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LDF906 - Red Hat® Ansible® Automation Platform

Contenu du Module

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LAB#1 - Ansible® Automation Controller

1.1 - Préparation

Avant de commencer, ouvrez un compte développeur chez [Red Hat](#).



Important : Notez vos coordonnées de connexion au compte Red Hat.

Démarrez votre essai de [Red Hat 9](#).



Important : Vous n'avez **PAS** besoin de l'iso de Red Hat 9. Annulez donc son téléchargement après que celui-ci a démarré.

Connectez-vous ensuite à votre VM **RedHat_10.0.2.101_SSH**.

Enregistrez la VM dans **vosre** compte Red Hat :

```
[trainee@redhat9 ~]$ su -  
Password: fenestros  
  
[root@redhat9 ~]# subscription-manager register
```

```
Registering to: subscription.rhsm.redhat.com:443/subscription
Username: <login>
Password: <password>
The system has been registered with ID: a85a9fe3-334d-4b0c-9a98-f408e7d3a1e7
The registered system name is: redhat9.ittraining.loc
```

Configurez SELinux en mode permissive :

```
[root@redhat9 ~]# setenforce permissive
```

Désarchivez le fichier **ansible-automation-platform-setup-bundle-2.4-2.2-x86_64.tar.gz** et consultez le contenu du répertoire créé :

```
[root@redhat9 ~]# tar xvf ansible-automation-platform-setup-bundle-2.4-2.2-x86_64.tar.gz

[root@redhat9 ~]# cd ansible-automation-platform-setup-bundle-2.4-2.2-x86_64/

[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ls
bundle  collections  group_vars  inventory  README.md  setup.sh
```

Consultez le fichier **README.md** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cat README.md
Red Hat Ansible Automation Platform Deployment
=====

This collection of files provides a complete set of playbooks for deploying
Red Hat Ansible Automation Platform in your environment on hosts running
Red Hat Enterprise Linux.

For getting started with installation and setup instructions, please refer to:

- Install Guide --
https://access.redhat.com/documentation/en-us/red\_hat\_automation\_platform/2.4/html-single/red\_hat\_automation
```

_automation_platform_installation_guide/index



Important : Notez l'URL du [guide d'installation](#).

Modifiez le fichier **/etc/hosts** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# vi /etc/hosts
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cat /etc/hosts
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1        localhost localhost.localdomain localhost6 localhost6.localdomain6
redhat9.ittraining.loc 10.0.2.101
autohub.ittraining.loc 10.0.2.102
```

Installez ensuite le paquet **ansible-core** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# dnf install ansible-core
Updating Subscription Management repositories.
Red Hat Enterprise Linux 9 for x86_64 - BaseOS (RPMs)
15 MB/s | 14 MB    00:00
Red Hat Enterprise Linux 9 for x86_64 - AppStream (RPMs)
21 MB/s | 25 MB    00:01
Last metadata expiration check: 0:00:03 ago on Fri 20 Oct 2023 12:21:53 PM CEST.
Dependencies resolved.
```

```
=====
=====
Package                               Architecture                               Version
Repository                             Size
=====
=====
Installing:
ansible-core                           x86_64                                     2.14.2-5.el9_2
```

```

rhel-9-for-x86_64-appstream-rpms                3.4 M
Installing dependencies:
  git-core                                       x86_64                2.39.3-1.el9_2
rhel-9-for-x86_64-appstream-rpms                4.3 M
  libnsl2                                       x86_64                2.0.0-1.el9
rhel-9-for-x86_64-appstream-rpms                33 k
  mpdecimal                                       x86_64                2.5.1-3.el9
rhel-9-for-x86_64-appstream-rpms                88 k
  python3.11                                       x86_64                3.11.2-2.el9_2.2
rhel-9-for-x86_64-appstream-rpms                28 k
  python3.11-cffi                                       x86_64                1.15.1-1.el9
rhel-9-for-x86_64-appstream-rpms               315 k
  python3.11-cryptography                               x86_64                37.0.2-5.el9
rhel-9-for-x86_64-appstream-rpms               1.2 M
  python3.11-libs                                       x86_64                3.11.2-2.el9_2.2
rhel-9-for-x86_64-appstream-rpms               9.9 M
  python3.11-pip-wheel                                   noarch                22.3.1-2.el9
rhel-9-for-x86_64-appstream-rpms               1.4 M
  python3.11-ply                                       noarch                3.11-1.el9
rhel-9-for-x86_64-appstream-rpms              141 k
  python3.11-pycparser                                   noarch                2.20-1.el9
rhel-9-for-x86_64-appstream-rpms              161 k
  python3.11-pyyaml                                       x86_64                6.0-1.el9
rhel-9-for-x86_64-appstream-rpms              229 k
  python3.11-setuptools-wheel                             noarch                65.5.1-2.el9
rhel-9-for-x86_64-appstream-rpms              714 k
  python3.11-six                                       noarch                1.16.0-1.el9
rhel-9-for-x86_64-appstream-rpms              47 k
  sshpass                                       x86_64                1.09-4.el9
rhel-9-for-x86_64-appstream-rpms              30 k

```

Transaction Summary

```

=====
=====

```

Install 15 Packages

Total download size: 22 M

Installed size: 88 M

Is this ok [y/N]: y

Downloading Packages:

(1/15): sshpass-1.09-4.el9.x86_64.rpm

24 kB/s | 30 kB 00:01

(2/15): libnsl2-2.0.0-1.el9.x86_64.rpm

26 kB/s | 33 kB 00:01

(3/15): python3.11-six-1.16.0-1.el9.noarch.rpm

36 kB/s | 47 kB 00:01

(4/15): python3.11-pycparser-2.20-1.el9.noarch.rpm

153 kB/s | 161 kB 00:01

(5/15): python3.11-setuptools-wheel-65.5.1-2.el9.noarch.rpm

420 kB/s | 714 kB 00:01

(6/15): python3.11-cffi-1.15.1-1.el9.x86_64.rpm

179 kB/s | 315 kB 00:01

(7/15): python3.11-pyyaml-6.0-1.el9.x86_64.rpm

288 kB/s | 229 kB 00:00

(8/15): python3.11-cryptography-37.0.2-5.el9.x86_64.rpm

704 kB/s | 1.2 MB 00:01

(9/15): mpdecimal-2.5.1-3.el9.x86_64.rpm

55 kB/s | 88 kB 00:01

(10/15): git-core-2.39.3-1.el9_2.x86_64.rpm

18 MB/s | 4.3 MB 00:00

(11/15): python3.11-ply-3.11-1.el9.noarch.rpm

111 kB/s | 141 kB 00:01

(12/15): python3.11-pip-wheel-22.3.1-2.el9.noarch.rpm

850 kB/s | 1.4 MB 00:01

(13/15): ansible-core-2.14.2-5.el9_2.x86_64.rpm

2.3 MB/s | 3.4 MB 00:01

(14/15): python3.11-3.11.2-2.el9_2.2.x86_64.rpm

28 kB/s | 28 kB 00:00

```
(15/15): python3.11-libs-3.11.2-2.el9_2.2.x86_64.rpm  
5.9 MB/s | 9.9 MB      00:01  
-----  
-----
```

Total

```
3.1 MB/s | 22 MB      00:07
```

```
Red Hat Enterprise Linux 9 for x86_64 - AppStream (RPMs)
```

```
3.5 MB/s | 3.6 kB      00:00
```

```
Importing GPG key 0xFD431D51:
```

```
  Userid      : "Red Hat, Inc. (release key 2) <security@redhat.com>"
```

```
  Fingerprint: 567E 347A D004 4ADE 55BA 8A5F 199E 2F91 FD43 1D51
```

```
  From        : /etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release
```

```
Is this ok [y/N]: y
```

```
Key imported successfully
```

```
Importing GPG key 0x5A6340B3:
```

```
  Userid      : "Red Hat, Inc. (auxiliary key 3) <security@redhat.com>"
```

```
  Fingerprint: 7E46 2425 8C40 6535 D56D 6F13 5054 E4A4 5A63 40B3
```

```
  From        : /etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release
```

```
Is this ok [y/N]: y
```

1.2 - Installation

Éditez maintenant le fichier **inventory** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# vi inventory
```

```
...  
[automationcontroller]  
redhat9.ittraining.loc ansible_connection=local node_type=hybrid  
...
```





Important : Cette section configure une installation d'un seul noeud ayant une base de données interne.

Configurez ensuite le mot de passe **fenestros** aux endroits indiqués :

```
...  
[all:vars]  
admin_password='fenestros'  
  
pg_host=''  
pg_port=5432  
  
pg_database='awx'  
pg_username='awx'  
pg_password='fenestros'  
pg_sslmode='prefer' # set to 'verify-full' for client-side enforced SSL  
...
```

```
...  
registry_url='registry.redhat.io'  
registry_username='yyyyyyyyyyyy'  
registry_password='xxxxxxxxxxx'  
...
```

Cette section configure une installation d'un seul noeud ayant une base de données interne.



A faire : Remplacez 'yyyyyyyyyyyy' avec **votre** Red Hat login et 'xxxxxxxxxxx' avec **votre** mot de passe Red Hat.

```
...
automationhub_admin_password='fenestros'

automationhub_pg_host=''
automationhub_pg_port=5432

automationhub_pg_database='automationhub'
automationhub_pg_username='automationhub'
automationhub_pg_password='fenestros'
automationhub_pg_sslmode='prefer'
...
```

```
...
automationedacontroller_admin_password='fenestros'

automationedacontroller_pg_host=''
automationedacontroller_pg_port=5432

automationedacontroller_pg_database='automationedacontroller'
automationedacontroller_pg_username='automationedacontroller'
automationedacontroller_pg_password='fenestros'
automationedacontroller_pg_sslmode='prefer'
...
```

```
...
# The default install will deploy SSO with sso_use_https=True
# Keystore password is required for https enabled SSO
sso_keystore_password='fenestros'

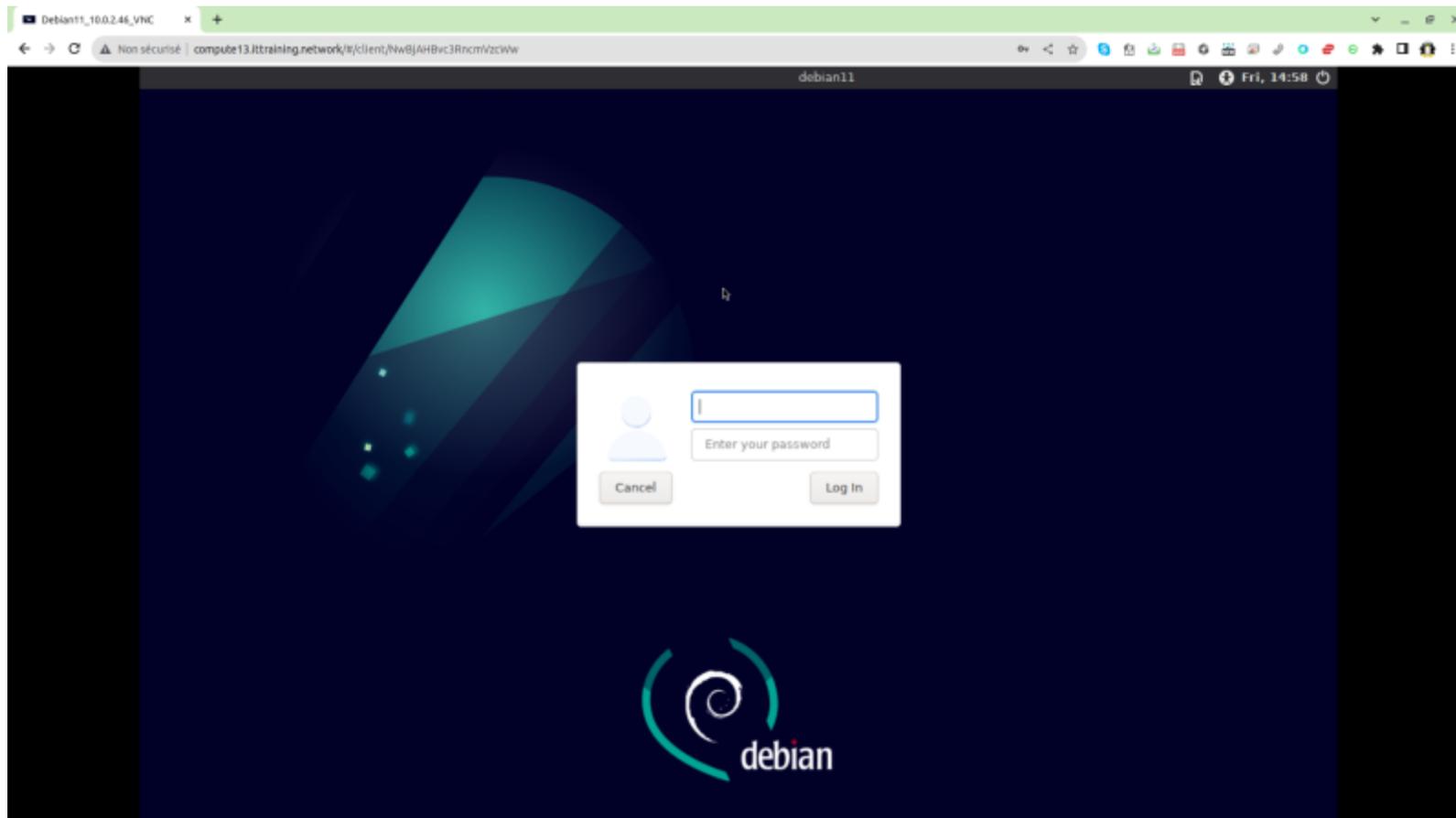
# Single-Sign-On configuration
sso_console_admin_password='fenestros'
...
```

Exécutez le script d'installation **setup.sh** et patientez une quinzaine de minutes :

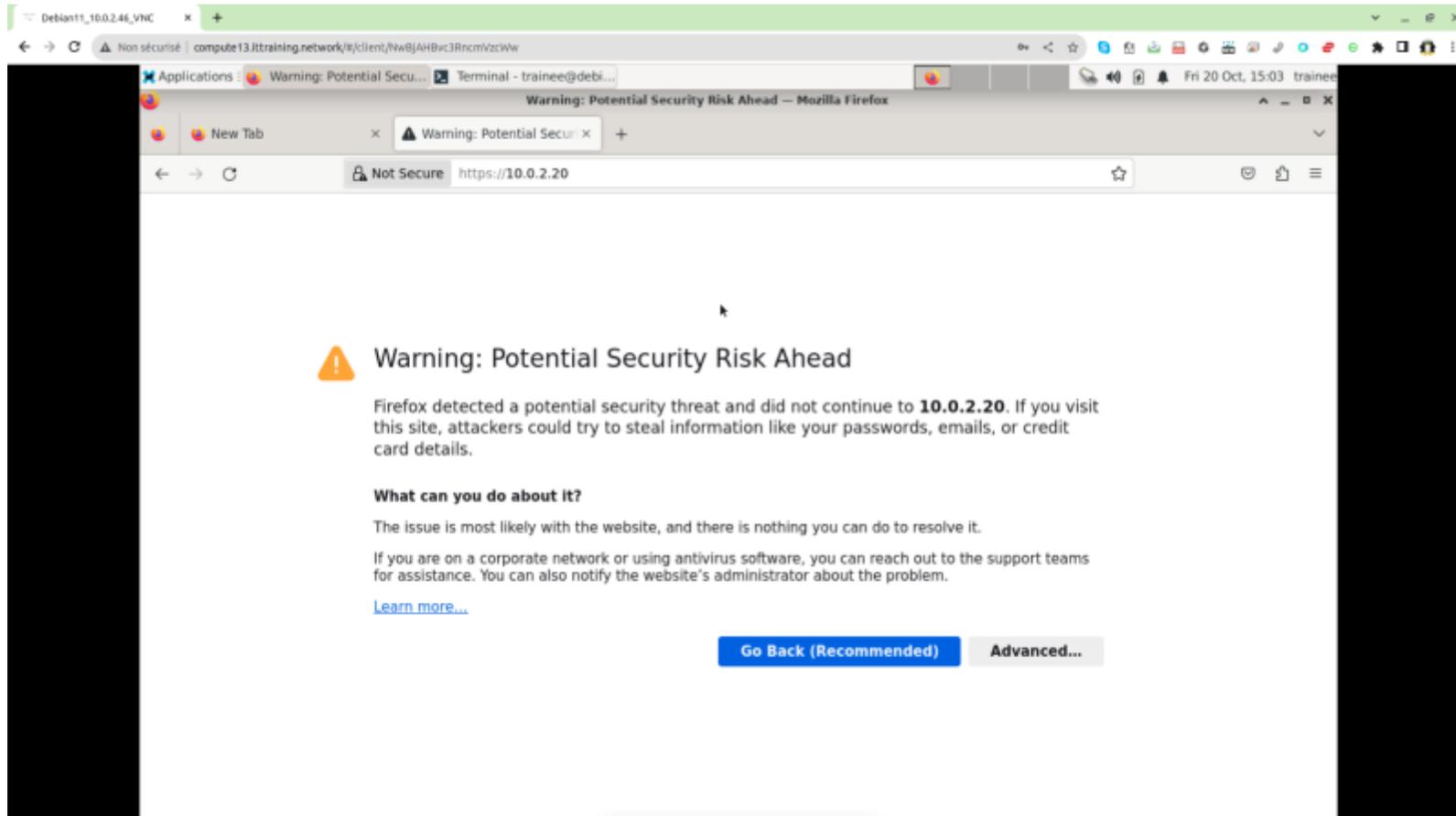
```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh
...
PLAY RECAP *****
localhost                : ok=0    changed=0    unreachable=0    failed=0    skipped=1    rescued=0
ignored=0
redhat9.ittraining.loc   : ok=374  changed=170  unreachable=0    failed=0    skipped=246  rescued=0
ignored=6
```

1.3 - Consultation

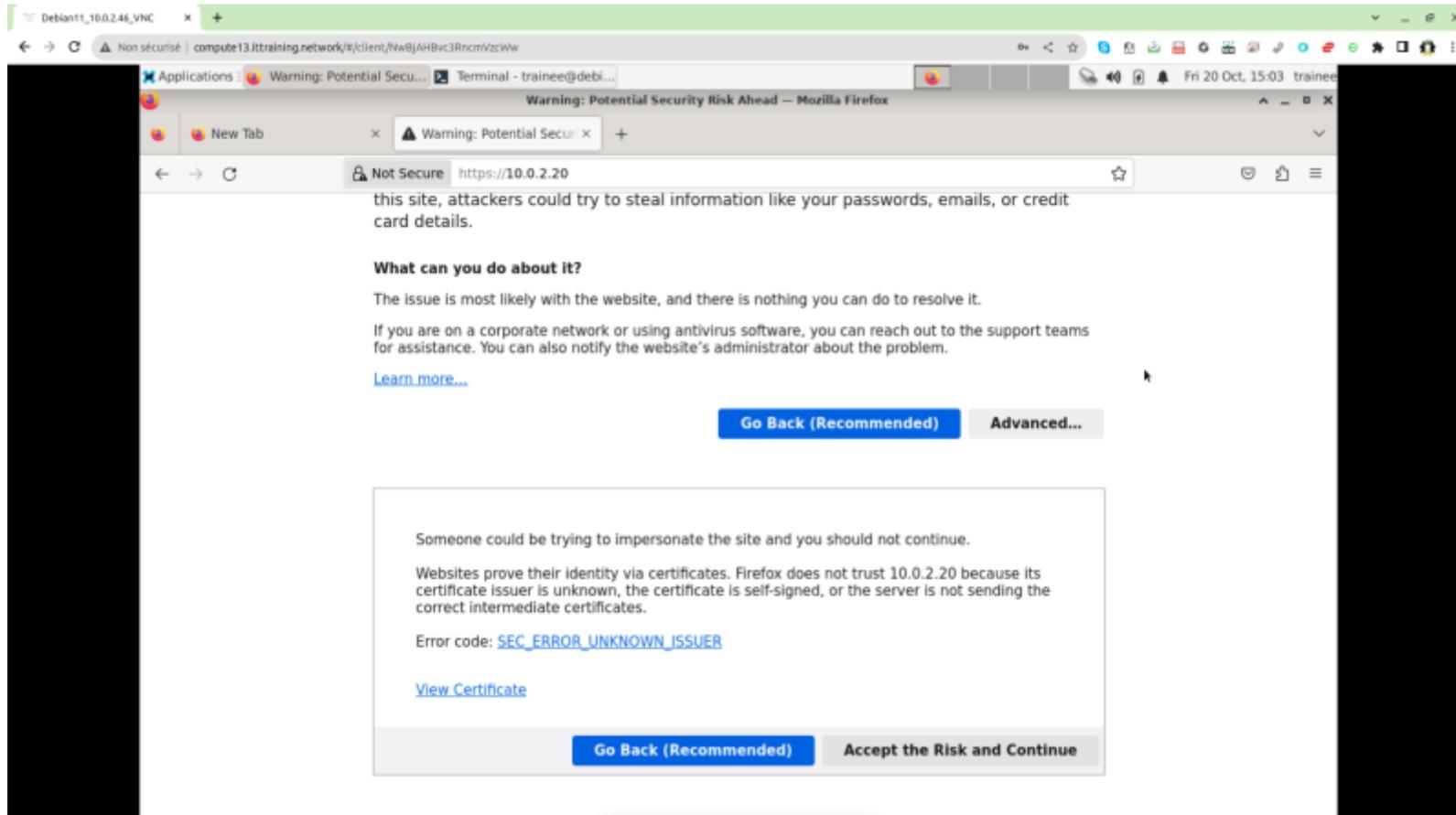
Connectez-vous à votre VM **Debian_10.0.2.46_VNC** :



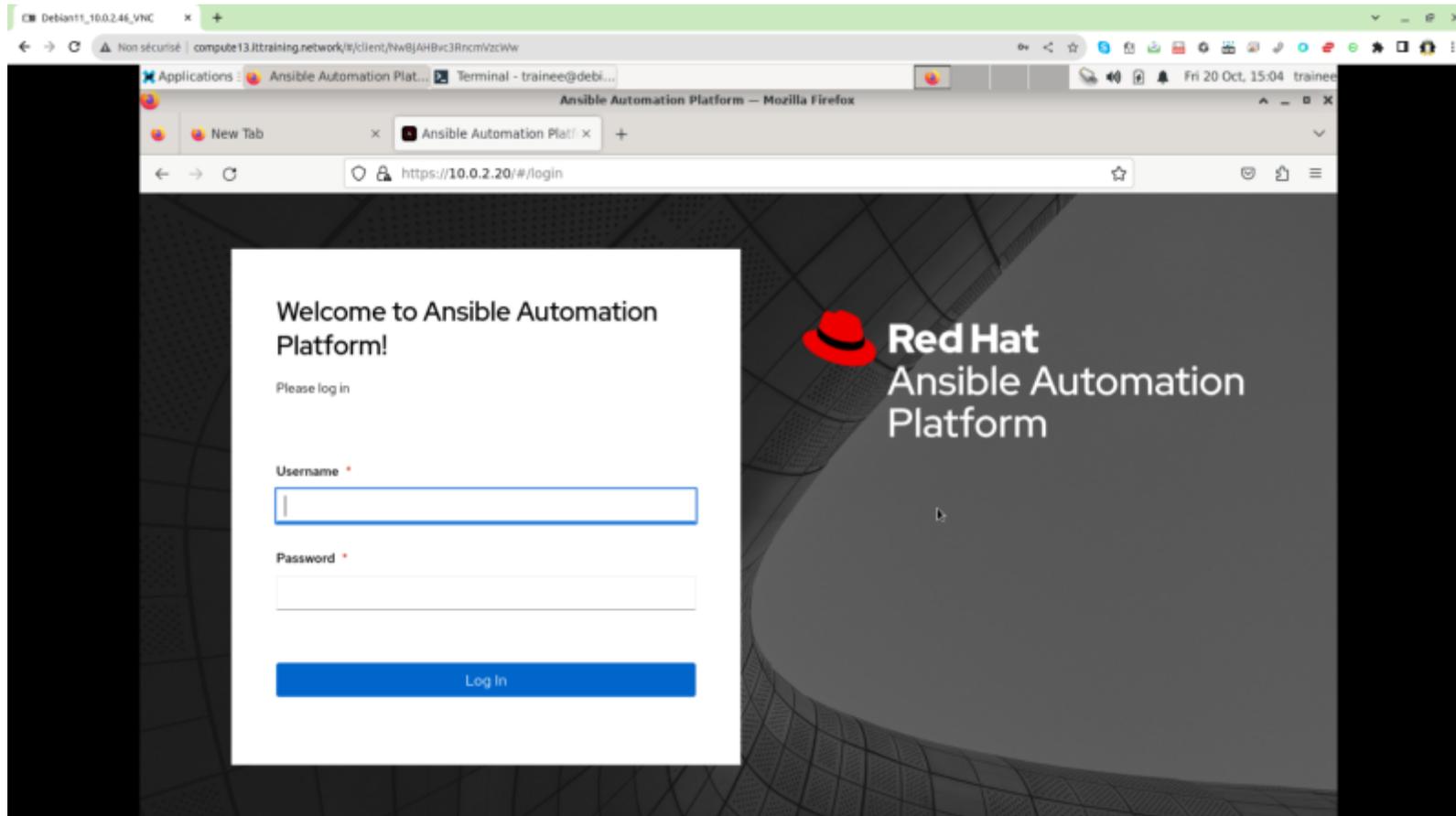
Ouvrez un navigateur Web et naviguez à <https://10.0.2.101> :



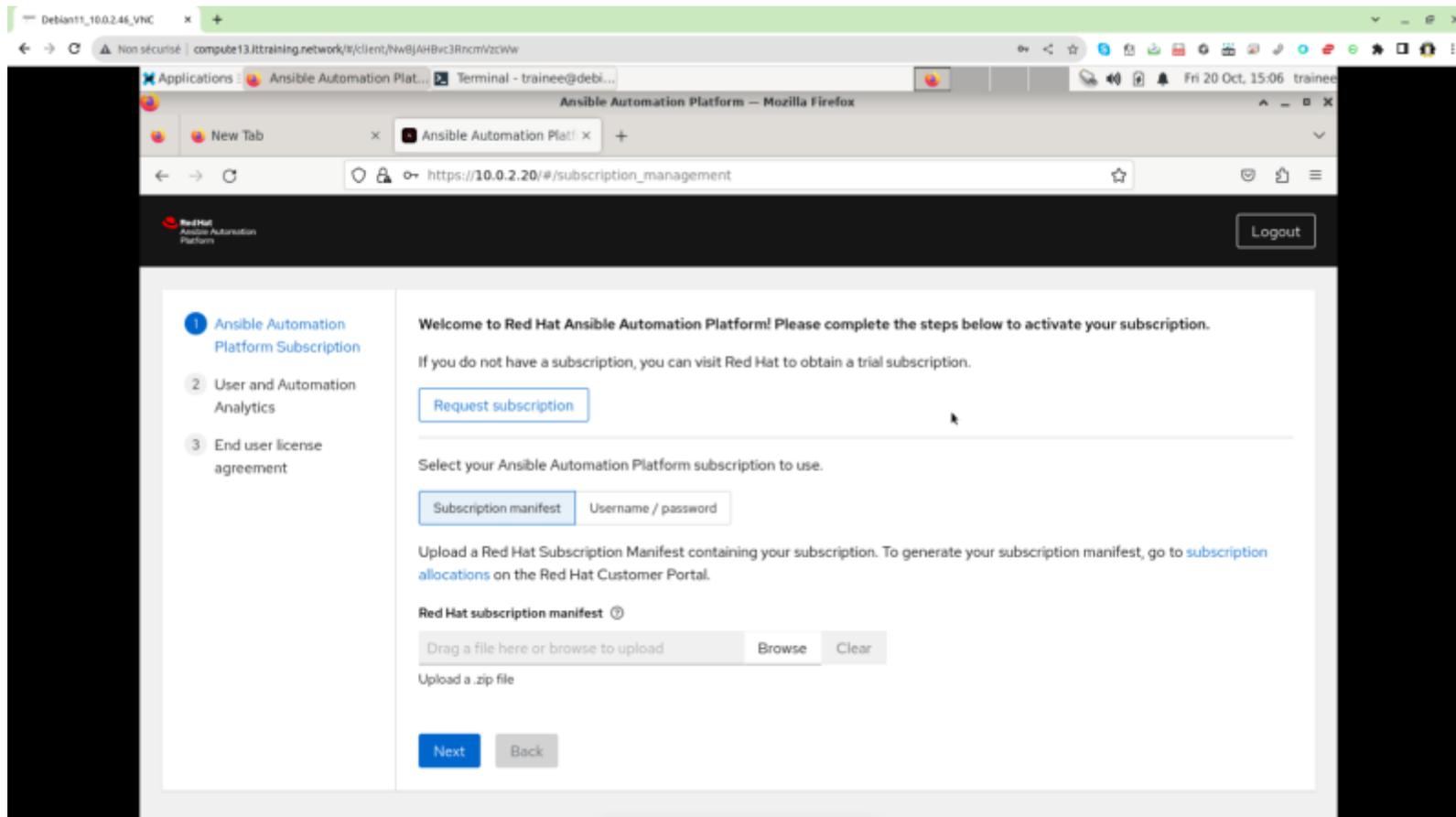
Acceptez le certificat auto-signé :



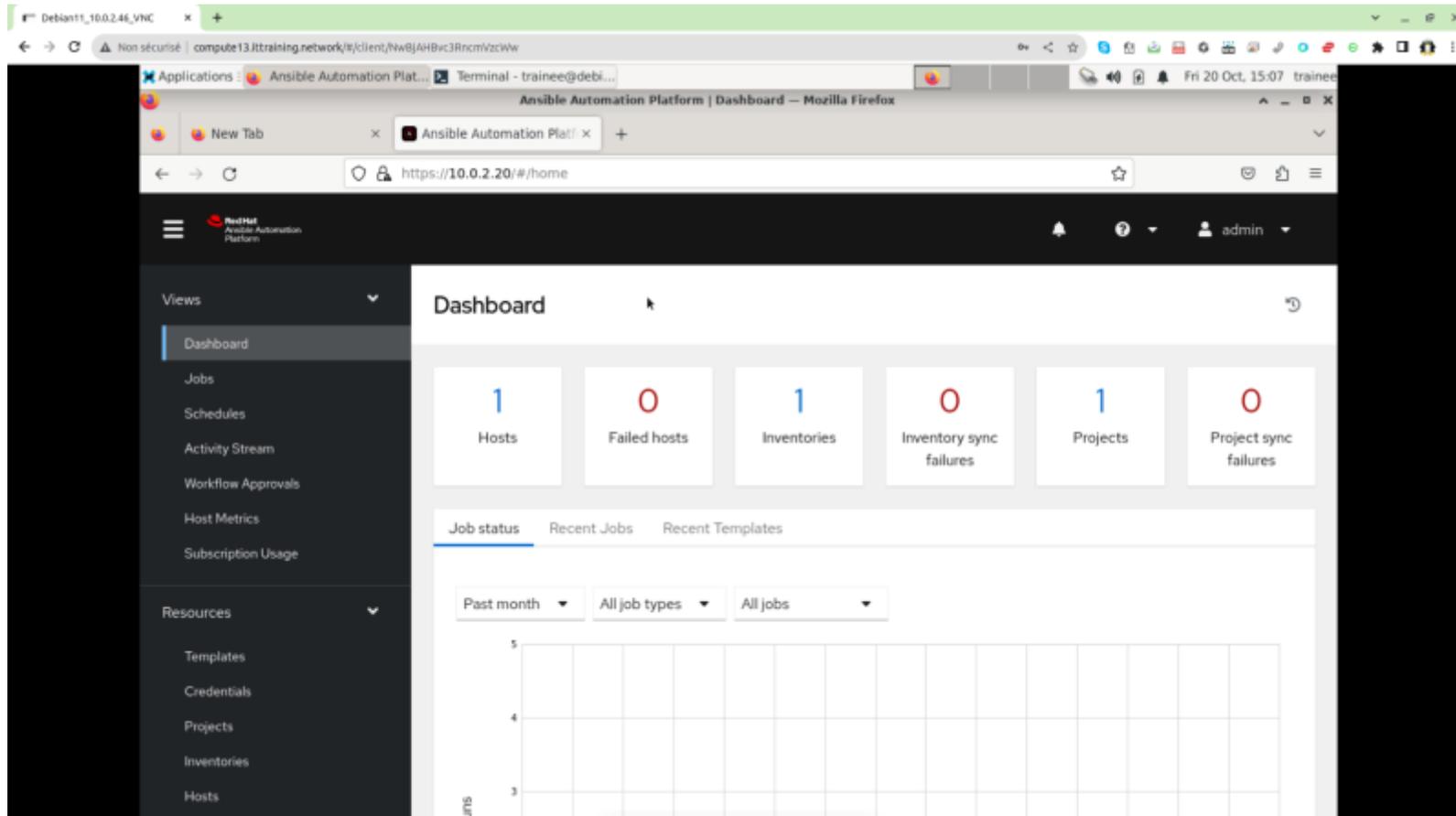
Connectez-vous à votre Ansible® Automation Controller en utilisant le compte **admin** et le mot de passe **fenestros** :



Cliquez sur le bouton **Username/password** et enregistrez votre Ansible® Automation Controller auprès de Red Hat en utilisant **votre** compte :



Vous obtiendrez :



LAB #2 - Ansible® Automation Hub

2.1 - Préparation

Connectez-vous maintenant à votre VM **autohub.ittraining.loc** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ssh -l trainee 10.0.2.102
```

Enregistrez la VM dans **votre** compte Red Hat :

```
[root@autohub ~]# subscription-manager register
Registering to: subscription.rhsm.redhat.com:443/subscription
Username: <login>
Password: <password>
The system has been registered with ID: a85a9fe3-334d-4b0c-9a98-f408e7d3a1e7
The registered system name is: autohub.ittraining.loc
```

Configurez SELinux en mode permissive :

```
[root@autohub ~]# setenforce permissive
```

Désarchivez le fichier **ansible-automation-platform-setup-bundle-2.4-2.2-x86_64.tar.gz** et consultez le contenu du répertoire créé :

```
[root@autohub ~]# tar xvf ansible-automation-platform-setup-bundle-2.4-2.2-x86_64.tar.gz

[root@autohub ~]# cd ansible-automation-platform-setup-bundle-2.4-2.2-x86_64/

[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ls
bundle  collections  group_vars  inventory  README.md  setup.sh
```

Modifiez le fichier **/etc/hosts** selon votre numéro de stagiaire :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# vi /etc/hosts
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cat /etc/hosts
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1        localhost localhost.localdomain localhost6 localhost6.localdomain6
10.0.2.102  autohub.ittraining.loc
```

Installez ensuite le paquet **ansible-core** :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# dnf install ansible-core
```

Updating Subscription Management repositories.

Red Hat Enterprise Linux 9 for x86_64 - BaseOS (RPMs)

25 MB/s | 14 MB 00:00

Red Hat Enterprise Linux 9 for x86_64 - AppStream (RPMs)

35 MB/s | 25 MB 00:00

Dependencies resolved.

