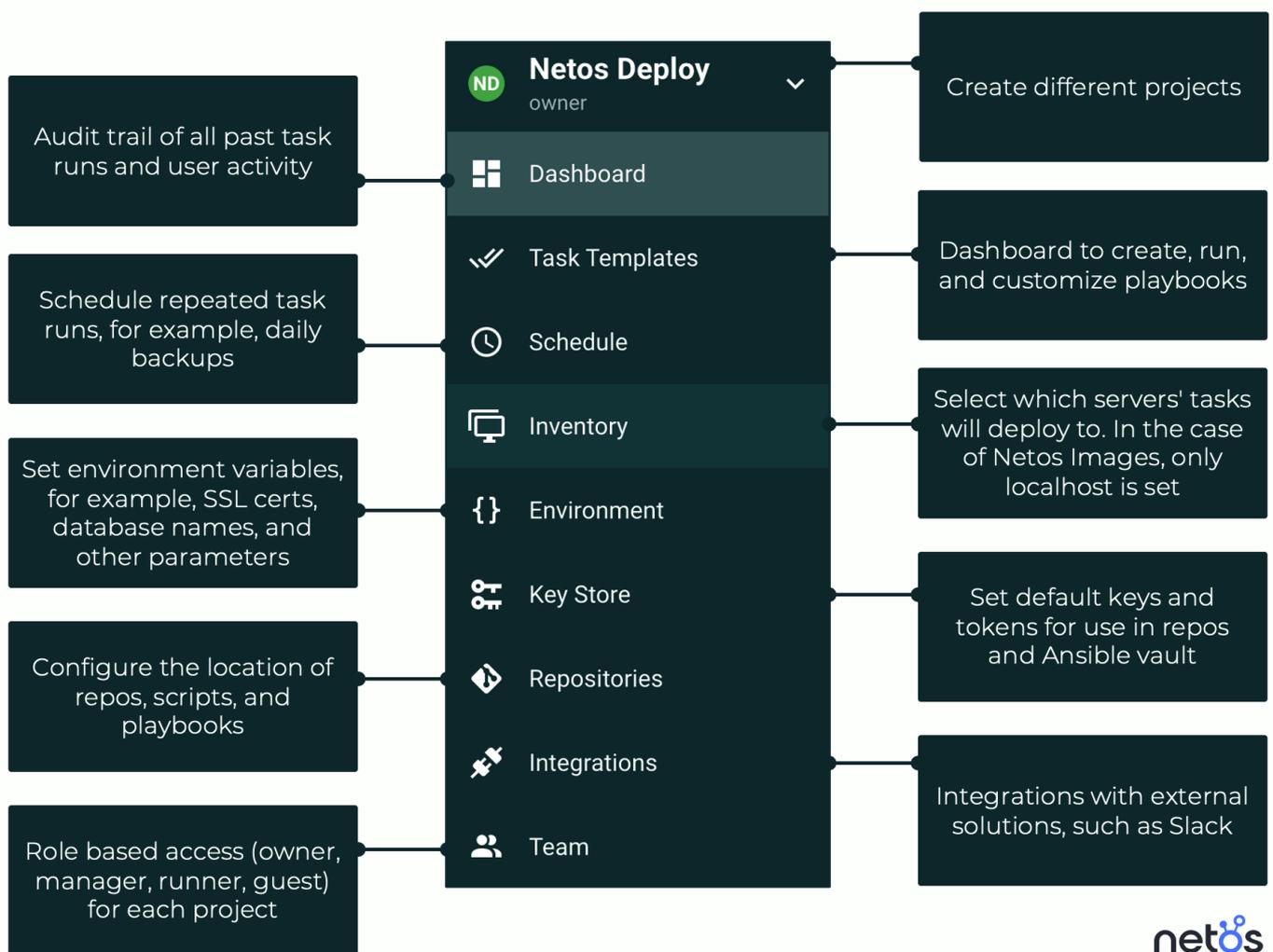


# Key Semaphore Principles

