

Cross-DAAC Software Upgrade Coordination Scenario

Scenario Description

- Scenario depicts the process of scheduling a software upgrade across DAACs.

Scenario Assumptions

- The ESDIS CCB has approved the ECS M&O software maintenance organization to make an upgrade to the Data Server Subsystem that will result in a new version of the ECS software suite at each of the three Release A DAACs.
- The software maintenance group at GSFC (SEO) makes the fixes and then starts the software test process.
- Each DAAC has a standard set of regression tests with test data that any software upgrade is run against.
- The DAACs have a standard regression test and data set to do inter-DAAC tests.

A. A CCR is generated by sustaining engineering for ESDIS CCB. The CCR contains a high level test plan and resource requirements for each DAAC.

SEO

B. Each of the DAACs and SMC evaluate the CCR and send comments into ESDIS CCB.

SMC

C. ESDIS CCB is held with DAACs on telecon. It is determined that the upgrade is required and must be implemented within the same day at all three operational DAACs. It is also determined that the testing can be done on a DAAC-by-DAAC basis and requires an inter-DAAC system test.

DAAC

SMC

ESDIS

SEO

The CCR is approved and sent to SMC for coordination. Any requirements or requests by the SMC or the individual DAAC to do parallel testing with ops prior to formal implementation is decided at this time as it would impact the time of implementation.

DAAC

SEO

D. After making the software fix, the maintenance team requests the creation of a new version of the Data Server Subsystem (DSS X.4). This is done through the CM process using the CM tool.

E. In parallel the maintenance team requests of the GSFC DAAC resource group the utilization of ops resources to test out DSS X.4. The resource group evaluates the utilization and schedules resources dedicated to the maintenance team.

DAAC

SEO

- F. Once the fix is tested to SEO's satisfaction, SMC approves the sending of the new software version to the DAACs for testing. This transmission is accomplished via the inter-DAAC network from the GSFC CM organization to the DAACs CM team.**

DAAC

SMC

- G. SMC uses Resource Planning tool to generate a ground event definition. SMC then uses the same tool to electronically transfer the ground event to the three DAACs.**

- H. The DAACs run this ground event requirement in their copy of the Resource Planning tool to evaluate for conflict.**

DAAC

SMC

- I. **SMC logs into the DAACs resource plan to have the plans available for the coordination process. The DAACs and SMC hold an ops telecon to coordinate the timing for placing the new version on the ECS system. This requires evaluation of required resources at each of the DAACs and, if priorities need to be adjusted to accomplish the task, a discussion and SMC decision on modifying priorities is made. The discussion involves scheduling both the test periods and the day on which the new version will be implemented.**

DAAC

- J. **Once a coordinated schedule for the system test and the upgrading of versions has been agreed upon, the rest of the scheduling is performed on a DAAC-by-DAAC basis up to the time of the inter-DAAC system test. The scenario for resource planning at the DAACs is covered by the Resource Planning scenario.**

DAAC

SMC

K. Each DAAC follows standard testing and CM procedures during the test phase. As the testing proceeds to the inter-DAAC test date, the DAACs and the SMC remain in contact to understand if there are any reasons to delay or modify the planned test date.

DAAC

SEO

L. The test conductor of the inter-DAAC test is from one of the DAACs or from the sustaining engineering organization at GSFC. SMC's role is to monitor the activities and be available to be involved in system level activities requiring priority decisions. The conduct of the test is between the DAACs. If the test fails, the process repeats itself, potentially all the way back to the maintenance team. (Software problems are tracked with the software trouble reporting system.) When the test is successful, would proceed to the next phase.

DAAC

SMC

SMC

M. The DAACs in conjunction with SMC decides on the exact time at which to switch over to DSS X.4. If there are potential problems associated with having different versions at the sites, the transition time may occur in a tight time window. If not, each DAAC has a window in which to accomplish the task.

DAAC

N. As each DAAC accomplishes the transition using standard CM process, they inform the SMC and the other DAACs.

DAAC