



IBM Software Group | Information Management

IMS DRD promises
a “SYSGEN free” environment

Are you ready?

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Does DRD make sense for you?

- Is there value in a “SYSGEN free” environment?
 - For IMS Cold Start
 - For on-line change

- When are scheduled MODBLKS changes made?
 - Production – usually not very often
 - Final Test – staging to production
 - Test – staging from development systems
 - Development – fairly often if application development active

- When are emergency MODBLKS changes made?

How IMS customers manage resources today

- Resource changes made using IMS SYSGEN process
 - Highly automated
 - In-house application or TSO Edit to PDS source
 - Stage 1 source updates for a Cycle
 - Periodic cycle close – extract to Stage 1 source
 - SYSGEN of Stage 1 – changes introduced via cold start and/or online change

- Ad hoc changes made using
 - Online change and/or Coordinated online change
 - BMC Delta
 - High Performance SYSGEN tools

- Ad hoc changes must be copied to Stage 1 source

Challenges to DRD implementation

- Stage 1 source is the basis for knowing what the IMS system resources look like (i.e. MODBLKS)

- With DRD you no longer have Stage 1 source
 - How do you know what the system resources look like?

- DRD changes applied using TSO SPOC or something like that
 - How do you keep track of what is applied?
 - How do you back-out unwanted changes (i.e. partial or full)
 - How do you audit the change process?
 - How do you accommodate Change Control approval
 - How do you migrate approved changes between levels

IMS Configuration Manager (ICM) solves these problems

- Resource repository provides for Stage 1 source management
 - Supports both SYSGEN and DRD installations
 - Batch install process enables
 - Back-out
 - Audit
 - Change control (i.e. update scheduling)
 - Adhoc changes bundled into “Change Packages”
 - Source for Change Control approvals
 - Migration of changes to next level system (i.e. Development to Test)
 - ICM V210 provides “Access Control”
 - Enables distributed control to applications for development systems while protecting all other systems from harm.

Using ICM to manage resources

- Take-up: allows you to take resources from stage 1 source or RDDS and enter them into IMS Configuration Manager
 - Resources are organized into logical resource groups
 - Associate resource groups with your IMS systems
- Edit and add resources to resource groups
- Package changes to resources into change packages:
 - GEN change packages: generate an RDDS or Stage 1 source for cold-start processing
 - Command change packages: install updates using DRD commands
- Close and schedule change packages: create JCL for implementing the package
- Run scheduled jobs: create stage 1, an RDDS, or install resources into live systems

Simple forms for creating and updating resources

```

File  Help
-----
EDIT                               Transaction TX001
Command ==>> _____

Update transaction definition.

Transaction . : TX001
Description . : You can use descriptions and notes ----->  Notes...
                                                    More:      +

Attribute          Description
AOCMD . . . . . N          AOI command option (CMD, N, TRAN, Y)
CLASS . . . . . 1          Class (1-999)
CMTMODE . . . . . SNGL     Commit mode (SNGL, MULT)
CONV . . . . . N          Conversational (Y, N)
DCLWA . . . . . -          Log write-ahead option (Y, N)
DIRROUTE . . . . . N       MSC direct routing option (Y, N)
EDITRTN . . . . . _____ Input edit routine
EDITUC . . . . . Y          Edit to uppercase (Y, N)
EMHBSZ . . . . . _____ EMH buffer size (12-30720)
EXPRTIME . . . . . 0       Expiration time (0-65535)
FP . . . . . N           Fastpath processing option (N, E, P)
INQ . . . . . N           Inquiry option (Y, N)
LCT . . . . . 65535       Limit count (1-65535)

```

- Context-sensitive help
- Extensive validation
- Notes

Create a package when ready

```
                                Create System Change Package
Command ==> _____
Change Package . . . . . JUNE CP
Description . . . . . CP for June Cold-Start window
IMSpIex . . . . . : PLXB
IMSID . . . . . : IMSB  Version . . . : 12.1

Change Package type 2  1. COMMAND (CMD) - selected resources
                       2. GENERATE (GEN) - Complete system image

Output Type . . . . . 1  1. Stage 1 Macros
                       2. Cold Start RDDS
```

- Contains all resources for the IMS image
- You can now continue to make changes for the next cold-start window
- Generate stage 1 or RDDS when you are ready to schedule the package...

