

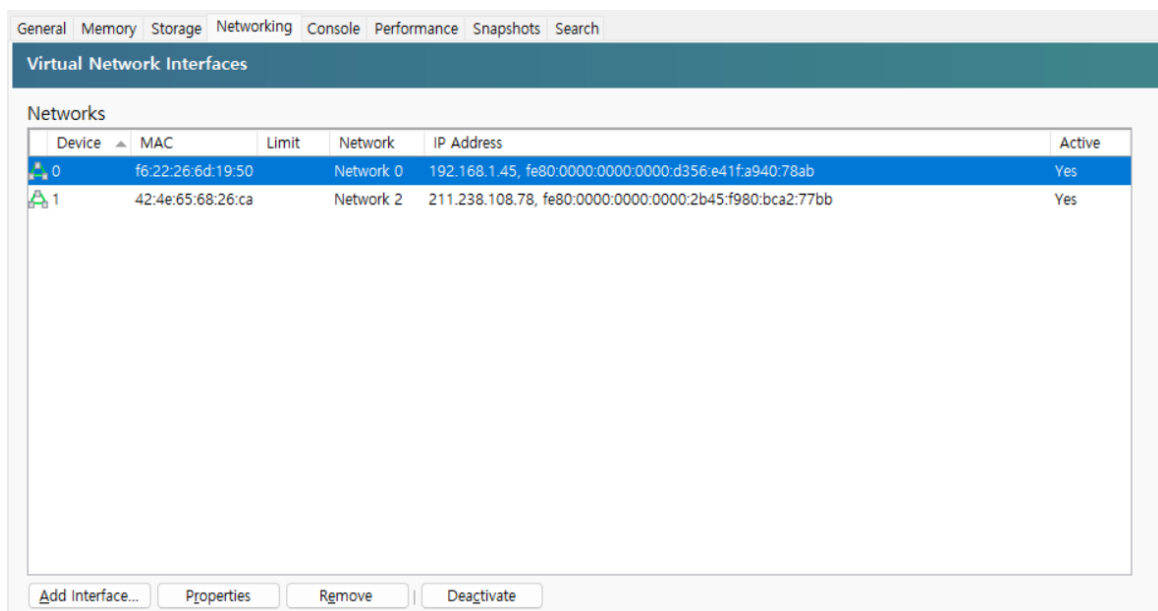
[webMethods.io] DB-to-DB Workflow Tutorial

References

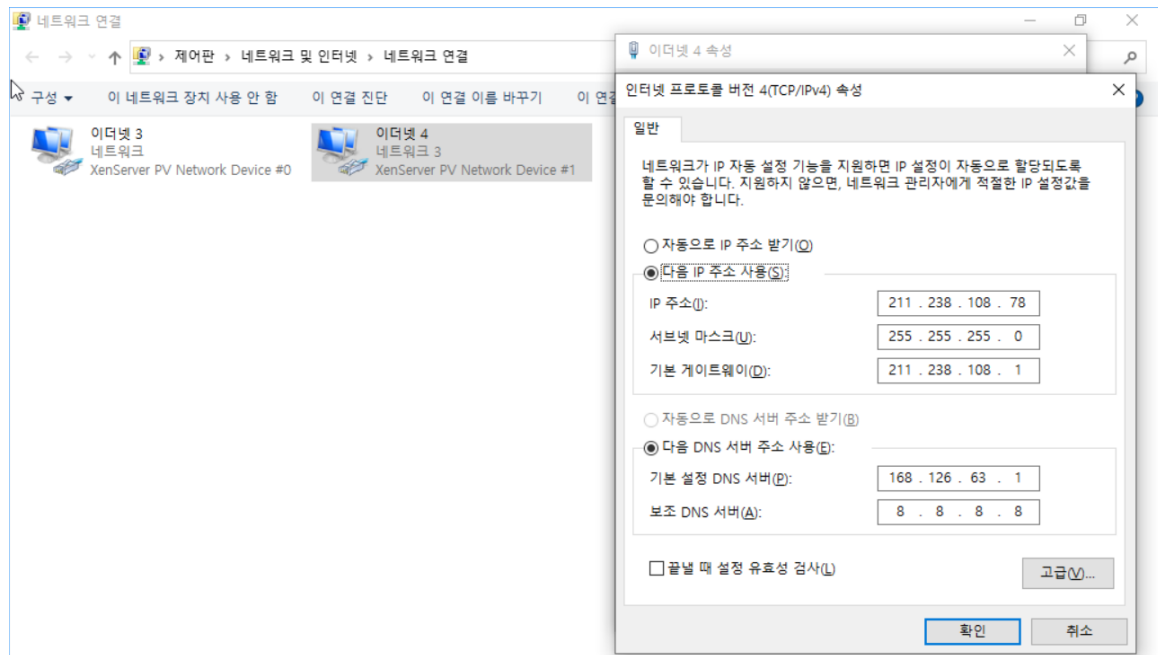
- [webMethods.io Integration \(Notion\)](#)
- [webMethods.io Documentation \(Database Connector\)](#)

• 사전 구성

- Database Server 설치 & 구성
 - 해당 서버는 외부 인터넷 망에서 접속 가능한 공인 IP 또는 도메인 설정 필요
- 공인 (Static) IP 구성 예시
 - VM 의 네트워크 인터페이스 추가 후 Static IP 설정

