



DB2 Audit Management Expert for z/OS

DB2 Audit Management Expert for z/OS

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Database Security

- **Database security is no longer something that *should* be implemented,**
 - but something that every serious company ***must have***, to bring a certain level of reassurance to their clients.
 - and it is the **LAW**.
- **Any business should know who is reading or changing their valuable information stored in their databases.**
 - Companies should have a log of actions performed inside the DB2 database, for later tracking and problem solving.
 - The DB2 audit trace record is a unique source of information
 - can be retroactively queried if fraud is suspected
 - if individuals wish to know how their information was used

For the DBA

- **Management said we have to audit access to tables with sensitive data, so get with the auditors and take care of it!**
 - Which Audit Trace classes do we start?
 - What audit information do we want?
 - To what destination?
 - Which tables need 'AUDIT ALL' ?
 - How many audit trace records will we produce?
 - Do we run the Audit Trace all the time?
 - What is the overhead?
 - How do we get reports from the Audit Trace data?
 - What other sources of audit information is there?
 - How do I set up enough reports to keep the Auditors busy?
 - How do we get the Auditors to do it?
 - How much of my time will I have to spend with the Auditors?

Privileged user auditing and monitoring

- **One of the biggest needs for database monitoring is privileged user (i.e. DBA) auditing?**
- **In other words, who watches the watchers?**
- **Super users (SYSADM, DBADM):**
 - Can do anything to any data.
 - Database auditing can be used to verify the integrity and accuracy of the DBA group.

Audit Management Expert Overview

- **Collects and correlates information from DB2 resources.**
 - Audit Trace Data, Log Analysis data
- **Provides a central resource for auditors to produce a coherent view of DB2 access information.**
- **Auditors will be able to Access:**
 - SELECT, INSERT, UPDATE, and DELETE activity by user or by object.
 - CREATE, ALTER, and DROP operations against an audited object
 - Utility access to an audited object
 - DB2 commands entered
 - Assignment or modification of an authorization ID
- Provides auditors with flexible options for examining the data in the audit repository.

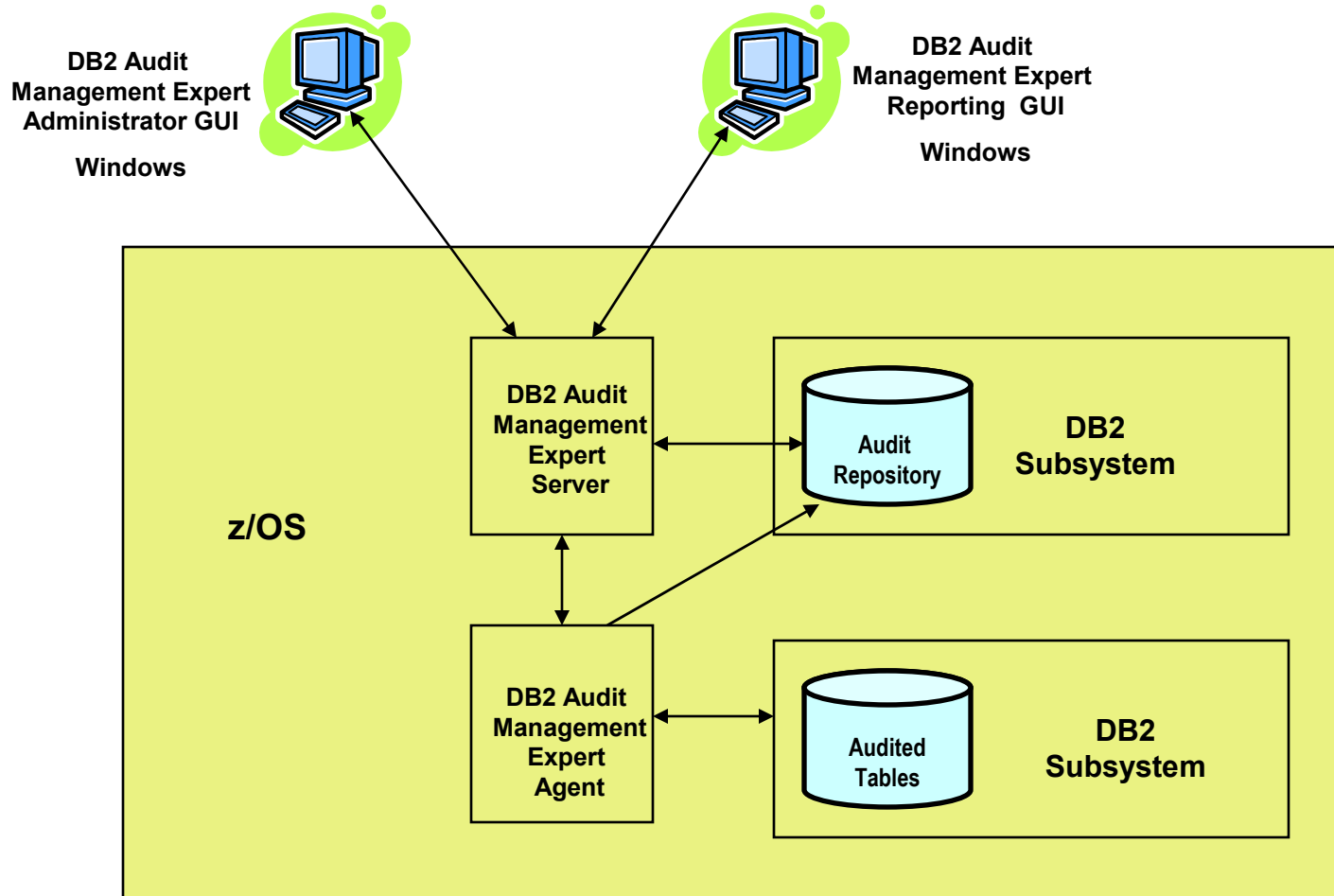
DB2 Audit Management Expert Components

- **Audit server**
 - Started task or batch job
 - central control point for an Audit Management Expert network
 - single audit server can support data collection from multiple agents on multiple z/OS systems

- **Agent**
 - Started Task or batch job
 - responsible for communications in an Audit Management Expert environment
 - acts as a "container" to run the various collectors
 - One per DB2 to Audit

- **CLIENT User interfaces**
 - Audit Management Expert Reporter
 - Audit Management Expert Administration
 - Windows

DB2 Audit Management Expert Architecture



Data Collection Capabilities

- **Data collection can be filtered based on any combination of:**
 - DB2 objects
 - DB2 user IDs
 - Applications connecting to DB2
 - Time
- **Collection Profiles can be shared**
 - Exported/Imported using XML files to other AME servers,
 - or assigned to another DB2 system within the same AME server
- **Allows for filters created for common tables (such as SAP) to be created once and then used at other DB2 servers where the same application tables are installed**

Comprehensive Reporting Facilities

- **Robust reporting options enable auditors to view and report on data in a variety of ways**
- **Auditors can view audit data from several perspectives:**
 - Overview – View all of the subsystems currently being monitored
 - Subsystem - View activity for a selected subsystem
 - Detail - View details for a particular type of activity for a selected subsystem
 - Viewing filters by User, Object, Plan
 - Graphical or Tabular
- **Thresholds can be set to flag data that may need further investigation**
- **Batch Reporting**

DB2 Audit Management Expert Profiles

- **Profiles are created / maintained via Administration UI**
 - Collection Profile
 - records the details for audit data that is stored within an Audit Management Expert
 - Authorization Profile
 - describe which audit data, once collected, can be viewed by associated users or groups.
 - User Profile
 - contain information specific to an individual Audit Management Expert user such as: the user type, configurable privileges, and associated user groups.

