How to update **IO-AVSTATS** in an AWS instance

The cloud version of **IO-AVSTATS** consists of a series of docker containers that are launched using Docker Compose. For the PostgreSQL database, the official DockerHub image from here is used. A separate Docker image is created for each of the Streamlit applications.

1. Docker images

Currently, the following Streamlit applications are supported:

Application	Description
all	All Streamlit applications
ae1982	Aircraft Accidents in the US since 1982
pd1982	Profiling Data for the US since 1982

The script `run_io_avstats` with task `c_d_i` can be used to create or update the necessary Docker images.

Example protocol:

```
...>run_io_avstats
===========================================================
r_s_a   - Run a Streamlit application
-----------------------------------------------------------
d_n_a   - Download a NTSB MS Access database file
l_n_a   - Load NTSB MS Access database data into PostgreSQL
c_l_l   - Correct decimal US latitudes and longitudes
v_n_d   - Verify selected NTSB data
r_d_s   - Refresh the PostgreSQL database schema
-----------------------------------------------------------
c_p_d   - Cleansing PostgreSQL data
l_c_d   - Load data from a correction file into PostgreSQL
l_c_s   - Load country and state data into PostgreSQL
l_s_d   - Load simplemaps data into PostgreSQL
l_z_d   - Load ZIP Code Database data into PostgreSQL
-----------------------------------------------------------
c_d_s   - Create the PostgreSQL database schema
u_d_s   - Update the PostgreSQL database schema
-----------------------------------------------------------
c_d_i   - Create or update a Docker image
c_d_c   - Run Docker Compose tasks
c_f_z   - Zip the files for the cloud
-----------------------------------------------------------
version - Show the IO-AVSTATS-DB version
-----------------------------------------------------------
Enter the desired task [default: r_s_a] c_d_i
===========================================================
all      - All Streamlit applications
```

```
------------------------------------------------------------
ae1982 - Aircraft Accidents in the US since 1982
pd1982 - Profiling Data for the US since 1982
------------------------------------------------------------
Enter the Streamlit application name all

Script run_io_avstats is now running
========================================================================
Start run_io_avstats
------------------------------------------------------------------------
IO-AVSTATS - Aviation Event Statistics.
------------------------------------------------------------------------
PYTHONPATH :
------------------------------------------------------------------------
TASK       : c_d_i
CORRECTION :
MSACCESS   :
------------------------------------------------------------------------
The current time is:  5:26:55.43
Enter the new time:
========================================================================

Script scripts\run_create_image is now running - Application: all

You can find the run log in the file run_create_image.log

Please wait ...


========================================================================
Start scripts\run_create_image
------------------------------------------------------------------------
Create a Docker image for application all
------------------------------------------------------------------------
DOCKER_CLEAR_CACHE       : yes
DOCKER_HUB_PUSH          : yes
STREAMLIT_SERVER_PORT    : 8501
------------------------------------------------------------------------
The current time is:  5:26:55.49
Enter the new time:
========================================================================

Script scripts\run_create_image is now running - Application: ae1982

