

Reviewing DPRs (Cont.)



- **DPR List (Production Request Editor)**
 - Each line represents a DPR, i.e., a job that will be run when all data and resource needs have been satisfied
 - For each DPR the list includes...
 - » DPR identification
 - » relevant PGE
 - » name of the corresponding PR
 - » data start date and time, etc.
 - may be filtered, so that only DPRs with certain characteristics are displayed

Reviewing DPRs (Cont.)



- **Data concerning an individual DPR (Production Request Editor)**
 - PGE parameters
 - UR File Mappings (PGE File Mappings)
 - » input and output files for a particular DPR on the PGE File Mappings GUI
 - » GUI displays one line of information for each file that may be used by or be produced by the PGE

Reviewing DPRs (Cont.) : UR File Mappings GUI



UR File Mappings

File Mappings

Input Data

Logical Id	Granule Id	Start Time	Stop Time
10002	EPHEM_v1.00401960000	04/01/96 00:00:00	04/02/96 00:00:00
10001	IDS_v1.00401960000	04/01/96 00:00:00	04/02/96 00:00:00

Find

Output Data

Logical Id	Granule Id	Start Time	Stop Time
20001	BDS_v1.00401960000	04/01/96 00:00:00	04/02/96 00:00:00
5001	IES_v1.00401960000	04/01/96 00:00:00	04/01/96 01:00:00
5001	IES_v1.00401960100	04/01/96 01:00:00	04/01/96 02:00:00
5001	IES_v1.00401960200	04/01/96 02:00:00	04/01/96 03:00:00
5001	IES_v1.00401960300	04/01/96 03:00:00	04/01/96 04:00:00
5001	IES_v1.00401960400	04/01/96 04:00:00	04/01/96 05:00:00
5001	IES_v1.00401960500	04/01/96 05:00:00	04/01/96 06:00:00
5001	IES_v1.00401960600	04/01/96 06:00:00	04/01/96 07:00:00
5001	IES_v1.00401960700	04/01/96 07:00:00	04/01/96 08:00:00
5001	IES_v1.00401960800	04/01/96 08:00:00	04/01/96 09:00:00
5001	IES_v1.00401960900	04/01/96 09:00:00	04/01/96 10:00:00

Find

OK Help

Reviewing DPRs (Cont.) : DPR List GUI



Production Request Editor

File Help

Planning PR Edit PR List DPR View DPR List

Production Request: PR_TEST1_v1.0

Filter

Data Processing Requests

DPR Id	PGE Id	PR Name	Data Start Time
CERES_SUB1_v1.00401960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/01/96 00:00
CERES_SUB1_v1.00402960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/02/96 00:00
CERES_SUB1_v1.00403960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/03/96 00:00
CERES_SUB1_v1.00404960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/04/96 00:00
CERES_SUB1_v1.00405960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/05/96 00:00
CERES_SUB1_v1.00406960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/06/96 00:00
CERES_SUB1_v1.00407960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/07/96 00:00
CERES_SUB1_v1.00408960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/08/96 00:00
CERES_SUB1_v1.00409960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/09/96 00:00
CERES_SUB1_v1.00410960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/10/96 00:00
CERES_SUB1_v1.00411960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/11/96 00:00
CERES_SUB1_v1.00412960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/12/96 00:00
CERES_SUB1_v1.00413960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/13/96 00:00
CERES_SUB1_v1.00414960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/14/96 00:00
CERES_SUB1_v1.00415960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/15/96 00:00
CERES_SUB1_v1.00416960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/16/96 00:00
CERES_SUB1_v1.00417960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/17/96 00:00
CERES_SUB1_v1.00418960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/18/96 00:00
CERES_SUB1_v1.00419960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/19/96 00:00
CERES_SUB1_v1.00420960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/20/96 00:00
CERES_SUB1_v1.00421960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/21/96 00:00
CERES_SUB1_v1.00422960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/22/96 00:00
CERES_SUB1_v1.00423960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/23/96 00:00
CERES_SUB1_v1.00424960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/24/96 00:00
CERES_SUB1_v1.00425960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/25/96 00:00
CERES_SUB1_v1.00426960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/26/96 00:00
CERES_SUB1_v1.00427960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/27/96 00:00
CERES_SUB1_v1.00428960000	CERES_SUB1_v1.0	PR_TEST1_v1.0	04/28/96 00:00

Find

Status:

Reviewing DPRs (Cont.): Procedure



- **Access the Production Request Editor from the UNIX prompt**
- **Select the Data Processing Request List by clicking on the DPR List tab**
- **To list only the DPRs associated with a particular Production Request...**
 - **click on the option button associated with the Production Request field**
 - **highlight the desired PR in the option menu then click on the Filter button**
- **Select a DPR to be reviewed from the list of Data Processing Requests, then click on the DPR View tab**

Reviewing DPRs (Cont.): DPR View GUI



Production Request Editor

File Help

Planning PR Edit PR List DPR View DPR List

Data Processing Request Identification

DPR Name: CERES_SUB1_v1.004019600 PR Name: PR_TEST1_v1.0

Origination Date: 07/23/96 08:46:37

Originator: jolyon

PGE ID: CERES_SUB1_v1.0 PGE Parameters...

Data Start Time: 03/31/96 19:00:00 PGE File Mappings...

