



Concurrent Request Sets

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Oracle Applications Precision

All About Request Sets



- About Alaris Technology and the presenter
- Agenda
- Credits
- Questions / Discussion

About Alaris Technology and Kevin



- Alaris Technology, Inc was founded in 2001
- Re-branded in 2009 – formerly known as GLC Consulting Group
- Provide high quality Oracle Applications functional, technical and install / upgrade consulting services aligned with your business goals to effectively and efficiently accomplish your business needs.
- Serving clients across the Northeast spanning several industries
- Core competencies are built on Oracle Financials, Projects, CRM and Supply Chain
- Install / Upgrade DBA services in addition with large development projects extending and / or customizing the product to fit business requirements
- Complete knowledge of Application foundations and forging solutions out of the box by leveraging delivered functionality
- I have been involved with Oracle Applications since release 8.4 (1993)

Agenda



- Request sets – What are they and why are they used?
- Building request sets with the wizard
- Parallel or Sequential requests and compatibilities
- Building request sets manually
- What are “Stages” and leveraging them to your advantage
- Sharing of parameters
- Request set security
- Custom stage evaluation to enhance production support efforts
- Scheduling and notifications

What are Request Sets

- Collection of individual programs defined to execute in a pre-determined sequence and fashion
- Clean method to package multiple programs as a business process flow
- Allows you to combine custom developed programs with Oracle delivered programs to achieve a desired business requirement
- Can be run in parallel or sequential

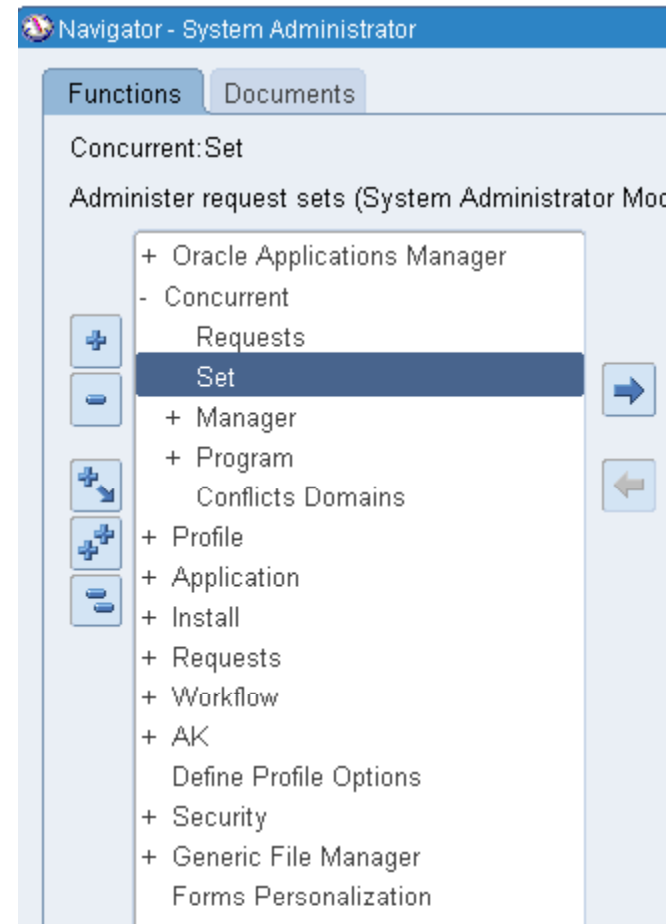
Why use Request Sets

- Simplify daily, weekly and monthly processing and scheduling
- Simplify parameter entry by sharing parameters between programs within the set
- Enhance security to a process rather than just programs
- Easy to combine programs from different modules into a process including custom programs
- Maximizes concurrency while maintaining program dependency

The Request Set Wizard (1 of 12)



- System Administrator responsibility
- Navigate → Concurrent → Set



The Request Set Wizard (2 of 12)



- Go directly to the Request Set Wizard button

The screenshot shows a software window titled "Request Set" with the following fields and options:

