# CICS Tools – ISV Alternatives

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# Preface

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  - ► DB2
  - ► DFSMS/MVS
  - ► IBM
  - ► MQSeries
  - ► MVS/ESA
  - ► OS/390
  - ► RMF, Resource Measurement Facility
  - ► S/390, z/OS
  - ► WebSphere
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# Portfolio Overview
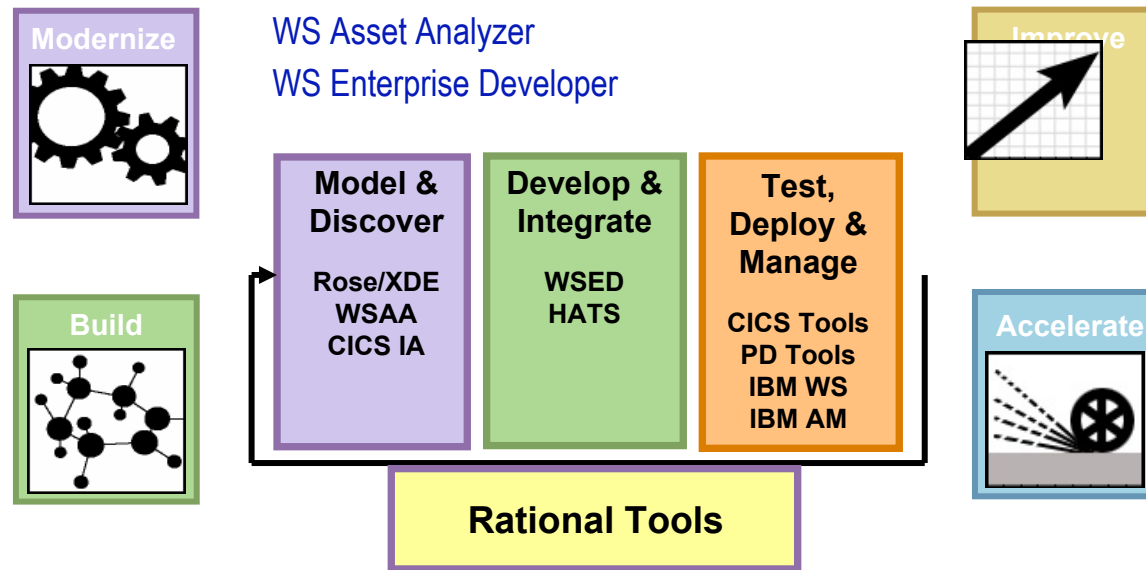
## Problem Determination Tools

File Manager

File Export

Fault Analyzer

Debug Tool Utilities

TicToc

IBM Application Monitor

IBM Workload Simulator

Rational Functional Tester Extension

## CICS Tools

CICS Interdependency Analyzer

CICS Performance Analyzer

CICS Business Event Publisher

CICS VSAM Transparency

CICS Batch Application Control

IBM Session Manager

CICS VSAM Recovery

CICS VSAM Copy

CICS OTTO

CICS Configuration Manager

## WAS/z Tools

WS Application Monitor

WS Workload Simulator

WS Asset Analyzer

WS Enterprise Developer

**Modernize**

**Build**

**Improve**

**Accelerate**

| Model & Discover | Develop & Integrate | Test, Deploy & Manage |
|---|---|---|
| Rose/XDE WSAA CICS IA | WSED HATS | CICS Tools PD Tools IBM WS IBM AM |

**Rational Tools**

## Host Integration Tools

Personal Communications

Host Publisher

Host On Demand

Host Access Transformation Server

## Runtimes

WebSphere Application Server

CICS, IMS, DB2

Enterprise COBOL/PL/I

Host Access Transformation Server

# What is CICS Performance Monitor for z/OS?

- Real-time and historical performance monitoring, management and troubleshooting tool
  - ▶ Friendly Graphical User Interface
    - Exception management
    - Historical task data collection
      - − Extensive filtering capabilities
  - ▶ Access to detailed performance management data and the ability to change parameters
- Product number - 5655-I46
- Releases Supported ...
  - ▶ CICS Transaction Server for z/OS, Version 3
  - ▶ CICS Transaction Server for z/OS, Version 2
  - ▶ CICS Transaction Server for OS/390, Version 1.3

