

13. Production Planning

The Planning Subsystem is responsible for supporting site operations in developing a production plan based on locally defined strategy. Production Planning involves creation of Production Requests using the **Production Request Editor** and the scheduling of the Production Requests using the **Production Workbench**. The Production Planner issues commands to initiate plan creation and plan activation.

The Planning Subsystem submits Data Processing Requests (DPRs). A DPR has the information needed by Processing, including Product Generation Executive (PGE)-related information. Each DPR defines a set of related processing jobs.

13.1 Production Request Editor

From the Production Request Editor, the Production Planner can create new production requests, modify or delete production requests, and review or delete data processing requests.

Each procedure outlined has an **Activity Checklist** table that provides an overview of the task to be completed. The outline of the **Activity Checklist** is as follows:

Column one - **Order** shows the order in which tasks should be accomplished.

Column two - **Role** lists the Role/Manager/Operator responsible for performing the task.

Column three - **Task** provides a brief explanation of the task.

Column four - **Section** provides the Procedure (P) section number or Instruction (I) section number where details for performing the task can be found.

Column five - **Complete?** is used as a checklist to keep track of which task steps have been completed.

The following Activity Checklist, Table 13.1-1, provides an overview of the Production Planning process.

Table 13.1-1. Production Request - Activity Checklist

Order	Role	Task	Section	Complete?
1	Production Planner	Launch the Production Request Editor	(P) 13.1.1	
2	Production Planner	Create New Production Request	(P) 13.1.2	
3	Production Planner	Edit/Modify Production Request	(P) 13.1.3	
4	Production Planner	Delete Production Request	(P) 13.1.4	
5	Production Planner	Review Data Processing Requests	(P) 13.1.5	
6	Production Planner	Delete DPRs	(P) 13.1.6	
7	Production Planner	Re-Generate Granules Affected by Loss of Files from the Archive	(P) 13.1.7	

NOTE: The procedures that follow are written under the assumption that PGEs have been previously created and are available for use with the same rule criteria that you are attempting to use.

13.1.1 Launch the Production Request Editor

The Production Request Editor is invoked from a UNIX command line prompt. Table 13.1-2 presents (in a condensed format) the steps required to launch the Production Request Editor. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 At the UNIX command line prompt enter:
xhost <hostname>
 - a. **<hostname>** refers to the host on which GUI is to be launched during the current operating session. Multiple hostnames can be specified on the same line.
 - b. The use of **xhost +** is discouraged because of a potential security problem.
- 2 In the Terminal window, at the command line prompt, enter:
setenv DISPLAY <clientname>:0.0
 - a. Use either the X terminal/workstation IP address or the machine-name for the clientname.
 - b. When using secure shell, the DISPLAY variable is set just once, before logging in to remote hosts. If it were to be reset after logging in to a remote host, the security features would be compromised.
- 3 Open another UNIX (terminal) window.
- 4 In the terminal window, at the command line prompt, start the log-in to the Planning/Management Workstation by entering:
/tools/bin/ssh <hostname>
 - a. Examples of hostnames include **e0pls03, g0pls01, l0pls02, n0pls02**.
 - b. If you receive the message, “Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?” enter **yes** (“y” alone will not work).
 - c. If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears; continue with Step 5.
 - d. If you have not previously set up a secure shell passphrase, go to Step 6.
- 5 If a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears, enter:
<Passphrase>
 - a. Go to Step 7.

- 6 At the `<user@remotehost>`'s **password:** prompt enter:
`<Password>`

- 7 In the terminal window, at the command line, enter:
cd /usr/ecs/<MODE>/CUSTOM/utilities
 - a. **<MODE>** is current mode of operation.
 1. TS1 - Science Software Integration and Test (SSI&T)
 2. TS2 - New Version Checkout
 3. OPS - Normal Operations
 - b. "utilities" is the directory containing the Planning Subsystem start-up scripts.

- 8 Set the application environment variables by entering:
setenv ECS_HOME /usr/ecs/
 - a. Application home environment is entered
 - b. When logging in as a system user (e.g., cmshared), the ECS_HOME variable may be set automatically so it may not be necessary to set it manually.

- 9 Start the Production Request Editor by entering:
EcPIPRE_IFStart <MODE>
 - a. The Production Request Editor is launched.

Table 13.1-2. Launch the Production Request Editor - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Log in to the Planning host using secure shell	enter text, press Enter
2	Enter cd /usr/ecs/<MODE>/CUSTOM/utilities	enter text, press Enter
3	Set environment variables if necessary	enter text, press Enter
4	Enter EcPIPRE_IFStart <MODE>	enter text, press Enter

13.1.2 Create New Production Request

The process of creating a new Production Request begins with the Production Planner starting the Production Request Editor GUI. The Production Planner specifies the PGE, duration, and comments for the new Production Request.

PRODUCTION RULES: Production Rules provide templates for Instrument Teams to describe the relationship(s) between PGEs and their input and output data. The assumption of this documentation is that the user has knowledge of the specific production rules under which the PGE was created. Listed below is a sampling of the available production rules.

- | | |
|-------------------|----------------------------------------------------|
| Basic Temporal | Input times = output times |
| Advanced Temporal | Input and output temporal ranges can be different. |

Alternate Inputs	PGE is run with different inputs based on the availability of various alternate input data sets.
Optional Inputs	PGE is run with specified optional inputs if available; otherwise, PGE is run without them.
Min/Max Granules	Minimum number of input granules needed for full data coverage and maximum number of input granules to search for may be specified. Minimum and maximum number of outputs expected from the PGE may be specified.
Optional DPRs	The only DPRs executed are those for which the non-routine key input data actually become available (i.e., are either produced in data processing or can be acquired from the archive).
Intermittent Activation	Every n^{th} DPR is activated; all other DPRs are skipped.
Metadata Checks	Run DPR only if metadata value(s) meet certain criteria.
Metadata Query	Input granule selection is based on metadata value(s).
Data Day	Input data selection is based on Data Day.
Spatial Query	Select input(s) on the basis of the spatial coverage of another input (i.e., the key input).
Tiling	Input data is chosen on the basis of Instrument Team-defined tiles (geographic areas).
Closest Granule	DPR is generated if a required input granule within a particular time range (rather than an exact time) is available; otherwise, no DPR is generated. (Supersedes the Most Recent Granule Production Rule)
Orbital Processing	Selection of input times is based on orbit information.

Table 13.1-3 presents (in a condensed format) the steps required to create a new production request. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Launch the **Production Request Editor** (refer to Section 13.1.1).
 - a. The **Production Request Editor** GUI is displayed.
- 2 Select the Production Request Editor by **single-clicking** on the **PR Edit** tab.
 - a. The **PR Edit** GUI page is presented.

NOTE: If the GUI is unresponsive, always check to see if a prompt window is hidden behind the main GUI waiting for a response. Respond to the window, then continue with the Production Request Editor GUI.

- 3 **Single-click and hold the PR Type option button to display a menu of types of production requests, move the mouse cursor to the desired selection (highlighting it), then release the mouse button.**
 - a. The following production request types are listed:
 1. **Routine.**
 2. **On-Demand** [not currently available for selection].
 3. **Reprocessing.**
 4. **Ad-hoc Reprocessing.**

NOTE: The **PR Name** and **Origination Date** fields will be filled automatically when the Production Request is saved at the end of the procedure. (You do not need to fill in these fields.)

- 4 Enter <username> or actual name for the **Originator**.

- 5 **Single-click the Priority field and enter the <Priority>, then press Tab.**
 - a. Enter a number in the range of one (1) to ten (10).
 1. One (1) has the highest priority; ten (10) has the lowest priority.
 - b. The **Priority** field specifies the **User-Selected Priority** to be included in the Data Processing Request(s) that result(s) from the Production Request.
 - c. **User-Selected Priority** is subsequently weighted according to the value specified in the Production Strategy selected from the Planning Workbench when a Production Plan is created using the Production Request.

- 6 **Single-click the PGE... button.**
 - a. The **PGE** GUI is displayed.

- 7 Select the desired PGE by **single-clicking** on the PGE.
 - a. The desired **PGE** is highlighted.

- 8 **Single-click the Ok button.**
 - a. The **PR Edit** GUI is displayed.
 - b. The following fields are automatically filled:
 1. **Satellite Name.**
 2. **Instrument Name.**
 3. **PGE Name.**
 4. **PGE Version.**
 5. **Profile ID.**

- 9 Select **PGE Parameters...** button.
 - a. The **PGE Parameters** GUI is displayed.
 - b. PGE parameter data are displayed in a table that has the following columns:
 1. **Parameter Name.**
 2. **Logical Id.**
 3. **Default Value.**

4. **Override Value.**
5. **Description.**

- 10 Select the parameter (if any) with the default value to be changed by **single-clicking** on the **Parameter Name** row.
 - a. The parameter row is highlighted.
 - b. Only the default values can be modified.
 - c. Modify parameter values when and as directed by the customer (e.g., MODIS) only.
- 11 Enter the desired value in the **Parameter Mapping** field and press **Return**.
 - a. The new value is displayed in the **Override Value** column.
 - b. Repeat Steps 10 and 11 to modify additional parameters (if applicable).
- 12 **Single-click** on the **Ok** button to approve the changes.
 - a. The **PR Edit** GUI is displayed.

