

TotalStorage Productivity Center for  
Replication V3.4.1.1



# Release Notes<sup>®</sup>

*Version 3 Release 4.1.1*



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Replication V3.4.1.1



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**Note**

Before using this information and the product it supports, read the information in "Notices," on page 7.

**First Edition (September 2008)**

This edition applies to the IBM Total Productivity Center for Replication V3.4.1.1 release and to all subsequent releases and modifications until otherwise indicated in new editions.

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## About this release

This document contains the release notes in support of TotalStorage® Productivity Center for Replication V3.4.1.1 release and to all subsequent releases and modifications until otherwise indicated in new edition.

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## Prerequisites

Prerequisites for this release are the same as for TotalStorage Productivity Center for Replication V3.4.

**Note:** Connecting DS8000™ storage systems using the Hardware Management Console (HMC) on TotalStorage Productivity Center for Replication version 3.4.1.x will not be officially supported until the DS8000 version 64.1.x.x is released. For more information about DS8000 release dates, see the DS8000 Code Bundle Information Web Site ([http://www.ibm.com/support/docview.wss?rs=0 &q1=bundle+code&q2=ds8000&uid=ssg1S1002949&loc=en\\_US&cs=utf-8&us&lang=en](http://www.ibm.com/support/docview.wss?rs=0&q1=bundle+code&q2=ds8000&uid=ssg1S1002949&loc=en_US&cs=utf-8&us&lang=en)).



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## Fixes

**ESS800, DS6000™, and DS8000 paths for copy services appear to get established with consistency group mode enabled even if the relationships are supposed to be Global Copy relationships.**

This issue was addressed by APAR IC57623.

Global Copy pairs do not need the consistency group mode enabled. This could affect your application if there is an error on a secondary volume. Since Global Copy is typically set up to have minimal application impact, TotalStorage Productivity Center for Replication needs to ensure that if the relationships are Global Copy relationships, the consistency group mode is disabled.

This flash ensures that if TotalStorage Productivity Center for Replication establishes Global Copy relationships on an ESS800, DS6000, and DS8000 storage system, that the paths are reestablished with the consistency group mode disabled.

**Note:** An exception to this is when the paths are shared with Metro Mirror relationships that are also managed by the same TotalStorage Productivity Center for Replication server.

Until the program temporary fix (PTF) is applied, you can avoid this problem if you query the consistency group using either the DSCLI command, ICKDSF utility, or the TSO command to ensure that the consistency group mode is disabled. This query should be done after any configuration changes to the session or Start commands done to a session as well as after any changes to the copy services using copy services management tools outside of TotalStorage Productivity Center for Replication, such as DSCLI.

If the consistency group setting is already enabled, applying this fix pack will not cause the setting to automatically be disabled. The paths will need to be reestablished using either TotalStorage Productivity Center for Replication or the DSCLI command to be disabled.

It is recommended all customers running sessions using Global Mirror issue the DSCLI, ICKDSF, or TSO queries to determine if the consistency group is currently enabled.

**A potential loss of data might occur during a Terminate to a TotalStorage Productivity Center for Replication session using ESS800, DS6000, and DS8000 FlashCopy® relationships**

This issue was addressed by APAR IC56828.

When you issue a **Terminate** command to a TotalStorage Productivity Center for Replication session using ESS800, DS6000, and DS8000 FlashCopy relationships, where the targets of those FlashCopy relationships are connected to a host application applying writes, the **Terminate** command to this session could result in a potential loss of data. After a FlashCopy is successfully issued, the target of the FlashCopy relationship is available immediately for writes. When the relationship on the hardware is withdrawn, even if the background copy is complete, the ESS800, DS6000, and DS8000 storage system will discard all cached data at

the time of the terminate. If new writes are being written to the FlashCopy target, those writes could potentially be in cache and thus discarded, causing a loss of data.

Metro Mirror Failover/Failback with Practice session and Global Mirror Failover/Failback with Practice session use FlashCopy relationships in which the host volume on Site 2 is a target of a FlashCopy relationship to enable you to practice what you would do in a disaster. If you use these sessions and switch the application to site 2 to begin to write data to the H2 (Host at Site 2) volumes, you should not issue a **Terminate** command to the TotalStorage Productivity Center for Replication session or issue a terminate for the FlashCopy relationships using another copy services management tool (such as the DSCLI command).

This fix addresses this issue by no longer making the FlashCopy relationships between the I2 and H2 volumes persistent on both the Metro Mirror Failover/Failback with Practice session and Global Mirror Failover/Failback with Practice sessions. Because the relationships are no longer persistent, when the background copy completes, the relationships will be removed from the hardware automatically, and the **Terminate** command will not affect the H2 volumes.

The **Flash** command on the Metro Mirror Failover/Failback with Practice session will no longer establish the relationships with Incremental either as persistence is needed to do an incremental copy. A full copy will be done every time the I2 to H2 FlashCopy is issued. Also, a full copy will be done in returning the application to the H1 host after having run on the H2 host. If a FlashCopy relationship from I2 to H2 already exists at the time that this PTF is applied, it is recommended that you issue another **Flash** command to the session in order to make the I2H2 relationship no longer persistent.

