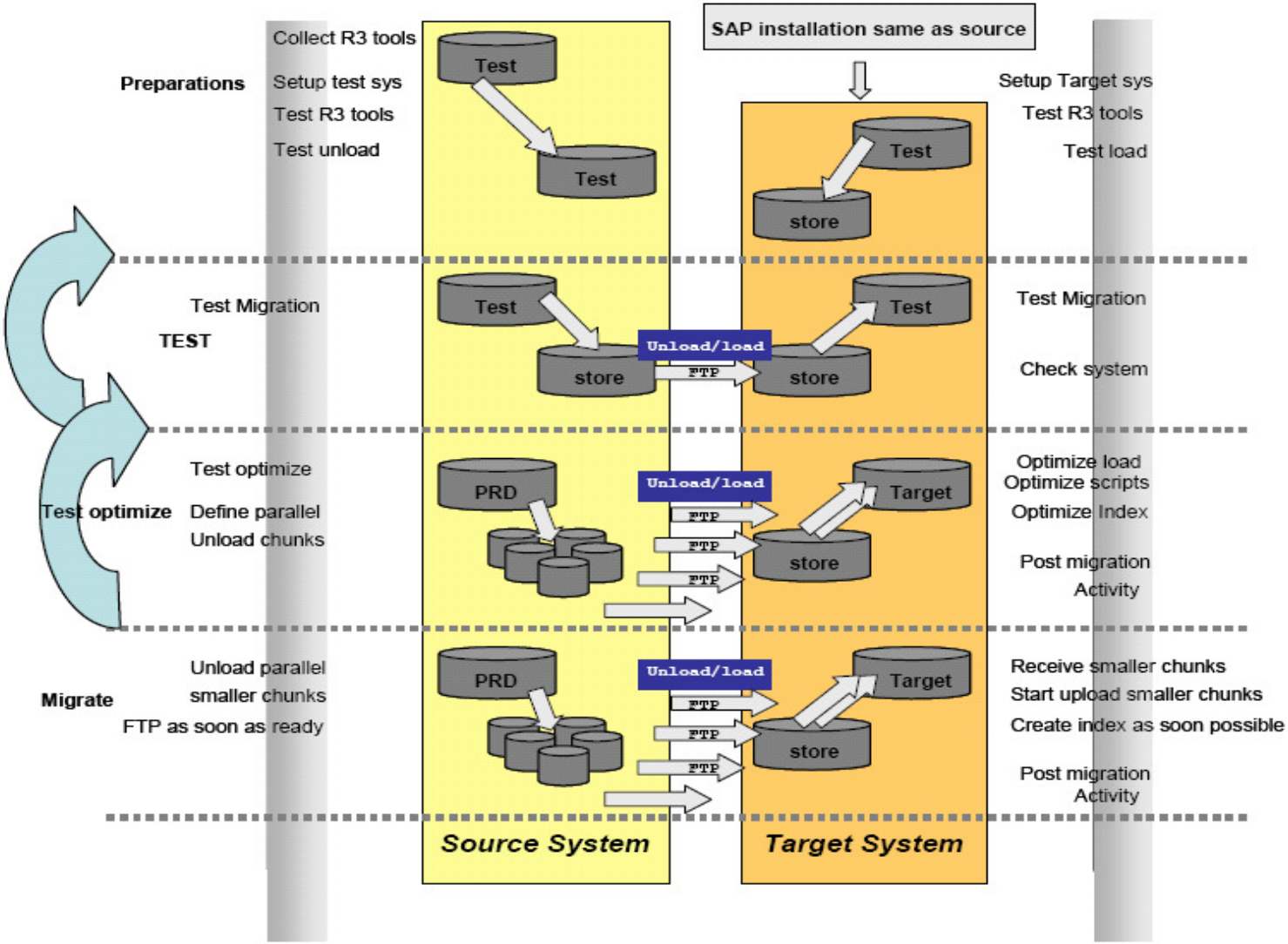
SAP standard migration

- **Sequential Process**
- **Based on R3Load**
- **DB-Export to meta-file, then DB-import on target platform**
  - **Limitation mostly on old source platform**
- **Slow process (17 GB/h…50 GB/h)**
  - **Table creation on target size with insert operation**
  - **Index creation slow**