****The procedures that follow involve the implementation of specific PRODUCTION RULES.****

MODIS uses

- 1) Temporal Rules, to include Basic and Advanced Temporal specifications,
- 2) Orbit-Based Activation **and**
- 3) Period/Calendar Specification,
- 4) Conditional Activation,
- 5) Additional inputs **and**
- 6) DataBase Query.

ASTER uses both Temporal Rules, Basic and Advanced Temporal specifications. In addition, **ASTER** routine processing makes use of the Optional DPRs Production Rule to schedule and execute **ASTER** PGEs for new data that have been archived. The Production Planner specifies the **insertion time** range (i.e., the time period when the desired data were archived) as opposed to the **collection time** (when the satellite instrument gathered the data).

MISR has primarily “orbit” based PGEs.

Multiple “production rules” can be combined to complete a PR, however, **Temporal- and Orbit-based rules** cannot be combined.

To execute either a **Basic or Advanced Temporal Production Rule**, you must complete Steps 1-12, specified above in 13.1.2. and specify date and time information for processing (Steps 28 and 29). Then continue processing with Step 33, etc. as necessary.

METADATA-BASED PRODUCTION RULE

- 13 If the PGE is subject to a metadata-based production rule and the value(s) to be checked need(s) to be changed, **single-click** on the **Metadata Checks...** button, perform Steps 14 through 18 as applicable; otherwise go to Step 19.
 - a. The **MetadataChecks** GUI page is displayed.

- b. The **MetadataChecks** GUI has an **InputDataType** window that lists the input data types for the PGE.
 - c. In addition, the **MetadataChecks** GUI has a metadata checks (**MetaDataField-Operator-Value-Type**) window in which there is a table that lists the following information concerning each metadata check:
 - 1. **MetaDataField**.
 - 2. **Operator**.
 - 3. **Value**.
 - 4. **Type**.
 - d. Initial values for metadata checks are entered during SSI&T; however, it is possible to modify the values using the **MetadataChecks** GUI when creating a production request.
 - 1. Modify metadata check values when and as directed by the customer (e.g., MODIS) only.
- 14** If it is necessary to change any value(s) for metadata checks, select an input data type with a value to be changed by **single-clicking** on the corresponding row in the **InputDataType** window.
- a. The input data type row is highlighted.
 - b. The metadata check information for the highlighted input data type is displayed in the **MetaDataField-Operator-Value-Type** window.
- 15** Select (highlight) a metadata field with a comparison value to be changed by **single-clicking** on the corresponding row in the **MetaDataField-Operator-Value-Type** window.
- a. The metadata field row is highlighted in the **MetaDataField-Operator-Value-Type** window.
 - b. The identity of the metadata field is displayed in the **MetaDataField** window.
- 16** Enter the new value for the metadata check in the **Value** field.
- 17** **Single-click** on the appropriate button from the following selections:
- a. **OK** - to approve the new value and dismiss the **MetadataChecks** GUI.
 - 1. The **Production Request - PR Edit** GUI is displayed.
 - 2. Go to Step 19.
 - b. **Apply** - to approve the new value without dismissing the **MetadataChecks** GUI.
 - 1. Go to Step 18.
 - c. **Cancel** - to return to the **Production Request - PR Edit** GUI without saving the new value.
 - 1. The **Production Request - PR Edit** GUI is displayed.
 - 2. Go to Step 19.
- 18** If any additional value(s) to be checked need to be changed, repeat Steps 14 through 17 as necessary.

ALTERNATE INPUTS PRODUCTION RULE

- 19** If the PGE is subject to the **Alternate Inputs Production Rule** and the timer settings or the order of alternate inputs need to be changed, **single-click** on the **Alternate Input Values...** button and perform Steps 20 through 25 as applicable; otherwise go to Step 26.
- a. The **AlternateInputValues** GUI page is displayed.
 - b. The **AlternateInputValues** GUI has an **AlternateListName** window that lists the applicable alternate inputs.
 - c. In addition, the **AlternateInputValues** GUI has an alternate input (**Order-DataType-LogicalID-Timer**) window in which there is a table that lists the following information concerning each alternate input:
 1. **Order.**
 2. **DataType.**
 3. **LogicalID.**
 4. **Timer.**
 - d. The initial set-up for alternate inputs is entered during SSI&T; however, it is possible to modify the set-up using the **AlternateInputValues** GUI when creating a production request.
- 20** If it is necessary to change timer settings or the order of alternate inputs, first select (highlight) an alternate input to be changed by **single-clicking** on the corresponding row in the **AlternateListName** window.
- a. The alternate input row is highlighted.
 - b. Information concerning the highlighted alternate input is displayed in the **Order-DataType-LogicalID-Timer** window.
- 21** Select (highlight) an alternate input with timer settings or the order of alternate inputs to be changed by **single-clicking** on the corresponding row in the **Order-DataType-LogicalID-Timer** window.
- a. Alternate input row is highlighted in the **Order-DataType-LogicalID-Timer** window.
 - b. The data type of the alternate input is displayed in the **DataType** field.
- 22** If it is necessary to change the order of alternate inputs, **single-click** on the up/down arrow buttons adjacent to the **Order-DataType-LogicalID-Timer** window as necessary until the highlighted alternate input has the proper order listed in the **Order** column of the window.
- a. If necessary, repeat Steps 21 and 22 to change the order of additional alternate inputs.
- 23** If the timer setting for an alternate input is to be modified, verify that the alternate input with the timer setting to be changed has been highlighted then enter the new timer setting in the **Timer** fields.
- a. Another method of changing timer settings (other than typing the numbers) is to **single-click** in each of the timer fields in turn and click on the up/down buttons adjacent to the **Timer** fields until the correct time is indicated.

- 24** **Single-click** on the appropriate button from the following selections:
- a. **OK** - to approve the new alternate input setting(s) and dismiss the **AlternateInputValues** GUI.
 1. The **Production Request - PR Edit** GUI is displayed.
 2. Go to Step 26
 - b. **Apply** - to approve the new alternate input setting(s) without dismissing the **AlternateInputValues** GUI.
 1. Go to Step 25.
 - c. **Cancel** - to return to the **Production Request - PR Edit** GUI without saving the new alternate input setting(s).
 1. The **Production Request - PR Edit** GUI is displayed.
 2. Go to Step 26.
- 25** If any additional alternate input setting(s) need to be changed, repeat Steps 20 through 24 as necessary.

*ASTER routine processing makes use of the **Optional DPRs Production Rule** to schedule and execute **ASTER PGEs** for new data that have been archived. The **Production Planner** specifies the **insertion time** range (i.e., the time period when the desired data were archived) as opposed to the **collection time** (when the satellite instrument gathered the data).*

- 26** **Single-click** on either the **Collection Time** or **Insertion Time** button (as applicable) if data are to be processed on the basis of time (rather than orbit or tile).
- a. Normally the **Collection Time** (time when the data were collected by the instrument on the satellite) is used for specifying what data are to be processed.
 - b. The **Insertion Time** option is available primarily for **ASTER** processing to allow the generation of **DPRs** for all data contained on an **ASTER** tape received from the **ASTER Ground Data System (GDS)**.

TIME- OR ORBIT-BASED PROCESSING?

- 27** **Single-click** on either the **UTC Time** (Coordinated Universal Time) button or the **Orbit** button, depending on whether data to be processed is specified by time or orbit.
- a. If **UTC Time** is selected, go to Step 28.
 - b. If **Orbit** is selected go to Step 31.

TEMPORAL PRODUCTION RULES

- 28** Enter the desired data start date and time (in **MM/DD/YYYY hh:mm:ss** format) in the **Begin** fields.
- a. As data are entered in each field the cursor automatically advances to the next field.
 - b. Another method of entering date and time (other than typing the numbers) is to **single-click** in each of the date/time fields in turn and click on the up/down buttons adjacent to the date/time fields until the correct date/time is indicated.
- 29** Enter the desired data end date and time (in **MM/DD/YYYY hh:mm:ss** format) in the **End** fields.

TILING PRODUCTION RULE

- 30 If the Tiling Production Rule applies, enter the tile identification in the **Tile Id** field.
 a. Go to Step 33.

ORBITAL PROCESSING PRODUCTION RULE

- 31 If the Orbital Processing Production Rule applies, enter the number of the first orbit of data to be processed in the **From** field.
- 32 If the Orbital Processing Production Rule applies, enter the number of the last orbit of data to be processed in the **To** field.

INTERMITTENT ACTIVATION PRODUCTION RULE

- 33 If the Intermittent Activation Production Rule applies, enter the number of DPRs to skip in the **Skip** field.
 a. If the Intermittent Activation Production Rule applies, perform Steps 34 and 35.
 b. If the Intermittent Activation Production Rule does not apply, go to Step 36.
- 34 Enter the number of DPRs to keep in the **Keep** field.
- 35 If the first DPR is to be skipped, **single-click** on the **SkipFirst** button.
- 36 Enter any relevant comments in the **Comments** field.
- 37 Select **Save As** from the **File** pull-down menu (**File** → **Save As**).
 a. The **File Selection** window is displayed.
- 38 Enter a file name for the production request in the **Selection** field.
- 39 **Single-click** on the **OK** button to save the production request.
 a. The production request is saved and the corresponding DPR(s) is/are generated.
 b. The **PR Name** and **Origination Date** fields are automatically updated.
- 40 Select **File** → **New** to clear the entries on the **Production Request Editor** GUI.
 a. Return to Step 3 to create another new PR.
- 41 Select **File** → **Exit** to exit the **Production Request Editor**.

