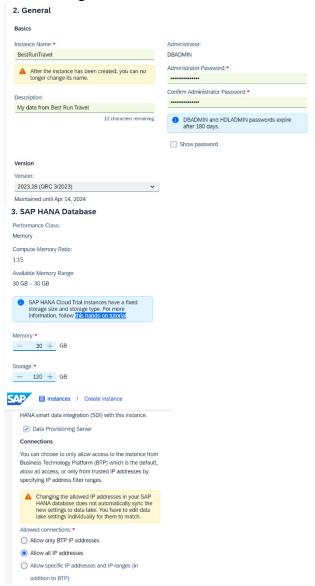Nama   : Irma Nathasya Ginting
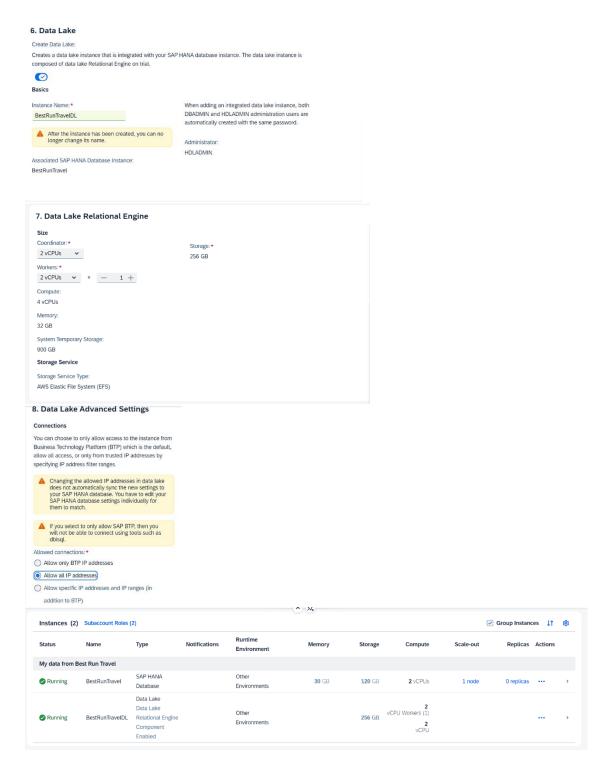
NIM   : 201402136

Mata Kuliah   : Enterprise Development Software (EDS)

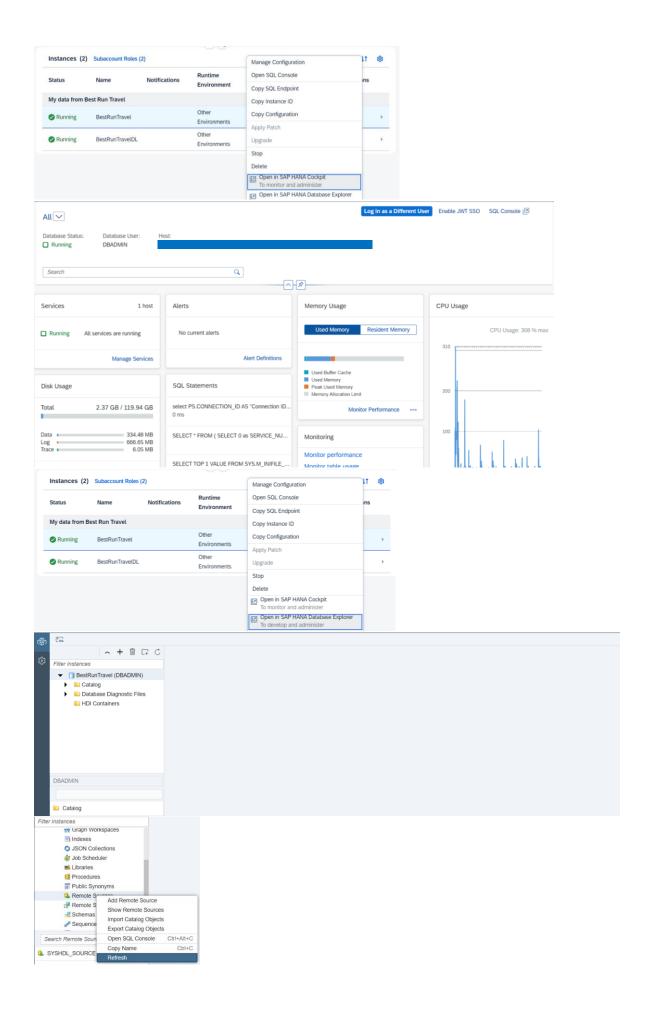Dosen   : Baihaqi Siregar S.Si., M.T.

