

ECS Configuration Change Request

Page(s)

1. Originator Alla Lake	2. Log Date: 3/3/99	3. CCR #: 99-0199	4. Rev: -	5. Tel: 0626	6. Off: 2083	7. Org. DEV
8. Title of Change: Reuse Working Storage Platform RAID at GSFC						
9. Originator Signature <i>[Signature]</i>	10. Date: 3/3/99	11. Class II	12. Type: CCR	13. Need Date: 3/05/99		
14. Office Manager Signature <i>[Signature]</i>	15. Date: 3/3/99	16. Date CCB Decision Needed:	17. Category of Change: Update Baseline	18. Priority: Emergency Routine		
19. Documentation/Drawings Impacted: See attached at *1		20. Schedule Impact: N/A	21. CI(s) Affected: DRGHW, ACGHW, ICGHW, WKSHW			
22. Release Affected: 4PY	23. Date due to Customer: N/A	24. Impl. Date:	25. Effectivity of Change:	26. Est. Cost None		
27. Source Reference: <input type="checkbox"/> NCR (attach) <input type="checkbox"/> Action Item <input type="checkbox"/> GSFC CCR <input type="checkbox"/> Tech Ref. <input type="checkbox"/> Other:						
28. Description of Change: (use additional Sheets if necessary) Working Storage hardware is not needed at GSFC for the storage of Intern files, therefore it can be reused for other purposes to allow for significant performance improvements.						
29. Proposed Solution: (use additional sheets if necessary) Reuse WKS RAID as described in attachment *2.						
30. Alternate Solution: (use additional sheets if necessary) N/A						
31. Consequences if Change(s) are not approved: (use additional sheets if necessary) Expensive hardware will idle and the indicated performance gains will not be realized.						
32. Does Change Affect Any of the following (Please Explain on additional sheet): <input type="checkbox"/> Maintenance Training <input checked="" type="checkbox"/> Performance <input type="checkbox"/> Operation Training <input type="checkbox"/> Safety <input type="checkbox"/> Service <input type="checkbox"/> Support <input type="checkbox"/> Test <input type="checkbox"/> Baseline (XRP) <input type="checkbox"/> Y2K Compliance						
33. Organization(s) Affected: <input type="checkbox"/> CM <input type="checkbox"/> Clearcase SG <input type="checkbox"/> Contracts <input type="checkbox"/> Chief Eng <input type="checkbox"/> FOS <input type="checkbox"/> M&O <input type="checkbox"/> QO <input type="checkbox"/> Rel Dev <input type="checkbox"/> Procurement <input type="checkbox"/> RTSC <input type="checkbox"/> Sci. Data Eng <input type="checkbox"/> Security <input type="checkbox"/> Sys. Dev. <input checked="" type="checkbox"/> Sys. Eng. <input type="checkbox"/> Sys Verf Acpt <input type="checkbox"/> Other						
34. Site(s) Affected: <input type="checkbox"/> EDF <input type="checkbox"/> Mini-DAAC <input type="checkbox"/> VATC <input type="checkbox"/> EDC <input checked="" type="checkbox"/> GSFC <input type="checkbox"/> LaRC <input type="checkbox"/> NSIDC <input type="checkbox"/> SMC <input type="checkbox"/> AK <input type="checkbox"/> JPL <input type="checkbox"/> EOC <input type="checkbox"/> Other						
35. Board Comments:				36. Work Assigned To:		
37. Release Authorized (For CM Use Only): <input type="checkbox"/> Yes <input type="checkbox"/> No			38. CM Verified/Signature and Date			
39. EDP/REC2 CCB Chair (Sign/Date): <i>[Signature]</i> 5/18/99		40. Disposition: <input checked="" type="checkbox"/> App <input type="checkbox"/> Ap/C <input type="checkbox"/> DisApproved <input type="checkbox"/> Withdraw <input type="checkbox"/> Fwd/ECS <input type="checkbox"/> Fwd/ESDIS		41. ESDIS ERB Concurrence:		
42. ECS CCB Chair (Sign/Date):		43. Disposition: App <input type="checkbox"/> A/C <input type="checkbox"/> DisApproved <input type="checkbox"/> Withdraw <input type="checkbox"/>		44. CCR Closed Date:		

ADDITIONAL SHEET

CCR #: **99-0199** Rev: — Originator: Alla Lake

Telephone: 0626 Office: 2083

Title of Change: Reuse Working Storage Platform RAID at GSFC

*1 Documentation affected

- 1) Hardware Baseline Diagram for GSFC 920TDG001Rev07
- 2) Disk Configuration Drawings: Working Storage 922TDG018Rev2, ACG 922TDG001Rev3, DRG 922TDG 007Rev03 DRG 922TDG007Rev03, ICG 922TDG008Rev03.
- 3) DAAC SCSI Cable Management Plan 920TDG012Rev02

*2 Disk reuse rational - reuse of 30 disks out of 40 available. as well as the RAID assembly.

- 1) The total of 9 disks reuse. Use 2 disks as RAID1 mirrored pair on SP controller A1 for the placement of filesysdb for g0drg01 and 2 disks as RAID1 mirrored pair on SP controller A2 for the placement of filesysdb for g0drg02. Use 2 disks as RAID1 mirrored pair on SP controller B1 for the placement of amassjournal for g0drg01 2 disks as RAID1 mirrored pair on SP controller B2 for the placement of amassjournal for g0drg02. The use of these supplemental disks and controllers produces a 3-fold performance gain for file creates on each of the platforms (from 4 file creates per second to 12 file creates per second). Add one disk as a hot spare.
- 2) Use 3 disks as shared data1 custom code partition for g0icg01 and g0icg02 (2 disks mirrored and a hot spare). This would assure custom code agreement for both primary and secondary hosts during failover execution.
- 3) The total of 4 disks reuse. Move 2 disks as RAID1 mirrored pair to g0acg01 for the placement of filesysdb and 2 disks as RAID1 mirrored pair to g0acg01 for the placement of amassjournal. This space is not properly allocated in the current design for browse data and creating it on existing disk would cause performance degradation.
- 4) Move 5 disks to g0acg01 for use as AMASS cache for browse data.
- 5) Move 3 disks to g0acg01 for use as data1 custom code partition (2 disks mirrored and a hot spare). This would assure custom code agreement for both primary and secondary hosts during failover execution.
- 6) Use 3 disks to serve as a duplicate of the data1 partition on g0drg01 (2 disks mirrored and a hot spare). Use 3 disks to serve as a duplicate of the data1 partition on g0drg02 (2 disks mirrored and a hot spare). This would assure custom code agreement for both primary and secondary hosts during failover execution.

CM01A