Table 13.1-3. Create New Production Request - Quick-Step Procedures (1 of 2)**

Step	What to Enter or Select	Action to Take
1	Launch Production Request Editor GUI	Use procedure in Section 13.1.1
2	Select PR Edit tab	single-click
3	Select PR Type	single-click
4	Enter <originator>	press Tab
5	Enter <Priority>	press Tab

Step	What to Enter or Select	Action to Take
6	Select PGE... button	single-click

Table 13.1-3. Create New Production Request - Quick-Step Procedures (2 of 2)**

Step	What to Enter or Select	Action to Take
7	Select PGE	single-click
8	Select Ok	single-click
9	Enter characteristics (time/tile/orbit) of data to be processed	enter text
10	Open PRE file selection window (File → Save As)	single-click
11	Enter <PR file name>	enter text
12	Select Ok	single-click

**Production Rules are not addressed in these Quick-Step Procedures.

13.1.3 Edit/Modify Production Request

Edits or modifications to a previously created production request result in a new production request. The new production request must be saved with a new name.

Table 13.1-4 presents (in a condensed format) the steps required to edit/modify a production request. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Launch the **Production Request Editor** by performing procedure 13.1.1.
 - a. The **Production Request Editor** GUI is displayed.
- 2 **Single-click** on the **PR Edit** tab.
 - a. The **PR Edit** GUI page is displayed.
- 3 Select **File** → **Open** from the pull-down menu to display a list of Production Requests from which to select the PR to be opened..
 - a. A list of Production Requests is displayed in the **File Selection** window.
- 4 Select (highlight) the PR to be edited/modified by **single-clicking** on the corresponding PR name in the list of PRs.
- 5 **Single-click** on the **OK** button.
 - a. The PR information appears in the **PR Edit** GUI.
- 6 Modify the **Priority**, then press **Tab**.
 - a. Enter a number in the range of one (1) to ten (10).
 1. One (1) has the highest priority; ten (10) has the lowest priority.

- b. The **Priority** field specifies the **User-Selected Priority** to be included in the Data Processing Request(s) that result(s) from the Production Request.
- c. **User-Selected Priority** is subsequently weighted according to the value specified in the Production Strategy selected from the Planning Workbench when a Production Plan is created using the Production Request.

- 7 Select **PGE Parameters...** button.
 - a. The **PGE Parameters** GUI displays.
- 8 Select the parameter to be modified by **single-clicking** on the **Parameter Name** row.
 - a. The **parameter** row is highlighted.
- 9 Enter the desired value in the **Parameter Mapping** field.
 - a. **Single-click ENTER** and the value in the **Override Value** column is updated.
 **Some PGEs may NOT have modifiable default parameters.
- 10 **Single-click** on the **Ok** button to approve the changes.
 - a. The Production Request Editor GUI is displayed.
- 11 Modify **MM/DD/YYYY** for **Duration Start Date**, then press **Tab**.
- 12 Modify **hh:mm:ss** for **Duration Start Time**, then press **Tab**.
- 13 Modify **MM/DD/YYYY** for **Duration End Date**, then press **Tab**.
- 14 Modify **hh:mm:ss** for **Duration End Time**, then press **Tab**.
- 15 Modify **Comments**.
- 16 Select **File** → **Save As** for a modified **Production Request**.
 - a. File Selection Window appears.
- 17 Enter new PR name in **Selection** field.
 - a. Production Request is named. *Must change name.*
- 18 **Single-click** on the **Ok** button.
 - a. Production Request is saved.
 - b. Message appears stating that PR was successfully saved to the database.
 - c. Messages appear stating that the PR has been exploded into DPRs.

Table 13.1-4. Edit/Modify Production Request - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch Production Request Editor	Use procedure in Section 13.1.1
2	Select File → Open	single-click
3	Select PR Name	single-click

Step	What to Enter or Select	Action to Take
4	Select OK	single-click
5	Select PR Edit	single-click
6	Modify Priority	enter number

Table 13.1-4. Edit/Modify Production Request - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
7	Select PGE... button	single-click
8	Select desired PGE	single-click
9	Select OK	single-click
10	Select PGE Parameters... button	single-click
11	Select Parameter	single-click
12	Enter parameter value	enter text, press Return
13	Select OK	single-click
14	Enter Duration Start Date	enter text, press Tab
15	Enter Duration Start Time	enter text, press Tab
16	Enter Duration End Date	enter text, press Tab
17	Enter Duration End Time	enter text, press Tab
18	Modify Comment	enter text
19	Select File → Save As	single-click
20	Enter <PR file name>	enter text
21	Select Ok	single-click

13.1.4 Delete Production Request

Production Requests can be deleted if necessary. Table 13.1-5 presents (in a condensed format) the steps required to delete Production Requests. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Launch the **Production Request Editor** (refer to Section 13.1.1).
 - a. The Production Request Editor GUI is displayed.
- 2 **Single-click** on the **PR List** tab.
 - a. The **PR List** GUI is presented.
 - b. A list of Production Requests is displayed.
- 3 **Single-click** on the Production Request to be deleted.
 - a. The Production Request to be deleted is highlighted.
- 4 Select **Edit→Delete**.

a. A dialog box is displayed requesting confirmation of the decision to delete the Production Request.

5 **Single-click** on the **OK** button to delete the Production Request.

a. A confirmation notice is displayed after completion of deletion.

6 Select **File** → **Exit** to quit the **Production Request Editor** GUI.

Table 13.1-5. Delete Production Request - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch Production Request Editor	Use procedure in Section 13.1.1
2	Select PR List tab	single-click
3	Select < PR name >	single-click
4	Select Edit → Delete	single-click
5	Select OK	single-click

13.1.5 Review Data Processing Requests

The process of reviewing Data Processing Requests (DPRs) begins with the Production Planner launching the Production Request Editor. The Production Planner can review DPRs associated with a specific PR. The Production Planner can review such DPR values as input granule(s), output granule(s), predicted and actual start times, data start time, status, and priority.

Table 13.1-6 presents (in a condensed format) the steps required to review DPRs. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Launch the **Production Request Editor** (refer to Section 13.1.1).
 - a. The Production Request Editor GUI is displayed.
- 2 **Single-click** on the **DPR List** tab.
 - a. The **DPR List** GUI is presented.
- 3 **Single-click** on the **Production Request** pull-down arrow.
 - a. A list of Processing Requests is displayed.
- 4 **Single-click** on the Production Request for which a DPR listing is desired.
 - a. The Production Request is entered into the **Production Request** field.
- 5 **Single-click** on the **Filter** button.
 - a. The list of DPRs associated with the selected Production Request is displayed.
- 6 **Single-click** the **DPR View** tab.
 - a. The **DPR View** GUI is displayed.
- 7 Select **File** → **Open**.
 - a. The **File Selection** GUI is displayed.
- 8 **Single-click** on the desired DPR from list.
 - a. DPR appears in the **Selection** field.

- 9 **Single-click** on the **OK** button.
 - a. The **DPR** information is displayed on the **DPR View** GUI.
 - b. The **DPR ID** is a modification of the original PGE name.

- 10 Review **Data Processing Request Identification** information displayed.
 - a. **DPR Name**.
 - b. **PR Name**.
 - c. **Origination Date**.
 - d. **Originator**.
 - e. **PGE ID**.
 - f. **Data Start Time**.
 - g. **Data Stop Time**.

- 11 **Single-click** on the **PGE Parameters...** button.
 - a. The PGE Parameter Mappings GUI displays.

- 12 Review the **PGE Parameter Mappings** information displayed.
 - a. PGE parameter data are displayed in a table that has the following columns:
 1. **Parameter Name**.
 2. **Logical Id**.
 3. **Default Value**.
 4. **Override Value**.
 5. **Description**.

- 13 **Single-click** on the **Ok** button.
 - a. The **PGE Parameter Mappings** GUI is dismissed.
 - b. The **DPR View** GUI is displayed.

- 14 **Single-click** on the **PGE File Mappings...** button.
 - a. The **UR File Mappings** GUI is displayed.

- 15 Review the **Universal Reference (UR) File Mappings** information displayed.
 - a. **Input Data**.
 1. **Logical Id**.
 2. **Granule Id**.
 3. **Start Time** (date and time).
 4. **Stop Time** (date and time).
 5. **Availability** (date and time).
 6. **UR** (universal reference).
 - b. **Output Data** (Displays the same data as shown for Input Data).

- 16 **Single-click** on the **Ok** button.
 - a. The **UR File Mappings** GUI is dismissed.
 - b. The **DPR View** GUI is displayed.

