

GDPS Cyber Resiliency - Securing, Vaulting, and Recovering critical data

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GDPS

Agenda

- Current Trends
- Cyber Vault Overview
- Roadmap
- Delivered in GDPS 4.9





Current Trends

Megan

Experiences



Why are clients deploying this?

- Government regulations (e.g. DORA in the EU and FFIEC Appendix J in the USA)
- Business requirements
- Cyber events in the news

Initially financial services firms (FSS) were deploying the IBM Z Cyber Vault, but now other industry sectors are following suit

IBM Z isn't immune to cyber attacks

GDPS LCP Manager features have been acquired, and clients are at different phases of deployment all over the world

Geo	Virtual or Physical isolation
Asia Pacific	x
Europe	x
Japan	x
Middle East & Africa	x
North America	x

Typical Cyber Vault Implementation Journey



Provides the foundation to respond to corruption events. Time to restore may be long.

Reduces business impact by reducing the time to detect, respond and recover.

Improves compliance with retention requirements.

Phase 1	Phase 1A	Phase 2	Phase 3	Phase 4
<i>Protect the data</i>	<i>Recover and IPL Type 1 Validation</i>	<i>Restore to Production</i>	<i>Type 2 Validation</i>	<i>Offline Backups (if needed)</i>
<ul style="list-style-type: none"> • Implement SGC • Implement GDPS LCP 	<ul style="list-style-type: none"> • Create IBM Z Cyber Vault infrastructure • Recover SGC to RC1 • IPL Sysplex from RC1 • Define strategy and processes for forensic analysis • Implement and automate Type 1 validation 	<ul style="list-style-type: none"> • Design recovery strategy and processes • Implement required replication infrastructure and network • Restore from SGC to production volumes 	<ul style="list-style-type: none"> • Define scope of Type 2 validation • Implement Type 2 validation • Automate Type 2 validations 	<ul style="list-style-type: none"> • Design backup processes • Create LPAR to perform backup • Perform backup from RC1 to virtual tape or COS

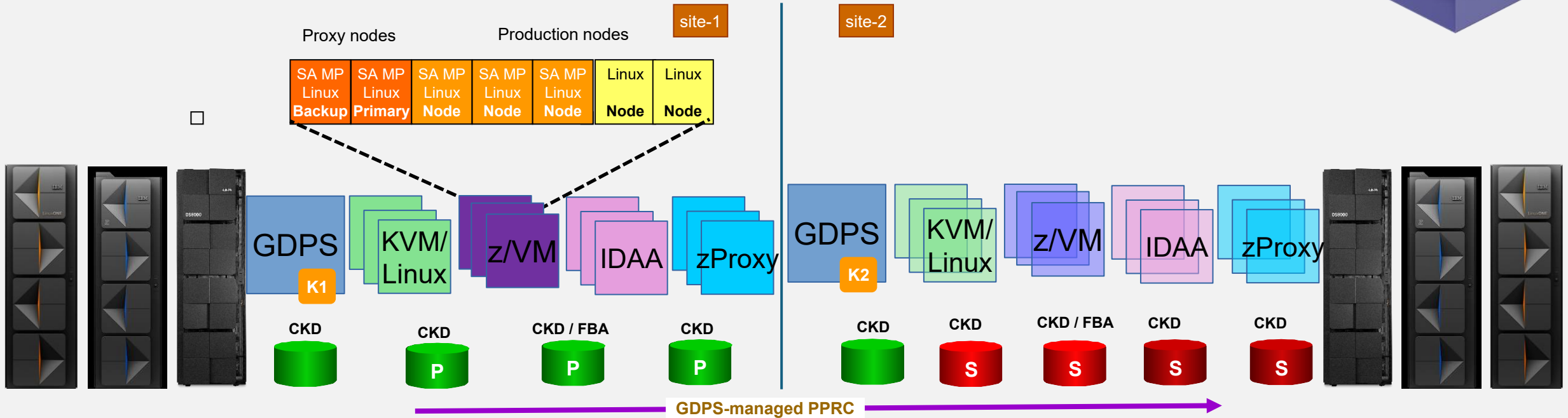




Cyber Vault Overview

Megan & Steven

GDPS xDR Multi-Platform support



- Management of all disks --> control mirroring
- Management of all partitions and systems → start/stop...
- HyperSwap – z/VM with its guests, z/OS Proxy
- Coordinated reboot with HyperSwap of KVM, Linux-in-LPAR, IDAA
- zVM SSI Live Guest relocation
- Graceful shutdown of z/VM, z/OS Proxy, Linux, KVM and IDAA
- Coordinated takeover in unplanned cases e.g. recovery from a node failure
- Coordinated takeover in planned cases for e.g. maintenance
- IBM Cyber Vault data corruption protection

