Oracle® Retail Bulk Data Integration Cloud Service Installation Guide Release 22.1.401.0 F73166-01

November 2022



Oracle® Retail Bulk Data Integration Cloud Service Installation Guide, Release 22.1.401.0

F73166-01

Copyright © 2022, Oracle and/or its affiliates. All rights reserved.

Primary Author: Nathan Young

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Value-Added Reseller (VAR) Language

Oracle Retail VAR Applications

The following restrictions and provisions only apply to the programs referred to in this section and licensed to you. You acknowledge that the programs may contain third party software (VAR applications) licensed to Oracle. Depending upon your product and its version number, the VAR applications may include:

(i) the **MicroStrategy** Components developed and licensed by MicroStrategy Services Corporation (MicroStrategy) of McLean, Virginia to Oracle and imbedded in the MicroStrategy for Oracle Retail Data Warehouse and MicroStrategy for Oracle Retail Planning & Optimization applications.

(ii) the **Wavelink** component developed and licensed by Wavelink Corporation (Wavelink) of Kirkland, Washington, to Oracle and imbedded in Oracle Retail Mobile Store Inventory Management.

(iii) the software component known as Access Via[™] licensed by Access Via of Seattle, Washington, and imbedded in Oracle Retail Signs and Oracle Retail Labels and Tags.

(iv) the software component known as **Adobe Flex™** licensed by Adobe Systems Incorporated of San Jose, California, and imbedded in Oracle Retail Promotion Planning & Optimization application.

You acknowledge and confirm that Oracle grants you use of only the object code of the VAR Applications. Oracle will not deliver source code to the VAR Applications to you. Notwithstanding any other term or condition of the agreement and this ordering document, you shall not cause or permit alteration of any VAR Applications. For purposes of this section, "alteration" refers to all alterations, translations, upgrades, enhancements, customizations or modifications of all or any portion of the VAR Applications including all reconfigurations, reassembly or reverse assembly, re-engineering or reverse engineering and recompilations or reverse compilations of the VAR Applications or any derivatives of the VAR Applications. You acknowledge that it shall be a breach of the agreement to utilize the relationship, and/or confidential information of the VAR Applications for purposes of competitive discovery.

The VAR Applications contain trade secrets of Oracle and Oracle's licensors and Customer shall not attempt, cause, or permit the alteration, decompilation, reverse engineering, disassembly or other reduction of the VAR Applications to a human perceivable form. Oracle reserves the right to replace, with functional equivalent software, any of the VAR Applications in future releases of the applicable program.

Contents

Se	end Us Your Comments	vii
Pr	eface	ix
	Audience	ix
	Documentation Accessibility	
	Customer Support	
	Review Patch Documentation	
	Improved Process for Oracle Retail Documentation Corrections	
	Oracle Help Center (docs.oracle.com)	
	Conventions	
1	Introduction	
	BDI Topology	1-1
2	Technical Specifications	
	Requesting Infrastructure Software	2-1
	Server Requirements	2-1
	Installation Notes	2-2
3	BDI Batch Job Admin	
	Installation and Setup Instructions	3-1
	Prerequisites	3-1
	Installing WebLogic	
	Creating the Required Schema Using the Repository Creation Utility	
	Creating a WebLogic Domain with JRF	3-10
4	Deploying BDI Batch Job Administration Applications	
	Deploying BDI Batch Job Admin Applications for a Sender Application	
	Preparing the Database for BDI Batch Job Admin for RMS Installation	
	Preparing the WebLogic Domain for BDI Batch Job Admin for RMS	
	Deploying BDI RMS Batch Job Admin on the WebLogic	
	Testing the Deployment	
	Creating Outbound Interface tables for BDI RMS	
	Deploying BDI Batch Job Admin Application for a Receiver Application	
	Preparing the Database for BDI SIM Batch Job Admin Installation	
	Preparing the WebLogic Domain for BDI Batch Job Admin for SIM Deploying BDI SIM Batch Job Admin on the WebLogic	
	Testing the Deployment	
	Creating Inbound Interface tables for BDI SIM	
	Upgrade Instructions for BDI	

5 Process Flow Installation

Prerequisites	5-1
Install the Process Flow Application	5-1
Verify Installation	5-7
Enabling Email Notification Alerts	5-8
Process Flow Upgrade Steps	5-9

6 BDI Batch Scheduler Installation

Installation Prerequisites	6-1
Preparing for Installation	6-1
Deploying Scheduler Application	6-2
Verifying Installation	6-4
Enabling Email Notification Alerts	6-5
Scheduler Upgrade Steps	6-5

7 Cluster Considerations

Scaling BDI	7-1
BDI on Cluster	
Logging	7-1
Update Log Level	7-2
Create/Update/Delete System Options	7-2
Create/Update/Delete System Credentials	7-3
Scheduler Configuration Changes for Cluster	7-3

8 BDI Migration

Α	Appendix: Integrating BDI-RMS with External Applications		
	Installation Instructions	A-1	
В	Appendix: Enabling BDI Schedules		

Send Us Your Comments

Oracle[®] Retail Bulk Data Integration Cloud Service Installation Guide, Release 22.1.401.0.

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document.

Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the Online Documentation available on the Oracle Technology Network Web site. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: retail-doc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at http://www.oracle.com.

Preface

The Oracle® Retail Bulk Data Integration Cloud Service Installation Guide contains the requirements and procedures that are necessary for the retailer to install the Oracle Retail Bulk Data Integration product.

Audience

The Installation Guide is written for the following audiences:

- Database administrators (DBA)
- System analysts and designers
- Integrators and implementation staff

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Customer Support

To contact Oracle Customer Support, access My Oracle Support at the following URL:

https://support.oracle.com

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

Review Patch Documentation

When you install the application for the first time, you install either a base release (for example, 21.0.000) or a later patch release (for example, 19.0.001). If you are installing the base release and additional patch releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch releases can contain critical information related to the base release, as well as information about code changes since the base release.

Improved Process for Oracle Retail Documentation Corrections

To more quickly address critical corrections to Oracle Retail documentation content, Oracle Retail documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail document may at times not be attached to a numbered software release; instead, the Oracle Retail document will simply be replaced on the Oracle Technology Network Web site, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

Oracle Retail product documentation is available on the following web site:

https://docs.oracle.com/en/industries/retail/index.html

An updated version of the applicable Oracle Retail document is indicated by Oracle part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-02 is an updated version of a document with part number E123456-01.

If a more recent version of a document is available, that version supersedes all previous versions.

Oracle Help Center (docs.oracle.com)

Oracle Retail product documentation is available on the following web site:

https://docs.oracle.com/en/industries/retail/index.html

(Data Model documents can be obtained through My Oracle Support.)

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1 Introduction

Oracle Retail Bulk Data Integration (BDI) provides the ability to transfer bulk data between Oracle Retail applications. BDI contains the following components:

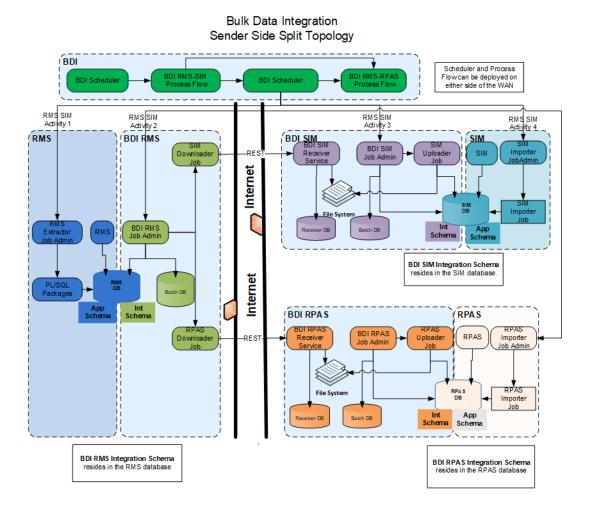
- BDI Batch Job Admin Helps management of batch jobs
- BDI Process Flow Provides a mechanism to run multiple dependent batch jobs
- BDI Scheduler Schedules execution of an action, like invoking process flows or services

A BDI installation contains the following components:

- An installation of BDI RMS Batch Job Admin
- An installation of BDI SIM Batch Job Admin
- An installation of BDI Process Flow
- An installation of BDI Scheduler

BDI Topology

The diagram below shows the default topology for BDI. Please refer to the *Oracle Retail Bulk Data Integration Implementation Guide* for other supported topologies.



Technical Specifications

The BDI components have several dependencies on Oracle Retail Application installations, as well as on the Oracle WebLogic Servers. This section covers these requirements.

Requesting Infrastructure Software

If you are unable to find the necessary version of the required Oracle infrastructure software (database server, application server, WebLogic, etc.) on the Oracle Software Delivery Cloud, you should file a non-technical 'Contact Us' Service Request (SR) and request access to the media. For instructions on filing a non-technical SR, see My Oracle Support Note 1071023.1 - *Requesting Physical Shipment or Download URL for Software Media*.

Server Requirements

Supported On	Versions Supported	
Database Server OS	OS certified with Oracle Database 12c (12.1.0.2) Enterprise Edition. Options are:	
	 Oracle Linux 6 or 7 for x86-64 (Actual hardware or Oracle virtual machine). 	
	 Red Hat Enterprise Linux 6 or 7 for x86-64 (actual hardware or Oracle virtual machine) 	
	 IBM AIX 7.1 (actual hardware or LPARs) 	
	 Solaris 11.2 Sparc (actual hardware or logical domains) 	

Database Server 12c	Oracle Database Enterprise Edition 12c (12.1.0.2) with t following specifications:
	Components:
	 Enterprise Edition
	 Examples CD (formerly the companion CD)
	Oneoff Patches:
	 20846438: ORA-600 [KKPAPXFORMFKK2KEY_1] WITH LIST PARTITION
	 Patch 19623450: MISSING JAVA CLASSES AFTER UPGRADE TO JDK 7
	 20406840: PROC 12.1.0.2 THROWS ORA-600 [1799 WHEN PRECOMPILING BY 'OTHER' USER
	Other Components:
	 Perl interpreter 5.0 or later
	 X-Windows interface
	 JDK 1.8 with latest security updates 64 bit
Database Server 19c	Oracle Database Enterprise Edition 19c(19.3.0.0) with following components.
	Components:
	 DBHOME
	 Examples CD
	Other Components:
	 Perl interpreter 5.0 or later
	 X-Windows interface
	■ JDK 1.8
Application Server OS	OS certified with Oracle Fusion Middleware 12c. Optio are:
	 Oracle Linux 6 or 7 for x86-64 (Actual hardware or Oracle virtual machine).
	 Red Hat Enterprise Linux 6 or 7 for x86-64 (actual hardware or Oracle virtual machine)
	 IBM AIX 7.1 (actual hardware or LPARs)
	Solaris 11 Sparc (actual hardware or logical domain
Application Server	Oracle Fusion Middleware 12c (12.2.1.4.0)
	Components:
	• Oracle WebLogic Server 12c (12.2.1.4.0)
	 Java: JDK 1.8+ latest security updates 64 bit
	Patches:
	 Patch 22648025: ILLEGALSTATEEXCEPTION WH INVOKING A WEBSERVICE/EJB IN WLS 12.2.1 (need an Oracle support account to get it)
Minimum required JAVA version for all operating systems	JDK 1.8+ latest security updates 64 bit

Installation Notes

When redeploying BDI applications, please note the following.

- If any existing datasource connection detail is changed (in *env-info.json deployment config file), such as the JDBC URL, username or, password of the database connection, the datasource needs to be first deleted from the WebLogic server before installation. This is a manual step.
 - Log in to the WebLogic Server Admin console. Go to Services -> Data Sources page. Select the datasource, delete and activate the changes.
 - Proceed with the installation.
- The JobAdminDataSource and ReceiverServiceDataSource should also be cleaned if we are using the same schema, delete all the tables for RMS, SIM and external.

Note: The above steps are not required if no datasource connection detail is changed during redeployment.

If there are no datasource detail changes, note the following before redeployment of the BDI applications on an existing schema:

- Make sure the LOADSEEDDATA flag is set to TRUE.
- For BDI Batch JOB Admin, make sure the LOADJOBDEF flag is set to TRUE, if there are any changes to existing job definitions or new jobs are added.
- For BDI Process Flow, make sure the LOADPROCESSDEF flag is set to TRUE, if there are any changes to existing process flow definitions or new process defs are added.

BDI Batch Job Admin

This chapter describes the procedure you must use to install the JRF domain and deploy the BDI Batch Job Admin application. For more information about domain creation and other server related information, see the WebLogic application server documents.

Installation and Setup Instructions

This section describes the installation and setup instructions including the installation prerequisites, preparing the WebLogic server, creating a WebLogic domain, and deploying the WAR file.

Prerequisites

The BDI Batch Job Admin application requires Oracle WebLogic server 12c (12.2.1.4.0), built with Java 8 (JDK 1.8 64 bit with the latest security updates).

The recommended Java VM memory setting for the Job Admin application domain is:

-Xms1024m -Xmx2048m

Installing WebLogic

To obtain WebLogic 12c (12.2.1.4.0), go to the Oracle Technology Network and take the following steps.

- 1. Find fmw_12.2.1.4.0.0_infrastructure_Disk1_1of1.zip and download this file to your system.
- **2.** Extract the contents of this zip file to your system. You will use the fmw_ 12.2.1.4.0.0_infrastructure.jar file to run the installer.
- **3.** Run the installer by executing the jar file:

java -jar fmw_12.2.1.4.0.0_infrastructure.jar

The Welcome window appears.



4. Click Next. The Auto Updates window appears.

× – Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 2 of 8				
Auto Updates				
Welcome Auto Updates Installation Location Installation Type Prerequisite Checks Installation Summary Installation Progress Installation Complete	Skip Auto Updates Select patches from directory Location: Search My Oracle Support for Updates Username: Password: Proxy Settings Search	FUSION MIDDLEWARE		
Неір		< Back Next > Enish Cancel		

5. Select the appropriate radio button and click Next. The Installation Location window appears.

× – Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 3 of 8				
Installation Location				
<u>Welcome</u> <u>Auto Updates</u> Installation Location	Oracle Home:			
Installation Type Prerequisite Checks Installation Summary Installation Progress Installation Complete	Preature Sets installed At Selected Uracle Home: Wew Oracle Home may only contain alphanumeric, underscore (_), hyphen (-) or dot(.) characters and it must begin with an alphanumeric character.			
Help	< <u>Back</u> Next > Enish Cancel			

- **6.** Click Browse to select the Oracle Home location where the Weblogic Server is to be installed.
- 7. Click Next. The Installation Type window appears.

Installation Type		
<u>Welcome</u> <u>Auto Updates</u>		
Installation Location	⊖ <u>C</u> oherence	
Prerequisite Checks Installation Summary	○ Complete with <u>E</u> xamples	
Installation Progress	 □ Oracle Fusion Middleware 12c WebLogic Server and Coherence 12.2.1.4.0 □ Core Server □ Core Application Server 12.2.1.4.0 □ Coherence Product Files 12.2.1.4.0 □ WebLogic SCA 12.2.1.4.0 □ WebLogic Client Jars 12.2.1.4.0 □ Administrative Tools □ Administrative Tools □ Administrative Tools □ Third party JDBC Drivers 12.2.1.4.0 □ Detabase Support □ Third party JDBC Drivers 12.2.1.4.0 □ Open Source Components □ Fusion Middleware Maken Support 12.2.1.4.0 □ Oracle Installation Infrastructure □ FWW Platform Generic 12.2.1.4.0 	

8. Select Fusion Middleware Infrastructure (JRF and Enterprise Manager) and click Next. The installer performs the pre-requisite checks and ensures all required conditions are satisfied.

× – Oracle Fusion Middleware 12c WebLogic Server and Coherence Installation - Step 5 of 8				
Prerequisite Checks				
<u>Welcome</u> <u>Auto Updates</u>		100%		
 Installation Location Installation Type 	Checking operating system			
Prerequisite Checks Installation Summary	Checking Java version used	to launch the installer		
Installation Progress				
C Installation Complete				
	Stop Rerun Skip	✓ View Successful <u>T</u> asks	View <u>L</u> og	
	■			
Help		< Back Next >	nish Cancel	

9. When the prerequisite check completes successfully, click Next. The Security Updates window appears.

Oracl	e Fusion Middleware 12c Infrastructure Installation - Step 6 of 9
Security Updates	
Welcome Auto Updates Installation Location Installation Type Prerequite Checks Security Updates Installation Summary Installation Complete Installation Complete	Provide your email address to be informed of security issues, install the product and initiate configuration manager. <u>View.details</u> . Email: Easier for you if you use your My Oracle Support email address/username. (v) I wish to receive security updates via My Oracle Support. My <u>O</u> racle Support Password:
Help	< <u>Back</u> <u>Next</u> > <u>Finish</u> Cancel

10. Provide information and click Next.



11. Click Install. The Installation Progress window appears.

× – Oracle Fusion Mic	Idleware 12c WebLogic Server and Coherence Installation - Step 7 of 8
Installation Progress	
Welcome Auto Updates	100%
Installation Location Installation Type Prerequisite Checks Installation Summary Installation Progress Installation Complete	 Prepare Copy Generating Libraries Performing String Substitutions Linking Strip Saving the inventory Post install scripts
	View Messages View Successful Tasks View Log Hardware and Software Engineered to Work Together
Help	< <u>Back</u> <u>Next</u> > <u>Finish</u> Cancel

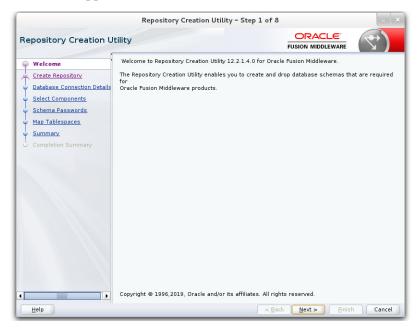
12. Click Next when the installation completes. The Installation Complete window appears.



