

# Manual Oracle Streams

- In source database, open tnsnames.ora that located in ORACLE\_HOME/network/admin
  - tambahkan baris berikut :

```
NAMA_INSTANCE =  
(DESCRIPTION =  
  (ADDRESS = (PROTOCOL = TCP)(HOST = ip/nama_host)(PORT = oracle_port))  
  (CONNECT_DATA =  
    (SERVER = DEDICATED)  
    (SERVICE_NAME = NAMA_INSTANCE)  
  )  
)
```

- 
- Activate archive log in source database
  - run sqlplus from command line by typing this command : **sqlplus / as sysdba**
  - type **shutdown immediate;** if the database is opened/mounted
  - start and mount the database : **startup mount;**
  - activate archive log in database : **alter database archive log;**
  - and then open the database : **alter database open;**
- Open the enterprise manager (<http://master-ip:1158/em>) dan log in
  - log in as user **sys as sysdba**

## Login to Database:orcl

\* User Name   
\* Password   
Connect As

- 
- Go to maintenance tab

## Database Instance: orcl

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- 
- In Streams section, choose **setup**

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- 
- In the next screen, choose **Streams Global, Schema, Table, and Subset Replication Wizard**

○ **Setup Options**

Streams Setup wizard allows you to setup and replicate the whole database, specific schemas or specific tables between 2 databases.

Streams Global, Schema, Table and Subset Replication Wizard

Streams Tablespaces replication wizard allows the replication and maintenance of tablespaces between databases.

Streams Tablespace Replication Wizard

Messaging allows creation and setting up of queues.

Messaging

- First step in this wizard is to create or define the stream admin user in the source database
- Enter the stream admin username and password, or choose **Create Streams Administrator** to create a new one

**Configure Streams: Source Database**

Specify Streams Administrator credentials for the source database.

Source Database **ORCL.REGRESS.RDBMS.DEV.US.Oracle.COM**

Streams Administrator

Password

Create Streams Administrator

- **■** If you choose to create new stream admin, in the next screen, enter the username and password of your DBA and new stream admin.

DBA Username

DBA Password

Streams Administrator Username

Streams Administrator Password

Streams Administrator user will be created on completion of this wizard

- Second step, define your destination database. Just like the source database, you can create new stream admin by clicking **Create Streams Administrator**

**Configure Streams: Destination Database**

Host Name

Port

SID or Service Name

Streams Administrator

Password

Create Streams Administrator

- **■** If you choose to create new stream admin, in the next screen, enter the username and password of your DBA and new stream admin.

Host Name

Port

SID or Service Name

DBA Username

DBA Password

Streams Administrator Username

Streams Administrator Password

Streams Administrator user will be created on completion of this wizard

- Third step, choose which rule you will use. Global, Schema or Table rules

## Replication




Select a replication method. The next step allows you to specify :

- Global Rule  
Specify schemas to exclude and tables to exclude
- Schema Rule  
Specify schemas to include and tables to exclude
- Table Rule  
Specify tables to include or a WHERE clause to include subset of a table

- 
- Define the capture, propagation, and apply process name.

## Processes

Select an existing Stream process, or specify a new name and a new stream destination database selected in the previous step.

Capture Name	<input type="text" value="STREAMS_CAPTURE"/>	
Propagation Name	<input type="text" value="STREAMS_PROPAGATION"/>	
Apply Name	<input type="text" value="STREAMS_APPLY"/>	

- Define the location for your pump file. Just click the inside the red circle to open new window.

## Directory Objects

Specify a directory object at the source database to store the generated Data Pump Export dump file files. You should have "Read" and "Write" privileges on these directory objects.

Source Database	<input type="text"/>		<input type="button" value="Create Directory Object"/>
Destination Database	<input type="text"/>		<input type="button" value="Create Directory Object"/>

- In the new window, just choose DATA\_PUMP\_DIR

## Directory Objects

### Process Name

Select Directory Object	Directory Path
<input type="radio"/> ADMIN_DIR	/ade/aime_10.2_inx_push/oracle/md/admin
<input checked="" type="radio"/> DATA_PUMP_DIR	/opt/oracle/oraHome/admin/orcl/dpump/
<input type="radio"/> DATA_FILE_DIR	/opt/oracle/oraHome/demo/schema/sales_history/
<input type="radio"/> WORK_DIR	/ade/aime_10.2_inx_push/oracle/work
<input type="radio"/> LOG_FILE_DIR	/opt/oracle/oraHome/demo/schema/log/
<input type="radio"/> MEDIA_DIR	/opt/oracle/oraHome/demo/schema/product_media/
<input type="radio"/> XMLDIR	/opt/oracle/oraHome/demo/schema/order_entry/
<input type="radio"/> SUBDIR	/opt/oracle/oraHome/demo/schema/order_entry//2002/Sep

- Do it again for destination database
- In the bottom section, check which process do you want to capture, propagate, and apply. In this tutorial, i choose to replicate only DML changes. You cannot check both DDL and DML changes. Only one of them can be captured in one capture process

## Options

- Capture, Propagate and Apply data manipulation language (DML) changes
- Capture, Propagate and Apply data definition language (DDL) changes
- Copy existing data to the destination database as part of setup

- Fourth step, Choose tables which will be replicated. You can add conditions for each table if you want replicate only subset of the table.

## Configure Streams: Object Selection

To specify that replication should be configured for a table, add them to the table below.

### Include Tables

All the tables listed in the table below will be captured. Table Replication will be configured for each table without

Table	Subset Condition	Remove
MASTER.EMPLOYEES	employee_id=207	

[Add 5 More Rows](#)

- Fifth step, just click finish and Enterprise Manager will create a jobs to execute your configuration.
- If Jobs has finished and no error occurred, then your Streams is ready. To see running capture, propagation, and apply process, in Enterprise Manager choose Maintenance tab and then in Streams section choose Management.

## Streams

Setup

Management

ORACLE Enterprise Manager 10g

Database Control

Database Instance: orcl > Streams

## Streams

[Overview](#) [Capture](#) [Propagation](#) [Apply](#) [Messaging](#)

### Capture

Capture Processes **1**  
Capture Processes Having Errors **0** ✓

### Propagation

Propagation Jobs **1**  
Propagations Having Errors **0** ✓

### Apply

Apply Processes **0**  
Apply Processes Having Errors **0** ✓

### Messaging

Queue Tables **16**  
Queues **31**  
Total Propagation Errors **0** ✓

- Don't forget too set Instantiation SCN in destination database. Below is “howto” :
  - Open SQL Plus/Toad/SQL Developer
  - login as sys in source database

- type this query : **select dbms\_flashback.get\_system\_change\_number from dual**
- save the query result
- then log in as stream admin in destination database
- run this script for each table that being replicated

```
BEGIN
  DBMS_APPLY_ADM.SET_TABLE_INSTANTIATION_SCN(
    source_object_name => '[schema_name.table_name]',
    source_database_name => '[instance
name/SID_source_database]',
    instantiation_scn => [query result from source database]
  );
END;
```