

Ansible Semaphore

An alternative to AWX

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<https://poorlydrawnlines.com/comic/listen-to-me/>

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Robert Waffen

- "Agile Enterprise DevOps"
- Doing automation since 2008
- Following the smart admin principle
- Working at [betadots GmbH](#)
- Kindly sponsored by [uni-assist e.V.](#)
- Active in the [Vox Pupuli Puppet Community](#)
- Come and see my other talk, too :]

What is Semaphore

- Alternative UI for ansible
- Simple easy approach
- Not so overloaded
- Simple installation
- Ideal for small businesses
- Can run locally or in a container
- Can be configured through API

<https://github.com/ansible-semaphore/semaphore>

The screenshot displays the Ansible Semaphore web interface. The browser address bar shows the URL `/project/4/views/3/templates`. The interface includes a dark sidebar on the left with navigation options: Dashboard, Task Templates (selected), Inventory, Environment, Key Store, Repositories, and Team. The main content area is titled "Task Templates" and features a "NEW TEMPLATE" button. Below the title, there are tabs for "ALL", "CONF" (selected), "INST", "DEPLOY", and "TEST". A table lists various task templates, all with a "Success" status. The table columns are NAME, STATUS, LAST TASK, INVENTORY, and ACTIONS.

NAME	STATUS	LAST TASK	INVENTORY	ACTIONS
Conf Add logrotate config [Servers]	Success	#453 by Robert Waffan 0	Servers	RUN
Conf Add Semaphore Repositories	Success	#555 by Robert Waffan 0	Servers	RUN
Conf Add Semaphore Templates	Success	#676 by Robert Waffan 0	Servers	RUN
Conf Add Semaphore Views	Success	#593 by Robert Waffan 0	Servers	RUN
Conf Add SSH Account Keys [Servers]	Success	#671 by Robert Waffan 0	Servers	RUN
Conf Add SSH ansible Key [Servers]	Success	#566 by Robert Waffan 0	Servers	RUN
Conf Add UA CA Cert [Servers]	Success	#569 by Robert Waffan 0	Servers	RUN
Conf Clean Dev Gitlabrunner Volumes [Servers]	Success	#667 by 0	Servers	RUN
Conf Prepare Exec Env [localhost]	Success	#624 by Robert Waffan 0	Servers	RUN
Conf Qemu Agent [Servers]	Success	#587 by Robert Waffan 0	Servers	RUN
Conf Update Semaphore Templates	Success	#678 by Robert Waffan 0	Servers	RUN

At the bottom of the sidebar, there is a "Dark Mode" toggle and a user profile for "Robert Waffan".

How to install Semaphore

Can be installed locally with snap

```
sudo snap install semaphore

sudo semaphore user add \
--admin \
--login your_login \
--name "Your Name" \
--email your-email@example.com \
--password your_password
```

Can be run as a container

```
services:
  semaphore:
    ports:
      - 3000:3000
    image: semaphoreui/semaphore:latest
    environment:
      SEMAPHORE_DB_DIALECT: bolt
      SEMAPHORE_ADMIN_PASSWORD: changeme
      SEMAPHORE_ADMIN_NAME: admin
      SEMAPHORE_ADMIN_EMAIL: ...
      SEMAPHORE_ADMIN: admin
```

Concepts of Semaphore

One will execute a "template".

In order to do so one needs:

- A project
- An environment
- A SSH key
- A git repository
- An inventory

A project:

- Collection of all other objects
- Like a "folder"
- To distinguish between teams

An environment:

- I don't really use this
- But is needed even if it is empty

A SSH key

- One or more keys without password

A git repository

- Should be clone-able with the ssh key
- Should include [an ansible structure](#)
- Should include a inventory

An inventory

- Include host and/or groups

Automating Semaphore

- No config role in the galaxy
- Do not want to install, will use a container
- Wrote own role
 - Not yet published
- Can configure and update templates
- Serves as a disaster recovery

The screenshot shows the Ansible Galaxy website interface. The browser address bar displays 'galaxy.ansible.com/ui/standalone/roles/?keywords=semaphore'. The left sidebar contains navigation options: Ansible Galaxy, Search, Collections, Roles (selected), Role Namespaces, Documentation, and Terms of Use. The main content area is titled 'Roles' and features a search filter for 'semaphore'. Below the filter, four roles are listed:

Role Name	Provider	Description	Updated	Downloads
thulum_drake.ansible_semaphore	thulum_drake	Ansible Semaphore	Updated 4 months ago	0.0.5 304 Downloads
ansibleguy.sw_semaphore	ansibleguy	Ansible role to provision Ansible-Semaphore on a linux server	Updated 2 months ago	635 Downloads
thedumbtechguy.semaphore	thedumbtechguy	Ansible-Semaphore for Linux.	Updated 7 years ago	1.1.0 101 Downloads
morbidick.semaphore	morbidick	install and configure the Ansible UI Semaphore	Updated 6 years ago	v2.5.1 369 Downloads

At the bottom right of the page, there is a pagination indicator showing '1 - 4 of 4' and '1 of 1'.

The screenshot shows a web browser window with the URL `localhost:3000/project/new`. The page title is "Neues Projekt". The form contains the following fields and options:

- Projektname**: A text input field.
- Alarme für dieses Projekt zulassen**: A checkbox option.
- Telegram Chat ID (Optional)**: A text input field.
- Maximale Anzahl an gleichzeitig ausführbaren A...**: A text input field.

At the bottom of the form, there are two buttons: **CREATE DEMO PROJECT** (green) and **ERSTELLEN** (blue).

At the bottom left of the page, there is a dark teal sidebar with a toggle for **Dunkler Modus** (Dark Mode) and a German flag icon. Below that, the user is identified as **admin** with a red button labeled **admin**.

The screenshot shows the Ansible Semaphore web interface. The browser address bar indicates the URL is localhost:3000/project/1/templates. The page title is "Anwendungsvorlagen". The left sidebar contains navigation options: Demo (owner), Oberfläche, Anwendungsvorlagen (selected), Inventar, Umgebung, Schlüsselspeicher, Repositories, and Team. At the bottom of the sidebar, there is a "Dunkler Modus" toggle and a user profile for "admin". The main content area displays a table of application templates with columns for NAME, VERSION, STATUS, and LETZTE AUFG. A "NEUE VORLAGE" button is visible in the top right corner of the main area.

NAME	VERSION	STATUS	LETZTE AUFG
Deploy Create VM [Servers]	-	Nicht gestartet	
Deploy Remove VM [Servers]	-	Nicht gestartet	
Deploy Create UA VM Template	-	Nicht gestartet	
Deploy Create Docker Swarm [Servers]	-	Nicht gestartet	
Conf Add SSH ansible Key [Servers]	-	Nicht gestartet	
Conf Add SSH Account Keys [Servers]	-	Nicht gestartet	
Conf Add Semaphore Templates	-	Nicht gestartet	
Conf Add Semaphore Repositories	-	Nicht gestartet	
Conf Add Semaphore Views	-	Nicht gestartet	
Conf Update Semaphore Templates	-	Nicht gestartet	
Conf Add UA CA Cert [Servers]	-	Nicht gestartet	
Conf Prepare Exec Env [localhost]	-	Nicht gestartet	

Demo Time!

What could
possibly
go wrong?

[source](#)

<https://github.com/betadots/cfgmgmtcamp24-ansible-semaphore>

- docker compose up
- ansible-playbook playbooks/conf_semaphore.yml -i inventories/test/hosts
- add SSH demo ansible key in semaphore
- Does not need to be in git repo, because public