Ansible Tower Quick Setup Guide

Release Ansible Tower 2.4.5

Red Hat, Inc.

Jun 06, 2017

CONTENTS

Thank you for your interest in Ansible Tower by Red Hat. Ansible Tower is a commercial offering that helps teams manage complex multi-tier deployments by adding control, knowledge, and delegation to Ansible-powered environments.

The *Ansible Tower Quick Setup Guide* covers basic steps for using Ansible Tower and running your first playbook. This document has been updated to include information for the latest release of Ansible Tower 2.4.5.

Ansible Tower Version 2.4.5; June 2, 2016; https://access.redhat.com/

CHAPTER

ONE

QUICK START

You can expect the Quick Start process to take less than thirty minutes. At the end of the Quick Start, you will have a functioning Tower application that you can use to launch more sophisticated playbooks.

To begin, you must install Tower and you must choose a target system where the initial playbook deploys. This first playbook executes simple Ansible tasks, while teaching you how to use Tower, as well as ensuring its proper setup. This can be any sort of system manageable by Ansible, as described at: http://docs.ansible.com/intro_installation.html.

Note: Ansible Tower is available as a Basic license, Enterprise license, or Premium license. These licenses vary in price, support-levels, and features. Enterprise and Premium license users will have access to some extended Tower features that Basic users will not have available. For more information about licenses and features, refer to Licensing, Updates, and Support in the Tower Installation and Reference Guide.

This Quick Start Guide covers setting up with a Basic license in mind. Features only available to Enterprise or Premium license users are noted as you go along.

CHAPTER

TWO

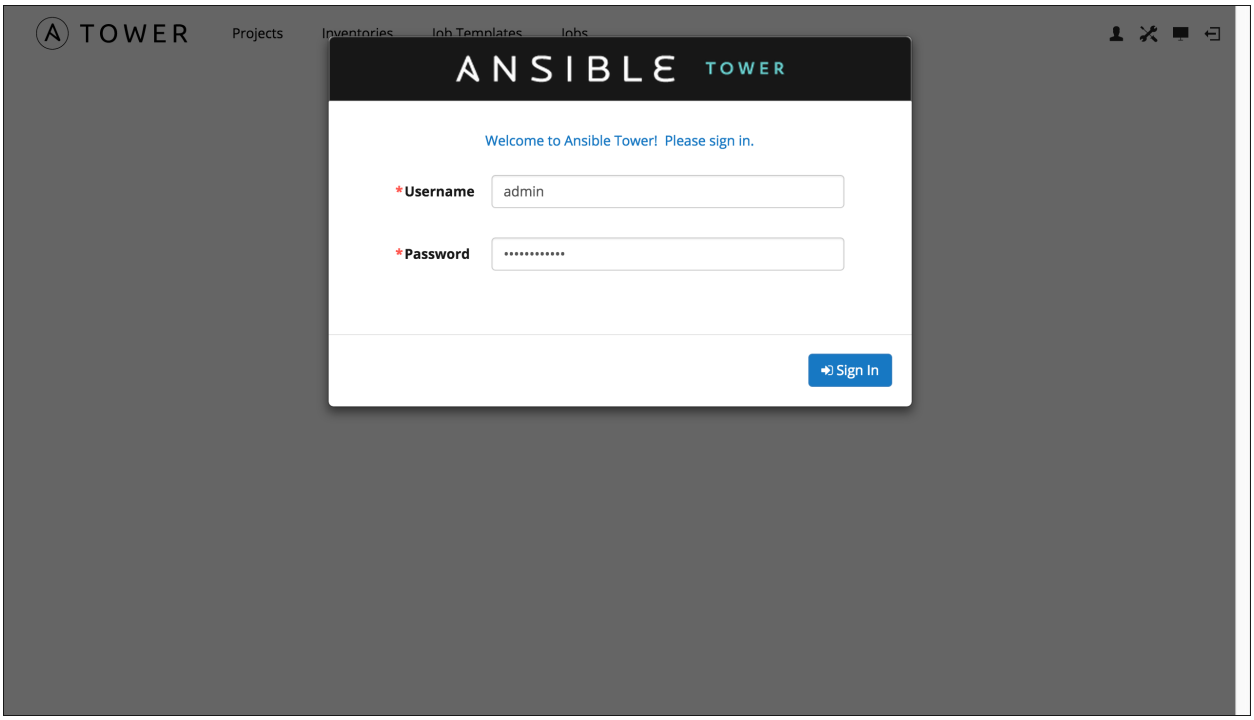
LOGIN AS A SUPERUSER

Using the login information provided by the configuration wizard, open a web browser and log in to Tower by browsing to the Tower server URL at: `https://<Tower server name>/`

Note: Tower installs a self-signed certificate for HTTPS communication which may require acceptance in your browser. Refer to the General Installation Notes in the *Tower Installation and Reference Guide* for help with replacing this certificate if needed.

Log in using the username and password set during the installation process. By default, this is username: *admin* and password: *password*.

These defaults can be changed later by clicking on the Setup  Menu button and selecting the Users navigational link.



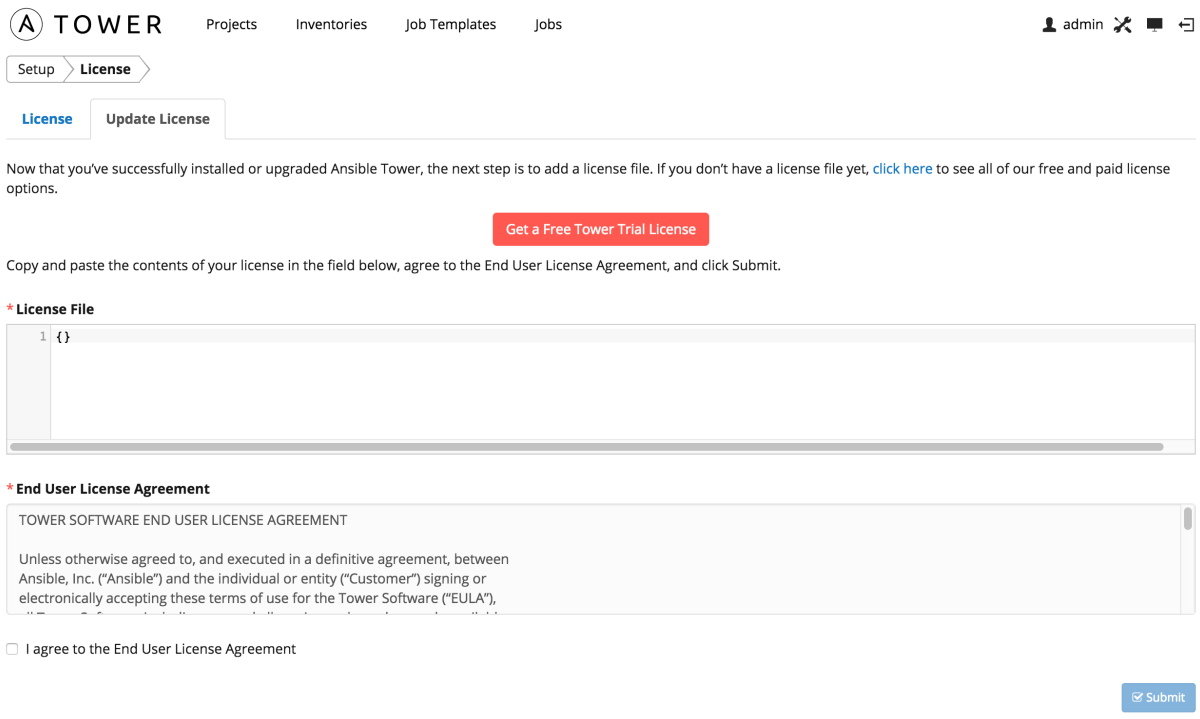
CHAPTER

THREE

IMPORT A LICENSE

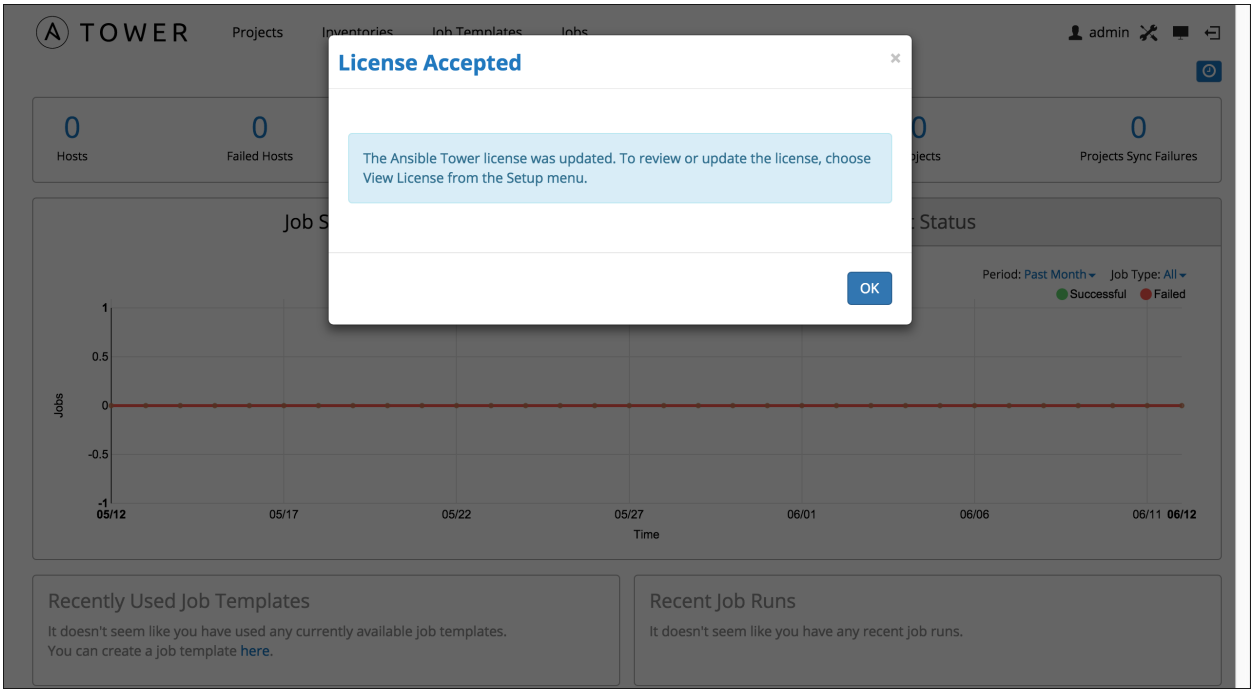
Tower requires a valid license to run. If you did not receive a license from Ansible directly or via email, or have issues with the license you received, refer to http://www.ansible.com/license for free and paid license options (including free trial licenses) or contact Ansible via the Red Hat Customer Portal at https://access.redhat.com/.

Paste in the license you received from Ansible, agree to the End User License Agreement, and click **Submit**.



Note: Users of older versions of Ansible Tower, prior to 2.2, can review their license from the 'View License' drop-down of the Tower user's menu at the top right of the screen.

Once accepted, your license allows you to continue on to the main Ansible interface. For later reference, you can view this license from the Setup () Menu's 'View License' link.


TOWER
Projects
admin
License Accepted
The Ansible Tower license was updated. To review or update the license, choose View License from the Setup menu.
OK
0
Hosts
0
Failed Hosts
0
Projects Sync Failures
Status
Period: Past Month
Job Type: All
Successful
Failed
Jobs
Time
05/12
05/17
05/22
05/27
06/01
06/06
06/11
06/12
Recently Used Job Templates
It doesn't seem like you have used any currently available job templates.
You can create a job template here.
Recent Job Runs
It doesn't seem like you have any recent job runs.