Select the resources to include

```

File Help
-----
Select Change Package Resources                               Row 1 to 15 of 15
Command ==> _____ Scroll ==> PAGE

CP Name . . . . . : APP2.01
CP description  : Updates to new app
IMSplex . . . . . : PLXA
IMS ID . . . . . : IMSA  Version . . : 11.1

view . . . . . 2  1. Resource Groups
                  2. Resource Group elements

/  CP  Resource  Type      Resource Group  Lev  Changed
-  *  *          *          *                  *  *
s  BILL  DATABASE  BILL      BILL      S    2011-03-16 14.27
   BILL  TRAN      BILL      BILL      S    2011-03-16 14.27
   BILLPGM PROGRAM  BILL      BILL      S    2011-03-16 14.27
   BILLPGM2 PROGRAM  BILL      BILL      S    2011-03-16 14.29
s  BILLSYSO TRAN      BILL      BILL      S    2011-03-16 14.28
   BILL2  TRAN      BILL      BILL      C    2011-03-16 14.26
   BILL3  TRAN      BILL      BILL      C    2011-03-16 14.26
s  BILL4  TRAN      BILL      BILL      C    2011-03-16 14.26
   BILL5  TRAN      BILL      BILL      S    2011-03-16 14.27
   DBPART DATABASE  UTIL      UTIL      C    2011-03-17 15.50
   IVP    TRAN      UTIL      UTIL      C    2011-03-18 14.41
   PART   PROGRAM  UTIL      UTIL      C    2011-03-18 14.42
   UTILPGM PROGRAM  UTIL      UTIL      C    2011-03-17 15.50
s  UTILT1  TRAN      UTIL      UTIL      C    2011-03-17 15.50
***** Bottom of data *****
    
```

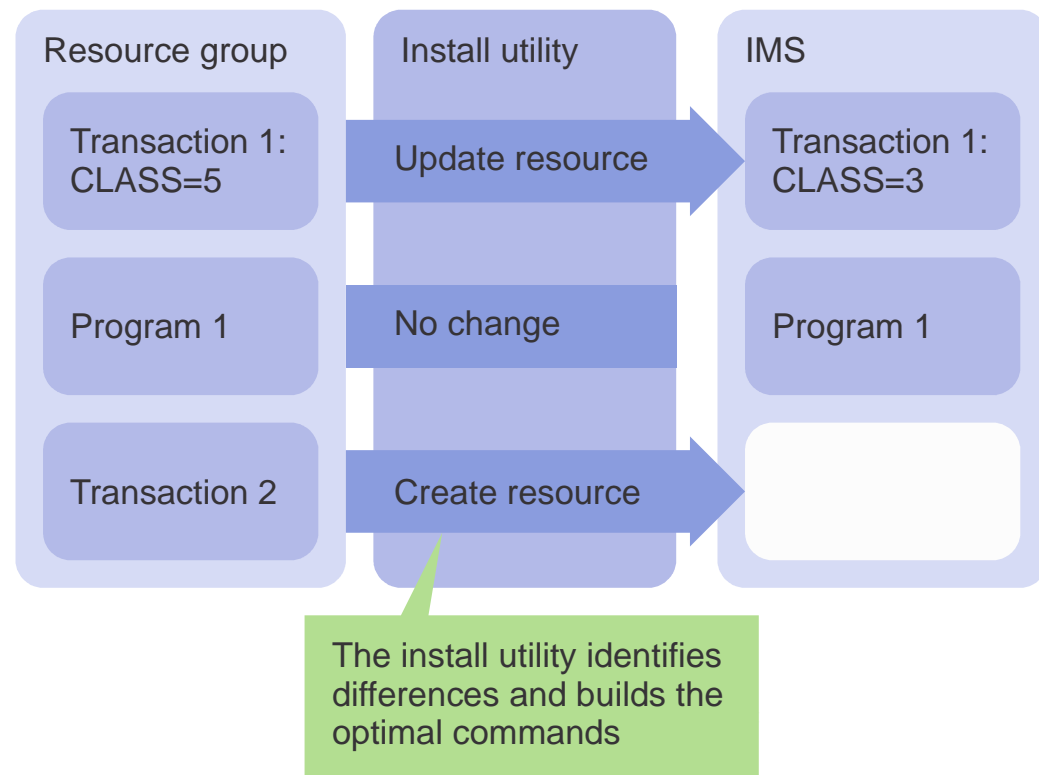
ICM Processes: updating resources using DRD



- An ISPF dialog is provided to edit and manage resources
- An audit log is maintained of all live changes made through IMS Configuration Manager change packages