## 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).

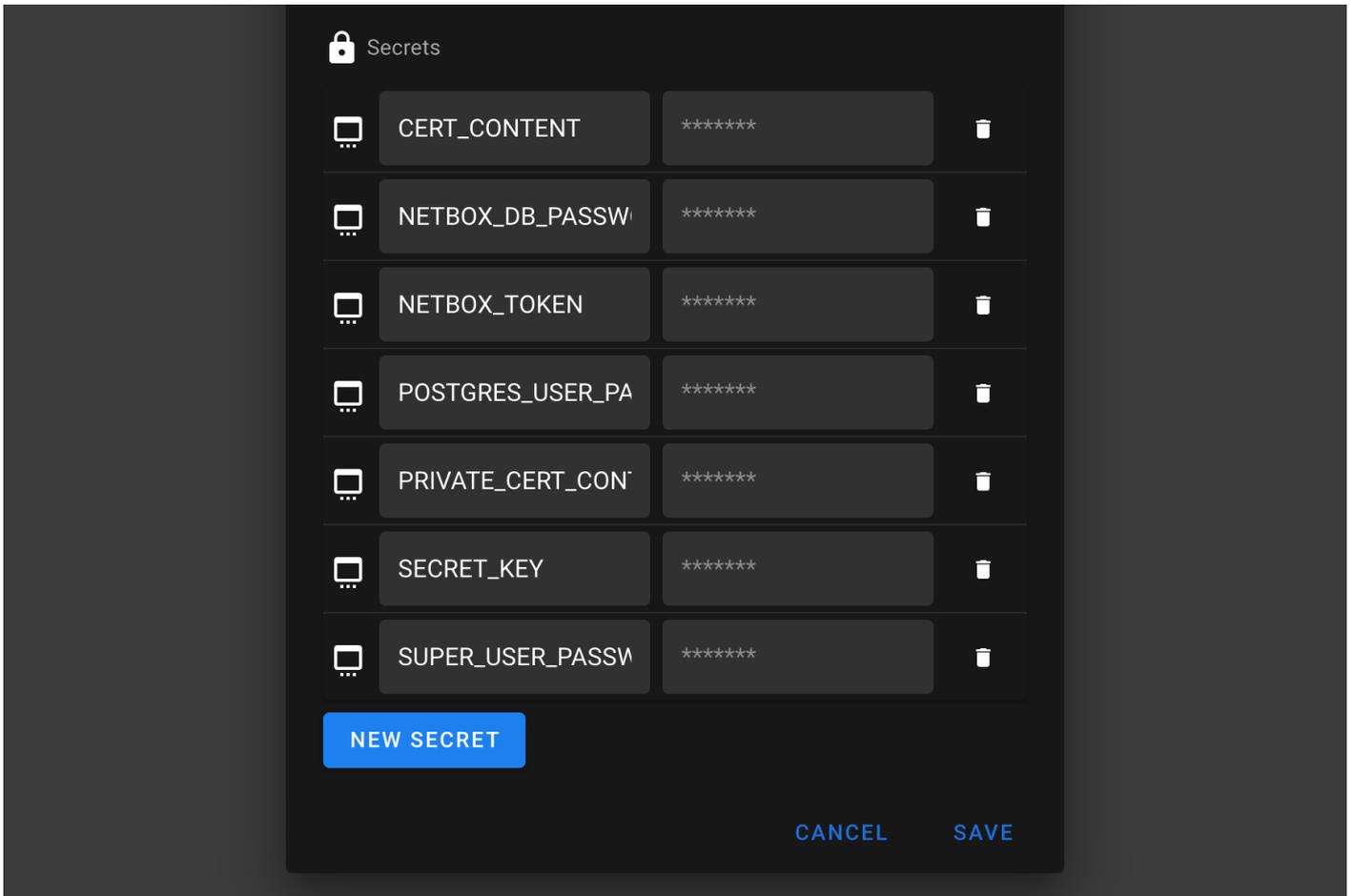
The screenshot shows the NetBox web interface. On the left is a dark sidebar with navigation items: Dashboard, Task Templates, Schedule, Inventory, Environment (highlighted), Key Store, Repositories, Integrations, and Team. The main content area shows a list of environments under the heading 'Environment'. The 'NetBox Global Settings' environment is selected, and an 'Edit Environment' modal is open. The modal title is 'Edit Environment' with a close button. Below the title, it says 'Environment Name: NetBox Global Settings'. There