Coordinated recovery for planned and unplanned events

IBM Z Cyber Vault



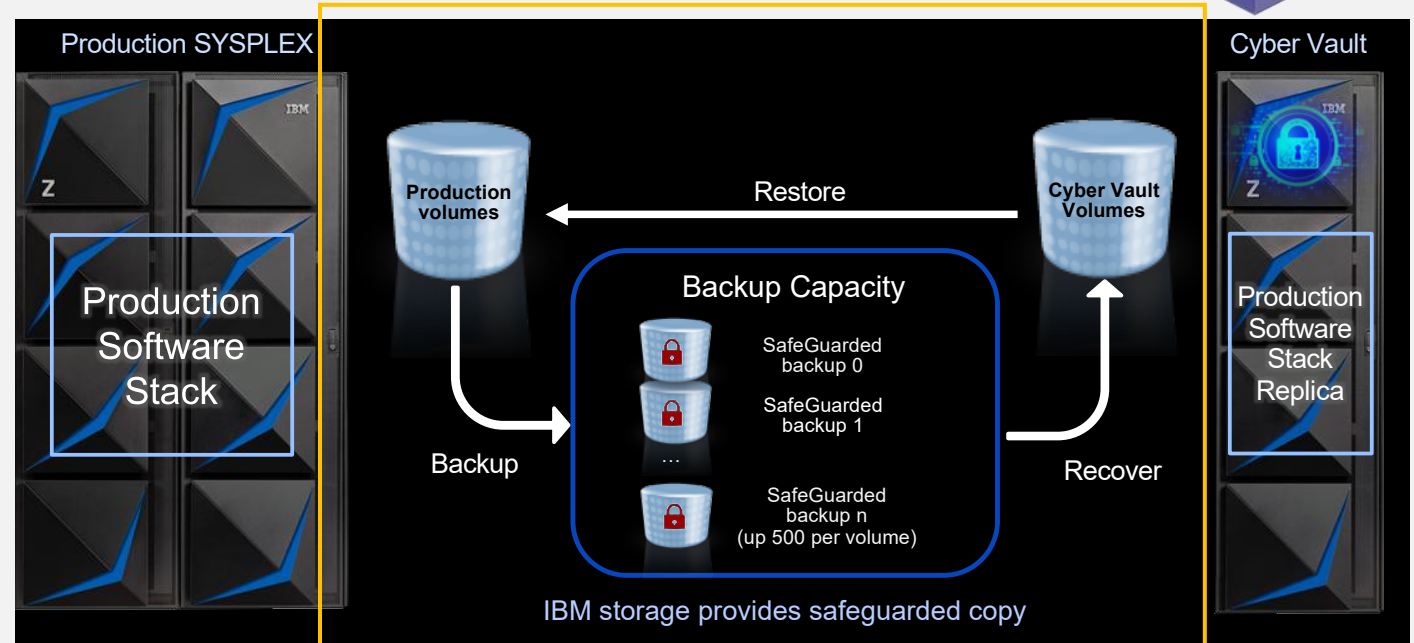
IBM Z Cyber Vault

Principle Idea:

Reduce the time to recovery from days to minutes, by implementing a Data Corruption Protection solution as part of your disaster recovery strategy

Cyber Vault Environment:

- IBM DS8K with Safeguarded Copy provides immutable, consistent point-in-time copies of data.
- GDPS LCP Mgr manages the creation, recovery, and restoration of the copies and provides automation to manage those processes.
- IBM zSystems hardware and software provides a secure, isolated environment to perform data validation, forensic analysis, and create offline backups.