Creating the Required Schema Using the Repository Creation Utility

Perform the following procedure to create a schema user for the domain:

1. Run the RCU from the <MW_HOME>/oracle_common/bin folder. The Welcome window appears.



2. Click Next and select the Create Repository option.



3. Click Next. Enter the database credentials where the schema user has to be created.

		Welcome - Step 3 of 8
epository Creation Uti	lity	
Welcome Create Repository	<u>D</u> atabase Type:	Oracle Database
Database Connection Det <u>Select Components</u> Schema Passwords	Host Na <u>m</u> e:	For RAC database, specify VIP name or one of the Node name as Host name. For SCAN enabled RAC database, specify SCAN host as Host name.
<u>Schema Passwords</u> <u>Map Tablespaces</u> <u>Summary</u>	P <u>o</u> rt: Service Name:	r***.
Completion Summary	<u>Service Name</u> .	sys
	<u>P</u> assword:	User with DBA or SYSDBA privileges. Example:sys
	<u>R</u> ole:	SYSDBA One or more components may require SYSDBA role for the operation to
Help		< Back Next > Finish Cancel

4. Click Next. Specify the prefix to be used for the schema user creation. For example, INT. Select Metadata Services, WebLogic Services, and Oracle Platform Security Services.

	Welcome	e - Step 4 of 8		-
epository Creation U	tility			7
Welcome	Specify a unique prefix for all s and manage the schemas late		session, so you can easily loc	ate, reference
Database Connection Details	○ <u>S</u> elect existing prefix:	BDI16B		
Select Components	(a) Create new prefix:	INT		
Schema Passwords Map Tablespaces		annot start with a number. No	special	
Summary	Component		Schema Owne	r
	Oracle AS Repository Components			
Completion Summary	AS Common Schemas Common Infrastructure Services			
			INT_STB INT_OPSS	
	User Messagir	n Security Services	INT UMS	
	Audit Services		INT IAU	
	Audit Services		INT IAU APPEN	
	Audit Services		INT IAU VIEWE	
	Metadata Serv	rices	INT MDS	
	Weblogic Serv	ices	INT_WLS	
Help			Back Next > Finis	h Cano

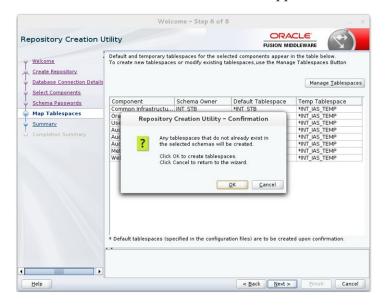
5. Click Next. Specify the password.

	W	elcome - Step 5 of 8		- ×
Repository Creation U	tility			7
Vielcome Create Repository Database Connection Details Select Components Schema Passwords Map Tablespaces Summary Completion Summary	 Use same password Password: <u>C</u>onfirm Password: Use <u>m</u>ain schema p 	Alpha numeric only.Cannot start with a No special characters except: \$, #		
Help		< <u>B</u> ack	Next > Einis	h Cancel

6. Click Next. The window provides the details of tablespaces created as part of schema creation.

		Welc	ome - Step 6 of	8	
Re	pository Creation U	tility			
Ĭ Ť Ť	Welcome Create Repository Database Connection Details Select Components	Default and temporary tab To create new tablespace		cted components appear i ablespaces,use the Manag	
1	Schema Passwords	Component	Schema Owner	Default Tablespace	Temp Tablespace
I		Common Infrastructu		*INT_STB	*INT_IAS_TEMP
φ	Map Tablespaces	Oracle Platform Secu	INT_OPSS	*INT_IAS_OPSS	*INT_IAS_TEMP
5	Summary	User Messaging Serv	INT_UMS	*INT_IAS_UMS	*INT_IAS_TEMP
		Audit Services	INT_IAU	*INT_IAU	*INT_IAS_TEMP
0	Completion Summary	Audit Services Append	INT_IAU_APPEND	*INT_IAU	*INT_IAS_TEMP
		Audit Services Viewer	INT_IAU_VIEWER	*INT_IAU	*INT_IAS_TEMP
		Metadata Services	INT_MDS	*INT_MDS	*INT_IAS_TEMP
		Weblogic Services	INT_WLS	*INT_WLS	*INT_IAS_TEMP
		* Default tablespaces (spr	cified in the configur	ation files) are to be create	ed upon confirmation.
• 🗆					

7. Click Next. The Confirmation window appears.



8. Click OK. The Summary window appears.

s INTSTB	a Load concurrently	
1 sys System and Dat wners INT Schema Owner s INT_STB	a Load concurrently Tablespace Type Default Temp	INT_STB INT_IAS_TEMP
1 sys System and Dat wners INT Schema Owner s INT_STB	a Load concurrently Tablespace Type Default Temp	INT_STB INT_IAS_TEMP
:	Tablespace Type Default Temp	INT_STB INT_IAS_TEMP
System and Dat wners INT Schema Owner s INT_STB	Tablespace Type Default Temp	INT_STB INT_IAS_TEMP
System and Dat wners INT Schema Owner s INT_STB	Tablespace Type Default Temp	INT_STB INT_IAS_TEMP
s INTSTB	Tablespace Type Default Temp	INT_STB INT_IAS_TEMP
Schema Owner s INT_STB	Default Temp	INT_STB INT_IAS_TEMP
s INT_STB	Default Temp	INT_STB INT_IAS_TEMP
s INT_STB	Default Temp	INT_STB INT_IAS_TEMP
	Temp	INT_IAS_TEMP
es INT_OPSS	Default Temp Additional	INT_IAS_OPSS INT_IAS_TEMP [None]
INT_UMS	Default Temp Additional	INT_IAS_UMS INT_IAS_TEMP [None]
INT_IAU	Default Temp Additional	INT_IAU INT_IAS_TEMP [None]
INT_IAU_APPEND	Default Temp	INT_IAU INT_IAS_TEMP
	INT_IAU	Additional INT_UMS Default Temp Additional INT_IAU Default Temp Additional INT_IAU_APPEND Default Temp

9. Click Create and proceed to create the schema. This could take a while to complete. The Completion Summary window appears.

We	lcome – St	ep 8 of 8		-
Itility				
Database details:				
	-			
			rrently	
Execution Time 1 minute 43 seconds				
RCU Logfile	/tmn/RCI1201	7-04-06 02-19 2	255123436/logs/rcu.log	1
Directory	/unp/RC0201	/-04-00_02-13_2	233123430/logs	
View Log	rcu.log			
Prefix for (prefixable) I Schema Owners	NT			
Compone	nt	Status	Time	Logfile(Click to view
		Success	00:09.296(sec)	stb.log
		Success	00:16.123(sec)	opss.log
	1			ucsums.log
				iau.log iau append.log
Audit Services Viewer		Success		iau viewer.log
Metadata Services		Success	00:12.967(sec)	mds.log
Weblogic Services		Success	00:16.790(sec)	wls.log
	Database details: Host Name Port Service Name Connected As Execution Time Service Execution Time Service Component Log Directory View Log Perfx for (prefixable) I Schema Owners Compone Componen Security User Messaging Service Audit Services Apend Audit Services Viewer	Database details: Host Name Port 1: Service Name Connected As 5ys Operation System and D Execution Time 1 minute 43 RCU Logfile Component Log Dirictory View Log Prefix for (prefixable) Schema Owners Component Component Component Services Soracle Platform Services User Messaging Service Sudit Services Append Audit Services Append Audit Services Viewer	Database details: Host Name Loss Name Port Service Name Connected As System and Data Load concur Execution Time 1 Service Name Comport Service Name RCU Logfile Tmp/RCU2017-04-06_02-19_1 Directory Component Log Prefix for (prefixable) Schema Owners INT Component Infrastructure Services Success User Hessaging Service Success Success	Component Status Time Component Status Time Component transfer Immute 43 seconds Status RCU Logfile /tmm/RCU2017-04-06_02-19_25512436/logs/rcu.log Timp/RCU2017-04-06_02-19_25512436/logs/rcu.log Prefix for (prefixable) Immp/RCU2017-04-06_02-19_255123436/logs/rcu.log Timp/RCU2017-04-06_02-19_255123436/logs/rcu.log Prefix for (prefixable) IMT Status Time Component Log Immp/RCU2017-04-06_02-19_255123436/logs/rcu.log Time Component Status Time Time Time Audit Services Success 00:10:23(sec) User Messaging Service Success 00:13:28(sec) Ours/28(sec) Audit Services Success 00:09:28(sec) Audit Services Success 00:09:28(sec) Success 00:09:28(sec)

Creating a WebLogic Domain with JRF

Perform the following procedure to create a new WebLogic domain with JRF:

1. Run the config.sh from <ORACLE_HOME>/oracle_common/common/bin folder. The Configuration Type window appears.

	Fusion Middlew	vare Configuration Wiza	rd - Page 1 of 8		_ ×
Configuration Type					
Create Domain Templates. Administrator Account Domain Mode and JDK Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	What do you want © <u>C</u> reate a new o <u>Update an exis</u> Domain Location: Create a new dom	domain tting domain dleware12.2.1.2/Oracle_Ho	me/user_projects/domains	/int_domain	Browse
Help			< Back Next >	Einish	Cancel

2. Select Create a new domain, provide domain location, and click Next. The Templates window appears. By default, the Basic WebLogic Server Domain - 12.2.1.4.0 [wlserver] checkbox is selected.

Select the Oracle JRF - 12.2.1.4.0.0 [oracle_common], Oracle Enterprise Manager [em], and Oracle WSM Policy Manager - 12.2.1.4.0 [oracle_common] check boxes.

Fusio	on Middleware Configuration Wizard - Pag	ge 2 of 12	00
Templates			
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDEC Test Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	Create Domain Using Broduct Templates: Filter Templates: Type here Include all gelected templates Available Templates Sasic WebLogic Server Domain - 12.2.1.3.0 [wiserver Oracle Enterprise Manager - 12.2.1.3.0 [wiserver Oracle Enterprise Manager-Restricted JRF - 12.2.1.3.0 [ohs] Oracle HTTP Server (Collocated) - 12.2.1.3.0 [ohs] Oracle HTTP Server (Collocated) - 12.2.1.3.0 [ohs] Oracle JRF SOAP/JMS Web Services - 12.2.1.3.0 [oracle Oracle JRF SOAP/JMS Web Services - 12.2.1.3.0 [oracle Oracle JRF SOAP/JMS Web Services - 12.2.1.3.0 [oracle_comm Oracle JRF SOAP/JMS Web Services - 12.2.1.3.0 [oracle_comm Oracle JRF - 12.2.1.3.0 [oracle_common] Oracle RAS Session Service - 12.2.1.3.0 [oracle_common] Oracle RAS Session Service JRF - 12.2.1.3.0 [oracle_common] Ora	.0 (em) ;] acle_common] ;e_common] k= ion]	
Help	<[1	ick Next > Einist	Cancel

3. Click Next. The Administrator Account window appears. Enter the user credentials you want to use to log in to the WebLogic Administration Console.

Fusion Middleware Configuration Wizard - Page 4 of 12						
Administrator Account						
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDBC Test Advanced Configuration Configuration Summary Configuration Progress End Of Configuration		weblogic	nust contain at least 8	alphanumeric cl	haracters with	
Help			< <u>B</u> ack <u>N</u> ext >	Einish	Cancel	

4. Click Next. The Domain Mode and JDK window appears. Set the Domain Mode as Production and select the JDK version (JDK 1.8 with the latest security updates) you want to use.

I	usion Middleware Configuration Wizard - Page 5 of	12	_ ×
Domain Mode and JDK			
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources JDBC Test Advanced Configuration Configuration Summary Configuration Progress End Of Configuration	Domain Mode Development Utilize boot properties for username and password, an Production Require the entry of a username and password, and de JDK Oracle HotSpot 1.8.0_121 / /, Other JDK Location:		
Help	< Back	Next > Einish	Cancel

- 5. Click Next. The Database Configuration Type window displays.
 - **a.** Select the RCU Data radio button.
 - **b.** Select Oracle as the Vendor.

- **c.** Select Oracle's Driver (Thin) for Service connections; Version 9.0.1 and later as the Driver.
- **d.** Enter the Service, Host Name, Port, Schema Owner, and Schema Password for the *_STB schema created using RCU.
- e. Click Get RCU Configuration.

The Connection Result Log displays the connection status.

	Fusion Middleware Configura	tion Wizard -	Page 6 of 12	(
Database Configuration	Туре			
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration T	Specify AutoConfiguration Options BCU Data Manual Configuration det Enter the database connection det schema credentials. The Wizard u required for components in this det	guration tails using the Re ses this connectio		
Component Datasources <u>IDBC Test</u> Advanced Configuration <u>Configuration Summary</u> Configuration Progress End Of Configuration	Vendor: Oracle DBMS/Service: June Schema Owner: INT_STB Get RCU Configuration Connection Result Log	Driver: #Or Host Name: Schema Pas <u>Cancel</u>		e connections; •
	Connecting to the database server Retrieving schema data from datab Binding local schema components Successfully Done.	ase serverOK	:aOK	
Help		<	Back Next > Fin	ish Cancel

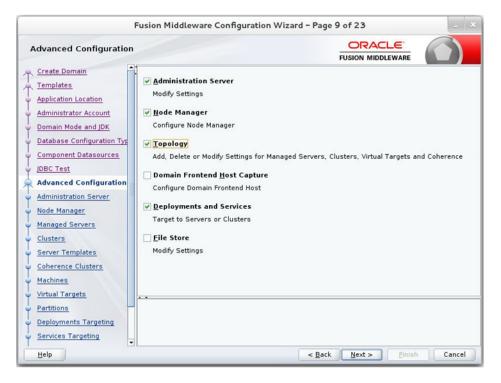
6. Click Next. The JDBC Component Schema window appears.

DBC Component Scheme	a						
Create Domain	Ve	ndor:	T D	river:			
Application Location	DB	MS/Service:	Н	lost Name:		Port:	
Administrator Account	Sc	hema Owner:	S	ichema Password:			
Domain Mode and JDK	Or	acle RAC configuration	for component	schemas:			
Database Configuration Type				nvert to RAC multi	data cour	ce O Don't	convert
Component Datasources		O convert to Gri	Idunk O'cor	iven to rac mulu	data sour	Ce O Don't	convert
JDBC Test	Ed	its to the data above w	ill affect all che	cked rows in the ta	able belov	ı.	
Advanced Configuration		Component Schema	DBMS/Service	Host Name	Port	Schema Ow	Schema Pas
		LocalSvcTbl Schema		E'	1521	INT_STB	
Configuration Summary		OWSM MDS Schema	6	·	1521	INT_MDS	
Configuration Progress		OPSS Audit Schema		1	1521	INT_IAU_APPE	
End Of Configuration		OPSS Audit Viewer So	£	11 00 11-1	1521	INT_IAU_VIEWI	
		OPSS Schema			1521	INT_OPSS	

7. Click Next. The JDBC Component Schema Test window displays the status on whether the JDBC tests on the schemas were successful.

JDBC Component Schema Test							(\bigcirc)
Create Domain		Status	Component Schema	JDBC	Connection URL	2	
Templates		1	LocalSvcTbl Schema	jdbc:oracle:thin:@//		···./	
Application Location	-	1	OWSM MDS Schema	jdbc:oracle:thin:@//	' i c 1'	· ^1/.	
	-	1	OPSS Audit Schema	jdbc:oracle:thin:@//	1	L/	
Administrator Account	-	1	OPSS Audit Viewer !	jdbc:oracle:thin:@//		1,	
Domain Mode and JDK	 Image: A second s	1	OPSS Schema	jdbc:oracle:thin:@//l	·:1.	1/	
End Of Configuration	Com Drive URL	ponent er=ora		I Schema			
	Pass						
	Pass		SELECT 1 FROM DUAL				
	Pass SQL CFG	Test=S		test was surcessful			

8. Click Next. The Advanced Configuration window displays. Select all the checkboxes, except Domain Frontend Host Capture and JMS File Store options, in this window.



9. Click Next. The Administration Server window appears. Enter the Listen Address and the Listen Port details.

	Fusion Middlev	vare Config	uration Wiza	rd - Page 10 of	23	_ ×
Administration Server						
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Type Component Datasources IDBC Test Advanced Configuration Administration Server Managed Servers Clusters Server Templates Coherence Clusters Machines Virtual Targets Partitions Deployments Targeting Services Targeting	Server Name Listen Address Listen Port Enable SSL SSL Listen Port Server Groups	7001	resses	r not contain any : , .	= * ? % / _cloned.	
Help				< <u>B</u> ack N	ext >	Cancel

10. Click Next. The Node Manager window appears. Select the Node Manager Type and enter the Node Manager Credentials.

Fu	ision Middleware Con	figuration Wizar	d – Page 11 of 23	_ ×
Node Manager				
<u>Deployments Targeting</u> <u>Services Targeting</u>	Manual Node Manager Node Manager Credent Username: Password: Confirm Password:	ocation	ects/domains/int_domain/node	anumeric characters with
Help			< <u>B</u> ack <u>N</u> ext >	Einish Cancel

- **11.** Click Next. The Managed Servers window appears.
 - **a.** Click Add to add a managed server on which you will deploy the application.
 - **b.** Enter the Server Name, Listen Address, and Listen Port for the managed server.
 - c. Set the Server Groups to JRF-MAN-SVR.

Managed Servers			i			
<u>Create Domain</u> Templates	- 📥 付 🗈 C	lone X Delete			🔊 Dis <u>c</u> a	rd Changes
Application Location Administrator Account	Server Name	Listen Address	Listen Port	Enable SSL	SSL Listen Port	Server Groups
Domain Mode and JDK Database Configuration Tyr Component Datasources JDBC Test Advanced Configuration	int-app-server	All Local Address	7003		Disabled	Unspecified
Administration Server Node Manager Managed Servers Clusters Server Templates						

12. Click Next. The Clusters window appears.

a. Click Add to add a cluster. This is an optional step in the procedure.