1. Provisioning SAP HANA Cloud

6. Data Lake

Create Data Lake:

Creates a data lake instance that is integrated with your SAP HANA database instance. The data lake instance is composed of data lake Relational Engine on trial.

Basics

Instance Name: *

BestRunTravelDL

⚠ After the instance has been created, you can no longer change its name.

When adding an integrated data lake instance, both DBADMIN and HDLADMIN administration users are automatically created with the same password.

Administrator:

HDLADMIN

Associated SAP HANA Database Instance:

BestRunTravel

7. Data Lake Relational Engine

Size

Coordinator: *

2 vCPUs ⌄

Workers: *

2 vCPUs ⌄ × — 1 +

Compute:

4 vCPUs

Memory:

32 GB

System Temporary Storage:

900 GB

Storage: *

256 GB

Storage Service

Storage Service Type:

AWS Elastic File System (EFS)

8. Data Lake Advanced Settings

Connections

You can choose to only allow access to the instance from Business Technology Platform (BTP) which is the default, allow all access, or only from trusted IP addresses by specifying IP address filter ranges.

⚠ Changing the allowed IP addresses in data lake does not automatically sync the new settings to your SAP HANA database. You have to edit your SAP HANA database settings individually for them to match.

⚠ If you select to only allow SAP BTP, then you will not be able to connect using tools such as dbisql.

Allowed connections: *

◯ Allow only BTP IP addresses

◉ Allow all IP addresses

◯ Allow specific IP addresses and IP ranges (in addition to BTP)

Instances (2)   Subaccount Roles (2)

☑ Group Instances   ↕   ⚙

Status	Name	Type	Notifications	Runtime Environment	Memory	Storage	Compute	Scale-out	Replicas	Actions	
My data from Best Run Travel											
✅ Running	BestRunTravel	SAP HANA Database		Other Environments	30 GB	120 GB	2 vCPUs	1 node	0 replicas	•••	›
✅ Running	BestRunTravelDL	Data Lake Data Lake Relational Engine Component Enabled		Other Environments		256 GB	**2** vCPU Workers (1) **2** vCPU			•••	›

2. Tools to Work with SAP HANA Cloud

Instances (2)   Subaccount Roles (2)

Status	Name	Notifications	Runtime Environment		
My data from Best Run Travel					
✅ Running	BestRunTravel		Other Environments		›
✅ Running	BestRunTravelDL		Other Environments		›

Manage Configuration

Open SQL Console

Copy SQL Endpoint

Copy Instance ID

Copy Configuration

Apply Patch

Upgrade

Stop

Instances (2) Subaccount Roles (2)

Status	Name	Notifications	Runtime Environment	
My data from Best Run Travel				
✅ Running	BestRunTravel		Other Environments	›
✅ Running	BestRunTravelDL		Other Environments	›

Context menu:
- Manage Configuration
- Open SQL Console
- Copy SQL Endpoint
- Copy Instance ID
- Copy Configuration
- Apply Patch
- Upgrade
- Stop
- Delete
- 🗔 Open in SAP HANA Cockpit
  To monitor and administer
- 🗔 Open in SAP HANA Database Explorer