```

=====
Package                               Architecture                               Version
Repository                             Size
=====
Installing:
ansible-core                           x86_64                                     2.14.2-5.el9_2
rhel-9-for-x86_64-appstream-rpms      3.4 M
Installing dependencies:
git-core                               x86_64                                     2.39.3-1.el9_2
rhel-9-for-x86_64-appstream-rpms      4.3 M
libnsl2                                x86_64                                     2.0.0-1.el9
rhel-9-for-x86_64-appstream-rpms      33 k
mpdecimal                              x86_64                                     2.5.1-3.el9
rhel-9-for-x86_64-appstream-rpms      88 k
python3.11                             x86_64                                     3.11.2-2.el9_2.2
rhel-9-for-x86_64-appstream-rpms      28 k
python3.11-cffi                        x86_64                                     1.15.1-1.el9
rhel-9-for-x86_64-appstream-rpms      315 k
python3.11-cryptography                x86_64                                     37.0.2-5.el9
rhel-9-for-x86_64-appstream-rpms      1.2 M
python3.11-libs                        x86_64                                     3.11.2-2.el9_2.2
rhel-9-for-x86_64-appstream-rpms      9.9 M
python3.11-pip-wheel                   noarch                                     22.3.1-2.el9
rhel-9-for-x86_64-appstream-rpms      1.4 M
python3.11-ply                          noarch                                     3.11-1.el9
rhel-9-for-x86_64-appstream-rpms      141 k

```

python3.11-pycparser	noarch	2.20-1.el9
rhel-9-for-x86_64-appstream-rpms	161 k	
python3.11-pyyaml	x86_64	6.0-1.el9
rhel-9-for-x86_64-appstream-rpms	229 k	
python3.11-setuptools-wheel	noarch	65.5.1-2.el9
rhel-9-for-x86_64-appstream-rpms	714 k	
python3.11-six	noarch	1.16.0-1.el9
rhel-9-for-x86_64-appstream-rpms	47 k	
sshpass	x86_64	1.09-4.el9
rhel-9-for-x86_64-appstream-rpms	30 k	

Transaction Summary

=====
=====
Install 15 Packages

Total download size: 22 M

Installed size: 88 M

Is this ok [y/N]: y

Downloading Packages:

(1/15): sshpass-1.09-4.el9.x86_64.rpm

24 kB/s | 30 kB 00:01

(2/15): libnsl2-2.0.0-1.el9.x86_64.rpm

26 kB/s | 33 kB 00:01

(3/15): python3.11-six-1.16.0-1.el9.noarch.rpm

36 kB/s | 47 kB 00:01

(4/15): python3.11-pycparser-2.20-1.el9.noarch.rpm

153 kB/s | 161 kB 00:01

(5/15): python3.11-setuptools-wheel-65.5.1-2.el9.noarch.rpm

420 kB/s | 714 kB 00:01

(6/15): python3.11-cffi-1.15.1-1.el9.x86_64.rpm

179 kB/s | 315 kB 00:01

(7/15): python3.11-pyyaml-6.0-1.el9.x86_64.rpm

288 kB/s | 229 kB 00:00

```
(8/15): python3.11-cryptography-37.0.2-5.el9.x86_64.rpm
704 kB/s | 1.2 MB    00:01
(9/15): mpdecimal-2.5.1-3.el9.x86_64.rpm
55 kB/s | 88 kB     00:01
(10/15): git-core-2.39.3-1.el9_2.x86_64.rpm
18 MB/s | 4.3 MB    00:00
(11/15): python3.11-ply-3.11-1.el9.noarch.rpm
111 kB/s | 141 kB   00:01
(12/15): python3.11-pip-wheel-22.3.1-2.el9.noarch.rpm
850 kB/s | 1.4 MB   00:01
(13/15): ansible-core-2.14.2-5.el9_2.x86_64.rpm
2.3 MB/s | 3.4 MB   00:01
(14/15): python3.11-3.11.2-2.el9_2.2.x86_64.rpm
28 kB/s | 28 kB     00:00
(15/15): python3.11-libs-3.11.2-2.el9_2.2.x86_64.rpm
5.9 MB/s | 9.9 MB   00:01
```


Total

3.1 MB/s | 22 MB 00:07

Red Hat Enterprise Linux 9 for x86_64 - AppStream (RPMs)

3.5 MB/s | 3.6 kB 00:00

Importing GPG key 0xFD431D51:

Userid : "Red Hat, Inc. (release key 2) <security@redhat.com>"

Fingerprint: 567E 347A D004 4ADE 55BA 8A5F 199E 2F91 FD43 1D51

From : /etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release

Is this ok [y/N]: y

Key imported successfully

Importing GPG key 0x5A6340B3:

Userid : "Red Hat, Inc. (auxiliary key 3) <security@redhat.com>"

Fingerprint: 7E46 2425 8C40 6535 D56D 6F13 5054 E4A4 5A63 40B3

From : /etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release

Is this ok [y/N]: y

2.2 - Installation

Éditez maintenant le fichier **inventory** :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# vi inventory
```

```
...
[automationhub]
autohub.ittraining.loc ansible_connection=local
...
```

```
...
# Automation Hub Configuration
#

automationhub_admin_password='fenestros'

automationhub_pg_host=''
automationhub_pg_port=5432

automationhub_pg_database='automationhub'
automationhub_pg_username='automationhub'
automationhub_pg_password='fenestros'
automationhub_pg_sslmode='prefer'
...
```

Exécutez le script d'installation **setup.sh** et patientez une quinzaine de minutes :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh
...
PLAY RECAP *****
autohub.ittraining.loc      : ok=165  changed=51  unreachable=0    failed=2    skipped=173  rescued=0
ignored=0
```

```
localhost          : ok=0    changed=0    unreachable=0    failed=0    skipped=1    rescued=0
ignored=0
```

```
[error] Oops! An error occurred while running setup.
```

```
[warn] /var/log/tower does not exist. Setup log saved to setup.log.
```

```
[warn] Provided path does not exist or is not accessible. Setup log saved to ./setup.log.
```

En cas d'erreur(s), ré-exécutez le script setup.sh :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh
```

```
...
```

```
PLAY RECAP *****
```

```
autohub.ittraining.loc : ok=900  changed=150  unreachable=0    failed=0    skipped=379  rescued=0
ignored=0
```

```
localhost          : ok=0    changed=0    unreachable=0    failed=0    skipped=1    rescued=0
ignored=0
```

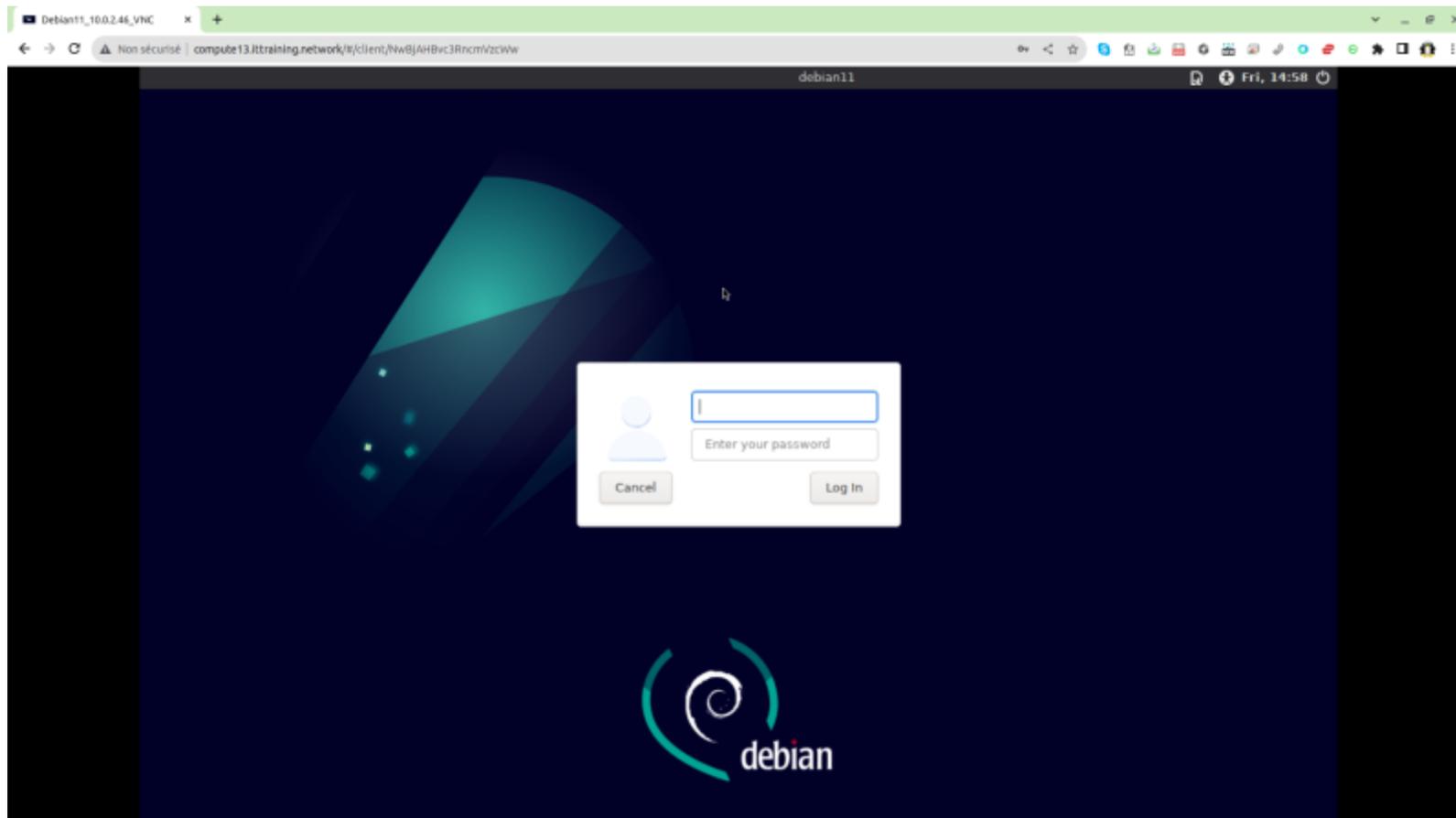
```
The setup process completed successfully.
```

```
[warn] /var/log/tower does not exist. Setup log saved to setup.log.
```

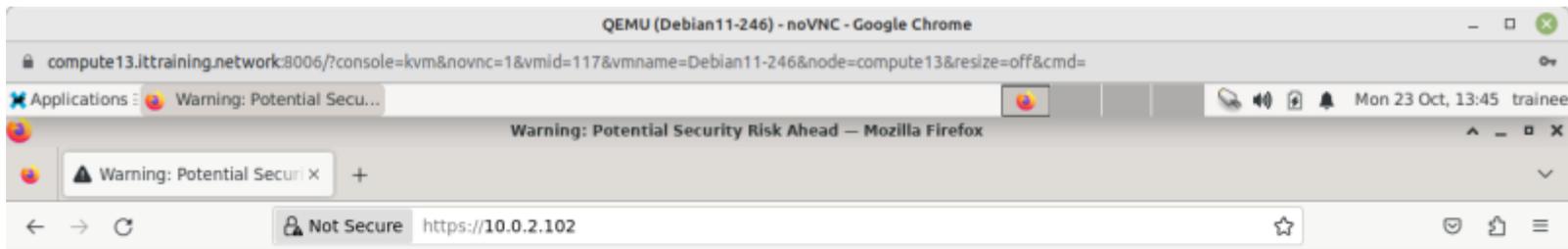
```
[warn] Provided path does not exist or is not accessible. Setup log saved to ./setup.log.
```

2.3 - Consultation

Connectez-vous à votre VM **Debian_10.0.2.46_VNC** :



Ouvrez un navigateur Web et naviguez à <https://10.0.2.102> :



Warning: Potential Security Risk Ahead

Firefox detected a potential security threat and did not continue to **10.0.2.102**. If you visit this site, attackers could try to steal information like your passwords, emails, or credit card details.

What can you do about it?

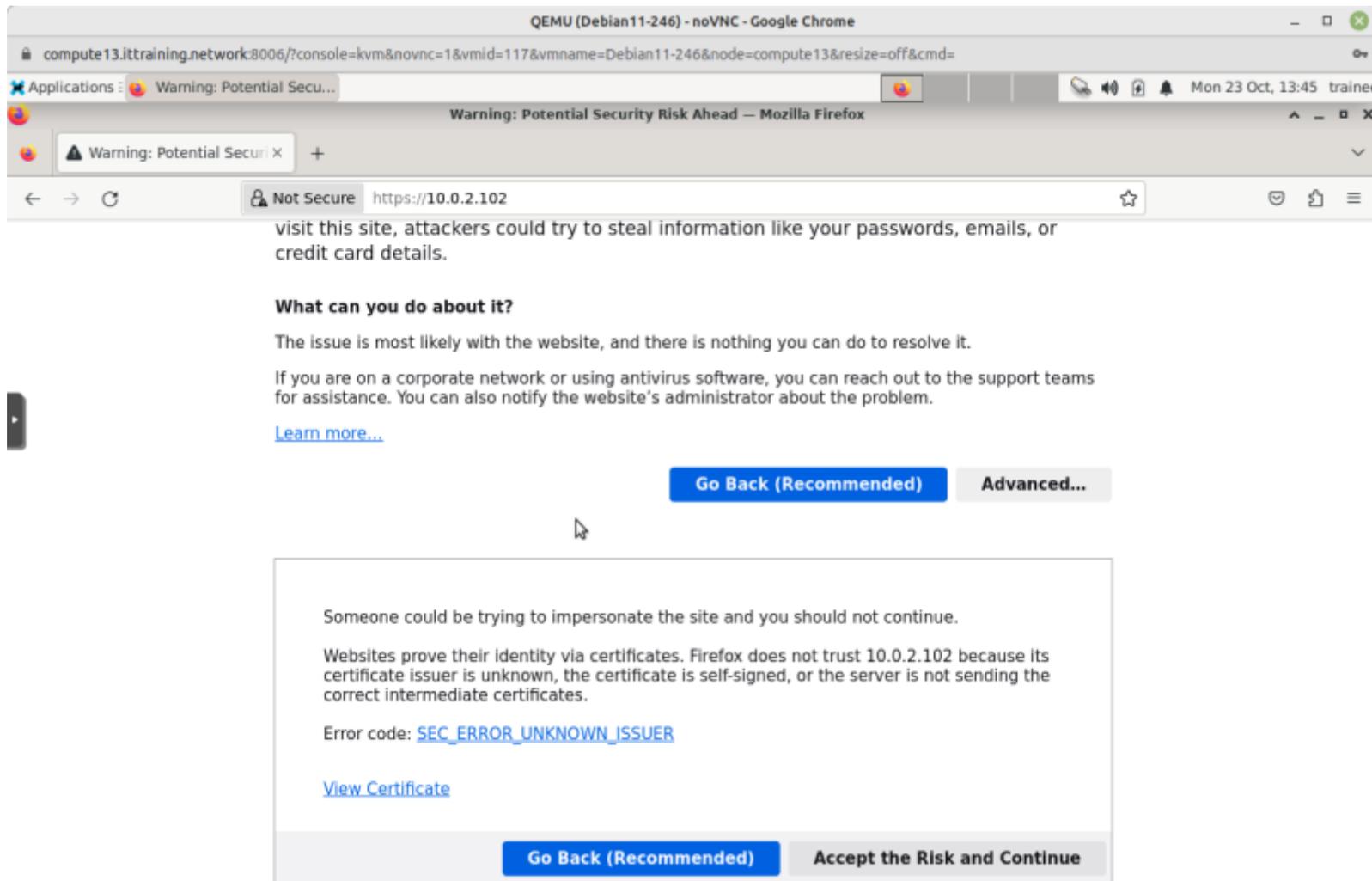
The issue is most likely with the website, and there is nothing you can do to resolve it.

If you are on a corporate network or using antivirus software, you can reach out to the support teams for assistance. You can also notify the website's administrator about the problem.

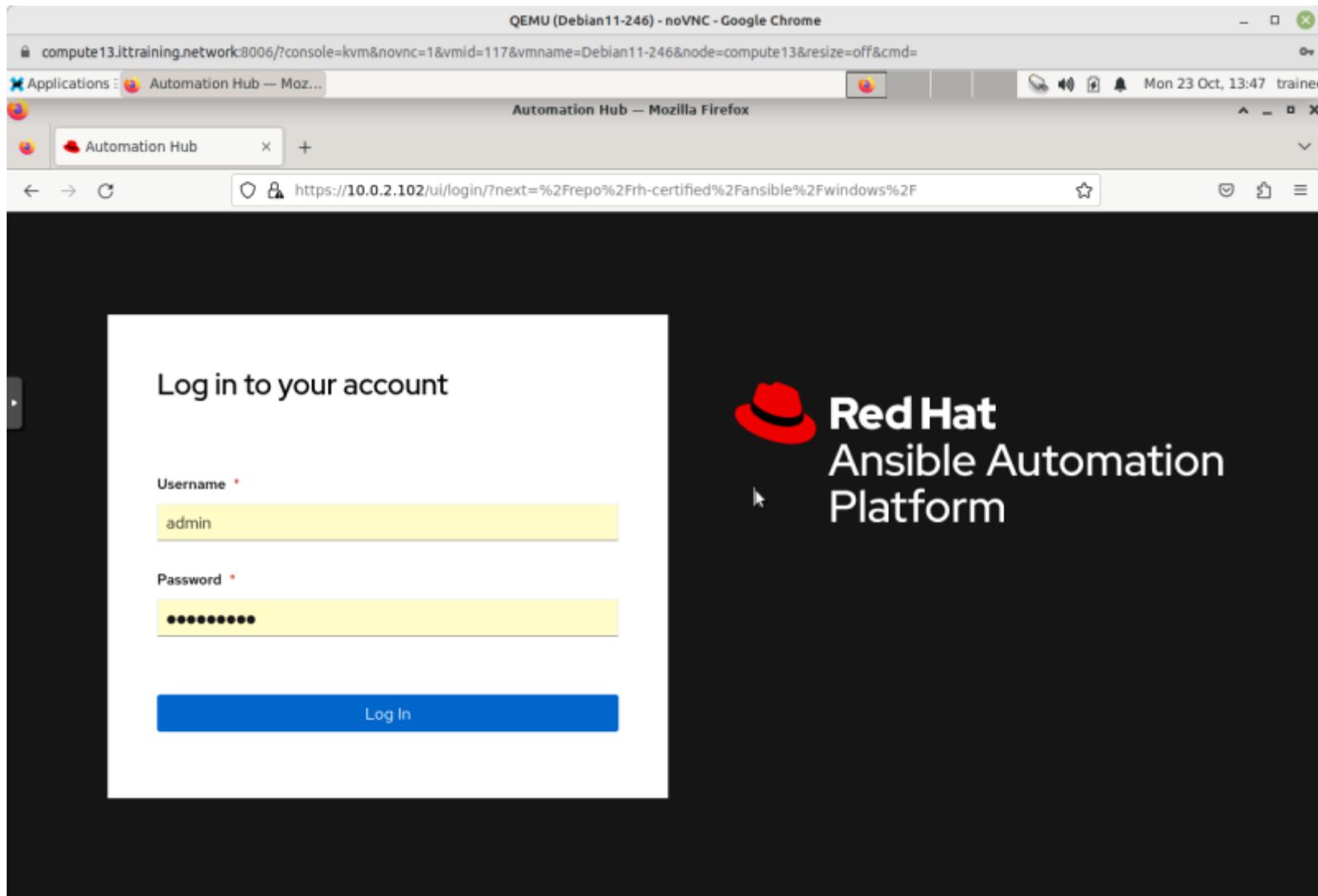
[Learn more...](#)

Go Back (Recommended) **Advanced...**

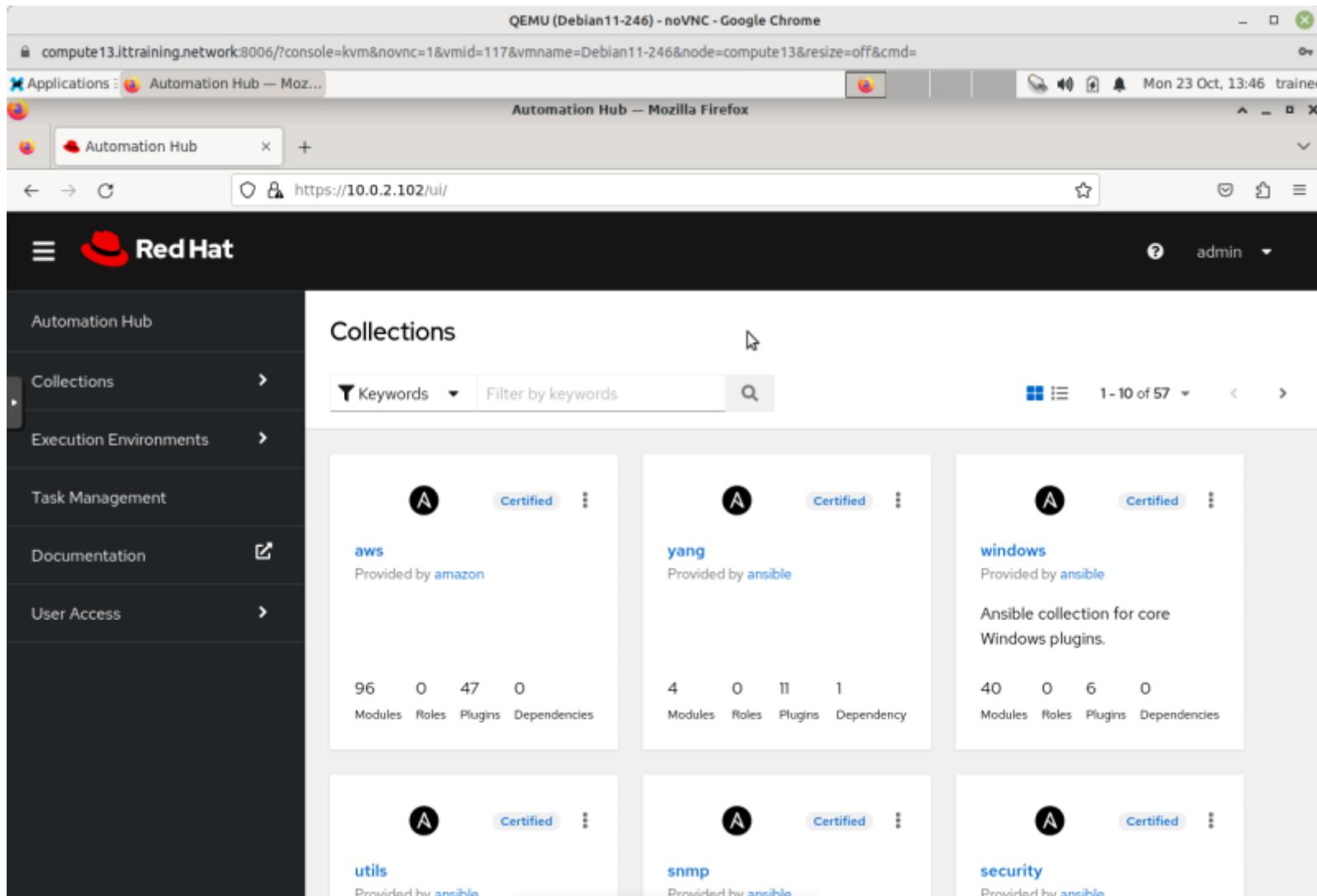
Acceptez le certificat auto-signé :



Connectez-vous à votre Ansible® Automation Hub en utilisant le compte **admin** et le mot de passe **fenestros** :



Vous obtiendrez :



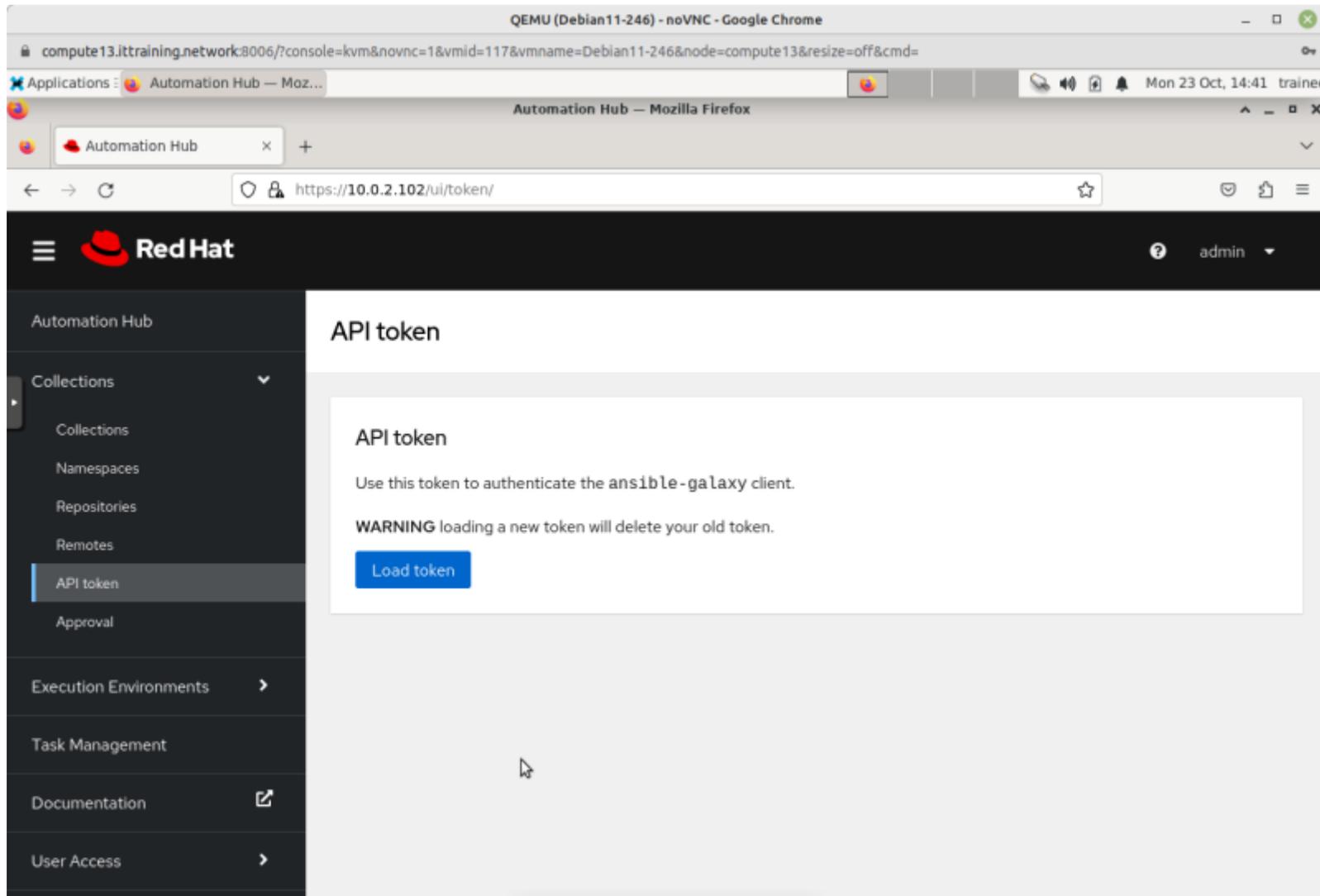
The screenshot displays the Red Hat Ansible Automation Hub interface. The top navigation bar includes the Red Hat logo and the user name 'admin'. The left sidebar contains navigation options: Automation Hub, Collections, Execution Environments, Task Management, Documentation, and User Access. The main content area is titled 'Collections' and features a search bar with the text 'Filter by keywords'. Below the search bar, there are six collection cards, each with a 'Certified' badge and a list of statistics (Modules, Roles, Plugins, Dependencies).