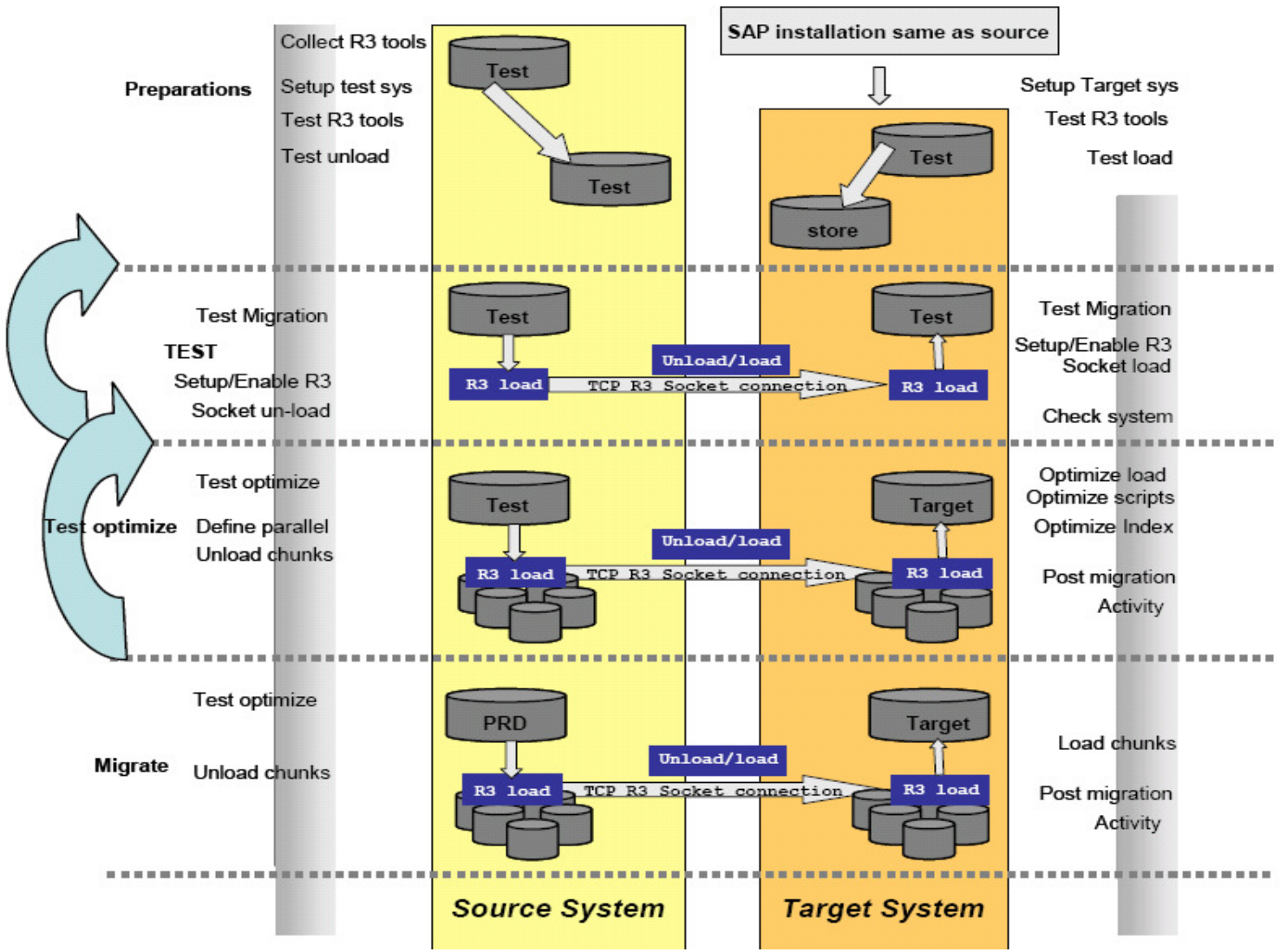
Optimized SAP migration

- **Parallel process**
- **Use of migration monitor**
  - **automates sending of dump files to target system**
- **Start largest tables first**
  - **their migration defines absolute minimum time**



Normal/Optimized via socket loader

- **Instead of creating intermediate unload file, uses process pipes**
- **Requires high network bandwidth > 1GB**
- **Migration cannot be restarted.**



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Why Unicode Migrations?