You can find the run log in the file run_create_image.log

Please wait ...


========================================================================
Start scripts\run_create_image
------------------------------------------------------------------------
Create a Docker image for application ae1982
------------------------------------------------------------------------
DOCKER_CLEAR_CACHE       : yes
DOCKER_HUB_PUSH          : yes
```

```
STREAMLIT_SERVER_PORT    : 8501
----------------------------------------------------------------------
The current time is:  5:26:55.51
Enter the new time:
======================================================================
Deleted build cache objects:
uzxx25i0lxo6i63dn7x6m43sf
k6ij499naa2h1rato1wusqsnb
ybs0ov6x6brbw3mza4ebom3tn
jrl57t6dmkmh16a8cr05eel4v
mr3hfgjbcvgownt6cgt42hhj8
v1cew3osiidfg3zjw7oefaxz3
udbfolcspdf4533lc9km5tlx6
mpwj560p2a3iao6zvntnb9bmd
ajtls8cd4v7c2j0145wpdt62m
qyva0m4glms5i06qpk50ngydn
0m34yyo0nfo0njcenkvxgbzuo
cykj0j5z3dspf7qkltlgiehcx
jhduefpbk7sfzdp3vvw39mcgh
xee28brnh8940r3yvbt2rvygj
6b57pxquyoxvqemkpgtwhh0s1
svwrr9owakmy9jywyvm3zo0zc
wjiwh0jvnfkv721221wjbmnjd
uhf3bsyz66ya2dgg812bxpmj3
8fq8uoy7bul7us3xbc4y7notj
odzccrtlsypmao8i86phdqbem
is2due0y1dwyos9twpcy88qmu

Total reclaimed space: 2.785GB
Docker stop/rm ae1982 ............................. before containers:
CONTAINER ID    IMAGE                       COMMAND                  CREATED
STATUS                  PORTS
NAMES
9e010303ef67    postgres:latest             "docker-entrypoint.s…"   7 hours ago     Up
24 minutes              0.0.0.0:5432->5432/tcp
IO_AERO_db
2f53ab870011    louislam/uptime-kuma:1    "/usr/bin/dumb-init …"   6 days ago      Up
24 minutes (healthy)    0.0.0.0:3001->3001/tcp
uptime-kuma
f67eb28b8888    portainer/portainer-ce    "/portainer"             2 months ago    Up
24 minutes              0.0.0.0:8000->8000/tcp, 0.0.0.0:9000->9000/tcp, 9443/tcp
portainer
.......................................................... after containers:
CONTAINER ID    IMAGE                       COMMAND                  CREATED
STATUS                  PORTS
NAMES
9e010303ef67    postgres:latest             "docker-entrypoint.s…"   7 hours ago     Up
24 minutes              0.0.0.0:5432->5432/tcp
IO_AERO_db
2f53ab870011    louislam/uptime-kuma:1    "/usr/bin/dumb-init …"   6 days ago      Up
24 minutes (healthy)    0.0.0.0:3001->3001/tcp
uptime-kuma
f67eb28b8888    portainer/portainer-ce    "/portainer"             2 months ago    Up
24 minutes              0.0.0.0:8000->8000/tcp, 0.0.0.0:9000->9000/tcp, 9443/tcp
```

```
portainer
.................................................. before images:
REPOSITORY                TAG        IMAGE ID       CREATED        SIZE
ioaero/pd1982             latest     21178cc3b8bc   36 hours ago   3.71GB
ioaero/ae1982             latest     55595e574018   36 hours ago   3.71GB
louislam/uptime-kuma      1          7a23beca3798   7 days ago     382MB
postgres                  latest     a26eb6069868   11 days ago    379MB
louislam/uptime-kuma      <none>     930a7e08142f   2 months ago   350MB
portainer/portainer-ce    latest     500504ac663a   3 months ago   285MB
ioaero/ae1982             latest     55595e574018   36 hours ago   3.71GB
Untagged: ioaero/ae1982:latest
Untagged:
ioaero/ae1982@sha256:8e0508754352cf9fbfd5c1957df825aab5703d8ec7ed85d6c44358f0bc701
e2d
Deleted: sha256:55595e574018ea4759bb7a13e51aaea8e869fe84e49c17ff05f5234b0b65f6b0
Deleted: sha256:119fc70cf352a239f7e323ba1d9b7603fb77e899ca0db5b4bc994b577cb55f45
Deleted: sha256:8922e3751ae2b60d598394358173719c4043d29ae71e8d709a305a5432f70f36
Deleted: sha256:6a95257bdb25543436f2741138e8e4cdee6121409b665f51d2f2fdcb3228a8bc
Deleted: sha256:7c6422e12c7c23e441493c9177661519dd616a418c7cd9ea6c3acfab981b5279