Data Validation

Detect data corruption early or validate that the copy is clear



Forensic Analysis

Investigate the problem and determine the best recovery action



Surgical or Catastrophic Recovery

Extract data from the copy and logically restore back to production environment



Offline Backup

Backup copy of the clean environment to offline tape media



Offensive Security

Ethical hackers start a simulated, goal-oriented cyberattack on the organization

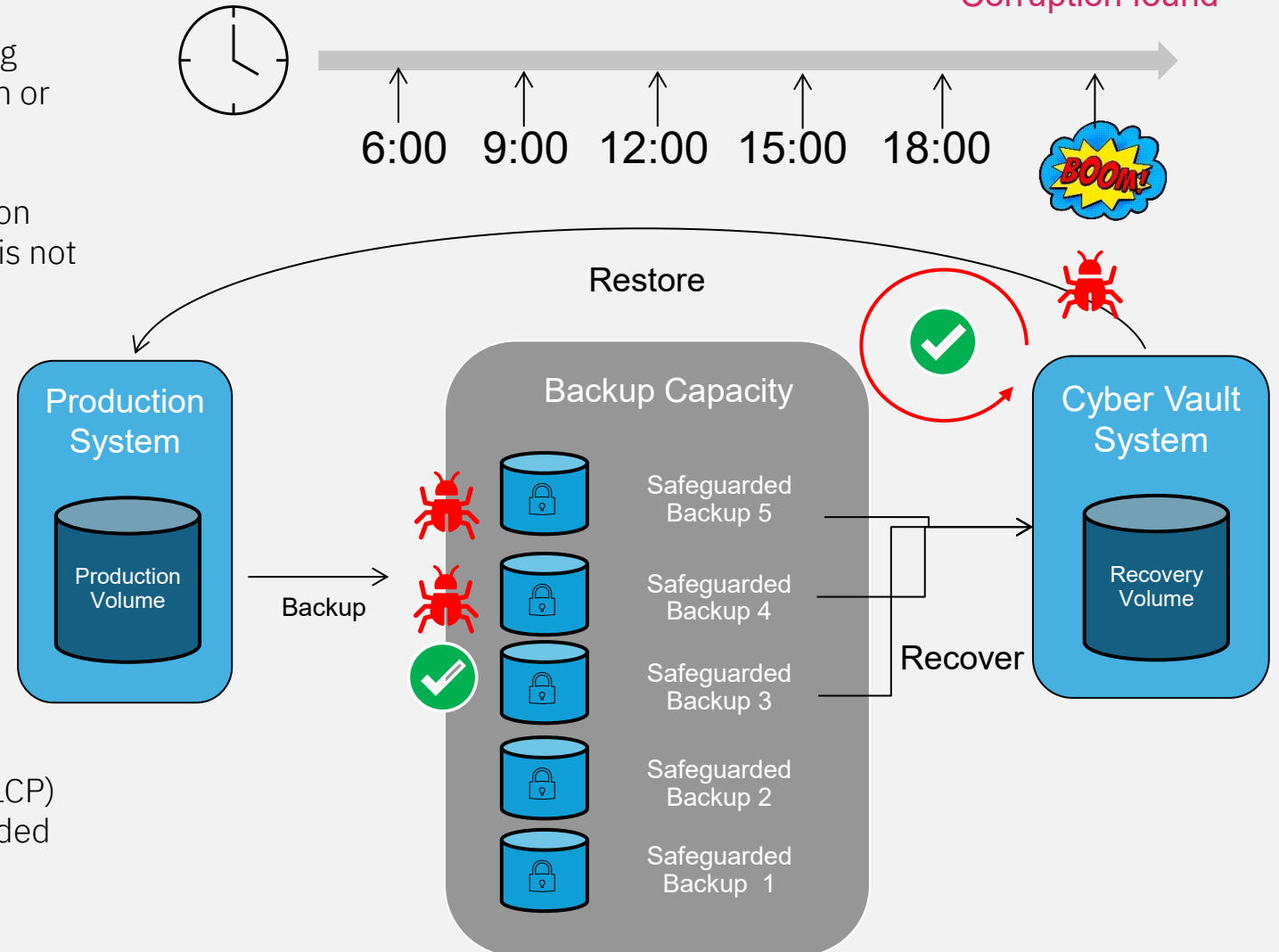




Corruption found

Protect your data with IBM Safeguarded Copy

- Prevent sensitive point in time copies of data from being modified or deleted due to errors, malicious destruction or ransomware attacks.
- Create up to 1024 Safeguarded Backups for a production volume stored in Safeguarded Backup Capacity, which is not accessible to any server.
- The data is accessible only after a Safeguarded Backup is recovered to a separate recovery volume.
- Recovery volumes are used with a data recovery system for:
 - Data validation
 - Forensic analysis
 - Restore production data
- IBM GDPS or IBM CSM (With/without IBM Standalone LCP) is required in order to create and manage the Safeguarded Backups



Roadmap

Megan

Roadmap



Delivered in GDPS 4.9

- Retry of Automatic Captures
- Data validation - Type 1
- 1024 Backups
- Threat Detection – TDz
- DS8000 Compression
- TimeStamp precision
- Db2 Application Roll Forward Phase 1

Future items

- Validation
- Enhanced integration w/3rd party sw
- Threat Detection
- Schedule controls
- IDEAs
-
-
-



Delivered in GDPS 4.9

Steven

IDEAs addressed in 4.9



- ZGDPS-I-162 - Increase the maximum supported SafeGuarded Copy captures beyond the current 500
- ZGDPS-I-211 - Store the active IPLType/-mode at time of LCP capture
- ZGDPS-I-231 - Reporting on SGC capture status
- ZGDPS-I-249 - LCP Scheduler Automatic retry
- ZGDPS-I-269 - Save environment information -such as IPLINFO- when obtaining an LCP CAPTURE
- ZGDPS-I-286 - Messages GEO2775I (SGC capture succeeded) and GEO2776E (SGC capture failed) should display the profile name
- ZGDPS-I-287 - Issue a Geo-message, with the name of the management profile, showing a capture is being taken

Threat Detection Overview



- When a threat is detected, GDPS RestAPI is used to inform the LCP Manager(s)
- LCP Manager has user-defined policies associating events with LCP management profiles
 - Each policy has a set of actions that the LCP Manager can perform when notified of the event
- LCP Manager performs the policy's actions
- Policies will be used in the future for Cyber Vault Validation and other forms of threat detection

Integration with Threat Detection for z/OS



```
VPCPMPM2          Modify an LCP Management Profile          BZK1
  Capture Interval: NO          Enable automated captures
  Capture Start Time: AUTO      Start UTC time of capture schedule
  Capture Retry Delay: MINUTE(1) Time between capture retry attempts
  Capture Retry Count: 3       Number of capture retry attempts

  Monitor Interval: NO         Enable SGC monitoring
  Monitor Start Time: 00:00:00 Start UTC time of monitor schedule

  TDz Read Policy: TDZ_READ     z/OS Threat Detection read policy
  TDz Write Policy: TDZ_WRITE   z/OS Threat Detection write policy
  Validation Policy: VAL_SUSPEND_SDF Validation failure policy

Enter NO to cancel or YES to proceed with the profile modification

Selection ==>> _
F1=Help F3=Return F7=Up F8=Down                               Page 2 of 2
```

```
VPCPCVPA          Add an LCP Policy          BZK1
  Policy Name: VAL_SUSPEND_SDF  Policy Name
  Alert: SDF                    Issue an SDF alert or WTO message
  Capture: NO                   Take a new capture
  Quiesce: NO                   Quiesce LCP captures and releases
  Suspend Replication: NO       Suspend Replication to the vault

Enter NO to cancel or YES to proceed with the policy addition

Selection ==>> YES
F1=Help F3=Return
```

Upon receiving a TDz alert, the LCP Manager consults configured LCP policies – defined per management profile per event type (READ or WRITE) – to determine which automated actions to take.

Alert

Issuing alerts (WTO / SDF).

Capture

Taking a new capture to preserve a forensic state.

Quiesce

Quiescing LCP operations to stop further changes.

Suspend Replication

Suspending replication into the vault to prevent out-of-space events and internal roll-offs.

pure z/OS Proxy environments are not supported in this initial release

Integrated Type 1 Validation



GDPS 4.9 introduces support for automated Type 1 (Infrastructure) validation of Safeguarded Copy backups within the vault.

Validation in GDPS 4.9 enables the LCP Manager to:

- IPL recovery systems directly from RC(n) copies, collected either via a new capture or from an existing tagged capture.
- Monitor IPL progress using enhanced BCPii message filtering, delivering reliable checkpoint detection even in high-volume environments.
- Record validation results, associate them with captures, and automatically mark intervening captures as *validated*, *failed*, or *in-doubt* based on sequencing.
- Can be integrated with existing Type 2 (Data structure) and Type 3 (Data content) validation.

