Ansible Tower on the AWS Cloud

Quick Start Reference Deployment

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This guide is also available in HTML format at https://docs.aws.amazon.com/quickstart/latest/ansible-tower/.

Contents

About This Guide

This Quick Start reference deployment guide discusses the steps for deploying and testing Ansible Tower on the Amazon Web Services (AWS) Cloud. It provides links for viewing and launching the AWS CloudFormation templates that automate the Ansible Tower deployment, and creates Ansible-aware Amazon Elastic Compute Cloud (Amazon EC2) instances. The guide also explains how you can configure Ansible Tower to pull EC2 instances and their metadata into the Ansible Tower dashboard.

The Quick Start is for IT infrastructure architects, administrators, and DevOps professionals who are planning to implement Ansible Tower to manage their AWS compute resources. It supports Ansible Tower version 3.*x*.

> **AWS OpsWorks option** This Quick Start is for customers who want to run and manage an Ansible Tower infrastructure on AWS. However, we recommend that you also take a look at AWS OpsWorks, which is a configuration management service provided by AWS, to determine if it's more suitable for your needs. AWS OpsWorks helps you configure and operate applications of all types and sizes. You can define the application's architecture and the specification of each component, including package installation, software configuration, and resources such as storage. For more information, see the AWS OpsWorks User Guide.

Quick Links

The links in this section are for your convenience. Before you launch the Quick Start, please review the architecture, configuration, and other considerations discussed in this guide.

- If you have an AWS account, and you're already familiar with AWS services and Ansible Tower, you can launch the Quick Start to deploy Ansible into a new or existing virtual private cloud (VPC) in your AWS account. The deployment takes approximately 20 minutes. If you're new to AWS or Ansible Tower, please review the implementation details and follow the step-by-step instructions provided later in this guide.

Launch (for new VPC) **Launch (for existing VPC)**

- If you want to take a look under the covers, you can view the AWS CloudFormation templates that automate the deployment. You can customize each template during launch, or download and extend it for other projects.

View template (for new VPC) View template (for existing VPC)

About Quick Starts

Quick Starts are automated reference deployments for key workloads on the AWS Cloud. Each Quick Start launches, configures, and runs the AWS compute, network, storage, and other services required to deploy a specific workload on AWS, using AWS best practices for security and availability.

Overview

Ansible Tower on AWS

Ansible is an IT DevOps tool that automates provisioning, configuration management, application deployment, intra-service orchestration, continuous delivery, and many other IT processes.

Ansible is designed for multi-tier deployments. Instead of managing systems individually, it models your IT infrastructure by describing the inter-relationships among all your systems.

Ansible Tower is a web-based user interface for Ansible. Its visual dashboard lets you schedule and deploy Ansible playbooks, and provides centralized logging, auditing, and system tracking.

A key advantage to Ansible over other automation engines is that it uses no agents and no additional custom security infrastructure, which simplifies deployment. Ansible uses a very simple, human-readable language called *YAML* for Ansible playbooks, to manage configuration, deployment, and orchestration tasks. Ansible works by connecting to your nodes and running small programs, called *Ansible modules*, to configure the resource for your system. Ansible executes these modules over Secure Shell (SSH) by default, and removes them when finished.

Cost and Licenses

You are responsible for the cost of the AWS services used while running this Quick Start reference deployment. There is no additional cost for using the Quick Start. See the pricing pages for each AWS service you will be using for full details.

This Quick Start deploys Ansible Tower on the AWS Cloud along with the Linux Ansible client. Ansible Tower is subject to the Ansible Software Subscription and Services Agreement. A free trial of Ansible Tower is available for managing up to 10 hosts. After you deploy the Quick Start, you can follow the step-by-step instructions in this guide to acquire the 10-host trial license.

Ansible is installed as part of the Ansible Tower installation and is licensed under the GNU General Public License version 3.

AWS Services

The core AWS components used by this Quick Start include the following AWS services. (If you are new to AWS, see the Getting Started section of the AWS documentation.)

- Amazon EC2 – The Amazon Elastic Compute Cloud (Amazon EC2) service enables you to launch virtual machine instances with a variety of operating systems. You can choose from existing Amazon Machine Images (AMIs) or import your own virtual machine images.
- Amazon VPC – The Amazon Virtual Private Cloud (Amazon VPC) service lets you provision a private, isolated section of the AWS Cloud where you can launch AWS services and other resources in a virtual network that you define. You have complete control over your virtual networking environment, including selection of your own IP address range, creation of subnets, and configuration of route tables and network gateways.
- AWS CloudFormation – AWS CloudFormation gives you an easy way to create and manage a collection of related AWS resources, and provision and update them in an orderly and predictable way. You use a template to describe all the AWS resources (for example, EC2 instances) that you want. You don't have to individually create and configure the resources or figure out dependencies—AWS CloudFormation handles all of that.
- IAM – AWS Identity and Access Management (IAM) enables you to securely control access to AWS services and resources for your users. With IAM, you can centrally manage users, security credentials such as access keys, and permissions that control which AWS resources users can access.

Architecture

Deploying this Quick Start for a new VPC with the **default parameters** builds the following environment in the AWS Cloud.

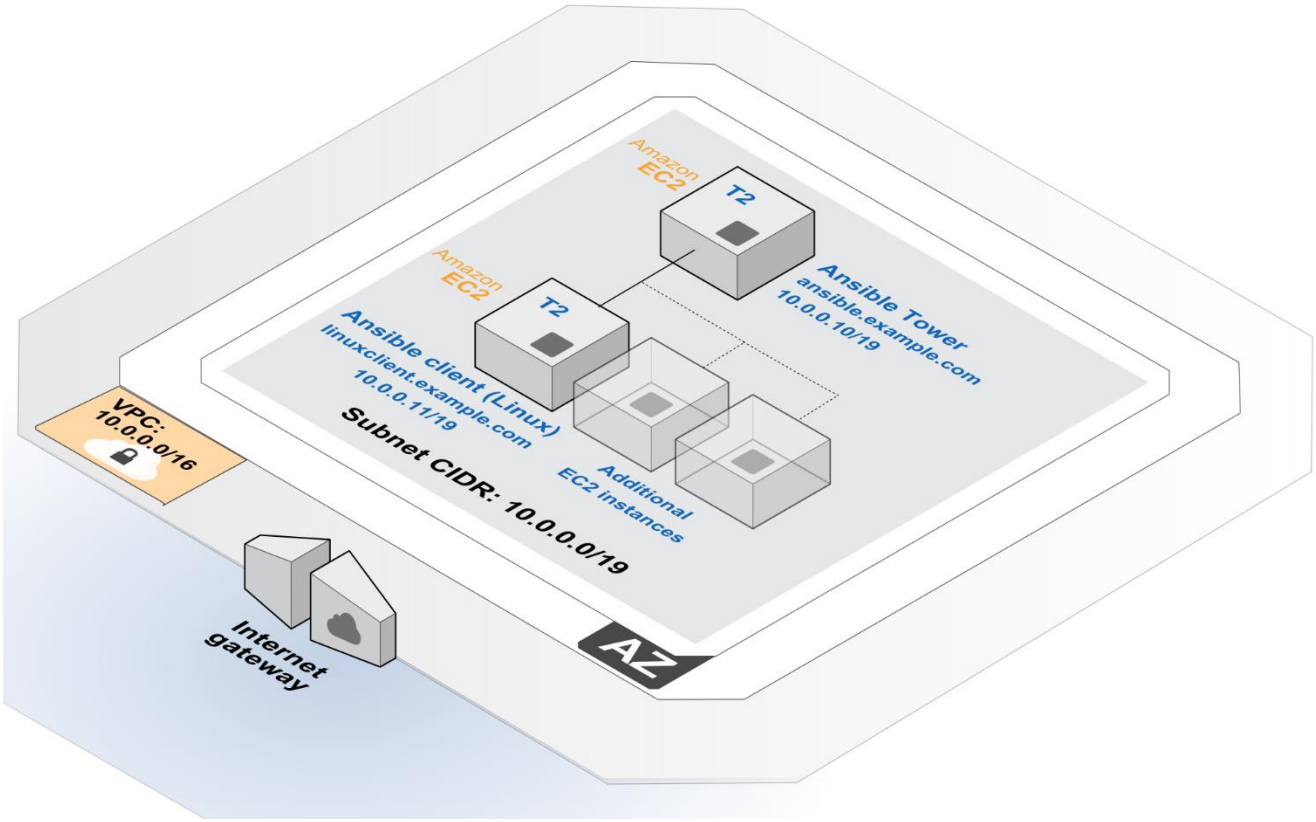


Figure 1: Quick Start architecture for Ansible Tower on AWS

The Quick Start sets up the following:

- A VPC configured with a single, public subnet in an Availability Zone, to provide you with your own virtual network on AWS.*
- An Internet gateway to allow access to the Internet.*
- One Linux client instance deployed into the public subnet.
- One Ansible Tower instance deployed into the public subnet.

* The template that deploys the Quick Start into an existing VPC skips the tasks marked by asterisks and prompts you for your existing VPC configuration.

Ansible Tower Installation

This Quick Start deploys Ansible Tower version 3 on an EC2 instance that is running CentOS 7 or Red Hat Enterprise Linux (RHEL) 7. The installation is automated with a user data script that executes when the instance is launched via AWS CloudFormation. Ansible Tower installation files are installed directly from Ansible's release server.

In addition to installing Ansible Tower, the Quick Start also deploys a Linux client into the VPC. The client is tagged with the key **Tower**. After you deploy the Quick Start, you'll use this key to identify and manage the client in Ansible Tower. We'll provide step-by-step instructions for doing that in step 6 of the deployment section.

Deployment Options

This Quick Start provides two deployment options:

- **Deploy Ansible Tower into a new VPC** (end-to-end deployment). This option builds a new AWS environment consisting of the VPC, subnets, NAT gateways, security groups, and other infrastructure components, and then deploys Ansible Tower into that new VPC.
- **Deploy Ansible Tower into an existing VPC**. This option provisions Ansible Tower in your existing AWS infrastructure.

The Quick Start provides separate templates for these options. It also lets you configure additional settings such as CIDR blocks and instance types, as discussed later in this guide.

Deployment Steps

The procedure for deploying and testing Ansible Tower on AWS consists of the following steps. For detailed instructions, follow the links for each step.

- Step 1. Prepare an AWS account

  This involves signing up for an AWS account, choosing a region, creating a key pair, and requesting increases for account limits, if necessary.

- Step 2. Subscribe to the CentOS or RHEL AMI

  You'll need to subscribe to the CentOS or RHEL AMI from the AWS Marketplace before you launch the Quick Start.

- Step 3. Launch the Quick Start

  In this step, you'll launch the AWS CloudFormation template into your AWS account, specify parameter values, and create the stack. The Quick Start provides separate templates for end-to-end deployment and deployment into an existing VPC.

- Step 4. Create a user account

  Create a user account for Ansible Tower, and assign it the IAM `PowerUserAccess` policy. Alternatively, you can use an existing administrator account.