Data Stop Time: 04/30/96 20:00:00

Request Data and Status

Predicted Start

Date: #N/A Time: []

Actual Start:

Date: #N/A Time: []

Priority: 0 Status: ON_QUEUE

Reviewing DPRs (Cont.): Procedure



- **To obtain information concerning the PGE parameters, click on the PGE Parameters... button**
- **When finished reviewing the PGE parameters, click on the OK button to return to the DPR View GUI**
- **Click on the PGE File Mappings... button to display the UR File Mappings GUI**
- **When finished reviewing the UR File Mappings, click on the OK button to return to the DPR View GUI**

Reviewing DPRs (Cont.): Procedure



- **Review the Data Start Time and Data Stop Time**
- **Review the Request Data and Status area of the GUI**
- **When finished reviewing information concerning the DPR, repeat steps as necessary to review additional DPRs**

Reviewing a Plan Timeline



- **Production Plan Timeline**

- graphic, timeline-oriented depiction of a production plan
- displays a set of computers, arranged along the left side of the GUI
- displays some period of time across the top edge of the GUI
- execution of DPRs on a computer over a period of time is represented by several DPR bars across the GUI for that computer
 - » bar represents a time period during which a PGE (as described by a DPR) is running

Reviewing a Plan Timeline (Cont.): Procedure



- [TBD]

Production Planning Scenarios



- **Two scenarios from the *Operations Scenarios for the ECS Project: Release A, 605-CD-001-003, June 1996:***
 - Routine Production Planning Scenario
 - Replanning Production Scenario

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario**
 - occurs during a given day of the Release A period at the Langley Research Center (LaRC) DAAC under the following conditions:
 - » DAAC is in stable operations
 - » The following components are all operating normally: TRMM instruments (including CERES), Sensor Data Processing Facility (SDPF), ECS Ingest Subsystem.
 - » Pertinent PGEs have been integrated into the ECS production processing environment and are operating normally

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **scenario is based on the following assumptions:**
 - » **all resource allocation issues have been resolved with the Resource Planner**
 - » **Resource Planner has provided the Production Planner with the following items: list of resources available for use in processing, allocation profile with time for the available resources**
 - » **PDPS database is complete in terms of PRs, DPRs and data availability predictions, etc. and is ready to support the planning activity**
 - » **subscriptions have been entered against all data products required for processing**

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **steps extracted and adapted from the scenario:**
 - **Production Planner reviews objectives for processing for the coming month**
 - **Production Planner starts the Production Request Editor and selects the option to access existing PRs**
 - **Production Planner selects the PR to be reissued from the PR List GUI and opens the PR Edit GUI to make modifications to the PR**
 - **Production Planner creates a plan for the coming month using the Planning Workbench**
 - **Production Planner selects the new plan option**

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **steps extracted and adapted from the scenario:**
 - Production Planner enters the time period (date/ time) for the plan [TBD]
 - Production Planner reviews the available PRs displayed on the Planning Workbench GUI
 - Production Planner is uncertain concerning the details of one of the PRs displayed and selects the PR to review the details [TBD]
 - Production Planner goes back to the lists of scheduled and unscheduled PRs and moves PRs between the lists until the scheduled list contains the desired PRs

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **steps extracted and adapted from the scenario:**
 - **Having selected the applicable PRs for the new Production Plan, the Production Planner activates the plan (using the Activate button)**
 - **Production Planner reviews the Production Planning Timeline GUI which was displayed when the Production Planner clicked on the Activate button**
 - **Production Planner reviews the new plan**
 - **Production Planner exits from the Production Planning Timeline GUI, saves the current plan, and returns to plan creation, selecting a PR, modifying its priority level and time period and scheduling it in the modified plan**

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **steps extracted and adapted from the scenario:**
 - Production Planner reviews the modified plan
 - Production Planner analyzes the results of the modified plan and decides that it achieves the goals; Production Planner saves the monthly Production Plan
 - Production Planner selects a baseline plan (monthly) using the Planning Workbench GUI
 - Production Planner starts the creation of a weekly Production Plan by opening an existing weekly plan using the Planning Workbench GUI

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **steps extracted and adapted from the scenario:**
 - **Production Planner reviews and updates the selected PRs as required on the basis of planning meetings and comments**
 - **Production Planner reviews the Production Planning Timeline GUI, decides that the plan meets the objectives and saves the plan**
 - **Production Planner selects a baseline plan (weekly) using the Planning Workbench GUI**
 - **Production Planner decides to review and activate the production schedule for the next day of processing**

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **steps extracted and adapted from the scenario:**
 - **Production Planner selects the current weekly plan being used for the activation/schedule seeding operation**
 - **Production Planner enters the time range of the scheduling period, enters any comments and activates the plan**
 - **Production Planner reviews the resulting schedule and accepts the results**

Production Planning Scenarios (Cont.)



- **Routine Production Planning Scenario (Cont.)**
 - **conditions at the completion of the routine production planning scenario:**
 - » **planning database contains new and updated entries reflecting the current state of the Production Plan**
 - » **DDS contains the published version of the plan and a timeline view [TBD] of the plan**
 - » **e-mail messages will have been sent to all affected persons, as determined by the plan insertion or update**
 - » **production schedule, as maintained by AutoSys, will have been updated and processing will proceed according to the schedule**

Production Planning Scenarios (Cont.)



- **Replanning Production Scenario**
 - occurs during a given day of the Release A period at the Langley Research Center (LaRC) DAAC
 - scenario is based on the following assumptions:
 - » plan for the processing interval has been developed and activated so that the Processing system contains a queue of jobs and has been processing jobs for some time
 - » because of unexpectedly long run times for some processing jobs, the actual processing accomplished has fallen behind the planned processing

Production Planning Scenarios (Cont.)



- **Replanning Production Scenario (Cont.) - steps extracted and adapted from the scenario:**
 - In response to the Production Monitor's notification that the planned objectives for the shift are not being met, the Production Planner launches the Planning Workbench GUI
 - Production Planner selects and opens the current weekly plan being used for the activation/schedule seeding operation
 - Production Planner reviews the resulting schedule and works to adjust priorities until the results are acceptable
 - Production Planner activates the new plan

Production Planning Scenarios (Cont.)



- **Replanning Production Scenario (Cont.) - steps extracted and adapted from the scenario:**
 - **Data Processing System will initiate PGE jobs according to the schedule of jobs transferred from the Planning System**

Production Planning Scenarios (Cont.)