Release
GDPS 4.9

Topology
MM2SITE & MM3SITE with
physical isolation only

Figure 2. VPCPLV00, LCP Safeguarded validation summary

```

VPCPLV00      Logical Corruption Protection Safeguarded Validation      GIC3
Management Profile: SGC1VAL1      Latest Capture: 2026/03/04.14:01:07
Consistency Group: ZPR0DI1.RS1    Latest Validation: 2026/03/04.14:01:13

Actions:  I nfo

Validation      Capture      Data Consistency
UTC TimeStamp  Seqno      UTC TimeStamp  Source  RCn  Status
- 2026/03/04.14:01:13 69A83B23 2026/03/04.14:01:11 RS(1) 001 Failure
- 2026/03/04.13:02:05 69A82D48 2026/03/04.13:02:03 RS(1) 001 Success
- 2026/03/04.11:02:32 69A81143 2026/03/04.11:02:30 RS(1) 001 Success
- 2026/03/04.10:16:49 69A8068C 2026/03/04.10:16:48 RS(1) 001 Success
- 2026/03/04.10:04:53 69A803C0 2026/03/04.10:04:51 RS(1) 001 Aborted
- 2026/03/04.09:33:08 69A7FC4F 2026/03/04.09:33:07 RS(1) 001 Success
- 2026/03/04.08:54:24 69A7F33B 2026/03/04.08:54:23 RS(1) 001 Failure
- 2026/03/04.08:27:53 69A7EA47 2026/03/04.08:16:11 SGC(1) 001 Aborted
- 2026/03/03.16:05:34 69A70682 2026/03/03.16:04:22 SGC(1) 002 Aborted
- 2026/03/03.15:21:33 69A6F0B8 2026/03/03.14:31:24 SGC(1) 002 Aborted
- 2026/03/02.10:23:33 69A56520 2026/03/02.10:23:32 RS(1) 002 Aborted
- 2026/02/27.14:25:28 69A1A953 2026/02/27.14:25:27 RS(1) 001 Failure

Command/Filter ==>      Row 1 of 16
F1=Help  F3=Return  F5=Refresh  F6=Roll  F7=Up  F8=Down

_VPCPLVII      LCP Validation Information      GIC3
Management Profile: SGC1VAL1      Capture Seqno: 69A83B23
Consistency Group: ZPR0DI1.RS1    Capture Time: 2026/03/04.14:01:07
Direct FlashCopy: RS(1) to RC(1)  Data Consistency: 2026/03/04.14:01:11
Validation Seqno: 69A83B29        Validation Start: 2026/03/04.14:01:13
Validation Status: Open           Validation End: .....

Validation      Starting      Ending
Step           UTC TimeStamp  UTC TimeStamp
IPL            Success        2026/03/04.14:01:13 2026/03/04.14:14:53
CUSTOM        Open           2026/03/04.14:14:53 .....

System      System      Load      Load      Flags
Name       Type      SA  CPC.LPAR  Addr  Parns  DAL.. IPL Status
CVP1      Z0S      Y  PS01.PS0138 0EA80 EA8798.1 .YY.. Success
CVP2      Z0S      Y  PS01.PS0139 EA80  EA8798.1 .YY.. Success
CF3       CF        PS01.PS0144                YY... Success

F1=Help  F3=Return  F5=Refresh  F6=Roll  F7=Up  F8=Down
Page 1 of 1
    
```

Select the IPL info for each system

Idea ZGDPS-I-211 and ZGDPS-I-269



- IPLTYPE/IPLMODE to be used for validation without impacting the ‘standard’ IPLTYPE/IPLMODE used for non-validation purposes
- Selected using a script or panels
- Associated load address and load parms are saved for each system at capture time

LCPIPLTYPE *sysname* | *ALL [RC1|NOTRANSL] [MODE=*ipl_mode*]

Select the IPL info for each system

Idea ZGDPS-I-211 and ZGDPS-I-269



```
VPCPSTD1                               Standard Actions                               BZK1
Actions: M Modify
          L Load  X Reset  A Activate  D Deactivate
 Sysname  IND  Status  IPLtype  LPAR      IPLmode  Auto  L-addr  Loadparm
_ BZK1      C  PRIMARY  NORMAL                    YN
_ AZP3      C  MANUAL   NORMAL   AZP3L    DR       NN   7072   7073M1
_ AZP4      C  MANUAL   NORMAL   AZP4L    DR       NN   7072   7073M2
_ ACF1L     C  MANUAL   NORMAL   ACF1L                    NN
_ AZP5      C  MANUAL   NORMAL   AZP5L                    NN
_ AZP6      C  MANUAL   NORMAL   AZP6L                    NN
_ ACF2L     C  MANUAL   NORMAL   ACF2L                    NN

1 CPC Ops          3 LPAR View  4 LCP IPLinfo
Selection ==>
F1=Help  F3=Return  F6=Roll  F7=Up  F8=Down
```

Select the IPL info for each system

Idea ZGDPS-I-211 and ZGDPS-I-269



VPCPSTLI Standard Actions - LCP IPL Information BZK1

Actions: **M Modify** **IPL Timeout: 20m**

System Name	System Type	CPC.LPAR	LCP IPLtype	LCP IPLmode	LCP IPLs
AZP3	ZOS	ST01.AZP3L	NOTRANSL	DEMO	
AZP4	ZOS	ST01.AZP4L	NOTRANSL	DEMO	1234 1234P4
ACF1L	CF	ST01.ACF1L			
AZP5	ZOS	ST01.AZP5L	NOTRANSL	DEMO	1234 1234P5
AZP6	ZOS	ST01.AZP6L	NOTRANSL	DEMO	1234 1234P6
ACF2L	CF	ST01.ACF2L			

Command ==> Row 1 of 6
F1=Help F3=Return F5=Refresh F6=Roll F7=Up F8=Down

- Applies to all IPLed systems selected for validation
- Modifiable

Select the IPL info for each system

Idea ZGDPS-I-211 and ZGDPS-I-269



```
VPCPSTLM                               Modify LCP IPL Information                               BZK1

  Actions:  S Select                               System Name:  AZP3

  IPLtype  IPLmode  IPLset  Load  Load  Flags
                Addr  Parms  L....
-  RC1      NORMAL    7FC2  7FC3M1  N....
-  RC1      ABNORMAL  ****  ****M1  N....
-  RC1      XYZ       7FC1  7FC1M1  N....
-  NOTRANSL DEMO     1234  1234P3  Y....
-  NOTRANSL DEMO2    4321  4321P3  N....

                                                                 Row 1 of 5

F1=Help  F3=Return  F6=Roll  F7=Up   F8=Down
```

Running validation of current data



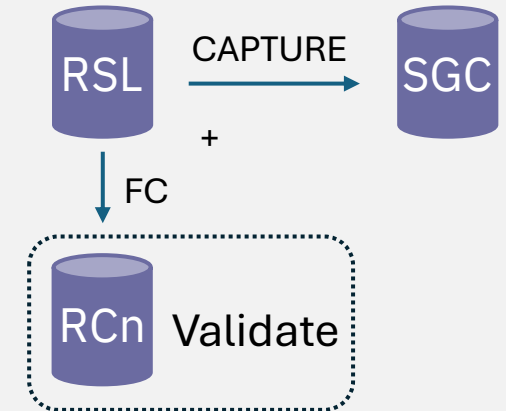
Current LCP IPL info is used for validation-based IPL

