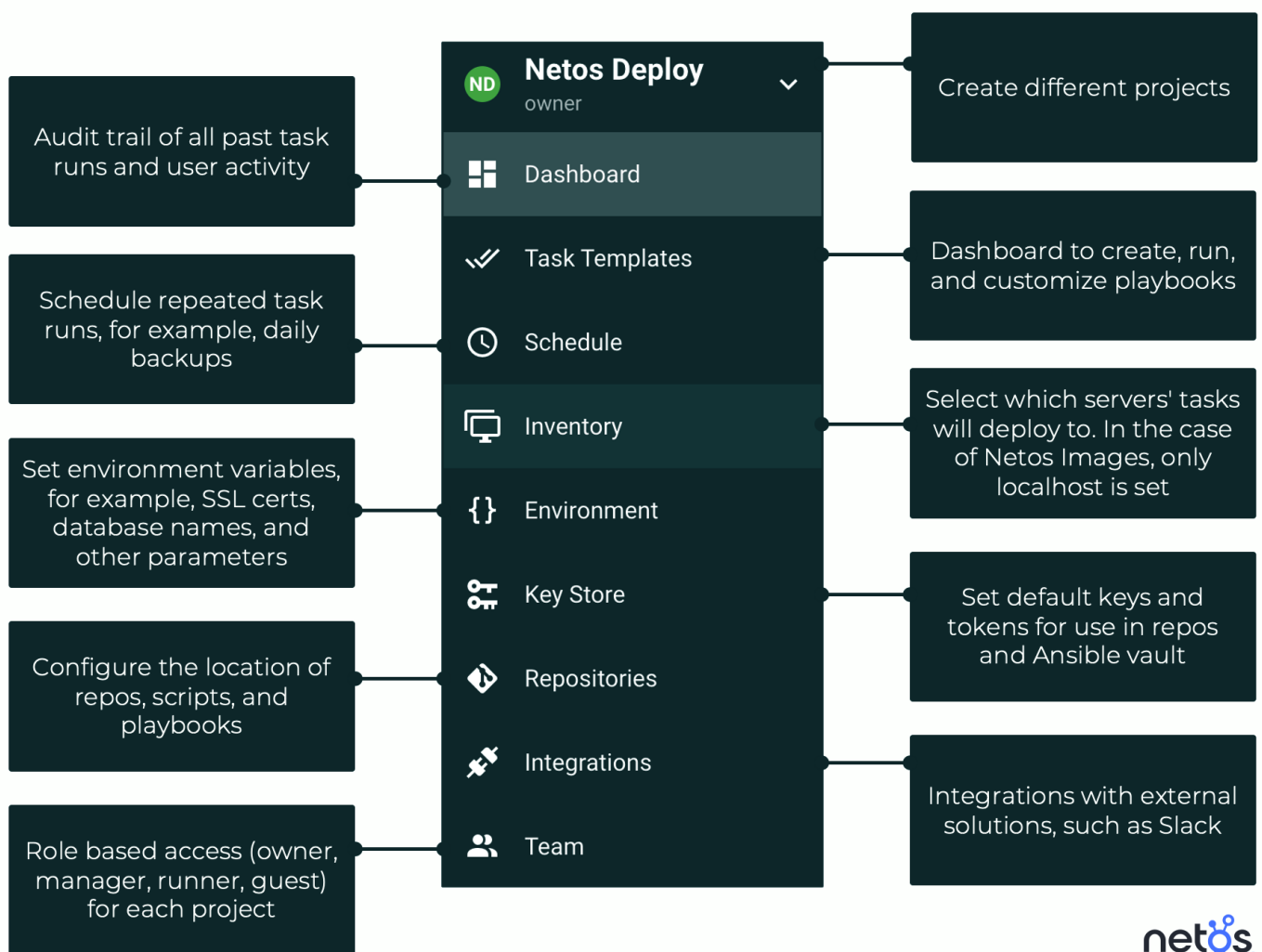


# Key Semaphore Principles

## Introduction

The following diagram illustrates the purpose of each menu item in Semaphore, in the context of the Netos deployment.