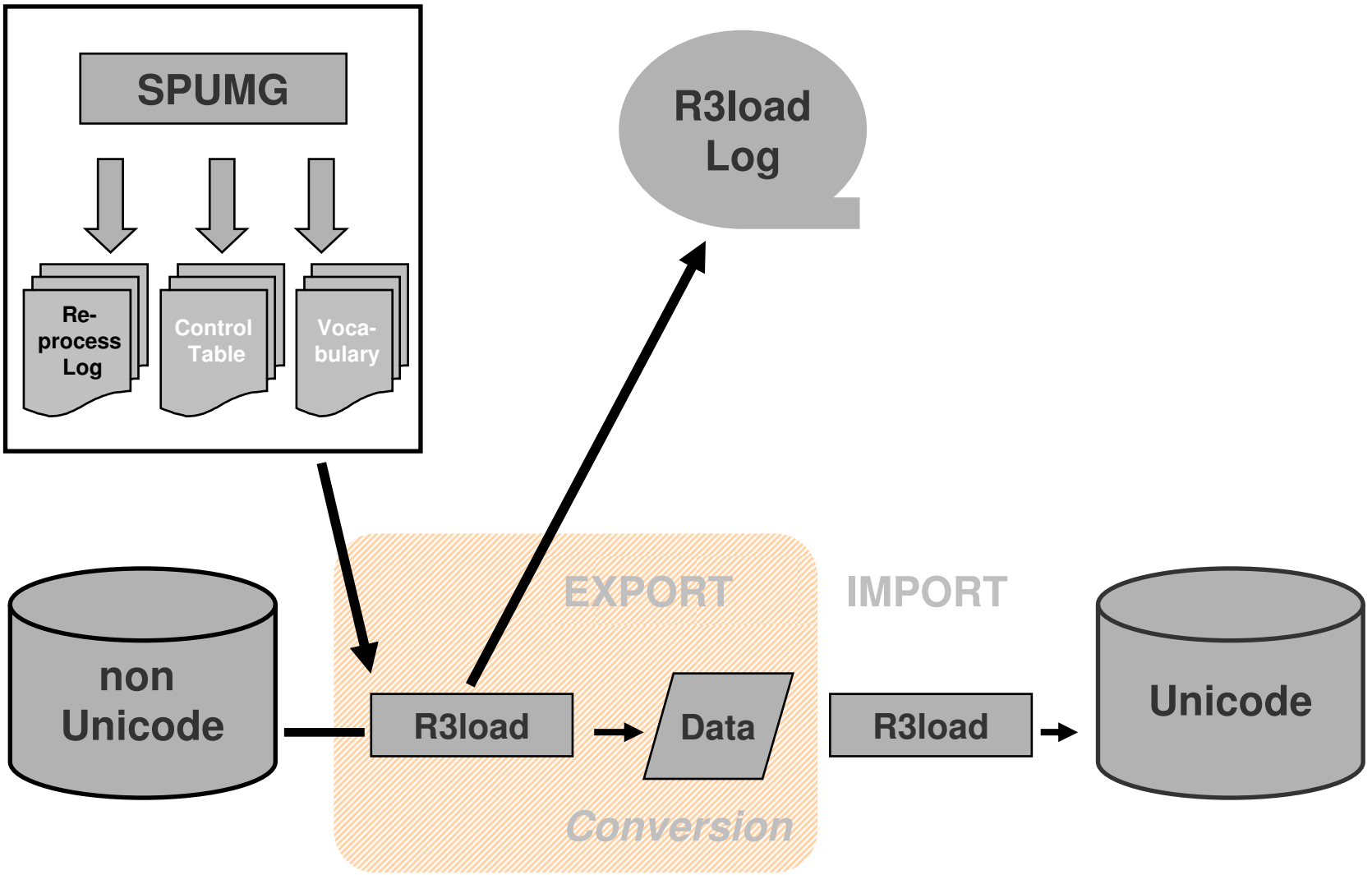
- So far, international SAP implementations maintained several code pages to support multiple languages.
  - „blended codepages“, MDMP (Multi-Display-Multi-Processing) have been a common approach.
  - Complex to maintain
  - expanding business networks ➔ more languages to support
- Starting with ERP 6.0 (NetWeaver 7.0 base) SAP strongly pushes Unicode.
  - Multiple codepages only per exception
  - Not sure, how long SAP will support single/multi codepage systems in future
  - SAP WebAS JAVA stack is Unicode only
- Related SAP Resources at Service Marketplace:
  - SAP Note 857081 „Unicode conversion: downtime estimate“
  - /unicode
  - /unicode@sap
  - /systemcopy → optimization
  - /sizing

