



WebSphere Enterprise Application Development

***October 12, 2005 Teleclinic***

## **zSeries Application Testing**

***Technical overview on solutions and  
typical testing scenarios for  
zSeries Application Developers***

IBM Americas

## Speakers

- **Pamela (PJ) Baron**, Business Unit Executive / [pbaron@us.ibm.com](mailto:pbaron@us.ibm.com)
- **Dan Brown**, Certified AD Tools Sales Enablement Americas
- **Tim Magee**, AD Tools Technical Sales Specialist
- **Others Joining for Q&A:** Michael Connor / Dennis Schulz / Cornell Keene

## Agenda

- **Product Introduction and Highlights**
- **Testing Scenarios**
- **Polling Questions**
- **Open Q & A Session**

# Tool Agenda:

## **File Manager for z/OS**

- Data management tool supporting key file structures like VSAM, DB2, and IMS

## **File Export for z/OS**

- Export and import related sets of DB2, IMS, VSAM and sequential data

## **Debug Tool Utilities & Advanced Functions for z/OS**

- Source code debugging and testing to improve development productivity

## **Workload Simulator for z/OS**

- Regression and Load testing of interactive z/OS applications

## **Application Performance Analyzer**

- An application program performance measurement tool for use on IBM z/OS systems, measures and reports on how system resources are used.

## Tool Agenda (cont):

### **CICS Performance Analyzer**

- A reporting tool that provides information on the performance of your CICS systems and applications.

### **CICS Interdependency Analyzer for z/OS**

- A productivity tool which automates discovery of resource interdependencies within CICS applications.

### **CICS VSAM Copy**

- A tool for creating consistent copies of VSAM files, with no impact to online processing.

### **Rational Performance Tester**

- Stress and Load testing of a web-based applications

### **Rational Functional Tester Extension**

- Workstation-based regression testing of interactive z/OS applications

## Tool Agenda (cont):

### **Websphere Developer for zSeries (WDz)**

- Help make traditional mainframe development, Web development, and integrated mixed workload faster and more efficient.

### **Websphere Studio Asset Analyzer**

- A tool that allows you to extend and transform your existing applications through rapid application understanding.

### **Websphere Application Monitor**

- Manage heterogeneous environments consisting of both mainframe and distributed systems.

# IBM File Manager for z/OS

## Use it to:

- Work with data in files, DB2 tables, and IMS databases
- Browse and edit data directly
- Easily copy, reformat, create test data, and compare data

## Key Features:

- Advanced data **Edit** and **Browse** No limit to file size!
  - Uses familiar ISPF edit commands
  - Powerful data formatting and selection capabilities
- A robust set of **utilities to generate test data, copy, find, compare, and modify data**
- Work with data in friendly formats
  - Use a copybook or user-defined “template” to format records

# IBM File Export for z/OS

## **Use it to:**

- Import and Export related sets of DB2, IMS, VSAM, and sequential data.
- Generate test data on demand
- Supports Interactive System Productivity Facility (ISPF) and offline (batch) interfaces

## ■ **Key Features:**

- Copies all data in a related set of objects or a slice of data across a related sets of objects
- Provides for one-to-one data creation, one-to-many, and many-to-one data creation
- Provides support for parent-child relationships defined using IBM File Export
- Includes highly flexible data selection and reformatting rules
- Gives the user the option to protect sensitive data on a field-by-field basis
- Supports altering data content while copying, including the ability to age date-related data

# IBM Debug Tool and Advanced Functions for z/OS

## Use it to:

- Interactively debug an application program while it runs
  - Step through source statements, set “breakpoints” and run, monitor and change program variables
- Modernize COBOL programs written for older compilers

## Key Features:

- Debug **COBOL**, **PLI**, **C**, **C++**, and **Assembler** programs
- Support for **batch**, **CICS**, **IMS**, **DB2**, and **DB2 stored procedure** programs
- Set simple or conditional breakpoints; or run a script at a breakpoint
- Gives you the ability to **trap and repair abends**
- Intuitive GUI interface when used with products such as **WDz**
- **COBOL Conversion Utility**



# IBM Workload Simulator for z/OS

## **Use it to:**

- Automatically simulate online user(s) on the system
- Perform regression testing of online applications
- Perform Load and Performance testing

## **Key Features:**

- Automatically capture test scripts from a live session
- Powerful scripting language
- Easy-to-use ISPF interface
- Organizes your testing scripts, projects, and results

# IBM Application Performance Analyzer for z/OS

## Use it to:

- Optimize the performance of your existing application resources
- Improve the response time of your online transactions and batch turnaround times
- Isolate performance problems in applications
- Provide maximum flexibility with support for CICS, Assembler, COBOL, PL/I, DB2® , IMS, and WebSphere® MQ
- Test the effect of increased workloads on your systems

## Key Features:

- **Online analysis:** Shows displays of the overall system activity. You can check job execution online and select which active job to monitor.
- **Monitoring:** Automatically starts to monitor a job's performance when that job or program becomes active for as many times as you specify.
- **Performance analysis:** Provides you with CPU usage by procedure, referred attribution, wait time by task, category, and module.
- **Source language support:** Offers support for Assembler, COBOL, and PL/I language applications.

# IBM Rational Performance Tester

## **Use it to:**

- Provide performance test creation
- Validate the scalability and reliability of web-based applications
- Perform load and performance testing

## **Key Features:**

- Multi-user performance testing for Web-based applications
- Visual editor delivering both high-level and detailed test views
- Flexible modeling and emulation of diverse user populations
- Low memory and processor footprint, enabling large multi-user tests with limited hardware resources
- Real-time reporting to enable immediate recognition of performance problems
- Dynamic variation of user load during the test

# IBM Rational Function Tester Extension for z/OS

## **Use it to:**

- Automatically simulate online user(s) on the system
- Drive simulations from a workstation
- Perform regression testing of online applications

## **Key Features:**

- An extension to Rational Functional Tester
- Automatically capture test scripts from a live session
- Powerful scripting language
- GUI interface
- Organizes your testing scripts and results

# IBM CICS Performance Analyzer

## **Use it to:**

- Improve CICS system resource usage
- Evaluate the effects of CICS system tuning efforts
- Improve transaction response times
- Analyze CICS application performance
- Enable faster resolution of online problems
- Provide ongoing system management and measurement reports

## **Key Features:**

- Detailed performance bottleneck analysis
- Trend Analysis for capacity planning
- Identification of usage trends leading to reduced CICS performance or even outages.
- Complements the enterprise-wide historical performance capabilities of IBM Tivoli® Decision Support for z/OS

# IBM CICS Interdependency Analyzer

## Use it to:

- Determine which programs have **potential affinities** due to the CICS API commands within them.
- Determine which **resources** (Programs, Files, TSQs TDQs etc) are required by a transaction.
- Which **resources are no longer used**.
- Which transactions have **affinities to particular CICS regions**.

## Key Features:

- A Collector that gathers information on resource interdependencies and affinities.
- Resource Relationship database that contains accumulated data about all applications and the resources that are used.
- A Query Interface that provides comprehensive set of SQL queries that allows you to use the collected data to gain a detailed level of understanding of end-to-end resource relationships
- A Scanner to analyze the members in the Application LoadLib (both, affinities and interdependencies) to produce summary and detailed reports.

# IBM CICS VSAM Copy

## **Use it to:**

- Create consistent copies of VSAM files, concurrent with online processing activity.
- Rapidly copy one or more VSAM files, with data consistency.
- Create copies of VSAM files online or offline

## **Key Features:**

- Online mode copy request
- Offline mode copy request
- Dynamic mode copy request
- Copy requests for multiple dataset
- Partial dataset copy request

# IBM Websphere Developer for zSeries (WDz)

## Use it to:

- Graphical development environment on a workstation which provides debugging while program executes on mainframe (CICS, IMS Batch, DB2 Stored procedures, etc.).
- Leverage enterprise lifecycle support integrating discovery (WSAA) and debugging (Debug Tool) with common interfaces
- Extend mainframe or JAVA expertise across the IT organization

## Key Features:

- Provides Smart editing
- Full syntax checker
- Graphical navigation
- Full control of remote complies
- Live host connectivity (TSO commands, Job queue mngmt., etc.)



# IBM Websphere Studio Asset Analyzer

## **Use it to:**

- Interpret program and system source code and control tables
- Increase developer and analyst productivity by automating the discovery phase of a development cycle
- Automate application functional documentation for Sarbanes-Oxley
- Minimize risk in application maintenance by enabling a more thorough analysis of proposed changes
- Find existing application assets which are, or could be, components to be reused in Web or Web-services applications

## **Key Features:**

- A wizard-driven interface that you can use to create impact analyses
- The ability to indicate the scope of analysis, such as analysis only within programs or across program boundaries, by specifying a level for analysis.
- Tabbed output on the impact-analysis details page, enabling you to move quickly among summary, detailed and graphical views of the results of an impact analysis.

# IBM Websphere Application Monitor

## **Use it to:**

- Provides composite application monitoring so you can view correlated traces of complex applications that span J2EE boundaries to CICS and IMS to pinpoint hotspots in application code.
- Give application independence to gain method-level application visibility without modification or knowledge of the application
- Provide comprehensive J2EE diagnostics and problem determination to detect, analyze and resolve application problems before they impact business users

## **Key Features:**

- J2EE-to-CICS monitoring with composite transaction monitoring between J2EE and CICS over WebSphere MQ and IBM WebSphere CICS Transaction Gateway
- MQ monitoring, a new enabling technology that supports the ability to track composite transactions that cross J2EE to legacy systems (such as CICS and IMS) using WebSphere MQ as the data transport

# ***IBM Testing Tools Scenario***

# *Static Source Code Analysis:*

## *WebSphere Asset Analyzer*

Home - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Refresh Print Mail Stop

Address <http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=searchall> Go

**WebSphere Studio Asset Analyzer for Multiplatforms**  
Version 4.1

Home Explore Impact analysis Database

Search enterprise assets:  Go  Type mixed case

Common assets	Total
Application	<a href="#">15</a>
Container	<a href="#">55</a>
File	<a href="#">26320</a>
Impact analysis	<a href="#">32</a>
Site	<a href="#">3</a>

Fri Oct 07 21:33:33 GMT+00:00 2005

start Rep... 8 S... Ado... 4 I... 2 W. Ses... 2 M.. 2 M.. Unti...