- Step 5. Get an Ansible Tower trial license

  Connect to your Ansible Tower via a web browser and follow the steps to license Ansible Tower.

- Step 6. Configure and manage EC2 instances in Ansible Tower

  Configure Ansible Tower with EC2 integration, integrate AWS compute resources into the Ansible Tower inventory, and add other managed instances that you can view and configure in Ansible Tower.

Step 1. Prepare Your AWS Account

1. If you don't already have an AWS account, create one at https://aws.amazon.com by following the on-screen instructions. Part of the sign-up process involves receiving a phone call and entering a PIN using the phone keypad.
2. Use the region selector in the navigation bar to choose the AWS Region where you want to deploy Ansible Tower on AWS.

   Amazon EC2 locations are composed of *Regions* and *Availability Zones*. Regions are dispersed and located in separate geographic areas. We recommend that you check the availability of AWS services before you choose a region. Otherwise, deployment will fail.

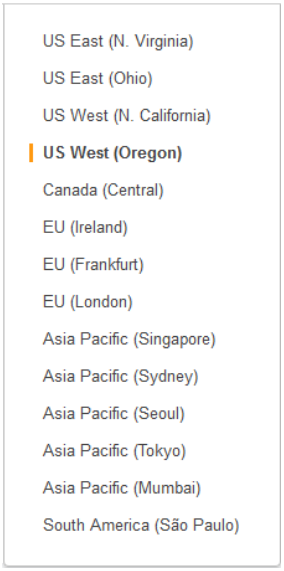


Figure 2: Choosing an AWS Region

> **Tip** Consider choosing a region closest to your data center or corporate network to reduce network latency between systems running on AWS and the systems and users on your corporate network.

3. Create a key pair in your preferred region. To do this, in the navigation pane of the Amazon EC2 console, choose **Key Pairs**, **Create Key Pair**, type a name, and then choose **Create**.

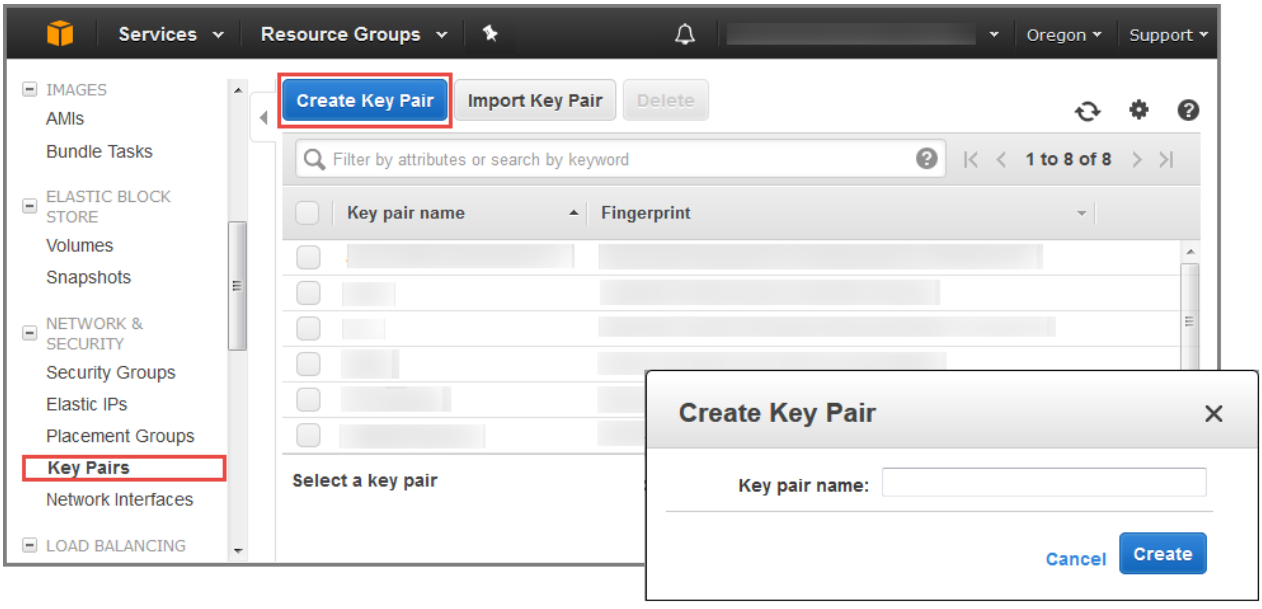


Figure 3: Creating a key pair

Amazon EC2 uses public-key cryptography to encrypt and decrypt login information. To be able to log in to your instances, you must create a key pair. On Linux, we use the key pair to authenticate SSH login.

4. If necessary, request a service limit increase for the Amazon EC2 **t2.medium** instance type. To do this, in the AWS Support Center, choose **Create Case**, **Service Limit Increase**, **EC2 instances**, and then complete the fields in the limit increase form. The current default limit for this instance type is 20 instances. (You can also choose a different instance type by customizing AWS CloudFormation parameters, as explained in step 3.)

   You might need to request an increase if you already have an existing deployment that uses this instance type, and you think you might exceed the default limit with this reference deployment. It might take a few days for the new service limit to become effective. To learn more, see Amazon EC2 Service Limits in the AWS documentation.

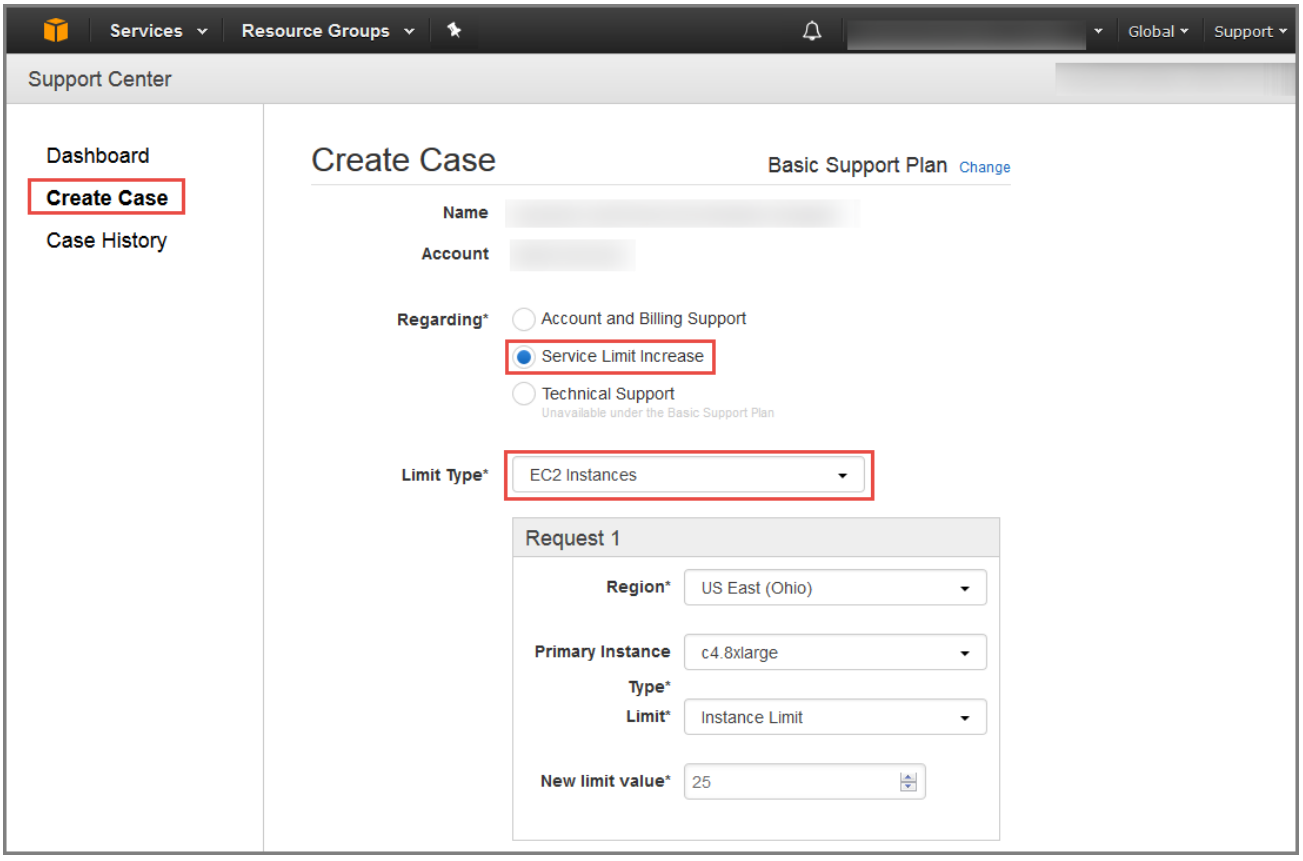


Figure 4: Requesting a service limit increase

Step 2. Subscribe to the CentOS or RHEL AMI

You can use this Quick Start to deploy Ansible Tower on either CentOS or Red Hat Enterprise Linux (RHEL). Before you launch the Quick Start, you must subscribe to the CentOS 7 **or** RHEL 7 AMI in the AWS Marketplace.

Subscribing to the CentOS AMI

1. Visit the AWS Marketplace at http://aws.amazon.com/marketplace and log in with your AWS account.
2. From the AWS Marketplace page for CentOS 7, choose **Continue**.

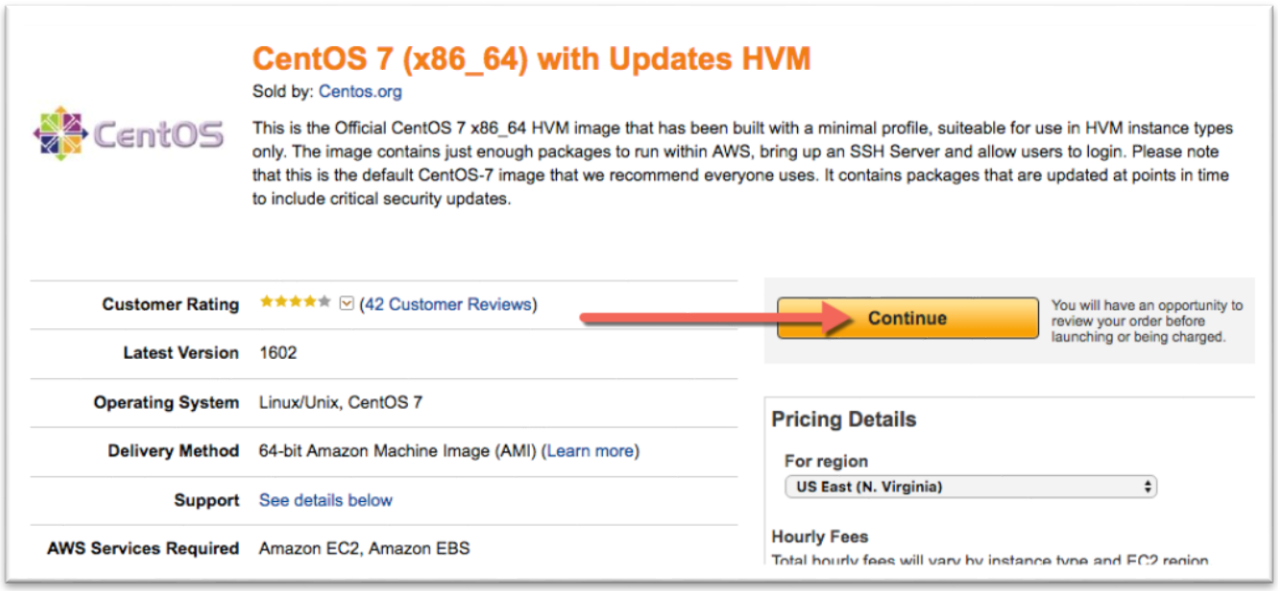


Figure 5: Subscribing to the CentOS AMI

3. Follow the instructions on the page to subscribe to the AMI for your region (choose the **t2.medium** instance type). For detailed information about the subscription process, see the AWS Marketplace FAQ.
4. When the subscription is complete, you're ready to launch the Quick Start, and you can continue to step 3.

