CUSTOMER ADVISORY

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FE040422_CW01 REVISION: 0
Release of HSG60/HSG80 ACS V8.7-5, V8.7-6 Patches

RELEASE DATE: 22 April 2004

DESCRIPTION

PATCH V8.7-4

This is a special use patch which was released for a DRM configuration which is run in expedited mode with OpenVMS host mode ONLY. This special configuration is a restricted configuration which is not available for general use.

There is no applicability of this patch to other HSG60/80 customers. Because of the manner in which the ACS patch mechanism is implemented however, it is required that this patch be installed prior to the installation of any subsequent patches.

CUSTOMER USE and Restriction: If you already have set Expedited mode as your DRM operational mode, only one restart of the controllers will be required to apply and enable the patch. If you have the patch installed, and Expedited mode is changed from Off to ON or from ON to Off, you will have to restart the controller in order to allow the patch to appropriately reconfigure in response to the mode change.

This patch applies ONLY to customers that are running DRM/Continuous Access functionality of V87-1P firmware and have been authorized to use the EXPEDITED mode of DRM. The authorization for use of this functionality requires direct acknowledgement/approval of the DRM/CA Team in the ONLINE Storage Division. Any other use of this functionality is unsupported.

PATCH V87-5

The following has been corrected:

- Spontaneous HSG based controller crashes where Last Failure Code (LFC) = 011B0108 and the parameter below is seen:

```
Last Failure Parameter[7.]= 5C381E24
```

This patch MUST be installed if patch V87-4 is installed.

PATCH V87-6

The following problems are resolved with the release of the V8.7-6 patch:

- If a mirrorset membership is changed (up or down), there was an internal to controller memory leak that resulted. This may occur as a result of the following operations:

```
HSG >   RUN CLONE
HSG >SET Mx member = n
```

The following LFC crash codes have been experienced: 080B0100, 0B070100 and less frequently 01920186, 01942088:

- If there are devices with save_config information (initialized under ACS V8.5x) on a controller and the controller attempts a save configuration operation, there was an internal controller memory leak. Operations leading to this include:

HSG > RUN CLONE
HSG >SET Mx member = n

The ultimate result of running out of buffers is that the controller appears to lock up waiting for some to come free. It generally takes many weeks to loose resources in this manner in order to experience a HANG. The configuration save options occur any time the configuration is changed (add disks, split mirrorset, add mirror members).

- When manually moving a LUN via VMS console on an OpenVMS Cluster node by issuing the command below:

```
VMS> set device  /path_name/switch/
```

The destination path comes back as "not responding" and the unit will return back to controller side it was on.

- If you have a large number (128 or more) of storage objects created (LUNs and Storage containers), and then you set "Management Enable", the access list may show a change against one of the storage objects. The access list information gets overwritten internally.

SCOPE
ACS Engineering recommends that these patches be installed on all HSG60/80 based subsystems that are running with the V87-1 functionality.

RESOLUTION
Install these patches that are available on the external HP website as noted below:

If you presently are running the ACS V87-0 base release, this firmware was replaced by the ACS V87-1 base release. The above patches can NOT be installed on the V87-0 base release. Customers should contact Customer Services for assistance if they have the ACS V87-0 base release and have not received V87-1 cards in September 2002..

> Note: The ACS V87-1 code stream supports the concept of a single global patch which works for V87 F , G, L , P, and S variants of the firmware. As always, before a patch can be entered into a controller, the prior patches must have been entered. You may however load multiple patches in sequence at once, and then perform a single controller restart in order to install the patches. When restarting the controllers to get the patch installed into the runtime image, it is best to pick a timeframe where system load is not at its peak. V87-3 cards contain the V87-1 code stream image and the -2 and -3 patches.

HARDWARE PLATFORMS AFFECTED: Non-platform specific

COMPONENTS AFFECTED: Disk Storage Enclosures EMA16000, Disk Storage Enclosures MA6000 Fibre Channel

OPERATING SYSTEMS AFFECTED: Non-OS Specific

SOFTWARE AFFECTED: Other Storage Software StorageWorks Array Controller (ACS)

THIRD PARTY PRODUCTS AFFECTED: None

DOWNLOADABLE FILES: None

NOTICE: The information in this document, including products and software versions, is current as of the Release Date. This document is subject to change without notice.