

Ansible Local Mode

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Contents

| | |
|--|----------|
| 1 Abstract | 1 |
| 2 Installation | 2 |
| 3 Configuration | 2 |
| 4 Run | 3 |
| 5 Check | 3 |
| 6 Automate | 3 |
| 7 History | 4 |
| 8 Disclaimer of Warranty | 4 |
| 9 Limitation of Liability | 4 |

1 Abstract

Ansible is primarily an agentless system that typically pushes configuration from a controlling node (Ansible server). However, Ansible could be installed on each client node and run Ansible playbooks from a Git repository via cron. This creates a resilient system that installs software without a single point of failure because no central server is required. The central git repository is cloned to each client, so there is no single point of failure. This is not ideal, of course, as it requires special care in managing secrets (such as SSH keys or API keys). And this also has some challenges when some client nodes depend on others (orchestration). In clouds, automatic recovery may also be difficult with this setup, but if you are managing real machines, you would have to do it differently anyway, for example

by using a bare metal deployment system like FAI, warewulf or others. So this last point is not really a criticism of local mode.

2 Installation

This installation was tested on Debian 12 bookworm.

Install Ansible

```
aptitude install ansible
```

This will install:

```
1 ansible ansible-core ieee-data libyaml-0-2 python-babel-localedata
2 python3-anyio python3-argcomplete python3-babel python3-cffi-backend
3 python3-click python3-colorama python3-cryptography python3-dnspython
4 python3-h11 python3-h2 python3-hpack python3-httpcore python3-httpx
5 python3-hyperframe python3-jinja2 python3-jmespath python3-kerberos
6 python3-libcloud python3-lockfile python3-markdown-it python3-markupsafe
7 python3-mdurl python3-netaddr python3-ntlm-auth python3-pygments
8 python3-requests-kerberos python3-requests-ntlm python3-requests-toolbelt
9 python3-resolvelib python3-rfc3986 python3-rich python3-selinux
10 python3-simplejson python3-sniffio python3-tz python3-winrm python3-
    xmltodict
11 python3-yaml
```

3 Configuration

1. Create or clone a git repository in `/srv/pb`

```
cd /srv
git clone URL:my-ansible-local-mode.git pb
```

2. Create a sample configuration or use one from your `my-ansible-local-mode.git`. We assume that this will create the file `screen.yml` in `/srv/pb`.

```
---
- hosts: localhost
  gather_facts: no
  tasks:
    - name: Install screen
      apt:
```

```
name: screen
state: present
become: yes
```

4 Run

Run Ansible with `ansible-playbook`

```
ansible-playbook screen.yml
[WARNING]: No inventory was parsed, only implicit localhost is available
[WARNING]: provided hosts list is empty, only localhost is available. Note
  ↳ that
the implicit localhost does not match 'all'

PLAY [localhost]
  ↳ *****

TASK [Install screen]
  ↳ *****
changed: [localhost]

PLAY RECAP
  ↳ *****
localhost : ok=1 changed=1 unreachable=0 failed=0 skipped=0 rescued=0
  ↳ ignored=0
```

5 Check

Check the result

```
dpkg -l |grep 'ii screen '
ii screen 4.9.0-4 amd64 terminal multiplexer with VT100/ANSI terminal
  ↳ emulation
```

6 Automate

Setup a cron job

In this example we assume that the git repository is at `/srv/pb` and it contains the file `screen.yml`.

```
0 * * * * cd /srv/pb&& /usr/bin/git pull&& /usr/bin/ansible-  
playbook screen.yml
```

7 History

| Version | Date | Notes |
|---------|------------|-----------------|
| 0.1.0 | 2023-06-29 | Initial release |

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