oracle dbms_jobs and dbms_scheduler

参考：

```
select job,SCHEMA_USER from dba_jobs where SCHEMA_USER not in ('SYS');
```

dbms_jobs :
```
begin
  sys.dbms_job.submit(job => :job,
                      what => '');
  commit;
end;
/
```

jobs :
```
begin
  sys.dbms_scheduler.create_job(job_name          => '',
                                job_type          => '',
                                job_action        => '',
                                start_date        => to_date(null),
                                repeat_interval   => '',
                                end_date          => to_date(null),
                                job_class         => '',
                                enabled           => true,
                                auto_drop         => false,
                                comments          => '');
end;
/
```

job_classes :
```
begin
  sys.dbms_scheduler.create_job_class(job_class_name          => '',
                                      resource_consumer_group => '',
                                      service                 => '',
                                      logging_level           => null,
                                      log_history             => to_number(null),
                                      comments                => '');
end;
/
```

dbms_schedulers :

schedulers :
```
begin
  sys.dbms_scheduler.create_schedule(schedule_name   => '',
                                     start_date      => to_date(null),
                                     repeat_interval => '',
                                     end_date        => to_date(null),
```

```
                                    comments         => '');
end;
/


windows :
begin
  sys.dbms_scheduler.create_window(window_name     => '',
                                   resource_plan    => '',
                                   start_date       => to_date(null),
                                   repeat_interval  => '',
                                   end_date         => to_date(null),
                                   duration         => '',
                                   window_priority  => 'LOW',
                                   comments         => '');
end;
/


window_groups :
begin
  sys.dbms_scheduler.create_window_group(group_name => '', window_list => '', comments => '');
end;
/


programs :
begin
  sys.dbms_scheduler.create_program(program_name        => '',
                                    program_type        => '',
                                    program_action      => '',
                                    number_of_arguments => 0,
                                    enabled             => true,
                                    comments            => '');
end;
/


chains :
begin
  sys.dbms_scheduler.create_chain(chain_name          => '',
                                  rule_set_name       => '',
                                  evaluation_interval => '',
                                  comments            => '');
  sys.dbms_scheduler.enable(name => '');
end;
/



SQL> desc dbms_scheduler
Element                      Type
---------------------------  ---------
LOGGING_OFF                  CONSTANT
LOGGING_RUNS                 CONSTANT
LOGGING_FAILED_RUNS          CONSTANT
LOGGING_FULL                 CONSTANT
DEFAULT_NOTIFICATION_SUBJECT CONSTANT
DEFAULT_NOTIFICATION_BODY    CONSTANT
JOB_STARTED                  CONSTANT
JOB_SUCCEEDED                CONSTANT
JOB_FAILED                   CONSTANT
JOB_BROKEN                   CONSTANT
```