- 17 Review the **DPR Status** information displayed.
 - a. **Predicted Start Date and Time.**
 - b. **Actual Start Date and Time.**
 - c. **Priority.**
 - d. **Status.**
 - e. **Predicted and Actual Start Date and Times and Status** will not be displayed if the Production Request has not been scheduled.

- 18 Repeat steps 2 through 17 to review multiple DPRs associated with multiple PRs.

Table 13.1-6. Review Data Processing Requests - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch Production Request Editor	Use procedure in Section 13.1.1
2	Select DPR List tab	single-click
3	Select <PR name>	single-click
4	Select Filter	single-click
5	Select <DPR ID>	single-click
6	Select DPR View tab	single-click
7	Select File → Open	single-click
8	Select <DPR ID> from list	single-click
9	Select OK	single-click
10	Review DPR information	read text
11	Select PGE Parameters...	single-click
12	Review PGE parameters	read text
13	Select OK	single-click
14	Select PGE File Mappings...	single-click
15	Review input and output granule information	read text
16	Select OK	single-click
17	Repeat Steps 2 through 16 to review additional DPRs	

13.1.6 Delete DPRs

DPRs can be deleted manually if necessary. Table 13.1-7 presents (in a condensed format) the steps required to delete DPRs. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Launch the **Production Request Editor** (refer to Section 13.1.1).
 - a. The Production Request Editor GUI is displayed.

17, specifically the “Data Recovery Procedure for Known Files” section.

The role of this procedure is to initiate production of replacements for granules previously generated within this DAAC but now lost due to failure in the ECS Archive. In order to achieve this, Production Requests (PRs) for the generation of the replacement granules must be created, entered into a Production Plan, and activated.

The PRs are created using the Production Request Editor (PRE). However, first the necessary parameters of the PRs must be retrieved from the Production History file (PH) of the lost granule. The PH file is itself acquired by use of the QA Monitor tool and, though the PH UR is supplied in

the input to this process, this can be achieved only by first using the QA Monitor tool to search the SDSRV database for granules matching the lost granule. Hence, this process commences with use in the QA Monitor GUI of the attributes of each lost granule (shortname, versionID etc.) supplied in the input to this procedure. Refer to Chapter 17 for further information on the wider context of this procedure.

The input to this procedure is the “Granules for PDPS Re-Generation” list. This is a list of granules and associated metadata generated by the procedure “SDSRV Retrieval of Granule Production History Metadata” (refer to Chapter 17). While the list can be obtained electronically, its use in this procedure is line-by-line. However, if available electronically, entries from it can be ‘cut and pasted’ into the input fields of the QA monitor GUI to avoid typing errors.

The outputs of the procedure are as follows:

- a. Granule re-generation Production Requests entered into a production plan.
- b. The “PDPS Residual Granules List” which is a list of Granules which this PDPS can not re-generate or which it has been decided do not justify re-generation. This list is returned to the process in Chapter 17.

Note that the following assumptions apply to the application of this procedure:

- a. The Science Data Server (SDSRV) will provide a list of granules to be regenerated (“Granules for PDPS Re-Generation”). This list will contain information about the granules to be regenerated and a Universal Reference (UR) for the associated Production History tar file.
- b. When reproducing lost granules, all outputs of the PGE, not just those equivalent to the lost granule(s), will be produced and archived.
- c. It cannot be guaranteed that the PGE re-run will use the same inputs as were used during its original execution due to the variability of: Optional/Alternate inputs, Ad Hoc Reprocessing, Metadata Checks, Metadata Query and other Production Rules.
- d. It is possible that at the time of the original run of PGE, certain optional/alternate inputs were not available, which became available later. During the re-run of the PGE use of those additional or other optional inputs cannot be avoided. However, it can be assumed that an equivalent or better product than the original will be produced as a result.
- e. PDPS maintains a minimal amount of granule level versioning. By design, only the latest version of the granule will be used. If the PGE which is to be re-run uses inputs which have more than one granule level version, PDPS will use only the latest version of those inputs. However, if references to those granules have been deleted from the PDPS database (a delete script, which runs periodically, cleans up unused database entries), then PDPS will choose the first one returned from SDSRV. SDSRV does not guarantee any sort of ordering in this case but PDPS will select the latest granule from those returned (Note: depends on fix to NCR ECSed16326).
- f. At Production Request time, the default values for metadata checks can be overridden. The new values used are stored in the PDPS database but not in the Production History. If, at the time of re-run of the PGE, the references to that PGE have been deleted from PDPS database, the default metadata checks will be used. It is possible, therefore, that these default values will cause this DPR not to be run in this instance; e.g. if the metadata checks had been changed in the original run to be less restrictive.

- If these types of changes to metadata checks are required in order to get DPRs to run, then it is assumed that these defaults are saved as part of the PGE profile.
- g. In a manner that is similar to Metadata Checks, a Metadata Query specifies a query to be used to determine the input granules to be used for a DPR. For reasons of production timing or updated QA values, a product reproduced at a later date could have different granules used as input. Again, it can be assumed that in this case a better product will result.
 - h. Other production rules (e.g., tiling) could make it impossible to reproduce identical granules.
 - i. If a PGE (PGE name, version and profile) has to support lost granules regeneration, then that PGE should not be deleted from the PDPS database. This means, in the SSIT Operational Metadata GUI, the delete flag for that PGE should not be checked.

Table 13.1-8 presents (in a condensed format) the steps required to re-generate granules affected by loss of files from the archive. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Determine whether all the granules in the input list “Granules for PDPS Re-Generation” should be reproduced.
 - a. It is possible that some granules need not be reproduced, e.g. because a newer version of that product is available.
 - b. Granules that need not be reproduced should be added to the “PDPS Residual Granules” list. Also, at any time during this process, if it is determined that some granules cannot be regenerated or need not be regenerated, then those granules should be included in the “PDPS Residual Granules” list.

- 2 Retrieve (using the QA Monitor GUI) the Production History tar file from the archive for each granule in the “Granules for PDPS Re-Generation” list that needs to be reproduced.
 - a. Use the lost granule’s datatype, and “begin date” and “end date” values that encompass its RangeBeginningDateTime and RangeEndingDateTime. Note that the GUI interprets the dates in UTC format.
 - b. For each granule that meets the query conditions and is displayed on the QA Monitor GUI, the granule’s UR, its Production History tar file’s UR, and the name of the Production History tar file are shown. For only one of the granules will the URs (both the granule UR and the Production History UR) match the URs for this granule in the input list.
 1. If the Query failed or did not return any hit that matched, add the granule to “PDPS Residual Granules” list.
 - c. Retrieve the matching granule.
 1. The Production History tar file will be acquired to a directory that is configurable (the name of the configuration parameter is DpPrQA_DATA_DIR, and the default value for this parameter is \$ECS_HOME/<MODE>/CUSTOM/data/DPS).
 2. The name of the tar file is the one that appears under the column **Production History File Name** on the QA Monitor GUI.

- d. Note that if more than one granule in the input list maps to the same Production History tar file, then the Production History tar file need not be retrieved multiple times.
 - e. The Production History tar file contains the Process Control File (PCF) which has all the information needed to re-run the PGE. The following particulars have to be extracted from the PCF:
 1. PGE Name.
 2. PGE Version.
 3. PGE Profile ID.
 4. DPR Start time.
 5. DPR Stop time.
 6. PGE runtime parameters and their associated values.
 - f. Identification of information in the PCF:
 1. The PGE Name, PGE Version, and the PGE Profile appear in the System Runtime Parameters section of the PCF. They are concatenated (with a # sign to separate them) and appear in the place reserved for “Software ID”.
 2. DPR Start time appears in the User Defined Parameter Section of the PCF under the logical ID 10258.
 3. DPR Stop time also appears in the User Defined Parameter Section of the PCF under logical ID 10259.
 4. All other logical IDs in the User Defined Parameter Section of the PCF form the run time parameters and their associated values. Note the logical ID and its corresponding values.
 5. An automated script could be written to extract the values from the PCF.
- 3 If the PGE name, version and profile that is extracted from the PCF does not appear as an Existing/New PGE, then add the granule that is to be regenerated to the “PDPS Residual
 - 4 From the SSIT host, launch the **SSIT Manager** GUI and invoke the **PDPS Operational Metadata** GUI.
 - 5 If the PGE is not registered, register the PGE using the **PDPS Science Update Metadata Update** from the **SSIT Manager** GUI.
 - a. The PGE must be registered before a production request can be entered.
 - 6 If it is decided not to re-register the PGE, add the granule that is to be regenerated to the “PDPS Residual Granules” list.
 - 7 From the Planning Workstation, launch the **Production Request Editor** GUI as described in Section 13.1.1.
 - 8 Enter a Production Request (as described in Section 13.1.2) for the relevant PGE/version/profile ID.
 - a. Use **Ad-Hoc Reprocessing** for the **Processing Type**.
 - b. Use the DPR Start and Stop Time listed in the Production History for the **Begin** and **End** times.