Security

- Supporting internal and external auditors in collection and reporting of DB2 audit data
- **Does not require auditors to be DB2 defined users within the monitored DB2 system(s)**
- **Does not require the auditors to log on to the operating system where the monitored system is running**
- **Does not require extensive interaction between the auditor and the system support personnel (DBA/Sys admin)**
- **Auditor will not be able to directly manipulate any DB2 resources**
- Provide complete visibility of all auditable objects to an administrator level user
- Provide controls for limiting visibility to auditors of auditable objects

At A Glance

■ Audit Management Expert

- Centralized auditing tools that can bring together information from different sources into a correlated, coherent view of the system
- Enable auditors to collect, view, analyze, and report on data via the audit repository
- Enable administrators to define customized filters for the collection of audit data
 - By data of interest – not by audit trace classes
- Provides an administration UI
 - allows product administrators to easily define
 - users and groups, assign privileges, define data collection policies
- Provides an auditor-friendly reporting UI
 - Many user friendly options for examining data in the repository
 - Allows detailed analysis and visualization of data collected by the DB2 auditing tool
 - Auditors can export audit data into other applications such as Excel®.
- Product provides Batch reporting
- Can perform Log Analysis to view changed data values



DB2 Audit Management Expert for z/OS

DB2 Audit Management Expert Admin Client

DB2 Audit Management Expert Reporter

File Settings Help

Log

- D81A
- ◆ D81B
- D84C
- D8A
- Q71A
- Q7A2
- Q7C2
- RS1A

Define Servers... Ctrl+D

2 AUDIT MANAGEMENT EXPERT

User Name:

Password:

Login Disconnect Help

Connected to D81B

Audit Management Expert Server Definitions

Description	Server Host	Server Port
D81A	RS23	52521
D81B	RS23	33090
D84C	RS25	27104
D8A	RS22	33082
Q71A	RS25	27100
Q7A2	RS25	27102
Q7C2	RS22	27107
RS1A	RS22	33088

Add Edit Delete OK Cancel

Audit Management Expert _ □ X

File Edit Settings Help

Users Groups Agents Collection Profiles Collections Authorizations Repository

Username	Description	Connect to ...	Create Users	Create Grou...	Create Profil...	Edit Profiles	Assign Per ...	Assign Con...	A
adhadmin	Audit Expert ...	<input checked="" type="checkbox"/>	<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 Expert ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SLUser1	Susan Super...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
linux	bahvalov	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
pddavi	Barry Davis ...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Add Edit Clone Delete Refresh

Audit Management Expert _ □ X

File Edit Settings Help

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

Profile Name	Description	Last Modified	Rules	Active Collections
Test One Profile	My test profile	2006-04-18 22:25:21	1	0
SLCollectionProfile1	Susan Collection 1	2006-04-18 23:12:33	1	0
SLCollectionProfile2	test for ADH-106	2006-04-19 12:15:10	1	0
SLCollectionProfile3	CQM Wild Run	2006-04-26 09:18:42	1	1
SLCollectionProfile2a		2006-04-20 16:20:00	2	0
SLCollectionProfileNoDes...	clone test	2006-04-20 15:38:31	1	0
Barry Profile	explore profiles	2006-04-26 11:39:55	2	0

Collection Profile Editor

i_profile2

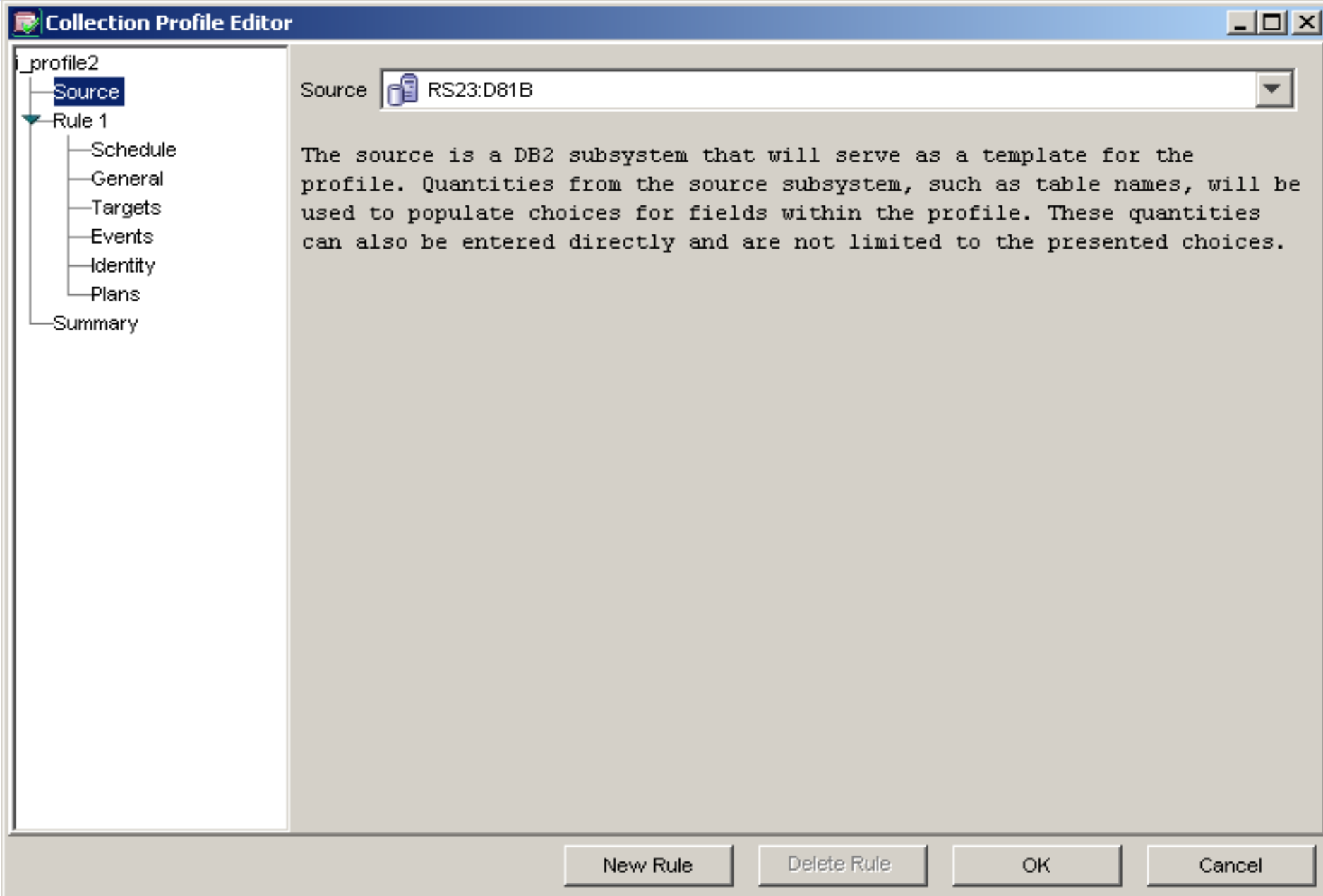
- Source
- ▼ Rule 1
 - Schedule
 - General
 - Targets
 - Events
 - Identity
 - Plans
- Summary

Profile Name

Description

Provide a name and optional description for this collection profile. Later steps provide for a schedule of when this profile will collect data and what database objects and the events related to those objects that will be audited. Additionally, specific users and applications can be included or excluded from the collection of audit data.