is a section for 'Extra variables' with a toggle for '(x) Extra variables' and a '?' icon. Below this, it says 'No values' and there is a 'NEW EXTRA VARIABLE' button. At the bottom, there is a section for 'Environment variables' with a list of variables in a table:

Variable Name	Value	Action
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') }}"
```

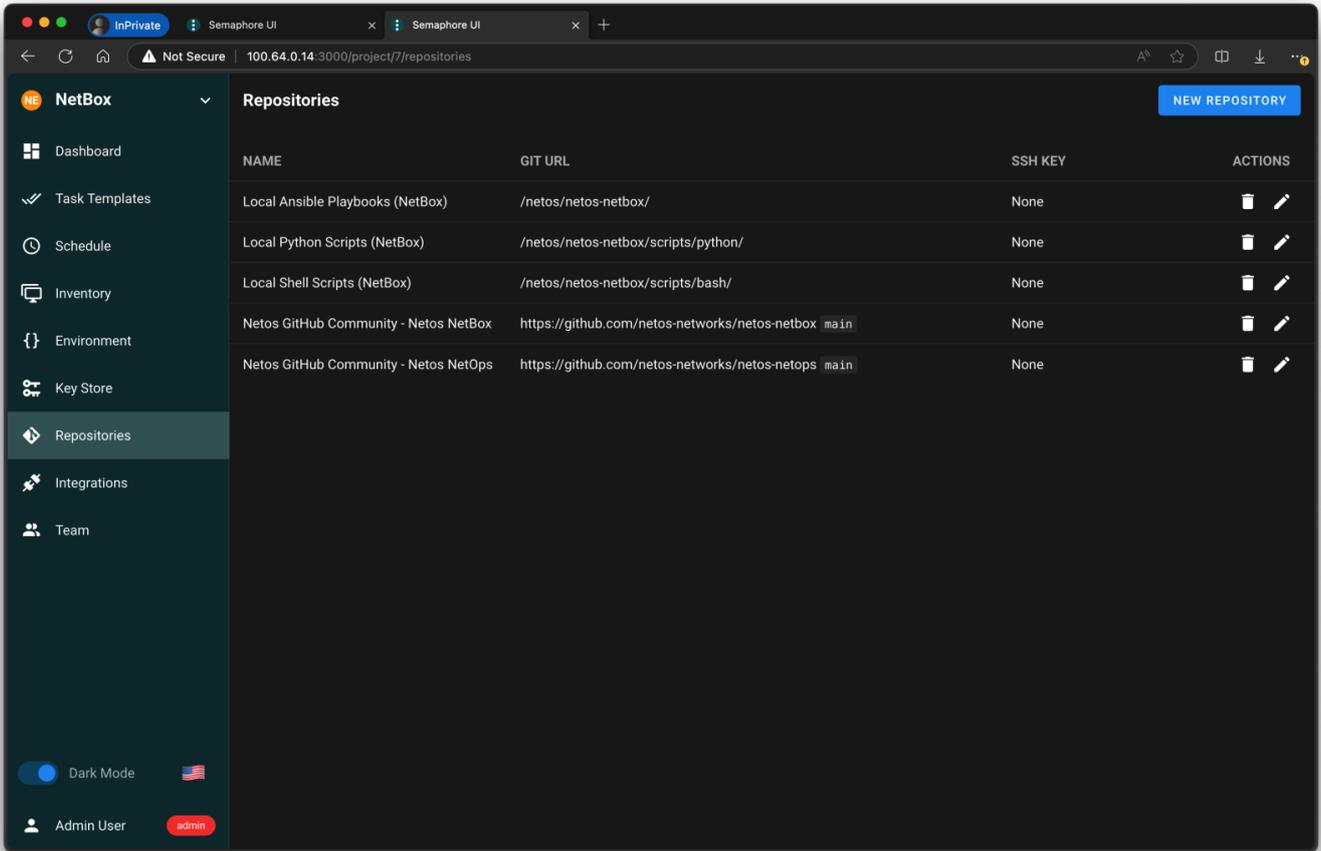
Semaphore also supports encrypted secrets as variables. We decided to use this feature throughout rather than Ansible Vault because it ensures that all data is in one place, rather than being split across different vaults and environments.