Collection Name	Provider	Modules	Roles	Plugins	Dependencies
aws	amazon	96	0	47	0
yang	ansible	4	0	11	1
windows	ansible	40	0	6	0
utils	ansible				
snmp	ansible				
security	ansible				

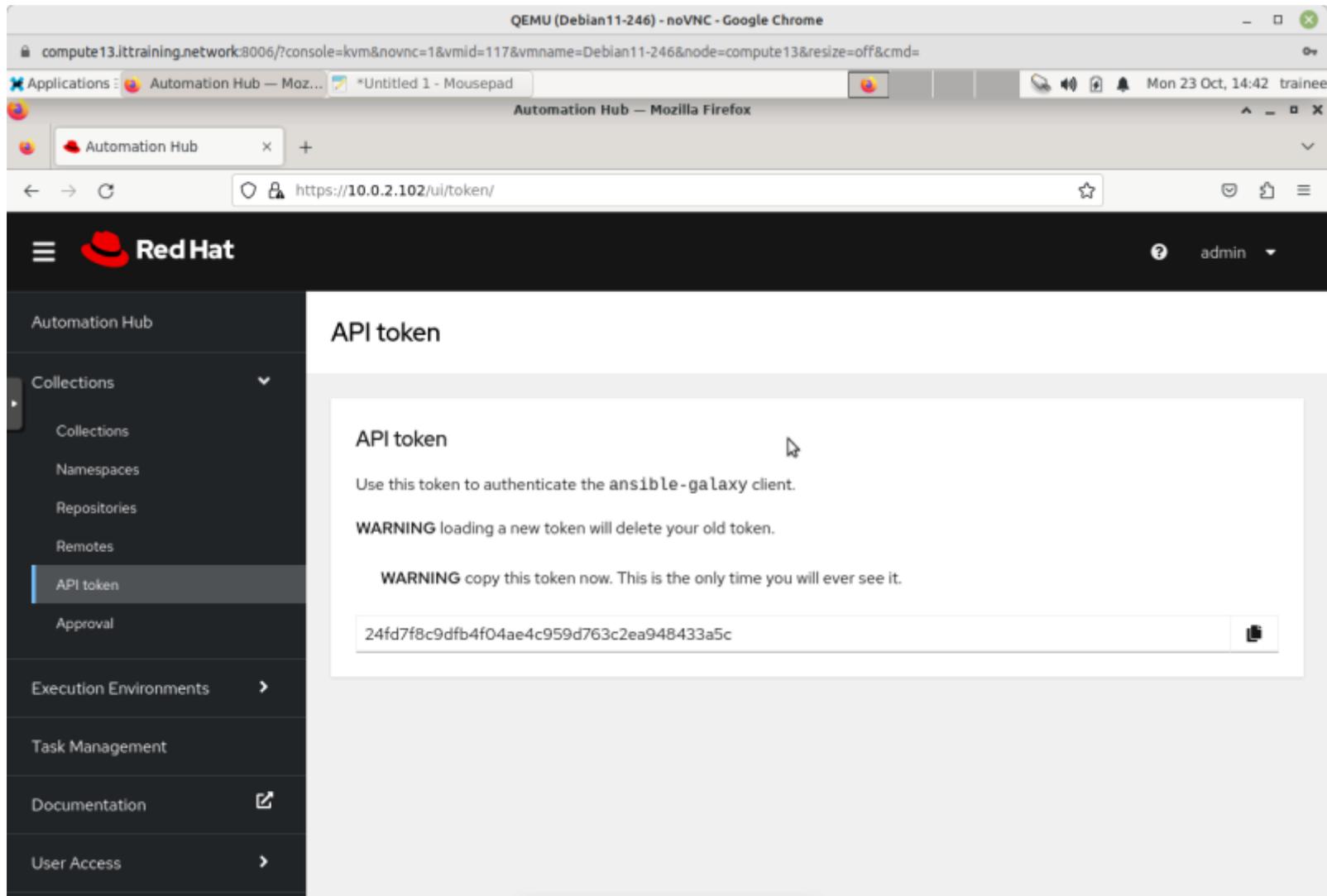
LAB #3 - Connecter l'Ansible® Automation Hub et l'Ansible® Automation Controller

3.1 - Configurer Ansible® Automation Hub

Dans l'interface de votre Ansible® Automation Hub, cliquez sur **Collections > API token > Load token** :



Copiez le token ainsi généré :



The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser's address bar shows the URL `https://10.0.2.102/ui/token/`. The page title is "API token". The left sidebar contains a navigation menu with the following items: Automation Hub, Collections (expanded), Collections, Namespaces, Repositories, Remotes, API token (selected), Approval, Execution Environments, Task Management, Documentation, and User Access. The main content area displays the "API token" page, which includes the following text:

API token

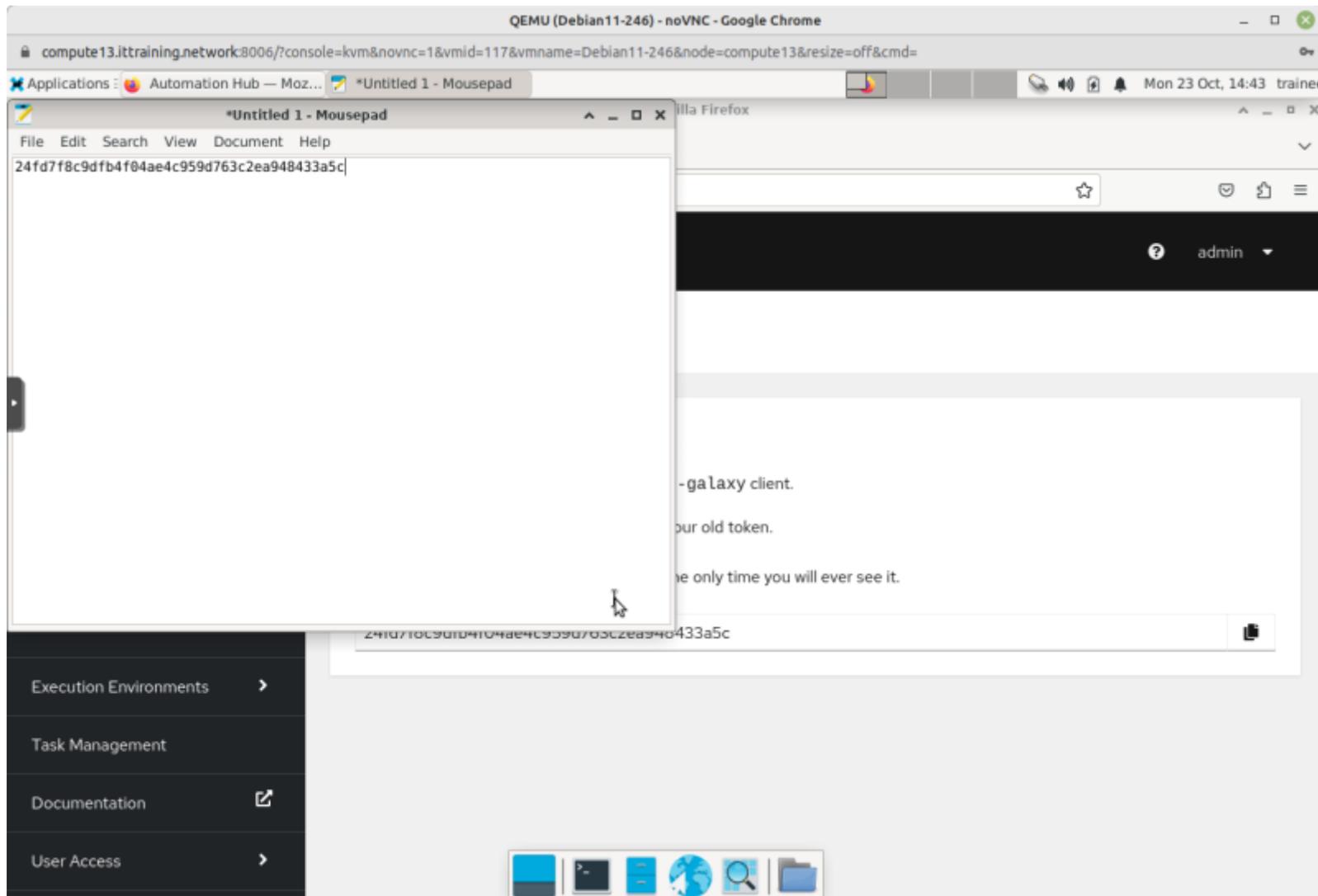
Use this token to authenticate the `ansible-galaxy` client.

WARNING loading a new token will delete your old token.

WARNING copy this token now. This is the only time you will ever see it.

The token value is displayed in a text box: `24fd7f8c9dfb4f04ae4c959d763c2ea948433a5c`. A copy icon is visible to the right of the token.

Collez ce token dans un bloc-note (mousepad) :



3.2 - Configurer Ansible® Automation Controller

Ouvrez l'interface de votre Ansible® Automation Controller :

The screenshot shows the Ansible Automation Platform Dashboard. The top navigation bar includes the Red Hat Ansible Automation Platform logo, a user profile for 'admin', and a notification bell. The left sidebar is expanded to show 'Views' and 'Resources'. The 'Views' menu includes Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, and Subscription Usage. The 'Resources' menu includes Templates, Credentials, Projects, Inventories, and Hosts. The main content area is titled 'Dashboard' and features six summary cards: Hosts (1), Failed hosts (0), Inventories (1), Inventory sync failures (0), Projects (1), and Project sync failures (0). Below these cards are tabs for 'Job status', 'Recent Jobs', and 'Recent Templates'. The 'Job status' tab is active, showing a chart with filters for 'Past month', 'All job types', and 'All jobs'. The chart area is currently empty, with a y-axis labeled 'sum' ranging from 3 to 5.

Naviguez à **Resources > Credentials** et cliquez sur le bouton **Add** :

The screenshot shows the Ansible Automation Platform web interface. The browser address bar indicates the URL is `https://10.0.2.20/#/credentials`. The page title is "Credentials". The left sidebar contains a navigation menu with the following items: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage), Resources (Templates, Credentials, Projects, Inventories, Hosts). The main content area displays a table of credentials:

<input type="checkbox"/>	Name	Type	Actions
<input type="checkbox"/>	Ansible Galaxy	Ansible Galaxy/Automation Hub API Token	
<input type="checkbox"/>	Default Execution Environment Registry Credential	Container Registry	
<input type="checkbox"/>	Demo Credential	Machine	

At the bottom of the table, there is a pagination control showing "1 - 3 of 3 items" and "1 of 1 page".

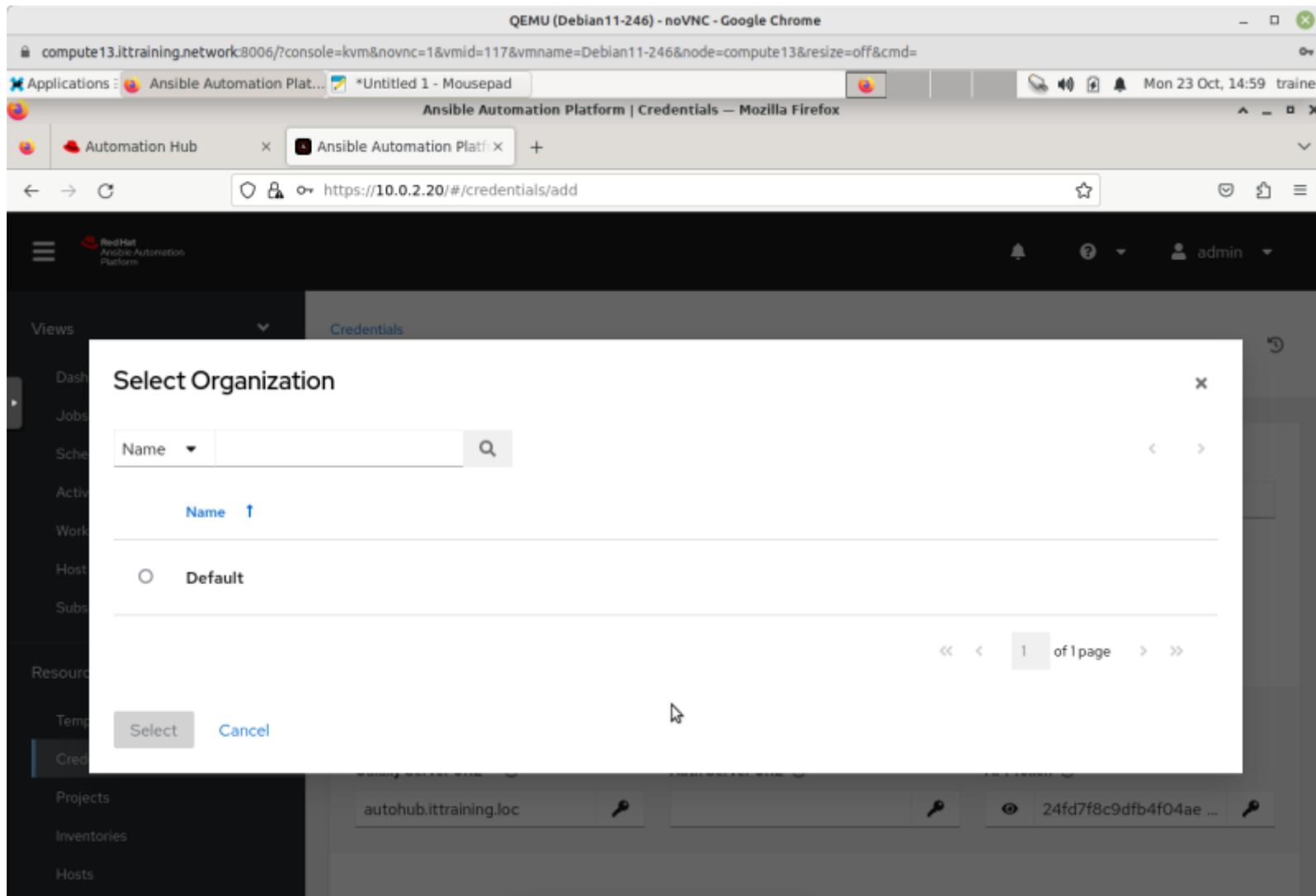
Renseignez les champs **Name**, **Description** et **Galaxy Server URL**. Choisissez **Galaxy/Automation Hub API Token** dans le menu déroulant **Credential Type** et collez le token API dans **API token** :

The screenshot displays the 'Create New Credential' interface in the Ansible Automation Platform. The page is titled 'Credentials' and 'Create New Credential'. The form includes the following fields:

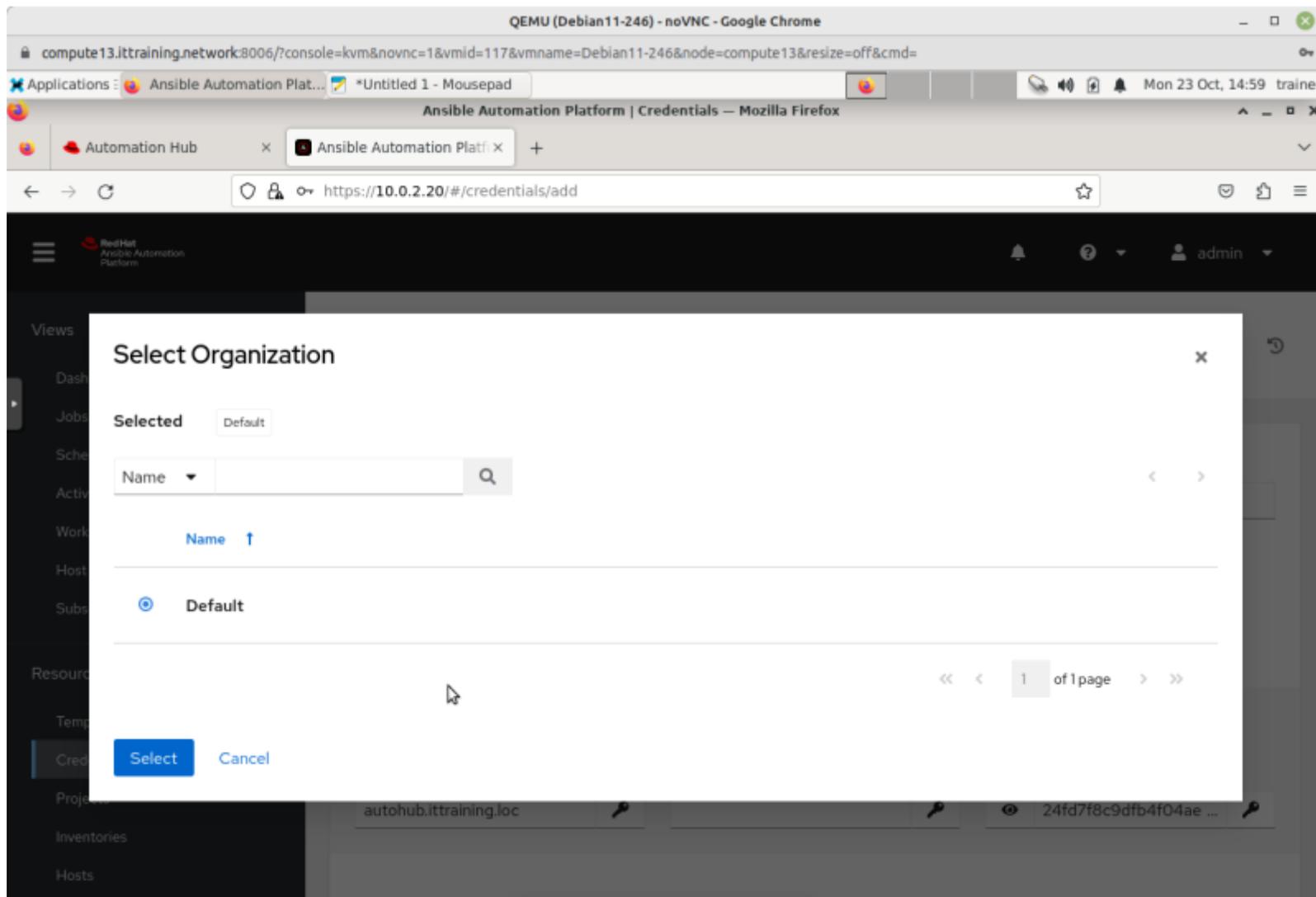
- Name:** Autohub
- Description:** Ansible Automation Hub
- Organization:** A search field with a magnifying glass icon (loupe) to its left. A red error message below it reads: "Galaxy credentials must be owned by an Organization."
- Credential Type:** A dropdown menu showing "axy/Automation Hub API Token".
- Type Details:**
 - Galaxy Server URL:** autohub.ittraining.loc
 - Auth Server URL:** (empty)
 - API Token:** 24fd7f8c9dfb4f04ae ...

The left sidebar contains a navigation menu with the following items: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage), Resources (Templates, Credentials, Projects, Inventories, Hosts).

Cliquez sur la loupe à gauche du champs **Organization** :



Cochez l'organisation **Default** et cliquez sur le bouton **Select** :



Validez en cliquant sur le bouton **Save** :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/credentials/add`. The page title is "Create New Credential".

The interface includes a sidebar menu on the left with the following items: Views, Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage, Resources, Templates, Credentials (highlighted), Projects, Inventories, and Hosts.

The main content area contains the "Create New Credential" form with the following fields:

- Name:**
- Description:**
- Organization:**
- Credential Type:**

The "Type Details" section includes:

- Galaxy Server URL:**
- Auth Server URL:**
- API Token:**

At the bottom of the form, there are "Save" and "Cancel" buttons.

Vous obtiendrez :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser address bar shows the URL: `https://10.0.2.20/#/credentials/4/details`. The page title is "Credentials > Autohub" and the main heading is "Details".

The interface includes a sidebar menu on the left with the following items: Views, Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage, Resources, Templates, Credentials (highlighted), Projects, Inventories, and Hosts.

The main content area displays the details of the "Autohub" credential. It includes a table with the following information:

	Name	Description	Organization
	Autohub	Ansible Automation Hub	Default
Credential Type	Ansible Galaxy/Automation Hub API Token	Galaxy Server URL	API Token
		autohub.ittraining.loc	Encrypted
Created	10/23/2023, 2:59:47 PM by admin	Last Modified	10/23/2023, 2:59:47 PM by admin

At the bottom of the details card, there are two buttons: "Edit" and "Delete".

Cliquez sur **Settings > Jobs settings** :

The screenshot shows a web browser window displaying the Ansible Automation Platform settings page. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows "https://10.0.2.20/#/settings". The page content is organized into several sections:

- Authentication**: Enable simplified login for your Ansible Automation Platform applications. Includes links for Azure AD settings, GitHub settings, Google OAuth 2 settings, LDAP settings, RADIUS settings, SAML settings, TACACS+ settings, and Generic OIDC settings.
- System**: Define system-level features and functions. Includes links for Miscellaneous System settings, Miscellaneous Authentication settings, and Logging settings.
- User Interface**: Set preferences for data collection, logos, and logins. Includes a link for User Interface settings.
- Subscription**: View and edit your subscription information. Includes a link for Subscription settings.
- Jobs**: Update settings pertaining to Jobs within Ansible Automation Platform. Includes a link for Jobs settings.

The left sidebar contains navigation options: Organizations, Users, Teams, Administration (expanded), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings (highlighted). The user is logged in as "admin".

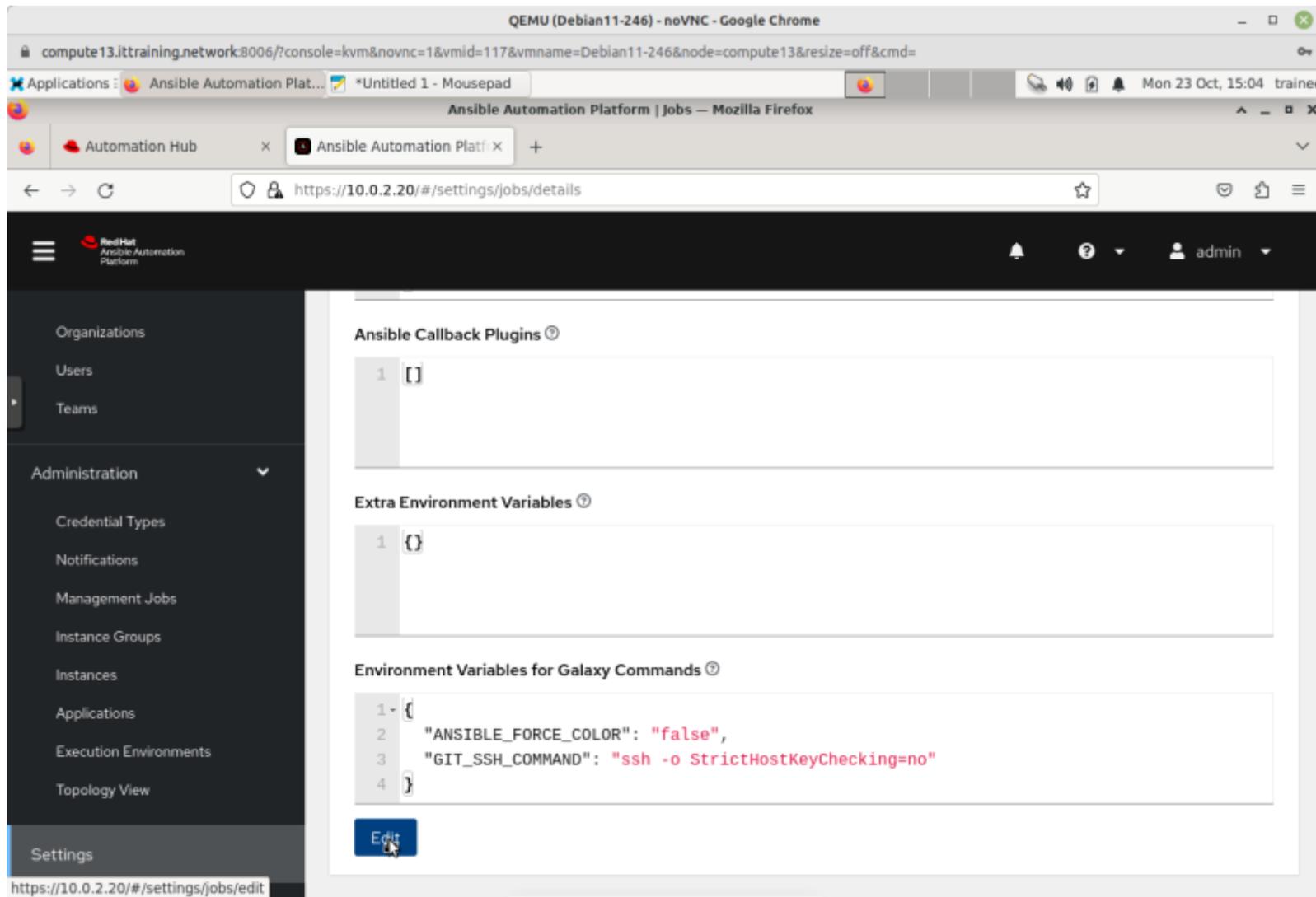
Vous obtiendrez :

The screenshot shows the Ansible Automation Platform (AAP) interface in a browser window. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows the URL "https://10.0.2.20/#/settings/jobs/details". The page title is "Settings > Jobs Details".

The main content area displays a table of settings for Jobs. The table has three columns: Setting Name, Value, and Action (represented by a question mark icon). The settings are:

Setting Name	Value	Action
When can extra variables contain Jinja templates?	template	?
Job execution path	/tmp	?
K8S Ansible Runner Keep-Alive Message Interval	0	?
Job Event Maximum Websocket Messages Per Second	30	?
Maximum Scheduled Jobs	10	?
Default Job Timeout	0 seconds	?
Default Job Idle Timeout	0 seconds	?
Default Inventory Update Timeout	0 seconds	?
Default Project Update Timeout	0 seconds	?

Descendez la page et cliquez sur le bouton **Edit** :



The screenshot shows the Ansible Automation Platform interface in a browser window. The URL is `https://10.0.2.20/#/settings/jobs/details`. The left sidebar contains navigation options: Organizations, Users, Teams, Administration (expanded), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings. The main content area displays the configuration for a job, with the following sections:

- Ansible Callback Plugins**: A text area containing a single empty list item.
- Extra Environment Variables**: A text area containing a single empty list item.
- Environment Variables for Galaxy Commands**: A text area containing a JSON object:

```
1- {  
2  "ANSIBLE_FORCE_COLOR": "false",  
3  "GIT_SSH_COMMAND": "ssh -o StrictHostKeyChecking=no"  
4 }
```

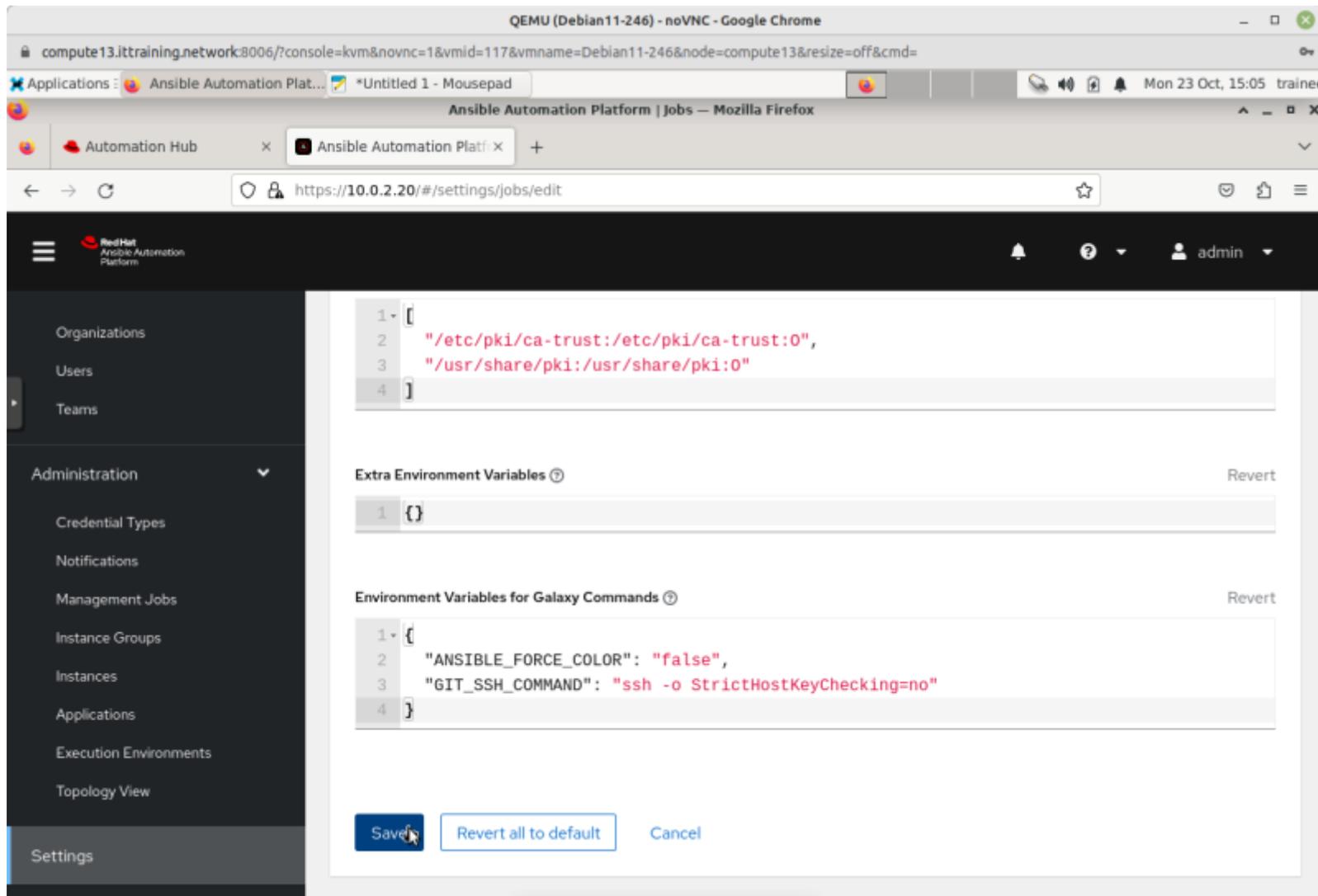
An **Edit** button is located below the text area for Environment Variables for Galaxy Commands.

Activez l'option **Ignore Ansible Galaxy SSL Certificate Validation** pour permettre l'utilisation de votre certificat auto-signé :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/settings/jobs/edit`. The page title is "Edit Details" under the "Settings > Jobs" breadcrumb. The left sidebar contains a navigation menu with the following items: Organizations, Users, Teams, Administration (expanded), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings (highlighted). The main content area displays the following settings:

Setting Name	Value	Revert
Job execution path	/tmp	Revert
Maximum Scheduled Jobs	10	Revert
K8S Ansible Runner Keep-Alive Message Interval	0	Revert
Default Job Timeout	0	Revert
Default Job Idle Timeout	0	Revert
Default Inventory Update Timeout	0	Revert
Default Project Update Timeout	0	Revert
Per-Host Ansible Fact Cache Timeout	0	Revert
Maximum number of forks per job	200	Revert
When can extra variables contain Jinja templates?	Template	Revert
Run Project Updates With Higher Verbosity	Off	Revert
Ignore Ansible Galaxy SSL Certificate Verification	On	Revert

Descendez en bas de la page et cliquez sur le bouton **Save** :



The screenshot shows the Ansible Automation Platform interface in a browser window. The URL is `https://10.0.2.20/#/settings/jobs/edit`. The left sidebar contains a navigation menu with the following items: Organizations, Users, Teams, Administration (expanded), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings. The main content area displays the configuration for a job, including:

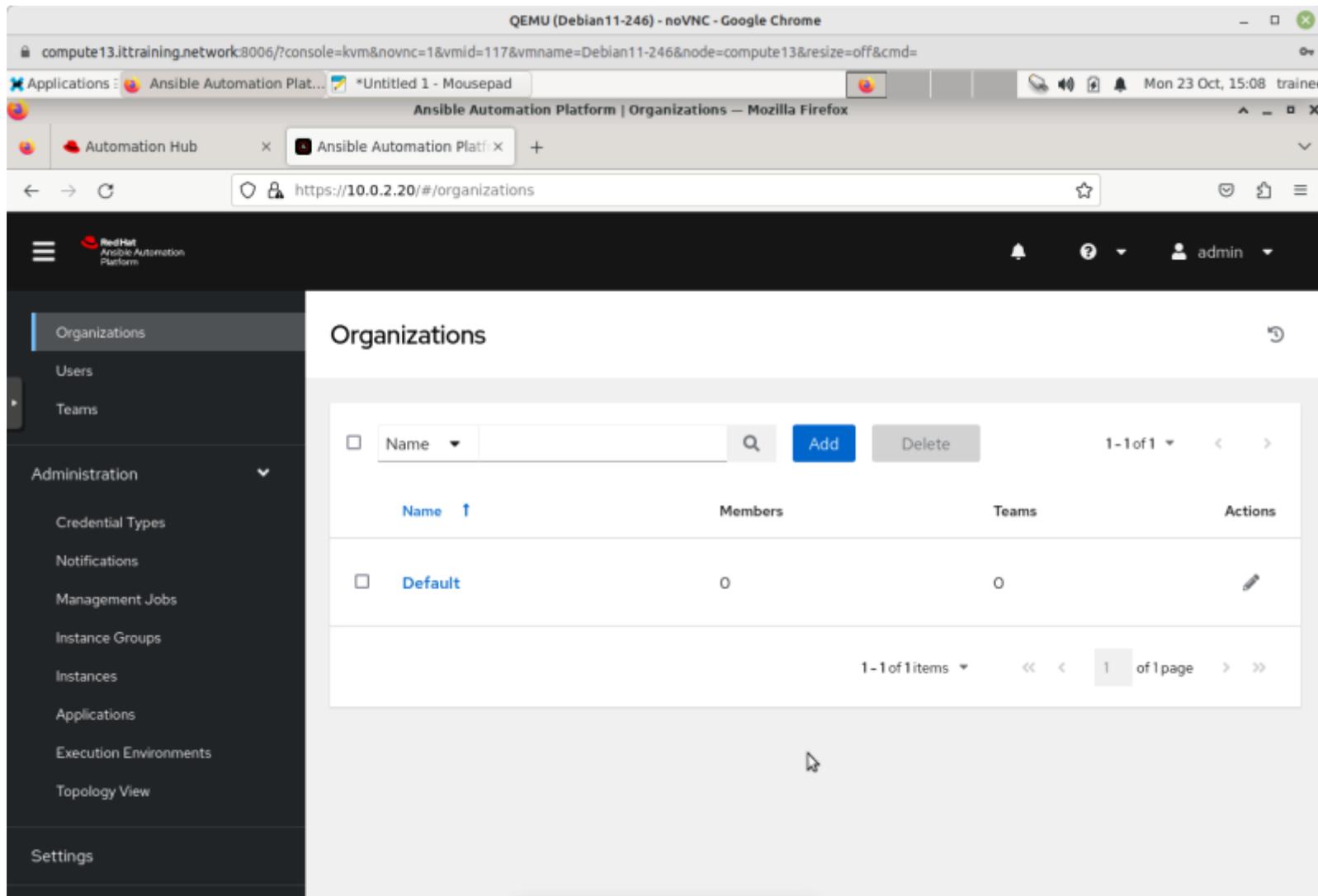
- A code editor with the following content:

```
1 - [  
2   "/etc/pki/ca-trust:/etc/pki/ca-trust:0",  
3   "/usr/share/pki:/usr/share/pki:0"  
4 ]
```
- An "Extra Environment Variables" section with a "Revert" button and a code editor containing `{}`.
- An "Environment Variables for Galaxy Commands" section with a "Revert" button and a code editor containing:

```
1 - [  
2   "ANSIBLE_FORCE_COLOR": "false",  
3   "GIT_SSH_COMMAND": "ssh -o StrictHostKeyChecking=no"  
4 ]
```

At the bottom of the configuration area, there are three buttons: "Save", "Revert all to default", and "Cancel".

