CICS Batch Application Control for z/OS Version 1.1

Product Overview

CICS Batch Application Control for z/OS – Version 1.1

- **New IBM tool to improve CICS availability**
  - Announced November 4, 2004
  - Generally available November 26, 2004
- **What does it do?**
  - Provides the ability to change the state of a CICS resource from a batch job step
  - Tracks CICS resource state change requests across CICS regions and batch jobs
  - Ensures CICS resources are set to their correct state when the CICS region is started

CICS Batch Application Control for z/OS – Version 1.1

- **Why does a customer want it?**
  - Reduces the likelihood of errors, abends, and unavailable resources in batch job processing
  - Improves CICS availability
  - Reduces the amount of operator intervention required for normal batch processing

CICS BAC – Features

- Dynamic control of CICS resources
  - File control (VSAM files)
  - Transient data queues
  - Transactions
  - Programs
- Batch request utility provides the capability to alter a resource's state from "outside" of CICS
  - State change made at time of request if CICS is active
  - State change made at CICS startup if CICS is not active
- Tracks resource state change requests, including...
  - Request from batch request utility
  - CICS SPI state change requests
  - CEMT state change requests

CICS BAC – Features (cont'd)

- Ensures CICS resources are set to their last requested state at CICS region startup
  - Depending on type of region startup
  - Before CICS applications begin processing
- Administration functions provided by a Windows-based GUI
  - Set/maintain CICS BAC region properties
  - Define resources to be processed by CICS BAC
- Associate programs/transactions with files or TDQueues
  - Programs/transactions enabled after file or TDQueue opened
  - Programs/transactions disabled before file or TDQueue closed
  - Up to 512 of each can be specified with a file or TDQueue
- Application groups
  - Logical grouping of files, TDQueues, programs, and/or transactions
  - Group processed as a single entity with a single command

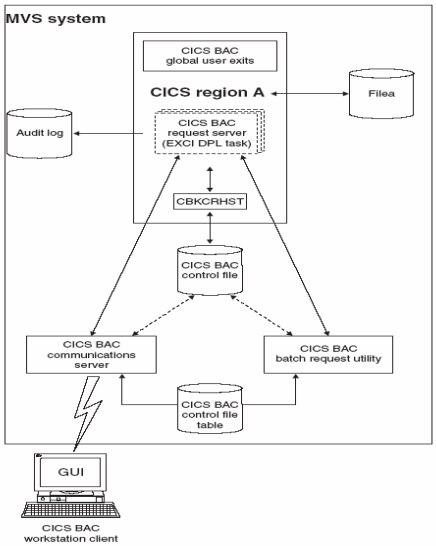
CICS BAC – Features (cont'd)

- Application Lists
  - Logical grouping of application groups
  - One list can contain up to 512 groups
- LINK command
  - LINK to CICS application program (synchronous processing)
  - Pass commarea of up to 256 bytes
  - Returned commarea "dumped" to print file
- START command
  - START a CICS transaction (asynchronous processing)
  - Pass data of up to 256 bytes
- RUNCEMT command
  - Issue any CEMT command in the target CICS region
  - Returned data "dumped" to print file

CICS BAC – Features (cont'd)

- Simple command language
  - Similar to CICS SPI/API commands
- Audit log
  - SYSPRINT or data set
  - Batch request utility commands and CICS SPI requests
  - Logging done whether CICS is up or down
- Undefined object processing
  - Resource does not have to be previously defined to CICS BAC in order to issue commands against it or track it's state changes
- CICS EXCI used to communicate between batch request utility or communication server and CICS region
- Batch request utility can command server can ship requests to any CICS region in the CICSplex.
- Sample migration utility

CICS BAC – component diagram



CICS BAC Components

- CICS component
  - Startup processor
  - Request server
  - Request server subtask
  - Control file
  - Global User Exits
- Control file table
  - PDS member containing “cross reference” between CICS applid and region’s control file data set name
  - Can be in CBKPARMS DD data set or MVS logical parmlib concatenation

