

What's new/changed in GDPS 4.3?

On March 31, 2020, IBM® has made available Version 4 Release 3 of GDPS® Metro, GDPS Metro HyperSwap® Manager, GDPS Global - GM, GDPS Metro Global - GM, GDPS Global - XRC and GDPS Metro Global - XRC.

In addition, GDPS Continuous Availability Version 2 Release 3 has also been released on 31st March 2020.

This document describes at a high level:

- ▶ New function and changes in GDPS V4.3 solutions, including new function added in GDPS V4.2 via Small Programming Enhancement (SPE) APARs.
- ▶ New function and changes in GDPS Continuous Availability V2.3 plus significant new functions introduced in GDPS/A-A V2.2 via SPE APARs.
- ▶ Preview of items planned to be released via SPE APARs in the coming months.
- ▶ Any formal GDPS Statements of Direction beyond the preview of planned SPEs already mentioned.
- ▶ End of support information for GDPS releases.

What's new or changed in GDPS Metro V4.3

The following new capabilities or procedures have been included in the GDPS Metro V4.3 solution or as small programming enhancements through the service stream since GDPS Metro 4.2 was made available:

Attention: To coexist with GDPS Metro 4.3, all images with GDPS Metro 4.2 installed must have a required set of PTFs installed before migrating the first system to GDPS Metro 4.3. See GDPS V4R3 PSP for details.

- ▶ GDPS LCP Manager has been extended with the following capabilities:
 - Support for the DS8000[®] Safeguarded copy function
 - LCP Management profiles that enable the following characteristics to be defined:
 - Profile Name
 - Retention period before the capture is classed as expired
 - Minimum interval between captures to prevent flooding the storage with bad captures after a corruption event
 - Capture type
 - Maximum reservation and check-in times in the case of a Safeguarded Copy capture
 - Support for a GDPS Metro LCP capability with physical isolation between the HA/DR disk and the LCP disk. This topology exploits an LCP Manager running on a GDPS GM environment with a GM session providing the data feed between the HA/DR and LCP environments.
 - Script statements to drive the following actions in the LCP environment
 - Capture a point in time copy
 - Recover a point in time copy
 - Release expired copies
 - Terminate the recovery of a point in time copy
 - In the case of a FlashCopy[®] created LCP capture, restore a capture over the original source devices
 - The ability to tag a specific capture within a profile to be the target of a future script action
 - A mechanism to protect devices from being inadvertently (or deliberately) removed from the GDPS configuration
- ▶ A number of workflow enhancements have been introduced in GDPS Script processing as follows:
 - The ability to start a script at any statement within the defined script
 - The ability to inject a request to stop a script before the next script statement is initiated
 - Highlighting any script that has a failed script indicator, that includes those where a stop request has been injected
 - The ability to clear any indication of a script that has had a stop request injected, or where a script has failed

Note: The ability to inject a stop request does *not* cause the currently executing step of the script to be terminated.

- ▶ GDPS Health Checks have been enhanced specifically in relation to z/OS[®] Proxy-managed systems. All GDPS Health Checks, with the exception of GDPS_Check_K_SYS_LPAR and GDPS_Check_SDM_CAP have been enabled and where necessary adapted to run on the z/OS Proxy-managed systems. Note that not all aspects of all checks are relevant to the z/OS Proxy-managed systems.

In addition to the checks modified to execute on the z/OS Proxy-managed systems, the following new capabilities are also introduced to GDPS Health Checks or Health Check processing:

- The GDPS_Check_CONFIG check is updated to analyze the CTC configuration between the GDPS Controlling Systems and the z/OS Proxy-managed systems. The following aspects are checked:
 - Two or more CTCs defined and available
 - The two or more CTCs defined are not sharing the same FICON[®] CHPIDs.
- From the GDPS Controlling System interface (GUI or 3270) the ability to look at a summary of the Health Check status and execution results on the z/OS Proxy-managed guests is provided.
- ▶ A configuration wizard has been added to the GDPS GUI to aid clients in the customization of key GDPS files that are based on an XML format. The files supported are as follows:
 - GEOGROUP
 - GDPS Options
 - GEOPARM
 - GDPS Scripts

The value provided by the configuration wizard includes real time syntax validation, auto completion assistance and live documentation for the file and configuration being processed.

