



# Technical Manual

## Tailored System of Climate services for Agriculture

tailOred System of Climate services for AgRiculture

# Technical Manual



EPINET Co.,Ltd.

### 1. Overview

The Oscar System Guidelines are documents that provide the information you need to install, configure, and maintain your system.

### 2. Installing a System

#### 2.1 System Installation Procedure

##### 2.1.1 CentOS to Docker Installation

Run the commands below to install the Docker program

- yum -y update
- yum install -y yum-utils
- yum-config-manager --add-repo  
<https://download.docker.com/linux/centos/docker-ce.repo>
- yum-config-manager --enable docker-ce-nightly
- yum -y install docker-ce docker-ce-cli containerd.io
- systemctl start docker
- systemctl enable docker
- systemctl status docker

##### 2.1.2 Docker Network Creation

- docker network create --gateway 172.19.0.1 --subnet 172.19.0.0/16 network\_vacsa

##### 2.1.3 PostgreSQL Run

- PostgreSQL data folder to /data/vacsa/database/postgis copy to location
  - docker run script Run
- ```
docker run  $\mathbb{W}$   
--name=postgis_12_vacsa  $\mathbb{W}$   
--network network_vacsa  $\mathbb{W}$   
--restart always  $\mathbb{W}$   
--detach  $\mathbb{W}$   
--env POSTGRES_USER=epinet  $\mathbb{W}$   
--env POSTGRES_PASS=VaCSA2019!  $\mathbb{W}$   
--env POSTGRES_DBNAME=vacsa2019  $\mathbb{W}$   
--env ALLOW_IP_RANGE=0.0.0.0/0  $\mathbb{W}$   
--ip 172.19.0.10  $\mathbb{W}$   
--publish 15432:5432  $\mathbb{W}$ 
```

```
--volume /data/vacsa/database/postgis:/var/lib/postgresql \#  
kartoza/postgis:12.0
```

#### 2.1.4 mapserver Run

- cd /data/vacsa/docker\_base/vacsa\_mapserver
- ./restart\_vacsa\_mapserver.sh

#### 2.1.5 Tomcat Server Run

- Export the project to a vacsa2019.war file  
/data/vacsa/docker\_base/vacsa\_tomcat Copy to Folder
- cd /data/vacsa/docker\_base/vacsa\_tomcat
- ./restart\_vacsa\_tomcat.sh

#### 2.1.6 Batch Server Run

- Export the project to a vacsa2019.war file  
/data/vacsa/docker\_base/vacsa\_tomcat Copy to Folder
- cd /data/vacsa/docker\_base/vacsa\_batch
- ./restart\_vacsa\_batch.sh

#### 2.1.7 Dssat Batch Server Installing and Running

- /data/vacsa/docker\_base/vacsa\_dssat48 Execute version-specific scripts  
sequentially under folders
- cd /data/vacsa/docker\_base/vacsa\_dssat48/1.0.0
- ./rebuild\_batch.sh
- cd /data/vacsa/docker\_base/vacsa\_dssat48/1.1.0
- ./rebuild\_batch.sh
- cd /data/vacsa/docker\_base/vacsa\_dssat48/1.2.0
- ./rebuild\_batch.sh

#### 2.1.8 Offline Map Server Installing

- cd /data/vacsa/docker\_base/vacsa\_offmap
- ./restart\_vacsa\_offmap.sh

### 3. System Operations

#### 3.1 Resource Management

- Install a Gitlab or SVN server to manage program sources.

#### 3.2 Backups Management

##### 3.2.1 Database Backup

- Establish a backup policy to periodically back up /data/vacsa/database/postgis folders

### 4. User Guide

#### 4.1 How to start and end

- Use the docker ps command to determine which docker container is running
- Determine the name of the container that requires a restart
- docker stop container-name
- docker start container-name