CHAPTER

FOUR

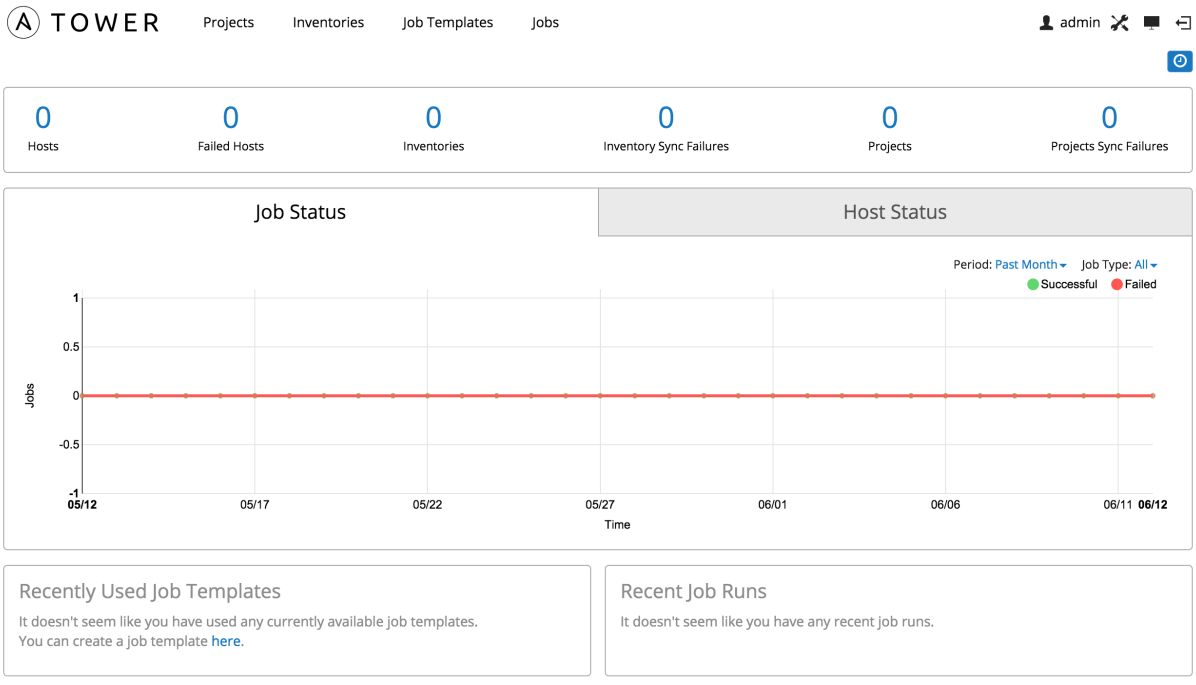
EXAMINE THE TOWER DASHBOARD

Note: Ansible Tower 2.2 provides a streamlined interface, with the  button offering access to administrative configuration needs. Users of older versions of Ansible Tower (pre-2.2) can access most of these through the top-level navigational menu.

The Tower Dashboard offers a friendly graphical framework for your IT orchestration needs. Across the top-left side of the Tower Dashboard, administrators can quickly navigate to their **Projects**, **Inventories**, **Job Templates**, and **Jobs**.

Across the top-right side of this interface, administrators can access the tools they need to configure organizations, users, groups, and permissions.

On the main Tower Dashboard screen, a summary appears listing your current *Hosts*, *Inventories*, and *Projects*. You can view charts and graphs for **Job Status** and **Host Status** by clicking on their tabs. Also available for review are summaries of **Recent Used Job Templates** and **Recent Run Jobs**.



Note: Keep in mind that the goal of this Quick Start is to launch a simple playbook. To do this, a number of configuration options must be setup. Completing the quick start configuration tasks now ensures that Tower is configured

properly and allows for easier executions of more involved playbooks later on.

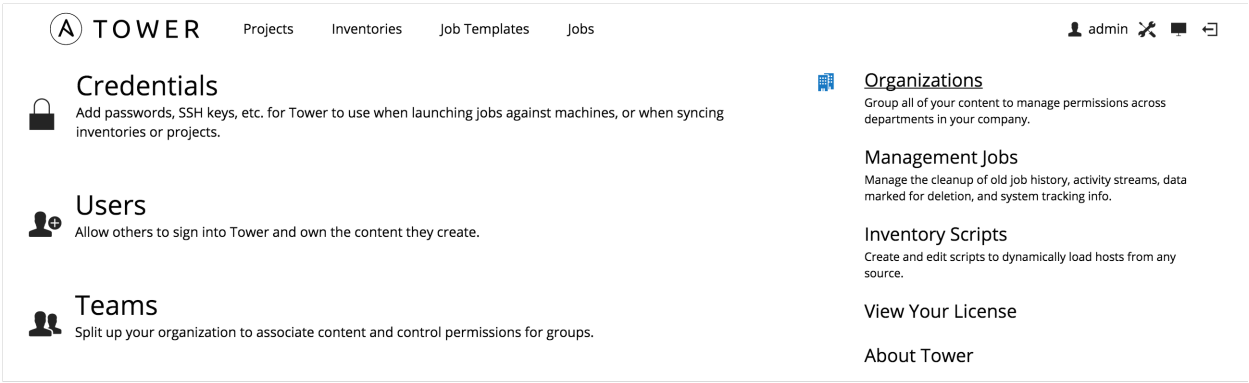
CHAPTER

FIVE

THE SETUP MENU

To enter the Setup Menu screen for Ansible Tower, click the  button. This screen allows you to create your organization, add credentials, add users and teams, schedule management jobs, and more.

Note: The Setup Menu screen is new for Ansible Tower 2.2. Users of older versions can click on the self-titled links from the main navigation menu to access **Organizations**, **Teams**, **Users**, **Credentials**, etc.

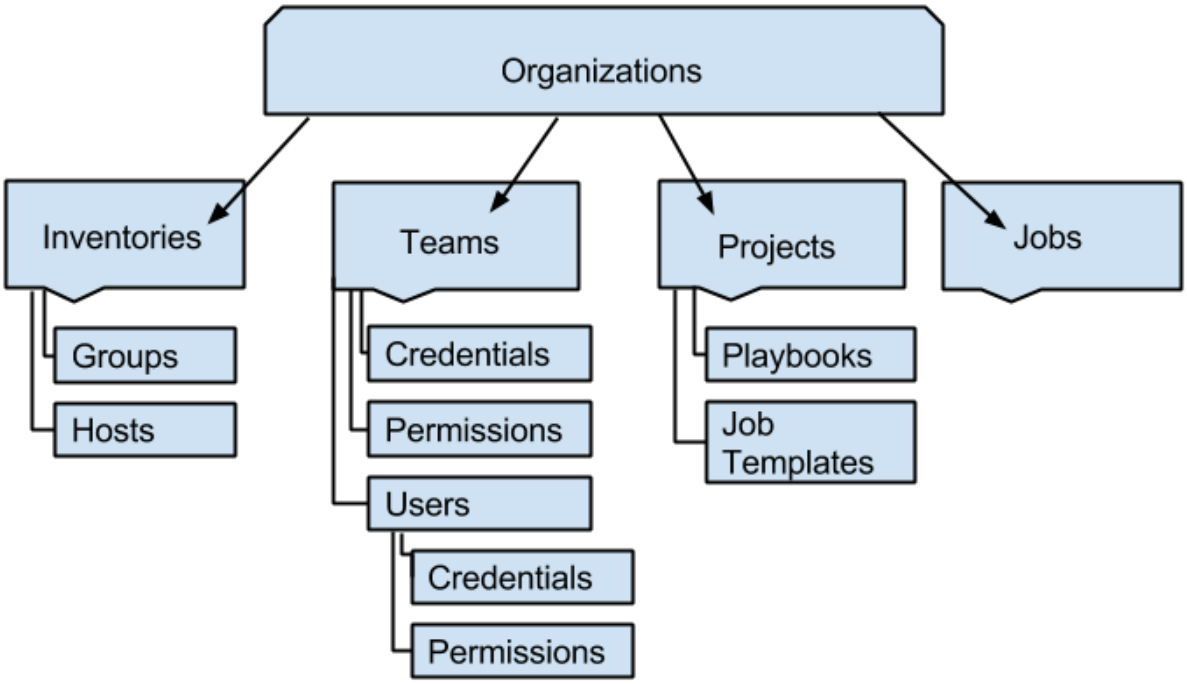


CHAPTER

SIX

REVIEW THE ORGANIZATION

An organization is a logical collection of users, teams, projects, and inventories. Consider it the highest level object in the Tower object hierarchy.



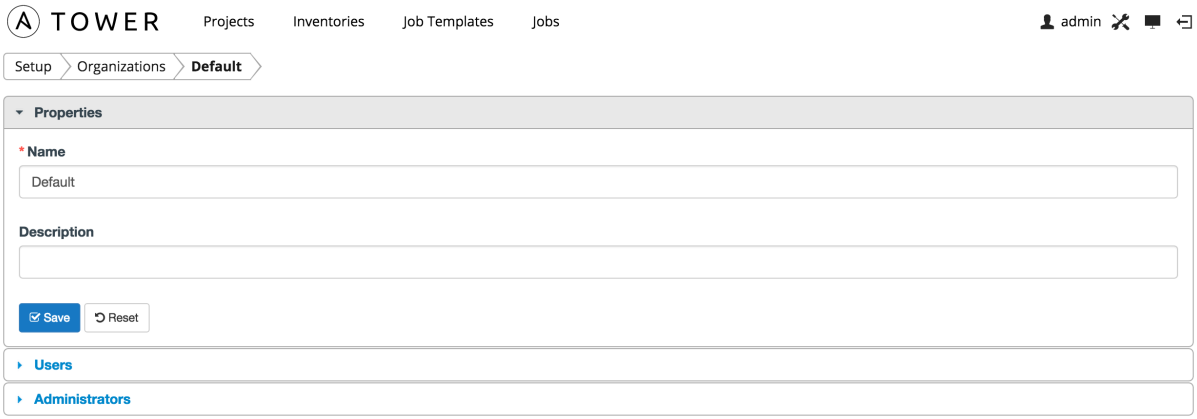
From the Setup Menu screen, click on **Organizations**.

Note: Ansible Tower 2.2 creates a default organization automatically. Users of older versions of Tower will not see

this default organization.

A default organization has been automatically created and is available to all users of Ansible Tower. It can be used as is or edited later as needed.

For the purpose of this Quick Start Guide, leave the default organization as is and click **Save**.



Note: If you are using Ansible Tower with a Basic license, you must use the default organization. Only Enterprise or Premium Tower licenses have the ability to add new organizations beyond the default.

To edit the default organization later, expand its 'Properties' and enter the appropriate details. Then, click **Save**.

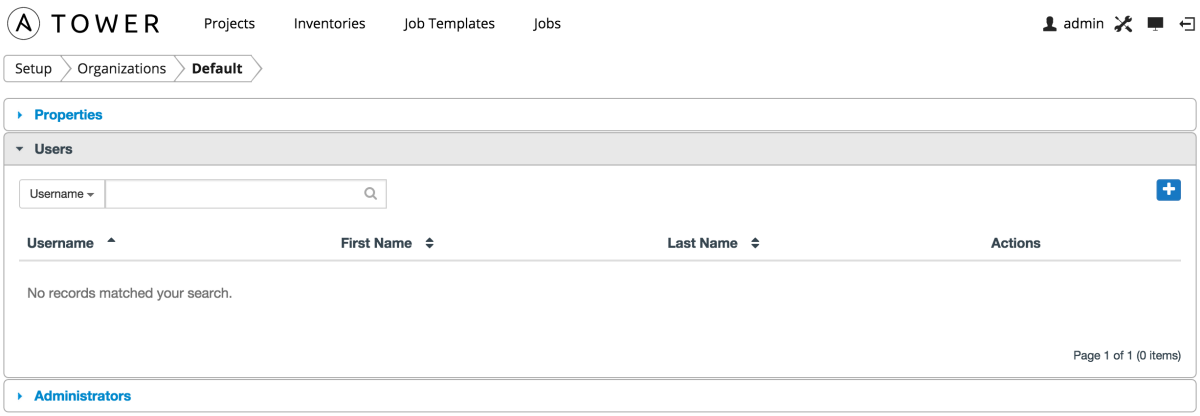
Enterprise and Premium Tower license users who want to add a new organization should refer to the Organizations section in the Tower User Guide.