Address  Go 100% 5:37 PM Friday 10/7/2005

Application summary - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=summary&cmpntType=26&scope=0\\_0\\_0\\_0\\_](http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=summary&cmpntType=26&scope=0_0_0_0_) Go

**WebSphere Studio Asset Analyzer for Multiplatforms**  
Version 4.1

Home Explore Impact analysis Database

Context : Home Application summary

### Application summary

Actions Select an Action

Search Application names:  Go  Type mixed case [Advanced search](#)

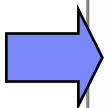
Application short name (15)	Action	Name	Description
<a href="#">ASSEMBLER</a>	<a href="#">delete</a>		Created by the Inventory page
<a href="#">BIRTHDAY</a>	<a href="#">delete</a>	Birthday demonstration application	The Birthday demonstration is an all batch application that has all members in a single PDS
<a href="#">CCDEMO</a>	<a href="#">delete</a>	ccdemo	ccdemo
<a href="#">CICSSAMP</a>	<a href="#">delete</a>	Â CICS Sample Applications	Created by the Inventory page Sample applications shipped with CICS Transaction Server for z/OS V3R1
<a href="#">DSTDemo</a>	<a href="#">delete</a>	DST Demo Application	This is a demo batch application to be presented to DST 08/19/2005
<a href="#">ERRDEMO</a>	<a href="#">delete</a>	Error Demomstration Application	This is an application created to show how WSAA reports errors from the load process
<a href="#">KLV</a>	<a href="#">delete</a>		Created by the Inventory page
<a href="#">KLV2</a>	<a href="#">delete</a>	KLV test application	
<a href="#">TRADER</a>	<a href="#">delete</a>	TRADER VSAM Version	
<a href="#">TRADERJ</a>	<a href="#">delete</a>	TRADER JHA Version	
<a href="#">WSAA CICS SAMPLE APPLICATION DO NOT DELETE</a>	<a href="#">delete</a>		Created by the Inventory page
<a href="#">WSAA IMS IVP APPLICATION DO NOT DELETE</a>	<a href="#">delete</a>		Created by the Inventory page
<a href="#">WSAA MVS IVP APPLICATION DO NOT DELETE</a>	<a href="#">delete</a>		Created by the Inventory page
<a href="#">WSAA TUTORIAL SAMPLE APPLICATION DO NOT DELETE</a>	<a href="#">delete</a>		Created by the Inventory page
<a href="#">WSAAATW</a>	<a href="#">delete</a>		Created by the Inventory page

start

Address  Go 100%

Rep... 8 S... Ado... 4 I... 2 W... Ses... 2 M... 2 M... Unt...

5:38 PM Friday 10/7/2005



DSTDEMO - Application details - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=details&cmpntType=26&key=11&scope=0\_0\_0\_0\_

**WebSphere Studio Asset Analyzer for Multiplatforms**  
Version 4.1

Home Explore Impact analysis Database

Context: Home Application summary Application details

### Application details

Actions Select an Action

**Details**

Application: DSTDEMO  
 Full name: DST Demo Application  
 Description: This is a demo batch application to be presented to DST 08/19/2005  
 Parent application:  
 Created/last updated: 8/16/05 6:23 PM by dnet603

Common assets	Total
Application	0
Container	2
File	7
Impact analysis	3
Site	1

Run time	Total
Batch job	1
CICS group	0
CICS online region	0
CICS transaction	0
DB2 system	0
IMS subsystem	0
IMS transaction	0
IMS DBD	0
Run unit	4

Program	Total
S map definition	0
BMS map set definition	0
Concatenation set	1
DB2 stored procedure	0
Entry point	4
IMS PSB	0
Literal	n/a
Program	4

Data	Total
Data element	115
Data set	7
Data store	1
DB2 column	0
DB2 table	0
DD name	24
I/O record description	2

Fri Oct 07 21:37:31 GMT+00:00 2005

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DNET603W - Batch job details - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

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Address <http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=details&cmpntType=7&key=1157091873&tab=5> Go

**WebSphere Studio Asset Analyzer for Multiplatforms**  
Version 4.1

Home Explore Impact analysis Database

Context: Explore MVS assets Batch job summary **Batch job details**

### Batch job details

**Details**

File:	GATCDEMO
Batch job:	DNET603W
Language/type:	JCL / Batch job source
Analysis status:	Completed
Number of lines in file:	75
Site:	<a href="#">DEMOMVS</a>
Container:	Partitioned Data Set <a href="#">DNET603.DEMO.DATA</a>
Data base updated:	8/16/05 6:21 PM by DNET603

**Actions**

- Select an Action
- Select an Action
- Assign concatenation set
- Assign new language
- Bookmark this page
- Manage annotations
- Queue for analysis
- Show Batch job diagram**
- View source

**Steps** | DDs | Included files | Annotations

Steps defined for this batch job

Job step (3)	Run unit	Execution parameters
STEP1	<a href="#">IEBGENER</a>	""
STEP2	<a href="#">IEBGENER</a>	""
STEP3	<a href="#">ATCDEMO</a>	"/TEST(,,,TCP/IP51.94.65%8001:*) ""

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start | Address | Go | 100% | 5:41 PM Friday 10/7/2005

Rep... | 8 S... | Ado... | 4 I... | 2 W... | Ses... | 2 M... | 2 M... | Unti...



DNET603W - Batch job diagram - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Mail Print Address Bar

Address: http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=DmhCustomLink&linkTypeId=10005&cmpntType=7&key=1157091873

**WebSphere Studio Asset Analyzer for Multiplatforms**  
Version 4.1

Home Explore Impact analysis Database

### Batch job diagram

Batch job: [DNET603W](#)

Graph actions  
[Zoom in](#) [Zoom out](#) [Zoom all](#)

← 2. STEP2 Filter

```
graph LR; DNET603W[DNET603W] --> STEP1[STEP1]; DNET603W --> STEP2[STEP2]; DNET603W --> STEP3[STEP3]; STEP1 --> IEBGENER1[IEBGENER]; STEP2 --> IEBGENER2[IEBGENER]; STEP3 --> STEPLIB[STEPLIB]; STEP3 --> ATCDEMO[ATCDEMO]; IEBGENER1 --> SYSUT1_1[SYSUT1]; IEBGENER1 --> SYSUT2_1[SYSUT2]; IEBGENER2 --> SYSUT1_2[SYSUT1]; IEBGENER2 --> SYSUT2_2[SYSUT2]; STEPLIB --> DNET603_CODE_LOAD[DNET603.CODE.LOAD]; STEPLIB --> DEBUG_V5R1_SEQAMOD[DEBUG.V5R1.SEQAMOD]; ATCDEMO --> CMD[CMD]; ATCDEMO --> INPUT1[INPUT1]; ATCDEMO --> INSPLOG[INSPLOG]; ATCDEMO --> INSPREF[INSPREF]; DNET603_CODE_LOAD --> DNET603_CODE_FILES_INSPLUG[DNET603.CODE.FILES(INSPLUG)]; DNET603_CODE_LOAD --> DNET603_CODE_FILES_INSPIN[DNET603.CODE.FILES(INSPIN)]; DNET603_CODE_LOAD --> DNET603_CODE_SOURCE_TESTDATA[DNET603.CODE.SOURCE(TESTDATA)]; DNET603_CODE_LOAD --> AMPDAT_TESTDATA[&&TEMPDAT(TESTDATA)]; INSPREF --> DNET603_CODE_FILES_INSPREF[DNET603.CODE.FILES(INSPREF)];
```

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Rep... 8 S... Ado... 5 I... 2 W... Ses... 2 M... 2 M... Unti...

ATCDEMO - Run unit details - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Mail Print Mail Stop

Address <http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=details&cmpntType=5&key=508695622> Go

**WebSphere Studio Asset Analyzer for Multiplatforms**  
Version 4.1

Home Explore Impact analysis Database

Context: Explore MVS assets Run unit summary Run unit details

### Run unit details

Actions Select an Action

**Details**

Run unit: ATCDEMO  
 Site: [DEMOMVS](#)  
 Analysis status: Completed  
 Data base updated on: 8/16/05 6:21 PM by DNET603

Job name (1)	Source location	Container	File
<a href="#">DNET603W</a>	<a href="#">DNET603.DEMO.DATA(GATCDEMO)</a>	<a href="#">DNET603.DEMO.DATA</a>	<a href="#">GATCDEMO</a>

Level (6)	Entry point	Resolve type	Program	Program source
1 (main)	ATCDEMO	Resolved by Entry Point	<a href="#">ATCDEMO</a>	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>
2	ATCDEM2	Resolved by Entry Point	<a href="#">ATCDEM2</a>	<a href="#">DNET603.DEMO.DATA(ATCDEM2)</a>
2	ATCDEM4	Resolved by Entry Point	<a href="#">ATCDEM4</a>	<a href="#">DNET603.DEMO.DATA(ATCDEM4)</a>
2	ATCDEM5	Resolved by Entry Point	<a href="#">ATCDEM5</a>	<a href="#">DNET603.DEMO.DATA(ATCDEM5)</a>
3	ATCDEM4	Resolved by Entry Point	<a href="#">ATCDEM4</a>	<a href="#">DNET603.DEMO.DATA(ATCDEM4)</a>
4	ATCDEM5	Resolved by Entry Point	<a href="#">ATCDEM5</a>	<a href="#">DNET603.DEMO.DATA(ATCDEM5)</a>

Fri Oct 07 21:40:06 GMT+00:00 2005

start Rep... 8 S... Ado... S I... 2 W... Ses... 2 M.. 2 M.. Unti...