- ▶ GDPS Role-based security has been introduced via an SPE on GDPS Metro 4.2 and is included in the base of GDPS 4.3. This new capability enables you to define and protect a number of resources associated with GDPS Standard Actions and the SYSPLEX script statement using an XFACILIT class and associated access profiles.
- ▶ An enhancement has been made in the performance of the processing on the Alternate Controlling System when retrieving HMT data from the Master Controlling System.
- ▶ A number of enhancements have been made to aid in problem determination in a GDPS Metro xDR environment. These are:
 - The ability to determine the xDR maintenance level directly from GDPS
 - The ability to perform 'get xdrstatus' directly from GDPS
 - The ability to perform 'get xdrlogs' directly from GDPS
- ▶ Support has been provided in GDPS Metro, via 4.2 SPE to provide a DR capability for the IBM Db2[®] Analytics Accelerator on Z running in a Secure Service Container.
- ▶ GDPS Support has been delivered via an 4.2 SPE for FREEZE/RUN support of FB disks using the xDR protocol. This support also requires specific DS8000 levels and capability packages to be installed.
- ▶ The GDPS Virtual Appliance, which is based on GDPS Metro has been refreshed both for the containerized z/OS system and the NetView[®], System Automation and GDPS software levels. In addition, support is added for zVM SSI Live Guest Relocation and KVM on IBM Z[®] as a new hypervisor.
- ▶ Support for the GDPS interface with the Discovery Library Adapter has been removed.

- ▶ The ability for GDPS to include management of the LOGR CDS has been removed. This will result in the LOGR CDSes always being excluded from GDPS control.
- ▶ Support has been provided in GDPS via a 4.2 SPE for the z/OS v2.4 Logger Single-system Scope CDS capability that allows definition of up to two unique logger CDS types, LOGRY and LOGRZ, each to be used by one of the GDPS Controlling Systems. This then allows use of log stream capabilities and technologies such as for SMF data on the GDPS Controlling Systems as well as tools and utilities to extract log data.
- ▶ The **GDPSIVP** command has been enhanced to provide improved, context sensitive, diagnostic help to users implementing the GDPS GUI.

New or updated GDPS Tools for GDPS Metro

- ▶ A new version of the GDPS Preserve Mirror Tool (PMT) is made available for single leg configurations in GDPS Metro, Metro Global - GM and Metro Global - XRC to help introduce changes (addition or deletion) to the GDPS managed PPRC configuration. The new version of PMT is more integrated into the GDPS solution than in the past and is only supplied as part of the GDPS distribution and in compiled REXX code. Support for the new PMT will be via GDPS support cases.

Note: The new PMT will additionally be rolled back to GDPS V4.1 and V4.2 environments.

What's new or changed in GDPS Metro HM V4.3

The following new capabilities or procedures have been included in the GDPS Metro HyperSwap Manager V4.3 solution or as small programming enhancements through the service stream since GDPS Metro HM V4.2 was made available:

- ▶ A configuration wizard has been added to the GDPS GUI to aid clients in the customization of key GDPS files that are based on an XML format. The files supported are as follows:
 - GEOGROUP
 - GDPS Options
 - GEOPARM

The value provided by the configuration wizard includes real time syntax validation, auto completion assistance and live documentation for the file and configuration being processed.

- ▶ The **GDPSIVP** command has been enhanced to provide improved, context sensitive, diagnostic help to users implementing the GDPS GUI.
- ▶ An enhancement has been made in the performance of the processing on the Alternate Controlling System when retrieving HMT data from the Master Controlling System.