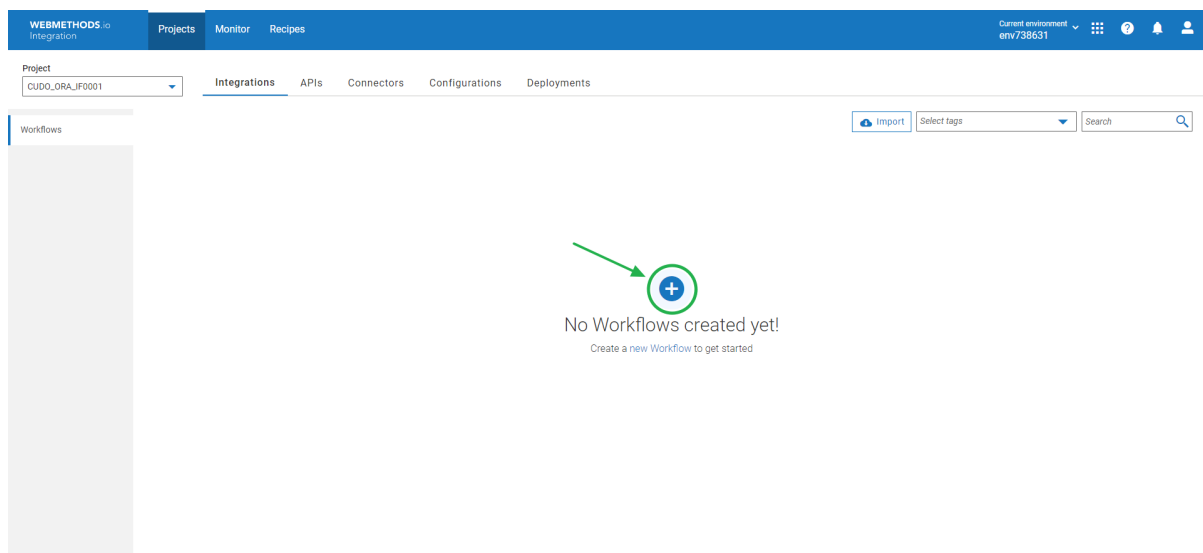


Database가 설치 된 VM 의 Virtual Network Interface 구성 (Xen, XCP-ng 기준)