Naviguez à **Organizations** et cliquez sur l'icône d'un stylo à droite du nom **Default** :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows the URL "https://10.0.2.20/#/organizations". The page title is "Organizations". The left sidebar contains a navigation menu with the following items: Organizations (selected), Users, Teams, Administration (expanded), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings. The main content area displays a table of organizations. The table has columns for Name, Members, Teams, and Actions. There is one organization listed: "Default" with 0 members and 0 teams. The table includes a search bar, an "Add" button, and a "Delete" button. The pagination shows "1-1 of 1 items" and "1 of 1 page".

Name	Members	Teams	Actions
<input type="checkbox"/> Default	0	0	

Dans le champs **Galaxy Credentials**, supprimez **Ansible Galaxy** :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/organizations/1/edit`. The page title is "Organizations > Default Edit Details". On the left, a dark sidebar contains a navigation menu with items: Organizations, Users, Teams, Administration (expanded), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings. The main content area is titled "Edit Details" and contains a form with the following fields:

- Name**: A text input field containing "Default".
- Description**: An empty text input field.
- Max Hosts**: A numeric input field containing "0".
- Instance Groups**: A search input field with a magnifying glass icon.
- Execution Environment**: A search input field with a magnifying glass icon.
- Galaxy Credentials**: A search input field containing "Ansible Galaxy" with a close button (X).

At the bottom of the form, there are two buttons: "Save" (in blue) and "Cancel".

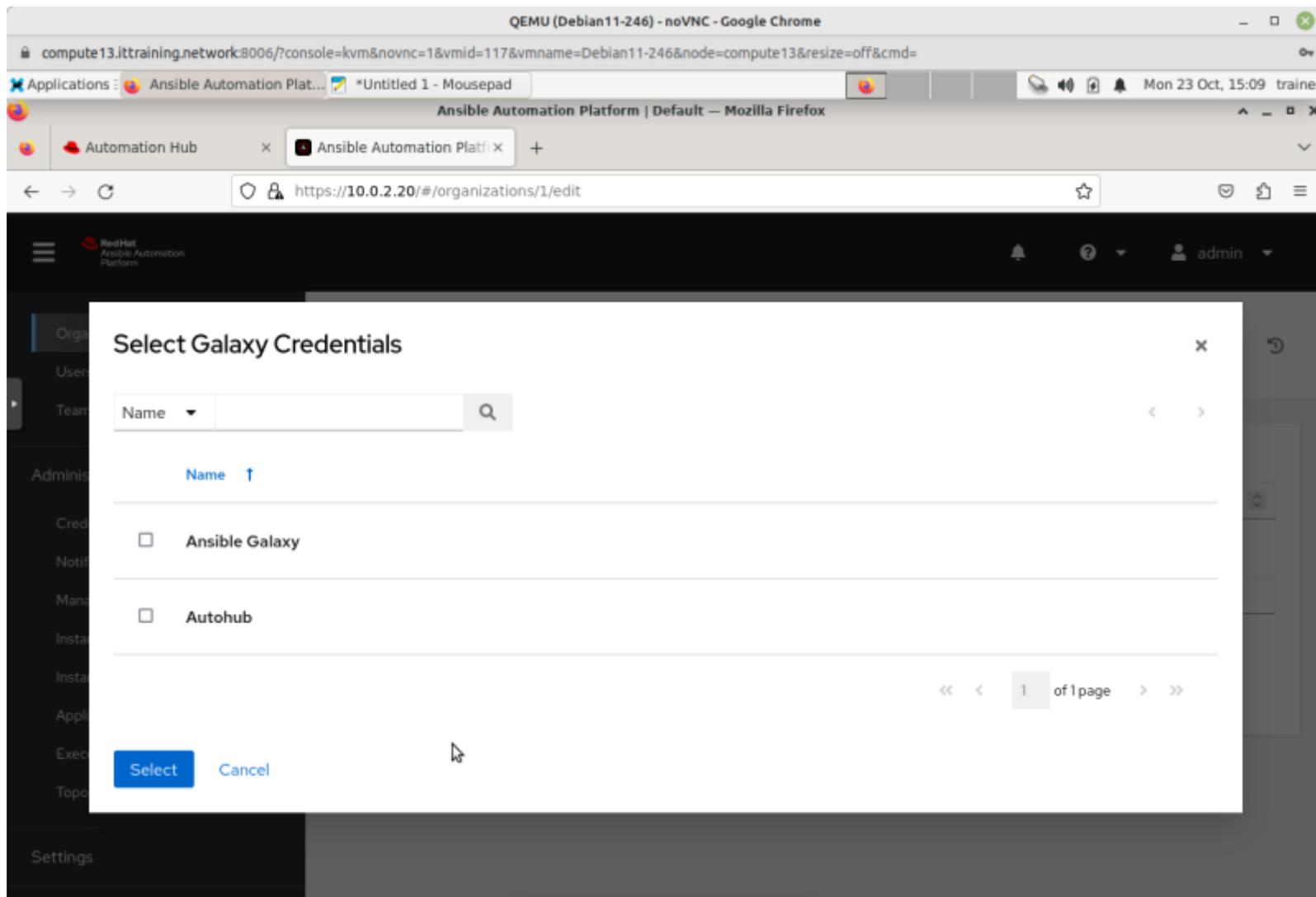
Cliquez sur la loupe à gauche du champs **Galaxy Credentials** :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/organizations/1/edit`. The page title is "Organizations > Default Edit Details". The left sidebar contains a navigation menu with the following items: Organizations (selected), Users, Teams, Administration (with a dropdown arrow), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings. The main content area is titled "Edit Details" and contains a form with the following fields:

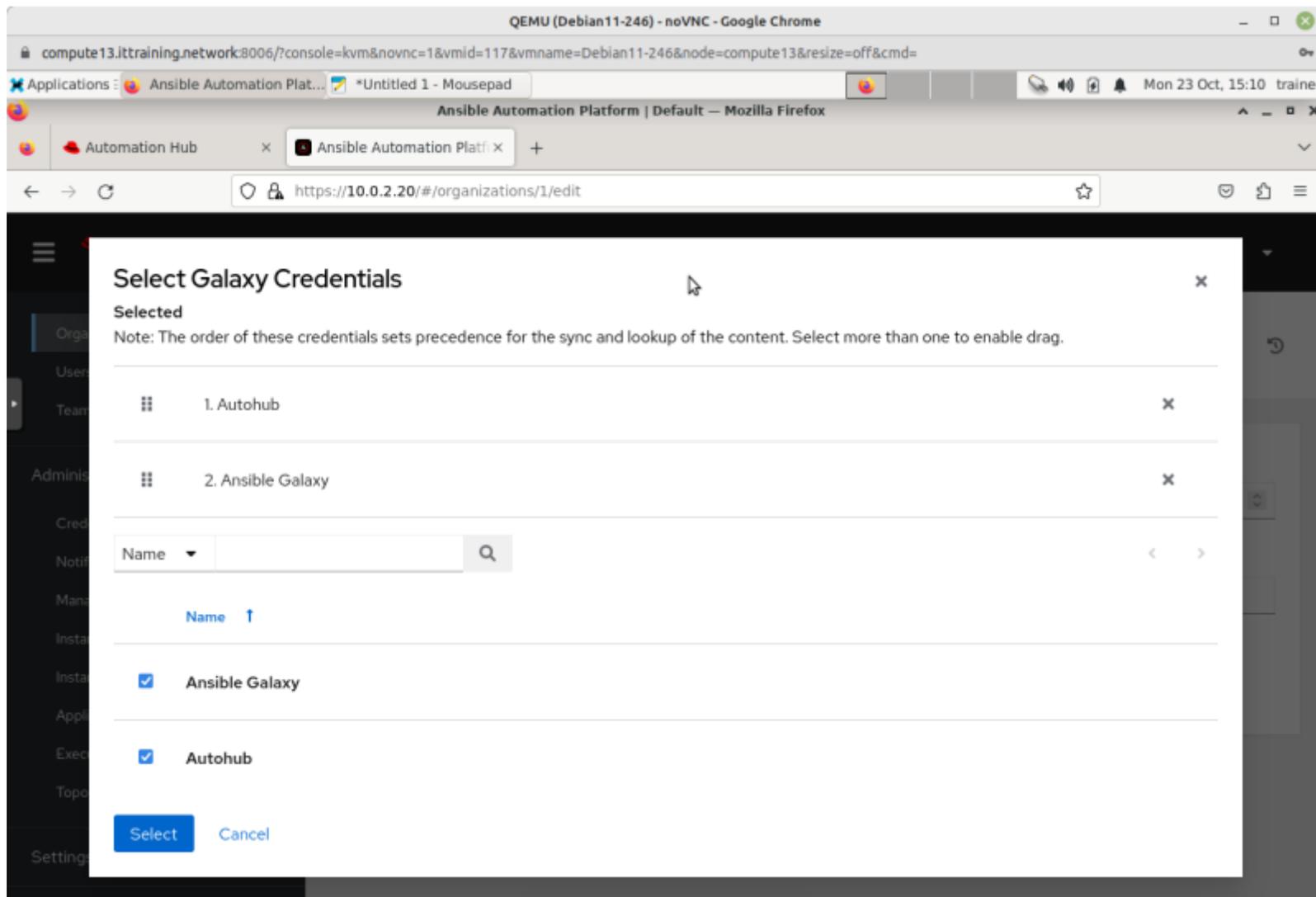
- Name**: A text input field containing "Default".
- Description**: An empty text input field.
- Max Hosts**: A numeric input field containing "0".
- Instance Groups**: A search input field with a magnifying glass icon.
- Execution Environment**: A search input field with a magnifying glass icon.
- Galaxy Credentials**: A search input field with a magnifying glass icon.

At the bottom of the form, there are two buttons: "Save" (in blue) and "Cancel".

Vous obtiendrez :



Cochez **Autohub** PUIS **Ansible Galaxy** puis cliquez sur le bouton **Select** :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser address bar shows the URL `https://10.0.2.20/#/organizations/1/edit`. The main content area displays a dialog box titled "Select Galaxy Credentials".

The dialog box contains the following elements:

- Selected**: A section header.
- Note**: "Note: The order of these credentials sets precedence for the sync and lookup of the content. Select more than one to enable drag."
- Order List**: A list of selected credentials with their order and a delete button (X):
 - 1. Autohub
 - 2. Ansible Galaxy
- Search**: A search bar with a dropdown menu labeled "Name" and a search icon.
- Available Credentials**: A list of available credentials with checkboxes:
 - Ansible Galaxy
 - Autohub
- Buttons**: "Select" and "Cancel" buttons at the bottom.

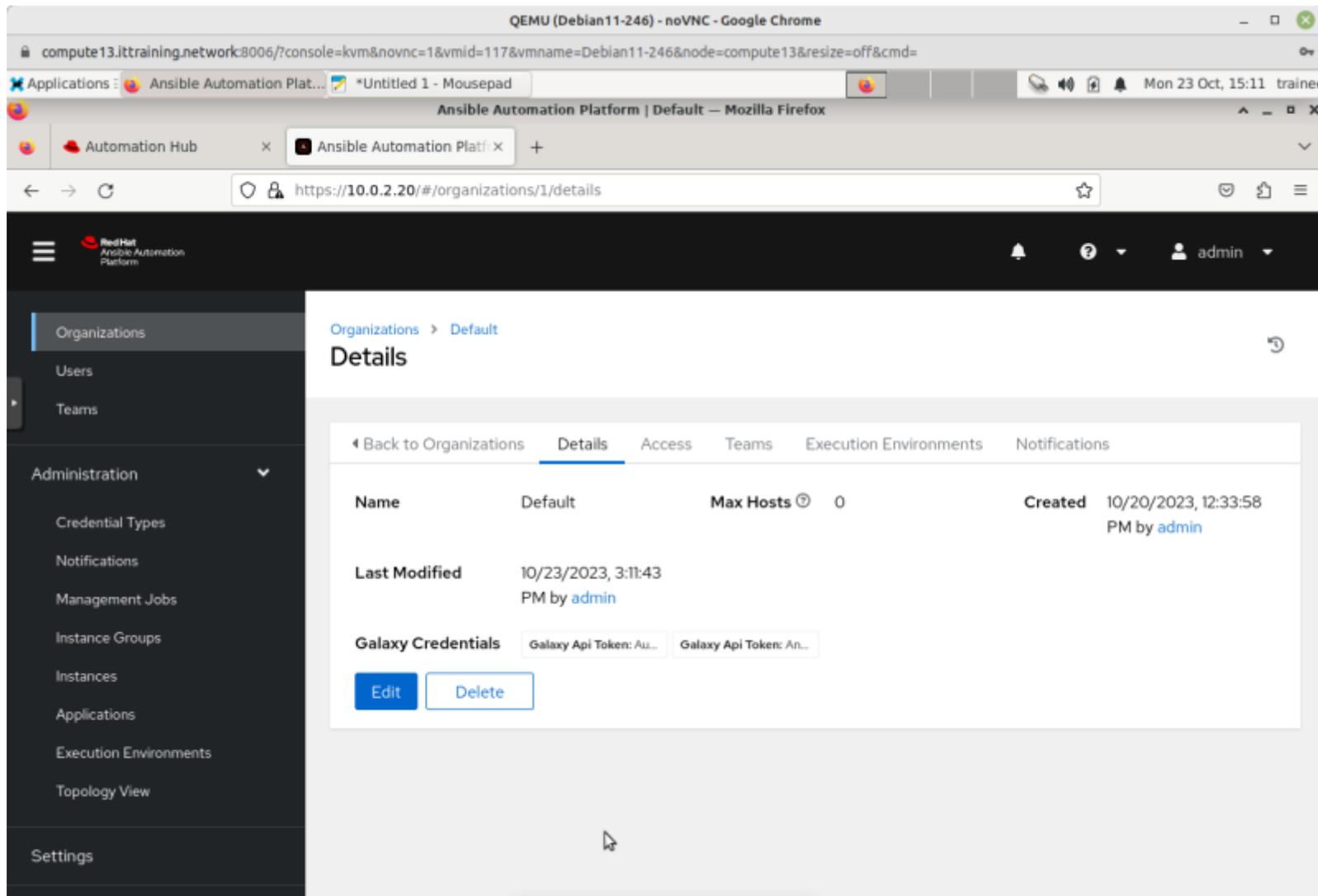
Cliquez ensuite sur le bouton **Save** :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/organizations/1/edit`. The page title is "Organizations > Default Edit Details". The left sidebar contains a navigation menu with the following items: Organizations (selected), Users, Teams, Administration (expanded), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings. The main content area displays the "Edit Details" form for the "Default" organization. The form includes the following fields:

- Name:** A text input field containing "Default".
- Description:** An empty text input field.
- Max Hosts:** A dropdown menu set to "0".
- Instance Groups:** A search input field with a magnifying glass icon.
- Execution Environment:** A search input field with a magnifying glass icon.
- Galaxy Credentials:** A search input field with a magnifying glass icon and two selected credentials: "Autohub" and "Ansible Galaxy".

At the bottom of the form, there are two buttons: "Save" (in blue) and "Cancel".

Vous obtiendrez :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/organizations/1/details`. The page title is "Organizations > Default Details". The left sidebar contains a navigation menu with items: Organizations, Users, Teams, Administration (with a dropdown arrow), Credential Types, Notifications, Management Jobs, Instance Groups, Instances, Applications, Execution Environments, Topology View, and Settings. The main content area shows the details for the "Default" organization. It includes a breadcrumb "Organizations > Default" and a "Details" header. Below the header is a navigation bar with tabs: "Back to Organizations", "Details" (selected), "Access", "Teams", "Execution Environments", and "Notifications". The main content area displays the following information:

Name	Default	Max Hosts	0	Created	10/20/2023, 12:33:58 PM by admin
Last Modified	10/23/2023, 3:11:43 PM by admin				
Galaxy Credentials	Galaxy Api Token: Au... Galaxy Api Token: An...				

At the bottom of the details section, there are two buttons: "Edit" and "Delete".



Good News : Votre Ansible® Automation Hub et votre Ansible® Automation Controller sont maintenant connectés.

LAB #4 - Sauvegarder et Restaurer la Plateforme Ansible® Automation

4.1 - Sauvegarder l'Ansible® Automation Controller

Revenez dans votre Ansible® Automation Controller.

La sauvegarde de l'Ansible® Automation Controller s'effectue en utilisant le même script utilisé pour l'installation auquel il convient de passer l'option **-b** :

```
[root@redhat9 ~]# cd ansible-automation-platform-setup-bundle-2.4-2.2-x86_64/
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh -b
...
PLAY RECAP *****
localhost                : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0
ignored=0
redhat9.ittraining.loc   : ok=91   changed=49   unreachable=0    failed=0    skipped=90   rescued=0
ignored=0

The setup process completed successfully.
Setup log saved to /var/log/tower/backup-2023-10-24-10:43:16.log.
```

A l'issue de la sauvegarde vous constaterez la présence d'une archive **tar.gz** ainsi qu'un lien symbolique dénommé **automation-platform-backup-latest.tar.gz** dans le répertoire **courant** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ls -l
total 108
-rw----- . 1 root root 74610 Oct 24 10:43 automation-platform-backup-2023-10-24-10:43:19.tar.gz
lrwxrwxrwx. 1 root root  117 Oct 24 10:43 automation-platform-backup-latest.tar.gz -> /root/ansible-automation-
platform-setup-bundle-2.4-2.2-x86_64/./automation-platform-backup-2023-10-24-10:43:19.tar.gz
drwxr-xr-x. 5 root root   55 Oct 13 17:00 bundle
drwxr-xr-x. 3 root root   33 Oct 13 16:56 collections
drwxr-xr-x. 2 root root   17 Oct 13 16:56 group_vars
```

```
-rw-r--r--. 1 root root 9063 Oct 20 12:21 inventory
-rw-r--r--. 1 root root 530 Oct 13 17:11 README.md
-rwxr-xr-x. 1 root root 14780 Oct 13 16:56 setup.sh
```

Dans ce cas, la taille de l'archive est de 76K :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# du -hs automation-platform-backup-*
76K    automation-platform-backup-2023-10-24-10:43:19.tar.gz
0      automation-platform-backup-latest.tar.gz
```

4.2 - Sauvegarder l'Ansible® Automation Hub

Connectez-vous maintenant à votre VM **autohub.ittraining.loc** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ssh -l trainee 10.0.2.102
```

La sauvegarde de l'Ansible® Automation Hub s'effectue en utilisant le même script utilisé pour l'installation auquel il convient de passer l'option **-b** :

```
[root@autohub ~]# cd ansible-automation-platform-setup-bundle-2.4-2.2-x86_64/
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh -b
...
PLAY RECAP *****
autohub.ittraining.loc    : ok=70    changed=29    unreachable=0    failed=0    skipped=114    rescued=0
ignored=0
localhost                : ok=2     changed=0     unreachable=0     failed=0     skipped=0     rescued=0
ignored=0

The setup process completed successfully.
[warn] /var/log/tower does not exist. Setup log saved to backup.log.
[warn] Provided path does not exist or is not accessible. Setup log saved to ./backup.log.
```

À l'issue de la sauvegarde vous constaterez la présence d'une archive **tar.gz** ainsi qu'un lien symbolique dénommé **automation-platform-backup-**

latest.tar.gz dans le répertoire **courant** :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ls -l
total 612124
-rw-----. 1 root root 621857468 Oct 24 11:09 automation-platform-backup-2023-10-24-11:07:36.tar.gz
lrwxrwxrwx. 1 root root      117 Oct 24 11:09 automation-platform-backup-latest.tar.gz -> /root/ansible-
automation-platform-setup-bundle-2.4-2.2-x86_64/./automation-platform-backup-2023-10-24-11:07:36.tar.gz
-rw-r-----. 1 root root   116738 Oct 24 11:09 backup.log
drwxr-xr-x. 5 root root      55 Oct 13 17:00 bundle
-rw-r--r--. 1 root root   1751 Oct 23 12:28 certified_collection_seed_2023-10-23-12-13-33.log
drwxr-xr-x. 3 root root      33 Oct 13 16:56 collections
drwxr-xr-x. 2 root root      17 Oct 13 16:56 group_vars
-rw-r--r--. 1 root root   8962 Oct 23 11:23 inventory
-rw-r--r--. 1 root root    530 Oct 13 17:11 README.md
-rw-r-----. 1 root root 4796277 Oct 23 12:32 setup.log
-rwxr-xr-x. 1 root root   14780 Oct 13 16:56 setup.sh
-rw-r--r--. 1 root root    605 Oct 23 12:31 validated_collection_seed_2023-10-23-12-28-02.log
```

Dans ce cas, la taille de l'archive est de 594M :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# du -hs automation-platform-backup-*
594M   automation-platform-backup-2023-10-24-11:07:36.tar.gz
0      automation-platform-backup-latest.tar.gz
```

4.3 - Restaurer l'Ansible® Automation Hub à l'Identique

Copiez le fichier **automation-platform-backup-2023-10-24-11:07:36.tar.gz** vers le fichier **automation-platform-backup.tar.gz** :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cp automation-platform-
backup-2023-10-24-11\:07\:36.tar.gz automation-platform-backup.tar.gz
```

Copiez le fichier **automation-platform-backup.tar.gz** vers votre VM **backuphub** selon votre numéro de stagiaire :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# scp automation-platform-backup.tar.gz
trainee@10.0.2.103:/home/trainee
The authenticity of host '10.0.2.103 (10.0.2.103)' can't be established.
ED25519 key fingerprint is SHA256:k/cooDrUynjprBohmFjJd22Ii2xlCXFdTHt/HAXpDE4.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.0.2.103' (ED25519) to the list of known hosts.
trainee@10.0.2.103's password: trainee
automation-platform-backup.tar.gz
100% 593MB 315.5MB/s 00:01
```

Copiez ensuite le fichier **inventory** vers votre VM **backuphub** selon votre numéro de stagiaire :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# scp inventory
trainee@10.0.2.103:/home/trainee
trainee@10.0.2.103's password: trainee
inventory
100% 8962      8.9MB/s  00:00
```

Connectez-vous maintenant à votre VM **backuphub** selon votre numéro de stagiaire :

```
[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ssh -l trainee 10.0.2.103
trainee@10.0.2.103's password: trainee
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Tue Oct 24 13:02:01 2023 from 10.0.2.1
[trainee@backuphub ~]$ su -
Password: fenestros
[root@backuphub ~]#
```

Enregistrez la VM dans **votre** compte Red Hat :

```
[root@backuphub ~]# subscription-manager register
```

```
Registering to: subscription.rhsm.redhat.com:443/subscription
Username: <login>
Password: <password>
The system has been registered with ID: a52fe25b-0bfd-4c60-8898-68de681c9fda
The registered system name is: backuphub.ittraining.loc
```

Configurez SELinux en mode permissive :

```
[root@backuphub ~]# setenforce permissive
```

Désarchivez le fichier **ansible-automation-platform-setup-bundle-2.4-2.2-x86_64.tar.gz** et consultez le contenu du répertoire créé :

```
[root@backuphub ~]# tar xvf ansible-automation-platform-setup-bundle-2.4-2.2-x86_64.tar.gz

[root@backuphub ~]# cd ansible-automation-platform-setup-bundle-2.4-2.2-x86_64/

[root@autohub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ls
bundle  collections  group_vars  inventory  README.md  setup.sh
```

Installez le paquet **ansible-core** :

```
[root@backuphub ~]# dnf install ansible-core
```

Copiez le fichier **/home/trainee/automation-platform-backup.tar.gz** dans le répertoire courant :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cp /home/trainee/automation-platform-backup.tar.gz .
```

Ajoutez un lien symbolique vers le fichier **automation-platform-backup.tar.gz** :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ln -s automation-platform-backup.tar.gz
automation-platform-backup-latest.tar.gz
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ls -l
```

```
total 607316
lrwxrwxrwx. 1 root root      33 Oct 24 13:26 automation-platform-backup-latest.tar.gz -> automation-platform-
backup.tar.gz
-rw----- . 1 root root 621857468 Oct 24 13:22 automation-platform-backup.tar.gz
drwxr-xr-x. 5 root root      55 Oct 13 17:00 bundle
drwxr-xr-x. 3 root root      33 Oct 13 16:56 collections
drwxr-xr-x. 2 root root      17 Oct 13 16:56 group_vars
-rw-r--r-- . 1 root root    8896 Oct 13 16:56 inventory
-rw-r--r-- . 1 root root     530 Oct 13 17:11 README.md
-rwxr-xr-x. 1 root root   14780 Oct 13 16:56 setup.sh
```



Important : Le processus de restauration recherche le fichier identifié par le lien symbolique **automation-platform-backup-latest.tar.gz**.

Copiez le fichier **/home/trainee/inventory** dans le répertoire courant :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cp /home/trainee/inventory .
cp: overwrite './inventory'? y
```

Modifiez le nom d'hôte de la VM :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# hostnamectl set-hostname
autohub.ittraining.loc
```

Modifiez le fichier **/etc/hosts** :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# vi /etc/hosts
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cat /etc/hosts
127.0.0.1    localhost localhost.localdomain localhost4 localhost4.localdomain4
::1        localhost localhost.localdomain localhost6 localhost6.localdomain6
```

```
10.0.2.103      autohub.ittraining.loc
```

Installez maintenant un nouvel Ansible® Automation Hub :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh
...
PLAY RECAP *****
autohub.ittraining.loc      : ok=165  changed=51  unreachable=0    failed=2    skipped=173  rescued=0
ignored=0
localhost                   : ok=0    changed=0  unreachable=0    failed=0    skipped=1    rescued=0
ignored=0

[error] Oops!  An error occurred while running setup.
[warn] /var/log/tower does not exist. Setup log saved to setup.log.
[warn] Provided path does not exist or is not accessible. Setup log saved to ./setup.log.
```

En cas d'erreur(s), ré-exécutez le script setup.sh :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh
...
PLAY RECAP *****
autohub.ittraining.loc      : ok=900  changed=150  unreachable=0    failed=0    skipped=379  rescued=0
ignored=0
localhost                   : ok=0    changed=0  unreachable=0    failed=0    skipped=1    rescued=0
ignored=0

The setup process completed successfully.
[warn] /var/log/tower does not exist. Setup log saved to setup.log.
[warn] Provided path does not exist or is not accessible. Setup log saved to ./setup.log.
```

Dernièrement, procédez à la restauration :

```
[root@backuphub ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# ./setup.sh -r
...
```

```
PLAY RECAP *****
autohub.ittraining.loc      : ok=78   changed=23   unreachable=0   failed=0   skipped=101   rescued=0
ignored=0
```

The setup process completed successfully.

[warn] /var/log/tower does not exist. Setup log saved to restore.log.

[warn] Provided path does not exist or is not accessible. Setup log saved to ./restore.log.

LAB #5 - Utilisation de l'Ansible® Automation Controller

5.1 - Créer un Job Simple

Revenez dans votre Ansible® Automation Controller.

Commencez par créer un playbook simple, destiné à imprimer la phrase **Hello World!** :

```
[root@redhat9 ansible-automation-platform-setup-bundle-2.4-2.2-x86_64]# cd ~
[root@redhat9 ~]# vi hello-world.yml
[root@redhat9 ~]# cat hello-world.yml
---
- hosts: all
  tasks:
    - name: Hello World
      debug:
        msg: Hello World!
```

Vérifiez la syntaxe de ce playbook :

```
[root@redhat9 ~]# ansible-playbook --syntax-check hello-world.yml
```

```
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'
```

```
playbook: hello-world.yml
```

Notez l'avertissement **[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'**. En effet, Ansible ne trouve pas de fichier inventory. Créez donc le fichier inventory :

```
[root@redhat9 ~]# vi inventory
[root@redhat9 ~]# cat inventory
[Test]
localhost ansible_connection=local
```

Vérifiez de nouveau la syntaxe de ce playbook :

```
[root@redhat9 ~]# ansible-playbook --syntax-check hello-world.yml
[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'
```

```
playbook: hello-world.yml
```

Notez l'avertissement **[WARNING]: provided hosts list is empty, only localhost is available. Note that the implicit localhost does not match 'all'**. En effet, Ansible cherche les fichiers inventory **/etc/ansible/hosts**. Bien que ce fichier existe, il est vide de toute déclaration active :

```
[root@redhat9 ~]# ls -l /etc/ansible/hosts
-rw-r--r--. 1 root root 1018 Jun  5 17:30 /etc/ansible/hosts
[root@redhat9 ~]# cat /etc/ansible/hosts
# This is the default ansible 'hosts' file.
#
# It should live in /etc/ansible/hosts
#
# - Comments begin with the '#' character
# - Blank lines are ignored
# - Groups of hosts are delimited by [header] elements
```

```
# - You can enter hostnames or ip addresses
# - A hostname/ip can be a member of multiple groups

# Ex 1: Ungrouped hosts, specify before any group headers:

## green.example.com
## blue.example.com
## 192.168.100.1
## 192.168.100.10

# Ex 2: A collection of hosts belonging to the 'webservers' group:

## [webservers]
## alpha.example.org
## beta.example.org
## 192.168.1.100
## 192.168.1.110

# If you have multiple hosts following a pattern, you can specify
# them like this:

## www[001:006].example.com

# Ex 3: A collection of database servers in the 'dbservers' group:

## [dbservers]
##
## db01.intranet.mydomain.net
## db02.intranet.mydomain.net
## 10.25.1.56
## 10.25.1.57

# Here's another example of host ranges, this time there are no
# leading 0s:
```

```
## db-[99:101]-node.example.com
```

Testez le playbook en indiquant le fichier inventory créé au dessus :

```
[root@redhat9 ~]# ansible-playbook -i inventory hello-world.yml

PLAY [all] *****

TASK [Gathering Facts] *****
ok: [localhost]

TASK [Hello World] *****
ok: [localhost] => {
  "msg": "Hello World!"
}

PLAY RECAP *****
localhost          : ok=2    changed=0    unreachable=0    failed=0    skipped=0    rescued=0
ignored=0
```

5.2 - Créer un Projet

Pour exécuter ce même playbook avec Red Hat® Ansible® Automation Platform, il faut créer un projet. Les projets sont des répertoire dans **/var/lib/awx/projects** et doivent contenir le(s) playbook(s) :

