

SOP 19: Managing the Production Environment

Version 1

Revision History Log:

Prev. Version #	Revision Date	Author	Changes Made	New Version #
[none]	Oct. 2010	S. Danielson, W. Johnson, L. Sharman, G. Eckert, B. Moynahan	Initial version	1

1.0 Summary

In order for most SEAN deliverables to be disseminated to the public, they must be installed in the NPS production environment at I&M in Ft. Collins, Colorado. Certain of the deliverables must also be installed in production repositories, such as the NODC and the NPS Data Store. In order for this production content to be generated, various steps must be performed in SEAN's staging environment. Once content is built and verified in the staging environment, it gets copied to production for permanent storage and dissemination.

Most of the detailed SOPs in this protocol end with a reference to propagating the final deliverable into production. This is an implicit reference to this SOP. Not all deliverables are handled in the exact same manner, so methods for installing them into production vary.

2.0 Schematic of the Environments

Figure SOP 19.1 illustrates the major components in the SEAN staging and WASO production environments. (References are also made to SEAN's development and test environments. Details of their operation are not germane to moving deliverables from staging to production, and will not be discussed here.)

3.0 Components of the Environments

Major components of the staging environment include the Staging Directory, the Data Management Web Server, the Staging Database, and the Master Auxiliary Repository. The staging directory is a folder on SEAN's local file server used to collect submitted productions and feed them into validation and certification processes. The data management web server is an internal-only website holding applications used to: validate some deliverables; create certain deliverables; report information used as the basis for other deliverables; and actively track the status of all deliverables in process. The staging database is a SQL database used to hold the OC_D product and the status tables. The master auxiliary repository is a set of folders and files housed on the local SEAN file server. It contains all certified deliverables except for OC_D, which can only live on a database server.

The production environment consists of the Production Database, the Replica Auxiliary Repository, and the Production Web Server. The production database houses all final OC_D data. The replica auxiliary repository is a mirror of the staging auxiliary repository. (This is done because NPS security technicians do not permit the production environment to directly access

the staging auxiliary repository.) The production web server houses the public dissemination point. It draws content from the other two components.

Three additional production environments, which receive copies of certain items from the auxiliary repository, are AOOS, NODC, and the NPS Data Store. Delivering content to these repositories is SEAN's only role and responsibility in their management.

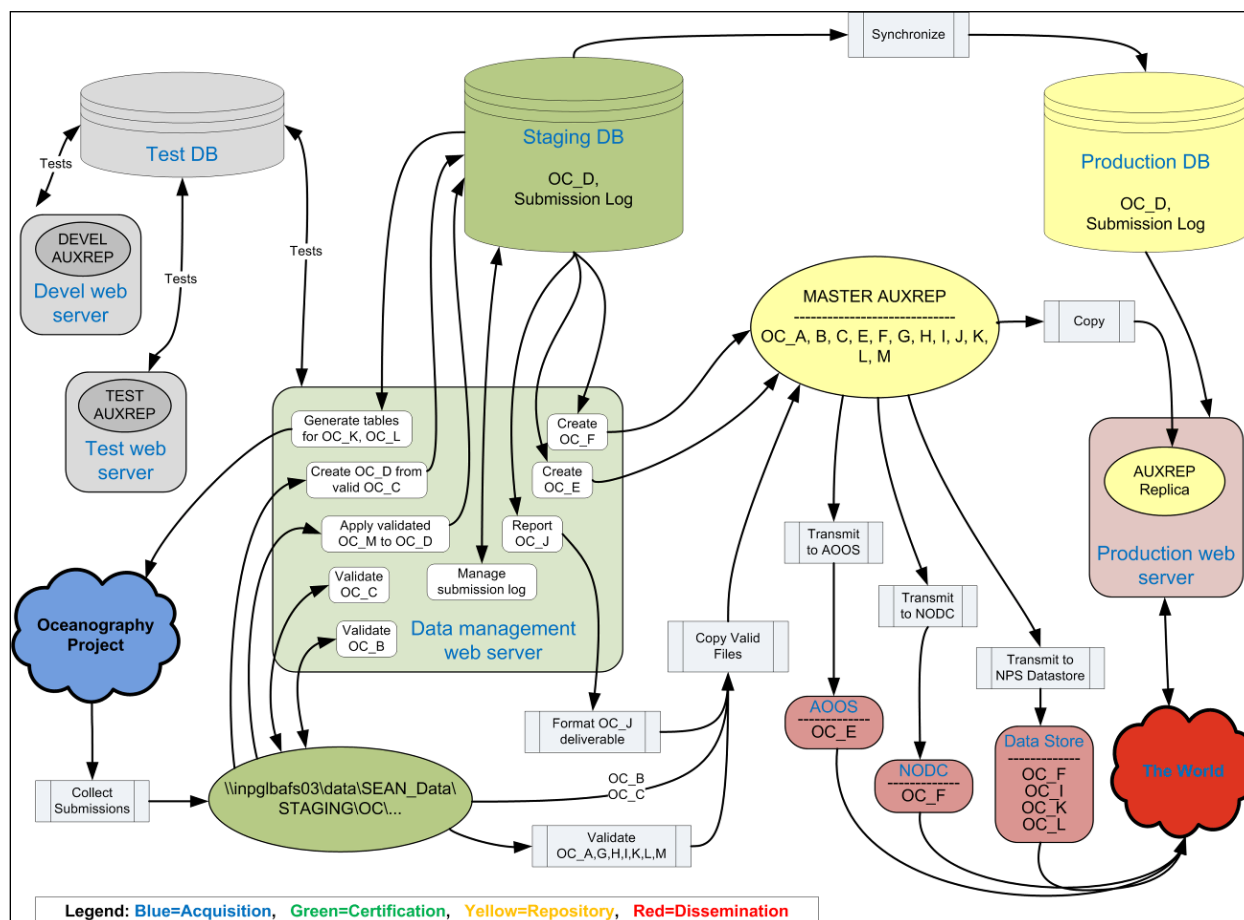


Figure SOP 19.1. Components of the staging and production environments are illustrated in schematic form. Coloring indicates the functional realm of each component, as defined in the SEAN data management plan. Rectangles depict the data management tasks required to move a product from one component to the next. Internal functions provided by the data management web server related to oceanography are also listed.

4.0 Management Tasks to Perform

Figure SOP 19.1 shows in rectangles specific tasks needed to move a deliverable from the submission-to-staging through the production-dissemination states. These are primarily data copying steps achieved either by file transfer or by SQL database synchronization. No attempt will be made to detail specific commands and IT processes to accomplish these particular tasks. They are inherently complex and are dependent on the current complement of equipment components, software versions, security policies, and NRPC operating procedures. Most of the

tasks are also performed on the order of only once per year. Data management staff is expected to determine the best method to use at each particular invocation.

The data management web site also supports a number of necessary tasks required in accomplishing the staging to production process. These are depicted in Figure SOP 19.1 as lozenges within the data management web server object. Their use is covered in the various SOPs covering detailed production of data deliverables.