

ITA\_ System Configuration/

Environment Construction Guide

Ansible-driver

*－*　Version 1.5*－*

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※「Exastro IT Automation」is written as「ITA」in this document.

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# Introduction

This document explains the system configuration and environment construction for operating Ansible optional function (referred to as Ansible driver hereafter) in ITA.

To use the ITA Ansible driver, it is assumed that the basic ITA functions have been built. Please refer to "System Configuration/Environment Construction Guide - Basics" for constructing ITA basic function.

# Function

Ansible driver provides the following functions.

Table 1 Function name

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Function name | Use | WEB  Content | BackYard  Content |
| 1 | Ansible driver | Manage construction of server, storage, network devices from ITA through Ansible or AnsibleTower. | ○ | ○ |
| 2 | Ansible RestAPI | Contents providing RestAPI for operating Ansible from external. | ○ | － |

# System configuration

The system configuration of Ansible driver is same as the ITA system.

Ansible RestAPI is considered to be configured in a dedicated Ansible server separated from the ITA driver.

Also, preparing a designated server for Ansible Tower is required. (Consolidating the construction into one server is also possible.)

This figure shows a configuration in which an Ansible RESTAPI server is added to the balanced HA type, the recommended configuration for the ITA system.

※The figure here is a omitted version. Please refer to "System Configuration/Environment Construction Guide - Basics" for details.

Ansible RestAPI

ITA system/Ansible driver

AP/DB server [SBY]

BackYard

function

AP/DB server [ACT]

DB

Session management

Uploaded file

DB connection

information

DBMS

Web server [ACT]

Web server [ACT]

Web

function

Web server [ACT]

DB connection information

**Ansible**

**driver**

Load balancer

Ansible server

Configuration

target device

Network

device

Server

Storage

**AnsibleAPI**

**function**

Ansible

AnsibleTower server

**Ansible**

**driver**

SCM management

External installed data

In the case that AnsibleTower is in cluster configuration.

# System requirements

Since Ansible driver is based on system requirements of ITA system, please refer to "System Configuration/Environment Construction Guide - Basics". This section describes the requirements for BackYard, Ansible RestAPI, and Ansible Tower.

●BackYard

Table 3-1. Linux commands required for Ansible BackYard

|  |  |
| --- | --- |
| **Command** | **Note** |
| zip |  |

Table 3-2. External modules required for Ansible BackYard

|  |  |  |
| --- | --- | --- |
| **External module** | **Version** | **Note** |
| php-yaml | 2.1.0 or higher |  |

●Ansible RestAPI

Table 3-3 Ansible RestAPI system requirements

|  |  |  |
| --- | --- | --- |
| **Package** | **Version** | **Note** |
| Ansible | 2.5 or higher |  |
| Python | 3.0 or higher |  |
| pywinrm |  | Python module. If installation fails when using yum, please use pip to install. |
| Pexpect |  | Python module. |
| telnet | － | Required for telnet connection to the configuration target. |
| Apache | 2.2 series / 2.4 series | Required when operating the function on the server different from the ITA system.  The package and version should match the ITA system servers |

Table 3-4 Linux command required for Ansible Driver

|  |  |
| --- | --- |
| **Command** | **Note** |
| expect |  |

●Ansible Tower

Table 3-5 Ansible Tower system requirements

|  |  |  |
| --- | --- | --- |
| **Package** | **Version** | **Note** |
| Ansible Tower | 3.5.0 or higher | The user/password authentication method under version 3.5.0 is not supported |

# Prepare shared directory

## Ansible driver － Ansible RestAPI

Please prepare a shared directory which both Ansible driver and Ansible RestAPI can refer.

After installing Ansible driver and Ansible RestAPI, it is required to register the shared directory to ITA system. Please refer to "Interface information" in "User instruction manual - Ansible-driver" and perform registration.

## Ansible driver － Ansible Tower server

Please prepare a shared directory which both Ansible driver and AnsibleTower server can reference.

After installing Ansible driver and constructing AnsibleTower server, registering the shared directory to ITA system is required.

Please refer to "Interface information" in "User instruction manual - Ansible-driver" and perform registration.

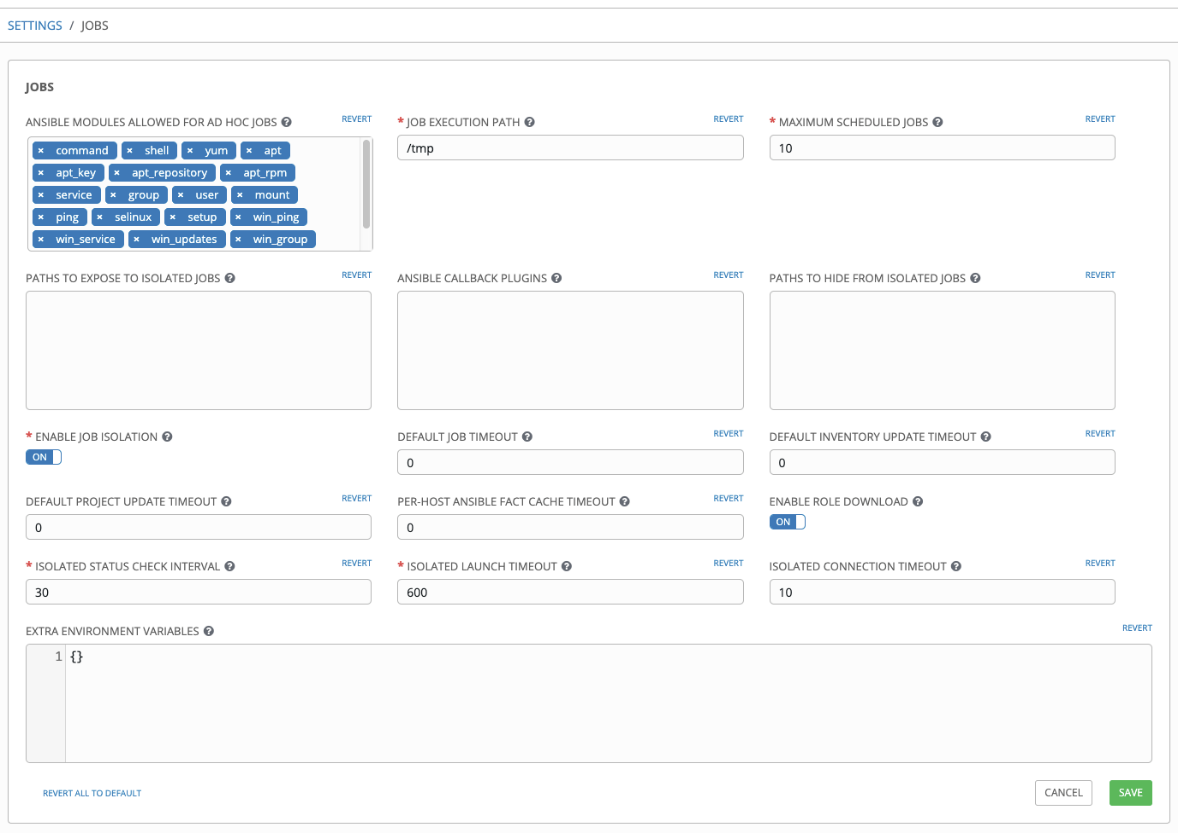
# AnsibleTower initial settings

Perform settings required for AnsibleTower after installing AnsibleTower.

## Settings

Login AnsibleTower from browser, set “/var/lib/awx/.ssh” in “SETTINGS” → “JOBS” → “PATHS TO EXPOSE ISOLATED JOBS”.

According to this setting, ssh connection that does not require the user and password of the target node with key exchange is enabled.



/var/lib/awx/.ssh

## Ansible Tower SCM management directory

SCM type is set to manual when creating an AnsibleTower project from ITA.  
Files that are required for construction operation will be sent to the base path of AbisbleTower project (/var/lib/awx/projects). The linux user to send the file need to be registered to ITA system. Please refer to “Ansible Tower host list” in “User instruction manual\_Ansible-driver” and register.  
It is recommended to set the password to the awx user created during AnsibleTower installation and use the user as linux user.

Furthermore, when using users other than awx user, the permission change of base path (/var/lib/awx/projects) is not under Redhat support.

## Package confirmation

Confirm packages that are required for Ansible-driver are installed.

If not installed, it’s required to install the packages.

* Required package

pexpect

* Method to confirm

su - awx

source /var/lib/awx/venv/ansible/bin/activate

pip list

deactivate

* Method to install

su - awx

source /var/lib/awx/venv/ansible/bin/activate

umask 0022

pip install --upgrade pexpect

deactivate

## Required resource preparation

It is required to register projects, inventory, credentials, and application with Ansible Tower in advance.

Table 5-1 AnsibleTower required resource

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Use** | **Name** | **Description** |
| Application | Authentication application | o\_auth2\_access\_token | Application information for authentication when connecting from ITA to AnsibleTower with RestAPI |
| User | Token | - | Connection token used to connect from ITA to AnsibleTower with RestAPI |

5.4.1　Application

* AnsibleTower settings
* Name ：　o\_auth2\_access\_token
* Organization ：　Default
* Authorization Grant Type ：　Password base of resource owner
* Client type ： Secret

5.4.2　User Token

* AnsibleTower settings
* APPLICATION ：　o\_auth2\_access\_token
* SCOPE ：　write

Login with the user used to login AnsibleTower beforehand is required.

The generated token must be set as the connection token in the interface information of the AnsibleTower console.　Please refer to “Interface information” in “User Instruction Manual\_Ansible-driver” and register.