What's new or changed in GDPS Global - XRC V4.3

The following new capabilities or procedures have been included in the GDPS Global - XRC V4.3 solution or as small programming enhancements through the service stream since GDPS XRC V4.2 was made available:

- ▶ GDPS Global - XRC support for recovery of devices in alternate subchannel sets is extended to include recovery of XRC secondary devices defined in subchannel set 1.
- ▶ The GDPS RESTful API has been extended for use in a GDPS Global - XRC environment for standard or common functions with GDPS Metro. This does not include direct replication management, but invocation of scripts to achieve this is possible. In addition, a service to provide the XRC status is provided.
- ▶ A number of workflow enhancements have been introduced in GDPS Script processing as follows:
 - The ability to start a script at any statement within the defined script
 - The ability to inject a request to stop a script before the next script statement is initiated
 - Highlighting any script that has a failed script indicator, that includes those where a stop request has been injected
 - The ability to clear any indication of a script that has had a stop request injected, or where a script has failed

Note: The ability to inject a stop request does *not* cause the currently executing step of the script to be terminated.

What's new or changed in GDPS Global - GM V4.3

The following new capabilities or procedures have been included in the GDPS Global - GM V4.3 solution or as small programming enhancements through the service stream since GDPS GM V4.2 was made available:

- ▶ Toleration support for FlashCopy onto GDPS-managed GM primary is provided.
- ▶ The **GDPSIVP** command has been enhanced to provide improved, context sensitive, diagnostic help to users implementing the GDPS GUI.
- ▶ A number of workflow enhancements have been introduced in GDPS Script processing as follows:
 - The ability to start a script at any statement within the defined script
 - The ability to inject a request to stop a script before the next script statement is initiated
 - Highlighting any script that has a failed script indicator, that includes those where a stop request has been injected
 - The ability to clear any indication of a script that has had a stop request injected, or where a script has failed

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What's new or changed in GDPS Metro Global - XRC V4.3

In addition to the new functions provided in the individual products that constitute the GDPS Metro Global - XRC offering, the following new capabilities or procedures have been included in the GDPS Metro Global - XRC V4.3 solution or as small programming enhancements through the service stream since GDPS MzGM 4.2 was made available:

- ▶ A number of enhancements have been made to GDPS MzGM High Availability support. This includes the following:
 - in MzGM 4-site configurations support is provided for HyperSwap for the XRC secondary devices
 - Support is introduced for dual master controlling systems in an MzGM 4-site configuration
 - Automated REFRESHS performed to ensure SDM pointers are updated to the swapped-to disk
 - Redirection of SNA communication
 - Enhancements have been made for Heat Map Transfer support to support HyperSwap of the Metro Mirror devices in both the MzGM 3-site and 4-site environments.
- ▶ LCP support for GDPS Metro in MzGM configuration – virtual isolation active in the current application region
- ▶ The following has been introduced to speed up the overall GDPS MzGM region switch time:
 - Use of STOP SESSON DRAINCLIP to avoid overhead of XRECOVER processing

What's new or changed in GDPS Metro Global - GM 4.3

In addition to the new functions provided in the individual products that constitute the GDPS Metro Global - GM offering, the following new capabilities or procedures have been included in the GDPS Metro Global - GM v4.3 solution or as small programming enhancements through the service stream since GDPS MGM V4.2 was made available:

- ▶ The **CHGGMSITE** command has been reinstated to GDPS V4.1, V4.2 and V4.3 after it was erroneously removed in GDPS V4.1.
- ▶ Support for the IBM Db2 Analytics Accelerator on Z (IDAA on Z) running in a Secure Service Container in an MGM 3-site configuration is introduced.. Note that this requires a specific level of IDAA on Z that contains the required support. Refer to GDPS PSP for further information on the level required.
- ▶ Toleration for FlashCopy onto GM primary is available in a GDPS Metro Global - GM environment.