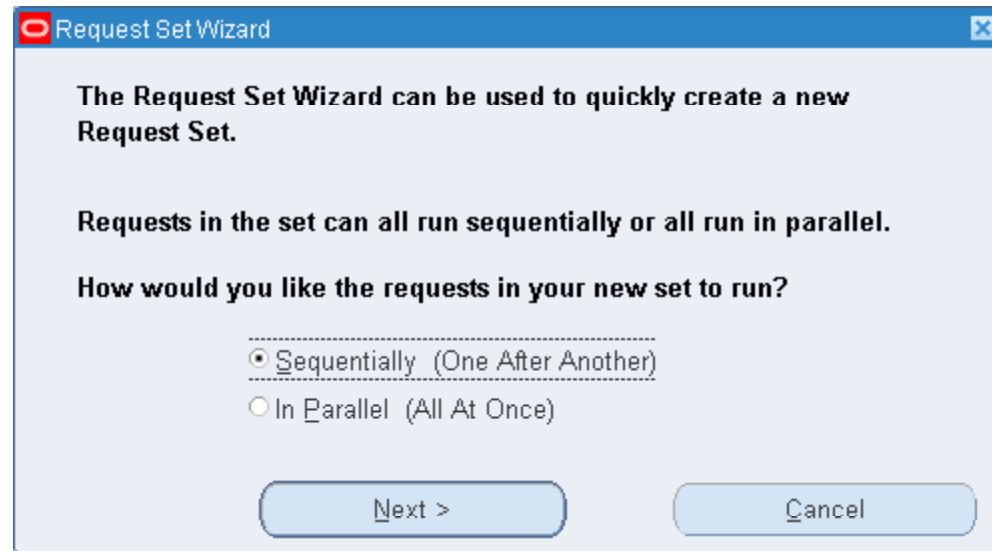
- Set: [Yellowed out]
- Set Code: [Yellowed out]
- Application: [Yellowed out]
- Description: [Empty text box]
- Owner: [Empty text box]
- Active Dates:
 - From: 03-JUN-2010
 - To: [Empty text box]
- Run Options:
 - Print Together
 - Allow Incompatibility

Buttons at the bottom: "Request Set Wizard" (circled in red), "Define Stages", and "Link Stages".

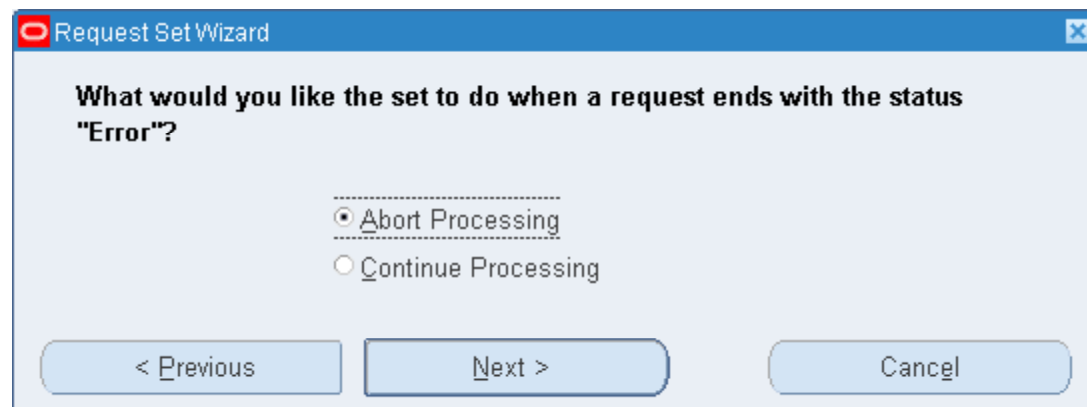
The Request Set Wizard (3 of 12)



- Sequentially
- Parallel



- Abort Processing
- Continue Processing



The Request Set Wizard (4 of 12)



- Set (name)
- Application
- Description

Request Set Wizard

Please choose a name and an application for your request set.

Set: NEOAUG Wiz Seq Abort

Application: System Administration

Description: NEOAUG Sample Set

< Previous Next > Cancel

- Printing
- After entire set
- Each request

Request Set Wizard

When would you like your request output files to print?

After the Entire Set Has Completed

As Each Request in the Set Completes

< Previous Next > Cancel

The Request Set Wizard (5 of 12)




Request Set Wizard

Please enter the concurrent programs to include in your request set.