Combined Capture and Validation:

- Perform a SGC capture with a direct FlashCopy to RC(n) in the same window
- Perform validation on recovery systems
- Flag validity of new capture and older captures

LCP=CAPTURE PROFILE(*mp_name*) VALIDATE(1) RC(*n*) [NOCLEANUP]

- By default, the systems are cleaned up and RC(n) will be FlashCopy withdrawn on successful Type 1 validation
- **NOCLEANUP** keyword can be used to request that GDPS **not** clean up the vault after a successful validation operation

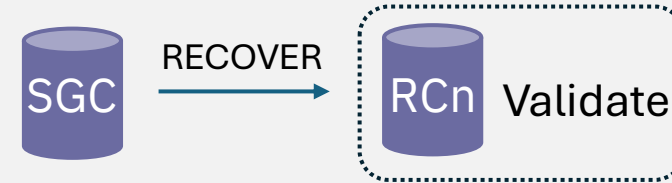


Running validation of existing captures/data



Recovered SGC Capture Validation:

- Recover a tagged SGC to RC(n)
- Perform validation on recovery systems
- Flag validity of older captures



```
LCP=RECOVER PROFILE(mp_name) VALIDATE(1) RC(n)  
[NOCLEANUP] [IPLSRC(CAPTURE | IPLTYPE | LCPIPLTYPE)]
```

- By default, the systems are cleaned up and RC(n) will be FlashCopy withdrawn on successful Type 1 validation
- **NOCLEANUP** keyword can be used to request that GDPS **not** clean up the vault after a successful validation operation
- IPLSRC controls where the IPL info comes from
 - **CAPTURE** – (default) IPL information saved from the LCPIPLTYPE at the time of capture
 - **IPLTYPE** – IPL information is determined by the current IPLTYPE values
 - **LCPIPLTYPE** – IPL information is determined by the current LCPIPLTYPE values

Custom validation



- If ***NOCLEANUP*** keyword is used, validation remains in *open* status after successful Type 1 validation
- Additional custom validation can be performed at this time (TEL asset, etc)
- When custom validation is complete, tell GDPS the status of the validation and GDPS will record it and clean up the systems

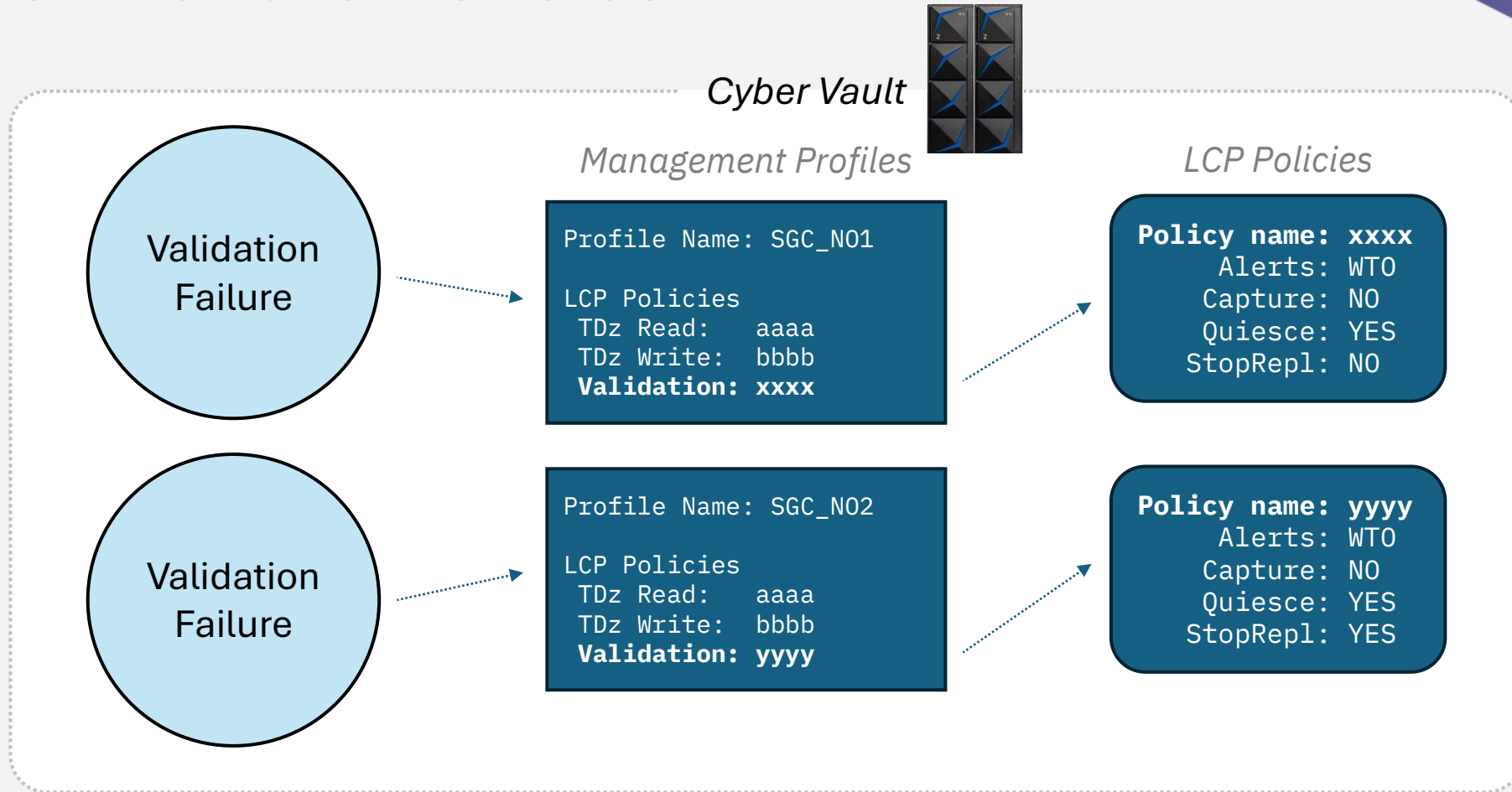


Validation cleanup

- Resets the systems and terminates the RC(n) relationship while optionally setting the completion status of any custom validation the client performs on the open validation
- The **STATUS** keyword can only be used if GDPS automated validation is not in 'running' state (Type 1 in R1) or the validation is left *open*.
- Executing the script during Type 1 validation or without specifying the **STATUS** keyword will result in an aborted validation.

```
LCP VALIDATE PROFILE(management_profile_name) CLEANUP RC(n)  
[STATUS(SUCCESS | FAILURE)]
```

