



IBM IMS Audit Management Expert for z/OS

IMS Audit Management Expert for z/OS Version 1.1

Agenda

- **Tool Overview**
 - Features
 - Architecture
- **Tool Walk Through**
 - Screen shots of Report UI
 - Screen shots of Administration UI
- **Questions**

IMS Audit Management Expert for z/OS

- **A tool that collects and correlates data access information from the IMS and SMF Logs**
- **A tool that assists a company's efforts to comply with Regulatory Compliance**
- **Separates the roles of auditing and database administration**

IMS Audit Management Expert for z/OS Features

- **Saves time and effort by eliminating manual auditing processes**
- **Facilitates common auditing tasks**
 - determining who updated a particular object
 - time frame
 - monitoring access to specific objects
- **Shows a detailed analysis for any changes being monitored by IMS Audit Management Expert**
- **Defines various filter policies for collecting and reporting data**

IMS Audit Management Expert for z/OS Features

- **Allows auditors to obtain information**
 - without being defined as IMS users
 - work without extensive interaction with Data Base and System Administrators
 - Auditors will not be able to directly manipulate IMS resources

IMS Audit Management Expert for z/OS

■ Data collection

- IMS Audit Management Expert can collect and correlate many different types of information into its audit repository:
 - Access to database data sets and image copy data sets as recorded in SMF
 - Changes to databases as recorded in the IMS log
 - User access to the IMS system via SIGNON as recorded in the IMS log
 - PSB and database 'change of state' activity as recorded in the IMS log
 - System STOP and START activity as recorded in the IMS log
- IMS does not log DB GET (reads) to databases
 - The total number of reads for all DB in application will be in the accounting record, but there is no record of read only

■ Reporting user interface

- Provides auditors with flexible options for examining the data in the audit repository

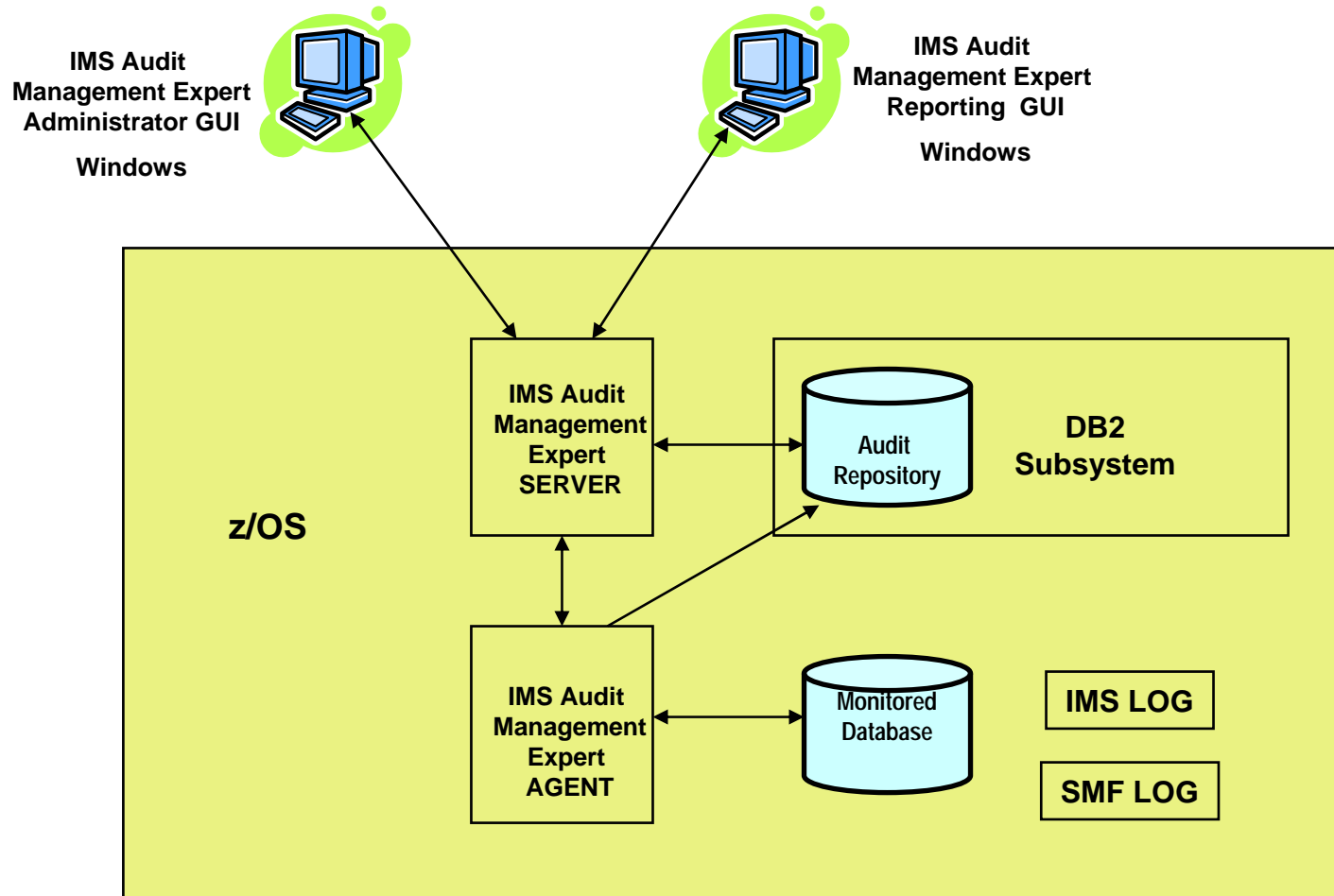
■ Administration user interface

- Provides administrators with flexible options
 - for user management, auditing profiles, and reporting authorizations

IMS Audit Management Expert Components

- **SERVER**
 - Started task or batch job
- **AGENT**
 - Started Task or batch job
 - One per IMS System to Audit
- **CLIENT**
 - Reporting Analysis GUI
 - Administrator GUI
 - Windows
- **AUDIT REPOSITORY**
 - DB2 Tables and Views
- **PROFILE**
 - Defines
 - Collection Profile
 - Authorization Profile
 - User Profile

IMS Audit Management Expert Architecture





IBM IMS Audit Management Expert for z/OS

Using IMS Audit Management Expert Report UI



IMS AUDIT MANAGEMENT EXPERT



User Name

Password

Login

Disconnect

Help



IMS SYSTEMS

DATASETS

IMS AUDIT MANAGEMENT EXPERT

Welcome barry

> Overview

< Back

Help

Report Options:

Date Range:

From: Calendar >

Thu, Jan 18, 2007

Hour: 0

To: Calendar >

Thu, Jan 18, 2007

Hour: 23

Last Summary Table Update: 01-18-2007 1

Log Type:

All

Activity Result:

All

Set Filter...

Set time period to check for Threshold:

- Every Hour
- Every Day
- Every Week
- Every Month

Refresh

Edit Thresholds...

Collection History

Date Range From:

December 2006

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

OK Cancel

Database Activity:

- Rollback [IMS]
- Change [SMF]
- Read [SMF]

System Activity:

- g. IMS STOP and START [IMS]
- h. User Sign-ON and OFF [IMS]
- i. PSB STOP and START [IMS]
- j. CPIC STOP and START [IMS]
- k. Database STOP and START [IMS]

Normal

Warning

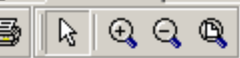
Critical

RS22|T81B

Systems Activity:

b.	e.	g.	j.
c.	f.	h.	k.
		i.	

> Available Dates: 2006-7-21 to 2007-1-18



IMS SYSTEMS

DATASETS

IMS AUDIT MANAGEMENT EXPERT

Welcome barry

> Overview Subsystem

< Back Help

Report Options:

Date Range:

From: Hour:

To: Hour:

Last Summary Table Update: 01-18-2007 12:39

Log Type:

Activity Result:

Set time period to check for Threshold:

Every Hour

Every Day

Every Week

Every Month

Database Activity:		System Activity:	
a. First INSERT [IMS]	d. Rollback [IMS]	g. IMS STOP and START [IMS]	j. CPIC STOP and START [IMS]
b. First UPDATE [IMS]	e. Change [SMF]	h. User Sign-ON and OFF [IMS]	k. Database STOP and START [IMS]
c. First DELETE [IMS]	f. Read [SMF]	i. PSB STOP and START [IMS]	

Normal

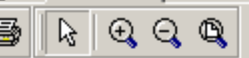
Warning

Critical

Subsystem: RS22|T81B

Database Activity:		Systems Activity:	
a.	d.	g.	j.
b.	e.	h.	k.
c.	f.	i.	