Deleted: sha256:3539296c13a8b190f45a4d7d66330d3396e5b1d5e81200ae492b0a0b1fe8b914
Deleted: sha256:06758fe39d1e7343a30e0f4d62d57abd997164a4840c6af6136953f12953f81d
Deleted: sha256:6a2295de770bec3782f572ee92533e5c120dda4a7a8f07faea3fe21a8fa5b9d2
Deleted: sha256:82fa1f4f9b491d32fa8f2fda71e7c8223f2ea66d85b92b19869554e4342f2a55
.................................................. after images:
REPOSITORY                TAG        IMAGE ID       CREATED        SIZE
ioaero/pd1982             latest     21178cc3b8bc   36 hours ago   3.71GB
louislam/uptime-kuma      1          7a23beca3798   7 days ago     382MB
postgres                  latest     a26eb6069868   11 days ago    379MB
louislam/uptime-kuma      <none>     930a7e08142f   2 months ago   350MB
portainer/portainer-ce    latest     500504ac663a   3 months ago   285MB
[+] Building 126.0s (16/16) FINISHED
 => [internal] load build definition from Dockerfile
0.1s
 => => transferring dockerfile: 685B
0.0s
 => [internal] load .dockerignore
0.1s
 => => transferring context: 2B
0.0s
 => [internal] load metadata for docker.io/library/python:3.10.9
1.6s
 => [auth] library/python:pull token for registry-1.docker.io
0.0s
 => [internal] load build context
0.1s
 => => transferring context: 54.51kB
0.0s
 => [ 1/10] FROM
docker.io/library/python:3.10.9@sha256:e18f86de2e5eadcb00af7d57eefeeb377aec81a41d0
33bf20de426ae6c7bbff6
0.3s
 => => resolve
docker.io/library/python:3.10.9@sha256:e18f86de2e5eadcb00af7d57eefeeb377aec81a41d0
33bf20de426ae6c7bbff6
```

```
0.0s
 => => sha256:e18f86de2e5eadcb00af7d57eefeeb377aec81a41d033bf20de426ae6c7bbff6
2.36kB / 2.36kB
0.0s
 => => sha256:3aae3bded9cfb06e92d7342abf1833b156fe197522ffbde031363194c429c8d5
8.53kB / 8.53kB
0.0s
 => => sha256:08dfb526b02f1b849ca4ce479b51f100448053a67b64905a63dcdad2fe6802c5
2.22kB / 2.22kB
0.0s
 => [ 2/10] WORKDIR /home
0.0s
 => [ 3/10] COPY .settings.io_aero.toml ./
0.0s
 => [ 4/10] COPY .streamlit/config.toml ./.streamlit/
0.0s
 => [ 5/10] COPY .streamlit/secrets_4_dockerfile.toml ./.streamlit/secrets.toml
0.0s
 => [ 6/10] COPY Makefile ./
0.0s
 => [ 7/10] COPY Pipfile ./
0.0s
 => [ 8/10] COPY settings.IO_AERO_4_dockerfile.toml ./settings.io_aero.toml
0.0s
 => [ 9/10] COPY src/streamlit_apps/ae1982.py ./ae1982.py
0.0s
 => [10/10] RUN make pipenv-prod
116.1s
 => exporting to image
7.6s
 => => exporting layers
7.6s
 => => writing image
sha256:9c52d19f49cab5d423d3829c9bf9a275646a6c8102664798439d2f6a8a36ec70
0.0s
 => => naming to docker.io/ioaero/ae1982
0.0s
Using default tag: latest
The push refers to repository [docker.io/ioaero/ae1982]
e0d3af52dd2a: Pushed
02cd2263f756: Pushed
4303b7702627: Pushed
09bdea621e5d: Pushed
4fa461cf256d: Pushed
36b2ed23b0c8: Pushed
bf522582bcc8: Pushed
568d53719d94: Pushed
5f70bf18a086: Layer already exists
6cda7fb97c48: Layer already exists
a5ea5c85f053: Layer already exists
86ee53f76eff: Layer already exists
248397b6b856: Layer already exists
fa1175420e6f: Layer already exists
bb2453e12947: Layer already exists
```

```
7354e83da007: Layer already exists
c284f546974c: Layer already exists
4efcd4003c84: Layer already exists
latest: digest:
sha256:7a10f6e705635ba099fc1e7751ce8ba7e8ab42a3effd1c85e5e391e87b3d7713 size: 4090
------------------------------------------------------------------------
The current time is:  5:29:48.32
Enter the new time:
------------------------------------------------------------------------
End   scripts\run_create_image
========================================================================


Script scripts\run_create_image is now running - Application: pd1982


You can find the run log in the file run_create_image.log


Please wait ...


========================================================================
Start scripts\run_create_image
