

# ☐☐ AWX on Single Node K3s

An example implementation of AWX on single node K3s using AWX Operator.

- Accessible over HTTPS from remote host

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## ☐☐ Requirements

- **Computing resources**
  - Both **AMD64** (x86\_64) with x86-64-v2 or cpu type Host support bc the DB would not start , and **ARM64** (aarch64) are supported.
  - **4 GiB RAM minimum.**
  - It's recommended to add more CPUs and RAM (like 4 CPUs and 8 GiB RAM or more) to avoid performance issue and job scheduling issue.
- **Storage resources**
  - At least **10 GiB** for `/var/lib/rancher` are safe for fresh install.
  - **The actual consumption highly depends on your environment and your use case**, so you should to pay attention to the consumption and add more capacity if required.

## ☐☐ Deployment Instruction

Disable firewalld if enabled if not use kubernetes-firewall first before installing K3S. This is [recommended by K3s](#).

```
cd firewall
. kubernetes-firewall.sh
```

## ❑ Install K3s

Install K3s with `--write-kubeconfig-mode 644` to make the config file (`/etc/rancher/k3s/k3s.yaml`) readable by non-root users.

```
curl -sfL https://get.k3s.io | sh -s - --write-kubeconfig-mode 644
```

Also add your subnet in noproxy in

```
vim /etc/systemd/system/k3s.service.env
#should look like this
no_proxy='localhost,127.0.0.1, .dkfz.heidelberg.de, .inet.dkfz-heidelberg.de, .dkfz.de, 10.131.196.0/22'
```

## ❑ Install AWX Operator

Clone this repository and change directory.

```
cd ~
git clone https://odcf-gitlab.dkfz.de/it/trainee/awx-test.git
cd awx-operator
```

then copy or create (if needed) an certificat to the kubernetes folder.

PS: is not needed you can also specify the location of the Cert and key.

```
cd kubernetes
openssl req -x509 -nodes -days 365 -newkey rsa:4096 -keyout yourdomain.key -out yourdomain.crt -subj
"/CN=example.com" -addext "subjectAltName=DNS:example.com"
```

After that you copied the Key and Cert file to the system. You can run the awx.sh script Also look for the [AWX-Operator version](#)

```
chmod +x awx.sh
. awx.sh
```

By default, the admin user is admin and the password is available in the `-admin-password secret`. To retrieve the admin password, run:

```
kubectl get secret odcf-awx-admin-password -n awx -o jsonpath="{.data.password}" | base64 --decode ; echo
```

## ☐ Troubleshooting Issues

### 1. Check Resources:

```
kubectl -n awx get awx,all,ingress,secrets
```

### 2. Create Admin Password Secret (if not created):

```
kubectl -n awx create secret generic odcf-awx-admin-password --from-literal=password=<your-admin-password>
```

### 3. Verify Ingress:

```
kubectl get endpoints -n awx
```

Check if the endpoint for `odcf-awx-service` is available on port 80. If not, update the `awx-ingress-tls.yaml` script.

## Some Usefull CMD

```
kubectl get namespaces  
kubectl -n awx get awx,all,ingress,secrets  
kubectl get svc -n <namespace>  
kubectl describe pod <pod_name> -n <namespace>  
kubectl describe service <service_name> -n <namespace>  
kubectl get events -n <namespace>  
kubectl -n awx get all  
kubectl -n awx logs -f deployments/awx-operator-controller-manager
```

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