New Rule Delete Rule OK Cancel



Collection Profile Editor

i_profile2

- Source
- Rule 1
 - Schedule**
 - General
 - Targets
 - Events
 - Identity
 - Plans
- Summary

Always

Scheduled

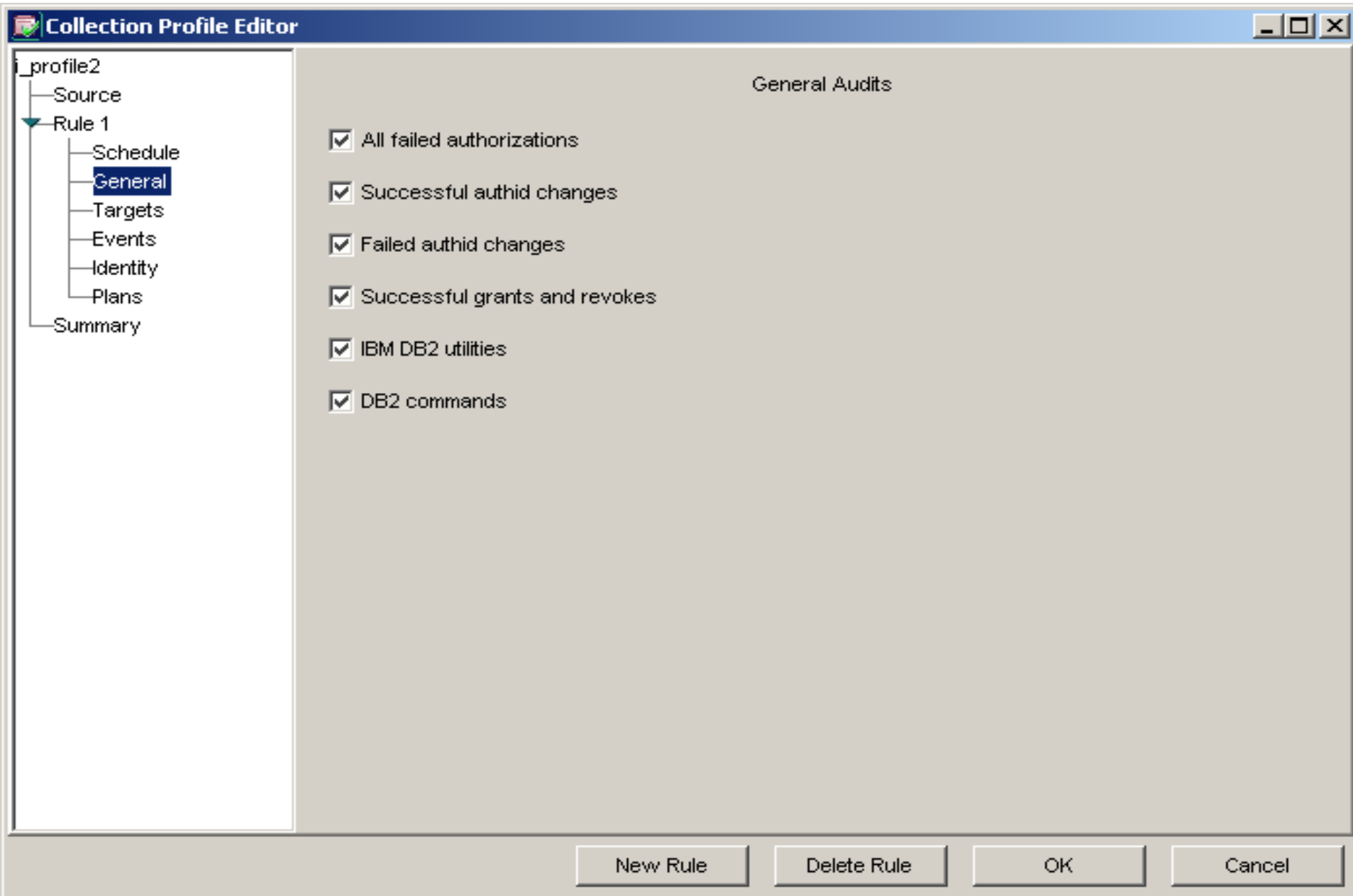
Start Time

Month Date Weekday Hour

End Time

Month Date Weekday Hour

New Rule Delete Rule OK Cancel



Collection Profile Editor

i_profile2

- Source
- Rule 1
 - Schedule
 - General
 - Targets**
 - Events
 - Identity
 - Plans
- Summary

Tables

Target Filter

Schema: %

Name: %

Refresh

Audited targets

Type	Schema	Name
	PDWDBX4	TABLE1
	PDWDBX4	TABLE2
	PDWDBX4	TABLE3
	PDWDBX4	TABLE4

Known targets

Add

Type	Schema	Name	Status
	ABPGG99	ABPOBJ...	Unaudited
	ABPTST...	TST01TB1	Unaudited
	ABPTST...	TST01TB2	Unaudited
	ADB	ADBCH...	Unaudited
	ADB	ADBPART	Unaudited
	ADHSCH1	ADH1T1	Audited
	ADHSCH1	ADH1T2	Audited
	ADHSCH1	ADH1T3	Audited
	ADHSCH1	ART_EM...	Audited
	ADHSCH2	ADH1T1	Unaudited