Address Go 100% 5:43 PM Friday 10/7/2005

ATCDEMO - Program details - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

Address: http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=details&cmpntType=18key=76459952

Context: Explore MVS assets | Program summary | Program details

### Program details

**Details** | Analysis Messages

File: ATCDEMO  
 Program: ATCDEMO  
 Language/type: COB / Program source  
 Scan parameters for COBOL: COMPILER-BASED SCANNER:  
 Analysis status: Completed  
 Number of lines in file: 415  
 Blank lines: 59  
 Comment lines: 115  
 Noncomment lines: 241  
 Number of lines in program: 460  
 Splitting nodes: 28  
 Site: DEMOMVS  
 Container: Partitioned Data Set DNET603.DEMO.DATA  
 Data base updated: 8/16/05 6:21 PM by DNET603  
 Concatenation set assigned: DMH15

**Actions** Select an Action

- Select an Action
- Analyze impact for a range of statements
- Assign concatenation set
- Assign new language
- Bookmark this page
- Code extraction
- Manage annotations
- Queue for analysis
- Show control flow diagram
- Show Program diagram
- Show structure diagram
- View e-business program information
- View program data elements
- View source

**Included files** Control transfers DB2 Data stores Entry points Run units Annotations

Source files used by this program

File (2)	Language	Type	Analysis status	Action	Number of lines in file	Source location
<a href="#">RECBUF1</a>	COB	Included source	Completed	<a href="#">delete</a> , <a href="#">annotate</a>	23	<a href="#">DNET603.DEMO.COPY(RECBUF1)</a>
<a href="#">RECBUF2</a>	COB	Included source	Completed	<a href="#">delete</a> , <a href="#">annotate</a>	22	<a href="#">DNET603.DEMO.COPY(RECBUF2)</a>

start | 8 S... | 5 I... | 2 W... | 2 M... | 2 M... | 10/7/2005 5:44 PM Friday

ATCDEMO - Program control flow diagram - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=DmhDiagram&cmpntType=1&key=76459952&diagramTypeId=10001

WebSphere Studio Asset Analyzer for Multiplatforms Version 4.1

Home Explore Impact analysis Database

### Program control flow diagram

Graph actions  
[Zoom in](#) [Zoom out](#) [Zoom all](#)

Statement: PROCESS-REC-01

Fri Oct 07 21:41:59 GMT+00:00 2005

start Rep... 8 S... Ado... 6 I... 2 W... Ses... 2 M... 2 M... Unti... Address Go 100% 5:45 PM Friday 10/7/2005

The screenshot displays the WebSphere Studio Asset Analyzer interface. On the left, a 'Program control' graph shows a flow from 'ATCDEMO' to 'PSR0-MAIN-L68C'. The main window shows the COBOL code for 'PROCESS-REC-01' with line numbers 200 through 234. The code includes comments and logic for moving data, comparing dates, and calling subprograms.

```

200. PROCESS-REC-01.
201. *****
202. * MOVE DEMO TYPE AND RECORD YEAR INTO PARM BUFFER *
203. * *****
204. MOVE PD-TOOL-DEMO-TYPE TO DEMO-TYPE.
205. MOVE RECORD-YEAR1 TO RECORD-TYPE1-YEAR.
206.
207. *****
208. * COMPARE THE SYSTEM DATE WITH THE INPUT RECORD DATE *
209. * *****
210. IF CURRENT-DATE = RECORD-DATE1
211. ADD 10 TO RECORD-DAY1
212. ELSE
213. ADD 5 TO RECORD-DAY1
214. END-IF.
215.
216. *****
217. * COMPARE THE SYSTEM DATE IS LESS THAN THE RECORD DATE *
218. * *****
219. IF CURRENT-DATE LESS THAN RECORD-DATE1
220. CALL 'ATCDEM2'
221. ADD 10 TO RECORD-DAY1
222. ELSE
223. ADD 10 TO RECORD-YEAR1
224. END-IF.
225.
226. *****
227. * COMPARE THE ELEMENTS OF THE SYSTEM DATE WITH THE *
228. * ELEMENTS OF THE RECORD DATE *
229. * *****
230. IF CURRENT-DAY = RECORD-DAY1
231. CALL 'ATCDEM2'
232. ELSE
233. CALL 'ATCDEM5' USING PARM-VALS
234. END-IF.
    
```

# *Interactive Debugging:*

## *IBM Debug Tool Utilities and Advanced Functions*

Session A - [24 x 80]

File Edit Edit\_Settings Menu Utilities Compilers Test Help

---

EDIT DNET603.CODE.JCL (GATCDEMO) - 01.99 Columns 00001 00072

```

000054 //*****
000055 /**
000056 /** STEP3: THIS STEP EXECUTE THE DEMO PROGRAM
000057 /**
000058 //*****
000059 //STEP3 EXEC PGM=ATCDEMO,
000060 // PARM='/TEST(,,MFI%TRMLU009:)'
000061 //STEPLIB DD DSN=DNET603.CODE.LOAD,DISP=SHR
000062 // DD DSN=DEBUG.V5R1.SEQAMOD,DISP=SHR
000063 //SYSOUT DD SYSOUT=*
000064 //SYSPRINT DD SYSOUT=*
000065 //SYSDUMP DD SYSOUT=*
000066 //SYSUDUMP DD SYSOUT=*
000067 //CMD DD DSN=DNET603.CODE.FILES (INSPIN),DISP=SHR
000068 //INSPLOG DD DSN=DNET603.CODE.FILES (INSPLOG),DISP=SHR
000069 //INSPREF DD DSN=DNET603.CODE.FILES (INSPREF2),DISP=SHR
000070 //INPUT1 DD DSN=DNET603.CODE.SOURCE (TESTDATA),DISP=SHR
000071 /**PUT1 DD DSN=&&TEMPDAT (TESTDATA),DISP=(OLD,DELETE)
    
```

Command ==>  Scroll ==> PAGE

F1=Help F2=Split F3=Exit F5=Rfind F6=Rchange F7=Up  
 F8=Down F9=Swap F10=Left F11=Right F12=Cancel

MA a 22/015

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:

start | Address | 100% | 5:54 PM Friday 10/7/2005

```

Session B - [24 x 80]
Enter Your Userid: █
Password:                               New password:
Application:
Application Required. No Installation Default
    
```

```

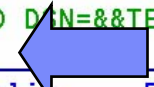
Session A - [24 x 80]
File Edit Edit_Settings Menu Utilities Compilers Test Help

EDIT          DNET603.CODE.JCL (GATCDEMO) - 01.99          Columns 00001 00072
000054 //*****
000055 /**
000056 /** STEP3: THIS STEP EXECUTE THE DEMO PROGRAM
000057 /**
000058 //*****
000059 //STEP3      EXEC PGM=ATCDEMO,
000060 //  PARM='/TEST(,,MFI%TRMLU009:)'
000061 //STEPLIB   DD DSN=DNET603.CODE.LOAD,DISP=SHR
000062 //          DD DSN=DEBUG.V5R1.SEQAMOD,DISP=SHR
000063 //SYSOUT    DD SYSOUT=*
000064 //SYSPRINT  DD SYSOUT=*
000065 //SYSDUMP   DD SYSOUT=*
000066 //SYSUDUMP  DD SYSOUT=*
000067 //CMD      DD DSN=DNET603.CODE.FILES(INSPIN),DISP=SHR
000068 //INSPLOG   DD DSN=DNET603.CODE.FILES(INSPLOG),DISP=SHR
000069 //INSPREF   DD DSN=DNET603.CODE.FILES(INSPREF2),DISP=SHR
000070 //INPUT1   DD DSN=DNET603.CODE.SOURCE(TESTDATA),DISP=SHR
000071 // *PUT1   DD DSN=&&TEMPDAT(TESTDATA),DISP=(OLD,DELETE)
Command ==> sub
F1=Help      F2=Split   F3=Exit     F5=Rfind    F6=Rchange  F7=Up
F8=Down      F9=Swap    F10=Left   F11=Right   F12=Cancel

MA a                ^                22/018
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23
HP DeskJet 820Cse on LPT1:
    
```

MA b

Connected to remote server/host demomvs.demopkg





# 3270 Display Interface:

The screenshot displays a 3270 terminal window titled 'Session B - [24 x 80]'. The main window shows COBOL program initialization for 'ATCDemo'. The screen is divided into several sections:

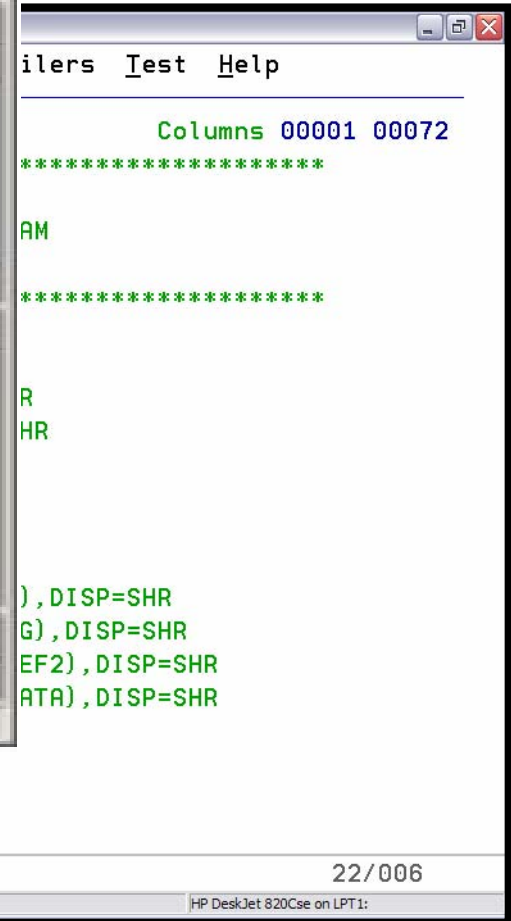
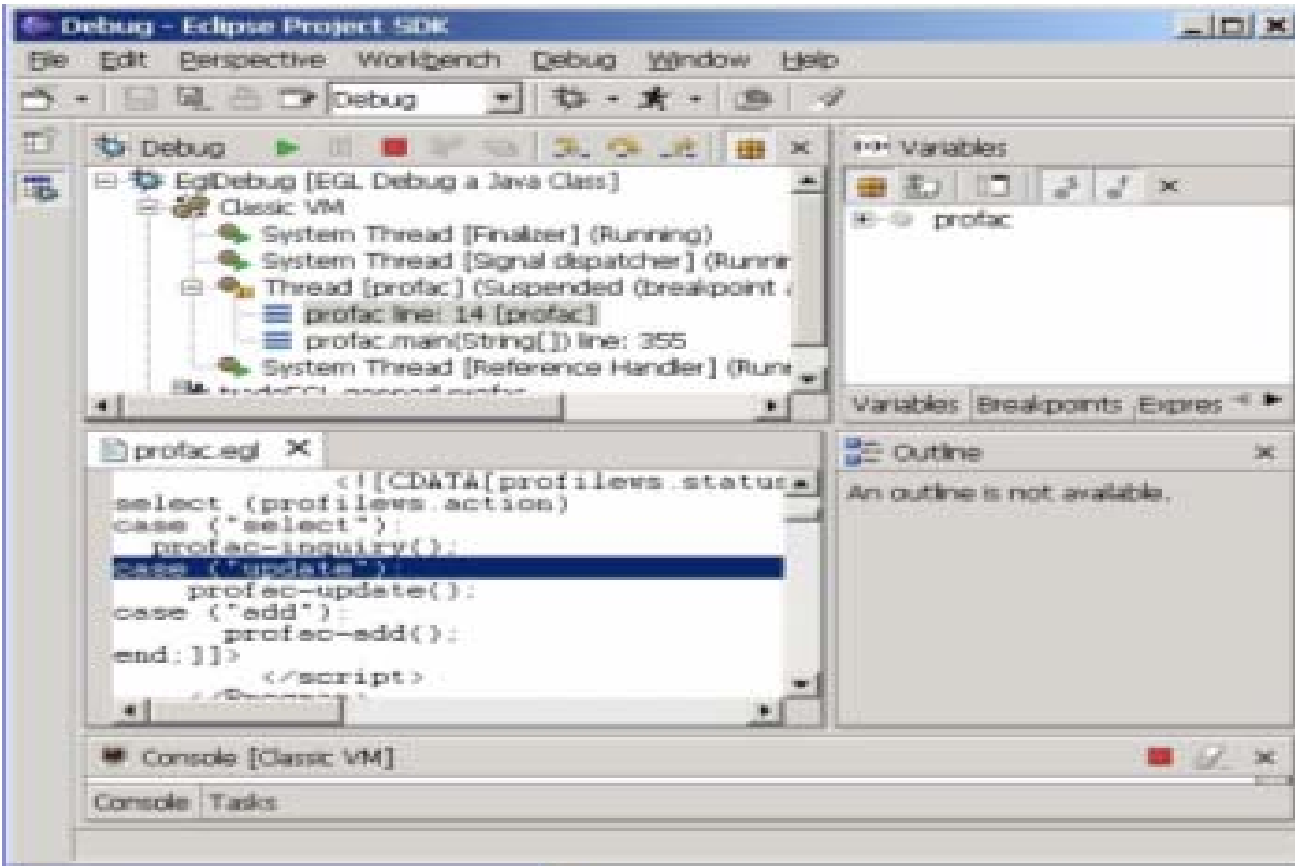
- MONITOR:** A header section with a green background and white text. It includes 'Command ==>' and 'Scroll ==> PAGE'. Below this are two lines of asterisks: '\*\*\*\*\* TOP OF MONITOR \*\*\*\*\*' and '\*\*\*\*\* BOTTOM OF MONITOR \*\*\*\*\*'.
- SOURCE:** A section with a green background and white text, showing the first six lines of the program source. Line 1 is highlighted in red and contains 'IDENTIFICATION DIVISION.'. Lines 3, 4, 5, and 6 contain program details such as 'PROGRAM NAME: ATCDemo Version TDM' and 'OBJECTIVES OF TESTCASE:'.
- LOG:** A section with a green background and white text, displaying system messages including 'IBM Debug Tool Version 5 Release 1 Mod 0', the date '10/07/2005 4:58:51 PM', and copyright information for IBM Corp. 1992, 2004.
- PF KEYS:** A section with a green background and white text, listing function keys (PF 1-12) and their corresponding actions (CURRENT, STEP, QUIT, LIST, FIND, AT/CLEAR, UP, DOWN, GO, ZOOM, MON LIST, RETRIEVE).

At the bottom of the terminal window, the status bar shows 'MA b' on the left, the date '02/015' on the right, and a connection message: 'Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023'.

To the right of the main terminal window is a smaller window titled 'Test Help'. It contains the text: 'Columns 00001 00072' followed by several lines of asterisks. At the bottom of this window, there is a list of actions: '=SHR', 'P=SHR', 'ISP=SHR', and 'ISP=SHR'.

Below the main terminal window is a second terminal window titled 'MA a' with the date '22/006'. It shows a connection message: 'Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23' and a hardware status indicator: 'HP DeskJet 820Cse on LPT1:'.

# WDz Remote GUI Debugger Interface:



```

Session B - [24 x 80]
COBOL  LOCATION: ATCDEMO :> 191.1
Command ==>                               Scroll ==> PAGE
MONITOR --+-----1-----2-----3-----4-----5-----6 LINE: 1 OF 5
***** TOP OF MONITOR *****
0001  1 ***** AUTOMONITOR *****
0002  01 ATCDEMO:>CURRENT-DATE
0003  02 ATCDEMO:>CURRENT-YEAR      X'0000'
0004  02 ATCDEMO:>CURRENT-MONTH    X'0000'
0005  02 ATCDEMO:>CURRENT-DAY      X'0000'
***** BOTTOM OF MONITOR *****
SOURCE: ATCDEMO --1-----2-----3-----4-----5--- LINE: 189 OF 458
189  * GET THE SYSTEM DATE AND TIME *
190  *****
191  ACCEPT CURRENT-DATE FROM DATE.
192  ACCEPT CURRENT-TIME FROM TIME.
193
194  *****
LOG 0--1-----2-----3-----4-----5-----6- LINE: 3 OF 6
0003  5655-M18 and 5655-M19: (C) Copyright IBM Corp. 1992, 2004
0004  *** User preferences file commands end ***
0005  STEP ;
0006  STEP ;
PF  1:CURRENT  2:STEP  3:QUIT  4:LIST  5:FIND  6:AT/CLEAR
PF  7:UP      8:DOWN  9:GO    10:ZOOM 11:MON LIST 12:RETRIEVE
MR  b                                               02/015
Connected to remote server /host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023

```

```

Session B - [24 x 80]
COBOL  LOCATION: ATCDEMO :> 191.1
Command ==> find record-day1_                               Scroll ==> PAGE
SOURCE: ATCDEMO --1---+----2---+----3---+----4---+----5--- LINE: 189 OF 458
189      * GET THE SYSTEM DATE AND TIME                      *
190      *****
191      ACCEPT CURRENT-DATE FROM DATE.
192      ACCEPT CURRENT-TIME FROM TIME.
193
194      *****
195      * OUTPUT THE SYSTM DATE AND TIME                      *
196      *****
197      * DISPLAY 'ATCDEMO RUNTIME DATE = ' CURRENT-MONTH ':'
198      *           CURRENT-DAY ':' CURRENT-YEAR.
199      *
200      * DISPLAY 'ATCDEMO RUNTIME TIME = ' CURRENT-HOUR ':'
201      *           CURRENT-MINUTE ':' CURRENT-SECOND.
202
203      *****
204      * OPEN THE INPUT FILE                                  *
205      *****
206      MOVE 0000 TO RETURN-CODE.
207      OPEN INPUT QSAMIN.

```

PF 1:CURRENT 2:STEP 3:QUIT 4:LIST 5:FIND 6:AT/CLEAR  
PF 7:UP 8:DOWN 9:GO 10:ZOOM 11:MON LIST 12:RETRIEVE

MA b 02/032

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023

```

Session B - [24 x 80]
COBOL  LOCATION: ATCDEMO :> 191.1
Command ==>                               Scroll ==> PAGE
SOURCE: ATCDEMO --1-----2-----3-----4-----5--- LINE: 255 OF 458
256          ADD 10 TO RECORD-DAY1           0
257          ELSE                           .
258          ADD 5 TO RECORD-DAY1           0
259          END-IF.                         .
260                                           .
261          *****                       .
262          *  COMPARE THE SYSTEM DATE IS LESS THAN THE RECORD DATE  *   .
263          *****                       .
264          IF CURRENT-DATE LESS THAN RECORD-DATE1                       0
265          CALL 'ATCDEM2'                   0
266          ADD 10 TO RECORD-DAY1           0
267          ELSE                             .
268          ADD 10 TO RECORD-YEAR1          0
269          END-IF.                         .
270                                           .
271          *****                       .
272          *  COMPARE THE ELEMENTS OF THE SYSTEM DATE WITH THE      *   .
273          *  ELEMENTS OF THE RECORD DATE                            *   .
274          *****                       .

PF  1: CURRENT    2: STEP    3: QUIT    4: LIST    5: FIND    6: AT/CLEAR
PF  7: UP         8: DOWN    9: GO     10: ZOOM   11: MON LIST  12: RETRIEVE

MR  b                                                    12/006
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023
    
```

```

Session B - [24 x 80]
COBOL  LOCATION: ATCDEMO :> 264.1
Command ==>                               Scroll ==> PAGE
SOURCE: ATCDEMO --1----+----2----+----3----+----4----+----5--- LINE: 255 OF 458
256          ADD 10 TO RECORD-DAY1          0
257          ELSE                          .
258          ADD 5 TO RECORD-DAY1          1
259          END-IF.                        .
260                                          .
261          *****                      .
262          *  COMPARE THE SYSTEM DATE IS LESS THAN THE RECORD DATE  *
263          *****                      .
264          IF CURRENT-DATE LESS THAN RECORD-DATE1          0
265          CALL 'ATCDEM2'                  0
266          ADD 10 TO RECORD-DAY1          0
267          ELSE                          .
268          ADD 10 TO RECORD-YEAR1         0
269          END-IF.                        .
270                                          .
271          *****                      .
272          *  COMPARE THE ELEMENTS OF THE SYSTEM DATE WITH THE      *
273          *  ELEMENTS OF THE RECORD DATE                            *
274          *****                      .

PF 1: CURRENT      2: STEP      3: QUIT      4: LIST      5: FIND      6: AT/CLEAR
PF 7: UP           8: DOWN      9: GO       10: ZOOM     11: MON LIST  12: RETRIEVE

MA  b                                                    12/006