- c. View the default PGE runtime parameters and compare them against the runtime parameters obtained from the Production History tar file.
 - 1. Modify the runtime parameter values to match exactly what was used in the original run.
 - d. If granules that need to be regenerated are produced by PGEs that are chained, then the production requests must be entered in that order.
 - 1. For instance, if granules A and B are to be regenerated, and PGEs P1 & P2 produce them and if P1 & P2 are chained (P2 takes P1's outputs as its inputs) then the production request for P1 must be entered before entering one for P2.
- 9 Launch the Planning Workbench from the Planning Workstation as described in Section 13.2.1.
- 10 Create and activate a production plan that includes the newly created production request(s) as described in Section 13.2.2.
- 11 Return the output ("PDPS Residual Granules") list to the "Data Recovery Procedure for Known Files" procedure in Chapter 17 for further processing.
 - a. Those granules which were not re-generated by this process are listed in the output ("PDPS Residual Granules") list.

Table 13.1-8. Re-Generate Granules Affected by Loss of Files from the Archive - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Identify granules to be reproduced	read text
2	Add not-to-be-reproduced granules to the "PDPS Residual Granules" List	enter text
3	Retrieve Production History tar file for each element to be reproduced using the QA Monitor GUI	Use QA Monitor procedures (Chapter 15)
4	Obtain URs from the QA Monitor GUI	Use QA Monitor procedures (Chapter 15)
5	Extract PGE parameters from the Process Control File	Use QA Monitor procedures (Chapter 15)
6	Launch the PDPS Operational Metadata GUI from the SSIT Manager GUI if the applicable PGE is not registered	Use SSIT procedure for launching the PDPS Operational Metadata GUI (Chapter 11)
7	Register the PGE	Use SSIT procedure for registering PGEs (Chapter 11)
8	Launch the Production Request Editor GUI	Use procedure in Section 13.1.1
9	Enter the Production Request for Ad Hoc Reprocessing	Use procedure in Section 13.1.2
10	Launch the Planning Workbench	Use procedure in Section 13.2.1

Table 13.1-8. Re-Generate Granules Affected by Loss of Files from the Archive - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
11	Create and activate a plan for the newly created Production Request	Use procedure in Section 13.2.2
12	Return the output (“PDPS Residual Granules”) list to the “Data Recovery Procedure for Known Files” procedure (Chapter 17)	

13.2 Production Planning Workbench

The Production Planner uses the Planning Workbench when creating a plan for production data processing at the DAAC. The Planning Workbench GUI provides the means by which the Production Planner selects specific PRs whose DPRs are to be run. The planning tool provides a forecast of the start and completion times of the jobs based upon historical experience in running these PGEs (as determined during the SSI&T process). Through the planning tool, when the generated plan is “activated,” the information included in the plan is transferred to the Data Processing Subsystem and loaded into the Platinum AutoSys tool where production processing is managed.

A Production Strategy is a high-level plan that the Production Planner prepares to notify the Planning Workbench of the rules for priorities and preferences in the processing of DPRs. The Production Planner uses the Production Strategies GUI to develop Production Strategies.

Table 13.2-1 lists Production Planning activities.

Table 13.2-1. Production Planning - Activity Checklist

Order	Role	Task	Section	Complete?
1	Production Planner	Launch the Production Strategies GUI	(P) 13.2.1	
2	Production Planner	Define or Modify a Production Strategy	(P) 13.2.2	
3	Production Planner	Launch the Planning Workbench and Planning Timeline GUIs	(P) 13.2.3	
4	Production Planner	Create New Production Plan	(P) 13.2.4	
5	Production Planner	Review Plan Timeline	(P) 13.2.5	

13.2.1 Launch the Production Strategies GUI

The Production Strategies GUI is invoked as described in the procedure that follows. Table 13.2-2 presents (in a condensed format) the steps required to launch the Production Strategies GUI. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 At the UNIX command line prompt enter:
xhost <hostname>
 - a. **<hostname>** refers to the host on which GUI is to be launched during the current operating session. Multiple hostnames can be specified on the same line.
 - b. The use of **xhost +** is discouraged because of a potential security problem.
- 2 In the Terminal window, at the command line prompt, enter:
setenv DISPLAY <clientname>:0.0
 - a. Use either the X terminal/workstation IP address or the machine-name for the clientname.
 - b. When using secure shell, the DISPLAY variable is set just once, before logging in to remote hosts. If it were to be reset after logging in to a remote host, the security features would be compromised.
- 3 Open another UNIX (terminal) window.
- 4 In the terminal window, at the command line prompt, start the log-in to the Planning/Management Workstation by entering:
/tools/bin/ssh <hostname>
 - a. Examples of hostnames include **e0pls03, g0pls01, l0pls02, n0pls02**.
 - b. If you receive the message, “Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?” enter **yes** (“y” alone will not work).
 - c. If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears; continue with Step 5.
 - d. If you have not previously set up a secure shell passphrase, go to Step 6.
- 5 If a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears, enter:
<Passphrase>
 - a. Go to Step 7.
- 6 At the **<user@remotehost>'s password:** prompt enter:
<Password>
- 7 In the terminal window, at the command line, enter:
cd /usr/ecs/<MODE>/CUSTOM/utilities
 - a. **<MODE>** is current mode of operation.
 1. TS1 - Science Software Integration and Test (SSI&T)
 2. TS2 - New Version Checkout
 3. OPS - Normal Operations
 - b. “utilities” is the directory containing the Planning Subsystem start-up scripts.

- 8 Set the application environment variables by entering:
 - setenv ECS_HOME /usr/ecs/**
 - a. Application home environment is entered
 - b. When logging in as a system user (e.g., cmshared), the ECS_HOME variable may be set automatically so it may not be necessary to set it manually.

- 9 Start the Production Strategies GUI by entering:
 - EcPIProdStratStart <MODE> <Application_id>**
 - a. The Production Strategies GUI is launched.
 - b. The application_id or MSGSRV_ID is a number from 1 to 5. It identifies the message service in use so messages can be directed to the proper message handler GUI. Consequently, it is a good idea to use the same application_id consistently during a production planning session.

Table 13.2-2. Launch the Production Strategies GUI - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Log in to the Planning host using secure shell	enter text, press Enter
2	Enter cd /usr/ecs/<MODE>/CUSTOM/utilities	enter text, press Enter
3	Set the environment variables if necessary	enter text, press Enter
4	Enter EcPIProdStratStart <MODE> <application_id>	enter text, press Enter

13.2.2 Define or Modify a Production Strategy

The Production Planner uses the Production Strategies GUI to develop Production Strategies. Table 13.2-3 presents (in a condensed format) the steps required to define or modify a production strategy. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Launch the **Production Strategies** GUI (refer to Section 13.2.1).
 - a. The **Production Strategies** GUI is displayed.

- 2 If defining a new production strategy, select **File** → **New** from the pull-down menu.
 - a. The fields of the **Production Strategies** GUI are reset.

- 3 If modifying an existing production strategy, first **single-click** the option button associated with the **Production Strategies** field, then highlight (in the option menu) the name of the production strategy to be modified.
 - a. Data pertaining to the selected production strategy are displayed in the applicable fields of the **Production Strategies** GUI.

- b. Alternatively, it is possible to select **File** → **Open** from the pull-down menu, select the desired production strategy from the list on the **Open** window, and **single-click** on the **Ok** button to open the production strategy.
- 4 If changing the default priority for PR Type, **single-click** in the **Default** field below the **PR Type** button and enter the desired default value.
 - a. The range for the default is from 1 to 10.
- 5 If changing the default priority for User Type, **single-click** in the **Default** field below the **User Type** button and enter the desired default value.
- 6 If changing the default priority for PGE Type, **single-click** in the **Default** field below the **PGE Type** button and enter the desired default value.
- 7 If defining or modifying a priority for a type of production request, first **single-click** on the **PR Type** button.
 - a. The different types of production requests are displayed in the **Type List** field at the bottom left of the GUI.
- 8 If defining a priority for a type of production request **not** currently listed in the **PR Type Value-Priority** list, **single-click** on that PR type in the **Type List** field.
 - a. The PR type is highlighted.
 - b. It is possible to highlight multiple PR types (by **single-clicking** on each one in turn) if they are all going to be assigned the same priority.
- 9 If redefining or deleting a priority for a type of production request **already** listed in the **PR Type Value-Priority** list, **single-click** on that PR type in the **Value-Priority** list.
 - a. The PR type is highlighted.
 - b. It is possible to highlight multiple PR types (by **single-clicking** on each one in turn while holding down either the **Shift** key or the **Ctrl** key) if the same action is going to be taken with respect to all of them.
- 10 If defining or modifying (not deleting) a priority, click on the up/down arrow buttons to the right of the **Priority** field until the desired priority value is displayed in the **Priority** field.
 - a. An alternative method of entering the priority is to enter the desired priority value in the **Priority** field.
 - b. The acceptable range for the priority is from 1 to 10.
- 11 **Single-click** on the appropriate button from the following selections:
 - a. **Add** - to approve a priority for an additional PR type and display the selected PR type and priority in the **PR Type Value-Priority** list at the left center of the GUI.
 - b. **Modify** - to approve a revised priority for the selected PR type and display the PR type and modified priority in the **PR Type Value-Priority** list.
 - c. **Delete** - to delete the priority for the selected PR type and remove the PR type and priority from the **PR Type Value-Priority** list.