Program	Application
<input type="checkbox"/> Prints environment variable values	Application Object Library
<input type="checkbox"/> Prints environment variable values	Application Object Library
<input type="checkbox"/> Prints environment variable values	Application Object Library
<input type="checkbox"/> Prints environment variable values	Application Object Library
<input checked="" type="checkbox"/> Prints environment variable values	Application Object Library
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

< Previous Finish Cancel

Note

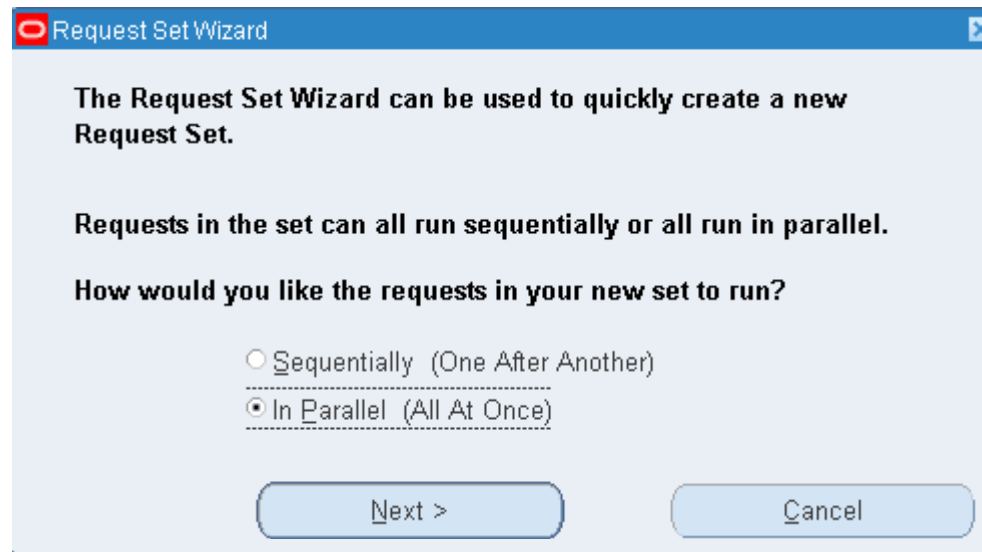
 Your request set has been created and saved. Many advanced options for your set have been defaulted. If you wish to change these options, you may do so using this form.

OK

The Request Set Wizard (7 of 12)



- Starting another request set to try different options



- Notice no completion option prompt after this screen

The Request Set Wizard (8 of 12)



- Set name

Request Set Wizard

Please choose a name and an application for your request set.

Set	NEOAUG Wiz Parallel
Application	System Administration
Description	NEOAUG Wiz Parallel

< Previous Next > Cancel

- Set print options

Request Set Wizard

When would you like your request output files to print?

After the Entire Set Has Completed

As Each Request in the Set Completes

< Previous Next > Cancel

The Request Set Wizard (10 of 12)



- **Wizard Results**
- Set information
- Set stage (parallel)
- Only one created
- Request for Stage 10
- All run at the same time

The screenshot displays three windows from the Request Set Wizard:

- Request Set:** Shows fields for Set (NEOAUG Wiz Parallel), Set Code (FNDRSSUB3398), Application (System Administration), Description (NEOAUG Wiz Parallel), and Owner (KGILLINS).
- Stages:** Shows Set (NEOAUG Wiz Parallel) and Set Application (System Administration). A table lists stages, with Stage 10 'All Requests' selected.
- Stage Requests:** Shows Set (NEOAUG Wiz Parallel) and Set Application (System Administration). A table lists programs for Stage 10, all with the description 'Prints environment variable values' and 'Application Object Library'.

Seq	Program	Application	Description
10	Prints environment variable values	Application Object Library	Prints values of environment variable
20	Prints environment variable values	Application Object Library	Prints values of environment variable
30	Prints environment variable values	Application Object Library	Prints values of environment variable
40	Prints environment variable values	Application Object Library	Prints values of environment variable
50	Prints environment variable values	Application Object Library	Prints values of environment variable

The Request Set Wizard (11 of 12)



- Let's look at the Link Stages

The screenshot shows the 'Request Set' window with the following details:

- Set:** NEOAUG Wiz Seq Abort
- Set Code:** FNRSSUB3397
- Application:** System Administration
- Description:** NEOAUG Wiz Seq Abort
- Owner:** KGILLINS
- Active Dates:** From 03-JUN-2010
- Run Options:** Print Together, Allow Incompatibility

Buttons at the bottom include 'Request Set Wizard', 'Define Stages', and 'Link Stages'. The 'Link Stages' button is circled in red.

The Request Set Wizard (12 of 12)



- Take note of the **Start Stage** as this is commonly missed when creating sets manually

Link Stages

Set: NEOAUG Wiz Seq Abort Set Application: System Administration

Start Stage: Prints environment variable values (10)

Display Sequence: Stage To Proceed To On...