CICS BAC Components (cont’d)

- Communication server
  - Runs as an MVS started task
  - “Middleware” between workstation administration client and CICS request server
  - Can process workstation request natively if target CICS region is down
  - Not required for any other processing

CICS BAC Components (cont'd)

- Batch request utility
  - Runs as a batch job step
  - Used to issue commands to target CICS region
  - Communicates with CICS via CICS EXCI
  - Single instance can communicate ("sequentially") with multiple CICS regions throughout the CICSplex
  - Can update target CICS region's control file directly if CICS region is down
  - Uses Control File Table to determine target CICS region's control file data set name

CICS BAC – Batch request utility commands

- SET FILE command
  - Open/closed
  - Enabled/disabled
  - Access options
  - Primary/alternate/new data set name
  - Process associated transaction IDs and/or programs
- SET TDQUEUE command
  - Open/closed
  - Enabled/disabled
  - Process associated transaction IDs and/or programs
- SET TRANSID command
  - Enabled/disabled
- SET PROGRAM command
  - Enabled/disabled

CICS BAC – Batch request utility commands (cont'd)

- SET GROUP/LIST command
  - Open/closed
  - Enabled/disabled
  - Primary/alternate DSN
- DEFAULT commands
  - Sets various default values to be used until subsequent DEFAULT command is encountered
  - Default values can be overridden on a single command
- LINK/START/RUNCEMT

CICS BAC – Installation overview

- SMP/E installation of distribution data sets
  - LOADLIB
  - SAMPLIB
  - Workstation administration client
- CICS installation
  - Define and initialize control file (one per CICS region)
  - Add CICS BAC LOADLIB to DFHRPL concatenation
  - Define CICS BAC resource definitions – transaction ID, programs, mapset, file
  - Decide on CICS BAC startup and shutdown method
  - Start CICS BAC in CICS region

CICS BAC – Installation overview (cont'd)

- Create communication server started task JCL
  - APF-authorize LOADLIB is workstation request security check is to be performed
  - SDFHEXCI data set must be available
  - Start communication server
- FTP workstation administration client setup.exe file to workstation and install it
  - "Typical" InstallShield installation
  - Create CICS region folder, region properties, and default values/definitions
  - Define objects as necessary
  - Upload region folder contents to CICS region control file

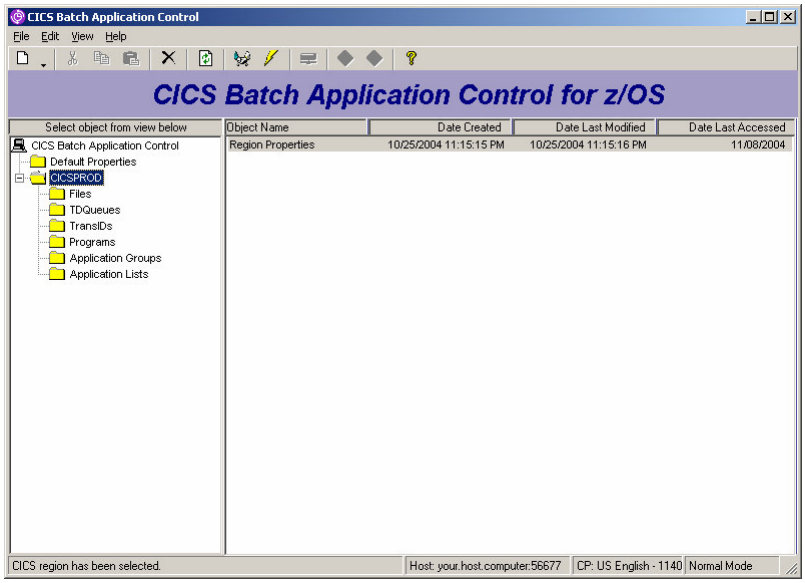
CICS Batch Application Control – summary