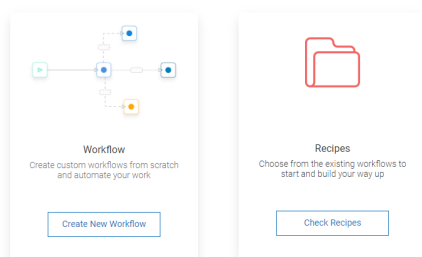
Window 10 기준 Static IP 설정 예시

STEP 1. Custom Workflow 생성

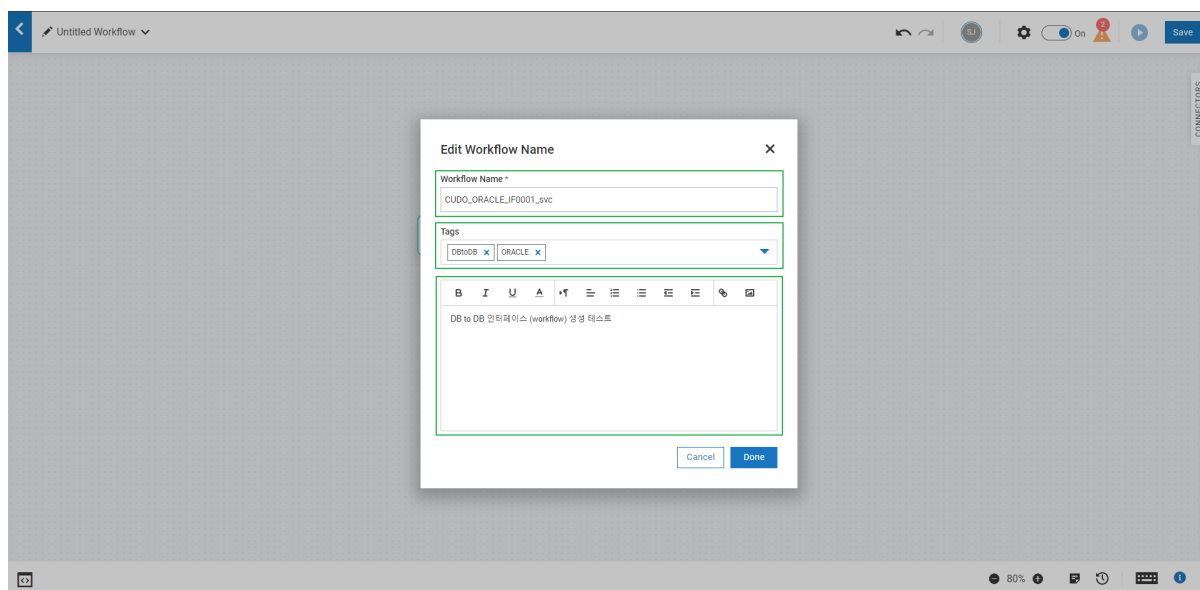


STEP 1-1. Create Workflow

Start Building your Workflow

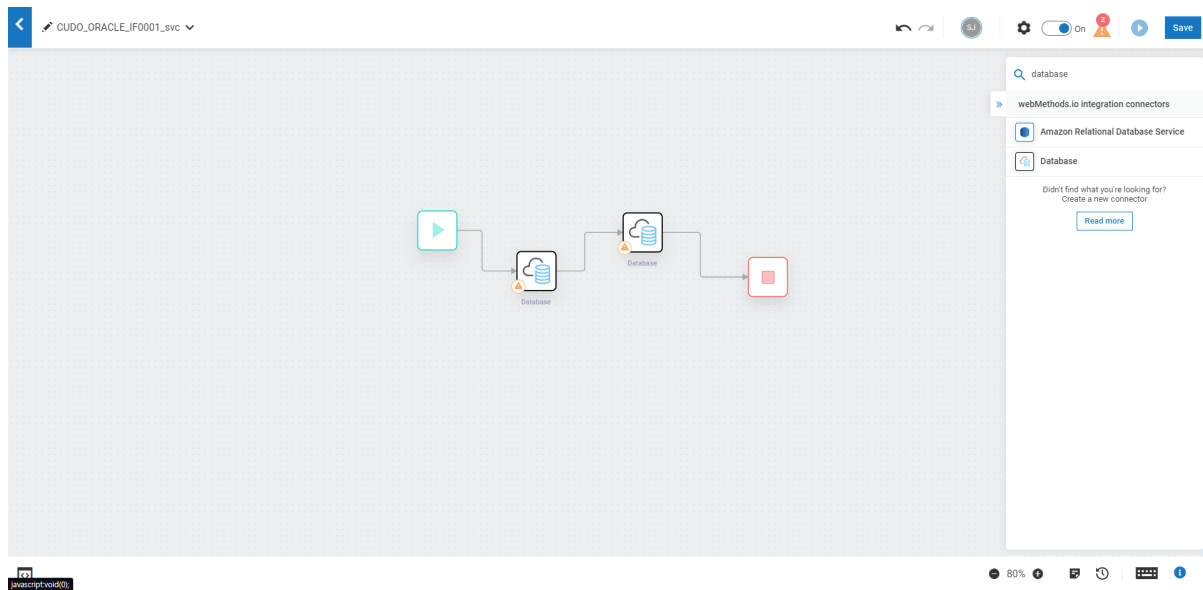


STEP 1-2. Workflow 생성 방식 설정 (Workflow 선택)

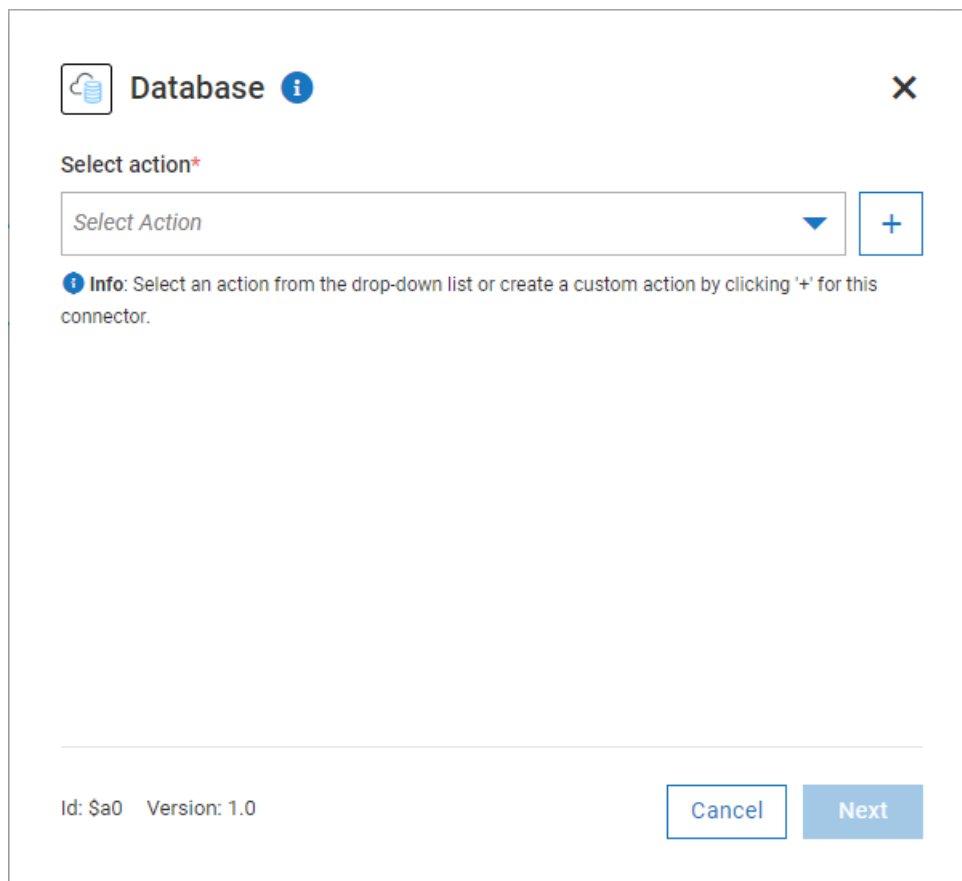


STEP 1-3. Workflow 이름 변경 (좌측 상단 ✎ 클릭)

STEP 2. Database Connector - Connection 설정

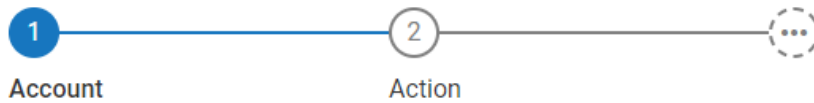


STEP 2-1. Database Connector 검색 후 Drag & Drop



STEP 2-2. 각 Connector 의 ⚠ 를 클릭하여 (생성 한 Custom Action 이 없을 시 + 버튼으로 생성)

Add custom action - CUDO_ORA_IF0001_Select



Account

Name *

CUDO_ORA_IF0001_Select 22/36

Description

ORACLE DB 에서 Select 하는 Custom Action (Adatper Service) 34/150

Connect to account Database *

Select account ▼ +

Cancel

Next

STEP 2-3. Custom Action 추가 (생성 한 Connection이 없을 시 + 버튼으로 커넥션 생성)

Add account ⓘ

1

Account

2

Test and review

Name *

CUDO_ORA_Connection

19/36

Info: Account name should not start with a number or any special character and max limit should be 36.