Remove

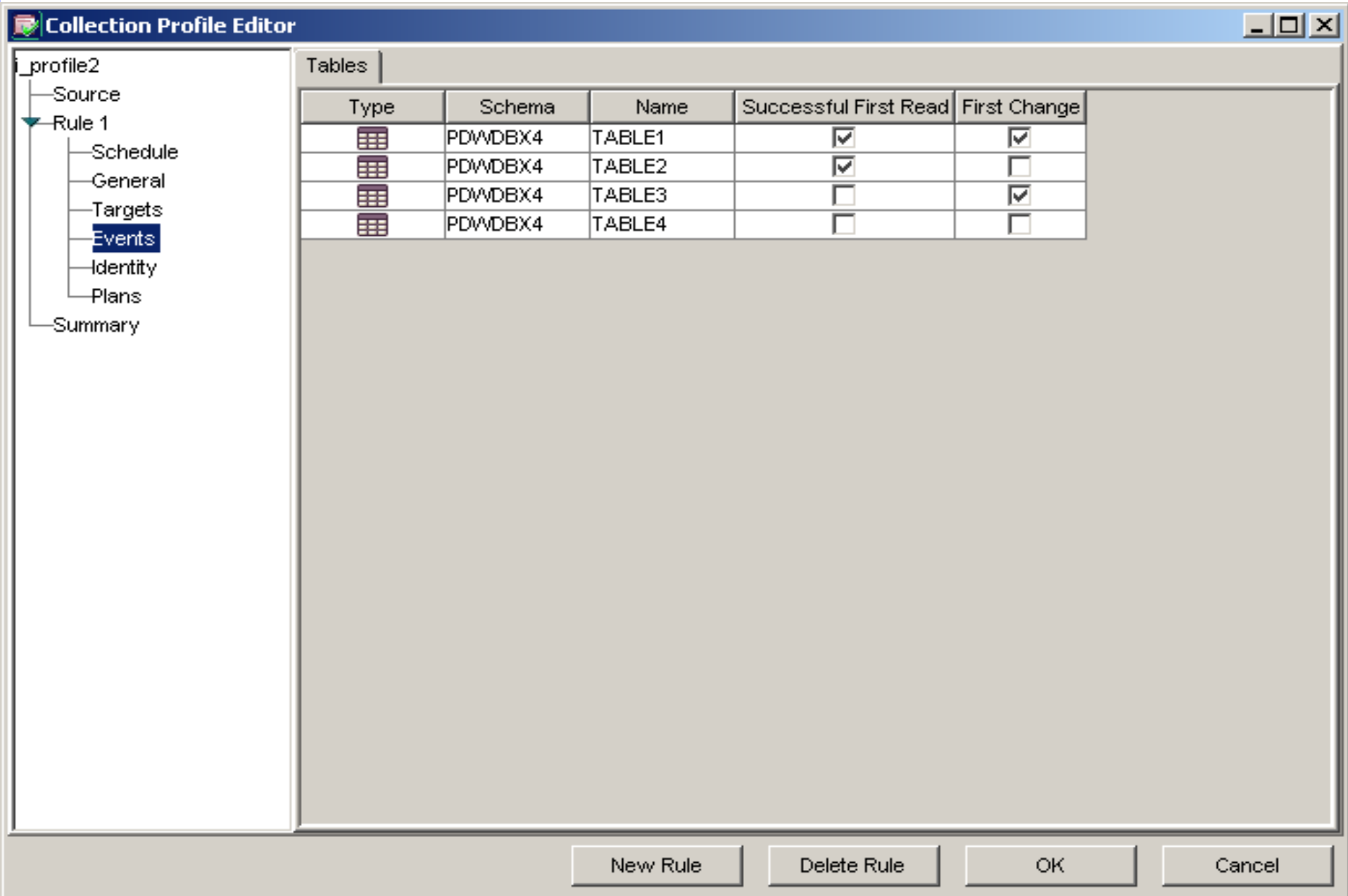
Remove All

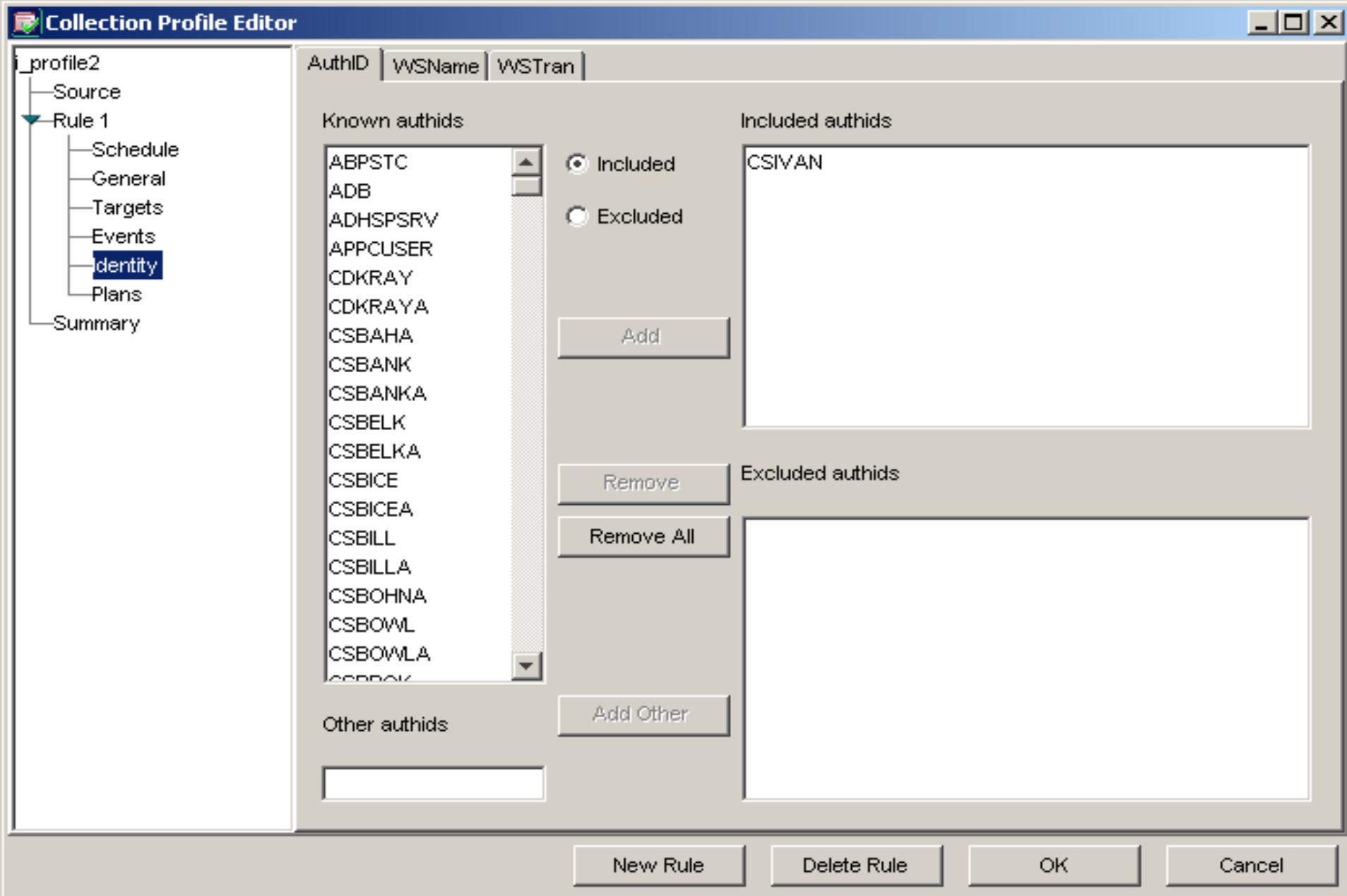
Other targets

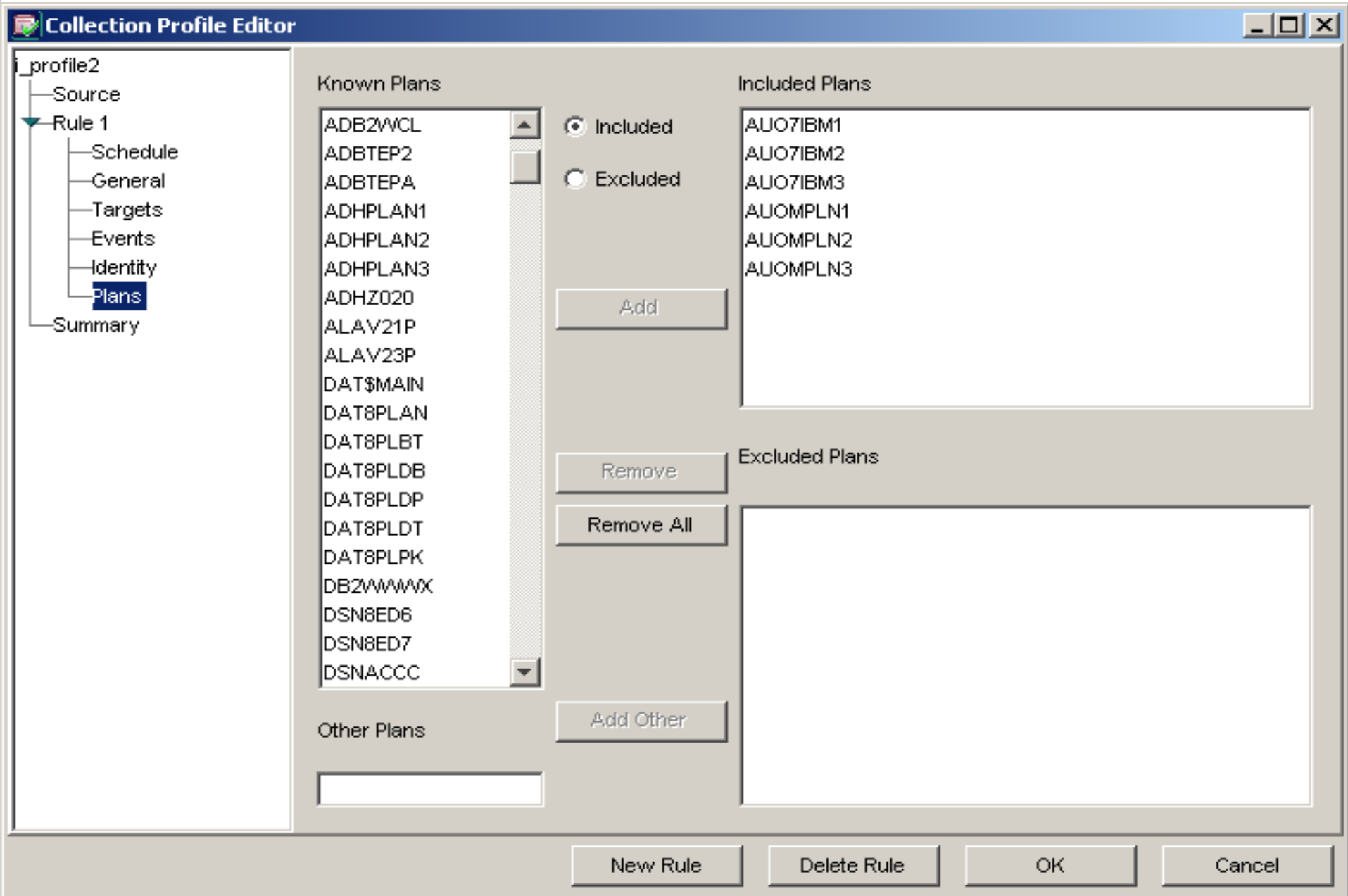
Type Schema Name

Add Other

New Rule Delete Rule OK Cancel







- profile2
 - Source
 - Rule 1
 - Schedule
 - General
 - Targets
 - Events
 - Identity
 - Plans
 - Summary

Profile Summary

i_profile2 for z/OS

Rules

Rule 1

Schedule

Always active.

General Audits

- All failed authorizations
- Successful authid changes
- Failed authid changes
- Successful grants and revokes
- IBM DB2 utilities
- DB2 commands

Audited Tables

Schema	Name	Audit successful first read	Audit first change
PDWDBX4	TABLE1	true	true
PDWDBX4	TABLE2	true	false
PDWDBX4	TABLE3	false	true
PDWDBX4	TABLE4	false	false

Included AuthIDs

- CSIVAN

Included Plans

- AUO7IBM1
- AUO7IBM2
- AUO7IBM3
- AUOMPLN1
- AUOMPLN2
- AUOMPLN3

New Rule

Delete Rule

OK

Cancel

DB2 Audit Management Expert Administration adhadmin@D81B

File Edit Settings Help

Users Groups Agents Collection Profiles Collections Authorizations Repository

Profile Name	Applies to	Status	Since
SLCollProfileSMPE10A	RS23:D81B	Inactive	2006-07-19 00:53:38
SLCollProfileADH-1158	RS23:D81B	Inactive	2006-07-14 11:37:52
OT_profile	RS23:D81B	Inactive	2006-07-21 04:28:48
i_profile3	RS23:D81B	Active	2006-07-21 06:19:40
			2006-07-20 01:14:49
			2006-07-21 01:55:29

Collection Editor

Collections associate collection profiles with specific DB2 subsystems. The profile name specifies the collection profile. The status indicates whether the association is active or inactive. The applies to field specifies the DB2 subsystem to which the named collection profile is to be applied.

Profile Name:

Status:

- Active
- Active
- Inactive

Applies to:

OK Cancel



DB2 Audit Management Expert for z/OS

DB2 Audit Management Expert Report Client

DB2 Audit Management Expert Reporter

File Settings Help

Log

- D81A
- ◆ D81B
- D84C
- D8A
- Q71A
- Q7A2
- Q7C2
- RS1A

Define Servers... Ctrl+D

AUDIT MANAGEMENT EXPERT

User Name:

Password:

Audit Management Expert Server Definitions

Description	Server Host	Server Port
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D8A	RS22	33082
Q71A	RS25	27100
Q7A2	RS25	27102
Q7C2	RS22	27107
RS1A	RS22	33088

Add Edit Delete OK Cancel

Login Disconnect Help

Connected to D81B

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

IBM **DB2 SYSTEMS** OBJECTS DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

> Overview Subsystem Detail < Back Help

Report Options:

Date Range:

From: Calendar >
 Hour:

To: Calendar >
 Hour:

Last Summary Table Update: 07-21-2006 11:56

Selected Users:

> All Users Edit...

Activity Type:

All

Set time period to check for Threshold:

Every Hour

Every Day

Every Week

Every Month

Refresh

Edit Thresholds... Collection History

a. Access Attempts b. First Read of Audited Object c. First Change of Audited Object

