

IMS Simplification: Shrinking the Generation Gap for IMS Application Development

Session 1900

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IBM Software

Information On Demand 2011



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IMS Simplification

Reduce skills, time and cost required to manage IMS systems and to develop IMS applications

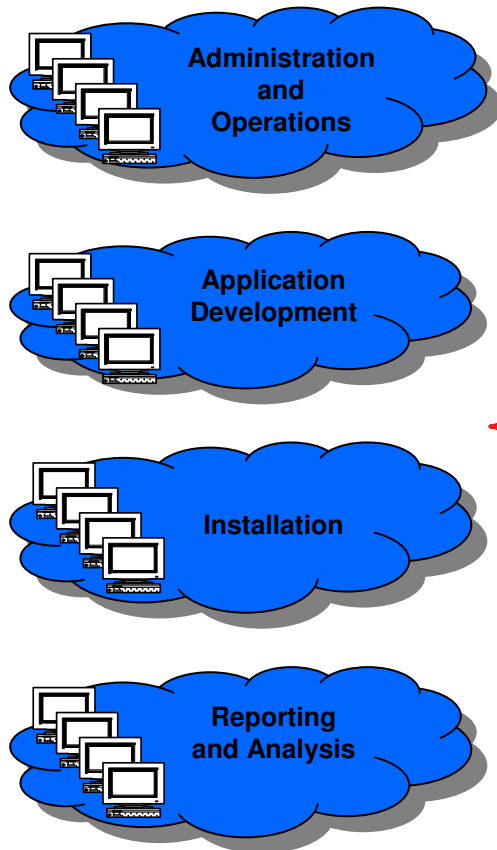
- ✓ Using industry standards
- ✓ Consistent look and feel
- ✓ Integration





IMS Simplification

New IMS interfaces and models

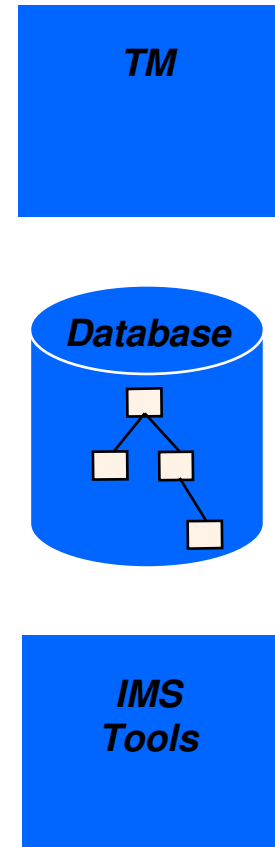


- SQL / JDBC
- IMS Tools
- Rational
- Optim
- Cognos
- InfoSphere
- JavaEE
- pureQuery

IMS interfaces

- JCL
- ISPF
- SDSF
- JES
- User Mods
- User Exits
- DBDGEN
- PSBGEN
- ACBGEN
- OLC
- DRD
- DLI