Validation Failure Policies



The policy-based automatic CAPTURE will **NOT** be taken if the validation was performed with CAPTURE VALIDATE, since a new capture was already taken

Viewing capture validation status



```
VPCPLCS0          Logical Corruption Protection Safeguarded Captures          BZK1
Management Profile: GOLD_SGC_RS1          Latest Capture: 2026/01/25.19:07:53
Consistency Group: PRODUCTI.RS1          Captured/Expired: 17/17

Actions:  V olumes  I nfo  T ag  U ntag

Copy   Capture   Data Consistency   Volume   Flags   Latest Validation
Set    Seqno      UTC TimeStamp     Count   EITRPCV...  UTC TimeStamp
-      -          -                 -       -         -
001    69766A05   2026/01/25.19:07:53  384    YNNNNNN... Validation running
-      -          -                 -       -         -
001    69750F1B   2026/01/24.18:27:43  -       -         -
-      -          -                 -       -         -
001    69750BAC   2026/01/24.18:13:04  -       -         -
-      -          -                 -       -         -
001    697505DE   2026/01/24.17:48:18  -       -         -
-      -          -                 -       -         -
001    6974FD7F   2026/01/24.17:12:35  -       -         -
-      -          -                 -       -         -
001    6974FB78   2026/01/24.17:03:56  -       -         -
-      -          -                 -       -         -
001    6974F888   2026/01/24.16:51:24  -       -         -
-      -          -                 -       -         -
001    6974159E   *2026/01/24.00:43:10  -       -         -
-      -          -                 -       -         -
001    697408CA   *2026/01/23.23:48:26  384    YNNNNNN... ..
-      -          -                 -       -         -
001    69740740   *2026/01/23.23:41:52  384    YNNNNNN... ..
-      -          -                 -       -         -
001    697406BF   *2026/01/23.23:39:43  384    YNNNNNN... ..

Command/Filter ==>          Row 1 of 17
F1=Help    F3=Return  F4=MonData  F5=Refresh  F6=Roll  F7=Up  F8=Down
F9=CapTime F10=ValData
```

Data consistency timestamp at the time of capture
Asterisk means no data consistency timestamp available

Viewing capture information



```
VPCPLCI1          LCP Safeguarded Capture Information          BZK1
Management Profile: GOLD_SGC_RS1          Copy Set: 1
Consistency Group: PRODUCTI.RS1         Volume Count: 384

Capture Sequence Number: 69766A05
Capture TimeStamp: 2026/01/25.19:07:49 UTC
Data Consistency TimeStamp: 2026/01/25.19:07:53 UTC
User Impact Time: 0.581918 seconds

Expired: Yes
Expiration TimeStamp: 2026/01/25.19:08:49 UTC
Invalid: Recoverable
Tagged: No
Recovery: No
Partial: No
Capture In Doubt: No

New information
```

New information

Viewing capture information



```

VPCPLCI2                                LCP Safeguarded Capture Information                                BZK1

      Validation Status: Running
Latest Validation TimeStamp: 2026/01/25.19:07:55 UTC
Capture Used for Validation: 69766A05 (directly validated)

-----Captured IPLINFO-----          -----Validated IPLINFO-----
System      System      Load   Load      System      System      Load   Load
Name        Type        SA    Addr    Parms    Name        Type        SA    Addr    Parms
AZP3        ZOS          Y    1234    1234P3    AZP3        ZOS          Y    1234    1234P3
AZP4        ZOS          Y    1234    1234P4    AZP4        ZOS          Y    1234    1234P4
ACF1L       CF
AZP5        ZOS          Y    1234    1234P5    AZP5        ZOS          Y    1234    1234P5
AZP6        ZOS          Y    1234    1234P6    AZP6        ZOS          Y    1234    1234P6
ACF2L       CF
    
```

Page 2 of 2

F1=Help F3=Return F5=Refresh F6=Roll F7=Up F8=Down F10=ValData

Viewing validation data



```

VPCPLCS0          Logical Corruption Protection Safeguarded Captures          BZK1

Management Profile: GOLD_SGC_RS1          Latest Capture: 2026/01/25.19:07:49
Consistency Group: PRODUCTI.RS1          Captured/Expired: 17/17

Actions:  V olumes  I nfo  T ag  U ntag

Copy   Capture   Volume  Flags   Latest Validation
Set    Seqno      UTC TimeStamp  Count  EITRPCV...  UTC TimeStamp
-      -          -          -      -          -
001    69766A05    2026/01/25.19:07:49    384    YNNNNNN...  Validation running
-      -          -          -      -          -
001    69750F1B    2026/01/24.18:27:39    384    YNNNNNY...  2026/01/24.18:27:45
-      -          -          -      -          -
001    69750BAC    2026/01/24.18:13:00    384    YNNNNNY...  2026/01/24.18:13:06
-      -          -          -      -          -
001    697505DE    2026/01/24.17:48:14    384    YNNNNNY...  2026/01/24.18:07:32
-      -          -          -      -          -
001    6974FD7F    2026/01/24.17:12:31    384    YNNNNNN...  .....
-      -          -          -      -          -
001    6974FB78    2026/01/24.17:03:52    384    YNNNNNN...  .....
-      -          -          -      -          -
001    6974F888    2026/01/24.16:51:20    384    YNNNNNN...  .....
-      -          -          -      -          -
001    6974159E    2026/01/24.00:43:10    384    YNNNNNN...  .....
-      -          -          -      -          -
001    697408CA    2026/01/23.23:48:26    384    YNNNNNN...  .....
-      -          -          -      -          -
001    69740740    2026/01/23.23:41:52    384    YNNNNNN...  .....
-      -          -          -      -          -
001    697406BF    2026/01/23.23:39:43    384    YNNNNNN...  .....

Command/Filter ==>          Row 1 of 17
F1=Help    F3=Return    F4=MonData    F5=Refresh    F6=Roll    F7=Up    F8=Down
F9=ConTime    F10=ValData
    
```