```

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023

```

Session B - [24 x 80]
COBOL  LOCATION: ATCDEMO :> 264.1
Command ==> go_                               Scroll ==> PAGE
SOURCE: ATCDEMO --1-----+----2-----+----3-----+----4-----+----5--- LINE: 255 OF 458
256          ADD 10 TO RECORD-DAY1              0
257          ELSE                               .
258          ADD 5 TO RECORD-DAY1              1
259          END-IF.                            .
260                                              .
261          *****                          .
262          * COMPARE THE SYSTEM DATE IS LESS THAN THE RECORD DATE *  .
263          *****                          .
264          IF CURRENT-DATE LESS THAN RECORD-DATE1 0
265          CALL 'ATCDEM2'                      0
266          ADD 10 TO RECORD-DAY1              0
267          ELSE                               .
268          ADD 10 TO RECORD-YEAR1             0
269          END-IF.                            .
270                                              .
271          *****                          .
272          * COMPARE THE ELEMENTS OF THE SYSTEM DATE WITH THE      *  .
273          * ELEMENTS OF THE RECORD DATE                            *  .
274          *****                          .

PF 1: CURRENT      2: STEP      3: QUIT      4: LIST      5: FIND      6: AT/CLEAR
PF 7: UP           8: DOWN      9: GO       10: ZOOM     11: MON LIST  12: RETRIEVE

MR  b                                                    02/017
Connected to remote server /host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023
    
```

```

Session B - [24 x 80]
COBOL  LOCATION: ATCDEM5 :> 60.1
Command ==>                               Scroll ==> PAGE
MONITOR ---+---1---+---2---+---3---+---4---+---5---+---6 LINE: 1 OF 3
0001  1 ***** AUTOMONITOR *****
0002  02 ATCDEM5:>PARAM-YEAR  00
0003  01 ATCDEM5:>BASE-YEAR  00
***** BOTTOM OF MONITOR *****

SOURCE: ATCDEM5 --1---+---2---+---3---+---4---+---5---+ LINE: 58 OF 93
58      END-PERFORM
59
60      DIVIDE PARAM-YEAR  BASE-YEAR
61
62      IF TDPARM2 = 0
63      PERFORM PROCD

LOG 0---+---1---+---2---+---3---+---4---+---5---+ LINE: 16 OF 19
0016  CEE3211S The system detected a decimal-divide exception (System
0017  Completion Code=0CB).
0018  The current location is ATCDEM5 ::> ATCDEM5 :> 60.1.
0019  QUALIFY RESET ;
PF  1:CURRENT  2:STEP  3:QUIT  4:LIST  5:FIND  6:AT/CLEAR
PF  7:UP       8:DOWN  9:GO    10:ZOOM 11:MON LIST 12:RETRIEVE

MR  b 21/015

```

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023



```

Session B - [24 x 80]
COBOL  LOCATION: ATCDEM5 :> 60.1
Command ==> playback start
MONITOR ---+---1---+---2---+---3---+---4---+---5---+---6 LINE: 1 OF 3
0001  1 ***** AUTOMONITOR *****
0002  02 ATCDEM5:>PARAM-YEAR 00
0003  01 ATCDEM5:>BASE-YEAR 00
***** BOTTOM OF MONITOR *****

SOURCE: ATCDEM5 --1---+---2---+---3---+---4---+---5---+ LINE: 58 OF 93
58      END-PERFORM
59
60      DIVIDE PARAM-YEAR INTO BASE-YEAR
61
62      IF TDPARM2 = 0
63          PERFORM PROCD

LOG 0---+---1---+---2---+---3---+---4---+---5---+ LINE: 16 OF 19
0016  CEE3211S The system detected a decimal-divide exception (System
0017  Completion Code=0CB).
0018  The current location is ATCDEM5 ::> ATCDEM5 :> 60.1.
0019  QUALIFY RESET ;
PF  1:CURRENT  2:STEP  3:QUIT  4:LIST  5:FIND  6:AT/CLEAR
PF  7:UP       8:DOWN  9:GO   10:ZOOM 11:MON LIST 12:RETRIEVE

MA b 02/029
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023
    
```

Session B - [24 x 80]

```

COBOL   PBK<LOC:  ATCDEMO  :> 278.1
Command ==>                               Scroll ==> PAGE
MONITOR ---+---1---+---2---+---3---+---4---+---5---+---6 LINE: 1 OF 4
0001  1 ***** AUTOMONITOR *****
0002  01 ATCDEMO:>PARAM-VALS
0003  02 ATCDEMO:>DEMO-TYPE  ' / T '
0004  02 ATCDEMO:>RECORD-TYPE1-YEAR  00
***** BOTTOM OF MONITOR *****
SOURCE: ATCDEMO --1---+---2---+---3---+---4---+---5--- LINE: 277 OF 458
278  CALL 'ATCDEM5' USING PARAM-VALS
279  END-IF.
280
281  IF CURRENT-MONTH = RECORD-MONTH1
282  CALL 'ATCDEM4'
283  ELSE
LOG 0---+---1---+---2---+---3---+---4---+---5--- LINE: 19 OF 22
0019  QUALIFY RESET ;
0020  PLAYBACK START ;
0021  STEP ;
0022  STEP ;
PF  1:CURRENT  2:STEP  3:QUIT  4:LIST  5:FIND  6:AT/CLEAR
PF  7:UP       8:DOWN  9:GO   10:ZOOM 11:MON LIST 12:RETRIEVE

```

MA b 02/015

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023

```

Session B - [24 x 80]
COBOL  PBK<LOC:  ATCDEMO :> 264.1
Command ==>
Scroll ==> PAGE
MONITOR  --+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6 LINE: 1 OF 9
0001  1 ***** AUTOMONITOR *****
0002  01 ATCDEMO:>CURRENT-DATE
0003  02 ATCDEMO:>CURRENT-YEAR  05
0004  02 ATCDEMO:>CURRENT-MONTH 10
0005  02 ATCDEMO:>CURRENT-DAY  07
0006  02 ATCDEMO:>RECORD-DATE1
0007  03 ATCDEMO:>RECORD-YEAR1  00
SOURCE:  ATCDEMO  --1-----+-----2-----+-----3-----+-----4-----+-----5--- LINE: 261 OF 458
262  * COMPARE THE SYSTEM DATE IS LESS THAN THE RECORD DATE *
263  *****
264  IF CURRENT-DATE LESS THAN RECORD-DATE1
265  CALL 'ATCDEM2'
266  ADD 10 TO RECORD-DAY1
267  ELSE
LOG 0---+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+----- LINE: 22 OF 25
0022  STEP ;
0023  STEP ;
0024  STEP ;
0025  STEP ;
PF  1: CURRENT  2: STEP  3: QUIT  4: LIST  5: FIND  6: AT/CLEAR
PF  7: UP      8: DOWN  9: GO    10: ZOOM  11: MON LIST  12: RETRIEVE
MR  b
02/015
Connected to remote server /host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023
    
```

```

Session B - [24 x 80]
COBOL  PBK>LOC:  ATCDEMO  :> 437.1
Command ==>
Scroll ==> PAGE
MONITOR  --+----1----+----2----+----3----+----4----+----5----+----6 LINE: 1 OF 6
0001  1 ***** AUTOMONITOR *****
0002  FD ATCDEMO:>QSAMIN  OPEN INPUT, FILE STATUS: 00
0003  01 ATCDEMO:>WS-INPUT-RECORD
0004  02 ATCDEMO:>WS-REC-TYPE  '02'
0005  02 ATCDEMO:>WS-FILLER  'Sam Orez 8i1111118587=>DATE=>'
0006  '990101Adelphia Communications Corporat'
***** BOTTOM OF MONITOR *****
SOURCE:  ATCDEMO  --1----+----2----+----3----+----4----+----5--- LINE: 433 OF 458
435  *****
436  900-READ-QSAMIN.
437  READ QSAMIN INTO WS-INPUT-RECORD
438  AT END MOVE 'Y' TO SW-EOF-QSAMIN.
439  *  DISPLAY 'FILE STATUS ON QSAMIN READ = ' QSAMIN-STATUS.
440
LOG 0---+----1----+----2----+----3----+----4----+----5----+---- LINE: 36 OF 39
0036  STEP ;
0037  PLAYBACK FORWARD ;
0038  STEP ;
0039  STEP ;
PF 1: CURRENT  2: STEP  3: QUIT  4: LIST  5: FIND  6: AT/CLEAR
PF 7: UP  8: DOWN  9: GO  10: ZOOM  11: MON LIST  12: RETRIEVE
MA b 21/044
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TRMLU010 and port 2023
    
```

Session A - [24 x 80]

File Edit Edit\_Settings Menu Utilities Compilers Test Help

```

EDIT          DNET603.CODE.JCL (GATCDEMO) - 01.99          Columns 00001 00072
000055 /*
000056 /* STEP3: THIS STEP EXECUTE THE DEMO PROGRAM
000057 /*
000058 /******
000059 //STEP3      EXEC PGM=ATCDEMO,
000060 //      PARM='AM'
000061 //STEPLIB    DD DSN=DNET603.CODE.LOAD,DISP=SHR
000062 //          DD DSN=DEBUG.V5R1.SEQAMOD,DISP=SHR
000063 //SYSOUT     DD SYSOUT=*
000064 //SYSPRINT   DD SYSOUT=*
000065 //SYSDUMP    DD SYSOUT=*
000066 //SYSUDUMP   DD SYSOUT=*
000067 //CMD        DD DSN=DNET603.CODE.FILES (INSPIN),DISP=SHR
000068 //INSPLOG     DD DSN=DNET603.CODE.FILES (INSPLOG),DISP=SHR
000069 //INSPREF     DD DSN=DNET603.CODE.FILES (INSPREF2),DISP=SHR
000070 //INPUT1     DD DSN=DNET603.CODE.SOURCE (TESTDATA),DISP=SHR
000071 /*
000072 //
Command ==> |
F1=Help      F2=Split      F3=Exit      F5=Rfind     F6=Rchange   F7=Up
F8=Down      F9=Swap       F10=Left    F11=Right    F12=Cancel