IMS

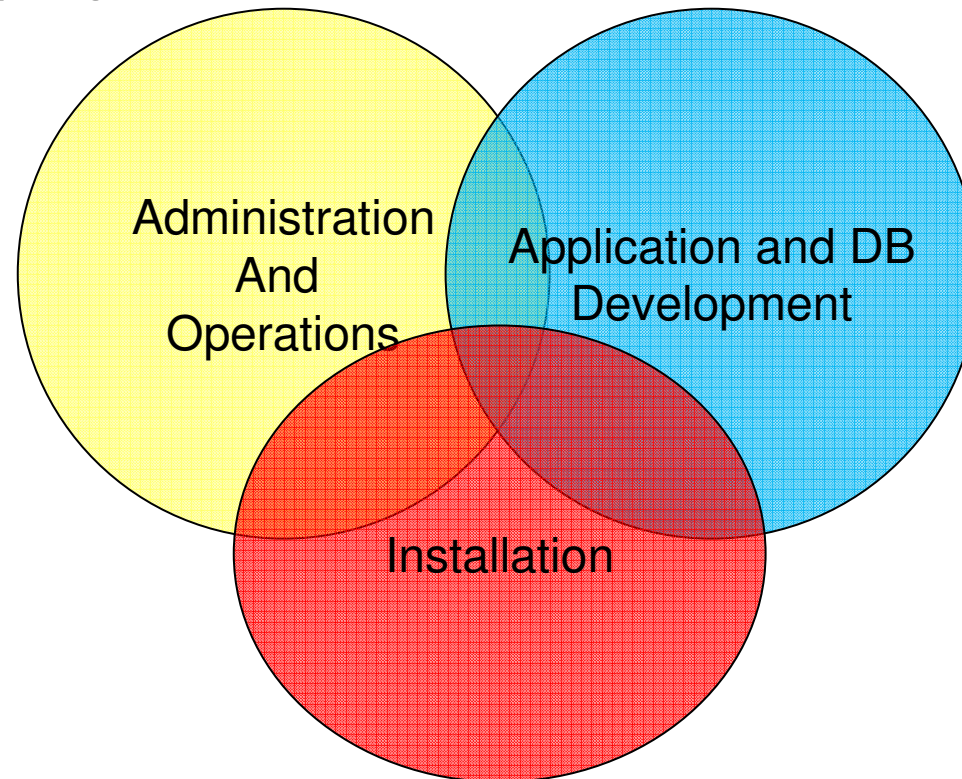


Reduce the need for in-depth IMS skills





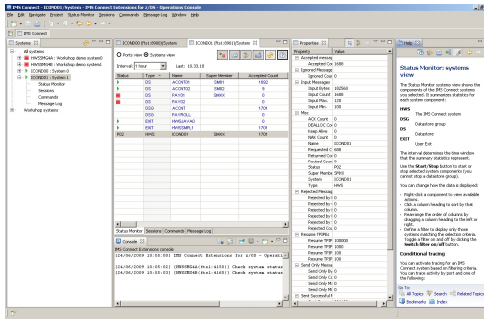
Areas to Simplify





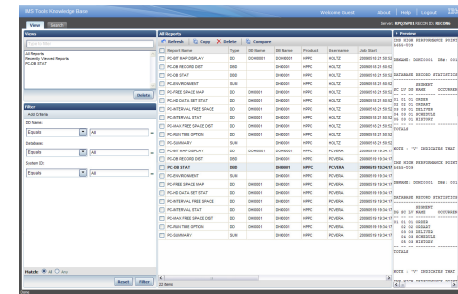
IMS Simplification – Externals

Development (Eclipse)

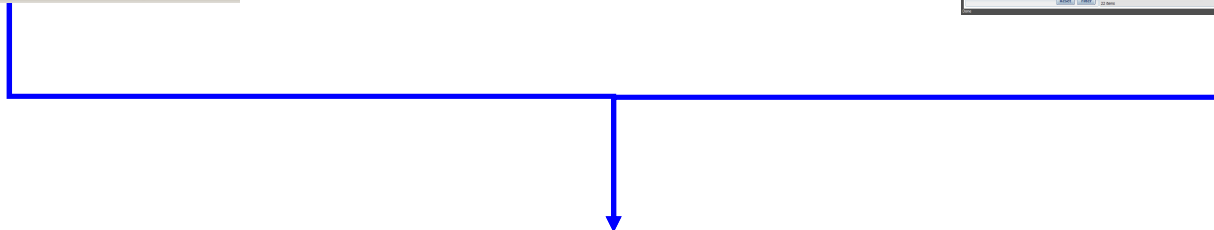


Developer

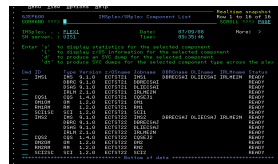
Administration (Web Browser)