```
[root@redhat9 ~]# mkdir /var/lib/awx/projects/myrepo
[root@redhat9 ~]# cp hello-world.yml /var/lib/awx/projects/myrepo
```

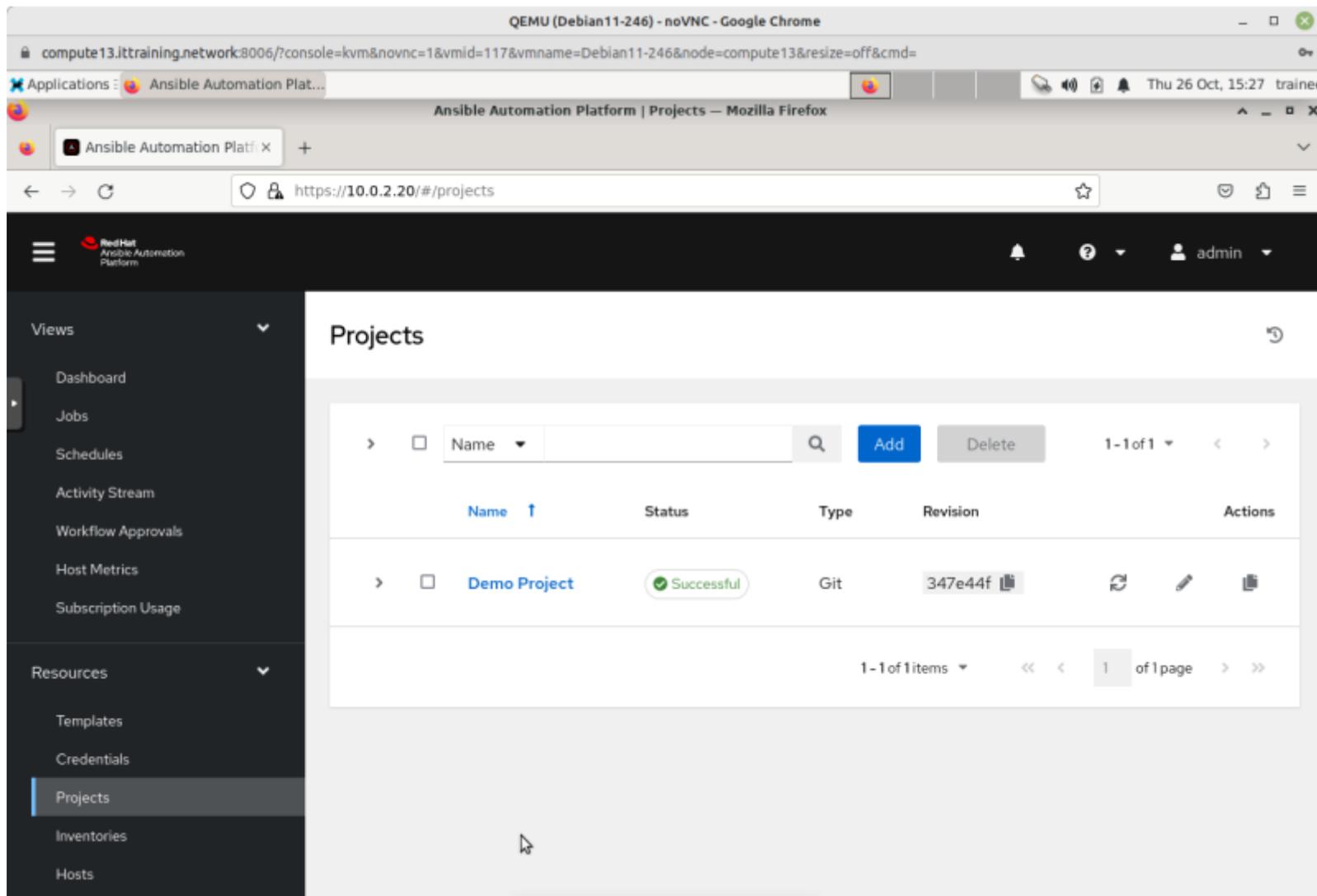
Connectez-vous à votre **VM Debian_10.0.2.46_VNC**. Ouvrez un navigateur Web et naviguez à <https://10.0.2.101> :

The screenshot displays the Ansible Automation Platform dashboard. The top navigation bar shows the user is logged in as 'admin'. The dashboard features six summary cards with the following values:

Metric	Value
Hosts	1
Failed hosts	0
Inventories	1
Inventory sync failures	0
Projects	1
Project sync failures	0

Below the summary cards, there are tabs for 'Job status', 'Recent Jobs', and 'Recent Templates'. The 'Job status' tab is active, showing a chart with a y-axis labeled 'sum' ranging from 3 to 5. The chart area is currently empty, with dropdown menus for 'Past month', 'All job types', and 'All jobs' above it.

Cliquez sur **Projects** puis sur le bouton **Add** :



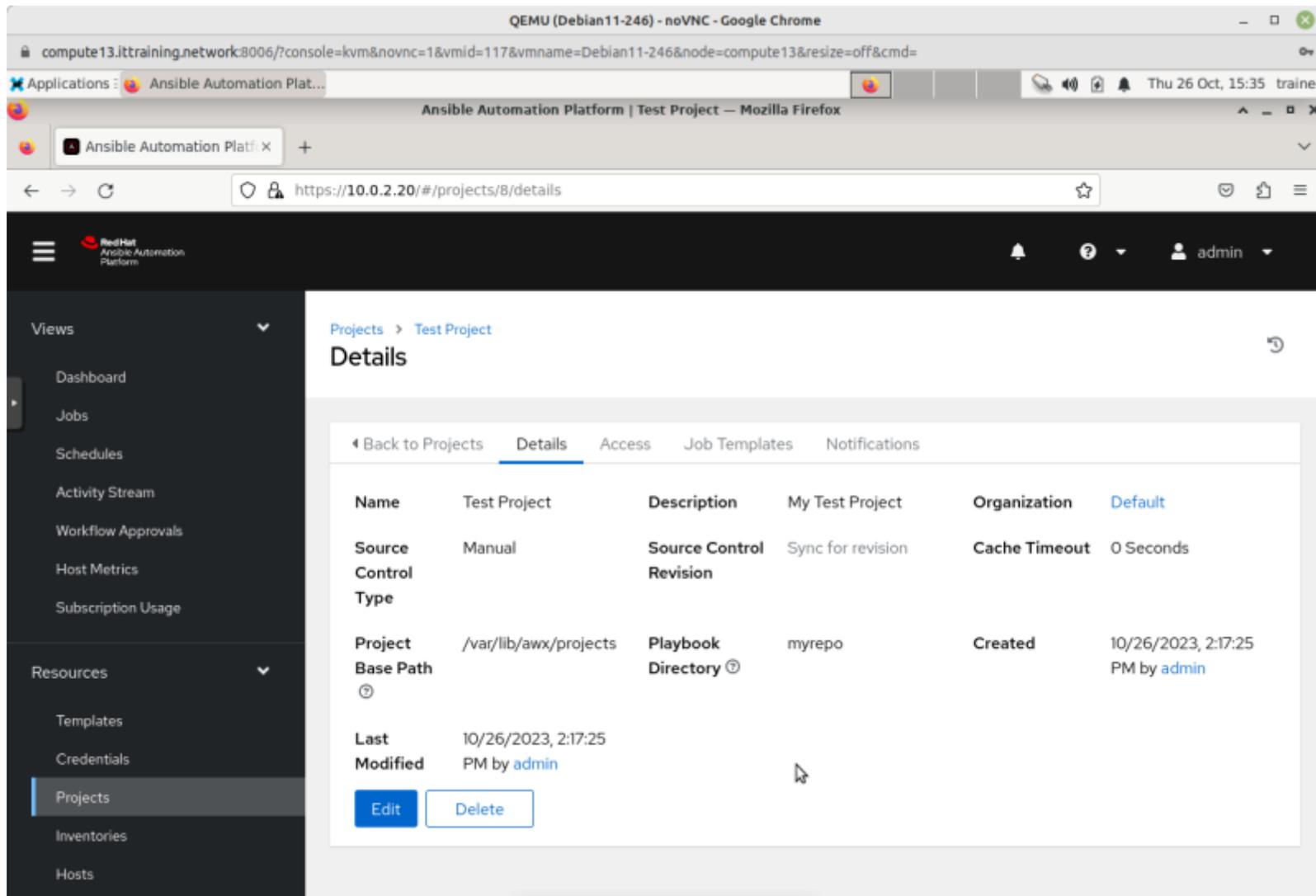
The screenshot shows the Ansible Automation Platform web interface. The browser address bar indicates the URL is `https://10.0.2.20/#/projects`. The page title is "Projects". On the left, there is a sidebar menu with the following items: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage), Resources (Templates, Credentials, Projects, Inventories, Hosts). The main content area shows a table of projects. The table has columns for Name, Status, Type, Revision, and Actions. There is one project listed: "Demo Project" with a status of "Successful", Type of "Git", and Revision "347e44f". The table also includes search, add, and delete buttons, and pagination controls showing "1 of 1 items" and "1 of 1 page".

Indiquez **Test Project** dans **Name**, **My test Project** dans **Description**, choisissez **myrepo** dans **Playbook Directory** et cliquez sur le bouton **Save** :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/projects/add`. The page title is "Create New Project" under the "Projects" section. The interface includes a sidebar menu with options like "Dashboard", "Jobs", "Schedules", "Activity Stream", "Workflow Approvals", "Host Metrics", "Subscription Usage", "Templates", "Credentials", "Projects" (highlighted), "Inventories", and "Hosts". The main content area contains a form with the following fields:

- Name**: Test Project
- Description**: My Test Project
- Organization**: Default
- Execution Environment**: (empty search field)
- Source Control Type**: Manual
- Content Signature Validation Credential**: (empty search field)
- Type Details**:
 - Project Base Path**: /var/lib/awx/projects
 - Playbook Directory**: myrepo

Vérifiez les informations de votre projet :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser address bar shows the URL `https://10.0.2.20/#/projects/8/details`. The interface includes a sidebar with navigation options: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage), Resources (Templates, Credentials, Projects, Inventories, Hosts), and a top navigation bar with a user profile 'admin'.

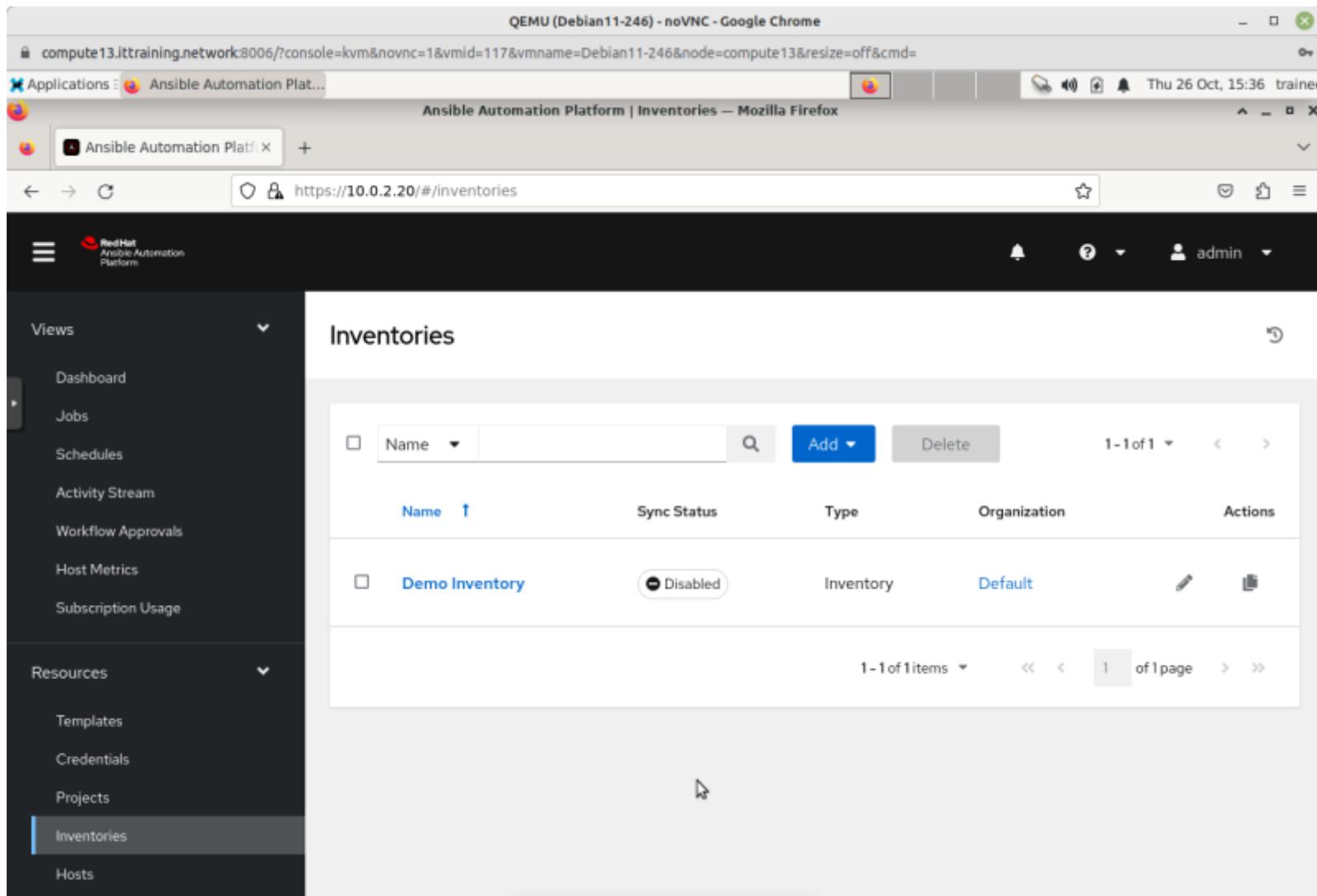
The main content area displays the 'Details' page for a project named 'Test Project'. The page includes a breadcrumb trail 'Projects > Test Project' and a navigation bar with tabs: 'Back to Projects', 'Details', 'Access', 'Job Templates', and 'Notifications'. The 'Details' tab is active.

Name	Test Project	Description	My Test Project	Organization	Default
Source Control Type	Manual	Source Control Revision	Sync for revision	Cache Timeout	0 Seconds
Project Base Path	/var/lib/awx/projects	Playbook Directory	myrepo	Created	10/26/2023, 2:17:25 PM by admin
Last Modified	10/26/2023, 2:17:25 PM by admin				

At the bottom of the details card, there are two buttons: 'Edit' and 'Delete'.

5.3 - Créer un Inventory

Cliquez ensuite sur **Inventories** :



The screenshot shows the Ansible Automation Platform web interface. The browser address bar indicates the URL is `https://10.0.2.20/#/inventories`. The page title is "Inventories". The interface includes a sidebar with navigation options: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage), Resources (Templates, Credentials, Projects, Inventories, Hosts), and a user profile for "admin".

The main content area displays a table of inventories. The table has the following columns: Name, Sync Status, Type, Organization, and Actions. There is one entry in the table:

Name	Sync Status	Type	Organization	Actions
<input type="checkbox"/> Demo Inventory	Disabled	Inventory	Default	 

At the bottom of the table, there is a pagination control showing "1-1 of 1 items" and "1 of 1 page".

Cliquez sur le lien **Demo Inventory** :

The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows the URL "https://10.0.2.20/#/inventories/inventory/1/details". The page header includes the Red Hat Ansible Automation Platform logo and the user name "admin".

The main content area is titled "Inventories > Demo Inventory" and "Details". It features a navigation menu with options: "Back to Inventories", "Details", "Access", "Groups", "Hosts", "Sources", "Jobs", and "Job Templates".

The "Details" section displays the following information:

Name	Demo Inventory	Type	Inventory	Organization	Default
Total hosts	0				
Variables	YAML JSON				
Created	10/20/2023, 12:33:59 PM by admin	Last Modified	10/20/2023, 12:33:59 PM by admin		

At the bottom of the details section, there are "Edit" and "Delete" buttons.

Cliquez sur le lien **Hosts** et cochez **localhost** :

The screenshot shows the Ansible Automation Platform interface in a browser window. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows the URL "https://10.0.2.20/#/inventories/inventory/1/hosts". The page title is "Ansible Automation Platform | Demo Inventory — Mozilla Firefox". The interface includes a sidebar with navigation options: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage), Resources (Templates, Credentials, Projects, Inventories, Hosts), and a top navigation bar with "Back to Inventories", "Details", "Access", "Groups", "Hosts", "Sources", "Jobs", and "Job Templates". The main content area displays a table of hosts for the "Demo Inventory". The table has columns for "Name", "Description", "Related Groups", and "Actions". A single host, "localhost", is listed with a checked checkbox, a toggle switch set to "On", and an edit icon. The table footer shows "1-1 of 1 items" and "1 of 1 page".

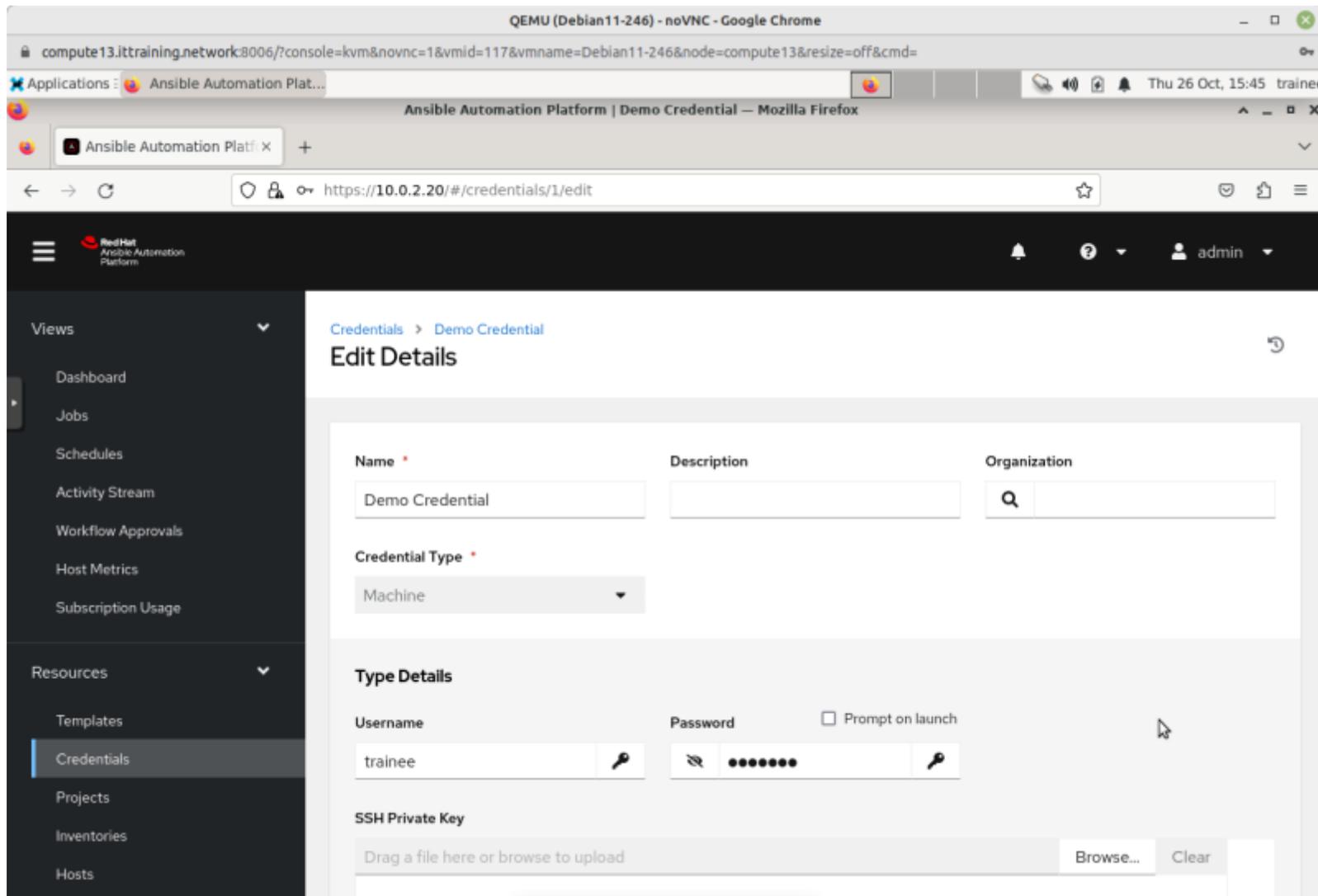
5.4 - Créer des Informations d'Identification

Cliquez sur **Credentials** :

The screenshot shows the Ansible Automation Platform web interface. The browser address bar indicates the URL is `https://10.0.2.20/#/credentials`. The page title is "Credentials". On the left, a navigation menu is visible with options like Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage, Resources, Templates, Credentials (highlighted), Projects, Inventories, and Hosts. The main content area shows a table of credentials:

<input type="checkbox"/>	Name	Type	Actions
<input type="checkbox"/>	Ansible Galaxy	Ansible Galaxy/Automation Hub API Token	
<input type="checkbox"/>	Autohub	Ansible Galaxy/Automation Hub API Token	
<input type="checkbox"/>	Default Execution Environment Registry Credential	Container Registry	

Éditez **Demo Credential** en indiquant **trainee** en tant que **Username** et **trainee** en tant que **Password** :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows the URL "https://10.0.2.20/#/credentials/1/edit". The page title is "Ansible Automation Platform | Demo Credential — Mozilla Firefox".

The interface features a dark sidebar on the left with a menu. The "Views" section includes: Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, and Subscription Usage. The "Resources" section includes: Templates, Credentials (highlighted), Projects, Inventories, and Hosts.

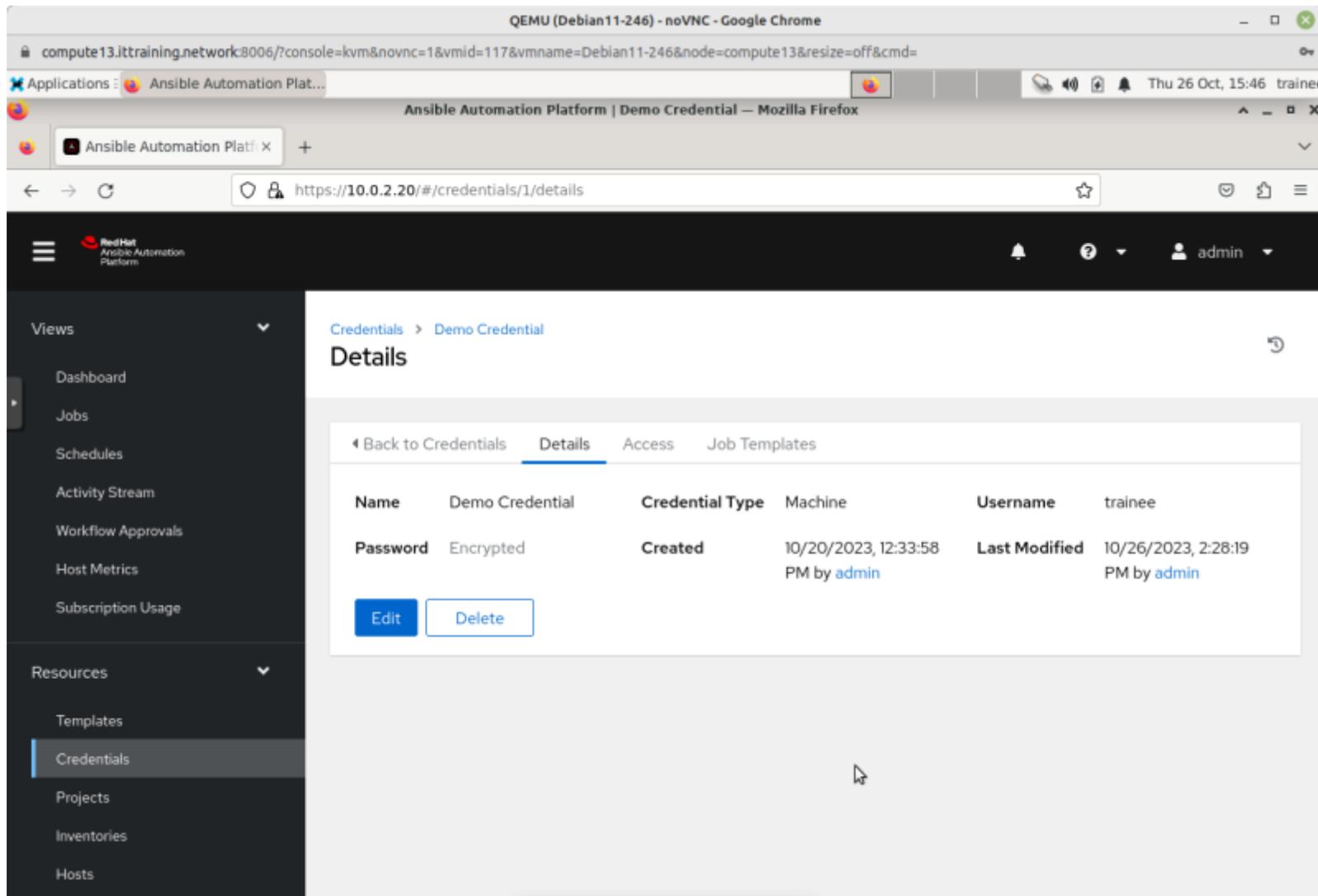
The main content area is titled "Edit Details" and contains the following form fields:

- Name:** Demo Credential
- Description:** (empty)
- Organization:** (empty)
- Credential Type:** Machine
- Type Details:**
 - Username:** trainee
 - Password:** (masked with dots)
 - Prompt on launch
- SSH Private Key:** Drag a file here or browse to upload. Includes "Browse..." and "Clear" buttons.

Cliquez sur le bouton **Save** :

The screenshot displays the Ansible Automation Platform interface in a web browser. The browser window is titled "QEMU (Debian11-246) - noVNC - Google Chrome" and shows the URL "https://10.0.2.20/#/credentials/1/edit". The page is titled "Signed SSH Certificate" and features a sidebar with navigation options: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage) and Resources (Templates, Credentials, Projects, Inventories, Hosts). The main content area includes a file upload section with a "Browse..." button and a "Clear" button. Below this are input fields for "Private Key Passphrase", "Privilege Escalation Method", "Privilege Escalation Username", and "Privilege Escalation Password", each with a "Prompt on launch" checkbox and a key icon. At the bottom, there are "Save" and "Cancel" buttons.

Vous obtiendrez :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser address bar shows the URL: `https://10.0.2.20/#/credentials/1/details`. The page title is "Credentials > Demo Credential". The main content area displays the details of a credential named "Demo Credential".

Name	Demo Credential	Credential Type	Machine	Username	trainee
Password	Encrypted	Created	10/20/2023, 12:33:58 PM by admin	Last Modified	10/26/2023, 2:28:19 PM by admin

Below the table, there are two buttons: "Edit" and "Delete".

5.5 - Créer un Gabarit

Cliquez sur **Templates** puis cliquez sur **Demo Job Template** :

The screenshot shows the Ansible Automation Platform interface in a browser. The page title is "Templates". The left sidebar is open, showing the "Resources" section with "Templates" selected. The main content area displays a table of templates. The table has columns for Name, Type, Organization, Last Ran, and Actions. There is one row with the following data:

Name	Type	Organization	Last Ran	Actions
Demo Job Template	Job Template	Default		[Icons for edit, delete, etc.]

At the bottom of the table, there is a pagination control showing "1-1 of 1 items" and "1 of 1 page".

Cliquez sur la loupe dans le champs **Project** :

The screenshot displays the Ansible Automation Platform (AAP) web interface in a browser window. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows the URL: `https://10.0.2.20/#/templates/job_template/7/edit`. The page title is "Ansible Automation Platform | Demo Job Template — Mozilla Firefox".

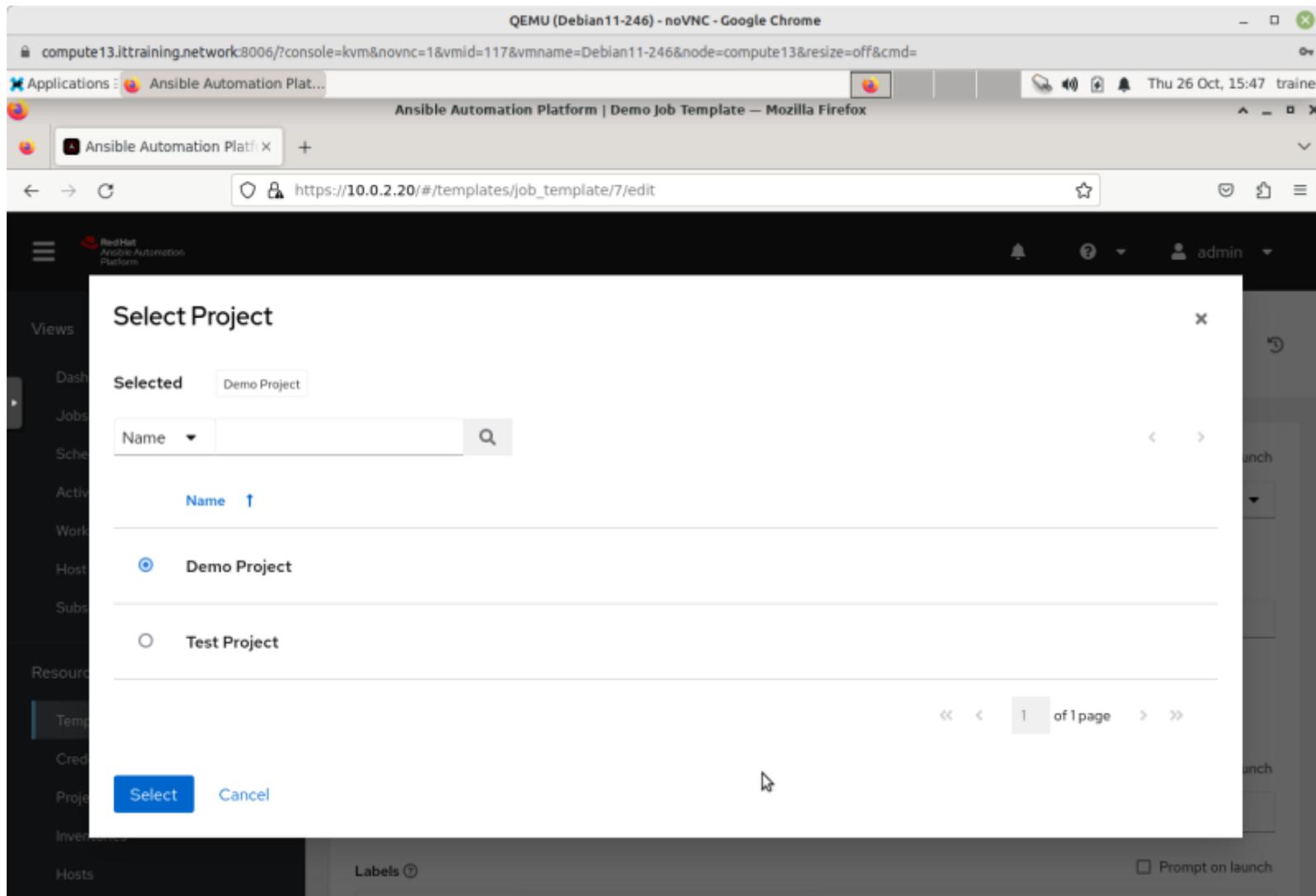
The interface features a dark sidebar on the left with the following menu items:

- Views
 - Dashboard
 - Jobs
 - Schedules
 - Activity Stream
 - Workflow Approvals
 - Host Metrics
 - Subscription Usage
- Resources
 - Templates (highlighted)
 - Credentials
 - Projects
 - Inventories
 - Hosts

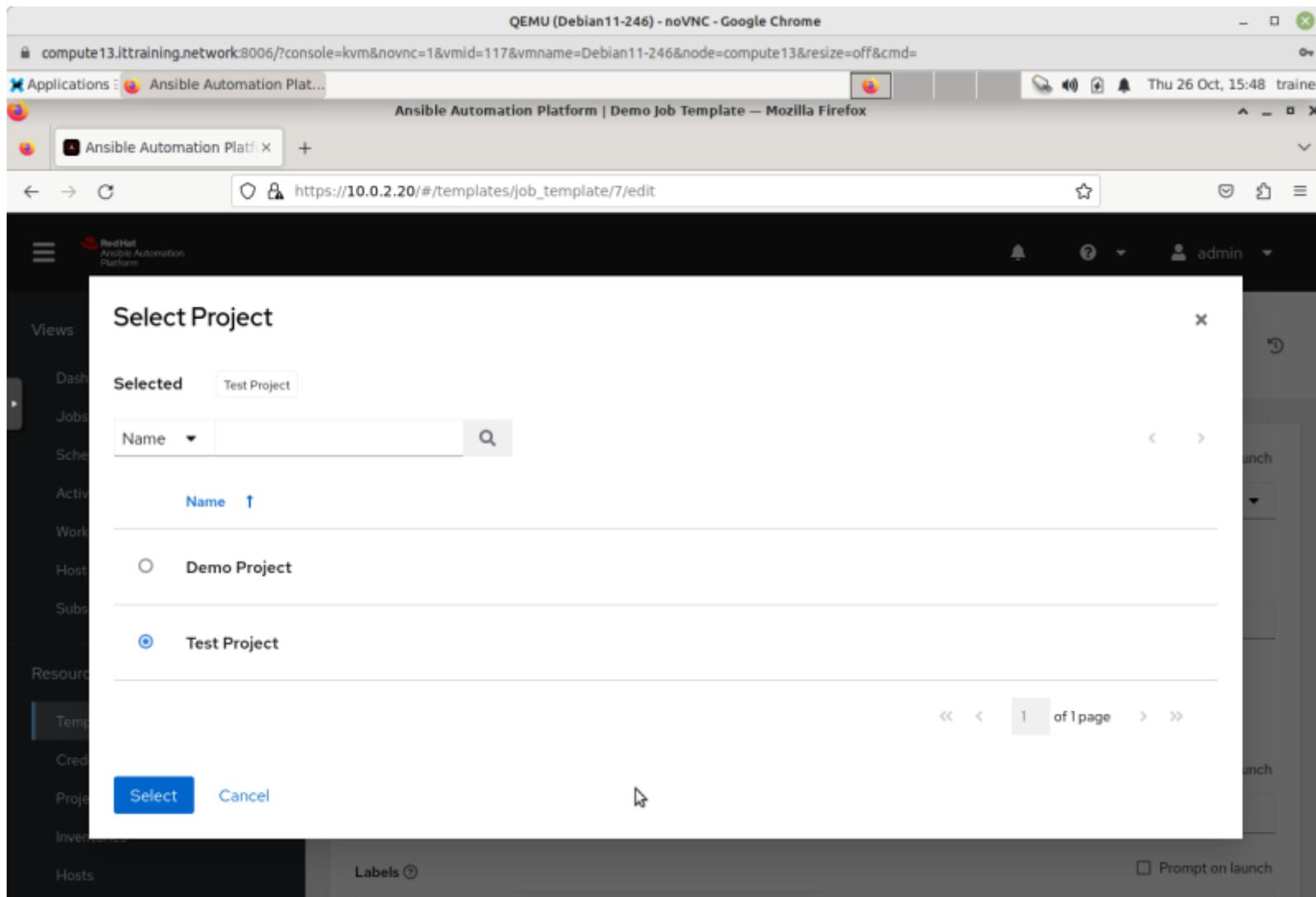
The main content area is titled "Edit Details" and contains the following form fields:

- Name:** Demo Job Template
- Description:** (empty)
- Job Type:** Run (dropdown menu)
- Prompt on launch
- Inventory:** Demo Inventory (dropdown menu)
- Prompt on launch
- Project:** Demo Project (dropdown menu)
- Execution Environment:** (empty dropdown menu)
- Prompt on launch
- Playbook:** hello_world.yml (dropdown menu)
- Credentials:** SSH: Demo Credential (dropdown menu)
- Prompt on launch
- Labels:** (empty)
- Prompt on launch

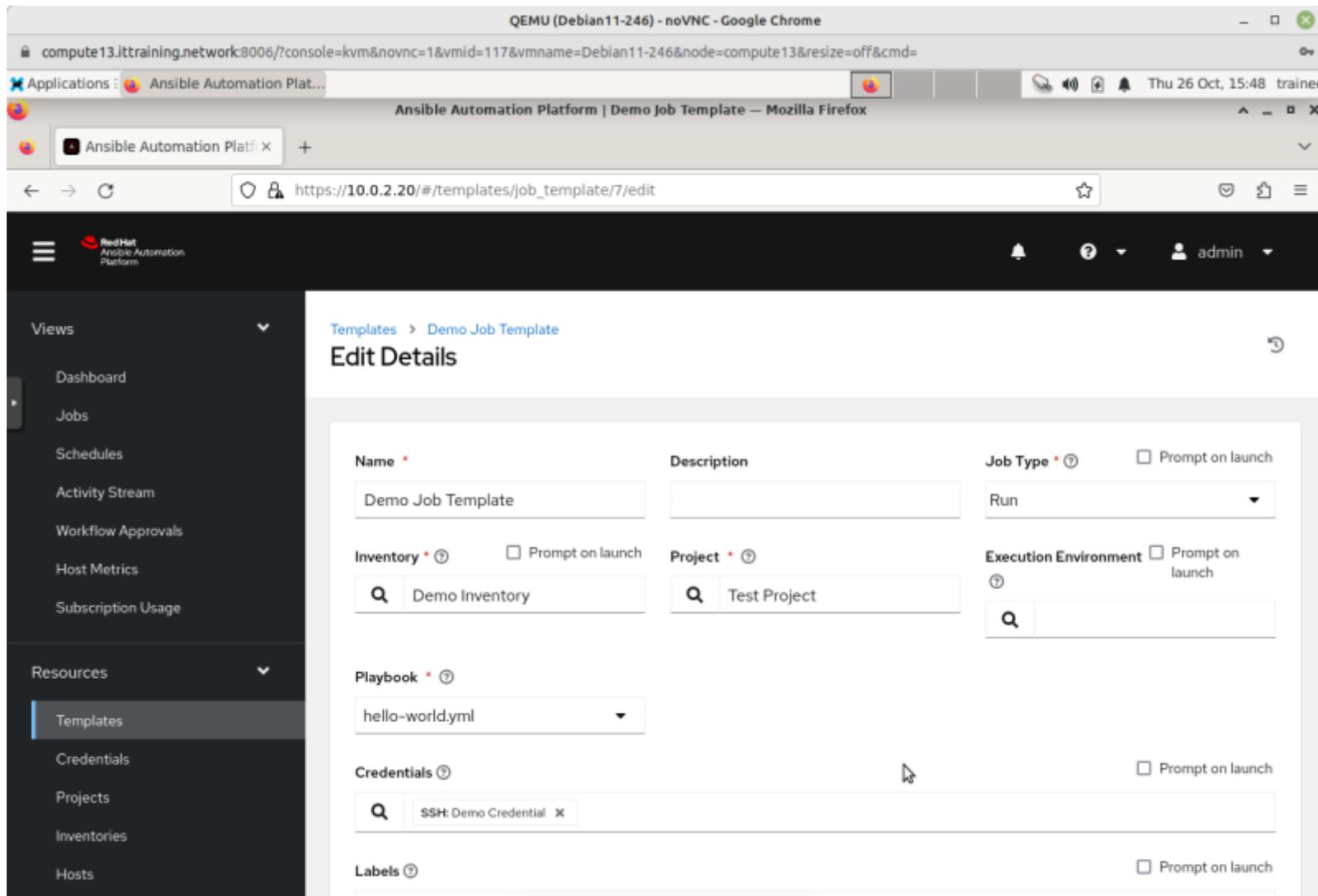
Vous obtiendrez :



Cochez **Test Project** puis cliquez sur le bouton **Select** :



Vous verrez le Playbook **hello-world.yml** apparaître dans le champs **Playbook** :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/templates/job_template/7/edit`. The page title is "Ansible Automation Platform | Demo Job Template". The left sidebar contains a navigation menu with sections "Views" and "Resources". The "Resources" section is expanded, showing "Templates" as the active item. The main content area is titled "Edit Details" and contains a form for editing a job template. The form fields are:

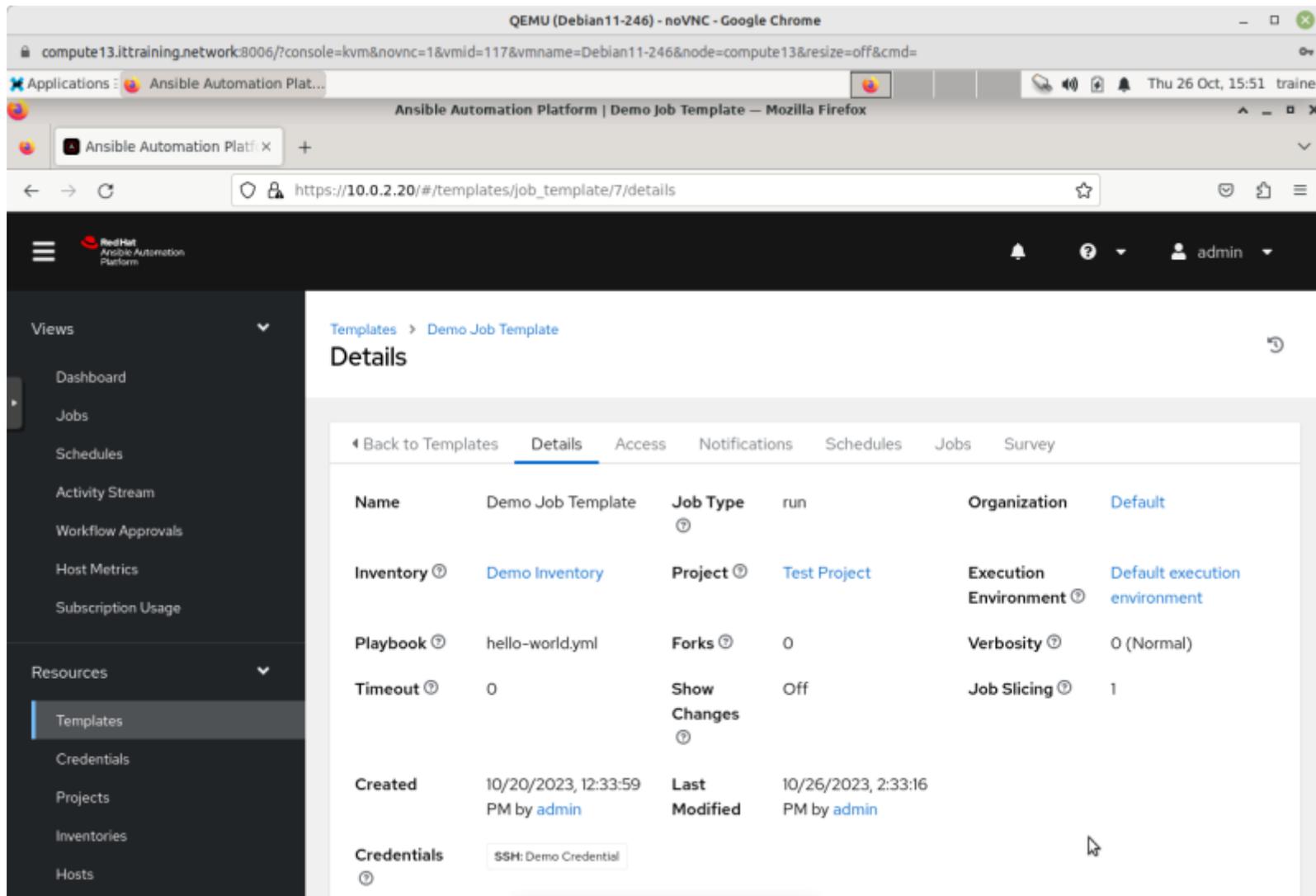
- Name:** Demo Job Template
- Description:** (empty)
- Job Type:** Run
- Inventory:** Demo Inventory
- Project:** Test Project
- Execution Environment:** (empty)
- Playbook:** hello-world.yml
- Credentials:** SSH: Demo Credential
- Labels:** (empty)

Each field has a search icon and a "Prompt on launch" checkbox. The "Prompt on launch" checkboxes are currently unchecked.

Cliquez sur le bouton **Save** :

The screenshot shows the Ansible Automation Platform interface in a browser window. The browser title is "QEMU (Debian11-246) - noVNC - Google Chrome". The address bar shows the URL "https://10.0.2.20/#/templates/job_template/7/edit". The page title is "Ansible Automation Platform | Demo Job Template - Mozilla Firefox". The interface includes a sidebar with navigation options: Views (Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage), Resources (Templates, Credentials, Projects, Inventories, Hosts), and a top navigation bar with a user profile "admin". The main content area displays configuration options for a job template, including "Job Slicing" (set to 1), "Timeout" (set to 0), "Show Changes" (set to Off), and sections for "Instance Groups", "Job Tags", and "Skip Tags", each with a "Prompt on launch" checkbox. The "Options" section includes checkboxes for "Privilege Escalation", "Provisioning Callbacks", "Enable Webhook", "Concurrent Jobs", "Enable Fact Storage", and "Prevent Instance Group Fallback". A "Save" button is located at the bottom left of the configuration area.

Vérifiez votre Template puis cliquez sur le lien **Templates** :

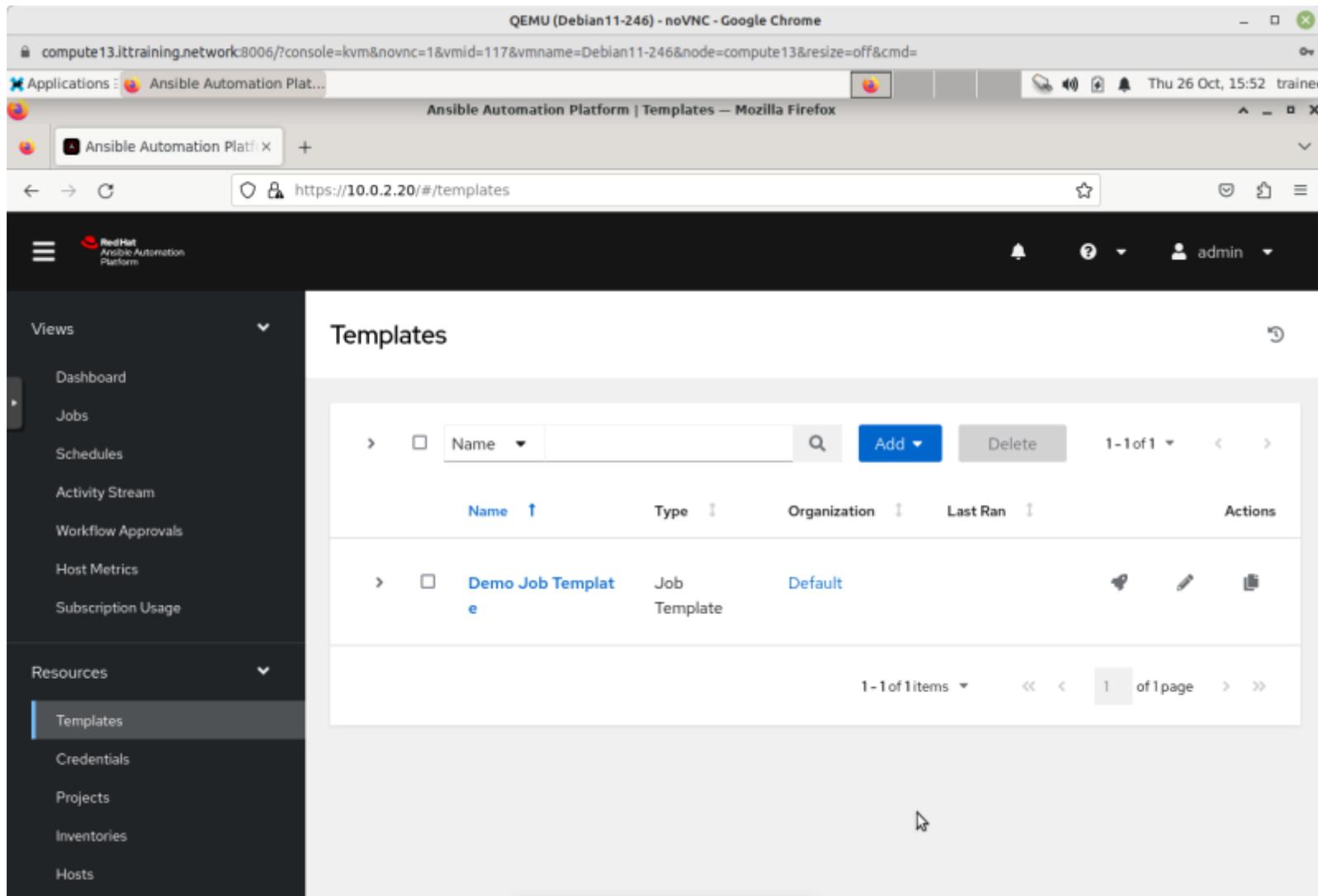


The screenshot shows the Ansible Automation Platform interface in a browser window. The page title is "Demo Job Template" and the URL is "https://10.0.2.20/#/templates/job_template/7/details". The interface includes a sidebar with navigation options like Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage, Resources, Templates, Credentials, Projects, Inventories, and Hosts. The main content area displays the details of the "Demo Job Template" with the following information:

Property	Value	Property	Value	Property	Value
Name	Demo Job Template	Job Type	run	Organization	Default
Inventory	Demo Inventory	Project	Test Project	Execution Environment	Default execution environment
Playbook	hello-world.yml	Forks	0	Verbosity	0 (Normal)
Timeout	0	Show Changes	Off	Job Slicing	1
Created	10/20/2023, 12:33:59 PM by admin	Last Modified	10/26/2023, 2:33:16 PM by admin		
Credentials	SSH: Demo Credential				

5.6 - Exécuter un Job

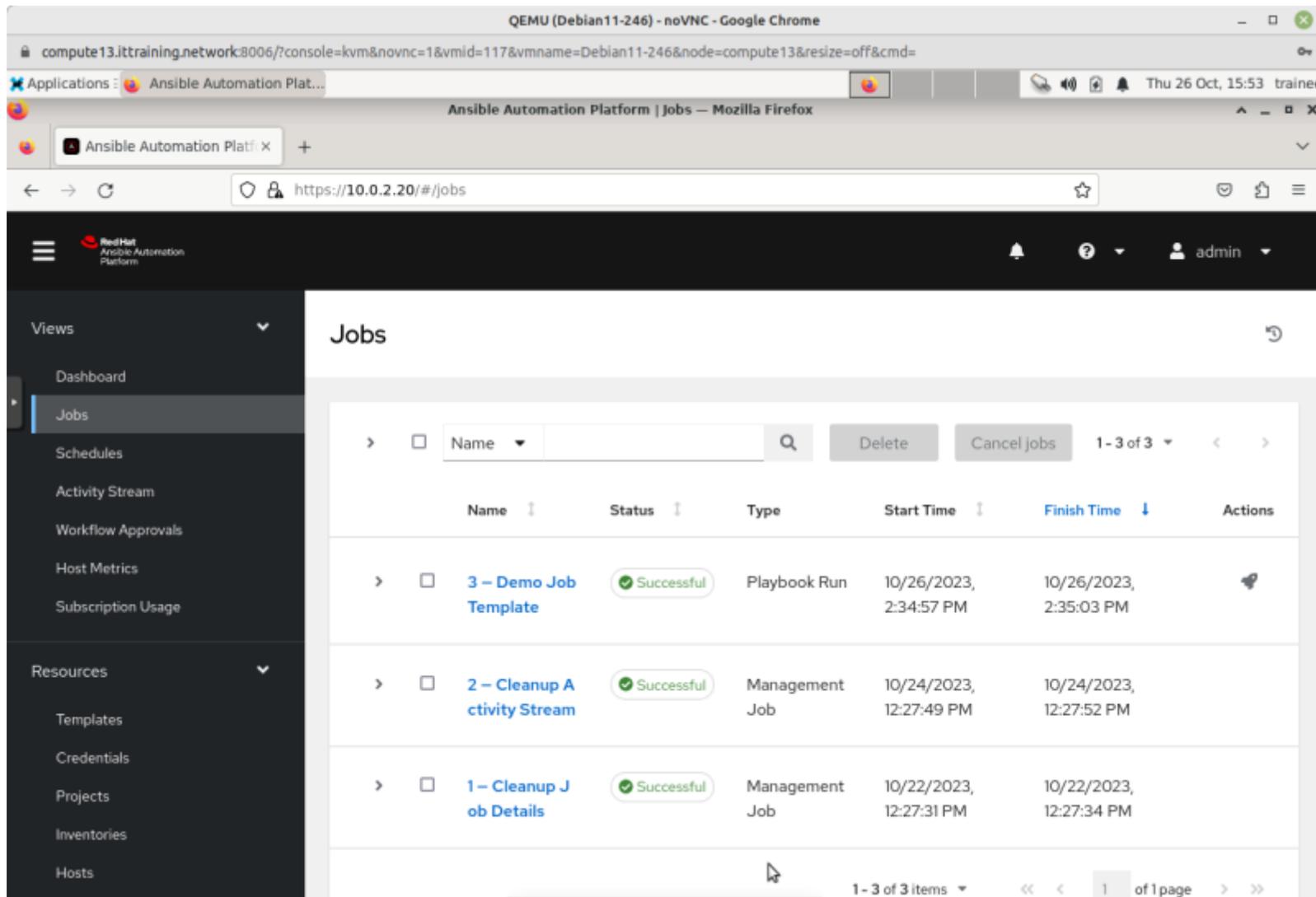
Cliquez sur l'icône de la fusée en face de **Demo Job Template** :



The screenshot shows a web browser window displaying the Ansible Automation Platform interface. The browser's address bar shows the URL `https://10.0.2.20/#/templates`. The page title is "Templates". On the left, a dark sidebar menu is visible with the following items: Views (expanded), Dashboard, Jobs, Schedules, Activity Stream, Workflow Approvals, Host Metrics, Subscription Usage, Resources (expanded), Templates (selected), Credentials, Projects, Inventories, and Hosts. The main content area displays a table of templates. The table has columns for Name, Type, Organization, Last Ran, and Actions. One template is listed: "Demo Job Template" (Type: Job Template, Organization: Default). The table includes search and filter controls at the top, and pagination at the bottom indicating "1-1 of 1 items" and "1 of 1 page".

Name	Type	Organization	Last Ran	Actions
Demo Job Template	Job Template	Default		🔔 ✎ 🗑️

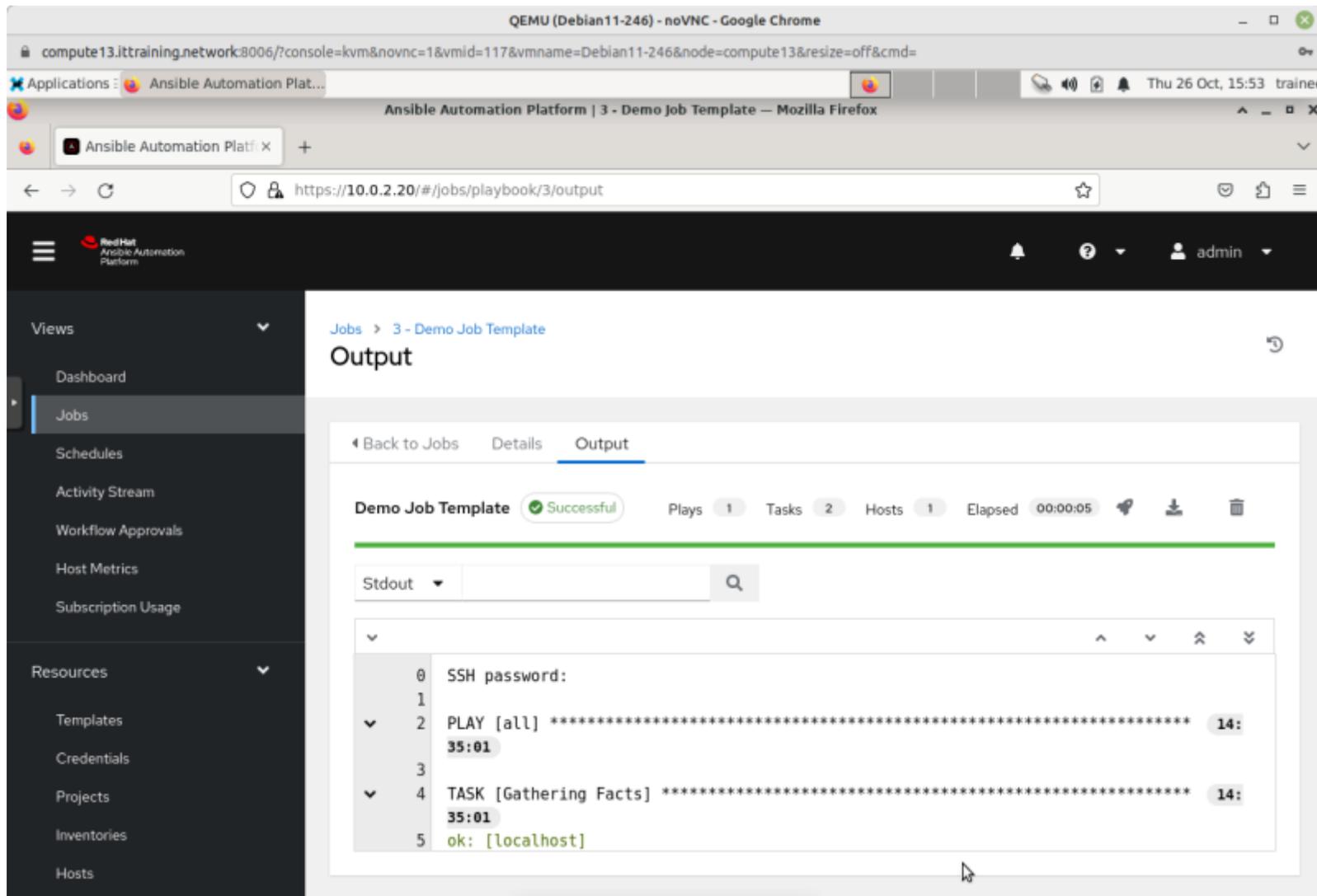
Cliquez sur **Jobs** :



The screenshot shows the Ansible Automation Platform interface in a web browser. The browser address bar shows the URL `https://10.0.2.20/#/jobs`. The page title is "Jobs". On the left, there is a navigation menu with "Jobs" selected. The main content area displays a table of jobs with the following data:

Name	Status	Type	Start Time	Finish Time	Actions
3 – Demo Job Template	Successful	Playbook Run	10/26/2023, 2:34:57 PM	10/26/2023, 2:35:03 PM	
2 – Cleanup Activity Stream	Successful	Management Job	10/24/2023, 12:27:49 PM	10/24/2023, 12:27:52 PM	
1 – Cleanup Job Details	Successful	Management Job	10/22/2023, 12:27:31 PM	10/22/2023, 12:27:34 PM	

Cliquez sur **Demo Job Template** et constatez la réussite de l'exécution du Job :



LAB #6 - Utilisation de l'Ansible® Automation Hub

6.1 - Créer une Collection

Connectez-vous ensuite à votre VM **autohub.ittraining.loc** :