> Available Dates: 2006-7-21 to 2007-1-18



Report Options:

Date Range:
 From: Hour:
 To: Hour:

Last Summary Table Update: 01-18-2007 12:39

Log Type:

Activity Result:

Set time period to check for Threshold:
 Every Hour
 Every Day
 Every Week
 Every Month

Database Activity:		System Activity:	
a. First INSERT [IMS]	d. Rollback [IMS]	g. IMS STOP and START [IMS]	j. CPIC STOP and START [IMS]
b. First UPDATE [IMS]	e. Change [SMF]	h. User Sign-ON and OFF [IMS]	k. Database STOP and START [IMS]
c. First DELETE [IMS]	f. Read [SMF]	i. PSB STOP and START [IMS]	

Normal

Warning

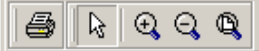
Critical

Subsystem: RS22 | T81B

Database Activity: Systems Activity:

Set Threshold Criteria For Reports

Activity	Normal If Less Than:	Critical If Greater Than:
a. First INSERT [IMS]	500	1,000
b. First UPDATE [IMS]	500	1,000
c. First DELETE [IMS]	500	1,000
d. Rollback [IMS]	500	1,000
e. Change [SMF]	500	1,000
f. Read [SMF]	500	1,000
g. IMS STOP and START [IMS]	500	1,000
h. User Sign-ON and OFF [IMS]	500	1,000
i. PSB STOP and START [IMS]	500	1,000
j. CPIC STOP and START [IMS]	500	1,000
k. Database STOP and START [IMS]	500	1,000



IBM **IMS SYSTEMS** **IMS AUDIT MANAGEMENT EXPERT** **Welcome Barry**

> **Collection History** < Back Help

Report Options:

Date Range:

From: [Calendar >](#) Hour:

Mon, Dec 18, 2006

To: [Calendar >](#) Hour:

Thu, Jan 18, 2007

> Available Dates: 2006-12-26 to 2007-1-17

Subsystem:

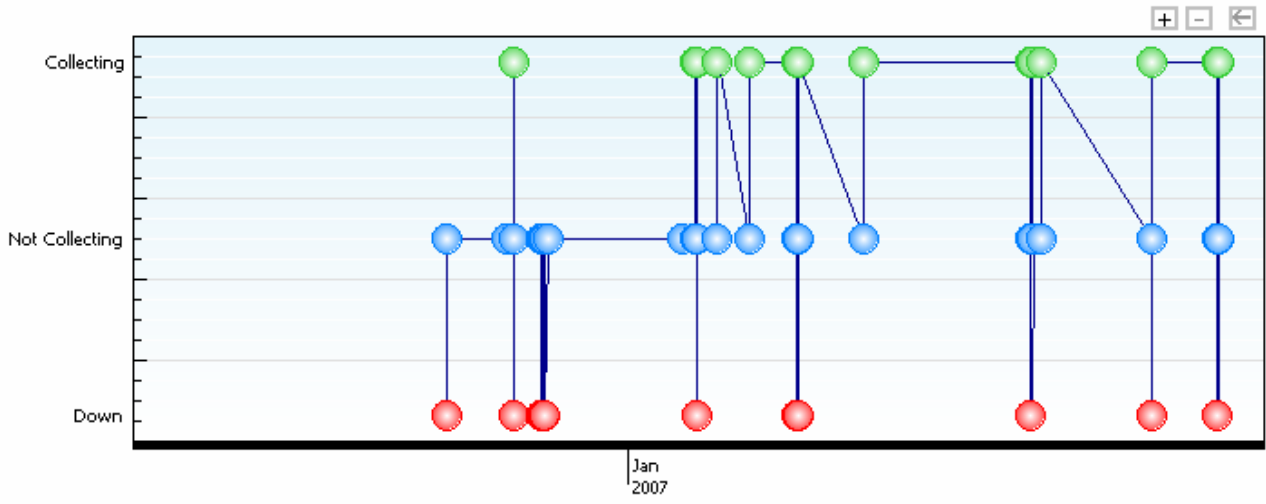
- > All Subsystems
- RS22 | T81B**

Refresh

Display Colors...

Close

Collection Status Timeline for: RS22|T81B





Report Options:

Date Range:
 From:
 Hour:
 To:
 Hour:
[> Available Dates: 2006-7-21 to 2007-1-18](#)
 Last Summary Table Update: 01-18-2007 13:09

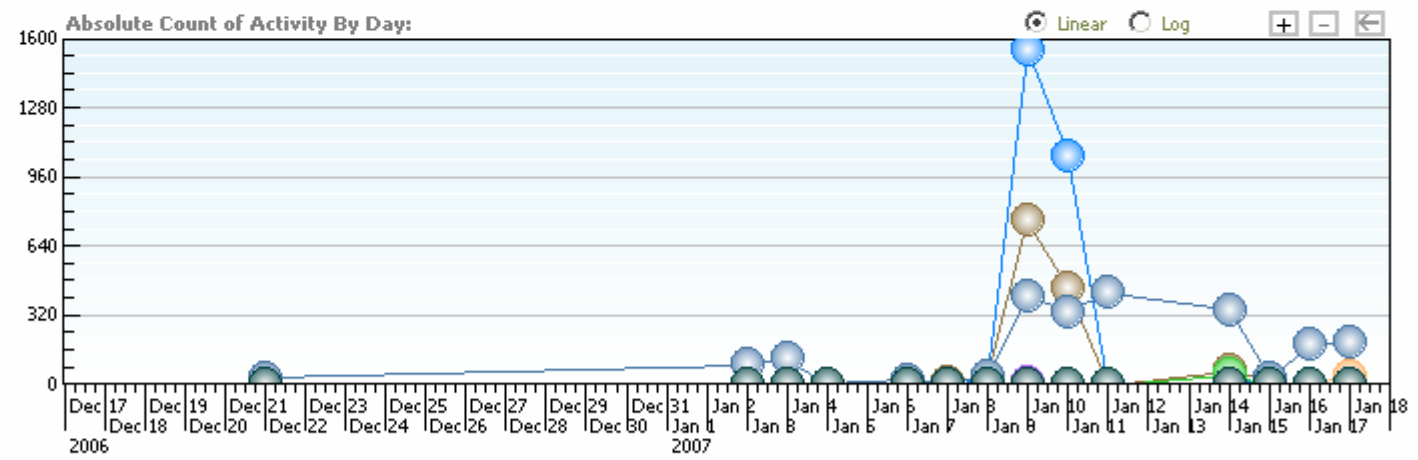
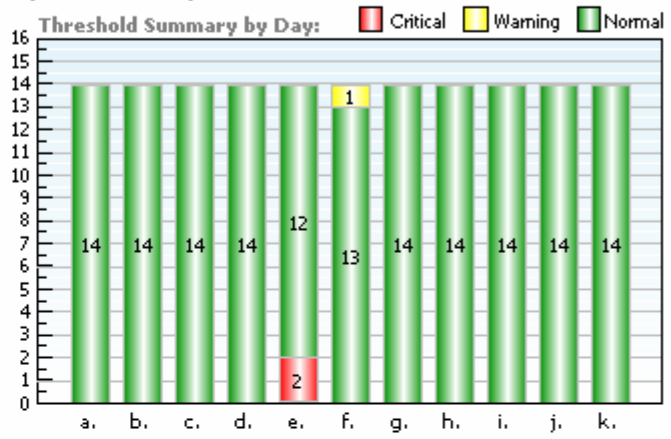
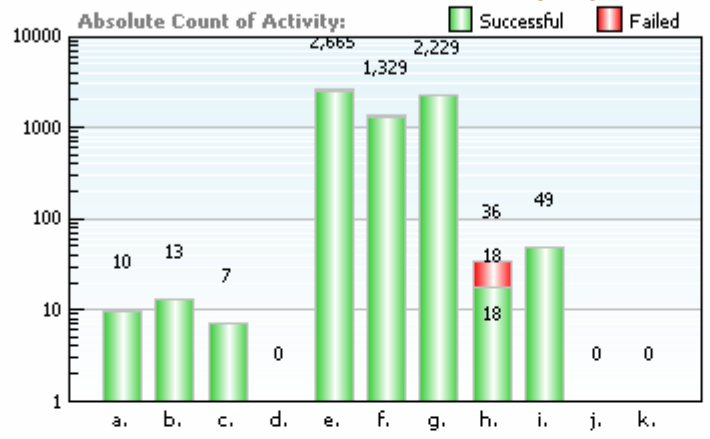
Subsystem:

Log Type:

Activity Result:

Set time period to check for Threshold:
 Every Hour
 Every Day
 Every Week
 Every Month

Summary Report for Subsystem: RS22|T81B



- a. First INSERT [IMS]
- b. First UPDATE [IMS]
- c. First DELETE [IMS]
- d. Rollback [IMS]
- e. Change [SMF]
- f. Read [SMF]
- g. IMS STOP and START [IMS]
- h. User Sign-ON and OFF [IMS]
- i. PSB STOP and START [IMS]
- j. CPIC STOP and START [IMS]
- k. Database STOP and START [IMS]



Report Options:

Time Range: Calendar >

Start Date: on, Dec 18, 2006

End Date: Calendar >

Start Time: Hour: 0

End Time: Hour: 23

Available Dates: 2006-7-21 to 2007-1-18

Summary Table Update: 01-18-2007

System: 2|T81B

Type: [Dropdown]

Activity Result: [Dropdown]

Set Filter...

Time period to check for The: Every Hour

Every Day

Every Week

Every Month

Report Data... Refresh

Report Options... Display Colors...

Filter Data Option

Option

Filter Criteria:

<p>Available Users</p> <p>> All Users</p> <p><EMPTY></p> <p>ABXFPOCA</p> <p>ABXPSB00</p> <p>ABXTSTCA</p> <p>Add</p> <p>Users</p> <p>Refresh</p> <p>Selected Users</p> <p>> All Users</p> <p>Remove</p>	<p>Available PSB Name</p> <p>> All PSBs</p> <p><EMPTY></p> <p>ABX019</p> <p>ABX026</p> <p>ABX043</p> <p>ABXFPOCA</p> <p>Add</p> <p>PSB Name</p> <p>Refresh</p> <p>Selected PSB Name</p> <p>> All PSBs</p> <p>Remove</p>	<p>Available PSB Program Types</p> <p>> All PSB Program Types</p> <p><EMPTY></p> <p>BATCH</p> <p>BMP</p> <p>Add</p> <p>PSB Program Types</p> <p>Refresh</p> <p>Selected PSB Program Types</p> <p>> All PSB Program Types</p> <p>Remove</p> <p>Remove All</p>	<p>Available Job Name</p> <p>> All Jobs</p> <p><EMPTY></p> <p>AB9TST1L</p> <p>AB9TST1P</p> <p>AB9TSTCP</p> <p>ABXIMS10</p> <p>Add</p> <p>Job Name</p> <p>Refresh</p> <p>Selected Job Name</p> <p>> All Jobs</p> <p>Remove</p>	<p>Available Database</p> <p>> All Database</p> <p><EMPTY></p> <p>ABXFP01</p> <p>ABXFPOC</p> <p>ABXTST0</p> <p>Add</p> <p>Database</p> <p>Refresh</p> <p>Selected Database</p> <p>> All Databases</p> <p>Remove</p>
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OK Cancel Help

- a. First INSERT [IMS]
- b. First UPDATE [IMS]
- c. First DELETE [IMS]
- d. Rollback [IMS]
- e. Change [SMF]
- f. Read [SMF]
- g. IMS STOP and START [IMS]
- h. User Sign-ON and OFF [IMS]
- i. PSB STOP and START [IMS]
- j. CPIC STOP and START [IMS]
- k. Database STOP and START [IMS]



Report Options:

Date Range:

From: Calendar > Mon, Dec 18, 2006 Hour: 0

To: Calendar > Thu, Jan 18, 2007 Hour: 23

> Available Dates: 2006-7-21 to 2007-1-18

Last Summary Table Update: 01-18-2007 13:09

Subsystem: RS22|T81B

Log Type: All

Activity Result: All

Set Filter...

Set time period to check for Threshold:

- Every Hour
Every Day
Every Week
Every Month

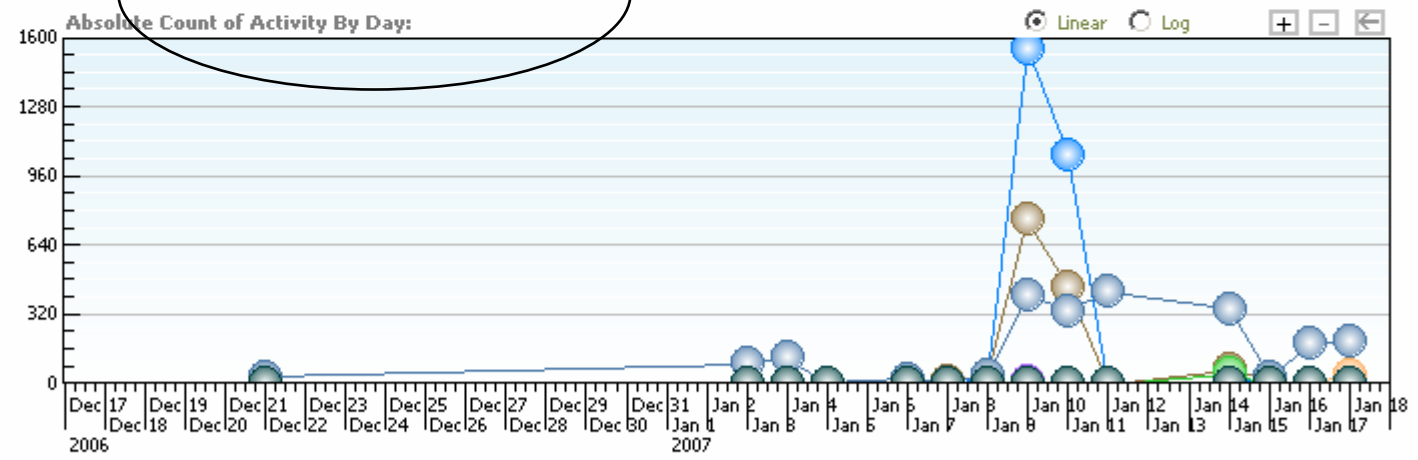
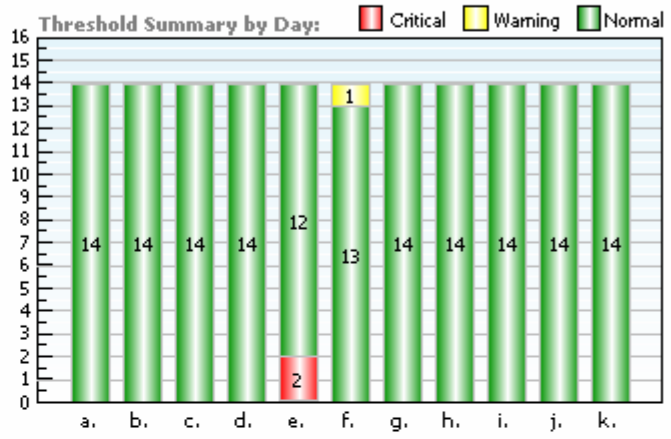
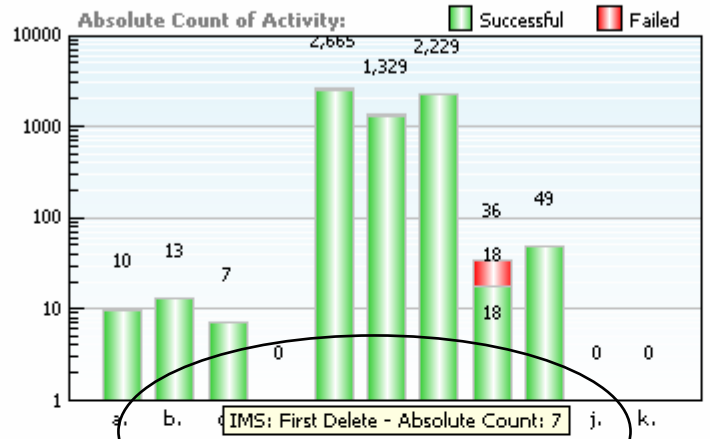
Export Data...