Subscribing to the RHEL AMI

1. Visit the AWS Marketplace at http://aws.amazon.com/marketplace and log in with your AWS account.
2. From the AWS Marketplace page for RHEL 7.2, choose **Continue**.

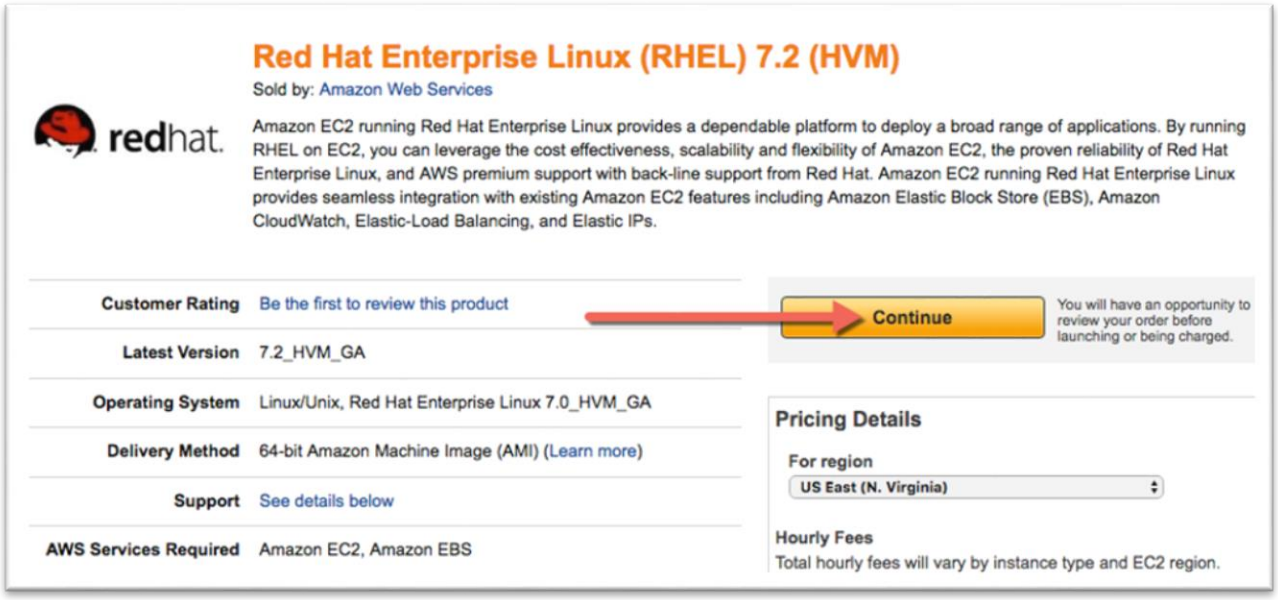


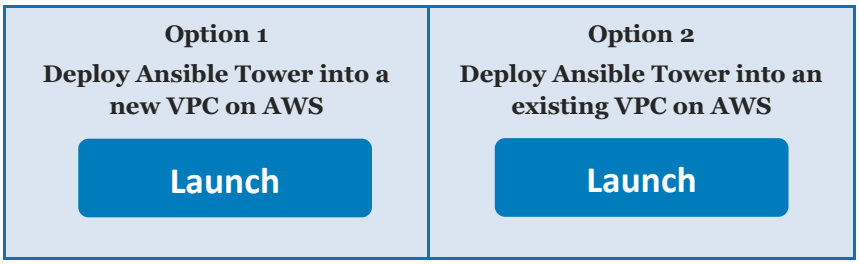
Figure 6: Subscribing to the RHEL AMI

3. Follow the instructions on the page to subscribe to the AMI for your region (choose the **t2.medium** instance type). For detailed information about the subscription process, see the AWS Marketplace FAQ.
4. When the subscription is complete, you're ready to launch the Quick Start, and you can continue to step 3.

Step 3. Launch the Quick Start

> **Note** You are responsible for the cost of the AWS services used while running this Quick Start reference deployment. There is no additional cost for using this Quick Start. For full details, see the pricing pages for each AWS service you will be using in this Quick Start.

1. Choose one of the following options to launch the AWS CloudFormation template into your AWS account. For help choosing an option, see deployment options earlier in this guide.



> **Important** If you're deploying Ansible Tower into an existing VPC, you'll be prompted for your VPC settings when you launch the Quick Start.

   Each deployment takes about 20 minutes to complete.

2. Check the region that's displayed in the upper-right corner of the navigation bar, and change it if necessary. This is where the network infrastructure for Ansible Tower will be built. The template is launched in the US West (Oregon) Region by default.
3. On the **Select Template** page, keep the default setting for the template URL, and then choose **Next**.
4. On the **Specify Details** page, change the stack name if needed. Review the parameters for the template. Provide values for the parameters that require input. For all other parameters, review the default settings and customize them as necessary. When you finish reviewing and customizing the parameters, choose **Next**.

   In the following tables, parameters are listed by category and described separately for the two deployment options:

   – Parameters for deploying Ansible Tower into a new VPC

   – Parameters for deploying Ansible Tower into an existing VPC

- **Option 1: Parameters for deploying Ansible Tower into a new VPC**

  View template

> **Important** Make a note of the password you provide for the **Ansible Tower Admin Password** parameter. You will need this password in the steps to follow.

Network Configuration:

Parameter label (name)	Default	Description
VPC CIDR (VPCCIDR)	10.0.0.0/16	CIDR block for the VPC to create.
Permitted IP range (AccessCIDR)	*Requires input*	The CIDR IP range that is permitted to access Ansible Tower. We recommend that you set this value to a trusted IP range. For example, you might want to grant only your corporate network access to the software.
Subnet CIDR (PublicSubnetCIDR)	10.0.0.0/19	CIDR block for the public (DMZ) subnet where Ansible Tower will be deployed.

Ansible Configuration:

Parameter label (name)	Default	Description
Key Pair Name (KeyPairName)	*Requires input*	Public/private key pair, which allows you to connect securely to your instance after it launches. When you created an AWS account, this is the key pair you created in your preferred region.
Ansible Tower IP Address (AnsibleTowerIP)	10.0.0.10	Private IP address of your Ansible Tower.
Linux Client IP Address (AnsibleClientLinuxIP)	10.0.0.12	IP address of a Linux instance that can be managed by Ansible.
Ansible Tower Admin Password (AnsibleAdminPassword)	*Requires input*	Password for the Ansible Tower administrator account. This must be at least 8 characters, including letters, numbers, and symbols, and must contain at least one uppercase letter (e.g., `An$ibl3ChgMe`). Make a note of this password—you'll be using it in step 5.
Database Admin Password (DatabaseAdminPassword)	*Requires input*	Password for the Ansible database administrator account. This must be at least 8 characters, including letters, numbers, and symbols, and must contain at least one uppercase letter. All database resources (e.g., Redis, Postgres) will use this password.
Tower Instance Type (AnsibleTowerInstance Type)	m4.large	EC2 instance type for the Ansible Tower config server.
Client Instance Type (AnsibleClientInstance Type)	t2.medium	EC2 instance type for the Linux nodes.
Operating System (OSType)	Redhat-Enterprise-Linux-7	The Linux operating system to use for Ansible Tower. The two options are Red Hat Enterprise Linux (RHEL) 7 and CentOS 7.

AWS Quick Start Configuration:

Parameter label (name)	Default	Description
Quick Start S3 Bucket Name (QSS3BucketName)	quickstart-reference	S3 bucket where the Quick Start templates and scripts are installed. Use this parameter to specify the S3 bucket name you've created for your copy of Quick Start assets, if you decide to customize or extend the Quick Start for your own use. The bucket name can include numbers, lowercase letters, uppercase letters, and hyphens, but should not start or end with a hyphen.
Quick Start S3 Key Prefix (QSS3KeyPrefix)	redhat/ansible/latest	The S3 key name prefix used to simulate a folder for your copy of Quick Start assets, if you decide to customize or extend the Quick Start for your own use. This prefix can include numbers, lowercase letters, uppercase letters, hyphens, and forward slashes, but should not start or end with a forward slash (which is automatically added).

- **Option 2: Parameters for deploying Ansible Tower into an existing VPC**

View template

Network Configuration:

Parameter label (name)	Default	Description
VPC CIDR (VPCCIDR)	172.31.0.0/16	The CIDR block for your existing VPC (e.g., 10.0.0.0/16).
Permitted IP range (AccessCIDR)	*Requires input*	The CIDR IP range that is permitted to access Ansible Tower. We recommend that you set this value to a trusted IP range. For example, you might want to grant only your corporate network access to the software.
Subnet ID (SubnetID)	*Requires input*	ID of the public subnet in your existing VPC where Ansible Tower will be deployed (e.g., subnet-b58c3d67).
VPC ID (VPCID)	*Requires input*	ID of your existing VPC where Ansible Tower will be deployed (e.g., vpc-0343606e).

Ansible Configuration:

Parameter label (name)	Default	Description
Key Pair Name (KeyPairName)	*Requires input*	Public/private key pair, which allows you to connect securely to your instance after it launches. When you created an AWS account, this is the key pair you created in your preferred region.

Parameter label (name)	Default	Description
Ansible Tower IP Address (AnsibleTowerIP)	172.31.0.10	Private IP address of your Ansible Tower.
Linux Client IP Address (AnsibleClientLinuxIP)	172.31.0.11	IP address of a Linux instance that can be managed by Ansible.
Ansible Tower Admin Password (AnsibleAdminPassword)	*Requires input*	Password for the Ansible Tower administrator account. This must be at least 8 characters, including letters, numbers, and symbols, and must contain at least one uppercase letter (e.g., `An$ibl3ChgMe`). Make a note of this password—you'll be using it in step 5.
Database Admin Password (DatabaseAdminPassword)	*Requires input*	Password for the Ansible database administrator account. This must be at least 8 characters, including letters, numbers, and symbols, and must contain at least one uppercase letter. All database resources (e.g., Redis, Postgres) will use this password.
Tower Instance Type (AnsibleTowerInstance Type)	m4.large	EC2 instance type for the Ansible Tower config server.
Client Instance Type (AnsibleClientInstance Type)	t2.medium	EC2 instance type for the Linux nodes.
Operating System (OSType)	Redhat-Enterprise-Linux-7	The Linux operating system to use for Ansible Tower. The two options are Red Hat Enterprise Linux (RHEL) 7 and CentOS 7.