Administrator



ISPF





IMS Application and Database Development





Application Development Life Cycle

- **Visualize Database (Design / Understand)**

IMS Explorer for Development

- **Define Queries (Build and test)**

IMS Explorer for Development

- **Code (Remote development and build)**

Rational Developer for System z

- **Unit Test**

Batch Terminal Simulator

- **Debug**

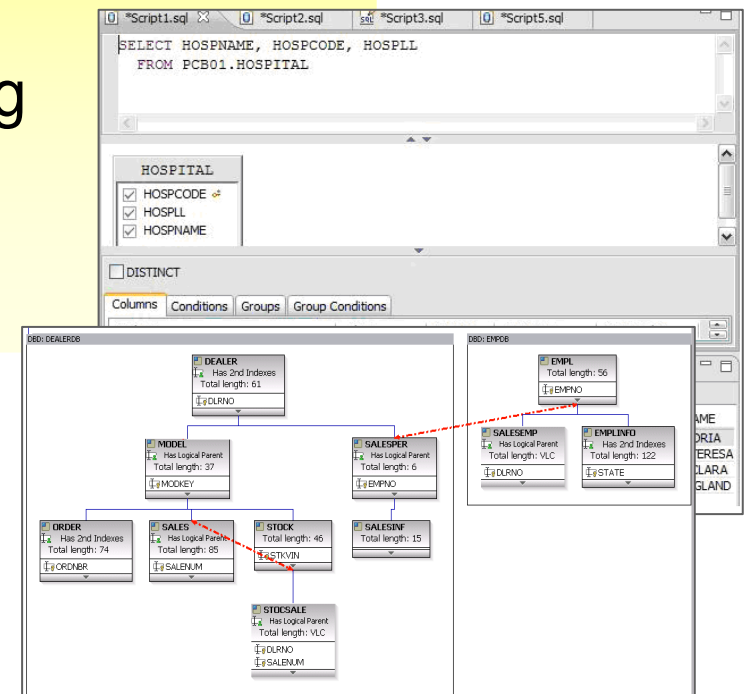
Debug Tool for z/OS

- **Deploy**



IMS Explorer for Development

- Visualize IMS database structure as defined by DBD source
- Change IMS Database and Program Definitions sources
- **Graphically** access IMS data using SQL
- View your mainframe datasets
- Submit JCL and inspect output in JES





- IMS Explorer

IMS Explorer for Development – Short Term Candidates



- View programs and transactions
- Stop/start programs and transactions
- Put transactions in a queue



PLEX1 > IMS1 > Transactions

Filter By:

Name: *TR* Application: Class: All

Filter Data Clear Filter

Name	Status	Application	Class	Queue Count	Serial	IMS Member
AUTRAN1	▶ STARTED	AUTPSB11	1	0	0	IMS1
AUTRAN2	▶ STARTED	AUTPSB11	1	0	0	IMS1
AUTRAN1H	▶ STARTED	AUTPSB1H	1	0	0	IMS1
AUTRAN11	▶ STARTED	AUTPSB11	1	0	0	IMS1
AUTRAN12	▶ STARTED	AUTPSB11	1	0	0	IMS1
AUTRAN1	▶ STARTED	AUTPSB11	1	0	0	IMS1
CDEBTRNA	▶ STARTED	CDEBS	1	0	0	IMS1
CDEBTRN1	▶ STARTED	CDEBS	1	0	0	IMS1
CDEBTRN2	▶ STARTED	CDEBS	1	0	0	IMS1
AUTRAN1	▶ STARTED	AUTPSB11	1	0	0	IMS1

Actions

- Start Application
- Stop Application

AUTPSB11

Status: **STOPPED**

Member: IMS1

Language: NEW

Region Type: 1

Transactions: 1

Name: AUTPSB11

Status: **▶ STARTED**

Member: IMS1

Language: NEW

Region Type: MPP

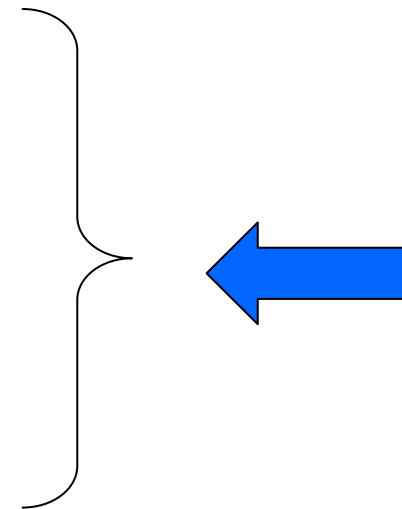
Transactions: 1





Application Development Life Cycle

- **Visualize Database (Design / Understand)**
IMS Explorer for Development
- **Define Queries (Build and test)**
IMS Explorer for Development
- **Code (Remote development and build)**
Rational Developer for System z
- **Unit Test**
Batch Terminal Simulator
- **Debug**
Debug Tool for z/OS
- **Deploy**





RDz based z/OS development environment

Common development environment for COBOL, PL/I, C/C++, and Java

The screenshot shows the LPEX Editor interface with a COBOL program open. The program code includes data declarations and a procedure division. A callout box on the left identifies the 'z/OS Project' structure. A callout box on the top right identifies the editor as 'LPEX Editor ISPF LPEX etc'. A callout box on the right side identifies the remote system connection as 'Remote z/OS JES MVS files TSO Emulator'. A callout box at the bottom left identifies the 'Program Outline' view. A callout box at the bottom center identifies the 'Errors, Warnings, etc' list in the Problems view.