CHAPTER

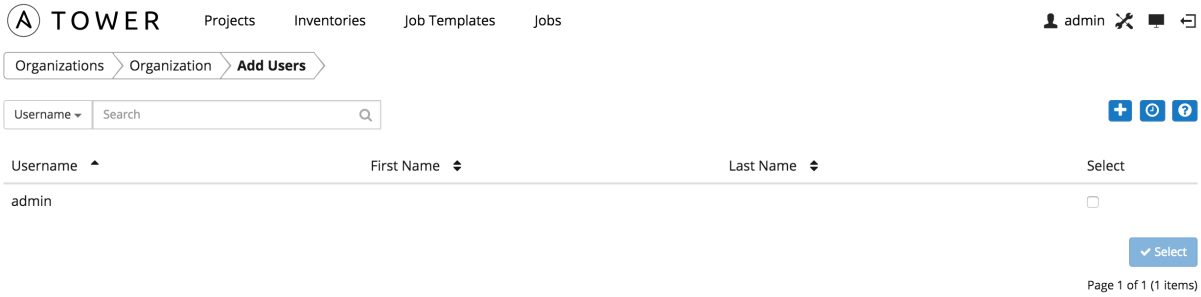
SEVEN

ADD A USER TO THE ORGANIZATION

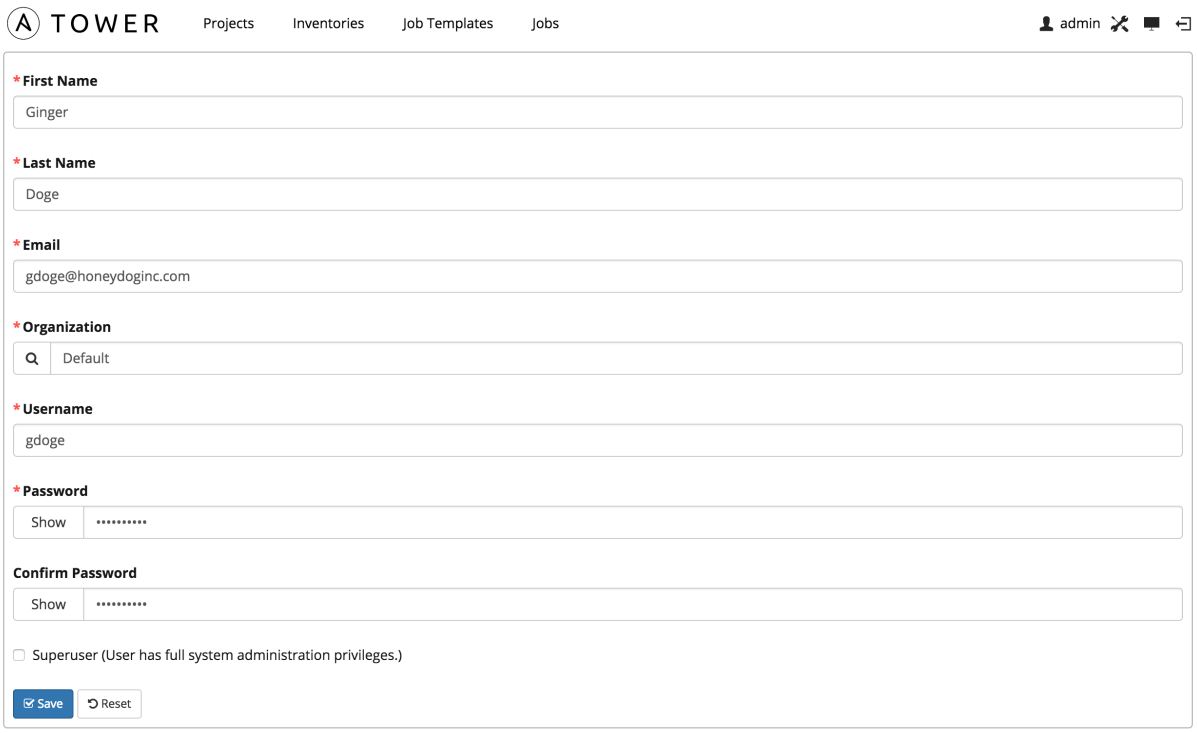
Expand the **Users** section at the bottom of the default organization you just saved (not from the Setup [] Screen's User menu item).



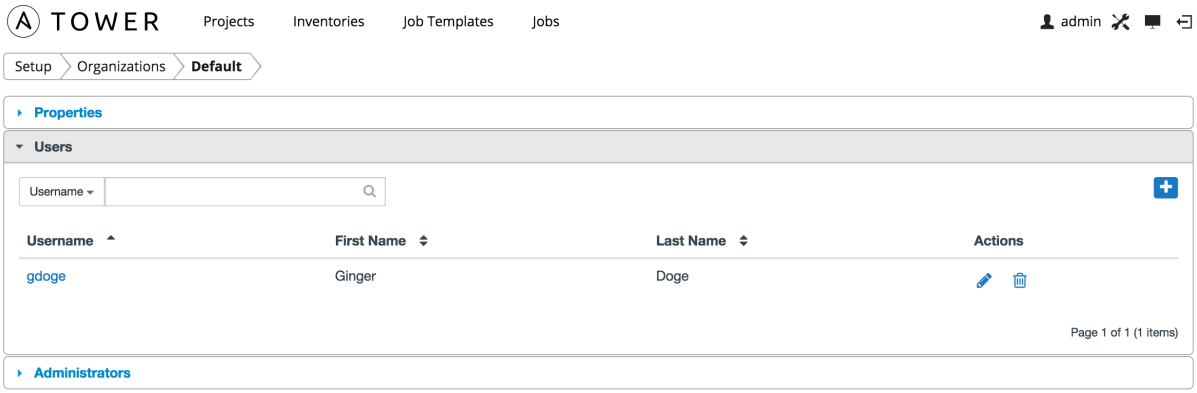
To add a user, click the  button.



Because you have not created any users yet, the "admin" user is the only user listed. Click the  button again to create a new user and enter the user's details. Leave the **Organization** field set to default for now.



Click the **Save** button. The organization's user information becomes available for viewing and the new user you created appears on the list.



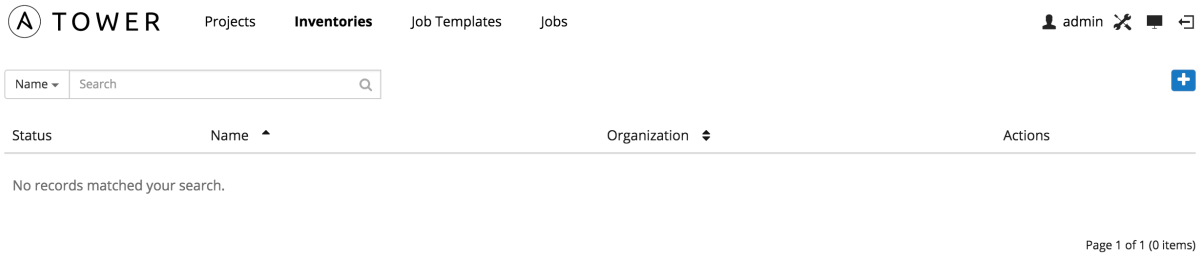
CHAPTER

EIGHT

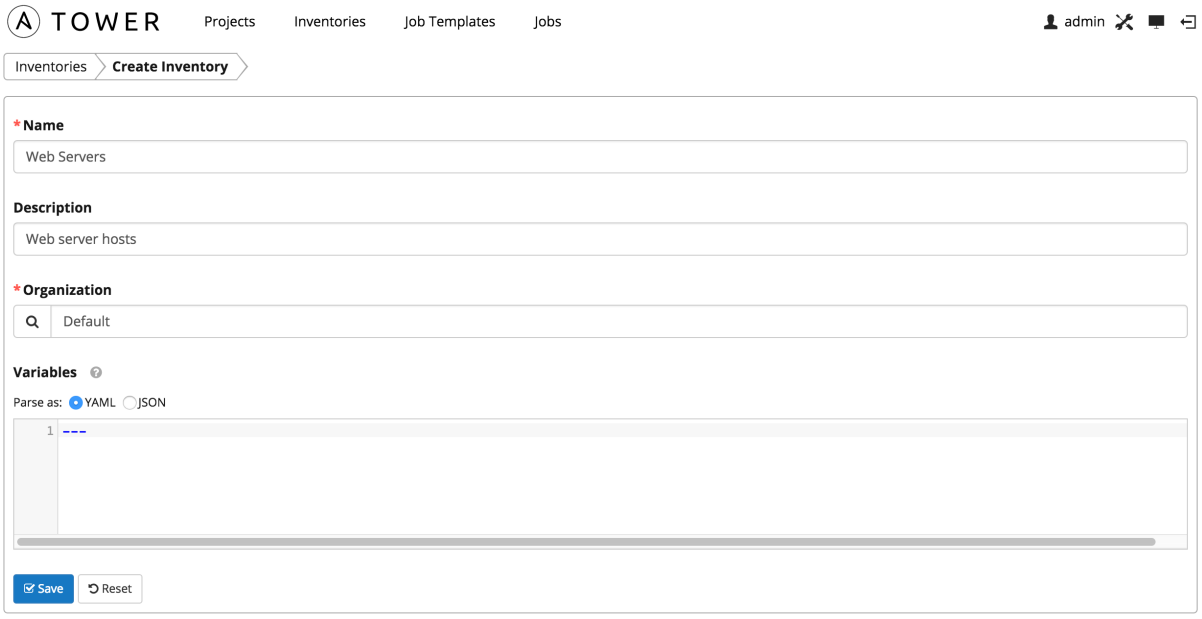
CREATE A NEW INVENTORY AND ADD IT TO THE ORGANIZATION

An inventory is a collection of hosts managed by Tower. Inventories are assigned to organizations, while permissions to launch playbooks against inventories are controlled at the user and/or team level. For more information, refer to Inventories, Users - Permissions, and Teams - Permissions in the "Tower User Guide".

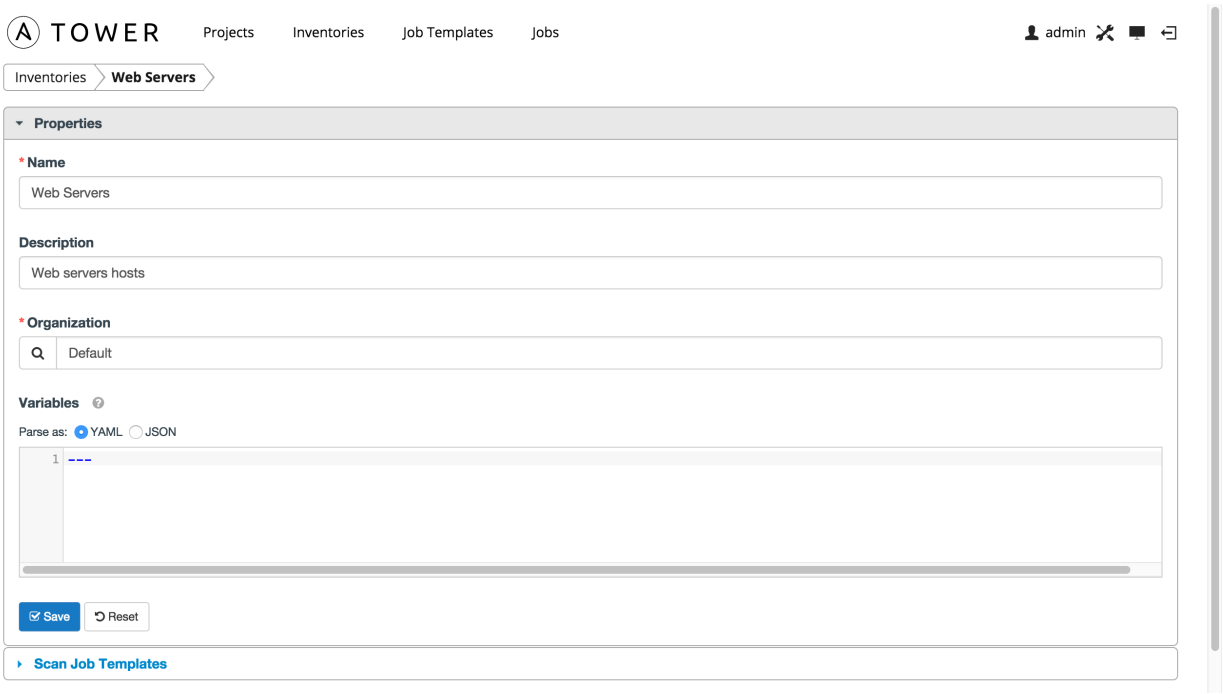
Create a new inventory by browsing to the **Inventories** main navigation link and clicking the  button.



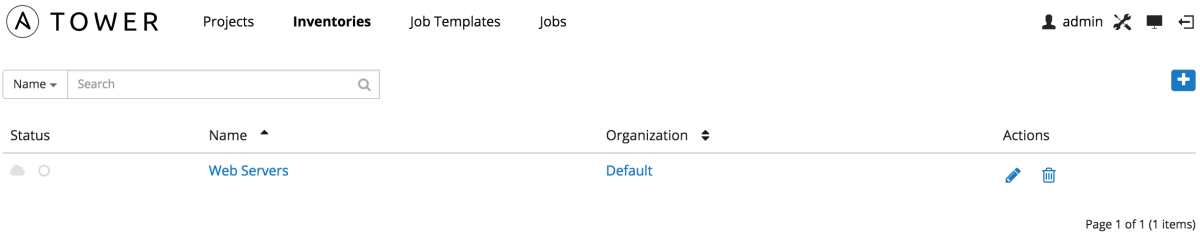
Enter the values for **Name** and **Description**. Leave the organization set as default in the **Organization** field.



For now, ignore the **Variables** field. Click the **Save** button at the bottom of the page to create the inventory.



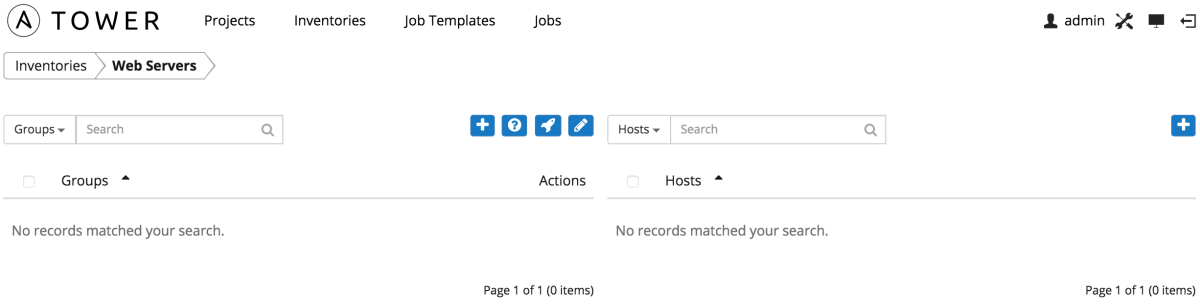
After clicking **Save**, 'Scan Job Templates' becomes available at the bottom of the screen. For now, ignore this section. For more information, refer to Job Templates in the "Tower User Guide". Click **Save** again and a populated **Inventories** screen appears.