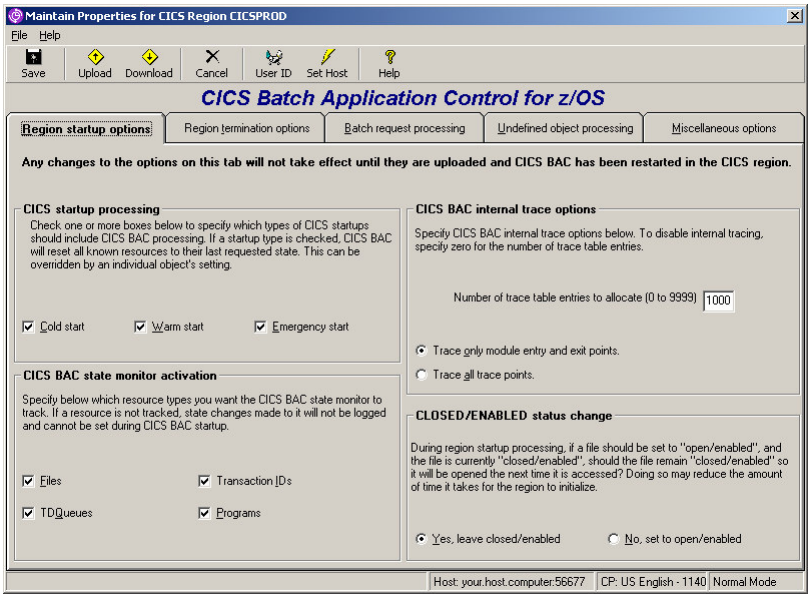
- Easy to install and use
- Command language intuitive to CICS programmers
- Provides the most often used capabilities of DADS+, CAFC, etc.
- Sample migration utility can be tailored to help migrate from competitive product
- Takes advantage of current technology