5. On the **Options** page, you can specify tags (key-value pairs) for resources in your stack and set additional options. When you're done, choose **Next**.
6. On the **Review** page, review and confirm the settings. Under **Capabilities**, select the check box to acknowledge that the template will create IAM resources.
7. Choose **Create** to deploy the stack.
8. Monitor the status of the stack. When the status is **CREATE_COMPLETE**, the Ansible Tower stack is ready. The IP address is displayed in the **Outputs** tab for the stack, as shown later in Figure 11.

> **Important** We recommend that you update the passwords for the administrator and database administrator accounts in accordance with your IT standards after stack creation is complete.

Step 4. Create a User Account for Ansible Tower

Let's create a new user called `ansibleadm` for Ansible Tower. This is an optional step—you can use an existing user account instead, if that account has the proper privileges. (At a minimum, you'll need read-only access to EC2 instances to pull in metadata.)

1. Open the IAM console at https://console.aws.amazon.com/iam/.
2. In the navigation pane, choose **Users**, and then choose **Add user**.
3. For the user name, type **ansibleadmin**.
4. For **Access type**, select **Programmatic access**.
5. Choose **Next: Permissions**.

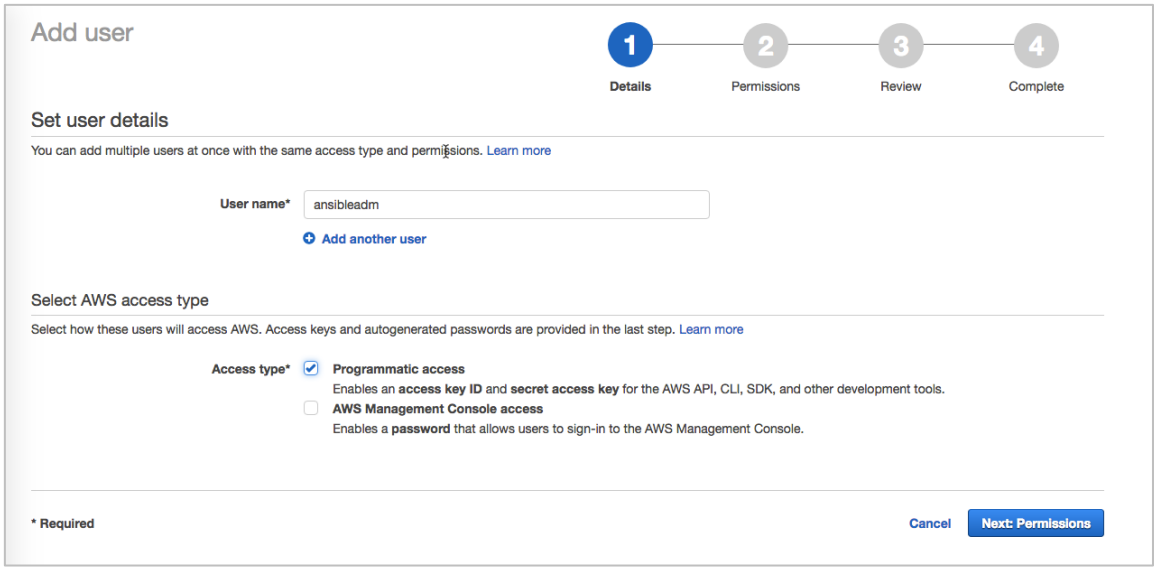


Figure 7: Setting user details

6. On the **Set permissions** page, choose **Attach existing policies directly**.
7. In the **Filter** field for **Policy type**, type **PowerUserAccess**, select that policy, and then choose **Next: Review**.

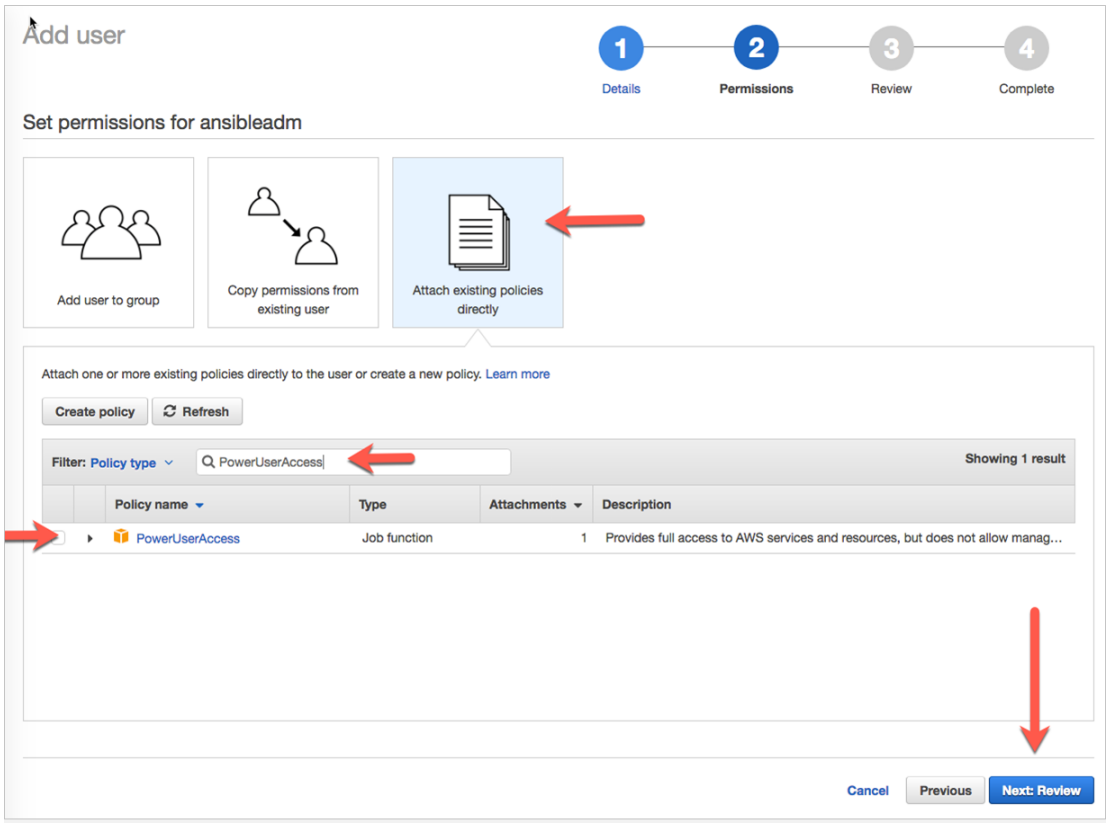


Figure 8: Setting user permissions

8. Review your choices, and then choose **Create User**.

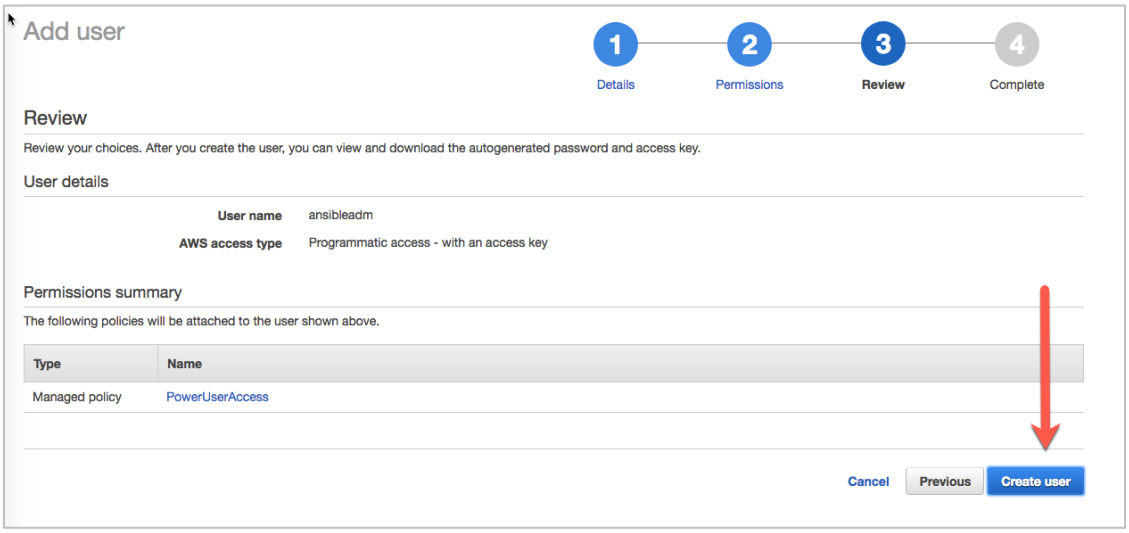


Figure 9: Creating the user

9. Record the access key ID and secret access key, and then choose **Close**. You can choose **Show** to reveal the secret access key.

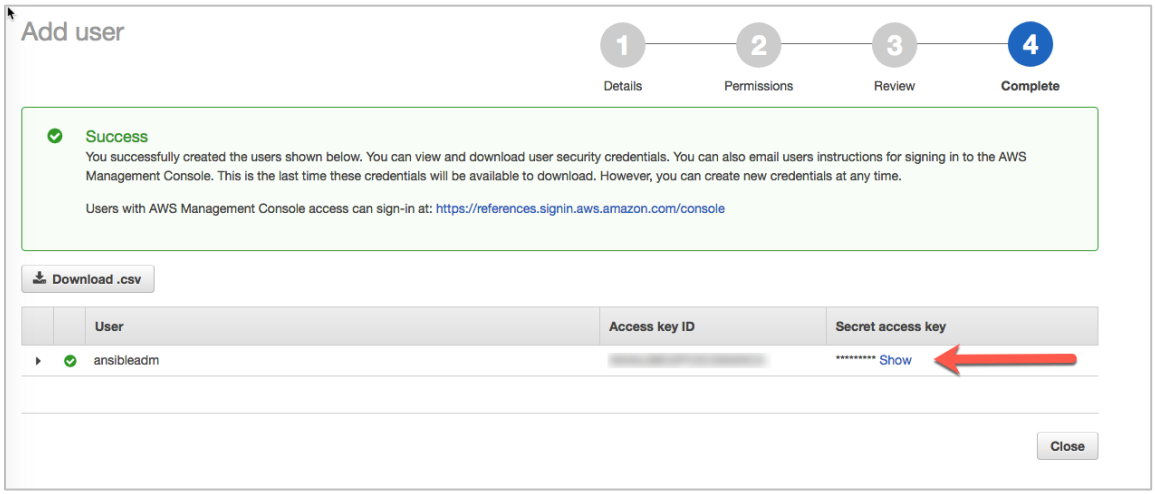


Figure 10: Viewing the access key ID and secret access key

The `ansibleadm` user you just created has an IAM `PowerUserAccess` policy, which provides full access to AWS services and resources. If you wish, you can lock permissions down further. For more information about IAM roles, see IAM Roles for Amazon EC2 in the Amazon EC2 documentation.