All ⌄   Log in as a Different User   Enable JWT SSO   SQL Console 🗗

Database Status:	Database User:	Host:
☐ Running	DBADMIN	▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

Search 🔍

⌃ 📌

Services   1 host

☐ Running   All services are running

Manage Services

Alerts

No current alerts

Alert Definitions

Memory Usage

[Used Memory] [Resident Memory]

▮▮▮▮▮▮▮▮▯▯▯

- 🟦 Used Buffer Cache
- 🟦 Used Memory
- 🟧 Peak Used Memory
- ⬜ Memory Allocation Limit

Monitor Performance •••

CPU Usage

CPU Usage: 308 % max

310 ┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄┄
200
100

Disk Usage

Total	2.37 GB / 119.94 GB
▮▯▯▯▯▯▯▯▯▯	
Data	334.48 MB
Log	666.65 MB
Trace	6.05 MB

SQL Statements

select PS.CONNECTION_ID AS "Connection ID...
0 ms

SELECT * FROM (SELECT 0 as SERVICE_NU...

SELECT TOP 1 VALUE FROM SYS.M_INIFILE_...

Monitoring

Monitor performance
Monitor table usage

Instances (2) Subaccount Roles (2)

Status	Name	Notifications	Runtime Environment	
My data from Best Run Travel				
✅ Running	BestRunTravel		Other Environments	›
✅ Running	BestRunTravelDL		Other Environments	›

Context menu:
- Manage Configuration
- Open SQL Console
- Copy SQL Endpoint
- Copy Instance ID
- Copy Configuration
- Apply Patch
- Upgrade
- Stop
- Delete
- 🗔 Open in SAP HANA Cockpit
  To monitor and administer
- 🗔 Open in SAP HANA Database Explorer
  To develop and administer

Filter Instances

⌄ ⊞ BestRunTravel (DBADMIN)
  ▸ 📁 Catalog
  ▸ 📁 Database Diagnostic Files
    📁 HDI Containers

DBADMIN

📁 Catalog

Filter Instances

- 🕸 Graph Workspaces
- 📄 Indexes
- ◎ JSON Collections
- 🔒 Job Scheduler
- 📚 Libraries
- 📇 Procedures
- 🔲 Public Synonyms
- 🔒 Remote Sources
- 📄 Remote S...
- 📇 Schemas
- 🔲 Sequence...

Context menu:
- Add Remote Source
- Show Remote Sources
- Import Catalog Objects
- Export Catalog Objects
- Open SQL Console   Ctrl+Alt+C
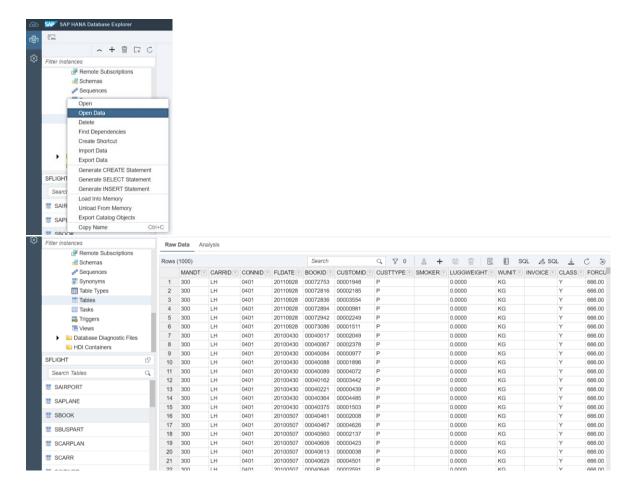- Copy Name   Ctrl+C
- **Refresh**

Search Remote Sour...

🔒 SYSHDL_SOURCE...