------------------------------------------------------------------------
Create a Docker image for application pd1982
------------------------------------------------------------------------
DOCKER_CLEAR_CACHE       : yes
DOCKER_HUB_PUSH          : yes
STREAMLIT_SERVER_PORT    : 8501
------------------------------------------------------------------------
The current time is:  5:29:48.34
Enter the new time:
========================================================================
Deleted build cache objects:
thhicfsjzega5hhfsfhgazo5f
c0hrwt7xm4gqwku594jwovtxy
mj3v2y03lne206mx98ck6bs5q
t91qc536n2yxg4khxtg8ujpy7
mxil38rm6bwdx496jkxz7mlao
d8yhfp8fu7c8pyswiomy19unw
ypkmd6a84ytbkimlxvc5hge2r
tbn52lkr2rwt8kgl4taocwdq9
0hhmtdy5632ayhrwjbknd6wmu
v9nu6ong6kpge0wgy5hw7msd0
5wab3qctjhthudw31strfmcas
cvx5a4vxg4wl96bm66r65c3im
05e4dt4o8ts5myzatdapc3zbp
rei1avwchsi7rcwwwxyqj5bek
uuz6tgeqx4aakkd5rk6mviwqw
kuiq5mq3o4fdr7t1fjh59kf3z
sz0a79o1lfbfjoffp2xad68d9
p5srd861jgkz1jim3hlagwy5k
k9hr87wufmsxkrcn95mvzncx9
d0y2kal9jkigo3d1iwmnv6c5x
cop4h1ejwr20j5i6ilnjm2udh

Total reclaimed space: 2.787GB
```

```
Docker stop/rm pd1982 ............................. before containers:
CONTAINER ID    IMAGE                       COMMAND                 CREATED
STATUS                      PORTS
NAMES
9e010303ef67    postgres:latest             "docker-entrypoint.s…"  7 hours ago
Exited (0) About a minute ago
IO_AERO_db
2f53ab870011    louislam/uptime-kuma:1   "/usr/bin/dumb-init …"  6 days ago     Up
27 minutes (healthy)        0.0.0.0:3001->3001/tcp
uptime-kuma
f67eb28b8888    portainer/portainer-ce   "/portainer"            2 months ago   Up
27 minutes                  0.0.0.0:8000->8000/tcp, 0.0.0.0:9000->9000/tcp,
9443/tcp    portainer
...................................................... after containers:
CONTAINER ID    IMAGE                       COMMAND                 CREATED
STATUS                      PORTS
NAMES
9e010303ef67    postgres:latest             "docker-entrypoint.s…"  7 hours ago
Exited (0) About a minute ago
IO_AERO_db
2f53ab870011    louislam/uptime-kuma:1   "/usr/bin/dumb-init …"  6 days ago     Up
27 minutes (healthy)        0.0.0.0:3001->3001/tcp
uptime-kuma
f67eb28b8888    portainer/portainer-ce   "/portainer"            2 months ago   Up
27 minutes                  0.0.0.0:8000->8000/tcp, 0.0.0.0:9000->9000/tcp,
9443/tcp    portainer
...................................................... before images:
REPOSITORY              TAG        IMAGE ID      CREATED        SIZE
ioaero/ae1982           latest     9c52d19f49ca  53 seconds ago  3.71GB
ioaero/pd1982           latest     21178cc3b8bc  36 hours ago    3.71GB
louislam/uptime-kuma    1          7a23beca3798  7 days ago      382MB
postgres                latest     a26eb6069868  11 days ago     379MB
louislam/uptime-kuma    <none>     930a7e08142f  2 months ago    350MB
portainer/portainer-ce  latest     500504ac663a  3 months ago    285MB
ioaero/pd1982           latest     21178cc3b8bc  36 hours ago    3.71GB
Untagged: ioaero/pd1982:latest
Untagged:
ioaero/pd1982@sha256:81275d3926397906a73a897d067081b957a94c944c01fede413eb998916ab
db3
Deleted: sha256:21178cc3b8bc68774299f0015c9aff0ff819078d62174db6e13da31fe8253ece
Deleted: sha256:b0403dd2d4728d6cdb151bdd2e182b3170de1b0cbf5f0b7e00c17dddcc389f5b
Deleted: sha256:10742399ddf223a435aaf2674a553baf3c5a1345aad7d6a4f5dabe4a4398ad25
Deleted: sha256:154ad29ff275517ad1f803aa1efc0bb372ea9f37d7f0273b432ae1dfa8af87c2
Deleted: sha256:2ffd78873dbaec78fbcf969f45396338bdb809f38c04a41862f74c4d18ded62e
Deleted: sha256:faf980ada2cc0547773a54a6a55bae285088dd9afb7f29a0f1f36a6230f406c9
Deleted: sha256:9bbb505d8de414f3da1416a76cd56e6e8144e35652bf06b9b2f389d5ade00aea
Deleted: sha256:ccd5b1ddd9e1cfb8897f307f303097fafd12e1cf3220603419c03a4394138653