**A database query failed and caused TotalStorage Productivity Center for Replication to issue a FlashCopy in the wrong direction on a Global Mirror Failover/Failback with Practice session.**

This issue was addressed by APAR IC56705.

Because of the query failure, TotalStorage Productivity Center for Replication used a default direction which was incorrect and caused the FlashCopy to reverse the source and target. This PTF addresses this problem so that if a database query fails, a default will not be used and instead the command will fail. This will prevent a relationship from being established in the wrong direction using a target that is not wanted.

**A timing issue was found when running a session using Global Mirror that causes as restarted session to transition into a Suspended state.**

This issue was addressed by APAR IC56705.

Even though the restart of the session is successful, due to this timing issue the session might end up in a Suspended state. If an event causes the sessions state to get processed internally after the **Start** command has been issued, but before the first pass has completed, the session might see the H1J2 pairs as Suspended and transition the session. This PTF addresses this issue by no longer causing the session to transition back to a Suspended state if the session is in the middle of a restart.

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## Known issues and workarounds

This section describes current known issues with Version 3.4.1.1 and associated workarounds.

**For any DS8000 devices connected to an HMC, the heartbeat could trigger a freeze on the hardware and application impact for the duration of the long busy timeout timer, if the HMC is shut down for any reason**

When connecting to a DS8000 using an HMC device versus a direct connection via Ethernet, caution should be used when activating the heartbeat between the TotalStorage Productivity Center for Replication server and the DS8000. On the Advanced Tools panel, the server's heartbeat can be enabled. If any DS8000 devices are connected using an HMC, the heartbeat could trigger a freeze on the hardware and application impact for the duration of the long busy timeout timer, if the HMC is shut down for any reason. Since the HMC is external to the actual DS8000 device there may be situations where the HMC shuts down or needs to be shut down, such as in a microcode upgrade.

If an HMC connection is necessary to support an IPV6 environment, and the heartbeat function is required, it is recommended to always use a dual HMC configuration to help guarantee that one of the HMC devices is connected.

If planned maintenance is necessary on the HMC, it is strongly recommended that the you disable the heartbeat function on the TotalStorage Productivity Center for Replication server while the maintenance is performed.

If the HMC you use to connect to the DS8000 needs to go down frequently or ends up rebooting frequently, it is recommended that the TotalStorage Productivity Center for Replication server heartbeat be disabled unless absolutely required and the risk of application impact due to a non-disaster related shutdown has been properly assessed.

If the heartbeat is vital for your application, than the recommended interface would be a direct connection interface unless IPV6 is also required.

**The TotalStorage Productivity Center for Replication server may need to be restarted if the Metro Global Mirror session fails to update the pair state.**

There is a known issue when running a TotalStorage Productivity Center for Replication Metro Global Mirror session and the H2 volumes are connected using an HMC connection that loses connectivity. Due to the disconnect the pairs using the H2 volumes will show as unknown, but after connectivity is regained to the HMC, the pairs might remain in an unknown state. The problem is due to an internal deadlock in the processing code. If the pairs fail to update their pair state and the session fails to respond to commands, then restart the TotalStorage Productivity Center for Replication server.

**Rebooting a logical partition on the DS8000 device briefly causes a loss in connectivity to the TotalStorage Productivity Center for Replication**

There is a known issue when running TotalStorage Productivity Center for Replication with a DS8000 device connected using an HMC device and a

logical partition (LPAR) on the DS8000 is quiesced and resumed. It appears that when the LPAR is resumed, TotalStorage Productivity Center for Replication briefly loses connectivity to the DS8000 device. If the TotalStorage Productivity Center for Replication server has the heartbeat enabled to the device this could lead to a freeze and application impact for the duration of the long-busy timeout timer.

If an LPAR needs to be quiesced and the heartbeat function on the TotalStorage Productivity Center for Replication server is required, it is highly recommended that the heartbeat be disabled during the quiesce and not be re-enabled until after the LPAR is resumed.

**After several reboots and restarts of the HMC, the console logs indicate that the DS8000 communication has been lost.**

There is a known issue when running TotalStorage Productivity Center for Replication with a DS8000 device connected using an HMC, and the HMC is rebooted or restarted while TotalStorage Productivity Center for Replication is connected, the connection might appear to disconnect and reconnect several times before finally keeping the connection. The console logs will state that the communication is lost to the device and followed shortly by the device being accessible.

If it is necessary for the HMC to be rebooted or upgraded and the heartbeat on the TotalStorage Productivity Center for Replication server is enabled, it is recommended that the TotalStorage Productivity Center for Replication heartbeat is disabled prior to rebooting the HMC to prevent the heartbeat from causing a freeze that will impact application for the duration of the long busy timeout timer.

**While modifying your single HMC configuration to a dual HMC configuration, the DS8000 device might be temporarily disconnected.**

There is a known issue when running TotalStorage Productivity Center for Replication with a DS8000 device connected using a single HMC. If you modify the connection to add a secondary HMC in a dual HMC configuration, the connection to the device might be temporarily lost. In order to modify the connection from a single HMC to a dual HMC, TotalStorage Productivity Center for Replication must break the connection to the device, and then reestablish the connection. This causes the device to show as disconnected until the new dual connection is complete.

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## Appendix. Notices

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