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

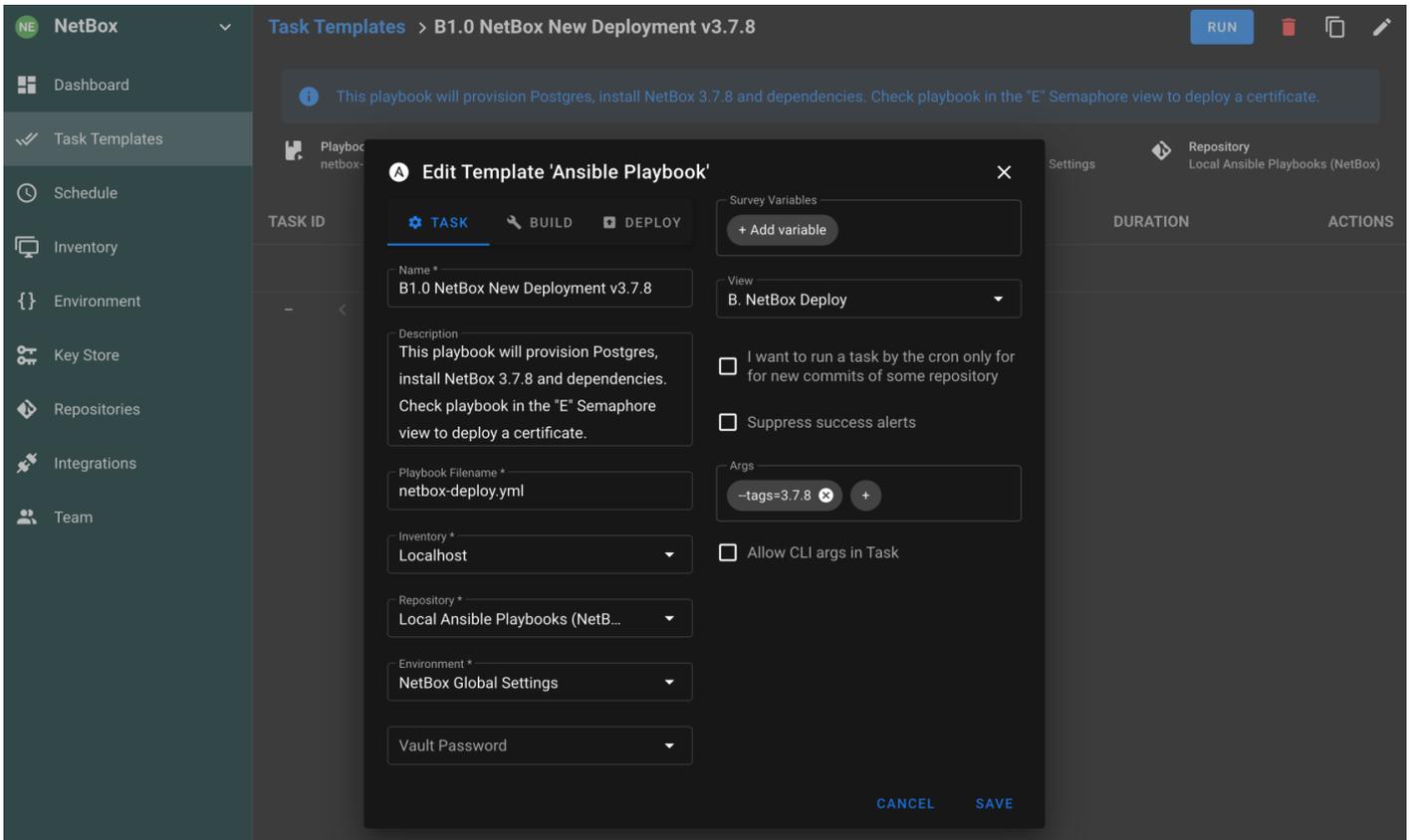
## Repositories

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 \(github.com\)](#).



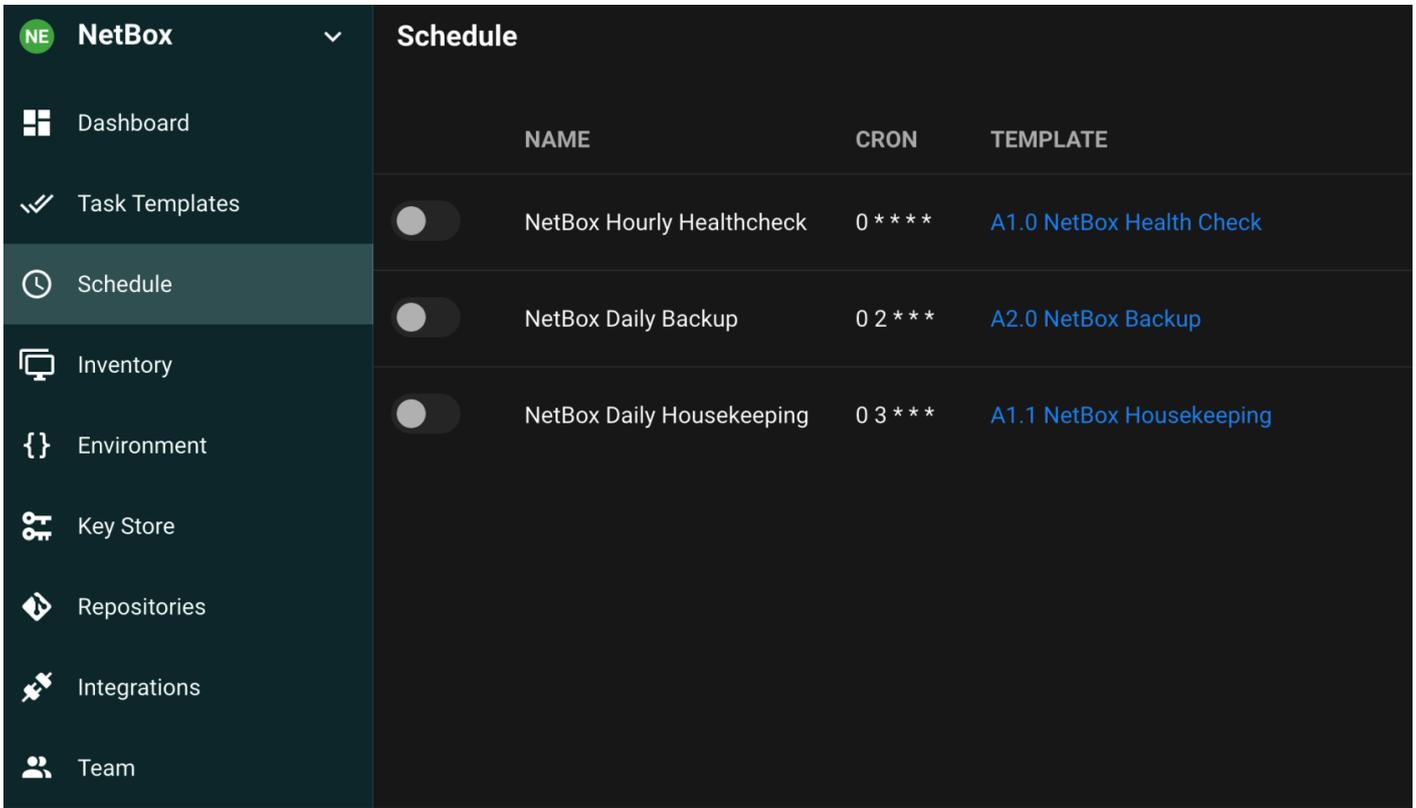