Refresh

Chart Options...

Display Colors...

Summary Report for Subsystem: RS22|T81B



- Checkboxes for activity types: a. First INSERT [IMS], b. First UPDATE [IMS], c. First DELETE [IMS], d. Rollback [IMS], e. Change [SMF], f. Read [SMF], g. IMS STOP and START [IMS], h. User Sign-ON and OFF [IMS], i. PSB STOP and START [IMS], j. CPIC STOP and START [IMS], k. Database STOP and START [IMS]



Report Options:

Date Range:

From: Hour:

To: Hour:

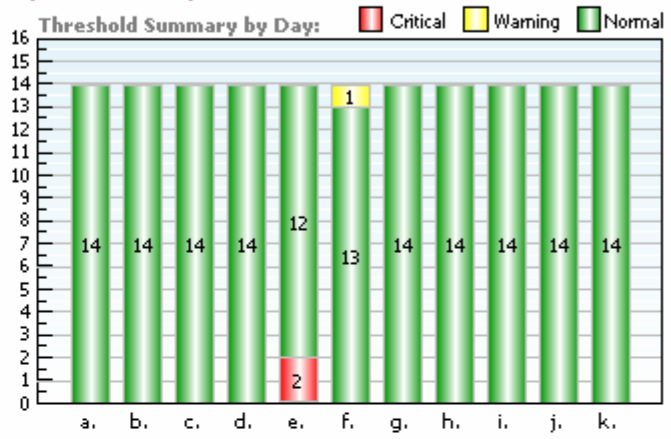
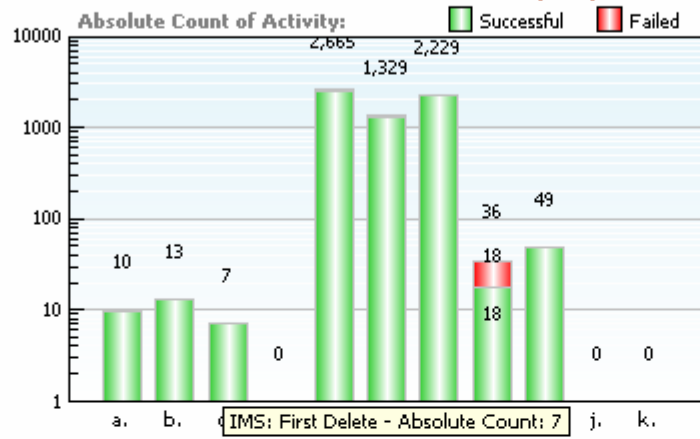
> Available Dates: 2006-7-21 to 2007-1-18

Last Summary Table Update: 01-18-2007 13:09

Subsystem:

Log Type:

Summary Report for Subsystem: RS22|T81B



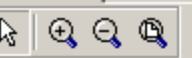
Absolute Count of Activity By Day: Linear Log

Audit Management Expert Data for users_subsystem

Option

Record Count: 7

TIME	RESULT	MVS_SYST...	EVENT_TYPE	CONTEXT_T...	DESCRIPTION	START_TIME	END_TIME	CORR_TIME	CORR_ID_I1	CORR_ID_IM...	USER_ID	D
2007-01-09 23...	000		IMS050	53	IMS DB UPDATE	2007-01-09 23...	2007-01-09 23...		3	I9QA	ABXTSTCA	ABX
2007-01-09 23...	000		IMS050	53	IMS DB UPDATE	2007-01-09 23...	2007-01-09 23...		8	I9QA	ABXTSTCA	ABX
2007-01-09 23...	000		IMS050	53	IMS DB UPDATE	2007-01-09 23...	2007-01-09 23...		16	I9QA	ABXTSTCA	ABX
2007-01-09 23...	000		IMS050	53	IMS DB UPDATE	2007-01-09 23...	2007-01-09 23...		18	I9QA	ABXTSTCA	ABX
2007-01-09 23...	000		IMS050	53	IMS DB UPDATE	2007-01-09 23...	2007-01-09 23...		26	I9QA	ABXTSTCA	ABX
2007-01-09 23...	000		IMS050	53	IMS DB UPDATE	2007-01-09 23...	2007-01-09 23...		34	I9QA	DJ1EPSBA	DJ2E
2007-01-09 23...	000		IMS050	53	IMS DB UPDATE	2007-01-09 23...	2007-01-09 23...		34	I9QA	DJ1EPSBA	DJ1E



Report Options:

Date Range:

From: Calendar >
Mon, Dec 18, 2006 Hour: 0

To: Calendar >
Thu, Jan 18, 2007 Hour: 23

> Available Dates: 2006-7-21 to 2007-1-18

Last Summary Table Update: 01-18-2007 13:09

Subsystem:
 RS22 | T81B

Log Type:
 All

Activity Result:
 All

Set Filter...

Set time period to check for Threshold:

Every Hour

Every Day

Every Week

Every Month

Export Data...

Refresh

Chart Options...

Display Colors...

Summary Report for Subsystem: RS22 | T81B

Chart Options

Select Activities to Hide in Charts:

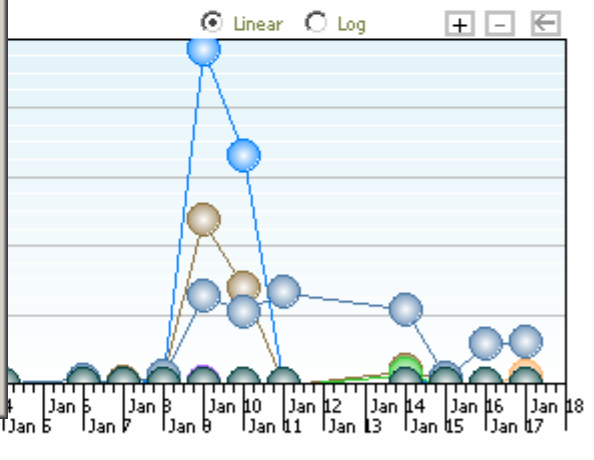
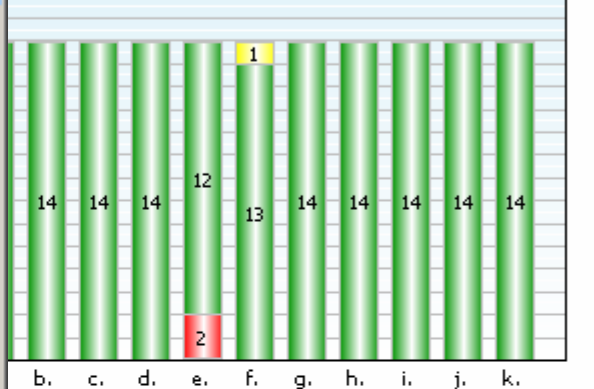
- a. First INSERT [IMS]
- b. First UPDATE [IMS]
- c. First DELETE [IMS]
- d. Rollback [IMS]
- e. Change [SMF]
- f. Read [SMF]
- g. IMS STOP and START [IMS]
- h. User Sign-ON and OFF [IMS]
- i. PSB STOP and START [IMS]
- j. CPIC STOP and START [IMS]
- k. Database STOP and START [IMS]
- Hide Threshold Chart

Set Absolute Count Chart Axis:

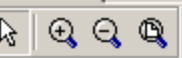
Linear Axis Logarithmic Axis

OK Cancel Edit Thresholds... Help

Hold Summary by Day: ■ Critical ■ Warning ■ Normal



- a. First INSERT [IMS]
- b. First UPDATE [IMS]
- c. First DELETE [IMS]
- d. Rollback [IMS]
- e. Change [SMF]
- f. Read [SMF]
- g. IMS STOP and START [IMS]
- h. User Sign-ON and OFF [IMS]
- i. PSB STOP and START [IMS]
- j. CPIC STOP and START [IMS]
- k. Database STOP and START [IMS]



Report Options:

Date Range:

From:

Hour:

Sat, Jan 6, 2007

To:

Hour:

Thu, Jan 18, 2007

> Available Dates: 2006-7-21 to 2007-1-18

Subsystem:

Graph Display (middle chart):

