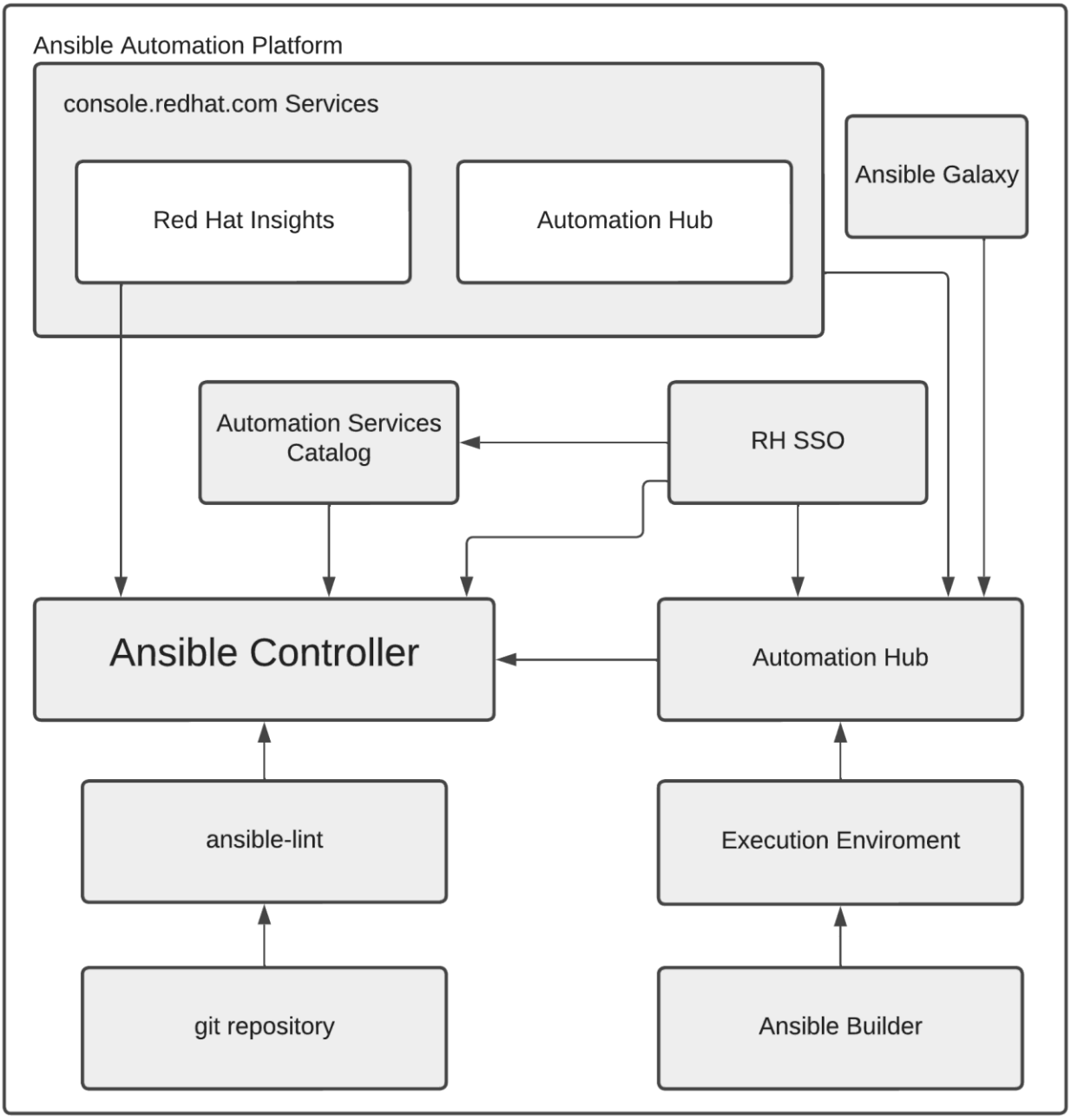
Chapter 1: Introduction to Ansible Automation Platform