Description

Local (211.238.108.78) 서버의 Oracle Database와의 커넥션

48/150

Basic configuration

Cancel

Previous

Save

Next

STEP 2-4. Account 생성 1 - Connection 명, Description 설정

Add account ⓘ

Basic configuration

Database *

Oracle

Transaction Type *

Select transaction type

Server Name *

211.238.108.78

User *

sjh

Database Name

xel

Driver Group *

Select driver group

+

DataSource Class *

Select datasource class

Password *

...

Port Number

1521

Cancel

Previous

Save

Next

Add driver

Database *

Oracle

Driver group *

ORACLE_OJDBC_8_JAR

Select the driver *

Browse files

1 file uploaded × Clear all

ojdbc8.jar ×

Cancel

Save

Add account

Basic configuration

Database *

ORACLE

Transaction Type *

NO_TRANSACTION

Server Name *

211.238.108.78

User *

sjh

Database Name

xe

Driver Group *

ORACLE_OJDBC_8_JAR

+

DataSource Class *

oracle.jdbc.pool.OracleDataSource

Password *

...

Port Number

1521

Cancel

Previous

Save

Next

STEP 2-5. Account 생성 2 (Basic Configuration) - Driver 설정 (+ 버튼을 눌러 DB 버전에 호환되는 JDBC 드라이버 등록)

^ Advanced configuration

Truststore Alias

Network Protocol

Other properties

Property name

Property value

[Cancel](#) [Previous](#) [Save](#) [Next](#)

STEP 2-6. Account 생성 3 (Advanced Configuration) - Network Protocol, Other Properties 설정

Add account

Account		Other properties
Name	CUDO_ORA_Connection	Database ORACLE
Transaction Type	NO_TRANSACTION	Driver Group ORACLE_OJDBC_8_JAR
User	sjh	DataSource Class oracle.jdbc.pool.OracleDataSource
Truststore alias		Server Name 211.238.108.78
Description	Local (211.238.108.78) 서버의 Oracle Database와의 커넥션	Database Name xe
		Port Number 1521
		Network protocol tcp

[Cancel](#) [Previous](#) [Enable](#)

STEP 2-7. 생성 된 Account - Other Properties 탭을 클릭하여 테스트 가능

Add account



Test connection

Overview

Account

Other properties

driverType
thin

Cancel Previous **Enable**

Add account



 Success: Test Account is successful.

Dismiss

Overview

Account

Other properties

driverType
thin

Cancel Previous **Enable**

STEP 2-8. Connection 테스트 예시 화면 - 테스트 후 Enable 하여 Connection 활성화

STEP 3. 생성 된 Connection 을 사용하여 Custom Action 설정 (SELECT 예시)

Add custom action - CUDO_ORA_IF0001_Select



Account

Name *

CUDO_ORA_IF0001_Select 22/36

Description

ORACLE DB 에서 Select 하는 Custom Action (Adatper Service) 94/150

Connect to account Database *

CUDO_ORA_Connection ▼ +

Cancel

Next

STEP 3-1. Connection 설정 후 NEXT

Add custom action - CUDO_ORA_IF0001_Select

Account Action Tables Joins Data fields Condition Parameters Summary

Select the action

Name	Description
<input type="radio"/> Batch Insert	Inserts a large volume of data into a single table.
<input type="radio"/> Batch Update	Updates a large volume of data in a single table.
<input type="radio"/> Custom SQL	Performs database operation where the column values can be set at run-time. You can use '?' as the value placeholder for each column in the Custom SQL.
<input type="radio"/> Delete	Deletes rows from a database table.
<input type="radio"/> Dynamic SQL	Performs database operation where the complete SQL query or a part of SQL query can be set at run-time. You can pass the part of SQL at runtime using '\${input_field_name}' as the placeholder in the Dynamic SQL.
<input type="radio"/> Insert	Inserts new information into a database table.
<input checked="" type="radio"/> Select	Retrieves specified information from the database table.
<input type="radio"/> Stored Procedure	Calls a Stored Procedure. Introspects the stored procedure and obtains the stored procedure's input/output parameters.
<input type="radio"/> Update	Updates the existing information in a database table.

Cancel Previous Next

STEP 3-2. Action 설정 - Adatper Service 설정 과 동일

Add custom action - CUDO_ORA_IF0001_Select

Account Action Tables Joins Data fields Condition Parameters Summary

Table, Views, Synonyms


+
No table added so far.
Add a new table to get started

















Cancel Previous Save Next

Add tables



Select Tables, Views, Synonyms



Search by name 

Name	Type
  <current catalog>	
  <current schema>	
<input checked="" type="checkbox"/>  SELECTTABLE	TABLE
<input type="checkbox"/>  TESTTABLE	TABLE
  ANONYMOUS	
  APEX_040000	
  APEX_PUBLIC_USER	
  APPQOSSYS	
  ASY	

Cancel

Add

STEP 3-3 Add Table

 Add custom action - CUDO_ORA_IF0001_Select 



Data fields



No data fields added so far.