What's new or changed in GDPS Continuous Availability 2.3

The following new capabilities or procedures have been included in the GDPS Continuous Availability 2.3 solution and enhancements delivered as small programming enhancements through the service stream for GDPS CA 2.2:

- ▶ A number of workflow enhancements have been introduced in GDPS Script processing as follows:
 - The ability to start a script at any statement within the defined script
 - The ability to inject a request to stop a script before the next script statement is initiated
 - Highlighting any script that has a failed script indicator, that includes those where a stop request has been injected
 - The ability to clear any indication of a script that has had a stop request injected, or where a script has failed

Note: The ability to inject a stop request does *not* cause the currently executing step of the script to be terminated.

- ▶ A number of small reliability, availability and serviceability (RAS) improvements have been made throughout the GDPS CA solution.
- ▶ The GDPS CA Zero Data Loss solution for DB2-based workloads has been extended to provide support for zero data loss at distance through the use of a Global Mirror leg to transport the required data over unlimited distance. This support requires the DS8000 read from GM secondary function.
- ▶ The **GDPSIVP** command has been enhanced to provide improved, context sensitive, diagnostic help to users implementing the GDPS GUI.
- ▶ The GDPS RESTful API has been extended to provide functions for GDPS CA:
 - Common functions with GDPS Metro
 - Many CA-specific functions such as Workload information, Latency information, ZDL status, Replication status, Switch status, Change Master function, Controller info and more besides are available.

Functions to be removed in the next release of GDPS

The following items are planned to be removed in the next release of GDPS:

- ▶ There are no items to be announced at this time as being planned to be removed in the next release of GDPS.

GDPS Statements of direction

There are no formal GDPS statements of direction at this time. For your planning purposes, “GDPS Small Programming Enhancements (SPE) Preview” includes a number of specific enhancements that are expected to be released within the coming months.

GDPS Small Programming Enhancements (SPE) Preview

The following SPEs are currently planned to be release in the coming months through the GDPS service stream:

- ▶ A number of GDPS Security Enhancements are planned:
 - GDPS Standard Actions rollout to GDPS Continuous Availability and GDPS Global - GM
 - GDPS security enhancements for Logical Corruption Protection
 - Securing the GDPS Main menu options via XFACILIT class in SAF
- ▶ Extension of the GDPS RESTful API to GDPS GM and MGM solutions
- ▶ GDPS Procedure Handler extension to provide an exception report to highlight any anomalies in the GDPS environment prior to execution of procedures such as those required for a region switch.
- ▶ GDPS LCP Manager extensions are planned as follows:
 - The GDPS LCP Manager feature is planned to be included on a GM code base to support Safeguarded copy capability. This delivers support for the following LCP topologies:
 - Physical isolation for MM2SITE topology
 - Virtual isolation for GM2SITE topology
 - LCP Manager GM phase 2 (FCSet support)
 - Enhanced error handling capabilities
 - Automatic handling of extent pool and backup volume exhaustion events
 - LCP Capture enhancements
 - MGM 4-site region switch enhancements
- ▶ GDPS Health Checks enhancements are planned as follows:
 - Dynamic Data Space usage for CANZLOG
 - Channel recovery path setting
 - CFRM message-based manager role check
- ▶ Support for the IBM Db2 Analytics Accelerator on Z (IDAA on Z) running in a Secure Service Container in an MGM 4-site configuration is planned to be introduced.
- ▶ GDPS Metro Global – XRC region switch RTO enhancement
 - Parallel processing of CopyOnce data movers
- ▶ GDPS Continuous Availability is planned to be enhanced to support the ROUTING SWITCH command for VSAM replication based workloads

End of support

- ▶ In accordance with the GDPS “n, n-2” support policy, support for GDPS V4.1 will be discontinued on March 31, 2021 and also note that support will be discontinued for GDPS V4.2 on March 31, 2022.



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