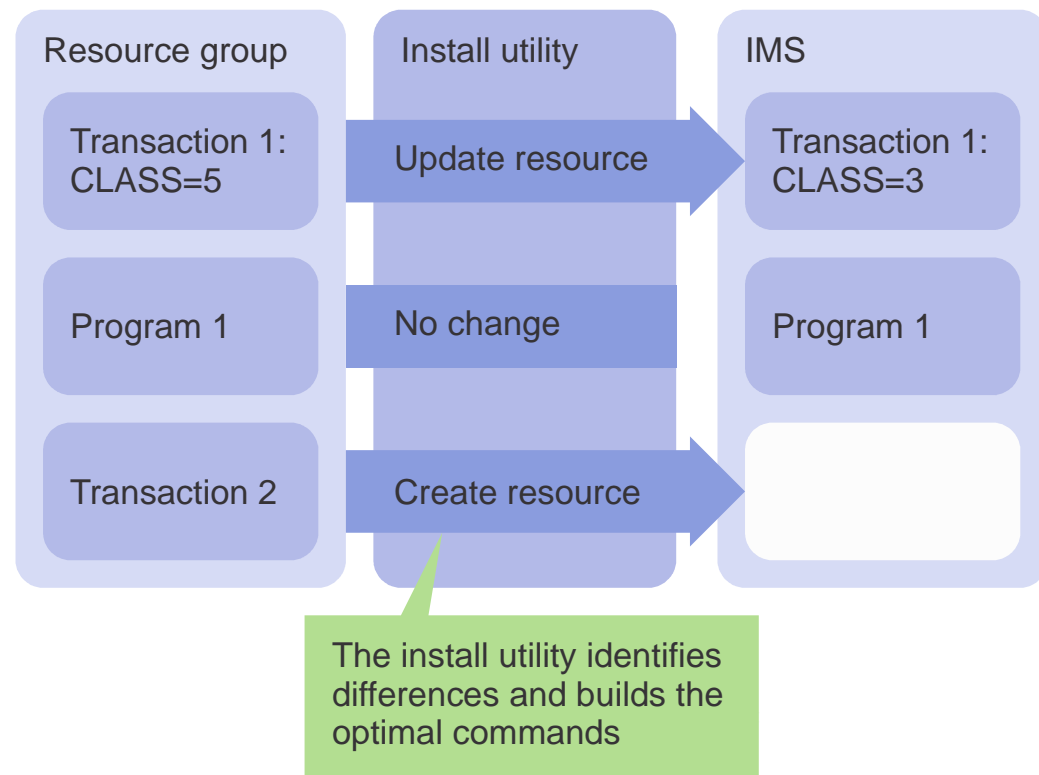
IMS Configuration Manager resource installer

- The installer provides enhanced services on top of the IMS type-2 command interface
- Automatically determines whether an install or update is required
- Rollback option
- Quiescing of resources
- Full-logging and auditing of install activity



IMS Configuration Manager resource installer - BACKOUT

- Each change that is made is tracked in the journal
- If any change fails, previous changes can be reversed so that all changes must be successful if any are to be made



Fundi GUI strategy

- ICM Eclipse GUI provided with ICM V210
- Fundi GUI will adapt to the IMS Tools Administration Console
- The ICM GUI is a consolidated GUI including the CEX GUI at the CEX V230
- Also provides IMS command access via IMS Operations Manager

Connection Server - IMSplex PLXDP(FTS1:8940) - IBM Tools Base Connection Server

File Edit Navigate Project Configuration Window Help

Connection Server Resource

Navigation

- Configuration
 - IMSplex
 - PLXD4
 - PLXDP
 - Commands
 - Databases
 - Descriptors
 - Members**
 - Programs
 - Routing Codes
 - Systems
 - Transactions
 - Members
 - Repositories
 - TESTCASE
 - Systems
 - IADP (PLXDP)
 - IBDP (PLXDP)
 - ICDP (PLXDP)
 - Connection Servers
 - REA server

PLXD4 PLXDP

IMS Command: QUERY IMSPLEX SHOW(ALL)