```
[root@redhat9 ~]# ssh -l trainee 10.0.2.102
```

Créez un répertoire appelé **collection** et placez-vous dedans :

```
[trainee@autohub ~]$ mkdir collection
```

```
[trainee@autohub ~]$ cd collection
```

Créez une **Collection** vide appelée **ittraining** dans un **Namespace** appelé **ittraining** avec la commande **ansible-galaxy** :

```
[trainee@autohub collection]$ ansible-galaxy collection init ittraining.ittraining  
- Collection ittraining.ittraining was created successfully
```

Consultez l'arborescence de la Collection :

```
[trainee@autohub collection]$ tree
```

```
.  
├── ittraining  
│   ├── ittraining  
│   │   ├── docs  
│   │   ├── galaxy.yml  
│   │   ├── meta  
│   │   │   └── runtime.yml  
│   │   ├── plugins  
│   │   │   └── README.md  
│   │   ├── README.md  
│   └── roles
```

6 directories, 4 files

Les informations concernant la Collection sont stockées dans le fichier `~/collections/ittraining/ittraining/galaxy.yml` :

```
[trainee@autohub collection]$ cat ittraining/ittraining/galaxy.yml
### REQUIRED
# The namespace of the collection. This can be a company/brand/organization or product namespace under which all
# content lives. May only contain alphanumeric lowercase characters and underscores. Namespaces cannot start with
# underscores or numbers and cannot contain consecutive underscores
namespace: ittraining

# The name of the collection. Has the same character restrictions as 'namespace'
name: ittraining

# The version of the collection. Must be compatible with semantic versioning
version: 1.0.0

# The path to the Markdown (.md) readme file. This path is relative to the root of the collection
readme: README.md

# A list of the collection's content authors. Can be just the name or in the format 'Full Name <email> (url)
# @nicks:irc/im.site#channel'
authors:
- your name <example@domain.com>

### OPTIONAL but strongly recommended
# A short summary description of the collection
description: your collection description

# Either a single license or a list of licenses for content inside of a collection. Ansible Galaxy currently only
# accepts L(SPDX,https://spdx.org/licenses/) licenses. This key is mutually exclusive with 'license_file'
license:
- GPL-2.0-or-later
```

```
# The path to the license file for the collection. This path is relative to the root of the collection. This key
is
# mutually exclusive with 'license'
license_file: ''

# A list of tags you want to associate with the collection for indexing/searching. A tag name has the same
character
# requirements as 'namespace' and 'name'
tags: []

# Collections that this collection requires to be installed for it to be usable. The key of the dict is the
# collection label 'namespace.name'. The value is a version range
# L(specifiers,https://python-semanticversion.readthedocs.io/en/latest/#requirement-specification). Multiple
version
# range specifiers can be set and are separated by ','
dependencies: {}

# The URL of the originating SCM repository
repository: http://example.com/repository

# The URL to any online docs
documentation: http://docs.example.com

# The URL to the homepage of the collection/project
homepage: http://example.com

# The URL to the collection issue tracker
issues: http://example.com/issue/tracker

# A list of file glob-like patterns used to filter any files or directories that should not be included in the
build
# artifact. A pattern is matched from the relative path of the file or directory of the collection directory.
This
# uses 'fnmatch' to match the files or directories. Some directories and files like 'galaxy.yml', '*.pyc',
```

```
'*.retry',
# and '.git' are always filtered. Mutually exclusive with 'manifest'
build_ignore: []

# A dict controlling use of manifest directives used in building the collection artifact. The key 'directives' is
# a
# list of MANIFEST.in style
# L(directives,https://packaging.python.org/en/latest/guides/using-manifest-in/#manifest-in-commands). The key
# 'omit_default_directives' is a boolean that controls whether the default directives are used. Mutually
# exclusive
# with 'build_ignore'
# manifest: null
```

Éditez la ligne **requires-ansible** dans le fichier `~/collections/ittraining/ittraining/meta/runtime.yml` :

```
[trainee@autohub collection]$ vi ittraining/ittraining/meta/runtime.yml

[trainee@autohub collection]$ cat ittraining/ittraining/meta/runtime.yml
---
# Collections must specify a minimum required ansible version to upload
# to galaxy
requires_ansible: '>=2.9.10'

# Content that Ansible needs to load from another location or that has
# been deprecated/removed
# plugin_routing:
#   action:
#     redirected_plugin_name:
#       redirect: ns.col.new_location
#     deprecated_plugin_name:
#       deprecation:
#         removal_version: "4.0.0"
#         warning_text: |
#           See the porting guide on how to update your playbook to
```

```
#         use ns.col.another_plugin instead.
# removed_plugin_name:
#     tombstone:
#         removal_version: "2.0.0"
#         warning_text: |
#             See the porting guide on how to update your playbook to
#             use ns.col.another_plugin instead.
# become:
# cache:
# callback:
# cliconf:
# connection:
# doc_fragments:
# filter:
# httpapi:
# inventory:
# lookup:
# module_utils:
# modules:
# netconf:
# shell:
# strategy:
# terminal:
# test:
# vars:

# Python import statements that Ansible needs to load from another location
# import_redirection:
#     ansible_collections.ns.col.plugins.module_utils.old_location:
#         redirect: ansible_collections.ns.col.plugins.module_utils.new_location

# Groups of actions/modules that take a common set of options
# action_groups:
#     group_name:
```

```
# - module1  
# - module2
```

Placez-vous dans le répertoire `~/collections/ittraining/ittraining/` :

```
[trainee@autohub collection]$ cd ittraining/ittraining/  
  
[trainee@autohub ittraining]$ ls  
docs galaxy.yml meta plugins README.md roles
```

Construisez la Collection **ittraining-ittraining-1.0.0.tar.gz** avec la commande **ansible-galaxy collection build** :