- 12 Repeat Steps 7 through 11 as necessary until all PR Type priorities (as shown in the **PR Type Value-Priority** field) are correct.

NOTE: Although it is possible to enter values for different types of users, values assigned to the User Type category are not included in priority calculations. Calculation of priorities using User Type values may become functional when automated on-demand processing is implemented; i.e., in the Release 5B time frame. This affects Steps 13 through 18.

- 13 If defining or modifying a priority for a type of user, first **single-click** on the **User Type** button.
 - a. The different types of users are displayed in the **Type List** field at the bottom left of the GUI.
- 14 If defining a priority for a type of user **not** currently listed in the **User Type Value-Priority** list, **single-click** on that user type in the **Type List** field.
 - a. The user type is highlighted.
 - b. It is possible to highlight multiple user types (by **single-clicking** on each one in turn).
- 15 If redefining or deleting a priority for a user type **already** listed in the **User Type Value-Priority** list, **single-click** on that user type in the **Value-Priority** list.
 - a. The user type is highlighted.
 - b. It is possible to highlight multiple user types (by **single-clicking** on each one in turn while holding down either the **Shift** key or the **Ctrl** key).
- 16 If defining or modifying (not deleting) a priority, click on the up/down arrow buttons to the right of the **Priority** field until the desired priority value is displayed in the **Priority** field.
 - a. An alternative method of entering the priority is to enter the desired priority value in the **Priority** field.
 - b. The acceptable range for the priority is from 1 to 10.
- 17 **Single-click** on the appropriate button from the following selections:
 - a. **Add** - to approve a priority for an additional user type and display the selected user type and priority in the **User Type Value-Priority** list near the center of the GUI.
 - b. **Modify** - to approve a revised priority for the selected user type and display the user type and modified priority in the **User Type Value-Priority** list.
 - c. **Delete** - to delete the priority for the selected user type and remove the user type and priority from the **User Type Value-Priority** list.
- 18 Repeat Steps 13 through 17 as necessary until all user type priorities (as shown in the **User Type Value-Priority** field) are correct.
- 19 If defining a priority for a type of PGE, first **single-click** on the **PGE Type** button.

- a. The different types of PGEs are displayed in the **Type List** field at the bottom left of the GUI.

- 20 If defining a priority for a type of PGE **not** currently listed in the **PGE Type Value-Priority** list, **single-click** on that PGE type in the **Type List** field.
 - a. The PGE type is highlighted.
 - b. It is possible to highlight multiple PGE types (by **single-clicking** on each one in turn).
- 21 If redefining or deleting a priority for a PGE type **already** listed in the **PGE Type Value-Priority** list, **single-click** on that PGE type in the **Value-Priority** list.
 - a. The PGE type is highlighted.
 - b. It is possible to highlight multiple PGE types (by **single-clicking** on each one in turn while holding down either the **Shift** key or the **Ctrl** key).
- 22 If defining or modifying (not deleting) a priority, click on the up/down arrow buttons to the right of the **Priority** field until the desired priority value is displayed in the **Priority** field.
 - a. An alternative method of entering the priority is to enter the desired priority value in the **Priority** field.
 - b. The acceptable range for the priority is from 1 to 10.
- 23 **Single-click** on the appropriate button from the following selections:
 - a. **Add** - to approve a priority for an additional PGE type and display the selected PGE type and priority in the **PGE Type Value-Priority** list near the center of the GUI.
 - b. **Modify** - to approve a revised priority for the selected PGE type and display the PGE type and modified priority in the **PGE Type Value-Priority** list.
 - c. **Delete** - to delete the priority for the selected PGE type and remove the PGE type and priority from the **PGE Type Value-Priority** list.
- 24 Repeat Steps 19 through 23 as necessary until all PGE type priorities (as shown in the **PGE Type Value-Priority** field) are correct.
- 25 **Single-click** in the **Weight** field below the **PR Type** button and enter the desired weight.
 - a. The acceptable range for weights is from 1 to 100.
 - b. The **Total Weight** field displays updated totals of all weighting factors as they are entered.
 - c. When entering weights for the **PR Type**, **User Type**, **PGE Type**, and **User Selected** factors, relative values can be entered without regard to whether the values in the four categories add up to 100. The **Normalize** button provides a means of eventually ensuring that the total of all four categories equals 100.
 - d. The assigned weight in each category is multiplied by the priority for each type. To maintain a high priority (low number, such as one), assign a low weight; to ensure a low priority, assign a relatively high weight.
- 26 **Single-click** in the **Weight** field below the **User Type** button and enter the desired weight.

- 27 **Single-click** in the **Weight** field below the **PGE Type** button and enter the desired weight.
- 28 **Single-click** in the **User Selected Weight** field and enter the desired weight.
 - a. The priority to which the user-selected weight is applied is the priority assigned using the Production Request Editor when a production request is created.
- 29 **Single-click** on the **Normalize** button.
 - a. The Planning Subsystem adjusts all weighting factors to produce a total weight of 100 (as displayed in the **Total Weight** field).
- 30 If it is necessary to change the priority of all jobs that produce data needed by other DAACs, **single-click** in the **Inter DAAC Delta Priority** field and enter the desired value.
 - a. The range for Inter-DAAC Delta Priority is from 1 to 100.
 - b. The lower the number, the higher the priority (1 is a high priority, 100 is a low priority).
- 31 If it is necessary to change the priority of jobs that have been waiting in the Production Queue for more than a day, **single-click** in the **Late Start Delta Priority** field and enter the desired value.
 - a. The range for the Late Start Delta Priority is from 1 to 100.
- 32 Select **File** → **Save As** from the pull-down menu.
 - a. A **Save As** window similar to the **File Selection** window is displayed.
- 33 Enter the desired file name for the new production strategy in the **Save As** field.
- 34 **Single-click** on the **Ok** button to accept the file name in the **Save As** field.
 - a. The **Save As** window is dismissed.
 - b. The production strategy is saved with the specified file name.
- 35 To exit from the **Production Strategies** GUI select **File** → **Exit** from the pull-down menu.

Table 13.2-3. Define a Production Strategy - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch Production Strategies GUI	Use procedure in Section 13.2.1
2	Select File → New	single-click
3	Enter PR Type <default priority> if applicable	enter text
4	Enter User Type <default priority> if applicable	enter text
5	Enter PGE Type <default priority> if applicable	enter text
6	Select PR Type button.	single-click
7	Select <PR type> from the Type List field	single-click
8	Enter <priority> in the Priority field	enter text or single-click as necessary

Step	What to Enter or Select	Action to Take
9	Select Add	single-click
10	Repeat Steps 7 through 9 for additional PR types if applicable	

Table 13.2-3. Define a Production Strategy - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
11	Select User Type button.	single-click
12	Select <user type> from the Type List field	single-click
13	Enter <priority> in the Priority field	enter text or single-click as necessary
14	Select Add	single-click
15	Repeat Steps 12 through 14 for additional user types if applicable	
16	Select PGE Type button.	single-click
17	Select <PGE type> from the Type List field	single-click
18	Enter <priority> in the Priority field	enter text or single-click as necessary
19	Select Add	single-click
20	Repeat Steps 17 through 19 for additional PGE types if applicable	
21	Enter PR Type <weight>	enter text
22	Enter User Type <weight>	enter text
23	Enter PGE Type <weight>	enter text
24	Enter User Selected <weight>	enter text
25	Select the Normalize button	single-click
26	Enter <Inter DAAC Delta Priority>	enter text
27	Enter <Late Start Delta Priority>	enter text
28	Select File → Save As	single-click
29	Enter production strategy <file name> in the Save As field	enter text
30	Select Ok	single-click
31	Select File → Exit	single-click

13.2.3 Launch the Planning Workbench and Planning Timeline GUIs

The Planning Workbench and Planning Timeline GUIs are invoked from a UNIX command line prompt. Table 13.2-4 presents (in a condensed format) the steps required to launch the Planning Workbench and Planning Timeline GUIs. If you are already familiar with the procedures, you may prefer to use the quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 At the UNIX command line prompt enter:
xhost <hostname>

- a. **<hostname>** refers to the host on which GUI is to be launched during the current operating session. Multiple hostnames can be specified on the same line.
- b. The use of **xhost +** is discouraged because of a potential security problem.

- 2 In the Terminal window, at the command line prompt, enter:
setenv DISPLAY <clientname>:0.0
 - a. Use either the X terminal/workstation IP address or the machine-name for the clientname.
 - b. When using secure shell, the DISPLAY variable is set just once, before logging in to remote hosts. If it were to be reset after logging in to a remote host, the security features would be compromised.
- 3 Open another UNIX (terminal) window.
- 4 In the terminal window, at the command line prompt, start the log-in to the Planning/Management Workstation by entering:
/tools/bin/ssh <hostname>
 - a. Examples of hostnames include **e0pls03**, **g0pls01**, **l0pls02**, **n0pls02**.
 - b. If you receive the message, “Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?” enter **yes** (“y” alone will not work).
 - c. If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears; continue with Step 5.
 - d. If you have not previously set up a secure shell passphrase, go to Step 6.
- 5 If a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears, enter:
<Passphrase>
 - a. Go to Step 7.
- 6 At the **<user@remotehost>'s password:** prompt enter:
<Password>
- 7 In the terminal window, at the command line, enter:
cd /usr/ecs/<MODE>/CUSTOM/utilities
 - a. **<MODE>** is current mode of operation.
 1. TS1 - Science Software Integration and Test (SSI&T)
 2. TS2 - New Version Checkout
 3. OPS - Normal Operations
 - b. “utilities” is the directory containing the Planning Subsystem start-up scripts.
- 8 Set the application environment variables by entering:
setenv ECS_HOME /usr/ecs/
 - a. Application home environment is entered
 - b. When logging in as a system user (e.g., cmshared), the ECS_HOME variable may be set automatically so it may not be necessary to set it manually.