Viewing validation data



```
VPCPLV00          Logical Corruption Protection Safeguarded Validation          BZK1
Management Profile: GOLD_SGC_RS1          Latest Capture: 2026/01/25.19:07:49
Consistency Group: PRODUCTI.RS1          Latest Validation: 2026/01/25.19:07:55

Actions:  I nfo

Validation          Cap          Status
UTC TimeStamp      Sec
- 2026/01/25.19:07:55 697 Running
- 2026/01/24.18:27:45 697 Success
- 2026/01/24.18:13:06 697 Open
- 2026/01/24.18:07:32 697 Success
- 2026/01/24.18:05:19 697 Success

Running Validation Type 1 is currently running
Success Validation completed successfully
Open Type 1 completed successfully. Left open for custom validation (NOCLEANUP specified)
Aborted Validation aborted by user
Failure Validation failed

Command/Filter ==>          Row 1 of 5
F1=Help  F3=Return  F5=Refresh  F6=Roll  F7=Up  F8=Down
```

Viewing validation info (*NOCLEANUP* omitted)



```

VPCPLVI1                                LCP Validation Information                                BZK1

Management Profile: GOLD_SGC_RS1
Consistency Group: PRODUCTI.RS1
Direct FlashCopy: RS(1) to RC(1)
Cleanup on Success: Yes
Validation Status: Running

Validation                               Starting                               Ending
Step                               Status                               TimeStamp
IPL                               Running

System                               System
Name                               Type   SA   CPC.LP
AZP3                               ZOS    Y   ST01.A
AZP4                               ZOS    Y   ST01.A
ACF1L                               CF      ST01.A
AZP5                               ZOS    Y   ST01.A
AZP6                               ZOS    Y   ST01.A
ACF2L                               CF      ST01.A

Values:
Y – Successful
N – Not started
R – Running
A – Aborted by user
F – Failure

Flags
DAL.. IPL Status
.YR.. Loading
.YR.. Loading
YY... Success
.YR.. Loading
.YR.. Loading
YY... Success
    
```

yellow when recovery copy set is actively in use for validation

D – Deactivate
 A – Activate
 L – Load

Flags

Viewing validation info (*NOCLEANUP* specified)



```

VPCPLVI1                                LCP Validation Information                                BZK1

Management Profile: GOLD_SGC_RS1          Capture Seqno: 69767A0D
Consistency Group: PRODUCTI.RS1          Capture Time: 2026/01/25.20:16:13
Recover: SGC(1) to RC(1)                 Data Consistency: 2026/01/25.20:16:17
Cleanup on Success: No                    Validation Start: 2026/01/25.20:17:21
Validation Status: Open                   Validation End: .....

Validation                               Starting                               Ending
Step      Status      UTC TimeStamp      UTC TimeStamp
IPL       Success    2026/01/25.20:17:21 2026/01/25.20:17:49
CUSTOM    Open        2026/01/25.20:17:49 .....

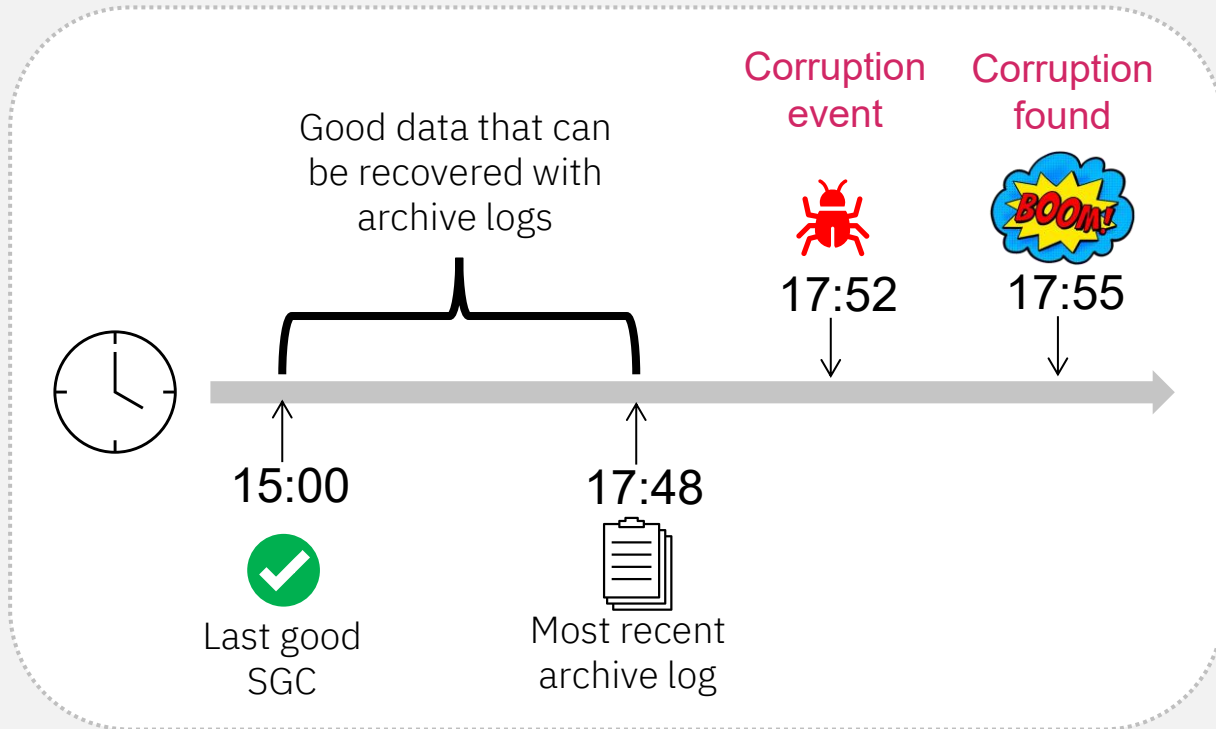
System      System      Load  Load  Flags
Name        Type       SA  CPC.LPAR  Addr  Parns  DAL.. IPL Status
AZP3       ZOS        Y  ST01.AZP3L 1234 1234P3 .YY.. Success
AZP4       ZOS        Y  ST01.AZP4L 1234 1234P4 .YY.. Success
ACF1L      CF         ST01.ACF1L           YY... Success
AZP5       ZOS        Y  ST01.AZP5L 1234 1234P5 .YY.. Success
AZP6       ZOS        Y  ST01.AZP6L 1234 1234P6 .YY.. Success
ACF2L      CF         ST01.ACF2L           YY... Success

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F1=Help F3=Return F5=Refresh F6=Roll F7=Up F8=Down
    
```