[Add a new data field](#) to get started

Cancel Previous Save Next

Add data fields



Select method

Select From Tables/Views/Synonyms

Select field

Search by name



Name	Type
<input checked="" type="checkbox"/> SELECTTABLE_1	
<input checked="" type="checkbox"/> str NAME_S	VARCHAR2(100)
<input checked="" type="checkbox"/> str EMAIL_S	VARCHAR2(100)
<input checked="" type="checkbox"/> str PHONENUMBER_S	VARCHAR2(100)

Convert selected to String



Off

Cancel

Add

Add custom action - CUDO_ORA_IF0001_Select



Data fields

Delete Add fields

Field/Expression	Output field type	Output field name	Actions
<input checked="" type="checkbox"/> SELECTTABLE_1.NAME_S	java.lang.String	NAME_S_1	
<input checked="" type="checkbox"/> SELECTTABLE_1.EMAIL_S	java.lang.String	EMAIL_S_1	
<input checked="" type="checkbox"/> SELECTTABLE_1.PHONENUMBER_S	java.lang.String	PHONENUMBER_S_1	

Select distinct



Off

Cancel Previous Save Next

STEP 3-4 Data fields 설정 - Select 할 필드 상세 설정

Add custom action - CUDO_ORA_IF0001_Select

Account

Action

Tables

Joins

Data fields

Condition

Parameters

Summary

Condition

No conditions applied so far.

Add a new condition to get started

Cancel

Previous

Save

Next

Edit custom action - CUDO_ORA_IF0001_Select

Account

Action

Tables

Joins

Data fields

Condition

Parameters

Summary

Condition

WHERE

Column name

SELECTTABLE_1.NAME_S

Operator

=

Value

'SeoJihoon'

Field properties

Input field

JDBC type

Input field type

Serialized expression

1

SELECTTABLE_1.NAME_S = 'SeoJihoon'

Cancel

Previous

Save

Next

STEP 3-5. Condition 설정 - Where 조건 설정

[webMethods.io] DB-to-DB Workflow Tutorial

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Edit custom action - CUDO_ORA_IF0001_Select

Account Action Tables Joins Data fields Condition **Parameters** Summary

Execution parameters

Query time out (sec) Maximum row

Row count field name Row count field type

rec_cnt java.lang.String

Cancel Previous Save Next

STEP 3-6. Parameters 설정 - Query Timeout, Maximum row, Row count field 설정

Note. Row Count Field Name 을 results 로 설정하면 Pipeline 데이터 키 값이 겹쳐 Select Output이 나오지 않으므로 주의

Edit custom action - CUDO_ORA_IF0001_Select

Account Action Tables Joins Data fields Condition Parameters **Summary**

Summary

Name: CUDO_ORA_IF0001_Select

Description: ORACLE DB 에서 Select 하는 Custom Action (Adapter Service)

Account: CUDO_ORA_Connection

Action: Select

Maximum limit: 100

Query timeout: No timeout

Signature: Show Input/Output

Serialized SQL expression:

```



1 select SELECTTABLE_1.NAME_S as NAME_S_1,SELECTTABLE_1.EMAIL_S as EMAIL_S_1,SELECTTABLE_1.PHONENUMBER_S as PHONENUMBER_S_1
2 from SELECTTABLE_SELECTTABLE_1
3 where SELECTTABLE_1.NAME_S = 'SeoJinon'



```

Verify the above detail and click Done to create the action.

Cancel Previous Done

STEP 3-7. Summary 화면 (Done 클릭)


CUDO_ORA_IF0001_Select


Test this action

To test this action, we will use the input data provided by you (shown below) and execute the action. This output will then be used to configure the rest of the workflow.

InputOutput

Mask All

Search

```

{
  "auth": "${config.connection.uconnf2a47d7468221fe2df651705e3b508d13dbf04df.handle}"
  "_connection": "${config.connection.uconnf2a47d7468221fe2df651705e3b508d13dbf04df}"
}

```

Test



Note: If you do not test this action, you will not be able to see actual output data of this action in the subsequent actions.



Id: \$a0 Version: 1.0

Cancel

Previous

Done


CUDO_ORA_IF0001_Select


Message posted successfully

Here's the output of this action. For the testing purpose, we fetch at most two records from the output. However, the actual output of this action may consist of more records. We will use this data to configure the rest of the workflow.

InputOutput

Mask All

Search

```

{
  "CUDO_ORA_IF0001_SelectOutput": {
    "results": [
      {
        "NAME_S_1": "Seol Hoon"
        "EMAIL_S_1": "sjh@cudo.co.kr"
        "PHONENUMBER_S_1": "01020662691"
      }
    ]
    "rec_cnt": "1"
  }
}

```

Retest

Note: If you do not test this action, you will not be able to see actual output data of this action in the subsequent actions.