d. CREATE, ALTER and DROP e. GRANT and REVOKE f. Assignment or change of authorization ID

g. IBM Utility Access h. DB2 Commands i. Other Authorization Failures

Subsystem: RS23:D81B

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

> Available Dates: 2006-7-13 to 2006-7-21

Critical	Warning	Normal

Users_Overview

0.2 3.55 100%

Connected to D81B Reporting

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

DB2 SYSTEMS OBJECTS DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

> Overview Subsystem Detail < Back Help

Report Options:

Date Range:

From: Mon, Jul 17, 2006 Hour: 0

To: Fri, Jul 21, 2006 Hour: 23

Last Summary Table Update: 07-21-2006 11:56

Selected Users:

> All Users

Activity Type:

All

Set time period to check for Threshold:

Every Hour

Every Day

Every Week

Every Month

a. Access Attempts b. First Read of Audited Object c. First Change of Audited Object

d. CREATE, ALTER and DROP e. GRANT and REVOKE f. Assignment or change of authorization ID

g. IBM Utility Access h. DB2 Commands i. Other Authorization Failures

Critical **Warning** **Normal**

Subsystem: RS23:D81B

a. b. c.

d. e. f.

g. h. i.

> A

Set Threshold Criteria For Reports

Activity	Normal If Less Than:	Critical If Greater Than:
a. Access Attempts	500	1,000
b. First Read of Audited Object	500	1,000
c. First Change of Audited Object	500	1,000
d. CREATE,ALTER and DROP	500	1,000
e. Explicit GRANT and REVOKE	500	1,000
f. Assignment or change of authorization ID	500	1,000
g. IBM Utility Access	500	1,000
h. DB2 Commands	500	1,000
i. Other Authorization Failures	500	1,000

OK Cancel Help

Users_Overview

Connected to D81B Reporting

0.2 3.55 100%

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

IBM **DB2 SYSTEMS** DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

> Collection History < Back Help

Report Options:

Date Range:

From: Hour:

Mon, Jul 17, 2006

To: Hour:

Fri, Jul 21, 2006

> Available Dates: 2006-7-13 to 2006-7-21

Subsystem:

- > All Subsystems
- RS23:D81B

Collection Status Timeline for: > All Subsystems

Collecting

Not Collecting

Down

Jul 17 2006 Jul 18 Jul 19 Jul 20 Jul 21

Users_Overview_History

Connected to D81B Reporting -0.4 3.56 100%

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

DB2 SYSTEMS **OBJECTS** **DB2 AUDIT MANAGEMENT EXPERT** Welcome adhadmin

Overview > **Subsystem** Detail Choose from: Help < Back

Report Options:

Date Range:

From: Hour:

To: Hour:

> Available Dates: 2006-6-1 to 2006-6-9

Last Summary Table Update: 06-10-2006 17:40

Subsystem:

Users:

- > All Users
- CSBAHA
- CSLIVI
- CSLIVIA
- CSLIVIA

Activity Result:

Set time period to check for Threshold:

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

Summary Report for Subsystem: RS23:D81A and user: > All Users

Absolute Count of Activity: ■ Successful ■ Failed

Category	Successful	Failed
a.	0	0
b.	2,018	0
c.	6,000	0
d.	214	0
e.	17	0
f.	91	0
g.	1	0
h.	5,051	0
i.	0	0