## CICS PM at a glance

- Comprehensive user-friendly interface to enable users to :
  - Define and modify thresholds for exception management
  - Monitor events status
  - Display alerts and their recent histories
  - Define historical task data collection criteria
  - Query historical task data using extensive filtering capabilities
  - Investigate problems online
  - Make changes to key system and resource parameters
  - 'KILL' function for looping tasks and system stalls

IBM CICS Performance Monitor for z/OS

Monitor   Topology   Event List   Status   Window   Help

HURPLEXW
  Other systems
    CICSHW61
HURPLEX1
  ALLHCICS
    MV26AORS
      CICSHA61
      CICSHA62
      CICSHT61
    MV27AORS
      CICSHA71
      CICSHA72
      CICSHT71
  Other systems
    CICSHA63
    CICSHA64

**Activity**

| ICEs |
| Tasks |
| Taskfile |
| SAM Max Tasks |
| SAM Stall Cond |
| SAM Tran Dump |
| SAM Not Avail |
| SAM Sys Dump |
| SAM SOS |

**Connectivity**

| CPIC Partners |
| FEPI Conns |
| ISC & MRO |
| LU 6.2 Modenames |

**Files & DB2**

| CFDT Pools |
| Data Tables |
| DB2 Connection |
| DB2 Entries |
| DB2 Trans |
| Dataset Name |
| Local Files |
| LSR Buffers |
| LSR Pools |
| Remote Files |

**Logging**

| Journal Names |

**Queues**

| Extra TD Queues |
| Indirect TD Queues |
| Remote TD Queues |
| Transient Data |
| TS Pools |
| Temporary Storage |
| Shared TSQ |
| Intra TD Queues |

**Regions**

| CICS Storage |
| Region |
| CICS Dispatcher |
| ENQ Pools |
| Transaction Dumps |

Region Histories   Resources Summary

Status for scope: HURPLEXW  Filter: None

Clear filter

| Event | Region | Resource | Identifier | Attribute | Operator | Reference value | Current value | Severity | Priority |
|---|---|---|---|---|---|---|---|---|---|

Event Monitor   Threshold Definitions   Installed Threshold Definitions

Connected -  winmvs26 (9.20.101.6:20231,20131)

# OMEGAMON XE for CICS

## What does it do?

- **Enables proactive management of performance and availability of CICS systems – including CICS in Parallel Sysplex environments**
- **Helps identify bottlenecks at the record level**
- **Can trace transactions from one system to another**
- **Helps detect application performance problems**
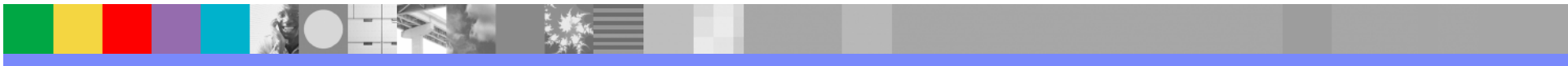- **Eases creation of complex thresholds, situations**
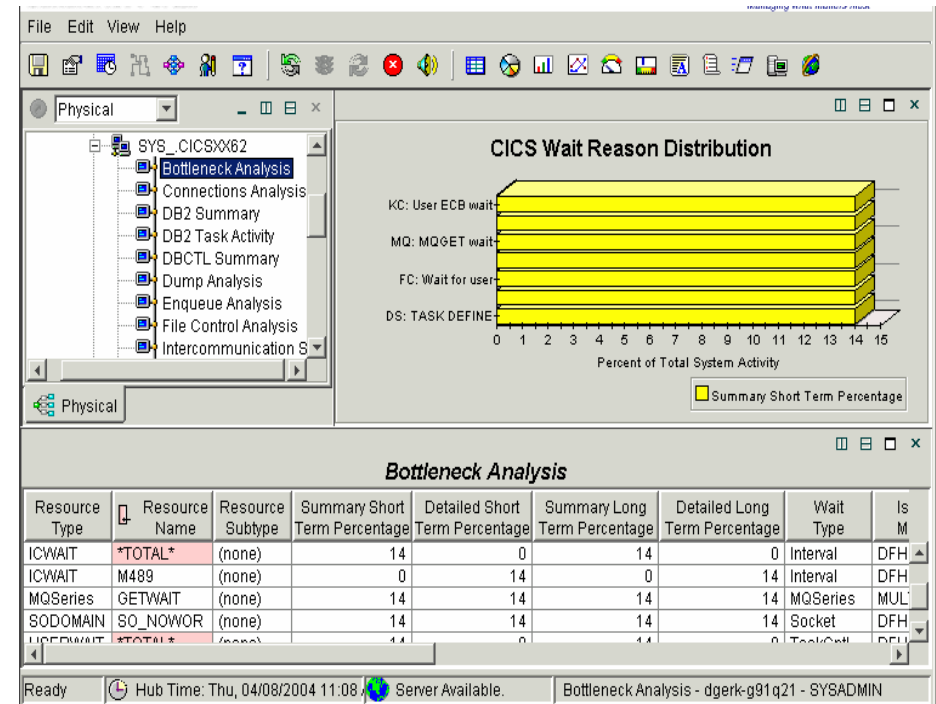
## Exploitation