```

Scroll ==> PAGE

22/015

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23

HP DeskJet 820Cse on LPT1:

# *Data Management:*

## ***IBM File Manager Support for VSAM, QSAM, DB2, IMS***

```

Session A - [24 x 80]
Process  Options  Help
-----
File Manager                Primary Option Menu

0  Settings      Set processing options      User ID . : DNET603
1  Browse        Browse data                  System ID : DEMOMVS
2  Edit          Edit data                    Appl ID . : FMN
3  Utilities     Perform utility functions   Version . : 5.1.0
4  Tapes         Tape specific functions     Terminal. : 3278
5  Disk/VSAM     Disk track and VSAM CI functions
6  OAM           Work with OAM objects       Screen. . : 1
7  Templates     Create, edit, or update templates
8  HFS           Access Hierarchical File System
X  Exit          Terminate File Manager      Date. . . : 2005/10/07
                                           Time. . . : 17:12

Command ==> 2
-----
F1=Help      F2=Split      F3=Exit      F4=CRetriev  F7=Backward  F8=Forward
F9=Swap      F10=Actions   F12=Cancel

MP a                                               22/016
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23
HP DeskJet 820Cse on LPT1:

```

```

Session A - [24 x 80]
Process  Options  Help
-----
File Manager                Browse Entry Panel

Input Partitioned, Sequential or VSAM Data Set:
  Data set name . 'DNET603.CODE.SOURCE'
  Member . . . . . TESTDATA      Blank or pattern for member list
  Volume serial . _____    If not cataloged
  Start position . _____    +
  Record limit . . _____    Record Sampling  _
  In-storage mode  _

Copybook or Template:
  Data set name . 'DNET603.CODE.TEMPLATE'
  Member . . . . . RECBUF      Blank or pattern for member list

Processing Options:
  Copybook/template  Start position type  Enter "/" to select option
  1. Above           1. Key                _ Edit template
  2. Previous        2. RBA                 _ Set top to Start position
  3. None            3. Slot
  4. Create dynamic  4. Record number

Command ==> _____
F1=Help    F2=Split    F3=Exit    F4=Expand    F7=Backward  F8=Forward
F9=Swap    F10=Left    F11=Right  F12=Cancel

MA  a                A                ^                06/022
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23  HP DeskJet 820Cse on LPT1:

```



```

Session A - [24 x 80]
Process Options Help
Edit          DNET603.CODE.SOURCE (TESTDATA)          Rec 0 of 949
                                     Format TABL
WS-REC-TYPE-1 WS-ACCT-REPRESENTIVE1 WS-KEY1          WS-KEY-CASE1 WS-KEY1-F
#2            #3                    #4            #6            #7
AN 1:2        AN 3:20                AN 23:12      AN 23:2       AN 25:1
<>           <----+-----1-----> <----+-----1-> <>           -
000000 **** Top of data ****
000001 01          Dennis Smith          1e2141426086 1e          2
- - - - - WS-INPUT-RECORD-2 - - - - - 2 Line(s) suppressed
000004 01          Global agee          8if 33338587 8i          f
000005 01          Russ Courtney        1h2141425706 1h          2
- - - - - WS-INPUT-RECORD-2 - - - - - 1 Line(s) suppressed
000007 01          Bob Bemon           1h2141425706 1h          2
000008 01          Bob Bemon           1h2141425706 1h          2
000009 01          Al Oratter          8i2141428587 8i          2
000010 01          Al Oratter          8i2141428587 8i          2
000011 01          Bob Bemon           1h2141425706 1h          2
000012 01          Bob Bemon           1h2141425706 1h          2
000013 01          Strech Magee        4j3333335249 4j          3
Command ==>
F1=Help      F2=Zoom      F3=Exit      F4=CRetriev  F5=RFind     F6=RChange
F7=Up        F8=Down      F9=Swap      F10=Left     F11=Right    F12=Cancel
                22/015
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23
HP DeskJet 820Cse on LPT1:
    
```

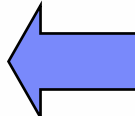
```

Session A - [24 x 80]
Process  Options  Help
-----
Edit          DNET603.CODE.SOURCE (TESTDATA)          Rec 7 of 949
                                           Format SNGL
                                           Top Line is 29   of 38

Current 01: WS-INPUT-RECORD-1
Ref Field  Picture Typ Start   Len   Data
 15   2 RECORD-DATE1
           AN    43     6
 16   3 RECORD-YEAR1
           9(2)  ZD    43     2   0
 17   3 RECORD-MONTH1
           9(2)  ZD    45     2   1
 18   3 RECORD-DAY1
           9(2)  ZD    47     2   1
 19   2 WS-COMPANY-NAME1
           X(32) AN    49    32  Adobe Systems Incorporated
*** End of record ***

Command ==> █
F1=Help      F2=Zoom      F3=Exit      F4=CRetriev  F5=RFind     F6=RChange
F7=Up        F8=Down      F9=Swap      F10=Previous F11=Next     F12=Cancel

MA a
                                           22/015
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23
HP DeskJet 820Cse on LPT1:
    
```



Session A - [24 x 80]

Process    Options    Help

---

Edit                                  DNET603.CODE.SOURCE (TESTDATA)                                  Rec 7 of 949

Format SNGL

Top Line is 29    of 38

Current 01: WS-INPUT-RECORD-1

Ref	Field	Picture	Typ	Start	Len	Data
15	2	RECORD-DATE1				
			AN	43	6	
16	3	RECORD-YEAR1				
		9(2)	ZD	43	2	99
17	3	RECORD-MONTH1				
		9(2)	ZD	45	2	1
18	3	RECORD-DAY1				
		9(2)	ZD	47	2	1
19	2	WS-COMPANY-NAME1				
		X(32)	AN	49	32	Adobe Systems Incorporated

\*\*\* End of record \*\*\*

Command ==> █

Scroll PAGE

F1=Help    F2=Zoom    F3=Exit    F4=CRetriev    F5=RFind    F6=RChange

F7=Up      F8=Down    F9=Swap    F10=Previous    F11=Next    F12=Cancel

MR a 22/015

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23      HP DeskJet 820Cse on LPT1:

ATCDEMO - Program details - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=details&cmpntType=1&key=76459952>

Context : [Explore MVS assets](#) [Program summary](#) [Program details](#)

### Program details

**Details** | [Analysis Messages](#)

File:	ATCDEMO
Program:	ATCDEMO
Language/type:	COB / Program source
Scan parameters for COBOL:	COMPILER-BASED SCANNER:
Analysis status:	Completed
Number of lines in file:	415
Blank lines:	59
Comment lines:	115
Noncomment lines:	241
Number of lines in program:	460
Splitting nodes:	28
Site:	<a href="#">DEMOMVS</a>
Container:	Partitioned Data Set <a href="#">DNET603.DEMO.DATA</a>
Data base updated:	8/16/05 6:21 PM by DNET603
Concatenation set assigned:	<a href="#">DMH15</a>

**Actions** Select an Action

- Select an Action
- Analyze impact for a range of statements
- Assign concatenation set
- Assign new language
- Bookmark this page
- Code extraction
- Manage annotations
- Queue for analysis
- Show control flow diagram
- Show Program diagram
- Show structure diagram
- View e-business program information
- View program data elements**
- View source

**Included files** [Control transfers](#) [DB2](#) [Data stores](#) [Entry points](#) [Run units](#) [Annotations](#)

Source files used by this program

File (2)	Language	Type	Analysis status	Action	Number of lines in file	Source location
<a href="#">RECBUF1</a>	COB	Included source	Completed	<a href="#">delete</a> , <a href="#">annotate</a>	23	<a href="#">DNET603.DEMO.COPY(RECBUF1)</a>
<a href="#">RECBUF2</a>	COB	Included source	Completed	<a href="#">delete</a> , <a href="#">annotate</a>	22	<a href="#">DNET603.DEMO.COPY(RECBUF2)</a>

Data element summary - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=summary&cmpntType=2&DEAcuid=76459952&DEAcuidActive=1&adv=yes&scope=0\\_0\\_0\\_\\*&pg=2](http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=summary&cmpntType=2&DEAcuid=76459952&DEAcuidActive=1&adv=yes&scope=0_0_0_*&pg=2) Go

## Data element summary

Actions Select an Action

Search Data element names: \*   Type mixed case [Advanced search](#)

Optionally, specify any additional search criteria from the following: X

Site: -- All -- Application: -- All -- Annotations: Data type: -- All -- Physical length: Logical length: Scale:

Show only used data elements  
 Show only top level data elements  
 Show only data elements for Program **ATCDEMO**

Select one or more assets for impact analysis, then click "Analyze impact".