## Environments

Environments pass variables into Ansible (or other scripts such as Python or Bash).

The screenshot shows the NetBox web interface. On the left is a navigation sidebar with items like Dashboard, Task Templates, Schedule, Inventory, Environment (selected), Key Store, Repositories, Integrations, and Team. The main content area shows the 'Environment' list with 'NetBox Global Settings' selected. An 'Edit Environment' modal is open, showing the environment name and a table for extra variables. The table is currently empty. Below the table is a 'NEW EXTRA VARIABLE' button and a section for 'Environment variables' with a list of variables and their values.

Environment Name
NetBox Global Settings

(x) Extra variables ? TABLE JSON

No values

[NEW EXTRA VARIABLE](#)

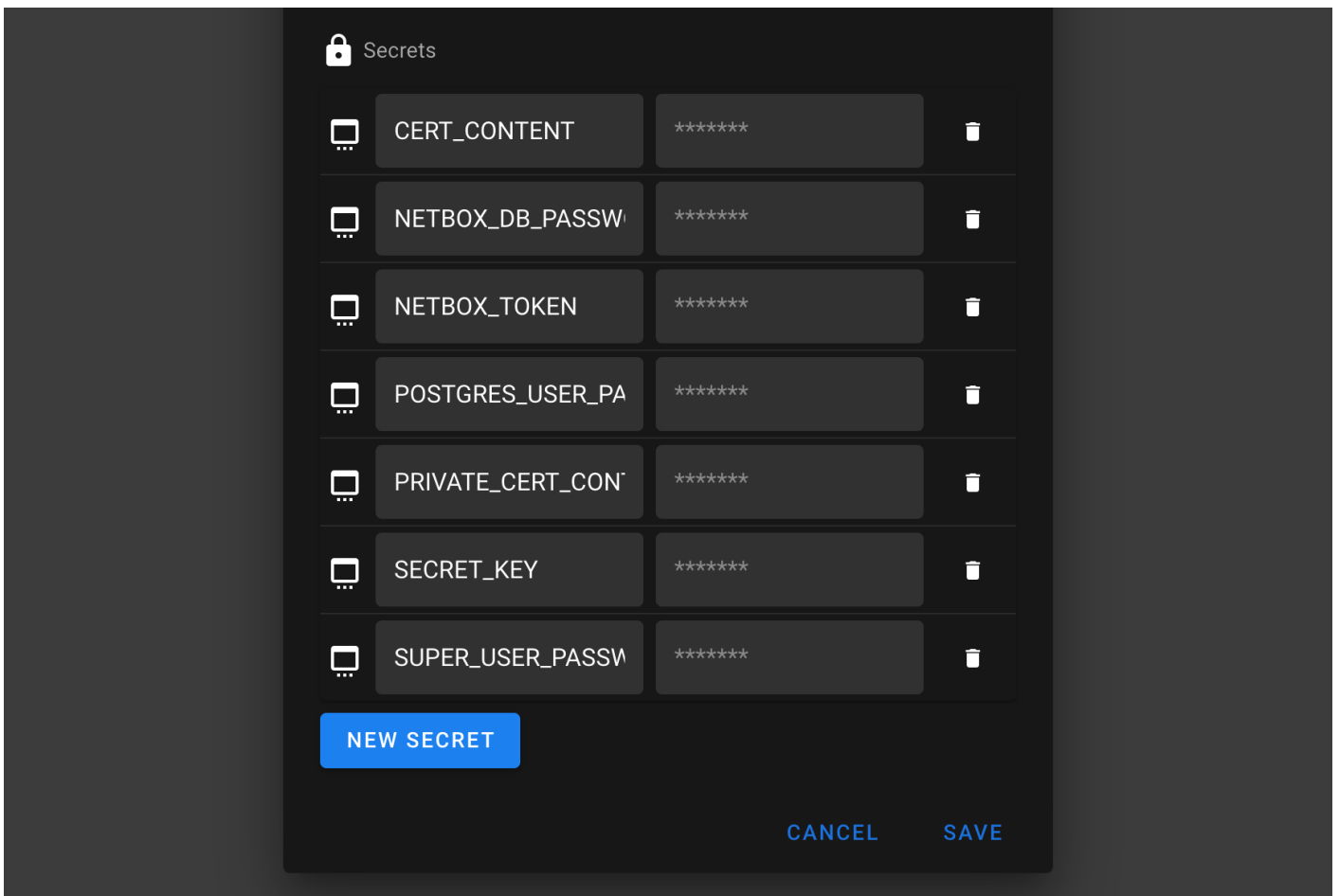
Environment variables

NETBOX_DB_NAME	netbox	
NETBOX_DB_USER	netbox	