- **Exploitation of CICS Transaction Server V2.3 and the upcoming V3**

- **CICS Dispatcher & JVM support, MVS Logger**

## Product Simplification

- **Merge XE & CICSPlex into single package**

## Performance and Scalability

- **Resource consumption improvements**

# CICS Tools – ISV Replacements

## CICS Online Transmission Time Optimizer – CICS OTTO

- Optimize 3270 data streams to increase your system performance

## CICS VSAM Copy – CICS VC

- Create consistent point-in-time copies of VSAM files concurrent with business-critical online processing activity

## CICS VSAM Recovery – CICS VR

- Automated recovery of lost VSAM data

## CICS Batch Application Control – CICS BAC

- Simplify and automate batch access to CICS resources

## IBM Session Manager – ISM

- Provide secure, reliable, and easy access to multiple z/OS and OS/390 applications from a single terminal

# CICS Tools – ISV Replacements

## **CICS Online Transmission Time Optimizer – CICS OTTO**

- Optimize 3270 data streams to increase your system performance

# What is CICS OTTO ?

- CICS Online Transmission Time Optimizer for z/OS
  - ► CICS OTTO optimizes
    - –Data streams directed to 3270-type display stations and/or printers
    - –Data streams directed to SCS-type printers
    - –Data streams directed to banking terminals 3600/4700
  - ► CICS-specific solution (not VTAM)
- Reduces network load
- Better use of existing network resources and devices
- Easy to install, customize and use
- Statistics maintained
- Optimization features are easily controlled

# CICS OTTO - Operation



```
IYCLZC07 - [24 x 80]                                                    _ 6 x

PRIMARY OPTION MENU           Otto for CICS V1R1                    OTTOM01


OPTION ===> _


         1.   START / STOP  Otto for CICS Optimization
         2.   Display and Control Otto Image Pool Size
         3.   3270 Component Based Optimization Control
         4.   3600/SCS Component Based Optimization Control
         5.   LU Based Optimization Control
         6.   Module Based Optimization Control
         7.   EXCLUDE LU's from Optimization
         8.   EXCLUDE Modules from Optimization
         9.   SELECT LU's for Optimization
        10.   Trace
        11.   System Options
        12.   Statistics Control
        13.   Display Statistics
        14.   Otto Commands (Compatibility Mode)
         X.   Exit


    ---------------------------------------------------------------------

    F1=Help      F3=Exit


MA   c                                                            04/014
Connected to remote server/host winmvs20 using port 23
```

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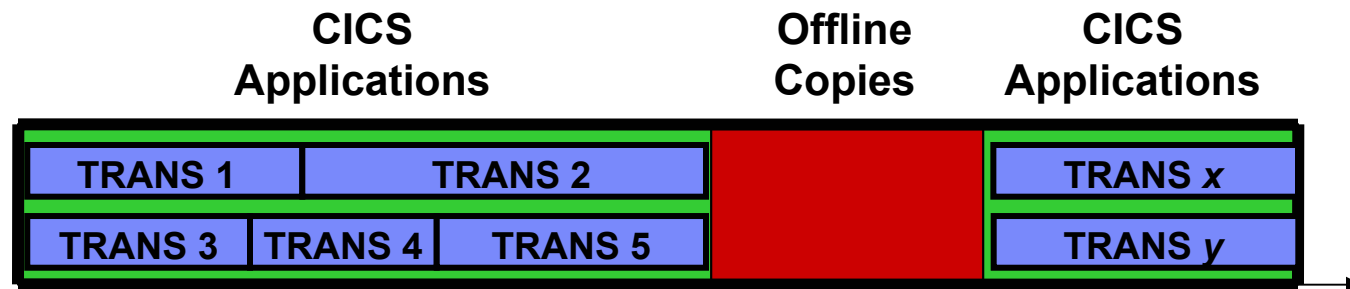
# CICS VSAM Copy for z/OS – Version 1.1

