

Chapter 2: Installation

2.1 Environment Preparation

The Proactive Risk Alerts Platform currently supports the following environments:

1. Linux operating systems with x86_64 architecture. Recommended OS versions: CentOS 7.9 or later, Ubuntu 20.04, Ubuntu 22.04.
2. Domestic independent innovation (Xinchuang) systems with arm80 and arm82 architectures.

Notes:

- arm80 and arm82 architectures correspond to different installation packages. Confirm the current environment architecture before selecting the appropriate package.
- **Architecture verification method:**
 1. Locate the **check_arm_level.sh** script in the installation package and grant it executable permissions.
 2. Run the script:
 - If the output is aarch64v80compat, the architecture is arm80.
 - If the output is aarch64, the architecture is arm82.

As shown in the figure below, the output aarch64v80compat indicates an arm80 environment.

Performance requirements are related to the number of clients. Recommended configurations for different scales are as follows (higher hardware specifications are advised, as future feature expansions will increase performance demands):

Detected architecture level: aarch64v80compat

Performance requirements are correlated with the number of clients, and recommendations for different scales are as follows: (It is recommended to use servers with better performance. As more features are added in the future, the performance requirements for the servers will be higher.)

Number of Clients	Configuration Type	Memory	CPU Cores/Threads	Disk Space
1,000	Recommended	32 GB	8 Cores / 16 Threads	50 GB
5,000	Recommended	64 GB	16 Cores / 32 Threads	100 GB

2.2 Installation

Important Notes Before Installation!!

1. The deployment process will modify configuration files with the .yaml extension. Please pay attention to the following:

- 1) Back up the files before making modifications.
- 2) YAML files use indentation to represent data hierarchy. Spaces must be used for indentation (tabs are not allowed). The number of indentation spaces must be consistent; otherwise, parsing errors will occur.
- 3) YAML files use indentation to represent data hierarchy. Spaces must be used for indentation (tabs are not allowed). The number of indentation spaces must be consistent; otherwise, parsing errors will occur.

Online YAML validation tool: https://www.bejson.com/validators/yaml_editor/

2. Install the platform using the root user.
3. Before installation, ensure network connectivity is normal between:
 - The Proactive Risk Alerts Platform and port 8236 of the server.
 - The server and its database.

1. Copy the project installation package oanalysis.tar.gz from the compressed file StatisticalSystem-<version number>.zip to the **/usr/local** directory.
2. Extract the installation package

```
tar zxvf oanalysis.tar.gz
```

3. Elevate permissions and modify the directory owner

```
chmod 777 -R /usr/local/oanalysis/pgsql chmod 777 -R  
/usr/local/oanalysis/clickhouse chown 1001:1001 -R  
/usr/local/oanalysis/pgsql
```

4. Install Docker

```
sudo sh /usr/local/oanalysis/shell/docker-install.sh
```

After installation, execute `systemctl status docker`. If the status is displayed as active (running) and shown in the figure below, Docker has been installed successfully.

```

[root@MiWi-Fi-RA72-srv oanalysis]# systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; disabled; preset: disabled)
   Active: active (running) since Fri 2024-07-12 11:45:54 CST; 6 days ago
     TriggeredBy: ● docker.socket
       Docs: https://docs.docker.com
    Main PID: 103260 (dockerd)
       Tasks: 24
      Memory: 2.0G
         CPU: 12min 12.117s
    CGroup: /system.slice/docker.service
            └─103260 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

7 19 10:09:32 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:32.338079226+08:00" level=info msg="ignoring event" container=cb29e9a
7 19 10:09:32 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:32.999349044+08:00" level=info msg="ignoring event" container=cb29e9a
7 19 10:09:57 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:57.733886723+08:00" level=info msg="ignoring event" container=cb29e9a
7 19 10:09:57 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:57.754554856+08:00" level=warning msg="ShouldRestart failed, containe
7 19 10:09:58 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:58.856380081+08:00" level=info msg="ignoring event" container=f781bc7
7 19 10:09:58 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:58.869662041+08:00" level=warning msg="ShouldRestart failed, containe
7 19 10:09:59 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:59.917183275+08:00" level=info msg="ignoring event" container=eafea46
7 19 10:09:59 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:09:59.955990745+08:00" level=warning msg="ShouldRestart failed, containe
7 19 10:10:01 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:10:01.087947937+08:00" level=info msg="ignoring event" container=7d74lee
7 19 10:10:01 MiWi-Fi-RA72-srv dockerd[103260]: time="2024-07-19T10:10:01.099339879+08:00" level=warning msg="ShouldRestart failed, containe
lines 1-22/22 (END)

```

Before installation, first check if Docker is installed in the environment. Run the command `docker --version` to verify the version. If the version is lower than 27.3.1, you need to uninstall it first and then install the Docker included in the Proactive Risk Alerts Platform installation package.

5. Configure the source database (i.e., the database of the AnySecura server)

```
vim /usr/local/oanalysis/oanalysis/config/config.yaml
```

Search for the keyword **【ocular:】** and modify the value of link as follows:

Link:

"database_type:database_account:database_password@tcp(database_address:port)/database_name"

link Example 1:

"mssql:sa:123456@tcp(192.168.2.50:1433)/OCULAR3?encrypt=disable"

link Example 2:

"mysql:root:123456@tcp(192.168.2.64:3306)/OCULAR3"

● Database type:

For **SQL Server**, enter `mssql` and append `?encrypt=disable` at the end.

For **MySQL**, enter `mysql` with no need to append `?encrypt=disable`.

● Database account and password

Use an account with read permissions for the OCULAR3 database and the log database OCULAR3_DATA.YYYYMMDD.

● Database server address

AnySecura database address:port

● Database name

Only **OCULAR3** is allowed.

```

default:
link: "pgsql:postgres:encrypt-7xwE8TNj04/Emwa5E1qeFvtpbckfyUj@tcp(172.28.1.123:5432)/oanalyze"
debug: true
charset: "utf8mb4" # Database encoding
dryRun: false # Dry run (no actual data operation)
maxIdle: 10 # Maximum idle connections in the connection pool
maxOpen: 10 # Maximum open connections in the connection pool
maxLifetime: "60s" # (Unit: seconds) Reusable duration of connection objects

ocular:
# link: "mssql:sa:encrypt-HnGD8YAxFLYzGv/FuW84w1MLDP5akg==@tcp(2.tcp.cpoLar.top:13335)/OCULAR3?encrypt-disable"
link: "mssql:testfan:123456@tcp(192.168.2.49:1433)/OCULAR3?encrypt=disable"
debug: true
charset: "utf8mb4" # Database encoding
dryRun: false # Dry run (no actual data operation)
maxIdle: 10 # Maximum idle connections in the connection pool
maxOpen: 10 # Maximum open connections in the connection pool
maxLifetime: "60s" # (Unit: seconds) Reusable duration of connection objects

clickhouse:
link: "clickhouse:default:encrypt-LJ8TbRfK8TC3qucgMrMg8jRB9DPGwFe=@tcp(172.28.1.124:9000)/ocular3"
# link: "clickhouse:default:123456@tcp(192.168.31.67:9000)/default"
charset: "utf8mb4" # Database encoding
dryRun: false # Dry run (no actual data operation)
maxIdle: 30 # Maximum idle connections in the connection pool
maxOpen: 100 # Maximum open connections in the connection pool
maxLifetime: "60s" # (Unit: seconds) Reusable duration of connection objects

```

Note: Enter the database password in plain text. After starting the service, the service will automatically encrypt the password and save it to the configuration file.

When the database is MySQL 8.0 or later, the default authentication method for accounts is caching_sha2_password, which needs to be modified to mysql_native_password for the Proactive Risk Alerts Platform to connect normally.

Steps:

1. Obtain the current password hash value of the user

SELECT authentication_string FROM mysql.user WHERE user='root';

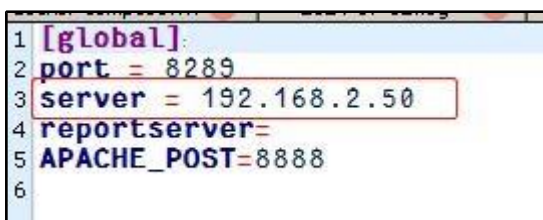
2. Modify only the user authentication method without changing the password

ALTER USER 'root'@'%' IDENTIFIED WITH mysql_native_password AS 'hash_value';
FLUSH PRIVILEGES;

6. Configure the connection server and stateless authorization verification

```
vim /usr/local/oanalysis/owss/config.ini
```

➤ Modify the value of server to the IP address of the AnySecura server.



```

1 [global]
2 port = 8289
3 server = 192.168.2.50
4 reportserver=
5 APACHE_POST=8888
6

```

➤ Configure stateless authorization verification.

[auth]

```
function=docasset          inneraccount=test
innerpwd=123456 authid=65537
authkey=7f7367bea17bf31c2048ab88af6b5a22d032479e
```

- **function:** Supported function functions
- **docasset:** Document assets
- **inneraccount/innerpwd:** Administrator account/administrator password. The configured account must have the functional permission Parameter Settings - Server Settings and full management scope.
- **authid:** Authorization ID, default value is 65537. It must be consistent with the authid in `/usr/local/oanalysis/oanalysis/config/config.yaml`.
- **authkey:** Authorization key, default value is 7f7367bea17bf31c2048ab88af6b5a22d032479e. It must be consistent with the authkey in `/usr/local/oanalysis/oanalysis/config/config.yaml`.

Notes:

1. authid and authkey can be custom-modified by searching for the corresponding keywords in the /usr/local/oanalysis/oanalysis/config/config.yaml file. After modification, ensure that the relevant configurations in the /usr/local/oanalysis/owss/config.ini file are updated synchronously to maintain consistency between the two.
2. If not configured or configured incorrectly, the "File Classification Statistics - Download Count" in Data Security - Document Operations - Document Operation Statistics will display as empty, and the "Document Classification" in the query criteria will also display as empty.

7. Configure the document asset collection tool configuration file (optional step, only required if the Document Asset Map function is to be used).

```
vim /usr/local/oanalysis/asset/odocassetserver.ini
```

The configuration content is as follows:

```
[GLOBAL] SERVER=192.168.2.108 [CBH CONFIG]
DOMAINS=test08.com DISPATCH_COUNT=10
[CONFIG] HTTP_SERVER=0 MAX_CONNECTION=500
AssetPath=/
```

- **SERVER:** IP address of the connected AnySecura server.
- **DOMAINS:** External domain name of the machine hosting the Proactive Risk Alerts Platform / IP address of the machine where the Proactive Risk Alerts Platform is deployed.
 - If clients need to upload scan results to the document asset collection tool from an external network, a domain name can be used for connection and upload.
 - If within an internal network, the IP address of the Proactive Risk Alerts Platform machine can be entered for connection.

- **DISPATCH_COUNT**: Maximum number of clients allowed to upload files simultaneously.
- **HTTP_SERVER**: Connection protocol for the web page displaying the connection status of the document asset collection tool.
 - 0 / Not configured: HTTPS
 - Non-0: HTTP
- **MAX_CONNECTION**: Maximum number of clients allowed to connect simultaneously.
- **AssetPath**: Storage path for the data list. Fixed value: / (the data list will be stored under /pend).

8. Modify the PostgreSQL database password (optional step)

This step is only required if you need to change the default account credentials (default account: postgres, password: postgres). The modification steps are as follows:

- (1) In **/usr/local/oanalysis/docker-compose.yml**, search for the **【pgsql:】** section and modify the value of the **POSTGRES_PASSWORD** parameter to the new password.

```

50     oanet:
51       ipv4_address: 172.28.1.126
52     ports:
53       - 8487:8290
54       - 8888:8888
55     restart: always
56     volumes:
57       - /usr/local/oanalysis/owss/config.ini:/var/TEC/0Interface/server/config.ini
58       - /usr/local/oanalysis/owss/debug:/var/TEC/0Interface/server/debug
59     pgsql:
60       container_name: pgsql
61       environment:
62         POSTGRES_PASSWORD: postgres
63         POSTGRES_POSTGRES_PASSWORD: NewPassword123!
64       image: bitnami/postgresql:15.8.0
65       networks:
66         oanet:
67       ipv4_address: 172.28.1.123
68     ports:

```

- (2) In **/usr/local/oanalysis/oanalysis/config/config.yaml**, search for the **【database:】** section and modify the password in the database connection string link under default.

link: postgresql:postgres:new_password@tcp(postgresql:5432)/oanalyze

```

docker-compose... config.yaml
10   enable: false
11   max_day: 60
12   sync_config_period: 60
13   auth:
14     GetServerRunInfoJob: 1
15   casbin:
16     modelFile: ./resource/casbin/rbac_model.conf
17     policyFile: ./resource/casbin/rbac_policy.csv
18   database:
19     clickhouse:
20       charset: utf8mb4
21       debug: true
22       dryRun: false
23       link: clickhouse:default:encrypt-s+c7gdahWBLQYxi8r7JWVZu8XKIGiZI=@t
24       maxIdle: 30
25       maxLifetime: 60s
26       maxOpen: 100
27     default:
28       charset: utf8mb4
29       debug: true
30       dryRun: false
31       link: postgresql:postgres:NewPassword123!@tcp(postgresql:5432)/oanalyze
32       maxIdle: 10
33       maxLifetime: 60s
34       maxOpen: 10

```

9. Modify the ClickHouse database password (optional step)

This step is only required if you need to change the default account credentials (default account: default, password: default). The modification steps are as follows:

- (1) In **/usr/local/oanalysis/docker-compose.yml**, search for the **【clickhouse:】** section and modify the value of the **CLICKHOUSE_DEFAULT_PASSWORD** parameter to the new password.


```

5   config:
6     - gateway: 172.28.1.1
7       subnet: 172.28.1.0/24
8 services:
9   clickhouse:
10    container_name: clickhouse
11    environment:
12      CLICKHOUSE_ADMIN_PASSWORD: NewPassword123!
13    image: bitnami/clickhouse:24.8
14    networks:
15      oanet:
16        ipv4_address: 172.28.1.124
17    ports:
18      - 8123:8123
19      - 9001:9000
20    restart: always
21    volumes:
22      - /usr/local/oanalysis/clickhouse/config.xml:/opt/bitnami/clickhouse/etc/config.xml
23      - /usr/local/oanalysis/clickhouse/etc.default:/opt/bitnami/clickhouse/etc.default
24      - /usr/local/oanalysis/clickhouse/etc:/opt/bitnami/clickhouse/etc
25      - /etc/localtime:/etc/localtime:ro
26      - /usr/local/oanalysis/clickhouse/data:/var/lib/clickhouse:rw
27  oanalysis:
28    container_name: oanalysis
29    depends_on:
30      - clickhouse

```

- (2) In `/usr/local/oanalysis/oanalysis/config/config.yaml`, search for the `【database:】` section and modify the link under clickhouse:

link: clickhouse:default:new_password@tcp(clickhouse:9000)/ocular3

```

13 auth:
14   GetServerRunInfoJob: 1
15 casbin:
16   modelFile: ./resource/casbin/rbac_model.conf
17   policyFile: ./resource/casbin/rbac_policy.csv
18 database:
19   clickhouse:
20     charset: utf8mb4
21     debug: true
22     dryRun: false
23     link: clickhouse:default:NewPassword123!@tcp(clickhouse:9000)/ocular3
24     maxIdle: 30
25     maxLifetime: 60s
26     maxOpen: 100
27   default:
28     charset: utf8mb4
29     debug: true
30     dryRun: false
31     link: postgresql:postgres:NewPassword123@tcp(postgresql:5432)/oanalyze
32     maxIdle: 10
33     maxLifetime: 60s
34     maxOpen: 10
35 logger:
36   Path: resource/log/sql
37   level: error
38   stdout: false
39 ocular:

```

10. Execute the initialization script

sh /usr/local/oanalysis/shell/init.sh

```

1e1fde6dc7c3: Loading layer [=====] 687.8MB/687.8MB
Loaded image: bitnami/clickhouse:24.8
2a14b87e7cf3: Loading layer [=====] 351.5MB/351.5MB
Loaded image: bitnami/postgresql:17.6.0
174f56854903: Loading layer [=====] 211.7MB/211.7MB
b4992c82fd8f: Loading layer [=====] 25.94MB/25.94MB
abeb14576921: Loading layer [=====] 54.84MB/54.84MB
0311818260a4: Loading layer [=====] 2.048kB/2.048kB
Loaded image: oanalysis:4.88.1430.0
3cc982388b71: Loading layer [=====] 80.42MB/80.42MB
9de6f0574e6e: Loading layer [=====] 145.1MB/145.1MB
9f7658f659ba: Loading layer [=====] 357.3MB/357.3MB
437d3c04bb6e: Loading layer [=====] 2.048kB/2.048kB
Loaded image: owss:4.88.1410.0
abb7598cbbc2: Loading layer [=====] 3.072kB/3.072kB
0565c0dd9b01: Loading layer [=====] 39.62MB/39.62MB
43cfe456cf90: Loading layer [=====] 101.5MB/101.5MB
d5db52cf7f4e: Loading layer [=====] 4.031MB/4.031MB
3202bf364049: Loading layer [=====] 8.065MB/8.065MB
6b5e455983c7: Loading layer [=====] 2.048kB/2.048kB
Loaded image: assettool:4.88.1410.0

```

11. Execute the script to start containers and set up auto-start on boot

sh /usr/local/oanalysis/shell/oanalysis.sh

```
[root@localhost ~]# sh /usr/local/oanalysis/shell/oanalysis.sh
[+] Running 5/0
# Container clickhouse Running
# Container assettool Running
# Container owss Running
# Container pgsql Running
# Container oanalysis Running
```

12. Verify the service status

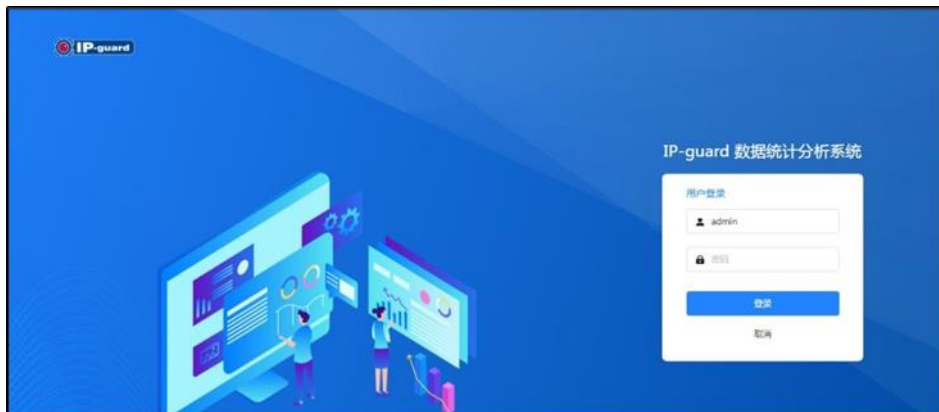
docker ps

```
[root@localhost ~]# docker ps -a
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS
79afe586b4c3   oanalysis:4.88.1430.0              "/usr/local/oanalysis..." 7 days ago    Up 3 minutes   0.0.0.0:8808->8808/tcp, :::8808->8808/tcp
fbd3f781503a   bitnami/clickhouse:24.8             "/opt/bitnami/script..." 7 days ago    Up 20 minutes   9004-9005/tcp, 0.0.0.0:8123->8123/tcp, :::8123->8123/tcp, 9009/tcp, 0.0.0.0:9001->9001/tcp, [::]:9001->9001/tcp
70021b6ea41c   bitnami/postgresql:17.6.0          "/opt/bitnami/script..." 7 days ago    Up 20 minutes   0.0.0.0:5432->5432/tcp, :::5432->5432/tcp
96790274c8fa   assettool:4.88.1410.0              "/bin/sh /var/Asset/..." 7 days ago    Up 20 minutes   0.0.0.0:8293-8294->8293-8294/tcp, [::]:8293-8294->8293-8294/tcp
458e6635890f   owss:4.88.1410.0                   "/var/TEC/OInterface..." 7 days ago    Up 20 minutes   0.0.0.0:8487->8487/tcp, [::]:8487->8487/tcp
```

Check for 5 containers with the IMAGE field values: **oanalysis**, **clickhouse**, **owss**, **postgresql**, and **assettool**. The service is considered normal if there are no errors, all containers exist, and the PORTS field of each container is not empty.

13. Access and Login

The default access address is `http://<Proactive Risk Alerts Platform IP>:8808`. Use the AnySecura server administrator account to log in.



Accounts, passwords, and ports of related components after installation:

- PostgreSQL: Default account: postgres, password: postgres, port: 5432
- ClickHouse: Default account: default, password: default, port: 8123
- OWSS: Default port: 8487
- Oanalysis: Default port: 8808

Common errors:

After installation, when running `docker ps -a` to check containers, some ports show as empty, indicating that the service failed to start.


```
permission denied while trying to connect to the docker daemon socket at unix:///var/run/docker.sock: Get "http://localhost:2375/v1.47/containers/oanalysis/json": dial unix /var/run/docker.sock: connect: permission denied
root@localhost:~#
```

Troubleshooting steps:

1. Use the docker logs [CONTAINER_ID] command to check the image logs. Replace [CONTAINER_ID] with the actual container ID or name (e.g., docker logs oanalysis). If there is an error message related to permission denied, it indicates insufficient permissions. Elevate permissions and modify the directory owner using the following commands:

```
chmod 777 -R /usr/local/oanalysis/pgsql
```

```
chmod 777 -R /usr/local/oanalysis/clickhouse
```

```
chown 1001:1001 -R /usr/local/oanalysis/pgsql
```

2. After elevating permissions, perform the following steps:

● Uninstall containers

```
sh /usr/local/oanalysis/shell/uninstall.sh
```

● Execute the script to start containers and set up auto-start on boot

```
sh /usr/local/oanalysis/shell/oanalysis.sh
```

2.3 Start/Stop the Service

#Check service status

```
docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
79fe680b4cd	oanalysis:4.88.1410.0	"/usr/local/oanalysis..."	7 days ago	Up 3 minutes	0.0.0.0:8888->8888/tcp, :::8888->8888/tcp
fb03781103a	bitnami/clickhouse:24.8	"/opt/bitnami/script..."	7 days ago	Up 20 minutes	9094-9095/tcp, 0.0.0.0:8123->8123/tcp, :::8123->8123/tcp, 0.0.0.0:9001->9001/tcp, :::9001->9001/tcp
00621b6e941c	bitnami/postgresql:17.6.0	"/opt/bitnami/script..."	7 days ago	Up 20 minutes	0.0.0.0:5432->5432/tcp, :::5432->5432/tcp
96790274c0fa	assettool:4.00.1410.0	"/bin/sh /var/Asset/..."	7 days ago	Up 20 minutes	0.0.0.0:8293-8294->8293-8294/tcp, :::8293-8294->8293-8294/tcp
458e6635396f	owss:4.88.1410.0	"/var/TEC/OInterface..."	7 days ago	Up 20 minutes	0.0.0.0:8467->8290/tcp, :::8467->8290/tcp

Check for 5 containers with the IMAGE field values: oanalysis, clickhouse, owss, postgresql, and assettool. The service is running normally if there are no errors and all containers exist.

#Script to start containers

```
sh /usr/local/oanalysis/shell/start.sh
```

#Script to stop containers

```
sh /usr/local/oanalysis/shell/stop.sh
```

If no errors occur when executing the start/stop scripts, the scripts are running normally.

```
# container oanalysis started
```

2.4 Uninstallation

1. Uninstall containers

```
sh /usr/local/oanalysis/shell/uninstall.sh
```

```
[root@localhost ~]# sh /usr/local/oanalysis/shell/uninstall.sh
[+] Running 6/6
# Container assettool      Removed
# Container oanalysis     Removed
# Container owss           Removed
# Container pgsq1         Removed
# Container clickhouse     Removed
# Network oanalysis_oanet Removed
```

2. Uninstall images

```
sh /usr/local/oanalysis/shell/uninstall-images.sh
```

```
# Network oanalysis_oanet Removed
[root@localhost ~]# sh /usr/local/oanalysis/shell/uninstall-images.sh
Untagged: oanalysis:4.88.1430.0
Deleted: sha256:b5455f0738e675bf088b5adf1f7c945cc55ecd9a67416dfad1f4d837868749e2
Deleted: sha256:a3b1a57ac0d4147118f081ed70bb6873d142ab04eb17c052b99feee1bcebd362
Deleted: sha256:3abc51cc4cc93ba87782f2548fca4b175fdde553ae5af6b9deb6c0e5128cad
Deleted: sha256:c6dc82bea6603cef50b21eb84ec84627007cc266eb70d99927f4b28f3894cc6e
Untagged: owss:4.88.1410.0
Deleted: sha256:7df0d3d28ee71eb9907bce91d009e5c93cf6cf0735358721f738895a18b922d8
Deleted: sha256:14a4f907cba3c48a10f82b99ead45164c1313cfdd241e2b8971e90b9af82baf
Deleted: sha256:09b9dd6ac8956af369aadd54447d0a8c4655ea9e1e75cf0375438a5488a5eaeaf
Deleted: sha256:785557947b26cd73a630646764e6665709523193393bf7a31e90964391c2aded
Deleted: sha256:3cc982388b71ef357e0b7d3059dcefa4dc9fd2e3815bde6c6ce040302f3
Untagged: bitnami/clickhouse:24.8
Deleted: sha256:8d783317a83a225f4176a4d385cc43782a85a2cb918c067cc1bcf7a43b3f7eb5
Deleted: sha256:1e1fde6dc7c33b0d9a945b34a813bdfa81e913053637291028499636a3b28d76
Untagged: bitnami/postgresql:17.6.0
Deleted: sha256:256d56fa46393a06aad11524590032912c761f1f8a0db126877eff89975cbbab6
Deleted: sha256:2a14b87e7cf38ed19504cbce225e63b8495ea31670206484ff11ba159ed074fe
Untagged: assettool:4.88.1410.0
Deleted: sha256:434f6caba72894b742df7860fcf99af298b366e46bf3df22fa1cb0c7f5f134a5
Deleted: sha256:40cf488b3af28604275ca2cfd4c033a606b5fef567d4c3f71cc71ccba3da35a8
Deleted: sha256:868f66435411e9e972f34600765432a853fbd1ffae262fa5a4ec497ffe1e98a2
Deleted: sha256:65bb9de413d01c69a21c6831460b4ccbd82640c4c6c5a7a56d309b2fb4d5dd54
Deleted: sha256:9e655c3aae7641a3730642701a8fbf780dbac4eef3bd7200f7aea7abe3ef1b75
Deleted: sha256:fe4ee0f4baf55eea47f69648ca2c7a17848c44bb227f3b6fcf4595fabe3f68bf
Deleted: sha256:8760fb27703a324e7508dc61b2afc70195076f789005974311d0a6588d86b416
Deleted: sha256:174f5685490326fc0a1c0f5570b8663732189b327007e47ff13d2ca59673db02
```

If an error "source: not found" occurs:

```
root@teclink-virtual-machine:/usr/local/oanalysis# sh /usr/local/oanalysis/shell/uninstall-images.sh
/usr/local/oanalysis/shell/uninstall-images.sh: 8: source: not found
Error response from daemon: invalid reference format
Error response from daemon: invalid reference format
Error response from daemon: invalid reference format
Error response from daemon: invalid reference format
```

Perform the following steps:

1. Elevate permissions

```
chmod 777 /usr/local/oanalysis/shell/uninstall-images.sh
```

2. Navigate to the oanalysis directory

```
cd /usr/local/oanalysis/
```

3. Execute the script

```
./shell/uninstall-images.sh
```

3. Remove files

```
rm -rf /usr/local/oanalysis
```

Note: Uninstallation will not remove Docker.

2.5 Upgrade

The Proactive Risk Alerts Platform consists of oanalysis, postgresql, clickhouse, owss, and assettool, where oanalysis includes both frontend and backend components.

2.5.1 Full Upgrade of Oanalysis

Notes:

- 1、 Perform the upgrade as the root user. Only versions **4.87.1261.0** and above support upgrade via the upgrade package. For versions lower than this, follow the steps in **【2.6 Reinstallation】** .
- 2、 Version 4.87.1264.0 cannot be directly upgraded to 4.88.1430.0. You must first upgrade to version 4.88.1421.0, then upgrade to 4.88.1430.0.

- Notes:**
- 1、 Perform the upgrade as the root user. Only versions **4.87.1261.0** and above support upgrade via the upgrade package. For versions lower than this, follow the steps in **【2.6 Reinstallation】** .
 - 2、 Version 4.87.1264.0 cannot be directly upgraded to 4.88.1430.0. You must first upgrade to version 4.88.1421.0, then upgrade to 4.88.1430.0.

- (1) Copy the upgrade package (upgrade.tar.gz) from the StatisticalSystem-<Version>.zip compressed file to any directory.
- (2) Extract the upgrade package

```
sudo tar zxvf upgrade.tar.gz
```

- (3) Navigate to the upgrade package directory and execute the upgrade script.

```
cd upgrade
sh upgrade.sh
```

[illegible]

If an error occurs:

```
teclink@ubuntu:/usr/local$ sh /usr/local/upgrade/upgrade.sh
/usr/local/upgrade/upgrade.sh: 7: source: not found
Error: Failed to source version.conf
```

```
teclink@ubuntu:/usr/local$ sh /usr/local/upgrade/upgrade.sh
/usr/local/upgrade/upgrade.sh: 7: source: not found
Error: Failed to source version.conf
```

Perform the following steps:

```
chmod 777 upgrade.sh
```

```
./upgrade.sh
```

- (4) Verify the service status

```
docker ps
```

```
[root@localhost ~]# docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
79af586bd4c3	oanalystis:4.88.1430.0	"/usr/local/oanalystis..."	7 days ago	Up 3 minutes	0.0.0.0:8808->8808/tcp, ::8808->8808/tcp
fbd3f781503a	bitnami/clickhouse:24.8	"/opt/bitnami/script..."	7 days ago	Up 20 minutes	9004-9005/tcp, 0.0.0.0:8123->8123/tcp, ::8123->8123/tcp
78021b6ea41c	bitnami/postgresql:17.6.0	"/opt/bitnami/script..."	7 days ago	Up 20 minutes	0.0.0.0:5432->5432/tcp, ::5432->5432/tcp
967902748cfa	assettool:4.88.1410.0	"/bin/sh /var/Asset/..."	7 days ago	Up 20 minutes	0.0.0.0:8293-8294->8293-8294/tcp, ::8293-8294->8293-8294/tcp
458e6635890f	owss:4.88.1410.0	"/var/TEC/OInterface..."	7 days ago	Up 20 minutes	0.0.0.0:8487->8290/tcp, ::8487->8290/tcp

Check for 5 containers with the IMAGE field values: oanalysis, clickhouse, owss, postgresql, and assettool. The service is

considered normal if:

- No errors are reported.
- All containers exist.
- The PORTS field of each container is not empty.

The oanalysis image includes version information. After the upgrade, you can verify if the version is correct.

2.5.2 Upgrade Oanalysis Frontend

Notes: Perform the upgrade as the root user.

(1) Copy the Oanalysis frontend upgrade package (4.81.0301.8001.zip) to the **/usr/local/oanalysis/oanalysis/public** directory.

(2) Delete the old version of the Oanalysis frontend

```
rm -rf /usr/local/oanalysis/oanalysis/public/dist
```

```
[root@localhost local]# ll /usr/local/oanalysis/oanalysis/public/
drwxr-xr-x 3 root root 114 9月  2 15:39 dist
[root@localhost local]# rm -rf /usr/local/oanalysis/oanalysis/public/dist
[root@localhost local]#
```

(3) Extract the new version of the Oanalysis frontend to complete the upgrade

```
unzip /usr/local/oanalysis/oanalysis/public/4.81.0301.8001.zip
```

2.6 Reinstallation

If a version of the Proactive Risk Alerts Platform lower than 4.87.1264.0 is already installed, a complete reinstallation is required when using a new installation package. Follow these steps:

1. Uninstall the old version by referring to the steps in 2.4 Uninstallation (including deleting the installation directory). Note that the uninstallation process will delete all existing data, including but not limited to configured alert rules.
2. Reinstall the platform by following the steps in 2.2 Install the Proactive Risk Alerts Platform. (Docker will not be removed during the uninstallation process, so there is no need to reinstall Docker for the new installation.)

Note: Only versions **4.87.1264.0 and above** of the Proactive Risk Alerts Platform support upgrade operations.