z/OS Introduction and Workshop

Rational Developer for z System (RDz)

Most current release has a name change
IBM Developer for z System (IDz)
Unit Objectives

After completing this unit, you should be able to:

• Understand RDz is an alternative to TSO, ISPF, and SDSF for development
• Understand RDz as modern development tool
• Understand RDz capability as a multi platform development tool
Rational Developer for System z (RDz) is an **eclipse** based Integrated Development Environment (IDE)
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An Integrated Development Environment (IDE) brings all of the programmers tools into one convenient place.

IDEs bring editor, compiler, linker and debugger into one place along with project management tools to increase programmer productivity.

Sometimes a version control system and various tools to simplify the construction of a GUI are integrated as well.
RDz is an alternative to using TSO, ISPF, and SDSF with the ability to simultaneous use other platforms when developing end to end solutions or meet requirement to develop, maintain and test on separate platforms from a single controlling workstation.
RDz Features and Functions

Connect and Disconnect to z/OS
- Data Set and Unix File Access
- Allocate new data sets
- Data set characteristics view
- Configurable Editor
- Submit JCL
- JES Output Access
- TSO Command Shell
- Unix Command Shell
- DB2 Connect Access
- CICS Explorer

TN3270 Emulator

Drag and drop data set across separate systems

z/OS Projects
- Local Compile and Execution Capability

Preferences (session configuration)

Perspectives
- CICS SM
- CVS Repository Exploring
- Database Debug
- Database Development
- Debug
- Enterprise Service Tools
- Fault Analyzer Perspective
- Java
- Java Browsing
- Java EE
- Java Type Hierarchy
- JavaScript
- Plug-in Development
- Remote System Explorer
- SCLM
- Team Synchronizing
- Web
- z/OS Projects
- Web
What is RDz?

- IBM’s application development workbench for the 21st century
- RDz provides a workstation-based environment with advanced, graphical, tool-based access to z/OS data sets and z/OS resources
What can you do with RDz?

- Develop mainframe applications in:
  - COBOL
  - PL/I
  - C/C++
  - HLASM (high-level assembler language)

- Target code you write for:
  - z/OS Batch
  - z/OS online applications running CICS or IMS TM
  - z/OS with access to: DB2, IMS (DL/I), QSAM, VSAM data structures
  - Windows-based systems
  - AIX-based COBOL systems

- RDz enables:
  - z/OS traditional mainframe coding and testing
  - Integration with leading-edge z/OS development tools and features
  - Template-based development
  - Integration with modern languages and toolsets
ISPF-Based Development

- Submit compile job
- Swap to SDSF
- Select job
- Edit JCL
- Exit source
- Change code
- Find error message
- Find code line (remember error)
- Swap to edit session
- Exit JCL
RDz-Based Development

- Common development environment for COBOL, PL/I, C/C++, and Java
- Simplified development with more information at your fingertips

Outline view presents COBOL structure

Syntax check
Submit jobs, access job output, or open source members with a single click

Edit source
Open and edit multiple source and JCL members simultaneously

Error list in Problems view

Statement in error indicated in source

Double-click on the error
Integrated CICS/BMS – IMS TM/MFS Map Editor

For both CICS/BMS and IMS/MFS:

- Graphical editing
- Source-mode editing
- Preview
- Run-time simulation
Integrated DB2 Relational DBMS Table Editor

- Full-screen test data editing facility
- SQL statement: Editor, query build facility, test
- Create, deploy and test DB2 stored procedures
RDz and Problem Determination Tools Suite
Supporting development and testing of composite applications

- Optimize and manage performance of application resources
- Compile, debug and test applications, and convert code quickly and easily
- Analyze and correct application failures with minimal down-time
- Manage and generate data files, including XML
- Extract/manipulate production data for testing applications (DB2, IMS, VSAM) and provide data privacy functionality
- Conduct stress, performance, regression, function and capacity planning tests
Is RDz Useful to Your Organization

- Reduces training costs
- Increases productivity
- Reduces host MIPS
- Produces higher quality applications
- Maximizes reuse of z/OS applications
- Attracts younger developers
RDz Benefits – Anecdotal Data from RDz Customers

- **Large bank in Germany benchmark results:**
  - **75%** CPU Savings
  - With 100 Developers - **€ 3,600,000 savings/Annually** ($4,160,000 U.S.)

- **Other European banks benchmarks and feedback:**
  - Reduced TSO consumption by as much as **80%**
  - Saved **2 Euros an hour/per developer** using RDz versus the mainframe

- **U.S. telecomm company:**
  - Reduced costs by more than US $75,000 on a single project

- **European services provider** – Estimates that by rolling RDz out to 600 users will save ~ **€ 74,000,000 over five years** ($102,490,000 U.S.)

- **Financial services provider in Sweden:**
  - Saves approximately **US $1.6 million** on licensing costs & improved ABEND analyses, file alterations and application debugging processes when they replaced existing debugging software with IBM Problem Determination Tools
  - Reduced 90% of time spent tuning programs and discovering performance bottlenecks when they implemented Application Performance Analyzer to help diagnose issues in IMS and DB2
Where to Go for More Information

Download Installation Manager and Trial RDz


RDz launch Welcome page has many education assistant references

Example of Youtube Instruction Videos

https://www.youtube.com/watch?v=m_qHgosLtvU

https://www.youtube.com/watch?v=pgZp6XHLb_4

https://www.youtube.com/watch?v=x6ycgS9Aasc
**Demonstration**
- Edit source code, JCL used to compile and execute
- Submit JCL and review JES2 spool output
- TSO and Unix command prompt
- TN3270 Session
- Data Perspective
  - Connect to DB2 data source
  - DB2 table navigation

Lab system RDz host components are operational

Download and install RDz client to interact with lab system
Unit summary

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