Step 5. Get a Trial License for Ansible Tower

1. Navigate to the IP or host name of Ansible Tower in your VPC.

> **Note** You can find the Tower URL on the **Outputs** tab of the AWS Management Console, as shown in Figure 11, or in the Amazon EC2 console.

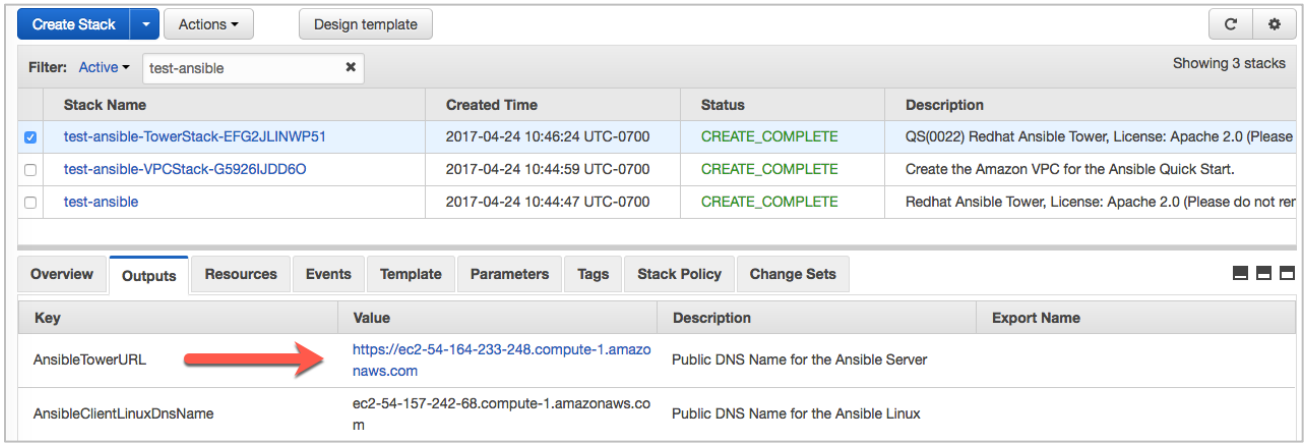


Figure 11: IP address for Ansible Tower

You'll see a warning in your web browser. This is because the deployment uses a self-signed certificate. To proceed, you'll need to trust the self-signed certificate, but we recommend that you add your own certificate to Ansible Tower for higher security. For more information, see the Ansible Tower User Guide.

2. Choose **Advanced**, and then choose **Proceed** to reach the Ansible Tower dashboard. (This instruction reflects Google Chrome settings. The options for proceeding will depend on your web browser.)

3. For the user name, type **admin**, and then provide the administrator password you specified for the **Ansible Tower Admin Password** parameter when you launched the Quick Start in step 3.

Figure 12: Ansible sign-in screen

If you forgot your password, you'll find it in the Ansible root directory. The following command will display the administrator password:

```
[centos@ip-10-0-0-10 ~]$ sudo grep admin_password /ansible-tower-setup-bundle*/inventory
```

If you need instructions on how to use Secure Shell (SSH) to connect into your EC2 instance, see step 6.

Note On CentOS, use the user name `centos`, not `ec2-user`, for the SSH connection. For example, on CentOS, use:

```
ssh -i <your>.pem centos@<ip-or-hostname>
```

On RHEL, use:

```
ssh -i <your>.pem ec2-user@<ip-or-hostname>
```

Upon successful login, you will reach the screen shown in Figure 13.

4. Choose **Request License** to get a free Tower trial license. (If you already have a Tower license, you can skip this step and enter the license information later.)

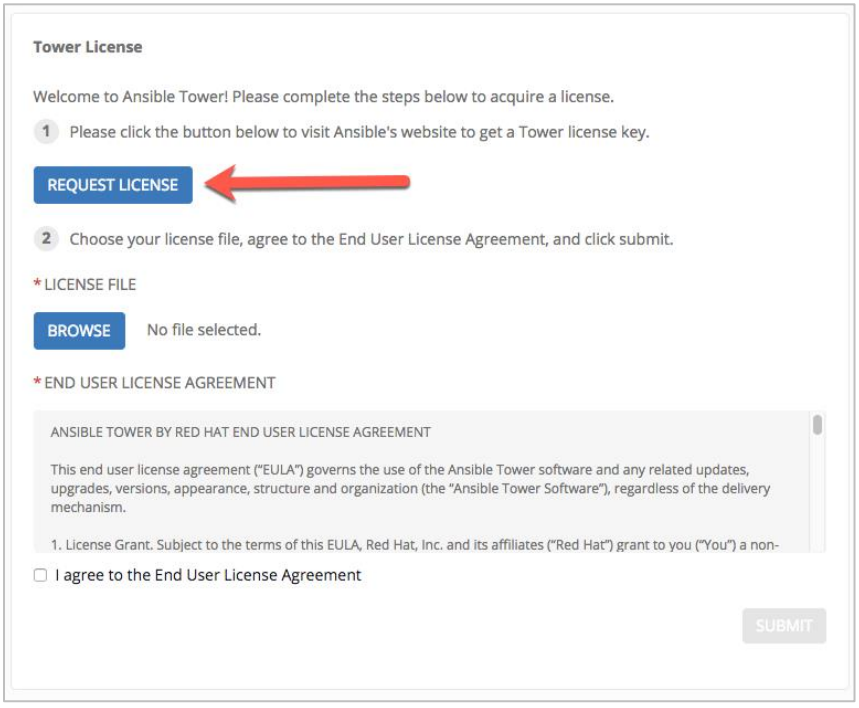


Figure 13: Requesting a Tower license

5. Choose the (10-node) free trial option, enter the information requested, and then choose **Submit**.

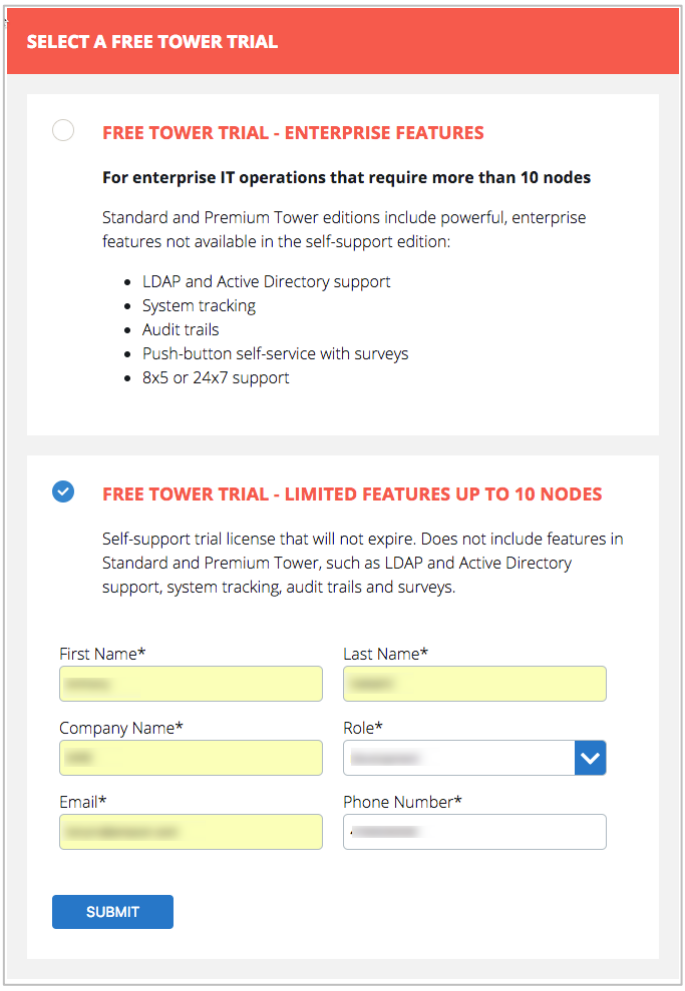


Figure 14: Selecting the free trial for Ansible Tower

Ansible will send a trial license file similar to that shown in Figure 15 to your email account.