- **Replanning Production Scenario (Cont.)**
 - **conditions at the completion of the replanning scenario:**
 - » **planning database contains new and updated entries reflecting the current state of the Production Plan**
 - » **Document Data Server contains the published version of the plan and a timeline view [TBD] of the plan**
 - » **e-mail messages will have been sent to all affected persons, as determined by the plan insertion or update**
 - » **production schedule, as maintained by AutoSys, will have been updated and processing will proceed according to the schedule**

Configuring AutoSys Screens/ Displays

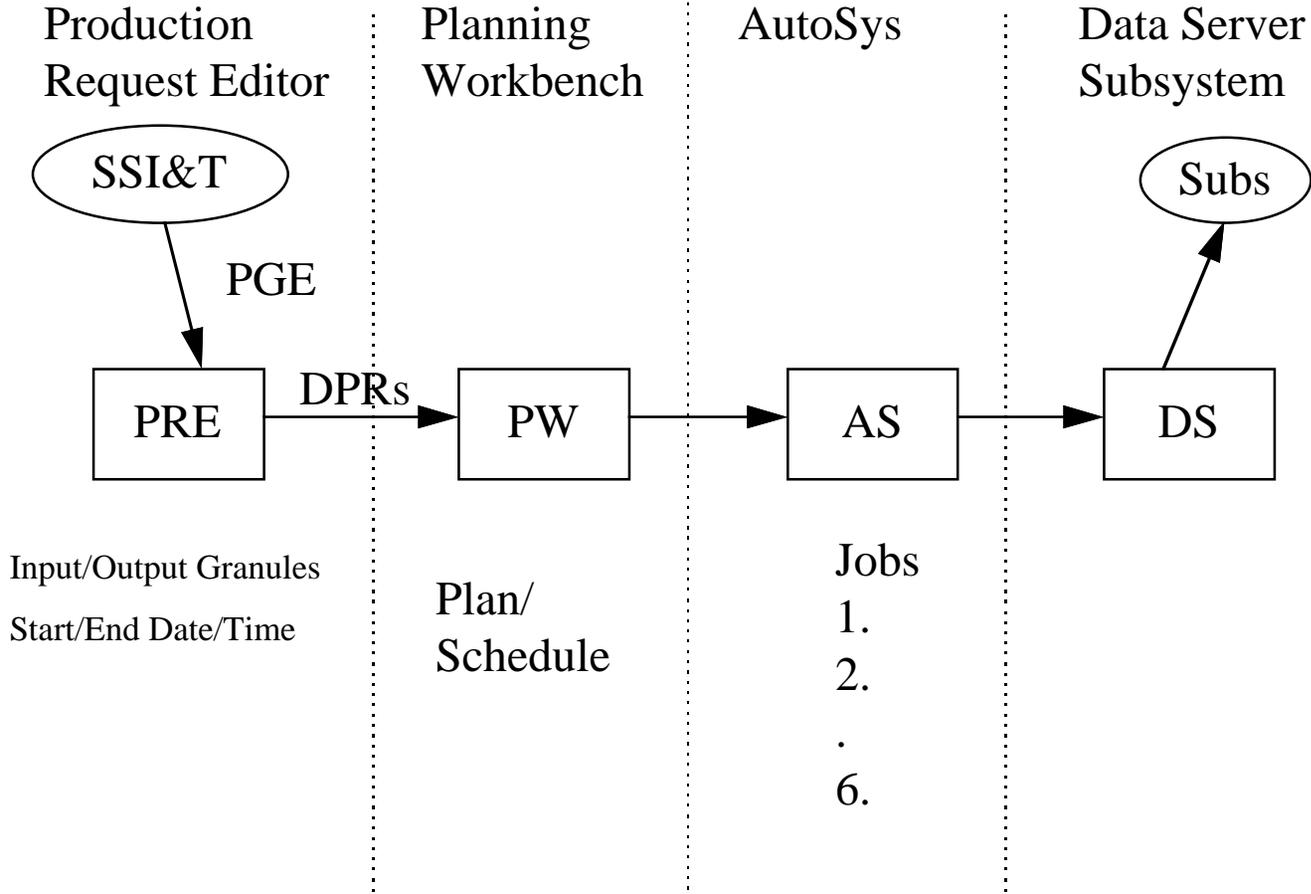


- **AutoSys/AutoXpert**
 - production scheduling tool
 - supports the operational activities surrounding production processing in the PDPS
 - assists with the following activities (among others):
 - » job monitoring
 - » job scheduling
 - » fault notification
 - » job restart
 - » determining the effects of failure of a DPR
 - » determining the cause and actions to be taken due to the failure of a DPR

Configuring AutoSys Screens/ Displays



PDPS Simple Flow



Configuring AutoSys (Cont.)



- **AutoSys/AutoXpert (Cont.)**
 - displays DPRs as job boxes
 - recognizes the following three categories of jobs:
 - » command jobs
 - » box jobs
 - » file-watcher jobs

Configuring AutoSys (Cont.)



- **Command job**
 - “command” can be a shell script, the name of an executable program, a file transfer, or any other command that causes execution of a UNIX command on client machine
- **Box job**
 - collection of other jobs
 - provides an organizational structure for a group of jobs that should be run within the same time period
 - » performs no processing action

Configuring AutoSys (Cont.)



- **File-watcher job**
 - functions similarly to a command job
 - monitors the creation and size of a particular operating system file
 - allows AutoSys to know the status of external files that are needed in the processing of command jobs or box jobs

Configuring AutoSys (Cont.)



- **AutoSys Job Starting Parameters**
 - Date and time scheduling parameters are met
 - Starting Conditions specified in the job definition evaluate to “true”
 - For jobs in a box, the box must be in the **RUNNING** state
 - The current status of the job is not **ON_HOLD** or **ON_ICE**
- **AutoSys finds all jobs that may be affected by any change in the truth of the starting parameters and determines whether or not to start the jobs**

Configuring AutoSys (Cont.)



