ECS Configuration Change Request

CCR No. 98-0160	Logged Date 2/9/98	Rev. —	Request Type CCR
Priority Routine ☐ Urgent ☐ Emergency ☒		Affected Release	Change Class IN

Title (description)
Sybase OpenSwitch Software Evaluation

Documents Affected	Source Nos (RID, NCR, Action Item, GSFC CCR, etc.) or Tech Reference
N/A	N/A

RTM Change ☐ Start New Baseline ☐

Problem
DD&M need to define the failover process for the warm standby databases

NEED DATE 2/16/98

Proposed Solution
Bring In-house Sybase OpenSwitch Software for an evaluation period of 30 days. (see Attachment)

Install OpenSwitch on SUN Solaris machines judge and shelby.

Impact Analysis:

Organizations Affected:					
BOO ☐	Contracts ☐	ECS Chief Eng ☐	FOS ☐	M&O ☐	
Procurement ☐	QO ☐	Rel. Dev ☒	Rel. A ☐	Rel. C ☐	SCDO Arch ☐
Science Off ☐	Security ☐	Subcontrct ☐	Sys. Eng ☐	Sys Verf Acpt ☐	

Cost:	None ☒	Small ☐ (Not exceeding $100,000)	Medium ☐ ($100,000 to $500,000)	Large ☐ (Over $500,000)

Schedule: None ☐ Other

Additional LOC _____ Man-Months _____

Materials

Originator Linwood F. Moses Linwood F. Moses 2/6/98
Signature Date

Office Database Development Office Manager Maureen Muzanda 2/6/98
Signature Date

Disposition Approved ☒ Approved w/Comment ☐ Forward ☐ Disapproved ☐

Comments: No purchase until re-presented w/ eval results

CCB Chairperson Karl Frath 10 Feb 98
Signature Date

ORIGINAL

CM JRW

Sybase OpenSwitch Software Evaluation Plan
Attachment

Purpose
DD&M group need to define the failover process for the warm standby databases. Sybase's OpenSwitch software may assist in automating this failover process. The software features:
Transparent Migration which allows a client application to re-connect to the standby SQL server without disconnecting to the primary and then connecting to the secondary. The OpenSwitch also keeps track of the database context and transaction state without affecting the client
Connection Termination which ensures that all idle connections are terminated and not left as zombie processes.
Dynamic Configuration which allows all configurable features of the product to defined in an external configuration files that may be altered and re-read by the application without interruption of the client connections

Test Goals
This evaluation will aid DD&M in defining the failover process for the warm standby environment. DD&M will compare OpenSwitch solution against a manual failover process to determine which solution is a better implementation for the ECS environment. This evaluation will include
1) The amount of time for failover to occur
2) Any manual processes needed before switching to the standby databases
3) The effort to switch back to the primary database
4) Determine how appropriate the process integrates with the system failover procedures where applicable

Test Schedule
DD&M plans to complete the evaluation of Sybase OpenSwitch within 30 working days.

Test Environment
The test will be performed on the DD&M Development environment prototype machines.

Test Procedures
1. Setup a warm standby database in the development environment.
2. Establish a client connection and pump data through this connection
3. Halt the primary database connection
4. Detect the amount of data loss (if any)
5. Restart the primary database