z/OS Project

**LPEX Editor
ISPF
LPEX
etc**

**Remote z/OS JES
MVS files
TSO Emulator**

Program Outline

Errors, Warnings, etc

Error list in Problems view





The Debug Tool for z/OS

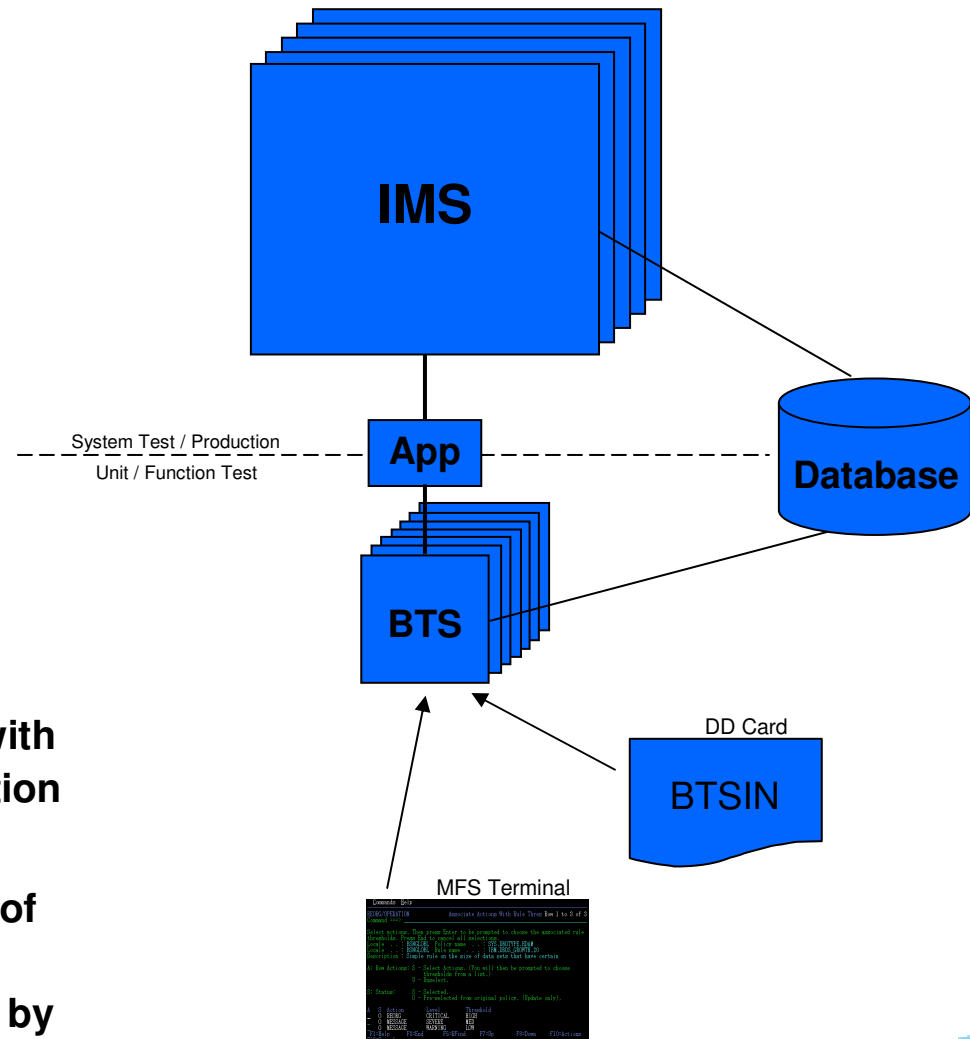
- Interactive debugging for applications
- Multiple languages:
 - COBOL, PL/I, C/C++, Assembler
- Multiple z/OS environments
 - Batch, TSO, CICS, IMS/TM, DB2 stored procedures,
 - Websphere application server, Unix system services
- GUI Eclipse plug-in **at no additional cost!**