- **AutoSys Jobs (ECS)**
 - **DPRs generated by the Planning Subsystem**
 - » in response to the Production Planner's selection of PGEs on a Production Request
 - **AutoSys creates jobs from the DPRs**
 - » when a Production Plan that includes the Production Request is activated

Configuring AutoSys (Cont.)



- **Each DPR represents the execution of a single science software PGE**
 - DPR may depend on the availability (as input) of data produced by another DPR
- **Effects of DPR dependencies**
 - dependent DPRs are "held" by AutoSys until their data availability subscriptions are fulfilled
 - subscription manager software (in the PLS) informs the DPS to release the AutoSys jobs after all data subscriptions for a given DPR are fulfilled
 - DPS (as managed by the AutoSys Job Scheduling engine) runs the PGEs and associated jobs as the resources required for the tasks become available
 - procedure continues until all DPRs scheduled for the day have completed

Configuring AutoSys (Cont.)



- **DAAC Production Monitor uses AutoSys/ AutoXpert for...**
 - **monitoring/managing on-demand thresholds processing queues to optimize resource utilization**
 - **modifying DPR priorities and inputs as required**
 - **transferring/deleting/suspending/resuming DPRs as required (e.g., requests, resource problems, input data schedule problems, special events, schedules replans, etc.)**
 - **monitoring and providing processing status upon request**
 - **monitoring/reviewing input and output data**
 - **implementing production system reconfiguration in response to operations anomalies**

Configuring AutoSys (Cont.)



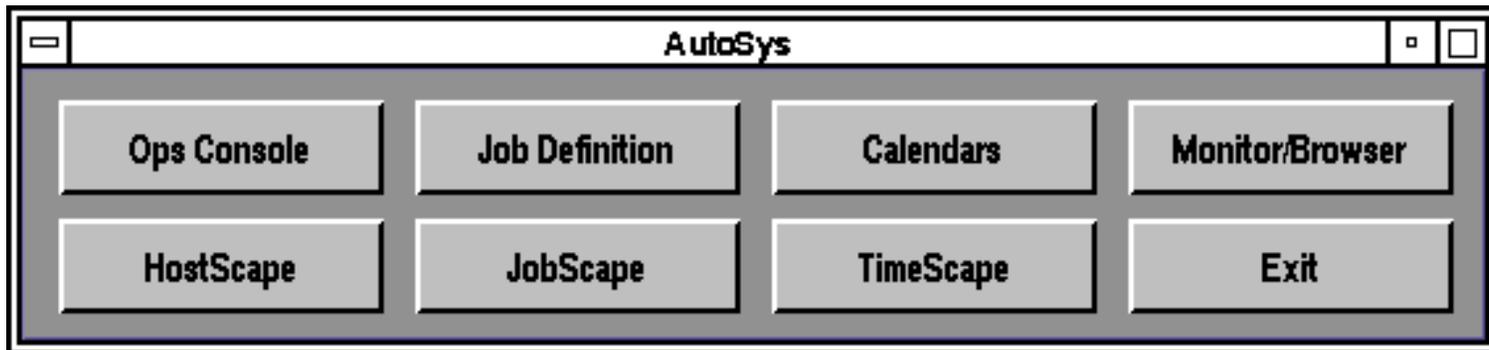
- **Configuring AutoSys Runtime Options**
 - **Refresh Interval**
 - » determines how often the View Region will be updated
 - **Ping Interval**
 - » defined by how often the connectivity will be evaluated
 - **Hang Time**
 - » length of time jobs will continue to be displayed within a machine after they have completed running
 - **Inches/Hr**
 - » specifies how much information is displayed on the screen

Configuring AutoSys (Cont.): Procedure



- **Configuring AutoSys Runtime Options**
- **Launch AutoSys using UNIX commands to display the AutoSys GUI Control Panel**
- **Click on either the HostScape, TimeScape, or JobScape button to display the corresponding AutoXpert GUI**
- **Select Options → Edit Runtime Options from the pull-down menu to display the Runtime Options dialog box**