- **What does it do?**
  - ▶ Creates CONSISTENT copies of VSAM data sets
    - While they remain online and open to CICS for update
    - While they are closed to CICS

- **Why do I need it?**
  - ▶ Create ad-hoc copies of VSAM data sets
    - Without affecting current performance of running CICS applications
    - Produced copies are consistent (no incomplete units of work)

  - ▶ Work towards 24*7 VSAM availability
    - No need to take the data set offline from CICS before creating copy

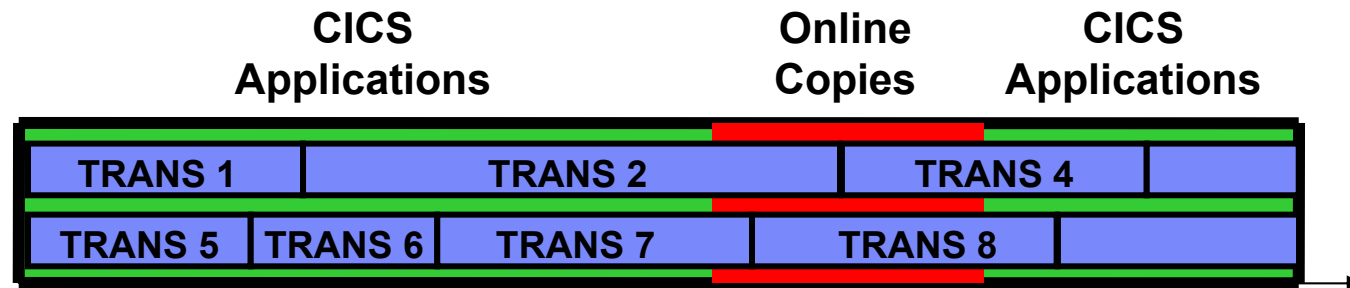# Currently available offline copy tools

- **Offline copy tools**

| CICS Applications | Offline Copies | CICS Applications |
|---|---|---|
| TRANS 1 / TRANS 2 | | TRANS $x$ |
| TRANS 3 / TRANS 4 / TRANS 5 | | TRANS $y$ |

- **Advantages**
  - ▸ **Consistent copies produced (no incomplete units of work)**
  - ▸ **Often fast and robust (multiple copies in one run)**

- **Disadvantages**
  - ▸ **Must take data sets offline from CICS**
  - ▸ **Usually must be scheduled in advanced**

# Currently available online copy tools

- **Online copy tools**

|  | CICS<br>Applications | Online<br>Copies | CICS<br>Applications |
|---|---|---|---|

| TRANS 1 | TRANS 2 | TRANS 4 | |
| TRANS 5 | TRANS 6 | TRANS 7 | TRANS 8 | |

- **Advantages**
  - ▸ **Data sets remain online to CICS for update**

- **Disadvantages**
  - ▸ **Produced copy may be fuzzy (incomplete units of work included)**
  - ▸ **Fuzzy copies require forward recovery to make them consistent**

# "Snapshot Copy" Products

- **Hardware/software solution to online copy**
  - ▶ **Concurrent Copy**
  - ▶ **RVA devices**
- **Requires activity to all involved data sets be quiesced before copy process can begin**
  - ▶ **May take several minutes if manual process**
  - ▶ **May cause short interruption for online users**
  - ▶ **May cause errors/abends in CICS transactions that are not written to handle closed files**

# CICS VSAM Copy for z/OS advantages

- **Includes best of both worlds**
  - ▶ Create consistent copies of VSAM data sets
  - ▶ Create copies of data sets while they remain online to CICS for update
  - ▶ Copy multiple VSAM data sets in one run
  - ▶ No degradation to performance of running CICS transactions

- **Supports KSDS, ESDS, RRDS, and VRRDS VSAM data sets**

- **Supports copying a VSAM KSDS base cluster with alternate indices**

- **Automatically determines if the data set is online or offline to CICS before copy – no additional user intervention required**

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## CICS VSAM Recovery – CICS VR

- Automated recovery of lost VSAM data

# CICS VSAM Recovery

- **What does it do?**
  - ▸ Recovers CICS and batch VSAM data after physical or logical corruption
  - ▸ Removes updates made by failed batch job steps
  - ▸ Reapplies changes made by applications since last data back up.