```
[trainee@autohub ittraining]$ ansible-galaxy collection build  
Created collection for ittraining.ittraining at /home/trainee/collection/ittraining/ittraining/ittraining-  
ittraining-1.0.0.tar.gz
```

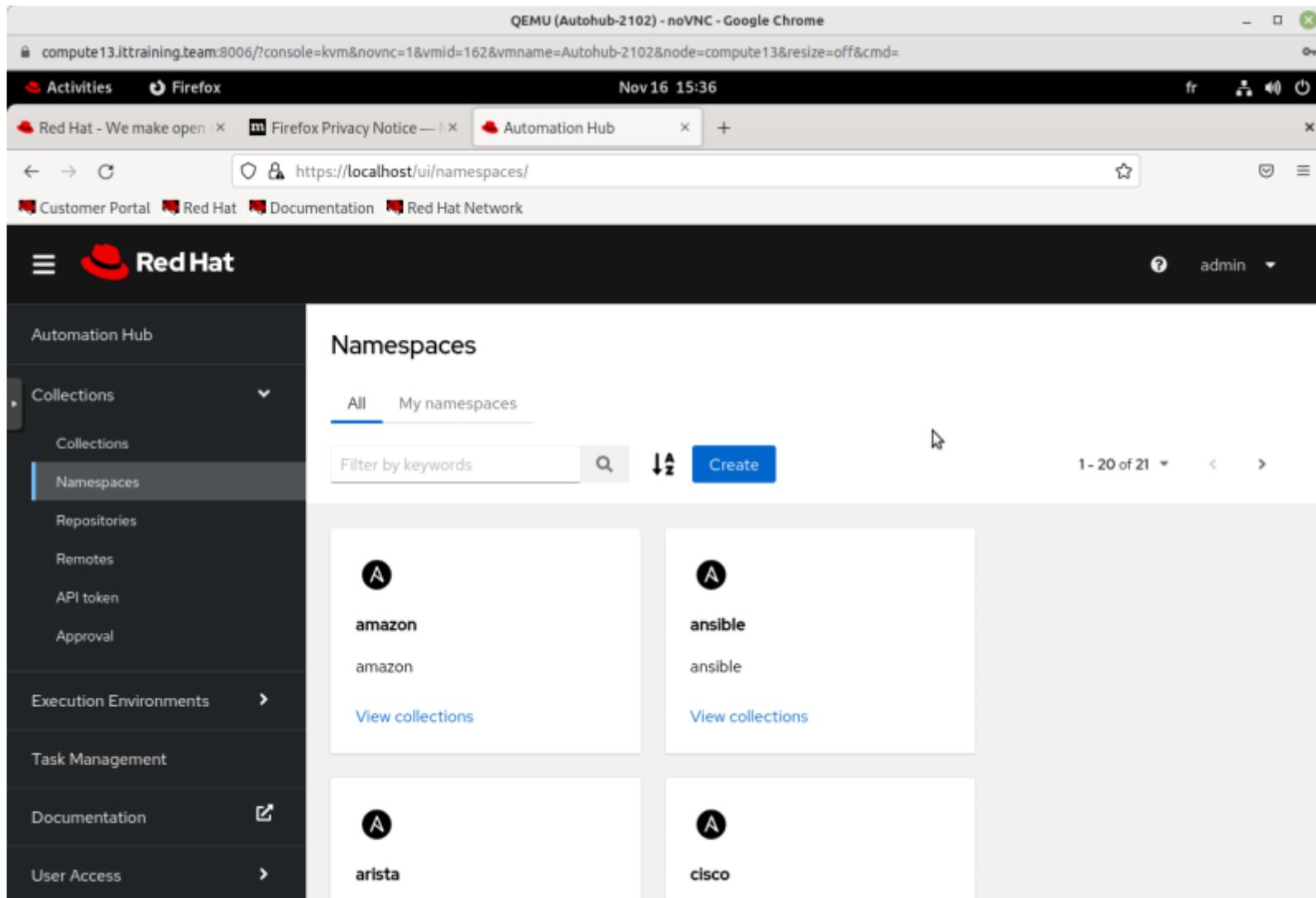
6.2 - Téléverser une Collection

Connectez-vous à votre **VM Debian_10.0.2.46_VNC**. Ouvrez un navigateur Web et naviguez à <https://10.0.2.102> :

The screenshot shows a web browser window displaying the Red Hat Ansible Automation Platform interface. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The address bar shows the URL "https://localhost/ui/". The page header includes the Red Hat logo and the user name "admin". The main content area is titled "Collections" and features a search bar with the text "Filter by keywords" and a search icon. Below the search bar, there are six collection cards arranged in a 2x3 grid. Each card displays the collection name, provider, and statistics for Modules, Roles, Plugins, and Dependencies. The collections shown are:

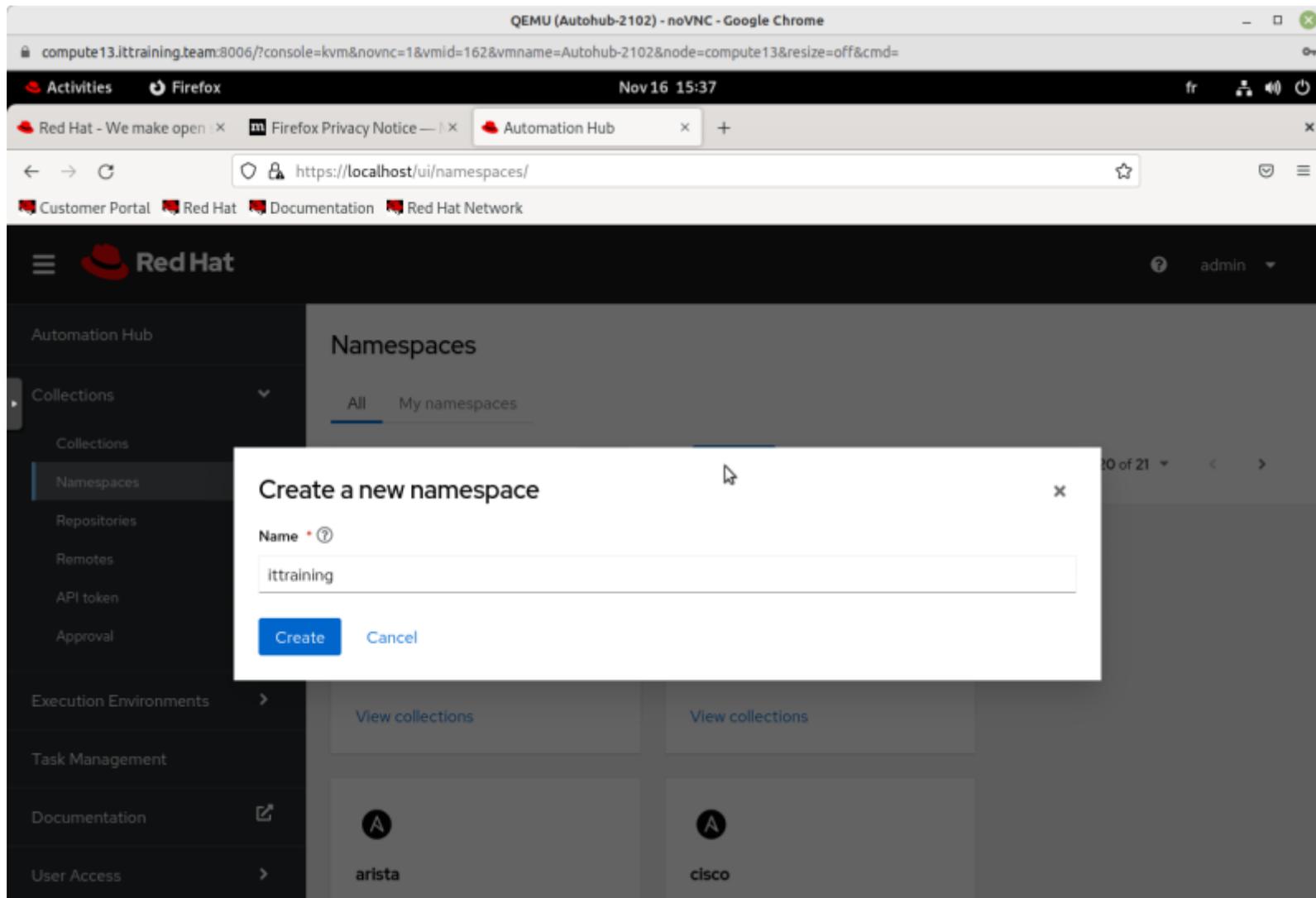
Collection Name	Provider	Modules	Roles	Plugins	Dependencies
aws	amazon	96	0	47	0
yang	ansible	4	0	11	1
windows	ansible	40	0	6	0
utils					
snmp					
security					

Cliquez ensuite sur **Namespaces** dans le menu de gauche puis cliquez sur le bouton **Create** :

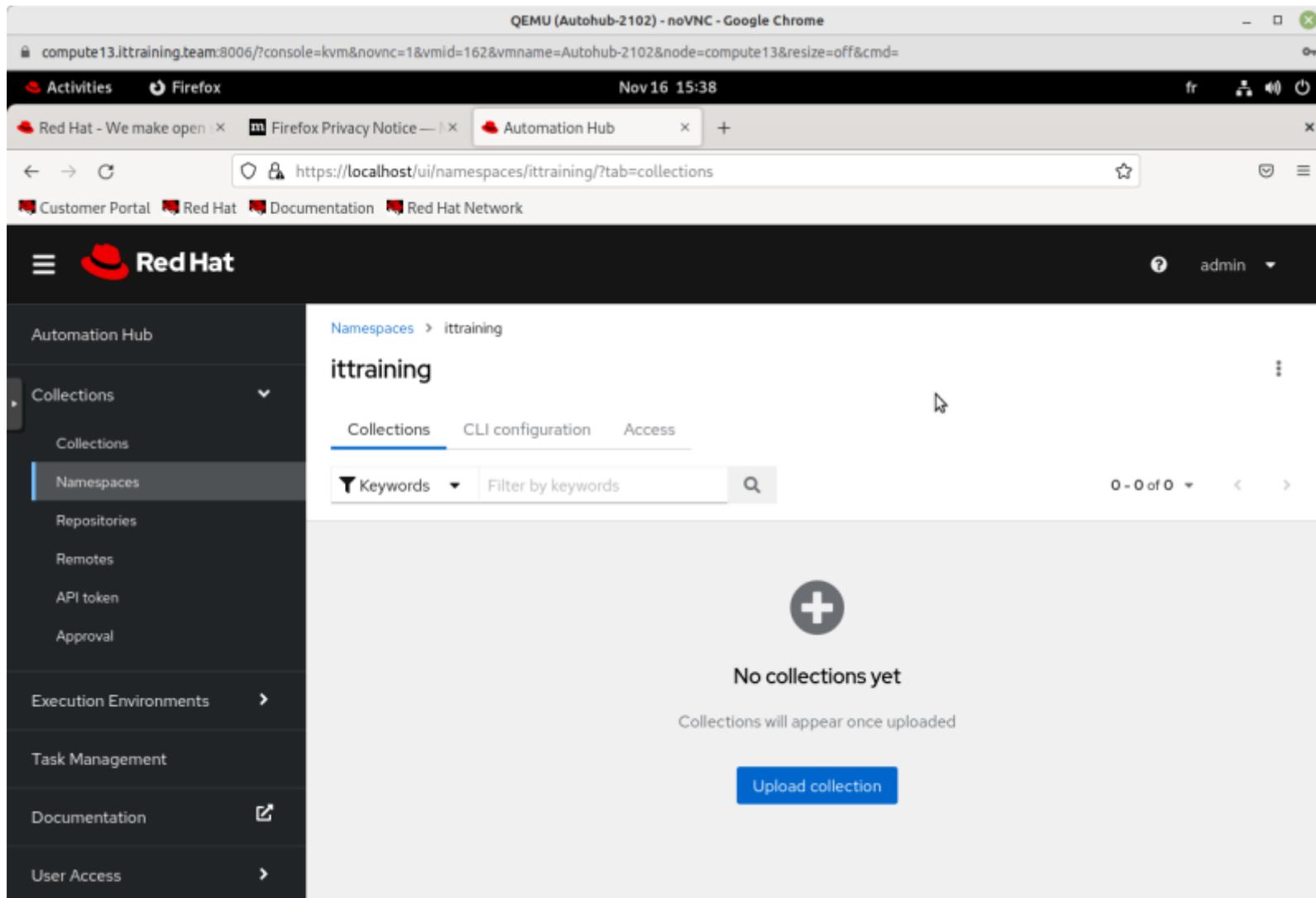


The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The address bar shows the URL "https://localhost/ui/namespaces/". The page header includes the Red Hat logo and the user name "admin". The left sidebar contains a navigation menu with the following items: Automation Hub, Collections (expanded), Namespaces (selected), Repositories, Remotes, API token, Approval, Execution Environments, Task Management, Documentation, and User Access. The main content area is titled "Namespaces" and has two tabs: "All" and "My namespaces". Below the tabs is a search bar labeled "Filter by keywords" and a "Create" button. The page shows a list of namespaces: "amazon", "ansible", "arista", and "cisco". Each namespace card includes a circular icon with the letter 'A', the namespace name, a sub-name, and a "View collections" link. The page indicates "1 - 20 of 21" namespaces are displayed.

Renseignez le nom **ittraining** et cliquez sur le bouton **Create** :



Notez que pour l'instant, il n'y a pas de **Collections** dans ce **Namespace**. Cliquez donc sur le bouton **Upload collection** :



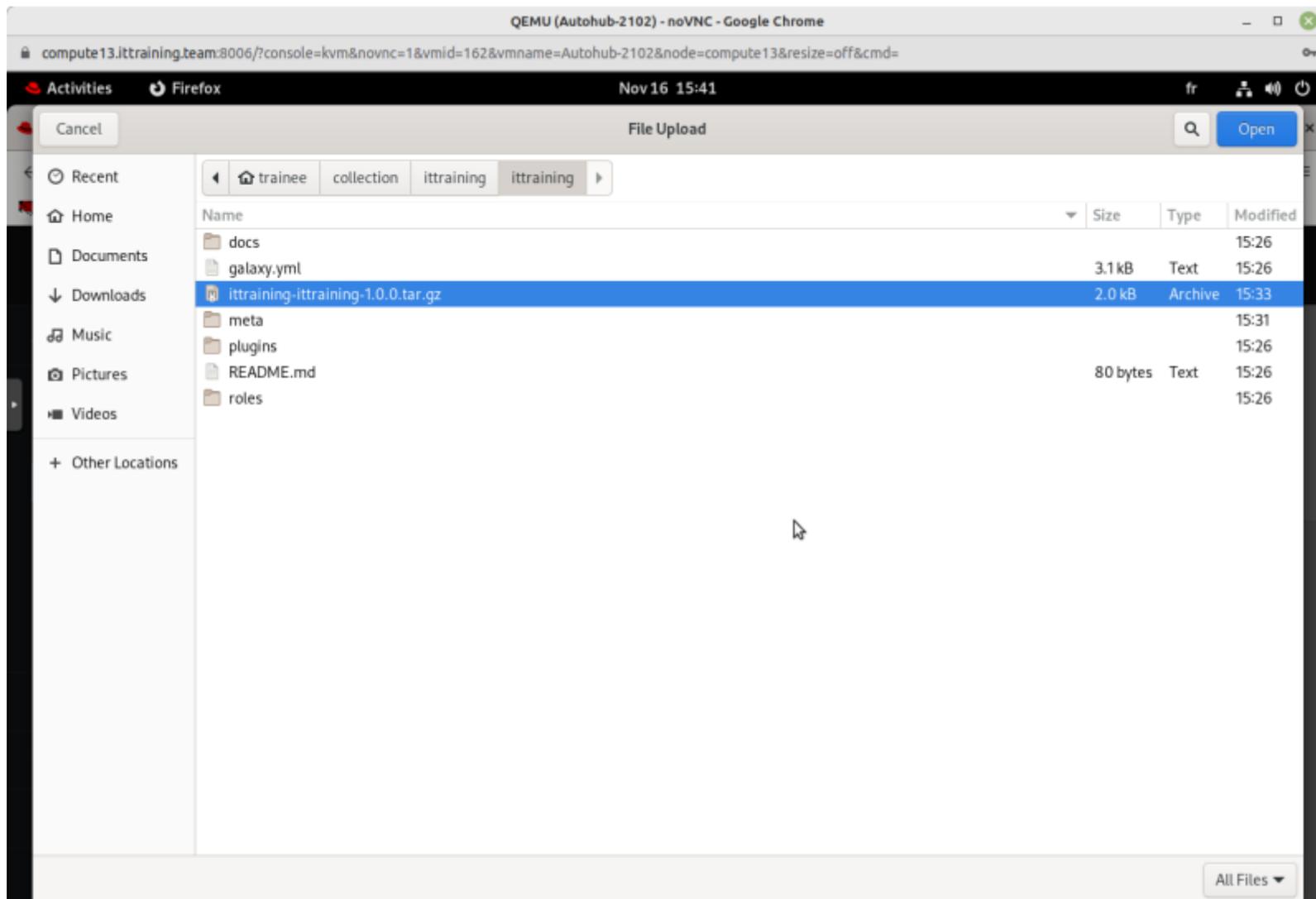
Dans la fenêtre **New collection**, cliquez sur **Select file** :

The screenshot shows a web browser window with the URL `https://localhost/ui/namespaces/ittraining/?tab=collections`. A modal dialog titled "New collection" is open. It features a "Select file" input field, two radio buttons: "Staging Repos" (selected) and "All Repos", and a "Selected" tag with the text "staging". Below this is a search filter "Filter by repository" and a table with columns "Name" and "Description". The table contains one row with the value "staging". At the bottom of the dialog are "Upload" and "Cancel" buttons.

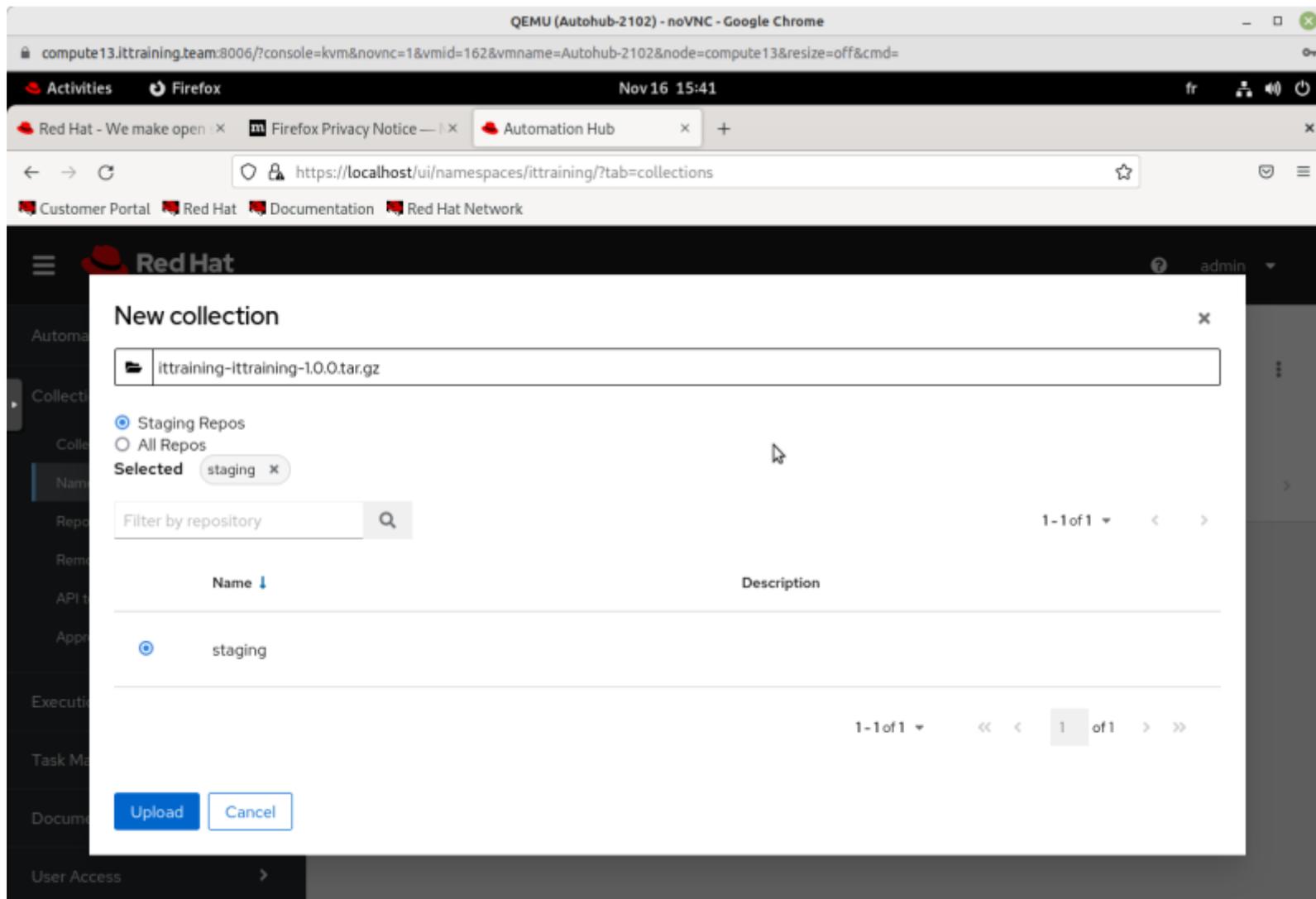


Important : Notez que le dépôt de destination est **staging**. Le dépôt staging est utilisé pour téléverser toute nouvelle Collection avant que celle-ci soit vérifiée pour publication.

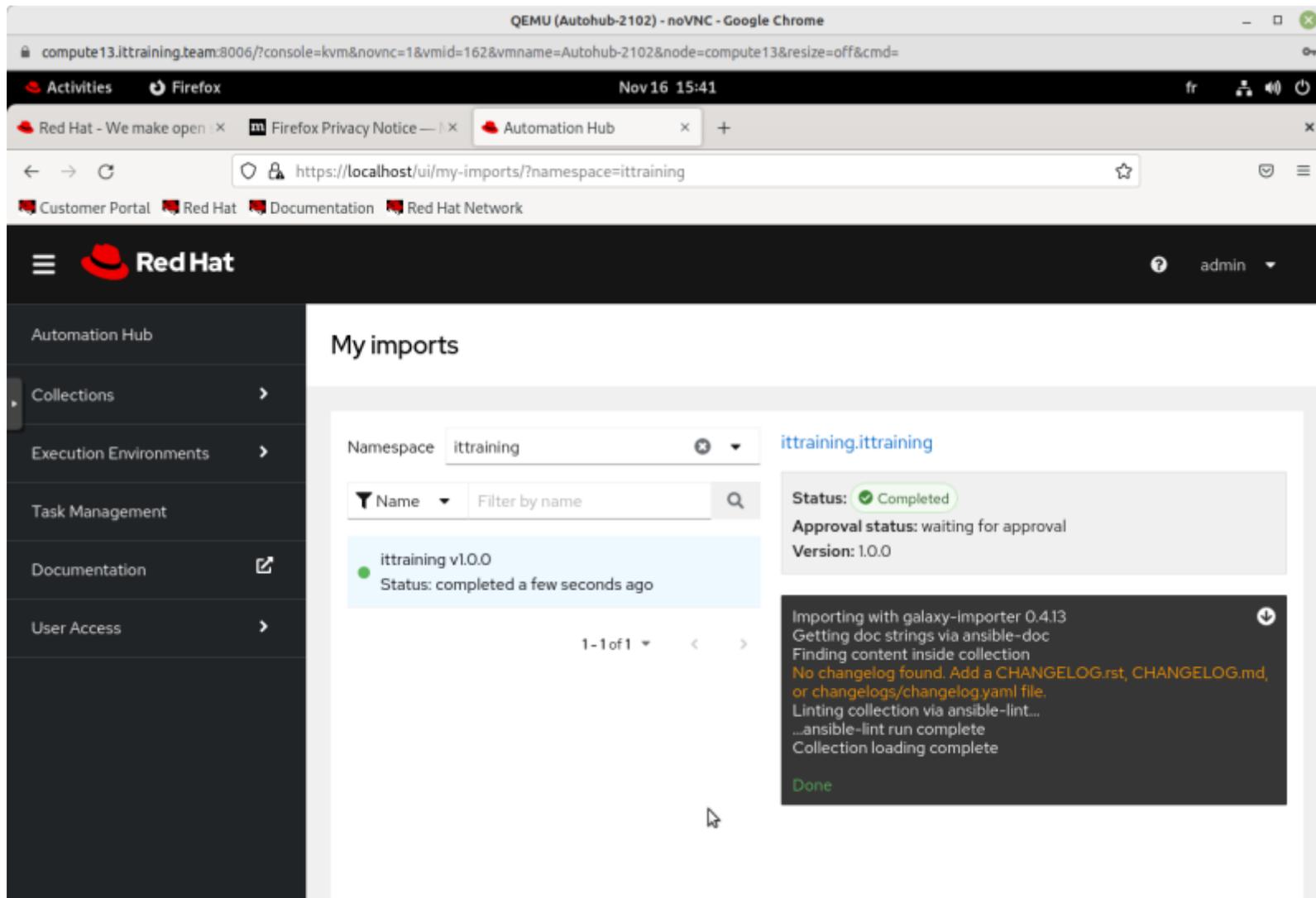
Choisissez le fichier **ittraining-ittraining-1.0.0.tar.gz** :



Cliquez ensuite sur le bouton **Upload** :



A l'issu de quelques secondes, la **Collection** est téléversée :



The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser address bar shows the URL `https://localhost/ui/my-imports/?namespace=ittraining`. The interface features a dark sidebar on the left with the Red Hat logo and navigation items: Automation Hub, Collections, Execution Environments, Task Management, Documentation, and User Access. The main content area is titled "My imports" and shows a list of imports for the namespace "ittraining". A single import, "ittraining v1.0.0", is listed with a status of "completed a few seconds ago". To the right of the list, a detailed view for the "ittraining.ittraining" namespace is shown, indicating a "Status: Completed" and "Approval status: waiting for approval". Below this, a terminal-style log shows the import process: "Importing with galaxy-importer 0.4.13", "Getting doc strings via ansible-doc", "Finding content inside collection", "No changelog found. Add a CHANGELOG.rst, CHANGELOG.md, or changelogs/changelog.yaml file.", "Linting collection via ansible-lint...", "...ansible-lint run complete", and "Collection loading complete". The log ends with "Done".

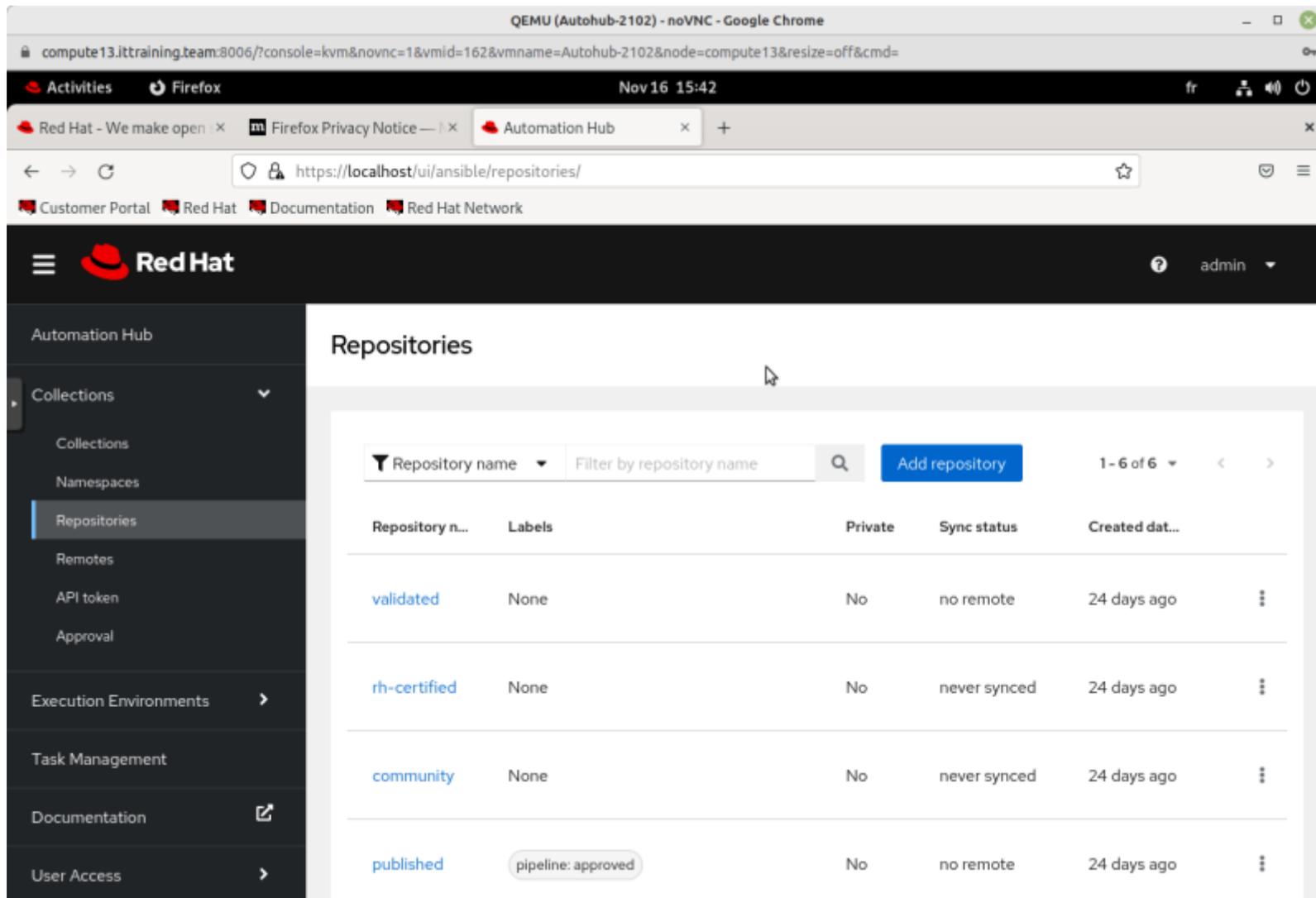


Important : Notez la ligne **Approval status: waiting for approval**.

Développez l'item **Collections** dans le menu de gauche :

The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The address bar shows the URL "https://localhost/ui/my-imports/?namespace=ittraining". The page header includes the Red Hat logo and the user name "admin". The main content area is titled "My imports" and shows a list of imports for the namespace "ittraining". A single import is listed: "ittraining v1.0.0" with a status of "Status: completed a few seconds ago". To the right of the list, there is a summary box for the import: "Status: Completed", "Approval status: waiting for approval", and "Version: 1.0.0". Below this, a terminal window displays the import process logs: "Importing with galaxy-importer 0.4.13", "Getting doc strings via ansible-doc", "Finding content inside collection", "No changelog found. Add a CHANGELOG.rst, CHANGELOG.md, or changelogs/changelog.yaml file.", "Linting collection via ansible-lint...", "...ansible-lint run complete", and "Collection loading complete". The terminal window ends with "Done".

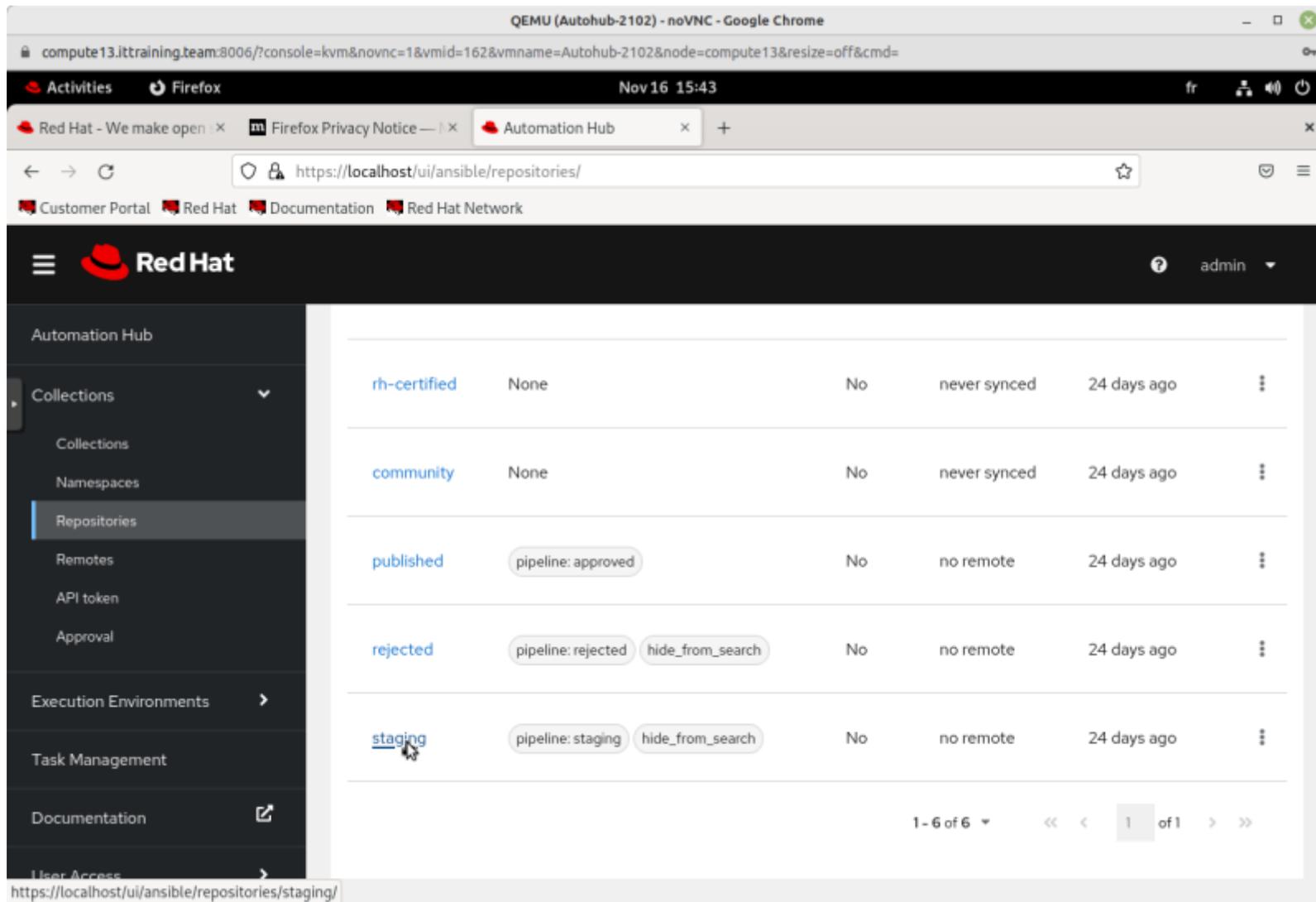
Cliquez sur **Repositories** :



The screenshot shows the Red Hat Automation Hub interface. The left sidebar contains the navigation menu with 'Automation Hub' selected. The main content area is titled 'Repositories' and displays a table of repository information. The table has the following columns: Repository name, Labels, Private, Sync status, and Created date. The visible rows are:

Repository name	Labels	Private	Sync status	Created date
validated	None	No	no remote	24 days ago
rh-certified	None	No	never synced	24 days ago
community	None	No	never synced	24 days ago
published	pipeline: approved	No	no remote	24 days ago

Descendez en bas de la liste des **Repositories** et cliquez sur **staging** :

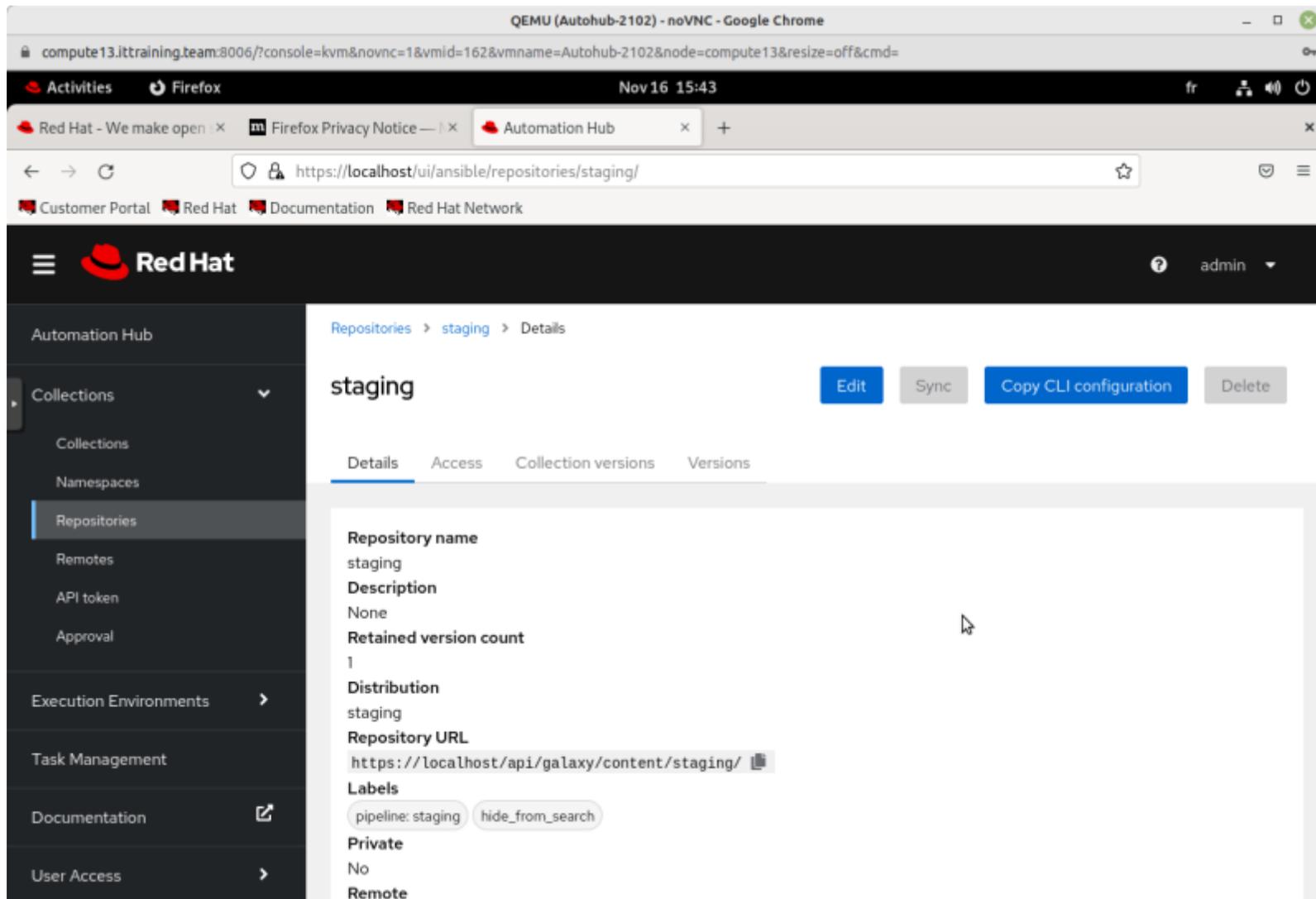


The screenshot shows the Red Hat Automation Hub interface in a browser window. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The address bar shows the URL "https://localhost/ui/ansible/repositories/". The page header includes the Red Hat logo and the user name "admin". The left sidebar contains a navigation menu with the following items: Automation Hub, Collections, Namespaces, Repositories (highlighted), Remotes, API token, Approval, Execution Environments, Task Management, Documentation, and User Access. The main content area displays a table of repositories:

Repository Name	Content Type	Sync Status	Last Sync	Actions
rh-certified	None	No	never synced	24 days ago
community	None	No	never synced	24 days ago
published	pipeline: approved	No	no remote	24 days ago
rejected	pipeline: rejected, hide_from_search	No	no remote	24 days ago
staging	pipeline: staging, hide_from_search	No	no remote	24 days ago

At the bottom of the table, there is a pagination control showing "1 - 6 of 6" and "1 of 1". The browser's address bar at the bottom shows the URL "https://localhost/ui/ansible/repositories/staging/".

