# Dicex-pgsa: Managing Standalone Postgres in Supercomputer
## User's Manual

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## How to obtain Dicex-pgsa?

For development clone the repo `https://ndsslgit.vbi.vt.edu/ndssl-software/dicex_pgsa`. For use in your projects, login to shadowfax and run

```
1  you@sfxlogin1:  cd <your−work−directory >
2  you@sfxlogin1:  .  /home/pgxxc/ public / dicex . sh
```

## How to launch a job running a database instance?

```
1  you@sfxlogin1:  cd <your−work−directory >
2  dicex \_pgsa . sh −−launchjob <session−identifier >
```

where <session-identifier> is a tag that defines the current database session. It is optional. If not provided, the system will assign an idenifier as "pgsa_YYYY_MM_DD_HH".

This command grabs hold of a compute resource and launches a database engine on a port. The compute node is identified as server_ip and the port as server_port. Both of these are writted on in the "dbsession_<session-identifier>.py" file.

## How to remove a job?

```
1  you@sfxlogin1:  cd <your−work−directory >
2  dicex \_pgsa . sh −−removejob <session−identifier >
```

## Other Options

- To run a script after start of the database, use following additional option

```
1  −−post_dbstart <script_file_full_path >
```

  where <postdb_script> is the path to the script being run.

- To run a script after the shutdown of the database, use following additional command

```
1  −−post_dbstop <script_file_full_path >
```

- To close a database session (so that post_dbstop script can be called use following command

```
1  −−closedb <dbdesc>
```

  This will shutdown the database and call post_dbstop stop.

- Save dbsession before closing the dbsession. This option will automatically save the database session before releasing all the resources. To enable this, use the following option in addtion to launchdb command:

```
1  −−save_on_exit
```

- To change number of hours the database session is active

```
1  −−walltime <num_hours>
2
```

All the rest of the commands have to executed from the compute node. For these login to the designated compute node using

```
1  user@sfxlogin1:  ssh <server_ip >
2  user@sfxlogin1:  cd <your−work−directory >
3  user@sfxlogin1:  .  /home/pgxxc/ public / dicex_pgsa /
     ↪  dicex_pgsa . sh
```

## How to stop the database instance?

```
1  user@sfxlogin1:  dicex_pgsa . sh −−stopdb <session−
     ↪  identifier >
```

This will stop the database session.

## How to restart the database instance?

```
1  user@sfxlogin1:  dicex_pgsa . sh −−restartdb <session−
     ↪  identifier >
```

This will restart the stopped the database session.

## How to save the database instance?

```
1  user@sfxlogin1:  dicex_pgsa . sh −−savedb <session−
     ↪  identifier >
```

This will stop the database instance and save the image

## How to resume a saved instance?

```
1  user@sfxlogin1:  dicex_pgsa . sh −−resumedb <session−
     ↪  identifier >
```

## How to cleanup the database instance?

```
1  user@sfxlogin1:  dicex_pgsa . sh −−cleandb <session−
     ↪  identifier >
```

This will stop the database and remove/delete the instance from the disk.