Id: \$a0 Version: 1.0

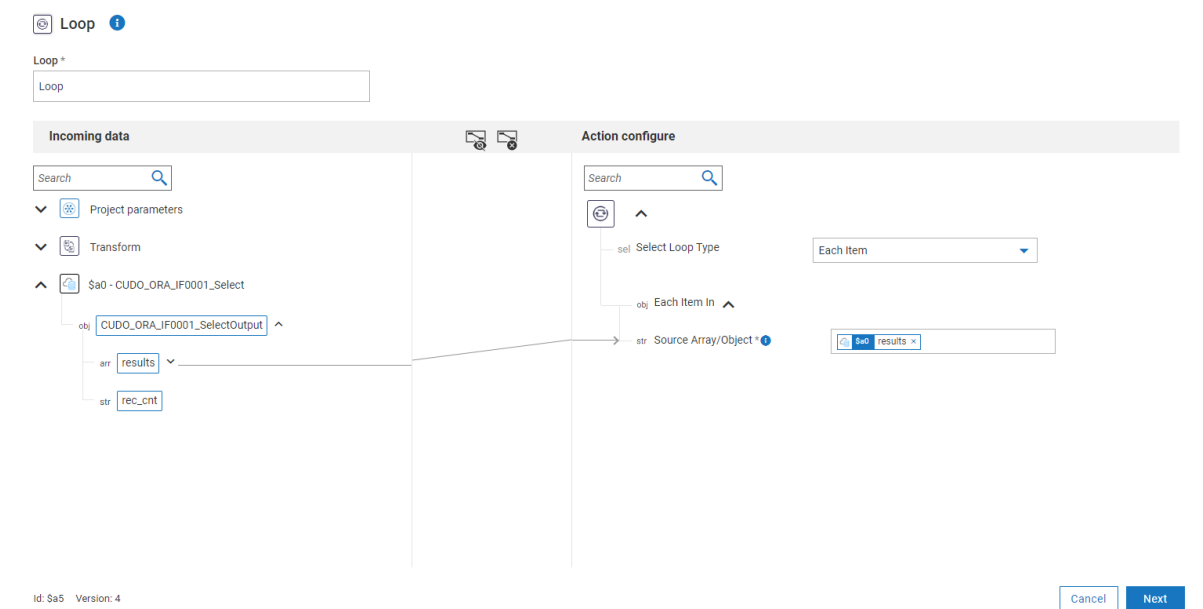
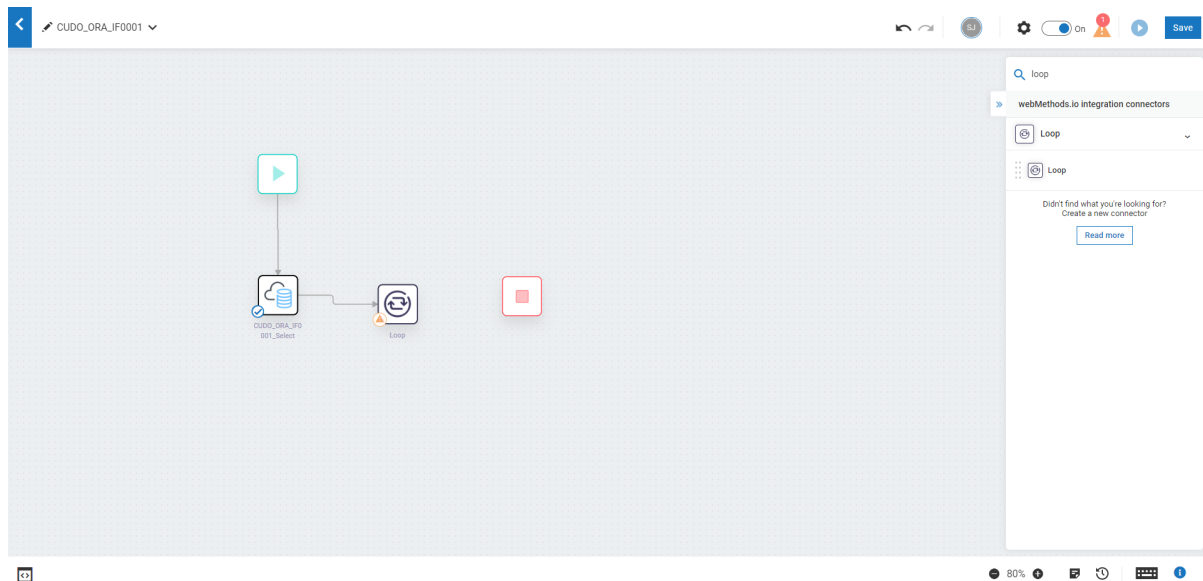
Cancel

Previous

Done

STEP 3-8. 생성 된 Custom Action의 Pipeline 설정 (테스트 가능)

이후 STEP 은 동일한 방식으로 UPDATE, INSERT Database Connector - Custom Action 구성



Loop ⓘ

Message posted successfully

Here's the output of this action. For the testing purpose, we fetch at most two records from the output. However, the actual output of this action may consist of more records. We will use this data to configure the rest of the workflow.

Input

Output

Search

```
{
  "continue": true,
  "currentIndex": 0,
  "currentItem": {
    "NAME_S_1": "SeoJ Hoon",
    "EMAIL_S_1": "sjh@cudo.co.kr",
    "PHONE_NUMBER_S_1": "01020662691"
  },
  "currentKey": 0,
  "currentValue": {
    "NAME_S_1": "SeoJ Hoon",
    "EMAIL_S_1": "sjh@cudo.co.kr",
    "PHONE_NUMBER_S_1": "01020662691"
  }
}
```

Retest

Note: If you do not test this action, you will not be able to see actual output data of this action in the subsequent actions.