Click on the 'Web Servers' link for the inventory you created.

Note that inventories are divided into groups and hosts. A group might represent a particular environment (e.g. "Datacenter 1" or "Stage Testing"), a server type (e.g. "Application Servers" or "DB Servers"), or any other representation of your environment.

The left side of the screen displays the groups that belong to the Web Servers inventory. The right side displays hosts.



Note: Prior to Ansible Tower 2.2, hosts could not be added to the Web Servers inventory before adding a group. If

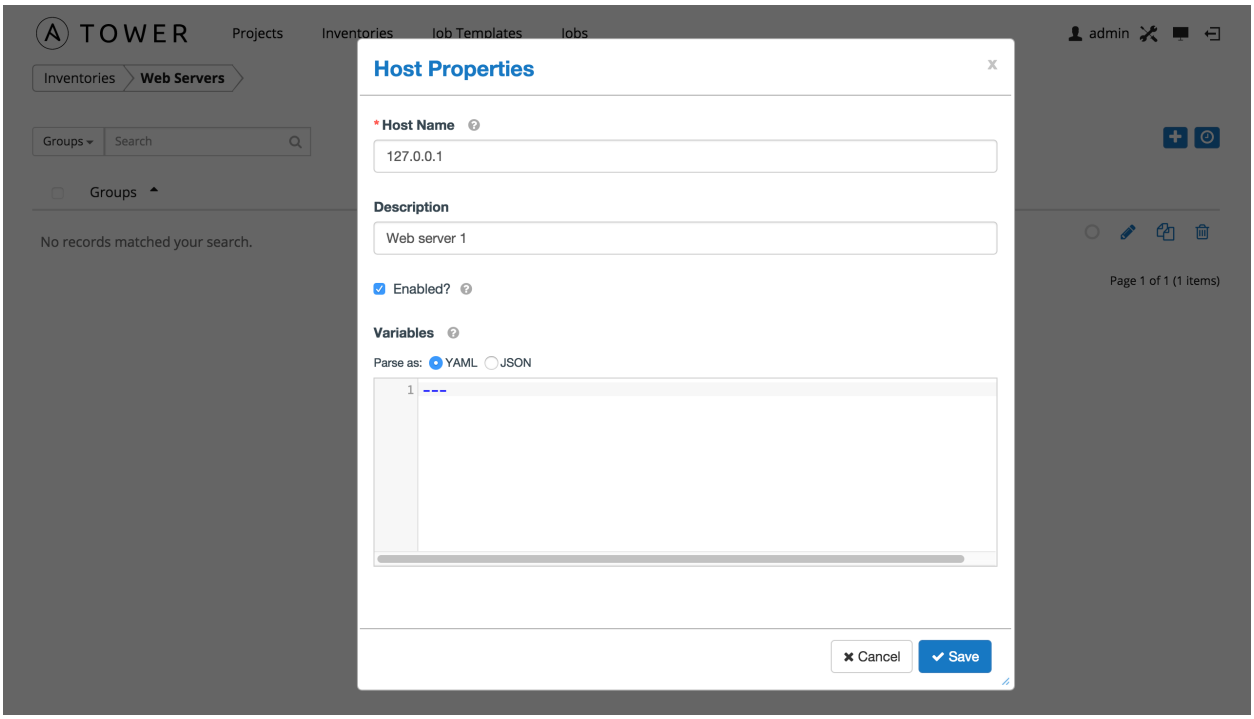
you are using an older version of Tower, click the  button above the 'Groups' section to add a group before adding a host.

For this example, suppose that the organization you created earlier has a group of web server hosts supporting the corporate CMS application. To add these hosts to the Web Servers inventory, create a "CMS Web" group. Click the **Save** button to create the group.

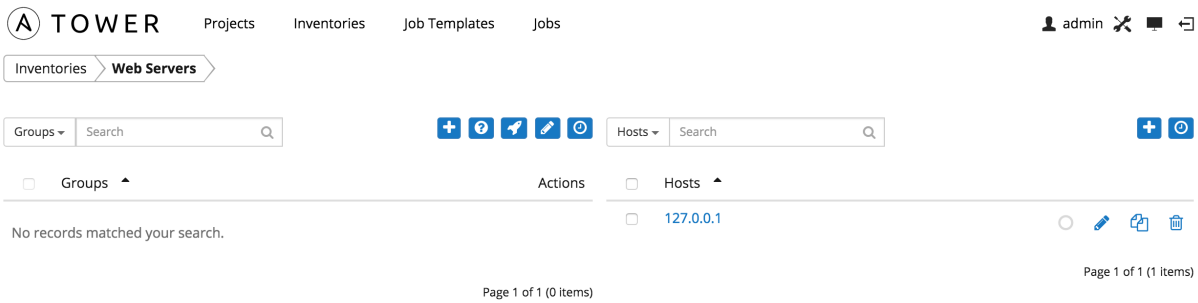
Beginning with Ansible Tower 2.2, hosts can be added directly to the inventory root or created under a group. In the "Web Servers" inventory you created, select the  button above 'Hosts' to create the new host. (To add a host to a group, click on the group to which the host should be assigned and add the host from there.)

Note: For the purposes of this Quick Start and to test that Tower is setup properly, add a host that you can reach via SSH and manage using Ansible (i.e. that meets the Ansible requirements). The simple Ansible playbook launched will not harm or alter the target in any way. If you cannot reach the host via SSH, the playbook launched later in this Quick Guide will fail.

Enter the "Host Name", either the DNS resolvable name of the host or its IP address. The **Description** is arbitrary. Click **Save** to finish adding the host.



Click **Save** to finish adding the host.


TOWER
Projects
Inventories
Job Templates
Jobs
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Inventories
Web Servers
Groups
Search
Hosts
Search
Groups
Actions
Hosts
127.0.0.1
No records matched your search.
Page 1 of 1 (0 items)
Page 1 of 1 (1 items)

CHAPTER

NINE

CREATE A CREDENTIAL

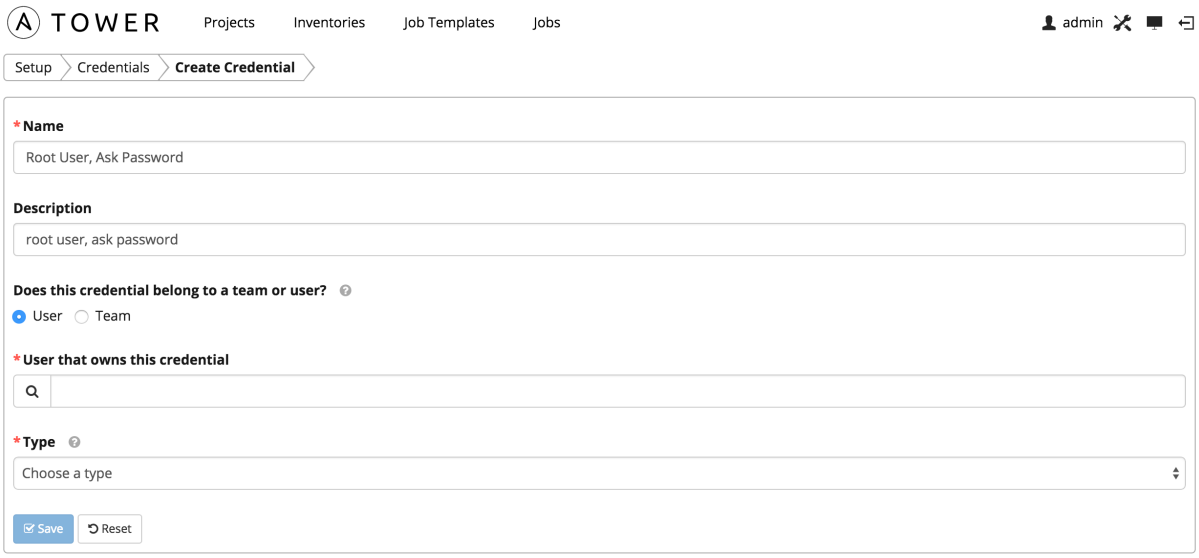
Credentials authenticate the Tower user to launch Ansible playbooks against inventory hosts, which can include passwords and SSH keys. You can also require the Tower user to enter a password or key phrase when a playbook launches using the credentials feature of Tower.

Create a new credential by browsing to and clicking on the **Credentials** link from the  button.

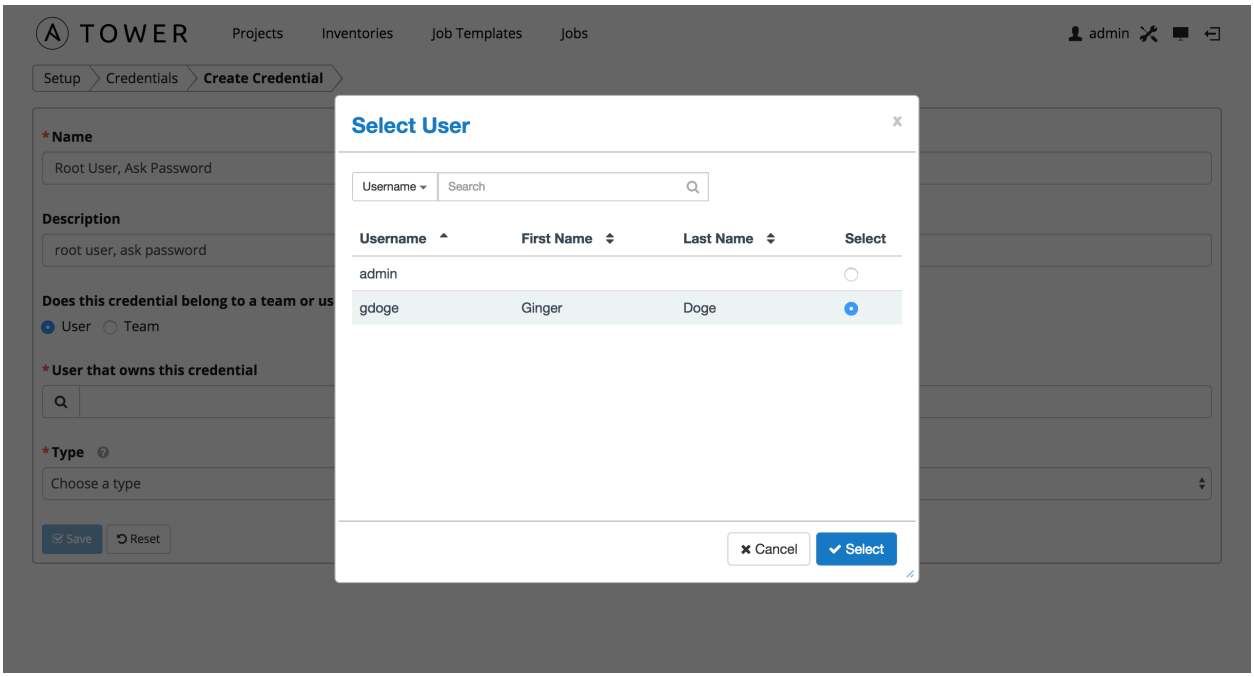
Note: When setting up your credential, keep in mind that the user you assign must have root access or be able to use SSH to connect to the host machine.

Click the  button to create a new credential.

Enter an arbitrary **Name** and **Description** for this credential based on the user you created earlier. Select the "User" radio button.



Click the button to find the user you created earlier, then select that user.