- Job
- User
- Database
- Dataset

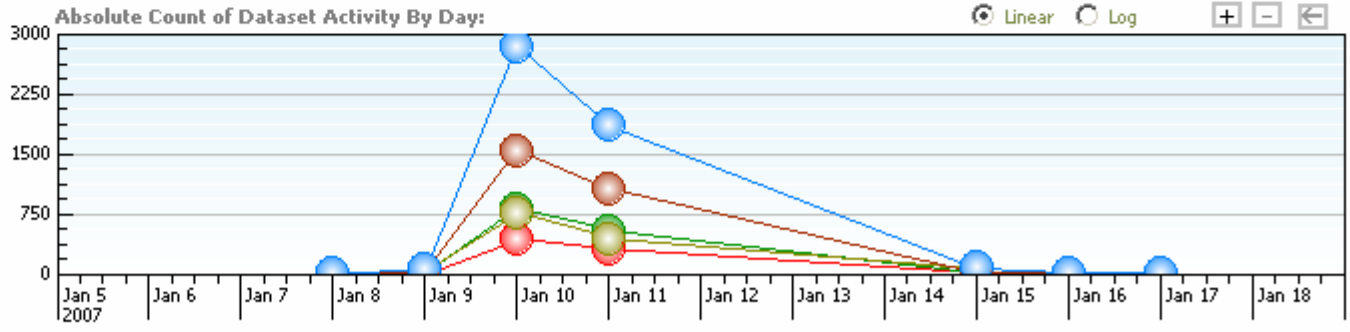
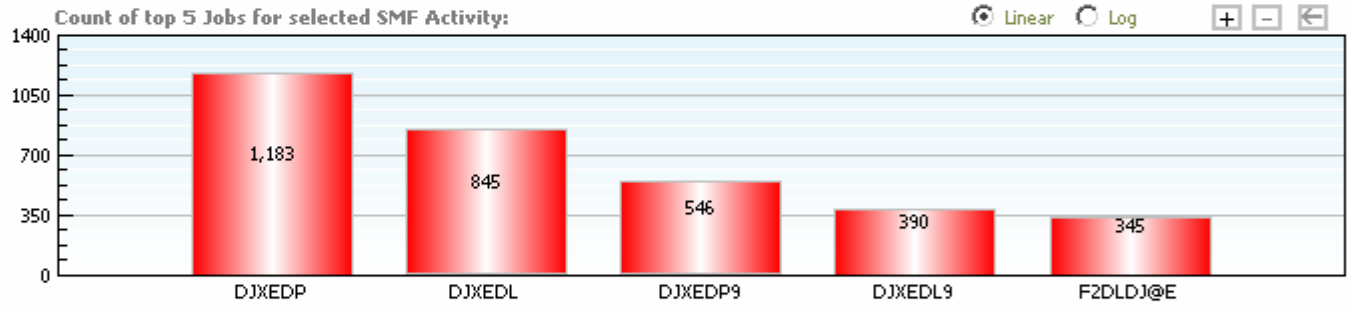
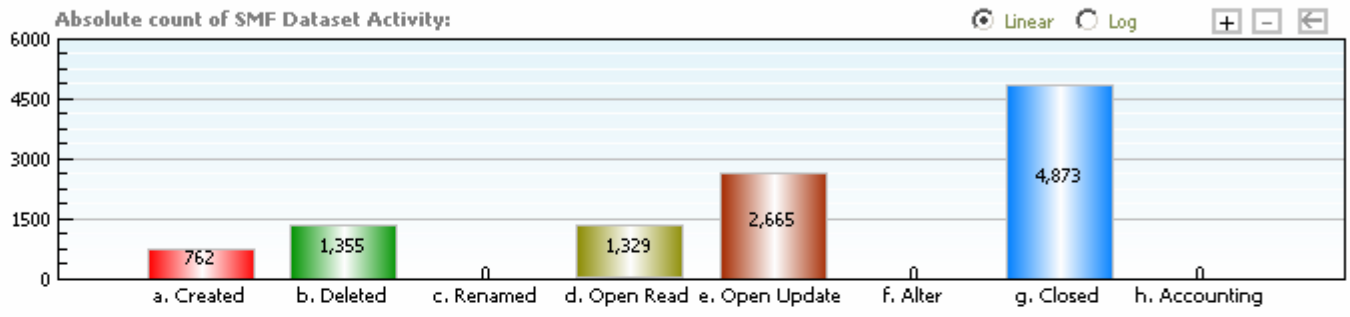
Show Top Number:

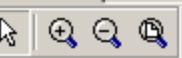
Set time period to group by:

- Every Hour
- Every Day
- Every Week
- Every Month

Summary of Datasets for Subsystem: RS22|T81B

a. b. c. d. e. f. g. h.





Report Options:

Date Range:

From: Hour:

To: Hour:

> Available Dates: 2006-7-21 to 2007-1-18

Subsystem:

Graph Display (middle chart):

Job
 User
 Database
 Dataset

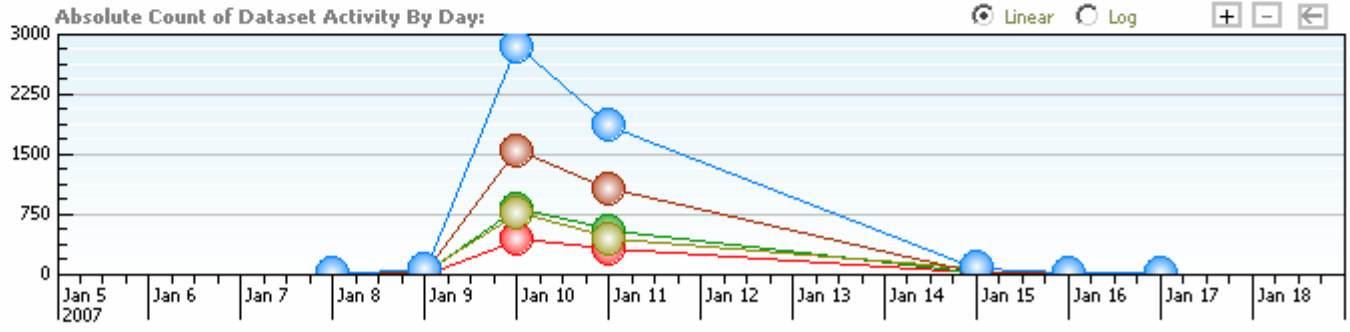
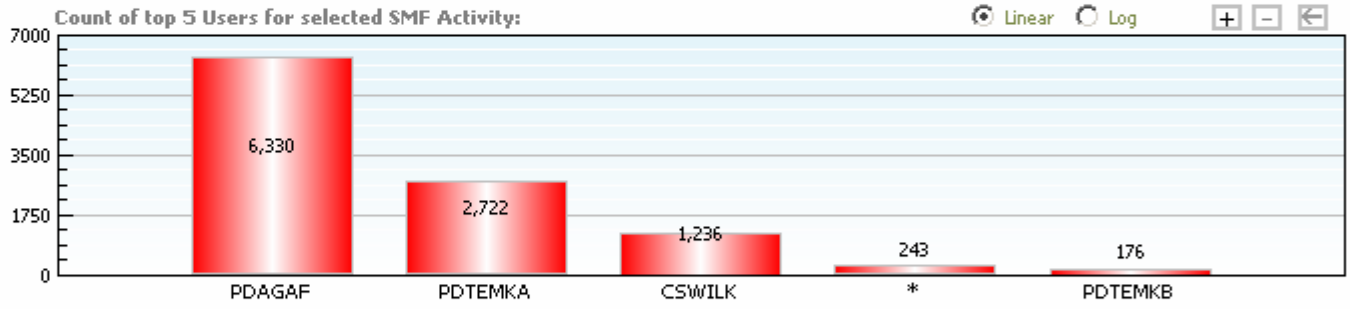
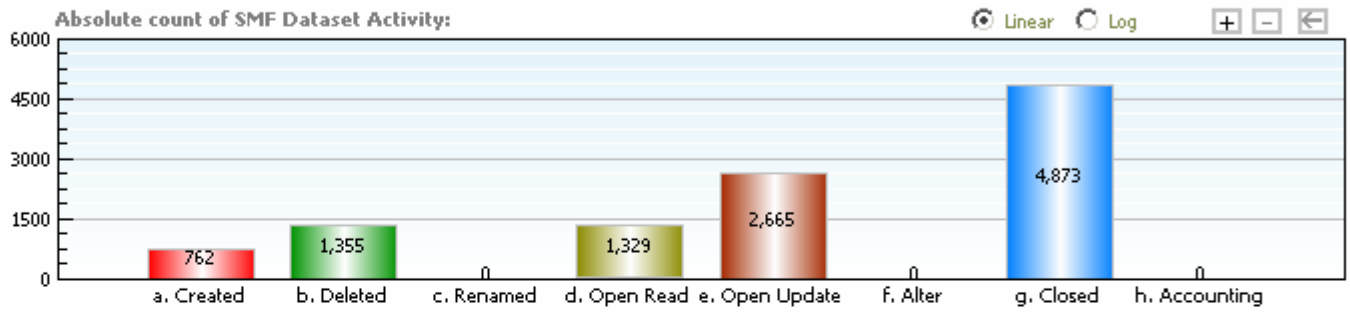
Show Top Number:

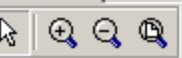
Set time period to group by:

Every Hour
 Every Day
 Every Week
 Every Month

Summary of Datasets for Subsystem: RS22|T81B

a. b. c. d. e. f. g. h.