3. Upload Data to Your Instance
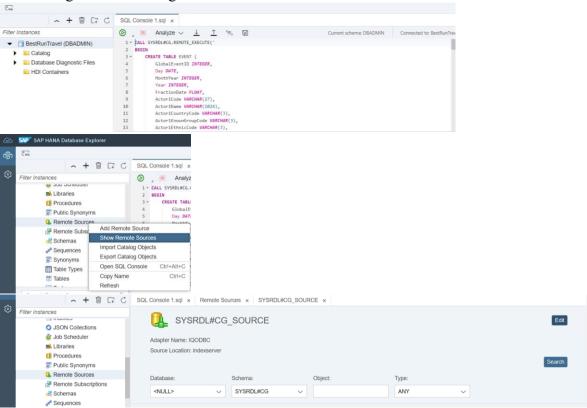
4. Connecting to and Creating Data on the SAP HANA Cloud Data Lake

5. Query Data on SAP HANA Cloud


```sql
set schema SFLIGHT
```



```sql
CREATE TABLE SAGENCYDATA as (select SBOOK.AGENCYNUM, count(SBOOK.AGENCYNUM) as NUMBOOKINGS from SBOOK, STRAVELAG where SBOOK.
```



```sql
SELECT TOP 5 SAGENCYDATA.AGENCYNUM, STRAVELAG.NAME,SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER JOIN STRAVELAG on SAGENCYDA
```

Rows (5)

	AGENCYNUM	NAME	NUMBOOKINGS
1	00000284	Rainy, Stormy, Cloudy	27870
2	00000122	Fly Low	27869
3	00000109	Kangeroos	27867
4	00000101	Bella Italia	27866
5	00000118	Asia By Plane	27416

SQL Console 3.sql ×

Analyze ∨ ⊥ ↑ ⇌ 🖫   Current schema: SFLIGHT   Connected to: BestRunTrave

```
1  CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM, STRAVELAG.NAME,SAGENCYDATA.NUMBOOKINGS from SAGENCYDATA INNER
```

Messages ×   History

Statement: CREATE TABLE STOPAGENCY as (select top 5 SAGENCYDATA.AGENCYNUM, ...
Client elapsed time: 26.00 ms
Statement prepare time: 2.882 ms elapsed time, 2.517 ms CPU time
Statement execute time: 23.87 ms elapsed time, 22.43 ms CPU time
Peak memory consumed: 89.15 KB

SQL Console 3.sql ×

Analyze ∨ ⊥ ↑ ⇌ 🖫   Current schema: SFLIGHT   Connected to: BestRunTrave

```
1  CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER_DATE) as ORDERDAY, count(dayname(ORDER_DATE)) as DAYCOUNT from S
```

Messages ×   History

Statement: CREATE TABLE SAGBOOKDAYS as (select AGENCYNUM, dayname(ORDER_DATE) as ORDERDAY, ...
Client elapsed time: 297.0 ms
Statement prepare time: 3.158 ms elapsed time, 2.841 ms CPU time
Statement execute time: 294.5 ms elapsed time, 543.3 ms CPU time
Peak memory consumed: 91.08 KB

SQL Console 3.sql ×

Analyze ∨ ⊥ ↑ ⇌ 🖫   Current schema: SFLIGHT   Connected to: BestRunTrave

```
1  SELECT  SAGBOOKDAYS.AGENCYNUM, STOPAGENCY.NAME, SAGBOOKDAYS.ORDERDAY, SAGBOOKDAYS.DAYCOUNT from SAGBOOKDAYS INNER JOIN STOPAG
```

Result ×   Messages ×   History

Rows (5)

	AGENCYNUM	NAME	ORDERDAY	DAYCOUNT
1	00000122	Fly Low	THURSDAY	4037
2	00000109	Kangeroos	THURSDAY	4095
3	00000118	Asia By Plane	TUESDAY	4004
4	00000101	Bella Italia	THURSDAY	4038
5	00000284	Rainy, Stormy, Cloudy	MONDAY	4108