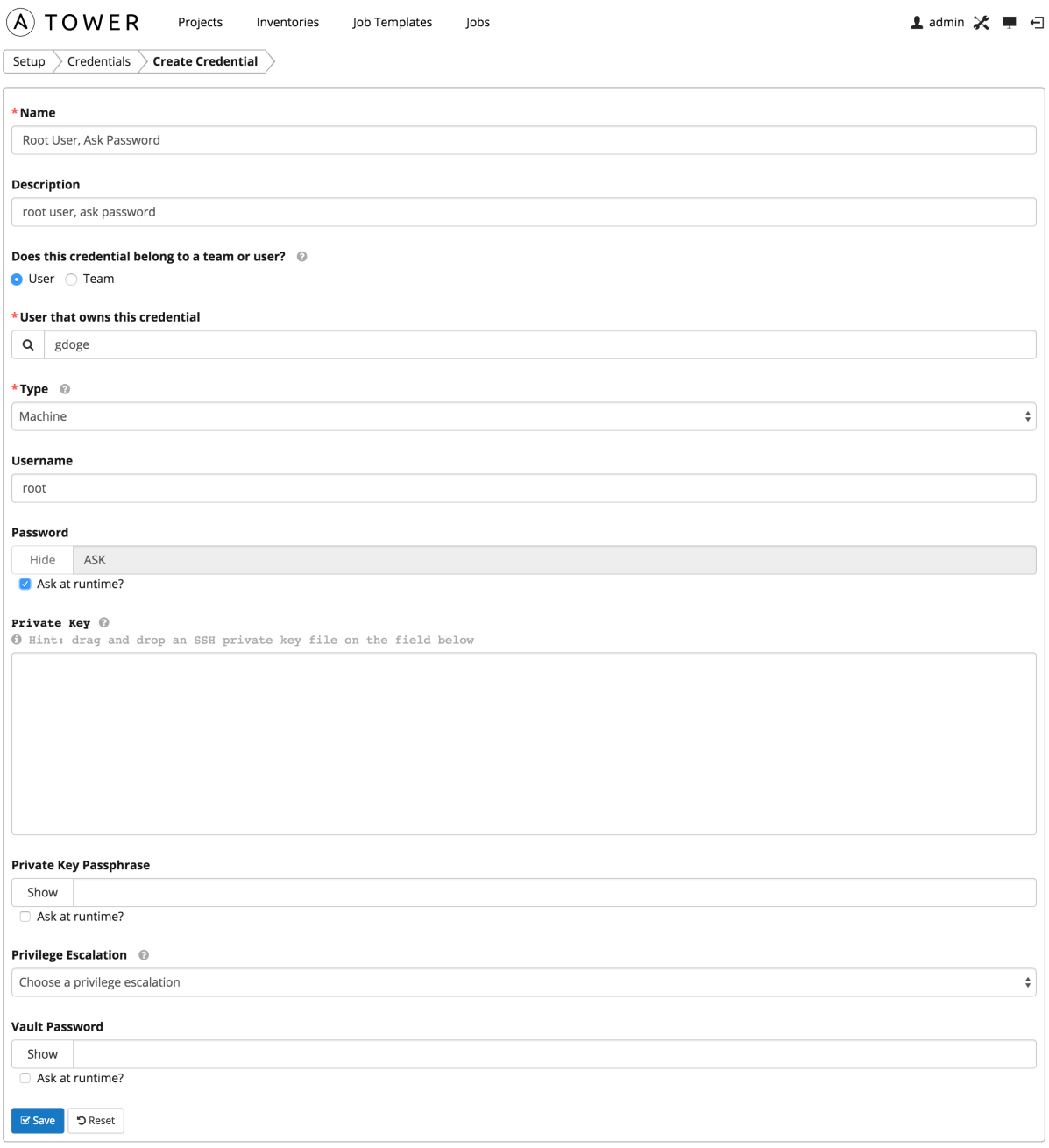


Next, select credential type **Machine**.

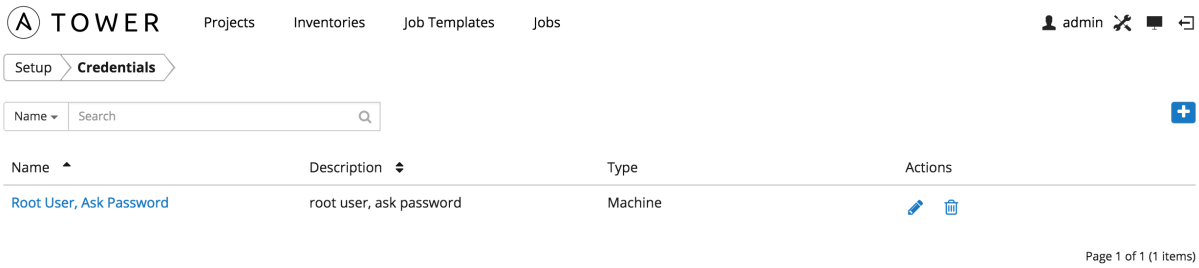
Enter the details of the appropriate authentication mechanism to use for the host you added to Tower earlier. For testing purposes, remember to use credentials for a real host that you can access via SSH. To keep things simple, rather than entering the password here, you will enter it later when a playbook launches using these credentials. Check the box **Ask at runtime?**.

Note: Tower supports different options for what you want to store for credentials in this box. Uploading a locked SSH key is recommended and Tower can prompt you for the SSH unlock password for use with ssh-agent when launching the job. Tower encrypts passwords and key information in the Tower database and never makes secret information

visible via the API.



Click **Save** and your newly created credential appears.


TOWER
Projects
Inventories
Job Templates
Jobs
admin
Setup
Credentials
Name
Search
Name
Description
Type
Actions
Root User, Ask Password
root user, ask password
Machine
Page 1 of 1 (1 items)

CHAPTER

TEN

SETTING UP A PROJECT

There are two ways to access a simple playbook for this Quick Start example–manually or by specifying a link from a Github repository.

Note: It is recommended that, whenever possible, you use source control to manage your playbooks. This type of best practice provides the ability to treat your infrastructure as code and is in line with DevOps ideals.

10.1 Using Github for Playbook Access

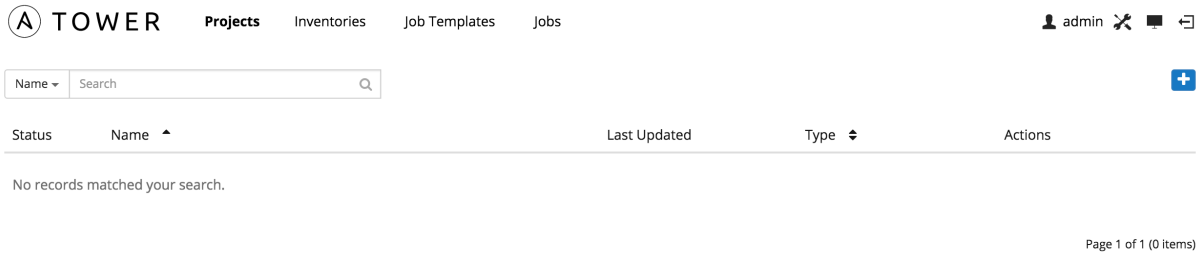
Linking a playbook from Github

Using a Github link offers an easy way to use a playbook. To help get you started, use the `helloworld.yml` file available at: `https://github.com/ansible/tower-example.git`

This link offers a very similar playbook to the one created manually in the instructions below. Using it will not alter or harm your system in anyway.

Create the project

Using your web browser, create the new project by clicking on the **Projects** link at the top of the Tower Dashboard.



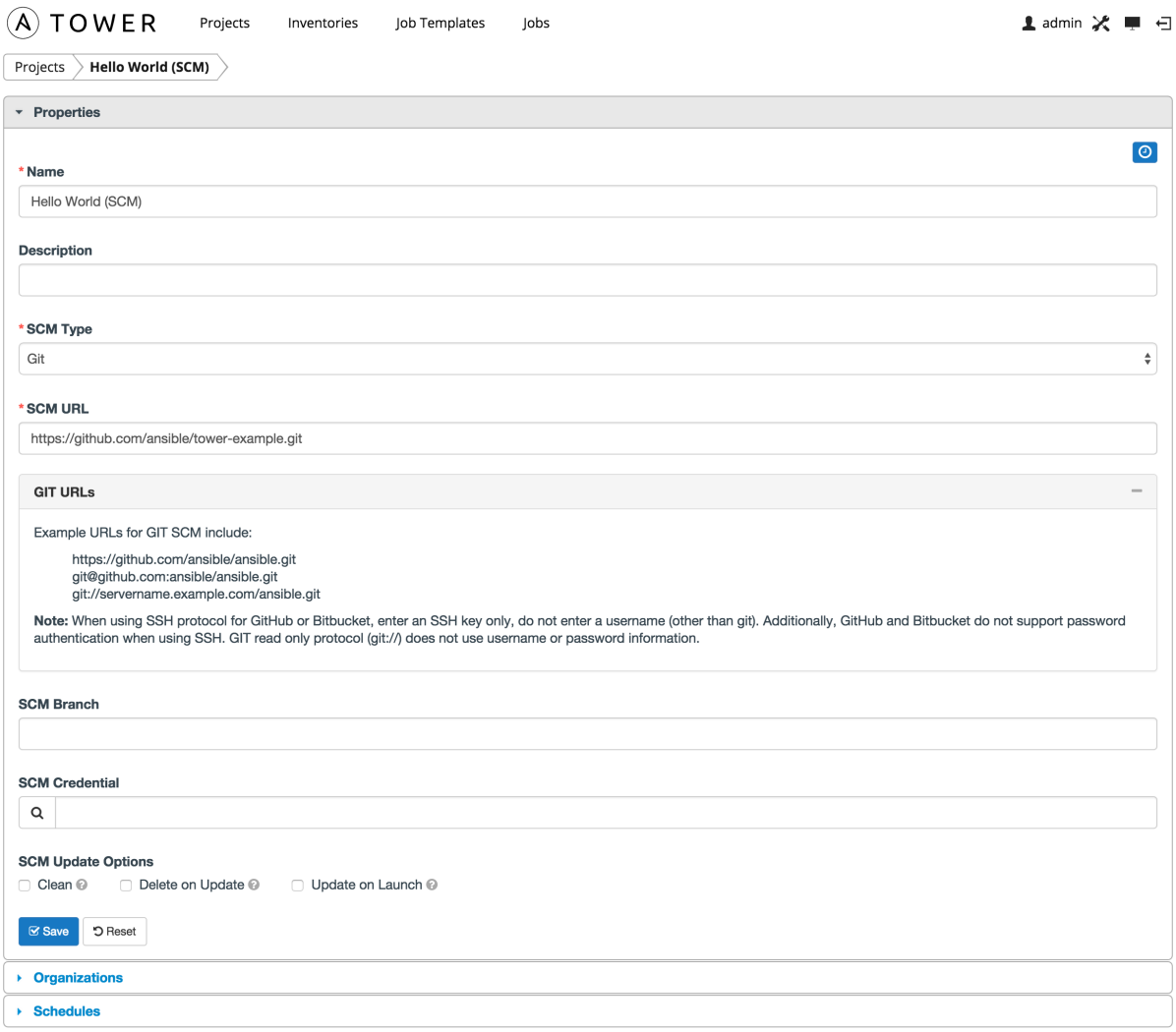
Click the  button, then enter a **Name** and **Description** for the project.

The **Project Base Path** displays the value entered during the installation of Tower. You cannot edit it from this dialog. (Refer to the Administration Guide for more information on how to alter this value.)

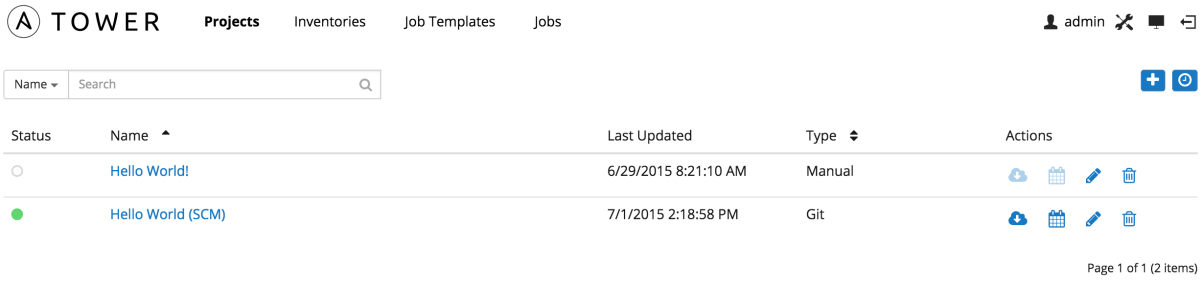
Set the **SCM Type** *Git*.

Playbook Setup:

Under **SCM URL**, provide the Github address to the playbook. For the purposes of this Quick Start, ignore the **SCM Branch**, **SCM Credential**, and **SCM Update Options** input fields.



Select **Save** and the new project displays.



10.2 Accessing a Manually Created Playbook

Creating a playbook

Using a command line console as the root user, create a subdirectory for your project on the Tower server filesystem, in which to store your Ansible playbooks for this project.