[Analyze impact](#) | Page 2 of 6 | 16 - 30 of 88 | Show groups of: 15

	Data element	Site	Program	Action	Program source location	Decl. line	Level	Language	Type	Physical length	Logical length	Scale	Declared In copy?
<input type="checkbox"/>	<a href="#">PD-TOOL-DEMO</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	132	1	COB	GRP	4			N
<input type="checkbox"/>	<a href="#">PD-TOOL-DEMO-TYPE</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	134	5	COB	CHAR	2	2		N
<input type="checkbox"/>	<a href="#">QSAMIN</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	43	0	COB	FD				N
<input type="checkbox"/>	<a href="#">QSAMIN-STATUS</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	95	1	COB	CHAR	2	2		N
<input type="checkbox"/>	<a href="#">RECORD-DATE1</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	18	5	COB	GRP	6			Y
<input type="checkbox"/>	<a href="#">RECORD-DATE2</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	18	5	COB	GRP	6			Y
<input type="checkbox"/>	<a href="#">RECORD-DAY1</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	21	10	COB	NUMB	2	2		Y
<input type="checkbox"/>	<a href="#">RECORD-DAY2</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	21	10	COB	NUMB	2	2		Y
<input type="checkbox"/>	<a href="#">RECORD-MONTH1</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	20	10	COB	NUMB	2	2		Y
<input type="checkbox"/>	<a href="#">RECORD-MONTH2</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	20	10	COB	NUMB	2	2		Y
<input type="checkbox"/>	<a href="#">RECORD-TYPE1-YEAR</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	86	5	COB	NUMB	2	2		N
<input type="checkbox"/>	<a href="#">RECORD-YEAR1</a>	DEMOMVS	ATCDEMO	annotate	<a href="#">DNET603.DEMO.DATA(ATCDEMO)</a>	19	10	COB	NUMB	2	2		Y



RECORD-YEAR1 - Data element details - WebSphere Studio Asset Analyzer - Microsoft Internet Explorer

Address: http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=details&cmpntType=2&key=76459952+++\_4101

### Data element details

**Details**

Data element: RECORD-YEAR1  
 Type: NUMB  
 Length physical/logical: 2/2  
 Level: 10  
 Initial value: Not initialized  
 Parent: [RECORD-DATE1](#)  
 Program: [ATCDEMO](#)  
 Language/type: COB / Included source  
 File: [RECBUF1](#)  
 Container: [DNET603.DEMO.COPY](#)  
 Site: [DEMOMVS](#)

**Actions**

- Select an Action
- Select an Action
- Analyze impact of a change
- Bookmark this page
- Manage annotations
- View other same name definitions
- View source

Modified by

Data element ref (1)	Statement	Program	Source Location
Literal: <a href="#">10</a>	ADD	<a href="#">ATCDEMO</a>	<a href="#">DNET603.DEMO.DATA(ATCDEMO) line 223</a>

Modifies

Data element ref (2)	Statement	Program	Source Location
Data element: <a href="#">RECORD-TYPE1-YEAR</a>	MOVE	<a href="#">ATCDEMO</a>	<a href="#">DNET603.DEMO.DATA(ATCDEMO) line 205</a>
Data element: <a href="#">CURRENT-YEAR</a>	MOVE	<a href="#">ATCDEMO</a>	<a href="#">DNET603.DEMO.DATA(ATCDEMO) line 247</a>

Referenced only

Statement (3)	Program	Source Location
---------------	---------	-----------------

ATCDEMO:RECORD-YEAR1 - Impact analysis details: Impact analysis results - WebSphere Studio Asse - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Refresh Print Mail Stop

Address http://demomvs.demopkg.ibm.com:9080/dmh/DmhPageServlet?pagetype=details&cmpntType=28&key=45&scope=0\_0\_0\_0\_

Home Explore Impact analysis Database

Context : Home Impact analysis summary Impact analysis details

### Impact analysis details: Impact analysis results

Actions Select an Action

**Details**

Impact analysis: ATCDEMO:RECORD-YEAR1

Description: GENERATED for Program ATCDEMO, Data element RECORD-YEAR1

Type of asset analyzed: Impact Analysis - Data element

Program/Element: [ATCDEMO/RECORD-YEAR1](#)

Created/last updated: 10/7/05 5:27 PM by DNET603 / 10/7/05 5:27 PM by DNET603

Overview Summary Details

The following impact analysis overview diagram shows a subset of assets that this proposed code change directly and indirectly affects.

```

graph TD
    subgraph Direct_Impacts
        A["0 CICS transactions  
0 IMS transactions"] --> DI["Direct Impacts"]
        B["1 Batch jobs"] --> DI
        DI --> C["Starting with 1 data elements  
in 1 programs  
8 Data elements  
1 Entry points  
2 Other impacted programs"]
    end
    subgraph Indirect_Impacts
        D["0 CICS transactions  
0 IMS transactions"] --> II["Indirect Impacts"]
        E["0 Batch jobs"] --> II
        II --> F["1 Data elements  
0 Programs"]
    end
    C <--> G["1 Data sets  
1 Data stores  
0 IMS segments  
0 DB2 tables"]
    G <--> F
    
```

Fri Oct 07 22:27:55 GMT+00:00 2005

# *Performance Management:*

## *IBM Application Performance Analyzer*



```
Session A - [24 x 80]
File View Navigate Help
R02: IBM APA for z/OS Observation List (CAZ0) Row 00001 of 00001
ReqNum Owned By Description Job Name Date/Time Samples Status
Command ==> NEW ← Scroll ==> PAGE
F1=Help F2=Split F3=End F4=Jump F5=Rfind F7=Up F8=Down
F9=Swap F10=Left F11=Right F12=Cancel
MA a A 22/018
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:
```

Session A - [24 x 80]

File View Navigate Help

---

R03: Schedule New Measurement Row 00001 of 00012

1. Job Information	3. Multi Steps	5. CICS Txns	7. Schedule
2. Options	4. Active Jobs	6. Sysplex	8. Sched Options

**Panel 1. Job Information**

Job Name/Pattern . . \*

Step Specification

Step No. . . . .	<input type="text"/>	Specify step number, program name,
Program Name . . .	<input type="text"/>	step name or step name + Proc step
Step Name . . . .	<input type="text"/>	name. Use panel 3 to specify more
ProcStepName . . .	<input type="text"/>	than one step.

Description . . . .

Number of Samples .	<input type="text"/>	Measure to step end . . . .	<u>N</u>
Duration (min:sec) .	<input type="text"/>	Delay by (secs) . . . . .	<input type="text"/>
Notify TSO User . .	<u>DNET603</u>	Retain file for (days) .	<input type="text"/>

Command ==>  Scroll ==> PAGE

F1=Help	F2=Split	F3=End	F4=Jump	F5=Rfind	F7=Up	F8=Down
F9=Swap	F10=Left	F11=Right	F12=Cancel			

MA a A 10/026

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:

Session A - [24 x 80]

File View Navigate Help

---

R03: Schedule New Measurement Row 00118 of 00272

1. Job Information
3. Multi Steps
5. CICS Txns
7. Schedule  
2. Options
4. **Active Jobs**
6. Sysplex
8. Sched Options

---

**Panel 4. Active Jobs**

Enter S to select an active job step to be measured. Prefix . . \*

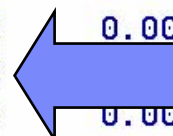
<u>JobName</u>	<u>Type</u>	<u>JobId</u>	<u>StepName</u>	<u>ASID</u>	<u>System</u>	<u>CPU%</u>	<u>SIO</u>
— DNET118D	JOB	JOB05501	RUNCAC	0028	DEMOMVS	0.00	0.00
— DNET133	TSO	TSU05561	DBAUSER	013B	DEMOMVS	0.00	0.00
— DNET263	TSO	TSU00863	DBAUSER	0158	DEMOMVS	0.00	0.00
— DNET424	TSO	TSU00964	DBAUSER	017B	DEMOMVS	0.00	0.00
— DNET530	TSO	TSU05763	DBAUSER	0141	DEMOMVS	0.00	0.00
— DNET603	TSO	TSU01049	DBAUSER	0151	DEMOMVS	0.05	0.00
— DNET603W	JOB	JOB01060	STEP3	002C	DEMOMVS	54.92	0.00
— DNET841	TSO	TSU06060	DBAUSER	0149	DEMOMVS	0.02	0.00
— DPROPAPP	STC	STC04130	DPROPAPP	008C	DEMOMVS	0.02	0.00

Command ==>  Scroll ==> PAGE

F1=Help    F2=Split    F3=End    F4=Jump    F5=Rfind    F7=Up    F8=Down  
 F9=Swap    F10=Left    F11=Right    F12=Cancel

MA a 22/015

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:



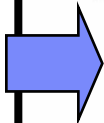
Session A - [24 x 80]

File View Navigate Help

R02: IBM APA for z/OS Observation List (CAZ0)

Row 00001 of 00001

<u>ReqNum</u>	<u>Owned By</u>	<u>Description</u>	<u>Job Name</u>	<u>Date/Time</u>	<u>Samples</u>	<u>Status</u>
007	DNET603		DNET603W	Oct-7 17:40	1,000	Ended



Command ==>

Scroll ==> PAGE

F1=Help    F2=Split    F3=End    F4=Jump    F5=Rfind    F7=Up    F8=Down  
 F9=Swap    F10=Left    F11=Right    F12=Cancel

MA a

07/004

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23

HP DeskJet 820Cse on LPT1:

Session A - [24 x 80]

File View Navigate Help

R 001 of 00001

R Enter S to select a function from this menu. The line command (Yellow) can also be entered on the main panel. Status

Sel	To Perform the Following	LineCmd	Ended
-	display context help information	?	
-	show additional details about this line	++	
-	expand to reveal next level entries	+	
-	collapse to hide next level entries	-	
-	delete the request	D	
<b>S</b>	analysis reports or realtime monitor	R	
-	analysis reports or realtime monitor	S	

F1=Help F2=Split F3=End F4=Jump F5=Rfind F7=Up  
F8=Down F9=Swap F10=Left F11=Right

Command ==> Scroll ==> PAGE

F1=Help F2=Split F3=End F4=Jump F5=Rfind F7=Up F8=Down  
F9=Swap F10=Left F11=Right F12=Cancel

MR a 14/007

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:

```

Session A - [24 x 80]
File View Navigate Help
-----
R01: IBM APA for z/OS Performance Reports (0007)           Row 00001 of 00007

Select a category from the list to the right to view the available reports in the selection list below.

_ A Admin/Miscellaneous           _ I IMS Measurement
_ S Statistics/Storage         _ E CICS Measurement
_ C CPU Usage Analysis           _ F DB2 Measurement
_ D DASD I/O Analysis            _ Q MQ Measurement
_ W CPU WAIT Analysis           _ G Coupling Facility

More: +

Enter S to make a selection or enter the report code on the command line

S S01 Measurement Profile           _ S07 TCB Execution Summary
_ S02 Load Module Attributes       _ S08 Processor Utilization Summary
_ S03 Load Module Summary
_ S04 TCB Summary
_ S05 Memory Usage Timeline
_ S06 Data Space Usage Timeline

Command ==> _____ Scroll ==> PAGE
F1=Help   F2=Split   F3=End   F4=Jump   F5=Rfind   F7=Up     F8=Down
F9=Swap   F10=Left  F11=Right F12=Cancel

MA a 14/004
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23
HP DeskJet 820Cse on LPT1:

```

Session A - [24 x 80]

File View Navigate Help

S01: Measurement Profile (0007) Row 00001 of 00079

Overall CPU Activity

Samples	1,000	100.0%	.....
CPU Active	776	77.6%	██████████
WAIT	0	0.0%	
Queued	224	22.4%	██

Reports:

[C01](#) [C02](#) [C03](#) [C05](#)

[C07](#) [W01](#) [W02](#)

CPU Usage Distribution

CPU Active	776	100.0%	.....
Application	754	97.1%	██████████
System	0	0.0%	
DB2 SQL	0	0.0%	
Data Mgmt	0	0.0%	
Unresolved	22	2.8%	■

Reports:

**C01** [C08](#) [W01](#)

CPU Modes

Command ==> \_\_\_\_\_

F1=Help    F2=Split    F3=End    F4=Jump    F5=Rfind    F7=Up

F9=Swap    F10=Left    F11=Right    F12=Cancel

Reports:

Scroll ==> [PAGE](#)

MA a 13/058

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:

Session A - [24 x 80]

File View Navigate Help

---

C01: CPU Usage by Category (0007) Row 00001 of 00006

<u>N</u> ame	<u>D</u> escription	<u>P</u> ercent of CPU Time * 10.00% <span style="color: orange;">±3.5%</span>
		* . . . . 1 . . . . 2 . . . . 3 . . . . 4 . . . . 5 . . . . 6 . . . . 7 . . . . 8
<u>A</u> PPLCN	Application Code	97.16 <span style="background-color: green; width: 100px; display: inline-block;"></span>
<u>A</u> TCDEM5	Application Program	97.16 <span style="background-color: green; width: 100px; display: inline-block;"></span>
<u>p</u> TCDEM5	CSECT in ATCDEM5	97.16 <span style="background-color: green; width: 100px; display: inline-block;"></span>
<u>N</u> OSYMB	No Module Name	2.83 <span style="background-color: green; width: 10px; display: inline-block;"></span>
<u>S</u> YSTEM	System/OS Services	0.00

Command ==>    Scroll ==> PAGE

F1=Help    F2=Split    F3=End    F4=Jump    F5=Rfind    F7=Up    F8=Down

F9=Swap    F10=Left    F11=Right    F12=Cancel

MP a 22/015

Connected to remote server /host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:



```

Session A - [24 x 80]
File View Navigate Help
P01: Source Program Attribution (0007) Row 00001 of 00093

Load Module: ATCDEM5 LIB: DNET603.CODE.LOAD CSECT: ATCDEM5
Mapped by: DNET603.CODE.COBOLST(ATCDEM5) (COBOL)
Compiler: Enterprise COBOL Compile Time: 2005/10/04 13:49

LineNo Offset Count Source Statement

000001 IDENTIFICATION DIVISION.
000002 *****
000003 * PROGRAM NAME: DTDEM5 VERSION TDM
000004 *
000005 * OBJECTIVES OF TESTCASE:
000006 *
000007 * DEMO INTERACTIVE DEBUG TOOL
000008 *
000009 *****
000010 PROGRAM-ID. ATCDEM5.
000011 AUTHOR. TIM MAGEE.

Command ==> | Scroll ==> PAGE
F1=Help F2=Split F3=End F4=Jump F5=Rfind F7=Up F8=Down
F9=Swap F10=Left F11=Right F12=Cancel

MA a 22/015
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:

```

Session A - [24 x 80]

File View Navigate Help

---

P01: Source Program Attribution (0007) Row 00081 of 00093

Load Module: ATCDDEM5 LIB: DNET603.CODE.LOAD CSECT: ATCDDEM5  
 Mapped by: DNET603.CODE.COBOLST(ATCDDEM5) (COBOL)  
 Compiler: Enterprise COBOL Compile Time: 2005/10/04 13:49

<u>LineNo</u>	<u>Offset</u>	<u>Count</u>	<u>Source Statement</u>
000081			.
000082			
000083			PROCE.
000084	0004F6		MOVE 1000000 TO LOOPCT.
000085			
000086	000500	28	PERFORM WITH TEST BEFORE UNTIL LOOPCT < 2
000087	000524	419	MOVE INPUT-RECORD-1 TO INPUT-RECORD-2
000088	00053A	307	SUBTRACT 1 FROM LOOPCT
000089			END-PERFORM
000090			
000091	000564		GOBACK
000092			.

Command ==>  Scroll ==> PAGE

F1=Help F2=Split F3=End F4=Jump F5=Rfind F7=Up F8=Down  
 F9=Swap F10=Left F11=Right F12=Cancel

MP a 22/015

Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:

```

Session A - [24 x 80]
File View Navigate Help

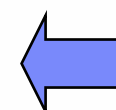
P01: Source Program Attribution (0007) Row 00032 of 00093

Load Module: ATCDEM5 LIB: DNET603.CODE.LOAD CSECT: ATCDEM5
Mapped by: DNET603.CODE.COBOLST(ATCDEM5) (COBOL)
Compiler: Enterprise COBOL Compile Time: 2005/10/04 13:49

LineNo Offset Count Source Statement
000031 WORKING-STORAGE SECTION.
000032 01 TDPARM1 PIC 99 VALUE 5.
000033 01 TDPARM2 PIC 99 VALUE 2.
000034 01 P1PARAM1 PIC 99 VALUE 0.
000035 01 BASE-YEAR PIC 99 VALUE 99.
000036
000037 01 LOOPCT PIC 9999999 VALUE 0.
000038
000039 01 INPUT-RECORD-1 PIC X(2048).
000040 01 INPUT-RECORD-2 PIC X(2048).
000041
000042 *****

Command ==> |
F1=Help F2=Split F3=End F4=Jump F5=Rfind F7=Up F8=Down
F9=Swap F10=Left F11=Right F12=Cancel

Scroll ==> PAGE
22/015
Connected to remote server/host demomvs.demopkg.ibm.com using lu/pool TCP00067 and port 23 HP DeskJet 820Cse on LPT1:
    
```



## Summary

- **Session available for replay**
- **Live webcast on testing scenarios**
- **Product demos**

## For More Information

- IBM Product ID's
  - File Manager for z/OS V5 (5655-M21)
  - File Export for z/OS (5697-I12)
  - Debug Tool Utilities and Advanced Functions for z/OS V5 (5655-M19)
  - Application Performance Analyzer (5697-N37)
  - Workload Simulator (5655-I39)
  - CICS Performance Analyzer (5655-F38)
  - CICS Interdependency Analyzer for z/OS (5697-J23)
  - CICS VSAM Copy (5655-L66)
  - Rational Performance Tester (5724-J96 part D556ULL)
  - Rational Functional Tester Extension (5724J07 part options: authorized user D53ZTLL or floating user D53ZZLL)
  - Websphere Developer for zSeries – WDz (5724-L44)
  - Websphere Studio Asset Analyzer (5655-M22)
  - Websphere Application Monitor (5697-J18)

Get more information about AD tools at  
[www.ibm.com/software/awdtools/deployment](http://www.ibm.com/software/awdtools/deployment)

z/OS Problem Determination and Deployment Tools

Library

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How to buy

Training and certification

Services

Support

**Related software**

- Application Monitor for z/OS
- DebugTool for z/OS
- Fault Analyzer for z/OS
- File Export for /OS
- File Manager for z/OS
- Workload Simulator for z/OS and OS/390

**Related hardware**

- zSeries servers
- Warranty info

Software > Software Development >

## z/OS Problem Determination and Deployment Tools

z/OS® Problem Determination and Deployment Tools have powerful functions and features. Organizations that choose to use them improve the health of their application portfolios.

Go

**Products**

- **Application Monitor for z/OS**  
A non-intrusive performance analyzer for applications and systems programs that provides resource utilization information for your applications. This resource information can be the current system data (online analysis) or data collected over a certain time period (historical analysis).
- **Debug Tool for z/OS**  
A program testing and analysis aid that helps you examine, monitor, and control the execution of programs written in C/C++, COBOL, or PL/I on OS/390, MVS™, VM, or VSE™, and compiled Java™ with the

**Solutions**

- **Problem Determination and Deployment Tools Information Center**  
This information center provides fast, online centralized access to Problem Determination and Deployment Tools product information.
- **IBM COBOL family**  
IBM COBOL provides a complete offering of compatible, cross-platform, cross-product compilers that support z/OS, OS/390®, VM, VSE/ESA®, AS/400®, AIX®, and Microsoft® Windows NT®. IBM gives you the tools you need to amplify your program development and leverage your existing applications, enabling you

**Highlights**

File Manager: Latest PTF information

Fault Analyzer: Latest PTF information

Debug Tool: Latest PTF information

WebSphere and zSeries AD tools help meet on demand

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zSeries Application Development Tools

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## Polling Questions

- **Would you like to see these and more testing scenarios on a live one-on-one webcast?**
  - \* 1 – Yes
  - \* 2 – No
  
- **If this session was informative would you recommend it to a coworker or associate to listen to the replay?**
  - \* 1 – Yes
  - \* 2 - No

# Polling Questions

- **If you want more information on the following tools press 1 for yes or 2 for no**
- ***(this will be asked one product at a time)***
  - 1 yes / 2 no : File Manager
  - 1 yes / 2 no : File Export
  - 1 yes / 2 no : Debug Tool Utilities & Advanced Functions for z/OS V5
  - 1 yes / 2 no: Application Performance Analyzer
  - 1 yes / 2 no: Workload Simulator
  - 1 yes / 2 no: CICS Performance Analyzer
  - 1 yes / 2 no: CICS Interdependency Analyzer
  - 1 yes / 2 no CICS VSAM Copy
  - 1 yes / 2 no Rational Performance Tester
  - 1 yes / 2 no Rational Functional Tester Extension
  - 1 yes / 2 no Websphere Developer for zSeries – WDz
  - 1 yes / 2 no Websphere Studio Asset Analyzer
  - 1 yes / 2 no Websphere Application Monitor



# Q & A Session