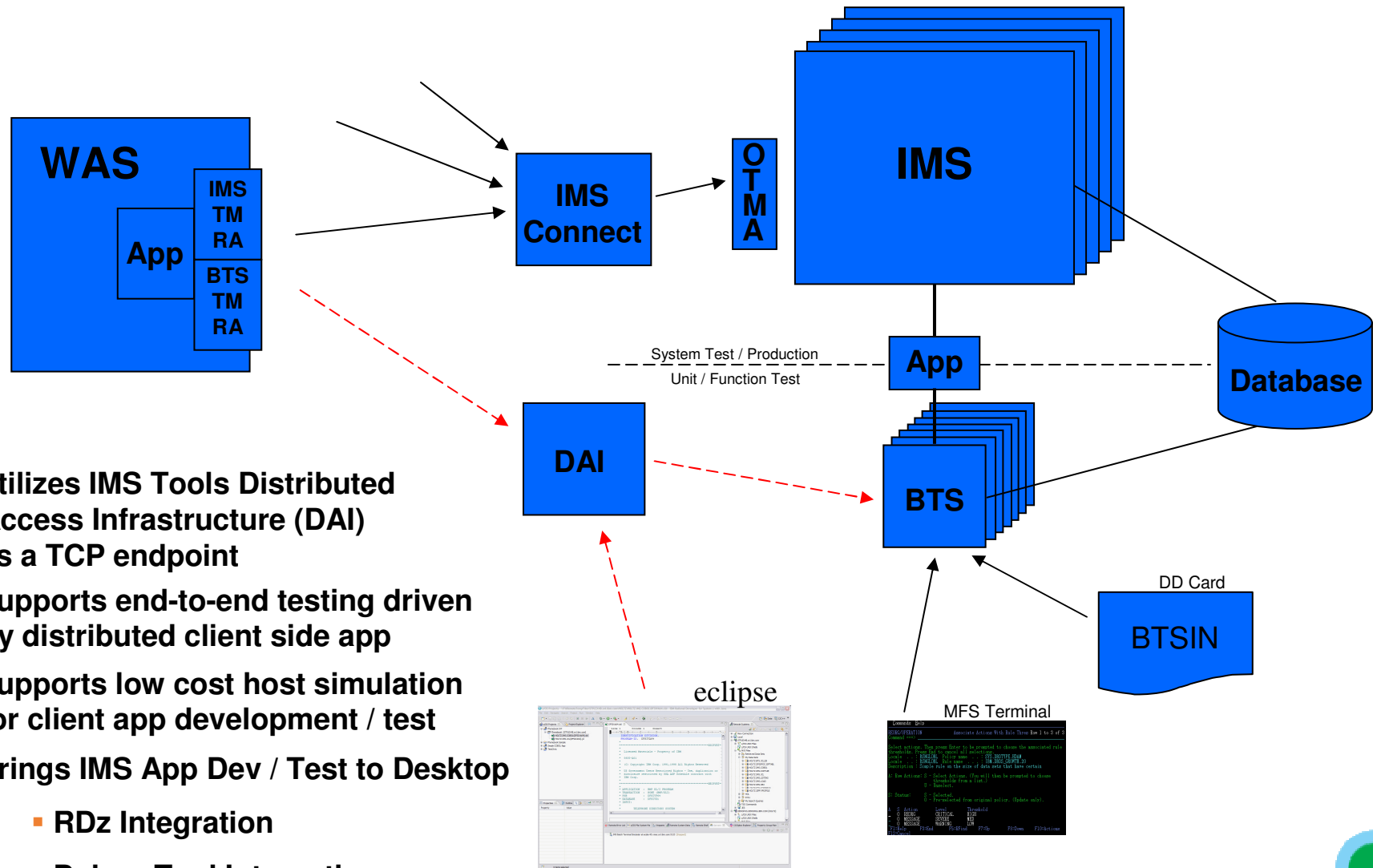


IMS Batch Terminal Simulator Modernization

- Tool for Unit Testing and Debugging IMS applications
 - Runs in TSO, IMS Batch (DL/I DBB) or IMS Online (BMP/JBP)
 - Simulates IMS DC calls
- Driven through BTSIN control statements or interactive full screen TSO simulation
- Playback utility
 - Generates BTSIN with the corresponding MFS associated with the MOD name from IMS transaction log records ('01'X, '03'X).
 - Prints containing screen images of transactions including data, USER/LTERM identification, time by extracting from BTSOUT



