

Portus DR

=== Secure Private Registry

To satisfy DataHub requirements you also need a Docker Registry.
The easiest way to build and manage it comes with the project Portus.
<http://port.us.org>

First you need to create a dedicated server for your Docker registry and Portus stack.

```
# sudo virt-install --name portus-dr --ram 8192 --disk  
path=/var/lib/libvirt/VMS/portus-dr.qcow2,size=40 --vcpus 4 --os-type linux --os-  
variant generic --network bridge=common --graphics none --console  
pty,target_type=serial --location '/var/lib/libvirt/isos/SLE-12-SP4-Server-DVD-  
x86_64-GM-DVD1.iso' --extra-args 'console=ttyS0,115200n8 serial  
ifcfg=eth0=10.10.10.11/24,10.10.10.1,10.10.10.11,suse-sap.net hostname=portus-dr  
domain=suse-sap.net Textmode=1'
```

In our example this server will be connected to another local bridge which provides common services (DNS, SMTP, Docker-registry) for the Datahub stack.

Our Portus deployment will be based on Container, and orchestrated locally with docker-compose.

Portus docker-compose deployment requires an up-to-date release of docker-compose.

```
sudo curl -L "https://github.com/docker/compose/releases/download/1.24.1/docker-  
compose-\$\(uname -s\)-\$\(uname -m\)" -o /usr/local/bin/docker-compose  
sudo chmod +x /usr/local/bin/docker-compose  
sudo ln -s /usr/local/bin/docker-compose /usr/bin/docker-compose
```

Now you could simply clone the Portus repository, adapt the .env and the nginx configuration to your naming convention.

```
# git clone https://github.com/SUSE/Portus.git /tmp/Portus-DR  
# mv /tmp/Portus-DR/examples/compose ./portus  
# cd portus
```

Now you could edit both .env and nginx/nginx.conf.
This is how our configuration looks like :

```
# cat .env  
MACHINE_FQDN=portus-dr.suse-sap.net  
SECRET_KEY_BASE=b494a25faa8d22e430e843e220e424e10ac84d2ce0e64231f5b63  
6d21251eb6d267adb042ad5884cbff0f3891bcf911bdf8abb3ce719849ccda9a4889249e5  
c2  
PORTUS_PASSWORD=XXXXXXXXX
```

DATABASE_PASSWORD=YYYYYYYYY

In the nginx/nginx.conf file, you should now adapt the following section :

```
server {  
    listen 443 ssl http2;  
    server_name portus-dr.suse-sap.net;  
    root /srv/Portus/public;
```

Now, you could pull the latest docker-compose.yml.

```
rm docker-compose.*  
wget  
https://gist.githubusercontent.com/Patazerty/d05652294d5874eddf192c9b633751ee/  
raw/6bf4ac6ba14192a1fe5c337494ab213200dd076e/docker-compose.yml
```

To avoid dealing with Docker insecure registry configuration we'll add SSL to our setup.

```
echo "subjectAltName = DNS:portus-dr.suse-sap.net" > extfile.cnf  
openssl genrsa -out secrets/rootca.key 2048  
openssl req -x509 -new -nodes -key secrets/rootca.key -subj  
"/C=FR/ST=FR/O=SUSE" -sha256 -days 1024 -out secrets/rootca.crt  
openssl genrsa -out secrets/portus.key 2048  
openssl req -new -key secrets/portus.key -out secrets/portus.csr -subj  
"/C=FR/ST=FR/O=SUSE/CN  
openssl req -new -key secrets/portus.key -out secrets/portus.csr -subj  
"/C=FR/ST=FR/O=SUSE/CN=portus-dr.suse-sap.net"  
openssl x509 -req -in secrets/portus.csr -CA secrets/rootca.crt -extfile extfile.cnf -  
CAkey secrets/rootca.key -CAcreateserial -out secrets/portus.crt -days 500 -sha256
```