Clusters						
Create Domain Templates		Delete			🔊 Dis	<u>c</u> ard Changes
Application Location Administrator Account	Cluster Name	Cluster Address	Frontend Host	Frontend HTTP Port	Frontend HTTPS Port	Dynamic Server Group
Domain Mode and JDK Database Configuration Typ						
Component Datasources						
Advanced Configuration						
Administration Server						
Node Manager						
Managed Servers Clusters						
Server Templates						
Coherence Clusters						
Machines						
Virtual Targets Partitions	• •					
Deployments Targeting						

13. Click Next. The Coherence Clusters window appears.

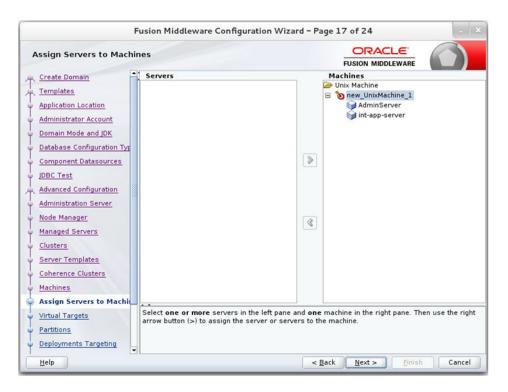
a. Add a coherence cluster. This is an optional step in the procedure.

	Fusion Middleware Configuration W	izard - Page 15 of 23	_ ×
Coherence Clusters			
Templates	:	🔊 Di	s <u>c</u> ard Changes
Application Location	Cluster Name	Cluster Listen P	ort
Administrator Account	defaultCoherenceCluster	7574	
Domain Mode and JDK			
Database Configuration Typ			
Component Datasources			
UDBC Test			
Advanced Configuration			
Administration Server			
🖕 <u>Node Manager</u>			
Managed Servers			
Clusters			
Server Templates			
Coherence Clusters			
Machines			
Virtual Targets			
Partitions			
Deployments Targeting			
<u>Services Targeting</u>			
Help		< <u>Back N</u> ext > Einish	Cancel

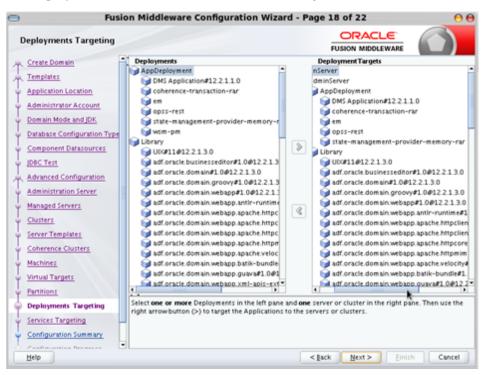
- 14. Click Next. The Machine window appears.
 - a. Click Add.
 - **b.** Enter the Name and the Node Manager Listen Address for the managed server.

Machines							
Create Domain Templates Application Location	Machine Unix Ma	ochine Delete				🔊 Disg	ard Changes
Administrator Account	Name	Enable	Post Bind GID	Enable	Post Bind UID	Node Manager Listen Address	Node Manager
Database Configuration Typ	new_UnixMachine_1		nobody		nobody	localhost	▼ 555
JDBC Test Advanced Configuration Administration Server Node Manager							
Advanced Configuration							

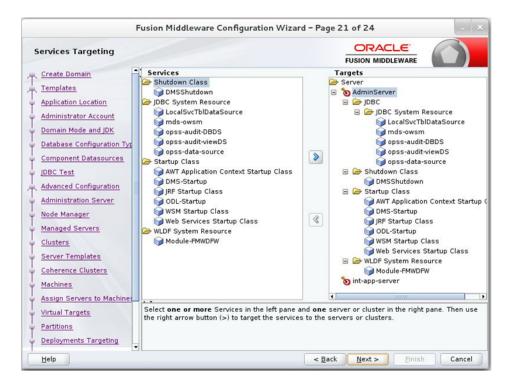
15. Click Next. The Assign Servers to Machines window appears. Add the Admin Server and the managed server to the computer.



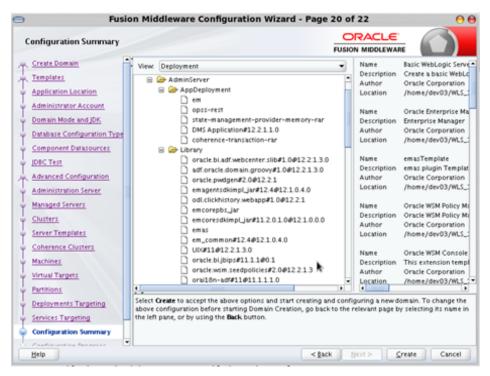
16. Click Next. The Deployments Targeting window appears. Select wsm-pm from Deployments and add it to Admin Server in Targets.



17. Click Next. The Services Targeting window appears.



18. Click Next. The Configuration Summary window appears. Verify that all information described in this window is accurate.



19. Click Create. The Configuration Progress window displays a message when the domain is created successfully.

Fusi	on Middleware Configuration Wizard - Page 23 of 24	_ ×
Configuration Progress		
Create Domain Templates Application Location Administrator Account Domain Mode and JDK Database Configuration Tyr Component Datasources JDBC Test Advanced Configuration Administration Server Node Manager Managed Servers Clusters	Fusion Midbleware 100% Copy Unprocessed Artifacts OPSS Processing OWSM Processing Security Processing Artifacts Generation String Substitution Post Processing	
Server Templates Coherence Clusters Machines Assign Servers to Machiner Virtual Targets Partitions Deployments Targeting		
Help	< <u>Back</u> <u>Next</u> > <u>Finish</u>	Cancel

20. Click Next. The Configuration Success window displays the Domain Location and Admin Server URL once the configuration is complete.

F	Fusion Middleware Configuration Wizard - Page 24 of 24	_ ×
End Of Configuration	ORA	
Lind of comigatation	FUSION MIL	
Create Domain	✓ Oracle Weblogic Server Configuration Succeeded	
4 Templates	New Domain int_domain Creation Succeeded	
Application Location	Domain Location	Home/user projects/domains
Administrator Account	Admin Server URL http://	
Domain Mode and JDK	http:// /console	
Database Configuration Typ		
Component Datasources		
JDBC Test		
Advanced Configuration		
Administration Server		
V Node Manager		
Managed Servers		
Clusters		
Server Templates		
Coherence Clusters		
4 Machines		
Assign Servers to Machine		
Virtual Targets		
Partitions		
Deployments Targeting		
	A Seck Next >	Einish Cancel

- **21.** Click Finish to complete creating the WebLogic domain and managed servers.
- **22.** Add the following security policy to \$ORACLE_ HOME/wlserver/server/lib/weblogic.policy file.

```
grant codeBase "file:/<DOMAIN_HOME>/-" {
    permission java.security.AllPermission;
```

```
permission oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore", "read,write,update,delete";
permission oracle.security.jps.service.credstore.CredentialAccessPermission
"credstoressp.credstore.*", "read,write,update,delete";
};
```

- **23.** Start the Weblogic Admin and Manage Server.
- **24.** Set JTA timeout to 43200.
 - **a.** Log in to Admin console
 - **b.** Click on the domain name
 - c. Select the JTA tab and change the timeout value to 43200.

Deploying BDI Batch Job Administration Applications

Before starting the installation procedure, identify the retail applications that are in-scope for this installation. BDI requires at least 2 applications in-scope, a sender app and a receiver app. Each bdi-app must be deployed on its own WebLogic managed server. Depending on the site specific deployment topology, create separate WebLogic domains OR managed servers to host the BDI apps in-scope.

Note: Repeat the procedures in this chapter for installing other applications that are in-scope.

Deploying BDI Batch Job Admin Applications for a Sender Application

This section describes the installation process for a sender app with the BDI-RMS app as an example.

Preparing the Database for BDI Batch Job Admin for RMS Installation

Before you begin installing BDI RMS Batch Job Admin, make sure you have the database schema created for BDI RMS Batch Job Admin.

If you are migrating from previous version of BDI RMS Batch Job Admin to a newer version, Follow upgrade instructions for bdi.

Before following upgrade instructions for bdi, you need to provide permissions for database schema. Run the below commands on admin schema where database schema is created, to provide permissions.

Commands:

```
CREATE TABLE TO 'user schema';
CREATE SEQUENCE TO 'user schema';
CREATE INDEX TO 'user schema';
Ex: User schema name is bdi_rms_app. Run below commands on admin schema.
```

```
CREATE TABLE TO 'bdi_rms_app';
CREATE SEQUENCE TO 'bdi_rms_app';
```

```
CREATE INDEX TO 'bdi_rms_app';
```

Note: Database schema auto migration feature should be used from >=16.0.028 version.

Preparing the WebLogic Domain for BDI Batch Job Admin for RMS

- 1. Use the instructions provided in Chapter 3, "BDI Batch Job Admin" to install WebLogic 12.2.1.4.0 and create a domain.
- 2. Start the Admin and managed servers.

Deploying BDI RMS Batch Job Admin on the WebLogic

To deploy the BDI RMS Batch Job Admin war, take the following steps.

- 1. Download BdiEdgeJobAdminPak22.0.000ForRms22.0.000_eng_ga.zip to \$BDI_ HOME.
- **2.** Unzip the downloaded archive. The Bdi Job home directory will be created under the current directory.

```
unzip BdiEdgeJobAdminPak22.0.000ForRms22.0.000_eng_ga.zip
```

This command extracts the archive. The relevant directories for the installation are shown (There are more directories than what is shown).

```
|- - - - - - bin
                     - - - - - bdi-job-admin-deployer.sh
  - - - - - - conf
                    ` - - - - - - security
                         `- - - - - - - jazn-data.xml
           `- - - - - - - jps-config.xml
           ` - - - - - bdi-job-admin-deployment-env-info.json
                    ` - - - - - -
bdi-job-admin-deployment-env-info.json.template
                    ` - - - - - bdi-job-admin-internal-trust-store.jks
                    `----log4j2.xml
 - - - - - - - dist
                    ` - - - - - bdi-batch-job-admin.war
                    ` - - - - - - rms-jars
                    ` - - - - - - README.txt
 - - - - - - - scripts
                     - - - - - DBSchemaMigration.groovy
                     - - - - - JobAdminDeployer.groovy
                     - - - - - - README.txt
                    ` - - - - - WebLogicManager.groovy
  - - - - - - setup-data
                    ` - - - - - - dml
                         `- - - - - - - url_seed_data_1.sql
                         `- - - - - - - bdi_rms_seed_data.sql
                          `- - - - - - BDI_SET_BATCHSTATUS_TO_ABANDON.sql
                          `- - - - - - - README.txt
                          `- - - - - - rms_group_seed_data.sql
                     - - - - - available-jobs-for-external-app-integration
                     - - - - - - batch-scripts
                         `- - - - - - - bdi_sftp_push.sh
                    ` - - - - - - ddl
                         `- - - - - - - migration
                                                   `- - - - - - - BDI
CLEANUP_JOB_SQL.sql
                                                  `- - - - - - - BDI
Database_Util_Spec_Permission.sql
                                                  `- - - - - - BDI_
Database Util Spec.sql
                                                  `- - - - - - - - create_
wl_llr_table.sql
```

<pre>migrate-edge-batch-schema-from-16.0.025-to-16.0.027.sq1 </pre>	\\	
<pre> </pre>	migrate-edge-batch-schema-from-16.0.025-to-16.0.027.sgl	
<pre> </pre>		
<pre> </pre>	migrate-edge-batch-schema-from-16.0.028-to-16.0.030.sgl	
<pre> ' '</pre>		
<pre> ' '</pre>	migrate-edge-bdi-infra-schema-from-16.0.025-to-16.0.027.sgl	
<pre> </pre>		
<pre> </pre>	u migrate-edge-bdi-infra-schema-from-16.0.028-to-16.0.030.sgl	
<pre> </pre>		
<pre> </pre>	$ $ $ $ $ $ $migrate_schema_from_{16} = 0.021_{to_{-}16} = 0.023_{sg}$	
<pre> </pre>		
<pre> </pre>	$ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $	
<pre> `</pre>		
<pre> `</pre>	$ $ $$	
<pre> ` migrate-schema-from-16.0.028-to-16.0.030.sql ` migrate-schema-from-16.0.030-to-16.0.031.sql ` migrate-schema-from-16.0.031-to-19.0.000.sql ` migrate-schema-from-19.0.000-to-19.1.000.sql `</pre>		
<pre> ` migrate-schema-from-16.0.028-to-16.0.030.sql ` migrate-schema-from-16.0.030-to-16.0.031.sql ` migrate-schema-from-16.0.031-to-19.0.000.sql ` migrate-schema-from-19.0.000-to-19.1.000.sql `</pre>		
<pre> ` migrate-schema-from-16.0.030-to-16.0.031.sql ` migrate-schema-from-16.0.031-to-19.0.000.sql ` migrate-schema-from-19.0.000-to-19.1.000.sql `</pre>	migrate-schema-irom-i0.0.027-co-i0.0.020.sqi	
<pre> ` migrate-schema-from-16.0.030-to-16.0.031.sql ` migrate-schema-from-16.0.031-to-19.0.000.sql ` migrate-schema-from-19.0.000-to-19.1.000.sql `</pre>		
<pre> ` migrate-schema-from-16.0.031-to-19.0.000.sql ` migrate-schema-from-19.0.000-to-19.1.000.sql `</pre>	migrate-schema-irom-i0.0.020-co-i0.0.050.sqi	
<pre> ` migrate-schema-from-16.0.031-to-19.0.000.sql ` migrate-schema-from-19.0.000-to-19.1.000.sql `</pre>		
<pre> ` migrate-schema-from-19.0.000-to-19.1.000.sql ` purge batch_db_repo.sql ` purge job_int_repo.sql ` purge job_rcvr_repo.sql ` README.txt ` META-INF ` batch-jobs</pre>	migrate-schema-irom-i6.0.050-co-i6.0.051.sqi	
<pre> ` migrate-schema-from-19.0.000-to-19.1.000.sql ` purge batch_db_repo.sql ` purge job_int_repo.sql ` purge job_rcvr_repo.sql ` README.txt ` META-INF ` batch-jobs</pre>		
<pre> `purge `purge `purge `purge `purge `purge_ job_int_repo.sql `</pre>	migrate-schema-irom-16.0.031-to-19.0.000.sql	
<pre> `purge `purge `purge `purge `purge `purge_ job_int_repo.sql `</pre>		
<pre></pre>		
batch_db_repo.sql ` purge_ job_int_repo.sql ` README.txt ` README.txt ` batch-jobs		
<pre> `purge_ job_int_repo.sql ` purge_ job_rcvr_repo.sql ` README.txt ` META-INF ` batch-jobs</pre>		<u>_</u>
job_int_repo.sql `purge_ job_rcvr_repo.sql ` README.txt ` META-INF ` batch-jobs		
`purge_ job_rcvr_repo.sql ` README.txt ` META-INF ` batch-jobs	· · · · · ·	<u>،</u>
job_rcvr_repo.sql ` README.txt ` META-INF ` batch-jobs	job_int_repo.sql	
`README.txt `META-INF `batch-jobs		<u>.</u>
META-INF batch-jobs		
batch-jobs		
-		
target		
`rms-batch-job-admin.war		
README.txt		
1ib	1ib	

Note: To Integrate BDI-RMS with an external application, additional steps are required. Refer to Appendix A, "Appendix: Integrating BDI-RMS with External Applications" for additional information.

3. Edit the rms job configuration file to point to deployment environment (conf/bdi-job-admin-deployment-env-info.json) as follows:

To deploy without OAuth, we need to rename or remove the OAuth2 aliases for example:- jobAdminUiOAuth2ApplicationClientAliasRef from bdi-job-admin-deployment-env-info.json, and then deploy. No other extra steps needed for deployment.

```
cd bdi-edge-rms-job-home/conf
vi bdi-job-admin-deployment-env-info.json
```

Note: BDI does not mandate the use of OAuth2 or IDCS as authorization server. This version of the BDI is backward compatible with basicAuth. New customers can use basicAuth by following the below steps. Existing customers can use upgrade instructions and proceed to use basicAuth as the authentication mechanism.

See How to Install BDI without IDCS.