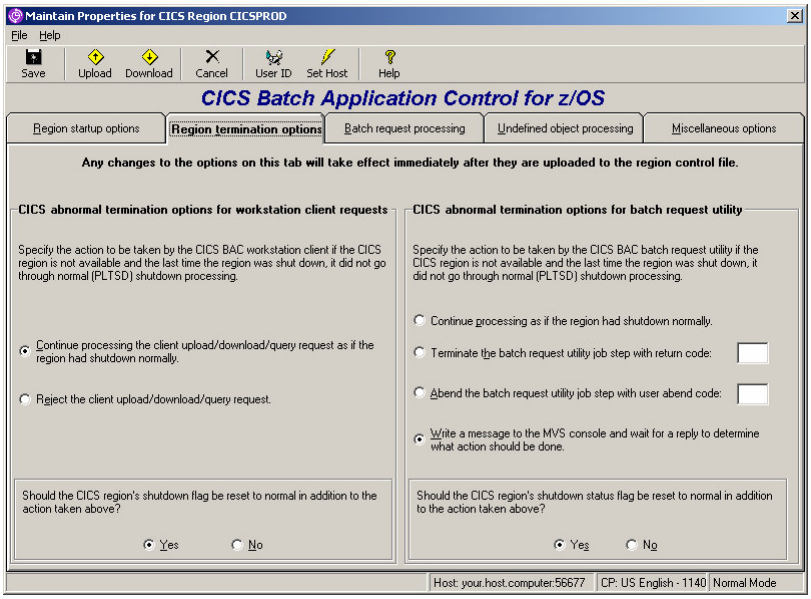
CICS Batch Application Control

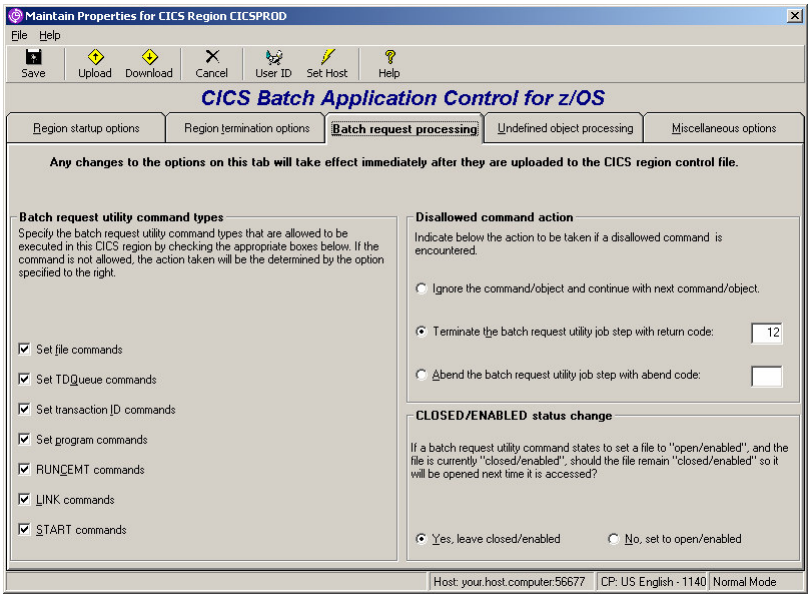
Workstation Administration Client

Screen Shots




Maintain Properties for CICS Region CICSPROD
File Help
Save Upload Download Cancel User ID Set Host Help
CICS Batch Application Control for z/OS
Region startup options
Region termination options
Batch request processing
Undefined object processing
Miscellaneous options
Any changes to the options on this tab will not take effect until they are uploaded and CICS BAC has been restarted in the CICS region.
CICS startup processing
Check one or more boxes below to specify which types of CICS startups should include CICS BAC processing. If a startup type is checked, CICS BAC will reset all known resources to their last requested state. This can be overridden by an individual object's setting.
Cold start
Warm start
Emergency start
CICS BAC state monitor activation
Specify below which resource types you want the CICS BAC state monitor to track. If a resource is not tracked, state changes made to it will not be logged and cannot be set during CICS BAC startup.
Files
Transaction IDs
TDQueues
Programs
CICS BAC internal trace options
Specify CICS BAC internal trace options below. To disable internal tracing, specify zero for the number of trace table entries.
Number of trace table entries to allocate (0 to 9999) 1000
Trace only module entry and exit points.
Trace all trace points.
CLOSED/ENABLED status change
During region startup processing, if a file should be set to "open/enabled", and the file is currently "closed/enabled", should the file remain "closed/enabled" so it will be opened the next time it is accessed? Doing so may reduce the amount of time it takes for the region to initialize.
Yes, leave closed/enabled
No, set to open/enabled
Host: your.host.computer:56677
CP: US English - 1140
Normal Mode


Maintain Properties for CICS Region CICSPROD
File Help
Save Upload Download Cancel User ID Set Host Help
CICS Batch Application Control for z/OS
Region startup options
Region termination options
Batch request processing
Undefined object processing
Miscellaneous options
Any changes to the options on this tab will take effect immediately after they are uploaded to the region control file.
CICS abnormal termination options for workstation client requests
Specify the action to be taken by the CICS BAC workstation client if the CICS region is not available and the last time the region was shut down, it did not go through normal (PLTSD) shutdown processing.
Continue processing the client upload/download/query request as if the region had shutdown normally.
Reject the client upload/download/query request.
Should the CICS region's shutdown flag be reset to normal in addition to the action taken above?
Yes
No
CICS abnormal termination options for batch request utility
Specify the action to be taken by the CICS BAC batch request utility if the CICS region is not available and the last time the region was shut down, it did not go through normal (PLTSD) shutdown processing.
Continue processing as if the region had shutdown normally.
Terminate the batch request utility job step with return code:
Abend the batch request utility job step with user abend code:
Write a message to the MVS console and wait for a reply to determine what action should be done.
Should the CICS region's shutdown status flag be reset to normal in addition to the action taken above?
Yes
No
Host: your.host.computer:56677
CP: US English - 1140
Normal Mode