Route: * % IADP ICDP IBDP

Hide Empty Columns 30/01/2012 3:16:46 PM

IMSplex	MbrName	CC	Member	JobName	Type	Subtype	Version	OSName	Status
CSLPLXDP	S1XDPOM	0	S1XDPOM	PLXDPOM	OM		1.5.0	FTS1	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	GU1PLXDP	ICON001	IMSCON		12.1.0	FTS1	ACTIVE
CSLPLXDP	S1XDPOM	0	IADP	IADPCTL	IMS	DBDC	10.1.0	FTS3	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	GU0PLXDP	ICON000	IMSCON		12.1.0	FTS1	ACTIVE
CSLPLXDP	S1XDPOM	0	CDP1CQS	PLXDPCQS	CQS		1.7.0	FTS1	ACTIVE
CSLPLXDP	S1XDPOM	0	S3XDPOM	PLXDPOM	OM		1.5.0	FTS3	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	S1XDPRM	PLXDPRM	RM	SNGLRM	1.5.0	FTS1	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	S1XDSPC	PLXDSPCI	SCI		1.5.0	FTS1	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	IBDPDBRC	IBDPDBRC	DBRC	001	11.1.0	FTS1	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	ICDP	ICDPCTL	IMS	DBDC	12.1.0	FTS1	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	CDP3CQS	PLXDPCQS	CQS		1.7.0	FTS3	ACTIVE
CSLPLXDP	S1XDPOM	0	IBDP	IBDPCTL	IMS	DBDC	11.1.0	FTS1	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	IADPDBRC	IADPDBRC	DBRC	001	10.1.0	FTS3	READY,ACTIVE
CSLPLXDP	S1XDPOM	0	S3XDSPC	PLXDSPCI	SCI		1.5.0	FTS3	READY,ACTIVE

Databases Databases - Not Initi... Programs - DB Unavail... DBFSAMP3/DBs Detail Databases - Stopped DBFSAMD1/Pgms. Detail Members

Console

Manage live systems

View resources in the source repository

Manage live systems

Navigation

- Configuration
 - IMSplexes
 - PLXD4
 - PLXDP
 - Commands
 - Databases
 - Databases - All
 - Databases - Not Initialized**
 - Databases - ...
 - Descriptors
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PLXDP | PLXD4 | TESTCASE

IMS Command: QUERY DB NAME(*) SHOW(ALL) STATUS(NOTINIT)

Route: * % IADP ICDP IBDP

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Customer learns the commands required to get this information

Information of interest is highlighted

DBName	MbrName	CC	CCText	TYPE	LAcc	LDRsdnt	LRsdnt	LclStat	LModelName	LM
				UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
				BRWS			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
				UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB1	IADP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB2	IBDP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB2	IADP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB3	IBDP	0		EXCL			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB3	IADP	0		EXCL			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB4	IBDP	0		BRWS			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB4	IADP	0		BRWS			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB5	IBDP	0		READ			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB5	IADP	0		READ			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKOMSD1	IBDP	0		UPD		Y		NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKOMSD1	IADP	0		UPD		Y		NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB1	IBDP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB1	IADP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB2	IBDP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB2	IADP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB3	IBDP	0		EXCL			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB3	IADP	0		EXCL			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:

Manage live systems

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 - Databases - Stopped
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PLXDP | PLXD4 | TESTCASE

IMS Com

<Locate value> <Find value>

Search for strings within results

Save results

Route: * % IADP ICDP IBDP

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DBName	MbrName	CC	CCText	TYPE	LAcc	LDRsdnt	LRsdnt	LclStat	LModelName	LM
ARTHUR				IPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
ARTHUR				BRWS			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB				UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BKODB										DE:
BKODB										DE:
BKODB										DE:
BKODB										DE:
BKODB										DE:
BKODB										DE:
BKODB										DE:
BKODB										DE:
BKOMS										DE:
BKOMS										DE:
BODB1										DE:
BODB1	IADP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB2	IBDP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB2	IADP	0		UPD			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB3	IBDP	0		EXCL			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:
BODB3	IADP	0		EXCL			N	NOTINIT-1E-NODMB,NOTOPEN	DFSDSDB1	DE:

Create advanced filters

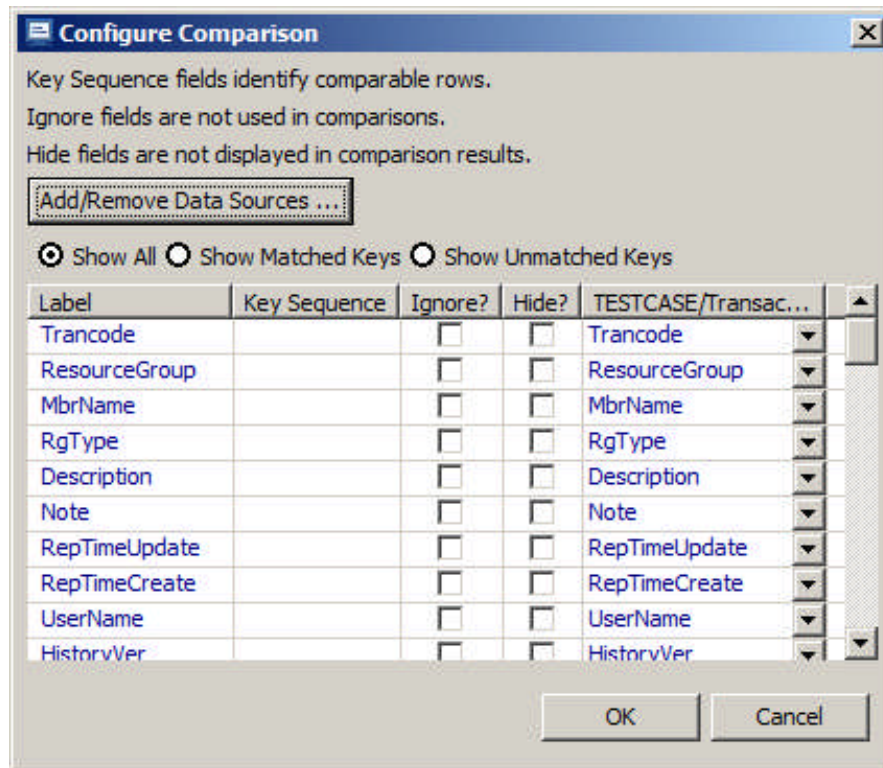
Field: Condition: Value:

LNPRI = 99

Add Condition Remove All

Field	Condition	Value
MbrName	=	IADP
LQCnt	>	1

Powerful compare capabilities



- Compare command output on different days
- Compare between source and live systems
- Compare between various systems in the same or different IMSplexes
- Compare allows you to ignore or hide fields that you expect to change
- Define your own keys for comparison purposes

Example compare output

Source	PgmName	MbrName	RgnType	BMPTYPE	FP	DOPT	GPSB	Rsdnt	LRsdnt	TranStat	PgmLang	SchdType	LclStat
1	DBFSAMP2	IADP	BMP	Y	N	N	N		N	N		SERIAL	
2	DBFSAMP2	IBDP	BMP	Y	N	N	N		N	N		SERIAL	
1	DBFSAMP3	IADP	IFP	N	E	N	N		N	N		SERIAL	
2	DBFSAMP3	IBDP	IFP	N	E	N	N		N	N		SERIAL	DB-NOTAVL

Highlight status differences relative to a baseline

Source	PgmName	MbrName	RgnType	BMPTYPE	FP	DOPT	GPSB	Rsdnt	LRsdnt	TranStat	PgmLang
2	ABORTPRG	IBDP	MPP	N	N	N	N		N	N	
1	AUTPSB11	IADP	JMP	N	N	N	N		N	N	
2	AUTPSB11	IBDP	JMP	N	N	N	N		N	N	
1	BADNAME	IADP	MPP	N	N	N	N	Y	N	N	
1	BILLPGM	IADP	MPP	N	N	N	N		N	N	
2	BILLPGM	IBDP	MPP	N	N	N	N		N	N	

Identify resources that exist on one system but do not exist on the other

Source	PgmName	MbrName	RgnType	BMPTYPE	FP	DOPT	GPSB	Rsdnt	LRsdnt	TranStat
1	FUNPSB41	IADP	MPP	N	N	N	N		N	N
2	FUNPSB41	IBDP	IFP		N	N	N		N	N

Find inconsistencies

Obstacles to success

- Many System Programmers are afraid of DRD
 - Have process that has worked for many years, why change?
 - DRD has some limitations that can make it hard to implement
 - DRD represents change and that is hard for some

- Many mistakenly feel that the IMS Repository in V12 solves the issue I have raised
 - Not true – no staging of resource changes is just one example

- Without a product like ICM, you must build lots of processes around the DRD process

Conclusions

- IMS Configuration Manager simplifies the management of IMS resources and parameters
 - Using DRD or traditional SYSGEN processes
- Provides the same level of controls you had in a SYSGEN environment
- The resource installation process is streamlined making it easy to synchronize offline source with online systems
- The availability of rollback helps customers introduce changes as a unified set
- Back-out provides auditors with peace of mind
- IMS Configuration Manager provides a foundation from which an end-to-end IMS administration and management system can evolve

Contact information

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