4. Provide the following values in the JSON file.

Configuration Property	Description	
RmsJobAdminDataSource -> jdbcUrl	The JDBC URL for the Oracle database where the RMS integration schema resides.	
RmsReceiverServiceDataSource -> jdbcUrl	The JDBC URL for the Oracle database where the RMS Receiver integration schema resides. BdiRmsJobAdminDataSource and BdiRmsReceiverServiceDataSource can use the same jdbcUrl.	
BatchInfraDataSource -> jdbcUrl	The JDBC URL for the schema created using RCU. The schema user is <prefix>_wls (e.g. INT_WLS). The value of prefix that you provided in schema creation using RCU.</prefix>	
JobXmlDataSource -> jdbcUrl	The JDBC URL for the Oracle database where the all job xmls gets created in rms schema.	
JobAdminAppServer -> weblogicDomainName	The domain name where BDI RMS Admin app is deployed.	
JobAdminAppServer->weblogicD omainHome	The domain path where BDIRMS Admin app is deployed	
JobAdminAppServer -> weblogicDomainAdminServerUrl	Admin Server URL of the BDI RMS Admin App - http:// <admin host="">:<admin port=""></admin></admin>	
JobAdminAppServer->weblogicD omainAdminServerProtocol	Admin Server protocol, which is by default t3, For SSL deployment update to t3s.	
JobAdminAppServer -> weblogicDomainAdminServerHo st	Host Name of the BDI RMS Admin Server	
JobAdminAppServer -> weblogicDomainAdminServerPor t	BDI RMS Admin Server Port	
JobAdminAppServer -> weblogicDomainTargetManagedS erverName	Managed Server Name where BDI RMS Admin App is installed (e.g. bdi-rms-server)	
JobAdminAppServer ->	Job Admin URL of BDI RMS	
jobAdminUiUrl	http:// <host>:<managed server<br="">port>/bdi-rms-batch-job-admin</managed></host>	
dataSourceProperties	DataSource configurations contributes to the performance	
	of the applications at the runtime.	
	Ex: "connectionPool_MaxCapacity":"100"	
	"general_RowPreferfetchSize":"100"	
RpasJobAdminAppServer -> jobAdminUiUrl	Job Admin URL of BDI RPAS	
	http:// <host>:<rpas managed="" server<br="">port>/rpas-batch-job-admin</rpas></host>	

Configuration Property	Description
SimJobAdminAppServer ->	Job Admin URL of BDI SIM
jobAdminUiUrl	http:// <host>:<sim managed="" server<br="">port>/sim-batch-job-admin</sim></host>
RfiJobAdminAppServer->	Job Admin URL of BDI RFI
jobAdminUiUrl	http:// <host>:<sim managed="" server<br="">port>/bdi-rfi-batch-job-admin</sim></host>
OcdsJobAdminAppServer ->	Job Admin URL of BDI RFI
jobAdminUiUrl	http:// <host>:<ocds managed="" server<br="">port>/ocds-batch-job-admin</ocds></host>
ExternalJobAdminAppServer ->	Job Admin URL of BDI RFI
jobAdminUiUrl	http:// <host>:<external managed="" server<br="">port>/external-batch-job-admin</external></host>
oauth2AuthorizationServerUrl	Provide the IDCS url
	For example - https://idcs-4ff493196128425c80ce4ecbfc8352e5.identity.c 9dev1.oc9qadev.com/oauth2/v1/token
jobAdminUiOAuth2ApplicationC	ICDS Client secret ID and password
lientAliasRef	"name":"simJobAdminBaseUrlOAuth2ApplicationClientA lias", "value": "*simOauth2ApplicationClientAlias"
jobAdminUiOAuth2ApplicationC lientAliasRef	"name":"rfiJobAdminBaseUrlOAuth2ApplicationClientAli as", "value": "*ricsOauth2ApplicationClientAlias"
jobAdminUiOAuth2ApplicationC lientAliasRef	"name":"rpasJobAdminBaseUrlOAuth2ApplicationClient Alias", "value": "*rpasOauth2ApplicationClientAlias"
jobAdminUiOAuth2ApplicationC	ICDS Client secret ID and password
lientAliasRef	"name":"ocdsJobAdminBaseUrlOAuth2ApplicationClient Alias", "value": "*ricsOauth2ApplicationClientAlias"
SystemOptions	Optional. Allows to provide system options as name value pairs

Note: The alias names in the configuration files should not be changed.

Below are the changes for bdi-job-admin-deployment-env-info.json.

Below json snippet is to support OAuth2 with IDCS for Job Admin.

```
"CentralAuthenticationSystem":{
   "IdcsAuthenticationProvider":{
   "oauth2AuthorizationServerUrl":"https://idcs-4ff493196128425c80ce4ecbfc8352
e5.identity.c9dev1.oc9qadev.com/oauth2/v1/token",
   "oauth2Application":[
   {
        "oauth2ApplicationName" : "RICS",
        "oauth2ApplicationScopeOfAccess" :
        {"name":"oauth2.default.scopeOfAccess.*", "val-ue":"urn:opc:idm:__myscopes_
__"},
   "oauth2ApplicationClientAlias" : "ricsOauth2ApplicationClientAlias",
   "oauth2ApplicationClientId" : "GET_FROM_WALLET",
   "oauth2ApplicationClientSecret" : "GET_FROM_WALLET"
},
```

```
{
"oauth2ApplicationName" : "MFCS",
"oauth2ApplicationScopeOfAccess" :
{"name":"oauth2.default.scopeOfAccess.*", "val-ue":"urn:opc:idm:__myscopes_
_"},
"oauth2ApplicationClientAlias" : "mfcsOauth2ApplicationClientAlias",
"oauth2ApplicationClientId" : "GET_FROM_WALLET",
"oauth2ApplicationClientSecret" : "GET_FROM_WALLET"
},
{
"oauth2ApplicationName" : "RPAS",
"oauth2ApplicationScopeOfAccess" :
{"name":"oauth2.default.scopeOfAccess.*", "val-ue":"urn:opc:idm:__myscopes_
"},
"oauth2ApplicationClientAlias" : "rpasOauth2ApplicationClientAlias",
"oauth2ApplicationClientId" : "GET_FROM_WALLET",
"oauth2ApplicationClientSecret" : "GET_FROM_WALLET"
}
1
},
"OamAuthenticationProvider":{
}
```

Optional – Users can configure system options in the deployment env info json file. Users have to add the system options as part of the configuration in the json file with name value pairs. After the application starts, the system option tables should have system options provided in the json filea=b and c=d values in the system options table. After deploying Jjob Admin, verify that values are getting added to the system option table properly.

Example:

Job Admin JSON Snippet:

```
"JobAdminApplication":{
            "appName":"rms",
            "JobAdminAppUses":[
                "JobAdminDataSource",
                "JobAdminAppServer",
                {
                    "RemoteJobAdminAppServers":[
                       "SimJobAdminAppServer",
                       "RfiJobAdminAppServer",
                       "RpasJobAdminAppServer",
                       "OcdsJobAdminAppServer",
                       "ExternalJobAdminAppServer"
                    1
               }
            1,
             "SystemOptions":[
                {"name": "MFP_outboundLocation",
"value":"/replace/with/outbound/location/for/mfp"},
                {"name":"RDF outboundLocation",
"value":"/replace/with/outbound/location/for/rdf"},
                {"name":"AP_outboundLocation",
"value":"/replace/with/outbound/location/for/ap"},
                {"name":"IP_outboundLocation",
"value":"/replace/with/outbound/location/for/ip"},
                {"name":"shellCmdWorkingDir",
"value":"/replace/with/path/to/working/dir/for/shellCmds"},
                {"name":"shellCmdLocationDir",
```

```
"value":"/replace/with/path/where/shell_programs/are/present"},
                {"name":"downloadFileLocation",
"value":"/replace/with/path/where/to/download_
files/before/files/move/to/finalOutboundLocation"},
                {"name":"overwriteOutboundFilesFlag", "value":"replace_with_
TRUE or FALSE" },
                {"name":"autoPurgeOutboundData.global", "value":"TRUE"},
                {"name":"autoPurgeOutboundDataDelay.global", "value":"30"},
                {"name":"MFP_sftpHost", "value":"replace_with_sftp_host_for_
mfp"},
                {"name":"RDF_sftpHost", "value":"replace_with_sftp_host_for_
rdf"},
                {"name":"AP_sftpHost", "value":"replace_with_sftp_host_for_
ap"},
                {"name":"IP_sftpHost", "value":"replace_with_sftp_host_for_
ip"},
                {"name":"MFP_sftpPort", "value":"replace_with_sftp_port_for_
mfp"},
                {"name":"RDF_sftpPort", "value":"replace_with_sftp_port_for_
rdf"},
                {"name":"AP_sftpPort", "value":"replace_with_sftp_port_for_
ap"},
                {"name":"IP_sftpPort", "value":"replace_with_sftp_port_for_
ip"},
                {"name":"MFP_sftpUser", "value":"replace_with_sftp_user_for_
mfp"},
                {"name":"RDF_sftpUser", "value":"replace_with_sftp_user_for_
rdf"},
                {"name":"AP_sftpUser", "value":"replace_with_sftp_user_for_
ap"},
                {"name":"IP_sftpUser", "value":"replace_with_sftp_user_for_
ip"},
                {"name":"MFP_destinationLocation",
"value":"/replace/with/ftp/location/for/mfp"},
                {"name":"RDF_destinationLocation",
"value":"/replace/with/ftp/location/for/rdf"},
                {"name":"AP_destinationLocation",
"value":"/replace/with/ftp/location/for/ap"},
                {"name":"IP_destinationLocation",
"value":"/replace/with/ftp/location/for/ip"},
                {"name":"ftpFilesFlag", "value":"replace_with_TRUE_or_FALSE"}
            1
        3
```

 Run the deployer script to create the data sources and deploy BDI RMS Batch Job Admin. While deploying, the user needs to provide the IDCS client secret ID & password for ricsOauth2ApplicationClientAlias, mfcsOauth2ApplicationClientAlias, rpasOauth2ApplicationClientAlias

cd bdi-edge-rms-job-home/bin bdi-job-admin-deployer.sh -setup-credentials -deploy-job-admin-app

bash-4.25 sh bdi-job-admin-deploye log4j:WARN No appenders could be f log4j:WARN Please initialize the 1	found for logger (com.oracle.retail.integration.common.security.credential.CredentialStoreManager).
USAGE: JobAdminDeployer SECURITY_C	DPTION TASK_ACTION DESCHEMA_MIGRATION
: Job&dminDeployer {-setup-cr	redentials -use-existing-credentials} {-deploy-job-admin-app -prepare-job-admin-app} -run-db-schema-migration
SECURITY_OPTION	: One of the following SECURITY options must be used.
-setup-credentials	: Setup AppServer and D8 user/password and save to wallet. : Edit the bdi-job-admin-deployment-env-info.json config file before setting up credentials.
-use-existing-credentials	: Use previously setup AppGerver and D8 user/passwords from wallet.
TASK_ACTION	: The following TASK_ACTION option must be used.
-deploy-job-admin-app :	: Configures WebLogic Server and deploy the job-admin application.
-prepare-job-admin-app	: Configures job-admin application for installation, to be used only with -setup-credentials option.
uired step while deploying the app	This option is used to setup the credentials in the installer without deploying the application. This is not a req plication.
DBSCHEMA_MIGRATION	: Below option should be used for auto migration
-run-db-schema-migration	: automates migration from one version to another version

6. Enter the values prompted by the script for following credentials aliases. JobAdmin user has more privileges (e.g change configuration and run jobs from JobAdmin UI) than JobOperator user. JobOperator can run batch jobs where as JobMonitor has just read privileges.

Alias	Description
	-
bdiAppServerAdminServerUserAlias	WebLogic admin server credentials
rmsJobAdminUiUserAlias	Credentials for Admin Role user for Job Admin app
rmsJobOperatorUiUserAlias	Credentials for Operator Role user for Job Admin app
rmsJobMonitorUiUserAlias	Credentials for Monitor Role user for Job Admin app
rmsJobAdminDataSourceUserAlias	Credentials for the Data Source of the Job Admin Schema
rmsReceiverServiceDataSourceUserAlias	Credentials for the Data Source of the Job Receiver Schema
batchInfraDataSourceUserAlias	Credentials for the Data Source of the Batch Infra Schema
jobXmlDataSourceUserAlias	Credentials for the Data Source of the Job Xml Schema
rpasJobAdminBaseUrlUserAlias	BDI RPAS job admin app credentials
simJobAdminBaseUrlUserAlias	BDI SIM job admin app credentials
externalJobAdminBaseUrlUserAlias	BDI EXTERNAL job admin app credentials
rfiJobAdminBaseUrlUserAlias	BDI RFI job admin app credentials
ocdsJobAdminBaseUrlUserAlias	BDI OCDS job admin app credentials
jobAdminUiOAuth2ApplicationClientAlia	ICDS Client secret ID and password
sRef	"name":"simJobAdminBaseUrlOAuth2App licationClientAlias", "value": "*simOauth2ApplicationClientAlias"
jobAdminUiOAuth2ApplicationClientAlia sRef	"name":"rfiJobAdminBaseUrlOAuth2Appli cationClientAlias", "value": "*ricsOauth2ApplicationClientAlias"
jobAdminUiOAuth2ApplicationClientAlia sRef	"name":"rpasJobAdminBaseUrlOAuth2Ap plicationClientAlias", "value": "*rpasOauth2ApplicationClientAlias"

Alias	Description
jobAdminUiOAuth2ApplicationClientAlia sRef	ICDS Client secret ID and password "name":"ocdsJobAdminBaseUrlOAuth2Ap plicationClientAlias", "value": "*ricsOauth2ApplicationClientAlias"

Note: If you have already configured the credentials and can use the same credentials (typically when redeploying the app), you can run the deployer with the -use-existing-credentials option as follows, and you will not be prompted for the credentials again for the deployment.

bdi-job-admin-deployer.sh -use-existing-credentials -deploy-job-admin-app

- 7. Deployer script deploys BDI RMS Batch Job Admin to the managed server.
- 8. Restrict access to the bdi-edge-rms-job-home folder:

cd bdi-edge-rms-job-home chmod -R 700 .

9. Bounce the Edge managed server.

Testing the Deployment

After you deploy to the server successfully, BDI RMS Batch Job Admin can be accessed using the following URL:

http://<server>:<port>/rms-batch-job-admin

Log in using credentials provided during the installation and verify that jobs are displayed in the Manage Batch Jobs tab and configuration is displayed in the Manage Configurations tab.

Summary Manage Ba	nch Jobs Trace Data 0	Diagnostics Manage	e Configurations Bystem Logs				
Batch Application RMS-BATCH	System Health	Total Jobs 218	Total Executions 173	Total Suc	cessful Execution 100		43
	Job Name		Family	instance id	Execution Id	Enter job name to search	Status
Ud	Job Name allemLov_Fnd_DitractorJob		Family Udateni.ov	Instance Id 12205	Execution Id 12585		
						Start Time	Status
	altemLov_Fnd_Extractor.tob		Udatemi, ov	12285	12585	Start Time	Status COMPLETED FALED
Berni	altenLov_Fnd_Ditractor.iob		Udatemi, ov Benildr	12285 12284	12585 12584	Start Time	Status COMPLETED FALED
teni teni	allemLov_Fnd_Extractor.lob emildr_Fnd_Extractor.lob etr_Fnd_Extractor.Ceanup.lob		UdatemLov BenHdr BenHdr	12285 12284 12283	12585 12584 12583	Start Time Tue Oct 23 03 27 35 PDT 2018	Status COMPLETED FALED FALED FALED
l Beni Beni	altenLov_Fnd_Ddractor.tob emildr_Fnd_Ddractor.tob emildr_Fnd_Extractor.Ceanup.tob emildr_Fnd_Extractor.tob	8300	UdatemLov BenHdr BenHdr BenHdr	12285 12284 12283 12282	12585 12584 12583 12582	Start Time Twe Oct 23 03 27 35 PDT 2016	Status COMPLETED FALED FALED FALED COMPLETED
Benr I Benr TranDuta_Ts	alenLov_Fnd_Ditractor.tob emildr_Fnd_Ditractor.tob errifdr_Fnd_Ditractor.toanup.tob emildr_Fnd_Ditractor.toanup.tob errifdr_Fnd_Ditractor.toanup.tob		UdatemiLov BeniHor BeniHor BeniHor BeniHor	12285 12284 12283 12282 12281	12585 12584 12583 12582 12581	Start Time Twe Oct 23 03 27 35 PDT 2016	Status COMPLETED FALED COMPLETED

Creating Outbound Interface tables for BDI RMS

- 1. Go to the \$BDI_HOME/bdi-edge-rms-job-home/setup-data/ddl folder.
- **2.** Run the DDL script "bdi_rms_ddl.sql" provided in this folder in the BDI RMS database schema.
- 3. DDL generates interface tables and PL/SQL packages.

Deploying BDI Batch Job Admin Application for a Receiver Application

This section describes the installation process for a receiver app with the BDI-SIM app as an example. The same procedure can be used for installing other receiver applications like BDI RPAS.

Preparing the Database for BDI SIM Batch Job Admin Installation

Before you begin installing BDI SIM Batch Job Admin, make sure you have the database schema created for BDI SIM Batch Job Admin.

If you are migrating from previous version of BDI RMS Batch Job Admin to a newer version, Follow upgrade instructions for bdi.

Before following upgrade instructions for bdi, you need to provide permissions for database schema.

Run the below commands on admin schema where database schema is created, to provide permissions.

Commands:

```
CREATE TABLE TO 'user schema';
CREATE SEQUENCE TO 'user schema';
CREATE INDEX TO 'user schema';
```

Example: User schema name is bdi_rmsim_app. Run below commands on admin schema.

```
CREATE TABLE TO 'bdi_sim_app ;
CREATE SEQUENCE TO 'bdi_sim_app ;
CREATE INDEX TO 'bdi_sim_app ';
```

Note: Database schema auto migration feature should be used from >=16.0.028 version.

Preparing the WebLogic Domain for BDI Batch Job Admin for SIM

- **1.** Use the instructions provided above to install WebLogic 12.2.1.4.0 and create a domain.
- 2. Start the Admin and managed servers.

Deploying BDI SIM Batch Job Admin on the WebLogic

To deploy the BDI SIM Batch Job Admin war, take the following steps.

- 1. Download BdiEdgeJobAdminPak22.0.000ForSIM22.0.000_eng_ga.zip to \$BDI_HOME.
- **2.** Unzip the downloaded archive. The BDI Job home directory will be created under the current directory.

unzip BdiEdgeJobAdminPak22.0.000ForSIM22.0.000_eng_ga.zip

This command extracts the archive. The relevant directories for the installation are shown (There are more directories than what is shown).

|- - - - - bin | ` - - - - bdi-job-admin-deployer.sh

- - - - - - - conf - - - - - security ` - - - - - bdi-job-admin-deployment-env-info.json `---bdi-job-admin-deployment-env-info.json.template ` - - - - - bdi-job-admin-internal-trust-store.jks `----log4j2.xml - - - - - - dist ` - - - - - - sim-jars `- - - - - - - README.txt - - - - - sim-batch-job-admin.war - - - - - - scripts - - - - - DBSchemaMigration.groovy - - - - - JobAdminDeployer.groovy - - - - - README.txt ` - - - - - WebLogicManager.groovy - - - - - setup-data ` - - - - - - ddl `- - - - - - - migration `- - - - - - - BDI Database_Util_Spec_Permission.sql `- - - - - - - BDI Database_Util_Spec.sql | `- - - - - - - - create L wl_llr_table.sql `- - - - - - - -migrate-schema-from-16.0.021-to-16.0.023.sql 1 migrate-schema-from-16.0.023-to-16.0.025.sql migrate-schema-from-16.0.025-to-16.0.027.sql migrate-schema-from-16.0.027-to-16.0.028.sql migrate-schema-from-16.0.028-to-16.0.030.sql migrate-schema-from-16.0.030-to-16.0.031.sql migrate-schema-from-16.0.031-to-19.0.000.sql I migrate-schema-from-19.0.000-to-19.1.000.sql ` - - - - - - dml `- - - - - - BDI_SET_BATCHSTATUS_TO_ABANDON.sql `- - - - - - - bdi_sim_seed_data.sql `- - - - - - - README.txt - - - - - - META-INF ` - - - - - - batch-jobs - - - - - target - - - - - README.txt **3.** Edit bdi-job-admin-deployment-env-info.json as follows:

cd bdi-edge-sim-job-home/conf

vi bdi-job-admin-deployment-env-info.json

4. Provide the following values in the JSON file.

Configuration Property	Description
SimJobAdminDataSource ->jdbcUrl	The JDBC URL for the Oracle database where the SIM integration schema resides.