SUPER_USER_USERNAME	admin	
SUPER_USER_EMAIL	netbox@netos.dev	
DOMAIN	netos.dev	
NETBOX_HOSTNAME	netbox	

For example, in this environment file we pass through variables from the Semaphore Environment, but also set default variables where applicable in the `/vars/` files in the Ansible project.

```
CERT_CONTENT: "{{ lookup('env', 'CERT_CONTENT') | default('must-be-set-in-semaphore-variable')
}}"
CERT_DIR: "{{ lookup('env', 'CERT_DIR') | default('/netos/certs/netbox') }}"
DOMAIN: "{{ lookup('env', 'DOMAIN') | default('netos.dev') }}"
NETBOX_DB_NAME: "{{ lookup('env', 'NETBOX_DB_NAME') | default('netbox') }}"
```

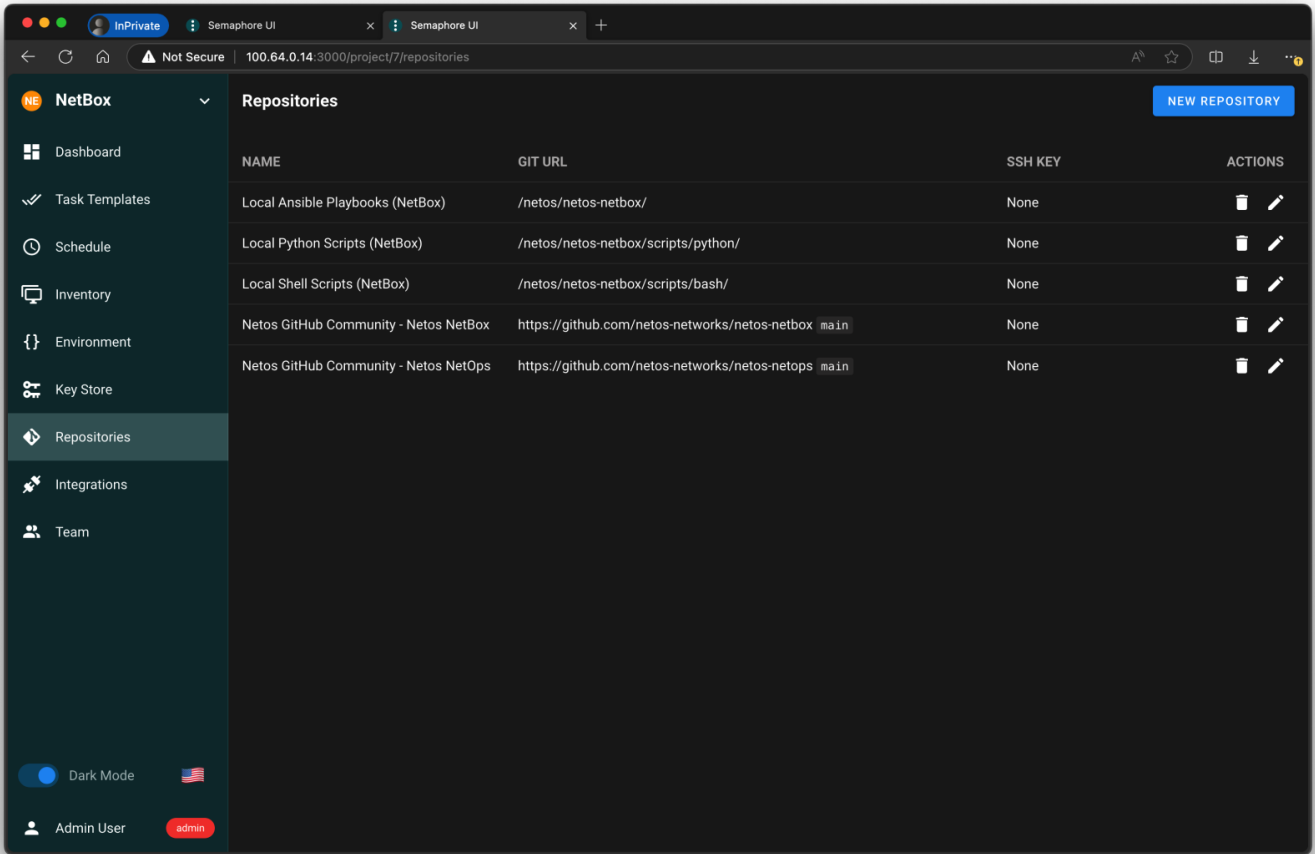
Semaphore also supports encrypted secrets as variables. We decided to use this feature throughout rather than Ansible Vault because it ensures that all data is in one place, rather than being split across different vaults and environments.