Threshold Summary by Day: ■ Critical ■ Warning ■ Normal

Category	Critical	Warning	Normal
a.	0	0	4
b.	1	0	3
c.	2	1	1
d.	0	0	4
e.	0	0	4
f.	0	0	4
g.	0	0	4
h.	2	0	2
i.	0	0	4

Absolute Count of Activity By Day: Linear Log

First Change of Audited Object: 2006-6-6 Absolute Count: 1,380

a. Access Attempts b. First Reads of Audited Object c. First Change of Audited Object d. CREATE,ALTER and DROP

e. GRANT and REVOKE f. Assignment or change of auth. ID g. IBM Utility Access h. DB2 Commands i. Other Authorization Failures

Users_Subsystem

-0.28 -0.83 100%

Connected to D81A Reporting

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

IBM DB2 SYSTEMS OBJECTS DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

Overview Subsystem > Detail First Change of Audited Object Help < Back

Report Options:

Date Range:
 From: Mon, Jun 5, 2006 Hour: 0 Minute: 0
 To: Thu, Jun 8, 2006 Hour: 23 Minute: 59
 > Available Dates: 2006-6-1 to 2006-6-9

Subsystem:
 RS23:D81A

Activity Result:
 All

Show Top Number:
 5

Drill Down Options:
 Retrieve data for selected item only
 Retrieve all currently displayed data

Time Chart Options:
 Group Activity By Minutes
 Group Activity By Hours
 Group Activity By Days

First Change of Audited Object for Subsystem: RS23:D81A ■ Success ■ Failure

Top 5 Objects for First change of Audited Object: (For Successful and Failed activity) Linear Log

Object	Count
CSLI	5,993
CSLI	1
EMP	1
ADHSC830.ART_EMPROJECT2	1
ADHSC830.ART_EMPROJECT3	1

Top 5 Users for First change of Audited Object (For Successful and Failed activity) Linear Log

User	Count
CSLIVIA	3,588
CSLIVI	2,412

Count of First change of Audited Object by day (For Successful and Failed activity) Linear Log

Date	Successful Count	Failed Count
Jun 5	5,993	0
Jun 6	1,412	0
Jun 7	812	0
Jun 8	412	0

Detail_c

Connected to D81A Reporting -1.01 1.39 100%

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

IBM DB2 SYSTEMS OBJECTS DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

Overview Subsystem > Detail First Change of Audited Object Help < Back

Report Options:

Date Range:
 From: Hour: Minute:
 To: Hour: Minute:
 > Available Dates: 2006-6-1 to 2006-6-9

Subsystem:

Activity Result:

Show Top Number:

Drill Down Options:
 Retrieve data for selected item only
 Retrieve all currently displayed data

Time Chart Options:
 Group Activity By Minutes
 Group Activity By Hours
 Group Activity By Days

for Subsystem: RS23:D81A Success Failure

Top 5 Objects for First Change of Audited Object (For Successful and Failed activity) Linear Log

Object	Count
CSLIVI.ART_ACT1	~7,500
ADHSC830.ART_EMP	1
ADHSC830.ART_EMPROJECT2	1
ADHSC830.ART_EMPROJECT1	1
ADHSC830.ART_EMPROJECT3	1

Top 5 Users for First change of Audited Object (For Successful and Failed activity) Linear Log

User	Count
CSLIVIA	3,588
CSLIVI	2,412

Count of First change of Audited Object by day (For Successful and Failed activity) Linear Log

Date	Count
Jun 5, 2006	~3,500
Jun 6, 2006	~1,500
Jun 7, 2006	~1,000
Jun 8, 2006	~500

Detail_c

0.87 3.03 100%

Connected to D81A Reporting

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

IBM DB2 SYSTEMS OBJECTS DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

Overview Subsystem > Detail First Change of Audited Object Help < Back

Report Options: First Change of Audited Object for Subsystem: D81A Success Failure

Audit Management Expert Data

Option

Record Count: 276

TIME	RESULT	RETURNED	SCHEMA	NAME	IFCODE	CORRELATION...	CONTEXT_TYPE	CONTAINER	TYPE	AUTHORIZA...	ORIGINAL_...	PLAN
2006-06-08 21:12:02.54174	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.555126	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.5656	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.579408	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.592304	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.602876	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.613217	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.629298	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.643586	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.666236	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.687684	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2
2006-06-08 21:12:02.70794	0	SUCCESS	CSLIVI	ART_ACT1	00143	302391232	TABLE CHANGE - FIRST	ARTRACT1	TABLE/VIEW	CSLIVIA	CSLIVIA	DSNTEP2

Copy Export Cancel Close

Group Activity By Days

Log Analysis Refresh Filter Options... Display Colors...

Detail_c

-1.01 1.39 100%

Connected to D81A Reporting

Report Options:

Date Range:

From: Calendar >
 Mon, Jun 5, 2006 Hour: 0 Minute: 0

To: Calendar >
 Thu, Jun 8, 2006 Hour: 23 Minute: 59

> Available Dates: 2006-6-1 to 2006-6-9

Subsystem:
 RS23:DB1A

Activity Result:
 All

Show Top Number:
 5

Drill Down Options:

Retrieve data for selected item only

Retrieve all currently displayed data

Time Chart Options:

Group Activity By Minutes

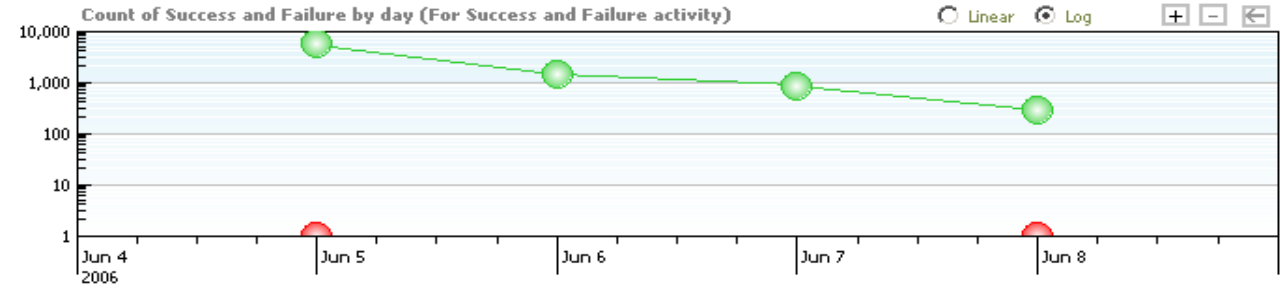
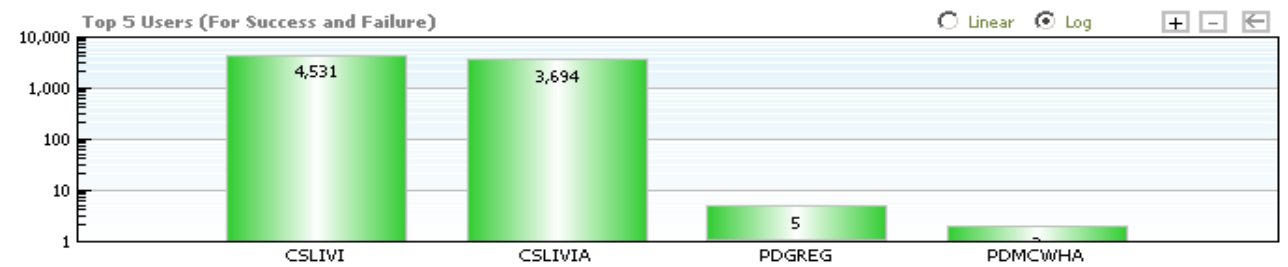
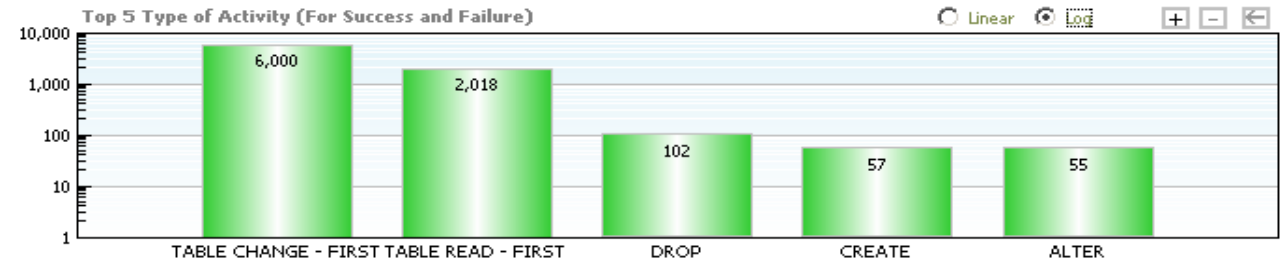
Group Activity By Hours

Group Activity By Days

Refresh

Filter Options... Display Colors...