Configuration Property	Description
SimReceiverServiceDataSource -> jdbcUrl	The JDBC URL for the Oracle database where the SIM integration schema resides. Can use the same jdbcUrl.
BatchInfraDataSource -> jdbcUrl	The JDBC URL for the schema created using RCU. The schema user is <prefix>_ wls (e.g. INT_WLS). The value of prefix that you provided in schema creation using RCU.</prefix>
JobAdminAppServer -> weblogicDomainName	The domain name where BDI SIM Admin app is deployed
JobAdminAppServer -> weblogicDomainHome	The domain home directory of WebLogic where BDI SIM Admin app is deployed
JobAdminAppServer -> weblogicDomainAdminServerUrl	Admin Server URL of the BDI SIM Admin App - http:// <admin host="">:<admin port></admin </admin>
JobAdminAppServer->weblogicDomainA dminServerProtocol	AdminServer protocol which is by default t3, For SSL deployment update to t3s.
JobAdminAppServer -> weblogicDomainAdminServerHost	Host Name of the BDI SIM Admin Server
JobAdminAppServer -> weblogicDomainAdminServerPort	BDI SIM Admin Server Port
JobAdminAppServer -> weblogicDomainTargetManagedServerNa me	Managed Server Name where BDI SIM Admin App is installed (e.g. bdi-sim-server)
JobAdminAppServer -> jobAdminUiUrl	Job Admin URL of BDI SIM
	http:// <host>:<bdi managed="" port="" server="" sim="">/sim-batch-job-admin</bdi></host>
ExternalJobAdminAppServer ->	Job Admin URL of BDI EXTERNAL
jobAdminUiUrl	http:// <host>:<bdi managed="" rms="" server<br="">port>/rms-batch-job-admin</bdi></host>
SystemOptions	Optional. Allows to provide system options as name value pairs
RmsJobAdminAppServer ->	Job Admin URL of BDI RMS
jobAdminUiUrl	http:// <host>:<bdi managed="" rms="" server<br="">port>/rms-batch-job-admin</bdi></host>

Optional - Users can configure system options in the deployment env info json file. Users have to add the system options as part of the configuration in the json file with name value pairs. After the application starts, the system option tables should have system options provided in the json file a=b and c=d values in the system options table. After deploying job Admin, verify that values are getting added to the system option table properly.

```
]
}
],
"SystemOptions":[
{"name":"jobSelection.1.pattern", "value":"ToExternalJob"},
{"name":"jobSelection.1.initialState", "value":"false"},
{"name":"jobSelection.2.pattern", "value":"JOB_NAME1, JOB_
NAME2"},
{"name":"jobSelection.2.initialState", "value":"true"}
{"name":"autoPurgeInboundData.global", "value":"TRUE"},
{"name":"autoPurgeInboundDataDelay.global", "value":"30d"},
{"name":"autoPurgeInboundDataUpperLimit.global", "value":"45"}
]
}
```

5. Run the deployer script to create the data sources and deploy BDI SIM Batch Job Admin.

```
cd bdi-edge-sim-job-home/bin
bdi-job-admin-deployer.sh -setup-credentials -deploy-job-admin-app
```

bash-4.2\$ sh bdi-job-admin-deplo log4j:WARN No appenders could be log4j:WARN Flease initialize the	found for logger (com.oracle.retail.integration.common.security.credential.CredentialStoreManager).
USAGE: JobAdminDeployer SECURITY	OPTION TASK_ACTION DESCHEMA_MIGRATION
: JobAdminDeployer (-setup-	credentials -use-existing-credentials} {-deploy-job-admin-app -prepare-job-admin-app} -run-db-schema-migration
SECURITY_OPTION	: One of the following SECURITY options must be used.
-setup-credentials	: Setup AppGerver and DB user/password and save to wallet. : Edit the Edi-job-admin-deployment-env-info.json config file before setting up credentials.
-use-existing-credentials	: Use previously setup AppServer and DB user/passwords from wallet.
TASK_ACTION	: The following TASK_ACTION option must be used.
-deploy-job-admin-app	: Configures WebLogic Server and deploy the job-admin application.
-prepare-job-admin-app	: Configures job-admin application for installation, to be used only with -setup-credentials option.
uired step while deploying the a	This option is used to setup the credentials in the installer without deploying the application. This is not a reg splication.
DBSCHEMA_MIGRATION	: Below option should be used for auto migration
-run-db-schema-migration	: automates migration from one version to another version

6. Enter the values prompted by the script for the following credential aliases. JobAdmin user has more privileges (e.g change configuration and run jobs from JobAdmin UI) than JobOperator user. JobOperator can run batch jobs where as JobMonitor has just read privileges.

Alias	Description
bdiAppServerAdminServerUserAlias	WebLogic admin server credentials
simJobAdminUiUserAlias	Credentials for Admin Role user for Job Admin app
simJobOperatorUiUserAlias	Credentials for Operator Role user for Job Admin app
simJobMonitorUiUserAlias	Credentials for Monitor Role user for Job Admin app
simJobAdminDataSourceUserAlias	Credentials for the Data Source of the Job Admin Schema
simReceiverServiceDataSourceUserAlias	Credentials for the Data Source of the Job Receiver Schema
batchInfraDataSourceUserAlias	Credentials for the Data Source of the Batch Infra Schema
externalJobAdminBaseUrlUserAlias	BDI SIM job admin app credentials

Alias	Description
rmsJobAdminBaseUrlUserAlias	BDI RMS job admin app credentials

Note: If you have already configured the credentials and can use the same credentials (typically when redeploying the app), you can run the deployer with the -use-existing-credentials option as follows, and you will not be prompted for the credentials again for the deployment.

bdi-job-admin-deployer.sh -use-existing-credentials -deploy-job-admin-app

- 7. Deployer script deploys BDI SIM Batch Job Admin to the server.
- 8. Restrict access to the bdi-edge-sim-job-home folder:

cd bdi-edge-sim-job-home chmod -R 700 .

Testing the Deployment

After you deploy to the server successfully, the BDI SIM Batch Job Admin can be accessed using the following URL:

http://<server>:<port>/sim-batch-job-admin

Log in using credentials provided during the installation and verify that jobs are displayed in the Manage Batch Jobs tab and configuration is displayed in the Manage Configurations tab.

Jobs Definition							
de Disabled jobs		Select Group: ALL	¥		Enter job nar	te to search	٩
Job Name	Family	Job Description	Job Groups	Enable 🖬	Execution Count	Action Launch View Executi	ions
Clearance_Tx_UploaderJob	Clearance	Clearance_Tx Uploader Job		2	0	0 🖾 🛠	
CodeDetail_Fnd_UploaderJob	CodeDetail	CodeDetai_Fnd Uploader Job		2	0	0 🖬 🛠	
CodeHead_Fnd_UploaderJob	CodeHead	CodeHead_Fnd Uploader Job		R	0	0 💷 🛠	
DeliverySlot_Fnd_UploaderJob	DeliverySlot	DeliverySlot_Find Uploader Job		Ø	0	0 11 2	
DiffGrp_Find_UploaderJob	DiffGrp	DiffGrp_Find Uploader Job		Ø	0	0 10 2	
Diff_Fnd_UploaderJob	Diff	Diff_Find Uploader Job		Ø	1	0 🗉 🛠	
ExtPrice_Tx_UploaderJob	ExtPrice	ExtPrice_Tx Uploader Job		Ø	0	0 🖬 🛠	
ExtRtd_Tx_UploaderJob	ExtRid	ExtRfid_Tx Uploader Job		2	0	0 🖬 🛠	
FinisherAddr_Fnd_UploaderJob	FinisherAddr	FinisherAddr_Fnd Uploader Job		2	0	0 🖬 🛠	
InvAvailStore_Tx_UploaderJob	InvAvaiIStore	InvAvailStore_Tx Uploader Job		8	0	0 🖬 🗶	

Creating Inbound Interface tables for BDI SIM

- 1. Go to \$BDI_HOME/bdi-edge-SIM-job-home/setup-data/ddl folder.
- **2.** Run the DDL script "bdi_sim_ddl.sql" provided in this folder in the BDI SIM database schema.
- 3. DDL generates the inbound interface tables for SIM.

Note: BDI SIM inbound interface tables are created in the SIM database schema instead of the BDI SIM database schema. The BDI SIM database schema will have synonyms for BDI SIM inbound interface tables.

Upgrade Instructions for BDI

BDI Edge JobAdmin App (BdiEdgeJobAdminPak19.1.xFor<app>19.1.x_eng_ ga.zip) Upgrade Steps

- 1. Download BdiEdgeJobAdminPak22.0.000ForRms22.0.000_eng_ga.zip to \$BDI_ HOME.
- 2. Take the backup of existing bdi-<app>-home.
- **3.** Login to the BDI Edge Job App (Example: http://host:17011/rms-batch-job-admin)
- **4.** Go to Manage Configurations -> System Options and make following changes. LOADJOBDEF = TRUE and LOADSEEDDATA = TRUE.
- **5.** Login to the WLS Console and delete the existing Edge App.
- **6.** Delete existing BDI datasources from WLS console, for any datasources changes planned during deployment.
- 7. Modify bdi job flow configuration file

(conf/bdi-job-admin-deployment-env-info.json) to support OAuth2 feature. Below property needs to be updated in json file. Remaining property values should be same as backed up bdi-<app>-home. Click here to see new changes in bdi-job-admin-deployment-env-info.json. The deployment description json format has changed from previous release, to accommodate IDCS client credentials and URL.

"oauth2AuthorizationServerUrl":"https://idcs-4ff493196128425c80ce4ecbfc8352e5.i dentity.c9dev1.oc9qadev.com/oauth2/v1/token" ? Replace with IDCS server url.

8. To deploy without OAuth, we need to rename or remove the OAuth2 aliases for example:- jobAdminUiOAuth2ApplicationClientAliasRef from bdi-job-admin-deployment-env-info.json, and then deploy. No other extra steps needed for deployment.

See How to Install BDI without IDCS.

9. Deploy the BDI Edge job app using -setup-credential option (Follow BDI Installation Guide). -use-existing-credential option will not work the first time, since there is a new entry (IDCS client credentials) now. While deploying user needs to provide the IDCS client secret ID & password for ricsOauth2ApplicationClientAlias, mfcsOauth2ApplicationClientAlias, rpasOauth2ApplicationClientAlias. Cd to <appName>-job-home/bin and run the below command to upgrade and deploy the bdi job app.

sh bdi-job-admin-deployer.sh -use-existing-credentials }
-run-db-schema-migration -deploy-job-admin-app

Note: Database schema auto migration feature should be used from >=16.0.028 version.

			isting-credentials -run-o		ecurity.credential.CredentialStoreManager).	
g4j:WARN Please				itegration.common.s	ecurity.credential.credentialStoreManager).	
			atch-job-admin.AdminAcces			
				s-batch-job-admin.»		
	e credentials to		atch-job-admin.OperatorAd	constance to DB SI		
	e credentials to		accii-job-adminisoperacoria	ressacope to be at		
			atch-job-admin.MonitorAcc	cessScope to DB Sto		
			bAdminBaseUrlUserAlias to	DB Store		
	e credentials to		bAdminBaseUrlUserAlias to	DB STORA		
	credentials to					
			obAdminBaseUrlUserAlias t			
			obAdminBaseUrlUserAlias t	to DB Store		
rsisting runtime			nalJobAdminBaseUrlUserAli	as to DB Store		
rsisting runtime						
	:35 PM java_ut:					
	TA					
v 11. 2019 10:22	:39 PM groovy.		ctQueryCommand execute			
				re because: ORA-00		
v 11, 2019 10:22 RNING: Failed to	:39 PM groovy.:	ql.StlSAbstrac	ctQueryCommand execute			
wino, called to	execute: SEPE			CRA-UC		

- **10.** After successful deployment, bounce the managed server.
- **11.** Login to BDI Edge Job App and make sure no error is displayed in any of the pages.

Note: BDI does not mandate the use of OAuth2 or IDCS as authorization server. This version of the BDI is backward compatible with basicAuth. New on-prem customers can use basicAuth by following the below steps. Existing customers can use upgrade instructions and proceed to use basicAuth as the authentication mechanism.

How to Install BDI without IDCS

1. To deploy without OAuth, we need to rename or remove the OAuth2 aliases for example:- jobAdminUiOAuth2ApplicationClientAliasRef from bdi-job-admin-deployment-env-info.json, and then deploy. No other extra steps needed for deployment.

"comment_2": "For 19.0.("jobAdminUiUrl":"http://	":"http://localhost:7001/bdi-rfi-batch-job-admin", 00 and later RFI", 10calhost:7001/rfi-batch-job-admin", fiJobAdminBaseUrlUserAlias",	
"jobAdminUiUser":"GET_FF "jobAdminUiPassword":"GB	NAMERICANTING AND	
<pre>}, "RpasJobAdminAppServer": { "jobAdminUiUrl":"http://</pre>	msp00bqu.us.oracle.com:80/rpas-batch-job-admin", pasJobAdminBaseUrlUserAlias",	
"jobAdminUiUser":"GET_FF "jobAdminUiPassword":"GB		
<pre>}, "OcdsJobAdminAppServer": { "jobAdminUiUrl":"http://</pre>	msp00bqu.us.oracle.com:80/ocds-batch-job-admin", cdsJobAdminBaseUrlUserAllas",	
"jobAdminUiUser":"GET FF "jobAdminUiPassword":"GB		
<pre>}, "ExternalJobAdminAppServer"; "jobAdminUiUrl":"http://</pre>	<pre>msp00bqu.us.oracle.com:80/external-batch-job-admin", xternalJobAdminBaseUrlUserAlias", OM WALLET",</pre>	
"SimJobAdminAp	pServer": {	
•	"jobAdminUiUrl":"http://localhost:7001/sim-batch	-job-admin",
	"jobAdminUiUserAlias":"simJobAdminBaseUrlUserAlia	as",
	"jobAdminUiUser":"GET_FROM_WALLET",	
	"iobAdminUiPassword"."GET FROM WALLET"	

```
},
            "RfiJobAdminAppServer": {
                "comment_1": "For 16.0.028 and older RFI",
                "comment_1_
jobAdminUiUrl":"http://localhost:7001/bdi-rfi-batch-job-admin",
                "comment 2": "For 19.0.000 and later RFI",
                "jobAdminUiUrl":"http://localhost:7001/rfi-batch-job-admin",
                "jobAdminUiUserAlias":"rfiJobAdminBaseUrlUserAlias",
                "jobAdminUiUser":"GET_FROM_WALLET",
                "jobAdminUiPassword":"GET_FROM_WALLET",
            },
            "RpasJobAdminAppServer": {
                "jobAdminUiUrl":"http://localhost:7001/rpas-batch-job-admin",
                "jobAdminUiUserAlias":"rpasJobAdminBaseUrlUserAlias",
                "jobAdminUiUser":"GET_FROM_WALLET",
                "jobAdminUiPassword":"GET_FROM_WALLET",
            }.
            "OcdsJobAdminAppServer": {
                "jobAdminUiUrl":"http:// localhost:7001/ocds-batch-job-admin",
                "jobAdminUiUserAlias":"ocdsJobAdminBaseUrlUserAlias",
                "jobAdminUiUser":"GET_FROM_WALLET",
                "jobAdminUiPassword":"GET_FROM_WALLET",
            },
            "ExternalJobAdminAppServer": {
"jobAdminUiUrl":"http://localhost:7001/external-batch-job-admin",
                "jobAdminUiUserAlias": "externalJobAdminBaseUrlUserAlias",
                "jobAdminUiUser":"GET_FROM_WALLET",
                "jobAdminUiPassword":"GET_FROM_WALLET",
            }
        },
        "CentralAuthenticationSystem":{
            "IdcsAuthenticationProvider":{
"oauth2AuthorizationServerUrl":"https://idcs-4ff493196128425c80ce4ecbfc8352e5.i
dentity.c9dev1.oc9qadev.com/oauth2/v1/token",
                "oauth2Application":[
                    {
                         "oauth2ApplicationName" : "RICS",
                         "oauth2ApplicationScopeOfAccess" :
{"name":"oauth2.default.scopeOfAccess.*", "value":"urn:opc:idm:__myscopes__"},
                         "oauth2ApplicationClientAlias" :
"ricsOauth2ApplicationClientAlias",
                         "oauth2ApplicationClientId" : "GET_FROM_WALLET",
                         "oauth2ApplicationClientSecret" : "GET_FROM_WALLET"
                    },
                    {
                         "oauth2ApplicationName" : "MFCS",
                         "oauth2ApplicationScopeOfAccess" :
{"name":"oauth2.default.scopeOfAccess.*", "value":"urn:opc:idm:__myscopes__"},
                         "oauth2ApplicationClientAlias" :
"mfcsOauth2ApplicationClientAlias",
```

2. Continue with regular installation

Note: In case any similar errors like ORA-00942: table or view does not exist Verify if the corresponding tables present in the schema or not, as there are cases where Bdi<App>ReceiverServiceDataSource and Bdi<App>JobAdminDataSource might have configured to different schemas.RTG maintains only one migration script for upgrades. Please ignore those errors.

