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How to Create ESS Job Set in Oracle Fusion

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November 2023



Today's Presenters

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A scenic view of misty mountains with a straw hat, binoculars, and a map in the foreground. The image shows a vast landscape of rolling hills and mountains shrouded in a light mist. In the foreground, a straw hat with a black band, a pair of binoculars, and a map are resting on a surface, suggesting a hiking or travel theme.

Safe Harbor Statement

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Today's Agenda

1. Overview of Managing Job Definitions and Job Sets
2. Typical creation of Job Sets
3. System Properties for Job Sets
4. Update Existing Setup Data
5. Typical FAQs



Overview of Managing Job Definitions and Job Sets

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Overview of Managing Job Definitions and Job Sets

- Scheduled processes are used based on jobs to process data and to provide report output.
- Each job requires a job definition
- **Job Definitions:** Contain the metadata about the job and the options available to users
- **List of Values Sources:** Determine where a list of values for the parameters in a job definition comes from and what the specific values are
- **Job Sets:** Collections of several jobs in a single process set that the users submit instead of running separate jobs.



Overview of Managing Job Definitions and Job Sets

Benefits of Job sets:

- Job sets help customize your needs where the seeded functionality is not there
- Lessen user intervention
- Enables Job dependency
- Enables parallel Job execution



Overview of Managing Job Definitions and Job Sets

The various Enterprise Scheduler Jobs tasks are:

1. Manage Enterprise Scheduler Job Definitions and Job Sets for **Financial, Supply Chain Management**, and Related Applications
2. Manage Enterprise Scheduler Job Definitions and Job Sets for **Human Capital Management** and Related Applications
3. Manage Enterprise Scheduler Job Definitions and Job Sets for **Customer Relationship Management** and Related Applications

Note : Available from Setup and Maintenance work area



Overview of Managing Job Definitions and Job Sets

This table describes the columns in the table on the Manage Job Definitions tab.

Field Name	Description
Name	Name of the job definition.
Display Name	Name of the job definition as available to users while submitting scheduled processes.
Path	The full directory path where the job definition is saved.
Job Application Name	Application for which the job definition belongs to like EarHcmEss
Job Type	<p>The name of the job type that the job definition is based on.</p> <ul style="list-style-type: none">• BIPJobType: Jobs that run as Oracle Analytics Publisher reports <p>If create a brand-new job definition (not by duplicating an existing one), the only job type can use is BIPJobType.</p>

Overview of Managing Job Definitions and Job Sets

Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications ?

[Manage Job Definitions](#) [Manage List of Values Sources](#) [Manage Job Sets](#)

Create Job Definition

▲ [Job Definition](#) | [Show More](#)

* Display Name	<input type="text" value="Process A"/>
* Name	<input type="text" value="ProcessA"/>
* Path	<input type="text" value="ProcessA"/>
Application	<input type="text" value="Application Toolkit"/>

* Job Application Name	<input type="text" value="EarHcmEss"/>
	<input type="checkbox"/> Enable submission from Enterprise Manager
* Job Type	<input type="text" value="BIPJobType"/>
	<input type="checkbox"/> Bursting report



Overview of Managing Job Definitions and Job Sets

This table describes the Header fields of Job sets .

Field Name	Description
Name	Provide a name with only alphanumeric characters, for example, ExportMetadataTables1. Note: A job set name cannot have space or any special character.
Display Name	Provide a name that the users see while submitting the scheduled process.
Description	Provide more information about what the job set does.
Package	Specify the path where you want to save the job set.

Overview of Managing Job Definitions and Job Sets

[Manage Job Definitions](#) [Manage List of Values Sources](#) [Manage Job Sets](#)

Create Job Sets

Job Set

* Name

* Display Name

Description
Test JobSet

Package



Typical creation of Job Sets

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Typical creation of Job Sets

- ESS Job Set is useful when there's a need to run multiple ESS jobs for any activity
- Depending on requirement, Choose the Job set Type
- Below are the Two Types,
 - **Serial:** The jobs are executed in a sequence one after the other
 - **Parallel:** The jobs are executed in parallelly at a time

Note: Either Serial or Parallel type can be chosen for jobs processing



Typical creation of Job Sets

Prerequisites

1. Identify the jobs to be included in ESS Job Set.
2. Run these jobs individually. This will ensure that the jobs are running without issues and users will be able to collect runtime information about the ESS jobs.
3. Ensure name of the web module to be same for all the jobs that are part of the job set
4. Gather Runtime Parameters like Application and Definition names.