IPL step is successful and validation has been left *open* for custom validation

Capture and Restore Db2 archive logs



- Most recent good SGC at 15:00
- Archive logs available up to 17:48
- An additional 2 hours and 48 minutes of good data are potentially available reducing RPO to minutes

Capture and store Db2 archive logs

- Configure Db2 to archive logs as frequently as possible
- Depending on number of Db2 data sharing members, archive logs should be generated every 4 to 8 minutes
- **IBM Db2 Recovery Expert Pro for z/OS** creates immutable copy of the archive logs



1. Move to secured cloud storage
2. Separate mirroring and capture sessions (GDPS support position TBA)
3. Write to WORM on TS7700 (future)

The combination of the restored SGC plus the stored archive logs should bring the **RPO down to single digit minute range**

NOTE: Db2 used for illustrative purposes. Similar tools/techniques are available for other subsystems

LCP Manager Capture Scheduler



Capture scheduler

- Ability to use LCP to schedule captures rather than using an external scheduler
- GDPS to auto allocate schedule times based on frequency and number of profiles or set manually if preferred

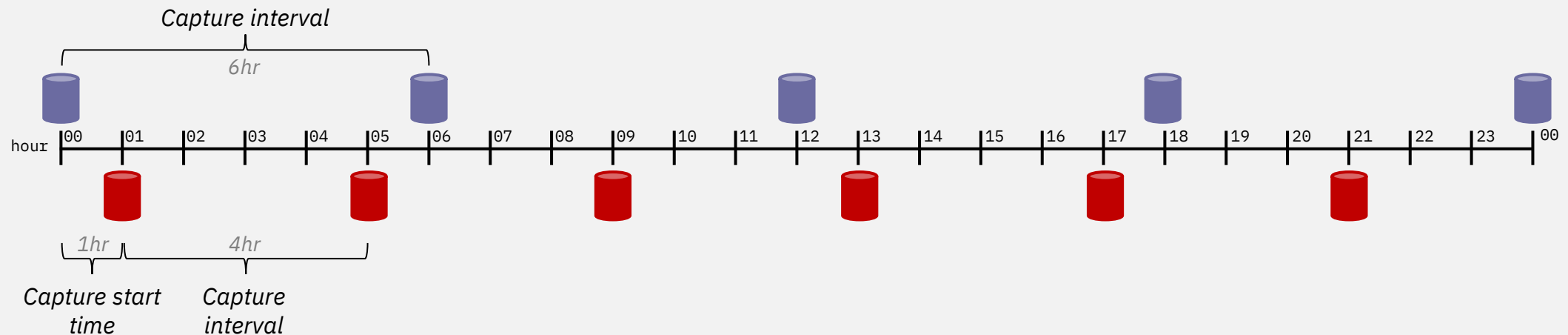
Capture Scheduler *(applies to all SGC profiles)*

- **MANUAL** Capture Start Times are manually specified
- **AUTOMATIC** Capture Start Times are automatically calculated to spread captures as much as possible

Capture Start Time is automatically calculated to spread captures as much as possible

Management Profile #1
Capture Interval: **HOURL(6)**

Management Profile #2
Capture Interval: **HOURL(4)**





Retry of Automatic Captures

- Adds automatic retry logic for failed LCP scheduled captures
- New parameters: Retry Delay (time between retries) and Retry Count (max attempts)
- Retries triggered only for specific transient failures (e.g., lock issues, active scripts)
- No retries for script-based or policy-based captures
- Introduces new messages for scheduling, retries, and failures
- Updates UI panels, profiles, and scheduler to support retry tracking
- Goal: reduce missed captures and manual intervention

Capture Interval: NO	Enable automated captures
Capture Start Time: AUTO	Start UTC time of capture schedule
Capture Retry Delay: MINUTE(1)	Time between capture retry attempts
Capture Retry Count: 3	Number of capture retry attempts



Questions?

Additional Information



Websites:

- GDPS <https://www.ibm.com/products/gdps>
- IBM Z <https://www.ibm.com/z>
- IBM Z Resiliency <https://www.ibm.com/z/resiliency>
- Storage <https://www.ibm.com/storage>
- Redbook – GDPS Family: An Introduction to Concepts and Capabilities <http://www.redbooks.ibm.com/abstracts/sg246374.html?Open>

GDPS Website resources

- GDPS: The Enterprise Continuous Availability / Disaster Recovery Solution white paper
- GDPS Pre-requisite Information
- GDPS Training Schedule Links
- GDPS Hardware Qualification Letters
- E-mail: gdps@us.ibm.com



The image features a 3D rendered background composed of several large, light gray triangular facets that meet at a central point, creating a star-like or crystalline pattern. A prominent triangular facet in the upper center is filled with a solid, light purple color. The words "Thank You!" are rendered in a bold, white, 3D sans-serif font, appearing to be raised from the surface of the facets. The word "Thank" is on the left and "You!" is on the right, both slanted slightly to follow the perspective of the facets.

Thank You!