6. Save the license file to your workstation.

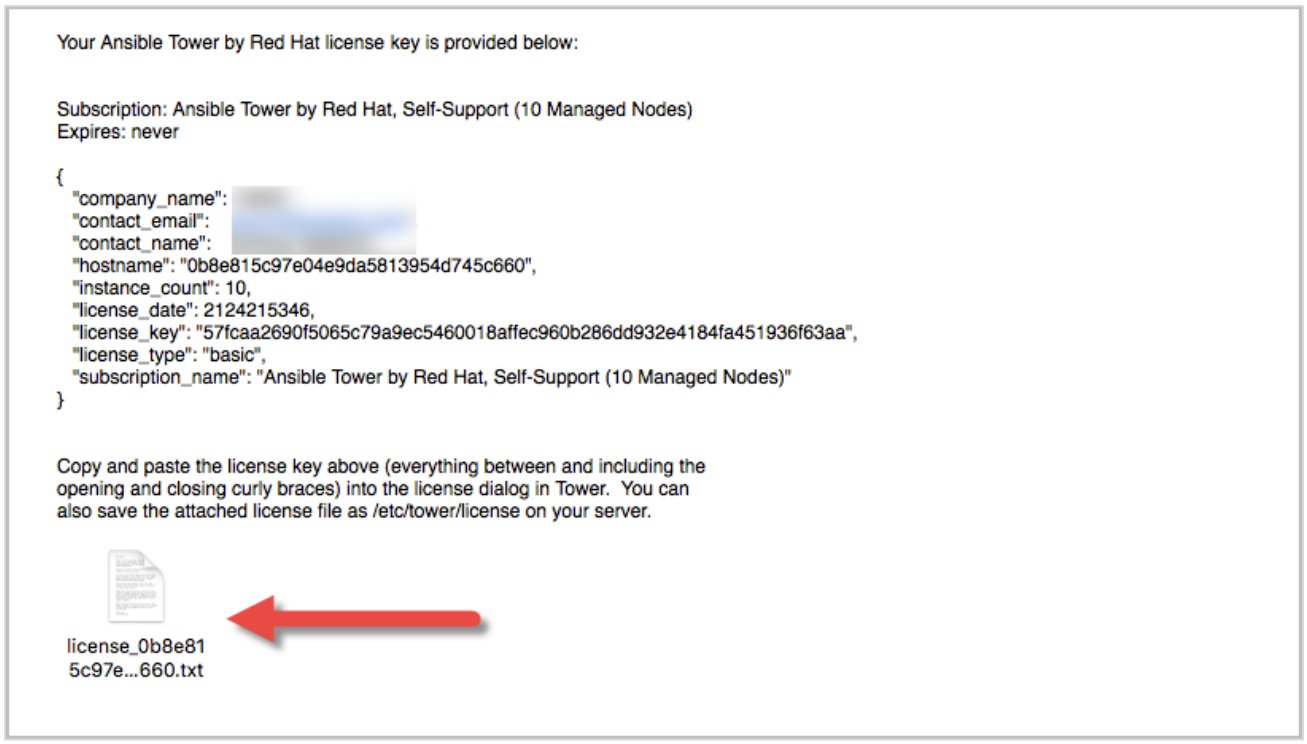


Figure 15: Ansible trial license file

7. On the **Tower License** page, choose **Browse** and navigate to the location where you saved the license.

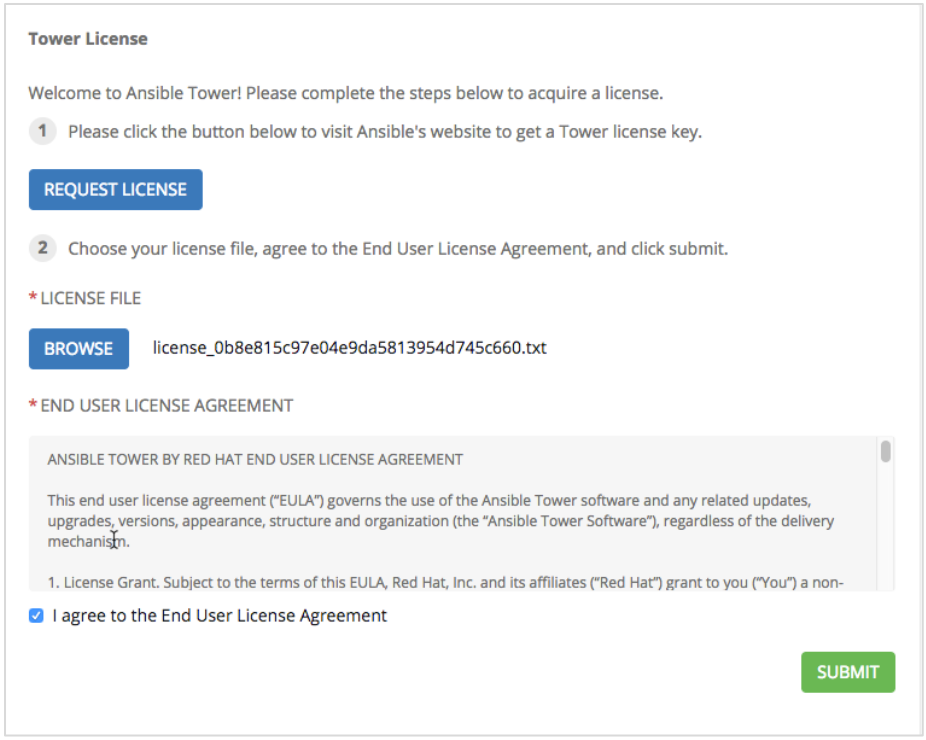


Figure 16: Choosing your license file

8. Select the check box at the bottom of the screen to accept the end user license agreement, and then choose **Submit**.

Step 6. Configure and Manage EC2 Instances in Tower

In this step, we'll configure Ansible Tower with Amazon EC2 integration, so we can view and manage EC2 instances in the Ansible Tower dashboard. We'll then add other managed instances for Ansible Tower to discover. For complete information about how you can set up organizations, teams, and projects in Ansible Tower, see the Ansible Tower User Guide.

Configuring Ansible Tower with EC2 Integration

1. On the Ansible Tower dashboard, choose the button in the upper-right corner to open the setup screen.

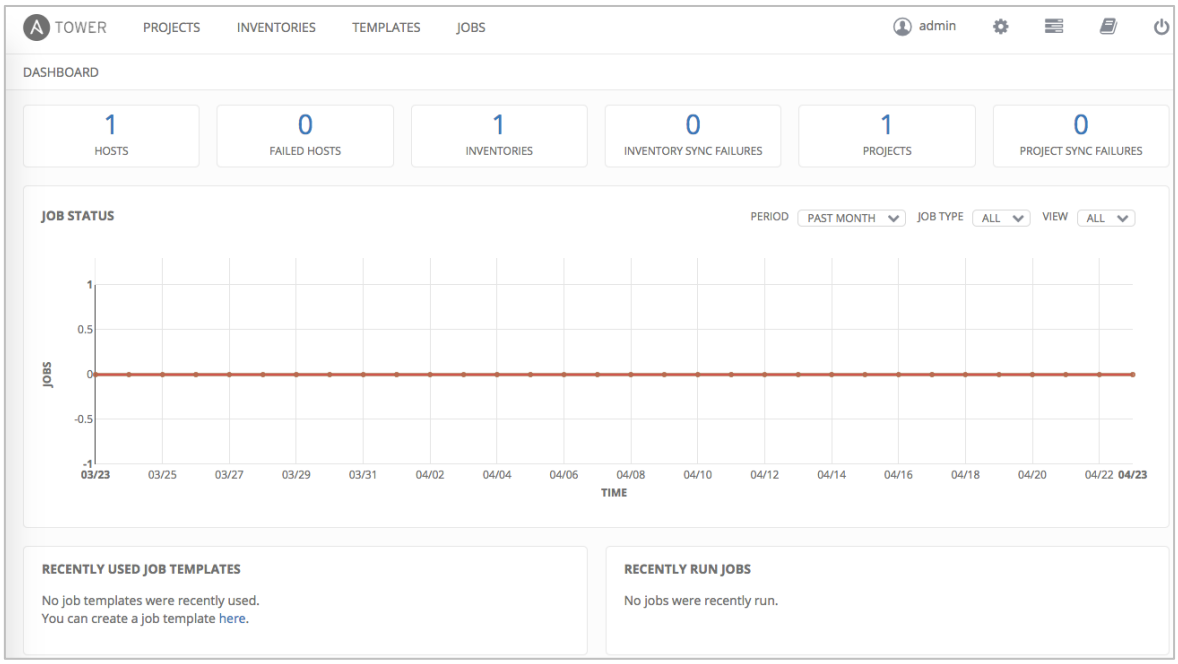


Figure 17: Ansible Tower dashboard

2. In the upper right, choose the gear icon, and then choose **Credentials**. Choose **Add**.
3. Enter the credential details as shown in Figure 18:
   a. Provide a **Name** and **Description**.
   b. Select your organization.
   c. For **Type**, select **Amazon Web Services**.
   d. Enter your **Access Key** and **Secret Key**.
   e. Choose **Save**.

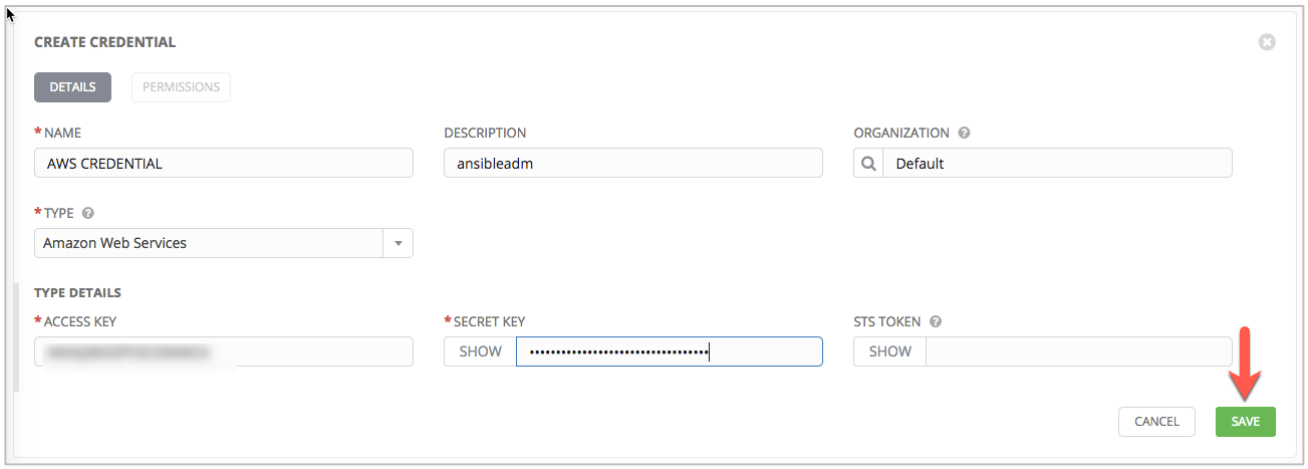
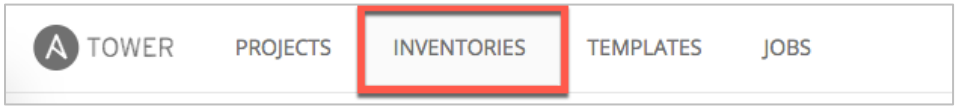


Figure 18: Creating a credential in Ansible Tower

Discovering and Managing EC2 Instances in Ansible Tower

In Ansible, a collection of hosts that you can launch tasks against is called an *inventory*. Inventories consist of *sources*, which contain specific *hosts* (systems, nodes, or instances). For detailed information about these concepts, see the Ansible Tower User Guide.

1. On the Ansible Tower navigation bar, chooose **Inventories**.



2. On the **New Inventory** screen, provide a name (for example, `AWS INVENTORY`) and a description for the inventory, and then choose **Save**.

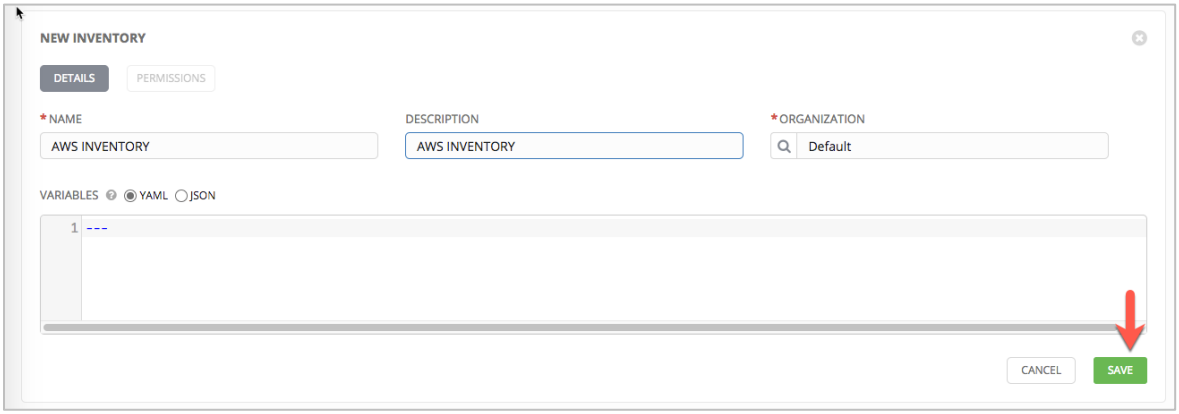


Figure 19: Creating an inventory

3. Next, select the inventory you created (for example, `AWS INVENTORY`), choose **Sources**, and then choose **Add Source**.