Id: \$a5 Version: 4

Cancel Previous Done

STEP 3-9. Loop 구성 및 설정 → Each Item (Array) 에 results 매핑 → TEST

Note. 테스트를 해야 필드 정보를 받아오기에 반드시 TEST 수행

CUDO_ORA_IF0001

Loop

Search

webMethods.io integration connectors

AMQP

ARIS

ARIS Process Mining

Abstract Email Validation

Abstract Holidays

Abstract IP Geolocation

Abstract Phone Validation

ActiveCampaign

Acuity Scheduling

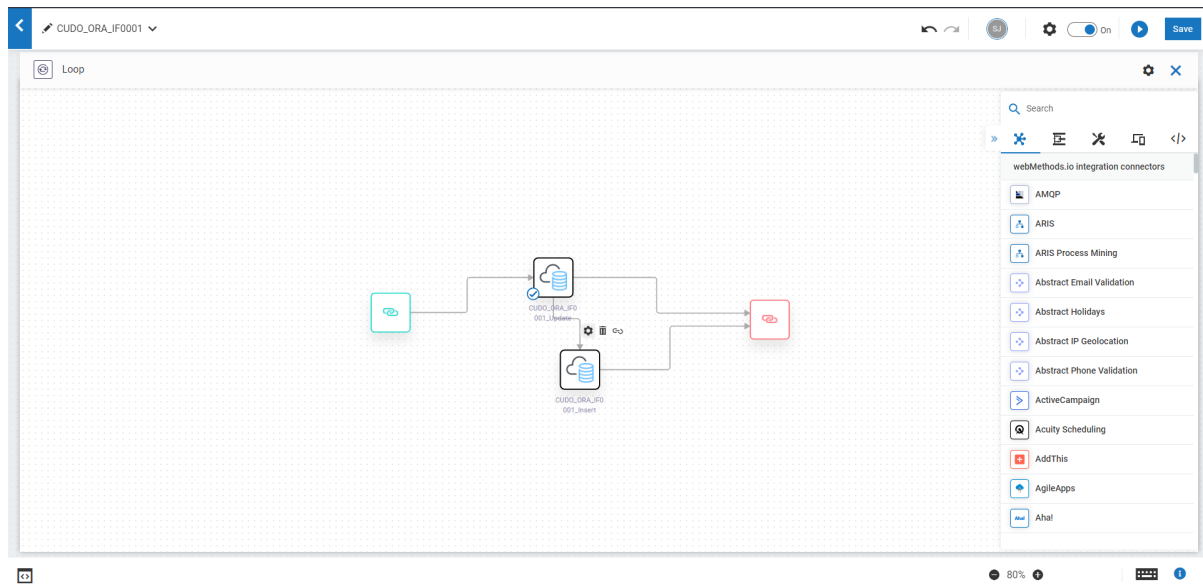
AddThis

AgileApps

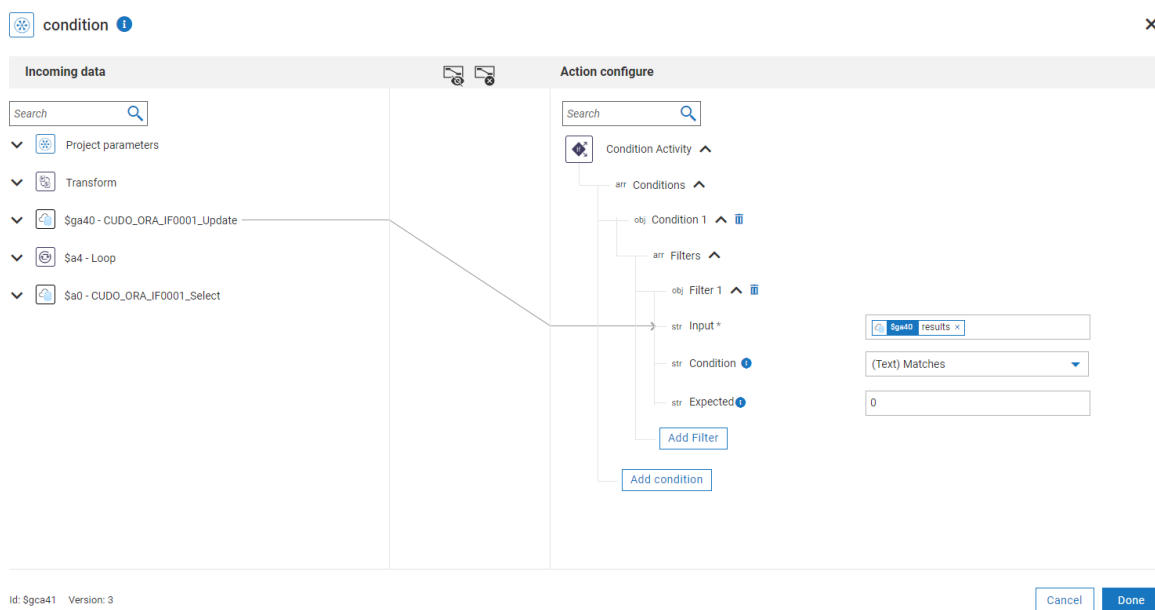
Aha!