	Name	Success	Warning	Error
10	Prints environment variable values	Prints environment variab	Prints environment variabl	
20	Prints environment variable values	Prints environment variab	Prints environment variabl	
30	Prints environment variable values	Prints environment variab	Prints environment variabl	
40	Prints environment variable values	Prints environment variab	Prints environment variabl	
50	Prints environment variable values			

Stage Properties

Description:

The Return Value of this Stage Affects the Set Outcome

Done Cancel

Parallel or Sequential – Which is best (1 of 3)



- Parallel
 - Leverage your powerful servers during off hours with multiple programs executing at the same time
 - Allow the Concurrent Manager system to control resources as defined by your administrator
- Sequential
 - Keep programs from consuming significant resources during work hours
 - Execute programs in the proper order when sequence is sensitive
 - Control outcome (return code) logic for subsequent processing
- **So which one should you use?**

Parallel or Sequential – Which is best (2 of 3)



- Both options and mixing them
 - A sensible mix of parallel and sequential stages will provide you with the most robust processing
 - You can maximize server power and keep dependent programs in their correct sequence
 - Even override program incompatibilities if you understand what they are and how to execute your programs in the correct sequence

Parallel or Sequential – Which is best (3 of 3)



- Control the incompatibility at the SET or STAGE level

Request Set configuration window showing fields for Set Name, Set Code, Application, Description, Owner, Active Dates, and Run Options. The 'Allow Incompatibility' checkbox is circled in red.

Set	NEOAUG Man Mixed
Set Code	MY_SET_CODE_01
Application	System Administration
Description	Sample request set created manually for maximum flexibility
Owner	KGILLINS
Active Dates	From: 08-JUN-2010
Run Options	<input type="checkbox"/> Emit Together <input type="checkbox"/> Allow Incompatibility

Stages configuration window showing a table of stages and stage details. The 'Allow Incompatibility' checkbox is circled in red.

Stage	Description
2	Core process stage
3	Error cleanup stage
4	Reporting stage

Stage Details:

Function	Standard Evaluation
Application	Application Object Library

The return value of This Stage Affects the Set Outcome
 Allow Incompatibility

Manually Creating Your Request Set (1 of 4)

What are Stages and Leveraging them to your advantage



- Enter the details of your request set as desired.

The screenshot shows the 'Request Set' dialog box with the following details:

- Set:** NEOAUG Man Mixed
- Set Code:** MY_SET_CODE_01
- Application:** System Administration
- Description:** Sample request set created manually for maximum flexibility
- Owner:** KGILLINS
- Active Dates:**
 - From: 08-JUN-2010
 - To: (empty)
- Run Options:**
 - Print Together
 - Allow Incompatibility

Buttons at the bottom: Request Set Wizard, Define Stages, Link Stages

Manually Creating Your Request Set (2 of 4)

What are Stages and Leveraging them to your advantage



- Scenario
 - Stage 1
 - Execute 2 programs in parallel that extract data from core application tables for some computation processing. If either of the extracts fail then do not continue with the processing.
 - Stage 2
 - Core data processing stage with 1 program that handles the data manipulation and calculations. No further reporting is to take place if this program fails.
 - Stage 3
 - Error cleanup program to delete extracted data
 - Notification (error reporting) program to indicate calculation failures
 - Stage 4
 - Reporting programs execute on if the calculation was successful

Manually Creating Your Request Set (3 of 4)

What are Stages and Leveraging them to your advantage



- Definition of the stages using description fields to help clarify what we want to do

Stages

Set: NEOAUG Man Mixed Set Application: System Administration

Display Sequence

Stage	Description
1	Startup stage
2	Core process stage
3	Error cleanup stage
4	Reporting stage

Stage Details

Stage Code: MY_STAGE_4

Function: Standard Evaluation Parameters

Application: Application Object Library

The Return Value of This Stage Affects the Set Outcome

Allow Incompatibility

Requests

Manually Creating Your Request Set (4 of 4)

What are Stages and Leveraging them to your advantage



- Just follow the prompts and column headings to see the logic

Link Stages

Set: NEOAUG Man Mixed Set Application: System Administration

Start Stage: Startup stage

Display Sequence Stage To Proceed To On...