4. In the **Add Source** window:
   a. Provide a name and description for the source.
   b. For **Credential**, choose the magnifying glass, and then choose **AWS**.
   c. For **Regions**, choose **All**.
   d. For **Instance Filters**, type **tag-key=Tower**.
   e. Leave all other fields unchanged, and then choose **Save**.

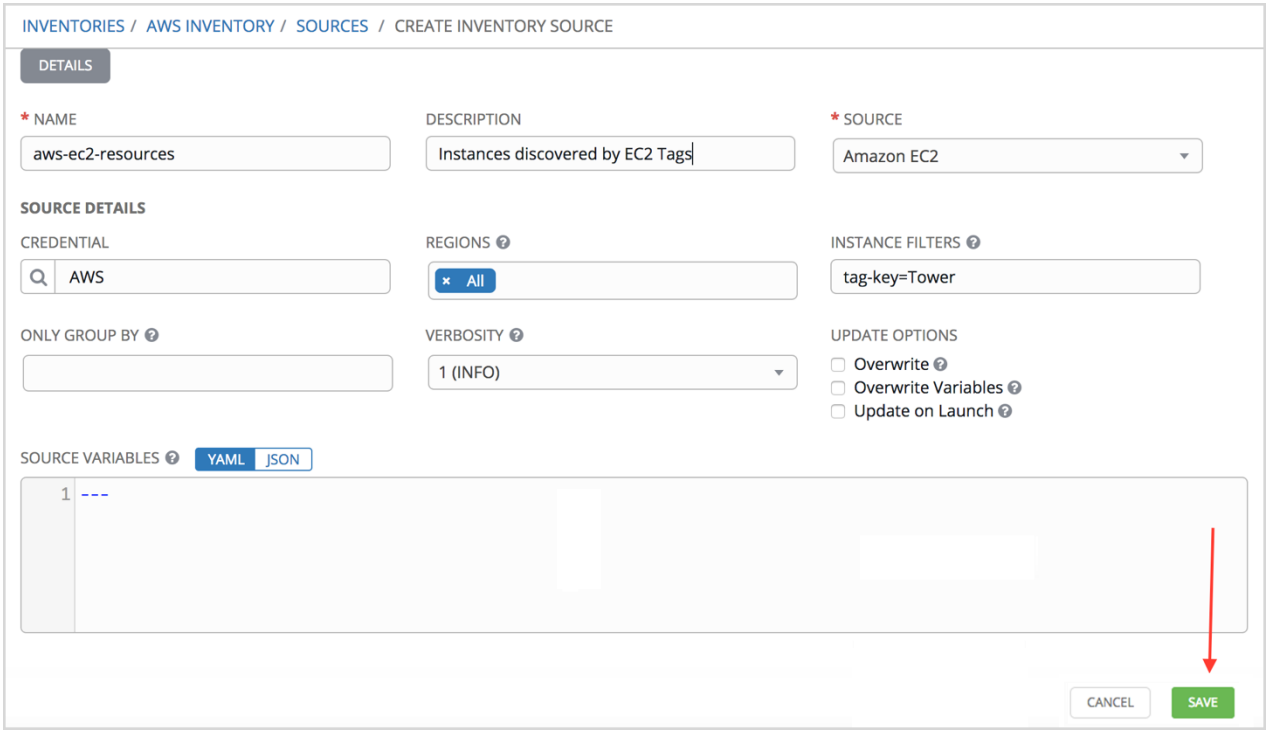


Figure 20: Sources in Ansible Tower

5. Use the navigation bar to navigate back to **Inventories**, and then select **AWS INVENTORY**.

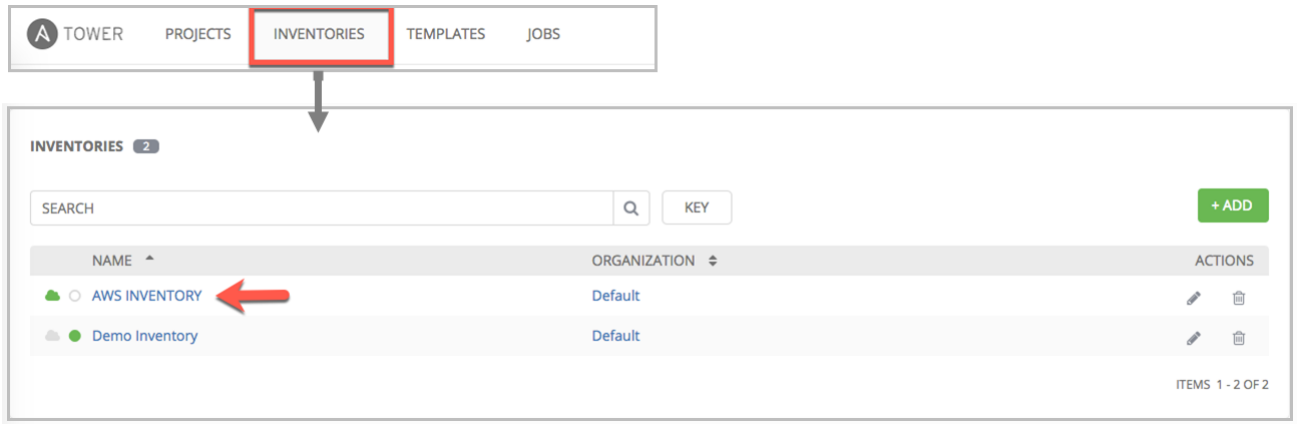


Figure 21: Accessing the source

6. In the **AWS INVENTORY** window, select **Sources**.

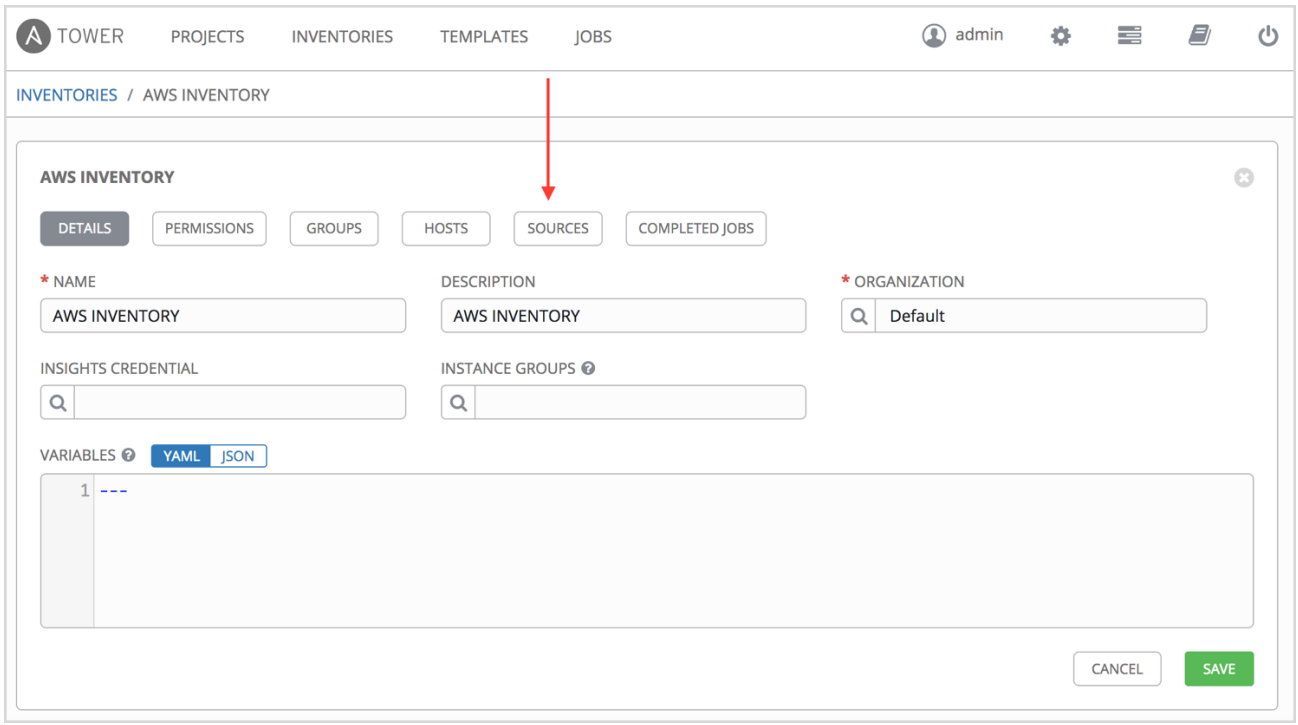


Figure 22: Opening the Sources window

7. In the **Sources** area of the screen, choose the button to start the synchronization process.

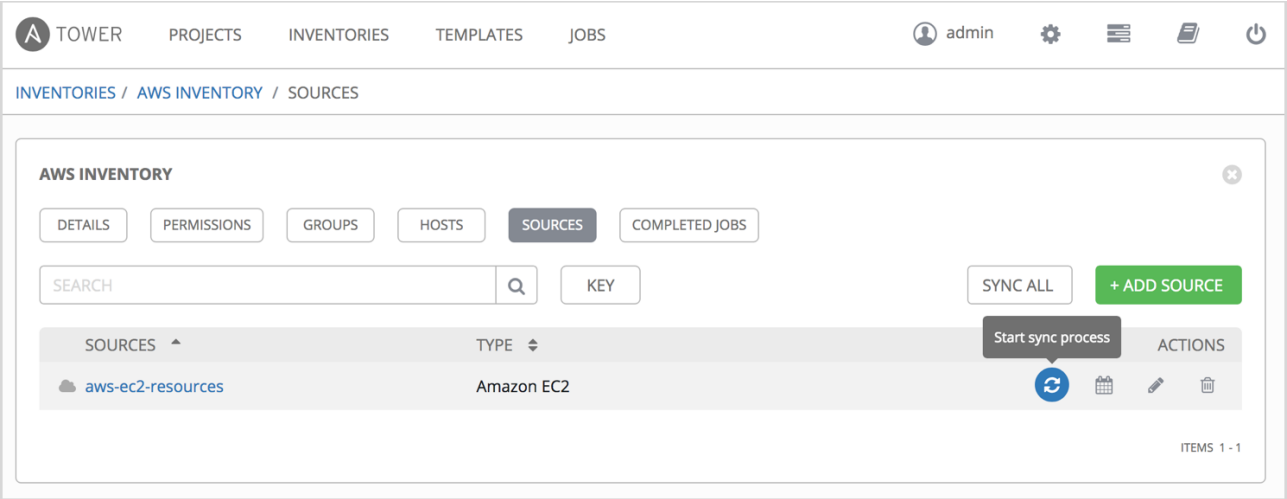


Figure 23: Synchronizing the source

During synchronization, Ansible Tower will use the credentials you provided to pull metadata from AWS. When this process completes successfully, you will see a green cloud and a green circle next to the group name, indicating that the synchronization with AWS is complete.