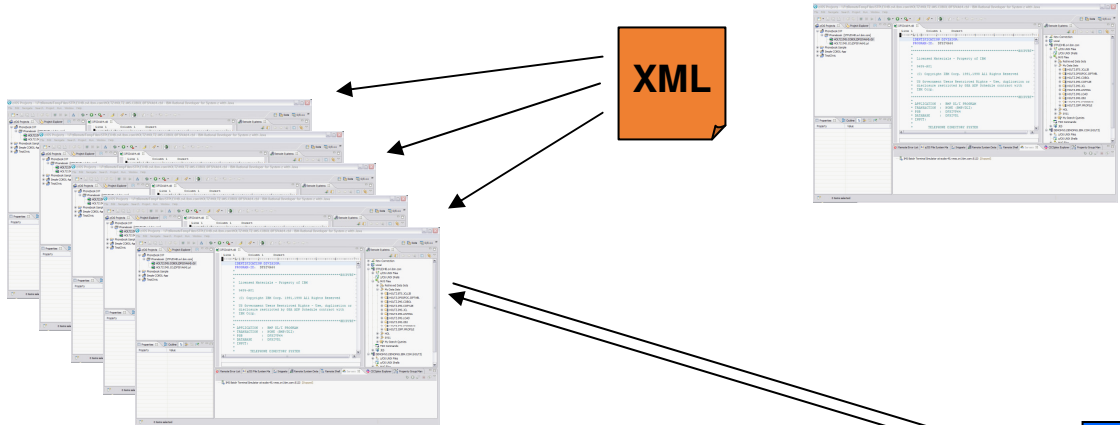
IMS Batch Terminal Simulator Modernization



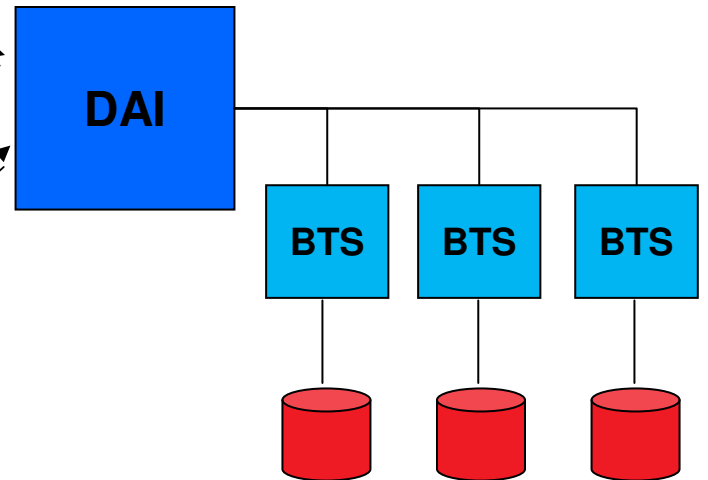
- Utilizes IMS Tools Distributed Access Infrastructure (DAI) as a TCP endpoint
- Supports end-to-end testing driven by distributed client side app
- Supports low cost host simulation for client app development / test
- Brings IMS App Dev / Test to Desktop
 - RDz Integration
 - Debug Tool Integration

Application Development Modernization with BTS

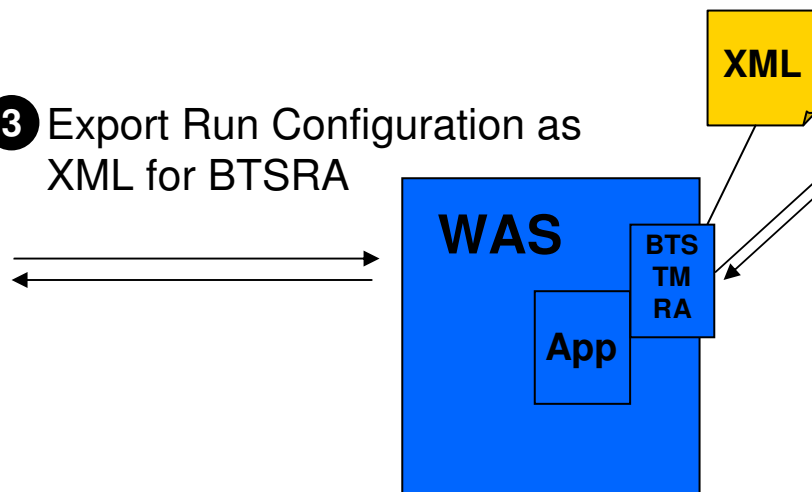
1 System Programmer defines common datasets, attributes, etc (similar to PROCLIB) and exports as XML



2 Developers import XML and use to create Run Configuration... to test applications



3 Export Run Configuration as XML for BTSRA





- RDz
- BTS
- Debug Tool



IMS Simplification for AD – Our Vision

- Lessen the need of IMS specialized knowledge
- Same look and feel across:
 - Language (Java, COBOL, etc)
 - Platform (Mainframe, Distributed)
 - Transaction (WAS/CICS/TM)
 - Database (IMS/DB2)
- An environment with a single interface that integrates design, coding, testing, and debugging