Summary of Objects in subsystem: RS23:DB1A

■ Success ■ Failure


DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

IBM DB2 SYSTEMS **OBJECTS** DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

> Summary of Objects Help < Back

Report Options: Summary of Objects in subsystem: D81A Success Failure

Audit Management Expert Data

Option

Record Count: 55

TIME	RESULT	RETURNED	SCHEMA	NAME	IFICODE	CORRELATI...	CONTEXT_T...	CONTAINER	TYPE	STATEMENT_TXT
2006-06-05 11...	0	SUCCESS	CSLIVI	ART_ACT1	00142	385804688	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 11...	0	SUCCESS	CSLIVI	ART_ACT1	00142	385799496	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 11...	0	SUCCESS	CSLIVI	ART_ACT1	00142	385805632	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 11...	0	SUCCESS	CSLIVI	ART_ACT1	00142	385805632	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 11...	0	SUCCESS	CSLIVI	ART_ACT1	00142	385805632	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 11...	0	SUCCESS	CSLIVI	ART_ACT1	00142	385796664	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 11...	0	SUCCESS	CSLIVI	ART_ACT1	00142	385805632	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 17...	0	SUCCESS	CSLIVI	ART_ACT1	00142	302392176	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 17...	0	SUCCESS	CSLIVI	ART_ACT1	00142	302392176	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 17...	0	SUCCESS	CSLIVI	ART_ACT1	00142	302394064	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 17...	0	SUCCESS	CSLIVI	ART_ACT1	00142	302394064	ALTER	ARTRACT1	TABLE/VIEW	ALTER TABLE CSLIVI.ART_ACT1 AUD
2006-06-05 18...	0	SUCCESS	ADHSC830	ART_EMP	00142	302396896	ALTER	ADHTS1	TABLE/VIEW	ALTER TABLE ADHSC830.ART_EMP A

Copy Export Cancel Close

Group Activity By Days

Refresh Filter Options... Display Colors...

Users_Object

1.1 -1.19 100%

Connected to D81A Reporting

DB2 Audit Management Expert Reporter

File Reports Settings Help

Log in Reporting Log Analysis

IBM DB2 SYSTEMS OBJECTS DB2 AUDIT MANAGEMENT EXPERT Welcome adhadmin

Overview Subsystem > Detail Explicit GRANT and REVOKE < Back Help

Successful GRANT and REVOKE in subsystem: RS23:D81B

Success Grant Revoke Failure Grant Revoke

Report Options:

From: Calendar > Mon, Jul 17, 2006 Hour: 0 Minute: 0

To: Calendar > Fri, Jul 21, 2006 Hour: 23 Minute: 59

> Available Dates: 2006-7-13 to 2006-7-21

Subsystem: RS23:D81B

Activity Result: All

Activity Type: All

Show Top Number: 10

Drill Down Options:

- Retrieve data for selected item only
- Retrieve all currently displayed data

Time Chart Options:

- Group Activity By Minutes
- Group Activity By Hours
- Group Activity By Days

Refresh Display Colors...

Filter Data Option

Option

Filter Criteria:

Available Users	Available Objects	Available Plans
> All Users CSBELK CSIVAN CSLIVI CSLIVIA CSTROS	> All Objects TABLE/VIEW	> All Plans ADHPLAN1 ADHPLAN3 DISTSERV DSNTEP2 DSNUTIL

User Filter: Refresh Object Filter: Refresh Plan Filter: Refresh

Selected Users	Selected Objects	Selected Plans
> All Users	> All Objects	> All Plans

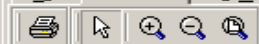
Remove Remove All Remove Remove All

OK Cancel Help

Detail_e

5.22 3.2 100%

Connected to D81B Reporting



DB2 SYSTEMS
OBJECTS
DB2 AUDIT MANAGEMENT EXPERT
Welcome adhadmin

Overview
Subsystem
> Detail
First Change of Audited Object

< Back
Help

Report Options:

Date Range:
 From: Calendar >
Mon, Jul 17, 2006 Hour: 0 Minute: 0

To: Calendar >
Fri, Jul 21, 2006 Hour: 23 Minute: 59

[> Available Dates: 2006-7-13 to 2006-7-21](#)

Subsystem:
RS23:D81B

Activity Result:
All

Show Top Number:
10

Drill Down Options:
 Retrieve data for selected item only
 Retrieve all currently displayed data

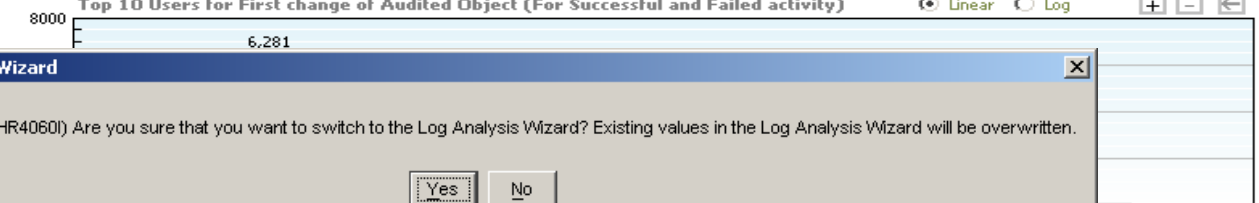
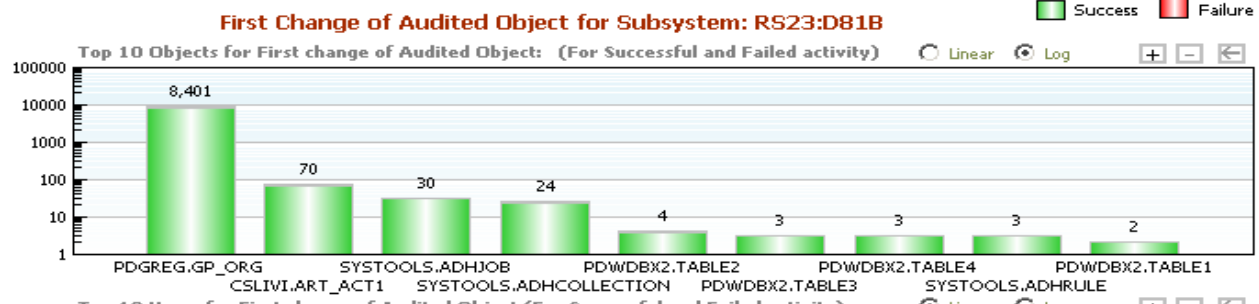
Time Chart Options:
 Group Activity By Minutes
 Group Activity By Hours
 Group Activity By Days

Log Analysis

Refresh

Filter Options...