Typical creation of Job Sets

Creation of Job Set

- a) Navigate to the product specific task. In this example "Manage Custom Enterprise Scheduler Jobs for HCM Core Processes"
- b) Click on **Manage Job Sets** tab.

Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications ⓘ

[Manage Job Definitions](#) [Manage List of Values Sources](#) [Manage Job Sets](#)

Actions ▼ View ▼ +     Detach

	<input type="text"/>	<input type="text"/>
---	----------------------	----------------------

Typical creation of Job Sets



c) Click on '+' and Enter the new job set details.

Manage Job Definitions Manage List of Values Sources **Manage Job Sets**

Create Job Sets

Job Set

* Name

* Display Name

Description

Package /oracle/apps/ess/custom

Typical creation of Job Sets

- d) Choose **Serial** or **Parallel** depending on how the jobs need to run.
- e) Click on the **Add Job Set Step** button to add the first job details.

Job Set Steps

☒ Serial ☐ Parallel



Available Steps



Typical creation of Job Sets

- f) Give a name for Step ID. Note: Make sure to add Step ID without space or ‘_’
- g) Search for first Job. For example, search by Name *ProcessA*

The 'Add Step' dialog box is shown with the 'Step' tab selected. It contains the following fields and options:

- * Step ID:** A text box containing 'Step1'.
- * Job:** A text box with a magnifying glass icon, indicating a search function.
- Package:** A text box.
- Effective Application:** Two radio buttons:
☒ Insert into main diagram
☐ Add to list of available steps
- Buttons:** 'OK' and 'Cancel' at the bottom right.

The 'Search and select a Job or Job Set' dialog box is shown. It contains the following fields and options:

- Type:** Two radio buttons:
☒ Job Definition
☐ Job Set
- Name:** A text box containing 'ProcessA'.
- Package:** A text box.
- Buttons:** A magnifying glass icon and a plus icon.
- Table:** A table with two columns: 'Name' and 'Package'.

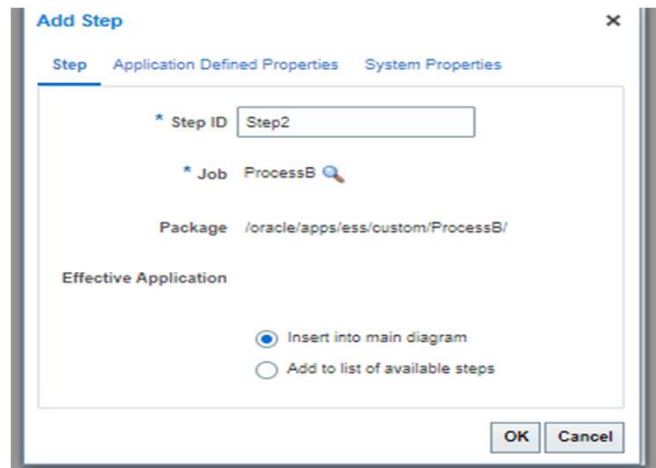
Name	Package
ProcessA	/oracle/apps/ess/custom/ProcessA/

The 'Add Step' dialog box is shown with the 'Application Defined Properties' tab selected. It contains the following fields and options:

- * Step ID:** A text box containing 'Step1'.
- * Job:** A text box containing 'ProcessA' with a magnifying glass icon.
- Package:** A text box containing '/oracle/apps/ess/custom/ProcessA/'.
- Effective Application:** Two radio buttons:
☒ Insert into main diagram
☐ Add to list of available steps
- Buttons:** 'OK' and 'Cancel' at the bottom right.