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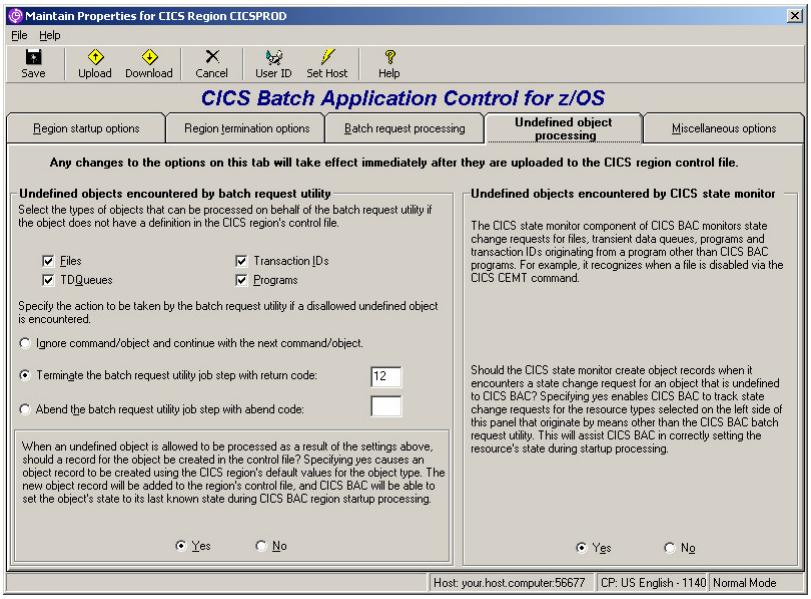
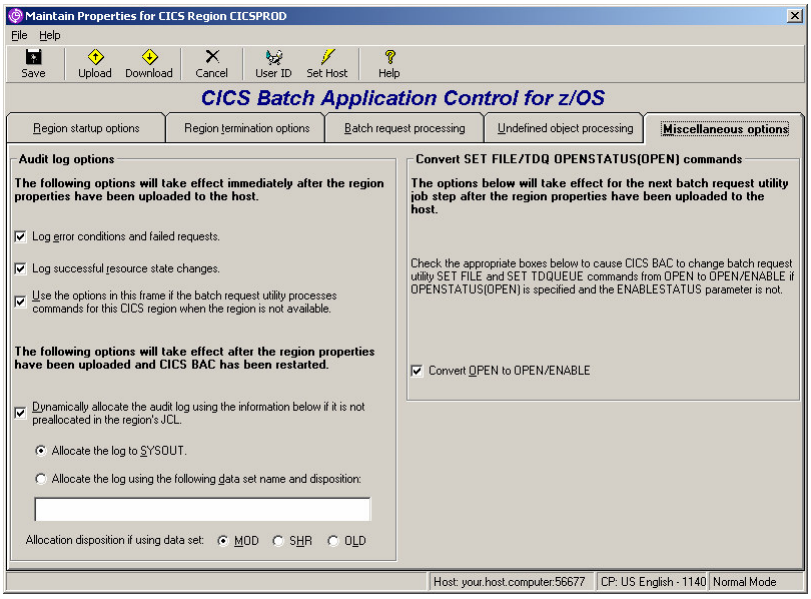
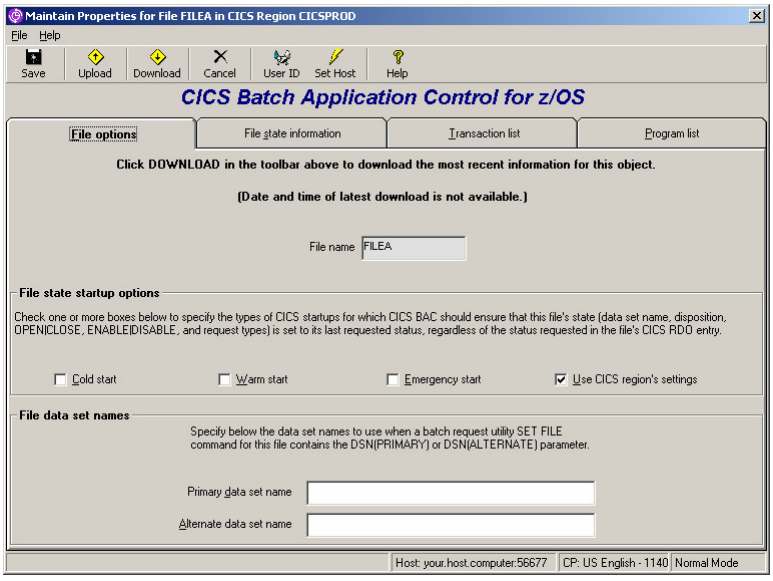
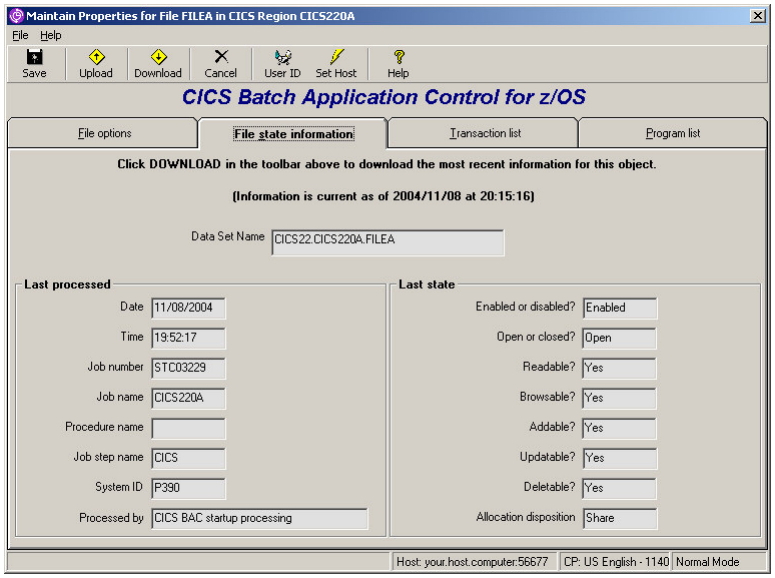
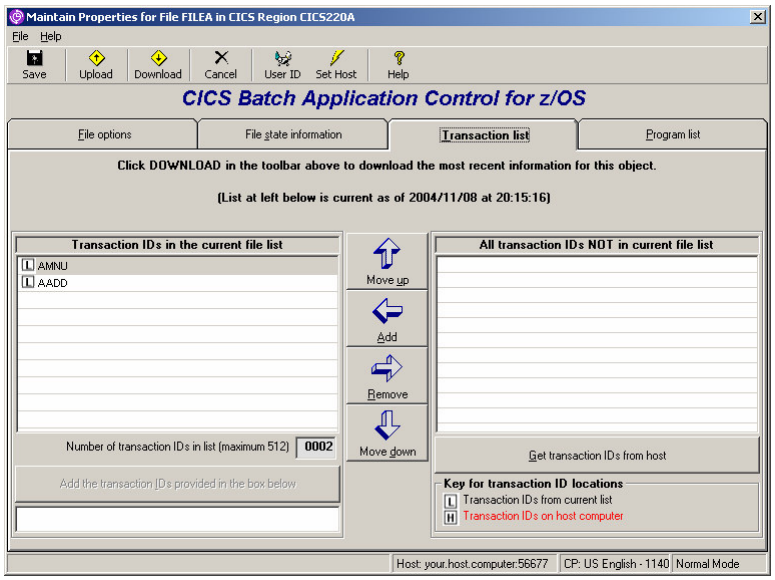