Organizations

Create New Organization

Name *

Description

Max Hosts

0

Instance Groups

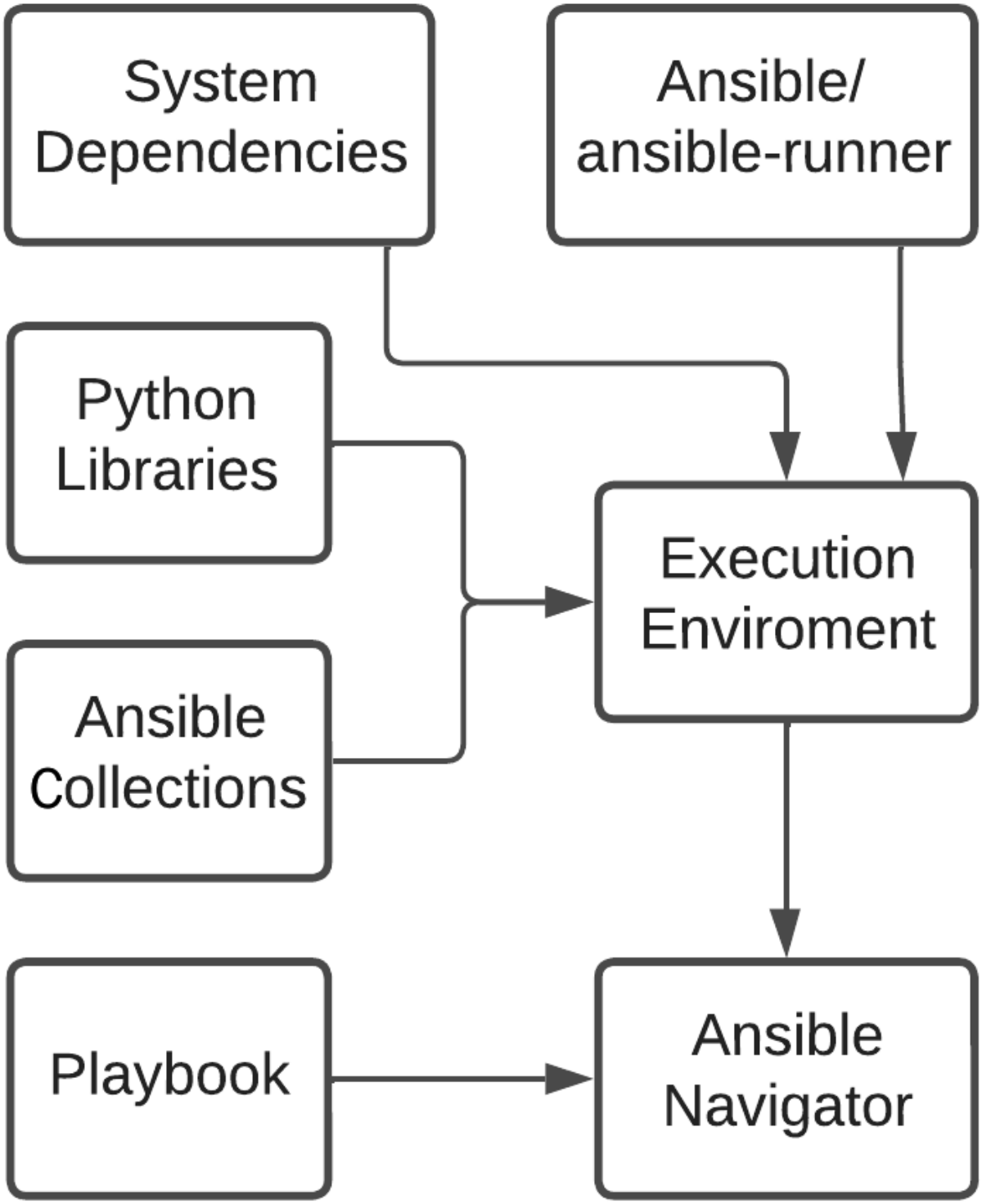
Execution Environment

Galaxy Credentials

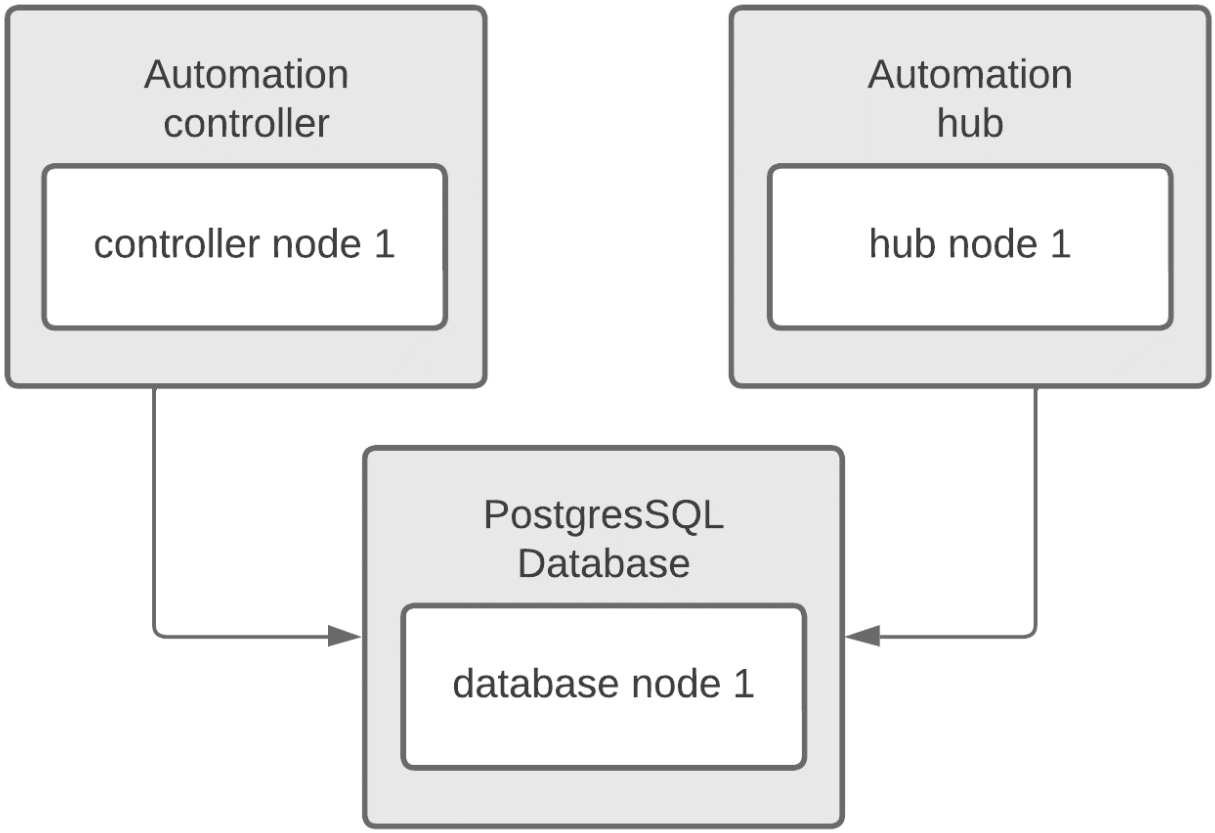
Ansible Galaxy

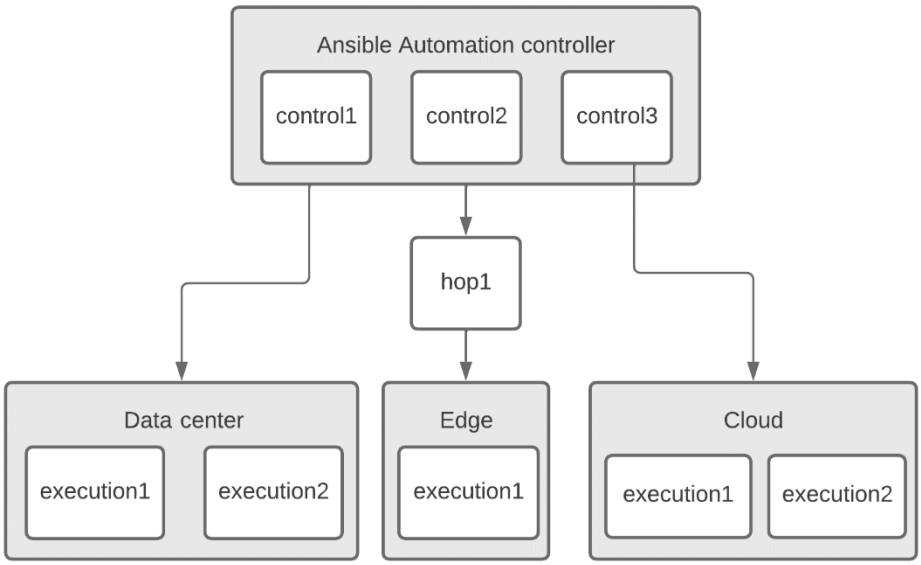
Save

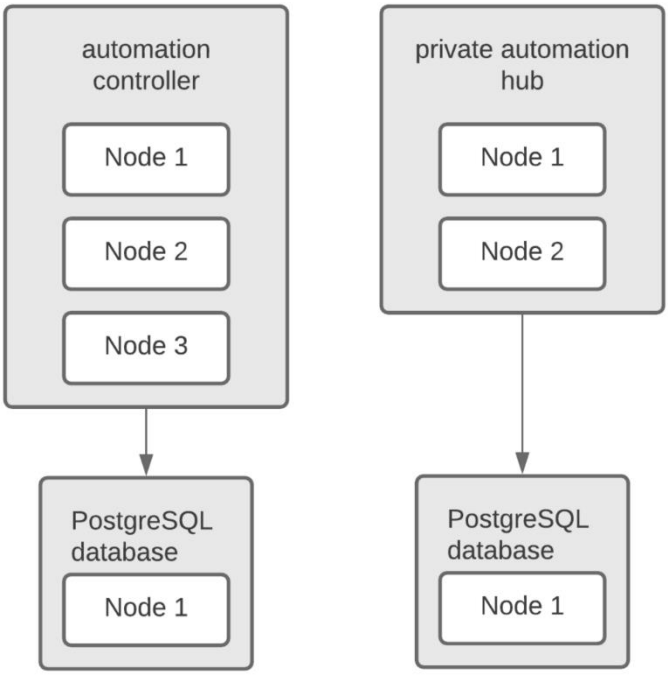
Cancel

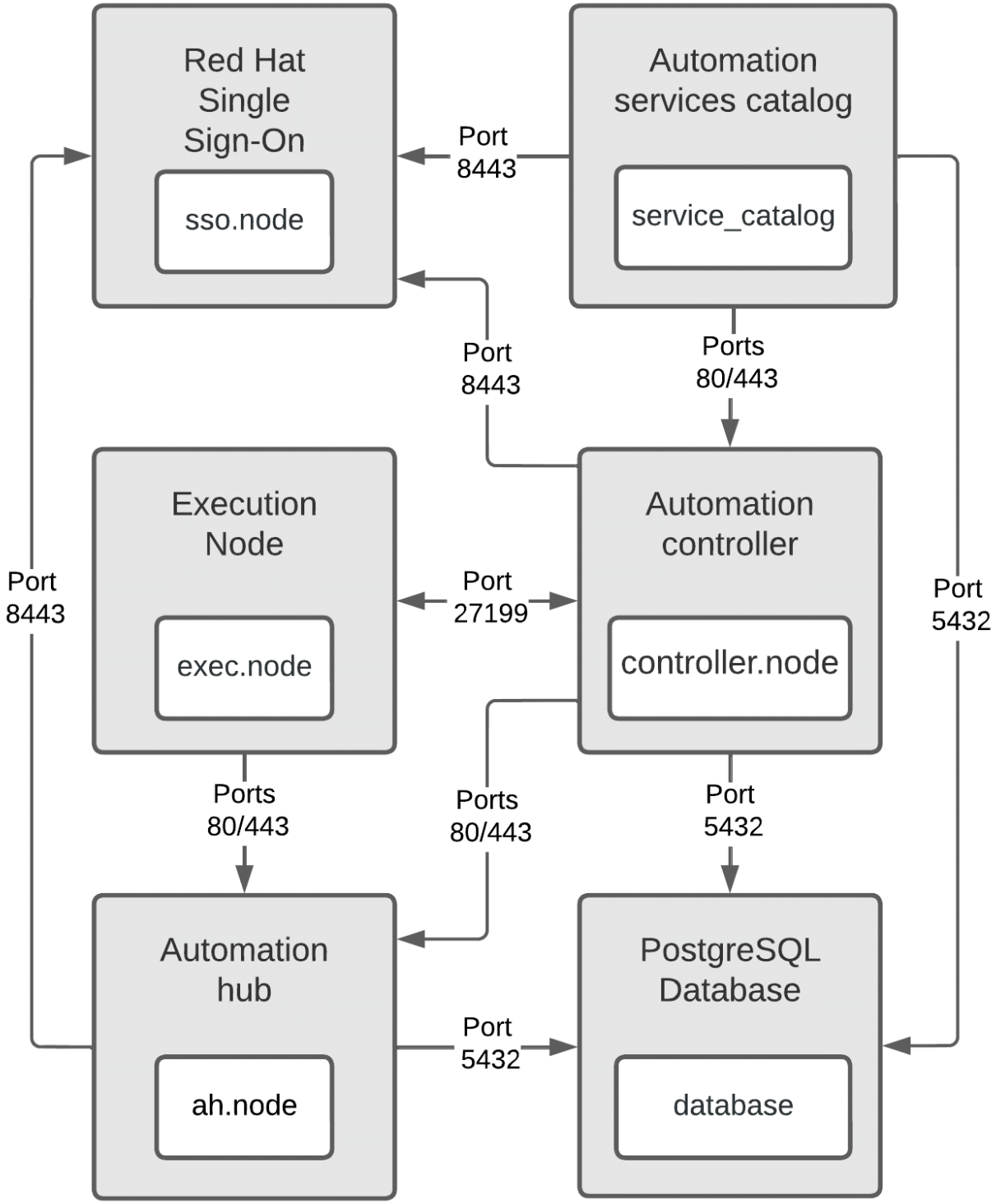

System Dependencies
Ansible/ ansible-runner
Python Libraries
Execution Enviroment
Ansible Collections
Playbook
Ansible Navigator

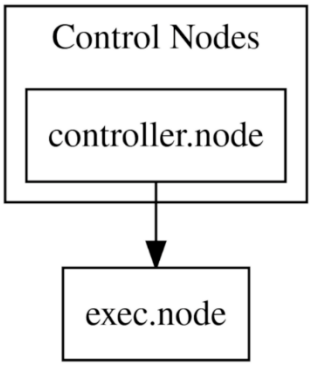
Chapter 2: Installing Ansible Automation Platform

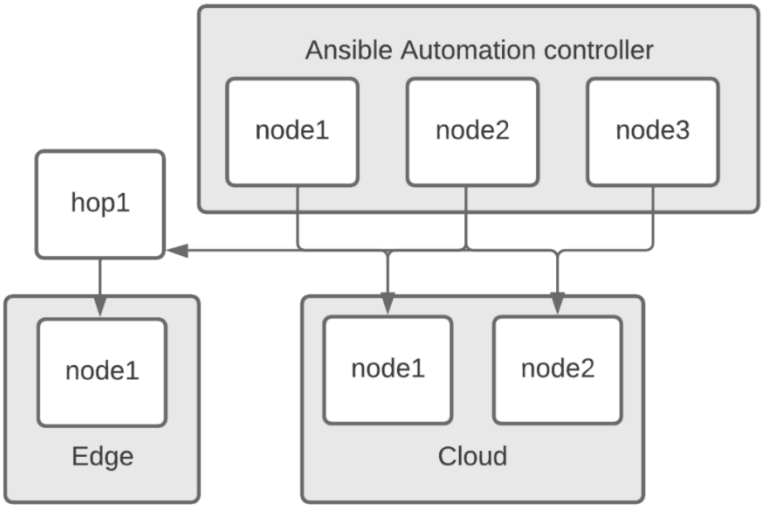





automation controller
Node 1
Node 2
Node 3
private automation hub
Node 1
Node 2
PostgreSQL database
Node 1
PostgreSQL database
Node 1


Red Hat Single Sign-On
sso.node
Automation services catalog
service_catalog
Port 8443
Port 8443
Ports 80/443
Execution Node
exec.node
Automation controller
controller.node
Port 8443
Port 27199
Port 5432
Ports 80/443
Ports 80/443
Port 5432
Automation hub
ah.node
PostgreSQL Database
database
Port 5432

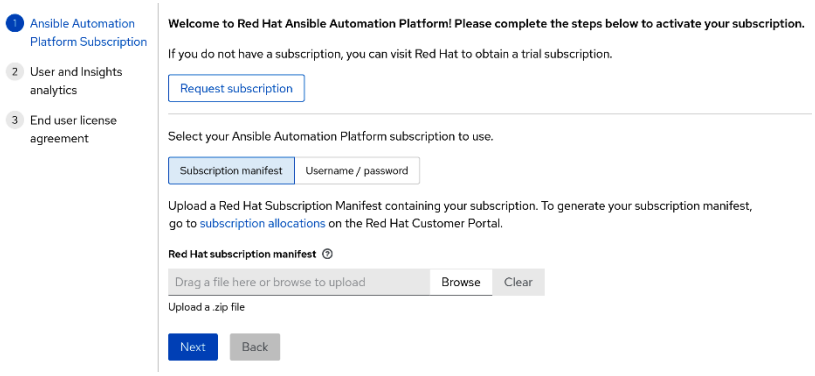

Control Nodes
controller.node
exec.node


Ansible Automation controller
node1
node2
node3
hop1
node1
Edge
node1
node2
Cloud

Chapter 3: Installing Ansible Automation Platform on OpenShift

No Images…

Chapter 4: Configuring Settings and Authentication



Setting	Value	Description
Console Display Name	`ldap`	Display name of provider
Vendor	**Active Directory**	Vendor to use Red Hat or Active Directory
Connection URL	`LDAP://servername`	Ldap server connection
Users DN	`CN=Users,DC=ansible,DC=lcl`	Full DN of the Ldap Tree where the users are
Bind DN	`CN=Administrator,CN=Users,DC=ansible,DC=lcl`	DN of Ldap Admin
Bind Credential	`password`	The password for the BIND DN user

* Username LDAP attribute	cn
* RDN LDAP attribute	cn
* UUID LDAP attribute	objectGUID
* User Object Classes	person, organizationalPerson, user
* Connection URL	LDAP://server2022.ansible.lcl
* Users DN	CN=Users,DC=ansible,DC=lcl
Custom User LDAP Filter	*LDAP Filter*
Search Scope	One Level
* Bind Type	simple
* Bind DN	CN=Administrator,CN=Users,DC=ansible,DC=lcl
* Bind Credential	••••••••••

User Federation › Ldap › LDAP Mappers › Create LDAP mapper

Add user federation mapper

Name *

Controller Mapper

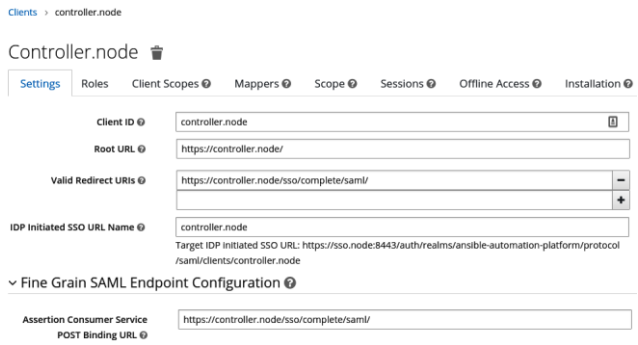
role-ldap-mapper

Mapper Type

LDAP Roles DN

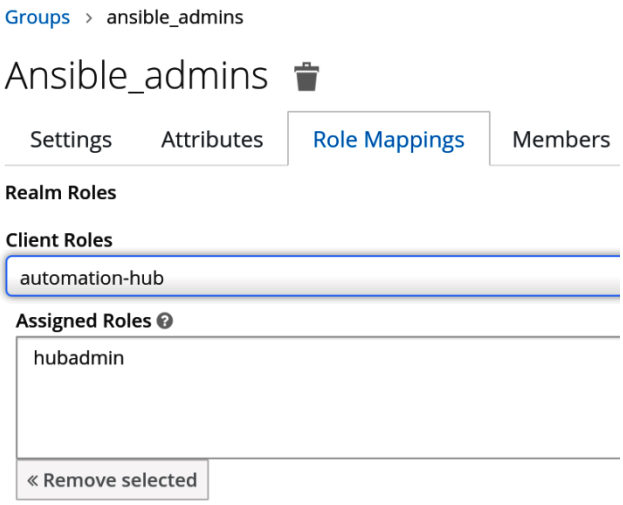
OU=Ansible,DC=ansible,DC=lcl

Fields	Value	Description
Client ID	`Controller.node`	Unique name for the client
Root URL	https://controller_fqdn/	URL of the controller
Valid Redirect URIs	https://controller_fqdn/sso/complete/saml/	the redirect URL from controller
IDP Initiated SSO URL Name	`controller_fqdn`	FQDN of the controller
Fine Grain SAML Endpoint Configuration		Advanced option to expand
Assertion Consumer Service POST Binding URL	https://controller_fqdn/sso/complete/saml/	Binding URl to send response to

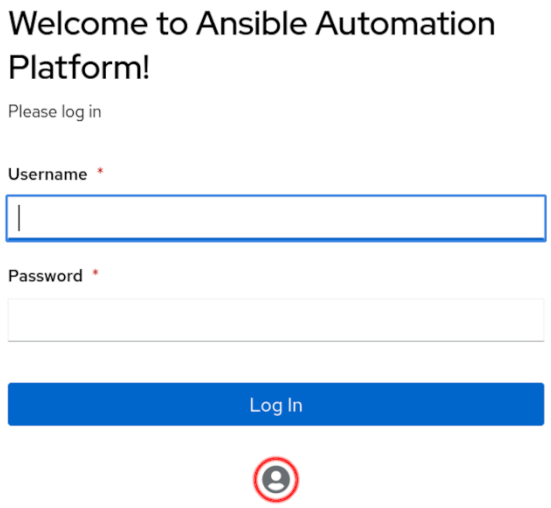


Name	Mapper Type	Property	Friendly Name	SAML Attribute Name	SAML Attribute NameFormat
email	**User Property**	`email`	**Email**	`email`	**Basic**
last_name	**User Property**	`lastName`	**Last Name**	`last_name`	**Basic**
first_name	**User Property**	`firstName`	**First Name**	`first_name`	**Basic**
user_name	**User Property**	`username`	**User Name**	`username`	**Basic**
user_permanent_id	**User Property**	`uid`	**name_id**	`name_id`	**Basic**

Name	Mapper Type	Group attribute name	Friendly Name	SAML Attribute NameFormat	Single Group Attribute	Full group path
group	Group list	`group`	group	Basic	On	Off
role list	Role list	`Role`	Role	Basic	On	Off



Gui Field	API Setting
SAML Service Provider Entity ID	`SOCIAL_AUTH_SAML_SP_ENTITY_ID`
SAML Service Provider Public Certificate	`SOCIAL_AUTH_SAML_SP_PUBLIC_CERT`
SAML Service Provider Private Key	`SOCIAL_AUTH_SAML_SP_PRIVATE_KEY`
SAML Service Provider Organization Info	`SOCIAL_AUTH_SAML_ORG_INFO`
SAML Service Provider Technical Contact	`SOCIAL_AUTH_SAML_TECHNICAL_CONTACT`
SAML Service Provider Support Contact	`SOCIAL_AUTH_SAML_SUPPORT_CONTACT`
SAML Enabled Identity Providers	`SOCIAL_AUTH_SAML_ENABLED_IDPS`

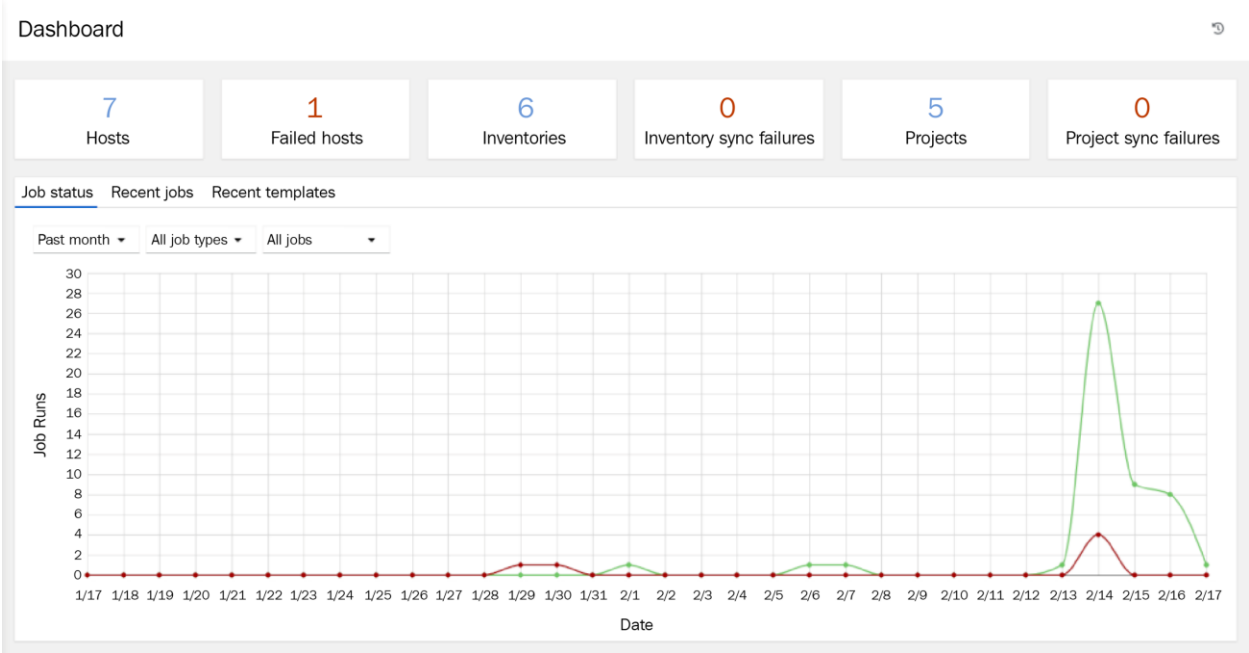


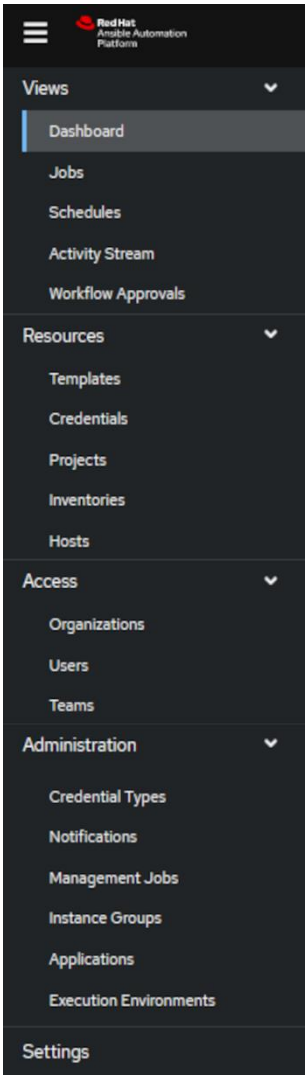
Gui Field	API Variable	Description
LDAP Server URI	AUTH_LDAP_SERVER_URI	The server URI
LDAP Bind DN	AUTH_LDAP_BIND_DN	DN of Ldap Admin
LDAP Bind Password	AUTH_LDAP_BIND_PASSWORD	Password of Ldap Admin
LDAP User Search	AUTH_LDAP_USER_SEARCH	DN of user search
LDAP User DN Template	AUTH_LDAP_USER_DN_TEMPLATE	Alternative to DN user search
LDAP User Attribute Map	AUTH_LDAP_USER_ATTR_MAP	Map LDAP scheme to controller scheme

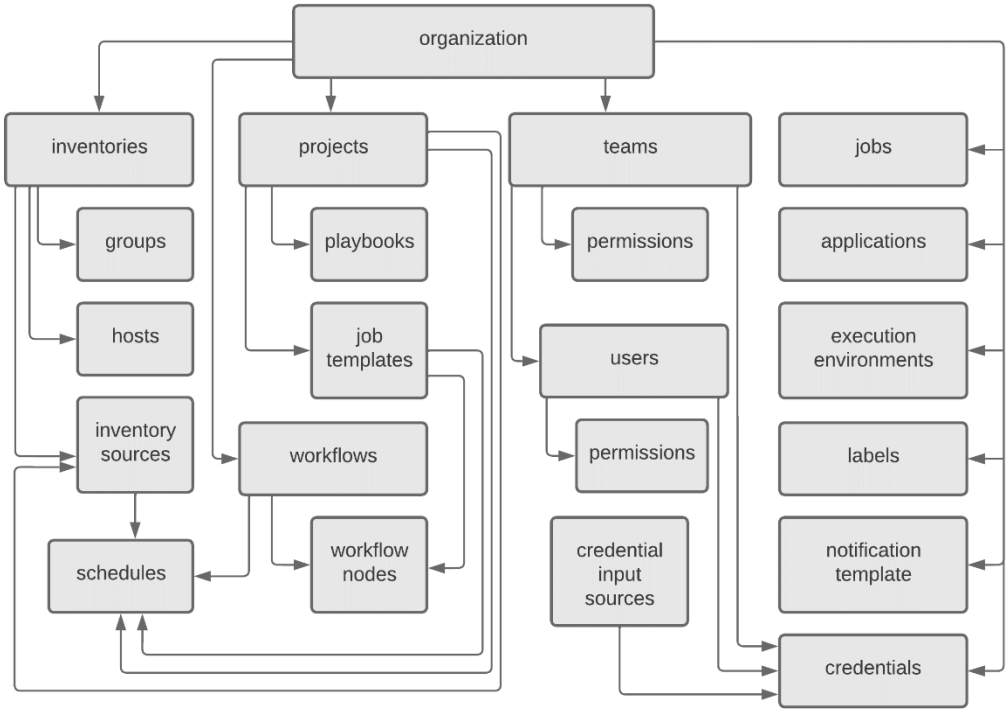
Gui Field	API Variable	Description
LDAP Group Search	AUTH_LDAP_GROUP_SEARCH	LDAP group search query to use
LDAP Group Type	AUTH_LDAP_GROUP_TYPE	Group type to use depending on server
LDAP Group Type Parameters	AUTH_LDAP_GROUP_TYPE_PARAMS	Group type parameters name and member attributes
LDAP Require Group	AUTH_LDAP_REQUIRE_GROUP	Set group membership requirements to limit to groups
LDAP Deny Group	AUTH_LDAP_DENY_GROUP	Deny login to groups set here

Gui Field	API Variable	Description
LDAP User Flags By Group	AUTH_LDAP_USER_FLAGS_BY_GROUP	Set Superusers and system admins by groups
LDAP Organization Map	AUTH_LDAP_ORGANIZATION_MAP	Maps to set organizations and admins
LDAP Team Map	AUTH_LDAP_TEAM_MAP	Maps to set teams inside an organization
LDAP Start TLS	AUTH_LDAP_START_TLS	Enable TLS when not using SSL

Chapter 5: Configuring the Basics after Installation




Red Hat
Ansible Automation
Platform
Views
Dashboard
Jobs
Schedules
Activity Stream
Workflow Approvals
Resources
Templates
Credentials
Projects
Inventories
Hosts
Access
Organizations
Users
Teams
Administration
Credential Types
Notifications
Management Jobs
Instance Groups
Applications
Execution Environments
Settings


organization
inventories
projects
teams
jobs
groups
playbooks
permissions
applications
hosts
job templates
users
execution environments
inventory sources
workflows
permissions
labels
schedules
workflow nodes
credential input sources
notification template
credentials

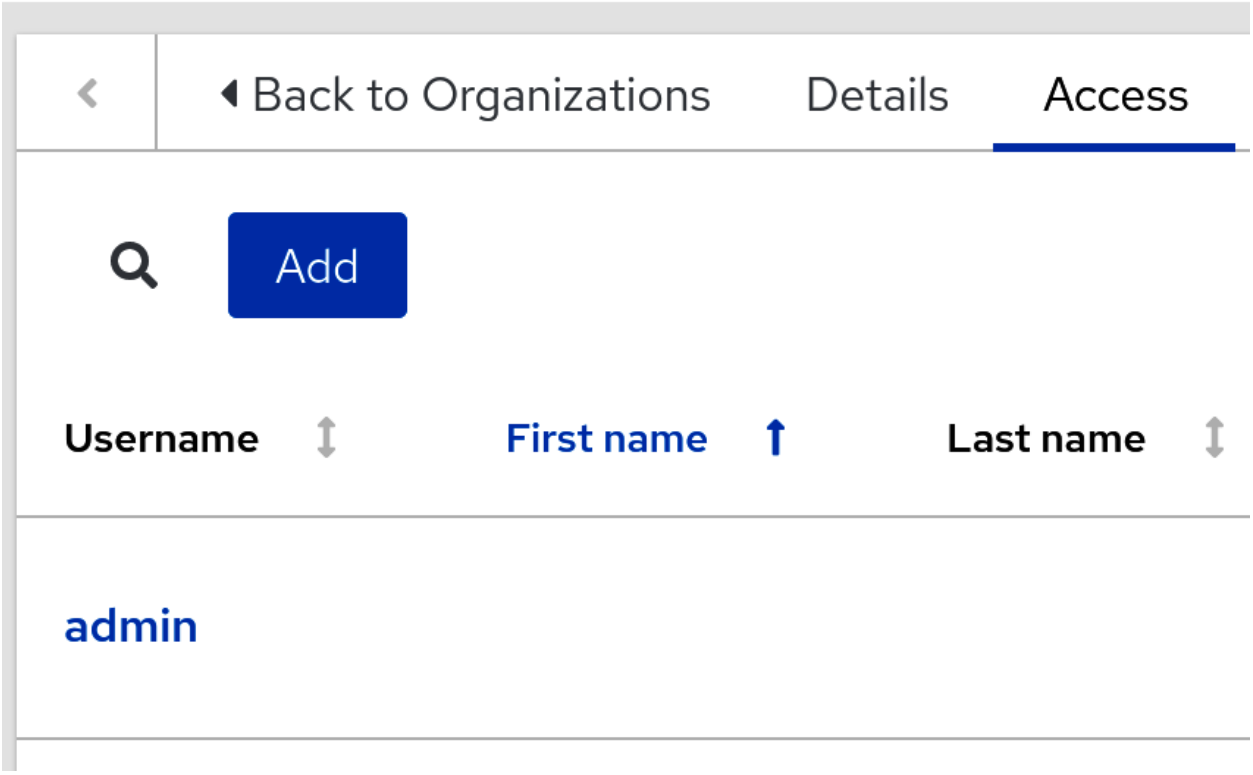
Chapter 6: Configuring Role-Based Access Control

Module option	System Role	Has Permision to
admin	Admin role for a given object	Superuser privileges for a given Organization, Team, Inventory, Project, or Job Template
read	Read role for a given object	For an Organization, Team, Inventory, Project, or Job Template, be able to read all aspects of that object
member	Member role for a given object	Gives user access as a member of a given Organization or Team
execute	Execute role – Job Templates	Launch Job Template to create a Job
adhoc	Ad Hoc role – Inventory	Run commands on Inventory hosts
update	Update role – Project, Inventory	Update the Project or Inventory
use	Use role – Credential, Inventory, Project	Able to assign the given Credential to an Inventory, Project, or Job Template
approval	Approval role – Workflow Level	Able to Approve an approval node in a workflow
auditor	Auditor role – All	Read Everything for a given Organization, Project, Inventory, or Job Template

Module option	System Role	Manages all aspects of
project_admin	Admin for a project	Projects
inventory_admin	Admin for a inventory	Inventories
credential_admin	Admin for a credential	Credentials
workflow_admin	Admin for workflow	Workflows
notification_admin	Admin for a notification	Notifications
job_template_admin	Admin for a job template	Job templates
execution_environment_admin	Admin for an execution enviroment	Execution environments
N/A	System administrator	System
N/A	System auditor	Views all aspects of the system

Organizations > Default

Access



Permission	Role/Module Variable Name
Add user	`add_user`
Change user	`change_user`
Delete user	`delete_user`
View user	`view_user`

Permission	Role/Module Variable Name
Add group	`add_group`
Change group	`change_group`
Delete group	`delete_group`
View group	`view_group`

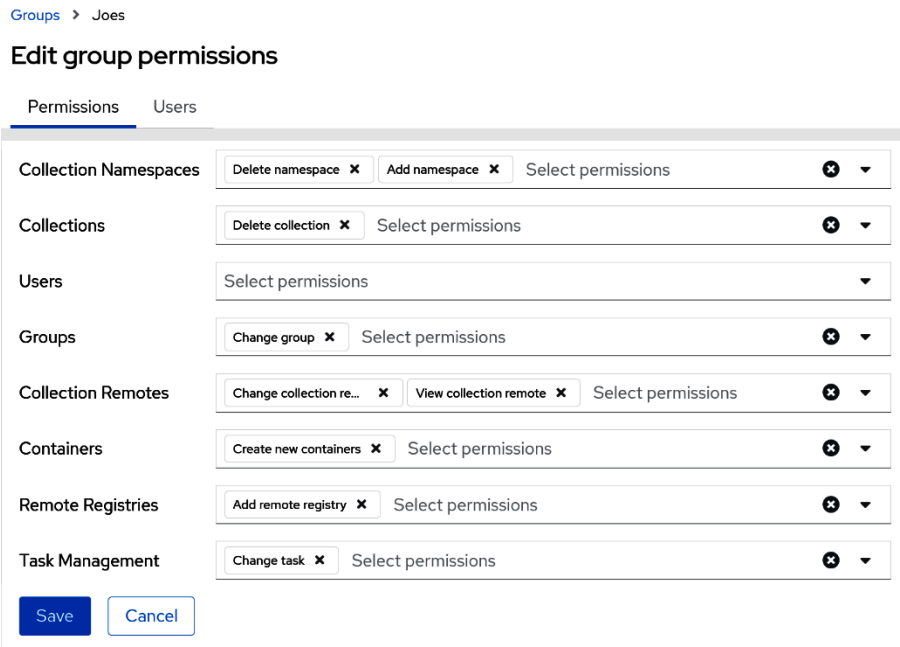
Permission	Role/Module Variable Name
Add namespace	`add_namespace`
Change namespace	`change_namespace`
Upload to namespace	`upload_to_namespace`
Delete Namespace	`delete_namespace`

Permission	Role/Module Variable Name
Modify Ansible repository content	`modify_ansible_repo_content`
Delete collection	`delete_collection`

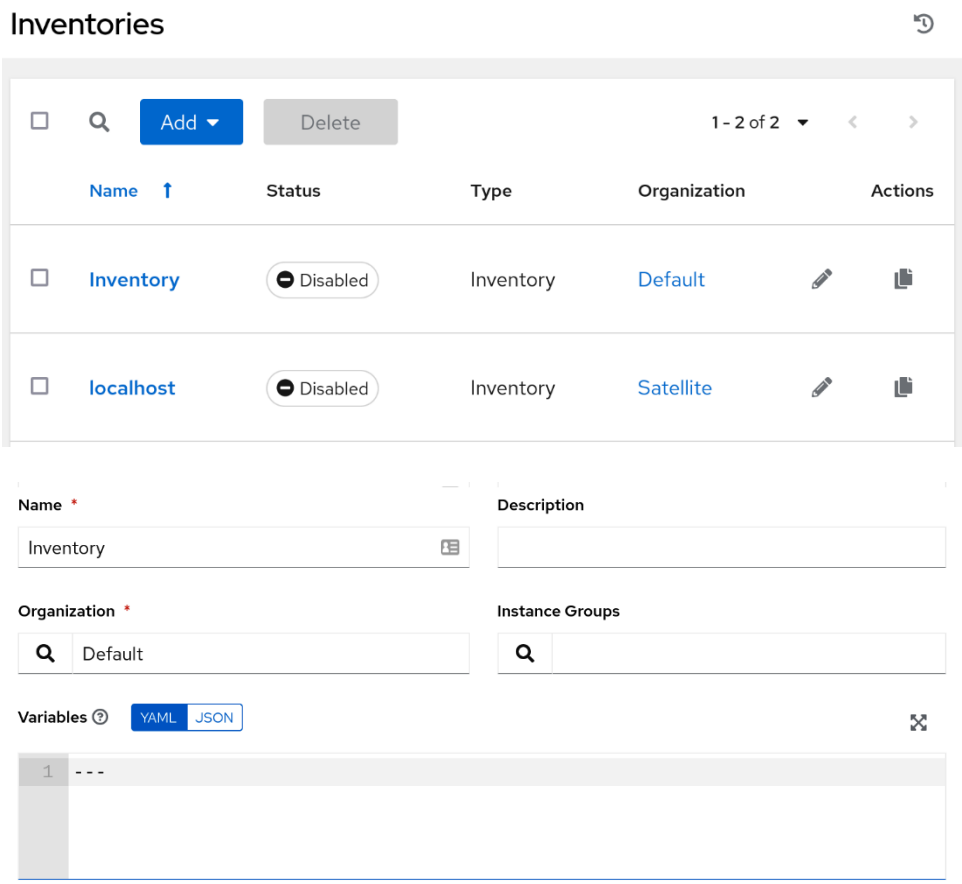
Permission	Role/Module Variable Name
Change collection remote	`change_collectionremote`
View collection remote	`view_collectionremote`

Permission	Role/Module Variable Name
Change container namespace permissions	`change_containernamespace_perms`
Change containers	`change_container`
Change image tags	`change_image_tag`
Create new containers	`create_container`
Push to existing containers	`push_container`
Delete container repository	`delete_containerrepository`

Permission	Role/Module Variable Name
Change task	`change_task`
Delete task	`delete_task`
View all tasks	`view_task`



Chapter 7: Creating Inventory, and Other Inventory Pieces



Name *

hostname

Description

Variables YAML JSON

```
---
ansible_host: 10.10.42.42
```

Inventories > Basic Inventory > Sources > New

Edit details

Name *

AWS inventory

Description

Execution Environment

Source *

Amazon EC2

Source details

Credential

AWS Credential

Verbosity

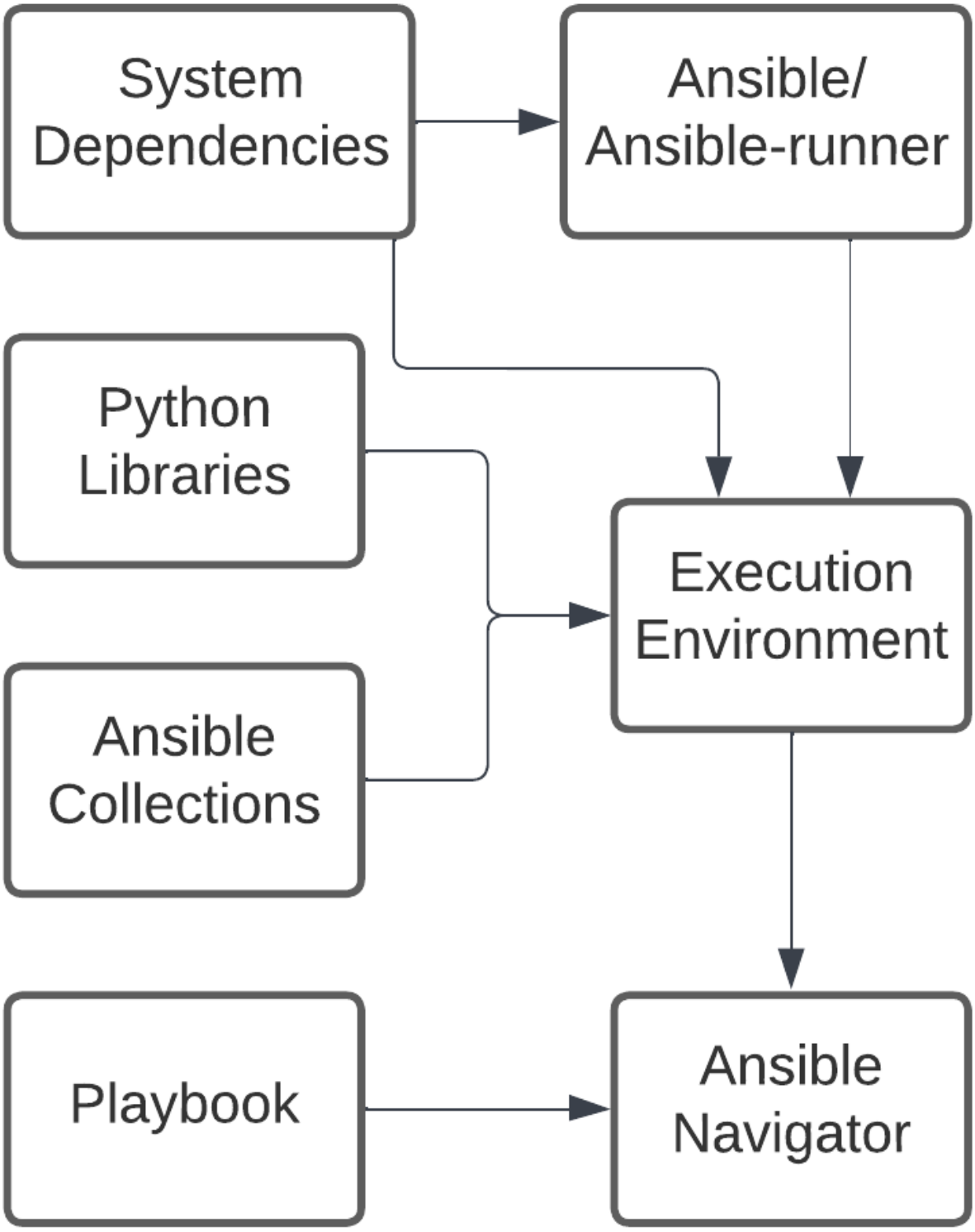
1 (Info)

Host Filter

Enabled Variable

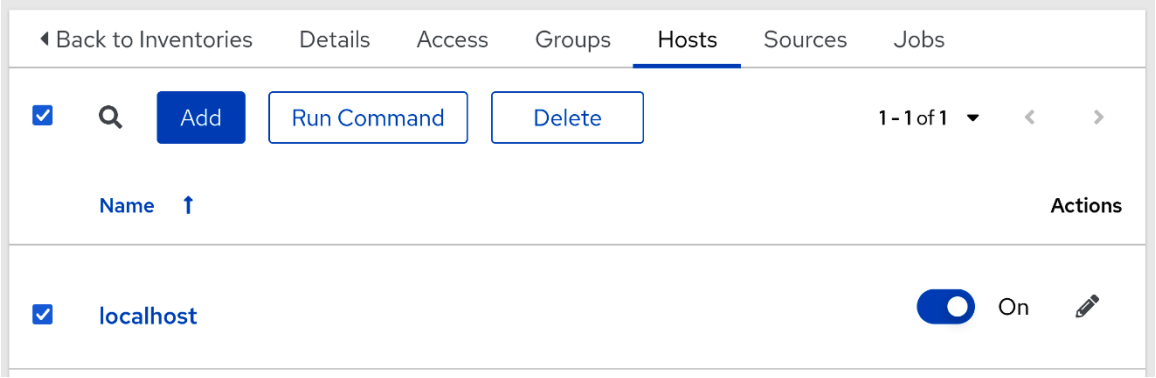
Enabled Value

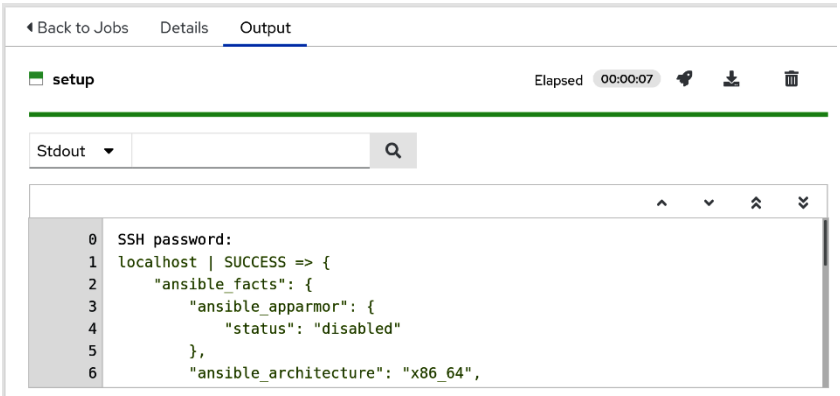
Chapter 8: Creating Execution Environments



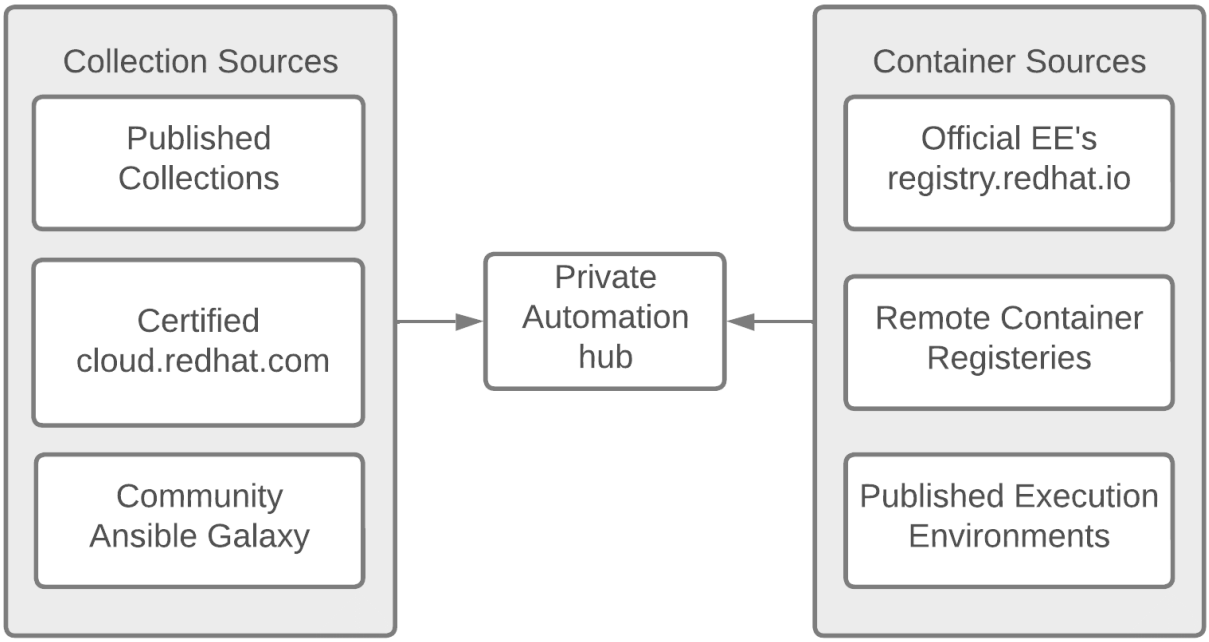
```
  NAME                                TAG     EXECUTION ENVIRONMENT
0 ansible-builder                     latest                 False
1 ansible-navigator-demo-ee (primary) 0.6.0                   True
2 ee-29-rhel8                         latest                  True
3 ee-supported-rhel8                  latest                  True
4 ee_tools                            latest                  True
```

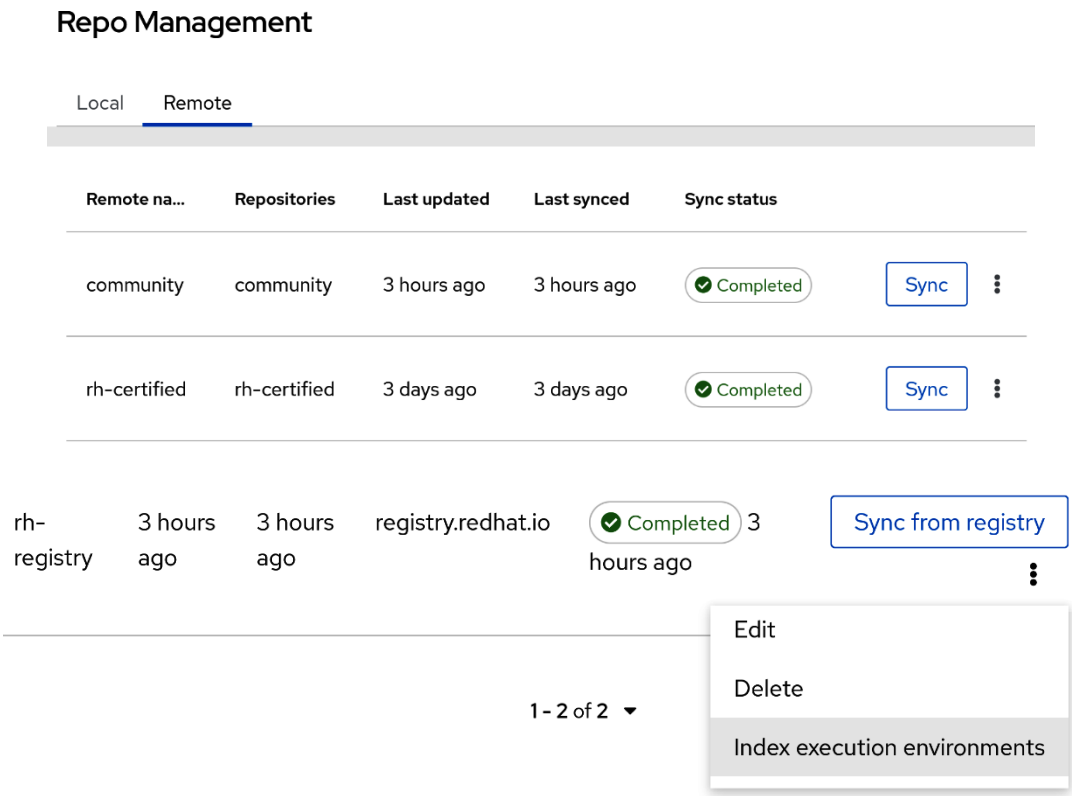
```
PLAY [Demo Playbook] ****************
*************

TASK [debug] ************************
*************
ok: [localhost] => {
    "msg": "Hello world"
}

PLAY RECAP **************************
*************
localhost                  : ok=1
```





Chapter 9: Automation Hub Management





Container repository name	Descri...	Created	Last modifi...	Contain...	
ansible-automation-platform-21/ee-29-rhel8	Ansibl...	6 days ago	6 days ago	Remote	⋮
ansible-automation-platform-21/ee-minimal-rhel8	Ansibl...	5 days ago	5 days ago	Remote	⋮
ansible-automation-platform-21/ee-supported-rhel8	Ansibl...	5 days ago	5 days ago	Remote	⋮

Use in Controller

Execution Environment ee-supported-rhel8

Tag latest

Digest sha256:05735589088148a519564e83b0d08794134052c5fe079652c02b08eb6725020c

Click on the Controller URL that you want to use the above execution environment in, and it will launch that Controller's console. Log in (if necessary) and follow the steps to complete the configuration.

Controller name | Filter by controller name

1 - 1 of 1

https://controller.node

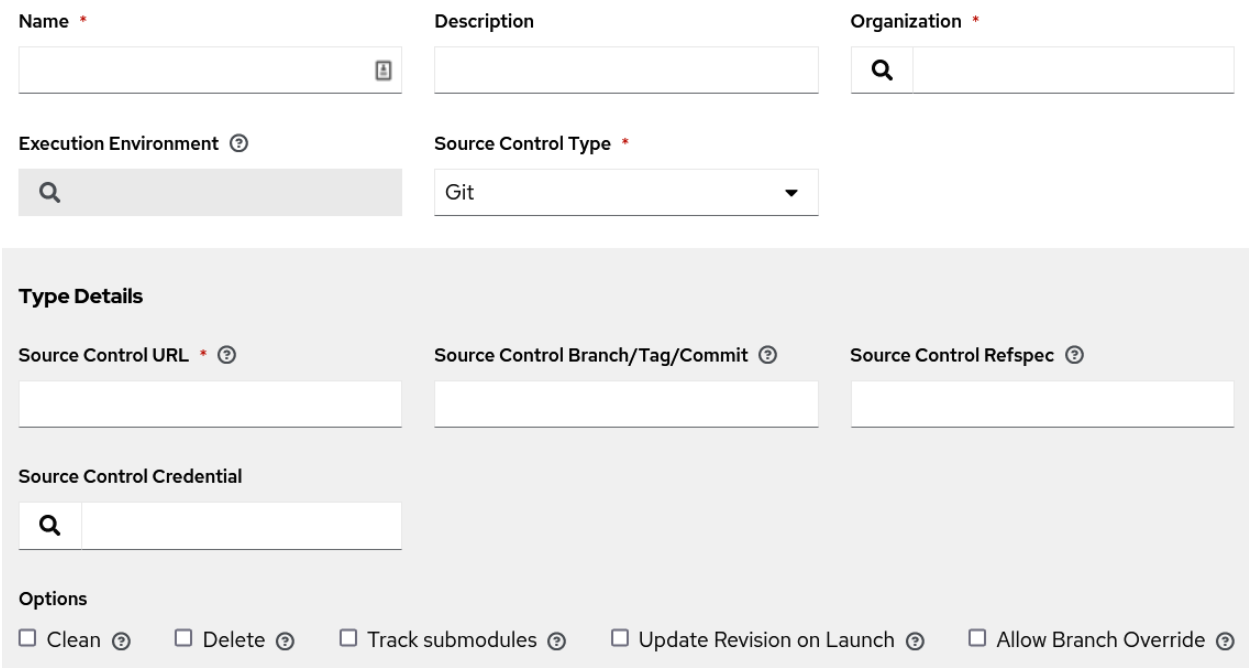
1 - 1 of 1

If the Controller is not listed in the table, check settings.py. Learn more

Close

Chapter 10: Creating Job Templates and Workflows

```
├── collections
│   └── requirements.yml
├── roles
│   └── requirements.yml
├── tasks
│   └── tasks.yml
├── playbook.yml
└── ansible.cfg
```



Name *

Description

Job Type * Prompt on launch

Run

Inventory * Prompt on launch

Project *

Execution Environment

Playbook *

Select a playbook

Credentials Prompt on launch

Labels

Variables YAML JSON Prompt on launch

```
---
```

Forks

0

Limit Prompt on launch

Verbosity Prompt on launch

0 (Normal)

Name *

Demo Job Template

Inventory Prompt on launch

Demo Inventory

Source Control Branch Prompt on launch

Question *

multiple_single

Description

Answer variable name *

multiple_single

Answer type *

Multiple Choice (single select)

Required

Multiple Choice Options *

choice1

choice2

choice3

choice4

Name *

Complicated workflow schema

Description

Organization

Inventory

Prompt on launch

Limit

Prompt on launch

Source control branch

Prompt on launch

Labels

Variables

YAML JSON

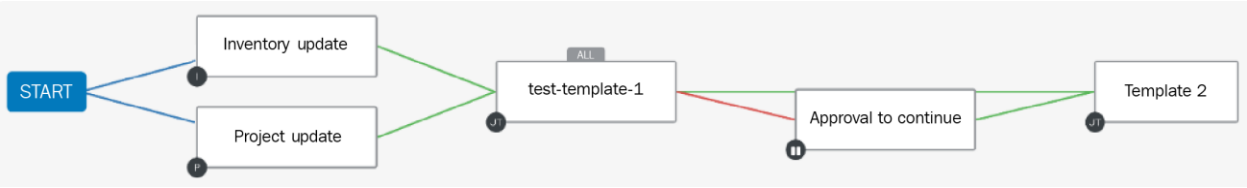
Prompt on launch

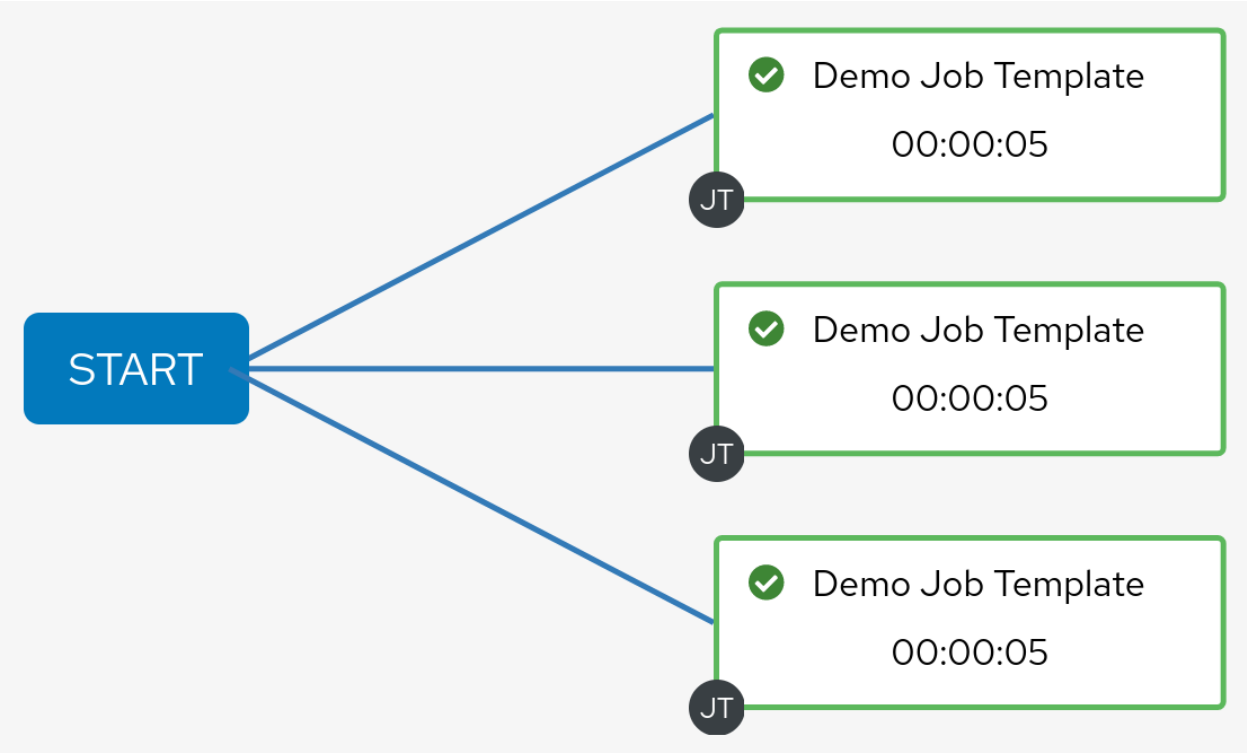
```
---
```

Options

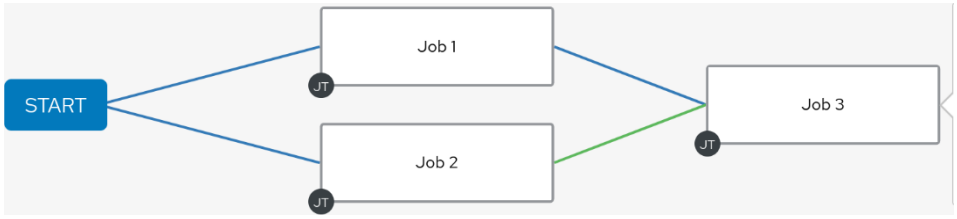
Enable Webhook

Enable Concurrent Jobs


START
Inventory update
Project update
ALL
test-template-1
Approval to continue
Template 2


START
Demo Job Template
00:00:05
JT
Demo Job Template
00:00:05
JT
Demo Job Template
00:00:05
JT

Chapter 11: Creating Advanced Workflows and Jobs




```
TASK [debug] ***************************
ok: [PSQL2] => {
    "show_vars": {
        "other_info": 1
    }
}
ok: [PSQL3] => {
    "show_vars": {
        "other_info": 1
    }
}
ok: [PSQL1] => {
    "show_vars": {
        "other_info": 1
    }
}
```

```
_var_per_host:
  PSQL2:
    other_info: 1
  PSQL3:
    other_info: 1
  PSQL1:
    other_info: 1
abc_var: nonenonenone

```

Gmail Admins	Email	○ Approval	○ Start	○ Success	● Failure
Gmail Users	Email	● Approval	○ Start	○ Success	○ Failure
Slack	Slack	● Approval	○ Start	● Success	○ Failure

Chapter 12: Using CI/CD to Interact with Automation Controller

No Images..

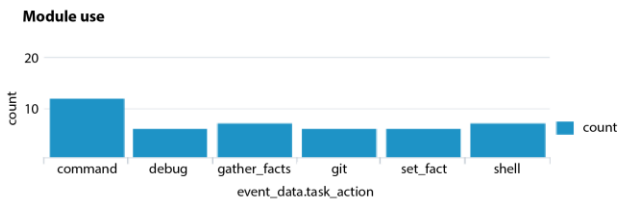
Chapter 13: Integration with Other Services

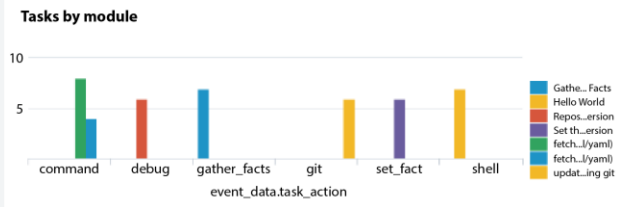
Review

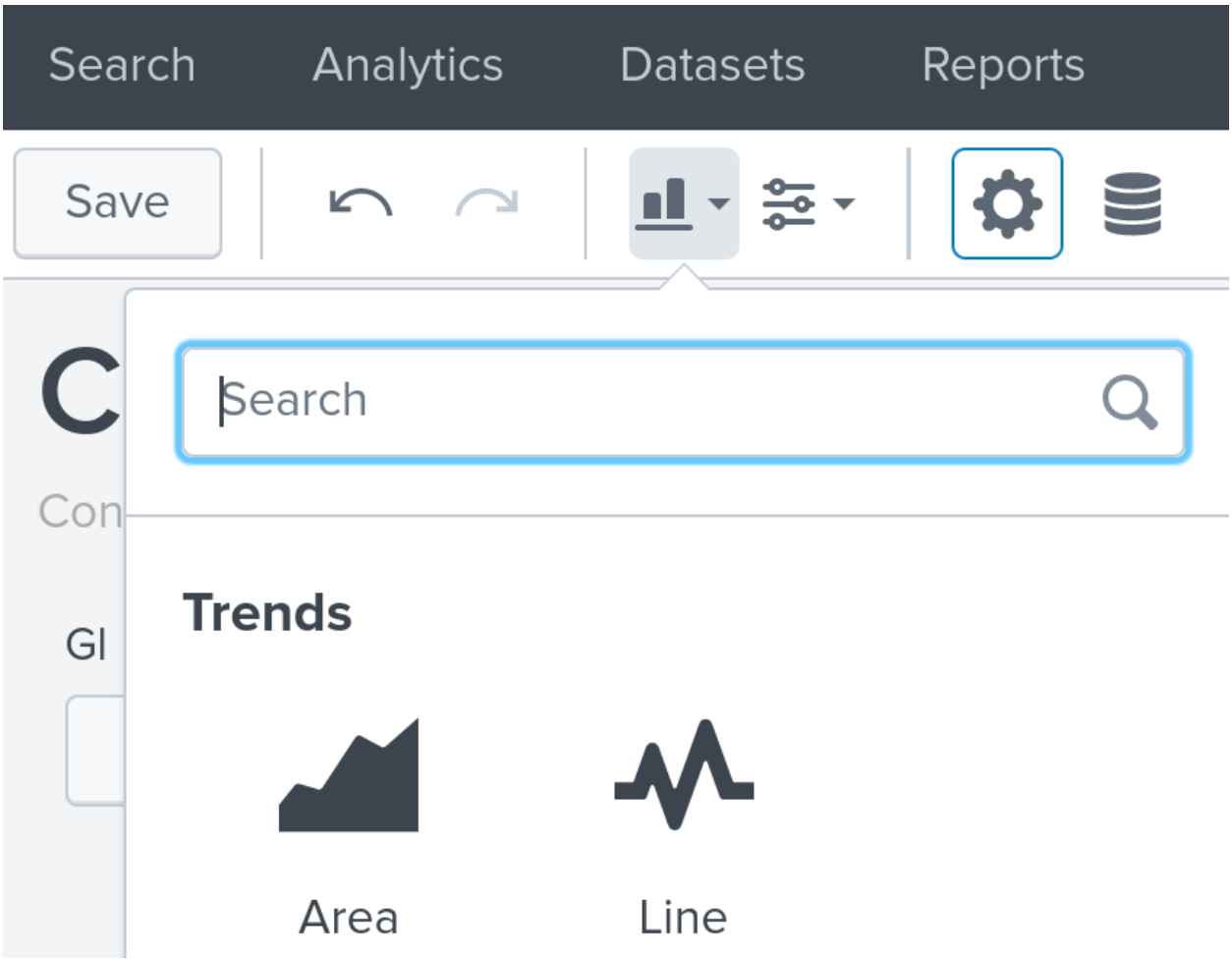
Input Type	Token
Name	controller
Source name override	N/A
Description	controller
Enable indexer acknowledg	No
Output Group	N/A
Allowed indexes	ansible
Default index	ansible
Source Type	Automatic
App Context	search

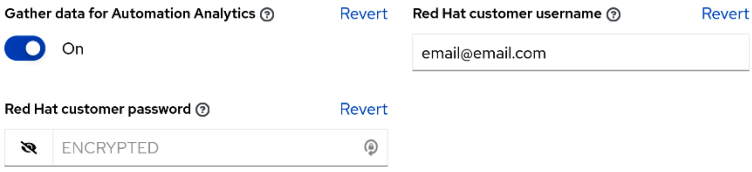
Name	Actions	Token Value	Source Type	Index	Status
controller controller	Edit Disable Delete	9008cca6-157f-49c7-be35-9c5771f8d6ef		ansible	Disabled

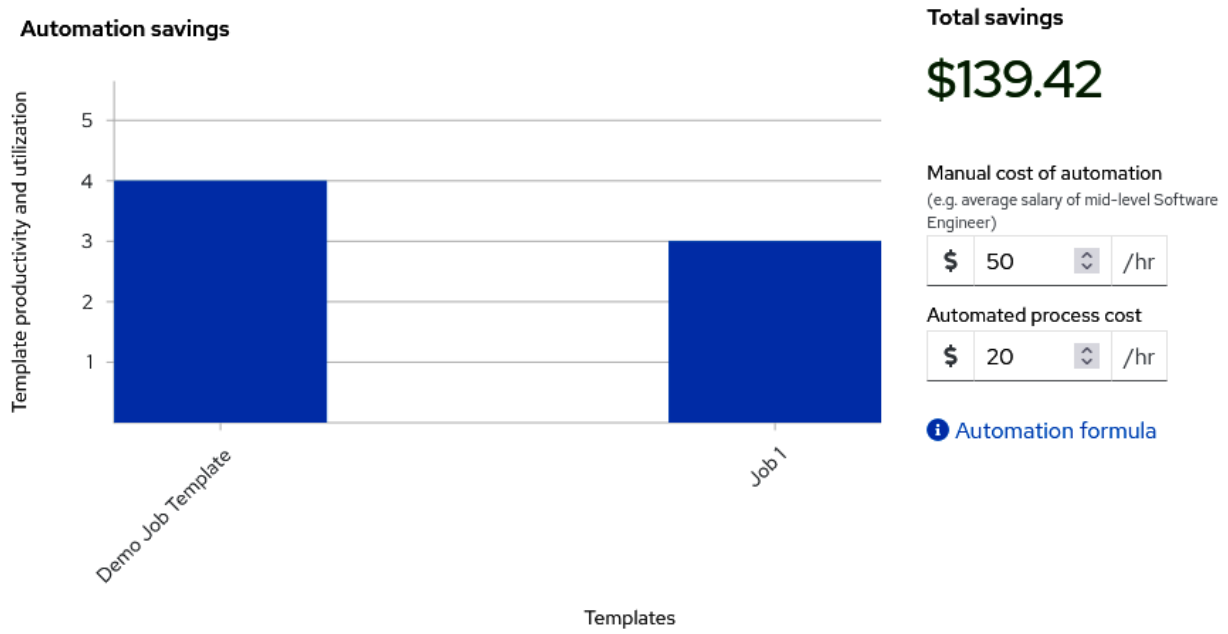
Logging Aggregator	https://10.242.42.36/services/collector/event	**Logging Aggregator Level Threshold**	INFO	**Logging Aggregator Password/Token**	Encrypted
Logging Aggregator Port	8088	**Logging Aggregator Protocol**	https	**TCP Connection Timeout**	5 seconds
Logging Aggregator Type	splunk	**Logging Aggregator Username**	admin	**Log Format For API 4XX Errors**	status {status_code} received by user {user_name} attempting to access {url_path} from {remote_addr}
Enable External Logging	On	**Log System Tracking Facts Individually**	On	**Enable/disable HTTPS certificate verification**	Off


Module use
20
10
count
command
debug
gather_facts
git
set_fact
shell
event_data.task_action
count


Tasks by module
10
5
command
debug
gather_facts
git
set_fact
shell
event_data.task_action
Gathe... Facts
Hello World
Repos...ersion
Set th...ersion
fetch...l/yaml)
fetch...l/yaml)
updat...ing git


Search
Analytics
Datasets
Reports
Save
Search
Trends
Area
Line


Gather data for Automation Analytics
Revert
On
Red Hat customer username
Revert
email@email.com
Red Hat customer password
Revert
ENCRYPTED

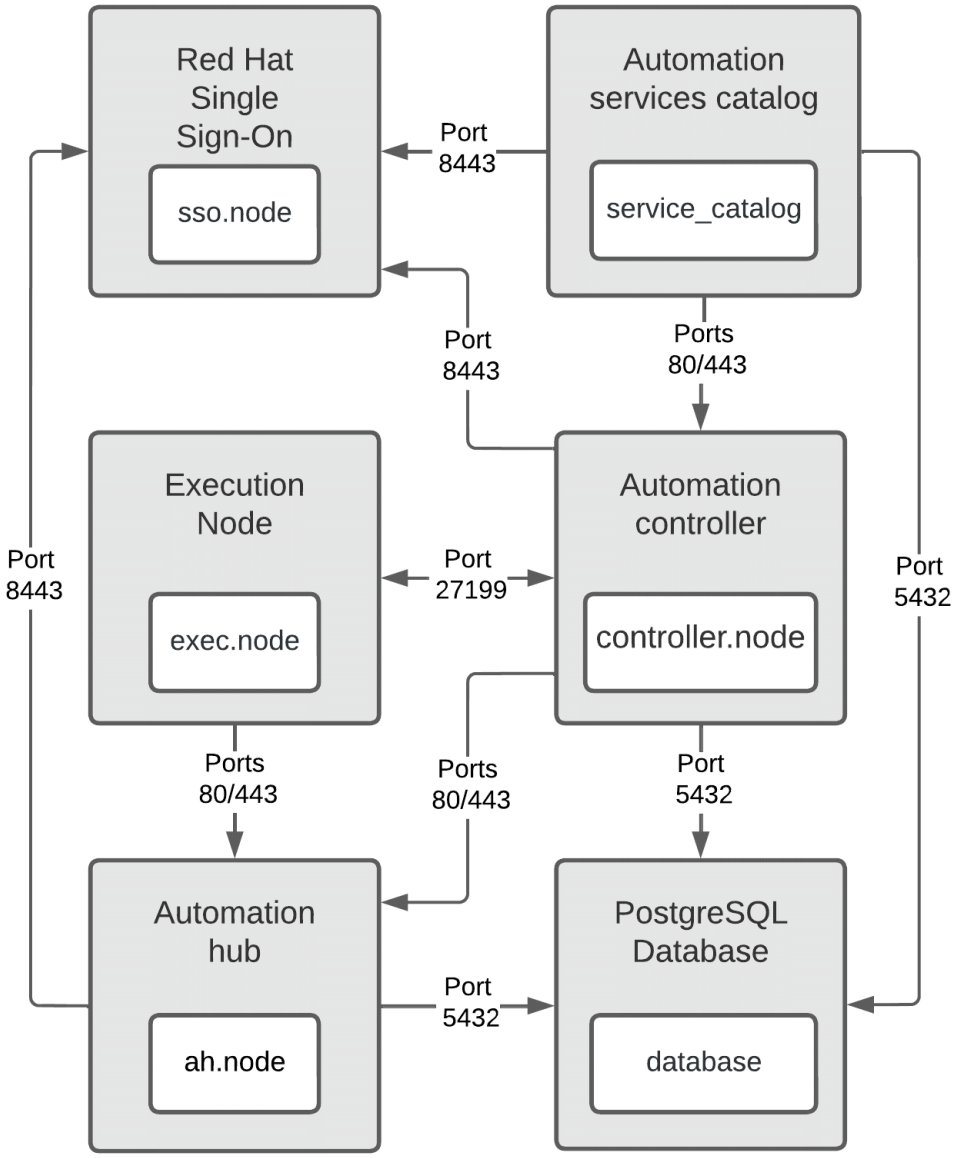


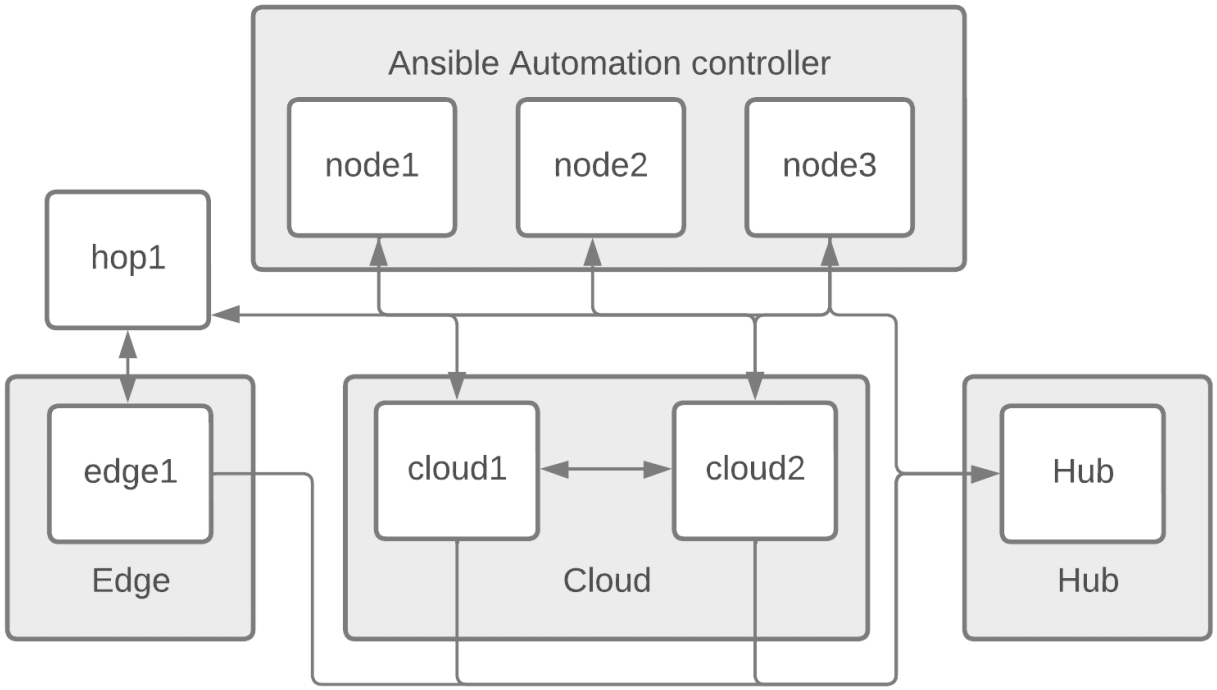
Enter the time it takes to run the following templates manually.

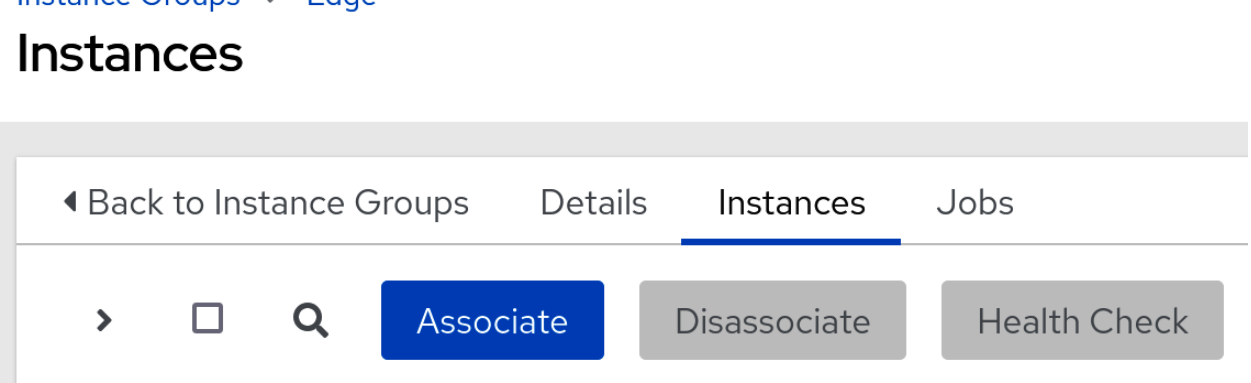
Name	Template ...	Manual time		Savings	Show all
Demo Job Template	4.00	60 min	x 4 host runs	$79.48	Show
Job 1	3.00	60 min	x 3 host runs	$59.94	Show

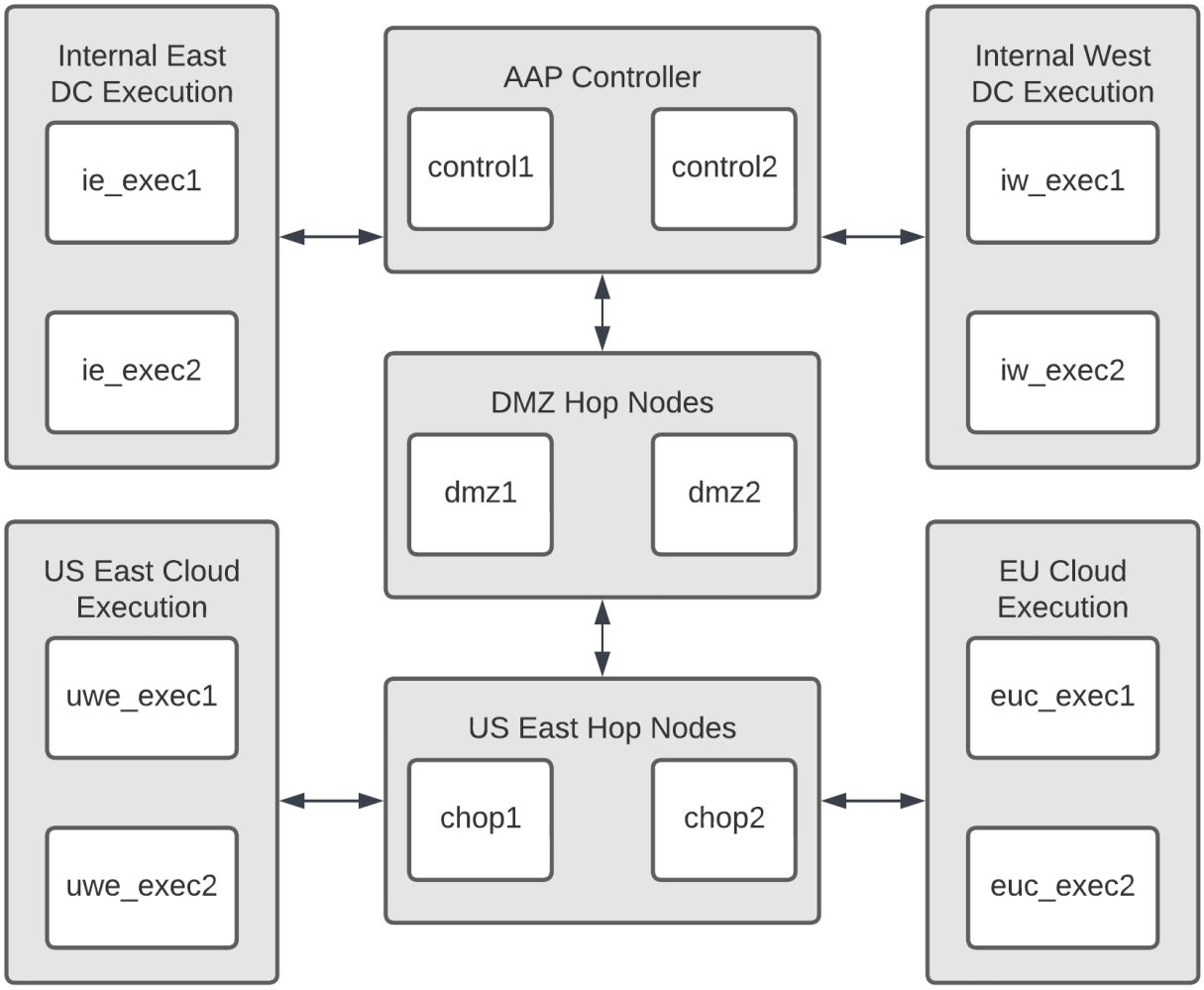
Chapter 14: Automating at Scale with Automation Mesh