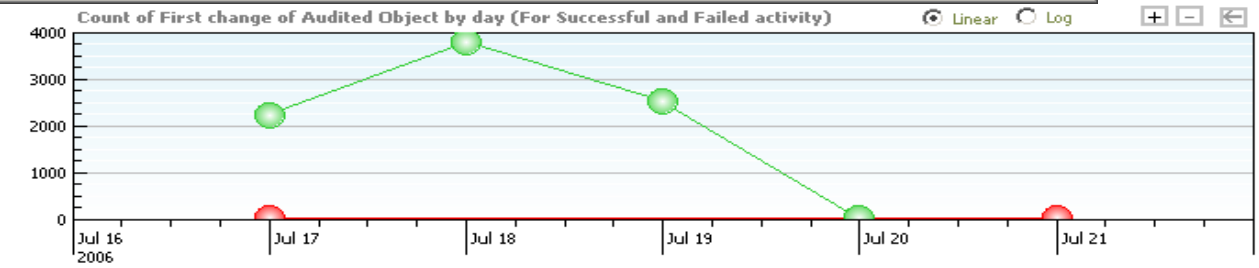
Display Colors...



Log Analysis Wizard

(ADHR4060) Are you sure that you want to switch to the Log Analysis Wizard? Existing values in the Log Analysis Wizard will be overwritten.

Yes
No



DB2 Audit Management Expert Reporter

File Log Analysis Settings Help

Log in Reporting Log Analysis

Welcome

Subsystem

Table

Filter

Run

Output

Save

Select Table(s):

Schema:

Name:

Refresh

Available Tables:

Table Owner	Table Name	Add

Remove

Remove All

Selected Tables:

Table Owner	Table Name
PDGREG	GP_ORG
CSLIVI	ART_ACT1
SYSTOOLS	ADHJOB
	ADHCOLLECTION
PDWDBX2	TABLE2
	TABLE3
	TABLE4
SYSTOOLS	ADHRULE
PDWDBX2	TABLE1

Log Analysis Wizard

(ADHR4062) The Log Analysis Wizard has been successfully updated with values from the Report.

OK

< Back Next >

Connected to D81B Log Analysis Table

DB2 Audit Management Expert Reporter

File Log Analysis Settings Help

Log in Reporting Log Analysis

Welcome

Subsystem

Table

Filter

Run

Output

Save

Log Range:

From: Jul 17, 2006 00:00:00 To: Jul 21, 2006 23:59:00

Audit Management Expert typically uses the SYSLGRNX directory table to optimize which log files must be read. You can choose not to use the SYSLGRNX if errors occur when trying to use it, or if the overhead of using it will likely outweigh the savings it provides.

Use SYSLGRNX

Statement Type:

- Include inserts
- Include updates
- Include deletes
- Ignore catalog tables

Report Output Options:

Optionally choose to generate a Detailed Activity Report:

- Summary report
- Detailed Activity Report

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Connected to D81B Log Analysis Filter

DB2 Audit Management Expert Reporter

File Log Analysis Settings Help

Log in Reporting Log Analysis

Welcome
Subsystem
Table
Filter
Run
Output
Save

Submit JCL for Log Analysis:

Generate JCL Revert

```

//ADHJOB JOB ,DB2 AME,MSGCLASS=H,REGION=0M
//*
/*****
/* DB2 Audit Management Expert for z/OS
/*
/* Generated by CSLIVI 2006-07-21 14:52
/*
/* SSID: D81B
/*
/*****
/*
/*****
/* STEP 1: CLEAN UP PREVIOUS DATASETS, IF ANY *
/*****
//STEP1 EXEC PGM=IEFBR14,COND=(4,LT)
//EXTFILE DD DSN=PDDAVI,ADHLAT,EXTFILE.R00
// SPACE=(CYL,(15,10),RLSE),DCB=(LRECL=32752,BL
// UNIT=SYSDA,DISP=(MOD,CATLG,DELETE)
/*
/*****
/* STEP 2: READ THE DB2 LOG TO GENERATE THE
/*****
//STEP2 EXEC PGM=ADHGEN1,REGION=0M,COND
//STEPLIB DD DISP=SHR,DSN=RSQA,ADH110.TSTP
// DD DISP=SHR,DSN=D81B.SDSNEXIT
// DD DISP=SHR,DSN=DSN.V810.SDSNLOAD
//DB2PARMS DD DISP=SHR,DSN=RSQA.QATEST.RS
//MODEFILE DD DSN=PDDAVI,ADHLAT,MODE.R00
// DISP=OLD
//SYSOUT DD SYSOUT=*
//CFILE DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//GENRPT DD SYSOUT=*
//EXTREP DD SYSOUT=*
//SUMREPT DD SYSOUT=*
//XDREPT DD SYSOUT=*
//QTRPT DD SYSOUT=*
//WARNINGS DD SYSOUT=*
//MESSAGES DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//DATAIN DD *
SSID =D81B
START DATE =2006/07/17
START TIME =00:00:00
END DATE =2006/07/21
END TIME =23:59:00
..

```

TSO Userid For Batch Job

UserID:

Password:

OK Cancel

Run

< Back Next >

Connected to D81B Log Analysis Run Template: JOBBARRY

DB2 Audit Management Expert Reporter

File Log Analysis Settings Help

Log in Reporting Log Analysis

Submitted Log Analysis Jobs:

Name	Report Type	Status	Job ID	MAX CC	Start Time	Last Updated	User	Subsystem
ADHJOB	Detail	Completed	J0445071	0	July 17, 2006 5:1...	July 17, 2006 5:14:...	adhadmin	RS23:D81B
ADHJOB	Detail	Completed	J0445299	0	July 17, 2006 7:5...	July 17, 2006 8:00:...	adhadmin	RS23:D81B
ADHJOB	Summary	Completed	J0446129	0	July 18, 2006 5:2...	July 18, 2006 5:20:...	linux	RS23:D81B
ADHJOB	Detail	Completed	J0449424	2	July 18, 2006 7:5...	July 18, 2006 7:52:...	adhadmin	RS23:D81B
ADHJOB	Detail	Completed	J0449429	0	July 18, 2006 7:5...	July 18, 2006 7:55:...	adhadmin	RS23:D81B

Retrieve Job Parameters

View Report

Delete Report

Cancel Job

Refresh

Report Output:

```
*****
* COMMITTED ACTIVITY *
*****
```

OBJECT TYPE/NAME	UPDATES	INSERTS	DELETES	MD
TABLE..... SYSTOOLS.ADHJOB	8	29	0	
TABLESPACE, ADHTSJOB	8	29	0	
TABLE..... SYSTOOLS.ADHEVENT	0	2430	0	
TABLESPACE, ADHTSEVN	0	2430	0	
TABLE..... SYSTOOLS.ADHCOLLECTION	0	2	0	
TABLESPACE, ADHTSCPS	0	2	0	
DATABASE... SYSTOOLS	8	2461	0	
TABLE..... PDGREG.GP_ORG	0	6000	6000	
TABLESPACE, TSGPORG	0	6000	6000	
DATABASE... DBGPADH	0	6000	6000	

```
OBJECT TYPE/NAME (RI ACTIONS ONLY)  UPDATES  INSERTS  DELETES  MD
```

TOTAL SUMMARY REPORT

```
-----
TOTAL UPDATES: 8
TOTAL INSERTS: 8461
TOTAL DELETES: 6000
```

```
*****
* UNCOMMITTED ACTIVITY *
*****
```

```
OBJECT TYPE/NAME  UPDATES  INSERTS  DELETES  MD
```

```
OBJECT TYPE/NAME (RI ACTIONS ONLY)  UPDATES  INSERTS  DELETES  MD
```

Save Report

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Next >

Connected to D81B Log Analysis Output