Maintain Properties for CICS Region CICSPROD
File Help
Save Upload Download Cancel User ID Set Host Help
CICS Batch Application Control for z/OS
Region startup options
Region termination options
Batch request processing
Undefined object processing
Miscellaneous options
Audit log options
The following options will take effect immediately after the region properties have been uploaded to the host.
Log error conditions and failed requests.
Log successful resource state changes.
Use the options in this frame if the batch request utility processes commands for this CICS region when the region is not available.
The following options will take effect after the region properties have been uploaded and CICS BAC has been restarted.
Dynamically allocate the audit log using the information below if it is not preallocated in the region's JCL.
Allocate the log to SYSOUT.
Allocate the log using the following data set name and disposition:
Allocation disposition if using data set: MOD SHR OLD
Convert SET FILE/TDQ OPENSTATUS(OPEN) commands
The options below will take effect for the next batch request utility job step after the region properties have been uploaded to the host.
Check the appropriate boxes below to cause CICS BAC to change batch request utility SET FILE and SET TDQUEUE commands from OPEN to OPEN/ENABLE if OPENSTATUS(OPEN) is specified and the ENABLESTATUS parameter is not.
Convert OPEN to OPEN/ENABLE
Host: your.host.computer:56677
CP: US English - 1140
Normal Mode


