



# Java IC Installation

Oracle FLEXCUBE Universal Banking

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## 1. Java IC Installation

### 1.1 Introduction

This document lists steps to configure Application Server for JAVA IC Integration with FCUBS.

### 1.2 Prerequisites

Java IC installation requires a Weblogic domain.

Note: In the following sections, 10.10.10.10 IP address and 1010 port are used as an example. Please use valid IP and Port of corresponding server.

### 1.3 Server Setup

Java IC Setup includes two sets of services:

1. **INFRA Services:** There are two services under this category.
  - a. **Discovery Service:** This service is required for Java IC Services Registration. On start-up all Java IC services will be registered with Discovery Service. The registered services can make inter service calls by making use of Discovery Service.  
**Service Name: plato-discovery-services.war**
  - b. **Config Service:** All the configuration related details will be stored in a database table (table name: PROPERTIES). Config service provides the required configuration details for the corresponding Java IC Services during service start up.  
**Service Name: plato-config-services.war**
2. **Java IC Services:** These Services are Java IC Functional Services. E.g.: CALC Service, ACCR service, LIQD Service etc.

INFRA services and Java IC Services must be deployed on two separate Managed Servers (Any name can be given to Managed Servers).

1. **ConfigServer:** In this managed server, INFRA Services should be deployed (plato-discovery-services.war and plato-config-services.war).
2. **JavalCServer:** In this managed server, all the Java IC services should be deployed.

Following Data Sources have to be created for INFRA and Java IC Services:

Data Source JNDI Name	Type	Targets
jdbc/OBIC	Non-XA Datasource	JavalCServer

<b>jdbc/FCUBS</b>	Non-XA Datasource	JavalCServer
<b>jdbc/PLATO</b>	Non-XA Datasource	JavalCServer, ConfigServer
<b>jdbc/PLATOBATCH</b>	Non-XA Datasource	JavalCServer

Below line must be included in setDomainEnv.cmd or setDomainEnv.sh of the Weblogic domain:

#### For Linux Server:

```
JAVA_OPTIONS="${JAVA_OPTIONS} ${JAVA_PROPERTIES} -Dflyway.enabled=false -
Dspring.flyway.enabled=false -Dplato.services.config.uri=http://<config-server-ip>:<config-
server-port> -Dplato.service.logging.path=<Debug Path where Logs are to be written>" -
Dserver.id=<server id>
```

```
export JAVA_OPTIONS
```

E.g.:

```
JAVA_OPTIONS="${JAVA_OPTIONS} ${JAVA_PROPERTIES} -Dflyway.enabled=false -
Dspring.flyway.enabled=false -Dplato.services.config.uri=http://10.10.10.10:1010 -
Dplato.service.logging.path=/mnt/FC144/ICLogs" -Dserver.id=1
```

```
export JAVA_OPTIONS
```

#### For Windows Server:

```
set JAVA_OPTIONS=%JAVA_OPTIONS% %JAVA_PROPERTIES% -
Dplato.services.config.uri=http://<config-server-ip>:<config-server-port> -Dflyway.enabled=false -
Dspring.flyway.enabled=false -Dplato.service.logging.path=<Debug Path where Logs are to be
written> -Dserver.id=<server id>
```

E.g.:

```
set JAVA_OPTIONS=%JAVA_OPTIONS% %JAVA_PROPERTIES% -Dflyway.enabled=false -
Dspring.flyway.enabled=false -Dplato.services.config.uri=http://10.10.10.10:1010 -
Dplato.service.logging.path=D:/ICLogs -Dserver.id=1
```

server id parameter should be a number used to uniquely identify an application instance. If only one deployment of a service is present then this value has to be set to 1. In case of multiple deployment, number from 1 to the number of instances can be assigned to the server where deployment is done.

Alternatively, if the parameters are to be set specific to a Managed Server where Services are deployed, then these properties can be set in Servers->Managed Server->Server Start in the argument section. Note: It will be useful only if Node-Manager is used to start managed servers.

<b>BEA Home:</b>	<input type="text"/>	The BEA home directory (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>Root Directory:</b>	<input type="text"/>	The directory that this server uses as its root directory. This directory must be on the computer that hosts Node Manager. If you do not specify a Root Directory value, the domain directory is used by default. <a href="#">More Info...</a>
<b>Class Path:</b>	<div style="border: 1px solid black; height: 40px;"></div>	The classpath (path on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>Arguments:</b>	<div style="border: 1px solid black; padding: 5px;"> -Dflyway.enabled=false -Dspring.flyway.enabled=false -  Dplato.services.config.uri=http://10.10.10.10:1010 -  Dplato.service.logging.path=D:/ICLogs -Dserver.id=1 </div>	The arguments to use when starting this server. <a href="#">More Info...</a>
<b>Security Policy File:</b>	<input type="text"/>	The security policy file (directory and filename on the machine running Node Manager) to use when starting this server. <a href="#">More Info...</a>
<b>User Name:</b>	<input type="text"/>	The user name to use when booting this server. <a href="#">More Info...</a>
<b>Password:</b>	<input type="password"/>	The password of the username used to boot the server and perform server health monitoring. <a href="#">More Info...</a>
<b>Confirm Password:</b>	<input type="password"/>	
<input type="button" value="Save"/>		

## 1.4 WAR Deployment after Build

As part of FCUBS EAR build, in addition to FCUBS EAR, Java IC wars and Java IC INFRA wars will get copied into the destination location.