Configuring AutoSys (Cont.): AutoSys GUI Control Panel



Configuring AutoSys (Cont.): AutoXpert HostScape GUI

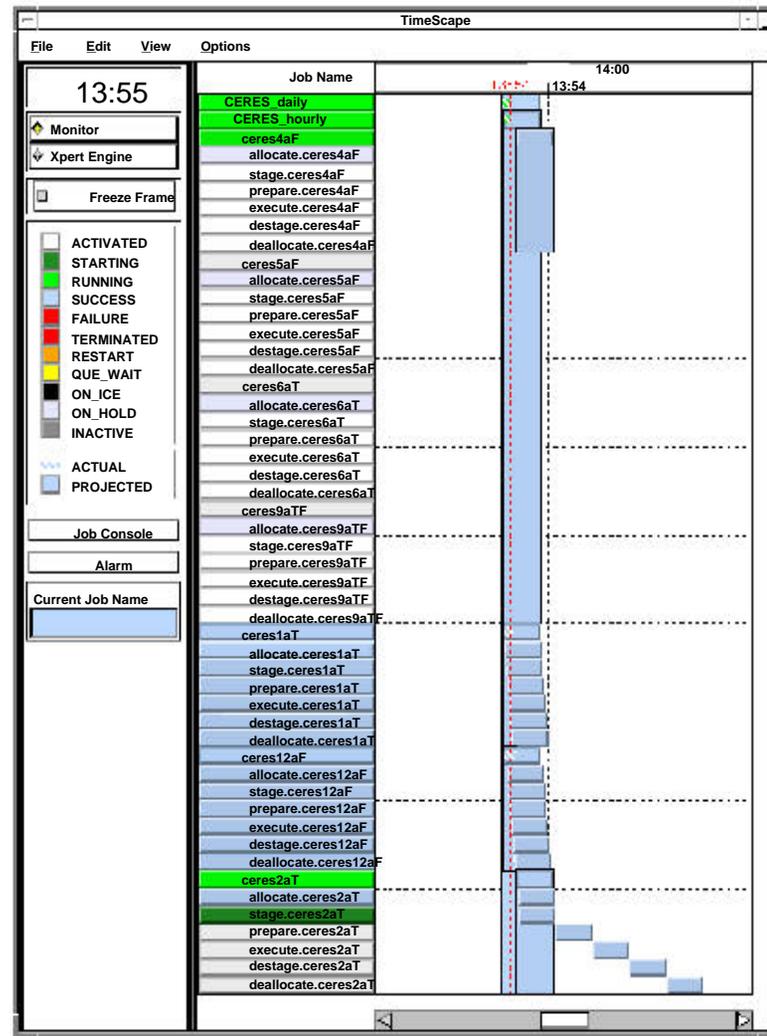


The screenshot displays the HostScape GUI with a menu bar (File, Edit, View, Option) and a clock showing 8:49. On the left, there are control buttons for Monitor, Xpert Engine, and Freeze Frame. Below these is a legend for job states: ACTIVATED, STARTING, RUNNING, SUCCESS, FAILURE, TERMINATED, RESTART, QUE_WAIT, ON_ICE, ON_HOLD, INACTIVE, MACHINE UP, and MACHINE DOWN. At the bottom left, there is a Job Console with an Alarm button and a Current Job Name field.

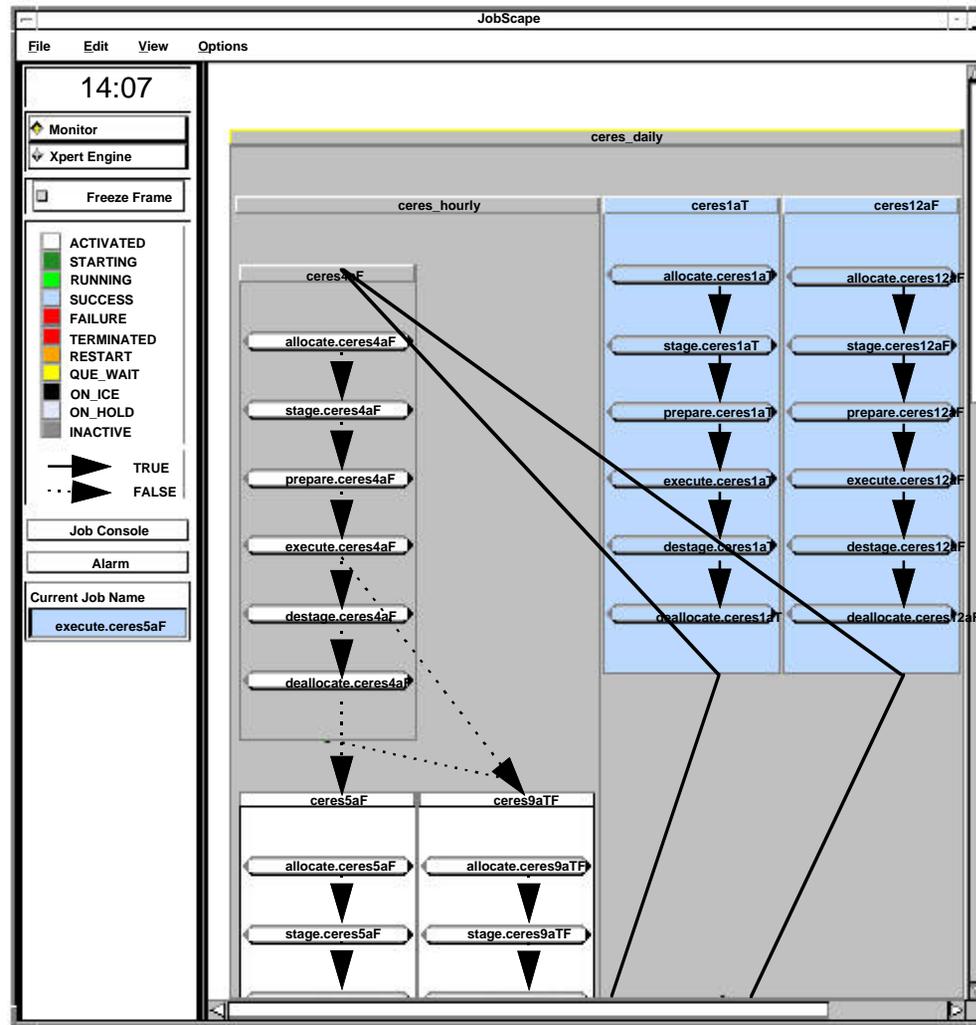
The main area shows a job flow with five nodes:

- osprey** (0, Alarm): Contains jobs allocate.ceres12aF, allocate.ceres1aT, allocate.ceres2aT, allocate.ceres4aF, and deallocate.ceres12aF. It is highlighted with a green border.
- chamonix** (0, Alarm): Highlighted with a red border.
- hatteras** (0, Alarm): Contains jobs execute.ceres2aT and execute.ceres4aF. The execute.ceres4aF job is highlighted with a red bar. The node is highlighted with a green border.
- heron** (0, Alarm): Highlighted with a green border.
- windjammer** (0, Alarm): Contains job execute.ceres12aF. It is highlighted with a green border.

Configuring AutoSys (Cont.): AutoXpert TimeScape GUI



Configuring AutoSys (Cont.): AutoXpert JobScape GUI



Configuring AutoSys (Cont.): Procedure



- **If the refresh interval is to be modified, click on Refresh Interval (Seconds) and enter a value between 1 and 99999 (type or click)**
 - default value is 30 seconds
- **If the ping interval is to be modified, click on Ping Interval (Seconds) and enter a value between 1 and 99999**
 - default value is 300 seconds
 - if 99999 is entered, no ping commands are issued
- **If the hang time is to be modified, click on Hang Time (Minutes) and enter a value between 1 and 99999**
 - default value is 1 minute

Configuring AutoSys (Cont.): Procedure



- If the number of inches/hour is to be modified, click on Inches/Hr (inches) and enter a value to decrease or increase the current numerical value until the desired value is reached
 - default value is 2 inches/hr
- When all desired modifications have been entered, click on the Apply button
- Click on the OK button to close the dialog box
- If another of the AutoXpert GUIs needs to have its runtime options configured, repeat steps as necessary

Configuring AutoSys (Cont.)