BDI Edge RMS Job Admin Configuration file Changes

The following changes have been introduced to the BDI Edge RMS Job Admin Configuration file in 22.0.000 Release

 For BDI RFI the application has been renamed from BdiIntJobAdminPak<VERSION>ForRfi<VERSION>_eng_ga.zip to BdiEdgeAppJobAdminPak<VERSION>ForRfi<VERSION>_eng_ga.zip, due to this change the BDI RMS Configuration for BDI RFI has also changed:

```
"RfiJobAdminAppServer": {
    "comment_1": "For 16.0.028 and older RFI",
    "comment_1_
jobAdminUiUrl": "http://localhost:7001/bdi-rfi-batch-job-admin",
    "comment_2": "For 19.0.000 and later RFI",
    "jobAdminUiUrl": "http://localhost:7001/rfi-batch-job-admin",
    "jobAdminUiUserAlias": "rfiJobAdminBaseUrlUserAlias",
    "jobAdminUiUser": "GET_FROM_WALLET",
    "jobAdminUiPassword": "GET_FROM_WALLET",
    },
```

2. New System Options Added to Disable Jobs at the time of installation:

{"name":"jobSelection.1.pattern", "value":"ToExternalJob"},
{"name":"jobSelection.1.initialState", "value":"false"},

Process Flow Installation

Prerequisites

The Process Flow application has the same tech stack requirements mentioned in the beginning of this document for JDK, WebLogic domain, and database. Before installing the Process Flow application install the following infrastructure components for the application.

- A WebLogic domain with JRF for the application
- A database schema for the Process Flow application

Before you begin installing BDI Process Flow, make sure you have the database schema created for BDI Process flow.

If you are migrating from previous version of BDI PROCESS FLOW to a newer version, Follow upgrade instructions for bdi. Before following upgrade instructions for bdi, you need to provide permissions for database schema. Run the below commands on admin schema where database schema is created, to provide permissions.

Commands:

```
CREATE TABLE TO 'user schema';
CREATE SEQUENCE TO 'user schema';
CREATE INDEX TO 'user schema';
Example: User schema name is bdi_process_app. Run below commands on admin
schema.
CREATE TABLE TO 'bdi_ process _app';
CREATE TABLE TO 'bdi_ process _app';
```

```
CREATE SEQUENCE TO 'bdi_ process _app';
CREATE INDEX TO 'bdi_ process _app';
The recommended java VM memory setting for the Process Flow application domain
is:
```

-Xms1024m -Xmx2048m

Install the Process Flow Application

Perform the following procedure to install the Process Flow application:

- 1. Download the process flow archive BdiProcessFlow22.0.000ForAll22.x.xApps_eng_ga.zip
- **2.** Unzip the downloaded archive. The Process Home directory will be created under the current directory.

unzip BdiProcessFlow22.0.000ForAll22.x.xApps_eng_ga.zip

This command extracts the archive. The relevant directories for the installation are shown below (There are more directories than what is shown).

```
- - - - - bin
                        - - - - bdi-process-flow-admin-deployer.sh
     - - - - conf
bdi-process-flow-admin-deployment-env-info.json
                  `----
L
bdi-process-flow-admin-internal-trust-store.jks
                   ` - - - - - - log4j2.xml
                   ` - - - - - - security
                     - - - - - jazn-data.xml
                    - - - - - jps-config.xml
    - - - - - dist
                   ` - - - - - bdi-process-flow-22.0.000.war
                     - - - - - README.txt
  - - - - - 1ib
   - - - - - - scripts
                    - - - - - DBSchemaMigration.groovy
                    - - - - - ProcessFlowAdminDeployer.groovy
                       - - - - - README.txt
                   ` - - - - - WebLogicManager.groovy
   - - - - - - setup-data
                   ` - - - - - - ddl
                                   |- - - - - - -

    migration

    - - - - BDI_Database_
L
Util Spec Permission.sql
   - - - - - - BDI_Database_
Util_Spec.sql
    _____I
- - - - - - - - create_wl_llr_
table.sql
|- - - - - -
migrate-process-schema-from-16.0.027-to-16.0.028.sql
                T
           |- -
migrate-schema-from-16.0.021-to-16.0.023.sql
              1-
migrate-schema-from-16.0.023-to-16.0.025.sql
          L
                                      1-
migrate-schema-from-16.0.025-to-16.0.027.sql
          L
                                      |-
migrate-schema-from-16.0.031-to-19.0.000.sql
|- -
migrate-schema-from-16.0.21-to-16.0.023.sql
- - purge
                                   - - purge_process_repo.sql
                   ----dml
                     - - - - - - dsl
                        - - - - available_process_flow_options
                                   - - enterprise-sender_side_split_flows
|- - - - - - -
                                  - - external_ocds-no_split_flows
|- - - - - - -
- - external_sim-no_split_flows
```

rms_enterprise-	sender_side_split_	_flows		
rms_external-no	_split_flows			
rms_ocds-no_spl	it_flows			
rms_rfi-no_spli	t_flows			
rms_rpas_file_c	reator-no_split_f	Lows		
rms_rxm-no_spli	t_flows			
rms_sim-no_spli	t_flows			
rms_sim_rxm-rec	eiver_side_split_i	flows		
rms_sim_rxm-ser	der_side_split_flo	ows		
targe				
	`bd:	i-process-flow.war		
	` REA	ADME.txt		

3. Modify process flow configuration

file(conf/bdi-process-flow-admin-deployment-env-info.json) to match the deployment environment and to support OAuth2 feature. The deployment description json format has changed from previous release, to accommodate IDCS client credentials and URL.While you can change many values to match your requirements, here is a table of a minimum set of configuration values that you need to modify for process flow application.

To deploy without OAuth, we need to remove or replace the OAuth2 aliases (For example:- jobAdminUiOAuth2ApplicationClientAliasRef) in bdi-process-flow-admin-deployment-env-info.json, and then deploy. No other extra steps required for deployment.

Note: The alias names in the configuration files should not be changed.

Configuration Field	Description
BdiProcessFlowAdminDataSource ->jdbcUrl	JDBC URL for the process flow schema. Change this value to match the environment
ProcessFlowAdminAppServer ->weblogicDomainName	Name of the WebLogic domain where the process flow application is deployed
ProcessFlowAdminAppServer ->weblogicDomainHome	WebLogic Domain home directory
ProcessFlowAdminAppServer-> weblogicDomainProtocol	WebLogic admin server protocol is by default t3, if SSL configured then update to t3s.
ProcessFlowAdminAppServer ->weblogicDomainAdminServerUrl	WebLogic Admin server URL
ProcessFlowAdminAppServer ->weblogicDomainAdminServerHost	Host name of WebLogic Admin Server
ProcessFlowAdminAppServer ->weblogicDomainAdminServerPort	WebLogic admin server port

Configuration Field	Description
ProcessFlowAdminAppServer ->weblogicDomainTargetManagedServerN ame	Managed Server name where Process Flow is hosted
ProcessFlowAdminAppServer ->processFlowAdminUiUrl	Process Flow admin app URL. Update only the host and port
RmsAppJobAdminAppServer>jobAdmin UiUrl	BDI RMS job admin URL
SimAppJobAdminAppServer>jobAdmin UiUrl	BDI SIM job admin URL
SimJobAdminAppServer>jobAdminUiUr l	BDI SIM job admin URL
RfiAppJobAdminAppServer-> jobAdminUiUrl	RFIAPP job admin URL
OcdsAppJobAdminAppServer	BDI OCDS job admin URL
ExternalAppJobAdminAppServer	BDI EXTERNAL job admin URL
RpasAppJobAdminAppServer	BDI RPAS job admin URL
oauth2AuthorizationServerUrl	IDCS URL
	For example: https://idcs-4ff493196128425c80ce4ecbfc83 52e5.identity.c9dev1.oc9qadev.com/oauth2 /v1/token
SystemOptions	allAvailableDestinationApps mentions all the apps available as destination
	appsInScope - mentions the apps that are in scope.

Example:

ProcessFlow JSON Snippet:

```
"ProcessFlowAdminApplication":{
            "ProcessFlowAdminAppUses":[
                "ProcessFlowAdminDataSource",
                "ProcessFlowAdminAppServer",
                {
                    "RemoteJobAdminAppServers":[
                       "RfiAppJobAdminAppServer",
                        "SimJobAdminAppServer",
                        "RmsAppJobAdminAppServer",
                        "SimAppJobAdminAppServer",
                        "RpasAppJobAdminAppServer",
                        "OcdsAppJobAdminAppServer",
                       "ExternalAppJobAdminAppServer"
                    1
                }
            1,
            "SystemOptions":[
                {"name":"allAvailableDestinationApps",
"value":"SIM, RPAS, EXTERNAL, OCDS, RFI, RMS"},
                {"name":"appsInScope", "value":"SIM, RPAS, OCDS, RFI"},
                {"name":"jobGroupCacheEnabled", "value":"false"},
                {"name":"flowSelection.1.pattern", "value":"_From_EXTERNAL"},
                {"name":"flowSelection.1.initialState", "value":"false"},
```

```
{"name":"flowSelection.2.pattern", "value": "ProcessFlowName1, ProcessFlowName2"},
                {"name":"flowSelection.2.initialState", "value":"true"},
                {"name":"skipImporterActivitiesForExternal", "value":"true"},
                {"name":"repave_notification_lead_time", "value":"30"},
                {"name":"processFlowNotification.global.enable",
"value":"false"},
                {"name":"processFlowNotification.global.onStart",
"value":"false"},
                {"name":"processFlowNotification.global.onRestart",
"value":"false"},
                {"name":"processFlowNotification.global.onFailure",
"value":"true"},
                {"name":"processFlowNotification.global.onCompletion",
"value":"false"}
            1
        }
```

Process Flow Json snippet for OAuth support:

```
"CentralAuthenticationSystem":{
```

"IdcsAuthenticationProvider":{

```
"oauth2AuthorizationServerUrl":"https://idcs-4ff493196128425c80ce4ecbfc8352e5.i
dentity.c9dev1.oc9gadev.com/oauth2/v1/token",
                "oauth2Application":[
                    ł
                         "oauth2ApplicationName" : "RICS",
                         "oauth2ApplicationScopeOfAccess" :
{"name":"oauth2.default.scopeOfAccess.*", "value":"urn:opc:idm:_myscopes_"},
                         "oauth2ApplicationClientAlias" :
"ric-sOauth2ApplicationClientAlias",
                         "oauth2ApplicationClientId" : "GET_FROM_WALLET",
                         "oauth2ApplicationClientSecret" : "GET_FROM_WALLET"
                    },
                    {
                         "oauth2ApplicationName" : "MFCS",
                         "oauth2ApplicationScopeOfAccess" :
{"name":"oauth2.default.scopeOfAccess.*", "value":"urn:opc:idm:__myscopes__"},
                         "oauth2ApplicationClientAlias" :
"mfcsO-auth2ApplicationClientAlias",
                         "oauth2ApplicationClientId" : "GET_FROM_WALLET",
                         "oauth2ApplicationClientSecret" : "GET_FROM_WALLET"
                    },
                    {
                         "oauth2ApplicationName" : "RPAS",
                         "oauth2ApplicationScopeOfAccess" :
{"name":"oauth2.default.scopeOfAccess.*", "value":"urn:opc:idm:__myscopes__"},
                         "oauth2ApplicationClientAlias" :
"rpas0-auth2ApplicationClientAlias",
                         "oauth2ApplicationClientId" : "GET_FROM_WALLET",
                         "oauth2ApplicationClientSecret" : "GET_FROM_WALLET"
```

1

}

```
},
"OamAuthenticationProvider":{
}
```

BDI Process flow installer copies all the enterprise flows from bdi-process-home/setup-data/dsl/available_process_flow_options/rms_ enterprise-sender_side_split_flows/ to bdi-process-home/setup-data/dsl/flows-in-scope.

- **4.** Configure the appsInScope system options in process flow configuration file. As shown in step 3 above.
- **5.** If you are migrating from previous version to a new version, follow the upgrade instructions for bdi.
- **6.** Run the deployer. Make sure that the WebLogic server is running before issuing the following command.

```
cd bin
bdi-process-flow-admin-deployer.sh -setup-credentials
-deploy-process-flow-admin-app
```

The process flow deployer will prompt for username and password for the following credential aliases:

Alias	Description
bdiAppServerAdminServerUserAlias	WebLogic admin server credentials
processFlowAdminBaseUrlUserAlias	Credentials for Admin Role user for Process Flow Admin app
processFlowOperatorBaseUrlUserAlias	Credentials for Operator Role user for Process Flow Admin app
processFlowMonitorBaseUrlUserAlias	Credentials for Monitor Role user for Process Flow Admin app
bdiProcessFlowAdminDataSourceUserAlia s	Credentials for the Data Source of the Process Flow Schema
rmsappJobAdminBaseUrlUserAlias	RMS job admin credentials
simappJobAdminBaseUrlUserAlias	SIM job admin credentials
simJobAdminBaseUrlUserAlias	SIM job admin credentials
ocdsappJobAdminBaseUrlUserAlias	OCDS job admin credentials
externalappJobAdminBaseUrlUserAlias	External job admin credentials
rfiappJobAdminBaseUrlUserAlias	RFIAPP job admin credentials
rpasappJobAdminBaseUrlUserAlias	RPAS job admin credentials
jobAdminUiOAuth2ApplicationClientAlia sRef	IDCS Client ID and password
(name":"rpasappJobAdminBaseUrlOAuth2 ApplicationClientAlias", "value": "*rpasOauth2ApplicationClientAlias)	
jobAdminUiOAuth2ApplicationClientAlia sRef	IDCS Client ID and password
(name":"ocdsappJobAdminBaseUrlOAuth2 ApplicationClientAlias", "value": "*ricsOauth2ApplicationClientAlias)	

Alias	Description
jobAdminUiOAuth2ApplicationClientAlia sRef	IDCS Client ID and password
(name":"rmsappJobAdminBaseUrlOAuth2 ApplicationClientAlias", "value": "*mfcsOauth2ApplicationClientAlias)	
jobAdminUiOAuth2ApplicationClientAlia sRef	IDCS Client ID and password
(name":"rfiappJobAdminBaseUrlOAuth2A pplicationClientAlias", "value": "*ricsOauth2ApplicationClientAlias)	

Note: If you have an existing process flow deployment then, login to Process Flow App, go to Manage Configurations -> System Options and update the following system options before running the above command. LOADPROCESSDEF = TRUE and LOADSEEDDATA = TRUE

Value "skipImporterActivitiesForExternal' cannot be updated using System Options available in UI. It can be done by updating its value in bdi-process-flow-admin-deployment-env-info.json and redeploying application.

Set value of "skipImporterActivitiesForExternal' to false for on premise users.

Example: {"name":"skipImporterActivitiesForExternal","value":"false"}

If you have already configured various credentials required for process flow, you can run the deployer with the following syntax. It will not ask the credentials again for the deployment. Make sure you set the LOADPROCESSDEF = true, LOADSEEDDATA = true.

bdi-process-flow-admin-deployer.sh -use-existing-credentials -deploy-process-flow-admin-app

- 7. Make sure the deployment step shows deployment success message at the end.
- **8.** Restrict access to the bdi-process-home folder:

cd bdi-process-home chmod -R 700 .

9. Bounce the process managed server.

Verify Installation

If the process flow app is successfully deployed, you should be able to access the application at the URL http://<host>:<port>/bdi-process-flow/. The following is a sample screenshot of the process flow application. Make sure all the tabs of the application are properly displayed.

Total Processes Definitions	Total Process Executions	Failed Executions	Successful Execution	Currentle	Running Processes			
41	35	11	22	Currently	2	_		
ocess Flow Executions Since 00:00 AM								
				Enter process name to	search Q			
Process Name	Execution Id	Ú.	Process Execution Start Time	Process Execution End Time	Process Status			
DiffGrp_Fnd_SubProcessFlow_From_RMS_ To_SIM	DiffGrp_Find_SubProcessFlow_From_RMS a09d-5f1067a54		Thu Sep 29 23:44:03 PDT 2016		PROCESS_STARTED			
Diff_Find_SubProcessFlow_From_RMS_To_ SIM	Diff_End_SubProcessFlow_Erom_RMS_1 a0ti-605638a293		Thu Sep 29 23:42:58 PDT 2016	Thu Sep 29 23:43:58 POT 2016	PROCESS_COMPLET			
Orghier_Find_ProcessFlow_From_RMS	OrgHer_Fnd_ProcessFlow_From_RMS# 4a8634d2a610		Thu Sep 29 23:42:25 PDT 2016	Thu Sep 29 23:44:25 POT 2016	PROCESS_COMPLET			
InvAvailStore_Tx_ProcessFlow_From_RMS	ImAvailStore_Tx_ProcessFlow_From_R bf8b-d7db2bd31c		Thu Sep 29 23.42:14 PDT 2016	Thu Sep 29 23:43:16 POT 2016	PROCESS_COMPLET			
FinishesAddr_Find_ProcessFlow_From_RMS	inherAdd_Fed_ProcessFlow_From_FMS FrisherAdd_Fed_ProcessFlow_From_FMS#add0005-4da1-4le4-5eb5- eabee001033 2016 2016 PROCESS_F							

See the Oracle Retail Bulk Data Integration Implementation Guide for the operation details of the Process Flow application.

Enabling Email Notification Alerts

Process Flow can send email alerts upon success or failure of process executions as specified in the process definitions. The following configuration is required for process email notification.

Mail Session configuration in WebLogic, for process email notification:

- **1.** Go to the WebLogic Admin console of the environment where the process app is deployed.
- 2. Navigate to Services -> Mail Sessions.
- 3. Select New to create a new mail session.
- 4. Enter the following details:

Name: BdiProcessMailSession

JNDI name: mail/BdiProcessMailSession

Session Username: A valid email id, preferably email-id of an administrator.