- 9 Start the Planning Workbench-related applications by entering:
EcPIAllStart <MODE> <Application_id>
 - a. The System Name Server, Resource Model, Message Handler, Planning Workbench GUI and Planning Timeline GUI are launched.
 - b. The application_id or MSGSRV_ID is a number from 1 to 5. It identifies the message service in use so messages can be directed to the proper message handler GUI. Consequently, it is a good idea to use the same application_id consistently during a production planning session.

- 10 Adjust the window size of the Planning Timeline (if necessary) to allow access to other items in the workspace.

Table 13.2-4. Launch the Planning Workbench - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Log in to the Planning host using secure shell	enter text, press Enter
2	Enter cd /usr/ecs/<MODE>/CUSTOM/utilities	enter text, press Enter
3	Set the environment variables if necessary	enter text, press Enter
4	Enter EcPIAllStart <MODE> <application_id>	enter text, press Enter

13.2.4 Create New Production Plan

The new Production Plan process begins when the Production Planner starts the Planning Workbench. The Production Planner will perform the high level functions, such as creating a plan, deciding when to activate, cancel, and replan.

The Production Planner will bring the plan back on track due to late data arrivals, QA issues, equipment failures and other events that can cause significant delays in the processing of the associated products.

Table 13.2-5 presents (in a condensed format) the steps required to create a new Production Plan. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures:

- 1 Launch the Planning Workbench (refer to Section 13.2.3).
 - a. The **Planning Workbench** and **Planning Timeline** GUIs are displayed.

- 2 Select **File** → **New** on the **Planning Workbench GUI**.
 - a. The **New Plan** window is displayed.

- 3 Enter the plan name in the **Plan Name** field, then **single-click** on the **Ok** button.
 - a. Name is displayed in **Plan Name** field.
 - b. Status is **Candidate**.

zzz” can be scheduled. If all DPRs associated with a PR have been run, the PR cannot be rescheduled.

- d. If processing of the currently active plan is to be continued when the new plan is activated, include the PR(s) for the currently active plan in the new plan.
- e. In the **Scheduled** list, items with the prefix “GE_” are resource reservations (also
- f. All ground events are automatically scheduled with any plan; therefore, the ground events are normally displayed in the Scheduled list.
- g. Whenever a plan is activated, the ground events are activated as well as the DPRs associated with the specified PRs.
- h. If a ground event appears in the Unscheduled list, the ground event has lost allocations.

7 Select **File** → **Save As** from the pull-down menu.

- a. The **Save Plan** window is displayed.

8 Enter the plan name in the **Plan Name** field, then **single-click** on the **Ok** button.

- a. The **Save Plan** window is dismissed.
- b. The production plan is saved with the specified file name.
- c. Status is **Candidate**.

9 If appropriate, **single-click** on the **Activate** button to activate the new Plan.

- a. The **Rollover Time** area is automatically filled when a new plan is activated.
- b. Clicking on the **Activate** button activates a plan and the Data Processing Requests (DPRs) associated with the planned PRs are transferred to the Data Processing Subsystem and loaded into the AutoSys production queuing system.
- c. Once its data dependencies have been satisfied, each DPR is “released” to be run as processing resources become available.
- d. Clicking on the **Activate** button causes the current active plan to get "replanned over" by the selected plan.

- 10** If it is desired to baseline a plan, **single-click** on the **Baseline** button then **single-click** on **Yes**.
- “The current plan is <planname>. Do you wish to baseline it?” window appears.
 - Clicking on the **Baseline** button records the plan and the time of baselining.
 - A baseline plan can be used as a point of comparison with which to compare future plans and results.
- 11** Select **File** → **Exit** to quit the Planning Workbench.
- 12** After quitting the **Planning Workbench** GUI **single-click** in the UNIX window used to start the **Planning Workbench** GUI.
- The Message Handler, System Name Server, and Resource Model should be shut down to eliminate unneeded processes and allow other operators to gain access to the Planning Workbench if necessary.
- 13** Shut down Planning Workbench-related applications by entering:
EcPISlayAll <MODE> <Application_id>
- The following Planning Workbench-related applications shut down:
 - Planning Workbench (if it has not already been shut down).
 - Planning Timeline (if it has not already been shut down).
 - Message Handler.
 - System Name Server.
 - Resource Model.
- 14** Obtain a list of active processes in the specified mode by entering:
ps -ef | grep <MODE>
- A list of active processes in the specified mode is displayed.
 - If an error message is received when **ps -ef | grep <MODE>** is entered, enter:
ps -auxwww | grep <MODE>
- 15** Examine the list of processes running in the specified mode to determine whether the Message Handler, System Name Server, and Resource Model processes have actually been shut down.
- None of the following processes should be active:
 - EcPIWb
 - EcPITI
 - EcPIMsh
 - EcPISns
 - EcPIRm
- 16** If any of the specified processes [especially the Message Handler, System Name Server, and/or Resource Model process(es)] is/are still active, terminate the active process(es) by entering:
kill -15 <PROCESS_ID1> <PROCESS_ID2> <...> <PROCESS_IDx>

- 17 Repeat Steps 14 through 16 as necessary.

Table 13.2-5. Create New Production Plan - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Launch Planning Workbench	Use procedure in Section 13.2.3
2	Select File → New	single-click
3	Enter <Plan Name>	enter text
4	Select Ok	single-click
5	Select <Strategy>	single-click
6	Select <Production Request(s)> to schedule/unschedule	single-click
7	Select Schedule button or Unschedule button as applicable	single-click
8	Schedule/Unschedule Production Requests	single-click
9	Select File → Save As	single-click
10	Enter <Plan Name>	enter text
11	Select Ok	single-click
12	Select Activate if applicable	single-click if applicable
13	Select File → Exit	single-click
14	Enter EcPISlayAll <MODE> <Application_id>	enter text, press Enter
15	Enter ps -ef grep <MODE>	enter text, press Enter
16	Enter kill -15 <PROCESS_ID1> <PROCESS_ID2> <...> <PROCESS_IDx> to terminate active process(es)	enter text, press Enter if applicable

13.2.5 Review Plan Timeline

Table 13.2-6 presents (in a condensed format) the steps required to review planning timelines. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 Launch the Planning Workbench and Timeline GUIs (refer to Section 13.2.3).
 - a. The **Planning Timeline** GUI is displayed.
 - b. If you have previously saved a configuration file, you may load it as follows:
 1. Select **File** → **Load Configuration** from menu (change directory in GUI box, if necessary).
 - c. Otherwise continue with Step 2.

- 2 Select **File** → **Open Plan** from the pull-down menu bar.
 - a. List of plans appears.

- 3 Select the plan to be reviewed.
 - a. The timeline for the specific plan is displayed.
 - b. Name is displayed in the Title bar.
- 4 **Single-click** on the **Ok** button.
- 5 Observe the production plan information displayed on the timeline GUI.
- 6 If a different time scale (start and end dates and times) is desired, perform Steps 7 through 9; otherwise, go to Step 10.
- 7 Select **Time** → **Change Plan Window**.
 - a. **plan window edit** window appears with default times.
- 8 Enter **Plan Win Start** date and time.
 - a. DD MMM YYYY and hh:mm:ss are displayed.
- 9 Enter **Plan Win End** date and time then **single-click** on **Ok**.
 - a. DD MMM YYYY and hh:mm:ss are displayed.
- 10 If a different time span is desired, **single-click** on the **Show** pushbutton and select one of 12 time increments between **5 min** to **168 hrs** for the timeline scale.
 - a. The entry “**OTHER**” has no purpose at this time.
- 11 If no resources are displayed on the GUI or if different resources should be displayed, perform Steps 12 through 15; otherwise, go to Step 16.
- 12 Select **Display** → **Change resources**.
 - a. **Resource edit** window with lists of **Available Resources** and **Viewed Resources** is displayed.
- 13 **Single-click** resource(s) in desired list then **single-click** **Add** or **Del**.
 - a. **Add** move the resource(s) from the **Available** list to the **Viewed** list.
 - b. **Del** removes items from the **Viewed** List.
- 14 To change to order in which resources are displayed on the timeline, **single-click** on an item in the **Viewed Resources** list then **single-click** on the **up** or **down** arrow as appropriate.
 - a. Selected resource moves up or down in order on the list.
- 15 **Single-click** on the **Ok** button.
- 16 If different color coding of the timeline is desired, perform Steps 17 through 19; otherwise, go to Step 20.
- 17 Select **Display** → **Change colors**.