Typical creation of Job Sets

- h) Click on the Add Job Set Step button to add the second job details
- i) Now search on Name *ProcessB*

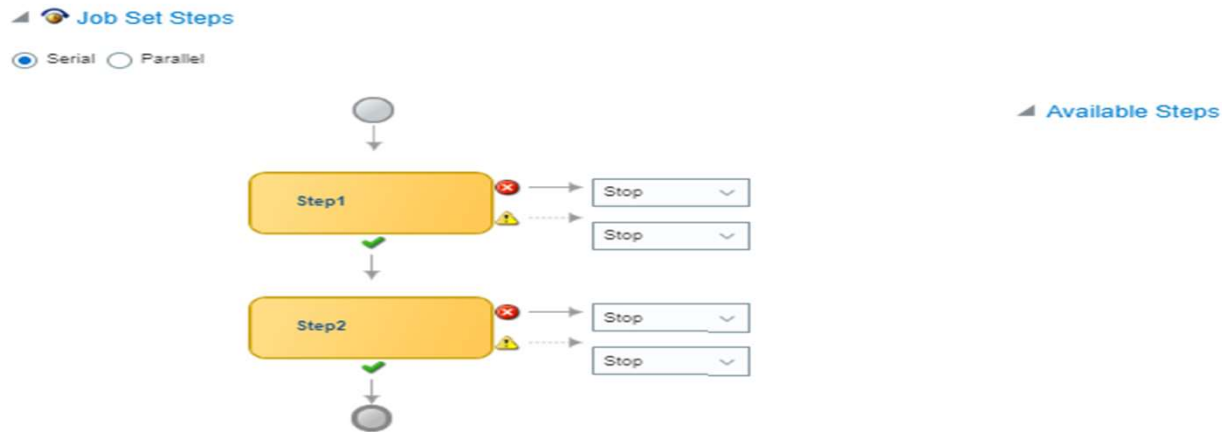


The screenshot shows the 'Add Step' dialog box with the following fields and options:

- Step ID:** A text field containing 'Step2'.
- Job:** A text field containing 'ProcessB' with a magnifying glass icon to its right.
- Package:** A text field containing '/oracle/apps/ess/custom/ProcessB/'.
- Effective Application:** A section with two radio buttons:
 - ☒ Insert into main diagram
 - ☐ Add to list of available steps
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

Typical creation of Job Sets

J) After adding 2 Jobs, the flow looks like below for a Serial Job Set



Typical creation of Job Sets

K) Under the System Properties add the **SYS_effectiveApplication** as the value as **EarHcmEss**

Add System Property

* Name

Type String

Initial Value

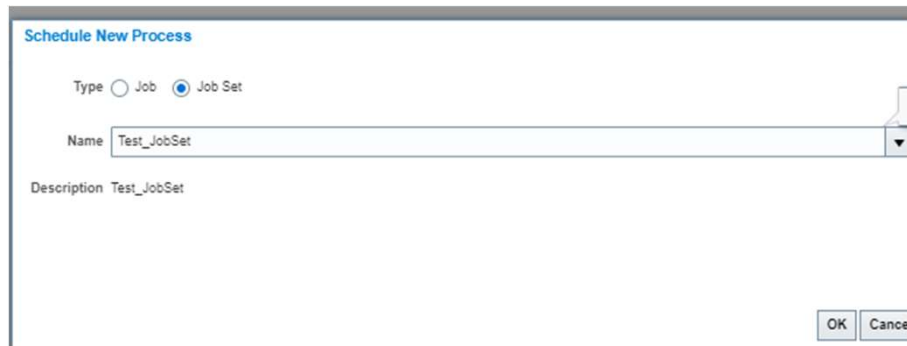
☐ Read Only

L) Save the Job set

Typical creation of Job Sets

How to Submit the Job set:

1. Navigate to Scheduled Processes
2. Choose Type Job Set
3. Search for the job set created



The screenshot shows a web-based dialog box titled "Schedule New Process". It contains the following elements:

- Type:** Two radio buttons are present. The first is labeled "Job" and is unselected. The second is labeled "Job Set" and is selected (indicated by a blue dot).
- Name:** A text input field containing the value "Test_JobSet". A small dropdown arrow is visible on the right side of the field.
- Description:** A text label followed by the value "Test_JobSet".
- Buttons:** At the bottom right, there are two buttons: "OK" and "Cancel".

Typical creation of Job Sets

How to Submit the Job set:

4. Enter the parameters for the first job step, by selecting Process A

Process Details ×

ⓘ This process will be queued up for submission at position 1

Process Set Name Test_JobSet Submission Notes

Description Test_JobSet

Processes Schedule Notification

Process Name	Path	Parent Process Set
Process A	Step1	Test_JobSet
Process B	Step2	Test_JobSet

Process Details : Process A

Parameters Output

Parameter1

Parameter2

Typical creation of Job Sets

How to Submit the Job set:

5. Enter the parameters for the second job step, by selecting Process B

Process Details

This process will be queued up for submission at position 1

Submit

Cancel

Process Set Name Test_JobSet

Submission Notes

Description Test_JobSet

Processes

Schedule

Notification

Process Name	Path	Parent Process Set
Process A	Step1	Test_JobSet
Process B	Step2	Test_JobSet

Process Details : Process B

Parameters

Output

Parameter2 xyz

Parameter1 456

Typical creation of Job Sets

How to Submit the Job set:

- 6 Submit the Job set
- 7. At completion notice that there are three process IDs.

[Search](#)

[Search Results](#)

View ☐ Flat List ☒ Hierarchy

Actions View

Schedule New Process

Resubmit

Put On Hold

Cancel Process

Release Process

View Log

Change Process Priority

Name	Process ID
Test_JobSet	9545806
Process A	9545807
Process B	9545808



Typical creation of Job Sets

How to Submit the Job set:

Note:

when you create a job set, a privilege with the same name as the job set is automatically created with a Run prefix. For example, for a job set named ExportAppsData, with display name Export Application Data, the privilege code is **RUN_EXPORTAPPSDATA**.

This Privilege needs to be assigned to the other users, If any user is not able to view or submit the Custom ESS Job Set.



System & Application Properties for Job Sets

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System And Application Properties for Job Sets

➤ **Application Defined Properties** are the additional properties that the user has to enter during runtime

Property Name	Description	Value	Type
srsFlag	A boolean parameter (Y or N) that controls whether the job displays in the job request submission user interface. Enter Y.	Y	Application
EXT_PortletContainerWebModule _application	The name of the web module for the Oracle Enterprise Scheduler Central UI application to use as a portlet when submitting a job request.	ORA_HCM_UI	Application
enableDuplicateJobWithParamTaskflow	When property is set to True, it can be used to run a single job multiple times with different parameter	True	Application



System And Application Properties for Job Sets

- **System Properties** are the additional settings that determine how a job set runs. For example, you can use a system property to determine the number of retries for a job set that fails to execute.

Property Name	Description	Value	Type
SYS_effectiveApplication	Specifies the logical name of the Scheduling Services folder application that is the effective application used to process the request. You can associate a job definition, job type, or a job set step with a different application by defining the EFFECTIVE_APPLICATION system property. This property can only be specified through metadata and cannot be specified as a submission parameter.	EarHcmEss	System
SYS_priority	Specifies the request processing priority. The priority interval is 0 to 9, where 0 is the lowest priority and 9 is the highest. If this property is not specified, the default value used is 4.	Not mandatory	System
SYS_retries	Specifies the retry limit for a failed request. If request execution fails, the request is retried up to the number of times specified by this property until the request succeeds. If the retry limit is zero (0), a failed request is not retried. If this property is not specified, the default value used is 0.	Not Mandatory	System



Update Existing Setup Data

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Update Existing Setup Data


- You can select job steps in the Job Set Steps section and edit, remove, or reorder (for Serial only). You can also switch between Serial and Parallel.

1. Navigate to the product specific task. In this example "Manage Custom Enterprise Scheduler Jobs for HCM Core Processes"
2. Click on **Manage Job Sets** tab.
3. Search for the Job set
4. Click on Pencil Icon to edit the Job set

Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications ⓘ

[Manage Job Definitions](#) [Manage List of Values Sources](#) [Manage Job Sets](#)

Actions ▾ View ▾ +      Detach



Name	Display Name	Description
Test_JobSet	Test_JobSet	Test_JobSet

Update Existing Setup Data

5. Select the Step which needs to be edited or removed



6. Make changed as per your requirement.

7. Save and close the changes



Typical FAQs

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FAQ:

1. What do I select for job application name when I create a job definition?

Answer: Select from the Job Application Name list depends on the setup task you're using.

- Select **CrnEss** when using task Manage Enterprise Scheduler Job Definitions and Job Sets for Customer Relationship Management and Related Applications:
- Select **FscmEss** when using task Manage Enterprise Scheduler Job Definitions and Job Sets for Financial, Supply Chain Management, and Related Applications:
- Select **EarHcmEss** when using task Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications task:

The screenshot shows the Oracle HR Cloud interface for managing job definitions. The main heading is "Manage Enterprise Scheduler Job Definitions and Job Sets for Human Capital Management and Related Applications". Below this, there are three tabs: "Manage Job Definitions", "Manage List of Values Sources", and "Manage Job Sets". The "Manage Job Definitions" tab is active. Under this tab, there is a "Create Job Definition" section. In this section, there is a "Job Definition" dropdown menu and a "Show More" link. Below these, there are two input fields: "* Display Name" with the value "Process A" and "* Job Application Name" with the value "EarHcmEss". A blue arrow points to the "Job Application Name" dropdown menu.



FAQ:

2. How to verify the EXT_PortletContainerWebModule parameter value ?

Answer: query the FUSION.ESS_REQUEST_PROPERTY

Example of SQL for Two Process IDs:

```
select REQUESTID, VALUE  
from FUSION.ESS_REQUEST_PROPERTY  
where requestid in (<PROCESS ID A>,<PROCESS ID B>)  
and name='EXT_PortletContainerWebModule'
```

Results		Statistics	Plan
		Execution Time (seconds) 0.021	
REQUESTID		VALUE	
9609528		ORA_HCM_UI	
9609530		ORA_HCM_UI	

FAQ:

3. How to verify the application Name ?

Answer: query the FUSION.ESS_REQUEST_HISTORY

Example of SQL for Two Process IDs:

```
select REQUESTID, APPLICATION, DEFINITION
from FUSION.ESS_REQUEST_HISTORY
where requestid in (<PROCESS ID A>,<PROCESS ID B>)
```

Results Statistics Plan		
Execution Time (seconds) 0.028		
REQUESTID	APPLICATION	DEFINITION
9609528	EarHcmEss	JobDefinition://oracle/apps/ess/hcm/users/AseInactiveUsersDataLoadJob
9609530	EarHcmEss	JobDefinition://oracle/apps/ess/hcm/users/AseInactiveUsersJob

FAQ:

4 . How many jobs can have in a Job set.

Answer: A job set can contain any number of individual jobs as well as other job sets. There can also be multiple levels of nested job sets within a single job set. For example, a job set can include three jobs and two job sets, one of which contains another job set.

5. Error code : ESS-01035 Unable to determine a logical application name for new request.

Answer: In this case **SYS_effectiveApplication** Property is missing

Add System Property

* Name

Type

Initial Value

☐ Read Only

FAQ:

6. ESS-01031 – Application <incorrect_app_name> was not found.

Answer: In this case **SYS_effectiveApplication** parameter is set with an incorrect value

7. How to view already run Job sets from scheduled process UI?

Answer: From Tools >> Schedule Processes >> Hierarchy view

Search

Search Results ?

View ☐ Flat List ☒ Hierarchy

Actions View [Schedule New Process](#) [Resubmit](#) [Put On Hold](#) [Cancel Process](#) [Release Process](#) [View Log](#) [Change Process Priority](#)

Name	Process ID
Test_JobSet	9545808
Process A	9545807
Process B	9545806



FAQ:

8. Can I use same program/report multiple times within same Job set?

Answer: Yes, but need to define “**enableDuplicateJobWithParamTaskflow**” Application defined parameter as true at Job set level.

9. When changing Job set, does it require sign out/sign back in?

Answer: As a best practice, it is advised to sign out/sign back in for any Job set changes to reflect before executing.

10. Is there any Soap API/webservice to submit Job Set?

Answer: Yes, <https://myPOD.fa.myDC.oraclecloud.com/ess/esswebservice?wsdl>



FAQ:

11. ESS-01028 Request submission or validation failed. oracle.as.scheduler.MetadataServiceException: Failed to get Jobset with name JobSet://oracle/apps/ess/custom/XXXXXX: ESS-02002 User XXXXX does not have sufficient privilege to perform operation READ.

Answer: Due to Privilege issue, ESS job set privileges need to be assigned to User.

Roles

Create Role

*SearchJob roles;Duty roles;Abstract roles;Otl

Demo_Serial_Jobset

Search Result Count : 1

NameDemo_Serial_Jobset

CodeRUN_DEMO1

DescriptionDemo_Serial_Jobset

Expand TowardPrivileges

Demo_Serial_Jobset

ShowPrivileges

Privilege Name	Privilege Code	Privilege Description	Inherited from Role Name	Inherited from Role Code
Demo_Serial_Jobset	RUN_DEMO1	Demo_Serial_Jobset		



Demo: Create Job Set & Submit Job Set

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Questions & Answers



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