- **Configuring Hardware Groups**
 - makes it easier to monitor the hardware associated with a particular function (e.g., testing, training, or a certain type of processing)
 - default group is “All Machines”
 - **Production Monitor defines a specific set of machines to be monitored as a group**
 - » must know which machines are to be included in the group
 - » should devise a useful name for the group

Configuring AutoSys (Cont.): Procedure



- **Configuring Hardware Groups**
- **If necessary, log in to the planning server as described in Steps 1 through 7 of the procedure for Configuring AutoSys Runtime Options**
- **Type `cd /usr/ecs/Rel_A/COTS/autotree2` then press the Return/Enter key on the keyboard**
- **Type `vi xpert.groups.XXX` (where *XXX* = the AUTOSERV instance) then press Return/Enter**

Configuring AutoSys (Cont.): Procedure



- **Using vi editor commands create/modify hardware groups as necessary**
 - first line of each machine group is in the format **groupname: *groupname***
 - name of each machine to be included in the group is on a separate line
- **Press the Esc key**
- **Type ZZ then press Return/Enter**
 - New hardware groups are entered and saved in the file

Reviewing Hardware Status, DPR Dependency, etc.



- **Reviewing Hardware Status**
 - Production Monitor reviews hardware status using AutoXpert HostScape GUI
 - Production Monitor can determine the following conditions (among others):
 - » status of processors
 - » condition of the queue
 - » whether any processors are overloaded while others are idle
 - » whether there are any system problems

Reviewing Hardware Status etc. (Cont.): Procedure



- **Reviewing Hardware Status:**
- **Launch AutoSys**
- **Click on the HostScape button on the AutoSys GUI Control Panel**
- **Review the Control Region to identify the color codes for the status of the machines**
- **Review the machine type in the View Region**
- **Review the machine boxes in the View Region to determine the status of individual machines**

Reviewing Hardware Status etc. (Cont.): Procedure



- Review the Alarm indicating buttons of individual machines in the View Region
- Review the machine connection status in the View Region
- To exit from HostScape select File → Exit from the pull-down menu then click on the OK button

Reviewing Hardware Status etc. (Cont.)



- **Changing the Hardware Status View**
 - **View Options provide three methods of viewing hardware status:**
 - » **normal**
 - » **global**
 - » **zoom**

Reviewing Hardware Status etc. (Cont.): Procedure



- **Changing Hardware Status Views:**
- **Select a machine in the View Region by clicking on its name, then select**
 - **first Select View Level**
 - **then Global View**
 - » **seven rows of machines are displayed**
 - » **no job information is displayed**
- **Select a specific machine by clicking on its name, then select Zoom in Machine**
 - **zoom view is displayed**
 - **table listing relevant data is displayed**

Reviewing Hardware Status etc. (Cont.): Procedure



- **Select Dismiss**
 - global view is displayed
- **Select View → Select View Level then select Normal View**
 - normal view is displayed
 - three rows of machines are displayed
 - limited job information is displayed

Reviewing Hardware Status etc. (Cont.)



- **Reviewing DPR Dependencies**
 - **The Production Monitor reviews DPR dependencies using AutoXpert JobScope GUI**
 - » **presents a Pert-like view of job processing from a logical (or job dependency) point of view**
 - » **depicts all job types; i.e., command jobs, box jobs, and file-watcher jobs**
 - » **depicts the nesting of jobs within boxes and the dependencies between jobs.**
 - » **can be used for monitoring job flow in real-time**
 - » **allows the Production Monitor to identify potential problems before they become actual problems**
 - **AutoSys defines job status in the terms listed in the table**
 - » **different states are color-coded**

Reviewing Hardware Status etc. (Cont.)



- **Job States**
 - Activated (white)
 - Starting (forest green)
 - Running (green)
 - Success (light blue)
 - Failure (red)
 - Terminated (red)
 - Restart (orange)
 - Que_Wait (yellow)
 - On_Ice (black)
 - On_Hold (black)
 - Inactive (white)

Reviewing Hardware Status etc. (Cont.)



- **ON_HOLD vs ON_ICE**
 - **ON_HOLD**
 - » Lose a Turn. (Can start anytime from stop point.)
 - **ON_ICE**
 - » Go to Jail. Do not pass GO. Do not collect \$200. (ALL conditions must be reset before starting again.)

Reviewing Hardware Status etc. (Cont.): Procedure



- Reviewing DPR Dependencies:
- Launch AutoSys
- Click on the JobScape button on the AutoSys GUI Control Panel.
- Review the Control Region to identify the True/False dependency legend
 - True = solid arrow (job dependencies have been met)
 - False = dashed arrow (job dependencies have not been met)
- Review the Job Display to determine the status (color-coded) of DPRs

Reviewing Hardware Status etc. (Cont.): Procedure



- **Review the Job Display to determine the types of jobs**
 - rectangle = Box Job
 - ellipse = Command Job
 - hexagon = File Watcher Job
- **Select a job (for which descendants are to be determined) by clicking**
- **Review the job's descendants by clicking and holding**
- **Select Show Children from the Descendants pop-up menu**
 - job's first-level Command, File-Watcher, and Box Jobs appear

Reviewing Hardware Status etc. (Cont.): Procedure



- **Select Show All Descendants from the Descendants pop-up menu**
 - job's Command, File-Watcher, and Box Jobs appear for all levels
- **Select Hide All Descendants from the Descendants pop-up menu**
 - default view is displayed
 - all descendants are hidden
- **To exit from JobScape select File → Exit from the pull-down menu then click on the OK button**

Reviewing Hardware Status etc. (Cont.)