Make a new project directory by creating it on the Tower filesystem under the **Project Base Path** directory, located by default in "/var/lib/awx/projects/". For this example, the directory is `helloworld`.

```
root@localhost:~$ mkdir /var/lib/awx/projects/helloworld
```

Next, use your preferred editor to create a simple Ansible playbook. Make a file called "helloworld.yml" inside of the directory you just created.

```
root@localhost:~$vi /var/lib/awx/projects/helloworld/helloworld.yml
```

The contents of the file are below:

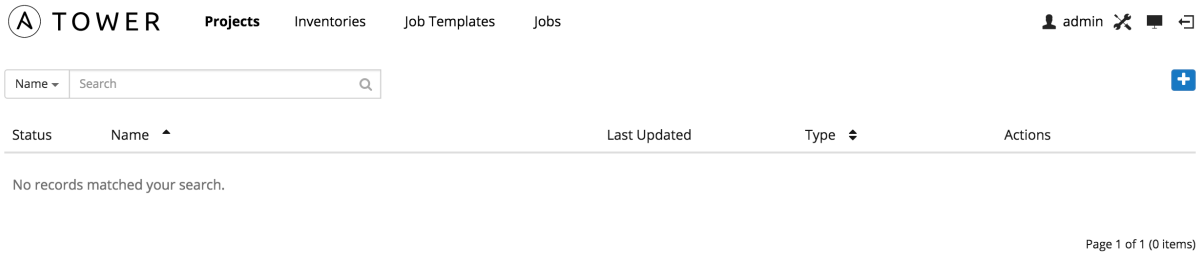
```
---
- name: Hello World!
  hosts: all

  tasks:

  - name: Hello World!
    shell: echo "Hi! Tower is working!"
```

Please take note of the indentation as it plays an important role. Once saved, this playbook file can test Tower running a playbook against the host in the inventory.

Note: If you have trouble navigating to the directories mentioned above or creating the `helloworld.yml` file due to permissions, use `sudo` as you execute your commands if you do not have root access.

Create the project

Using your web browser, create the new project by clicking on the **Projects** link at the top of the Tower Dashboard.



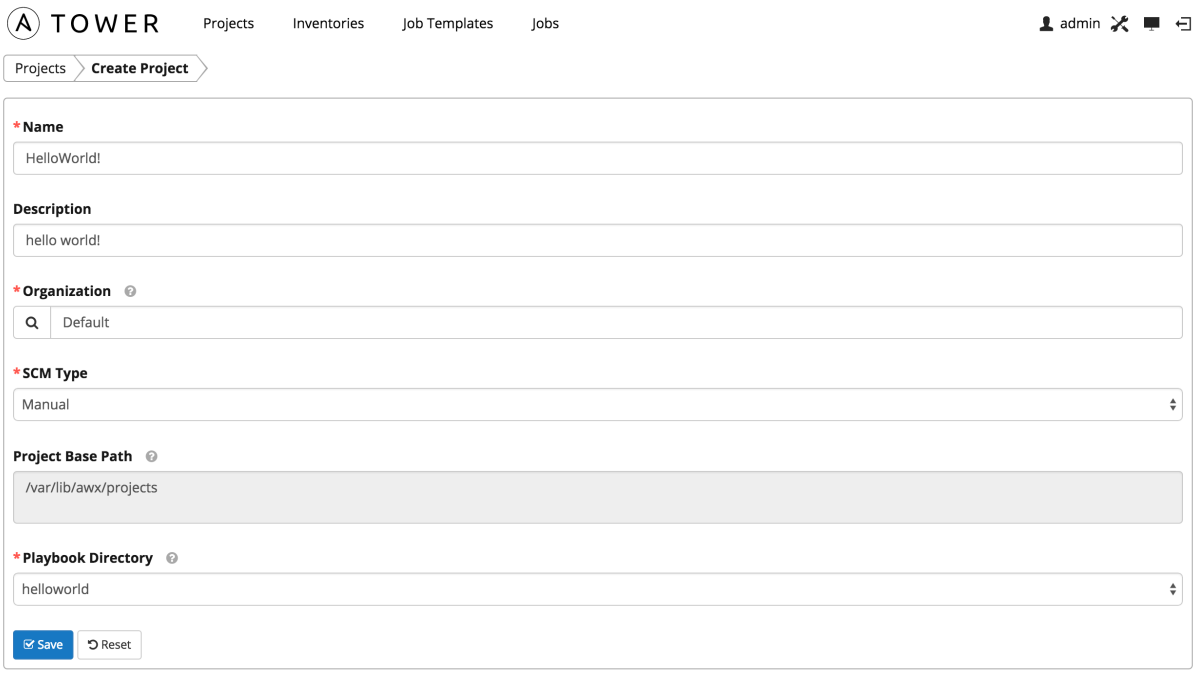
Click the  button, then enter a **Name** and **Description** for the project.

The **Project Base Path** displays the value entered during the installation of Tower. You cannot edit it from this dialog. (Refer to the Administration Guide for more information on how to alter this value.)

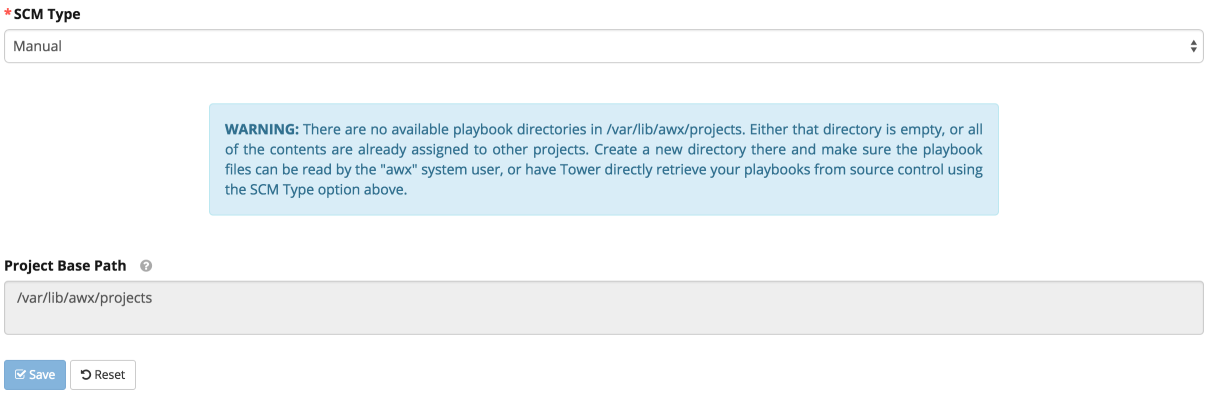
Set the **SCM Type** to *Manual*.

Playbook Setup:

For the **Playbook Directory**, select a value which corresponds to the subdirectory you created.

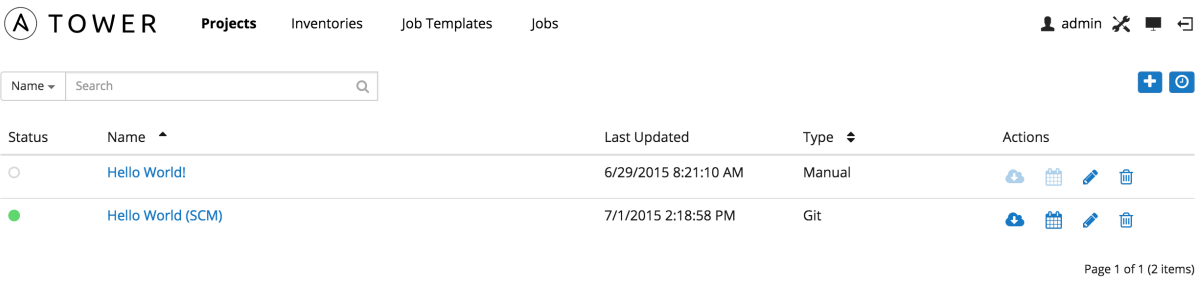


Warning: If the `helloworld/` project directory and file are incorrectly created, and if the permissions are incorrect, you will encounter the following message:



Double check your settings and use the command `chown -R awx` against the project directory, if necessary. If SE Linux is enabled, check the directory and file context.

Select **Save** and the new project displays.

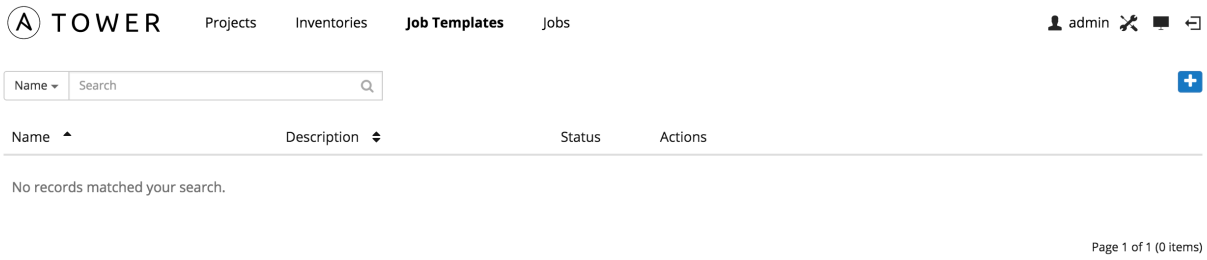


CHAPTER

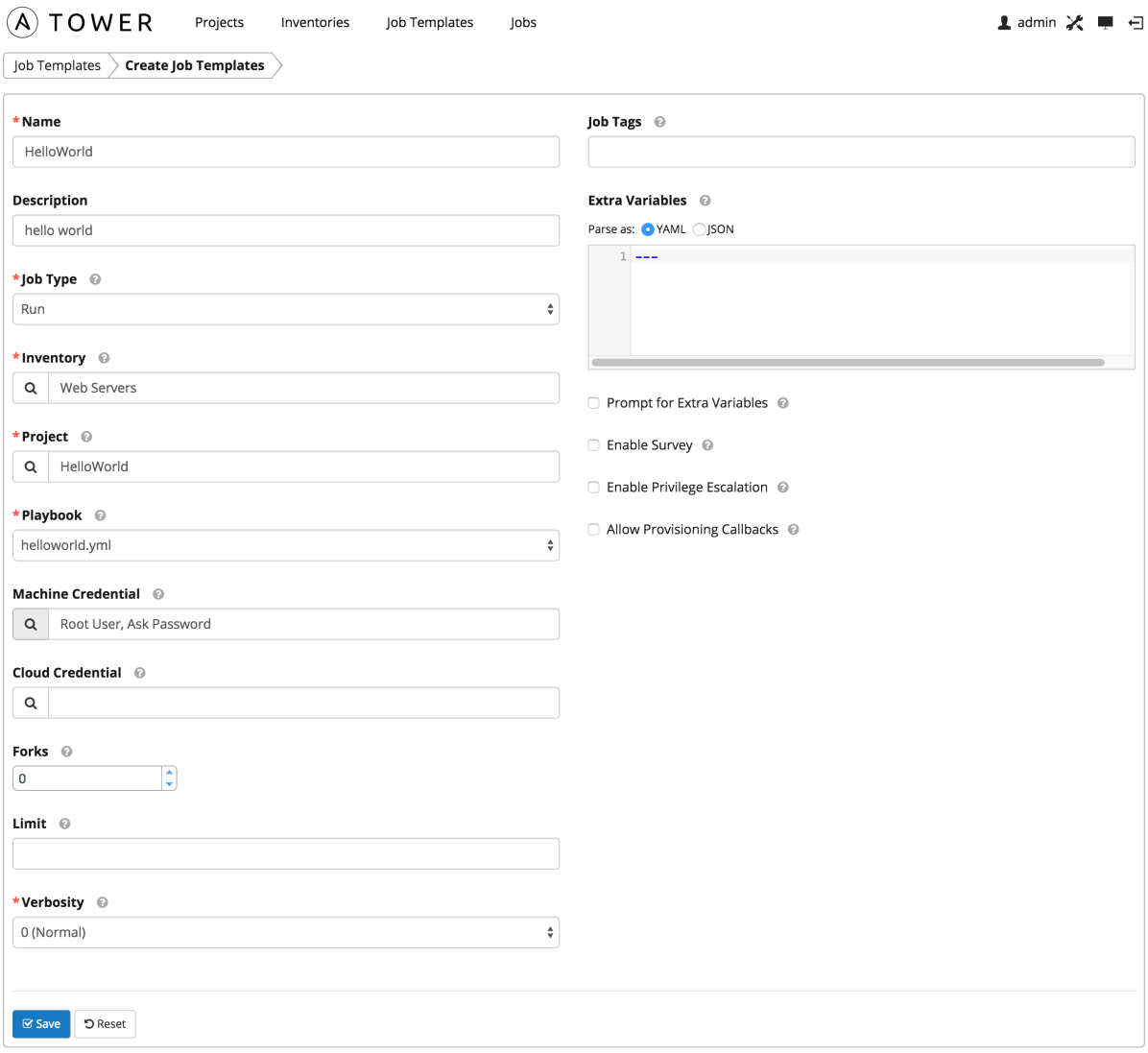
ELEVEN

CREATE A NEW JOB TEMPLATE

A job template combines an Ansible playbook from a project and the settings required to launch it. Create a new job template by browsing to **Job Templates**.



Click the  button.