Report Options:

Date Range:

From: Hour:

To: Hour:

> Available Dates: 2006-7-21 to 2007-1-18

Subsystem:

Graph Display (middle chart):

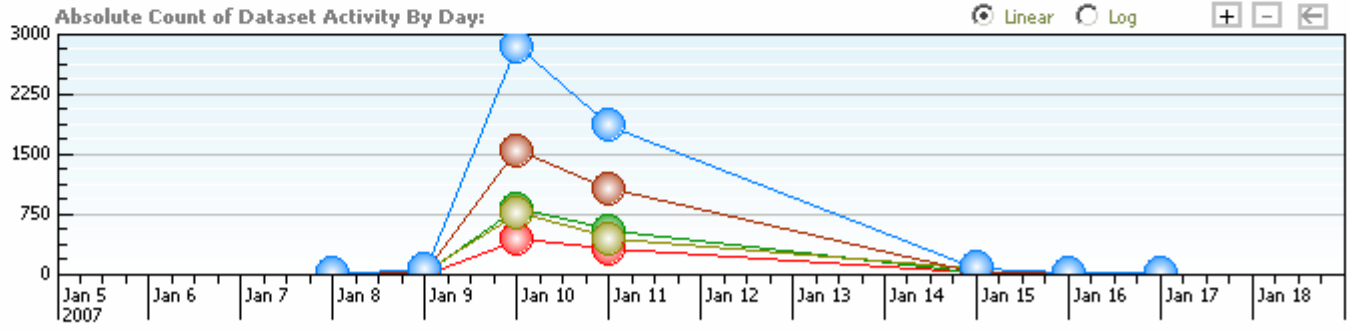
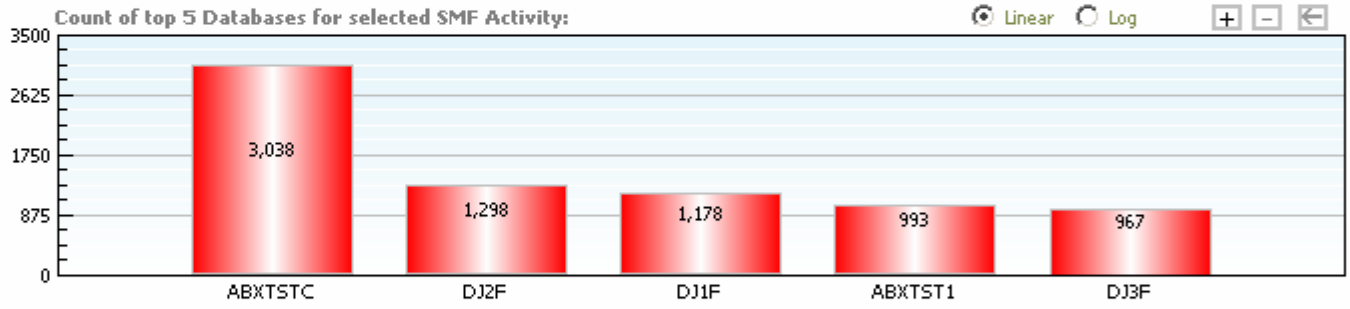
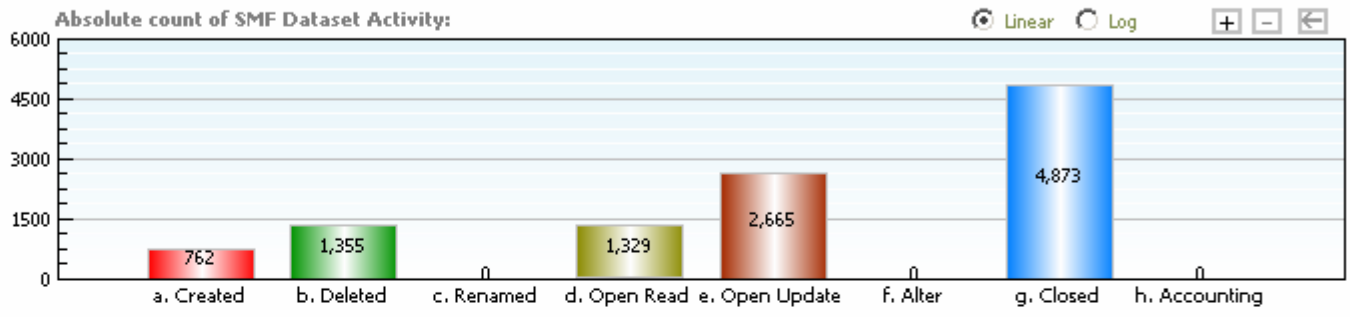
Job
 User
 Database
 Dataset

Show Top Number:

Set time period to group by:

Every Hour
 Every Day
 Every Week
 Every Month

Summary of Datasets for Subsystem: RS22|T81B





Report Options:

Date Range:

From: Hour:

To: Hour:

> Available Dates: 2006-7-21 to 2007-1-18

Subsystem:

Graph Display (middle chart):

Job

User

Database

Dataset

Show Top Number:

Set time period to group by:

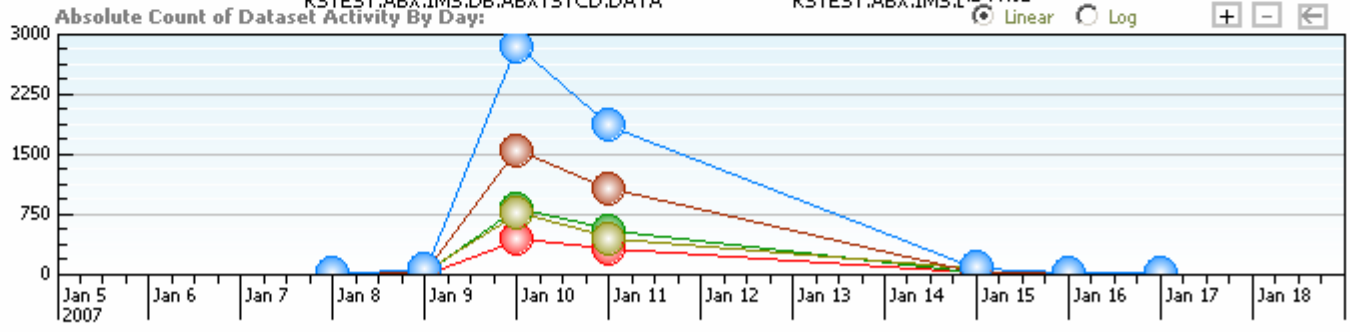
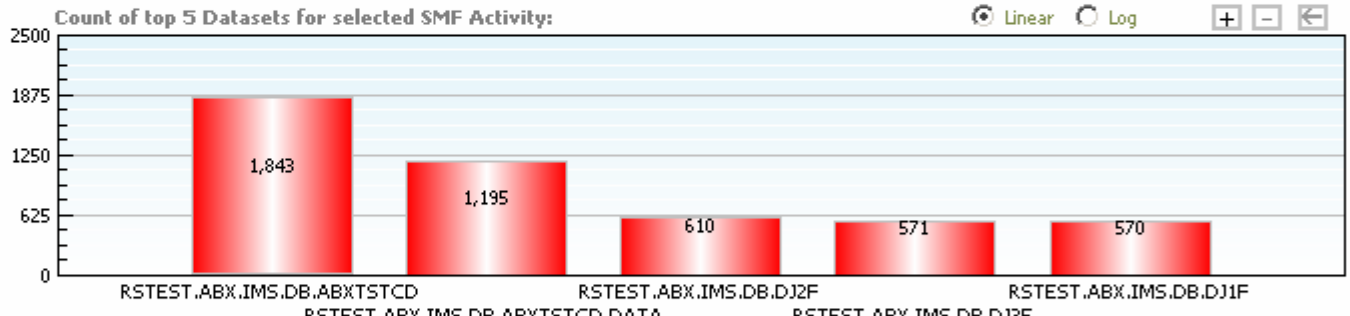
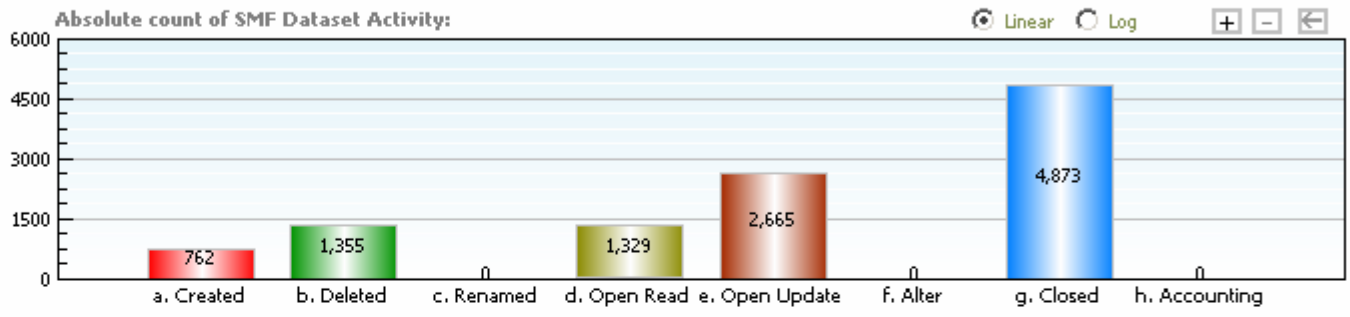
Every Hour

Every Day

Every Week

Every Month

Summary of Datasets for Subsystem: RS22|T81B





Report Options:

Date Range:

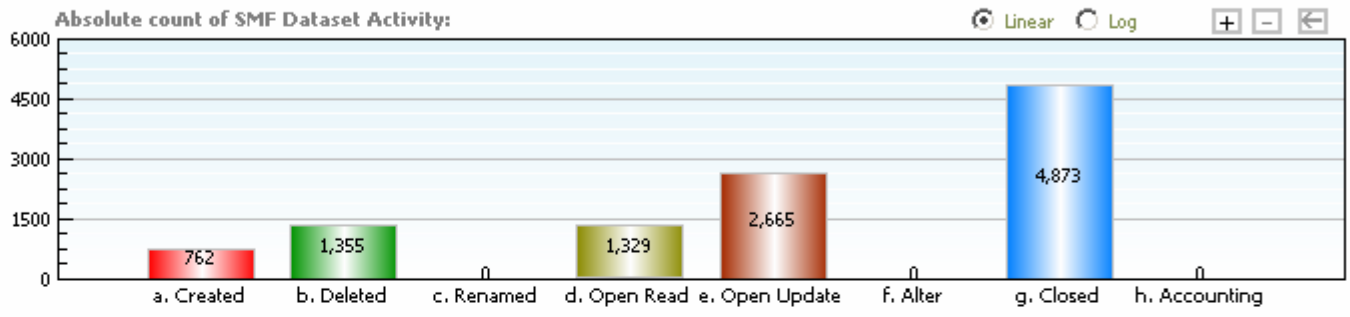
From: Sat, Jan 6, 2007 Hour:

To: Thu, Jan 18, 2007 Hour:

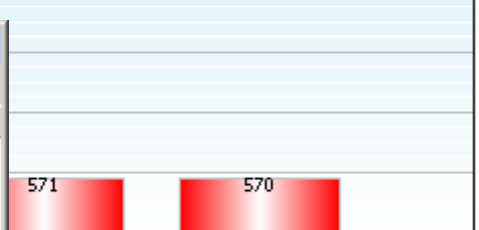
> Available Dates: 2006-7-21 to 2007-1-18

Subsystem:

Summary of Datasets for Subsystem: RS22|T81B



Count of top 5 Datasets for selected SMF Activity:



Graph Display

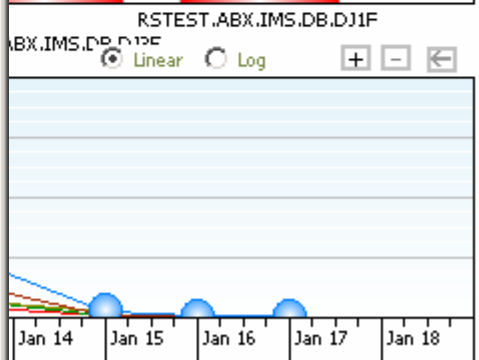
Audit Management Expert Data for users_datassets

Option

Record Count: 1329

ROW	TIME	RESULT	MVS_SYST...	EVENT_TYPE	CONTEXT_T...	DESCRIPTION	START_TIM
1	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
2	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
3	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
4	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
5	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
6	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
7	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
8	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
9	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
10	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
11	2007-01-08 13...		RS22	SMF062		3 SMF: Open Read	
12	2007-01-09 23...		RS22	SMF062		3 SMF: Open Read	

Buttons: Copy, Export, Cancel, Close





IBM IMS Audit Management Expert for z/OS

Using IMS Audit Management Expert Administration UI

IMS Audit Management Expert Administration barry@IMS-I81A on R501

File Edit Settings Help

Users Groups IMSs Agents Collection Profiles Collections Authorizations Repository

User Name	Description	Connect to Audit Management Expert	Create Users	Create Groups	Create Profiles	Edit Profiles	Assign Permis
adhadmin	Audit Man...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
adhlimited	Audit Man...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
aeadmin	aeadmin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
barry	Barry Dav...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