JOB_COMPLETED	CONSTANT
JOB_STOPPED	CONSTANT
JOB_SCH_LIM_REACHED	CONSTANT
JOB_DISABLED	CONSTANT
JOB_CHAIN_STALLED	CONSTANT
JOB_ALL_EVENTS	CONSTANT
JOB_OVER_MAX_DUR	CONSTANT
JOB_RUN_COMPLETED	CONSTANT
CREATE_PROGRAM	PROCEDURE
DROP_PROGRAM	PROCEDURE
DEFINE_PROGRAM_ARGUMENT	PROCEDURE
DEFINE_ANYDATA_ARGUMENT	PROCEDURE
DEFINE_METADATA_ARGUMENT	PROCEDURE
DROP_PROGRAM_ARGUMENT	PROCEDURE
CREATE_JOB	PROCEDURE
RUN_JOB	PROCEDURE
STOP_JOB	PROCEDURE
COPY_JOB	PROCEDURE
DROP_JOB	PROCEDURE
SET_JOB_ARGUMENT_VALUE	PROCEDURE
SET_JOB_ANYDATA_VALUE	PROCEDURE
RESET_JOB_ARGUMENT_VALUE	PROCEDURE
CREATE_GROUP	PROCEDURE
DROP_GROUP	PROCEDURE
ADD_GROUP_MEMBER	PROCEDURE
REMOVE_GROUP_MEMBER	PROCEDURE
CREATE_DATABASE_DESTINATION	PROCEDURE
DROP_DATABASE_DESTINATION	PROCEDURE
DROP_AGENT_DESTINATION	PROCEDURE
CREATE_JOB_CLASS	PROCEDURE
DROP_JOB_CLASS	PROCEDURE
CREATE_WINDOW	PROCEDURE
DROP_WINDOW	PROCEDURE
OPEN_WINDOW	PROCEDURE
CLOSE_WINDOW	PROCEDURE
CREATE_WINDOW_GROUP	PROCEDURE
ADD_WINDOW_GROUP_MEMBER	PROCEDURE
REMOVE_WINDOW_GROUP_MEMBER	PROCEDURE
DROP_WINDOW_GROUP	PROCEDURE
STIME	FUNCTION
GET_AGENT_VERSION	FUNCTION
GET_SYS_TIME_ZONE_NAME	FUNCTION
CREATE_SCHEDULE	PROCEDURE
DISABLE1_CALENDAR_CHECK	PROCEDURE
CREATE_EVENT_SCHEDULE	PROCEDURE
DROP_SCHEDULE	PROCEDURE
CREATE_CHAIN	PROCEDURE
DEFINE_CHAIN_RULE	PROCEDURE
DEFINE_CHAIN_STEP	PROCEDURE
DEFINE_CHAIN_EVENT_STEP	PROCEDURE
DROP_CHAIN_RULE	PROCEDURE
DROP_CHAIN_STEP	PROCEDURE
ALTER_CHAIN	PROCEDURE
DROP_CHAIN	PROCEDURE
ANALYZE_CHAIN	PROCEDURE
ALTER_RUNNING_CHAIN	PROCEDURE
EVALUATE_RUNNING_CHAIN	PROCEDURE
RUN_CHAIN	PROCEDURE

```
CREATE_CREDENTIAL              PROCEDURE
DROP_CREDENTIAL                PROCEDURE
PUT_FILE                       PROCEDURE
GET_FILE                       PROCEDURE
CREATE_FILE_WATCHER            PROCEDURE
DROP_FILE_WATCHER              PROCEDURE
ADD_JOB_EMAIL_NOTIFICATION     PROCEDURE
REMOVE_JOB_EMAIL_NOTIFICATION  PROCEDURE
DISABLE                        PROCEDURE
ENABLE                         PROCEDURE
SET_ATTRIBUTE                  PROCEDURE
SET_ATTRIBUTE_NULL             PROCEDURE
GET_ATTRIBUTE                  PROCEDURE
SET_SCHEDULER_ATTRIBUTE        PROCEDURE
GET_SCHEDULER_ATTRIBUTE        PROCEDURE
ADD_EVENT_QUEUE_SUBSCRIBER     PROCEDURE
REMOVE_EVENT_QUEUE_SUBSCRIBER  PROCEDURE
PURGE_LOG                      PROCEDURE
GENERATE_JOB_NAME              FUNCTION
CHECK_SYS_PRIVS                FUNCTION
GET_VARCHAR2_VALUE             FUNCTION
AUTO_PURGE                     PROCEDURE
GET_DEFAULT_VALUE              FUNCTION
GET_CHAIN_RULE_ACTION          FUNCTION
GET_CHAIN_RULE_CONDITION       FUNCTION
RESOLVE_NAME                   FUNCTION
SUBMIT_REMOTE_EXTERNAL_JOB     PROCEDURE
BYLIST                         TYPE
YEARLY                         CONSTANT
MONTHLY                        CONSTANT
WEEKLY                         CONSTANT
DAILY                          CONSTANT
HOURLY                         CONSTANT
MINUTELY                       CONSTANT
SECONDLY                       CONSTANT
MONDAY                         CONSTANT
TUESDAY                        CONSTANT
WEDNESDAY                      CONSTANT
THURSDAY                       CONSTANT
FRIDAY                         CONSTANT
SATURDAY                       CONSTANT
SUNDAY                         CONSTANT
CREATE_CALENDAR_STRING         PROCEDURE
RESOLVE_CALENDAR_STRING        PROCEDURE
EVALUATE_CALENDAR_STRING       PROCEDURE
SET_AGENT_REGISTRATION_PASS    PROCEDURE
GET_JOB_STEP_CF                FUNCTION
GENERATE_EVENT_LIST            FUNCTION
CREATE_JOBS                    PROCEDURE
SET_JOB_ATTRIBUTES             PROCEDURE
SHOW_ERRORS                    PROCEDURE
END_DETACHED_JOB_RUN           PROCEDURE
FILE_WATCH_FILTER              FUNCTION


SQL>
SQL> desc dbms_job
Element           Type
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```

```
ANY_INSTANCE        CONSTANT
ISUBMIT             PROCEDURE
SUBMIT              PROCEDURE
REMOVE              PROCEDURE
CHANGE              PROCEDURE
WHAT                PROCEDURE
NEXT_DATE           PROCEDURE
INSTANCE            PROCEDURE
INTERVAL            PROCEDURE
BROKEN              PROCEDURE
RUN                 PROCEDURE
USER_EXPORT         PROCEDURE
BACKGROUND_PROCESS  FUNCTION
IS_JOBQ             FUNCTION

SQL>
```

可以看出 dbms_scheduler 确实比 dbms_job 增强了许多