Below are the locations where the wars will be copied after build:

1. **FCUBS Application EAR and All Adapter EARs:** Available in the destination folder.
2. **INFRA Service WARs:** plato-discovery-services war and plato-config-services war will be available in the destination folder.  
Deploy all the INFRA Service WARs in **ConfigServer**.
3. **Java IC Service WARs:** All the Java IC Service WARs will be copied in "IC" folder under the destination folder.  
Deploy all the Java IC Service WARs are in **JavalCServer**.

### Note:

**obic-interest-allocate-services and obic-interest-batch-services wars currently do not support multiple deployments. Only one instance of these services are to be deployed.**

## 1.5 Order of Server Start

After deployment or server restart, services have to be started in following sequence:

- a. plato-config-service
- b. plato-discovery-service
- c. Java IC Services

When servers are restarted, ensure to start **ConfigServer** first and then then **JavalCServer**.

On every restart of **ConfigServer**, plato-discovery-service must be stopped and started. This is required as Discovery requires properties entries for self-registration to be picked from plato-config-service.

In order to check if all the services have started, below discovery URL can be checked:

<http://<config-server-ip>:<config-server-port>/plato-discovery-service>

E.g.:

<http://10.10.10.10:1010/plato-discovery-service>

All the deployed Java IC Services should get listed in the service discovery URL.

## 2. Java IC Maintenance in FCUBS

### 2.1 Required Maintenance for Java IC:

Below maintenances are required in FCUBS

1. Properties Maintenance (CSDPROPM):

- a. Launch the screen and query for entry present in LOV for Reference Number:

Unlock Authorize Enter Query

Reference Number 10101096 Update Service Details Service All

Service URL http://10.10.10.10:1010/plato-discovery-service/eureka

Service Port 1010

Service Names

Service Name	Service Description
<input checked="" type="checkbox"/> fcubs-ext-accounting-services	fcubs ext accounting services
<input type="checkbox"/> obic-charge-calc-services	obic charge calc services
<input type="checkbox"/> obic-intchg-actgng-services	obic intchg actgng services
<input type="checkbox"/> obic-interest-accrual-services	obic interest accrual services
<input type="checkbox"/> obic-interest-allocate-services	obic interest allocate services
<input type="checkbox"/> obic-interest-batch-services	obic interest batch services

Service Details

Key	Value
<input checked="" type="checkbox"/> plato.services.eureka.uri	http://10.10.10.10:1010/plato-discovery-service/eureka
<input type="checkbox"/> server.port	1010
<input type="checkbox"/> plato.services.entityservices.port	1010

Maker LIJ004 Date Time: 2014-01-01 12:40:59 Mod No 42 Record Status Open

Checker Date Time: Authorization Status Unauthorized Exit

- b. Unlock the screen, Select All for “Update Service Details” and update the Service URL and Service Port to as below:

Service URL: <http://<config-server-ip>:<config-server-port>/plato-discovery-service/eureka>

Service Port: JavaICServer Managed Server Port

2. External Service Maintenance (IFDEXSER):

Prior to this step, user must maintain external system “OBIC” in CODSORCE screen.

User has to query for External System “OBIC” in IFDEXSER and following details have to be modified:

- a. Rest Service IP: The server IP where **obic-interest-batch-services.war** has been deployed.
- b. Rest Service Port: The Managed Server port where **obic-interest-batch-services.war** has been deployed.
- c. External User: User ID of the Flexcube user used for invoking the Java IC Services.

External Service Maintenance

Save

External System \* OBIC  
System Type Default  
External User \* OBICUSER

External Application

1 Of 1

Type	Service Name	WS Endpoint URL	Rest Service Context	Rest Service IP	Rest Service P
REST request	ICEodBatchService		obic-interest-batch-services	10.10.10.10	1010

Maker  
Checker

Date Time:  
Date Time:

Mod No 11

Record Status Open  
Authorization

Ok Cancel

### 3. IC Param Maintenance (ICDPARAM):

Launch the screen and unlock and modify the parameters.

Interest Charges Parameters

Parameters

1 Of 1

Parameter	Param Value
DB_Acntg_Commit_Freq	200
DB_Acntg_Fetch_Size	2000
IC_Multi_Dest_Ahof	N
Java_Batch_Sleep_Time	5
PLSQL_Parallel_Sleep_Time	30

Change Log

Maker SYSTEM  
Checker SYSTEM

Date Time: 2014-01-01 17:28:51  
Date Time: 2014-01-01 17:29:29

Mod No 5

Record Status Open  
Authorization Authorized  
Status

Exit

Below are the parameters which can be configured as per requirement:

PARAM_NAME	PARAM_VAL	Description
JAVA_BATCH_SLEEP_TIME	5	Sleep time in seconds to verify the status of Java IC service submitted