Session password: The password for the above email id.

5. Enter the following in the JavaMail properties:

mail.smtp.ssl.enable=true
mail.smtp.auth=true
mail.smtp.ssl.trust=<company's smtp mail server host name>
mail.smtp.port=<mail server smtps port, typically is 465>
mail.transport.protocol=smtps
mail.smtp.host=<company's smtp mail server host name>
mail.from=<A valid email-id for 'from email address' when email is sent>
mail.to(Optional)=<List of valid recipients email-ids>

Web Session Mail.to property is used if processFlowNotification.<scope>.recipients is not set in Process Notification Configuration.

- **6.** Click Next. In the Mail Session Targets, select the managed server where the process application is deployed.
- 7. Finish creating the mail session.

Note: For more information on configuring Mail sessions on WebLogic, see the *Oracle*® *WebLogic Administrator's Guide* 12*c Release*.

Repave lead time by default is 30. The user can modify the value through System Options repave_notification_lead_time.

ystem Options Diagnostics Log Level Process Notificat	lons
View/Edit System Options	
มเดรอรรา เดพางกากเล่นการบุเอบสะดาก สายเต	Enter Option Name or Value to Search.
process for foundation.global.on and o	
processFlowNotification.global.onRestart	false
processFlowNotification.global.onStart	faise
processFlowNotification.global.subject	\$(processName). Status: \$(processStatus)
repave_notification_lead_time	30
rfiappJobAdminBaseUrl	http: :
rfiappJobAdminBaseUrlUserAlias	GET_FROM_WALLET:GET_FROM_WALLET
ricsOauth2ApplicationClientAlias	GET_FROM_WALLET:GET_FROM_WALLET

Process Flow Upgrade Steps

- Download the BdiProcessFlow22.0.000ForAll22.x.xApps_eng_ga.zip from RTG Wiki and extract.
- **2.** Take the backup of existing bdi-process-home.
- **3.** Cd to bdi-process-home/conf folder.
- **4.** Modify process flow configuration file (conf/bdi-process-flow-admin-deployement-env-info.json) to match the deployment environment and support OAuth2 feature.
- 5. To deploy without OAuth, we need to remove or replace the OAuth2 aliases (For example:- jobAdminUiOAuth2ApplicationClientAliasRef) in bdi-process-flow-admin-deployment-env-info.json, and then deploy. No other extra steps required for deployment.
- **6.** The deployment description json format has changed from previous release, to accom-modate IDCS client credentials and URL.

Note: The alias names in the configuration files should not be changed.

"oauth2AuthorizationServerUrl":"https://idcs-4ff493196128425c80ce4ecbfc8352e5.i dentity.c9dev1.oc9qadev.com/oauth2/v1/token" ? Replace with IDCS server url

- 7. Configure the appsInScope system options in process flow configuration file.
- 8. Login to the existing deployed process flow app.
- **9.** Go to Manage Configurations -> System Options and make following changes: LOADPROCESSDEF = TRUE and LOADSEEDDATA = TRUE
- **10.** Delete the existing process flow app.
- 11. Run the below command to upgrade and deploy the process-flow-app.

```
Cd bin
sh bdi-process-flow-admin-deployer.sh -use-existing-credentials
-run-db-schema-migration -deploy-process-flow-admin-app
```

- 12. BDI process flow installer copies all the enterprise flows from process-home/setup-data/dsl/available_process_flow_options/rms_ enterprise-sender_side_split_flows/ to process-home/setup-data/dsl/flows-in-scope while deployment.
- **13.** After successful deployment, bounce the managed server.

redentials saved ersisting runtim repare to use DB									
		s for al	ias proc	essFlowAdm	inBaseUrlUserAli	ias to	DB Sto	ze	
					with appTag (bdi	i-proc	ess-flo	w.war)	
ersisting runtim									
					ow.AdminAccessSc	cone to	o DB St		
presisting runtim									
				a set 1 outros	ratorBaseUrlUser		FO DB		
ersisting runtim									
				propert 1	ow.OperatorAcces	e e e a a a a	a to DB	Store	
ersisting runtim					ON OPERCOMPOSE	1990 COP	0 00 00	96014	
					itorBaseUrlUserA		- DB C		
ersisting runtim				essriessnin	itorBaseUriUser#	ALL65	CO DB a		
					ow.MonitorAccess				
					ow.MonitorAccess	sacope	to DB		
rsisting runtim									
				ppJobAcmin	BaseUrlUserAlias	s to p	s store		
rsisting runtim									
				TobAdminBas	eUrlUserAlias to	DB S			
rsisting runtim									
				ppJobAdmin	BaseUrlUserAlias	s to D	8 Store		
				ppJobAdmin	BaseUrlUserAlias	s to D	B Store		
rsisting runtim									
				lappJobAdmi		as to	DB Stor		
rsisting runtim				appJobAdmi					
rsisting runtim	e credentia e credentia	ls for al is to DB	ias ocds store						
rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al	ias ocds store ias exte		nBaseUrlUserAlia AdminBaseUrlUser				
rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al	ias ocds store ias exte						
rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al	ias ocds store ias exte						
rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al	ias ocds store ias exte						
rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al	ias ocds store ias exte						
rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al	ias ocds store ias exte						
rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al is to DB	ias ocds store ias exte store		AdminBaseUrlUser				
rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia	is for al is to DB is for al is to DB	ias ocds store ias exte store		AdminBaseUrlUser				
rsisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia	is for al is to DB is for al is to DB	ias ocds store ias exte store		AdminBaseUrlUser				
sisting runtim sisting runtim sisting runtim sisting runtim	e credentia e credentia e credentia e credentia ###	is for al is to DB is for al is to DB	ias ocds store ias exte store		AdminBaseUrlUser				
rsisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia e credentia	is for al is to DB is for al is to DB	ias ocds store ias exte store		AdminBaseUrlUser				
rsisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia e credentia	is for al is to DB is for al is to DB	ias ocds store ias exte store		AdminBaseUrlUser				
sisting runtim sisting runtim sisting runtim sisting runtim	e credentia e credentia e credentia e credentia	is for al is to D8 is for al is to D8	ias ocds store ias exte store		AdminBaseUrlUser				
sisting runtim sisting runtim sisting runtim sisting runtim	e credentia e credentia e credentia e credentia	is for al is to D8 is for al is to D8	ias ocds store ias exte store		AdminBaseUrlUser				
sisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia	is for al is to D8 is for al is to D8	ias ocds store ias exte store		AdminBaseUrlUser				
reisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia	is for al is to D8 is for al is to D8	ias ocds store ias exte store		AdminBaseUrlUser				
rsisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia	is for al is to D8 is for al is to D8	ias ocds store ias exte store		AdminBaseUrlUser				
rsisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia	is for al is to D8 is for al is to D8	ias ocds store ias exte store		AdminBaseUrlUser				
risting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia	is for al is to D8 is for al is to D8	ias ocds store ias exte store		AdminBaseUrlUser				
rsisting runtin rsisting runtin rsisting runtin rsisting runtin l l l l l l l l l l l l l l l l l l l	e credentia e credentia e credentia e credentia f## f## iii iiiiiiiiiiiiiiiiiiiiiiiiiii	is for al is to DB is for al is to DB is to DB	ias ocds store ias exte store		AdminBaseUr1User				
rsisting runtim rsisting runtim rsisting runtim rsisting runtim	e credentia e credentia e credentia e credentia f## 111 1111 111 111 111 111	is for al is to DB is for al is to DB is to DB	ias ocds store ias exte store		AdminBaseUr1User				

6

BDI Batch Scheduler Installation

Installation Prerequisites

The BDI Batch Scheduler supports the same tech stack and platform specifications as given in prior section in this installation guide. The following infrastructure is required for Scheduler application installation.

Preparing for Installation

- Before starting the installation, make sure a database schema has been created for the Scheduler application.
- Ensure that the WebLogic server where the scheduler application will be deployed is up and running.
- Download the BDI scheduler installer archive: BdiScheduler22.0.000ForAll22.x.xApps_eng_ga.zip
- Unzip/extract the archive to a target directory to run the installer. The bdi-scheduler-home directory will be created under the target directory with the artifacts.
- The following is part of the directory structure and artifacts that are extracted from the archive (not the complete list shown below).

```
- - - - - - bin
                    - - - - - bdi-scheduler-admin-deployer.sh
- - - - - - - conf
                   - - - - - bdi-scheduler-admin-deployment-env-info.json
                 ` - - - - - bdi-scheduler-admin-internal-trust-store.jks
                   ----log4j2.xml
                 `---- security
                 `----jazn-data.xml
                 `----jps-config.xml
 - - - - - - dist
                 `---- bdi-scheduler-ui.war
                   - - - - - README.txt
 - - - - - - lib
- - - - - - - scripts
                    - - - - DBSchemaMigration.groovy
                       - - - README.txt
                   - - - - - SchedulerAdminDeployer.groovy
                   - - - - - WebLogicManager.groovy
```

```
- - - - setup-data
                     - - - - - - ddl
                          - - - - - - - migration
                                                    - - - - - - - BDI
Database_Util_Spec_Permission.sql
                                                    - - - - - - - BDI
Database_Util_Spec.sql
                                                    - - - - - - - - create_
wl_llr_table.sql
           1
-migrate-schema-from-16.0.021-to-16.0.023.sgl
I
           -migrate-schema-from-16.0.025-to-16.0.027.sql
           -migrate-schema-from-16.0.028-to-16.0.030.sql
-migrate-schema-from-16.0.031-to-19.0.000.sgl
                         `----purge
           L
                         `- - - - - - - purge_scheduler_repo.sql
           `---- dml
                                 ds1
          - - target
                       - - - - bdi-scheduler-ui.war
                         - - - - README.txt
```

Note: Any seed data schedule definition can be edited if required using the seed_data.sql file. To add a new schedule at the time of deployment, edit seed_data.sql to include an insert statement for the new schedule definition and add the corresponding <ScheduleName>_Action.sch file in the /setup-data/dsl directory.

To configure valid Email Recipients for Schedule email notifications, update seed data located in bdi-scheduler-home/setup-data/dml /seed_data.sql. By default value is admin@example.com in BDI_ SCHEDULE_DEFINITION

For more details, refer to the *Oracle Retail Bulk Data Integration Implementation Guide*.

Deploying Scheduler Application

1. Edit bdi-scheduler-admin-deployment-env-info.json (in bdi-scheduler-home/conf directory) with corresponding values matching the target deployment environment. Update the values of the following configuration properties.

Configuration Property	Description
DataSourceDef -> SchedulerAdminDataSource -> jdbcUrl	JDBC URL of the scheduler database schema
ProcessFlowAdminAppServer-> processFlowAdminUiUrl	Url of the process flow admin app
MiddlewareServerDef -> SchedulerAdminAppServer -> weblogicDomainName	Name of the WebLogic domain where the scheduler application is deployed.

Configuration Property	Description
MiddlewareServerDef -> SchedulerAdminAppServer -> weblogicDomainHome	WebLogic Domain home directory.
MiddlewareServerDef->SchedulerAdminA ppServer->weblogicDomainAdminServerP rotocol	By default the protocol is t3 and if configured to SSL then update to t3s.
MiddlewareServerDef -> SchedulerAdminAppServer -> weblogicDomainAdminServerUrl	WebLogic Admin server URL. Example: t3:// <serverhostname>:8001</serverhostname>
MiddlewareServerDef -> SchedulerAdminAppServer -> weblogicDomainAdminServerHost	Host name of WebLogic Admin server.
MiddlewareServerDef -> SchedulerAdminAppServer -> weblogicDomainAdminServerPort	WebLogic Admin server port.
MiddlewareServerDef -> SchedulerAdminAppServer -> weblogicDomainTargetManagedServerNa me	Managed Server name where the Scheduler application is deployed.
MiddlewareServerDef ->	Scheduler Admin app URL.
SchedulerAdminAppServer -> schedulerAdminUiUrl	http:// <serverhostname>:<managed server port>/bdi-scheduler</managed </serverhostname>
MiddlewareServerDef -> ProcessFlowAdminAppServer -> processFlowAdminUiUrl	BDI Process Flow app base URL. This URL will be used by the scheduler to connect to the process flow app to call process flows.
	Example: http:// <serverhostname>:8001/bdi-proc ess-flow</serverhostname>

- **2.** If you are migrating from the previous version, follow upgrade instructions for bdi-scheduler.
- **3.** Run the deployer script from the bdi-scheduler-home/bin directory. Use the -setup-credentials option to setup necessary credentials for the application and deploy.

bdi-scheduler-admin-deployer.sh -setup-credentials -deploy-scheduler-admin-app The deployer will prompt credentials for the following user aliases to be configured. Enter the corresponding username and password as required for each alias.

Alias Name	Description
bdiAppServerAdminServerUserAlias	WebLogic admin server credentials
bdiSchedulerAdminUiUserAlias	Credentials for the user with Admin Role for Scheduler Admin app
bdiSchedulerOperatorUiUserAlias	Credentials for the user with Operator Role for Scheduler Admin app
bdiSchedulerMonitorUiUserAlias	Credentials for the user with Monitor Role for Scheduler Admin app
bdiSchedulerAdminDataSourceUserAlias	Datasource credentials to connect to the Scheduler database schema

Alias Name	Description
processFlowAdminBaseUrlUserAlias	Credentials of the process flow admin app

4. If you have already configured the credentials and can use the same credentials (typically when redeploying the app), you can run the deployer with the -use-existing-credentials option as follows, and you will not be prompted for the credentials again for the deployment.

```
bdi-scheduler-admin-deployer.sh -use-existing-credentials -deploy-scheduler-admin-app
```

5. Restrict access to the bdi-scheduler-home folder:

```
cd bdi-scheduler-home
chmod -R 700 .
```

Verifying Installation

Perform the following procedure to verify the BDI Batch Scheduler installation:

- 1. Verify that the deployer script has run successfully with no error. The scheduler application would have been deployed to the target environment.
- 2. Launch the Scheduler admin app via the URL http://<host>:<port>/bdi-scheduler/
- **3.** Verify you are able to access the URL by logging in using the admin or operator role.
- **4.** Verify that the list of schedules (created from seed data) is displayed in 'Manage Schedules' page of the app.
- **5.** All schedules in BDI are in 'DISABLED' state by default. To enable the schedules, the user can enable them in the UI. Refer to Appendix B, "Appendix: Enabling BDI Schedules".
- 6. Ensure that all the schedules are in 'Disabled' status.
- **7.** A schedule can be in 'Disabled' status if no schedule action is loaded for the corresponding schedule or if the schedule action contains any forbidden keyword. The user needs to correct the schedule action and enable the schedule. For more details on this, please refer to the *Oracle Retail Bulk Data Integration Implementation Guide*.

0	Filter Schedu	le Name 🔹	Schedules with name like this		۹. ۲		Create Schedule
chedule Id	Schedule Name	Schedule Group	Schedule Start	Schedule Frequency	Schedule Next Run	Schedule Status	Schedule End
1	CodeDetail_Fnd_From_RMS_Schedule	CodeDetail	Sat Mar 12 00:00:00 GMT-06:00 2016	Daily	Thu Sep 29 00:00:00 GMT-06:00 2016	Active	Never
2	CodeHead_Fnd_From_RMS_Schedule	CodeHead	Sat Mar 12 00:05:00 GMT-06:00 2016	Daily	Thu Sep 29 00:05:00 GMT-06:00 2016	Active	Never
3	DeliverySlot_Fnd_From_RMS_Schedule	DeliverySlot	Sat Mar 12 00:10:00 GMT-06:00 2016	Daily	Thu Sep 29 00:10:00 GMT-06:00 2016	Active	Never
4	Diff_Fnd_From_RMS_Schedule	Diff	Sat Mar 12 00:15:00 GMT-06:00 2016	Daily	Thu Sep 29 00:15:00 GMT-06:00 2016	Active	Never
5	DiffGrp_Fnd_From_RMS_Schedule	Diff	Sat Mar 12 00:20:00 GMT-06:00 2016	Daily	Thu Sep 29 00:20:00 GMT-06:00 2016	Active	Never

Enabling Email Notification Alerts

Scheduler can send email alerts upon success or failure of schedule executions as specified in the schedule definitions. Email Recipients can be set in BDI_SCHEDULE_DEFINITION table at deployment time. The following configuration is required for Scheduler email notification.

Mail Session configuration in WebLogic, for scheduler email notification:

- **1.** Go to the WebLogic Admin console of the environment where the scheduler app is deployed.
- 2. Navigate to Services -> Mail Sessions.
- 3. Select 'New' to create a new mail session.
- **4.** Enter the following details:

Name: BdiSchedulerMailSession

JNDI name: mail/BdiSchedulerMailSession

Session Username: A valid email id, preferably email-id of an administrator.

Session password: The password for the above email id.

5. Enter the following in the JavaMail properties:

mail.smtp.ssl.enable=true

mail.smtp.auth=true

mail.smtp.ssl.trust=<company's smtp mail server host name>

mail.smtp.port=<mail server smtps port, typically is 465>

mail.transport.protocol=smtps

mail.smtp.host=<company's smtp mail server host name>

mail.from=<A valid email-id for 'from email address' when email is sent>

mail.to(Optional)=<List of valid recipients email-ids>

Web Session Mail.to property is used if no recipients set in BDI_SCHEDULE_ DEFINITION table.

Recipients can also be set from Manage Schedule tab in the Scheduler Application.

- **6.** Click Next. In the Mail Session Targets, select the managed server where the scheduler application is deployed.
- 7. Finish creating the mail session.

Note: For more information on configuring Mail sessions on WebLogic, see the *Oracle*® *WebLogic Administrator's Guide 12c Release*.