# Templates

Everything above is pulled together into a Template.



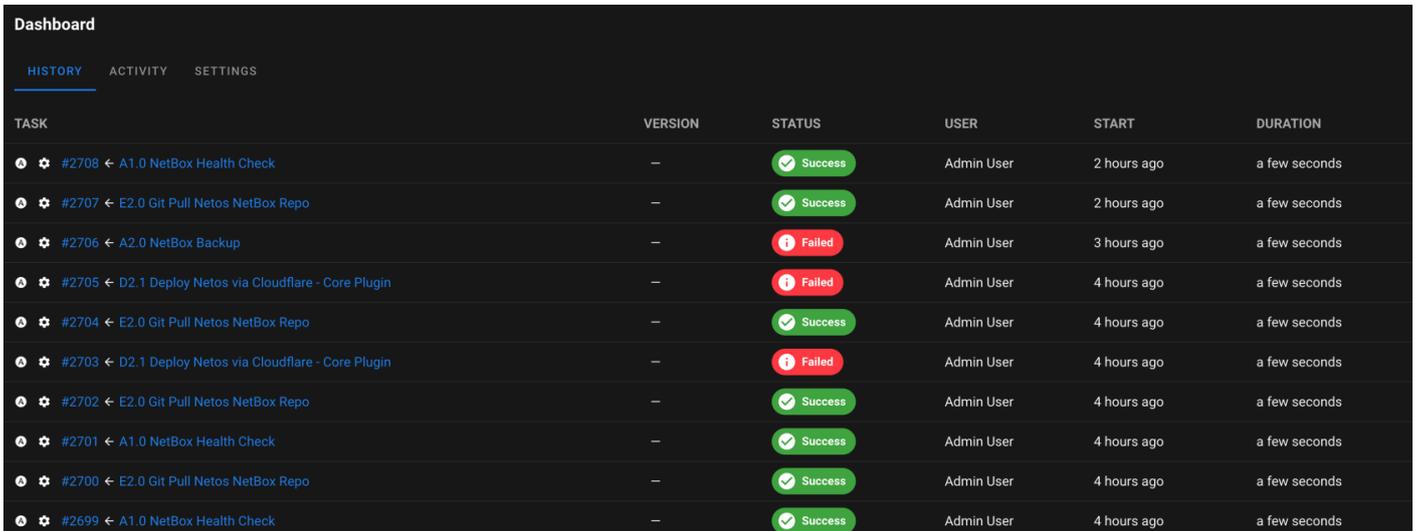
# Scheduling

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.



Revision #5

Created 22 September 2024 11:53:58 by Richard Foster

Updated 9 October 2024 13:18:47 by Richard Foster