Vous obtiendrez :



The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser's address bar shows the URL `https://localhost/ui/ansible/repositories/staging/`. The page title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The browser's taskbar shows the date and time as "Nov 16 15:43".

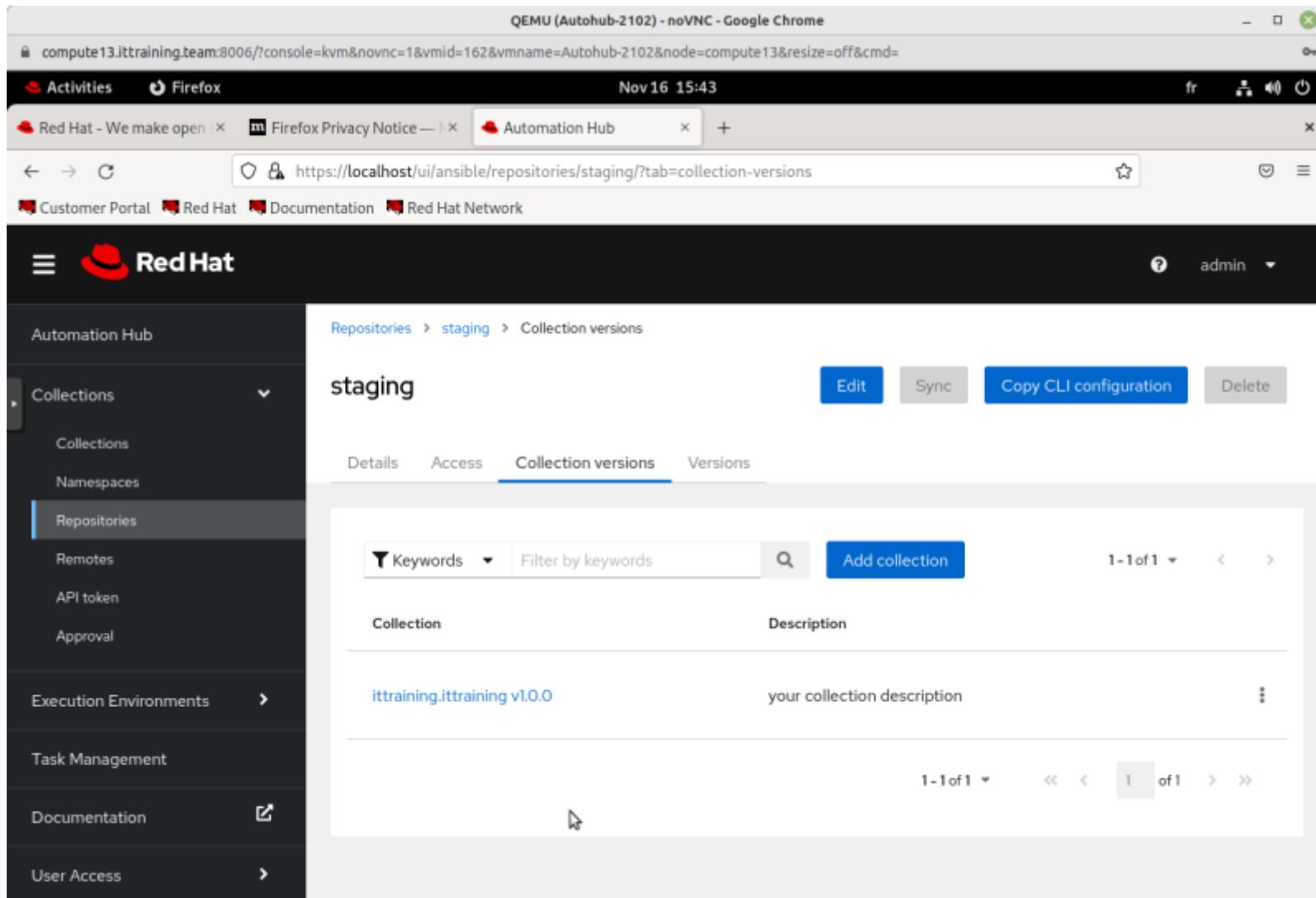
The interface features a dark sidebar on the left with the Red Hat logo and a navigation menu. The main content area displays the details for a repository named "staging". The breadcrumb navigation is "Repositories > staging > Details".

At the top right of the repository details, there are four buttons: "Edit", "Sync", "Copy CLI configuration", and "Delete". Below these buttons are four tabs: "Details", "Access", "Collection versions", and "Versions". The "Details" tab is currently selected.

The "Details" tab shows the following information:

- Repository name:** staging
- Description:** None
- Retained version count:** 1
- Distribution:** staging
- Repository URL:** `https://localhost/api/galaxy/content/staging/`
- Labels:** pipeline: staging, hide_from_search
- Private:** No
- Remote:** (field is present but value is not visible)

Cliquez sur l'onglet **Collection versions** et notez la présence de la Collection **ittraining-ittraining-1.0.0** :



The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The address bar shows the URL: "https://localhost/ui/ansible/repositories/staging/?tab=collection-versions". The page header includes the Red Hat logo and the user name "admin". The left sidebar menu is open, showing the following items: Automation Hub, Collections (expanded), Namespaces, Repositories (selected), Remotes, API token, Approval, Execution Environments, Task Management, Documentation, and User Access. The main content area displays the "staging" repository details, including buttons for "Edit", "Sync", "Copy CLI configuration", and "Delete". The "Collection versions" tab is active, showing a table with one entry: "ittraining.ittraining v1.0.0" with the description "your collection description". The table has columns for "Collection" and "Description". The page also includes a search bar with "Keywords" and "Filter by keywords" options, and a "Add collection" button.

Cliquez ensuite sur l'item **Approval** dans le menu de gauche :

QEMU (Autohub-2102) - noVNC - Google Chrome

compute13.ittraining.team:8006/?console=kvm&novnc=1&vmid=162&vmname=Autohub-2102&node=compute13&resize=off&cmd=

Activities Firefox Nov 16 15:45 fr

Red Hat - We make open... Firefox Privacy Notice... Automation Hub

https://localhost/ui/approval-dashboard/

Customer Portal Red Hat Documentation Red Hat Network

Red Hat admin

Approval dashboard

Namespace Filter by namespace 1-1 of 1

Status Needs Review x Clear all filters

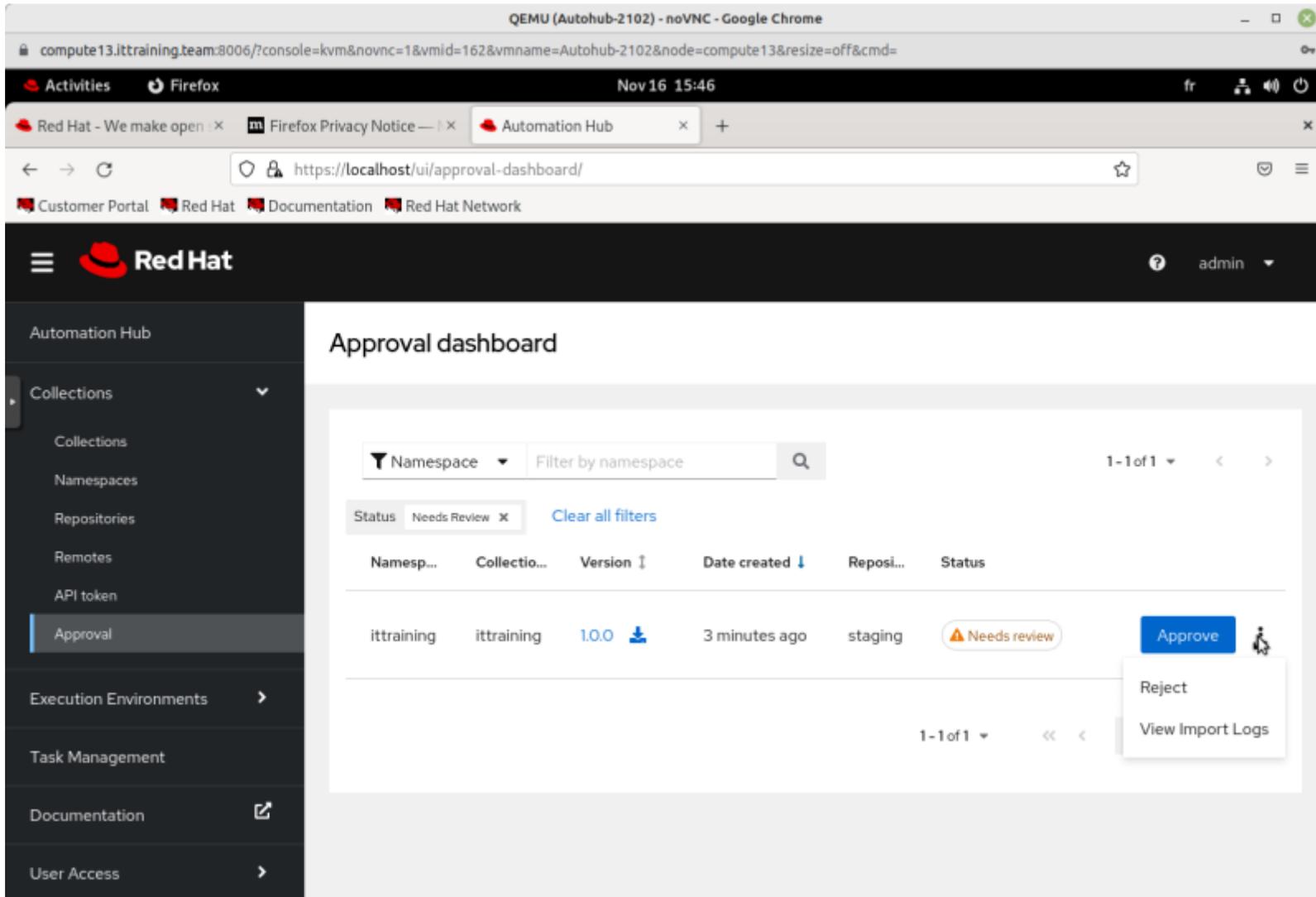
Namesp...	Collectio...	Version ↓	Date created ↓	Reposi...	Status
ittraining	ittraining	1.0.0	3 minutes ago	staging	Needs review Approve

1-1 of 1 1 of 1



Important : Notez que l'item **Approvals** est présent parce que vous êtes connecté en tant qu'administrateur.

Dans le cas où vous souhaiteriez rejeter cette Collection, il conviendrait de cliquer sur les trois points verticaux à droite de la ligne **ittraining** et de choisir **Reject**. Cliquez ensuite sur le bouton **Approve** :



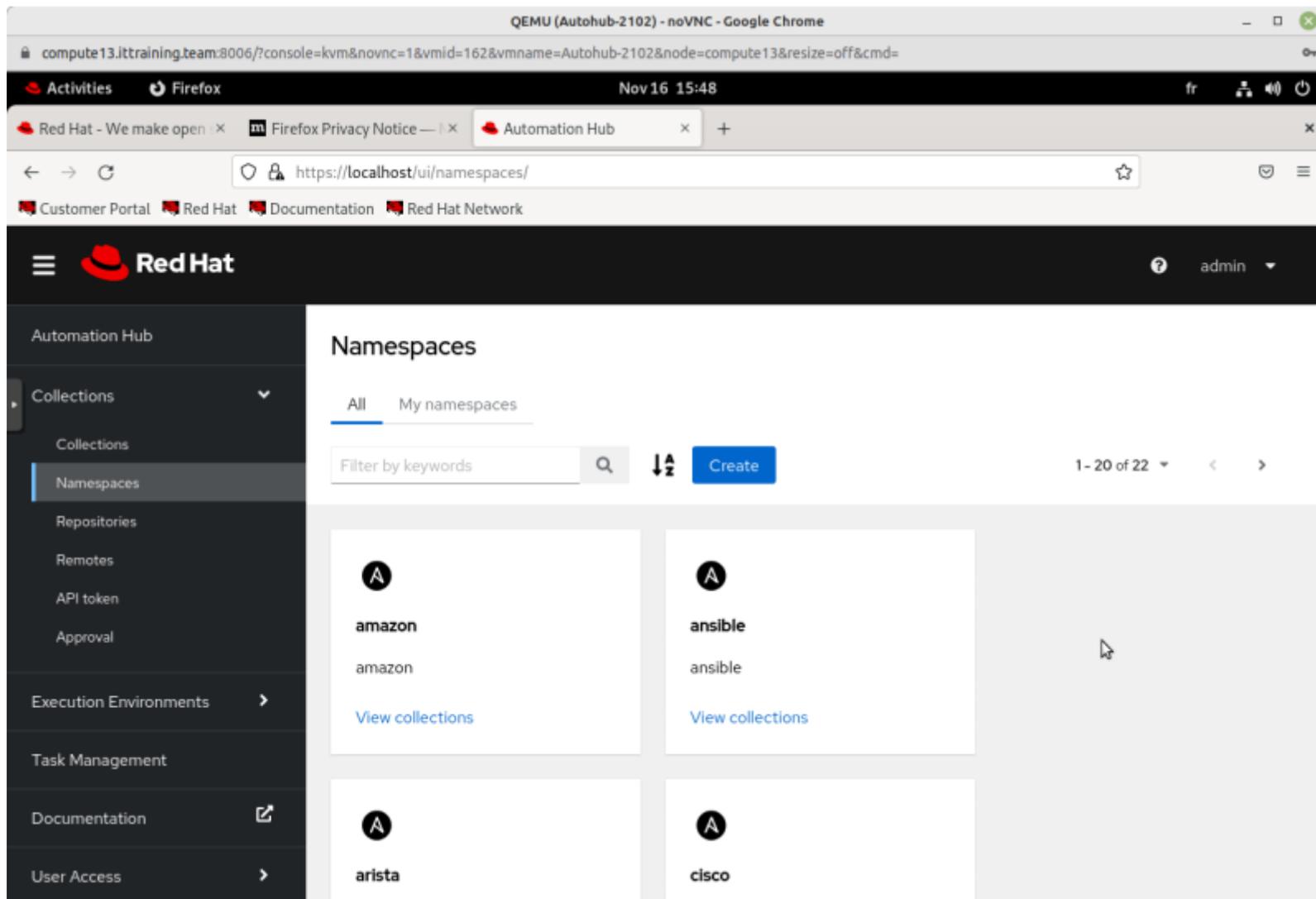
The screenshot shows the Red Hat Automation Hub interface. The left sidebar contains the navigation menu with 'Approval' selected. The main content area is the 'Approval dashboard' for the 'ittraining' namespace. A table lists the collection 'ittraining' with version '1.0.0', created '3 minutes ago', and status 'Needs review'. A context menu is open over the 'Approve' button, showing 'Reject' and 'View Import Logs' options.

Namesp...	Collectio...	Version ↓	Date created ↓	Reposi...	Status
ittraining	ittraining	1.0.0	3 minutes ago	staging	Needs review

Vous obtiendrez :

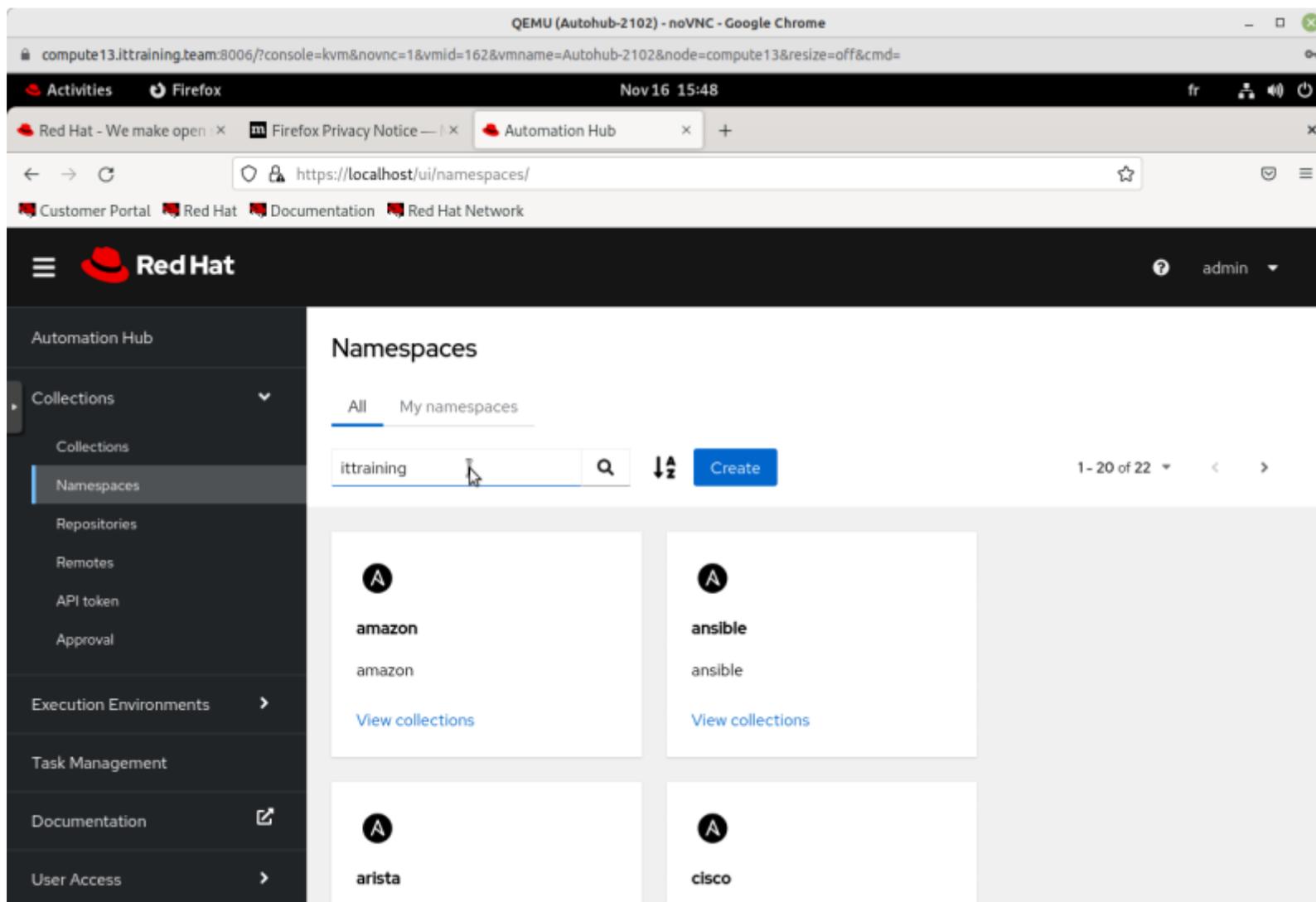
The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome" and the address bar shows "https://localhost/ui/approval-dashboard/". The page header includes the Red Hat logo and the user name "admin". The left sidebar menu is open, showing the "Approval" section selected. The main content area is titled "Approval dashboard" and displays a message: "Certification status for collection 'ittraining ittraining v1.0.0' has been successfully updated." Below this, there is a search bar with "Namespace" selected and a "Filter by namespace" input field. A status filter "Needs Review" is active. The main content area shows a large magnifying glass icon and the text "No results found" with the message "No results match the filter criteria. Try changing your filter settings." The bottom of the page shows pagination controls: "0 - 0 of 0" and "0 of 0".

Cliquez sur **Namespaces** dans le menu de gauche :



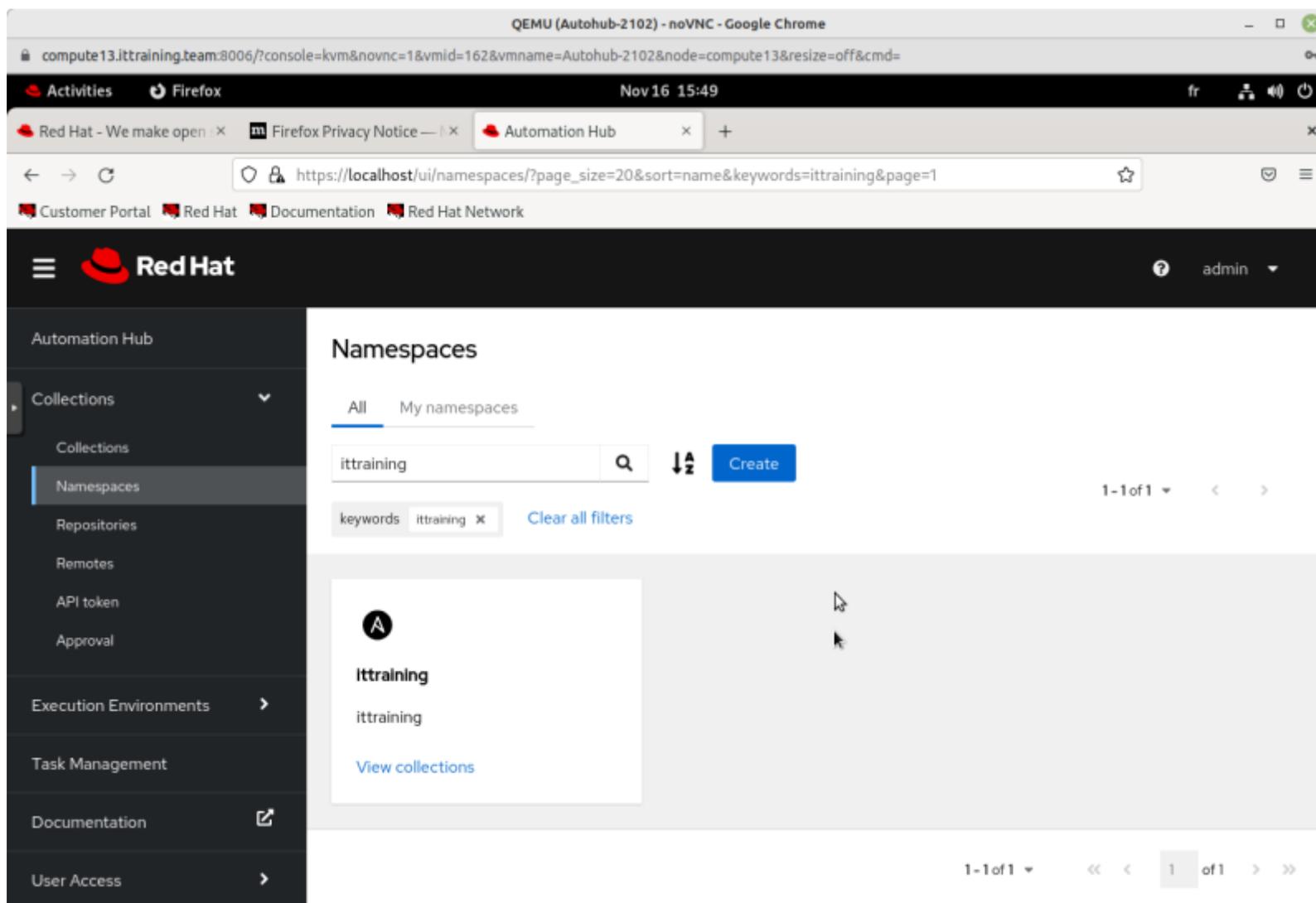
The screenshot shows a web browser window displaying the Red Hat Automation Hub interface. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The address bar shows the URL "https://localhost/ui/namespaces/". The page header includes the Red Hat logo and the user name "admin". The left sidebar contains a navigation menu with the following items: Automation Hub, Collections (expanded), Namespaces (selected), Repositories, Remotes, API token, Approval, Execution Environments, Task Management, Documentation, and User Access. The main content area is titled "Namespaces" and has two tabs: "All" and "My namespaces". Below the tabs is a search bar labeled "Filter by keywords" with a magnifying glass icon, a sort icon, and a "Create" button. To the right of the search bar, it shows "1 - 20 of 22" items. The main content area displays four namespace cards: "amazon", "ansible", "arista", and "cisco". Each card has a circular icon with the letter 'A', the namespace name, a sub-name, and a "View collections" link.

Dans le champs **Filter by keywords**, saisissez le mot **ittraining** puis cliquez sur l'**icône de la loupe** :



The screenshot shows the Red Hat Automation Hub interface in a browser window. The page title is "Namespaces". The left sidebar contains a navigation menu with items: Automation Hub, Collections (expanded), Namespaces (selected), Repositories, Remotes, API token, Approval, Execution Environments, Task Management, Documentation, and User Access. The main content area shows a search bar with "ittraining" entered, a search icon, a sort icon, and a "Create" button. Below the search bar, there are four namespace cards: "amazon", "ansible", "arista", and "cisco". Each card has a search icon, the namespace name, and a "View collections" link. The "amazon" namespace is currently selected in the search bar.

Cliquez sur le lien **View collections** pour consulter la liste des **Collections** dans le **Namespace** :



The screenshot shows the Red Hat Automation Hub interface in a browser window. The browser title is "QEMU (Autohub-2102) - noVNC - Google Chrome". The address bar shows the URL: `https://localhost/ui/namespaces/?page_size=20&sort=name&keywords=ittraining&page=1`. The page title is "Namespaces". The left sidebar is open, showing the navigation menu with "Namespaces" selected. The main content area shows a search bar with "ittraining" entered, a "Create" button, and a list of namespaces. The list contains one entry: "ittraining". Below the list, there is a "View collections" link. The page also shows a filter for "keywords: ittraining" and a "Clear all filters" button. The bottom right corner of the page shows pagination: "1-1 of 1".

Constatez la présence de la Collection **ittraining** :