	Name	Success	Warning	Error
1	Startup stage	Core process stage	Error cleanup stage	Error cleanup stage
2	Core process stage	Reporting stage	Error cleanup stage	Error cleanup stage
3	Error cleanup stage			
4	Reporting stage			

Stage Properties

Description: Initial stage with 2 requests in parallel

The Return Value of this Stage Affects the Set Outcome

Done Cancel

Sharing Parameters (1 of 5)



- Parameters are named in the request set to allow sharing
- Shared parameters will auto populate during navigation
- Simplifies requests with many parameters
- Simplifies parameter values that are not in the same sequence for each request

Sharing Parameters (2 of 5)



- Name the parameters the first time they are encountered

Request Parameters

Set: NEOAUG Parameters Set Application: System Administration
Stage: Stage 1 Sequence: 10
Program: Prints environment variable values Application: Application Object Library

Seq	Prompt	Display	Modify	Shared Parameter	Type	Value
1	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Period	Constant	JAN-10
2	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Type	Constant	BALANCE
3	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
4	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DAY	SQL Statement	select to_char(sysda
5	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
6	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
7	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
8	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
9	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
10	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
11	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
12	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

Select
to_char(sysdate, 'DY')
from dual

Sharing Parameters (3 of 5)



- Select parameters from list after they are named the first time

Request Parameters

Set: NEOAUG Parameters Set Application: System Administration
Stage: Stage 1 Sequence: 20
Program: Prints environment variable values Application: Application Object Library

Seq	Prompt	Display	Modify	Shared Parameter	Type	Value
1	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	DAY		...
2	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
3	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Period		
4	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
5	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Type		
6	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
7	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
8	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
9	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
10	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
11	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
12	Variable name	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

Sharing Parameters (4 of 5)



- Running the request

The screenshot shows two overlapping dialog boxes. The background dialog is titled 'Submit Request Set' and contains a 'Run this Request...' section with a 'Copy...' button and a text field for 'Request Set' containing 'NEOAUG Parameters'. Below this is a table with columns 'Program', 'Operating Unit', 'Stage', and 'Parameters'. The table lists four rows, each with 'Prints environment variable values' in the Program column and 'Stage 1' or 'Stage 2' in the Stage column. The foreground dialog is titled 'Parameters' and features a list of 'Variable name' fields. The first field contains 'JAN-10', the second contains 'BALANCE', and the third contains 'TUE'. At the bottom of the 'Parameters' dialog are buttons for 'OK', 'Cancel', 'Clear', and 'Help'.

Program	Operating Unit	Stage	Parameters
Prints environment variable values		Stage 1	
Prints environment variable values		Stage 1	
Prints environment variable values		Stage 2	
Prints environment variable values		Stage 2	

Sharing Parameters (5 of 5)



- Tab through all requests filling in parameters

Run this Request...

Request Set: NEOAUG Parameters

Program	Operating Unit	Stage	Parameters
Prints environment variable values		Stage 1	JAN-10..BALANCE..TUE.....
Prints environment variable values		Stage 1	TUE..JAN-10.. BALANCE.....
Prints environment variable values		Stage 2	.BALANCE.TUE.JAN-10.....
Prints environment variable values		Stage 2	BALANCE.JAN-10...TUE.....

At these Times... As Soon As Possible

Buttons: Copy..., Options..., Schedule..., Submit, Cancel, Help (A)

Request Set Security (1 of 3)



- Owner can update and run the request set
- Only System Administrators can add request sets and programs to list for Responsibilities
- Programs in the set become available without the need to have individual program access

Request Set Security (2 of 3)



- List of Request Sets for me (KGILLINS)

The screenshot shows a window titled "Sets" with a search bar containing "nEOAUG %". Below the search bar is a table with two columns: "Name" and "Application". The table lists five request sets, all associated with "System Administration". The first row, "NEOAUG Man Mixed", is highlighted.

Name	Application
NEOAUG Man Mixed	System Administration
NEOAUG Parameters	System Administration
NEOAUG Wiz Parallel	System Administration
NEOAUG Wiz Seq Abort	System Administration
NEOAUG Wiz Seq Continue	System Administration

At the bottom of the dialog box are three buttons: "Find", "OK", and "Cancel".

Request Set Security (3 of 3)



- Only **NEOAUG Parameters** Request Set is added to the Request Group for all System Administrators
- List of Request Sets available to user (USER1)

The screenshot shows a window titled 'Sets' with a search field containing 'Find %'. Below the search field is a table with two columns: 'Name' and 'Application'. The table lists several request sets, with 'NEOAUG Parameters' highlighted in blue. At the bottom of the window are three buttons: 'Find', 'OK', and 'Cancel'.