Deleted: sha256:2be71d95e8f20b84ab51375e52afc7665926a2ac52e22b32b82bb8f374082d13
...................................................... after images:
REPOSITORY              TAG        IMAGE ID      CREATED        SIZE
ioaero/ae1982           latest     9c52d19f49ca  54 seconds ago  3.71GB
louislam/uptime-kuma    1          7a23beca3798  7 days ago      382MB
postgres                latest     a26eb6069868  11 days ago     379MB
louislam/uptime-kuma    <none>     930a7e08142f  2 months ago    350MB
```

```
portainer/portainer-ce    latest    500504ac663a    3 months ago      285MB
[+] Building 125.4s (15/15) FINISHED
 => [internal] load build definition from Dockerfile
0.0s
 => => transferring dockerfile: 685B
0.0s
 => [internal] load .dockerignore
0.0s
 => => transferring context: 2B
0.0s
 => [internal] load metadata for docker.io/library/python:3.10.9
1.0s
 => [ 1/10] FROM
docker.io/library/python:3.10.9@sha256:e18f86de2e5eadcb00af7d57eefeeb377aec81a41d0
33bf20de426ae6c7bbff6
0.4s
 => => resolve
docker.io/library/python:3.10.9@sha256:e18f86de2e5eadcb00af7d57eefeeb377aec81a41d0
33bf20de426ae6c7bbff6
0.0s
 => => sha256:e18f86de2e5eadcb00af7d57eefeeb377aec81a41d033bf20de426ae6c7bbff6
2.36kB / 2.36kB
0.0s
 => => sha256:08dfb526b02f1b849ca4ce479b51f100448053a67b64905a63dcdad2fe6802c5
2.22kB / 2.22kB
0.0s
 => => sha256:3aae3bded9cfb06e92d7342abf1833b156fe197522ffbde031363194c429c8d5
8.53kB / 8.53kB
0.0s
 => [internal] load build context
0.0s
 => => transferring context: 43.50kB
0.0s
 => [ 2/10] WORKDIR /home
0.0s
 => [ 3/10] COPY .settings.io_aero.toml ./
0.1s
 => [ 4/10] COPY .streamlit/config.toml ./.streamlit/
0.0s
 => [ 5/10] COPY .streamlit/secrets_4_dockerfile.toml ./.streamlit/secrets.toml
0.0s
 => [ 6/10] COPY Makefile ./
0.0s
 => [ 7/10] COPY Pipfile ./
0.0s
 => [ 8/10] COPY settings.IO_AERO_4_dockerfile.toml ./settings.io_aero.toml
0.1s
 => [ 9/10] COPY src/streamlit_apps/pd1982.py ./pd1982.py
0.0s
 => [10/10] RUN make pipenv-prod
116.0s
 => exporting to image
7.6s
 => => exporting layers
```

```
7.6s
 => => writing image
sha256:352591832f346b0b30d89f33e01572eb1710024841c0d6fecd53a74b22ca5c09
0.0s
 => => naming to docker.io/ioaero/pd1982
0.0s
Using default tag: latest
The push refers to repository [docker.io/ioaero/pd1982]
fcd1849b77ee: Pushed
9b8fc3075985: Pushed
23c8d1891816: Pushed
adebe552f5a4: Pushed
1dddc5e9e66a: Pushed
ad5de2585a3a: Pushed
bf4ee8dfaa14: Pushed
3e99a612e0bf: Pushed
5f70bf18a086: Layer already exists
6cda7fb97c48: Layer already exists
a5ea5c85f053: Layer already exists
86ee53f76eff: Layer already exists
248397b6b856: Layer already exists
fa1175420e6f: Layer already exists
bb2453e12947: Layer already exists
7354e83da007: Layer already exists
c284f546974c: Layer already exists
4efcd4003c84: Layer already exists
latest: digest:
sha256:466fe6edd661ee9067d0e77e0fbd1f44acbce0cc6e7f5468dd7e8bf1b6bf05ec size: 4090
----------------------------------------------------------------------
The current time is:  5:32:40.32
Enter the new time:
----------------------------------------------------------------------
End   scripts\run_create_image
======================================================================

----------------------------------------------------------------------
The current time is:  5:32:40.33
Enter the new time:
----------------------------------------------------------------------
End   scripts\run_create_image
======================================================================


----------------------------------------------------------------------
The current time is:  5:32:40.34
Enter the new time:
----------------------------------------------------------------------
End   run_io_avstats
======================================================================
```

