

KYLIN-5689 Kylin5 local debugging and debugging Kylin5 using the metadata in the diagnostic package

1. IDEA Run Configuration

Name: ☒ Store as project file

Run on: Local machine Manage targets...

Run configurations may be executed locally or on a target: for example in a Docker Container or on a remote host using SSH.

Build and run Modify options ⌘M

java 8 SDK of 'kylin-server' m -cp kylin-server

-Dspring.profiles.active=dev -Dhdp.version=current -Dspark.local=true -Dkylin.server.mor

org.apache.kylin.rest.BootstrapServer

Press ⌘ for field hints

Active profiles:

Comma separated list of profiles

Working directory:

Environment variables:

Separate variables with semicolon: VAR=value; VAR1=value1

Open run/debug tool window when started Add dependencies with "provided" scope to classpath

Cancel Apply OK

Full config file

```
1 <component name="ProjectRunConfigurationManager">
2   <configuration default="false" name="Kylin Local" type="SpringBootApplicationC
3     <envs>
4       <env name="KYLIN_CONF" value="$PROJECT_DIR$/src/examples/test_case_data/lo
```

```

5     <env name="KYLIN_HOME" value="$PROJECT_DIR$" />
6     <env name="SPARK_HOME" value="$PROJECT_DIR$/build/spark" />
7     </envs>
8     <module name="kylin-server" />
9     <option name="SPRING_BOOT_MAIN_CLASS" value="org.apache.kylin.rest.Bootstrap
10    <option name="VM_PARAMETERS" value="-Dspring.profiles.active=dev -Dhdp.versi
11    <option name="WORKING_DIRECTORY" value="file://%MODULE_WORKING_DIR%" />
12    <method v="2">
13        <option name="Make" enabled="true" />
14    </method>
15 </configuration>
16 </component>

```

1.1 Environment variables

Variable	Path	Remarks
KYLIN_CONF	/PATH/TO/KAP/kylin/src/examples/test_case_data/localmeta	Meta Path in UT
KYLIN_HOME	/PATH/TO/KYLIN	Kylin code basedir
SPARK_HOME	/PATH/TO/KYLIN/build/spark	

Environment Variables

User environment variables:

+

-

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📋

Name	Value
KYLIN_CONF	/Users/.../kylin/src/examples/tes...
KYLIN_HOME	/Users/.../kylin
SPARK_HOME	/Users/.../kylin/build/spark

☒ Include system environment variables:

1.2 Start parameters

```

1 -Dspring.profiles.active=dev
2 -Dhdp.version=current
3 -Dspark.local=true
4 -Dkylin.server.mode=all

```

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Build and run Modify options

```
-Dspring.profiles.active=dev
-Dhdp.version=current
-Dspark.local=true
-Dkylin.server.mode=all
```

Working directory:

Environment variables:

Separate variables with semicolon: VAR=value; VAR1=value1

2. How to debug Kylin locally with IDEA (without sandbox/docker etc.)

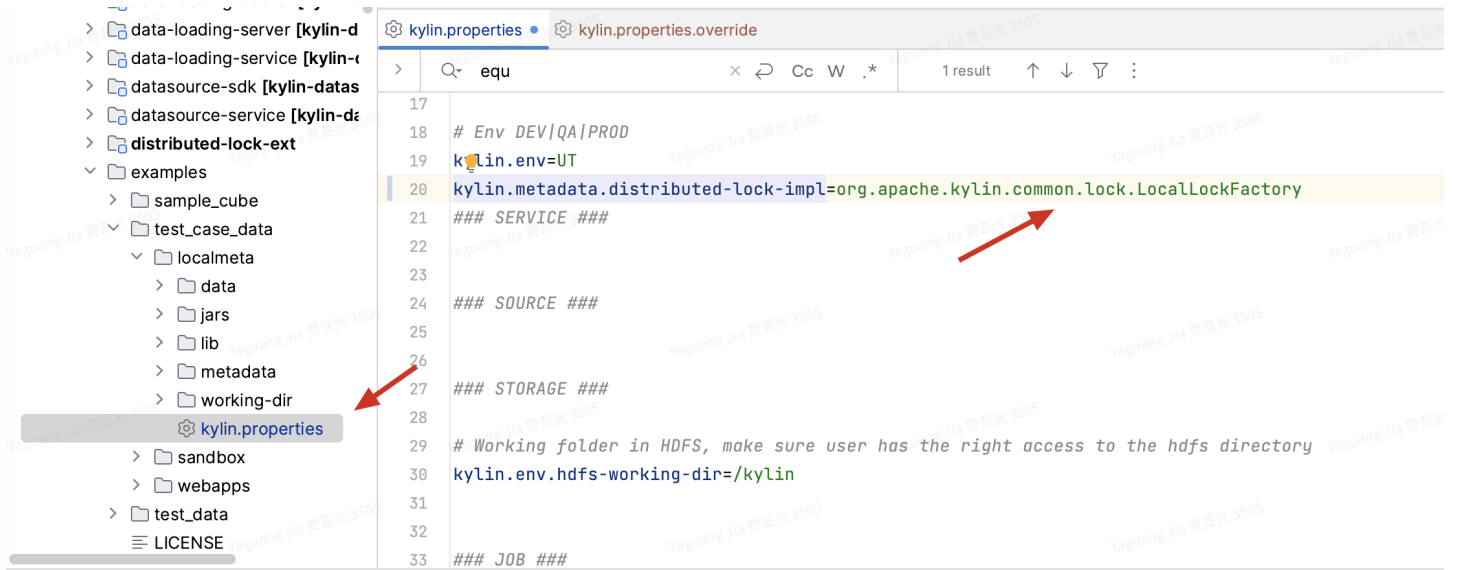
2.1 Configure kylin.metadata.distributed-lock-impl

This step is to remove a zookeeper dependency

Add a configuration to the kylin.properties under `KYLIN_CONF`

(/PATH/TO/KYLIN/src/examples/test_case_data/localmeta).

```
1 kylin.metadata.distributed-lock-impl=org.apache.kylin.common.lock.LocalLockFacto
```



2.2 Just start Kylin

The front-end static-locations configuration is added in application.yml, which can be directly accessed by the `http://127.0.0.1:7070/kylin` for debugging, and there is no need to start the front-end separately (but the compiled front-end code is required under kystudio dir).

3. How to quickly start Kylin5 locally with IDEA using Metadata in the diagnostic package

3.1 Unzip the diagnostic package and find the Metadata in the diagnostic package.

```
~/Kyligence/full_2023_02_16_11_15_42/metadata/2023-02-16-11-15-43_backup
|
~/Kyligence/full_2023_02_16_11_15_42/metadata/2023-02-16-11-15-43_backup (0.141s)
ll
total 16
-rw-rw-r--@ 1 yaguang.jia 25950964 38B Feb 13 10:59 UUID
drwxr-xr-x@ 8 yaguang.jia 25950964 256B Feb 16 11:16 _global
drwxr-xr-x@ 2 yaguang.jia 25950964 64B May 15 16:38 _health
-rw-rw-r--@ 1 yaguang.jia 25950964 15B Feb 16 11:15 _image
drwxr-xr-x@ 15 yaguang.jia 25950964 480B Feb 16 11:16 datalake_kylin
~/Kyligence/full_2023_02_16_11_15_42/metadata/2023-02-16-11-15-43_backup (0.054s)
pwd
/Users/yaguang.jia/Kyligence/full_2023_02_16_11_15_42/metadata/2023-02-16-11-15-43_backup
```

3.2 Configure Diagnostic Package Metadata to kylin.properties

KYLIN_CONF (/PATH/TO/KYLIN/src/examples/test_case_data/localmeta), configure `kylin.metadata.url` and specify `kylin.env.hdfs-working-dir` to a temporary directory

```
1 kylin.metadata.url=/Users/xxx.xxx/full_2023_02_16_11_15_42/metadata/2023-02-16-11-15-43_backup
2
3 # kylin.env.hdfs-working-dir Just specify a temporary directory
```

4 `kylin.env.hdfs-working-dir=/A/TMP/PATH/FOR/USE`



3.3 In the run configuration, add `-Ddev.diag-meta=true`



3.4 Start Kylin to view Metadata in the diagnostic package.

The static-locations configuration of the front end is added in `application.yml`, which can be directly accessed to the `http://127.0.0.1:7070/kylin` for debugging, and there is no need to start the front end separately.