Generic Procedure for Unicode Migrations

- **Prepare data for upgrade**

UCCHECK

- **Check customer apps for UC support**



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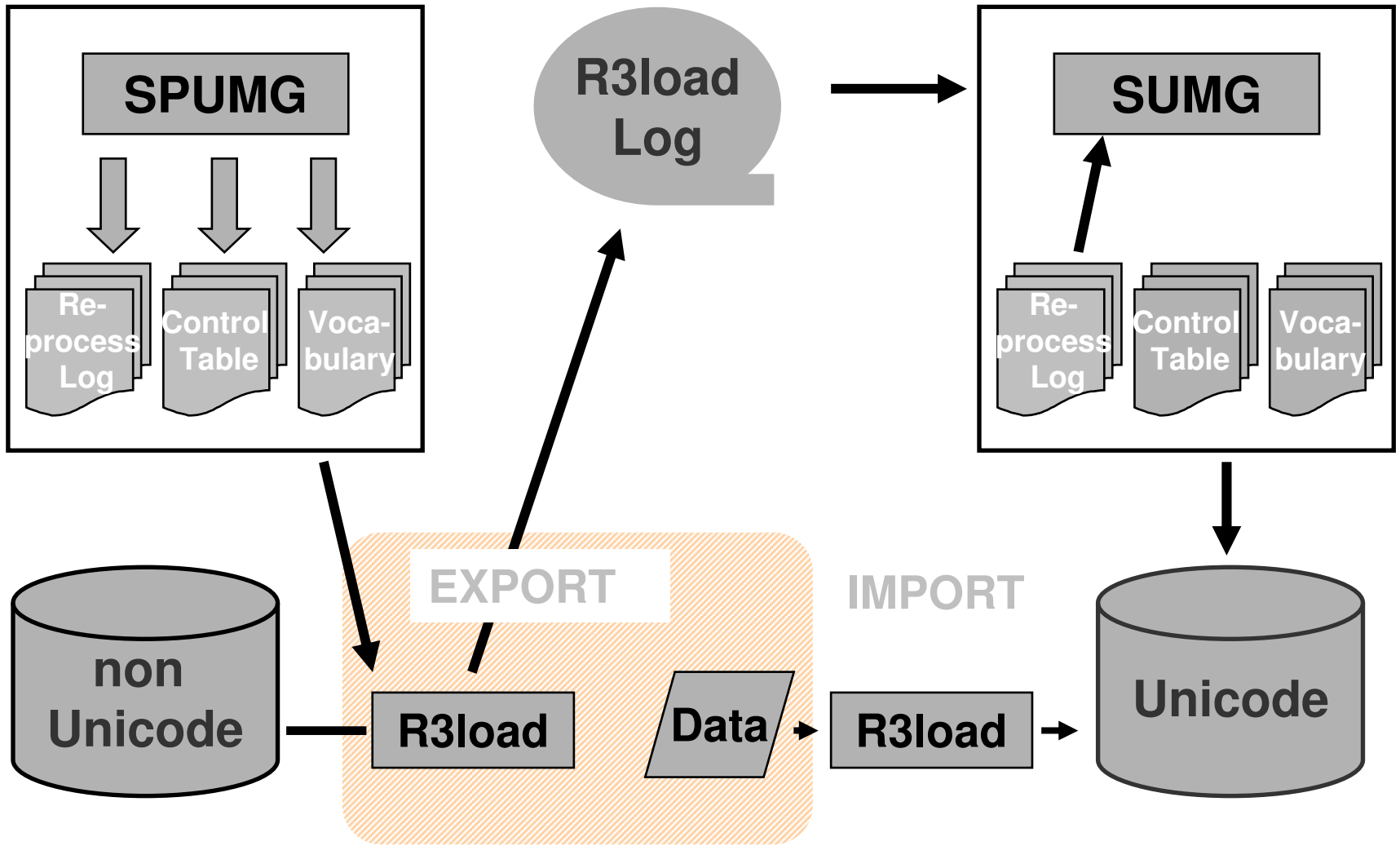

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Revised January 19, 2006

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