2. Zip local files

The script `run_io_avstats` with task `c_f_z` zips the required files into the `cloud.zip` file. The very first thing the script does is stop the PostgreSQL database so that the database files are in a consistent state. Then zip

the file directory **data/postgres** and rename the zipped file **postgres.zip** to **latest_postgres.zip**.

Example protocol:

```
D:\SoftDevelopment\Projects\IO-Aero\io-avstats>run_io_avstats
========================================================
r_s_a   - Run a Streamlit application
----------------------------------------------------------------
d_n_a   - Download a NTSB MS Access database file
l_n_a   - Load NTSB MS Access database data into PostgreSQL
c_l_l   - Correct decimal US latitudes and longitudes
v_n_d   - Verify selected NTSB data
r_d_s   - Refresh the PostgreSQL database schema
----------------------------------------------------------------
c_p_d   - Cleansing PostgreSQL data
l_c_d   - Load data from a correction file into PostgreSQL
l_c_s   - Load country and state data into PostgreSQL
l_s_d   - Load simplemaps data into PostgreSQL
l_z_d   - Load ZIP Code Database data into PostgreSQL
----------------------------------------------------------------
c_d_s   - Create the PostgreSQL database schema
u_d_s   - Update the PostgreSQL database schema
----------------------------------------------------------------
c_d_i   - Create or update a Docker image
c_d_c   - Run Docker Compose tasks
c_f_z   - Zip the files for the cloud
----------------------------------------------------------------
version - Show the IO-AVSTATS-DB version
----------------------------------------------------------------
Enter the desired task [default: r_s_a] c_f_z

Script run_io_avstats is now running
==============================================================================
Start run_io_avstats
------------------------------------------------------------------------------
IO-AVSTATS - Aviation Event Statistics.
------------------------------------------------------------------------------
PYTHONPATH :
------------------------------------------------------------------------------
TASK       : c_f_z
CORRECTION :
MSACCESS   :
------------------------------------------------------------------------------
The current time is:  5:35:14.64
Enter the new time:
==============================================================================
==============================================================================
Start scripts\run_cloud_files_zip
------------------------------------------------------------------------------
File Collection for AWS
------------------------------------------------------------------------------
The current time is:  5:35:14.67
Enter the new time:
```

```
============================================================================

7-Zip (a) [32] 15.14 : Copyright (c) 1999-2015 Igor Pavlov : 2015-12-31

Scanning the drive:
3 files, 290463129 bytes (278 MiB)

Creating archive: cloud.zip

Items to compress: 3


Files read from disk: 3
Archive size: 280942218 bytes (268 MiB)
Everything is Ok


============================================================================
Archive Content
----------------------------------------------------------------------------


7-Zip (a) [32] 15.14 : Copyright (c) 1999-2015 Igor Pavlov : 2015-12-31

Scanning the drive for archives:
1 file, 280942218 bytes (268 MiB)

Listing archive: cloud.zip

--
Path = cloud.zip
Type = zip
Physical Size = 280942218

   Date      Time    Attr         Size   Compressed  Name
------------------ ----- ------------ ------------  ------------------------
2023-01-02 23:47:48 ....A    290453357    280940090  data\latest_postgres.zip
2022-12-27 01:44:14 ....A         1666          441  docker-compose.yml
2023-01-01 16:40:06 ....A         8106         1187  scripts\run_docker_compose.sh
------------------ ----- ------------ ------------  ------------------------
2023-01-02 23:47:48              290463129    280941718  3 files
============================================================================


----------------------------------------------------------------------------
The current time is:  5:35:23.32
Enter the new time:
----------------------------------------------------------------------------
End    scripts\run_cloud_files_zip
============================================================================


----------------------------------------------------------------------------
The current time is:  5:35:23.33
Enter the new time:
----------------------------------------------------------------------------
End    run_io_avstats
============================================================================
```
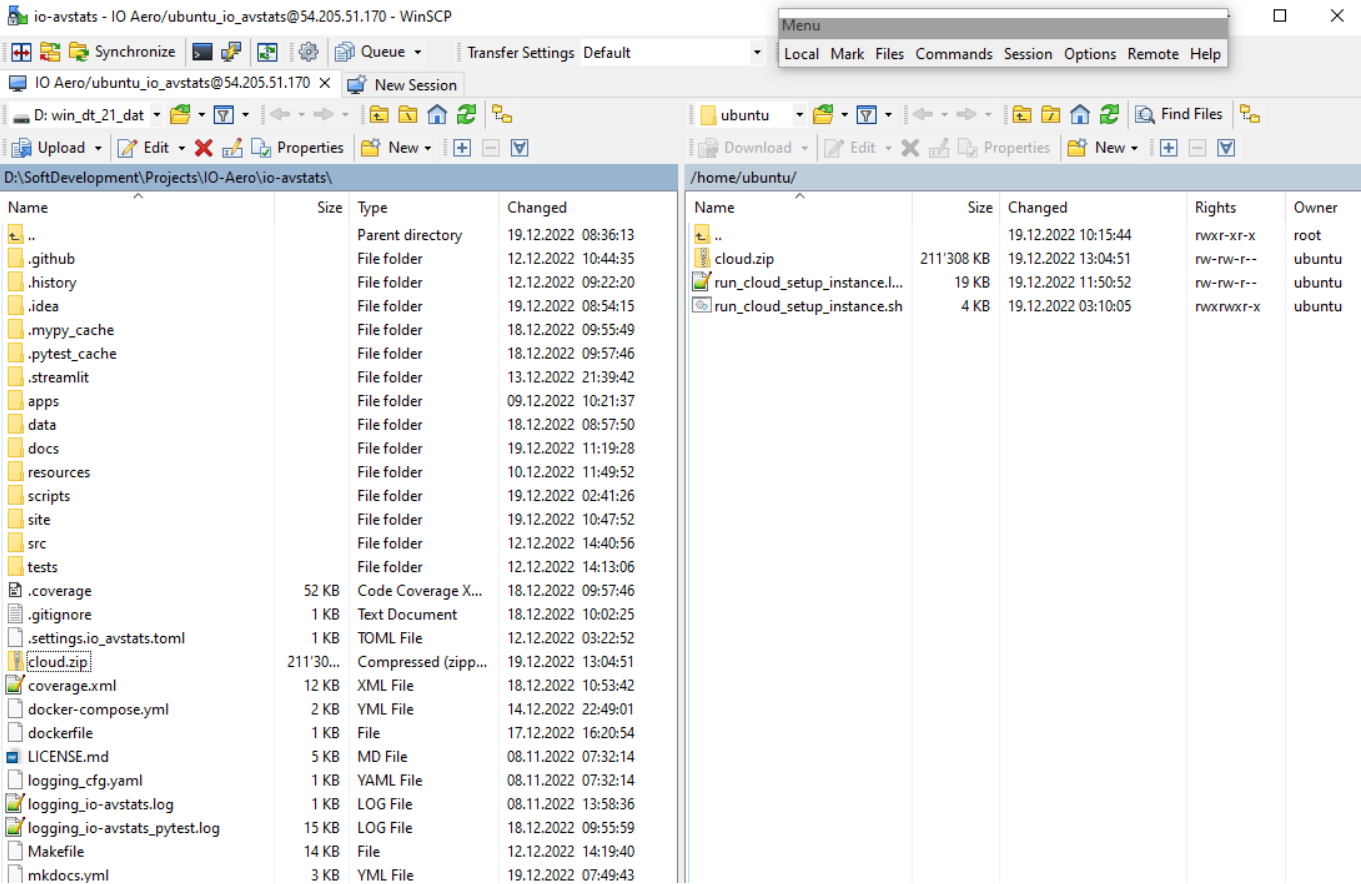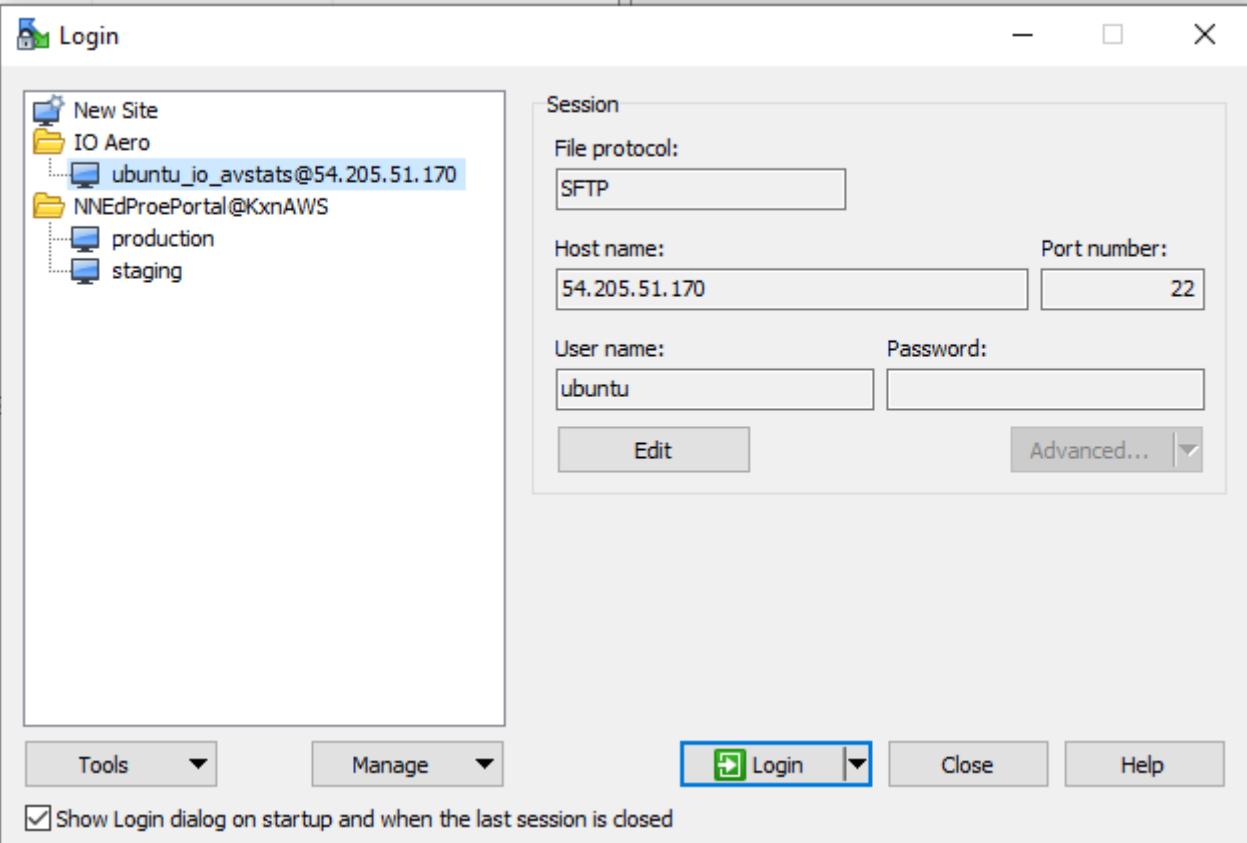
3. Upload zip file

On Windows, the WinSCP{:target="_blank"} program can be used to upload the `cloud.zip` file from the local system to the AWS Cloud.

4. Connect to the AWS instance

Instances (1/1) Info   ⟳   Connect

🔍 *Find instance by attribute or tag (case-sensitive)*

☑	Name	▽	Instance ID		Instance state	▽	Instance type	▽	Status check	Alarm status
☑	IO-AVSTATS		i-06ec890547dff6cf9		⊘ Running ⊕⊖		t2.micro		⊘ 2/2 checks passed	No alarms ➕

---

aws ⠿ **Services**   🔍 Search   [Alt+S]

☰

EC2 ＞ Instances ＞ i-06ec890547dff6cf9 ＞ **Connect to instance**

Connect to instance Info

Connect to your instance i-06ec890547dff6cf9 (IO-AVSTATS) using any of these options

EC2 Instance Connect	**Session Manager**	**SSH client**	**EC2 serial console**

Instance ID

⧉ i-06ec890547dff6cf9 (IO-AVSTATS)

Public IP address

⧉ 54.205.51.170

User name

ubuntu

Connect using a custom user name, or use the default user name ubuntu for the AMI used to launch the instance.

> ⓘ **Note:** In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

Cancel   **Connect**

```
aws      ::: Services    Q  Search
Welcome to Ubuntu 20.04.5 LTS (GNU/Linux 5.15.0-1026-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Mon Dec 19 10:46:00 UTC 2022

  System load:  0.0               Processes:             99
  Usage of /:   5.4% of 28.89GB   Users logged in:       0
  Memory usage: 19%               IPv4 address for eth0: 172.31.89.93
  Swap usage:   0%


0 updates can be applied immediately.


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
New release '22.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.


Last login: Mon Dec 19 10:40:11 2022 from 18.206.107.27
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-89-93:~$
```

5. Unzip in the cloud

First, the file `cloud.zip` is unzipped.

- `unzip cloud.zip`

Subsequently, the shell script must be made executable:

- `chmod +x scripts/*.sh`

Afterward , a possibly running **IO-AVSTATS** is terminated.

- `./scripts/run_docker_compose.sh down`

Next, unzip the database files.

- `cd data`
- `sudo rm -rf postgres`
- `unzip latest_postgres.zip`

Finally, clean up unnecessary files.

- `rm latest_postgres.zip`

- `cd ..`
- `rm cloud.zip`

5. Restart ***IO-AVSTATS**

- `./scripts/run_docker_compose.sh up`

6. Test the Streamlit applications