KAP KE-41254_Local_Debug KE Local

Project

- core-storage [kylin-core-stc]
- data-loading-booter [kylin-d
- data-loading-server [kylin-d
- data-loading-service [kylin-r
- datasource-sdk [kylin-datas
- datasource-service [kylin-de
- distributed-lock-ext
- examples
 - sample_cube
 - test_case_data
 - localmeta
 - data

KylinFileSourceScanExec.scala FilePruner.scala KylinSourceStrategy.scala IndexMatcher.java QueryService.java DeltaLog.scala

LocalLockFactory.java LocalLockFactoryTest.java DistributedLockFactory.java SparderEnv.scala KylinPrepareEnvListener.java Init.properties

kylin.properties x kylin.properties.override

```
18 # Env DEV|QA|PROD
19 kylin.env=UT
20 kylin.metadata.distributed-lock-impl=org.apache.kylin.common.lock.LocalLockFactory
21 kylin.metadata.url=/Users/yaguang.jia/KyLigence/full_2023_02_16_11_15_42/metadata/2023-02-16-11-15-43_backup
22 ### SERVICE ###
23
24
25 ### SOURCE ###
```

Services

Debugger Console Actuator

Spring Boot

- Running
 - KE Local :7070/
- Not Started
 - CommonBootstrap
 - DataLoadingBootstrap
 - QueryBootstrapSer
 - SmartBootstrapSer
 - KE 134

properties from classpath:ehcache.xml.
expression provided through VM argument net.sf.ehcache.pool.sizeof.ignore.pattern for IgnoreSizeOf annotation : ^.*cache\..*IgnoreSizeOf\$
settings of: 64-Bit OpenJDK JVM with Compressed 00Ps
temporary file /var/folders/my/n1st06tx0bx47qrzrwdy2gpmltm778/T/ehcache-sizeof-agent473788255280038582.jar
r/folders/my/n1st06tx0bx47qrzrwdy2gpmltm778/T/ehcache-sizeof-agent473788255280038582.jar
engine
started
e by KylinConfig KylinConfig 691863815 with base id: 691863815 from /Users/yaguang.jia/KyLigence/full_2023_02_16_11_15_42/metadata/2023-02-16-11-15-43_backup
Manager with kylinConfig id: 691863815
asure types from kylin config
DISTINCT(hllc), class org.apache.kylin.measure.hllc.HLLCMeasureType\$Factory
DISTINCT(bitmap), class org.apache.kylin.measure.bitmap.BitmapMeasureType\$Factory
topn), class org.apache.kylin.measure.topn.TopNMeasureType\$Factory
w), class org.apache.kylin.measure.raw.RawMeasureType\$Factory
ED_COLUMN(extendedcolumn), class org.apache.kylin.measure.extendedcolumn.ExtendedColumnMeasureType\$Factory
ITILE_APPROX(percentile), class org.apache.kylin.measure.percentile.PercentileMeasureType\$Factory
DISTINCT(dim_dc), class org.apache.kylin.measure.dim.DimCountDistinctMeasureType\$Factory
ECT_COUNT(intersect_bitmap), class org.apache.kylin.measure.bitmap.intersect.IntersectMeasureType\$Factory
T_SET(collect_set), class org.apache.kylin.measure.collect_set.CollectSetMeasureType\$Factory
corr), class org.apache.kylin.measure.corr.CorrMeasureType\$Factory
:(sum_lc), class org.apache.kylin.measure.sumlc.SumLCMeasureType\$Factory