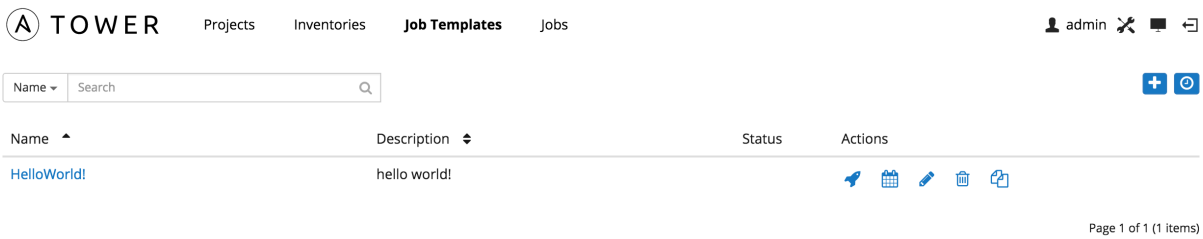


Enter values for the **Name** and **Description**. Jobs can be of type **Run**, **Check**, or **Scan**. Select **Run** for this Quick Start.

Choose the **Inventory**, **Project**, and **Credential** from those you created earlier. The playbook drop-down menu automatically populates from the project path and playbook we created earlier. Choose the **"helloworld"** playbook.

You can leave the other values, such as **Cloud Credential**, **Forks**, **Limit**, and **Job Tags** set to their default values or blank. Select the **Verbosity** level to control the output ansible produces as the playbook executes. Refer to Job Templates for more information.

Click **Save** and the new project displays.

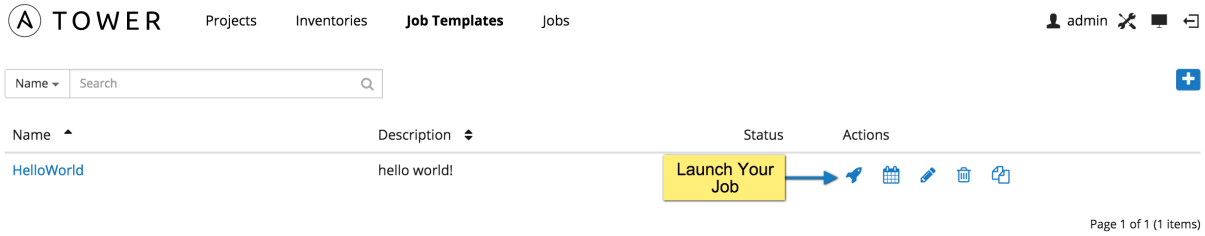


CHAPTER

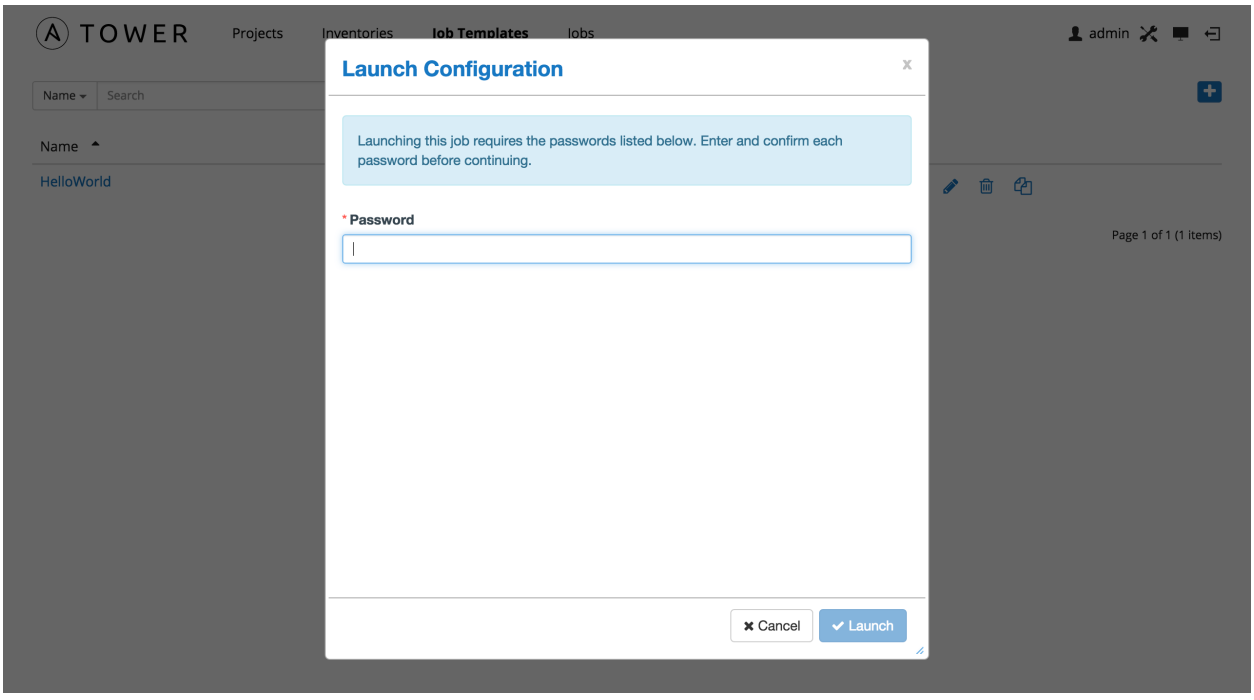
TWELVE

LAUNCH IT!

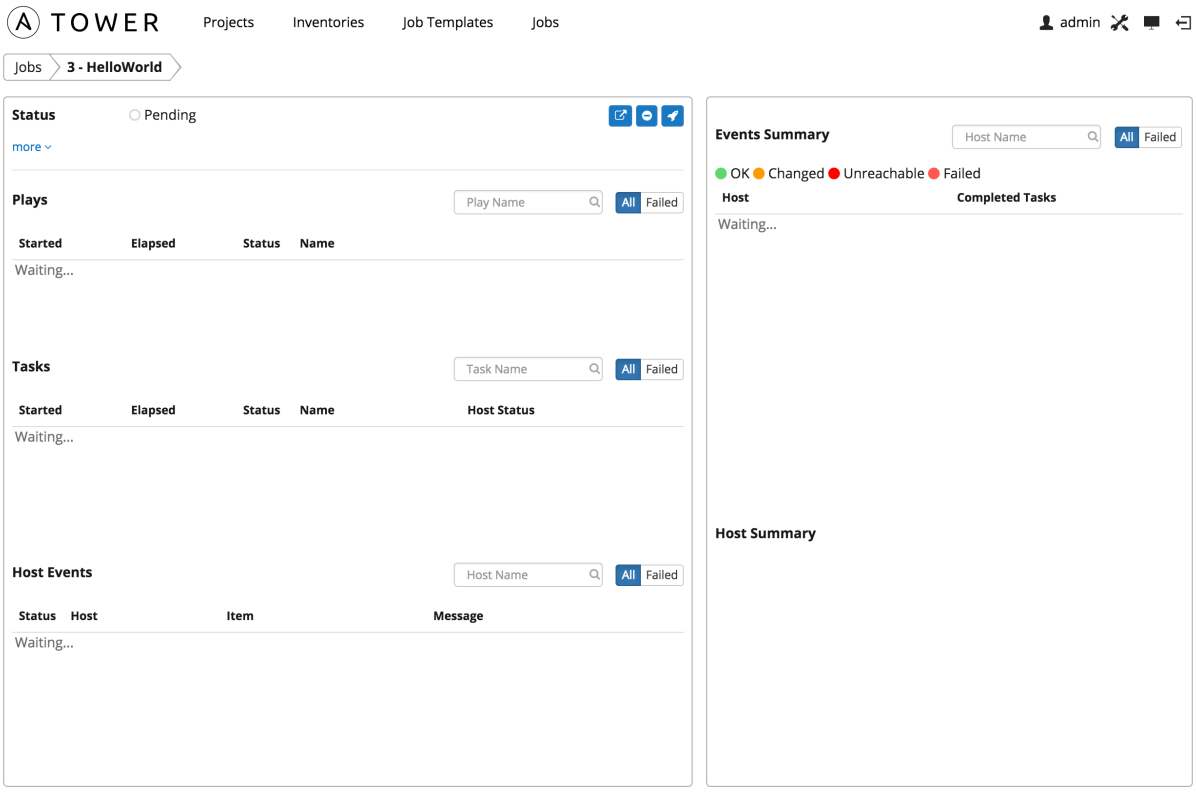
To launch the playbook, browse to the **Job Templates** tab and click the  button on the template.



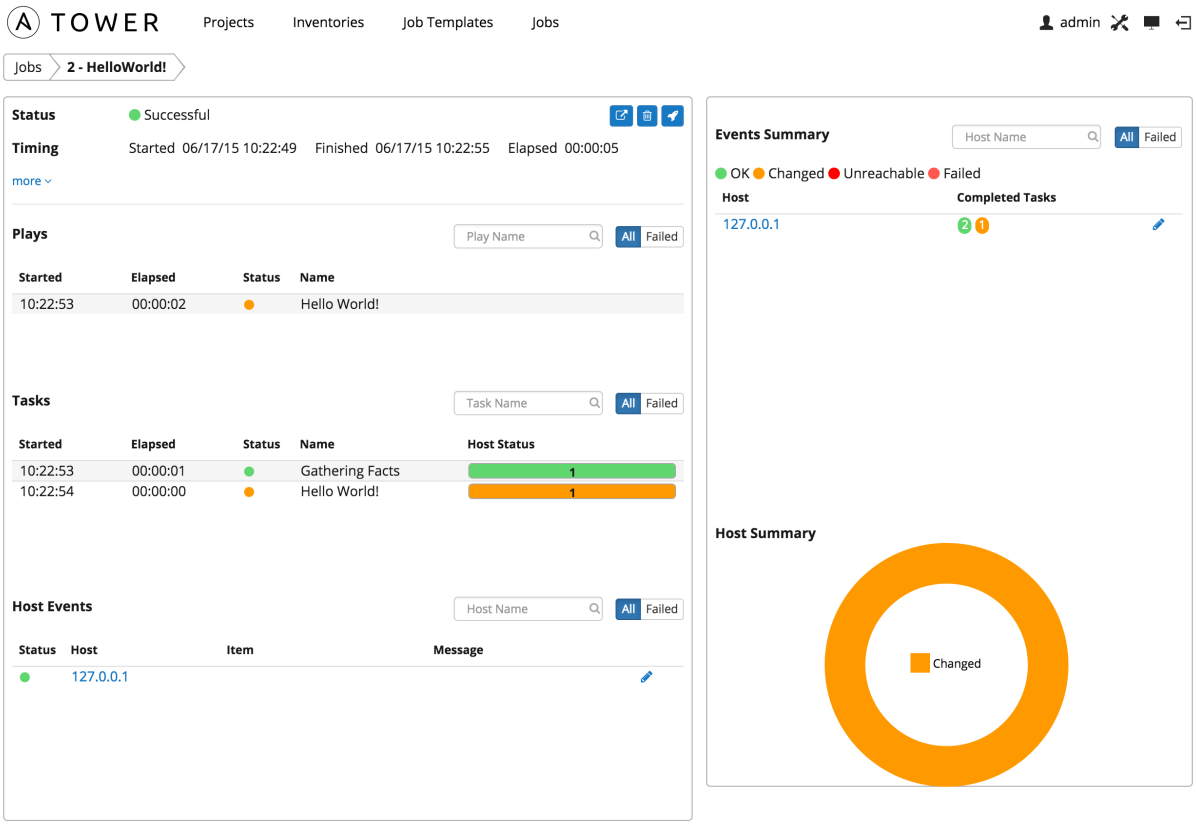
Tower prompts you for the any passwords you configured when setting up the credential. Enter and confirm your secure password(s).



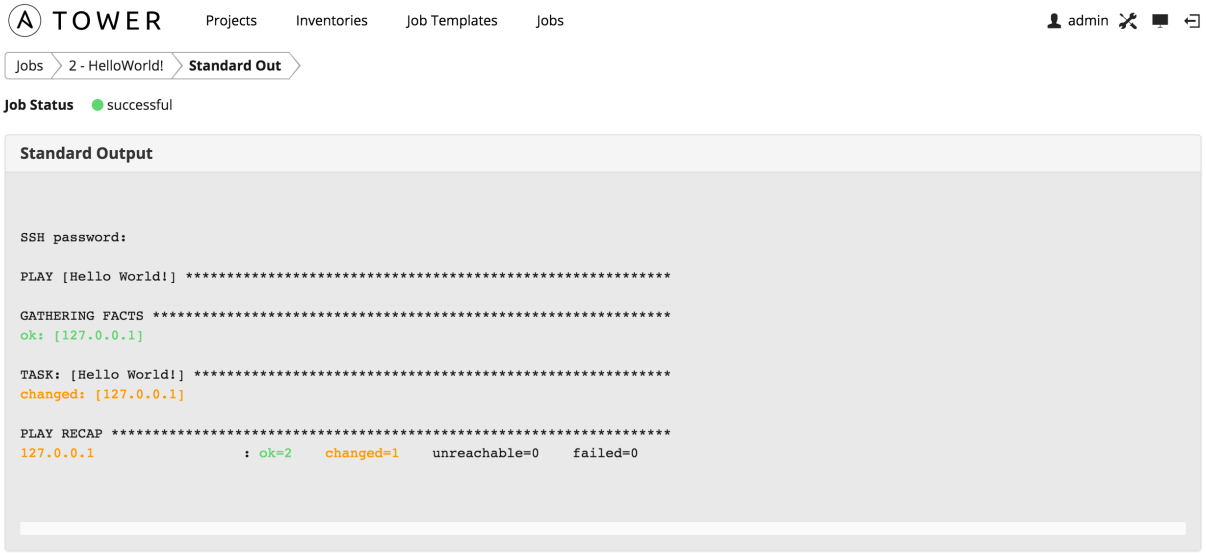
Tower redirects the browser to the status page for this job from the **Jobs** link, where you can watch this job as it runs.