- a. Color grid appears with a list of Production Requests.
- 18** **Single-click** on the Production Request name then **single-click** desired color for that Production Request.
 - a. Color is changed for the selected Production Request.
 - b. New color appears on the horizontal bar between color and Production Request selections.
- 19** **Single-click** on the **Ok** button.
- 20** Observe the production plan information displayed on the timeline GUI.
- 21** If desired, save your current configuration as a file. If you have not previously saved your current configuration and wish to do so:
 - a. Select **File** → **Save Configuration** from menu.
- 22** To exit the Planning Master Timeline, select **File** → **Exit** from the pull-down menu.

Table 13.2-6. Review Plan Timeline - Quick-Step Procedures (1 of 2)

Step	What to Enter or Select	Action to Take
1	Launch Planning Workbench and Timeline	Use procedure in Section 13.2.3
2	Load configuration file (File → Load Configuration) (optional)	single-click
3	Select File → Open Plan	single-click
4	Select <Plan>	single-click
5	Observe the production plan information	read text
6	Select Time → Change Plan window	single-click
7	Enter plan window <start date and time>	enter text
8	Enter plan window <end date and time>	enter text
9	Select Ok	single-click
10	Select <time span>	single-click
11	Select Display → Change resources	single-click
12	Select <resources>	single-click
13	Select Add	single-click
14	Select <viewed resource> to be reordered	single-click
15	Reorder viewed resources using up/down arrows	single-click
16	Select Ok	single-click
17	Select Display → Change colors	single-click
18	Select <Production Request>	single-click
19	Select <color> for Production Request	single-click
20	Select Ok	single-click
21	Observe the production plan information	read text
22	Select File → Save Configuration	single-click

Table 13.2-6. Review Plan Timeline - Quick-Step Procedures (2 of 2)

Step	What to Enter or Select	Action to Take
23	Enter <file name>	enter text
24	Select Ok	single-click

13.3 Submitting or Withdrawing a Subscription Using the Subscription Editor

The Subscription Editor is a character-based user interface that may be used to either submit or withdraw subscriptions for notification of data arrival (i.e., insertion of data into the archive) or other subscribable system events.

- a. Subscriptions may be submitted on behalf of a general user or on behalf of the Planning Subsystem (i.e., the PLS Subscription Manager).
- b. An advantage of the character-based Subscription Editor over the Subscription GUI is the ability to submit subscriptions without being a registered user of ECS.

Submitting or withdrawing a subscription using the Subscription Editor starts with the assumption that the applicable servers are running and the Production Planner has logged in to the ECS system.

Table 13.3-1. Subscription - Activity Checklist

Order	Role	Task	Section	Complete?
1	Production Planner	Submit or Withdraw a Subscription Using the Subscription Editor	(P) 13.3.1	

13.3.1 Submit or Withdraw a Subscription Using the Subscription Editor

Table 13.3-2 presents (in a condensed format) the steps required to submit or withdraw a subscription using the subscription editor. If you are already familiar with the procedures, you may prefer to use this quick-step table. If you are new to the system, or have not performed this task recently, you should use the following detailed procedures.

- 1 At the UNIX command line prompt enter:
xhost <hostname>
 - a. <hostname> refers to the host on which GUI is to be launched during the current operating session. Multiple hostnames can be specified on the same line.
 - b. The use of **xhost +** is discouraged because of a potential security problem.

- 2 In the Terminal window, at the command line prompt, enter:
setenv DISPLAY <clientname>:0.0
 - a. Use either the X terminal/workstation IP address or the machine-name for the clientname.
 - b. When using secure shell, the DISPLAY variable is set just once, before logging in to remote hosts. If it were to be reset after logging in to a remote host, the security features would be compromised.

- 3 Open another UNIX (terminal) window.
- 4 In the terminal window, at the command line prompt, start the log-in to the Planning/Management Workstation by entering:
/tools/bin/ssh *hostname*
 - a. Examples of hostnames include **e0pls03, g0pls01, l0pls02, n0pls02**.
 - b. If you receive the message, “Host key not found from the list of known hosts. Are you sure you want to continue connecting (yes/no)?” enter **yes** (“y” alone will not work).
 - c. If you have previously set up a secure shell passphrase and executed **sshremote**, a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears; continue with Step 5.
 - d. If you have not previously set up a secure shell passphrase, go to Step 6.
- 5 If a prompt to **Enter passphrase for RSA key '<user@localhost>'** appears, enter:
<Passphrase>
 - a. Go to Step 7.
- 6 At the **<user@remotehost>'s password:** prompt enter:
<Password>
- 7 In the terminal window, at the command line, enter:
cd /usr/ecs/<MODE>/CUSTOM/utilities
 - a. **<MODE>** is current mode of operation.
 1. TS1 - Science Software Integration and Test (SSI&T)
 2. TS2 - New Version Checkout
 3. OPS - Normal Operations
 - b. “utilities” is the directory containing the Planning Subsystem start-up scripts.
- 8 Set the application environment variables by entering:
setenv ECS_HOME /usr/ecs/
 - a. Application home environment is entered
 - b. When logging in as a system user (e.g., cmshared), the ECS_HOME variable may be set automatically so it may not be necessary to set it manually.
- 9 Start the Subscription Editor by entering:
EcPlSubsEditStart <MODE> <Application_id>
 - a. The following message is displayed:
This program may be used to submit subscriptions for notification of data arrivals, on behalf of a general user, or on behalf of the PDPS production system (ie. the PLS Subscription Manager)

Would you like to view the complete list of ESDTs known to PDPS? (y/n):

- 10** Enter either **y** or **n** (as appropriate).
- Either lower-case or upper-case letters may be entered.
 - If **y** was entered, a message similar to the following message is displayed:

AP#0 Subscription Flag: 1
DAP#0 Subscription Flag: 1
FAILPGE#0 Subscription Flag: 1
MOD00#0 Subscription Flag: 0
MOD01#0 Subscription Flag: 0
MOD021KM#0 Subscription Flag: 0
MOD02LUT#0 Subscription Flag: 0
MOD03#0 Subscription Flag: 0
MOD03LUT#0 Subscription Flag: 0
MOD29#0 Subscription Flag: 0
PGEEEXE#0 Subscription Flag: 1
PH#0 Subscription Flag: 1
SSAPC#0 Subscription Flag: 1
Is recipient PLS Subscription Manager (Y/N):

- If **n** was entered, the following message is displayed:
Is recipient PLS Subscription Manager (Y/N):

- 11** Enter either **y** or **n** (as appropriate).
- If **y** was entered, the following message is displayed:
Enter ESDT data type name (as appears in the PDPS database):
 - If **y** was entered, skip Steps 12 and 13, and go to Step 14.
 - If **n** was entered, the following message is displayed:
Enter user id:

- 12** In response to the “Enter user id” message enter:
<UserID>
- The following message is displayed:
Enter email address (for subscription notification):

- 13** In response to the “Enter email address...” message enter:
<e-mail address>
- The following message is displayed:
Enter ESDT data type name (as appears in the PDPS database):

- 14** Enter **<ESDT>**
- For example: **FAILPGE#0 Subscription Flag: 1**

- b. The following message is displayed:
Override the provider [SYSTEM] defined for this ESDT (Y/N)
- 15** Enter either **Y** or **N** (as appropriate).
a. The following message is displayed:
Submit(S)/Withdraw(W) :
- 16** Enter either **S** or **W** (as appropriate).
a. If **S** was entered, the following message is displayed:
Specify the Internal Service Name
Enter 'd' for default Insert Event service
b. If **W** was entered, the following message is displayed:
Specify the Internal Service Name
- 17** Enter either **<internal service name>** or **d** (as appropriate).
a. A message similar to the following message is displayed:
Client Path: ./subsys/ecs/TS2/EcIoAdServer
client: server binding is 03b894b0-c7e6-11d1-a691-
9b9d7b23aa77@ncacn_ip_tcp:155.
157.123.35[58765]
Client Path: ./subsys/ecs/TS2/EcIoAdServer
client: server binding is 03b894b0-c7e6-11d1-a691-
9b9d7b23aa77@ncacn_ip_tcp:155.
157.123.35[58764]
Client Path: ./subsys/ecs/TS2/EcSbSubServer

Table 13.3-2. Submit/withdraw Subscription - Quick-Step Procedures

Step	What to Enter or Select	Action to Take
1	Log in to Planning host using secure shell	enter text, press Enter
2	Enter cd usr/ecs/<MODE>/CUSTOM/utilities	enter text, press Enter
3	Set environment variables if necessary	enter text, press Enter
4	Enter EcPISubsEditStart <MODE> <Application_id>	enter text, press Enter
5	Enter Y or N to view ESDTs or not	enter text, press Enter
6	Enter Y or N to have notification or not	enter text, press Enter
7	Enter <user id> if prompted	enter text, press Enter
8	Enter <e-mail address> if prompted	enter text, press Enter
9	Enter <ESDT>	enter text, press Enter
10	Enter Y or N to override the provider defined for the ESDT or not	enter text, press Enter
11	Enter S to submit or W to withdraw a subscription	enter text, press Enter

12	Enter either <Internal Service Name> or d (for default)	single-click
----	-----------------------------------------------------------------------------	---------------------