SKIP_OBIC_ACNTG_ERR	O	O -Mark the accounting failures and complete the EOC batch, E - Fails the EOC batch when getting any accounting failures.
IC_JOB_SLEEP_TIMER	30	Sleep time to check the status of IC parallel streams - Conventional IC
JAVA_RETRY_COUNT	150	Maximum retry count to fail the EOC batch when the submitted java service is not picked up by scheduler
RESOLVE_MAX_TRY_WITHOUT_FAIL	5	Maximum retry to obtain account lock for resolution
DB_ACNTG_COMMIT_FREQ	200	IC Accounting Commit Frequency
DB_ACNTG_FETCH_SIZE	2000	IC Accounting Fetch Size

4. PLATO\_LOGGER\_PARAM\_CONFIG has to be updated with the log path for IC logs corresponding to LOG\_PATH param value.
5. After the above maintenances, restart FCUBS Application and all the servers in the order mentioned in the section 1.5

## 2.2 Scheduler Job for Triggering IC EOD in FCUBS:

A new Scheduler Job “ICEOD\_BATCH” has been introduced in order to trigger IC EOD in Flexcube. After the above maintenances are done, resume ICEOD\_BATCH Job from SMSJOBBER screen before triggering FCUBS EOD:

Job Details

Save Reset

Case Sensitive

Job Name: \_\_\_\_\_ Job Group: \_\_\_\_\_

State: \_\_\_\_\_ Next Fire Time: \_\_\_\_\_

Scheduler: \_\_\_\_\_

Records per page: 15 First Previous 2 Of 4 Next Last Go Lock Columns: 0

<input type="checkbox"/>	Job Name	Job Group	State	Next Fire Time	Scheduler	Error
<input type="checkbox"/>	EXT_ASYNCALL	EXTSYS	Scheduled	3/17/2020 4:04:18 PM	SchedulerFactory	
<input type="checkbox"/>	FCRTLRequest	RTL	Not Scheduled		SchedulerFactory	
<input type="checkbox"/>	FCUBS_FGL	FCUBS_FGL	Scheduled	3/17/2020 4:04:17 PM	SchedulerFactory	
<input type="checkbox"/>	FGEXTACT	FGEXTACT	Paused	3/16/2020 6:54:19 PM	SchedulerFactory	Internal Server Error
<input type="checkbox"/>	FILE_UPLOAD	NOTIF	Paused	3/16/2020 6:55:18 PM	SchedulerFactory	Internal Server Error
<input type="checkbox"/>	GIUPLOAD	GIUPLOAD	Not Scheduled		SchedulerFactory	
<input checked="" type="checkbox"/>	ICEOD_BATCH	EXTSYS	Scheduled	3/17/2020 4:04:18 PM	SchedulerFactory	
<input type="checkbox"/>	ITALRM	PLSQL	Scheduled	3/17/2020 4:04:07 PM	SchedulerFactory	
<input type="checkbox"/>	ITPURGE	PLSQL	Scheduled	3/17/2020 6:54:17 PM	SchedulerFactory	
<input type="checkbox"/>	ITSPNDARC	PLSQL	Scheduled	3/26/2020 6:54:17 PM	SchedulerFactory	
<input type="checkbox"/>	ITSPNDCAT	PLSQL	Scheduled	3/17/2020 4:24:17 PM	SchedulerFactory	

Pause | Resume

Exit

**Note:**

1. If execution preference for TD is Java then FCEODJ\_BATCH job has to be scheduled instead ICEOD\_BATCH.
2. ICEOD\_BATCH Job Scheduler interval is set by default as 5 seconds and shouldn't be maintained lesser than 5 seconds.
3. ICEOD\_BATCH Job has been released with start-up mode as Manual. Hence after every deployment of FCUBS application or restart of server, the job needs to be manually scheduled.
4. Before triggering UBS EOD job kindly ensure that ICEOD\_BATCH Job is running.

### 3. IC End of Day Batches

Following batches must be maintained for Interest processing.

For End OF Transaction Input stage following batches must be maintained in the given order.

Other batches of EOC in this stage should have sequence number less than IC batch sequence number (below listed IC batches should be after all non IC batches).

EOC Group	Batch Name	Module	Frequency	Maintenance order
End OF Transaction Input	ACBCUTOF	AC	D	1
End OF Transaction Input	ICBCUTOF	IC	D	2
End OF Transaction Input	ICJRPBAT	IC	D	3
End OF Transaction Input	ICBRESOL	IC	D	4
End OF Transaction Input	TDEOD	IC	D	5
End OF Transaction Input	ICBEOD	IC	D	6
End OF Transaction Input	DABHOFF	AC	D	7

No Other batch should be configured in between the above batches and all the batches of EOC in End OF Transaction Input stage should be of lower sequence number.

For Beginning of the day stage following batches to be maintained in the given order. Other batches of EOC in this stage should have a sequence number less than these batches (below listed IC batches should be after all non IC batches).

EOC Group	Batch Name	Module	Frequency	Maintenance order
Beginning of the Day	ICBOD	IC	D	1
Beginning of the Day	TDEOD	IC	D	2
Beginning of the Day	DABHOFF	AC	D	3



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