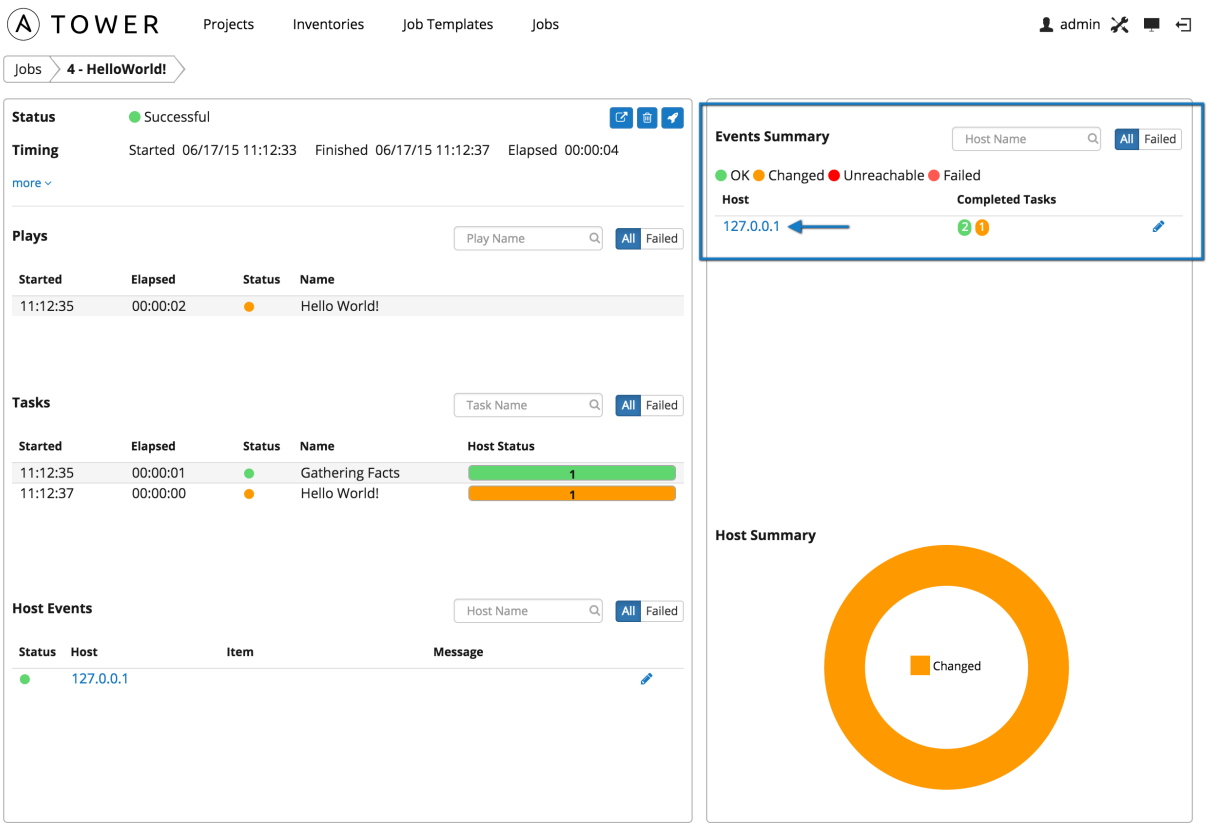
This page automatically refreshes using Tower's Live Event feature until the job is complete.



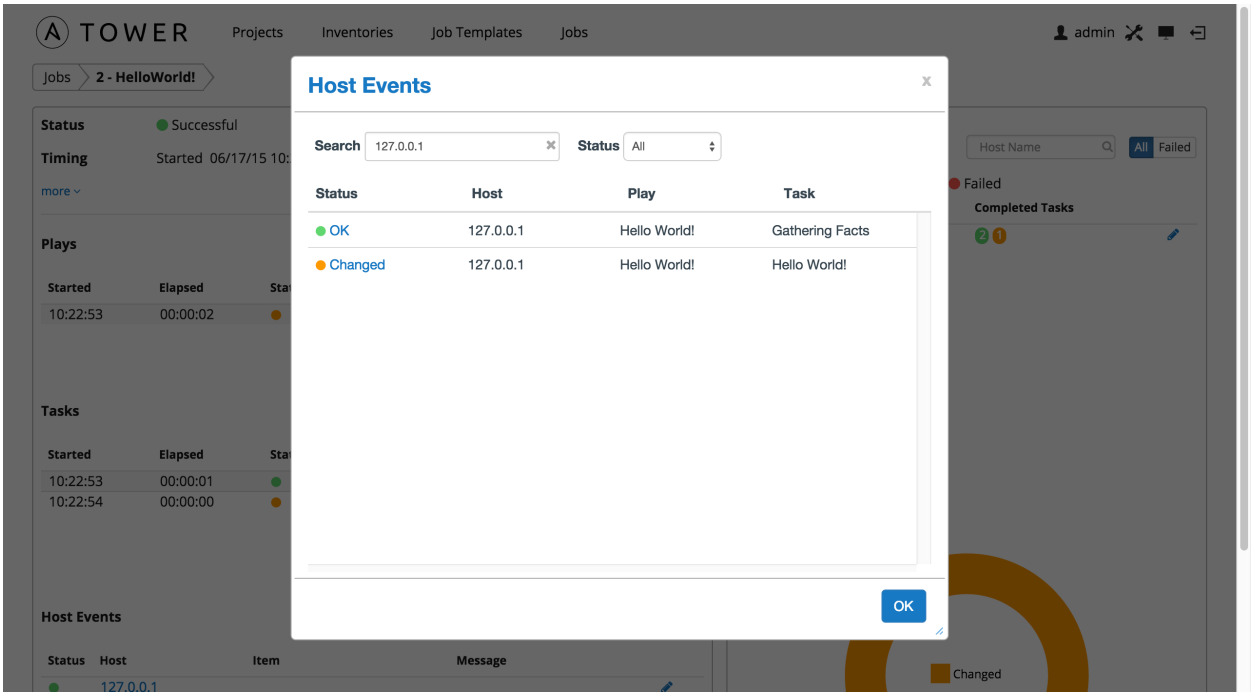
To view the standard output for the job once it has finished, click the  button.



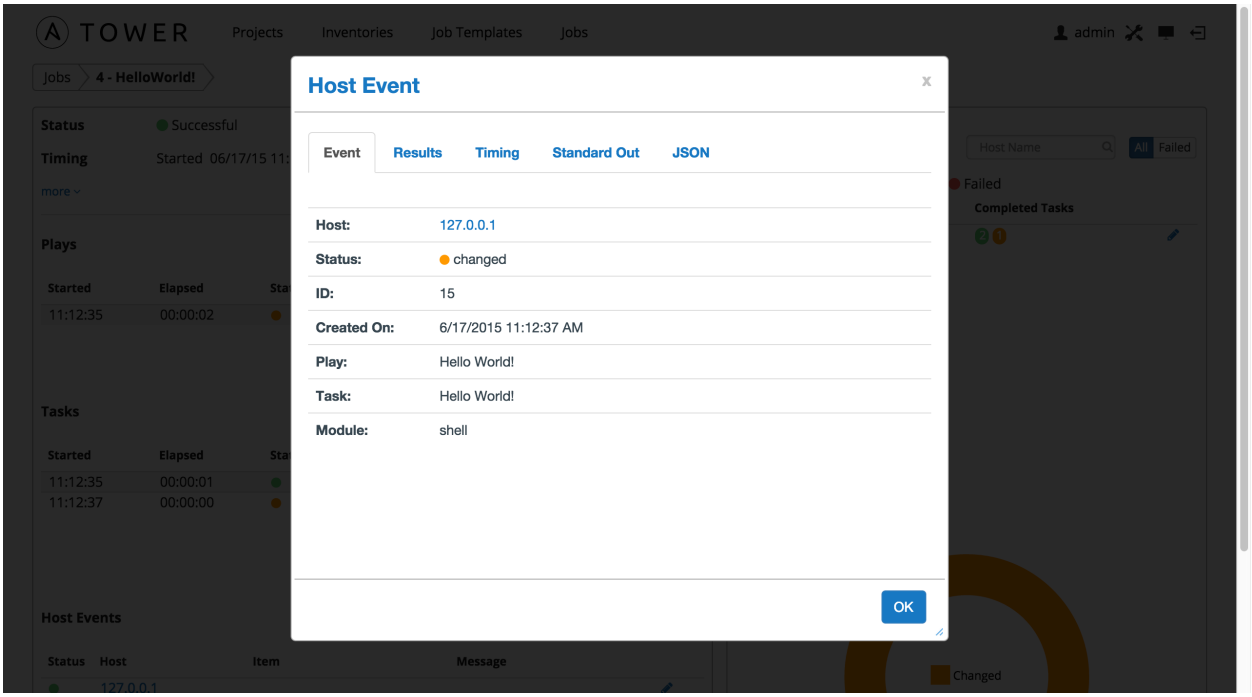
You can also drill down into individual tasks.



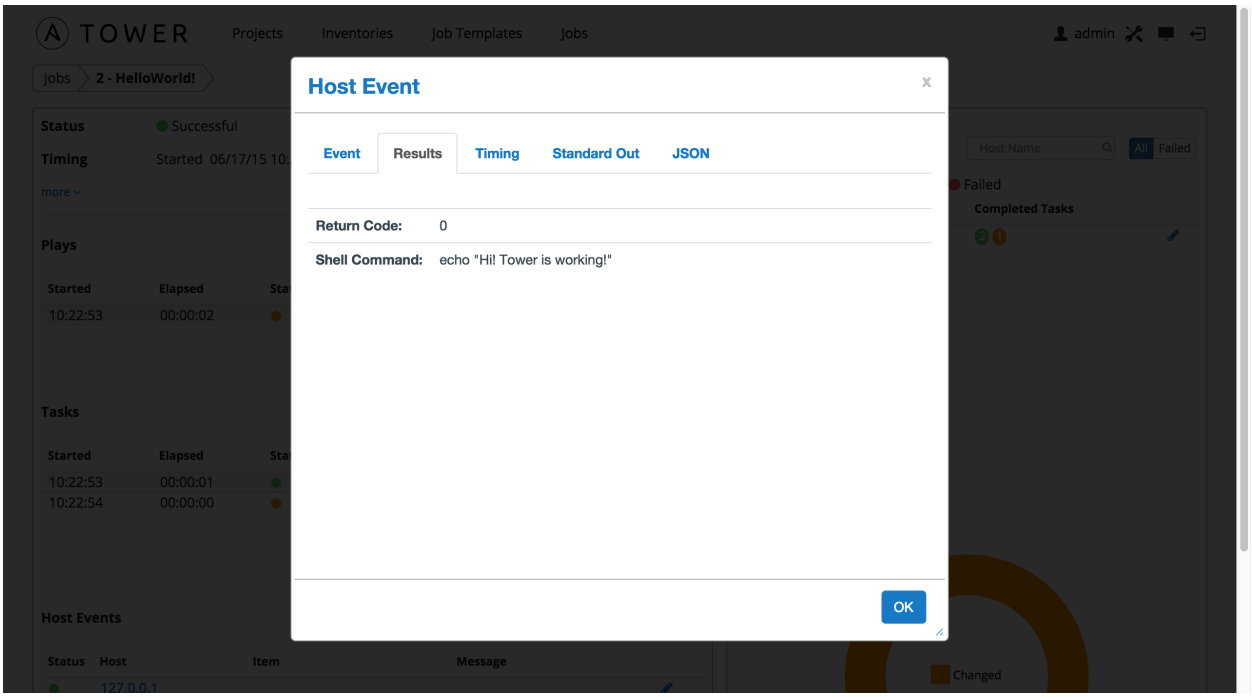
Select the `127.0.0.1` host entry under **Events Summary** to see the events for that host.



To view an event's details, click on any event in the list:



Click **Results**.



Congratulations! Your Tower installation is officially setup and running properly. To learn more about these Tower features or to learn about administration tasks, the Tower API, etc., refer to the following documentation sets:

- Ansible Tower User Guide
- Ansible Tower Installation and Reference Guide
- Ansible Tower Administration Guide
- Ansible Tower API Guide

- Ansible Documentation.

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