Scheduler Upgrade Steps

- 1. Download the BdiScheduler22.0.000ForAll22.x.xApps_eng_ga.zip from the RTG Wiki and extract.
- 2. Login to existing deployed Scheduler app.
- **3.** Go to Manage Configurations -> System Options and make following changes. LOADSEEDDATA = TRUE

- 4. Login to WebLogic console and delete the existing scheduler app.
- 5. Run the below command to upgrade and deploy the scheduler app.

```
Cd scheduler-home/bin
sh bdi-scheduler-admin-deployer.sh -use-existing-credentials
-run-db-schema-migration -deploy-scheduler-admin-app
```

bash-4.25 sh bdi-scheduler-admin-deployer.sh -use-existing-credential loqdj:HARN Neapendro: could be found for logger (com.oracle.retail.i loqd;HARN Please initialize the loqdj system properly. Persisting runtime credentials for alias bdi-scheduler-ui.AdminAccessS Prepare to use DB store for runtime credentials Preparing to store Runtime credentials on the DB store with appTag (bd Persisting runtime credentials to TB store persisting runtime credentials for alias bdi-scheduler-ui.OperatorAcce Persisting runtime credentials for alias bdi-scheduler-ui.OperatorAcce Persisting runtime credentials for alias bdi-scheduler-ui.MonitorAcces	ntegration.common.security.credential.CredentialStoreManager). cope to DB Store i=scheduler-ui.war) ssScope to DB Store
Persisting runtime credentials to DB store Persisting runtime credentials for alias processFlowAdminBaseUrlUserAl	ias to D8 Store
Persisting runtime credentials to DB store	
starting	

Nov 12, 2019 1:09:47 AM iava util logging_Logger\$info\$1 call INFO: Current Schema :	
and out of the series of the s	
······	
Version Details	
Nov 12, 2019 1:09:48 AM java util logging LoggerSinfoS1 call	
INFO: Current schema version :	
Nov 12, 2019 1:09:48 AM java_util_logging_Logger\$info\$1 call INFO: Upgrading to	

- 6. After successful deployment, bounce the scheduler managed server.
- 7. Login to scheduler and make sure no error is displayed in any of the pages.

Cluster Considerations

Modern business application requirements are classified by the abilities that the system must provide. This list of abilities such as availability, scalability, reliability, audit ability, recoverability, portability, manageability, and maintainability determine the success or failure of a business.

With a clustered system many of these business requirement abilities gets addressed without having to do lots of development work within the business application. Clustering directly addresses availability, scalability, recoverability requirements which are very attractive to a business. In reality though it is a tradeoff, clustered system increases complexity, is normally more difficult to manage and secure, so one should evaluate the pros and cons before deciding to use clustering.

Oracle provides many clustering solutions and options; those relevant to BDI are Oracle database cluster (RAC) and WebLogic Server clusters.

Scaling BDI

BDI needs to be scaled horizontally to handle large number of concurrent jobs. Single instances of Scheduler and Process Flow can be used since they are not resource intensive. Job Admin can be very resource intensive. To handle large number of concurrent jobs, multiple instances of Job Admin can be used to distribute jobs. WebLogic Server cluster that consists of multiple managed server instances provide horizontal scalability for Job Admin.

BDI on Cluster

As recommended above, for scaling BDI for large number of jobs, BDI components should be deployed to cluster. Following are some considerations to be taken into account when deploying BDI on cluster.

Logging

Issue

The "System Logs" tab in Scheduler, Process Flow, and Job Admin UIs show only logs from the server that UI is connected to.

Solution

Use a common log directory for each of the BDI components.

BDI components use the following directory structure for creating log files.

\$DOMAIN_HOME/logs/<server name>/<app name>

Example

\$DOMAIN_HOME/logs/server1/rms-job-admin.war

\$DOMAIN_HOME/logs/server2/rms-job-admin.war

- 1. Create a common log directory (e.g. /home/logs/jobadmin) for each BDI application.
- **2.** Create symbolic links to the common log directory for each server using the below command from \$DOMAIN_HOME/logs directory.

```
ln -s /home/logs/jobadmin
server1/rms-job-admin.war
ln -s /home/logs/jobadmin
server2/rms-job-admin.war
```

- **3.** If the directory \$DOMAIN_HOME/logs/<server>/<app> already exists, it needs to be deleted before symbolic link is created.
- 4. App needs to be restarted after symbolic link is created.

When WebLogic managed servers are in different machines a shared network disk has to be used.

Update Log Level

Issue

When log level is updated through UI or REST end point, it updates the log level only on the server it is connected to.

Solution

Log level needs to be updated through the URL of all the nodes in the cluster using UI or REST endpoint.

Example

http://server1:port1/bdi-rms-batch-job-admin/resources/system-setting/system-log s

http://server2:port2/bdi-rms-batch-job-admin/ resources/system-setting/system-logs

Create/Update/Delete System Options

Issue

When system options are created/updated/deleted using UI or REST end point, the changes are reflected only on the server that client is connected to.

Solution

The reset-cache REST endpoint needs to be invoked on the other nodes in the cluster for that application in BDI.

Example

http://server1:port1/bdi-rms-batch-job-admin/ resources/system-setting/reset-cache

Use curl command to reset cache as:

```
curl --user userId:password -i -X POST -H "Cot-Type:application.json"
http://server1:port1/rms-batch-job-admin/resources/system-setting/reset-cache
```

Create/Update/Delete System Credentials

Issue

When system credentials are created/updated/deleted using REST endpoint, the credentials are created/updated/deleted only on the server that client is connected to.

Solution

The REST endpoint that creates/updates/deletes credentials need to be invoked on all the nodes in the cluster for that application in BDI.

Example

```
http://server1:port1/rms-batch-job-admin/resources
/system-setting/system-credentials
http://server2:port2/rms-batch-job-admin/resources
/system-setting/system-credentials
```

Use curl command to create credentials on other nodes in the cluster as:

```
curl --user userId:password -i -X PUT -H "Content-Type:application/json"
http://server1:port1/bdi-rms-batch-job-admin/resources/system-setting/system-crede
ntials
```

```
-d '{"userAlias":"rmsappJobAdminBaseUrlUserAlias", "userName":"rmsjobadmin",
"userPassword":"xyzxyz"}'
```

Use curl command to update credentials on other nodes in the cluster as:

```
curl --user userId:password -i -X POST -H "Content-Type:application/json"
http://server1:port1/bdi-rms-batch-job-admin/resources/system-setting/system-crede
ntials
```

```
-d '{"userAlias":" reimappJobAdminBaseUrlUserAlias", "userName":"reimjobadmin" ,
"userPassword":"wwwqqqq"}'
```

Use curl command to delete credentials on other nodes in the cluster as:

-d '{"key":"rmsappJobAdminBaseUrl"}'

Scheduler Configuration Changes for Cluster

Perform the following procedure to cluster the Job Scheduler Data Source:

- **1.** Two data sources need to be created for scheduler on cluster in the Admin Console.
 - Create a non-XA data source (SchedulerTimerDs) pointing to the schema that contains the WEBLOGIC_TIMERS table. This is the schema with the WLS suffix, created using RCU.

Specify this schema in the scheduling tab of cluster configuration in WebLogic console.

 Create a non-XA data source (SchedulerRuntimeDs) pointing to schema that contains ACTIVE table. This is the schema with the WLS_RUNTIME suffix, created using RCU.

Specify this schema in the Migration tab of cluster configuration in the WebLogic console.

Perform the following steps to configure the data sources:

a. Specify the data source for schedule timers in the Admin Console.

- b. Login to Admin Console.
- c. Click Lock & Edit (For Production Mode only).
- d. Click Environment -> Clusters.
- e. Click the cluster name.
- f. Click Scheduling.
- g. Select SchedulerTimerDs for the Data Source For Job Scheduler field.
- h. Click Save.
- i. Click Migration.
- **j.** Select Migration Basis: DataBase, and Data Source For Automatic Migration: SchedulerRuntimeDs.
- k. Click Save.
- I. Verify Auto Migration Table Name populated with ACTIVE.
- m. Click Activate Changes.
- 2. Update the weblogic-ejb-jar.xml in WEB-INF folder of the bdi-scheduler-ui-<version>.war in <bdi-home>/dist folder with the contents shown (The entry in red is the change from the existing contents of the file)

Instructions to update

- a. cd dist
- b. jar xf bdi-scheduler-ui-<version>.war WEB-INF/weblogic-ejb-jar.xml
- c. Update the WEB-INF/weblogic-ejb-jar.xml with the contents below
- d. jar uf bdi-scheduler-ui-<version>.war WEB-INF/weblogic-ejb-jar.xml
- e. Delete dist/WEB-INF folder
- f. Deploy the scheduler application

```
<weblogic-ejb-jar xmlns="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar"</pre>
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
    <security-role-assignment>
        <role-name>AdminRole</role-name>
        <principal-name>BdiSchedulerAdminGroup</principal-name>
    </security-role-assignment>
    <security-role-assignment>
        <role-name>OperatorRole</role-name>
        <principal-name>BdiSchedulerOperatorGroup</principal-name>
    </security-role-assignment>
    <security-role-assignment>
        <role-name>MonitorRole</role-name>
        <principal-name>BdiSchedulerMonitorGroup</principal-name>
    </security-role-assignment>
    <timer-implementation>Clustered</timer-implementation>
</weblogic-ejb-jar>
```

8

BDI Migration

To accelerate the application performance, following indexes are created on the listed tables in JobAdmin, Processflow and SchedulerAdmin applications.

Process Flow Admin

Table Name	Index Name
BDI_ACTIVITY_EXEC_INSTANCE	INDX_ACTIVITY_EXEC_INSTANCE_1
BDI_PROCESS_EXEC_INSTANCE	INDX_PROCESS_EXECUTION_1
	INDX_PROCESS_EXECUTION_2
	INDX_PROCESS_EXECUTION_3
BDI_PROCESS_CALL_STACK	INDX_PROCESS_CALL_STACK_1
	INDX_PROCESS_CALL_STACK_2

Scheduler Admin

Table Name	Index Name
BDI_SCHEDULE_EXECUTION	INDX_SCHEDULE_EXEC_1
	INDX_SCHEDULE_EXEC_2
	INDX_SCHEDULE_EXEC_3
	INDX_SCHEDULE_EXEC_4

Job Admin

Table Name	Index Name
BDI_DWNLDR_IFACE_MOD_DATA_CTL	INDX_DNLDR_IFACE_MD_DAT_CL_1
	INDX_DNLDR_IFACE_MD_DAT_CL_2
	INDX_DNLDR_IFACE_MD_DAT_CL_3
BDI_DWNLDR_TRNSMITR_EXE_DSET	INDX_DT_TRANSMITR_EXE_DSET_1
	INDX_DT_TRANSMITR_EXE_DSET_2
	INDX_DT_TRANSMITR_EXE_DSET_3
	INDX_DT_TRANSMITR_EXE_DSET_4

Table Name	Index Name
BDI_UPLOADER_TRANSACTION	INDX_UPLOADER_TRANSACTION_1
	INDX_UPLOADER_TRANSACTION_2
BDI_RECEIVER_TRANSACTION	INDX_RECV_TRANSACTION_1
BDI_RECEIVER_TRANSMISSION	INDX_RECEIVER_TRANSMISSION_1
BDI_UPLDER_IFACE_MOD_DATA_CTL	INDX_UPLDR_IFACE_MD_DAT_CL_1
	INDX_UPLDR_IFACE_MD_DAT_CL_2
BDI_UPLOADER_EXE_DATASET	INDX_UPLOADER_EXE_DATASET_1
	INDX_UPLOADER_EXE_DATASET_2

Migration Steps

During migration from 16.0.025 to 16.0.027, to accommodate for the above-created indexes run the following SQL scripts against respective schemas as listed below.

Name	File Location	Database Schema for Execution
migrate-schema-from-16.0.0 25-to-16.0.027.sql	bdi-process-home/setup-da ta/ddl/migration	Processflow Schema

Note: If both integration schema and receiver schema are same, do not run the migration script twice from

bdi-<edge>-app-job-home/setup-data/ddl/migration.

If both schemas are different, the user may see the "SQL Error: ORA-00942: table or view does not exist" for the table that does not exist on that schema.

For migrating from any version older than 16.0.025, the user needs to run the migration scripts incrementally.

A

Appendix: Integrating BDI-RMS with External Applications

This section provides guideline for integrating External application with RMS using BDI.

Installation Instructions

- **1.** Additional entries are to be added in BDI-RMS configuration file to integrate bdi-rms with bdi-external.
- Copy the Job xmls from: bdi-edge-rms-job-home/setup-data/available-jobs-for-external-app-integration to the folder bdi-edge-rms-job-home/setup-data/META-INF/batch-jobs/.

```
cd bdi-edge-rms-job-home/setup-data/
cp available-jobs-for-external-app-integration/*.* META-INF/batch-jobs/
Install bdi-edge-rms application by following instructions in the section Deploying BDI RMS Batch Job Admin on the WebLogic.
```

4. To Install bdi-external application follow the instruction in the section Deploying BDI Batch Job Admin Application for a Receiver Application.

Appendix: Enabling BDI Schedules

This section provides guideline to update the status of BDI Schedules.

Schedule Status Update Instructions

All the BDI schedules are in DISABLED state by default after installation. So the user should make the required schedules ACTIVE as per the requirement. To enable the schedule the user can either User interface or the ReST end point.

To enable the schedule using the User Interface:

- 1. Login to the BDI scheduler web application.
- 2. Navigate to the Manage Schedules tab.

Schedule Summa	ry Manage Schedules Schedule Executions	Manage Configurations System	Logs				
lat of Schedules	(128)						
0	Filter Schedule Name v Schedule	name like this	۰ و			Create Sch	edule
Schedule Id	Schedule Name	Schedule Group	Schedule Start	Schedule Frequency	Schedule Next Run	Schedule Status	Schedule End
,	Store_Find_From_FMS_Schedule	Store	Tue Oct 22 05 22 43 POT 2019	Dely	No Next Run	Disabled	Never
2	Store_Find_From_EXTERNAL_Schedule	Store	Tue Oct 22 05:22:43 POT 2019	Daily	No Nett Run	Disabled	Never
3	DBGp_Fnd_From_RMS_Schedule	Diffuip	Tue Oct 22 05 22 46 POT 2019	Delty	No Nett Run	Disabled	Never
4	DRGp_Fng_From_EXTERNAL_Schedule	DiffSig	Tue Oct 22 05 22 46 807 2019	Daily	No Next Run	Disabled	Never

- 3. Select the Schedule in the List of Schedules table.
- 4. Go to the Schedule Detail Tab below the table.
- 5. Click on the Enable Schedule Icon on the top right of the Schedule Detail Panel.

Store_fiel_form_0081_bitedum Store Tel 0022 all 0522 a	1 Description (root, bit back or provided in the constraint or provided in the constra	1 Derry fred, from, bit Schoole Bits of 102 2019 Der 2019 <thder 2019<="" th=""> Der 2019 <thd< th=""><th>ld .</th><th>Schedule Name</th><th>Schedule Group</th><th>Schedule</th><th>Schedule Frequency</th><th>Schedule Next Run</th><th>Schedule Status</th><th>Schedule End</th></thd<></thder>	ld .	Schedule Name	Schedule Group	Schedule	Schedule Frequency	Schedule Next Run	Schedule Status	Schedule End
2 Start, free, from, DUESMA, Unexae Stare 6222 al. (2223) Data Number Name Number N	2 Struct, Ind, Ford, Dist Disk, Disease Struct Struct Struct Struct New 3 DBDSy, Ford, Ford, Structure DBSSy DBSSy, Ford, Ford, Structure DBSSy DBSSy, Ford, Ford, Structure New	2 Struct_Net_Non_CDCERN4_Stream Store Strict_Dirac Date New 3 DRDsp.fml_fram_Net_Netware DRDsp.fml_fram_Net_Netware DRDsp.fml_fram_Net_Netware Networe		Store_Find_From_FBMS_Schedule	Store	05:22:43	Daily		Disabled	Never
3 DBGrp_frid_from_5485_Schedule DBGrp 092244 Daly Rain Daabed Newr POT 2019 Te 00122 4 Te 00122	3 DR0p_fref_rom_bits_bitseta DR0p 69.22 /ml Data Dataent New 4 DR0p_fref_rom_bitSMA_shoesa DR0p 69.22 /ml Data Dataent New	3 DRDSy_ring_roup_sols_benedue DRDSp r02224 r02279 Davisy r02279 Davisy r0279 Davisy r0279 <thdavisy r0279<="" th=""> Davisy r</thdavisy>	2	Store_Find_From_DITESNAL_Schedule	Store	05 22 43	Daily		Disabled	Never
	4 DBDp_fret_from_DDEER44_Streade DBDp 05224 Day Rolled Red Rever	4 DBSp.fm.f.foru_DDEBAL_Service DBSp 0522.4 Day NDBeE New Normal DBSp 0522.4 Day NDBEE New New Normal DBSp.fm.f.foru_DDEBAL_Service New Normal DBSp.fm.fm.fm.fm.fm.fm.fm.fm.fm.fm.fm.fm.fm.	3	DBGp_Fnd_Fron_RMS_Schedule	D#Gp	05 22 46	Delty		Disabled	Never
	Name and Annual Statements and Annual Statements		4	D#Grp_Find_From_EXTERNAL_Schedule	Officia	05.22.46	Daity		Disabled	Never
2908	C O S									
2908	To Enable Schunder	Basic Info Schedule Action			Schedule Add	on.				

To enable/disable multiple schedules using ReST end point:

The ReST end point allows user to update status of one or more schedules in a single request.

The ReST end point returns response at schedule level.

Valid input value for scheduleStatus is: ACTIVE and DISABLED

ReST End Point Name: activateOrDisable-schedules

Method Name:

activateOrDisableSchedules

Type:

POST

Sample Request:

```
{
   "scheduleStatusVo": [{
    "scheduleName": "CodeDetail_Fnd_From_RMS_Schedule",
    "scheduleStatus": "ACTIVE"
},
   "scheduleName": "CodeHead_Fnd_From_RMS_Schedule",
    "scheduleStatus": "ACTIVE"
}
]
```

Sample Response: