**Ansible Workshop - Exercises** 

# Automation Platform

Learn to manage and run your Ansible content in AAP.



# 3 - Projects & Job Templates

## Objective

An Ansible automation controller **Project** is a logical collection of Ansible playbooks. You can manage your playbooks by placing them into a source code management (SCM) system supported by automation controller such as Git or Subversion.

This exercise covers:

- Understanding and using an Ansible automation controller Project
- Using Ansible playbooks kept in a Git repository.
- Creating and using an Ansible Job Template

## Guide

#### Setup Git Repository

For this demonstration we will use playbooks stored in a Git repository:

https://github.com/ansible/workshop-examples

A playbook to install the Apache web server has already been committed to the directory **rhel/apache**, apache\_install.yml:

```
- name: Apache server installed
 hosts: web
 tasks:
  - name: latest Apache version installed
   yum:
     name: httpd
     state: latest
  - name: latest firewalld version installed
     name: firewalld
     state: latest
  - name: firewalld enabled and running
   service:
     name: firewalld
     enabled: true
     state: started
  - name: firewalld permits http service
   firewalld:
     service: http
     permanent: true
     state: enabled
     immediate: yes
  - name: Apache enabled and running
    service:
     name: httpd
     enabled: true
     state: started
```

### 

Note the difference to other playbooks you might have written! Most importantly there is no become set, this has to be done later in the Job template!

To configure and use this repository as a Source Control Management (SCM) system in automation controller you have to create a Project that uses the repository

### Create the Project

• Automation Execution → Projects, click the Create Project button. Fill in the form:

Parameter	Value
Name	Workshop Project
Organization	Default
Default Execution Environment	Default Execution Environment

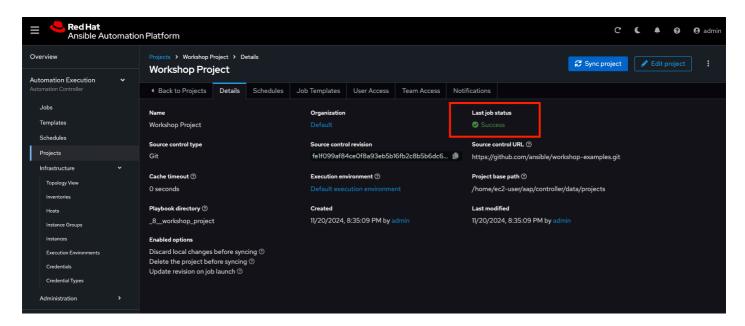
Source Control Type Git

#### Enter the URL into the Project configuration:

Parameter	Value
Source Control URL	https://github.com/ansible/workshop-examples.git
Options	Select <b>Clean</b> , <b>Delete</b> and <b>Update Revision on Launch</b> to request a fresh copy of the repository and to update the repository when launching a job.

#### Click Create project

The new project will be synced automatically after creation. But you can also do this manually: Sync the Project again with the Git repository by going to the **Projects** view and clicking the circular arrow **Sync Project** icon in the top right corner.



After starting the sync job, go to the **Jobs** view: there is a new job for the update of the Git repository.

#### Create a Job Template and Run a Job

A job template is a definition and set of parameters for running an Ansible job. Job templates are useful to execute the same job many times. So before running an Ansible **Job** from automation controller you must create a **Job Template** that pulls together:

- Inventory: On what hosts should the job run?
- · Credentials What credentials are needed to log into the hosts?
- Project: Where is the playbook?
- What playbook to use?

Okay, let's just do that: To create a Job Template, go to the **Automation Execution -> Templates** view,click the **Create** template button and choose Create job template.



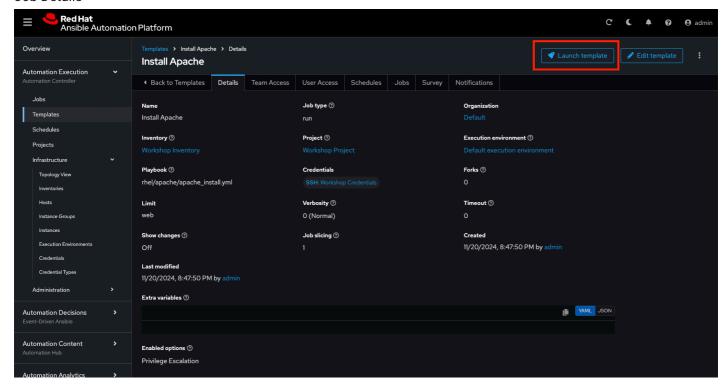
Remember that you can often click on the question mark with a circle to get more details about the field.

Parameter	Value
Name	Install Apache
Job Type	Run
Inventory	Workshop Inventory
Project	Workshop Project
Execution Environment	Default execution environment
Playbook	rhel/apache/apache_install.yml
Credentials	Workshop Credential
Limit	web
Options	☑ Privilege Escalation

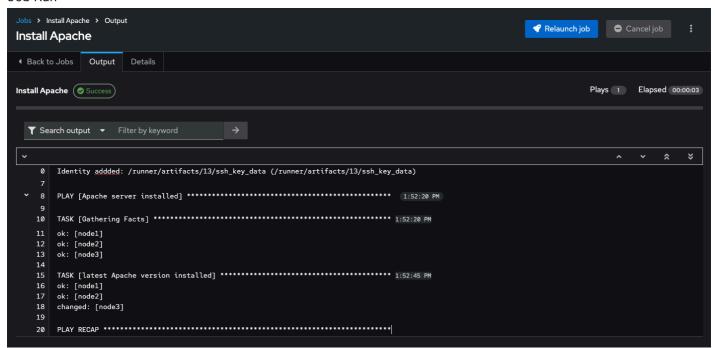
#### • Click Create job template

You can start the job by directly clicking the blue Launch template button, or by clicking on the rocket in the Job Templates overview. After launching the Job Template, you are automatically brought to the job overview where you can follow the playbook execution in real time.

#### Job Details



#### Job Run



Since this might take some time, have a closer look at all the details provided:

- All details of the job template like inventory, project, credentials and playbook are shown.
- Additionally, the actual revision of the playbook is recorded here this makes it easier to analyse job runs later on.
- Also the time of execution with start and end time is recorded, giving you an idea of how long a job execution actually was.
- Selecting **Output** shows the output of the running playbook. Click on a node underneath a task and see that detailed information are provided for each task of each node.

After the Job has finished go to the main **Jobs** view: All jobs are listed here, you should see directly before the Playbook run an Source Control Update was started. This is the Git update we configured for the **Project** on launch!

#### Challenge Lab: Check the Result

Time for a little challenge:

Use an ad hoc command on all hosts to make sure Apache has been installed and is running.

You have already been through all the steps needed, so try this for yourself.



#### Tip

What about systemctl status httpd?

#### Solution

- Go to Automation Execution  $\rightarrow$  Infrastructure  $\rightarrow$  Inventories  $\rightarrow$  Workshop Inventory
- In the Automation Execution → Infrastructure → Inventories → Workshop Inventory, select the Hosts tab and select node1, node2, node3 and click Run Command
- Within the **Details** window, select **Module** command, in **Arguments** type systemctl status httpd and click **Next**.
- Within the Execution Environment window, select Default execution environment and click Next.
- Within the Credential window, select Workshop Credentials and click Next.
- Review your inputs and click Finish.



#### Info

The output of the results is displayed once the command has completed.

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