- **Why do I need it?**
  - ▸ Reduce business cost of VSAM errors
    - Reduce impact of batch window processing errors
    - Helps you detect and reverse errors
    - Reduce the impact for VSAM data users against the effects of physical loss or incorrect update
      - − Reduce cost of down time
      - − Helps you minimize recovery time

CICSVR main menu

Command ===> _____

Select one and press Enter.

1_    1.  List of VSAM spheres
      2.  List of logs (CICS V4)
      3.  List of log streams (CICS TS)
      4.  List of registered log of logs (CICS TS)
      5.  JCL skeleton

 F1=Help      F3=Exit     F10=Menu bar F12=Cancel

MA   b                              A                          11/024

Help

```
                    CICSVR VSAM sphere list include
Command ===> _____

Specify VSAM sphere list search criteria, then press Enter.

VSAM sphere . . . . . . . .  EMPLOYEE.PAYROLL.*_____


                                 OR


Specify the name of a data set that contains a list of VSAM spheres,
then press Enter.


Data Set Name . . . . . . . _____

  F1=Help     F12=Cancel
```

 F1=Help      F3=Exit     F10=Menu bar F12=Cancel


MA    b                              A                          08/048

Administrate  Utilities  Tools  List  View  Help
_____

                        CICSVR VSAM sphere list              Row 1 to 6 of 6
Command ===> _____


Select one or more VSAM spheres, then select an action.


   N  Use default parameters for selected spheres
                                                 Last time        RLS RR
   S  VSAM sphere                                referenced       flag on
   _  EMPLOYEE.PAYROLL.SPHERE1                   03.009 17:12:10
   _  EMPLOYEE.PAYROLL.SPHERE2                   03.009 17:12:10
   s  EMPLOYEE.PAYROLL.SPHERE3                   03.010 01:19:45   N
   =  EMPLOYEE.PAYROLL.SPHERE4                   03.009 17:12:10   N
   _  EMPLOYEE.PAYROLL.SPHERE5                   03.009 17:12:10   N
   _  EMPLOYEE.PAYROLL.SPHERE6                   03.009 17:12:10   N
******************************** Bottom of data ********************************




        F1=Help      F3=Exit      F4=CompRec    F5=FwdRec      F6=Backout    F7=Bkwd
        F8=Fwd       F10=Menu bar F11=Dereg     F12=Cancel