- **Reviewing the DPR Production Timeline**
 - **Production Monitor reviews the DPR Production Timeline using AutoXpert TimeScape**
 - » **presents a Gantt-like view of a job processing from a temporal (time-related) point of view**
 - » **depicts all job types; i.e., Command Jobs, Box Jobs, and File Watcher Jobs**
 - » **depicts the nesting of jobs within boxes**
 - » **depicts the duration of time it will take for jobs to complete**
 - » **used for monitoring job flow in real-time**

Reviewing Hardware Status etc. (Cont.): Procedure



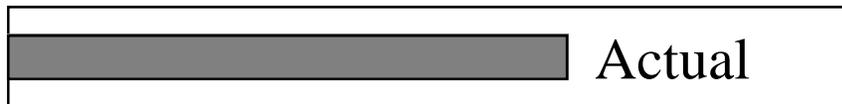
- **Reviewing the DPR Production Timeline:**
- **Launch AutoSys**
- **Click on the TimeScape button on the AutoSys GUI Control Panel**
 - current time is displayed in red in the View Region
- **Review the Control Region to identify the Actual/Projected legend for making comparisons in the View Region**
 - projected is a rectangular (blue filled) graphic, to show average job completion time
 - actual is a striped ribbon, to show how much of the job has completed

Reviewing Hardware Status etc. (Cont.): Procedure



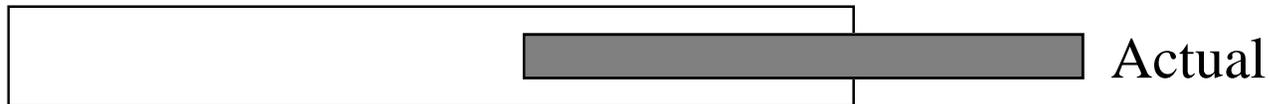
Good vs Bad

Projected



Looks Good!

Projected



Trouble!

Reviewing Hardware Status etc. (Cont.): Procedure



- Review a job's descendants by clicking and holding on the job
- Select Show Children from the Descendants pop-up menu
 - job's first-level Command, File Watcher, and Box Jobs appear
- Select Show All Descendants from the Descendants pop-up menu
 - job's Command, File Watcher, and Box Jobs appear with all levels

Reviewing Hardware Status etc. (Cont.): Procedure



- **Select Hide All Descendants from the Descendants pop-up menu**
 - default view is displayed
 - all descendants are removed
- **To exit from TimeScape select File → Exit from the pull-down menu then click on the OK button**

Reviewing Hardware Status etc. (Cont.)



- **Reviewing Alarms**
 - **Alarms indicate problems with job processing**
 - » **failure of job processing**
 - » **database problem**
 - » **communications problem**
 - » **hardware or software failure**
 - » **some other error in the data processing system**
 - **Production Monitor reviews alarms using the AutoSys Alarm Manager**
 - » **view alarms as they arrive**
 - » **provide a response to an alarm**
 - » **change alarm status**

Reviewing Hardware Status etc. (Cont.)



- **Reviewing Alarms (Cont.)**
 - **Production Monitor can configure the Alarm Manager to display certain types of alarms only**
 - » type of alarm
 - » alarm state
 - » time of the alarm

Reviewing Hardware Status etc. (Cont.): Procedure



- **Reviewing Alarms:**
- **Launch AutoSys**
- **Click on the Ops Console button on the AutoSys GUI Control Panel to display the Job Activity Console GUI (also known as the Ops Console GUI)**
- **Click on the Alarm button to display the Alarm Manager GUI**
- **Click on an alarm in the Alarm List**
 - relevant alarm information is displayed
- **Click the Response edit box and type in a response, if desired, then press Tab**

Reviewing Hardware Status etc. (Cont.): Job Activity Console



AutoSys Job Activity Console

File View

Job Name	Description	Status	Command	Machine
ground_event0		SUCCESS	sleep 120	osprey
ground_event1		SUCCESS	sleep 120	heron
ground_event2		SUCCESS	sleep 120	hatteras
ground_event3		SUCCESS	sleep 120	osprey
ground_event4		SUCCESS	sleep 120	windjammer
ground_event5		SUCCESS	sleep 120	osprey
ground_event6		SUCCESS	sleep 120	hatteras
ground_event7		SUCCESS	sleep 120	heron
job0		SUCCESS	sleep 120	osprey
job1		SUCCESS	sleep 120	windjammer
job2		SUCCESS	sleep 120	heron
job3		SUCCESS	sleep 120	windjammer
job4		SUCCESS	sleep 120	osprey

Currently Selected Job: job0

Description:

Command: sleep 120

Start Time: 11/08 08:59:02 Status: SUCCESS Machine: osprey Priority:

End Time: 11/08 09:01:02 Exit Code: 0 Queue Name: osprey Num. of Tries:

Run Time: 00:02:00 Next Start:

Starting Conditions			Job Report	
Atomic Condition	Current State	T/F		

Actions: Start Job, On Hold, Kill Job, Off Hold, Force Start Job, Send Event

Show: Job Definition, Dependent Jobs, Freeze Frame

Reports: Summary, Event, None

Alarm: Exit:

Reviewing Hardware Status etc. (Cont.): Alarm Manager GUI



Alarm Manager

View Options

Alarm Type	Job Name	Time	State	Comment
JOBFAILURE	execute.ceres4aF	10/23 08:50:05	Open	

Currently Selected Alarm

JOBFAILURE execute.ceres4aF 10/23 08:50:05 Open

Response

Alarm State

- Open
- Acknowledged
- Closed

User Autosys@osprey

Freeze Frame Select Job New Alarm

OK Apply Cancel

Reviewing Hardware Status etc. (Cont.): Procedure



- **Update the Alarm State by clicking on whichever of the radio buttons appropriately describes the Alarm State**
 - Open
 - Acknowledged
 - Closed
- **Click on the Apply button to enter the alarm response**
- **Repeat steps as necessary to review and update multiple alarms**

Reviewing Hardware Status etc. (Cont.): Procedure



- **When no more alarms are to be reviewed, click on the OK button**
 - Alarm Manager quits (is closed)
- **To exit from the Job Activity Console (Ops Console) GUI click on the Exit button then on the OK button**

Reviewing Hardware Status etc. (Cont.): Procedure



- **Configuring Alarm Selection:**
- **Select View → Select Alarms from the pull-down menu to display the Alarm Selection GUI**
- **To select a single type of alarm, click on the desired alarm in the Select by Type alarm list; to select all types of alarms, click on the All Types button**
- **To select multiple types of alarms: press and hold the Control (Ctrl) key on the keyboard while clicking the desired alarms in the Select by Type alarm list**

Reviewing Hardware Status etc. (Cont.): Alarm Selection GUI

The screenshot shows a window titled "Alarm Selection" with three main filter sections: "Select by Type", "Select by State", and "Select by Time".
Select by Type: A dropdown menu is set to "All Types". Below it is a list of alarm types: DUPLICATE_EVENT, EP_HIGH_AVAIL, EP_ROLLOVER, EP_SHUTDOWN, EVENT_HDLR_ERROR (highlighted), EVENT_QUE_ERROR, FORKFAIL, JOBFAILURE, JOBNOT_ONICEHOLD, and MAXRUNALARM.
Select by State: A dropdown menu is set to "All States". Below it are three checkboxes: "Open" (unchecked), "Acknowledged" (unchecked), and "Closed" (unchecked).
Select by Time: A dropdown menu is set to "All Times". Below it are four input fields: "From Date" (04/11/97), "From Time" (14:14), "To Date" (04/11/97), and "To Time" (14:14).
At the bottom of the window are three buttons: "OK", "Apply", and "Cancel".

Reviewing Hardware Status etc. (Cont.): Procedure



- **To select all alarm states click on the All States button; to select alarms by state click on whichever of the Select by State toggle buttons properly describe(s) the state(s) to be selected:**
 - Open
 - Acknowledge
 - Closed
- **To select all times click on the All Times button; to select alarms by time type the starting date in the From Date field**

Reviewing Hardware Status etc. (Cont.): Procedure



- Type the starting time in the From Time field
- Type the end date in the To Date field
- Type the end time in the To Time field
- Click on the Apply button to apply selections without dismissing (closing) the Alarm Selection GUI
- Click on the OK button to apply alarm selections and close the Alarm Selection GUI
- If alarm sound is desired, select Options → Sound On on the Alarm Manager GUI

Reviewing Hardware Status etc. (Cont.): Procedure



- If no alarms are to be reviewed, click on the OK button
 - Alarm Manager quits (is closed)

Reviewing Hardware Status etc. (Cont.)



- **Reviewing Job Selection Criteria**
 - **Production Monitor reviews job activities using the AutoSys Job Activity Console**
 - **AutoSys Job Selection GUI is used for...**
 - » **specifying (filtering) jobs the Production Monitor will review**
 - » **setting the criteria for displaying jobs by name, status and/or machine**

Reviewing Hardware Status etc. (Cont.): Procedure



- **Reviewing Job Selection Criteria:**
- **Launch AutoSys**
- **Click on the Ops Console button on the AutoSys GUI Control Panel to display the Job Activity Console GUI**
- **Choose View → Select Jobs from the pull-down menu to display the Job Selection GUI**

Reviewing Hardware Status etc. (Cont.): Job Selection GUI



Job Selection

Select by Name

All Jobs

◇ Job Name
[]

◇ Box Name
[]

Box Levels
[all]

Select by Status

All Statuses

Starting

Running

Success

Failure

Terminated

Restart

Que Wait

Activated

Inactive

On Hold

On Ice

Select by Machine

All Machines

aitn1 sun
aitn2sun
plnn1 sun
plnn2sun
sprn1 sgi

Sort Order

◇ Start Time ◇ Job Name ◇ Machine Name

◇ End Time ◇ Job Status ◇ Unsorted

OK Apply Cancel

Reviewing Hardware Status etc. (Cont.): Procedure



- **For the Select by Name option select all jobs by clicking on the All Jobs button; alternatives:**
 - to select a particular job by name, type the name of the desired job in the Job Name field
 - to select a particular box by name, type the name of the desired box in the Box Name field then type in the Box Levels field how many levels of nesting you want to view for the box job
- **To select all job statuses click on the All Statuses button; to select jobs by status click on whichever of the Select by Status toggle buttons properly describe(s) the status(es) to be selected**

Reviewing Hardware Status etc. (Cont.): Procedure



- **Select by Status toggle buttons**
 - **Starting**
 - **Running**
 - **Success**
 - **Failure**
 - **Terminated**
 - **Restart**
 - **Que Wait**
 - **Activated**
 - **Inactive**
 - **On Hold**
 - **On Ice**

Reviewing Hardware Status etc. (Cont.): Procedure



- **To select all machines click on the All Machines button; alternatives:**
 - to select jobs by the particular machine click on the name of the desired machine in the **Select by Machine list**
 - to select multiple machines, click and hold on the first machine then drag the cursor to the name of the last machine to be selected and release the mouse button

Reviewing Hardware Status etc. (Cont.): Procedure



- **Click on the desired order in the Sort Order area**
 - Start Time
 - End Time
 - Job Name
 - Job Status
 - Machine Name
 - Unsorted
- **Click on the Apply button to apply selections without dismissing the Job Selection GUI**
- **Click on the OK button to apply job selections and close the Job Selection GUI**

Reviewing Hardware Status etc. (Cont.): Procedure



- **When the job activity has been adequately reviewed, click on Exit to quit the Job Activity Console display**
- **Click on the OK button to confirm closing of the AutoSys Job Activity Console GUI**