IMS Editor

IMS name
Agent
RECONS
Summary

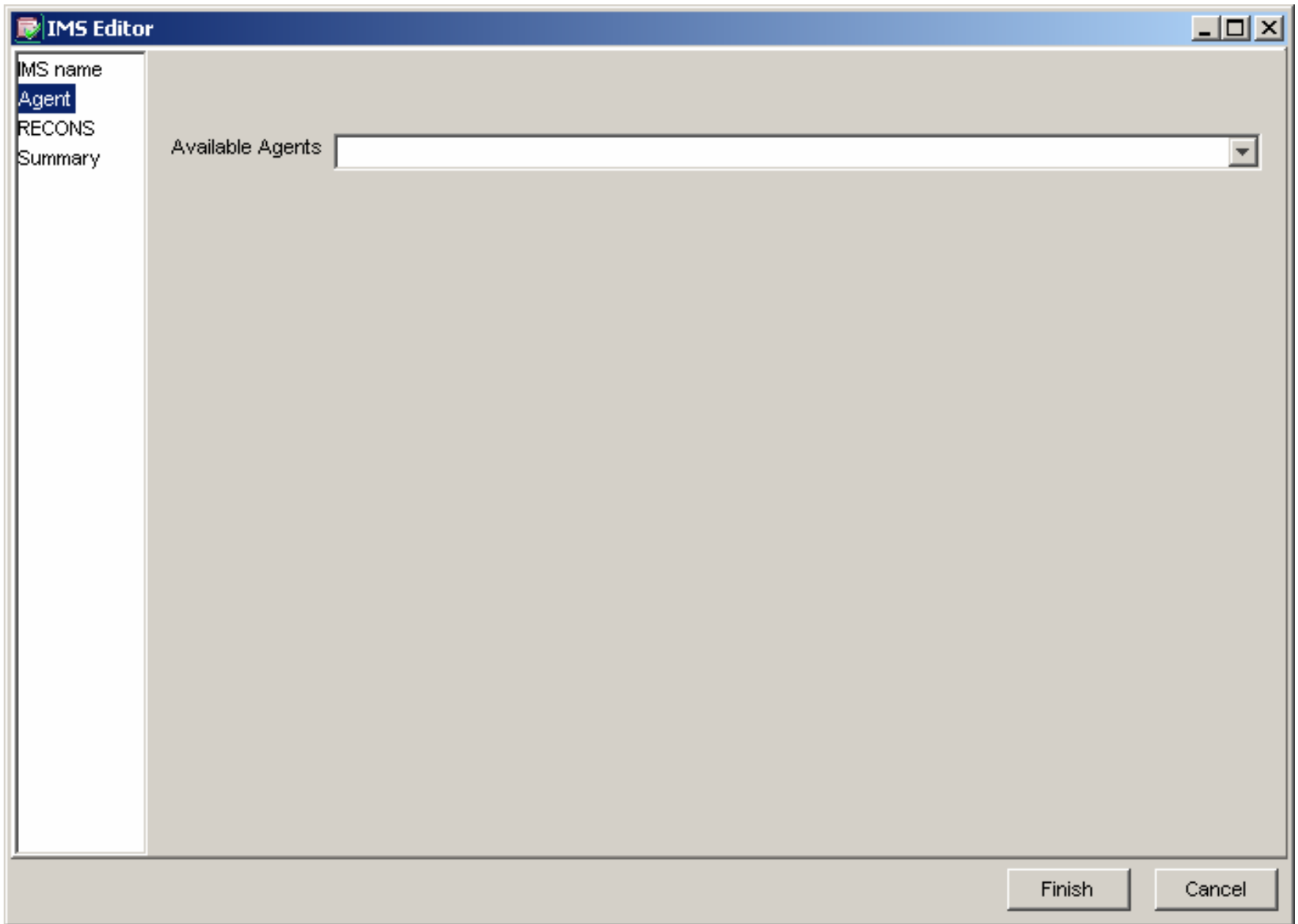
IMS entry name

Description

IMS Version

IMS databases can be specified for auditing. Create the IMS entry, specify the name, IMS Version, RESLIB, RECONS, and Agent associated with the IMS database. An optional description or comment can also be provided.

Finish Cancel



IMS Editor [minimize] [maximize] [close]

IMS name
Agent
RECONS
Summary

IMS RESLIB data set name

RECON1 data set name

RECON2 data set name

RECON3 data set name

Finish Cancel

Collection Profile Editor

DSTCollProfile02

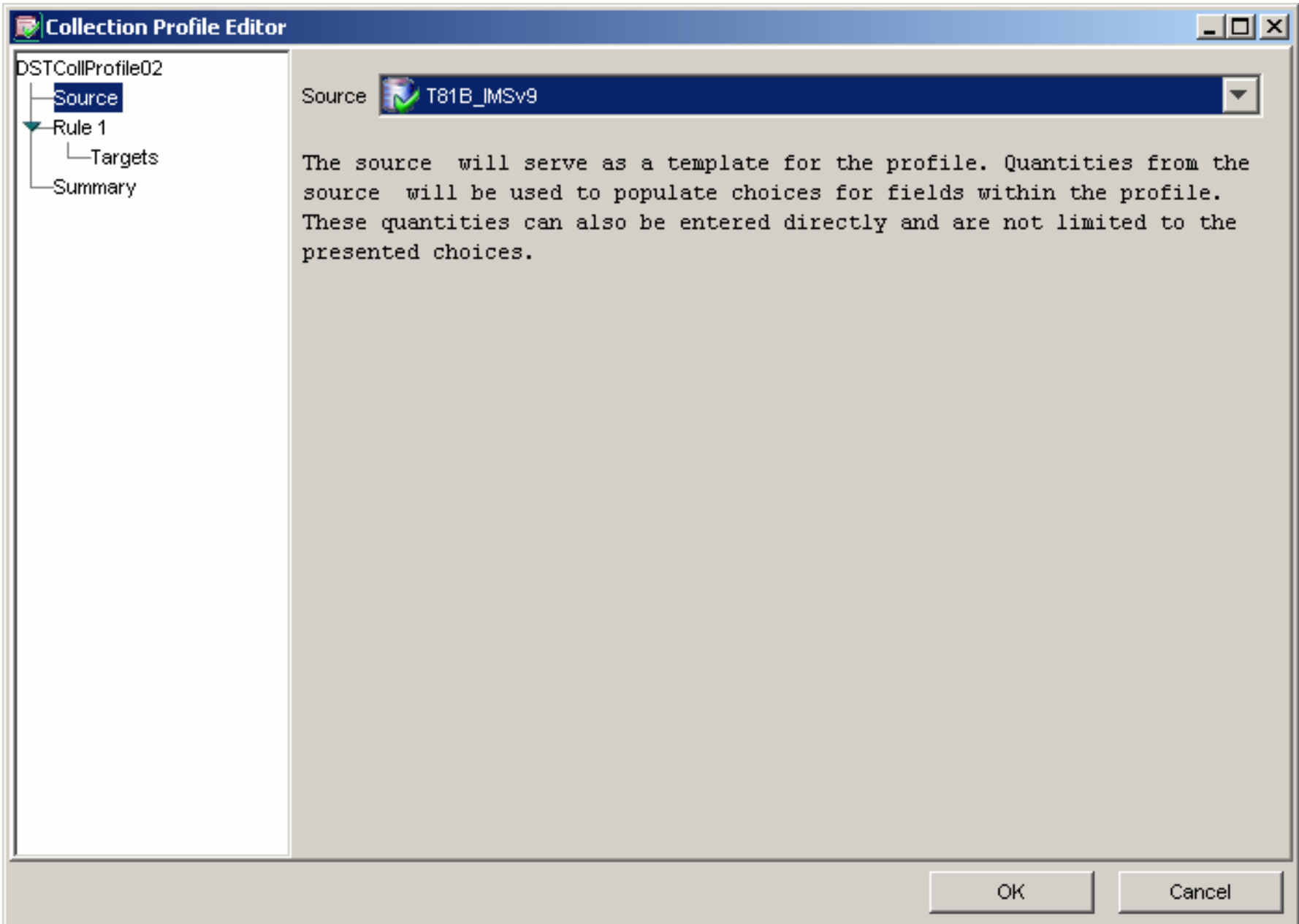
- Source
- Rule 1
 - Targets
- Summary

Profile Name: DSTCollProfile02

Description: test LE/DST/PK36010-clone

Provide a name and optional description for this collection profile. The name must be unique to this profile. Later steps provide the opportunity to specify what is to be audited by this collection profile.

OK Cancel



Collection Profile Editor

DSTCollProfile02

- Source
- Rule 1
 - Targets**
 - Summary

Databases

Target Filter

Name *

Known targets

Type	Name
<input type="checkbox"/>	ABXTSTC

Other targets

Type Name

Audited targets

Type	Name
<input type="checkbox"/>	ABXFP01
<input type="checkbox"/>	ABXFP0C
<input type="checkbox"/>	ABXTST0
<input type="checkbox"/>	ABXTST1
<input type="checkbox"/>	ABXTST2
<input type="checkbox"/>	ABXTST3
<input type="checkbox"/>	ABXTST4
<input type="checkbox"/>	CBRIALL
<input type="checkbox"/>	CBRIPBF
<input type="checkbox"/>	CBRIPDB
<input type="checkbox"/>	CBRIPLA
<input type="checkbox"/>	CBRIPLH
<input type="checkbox"/>	CBRIPLL
<input type="checkbox"/>	CBRIPSS
<input type="checkbox"/>	DJ1E
<input type="checkbox"/>	DJ1F
<input type="checkbox"/>	DJ2E
<input type="checkbox"/>	DJ2F
<input type="checkbox"/>	DJ3E
<input type="checkbox"/>	DJ3F
<input type="checkbox"/>	HDBAC01
<input type="checkbox"/>	HDBAC02

Add users to Authorizations

IMS Audit Management Expert Administration barry@IMS-I81A on RS01

File Edit Settings Help

Users Groups IMSs Agents Collection Profiles Collections **Authorizations** Repository

User or Group	Applies to	Status	Since
barry	K8A1	Active	2007-01-15 08:53:50
limited	K8A1	Active	2007-01-15 08:52:14
aueadmin	K8A1	Active	2007-01-15 08:50:59
admin	K8A1	Active	2007-01-15 08:51:18

Add Edit Clone Delete Refresh



IBM IMS Audit Management Expert for z/OS

Questions