Name	Application
CP Regression Test Set	Application Object Library
Function Security Reports	Application Object Library
Industry Activator	Application Object Library
Industry Deactivator	Application Object Library
Synchronize Workflow LOCAL tables	Application Object Library
DownloadPatches	Applications DBA
PatchWizard - Analyze Specific Patches	Applications DBA
PatchWizard - Recommend Patches	Applications DBA
UploadPatchInfoBundle	Applications DBA
NEOAUG Parameters	System Administration

Stage Evaluation (1 of 5)



- Define your executable routine to be called

Executable	NEOAUG_STAGE_EVAL
Short Name	NEOAUG_STAGE_EVAL
Application	System Administration
Description	Evaluate stage results
Execution Method	Request Set Stage Funtion
Execution File Name	neoaug_stage_pkg.stage_result
Subroutine Name	
Execution File Path	

Stage Function Parameters

Stage Evaluation (2 of 5)



- Define parameters used for your evaluation program

The screenshot shows a dialog box titled "Stage Function Parameters - NEOAUG_STAGE_EVAL". It contains a table with three columns: "Parameter", "Short Name", and "Description". The "Support Item" parameter is highlighted in yellow. Below the table are "Done" and "Cancel" buttons.

Parameter	Short Name	Description
Support Item	SUPPORT_ITEM	Enter the support item that should be paged out
Pager	PAGER	Pager number to contact (or email)
Notice Info	INFO	The information to be supplied to the support staff

p_prog_name := fnd_request_set.get_stage_parameter('INFO');

Stage Evaluation (3 of 5)



- Implement your evaluation routine on the request set stage
- Select your evaluation function from the list

Set: NEOAUG Man Mixed Set Application: System Administration

Display Sequence

Stage	Description
1 Startup stage	Initial stage with 2 requests in parallel
2 Core process stage	Single program processing data
3 Error cleanup stage	Only run when an error takes place in stage 2
4 Reporting stage	Execute 4 reports if no error happens in stage 2

Stage Details

Stage Code: MY_STAGE_2

Function: NEOAUG_STAGE_EVAL Parameters

Application: System Administration

The Return Value of This Stage Affects the Set Outcome

Allow Incompatibility

Requests

Stage Evaluation (4 of 5)



- Enter your parameters as desired
- These values will be sent to the evaluation function defined

The screenshot shows a dialog box titled "Stage Function Parameters" with a table containing the following data:

Parameter	Value
Notice Info	Calculation failed. Reason text being sent
Pager	kgillins.pager@alaristechnology.com
Support Item	CORE_CALCULATION

At the bottom of the dialog box, there are two buttons: "Done" and "Cancel".

Stage Evaluation (5 of 5)



- Snip-it of Custom Stage Evaluation – part 1

```
function    stage_result
            return varchar2
is
cursor    c_stg_requests (p_stg_req_id number) is
select    r.request_id                req_id,
           p.concurrent_program_name  prog_short_name,
           decode (r.status_code, 'C', 'S', 'G', 'W', 'E') exit_status
from      fnd_concurrent_requests     r,
           fnd_concurrent_programs    p
where     r.program_application_id    = p.application_id
and       r.concurrent_program_id     = p.concurrent_program_id
and       r.parent_request_id         = p_stg_req_id
and       r.critical                  = 'Y';

l_highest_error    varchar2(1);
l_req_id           number;

begin
```

Stage Evaluation (5 of 5)



- Snip-it of Custom Stage Evaluation – part 2

```
l_req_id := fnd_global.conc_request_id;
l_highest_error := 'S';

for r1 in c_stg_requests (l_req_id)
loop
  fnd_file.put_line(fnd_file.log, 'The request ' || r1.req_id ||
    ' program=' || r1.prog_short_name || ' exited with status of ' ||
    r1.exit_status);
  if l_highest_error = 'S'
  then
    if r1.exit_status in ('W','E')
    then
      l_highest_error := r1.exit_status;
    end if;
  elsif l_highest_error = 'W'
  then
    if r1.exit_status = 'E'
    then
      l_highest_error := 'E';
    end if;
  end if;
end loop;

return (l_highest_error);

end stage_result;
```



Questions



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Oracle Applications Precision