There is a bug in Semaphore where updates to Secrets are not saved. [Problem: not possible to edit secret name · Issue #2293 · semaphoreui/semaphore \(github.com\)](#)

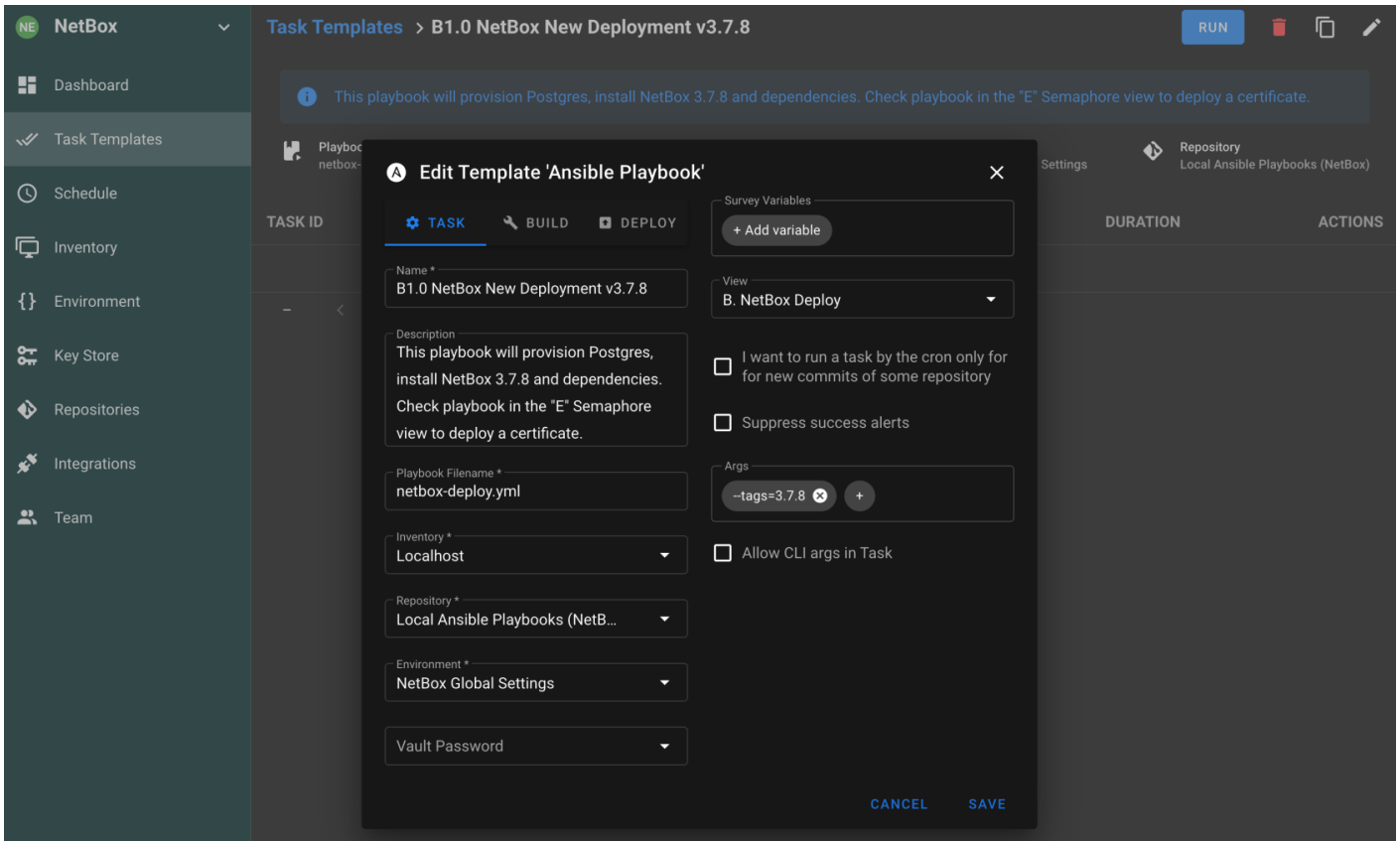
## Repositories

Repositories are linked to Templates (e.g. an Ansible playbook) and in general point to a Git repository. In the case of all Netos projects, we instead point to a local file system, and instead have a per-project task to pull the repository from [Netos Networks \(github.com\)](#).