Maintain Properties for File FILEA in CICS Region CICSPROD
File Help
Save Upload Download Cancel User ID Set Host Help
CICS Batch Application Control for z/OS
File options
File state information
Transaction list
Program list
Click DOWNLOAD in the toolbar above to download the most recent information for this object.
(Date and time of latest download is not available.)
File name FILEA
File state startup options
Check one or more boxes below to specify the types of CICS startups for which CICS BAC should ensure that this file's state (data set name, disposition, OPEN|CLOSE, ENABLE|DISABLE, and request types) is set to its last requested status, regardless of the status requested in the file's CICS RDO entry.
Cold start
Warm start
Emergency start
Use CICS region's settings
File data set names
Specify below the data set names to use when a batch request utility SET FILE command for this file contains the DSN(PRIMARY) or DSN(ALTERNATE) parameter.
Primary data set name
Alternate data set name
Host: your.host.computer:56677
CP: US English - 1140
Normal Mode


Maintain Properties for File FILEA in CICS Region CICS220A
File Help
Save Upload Download Cancel User ID Set Host Help
CICS Batch Application Control for z/OS
File options
File state information
Transaction list
Program list
Click DOWNLOAD in the toolbar above to download the most recent information for this object.
(Information is current as of 2004/11/08 at 20:15:16)
Data Set Name CICS22.CICS220A.FILEA
Last processed
Date 11/08/2004
Time 19:52:17
Job number STC03229
Job name CICS220A
Procedure name
Job step name CICS
System ID P390
Processed by CICS BAC startup processing
Last state
Enabled or disabled? Enabled
Open or closed? Open
Readable? Yes
Browsable? Yes
Addable? Yes
Updatable? Yes
Deletable? Yes
Allocation disposition Share
Host: your.host.computer:56677
CP: US English - 1140
Normal Mode


Maintain Properties for File FILEA in CICS Region CICS220A
File Help
Save Upload Download Cancel User ID Set Host Help
CICS Batch Application Control for z/OS
File options
File state information
Transaction list
Program list
Click DOWNLOAD in the toolbar above to download the most recent information for this object.
(List at left below is current as of 2004/11/08 at 20:15:16)
Transaction IDs in the current file list
L AMNU
L AADD
Move up
Add
Remove
Move down
All transaction IDs NOT in current file list
Number of transaction IDs in list (maximum 512) 0002
Get transaction IDs from host
Add the transaction IDs provided in the box below
Key for transaction ID locations
L Transaction IDs from current list
H Transaction IDs on host computer
Host: your.host.computer:56677
CP: US English - 1140
Normal Mode