In the **Hosts** section you will see two hosts: Ansible Tower and a bare Linux client instance, both managed by Ansible.

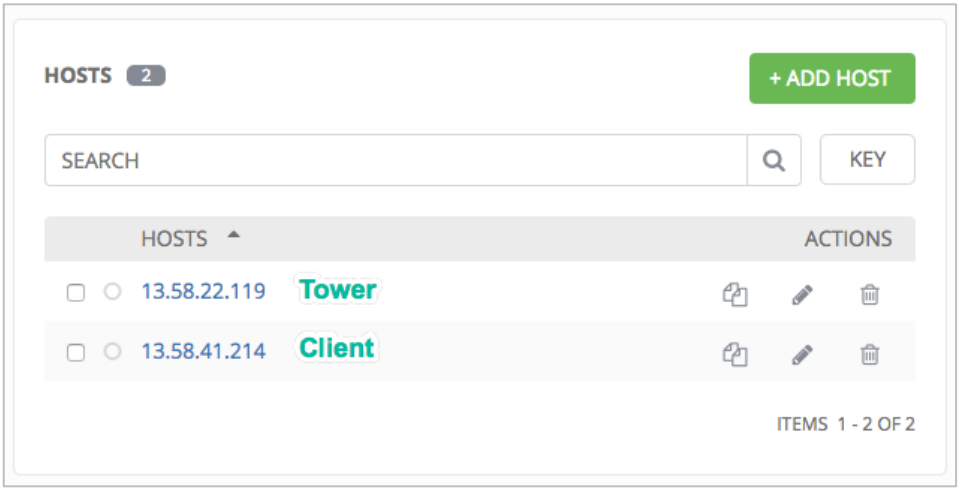


Figure 24: EC2 instances detected by Ansible Tower

8. You can choose the Tower host to see its instance metadata.

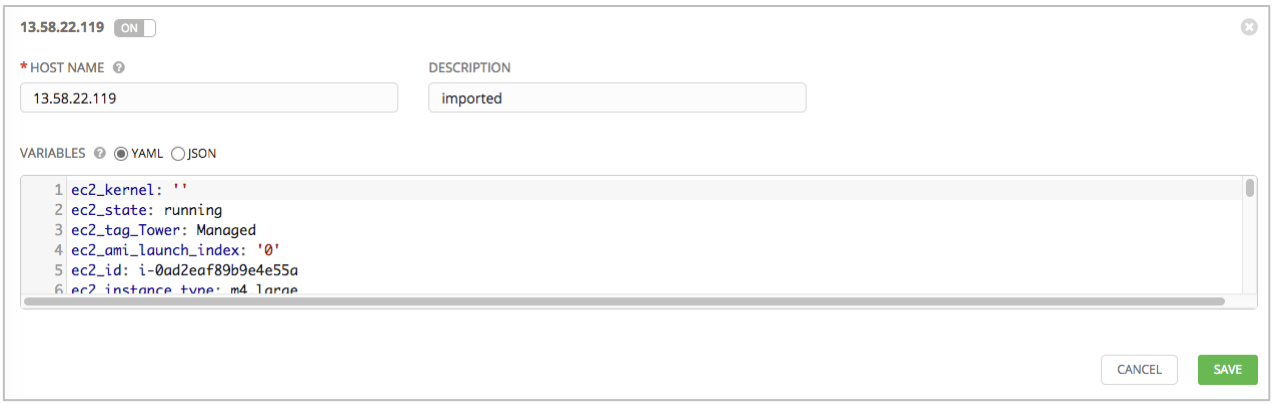


Figure 25: Properties for the Ansible Tower instance

Adding Other Managed Instances

The AWS Cloudformation template launched with this Quick Start initially created the EC2 instance and tagged it with the key **Tower**. The Amazon EC2 console provides a **Launch More Like This** feature that enables you to launch additional instances that will also be tagged with the key **Tower**. Ansible Tower will then discover the new instances when you request synchronization.

1. In the Amazon EC2 console, **Instances** page, select **AnsibleClient**.
2. Choose **Actions**, and then choose **Launch More Like This**.

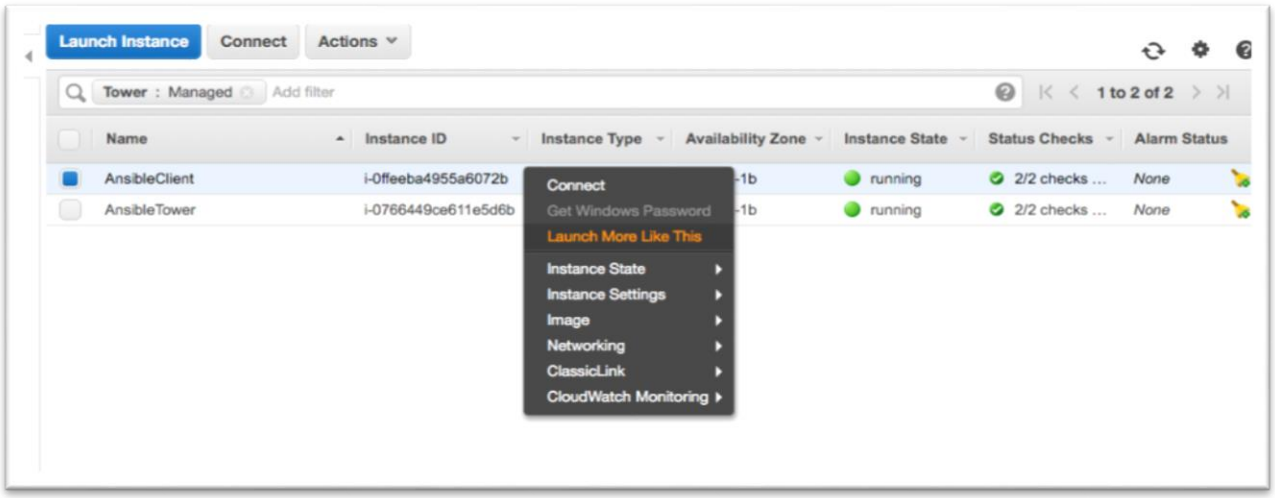


Figure 26: Launching additional EC2 instances

3. In the Ansible Tower **Hosts** screen, choose the button to scan for new instances.

   In Figure 27, you can also see the third host.

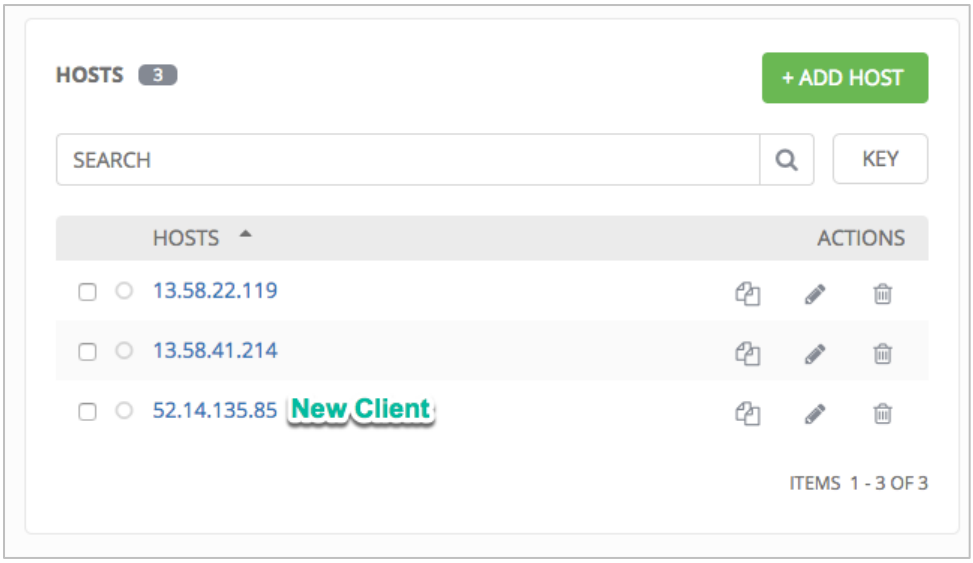


Figure 27: Discovering new EC2 instances in Ansible Tower

Now that you've configured Ansible Tower to detect hosts that are tagged with the key **Tower**, you'll be able to deploy playbooks to manage and configure your EC2 instances.

Troubleshooting

Q. I encountered a CREATE_FAILED error when I launched the Quick Start. What should I do?

A. If AWS CloudFormation fails to create the stack, we recommend that you relaunch the template with **Rollback on failure** set to **No**. (This setting is under **Advanced** in the AWS CloudFormation console, **Options** page.) With this setting, the stack's state will be retained and the instance will be left running, so you can troubleshoot the issue. (You may want to look at the log file `/var/log/cloud-init.log` for additional details about the cause of the failure.)

> **Important** When you set **Rollback on failure** to **No**, you'll continue to incur AWS charges for this stack. Please make sure to delete the stack when you've finished troubleshooting.

For additional information, see Troubleshooting AWS CloudFormation on the AWS website.

Q. I encountered a size limitation error when I deployed the AWS Cloudformation templates.

A. We recommend that you launch the Quick Start templates from the location we've provided or from another S3 bucket. If you deploy the templates from a local copy on your computer or from a non-S3 location, you might encounter template size limitations when you create the stack. For more information about AWS CloudFormation limits, see the AWS documentation.

Security

A *security group* acts as a firewall that controls the traffic for one or more instances. When you launch an instance, you associate one or more security groups with the instance. You add rules to each security group that allow traffic to or from its associated instances. You can modify the rules for a security group at any time. The new rules are automatically applied to all instances that are associated with the security group.

The security groups created and assigned to the individual instances as part of this solution are restricted as much as possible while allowing access to the various functions needed by Ansible Tower. We recommend that you review security groups and further restrict access as needed once Ansible is up and running.

We highly recommend that you update the passwords for the administrator and database administrator accounts in accordance with your IT standards after you deploy the Quick Start.

Additional Resources

AWS services

- AWS CloudFormation
  http://aws.amazon.com/documentation/cloudformation/
- Amazon EC2
  http://aws.amazon.com/documentation/ec2/
- IAM
  http://aws.amazon.com/documentation/iam/

- AWS OpsWorks
  http://aws.amazon.com/documentation/opsworks/
- Amazon VPC
  http://aws.amazon.com/documentation/vpc/

Ansible resources

- Ansible Tower User Guide
  http://docs.ansible.com/ansible-tower/latest/html/administration/index.html

Quick Start Reference Deployments

- AWS Quick Start home page
  https://aws.amazon.com/quickstart/

Send Us Feedback

You can visit our GitHub repository to download the templates and scripts for this Quick Start, to post your comments, and to share your customizations with others.

Document Revisions

Date	Change	In sections
November 2017	Updated instructions for working in Ansible Tower	Discovering and Managing EC2 Instances in Ansible Tower
June 2017	Removed the use of the tower_setup_conf.yml file for storing administrative credentials	Step 5
May 2017	Updated for Ansible Tower version 3	Changes in templates and throughout guide
April 2016	Initial publication	—

Notices

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