Now all we have to do is to make the servers aware of this certificate

```
cp -p secrets/rootca.crt /etc/pki/trust/anchors/.net-ca.crt  
scp secrets/rootca.crt root@jumpbox.suse-sap.net:/etc/pki/trust/anchors/portus-dr.suse-sap.net-ca.crt
```

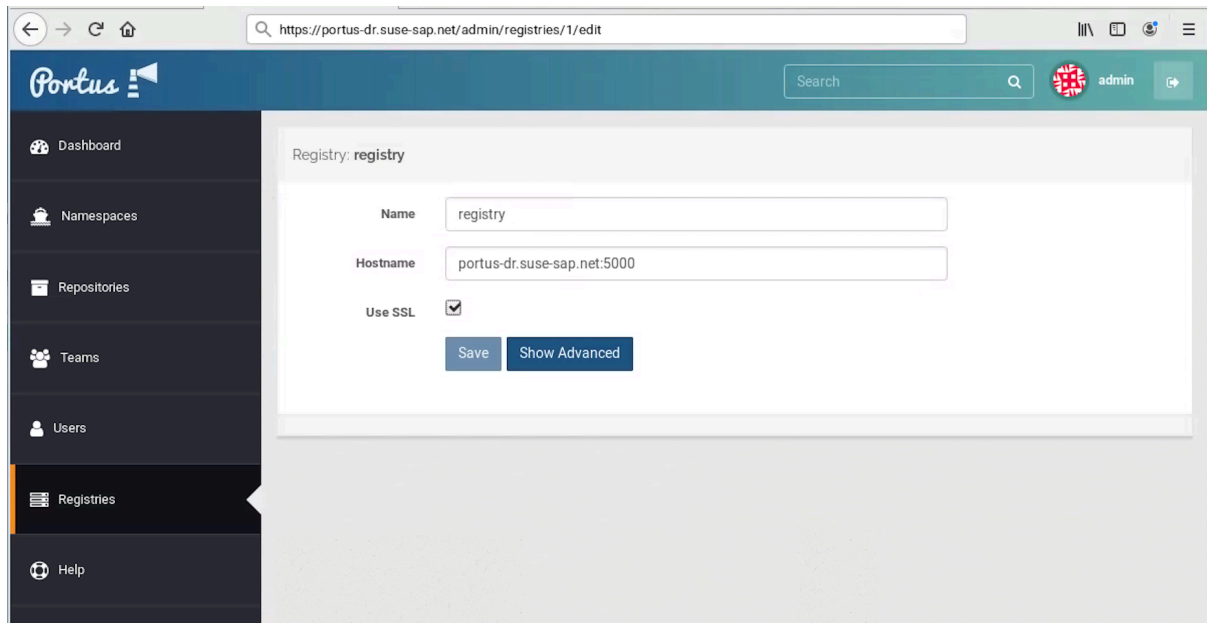
Then on all servers that will needs to interact with the docker-registry :

```
sudo update-ca-certificates  
sudo systemctl restart docker
```

It's time now to start your Portus setup.

```
docker-compose up -d
```

You could now log on Portus and set the registry.



The screenshot shows the Portus web interface in a browser window. The address bar displays `https://portus-dr.suse-sap.net/admin/registries/1/edit`. The interface has a dark sidebar on the left with the following menu items: Dashboard, Namespaces, Repositories, Teams, Users, Registries (highlighted with an orange bar), and Help. The main content area has a teal header with the Portus logo, a search bar, and a user profile for 'admin'. Below the header, the page title is 'Registry: registry'. The configuration form contains the following fields and controls:

- Name:** A text input field containing the value 'registry'.
- Hostname:** A text input field containing the value 'portus-dr.suse-sap.net:5000'.
- Use SSL:** A checkbox that is checked.
- Buttons:** Two buttons at the bottom of the form: 'Save' and 'Show Advanced'.