80%

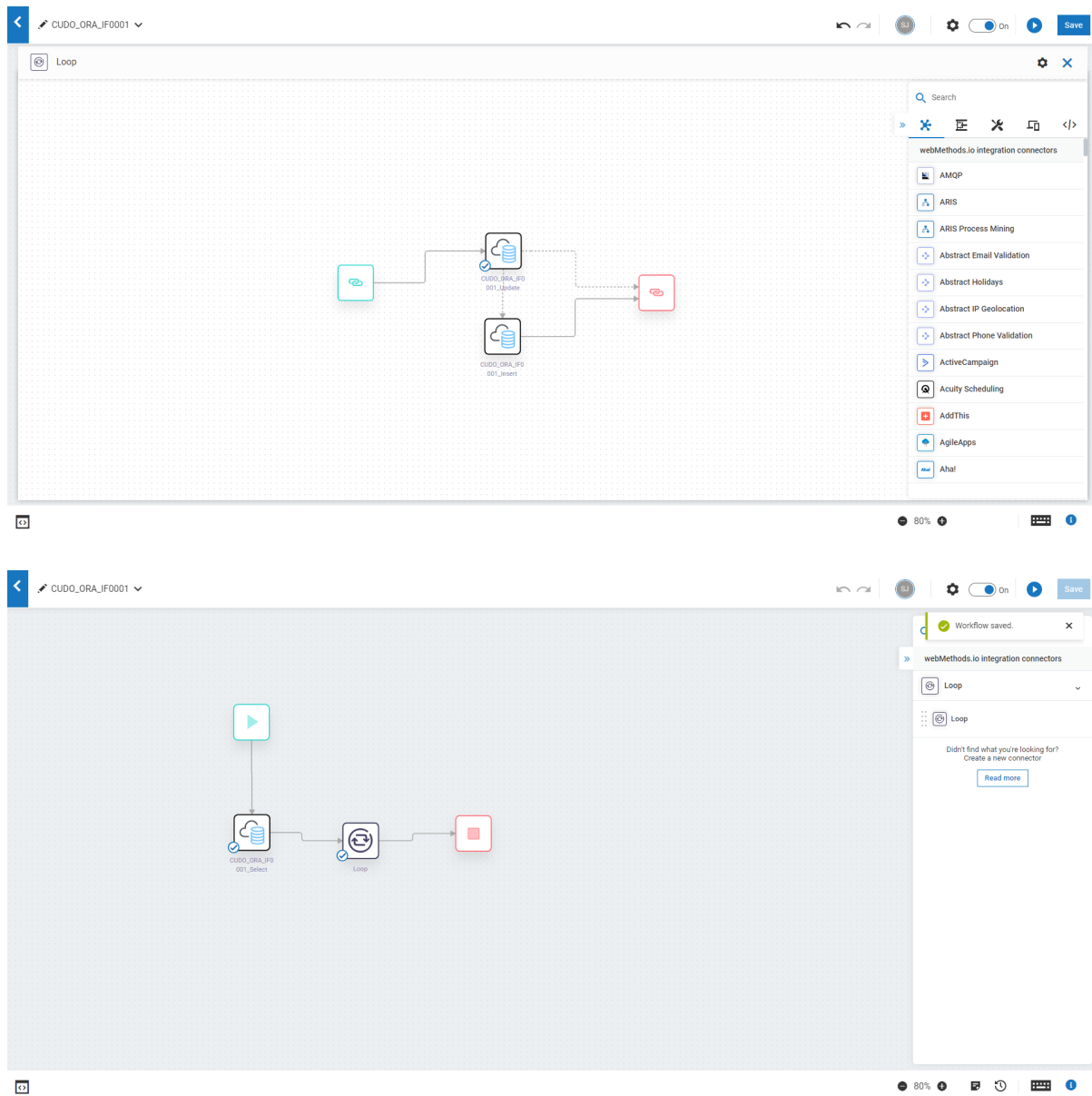
Info



STEP 3-10. Loop Connector 를 더블클릭하여 내부 Connector 설정 예시 (Update 후 Insert)

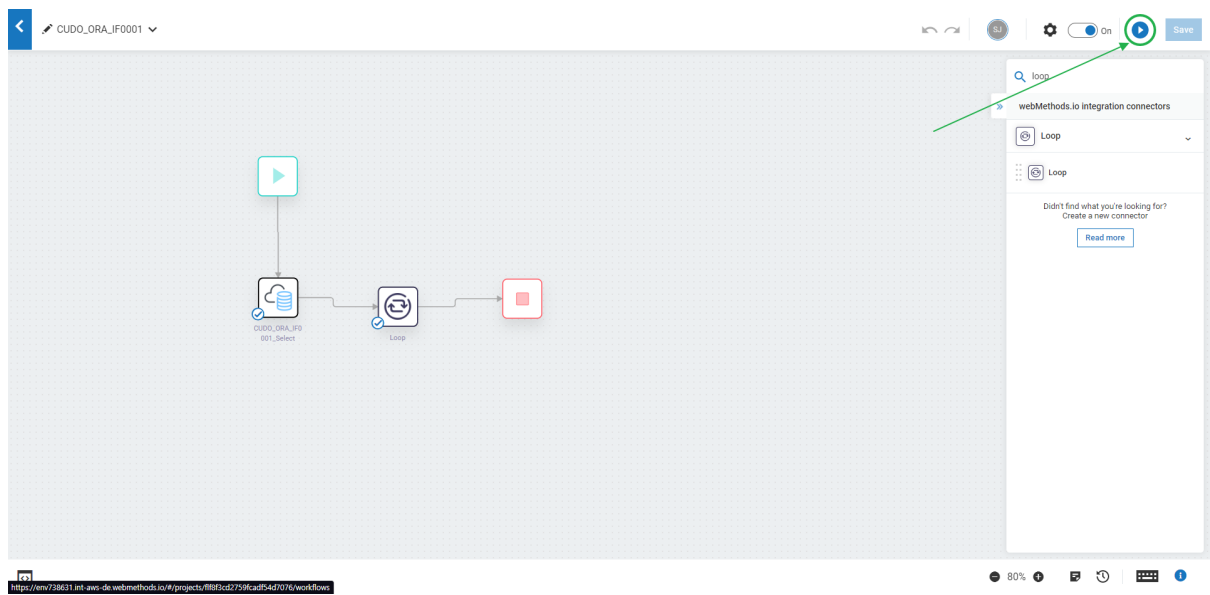


STEP 3-11. 선을 클릭 후 ⚙️ 를 클릭하여 Condition 설정 (기존 Branch 설정과 동일)



STEP 3-12 DB to DB Workflow 예시

STEP 4. Workflow 테스트



우측 상단에 ▶ 버튼을 클릭하여 Workflow 실행 가능

<postgres> Script-19 TESTTABLE × SELECTTABLE

Properties Data 엔티티 관계도

TESTTABLE Enter a SQL expression to filter results (use Ctrl+Space)

NAME	EMAIL	PHONENUMBER
SeoJiHoon	sjh@cudo.co.kr	01020662691

→ 정상 작동 확인