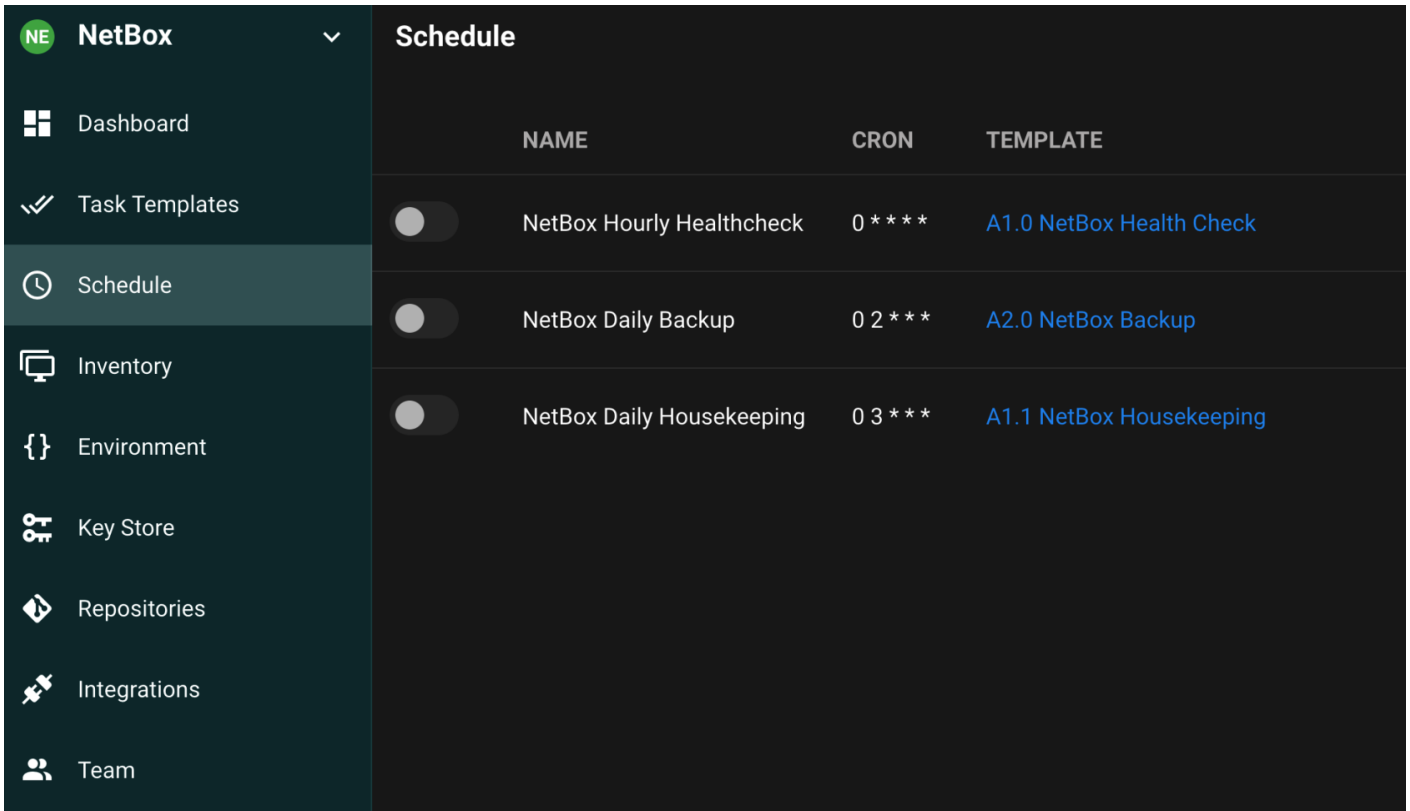
# Templates

Everything above is pulled together into a Template.



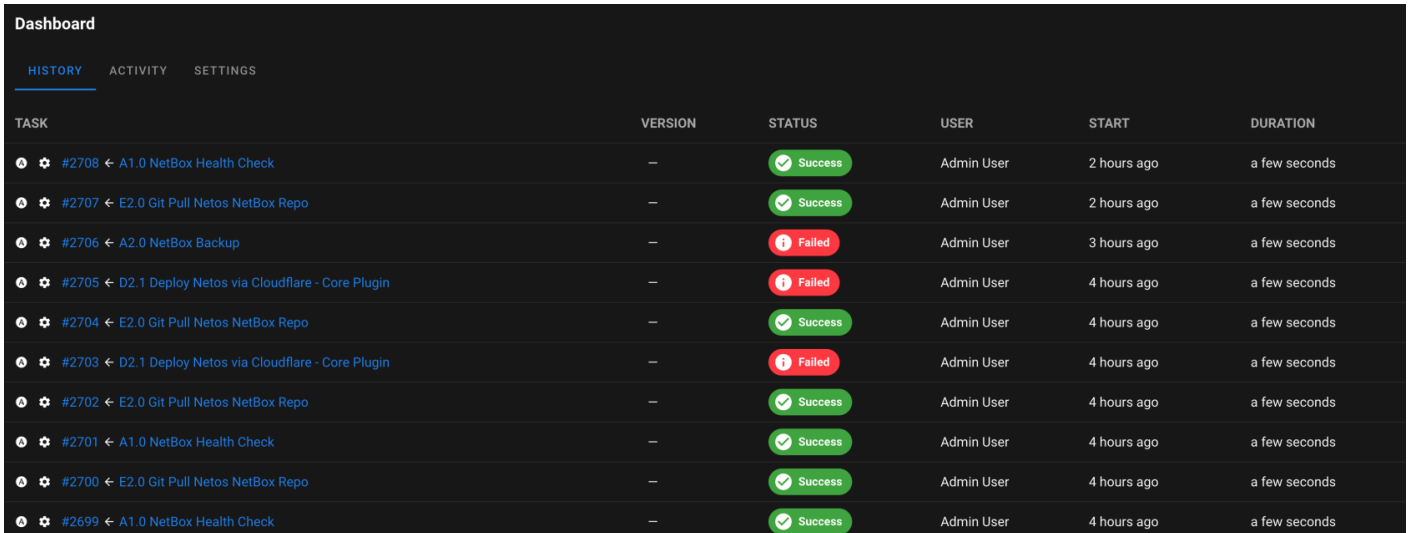
# Scheduling

Templates can then be scheduled for repetitive tasks, such as backup and housekeeping tasks.



# Tracking Tasks

You can globally track the status of all tasks, as well as within the logs of each Template.



Created 2024-09-22 11:53:58 UTC by Richard Foster  
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