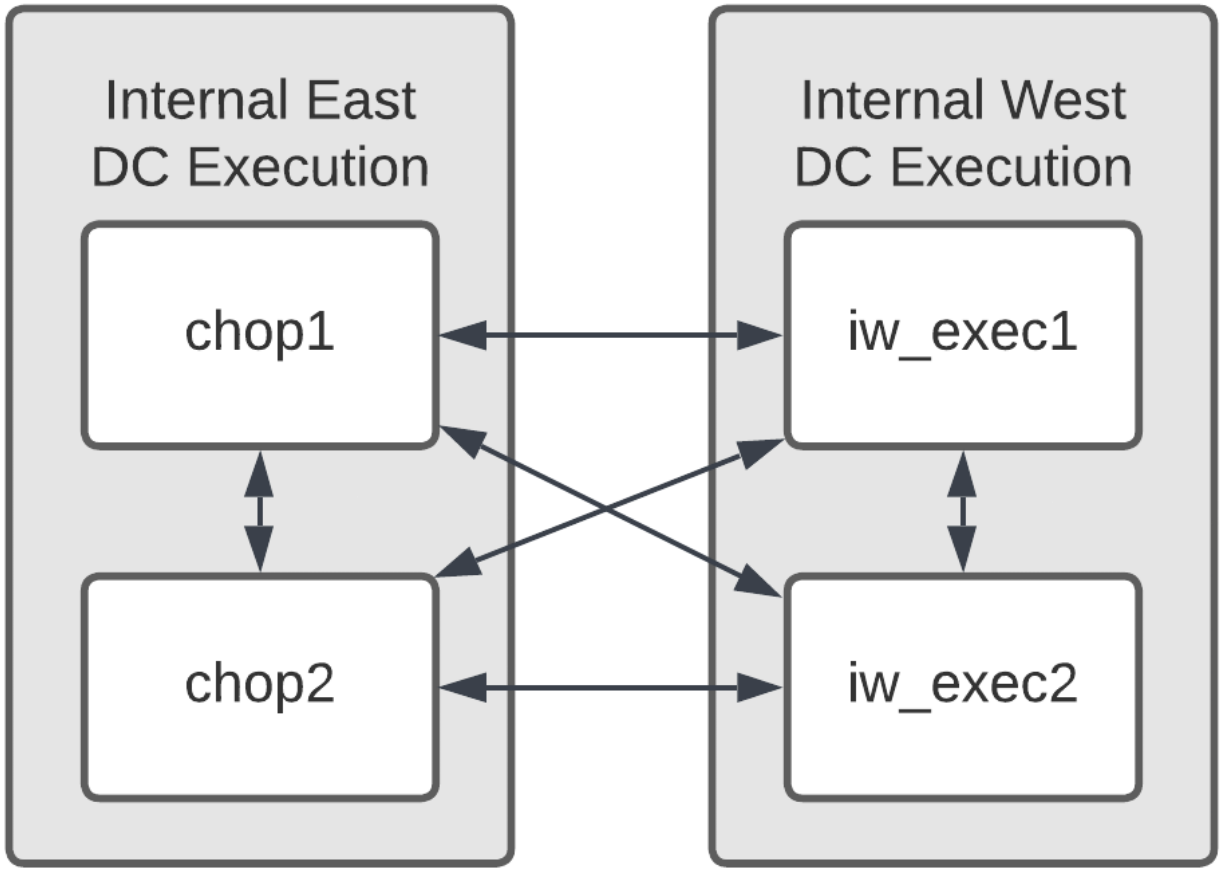
Protocol	Port	Purpose	Nodes
SSH	22/TCP	AAP installation	All
HTTP/HTTPS	80/443/TCP	Web UI, API	Control, hybrid, hub, service catalog
HTTPS	443/TCP	Execution environment (EE) pulls	Execution, hybrid
Postgres	5432/TCP	Database connection	Control, non peered execution*
Receptor	27199/TCP*	Automation mesh	All
HTTP/HTTPS	8080/8443	SSO	SSO



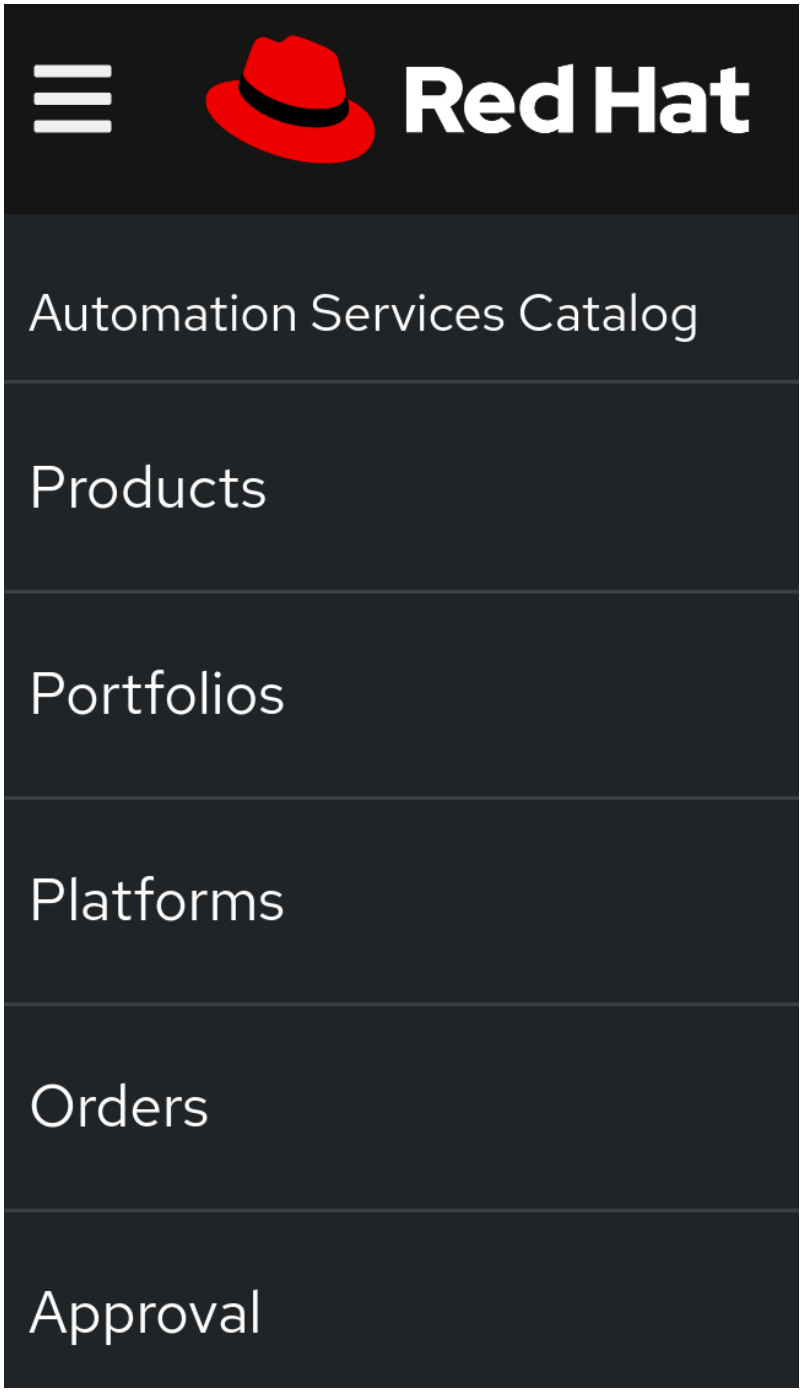

Ansible Automation controller
node1
node2
node3
hop1
edge1
Edge
cloud1
cloud2
Cloud
Hub
Hub

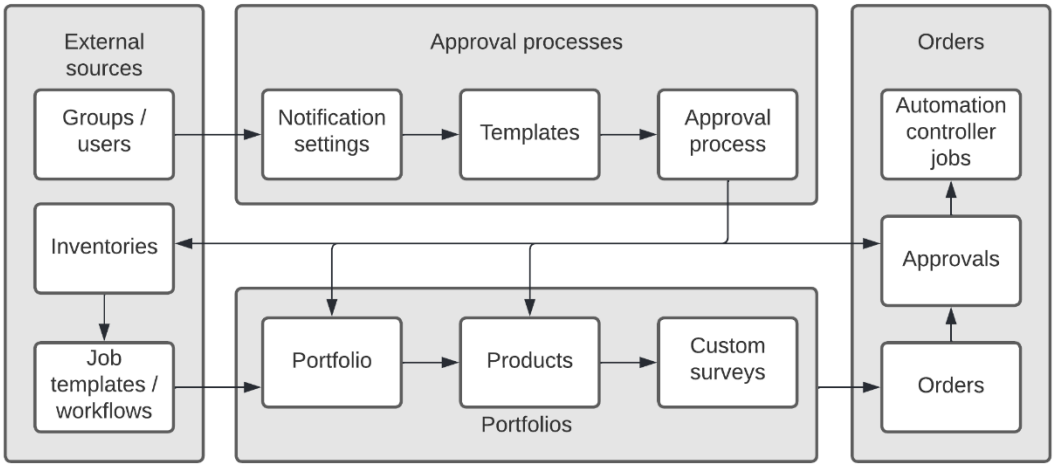

Instance Groups
Edge
Instances
Back to Instance Groups
Details
Instances
Jobs
Associate
Disassociate
Health Check

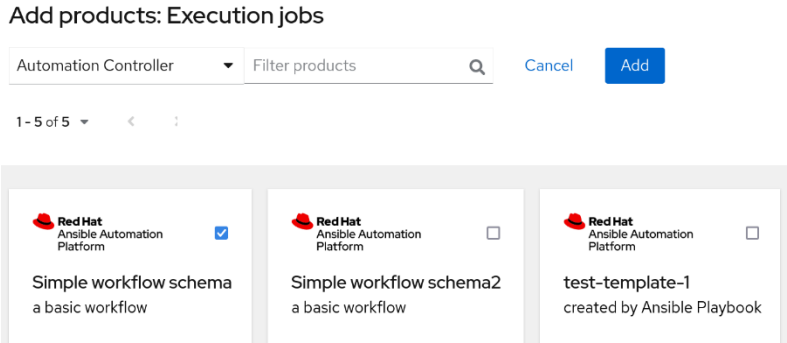

Internal East
DC Execution
ie_exec1
ie_exec2
AAP Controller
control1
control2
Internal West
DC Execution
iw_exec1
iw_exec2
DMZ Hop Nodes
dmz1
dmz2
US East Cloud
Execution
uwe_exec1
uwe_exec2
US East Hop Nodes
chop1
chop2
EU Cloud
Execution
euc_exec1
euc_exec2

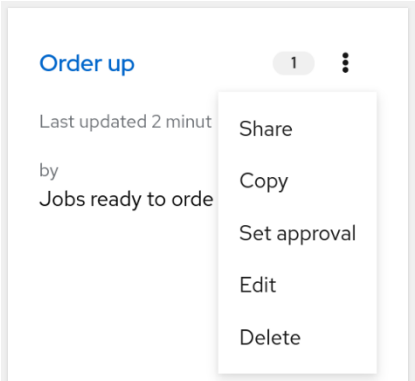

Internal East
DC Execution
chop1
chop2
Internal West
DC Execution
iw_exec1
iw_exec2

Chapter 15: Using Automation Services Catalog




External sources
Groups / users
Inventories
Job templates / workflows
Approval processes
Notification settings
Templates
Approval process
Portfolio
Products
Custom surveys
Portfolios
Orders
Automation controller jobs
Approvals
Orders


Add products: Execution jobs
Automation Controller
Filter products
Cancel
Add
1 - 5 of 5
Red Hat Ansible Automation Platform
Simple workflow schema
a basic workflow
Red Hat Ansible Automation Platform
Simple workflow schema2
a basic workflow
Red Hat Ansible Automation Platform
test-template-1
created by Ansible Playbook


Order up
1
Last updated 2 minut
by
Jobs ready to orde
Share
Copy
Set approval
Edit
Delete

Properties | Validation

Name

text

Initial value

infra-ansible-tower-testing.infra.sat.rdu2.red

Label

text

Helper text

target host is required for playbook to work, t ...

Placeholder

Disabled

Read only

Hidden

Substitution

Properties | Validation

Add validator

Choose new validator

Required validator

Required

Message

Min length

Min length

0

Message

Max length

Max length

1024

Message

longimagenamethatexceedslength

Exceeded max length

All requests > Request 24

Request 24

Summary

Product
Demo Job Template

Portfolio
env

Platform
Automation Controller

Requester
Fred Sample

Order#
14

Request transcript

Portfolio_group	Pending		Comment
Finance - Sample	Notified	Approve request	Deny request	Comment
Inventory_group	Pending		Comment
Order_group	Pending		Comment