MA    b                                                              14/004

```
    Administrate  Utilities  Tools  List  View  Help
   _____

                  ┌─────────────────────────────────────┐
                  │  1   1. Complete recovery...    F4   │   Row 1 to 6 of 6
   Command ===>    │      2. Forward recover only... F5   │
                  │      3. Backout only...         F6   │
   Select one or  └─────────────────────────────────────┘   ion.


     N  Use default parameters for selected spheres

                                               Last time        RLS RR
     S  VSAM sphere                            referenced       flag on
        EMPLOYEE.PAYROLL.SPHERE1               03.009 17:12:10
        EMPLOYEE.PAYROLL.SPHERE2               03.009 17:12:10
     S  EMPLOYEE.PAYROLL.SPHERE3               03.010 01:19:45  N
        EMPLOYEE.PAYROLL.SPHERE4               03.009 17:12:10  N
        EMPLOYEE.PAYROLL.SPHERE5               03.009 17:12:10  N
        EMPLOYEE.PAYROLL.SPHERE6               03.009 17:12:10  N
   ***************************** Bottom of data *****************************




     F1=Help       F3=Exit        F4=CompRec    F5=FwdRec     F6=Backout   F7=Bkwd
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## CICS Batch Application Control – CICS BAC

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# CICS Batch Application Control

- **New CICS tool**
  - ▶ Announced November 2, 2004
  - ▶ Generally available November 26, 2004

- Primarily CA-DADS replacement
- What does it do?
  - ▶ Helps a sysprog manage a batch job alongside online CICS applications (batch window)
  - ▶ Allows them to deallocate VSAM datasets from online CICS applications, then reallocate them to CICS after batch job complete
  - ▶ Powerful "group" feature enables multiple resources to be managed
  - ▶ Desktop GUI available (not mandatory – green screen access also available)

- Why do I need it?
  - ▶ Reduces errors and abends related to batch processing
  - ▶ Reduces manual interventions by operators and system programmers
  - ▶ Can help decrease length of batch window

# CICS Batch Application Control

- **CICS BAC advantages**
  - ▶ Incorporates the most common user requirements received for resource control
  - ▶ Takes advantage of newer CICS technologies (EXCI, SPI, RDO, etc.)
  - ▶ Provides a Windows-based GUI to perform administrative function (not required for daily operations)

- **CICS BAC benefits**
  - ▶ Increase CICS availability
  - ▶ Reduce user intervention
  - ▶ Reduce possibility of errors
  - ▶ Helps lower the total cost of ownership of the zSeries platform

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## IBM Session Manager – ISM

- Provide secure, reliable, and easy access to multiple z/OS and OS/390 applications from a single terminal

# IBM Session Manager for z/OS V1.2
## GA August 6, 2004

**A secure and user-friendly method of accessing multiple OS/390 or z/OS systems from a single 3270 terminal - VTAM and TCP/IP**

- Password-protected menu gives access all applications in network
- Log-off procedures, security checking, audit logging and centralized administration, operations, and monitoring
- Benefits to helpdesk and operations personnel  - Spy function
- Benefits in training staff – Demo function
- Centralized user ID admin and the ability to broadcast messages to end users
- Dynamic menus support

# IBM Session Manager for z/OS: Overview

**Network**

**Session Manager**

**CICS**

**TSO**

**IMS**

**Linux Application**

**Unix Application**

# Session Manager for z/OS: Overview....

**End-User  Interaction --> Application Access**



**Default  Application selection panel**

# Session Manager for z/OS: Overview....

**End-User Interaction --> Application Access**
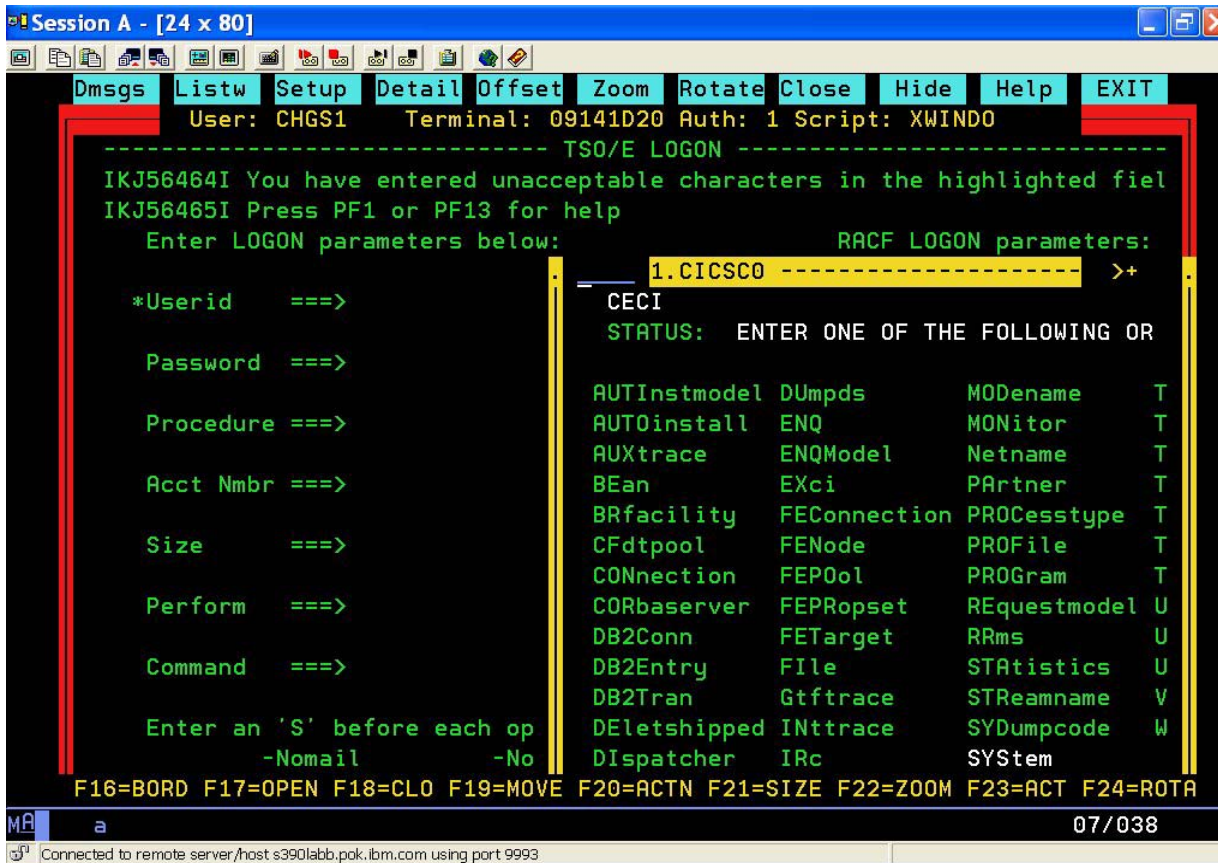


**Application selection panel with escape characters changed to PF keys**

# Session Manager for z/OS: Overview....
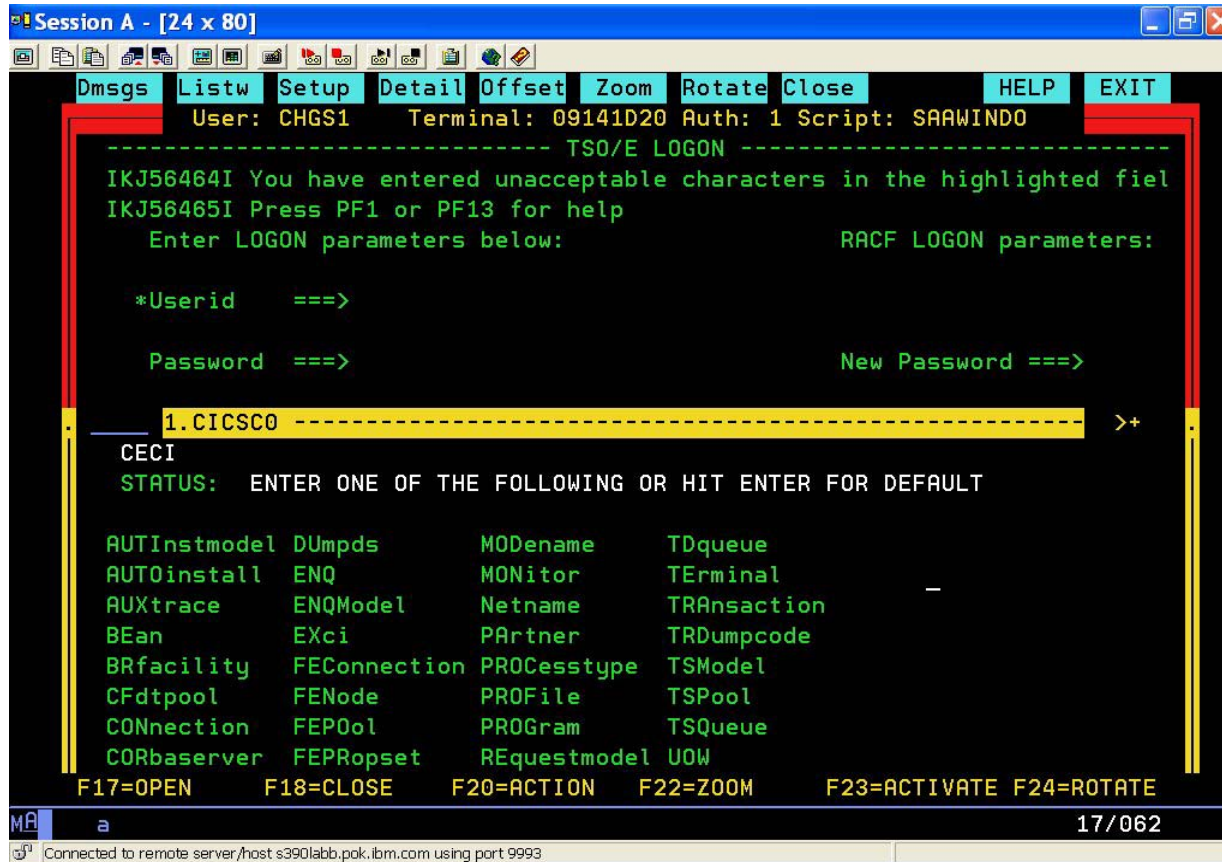
**End-User Interaction --> Windows Feature**



**PC type windows**

# Session Manager for z/OS: Overview....

**End-User  Interaction --> Windows Feature**



**CUA type windows**

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